

7R Tractors (Serial No. 103001-) North American Edition H8



JOHN DEERE

OPERATOR'S MANUAL

7R Tractors (Serial No. 103001-) North American Edition

OMRE592218 ISSUE H8 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:



WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

Additional Proposition 65 Warnings can be found in this manual.

North American Edition
PRINTED IN U.S.A.

Introduction

Foreword

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your machine may also be available in other languages (see your John Deere™ dealer to order).

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing the direction of forward travel.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I. N.) in the Specification or Identification Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place off the machine.

SETTING FUEL DELIVERY BEYOND PUBLISHED factory specifications or otherwise overpowering will result in loss of warranty protection for this machine.

BEFORE DELIVERING THIS MACHINE, your dealer performed a predelivery inspection. After operating for an agreed upon period, schedule an after-sale inspection with your John Deere™ dealer to ensure best performance.

THIS TRACTOR IS DESIGNED SOLELY for use in customary agricultural or similar operations ("INTENDED USE"). Use in any other way is considered as contrary to the intended use. The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the intended use.

THIS TRACTOR SHOULD BE OPERATED, serviced and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (accident prevention). The accident prevention regulations, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times. Any arbitrary modifications carried out on this tractor will relieve the manufacturer of all liability for any resulting damage or injury.

REGISTER USED PRODUCTS. If you purchased used John Deere™ products from an authorized John Deere™ dealer, the warranty registration information

was updated by the dealer and requires no further information on your part.

If you purchased any used John Deere™ product from an auction, through a trader or from a farmer, please register it now. John Deere™ and John Deere™ dealers value their customer's safety and satisfaction. Your local John Deere™ dealer is best equipped and anxious to provide you superior levels of support for your machine. Please enter your product details and your address online, using the John Deere™ website corresponding to your country. Then select the dealer of your choice.

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Emissions Performance and Tampering

Operation and Maintenance

The engine, including the emissions control system, shall be operated, used, and maintained in accordance with the instructions provided in this manual to maintain the emissions performance of the engine within the requirements applicable to the engine's category/certification.

Tampering

No deliberate tampering with or misuse of the engine emissions control system shall take place; in particular with regard to deactivating or not maintaining an exhaust gas recirculation (EGR) or a DEF dosing system. Tampering with an engine's emissions control system will void the European Union (EU) type approval and applicable emissions-related warranties.

DX,EMISSIONS,PERFORM-19-12JAN18

Look For Supplemental Information

Occasionally new or revised information will become available after manuals are printed. To get this up-to-date information into your hands, publication supplements are prepared and supplied to the field in the machine literature package.

Supplements can be supplied in the following forms and are usually identified with one of these titles:

- Direction(s) Sheet
- Installation Instructions
- Publications Supplement

Before your initial review of the Operator's Manual, look through the machine literature package to see if any supplemental information has been provided. If supplied, review this information to determine which operating procedures are impacted or modified by the revised instructions. Pay close attention to "CAUTION" and "IMPORTANT" statements as they address your safety, the safety of others, and safe operation of the machine.

When Operator's Manuals are revised, the supplemental information is incorporated directly into the manual, thereby eliminating the supplement.

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Introduction

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TouchSet™	Trademark of Deere and Company
Tractor-Implement Automation™	Trademark of Deere and Company
Vari-Cool™	Trademark of Deere and Company
Weather Pack™	Trademark of Packard Electric
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Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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Glossary

Glossary of Terms

Accessory	ACC	Secondary electrical system
ActiveCommand Steering (ACS™)	ACS	Abbreviation
ActiveSeat™ Control Unit	ASU	Abbreviation
Air Conditioning	A/C	System used for conditioning the air in the cab
Air Quality System	AQS	System used to control conditioned air in the cab
Alternating Current	AC	Electrical current that reverses its direction at regularly recurring intervals
Armrest Interface Control Unit	AIC	Abbreviation
Automatic Temperature Control Unit	ATC	Abbreviation
Brake Control Unit	BRC	Abbreviation
Cab Load Center Control Unit	CLC	Abbreviation
Cab Suspension Control Unit	CSC	Abbreviation
Cab Switch Module	CSM	Abbreviation
Chassis Control Unit	CCU	Abbreviation
Circulator Motor Speed	O	Medium Speed
Circulator Motor Speed	++	Fastest Speed
Cold Cranking Amperes	CCA	Refers to a battery's capability to perform during cold-weather operation
CommandCenter™	GS3	Computerized system for tractor monitoring
Component Technical Manual	CTM	Technical manual developed for the servicing of major components
Corner Post Display	PDU	Abbreviation
Diagnostic Technical Manual	DTM	Technical manual developed for diagnosing problems
Diagnostic Trouble Codes	DTC	Codes that inform the operator of stop, service, or information alerts
Diesel Particulate Filter	DPF	Filter that prevents ash and soot from entering the atmosphere
Direct Current	DC	Electrical current flowing in one direction only
e23™ Transmission Control Unit	PTP	Abbreviation
e23™ Transmission Shift Control Unit	TIP	Abbreviation
Electro-Hydraulic	EH	Refers to a hydraulic valve function that is controlled electrically
Electro-Hydraulic Depth Control	EHDC	Abbreviation
Electro-Hydraulic Selective Control Valve	EH SCV	Selective control valve operated with electrical solenoids
Electronics	ELX	Abbreviation
Engine Control Unit	ECU	Abbreviation
Engine Interface Control Unit	EIC	Abbreviation
Forward Set Speed	FSS	Speed control for Infinitely Variable Transmission
Front Chassis Control Unit	FCC	Abbreviation
Front PTO Control Unit	PTF	Abbreviation
Gallons per Minute	gpm	Fluid flow measured over a period of 1 minute
Global Positioning System	gps	Abbreviation
Heating Ventilating Air Conditioning	HVAC	Abbreviation
Heavy Duty	HD	Abbreviation
Hitch Control unit	HCC	Abbreviation
High Intensity Discharge	HID	Type of Xenon working light used for front lighting
Hitch Slip Command	HSC	Computerized system used to supplement hitch draft control
Hitch Valve Control Unit	HV1	Abbreviation
Ignition	IGN	Control for starting and stopping the tractor
Infinitely Variable Transmission	IVT	Abbreviation
Intelligent Total Equipment Control	iTEC	Abbreviation
International Standards Organization	ISO	Abbreviation
IVT™/AutoPowr™ Transmission Control Unit	PTI	Abbreviation
IVT™/AutoPowr™ Transmission Shift Control Unit	TII	Abbreviation
JDLink™ Control Unit	JDL	Abbreviation
Light Emitting Diode	LED	Abbreviation

Glossary

Liters per Minute	L/min	Fluid flow measured over a period of 1 minute
Mechanical Front Wheel Drive	MFWD	Powered front axle which is driven mechanically from the transmission
Operator Interface Control Unit	OIC	Abbreviation
Operators Manual	OM	Technical manual developed for operating a machine
Power Assisted PTO Shifting	PAPTOS	Electronic Rear PTO Shifting
Power Take-Off	PTO	Abbreviation
Pressure Control Valve	PCV	Valve used to control pressure within a system
Product Identification Number	PIN	Serial number relating to tractor identification
Radio Frequency Identification	RFID	Abbreviation
Rear PTO Control Unit	RPT	Abbreviation
Revolutions per Minute	rpm	Abbreviation
Roll-Over Protective Structure	ROPS	Abbreviation
Roof Lighting Control Unit	RLC	Abbreviation
SCV Control Unit	SCC	Abbreviation
Secondary Hydraulic Control Unit	SCO	Abbreviation
Selective Control Valve	SCV	Device used to control remote hydraulic functions
Selective Control Valve Units	SV	Abbreviation
Sequence Control Unit	SMV	Abbreviation
Slow Moving Vehicle	SMV	Warning sign on the rear of the tractor
StarFire Control Unit	ITC	Abbreviation
Steering System Control Unit	XMA, XMB, XSA, XSB	Abbreviation
Steering System Control Unit	XMC, XSC	Abbreviation
Suspended Front Axle Control Unit	SFA	Abbreviation
Tractor Equipment Control Unit	TEC	Abbreviation
Tractor Equipment Interface Control Unit	TEI	Abbreviation
Tractor Implement Automation	TIA	Automated processes for tractors and implements.
Triple Link Suspension	TLS	Suspended front axle
Vehicle Load Center Control Unit	VLC	Abbreviation
Virtual Terminal Implement Control Unit	VTI	Abbreviation
Water-In-Fuel	WIF	Abbreviation

RX32825,000179D-19-24JUL18

Safety

Recognize Safety Information



T81389—UN—28JUN13

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

DX,ALERT-19-29SEP98

Understand Signal Words



▲ WARNING

▲ CAUTION

TS187—19—30SEP88

DANGER; The signal word DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

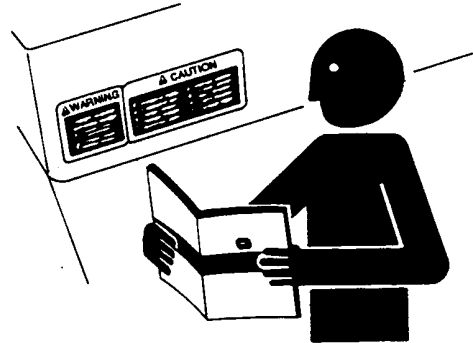
WARNING; The signal word WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION; The signal word CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. CAUTION may also be used to alert against unsafe practices associated with events which could lead to personal injury.

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards. DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

DX,SIGNAL-19-05OCT16

Follow Safety Instructions



TS201—UN—15APR13

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

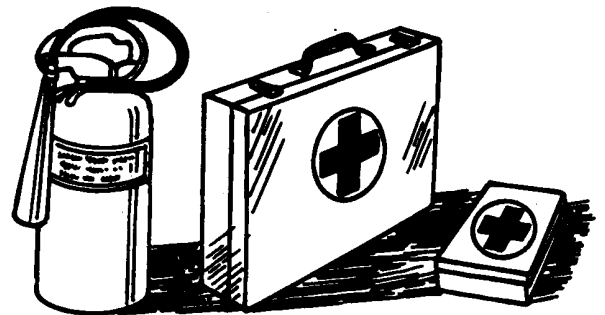
Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

DX,READ-19-16JUN09

Prepare for Emergencies



TS291—UN—15APR13

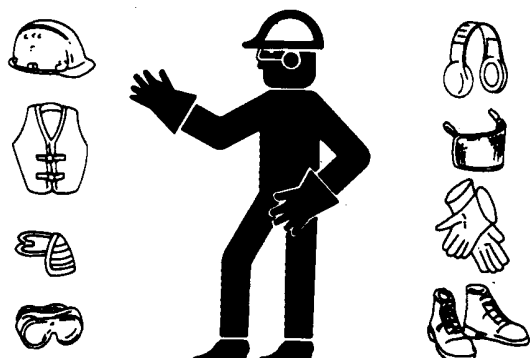
Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.

DX,FIRE2-19-03MAR93

Wear Protective Clothing



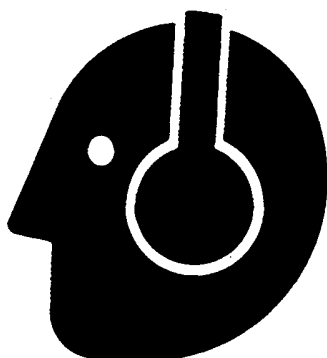
TS206—UN—15APR13

Wear close fitting clothing and safety equipment appropriate to the job.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

DX,WEAR2-19-03MAR93

Protect Against Noise



TS207—UN—23AUG88

There are many variables that affect the sound level range, including machine configuration, condition and maintenance level of the machine, ground surface, operating environmental, duty cycles, ambient noise, and attachments.

Exposure to loud noise can cause impairment or loss of hearing.

Always wear hearing protection. Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

DX,NOISE-19-03OCT17

Handle Fuel Safely—Avoid Fires



TS202—UN—23AUG88

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

Use only an approved fuel container for transporting flammable liquids.

Never fill fuel container in pickup truck with plastic bed liner. Always place fuel container on ground before refueling. Touch fuel container with fuel dispenser nozzle before removing can lid. Keep fuel dispenser nozzle in contact with fuel container inlet when filling.

Do not store fuel container where there is an open flame, spark, or pilot light such as within a water heater or other appliance.

DX,FIRE1-19-12OCT11

Handle Starting Fluid Safely



TS1356—UN—18MAR92

Starting fluid is highly flammable.

Keep all sparks and flame away when using it. Keep starting fluid away from batteries and cables.

To prevent accidental discharge when storing the pressurized can, keep the cap on the container, and store in a cool, protected location.

Do not incinerate or puncture a starting fluid container.
Do not use starting fluid on an engine equipped with glow plugs or an air intake heater.

DX,FIRE3-19-14MAR14

Fire Prevention

To reduce the risk of fire, your tractor should be regularly inspected and cleaned.

- Birds and other animals may build nests or bring other flammable materials into the engine compartment or onto the exhaust system. The tractor should be inspected and cleaned prior to the first use each day.
- A build up of grass, crop material and other debris may occur during normal operation. This is especially true when operating in very dry conditions or conditions where airborne crop material or crop dust is present. Any such build up must be removed to ensure proper machine function and to reduce the risk of fire. The tractor must be inspected and cleaned periodically throughout the day.
- Regular and thorough cleaning of the tractor combined with other routine maintenance procedures listed in the Operator's Manual greatly reduce the risk of fire and the chance of costly downtime.
- Do not store fuel container where there is an open flame, spark, or pilot light such as within a water heater or other appliance.
- Check fuel lines, tank, cap, and fittings frequently for damage, cracks or leaks. Replace if necessary.

Follow all operational and safety procedures posted on the machine and the Operator's Manual. Be careful of hot engine and exhaust components during inspection and cleaning. Before carrying out any inspection or cleaning, always shut OFF the engine, place the transmission in PARK or set parking brake, and remove the key. Removal of the key will prevent others from starting the tractor during inspection and cleaning.

DX,VWV,TRACTOR,FIRE,PREVENTION-19-12OCT11

In Case of Fire



TS227—UN—15APR13

CAUTION: Avoid personal injury.

Stop machine immediately at the first sign of fire. Fire may be identified by the smell of smoke or sight of flames. Because fire grows and spreads rapidly, get off the machine immediately and move safely away from the fire. Do not return to the machine! The number one priority is safety.

Call the fire department. A portable fire extinguisher can put out a small fire or contain it until the fire department arrives; but portable extinguishers have limitations. Always put the safety of the operator and bystanders first. If attempting to extinguish a fire, keep your back to the wind with an unobstructed escape path so you can move away quickly if the fire cannot be extinguished.

Read the fire extinguisher instructions and become familiar with their location, parts, and operation before a fire starts. Local fire departments or fire equipment distributors may offer fire extinguisher training and recommendations.

If your extinguisher does not have instructions, follow these general guidelines:

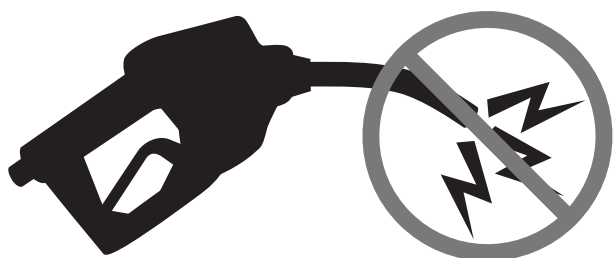
1. Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
2. Aim low. Point the extinguisher at the base of the fire.
3. Squeeze the lever slowly and evenly.
4. Sweep the nozzle from side-to-side.

DX,FIRE4-19-22AUG13

Avoid Static Electricity Risk When Refueling



RG22142—UN—17MAR14



RG21992—UN—21AUG13

The removal of sulfur and other compounds in Ultra-Low Sulfur Diesel (ULSD) fuel decreases its conductivity and increases its ability to store a static charge.

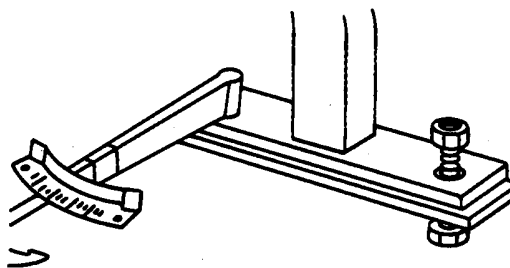
Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

Static charges can build up in ULSD fuel while it is flowing through fuel delivery systems. Static electricity discharge when combustible vapors are present could result in a fire or explosion.

Therefore, it is important to ensure that the entire system used to refuel your machine (fuel supply tank, transfer pump, transfer hose, nozzle, and others) is properly grounded and bonded. Consult with your fuel or fuel system supplier to ensure that the delivery system is in compliance with fueling standards for proper grounding and bonding practices.

DX,FUEL,STATIC,ELEC-19-12JUL13

Keep ROPS Installed Properly



TS212—UN—23AUG88

Make certain all parts are reinstalled correctly if the roll-over protective structure (ROPS) is loosened or removed for any reason. Tighten mounting bolts to proper torque.

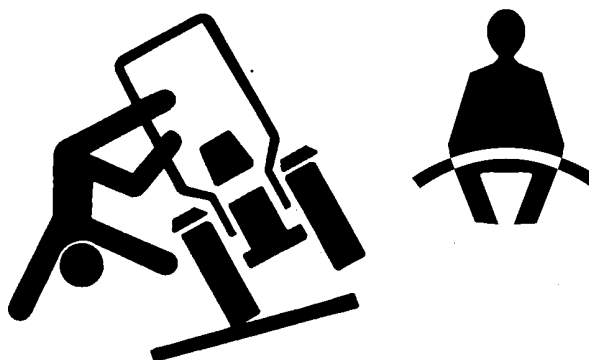
The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting. A damaged ROPS should be replaced, not reused.

The seat is part of the ROPS safety zone. Replace only with John Deere seat approved for your tractor.

Any alteration of the ROPS must be approved by the manufacturer.

DX,ROPS3-19-12OCT11

Use Foldable ROPS and Seat Belt Properly



TS1729—UN—24MAY13

Avoid crushing injury or death during rollover.

- If this machine is equipped with a foldable rollover protective structure (ROPS), keep the ROPS in the fully extended and locked position. **USE** a seat belt when you operate with a ROPS in the fully extended position.
 - Hold the latch and pull the seat belt across the body.
 - Insert the latch into the buckle. Listen for a click.
 - Tug on the seat belt to make sure that the belt is securely fastened.

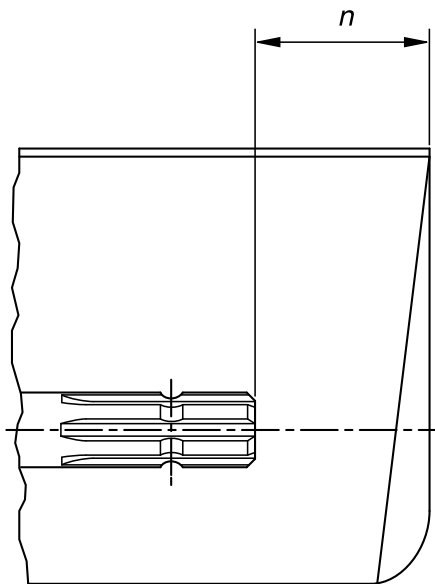
- Snug the seat belt across the hips.
- If this machine is operated with the ROPS folded (for example, to enter a low building), drive with extreme caution. DO NOT USE a seat belt with the ROPS folded.
- Return the ROPS to the raised, fully extended position as soon as the machine is operated under normal conditions.

DX,FOLDROPS-19-22AUG13

Stay Clear of Rotating Drivelines



TS1644—UN—22AUG95



H96219—UN—29APR10

Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Only use power take-off driveshafts with adequate guards and shields.

Wear close fitting clothing. Stop the engine and be sure that PTO driveline is stopped before making

adjustments, connections, or cleaning out PTO driven equipment.

Do not install any adapter device between the tractor and the primary implement PTO driveshaft that will allow a 1000 rpm tractor shaft to power a 540 rpm implement at speeds higher than 540 rpm.

Do not install any adapter device that results in a portion of the rotating implement shaft, tractor shaft, or the adapter to be unguarded. The tractor master shield shall overlap the end of the splined shaft and the added adaptor device as outlined in the table.

The angle at which the primary implement PTO driveshaft can be inclined may be reduced depending on the shape and size of the tractor master shield and the shape and size of the guard of the primary implement PTO driveshaft.

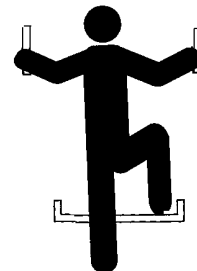
Do not raise implements high enough to damage the tractor master shield or guard of primary implement PTO driveshaft. Detach the PTO driveline shaft if it is necessary to increase implement height. (See Attching/ Detaching PTO Driveline)

When using Type 3/4 PTO, inclination and turning angles may be reduced depending on type of PTO master shield and coupling rails.

PTO Type	Diameter	Splines	n ± 5 mm (0.20 in.)
1	35 mm (1.378 in.)	6	85 mm (3.35 in.)
2	35 mm (1.378 in.)	21	85 mm (3.35 in.)
3	45 mm (1.772 in.)	20	100 mm (4.00 in.)
4	57.5 mm (2.264 in.)	22	100 mm (4.00 in.)

DX,PTO-19-28FEB17

Use Steps and Handholds Correctly



T133468—UN—15APR13

Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease

or oil. Never jump when exiting machine. Never mount or dismount a moving machine.

DX,WW,MOUNT-19-12OCT11

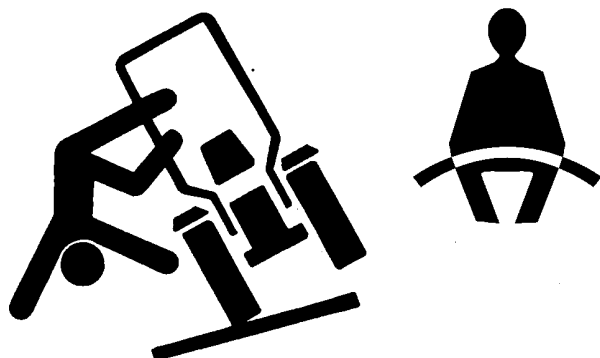
Read Operator's Manuals for ISOBUS Controllers

In addition to GreenStar™ Applications, this display can be used as a display device for any ISOBUS Controller that meets ISO 11783 standard. This includes capability to control ISOBUS implements. When used in this manner, information and control functions placed on the display are provided by the ISOBUS Controller and are the responsibility of the ISOBUS Controller manufacturer. Some of these functions could pose a hazard to either the operator or a bystander. Read the Operator's Manual provided by the ISOBUS Controller manufacturer and observe all safety messages in manual and on ISOBUS Controller product prior to use.

NOTE: ISOBUS refers to the ISO Standard 11783

DX,WW,ISOBUS-19-15JUL15

Use Seat Belt Properly



TS1729—UN—24MAY13

Avoid crushing injury or death during rollover.

This machine is equipped with a rollover protective structure (ROPS). USE a seat belt when you operate with a ROPS.

- Hold the latch and pull the seat belt across the body.
- Insert the latch into the buckle. Listen for a click.
- Tug on the seat belt latch to make sure that the belt is securely fastened.
- Snug the seat belt across the hips.

Replace entire seat belt if mounting hardware, buckle, belt, or retractor show signs of damage.

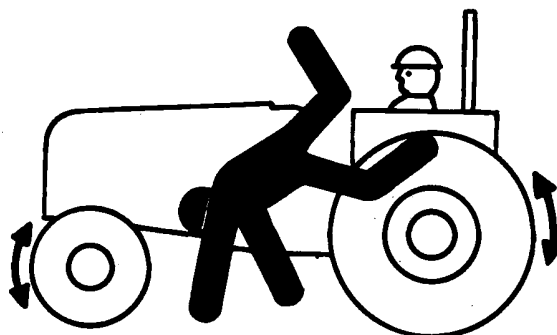
Inspect seat belt and mounting hardware at least once a year. Look for signs of loose hardware or belt damage, such as cuts, fraying, extreme or unusual wear,

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discoloration, or abrasion. Replace only with replacement parts approved for your machine. See your John Deere dealer.

DX,ROPS1-19-22AUG13

Operating the Tractor Safely



TS290—UN—23AUG88



TS276—UN—23AUG88

You can reduce the risk of accidents by following these simple precautions:

- Use your tractor only for jobs it was designed to perform, for example, pushing, pulling, towing, actuating, and carrying a variety of interchangeable equipment designed to conduct agricultural work.
- This tractor is not intended to be used as a recreational vehicle.
- Read this operator's manual before operating the tractor and follow operating and safety instructions in the manual and on the tractor.
- Follow operation and ballasting instructions found in the operator's manual for your implements/ attachments, such as front loaders
- Follow the instructions outlined in the operator's manual of any mounted or trailed machinery or trailer. Do not operate a combination of tractor-machine or tractor-trailer unless all instructions have been followed.
- Make sure that everyone is clear of machine, attached equipment, and work area before starting engine or operation.

- Stay clear of the three-point linkage and pick-up hitch (if equipped) when controlling them.
- Keep hands, feet, and clothing away from power-driven parts.

Driving Concerns

- Never get on or off a moving tractor.
- Complete any required training prior to operating vehicle.
- Keep all children and nonessential personnel off tractors and all equipment.
- Never ride on a tractor unless seated on a John Deere approved seat with seat belt.
- Keep all shields/guards in place.
- Use appropriate visual and audible signals when operating on public roads.
- Move to side of road before stopping.
- Reduce speed when turning, applying individual brakes, or operating around hazards on rough ground or steep slopes.
- Stability degrades when attached implements are at high position.
- Couple brake pedals together for road travel.
- Pump brakes when stopping on slippery surfaces.
- Regularly clean fenders and fender valances (mud flaps) if installed. Remove dirt before driving on public roadways.

Towing Loads

- Be careful when towing and stopping heavy loads. Stopping distance increases with speed and weight of towed loads, and on slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control.
- Consider the total weight of the equipment and its load.
- Hitch towed loads only to approved couplings to avoid rearward upset.

Parking and Leaving the Tractor

- Before dismounting, shut off SCVs, disengage PTO, stop engine, lower implements/attachments to ground, place implement/attachment control devices in neutral and securely engage park mechanism, including the park pawl and park brake. In addition, if tractor is left unattended, remove key.
- Leaving transmission in gear with engine off will NOT prevent the tractor from moving.
- Never go near an operating PTO or an operating implement.
- Wait for all movement to stop before servicing machinery.

Common Accidents

Unsafe operation or misuse of the tractor can result in accidents. Be alert to hazards of tractor operation.

The most common accidents involving tractors:

- Tractor rollover
- Collisions with motor vehicles
- Improper starting procedures
- Entanglement in PTO shafts
- Falling from tractor
- Crushing and pinching during hitching

DX,WW,TRACTOR-19-28FEB17

Avoid Backover Accidents



PC10857XW—UN—15APR13

Before moving machine, be sure that all persons are clear of machine path. Turn around and look directly for best visibility. Use a signal person when backing if view is obstructed or when in close quarters.

Do not rely on a camera to determine if personnel or obstacles are behind the machine. The system can be limited by many factors including maintenance practices, environmental conditions, and operating range.

DX,AVOID,BACKOVER,ACCIDENTS-19-30AUG10

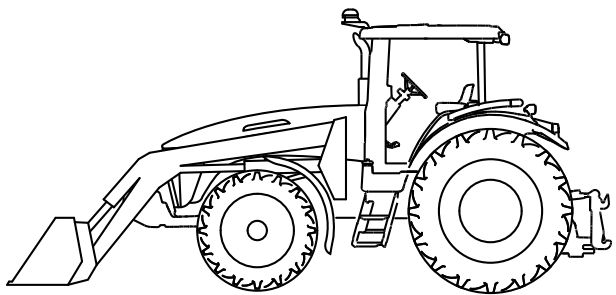
Limited Use in Forestry Operation

The intended use of John Deere tractors when used in forestry operations is limited to tractor-specific applications like transport, stationary work such as log splitting, propulsion, or operating implements with PTO, hydraulic, or electrical systems.

These are applications where normal operation does not present a risk of falling or penetrating objects. Any forestry applications beyond these applications, such as forwarding and loading, requires fitment of application-specific components including Falling Object Protective Structure (FOPS) and/or Operative Protective Structures (OPS). Contact John Deere dealer for special components.

DX,WW,FORESTRY-19-12OCT11

Operating the Loader Tractor Safely



TS1692—UN—09NOV09

When operating a machine with a loader application, reduce speed as required to ensure good tractor and loader stability.

To avoid tractor rollover and damage to front tires and tractor, do not carry load with your loader at a speed over 10 km/h (6 mph).

To avoid tractor damage do not use a front loader or a sprayer tank if the tractor is equipped with a 3 Meter Front Axle.

Never allow anyone to walk or work under a raised loader.

Do not use loader as a work platform.

Do not lift or carry anyone on loader, in bucket, or on implement or attachment.

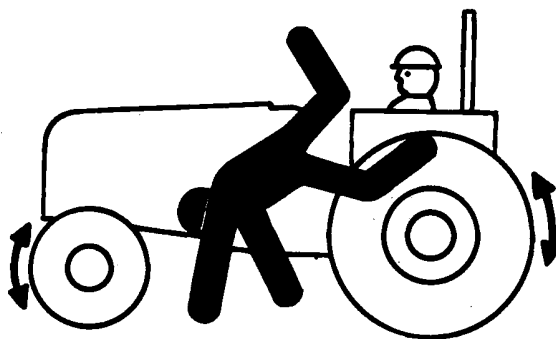
Lower loader to ground before leaving operators station.

The Rollover Protective Structure (ROPS) or cab roof, if equipped, may not provide sufficient protection from load falling onto the operators station. To prevent loads from falling onto the operators station, always use appropriate implements for specific applications (that is, manure forks, round bale forks, round bale grippers, and clammers).

Ballast tractor in accordance to Ballast Recommendations in PREPARE TRACTOR section.

DX,WW,LOADER-19-18SEP12

Keep Riders Off Machine



TS290—UN—23AUG88

Only allow the operator on the machine. Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

DX,RIDER-19-03MAR93

Instructional Seat

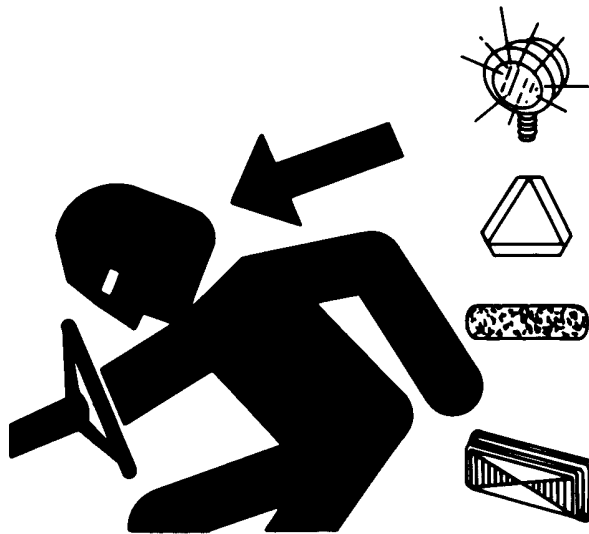


TS1730—UN—24MAY13

The instructional seat, if so equipped, has been provided only for training operators or diagnosing machine problems.

DX,SEAT,NA-19-22AUG13

Use Safety Lights and Devices



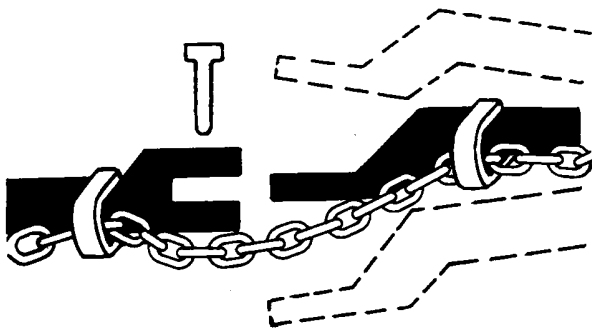
TS951—UN—12APR90

Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use turn signal lights.

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean, and in good working order. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting kit is available from your John Deere dealer.

DX,FLASH-19-07JUL99

Use a Safety Chain



TS217—UN—23AUG88

A safety chain will help control drawn equipment should it accidentally separate from the drawbar.

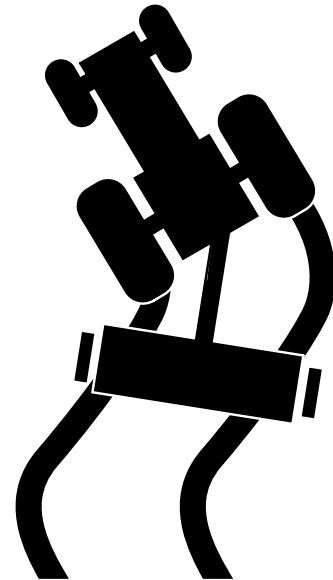
Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning.

See your John Deere dealer for a chain with a strength

rating equal to or greater than the gross weight of the towed machine. Do not use safety chain for towing.

DX,CHAIN-19-03MAR93

Transport Towed Equipment at Safe Speeds



TS1686—UN—27SEP06

Do not exceed the maximum transport speed. This towing unit may be capable of operating at transport speeds that exceed the maximum allowable transport speed for towed implements.

Before transporting a towed implement, determine from signs on the implement or information provided in the implement's operator manual the maximum transport speed. Never transport at speeds that exceed the implement's maximum transport speed. Exceeding the implement's maximum transport speed can result in:

- Loss of control of the towing unit/implement combination
- Reduced or no ability to stop during braking
- Implement tire failure
- Damage to the implement structure or its components

Implements shall be equipped with brakes if the maximum fully loaded weight is greater than 1500 kg (3307 lbs) and greater than 1.5 times the weight of the towing unit.

Example: Implement mass is 1600 kg (3527 lbs) and towing unit mass is 1600 kg (3527 lbs), example implement is not required to have brakes.

Implements without brakes: Do not transport at speeds greater than 32 km/h (20 mph).

Implements with brakes:

- If the manufacturer does not specify a maximum

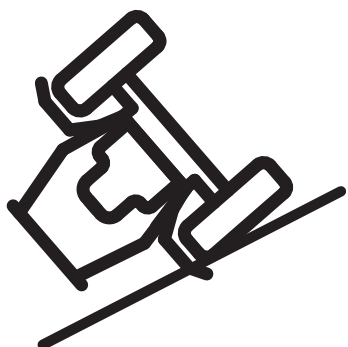
transport speed, do not tow at speeds greater than 40 km/h (25 mph).

- When transporting at speeds up to 40 km/h (25 mph) the fully loaded implement must weigh less than 4.5 times the towing unit weight.
- When transporting at speeds between 40—50 km/h (25—31 mph) the fully loaded implement must weigh less than 3.0 times the towing unit weight.

When towing a trailer, become familiar with the braking characteristics and ensure the compatibility of the tractor/trailer combination in regard to the deceleration rate.

DX,TOW1-19-28FEB17

Use Caution on Slopes, Uneven Terrain, and Rough Ground



RXA0103437—UN—01JUL09

Avoid holes, ditches, and obstructions which cause the tractor to tip, especially on slopes. Avoid sharp uphill turns.

Driving forward out of a ditch, mired condition, or up a steep slope could cause the tractor to tip over rearward. Back out of these situations if possible.

Danger of overturn increases greatly with narrow tread setting, at high speed.

Not all conditions that can cause a tractor to overturn are listed. Be alert for any situation in which stability may be compromised.

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. Operation on all slopes requires extra caution.

Uneven terrain or rough ground can cause loss-of-control and tip-over accidents, which can result in severe injury or death. Operation on uneven terrain or rough ground requires extra caution.

Never drive near the edge of a gully, drop-off, ditch, steep embankment, or a body of water. The machine could suddenly roll over if a wheel goes over the edge or the ground caves in

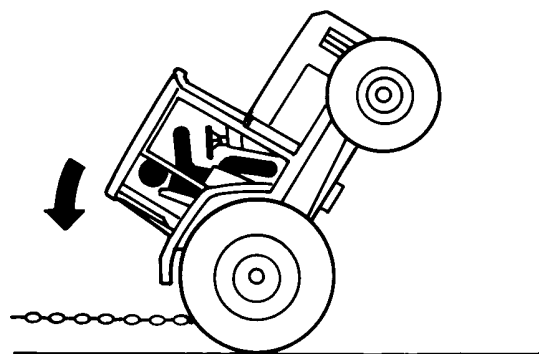
Choose a low ground speed so you will not have to stop or shift while on a slope.

Avoid starting, stopping, or turning on a slope. If the tires lose traction, disengage the PTO and proceed slowly, straight down the slope.

Keep all movement on slopes slow and gradual. Do not make sudden changes in speed or direction, which could cause the machine to roll over.

DX,WW,SLOPE-19-28FEB17

Freeing a Mired Machine



TS1645—UN—15SEP95



TS263—UN—23AUG88

Attempting to free a mired machine can involve safety hazards such as the mired tractor tipping rearward, the towing tractor overturning, and the tow chain or tow bar (a cable is not recommended) failing and recoiling from its stretched condition.

Back your tractor out if it gets mired down in mud. Unhitch any towed implements. Dig mud from behind the rear wheels. Place boards behind the wheels to provide a solid base and try to back out slowly. If necessary, dig mud from the front of all wheels and drive slowly ahead.

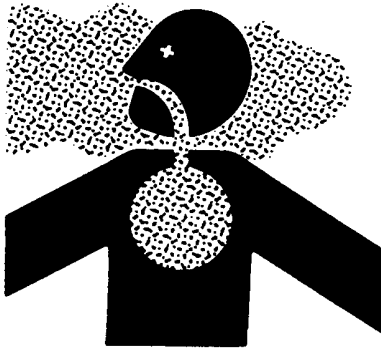
If necessary to tow with another unit, use a tow bar or a long chain (a cable is not recommended). Inspect the chain for flaws. Make sure all parts of towing devices are of adequate size and strong enough to handle the load.

Always hitch to the drawbar of the towing unit. Do not hitch to the front pushbar attachment point. Before

moving, clear the area of people. Apply power smoothly to take up the slack: a sudden pull could snap any towing device causing it to whip or recoil dangerously.

DX,MIREd-19-07JUL99

Avoid Contact with Agricultural Chemicals



TS220—UN—15APR13



TS272—UN—23AUG88

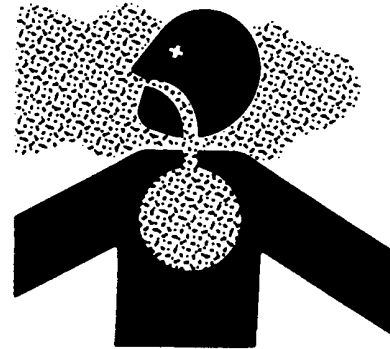
This enclosed cab does not protect against inhaling vapor, aerosol or dust. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

Before leaving the cab, wear personal protective equipment as required by the pesticide use instructions. When re-entering the cab, remove protective equipment and store either outside the cab in a closed box or some other type of sealable container or inside the cab in a pesticide resistant container, such as a plastic bag.

Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.

DX,CABS-19-25MAR09

Handle Agricultural Chemicals Safely



TS220—UN—15APR13



A34471

A34471—UN—11OCT88

Chemicals used in agricultural applications such as fungicides, herbicides, insecticides, pesticides, rodenticides, and fertilizers can be harmful to your health or the environment if not used carefully.

Always follow all label directions for effective, safe, and legal use of agricultural chemicals.

Reduce risk of exposure and injury:

- Wear appropriate personal protective equipment as recommended by the manufacturer. In the absence of manufacturer's instructions, follow these general guidelines:
 - Chemicals labeled **'Danger'**: Most toxic. Generally require use of goggles, respirator, gloves, and skin protection.
 - Chemicals labeled **'Warning'**: Less toxic. Generally require use of goggles, gloves, and skin protections.
 - Chemicals labeled **'Caution'**: Least toxic. Generally require use of gloves and skin protection.
- Avoid inhaling vapor, aerosol or dust.
- Always have soap, water, and towel available when working with chemicals. If chemical contacts skin, hands, or face, wash immediately with soap and water. If chemical gets into eyes, flush immediately with water.
- Wash hands and face after using chemicals and before eating, drinking, smoking, or urination.
- Do not smoke or eat while applying chemicals.

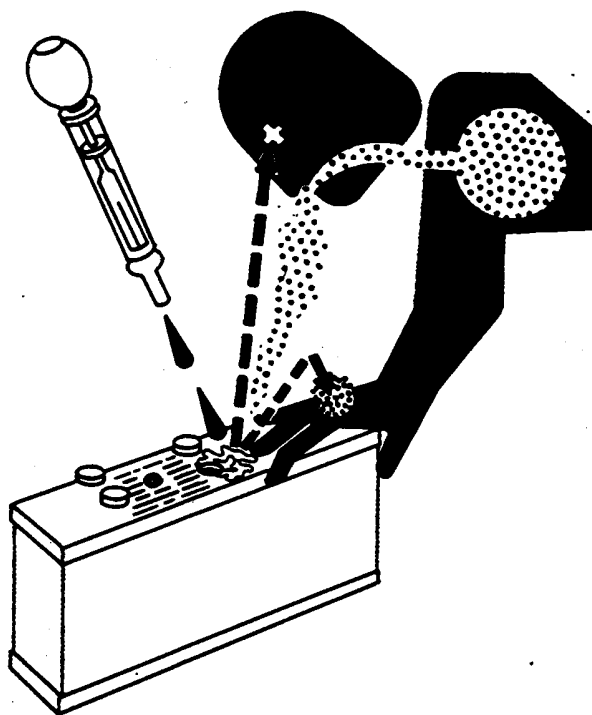
- After handling chemicals, always bathe or shower and change clothes. Wash clothing before wearing again.
- Seek medical attention immediately if illness occurs during or shortly after use of chemicals.
- Keep chemicals in original containers. Do not transfer chemicals to unmarked containers or to containers used for food or drink.
- Store chemicals in a secure, locked area away from human or livestock food. Keep children away.
- Always dispose of containers properly. Triple rinse empty containers and puncture or crush containers and dispose of properly.

DX,WW,CHEM01-19-24AUG10

Handling Batteries Safely



TS204—UN—15APR13



TS203—UN—23AUG88

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace grounded clamp last.

Sulfuric acid in battery electrolyte is poisonous and strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid hazards by:

- Filling batteries in a well-ventilated area
- Wearing eye protection and rubber gloves
- Avoiding use of air pressure to clean batteries
- Avoiding breathing fumes when electrolyte is added
- Avoiding spilling or dripping electrolyte
- Using correct battery booster or charger procedure.

If acid is spilled on skin or in eyes:

1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

If acid is swallowed:

1. Do not induce vomiting.

2. Drink large amounts of water or milk, but do not exceed 2 L (2 qt.).
3. Get medical attention immediately.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**

DX,WW,BATTERIES-19-02DEC10

Avoid Heating Near Pressurized Fluid Lines

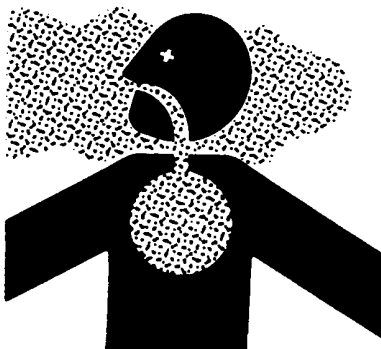


TS953—UN—15MAY90

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can accidentally burst when heat goes beyond the immediate flame area.

DX,TORCH-19-10DEC04

Remove Paint Before Welding or Heating



TS220—UN—15APR13

Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Remove paint before heating:

- Remove paint a minimum of 100 mm (4 in.) from area

to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.

- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

Do not use a chlorinated solvent in areas where welding will take place.

Do all work in an area that is well ventilated to carry toxic fumes and dust away.

Dispose of paint and solvent properly.

DX,PAINT-19-24JUL02

Handle Electronic Components and Brackets Safely



TS249—UN—23AUG88

Falling while installing or removing electronic components mounted on equipment can cause serious injury. Use a ladder or platform to easily reach each mounting location. Use sturdy and secure footholds and handholds. Do not install or remove components in wet or icy conditions.

If installing or servicing a RTK base station on a tower or other tall structure, use a certified climber.

If installing or servicing a global positioning receiver mast used on an implement, use proper lifting techniques and wear proper protective equipment. The mast is heavy and can be awkward to handle. Two people are required when mounting locations are not accessible from the ground or from a service platform.

DX,WW,RECEIVER-19-24AUG10

Practice Safe Maintenance



TS218—UN—23AUG88

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing away from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.

Falling while cleaning or working at height can cause serious injury. Use a ladder or platform to easily reach each location. Use sturdy and secure footholds and handholds.

DX,SERV-19-28FEB17

Avoid Hot Exhaust



RG17488—UN—21AUG09

Servicing machine or attachments with engine running can result in serious personal injury. Avoid exposure and skin contact with hot exhaust gases and components.

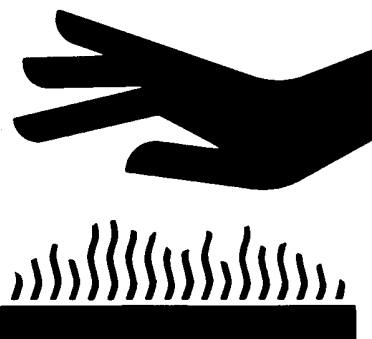
Exhaust parts and streams become very hot during operation. Exhaust gases and components reach temperatures hot enough to burn people, ignite, or melt common materials.

DX,EXHAUST-19-20AUG09

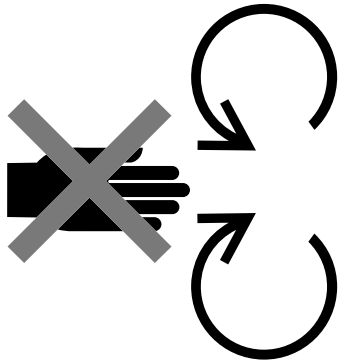
Clean Exhaust Filter Safely



TS227—UN—15APR13



TS271—UN—23AUG88



TS1693—UN—09DEC09



TS1695—UN—07DEC09

During exhaust filter cleaning operations, the engine may run at elevated idle and hot temperatures for an extended period of time. Exhaust gases and exhaust filter components reach temperatures hot enough to burn people, or ignite or melt common materials.

Keep machine away from people, animals, or structures which may be susceptible to harm or damage from hot exhaust gases or components. Avoid potential fire or explosion hazards from flammable materials and vapors near the exhaust. Keep exhaust outlet away from people and anything that can melt, burn, or explode.

Closely monitor machine and surrounding area for smoldering debris during and after exhaust filter cleaning.

Adding fuel while an engine is running can create a fire or explosion hazard. Always stop engine before refueling machine and clean up any spilled fuel.

Always make sure that engine is stopped while hauling machine on a truck or trailer.

Contact with exhaust components while still hot can result in serious personal injury.

Avoid contact with these components until cooled to safe temperatures.

If service procedure requires engine to be running:

- Only engage power-driven parts required by service procedure
- Ensure that other people are clear of operator station and machine

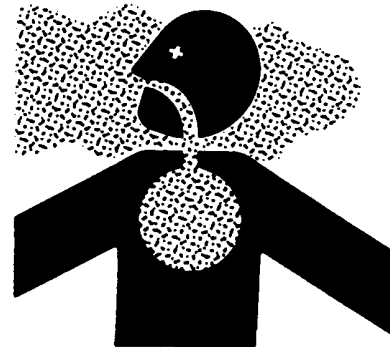
Keep hands, feet, and clothing away from power-driven parts.

Always disable movement (neutral), set the parking brake or mechanism and disconnect power to attachments or tools before leaving the operator's station.

Shut off engine and remove key (if equipped) before leaving the machine unattended.

DX, EXHAUST, FILTER-19-12, JAN11

Work In Ventilated Area



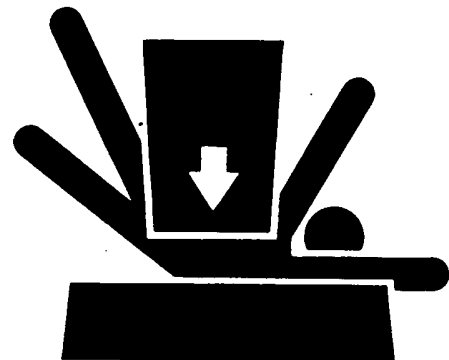
TS220—UN—15APR13

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.

DX, AIR-19-17FEB99

Support Machine Properly



TS229—UN—23AUG88

Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.

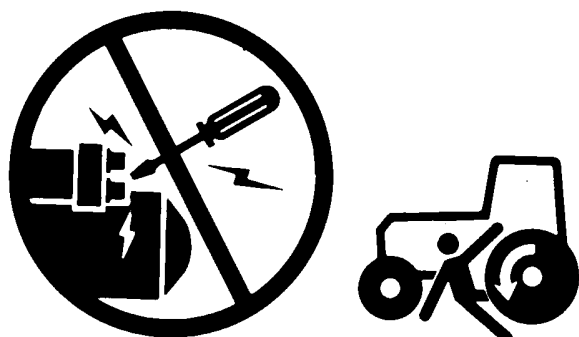
Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load.

Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.

DX,LOWER-19-24FEB00

Prevent Machine Runaway



TS177—UN—11JAN89

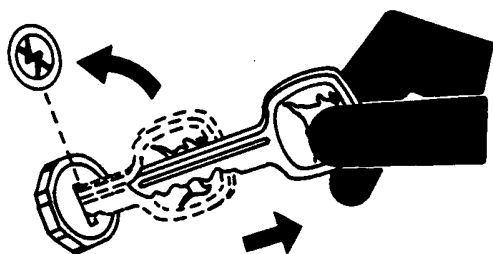
Avoid possible injury or death from machinery runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator's seat, with transmission in neutral or park.

DX,BYPAS1-19-29SEP98

Park Machine Safely



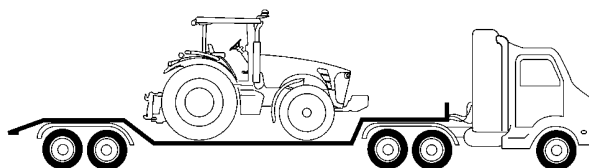
TS230—UN—24MAY89

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.

DX,PARK-19-04JUN90

Transport Tractor Safely



RXA0103709—UN—01JUL09

A disabled tractor is best transported on a flatbed carrier. Use chains to secure the tractor to the carrier. The axles and tractor frame are suitable attachment points.

Before transporting the tractor on a low-loader truck or flatbed rail wagon, make sure that the hood is secured over the tractor engine and that doors, roof hatch (if equipped) and windows are properly closed.

Never tow a tractor at a speed greater than 10 km/h (6 mph). An operator must steer and brake the tractor under tow.

DX,WW,TRANSPORT-19-19AUG09

Service Cooling System Safely



TS281—UN—15APR13

Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off engine. Only remove filler cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

DX,WW,COOLING-19-19AUG09

Service Accumulator Systems Safely



TS281—UN—15APR13

Escaping fluid or gas from systems with pressurized accumulators that are used in air conditioning, hydraulic, and air brake systems can cause serious injury. Extreme heat can cause the accumulator to burst, and pressurized lines can be accidentally cut. Do not weld or use a torch near a pressurized accumulator or pressurized line.

Relieve pressure from the pressurized system before removing accumulator.

Relieve pressure from the hydraulic system before removing accumulator. Never attempt to relieve hydraulic system or accumulator pressure by loosening a fitting.

Accumulators cannot be repaired.

DX,WW,ACCLA2-19-22AUG03

Service Tires Safely



RXA0103438—UN—11JUN09

Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension

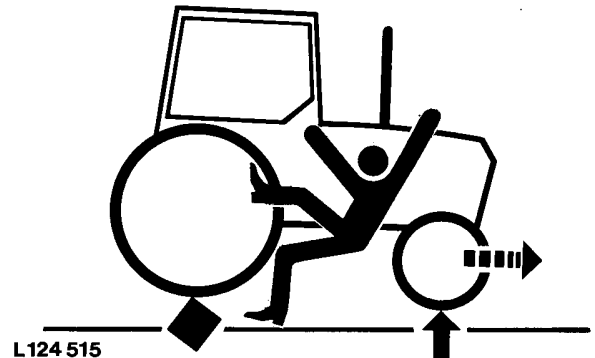
hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts.

Wheels and tires are heavy. When handling wheels and tires use a safe lifting device or get an assistant to help lift, install, or remove.

DX,WW,RIMS-19-28FEB17

Service Front-Wheel Drive Tractor Safely



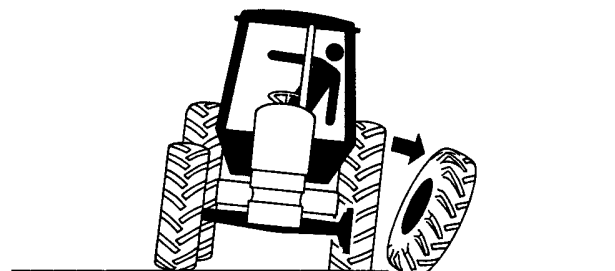
L124 515

L124515—UN—06AUG94

When servicing front-wheel drive tractor with the rear wheels supported off the ground and rotating wheels by engine power, always support front wheels in a similar manner. Loss of electrical power or transmission hydraulic system pressure will engage the front driving wheels, pulling the rear wheels off the support if front wheels are not raised. Under these conditions, front drive wheels can engage even with switch in disengaged position.

DX,WW,MFWD-19-19AUG09

Tightening Wheel Retaining Bolts/Nuts



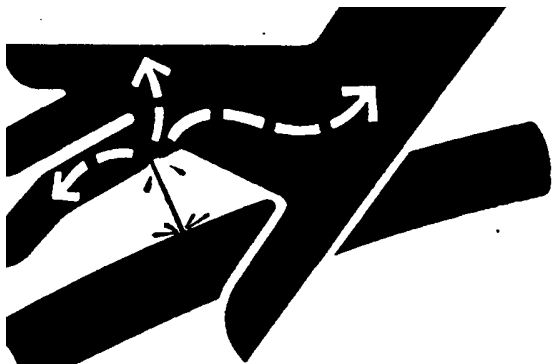
L124 516

L124516—UN—03JAN95

Torque wheel retaining bolts/nuts at the intervals specified in section Break-In Period and Service.

DX,WW,WHEEL-19-12OCT11

Avoid High-Pressure Fluids



X9811—UN—23AUG88

Inspect hydraulic hoses periodically – at least once per year – for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid or any other signs of wear or damage.

Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

DX,FLUID-19-12OCT11

Do Not Open High-Pressure Fuel System



TS1343—UN—18MAR92

High-pressure fluid remaining in fuel lines can cause serious injury. Do not disconnect or attempt repair of fuel lines, sensors, or any other components between the

high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system.

Only technicians familiar with this type of system can perform repairs. (See your John Deere dealer.)

DX,WW,HPCR1-19-07JAN03

Store Attachments Safely



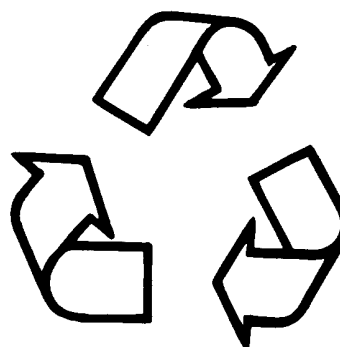
TS219—UN—23AUG88

Stored attachments such as dual wheels, cage wheels, and loaders can fall and cause serious injury or death.

Securely store attachments and implements to prevent falling. Keep playing children and bystanders away from storage area.

DX,STORE-19-03MAR93

Decommissioning — Proper Recycling and Disposal of Fluids and Components



TS1133—UN—15APR13

Safety and environmental stewardship measures must be taken into account when decommissioning a machine and/or component. These measures include the following:

- Use appropriate tools and personal protective equipment such as clothing, gloves, face shields or glasses, during the removal or handling of objects and materials.
- Follow instructions for specialized components.
- Release stored energy by lowering suspended machine elements, relaxing springs, disconnecting

the battery or other electrical power, and releasing pressure in hydraulic components, accumulators, and other similar systems.

- Minimize exposure to components which may have residue from agricultural chemicals, such as fertilizers and pesticides. Handle and dispose of these components appropriately.
- Carefully drain engines, fuel tanks, radiators, hydraulic cylinders, reservoirs, and lines before recycling components. Use leak-proof containers when draining fluids. Do not use food or beverage containers.
- Do not pour waste fluids onto the ground, down a drain, or into any water source.
- Observe all national, state, and local laws, regulations, or ordinances governing the handling or disposal of waste fluids (example: oil, fuel, coolant, brake fluid); filters; batteries; and, other substances or parts. Burning of flammable fluids or components in other than specially designed incinerators may be prohibited by law and could result in exposure to harmful fumes or ashes.
- Service and dispose of air conditioning systems appropriately. Government regulations may require a certified service center to recover and recycle air conditioning refrigerants which could damage the atmosphere if allowed to escape.
- Evaluate recycling options for tires, metal, plastic, glass, rubber, and electronic components which may be recyclable, in part or completely.
- Contact your local environmental or recycling center, or your John Deere dealer for information on the proper way to recycle or dispose of waste.

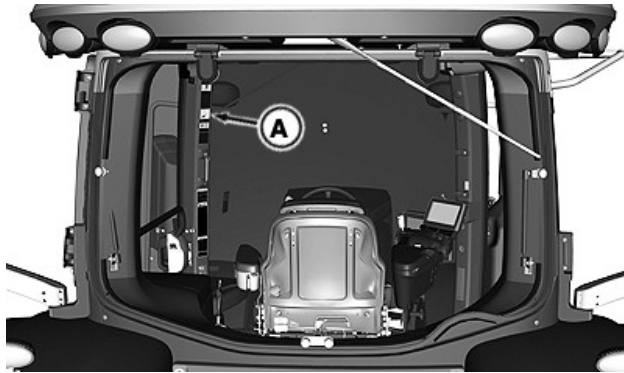
DX,DRAIN-19-01JUN15

Safety Signs

Seat Belt



RXA0161467—19—30NOV17



RXA0143796—UN—18JUL14

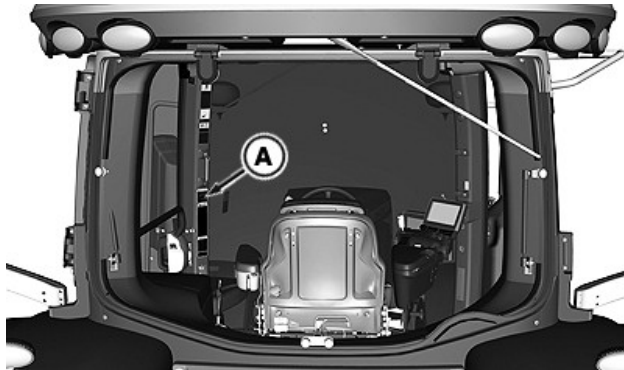
A—Transport and ROPS Warning Label

KT81203.0000481-19-01DEC17

Instructional Seat (If Equipped)



RXA0139152—19—07FEB14



RXA0143797—UN—18JUL14

A—Instructional Seat Label

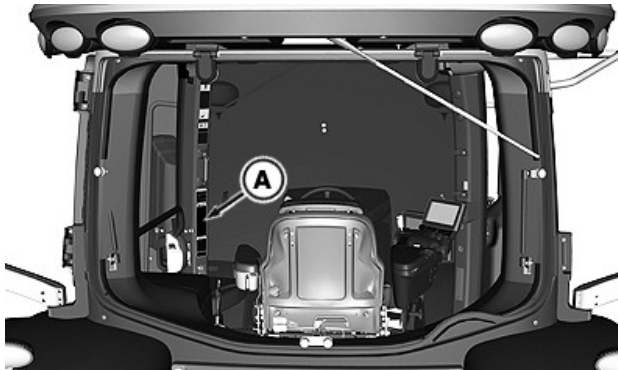
KT81203.000048C-19-11NOV16

Operator's Manual

Cab Suspension With Hydraulic Accumulators (If Equipped)



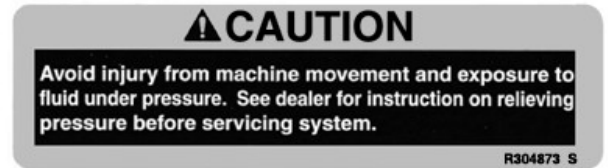
RXA0149693—19—18AUG15



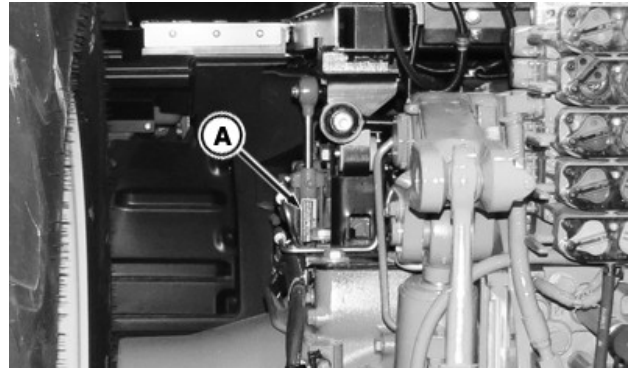
RXA0143795—UN—18JUL14

A—Before Operating Tractor Label

KT81203,0000482-19-11NOV16

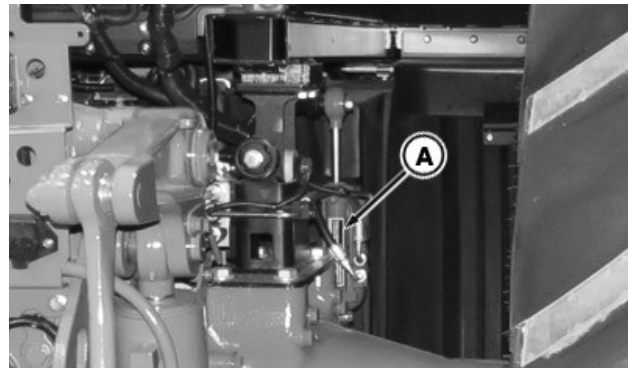


RXA0146397—19—20NOV14



RXA0134885—UN—05AUG13

Cab Suspension Cylinder Label - Left Side



RXA0134886—UN—05AUG13

Cab Suspension Cylinder Label - Right Side

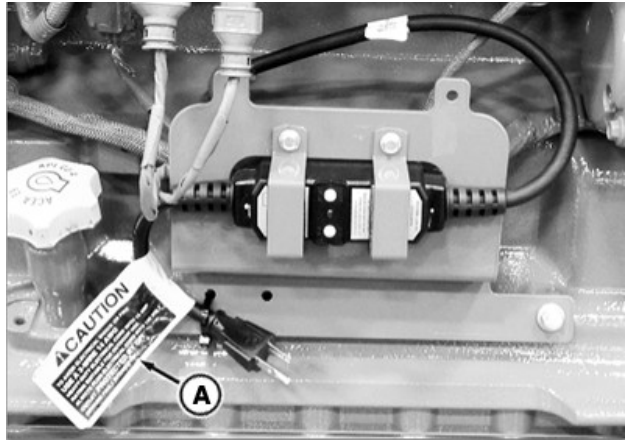
A—Cab Suspension Label

KT81203,0000484-19-20AUG18

Starter



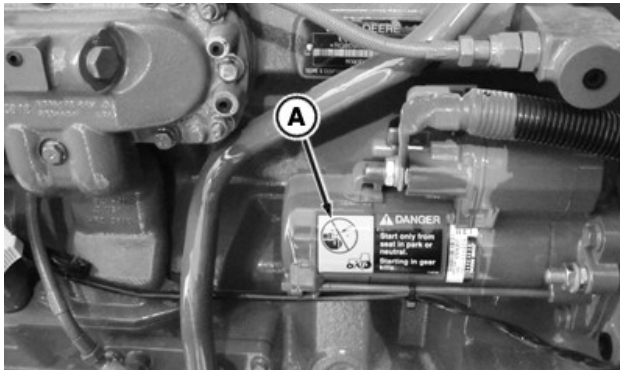
RXA0146409—19—26NOV14



RXA0148606—UN—09JUL15

A—Engine Heater Label

KT81203,0000486-19-11NOV16

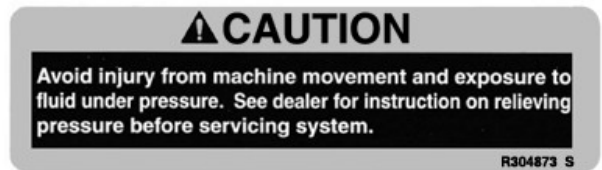


RXA0134425—UN—05AUG13

A—Starter Label

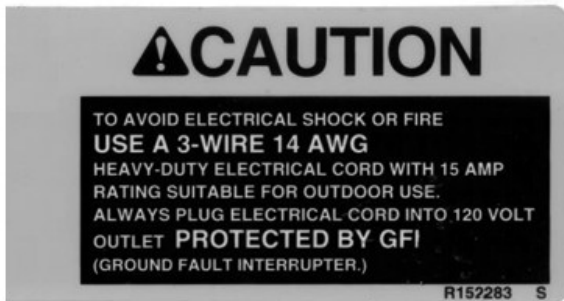
KT81203,0000485-19-23JAN17

Triple Link Suspension Plus (TLS™ Plus) (If Equipped)

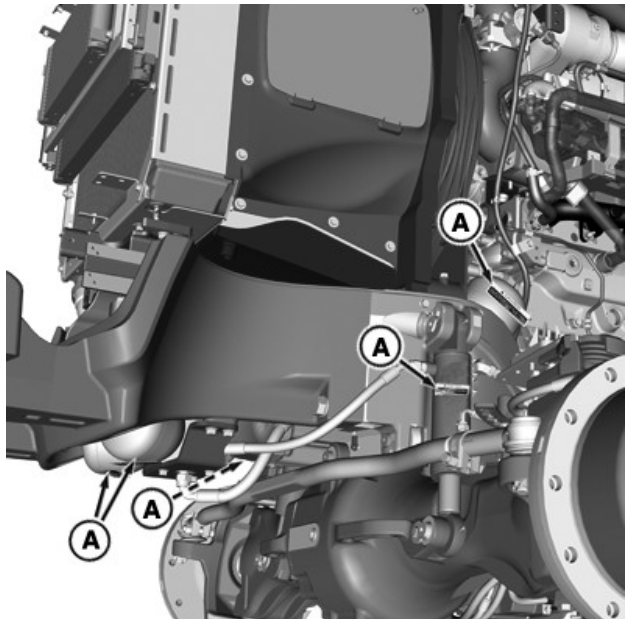


RXA0146397—19—20NOV14

Engine Block Heater (If Equipped)



RXA0131967—19—15APR13



RXA0134898—UN—15JUL14

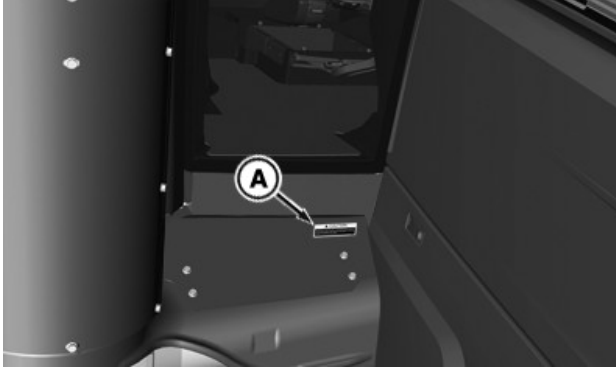
A—TLS™ Label

KT81203,0000487-19-11NOV16

Brake Accumulator (If Equipped)

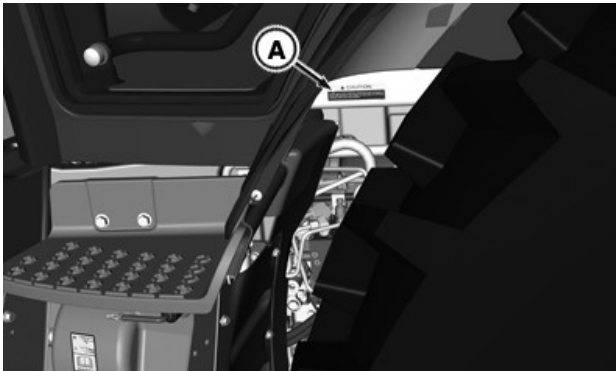


RXA0146397—19—20NOV14



RXA0134944—UN—28AUG13

Brake Accumulator Label (Right-Hand Front Exhaust Shield, Convenience Step Removed For Clarity)

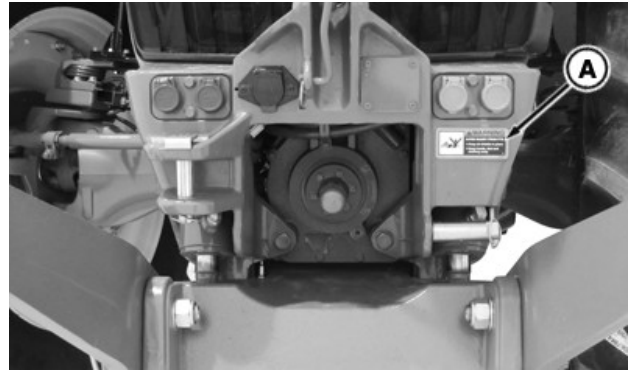


RXA0134945—UN—07AUG13

Brake Accumulator Label

A—Brake Accumulator Label

KT81203,0000488-19-23JAN17



RXA0134429—UN—05AUG13

A—Front PTO Label

KT81203,0000489-19-11NOV16

Front PTO (If Equipped)

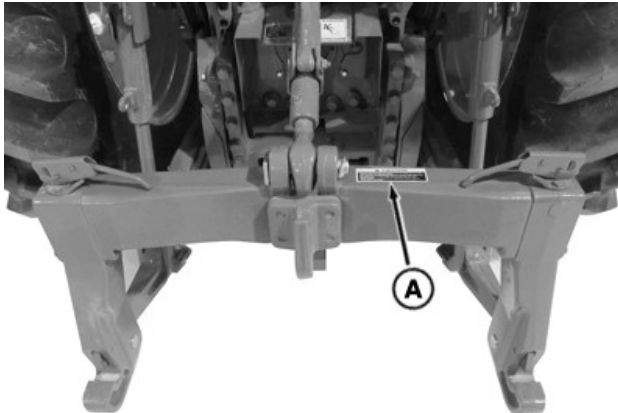


RXA0146423—19—01DEC14

Quick-Hitch(If Equipped)



RXA0146404—19—21NOV14



A—Quick-Hitch Label

RXA0134877—UN—05AUG13

KT81203,000048A-19-12JUL18

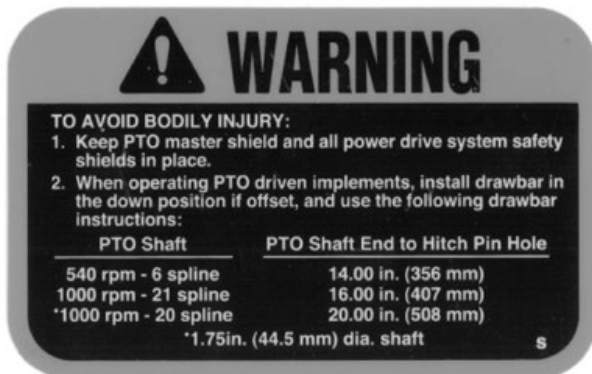


RXA0146544—19—09DEC14

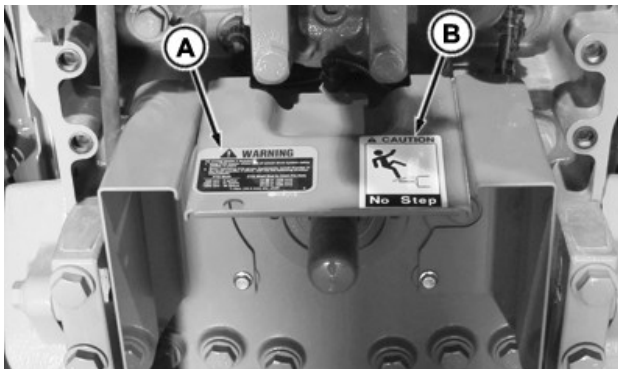
A—Rear PTO Label
B—No Step Label

KT81203,000048B-19-11NOV16

Rear PTO Shield



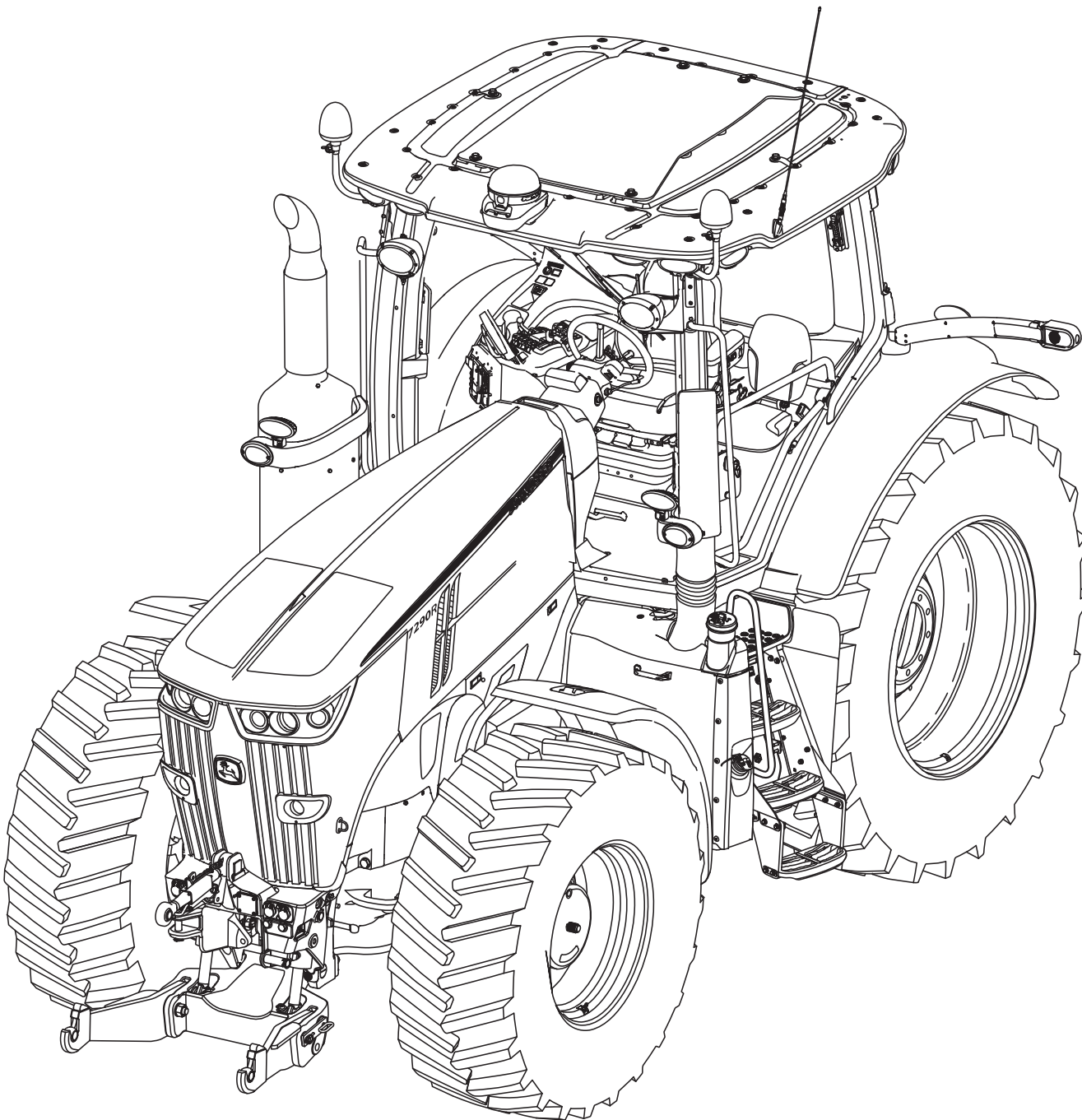
RXA0146396—19—21NOV14



RXA0134428—UN—05AUG13

Vehicle Overview

7R Series Tractor



7R Series Tractor (Typical)

RXA0155931—UN—23NOV16

RX32825,000179F-19-23NOV16

Operator's Manual Use

Operator's Manual Use

This tractor Operator's Manual contains information primarily for machine operation and routine maintenance. It is not a detailed service manual. More detailed service information, is available in the appropriate Technical Manual. See your John Deere dealer.

 **CAUTION: Reduce the possibility of injury or equipment damage. Before operating the tractor by itself, or in conjunction with a mounted implement or trailer become fully familiar with operating characteristics of all equipment. Carefully read appropriate tractor and implement Operator's Manuals.**

Operator's Manuals and safety decals on this tractor and mounted implements and trailers provide important information on how to operate the equipment in the best manner possible. Thus, it is important for all users to make themselves thoroughly familiar with this information prior to starting any operations.

KT81203,000042B-19-22NOV16

General Vehicle Description

7R Series Tractor

Your 7R Series Tractor has a high power density because of its low overall machine weight and high horsepower rating. Efficiency features found on its transmission, make your tractor an excellent choice in field work and for transport applications such as silage or manure hauling because they provide fast acceleration and low total fluid economy.

World-class efficiency is combined with increased horsepower to push productivity to higher levels than ever before. Intelligent Power Management (IPM) provides a horsepower increase during PTO and transport applications for full PTO power and speed.

The tractor's quiet, comfortable, and intuitive CommandView™ III Cab provides a secure base of operations. A totally redesigned CommandARM™, ten inch CommandCenter™ Display, and a seat with a 40-degrees of swivel, help keep you comfortable and productive during long hours spent in the cab.

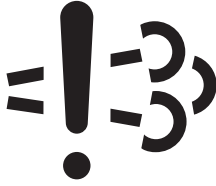
RX32825,000179E-19-23NOV16

*CommandView is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company*

Engine Operation

Required Machine Stop Warning

Machine Stop Mandate Occurs



RG22491—UN—21AUG13

IMPORTANT: In some situations, machine engine power may be reduced as described. On notification, immediately place the machine in a safe state and or move it to a safe location. A mandated machine stop can only be removed by a service technician.

Engine Emissions System Malfunction Indicator illuminates when an emission-related fault occurs.



RG22492—UN—21AUG13

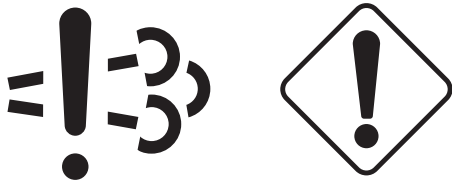
Warning Indicator illuminates when a condition exists which requires operator action.



RG22493—UN—21AUG13

Engine Stop Indicator illuminates when a condition exists which requires immediate operator action and service.

Emission System Fault Has Occurred



RG26361—UN—04SEP14

30 minutes remaining, Engine Emissions System Malfunction and Warning Indicators are illuminated and alarm sounds to warn operator of emissions-related fault. “Less than 30 minutes to Power Restriction” displayed on machines with display.

- Engine power is normal.
- Machine operation is normal.
- Place machine in a safe state.
- Contact service provider.



RG26972—UN—26MAR15

20 minutes remaining, Engine Emissions System Malfunction and Engine Stop Indicators are illuminated and alarm sounds to warn operator of emissions-related fault. “Less than 20 minutes to Power Restriction” displayed on machines with displays.

- Engine power and torque are reduced.
- Key Off - Key On will temporarily provide full power.
- Place machine in a safe state.
- Contact service provider.



RG26972—UN—26MAR15

2 minutes or less remaining, Engine Emissions System Malfunction and Engine Stop Indicators are illuminated and alarm sounds to warn operator of emissions-related fault which has not been corrected. “Power Restriction” displayed on machines with displays.

- Engine power is idle only.
- Place machine in a safe state.
- Contact service provider.

DX,MACHSTOPWARN,AG-19-02OCT15

Engine Fuel System and Power Rating

Fuel System

IMPORTANT: Modification or alteration of injection system or emission control devices will terminate warranty to purchaser.

Do not attempt to service injection system. Special training and special tools are required. See your John Deere dealer.

Engine Certification/Power Rating

kW (hp) rating on engine emissions certification label specifies gross engine kW (hp), which is flywheel power without fan.

TS36762,0000174-19-18NOV16

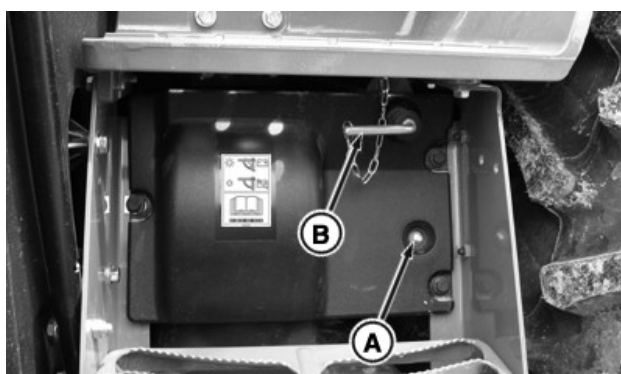
Battery Disconnect Switch

CAUTION: Avoid injury or damage to tractor systems from inadvertent contact with electrical power. Disconnect battery when directed.

IMPORTANT: Never turn power off with the battery disconnect switch while engine is running. This could result in serious damage to tractor electrical components.

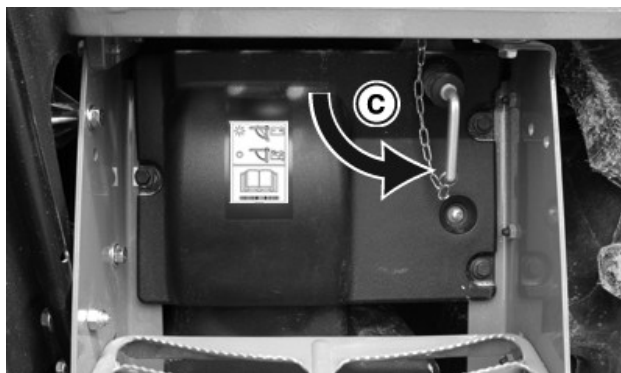
During a long storage period, always turn battery disconnect switch to off position. If battery disconnect switch is left on, battery could lose charge.

1. Stop tractor and place transmission into PARK.



RXA0163857—UN—10JUL18

IMPORTANT: Prevent damage to tractor emissions system. Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Electrical power must be maintained during automatic purge of Diesel Exhaust Fluid (DEF). Light (A) is illuminated during DEF purge. If full system is not purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF freezes and may damage system components. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn off disconnect switch (B) until light goes out.

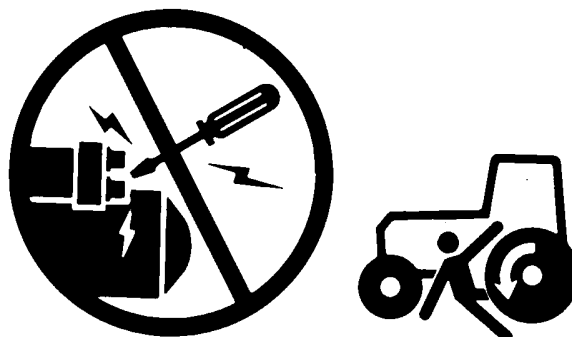


RXA0163858—UN—10JUL18

2. When battery disconnect switch indicator light has gone out, turn disconnect switch off (C).

TS36762,0000175-19-11JUL18

Start the Engine



TS177—UN—11JAN89

CAUTION: Avoid possibility of personal injury or death. Engine starting with shift lever in gear indicates malfunction of starting circuit. Repair immediately. See your John Deere dealer.

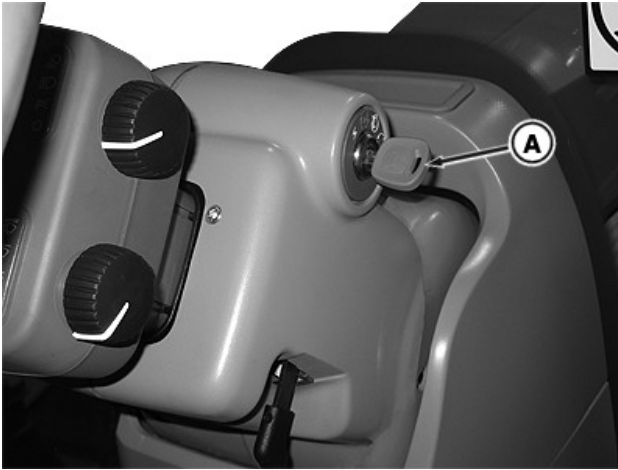
Do not start engine by shorting across starter terminals. Tractor will start in gear if normal circuitry is bypassed. Start engine **ONLY** from operator seat.

Before Starting Tractor

1. Move SCV levers to NEUTRAL position.
2. Disengage PTO.
3. Move hand throttle to slow idle position.
4. Move transmission shift lever to PARK position.

CAUTION: Avoid possibility of serious injury or death. Be sure tractor and attached equipment are clear of people and other objects.

5. Depress clutch and brake pedals.
6. Sound horn.



RXA0129144—UN—30OCT12

7. Turn key switch (A) to engage starter. Release key when engine starts.

IMPORTANT: Avoid starter damage. Do not operate starter more than 30 seconds. Wait at least two minutes before trying again.

If Engine Fails To Start:

Check quantity and quality of fuel.

Check electrical system.

In cold weather (at or below -6 °C (21 °F)), follow steps listed in appropriate Cold Weather Starting topic in Cold Weather Operation section of this Operator's Manual.

Engine speed is limited to 1440 rpm based on transmission type and transmission-hydraulic oil temperature:

- IVT™/AutoPowr™ transmission - temperature below -5 °C (23 °F).
- e23™ transmission - temperature below -18 °C (0 °F).

If engine fails to start after three attempts, see your John Deere dealer.

TS36762,0000176-19-25JUL18

Run the Engine

IMPORTANT: Do not start engine with throttle pushed completely forward.

Avoid excessive engine idling (more than 5 minutes). Prolonged idling may cause engine coolant temperature to fall below normal range. Prolonged idling causes crankcase oil dilution, due to incomplete fuel combustion, and permits formation of gummy deposits on valves, pistons, and piston rings. It promotes rapid

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AutoPowr is a trademark of Deere & Company
e23 is a trademark of Deere & Company

accumulation of engine sludge and unburned fuel in exhaust system.

Operate engine between 1500—2100 rpm. Do not operate engine constantly below 1500 rpm during heavy draft usage or when tractor is under full PTO load.

For maximum tractor performance:

- Ensure that tractor is correctly ballasted, see Performance Ballasting section of this Operator's Manual.
- For e23™ transmission, see e23™ Transmission section of this Operator's Manual.
- For IVT™/AutoPowr™ transmission, see IVT™/AutoPowr™ Transmission section of this Operator's Manual.

If engine stalls, start immediately to provide lubrication to critical engine parts.

Allow engine to idle for 20 seconds before turning key switch to OFF position.

Contact your John Deere dealer if any symptoms that may be early signs of engine problems are detected:

- Sudden drop in oil pressure
- Abnormal coolant temperatures
- Unusual noise or vibration
- Sudden loss of power
- Excessive fuel consumption
- Excessive oil consumption
- Fluid leaks

TS36762,0000177-19-25JUL18

Stop the Engine

IMPORTANT: Before stopping an engine that has been operating at working load, idle engine at least 2 minutes at 1000—1200 rpm to cool hot engine parts. If an Exhaust Filter Cleaning has just been performed, increase engine idle time to 4 minutes. If service work is going to be performed on exhaust filter, increase engine idle time to 10 minutes.

IMPORTANT: Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light goes out.

Battery disconnect switch without indicator light: Engine not equipped with SCR system. No waiting period is required before turning off switch.

See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

1. Pull throttle back to slow idle position.
2. Depress clutch and brake pedals.
3. Put transmission in PARK position.
4. Lower all equipment to ground.
5. Make sure SCV levers are in NEUTRAL position.
6. Pull rear and front PTO (if equipped) switches rearward to disengage PTO.

CAUTION: Remove key to help prevent accidents.

7. Turn key switch to OFF position and remove key.

TS36762,0000178-19-21AUG18

Restart Engine That Has Run Out of Fuel

1. Fill fuel tank.
2. Turn key switch to RUN position to start electric fuel pump and bleed air from fuel system.

NOTE: Steps two and three may need to be repeated as necessary if fuel tanks have been removed or drained.

3. Allow pump to run for 30 seconds to 1 minute before attempting to restart engine.

Fuel pump will turn off after 1 minute. Key switch must be turned to OFF and back to RUN to turn pump back on.

TS36762,0000179-19-18NOV16

Reduce Fuel Consumption

Fuel consumption reduction guidelines:

- Replace air cleaner, fuel, engine oil, and transmission-hydraulic filter elements at specified service intervals (see Service - Change section of this Operator's Manual) or when indicated by CommandCenter™ display messages.
- Use recommended oils and lubricants only (see appropriate section in Fuel, Lubricants, and Coolant - General Information section of this Operator's Manual).
- Adjust hitch function for most efficient operation (see TouchSet™ Depth Control section of this Operator's Manual).
- Check tires for correct pressure weekly (see Front or

Rear Wheels, Tires, and Treads section of this Operator's Manual).

- Ballast tractor for conditions (see Performance Ballasting section of this Operator's Manual).
- For gear transmissions, select correct gear. Always drive in highest possible gear with reduced engine speed. Choose gear so engine speed drops 150-250 rpm when tractor is operating and engine is under load (see appropriate transmission section of this Operator's Manual).

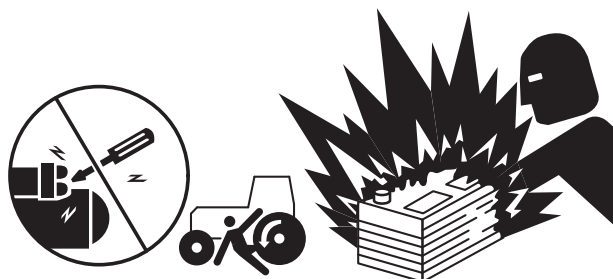
NOTE: For light work, reduce engine speed below 2000 rpm. Select gear so that engine speed drops 200—300 rpm when operating.

Using Maximum Set Speed may improve fuel economy (see Activate and Set Maximum Set Speed and Use Maximum Set Speed with Different Transmission Modes in Transmission - General Information section of this Operator's Manual).

- IVT™/AutoPowr™ transmissions provide additional fuel saving advantages (see IVT™/AutoPowr™ Transmission section of this Operator's Manual).

TS36762,000017A-19-13DEC16

Use Battery Booster or Charger



RXA0086722—UN—10FEB06

CAUTION: Gas given off by batteries is explosive. Keep sparks and flames away from batteries. Make last connection and first disconnection at point away from booster batteries.

Avoid possible injury or death from machinery runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator's seat, with transmission in neutral or park.

IMPORTANT: Be sure that polarity is correct before making connections. Reversed polarity will damage electrical system or possibly cause battery to explode.

If two or more booster batteries are used, they must be connected in parallel ensuring that booster batteries are producing 12 volt charge.

Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light goes out.

Battery disconnect switch without indicator light: Engine not equipped with SCR system. No waiting period is required before turning off switch.

See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

2. Switch charger to ON and charge battery according to charger manufacturer's instructions.
3. Switch charger to OFF. Remove negative charger lead first, then positive lead.

TS36762.000017B-19-21AUG18



RXA0143342—UN—03JUL14

Positive Terminal (Left-Hand Side of Tractor Behind Battery Panel)

Booster Battery

1. Remove cap and attach red cable to remote positive terminal (A), located on left-hand side of tractor behind battery panel, and positive terminal of booster battery.
2. Attach black cable to negative terminal of booster battery. Attach other end to ground (B) on tractor frame.
3. Remove ground cable first when disconnecting.

Battery Charger

IMPORTANT: Set battery charger at nominal 12 volt and no more than 16 volt maximum.

1. Remove cap and attach positive charger lead to positive remote terminal with charger in OFF position. Attach negative charger lead to negative ground at tractor frame, away from batteries.

Cold Weather Operation

Cold Weather Starting—With Glow Plug Starting Aid (6.8 L Engine)

IMPORTANT: To determine tractor engine type, see Engine Serial Number in Identification Numbers Section of this Operator's Manual.

IMPORTANT: DO NOT use starting fluid on tractors equipped with glow plugs.

Use of starting fluid on engines with glow plugs can cause pre-detonation when contacting heater components. Engine damage may result.

NOTE: All 6.8 L engines are equipped with glow plugs. Glow plugs are protected by 50 Amp harness in-line fuse.

Use of glow plugs is recommended in cold weather when temperature is at or below -6°C (21°F).

1. Turn key switch to RUN position.



RXA0154694—UN—12OCT16
Corner Post Display

2. Engine Preheat Indicator (A) on corner post display illuminates when system is activated.
3. Glow plug wait timer (B) will start at 15 seconds or less, depending on temperature, and count down to zero.

Intercooler Outlet Temperature $^{\circ}\text{C}$ ($^{\circ}\text{F}$)	Wait Time (Seconds)
-15 (5)	15
-10 (14)	10
-5 (23)	5
0 (32)	5
5 (41)	2
8 (46)	0

4. At 0, turn key switch to start engine.
5. If engine does not start, return key to OFF position and repeat steps 1-4.

If Engine Fails to Start:

- Check quantity and quality of fuel.

- Check electrical system.
- If engine fails to start after three attempts, contact your John Deere dealer.

TS36762,000017C-19-13DEC16

Cold Weather Starting—Without Starting Aid (9.0 L Engine)



TS1356—UN—18MAR92

CAUTION: Starting fluid is highly flammable. While using this product do not smoke and make sure to extinguish all flames. Turn off all pilot lights, stoves, heaters, electrical motors, and other sources of ignition while using this product and/or if vapors are still present. Avoid contact of aerosol with battery terminals, solenoid, or other electrical/electronic components. Do not overuse this product. Keep cap on container and store in cool location when not in use.

NOTE: Use of starter fluid is recommended when starting tractor at or below -6°C (21°F) (See Cold Weather Starting—With Starting Aid (9.0 L Engine) in this section of this Operator's Manual).

A cold weather starting kit is available from your John Deere dealer.



RXA0128561—UN—18OCT12

Air Intake Screen

1. Spray starting fluid into air intake screen (A) for two or three seconds.
2. Follow steps as outlined in Start the Engine in Engine Operation section of this Operator's Manual.

If Engine Fails to Start:

- Check quantity and quality of fuel.
- Check electrical system.
- If engine fails to start after three attempts, contact your John Deere dealer.

TS36762,000017D-19-31AUG17

**Cold Weather Starting—With Starting Aid
(9.0 L Engine)**

CAUTION: Avoid personal injury and damage to engine. Inject fluid only while engine is turning. Follow safety information on the container. Do not carry starting fluid cans inside cab.

Starting fluid is highly flammable. While using this product do not smoke and make sure to extinguish all flames. Turn off all pilot lights, stoves, heaters, electrical motors, and other sources of ignition while using this product and/or if vapors are still present. Avoid contact of aerosol with battery terminals, solenoid, or other electrical/electronic components. Do not overuse this product. Keep cap on container and store in cool location when not in use.

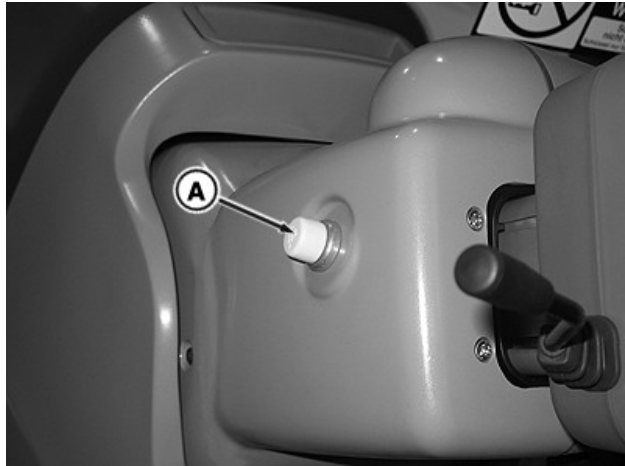
NOTE: Use of cold weather starting option is recommended when starting tractor at or below -6 °C (21 °F).

1. Start tractor as described in Start the Engine in Engine Operation section of this Operator's Manual.

IMPORTANT: Avoid starter damage. Do not operate starter more than 30 seconds. Wait at least two minutes before trying again.

When applying starter fluid, if pre-ignition knocking is detected, stop using starter fluid immediately.

2. If engine refuses to start, complete these steps while engine is cranking:



RXA0129150—UN—05NOV12

Starting Aid

- Press starter fluid button (A) in a series of quick taps rather than stream.
- After series of taps (no more than three) on starter fluid button, release starter fluid button for three seconds.
- If engine attempts to start but falters, use tapping motion on starter fluid button sparingly and only until engine runs on its own.

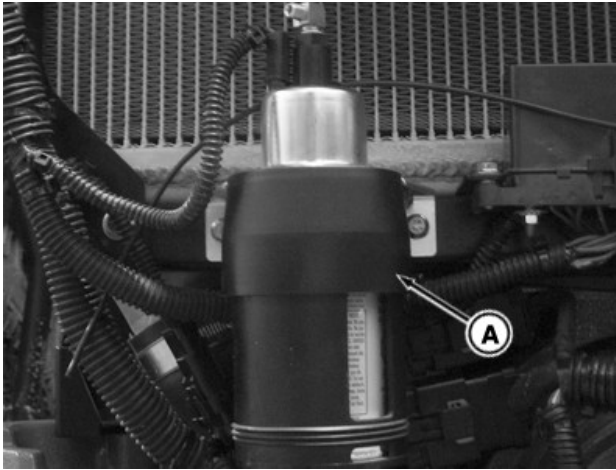
IMPORTANT: Idle engine at approximately 1000 rpm with no load for one to two minutes to assure adequate lubrication. Do not operate under full load until engine has reached normal operating temperature.

3. When engine starts, run engine at approximately 1000 rpm for two minutes.

TS36762,000017E-19-13DEC16

Change Starting Fluid Canister

CAUTION: Do not use starting fluid near fire, sparks, or flames. Read caution information on container. Protect container against damage. Do not carry starting fluid canisters inside cab.



RXA0135276—UN—28AUG13

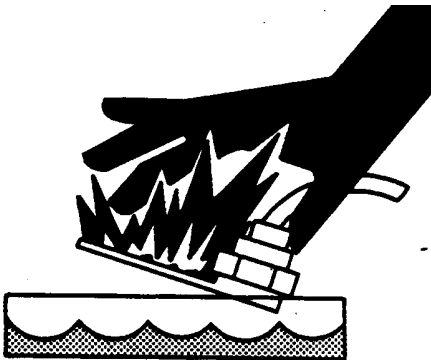
1. Access canister (A). Open hood, see Open Hood in Service-General Information section of this Operator's Manual.
2. Remove safety cap and plastic spray nozzle from new canister.

IMPORTANT: To avoid drawing dust into engine, always keep starting fluid canister installed bottom side up, clean and in position.

3. Loosen canister and remove old can.
4. Install new can and tighten canister.

TS36762,000017F-19-29NOV16

Auxiliary Heaters Use

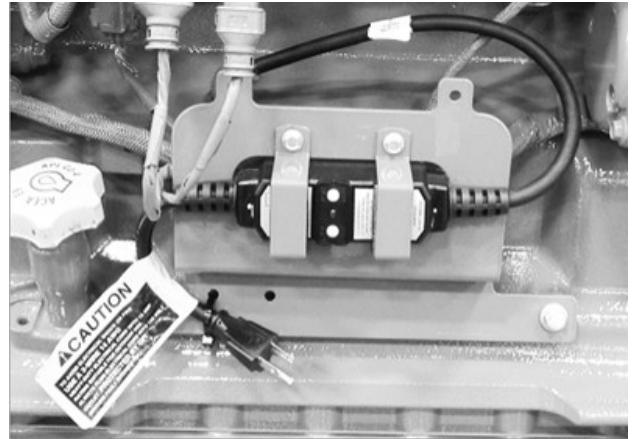


TS210—UN—23AUG88

CAUTION: To avoid electrical shock or fire, use 3-wire, 14 AWG (14 gauge), heavy-duty electrical cord with 15 amp rating, suitable for outdoor use. Always plug electrical cord into 120 volt outlet protected by GFI (Ground Fault Interrupter).

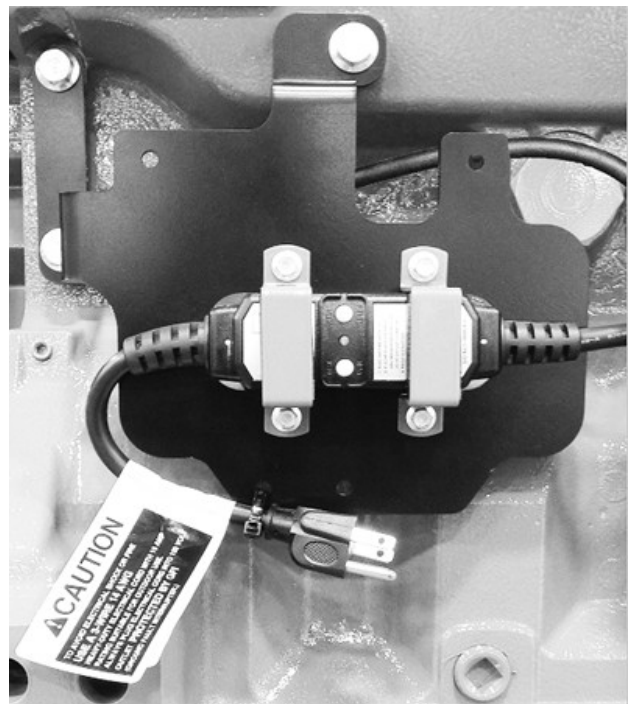
Before connecting heater to power source, be sure that element is immersed in coolant. NEVER energize heater in air. Doing so can cause element sheath to burst causing personal injury.

IMPORTANT: Ground fault circuit interrupter on tractor protects tractor only, not electrical wiring supplying power to tractor. Test all ground fault interrupters before each use.



RXA0148179—UN—13MAY15

Engine Coolant Heater (6.8 L Engine)



RXA0148181—UN—13MAY15

Engine Coolant Heater (9.0 L Engine)

Auxiliary engine coolant (1000 W) and hydraulic charge pump (150 W) heaters are available. See your John Deere dealer.

Connect heaters and ground fault interrupter to ground fault protected 120 volt electrical outlet.

KTX81203,000058A-19-06SEP17

Emissions Equipment

Exhaust Filter System Overview—Final Tier 4/Stage V Engine

IMPORTANT: Disable exhaust filter cleaning when temporarily connected to an indoor ducted exhaust system for diagnostic and repair activities. See Auto Exhaust Filter Cleaning Mode—Final Tier 4/Stage V Engine in this Operator's Manual section.

Exhaust filter cleaning will automatically reset back to AUTO mode after every key cycle.

Do not disable automatic exhaust filter cleaning unless absolutely necessary. Repeated disabling or ignoring prompts to perform manual or parked cleaning procedure will cause additional engine power limitation and can eventually lead to required dealer service.

Tractor is equipped with emission compliant engine which cleans and filters exhaust gas. Under normal machine operation and with system in AUTO mode, system requires minimal operator interaction.

To avoid buildup of diesel particulates or soot in exhaust filter system:

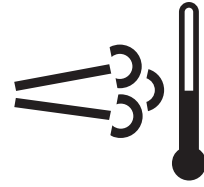
- Use AUTO Exhaust Filter Cleaning mode. See Auto Exhaust Filter Cleaning Mode—Final Tier 4/Stage V Engine in this Operator's Manual section.
- Use Parked Exhaust Filter Cleaning when AUTO Exhaust Filter Cleaning is disabled. See Parked Exhaust Filter Cleaning—Final Tier 4/Stage V Engine in this Operator's Manual section.
- Avoid unnecessary idling.
- Use proper engine oil. See appropriate Diesel Engine Oil in Engine Oil section of this Operator's Manual.
- Use only ultra low sulfur fuel. See Diesel Fuel in Fuel section of this Operator's Manual.

KT81203,00000CE-19-17JUL18

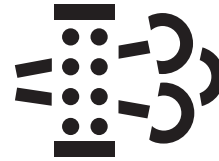
Aftertreatment Indicators Overview



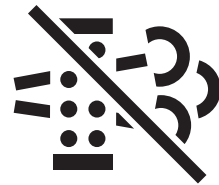
RG22487—UN—21AUG13
Diesel Exhaust Fluid Indicator



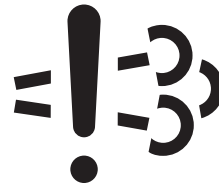
RG22488—UN—21AUG13
Engine Emissions Temperature Indicator



RG22489—UN—21AUG13
Exhaust Filter Indicator



RG22490—UN—21AUG13
Auto Cleaning Disabled Indicator



RG22491—UN—21AUG13
Engine Emissions System Malfunction Indicator



RG22492—UN—21AUG13
Warning Indicator



RG22493—UN—21AUG13
Engine Stop Indicator

IMPORTANT: The operator will be informed by the operator warning system when the emission control system does not function correctly and/or an engine malfunction is detected by the engine control unit. Ignoring the operator warning signals will lead to an emission related derate, resulting in an effective disablement of non-road mobile machinery operation.

It is essential to take prompt action to rectify any incorrect operation, use or maintenance of the emissions control system in accordance with the rectification measures indicated by the warnings referenced below.

The Diesel Exhaust Fluid (DEF) indicator illuminates when the DEF is low. Fill DEF tank.

When the DEF indicator is combined with the warning indicator or engine stop indicator engine performance is reduced by the Engine Control Unit (ECU) because the DEF is below a measurable level. Fill DEF tank.

When engine emissions temperature indicator illuminates exhaust gas temperature is high, elevated idle is active, or exhaust filter cleaning is in process. The machine can be operated as normal unless the operator determines the machine is not in a safe location for high exhaust temperatures and disables auto cleaning.

When engine emissions temperature indicator is combined with the warning indicator or engine stop indicator engine performance is reduced by the ECU because the exhaust gas temperature is higher than expected. Follow Diagnostic Trouble Code (DTC) procedure or see your authorized servicing dealer.

When the exhaust filter indicator illuminates the exhaust filter cleaning is in process, aftertreatment system has a fault, or the exhaust filter is in need of cleaning and the operator has disabled auto exhaust filter cleaning. If conditions are safe, the operator should enable the auto exhaust filter clean setting or perform manual service regeneration or follow DTC procedure.

When the exhaust filter indicator is combined with the warning indicator engine performance is reduced by the ECU because there is an aftertreatment system fault or

the soot level of the exhaust filter is moderately high. If conditions are safe, the operator should enable the auto exhaust filter clean function. If conditions are not safe, the operator should move the machine to a safe location and engage the auto exhaust filter cleaning mode. Perform manual service regeneration or follow DTC procedure.

When the exhaust filter indicator is combined with the engine stop indicator engine performance is further reduced by the ECU because there is an aftertreatment system fault or the soot level of the exhaust filter is extremely high. If this combination is present, see your authorized servicing dealer.

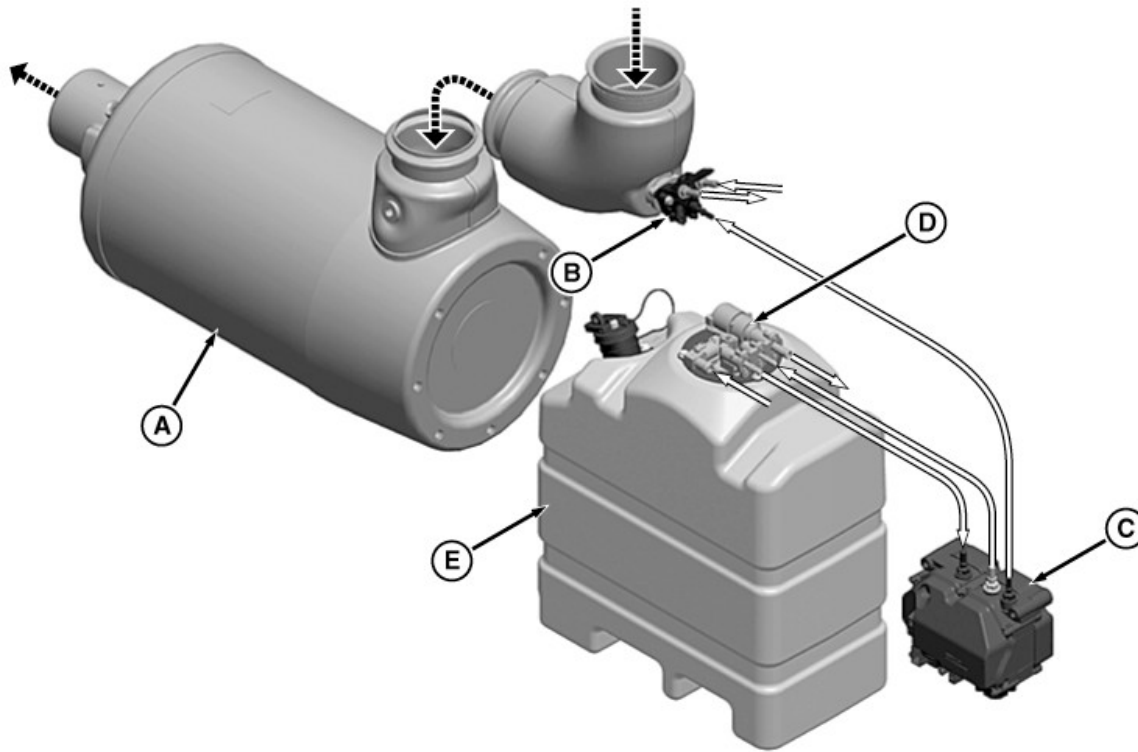
The auto cleaning disabled indicator illuminates when the operator has engaged the request to disable the auto exhaust filter cleaning function. This icon remains illuminated until the operator re-engages automatic exhaust filter cleaning from the diagnostic gauge. Disabling auto mode is not recommended for any situation unless it is safety-related or if the fuel tank lacks the required fuel to complete the cleaning process.

The engine emissions system malfunction indicator illuminates when engine emissions are outside of normal operating range or engine emissions system fault. Follow DTC procedure or see your authorized servicing dealer.

When the engine emissions system malfunction indicator is combined with the warning indicator engine performance is reduced by the ECU because the engine emissions are outside of normal operating range or engine emissions system fault. Follow DTC procedure or see your authorized servicing dealer.

DX,AFTRTREAT,INDCATRS-19-12FEB18

Selective Catalytic Reduction (SCR) System Overview



SCR System

RG22427—UN—14FEB13

A—SCR Catalyst
B—DEF Dosing Injector
C—DEF Dosing Unit

D—DEF Tank Header Assembly
E—DEF Tank

IMPORTANT: Do not remove battery leads for at least 4 minutes after engine stops. The SCR system automatically purges itself of Diesel Exhaust Fluid (DEF) immediately after the engine is stopped. If adequate time is not allowed for lines to be purged, residual DEF can freeze and possibly damage components of the SCR system during cold-weather exposure.

In order to comply with national and local emission requirements, this engine series contains a Selective Catalytic Reduction (SCR) system. The main components of the SCR system include the SCR catalyst (A), DEF dosing injector (B), DEF dosing unit (C), DEF tank header assembly (D), and DEF tank (E). The SCR system is effective at reducing the nitrogen oxides (NOx) emissions. NOx is a major component of smog and acid rain.

During combustion, NOx molecules are formed in the exhaust. DEF is injected into the exhaust stream before the SCR catalyst. Through a chemical reaction in the SCR, NOx is converted into nitrogen and water.

Water vapor is a normal by-product of combustion. During cold-weather operation at low exhaust temperatures, this water vapor can condense and

resemble white smoke from the exhaust. This will dissipate as operating temperature increases and the water is further vaporized. This situation is considered normal.

A DEF solution begins to crystallize and freeze at -11 °C (12 °F). With climate temperatures that can range much colder than this, DEF is expected to freeze in the DEF tank. For this reason, the DEF tank contains a heating element that provides rapid thawing of DEF upon start-up. The heating element cycles to maintain fluidity during operation as needed. DEF is not dosed upon initial start-up, therefore it is not necessary to have liquid DEF at cold start-up.

If DEF quality deteriorates and it is no longer within specifications, the engine can derate. DEF should be crystal clear with a light ammonia smell. If DEF appears cloudy, has a colored tint, or has a profound ammonia smell, it is likely not within specification.

DX,SCR,OVERVIEW-19-05SEP14

Auto Exhaust Filter Cleaning Mode—Final Tier 4/Stage V Engine

CAUTION: Never perform this procedure in a closed building unless suitable exhaust is provided.

Auto Exhaust Filter Cleaning Mode allows Exhaust Filter System to perform exhaust filter cleaning whenever required. Corner Post Display indicators and CommandCenter™ prompts provide information related to exhaust filter system activity.

IMPORTANT: Disable exhaust filter cleaning when temporarily connected to an indoor ducted exhaust system for diagnostic and repair activities.

Exhaust filter cleaning will automatically reset back to AUTO mode after every key cycle.

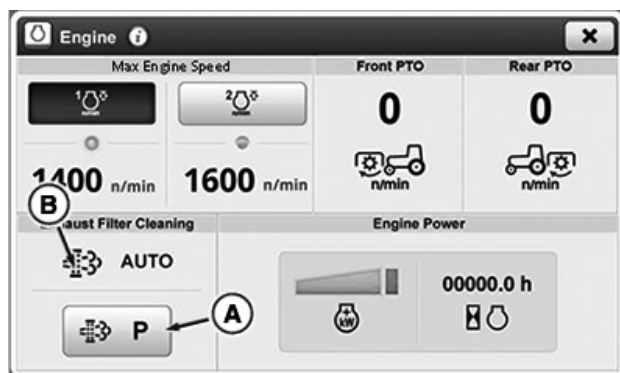
Avoid disabled mode unless absolutely necessary. Repeated disabling or ignoring prompts to perform manual or parked cleaning procedure will cause additional engine power limitation and can eventually lead to required dealer service.

Perform AUTO Exhaust Filter Cleaning:



RXA0133711—UN—16JUL13

1. Use engine shortcut button on navigation bar to access engine main page.



RXA0159801—UN—13JUN17

2. Select Exhaust Filter Cleaning AUTO (B) mode.
Parked exhaust filter cleaning indicator (A) may be active or inactive (grayed out) depending on exhaust filter restriction level. See Parked Exhaust Filter Cleaning in this section of this Operator's Manual.



RXA0129965—UN—07DEC12

3. Select Automatic Filter Cleaning ON (C) toggle to allow exhaust filter system to perform cleaning as required. Select Automatic Filter Cleaning OFF (D) toggle to disable exhaust filter system.



RXA0161009—UN—02OCT17

Exhaust filter cleaning indicator (E) illuminates when exhaust filter system is performing exhaust filter cleaning.

IMPORTANT: During exhaust filter cleaning operation, there may be higher exhaust gas temperatures and engine may operate at elevated idle.

Exhaust Filter Restricted—Depending on operating conditions, Exhaust Filter System may request a change in tractor operation. CommandCenter™ prompts describe specific operational changes needed.

TS36762,0000182-19-16JUL18

Parked Exhaust Filter Cleaning—Final Tier 4/Stage V Engine

CAUTION: Never perform this procedure in a closed building unless suitable exhaust is provided.

Parked exhaust filter cleaning is automated to allow system to clean exhaust filter when required. During process engine speed is controlled by system and tractor must remain parked to complete procedure. Time required for parked exhaust filter cleaning process is

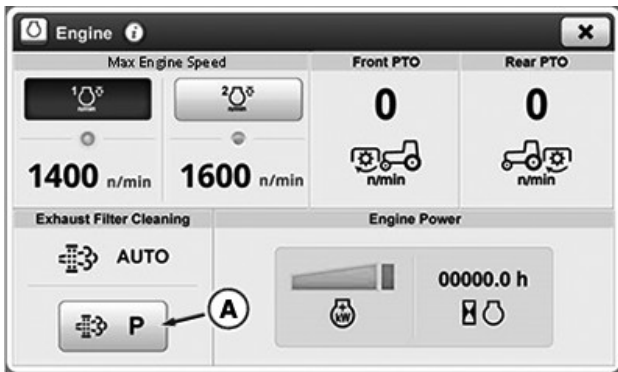
dependent upon level of exhaust filter restriction, ambient temperatures, and current exhaust gas temperature. CommandCenter™ prompts provide estimated time for completion.

Perform Parked Exhaust Filter Cleaning:



RXA0133711—UN—16JUL13

1. Press **Engine Shortcut Button** on Navigation Bar.



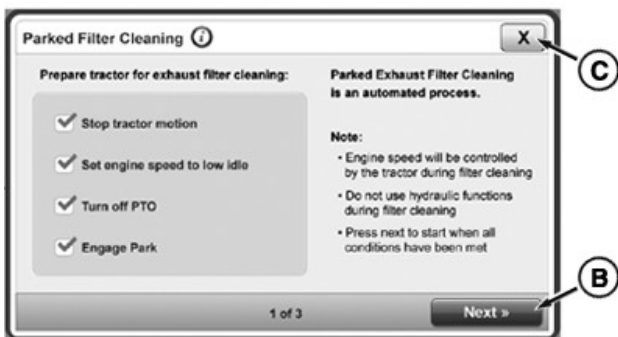
RXA0156758—UN—13JAN17

2. Select **Parked Exhaust Filter Cleaning** button (A).

3. **Conditions for Parked Exhaust Filter Cleaning:**

- Stop tractor motion
- Set engine speed to low idle
- Turn off PTO
- Engage PARK

If any of these conditions are not met, procedure will not occur.



RXA0141402—UN—02MAY14

4. Select **Next** button (B) once conditions are met.

IMPORTANT: During parked exhaust filter cleaning operation, engine may operate at elevated idle.

Engine speed will be controlled by machine during filter cleaning.

NOTE: At any time during parked procedure, process can be canceled by advancing throttle, engaging transmission, selecting cancel button, or stopping engine.

5. Status page appears when process starts.

Parked exhaust filter cleaning has two steps: preparation and cleaning. During preparation, exhaust filter system controls engine speed to increase exhaust temperature. During cleaning, diesel particulates or soot are cleaned from exhaust filter system. Parked exhaust filter cleaning may exceed 40 minutes.

6. Once parked exhaust filter cleaning process is complete, select **Close Window** button (C) to return to previously opened screen.

TS36762,0000183-19-16JUL18

Selective Catalytic Reduction (SCR) System —Final Tier 4/Stage V Engine

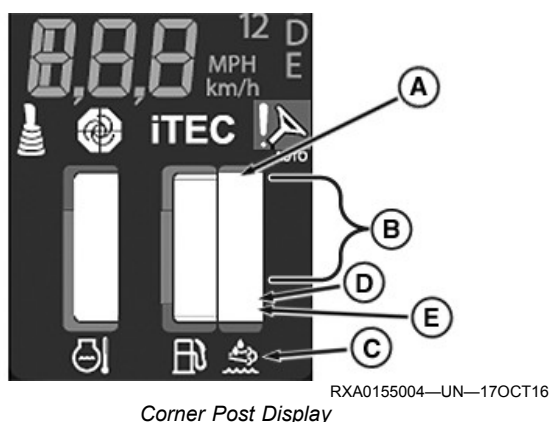
IMPORTANT: To determine tractor engine type, see **Engine Serial Number** in **Identification Numbers** section of this Operator's Manual.

It is unlawful to tamper with or remove any component of the aftertreatment system. It is also unlawful to use Diesel Exhaust Fluid (DEF) that does not meet the specifications provided or to operate the vehicle with no DEF.

Using incorrect or unapproved aftertreatment components can cause damage to vehicle's aftertreatment system and reduce ability of aftertreatment system to function correctly.

NOTE: SCR system monitors quality of DEF flowing through it. If a fluid other than DEF at correct urea concentration is detected, system will display a diagnostic trouble code and a four hour internal counter starts. After four hours, engine power and speed are derated.

SCR system supplies Diesel Exhaust Fluid (DEF) to engine aftertreatment system. DEF works in conjunction with tractor aftertreatment components to reduce emissions. See Diesel Exhaust Fluid (DEF) section of this Operator's Manual for specifications and information about DEF.



Tractor electronic systems monitor DEF level to assure proper performance. Corner post displays current DEF level (A). When quantity of DEF reaches reduced levels, systems change tractor operation. Refilling DEF tank will cause system to return tractor to normal operation. Refilling DEF tank every time tractor is refueled is recommended. See Fill Diesel Exhaust Fluid (DEF) Tank in Diesel Exhaust Fluid (DEF) section of this Operator's Manual.

DEF level and operation changes:

Normal Operation—When DEF level is within this range (B), DEF symbol is on and tractor operates normally. Always maintain fill within this level for uninterrupted performance.

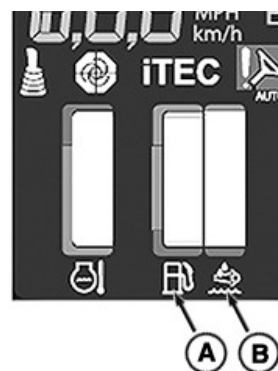
Low DEF Level 1—When DEF level drops to first red bar (D), DEF indicator light (C) flashes and a diagnostic trouble code is displayed and alarm sounds. Tractor operates normally, but refill of DEF tank is recommended.

Low DEF Level 2—When DEF level falls below this point (E), DEF indicator light stops flashing and constantly illuminates. A diagnostic trouble code is displayed and alarm sounds; engine power and speed are derated. Refill DEF tank and restart tractor to resume normal operation.

DEF freezes at -11 °C (12 °F) and will not flow to the SCR system. Tractor systems sense low temperature and allow engine to start, even with no DEF flow. Engine coolant is used to thaw fluid in DEF tank when engine is running. If system senses that DEF has thawed and SCR system is operating normally within forty minutes, tractor is allowed to continue operation. If DEF flow is not sensed within forty minutes, a diagnostic trouble code is displayed and a four hour internal counter starts. After four hours, engine power and speed are derated. Freezing and thawing of DEF does not degrade it.

KT81203,00005FA-19-17JUL18

Low Fuel or Low DEF Warning



Fuel indicator light (A) will flash and alarm will sound when approximately 39 L (10 gal) of fuel remains.

NOTE: DEF light gauge and indicator are only visible on Final Tier 4/Stage V engine-equipped tractor.

It is recommended that DEF tank is filled at each fuel tank fill.

DEF light (B) will flash and alarm will sound when fluid level is low.

TS36762,0000185-19-17APR18

Disconnect Battery—Final Tier 4/Stage V Engine

IMPORTANT: Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light goes out.

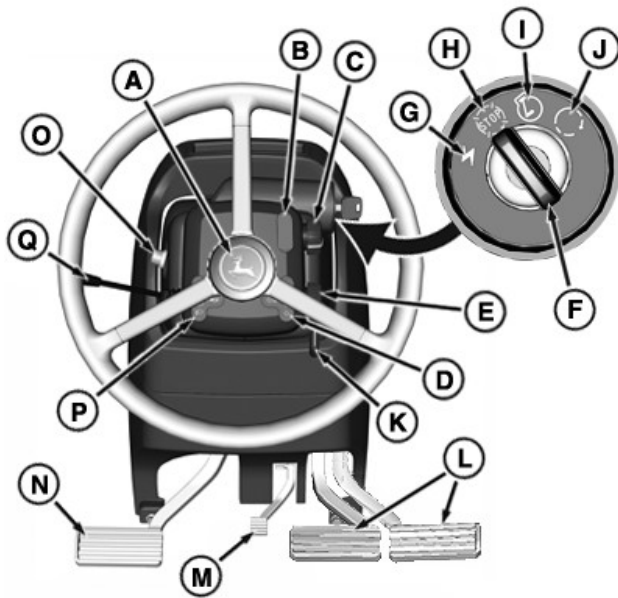
Battery disconnect switch without indicator light: Engine not equipped with SCR system. No waiting period is required before turning off switch.

See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

TS36762,000029E-19-21AUG18

Controls and Instruments

Front Console



RXA0155916—UN—23NOV16

- A—Steering Wheel Telescope Release
- B—Light Selection Cluster
- C—Light Selector Knob
- D—Windshield Wiper Cluster
- E—Windshield Wiper Control Knob
- F—Key Switch
- G—Accessories
- H—OFF (STOP)
- I—Run
- J—Start
- K—Steering Column Tilt Release Lever
- L—Brake Pedals
- M—Steering Wheel Tilt Release
- N—Clutch Pedal
- O—Starting Aid Switch (If Equipped)
- P—Turn Signal Icon, High-Low Beam Road Light Icon and Horn Icon
- Q—Turn Signal Lever/Horn

TS36762,0000186-19-13DEC16

CommandARM™ ISOBUS Shortcut Button (ISB)

In an ISOBUS-system, operator can activate function of implement over ISOBUS via Implement's Operator Interface on display, see ISOBUS controller's operator's manual.

After activation, operator can change screen of display in order to operate another implement or interact with other applications.

Deactivation of functions on first implement is not possible unless operator manually switches back to corresponding screen of first implement. ISB provides a direct method to inform all ISOBUS participants about operators desire to deactivate functions that were activated by an ISOBUS control.

CAUTION: Read appropriate operator's manual. ISB button function is proprietary to implement manufacturer. Verify button function in a safe and open area that is clear of bystanders.



RXA0136449—UN—06NOV13

ISOBUS Shortcut Button (ISB): Pressing ISB button (A) sends "Stop All Implement Operations" signal out on ISOBUS. Reaction on ISB is proprietary to receiving control unit.

Example: Implement currently using ISOBUS Class 3 automation goes to its safe state, see Tractor-Implement Automation™ (TIA™) section of this Operator's Manual.

TS36762,0000187-19-09AUG18

Foot Throttle (If Equipped)



RXA0106904—UN—17MAR10

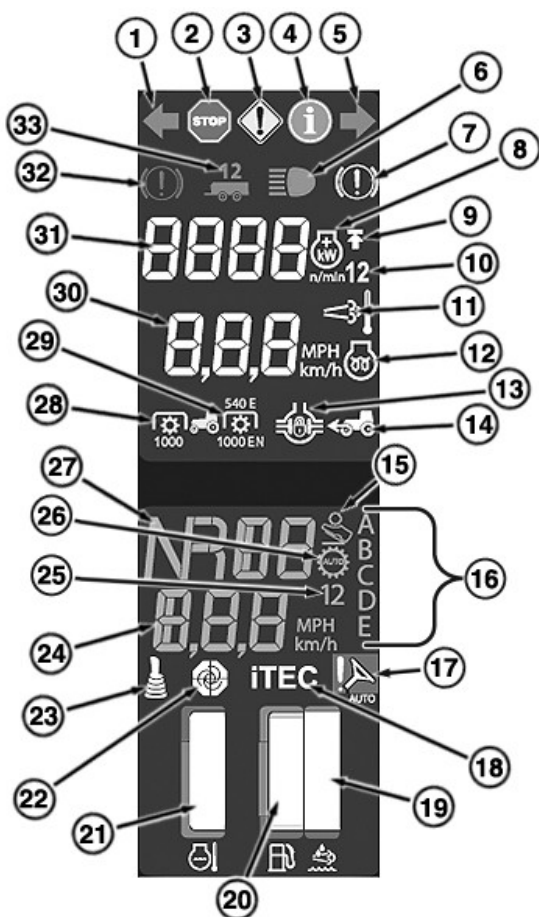
Foot operated throttle controls engine or ground speed dependent on transmission mode. Depress foot throttle (A) to increase engine rpm or ground speed.

TO84419,00003CE-19-27JUN17

*Tractor Implement Automation is a trademark of Deere & Company
TIA is a trademark of Deere & Company*

Corner Post Display

Corner Post Display



- 1— Left Turn Indicator
- 2— Stop Indicator
- 3— Service Alert Indicator
- 4— Information Indicator
- 5— Right Turn Indicator
- 6— High Beam Indicator
- 7— Brake Warning Indicator (Yellow)¹
- 8— Intelligent Power Management Indicator
- 9— Maximum Set Speed Indicator
- 10— Maximum Set Speed Selection (1 or 2)
- 11— Exhaust Filter Cleaning Indicator
- 12— Engine Preheat Indicator (For 6.8L Engines Only)
- 13— Differential Lock Indicator (If Equipped)
- 14— MFWD Indicator (If Equipped)
- 15— Foot Pedal Mode Indicator (If Equipped)
- 16— Transmission Range Indicators
- 17— AutoTrac™ Indicator
- 18— iTEC™ Indicator
- 19— Diesel Exhaust Fluid (DEF) Gauge (FT4/Stage V Engine)
- 20— Fuel Gauge
- 21— Coolant Temperature Gauge
- 22— Tractor Automation Indicator
- 23— ISOBUS Auxiliary Mode Indicator
- 24— Set Speed
- 25— IVT™ AutoPowr™ Forward Speed Band Indicator (If Equipped)
- 26— Automatic Shifting Indicator
- 27— Current Gear/Range
- 28— Front PTO Indicator (If Equipped)
- 29— Rear PTO Indicator (If Equipped)
- 30— Vehicle Ground Speed
- 31— Tachometer
- 32— Brake Warning Indicator (Red)¹
- 33— Trailer Indicator (If Equipped)

RXA0152755—UN—15NOV16

- 27— Current Gear/Range
- 28— Front PTO Indicator (If Equipped)
- 29— Rear PTO Indicator (If Equipped)
- 30— Vehicle Ground Speed
- 31— Tachometer
- 32— Brake Warning Indicator (Red)¹
- 33— Trailer Indicator (If Equipped)

TS36762,0000189-19-16JUL18

Information Indicators

STOP, Service Alert, and Information Indicators are accompanied by informative message, diagnostic trouble code, and/or fault description shown on CommandCenter™. For description of indicators and codes, see STOP and Service Alert Indicators and Information Indicators in Troubleshooting - Diagnostic Trouble Codes (DTC) section of this Operator's Manual.



RXA0109847—UN—20AUG10

STOP Engine Indicator (A): Light flashes and alarm sounds continuously.

Service Alert Indicator (B): Light flashes and alarm sounds five times indicating performance or operational problem is detected that needs to be resolved as soon as possible.

Information Indicator (C): Light illuminates continuously and alarm sounds for two seconds, indicating possible fault condition.

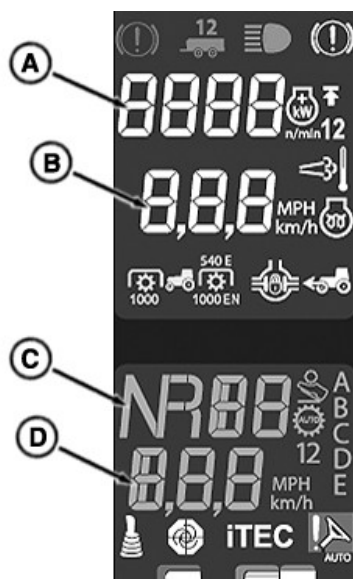
TS36762,000018A-19-17APR18

AutoTrac is a trademark of Deere & Company
iTEC is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

¹ See Brake Warning Indicators in Brakes section of this Operator's Manual

CommandCenter is a trademark of Deere & Company

Digital Indicators—Tachometer, Ground Speed, Transmission, and Set Speed



RXA0154166—UN—06OCT16

A—Tachometer: Displays engine speed in multiples of 10. If “- -” is displayed, no speed signal is being received.

B—Travel Speed Indicator: Displays travel speed in either miles per hour or kilometers per hour, depending on operator selected units (U.S. or Metric).

If “- -” is displayed, no speed signal is being received.

C—Transmission Information: Shows if transmission is in Neutral—N, Forward—F, Reverse—R, or Park—P.

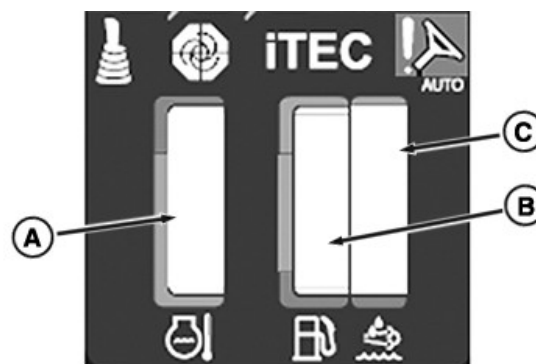
If “- -” is displayed, no gear signal is being received.

IVT™ /AutoPowr™ Only: Shows speed bands 1 or 2 and speed settings.

D—Set Speed Indicator: Shows what speed is set using set speed adjuster.

TS36762,000018B-19-18NOV16

Gauges—Coolant Temperature, DEF Level and Fuel Level



RXA0154167—UN—28SEP16

A—Coolant Temperature Gauge: Shows engine coolant temperature between 40—120 °C (104—248 °F). All segments are off when coolant temperature is below 40 °C (104 °F). All segments are lit when temperature is 120 °C (248 °F) and above.

B—Fuel Level Gauge: Displays fuel level in tank. Each lighted segment represents 4% of fuel tank total capacity. When fuel tank is full, all segments are lit. When only bottom segment is lit, tank is nearly empty with approximately 39 L (10 gal) remaining.

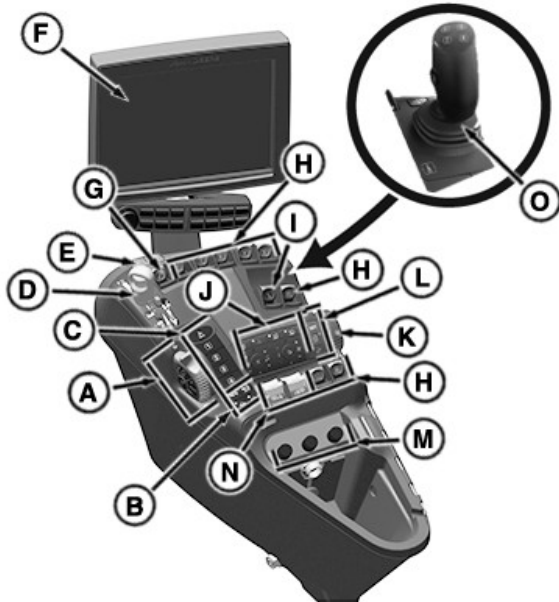
NOTE: Diesel Exhaust Fluid is only used on Full Tier 4 / Stage V engine equipped tractors. DEF gauge will not display on tractors without those engines.

C—Diesel Exhaust Fluid (DEF) Gauge (If Equipped): Displays diesel exhaust fluid level. Each lighted segment represents 4% of DEF fluid tank total capacity. When DEF fluid tank is full, all segments are lit. When only bottom segment is lit, tank is nearly empty. DEF fluid tank should be filled whenever fuel tank is filled.

TS36762,000018C-19-16JUL18

CommandARM™ Controls

CommandARM™ with Generation 4 CommandCenter™ Display



RXA0156085—UN—09DEC16

- A—Hand Throttle Control
- B—Differential Lock & Mechanical Front-Wheel Drive (MFWD) Buttons
- C—iTEC™ & AutoTrac™ Resume
- D—Speed Control Lever/Transmission Shift Lever
- E—SCV Control Lever Lock/ISB Lock
- F—Generation 4 CommandCenter™
- G—Rear Hitch Control Lever
- H—SCV Control Levers
- I—Front Hitch Control Lever (If Equipped)
- J—Climate, Radio and Lighting Controls
- K—Depth Adjust Hitch Dial
- L—Set/Lock/Resume Buttons
- M—Load Depth/Upper Limit/Drop Rate Hitch Dials
- N—Front and Rear PTO Control Levers (If Equipped)
- O—Joystick (If Equipped)

NOTE: See your transmission section for Efficiency Manager™ options (if equipped).

TS36762,000018D-19-18APR18

Rear and Front Hitch Controls



RXA0156087—UN—09DEC16

- A—Rear Hitch Control Lever
- B—Front Hitch Control Lever
- C—Set Point Button
- D—Rear Hitch Control Lever Lock
- E—Return to Lower Set Point
- F—Depth Adjust Hitch Dial
- G—Drop Rate Hitch Dial
- H—Upper Limit Hitch Dial
- I—Load Depth Hitch Dial

See Hitch sections of this Operator's Manual.

TS36762,000018E-19-13DEC16

SCV Control Levers



RXA0156088—UN—09DEC16

- A—SCV 1 Control Lever

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AutoTrac is a trademark of Deere & Company
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- B—SCV 2 Control Lever
- C—SCV 3 Control Lever
- D—SCV 4 Control Lever
- E—SCV 5 Control Lever
- F—Front Hitch Midstack/SCV 14
- G—SCV 15 Control Lever (If Equipped)
- H—SCV 6 Control Lever (If Equipped)
- I—SCV Control Lever Lock

IMPORTANT: SCV control lever lock (I) locks out control of SCV and front hitch control levers.

NOTE: Reconfigurable SCV controls allows operator to match device with various implement functions. This process is called Assignment. See Controls Setup in CommandCenter™ section of this Operator's Manual.

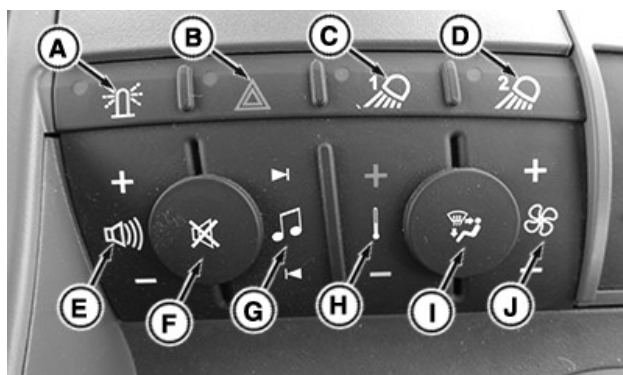


RXA0133735—UN—17JUL13
Controls Setup Icon

Controls setup icon appears on SCV control levers that are reconfigurable with joystick.

TS36762,000018F-19-13DEC16

CommandARM™ Climate, Radio and Lighting Controls



RXA0152425—UN—14JUN16

- A—Rotary Beacon Lights Button
- B—Hazard Lights Button
- C—Field Lights 1 Button
- D—Field Lights 2 Button
- E—Radio Volume
- F—Radio Mute Button
- G—Next/Previous Station, Preset or Track
- H—Temperature Control
- I—Air Flow Control
- J—Fan Control

TS36762,0000190-19-02JUN17

CommandARM™ PTO Control Lever

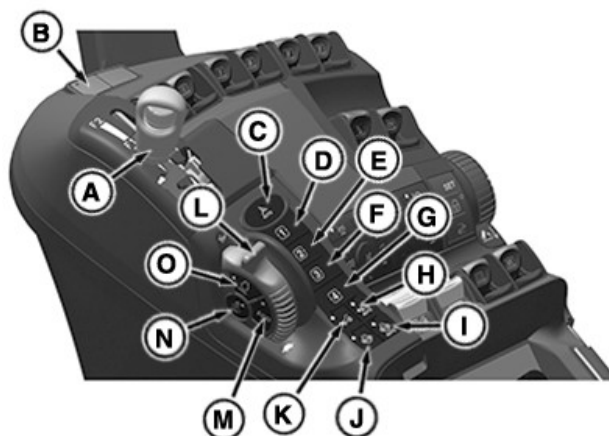


A—PTO Control Lever

RXA0142354—UN—09JUN14

KD34109,000075E-19-17APR18

Left-Hand Side Controls



RXA0156086—UN—09DEC16

- A—Speed Control Lever/Transmission Shift Lever
- B—SCV Control Lever Lock/ ISB Lock
- C—AutoTrac™ Resume Button
- D—iTEC™ 1 Button
- E—iTEC™ 2 Button
- F—iTEC™ 3 Button
- G—iTEC™ 4 Button
- H—Auto MFWD Button
- I—Auto Differential Lock Button
- J—Differential Lock Button
- K—MFWD Button
- L—Hand Throttle Control
- M—ECO ON/OFF Button
- N—Foot Throttle Lock/Unlock Button
- O—Maximum Set Speed ON/OFF Button

TS36762,0000192-19-09DEC16

CommandCenter™

Onscreen Help



PC15300—UN—19MAR13

Help Center Application and Information Button

Help Center is a supplement to the paper Operator's Manual. Read the Operator's Manuals prior to operation.

Navigate to Help Center

1. Select Menu.
2. Select System tab.
3. Select Help Center application.

DX,PC,INTRO,HELP-19-17DEC15



PC17355—UN—03DEC13

4200 and 4600 CommandCenter™

Generation 4 CommandCenter™

The John Deere Generation 4 CommandCenter™ is designed for maximum ease of use and productivity. One software system provides commonality while hardware options provide a range of price and functionality. The CommandCenter™ display is attached to the CommandARM™. There are 8.4 and 10 inch display options available.

NOTE: Software in Generation 4 CommandCenter™ is on processor, not display.

4200 CommandCenter™ (8.4 Inch) and **4600 CommandCenter™** (10 Inch)

- Title Bar displays currently viewed Run Page
- Large Status Center provides more information
- Shortcut Softkeys are always visible.

KD34109,0000814-19-20AUG18

Generation 4 CommandCenter™ Processor

Generation 4 CommandCenter™ software runs on a processor separate from the display.

NOTE: Maximum capabilities for each processor are listed. Depending on machine configuration, some functions may not be available.



PC25546—UN—19APR18

4200 Processor

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CommandARM is a trademark of Deere & Company*



4600 Processor

PC25545—UN—19APR18

- 4 Video Camera Inputs
- 4 USB Inputs
- 2 Display Outputs
- Upgradable for future applications

KD34109,0000815-19-20AUG18

Generation 4 CommandCenter™ 4600 Processor Wi-Fi® Capabilities

The CommandCenter™ 4600 processor contains a non-enabled wireless (Wi-Fi®) transmitter. Hardware is present to enable future functionality.

Federal Communications Commission Part 15.21 Statement:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

DX,PC,INTRO,WIFI-19-10MAY16

4200 Processor

- 1 Video Camera Input
- 1 USB Input
- 1 Display Output

4600 Processor

Federal Communications Commission and Industry Canada Notification

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

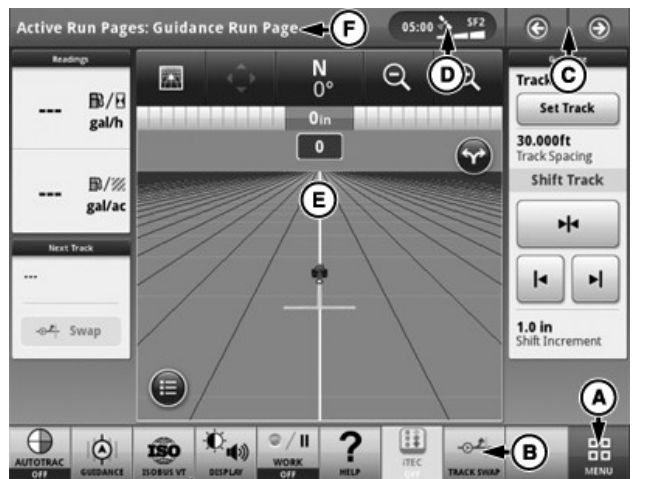
RF Exposure Guidance: This equipment complies with FCC and Industry Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 2.5 cm (1 in.) between the radiator and persons. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter, except in accordance with FCC and Industry Canada multi-transmitter product procedures.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF Exposure orientation: Cet équipement est conforme aux normes FCC et les limites d'exposition aux rayonnements Industrie Canada énoncées pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 2,5 cm (1 in.) entre le radiateur et les personnes. Cet émetteur ne doit pas être co-localisées ou opérant en conjonction avec une autre antenne ou un autre émetteur, sauf en conformité avec la FCC et Industrie Canada Procédures de produits multi-émetteurs.

PC17329—UN—24OCT13
DX,PC,INTRO,FCC-19-17DEC15

Run Page Structure



PC17353—UN—03DEC13
8.4 Inch (4200) and 10 Inch (4600) Display Run Page

- A—Menu
- B—Shortcut Softkeys
- C—Next or Previous Run Page Buttons
- D—Status Center
- E—Run Page
- F—Title Bar/Run Page Selection

Menu (A) lists all applications installed on display and machine.

Shortcut softkeys (B) provide quick access to frequently used applications and functions.

Next and Previous Run Page buttons (C) cycle through multiple run pages.

Select the area indicated (D) to display **Status Center**. Important information for display functions is highlighted, such as GPS signal strength and available data storage.

Run page (E) is configured using Layout Manager application.

Press **title bar (F)** to display **Run Page Selection** page. Choose desired run page from list of available pages.

(Refer to Layout Manager application for information about customizing the run page.)

KD34109,0000816-19-20AUG18

Menu



Menu Button

PC17269—UN—15JUL13

Selecting Menu button lists all applications installed on

display and machine. Select left-hand tabs to view different groups of applications.

NOTE: Available applications vary depending on machine configuration.

DX,PC,INTRO,MENU-19-21DEC15

Machine Settings Overview

Machine Settings

RXA0147924—UN—13APR15

Machine Settings tab allows selection of application main pages. Available applications vary depending on tractor configuration.



Audio

RXA0134978—UN—07AUG13

Audio

- Use Audio application to adjust audio settings.
- For more information, see Radio Operation section of this Operator's Manual.



Engine

RXA0134955—UN—07AUG13

Engine

- Use engine application to adjust exhaust filter system settings, Maximum Set Speed settings, or engine rpm.
- For more information, see Engine Operation and Transmission - General Information sections of this Operator's Manual.



HVAC (Heating Ventilation and Air Conditioning)

RXA0134979—UN—07AUG13

HVAC

- Use HVAC application to adjust heating, ventilation, and air conditioning settings.
- For more information, see HVAC section of this Operator's Manual.



iTEC™

RXA0134980—UN—07AUG13

iTEC™

- Use iTEC™ application to program and repeat common tasks.
- For more information, see Intelligent Total Equipment Control (iTEC™) section of this Operator's Manual.



Lights

RXA0134956—UN—07AUG13

Lights

- Use Lights application to adjust lights settings.
- For more information, see Lights section of this Operator's Manual.



Maintenance and Calibrations

RXA0134981—UN—07AUG13

Maintenance and Calibrations

- Use Maintenance and Calibrations application to add/edit service intervals and perform ground radar and wheel slip calibrations.



Phone

RXA0134982—UN—07AUG13

Phone

- Use Phone application to make/receive calls through CommandCenter™.

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CommandCenter is a trademark of Deere & Company

- For more information, see Radio Operation section of this Operator's Manual.



PTO

RXA0134957—UN—07AUG13

PTO

- Use PTO application to adjust PTO settings.
- For more information, see PTO, Hitch, and Drawbar section of this Operator's Manual.



Rear Hitch

RXA0134958—UN—07AUG13

Rear Hitch

- Use Rear Hitch application to adjust rear hitch settings.
- For more information, see Rear Hitch section of this Operator's Manual.



SCV

RXA0134983—UN—07AUG13

SCV

- Use SCV application to adjust SCV settings.
- For more information, see Selective Control Valves section of this Operator's Manual.



Steering

RXA0152447—UN—27JUN16

Steering

- Use Steering application to adjust steering settings.
- For more information, see Steering and Steering Settings in this section of this Operator's Manual.



Suspension

RXA0134976—UN—07AUG13

Suspension

- Use Suspension application to adjust suspension settings.
- For more information, see Drive Train section of this Operator's Manual.



Trailer Brake

RXA0152439—UN—20JUN16

Trailer Brake

- Use Trailer Brake application to adjust brake and pre-brake settings and to test trailer brakes.
- For more information, see Trailer Brake Settings in the Brakes section of this Operator's Manual.



Transmission

RXA0134984—UN—07AUG13

Transmission

- Use Transmission application to adjust transmission settings (if equipped).
- For more information, see appropriate transmission section of this Operator's Manual.

KT81203,000049F-19-16AUG17

Operating System Applications Overview



Operating System Applications Package

PC15302—UN—19MAR13

Operating System applications package is installed at the factory, and is updated with periodic software updates from John Deere. These applications are used for basic functions of display.

Calculator



Calculator

PC23955—UN—24MAR17

- Use Calculator application for quick mathematical calculations.
- It is found on Applications tab of the display menu.

COM Port Settings



COM Port Settings

PC25540—UN—18APR18

- Configures RS-232 signal so that the display can communicate with different control units or devices.
- COM Port Settings application requires a 4600.
- It is found on System tab of the display menu.

Controls Setup



Controls Setup

PC15326—UN—08JUL13

- Configures an ISOBUS or machine joystick to control machine or implement functions.
- It is found on Applications tab of the display menu.

Date and Time



Date and Time

PC16674—UN—18MAR13

- Information from Date and Time application is used for several important functions on system. These include error logging, activations, and data recording.
- Date and time are set automatically if a GPS receiver is connected and receiving valid signal. In this case, only set time zone.
- It is found on System tab of the display menu.

Diagnostics Center



Diagnostics Center

PC17272—UN—17JUL13

- Diagnostics Center is the one place to find diagnostics for the entire system.
- It is found on System tab of the display menu.

Display and Sound



Display and Sound

PC16685—UN—18MAR13

- Along with display brightness and volume, Display and Sound is used to calibrate display and configure multiple displays.
- It is found on System tab of the display menu.

Equipment Manager



Equipment Manager

PC20410—UN—22MAY15

- The Machine Profile allows operator to configure GPS offsets and machine dimensions.
- The Implement Profile allows operator to configure Implement Connection Type, Working Width, Dimensions, and Recording Triggers.
- It is found on Applications tab of the display menu.

Fields and Boundaries



Fields and Boundaries

PC17260—UN—11JUL13

- Field names are used to organize information so it is easier to find and use data, such as guidance lines.
- Use Fields and Boundaries application to set up clients, farms, and fields.
- Select client, farm, and field to set current location.
- It is found on Applications tab of the display menu.

File Manager



File Manager

PC16671—UN—18MAR13

- Data and setup information can be transferred between displays or compatible desktop software.
- Perform a Factory Data Reset to clear display of user data.
- It is found on System tab of the display menu.



ISOBUS VT Menu

PC15293—UN—18MAR13

- Monitor and control ISOBUS 11783 compatible controllers and implements.
- It is found on Applications tab of the display menu.

NOTE: Only one ISOBUS controller can be viewed at a time. If more than one controller is connected, select Menu button within ISOBUS VT to view a list of controllers to choose from.

Flags



Flags

PC25539—UN—18APR18

- Flags are used to mark points of interest within a field.
- It is found on Applications tab of the display menu.

Help Center



Help Center

PC16684—UN—18MAR13

- Onscreen Help about each application and more is available in Help Center.
- Not all Help languages are installed at the factory. Update display software to install Help for all supported languages.
- It is found on Applications tab of the display menu.

ISOBUS VT



ISOBUS VT

PC16682—UN—18MAR13

Language and Units



Language and Units

PC16677—UN—18MAR13

- Use Language and Units application to change Language, Number Format, and Units of Measurement.
- It is found on System tab of the display menu.

Layout Manager



Layout Manager

PC16678—UN—18MAR13

- Use Layout Manager to create and modify run pages and shortcut bar so important information and functions can be accessed from the main page.
- It is found on Applications tab of the display menu.

Machine Monitor



Machine Monitor

PC15318—UN—16MAY13

- Machine Monitor displays machine-specific performance values.
- It is found on Applications tab of the display menu.

Mapping



Mapping

PC20413—UN—11MAY15

- Mapping application is used to view spatial features, such as guidance, coverage, work data, and map based prescriptions. (Prescriptions require a CommandCenter™ Premium activation.)
- It is found on Applications tab of the display menu.

Remote Display Access



Remote Display Access

PC17363—UN—16DEC13

- Remote Display Access (RDA) allows someone from a remote location to view an operating display.
- It is found on Applications tab of the display menu.

Settings Manager



Settings Manager

PC22543—UN—22APR16

- Use Settings Manager to load, edit, or save configurations of machine and implement settings.
- It is found on Applications tab of the display menu.

Software Manager



Software Manager

PC15346—UN—11JUL13

- Use Software Manager to update software, activate features, and install onscreen help packages.
- It is found on System tab of the display menu.

StarFire™

CommandCenter is a trademark of Deere & Company



StarFire

PC17388—UN—15MAY14

- The StarFire™ application is used to view StarFire™ Receivers. If more than one receiver is connected, select the desired receiver using the application.
- It is found on Applications tab of the display menu.

Users and Access



Users and Access

PC17262—UN—12JUL13

- Users and Access manages user profiles and locks users out of certain settings.
- It is found on System tab of the display menu.

Video



Video

PC23956—UN—24MAR17

- Use Video application to observe areas around the machine that are difficult to see from the operator's station.
- Video can be displayed when certain machine functions are performed, such as reversing.
- It is found on Applications tab of the display menu.

Wireless Settings



Wireless Settings

PC23092—UN—26SEP16

- Access wireless networks to connect to the internet, or create a wireless network to connect mobile devices to the machine.
- It is found on System tab of the display menu.

Work Monitor



Work Monitor

PC15317—UN—16MAY13

- Work Monitor displays averaged and totaled machine and operation-specific values.
- It is found on Applications tab of the display menu.

Work Setup



Work Setup

PC20415—UN—11MAY15

- Use Work Setup to set up operations when changing implements, fields, or applying a different product.
- Use Work Setup to set up and use ISOBUS Tasks provided by TC-GEO (task controller geo-based) AEF (Agricultural Industry Electronics Foundation) certified implements and John Deere pull-type sprayers. All totals provided by the ISOBUS implement, such as time, area, mass, and volume, are recorded in the ISOBUS task in the Work Totals application.
- It is found on Applications tab of the display menu.

Work Totals



Work Totals

PC21878—UN—24NOV15

- Work Totals records work data, including acres worked, average product rate, and total product applied.
- Work Totals application requires a 4200 or 4600.
- It is found on Applications tab of the display menu.

DX,PC,INTRO,OSAPPS-19-25APR18

AMS Applications Overview



AMS Applications Package

PC15301—UN—19MAR13

AMS Applications package is installed at factory, but requires an activation to enable functionality. These applications are installed and updated in packages separate from the Generation 4 Operating System.

AutoTrac™ Guidance



AutoTrac™ Guidance

PC16676—UN—18MAR13

- The AutoTrac™ Guidance application is used for steering machines through the field along guidance tracks. Steering can be done manually or automatically using AutoTrac™.
- It is found on Applications tab of the display menu.

AutoTrac™ Turn Automation



AutoTrac™ Turn Automation

PC24721—UN—14SEP17

- AutoTrac™ Turn Automation is a system which coordinates machine and implement functions during end turns.
- It is found on Applications tab of the display menu.

Overlap Control



Overlap Control

PC20399—UN—16FEB15

- Overlap Control automatically adjusts the header width setting as the combine moves over areas that have already been harvested.
- Overlap Control is only available on combines.
- It is found on Applications tab of the display menu.

AutoTrac is a trademark of Deere & Company

Section Control



Section Control

PC20399—UN—16FEB15

- Section Control turns work point sections on and off automatically to reduce overlap and improve input management.
- Section Control is only available with compatible machines and implements.
- Section Control application requires a 4200 or 4600 with a CommandCenter™ Premium activation.
- It is found on Applications tab of the display menu.

Sharing



Sharing

PC24722—UN—18SEP17

- Use Sharing application to view infield data sharing settings.
- It is found on Applications tab of the display menu.

DX,PC,INTRO,AMSAPPS-19-25APR18

CommandCenter™ Activations

NOTE: Software activations are nontransferable if equipment is lost, stolen, or destroyed. It is recommended to insure machines at their full value, including software activations.

A CommandCenter™ Premium activation or a CommandCenter™ Automation activation is required to operate certain features, such as utilizing Section Control. It is also required to enable certain functions within applications, such as streaming work data wirelessly in the File Manager application to John Deere Operations Center.

CommandCenter™ Premium and CommandCenter™ Automation activations are not listed in the Software Manager application. The individual activations that are included within the CommandCenter™ Premium and CommandCenter™ Automation activations can be found by selecting Menu button > System tab > Software Manager application > Activations tab.

Contact your John Deere dealer to purchase a

CommandCenter is a trademark of Deere & Company

CommandCenter™ Premium or a CommandCenter™ Automation activation.

DX,PC,INTRO,CCPREMIUM-19-25APR18

Demo Activations

In Software Manager application, demo activations are available to try out features on the display. A blue light next to a feature indicates that demo is turned on.

Demo is available from the factory for 15 hr. of use. For example, AutoTrac™ demo only counts down when it is activated.

DX,PC,INTRO,DEMO-19-21DEC15

Automation Status Overview



RXA0135012—UN—12AUG13

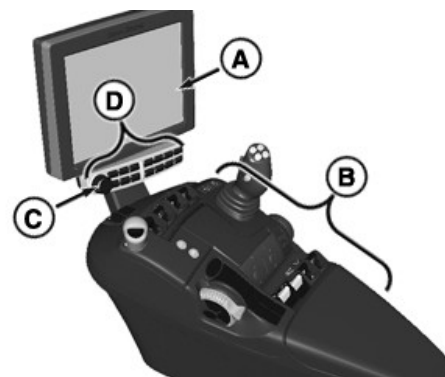
- Use Automation Status application to see which tractor functions are being controlled and their current status.
- It can be found on Applications tab of the display menu.

KT81203,00004A0-19-28NOV16

Navigate Generation 4 CommandCenter™

NOTE: Images are reference and may differ by tractor configuration or operator settings. As operator pages through CommandCenter™, more in-depth information is presented, allowing operator to fine tune tractor functions.

Navigating CommandCenter™ Pages



RXA0130496—UN—09APR13

CommandCenter™ and CommandARM™

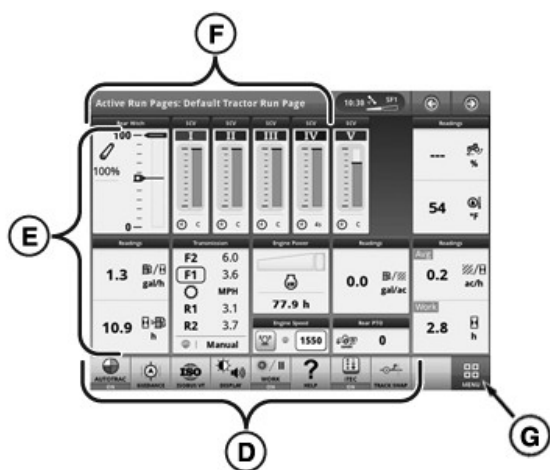
AutoTrac is a trademark of Deere & Company

Use Touch Screen CommandCenter™ buttons or icons to make selection. For input boxes use either key pad, or select input box and scroll adjustment dial (C) to desired value. Yellow highlight box appears around selected input box and indicates adjustment dial is active.

A—CommandCenter™: attached to CommandARM™ (B), allows operator to view selected pages required to operate tractor. Display is Touch Screen, allowing operator to touch options on screen to move through pages and access tractor functions.

B—CommandARM™: made up of buttons, joystick (if equipped), switches, and shortcuts allowing operator to manage tractor or implement functions.

C—Adjustment Dial/Close Window Button: allows operator to change values in input boxes. Rotating adjustment dial clockwise raises input box values. Rotating adjustment dial counterclockwise lowers input box values. Push button one time to close window. Push and hold to close all open windows.



Run Page

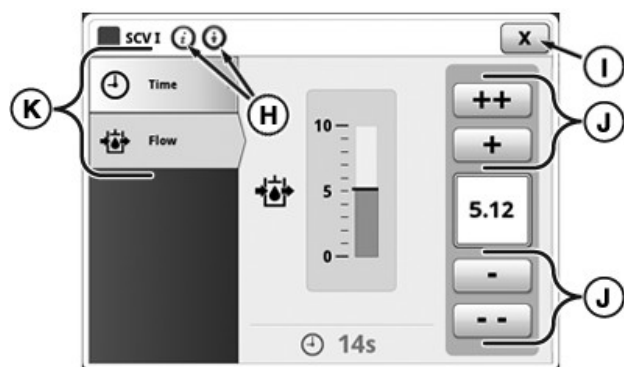
RXA0137128—UN—19NOV13

D—Shortcut Keys/Buttons: allow operator to access specific functions without going through CommandCenter™ menu.

E—Run Page Modules: allow quick access to functions.

F—Title Bar: select on any run page for drop-down bar to change run page.

G—Menu: lists all applications installed on display and machine. Select left-hand tabs to view different groups of applications.



RXA0137084—UN—13DEC13

Module Functions

H—Help/Advanced Settings Buttons: press title bar, while in application, to view help or change settings for current page when available.

I—Close Button: press to close current page.

J—Increase/Decrease Value Buttons: use to change value within input boxes. Use ++ and -- buttons to make larger incremental changes when adjusting value, rather than touching + or - buttons. For areas that require tighter adjustments, only + and - buttons are available.

K—Tabs: allow operator to change to different section topic.

KT81203,00004A1-19-03AUG17

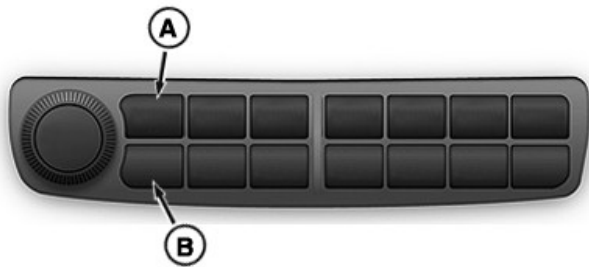
Power Display On and Off

Generation 4 CommandCenter™ display turns on and off with tractor key switch.

- **Warm boot** occurs when CommandCenter™ display has been run within last 24 hours. Display rests in hibernation state for that time. Display powers up quickly (approximately 10 seconds).
- **Cold boot** occurs if display is not operated for 24 hours or more, or if unswitched power has been disconnected. During this period, display shuts down completely to conserve battery power. Next power-up will take approximately 60 seconds.

NOTE: After turning off engine, avoid turning key switch back on until display screen has gone black.

- **Hard reset** is required when display is unresponsive for more than a few minutes under normal operating conditions.



Navigation Bar

RXA0148512—UN—25JUN15

Perform hard reset by pressing left-most upper and lower buttons (A and B), of navigation bar, simultaneously for 5 seconds. If display does not reset, pull fuse 9 located in load center fuse panel and replace after 5 seconds. For more information on load center fuse panel, see Service - Electrical section of this Operator's Manual. If problem persists, see your John Deere dealer.

KT81203,00004A2-19-31JUL17

Navigate Run Pages on Main Page

If more than one run page is in Active Set, there are multiple ways to choose which run page is displayed on main page.

Title Bar



PC17357—UN—03DEC13

A—Title Bar

Select title bar (A) at top of main page to display a list of all run pages that are in Active Set. Choose a run page to return to main page.

Next and Previous Run Page Buttons



PC17358—UN—03DEC13

B—Next and Previous Run Page Buttons C—Finger Swipe

Select either right or left arrows (B) to cycle through run pages.

Finger Swipe

Swipe finger (C) across display, left and right, to cycle through run pages.

Navigation Bar Shortcut Button



PC17359—UN—03DEC13

D—Navigation Bar Shortcut Button

Select right arrow (D) below display in CommandCenter™ Navigation Bar.

Extended Monitor

Extended monitor is a secondary display used to show a second active run page.



Swap Button

PC23154—UN—10OCT16

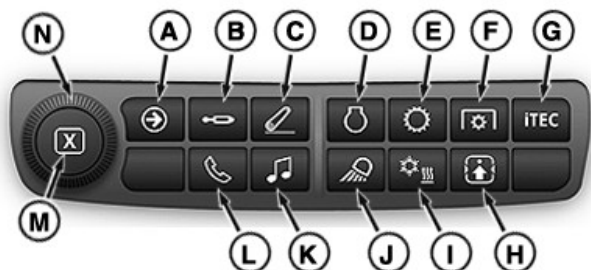
Select the Swap button to transfer active run page to the secondary display. All functionality of the transferred run page remains active on the extended monitor. The next run page in the active set becomes the active run page on the primary display.

For more information on extended monitor, see onscreen help.

DX,PC,LAYOUT,NAV-19-30APR18

Shortcut Buttons

Generation 4 CommandCenter™ navigation bar shortcut buttons allow direct access to specific applications.



RXA0132501—UN—15MAY13

- A—Next Run Page
- B—SCV
- C—Rear Hitch
- D—Engine
- E—Transmission
- F—PTO
- G—iTEC™
- H—Controls Setup
- I—HVAC
- J—Lights

CommandCenter is a trademark of Deere & Company

K—Audio
L—Phone
M—Close Button
N—Adjustment Dial

NOTE: If CommandCenter™ becomes unresponsive, reset by holding down Next Run Page button (A) and button below (no icon) for five seconds. If problem continues after reset, see your John Deere dealer.

KT81203,00004A3-19-11OCT17

Display and Sound



PC16685—UN—18MAR13

Display and Sound

Display and Sound application adjusts display brightness and volume level.

If multiple displays are connected, use this application to configure which functions appear on each display.

If screen touches do not register in correct location, use Touchscreen Calibration to realign screen.

Navigate to Display and Sound

1. Select Menu.
2. Select System tab.
3. Select Display and Sound application.

DX,PC,DISP-19-21DEC15

Brightness

Brightness and Color Mode

• Auto Mode

Auto Mode is recommended setting. This synchronizes display brightness with cab light switch. If cab lights are off, display is in Day Mode. If cab lights are on, display is in Night Mode.

• Day and Night Modes



A—Day Mode



PC15319—UN—20MAY13

B—Night Mode

Select either mode to prevent display brightness from synchronizing with cab light switch.

NOTE: The mode selected does not adjust brightness of a second display. Adjust brightness of that display through its settings.

Brightness Settings



A



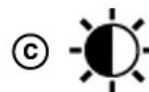
B

PC15320—UN—20MAY13

A—Day Settings

B—Night Settings

Select either settings button to display a popup page for corresponding brightness mode.



C



D

PC15321—UN—20MAY13

C—Display Brightness

D—Cab Brightness

Depending on mode selected with settings button, adjust display and cab brightness by using plus (+) and minus (-) buttons.

DX,PC,DISP,BRIGHT-19-07APR17

Sound



Display Volume

PC15322—UN—20MAY13

Change display volume by selecting increase (+) or decrease (-) buttons.

DX,PC,DISP,SOUND-19-21DEC15

Multiple Displays



Multiple Displays

PC15323—UN—20MAY13

Generation 4 CommandCenter™ may be configured to run with the following John Deere displays connected at corner post.

- GreenStar™ 2 1800 Display
- GreenStar™ 3 2630 Display
- 4640 Universal Display

Some applications, such as AutoTrac™, cannot run on both displays at the same time.

Activations do not transfer between displays. Second display must have its own activations to run AMS applications.



GS3 2630 Display PC20416—UN—12MAY15

Installing a GS2, GS3, or Generation 4 Display

1. Ensure that key switch and CommandCenter™ are off.
2. Attach display harness to corner post connector and 26-pin display connector to back of display.
3. Turn on the key switch.
4. CommandCenter™ display searches for second display on implement CAN bus for approximately 60 seconds. If CommandCenter™ was previously in Single Display Mode, it displays a message stating, "Multiple Displays Detected."
5. Select a configuration preset:

Single Display

- Do NOT use this option in this scenario. This mode is only used if second display is not installed.

Multiple Display – Machine Only

- Precision Ag Applications and ISOBUS

implements only appear on second display, not CommandCenter™. Use this option when connected to an ISOBUS implement with Auxiliary Reconfigurable Control.

Multiple – Implement Viewer

- Precision Ag Applications appear on second display.
- ISOBUS implements appear on CommandCenter™ or second display depending on the "Next VT display" setting of implement.

NOTE: If ISOBUS implement does not have "Next VT display" function, implement appears on display that starts up first.

Multiple Display – Precision Ag Applications

- Precision Ag Applications and SeedStar™ 4 HP Planter Applications appear on CommandCenter™.
- ISOBUS implements appear on second display or CommandCenter™ depending on the "Next VT display" setting of implement.

NOTE: If ISOBUS implement does not have "Next VT display" function, implement appears on display that starts up first.

Advanced Setup

- Manually set configurations.
6. Cycle key switch off and on to save settings.

When display settings are changed, corresponding changes must be made to the other display.

If either of these modes is selected:

Single Display

- Either disable GreenStar™, task controller, and implement bus virtual terminal (VT) on other display, or disconnect other display.

Multiple Display – Precision Ag Applications

- Disable GreenStar™ and task controller on other display.

To access multiple display settings on other GreenStar™ displays:

- 4640 Universal Display: Select Menu button > System tab > Display and Sound application > Multiple Display tab.
- GreenStar™ 3 2630: Select Menu button > Display button > Diagnostics softkey > Multiple Displays tab > Change Settings button.
- GreenStar™ 2 1800: Select Menu button >

Display button > Settings softkey > Multiple Displays softkey.

Removing a GS2, GS3, or Generation 4 Display

1. Ensure that key switch and CommandCenter™ are off.
2. Detach display harness from the 26-pin display connector at back of display.
3. Turn on the key switch.
4. CommandCenter™ display searches for second display on Implement CAN bus for approximately 2—3 minutes. If CommandCenter™ was previously in one of the Multiple Display Modes, it displays a message stating “Second Display Not Found.”
5. Cycle key switch off and on to save settings.

Removing a Third-Party Display

1. Ensure that key switch and CommandCenter™ are off.
2. Detach display harness from third-party display.
3. Turn on the key switch.
4. CommandCenter™ display searches for second display on Implement CAN bus for approximately 2—3 minutes. If CommandCenter™ was previously in one of the Multiple Display Modes, it displays a message stating “Second Display Not Found.” If the “Second Display Not Found” message does not appear after 3 minutes, skip to step 5.
5. Ensure CommandCenter™ is in Single Display Mode and third-party display is unplugged.
6. Cycle key switch off and on to save settings.

Operating AutoTrac™ on CommandCenter™

NOTE: Generation 4 OS software updates 2015-1 (8.12.2500-17) and newer disable Precision Ag Applications when a secondary GreenStar™ display is detected. Disconnect GreenStar™ display inside cab to operate Precision Ag functions on Generation 4 CommandCenter™ with these software versions.

After installing a GS3 2630 Display, AutoTrac™ defaults to that display. Follow these instructions to run AutoTrac™ on CommandCenter™.

NOTE: After procedure, GS3 2630 Display will not run any GreenStar™ applications, including Section Control.

1. Ensure CommandCenter™ is in Single Display Mode and GS3 2630 Display is unplugged. Turn key switch off.
2. Plug in GS3 2630 Display and turn on the key switch.

3. When CommandCenter™ boots up, select Multiple – Compatibility Mode. Reboot display.
4. On GS3 2630 Display, select Menu button > Display button > Diagnostics softkey > Multiple Displays tab. Turn off GreenStar™ application. Depending on configuration, display may reboot.
5. On CommandCenter™, select Display and Sound application > Multiple Displays tab. Turn on Precision Ag Applications. Reboot display.

DX,PC,DISP,MULTI-19-30APR18

Display Calibration

Touch Screen Calibration may be required if screen does not register a touch in a desired location. Touch screen is factory calibrated and should not need to be calibrated under normal service. If calibration does not resolve issue, contact a John Deere dealer.

1. Select Begin Calibration.
2. A large “X” and instructions are provided to lead operators through calibration process.
3. Each time “X” is pressed, instructions change and “X” moves to another area of screen.

NOTE: If touch screen malfunctions, a USB mouse may be used. Connect mouse to display's USB port.

DX,PC,DISP,CAL-19-21DEC15

Date and Time



Date and Time

PC15314—UN—15MAY13

Information from Date and Time application is used for several important functions on system. These include error logging, activations, and data recording.

Date and time are set automatically if a GPS receiver is connected and receiving valid signal. In this case, only set time zone.

Current date and time can be found at any time by selecting Status Center at top of main run page.

NOTE: Date and Time setting affects how Guidance and Documentation data are filtered on display and desktop software.

Navigate to Date and Time

1. Select Menu.

2. Select System tab.
3. Select Date and Time application.

DX,PC,DATE-19-21DEC15

Change Current Date



A



B

PC15315—UN—15MAY13

A—Date Set by User
B—Date Determined by GPS

Date can only be changed if GPS is not connected or GPS signal is not available. Otherwise, GPS signal determines date.

Date Format does not depend on GPS signal, and can be changed at any time.

1. Select day, month, or year.
2. Use keypad to enter correct value.
3. Select Done to apply changes or Cancel to return to previous page without applying changes.

Date Format

1. Select Date Format box.
2. Select desired date format from list.
3. Select Done to apply changes or Cancel to return to the previous page without applying changes.

DX,PC,DATE,DATE-19-21DEC15

Change Current Time



A



B

PC15316—UN—15MAY13

A—Time Set by User
B—Time Determined by GPS

Current Time can only be changed if GPS is not connected or GPS signal is not available. Otherwise, GPS signal determines time.

Time Zone and Time Format do not depend on GPS signal, and can be changed at any time.

1. Select hour or minute.
2. Use keypad to enter correct value.
3. Select Done to apply changes or Cancel to return to previous page without applying changes.

Time Zone

1. Select a continent or ocean and select Next.
2. Select a country and select Next.
3. Select a time zone and select Next.
4. Confirm selected time zone and select OK.

Time Format

Use radio button to select 12 Hour or 24 Hour time format.

DX,PC,DATE,TIME-19-21DEC15

Language and Units



PC16677—UN—18MAR13

Language and Units

Language and Units is used to change Language, Number Format, and Units of Measurement.

Different settings can be created for both the display and for controllers that are displayed in ISOBUS VT. Select either tab to change settings.

Navigate to Language and Units

1. Select Menu.
2. Select System tab.
3. Select Language and Units application.

DX,PC,LANG-19-21DEC15

Language and Units Settings

Display

Select Language, Number Format, and Units of Measurement from list boxes.

ISOBUS VT

It is possible for controllers that display in ISOBUS VT to have different units of measure than rest of display. Remove check from *Use Same Units of Measure as Display* to enable list boxes for:

- Number Format
- Distance
- Area
- Volume
- Mass
- Temperature
- Pressure
- Force

Saving Settings

After new settings are selected, select Save button. Display must reboot to apply changes.

DX,PC,LANG,SETTINGS-19-21DEC15

Change Pages and Values

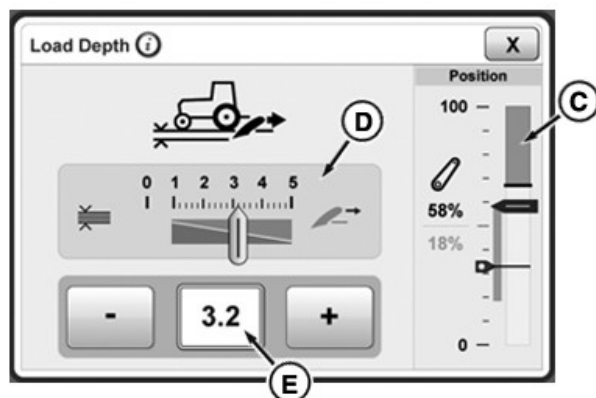
Various methods are provided to allow selection and modification of CommandCenter™ pages and values.



RXA0133414—UN—27JUN13

Input Fields

- **A—Section Tab:** To change to different section topic, click desired section tab.
- **B—Icons:** Select to open application.



RXA0130123—UN—23APR13

Menu

- **C—Bar Graph:** To change value, use increase (+) or decrease (-) buttons.
- **D—Slider Bar:** To change value, select slider bar module and use increase (+) or decrease (-) button.
- **E—Input Box:** Use increase (+) or decrease (-) buttons to adjust value. To enter new values or text, select desired input box.

NOTE: When changing values using adjustment dial, increasing speed of adjustment dial rotation increases speed of value changes.

If a large range of values is available a numeric keypad appears, allowing direct input of desired value.

KT81203,00004A7-19-03AUG17

Status Center



PC17275—UN—13AUG13

A—8.4 and 10 inch Display Status Center
B—7 inch Display Status Center

Status Center highlights important information for display functions, such as GPS signal strength and notifications. It is located in title bar on 8.4 and 10 inch displays, and in lower left corner on 7 inch displays.

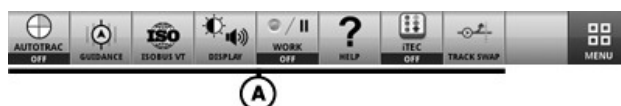
Select Status Center to display additional information in a drop down window. The expanded Status Center provides quick access to notifications and settings.

NOTE: Date and Time and Data Storage are always displayed in Status Center.

Additional information is displayed depending on machine configuration and notifications.

DX,PC,INTRO,STATUS-19-23APR18

Shortcut Softkeys



PC17276—UN—13AUG13

A—Shortcut Softkeys

Shortcut softkeys (A) display status information and provide quick access to application functions.



PC17277—UN—13AUG13

B—7 Inch Display Expand Button

Softkeys are always visible along the bottom of the 8.4 and 10 inch displays. On 7 inch display, select expand button (B) to display softkeys.

(Refer to Layout Manager application for information about customizing the shortcut bar.)

DX,PC,INTRO,SHORTCUTBAR-19-23APR18

Software Manager



Software Manager

PC15346—UN—11JUL13

Use Software Manager to update software, activate features, and find software version details.

Navigate to Software Manager

1. Select Menu.
2. Select System tab.
3. Select Software Manager application.

Software Packages

Generation 4 display software and help files are organized into packages. Each package is listed individually on Installations and Updates tab and Version Information tab.

Generation 4 Operating System



PC23900—UN—17MAR17

- Contains display operating system and basic applications.

Generation 4 Operating System Help



PC23901—UN—17MAR17

- Contains help files for display applications.

AMS Applications



PC23902—UN—17MAR17

- Contains display software.

Machine Applications



PC23903—UN—17MAR17

- Contains Machine software. A John Deere dealer

with Service ADVISOR™ is required to install package.

Machine Applications Help



PC23904—UN—17MAR17

- Contains help files for machine applications. Package may be installed without Service ADVISOR™.

NOTE: Onscreen Help packages include each language that the display supports.

DX,PC,SOFT-19-07APR17

Factory and Service ADVISOR™ Installed Onscreen Help

Tractor Application Help Package is installed at factory and with Service ADVISOR™ or Service ADVISOR™ Remote for eight languages listed below:

- | | |
|-----------|--------------|
| • Chinese | • Italian |
| • English | • Portuguese |
| • French | • Russian |
| • German | • Spanish |

Generation 4 Operating System Help Package is installed for all languages at factory.

For instructions on how to install and update onscreen help packages, see Update Display Software in this Operator's Manual section.

KT81203,00004A9-19-08NOV17

Update Display Software

Determine Software Versions on Display

Version numbers for all installed software packages are available in Version Information tab in Software Manager.

Download Software Updates



USB Drive

PC15348—UN—11JUL13

Software updates are available for download from:

Service ADVISOR is a trademark of Deere & Company

<https://my.deere.com/software-downloads/software-manager/>

The following items are available:

- Software release notes
- Software Manager utility used to download software to USB drive
- Instructions for using Software Manager utility

Once USB drive has latest software, take it to machine to install update.

Install Software Updates

USB Drive

1. Insert USB drive into upper USB port next to accessory outlet.



PC23932—UN—21MAR17

A—Install Software Button

2. When "USB Drive Options" page is displayed, select Install Software button (A). This displays the Installations & Updates tab of Software Manager.
3. Only software packages that are newer than what is currently installed are displayed. All display software packages are selected by default.
4. Select Install button. If an update does not start, follow the onscreen messages to resolve conflicts.

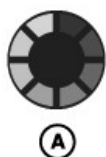
CAUTION: During software installation:

All applications will be shut down.

No system messages will be displayed.

To prevent injury, ensure that the machine is in Park and maintain electrical power throughout the installation process.

Do not remove USB drive.



PC23933—UN—21MAR17

A—Progress Indicator
B—Install Successful

5. A progress indicator (A) displays percentage of each package that has been installed. A green check mark (B) is displayed when package installs successfully.
6. Message displays when software update is finished.

Some software packages require a reboot to finish installation. Select Reboot button to restart display.

7. Remove USB drive and take back to computer. Run Software Manager Utility to upload return files.

NOTE: Return files contain software version information and are used to assist dealers with supporting display and machine.

Online Updates

1. On Installation and Updates tab, select Check for Updates Online. The display searches for available updates.
2. Only software packages that are newer than what is currently installed are displayed. All packages are selected by default.
3. Select Download button. If an update does not start, follow the onscreen messages to resolve conflicts.
4. A progress indicator (A) displays percentage of each package that is being downloaded. A green check mark (B) is displayed when package downloads successfully.
5. Select Install button to begin installation of downloaded software packages.

CAUTION: During software installation:

All applications will be shut down.

No system messages will be displayed.

To prevent injury, ensure the machine is in Park and maintain electrical power throughout the installation process.

6. Message displays when software update is finished. Some software packages require a reboot to finish installation. Select Reboot button to restart display.

Troubleshooting

When a software package fails to install, system rolls back all software to version before update started.

Record error message if software update fails. Remove files from USB drive, and reload software update to USB drive. Repeat software installation process.

If software update continues to fail, contact a John Deere dealer.

DX,PC,SOFT,UPDATE-19-25OCT17

Activations

Use this tab to manage activations on the display.



Details Button

PC23905—UN—17MAR17

StellarSupport.com requires the display serial number, challenge code, and may require a confirmation code in order to generate a code. Select Details button to find this information.

A single code may include multiple features, but it can perform only one type of action (activation or deactivation). For example, one code may activate three features, while a separate code would be needed to deactivate two features.

Enter Activation or Deactivation Code



Enter Code Button

PC23906—UN—17MAR17

1. Select Enter Code button.
2. Using keyboard, enter activation or deactivation code. Select OK button.
3. Record confirmation code, and enter code at StellarSupport.com.

Online Activations



PC24896—UN—23OCT17

Use Online Activations to view or check for available activations using a wireless connection. Activations and subscriptions are generated by StellarSupport.com. The display checks for activations automatically when powered on.

DX,PC,SOFT,ACTIVATE-19-25OCT17

Service ADVISOR™ Remote



ISOBUS VT

PC16682—UN—18MAR13

Service ADVISOR™ Remote is available in the ISOBUS VT application.



ISOBUS VT Menu

PC15293—UN—18MAR13

1. Select Menu button within ISOBUS VT.



Remote Software Updates

PC17281—UN—10SEP13

2. Select Remote Software Updates.

Theory of Operation

Service ADVISOR™ is a diagnostic tool used by John Deere dealers to perform diagnostics as well as updates to machine settings and software. Dealers can access diagnostic trouble codes and diagnostic addresses, create readings and recordings, and program controllers. This technology consists of both software and hardware. Technicians attend a minimum of 8 hours of training to become certified in utilizing this tool.

Service ADVISOR™ Remote (SAR) is a function of Service ADVISOR™ that allows the dealer technician to connect to a SAR enabled machine via the JDLINK™ network to remotely access diagnostic trouble code information and record diagnostic data, as well as to remotely program controllers on SAR-enabled machines.

Similar to software (payload) updates in the computer industry, SAR enables John Deere to remotely deliver updated software via the JDLINK™ hardware onboard. Remote programming gives John Deere the ability to update software to enhance the performance of the machine. This capability can be used to reprogram most machine controllers. The user actively participates with the dealer in this process by both downloading the software update and installing the software update.

NOTE: Some vehicle controllers may not be compatible for SAR reprogramming.

Vehicle Compatibility

NOTE: If equipped, Users and Access application provides capability to unlock, partially lock, or lock operator access to specific components. This includes the ability to download and install software updates. Please refer to Users and Access for more details.

For a current list of approved vehicles, please contact a John Deere dealer or visit StellarSupport.com.

DX,PC,SAR-19-07APR17

Vehicle Reprogramming



PC20419—UN—13NOV15

Software Update Available

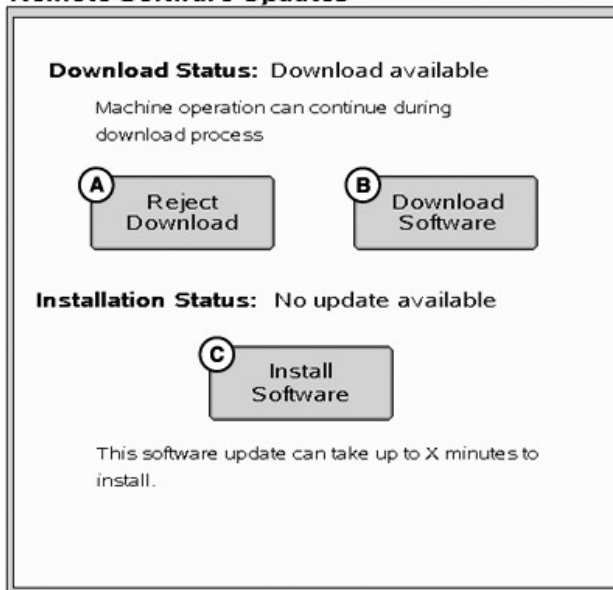
A—Accept Button
B—Cancel Button

With Service ADVISOR™ Remote (SAR), dealers can send new software to a machine to update control units. Once the dealer sends the software, a message appears on the display stating that there is new software available. Press Accept button (A) to display software updates page.

If the Cancel button (B) is selected, access the page by selecting Remote Software Updates from ISOBUS VT menu.

Download Updates

Remote Software Updates



PC17279—UN—10SEP13

Remote Software Updates

A—Reject Download Button
B—Download Software Button
C—Install Software Button

On the Remote Software Updates page, the operator can either reject (A) or download (B) the new software. Press the Download Software button to start the download process. This process continues in the background and normal machine operation can continue.

Install Updates



PC20420—UN—13NOV15

Update Ready for Install

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A—Accept Button
B—Cancel Button

Once the software has been downloaded and it is ready for installation, a message appears on the display. Press the Accept button (A) to go to the Remote Software Updates page.

Software installation can take up to 40 minutes. Press the Cancel button (B) to update the software at a later time.



PC12856—UN—07SEP10



PC12672—UN—28JUN10

On the Remote Software Updates page, press the Install Software button to begin the installation process.

Once prompted, accept the terms and conditions and then follow the on-screen instructions.

CAUTION: Some vehicle functions, including lights, may become inoperable during reprogramming. To avoid injury, ensure that the vehicle is in a safe location and configuration before reprogramming. Do not reprogram near public roadways or in active work sites.



PC17630—UN—10SEP13

If a Generation 4 Display update is included with the software download, the display is updated first. When complete, a message appears stating "Software successfully installed" and the display reboots.

Once display is updated, control unit update begins.



PC12857—UN—07SEP10



PC13582—UN—09MAY11

If there is a problem during the install process, the system tries a second install. If the second attempt fails, contact your John Deere dealer.

DX,PC,SAR,VEHICLE-19-19APR18

Troubleshooting — Reprogramming

Symptom	Problem	Solution
Accessory Power Lost	Engine started or key turned off.	Do not start engine or remove power while software updates are being installed. Turn key off and return to ON position.
Voltage Low	The system voltage is too low to proceed with the software installation.	Turn off or remove accessories that are unnecessary. Check battery voltage and recharge battery if necessary.
Communication Fault	The software installation cannot be completed because of a communications fault.	Turn key off and then back to on. Then retry software installation. Contact a John Deere dealer if communication cannot be established.
Remote Software Updates button is not on display.	Cannot access Remote Software Updates page on the display.	Check harness and connections to MTG.

NOTE: Remote Software Updates should be available at all times, whether there is a payload or not.

DX,PC,SAR,TROUBLE-19-19APR18

System Recovery

SYSTEM RECOVERY - 1.1

ENGLISH - Your system has entered System Recovery. Please contact your John Deere Dealer to attempt data recovery and software reinstallation.

ESPAÑOL - Su sistema ha entrado en modo de Recuperación. Por favor comuníquese con el concesionario John Deere para intentar la recuperación de datos y la reinstalación del software.

FRANÇAIS - Votre système a démarré une récupération du système. Veuillez contacter votre concessionnaire John Deere pour tenter une récupération de données et une réinstallation du logiciel.

DEUTSCH - Ihr System befindet sich im Systemwiederherstellungsmodus. Bitte wenden Sie sich an Ihren John Deere-Händler, um eine Datenwiederherstellung und Neuinstallation der Software zu versuchen.

PORTUGUÊS - Seu sistema iniciou a Recuperação do Sistema. Entre em contato com o seu distribuidor John Deere para tentar efetuar a recuperação dos dados e a reinstalação do software.

ITALIANO - Il sistema in uso è entrato in fase Recupero sistema. Rivolgersi al concessionario John Deere di zona per procedere al recupero dei dati ed alla reinstallazione del software.

PC20404—UN—08MAY15

Your system has entered System Recovery. Please contact your John Deere Dealer to attempt data recovery and software reinstallation.

Follow instructions if system recovery message is displayed.

System Recovery tries to protect and potentially save user data. System Recovery initiates when the system detects a conflict that might corrupt the intended functions. For more information about System Recovery, contact your John Deere dealer.

DX,PC,SYS,RECOVERY-19-21OCT16

Remote Display Access



Remote Display Access

PC17363—UN—16DEC13

Use Remote Display Access (RDA) to allow someone from a remote location to view an operating display.

Navigate to Remote Display Access

1. Select Menu.
2. Select Applications tab.
3. Select Remote Access application.



PC17391—UN—16MAY14

A—Signal Strength Bar
B—MTG Connection Icon

Using Remote Display Access

From a computer or mobile device, log in to JDLINK.com or MyJohnDeere.com and select the desired machine. Initiate a Remote Display Access session to send an RDA request to the operator in the cab. The request message must be accepted to start the session.

NOTE: When a Remote Display Access session is in progress, there is a blue outline around the display screen to indicate the session is active.

Once connected, the display view is sent through an Ethernet cable to the machine MTG. Using a cellular connection, information from the MTG is sent to the John Deere communications network allowing the display screen to be viewed on JDLINK.com or MyJohnDeere.com.

From a remote location, the operator in the cab can be assisted with display setup, optimization, and troubleshooting.

NOTE: Images from Video application are not viewable through Remote Display Access.

Select End Session button on display to stop sharing screen with a remote user.

Troubleshooting

1. Ensure MTG has adequate cellular signal strength. Refer to Signal Strength bar (A).
2. Ensure Ethernet cable is installed correctly to display, MTG, and Ethernet switch (if installed).
3. Ensure software versions of MTG and display are compatible and up to date. Refer to MTG Connection icon (B).

See Network tab in Diagnostics Center for MTG diagnostic readings.

DX,PC,RDA-19-23DEC15

File Manager



File Manager

PC16671—UN—18MAR13

File Manager application is used to transfer data to and from the display. Data can either be transferred wirelessly with John Deere Operations Center, or use a USB drive to transfer data between displays or compatible desktop software.

It is important to back up data to a USB drive periodically.

Display internal memory is intended to have enough capacity to store all data from a machine per season. A message appears when 95% of memory is used. Data should be exported and deleted before memory used exceeds 95%.

Navigate to File Manager

1. Select Menu.
2. Select System tab.
3. Select File Manager Application.

Factory Data Reset



Settings

PC17398—UN—22OCT14

Select settings at the top of File Manager application to open Factory Data Reset.

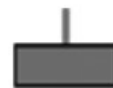
Process removes all user data from display and cannot be undone. User data includes setup and documentation data, guidance information, totals, and custom run page layouts. Language and regional settings, and activations are not reset. A reboot is required after reset.

Perform a Factory Data Reset before selling the machine.

Data Types



A



B



C

PC24718—UN—14SEP17

A—Guidance Tracks
B—Implement Profiles
C—Custom Run Pages

- Guidance tracks (A) include guidance lines and associated client, farm, and field names.
- Implement profiles (B) can be transferred between Generation 4 Displays. This includes profiles saved to the display for implements without a controller.

NOTE: Connection type, work recording, operation, and rate controller are not imported with implement profiles.

- Custom run pages (C) can be transferred between Generation 4 Displays that are the same size.

NOTE: Imported run pages are available on the All Run Pages tab in Layout Manager.

Some run page modules reset to default settings when imported.

Run page modules created for ISOBUS VT implement control units appear as unavailable if control unit is not connected to machine.



D



E



F



G

PC24719—UN—14SEP17

D—Work Data
E—Boundaries
F—Setup Data
G—Prescriptions

- Work data (D) includes mapping and totals data. It can be uploaded to John Deere Operations Center, or unloaded into compatible desktop software. When importing work data, only mapping data is transferred. Work totals cannot be imported.

NOTE: Exporting work data requires a 4200 or 4600 with a CommandCenter™ Premium or a CommandCenter™ Automation activation.

- Boundaries (E) are configured using Fields and Boundaries application.

CommandCenter is a trademark of Deere & Company

- Setup data (F) includes client, farm, and field names, crop varieties, and products.
- Prescriptions (G) are configured using Work Setup application.



(H)



(I)



(J)



(K)

PC24720—UN—14SEP17

H—ISOBUS Tasks
I—Screenshots
J—Error Logs
K—Variety Locator

- ISOBUS tasks (H) are configured using ISOBUS Tasks application.

NOTE: ISOBUS Tasks file size limit is 10 MB.

- Screenshots (I) copy the image displayed on the screen. (Refer to Capture Screenshots for instructions.)
- Error logs (J) are automatically generated by the display and can be used by John Deere to troubleshoot issues.
- Variety locator (K) files are configured using John Deere Operations Center or Apex™.

Data Sync



Data Sync

PC21844—UN—16NOV15

Data Sync is used to manually or automatically send work data directly to John Deere Operations Center. Data is transferred using cellular signal through the modular telematics gateway (MTG).

Data Sync Preference

To automatically send work data, select “Automatically Sync Work Data” checkbox. Data is sent to John Deere Operations Center when MTG is in cellular coverage. If cellular coverage is not available, work data is stored on the display. Data is sent when cellular signal is reacquired and MTG is able to make a call.

Data Triggers

Even though work data is automatically sent from the display to John Deere Operations Center periodically,

files cannot be viewed in the Operations Center until one of these triggers occur:

- Start New Work, or change client, farm, or field.
- Lose cellular communication between display and John Deere Operations Center for more than 30 minutes.
- Turn key off, and then turn key on within 30 minutes.
- Turn key off for more than 30 minutes.

Import Data



Import Data

PC20405—UN—30APR15

Select import method:

- Import from USB Drive – Select folders on USB drive that contain data to be imported.
- Import Received Files – Import setup, work data, and prescription files from John Deere Operations Center.

After setup files and prescriptions are imported to the display, use Work Setup to apply the file. Reference help files on John Deere Operations Center for how to create and send setup files to the Generation 4 Display.

Compatibility

Data can be transferred from another Generation 4 Display, GreenStar™ 3 2630 Display, compatible desktop software, or John Deere Operations Center.

John Deere Operations Center does not support the ability to view, send, or receive run pages. If a setup file only contains run pages, the file displays as invalid in John Deere Operations Center. If a setup file contains guidance lines or boundaries, and run pages, the setup file loads correctly, though run pages are not viewable.

NOTE: Update Apex™ or third-party desktop application if there are issues with transferring data.

Choose GS3 2630 card format when exporting from Apex™. To use guidance lines from other GreenStar™ displays, unload guidance lines into Apex™ and then export in GS3 2630 card format.

Data Conflicts

When necessary, imported client, farm, and field names are changed. For example, "Field1" is renamed "Field1 (1)".

If guidance lines are in the same field and created with the same tracking method, the display handles the following conflicts.

Different Name, Same Line

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Apex is a trademark of Deere & Company

- If lines are the same, name of guidance line on display is replaced by name on USB drive.

Same Name, Different Line

- If there are two different lines with the same name, line on USB drive is renamed when imported. For example, "Track1" is renamed "Track1(1)".

NOTE: A file may fail to import for multiple reasons. To determine which file is causing problems, remove individual files from USB drive and attempt to import remaining files.

Export Data



Export Data

PC20406—UN—30APR15

Select export method to transfer desired data types.

- Select Custom Export to transfer run pages and field-specific work data and guidance lines.
- Select Export All Data to quickly transfer all work data, guidance lines, and run pages using default settings.
- Select Diagnostic Data to transfer screenshots and error log files.

Delete Data



Delete Data

PC20407—UN—30APR15

Delete data removes selected data types from the display.

- Select Custom Delete to remove work data, guidance lines, prescriptions, and run pages.
- Select Clear Diagnostic Data to remove screenshots and error log files.

DX,PC,FILE-19-25APR18

USB Drive

USB Drive Requirements for John Deere Displays

- Format - Windows FAT or FAT32. This display does not recognize NTFS format.
- Capacity - Recommended capacity is 8 to 32 GB.
- Connectivity - USB 2.0
- Maximum Dimensions - 9.2 mm (3/8 in) thick by 21.7 mm (7/8 in) wide

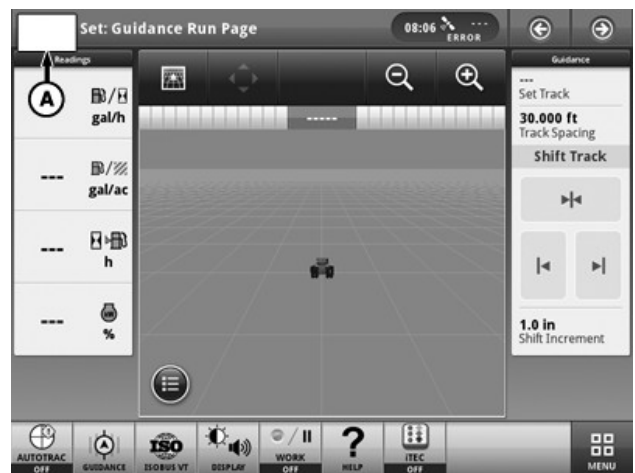
Best Practices

- After inserting USB drive, wait 10 seconds. Large USB drives may take time to be recognized.
- Use a USB drive that is 4 GB or larger, so multiple backups can be stored.
- Clean all files off the USB drive that are not associated with John Deere displays.

Check Display Hardware tab in Diagnostics Center application to determine if display recognizes USB drive.

DX,PC,FILE,USB-19-03OCT17

Capture Screen Shots



PC17263—UN—15JUL13

A—Screen Shot Area

Select area highlighted in top left corner of screen. Press and hold until screen flashes and display makes camera shutter sound.

Insert USB drive and select Export Data to transfer screen shots to drive.

DX,PC,FILE,SCREENSHOT-19-22DEC15

Diagnostics Center



Diagnostics Center

PC17272—UN—17JUL13

Diagnostics Center is the one place to find diagnostics for the entire system. Select one of the tabs for more information.

System Diagnostics

- View diagnostics information for machine, implement, and display applications.

Controller Diagnostics

- Access diagnostic addresses, diagnostic trouble codes, and information specific to each device connected on CAN bus.

Trouble Codes

- View all active or stored diagnostic trouble codes.

Display Hardware

- View diagnostic readings for processor, monitor, and display.

CAN Bus Info

- View diagnostic information for each CAN bus.

Network

- View MTG diagnostic readings.

DataSync

- View Sharing application and data transfer diagnostic information.

Navigate to Diagnostics Center

1. Select Menu.
2. Select System tab.
3. Select Diagnostics Center application.

DX,PC,DIAG-19-25OCT17

Controller Diagnostics

Controller Diagnostics displays the following information for controllers connected on CAN Bus.

Device

- Each device in list is identified by Device ID, CAN Address, and CAN Network location.

Codes

- Indicates if device has diagnostic trouble codes.

Message Count

- Number of CAN messages display has received from controller. Use zero button at bottom of page to reset message count for all devices.

Viewing and Sorting

Select button next to **View by** to change way controllers are displayed. Available views are:

All Devices

- All controllers connected to display are shown.

Implement Bus Devices

- Only controllers on Implement CAN Bus are displayed.

Vehicle Bus Devices

- Only controllers on Vehicle CAN Bus are displayed.

Select button next to **Sort by** to arrange list according to these filters.

Device

- List sorted by device ID.

Has Codes

- List sorted by if device has diagnostic trouble codes.

DX,PC,DIAG,CONTROLLER-19-22DEC15

Diagnostic Information

Select a controller from Controller Diagnostics list for more detailed information.

NOTE: Display is set to Diagnostic Mode when a controller is selected. Diagnostic Mode is removed when controller page is closed.

Diagnostic Addresses

IMPORTANT: Changing settings in Diagnostic Addresses may damage machine or implement controllers. Follow instructions, and use caution when changing address values.

Controllers have addresses that store values for different settings. Each Address is identified by an Address Number and Type. Data addresses can only be viewed (for example, software version information) while Input addresses can be edited (for example, calibration settings).

Diagnostic Trouble Codes

Current and stored codes for the selected controller are displayed. Select a code from list to view code details.

Controller Information

Controller Information displays detailed specifications and identification information from controller. This information is useful for ISOBUS diagnostics.

DX,PC,DIAG,INFO-19-22DEC15

Hide Diagnostic Center



Hide Diagnostics Center

PC15331—UN—08JUL13

Display is set to Diagnostic Mode once a controller is selected. Select Hide Diagnostic Center to minimize application and return to main page.

Hide button is useful for accessing another part of display during a calibration procedure. To return to the same diagnostic page, select Diagnostic Center application from menu.

NOTE: Leaving display in Diagnostic Mode is not recommended, because it can negatively affect performance.

Remove Diagnostic Mode by closing controller page.

DX,PC,DIAG,HIDE-19-22DEC15

Diagnostic Trouble Codes



(A)



(B)

PC15332—UN—08JUL13

A—Refresh Button
B—Clear Codes Button

Diagnostic Trouble Codes tab displays all current and stored codes that have occurred on the system.

Select Refresh button (A) to clear, and then retrieve all codes.

Select Clear Codes button (B) to remove all codes from display.

Viewing and Sorting



(A)



(B)



(C)

PC15333—UN—09JUL13

Code Types

A—Stop Alert
B—Service Alert
C—Info Alert

Select button next to **View by** to change the way codes are displayed. Available views are:

Code

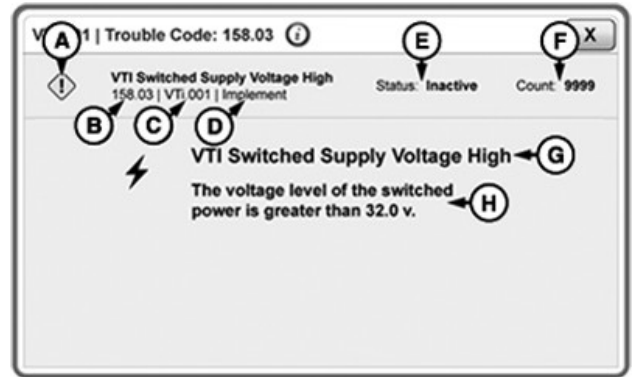
- View by “Code” lists all codes on display. Code Type

(A—C), Details, Status, and Count are all displayed. Select a code from list to view Code Details.

Device

- View by “Device” lists all controllers on CAN Bus. Device ID, CAN Network, and if device has codes are all displayed. Select a controller in list to view Device Codes.

Code Details



PC15334—UN—09JUL13

Code Details

A—Diagnostic Trouble Code Type
B—Diagnostic Trouble Code Number
C—Device ID
D—CAN Bus Network
E—Code Status
F—Count
G—Diagnostic Trouble Code
H—Diagnostic Trouble Code Description

Select a diagnostic trouble code to view code details.

DX,PC,DIAG,DTC-19-07APR17

Display Hardware

The following information is available in Display Hardware:

Hardware

- Displays and Processor
 - Part Numbers
 - Serial Numbers
 - Operational Hours
- USB Presence

Electrical

- Unswitched Voltage
- Switched Voltage
- Implement and Vehicle CAN
 - CAN High
 - CAN Low

NOTE: Instantaneous CAN bus voltage averaged each second.

Other

NOTE: Machine must be equipped to receive certain information.

- Radar Input Status
- Radar Frequency
- Implement Switch Status

DX,PC,DIAG,READINGS-19-07APR17

CAN Bus Information

CAN Bus Information tab displays status of communication between the controllers on CAN Bus. Vehicle CAN Bus connects controllers such as engine, hydraulics, and transmission. Implement CAN Bus connects controllers such as StarFire™ receiver, second ISOBUS display, and ISOBUS implements.



PC15335—UN—09JUL13

A—Green Indicator, Normal Range
B—Yellow Indicator, Out of Range

Some values display a green indicator or a yellow indicator with an exclamation point. Depending on machine and implement configuration, yellow might be expected.

- Green Indicator (A) — Value within normal range.
- Yellow Indicator (B) — Value out of normal range.

DX,PC,DIAG,CANINFO-19-07APR17

CAN Bus Values

Network Status

Active

- System is working as expected. In addition to display, at least one controller is connected and communicating on CAN Bus.

Inactive

- Display is not communicating with any other controllers on CAN Bus. If display is only controller on CAN Bus, Total Message Count increases, but Network Status is inactive.

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Total Message Count

Total message count is number of messages sent over CAN Bus. When machine is running, this value counts up continuously since there are always messages sent on CAN Bus.

CAN High and CAN Low Voltage

Peak voltage is highest average voltage that has occurred since last cold boot. Voltage measurements are averaged for each second. Peak CAN High and Peak CAN Low voltages normally range between 1.8 and 3.3 Volts.

NOTE: A cold boot occurs after display has been off for 24 hours or after unswitched power has been disconnected from display.

Bus Utilization

Information on CAN Bus is sent in messages between controllers. The John Deere implement CAN Bus is running at a baud rate of 250 kbd, meaning it can switch power up to 256,000 times per second to transmit messages. This is a Bus utilization of 100%.

If a controller, such as an implement, is not running as expected, a Bus utilization of 45% or higher could be a reason for the issue. Some devices cannot send and receive all necessary messages due to high Bus load.

NOTE: Some ISOBUS implements do not work with Bus loads higher than 25%.

A working StarFire™ Receiver causes a Bus load of about 5—7%.

Unplugging implements or GPS receivers can reduce Bus utilization.

Baud Rate

Baud Rate indicates how fast the Bus is working. ISOBUS and John Deere implement Bus are running at a rate of 250 kbd. Any controller connected to this system must work at 250 kbd, otherwise it will not function properly.

CAN Bus State and Error Counts

Four CAN Bus states are possible:

- Active – CAN Bus is running without any problems.
- Passive – Passive errors have occurred.
- Warn – Bus Warn errors have occurred.
- Off – Bus Off errors have occurred.

If one of these errors occurs, display records number of times it happens.

Passive Error Count

- If value counts up higher than zero, a controller on CAN Bus did not receive all messages. Important

information might have been lost. This is most likely due to high CAN Bus Utilization.

BUS Warn Count

- If value counts up higher than zero, a controller on CAN Bus has issues.

BUS Off Count

- If value counts up higher than zero, a controller on CAN Bus has issues. It missed a certain number of messages and does not receive messages anymore. Important information has been lost. It most likely occurs in combination with high CAN Bus Utilization.

Overrun Error Count

- Overrun Error Count indicates that applications or controllers on CAN Bus receive messages faster than they can process them. This results in missing messages and malfunction of the system. It most likely occurs in combination with high CAN Bus Utilization.

DX,PC,DIAG,CANVALUES-19-22DEC15

Network

Network tab displays diagnostic readings for machines that have a modular telematics gateway (MTG). MTG is one of the main components that enable John Deere telematics solutions, such as JDLink™, Service ADVISOR™ Remote, and John Deere Remote Display Access (RDA).

MTG contains firmware, a cellular modem, and SIM device. It sends and receives data and messages over cellular networks.

RDA requires an uninterrupted cellular connection to function. JDLink™ does not require an uninterrupted cellular connection because the MTG can store up to 1000 hours of data.

DX,PC,DIAG,NETWORK-19-21OCT16

DataSync

DataSync tab displays diagnostics readings for the Sharing application and data transfer.

Shared Work ID is the unique number of the work group the machine is assigned to. Each member of the work group shares the work ID.

Team Client, Team Farm, and Team Field are the names of the client, farm, and field associated with the current

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Service ADVISOR is a trademark of Deere & Company*

work group. Use Sharing application to make changes to these settings.

DX,PC,DIAG,DATASYNC-19-23OCT17

Users and Access



Users and Access

PC17262—UN—12JUL13

Users and Access manages user profile settings to lock users out of certain features.

User Profiles tab

- Change display profile and set PIN for administrator access.

Access Groups tab

- Store display features that are locked.

Navigate to Users and Access

1. Select Menu.
2. Select System tab.
3. Select Users and Access application.

DX,PC,USERS-19-22DEC15

User Profiles



A



B

PC17265—UN—15JUL13

A—Administrator Profile
B—Operator Profile

Display can be set to one of two profiles, Administrator or Operator. The active profile is displayed above profile list.

Administrator Profile (A)

Administrator profile always set to Full Access Group. It allows unlimited access of all features, and ability to lock and unlock features in Operator Profile. A PIN can be set to lock users out of the Administrator Profile.

Operator Profile (B)

Operator profile always set to Limited Access Group. It is restricted to only features it is given access to.

Operator Profile must be active profile and Administrator Profile must have a PIN for features to be locked.

Change Active Profile



A



B



C

PC17266—UN—15JUL13

A—Change Profile Button

B—Edit Button

C—View Button

Select Change Profile button (A) and select profile from list.

NOTE: If a PIN has been created for the administrator profile, it must be entered when switching from Operator Profile to Administrator Profile.

Add/Change PIN

Select Edit button (B) for Administrator Profile. Select Add/Change PIN button.

DX,PC,USERS,PROFILES-19-07APR17

Access Groups

Access Groups store display features users have access to. Full Access group is able to use all features on display, while Limited Access group can be restricted to only certain features.

NOTE: Full Access Group can not be edited.

Limited Access groups can only be edited if Administrator Profile is Active Profile.



A



B

PC17267—UN—15JUL13

A—View Button

B—Edit Group Button

Select View button (A) to display Access Group Summary. Select Edit Group button (B) to make changes to Access Group.

Edit Access Group



A



B

PC17268—UN—15JUL13

A—Unlock Icon

B—Lock Icon

For each application listed, "None Locked" is displayed if no features are locked. When features are locked, they are listed under the application name and icon changes to locked.

Select an application to highlight it and select Edit button.

Edit Access Rights page displays a list of features that can be locked or unlocked by toggling lock/unlock switch. Save changes by closing page.

DX,PC,USERS,GROUPS-19-07APR17

Layout Manager



Layout Manager

PC16678—UN—18MAR13

Use Layout Manager to create and modify run pages and shortcut bar so important information and functions can be accessed from the main page.

Run pages are made of "modules" or blocks that contain information and buttons. Modules can be added, removed, and rearranged on a run page.

Unlimited run pages can be created and saved. Only one Run Page Set with up to ten run pages can be created.

Custom run pages can be imported from another Generation 4 Display that is the same size. Imported run pages are available in All Run Pages.

Navigate to Layout Manager

1. Select Menu.
2. Select Applications tab.
3. Select Layout Manager application.

DX,PC,LAYOUT-19-22DEC15

Active Set



Active Set

PC15336—UN—10JUL13

Active Set is a collection of up to ten run pages that are grouped together for an operation (i.e. planting or tillage). Only pages in Active Set appear when cycling through run pages on main page.

Select Active Set to display Edit Run Page Set page.

Add Run Page to Active Set



Add Run Page Button

PC15341—UN—10JUL13

Select Add Run Page button to display a list of run pages that can be added to the set. Choose one of the run pages and select OK.

Edit Run Pages in Active Set



A



B



C



D



E

PC15338—UN—10JUL13

- A—Edit Button
- B—Duplicate Button
- C—Up Button
- D—Down Button
- E—Remove Button

Select one of the run pages to show a row of buttons for editing that run page.

Select Edit button (A) to change the modules on run page.

Select Duplicate button (B) to create a new run page with same modules.

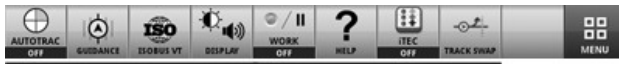
Select Up and Down buttons (C and D) to change order of run pages. Run page order is used when cycling through pages on main page.

Select Remove button (E) to delete run page from Active Set. Run page is still in All Run Pages list, just no longer in Active Set.

NOTE: Remove button is not shown if only one run page is in Active Set.

DX,PC,LAYOUT,ACTIVESET-19-07APR17

Shortcut Bar



A

PC17276—UN—13AUG13

A—Shortcut Softkeys

Shortcut bar is a collection of shortcut softkeys that display status information and provide quick access to application functions.

Select Default Shortcut Bar to Edit the Shortcut Bar.

Edit Shortcut Bar



A



B

PC17386—UN—15MAY14

C



PC17387—UN—15MAY14

- A—Add Button
- B—Move Shortcut Icon
- C—Remove Shortcut Button

Shortcuts can be added, removed, and rearranged on the shortcut bar.

NOTE: The same shortcut can only be placed on the shortcut bar once.

Select Add Shortcut button (A) and choose application with appropriate content. Applications without available shortcuts are grayed out. From list, find shortcut that performs desired function and select Add button.

Once added to shortcut bar, select shortcut to highlight it. Press and slide shortcut (B) to move it to an open area.

To remove a shortcut, select shortcut to highlight it and select Remove button (C).

DX,PC,LAYOUT,SHORTCUTBAR-19-07APR17

All Run Pages



All Run Pages

PC15340—UN—10JUL13

All Run Pages tab displays every run page that has been created on display. These include current run pages that are in Active Set, as well as run pages that will be used in future operations.

Edit Run Page



A



B



C

PC15339—UN—10JUL13

- A—Edit Button
- B—Duplicate Button
- C—Remove Button

Select one of the run pages to show a row of buttons for editing that run page.

Select Edit button (A) to change the modules on run page.

Select Duplicate button (B) to create a new run page with same modules.

Select Remove button (C) to delete run page from display. This permanently removes run page from display and Active Set.

NOTE: Remove button is not shown if factory default run page is selected.

Create Run Page



Add New Button

PC15341—UN—10JUL13

Select Add New button to create a new Run Page.

DX,PC,LAYOUT,ALLRUNPAGES-19-07APR17

Add, Edit, or Duplicate Run Pages

The same interface is displayed when adding, editing, or duplicating a run page. A new run page starts out blank, while duplicate or edited run pages have existing modules.

Run Page Name



A



B

PC15337—UN—10JUL13

A—Edit Button
B—Add Module Button

Every run page must have a unique name. Select Edit button (A) to either name or rename run page.

Add Module

Select Add Module button (B) and choose application with appropriate content. From list, find module with desired information and select Add button.

NOTE: The same module can only be placed on a run page once.

NOTE: Start with larger modules before adding smaller modules to fill in space.

Use grid to determine amount of space required for a module.

Rearrange Modules



Move Module

PC15342—UN—10JUL13

Once added to run page, select module to highlight it. Press and slide module to move it to an open area.

Remove Module



Remove Module Button

PC15343—UN—10JUL13

Select module to highlight it, and select Remove button.

DX,PC,LAYOUT,ADDRUNPAGES-19-07APR17

Fields and Boundaries



Fields and Boundaries Application

PC17260—UN—11JUL13

Field names organize information so it is easier to find and use data, such as guidance lines. Using field names is optional, and a “---” appears for undefined names.

Use Fields and Boundaries application to:

- Select field location name used for all other applications.
- Create a client, farm, or field name.
- Change the name of a client, farm, or field.
- Associate a field to a different farm or client.
- Delete a client, farm, or field.
- Create boundaries.

Select Client, Farm, and Field box to set current location and choose field name used for all other applications.

Integration with Guidance

- A field can be associated to a guidance track when the track is created, or by editing the track.
- Guidance track list can be filtered by field name.

Run Page Module

A Location module for the Fields application is available in Layout Manager application. It is available on the default Guidance Run Page, and it can be added to any run page.

Select a field in Location module to:

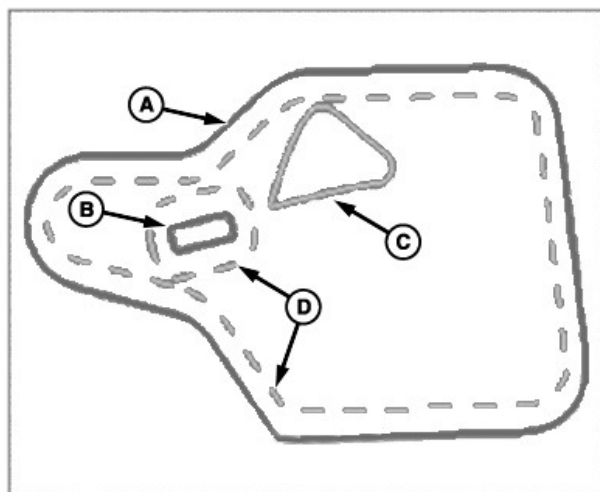
- Filter guidance track list.
- Associate new tracks to the field when they are created.
- Begin new or continue previous work data.

Navigate to Fields

1. Select Menu
2. Select Applications tab.
3. Select Fields application.

DX,PC,FIELDS-19-22DEC15

Field Boundaries



PC21838—UN—19NOV15

- A—Exterior Boundary (Pink)
 B—Interior Impassable Boundary (Pink)
 C—Interior Passable Boundary (Yellow)
 D—Headland Boundary (Yellow)

The exterior boundary (A) marks the perimeter of a field.

NOTE: Creating and using interior boundaries requires an exterior boundary.

Interior boundaries mark important areas of field. These can either be impassable (pink) (B) or passable (yellow) (C). An example of an impassable boundary is a well, while an example of a passable boundary is a waterway.

Headland boundaries (yellow dashes) (D) mark areas in the field where there are end rows or turn rows. They are created inside the exterior boundary and around impassable interior boundaries.

When used with Section Control, boundaries prevent application of product inside marked areas of the field and outside of the field.

Area Calculation

An estimated boundary area is calculated on a flat two-

dimensional plane. All active interior boundary areas are subtracted from exterior boundary area. Elevation changes are not used in boundary area calculation.

Work Totals include elevation changes in area worked totals. Due to calculation differences, boundary and work totals vary.

Creating a boundary using a coverage map requires the following:

- Field name.
- Coverage map with no coverage gaps around the exterior of the field.

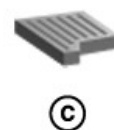
Creating a driven boundary requires the following:

- Field name.
- StarFire™ receiver with SF1 or better signal.

DX,PC,FIELDS,BOUNDARIES-19-23APR18

Manage Clients, Farms, and Fields

Field Organization



PC17389—UN—15MAY14

- A—Client
 B—Farm
 C—Field

Use the following hierarchy to help organize data:

- Clients (A) are the highest level of organization.
- Farms (B) are the middle level of organization. A farm can be associated with a client.
- Fields (C) are the basic level of organization. A field can be associated with a farm and a client.

A strict hierarchy is not necessary, though it is possible to use only field names, and leave farm and client names blank. It is even possible not to use field names at all.

These decisions depend on amount of data being kept. More data requires structure to find fields.

NOTE: In previous John Deere displays, maps and guidance lines were saved based on field names. In the Generation 4 display, data is saved as latitude and longitude points. The field name is only needed as a way to filter data.

Select and Filter Names

StarFire is a trademark of Deere & Company

In the Client, Farm, and Field hierarchy, select clients and farms to find fields.

1. Select Client tab.
2. From list, select client. Client name is displayed on Client tab.
3. Farm tab is automatically displayed. Only farms associated with the client are listed.
4. From list, select farm. Farm name is displayed on Farm tab.
5. Field tab is automatically displayed. Only fields associated with the client and farm are listed. Select field.

Remove Filter

Remove filter by selecting Clear Selections button.

Create and Edit Names

NOTE: Clients, farms, or fields should not be renamed after data is recorded. If renamed, change name in other locations, such as John Deere Operations Center.

Client, Farm, and Field names cannot be duplicated. Names associated with different clients and farms must be unique.

Client and Farm Tabs

When Client or Farm tabs are selected, select Edit button at bottom of page to display Edit Client or Edit Farm list.

On either list, select one of the client or farm names to edit it, or select New button at bottom of page to create a name.

Field Tab

When Field tab is selected, highlight field name and select edit button to edit a field. Select New button at bottom of the page to create a name.

Delete Names

To delete a name, edit the client, farm, or field, and select the delete button on the edit page.

- Deleting a client also deletes all farms, fields, and guidance tracks associated with client.
- Deleting a farm also deletes all fields and guidance tracks associated with farm.
- Deleting a field also deletes all guidance tracks associated with field.

DX,PC,FIELDS,MANAGE-19-07APR17

AutoTrac™ Guidance



Guidance

PC16676—UN—18MAR13

Use Guidance application for steering machines through field along guidance tracks. Guidance can be done manually, or automatically using AutoTrac™.

Manual Guidance (included feature)

Manual Guidance, also known as Parallel Tracking™, enables operator to steer manually along guidance tracks using onscreen lightbar, map, and audible tones. A StarFire™ receiver is required to operate Manual Guidance. Parallel Tracking™ shows the machine's position in a field relative to a track determined during the first pass through the field. Parallel Tracking™ has modes to follow a straight, circle, boundary, or curve track. Use the machine icon, lightbar, and line on the display to know which way to steer to stay on the path parallel with the last. Audible alerts allow the operator to focus on the field.

AutoTrac™ Guidance (activation required)

AutoTrac™ is an assisted steering system that automatically steers the machine through the field. AutoTrac™ requires a StarFire™ receiver and an integrated steering system on the machine to operate. After operator enters a reference path (Track 0) in AutoTrac™, machine will steer itself parallel to that track if all conditions are met.

The AutoTrac™ Guidance application provides the tools to:

- Set up a guidance track.
- Change track width.
- Adjust settings to improve guidance performance.
- Engage AutoTrac™.
- View exit codes.

DX,PC,AUTOTRAC-19-30APR18

Equipment Manager



Equipment Manager

PC20410—UN—22MAY15

AutoTrac is a trademark of Deere & Company
Parallel Tracking is a trademark of Deere & Company
StarFire is a trademark of Deere & Company

Select Equipment Manager application to enter Machine and Implement Profile settings. Profile settings are important for accurate performance of John Deere Precision Agricultural applications, such as AutoTrac™, Section Control, and work data maps.

Navigate to Equipment Manager

1. Select Menu.
2. Select Applications tab.
3. Select Equipment Manager application.

DX,PC,EQUIP-19-22DEC15

Machine Profile

General Settings

If display detects machine, some information is automatically set by machine control units.

At this time, profile settings cannot be imported or exported from the display.

Settings specific to certain machine types only appear on page when applicable.

- **Articulated Tractor Articulation Point**

Front Axle

- Distance from articulation point to center of the front axle. Articulation point is the pivoting point of machine when making a turn.

Rear Axle

- Distance from articulation point to center of rear axle. Articulation point is the pivoting point of machine when making a turn.

- **Track Tractor Center of Rotation**

Center of Rotation

- Distance from pivot point of the machine to rear axle.

GPS Offsets

- **GPS Lateral Offset**

- Lateral distance (left or right) from the center line of the machine to center of GPS receiver. This value is usually set to 0.0 unless GPS receiver is offset left or right of the machine center line. Guidance and Mapping applications require GPS Lateral Offset settings.

- **GPS Inline Offset**

- Inline distance from center of the non-steering axle on the machine to center of GPS receiver. Mapping application requires GPS Inline Offset settings.

- **GPS Height**

- Vertical distance from GPS receiver to ground.

Connection Offsets

- Inline distance from center of rear axle to connection point. Connection point is location where implement connects to machine. Mapping application requires Connection Offset settings.

Restore Profile to Factory Defaults

NOTE: Only machines detected by the display can have profile settings restored to factory default.

Default machine profile settings are stored in machine control units. Changes to these settings are stored in the display. To reset profile to factory defaults, select settings at the top of Machine Profile page. Then, select Reset Profile button.

Use Help Center Onscreen Help for more information about Equipment Manager and the Machine Profile.

DX,PC,EQUIP,MACHINE-19-07APR17

Implement Profile

Profile name is set automatically based on implement that is auto-detected and cannot be saved. On implements without a control unit, profile name is set by the operator.

Saving Profile Settings

Select Save button to store settings from all tabs and close Implement Profile application. Selecting Save is not required when switching between tabs.

Implement Profile settings are saved in the display according to the following factors:

- Profile Name
- ISO name of the detected implement control unit

NOTE: Set up pre-operation settings in the implement control unit, such as drive configuration, before configuring Implement Profile settings.

ISO name changes when some implement control unit settings change. This includes changing control unit setup between fertilizer and seeding.

Automatic Detection of Profile Settings

NOTE: Section Control must be OFF to detect SeedStar™ 2 or SeedStar™ XP planters when first connected to tractor. After first connection, planter is detected whether Section Control is ON or OFF.

If an implement control unit is connected, some Implement Profile settings are automatically set by the implement control unit.

An alert stating "Implement Profile Created" is displayed the first time the control unit is connected. When the implement is reconnected in the future, it is identified by its ISO name and Implement Profile settings that are saved in the display are loaded.

NOTE: The alert continues to appear if "Setup Later" is selected.

When an implement is connected that is not recognized, a profile must be created for that implement. Select Add Implement button in Equipment Manager to create an implement profile.

To view currently detected ISO Name, select Diagnostics Center > Controller Diagnostics tab > choose implement control unit > Controller Info tab.

Verify all required settings before operation. Work point is not set automatically.

Connection Types

- Connection type, or hitch, describes how implement is attached to machine and controls how display determines implement movement behind machine. Coverage map, documentation, and Section Control require Connection Type settings.

- **Pivoting Offset**

Some implements have a pivoting hitch that connects to machine's rear 3-point hitch. The offset for this pivoting location is required for display to determine implement movement behind the machine. Option is available when rear 3-point is selected as the connection type.

Working Width

- Working Width is the width of the area tilled, planted, sprayed, or harvested on each pass through the field. It is used to create work data maps and calculate area worked. Guidance, Mapping, and Area Totals applications require Working Width.

Dimensions

- **Lateral Offset**

Lateral distance from center point of the machine to center point of working width of implement. Guidance and Mapping applications require Lateral Offset setting.

- **Center of Rotation**

Inline distance from connection point to the implement's center of rotation while in working position. Usually, this is where load bearing parts of

implement make contact with ground. Center of Rotation offset is important to accurately model trailing action of implement around curves. Mapping application requires Center of Rotation setting.

- **Work Point**

Inline distance from connection point to point where the operation occurs. For example, where seed or product is dropped, a crop is harvested, or ground is tilled. Mapping application requires Work Point setting.

- **Section Offset (ISOBUS Implements)**

Inline distance from center of rotation to point where the operation occurs. For example, where seed or product is dropped, a crop is harvested, or ground is tilled. Mapping application requires Section Offset setting.

Work Recording

- Recording Triggers determine when map recording and Work Monitor totals are turned ON and OFF. Not all recording triggers are available for all machine types.

NOTE: In Manual mode, operator must push Record or Pause button to turn work data map recording ON or OFF.

Mechanical Delay

- Mechanical delay is the average time for the product to reach the ground after an ON or OFF command. It may need to change with each machine, implement, and display combination. Mapping application requires Mechanical Delay settings. Settings are critical for Section Control performance.

Use Help Center Onscreen Help for more information about Equipment Manager and the Implement Profile.

DX,PC,EQUIP,IMPLEMENT-19-25APR18

Machine Monitor



Machine Monitor

PC15318—UN—16MAY13

Machine Monitor displays machine-specific performance values. Groupings of values include:

- Speed and Power
- Fuel and Pressure
- Temperature

- Electrical
- Hours

NOTE: Values available in each group depend on machine model.

Select tabs on left-hand side of the page to switch between groups. Select a value to view a popup of just that value.

If a value is not available, dashes will be shown.

Navigate to Machine Monitor

1. Select Menu.
2. Select Applications tab.
3. Select Machine Monitor application.

DX,PC,MACHMON-19-23DEC15

Work Monitor



Work Monitor

PC15317—UN—16MAY13

Work Monitor displays averaged and totaled machine and operation-specific values. Select a value on the page to view a popup window of just that value. Every one of these values can be placed on the main run page.

Use the Reset button at the bottom of the page to clear all values, except instant values. Date and time of the last reset will be indicated next to the button.

To the right of the Reset button, Work Recording indicates whether the Work Monitor is active and currently counting. A pulsing light shows it is active.

Navigate to Work Monitor

1. Select Menu.
2. Select Applications tab.
3. Select Work Monitor application.

DX,PC,WORKMON-19-23DEC15

Work Recording

When Work Recording is ON, map recording and counters that require a recording trigger accumulate. Counters requiring Work Recording include:

- Area Worked
- Time Worked

- Productivity
- Average Fuel Per Area
- Average Working Speed

Select Work Recording in the bottom right hand corner to view a popup window with recording settings.

Recording status is based on the current recording trigger selected in Implement Profile. If the recording trigger does not fit the current operations, press Edit button to change the selected recording trigger. For more information, see Implement Profile section.

NOTE: If recording trigger is set to manual, work recording can be switched on or off by pressing the recording button.

DX,PC,WORKMON,REC-19-23DEC15

Maintenance and Calibrations



Maintenance and Calibrations

PC15324—UN—21MAY13

Maintenance and Calibrations application allows the operator to set up service intervals and perform calibrations on machine components.

Navigate to Maintenance and Calibrations

1. Select Menu.
2. Select Tractor Settings tab.
3. Select Maintenance and Calibrations application.

DX,PC,MAINT-19-23DEC15

Calibrations

Use this application to perform wheel slip calibration and radar calibration.

Radar Calibration



Radar Calibration

PC23946—UN—22MAR17

A radar device needs to be calibrated when it is first installed on the machine or if there is a difference between radar speed and actual ground speed when operating unloaded on a hard surface.

NOTE: In windy conditions, moving parts such as leaves, dust, or gravel can cause inaccurate radar speed.

Wheel Slip Calibration



Wheel Slip Calibration

PC23947—UN—22MAR17

Calibrate wheel slip if there is a mismatch between radar speed and wheel speed when operating unloaded on a hard surface. For more information, see Machine Monitor.

Perform calibration while driving with an unloaded machine on a hard, dry, clean, and level surface.

NOTE: Wheel slip calibration is only available on a connected and calibrated radar device.

Make sure that radar speed is accurate before performing wheel slip calibration.

DX,PC,MAINT,CAL-19-07APR17

Radar Calibration

CAUTION: Avoid injury. Perform calibration in safe and open area that is clear of objects and bystanders.

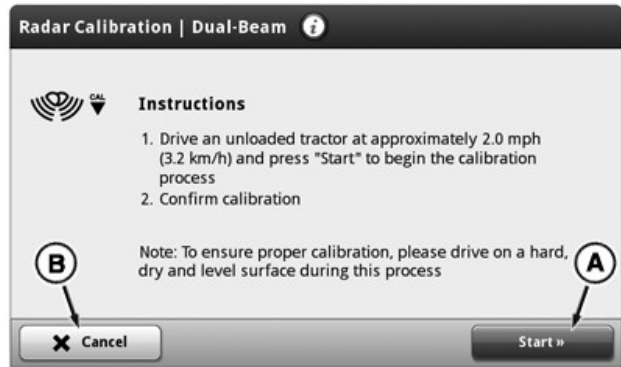
Perform radar calibration if:

- Radar speed and wheel speed are not equal when wheel slip is not present.
- Radar device was installed/replaced.
- Tire size was changed.
- Ballast of tractor was changed.



RXA0147926—UN—13APR15

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **Maintenance & Calibrations** icon.
4. Select **Calibrations** tab.
5. Select **Radar Calibration** icon.
6. Drive unloaded tractor, on hard, dry and level surface, at approximately 3.2 km/h (2.0 mph).



RXA0147580—UN—10MAR15

7. Select Start button (A) to begin radar calibration process.

NOTE: Radar calibration can be canceled by selecting cancel button (B).



RXA0147581—UN—10MAR15

8. Select OK button (C) to complete radar calibration.

If radar calibration is unsuccessful after three attempts, see your John Deere dealer.

KT81203,00004B4-19-01SEP17

Wheel Slip Calibration

CAUTION: Avoid injury. Perform calibration in safe and open area that is clear of objects and bystanders.

Perform wheel slip calibration if:

- After radar calibration has been performed.
- Wheel slip is displayed when wheel slip should not be present.
- Tire size was changed.
- Ballast of tractor was changed.

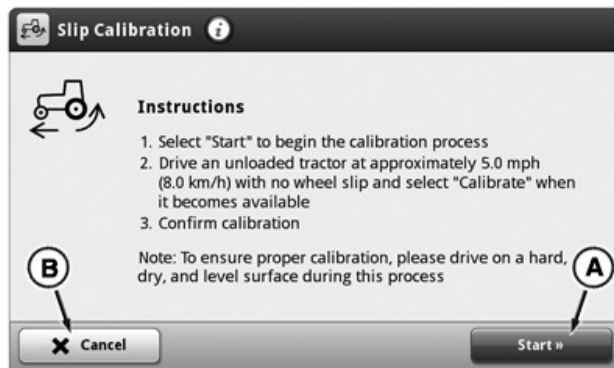


RXA0147928—UN—13APR15

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **Maintenance & Calibrations** icon.
4. Select **Calibrations** tab.

NOTE: Tractor must be in motion for wheel slip calibration icon to appear.

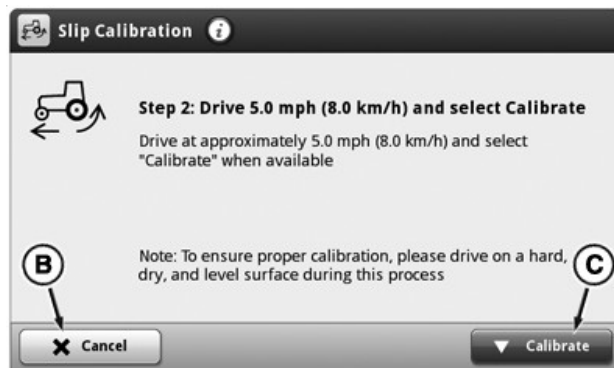
5. Select **Wheel Slip Calibration** icon.



RXA0147582—UN—10MAR15

NOTE: Wheel slip calibration can be canceled by selecting cancel button (B).

6. Select Start button (A) to begin wheel slip calibration process.
7. Drive unloaded tractor, on hard, dry and level surface, at least 8 km/h (5 mph).



RXA0147583—UN—10MAR15

8. Select Calibrate button (C).



RXA0147584—UN—10MAR15

9. Select OK button (D) to complete wheel slip calibration.

If wheel slip calibration is unsuccessful after three attempts, see your John Deere dealer.

KT81203,00004B5-19-01SEP17

Service Intervals

Service Intervals are reminders of when regular maintenance needs to be performed on a machine.

Select Add Service Interval button to create a new service interval. An unlimited number of service intervals can be added.

Once a service interval is created, it is added to the list and displayed with the name, elapsed time, and interval amount.

- The operator selects the name to identify the specific service interval.
- Elapsed indicates the number of hours since the service interval was reset.
- Interval is the number of hours between each service.

The intervals are sorted from least amount of time due to the most amount of time due. They are then sorted by name, in alpha-numerical order, with priority given to numbers.

Twenty hours before the service interval is due, the system will inform the operator that the machine will need to be serviced soon. Once the message has been acknowledged, the system will inform the operator about the upcoming service at every startup until service interval is reset.

DX,PC,MAINT,SERVINTERVAL-19-23DEC15

Service Checks

NOTE: Availability of the Service Checks feature depends on purchase options.

Perform service checks with machine on level ground

and engine off. For accurate readings, wait at least 40 minutes after engine shut down before checking fluid levels.

A light indicates the status of a machine service checkpoint.

- Green light — Normal level
- Red light — High level or low level

The following checkpoints are available:



(A)

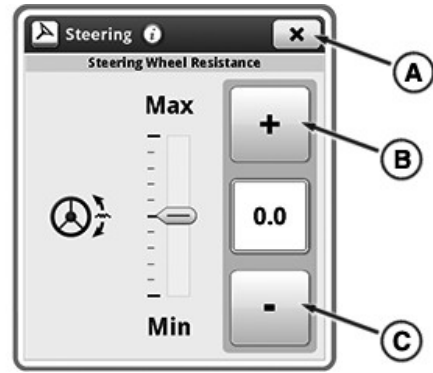


(B)

A—Engine Oil Level
B—Engine Coolant Level

- Engine Oil Level (A)
- Engine Coolant Level (B)

DX,PC,MAINT,SERVCHECK-19-07APR17



RXA0152446—UN—27JUN16

Steering Main Page

2. Select + (B) or - (C) to increase or decrease value.

- Maximum: 2
- Minimum: -2
- Increment: 0.1
- Default: 0

3. Select close (A).

KT81203,00004B9-19-16JUL18

Steering



Steering

RXA0152447—UN—27JUN16

Steering application allows operator to access and adjust steering settings.

Navigate to Steering

1. Select Menu.
2. Select Machine Settings tab.
3. Select Steering application.

KT81203,00004B8-19-28NOV16

Steering Settings

ACS Steering Setting allows operator to modify force required to turn steering wheel.

1. Access steering application to modify resistance.

Controls Setup



PC15326—UN—08JUL13

Controls Setup configures integrated tractor joystick, CommandARM™ levers, iTEC™ buttons, and third-party devices to control tractor or implement functions. ISO Aux implements configures to tractor joystick or third-party device.

Set up assignments:

1. Select Menu.
2. Select Applications tab.
3. Select Controls Setup application.
4. Select from following tabs on left-hand side of page:

NOTE: Unlock tractor joystick to activate default and custom (manually set) assignments. See CommandARM™ Joystick-Custom Setup in Selective Control Valves section of this Operator's Manual.

- **Integrated Tractor Joystick:** assign to control tractor and implement functions (e.g. front hitch).
- **CommandARM™ Levers and iTEC™ Buttons:** assign to control tractor and implement functions (e.g. rear hitch).

CommandARM is a trademark of Deere & Company
iTEC is a trademark of Deere & Company

- **Third-Party Devices:** any mechanism, John Deere or non-John Deere, attached to ISOBUS. Once attached, assign control to tractor and implement functions (e.g. wagon).
- **ISO Aux implements:** assign implement (e.g. wagon) function to a specific button on tractor joystick.

5. Select reconfigurable assignment module.

Depending on selected source, the following combinations (assignments) are possible

- **Integrated Tractor Joystick, CommandARM™ Levers and iTEC™ buttons, and Third-Party Devices:** Input + Source + Function
- **ISO Aux Implements:** Function + Device + Input

Manage Assignments:

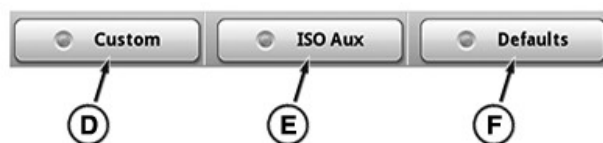


RXA0156706—UN—11JAN17

To edit assignments for tractor joystick, CommandARM™ levers, or iTEC™ buttons, select desired reconfigurable assignment module. To remove assignment, select remove button (A) (in source overlay).

To edit assignments for third-party devices or ISO Aux implements, select edit button (B) in desired reconfigurable assignment module. To remove assignment, select trash button (C).

ISO Aux, Custom, and Defaults:



RXA0156710—UN—12JAN17

NOTE: Select ISO Aux and Custom buttons to enable custom assignments for ISO Aux implements.

ISO Aux (D): determines if messages from tractor joystick are sent to ISO Aux implement. Select to enable implement functions. Select again to disable. Functions are stored until operator edits corresponding assignment.

Custom (E): enables all customized assignments across all groups.

Defaults (F): clears and restores any custom control assignments to factory default settings.

KT81203,00005B2-19-03APR18

Settings Manager



Settings Manager

PC22543—UN—22APR16

Use Settings Manager to load, edit, or save configurations of machine and implement settings. Saved configurations are used to easily restore the settings that a machine and implement use during an operation.

Navigate to Settings Manager

1. Select Menu.
2. Select Applications tab.
3. Select Settings Manager application.

DX,PC,SETTINGS-19-10MAY16

Automation Status

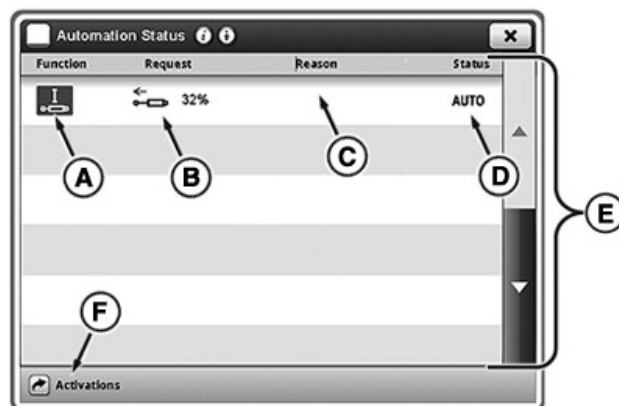
Automation Status allows control of various tractor functions. Automation Status displays which tractor functions are being controlled and their current status.

SCV Function Example: SCV status set to AUTO. Implement actively controls SCV 1. Implement requests SCV flow to be set at 32% in extend direction.



RXA0135014—UN—12AUG13

1. Select **Menu**.
2. Select **Applications** tab.
3. Select **Automation Status** icon.



RXA0135016—UN—12AUG13

Automation Status Page

A—Function
B—Request
C—Reason
D—Status
E—Scroll Bar
F—Activations button

Press Activations button (F) to navigate to Software Manager application.

KT81203,00004BB-19-26JUL17

Read ISOBUS Controller's Operator's Manual

CAUTION: ISOBUS Controller detected
Improper operation can cause unintended machine movement.

To avoid death or serious injury to a bystander, understand how this display operates the functions of the machine.

Read the ISOBUS controller's operator's manual.

Message shown above displays when system detects ISOBUS control unit. For more information, read the ISOBUS controller's operator's manual.

Generation 4 CommandCenter™ display can be used as display device for any control unit meeting ISO 11783 (ISOBUS) standard. This includes capability to control ISOBUS control units. When used in this manner, information and control unit functions placed on the display are provided by control unit and are responsibility of control unit manufacturer. Some of these control unit functions could provide hazard either to operator or bystander. Read operator manual provided by control unit manufacturer and observe all safety messages in manual and on control unit prior to use.

KT81203,00004BC-19-28NOV16

ISOBUS VT



ISOBUS VT

PC16682—UN—18MAR13

This John Deere display supports Agricultural Industry Electronics Foundation (AEF) ISOBUS compatible controllers according to ISO 11783. These controllers can be viewed and operated within the ISOBUS Virtual Terminal (VT).

CommandCenter is a trademark of Deere & Company

When an ISOBUS controller is connected, graphic files for the user interface are loaded into ISOBUS VT. Then ISOBUS VT provides a means for the operator to navigate through and operate all available functions of ISOBUS controller.

Navigate to ISOBUS VT

1. Select Menu.
2. Select Applications tab.
3. Select ISOBUS VT application.

Connected ISOBUS Implements and Controllers

The Generation 4 display loads and communicates with different ISOBUS controllers at the same time. A list of all connected ISOBUS controllers is displayed after selecting menu button.

Select desired ISOBUS controller and press OK button to view the user interface.

Troubleshooting

If the interface for an ISOBUS controller does not display correctly:

- View the ISOBUS controller in Status Center, and follow troubleshooting steps for the status indicated. For more information, view ISOBUS controllers in Diagnostic Center.

If the interface still does not display correctly:

1. Select settings at the top of ISOBUS VT application.
2. Select Clean Up ISOBUS VT in advanced settings to clear stored ISOBUS controller user interface files.

The user interface is reloaded the next time the controller is connected.

Run Page Module

ISOBUS VT modules can be added to a run page using the Layout Manager application.

Modules are loaded from implement controller and are only available while controller is connected. The types of modules available are dependent on controller manufacturer. This display is capable of displaying ISOBUS VT version 3.

DX,PC,ISOBUSVT-19-23APR18

StarFire™ GPS Receiver



StarFire Receiver

PC17388—UN—15MAY14

The StarFire™ GPS receiver acquires global positioning and differential correction signal through a single receiver.

A Terrain Compensation Module (TCM) is integrated into the receiver and corrects for machine dynamics, such as roll and pitch on side-slopes, rough terrain, or varying soil conditions. An accurate TCM calibration is necessary for proper operation.

See the StarFire™ Receiver operator's manual for setup and calibration instructions.

Navigate to StarFire™ GPS Receiver

1. Select Menu.
2. Select Applications tab.
3. Select StarFire™ application.

DX,PC,STARFIRE-19-07APR17

Use Video Display Capability Properly Avoid Backover Accidents



RXA0109491—UN—05AUG10

Avoid Backover Accidents

CAUTION: Before moving machine, be sure that all persons are clear of machine path. Give audible warning by sounding horn. Turn around and look directly for best visibility. Use mirrors to assist in checking all around machine. Keep windows and mirrors clean, adjusted, and in good condition. Use a signal person when backing if view is obstructed or when in close quarters.

Do not rely on a camera to determine if personnel or obstacles are behind the machine. The system can be limited by many factors including maintenance practices, environmental conditions, and operating range.

CAUTION: Do not rely on a camera for collision avoidance or bystander detection. To avoid possible injury or death to operator or others, always remain alert and aware of surroundings when operating the machine. Read and understand **AVOID BACKOVER ACCIDENTS** in this section.

IMPORTANT: Avoid damage to equipment. Correctly understand whether the camera is "mirrored" and whether the video application is mirrored.

- Mount camera in a sturdy and secure location.
- Understand camera's field of view.
- Keep camera properly serviced.
- Keep camera lens clean.

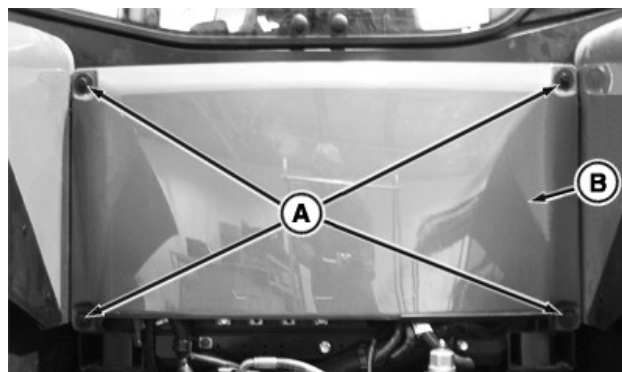
KT81203,00004BD-19-28NOV16

Install Video Display Camera

IMPORTANT: Avoid damaging camera by mounting camera securely to equipment and in location where camera will not be pinched, crushed, kicked, or knocked off.

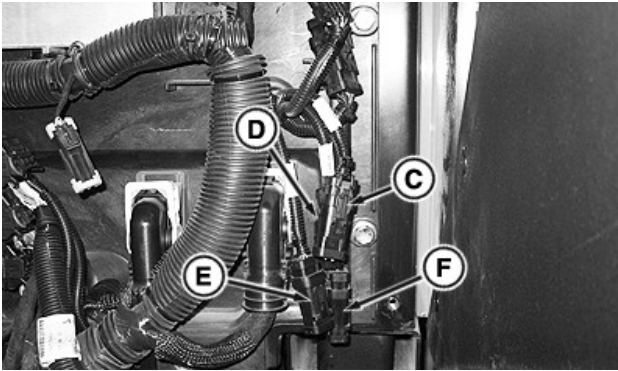
NOTE: Camera placement is limited to video camera cable length. Consider camera field of view when selecting location.

Tractors equipped with 4200 processor will have one camera input connector and 4600 processor will have four camera input connectors.



RXA0132177—UN—23APR13

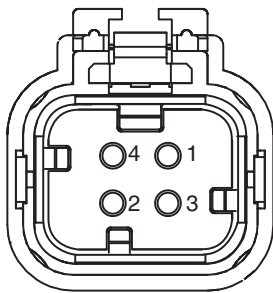
Remove Rear Panel



RXA0132178—UN—23APR13

Video Connectors Location (Equipped with 4600 Processor)

1. Tractors are equipped with one or four, 4-pin video connector(s) to attach camera(s). Remove rear cab panel cap screws (A). Remove cab rear panel (B) to access each marked video camera connector(s) (C, D, E or F). Chart shows connector pin/function information.



RXA0107925—UN—28MAY10

Video Connector Pin Identification

Pin Number	Function
1	Power
2	Ground
3	Signal
4	Signal—Ground

2. Connect camera cable into 4-pin connectors, route cable and mount camera at desired location.
3. Install rear panel on cab and tighten screws.
4. Proceed to Video Triggers in this section of this Operator's Manual to select camera settings.

KT81203,00004BE-19-31JUL18

Video



Video

PC15312—UN—15MAY13

CAUTION: Do not rely on a camera for collision avoidance or bystander detection. To avoid possible injury or death to operator or others, always remain alert and aware of surroundings when operating the machine. Read and understand **AVOID BACKOVER ACCIDENTS** in the safety section.

The Video application is used to observe areas around the machine. Only one video can be viewed at a time.

4600 processor can support up to four camera inputs, while 4200 processor can support only one camera input.

For more information about the different types of displays, see Display Introduction section.

Navigate to Video

1. Select Menu.
2. Select Applications tab.
3. Select Video application.

Switching Cameras



Camera Icon

PC23948—UN—22MAR17

If more than one camera is connected, choose between video inputs by selecting different camera numbers.

Mirror Video



Mirror Video Button

PC23949—UN—22MAR17

Select Mirror Video button to simulate a rear view mirror. This swaps left and right sides of video image.

Contrast



Video Contrast Icon

PC23950—UN—22MAR17

Adjust video contrast using plus (+) and minus (-) buttons. Brighten video by selecting the plus button, and darken video by selecting minus button.

IMPORTANT: Determine if camera image or video application is mirrored before using Video application.

KD34109,0000817-19-20AUG18

Video Triggers

Video can be displayed when certain machine functions are performed (For example: Reversing, PTO engage).

1. Select Edit Triggers to configure settings.
2. Select a trigger.
3. Select camera input for the current trigger. This camera is displayed when trigger is activated.

NOTE: To prevent video from displaying for a trigger, select No Camera.

4. Enter video Timeout length. This is the amount of time video is shown after the trigger becomes inactive.

DX,PC,VIDEO,TRIGGERS-19-23DEC15

Radio Operation

Radio Faceplate Features

Radio faceplate is made up of different buttons, knobs, and switches that perform various audio functions.



RXA0163492—UN—04JUN18

Radio Features		
Features	Option	
	Base (1)	Premium (2)
Radio	•	•
Auxiliary Input	•	•
USB	—	•
Bluetooth®	—	•
Satellite Radio	—	SiriusXM® Ready ^a
Display	7 Segment LCD	Dot Matrix LCD

^aXM radio kit must be installed and service activated to use SiriusXM® radio. See SiriusXM® Radio—General Information in this Operator's Manual section for more information.

Radio Faceplate Controls

A—Volume Control Knob: Turn clockwise to increase and counterclockwise to decrease volume.

B—BND Button: Press briefly to select memory level or wave band. Press and hold to start T-STORE function. T-STORE function scans band and sets FMT or AMT station buttons 1-6 to strongest signals. Press to accept phone call when call is coming in.

C—Power Button: Press and hold for 2 seconds to turn radio on or off. Press briefly during operation to mute radio.

D—Display: Shows current audio activity/information.

E—Menu Button: Access menu for basic settings. When phone is in use, press to end call.

F—Multi-Function Rocker Switch: Use to navigate within display and switch functions. Press left or right to seek up or down to next available station. Press up or down to manually tune frequency, change category when using SiriusXM® (when CAT mode is active), and browse folders when using USB.

G—AUD Button: Press briefly to access audio menu to adjust treble, middle, bass, balance, and fade. Press and hold to restore treble, bass, and middle back to factory sound setting for currently used audio source. Press and hold to restore balance and fade back to factory sound setting for all audio sources.

H—Station Buttons Save as presets. Press and hold to save current station (beep will sound). Press again to bring radio back to saved station. Depending on radio type, station buttons may have these specialized functions:

- **Station Button 1/Play or Pause Button:** When USB is in use, press to pause current track. Press again to play.
- **Station Button 2/RPT:** When USB is in use, press to repeat track. Press again to repeat all tracks in current playlist. Press a third time to turn off.
- **Station Button 3/MIX:** When USB is in use, press to

play songs in current playlist at random. Press again to play all songs at random. Press a third time to turn off.

- **Station Button 4/SCAN:** When USB is in use, press to play all tracks for approximately 10 seconds each until pressed again.
- **Station Button 5/SCRL:** When USB is in use, press to turn scrolling track information on display on or off.
- **Station Button 6:** When USB is in use, press to switch between display of elapsed and remaining playing time of current track.

I—TA Button: Press to switch from user/audio menus to current source or exit radio scan functions. When USB is in use, press and hold to activate playlist mode.

J—SRC Button: Source selection between radio and AUX (also USB, Bluetooth®, and SiriusXM® depending on model) provided medium is inserted or device is connected and turned on.

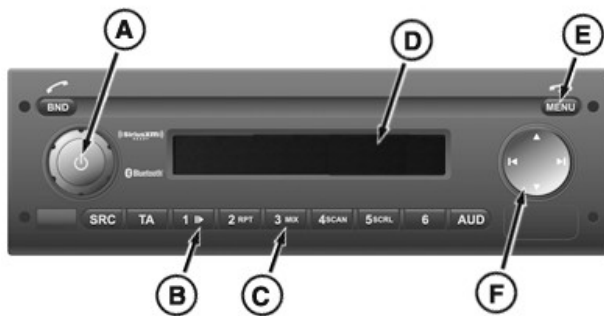
*NOTE: Playlist must be created on computer and saved as *.m3u or *.pls.*

KT81203,0000580-19-05JUN18

Select Radio Receiver Wave Band

Radio stations cannot be received if correct country-specific wave band is not selected for radio receiver. Select correct wave band:

1. Move key switch into ACC position.



RXA0163493—UN—04JUN18

2. Turn off radio with power button (A).
3. Press and hold power button, station button 1 (B), and station button 3 (C) until SETUP appears on display (D).
4. Press menu button (E) until current wave band (example: EUROPE, NAFTA, etc.) is shown on display. Countries and their associated wave bands are shown in chart.
5. If wave band shown on display is not correct, press multi-function rocker switch (F) left or right until correct wave band is shown.

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NOTE: If radio will not store selected wave band, radio may be CommandCenter™ controlled. See your John Deere dealer.

6. Without changing selected wave band, turn off radio.

Wave Band	Country	
EUROPE	Austria Belgium Bulgaria Croatia Denmark United Kingdom Estonia Finland France Hungary Italy Kazakhstan Lithuania Luxemburg	Latvia Netherlands Poland Portugal Romania Russia Serbia Slovakia Spain Sweden Switzerland Turkey Ukraine
NAFTA	Canada Dominican Republic	Mexico United States (USA)
SOTHAMRCA	Argentina Bolivia Brazil Guyana	Nicaragua Uruguay Venezuela
MESTAFRC	Armenia Ethiopia Israel	Oman South Africa Zambia
APAC	China Japan	Korea
AUSTRNLN	Australia	New Zealand
TAIWAN	Taiwan	
PHILIPIN	Philippines	

KT81203,00004C1-19-06JUN18

Federal Communications Commission (FCC) Bluetooth® Information

FCC ID: YBN-JD-BASE4

IC: 9595A-JD-BASE4

FCC Section 15.19, Labelling Requirements

This device complies with part 15 of the FCC¹ Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC Section 15.21, Information to User

Changes or modifications not expressly approved by the

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party responsible for compliance could void the user's authority to operate the equipment.

KT81203,0000581-19-05,JAN17

Set Clock

Set Clock Time

The radio will synchronize the clock if available on the vehicle CAN network. If there is no clock available on the vehicle CAN network, the time can be modified through the radio's user menu.

Set Time Manually:

1. Through the radio user menu – press the MENU button until TIMESET is displayed.
2. TIMESET displays for 2 seconds. Time is displayed with the hour digits flashing.
3. Use volume knob to change hour value.
4. Press the left/right rocker button to move the cursor to the minute digits. The radio changes AM/PM automatically if time format is 12H.
5. When the time is correct, press the SRC button to save and return to normal radio functions.

Time Format

The radio can display the clock time in 12H or 24H format.

Set Clock Format:

1. Press the MENU button until MODE 12H or 24H is displayed.
2. Use the volume knob to between 12H and 24H time format. Setting will be saved after 2 seconds.

Clock Mode

The radio can display the clock time by default (ALWAYS) or on request (TEMP).

- ALWAYS – The time is displayed on the radio faceplate unless a change in radio information is detected. Radio information is displayed on change for 5 seconds. Changes that prompt the radio information to be displayed include, source change, channel change, volume change, preset change, etc.
- TEMP – The time is displayed when requested by the operator. Press and hold the MENU button for 3 seconds. Time is displayed for 5 seconds then reverts to displaying radio information.

Set Clock Mode:

1. Press the MENU button until CLKMODE is displayed.
2. CLKMODE displays for 2 seconds. ALWAYS or TEMP is displayed.
3. Use the volume knob to switch between ALWAYS and

TEMP clock mode. Setting will be saved after 2 seconds.

KT81203,0000967-19-12,JUN18

Reset Clock

If there is no clock available on the vehicle CAN network, clock will need to be reset after power (example: battery or radio) is disconnected. Follow instruction to Set Time Manually in Set Clock in this Operator's Manual section.

KT81203,00009B1-19-13,JUN18

Turn Confirmation Beep On/Off (BEEP)

After certain actions (example: pressing and holding button) confirmation beep sounds. Confirmation beep can be turned on or off.

1. Press MENU button, on radio faceplate, until BEEP and current setting ON or OFF are displayed.
2. Turn volume control knob counterclockwise or clockwise to change from ON to OFF or vice versa.
3. Press MENU button several times to exit menu.

KT81203,00004C2-19-06,JUN18

Adjust Maximum Volume at Power-On (ONVOL)

Maximum volume when turning radio system on can be adjusted in ONVOL menu. Previously selected volume is used at power-on unless it is above setting for maximum volume at power-on. In this case, maximum volume setting is used.

1. Press MENU button, on radio faceplate, until ONVOL and current setting are displayed.
2. Turn volume control knob counterclockwise or clockwise to adjust maximum volume at power-on from 5 to 25.
3. Press MENU button several times to exit menu.

KT81203,00004C3-19-28,NOV16

Program Type (PTY)

Besides station name, some FM stations also transmit information on program type. Program types examples include:

- CULTURE
- TRAVEL
- WEATHER
- JAZZ MUSIC
- NEWS

- POP MUSIC

With this function only stations of specific program type can be selected.

When PTY is turned on and PTY scan has been started, the radio automatically changes from current station or from another mode to station of selected program type.

Turn PTY On/Off

1. Select radio mode.
2. Press MENU button, on radio faceplate, until PTY ON or PTY OFF is displayed.
3. Turn volume control knob counterclockwise or clockwise to turn PTY on or off.
4. Press MENU button several times to exit menu.

Select program type

NOTE: PTY must be turned on.

1. Select radio mode.
2. Press MENU button, on radio faceplate, several times until **PTYTYPE** is displayed.
3. Turn volume control knob counterclockwise or clockwise to select program type.
4. Press MENU button several times to exit menu.

Start PTY scan

NOTE: PTY scan is only available if PTY is turned on and AUTOSEEK or BANDSCAN is selected for ◀ and ▶ keys in KEY PRG menu. See Set Key Function (KEY PRG) in this Operator's Manual section.

1. Press ◀ or ▶ button, on radio faceplate, to start scanning.
2. If station of currently selected program type is found, it will be tuned to station.
3. If no station of this program type is found, previously selected station remains on.

KT81203,00004C4-19-08NOV17

Treble Reduction During Interference (HCUT)

HCUT function improves sound when radio reception is poor. If interference with reception is present, level of interference noise is automatically reduced.

1. Select radio mode.
2. Press MENU button, on radio faceplate, until HCUT and current setting OFF, 1 or 2 are displayed.
3. Turn volume control knob counterclockwise or clockwise to adjust or turn off HCUT.

4. Press MENU button several times to exit menu.

KT81203,00004C5-19-28NOV16

Set Key Function (KEY PRG)

Functions can be assigned to ◀ and ▶ buttons.

Possible key functions	Description
AUTOSEEK	Automatic search for next receivable station
MANSEEK	Manual frequency change in increments
PRSTSCAN	Scanning of stations stored on currently selected memory level
BANDSCAN	Scanning of stations receivable in currently selected wave band

Set key function

1. Select radio mode.
2. Press MENU button, on radio faceplate, until KEY PRG is displayed.
3. Turn volume control knob counterclockwise or clockwise to change between different settings (see table).
4. Press MENU button several times to exit menu.

KT81203,00004C6-19-06JUN18

SiriusXM® Radio—General Information

NOTE: XM radio kit must be installed and service activated to start using SiriusXM® radio. See your John Deere dealer to order kit.

Service will automatically renew and bill at then-current rates until you call us at 1-866-635-2349 to cancel. See our Customer Agreement for complete terms at www.siriusxm.com. Other fees and taxes apply. All fees and programming are subject to change. XL may include frequent explicit language or mature programming. Call SiriusXM® Listener Care at 1-800-967-2346 and ask about our Family Friendly packages; in Canada call 1-877-438-9677. XM satellite service is available only to those at least 18 and older in the 48 contiguous USA and D.C. For more information about program schedules or subscriptions, please visit www.siriusxm.com; in Canada visit www.siriusxm.ca. You may also call to subscribe. USA customers: 1-800-967-2346; Canadian customers: 1-877-438-9677. See Display XM Serial Number in this Operator's Manual section before subscribing.

NOTE: It is prohibited to copy, decompile, disassemble, reverse engineer, hack, manipulate, or otherwise make available any technology or software incorporated in receivers compatible with the SiriusXM® Satellite Radio System or that support the SiriusXM® website, the Online Service or any of its content. Furthermore, the AMBE® voice compression software included in this product is protected by intellectual property rights including patent rights, copyrights, and trade secrets of Digital Voice Systems, Inc.

Canada: Some deterioration of service may occur in extreme northern latitudes. This is beyond the control of SiriusXM® Satellite Radio.

KT81203,000058B-19-06JUN18

Display XM Serial Number

XM serial number and serial number of radio system are identical. Serial number is briefly displayed after XM receiver has been selected. Serial number is required to subscribe to satellite radio service.

1. Have note pad and pen ready.
2. Press SRC button, on radio faceplate, until XM is displayed.
3. After 2 seconds, channel CHN 0 will display.
4. Then RADIO ID is displayed. After another 2 seconds, eight-digit XM serial number (similar to 1A2B3C4D) will display.
5. Record number. Serial number displays for 10 seconds.

KT81203,000058C-19-06JUN18

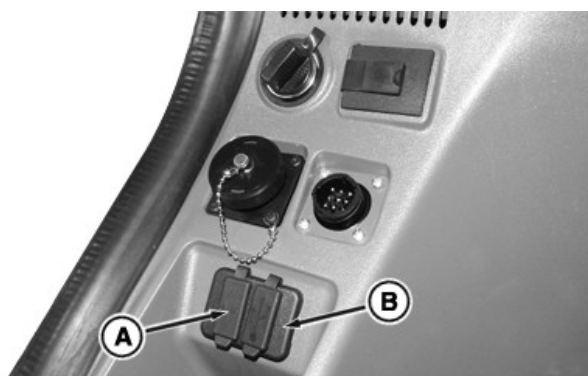
External Sources

External audio sources can be connected using convenience port on right-hand console/storage tray. Sources can also be connected using Bluetooth® functions. Use ports to charge certain external audio sources. Examples of external audio sources include portable CD player, MiniDisc player, or MP3 player.

NOTE: Charging some external audio sources, such as smart phones and tablets, via audio USB port is not supported. Attempting to charge device that is not supported may shutoff USB port. Device must be removed and cycle radio power to recover.

Activate AUX Input

NOTE: External audio source can only be selected if audio device is connected to external AUX input.



RXA0143013—UN—03JUL14

Connect external audio source using Auxiliary Input (A) and press SRC button several times until AUX is displayed on radio.

Activate USB Input (Premium Radio)

NOTE: USB audio source can only be selected if USB device is connected to external USB input.

Connect USB audio source using USB Input (B) and press SRC button several times until USB is displayed on radio.

Adjust AUX Input Volume

Volume for connected external audio source can be adjusted using radio volume knob after input is selected as audio source using SRC button.

1. Press SRC button several times until installed audio source is displayed.
2. Press MENU button. GAIN and current setting is displayed.
3. Turn volume control knob counterclockwise or clockwise to adjust value from -9 to +9.
4. Press the MENU button several times to exit the menu.

Set Up Bluetooth® (Premium Radio)

Following steps must be performed before Bluetooth® can be used:

NOTE: Bluetooth® connection only relevant to devices/ external audio sources which are Bluetooth® enabled.

NOTE: While pairing Bluetooth® device to radio, pairing process cancels if changes are made to radio (ex: changing source or frequency).

1. Enable Bluetooth® on device.
2. Press MENU button, on radio faceplate until BT MODE displays.
3. Wait 2 seconds until BT ON or BT OFF. Turn volume control knob clockwise or counterclockwise to turn

Bluetooth® on or off. Display window may take up to 5 seconds to change.

4. Press MENU button until display shows CON-TYPE. Select connection type phone/audio (default).
5. To pair device, press MENU button until BT Pair displays.
6. Enter pin provided into device.

Pairing process may take up to 5 minutes to complete. Bluetooth® symbol flashes while pairing takes place. When device/external audio source is successfully paired, phone calls and audio streaming can be received and placed via radio system. Device information (contact information, call history, music, etc.) does not transfer to CommandCenter™.

For further instructions on how to pair device/external audio source, select source for connection, and transfer data, see Pair Bluetooth® Device to Generation 4 CommandCenter™ in this Operator's Manual section.

KT81203,00004C8-19-06JUN18

Select Radio Source with Generation 4 CommandCenter™

Use radio source tabs on Generation 4 CommandCenter™ to select radio source.

When radio is on, radio page navigates to home page of current source selected. When radio is off, content blocker displays.

NOTE: Selecting radio source will not turn on radio. Turn on radio by pressing power button on radio faceplate.



RXA0133718—UN—16JUL13

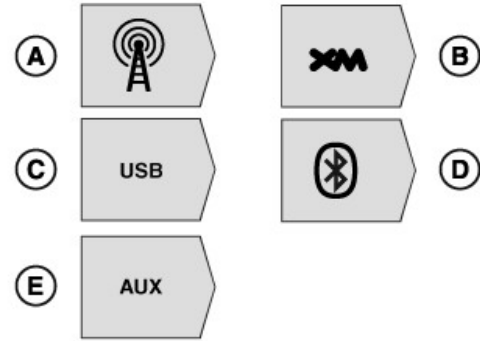
To access audio main page, use Audio Shortcut Button on Navigation Bar or follow alternative path:



RXA0147929—UN—13APR15

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **Audio** icon.
4. Select desired radio source tab:

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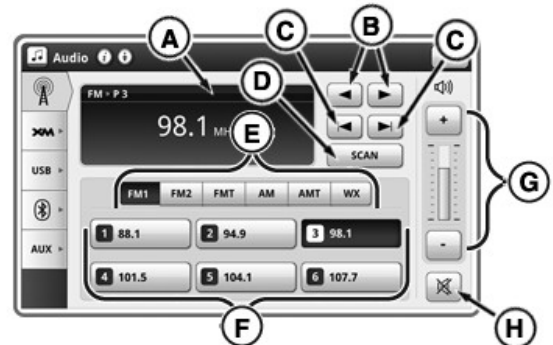
RXA0163496—UN—04JUN18

- A—FM, AM, and Weather Tab**
B—XM Tab (Premium Radio Only)
C—USB Tab (Premium Radio Only)
D—Bluetooth® Audio Tab (Premium Radio Only)
E—Auxiliary Tab

KT81203,0000582-19-06JUN18

AM, FM, Weather Channel Home Page

Navigate to AM, FM, Weather Channel home page. See Select Radio Source with Generation 4 CommandCenter™ in this Operator's Manual section.



RXA0163498—UN—04JUN18

A—Display Area: Displays current radio activity/information.

B—Manually Tune Forward/Back: Use left or right button to manually tune in desired station. Each time button is pressed, radio frequency increases or decreases by standard increment.

C—Next/Previous Station: Select to seek next available station before or after current station.

D—Scan Button: Select to cycle through available stations. Each station broadcasts for 5 seconds before moving to next station. Cycle ends if returns to original station or by selecting button again.

E—AM/FM/Weather Button Bar: Cycle through channel presets using toggle bar (FM1, FM2, FMT, AM, AMT, WX).

F—Presets: Six presets can be programmed to FM1, FM2, FMT, AM, and AMT banks. To change presets,

Bluetooth is a trademark of Bluetooth SIG

press preset for 3 seconds, while on desired station, until “beep” sounds. Press again to tune radio to saved station. Six presets are pre-programmed into WX bank and cannot be changed. FMT and AMT banks can be set automatically using T-STORE function. For more information, see Use Premium Radio in this Operator’s Manual section.

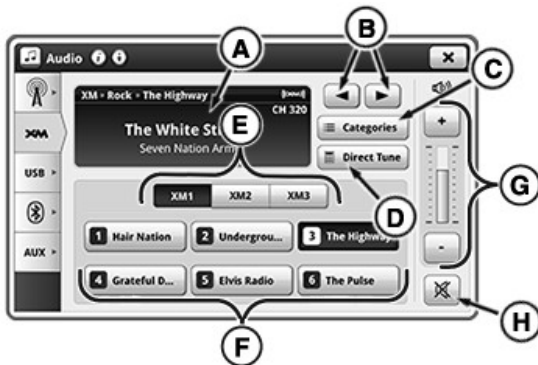
G—Volume Adjustment: Adjust volume.

H—Mute: Silence sound.

KT81203,0000583-19-06JUN18

Premium Radio XM Home Page

Navigate to XM home page. See Select Radio Source with Generation 4 CommandCenter™ in this Operator’s Manual section.



RXA0163501—UN—04JUN18

A—Display Area: Displays XM activity/information.

B—Next/Previous Station: Select to seek next available station before or after current station.

C—(CAT) Category Mode: Select to launch category search mode. Scroll up or down through categories and select station within category.

D—Direct Tune: Select to enter desired channel with keypad.

E—XM Channel Bank: Toggle through banks using buttons (XM1, XM2, XM3).

F—Presets: Six presets can be programmed per bank. To set, press and hold desired preset for at least three seconds.

G—Volume Adjustment: Adjust volume.

H—Mute: Silence sound.

KT81203,0000585-19-06JUN18

Premium Radio USB Home Page

Navigate to USB home page. See Select Radio Source with Generation 4 CommandCenter™ in this Operator’s Manual section.

Connect USB using USB input, on right-hand console/storage tray, to play stored music. See External Sources in this Operator’s Manual section.



RXA0163502—UN—04JUN18

A—Display Area: Displays current USB activity/information.

B—Next/Previous Track: Select to skip back to beginning of current track or ahead to beginning of next track. Press previous button twice to skip to previous track.

C—Play/Pause: Play or pause track.

D—Volume Controls: Adjust volume.

E—Mute: Silence sound.

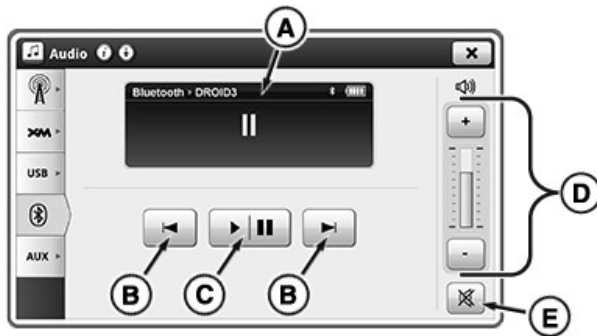
KT81203,0000586-19-07JUN18

Premium Radio Bluetooth® Home Page (If Equipped)

Navigate to Bluetooth® home page. See Select Radio Source with Generation 4 CommandCenter™ in this Operator’s Manual section.

NOTE: If Bluetooth® device with stored music is not connected, select Pair Device and complete pairing process. For more information, see steps 6 and 7 in Pair Bluetooth® Device to Generation 4 CommandCenter™ in this Operator’s Manual section.

Radio system is equipped with Bluetooth®, which allows data transfer between radio system and paired close-range Bluetooth® device such as cell phone. Music stored on device does not transfer to CommandCenter™



RXA0163504—UN—04JUN18

A—Display Area: Displays current Bluetooth® activity/information.

B—Next/Previous Track: Skip back to beginning or ahead to beginning of next track. Press previous button twice to skip to previous track.

NOTE: Not all devices support pause function. Devices may mute sound, but not pause play.

C—Play/Pause: Play or pause track.

D—Volume Adjustment: Adjust volume.

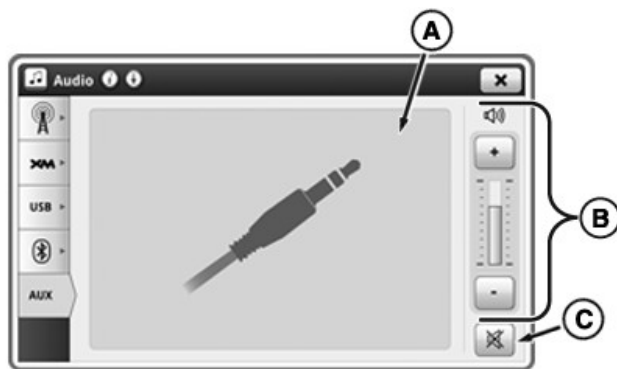
E—Mute: Silence sound.

KT81203,0000587-19-12JUN18

Auxiliary Home Page

Navigate to Auxiliary home page. See Select Radio Source with Generation 4 CommandCenter™ in this Operator's Manual section.

Connect external audio source to listen to stored music. See External Sources in this Operator's Manual section.



RXA0163506—UN—04JUN18

A—Display Area: Displays image shown. Activity or information displays on external device only, not on CommandCenter™ display.

B—Volume Adjustment: Adjust volume.

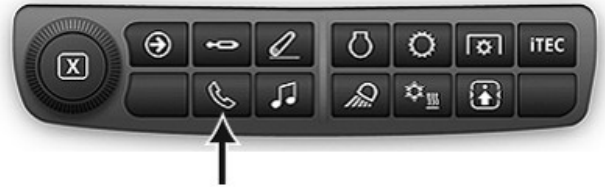
C—Mute: Silence sound.

KT81203,0000588-19-07JUN18

Pair Bluetooth® Device to Generation 4 CommandCenter™

Radio system is equipped with integrated Bluetooth®, which allows data transfer between radio system and paired close-range Bluetooth® device such as cell phone. Up to five device pairings can be stored in radio's Bluetooth® feature. See Manage Paired Bluetooth® Devices in this Operator's Manual section.

Phone book does not appear on CommandCenter™ display.



RXA0133719—UN—16JUL13

To access phone main page, use Phone Shortcut Button on Navigation Bar or follow alternative path:



RXA0147930—UN—13APR15

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **Phone** icon.

NOTE: Not ALL devices are able to use Bluetooth® feature on radio.

4. Enable Bluetooth® mode on device.



RXA0132157—UN—28JUN13

5. Select Pair Device button (A) to start pairing process.

NOTE: Once Bluetooth® pairing process is initiated, changes to radio - such as changing source or frequency - cancels pairing.



RXA0163558—UN—12JUN18

6. Enter pairing code displayed in Pairing Code box (B) into device. Pairing process begins immediately.
7. Once device is connected successfully, "Pairing Complete" is displayed.

KT81203,00004CF-19-12JUN18

Manage Paired Bluetooth® Devices

Up to five device pairings can be stored in radio's Bluetooth® feature. See Pair Bluetooth® Device to Generation 4 CommandCenter™ in this Operator's Manual section.



RXA0133719—UN—16JUL13

Use phone advanced settings to connect devices paired to radio or add new devices to paired list.



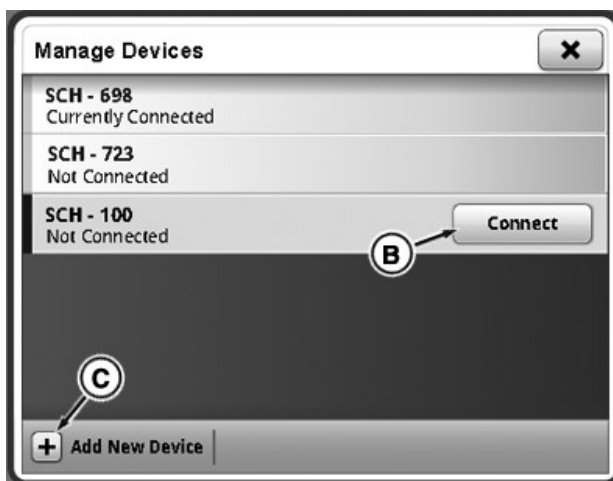
RXA0147944—UN—13APR15

1. Select **Phone Shortcut** button on Navigation Bar.
2. Select **Advanced Settings** icon.
3. Select **Settings** tab.
4. Information & Settings / Phone page appears.



RXA0147734—UN—30MAR15

5. Select Manage Devices button (A).



RXA0147733—UN—30MAR15

6. Choose desired device from list of paired devices and select Connect Device button (B).
7. Select Add New Device button (C) to pair new Bluetooth® device.

KT81203,00004D0-19-08NOV17

Phone Operation

Use Bluetooth® capability to make or receive phone calls from paired Bluetooth® enabled cell phone. See Pair Bluetooth® Device to Generation 4 CommandCenter™ in this Operator's Manual section.



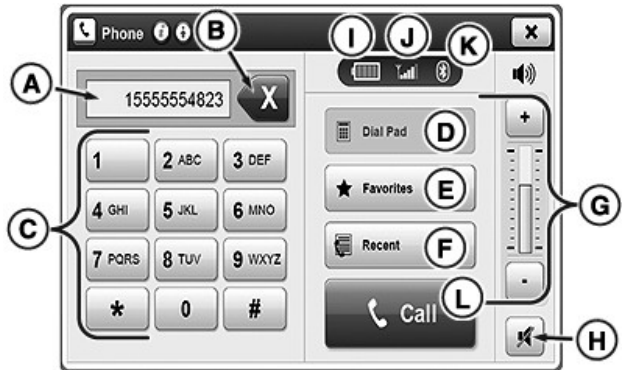
RXA0133719—UN—16JUL13

Press Phone Shortcut button on Navigation Bar or follow alternative path:



RXA0147930—UN—13APR15

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **Phone** icon.
4. Phone home page appears.



RXA0137742—UN—11DEC13

NOTE: Phone options A, B, C and E are not available during call. Use cell phone if another number is needed.

Phone controls on this page are disabled while device is syncing with radio.

A—Input Box: Displays typed digits.

B—Backspace Button: Cancel typed digit. Press and hold to cancel multiple digits.

C—Dial Pad: Enter phone number using number buttons.

D—Dial Pad Tab: Press to display dial pad during phone call.

NOTE: Favorites are stored permanently and can be viewed by any operator. Clear favorites before leaving tractor, if desired. See *Clear Favorites and Call History* in this Operator's Manual section.

E—Favorites Button: View/edit favorites contacts.

F—Recent Button: Review previous missed calls, incoming calls or outgoing calls.

G—Volume Control: Adjust volume.

H—Mute Button: Mutes microphone.

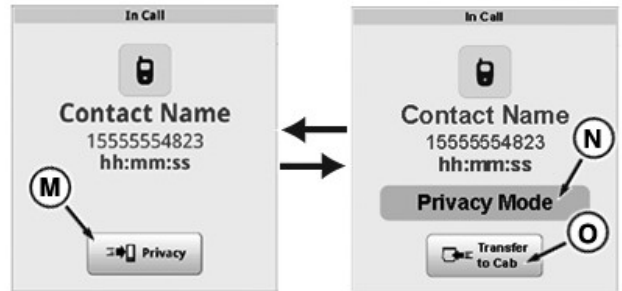
I—Battery Icon: Displays battery life.

J—Signal Icon: Displays current phone signal strength.

K—Bluetooth® Icon: If blue, Bluetooth® device is

connected. If grayed out, Bluetooth® device is not connected.

L—Call Button: After dialing or selecting number, press to begin call.



RXA0147774—UN—30MAR15

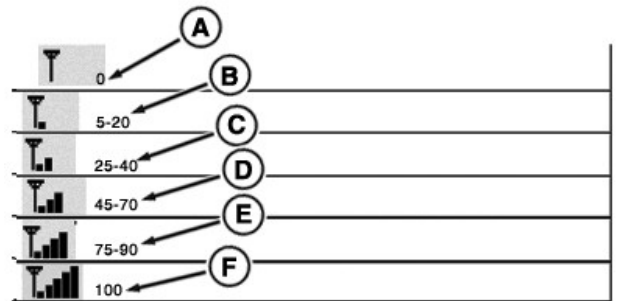
M—Privacy Mode Button: Transfers phone audio from cab speakers to phone speakers during call.

N—Privacy Mode Message: Displays when call has entered privacy mode.

O—Transfer to Cab Button: Exits privacy mode and transfers phone audio from phone speakers to cab speakers.

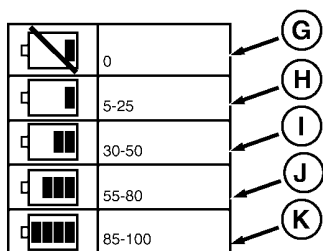
KT81203,00004D1-19-03APR18

Phone Signal Strength and Battery Charge



RXA0121552—UN—31OCT11

Cell phone signal strength is represented by phone signal strength bars (A-F). Signal strength ranges from no signal (A) to 100 percent signal strength (F).



RXA0121554—UN—31OCT11

Cell phone battery charge is represented by phone battery charge bars (G-K). Battery charge ranges from no battery charge (G) to 85-100 percent battery charge (K).

KT81203,00004D2-19-03APR18

Contact List

Device's phone book synchronizes with radio, not CommandCenter™. Contacts must be added and edited manually on display.

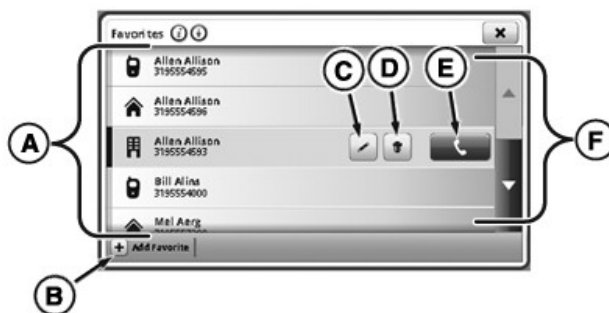
Maximum number of phone numbers that can be stored in CommandCenter™ is 25. Maximum number of characters in phone number is 21.

Favorites are stored permanently and can be viewed by any operator. Clear favorites before leaving tractor, if desired. See Clear Favorites and Call History in this Operator's Manual section.



RXA0147931—UN—13APR15

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **Phone** icon.
4. Select **Favorites** button.
5. Favorites page appears.



RXA0132498—UN—28JUN13

6. To edit favorites, press Add (B), Edit (C), or Delete (D) Favorite button.
7. Edit Favorite page appears.

A—Favorite List: List of available contacts.

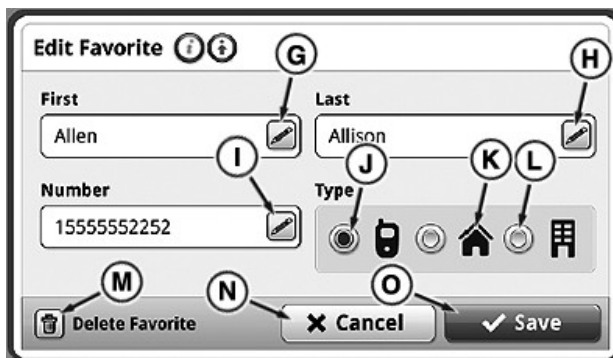
B—Add Favorite Button: Select to add contact manually.

C—Edit Favorite Button: Select to edit current contact.

D—Delete Button: Select to delete contact from favorites.

E—Call Button: Select to call currently selected contact.

F—Scroll Bar: Select to scroll up or down.



RXA0132499—UN—28JUN13

G—Edit Favorite First Name: Select to edit first name.

H—Edit Favorite Last Name: Select to edit last name.

I—Edit Favorite Phone Number: Select to edit phone number.

J—Mobile Phone Button: Select to list contact information under mobile phone.

K—Home Phone Button: Select to list contact information under home phone.

L—Work Phone Button: Select to list contact information under work phone.

M—Delete Favorite Button: Select to delete contact.

N—Cancel Button: Select to cancel edits.

O—Save Button: Select to save edits.

KT81203,00004D3-19-03APR18

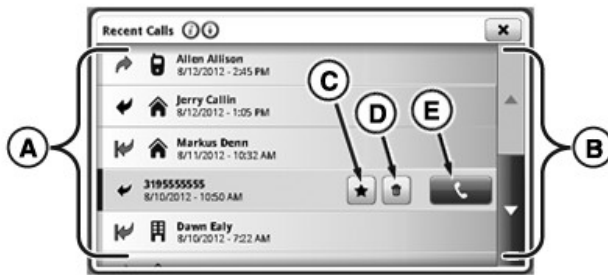
Recent Calls

Review previous missed, incoming or outgoing calls placed or received through CommandCenter™.



RXA0147933—UN—13APR15

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **Phone** icon.
4. Select **Recent** button.
5. Recent Calls page appears.



RXA0132556—UN—28JUN13

A—Recent Calls Contact List: List of recently called contacts.

B—Scroll Bars: Use to scroll up or down through recent calls contact list.

C—Add Favorite Button: Select to add contact to favorites.

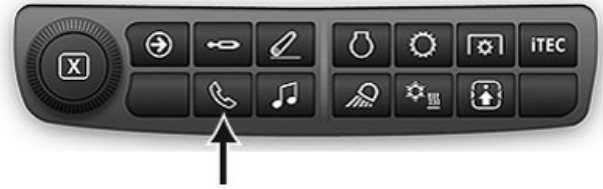
D—Delete Button: Select to delete contact from favorites.

E—Call Button: Select to call currently selected contact.

KT81203,00004D4-19-28NOV16

Clear Favorites and Call History

Use phone advanced settings to clear favorites and call history. Contacts will be cleared on CommandCenter™ display only, not on phone.



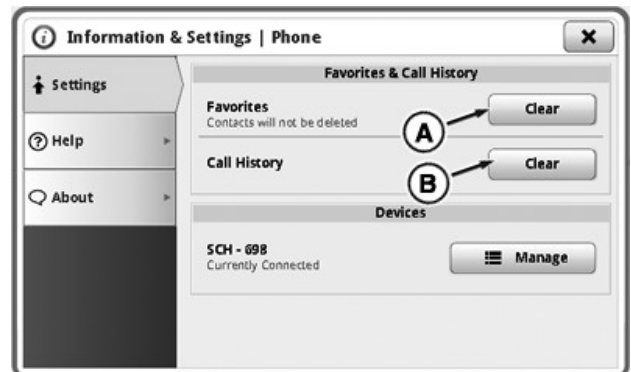
RXA0133719—UN—16JUL13

1. Select **Phone Shortcut** button on Navigation Bar.



RXA0147944—UN—13APR15

2. Select **Advanced Settings** icon.
3. Select **Settings** tab.
4. Information & Settings / Phone page appears.



RXA0147732—UN—30MAR15

5. Press clear favorites button (A) to erase favorites. Phone contacts will not be deleted.
6. Press clear call history button (B) to erase call history.

KT81203,00004D5-19-28NOV16

Machine Sync

Machine Sync controls synchronized movements between tractor and combine. It guides tractor and grain cart to preset position for unloading relative to specific combine.

Machine Sync utilizes AutoTrac™ and its advanced settings to control tractor. Machine Sync system maintains in line and lateral offset between the combine and tractor using information via the machine and StarFire™ 6000 receiver that is transmitted between machines using the Machine Communication Radio.

Machine Sync system contains three important entities:

- **Operational zone:** area that allows for automation to take over.
- **Calibration zone:** area that allows for calibration of home point.
- **Home point:** in line and lateral offset location relative to combine that tractor will return to every time it syncs with specific combine.

Machine Sync, when engaged, guides tractor and grain cart to home point position set in relation to each specific combine. Tractor and grain cart will maintain that position during operation.

For more information on Machine Sync, see John Deere Machine Sync operator's manual.

TS36762,0000193-19-18NOV16

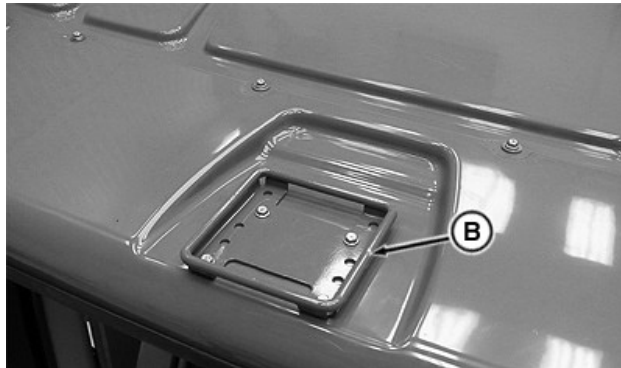
Mount StarFire™ Receiver

CAUTION: Falling while installing or removing global positioning receiver can cause serious injury. Use ladder or platform to easily reach mounting location.

Use sturdy and secure footholds and hand holds. Do not install or remove receiver in wet or icy conditions.



RXA0153451—UN—18AUG16



RXA0107027—UN—31MAR10

Mount StarFire™ receiver (A) on StarFire™ receiver bracket (B).

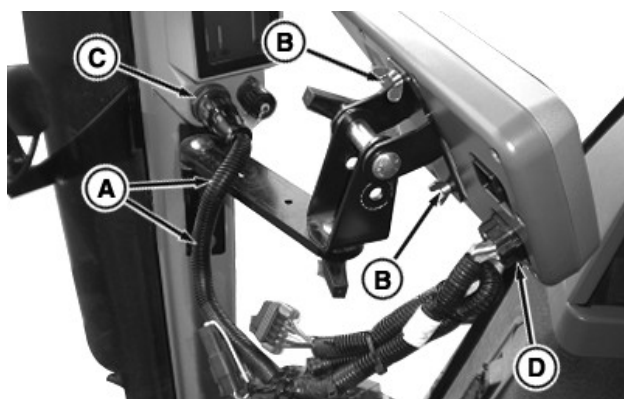
NOTE: Refer to your John Deere dealer or to StarFire™ receiver installation instructions for compatibility.

See your John Deere dealer for compatible adapter harnesses.

TS36762,0000194-19-18NOV16

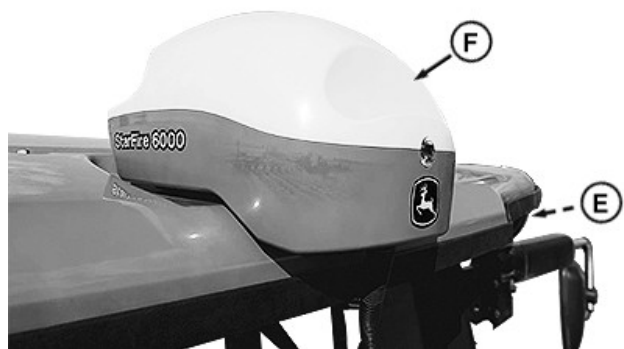
Install GreenStar™ System Components

IMPORTANT: This vehicle employs one or more CAN bus networks. Connecting unapproved devices to vehicle network(s) may cause machine to degrade in performance or fail to perform properly. Further, unapproved devices that attempt control of tractor functions should not be connected to implement network (ISOBUS).



RXA0104665—UN—10SEP09

1. Attach bracket to corner post mounts (A).
2. Attach display to bracket using wing nuts (B) (provided with display).
3. Attach harness to corner post connector (C) and lower GreenStar™ display connector (D) on back of display.
4. Position display so it is comfortable to reach and does not obstruct operator view.



RXA0153452—UN—19AUG16

5. Connect StarFire™ receiver connector (E) to Starfire™ receiver (F).

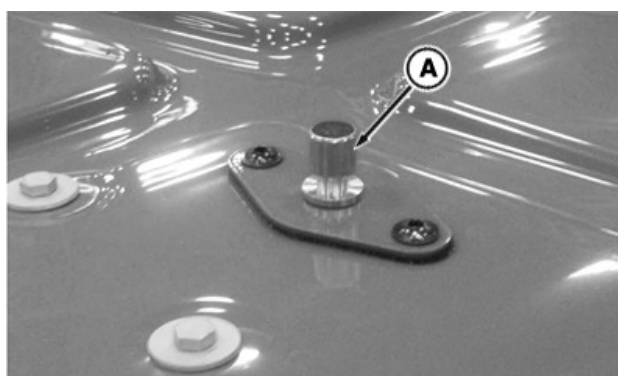
NOTE: See your John Deere dealer for compatible adapter harnesses.

TS36762.0000195-19-18NOV16

Install Machine Communications Radio (MCR) Antenna (If Equipped)

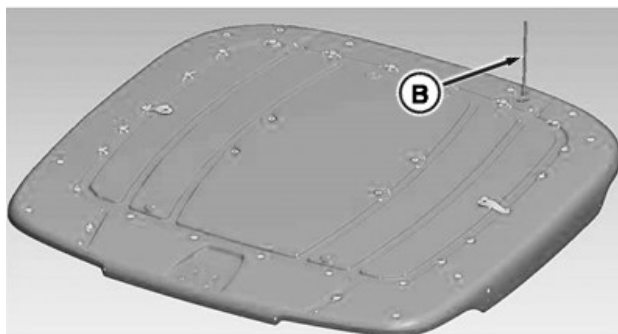
NOTE: This antenna is only available for machines that have a factory installed Machine Communications Radio. Refer to John Deere Machine Communications Radio operator's manual for more information.

1. Remove antenna from storage under instructional seat.



RXA0131714—UN—15APR13

2. Remove cap from MCR antenna post (A) from rear left roof.



RXA0131715—UN—15APR13

3. Screw MCR antenna (B) onto MCR antenna post.

TS36762.0000196-19-09AUG18

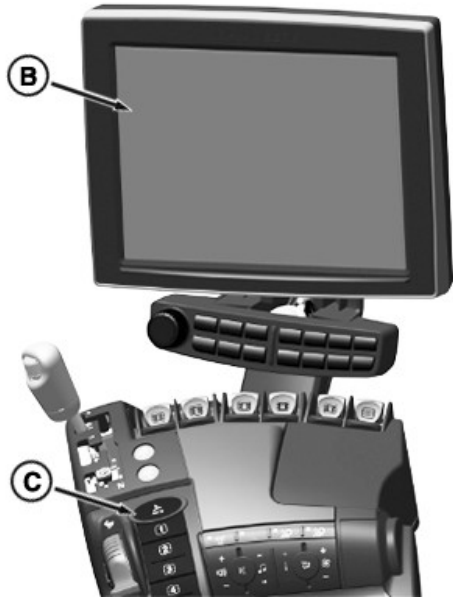
Connect AutoTrac™ Assisted Steering System

NOTE: Electro-hydraulic steering is required for AutoTrac™ to function.

Refer to Generation 4 Applications operator's manual for detailed instructions.



RXA0153453—UN—18AUG16



RXA0158424—UN—28MAR17

- AutoTrac™ system utilizes StarFire™ position receiver (A) and Generation 4 CommandCenter™ Display (B) to assist operator in steering tractor. Other displays are used as well, see Multiple Displays in CommandCenter™ section of this Operator's Manual.
- Operator must take manual control at end of each pass and when field obstacles are encountered. Regain steering control by turning steering wheel. After turn is made, press AutoTrac™ Resume button (C) to engage AutoTrac™.

NOTE: See your John Deere dealer for compatible adapter harnesses.

TS36762,0000197-19-10APR18

Intelligent Total Equipment Control (iTEC™)

CommandARM™ Control Functions

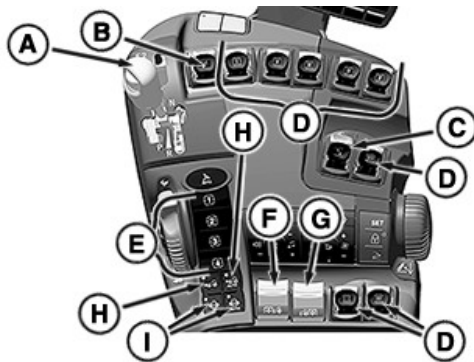
Intelligent Total Equipment Control, iTEC™, allows multiple reoccurring tasks to be performed with touch of one button, up to four sequences.

One sequence made up of series of functions, operations, and distances used at start of field. A second sequence used at water way in center of field. Sequences remain in memory until deleted or overwritten, even if electrical current is switched off.

Each sequence can include up to 20 functions.

A sequence is a course of events from start of first function to completion of last function that operator can start by pressing one of the sequence buttons.

iTEC™ pages are accessed through Generation 4 CommandCenter™.



RXA0156096—UN—09DEC16

Chart below describes item and function from CommandARM™ image.

iTEC™ Functionality		
	Component	Function(s)
A	IVT™ /AutoPowr™ Set Speed Forward (IVT™/ AutoPowr™ Only)	Change Set Speed Forward
	e23™ Transmission	Upshift or Downshift in forward gear
B	Rear Hitch (If Equipped)	Raise Detent, Lower Detent, and Fast Lower Detent
C	Front Hitch (If equipped)	Raise, Lower, Float, and Cancel
D	SCVs (CommandARM™)	Extend, Retract, Float, and Cancel
E	iTEC™ Buttons	1/2/3/4
F	Front PTO (If Equipped)	On/Off
G	Rear PTO	On/Off
H	MFWD	On/Off/Auto

iTEC™ Functionality		
	Component	Function(s)
I	Differential Lock	On/Off/Auto

IVT is a trademark of Deere & Company
 AutoPowr is a trademark of Deere & Company
 e23 is a trademark of Deere & Company
 iTEC is a trademark of Deere & Company

KT81203,00004D6-19-25JUL18

CommandCenter™ Pages Descriptions and Functions

iTEC™ Main Page



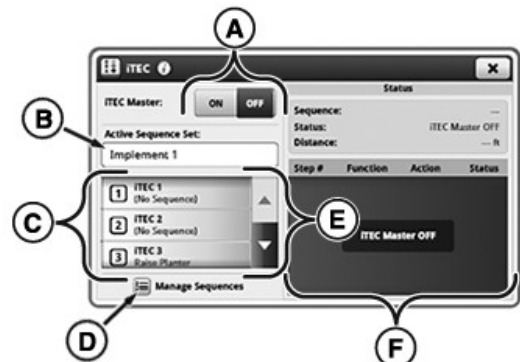
RXA0133714—UN—16JUL13

Use shortcut button or follow alternative path:



RXA0145566—UN—01OCT14

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **iTEC™ Icon**.



RXA0158043—UN—02MAR17

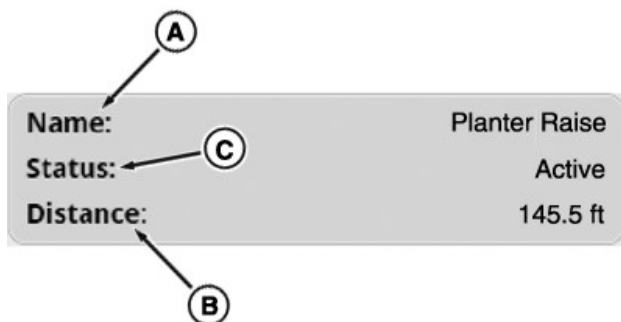
- **A — iTEC™ Master Toggle:** Toggle iTEC™ ON/ OFF.
- **B — Active Assignment Set Button:** Select or create an assignment set.
- **C — Assignments List:** List of sequences assigned to iTEC™ buttons.
- **D — Manage Sequences Button:** Edit sequence and assign buttons.
- **E — Scroll Bar:** Scroll up or down.

iTEC is a trademark of Deere & Company
 CommandCenter is a trademark of Deere & Company
 CommandARM is a trademark of Deere & Company

- **F — Status List:** Shows status of each iTEC™ sequence step as sequence progresses.

KT81203,00004D7-19-10MAY17

Status Area



RXA0131243—UN—08MAR13

- **A—Name:** Name of sequence that is currently running.
- **B—Distance:** Displays accumulated distance while iTEC™ sequence is running.
- **C—Status:** Indicator of current iTEC™ status.
 - **Off** - No sequence execution possible.
 - **Ready** - Waiting for iTEC™ button to which a sequence is assigned to be pressed.
 - **Active** - iTEC™ sequence execution active.
 - **RPM Limit** - Engine speed is out of range. ¹
 - **Park** - Transmission indicates that park lock is engaged. ²
 - **Operator Presence** - No operator presence, no iTEC™ execution allowed. Operator returns to seat. ¹
 - **Wheel Speed Low** - Wheel speed < 0.5 km/h (0.3 MPH), execution is paused.
 - **Complete** - Sequence successfully completed.
 - **Aborted** - Sequence execution aborted by operator or active abort condition.
 - **Error** - One or more sequence steps did not execute.

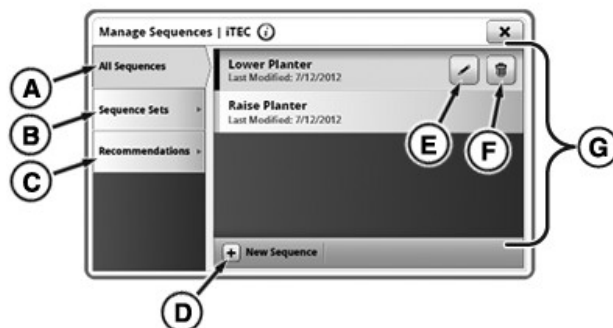
KT81203,00004D8-19-10APR18

All Sequence Page



RXA0129723—UN—06MAR13

Select **Manage Sequences** button on iTEC™ main page.



RXA0158044—UN—02MAR17

- **A—All Sequences Tab:** View available, delete saved, edit saved, or add new sequences.
- **B—Sequence Sets Tab:** View assigned sequences or give sequence assignment.
- **C—Recommendations (AutoLearn):** View and edit learned sequences.
- **D—New Sequence Button:** Manually program new sequence.
- **E—Edit Button:** Edit saved sequence.
- **F—Trash Button:** Deleted saved sequence.
- **G—Sequence List:** List of saved sequences.

DB71512,000013B-19-22AUG17

Add New Sequence

NOTE: For complete list of functions available, see CommandCenter™ Pages Descriptions and Functions in this Operators Manual section.

From iTEC™ main page, follow steps listed below:



RXA0158059—UN—02MAR17

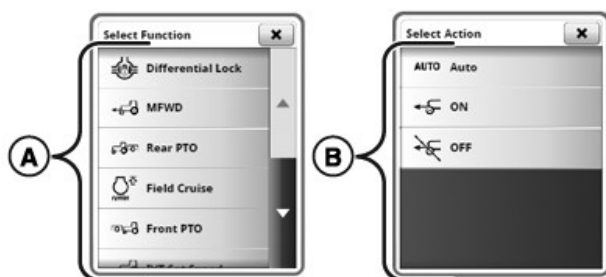
1. Select **Manage Sequences** button.
2. Select **All Sequences** tab.
3. Select **New Sequence** button.
4. Select **Add Step** button.

NOTE: Select Cancel button (F) to exit editing process without saving changes.

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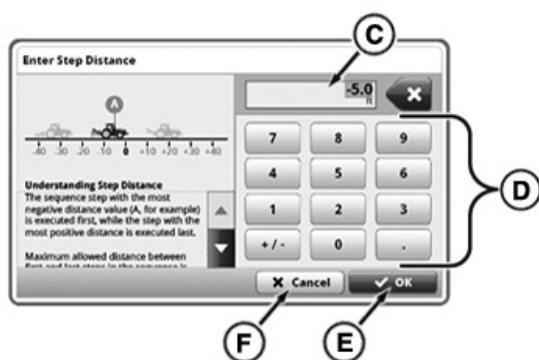
¹ Sequences pauses or cannot start if this condition exists. Correct condition to resume sequence.

² Sequence pauses or cannot start if this condition exists. Correct condition to resume sequence.



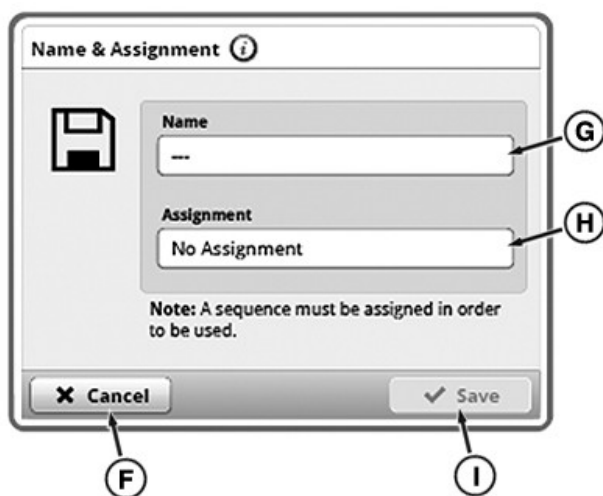
RXA0158057—UN—02MAR17

5. Select from list of functions (A).
6. Select from list of actions (B).



RXA0158047—UN—02MAR17

7. On Step Distance page, use keypad (D) to enter distance into step distance box (C).
8. Select OK Button (E).
9. Repeat steps 4-8 to add steps to sequence.
10. Press **Next** button to continue.



RXA0158048—UN—02MAR17

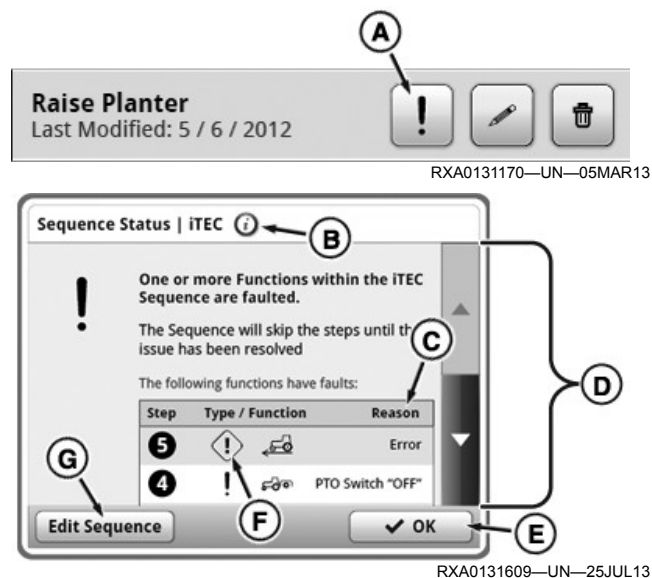
11. Select Sequence Name box (G). Type name of sequence. Select **Save/OK** button when complete.

NOTE: A sequence must be assigned in order to be used.

12. Select Sequence Assignment box (H). Select assignment, if desired, and select **Save/OK** button when complete.
13. Select **Save** button (I) to save sequence.

KT81203,00004D9-19-08NOV17

Sequence Step Status



RXA0131609—UN—25JUL13

NOTE: Press Information Button (B) on any iTEC™ page to access a general status page. General status page will list all functions that are part of the sequences of current selected implement.

Whenever execution of a sequence step is not possible or is interrupted, iTEC™ system informs operator about new issue by displaying Information Alert (A) or Fault Alert (F) next to the sequence or sequence step. Press **Alert Symbol** next to the sequence (in assignment area or sequence assignment tab) to access the sequence status page to read steps with errors. Use scroll bars (D) to scroll up and down list. Select edit sequence button (G) if you want to edit a sequence. Press **Alert Symbol** next to a sequence step (while in EDIT) for information about the issue just for that step. Both views will show a short reason (C) for issue. Press OK button (E) to exit.

KT81203,00004DA-19-28AUG17

Edit or Remove Sequence

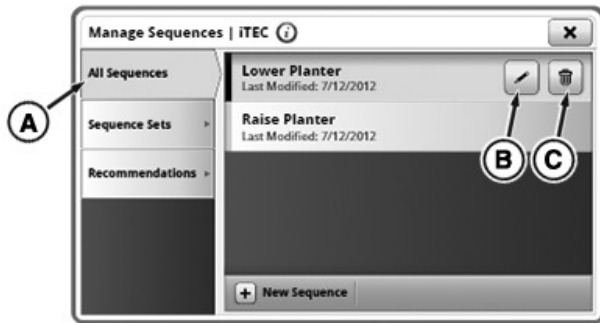
From iTEC™ main page:



RXA0129723—UN—06MAR13

1. Select **Manage Sequences** button.

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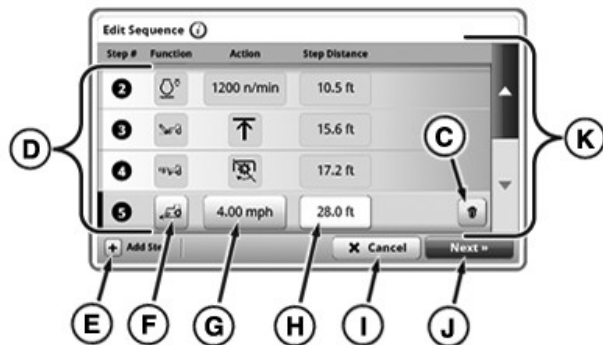
RXA0158049—UN—02MAR17

2. Select All Sequences tab (A).

3. Select desired sequence.

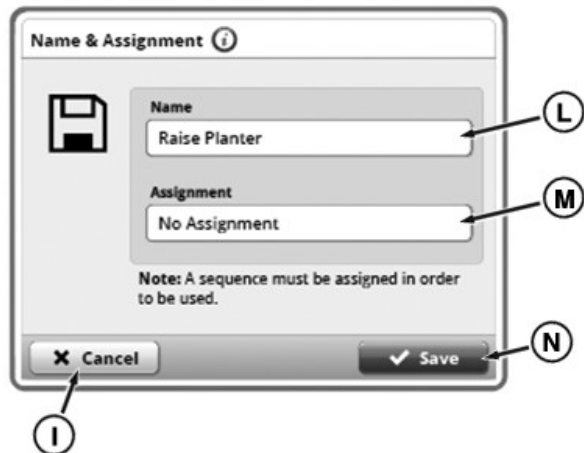
NOTE: Trash button (C) removes sequence or step within sequence.

4. To update sequence steps, select Edit button (B).



RXA0158050—UN—02MAR17

5. Select desired step to edit from sequence step list (D). If needed, use scroll bar (K) to locate step.



RXA0158051—UN—02MAR17

NOTE: To exit editing process without saving changes, select Cancel button (I).

6. To edit step, select add new step (E), function (F), or action (G) buttons or use distance input box (H).

7. Select Next button (J).

8. If needed, edit sequence name (L) or sequence assignment (M).

9. Select Save button (N).

KT81203,00004DB-19-11AUG17

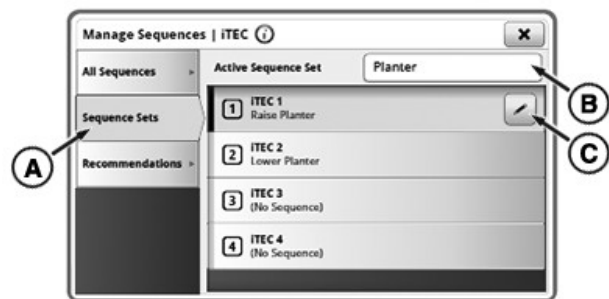
Sequence Sets Page

From iTEC™ main page, use following steps:



RXA0129723—UN—06MAR13

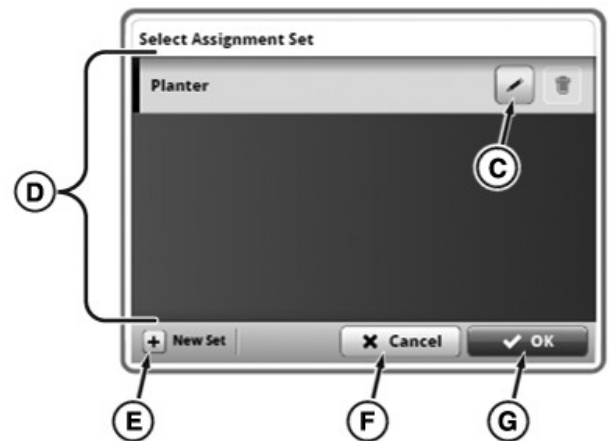
1. Select **Manage Sequences** button.



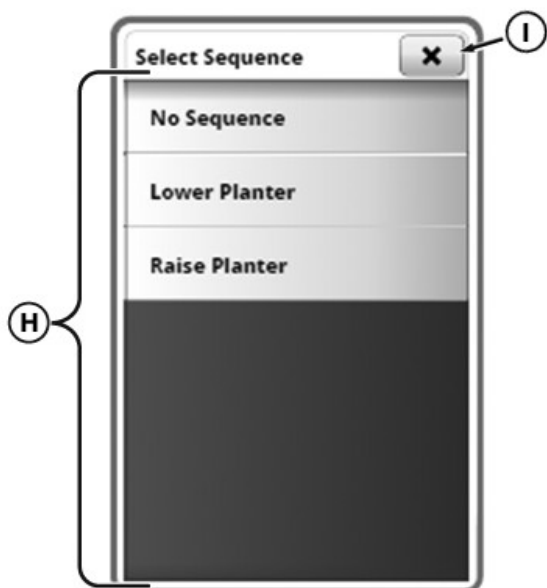
RXA0158311—UN—15MAR17

2. Select **Sequence Sets** tab (A).

3. If needed, select Active Sequence Set (B) and follow steps 4-6. If not, skip to step 7.



RXA0158312—UN—15MAR17



RXA0158313—UN—15MAR17

NOTE: To exit page without saving changes, select Cancel (F) or Close (I) button.

4. Select sequence set from Sequence Set list (D).
5. If needed, select Edit (C) or New Set (E) button.
6. Select OK button (G).
7. Select desired iTEC™ button to assign.
8. Select Edit button (C).
9. Select sequence from Sequence list (H).

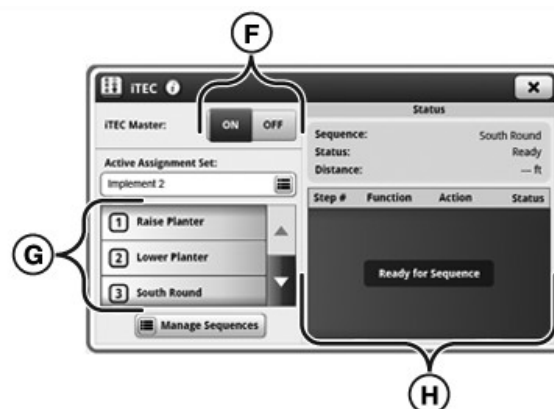
KT81203,00004DD-19-01SEP17

Perform Sequence

iTEC™ sequence execution requires certain tractor controls be operated in a particular way. Sequence will NOT execute with tractor in PARK position.

Transmission shift lever must be in forward position when executing set speeds, gears, or Automatic Gear Shift. Tractor ground speed must be at least 0.5 km/h (0.31 mph).

If a PTO function is included in sequence, PTO must be engaged manually, using PTO switch, for initial engagement. Before performing sequence using SCV functions, relevant SCV levers must be in neutral position.



RXA0131608—UN—26MAR13

During sequence execution, a function can be actuated manually at any time without execution of sequence being interrupted. Functions that are actuated manually are ignored by iTEC™ for the rest of sequence. Relevant alert icon for this function appears in **Status Area (H)**.

1. Turn iTEC™ **Master Toggle (F)** to ON position.
2. Select iTEC™ **Sequence button (A-D)** on CommandARM™ for desired sequence.

- Sequence steps appear in **Status Area (H)** and shows progression of steps.

KT81203,00004DF-19-07SEP17

Recommendations (AutoLearn)

When AutoLearn is ON, system learns every action tractor completes in the background. When the same patterns, actions, or steps are recognized, AutoLearn creates a new sequence and recommends assignment to iTEC™ button.

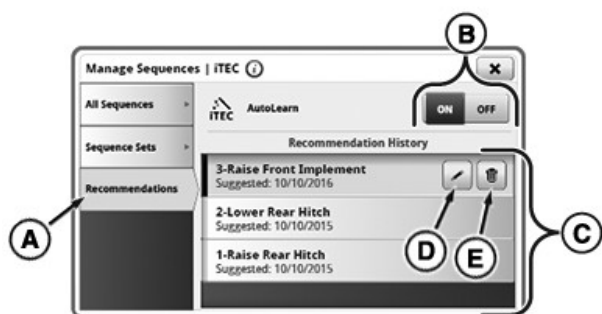
If no longer necessary, sequences can be completely deleted. When a sequence is deleted, all button assignments clear and sequence is no longer available for use.

From iTEC™ main page, use following steps:



RXA0129723—UN—06MAR13

- Select **Manage Sequences** button.



RXA0158056—UN—02MAR17

NOTE: AutoLearn is ON by default. To turn AutoLearn OFF, use AutoLearn ON/OFF toggle (B).

- Select Recommendations (AutoLearn) tab (A).
- Review recommendation history (C).
- To edit or assign recommended sequence, select edit button (D). To remove sequence from list, select trash button (E).

KT81203,00004E0-19-28AUG17

iTEC Functions—IVT™/AutoPowr™ Transmission

iTEC™ allows set speeds for IVT™/AutoPowr™ transmission to be preset. Minimum set speed can be saved is 0.8 km/h (0.5 mph).

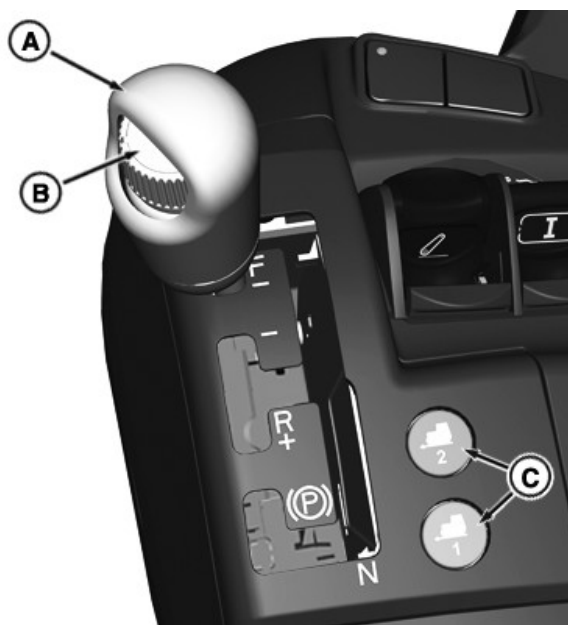
*iTEC is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company*

Changing set speed or moving lever during execution of sequence will not cause iTEC™ to abort, but no set speed changes will be commanded for remainder of sequence.

If iTEC™ sequence commanded set speed exceeds maximum allowable speed in range selected, set speeds change, but are restricted to highest or lowest allowable set speed in current range. For example, tractor reaches maximum allowable set speed if transmission is in speed range F1 and operator executes 50 km/h (31 mph) command. When set speed is changed by iTEC™, control unit reacts as if operator changed set speed, pushing other set speeds up or down as result.

KT81203,00004E1-19-28NOV16

iTEC™ Functions—Efficiency Manager™ Powershift Transmission



RXA0139446—UN—17MAR14

Efficiency Manager™ Set Speed Buttons (C): The current forward set speed can be changed up or down with the set speed adjusting wheel (B) on shift knob (A). Transmission changes will be executed at the normal rate once the set speed has been changed.

The minimum set speed that can be saved is 0.8 km/h (0.5 mph). Changing the set speed or shifting during execution of a sequence will not cause iTEC™ to abort, but set speed changes will not be executed for the remainder of the sequence.

When a set speed is changed by an iTEC™ sequence, transmission will react as if the operator changed set speed, shifting up or down as a result.

KT81203,00004E2-19-06DEC16

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Tractor-Implement Automation™ (TIA™)

Tractor-Implement Automation™ (TIA™)

CAUTION: Although phrases "transfer control" and "disengage control" are terms commonly used with TIA™ equipment, at NO time is implement in total control of an operation. Operator ALWAYS has ability to override TIA™ implement. It is operator's responsibility to make sure implement operation does not damage equipment, or pose danger of injury or death to operator or others close by.

Tractor Implement Automation™ must not be put in operation when driving on public roads or when other persons are close by.

For ISO-compliant tractors, TIA™-compatible implements have ability to control certain individual tractor functions. See your implement operator's manual or contact your John Deere dealer with any questions regarding TIA™ compatible implements.

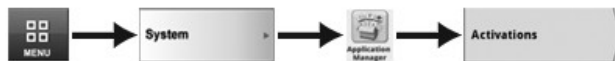
KT81203,00004E3-19-28AUG17

Activate Tractor-Implement Automation™ Equipment

Response Codes, Text Descriptions, and Corrective Actions		
Common Response Codes	Text Displayed	Corrective Action
0	Code Accepted	None Required
4	Implement Not Available to Deactivate	Implement already deactivated
5	Implement Already Activated	None Required, implement should work as expected
6 and 11	Space Unavailable for Activation	Contact your dealer for assistance
17	Demonstration Activation Replaced With Permanent Activation	None Required

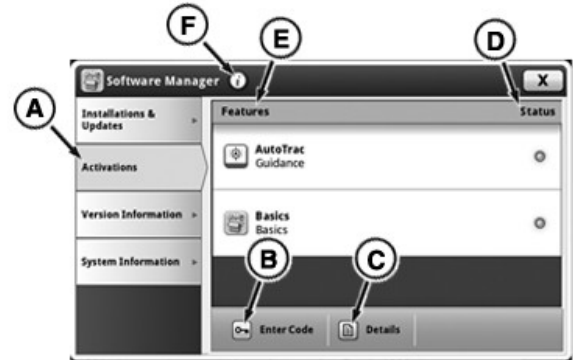
NOTE: To obtain tractor serial number, see *Product Identification Number Plate in Identification Numbers* section of this Operator's Manual.

An activation code is required to allow TIA™ to function. Contact your John Deere dealer with tractor serial number and implement make, model, and serial number. Dealer obtains activation code through John Deere StellarSupport™.



RXA0131994—UN—22APR13

1. Select **Menu**.
2. Select **System Tab**.
3. Select **Software Manager Icon**.



RXA0143147—UN—07JUL14

4. Select **Activations Tab (A)**.
5. When Activations page displays, press Enter Code button (B). Keyboard appears.

NOTE: Some Tractor Automation Activation page keyboard characters are grayed out and are not used in activation codes. If provided activation code includes any characters that are grayed out on Tractor Automation Activation page keyboard, request dealers reconfirm activation code.

6. Using keyboard, enter activation code, then select Save/Enter button.
7. If activation code is entered correctly, confirmation code appears in the enter activation overlay and message is displayed. Code Accepted indicates that activation is complete.
8. If message other than Code Accepted appears, see Response Codes, Text Descriptions, and Corrective Actions table. If message not listed appears, check and reenter code. If problem persists, contact your John Deere dealer.

Up to 20 implement names can be viewed on Tractor Automation Activation page at any given time. When a new entry shows up in Feature List (E), that entry is labeled "Unknown Implement". The text "Unknown Implement" should change to a real name after first time connecting the implement.

KT81203,00004E4-19-03APR18

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StellarSupport is a trademark of Deere & Company

Tractor-Implement Automation™ — Status Page



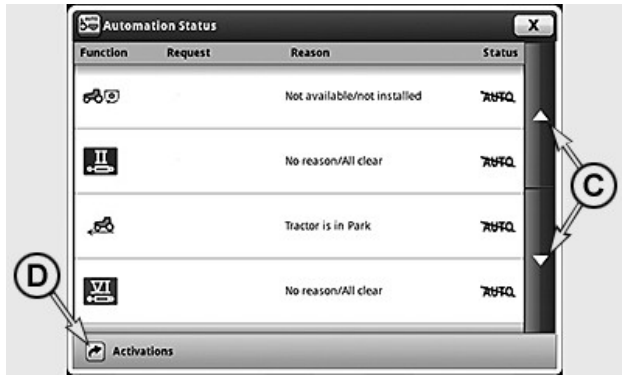
LX1057101—UN—23JUL13

Access CommandCenter™ Menu and select tab (A).

Press Automation Status icon (B) and access automation status page.

On the status page, the status of all the functions available for TIA™ are displayed.

If no TIA™-capable implement is connected, only a text message appears on the display.



LX1057102—UN—23JUL13

If there are too many functions to display on one status page, use scroll bar (C) to move to next or previous pages.

To activate the implements, press activating TIA™ button (D) and access the page for activating the implements. See also Activate Tractor-Implement Automation™ Equipment in this section of this Operator's Manual.

The status page has four columns:

Function	Request	Reason	Status
All functions available for TIA™ displayed	•Current command from implement appears on display if function is in auto mode and implement is commanding function.	•No Reason/All clear - function is fault-free and can be automated by implement. •Brief text - function is not ready to perform commands from implement.	•AUTO -function is currently commanded and has no threshold. •AUTO -function is currently not controlled by implement or cannot be controlled by it. Operator has control, or must enable function. •!AUTO! -function currently has a fault. Cause is displayed in a brief text in second column. •AUTO↑ -function has an upper threshold. Command from implement is too high. •AUTO↓ -function has a lower threshold. Command from implement is too low.

KT81203,00004E5-19-18APR18

Operate Tractor-Implement Automation™

IMPORTANT: Various requirements must be met by tractor and implements to allow TIA™ to function correctly. See information in this Operator's Manual sections and implement operator's manual sections.

1. Connect TIA™ equipment to tractor using ISO connection, see Connecting Compatible Electronic Equipment in Accessories section of this Operator's Manual.



RXA0135370—UN—25SEP13

2. Select AutoTrac™ Resume Button (A) on CommandARM™.
3. Follow implement operator's manual instructions to operate implement.

KT81203,00004E6-19-08NOV17

PTO Requirements

Before transferring control to implement, prepare implement as indicated in implement Operator's Manual. Transfer control using AutoTrac™ resume button as described in implement Operator's Manual.

Following conditions must be met before transferring control to implement:

- Operator in seat.
- Functional PTO system.
- PTO remote control off.
- PTO engaged (PTO switch On).

NOTE: Implement cannot engage PTO when tractor is stopped unless it is authorized to do so. However, implement can disengage PTO at any time including when tractor is stopped.

While operating and depending on PTO system capabilities, implement has ability to engage/disengage PTO, change PTO gear or adjust PTO speed.

To disengage control, turn PTO switch off.

KT81203,00004E7-19-27SEP17

SCV Requirements

Before transferring control to implement, prepare implement as indicated in implement operator's manual. Transfer control using AutoTrac™ resume button as described in implement operator's manual.

Following conditions must be met before transferring control to implement:

- Operator in seat.
- SCVs are functional.
- SCV control levers in neutral position.
- SCV levers are not locked.

NOTE: Set maximum SCV flow limit which cannot be exceeded by implement.

NOTE: Implement cannot adjust SCV flow when tractor is stopped unless it is authorized to do so. However, implement can stop SCV flow at any time including when tractor is stopped.

While operating, implement has ability to:

- Control SCVs during operations.
- Change SCV flow rate up to set limit.

To disengage control, perform any of the following:

- Actuate specific SCV lever.
- Lock SCV lever.
- Actuate remote control switch on fender.

KT81203,00004E8-19-03APR18

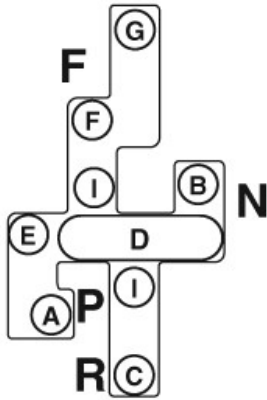
IVT™/AutoPowr™ Requirements

Before transferring control to implement, prepare implement as indicated in implement operator's manual. Transfer control using AutoTrac™ resume switch as presented in implement operator's manual.

NOTE: The implement cannot exceed ground speed set by the operator.

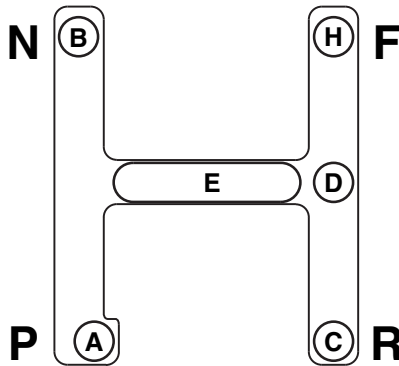
Following conditions must be met before transferring control to implement:

- Operator in seat.
- No malfunctions present in IVT™/AutoPowr™ transmission.



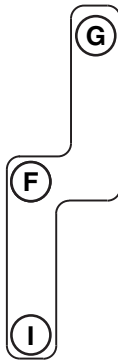
Right-Hand Reverser

RXA0133408—UN—09DEC13



Left-Hand Reverser

RXA0100319—UN—26JAN09



Left-Hand Reverser Speed Lever

RXA0077571—UN—10JUN05

Operator's approval to start or restart motion:

- Cycle reverser lever. Move lever from forward to scroll to forward position again.
Cycle reverser lever when a round baler stops tractor to eject full bale.
- Depress clutch or brake pedal while tractor rolls to stop. Hold pedal down while tractor is stopped. Tractor starts moving when pedal is released, if implement requests speed.

To disengage control using reverser lever:

- When driving: Move lever out of forward position.
- When stopped: Move lever to reverse, NEUTRAL or PARK.

To disengage control using speed control lever or speed adjusting dial:

NOTE: Speed may always be reduced.

Set speed limit may be increased within 2 seconds after engaging travel speed auto mode. Current travel speed can be limited by other processes (e.g. iTEC™). This limit will be observed; however, the limit will not be considered as an intervention by operator.

- If implement commands stopping tractor and speed is increased, ground speed auto mode will be ended.
- Increasing speed will end auto mode. Implement has all information to inform operator that this interaction will end ground speed auto mode (see implement operator's manual).

KT81203,00004E9-19-01SEP17

Powershift Transmission Requirements

Before transferring control to implement, prepare implement as indicated in implement operator's manual. Transfer control using AutoTrac™ resume button as presented in the implement operator's manual.

NOTE: The implement cannot exceed ground speed set by the operator.

Following conditions must be met before transferring control to implement:

- Operator in seat.
- No malfunctions present in transmission.
- Shift lever in forward.

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AutoTrac is a trademark of Deere & Company

- Reverser lever must be in scroll (E), Power Zero™ (D), or forward position (F or G) for left-hand, right-hand reverser, forward position (H) for left-hand reverser.

While operating, implement has ability to:

- Adjust speed up to operator set limit.
- Stop tractor.
- Drive tractor again after stopping; with operator's confirmation.

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NOTE: When transferring control to the implement, Efficiency Manager™ mode will engage.

Speed may always be reduced.

Set speed limit may be increased within 2 seconds after engaging travel speed auto mode. Current travel speed can be limited by other processes (e.g. iTEC™). This limit will be observed; however, the limit will not be considered as an intervention by operator.

To disengage control using the shift lever:

- During driving: Shift up or down manually.
- Increasing the speed will end the auto mode. The implement has all information to inform the operator that this intervention will end the travel speed auto mode. See implement operator's manual.

KT81203,00004EA-19-06NOV17

AutoTrac™ Guidance Requirements

Before transferring control to implement, prepare implement as indicated in implement operator's manual. Transfer control using AutoTrac™ resume button as presented in implement operator's manual.

Following guidelines must be met before transferring control to implement.

- Operator in seat.
- Steering system functional.
- AutoTrac™ is off.
- Steering wheel stationary.
- Vehicle speed below maximum automated speed.
- Transmission not in PARK.

While operating, implement has ability to automatically steer tractor.

To disengage control:

- Turn steering wheel.
- Place tractor in PARK.

KT81203,00004EB-19-06NOV17

Rear Hitch Requirements

Before transferring control to implement, prepare implement as indicated in implement operator's manual. Transfer control using AutoTrac™ resume button as presented in implement operator's manual.

Implement can automatically control hitch depth.

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Set raise limit using CommandCenter™.

IMPORTANT: Implement cannot exceed limit.

Following guidelines must be met before transferring control to implement:

- Operator in seat.
- Functional hitch system.
- Hitch control lever in neutral position.
- Hitch unlocked.

NOTE: Unless implement is authorized to adjust hitch depth when tractor is at a standstill, tractor will prevent hitch depth adjustments when at a standstill.

To disengage control:

- Move hitch control lever.
- Lock hitch.
- Activate fender mounted hitch switch (if equipped).

KT81203,00004EC-19-27SEP17

Drive Strategy Requirements

While operating, implement has ability to change drive strategy mode. See IVT™/AutoPowr™ Custom Mode Settings in IVT™/AutoPowr™ Transmission section of this Operator's Manual.

Before transferring control to implement, prepare implement as indicated in implement operator's manual. Transfer control using AutoTrac™ resume button as presented in implement operator's manual.

Following guidelines must be met before transferring control to implement:

- Operator in seat.
- No malfunctions present in transmission.
- Transmission not in PARK.

To disengage control:

- Manually select a drive strategy.
- Place transmission in PARK.

KT81203,00004ED-19-25JUL17

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Drivetrain

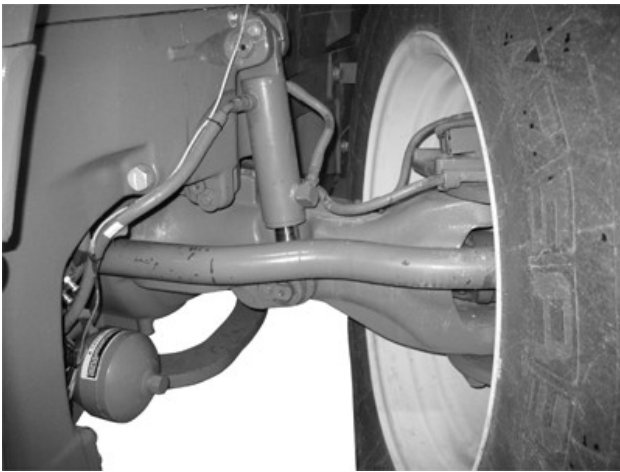
Drivetrain Overview

Tractor drivetrain consists of:

- Transmission: e23™ or IVT™ /AutoPowr™
- MFWD: Conventional Mechanical Front Wheel Drive or TLS™ Plus (Triple Link Suspension Plus) axle
- Differential: Differential, differential lock, final drives, and axles
- Brakes: Rear or front and rear
- Mechanical, electronic, and hydraulic control systems

KD34109,0000698-19-25JUL18

Triple Link Suspension Plus (TLS™ Plus)



RXA0110327—UN—13SEP10

TLS™ Plus Front Axle Suspension provides suspension for tractor front end using hydro-pneumatic self leveling system. TLS™ Plus can operate simultaneously, yet independently from Load/Depth Control and Hitch Dampening.

Operating Characteristics

CAUTION: Avoid possible injury. Always make sure transmission is in Park position when working in area of TLS™ Plus MFWD.

IMPORTANT: Check for adequate clearance with TLS™ Plus system when attaching front mounted implement.

TLS™ Plus automatically levels when tractor wheel speed is faster than 0.5 km/h (0.3 mph).

TLS™ Plus self levels with implement attached and hitch is raised or lowered.

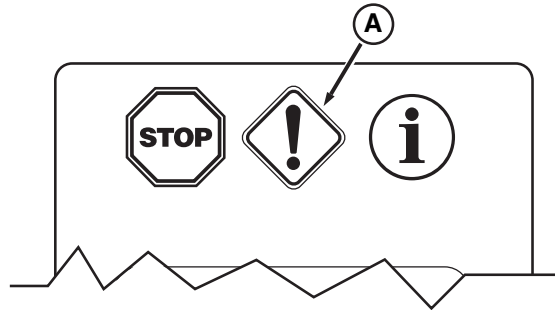
Cold Weather Operation

Use normal cold weather procedures. TLS™ Plus

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TLS is a trademark of Deere & Company

system may require extra time to function correctly. TLS™ Plus system may not operate if system has not recentered during first 80 seconds of operation. Several restarts may be required. If it still doesn't start, contact your John Deere dealer.

Troubleshooting



RXA0068147—UN—22JUN03

If fault occurs in leveling control, Service Alert indicator (A) comes on, and a DTC message appears on CommandCenter™ display. To clear fault, stop and restart engine. If fault reoccurs, contact your John Deere dealer.

TS36762,000029C-19-31AUG17

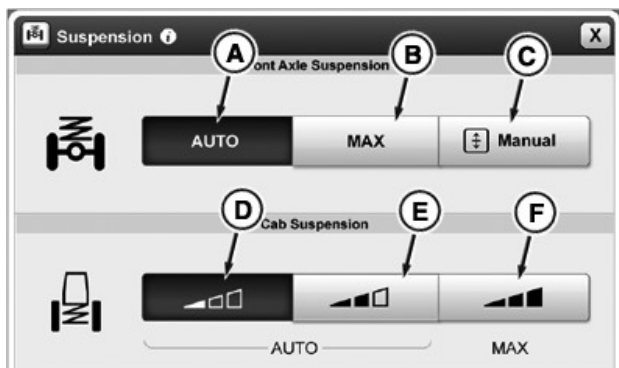
Operate Triple Link Suspension Plus (TLS™ Plus) and Hydraulic Cab Suspension (If Equipped)



RXA0147938—UN—13APR15

1. Select Menu.
2. Select Machine Settings tab.
3. Select Suspension icon.
4. Select desired front axle and cab suspension setting.

TLS™ Plus



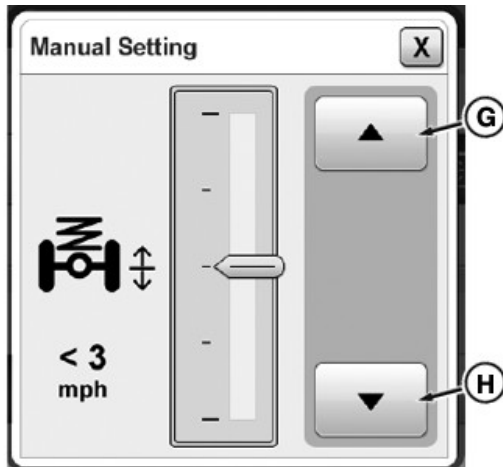
RXA0131033—UN—18FEB13

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TLS™ Plus can be set to two different firmness levels and a manual position option: AUTO (A), MAX (B), and Manual (C).

Suspended front axle engages whenever tractor travel speed exceeds 0.5 km/h (0.3 mph). Control after tractor begins moving is delayed. Suspension is active anytime tractor is not in park.

- **AUTO:** Suspension reacts in response to surrounding conditions and events. Provides best possible comfort by looking at inputs such as travel speed, surface characteristics, implement weight, implement usage, and braking activity.
- **MAX:** Suspension is set to maximum firmness (example: For operation with a front loader). When travel speed exceeds 30 km/h (18 mph), MAX setting is deactivated. When travel speed drops below 20 km/h (12 mph), MAX setting is reactivated.



RXA0131034—UN—18FEB13

- **Manual:** Operator is able to adjust chassis height by pressing raise button (G) or lower button (H). Manual setting is overridden when travel speed exceeds 5 km/h (3 mph). When overridden, system returns to previously active mode.

Hydraulic Cab Suspension (If Equipped)

IMPORTANT: Cab suspension should never hit end stops. If this occurs, select a stiffer setting.

Cab suspension can be set to three different firmness levels:

- **AUTO Soft (D):** Suspension operates from 0%—100% stiffness. Provides best suspension for transport situations. Cab suspension moves most with this setting. If less cab movement is desired, select a stiffer setting.
- **AUTO Medium (E):** Suspension operates from 50%—100% stiffness. Provides best suspension for field operation.
- **MAX (F):** Suspension operates at 100% stiffness. Most suitable for loader operations or operations that require frequent shuttle shifting.

Start Up Mode

- TLS™ Plus does not move until placed into either forward or reverse gear.
- TLS™ Plus flexes when transmission shift lever is placed in NEUTRAL or any forward or reverse gear.
- Leveling is completed when tractor wheel speed is above 0.5 km/h (0.3 mph).

TLS™ Plus in Locked Conditions (Restricted Mode)

- Operator activates hitch raise/lower switch.
- Transmission shift lever placed in PARK.
- Wheel speed less than 0.5 km/h (0.3 mph).
- Correcting for unlevel condition.
- Operator applies both brake pedals.

Rear Hitch

- Control units limit suspension response when hitch is raised or lowered with load sense front weight changes.
- Depressing clutch and moving transmission shift lever into gear for four seconds and then back to NEUTRAL adjusts suspension toward mid-point. This can be repeated until tractor levels when attaching and detaching implements.

Parking Tractor

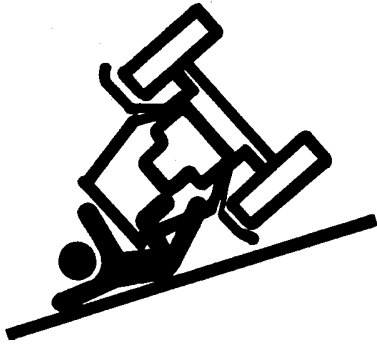
IMPORTANT: Prevent possible damage. Do not park tractor with equipment or items under front end of tractor.

- Front end can settle when tractor is parked. Keep front end of tractor away from equipment or other items.

TS36762,000029D-19-27AUG18

Mechanical Front-Wheel Drive (MFWD)

Mechanical Front-Wheel Drive (MFWD)



RW13093—UN—07DEC88

CAUTION: Avoid personal injury or death. Reduce speed when driving on icy, wet, or graveled surfaces.

Ballast tractor correctly to avoid skidding and loss of steering control. Engage front-wheel drive by using MFWD switch mode, rather than AUTO mode for four wheel braking.

IMPORTANT: Use AUTO MFWD or Brake Assist when transporting tractor.

MFWD allows the most power and traction for any road or field condition.

MFWD can be engaged and disengaged in all gears (forward and reverse) during operation and under full load. Select one of three operating modes:



RXA0138503—UN—21JAN14



RXA0160885—UN—06SEP17

AUTO MFWD — Enter Auto mode by pressing AUTO

MFWD switch (A) on armrest. While in Auto mode, LED in AUTO switch illuminates. MFWD indicator (C) illuminates when MFWD is engaged. Following is how MFWD operates in AUTO position:

- MFWD automatically *disengages* when either brake pedal is pressed, at speeds above 23 km/h (14 mph) or steering angle is greater than selected value. For more information on how to change MFWD steering angle see Change Mechanical Front-Wheel Drive (MFWD) Disengagement in the section of this Operator's Manual.
- MFWD automatically *engages* when speed falls below 19 km/h (12 mph) and steering angle is below selected value, or when BOTH brake pedals are depressed.

Manual MFWD — Enter Manual mode by pressing Manual MFWD switch (B). While in Manual mode, LED in Manual MFWD switch and MFWD indicator illuminate until disengaged. To disengage Manual MFWD mode, press illuminated Manual MFWD switch. MFWD is engaged when transmission is in PARK.

Brake Assist — If both Manual and Auto mode are deselected, MFWD will be in Brake Assist mode. In Brake Assist mode, MFWD will be off unless both brake pedals are depressed at speeds above 5 km/h (3 mph).

TS36762,0000198-19-06SEP17

Change Mechanical Front-Wheel Drive (MFWD) Disengagement Steering Angle

MFWD disengages to enable tighter turning radius or to reduce ground disturbance in area of turn. To allow for different turning radius of various implements, steering angles to disengage MFWD are higher and have different settings than steering angles to disengage differential lock.

Disabling steering angle to disengage MFWD switches MFWD into "AUTO" mode allowing disengagement of MFWD based on wheel speed and depression of brake pedal, not on steering angle.

MFWD Disengagement Steering Angle is retained through key cycles.

Use Transmission Advanced Settings to adjust steering angle to disengage MFWD.



RXA0133712—UN—16JUL13

Transmission Shortcut Button on Navigation Bar

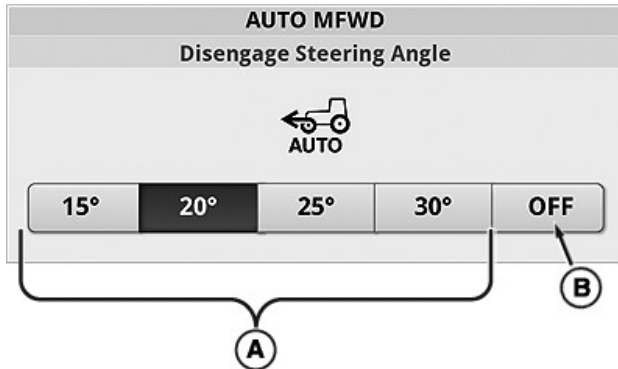
1. Select **Transmission Shortcut button** on **Navigation Bar**.



RXA0130326—UN—11JAN13

Advanced Settings Icon → Settings Tab

2. Select **Advanced Settings icon**.
3. Select **Settings tab**.



RXA0137848—UN—13DEC13

MFWD Steering Angle

4. Select desired steering angle to disengage MFWD using Steering Angle toggle bar (A). To disable steering angle to disengage MFWD, press Steering Angle OFF button (B).

TS36762,0000199-19-16DEC16

Differential Lock

Differential Lock

IMPORTANT: Engage differential lock before entering situation where wheel slippage may occur or when all wheels appear to be turning at same speed. If engaged after wheels begin to spin, damage to differential could result.

NOTE: On tractors with front and rear differential locks, front axle differential lock engages when rear differential lock engages.

Differential Lock latches wheel axles together to provide best traction possible for slippery field conditions.

When one wheel begins to slip, differential lock can be engaged by selecting either of the two operating positions:



AUTO Lock — Enter auto mode by pressing AUTO lock switch (A) on CommandARM™. When in auto mode, LED in AUTO lock switch illuminates. Differential lock indicator (C) illuminates when differential lock is engaged. AUTO lock:

- Disengages when wheel speed is more than 23 km/h (14 mph), one or both brake pedals are depressed or steering angle greater than selected value. See Change Differential Lock Disengagement Steering Angle in this section of this Operator's Manual.
- Engages when wheel speed falls below 19 km/h (12 mph), steering angle less than selected value and brakes are released.

When AUTO lock switch is pressed, button is always lit

until pressed again. Differential lock remains in auto mode until operator selects manual lock (B) on CommandARM™. Differential lock indicator turns on and off depending on the state of differential lock.

Manual Lock — Enter manual mode by pressing manual lock switch on armrest. When in manual mode, Light on CommandArm switch lock switch and differential lock indicator illuminates. Press manual lock switch a second time or both brake pedals to disengage manual mode.

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Change Differential Lock Disengagement Steering Angle

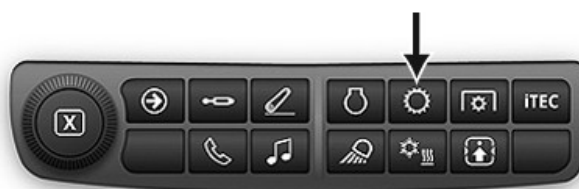
Higher disengage steering angles require operator to turn steering wheel further before differential lock disengages. Use in high slip field conditions that require large steering corrections to maintain desired path. Differential lock remains engaged while making steering corrections across field, but automatically disengages on headland turns.

Moderate disengage steering angles are useful in loader situations. Differential lock remains engaged when entering into a pile, but quickly disengages while turning.

Lower disengage steering angles allow differential lock to disengage sooner (less movement of the steering wheel), which is useful in high traction (example: paved surface) conditions. Differential lock remains engaged during straight-line work, while minimizing tractor jerk when disengaged or reengaged during turns.

Steering angle is factory set at 6°. Any custom settings are maintained until readjusted.

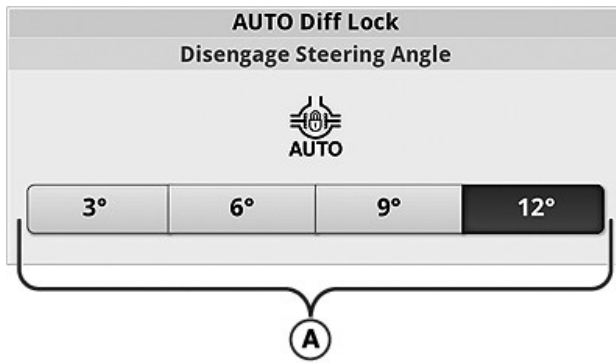
Adjust steering angle to disengage differential lock:



1. Select Transmission Shortcut button on Navigation Bar.



2. Select Advanced Settings icon.
3. Select Settings tab.



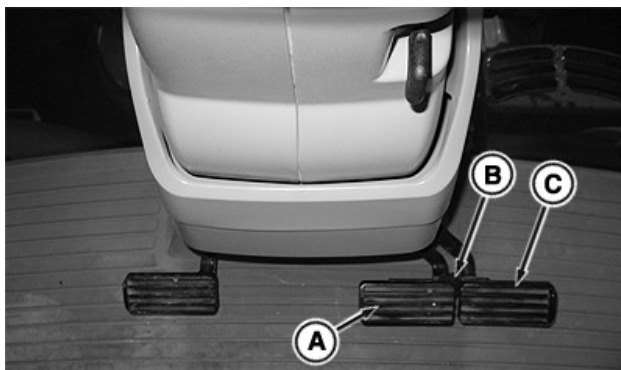
RXA0137847—UN—13DEC13

4. Select desired steering angle to disengage differential lock using Steering Angle toggle bar (A).

TS36762,000019B-19-27JUN18

Brakes

Brake Use



RXA0129148—UN—30OCT12

CAUTION: Avoid possible injury from losing control of tractor:

- Before operating on roads, while tractor is in parked position, lock brake pedals together with the pedal lock tab (B). Tractor speed limited to 40 km/h (24.9 mph) when brake pedals are unlocked.
- Reduce speed if towed load weighs more than the tractor or when transporting loads under adverse conditions. Avoid hard braking applications. See Tow Loads in Transport Section of this Operator's Manual.
- Tractor wheels may lock and skid on slippery downhill slopes. For IVT™/AutoPowr™ tractors, see Downhill Operation and Slippery Conditions, in the IVT™/AutoPowr™ Transmission section.

IMPORTANT: MFWD engages if MFWD Brake Assist mode is selected and both brake pedals are depressed at speeds above 5 km/h (3 mph). See Mechanical Front-Wheel Drive (MFWD) in this section for more information.

DO NOT rest feet on brake pedals during tractor operation to avoid unnecessary wear on brakes and increased fuel consumption.

Test brakes with engine stopped to be sure that manual brake system is functioning. See 250 Hour Service in Service - Record Charts section of this Operator's Manual.

Use individual brake pedals to assist in making sharp turns when working in field.

Depress both brake pedals (A and C) to stop tractor while disengaging clutch pedal. Use brake pedal lock tab (B) to lock brakes together.

Individual brake pedals can assist with slow speed off road turning situations, such as when hooking up implements.

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Maintain at least 1800 engine rpm during aggressive braking events to ensure that adequate cooling oil flow is directed to vehicle brakes. Do not over speed engine as it may cause damage to engine or transmission components.

For IVT™/AutoPowr™ Tractors

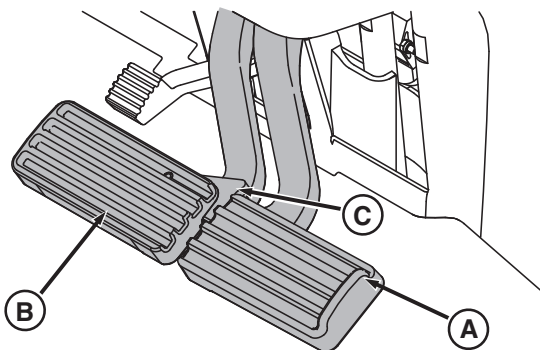
When operating at low idle, individual brake pedals stop tractor without use of clutch pedal. To assist slow speed turning, depress either brake pedal while slowly increasing engine speed until desired turn is achieved. Returning engine speed to low idle while continuing to depress one brake pedal slows the tractor to a stop.

Using Brakes with AutoClutch (If Equipped)

CAUTION: Avoid possible injury. Braking the tractor while commanding a high engine speed requires a higher brake pedal force.

Avoid injury due to sudden or unexpected acceleration. When brake pedals are released, the tractor automatically accelerates to the speed currently commanded by throttle and speed control levers.

IMPORTANT: Damage to brakes could result if brake pedals are not locked together during transport when using AutoClutch



RXA0122335—UN—17NOV11

For IVT™/AutoPowr™ Tractors Only: Individual brake pedals (A) and (B) can assist with slow speed off-road turning, such as hooking up to implements. At low idle, AutoClutch feature stops tractor if operator depresses only one brake pedal. IT IS NOT NECESSARY TO DEPRESS CLUTCH PEDAL.

To assist in hooking up implement, depress either brake pedal while slowly increasing engine speed until desired turn is achieved. Returning engine speed to low idle while continuing to depress one brake pedal slows the tractor to a stop.

Parking Tractor with AutoClutch

1. Depress both brake pedals. Brakes activate AutoClutch (automatic clutch function within transmission) to stop tractor. **It is not necessary to depress clutch, reduce throttle, or move speed control lever.**

CAUTION: Avoid possible injury due to losing control of tractor. Use pedal lock tab (C) to couple brake pedals together when driving on roads.

2. Move speed control lever to slowest position and stop tractor.

CAUTION: Always place reverser lever in PARK position before dismounting tractor.

3. Shift reverser or shift lever to PARK position.

Transmission PARK position holds tractor stationary.

4. Lower implements and shutoff PTO.

5. Shut off engine and remove ignition key.

TS36762,000019C-19-31JUL18

Use AutoClutch (If Equipped)

IMPORTANT: Damage to brakes could result if brake pedals are not locked together during transport when using AutoClutch.

IVT™/AutoPowr™ and e23™ transmissions are equipped with an AutoClutch feature. With AutoClutch, when brake pedals are depressed, clutch begins disengaging, pressing brake pedals further then applies the rear brakes. Front brakes (if equipped) are applied as well.

To keep AutoClutch from disengaging before trailer brakes are applied, select appropriate AutoClutch Sensitivity setting.



RXA0133712—UN—16JUL13
Transmission Shortcut Button on Navigation Bar

To access transmission main page, use Transmission Shortcut Button on Navigation Bar or follow alternative path:



RXA0147943—UN—13APR15

1. Select **Menu**.

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AutoPowr is a trademark of Deere & Company
e23 is a trademark of Deere & Company

2. Select **Machine Settings** tab.

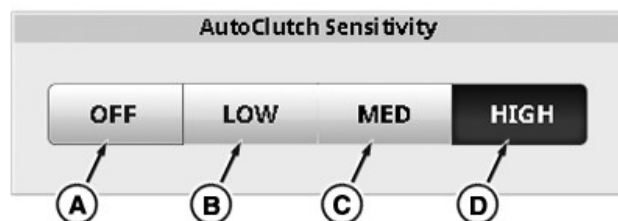
3. Select **Transmission** icon.



RXA0130326—UN—11JAN13

4. Select **Advanced Settings** icon.

5. Select **Settings** tab.



RXA0137943—UN—17DEC13

6. Select appropriate AutoClutch setting:

- ON/OFF (A) disables or enables AutoClutch.
- Low (B) is for heavy trailers (load).
- Medium (C) is for medium trailers (load).
- High (Factory Default) (D) is for light or no trailer (load).

KT81203,00004FA-19-29NOV16

Brake Warning Indicators

Brake warning indicators illuminate when a fault in the brake system occurs.



RXA0155981—UN—30NOV16

Brake Warning Indicator (Red) (A)

NOTE: Brake Warning Indicator (Red) illuminates while trailer air brakes reach operating pressure, indicator will turn off once operating pressure is reached.

If indicator is solid red, a serious fault has been detected that affects brake system performance:

- Immediately stop tractor.

- Park tractor on level ground and prevent tractor from rolling away.
- Diagnostic Trouble Code (DTC) will display on CommandCenter™, follow instructions to fix the fault.
- If fault cannot be fixed, see your John Deere dealer.

If indicator is flashing red, park lock cannot engage:

- Park tractor on level ground and prevent tractor from rolling away.
- DTC will display on CommandCenter™, follow instructions to fix the fault.
- If fault cannot be fixed, see your John Deere dealer.

Brake Warning Indicator (Yellow) (B)

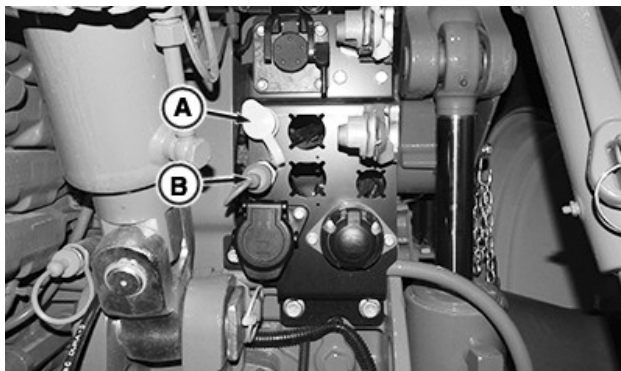
Yellow indicates an electrical fault has been detected that affects the ability to detect additional faults:

- Park tractor on level ground and prevent tractor from rolling away.
- DTC will display on CommandCenter™, follow instructions to fix the fault.
- If fault cannot be fixed, see your John Deere dealer.

DB71512,0000139-19-01DEC16

Trailer Hydraulic Brakes

CAUTION: Avoid possible injury from losing control of tractor equipped with IVT™/AutoPowr™ transmission operating on downhill slopes. Tractor wheels may lock and skid on slippery downhill slopes. See Downhill Operation in Slippery Conditions in IVT™/AutoPowr™ Transmission section of this Operator's Manual.



RXA0154823—UN—13OCT16

Shift transmission to PARK and turn tractor OFF. Remove dust cover from hydraulic trailer brake couplers (A and B). Connect pressure hoses to brake couplers, making sure hoses end and couplers are clean.

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IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

IMPORTANT: To reduce brake wear, make sure pressure hoses are connected, select same gear for both downhill and uphill driving, and check hydraulic trailer brakes regularly for correct functionality.

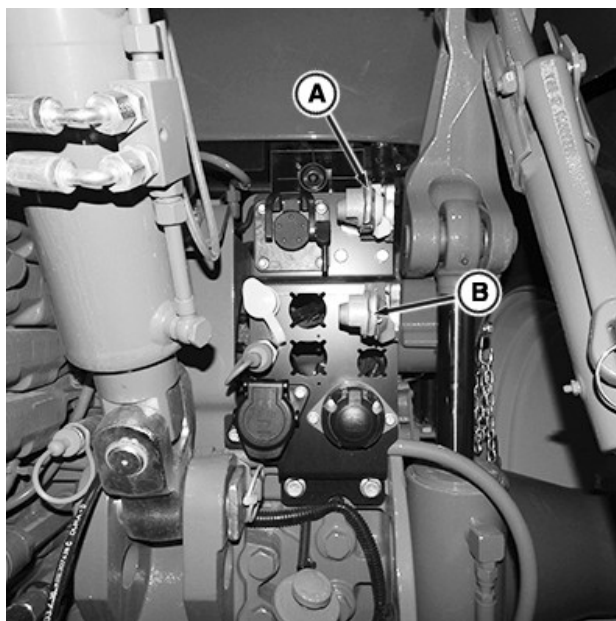
Depress brake pedals to operate hydraulic trailer brakes. Braking effect depends on pressure applied to brake pedals. If brake warning indicators illuminate during operation, see Brake Warning Indicators in Brakes section of this Operator's Manual.

Bring tractor-trailer to complete stop, shift transmission to PARK and turn tractor OFF before dismounting tractor and disconnecting hydraulic lines from couplers. Seal connections with dust covers whenever hoses are disconnected.

TS36762,000019D-19-13DEC16

Trailer Air Brakes

CAUTION: Avoid possible injury from losing control of tractor equipped with IVT™/AutoPowr™ transmission operating on downhill slopes. Tractor wheels may lock and skid on slippery downhill slopes. See Downhill Operation in Slippery Conditions in IVT™/AutoPowr™ Transmission section of this Operator's Manual.



RXA0152366—UN—13JUN16

Brake Couplers

Dual-line trailer air brake system employs yellow control (A) and red supply (B) couplers.

Clean connections before attaching air hoses. Connect trailer line that goes to yellow air brake coupler (control) first. Lift dust cover from trailer air brake coupler and

connect trailer hose coupling. Seal connections with dust covers whenever hoses are disconnected.

Start engine and allow air system to reach working pressure. While air pressure builds, Diagnostic Trouble Code and an accompanying message comes on CommandCenter™ display. When operating pressure is reached, indicator light and warning display shut off automatically. If brake warning indicators illuminate during operation, see Brake Warning Indicators in Brakes section of this Operator's Manual.

IMPORTANT: To reduce brake wear, make sure pressure hoses are connected correctly, select same gear for both downhill and uphill driving, and check air brakes on trailer regularly for correct functioning.

With trailer lines connected, do not drive tractor until operating pressure is reached and service alert indicator and warning display are off.

Depress brake pedals to stop tractor-trailer while disengaging clutch pedal. Depressing clutch pedal to stop tractor equipped with IVT™/AutoPowr™ transmission is not necessary. See Stop and Park Tractor in IVT™/AutoPowr™ Transmission section of this Operator's Manual.

Trailer air brakes are equipped with an automatic bleed valve which can be checked manually. See Air Brakes in Service - Check section of this Operator's Manual.

TS36762,000019E-19-13DEC16

Trailer Brake Settings

NOTE: If equipped. If brake adjustability screen is not displayed, see John Deere dealer to adjust brake settings.

Trailer Brake application allows operator to adjust brake and pre-brake settings, as well as testing the trailer brakes.

Navigate to Trailer Brake

1. Select Menu.
2. Select Machine Settings tab.
3. Select Trailer Brake application.

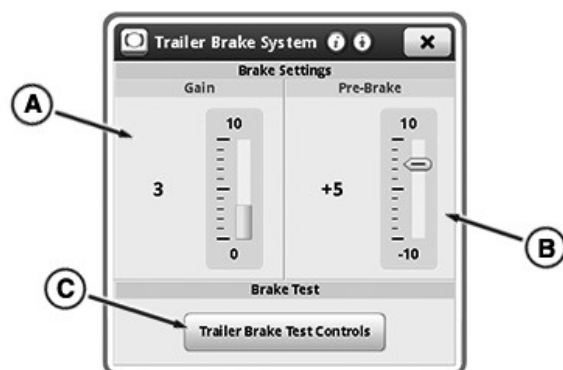
Brake Gain

Brake Gain allows operator to adjust brake to be more aggressive to match trailer requirements.

Modify when:

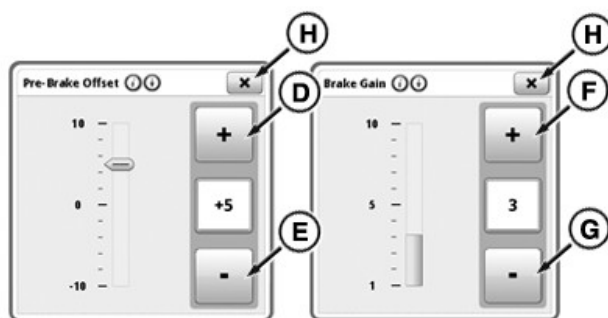
- Trailer is slow to stop.
- Trailer wheels lock up when brakes applied.

Procedure to modify:



RXA0152440—UN—20JUN16

1. Select Brake Gain (A) module to modify value.



RXA0152444—UN—20JUN16

2. Select + (F) or - (G) to increase or decrease value
3. Select the close button (H) to exit.

Pre-Brake

Pre-Brake allows operator to change timing of trailer brake initiation. Trailer brake initiation may need to be adjusted to avoid the trailer "pushing" the tractor.

Modify when:

- After connecting trailer to tractor.

Procedure to modify:

1. Select Pre-Brake (B) module to modify value.
2. Select + (D) or - (E) to increase or decrease value.
3. Select the close button (H) to exit.

Trailer Brake Test

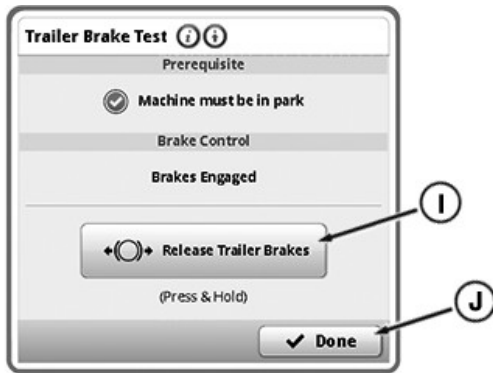
Tractors equipped with dual-line hydraulic trailer brakes have a Trailer Brake Test. Use test to confirm tractor's park brake will hold both tractor and trailer if the trailer brakes are released when parked. The Trailer Brake Test overrides the default park state of the braking system and forces brakes to release.

Modify when:

- Verifying park brake performance.
- Attaching different trailer.

Procedure to modify:

1. Place tractor in PARK.
2. Press trailer brake test controls button (C) to access trailer brake test.



RXA0152443—UN—24JUN16

3. Press and hold release trailer brakes button (I) to bleed brakes.
4. Press done button (J) when finished.

KT81203.0000519-19-04APR18

Transmission - General Information

Transmission Top Speed Note

All transmissions can be manually programmed to limit top speed. Tractors programmed for 50 km/h (31 mph) top speed can be permanently downrated to 40 km/h (24.8 mph) top speed. This may be advisable, if particular legal requirements for 50 km/h (31 mph) tractors cannot be met. Examples include a different class of driver's license, or similar restrictions. If top speed is changed, this must be recorded in the vehicle documents.

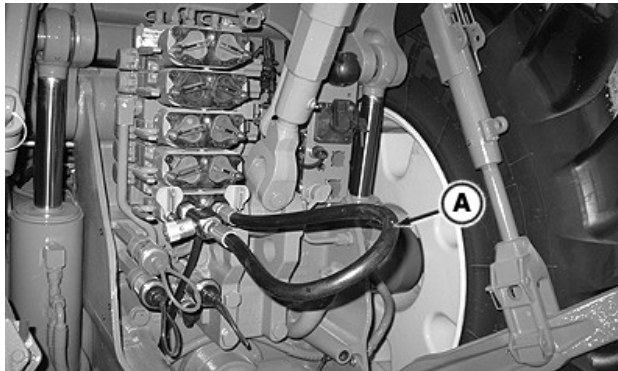
It is only possible to uprate the tractor from 40 km/h (24.8 mph) to 50 km/h (31 mph) if tractor was equipped for 50 km/h before leaving the factory.

For more information, contact your John Deere dealer.

TS36762,000019F-19-18NOV16

Warm-Up Transmission-Hydraulic System Set Detent Time

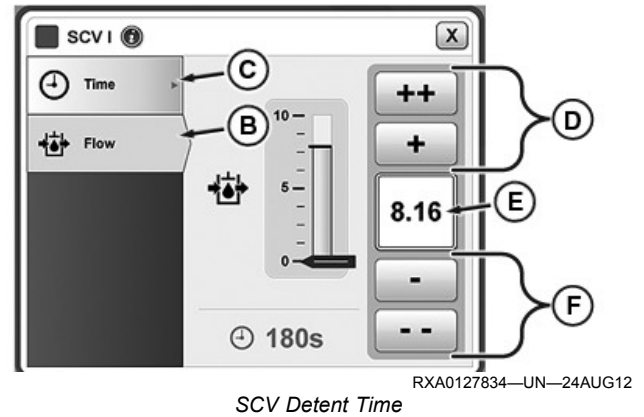
IMPORTANT: Avoid operating tractor under load until transmission-hydraulic system has warmed up. Tractor-hydraulic warm-up procedure is recommended at temperatures at or below -5 °C (23 °F).



RXA0131636—UN—28MAR13

Install Jumper Hose Into SCV Coupler

1. Install jumper hose (A) into SCV I couplers.
2. Place transmission lever in PARK position before starting tractor.
3. Turn key switch to START position.
4. Press SCV Shortcut Button on Navigation Bar.
5. Select SCV I module.



RXA0127834—UN—24AUG12

SCV Detent Time

- A—Jumper Hose
- B—SCV I Detent Flow Tab
- C—SCV I Detent Time Tab
- D—Increase Time button
- E—Input Box
- F—Decrease Time button
- G—Adjustment Dial

6. Select SCV I Time tab (C).



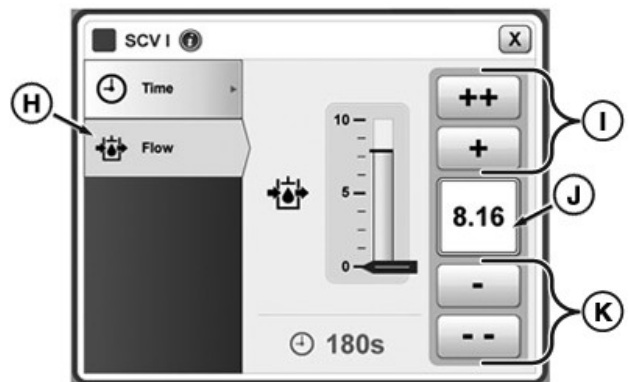
RXA0141641—UN—22MAY14

SCV Shortcut Button and Adjustment Dial on Navigation Bar

7. Select increase (+) button (D) to extend flow time to C (continuous) in input box (E). Adjustment dial (G) can also be used to increase or decrease desired detent time setting.

8. Set SCV II to C using steps 5 through 7.

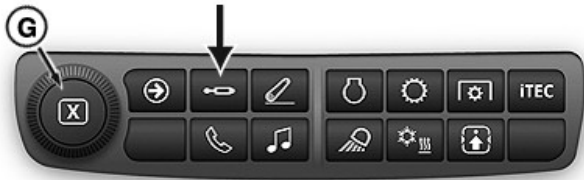
Set Detent Flow



RXA0155911—UN—21NOV16

NOTE: Flow is displayed in increments of 0.04 beginning at 0.04 through 10 located in input box (J). Pushing (+) increases flow by 0.04, pushing (++) increases flow by 1.00, and by pushing (-) and (--) decreases flow setting by same increments.

1. Select SCV I flow tab (H).



RXA0141641—UN—22MAY14

SCV Shortcut Button and Adjustment Dial on Navigation Bar

2. Set SCV I flow to 8.00 or above (J) by pressing buttons (I) to increase flow or buttons (K) to decrease flow setting. Adjustment dial (G) can be used to increase or decrease desired detent flow setting.



RXA0155912—UN—21NOV16

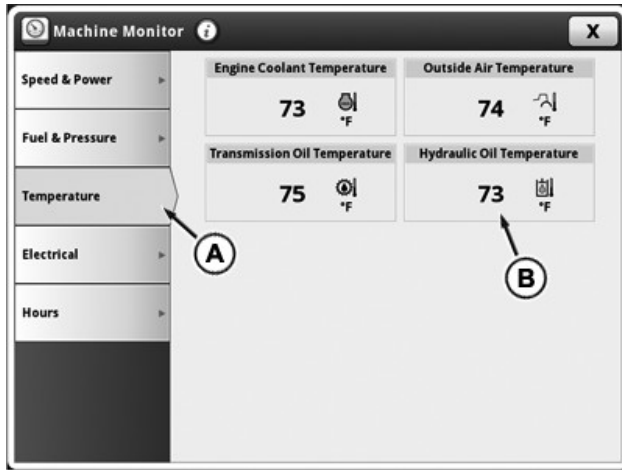
3. Pull SCV I (L) and SCV II (M) levers to extend detent.
4. Operate engine at 1400 rpm.

Monitoring Hydraulic Oil Temperature



RXA0126813—UN—12JUN12

1. Select **Menu**.
2. Select **Applications** tab.
3. Select **Machine Monitor** icon.

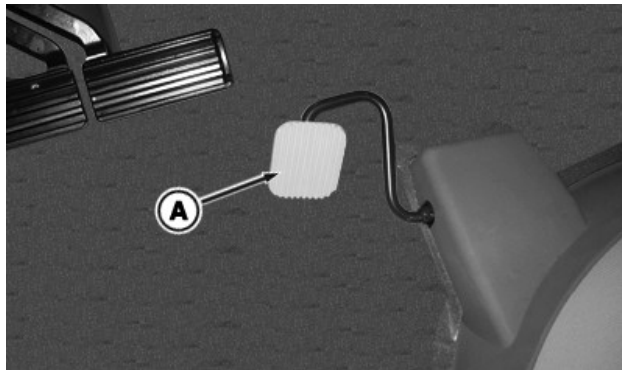


RXA0142554—UN—12JUN14

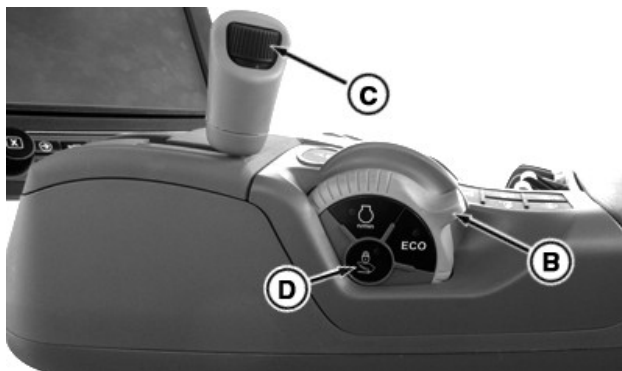
4. Select Temperature tab (A).
5. Select hydraulic oil temperature reading (B) and monitor until temperature reaches 38 °C (100 °F).
6. Return SCV I and SCV II lever to neutral position.
7. Disconnect jumper hose and return to normal operation.

KT81203,0000937-19-06SEP17

Foot Pedal Mode



RXA0135636—UN—19SEP13



RXA0156053—UN—02DEC16

Foot pedal mode is a function that allows the operator to control wheel speed independently of engine speed by using foot pedal (A) while using hand throttle (B) to keep engine at a constant speed.

When the foot pedal is released, vehicle decelerates to a minimum travel speed of 0.5 – 2 km/h (0.3 - 1.2 mph). To come to a complete stop, use brake pedal.

To control transport speeds with foot pedal only, set hand throttle to lowest position. Engine speed is controlled automatically based on transmission system and fuel economy settings.

If hand throttle is moved from lowest position, system reverts to normal accelerator mode control function.

If engine speed is being held at low rpm via hand throttle, vehicle may not reach wheel speed commanded by set speed adjuster dial (C).

Foot pedal mode is intended for applications where it is important to keep engine speed at a constant rpm independent from wheel speed (mowing for example).



Foot Pedal Mode Indicator Light

NOTE: Foot pedal mode indicator (E) is on when foot pedal mode enabled. Indicator goes out when foot pedal mode is disabled.

Enable Foot Pedal Mode

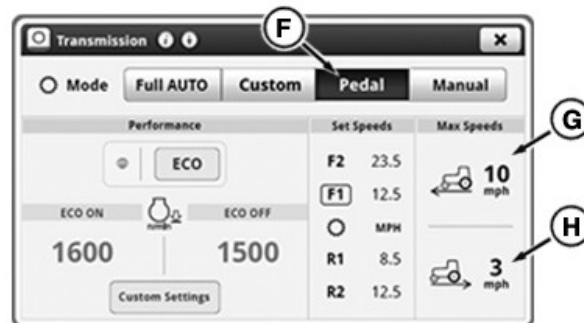
Fuel economy settings and automatic mode functions become active when foot pedal mode is enabled.

1. Place transmission shift lever in PARK position.



Transmission Shortcut Button on Navigation Bar

2. Press Transmission shortcut button on Navigation Bar.



RXA0156054—UN—02DEC16

Foot Pedal Mode

3. Press Pedal button (F).

Maximum forward and reverse speeds are adjusted using maximum forward (G) and reverse (H) speed module. See IVT™/AutoPowr™ Modes and Set Maximum Speeds in IVT™/AutoPowr™ Transmission section of this Operator's Manual.

Lock or unlock foot pedal settings using foot pedal lock/unlock button (D).

NOTE: Foot pedal will not lock if foot pedal lock button is held more than 1 second.

To unlock foot pedal:

- Depressing foot pedal a second time.
- Depressing brake pedal.
- Pressing foot pedal set lock/unlock button.
- Moving speed control lever or left-hand reverser to PARK position.

TS36762,00001A1-19-01SEP17

Activate and Set Maximum Set Speed

Maximum Set Speed utilizes a constant speed governor curve, providing instant response to varying loads. Limiting engine speed in light load situations may improve fuel economy. Two different Maximum Set Speed speeds can be set, enabling operator to toggle quickly from one to the other.

Activate Maximum Set Speed

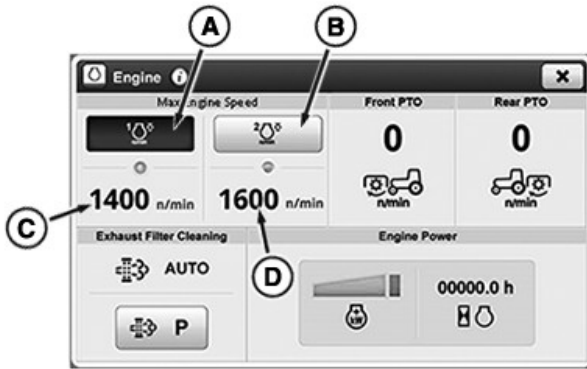
Engine must be running for Maximum Set Speed adjustment to operate.

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AutoPowr is a trademark of Deere & Company



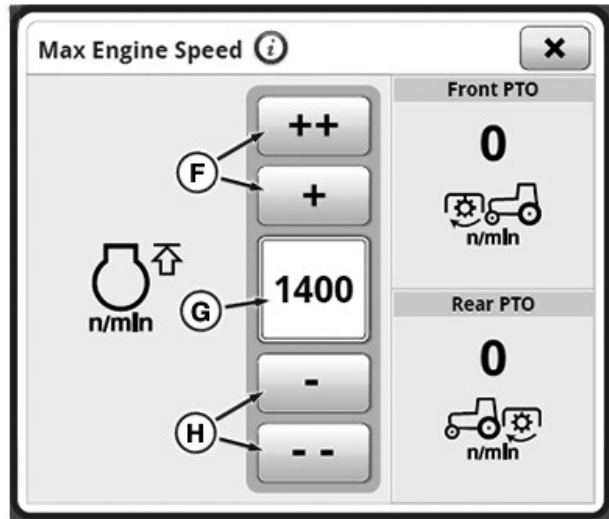
RXA0133711—UN—16JUL13

1. Select Engine Shortcut Button on Navigation Bar



RXA0156761—UN—13JAN17

2. When engine page appears, select Maximum Set Speed 1 (A) or 2 (B) ON/OFF toggle button.



RXA0161047—UN—11OCT17

2. When Maximum Set Speed 1 or 2 page appears, select desired speed using Maximum Set Speed increase (F) or decrease (H) button. “++” or “--” buttons change values at higher rate than “+” or “-” buttons.

TS36762,00001A5-19-11OCT17



RXA0137795—UN—12DEC13

NOTE: Maximum Set Speed can also be activated using Maximum Set Speed ON/OFF button (E) on CommandARM™. When CommandARM™ Maximum Set Speed ON/OFF button is pressed, last Maximum Set Speed mode selected with CommandCenter™ will be activated.

Adjust Maximum Set Speed

Maximum Set Speed is an upper limit to engine speed. Engine speed limit can be adjusted from 1100 to 2150 RPM. Changes to Maximum Set Speed take place immediately.

1. Select Maximum Set Speed 1 (C) or 2 (D) input module.

Use Maximum Set Speed with Different Transmission Modes

Change transmission mode by using Transmission Page on CommandCenter™ display. Following is how Maximum Set Speed works with different transmission modes:

Full Auto: At full throttle, minimum engine speed is 1200 rpm with PTO off. Transmission downshifts and engine speeds up to Maximum Set Speed, to compensate for increasing workloads. Available engine speed range is 1200 rpm to Maximum Set Speed.

Custom: Minimum engine speed depends on ECO engine speed setting on transmission page. Transmission downshifts and engine speeds up to Maximum Set Speed, to compensate for increasing workloads. Available engine speed range is ECO engine speed setting to Maximum Set Speed.

Foot Pedal (If Equipped): Maximum Set Speed function is replaced by Engine Set Speed function. Engine speed stays constant at engine speed selected. Hand throttle will take over control of engine speed if moved out of position.

Manual: Operator sets engine speed using hand throttle. Engine speed stays constant, but limited by Maximum Set Speed.

TS36762,00001A6-19-18NOV16

Intelligent Power Management

Intelligent Power Management (IPM) is available as factory or field installed option. IPM provides controlled power boost of up to 26kW (35hp) to tractor when:

- Accelerating at transport speeds, power boost occurs in steps through range of 23-28 km/h (14.3-17.4 mph).
- Decelerating at transport speeds, power boost ramps down in equal steps in range of 23-18 km/h (14.3-11.2 mph).
- PTO is under load and consuming moderate power and tractor is moving at 0.5 km/h (0.3 mph) or more.
- With tractor moving and rear PTO under load or in transport above 23 km/h (14.3 mph), power increase indicator will appear on display and IPM level is displayed on CommandCenter™

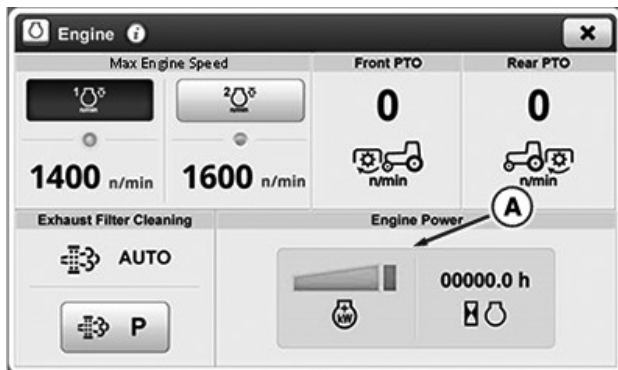
Power increase is not provided under draft applications or non-loaded rear PTO applications. Power increase is only provided when required.



RXA0133711—UN—16JUL13

Engine Shortcut Button on Navigation Bar

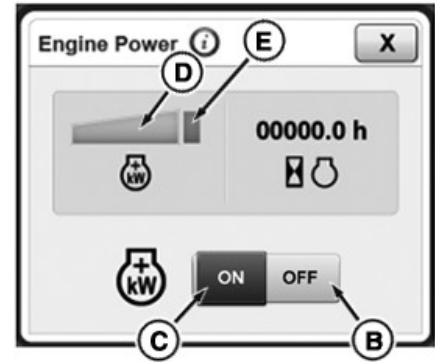
1. Press **Engine Shortcut Button on Navigation Bar**.



RXA0156762—UN—13JAN17

Intelligent Power Management

2. Select IPM module (A) to activate IPM.
3. IPM On/Off toggle appears.



RXA0141563—UN—13MAY14

Engine Power Overlay

4. Toggle ON IPM (C).
5. IPM engaged icon (E) appears.

When IPM is engaged, IPM level is identified by solid portion displayed in IPM Graph (D). Segments to right of solid portion indicate additional engine power above rated.

TS36762.00001A2-19-17JAN17

Backup Alarm

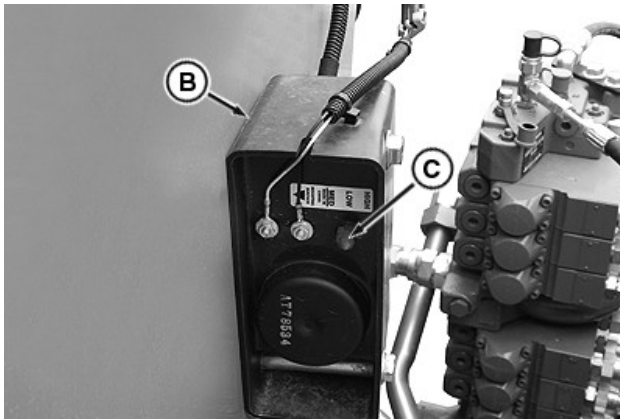
CAUTION: Backup alarm emits an audible sound to alert anyone near by. Tractor will be traveling in a reverse direction.



RXA0142551—UN—13JUN14

Backup alarm will sound when key switch is ON and transmission shift lever (A) is in reverse gear.

Alarm can be set at three different volume levels.



Backup alarm (B) is located on rear cross member. Turn volume control knob (C), on back of alarm, to desired setting.

RXA0154824—UN—13OCT16

TS36762.00001A3-19-27JUN17

2. "Transmission come home mode active" displays on CommandCenter™.
3. Turn key switch to START position.
4. Step on brake pedal momentarily.

CAUTION: Before operating tractor, verify correct operation of steering and brakes. In some situations braking may require additional force due to lower hydraulic pressure.

5. Depress clutch pedal.
6. Shift tractor into Forward or Reverse direction.
7. Release clutch pedal to put tractor in motion.
8. When destination is reached, put transmission shift lever in PARK position.
9. Turn key switch to OFF position.
10. Replace fuse #32.

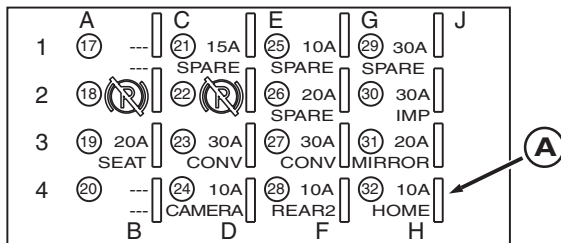
TS36762.00001A4-19-12JAN17

Come Home Mode

CAUTION: When driving tractor in come home mode, do not exceed tractor limited capability.

Come home mode may be used if tractor becomes inoperable due to failures and must be moved. In come-home mode, tractor can be moved short distances at reduced speeds and with limits on function:

- e23™ transmission — engine speed is limited to 1500 rpm and Efficiency Manager™ is disabled.
- For IVT™/AutoPowr™ transmission — maximum tractor speed is limited to 5 km/h (3.1 mph).



RXA0154827—UN—13OCT16

When fuse #32 (A) is removed and tractor is placed in gear, back-up pump will provide pressure oil for brake and steering functions.

1. Remove fuse #32 (A) and retain. See Load Center Fuses in Service - Electrical section of this Operator's Manual.

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 Efficiency Manager is a trademark of Deere & Company
 IVT is a trademark of Deere & Company
 AutoPowr is a trademark of Deere & Company

CommandCenter is a trademark of Deere & Company

e23™ Transmission

Operate e23™ Transmission with Right-Hand Reverser

CAUTION: Avoid personal injury or damage to tractor. If engine starts with right-hand reverser lever in forward or reverse positions, there is a malfunction in starting circuit. Repair immediately. See your John Deere dealer.

IMPORTANT: Prevent transmission or clutch damage:

- Never depress clutch pedal while tractor is rolling downhill or coasting as transmission can over-speed and cause serious damage to the transmission.
- Never attempt to start tractor by towing or pushing.
- Operator can always move shift lever to **PARK** Position; however, park brake does not engage until ground speed is below 1.75 km/h (1.0 mph).
- Avoid excessive ballast.
- Avoid continuous operation under full throttle and full load conditions below 1800 rpm.



RXA0155001—UN—17OCT16

Shift transmission using lever (A) on CommandARM™.

Transmission can be shifted, without use of clutch pedal, into forward or reverse.

If precise speed control is necessary, transmission control with clutch pedal for ease of connecting implements, operating in confined areas, or slow movement of tractor during precise maneuvers. Depress clutch pedal to preselect forward or reverse commanded gear from park.



RXA0155002—UN—17OCT16

When shift lever is moved from **PARK** to **NEUTRAL** position, park brake releases and corner post display (B) shows pre-selected forward or reverse gear and letter "N" for **NEUTRAL**. When lever is in forward or reverse, display shows "F" or an "R" along with commanded gear.

Engine only starts with shift lever in **PARK** or **NEUTRAL**.

Bump shift lever forward or rearward to shift transmission up or down. Multiple bumps or holding shift lever forward or rearward quickly shifts transmission through multiple gears, some gears may be skipped to make appropriate speed change

NOTE: The seat assembly contains an operator presence sensor to prevent initiation of movement of tractor without operator sitting in the seat.

When tractor is loaded to below low idle speed, transmission can default to **NEUTRAL** for powertrain protection. Park brake engages once the wheel speed drops below 1.75 km/h (1.0 mph).

To re-engage transmission, move shift lever to **PARK**, reduce load, and shift into desired operating gear.

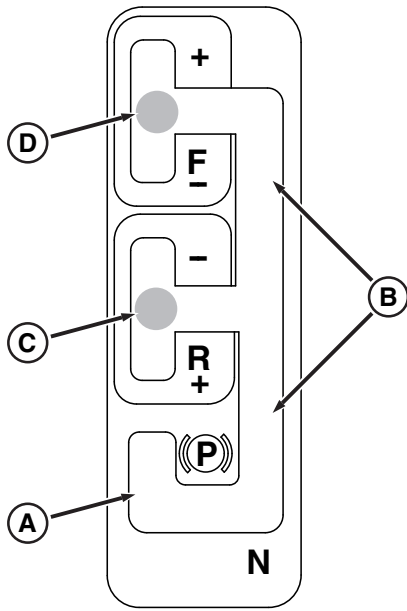
A diagnostic trouble code is stored and displayed when this condition occurs.

TS36762,00001A7-19-31AUG17

Shift e23™ Transmission with Right-Hand Reverser

Shift Lever Positions

IMPORTANT: Operator can always move shift lever to **PARK** Position; however, park brake will not engage until ground speed is below 1.75 km/h (1.0 mph). Repeated engagement of the park brake, while the tractor is moving, may damage the park brake.



RXA0107694—UN—18MAY10

PARK (A) — Park brake is applied when lever is fully forward in rear slot.

NEUTRAL (B) — Park brake is released when lever is moved to anywhere in right slot.

Reverse (C) — Tractor begins moving rearward when the lever enters this slot. Push lever forward for downshifts and pull rearward for upshifts.

Forward (D) — Tractor begins moving forward when lever enters this slot. Push lever forward for upshifts and pull rearward for downshifts.

NOTE: Transmission is in NEUTRAL position whenever shift lever is not in PARK, forward, or reverse positions.

Command Gears

NOTE: Optimum engine speed is 1800 — 2200 rpm in full load conditions. Using higher gear and lower engine speed for light load operation saves fuel and reduces wear. Under full load conditions, use full throttle engine speed.

Each time transmission enters forward or reverse slots, transmission starts in command gear, shown on corner post display.

If no other command gears have been selected, transmission starts out in either 8F or 4R after engine is started. These are default command gears. Startup default command gears can be changed from F1 - F15 in forward and R1 - R6 in reverse, see Set Startup Gears in this section of this Operator's Manual.

Command gear temporarily changes to the last gear used when shuttling between forward and reverse, or shift from gear to neutral.

Transmission starts in the preselected forward or reverse gear when clutch pedal is released.

Forward Gear— Gears between F1 and F15 can be preselected by depressing clutch pedal, putting the shift lever in forward slot, and bumping the shift lever up or down until the desired command gear is displayed.

Reverse Gear— Gears between R1 and R6 can be preselected by depressing clutch pedal, putting the shift lever in reverse slot, and bumping the shift lever up or down until the desired command gear is displayed.

Cold Weather Starting

When temperature is -10°C (14°F) or lower, it can take one minute to release the park brake with operator in the seat and shift transmission lever in gear. Several shifts between PARK and NEUTRAL can be required to release park in extremely cold conditions.

When temperature is -10°C (14°F) or above, it can take 3 seconds to release park brake with operator in seat.

When shift lever is moved to NEUTRAL, corner post display shows "N" for three seconds. If park brake does not release, "N" changes back to "P". Move shift lever back to PARK then back to NEUTRAL until "N" displays more than three seconds.

Delayed shift, slow hydraulic operation, hard steering, and limited engine rpm can also be noticeable until operating temperature is obtained.

Shift Without Using Clutch Pedal

Gear to Gear — Hold shift lever forward or rearward in slot until desired gear is reached. Transmission shifts one gear at a time until lever is released.

Gear to Gear — Quickly bump shift lever forward or rearward in slot to desired gear. Transmission can skip gears if lever is moved faster than transmission can shift.

Shift Using Clutch Pedal

IMPORTANT: Clutch pedal must be fully depressed to completely disengage clutch for correct operation.

Gear to Gear — Depress clutch pedal and hold or bump lever to shift forward or rearward in slot until desired gear is displayed. Transmission goes into commanded gear when clutch pedal is released.

Transport Shift

When tractor is in light load condition, transmission can shift faster by rapidly bumping shift lever until desired transport speed is reached. To reach transport speed quickly from a stop, depress clutch and bump shift lever to F15. Transmission shifts directly to F15 when clutch pedal is released. If direct shift to F15 is not desired, bump shift lever to shift rapidly to reach desired gear and speed.

Press and Hold Shift

Hold shift lever forward or rearward, transmission shifts through gears one at a time until shift lever is released.

Double Shift

Double bump shift lever forward or rearward to shift transmission up or down two gears at a time.

Shuttle Shift (Direction Change)

Moving shift lever between forward and reverse slots causes transmission to modulate directly to opposite direction of travel without clutching or braking. Shuttle shift occurs between last commanded forward and reverse gears.

Ground Speed Matching

CAUTION: Avoid possible accident and injury from loss of vehicle control. Never coast downhill.

Transmission shifts gears to match ground speed if clutch pedal is pressed.

Transmission shifts up to prevent engine overspeed if vehicle accelerates. The transmission also shifts down to F15 or the startup gear as the vehicle decelerates.

If Efficiency Manager™ is engaged, transmission returns to original set speed once the clutch pedal is released.

When the clutch is released in manual mode, transmission does not return to same gear it was in prior to pressing the clutch pedal.

TS36762,00001A8-19-04APR18

Operate e23™ Transmission with Left-Hand Reverser

CAUTION: Avoid personal injury or damage to tractor. If engine starts with left-hand reverser lever in forward or reverse positions, there is a malfunction in starting circuit. Repair immediately. See your John Deere dealer.

IMPORTANT: Prevent transmission or clutch damage:

- Never depress the clutch pedal while tractor is rolling downhill or coasting as transmission can overspeed and cause serious damage to the transmission.
- Never attempt to start tractor by towing or pushing.
- Operator can always move shift lever to PARK Position; however, park brake does not engage until ground speed is below 1.75 km/h (1.0 mph).

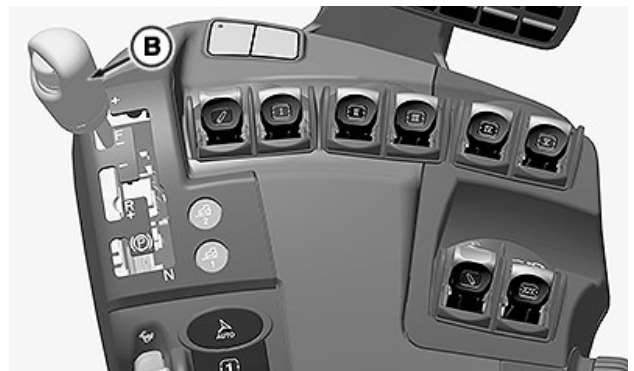
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- Avoid excessive ballast.
- Avoid continuous operation under full throttle and full load conditions below 1800 rpm.



RXA0130273—UN—11JAN13

To select direction of travel, move left-hand reverser lever (A) to either forward or reverse position in directional slot.



RXA0156094—UN—09DEC16

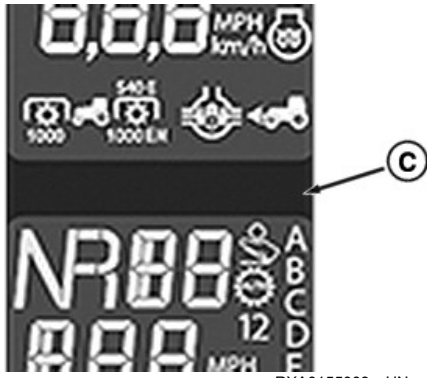
Shift transmission using lever (B) on CommandARM™.

The transmission can be shifted, without use of clutch pedal, into forward or reverse.

The clutch pedal allows operator maximum manual control of modulation for ease in connecting implements, operating in confined areas, or slow movement of tractor during precise maneuvers.

Depress clutch pedal to preselect forward or reverse direction from park.

CommandARM is a trademark of Deere & Company



RXA0155003—UN—17OCT16

When left-hand lever is moved from PARK to NEUTRAL position, park brake releases and corner post display (C) shows pre-selected forward or reverse gear and letter "N" for NEUTRAL. When lever is in forward or reverse, display shows "F" or an "R" along with commanded gear.

Engine only starts with left-hand reverser lever in PARK or NEUTRAL. Shifts are made one at a time by bumping lever. Multiple bumps or pushing and holding lever forward or pulling and holding lever rearward can result in skip shifts.

NOTE: The seat assembly contains an operator presence sensor to prevent initiation of movement of tractor without operator sitting in seat.

When the tractor is loaded to very low engine speed, the transmission can default to NEUTRAL for powertrain protection. Park brake engages once the wheel speed drops below 1.75 km/h (1.0 mph).

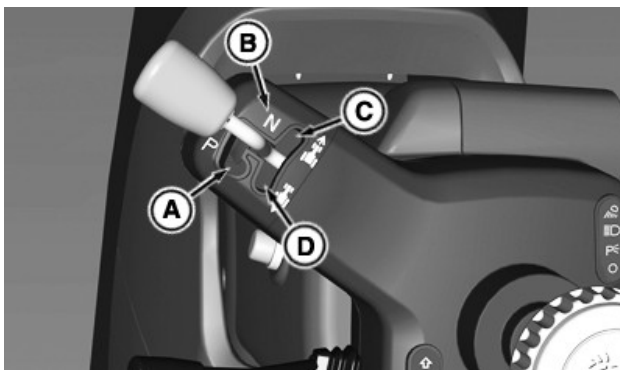
To re-engage transmission, move shift lever to PARK, reduce load, and shift into desired operating gear.

A diagnostic trouble code is stored and displayed when this condition occurs.

TS36762,00001A9-19-31AUG17

Shift e23™ Transmission with Left-Hand Reverser

Shift Lever Positions



RXA0130292—UN—11JAN13

PARK (A) — Park brake is applied when lever is fully inward in slot.

NEUTRAL (B) — Park brake is released when lever is moved to this slot.

Forward (C) — Tractor begins moving forward when lever enters this slot.

Reverse (D) — Tractor begins moving rearward when lever enters this slot.



RXA0156095—UN—09DEC16

Shift Lever (E) — After direction is selected, push shift lever forward (+) for upshifts or pull rearward (-) for downshifts.

IMPORTANT: Operator can always move shift lever to PARK Position; however, park brake does not engage until ground speed is below 1.75 km/h (1.0 mph).

Command Gears

NOTE: Optimum engine speed is 1800 — 2200 rpm in full load conditions. Using higher gear and lower engine speed for light load operation saves fuel and reduces wear. Under full load conditions, use full throttle engine speed.

Each time transmission enters forward or reverse shift pattern, transmission starts in command gear, shown on corner post display.

Transmission starts out in F8 and R4 after engine is started. These are default command gears. Startup default command gears can be changed from F1 - F15 in forward and R1 - R6 in reverse (see Set Startup Gears in this section of this Operator's Manual).

Command gear temporarily changes to the last gear used when shuttling between forward and reverse, or Shift from gear to neutral.

Initial command gear can be changed before initiating motion to match operation.

Forward Gear—Gears between F1 and F15 are preselected by depressing clutch pedal and pushing or pulling shift lever until desired command gear is displayed.

Reverse Gear—Gears between R1 and R6 are preselected by depressing clutch pedal and pushing or pulling shift lever until desired command gear is displayed.

The transmission starts in the preselected forward or reverse gear when clutch pedal is released.

Cold Weather Starting

When temperature is -10°C (14°F) or lower, it can take one minute to release park brake with operator in the seat and the transmission shifted into gear. Several shifts between PARK and NEUTRAL can be required to release park in extremely cold conditions.

When temperature is -10°C (14°F) or above, it can take 3 seconds to release park brake with operator in the seat.

When left-hand reverser lever is moved to NEUTRAL, corner post display shows “N” for three seconds. If park brake does not release, “N” changes back to “P”. Move left-hand reverser lever back to PARK then back to NEUTRAL until “N” displays more than three seconds.

Delayed Shift, slow hydraulic operation, hard steering, and limited engine rpm can also be noticeable until operating temperature is obtained.

Shift Without Using Clutch Pedal

Gear to Gear — Hold lever to shift forward or backward in slot until desired gear is reached. The transmission shifts one gear at a time until lever is released.

Gear to Gear — Quickly bump lever to shift up or down to desired gear. The transmission can skip gears if lever is moved faster than transmission can shift.

Shift Using Clutch Pedal

IMPORTANT: Clutch pedal must be fully depressed to completely disengage clutch for correct operation.

Gear to Gear — Depress clutch pedal and hold or bump shift lever forward or rearward until desired gear is displayed. Transmission goes into displayed gear when clutch pedal is released.

Transport Shift

When tractor is in a light load condition, transmission can shift faster by rapidly bumping shift lever until desired speed is reached. To reach transport speed quickly from a stop, depress clutch pedal and bump shift lever to F15. Transmission shifts directly to F15 when clutch pedal is released. If direct shift to F15 is not desired, bump shift lever to shift rapidly to reach desired gear and speed.

Press and Hold Shift

Hold shift lever forward or rearward to continuously shift transmission through gears until desired gear is reached then release shift lever.

Double Shift

Transmission shifts up or down two gears when shift lever is double bumped forward or backward. A double bump down shift is useful in field operations when hitting tough spots. Double bumping can also be useful in making headland turns.

Shuttle Shift (Direction Change)

Moving shift lever between forward and reverse slots causes transmission to modulate directly to opposite direction of travel without clutching or braking. Shuttle shift occurs between last commanded forward and reverse gears.

Ground Speed Matching

CAUTION: Avoid possible accident and injury from loss of vehicle control. Never coast downhill.

Transmission shifts gears to match ground speed if clutch pedal is pressed.

Transmission shifts up to prevent engine overspeed if tractor accelerates. Transmission shifts down to F15 or the startup gear as tractor decelerates.

If Efficiency Manager™ is engaged, transmission returns to original set speed once clutch pedal is released

In manual mode, transmission does not return to the gear it was in prior to pressing clutch pedal when clutch is released.

TS36762,00001AA-19-20DEC16

Set Startup Gears

NOTE: Up to one reverse and two forward startup gears may be set.



RXA0133712—UN—16JUL13

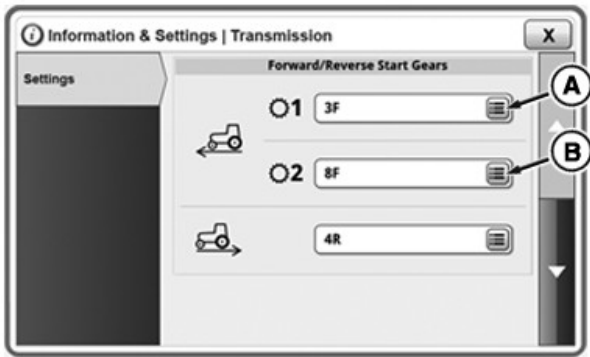
Press Transmission Shortcut Button on Navigation Bar.



RXA0130326—UN—11JAN13

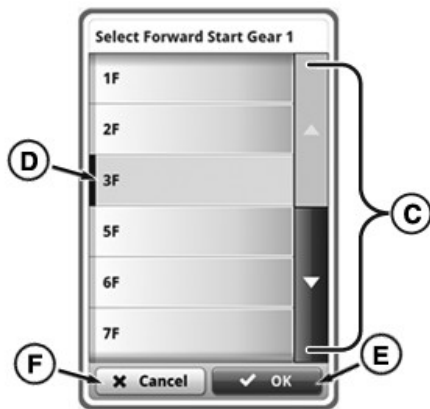
1. Press **Advanced Settings** icon.

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2. Press **Settings** tab.

RXA0155805—UN—17NOV16

3. Press Forward Start Gear 1 button (A). List of forward gears appears.



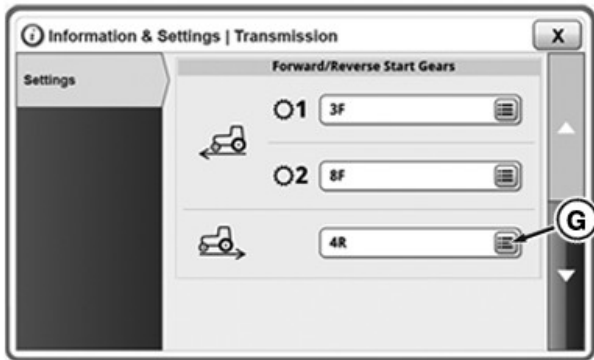
RXA0155806—UN—17NOV16

4. Scroll through list of gears (C).

5. Select desired gear (D) and press OK button (E) to finish selection or (F) to cancel.

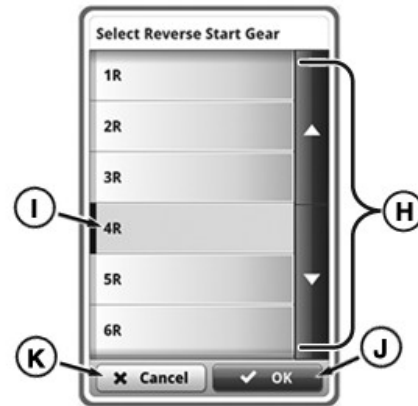
6. Press Forward Start Gear 2 button (B). List of forward gears appears.

7. Repeat step 4 and 5 to select Forward Start Gear 2.

Select Reverse Start Gear

RXA0155807—UN—17NOV16

1. Press Reverse Start Gear button (G). List of reverse gears appears.

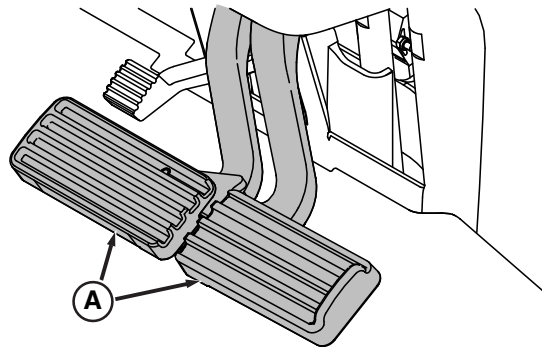


RXA0155829—UN—17NOV16

2. Scroll through list of gears (H).

3. Select desired gear (I) and press OK button (J) to finish selection or (K) to cancel.

TS36762.00001AB-19-18NOV16

Stop and Park Tractor

RXA0068273—UN—27AUG03

1. Reduce throttle to low idle.

CAUTION: Avoid possible injury due to losing control of tractor. Couple brake pedals (A) together when driving on roads.

2. Depress both brake pedals. Brakes activate AutoClutch (automatic clutch function within transmission) to stop tractor. It is not necessary to depress clutch. See Use AutoClutch (If Equipped) in Brakes section of this Operator's Manual.

3. Move speed control lever to slowest position.

CAUTION: Always place reverser lever in **PARK** position before dismounting tractor.

4. Shift reverser to PARK position.

5. Lower implements and shut off PTO.

6. Shut off engine and remove key.

Stopping Tractor using AutoClutch

CAUTION: Avoid possible injury. Braking tractor while commanding a high engine speed requires higher brake pedal force.

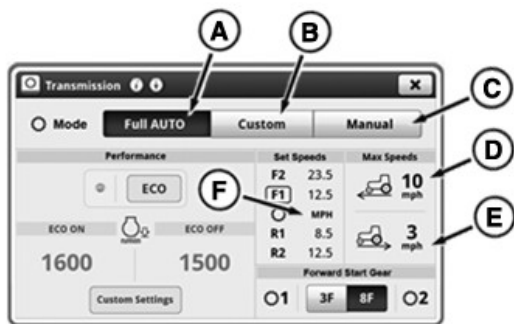
Avoid possible injury due to sudden or unexpected acceleration. When brake pedals are released, tractor automatically accelerates to speed currently commanded by throttle and speed control lever.

Depress both brake pedals. Brakes will activate AutoClutch. When brakes are released, tractor accelerates to currently commanded speed. **It is not necessary to depress clutch, reduce throttle, or move speed control lever.**

TS36762,00001AC-19-13DEC16

CommandCenter™ Transmission Main Page

e23™ transmission offers three modes of operation to optimize fuel efficiency and load control of the tractor. These modes are selected from the CommandCenter™ transmission main page.



RXA0154273—UN—03OCT16

Full AUTO (A) — Automatically adjusts engine speed and gear selection to optimize fuel economy while maintaining performance. This mode automatically responds to loads created by the hitch or SCVs. During PTO use, engine speed is automatically controlled to provide appropriate PTO speed.

Custom (B) — Similar to Full AUTO mode except the operator can modify some of the limits and parameters used in Full AUTO mode. Modifications allow for maximum engine performance for a specific application. See custom transmission settings in this section.

Manual (C) — Operator selects engine throttle position and gear.

Maximum Ground Speed

Set maximum ground speed using transmission main

page. Main page displays maximum forward (D) and reverse (E) speed.

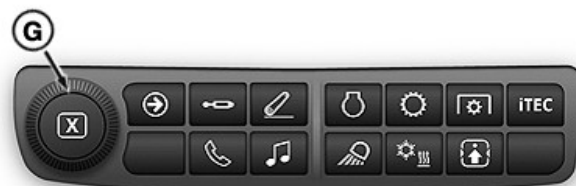
Changing Maximum Ground Speed



RXA0133712—UN—16JUL13

Press **Transmission Shortcut Button on Navigation Bar**.

1. Press appropriate speed limit (D or E) on the Transmission Main page. The value adjustment page appears.



RXA0131233—UN—09MAY13

2. Adjust the ground speed to the desired value by using increase (+) and decrease (-) buttons. Also turning adjusting dial (G) can be used to increase or decrease ground speed settings.

NOTE: If operator changes maximum forward or reverse speed below current speed, the set speed (F) decreases to the maximum speed and the vehicle speed will decrease.

Efficiency Manager™ Set Speed

There are two programmable set speeds for each direction used in Efficiency Manager™. They are activated by pushing the set speed buttons on CommandARM™. Once activated, Efficiency Manager™ will shift gears and change engine speed so that the ground speed will match the set speed. The set speeds are changed through the set speed adjusting wheel. See Efficiency Manager™ on the e23™ Transmission in this Operator's Manual section.

TS36762,00001AD-19-26JUL18

Efficiency Manager™ on the e23™ Transmission

Efficiency Manager™ controls transmission gear Shift and engine speed to maintain the desired ground speed (set speed). Shift decisions are based on load conditions, throttle command, and operator settings.

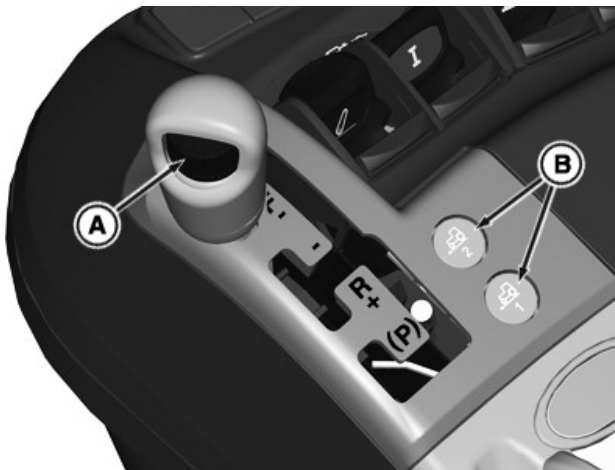
- Efficiency Manager™ is always running in Full AUTO and Custom modes.
- Efficiency Manager™ runs in Manual Mode when the set speed buttons are active.

Using Efficiency Manager™



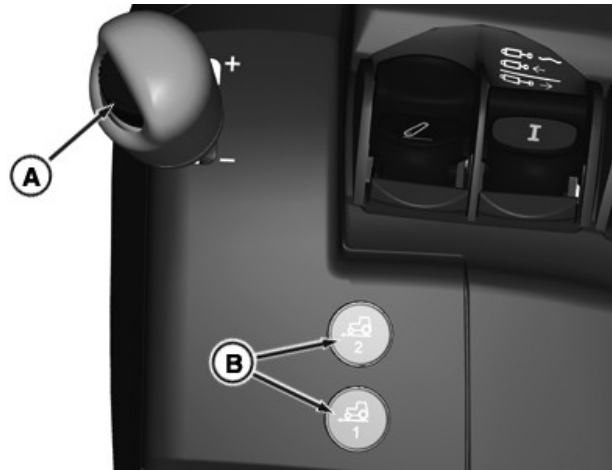
RXA0154276—UN—03OCT16

- The Efficiency Manager™ indicator light (C) is on the corner post display.
- It is recommended the hand throttle be placed in the full forward position at all times when Full AUTO and Custom mode is used.
- The tractor only reaches the set speed if the engine throttle is fully forward for maximum engine rpm.
- In high load applications, the throttle should be set to maximum rpm.
- The transmission may shift gears if either the hand throttle or foot throttle is changed.



RXA0132341—UN—02MAY13

Set Speed Buttons with Right-Hand Reverser



RXA0132342—UN—02MAY13

Set Speed Buttons with Left-Hand Reverser

- The operator has a choice of setting two separate set speeds, 1 and 2 (B).
- The set speed is adjusted on the active set speed button by using the set speed adjusting wheel (A) on the shift lever. Press either set speed button 1 or 2, then rotate set speed adjusting wheel clockwise to increase speed and counterclockwise to decrease set speed. Repeat process for setting the second set speed. The transmission may shift gears with changes in set speed while in gear.
- Bumping the shift lever when in Full AUTO and in Custom modes, temporarily makes a large change in the set speed. The transmission may shift gears and the engine speed may change. The speeds stored in the set speed buttons do not change.
- Efficiency Manager™ will not shift gears if the clutch pedal is partially depressed.
- If the clutch pedal is fully depressed and the tractor is stationary, Efficiency Manager™ selects the start-up gear and may reduce the engine speed.
- Efficiency Manager selects the start-up gear when shifting from neutral or park to gear.
- If the clutch pedal is fully depressed and the tractor is moving above the start-up gear speed, Efficiency Manager™ selects a gear and engine speed to match the ground speed.
- If the clutch pedal is fully depressed and the tractor is moving below the start-up gear speed, Efficiency Manager™ selects the start-up gear speed.

NOTE: Efficiency Manager™ set speeds can be programmed into iTEC™,

TS36762,00001AE-19-26JUL18

Efficiency Manager™ on e23™ Transmission in Manual Mode



RXA0154275—UN—03OCT16

Right-Hand Reverser



RXA0154274—UN—03OCT16

Left-Hand Reverser

- Press either set speed button (A) to activate Efficiency Manager™ in Manual Mode.

IMPORTANT: When Efficiency Manager™ is disabled, the engine rpm changes and tractor may accelerate or decelerate to appropriate speed commanded by current throttle position.

- Press same set speed button a second time in Manual Mode to disengage Efficiency Manager™.
- Bump shift lever forward or rearward in Manual Mode to disengage Efficiency Manager™. Transmission changes engine speed and shift gears to match throttle position.

All other features and functions of Efficiency Manager™ are the same whether in Full AUTO Mode or Custom Mode.

TS36762,00001AF-19-18NOV16

e23™ Custom Mode Settings

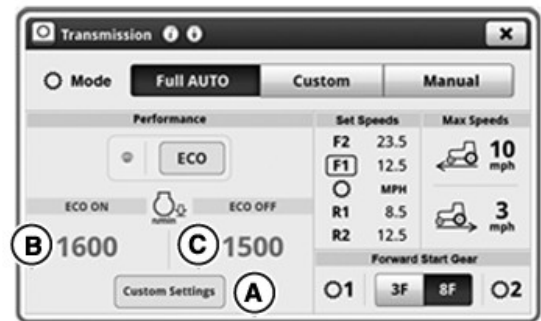
NOTE: Settings discussed can only be modified when Efficiency Manager™ is in Custom or Manual Mode.



RXA0133712—UN—16JUL13

Press Transmission Shortcut Button on Navigation Bar.

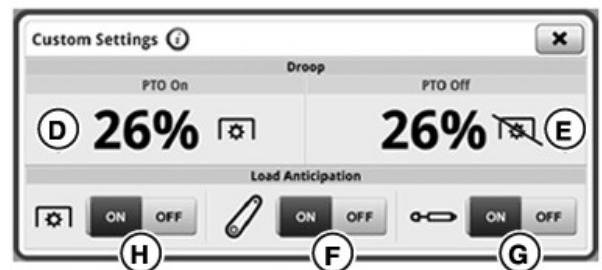
On Mode bar, select Custom Mode.



RXA0143050—UN—07OCT14

Select Custom Settings button (A).

Set Auto Shift Engine Droop



RXA0130327—UN—07OCT14

Under full load, Auto Shift Engine Speed Droop PTO On (D) and Auto Shift Engine Speed Droop PTO Off (E) limits the engine speed droop before Efficiency Manager™ automatically downshifts. Allowable droop is a percentage of selected ECO engine speed. A lower percentage means less droop is allowed before downshift.

For example: ECO OFF is selected and set to 2100 rpm, PTO OFF is set to 18% droop and PTO is not activated. Engine will maintain 2100 rpm at set speed until engine speed starts to droop due to load. Once engine speed droops to 1700 rpm (2100 x 0.82), transmission begins to downshift to maintain engine speed at the cost of

ground speed. Once draft load is reduced, engine recovers engine speed back to 2100 rpm and begins upshifting as Efficiency Manager attempts to reacquire set speed.

1200 rpm during a headland turn, engine will burst up to 1500 rpm as soon as hitch lever is moved.

TS36762_00001B0-19-26JUL18

1. Select Auto Shift Engine Speed Droop PTO On.
Value adjustment page appears.

NOTE: Different values can be entered for operation with or without the PTO:

- Auto Shift Engine Speed Droop PTO On can be set from 6% —26%.
 - Auto Shift Engine Speed Droop PTO Off can be set from 14% — 26%.
2. Adjust value to desired percentage by using increase (+) and decrease (-) buttons.
 3. Select Auto Shift Engine Speed Droop PTO Off.
Repeat step 2.

Minimum Engine Speed

ECO ON (B) and ECO Off (C) limits how much Efficiency Manager™ shifts up and throttles engine speed back to save fuel under light loads. It is recommended ECO ON is set to a value less than ECO OFF. Common setting will be ECO ON to 1200 rpm for transport or headland turn, and ECO OFF for loaded working condition.

1. Select ECO ON. Value adjustment page appears.
2. Adjust value to desired engine speed by using increase (+) and decrease (-) buttons.
3. Select ECO OFF. Repeat step 2 to select desired engine speed.

Load Anticipation

e23 transmission adjusts engine speed to help maintain wheel speed while SCV, PTO, or hitch are in use. Load anticipation functions can be enabled/disabled for SCV (G), PTO (H), or hitch (F).

NOTE: All load anticipation functions are active while in Full AUTO mode and cannot be adjusted. If adjustment is desired, Custom Mode must be utilized.

Load anticipation functions are engaged when:

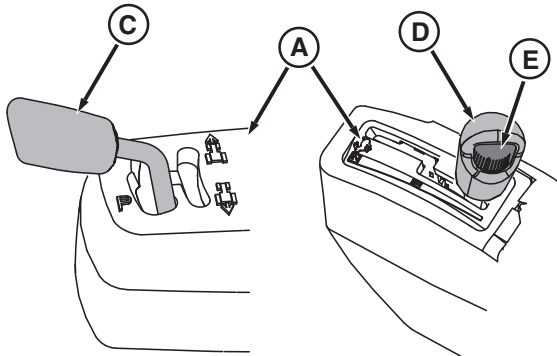
- SCV – Flow rate is 25% or greater, and/or SCV is set to continuous time detent.
- PTO – Transmission automatically downshifts to maintain wheel and PTO speed.
- Hitch – While hitch is being raised or lowered.

For example: If unit is in 3-point tillage application and hitch Load Anticipation is ON and in Full AUTO, engine speed will burst to prepare engine for a large swing in engine load. In other words, if engine was running at

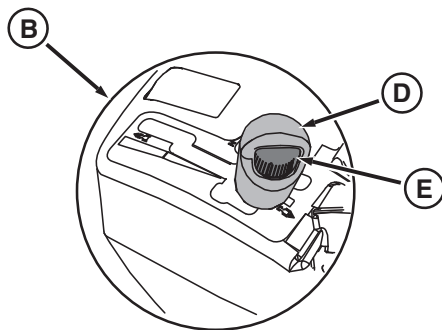
IVT™/AutoPowr™ Transmission

Controls Identification

IVT™/AutoPowr™ transmission provides infinite ground speeds in forward mode from 50 meters per hour (164 feet per hour) to 50 km/h (31 mph) depending on tractor specifications. Reverse mode provides infinite ground speeds from 50 meters per hour (164 feet per hour) to 20 km/h (12.4 mph). Maximum speeds can vary slightly due to tire size.



RXA0155008—UN—17OCT16



RXA0155009—UN—17OCT16

IVT™/AutoPowr™ tractors are equipped with either left-hand reverser (A) or right-hand reverser (B). Transmission is controlled by two levers in the left-hand configuration. Left-hand reverser lever (C) controls tractor direction, park, and neutral. Second lever, speed control lever (D), is located on CommandARM™ and controls ground speed.

Right-hand reverser option consists of right-hand reverser lever on CommandARM™ and controls tractor direction, park, neutral, and ground speed.

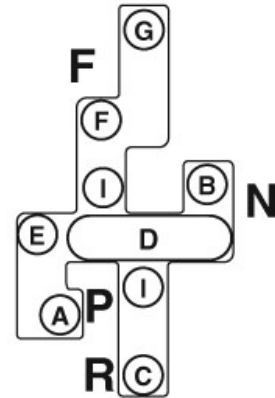
There are two variable speed bands in forward direction on all tractors. Tractors equipped with left-hand reverser have two-speed bands in reverse. Tractors equipped with right-hand reverser have single reverse band.

Set speeds are maximum ground speeds in each speed band. Speed control lever must be pushed to end of slot to achieve set speeds. Set speed adjusting dial (E) on speed control lever rotates to adjust set speeds, see

Adjust Set Speeds in this section of this Operator's Manual.

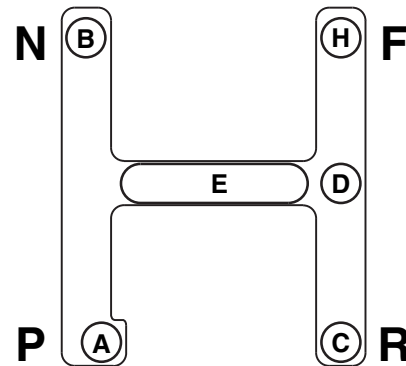
TS36762.00001B1-19-04APR18

Left-hand and Right-hand Reverser Shift Patterns



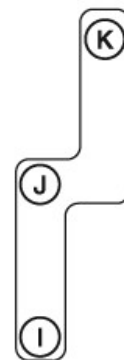
RXA0133408—UN—09DEC13

Right-Hand Reverser Speed Lever



RXA0100319—UN—26JAN09

Left-Hand Reverser



RXA0137698—UN—09DEC13

Left-Hand Reverser Speed Lever

(A) Park: Engages park brake to hold tractor stationary preventing tractor from rolling; "P" appears on corner post display.

(B) Neutral: Disengages park brake, allowing tractor to

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AutoPowr is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company

roll, but does not transmit power to wheels; "N" appears on corner post display.

(C) Reverse: Transmits power to wheels for rearward travel; "R" appears on corner post display.

(D) PowerZero™: Hand-held position temporarily holds tractor stationary on relatively flat surface.

(E) Scroll Position: Scrolls through set speeds on corner post display continuously while tractor is not moving.

(F) Forward Speed Band 1: Transmits power to wheels for forward travel; "F1" appears on corner post display.

(G) Forward Speed Band 2: Transmits power to wheels for forward travel; "F2" appears on corner post display.

(H) Forward: Transmits power to wheels for forward travel; "F" appears on corner post display.

(I) Minimum Speed: Transmits power to wheels in direction selected.

(J) Maximum Forward and Reverse Set Speed 1: Transmits power to wheels in direction selected.

(K) Maximum Forward and Reverse Set Speed 2: Transmits power to wheels in direction selected.

TS36762,00001B2-19-01SEP17

Operate the Transmission

Start Engine

CAUTION: Avoid personal injury or damage to tractor. If engine starts with left-hand reverser lever in forward or reverse positions, there is a malfunction in starting circuit. Repair immediately. See your John Deere dealer.

Tractors with right-hand reverser cannot start in neutral. If tractor does start in neutral, repair immediately, see your John Deere dealer.

IMPORTANT: Tractor with left-hand reverser can start in neutral.

Prevent transmission or clutch damage:

- Never depress clutch pedal while tractor is rolling downhill or coasting, as serious transmission damage can result.
- Never attempt to start tractor by towing or pushing.
- Transmission can be placed in PARK at any time; however, park brake does not engage until ground speed is below 1.75 km/h (1.0 mph).
- Avoid excessive ballast.
- Clutch pedal must be fully depressed to completely disengage clutch. Never rest foot on clutch pedal while tractor is moving.

NOTE: Operator presence sensor is built into seat to prevent movement of tractor while in gear without operator sitting in seat.

Place transmission into PARK position. Corner post display shows "P". Start engine.

Stop Engine

CAUTION: Always place reverser lever in PARK position before dismounting tractor.

For tractors with left-hand reverser, reduce engine speed to low rpm, pull speed control lever back to slowest setting, and depress brake pedals until travel stops. Move left-hand reverser lever to PARK position. Slowly release brakes and shut off engine.

For tractors with right-hand reverser, reduce engine speed to low rpm, pull speed control lever back to slowest setting, and depress brake pedals until travel stops. Move right-hand reverser lever to PARK position. Slowly release brakes and shut off engine.

Shuttle Shift (Direction Change)

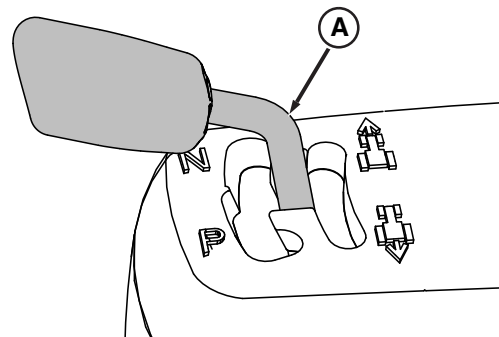
Moving shift lever between forward and reverse slots causes transmission to modulate directly to opposite direction of travel without clutching or braking. Shuttle shift occurs between last commanded forward and reverse gears.

TS36762,00001B3-19-20DEC16

Adjust Set Speeds

CAUTION: Avoid unexpected rapid acceleration. Check and adjust set speeds before putting tractor in motion.

Turn key switch to RUN position (for tractors with right-hand reverser, engine must be running to change set speeds).



RXA0068281—UN—27AUG03

Left-Hand Reverser

Move lever (A) to Scroll position. Forward and reverse set speeds scroll on corner post display pausing at each speed for 2 seconds.



RXA0156089—UN—09DEC16

Adjust each speed when displayed by rotating set speed adjuster (C) on speed control lever (D) clockwise to increase set speed value or counterclockwise to decrease it.

NOTE: Set speed adjustments can affect corresponding set speed of opposite direction, see *Adjust Reverse/Forward Set Speed Ratio* in this section of this Operator's Manual.



RXA0155010—UN—17OCT16

On corner post display, set speed of selected speed band displays in orange and ground speed of tractor displays in white letters (B). Set speed can be adjusted while tractor is moving by rotating set speed adjuster. Increasing set speed value increases ground speed. Decreasing set speed value decreases ground speed. New set speed shows on display.

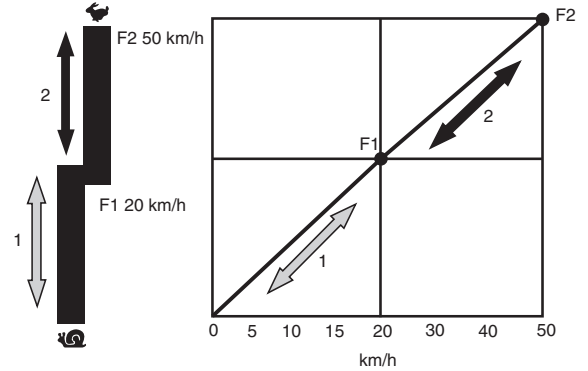
Select set speed approximately 3.2 km/h (2 mph) higher than desired working speed to obtain maximum productivity where precise forward speed is not critical (such as plowing). Tractor reaches higher set speed value during no load or light load condition.

Maximum ground speed of selected speed band is attained at full throttle when speed control lever is pushed fully forward to end of slot in respective speed band.

TS36762,00001B4-19-14DEC16

between speed bands and is illustrated in following examples.

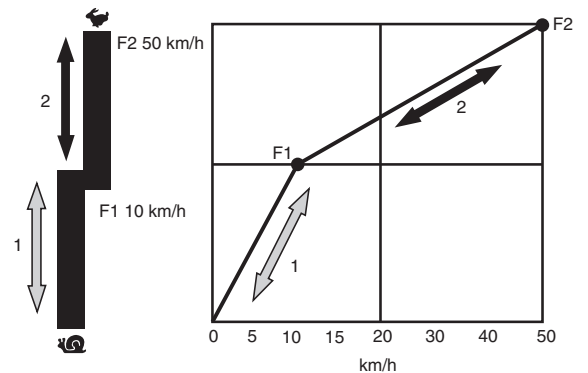
NOTE: F1 refers to Forward mode for Set Speed in speed band 1. F2 refers to Forward mode for Set Speed in speed band 2.



RXA0053043—UN—26APR01

Example 1

Example 1: Maximum Forward Set Speeds are selected for each speed band.



RXA0053045—UN—26APR01

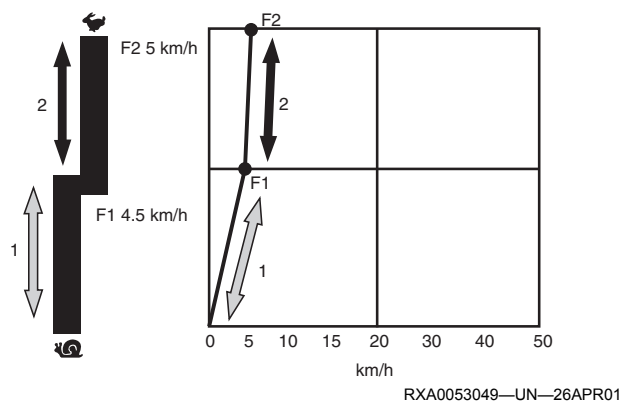
Example 2

Example 2: Value of Set Speed 1 is reduced to 10 km/h (6 mph). Set Speed 2 value is not changed, but lower portion of speed band 2 has automatically decreased to meet top end of speed band 1.

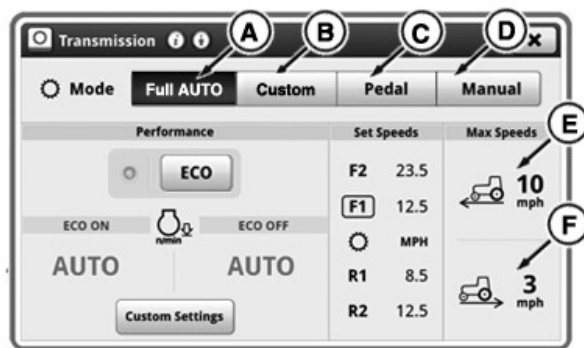
NOTE: Actual set speed increases or decreases at least 10% of adjusted speed band and ranges up to 12.5%. 10% is used in illustrations of Examples 3 and 4, and can differ by 2.5% of speeds shown.

Set Speeds—Guidelines and Examples

Value of Set Speed 1 is always at least 10% less than value of Set Speed 2. This ensures smooth transition



1. Press Menu button.
2. Press Machine Settings button.
3. Press Transmission button.
4. Transmission home page appears.



Forward maximum speed (E) or reverse maximum speed (F) are displayed. To change maximum speed, select module (E or F), use increase (+) or decrease (-) buttons to change value. If operator changes maximum forward or reverse speed below current set speed, set speed decreases to maximum speed and vehicle speed decreases.

IVT™/AutoPowr™ offers four modes for fuel efficiency and load control from tractor:

NOTE: Full AUTO Mode is designed to provide maximum fuel efficiency under most applications and drawbar loads. Use settings in Custom Mode to keep engine elevated above 1700 rpm if:

- Machine is operated in applications where maximum power is needed for extended periods of time.
- High loads are causing engine to stall on take-off.

• Full AUTO Mode (A)

Automatically adjusts Minimum Engine Speed allowing tractor to use most fuel efficient engine speed under light load. Automatically adjusts Auto Shift Engine Speed Droop allowing tractor to use entire torque curve in most applications.

• Custom Mode (B)

Operator can customize settings for Performance, Minimum Engine Speed, Auto Shift Engine Speed Droop, and Load Anticipation reaction.

• Foot Pedal Mode (C)

Operator can control wheel speed independently of

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IVT™/AutoPowr™ Modes and Set Maximum Speed



Press transmission shortcut button on navigation bar or follow alternative path:

engine speed by using the accelerator pedal. Operator can only choose Pedal Mode when the tractor is stopped and park brake is applied.

Tractor performs as if equipped with normal transmission and reacts to controls. No Fuel Economy or Load Control functions active.

• Manual Mode (D) (if equipped)

Full AUTO Mode (A)	Custom Mode (B)	Pedal Mode (C)	Manual Mode (D)
- Auto Shift (or Load Control) ON. - Load Anticipation for Hitch ON. - Load Anticipation for SCVs ON. - Auto Shift Engine Speed Droop maintained at maximum tractor power. - Maximum engine speed limit adjusted according to PTO rated speed.	- Auto Shift (or Load Control) ON. - Auto Shift Engine Speed Droop with PTO On is Adjustable. - Auto Shift Engine Speed Droop with PTO Off is Adjustable. - Performance and Minimum Engine Speed with ECO ON is Adjustable. - Performance and Minimum Engine Speed with ECO OFF is Adjustable. - Load Anticipation for Hitch is Adjustable. - Load Anticipation for SCVs is Adjustable.	When hand throttle control is pulled all the way to the rearward position: - Auto Shift (or Load Control) ON. - Load Anticipation for Hitch ON. - Load Anticipation for SCVs ON. - Auto Shift Engine Speed Droop maintained at maximum tractor power. - Maximum engine speed limit adjusted according to PTO rated speed. When hand throttle control is at any other position: - Constant engine speed corresponding to the throttle position is commanded. - Auto Shift (or Load Control) ON. - Activating Engine Set Speed Button would engage constant engine speed functionality.	- Auto Shift (or Load Control) OFF. - Use when application is causing undesired automatic shifting. - Use when operating on steep and/or slippery downhill slopes.^a

^a(See Downhill Operation in Slippery Conditions in this section.)

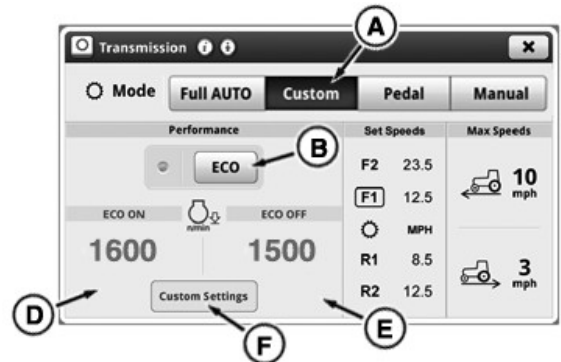
TS36762,00001B6-19-26JUL18

IVT™/AutoPowr™ Custom Mode Settings

NOTE: Settings apply only when IVT™/AutoPowr™ transmission is in Custom Mode.

Transmission is equipped with two ECO settings that are adjustable (1200—2100 rpm) to fit machine application:

- ECO ON – must be same or lower value than ECO OFF.
- ECO OFF – must be same or higher value than ECO ON.



RXA0130022—UN—16DEC13



RXA0137863—UN—21MAR14

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AutoPowr is a trademark of Deere & Company

Operators can set a minimum engine speed for both ECO ON and ECO OFF. ECO is turned ON/OFF by pressing button (B) on the transmission main page or corresponding ECO button (C) on hand throttle control. When ECO mode is active, light on CommandARM™ and transmission home page are illuminated.

For example: Setting would be to set ECO ON to 1200 rpm and ECO OFF to 1800 rpm. Settings allow operator to switch ECO OFF for maximum power while implement is functioned and ON for low load operations like headland turns.



RXA0133712—UN—16JUL13

Press **Transmission Shortcut Button on Navigation Bar**.

Press **Custom Mode toggle (A)**.

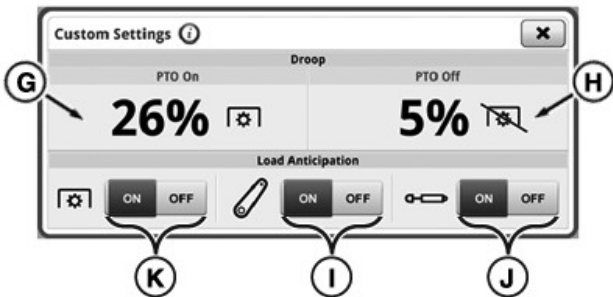
Set Engine Speed ECO ON

- Press ECO ON Engine Speed module (D).
- Adjust percentage value using increase (+) or decrease (-) to set desired value.

Set Engine Speed ECO OFF

- Press ECO OFF Engine Speed module (E).
- Adjust percentage value using increase (+) or decrease (-) to set desired value.

Auto Shift Engine Speed Droop



RXA0155830—UN—17NOV16

Transmission Custom Settings Page

Set for both PTO On (G) and PTO Off (H) when engine operates at full load condition before Custom Mode automatically downshifts. Lower percent causes transmission downshifts earlier, higher percent causes transmission downshifts later.

NOTE: Auto Shift Engine Speed Droop PTO On or Off can be set from 2% —26%.

Set Auto Shift Engine Speed Droop PTO On

- Press PTO On to set Auto Shift Engine Speed Droop.
- Adjust percentage value using increase (+) or decrease (-) to set desired value.

NOTE: Must make adjustments in PTO Off if machine is not equipped with PTO. PTO On adjustments will not affect transmission operation.

Set Auto Shift Engine Speed Droop PTO Off

- Press PTO Off to set Auto Shift Engine Speed Droop.
- Adjust percentage value using increase (+) or decrease (-) to set desired value.

Load Anticipation

Load Anticipation – IVT™/AutoPowr™ transmission adjusts engine speed to maintain wheel speed, while SCV, PTO, or hitch are in use. Toggle load anticipation functions ON/OFF for SCV (J), PTO (K), or hitch (I).

NOTE: All load anticipation functions are active while in Full AUTO mode and cannot be adjusted. If adjustment is desired, use Custom Mode.

Load anticipation functions are engaged when:

- SCV – Flow rate is 25% or greater, and/or SCV is set to continuous time detent.
- PTO – Transmission automatically downshifts to maintain wheel and PTO speed.
- Hitch – While hitch is being raised or lowered.

For example: If unit is in 3-point tillage application and hitch Load Anticipation is ON and in Full AUTO, engine speed will burst to prepare engine for a large swing in engine load. In other words, if engine was running at 1200 rpm during a headland turn, engine will burst up to 1500 rpm as soon as hitch lever is moved.

TS36762,00001B7-19-25JUL18

Adjust Reverse/Forward Set Speed Ratio

Reverse/Forward Ratio can be set to operate independently of each other or from 0.3 to 1.3 times as fast (in 0.1 increments). Forward and Reverse Set Speeds are same at 1.0 setting (1 to 1 ratio).

Maximum reverse speed is 20 km/h (12 mph) regardless of ratio.



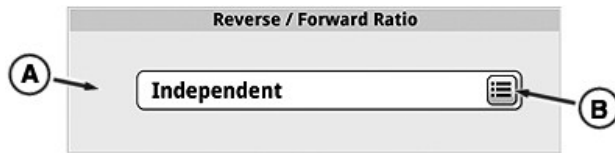
RXA0133712—UN—16JUL13

Press **Transmission Shortcut Button** on Navigation Bar.



RXA0130326—UN—11JAN13

1. Press **Advanced Settings** icon.
2. Press **Settings** tab.



RXA0127891—UN—29AUG12

3. Scroll to Reverse/Forward module (A).
4. Press Reverse/Forward Ratio button (B) to access list of reverse/forward ratio options.

Forward Set Speed is 4 km/h (2.5 mph) and Ratio is:	Reverse Set Speed km/h (mph) is:
0.3	1.2 (0.4)
0.4	1.6 (0.8)
0.5	2.0 (1.2)
0.6	2.4 (1.5)
0.7	2.8 (1.75)
0.8	3.2 (2.0)
0.9	3.6 (2.2)
1.0	4.0 (2.5)
1.1	4.4 (2.7)
1.2	4.8 (3.0)
1.3	5.2 (3.2)
Independent	No ratio because reverse and forward set speeds function independent of each other. Reverse Set Speed is limited to be no more than 5 km/h (3 mph) faster than Forward Set Speed.

TS36762,00001B8-19-14NOV17

Put Tractor in Motion

CAUTION: Avoid possible injury due to sudden or unexpected acceleration. Be aware of set speeds and throttle position before putting tractor in motion.

If operator is not seated, transmission will not engage gears. Information indicator lights and corresponding message appears on CommandCenter™ display when Forward, Reverse, or NEUTRAL positions are selected and operator is not in seat.

To initiate motion, move reverser lever from PARK position to either Forward or Reverse position with operator seated.

NOTE: Cold conditions can affect IVT™/AutoPowr™ tractor performance:

- Engine speed is limited to 1500 rpm if transmission oil temperature is less than -5 °C (23 °F).
- Wheel speed is limited to 5 km/h (3 mph) if transmission oil temperature is less than -15 °C (5 °F).

Using clutch to put tractor in motion is not necessary.

NOTE: In event of seat switch failure, tractor can still be put into motion by cycling (depress/release) clutch or brake pedals.



RXA0156090—UN—09DEC16

Left-hand Reverser Shift Lever

Adjust throttle to desired engine speed. Adjust speed control lever (A) within speed band (B) to obtain desired speed.

TS36762,00001B9-19-09DEC16

Use Creeper Mode

Creeper Mode is entered automatically when a set speed of less than 2 km/h (1 mph) is selected in speed band 1.

To eliminate rapid acceleration when lever is moved from speed band 1 to speed band 2, a ratio of 2.5:1 is set between maximum speed of band 2 and band 1. For example, if speed band 1 is set at 100 m/h (328.1 ft/h),

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AutoPowr is a trademark of Deere & Company

corresponding maximum speed in band 2 is 250 m/h (820.2 ft/h).

Standard ratio can be temporarily overridden (such as when making headland turns) by increasing speed band 2 to a maximum of 10 km/h (6 mph). Moving lever back to band 1 restores previous working speeds.

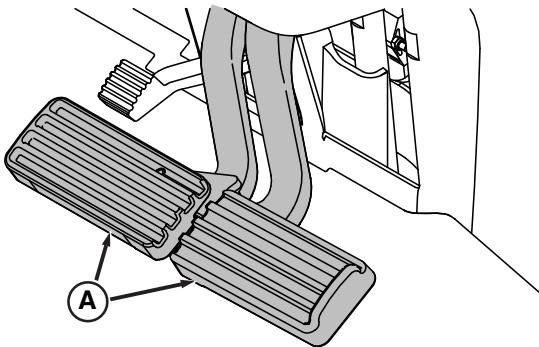
In creeper mode, reverse set speed can be set to less than forward set speed. Reverse set speed limit can be temporarily overridden by moving Right-Hand Reverser Lever into Reverse Speed Band and increasing reverse set speed. Moving Right-Hand Reverse Lever from Reverse Speed Band to Forward Speed Band 1 and not changing Forward Set Speed 1 resets Reverse Set Speed to less than Forward Set Speed.

Creeper mode is exited when Set Speed 1 is adjusted above 2 km/h (1 mph) or Set Speed 2 is adjusted above 10 km/h (6 mph).

TS36762,00001BA-19-18NOV16

Stop and Park Tractor

1. Reduce throttle to low idle.



RXA0068273—UN—27AUG03

CAUTION: Avoid possible injury due to losing control of tractor. Couple brake pedals (A) together when driving on roads.

2. Depress both brake pedals. Brakes activate AutoClutch (automatic clutch function within transmission) to stop tractor. It is not necessary to depress clutch. See Use AutoClutch (If Equipped) in Brakes section of this Operator's Manual.

3. Move speed control lever to slowest position.

CAUTION: Always place reverser lever in PARK position before dismounting tractor.

4. Shift reverser to PARK position.
5. Lower implements and shut off PTO.
6. Shut off engine and remove key.

Use AutoClutch

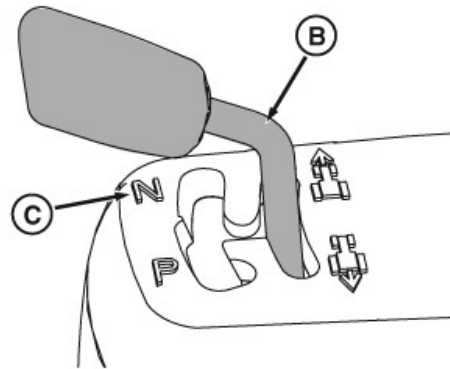
CAUTION: Avoid possible injury. Braking tractor while commanding a high engine speed requires higher brake pedal force.

Avoid possible injury due to sudden or unexpected acceleration. When brake pedals are released, tractor automatically accelerates to speed currently commanded by throttle and speed control lever.

Depress both brakes to activate AutoClutch and tractor slows and stops without depressing clutch pedal. When brakes are released, tractor accelerates to currently commanded speed. It is not necessary to depress clutch, reduce throttle, or move speed control lever.

Use PowerZero™ Position

CAUTION: Depending on speed and load, PowerZero™ cannot bring tractor to stop if already in motion.



RXA0130864—UN—06FEB13

Left-hand Reverser

Hold reverser lever in Power Zero™ position (B) to temporarily hold tractor stationary. Move lever to direction desired to resume motion.

Use NEUTRAL Position

Move shift lever to NEUTRAL (C) to stop transmission from powering wheels. Tractor rolls freely with transmission in NEUTRAL whether engine is running or not.

TS36762,00001BB-19-01SEP17

Downhill Operation in Slippery Conditions

CAUTION: Avoid possible injury from losing control of tractor while operating on a downhill slope. Tractor wheels can lock and skid on slippery downhill slopes. Observe following precautions:

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RXA0133712—UN—16JUL13

1. Press **Transmission Shortcut Button on Navigation Bar**.
2. When transmission page displays, select Manual toggle.
3. Adjust set speed value to a safe downhill operating speed.
4. Do not make major speed reductions with speed control lever.
5. Turn MFWD on.

TS36762,00001BC-19-18NOV16

PTO, Hitch, and Drawbar

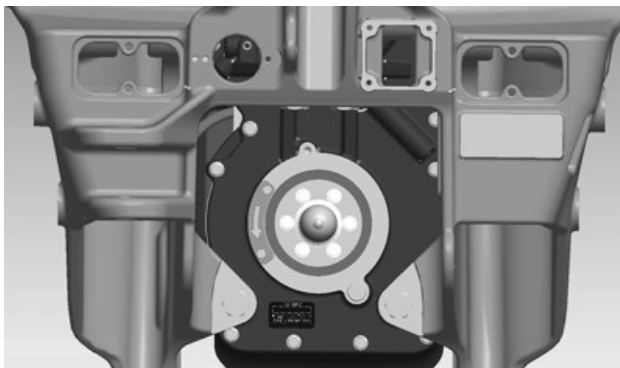
Attach PTO-Driven Implement-Front



TS1644—UN—22AUG95

CAUTION: Avoid serious injury or death due to entanglement in rotating driveline. Stop engine and telescoping driveline before adjustments or connections are made, or before cleaning PTO-driven equipment.

Keep all driveline shields in place at all times. Make sure rotating shields turn freely. Wear close-fitting clothing.



RXA0135350—UN—30AUG13

If optional front PTO is installed, it comes equipped with one of three PTO shafts. All shafts turn at 1000 rpm when engine is running at 1950 rpm.

TS36762,00001BD-19-01SEP17

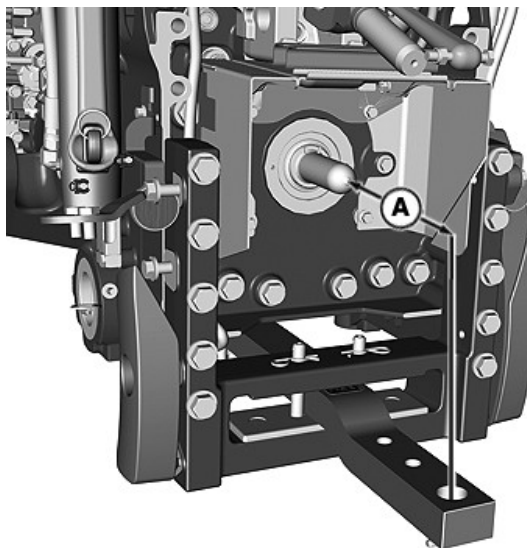
Attach PTO-Driven Implement-Rear



TS1644—UN—22AUG95

CAUTION: Avoid serious injury or death due to entanglement in rotating driveline. Stop the engine and telescoping driveline before adjustments or connections are made, or before cleaning PTO-driven equipment.

Keep PTO shield and drive line shields in place at all times. Make sure rotating shields turn freely. Wear close-fitting clothing.



RXA0128912—UN—16OCT12

PTO Shaft	Distance from PTO Shaft End to Hitch Pin Hole (A) mm (in)
1000 rpm - 6 Splines ^a	400 (16)
1000 rpm - 21 Splines ^a	
1000 rpm - 20 Splines ^b	508 (20)

^a35 mm (1-3/8 in) Shaft Diameter

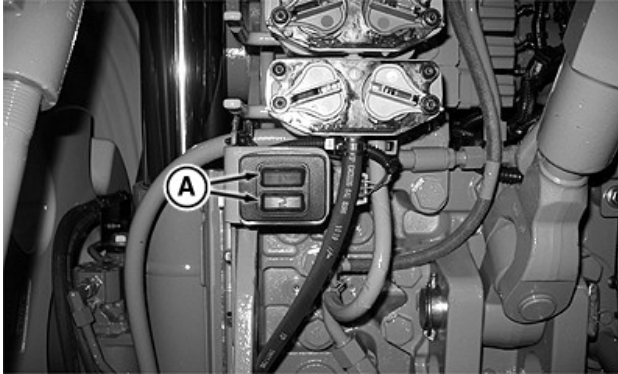
^b45 mm (1-3/4 in) Shaft Diameter

1. Lock drawbar in center, no sway position.
2. Remove clevis assembly.
3. Attach implement to drawbar before connecting telescoping driveline. If implement is connected to quick-hitch, be sure drawbar does not interfere.
4. Connect driveline to PTO shaft. Hand-turn shaft slightly to line up splines. Correctly position and firmly lock yoke.
5. Move PTO shield into position. See Rear PTO Shield —Type 3 PTO in Rear PTO section of this Operator's Manual.

TS36762,00001BE-19-12JUL18

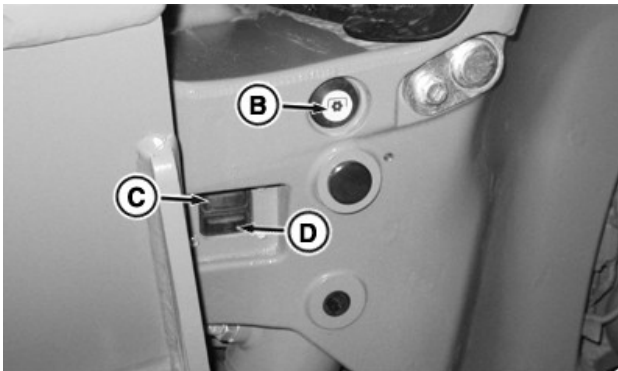
Hitch, SCV and PTO External Switches

⚠ CAUTION: Prevent injury or damage caused by inadvertent tractor movement. Place transmission in **PARK** position before using external raise/lower switches. Stay clear of interference points when using external raise/lower switches.



RXA0112400—UN—21DEC10

Tractors without fender extensions have external hitch raise and lower switches (A) mounted on valve stack.



RXA0143012—UN—26JUN14

Tractors equipped with front hitch may have front mounted external raise (C) and lower (D) switches. Tractors with front PTO may have external front PTO switch (B).

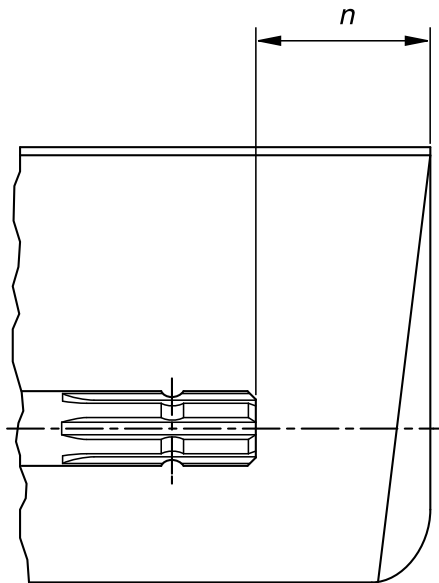
TS36762,00002A0-19-23NOV16

PTO - General Information

Stay Clear of Rotating Drivelines



TS1644—UN—22AUG95



H96219—UN—29APR10

Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Wear close fitting clothing. Stop the engine and be sure that PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

Do not install any adapter device between the tractor and the primary implement PTO drive shaft that will allow a 1000 rpm tractor shaft to power a 540 rpm implement at speeds higher than 540 rpm.

Do not install any adapter device that results in a portion of the rotating implement shaft, tractor shaft, or the adapter to be unguarded. The tractor master shield shall overlap the end of the splined shaft and the added adaptor device as outlined in the table.

PTO Type	Diameter mm (in)	Splines	$n \pm 5 \text{ mm (0.20 in)}$ mm (in)
1	35 (1.378)	21	85 (3.35)
2	45 (1.772)	20	100 (4.00)

TS36762,00001BF-19-21NOV16

Select PTO Cruise Speed

NOTE: Option is only available on tractors equipped with an electronic shift PTO.

CAUTION: Before engaging PTO, make sure that selected PTO speed is correct for attached implement. Incorrect PTO speed could result in severe damage to implement.

Engine must be shut off when an implement is being connected.

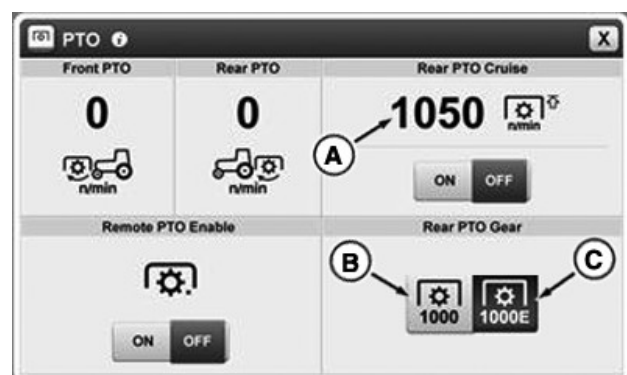
NOTE: PTO must be disengaged to select standard PTO speed.

Front PTO and Rear PTO operation is described in Front PTO and Rear PTO sections of this Operator's Manual.



RXA0133713—UN—16JUL13

1. Select PTO icon on navigation bar to access PTO module.



RXA0144644—UN—22AUG14

2. Select desired PTO 1000E (B) or 1000 (C) PTO speed.
3. PTO standard speed (A) appears in display window. It can be activated or deactivated using ON/OFF buttons located below PTO standard speed (A).

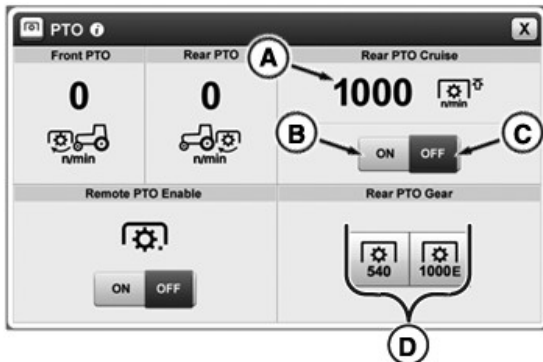
TS36762,00001C0-19-17NOV17

Fine Adjust PTO Cruise Speeds



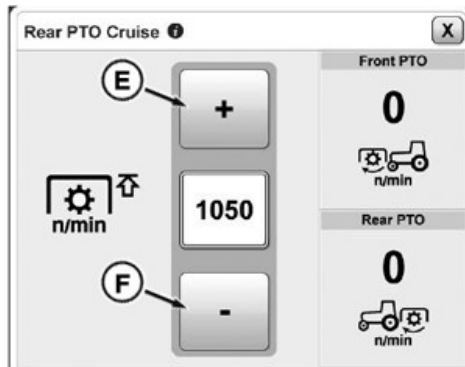
RXA0133713—UN—16JUL13

Press PTO shortcut button on navigation bar.



RXA0144647—UN—22AUG14

If desired, maximum PTO speed can be set. Press PTO standard speed (A) to access PTO cruise module.



RXA0137730—UN—16DEC13

Select increase value (E) and decrease value (F) softkeys in PTO cruise module to input desired maximum PTO speed. Close module and press ON (B) button to activate maximum PTO speed.

When maximum PTO speed is activated, engine speed is restricted so that set PTO speed is not exceeded, even at full throttle. When PTO is switched off, engine can be operated at its full speed range again.

To deactivate maximum PTO speed, press the OFF (C) button. Standard PTO speeds (D) can also be selected at any time.

NOTE: If engine speed limit is set on engine settings page (see *Activate and Set Maximum Set Speeds in Transmission - General Information* section of this Operator's Manual), lower limit applies.

TS36762,00001C1-19-14DEC16

Front PTO

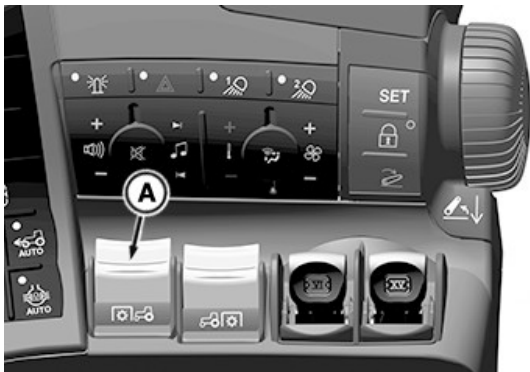
Operate Front PTO

CAUTION: Avoid personal injury. Stop engine and PTO driveline before adjustment or connections are made, or cleaning PTO-driven equipment.

Always disengage PTO when not in use.

PTO can be engaged or disengaged without operating clutch.

NOTE: Service alert indicator light will flash, a message appears on CommandCenter™ display, and an audible warning signal sounds if operator leaves seat with PTO engaged. PTO does not disengage when operator is off seat.



RXA0156103—UN—09DEC16

Extend PTO control lever (A) to engage PTO. Front PTO indicator on corner post monitor will light.

IMPORTANT: If PTO disengages during startup in cold weather operation, wait 5 minutes before reengaging PTO to avoid damage.

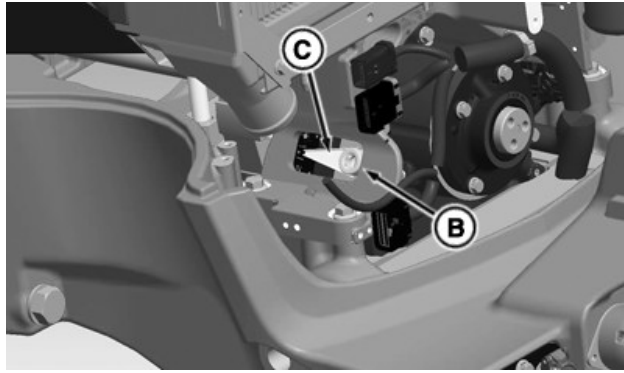
If PTO speed drops below 100 rpm for more than 1 second during normal operation, front PTO will be turned off. Information indicator will be activated.

If engine speed drops below 500 rpm while PTO is running or being engaged, front PTO will be shut off to keep engine from stalling.

Retract PTO control lever to disengage clutch and PTO brake will engage automatically.

NOTE: If engine is stopped and restarted while PTO is running, PTO will not operate. Disengage PTO control lever and engage PTO again.

Front PTO Disconnect



RXA0135349—UN—30AUG13

Turn front PTO disconnect (B) counterclockwise when front PTO is not in use to increase fuel economy. Using 1/2 in drive ratchet or breaker bar, turn front PTO disconnect clockwise to engage front PTO and counterclockwise to disengage front PTO. Front PTO disconnect flag (C) indicates whether front PTO is retracted (up) or extended (down).

Cold Weather Operation

CAUTION: Avoid personal injury. Keep PTO area clear of bystanders. PTO shaft or attached implement may rotate when engine is started in cold weather.

When air temperatures are expected to drop below -5° C (23° F), use John Deere Low Viscosity Hy-Gard™ oil in self contained front PTO reservoir.

Other oils can be used if they meet John Deere Standard JDM J20D.

TS36762.00001C3-19-09DEC16

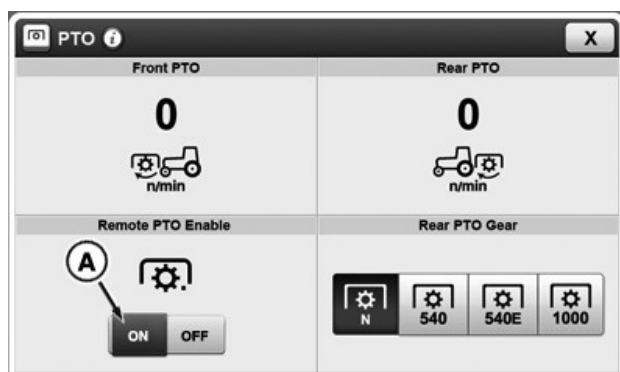
Remote Front PTO Switch

Front PTO can be operated from outside of cab.

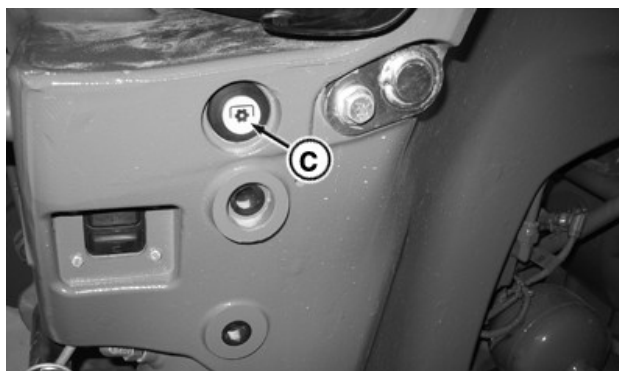


RXA0160860—UN—31AUG17

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **PTO** icon.



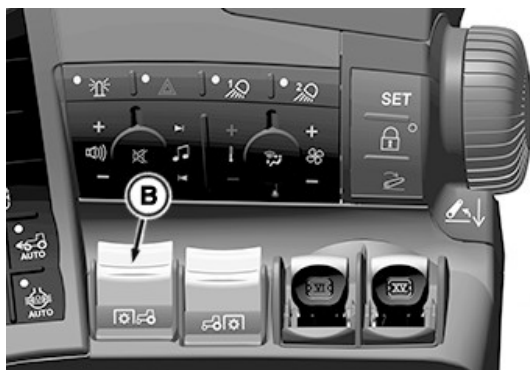
RXA0131638—UN—27MAR13



RXA0133386—UN—26JUL13

Front PTO Housing - Left-hand Side

4. Press Remote PTO Enable button (A) on CommandCenter™ to enable Remote Front PTO switch (C).



RXA0156104—UN—09DEC16

5. Extend front PTO switch (B). An audible warning will sound and hazard warning lights will flash (PTO has not started yet).
6. Press and hold Remote Front PTO button. Front PTO will start slowly.
 - Press and hold button for at least 4 seconds:
 - Hazard warning lights turn off
 - PTO continues to operate
 - Release button within 4 seconds:
 - PTO will slowly stop

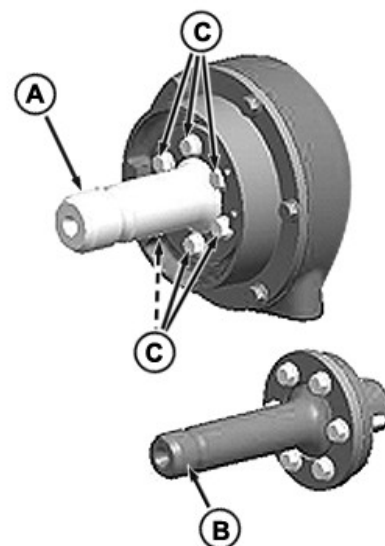
- Audible warning will continue to sound
- Hazard warning lights will flash

NOTE: If Front PTO is switched on in cab, Front PTO may be shut off at Remote Front PTO button. If Front PTO is switched off in cab, steps 1 through 3 must be repeated to enable Remote Front PTO button.

Shut off front PTO by pressing Remote Front PTO button (audible warning will sound and hazard warning lights will flash) or retract Front PTO switch inside cab. Operator must select OFF on CommandCenter™ to allow Front PTO Switch to return to normal operation.

TS36762,00001C4-19-01SEP17

Change Optional Front PTO Shafts



RXA0135433—UN—11SEP13

Front PTO is factory-equipped with one of two optional PTO shafts:

- 45 mm (1-3/4 in) 20 Spline Shaft (A)
- 35 mm (1-3/8 in) 21 Spline Shaft (B)

See your John Deere dealer for additional optional shafts.

To change shaft:

1. Remove six M8 cap screws (C).
2. Remove factory-installed shaft.
3. Install new shaft.
4. Reinstall six cap screws and tighten to 40 N·m (30 lb·ft).

TS36762,00001C5-19-21NOV16

PTO Engagement Rate



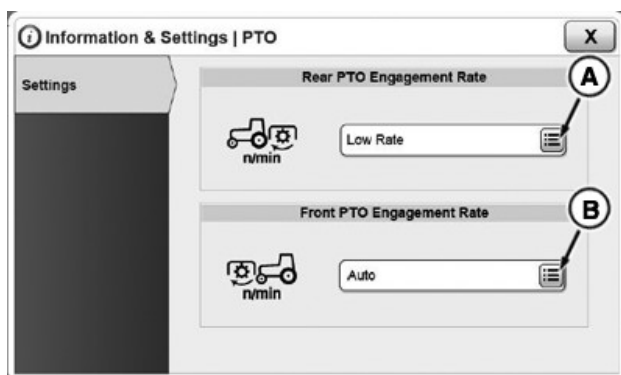
RXA0133713—UN—16JUL13

Use shortcut buttons or follow alternative path:



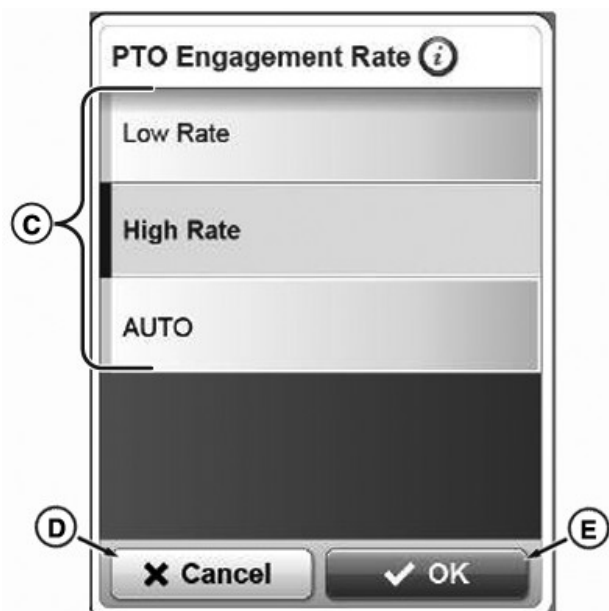
RXA0128917—UN—15MAR13

1. Select **Menu**.
2. Select **Tractor Settings** tab.
3. Select **PTO** icon.
4. Select **Information and Settings** icon.
5. Select **Settings** tab.



RXA0130890—UN—15FEB13

6. Select Rear PTO Engagement Rate(A) or Front PTO Engagement Rate (B) (If Equipped).



RXA0130891—UN—15FEB13

7. Select PTO Engagement Rate (C):

- **Low Rate:** Can be used where gradual PTO startup is required, or if Auto engagement is too aggressive or inconsistent.
- **High Rate:** Can be used for applications where PTO clutch engagement needs to be aggressive.

IMPORTANT: If operator is experiencing problems with PTO clutch engagement in Auto setting, change PTO engagement setting in CommandCenter™ from Auto to High Rate to prevent power train damage.

- **AUTO:** Used for most implements, and is the factory setting in CommandCenter™. This setting provides software logic to determine engagement rate for PTO clutch, based on PTO speed sensor feedback. If PTO does not turn fast enough during initial PTO clutch engagement, engagement rate is automatically increased to avoid clutch slip and PTO shutdown.

8. Press OK button (E) to accept settings, or Cancel button (D) to decline settings.

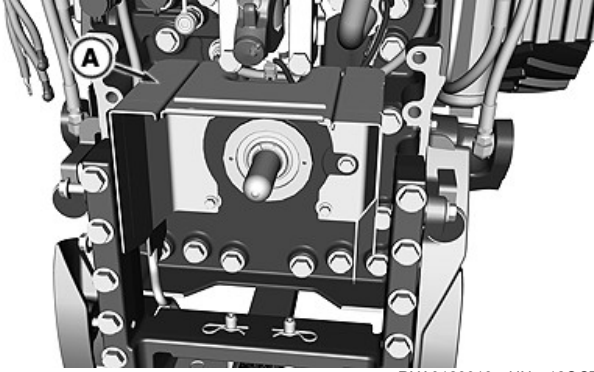
TS36762,00001C2-19-21NOV16

Rear PTO

Rear PTO Shield—Type 3 PTO

CAUTION: Avoid personal injury. Put PTO shield in correct position at all times. Do not use shield as a step.

NOTE: Type 3 PTO uses 45 mm (1-3/4 in) shaft with 20 splines.



RXA0128913—UN—12OCT12

Lower top plate (A) before engaging PTO.

When using hydraulic hitch center link, lower PTO shield to provide proper clearance. See Hydraulic Center Link in Rear Hitch section of this Operator's Manual.

TS36762,00001C6-19-14DEC16

are illuminated when on. Run engine at 1950 engine rpm for both 540 and 1000 rpm PTO speed operation.

If equipped with 3-speed PTO, run engine at:

- 1750 rpm—540E and 1000E rpm PTO
- 1950 rpm—540 and 1000 rpm PTO

TS36762,00001C7-19-21NOV16

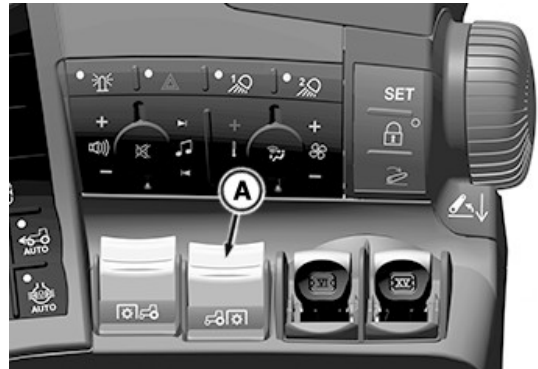
Operate Rear PTO

CAUTION: Avoid personal injury. Stop engine and PTO driveline before adjustment or connections are made, or cleaning PTO-driven equipment.

Always disengage PTO when not in use.

PTO can be engaged or disengaged without operating clutch.

NOTE: Service alert indicator light will flash, a message appears on CommandCenter™ display, and an audible warning sounds as operator leaves seat with PTO engaged. PTO does not disengage when operator is off seat.



RXA0156105—UN—09DEC16

Extend PTO switch (A) to engage PTO. PTO indicator on corner post display will light.

IMPORTANT: If PTO disengages during startup in cold weather operation, wait 5 minutes before reengaging PTO to avoid damage.

If PTO speed drops below 100 rpm for more than 1 second during normal operation, rear PTO will be turned off. Information indicator will be activated.

If engine speed drops below 500 rpm while PTO is running or being engaged, rear PTO will be shut off to keep engine from stalling.

Raise PTO switch to disengage clutch and PTO brake will engage automatically.

Select Correct Engine Speed



RXA0152772—UN—13JUL16

- A— Tachometer
B— PTO Indicator—Rear
C— PTO Indicator—Front (If Equipped)

Engine speed is indicated on the Tachometer (A). Rear PTO indicator (B) or front PTO indicator (C) (if equipped)

CommandCenter is a trademark of Deere & Company

NOTE: If engine is stopped and then restarted while PTO is running, PTO will not operate. Disengage PTO switch and engage PTO again.

If remote PTO switch enable is selected in CommandCenter, but a rear PTO fender switch is not installed, console rear PTO switch will not function until remote is deselected in CommandCenter.

TS36762,00001C8-19-05JAN17

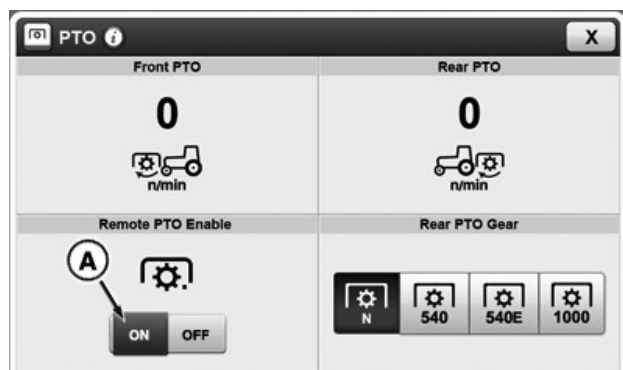
Rear PTO Switch

Rear PTO can be operated from outside of cab.



RXA0160860—UN—31AUG17

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **PTO icon**.



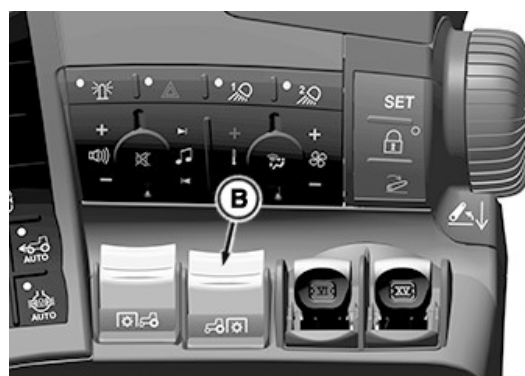
RXA0131638—UN—27MAR13



RXA0131099—UN—13MAR13

Right-hand Rear Fender

4. Press remote PTO enable button (A) on CommandCenter™ to enable rear PTO switch (C).



RXA0156106—UN—09DEC16

CommandARM

5. Push down and forward on rear PTO switch (B). An audible warning will sound and hazard warning lights (D) will flash (PTO has not started yet).
6. Press and hold rear remote PTO button. Rear PTO will start slowly.
 - Press and hold switch for at least 4 seconds:
 - Hazard warning lights turn off
 - PTO continues to operate
 - Release switch within 4 seconds:
 - PTO will slowly stop
 - An audible warning will sound
 - Hazard warning lights will flash

NOTE: If rear PTO is switched on in cab, Rear PTO may be shut off at remote PTO switch. If Rear PTO is switched off in cab, steps 1 through 4 must be repeated to enable Remote Rear PTO switch.

Shut off rear PTO by pressing rear remote PTO button [audible warning will sound and hazard warning lights will flash] or pull back rear PTO switch inside cab.

In order to restore normal function to rear PTO switch, deselect remote PTO enable.

TS36762,00001CB-19-01SEP17

Operate Shiftable 3-Speed Rear PTO (If Equipped)

IMPORTANT: Make sure selected PTO speed is correct for attached implement. Incorrect speed can result in serious damage to implement. Excessive engine rpm can also cause excessive PTO speeds resulting in implement damage.

Implements can be operated at 540 rpm only if power input never exceeds 60 kW (80 hp). Operating PTO at lower speeds under heavy load could damage PTO.

Do not attempt to shift PTO speeds when PTO shaft is turning or PTO clutch is engaged. Damage to PTO shift collars can result.

NOTE: Use proper engine speed when shifting into 540E or 1000E.

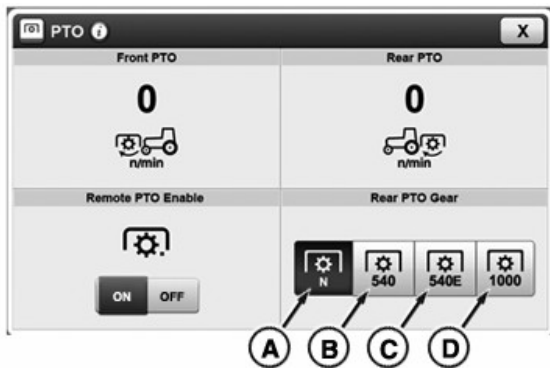
KT81203,0000507-19-31AUG17



RXA0160860—UN—31AUG17

1. Select **Menu**.
2. Select **Machine settings** tab.
3. Select **PTO** icon.

NOTE: If PTO does not engage, verify that a gear has been selected.



RXA0131639—UN—27MAR13

Select desired PTO speed in CommandCenter™. PTO speed may need to change depending on equipment. PTO has four gear options:

- Neutral (A)
- 540 rpm (B)
- 540E rpm (C)
- 1000 rpm (D)

Extend rear PTO operator switch to engage PTO clutch. PTO indicator shows PTO engagement on display.

IMPORTANT: Make sure to select 540 rpm or 1000 rpm mode after changing PTO shaft. PTO does not disengage but speed must be limited if it does not match shaft size.

PTO		
Shaft Diameter mm (in)	Spline Count	Speed rpm
35 (1-3/8)	6	540/540E
	21	1000/1000E
45 (1-3/4)	20	1000/1000E

Operate Shiftable 2-Speed Rear PTO (If Equipped)

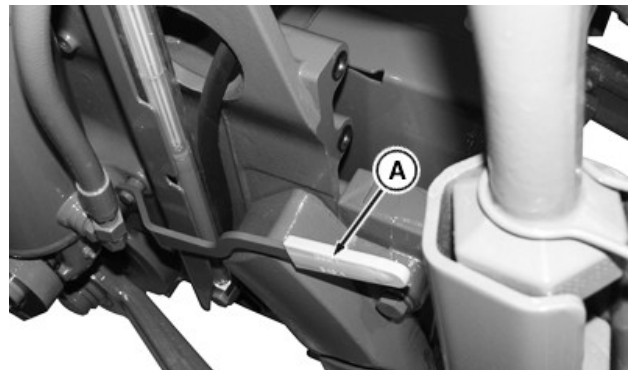
IMPORTANT: Make sure selected PTO speed is correct for implement attached. Incorrect speed can result in serious damage to implement. Excessive engine rpm can also cause excessive PTO speeds resulting in implement damage.

Implements can be operated with 540 rpm 35 mm (1-3/8 in) stub shaft only if power input never exceeds 60 kW (80 hp). Operating PTO at lower speeds under heavy load could damage PTO. 1000 rpm 35 mm (1-3/8 in) stub shaft should be used for loads under 115 kW (154 hp). 1000 rpm 45 mm (1-3/4 in) stub shaft should be used if heavier loads are expected.

Do not attempt to shift PTO speeds when PTO shaft is turning or PTO clutch is engaged. Damage to PTO shift collars may result.

PTO		
Shaft Diameter mm (in)	Spline Count	Speed rpm
35 (1-3/8)	6	540/540E
	21	1000/1000E
45 (1-3/4)	20	1000

Push down and forward on rear PTO switch to engage PTO clutch. PTO indicator will show PTO engagement on display.



RXA0112530—UN—14DEC10

Push PTO shift lever (A) down to shift to 540 rpm. Pull PTO shift lever up to shift to 1000 rpm.

IMPORTANT: Select either 540 rpm or 1000 rpm mode after changing PTO shaft. PTO will disengage if speed does not match shaft size.

Do not attempt to shift PTO speeds when PTO shaft is turning or PTO clutch is engaged. Damage to PTO shift collars may result.

KT81203,0000508-19-05JAN17

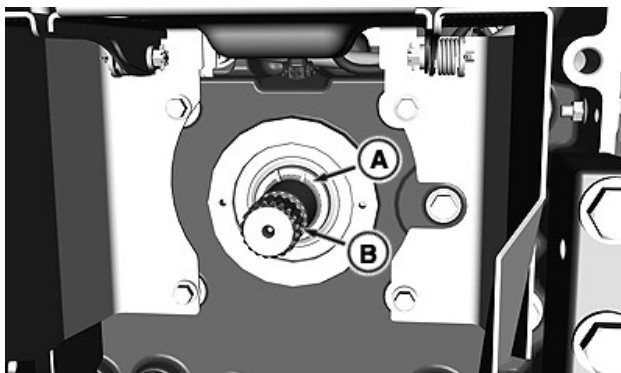
Change PTO Stub Shaft (If Equipped)

CAUTION: Avoid personal injury. PTO shaft may be hot from operation. Allow shaft to cool before changing.

IMPORTANT: Implements can be operated with 540 rpm 35 mm (1-3/8 in) stub shaft only if power input never exceeds 60 kW (80 hp). Operating PTO at lower speeds under heavy load could damage PTO. 1000 rpm 35 mm (1-3/8 in) stub shaft should be used for loads under 115 kW (154 hp). 1000 rpm 45 mm (1-3/4 in) stub shaft should be used if heavier loads are expected.

PTO		
Shaft Diameter mm (in)	Spline Count	Speed rpm
35 (1-3/8)	21	1000/1000E
45 (1-3/4)	20	1000

1. Rotate ends of snap ring to align with flat surface of PTO stub shaft.



RXA0128914—UN—12OCT12

2. Remove snap ring (A) and pull out shaft (B).
3. Clean stub shaft thoroughly. Coat splines with John Deere HD Non-Clay grease.



RW21883A—UN—02AUG99

IMPORTANT: Avoid damage to PTO. Clean bore (C) thoroughly when installing PTO shaft for 1000 rpm use.

4. Install shaft into PTO housing.

540 rpm shaft—Rotate shaft back and forth while installing, to ensure shaft is properly seated in housing; continue to push shaft in while installing snap ring.

1000 rpm shaft—Rotate shaft back and forth while installing until engagement is felt.

NOTE: Shaft is properly engaged when shaft turns with high effort.

5. Install snap ring in groove to retain PTO stub shaft. Align ends of snap ring with flat surface of shaft.

IMPORTANT: Make sure to select either 540 rpm or 1000 rpm mode after changing PTO shaft. PTO will disengage if speed does not match shaft size. See Operate Shifttable 2-Speed Rear PTO (if equipped) in this section.

TS36762,00001CC-19-01SEP17

Front Hitch

Front Hitch Use

CAUTION: Avoid possible personal injury and equipment damage. Do not use front hitch to lift tractor. Use correct lifting equipment. Balance load side-to-side and front-to-back.

IMPORTANT: Use deluxe hitch only for carrier operations unless optional push bar kit is installed.

NOTE: A front hitch can only be installed on tractor ordered from factory with front hitch ready option.

Two versions of front hitch are available, deluxe and premium.

Premium front hitch is equipped with push bar and heavier lift arms that allows carrier operations with ground engaging implements.

Front hitches with a push bar (for extra strength) maintain front axle to ground clearance for row-crop applications and can be used with ground engaging implements, including primary tillage implements and standard blades.

Deluxe front hitch should be used for carrier operations unless push bar is installed. Convert deluxe hitch to premium hitch configuration by installing kit from John Deere dealers.



Follow menu path to access front hitch settings.

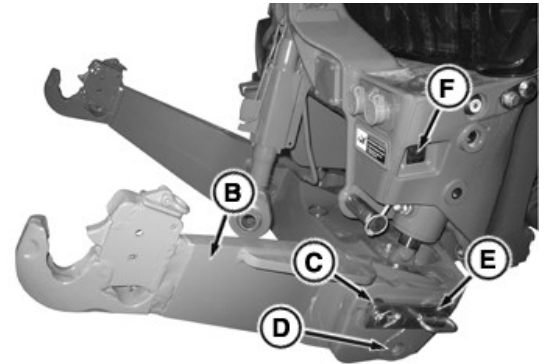


Front hitch can be operated by tractor mid-mount SCVs

using CommandARM™ Joystick (A). See Operate SCVs With CommandARM™ Joystick (If Equipped) in Selective Control Valves (SCV) Section in this Operator's Manual.

Lift Arm Positions

Prepare front hitch for operation:



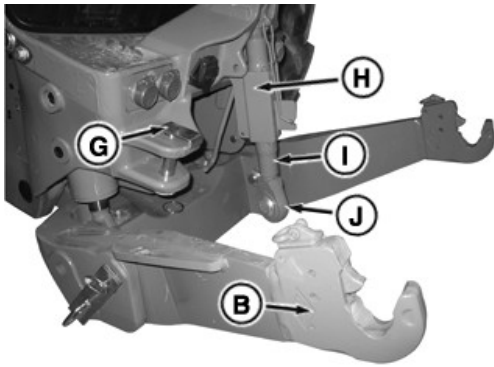
1. Support lift arm (B) and remove quick lock pin (C).
2. Lower lift arm to align holes with hitch frame for following operations:
 - Position (D) — Rigid; lift arms stable
 - Position (E) — Float; allows lift arms/hitch to follow ground contours
3. Install pin and quick lock pin.
4. Repeat on opposite side.

To store lift arms, remove pins and raise lift arm into upright position. Install pin and quick lock pin in location (D).

Attach and Detach Implement

1. Adjust implement attaching points. See implement operator's manual.
2. Lower lift arms (B) using remote hitch switch (F).
3. Position coupler ends of lift arms below implement link pins and slowly raise hitch until coupler ends lock on implement link pins.

NOTE: Keep center link in stored position when not in use.



RXA0155701—UN—15NOV16

4. Loosen locking sleeve (H).
5. Hold center link end (J) and turn center link (I) to adjust length. Tighten locking sleeve.
6. Remove quick lock pin (G) from storage location and attach center link to implement.

Detach implement from hitch in reverse order of attaching.

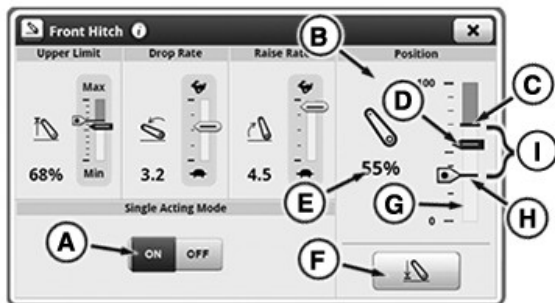
TS36762.00001CD-19-19JUL18

Front Hitch Single Acting Mode, Position, and Lower Set Point



RXA0160861—UN—31AUG17

1. Select Menu.
2. Select Machine Settings tab.
3. Select Front Hitch icon.



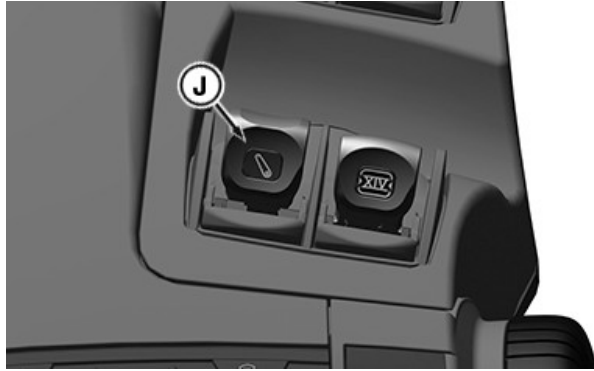
RXA0163982—UN—17JUL18

4. Select single acting mode ON (A).

When front hitch single acting mode is ON, no downforce is applied to the implement when lowering and no restrictions apply when raising.

Single acting mode can only be enabled when front hitch is in float or in top 10% of travel range and front hitch control lever is in center position. See Float Operation in Rear Hitch section of this Operator's Manual for more information.

Position module (B) displays current front hitch position (D), lower set point (H), and upper limit (C) for motion range (I). Hitch position indicator is shown as a percentage (E) of hitch position slider gauge (G). When front hitch is in full down position, position percentage is 0%. When hitch is fully up, position percentage is 100%.



RXA0163985—UN—18JUL18

In order to set lower set point, move position indicator to desired position using front hitch lever (J) or joystick, then press lower set point set button (F).

Performing an extend detent operation with front hitch control lever or joystick causes front hitch to move to upper limit position, provided hitch starts from below this point.

Performing a retract detent operation with front hitch control lever or joystick causes front hitch to move to lower set point position, provided front hitch starts above this point.

For more information on using front hitch control lever, see Hitch Control Lever in Rear Hitch section of this Operator's Manual.

NOTE: Exception: If tractor is moving during a retract detent operation, front hitch moves to lower set point from any starting position.

Hitch can be moved above upper limit or below lower set point by using front hitch control lever or joystick in proportional control or remote switches.

GH15097.000082A-19-23AUG18

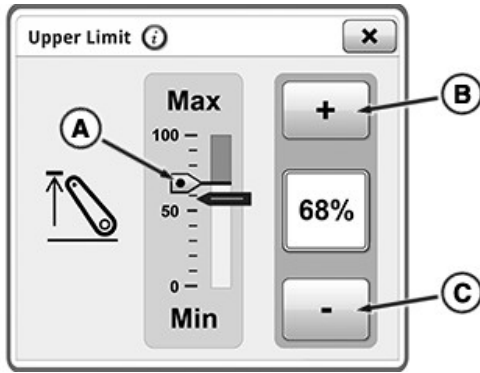
Adjust Front Hitch Upper Limit



RXA0160861—UN—31AUG17

1. Select Menu.
2. Select Machine Settings tab.
3. Select front hitch icon.
4. Select Front Hitch Upper Limit module.

NOTE: Changes to upper limit are immediate.



RXA0163983—UN—18JUL18

- Adjust front hitch upper limit (A) with increase (B) and decrease (C) buttons.

When upper limit is the same as hitch position, hitch follows upper limit.

KD34109,0000809-19-18JUL18

shown in display (C). Drop rate indicator (A) shows rate of relative value of drop rate.

TS36762,00001CF-19-18JUL18

Adjust Front Hitch Raise Rate



RXA0160861—UN—31AUG17

- Select Menu.
- Select Machine Settings tab.
- Select front hitch icon.
- Select Hitch Raise Rate module.

NOTE: Changes to raise rate are immediate.

Adjust Front Hitch Drop Rate

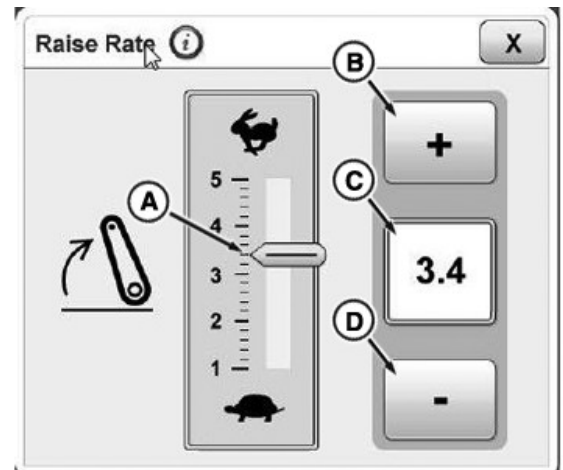
IMPORTANT: Excessive drop speed may cause injury or machine damage. Fully lowering implement should take at least 2 seconds.



RXA0160861—UN—31AUG17

- Select Menu.
- Select Machine Settings tab.
- Select front hitch icon.
- Select Front Hitch Drop Rate module.

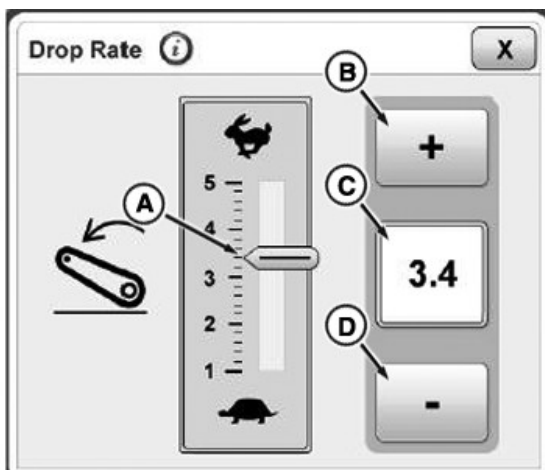
NOTE: Changes to rate of drop are immediate.



RXA0132459—UN—27JUN13

- Change raise rate with increase (B) or decrease (D) button. Relative numerical value for raise rate is shown in display (C). Raise rate indicator (A) shows rate of relative value of raise rate.

TS36762,00001D0-19-18JUL18

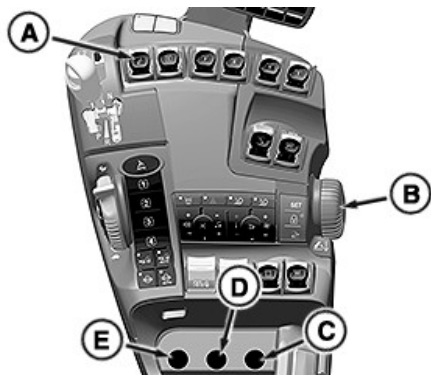


RXA0132458—UN—28JUN13

- Change drop rate with increase (B) or decrease (D) button. Relative numerical value for drop rate is

Rear Hitch

Rear Hitch



RXA0156100—UN—09DEC16

Controls:

Control rear hitch functions with:

- Rear Hitch Control Lever (A)
- Depth Adjust Hitch Dial (B)

Settings:

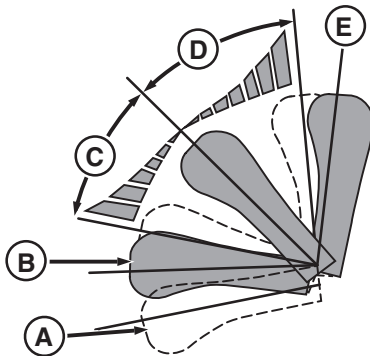
Adjust rear hitch settings with hitch dials (if equipped):

- Drop Rate Hitch Dial (C)
- Upper Limit Hitch Dial (D)
- Load Depth Hitch Dial (E)

Settings may also be adjusted with CommandCenter™.

TS36762,00001D1-19-19JUL18

Hitch Control Lever



RXA0143179—UN—07JUL14

Lever Positions

Proportional

Moving hitch control lever within proportional regions (C and D), changes raise or lower rate depending on how far lever is moved from center position.

Hitch control lever does not raise above upper limit, but can lower below set point.

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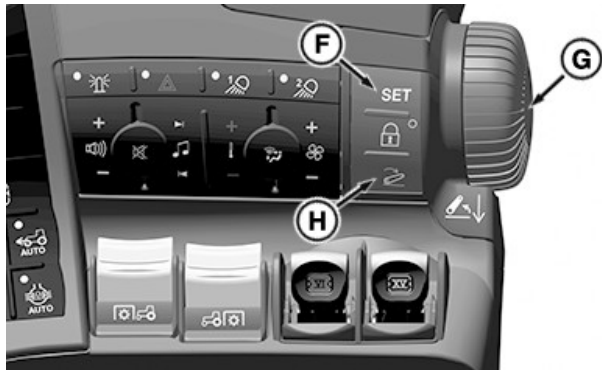
Detents

When the hitch control lever is pulled into detent position, raise (E) and released, hitch raises to upper limit. When pushed into detent position, lower (B) and released, hitch moves to set point.

Float

Float position (A) allows for freedom of motion for hitch and is useful when detaching implement. See Float Operation in this section of this Operator's Manual for proper setup if implement requires hitch to float during field operation.

Rear Hitch Depth Adjust Dial



RXA0156101—UN—09DEC16

Hitch depth adjust dial (G) can also be used to adjust hitch position. Like hitch control lever, it will not raise hitch above upper limit, but can lower hitch below set point.

Setting Depth

Use hitch control lever or depth adjust dial to move hitch to desired position, press set button (F) to store operating depth.

Return to Stored Operating Depth

Press resume button (H) or perform lower detent with control lever.

If hitch is lower than set point, returning to set point is only allowed when tractor is moving.

Resume button does not lower hitch if tractor is stationary with transmission in Park or Neutral.

TS36762,00001D2-19-23JUL18

Lock and Damping

CAUTION: To prevent possible injury and equipment damage, lock hitch before transporting.

Hitch Lock

Before transport, or when hitch-mounted implement is not in use, engage rear hitch lock/damping.

1. Raise hitch with control lever or hitch depth adjust dial.



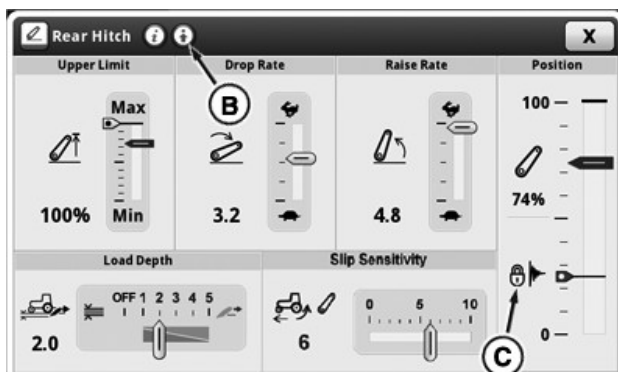
RXA0156102—UN—09DEC16

2. Press lock button (A).

Pressing lock button again unlocks hitch.

If hitch leaks down while tractor is stopped, hitch returns to locked height when tractor begins moving.

Hitch control lever can raise hitch back up to locked position with lever held in detent position.



RXA0149592—UN—07AUG15

When hitch lock indicator (C) is visible, hitch will not respond to hitch depth adjust dial and hitch control lever cannot lower hitch.

Hitch Damping

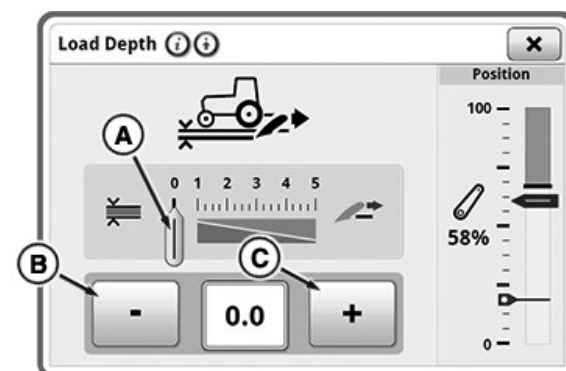
Hitch damping detects implement vibration while in transport and allows hitch to move up and down to counteract road noise. Press advanced settings (B) to access hitch lock damping on/off. When hitch lock damping is enabled in advanced settings, lock button turns lock and damping on/off.

TS36762,00001D3-19-19JUL18

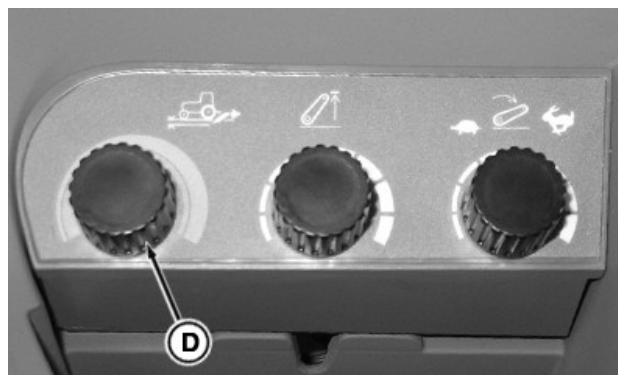


RXA0133710—UN—16JUL13

1. Press rear hitch shortcut button on navigation bar.
2. Select load depth module.



RXA0163986—UN—18JUL18



RXA0140227—UN—31MAR14

3. Set load depth value (A) with decrease (B) and increase (C) value buttons or load depth hitch dial (D) (if equipped).

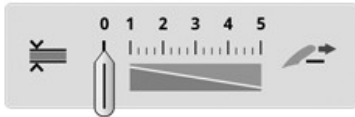
- For position only control, turn load depth setting to 0, see Position Control Use in this Operator's Manual section.
- Higher settings are used for draft control, see Draft Control Use in this Operator's Manual section.

TS36762,00001D4-19-25JUL18

Adjust Load/Depth Control (Draft Response)

Load/depth control allows control of movement of hitch while working. Correct adjustment provides better control of implement depth and operating efficiency.

Position Control Use

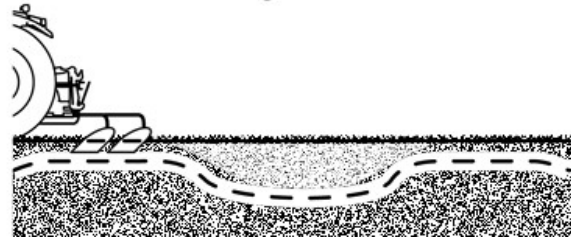


RXA0163992—UN—18JUL18

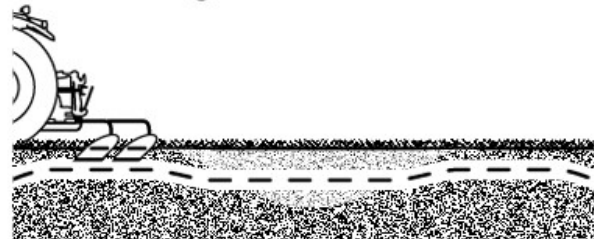
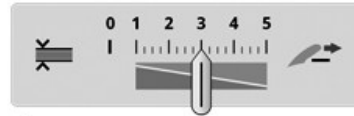
Hitch Held at Selected Position

Use position control to operate non-ground engaging implements and implements that fully rest on gauge wheels for depth control.

TS36762,00001D5-19-23JUL18



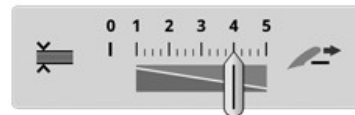
RXA0163993—UN—18JUL18

If Soil Varies, High Value Causes More Depth Variation

RXA0163994—UN—18JUL18

If Soil Varies, Middle Value Causes Less Depth Variation

RXA0163995—UN—18JUL18

In Rolling Terrain, Low Value Causes More Depth Variation

RXA0163996—UN—18JUL18

In Rolling Terrain, High Value Causes Less Depth Variation

Control or change operating depth by pressing resume

button or performing lower detent with control lever. For more information, see Hitch Control Lever in this Operator's Manual section.

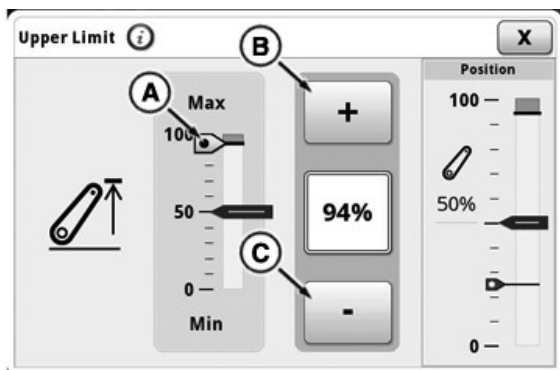
TS36762,00001D6-19-21AUG18

Adjust Rear Hitch Upper Limit

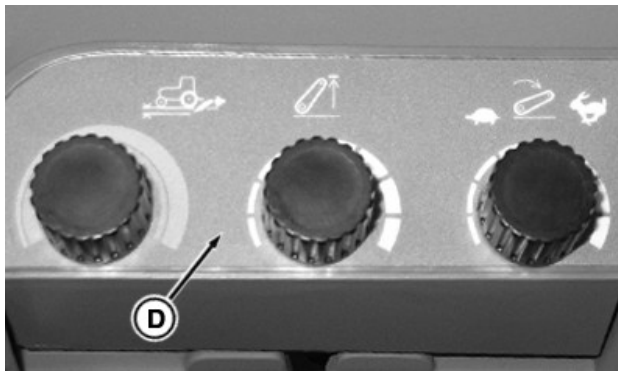


RXA0133710—UN—16JUL13

1. Press rear hitch shortcut button on navigation bar.
2. Select rear hitch upper limit module.



RXA0163987—UN—18JUL18



RXA0143175—UN—01JUL14

3. Adjust rear hitch upper limit (A) with increase (B) and decrease (C) value buttons or rear hitch upper limit dial (D) (if equipped).

Changes to upper limit are immediate.

When the upper limit is the same as the hitch position, hitch follows upper limit.

TS36762,00001D7-19-19JUL18

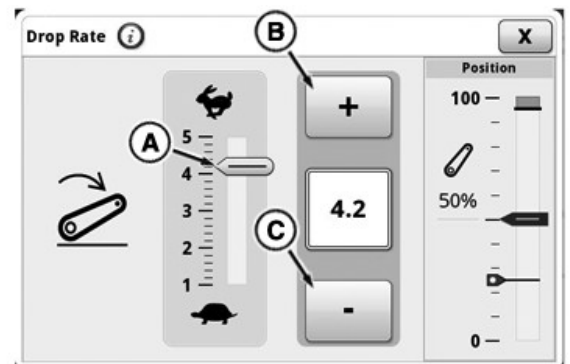
Adjust Rear Hitch Drop Rate

CAUTION: Avoid physical injury or machine damage due to excessive drop speed. Fully lowering implement should take a minimum of 2 seconds.

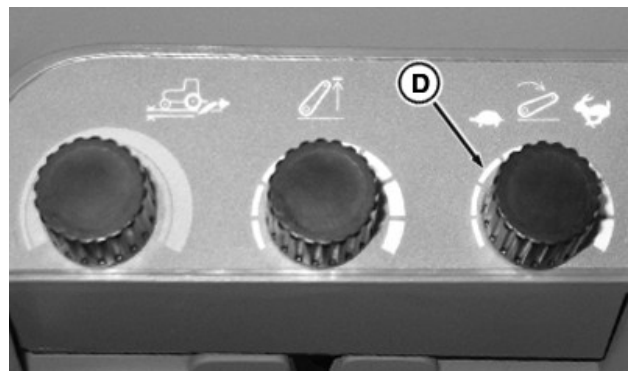


RXA0133710—UN—16JUL13

1. Press rear hitch shortcut button on navigation bar.
2. Select rear hitch drop rate module.



RXA0143171—UN—01JUL14



RXA0143174—UN—01JUL14

3. Adjust rear hitch drop rate (A) with increase (B) and decrease (C) value buttons or rear hitch drop rate dial (D) (if equipped).

Changes to drop rate are immediate.

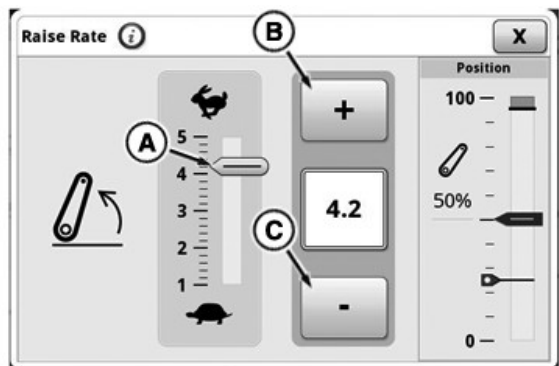
TS36762,00001D8-19-19JUL18

Adjust Rear Hitch Raise Rate



RXA0133710—UN—16JUL13

1. Press rear hitch shortcut button on navigation bar.
2. Select rear hitch raise rate module.



RXA0143170—UN—01JUL14

3. Adjust rear hitch raise rate (A) with increase (B) and decrease (C) value buttons.

Changes to raise rate are immediate.

TS36762,00001D9-19-18JUL18

Adjust Slip Sensitivity

NOTE: Hitch slip operates only in tractors equipped with radar, and load depth control set to draft control mode, see *Using Draft Control* in this section of this Operator's Manual.

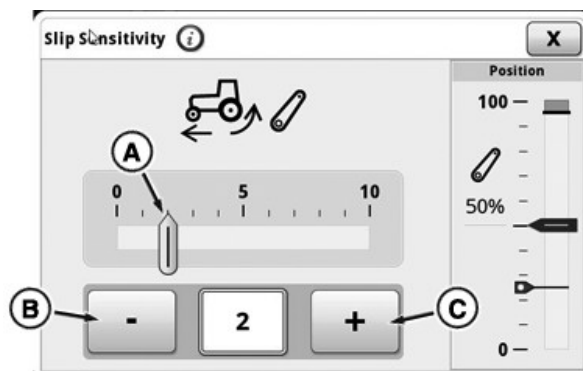
Operate hitch with draft sensing only, or with draft sensing and hitch slip. Hitch slip adjustment is independent from draft response.

Slip Sensitivity detects wheel slip and adjusts hitch accordingly. The lower the setting, the less the hitch reacts to wheel slip. The higher the setting, the more the hitch reacts to wheel slip. Slip Sensitivity setting only adjusts hitch up and takes priority over draft control setting which adjusts hitch down. Appropriate setting depends on implement type, soil conditions, and tractor setup.



RXA0133710—UN—16JUL13

1. Press rear hitch shortcut button on navigation bar.
2. Select rear hitch slip sensitivity module.



RXA0143178—UN—03JUL14

3. Adjust slip sensitivity (A) with decrease (B) and increase (C) buttons.

NOTE: Changes to slip sensitivity are immediate.

Changing rear hitch slip response can affect operation when wheel slip is above 10%.

Rear hitch slip response automatically returns to zero during transport [speed above 20 km/h (12.4 mph)].

TS36762,00001DA-19-21AUG18

Float Operation

Implements that fully rest on depth gauge wheels for depth control require hitch to float following ground contour.

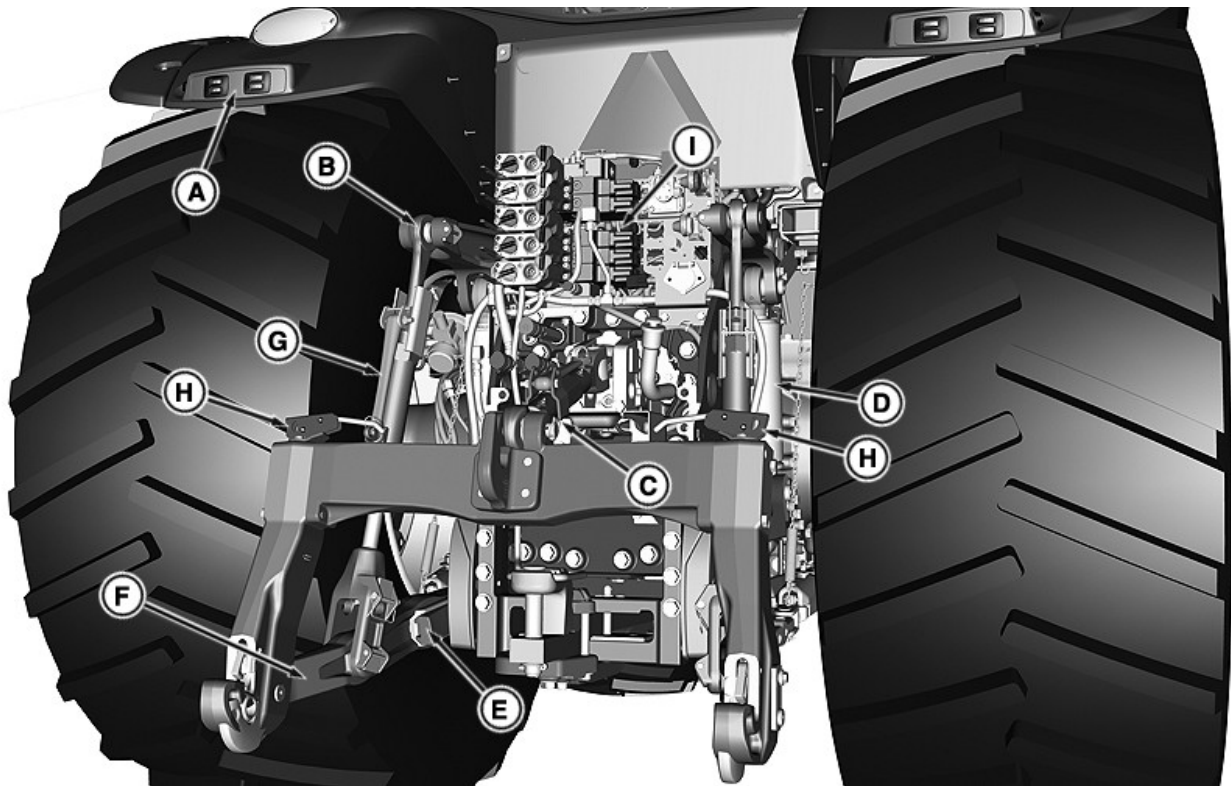
Put hitch control lever in float position. Lift links can be adjusted for lateral float. See Adjust Lateral Float in this Operator's Manual section.

Forced Float

When hitch is commanded to lower set point but is unable to reach it, hitch enters forced float mode. While in this mode, hitch acts as though control lever is in float position. If hitch reaches lower set point while in forced float mode, the hitch returns to mode lever is set to.

TS36762,00001DB-19-18JUL18

Components



RXA0149599—UN—07AUG15

A—Remote Raise/Lower Switches
B—Lift Arm
C—Center Link
D—Lift Cylinder
E—Sway Block (If Equipped)

F—Draft Link
G—Lift Link
H—Quick-Hitch Lever
I—Rear Hitch Valve

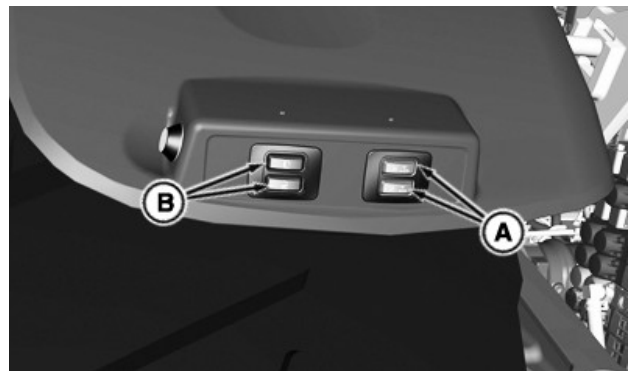
TS36762.00001DC-19-11JUL18

Remote Raise and Lower Switches (If Equipped)

⚠ CAUTION: To prevent injury or damage caused by tractor movement, be sure transmission is in PARK position before using remote raise and lower switches. Stay clear of interference points when using remote raise and lower switches.

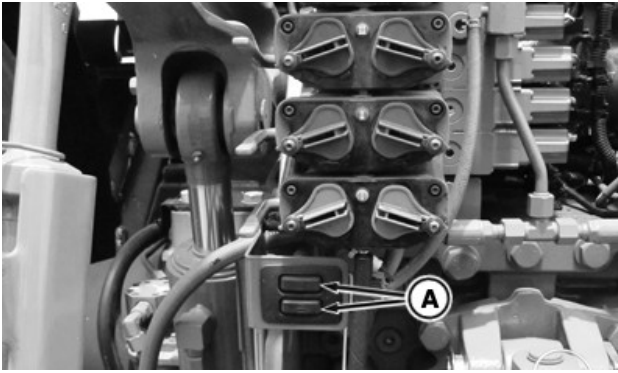
Avoid injury when using remote switches, stay clear of moving hitch components.

Hitch movement speed increases as switch is pressed.

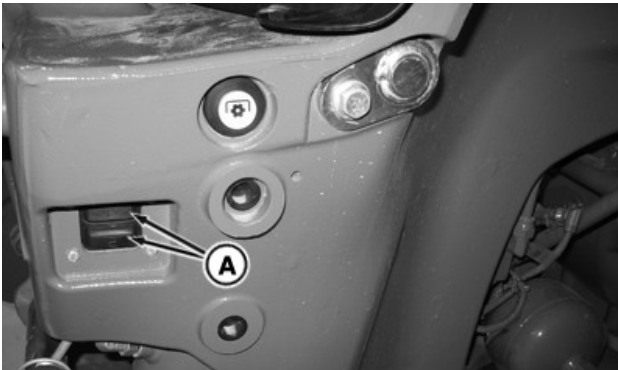


RXA0131100—UN—13MAR13

Left-Hand Fender



RXA0134416—UN—01AUG13



RXA0134417—UN—01AUG13

Press and hold remote front or rear hitch raise or lower switches (A) to operate hitch. When switches are pressed, hitch initially moves slowly - but increases speed the longer switch is held. SCV III extend or retract switches (B) are connected to hydraulic center link (if equipped).

Neither front nor rear hitch control levers can be used simultaneously with remote raise/lower switches.

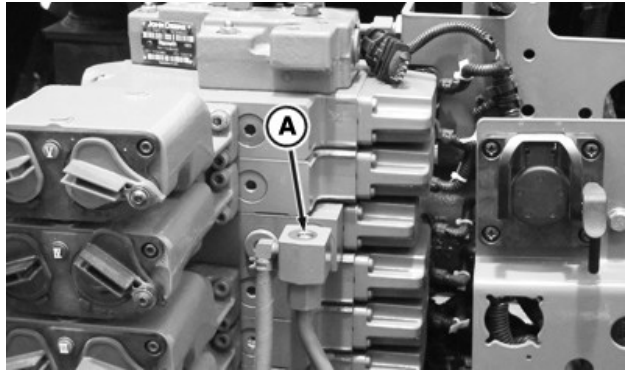
TS36762,00001DD-19-01SEP17

Hitch Manual Lowering

CAUTION: Avoid personal injury or death. Do not disconnect any hitch sensors, solenoids, or connectors from hitch control valve while engine is operating or key switch is ON. Unexpected hitch movement may occur. Stay clear of hitch area when starting engine or manually lowering hitch.

NOTE: Hitch cannot be raised manually. Both hydraulic and electrical power are required to raise hitch.

Hitch manual lowering is possible when hydraulic pressure and/or electrical power is not available.



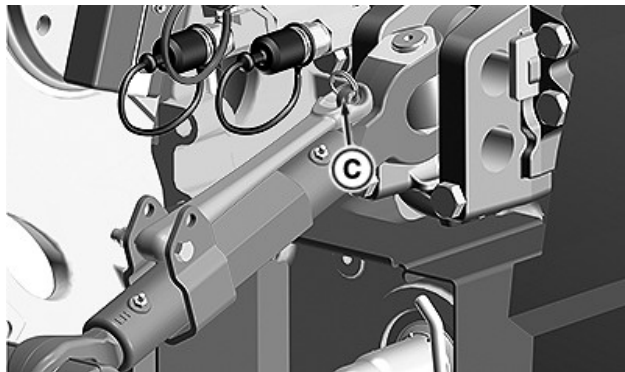
RXA0129473—UN—20NOV12

Remove plug to access manual lowering socket head cap screw (A). Turn screw counterclockwise to lower hitch.

Turn socket head cap screw clockwise and install plug after hitch is lowered.

TS36762,00001DE-19-21NOV16

Correct Center Link Position

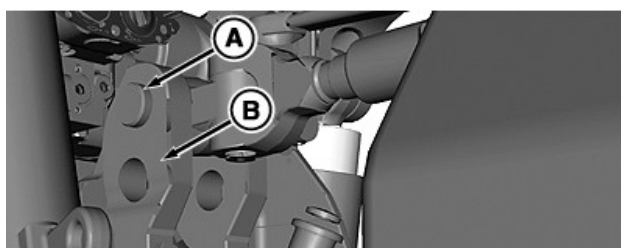


RXA0160589—UN—16AUG17

IMPORTANT: Excessive power can damage an implement, and large implement can damage tractor.

This tractor requires center link with recessed retaining mount (C) to prevent interference with SCV valve stack. Using center link without recessed retaining mounts may result in damage to SCV stack.

NOTE: Upper hole offers greater lift capacity. Lower hole offers greater ground clearance.

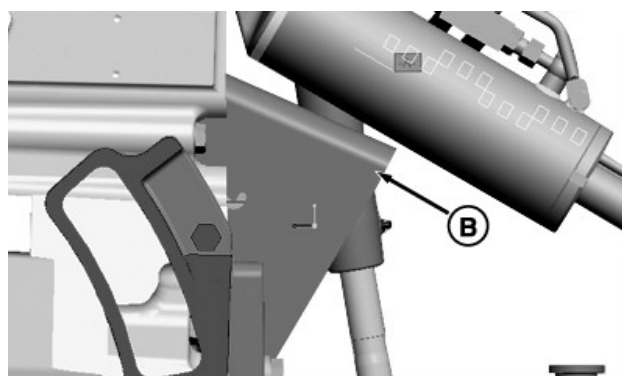


RXA0147836—UN—26MAR15

Attach center link to lower hole (B) for standard implements. Use upper hole (A) when implements require higher lift capacity. See implement Operator's Manual for recommendations.

For lift capacities see Hitch, Drawbar, and PTO in Specifications section in this Operator's Manual.

TS36762,00001DF-19-01SEP17



RXA0086282—UN—26JAN06

Place PTO shield (B) in down position when using hydraulic center link with lift links extended at maximum length.

Clean all mobile parts as required and apply commercial grease for smooth operation of parts. Interference of locking system is, in most cases, caused by dirt accumulation.

TS36762,00001E0-19-21NOV16

Hydraulic Center Link

CAUTION: To prevent injury, allow sufficient clearance in working zones.

To prevent machine damage, do not subject center link to excessive loads.

IMPORTANT: Verify locking mechanism is engaged and cord is free to move. Tight cord releases hook locking mechanism.

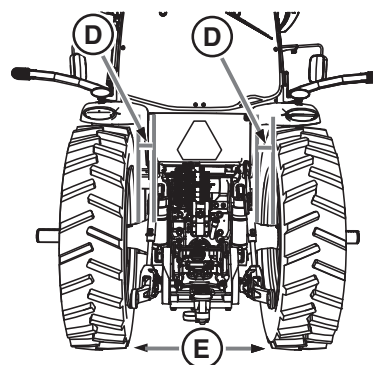
Do not use continuous flow or timed detents with hydraulic center link. Make sure SCV detent time is set to 0.



RXA0155072—UN—19OCT16

Length of hydraulic center link (A) can be adjusted from operator's seat using a selected control valve.

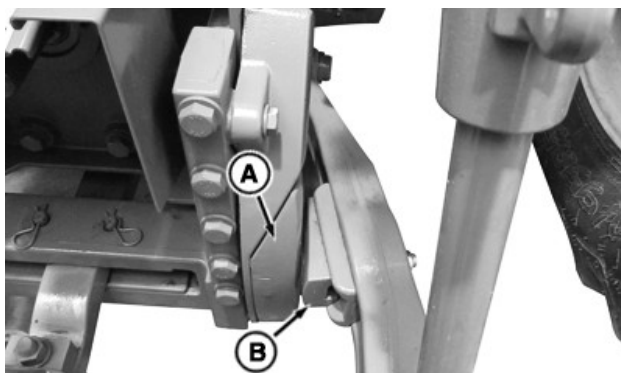
Adjust Sway Blocks



RXA0117508—UN—15JUN11

IMPORTANT: Avoid equipment damage. Tires must have at least 25 mm (1 in) clearance distance (D) with fenders. To prevent draft link interference, minimum distance (E) between tires must be:

- Category 3N Hitch—1090 mm (43 in)
- Category 3 Hitch—1170 mm (46 in)

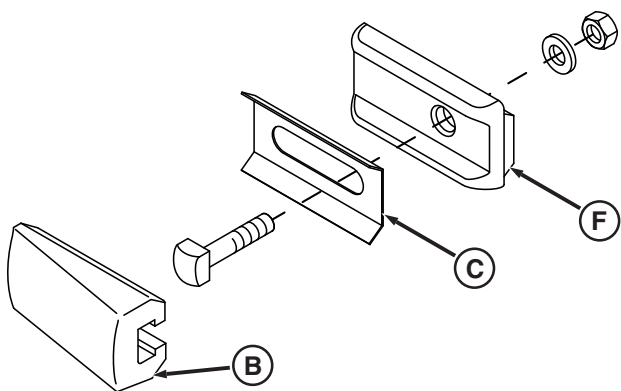


RXA0129476—UN—20NOV12
Sway Blocks in Lower Position

Install sway blocks (A) in lower position to minimize side sway of hitch.

Adjust bumper (B) by loosening lock nut and sliding forward or rearward to limit amount of sway.

Mount sway blocks (A) in upper position to allow side sway when hitch is lowered. Side sway is prevented when hitch is raised.



RXA0090041—UN—04AUG06

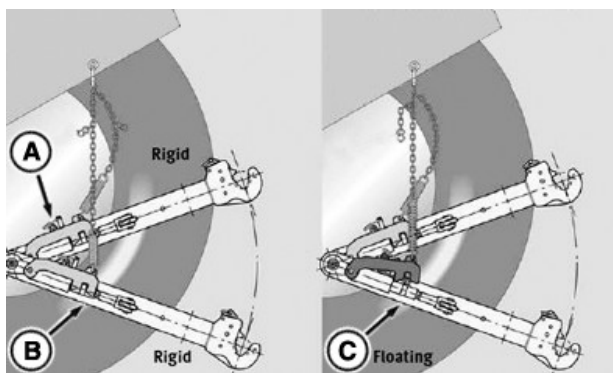
If there is not enough adjustment in bumper block to remove hitch sway, install shims (C) as necessary between bumper block (B) and spacer (F).

Converting to Category 3 or 3N

- Tractor is equipped with factory-installed quick-hitch for Category 3 applications.
- To convert to Category 3N, move spacer (F) outside of draft link.

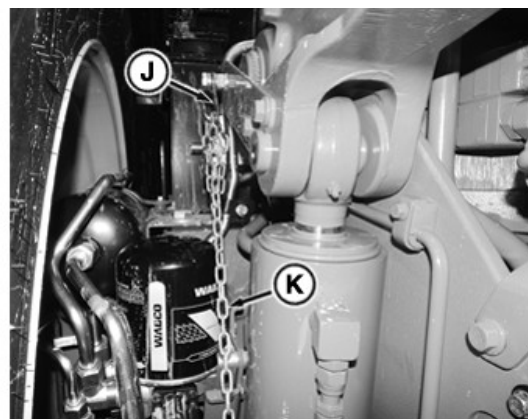
TS36762,00001E1-19-11JUL18

Adjust Deluxe Stabilizers



RXA0147640—UN—20MAR15
Locked Rigid and Floating Hitch Positions

Deluxe sway stabilizers eliminate sway on stabilizer arms in transport rigid position (A). However, sway stabilizers can allow hitch to remain in rigid working position (B).

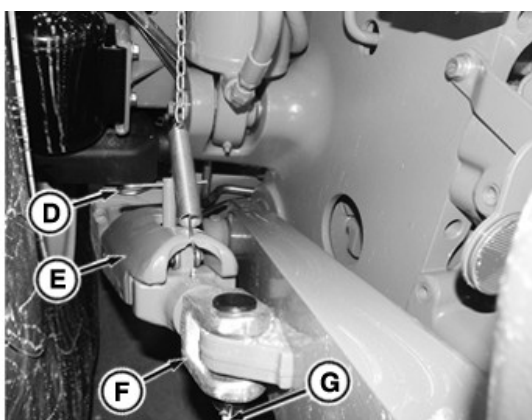


RXA0147004—UN—20MAR15
Stabilizer Chain Adjustment (Left-Hand Side Shown)

Stabilizer chains (K) must be adjusted for each implement used. When hitch is lowered, stabilizer is unlocked in floating position (C). When hitch is raised, stabilizer locks automatically.

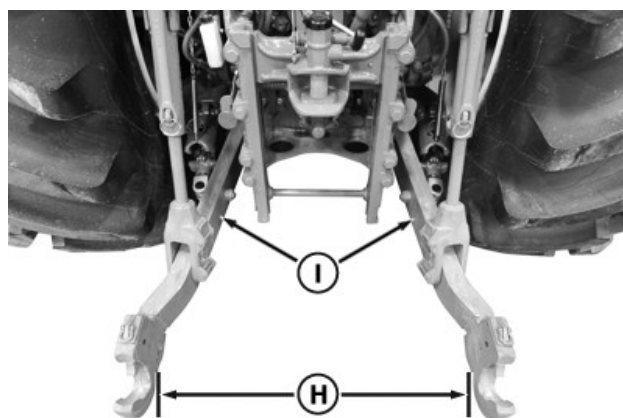
1. Park tractor on level ground and turn engine off.

IMPORTANT: Check full range of hitch movement to ensure unnecessary sway latch (E) wear does not occur.



RXA0147003—UN—20MAR15
Stabilizer in Transport Position (Left-Hand Side Shown)

2. Fully lower hitch.
3. Remove sway latch rings (D) from sway latches.
4. Raise sway latches (E) fully. Place stabilizer chains on chain retaining hooks (J) to secure them.



RXA0147641—UN—20MAR15
Draft Links Spread

5. Determine correct draft link spread (H). See implement operator's manual for desired distance.



RXA0156045—UN—01DEC16
Sway Latch Lever (Left-Hand Side Shown)

6. Adjust left-hand side sway latch lever (M) clockwise to decrease draft links spread (H) or

counterclockwise to increase draft links spread to fit implement. If tractor tires are too large and prevent sway latch lever adjustment, remove yoke pin (E) and adjust yoke (D) clockwise to decrease draft links spread or counterclockwise to increase draft links spread.

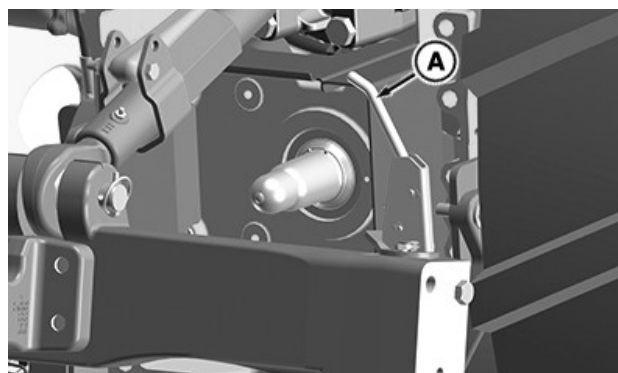
7. Measure distance from centerline of drawbar to centerline of left-hand side implement ball.
8. Repeat steps 6 and 7 for right-hand side.
9. Recheck measurements to ensure accuracy.
10. When measurements are correct, remove stabilizer chain (K) from chain retaining hook (J) and lower sway latches (C) to stabilizer bar (L) and reinstall sway latch rings (B) and/or yoke pins.
11. Raise hitch to desired transport position.
12. Select stabilizer chain link that secures sway latches in position for transport and place link on chain retaining hook. If additional chain links are not secured, hang them on chain retaining hook to prevent possible interference.
13. Raise and lower hitch to ensure draft links (I) and sway latches can be in rigid and floating positions as desired.

TS36762,00002B4-19-01DEC16

Attach Implement to Quick-Hitch

CAUTION: Avoid bodily injury or machine damage:

- Put transmission in **PARK** position and check the full range of hitch for interference, binding, or PTO separation whenever an implement is attached.
- Make sure implement is correctly attached. Incorrect attachment can allow implement to be pulled over the tractor wheel and onto the operator station.
- Do not stand between tractor and implement.

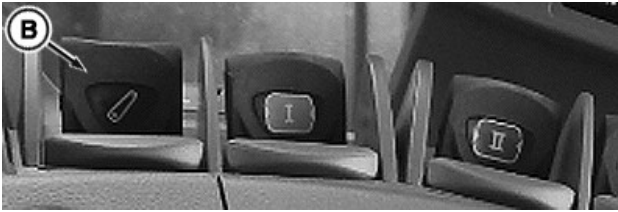


RXA0160590—UN—16AUG17

1. Pull coupler latch handles (A) up.

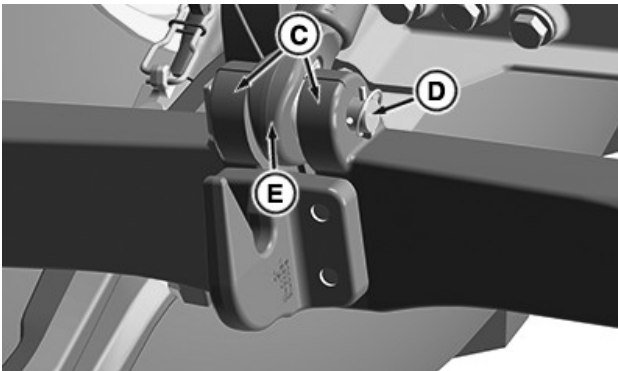
2. Lower hitch until quick-hitch hooks are lower than implement hitch pins.
3. Back up tractor to implement.
4. Raise hitch enough to engage implement pins in hooks.
5. Push coupler latch handles down to lock implement to quick-hitch.
6. Connect hydraulic hoses and electrical connections.

IMPORTANT: Check for implement interference.
Drawbar removal may be necessary.



RXA0149595—UN—07AUG15

7. Slowly pull rear hitch control lever (B) to raise implement.
8. If necessary, lower implement to ground and adjust upper height limit control.

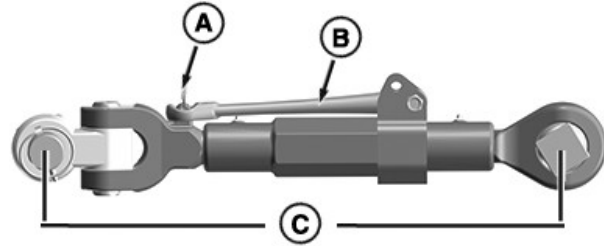


RXA0160591—UN—16AUG17

If center link is attached directly to implement, measure upper mast opening (C) and height above pin (D). If upper mast opening is greater than 70 mm (2.8 in) or height above pin is less than 14 mm (0.6 in), use shims to limit/restrict swiveling of yoke (E).

TS36762,00001E2-19-11JUL18

Level Implement



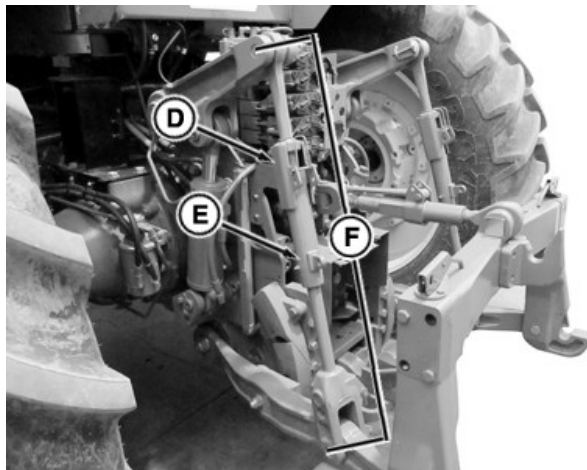
RXA0160592—UN—16AUG17

1. Remove locking ring (A) to adjust center link to level implement front-to-rear.
2. Lift handle (B).
3. Rotate center portion of center link to desired length.
4. Secure handle with locking ring.
5. Measure Center Link Length (C) between centers of pins. Center link length adjustments:

Category 3 Hitch Length Adjustment — Specification

With Quick-Hitch. 627—790 mm (24.7—31.1 in)

Without Quick-Hitch. 698—861 mm (27.5—33.9 in)



RXA0129480—UN—20NOV12

6. Adjust lift links to level implement side to side. Slide collar (D) upward. Rotate center portion (E) of lift link to desired length.
7. Measure Lift Link Length (F) between center of lift arm pin to draft link pin. Lift link length adjustments:

Length Adjustment — Specification

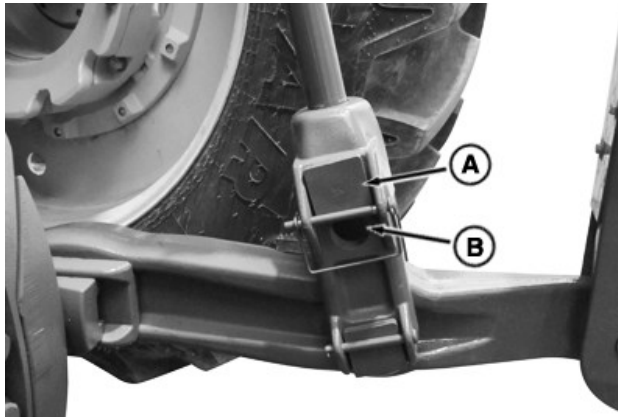
Group 47/48 Tires. 1020—1178 mm (40—46.4 in)

Group 49 Tires. 1049—1207 mm (41—47.5 in)

8. Lock out lateral float.
9. Secure collar in position.

TS36762,00001E3-19-11JUL18

Adjust Lateral Float



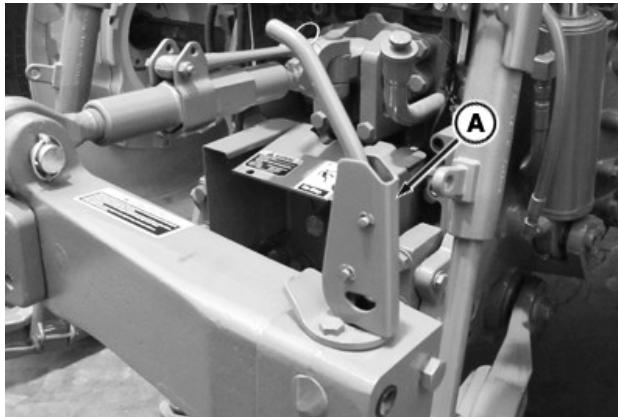
RXA0129481—UN—20NOV12

Put lateral float pins in upper holes (A) to hold implement rigidly.

Put lateral float pins in lower holes (B) to allow draft link to raise as implement follows ground surface.

TS36762,00001E4-19-21NOV16

Detach Implement from Quick-Hitch

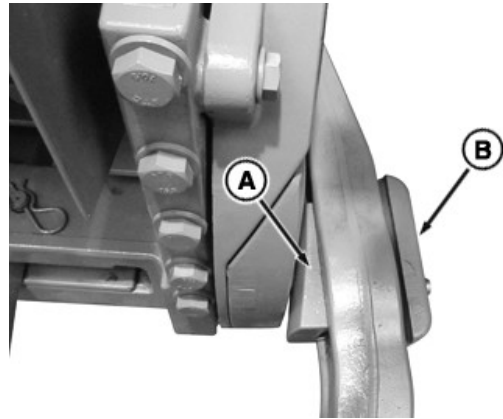


RXA0129731—UN—20NOV12

1. Raise both latch levers (A) with implement raised.
2. Disconnect hydraulic hoses and electrical connections.
3. Lower implement to ground and continue lowering quick-hitch until hooks clear implement hitch pins.
4. Carefully drive tractor away from implement.

TS36762,00001E5-19-11JUL18

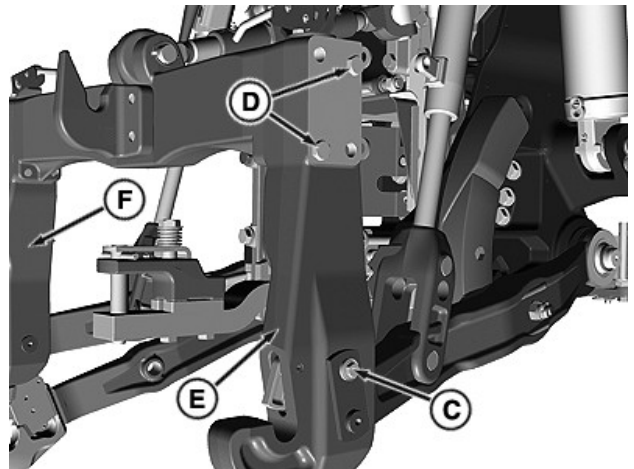
Hitch Conversion—Convertible Quick-Hitch



RXA0129732—UN—20NOV12

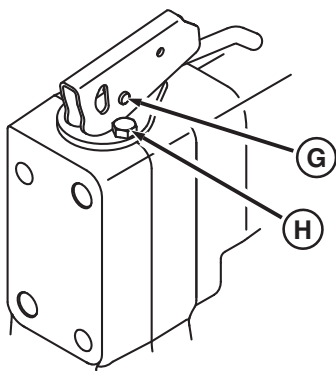
IMPORTANT: If coupler is converted to category 3N, sway block spacer (A) must be mounted on outside of draft link to avoid damaging equipment.

1. Converting to category 3N is necessary for narrow row/tread spacing operations. Quick-hitch is convertible to Category 3 or Category 3N. Use Category 3 whenever possible, especially for heavy loads. Install spacer (A) on outside of draft link for Category 3N.
2. Adjust bumper block (B) to minimize clearance.
3. Tighten nut securely.



RXA0128279—UN—24SEP12

4. Support center of quick-hitch. Remove pin retaining bolts (C) and pins from draft link. Remove side member cap screws (D).
5. Swap quick-hitch side members, left-hand side member (F) to right end and right-hand side member (E) to left. Tighten cap screws to 320 N·m (236 lb·ft).



RXA0128278—UN—24SEP12

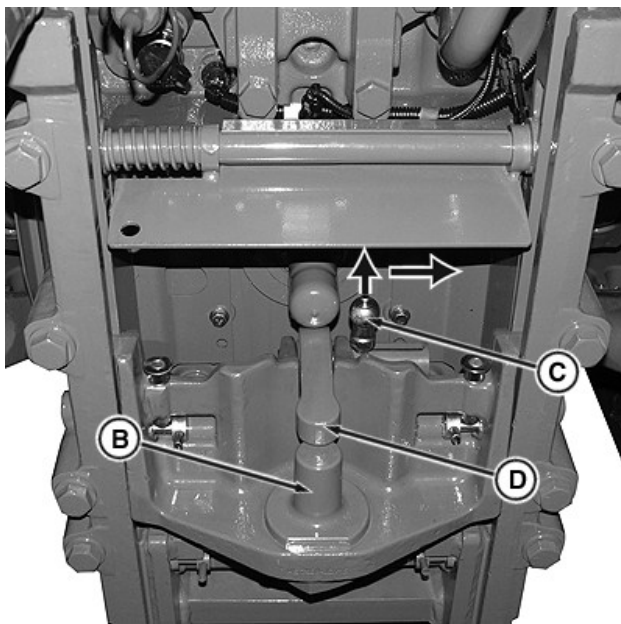
6. Disconnect latch levers by removing C-clip and pin (G).
7. Remove cap screw (H) from wear plate and turn tab inward.
8. Install cap screws and tighten securely.
9. Reconnect levers.

TS36762,00001E6-19-12JUL18

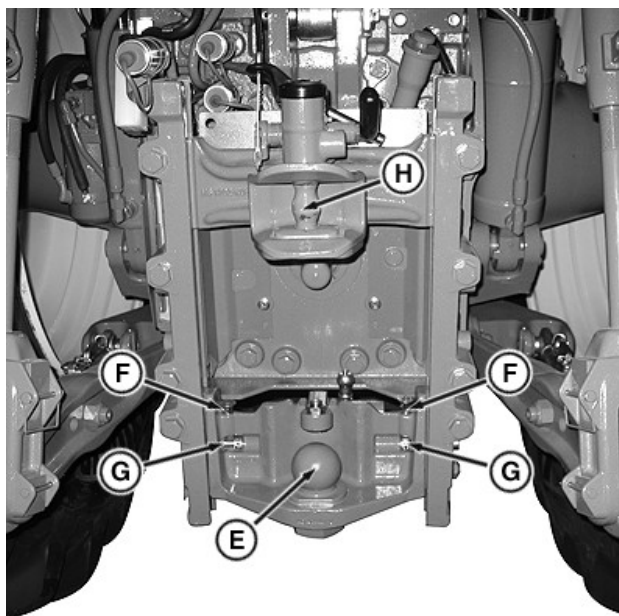
3-in-1 Hitch System

CAUTION: Avoid personal injury. Keep hands and fingers from hitch latching mechanism.

IMPORTANT: Avoid equipment damage. If using 35 mm (1.375 in) PTO or PTO adaptor with 3-in-1 hitch rails, it may be necessary to limit steering angles to prevent telescoping drive line from rubbing and/or damaging hitch rails.



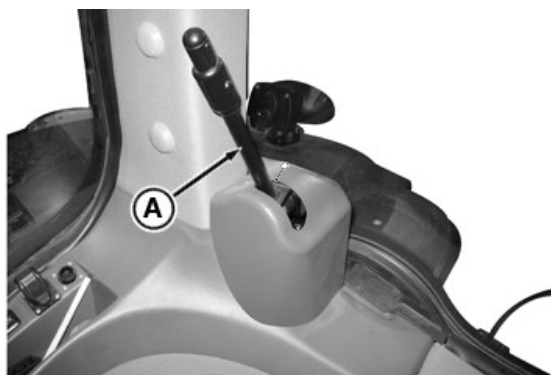
RXA0112499—UN—14DEC10



RXA0112497—UN—14DEC10

To operate piton coupling (B) or ball coupling (E), lift locking lever (C) and slide to the right to raise locking arm (D).

Install piton coupling or ball coupling by lifting locking pins (F) and sliding spring release pins (G). Slide either coupling into hitch rails and install locking pins.

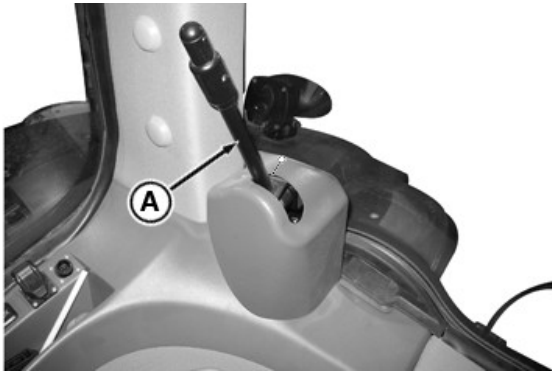


RXA0109284—UN—10AUG10

Wagon hitch pin (H) closes automatically when trailer towing eye enters the hitch or can be manually closed using pick-up hitch control lever (A).

TS36762,00002AD-19-01SEP17

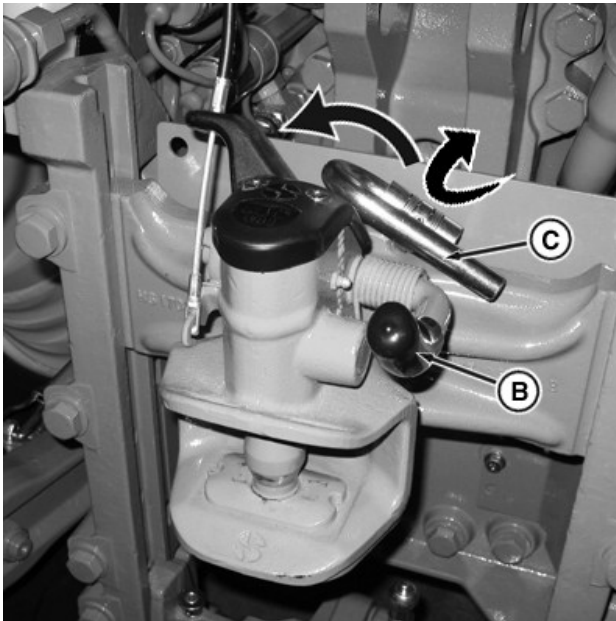
Operate Wagon Hitch



RXA0109284—UN—10AUG10

Wagon hitch can be released from the operator's seat using lever (A).

⚠ CAUTION: Avoid personal injury. Keep hands and fingers from hitch latching mechanism.



RXA0112501—UN—14DEC10

The wagon hitch closes automatically when trailer towing eye enters the hitch or can be manually closed using release lever (B).

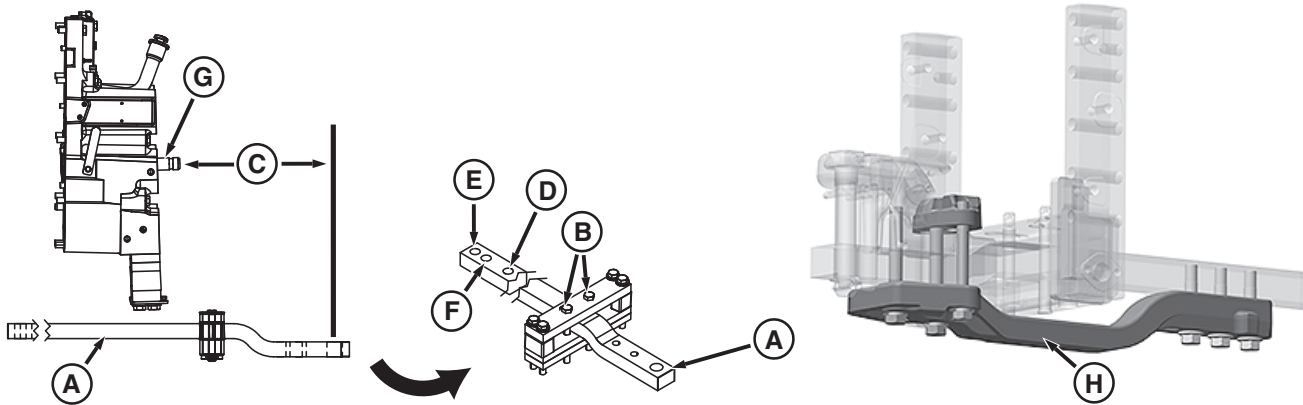
Wagon hitch height can be adjusted using height adjustment lever (C). To adjust height, rotate height adjustment lever back, then slide lever to the left.

TS36762,00002AA-19-30NOV16

Drawbar

Drawbar Options and Load Limits

IMPORTANT: Avoid equipment damage. Do not exceed maximum static vertical load on drawbar for a given drawbar length/position, as indicated in table below.



RXA0151680—UN—17MAR16

A—Drawbar
B—Cap Screws
C—Dimension
D—Short Position (Front Hole)

E—Long Position (Rear Hole)
F—Medium Position (Middle Hole)
G—PTO Shaft
H—Cat 3 HD Drawbar Support

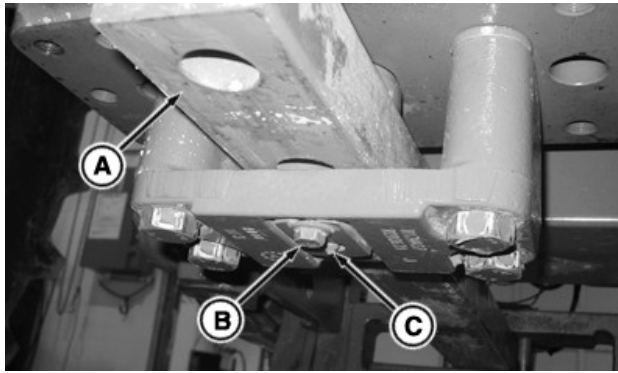
Drawbar Options						
Drawbar Type	7210R	7230R	7250R	7270R	7290R	7310R
Category 3	Standard					
Category 3 HD	Optional					

Drawbar Load Limits					
Drawbar Length	Dimension (C) mm (in)			Maximum Vertical Load kg (lb)	
	At 1000 RPM 1 3/4 in 20 splines (G)	At 1000 RPM 1 3/8 in 21 splines (G)	At 540 RPM 1 3/8 in 6 splines (G)	Category 3 Drawbar	Category 3 HD Drawbar
Short (D)	348 (13.7) ^a	360 (14.2) ^a	360 (14.2)	2766 (6100)	4536 (10000)
Medium (F)	397 (15.6) ^a	409 (16.1)	409 (16.1) ^a	2131 (4700)	3493 (7700)
Long (E)	500 (20)	512 (20.2) ^a	512 (20.2) ^a	1837 (4050)	2994 (6600)

^aNot for PTO operation

TS36762,00001E7-19-24JUL18

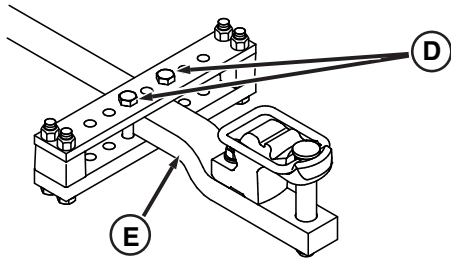
Adjust Drawbar Position



RXA0129472—UN—09NOV12

IMPORTANT: Avoid equipment damage. For PTO-driven implement, position drawbar (A) as instructed in Attach PTO-Driven Implement in this section of this Operator's Manual.

Adjust Drawbar Length



RXA0085803—UN—10JAN06

1. Loosen drawbar locking bolts (D).
2. Remove cap screw (B), retaining pin (C), and retaining strap.
3. Slide drawbar to desired position.
4. Reinstall drawbar retaining strap and pin.
5. Reinstall cap screw and tighten to 70 N·m (50 lb·ft).
6. Tighten drawbar locking bolts to 430 N·m (318 lb·ft).

Adjust Drawbar Height

IMPORTANT: Avoid equipment damage. Never attach clevis assembly to underside of drawbar. Cat 3 HD drawbar support cannot be used with drawbar offset positioned upward.

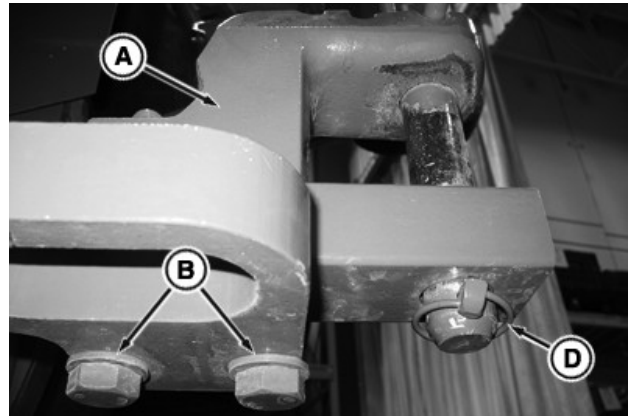
1. Loosen drawbar locking bolts.
2. Remove cap screw, retaining pin, and retaining strap.
3. Slide drawbar fully out.
4. Turn drawbar offset (E) over 180°.
5. Reinsert drawbar to desired position.
6. Reinstall drawbar retaining strap and pin.
7. Reinstall cap screw and tighten to 70 N·m (50 lb·ft).
8. Tighten drawbar locking bolts to 430 N·m (318 lb·ft).

Adjust Drawbar Side-To-Side

1. Remove drawbar locking bolts.
2. Slide drawbar to desired position.
3. Reinstall locking bolt against each side of drawbar. Tighten bolts to 430 N·m (318 lb·ft).

TS36762,00001E8-19-01SEP17

Install and Use Clevis Assembly-Cat 3 Drawbar



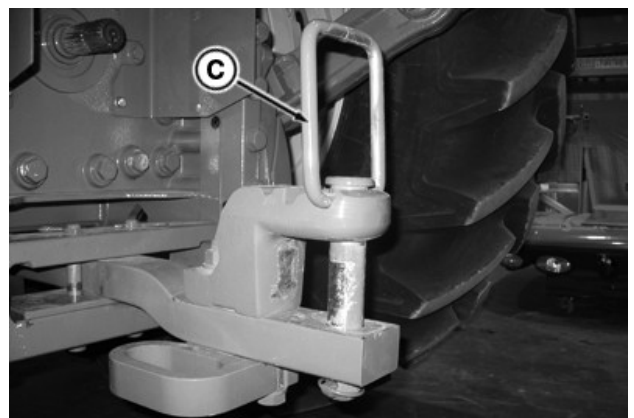
RXA0128173—UN—18OCT12

IMPORTANT: Prevent implement or tractor damage. Some applications require clevis assembly removal. See implement operator's manual.

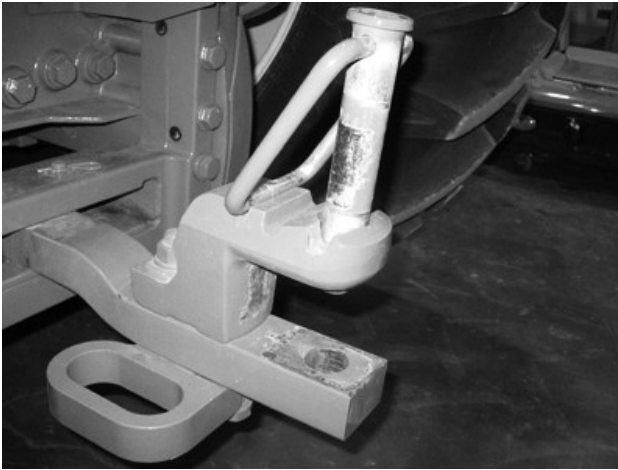
Never attach clevis assembly (A) to underside of drawbar.

Never connect clevis-equipped implement to clevis-equipped drawbar. Remove either tractor or implement clevis.

1. Install clevis assembly and tighten cap screws (B) to 750 N·m (550 lb·ft).
2. Remove lock pin (D).



RXA0128175—UN—12SEP12

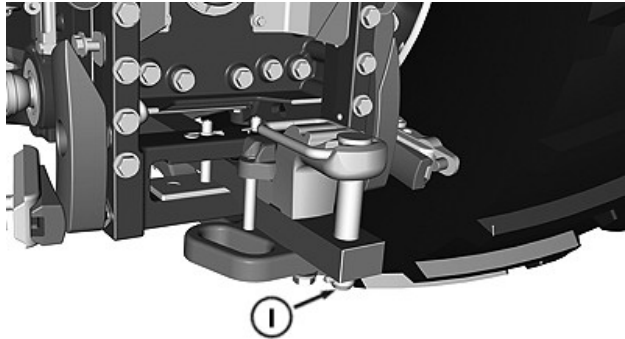


RXA0128176—UN—12SEP12

3. Lift pin with handle (C) and position in notch of clevis assembly.
4. Attach implement.
5. Reinstall pin with handle.
6. Reinstall lock pin.

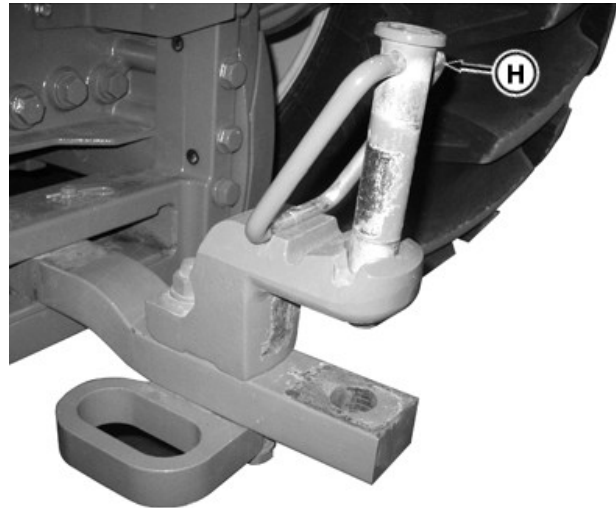
TS36762.00001E9-19-01SEP17

4. Install retainer (E) using one washer and cap screw (F). Tighten cap screw to 750 N·m (555 lb·ft).
5. Install two washers and cap screws (G). Tighten cap screws to 430 N·m (320 lb·ft).
6. Remove jack from brace.



RXA0128626—UN—12OCT12

7. Remove locking pin (I).

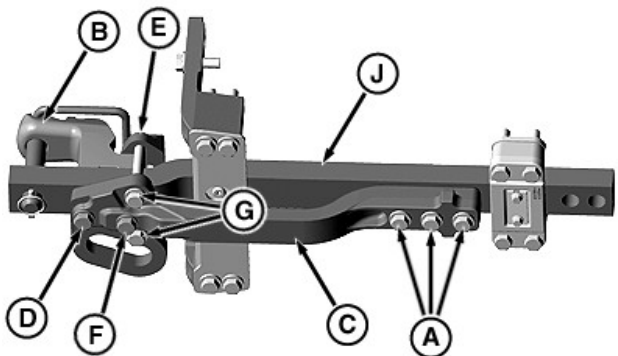


RXA0128624—UN—12OCT12

8. Lift pin with handle (H) and position in notch of clevis assembly.
9. Attach implement.
10. Reinstall pin with handle.
11. Reinstall locking pin.
12. Remove clevis in reverse order of installation.

TS36762.00001EA-19-21NOV16

Install and Use Clevis Assembly-High Vertical Load Drawbar Support



RXA0090741—UN—21SEP06

IMPORTANT: Prevent implement or tractor damage. Some applications require clevis assembly (B) removal. See implement operator's manual.

Never attach clevis assembly to underside of drawbar.

Never connect clevis-equipped implement to clevis-equipped drawbar. Remove either tractor or implement clevis.

1. Use jack to hold brace (C) during installation.
2. Install brace to drawbar (J) using three washers and cap screws (A). Tighten caps screws to 430 N·m (320 lb·ft).
3. Install brace to drawbar and clevis assembly using washer and cap screw (D). Tighten cap screw to 750 N·m (555 lb·ft).

Hydraulics - General Information

Hydraulic System Overview

Hydraulics system provides lubrication, power and control to many tractor subsystems. Transmission, steering, brakes, and hitches are covered in other sections of this Operator's Manual. The next several sections deal with selective control valves, including adjustment, function, and connections as well as special control systems.

KT81203,000044A-19-22NOV16

Selective Control Valves

Configure SCV Modes

CAUTION: Avoid unwanted movements and possible accidents. Do not operate front loaders in conjunction with Intelligent Total Equipment Control (iTEC™).



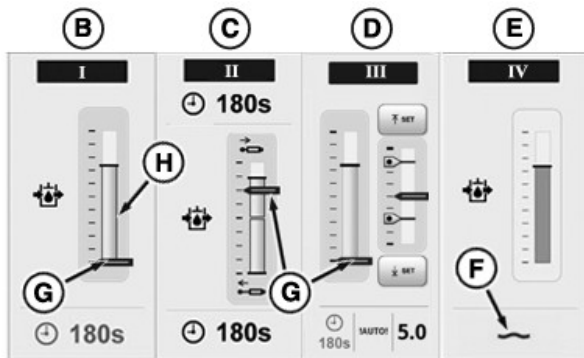
RXA0151873—UN—15APR16

Press SCV shortcut button (A) on Navigation Bar or follow alternative path:



RXA0148320—UN—05JUN15

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **SCV icon**.



RXA0151890—UN—15APR16

4. SCV Main Page appears.

NOTE: Flow indicators (G) on SCV Main Page example are shown for reference only. Flow Indicators will appear while SCV is activated and hydraulic oil is flowing. Flow display (H) appears whenever SCV is activated and hydraulic oil is flowing.

Each SCV can be configured in one of three different operating modes:

- Standard mode - SCV I (B).
- Independent mode - SCV II (C).
- Feature mode - SCV III (D).

Float symbol (F) appears when an SCV is set to float (SCV IV (E)).

TS36762,00001EB-19-04APR18

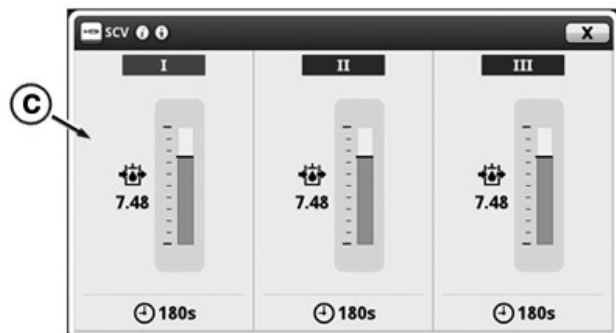
Configure SCV - Standard Mode

In standard mode, an SCV can have one time detent setting and one flow detent setting which apply to both extend and retract.



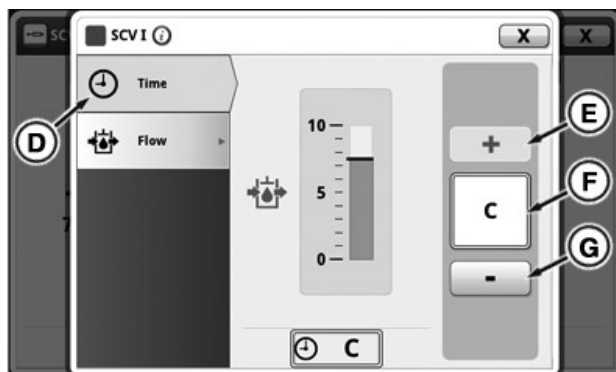
RXA0151869—UN—14APR16

Press **SCV shortcut button** on Navigation Bar (A).



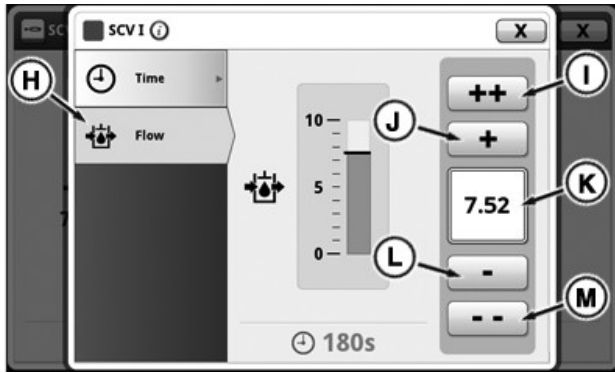
RXA0151870—UN—14APR16

1. Select an individual SCVs (C) to access Standard Mode.



RXA0151871—UN—14APR16

2. Select Time tab (D).
3. Input box (F) displays detent time set. Press increase button (+) (E) to increase time in 1 second increments up to 10 seconds, then in 2 second increments up to 20, then 5 seconds to 30, then by 30 seconds up to C for continuous flow. Pressing button (-) (G) decreases time by same increments. Adjustment dial (B) can also be used.



RXA0151872—UN—14APR16

4. Select Flow tab (H).
5. Input box (K) displays flow rate set. Flow is shown in increments of 0.04 beginning at 0.04 and increasing to 10. Press increase button (+) (J) will increase flow by 0.04 with each press. Press fast increase button (+) (I) to increase flow by units of 1.00. Pressing decrease button (-) (L) or fast decrease button (--) (M) reduces flow by same increments. Adjustment dial (B) can also be used to change flow rate.

TS36762,00001EC-19-21NOV16

Use toggles (B) to switch Independent Mode on or off for each SCV.

When Independent Mode is off, SCV is in Standard Mode. Access any additional SCVs using scroll bar (C).

TS36762,00001ED-19-21NOV16

Configure SCV - Independent Mode

Some implements require different extend and retract times and flow detents to function correctly. SCVs in Independent Mode have two detent flow and two detent time settings, one for extend and one for retract.



RXA0151869—UN—14APR16

Press **SCV shortcut button on Navigation Bar (A)**.

1. Select an SCV that is in Independent Mode.

Activate Independent Mode



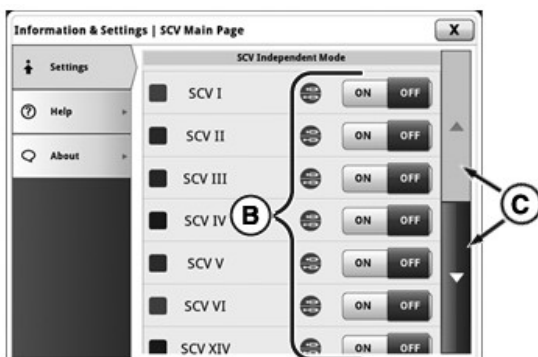
RXA0151873—UN—15APR16

1. Press **SCV shortcut button on Navigation Bar (A)**.

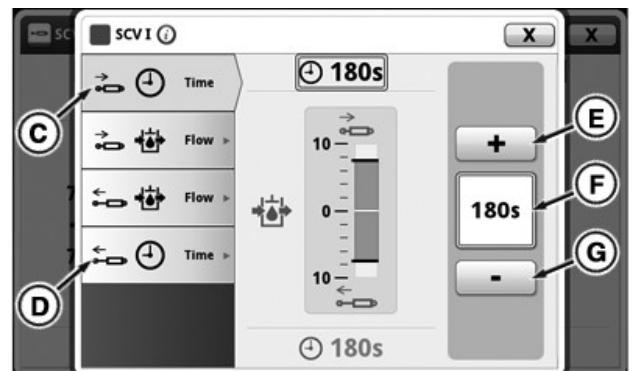


RXA0130326—UN—11JAN13

2. Press **Advanced Settings Icon**.
3. Press **Settings tab**.

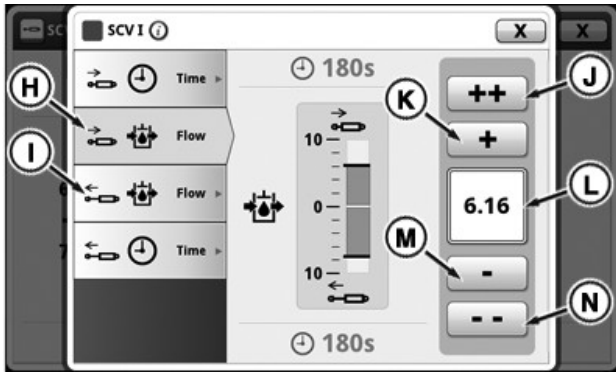


RXA0151874—UN—15APR16



RXA0151875—UN—15APR16

2. Select Detent Time Retract tab (C) or Detent Time Extend tab (D).
3. Input box (F) displays detent time set. Press increase button (+) (E) to increase time in 1 second increments up to 10 seconds, then in 2 second increments up to 20, then 5 seconds to 30, then by 30 seconds up to C for continuous flow. Pressing button (-) (G) decreases time by same increments. Adjustment dial (B) can also be used to change flow rate.



RXA0151876—UN—15APR16

4. Select Detent Flow Retract tab (H) or Detent Flow Extend tab (I).
5. Input box (L) displays flow rate set. Flow is shown in increments of 0.04 beginning at 0.04 and increasing to 10. Press increase button (+) (K) will increase flow by 0.04 with each press. Press fast increase button (+) (J) to increase flow by units of 1.00. Pressing decrease button (-) (M) or fast decrease button (--)(N) reduces flow by same increments. Adjustment dial (B) can also be used to change flow rate.

TS36762,00001EE-19-05JUL17

Configure SCV - Feature Mode

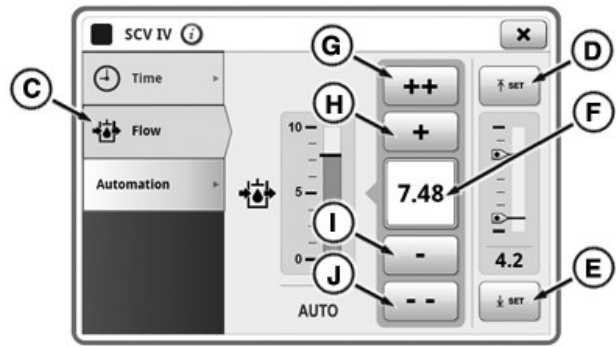
Feature mode requires an optional connector. To use feature mode, connect implement to tractor before turning key switch to ON. When connected through ISOBUS or implement connector, SCVs automatically enter feature mode and page displays with feature options.

1. Connect tractor to implement.



RXA0151869—UN—14APR16

2. Select SCV shortcut button (A) on navigation bar.
3. To adjust feature mode settings, select appropriate SCV.



RXA0151877—UN—15APR16

4. Select detent Flow tab (C).
5. Input box (F) displays flow rate setting. Flow adjustment is from 0.04 to 10. Selecting + (H) increases flow in increments of 0.04 and ++ (G) increases flow in increments of 1.00. Selecting - (I) or -- (J) decreases flow by same increments. Adjustment dial (B) can also be used to change flow rate.

NOTE: The implement controls detent Time.

Only TouchSet™ Depth Control uses upper and lower setpoint buttons (D) and (E). See Set TouchSet™ Depth Controls in TouchSet™ Depth Control section of this Operator's Manual.

TS36762,00001EF-19-13AUG18

Total SCV Flow

1. Check flow setting for each function independently (see implement operator's manual Specifications section to determine correct motor flow settings).

Following may cause pump to operate at high pressure:

- Down pressure systems (drills, air seeders, disks) can be considered to be zero flow demand after completion of raise or lower cycle (see Implement Connection Example 1, Pressure Control Valve Applications (Grain Drills or Air Seeders with Constant Down-Pressure System) in Hydraulic Connections section).
- Auxiliary flow control valves (vacuum flow control) - Open implement flow control valve and adjust tractor flow rate to desired setting (see Implement Connection Example 4, Planter with Vacuum Motor and Return Line to SCV Using Motor Return Tip in Hydraulic Connections section).
- Cylinder functions where line or orifice restrictions control flow - Adjust tractor flow control to point where function speed begins to decrease.
- Auxiliary control valves (implement stack valves,

row guidance) adjust tractor flow control to lowest setting resulting in correct operation.

2. Determine total flow demand by adding flow requirements for each SCV using settings determined in Step 1. Include hitch and power beyond flow requirements, if applicable (refer to chart for correct settings).
3. Determine if flow demand exceeds available pump flow (refer to chart for available pump flow):
 - Flow demand is less than available pump flow but has performance concern (see your John Deere dealer).
 - Flow demand exceeds pump flow:
 - Increase engine RPM if possible.
 - Decrease flow setting on noncritical functions.
 - Convert implement open center valves to closed center operation, if equipped.

NOTE: Flow measurements made without steering or hitch being used.

Engine rpm	SCV Pump Flow (Approximate) L/min (gpm)		
	48 cm ³ Pump	63 cm ³ Pump	85 cm ³ Pump
800	42.4 (11.2)	52 (13.7)	75 (19.8)
1500	85.8 (22.6)	109 (28.8)	152 (40.2)
1700	98.3 (26)	125 (33.0)	174 (46.0)
1900	110.7 (29.2)	142 (37.5)	196 (51.8)
2100	123.1 (32.5)	158 (41.7)	218 (57.6)
2200	129.3 (34.1)	166 (43.9)	229 (60.5)

SCV Flow Output (Approximate) ^a	
SCV Flow Settings	L/min (gpm)
0.1 ^b	—
1.0	1.9 (0.5) ^c
2.0	6.1 (1.6)
3.0	13.6 (3.6)
4.0	20.4 (5.4)
5.0	28.0 (7.4)
6.0	40.9 (10.8)
7.0	62.1 (16.4)
8.0	81.4 (21.5)
9.0	107.1 (28.3)
10.0	132 (35)

^aAt 2000 rpm and 454 kg (1000 lb) of load at point of use.

^b0.1 = Minimum Flow Setting

^cObserved under no load.

Hitch Cylinder Diameter (mm)	Hitch Flow L/min (gpm)	
	Front	Rear
90/90	61 (16.1)	71 (18.7)
100/100	—	88 (23.2)
100/115	—	102 (26.9)

TS36762,00001F0-19-31AUG17

Six Position SCV Control Levers

CAUTION: Avoid personal injury, confirm hoses are not reversed. If hoses are reversed, cylinder extends when it should retract.

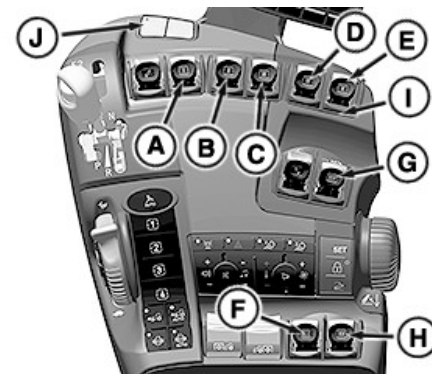
Prevent possible personal injury and unintentional implement movement. Move SCV levers to neutral position and shut off engine before connecting or disconnecting hydraulic hoses and attaching or detaching implements.

NOTE: SCV Control Levers can be reconfigured to control tractor functions and implements.

CommandARM™ configuration may vary depending on options.

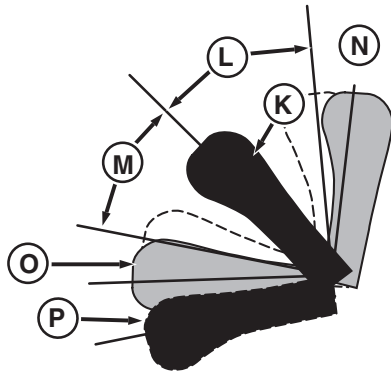
SCV lever remains in Neutral and Float positions without being held.

Basic information provided here. See specific control information in this section of this Operator's Manual for details on each lever function.



RXA0156098—UN—09DEC16

- **SCV Control Lever Lock (J):** Locks out control inputs for SCV levers (A-H) and front hitch lever. While lever lock is engaged, SCV and front hitch external switches will still function
- **SCV lever cover (I):** Push forward when SCV is not in use.



RXA0134902—UN—05AUG13

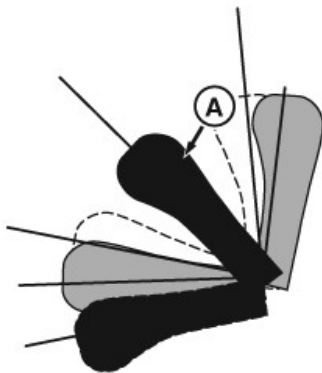
- **Neutral (K):** SCV flow is stopped.
- **Extend (L):** Operator controlled variable flow to extend cylinder.
- **Retract (M):** Operator controlled variable flow to retract cylinder.
- **Extend Detent Position (N):** Timed flow to extend cylinder, based on time and flow detent settings.
- **Retract Detent Position (O):** Timed flow to retract cylinder, based on time and flow detent settings.

NOTE: To relieve hydraulic pressure in implement cylinder, move SCV lever to float position (P), while engine is running.

- **Float (P):** SCV opens to allow free flow of oil from head to rod end of implement hydraulic cylinder.

TS36762,00001F5-19-06JUL17

SCV Control Lever—Neutral Position

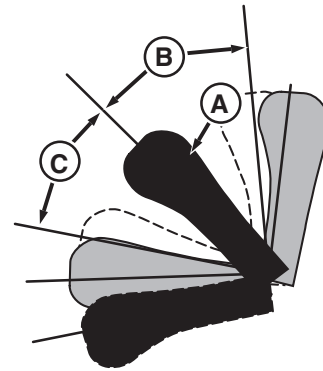


RXA0135070—UN—20AUG13

Neutral position (A) allows flow to continue until timed detent expires. If no timed detent is commanded, then flow is turned off. Levers in extend or retract positions automatically return to neutral when released. Float position remains detented. At tractor startup, lever positions are ignored until lever is cycled to neutral.

TS36762,00001F2-19-21NOV16

SCV Control Lever—Extend and Retract Position



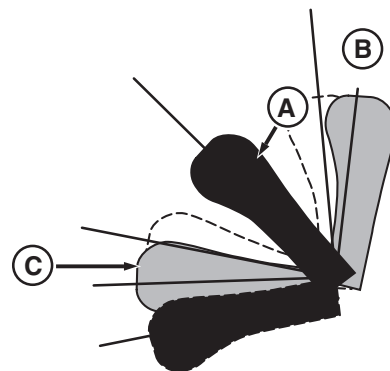
RXA0151813—UN—13APR16

Pull SCV lever (A) rearward (B) to extend. Push lever forward (C) to retract. Oil flows to extend or retract cylinder at a rate that varies depending on how far lever is moved. Slowest oil flow is when lever is closest to neutral position.

When lever is released it returns to neutral and flow is stopped. Maximum desired flow can be set with CommandCenter™, see Configure SCV - Standard Mode and Configure SCV - Independent Mode in this Operator's Manual section. Time detent settings are not active in extend or retract flow positions.

TS36762,00001F4-19-10APR18

SCV Control Lever—Extend Detent and Retract Detent Position



RXA0151814—UN—13APR16

Move SCV control lever (A) rearward into extend detent (B) or forward into retract detent (C) to “click” detent position and release.

Lever returns to Neutral position, but flow continues at flow detent setting rate until detent time setting has elapsed, see Configure SCV - Standard Mode and Configure SCV - Independent Mode in this Operator's Manual section.

Flow timing begins when the lever returns to neutral

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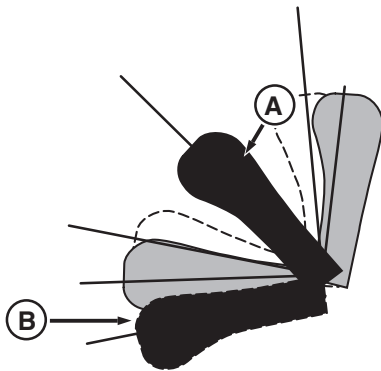
after being in the extend or retract detent position for less than 0.8 seconds.

Adjust flow time setting so cylinder is fully extended when time has elapsed.

Cancel detent by moving SCV lever slightly forward or rearward from neutral into extend or retract position for more than 0.8 seconds.

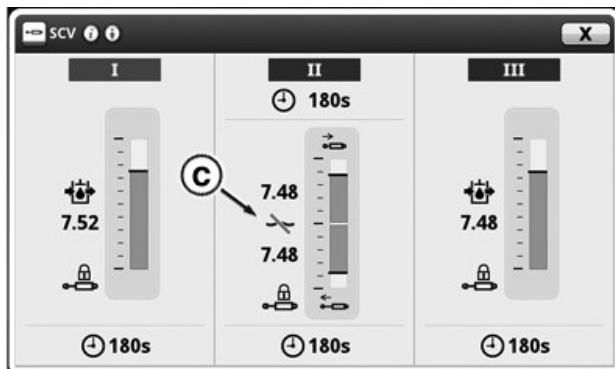
TS36762,00001F3-19-04APR18

SCV Control Lever—Float Position



RXA0151815—UN—13APR16

Push SCV control lever (A) all the way forward (B) to lock the lever in float position. Lever and SCV remain in float position until lever is manually returned to neutral. Cylinder is free to extend or retract, letting implement follow ground contour. Set maximum desired flow rate with CommandCenter™, see Configure SCV – Standard Mode or Configure SCV – Independent Mode in this Operator's Manual section. Time detent setting is not active in float positions



RXA0131855—UN—19AUG13

If lever is in float position at engine start up, float function will be disabled (C) until lever is cycled to neutral.

Cycle cylinder fully in both directions after being used in the float position to ensure cylinder is filled with oil.

TS36762,00001F6-19-04APR18

Operator Presence Sensor

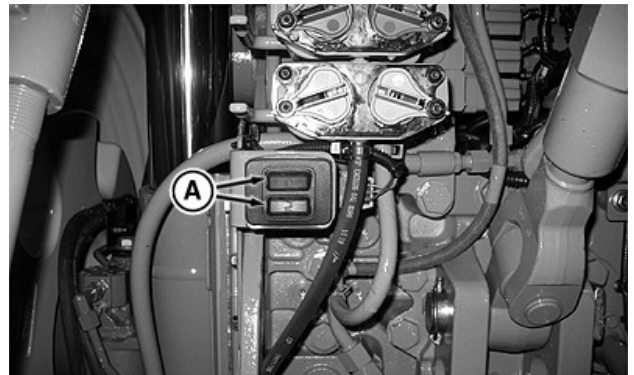
CAUTION: SCV does not disengage when operator leaves seat.

An audible warning sounds if operator leaves the seat with transmission in NEUTRAL, PTO engaged, or SCV operating in continuous or detent flow position. After 5 seconds, the audible warning stops.

TS36762,00001F7-19-21NOV16

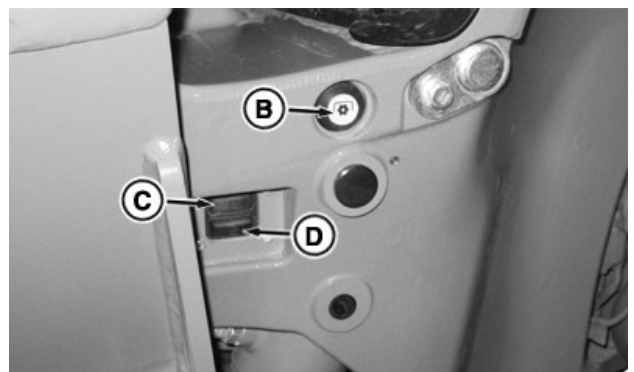
Hitch, SCV and PTO External Switches

CAUTION: Prevent injury or damage caused by inadvertent tractor movement. Place transmission in PARK position before using external raise/lower switches. Stay clear of interference points when using external raise/lower switches.



RXA0112400—UN—21DEC10

Tractors without fender extensions have external hitch raise and lower switches (A) mounted on valve stack.



RXA0143012—UN—26JUN14

Tractors equipped with front hitch may have front mounted external raise (C) and lower (D) switches. Tractors with front PTO may have external front PTO switch (B).

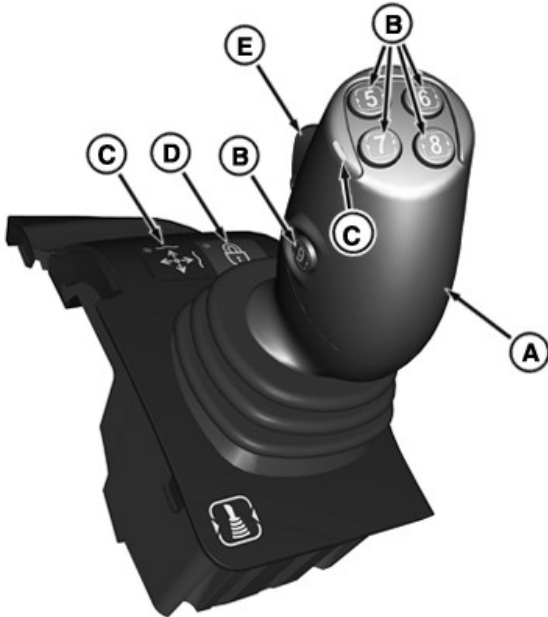
TS36762,00001F8-19-21NOV16

Operate SCVs With CommandARM™ Joystick (If Equipped)



RXA0133735—UN—17JUL13

- The Control Setup icon appears around Controls that may be setup to control other functions. Review the Controls Setup page to verify the function of each control.



RXA0133920—UN—11NOV13

- The axes of the joystick (A) operates combinations of programmed front or rear SCV functions.
- Tractors equipped with e23™ transmissions can select gear upshift (button 5) (B) and downshift (button 7) (B) for their joystick buttons on top of the lever.
- Joystick activation indicator light (C) is illuminated when joystick is active.
- Joystick lock (D) locks out electro-hydraulic functions for SCV assigned to Joystick.
- Rocker switch (E) operates combinations of programmed SCV functions.
- The operator can assign an SCV to a joystick axis but still be able to switch between an SCV control lever and the joystick control lever.
- The joystick overrides the SCV control lever of the SCV assigned to its axes when the joystick is enabled.
- Move joystick to the right twice in brief succession beyond the point of resistance and hold it there. This activates the bucket shake function. (Only when joystick loader mode setting is ON.)

- Push the joystick all the way forward and engage in detent to activate the float position. The joystick lever remains in the detent until it is pulled back. (Detent does not function in loader mode.)
- In Loader mode, time detents for SCVs assigned to the joystick axes cannot be adjusted, **only flow detents can be adjusted for those SCVs.**

TS36762,00002A2-19-25JUL18

CommandARM™ Joystick (If Equipped) - Custom Setup



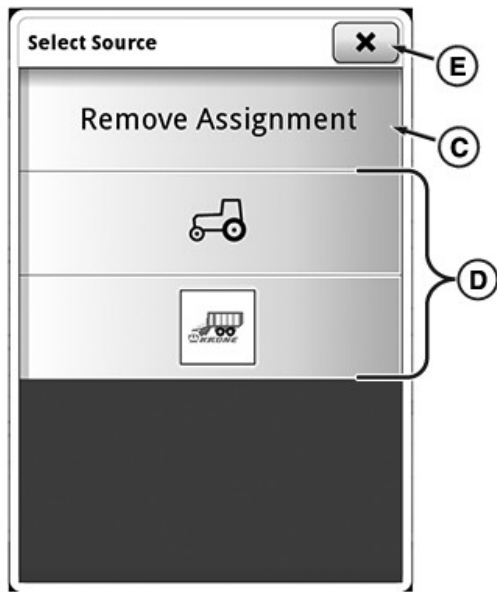
RXA0133715—UN—16JUL13

- Press **Controls Setup Shortcut Button** on Navigation Bar.



RXA0156213—UN—16DEC16

- Select Joystick (A).
- Select desired reconfigurable assignment (B)

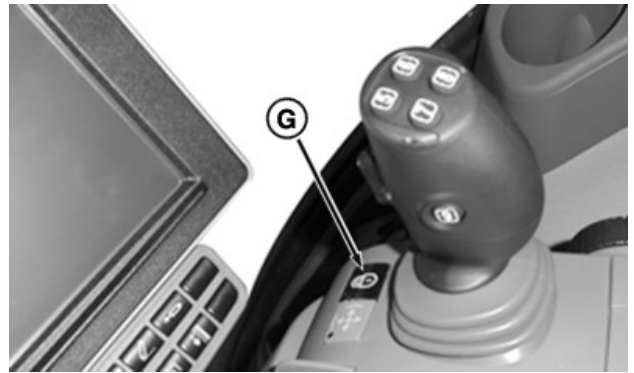


RXA0156214—UN—16DEC16

4. Select Source (D).

To remove assignment, select Remove Assignment button (C).

To cancel assignment process, selecting close button (E).



RXA0156242—UN—16DEC16

6. Unlock Joystick with Joystick Unlock/Lock button (G).

Default assignments will activate automatically.

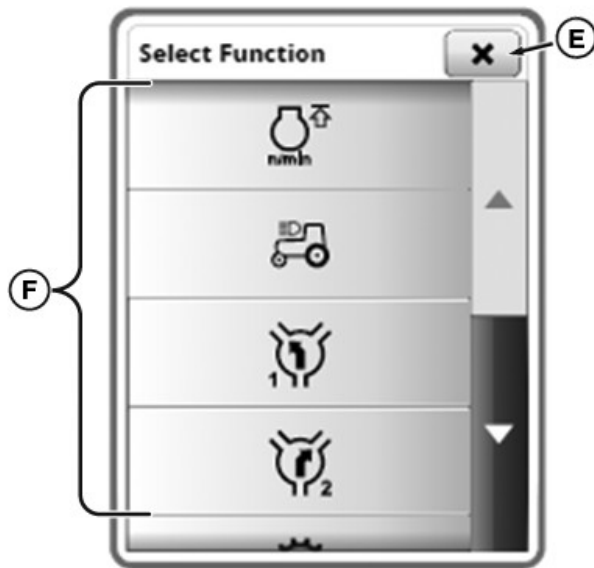


(H)

RXA0156241—UN—16DEC16

7. Select custom button (H) button to activate manually set assignments.

TS36762,00002A3-19-24JAN17

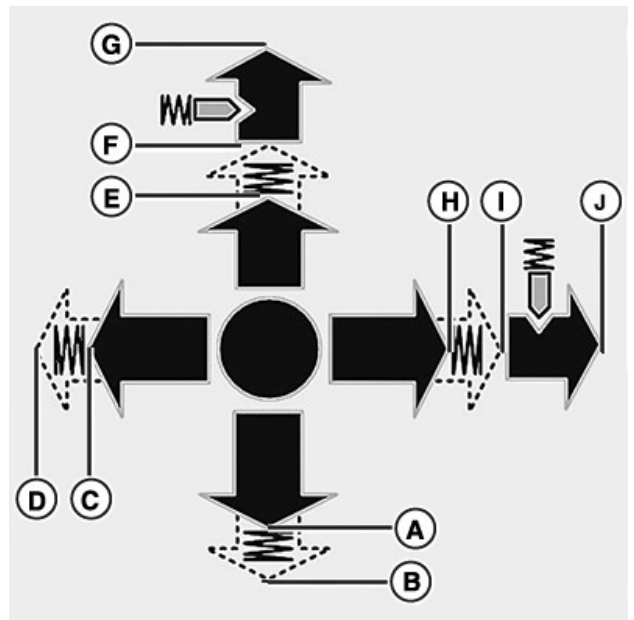


RXA0156215—UN—16DEC16

5. Select Function (F).

To cancel assignment process, selecting close button (E).

CommandARM™ Joystick (If Equipped) - Layout and Joystick Lever Functions



RXA0155031—UN—18OCT16



RXA0155032—UN—18OCT16

NOTE: The description of the joystick movements are made with the assumption that the hoses are connected so that extend is pulling the joystick back, retract is pushing the joystick forward. Moving the joystick to the left is extend and retract is to the right.

SCV and Joystick Flow Response Setting

SCV and Joystick response can be set to three different response curves: Linear, Progressive and Combination.

- **Linear** means that the flow rate of the SCV corresponds to the distance traveled by the SCV control lever/joystick lever.
- **Progressive** means that initially the flow rate of the SCV is less than that traveled by the SCV control lever/joystick lever (giving a more sensitive start to the movement).
- **Combination** is an intermediate stage between the two settings described above.



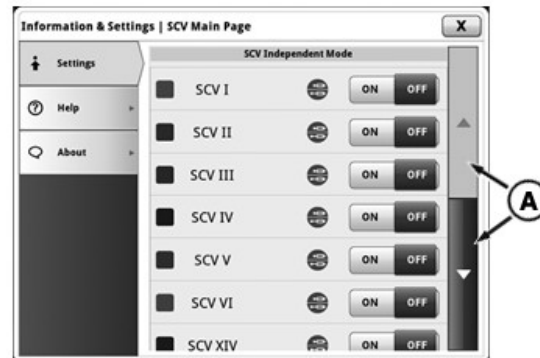
RXA0133709—UN—16JUL13

1. Press **SCV Shortcut Button** on Navigation Bar.



RXA0130326—UN—11JAN13

2. Press **Advanced Settings Icon**.
3. Press **Settings Tab**.

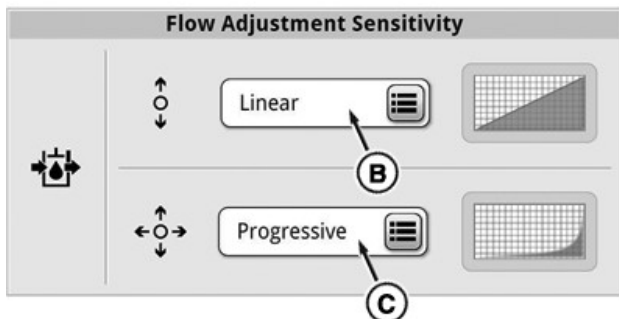


RXA0137874—UN—18DEC13

- A Pull joystick back to extend.
- B Pull joystick back **beyond** the point of detectable resistance to extend detent.
- C Move joystick to the left to extend.
- D Move joystick to the left **beyond** the point of detectable resistance to extend detent.
- E Push joystick forward to retract.
- F Push joystick forward **beyond** the point of detectable resistance to retract detent.
- G Push joystick all the way forward and engage in detent to activate the float position.
- H Move joystick to the right to retract.
- I Move joystick to the right **beyond** the point of detectable resistance to retract detent.
Move the multi-function lever to the right twice in brief succession beyond the point of resistance and hold it there. This activates the bucket shake function.
- J Move joystick all the way to the right and engage in detent to activate the float position.
- K Move rocker switch up **beyond** the point of detectable resistance for extend detent.
- L Move rocker switch down **beyond** the point of detectable resistance for retract detent.

Operator can set any SCV on any axis or rocker switch of the joystick.

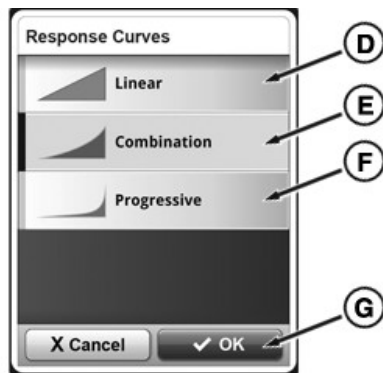
NOTE: Some functions shown may not be available depending upon what options the tractor is equipped with.



RXA0137875—UN—18DEC13

TS36762,00002A5-19-23NOV16

4. Using scroll bar (A), scroll down to flow adjustment sensitivity and press either SCV control lever (B) or joystick response (C) to adjust SCV response or joystick response.



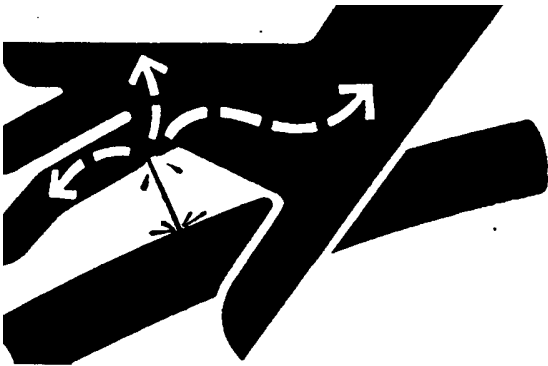
RXA0137876—UN—18DEC13

5. Then choose either Linear (D), Combination (E) or Progressive (F), then confirm using the OK button (G).

TS36762,00002A1-19-23NOV16

Hydraulic Connections

Connect Rear Hydraulic Hoses



X9811—UN—23AUG88

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene can result.

Hydraulic hoses can fail due to physical damage, kinks, age, and exposure. Check hoses regularly.

Prevent possible personal injury and unintentional implement movement. Move SCV levers to neutral position and shut off engine before connecting or disconnecting hydraulic hoses and attaching or detaching implements.

IMPORTANT: Dirt, dust, or other foreign material can damage hydraulic system. Thoroughly clean hydraulic hoses and SCVs before connecting implement to tractor.

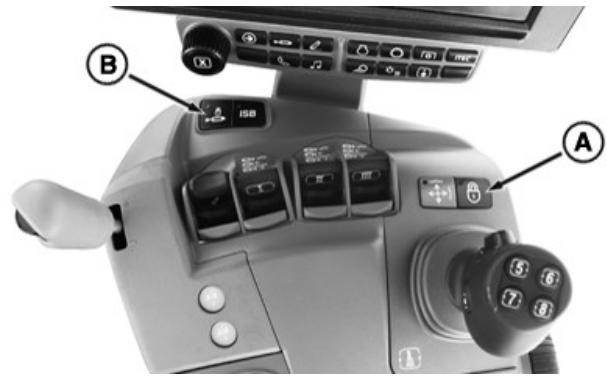
Steam cleaning or using a high pressure washer in the area around the SCV connections and electronics can damage equipment. Any pressure washer exceeding 6895 kPa (69 bar) (1000 psi) should be kept a minimum of 200 mm (8 in) away from connections.

NOTE: See Attaching Implement and Control System in TouchSet™ Depth Control Section of this Operator's Manual.

Connect Hydraulic Hoses

NOTE: Correctly connect remote hydraulic hoses to couplers. If hose connections are reversed, machine does not respond to system controls as expected. See Connect or Disconnect Hydraulic Hoses - Mid-Mount or Front SCVs in this section of this Operator's Manual.

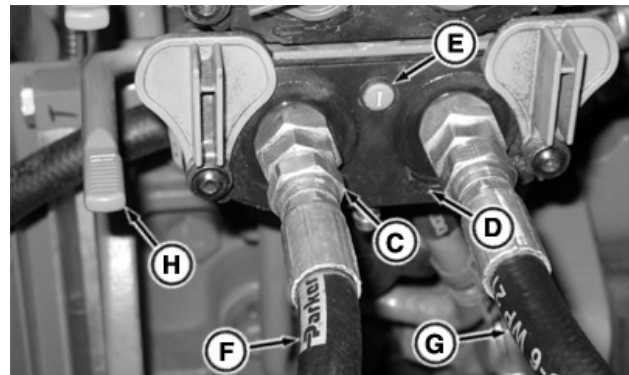
1. Lock out SCV controls. On:



RXA0155041—UN—18OCT16

- Joystick, press joystick lock (A).
- CommandARM™, press SCV control lever lock (B).

2. Clean dust covers. Rotate dust covers up to expose couplers.



RXA0131030—UN—19FEB13

- Check if symbols on coupler identification plate (C) or (D), indicating cylinder movement, match cylinder travel direction.
- When using SCV with single-acting cylinders, plug hose into extend side of coupler (F). When connecting double-acting cylinders, extend side is left side and retract is right side (G).
- Push hoses firmly into couplers.

Port	SCV Location		
	Front	Rear	Mid-Mount
Left	Extend		Retract
Right	Retract		Extend

NOTE: SCVs are color coded for easier identification. Color coded hose identification kits are available from your John Deere dealer.

SCV Numbers And Corresponding Colors	
SCV Number	Color
I	Green
II	Blue

SCV Numbers And Corresponding Colors	
SCV Number	Color
III	Brown
IV	Black
V	Violet
VI	Gray

TS36762,00002A6-19-01SEP17

Disconnect Rear Hydraulic Hoses

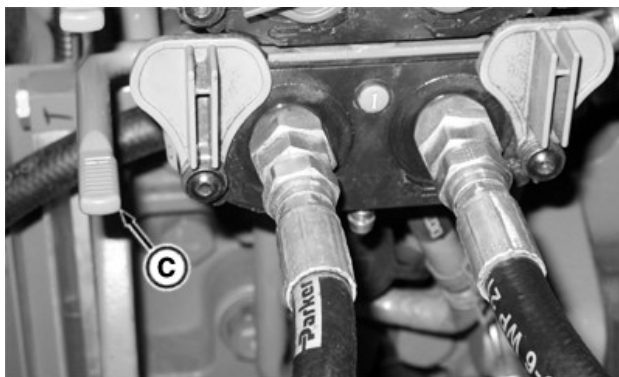
CAUTION: Prevent possible personal injury and unintentional implement movement. Move SCV levers to neutral position and shut off engine before connecting or disconnecting hydraulic hoses and attaching or detaching implements.

1. Lower implement to ground before disconnecting hydraulic hoses.
2. Relieve hydraulic pressure in hoses by moving SCV control lever or joystick (If Equipped) to float position for a few seconds while engine is running.
3. Lock out SCV controls. On:



RXA0155042—UN—18OCT16

- Joystick, press joystick lock (A).
- CommandARM™, press SCV control lever lock (B).



RXA0160002—UN—26JUN17

Couplers with Release Levers

IMPORTANT: Forcing or jerking SCV hoses when disconnecting can damage hose ends and SCV couplers. If hoses cannot be removed easily, relieve pressure in hydraulic system by moving SCV lever to float position for a few seconds with engine running and using release lever (C) to extract hoses.

4. Push SCV hose release lever down slightly to relieve any pressure buildup of trapped oil before removing hoses.
5. Pull hoses straight out from couplers.
6. Clean coupler area before closing dust cover.
7. Rotate dust covers down to cover couplers.

TS36762,00001FB-19-01SEP17

Connect or Disconnect Hydraulic Hoses - Mid-Mount or Front SCVs

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene can result.

Prevent possible personal injury and unintentional implement movement. Move SCV levers to neutral position and shut off engine before connecting or disconnecting hydraulic hoses and attaching or detaching implements.

IMPORTANT: Hydraulic hoses can fail due to physical damage, kinks, age, and exposure. Check hoses regularly.

Any dirt, dust, or other foreign material can damage hydraulic system. Thoroughly clean hydraulic hoses and SCVs before connecting implement to tractor.

Steam cleaning or using a high pressure washer in the area around the SCV connections and electronics can damage equipment. Any pressure washer exceeding 6895 kPa (69 bar) (1000 psi) should be kept a minimum of 200 mm (8 in) away from connections.

NOTE: See Attaching Implement and Control System in TouchSet™ Depth Control section of this Operator's Manual.

Front and mid-mount SCVs (if equipped) are operated by joystick or SCV lever. Optional equipment available: Loader or front hitch with hydraulic outlets.

1. Lock out SCV control levers. On:



RXA0155045—UN—18OCT16

- Joystick, press Joystick lock (A).
- CommandARM™, press SCV control lever lock (B).

2. Clean dust caps/plugs.

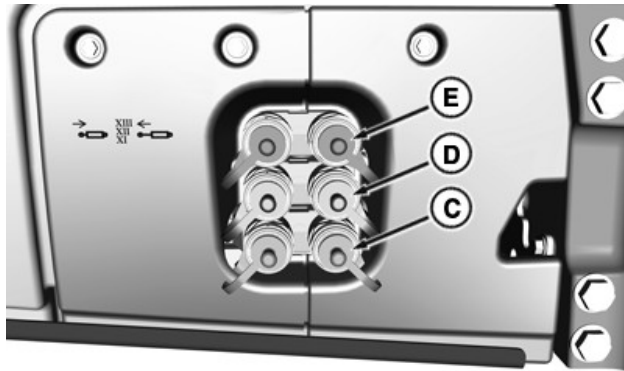
IMPORTANT: Correctly connect remote hydraulic hoses to couplers. If hose connections are reversed, machine does not respond to system controls as expected. Mid-mount SCV couplers are arranged opposite of front hitch and rear SCV stack couplers.

SCV		
Location	Action	
	Left Port	Right Port
Rear	Extend	Retract
Front Hitch		
Mid-Mount	Retract	Extend

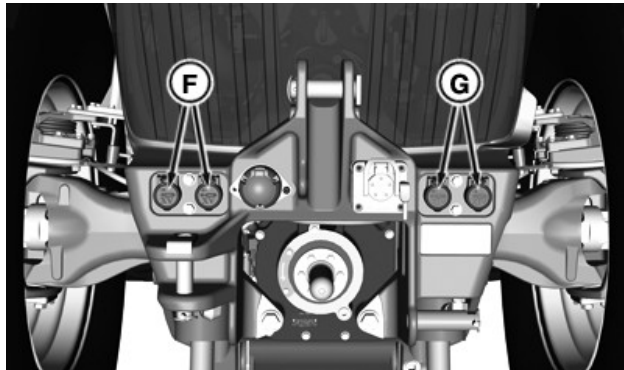
3. Pull off caps/plugs to expose couplers.

4. Push hoses firmly into couplers.

IMPORTANT: If equipped with loader, see procedure in loader Operator's Manual to identify correct hose connections.



RXA0129741—UN—12APR13



RXA0135061—UN—20AUG13

SCV		
Number	Color	Front Function
XI	Green	Mid-Mount (C)
XII	Blue	Mid-Mount (D)
XIII	Brown	Mid-Mount (E)
XIV	Black	Front (G)
XV	Violet	Front (F)

Midstack SCV Flow (Approximate) ^a	
Settings	Output L/min (gpm)
0.1 ^b	—
1.0	5.8 (1.5)
2.0	17.8 (4.7)
3.0	29.9 (7.9)
4.0	41.9 (11.1)
5.0	53.9 (14.2)
6.0	65.9 (17.4)
7.0	77.9 (20.6)
8.0	90.0 (23.7)
9.0	102.0 (26.9)
10.0	126.0 (33)

^aAt 2100 rpm and no mass load at point of use.

^b0.1 = Minimum Flow Setting

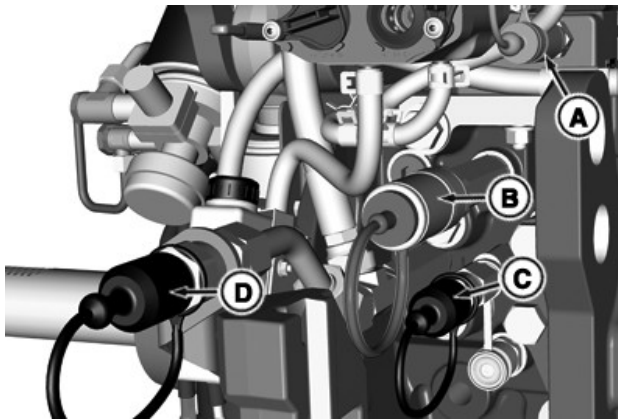
TS36762.00001FC-19-01SEP17

Use Load-Sense Hydraulic System (Power Beyond)

Power beyond is used as a pressure/flow source for auxiliary functions equipped with independent flow control valves. Use power beyond when:

- Tractor SCV control is not needed
- When Implement control valve generates an external load sense signal to communicate flow demand to the pump.
- No other SCV outlet is available

Power beyond functions require a load sense signal to regulate pump pressure, therefore, a load sense hydraulic line is needed. Certain equipment can require modification. Special hydraulic couplers are available from your John Deere dealer.



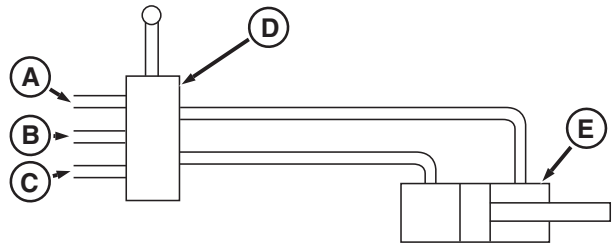
RXA0155049—UN—20OCT16

IMPORTANT: Motors without over-running check valves should be connected to motor return coupler (C, D) to prevent return line pressurization when SCV is returned to neutral.

Connect hoses to load sense coupler (A), pressure coupler (B), and return coupler (C or D).

TS36762,00001FD-19-21NOV16

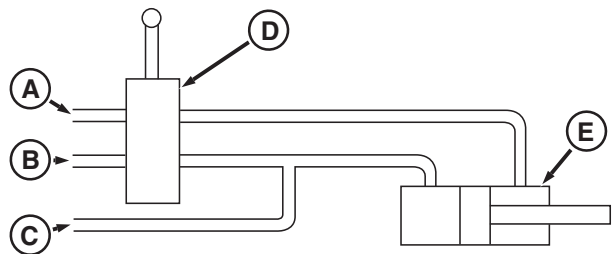
Examples Using Load-Sensing Hydraulic System—Power-Beyond



RXA0138783—UN—28JAN14

Example 1 —Control valves with a load-sense provide a load-sense signal to hydraulic system and can be operated manually or by solenoids.

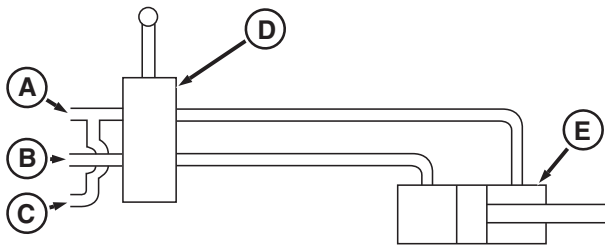
NOTE: Example 1 is the preferred practice.



RXA0138782—UN—28JAN14

Example 2 —Control valve directs oil into extend or retract circuits. Connect load-sense line to circuit requiring pressure. An example is a wagon lift cylinder with load supported by mechanical stops in full down position. Load-sense signals pump when increased pressure is needed. Pressure remains low when load is supported by mechanical stops.

IMPORTANT: Circuit allows cylinder "leak-down" through load-sense line (C). If leakage is not acceptable for operation, use Example 3.

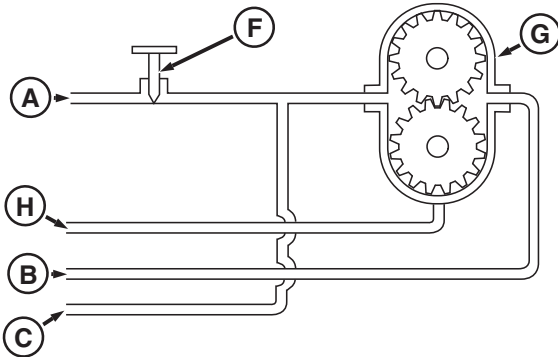


RXA0138269—UN—17JAN14

Example 3—Control valve directs oil into extend or retract circuits, either requiring high pressure. Connect load-sense line to pressure line before control valve.

IMPORTANT: System will maintain a maximum pressure of 20000 kPa (200 bar) (2900 psi) as long as power-beyond hoses are connected.

An example is a folding implement, where pressure is needed to extend or retract cylinders.



RXA0138270—UN—17JAN14

- A— Pressure Line
- B— Return Line
- C— Load-Sense Line
- D— Control Valve
- E— Cylinder
- F— Pressure-Compensated Flow Valve
- G— Hydraulic Motor
- H— Motor Case Drain (Sump Line)

Example 4—Pressure-compensated flow control valve is used to regulate hydraulic motor speed. Connect load-sense line to pressure line after control valve.

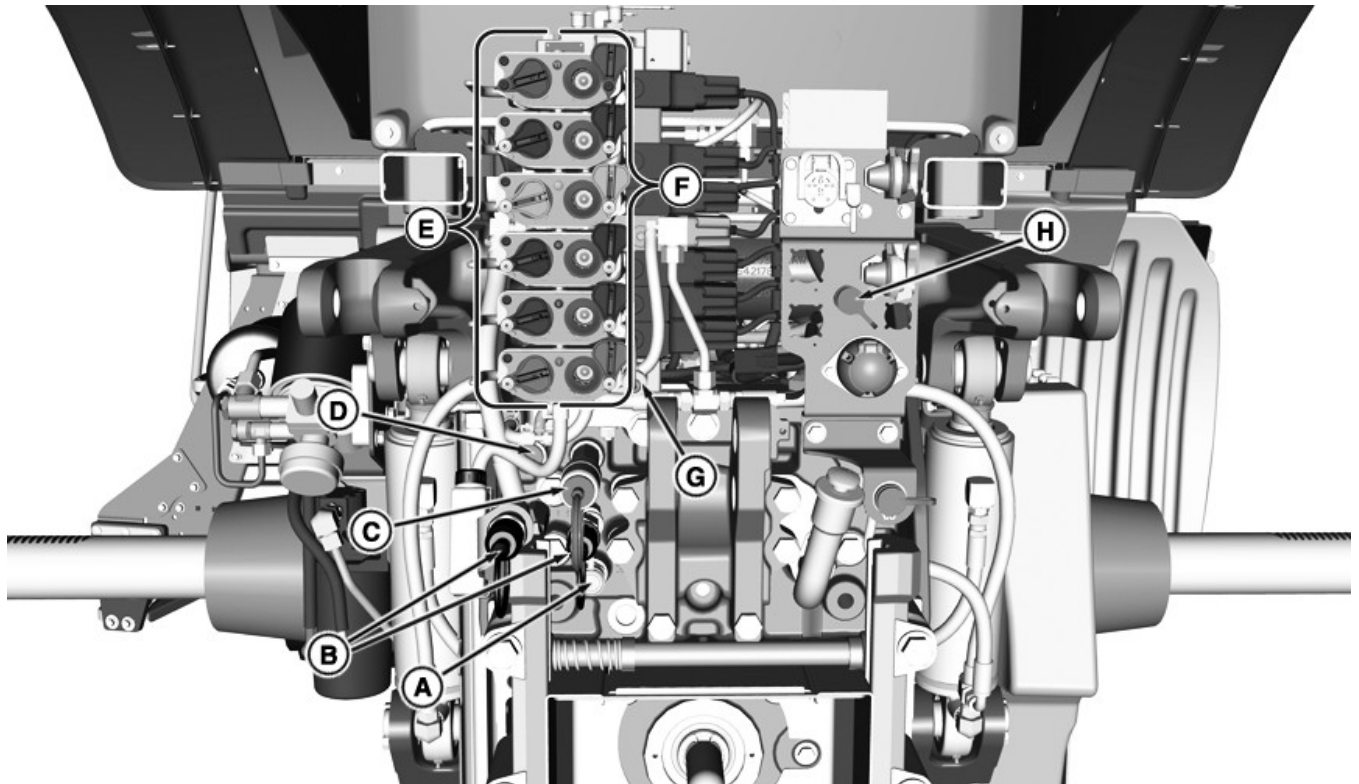
NOTE: Motor speed can fluctuate when other functions cause system pressure change. Minimize fluctuations by installing a pressure-compensated flow control valve.

NOTE: For Ag high flow, it is recommended that the hydraulic motor be connected to the top SCVs (85 cc high flow pump).

High flow scraper hydraulics is not recommended for motor application.

RD47322,00002D5-19-20FEB18

Implement Hydraulic Connections



RXA0155046—UN—21NOV16

Select Hydraulic Motors:

Select smallest displacement motor recommend for function to reduce power loss and heating of hydraulic oil, especially if other functions force pump to operate at high pressure.

- Fully open in-line valves.
- Remove in-line orifices.
- Close open-center bleed screw (if equipped).

Tractors not equipped with power beyond or auxiliary return couplers:

- Connect pressure line to SCV retract coupler (F).
- Connect return line to SCV extend coupler (E).
- Use "special return hose tip" to prevent flow checking of return line and back flow if inadvertently reversed.

Tractors equipped with auxiliary motor return:

- Connect pressure line to SCV retract coupler.
- Connect return line to return coupler (B).
- Special return hose tip is not required, but acceptable to use.

Adjust/set motor speed with SCV flow control. This ensures pump only operates at pressure required.

Shut off motor by moving lever to float. This protects motor from potential seal damage due to over pressure if returning to SCV, or cavitation if using motor return couplers.

Operate motors with power beyond:

Power beyond connection requires a separate flow control valve.

- Connect pressure line to pressure coupler (C or D).
- Connect return line to return coupler.
- Connect load sense line to coupler (G).

If sensed pressure is upstream of flow control valve, pump operates at maximum pressure all the time.

If sensed pressure is between control valve and motor, pump operates at load pressure.

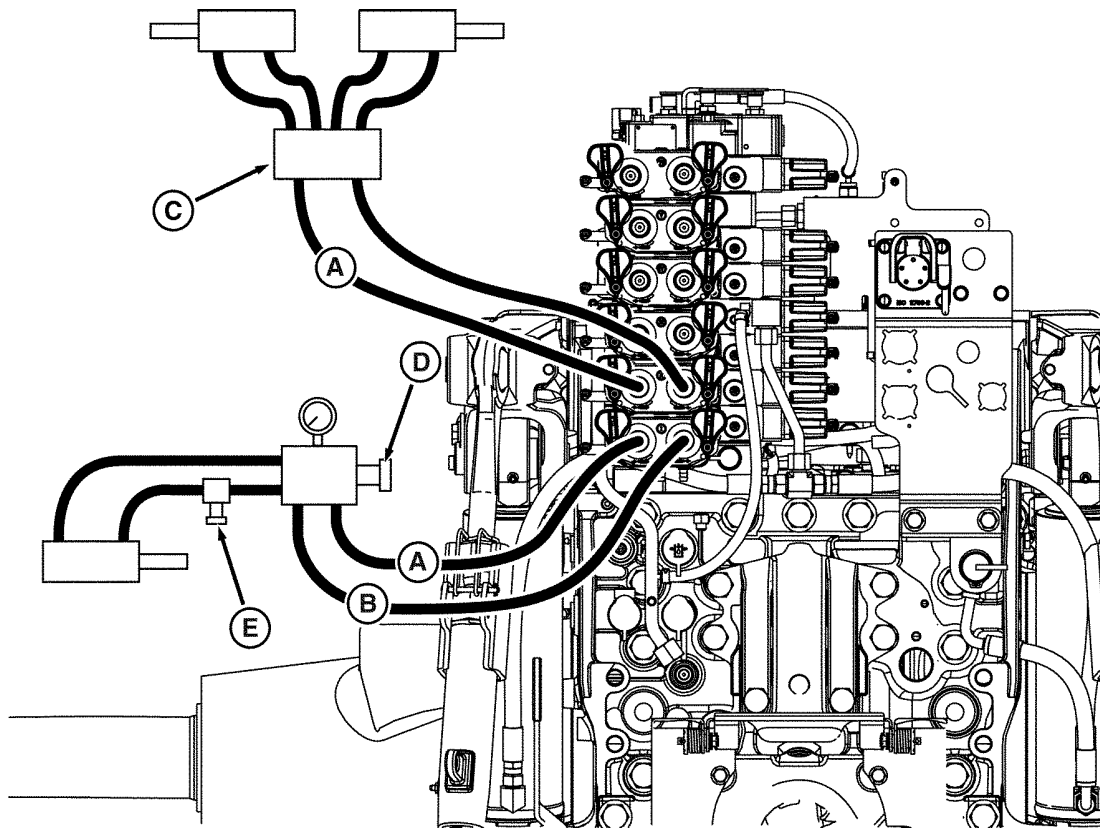
Motor Case Drain:

Some motors have a separate case drain line to relieve internal leakage. Connect to sump coupler (A) to direct oil to sump.

Activate motor by moving lever forward to retract detent.

TS36762,0000201-19-21NOV16

Implement Connections - Active Down Pressure



RXA0114390—UN—25MAY12

A— Extend Coupler Line
B— Retract Coupler Line
C— Selector Valve

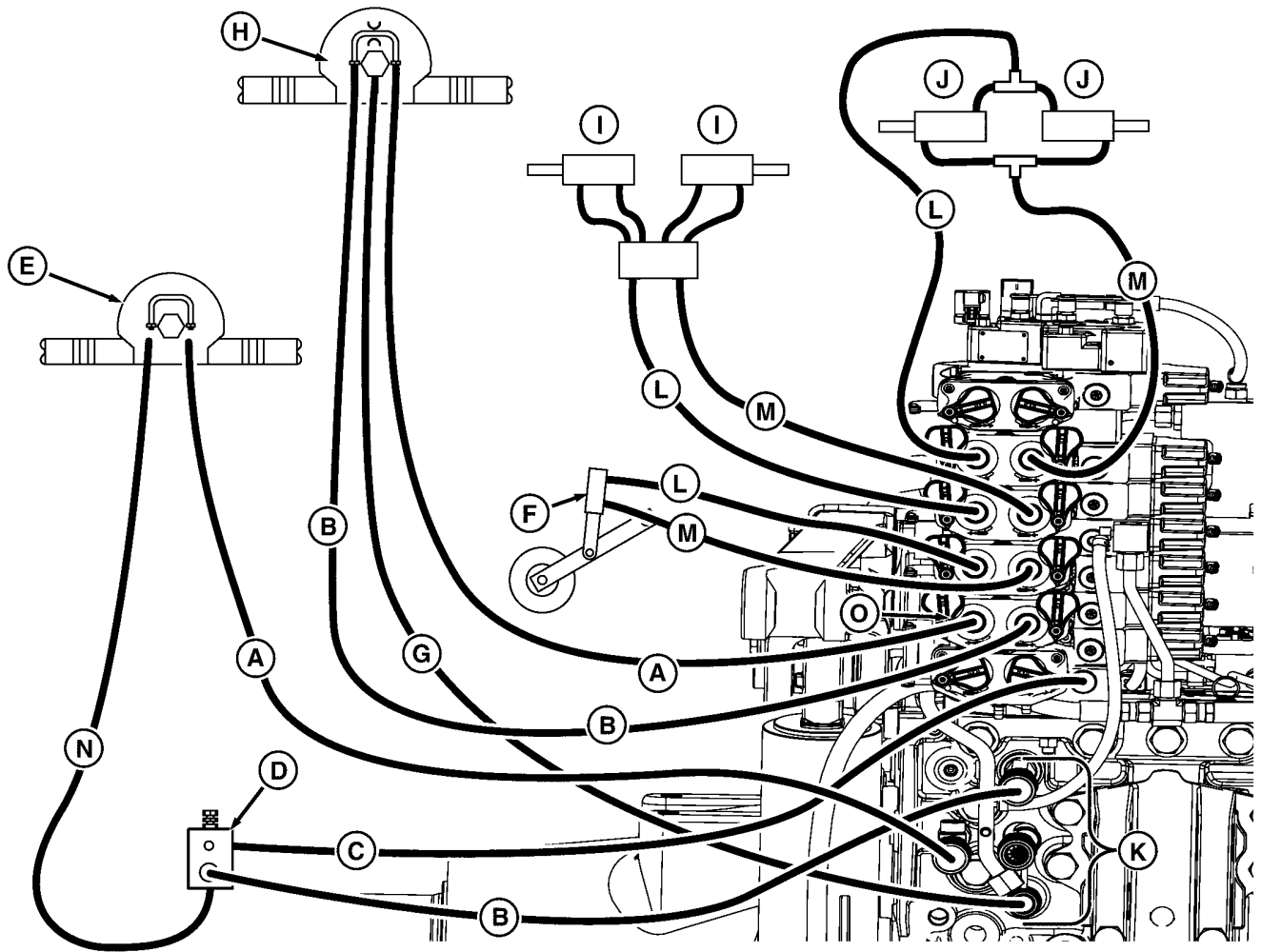
D— Pressure Control Valve
E— Implement Transport Lock Valve

IMPORTANT: Using active down force while operating hydraulic motors can cause overheating. Keep number of motors in operation to a minimum when active down force is in use.

For implements using active down force (such as grain drills or air seeders), connect implement as shown in diagram. Set SCV flow control to continuous. Move SCV lever to retract detent position.

KT81203,00004FD-19-06JAN17

Implement Connection - Vacuum Motors with Power Beyond and Motor Case Drain



RXA0113667—UN—11FEB11

A— Return Line
 B— Pressure Line
 C— Load Sense Line
 D— Control Valve
 E— Vacuum Motor
 F— Frame Lift Wheel Cylinder
 G— Motor Case Drain Line
 H— Vacuum Motor

I— Marker Cylinders
 J— Folding Cylinders
 K— Power Beyond Ports
 L— Extend Coupler Line
 M— Retract Coupler Line
 N— Controlled Flow Line
 O— Special Return Hose Tip

Diagram shows connections for possible planter application. Two hydraulic vacuum motors, marker cylinders (I), folding cylinders (J), and frame lift wheels are connected to system.

Vacuum motor (E) is powered from power beyond (K) through pressure compensated control valve (D). Load sense line (C) from valve, attached to load sense coupler (Y), signals hydraulic pump to control pump pressure.

Second vacuum motor (H) is equipped with motor case drain line (G) attached to sump coupler (X) to direct excess pressure oil from inside pump to move directly to sump.

Pressure oil (A) for second motor comes from SCV retract coupler. These connections allow SCV lever to be moved to float without going through neutral position when shutting motor off. If lever is moved to neutral motor stops abruptly. Motor seals can be damaged.

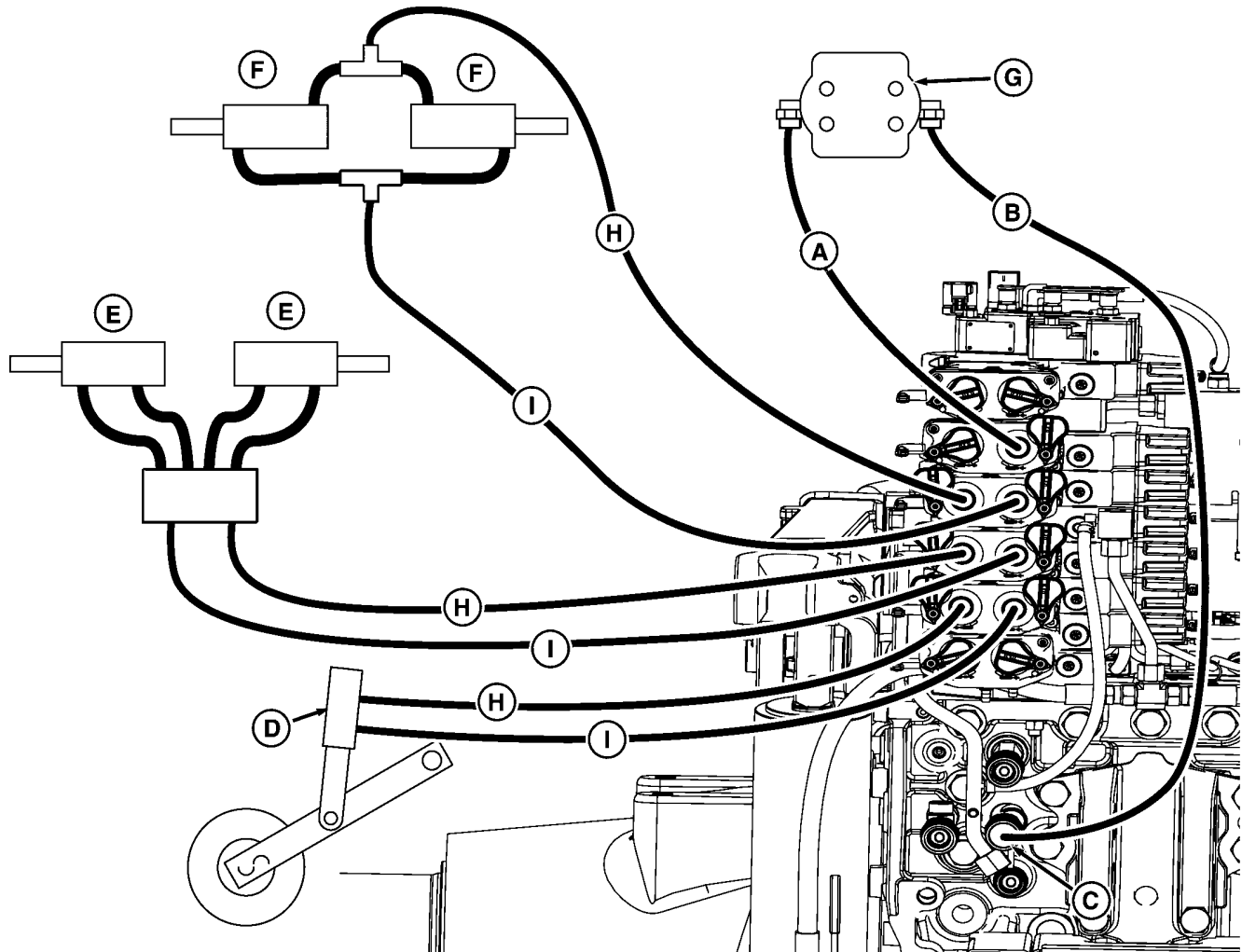
When motor return oil is routed to an SCV, a special return hose tip (O) prevents high pressure oil flowing back into motor and causing seal damage.

Folding (J), marker (I), and frame lift wheel cylinders (F) are connected to SCVs in normal manner.

See implement Operator's Manual or dealer for additional information.

KT81203,00004FE-19-29NOV16

Implement Connections - Hydraulic Motor with Motor Return



RXA0113668—UN—11FEB11

A— Pressure Line
B— Return Line
C— Motor Return Coupler
D— Raise/Lower Cylinder
E— Marker Cylinders

F— Folding Cylinders
G— Hydraulic Motor
H— Extend Coupler Line
I— Retract Coupler Line

Diagram shows connections for possible planter applications. Single hydraulic motor, marker arms (E), folding arms (F), and frame lift wheels are connected to system.

Pressure oil from SCV retract receptacle provided pressure oil (A) to hydraulic motor. Return oil (B) is routed to sump coupler (C). These connections allow SCV lever to be moved to float without going through neutral position when shutting motor off. If lever is

moved to neutral motor stops abruptly. Motor seals can be damaged.

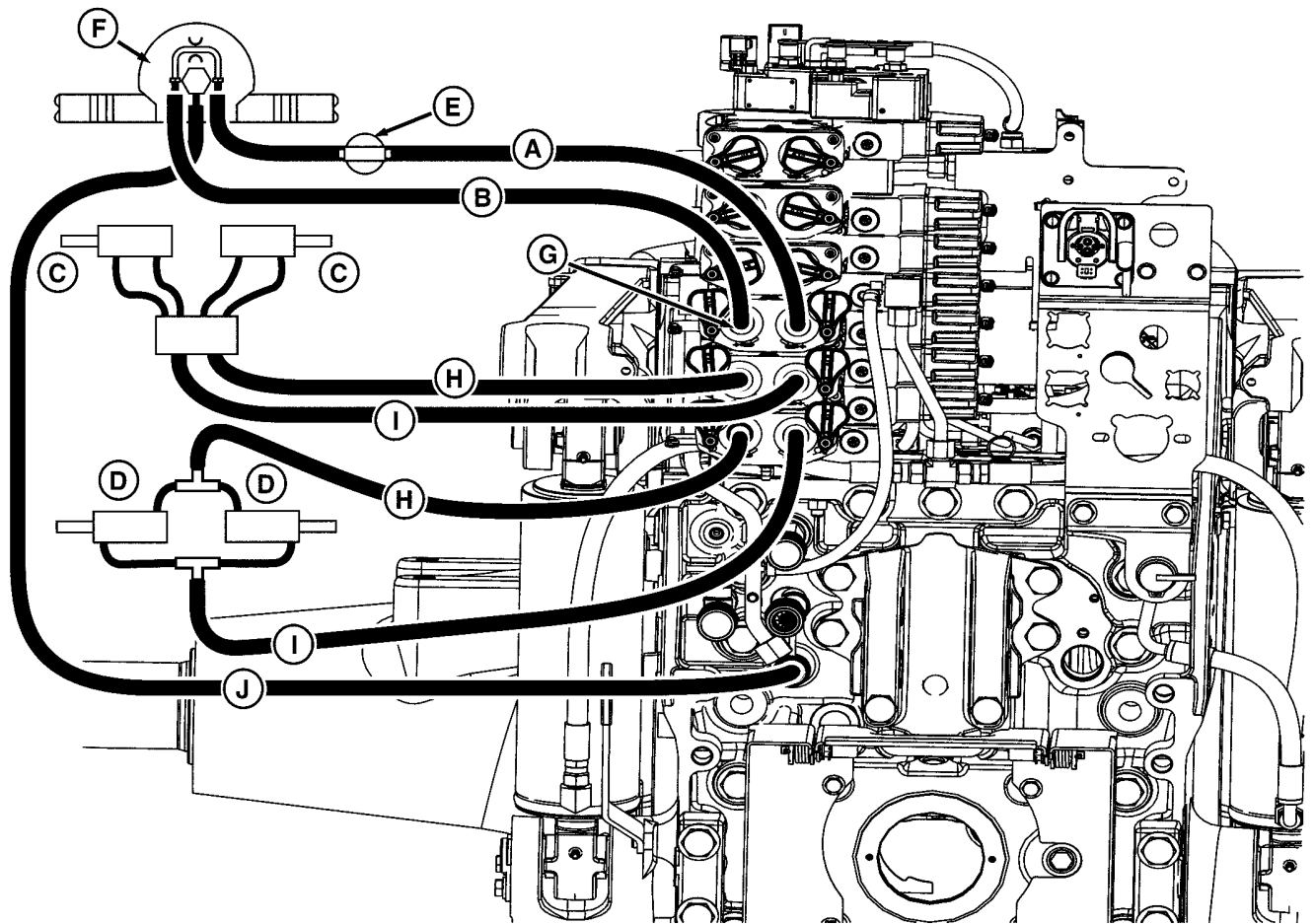
Load sensing is provided direct from SCV controlling motor.

Folding (F) marker (E), and frame lift wheel (D) cylinders are connected to SCVs in normal manner.

See implement Operator's Manual or dealer for additional information.

KT81203.00004FF-19-29NOV16

Implement Connections - Vacuum Motor with Motor Return Tip



RXA0113669—UN—11FEB11

A— Pressure Line
 B— Return Line
 C— Marker Cylinders
 D— Fold Cylinders
 E— Flow Control Valve

F— Vacuum Motor
 G— Special Return Hose Tip
 H— Extend Coupler Line
 I— Retract Coupler Line
 J— Case Drain Line¹

Diagram Shows connections for possible planter applications. Single hydraulic vacuum motor, marker arms (C), and folding arms (D) are connected to system.

Pressure oil (A) from vacuum motor (F) comes from SCV retract receptacle through pressure compensated control valve (E). Valve is opened fully and flow is controlled by SCV. Control valve does not provide load sense signal to hydraulic pump. If control valve is used to control flow, restriction increases pump pressure above that needed to operate pump. Increased pressure can cause overheating.

Return oil (B) is routed to extend receptacle. These SCV connections allow SCV lever to be moved to float without going through neutral position when shutting

motor off. If lever is moved to neutral motor stops abruptly. Motor seals can be changed.

When motor return oil is routed to an SCV, a special return hose tip (G) prevents high pressure oil flowing back into motor and causing seal damage.

On motor with a case drain, case drain line (J) is routed to sump coupler (X) to relieve excessive internal hydraulic pressure.

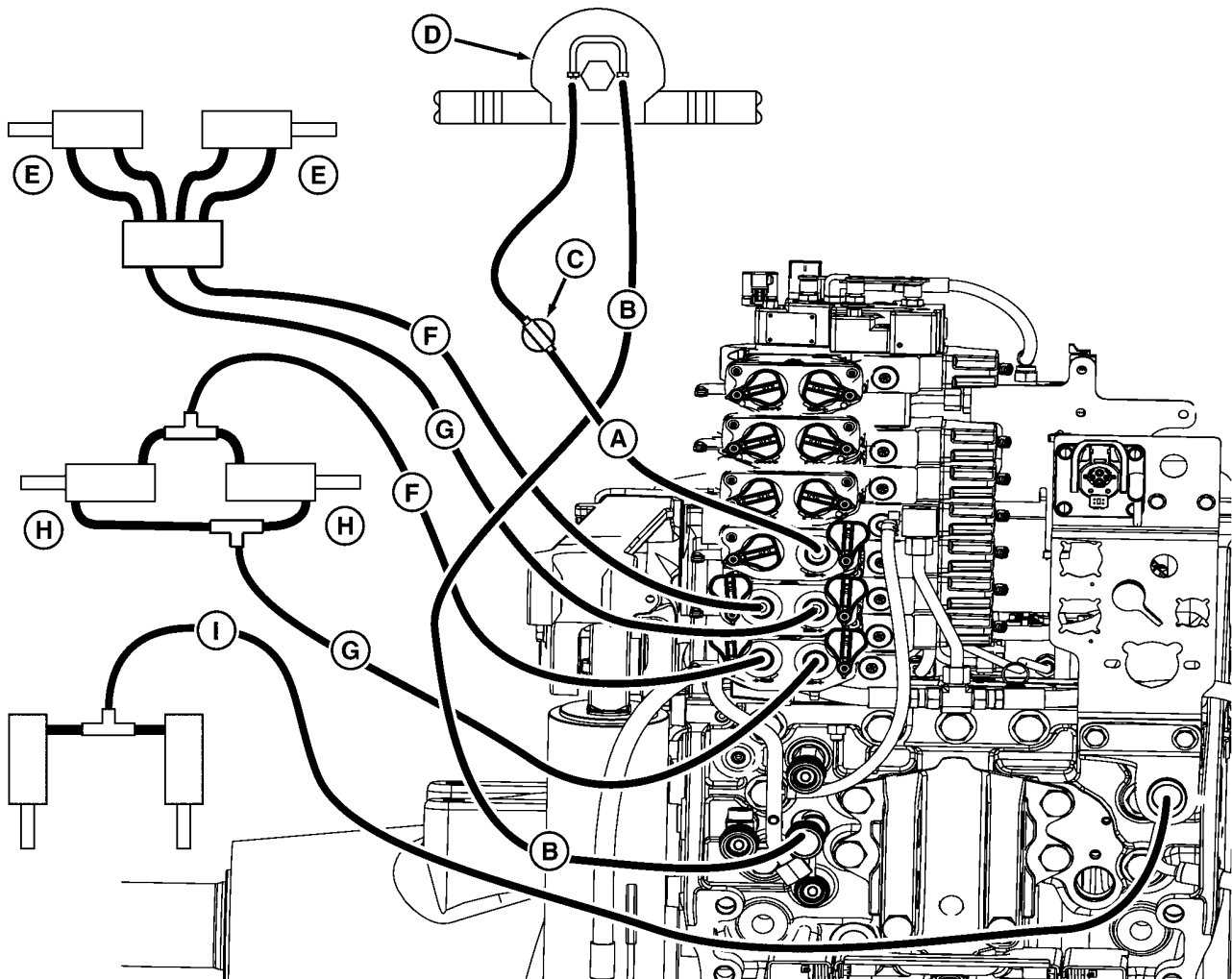
Folding (D) and marker (C) cylinders are connected to SCVs in normal manner.

See implement Operator's Manual or dealer for additional information.

KT81203,0000500-19-29NOV16

¹ For motor returns equipped with case drain only

Implement Connections - Hitch Auxiliary Raise in Parallel with Hitch Valve



RXA0113670—UN—11FEB11

A— Pressure Line
B— Return Line
C— Flow Control Valve
D— Vacuum Motor
E— Fold Cylinders

F— Extend Coupler Line
G— Retract Coupler Line
H— Marker Cylinders
I— Hitch Auxiliary Raise

Diagram shows connections for possible planter application. Single hydraulic vacuum motor, marker arms (H), and folding arms (E) are connected to system. Optional hitch auxiliary raise kit has been installed in parallel with hitch valve.

Pressure oil (A) for vacuum motor (D) comes from SCV retract receptacle through pressure compensated control valve (C). Valve is opened fully and flow is controlled by SCV. Controlled valve does not provide load sense signal to hydraulic pump. If control valve is used to control flow, restriction increases pump pressure above that needed to operate pump. Increased pressure can cause overheating.

Return oil (B) is routed to power beyond coupler. These connections allow SCV lever to be moved to float without going through neutral position when shutting motor off.

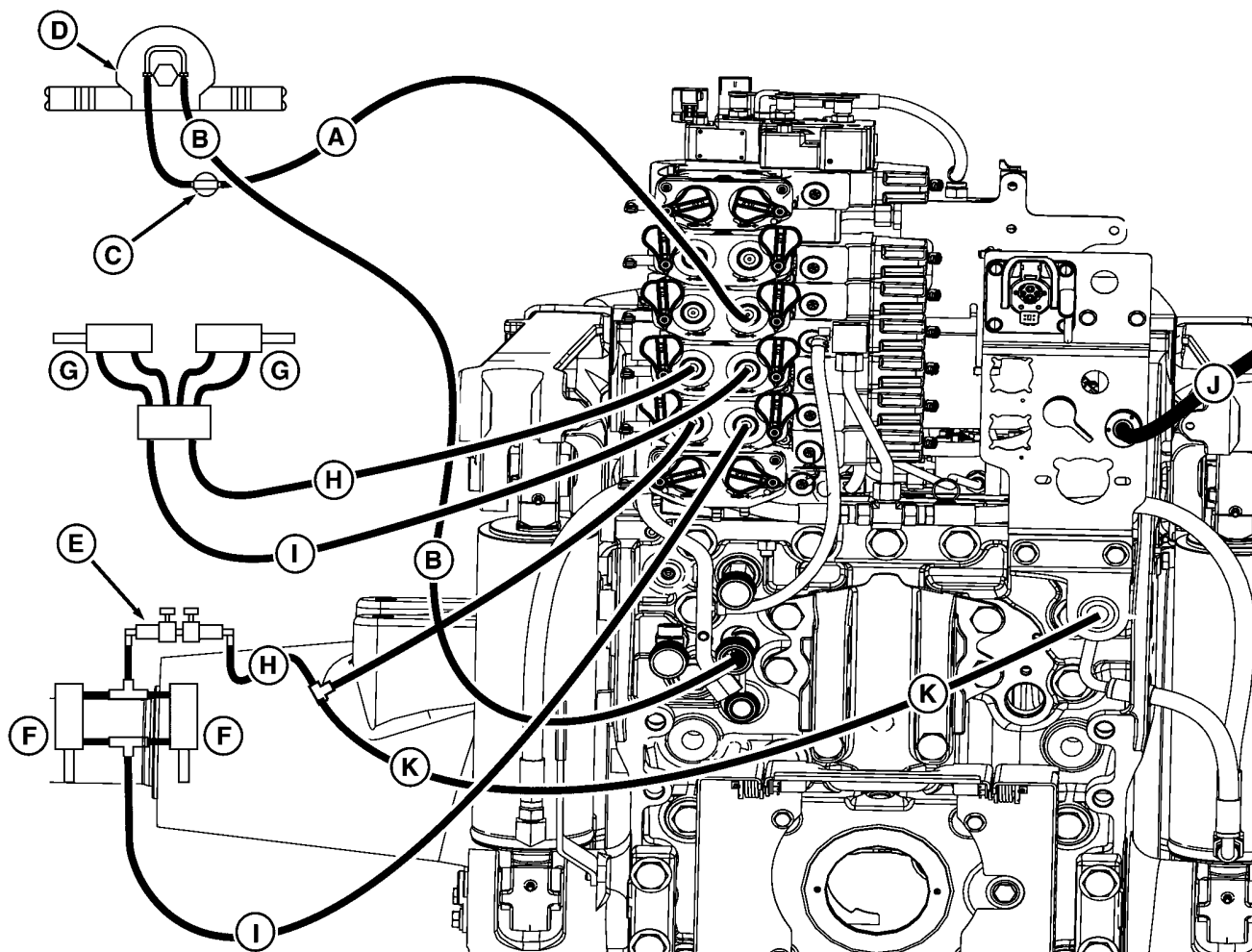
Hitch auxiliary raise is controlled by multi-function control lever on CommandARM.

Folding (D) and marker (C) cylinders are connected to SCVs in normal manner.

See implement Operator's Manual or dealer for additional information.

KT81203,0000501-19-29NOV16

Implement Connections - Hitch Auxiliary Raise in Parallel with SCV



Implement Connection Example 6 (SCV Controlled)

RXA0113671—UN—31MAR11

- A— Pressure Line
- B— Return Line
- C— Flow Control Valve
- D— Vacuum Motor
- E— Control Valve
- F— Hitch Auxiliary Raise

Diagram shows connection for possible planter application. Single hydraulic vacuum motor and marker arms (G) are connected to system. Optional hitch auxiliary raise kit has been installed in parallel with SCV I.

Pressure oil (A) for vacuum motor (D) comes from SCV retract receptacle through pressure compensated controlled by SCV. Control valve is used to control flow, restriction increases pump pressure above that needed to operate pump. Increased pressure can cause overheating.

- G— Marker Cylinder
- H— Extend Coupler Line
- I— Retract Coupler Line
- J— 9-Pin Connector with Harness
- K— Hitch Auxiliary Raise

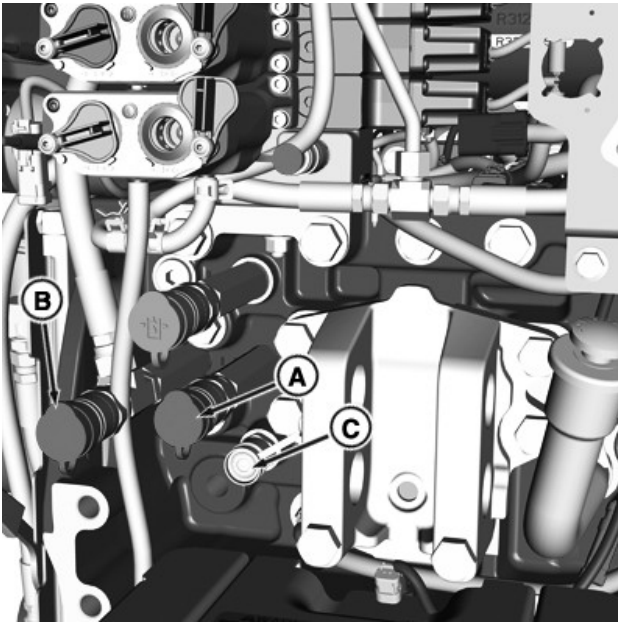
Return oil (B) is routed to power beyond coupler. These connections allow SCV lever to be moved to float without going through neutral position when shutting off motor.

Marker cylinders (G) are connected to SCV in normal manner.

See implement Operator's Manual or dealer for additional information.

KT81203,0000502-19-29NOV16

Hydraulic Motor Return and Case Drain Kits



RXA0155048—UN—20OCT16

Use as a motor case drain (C) for low pressure, low flow applications. Motor case drain is used when return oil flow may be too high for motor return port and could cause back pressure that can damage seals in motor. Motor return and case drain kits are available from your John Deere dealer.

Motor return couplers (A and B) are located below pressure couplers.

IMPORTANT: Motors without over-running check valves should be connected to motor return coupler (A, B) to prevent return line pressurization when SCV is returned to neutral.

Using motor return coupler prevents:

- Inadvertent reverse operation
- Pressurization of auxiliary function return line
- Potential flow checking of return-side SCV coupling

Examples of implements which cannot withstand high pressure applied to both couplers are:

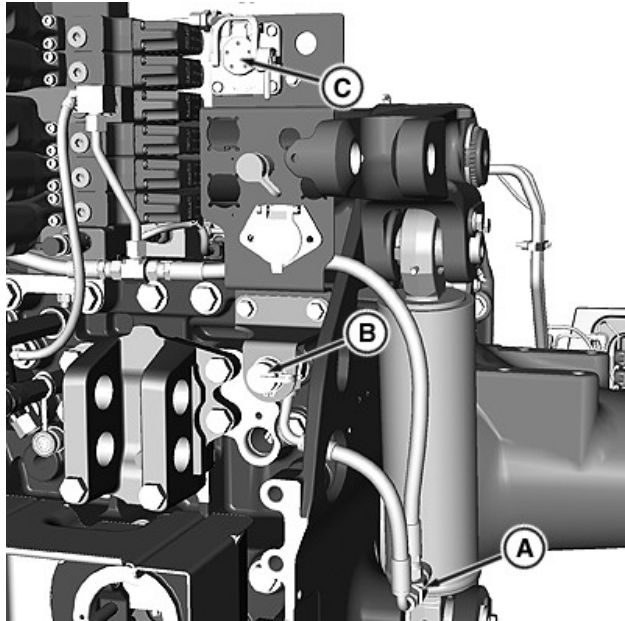
- Hydraulic motors which have return and case drain couplers connected. Failure of motor housing or shaft seals can result if return line is pressurized.
- Auxiliary control valves on implement can allow unexpected movement of cylinders or not function correctly if return line pressure is too high.

TS36762,0000200-19-21NOV16

Hitch Auxiliary Raise Kit

In some applications it is desirable to control a single

SCV and hitch at same time. A Hitch Auxiliary Raise kit is available from your John Deere dealer.



RXA0113560—UN—09FEB11

Implement joystick allows operation of an SCV and 3-point hitch using one lever. Kit connects to right side hitch lift cylinder (A).

Connect auxiliary raise hose to coupler (B).

9-pin connector and jumper harness (C) are required for hitch auxiliary raise kit. Jumper harness disables hitch valve and allows hitch valve to be operated with an SCV.

KT81203,00004FC-19-29NOV16

Using Implements Requiring Large Volumes of Oil

IMPORTANT: Removing too much oil can result in malfunction when raising hitch or using extend function of SCVs.

Do not add oil to hydraulic system with engine running.

If more oil capacity is needed for large one-way cylinders, an optional field installed auxiliary reservoir is available. See your John Deere dealer.

To determine if sufficient oil is available for implement being used:

- Cycle all implement cylinders after starting tractor.
- Check transmission-hydraulic oil levels see Transmission-Hydraulic Oil Level in Service - Check section of this Operator's Manual.
- Add oil if necessary.
- Lower implement to return oil to reservoir.
- Recheck oil level when implement is removed.

- Drain excess oil if necessary.

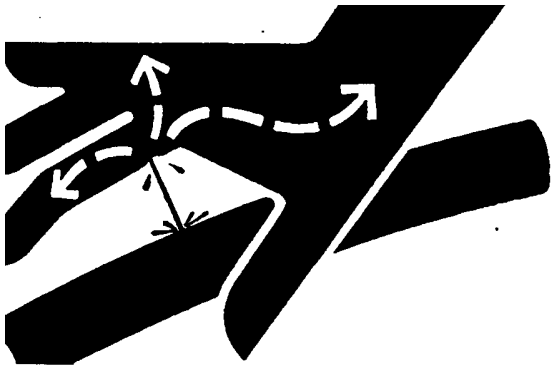
TS36762,00001FF-19-04APR18

TouchSet™ Depth Control

Attaching Implement and Control System

IMPORTANT: Hydraulic Option Connector Reset Procedure:

1. With the Ignition key in the STOP (off) position, disconnect hydraulic option connector harness from tractor.
2. Start tractor, wait until display comes up, stop tractor.
3. Connect hydraulic option connector harness to tractor.
4. Start tractor, optional hydraulic function should now be available.



X9811—UN—23AUG88

CAUTION: Escaping fluid under pressure can penetrate skin causing serious injury. Avoid hazard by relieving pressure before disconnecting hydraulic or other lines.

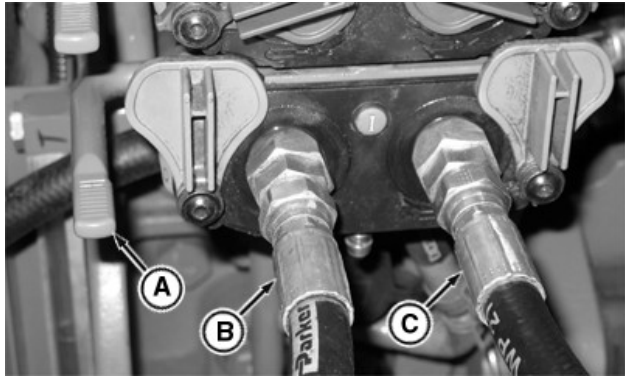
If an accident occurs, see a doctor immediately. Any fluid injected into skin must be surgically removed within a few hours or gangrene can result.

IMPORTANT: Hydraulic hoses can fail due to physical damage, kinks, age, and exposure. Check hoses regularly.

Any dirt, dust, or other foreign material can damage hydraulic system. Thoroughly clean hydraulic hoses and SCVs before connecting implement to tractor.

Steam cleaning or using a high pressure washer in the area around the SCV connections and electronics can damage equipment. Any pressure washer exceeding 6895 kPa (69 bar) (1000 psi) should be kept a minimum of 200 mm (8 in) away from connections.

NOTE: Hose identification kits are available from your John Deere dealer.



RXA0110340—UN—13SEP10

1. Identify extend (B) and retract hose (C).
2. If using drawn implement, back tractor into position and attach implement to drawbar. Be sure that hitch pin is locked into position.

CAUTION: Prevent possible personal injury. Shut off engine, move SCV lever to neutral position and lock out SCV controls before attaching implements to prevent implement movement.

IMPORTANT: Always shut off engine before connecting/disconnecting implement position sensor. Connect/disconnect with engine running can cause system faults. Shut off engine and restart to restore correct function.

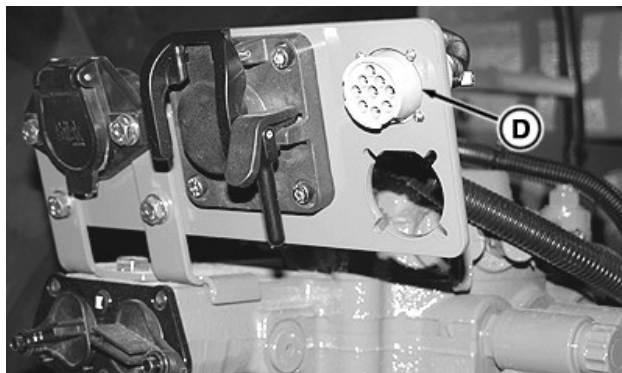
3. Shut off engine.

IMPORTANT: Be sure to correctly connect remote hydraulic hoses to couplers. If hose connections are reversed, implement will not respond to system controls as expected.

SCV		
Location	Action	
	Left Port	Right Port
Rear	Extend	Retract

NOTE: Coupler Lever (A) is used only to disconnect hoses from couplers.

Connect implement hydraulic hoses. Push hose tips into couplers to connect implement hoses, see Hydraulic Connections section of this Operator's Manual.



RXA0155869—UN—18NOV16

Install implement position connector to tractor wiring harness connector (D).

TS36762,0000202-19-04APR18

Reset Implement Connector

If implement is not responding to commands or Diagnostic Trouble Code (DTC) is present implement may require reset, to reset implement:

1. Shut off tractor and allow system to fully shut down.
2. Disconnect implement harness from implement connector.
3. Start tractor and allow operating system to fully load.
4. Shut off tractor and allow operating system to fully shut down.
5. Connect implement harness to implement connector.
6. Start tractor and allow operating system to fully load, if implement fails to respond, see your John Deere dealer.

DB71512,0000002-19-26JUN17

Set TouchSet™ Depth Controls

CAUTION: Avoid personal injury or death. Do not attempt to install depth control sensors on implements not intended for this system. See implement Operator's Manual.

Moving implement control unit, sensor, connectors, or linkages, when engine is running, can cause unexpected movement. Stay clear of implement when starting engine.

SCV I is used to control raising, lowering, and setting of implement depth electronically without leaving cab.

1. Connect implement to tractor using SCV I.



RXA0133709—UN—16JUL13

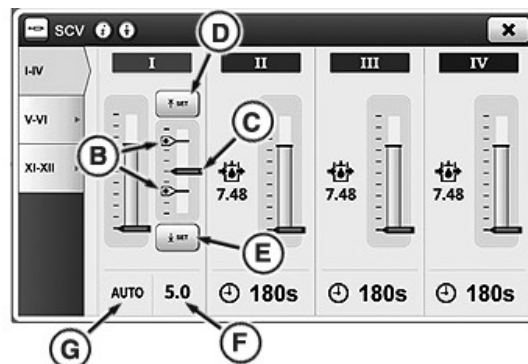
2. Press SCV shortcut button on navigation bar or follow alternative path.



RXA0127933—UN—04SEP12

3. Select Menu.
4. Select SCV icon.

NOTE: When using TouchSet™, SCV must be set for feature mode. See Configure SCV - Feature Mode in Selective Control Valves section of this Operator's Manual.



RXA0131879—UN—10APR13

Upper and lower set points are stored using upper set button (D) and lower set button (E). Indicators (B) display set point positions and indicator (C) displays current position of implement.



RXA0156097—UN—09DEC16

SCV I lever (A) adjustments with TouchSet™ in AUTO (G):

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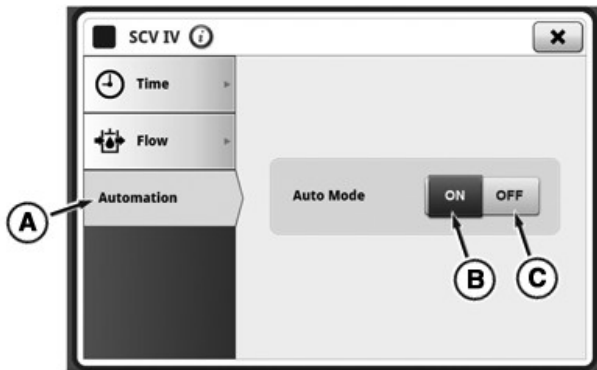
- Extend or retract detent commands implement to move to upper or lower set point.
 - Moving lever into extend or retract region and quickly returning it to center position adjusts implement up or down by fixed amount. Each bump moves implement from previous position.
5. Using SCV I lever, lower implement to desired depth while watching implement and CommandCenter™ Implement Position (F).
 6. When implement is at desired depth, press button (E).
 7. Using SCV I lever, raise implement to desired height while watching implement and CommandCenter™ Implement Range.
 8. When implement is at desired height, press button (D).

TS36762,0000203-19-14AUG18

Use TouchSet™ Depth Controls

Activate TouchSet™ Automation Mode

During field use, activate automation mode.



RXA0151697—UN—22MAR16

1. Press Automation tab (A).
2. Select ON button (B). While Automation is on:
 - Briefly hold SCV lever in extend detent or retract detent position to move implement to established lower or upper setpoint.
 - Tap SCV lever into extend or retract position adjusts implement position up or down by a fixed amount.

Select OFF button (C) at any time to end Automation mode.

DB71512,0000001-19-26JUN17

Laser Scraper Control

Laser Scraper—for Scrapers Equipped with Scraper Control Unit

NOTE: Used primarily in areas requiring automated laser guidance system for scraper applications.

SCVs I and III are used to control raising, lowering, and setting of implement depth electronically without leaving cab.

1. Connect tractor to implement using SCV I and/or III.



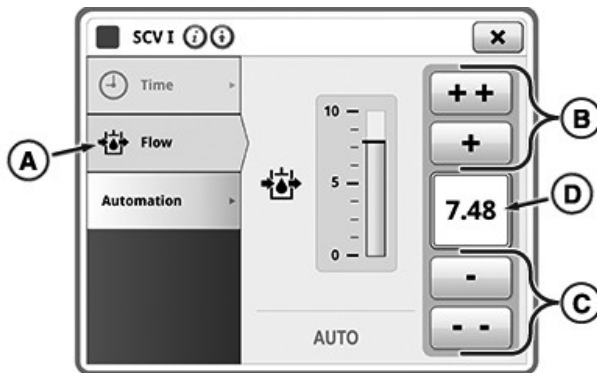
RXA0133709—UN—16JUL13

2. Press SCV shortcut button on navigation bar.



RXA0148320—UN—05JUN15

3. Select Menu button.
4. Select Machine Settings tab.
5. Select SCV button.
6. Select connected SCV.



RXA0164190—UN—13AUG18

7. Select Flow tab (A).



RXA0164194—UN—13AUG18

8. To increase flow setting, select + or ++ (B). To decrease flow setting, select - or -- (C). Turning dial (E) also adjusts flow setting. Adjustment value displays in input box (D). Implement controls Time in feature mode and tab is grayed out.

CAUTION: Avoid personal injury or death. Moving scraper control unit, connectors, or linkages, when engine is running, may cause unexpected movement. Stay clear of implement when starting engine.

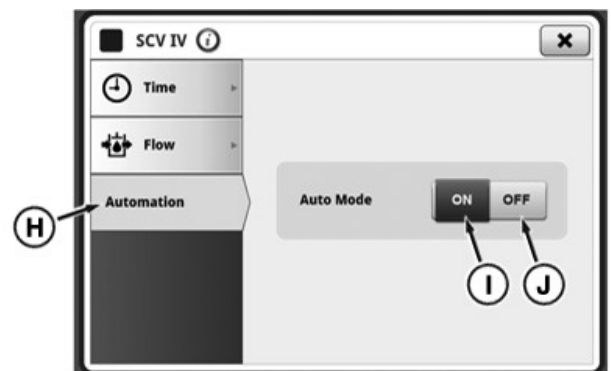
SCV Levers



RXA0164195—UN—13AUG18

Control SCVs and activate automatic scraper control system using corresponding SCV control levers I (F) and III (G).

Automation



RXA0164227—UN—14AUG18

Automation tab (H) allows enabling/disabling of AUTO Mode (feature mode). When disabled, SCV changes to

standard mode. For information on standard mode adjustments, see Configure SCV - Standard Mode in Selective Control Valves section of this Operator's Manual.

Select ON (I) to enable or OFF (J) to disable AUTO Mode.

TS36762,0000206-19-14AUG18

Wheels and Tires - General Information

Service Tires Safely



RXA0103438—UN—11JUN09

Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts.

Wheels and tires are heavy. When handling wheels and tires use a safe lifting device or get an assistant to help lift, install, or remove.

DX,WW,RIMS-19-28FEB17

D—Rim Diameter: Diameter in inches

E—Load Index (LI): Maximum permissible load capacity per tire, in relation to speed index (F)

F—Speed Index: Maximum permissible ground speed at which (E) applies

G—LI/Speed Index: Tire load capacity at alternative permitted ground speed

Tire load capacity at a specific ground speed:

Load capacity (LI) (E) at maximum permissible ground speed (F) is found on tire sidewall. Information listed as (G) indicate the tire is approved for alternative ground speed and maximum permissible load capacity.

Speed Index (G)	Maximum Permissible Ground Speed km/h (mph)
A6	30 (19)
A8	40 (25)
B	50 (30)
D	65 (40)

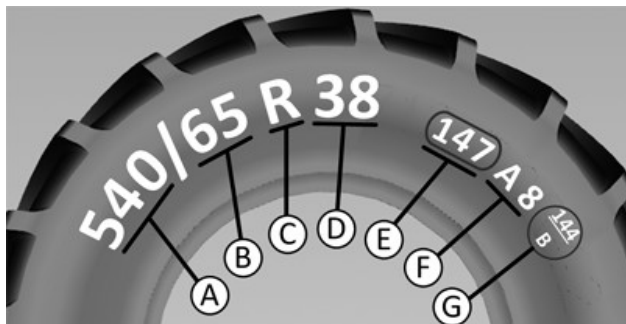
Example: a tire sidewall indicating 540/65R38 147A8 (144/B) allows two load and speed index options.

540/65R38 147A8 (144/B)		
Maximum	Tire Load and Speed Index	
	Option 1	Option 2
	147A8	144/B
Load Capacity Per Tire kg (lb)	3075 (6780)	2800 (6175)
Permissible Ground Speed km/h (mph)	40 (25)	50 (30)

EC82310,0000400-19-09OCT17

Determine Tire Load Capacity

CAUTION: Never exceed tire load capacity or permissible axle loads.



LX299192—UN—18NOV16

Example of Manufacturers' Information on Tire Sidewall

A—Tire Width: Width in millimeters

B—Aspect Ratio: Ratio of tire height to tire width

C—Type: "R" = radial; "—" = cross-ply (example: 18.4-38)

Change Tire Size

IMPORTANT: Before changing size of tire, see **Select Tire Combinations** in this section of this Operator's Manual.

See your John Deere dealer to recalibrate for tire size.

Perform wheel slip calibration (see Calibrations in CommandCenter™ section of this Operator's Manual).

TS36762,0000207-19-14DEC16

Select Tire Combinations

IMPORTANT: Mismatched front and rear tire combinations may cause poor performance, excessive power train wear, and other problems. **Never:**

- Mix worn and new tires

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- Mix bias and radial tires
- Mix tires of different diameters
- Use R2 tires in conjunction with R1 or R1W tires
- Convert Group 47/48 tires to Group 49 tires
- Convert Group 49 tires to Group 47/48 tires

If unable to replace tires with same size as original equipment, see your John Deere dealer or tire supplier for guidance.

Tire Group Size

Tires are placed into groups by their Rolling Circumference Index (RCI). Rolling circumference is distance tread travels in one revolution. Tires within a group, regardless of rim size, are same or nearly same diameter.

Required Front/Rear Tire Group Combinations

Front tire must be from a group five group sizes smaller than rear tire group.

Axle	Rear			
	Tire Group	47	48	49
Front	42	-5	—	—
	43	—	-5	—
	44	—	—	-5

Recommended Row and Section Width

Front Tires

Width		RCI Group Size		
Row ^a mm (in)	Section	42	43	44
508 (20)	320	320/85R38	320/80R42 IF320/80R42	—
559 (22)	380	380/85R34	380/80R38 IF380/80R38	380/80R42
762 (30)	420	420/90R30	420/85R34 IF420/85R34	420/85R38
	480	480/70R30	480/70R34 IF480/70R34	—
813 (32)	540	—	540/65R34	540/75R34
	600	600/65R28	600/70R30 IF600/70R30	600/65R34

Width		RCI Group Size		
Row ^a mm (in)	Section	42	43	44
864 (34)	620	—	—	620/75R30 IF620/75R30

^aMinimum recommended

Rear Tires

Width		RCI Group Size		
Row ^a mm (in)	Section	47	48	49
508 (20)	320	320/90R54 ^b	320/105R54	—
559 (22)	380	380/90R50	380/90R54	—
762 (30)	480	480/80R46	480/80R50 IF480/ 80R50 VF480/ 80R50	480/95R50
813 (32)	520	520/85R42	520/85R46	—
864 (34)	620	620/70R42	620/70R46	—
	650	650/65R42	650/85R38 IF650/ 85R38	—
914 (36)	710	710/70R38	710/70R42 IF710/ 70R42	710/75R42 IF710/75R42
1016 (40)	800	—	800/70R38 IF800/ 70R38	—
—	900	—	—	IF900/60R42

^aMinimum recommended

^bApproved in dual configuration only

TS36762,0000208-19-23AUG18

Tire Load Index

IMPORTANT: Tire load capacity can exceed allowable axle loading. Ballast tractor according to engine power and weight split guidelines. See Performance Ballasting Section in this Operator's Manual for more information.

Tire industry uses a term "load index" to define a load rating of a tire. Load index indicates maximum amount of weight that can be supported by each tire at manufacturer's maximum rated pressure is shown in this chart.

Load Index	Maximum Load per Tire ^a		Load Index	Maximum Load per Tire ^a	
	Single kg (lb)	Dual kg (lb)		Single kg (lb)	Dual kg (lb)
137	2300 (5071)	2024 (4462)	164	5000 (11023)	4400 (9700)
138	2360 (5203)	2077 (4579)	165	5150 (11354)	4532 (9991)
139	2430 (5357)	2138 (4714)	166	5300 (11684)	4664 (10282)
140	2500 (5512)	2200 (4850)	167	5450 (12015)	4796 (10573)
141	2575 (5677)	2266 (4996)	168	5600 (12346)	4928 (10864)
142	2650 (5842)	2332 (5141)	169	5800 (12787)	5104 (11252)

Load Index	Maximum Load per Tire ^a		Load Index	Maximum Load per Tire ^a	
	Single kg (lb)	Dual kg (lb)		Single kg (lb)	Dual kg (lb)
143	2725 (6008)	2398 (5287)	170	6000 (13228)	5280 (11640)
144	2800 (6173)	2464 (5432)	171	6150 (13558)	5412 (11931)
145	2900 (6393)	2552 (5626)	172	6300 (13889)	5544 (12222)
146	3000 (6614)	2640 (5820)	173	6500 (14330)	5720 (12610)
147	3075 (6779)	2706 (5966)	174	6700 (14771)	5896 (12998)
148	3150 (6945)	2772 (6111)	175	6900 (15212)	6072 (13386)
149	3250 (7165)	2860 (6305)	176	7100 (15653)	6248 (13774)
150	3350 (7385)	2948 (6499)	177	7300 (16094)	6424 (14162)
151	3450 (7606)	3036 (6693)	178	7500 (16535)	6600 (14550)
152	3550 (7826)	3124 (6887)	179	7750 (17086)	6820 (15036)
153	3650 (8047)	3212 (7081)	180	8000 (17637)	7040 (15521)
154	3750 (8267)	3300 (7275)	181	8250 (18188)	7260 (16005)
155	3875 (8543)	3410 (7518)	182	8500 (18739)	7480 (16490)
156	4000 (8818)	3520 (7760)	183	8750 (19290)	7700 (16975)
157	4125 (9094)	3630 (8003)	184	9000 (19841)	7920 (17460)
158	4250 (9370)	3740 (8245)	185	9250 (20393)	8140 (17945)
159	4375 (9645)	3850 (8488)	186	9500 (20944)	8360 (18430)
160	4500 (9921)	3960 (8730)	187	9750 (21495)	8580 (18915)
161	4625 (10196)	4070 (8973)	188	10000 (22046)	8800 (19400)
162	4750 (10472)	4180 (9215)	189	10300 (22707)	9064 (19982)
163	4875 (10748)	4290 (9458)	190	10600 (23369)	9328 (20565)

^aAt maximum rated pressure.

TS36762,0000209-19-11JUL17

Tire Sidewall Information

Displayed on tire sidewalls is information useful in selecting and working with tires.

520 / 85 R 42 158 A8

(A) (B) (C) (D) (E) (F)

RXA0149658—UN—13AUG15

- A**—Tire section width –Width in millimeters.
B—Aspect ratio – Ratio of height to tire section width.
C—Construction type –R = Radial, B = Bias.
D—Rim diameter –Diameter in inches (not total tire height or group size).
E—Load index –Numerical code indicates tire load-carrying capacity. Higher load index number designates higher load capacity. See Tire Load Index chart in this Operator's Manual section.
F—Speed rating –Maximum speed tire is designed to travel.

Additional information that may be displayed on sidewall.

- **Tread pattern** - Indicates tread design and tire usage. Designs offered are all lug- or bar-type tires and are separated into one of three specifications: R1, R1W, or R2.
- **Direction of rotation** - Icon (usually an arrow or group of arrows) indicating tire rotation direction.
- **Manufacturer name** - Name of tire manufacturer.
- **Max load and pressure information** - Maximum load a tire is permitted to carry under specified pressure and operating conditions. See Recommended Pressures charts in Wheels, Tires, and Treads section of this Operator's Manual.
- **Safety warnings** - Important information provided by tire manufacturer.

KD34109,000024E-19-08NOV17

Tire Inflation Pressure Guidelines

IMPORTANT: Never exceed maximum tire inflation pressure value stated on tire.

Maintain a minimum tire pressure of 200 kPa (2 bar) (29 psi) if no other pressure value is available.

Check tire inflation pressure while tires are cool, using an accurate dial or stick-type gauge having 10 kPa (0.1 bar) (1 psi) graduations.

NOTE: Use a special air-water gauge and measure with valve stem at bottom if tires contain liquid ballast.

Correctly inflated radial tires show deflection of sidewall. This is normal and does not harm tire.

Inflation pressures less than 80 kPa (0.8 bar) (12 psi) must be monitored frequently because of the increased risk of low-pressure air leaks.

NOTE: Bead slip can be experienced in high-traction conditions, with single tire usage. Increasing inflation pressure helps but reduces traction.

Maximum tire pressure is specified on tire sidewall.

Determine correct tire pressure

Integral implements transfer significant weight to axles, always include this weight when determining correct inflation pressures. Determine correct tire pressure by weighing tractor using following procedure:

Rear Mounted Implement - Front axle should be weighed with implement lowered. Rear axle should be weighed with implement raised.

Front Mounted Implement - Front axle should be weighed with implement raised. Rear axle should be weighed with implement lowered.

Front and Rear Mounted Implement - Weigh tractor with both front and rear implement raised.

Set tire inflation pressures according to weight measured. *Ballasting and tire inflation pressure may need to be adjusted when operating conditions change.* Use following tire inflation charts. For tires not found in charts refer to manufacturers recommended inflation pressures.

Managing Tire Inflation Pressures

Tractors operating with a loader should increase front tire pressures 30 kPa (0.3 bar) (4 psi) above values listed to compensate for weight transfer.

Tractors operating on steep side slopes or furrow plowing should increase rear tire pressures 30 kPa (0.3 bar) (4 psi) above values listed for base pressures 80 kPa (0.8 bar) (12 psi) and above to compensate for lateral weight transfer. For base pressures below 80 kPa (0.8 bar) (12 psi), pressure should be increased by 30%.

TS36762,000020B-19-14DEC16

Front Wheels and Tires

Recommended Pressures—Group 42

Group	42										
Size	320/ 85R38	380/85R34			420/90R30			480/ 70R30	600/65R28		
Load Index	143	137	145	146	142	145 -	147	152	147 ^a	154	
Speed Rating	A8	A8 / B	A8 / B	A8 / B	A8	A8	A8 / B	A8 / B	A8 / B	A8 / B	D
	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
1814 (4000)	55 (0.55)(8)	62 (0.62)(9)	55 (0.55)(8)	110 (1.1)(16)	83 (0.8)(12)	110 (1.10)(16)	50 (0.55)(8)	55 (0.55)(8)	65 (0.65)(9)	76 (0.7)(11)	69 (0.7)(10)
2041 (4500)	60 (0.6)(9)	62 (0.62)(9)	55 (0.55)(8)	110 (1.1)(16)	83 (0.8)(12)	110 (1.10)(16)	50 (0.55)(8)	55 (0.55)(8)	65 (0.65)(9)	76 (0.7)(11)	69 (0.7)(10)
2268 (5000)	80 (0.80)(12)	62 (0.62)(9)	55 (0.55)(8)	83 (0.83)(12)	83 (0.8)(12)	110 (1.10)(16)	50 (0.55)(8)	55 (0.55)(8)	65 (0.65)(9)	76 (0.7)(11)	69 (0.7)(10)
2495 (5500)	95 (0.95)(14)	62 (0.62)(9)	60 (0.6)(9)	110 (1.1)(16)	83 (0.8)(12)	110 (1.10)(16)	50 (0.55)(8)	70 (0.7)(10)	65 (0.65)(9)	76 (0.7)(11)	69 (0.7)(10)
2722 (6000)	105 (1.05)(15)	70 (0.7)(10)	70 (0.7)(10)	110 (1.1)(16)	83 (0.8)(12)	110 (1.10)(16)	50 (0.55)(8)	75 (0.75)(11)	65 (0.65)(9)	76 (0.7)(11)	69 (0.7)(10)
2948 (6500)	120 (1.2)(17)	90 (0.9)(13)	90 (0.90)(13)	110 (1.1)(16)	83 (0.8)(12)	110 (1.10)(16)	60 (0.6)(9)	85 (0.85)(12)	65 (0.65)(9)	76 (0.7)(11)	69 (0.7)(10)
3175 (7000)	125 (1.25)(18)	95 (0.95)(14)	97 (0.97)(14)	110 (1.1)(16)	83 (0.8)(12)	110 (1.10)(16)	75 (0.75)(11)	90 (0.9)(13)	65 (0.65)(9)	76 (0.7)(11)	69 (0.7)(10)
3402 (7500)	145 (1.45)(21)	110 (1.1)(16)	110 (1.1)(16)	110 (1.1)(16)	83 (0.8)(12)	110 (1.10)(16)	90 (0.9)(13)	105 (1.05)(15)	65 (0.65)(9)	76 (0.7)(11)	69 (0.7)(10)
3629 (8000)	160 (1.6)(23)	110 (1.1)(16)	117 (1.17)(17)	110 (1.1)(16)	83 (0.8)(12)	110 (1.10)(16)	95 (0.95)(14)	110 (1.1)(16)	65 (0.65)(9)	76 (0.7)(11)	69 (0.7)(10)
3856 (8500)	180 (1.80)(26)	125 (1.25)(18)	131 (1.31)(19)	110 (1.1)(16)	83 (0.8)(12)	110 (1.10)(16)	110 (1.1)(16)	120 (1.2)(17)	65 (0.65)(9)	76 (0.7)(11)	69 (0.7)(10)
4082 (9000)	200 (2.0)(29)	130 (1.3)(19)	138 (1.38)(20)	124 (1.24)(18)	83 (0.8)(12)	117 (1.2)(17)	120 (1.2)(17)	125 (1.25)(18)	65 (0.65)(9)	83 (0.8)(12)	76 (0.7)(11)
4309 (9500)	230 (2.3)(34)	145 (1.45)(21)	152 (1.52)(22)	145 (1.4)(21)	83 (0.8)(12)	117 (1.2)(17)	120 (1.2)(17)	140 (1.4)(20)	85 (0.85)(12)	90 (0.9)(13)	90 (0.9)(13)
4536 (10000)	250 (2.5)(38)	150 (1.5)(22)	159 (1.59)(23)	159 (1.6)(23)	83 (0.8)(12)	131 (1.3)(19)	130 (1.3)(19)	150 (1.5)(22)	95 (0.95)(14)	103 (1.0)(15)	97 (1.0)(14)
4763 (10500)	280 (2.8)(41)	160 (1.6)(23)	179 (1.79)(26)	179 (1.8)(26)	83 (0.8)(12)	138 (1.4)(20)	140 (1.4)(20)	160 (1.6)(23)	105 (1.05)(15)	110 (1.1)(16)	103 (1.0)(15)
4990 (11000)	303 (3.0)(44)	—	200 (2.0)(29)	200 (2.0)(29)	83 (0.8)(12)	145 (1.45)(21)	145 (1.45)(21)	165 (1.65)(24)	110 (1.1)(16)	110 (1.1)(16)	110 (1.10)(16)
5216 (11500)	324 (3.2)(47)	—	234 (2.34)(34)	207 (2.1)(30)	83 (0.8)(12)	159 (1.6)(23)	160 (1.6)(23)	180 (1.8)(26)	120 (1.2)(17)	117 (1.2)(17)	110 (1.1)(16)
5443 (12000)	359 (3.6)(52)	—	255 (2.55)(37)	221 (2.2)(32)	83 (0.8)(12)	172 (1.7)(25)	160 (1.6)(23)	190 (1.9)(28)	125 (1.25)(18)	124 (1.2)(18)	117 (1.2)(17)
5670 (12500)	—	—	276 (2.76)(40)	228 (2.3)(33)	83 (0.8)(12)	193 (1.9)(28)	190 (1.9)(28)	210 (2.1)(30)	140 (1.4)(20)	138 (1.3)(20)	124 (1.2)(18)
5900 (13000)	—	—	—	241 (2.4)(35)	83 (0.8)(12)	—	215 (2.15)(31)	220 (2.2)(32)	145 (1.45)(21)	145 (1.4)(21)	131 (1.3)(19)
6123 (13500)	—	—	—	—	97 (1.0)(14)	—	240 (2.4)(35)	240 (2.4)(36)	160 (1.6)(23)	159 (1.6)(23)	145 (1.4)(21)
6350 (14000)	—	—	—	—	103 (1.0)(15)	—	—	275 (2.75)(40)	—	165 (1.7)(24)	152 (1.5)(22)
6577 (14500)	—	—	—	—	110 (1.1)(16)	—	—	290 (2.9)(42)	—	179 (1.8)(26)	159 (1.6)(23)
6804 (15000)	—	—	—	—	117 (1.2)(17)	—	—	300 (3.0)(43)	—	186 (1.9)(27)	172 (1.7)(25)
7031 (15500)	—	—	—	—	117 (1.2)(17)	—	—	320 (3.2)(46)	—	200 (2.0)(29)	186 (1.9)(27)

Front Wheels and Tires

Group	42										
Size	320/85R38	380/85R34			420/90R30			480/70R30	600/65R28		
Load Index	143	137	145	146	142	145 -	147	152	147 ^a	154	
Speed Rating	A8	A8 / B	A8 / B	A8 / B	A8	A8	A8 / B	A8 / B	A8 / B	A8 / B	D
	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
7257 (16000)	—	—	—	—	131 (1.3)(19)	—	—	—	—	221 (2.2)(32)	207 (2.1)(30)
7484 (16500)	—	—	—	—	138 (1.4)(20)	—	—	—	—	241 (2.4)(35)	221 (2.2)(32)
7950 (17000)	—	—	—	—	145 (1.4)(21)	—	—	—	—	—	234 (2.3)(34)
8170 (17500)	—	—	—	—	159 (1.6)(23)	—	—	—	—	—	—
8400 (18000)	—	—	—	—	165 (1.7)(24)	—	—	—	—	—	—
8391 (18500)	—	—	—	—	179 (1.8)(26)	—	—	—	—	—	—
8618 (19000)	—	—	—	—	186 (1.9)(27)	—	—	—	—	—	—
8845 (19500)	—	—	—	—	200 (2.0)(29)	—	—	—	—	—	—
9071 (20000)	—	—	—	—	207 (2.1)(30)	—	—	—	—	—	—
9298 (20500)	—	—	—	—	214 (2.1)(31)	—	—	—	—	—	—
9525 (21000)	—	—	—	—	221 (2.2)(32)	—	—	—	—	—	—
9977 (22000)	—	—	—	—	228 (2.3)(33)	—	—	—	—	—	—
10430 (23000)	—	—	—	—	241 (2.4)(35)	—	—	—	—	—	—

^a154D @ 40 kph

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Recommended Pressures—Group 43

Group	43					
Size	320/80R42	IF320/80R42	380/80R38	IF380/80R38	420/85R34	IF420/85R34
Load Index	141	149	142	149	147	152
Speed Rating	A8	A8	A8	A8	A8	A8
	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
1814 (4000)	55 (0.55)(8)	40 (0.4)(6)	65 (0.65)(9)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)
2041 (4500)	65 (0.65)(9)	40 (0.4)(6)	65 (0.65)(9)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)
2268 (5000)	75 (0.75)(11)	55 (0.55)(8)	65 (0.65)(9)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)
2495 (5500)	90 (0.9)(13)	70 (0.7)(10)	65 (0.65)(9)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)

Front Wheels and Tires

Group	43					
Size	320/80R42	IF320/80R42	380/80R38	IF380/80R38	420/85R34	IF420/85R34
Load Index	141	149	142	149	147	152
Speed Rating	A8	A8	A8	A8	A8	A8
	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
2722 (6000)	105 (1.05)(15)	76 (0.76)(11)	70 (0.7)(10)	85 (0.85)(12)	65 (0.65)(9)	85 (0.85)(12)
2948 (6500)	120 (1.2)(17)	90 (0.90)(13)	85 (0.85)(12)	85 (0.85)(12)	65 (0.65)(9)	90 (0.90)(13)
3175 (7000)	125 (1.25)(18)	95 (0.95)(14)	90 (0.9)(13)	90 (0.90)(13)	75 (0.75)(11)	90 (0.90)(13)
3402 (7500)	140 (1.4)(20)	110 (1.1)(16)	95 (0.95)(14)	90 (0.90)(13)	85 (0.85)(12)	90 (0.90)(13)
3629 (8000)	150 (1.5)(22)	120 (1.2)(17)	95 (0.95)(14)	90 (0.90)(13)	95 (0.95)(14)	90 (0.90)(13)
3856 (8500)	175 (1.75)(25)	125 (1.25)(18)	105 (1.05)(15)	105 (1.05)(15)	105 (1.05)(15)	95 (0.95)(14)
4082 (9000)	200 (2.0)(29)	140 (1.4)(20)	120 (1.2)(17)	110 (1.1)(16)	110 (1.1)(16)	95 (0.95)(14)
4309 (9500)	235 (2.35)(34)	150 (1.5)(22)	140 (1.4)(20)	120 (1.2)(17)	120 (1.2)(17)	95 (0.95)(14)
4536 (10000)	260 (2.6)(38)	165 (1.65)(24)	160 (1.6)(23)	125 (1.25)(18)	130 (1.3)(19)	105 (1.05)(15)
4763 (10500)	275 (2.75)(40)	185 (1.85)(27)	180 (1.8)(26)	130 (1.3)(19)	140 (1.4)(20)	110 (1.1)(16)
4990 (11000)	305 (3.05)(44)	200 (2.0)(29)	200 (2.0)(29)	140 (1.4)(20)	145 (1.45)(21)	120 (1.2)(17)
5216 (11500)	—	234 (2.34)(34)	220 (2.2)(32)	150 (1.5)(22)	160 (1.6)(23)	120 (1.2)(17)
5443 (12000)	—	255 (2.55)(37)	—	160 (1.6)(23)	160 (1.6)(23)	125 (1.25)(18)
5670 (12500)	—	276 (2.76)(40)	—	175 (1.75)(25)	175 (1.75)(25)	140 (1.4)(20)
5897 (13000)	—	290 (2.9)(42)	—	185 (1.85)(27)	175 (1.75)(25)	145 (1.45)(21)
6123 (13500)	—	310 (3.1)(45)	—	215 (2.15)(31)	175 (1.75)(25)	150 (1.5)(22)
6350 (14000)	—	324 (3.24)(47)	—	240 (2.4)(35)	—	160 (1.6)(23)
6577 (14500)	—	—	—	—	—	180 (1.8)(26)
6804 (15000)	—	—	—	—	—	185 (1.85)(27)
7031 (15500)	—	—	—	—	—	200 (2.0)(29)

Group	43					
Size	480/70R34			540/65R34	600/70R30	IF600/70R30
Load Index	143	146	155	148	152	159
Speed Rating	A8 / B / D	A8 / B	A8 / B	A8	A8 / B / D	A8 / B / D
	Single	Single	Single	Single	Single	Single
Axle	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)

Front Wheels and Tires

Group	43					
Size	480/70R34			540/65R34	600/70R30	IF600/70R30
Load Index	143	146	155	148	152	159
Speed Rating	A8 / B / D	A8 / B	A8 / B	A8	A8 / B / D	A8 / B / D
	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
Load kg(lb)						
3175 (7000)	75 (0.75)(11)	65 (0.65)(9)	65 (0.65)(9)	65 (0.65)(9)	65 (0.65)(9)	83 (0.8)(12)
3402 (7500)	75 (0.75)(11)	70 (0.7)(10)	70 (0.7)(10)	65 (0.65)(9)	65 (0.65)(9)	83 (0.8)(12)
3629 (8000)	75 (0.75)(11)	75 (0.75)(11)	75 (0.75)(11)	65 (0.65)(9)	65 (0.65)(9)	83 (0.8)(12)
3856 (8500)	97 (1.0)(14)	85 (0.85)(12)	85 (0.85)(12)	70 (0.7)(10)	65 (0.65)(9)	83 (0.8)(12)
4082 (9000)	103 (1.0)(15)	95 (0.95)(14)	95 (0.95)(14)	75 (0.75)(11)	65 (0.65)(9)	83 (0.8)(12)
4309 (9500)	110 (1.1)(16)	105 (1.05)(15)	105 (1.05)(15)	85 (0.85)(12)	65 (0.65)(9)	83 (0.8)(12)
4536 (10000)	117 (1.2)(17)	110 (1.1)(16)	110 (1.1)(16)	95 (0.95)(14)	65 (0.65)(9)	83 (0.8)(12)
4763 (10500)	124 (1.2)(18)	120 (1.2)(17)	120 (1.2)(17)	105 (1.05)(15)	70 (0.7)(10)	83 (0.8)(12)
4990 (11000)	138 (1.4)(20)	125 (1.25)(18)	125 (1.25)(18)	105 (1.05)(15)	75 (0.75)(11)	83 (0.8)(12)
5216 (11500)	152 (1.5)(22)	130 (1.3)(19)	130 (1.3)(19)	110 (1.1)(16)	85 (0.85)(12)	83 (0.8)(12)
5443 (12000)	—	140 (1.4)(20)	140 (1.4)(20)	120 (1.2)(17)	95 (0.95)(14)	83 (0.8)(12)
5670 (12500)	—	145 (1.45)(21)	145 (1.45)(21)	130 (1.3)(19)	105 (1.05)(15)	90 (0.9)(13)
5897 (13000)	—	160 (1.6)(23)	160 (1.6)(23)	140 (1.4)(20)	110 (1.1)(16)	97 (1.0)(14)
6123 (13500)	—	—	180 (1.8)(26)	150 (1.5)(22)	120 (1.2)(17)	97 (1.0)(14)
6350 (14000)	—	—	180 (1.8)(26)	160 (1.6)(23)	130 (1.3)(19)	103 (1.0)(15)
6577 (14500)	—	—	185 (1.85)(27)	—	140 (1.4)(20)	110 (1.1)(16)
6804 (15000)	—	—	185 (1.85)(27)	—	145 (1.45)(21)	110 (1.1)(16)
7031 (15500)	—	—	190 (1.9)(28)	—	160 (1.6)(23)	117 (1.2)(17)
7257 (16000)	—	—	190 (1.9)(28)	—	—	124 (1.2)(18)
7484 (16500)	—	—	190 (1.9)(28)	—	—	131 (1.3)(19)
7711 (17000)	—	—	200 (2.0)(29)	—	—	138 (1.4)(20)
7938 (17500)	—	—	—	—	—	138 (1.4)(20)
8165 (18000)	—	—	—	—	—	145 (1.4)(21)
8391 (18500)	—	—	—	—	—	152 (1.5)(22)
8618 (19000)	—	—	—	—	—	159 (1.6)(23)

Front Wheels and Tires

Group	43					
Size	480/70R34			540/65R34	600/70R30	IF600/70R30
Load Index	143	146	155	148	152	159
Speed Rating	A8 / B / D	A8 / B	A8 / B	A8	A8 / B / D	A8 / B / D
	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
8845 (19500)	—	—	—	—	—	—

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Recommended Pressures—Group 44

Group	44					
Size	380/80R42	420/85R38	540/75R34	600/65R34	620/75R30	IF620/75R30
Load Index	150	149	157	157	163	164
Speed Rating	A8	A8 / B	A8	D	A8 / B / D	D
	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
2041 (4500)	40 (0.4)(6)	41 (0.4)(6)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
2268 (5000)	50 (0.5)(7)	48 (0.5)(7)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
2495 (5500)	65 (0.65)(9)	48 (0.5)(7)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
2722 (6000)	70 (0.7)(10)	55 (0.6)(8)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
2948 (6500)	85 (0.85)(12)	62 (0.6)(9)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
3175 (7000)	90 (0.9)(13)	69 (0.7)(10)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
3402 (7500)	105 (1.05)(15)	76 (0.8)(11)	55 (0.55)(8)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
3629 (8000)	110 (1.1)(16)	90 (0.9)(13)	70 (0.7)(10)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
3856 (8500)	120 (1.2)(17)	97 (1.0)(14)	75 (0.75)(11)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
4082 (9000)	130 (1.3)(19)	103 (1.0)(15)	83 (0.85)(12)	62 (0.6)(9)	105 (1.05)(15)	85 (0.85)(12)
4309 (9500)	140 (1.4)(20)	110 (1.1)(16)	90 (0.9)(13)	69 (0.7)(10)	105 (1.05)(15)	85 (0.85)(12)
4536 (10000)	150 (1.5)(22)	117 (1.2)(17)	97 (1.0)(14)	76 (0.8)(11)	105 (1.05)(15)	85 (0.85)(12)
4763 (10500)	160 (1.6)(23)	124 (1.2)(18)	103 (1.0)(15)	83 (0.8)(12)	105 (1.05)(15)	85 (0.85)(12)
4990 (11000)	175 (1.75)(25)	138 (1.4)(20)	110 (1.1)(16)	90 (0.9)(13)	105 (1.05)(15)	85 (0.85)(12)
5216 (11500)	190 (1.9)(28)	145 (1.4)(21)	110 (1.1)(16)	97 (1.0)(14)	105 (1.05)(15)	85 (0.85)(12)
5443 (12000)	220 (2.2)(32)	159 (1.6)(23)	124 (1.2)(18)	103 (1.0)(15)	105 (1.05)(15)	85 (0.85)(12)

Front Wheels and Tires

Group	44					
Size	380/80R42	420/85R38	540/75R34	600/65R34	620/75R30	IF620/75R30
Load Index	150	149	157	157	163	164
Speed Rating	A8	A8 / B	A8	D	A8 / B / D	D
	Single	Single	Single	Single	Single	Single
Axle Load kg(lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
5670 (12500)	250 (2.5)(36)	165 (1.7)(24)	117 (1.2)(17)	110 (1.1)(16)	105 (1.05)(15)	85 (0.85)(12)
5897 (13000)	260 (2.6)(38)	179 (1.8)(26)	124 (1.2)(18)	117 (1.2)(17)	105 (1.05)(15)	85 (0.85)(12)
6123 (13500)	280 (2.8)(41)	200 (2.0)(29)	131 (1.3)(19)	124 (1.2)(18)	105 (1.05)(15)	85 (0.85)(12)
6350 (14000)	300 (3.0)(43)	228 (2.3)(33)	138 (1.4)(20)	131 (1.3)(19)	110 (1.1)(16)	85 (0.85)(12)
6577 (14500)	320 (3.2)(46)	—	145 (1.5)(21)	138 (1.4)(20)	120 (1.2)(17)	90 (0.9)(13)
6804 (15000)	—	—	150 (1.5)(22)	145 (1.5)(21)	125 (1.25)(18)	95 (0.95)(14)
7031 (15500)	—	—	159 (1.6)(23)	159 (1.6)(23)	130 (1.3)(19)	95 (0.95)(14)
7257 (16000)	—	—	165 (1.7)(24)	165 (1.7)(24)	140 (1.4)(20)	105 (1.05)(15)
7484 (16500)	—	—	179 (1.8)(26)	179 (1.8)(26)	145 (1.45)(21)	110 (1.1)(16)
7711 (17000)	—	—	193 (1.9)(28)	193 (1.9)(28)	160 (1.6)(23)	110 (1.1)(16)
7938 (17500)	—	—	215 (2.15)(31)	200 (2.0)(29)	175 (1.75)(25)	120 (1.2)(17)
8165 (18000)	—	—	228 (2.3)(33)	214 (2.1)(31)	185 (1.85)(27)	125 (1.25)(18)
8391 (18500)	—	—	—	228 (2.3)(33)	190 (1.9)(28)	125 (1.25)(18)
8618 (19000)	—	—	—	241 (2.4)(35)	200 (2.0)(29)	130 (1.3)(19)
8845 (19500)	—	—	—	—	215 (2.15)(31)	130 (1.3)(19)
9072 (20000)	—	—	—	—	230 (2.3)(33)	140 (1.4)(20)
9525 (21000)	—	—	—	—	240 (2.4)(35)	150 (1.5)(22)
9979 (22000)	—	—	—	—	—	160 (1.6)(23)

TS36762.000020F-19-08AUG17

Adjust and Tighten - Front Wheel Bolts

CAUTION: Avoid personal injury and equipment damage. Completely follow torque sequence and procedure. Never operate tractor with loose wheel bolts. Wheel bolts are critical and require retightening.

IMPORTANT: Front duals are not approved or recommended for use with standard MFWD and/or TLS™ Plus tractors.

NOTE: Both inner and outer bolt patterns of disk have one tight-fit hole and one slot-fit hole 180° from each other, for improved wheel centering.

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Wheel Disk-to-Rim



RW26463—UN—14AUG99

1. Install and hand-tighten bolt in tight-fit hole (A).
2. Install and hand-tighten bolt in slot-fit hole (B).
3. Install and hand-tighten remaining wheel disk-to-rim bolts.
4. Tighten all bolts to 300 N·m (225 lb·ft) using a star-shaped pattern.
5. Drive tractor 100 m (100 yd) and tighten bolts.
6. Tighten bolts after working 3 hours, 10 hours, and daily for first week of operation and every 500 hours.

Wheel Disk-to-Hub (Eight-Position and Two-Position Wheels)



RW26464—UN—25AUG99

1. Install cap screw in tight-fit hole (C) and hand tighten cap screw.
2. Install cap screw in slot-fit hole (D) and hand tighten cap screw.

3. Install and hand tighten remaining wheel disk-to-hub cap screws.
4. Tighten all cap screws to 610 N·m (450 lb·ft) using a star-shaped pattern.
5. Drive tractor 100 m (110 yd) and tighten bolts.
6. Tighten bolts after working 3 hours, 10 hours, and daily for first week of operation and every 500 hours.

TS36762,0000210-19-11SEP17

Toe-In Check

IMPORTANT: Avoid premature tire wear. Excessive toe-in or toe-out will cause premature tire wear on hard-surfaced roads. Toe-in as close to zero as possible will provide least amount of tire wear on hard-surfaced roads.

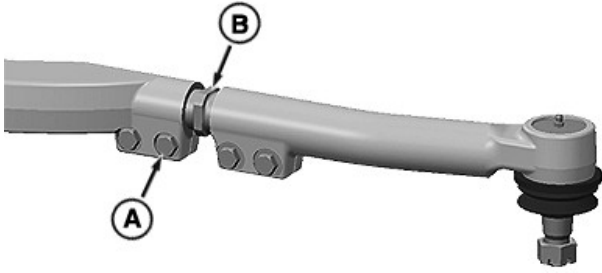
1. Drive tractor in a straight line 15 m (50 ft) to center tires.
2. Verify equal lengths of steering cylinder are showing on either side of tractor.



RXA0110374—UN—13SEP10

Distance Between Centerline of Tires

3. Measure distance between tires at hub level in front of axle. Mark the point at which you measured.
4. Drive tractor forward to position mark 180° from original position. Measure distance between tires at same point on tire.
5. Determine difference between front and rear measurements. Measured distance should be same as front measurement +/- 3mm (+/- 1/8 in). Setting toe-in as close to zero as possible will provide least amount of tire wear on hard-surfaced roads. To make adjustment, go to step 6.



RXA0152306—UN—07JUN16

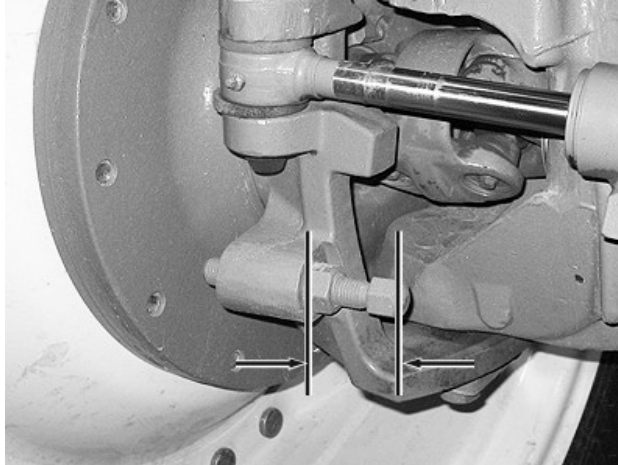
6. Loosen cap screws (A).
7. Divide difference between front and rear measurements by two. Adjust each tie rod by this amount to keep steering wheel centered.
8. Rotate left adjuster nut (B) to change tie rod length by value from step 7. Each turn equals approximately 3 mm (1/8 in) change.
9. Repeat adjustment on right tie rod.
10. Tighten cap screws to 128 N•m (95 lb•ft).
11. Confirm adjustment. Perform toe-in check beginning at step 1.

TS36762,0000211-19-07AUG17

Steering Stop, Fender, and Tread Settings

Set Steering Stops

1. Adjust fenders (if equipped) and tread settings before setting steering stop positions.
2. Select correct steering stop position for tire size and tread setting. See following charts.



RXA0109356—UN—10AUG10

3. Set steering stops to correct position by measuring bolt length, as illustrated.
4. Tighten steering stop retaining nuts to 250 N·m (185 lb·ft).
5. Turn steering wheel fully to the right. Impact knuckle housing to steering stop five times. Repeat for left side.
6. Retighten steering stop retaining nuts to 250 N·m (185 lb·ft).

IMPORTANT: These settings allow 20 mm (0.79 in) minimum clearance at maximum turn and full axle oscillation. Check for interference with front weights, tie rods, and side frames. If equipped, fenders may deflect against side frame, and/or grille screen during full turn. A minimized turn radius may be obtained by utilizing a shorter stop position.

7. Verify clearance by turning steering wheel fully to the left and then to the right.

NOTE: Settings listed are approximate, due to variations in tire size. Proper steering stop setting is obtained when the tire is 20 mm (0.79 in) away from frame or side panels, when axle is fully oscillated.

Steering Stop Settings		
Position	Turn Angle	Bolt Length mm (in)
0	52°	47 (1.85)
1	47°	60 (2.36)
2	42°	73 (2.87)
3	38°	87 (3.43)

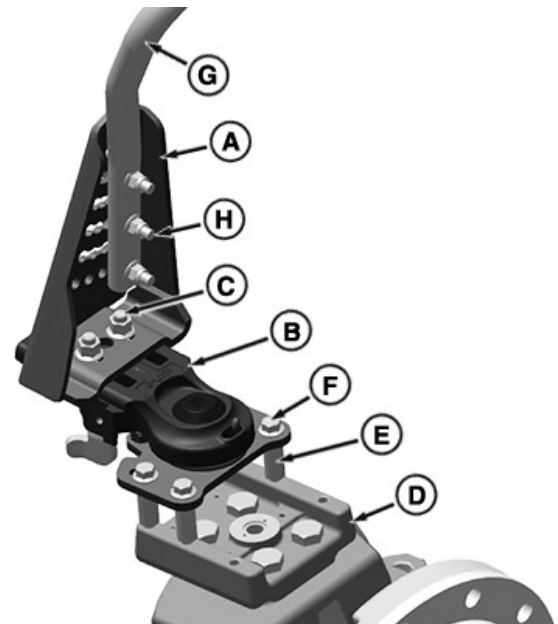
Steering Stop Settings		
Position	Turn Angle	Bolt Length mm (in)
4	34°	98 (3.86)
5	30°	109 (4.29)
6	25°	123 (4.84)

TS36762,0000212-19-21NOV16

Fender Settings-480 mm and 620 mm Fender

IMPORTANT: Avoid damage to fender, wheel, and hood. Position fender bracket and stopper in recommended positions.

Fender Support and Fender Pivot Installation



RXA0160574—UN—15AUG17

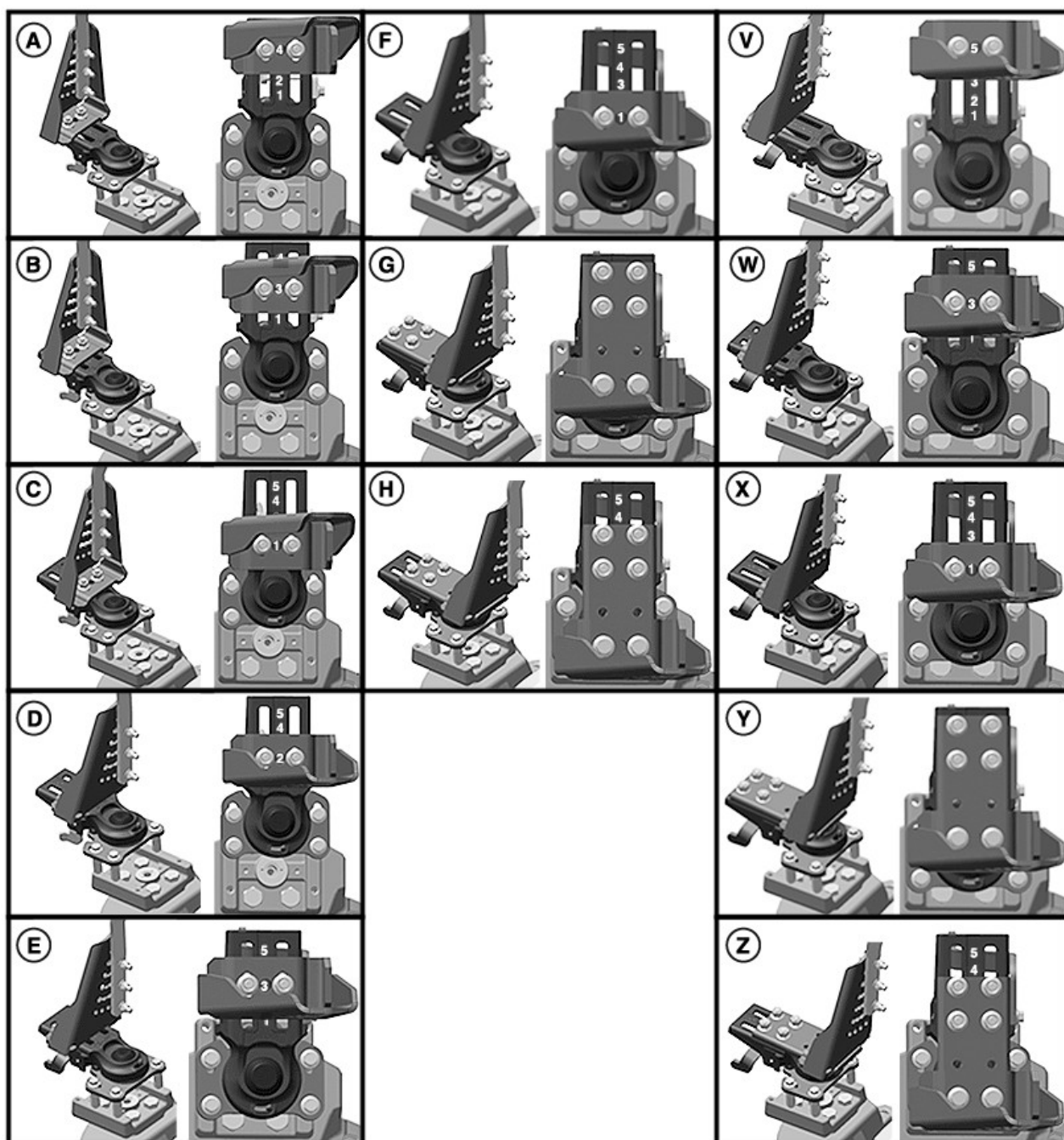
1. Install fender support (A) to fender pivot (B) with two M14 x 42 mm cap screws (C). See Fender Bracket Positions in this block for correct position. Tighten fender pivot cap screws to 140 N·m (104 lb·ft).
2. Install fender support and pivot assembly on the front axle assembly king pin (D) with four fender pivot spacers (E) and four M12 x 85 mm cap screws (F). See Fender Bracket Positions in this block for correct position. Tighten cap screws to 128 N·m (94 lb·ft).
3. Install fender rod (G) to fender support with three M12 x 55 mm cap screws (H). Tighten fender rod cap screws to 128 N·m (94 lb·ft).



RXA0160493—UN—15AUG17

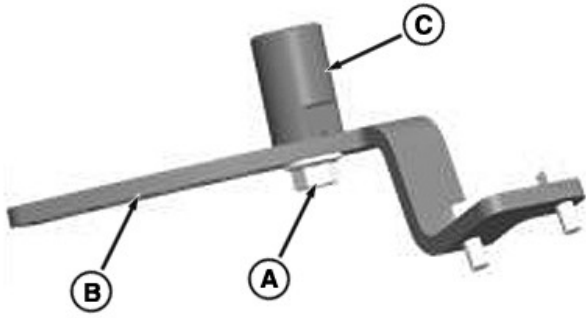
- (I) shows fender rod height position for the fender bracket positions A-H.
- (J) shows fender rod height position for the fender bracket positions V-Z.

Fender Bracket Positions



RXA0160494—UN—11AUG17

Stopper Bracket

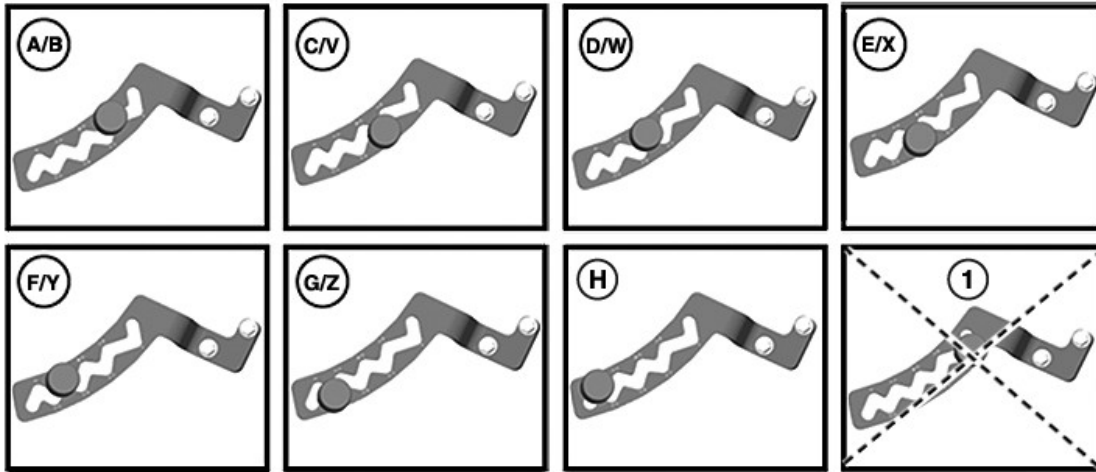


RXA0132027—UN—12APR13

1. Insert cap screw (A) into bracket (B).

2. Screw on stopper (C) from above. (Stopper can be replaced as it wears.) For stopper positions, see Stopper Positions in this block.
3. Verify fender clearance by turning steering wheel to left stop and right stop.
4. Additional adjustment may be necessary, if, on tight turns:
 - Fender contacts hood. Move stopper (C) towards axle, from G position to A position, to move fender further away from hood.
 - Tire contacts fender. Move stopper (C) away from axle, from A position to G position, to move fender further away from tire.

Stopper Positions



RXA0160495—UN—11AUG17

1—Position not used

TS36762,0000213-19-15AUG17

Extra-Wide Fender Settings-710 mm (28 in)

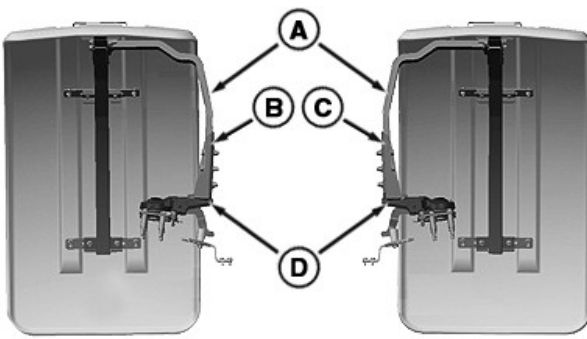
Tire Size	Tread Spacing mm (in)	Bracket Number		Settings/Position					
				Steering Stop	Casting Block	Arm		Stop	Tube
		Left-hand	Right-hand			Angle	Height		
600/65R34	2083 (82)	RE577187	RE577115 ^a	6	1	2	3	D	2
600/65R34	2184 (86)	RE577187	RE577115 ^b	4	1	2	3	E	2
620/75R30	2083 (82)	RE577187	RE577115 ^a	6	1	2	3	D	2
620/75R30	2184 (86)	RE577187	RE577115 ^b	4	1	2	3	E	2
IF620/75R30	2083 (82)	RE577187	RE577115 ^a	6	1	2	3	D	2
IF620/75R30	2184 (86)	RE577187	RE577115 ^b	4	1	2	3	E	2
600/60R30	1778 (70)	RE577115	RE577187	5	4	2	1	B	1
600/60R30	1880 (74)	RE577115	RE577187	4	3	2	1	C	1
600/60R30	1981 (78)	RE577115	RE577187	3	1	2	1	D	1
600/60R30	2083 (82)	RE577187	RE577115 ^a	2	1	2	2	E	1
600/60R30	2184 (86)	RE577187	RE577115 ^b	1	1	2	3	F	2
IF600/60R30	1778 (70)	RE577115	RE577187	5	4	2	1	B	1

Steering Stop, Fender, and Tread Settings

Tire Size	Tread Spacing mm (in)	Bracket Number		Settings/Position					
				Steering Stop	Casting Block	Arm		Stop	Tube
		Left-hand	Right-hand			Angle	Height		
IF600/60R30	1880 (74)	RE577115	RE577187	4	3	2	1	C	1
IF600/60R30	1981 (78)	RE577115	RE577187	3	1	2	1	D	1
IF600/60R30	2083 (82)	RE577187	RE577115	2	1	2	2	E	1
IF600/60R30	2184 (86)	RE577187	RE577115 ^b	1	1	2	3	F	2
540/65R34	1880 (74)	RE577115	RE577187	3	3	2	1	C	1
540/65R34	1981 (78)	RE577115	RE577187	2	1	2	1	D	1
540/65R34	2083 (82)	RE577187	RE577115 ^a	1	1	2	2	E	1
540/65R34	2083 (82)	RE577187	RE577115 ^a	1	1	2	2	E	1
540/65R34	2184 (86)	RE577187	RE577115 ^b	1	1	2	3	F	2

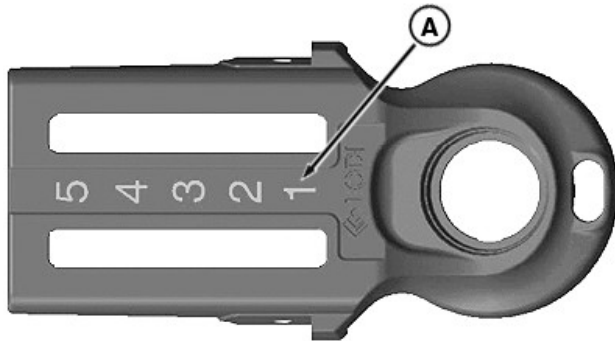
^aSwap RE577115 (C) and RE577187 (B). See diagram next page.

^bSwap RE577115 (C) and RE577187 (B). stall fender arm (A) outside fender brackets (B) and (C). See diagram next page.



RXA0149402—UN—27JUL15
710 mm (28 in) Extra Wide Fender Diagram

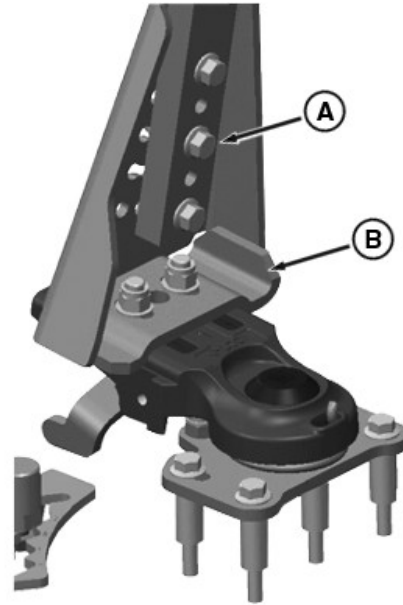
1. Refer to assembly diagram for fender supports (A), left-hand fender bracket (B), right-hand fender bracket (C), and casting block (D).



RXA0148599—UN—20JUL15
Casting Block Position

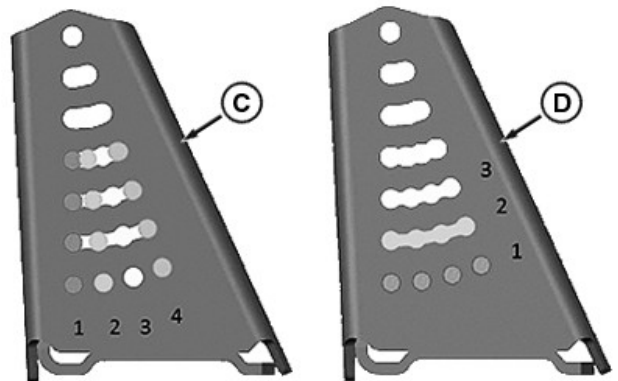
2. Adjust casting block (A) to desired fender using table for reference. Tighten cap screws to 140 N·m (104 lb·ft).

NOTE: For 2184 mm (86 in) tread settings, fender arm is mounted to outside of support bracket.



RXA0149398—UN—20JUL15

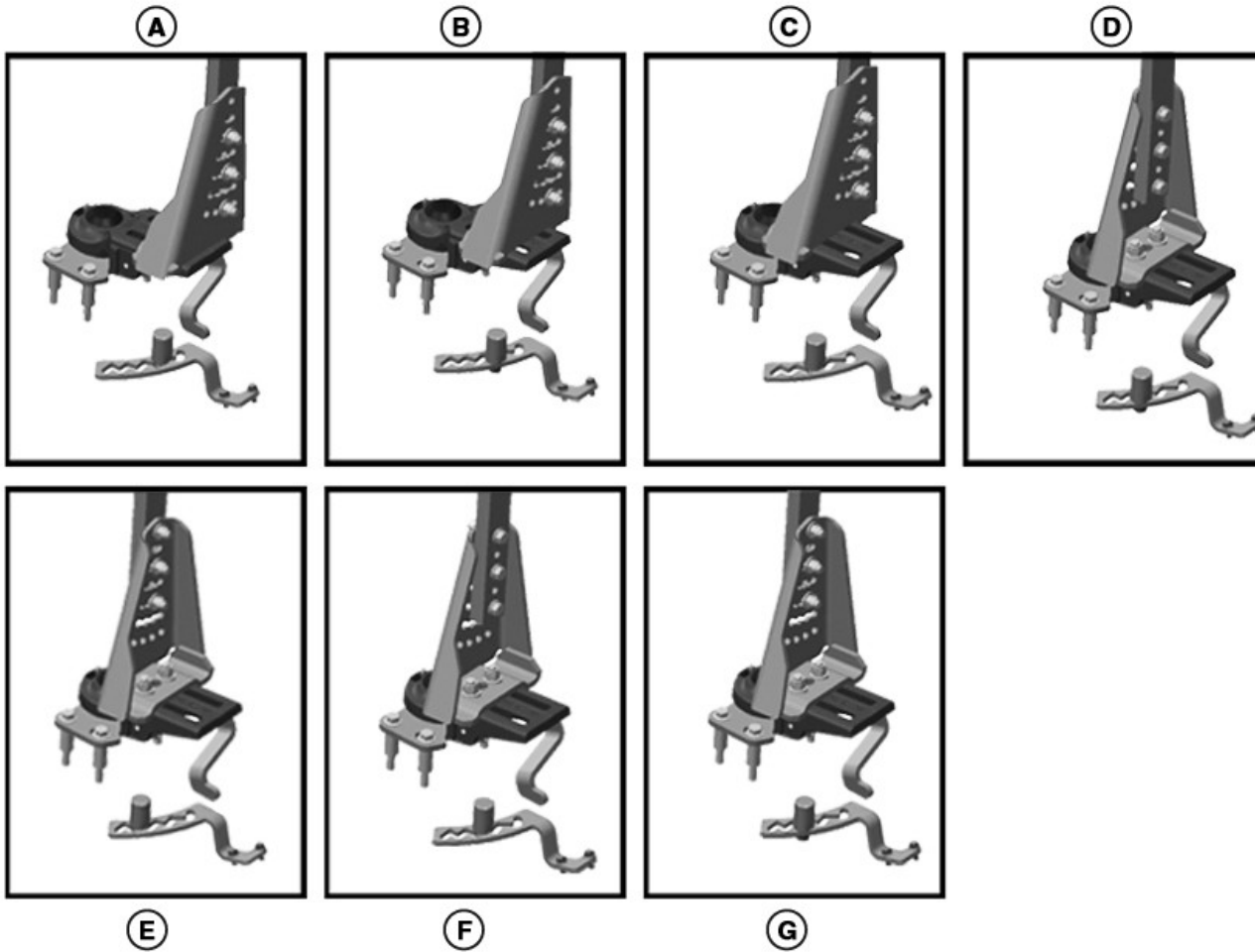
3. Check position of RE577114 adjustable fender arm (A) to RE577187 or RE577115 support bracket (B) for correct fender setting.



RXA0149399—UN—20JUL15

4. Adjust arm angle (C) and height position brackets

(D) to proper settings using the chart. Tighten cap screws to 128 N·m (95 lb·ft).



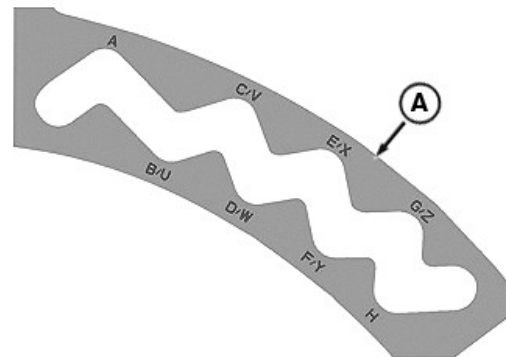
Steering Stop Position for Tread Setting and Tire Groups

RXA0149400—UN—16JUL15

A—70 in Tread, Group 42/43 Tire
B—74 in Tread, Group 42/43 Tire
C—78 in Tread, Group 42/43 Tire
D—82 in Tread, Group 42/43 Tire

E—86 in Tread, Group 42/43 Tire¹
F—82 in Tread, Group 44 Tire
G—86 in Tread, Group 44 Tire¹

5. Refer to the diagram for correct steering stop position for desired tread setting and tire group.

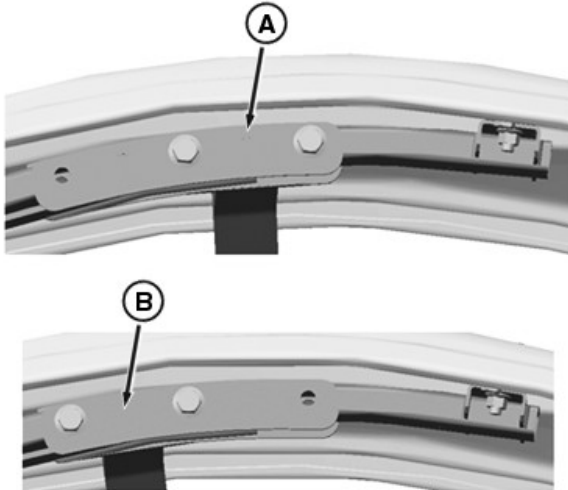


RXA0148598—UN—17JUL15

Steering Stop Bracket

6. Identify correct steering stop position on bracket (A) shown on the table for tire size and tread setting.

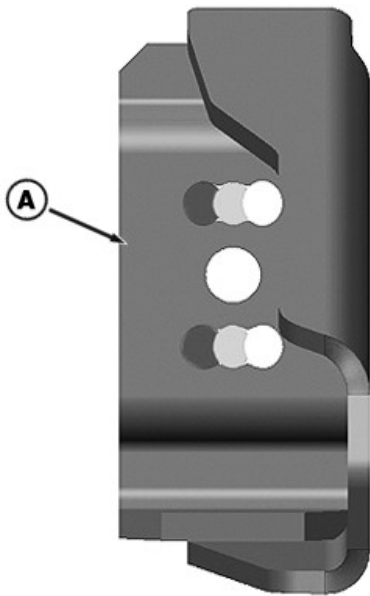
¹ Note: Fender arm mounted outside of support bracket



Top Tube Position

RXA0149401—UN—20JUL15

7. Identify proper top tube position from the table. Reference diagram (A) dictates **Setting 1** and (B) is for **Setting 2**. Tighten top tube cap screws to 128 N·m (95 lb·ft).



Bracket Bolt Position

RXA0149403—UN—20JUL15

8. Perform final adjustment and correct assembly settings from the table. Tighten bracket cap screws (A) to 140 N·m (104 lb·ft).



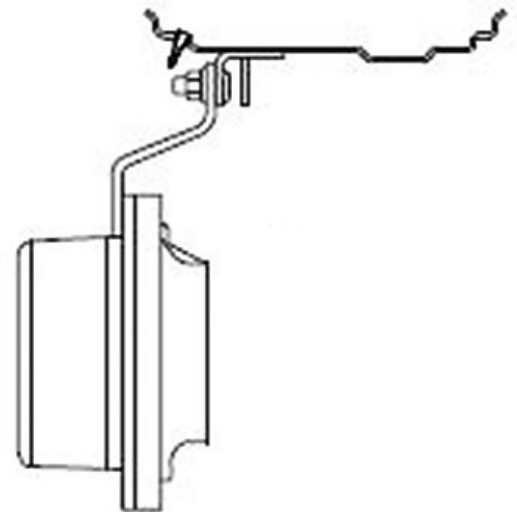
Fender Bracket Adjustment

RXA0149404—UN—20JUL15

9. Confirm fender brackets (A) are centered under fender as a final adjustment. Tighten cap screws to 73 N·m (54 lb·ft).
10. Check all wide fender assembly cap screws are tight to specification.

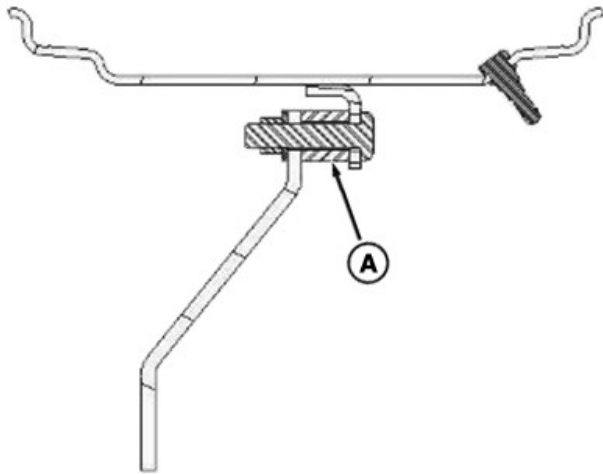
KT81203,0000511-19-01SEP17

Determine Rim Type



8-Position Rim

RXA0160411—UN—08AUG17



RXA0160412—UN—08AUG17
16-Position Rim

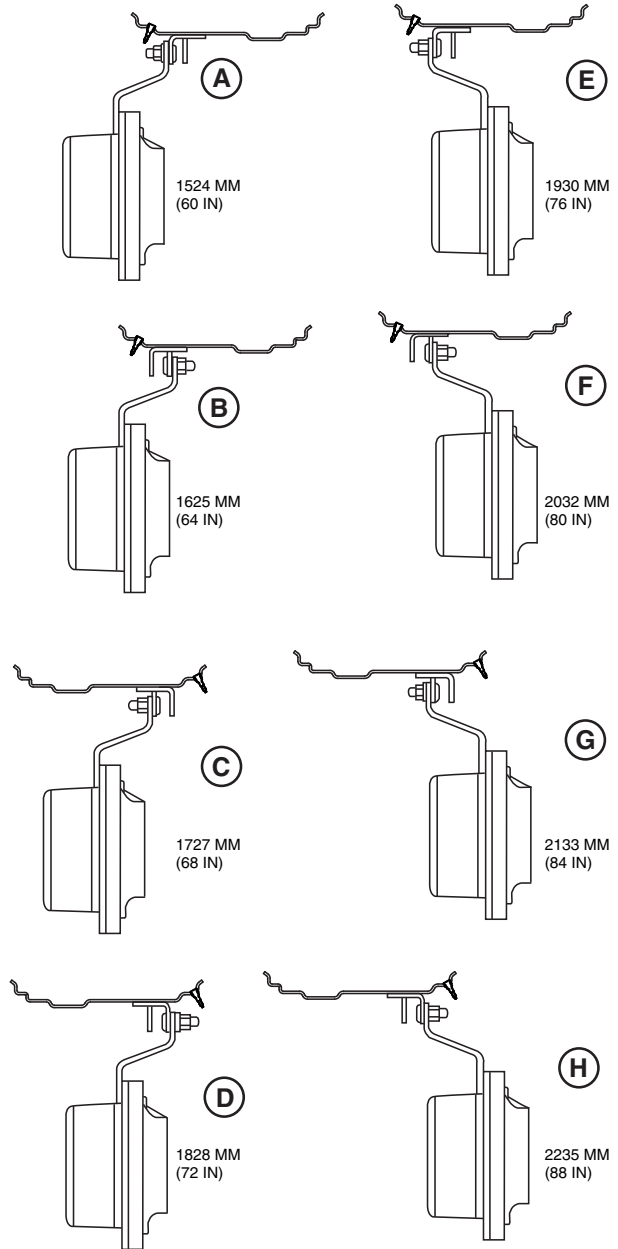
8-position rim and 16-position rim with spacer (A) uses M16 hardware at the disk to rim flange joint. Torque specification for M16 hardware is 300 N·m (225 lb·ft).

GH15097,0000491-19-11AUG17

Wheel Setting—8-Position

480 mm (18.9 in) or Smaller Rims

IMPORTANT: Carefully follow procedure for tightening wheel bolts. Failure to do so could lead to wheel hub damage.



RXA0089742—UN—05JUL06

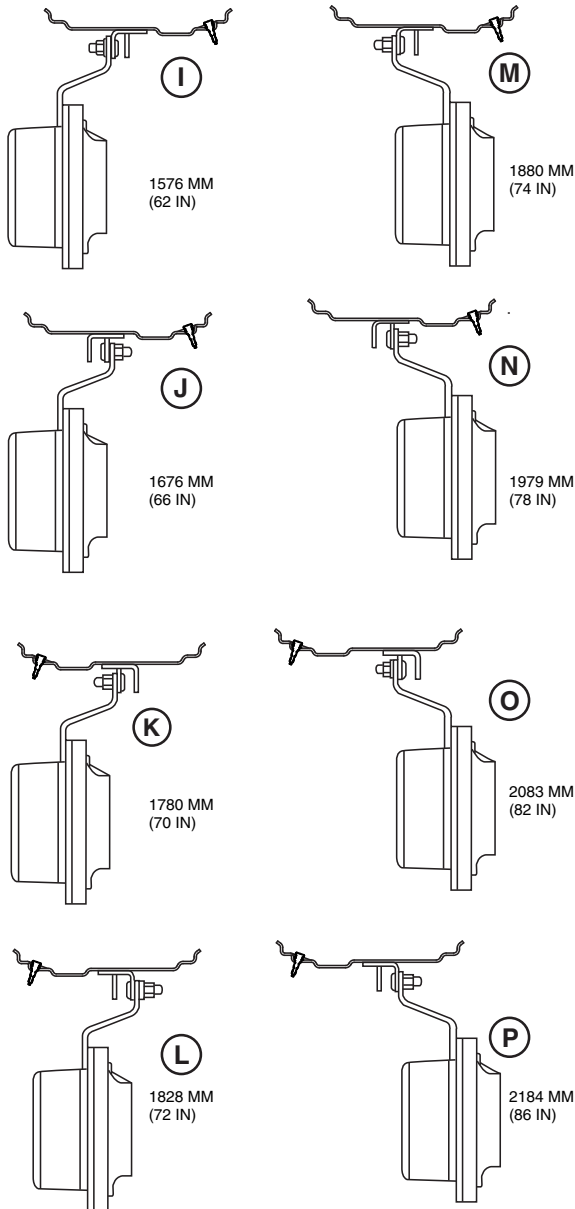
Diagrams A through H indicate wheel rim and disk positions used to reach wheel positions and tread spacing shown in tables in this section of this Operator's Manual. Tread spacing is distance between left and right tire center lines, measured at bottom of tire.

Secure wheel bolts as described in Front Wheel Bolts in Service - Tighten section of this Operator's Manual.

Adjust fenders and steering stops as required using tables and diagrams in this section of this Operator's Manual.

540 mm (21.3 in) or Larger Rims

IMPORTANT: Carefully follow procedure for tightening wheel bolts. Failure to do so could lead to wheel hub damage.



Diagrams I through P indicate wheel rim and disk positions used to reach wheel positions and tread spacing shown in tables in this section of this Operator's Manual. Tread spacing is distance between left and right tire center lines, measured at bottom of tire.

Secure wheel bolts as described in Front Wheel Bolts in Service - Tighten section of this Operator's Manual.

Adjust fenders and steering stops as required using tables and diagrams in this section of this Operator's Manual.

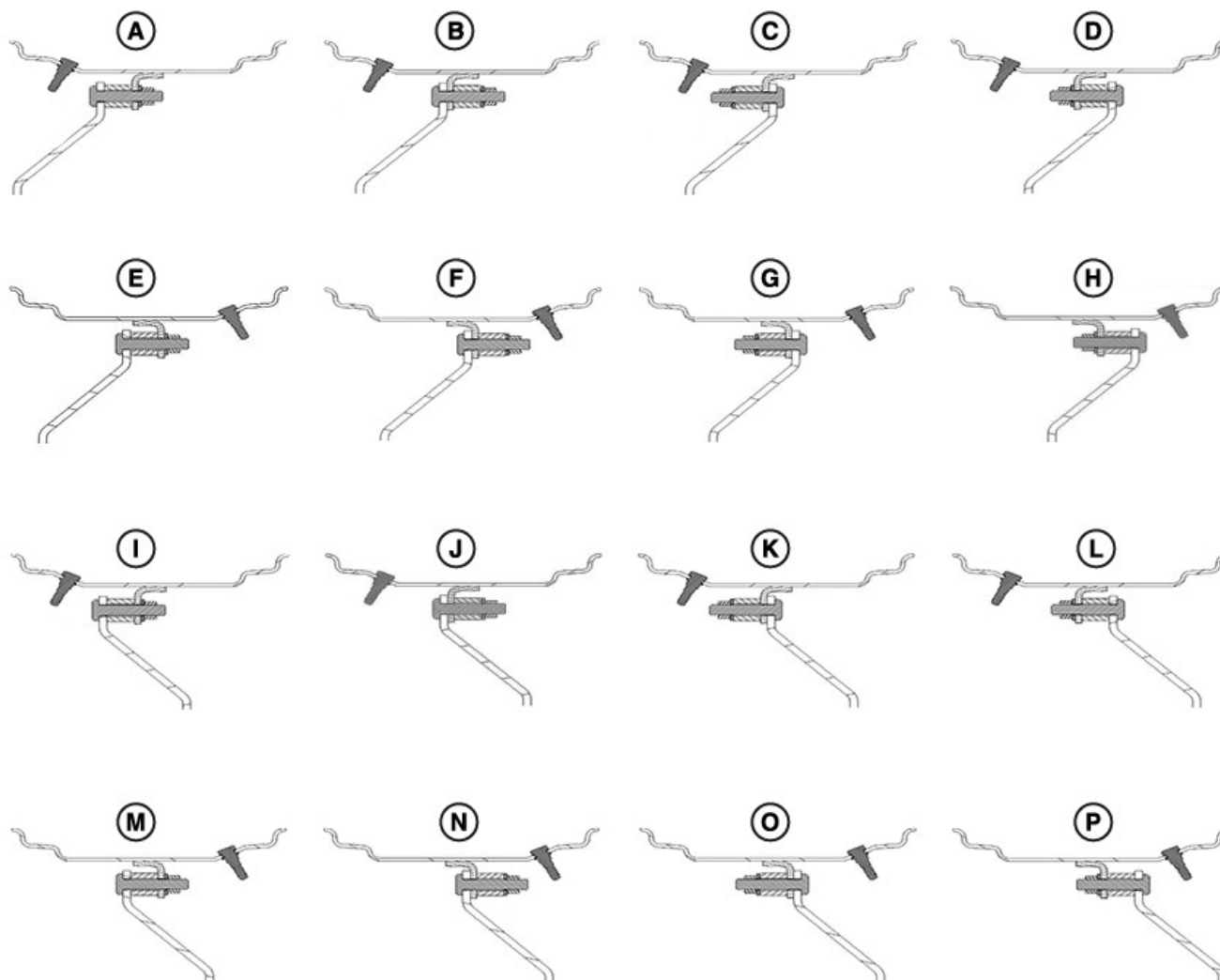
TS36762,0000216-19-09AUG17

Wheel Setting—16-Position

380/80R38 Tires Only

16-position steel wheel as viewed from behind left tire.

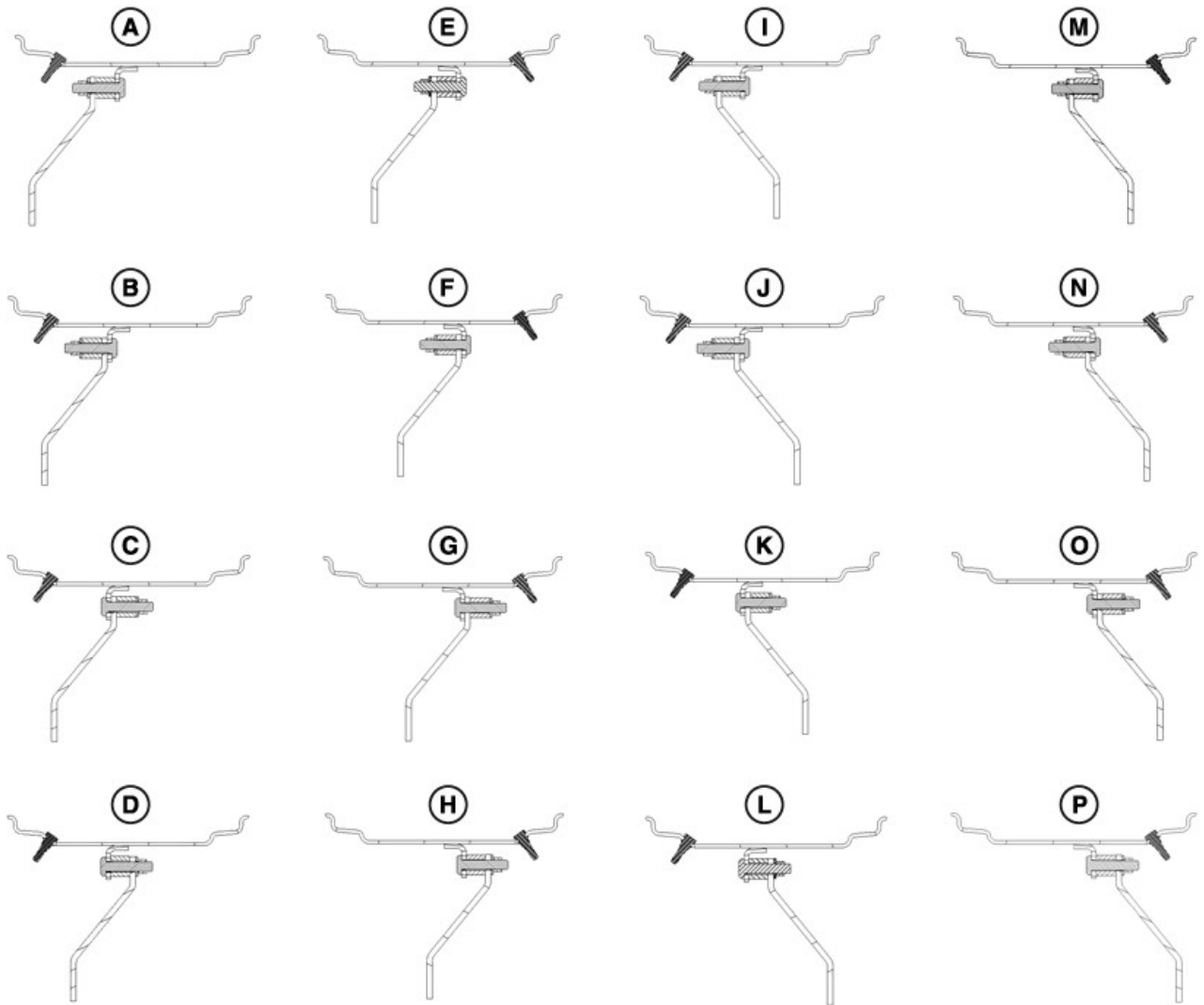
RXA0089743—UN—05JUL06



RXA0164282—UN—27AUG18

420/85R34 and 480/70R38 Tires Only

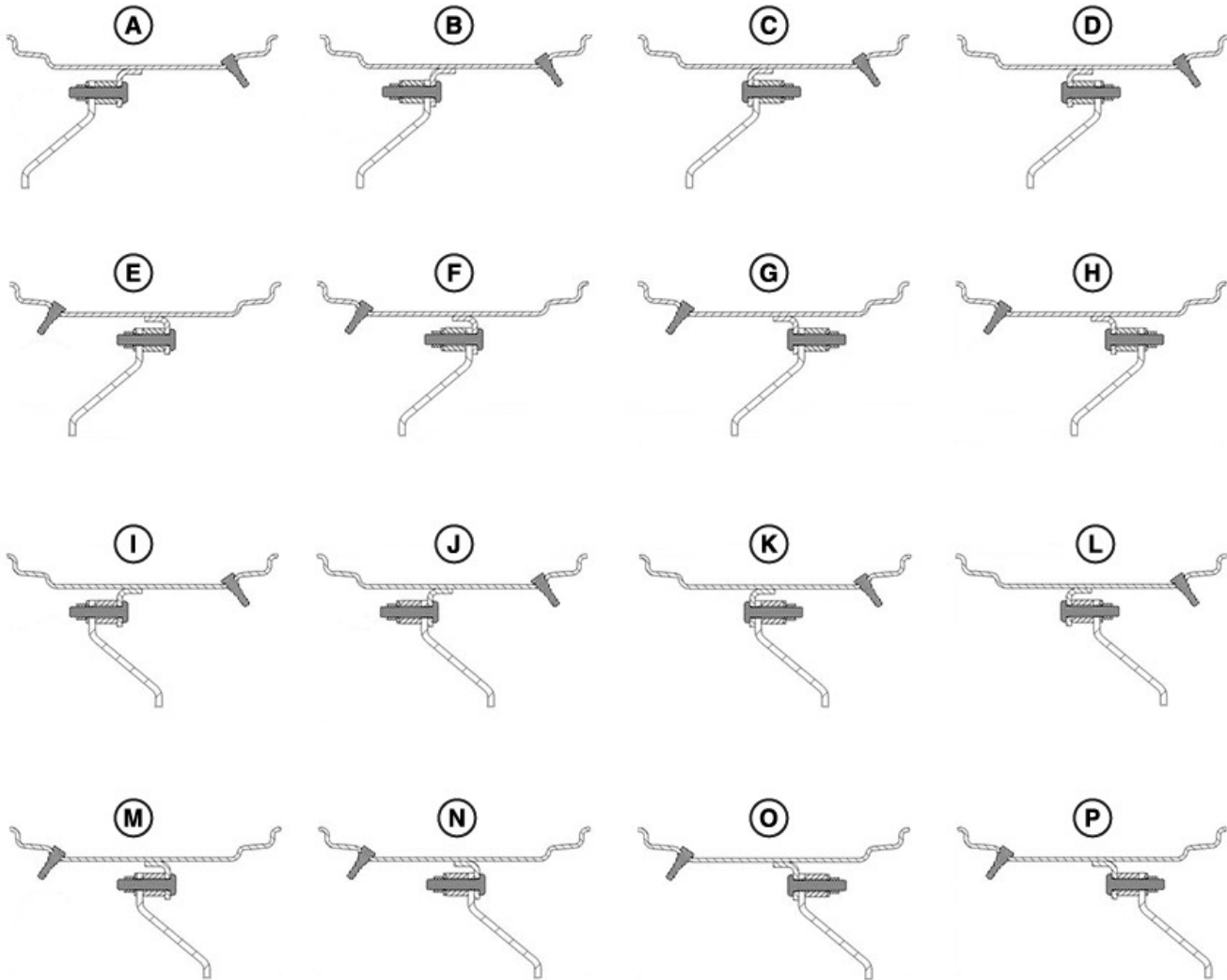
16-position steel wheel as viewed from behind left tire.



RXA0160413—UN—08AUG17

600/70R30 Tires Only

16-position steel wheel as viewed from behind left tire.


RXA0164283—UN—27AUG18
KT81203,000050D-19-16AUG18

Tire, Steering Stop, and Fender Settings Table Explanation

IMPORTANT: Avoid fender and tire damage. Always adjust fenders before setting steering stop.

To calculate Mean Tread Spacing see Determine Mean Tread Spacing in this section of this Operator's Manual.

Table data defined as:

Description	Example 1	Example 2
	8L1Cw 5625 (221)	16A1A _a 5680 (224)
Wheel rim type	8 ^a	16 ^b
Wheel setting ^c	L	A
Steering stop setting ^d	1	1

Description	Example 1	Example 2
	8L1Cw 5625 (221)	16A1A _a 5680 (224)
Fender setting ^e	C	A
Wide fender setting	w	^a or other footnote
Turning diameter in mm (in)	5625 (221)	5680 (224)

^a8-position rim setting. See 8-Position Wheel Settings in this section of this Operator's Manual.

^b16-position rim setting. See 16-Position Wheel Settings in this section of this Operator's Manual.

^cSee 8- or 16-position Wheel Settings in this section of this Operator's Manual.

^dSee Set Steering Stops in this section of this Operator's Manual.

^eSee Fender Settings in this section of this Operator's Manual.

EC82310,00005E9-19-09AUG17

**Tire, Steering Stop, and Fender Settings-
1150/1300 MFWD Axles**

NOTE: Model 7210R has the option of the 1150 or 1300 axle, all other models have the 1300 axle.

IMPORTANT: Avoid equipment damage. Further adjustment may be necessary if tire or fender contacts tractor on wide turns.

1150/1300 MFWD Axles, With 9° Oscillation Stops							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
320/80R42	8A5A 7210 (284)	—	8B4B 6641 (261)	—	8C3C ^a 6204 (244)	—	8D2D ^b 5860 (231)
320/85R38	16A1A 5680 (224)	—	16D0B 5750 (226)	—	16E0C 5470 (215)	—	16H0D 5320 (209)
380/80R38	—	—	—	—	8C5C ^a 16F5C 7396 (291)	—	8D4D ^a 16H4D 6824 (269)
380/85R34	8A5A 7210 (284)	—	8B4B 6641 (261)	—	8C3C ^a 6204 (244)	—	8D2D ^b 5860 (231)
420/85R34	8A6A 16A6A 8327 (328)	—	8B5B ^c 16C5B 7303 (288)	—	8C3C ^a 16F3C 6204 (244)	—	8D2D ^b 16H2D 5860 (231)
420/90R30	8A6A 8327 (328)	—	8B4B 6641 (261)	—	8C3C ^a 6204 (244)	—	8D2D ^b 5860 (231)
16.9R30	8A6A 8327 (328)	—	8B5B ^c 7303 (288)	—	8C4C ^a 6732 (265)	—	8D2D ^b 5860 (231)
480/70R30	8A6A 8327 (328)	—	8B5A 7303 (288)	—	8C4B 6732 (265)	—	8D2C 5860 (231)
480/70R34	—	—	8B5A 16C5A 7303 (288)	—	8C4B 16F4B 6732 (265)	—	8D3C 16H3C 6294 (248)
540/65R30	—	8I6A 8375 (330)	—	8J4B 6871 (263)	—	8K3B 6249 (246)	—
540/65R34	—	—	—	8J5A 7350 (289)	—	8K4B 6778 (267)	—
600/65R28	—	—	—	—	—	8K4B 6778 (267)	—
600/70R30	—	—	—	—	—	8K5A 16F5A 7443 (293)	—

^aWide fenders use position B.

^bWide fenders use position C.

^cWide fenders use position A.

1150/1300 MFWD Axles, With 9° Oscillation Stops (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
320/80R42	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0G ^a 5299 (209)	—	8H0H 5384 (212)
320/85R38	—	16I0E 5350 (211)	—	16L0F 5410 (213)	—	16M0G ^a 5440 (214)	—	16P0G 5510 (217)
380/80R38	—	8E3E ^b 16I3E 6384 (251)	—	8F2F ^c 16K2F 6037 (238)	—	8G1G ^a 16N1G 5673 (223)	—	8H0H 16P0H 5384 (212)
380/85R34	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0G ^a 5299 (209)	—	8H0G 5384 (212)
420/85R34	—	8E2E ^b 16I3E 5948 (234)	—	8F0F 16K2F 5215 (205)	—	8G0G ^a 16N1G 5299 (209)	—	8H0H 16P0H 5384 (212)
420/90R30	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0G ^a 5299 (209)	—	8H0H 5384 (212)

Steering Stop, Fender, and Tread Settings

1150/1300 MFWD Axles, With 9° Oscillation Stops (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
16.9R30	—	8E2E ^d 5948 (234)	—	8F1F ^c 5587 (220)	—	8G0G ^a 5299 (209)	—	8H0H 5384 (212)
480/70R30	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0F 5299 (209)	—	8H0G 5384 (212)
480/70R34	—	8E2D 16I2D 5948 (234)	—	8F1E 16K1E 5587 (220)	—	8G0F 16N0F 5299 (209)	—	8H0H 16P0H 5384 (212)
540/65R30	8M2C 5904 (232)	—	8N1E 5543 (218)	—	8O0F 5257 (207)	—	8P0F 5342 (210)	—
540/65R34	8M3C 6339 (250)	—	8N2D 5992 (236)	—	8O1F 5630 (222)	—	8P0F 5342 (210)	—
600/65R28	8M3C 6339 (250)	—	8N2D 5992 (236)	—	8O1E 5630 (222)	—	8P0F 5342 (210)	—
600/70R30	8M4B 16H4B 6870 (270)	—	8N3C 16K3C 6429 (253)	—	8O2E 16N2E 6081 (239)	—	8P1F 16P1F 5717 (225)	—

^aWide fenders use position F.

^bWide fenders use position C.

^cWide fenders use position E.

^dWide fenders use position D.

1150/1300 MFWD Axles, With 5° Oscillation Stops							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
320/80R42	8A5A 7210 (284)	—	8B4B 6641 (261)	—	8C2C 5772 (227)	—	8D2D ^a 5860 (231)
320/85R38	16A1A 5680 (224)	—	16D0B 5750 (226)	—	16E0C 5470 (215)	—	16H0D 5320 (209)
380/80R38	8A6A 16A6A 8327 (328)	—	8B4B 16C4B 6641 (261)	—	8C3C ^b 16F3C 6204 (244)	—	8D2D ^a 16H2D 5860 (231)
380/85R34	8A5A 7210 (284)	—	8B4B 6641 (261)	—	8C2C 5772 (227)	—	8D1D 5414 (213)
420/85R34	8A6A 16A6A 8327 (328)	—	8B5B ^c 16C5B 7303 (288)	—	8C3C ^b 16F3C 6204 (244)	—	8D2D ^a 16H2D 5860 (231)
420/90R30	8A5A 7210 (284)	—	8B4B 6641 (261)	—	8C3C ^b 6204 (244)	—	8D2D ^a 5860 (231)
16.9R30	8A6A 8327 (328)	—	8B5B 7303 (288)	—	8C3C ^b 6204 (244)	—	8D2D ^a 5860 (231)
480/70R30	8A6A 8327 (328)	—	8B5A 7303 (288)	—	8C3B 6204 (244)	—	8D2C 5860 (231)
480/70R34	—	—	8B5A 16C5A 7303 (288)	—	8C4B 16F4B 6732 (265)	—	8D3C 16H3C 6294 (248)
540/65R30	—	8I6A 8375 (330)	—	8J4B 6687 (263)	—	8K3B 6249 (246)	—
540/65R34	—	—	—	8J5A 7350 (289)	—	8K4B 6778 (267)	—
600/65R28	—	—	—	—	—	8K4B 6778 (267)	—
600/70R30	—	—	—	—	—	8K5A 16F5A 7443 (293)	—

^aWide fenders use position C.

^bWide fenders use position B.

^cWide fenders use position A.

Steering Stop, Fender, and Tread Settings

1150/1300 MFWD Axles, With 5° Oscillation Stops (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
320/80R42	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0G ^a 5299 (209)	—	8H0H ^a 5384 (212)
320/85R38	—	16I0E 5350 (211)	—	16L0F 5410 (213)	—	16M0G ^a 5440 (214)	—	16P0H ^a 5510 (217)
380/80R38	—	8E1E 16I1E 5500 (217)	—	8F1F 16K1F 5587 (220)	—	8G0G ^a 16N0G 5299 (209)	—	8H0H ^a 16P0H 5384 (212)
380/85R34	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0G ^a 5299 (209)	—	8H0G ^a 5384 (212)
420/85R34	—	8E2E ^b 16I23 5948 (234)	—	8F0F 16K0F 5215 (205)	—	8G0G ^a 16N0G 5299 (209)	—	8H0H ^a 16P0H 5384 (212)
420/90R30	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0G ^a 5299 (209)	—	8H0H ^a 5384 (212)
16.9R30	—	8E1E 5500 (217)	—	8F1F ^c 5587 (220)	—	8G0G ^a 5299 (209)	—	8H0H ^a 5384 (212)
480/70R30	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0F 5299 (209)	—	8H0F 5384 (212)
480/70R34	—	8E2D 16I2D 5948 (234)	—	8F1E 16K1E 5587 (220)	—	8G0F 16N0F 5299 (209)	—	8H0 ^d 16P0H 5384 (212)
540/65R30	8M2C 5904 (232)	—	8N1E 5543 (218)	—	8O0F 5257 (207)	—	8P0F 5342 (210)	—
540/65R34	8M3C 6339 (250)	—	8N2D 5992 (236)	—	8O1F 5630 (222)	—	8P0F 5342 (210)	—
600/65R28	8M3C 6339 (250)	—	8N2D 5992 (236)	—	8O1E 5630 (222)	—	8P0F 5342 (210)	—
600/70R30	8M4B 16H4B 6870 (270)	—	8N2C 16K2C 5992 (236)	—	8O2E 16N2E 6081 (239)	—	8P1F 16P1F 5717 (225)	—

^aWide fenders use position F.

^bWide fenders use position C.

^cWide fenders use position E.

^dFender not compatible with this setting

Tire, Steering Stop, and Fender Settings-1150/1300 MFWD Axles with Front Hitch

IMPORTANT: Avoid equipment damage. Further adjustment may be necessary if tire or fender contacts tractor on wide turns.

NOTE: Model 7210R has the option of the 1150 or 1300 axle, all other models have the 1300 axle. If tire size is not listed in the following charts, see 1150/1300 MFWD Axles, Tire, Fender, and Steering Stop Settings in this section.

NOTE: 7R Series Tractors have 9° oscillation on all rigid front axles except for tractors ordered with Group 44 front tires. 5° oscillation stops are installed with Group 44 front tires with rigid 1300 front axle. 5° oscillation stops can be installed on rigid front axles with 9° to offer better turning radius by limiting axle oscillation and the potential for tractor/tire contact.

1150/1300 MFWD, With 9° Oscillation Stops, With Front Hitch							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
320/80R42	8A6A 8327 (328)	—	8B4B 6641 (261)	—	8C3C ^a 6204 (244)	—	8D2D ^b 5860 (231)
380/80R38	—	—	—	—	8C5C ^c 16F3C 7396 (291)	—	8D4D ^a 16H4D 6824 (269)
420/85R34	—	—	8B6B ^c 16C6B 8423 (332)	—	8C4C ^a 16F4C 6732 (265)	—	8D3D ^b 16H3D 6294 (248)

Steering Stop, Fender, and Tread Settings

1150/1300 MFWD, With 9° Oscillation Stops, With Front Hitch							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
480/70R34	—	—	8B6A 16C6A 8423 (332)	—	8C4B 16F4B 6732 (265)	—	8D3C ^d 16H3C 6294 (248)
540/65R34	—	—	—	—	—	8K4B 6778 (267)	—
600/70R30	—	—	—	—	—	8K6B 16F6B 8566 (337)	—

^aWide fenders use position B.

^bWide fenders use position C.

^cWide fenders use position A.

^dFender not compatible with this setting

1150/1300 MFWD, With 9° Oscillation Stops, With Front Hitch (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
320/80R42	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0G ^a 5299 (209)	—	8H0H 5384 (212)
380/80R38	—	8E3E ^b 16I3E 6384 (251)	—	8F2F ^c 16K2F 6037 (238)	—	8G1G ^a 16N1G 5673 (223)	—	8H0H 16P0H 5384 (212)
420/85R34	—	8E2E ^b 16I2E 5948 (234)	—	8F1F 16K1F 5587 (220)	—	8G0G ^a 16N0G 5299 (209)	—	8H0H 16P0H 5384 (212)
480/70R34	—	8E2D 16I2D 5948 (234)	—	8F1E 16K1E 5587 (220)	—	8G0F 16N0F 5299 (209)	—	8H0H 16P0H 5384 (212)
540/65R34	8M3C 6339 (250)	—	8N2D 5992 (236)	—	8O1F 5630 (222)	—	8P0F 5342 (210)	—
600/70R30	8M4C 16H4C 6870 (270)	—	8N3D 16K3D 6429 (253)	—	8O2E 16N2E 6081 (239)	—	8P1F 16P1F 5717 (225)	—

^aWide fenders use position F.

^bWide fenders use position C.

^cWide fenders use position E.

1150/1300 MFWD, With 5° Oscillation Stops, With Front Hitch							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
320/80R42	8A5A 7210 (284)	—	8B4B 6641 (261)	—	8C2C 5772 (227)	—	8D2D ^a 5860 (231)
380/80R38	—	—	8B6B ^b 16C6B 8423 (332)	—	8C3C ^c 16F3C 6204 (244)	—	8D2D ^a 16H2D 5860 (231)
420/85R34	—	—	8B5B ^b 16C5B 7303 (288)	—	8C4C ^c 16F4C 6732 (265)	—	8D3D ^a 16H3D 6294 (248)
480/70R34	—	—	8B5A 16C5A 7303 (288)	—	8C4B 16F4B 6732 (265)	—	8D3C 16H3C 6294 (248)
540/65R34	—	—	—	8J5A 7350 (289)	—	8K4B 6778 (267)	—
600/70R30	—	—	—	—	—	8K5B 16F5B 7443 (293)	—

^aWide fenders use position C.

^bWide fenders use position A.

^cWide fenders use position B.

Steering Stop, Fender, and Tread Settings

1150/1300 MFWD, With 5° Oscillation Stops, With Front Hitch (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
320/80R42	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0G ^a 5299 (209)	—	8H0H ^a 5384 (212)
380/80R38	—	8E1E 16I1E 5500 (217)	—	8F1F 16K1F 5587 (220)	—	8G0G ^a 16N0G 5299 (209)	—	8H0H ^a 16P0H 5384 (212)
420/85R34	—	8E2E ^b 16I2E 5948 (234)	—	8F1F 16K1F 5587 (220)	—	8G0G ^a 16N0G 5299 (209)	—	8H0H ^a 16P0H 5384 (212)
480/70R34	—	8E2D 16I2D 5948 (234)	—	8F1E 16K1E 5587 (220)	—	8G0F 16N0F 5299 (209)	—	8H0H 16P0H 5384 (212)
540/65R34	8M3C 6339 (250)	—	8N2D 5992 (236)	—	8O1F 5630 (222)	—	8P0F 5342 (210)	—
600/70R30	8M4C 16H4C 6870 (270)	—	8N2D 16K2D 5992 (236)	—	8O2E 16N2E 6081 (239)	—	8P1F 16P1F 5717 (225)	—

^aWide fenders use position F.

^bWide fenders use position C.

Tire, Steering Stop, and Fender Settings-1150/1300 MFWD Axles with Front Loader

IMPORTANT: Avoid equipment damage. Further adjustment may be necessary if tire or fender contacts tractor on wide turns.

NOTE: Model 7210R has the option of the 1150 or 1300 axle, all other models have the 1300 axle. Pivoting fenders are not available with front loaders. Group 44 tires are not compatible with front loader.

1150/1300 MFWD Axles, With 9° Oscillation Stops, With Front Loader							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
320/80R42	8A5- 7210 (284)	—	8B4- 6641 (261)	—	8C3- 6204 (244)	—	8D2- 5860 (231)
320/85R38	16A1- 5680 (224)	—	16D0- 5750 (226)	—	16E0- 5470 (215)	—	16H0- 5320 (209)
380/80R38	—	—	—	—	8C5- 16F5- 7396 (291)	—	8D4- 16H4- 6824 (269)
380/85R34	8A5- 7210 (284)	—	8B4- 6641 (261)	—	8C3- 6204 (244)	—	8D2- 5860 (231)
420/85R34	8A6- 16A6- 8327 (328)	—	8B5- 16C5- 7303 (288)	—	8C4- 16F4- 6732 (265)	—	8D3- 16H3- 6294 (248)
420/90R30	8A6- 8327 (328)	—	8B4- 6641 (261)	—	8C3- 6204 (244)	—	8D2- 5860 (231)
16.9R30	8A6- 8327 (328)	—	8B5- 7303 (288)	—	8C4- 6732 (265)	—	8D2- 5860 (231)
480/70R30	8A6- 8327 (328)	—	8B5- 7303 (288)	—	8C4- 6732 (265)	—	8D2- 5860 (231)
480/70R34	—	—	8B5- 16C5- 7303 (288)	—	8C4- 16F4- 6732 (265)	—	8D3- 16H3- 6294 (248)
540/65R30	—	8I6- 8375 (330)	—	8J4- 6687 (263)	—	8K3- 6249 (246)	—
540/65R34	—	—	—	8J5- 7350 (289)	—	8K4- 6778 (267)	—
600/65R28	—	—	—	—	—	8K4- 6778 (267)	—
600/70R30	—	—	—	—	—	8K5- 16F5- 7443 (293)	—

Steering Stop, Fender, and Tread Settings

1100/1300 MFWD Axles, With 9° Oscillation Stops, With Front Loader (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
320/80R42	—	8E2-5948 (234)	—	8F2-6037 (238)	—	8G2-6126 (241)	—	8H2-6215 (245)
320/85R38	—	16I0-5350 (211)	—	16L0-5410 (213)	—	16M0-5440 (214)	—	16P0-5510 (217)
380/80R38	—	8E3-16I3-6384 (251)	—	8F3-16K3-6474 (255)	—	8G3-16N3-6565 (258)	—	8H3-16P3-6656 (262)
380/85R34	—	8E1-5500 (217)	—	8F1-5587 (220)	—	8G1-5673 (223)	—	8H1-5761 (227)
420/85R34	—	8E3-16I3-6384 (251)	—	8F3-16K3-6474 (255)	—	8G3-16N3-6565 (258)	—	8H3-16P3-6656 (262)
420/90R30	—	8E1-5500 (217)	—	8F1-5587 (220)	—	8G1-5673 (223)	—	8H1-5761 (227)
16.9R30	—	8E2-5948 (234)	—	8F1-5587 (220)	—	8G1-5673 (223)	—	8H1-5761 (227)
480/70R30	—	8E1-5500 (217)	—	8F0-5215 (205)	—	8G0-5299 (209)	—	8H0-5384 (212)
480/70R34	—	8E2-16I2-5948 (234)	—	8F2-16K2-6037 (238)	—	8G2-16N2-6126 (241)	—	8H2-16P2-6215 (245)
540/65R30	8M2-5904 (232)	—	8N1-5543 (218)	—	8O1-5630 (222)	—	8P1-5717 (225)	—
540/65R34	8M3-6339 (250)	—	8N2-5992 (236)	—	8O2-6081 (239)	—	8P2-6170 (243)	—
600/65R28	8M3-6339 (250)	—	8N2-5992 (236)	—	8O1-5630 (222)	—	8P1-5717 (225)	—
600/70R30	8M4-16H4-6870 (270)	—	8N4-16K4-6962 (274)	—	8O4-16N4-7054 (278)	—	8P4-16P4-7147 (281)	—

1150/1300 MFWD Axles, With 5° Oscillation Stops, With Front Loader							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
320/80R42	8A5-7210 (284)	—	8B4-6641 (261)	—	8C2-5772 (227)	—	8D2-5860 (231)
320/85R38	16A1-5680 (224)	—	16D0-5750 (226)	—	16E0-5470 (215)	—	16H0-5320 (209)
380/80R38	8A6-16A6-8327 (328)	—	8B4-16C4-6641 (261)	—	8C3-16F3-6204 (244)	—	8D3-16H3-6294 (248)
380/85R34	8A5-7210 (284)	—	8B4-6641 (261)	—	8C2-5772 (227)	—	8D1-5414 (213)
420/85R34	8A6-16A6-8327 (328)	—	8B5-16C5-7303 (288)	—	8C4-16F4-6732 (265)	—	8D3-16H3-6294 (248)
420/90R30	8A5-7210 (284)	—	8B4-6641 (261)	—	8C3-6204 (244)	—	8D2-5860 (231)
16.9R30	8A6-8327 (328)	—	8B5-7303 (288)	—	8C3-6204 (244)	—	8D2-5860 (231)
480/70R30	8A6-8327 (328)	—	8B5-7303 (288)	—	8C3-6204 (244)	—	8D2-5860 (231)
480/70R34	8A6-	—	8B5-	—	8C3-	—	8D2-

Steering Stop, Fender, and Tread Settings

1150/1300 MFWD Axles, With 5° Oscillation Stops, With Front Loader							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
	16A6-8327 (328)		16C5-7303 (288)		16F3-6204 (244)		16H2-5860 (231)
540/65R30	—	8I6-8375 (330)	—	8J4-6687 (263)	—	8K3-6249 (246)	
540/65R34	—	—	—	8J5-7350 (289)	—	8K4-6778 (267)	—
600/65R28	—	—	—	—	—	8K4-6778 (267)	—
600/70R30	—	—	—	—	—	8K5-16F5-7443 (293)	—

1150/1300 MFWD Axles, With 5° Oscillation Stops, With Front Loader (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
320/80R42	—	8E1-5500 (217)	—	8F1-5587 (220)	—	8G1-5673 (223)	—	8H1-5761 (227)
320/85R38	—	16I0-5350 (211)	—	16L0-5410 (213)	—	16M0-5440 (214)	—	16P0-5510 (217)
380/80R38	—	8E3-16I3-6384 (251)	—	8F3-16K3-6474 (255)	—	8G3-16N3-6565 (258)	—	8H3-16P3-6656 (262)
380/85R34	—	8E1-5500 (217)	—	8F0-5215 (205)	—	8G0-5299 (209)	—	8H0-5384 (212)
420/85R34	—	8E2-16I2-5948 (234)	—	8F2-16K2-6037 (238)	—	8G2-16N2-6126 (241)	—	8H2-16P2-6215 (245)
420/90R30	—	8E1-5500 (217)	—	8F0-5215 (205)	—	8G0-5299 (209)	—	8H0-5384 (212)
16.9R30	—	8E1-5500 (217)	—	8F1-5587 (220)	—	8G1-5673 (223)	—	8H1-5761 (227)
480/70R30	—	8E2-5948 (234)	—	8F0-5215 (205)	—	8G0-5299 (209)	—	8H0-5384 (212)
480/70R34	—	8E2-16I2-5948 (234)	—	8F2-16K2-6037 (238)	—	8G2-16N2-6126 (241)	—	8H2-16P2-6215 (245)
540/65R30	8M2-5904 (232)	—	8N1-5543 (218)	—	8O0-5257 (207)	—	8P0-5342 (210)	—
540/65R34	8M3-6339 (250)	—	8N2-5992 (236)	—	8O1-5630 (222)	—	8P1-5717 (225)	—
600/65R28	8M3-6339 (250)	—	8N2-5992 (236)	—	8O1-5630 (222)	—	8P0-5342 (210)	—
600/70R30	8M4-16H4-6870 (270)	—	8N3-16K3-6429 (253)	—	8O2-16N2-6081 (239)	—	8P2-16P2-6170 (243)	—

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Tire, Steering Stop, and Fender Settings- TLS™ Plus Axle

IMPORTANT: Avoid equipment damage. Further adjustment may be necessary if tire or fender contacts tractor on wide turns.

TLS™ Plus							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
320/80R42	8A5A 7210 (284)	—	8B4B 6641 (261)	—	8C3C ^a 6204 (244)	—	8D2D ^b 5860 (231)
320/85R38	16A2A 5880 (232)	—	16D1B 5570 (219)	—	16E0C 5260 (207)	—	16H0D 5320 (209)
380/80R38	—	—	8B5B ^c 16C5B 7303 (288)	—	8C4C ^a 16F4C 6732 (265)	—	8D3D ^a 16H3D 6294 (248)
380/80R42	—	—	—	—	—	—	—
380/85R34	8A5A 7210 (284)	—	8B4B 6641 (261)	—	8C3C ^a 6204 (244)	—	8D2D ^b 5860 (231)
420/85R34	8A6A 16A6A 8327 (328)	—	8B5B ^c 16C5B 7303 (288)	—	8C4C ^a 16F4C 6732 (265)	—	8D3D ^b 16H3D 6294 (248)
420/85R38	—	—	—	—	—	—	—
420/90R30	8A6A 8327 (328)	—	8B5B ^c 7303 (288)	—	8C3C ^a 6204 (244)	—	8D2D ^b 5860 (231)
16.9R30	8A6A 8327 (328)	—	8B5B ^c 7303 (288)	—	8C4C ^a 6732 (265)	—	8D3D ^b 6294 (248)
480/70R30	8A6A 8327 (328)	—	8B5A 7303 (288)	—	8C4B 6732 (265)	—	8D2C 5860 (231)
480/70R34	—	—	8B6A 16C6A 8423 (332)	—	8C5B 16F5B 7396 (291)	—	8D3C 16H3C 6294 (248)
540/65R30	—	—	—	8J5A 7350 (289)	—	8K3B 6249 (246)	—
540/65R34	—	—	—	8J6A 8470 (333)	—	8K4B 6778 (267)	—
540/75R34	—	—	—	—	—	—	—
600/65R28	—	—	—	—	—	8K4B 6778 (267)	—
600/70R30	—	—	—	—	—	8K5B 16F5B- 7443 (293)	—
620/75R30	—	—	—	—	—	—	—

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^aWide fenders use position B.

^bWide fenders use position C.

^cWide fenders use position A.

TLS™ Plus (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
320/80R42	—	8E1E 5500 (217)	—	8F1F ^a 5587 (220)	—	8G0G ^b 5299 (209)	—	8H0H 5384 (212)
320/85R38	—	16I0E 5370 (211)	—	16L0F 5410 (213)	—	16M0G ^b 5470 (215)	—	16P0G 5520 (217)
380/80R38	—	8E2E ^c 16I2E 5948 (234)	—	8F1F 16K1F 5587 (220)	—	8G0G ^a 16N0G 5299 (209)	—	8H0H 16P0H 5384 (212)
380/80R42	—	8E5W ^d 7583 (299)	—	8F4X ^e 7008 (276)	—	8G3Y ^e 6565 (258)	—	8H1Z ^f 5761 (227)

Steering Stop, Fender, and Tread Settings

TLS™ Plus (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
380/85R34	—	8E1E 5500 (217)	—	8F0F 5215 (205)	—	8G0G ^b 5299 (209)	—	8H0G 5384 (212)
420/85R34	—	8E2E ^c 16I2E 5948 (234)	—	8F1F 16K1F 5587 (220)	—	8G0G ^a 16N0G 5299 (209)	—	8H0H 16P0H 5384 (212)
420/85R38	—	8E6W 8709 (343)	—	8F4X ^e 7008 (276)	—	8G3Y ^e 6565 (258)	—	8H2Z ^f 6215 (245)
420/90R30	—	8E1E 5500 (217)	—	8F1F ^a 5587 (220)	—	8G0G ^b 5299 (209)	—	8H0H 5384 (212)
16.9R30	—	8E2E ^g 5948 (234)	—	8F1F ^a 5587 (220)	—	8G0G ^b 5299 (209)	—	8H0H 5384 (212)
480/70R30	—	8E1E 5500 (217)	—	8F1E 5587 (220)	—	8G0F 5299 (209)	—	8H0G 5384 (212)
480/70R34	—	8E2D 16I2D 5948 (234)	—	8F1E 16K1E 5587 (220)	—	8G1F 16N1F 5673 (223)	—	8H0H 16P0H 5384 (212)
540/65R30	8M2C 5904 (232)	—	8N1E 5543 (218)	—	8O0F 5257 (207)	—	8P0F 5342 (210)	—
540/65R34	8M3C 6339 (250)	—	8N2D 5992 (236)	—	8O1F 5630 (222)	—	8P1F 5717 (225)	—
540/75R34	—	—	8N6V 8757 (345)	—	8O5W 7724 (304)	—	8P3X 6611 (260)	—
600/65R28	8M3C 6339 (250)	—	8N2D 5992 (236)	—	8O1E 5630 (222)	—	8P0F 5342 (210)	—
600/70R30	8M4C 16H4C 6870 (270)	—	8N3D 16K3D 6429 (253)	—	8O2E 16N2E 6081 (239)	—	8P1F 16P1F 5717 (225)	—
620/75R30	—	—	—	—	8O6W 8853 (349)	—	8P4X 7147 (281)	—

^aWide fenders use position E.

^bWide fenders use position F.

^cWide fenders use position C.

^dWide fenders use position V.

^eWide fenders use position W.

^fNot available with wide fenders

^gWide fenders use position D.

Tire, Steering Stop, and Fender Settings-TLS™ Plus Axle with Front Hitch

NOTE: If tire sizes are not listed in the following charts, see TLS™ Plus Axle, Tire, Fender, and Steering Stop Settings in this section.

IMPORTANT: Avoid equipment damage. Further adjustment may be necessary if tire or fender contacts tractor on wide turns.

TLS™ Plus, With Front Hitch							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
320/80R42	8A6A 8327 (328)	—	8B45B ^a 7303 (288)	—	8C3C ^b 6204 (244)	—	8D2D ^c 5860 (231)
380/80R38	—	—	8B6B ^a 16C6B 8423 (332)	—	8C5C ^a 16F5C 7396 (291)	—	8D3D ^b 16H3D 6294 (248)
380/80R42 ^d	—	—	—	—	—	—	—
420/85R34	—	—	8B6B ^a 16C6B 8423 (332)	—	8C5C ^b 16F5C 7396 (291)	—	8D3D ^c 16H3D 6294 (248)
420/85R38 ^d	—	—	—	—	—	—	—
480/70R34	—	—	8B6A	—	8C5B	—	8D3C

Steering Stop, Fender, and Tread Settings

TLS™ Plus, With Front Hitch							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
			16C6A 8423 (332)		16F5B 7396 (291)		16H3C 6294 (248)
540/65R34	—	—	—	8J6A 8470 (333)	—	8K4B 6778 (267)	—
540/75R34 ^d	—	—	—	—	—	—	—
600/70R30	—	—	—	—	—	—	—
620/75R30 ^d	—	—	—	—	—	—	—

TLS is a trademark of Deere & Company

^aWide fenders use position A.

^bWide fenders use position B.

^cWide fenders use position C.

^dTire not available on 1100 axle.

TLS™ Plus, With Front Hitch (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
320/80R42	—	8E1E 5500 (217)	—	8F1F ^a 5587 (220)	—	8G0G ^b 5299 (209)	—	8H0H 5384 (212)
380/80R38	—	8E2E ^c 16I2E 5948 (234)	—	8F1F 16K1F 5587 (220)	—	8G0G 16N0G 5299 (209)	—	8H0H 16P0H 5384 (212)
380/80R42 ^d	—	8E6W ^e 8709 (343)	—	8F5X ^f 7677 (302)	—	8G5Y- ^f 7771 (306)	—	8H4Z- ^f 7193 (283)
420/85R34	—	8E2E ^c 16I2E 5948 (234)	—	8F1F 16K1F 5587 (220)	—	8G0G 16N0G 5299 (209)	—	8H0H 16P0H 5384 (212)
420/85R38 ^d	—	8E6W 8709 (343)	—	8F5X ^f 7677 (302)	—	8G4Y- ^f 7101 (280)	—	8H3Z- ^f 6656 (262)
480/70R34	—	8E2D 16I2D 5948 (234)	—	8F1E 16K1E 5587 (220)	—	8G1F 16N1F 5673 (223)	—	8H0H 16P0H 5384 (212)
540/65R34	8M3C 6339 (250)	—	8N2D 5992 (236)	—	8O1F 5630 (222)	—	8P1F 5717 (225)	—
540/75R34 ^d	—	—	8N6V 8757 (345)	—	8O5W 7724 (304)	—	8P3X 6611 (260)	—
600/70R30	8M5C 16H5C 7537 (297)	—	8N3D 16K3D 6429 (253)	—	8O2E 16N2E 6081 (239)	—	8P1F 16P1F 5717 (225)	—
620/75R30 ^d	—	—	—	—	8O6W 8853 (349)	—	8P4X 7147 (281)	—

^aWide fenders use position E.

^bWide fenders use position F.

^cWide fenders use position C.

^dTire not available on 1100 axle.

^eWide fenders use position V.

^fWide fenders use position W.

Tire, Steering Stop, and Fender Settings-TLS™ Plus Axle with Front Loader

IMPORTANT: Avoid equipment damage. Further adjustment may be necessary if tire or fender contacts tractor on wide turns.

NOTE: Group 44 tires are not available with TLS and front loader. Pivoting fenders are not available with front loaders.

Steering Stop, Fender, and Tread Settings

TLS™ Plus, With Front Loader							
Tire Size	Tread Setting mm (in)						
	1524 (60)	1575 (62)	1626 (64)	1676 (66)	1727 (68)	1778 (70)	1829 (72)
320/80R42	8A5-7210 (284)	—	8B4-6641 (261)	—	8C3-6204 (244)	—	8D3-6294 (248)
320/85R38	16A2-5880 (232)	—	16D1-5570 (219)	—	16E0-5260 (207)	—	16H0-5320 (209)
380/80R38	—	—	8B6-16C6-8423 (332)	—	8C6-16F6-8518 (335)	—	8D5-16H5-7490 (295)
380/85R34	8A5-7210 (284)	—	8B4-6641 (261)	—	8C3-6204 (244)	—	8D2-5860 (231)
420/85R34	8A6-16A6-8327 (328)	—	8B5-16C5-7303 (288)	—	8C4-16F4-6732 (265)	—	8D4-16H4-6824 (269)
420/90R30	8A6-8327 (328)	—	8B5-7303 (288)	—	8C4-6732 (265)	—	8D2-5860 (231)
16.9R30	8A6-8327 (328)	—	8B5-7303 (288)	—	8C4-6732 (265)	—	8D3-6294 (248)
480/70R30	8A6-8327 (328)	—	8B5-7303 (288)	—	8C4-6732 (265)	—	8D2-5860 (231)
480/70R34	—	—	8B6-16C6-8423 (332)	—	8C5-16F5-7396 (291)	—	8D3-16H3-6294 (248)
540/65R30	—	—	—	8J5-7350 (289)	—	8K3-6249 (246)	—
540/65R34	—	—	—	8J6-8470 (333)	—	8K4-6778 (267)	—
600/65R28	—	—	—	—	—	8K4-6778 (267)	—
600/70R30	—	—	—	—	—	8K5-16F5-7443 (293)	—

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TLS™ Plus, With Front Loader (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
320/80R42	—	8E3-6384 (251)	—	8F3-6474 (255)	—	8G3-6565 (258)	—	8H3-6656 (262)
320/85R38	—	16I0-5370 (211)	—	16L0-5410 (213)	—	16M0-5470 (215)	—	16P0-5520 (217)
380/80R38	—	8E4-16I4-6916 (272)	—	8F4-16K4-7008 (276)	—	8G4-16N4-7101 (280)	—	8H4-16P4-7193 (283)
380/85R34	—	8E1-5500 (217)	—	8F1-5587 (220)	—	8G1-5673 (223)	—	8H1-5761 (227)
420/85R34	—	8E4-16I4-6916 (272)	—	8F3-16K3-6474 (255)	—	8G3-16N3-6565 (258)	—	8H3-16P3-6656 (262)
420/90R30	—	8E2-5904 (232)	—	8F2-6037 (238)	—	8G2-6126 (241)	—	8H2-6215 (245)
16.9R30	—	8E2-5904 (232)	—	8F2-6037 (238)	—	8G2-6126 (241)	—	8H2-6215 (245)
480/70R30	—	8E1-5500 (217)	—	8F1-5587 (220)	—	8G1-5673 (223)	—	8H1-5761 (227)
480/70R34	—	8E3-16I3-6384 (251)	—	8F3-16K3-6474 (255)	—	8G3-16N3-6565 (258)	—	8H3-16P3-6656 (262)
540/65R30	8M2-5904 (232)	—	8N1-5543 (218)	—	8O1-5630 (222)	—	8P1-5717 (225)	—

Steering Stop, Fender, and Tread Settings

TLS™ Plus, With Front Loader (Continued)								
Tire Size	Tread Setting mm (in)							
	1880 (74)	1930 (76)	1981 (78)	2032 (80)	2083 (82)	2133 (84)	2184 (86)	2235 (88)
540/65R34	8M3- 6339 (250)	—	8N3- 6429 (253)	—	8O3- 6520 (257)	—	8P3- 6611 (260)	—
600/65R28	8M3- 6339 (250)	—	8N2- 5992 (236)	—	8O1- 5630 (222)	—	8P1- 5717 (225)	—
600/70R30	8M5- 16H5- 7537 (297)	—	8N5- 16K5- 7630 (300)	—	8O4- 16N4- 7054 (278)	—	8P4- 16P4- 7147 (281)	—

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Rear Wheels and Tires

Recommended Pressures—Group 47

Group	47								
Size	320/90R54	380/90R50		480/80R46		520/85R42			
Load Index	149	151		158		157		162	
Speed Rating	A8 / B	A8 / B		A8 / B		A8		A8 / B	
	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
3629 (8000)	48 (0.5)(7)	90 (0.9)(13)	40 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
3856 (8500)	55 (0.6)(8)	90 (0.9)(13)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
4082 (9000)	62 (0.6)(9)	103 (1.0)(15)	41 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
4309 (9500)	70 (0.7)(10)	110 (1.1)(16)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
4536 (10000)	69 (0.7)(10)	117 (1.2)(17)	41 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)	69 (0.7)(10)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
4763 (10500)	69 (0.7)(10)	124 (1.2)(18)	48 (0.5)(7)	95 (0.95)(14)	40 (0.4)(6)	76 (0.8)(11)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
4990 (11000)	76 (0.8)(11)	131 (1.3)(19)	55 (0.6)(8)	105 (1.05)(15)	40 (0.4)(6)	83 (0.8)(12)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5216 (11500)	83 (0.8)(12)	138 (1.4)(20)	55 (0.6)(8)	110 (1.1)(16)	40 (0.4)(6)	90 (0.9)(13)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5443 (12000)	90 (0.9)(13)	145 (1.4)(21)	62 (0.6)(9)	120 (1.2)(17)	40 (0.4)(6)	97 (1.0)(14)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5670 (12500)	97 (1.0)(14)	159 (1.6)(23)	69 (0.7)(10)	130 (1.3)(19)	40 (0.4)(6)	97 (1.0)(14)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5897 (13000)	103 (1.0)(15)	165 (1.7)(24)	69 (0.7)(10)	145 (1.45)(21)	50 (0.5)(7)	103 (1.0)(15)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
6123 (13500)	110 (1.1)(16)	179 (1.8)(26)	76 (0.8)(11)	150 (1.5)(22)	50 (0.5)(7)	110 (1.1)(16)	41 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)
6350 (14000)	110 (1.1)(16)	207 (2.1)(30)	83 (0.8)(12)	160 (1.6)(23)	55 (0.55)(8)	110 (1.1)(16)	41 (0.4)(6)	95 (0.95)(14)	40 (0.4)(6)
6577 (14500)	117 (1.2)(17)	221 (2.2)(32)	90 (0.9)(13)	165 (1.65)(24)	55 (0.55)(8)	117 (1.2)(17)	48 (0.5)(7)	105 (1.05)(15)	40 (0.4)(6)
6804 (15000)	117 (1.2)(17)	241 (2.4)(35)	90 (0.9)(13)	175 (1.75)(25)	65 (0.65)(9)	124 (1.2)(18)	48 (0.5)(7)	110 (1.1)(16)	40 (0.4)(6)
7031 (15500)	124 (1.2)(18)	—	97 (1.0)(14)	180 (1.8)(26)	70 (0.7)(10)	131 (1.3)(19)	55 (0.6)(8)	120 (1.2)(17)	40 (0.4)(6)
7257 (16000)	131 (1.3)(19)	—	103 (1.0)(15)	190 (1.9)(28)	75 (0.75)(11)	138 (1.4)(20)	55 (0.6)(8)	125 (1.25)(18)	40 (0.4)(6)
7484 (16500)	145 (1.4)(21)	—	110 (1.1)(16)	200 (2.0)(29)	75 (0.75)(11)	138 (1.4)(20)	62 (0.6)(9)	140 (1.4)(20)	40 (0.4)(6)
7711 (17000)	145 (1.4)(21)	—	110 (1.1)(16)	215 (2.15)(31)	80 (0.8)(12)	145 (1.4)(21)	62 (0.6)(9)	150 (1.5)(22)	40 (0.4)(6)
7938 (17500)	152 (1.5)(22)	—	117 (1.2)(17)	220 (2.2)(32)	90 (0.9)(13)	152 (1.5)(22)	69 (0.7)(10)	160 (1.6)(23)	50 (0.5)(7)
8165 (18000)	159 (1.6)(23)	—	117 (1.2)(17)	235 (2.35)(34)	95 (0.95)(14)	159 (1.6)(23)	69 (0.7)(10)	175 (1.75)(25)	55 (0.55)(8)
8391 (18500)	165 (1.7)(24)	—	124 (1.2)(18)	240 (2.4)(35)	105 (1.05)(15)	—	76 (0.8)(11)	180 (1.8)(26)	55 (0.55)(8)
8618 (19000)	172 (1.7)(25)	—	124 (1.2)(18)	—	105 (1.05)(15)	—	76 (0.8)(11)	190 (1.9)(28)	65 (0.65)(9)
8845 (19500)	186 (1.9)(27)	—	131 (1.3)(19)	—	110 (1.1)(16)	—	83 (0.8)(12)	207 (2.07)(30)	65 (0.65)(9)
9072 (20000)	207 (2.1)(30)	—	138 (1.4)(20)	—	110 (1.1)(16)	—	90 (0.9)(13)	220 (2.2)(32)	70 (0.7)(10)

Rear Wheels and Tires

Group	47								
Size	320/90R54	380/90R50		480/80R46		520/85R42			
Load Index	149	151		158		157		162	
Speed Rating	A8 / B	A8 / B		A8 / B		A8		A8 / B	
	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
9525 (21000)	241 (2.4)(35)	—	145 (1.4)(21)	—	120 (1.2)(17)	—	90 (0.90)(13)	240 (2.4)(35)	70 (0.7)(10)
9979 (22000)	262 (2.6)(38)	—	159 (1.6)(23)	—	130 (1.3)(19)	—	97 (1.0)(14)	—	75 (0.75)(11)
10433 (23000)	283 (2.8)(41)	—	172 (1.7)(25)	—	145 (1.45)(21)	—	103 (1.0)(15)	—	80 (0.8)(12)
10886 (24000)	296 (3.0)(43)	—	186 (1.9)(27)	—	150 (1.5)(22)	—	110 (1.10)(16)	—	90 (0.9)(13)
11340 (25000)	317 (3.2)(46)	—	214 (2.1)(31)	—	160 (1.6)(23)	—	117 (1.2)(17)	—	95 (0.95)(14)
11793 (26000)	—	—	234 (2.3)(34)	—	175 (1.75)(25)	—	117 (1.2)(17)	—	105 (1.05)(15)
12247 (27000)	—	—	—	—	185 (1.85)(27)	—	124 (1.2)(18)	—	110 (1.1)(16)
12701 (28000)	—	—	—	—	190 (1.9)(28)	—	131 (1.3)(19)	—	120 (1.2)(17)
13154 (29000)	—	—	—	—	200 (2.0)(29)	—	138 (1.4)(20)	—	125 (1.25)(18)
13608 (30000)	—	—	—	—	215 (2.15)(31)	—	145 (1.4)(21)	—	140 (1.4)(20)
14061 (31000)	—	—	—	—	220 (2.2)(32)	—	152 (1.5)(22)	—	150 (1.5)(22)
14515 (32000)	—	—	—	—	235 (2.35)(34)	—	159 (1.6)(23)	—	160 (1.6)(23)
14969 (33000)	—	—	—	—	240 (2.4)(35)	—	—	—	175 (1.75)(25)
15422 (34000)	—	—	—	—	—	—	—	—	185 (1.85)(27)
15876 (35000)	—	—	—	—	—	—	—	—	200 (2.0)(29)
16329 (36000)	—	—	—	—	—	—	—	—	240 (2.4)(35)

Group	47									
Size	620/70R42				650/65R42		710/70R38			
Load Index	160		166		158	170	166		171	
Speed Rating	A8		A8 / B		D	A8	A8 / B		A8 / B / D	
	Single	Dual	Single	Dual	Single	Single	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
4536 (10000)	62 (0.6)(9)	62 (0.6)(9)	55 (0.55)(8)	40 (0.4)(6)	60 (0.6)(9)	60 (0.6)(9)	41 (0.4)(6)	41 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)
4763 (10500)	62 (0.6)(9)	62 (0.6)(9)	60 (0.6)(9)	40 (0.4)(6)	60 (0.6)(9)	60 (0.6)(9)	41 (0.4)(6)	41 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)
4990 (11000)	69 (0.7)(10)	62 (0.6)(9)	70 (0.7)(10)	40 (0.4)(6)	70 (0.7)(10)	70 (0.7)(10)	48 (0.5)(7)	41 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)

Rear Wheels and Tires

Group	47									
Size	620/70R42				650/65R42		710/70R38			
Load Index	160		166		158	170	166		171	
Speed Rating	A8		A8 / B		D	A8	A8 / B		A8 / B / D	
	Single	Dual	Single	Dual	Single	Single	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
5216 (11500)	76 (0.8)(11)	62 (0.6)(9)	70 (0.7)(10)	40 (0.4)(6)	75 (0.75)(11)	75 (0.75)(11)	55 (0.6)(8)	41 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)
5443 (12000)	76 (0.8)(11)	62 (0.6)(9)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	85 (0.85)(12)	55 (0.6)(8)	41 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)
5670 (12500)	83 (0.8)(12)	62 (0.6)(9)	85 (0.85)(12)	40 (0.4)(6)	90 (0.9)(13)	90 (0.9)(13)	62 (0.6)(9)	41 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)
5897 (13000)	90 (0.9)(13)	62 (0.6)(9)	90 (0.9)(13)	40 (0.4)(6)	95 (0.95)(14)	95 (0.95)(14)	69 (0.7)(10)	41 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)
6123 (13500)	97 (1.0)(14)	62 (0.6)(9)	95 (0.95)(14)	40 (0.4)(6)	95 (0.95)(14)	95 (0.95)(14)	76 (0.8)(11)	41 (0.4)(6)	62 (0.6)(9)	41 (0.4)(6)
6350 (14000)	103 (1.0)(15)	62 (0.6)(9)	105 (1.05)(15)	40 (0.4)(6)	105 (1.05)(15)	105 (1.05)(15)	76 (0.8)(11)	41 (0.4)(6)	69 (0.7)(10)	41 (0.4)(6)
6577 (14500)	110 (1.1)(16)	62 (0.6)(9)	110 (1.1)(16)	40 (0.4)(6)	110 (1.1)(16)	110 (1.1)(16)	83 (0.8)(12)	41 (0.4)(6)	76 (0.8)(11)	41 (0.4)(6)
6804 (15000)	110 (1.1)(16)	62 (0.6)(9)	110 (1.1)(16)	40 (0.4)(6)	110 (1.1)(16)	110 (1.1)(16)	90 (0.9)(13)	41 (0.4)(6)	83 (0.8)(12)	41 (0.4)(6)
7031 (15500)	117 (1.2)(17)	62 (0.6)(9)	120 (1.2)(17)	40 (0.4)(6)	120 (1.2)(17)	120 (1.2)(17)	90 (0.9)(13)	41 (0.4)(6)	83 (0.8)(12)	41 (0.4)(6)
7257 (16000)	117 (1.2)(17)	62 (0.6)(9)	120 (1.2)(17)	40 (0.4)(6)	125 (1.25)(18)	125 (1.25)(18)	97 (1.0)(14)	41 (0.4)(6)	90 (0.9)(13)	41 (0.4)(6)
7484 (16500)	124 (1.2)(18)	62 (0.6)(9)	125 (1.25)(18)	50 (0.5)(7)	130 (1.3)(19)	130 (1.3)(19)	103 (1.0)(15)	41 (0.4)(6)	90 (0.9)(13)	41 (0.4)(6)
7711 (17000)	131 (1.3)(19)	62 (0.6)(9)	130 (1.3)(19)	55 (0.55)(8)	140 (1.4)(20)	140 (1.4)(20)	103 (1.0)(15)	41 (0.4)(6)	97 (1.0)(14)	41 (0.4)(6)
7938 (17500)	131 (1.3)(19)	62 (0.6)(9)	130 (1.3)(19)	55 (0.55)(8)	145 (1.45)(21)	145 (1.45)(21)	110 (1.1)(16)	41 (0.4)(6)	97 (1.0)(14)	41 (0.4)(6)
8165 (18000)	138 (1.4)(20)	62 (0.6)(9)	140 (1.4)(20)	65 (0.65)(9)	150 (1.5)(22)	150 (1.5)(22)	110 (1.1)(16)	41 (0.4)(6)	103 (1.0)(15)	41 (0.4)(6)
8391 (18500)	145 (1.4)(21)	62 (0.6)(9)	145 (1.45)(21)	65 (0.65)(9)	160 (1.6)(23)	160 (1.6)(23)	117 (1.2)(17)	41 (0.4)(6)	110 (1.1)(16)	41 (0.4)(6)
8618 (19000)	152 (1.5)(22)	69 (0.7)(10)	150 (1.5)(22)	70 (0.7)(10)	160 (1.6)(23)	160 (1.6)(23)	117 (1.2)(17)	48 (0.5)(7)	110 (1.1)(16)	41 (0.4)(6)
8845 (19500)	159 (1.6)(23)	69 (0.7)(10)	160 (1.6)(23)	70 (0.7)(10)	—	160 (1.6)(23)	124 (1.2)(18)	48 (0.5)(7)	117 (1.2)(17)	41 (0.4)(6)
9072 (20000)	152 (1.5)(22)	69 (0.7)(10)	167 (1.67)(24)	70 (0.7)(10)	—	160 (1.6)(23)	124 (1.2)(18)	48 (0.5)(7)	117 (1.2)(17)	41 (0.4)(6)
9525 (21000)	159 (1.6)(23)	76 (0.8)(11)	180 (1.8)(26)	75 (0.75)(11)	—	175 (1.75)(25)	138 (1.4)(20)	55 (0.6)(8)	131 (1.3)(19)	48 (0.5)(7)
9979 (22000)	—	83 (0.8)(12)	200 (2.0)(29)	85 (0.85)(12)	—	180 (1.8)(26)	145 (1.4)(21)	62 (0.6)(9)	138 (1.4)(20)	55 (0.6)(8)
10433 (23000)	—	90 (0.9)(13)	—	90 (0.9)(13)	—	185 (1.85)(27)	159 (1.6)(23)	69 (0.7)(10)	145 (1.4)(21)	62 (0.6)(9)
10886 (24000)	—	97 (1.0)(14)	—	95 (0.95)(14)	—	190 (1.9)(28)	—	76 (0.8)(11)	159 (1.6)(23)	69 (0.7)(10)
11340 (25000)	—	10 3(1.0)(15)	—	105 (1.05)(15)	—	190 (1.9)(28)	—	83 (0.8)(12)	172 (1.7)(25)	69 (0.7)(10)
11793 (26000)	—	110 (1.1)(16)	—	110 (1.1)(16)	—	200 (2.0)(29)	—	83 (0.8)(12)	193 (1.9)(28)	76 (0.8)(11)
12247 (27000)	—	117 (1.2)(17)	—	120 (1.2)(17)	—	—	—	90 (0.9)(13)	214 (2.1)(31)	83 (0.8)(12)
12701 (28000)	—	117 (1.2)(17)	—	120 (1.2)(17)	—	—	—	97 (1.0)(14)	234 (2.3)(34)	90 (0.9)(13)

Rear Wheels and Tires

Group	47									
Size	620/70R42				650/65R42		710/70R38			
Load Index	160		166		158	170	166		171	
Speed Rating	A8		A8 / B		D	A8	A8 / B		A8 / B / D	
	Single	Dual	Single	Dual	Single	Single	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
13154 (29000)	—	124 (1.2)(18)	—	125 (1.25)(18)	—	—	—	103 (1.0)(15)	—	90 (0.9)(13)
13608 (30000)	—	131 (1.3)(19)	—	130 (1.3)(19)	—	—	—	103 (1.0)(15)	—	97 (1.0)(14)
14061 (31000)	—	138 (1.4)(20)	—	140 (1.4)(20)	—	—	—	110 (1.1)(16)	—	103 (1.0)(15)
14515 (32000)	—	138 (1.4)(20)	—	140 (1.4)(20)	—	—	—	110 (1.1)(16)	—	103 (1.0)(15)
14969 (33000)	—	152 (1.5)(22)	—	145 (1.45)(21)	—	—	—	117 (1.2)(17)	—	110 (1.1)(16)
15422 (34000)	—	159 (1.6)(23)	—	150 (1.5)(22)	—	—	—	124 (1.2)(18)	—	117 (1.2)(17)
15876 (35000)	—	152 (1.5)(22)	—	150 (1.5)(22)	—	—	—	124 (1.2)(18)	—	117 (1.2)(17)
16329 (36000)	—	159 (1.6)(23)	—	175 (1.75)(25)	—	—	—	131 (1.3)(19)	—	124 (1.2)(18)
16783 (37000)	—	—	—	185 (1.85)(27)	—	—	—	138 (1.4)(20)	—	131 (1.3)(19)
17237 (38000)	—	—	—	190 (1.9)(28)	—	—	—	145 (1.4)(21)	—	131 (1.3)(19)
17690 (39000)	—	—	—	210 (2.1)(30)	—	—	—	152 (1.5)(22)	—	138 (1.4)(20)
18144 (40000)	—	—	—	220 (2.2)(32)	—	—	—	152 (1.5)(22)	—	145 (1.4)(21)
18597 (41000)	—	—	—	240 (2.4)(35)	—	—	—	159 (1.6)(23)	—	152 (1.5)(22)
19047 (42000)	—	—	—	—	—	—	—	—	—	159 (1.6)(23)
19501 (43000)	—	—	—	—	—	—	—	—	—	159 (1.6)(23)
19954 (44000)	—	—	—	—	—	—	—	—	—	172 (1.7)(25)
20408 (45000)	—	—	—	—	—	—	—	—	—	186 (1.9)(27)
20861 (46000)	—	—	—	—	—	—	—	—	—	193 (1.9)(28)
21315 (47000)	—	—	—	—	—	—	—	—	—	207 (2.1)(30)
20408 (48000)	—	—	—	—	—	—	—	—	—	221 (2.2)(32)
20861 (49000)	—	—	—	—	—	—	—	—	—	234 (2.3)(34)
21315 (50000)	—	—	—	—	—	—	—	—	—	241 (2.4)(35)

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Recommended Pressures—Group 48

Group	48									
Size	320/105R54		380/90R54		480/80R50		IF480/80R50		520/85R46	
Load Index	163		152		159		166		158	
Speed Rating	A8		A8		A8	A8 / B	A8		A8 / B / D	
	Single	Dual	Single	Dual	Single	Dual	Single	Dual	Single ^a	Dual ^b
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
4536 (10000)	131 (1.3)(19)	48 (0.5)(7)	105 (1.1)(15)	55 (0.55)(8)	85 (0.85)(12)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	62 ^a (0.6)(9)	41 ^b (0.4)(6)
4763 (10500)	138 (1.4)(20)	55 (0.55)(8)	110 (1.1)(16)	55 (0.55)(8)	85 (0.85)(12)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	69 ^a (0.7)(10)	41 ^b (0.4)(6)
4990 (11000)	145 (1.4)(21)	62 (0.6)(8)	120 (1.2)(17)	55 (0.55)(8)	90 (0.9)(13)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	76 ^a (0.8)(11)	41 ^b (0.4)(6)
5216 (11500)	159 (1.6)(23)	69 (0.7)(10)	130 (1.3)(19)	55 (0.55)(8)	95 (1.0)(14)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	83 ^a (0.8)(12)	41 ^b (0.4)(6)
5443 (12000)	172 (1.7)(25)	76 (0.8)(11)	140 (1.4)(20)	55 (0.55)(8)	105 (1.1)(15)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	83 ^a (0.8)(12)	41 ^b (0.4)(6)
5670 (12500)	193 (1.9)(28)	76 (0.8)(11)	150 (1.5)(22)	65 (0.65)(9)	110 (1.1)(16)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	90 ^a (0.9)(13)	41 ^b (0.4)(6)
5897 (13000)	214 (2.1)(31)	83 (0.8)(12)	160 (1.6)(23)	65 (0.65)(9)	110 (1.1)(16)	40 (0.4)(6)	40 (0.4)(6)	41 (0.4)(6)	97 ^a (1.0)(14)	41 ^b (0.4)(6)
6123 (13500)	228 (2.3)(33)	90 (0.9)(13)	170 (1.70)(25)	65 (0.65)(9)	120 (1.2)(17)	50 (0.5)(7)	40 (0.4)(6)	48 (0.5)(7)	103 ^a (1.0)(15)	41 ^b (0.4)(6)
6350 (14000)	248 (2.5)(36)	97 (1.0)(14)	180 (1.8)(26)	70 (0.7)(10)	125 (1.25)(18)	50 (0.5)(7)	40 (0.4)(6)	48 (0.5)(7)	110 ^a (1.1)(16)	41 ^b (0.4)(6)
6577 (14500)	262 (2.6)(38)	103 (1.0)(15)	190 (1.9)(28)	70 (0.7)(10)	130 (1.3)(19)	55 (0.55)(8)	40 (0.4)(6)	48 (0.5)(7)	117 ^a (1.2)(17)	41 ^b (0.4)(6)
6804 (15000)	283 (2.8)(41)	103 (1.0)(15)	200 (2.0)(29)	75 (0.75)(11)	140 (1.4)(20)	55 (0.55)(8)	40 (0.4)(6)	48 (0.5)(7)	117 ^a (1.2)(17)	41 ^b (0.4)(6)
7031 (15500)	296 (3.0)(43)	110 (1.1)(16)	250 (2.5)(36)	75 (0.75)(11)	145 (1.45)(21)	55 (0.55)(8)	40 (0.4)(6)	55 (0.6)(8)	124 (1.2)(18)	48 ^b (0.5)(7)
7257 (16000)	317 (3.2)(46)	110 (1.1)(16)	—	80 (0.8)(12)	150 (1.5)(22)	65 (0.65)(9)	50 (0.5)(7)	50 (0.5)(7)	131 (1.3)(19)	48 ^b (0.5)(7)
7484 (16500)	338 (3.4)(49)	117 (1.2)(17)	—	90 (0.9)(13)	160 (1.6)(23)	70 (0.7)(10)	50 (0.5)(7)	55 (0.55)(8)	138 (1.4)(20)	55 ^b (0.6)(8)
7711 (17000)	359 (3.6)(52)	124 (1.2)(18)	—	95 (0.95)(14)	180 (1.8)(26)	70 (0.7)(10)	55 (0.55)(8)	62 (0.6)(9)	138 (1.4)(20)	62 ^b (0.6)(9)
7938 (17500)	379 (3.8)(55)	124 (1.2)(18)	—	95 (0.95)(14)	190 (1.9)(28)	75 (0.75)(11)	65 (0.65)(9)	62 (0.6)(9)	145 (1.4)(21)	62 ^b (0.6)(9)
8165 (18000)	393 (3.9)(57)	131 (1.3)(19)	—	105 (1.05)(15)	200 (2.0)(29)	85 (0.85)(12)	65 (0.65)(9)	62 (0.6)(9)	152 (1.5)(22)	69 ^b (0.7)(10)
8391 (18500)	414 (4.1)(60)	138 (1.4)(20)	—	105 (1.1)(15)	220 (2.2)(32)	90 (0.9)(13)	65 (0.65)(9)	62 (0.6)(9)	159 (1.6)(23)	69 ^b (0.7)(10)
8618 (19000)	421 (4.2)(61)	145 (1.4)(21)	—	110 (1.1)(16)	235 (2.35)(34)	90 (0.9)(13)	70 (0.7)(10)	69 (0.7)(10)	—	76 ^b (0.8)(11)
8845 (19500)	434 (4.3)(63)	152 (1.5)(22)	—	120 (1.2)(17)	240 (2.4)(35)	90 (0.9)(13)	70 (0.7)(10)	69 (0.7)(10)	—	76 ^b (0.8)(11)
9072 (20000)	448 (4.5)(65)	159 (1.6)(23)	—	130 (1.3)(19)	—	95 (0.95)(14)	70 (0.7)(10)	69 (0.7)(10)	—	76 ^b (0.8)(11)
9525 (21000)	483 (4.8)(70)	172 (1.7)(25)	—	140 (1.4)(20)	—	105 (1.05)(15)	75 (0.75)(11)	76 (0.8)(11)	—	83 ^b (0.8)(12)
9979 (22000)	—	193 (1.9)(28)	—	150 (1.5)(22)	—	110 (1.1)(16)	85 (0.85)(12)	83 (0.8)(12)	—	90 ^b (0.9)(13)
10433 (23000)	—	214 (2.1)(31)	—	160 (1.6)(23)	—	110 (1.1)(16)	90 (0.9)(13)	90 (0.9)(13)	—	103 ^b (1.0)(15)
10886 (24000)	—	234 (2.3)(34)	—	170 (1.70)(25)	—	120 (1.2)(17)	95 (0.95)(14)	97 (1.0)(14)	—	110 ^b (1.1)(16)

Rear Wheels and Tires

Group	48									
Size	320/105R54		380/90R54		480/80R50		IF480/80R50		520/85R46	
Load Index	163		152		159		166		158	
Speed Rating	A8		A8		A8	A8 / B	A8		A8 / B / D	
	Single	Dual	Single	Dual	Single	Dual	Single	Dual	Single ^a	Dual ^b
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
11340 (25000)	—	255 (2.6)(37)	—	180 (1.8)(26)	—	130 (1.3)(19)	—	10 3(1.0)(15)	—	110 (1.1)(16)
11793 (26000)	—	276 (2.8)(40)	—	190 (1.9)(28)	—	140 (1.4)(20)	—	110 (1.1)(16)	—	117 (1.2)(17)
12247 (27000)	—	290 (2.9)(42)	—	200 (2.0)(29)	—	145 (1.45)(21)	—	117 (1.2)(17)	—	124 (1.2)(18)
12701 (28000)	—	310 (3.1)(45)	—	250 (2.5)(36)	—	150 (1.5)(22)	—	117 (1.2)(17)	—	131 (1.3)(19)
13154 (29000)	—	338 (3.4)(49)	—	—	—	160 (1.6)(23)	—	124 (1.2)(18)	—	138 (1.4)(20)
13608 (30000)	—	359 (3.6)(52)	—	—	—	170 (1.70)(25)	—	131 (1.3)(19)	—	138 (1.4)(20)
14061 (31000)	—	379 (3.8)(55)	—	—	—	190 (1.9)(28)	—	138 (1.4)(20)	—	145 (1.4)(21)
14515 (32000)	—	400 (4.0)(58)	—	—	—	200 (2.0)(29)	—	138 (1.4)(20)	—	159 (1.6)(23)
14969 (33000)	—	421 (4.2)(61)	—	—	—	220 (2.2)(32)	—	152 (1.5)(22)	—	—
15422 (34000)	—	434 (4.3)(63)	—	—	—	240 (2.4)(35)	—	159 (1.6)(23)	—	—
15876 (35000)	—	448 (4.5)(65)	—	—	—	—	—	165 (1.7)(24)	—	—
16329 (36000)	—	462 (4.6)(67)	—	—	—	—	—	172 (1.7)(25)	—	—
16783 (37000)	—	476 (4.8)(69)	—	—	—	—	—	186 (1.9)(27)	—	—
17237 (38000)	—	—	—	—	—	—	—	207 (2.1)(30)	—	—
17690 (39000)	—	—	—	—	—	—	—	221 (2.2)(32)	—	—
18144 (40000)	—	—	—	—	—	—	—	228 (2.3)(33)	—	—
18597 (41000)	—	—	—	—	—	—	—	241 (2.4)(35)	—	—

^aFor Mitas single tire option, recommended pressure is 103 kPa (1.0 bar) (15 psi) up to axle load of 6804 kg (15000 lb).

^bFor Mitas dual tire option, recommended pressure is 83 kPa (0.8 bar) (12 psi) up to axle load of 10900 kg (24000 lb).

Group	48					
Size	620/70R46		650/85R38		IF650/85R38	
Load Index	167		173		179	
Speed Rating	A8 / B		A8 / B		A8 / B	
	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
5443 (12000)	76 (0.8)(11)	41 (0.4)(6)	40 (0.4)(6)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
5670 (12500)	76 (0.8)(11)	41 (0.4)(6)	50 (0.5)(7)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)

Rear Wheels and Tires

Group	48					
Size	620/70R46		650/85R38		IF650/85R38	
Load Index	167		173		179	
Speed Rating	A8 / B		A8 / B		A8 / B	
	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
5897 (13000)	83 (0.8)(12)	41 (0.4)(6)	50 (0.5)(7)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
6123 (13500)	90 (0.9)(13)	41 (0.4)(6)	55 (0.55)(8)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
6350 (14000)	97 (1.0)(14)	41 (0.4)(6)	55 (0.55)(8)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
6577 (14500)	97 (1.0)(14)	41 (0.4)(6)	55 (0.55)(8)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
6804 (15000)	103 (1.0)(15)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
7031 (15500)	110 (1.1)(16)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
7257 (16000)	110 (1.1)(16)	41 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
7484 (16500)	117 (1.2)(17)	48 (0.5)(7)	70 (0.7)(10)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
7711 (17000)	117 (1.2)(17)	48 (0.5)(7)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
7938 (17500)	124 (1.2)(18)	48 (0.5)(7)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
8165 (18000)	131 (1.3)(19)	55 (0.6)(8)	75 (0.75)(11)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
8391 (18500)	138 (1.4)(20)	55 (0.6)(8)	85 (0.85)(12)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
8618 (19000)	145 (1.4)(21)	62 (0.6)(9)	90 (0.9)(13)	40 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)
8845 (19500)	152 (1.5)(22)	62 (0.6)(9)	95 (0.95)(14)	40 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)
9072 (20000)	152 (1.5)(22)	69 (0.7)(10)	105 (1.05)(15)	50 (0.5)(7)	95 (0.95)(14)	40 (0.4)(6)
9525 (21000)	159 (1.6)(23)	69 (0.7)(10)	110 (1.1)(16)	50 (0.5)(7)	105 (1.05)(15)	40 (0.4)(6)
9979 (22000)	179 (1.8)(26)	76 (0.8)(11)	120 (1.2)(17)	55 (0.55)(8)	110 (1.1)(16)	40 (0.4)(6)
10433 (23000)	207 (2.1)(30)	83 (0.8)(12)	145 (1.45)(21)	55 (0.55)(8)	110 (1.1)(16)	40 (0.4)(6)
10886 (24000)	241 (2.4)(35)	90 (0.9)(13)	160 (1.6)(23)	65 (0.65)(9)	120 (1.2)(17)	40 (0.4)(6)
11340 (25000)	—	97 (1.0)(14)	180 (1.8)(26)	65 (0.65)(9)	125 (1.25)(18)	40 (0.4)(6)
11793 (26000)	—	103 (1.0)(15)	200 (2.0)(29)	70 (0.7)(10)	130 (1.3)(19)	40 (0.4)(6)
12247 (27000)	—	110 (1.1)(16)	220 (2.2)(32)	70 (0.7)(10)	140 (1.4)(20)	40 (0.4)(6)
12701 (28000)	—	110 (1.1)(16)	240 (2.4)(35)	75 (0.75)(11)	145 (1.45)(21)	50 (0.5)(7)
13154 (29000)	—	117 (1.2)(17)	—	75 (0.75)(11)	150 (1.5)(22)	50 (0.5)(7)
13608 (30000)	—	117 (1.2)(17)	—	85 (0.85)(12)	160 (1.6)(23)	55 (0.55)(8)
14061 (31000)	—	124 (1.2)(18)	—	85 (0.85)(12)	180 (1.8)(26)	55 (0.55)(8)

Rear Wheels and Tires

Group	48					
Size	620/70R46		650/85R38		IF650/85R38	
Load Index	167		173		179	
Speed Rating	A8 / B		A8 / B		A8 / B	
	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
14515 (32000)	—	138 (1.4)(20)	—	90 (0.9)(13)	200 (2.0)(29)	65 (0.65)(9)
14969 (33000)	—	145 (1.4)(21)	—	90 (0.9)(13)	220 (2.2)(32)	65 (0.65)(9)
15422 (34000)	—	145 (1.4)(21)	—	95 (0.95)(14)	240 (2.4)(35)	70 (0.7)(10)
15876 (35000)	—	152 (1.5)(22)	—	95 (0.95)(14)	—	70 (0.7)(10)
16329 (36000)	—	159 (1.6)(23)	—	105 (1.05)(15)	—	75 (0.75)(11)
16783 (37000)	—	165 (1.7)(24)	—	110 (1.1)(16)	—	75 (0.75)(11)
17237 (38000)	—	172 (1.7)(25)	—	120 (1.2)(17)	—	85 (0.85)(12)
17690 (39000)	—	186 (1.9)(27)	—	125 (1.25)(18)	—	90 (0.9)(13)
18144 (40000)	—	200 (2.0)(29)	—	140 (1.4)(20)	—	90 (0.9)(13)
18597 (41000)	—	221 (2.2)(32)	—	150 (1.5)(22)	—	95 (0.95)(14)
19051 (42000)	—	241 (2.4)(35)	—	160 (1.6)(23)	—	95 (0.95)(14)
19504 (43000)	—	—	—	165 (1.65)(24)	—	105 (1.05)(15)
19958 (44000)	—	—	—	180 (1.8)(26)	—	105 (1.05)(15)
20412 (45000)	—	—	—	190 (1.9)(28)	—	105 (1.05)(15)
20865 (46000)	—	—	—	200 (2.0)(29)	—	110 (1.1)(16)
21319 (47000)	—	—	—	215 (2.15)(31)	—	110 (1.1)(16)
21772 (48000)	—	—	—	220 (2.2)(32)	—	110 (1.1)(16)
22226 (49000)	—	—	—	235 (2.35)(34)	—	120 (1.2)(17)
22680 (50000)	—	—	—	240 (2.4)(35)	—	120 (1.2)(17)
23133 (51000)	—	—	—	—	—	125 (1.25)(18)
23587 (52000)	—	—	—	—	—	130 (1.3)(19)
24040 (53000)	—	—	—	—	—	130 (1.3)(19)
24494 (54000)	—	—	—	—	—	140 (1.4)(20)
24948 (55000)	—	—	—	—	—	145 (1.45)(21)
25401 (56000)	—	—	—	—	—	145 (1.45)(21)
25855 (57000)	—	—	—	—	—	150 (1.5)(22)

Rear Wheels and Tires

Group	48					
Size	620/70R46		650/85R38		IF650/85R38	
Load Index	167		173		179	
Speed Rating	A8 / B		A8 / B		A8 / B	
	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
26308 (58000)	—	—	—	—	—	150 (1.5)(22)
26762 (59000)	—	—	—	—	—	150 (1.5)(22)
27216 (60000)	—	—	—	—	—	160 (1.6)(23)

Group	48									
Size	710/70R42				IF710/70R42		800/70R38		IF800/70R38	
Load Index	168		173		179		173		179	
Speed Rating	A8 / B		A8 / B / D		A8 / B / D		A8 / B		A8	
	Single	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
5443 (12000)	55 (0.6)(8)	41 (0.4)(6)	83 (0.8)(12)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
5670 (12500)	62 (0.6)(9)	41 (0.4)(6)	83 (0.8)(12)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
5897 (13000)	62 (0.6)(9)	41 (0.4)(6)	83 (0.8)(12)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
6123 (13500)	69 (0.7)(10)	41 (0.4)(6)	83 (0.8)(12)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
6350 (14000)	69 (0.7)(10)	41 (0.4)(6)	83 (0.8)(12)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
6577 (14500)	76 (0.8)(11)	41 (0.4)(6)	83 (0.8)(12)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
6804 (15000)	83 (0.8)(12)	41 (0.4)(6)	83 (0.8)(12)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
7031 (15500)	83 (0.8)(12)	41 (0.4)(6)	83 (0.8)(12)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	65 (0.65)(9)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
7257 (16000)	90 (0.9)(13)	41 (0.4)(6)	90 (0.9)(13)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
7484 (16500)	97 (1.0)(14)	41 (0.4)(6)	97 (1.0)(14)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	70 (0.7)(10)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
7711 (17000)	103 (1.0)(15)	41 (0.4)(6)	103 (1.0)(15)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
7938 (17500)	103 (1.0)(15)	41 (0.4)(6)	103 (1.0)(15)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	75 (0.75)(11)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
8165 (18000)	110 (1.1)(16)	41 (0.4)(6)	110 (1.1)(16)	62 (0.6)(9)	83 (0.8)(12)	41 (0.4)(6)	85 (0.85)(12)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
8391 (18500)	110 (1.1)(16)	41 (0.4)(6)	110 (1.1)(16)	62 (0.6)(9)	90 (0.9)(13)	41 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
8618 (19000)	117 (1.2)(17)	41 (0.4)(6)	117 (1.2)(17)	62 (0.6)(9)	90 (0.9)(13)	41 (0.4)(6)	90 (0.9)(13)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
8845 (19500)	117 (1.2)(17)	48 (0.5)(7)	117 (1.2)(17)	62 (0.6)(9)	90 (0.9)(13)	48 (0.5)(7)	95 (0.95)(14)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)

Rear Wheels and Tires

Group	48									
Size	710/70R42				IF710/70R42		800/70R38		IF800/70R38	
Load Index	168		173		179		173		179	
Speed Rating	A8 / B		A8 / B / D		A8 / B / D		A8 / B		A8	
	Single	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
9072 (20000)	124 (1.2)(18)	48 (0.5)(7)	124 (1.2)(18)	62 (0.6)(9)	97 (1.0)(14)	48 (0.5)(7)	105 (1.05)(15)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
9525 (21000)	131 (1.3)(19)	55 (0.6)(8)	131 (1.3)(19)	62 (0.6)(9)	103 (1.0)(15)	48 (0.5)(7)	110 (1.1)(16)	40 (0.4)(6)	83 (0.8)(12)	83 (0.8)(12)
9979 (22000)	138 (1.4)(20)	62 (0.6)(9)	138 (1.4)(20)	62 (0.6)(9)	110 (1.1)(16)	48 (0.5)(7)	120 (1.2)(17)	40 (0.4)(6)	90 (0.9)(13)	83 (0.8)(12)
10433 (23000)	152 (1.5)(22)	62 (0.6)(9)	152 (1.5)(22)	62 (0.6)(9)	117 (1.2)(17)	55 (0.6)(8)	120 (1.2)(17)	50 (0.5)(7)	97 (1.0)(14)	83 (0.8)(12)
10886 (24000)	159 (1.6)(23)	69 (0.7)(10)	159 (1.6)(23)	69 (0.7)(10)	124 (1.2)(18)	55 (0.6)(8)	125 (1.25)(18)	50 (0.5)(7)	103 (1.0)(15)	83 (0.8)(12)
11340 (25000)	—	76 (0.8)(11)	172 (1.7)(25)	76 (0.8)(11)	131 (1.3)(19)	55 (0.6)(8)	130 (1.3)(19)	50 (0.5)(7)	103 (1.0)(15)	83 (0.8)(12)
11793 (26000)	—	76 (0.8)(11)	186 (1.9)(27)	76 (0.8)(11)	138 (1.4)(20)	62 (0.6)(9)	140 (1.4)(20)	55 (0.55)(8)	110 (1.1)(16)	83 (0.8)(12)
12247 (27000)	—	83 (0.8)(12)	200 (2.0)(29)	83 (0.8)(12)	145 (1.4)(21)	62 (0.6)(9)	145 (1.45)(21)	55 (0.55)(8)	110 (1.1)(16)	83 (0.8)(12)
12701 (28000)	—	90 (0.9)(13)	228 (2.3)(33)	90 (0.9)(13)	152 (1.5)(22)	69 (0.7)(10)	150 (1.5)(22)	55 (0.55)(8)	117 (1.2)(17)	83 (0.8)(12)
13154 (29000)	—	97 (1.0)(14)	—	97 (1.0)(14)	159 (1.6)(23)	69 (0.7)(10)	160 (1.6)(23)	65 (0.65)(9)	124 (1.2)(18)	83 (0.8)(12)
13608 (30000)	—	103 (1.0)(15)	—	103 (1.0)(15)	172 (1.7)(25)	76 (0.8)(11)	—	70 (0.7)(10)	131 (1.3)(19)	83 (0.8)(12)
14061 (31000)	—	110 (1.1)(16)	—	110 (1.1)(16)	193 (1.9)(28)	83 (0.8)(12)	—	75 (0.75)(11)	138 (1.4)(20)	83 (0.8)(12)
14515 (32000)	—	110 (1.1)(16)	—	110 (1.1)(16)	207 (2.1)(30)	83 (0.8)(12)	—	85 (0.85)(12)	145 (1.4)(21)	83 (0.8)(12)
14969 (33000)	—	117 (1.2)(17)	—	117 (1.2)(17)	228 (2.3)(33)	90 (0.9)(13)	—	90 (0.9)(13)	152 (1.5)(22)	83 (0.8)(12)
15422 (34000)	—	117 (1.2)(17)	—	117 (1.2)(17)	241 (2.4)(35)	90 (0.9)(13)	—	95 (0.95)(14)	159 (1.6)(23)	83 (0.8)(12)
15876 (35000)	—	124 (1.2)(18)	—	124 (1.2)(18)	—	97 (1.0)(14)	—	95 (0.95)(14)	159 (1.6)(23)	83 (0.8)(12)
16329 (36000)	—	124 (1.2)(18)	—	124 (1.2)(18)	—	97 (1.0)(14)	—	105 (1.05)(15)	—	83 (0.8)(12)
16783 (37000)	—	131 (1.3)(19)	—	131 (1.3)(19)	—	103 (1.0)(15)	—	105 (1.05)(15)	—	83 (0.8)(12)
17237 (38000)	—	138 (1.4)(20)	—	138 (1.4)(20)	—	110 (1.1)(16)	—	110 (1.1)(16)	—	83 (0.8)(12)
17690 (39000)	—	145 (1.4)(21)	—	145 (1.4)(21)	—	110 (1.1)(16)	—	110 (1.1)(16)	—	90 (0.9)(13)
18144 (40000)	—	145 (1.4)(21)	—	145 (1.4)(21)	—	117 (1.2)(17)	—	120 (1.2)(17)	—	90 (0.9)(13)
18597 (41000)	—	152 (1.5)(22)	—	152 (1.5)(22)	—	117 (1.2)(17)	—	120 (1.2)(17)	—	97 (1.0)(14)
19051 (42000)	—	159 (1.6)(23)	—	159 (1.6)(23)	—	117 (1.2)(17)	—	125 (1.25)(18)	—	97 (1.0)(14)
19504 (43000)	—	159 (1.6)(23)	—	159 (1.6)(23)	—	124 (1.2)(18)	—	125 (1.25)(18)	—	103 (1.0)(15)
19958 (44000)	—	—	—	172 (1.7)(25)	—	131 (1.3)(19)	—	130 (1.3)(19)	—	103 (1.0)(15)
20412 (45000)	—	—	—	179 (1.8)(26)	—	131 (1.3)(19)	—	130 (1.3)(19)	—	110 (1.1)(16)

Rear Wheels and Tires

Group	48									
Size	710/70R42				IF710/70R42		800/70R38		IF800/70R38	
Load Index	168		173		179		173		179	
Speed Rating	A8 / B		A8 / B / D		A8 / B / D		A8 / B		A8	
	Single	Dual	Single	Dual	Single	Dual	Single	Dual	Single	Dual
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
20865 (46000)	—	—	—	193 (1.9)(28)	—	138 (1.4)(20)	—	140 (1.4)(20)	—	110 (1.1)(16)
21319 (47000)	—	—	—	200 (2.0)(29)	—	145 (1.4)(21)	—	140 (1.4)(20)	—	110 (1.1)(16)
21772 (48000)	—	—	—	207 (2.1)(30)	—	145 (1.4)(21)	—	145 (1.45)(21)	—	117 (1.2)(17)
22226 (49000)	—	—	—	221 (2.2)(32)	—	152 (1.5)(22)	—	152 (1.5)(22)	—	117 (1.2)(17)
22680 (50000)	—	—	—	241 (2.4)(35)	—	152 (1.5)(22)	—	160 (1.6)(23)	—	124 (1.2)(18)
23133 (51000)	—	—	—	—	—	159 (1.6)(23)	—	—	—	124 (1.2)(18)
23587 (52000)	—	—	—	—	—	165 (1.7)(24)	—	—	—	131 (1.3)(19)
24040 (53000)	—	—	—	—	—	172 (1.7)(25)	—	—	—	138 (1.4)(20)
24494 (54000)	—	—	—	—	—	186 (1.9)(27)	—	—	—	138 (1.4)(20)
24948 (55000)	—	—	—	—	—	193 (1.9)(28)	—	—	—	145 (1.4)(21)
25401 (56000)	—	—	—	—	—	207 (2.1)(30)	—	—	—	145 (1.4)(21)
25855 (57000)	—	—	—	—	—	214 (2.1)(31)	—	—	—	152 (1.5)(22)
26308 (58000)	—	—	—	—	—	228 (2.3)(33)	—	—	—	152 (1.5)(22)
26762 (59000)	—	—	—	—	—	234 (2.3)(34)	—	—	—	159 (1.6)(23)
27216 (60000)	—	—	—	—	—	241 (2.4)(35)	—	—	—	159 (1.6)(23)

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Recommended Pressures—Group 49

Group	49			
Size	480/95R50	710/75R42	IF710/75R42	IF900/60R42
Load Index	164	175	176	186
Speed Rating	A8 / B	A8 / B / D	A8 / B / D	D
	Dual	Single	Single	Single
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
6804 (15000)	40 (0.4)(6)	83 (0.8)(12)	85 (0.85)(12)	83 (0.8)(12)
7031 (15500)	50 (0.5)(7)	83 (0.8)(12)	85 (0.85)(12)	83 (0.8)(12)

Rear Wheels and Tires

Group	49			
Size	480/95R50	710/75R42	IF710/75R42	IF900/60R42
Load Index	164	175	176	186
Speed Rating	A8 / B	A8 / B / D	A8 / B / D	D
	Dual	Single	Single	Single
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
7257 (16000)	50 (0.5)(7)	83 (0.8)(12)	85 (0.85)(12)	83 (0.8)(12)
7484 (16500)	55 (0.55)(8)	83 (0.8)(12)	85 (0.85)(12)	83 (0.8)(12)
7711 (17000)	55 (0.55)(8)	83 (0.8)(12)	85 (0.85)(12)	83 (0.8)(12)
7938 (17500)	65 (0.65)(9)	90 (0.8)(13)	85 (0.85)(12)	83 (0.8)(12)
8165 (18000)	65 (0.65)(9)	90 (0.8)(13)	85 (0.85)(12)	83 (0.8)(12)
8391 (18500)	70 (0.7)(10)	97 (1.0)(14)	85 (0.85)(12)	83 (0.8)(12)
8618 (19000)	70 (0.7)(10)	97 (1.0)(14)	85 (0.85)(12)	83 (0.8)(12)
8845 (19500)	75 (0.75)(11)	97 (1.0)(14)	85 (0.85)(12)	83 (0.8)(12)
9072 (20000)	75 (0.75)(11)	103 (1.0)(15)	90 (0.9)(13)	83 (0.8)(12)
9525 (21000)	85 (0.85)(12)	110 (1.1)(16)	95 (0.95)(14)	83 (0.8)(12)
9979 (22000)	90 (0.9)(13)	117 (1.2)(17)	105 (1.05)(15)	83 (0.8)(12)
10433 (23000)	95 (0.95)(14)	124 (1.2)(18)	110 (1.1)(16)	90 (0.9)(13)
10886 (24000)	105 (1.05)(15)	131 (1.3)(19)	110 (1.1)(16)	97 (1.0)(14)
11340 (25000)	110 (1.1)(16)	145 (1.4)(21)	120 (1.2)(17)	103 (1.0)(15)
11793 (26000)	110 (1.1)(16)	152 (1.5)(22)	125 (1.25)(18)	110 (1.1)(16)
12247 (27000)	120 (1.2)(17)	159 (1.6)(23)	130 (1.3)(19)	110 (1.1)(16)
12701 (28000)	125 (1.25)(18)	172 (1.7)(25)	140 (1.4)(20)	117 (1.2)(17)
13154 (29000)	130 (1.3)(19)	186 (1.9)(27)	150 (1.5)(22)	124 (1.2)(18)
13608 (30000)	140 (1.4)(20)	207 (2.1)(30)	160 (1.6)(23)	131 (1.3)(19)
14061 (31000)	145 (1.45)(21)	221 (2.2)(32)	165 (1.65)(24)	138 (1.4)(20)
14515 (32000)	150 (1.5)(22)	241 (2.4)(35)	—	145 (1.4)(21)
14969 (33000)	160 (1.6)(23)	—	—	152 (1.5)(22)
15422 (34000)	165 (1.65)(24)	—	—	159 (1.6)(23)
15876 (35000)	185 (1.85)(27)	—	—	159 (1.6)(23)
16329 (36000)	195 (1.95)(28)	—	—	172 (1.7)(25)
16783 (37000)	210 (2.1)(30)	—	—	186 (1.9)(27)

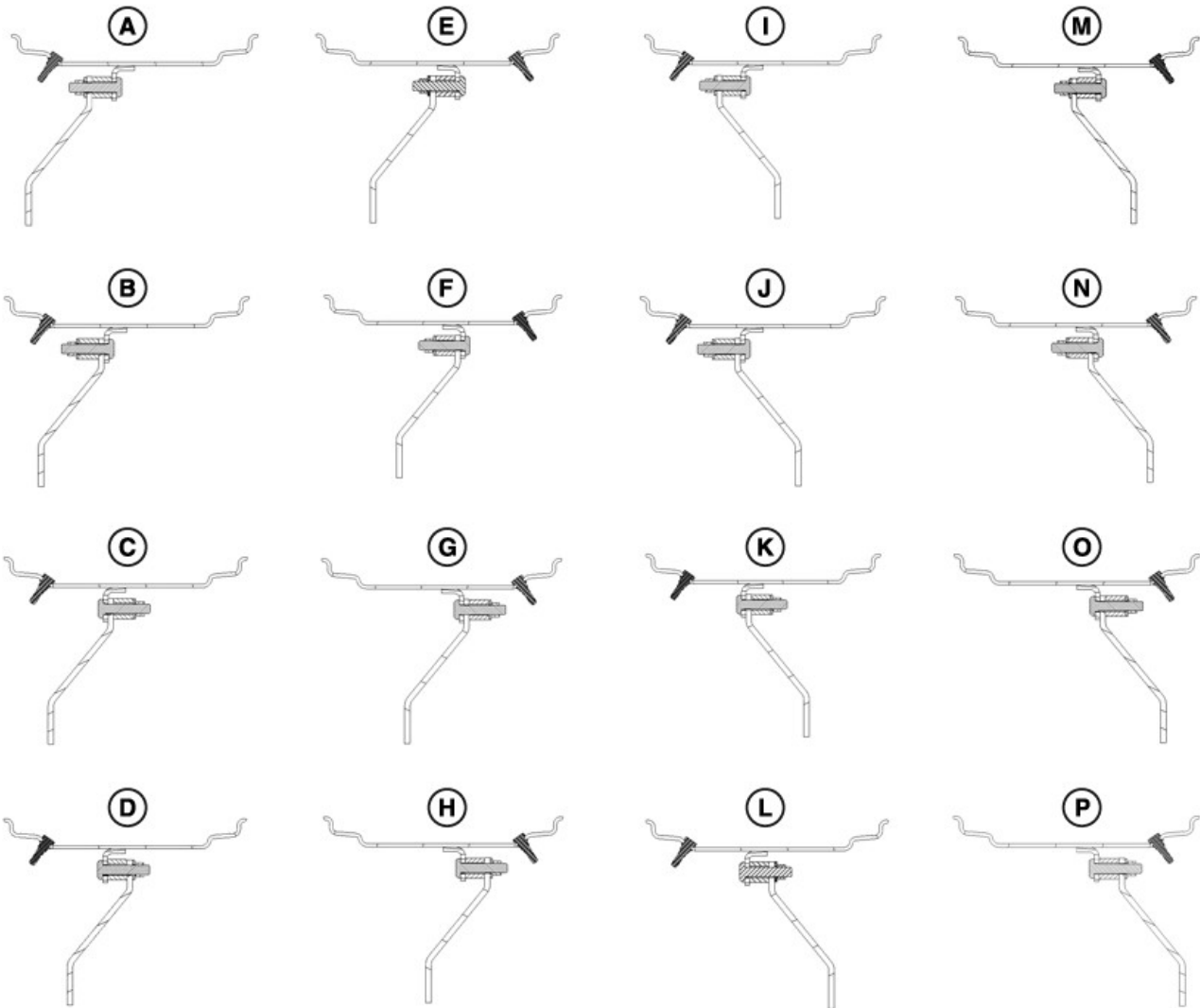
Rear Wheels and Tires

Group	49			
Size	480/95R50	710/75R42	IF710/75R42	IF900/60R42
Load Index	164	175	176	186
Speed Rating	A8 / B	A8 / B / D	A8 / B / D	D
	Dual	Single	Single	Single
Axle Load kg (lb)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)	kPa (bar)(psi)
17237 (38000)	230 (2.3)(33)	—	—	200 (2.0)(29)
17687 (39000)	—	—	—	207 (2.1)(30)
18141 (40000)	—	—	—	221 (2.2)(32)
18594 (41000)	—	—	—	234 (2.3)(34)

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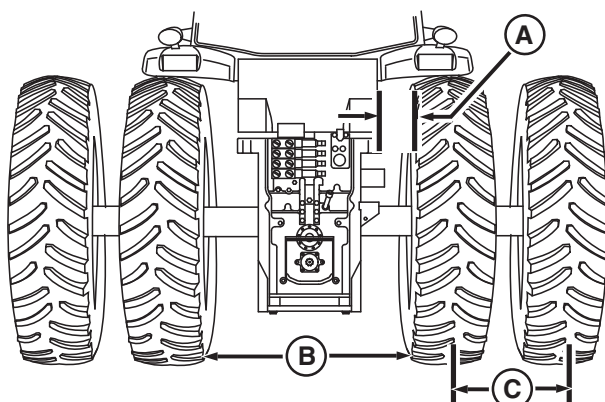
16-Position Rear Wheel Settings

16-Position steel wheel as viewed from behind left tire.



RXA0160413—UN—08AUG17
TS36762,0000223-19-27AUG18

Rear Wheel, Tire, and Tread Guidelines



RXA0160415—UN—08AUG17

CAUTION: Avoid personal injury and tractor instability. Never operate with single tires having tread width less than 1520 mm (60 in).

Turning while operating at transport speeds with narrow tread widths can cause tractor instability. Increase tread width to improve stability.

IMPORTANT: Tires must have at least 25 mm (1 in) clearance with fenders (A). Distance between tires (B) must be at least 1015 mm (40 in) with tires equal distances from tractor centerline.

With sway blocks in upper position (sway allowed), minimum distance between tires must be 1090 mm (43 in) to prevent interference.

Do not exceed 2800 mm (110 in) between single tires for pulling heavy loads.

To provide a wider range of settings, complete wheel can be installed on other side of tractor. In doing so, maintain correct direction of tire rotation.

Check for adequate clearance between implement and rear tires.

DO NOT mix radial and bias-ply tires on same axle.

Drive and dual tires mounted on same axle should all be inflated to same pressure.

Cast wheels are used inside and steel wheels on outside on tractors with duals.

Over inflating a radial tire reduces machine performance. Using correct inflation pressures will result in optimum tractive performance.

Minimum Spacing for Dual Tires (C) mm (in)	
Tread setting is measured between center of tires	
Tire Section	Minimum Spacing
480 (18.4)	549 (21.6)
520 (20.8)	591 (23.3)
620 (24.5)	695 (27.4)
650 (25.5)	726 (28.6)
710 (28.0)	788 (31)

TS36762,0000224-19-08AUG17

Minimum Tread Setting with Air Trailer Brakes and Inner Wheel Weights

IMPORTANT: Avoid tractor component damage. Follow weight specifications.

These restrictions only apply to tractors equipped with optional air trailer brakes.

Minimum Tread Setting With Air Trailer Brakes And Inner Wheel Weights						
		Options				
		1	2	3	4	5
		Inner Wheel Weight Options kg (lb)				
		205 (452)	72 (159) + 205 (452)	205 (452) + 205 (452)	72 (159) + 205 (452) + 205 (452)	625 (1378)
Wheel Type	Dish Position	Minimum Tread Setting mm (in)				
Cast ^a	In	1829 (72)	1829 (72)	2032 (80)	—	1880 (74)
		1880 (74)	1981 (78)	2134 (84)	—	2134 (84)
	Out	2134 (84)	2134 (84)	—	—	2184 (86)
		2184 (86)	—	—	—	—
Steel	In	—	2083 (82)	—	—	—
	Out	—	—	—	—	—
Flanged Axle		—	—	—	—	—

^aTire section width less than 800 mm

TS36762,0000225-19-21NOV16

Use Wheel Tightening Stand

A wheel tightening stand is available to aid in tightening wheel and wheel weight hardware. Stand supports a torque wrench when tightening cap screws at different heights. See your John Deere dealer to purchase stand or for fabrication instructions.

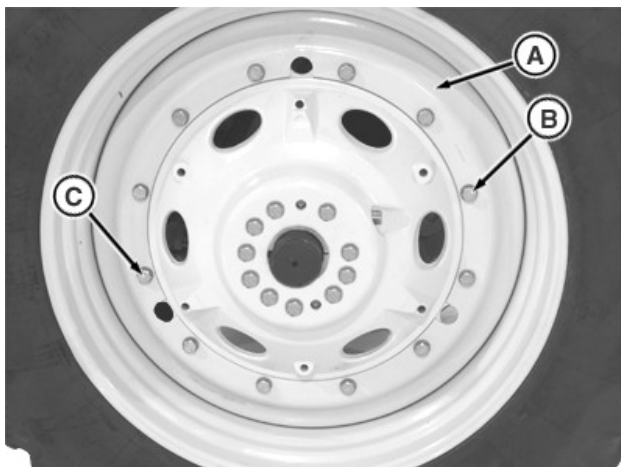
See Use Wheel Tightening Stand in Service - Tighten section of this Operator's Manual.

TS36762,0000226-19-31AUG17

Install Rear Drive Wheel to Cast Hub

CAUTION: Avoid equipment damage and the possibility of personal injury. Failure to follow torquing sequence and procedure will result in equipment damage and may result in personal injury.

IMPORTANT: Carefully follow procedure for retightening wheel bolts. Failure to do so could lead to wheel hub damage.



RXA0056891—UN—11SEP01

Wheel rim (A) has one tight-fit hole smaller than other holes. One slot-fit hole is 180° from tight fit hole, for improved wheel centering.

1. Install and hand-tighten bolt in the tight-fit hole (B).
2. Install and hand-tighten bolt in slot-fit hole (C).
3. Install and hand-tighten remaining bolts.
4. Tighten all bolts to 610 N·m (450 lb·ft) using a star-shaped pattern.
5. Drive tractor 100 meters (100 yd) and retighten bolts.
6. Tighten again at 3 hours, 10 hours, and daily for first week of operation and every 250 hours thereafter.

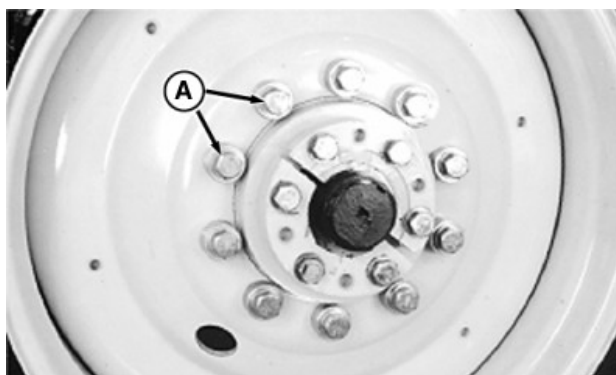
TS36762,0000228-19-07AUG17

Install Rear Steel Wheel to Hub

CAUTION: Avoid equipment damage and the possibility of personal injury. Failure to follow torquing sequence and procedure will result in equipment damage and may result in personal injury.

IMPORTANT: Carefully follow procedure for tightening wheel bolts. Failure to do so could result in equipment damage.

Check hole sizes on duals, wheel rim may have one tight-fit hole smaller than other holes. One slot-fit hole is 180° from tight fit hole, for improved wheel centering.



RXA0084448—UN—05OCT05

1. Install and hand tighten bolts (A).
2. Tighten all bolts to 610 N·m (450 lb·ft) using a star-shaped pattern.
3. Drive tractor 100 meters (100 yd) and retighten bolts.
4. Tighten again at 3 hours, 10 hours, and daily for first week of operation and every 250 hours thereafter.

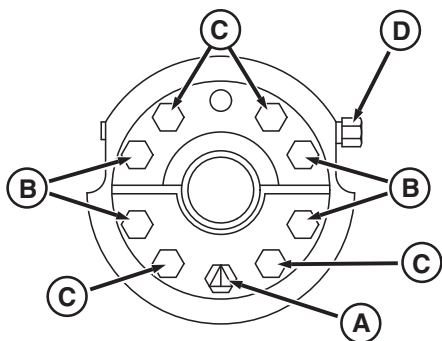
TS36762,0000229-19-07AUG17

Adjust and Tighten Rear Steel Wheels with Cast Hubs

CAUTION: Avoid personal injury. Never run the engine with transmission in gear and rear wheels off the ground. MFWD wheels could pull rear wheels off support. MFWD must be disengaged and transmission in NEUTRAL to rotate axle.

Avoid equipment damage and the possibility of personal injury. Failure to follow torquing sequence and procedure will result in equipment damage and may result in personal injury.

1. Raise tractor on level ground and turn wheels so rack on axle is on top.



RXA0151803—UN—07APR16

2. Loosen lower hub center cap screw (A) against retaining nut and loosen outer hub sleeve cap screws (B).

NOTE: Strike end of axle with a heavy hammer and use penetrating oil if sleeves are difficult to break loose.

3. Tighten inner jack cap screws (C) on upper and lower hub sleeves as necessary to loosen sleeves.

NOTE: Observe tread width limitations when adjusting rear wheels.

4. Turn adjusting cap screw (D) to slide wheel to desired position.
5. Loosen the jack cap screws (C) all the way against stop.
6. Tighten hub sleeve cap screws (B) to 200 N·m (150 lb·ft) beginning with center cap screw in lower sleeve, then tighten remaining cap screws in diagonal method.
7. Tighten cap screws to 400 N·m (300 lb·ft) using same sequence.
8. Drive tractor a minimum of 100 meters (100 yd) and tighten cap screws to 610 N·m (450 lb·ft).

IMPORTANT: Some sleeve cap screws may loosen as sleeve is tightened. Repeat star shaped torquing pattern until ALL sleeve cap screws maintain proper torque. Failure to follow procedure could result in damage to equipment and may result in personal injury.

9. Retighten cap screws after working 3 hours, 10 hours, and daily during first week of operation and every 250 hours thereafter.

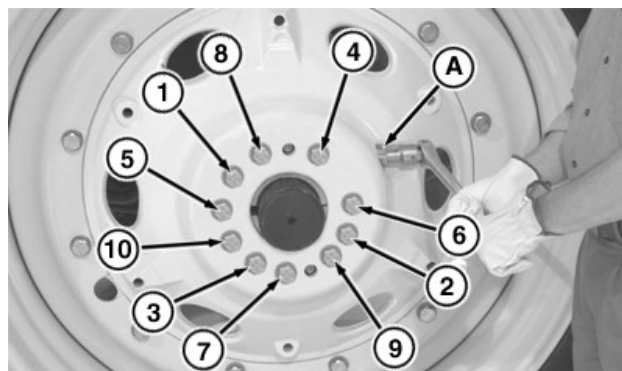
TS36762,000022A-19-07AUG17

Adjust and Tighten Rear Wheels—10-Bolt Heavy-Duty Hubs

CAUTION: Avoid personal injury. Never run the engine with transmission in gear and rear wheels off the ground. MFWD wheels could pull rear wheels off support. Disengage MFWD and put transmission in NEUTRAL to rotate axle. Never operate tractor with a loose rim, wheel, or hub.

Avoid equipment damage and the possibility of personal injury. Failure to follow torquing sequence and procedure will result in equipment damage and may result in personal injury.

1. Raise tractor on level ground with rack upward on the axle.



RXA0056944—UN—10OCT01

2. Loosen (without removing) sleeve cap screws (1—10) enough to move wheel.

IMPORTANT: Do not loosen or remove the two socket head cap screws. Doing so could result in wheel jamming or damage.

3. Turn pinion gear (A) to move wheel to desired position.
4. Tighten sleeve cap screws (1—10) in numerical order to 400 N·m (300 lb·ft). Make sure wheel is perpendicular to axle.
5. Tighten sleeve cap screws (1—10) in numerical order to 610 N·m (450 lb·ft).
6. Drive tractor a minimum of 100 meters (100 yd) and retighten cap screws in numerical order to 610 N·m (450 lb·ft).

CAUTION: Some sleeve cap screws may loosen as sleeve is tightened. Repeat numerical torquing pattern until ALL sleeve cap screws maintain proper torque. Failure to follow procedure could result in damage to equipment and may result in personal injury.

7. Tighten cap screws after working 3 hours, 10 hours,

and daily during first week of operation and every 250 hours thereafter.

TS36762,000022B-19-07AUG17

Adjust and Tighten Rear Wheels—12-Bolt Heavy-Duty Hubs

CAUTION: Avoid personal injury. Never run the engine with transmission in gear when adjusting wheels. Wheels on the ground could pull supported wheels off jackstands.

Never operate tractor with a loose rim, wheel, or hub.

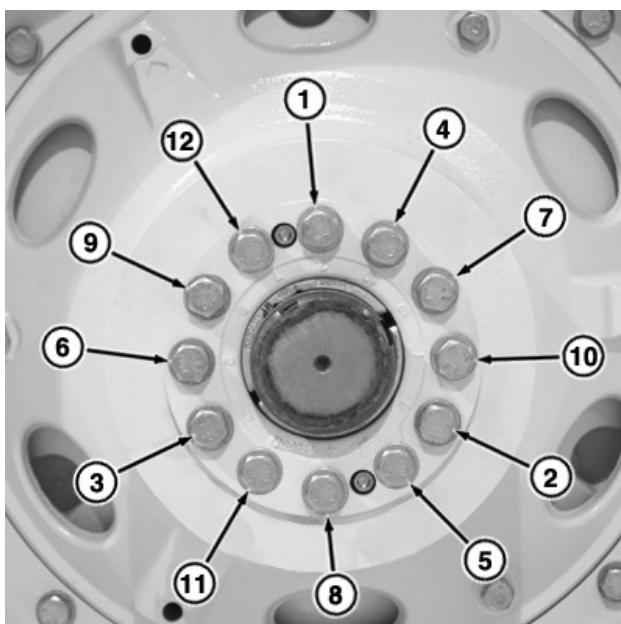
Avoid equipment damage and the possibility of personal injury. Failure to follow torquing sequence and procedure will result in equipment damage and may result in personal injury.

IMPORTANT: Tractors are equipped with 12 cap screw heavy-duty drive wheels and hubs. Numbers indicating proper torquing sequences are cast into wheel hub.

Carefully follow procedure. Failure to do so could lead to sleeve or cast wheel damage.

Clean any paint, grease, film, rust or debris from axle shafts, cap screws, and threads before positioning and installing wheel sleeves and cast wheel. DO NOT apply any lubricant to cap screws, threads, wheel, or axle.

1. Raise tractor on level ground and support tractor with jackstands.



RXA0090157—UN—08AUG06

2. Loosen (without removing) sleeve cap screws (1—12) enough to move wheel.

IMPORTANT: Do not loosen or remove two socket head cap screws. Doing so could result in wheel jamming or damage.

CAUTION: Avoid personal injury. Use a hoist, wheel dolly, or proper lifting equipment to safely slide and adjust wheels on axles.

3. Move wheel to desired position.
4. Tighten cap screws (1—12) in numerical torque sequence to 400 N·m (300 lb·ft). Make sure wheel is perpendicular to axle.
5. Tighten cap screws (1—12) in numerical order to 610 N·m (450 lb·ft).

CAUTION: Some sleeve cap screws may loosen as sleeve is tightened. Repeat star-shaped numbered sequence torquing pattern until ALL sleeve cap screws maintain proper torque. Failure to follow procedure could result in damage to equipment and may result in personal injury.

6. Drive tractor unloaded in a large figure-8 pattern a minimum of four times and tighten cap screws in numerical order to 610 N·m (450 lb·ft).

IMPORTANT: Keep wheel sleeve cap screws tightened to specification. If tractor is operated with loose wheel sleeves or under-torqued cap screws, damage to sleeves and cast wheels may result.

7. Tighten cap screws to 610 N·m (450 lb·ft) after working 3 hours, 10 hours, and daily during first week of operation or until cap screws do not move when retightening.

TS36762,000022C-19-07AUG17

Single Wheel Tread Settings-Steel Wheels

IMPORTANT: Avoid equipment damage. Never position rear treads narrower than 1676 mm (66 in) on tractors equipped with tires narrower than 520 mm and with 72 kg (159 lb) starter weight and two 205 kg (452 lb) inner wheel weights.

See Minimum Tread Setting with Air Trailer Brakes and Inner Wheel Weights in this section of this Operator's Manual for further restrictions on tractors equipped with optional air trailer brakes.

Rear Wheels and Tires

NOTE: To determine desired rim position for 16-position wheels, see 16-Position Rear Wheel Settings in this section of this Operator's Manual.

320 and 380 Tires mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
D	1524 (60)	1981 (78)	2220 (87.4)	2424 (95.4)
O	2182 (85.9)	2643 (104)	2882 (113.5)	3086 (121.5)
P	2232 (87.9)	2563 (106)	2932 (115.4)	3136 (123.5)

480 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1524 (60)	1969 (77.5)	2208 (86.9)	2412 (95)
OUT	2078 (81.8)	2409 (100)	2778 (109.4)	2982 (117.4)

520 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1544 (60.8)	1967 (77.4)	2206 (86.9)	2410 (94.9)
OUT	2074 (81.7)	2405 (99.8)	2774 (109.2)	2978 (117.2)

620 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1638 (64.5)	1969 (77.5)	2208 (86.9)	2412 (95)
OUT	2078 (81.8)	2539 (100)	2778 (109.4)	2982 (117.4)

650 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1669 (65.7)	1969 (77.5)	2208 (86.9)	2412 (95)
OUT	2078 (81.8)	2539 (100)	2778 (109.4)	2982 (117.4)

710 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1732 (68.2)	1969 (77.5)	2208 (86.9)	2412 (95)
OUT	2078 (81.8)	2539 (100)	2778 (109.4)	2982 (117.4)

Rear Wheels and Tires

800 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1826 (71.9)	2101 (82.7)	2340 (92.1)	2544 (100.2)
OUT	1946 (76.6)	2407 (94.8)	2646 (104.2)	2850 (112.2)

TS36762,000022D-19-21NOV16

Single Wheel Tread Settings—Cast Wheels

IMPORTANT: Avoid equipment damage. Never position rear treads narrower than 1676 mm (66 in) on tractors equipped with tires narrower than 520 mm and two 205 kg (452 lb) inner wheel weights.

See Minimum Tread Setting with Air Trailer Brakes and Inner Wheel Weights in this section of this Operator's Manual for further restrictions on tractors equipped with optional air trailer brakes.

320 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1524 (60)	1963 (77.3)	2202 (86.7)	2406 (94.7)
OUT	1806 (71.1)	2536 (99.8)	2506 (98.6)	2710 (106.7)

380 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1524 (60)	1963 (77.3)	2202 (86.7)	2406 (94.7)
OUT	1806 (71.1)	2536 (99.8)	2506 (98.6)	2710 (106.7)

480 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1524 (60)	1963 (77.3)	2202 (86.7)	2406 (94.7)
OUT	1806 (71.1)	2536 (99.8)	2506 (98.6)	2710 (106.7)

520 Tires mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1555 (61.2)	2005 (78.9)	2202 (86.7)	2449 (96.4)
OUT	1821 (71.7)	2310 (90.9)	2506 (98.6)	2754 (108.4)

Rear Wheels and Tires

620 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1659 (65.3)	2005 (78.9)	2202 (86.7)	2449 (96.4)
OUT	1821 (71.7)	2310 (90.9)	2506 (98.6)	2754 (108.4)

650 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1690 (66.5)	2005 (78.9)	2202 (86.7)	2449 (96.4)
OUT	1821 (71.7)	2310 (90.9)	2506 (98.6)	2754 (108.4)

710 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1752 (69)	2005 (78.9)	2202 (86.7)	2449 (96.4)
OUT	1821 (71.7)	2310 (90.9)	2506 (98.6)	2754 (108.4)

800 Tire mm (in)				
Position	Minimum	2550 (100.4) Axle Maximum	2808 (110.5) Axle Maximum	3012 (118.5) Axle Maximum
IN	1846 (72.7)	2158 (85.0)	2354 (92.7)	2602 (102.4)
OUT	Not Available	Not Available	Not Available	Not Available

TS36762.000022E-19-21NOV16

Dual Wheel Tread Settings-Steel Wheels

IMPORTANT: Avoid equipment damage. Never position rear treads narrower than 1676 mm (66 in) on tractors equipped with tires narrower than 520 mm and two 205 kg (452 lb) inner wheel weights.

See Minimum Tread Setting with Air Trailer Brakes and Inner Wheel Weights in this section of this Operator's Manual for further restrictions on tractors equipped with optional air trailer brakes.

NOTE: To determine desired rim position for 16-position wheels, see 16-Position Rear Wheel Settings in this section of this Operator's Manual.

320 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
D	1524 (60)	1692 (66.6)	1788 (70.4)	1896 (74.6)	1992 (78.4)	D	2290 (90.2)	2458 (96.8)	2662 (104.8)
D	1524 (60)	1788 (70.4)	1788 (70.4)	1992 (78.4)	1992 (78.4)	H	2448 (96.4)	2712 (106.8)	2916 (114.8)
D	1524 (60)	1788 (70.4)	1788 (70.4)	1992 (78.4)	1992 (78.4)	L	2600 (102.4)	2864 (112.8)	3068 (120.8)
D	1524 (60)	1788 (70.4)	1788 (70.4)	1992 (78.4)	1992 (78.4)	O	2854 (112.4)	3118 (122.8)	3322 (130.8)
D	1524 (60)	1788 (70.4)	1788 (70.4)	1992 (78.4)	1992 (78.4)	P	2904 (114.3)	3168 (124.7)	3372 (132.8)

Rear Wheels and Tires

320 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
G	1774 (69.8)	1998 (78.7)	2042 (80.4)	2202 (86.7)	2202 (86.7)	J	2540 (100)	2764 (108.8)	2968 (116.9)
G	1774 (69.8)	2042 (80.4)	2042 (80.4)	2246 (88.4)	2246 (88.4)	M	2750 (108.3)	3018 (118.8)	3222 (126.9)
G	1774 (69.8)	2042 (80.4)	2042 (80.4)	2246 (88.4)	2246 (88.4)	P	2900 (114.2)	3168 (124.7)	3372 (132.8)
L	1928 (75.9)	2098 (82.6)	2196 (86.5)	2302 (90.6)	2400 (94.5)	L	2692 (106)	2864 (112.8)	3068 (120.8)
L	1928 (75.9)	2196 (86.5)	2196 (86.5)	2400 (94.5)	2400 (94.5)	O	2850 (112.2)	3118 (122.8)	3322 (130.8)
L	1928 (75.9)	2196 (86.5)	2196 (86.5)	2400 (94.5)	2400 (94.5)	P	2900 (114.2)	3168 (124.7)	3372 (132.8)
O	2182 (85.9)	2404 (94.6)	2450 (96.5)	2608 (102.7)	2654 (104.5)	P	2946 (116)	3168 (124.7)	3372 (132.8)
P	2232 (87.9)	2404 (94.6)	2500 (98.4)	2608 (102.7)	2704 (106.5)	P	2998 (118)	3168 (124.7)	3372 (132.8)

^aWith 15 in extension on dual

380 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
D	1524 (60)	1776 (69.9)	1790 (70.5)	1980 (78)	1994 (78.5)	F	2412 (95)	2662 (104.8)	2866 (112.8)
D	1524 (60)	1790 (70.5)	1790 (70.5)	1994 (78.5)	1994 (78.5)	L	2598 (102.3)	2864 (112.8)	3068 (120.8)
D	1524 (60)	1790 (70.5)	1790 (70.5)	1994 (78.5)	1994 (78.5)	O	2852 (112.3)	3118 (122.8)	3322 (130.8)
D	1524 (60)	1790 (70.5)	1790 (70.5)	1994 (78.5)	1994 (78.5)	P	2904 (114.3)	3168 (124.7)	3372 (132.8)
G	1776 (69.9)	1976 (77.8)	2044 (80.5)	2180 (85.8)	2248 (88.5)	L	2662 (104.8)	2864 (112.8)	3068 (120.8)
G	1776 (69.9)	2044 (80.5)	2044 (80.5)	2248 (88.5)	2248 (88.5)	O	2850 (112.2)	3118 (122.8)	3322 (130.8)
G	1776 (69.9)	2044 (80.5)	2044 (80.5)	2248 (88.5)	2248 (88.5)	P	2900 (114.2)	3168 (124.7)	3372 (132.8)
L	1928 (75.9)	2182 (85.9)	2196 (86.5)	2386 (93.9)	2400 (94.5)	N	2816 (110.9)	3068 (120.8)	3272 (128.8)
L	1928 (75.9)	2196 (86.5)	2196 (86.5)	2400 (94.5)	2400 (94.5)	P	2900 (114.2)	3168 (124.7)	3372 (132.8)
O	2182 (85.9)	2282 (89.8)	2450 (96.5)	2486 (97.9)	2654 (104.5)	P	3070 (120.9)	3168 (124.7)	3372 (132.8)
P	2232 (87.9)	2282 (89.8)	2500 (98.4)	2486 (97.9)	2704 (106.5)	P	3120 (122.8)	3168 (124.7)	3372 (132.8)

^aWith 15 in extension on dual

18.4 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1524 (60)	—	1776 (69.9)	1534 (60.4)	1980 (78)	IN	2912/2596 (114.6/ 102.2) ^a	3164 _a (124.6)	2606 (102.6)
OUT	2078 (81.8)	—	1092 (43)	—	2296 (90.4)	IN	3150 (124) ^a	3164 _a (124.6)	3368 _a (132.6)
IN	1524 (60)	1776 (69.9)	1776 (69.9)	1980 (78)	1980 (78)	OUT	2816 (110.9)	3068 (120.8)	3272 (128.9)
OUT	2078 (81.8)	—	2346 (92.4)	2200 (86.6)	2550 (100.4)	OUT	3562 ^a /3150 (140.2/124)	3830 _a (150.8)	3272 (128.9)

^aWith 15 in extension on dual

Rear Wheels and Tires

480 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1524 (60)	—	1776 (69.9)	—	1980 (78)	IN	2912 (114.6) With 15 in extension on dual	3164 (124.6) _a	3368 (132.6) _a
OUT	2078 (81.8)	—	—	—	2270 (89.4)	IN	3176 (125) ^a	—	3368 (132.6) _a
IN	1524 (60)	1776 (69.9)	1776 (69.9)	1980 (78)	1980 (78)	OUT	2816 (110.9)	3068 (120.8)	3272 (128.9)
OUT	2078 (81.8)	—	2346 (92.4)	2174 (85.6)	2550 (100.4)	OUT	3562 ^a /3176 (140.2/125)	3830 (150.8) _a	3272 (128.9)

^aWith 15 in extension on dual

520 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1534 (60.4)	—	1774 (69.8)	—	1978 (77.9)	IN	2824 (111.2) _a	3062 (120.6)	3266 (128.6) _a
OUT	2074 (81.7)	—	—	—	2084 (82)	IN	3256 (128.2) _a	—	3266 (128.6) _a
IN	1534 (60.4)	1774 (69.8)	1774 (69.8)	1978 (77.9)	1978 (77.9)	OUT	2930 (115.4)	3170 (124.8)	3374 (132.8)
OUT	2074 (81.7)	—	2342 (92.2)	2192 (86.3)	2546 (100.2)	OUT	3664/3256 (144.3/ 128.2) ^a	3932 (154.8) _a	3374 (132.8)

^aWith 15 in extension on dual

620 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1638 (64.5)	—	—	—	1718 (67.6)	IN	3028 (119.2) _a	—	3108 (122.4) _a
OUT	1806 (71.18)	—	—	—	—	IN	—	—	—
IN	1638 (64.5)	1776 (69.9)	1776 (69.9)	1980 (78)	1980 (78)	OUT	3204 (126.1)	3342 (131.6)	3546 (139.6)
OUT	2078 (81.8)	1952 (76.9)	2346 (92.4)	2550 (100.4)	2550 (100.4)	OUT	3466 (136.5)	3342 (131.6)	3546 (139.6)

^aWith 15 in extension on dual

650 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1669 (65.7)	1774 (69.8)	1776 (69.9)	1978 (77.9)	1980 (78)	OUT	3310 (130.3)	3352 (132)	3556 (140)
OUT	2078 (81.8)	—	2346 (92.4)	Not Available	2550 (100.4)	OUT	3654 (143.9) _a	4114 (162) ^a	4318 (170) ^a

^aWith 15 in extension on dual

Rear Wheels and Tires

710 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1732 (68.1)	1774 (69.8)	1776 (69.9)	1978 (77.9)	1980 (78)	OUT	3310 (130.3)	3352 (132)	3556 (140)
OUT	2078 (81.8)	—	2346 (92.4)	—	2550 (100.4)	OUT	3654 _a (143.9)	4114 (162) ^a	4318 (170) ^a

^aWith 15 in extension on dual

800 Tire					
Inner Tire			Dual Tire		
Position	Minimum	3012 (118.5) Axle	Position	Minimum ^a	3012 (118.5) Axle
		Maximum ^b			Maximum ^a
IN	1826 (71.9)	1941 (76.4)	OUT	3843 (151.3)	4006 (157.7)
OUT	—	Not Available	OUT	—	—

^aWith 10 in extension on dual

^bWith 15 in extension on dual

TS36762,000022F-19-21NOV16

Dual Wheel Tread Settings—Cast Wheels

IMPORTANT: Avoid equipment damage. Never position rear treads narrower than 1676 mm (66 in) on tractors equipped with tires narrower than 520 mm and with two 205 kg (452 lb) inner wheel weights.

See Minimum Tread Setting with Air Trailer Brakes and Inner Wheel Weights in this section of this Operator's Manual for further restrictions on tractors equipped with optional air trailer brakes.

320 Tire									
Single Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1524 (60)	1692 (66.6)	1774 (69.8)	1896 (74.6)	1978 (77.9)	D	2290 (90.2)	2458 (96.8)	2662 (104.8)
OUT	1810 (71.3)	—	2078 (81.8)	1896 (74.6)	2282 (89.8)	D	2952 _a (116.2)	3220 _a (126.7)	2662 (104.8)
OUT	1810 (71.3)	—	2078 (81.8)	1896 (74.6)	2282 (89.8)	D	2576 (101.4)	3220 _a (126.7)	2662 (104.8)
IN	1524 (60)	1774 (69.8)	1774 (69.8)	1978 (77.9)	1978 (77.9)	G	2462 (96.9)	2711 (106.7)	2915 (114.8)
OUT	1810 (71.3)	1946 (76.6)	2078 (81.8)	2150 (84.6)	2282 (89.8)	G	2576 (101.4)	2711 (106.7)	2915 (114.8)
IN	1524 (60)	1774 (69.8)	1774 (69.8)	1978 (77.9)	1978 (77.9)	L	2614 (102.9)	2864 (112.7)	3068 (120.8)
OUT	1810 (71.3)	2078 (81.8)	2078 (81.8)	2282 (89.8)	2282 (89.8)	L	2596 (102.2)	2864 (112.7)	3068 (120.8)
IN	1524 (60)	1774 (69.8)	1774 (69.8)	1978 (77.9)	1978 (77.9)	O	2868 (112.9)	3118 (122.7)	3322 (130.8)
OUT	1810 (71.3)	2078 (81.8)	2078 (81.8)	2282 (89.8)	2282 (89.8)	O	2850 (112.2)	3118 (122.7)	3322 (130.8)
IN	1524 (60)	1774 (69.8)	1774 (69.8)	1978 (77.9)	1978 (77.9)	P	2920 (115)	3168 (124.7)	3372 (132.8)
OUT	1810 (71.3)	2078 (81.8)	2078 (81.8)	2282 (89.8)	2282 (89.8)	P	2900 (114.2)	3168 (124.7)	3372 (132.8)

^aWith 15 in extension on dual.

Rear Wheels and Tires

380 Tire									
Single Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1524 (60)	1770 (69.7)	1770 (69.7)	1974 (77.7)	1974 (77.7)	G	2414 (95)	2711 (106.7)	2915 (114.8)
OUT	1806 (71.1)	1822 (71.7)	2074 (81.7)	2026 (79.8)	2278 (89.7)	G	2698 (106.2)	2711 (106.7)	2915 (114.8)
IN	1524 (60)	1770 (69.7)	1770 (69.7)	1974 (77.7)	1974 (77.7)	L	2618 (103.1)	2864 (112.7)	3068 (120.8)
OUT	1806 (71.1)	1974 (77.7)	2074 (81.7)	2178 (85.7)	2278 (89.7)	L	2698 (106.2)	2864 (112.7)	3068 (120.8)
IN	1524 (60)	1770 (69.7)	1770 (69.7)	1974 (77.7)	1974 (77.7)	O	2872 (113.1)	3118 (122.7)	3322 (130.8)
OUT	1806 (71.1)	2074 (81.7)	2074 (81.7)	2278 (89.7)	2278 (89.7)	O	2850 (112.2)	3118 (122.7)	3322 (130.8)
IN	1524 (60)	1770 (69.7)	1770 (69.7)	1974 (77.7)	1974 (77.7)	P	2922 (115)	3168 (124.7)	3372 (132.8)
OUT	1806 (71.1)	2074 (81.7)	2074 (81.7)	2278 (89.7)	2278 (89.7)	P	2900 (114.2)	3168 (124.7)	3372 (132.8)

^aWith 15 in extension on dual.

18.4 and 480 Tires									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1524 (60)	—	1770 (69.7)	1508 (59.4)	1974 (77.7)	IN	2918 _a (114.9)	3164 _a (124.6)	2606 (102.6)
IN	1524 (60)	—	1770 (69.7)	1508 (59.4)	1974 (77.7)	IN	2622 (103.2)	3164 _a (124.6)	2606 (102.6)
OUT	1806 (71.1)	—	2066 (81.3)	—	2270 (89.4)	IN	2906 (114.4)	3164 _a (124.6)	3368 _a (132.6)
IN	1524 (60)	1770 (69.7)	1770 (69.7)	1974 (77.7)	1974 (77.7)	OUT	2822 (111.1)	3068 (120.8)	3272 (128.9)
OUT	1806 (71.1)	1970 (77.5)	2074 (81.7)	2174 (85.6)	2278 (89.7)	OUT	2906 (114.4)	3068 (120.8)	3272 (128.9)

^aWith 15 in extension on dual.

520 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1535 (60.4)	—	1770 (69.7)	—	1974 (77.7)	IN	2826 _a (111.3)	3062 _a (120.6)	3266 _a (128.6)
OUT	1806 (71.1)	—	1880 (74)	—	2084 (82)	IN	2988 _a (117.6)	3062 _a (120.6)	3266 _a (128.6)
IN	1534 (60.4)	1770 (69.7)	1770 (69.7)	1974 (77.7)	1974 (77.7)	OUT	2935 (115.6)	3170 (124.8)	3374 (132.8)
OUT	1806 (71.1)	1952 (76.9)	2074 (81.7)	2192 (86.3)	2278 (89.7)	OUT	2988 (117.6)	3170 (124.8)	3374 (132.8)

^aWith 15 in extension on dual.

620 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1638 (64.5)	—	—	—	1718 (67.6)	IN	3028 (119.2)	—	3108 _a (122.3)
IN	1638 (64.5)	1770 (69.7)	1770 (69.7)	1974 (77.7)	1974 (77.7)	OUT	3210 (126.4)	3342 (131.6)	3545 (139.6)
OUT	1806 (71.1)	1952 (76.9)	2074 (81.7)	2156 (84.9)	2278 (89.7)	OUT	3196 (125.8)	3342 (131.6)	3545 (139.6)

^aWith 15 in extension on dual.

Rear Wheels and Tires

650 Tire									
Single Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1670 (65.8)	1770 (69.7)	1770 (69.7)	1974 (77.7)	1974 (77.7)	OUT	3242 (127.6)	3342 (131.6)	3545 (139.6)
OUT	1806 (71.1)	1890 (74.4)	2074 (81.7)	2094 (82.4)	2278 (89.7)	OUT	3258 (128.3)	3342 (131.6)	3545 (139.6)

^aWith 15 in extension on dual.

710 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1732 (68.1)	1764 (69.4)	1770 (69.7)	1968 (77.5)	1974 (77.7)	OUT	3310 (130.3)	3342 (131.6)	3621 (139.6)
OUT	1806 (71.1)	—	2074 (81.7)	1968 (77.5)	2278 (89.7)	OUT	3384 (133.2)	3342 (131.6)	3621 (139.6)

^aWith 15 in extension on dual.

800 Tire									
Inner Tire mm (in)						Dual Tire mm (in)			
Position	Minimum	2808 (110.5) Axle		3012 (118.5) Axle		Position	Minimum	2808 (110.5) Axle	3012 (118.5) Axle
		Maximum	Maximum ^a	Maximum	Maximum ^a			Maximum	Maximum
IN	1732 (68.1)	1774 (69.8)	1776 (69.9)	1978 (77.9)	1980 (78)	OUT	3310 (130.3)	3352 (132)	3556 (140)
OUT	2078 (81.8)	—	2346 (92.4)	—	2550 (100.4)	OUT	3654 (143.9)	4114 (162)	4318 (170)

^aWith 15 in extension on dual.

TS36762,0000231-19-21NOV16

Dual Wheel Row Crop Settings and Dual Hub Extensions-Cast Wheels

IMPORTANT: Avoid tractor damage. Never position rear treads narrower than 1676 mm (66 in) on tractors equipped with tires narrower than 520 mm and with two 205 kg (452 lb) inner wheel weights.

Dual Rear Tire and Hub Extensions - 18.4 or 480 Section

Spacing mm (in)	Row	508 (20)	559 (22)	762 (30)	813 (32)	864 (34)	914 (36)	965 (38)	1016 (40)
	Inner Wheel	—	—	1524 (60)	1626 (64)	1727 (68)	1829 (72)	1930 (76)	2032 (80)
	Dual Wheel	—	—	3045 (120)	3251 (128)	3454 (136)	3657 (144)	3861 (152)	4064 (160)
Dual Axle Extension mm (in)	2808 (110.5)	—	—	NR ^a	127 (5)	254 (10)	254 (10)	381 (15)	—
	3012 (118.5)	—	—	NR ^a	NR ^a	127 (5)	254 (10)	254 (10)	381 (15)

^aDual hub extension, not required for tread setting

Dual Rear Tire and Hub Extensions - 520 or 20.8 Section

Spacing mm (in)	Row	508 (20)	559 (22)	762 (30)	813 (32)	864 (34)	914 (36)	965 (38)	1016 (40)
	Inner Wheel	—	—	—	1626 (64)	1727 (68)	1829 (72)	1930 (76)	2032 (80)
	Dual Wheel	—	—	—	3251 (128)	3454 (136)	3657 (144)	3861 (152)	4064 (160)
Dual Axle	2808 (110.5)	—	—	—	127 (5)	254 (10)	254 (10)	381 (15)	—

Rear Wheels and Tires

Extension mm (in)	3012 (118.5)	—	—	—	—	127 (5)	254 (10)	254 (10)	381 (15)
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Dual Rear Tire and Hub Extensions - 620 or 710 Section

Spacing mm (in)	Row	508 (20)	559 (22)	762 (30)	813 (32)	864 (34)	914 (36)	965 (38)	1016 (40)
	Inner Wheel	—	—	—	—	—	—	—	2032 (80)
	Dual Wheel	—	—	—	—	—	—	—	160
Dual Axle Extension mm (in)	2808 (110.5)	—	—	—	—	—	—	—	381 (15)
	3012 (118.5)	—	—	—	—	—	—	—	330 (13)

TS36762,0000232-19-21NOV16

Clamp-on Dual Usage

IMPORTANT: Clamp-on duals should not be used for heavy traction work. They are allowed only for use when the following conditions are met including recommended tire sizes and manufacturers.

NOTE: Clamp-on duals are not recommended for turning with brake.

Use the right combination of weight and tread widths for the relevant application.

Steel Rear Wheels

- Maximum rear axle weight is limited to 6300 kg (13860 lb).
- Maximum outer tread width is limited to 3404 mm (134 in).

Cast Rear Wheels

- Maximum total vehicle weight is limited to 16000 kg (35274 lbs).
- Maximum inner tread width is limited to 1930 mm (76 in).
- Maximum outer tread width is limited to 3860 mm (152 in).

TS36762,0000233-19-21NOV16

Operator's Station - General Information

Avoid Contact with Agricultural Chemicals



TS220—UN—15APR13



TS272—UN—23AUG88

This enclosed cab does not protect against inhaling vapor, aerosol or dust. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

Before leaving the cab, wear personal protective equipment as required by the pesticide use instructions. When re-entering the cab, remove protective equipment and store either outside the cab in a closed box or some other type of sealable container or inside the cab in a pesticide resistant container, such as a plastic bag.

Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.

DX,CABS-19-25MAR09

Clean Vehicle of Hazardous Pesticides

CAUTION: During application of hazardous pesticides, pesticide residue can build up on the inside or outside of the vehicle. Clean vehicle according to use instructions of hazardous pesticides.

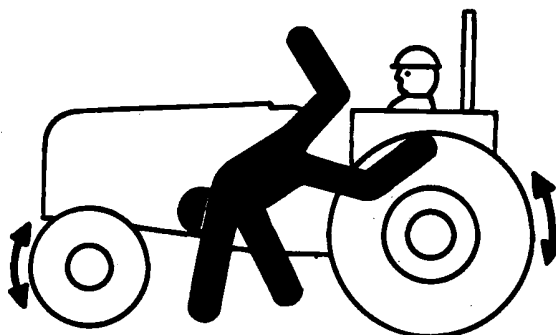
When exposed to hazardous pesticides, clean exterior and interior of vehicle daily to keep free of the accumulation of visible dirt and contamination.

1. Sweep or vacuum the floor of cab.
2. Clean headliners and inside cowlings of cab.
3. Wash entire exterior of vehicle.

4. Dispose of any wash water with hazardous concentrations of active or non-active ingredients according to published regulations or directives.

DX,CABS2-19-24JUL01

Keep Riders Off Machine



TS290—UN—23AUG88

Only allow the operator on the machine. Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

DX,RIDER-19-03MAR93

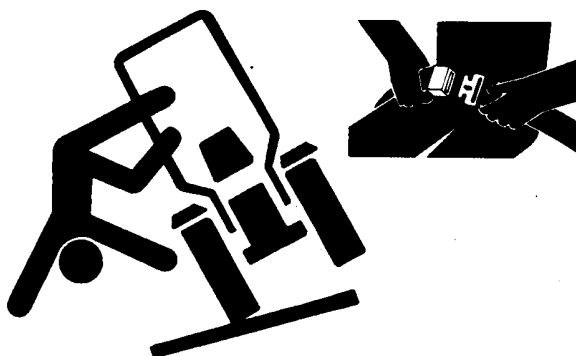
Keep Operator Station Window and Door Closed

CAUTION: Avoid undue exposure to noise and debris. Keep window and door closed during machine operation.

Properly close and latch door and rear window to prevent noise and debris from entering operator station.

RW29387,000004F-19-24FEB15

Use Seat Belts



TS205—UN—23AUG88



RXA0129149—UN—30OCT12

CAUTION: Minimize chance of possible injury from accident. Use seat belts (A) when operating tractor.

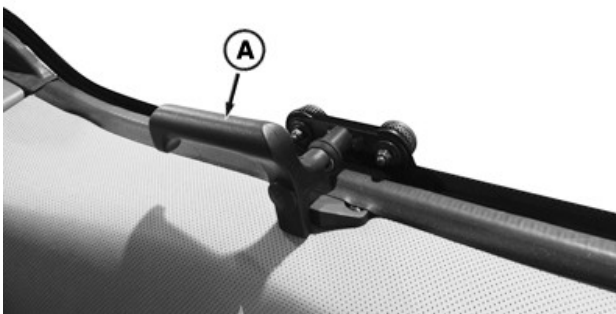
Instructional seat is provided only for training operators or diagnosing machine problems. Keep all other riders off tractor and equipment. Always wear seat belt.

Inspect seat belts and mounting hardware annually, see Seat Belts in Service - Check section of this Operator's Manual.

TS36762,0000235-19-06SEP17

Use Emergency Exit

Removable rear cab window provides large exit path if cab door is blocked in emergency situation.



RXA0148319—UN—04JUN15

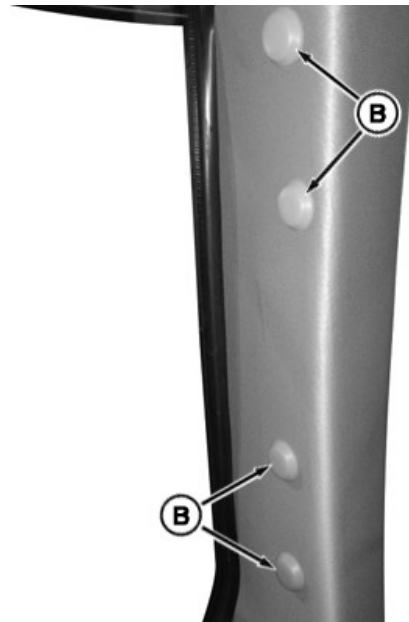
To open window, lift lever (A) and push out glass.

KT81203,000057F-19-27JUN17

Monitor Bracket Mounts



RXA0147009—UN—10MAR15



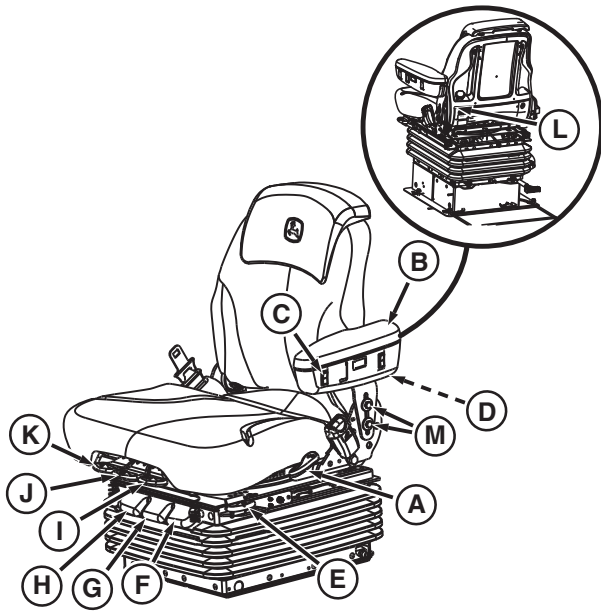
RXA0147010—UN—10MAR15

Front corner post mounting points (A) and rear corner post mounting points (B) are used to connect implement monitors to cab using M10 cap screws. See your John Deere dealer for brackets that utilize these mounting points.

TS36762,0000237-19-01SEP17

Seat

Adjust ComfortCommand™ Seat



RXA0151480—UN—17FEB16

A—Backrest Tilt Handle - Allows seat back to tilt.

B—Flip Up Armrest - Can be flipped up out of the way.

C—Height Adjustment Switch - Turn key to "ON". Press lower portion of switch to lower seat or press upper portion of switch to raise seat.

D—Armrest Tilt Adjustment Knob - Turn knob to adjust armrest angle.

E—Fore/Aft Seat Adjustment Handle - Lift up on handle, move seat forward or backward, press handle back down to lock into place.

F—Fore/Aft Isolation Handle - Adjust lever to back setting, lock into place with locking lever. Seat will absorb shock impacts while tractor is in motion. Seat won't move farther than 25 mm (1 in) in any direction.

G—Lateral Isolation Handle - Allows side to side movement of seat. Push down on handle to unlock lateral seat suspension. Pull up on handle to lock seat in position (seat must be centered).

H—Adjustment Damper Handle - Air suspension seat only. Controls amount of bounce operator feels while driving. Can be adjusted firmer to reduce amount of bounce.

I—Cushion Height Adjustment - Pull to adjust height of cushion up or down.

J—Seat Swivel Handle - Lift on handle to allow seat to swivel. Push down on handle to lock seat in position.

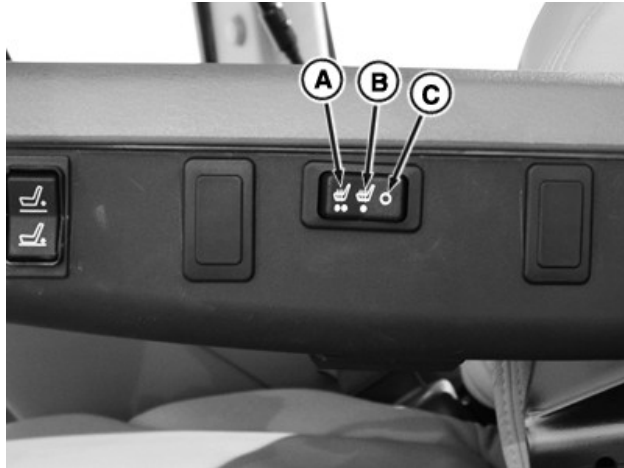
K—Fore/Aft Cushion Adjustment - Pull to adjust cushion forwards or backwards.

L—Lumbar Adjustment Knob - Turn knob clockwise to add support to lower back. Turn counterclockwise to lessen resistance to lower back.

M—Arm Rest Adjustment Cap Screws - Loosen cap screws to slide arm rest up or down. Retighten cap screws.

TS36762,0000238-19-21NOV16

Adjust Heated Leather Seat



RXA0136445—UN—30OCT13

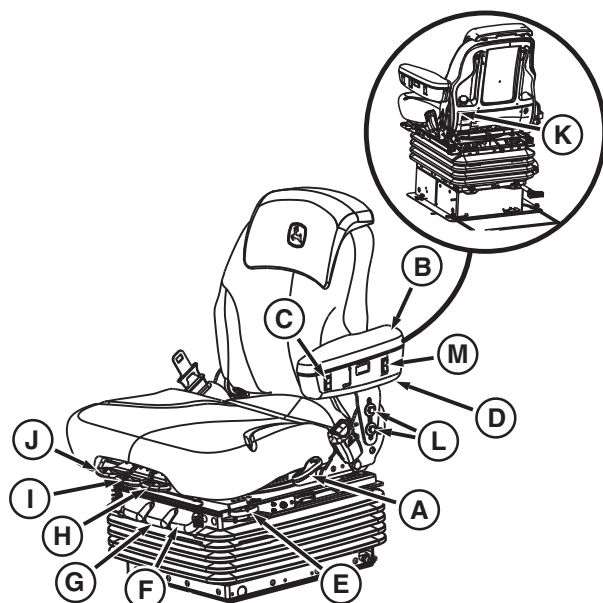
Heated seat provides increased comfort during cold days. Heat is controlled by left armrest switch. Three settings are available: Off (C), High (A), and Low (B). When tractor is shut off, seat also turns off, or after one hour of use heater automatically turns off.

TS36762,0000239-19-05JUL17

Adjust ActiveSeat™

Ride Zone Protection (RZP) - ActiveSeat™ has built-in buffer at high and low end of vertical seat travel, resulting in smoother ride. Adjust seat to operator height and weight prior to operating tractor to receive maximum benefit from RZP system. Seat automatically adjusts back into protected zone when operator adjusts seat height position at or near vertical seat travel limits.

ActiveSeat is a trademark of Deere & Company



RXA0144154—UN—30SEP15

A—Back Tilt Handle - Allows seat back to tilt.

B—Flip Up Armrest - Can be flipped up out of the way.

C—Height Adjustment Switch - Turn key to "ON". Press lower portion of switch to lower seat or press upper portion of switch to raise seat.

D—Armrest Tilt Adjustment Knob - Turn knob to adjust armrest angle.

E—Fore/Aft Seat Adjustment Handle - Lift up handle, move seat forward or backward, press handle back down to lock into place.

F—Fore/Aft Isolation Handle - Adjust lever to back setting, lock into place with locking lever. Seat will absorb shock impacts while tractor is in motion. Seat won't move farther than 25 mm in any direction.

G—Lateral Isolation Handle - Push down on handle to unlock lateral seat suspension. Pull up on handle to lock seat in position.

H—Cushion Height Adjustment - Pull to adjust height of cushion up or down.

I—Seat Swivel Handle - Lift on handle to allow seat to swivel. Push down on handle to lock seat in position.

J—Fore/Aft Cushion Adjustment - Pull to adjust cushion forwards or backwards.

K—Lumbar Adjustment Knob - Turn clockwise to add support to lower back. Turn counterclockwise to lessen resistance to lower back.

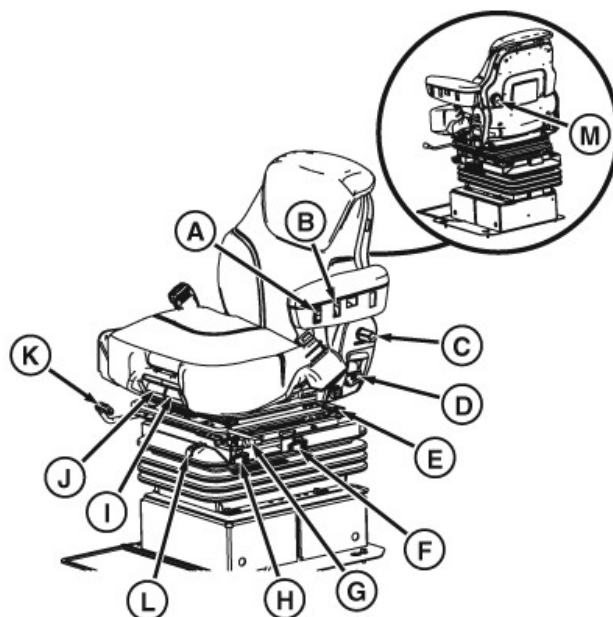
L—Armrest Adjustment Cap Screws - Loosen cap screws to slide arm rest up or down. Retighten cap screws.

M—Firmness Adjustment - Provides three different levels of seat suspension performance. Press upper (+)

portion of switch for the firmest ride or lower (-) portion for the softest ride.

TS36762,000023A-19-21NOV16

Adjust ComfortCommand™ Seat with Cab Suspension



RXA0131464—UN—09SEP13

A—Height Adjustment Switch - Turn key switch to ON. Press lower portion of switch to lower seat or press upper portion of switch to raise seat.

B—Heat/Vent Level Control Switch - Press to adjust level of heat or ventilation.

C—LH Armrest Tilt Adjustment Knob - Turn knob to adjust armrest angle.

D—Seat Back Recliner Adjustment Handle - Pull up to adjust back of seat.

E—Lateral Attenuation Lever - Pull lever up to move seat from side to side. Lock lever into position when at desired location.

F—Ride Firmness Control - Pull lever to one of four positions to adjust damping of seat. Seat absorbs some movement from shock impacts while driving.

G—Fore/Aft Attenuation - Adjust seat to control amount of fore/aft movement from tractor. Seat absorbs some movement from shock impacts while driving.

H—Seat Swivel Handle - Lift on handle to allow seat to swivel. Push down on handle to lock seat in position.

I—Cushion Height Adjustment - Pull to adjust height of cushion up or down.

J—Fore/Aft Cushion Adjustment - Pull to adjust cushion forwards or backwards.

K—Fore/Aft Adjustment Lever - Lift up on handle,

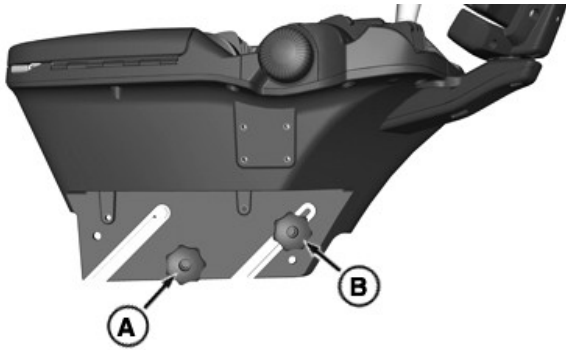
move seat forward or backward, press handle back down to lock into place.

L—Seat Adjustment Indicator - Gauge shows when seat is adjusted to operator's weight and height. Green marking will be visible when adjusted.

M—Lumbar Adjustment Knob - Turn knob clockwise to add support to lower back. Turn counterclockwise to lessen resistance to lower back.

TS36762,000023B-19-16AUG18

Adjust CommandARM™ Position



RXA0137805—UN—08JAN14

1. Turn CommandARM™ Height Adjustment Knob (A) and CommandArm™ Tilt and Height Adjustment Knob (B).

NOTE: Loosen both CommandARM™ Adjustment Knobs (A and B) to adjust height of CommandARM™.

2. By turning both knobs, CommandARM™ can slide at an angle to desired position.
3. Once proper position is attained, turn CommandARM™ Height Adjustment Knob to original position to lock.
4. Turn CommandARM™ Tilt Adjustment Knob (B) to adjust the angle of CommandARM™.
5. Once proper angle is attained, turn CommandARM™ Tilt Adjustment Knob to original position to lock.

TS36762,000023C-19-21NOV16

Operator Presence Sensor (If Equipped)

CAUTION: Neither PTO nor SCV automatically disengage when system senses operator is out of seat.

Audible warning sounds if operator leaves seat with transmission in NEUTRAL position, PTO engaged or

SCV left in detent flow position. After 5 seconds, audible warning sound will stop.

TS36762,000023D-19-25APR18

Use Instructional Seat



RXA0107055—UN—01APR10

CAUTION: Instructional seat is provided only for training operators or diagnosing machine problems. Keep all other riders off tractor and equipment. Always wear seat belt (A).



RXA0107057—UN—03JUN10



RXA0107061—UN—01APR10

Instructional seat back tilts forward to be used as writing

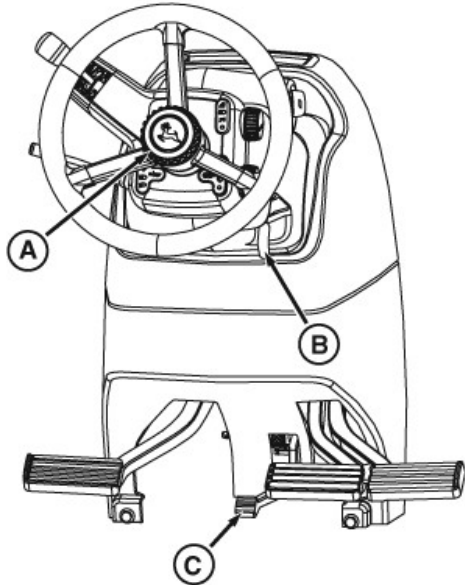
surface (B). Seat flips up (C) to allow easier entrance and egress.

KT81203,000058D-19-06SEP17

Steering Column

Adjust Steering Wheel and Column

Steering wheel can be adjusted in or out, up or down to provide comfortable driving position. For improved entry or egress, entire steering column can be pivoted up, then returned to previously set position with single control.



RXA0126757—UN—10OCT12

Telescope: Rotate steering wheel telescope release knob (A) counterclockwise. Extend or retract steering wheel to desired position. Rotate knob clockwise to lock.

Memory: Push down on steering column tilt release lever (C). Fully raise steering column. Release lever to latch column at top of travel.

Push down on steering column tilt release lever, latch releases. Lower steering column to previous tilt setting.

Tilt: Pull up on steering wheel tilt release lever (B) and move steering wheel to desired position. Release lever to lock.

TS36762,000023F-19-06JUL17

Operate Horn



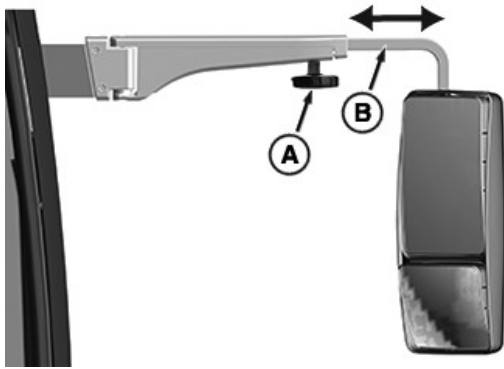
RXA0126178—UN—29OCT12

Push in on end of turn signal lever (A) to sound horn.

TS36762,0000240-19-21NOV16

Mirrors

Manual Mirror



RXA0156208—UN—15DEC16

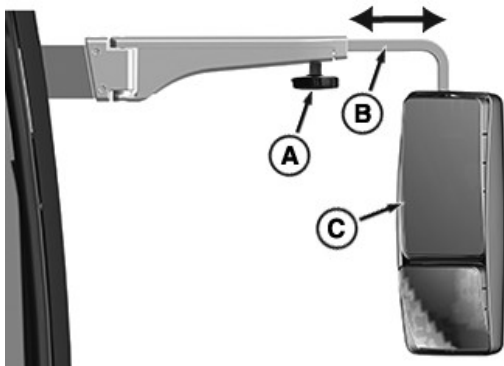
Right-Hand Manual Mirror

Loosen mirror arm locking knob (A) and slide mirror arm (B) to desired position. Securely tighten locking knob when adjustment is complete. Push on mirror to move surface into desired position.

After adjustment, use soft cloth to wipe any smudges off mirror face.

TS36762,0000241-19-26JUN17

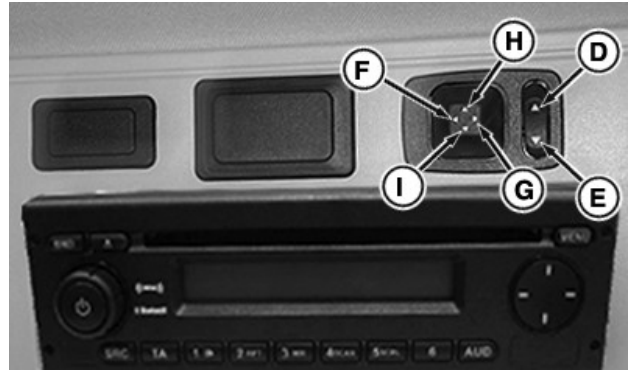
Electric Mirror



RXA0156209—UN—15DEC16

Right-Hand Electric Rear-view Mirror

1. Loosen mirror arm adjustment knob (A).
2. Slide mirror arm (B) to desired position.
3. Tighten mirror arm adjustment knob.

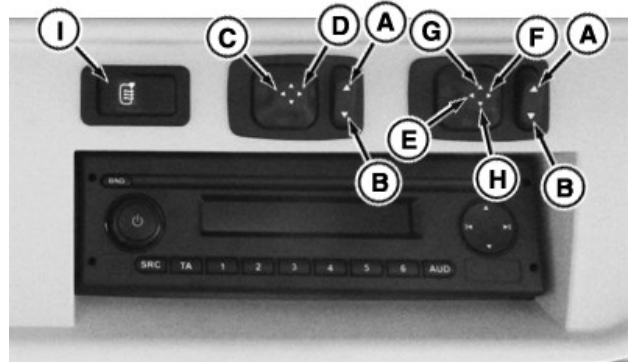


RXA0142296—UN—08JUL14

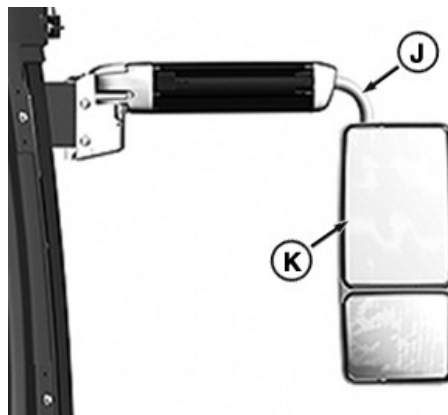
4. Select right (D) or left (E) mirror.
5. Push adjustment switch to angle mirror (C) left (F) or right (G).
6. Push adjustment switch to tilt mirror up (H) or down (I).

TS36762,0000242-19-26JUN17

Telescoping Heated Electric Mirror



RXA0142300—UN—09JUN14



RXA0156210—UN—15DEC16

Right-Hand Telescoping Electric Rear-view Mirror

1. Select right (A) or left (B) mirror (K).
2. Push adjustment switch to extend (C) or retract (D) telescoping arm (J).
3. Push adjustment switch to tilt mirror up (G) or down (H).

4. Push adjustment switch to angle mirror left (E) or right (F).

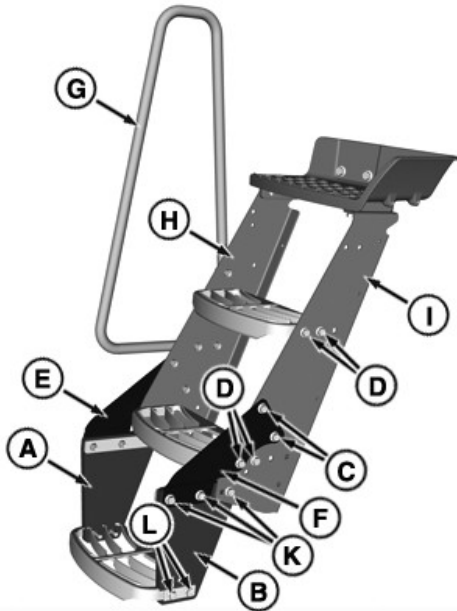
Press heating switch (I) to turn mirror heating on or off. When heat is on, switch is illuminated. Heating will continue until it is switched off or key switch is turned OFF. If heating switch is not manually turned off, mirror heating will restart when key switch is turned to accessory or ON position.

TS36762,0000243-19-04APR18

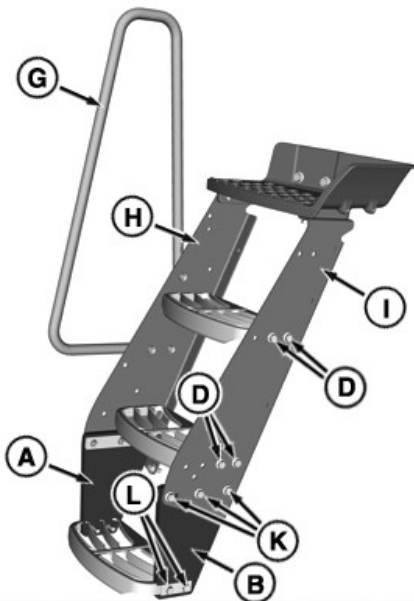
Steps

Position Left-hand Steps

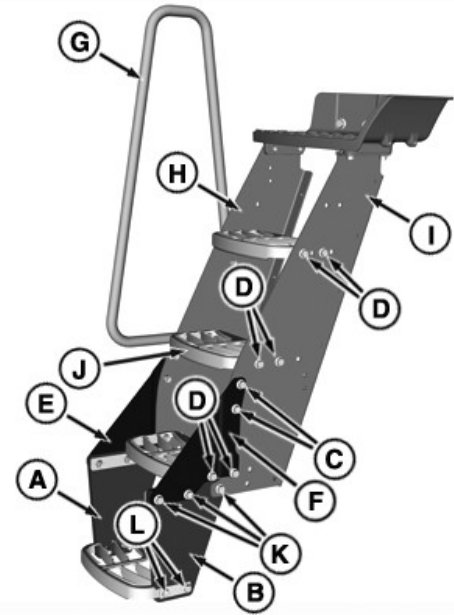
NOTE: Step assembly can be adjusted to either wide or narrow position. For wide positioned steps, use round holes in upper and lower side panels. For narrow steps, use square holes in upper and lower side panels.



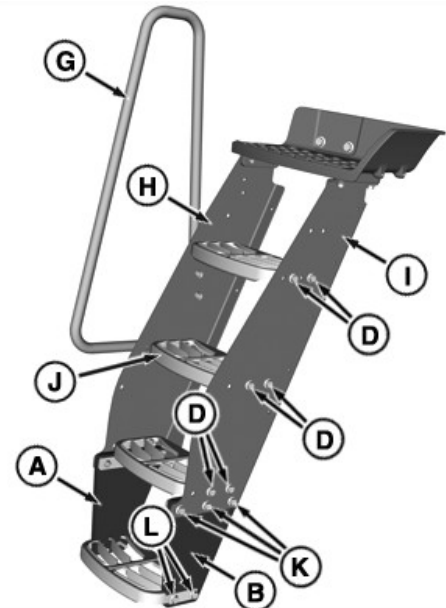
RXA0131506—UN—10SEP13
Wide Steps and Hand Rails—Tractors Equipped With Group 47/48 Tires



RXA0131470—UN—10SEP13
Narrow Steps and Hand Rails—Tractors Equipped With Group 47/48 Tires



RXA0131508—UN—10SEP13
Wide Steps and Hand Rails—Tractors Equipped With Group 49 Tires



RXA0131507—UN—10SEP13
Narrow Steps and Hand Rails—Tractors Equipped With Group 49 Tires

Remove steps by removing bolts (D, L).

Remove lower side panels 1 and 2 (A, B) by removing bolts (K) on both sides of step assembly.

To switch from wide position to narrow position, side brackets (E, F) need to be removed, and the lower side panels (A, B) need to be shifted into narrow position as shown.

To switch from narrow position to wide position, attach side brackets 1 and 2 (E, F) to lower and upper side panels (A, B, H, I). Side brackets must be ordered

through a dealer for tractors shipped from factory with narrow steps (refer to figure on previous page).

Use bolts (D, L) to adjust individual steps to match step assembly width.

NOTE: Upper side panels (H, I) do not have to be removed to change step positions.

On tractors equipped with Group 49 tires, positioning bolts for middle step (J) are also used to hold handrail (G) in place.

After correctly positioning steps and handrail, tighten cap screws to specified torque.

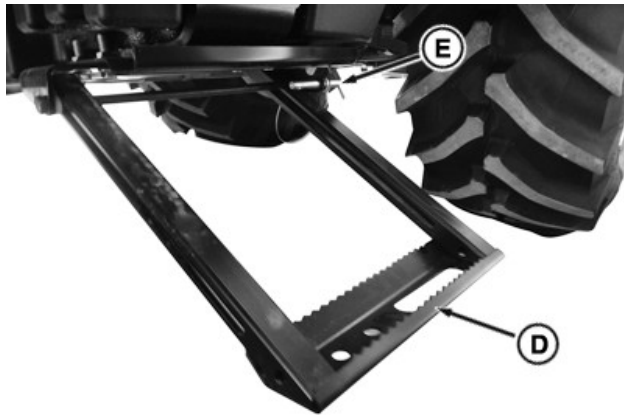
Part	Part Number
Group 48 Side Bracket 1 (E)	R542430
Group 48 Side Bracket 2 (F)	R542429
Group 49 Side Bracket 1 (E)	R543230
Group 49 Side Bracket 2 (F)	R542654

Torque — Specification

Bracket and Step Bolts (C, D)	55 N·m (41 lb·ft)
Carriage Bolts (K)	15 N·m (11 lb·ft)
Cap Screws (L)	37 N·m (27 lb·ft)

TS36762,0000244-19-09NOV17

CAUTION: To avoid injury, use handhold slot on lowest right-hand step to lower and raise step.



RXA0137123—UN—11DEC13

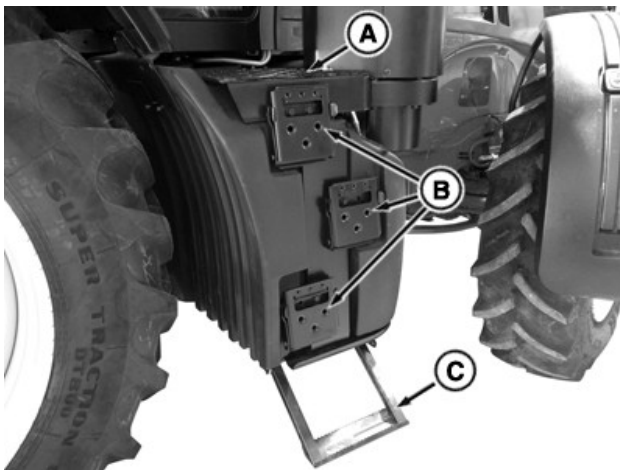
To extend bottom step, pull lock pin (E) forward until completely removed from step support. Grasp step using handhold slot (D) and pull outward and down until completely extended. Fully insert lock pin (E) in step support to secure bottom step when in stored position.

Retract and securely store all middle and lower steps when not in use. Use handholds to move steps.

TS36762,0000245-19-22NOV16

Right-hand Service Steps

CAUTION: Exhaust and muffler may be very hot. Do not use right side steps to access front step.



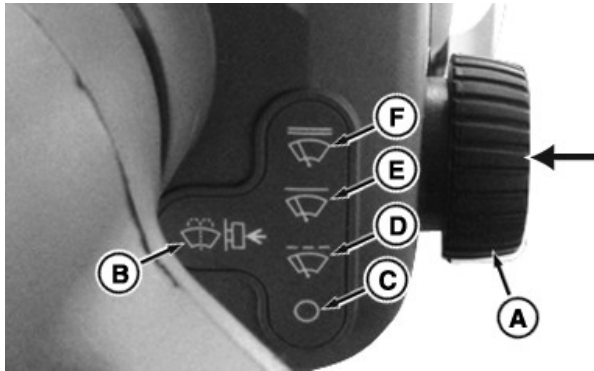
RXA0137121—UN—11DEC13

Fixed upper step above right fuel tank (A) allows access to right side of cab for service. Three pivoting middle steps (B) and one bottom extendable step (C) provide access to upper step.

Three middle steps (B) pivot into position. Pull down on step to position. When done using step, lift up, step will latch into place. Bottom step (C) slides under fuel tank when not in use.

Wiper Washer

Operate Front Wiper and Washer



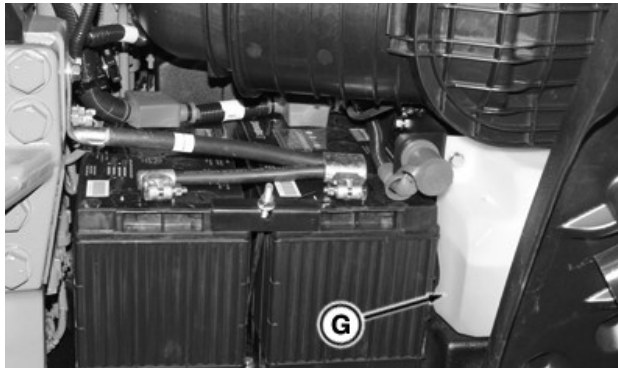
RXA0142299—UN—09JUN14

Wiper/washer knob (A) has four positions:

- OFF (C)
- Intermittent Operation (D)
- Slow Speed (E)
- Fast Speed (F)

Push knob in towards steering column to operate front washer (B).

NOTE: Front washer reservoir supplies rear and right hand wipers and washers (if equipped).

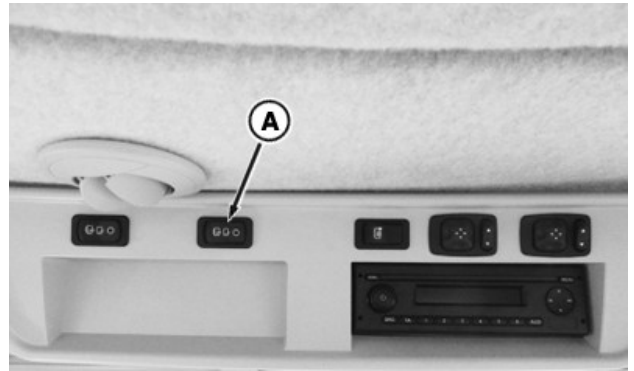


RXA0133281—UN—18JUN13

Front washer reservoir (G) is behind battery compartment cover. Fill reservoir with windshield washer fluid. In cold climates fill with non-freezing windshield washer fluid.

TS36762,0000246-19-22NOV16

Operate Rear Wiper and Washer



RXA0142297—UN—09JUN14

Switch (A) has three positions:

Right—OFF position.

Center—ON position. Rear wiper is activated.

Left—Rear window washer ON when switch is held. Release switch to turn OFF rear window washer.

TS36762,0000247-19-22NOV16

Operate Right-Hand Wiper and Washer



RXA0142353—UN—09JUN14

Switch (A) has three positions:

Right—OFF position.

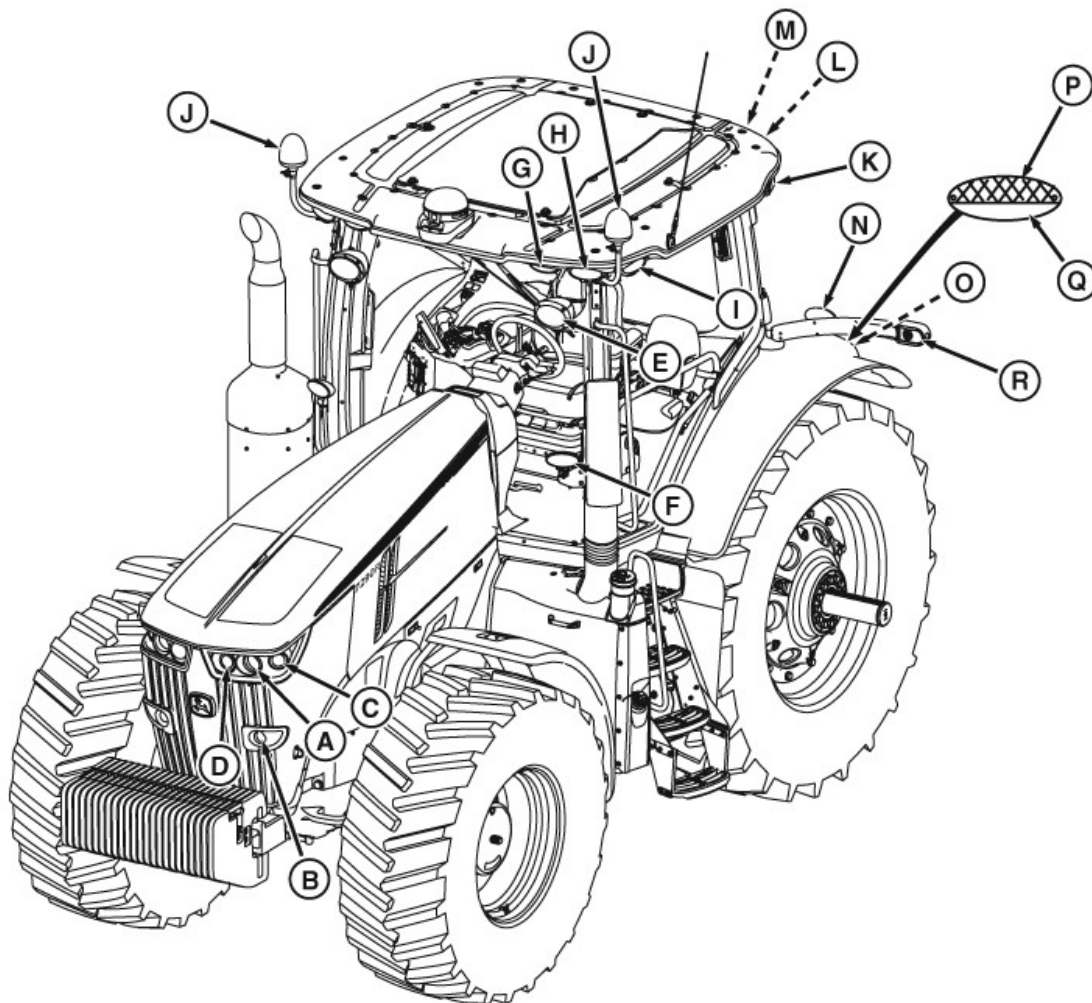
Center—ON position. Right-hand wiper is activated.

Left—Right-hand window washer ON when switch is held. Release switch to turn OFF right-hand window washer.

TS36762,0000248-19-22NOV16

Lights

Light Identification



RXA0131224—UN—08MAR13

A—Road Lights (High Beam)
B—Road Lights (Low Beam)
C—Outer Hood Lights
D—Inner Hood Lights (If Equipped)
E—Loader/Road Lights (Low and High Beam)
F—Beltline Lights
G—Front Inner Roof Lights
H—Front Outer Roof Indicator Lights (Amber)
I—Front Side Roof Lights

J—Rotary Beacon Lights (If Equipped)
K—Rear Side Roof Lights
L—Rear Outer Roof Indicator Lights (Amber)
M—Rear Inner Roof Lights
N—Rear Fender Lights
O—Rear Fender Tail/Brake/Indicator Lights
P—Amber Lens
Q—Red Lens
R—Extremity Indicator Lights

Configurable Lights

⚠ CAUTION: Avoid injury or death caused by a collision with another vehicle. Follow local laws and regulations for equipment lighting and marking. Comply with all traffic regulations.

Dim road lights to low-beam for oncoming vehicles. Avoid using worklights on public roadways or highways which could temporarily blind or confuse other drivers.

Promptly replace or repair damaged or lost lighting devices. See your John Deere dealer.

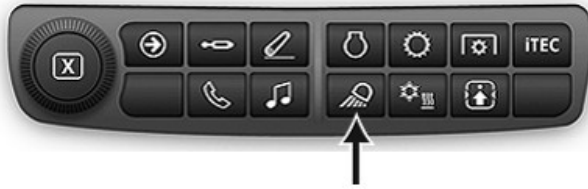
All lights are same for left and right side of tractor.

White lights are any exterior tractor lights that do not have colored lenses or bulbs.

Lights are configured on CommandCenter™ light page. See Configurable Lights in this section of this Operator's Manual.

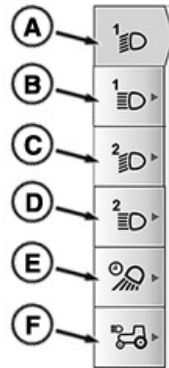
KT81203,000058E-19-14AUG17

CommandCenter is a trademark of Deere & Company



RXA0133717—UN—16JUL13

To access Lights page, press **Lights Shortcut Button** on Navigation Bar.

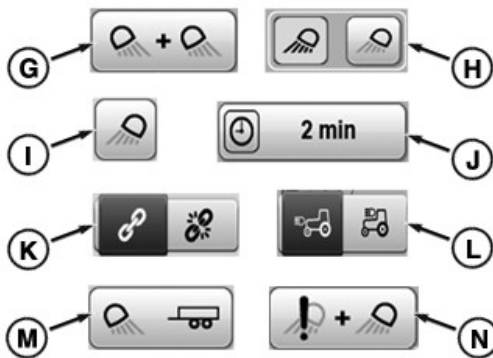


RXA0137115—UN—05DEC13

- A—Field 1 Low Beam
- B—Field 1 High Beam
- C—Field 2 Low Beam
- D—Field 2 High Beam
- E—Exit Lighting
- F—Hood/Belt Line Light (If Equipped)

When page is displayed, operator can select left side tabs (A-F).

NOTE: Page temporarily shows when selector knob transitions from OFF position to road lights or field lights position.



RXA0137114—UN—05DEC13

Light configuration buttons:

- G—Linked Lights:** Lights linked or paired together that can be unlinked.
- H—Unlinked Lights:** Unlinked light pair that can be linked.
- I—Paired Lights:** Light pair that is always linked.
- J—Exit Light Time-out:** Allows operator to select how long selected lights remain ON after light selector knob is turned to OFF position.
- K—Link/Unlink:** Press toggle to link and unlink lights on

all pages.

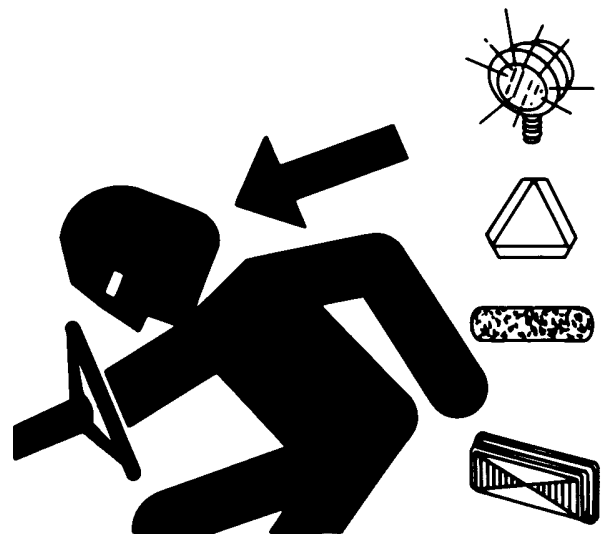
L—Hood/Loader Road Light Toggle: Press to toggle road lights between hood and loader lights position. Feature is only available when light knob is in road mode and tractor is equipped with hood/beltline lights.

M—Implement Lights: Press to activate implement lights. Implement light button only available if there are no fender work lights. If there are fender work lights, implement lights are controlled by fender work lights button.

N—Light with Fault: Exclamation point indicates that light is in error. (for example: light bulb is burnt out).

TS36762,000024A-19-25APR18

Steering Column Light Controls

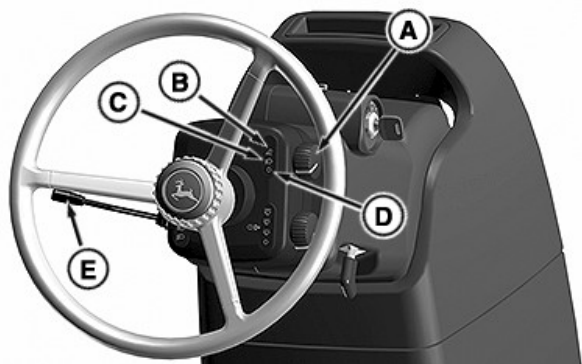


TS951—UN—12APR90

CAUTION: Avoid injury or death caused by collision with another vehicle. Follow local laws and regulations for equipment lighting and marking. Comply with all traffic regulations.

Use headlights and turn signals day and night. Dim road lights to low-beam for oncoming vehicles. Avoid using field lights on public roadways or highways which could temporarily blind or confuse other drivers. Frequently check for traffic from rear, especially in turns. Keep lighting and marking visible, clean and in good working order. Promptly replace or repair damaged or lost lighting devices. See your John Deere dealer.

Light Selector Knob



RXA0155918—UN—23NOV16

Control lights using light selector knob (A) on steering column. Display indicates selected lighting mode:

- Field Lights Position (B).
- Road Lights Position (C).
- OFF Position (D).

Turn Signal

Pull lever (E) up for right turn or down for left turn. Return lever to center position after completing turn.

A short audible chirping sound is heard when turn signal is activated.

High-Low Beam

Push lever (E) forward to activate high beam headlights; high beam indicator comes on. Dim lights to low beam for oncoming vehicles. Return lever to center position to operate low beam. Pull lever rearward and release to momentarily activate high beams.

KT81203,0000493-19-04APR18

Exit Lights

Program exit lighting to select which lights will remain on - and for how long they will remain on - after light selector knob is turned to off position.

Field exit lighting consists of all lights chosen on exit lighting page and will be activated for time selected for the Exit Timeout. Field exit lighting will be enabled when the field mode has been activated for at least 10 seconds during the current key switch cycle. Field exit lighting will then be activated when light switch and key switch are turned off. The order which light switch and key switch are turned off do not matter.

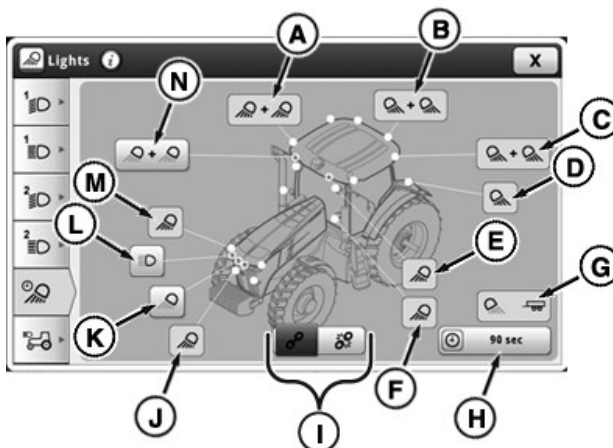
Road exit lighting is the low beam road lights only and will be activated for time selected for Exit Timeout. Road exit lighting will be enabled when the road mode has been activated for at least 10 seconds during current key switch cycle. Road exit lighting will then be activated when light switch and key switch are turned off.

The order which the light switch or button and key switch are turned off do not matter.



RXA0147935—UN—13APR15

1. Select **Menu**.
2. Select **Machine Settings** tab.
3. Select **Lighting** icon.
4. Select **Exit Lighting** tab.

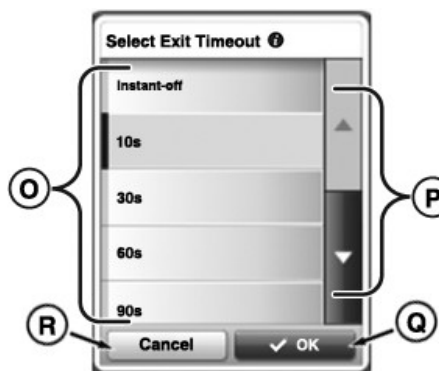


RXA0143008—UN—25JUN14

5. Lights page becomes Exit Lights selection page.

NOTE: Not all possible lights for programmable exit lighting are shown. Lights available are dependent on tractor configuration.

6. Select desired lights and deselect unwanted lights. Use Link/Unlink Toggle (I) if operator wishes to select a set (linked) or only select the right or left light in a set (unlinked) where applicable. Lights D-G and J-M are always linked and will always select both the left and right lights.
7. Exit Light Timeout button (H) shows current time between turning off lights and lights actually going out. Select button to change timeout value.



RXA0137119—UN—05DEC13

- A—Front Side Roof Lights Button
B—Rear Inner Roof Lights Button
C—Rear Side Roof Lights Button

- D—Rear Fender Lights Button
- E—Loader/Road Lights (Low and High Beams) Button
- F—Beltline Lights Button
- G—Implement Lights Button (If Equipped)
- H—Exit Light Timeout Button
- I—Link/Unlink Toggle
- J—Low Beam Road Lights Button
- K—Inner Hood Lights Button
- L—High Beam Road Lights Button
- M—Outer Hood Lights Button
- N—Front Inner Roof Lights Button
- O—Time Selection Interval List
- P—Scroll Bar
- Q—OK Button
- R—Cancel Button

8. When options appear, select desired time interval (O) for when lights automatically turn OFF and select OK button (Q).

TS36762,000024C-19-15DEC16



RXA0126178—UN—29OCT12

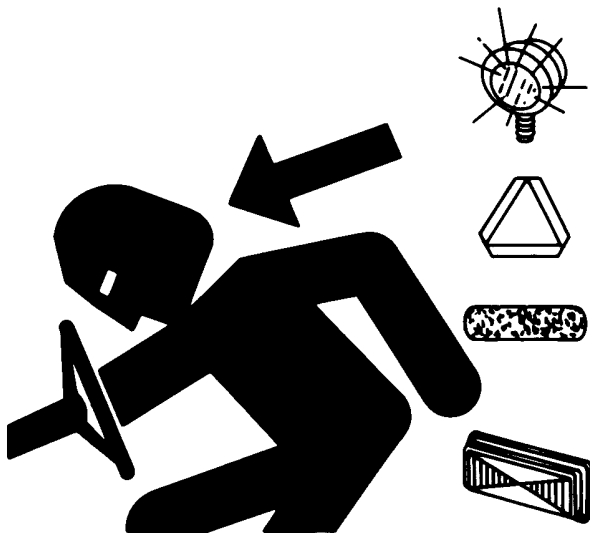
Push turn signal lever (A) up for right turn, or pull down for left turn. Audible chirping sound will start. Return lever to center position after completing turn, chirping sound will stop when lever is returned to position.

High/Low Beam:

Push lever (A) forward to activate high beam road lights; high beam indicator comes on. Pull lever into center position to operate low beam. Pull lever rearward and release to momentarily activate high beams.

TS36762,000024D-19-01SEP17

Operate Turn Signals and High or Low Beam Road Lights



TS951—UN—12APR90

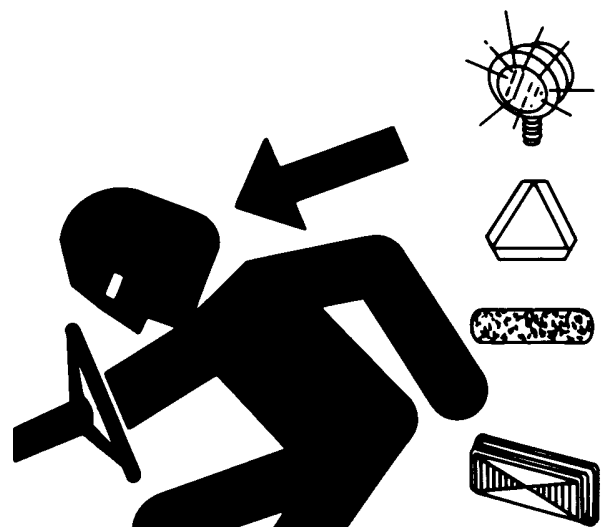
CAUTION: Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from rear, especially in turns, and use turn signal lights.

Use headlights and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean, and in good working order. Replace or repair lighting and marking that has been damaged or lost. See your John Deere dealer.

Dim road lights to low beam for oncoming vehicles.

Turn Signals:

Safety Lights and Devices



TS951—UN—12APR90

CAUTION: Avoid injury or death caused by collision with another vehicle, always operate flashing lights when traveling on highway or public roads, except where prohibited by law.

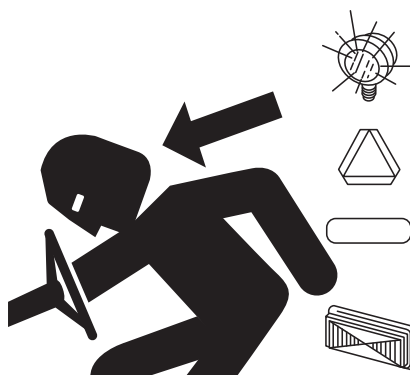
Always use road lights and transport warning lights when operating tractor on road or highway day or night. Extremity Transport Lights alert other vehicles of your extended width. Use flashing warning lights and turn signals day and night. Follow local laws and regulations for equipment lighting and marking.

While operating tractor on public roadways or highways, day or night:

- Turn on flashing warning lights, except where prohibited by law.
- Turn on headlights by selecting the Road Lights Position of the Light Selector Knob..
- Dim headlights for oncoming vehicles.
- Frequently check for traffic approaching from rear.
- Always use turn signals when turning.
- DO NOT use the Field Light Position of the Light Selector Knob. Extremely bright lights may blind or confuse other drivers.
- Make sure Slow Moving Vehicle (SMV) emblem is installed and visible.
- Make sure all lighting and marking devices are functional and clean.
- Comply with all traffic regulations.
- Promptly replace or repair damaged or lost lighting devices. Implement lighting kit is available from your John Deere dealer.

TS36762,000024E-19-06SEP17

Hazard Lights and Extremity Warning Lights



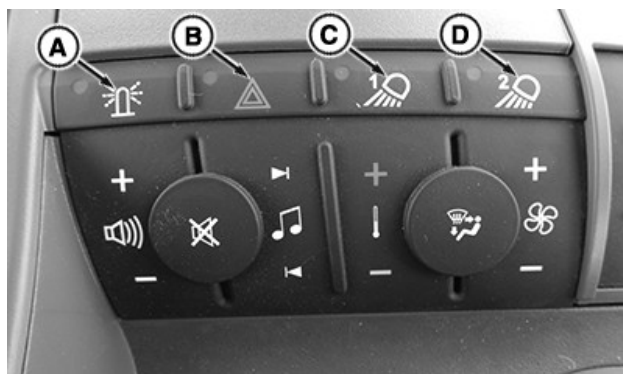
RXA0086584—UN—09FEB06

CAUTION: To prevent possible personal injury, always operate flashing lights when traveling on highway or public roads, except where prohibited by law.

Extremity Warning lights are needed when tractor width exceeds 3.7 m (12 ft). Always use road lights and transport warning lights when operating tractor on road or highway day or night. Extremity Warning lights alert other vehicles of your extended width. Use flashing warning lights and turn signals day and night. Follow local laws and regulations for equipment lighting and marking.

NOTE: Depending on region and installed equipment, amber hazard lights may not all be available as indicator lights when Hazard Switch is activated.

CommandARM™ Light Buttons



RXA0152426—UN—14JUN16

NOTE: Field Lights must be adjusted using the Generation 4 CommandCenter™ display.

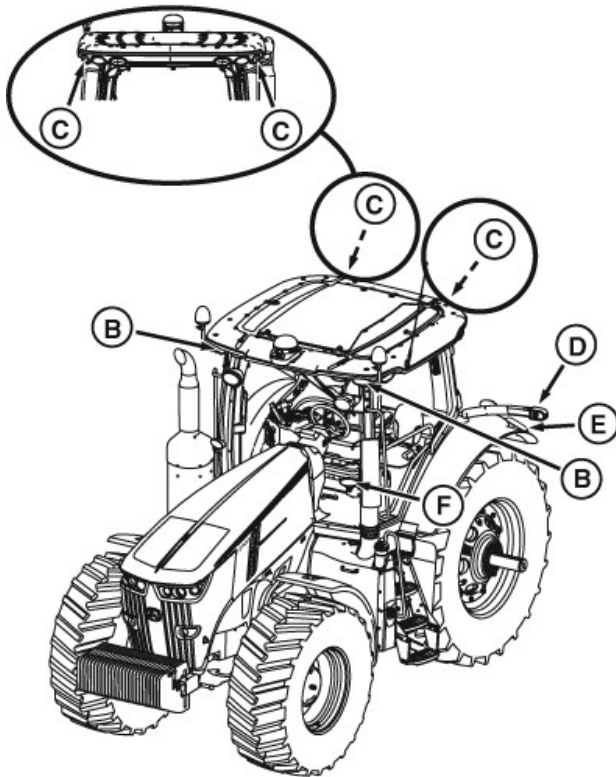
Control beacon lights (A), hazard lights (B), and field lights (C or D) from the CommandARM™ rather than from display screens. When lights are on, an appropriate indicator is illuminated.

TS36762,000024F-19-22NOV16

CommandCenter is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company



RXA0156107—UN—09DEC16



RXA0131296—UN—10APR13

- A—Hazard Light Button
- B—Front Outer Roof Indicator Lights
- C—Rear Outer Roof Indicator Lights
- D—Extremity Warning Lights
- E—Rear Fender Indicator Lights (Equipped With Amber Lens)
- F—Beltline Indicator Lights

Push Hazard Light button (A) to activate flashing amber hazard lights (B, C, D, E and F).

IMPORTANT: To avoid damage, Extremity Warning lights may be retracted when parking tractor in storage building.

Extremity Warning lights operate only when Hazard Light button is on.

Adjust Extremity Warning Lights no more than 400 mm (16 in) from widest point of tractor.

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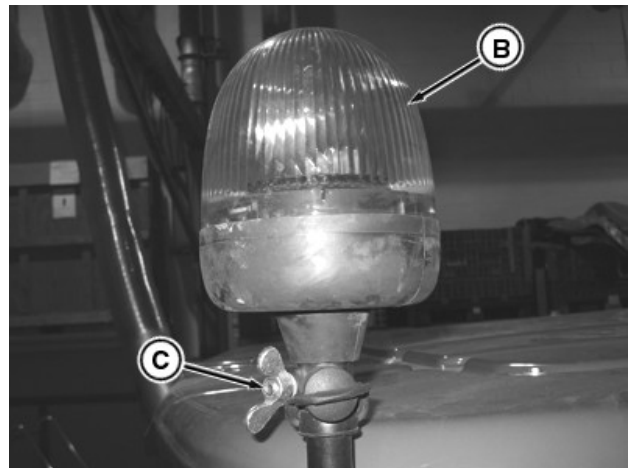
Rotary Beacon Light

NOTE: If Rotary Beacon light is not installed and Rotary Beacon switch is activated, a Rotary Beacon Diagnostic Trouble Code (DTC) will be generated.



RXA0156108—UN—09DEC16

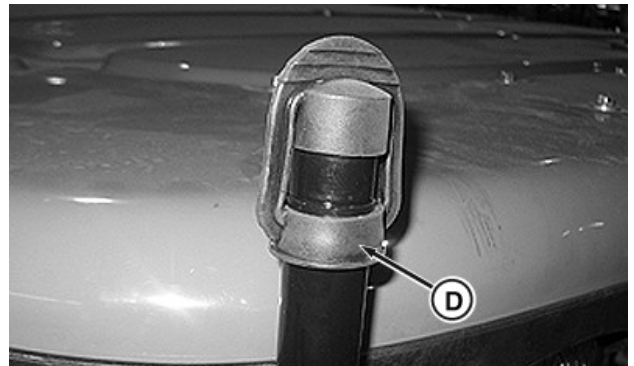
Push Rotary Beacon switch (A) to activate Rotary Beacon light.



RXA0109218—UN—29JUL10

When not used for extended periods of time, remove and safely store Rotary Beacon light (B):

1. Loosen nut (C) and remove light assembly.



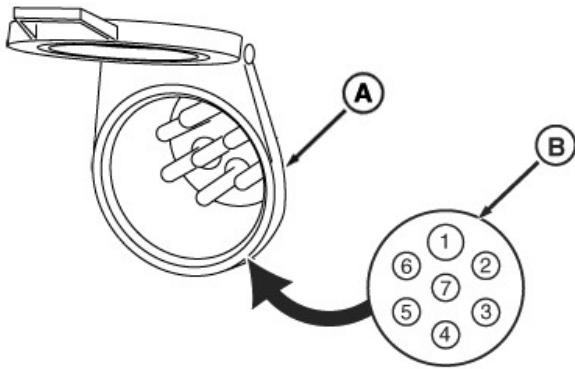
RXA0100494—UN—11FEB09

2. Install rubber protective cap (D) on connector.

TS36762,0000251-19-12DEC16

7-Pin Outlet

CAUTION: Avoid accidents. Always use auxiliary light on towed implement when tractor rear signals and other lights are obscured.



RXA0126196—UN—05JUN12

Rear-mounted 7-pin outlet (A) is used to connect lights, turn signals and other remote trailer or implement electrical equipment to tractor electrical system. Chart and image identify connector pin numbers and circuits associated with them. Matching 7-pin plug is available through your John Deere dealer.

Terminal Numbers (B)	Function	
	Rear Connection	Front Connection
1	Ground	
2	Flood (Implement Lights)	
3	Left Turn Signal	
4	Brake Lights	Not Used
5	Right Turn Signal	
6	Tail Light	
7	Accessory	Not Used

Contact your John Deere dealer for information regarding methods to connect tractor light switch with 7-pin connector accessory wires.

KT81203,000058F-19-28JUN17

Accessories

Pull-Down Sunshade



RXA0133298—UN—25JUN13

Pull-down sunshade (A) reduces glare when operating in bright sunlight. The pull-down sunshade allows operator flexibility in amount of window coverage.

TS36762,0000253-19-05SEP17

Install Business Band or Citizens Band (CB) Radio and Antenna



RXA0119185—UN—27JUL11

Antenna Coaxial Cable And Business Band Radio Power/Ground Plug Coiled Behind Right Rear Corner Post Cover

B—Antenna Coaxial Cable

C—Business Band Radio Power/Ground Cable

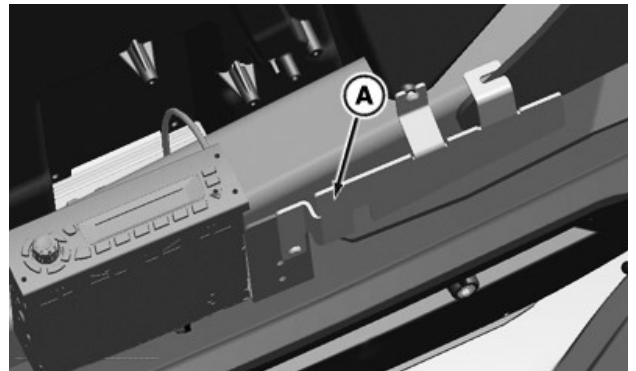
CAUTION: Never mount business band radio antenna to rear of cab. Never route antenna cable (B) near harness for electrical system controllers or operator controls. Failure to follow these precautions could expose operator to radio frequency energy levels higher than recommended by American National Standards Institute (ANSI) and/or could cause undesirable performance of electronically controlled systems.

Avoid personal injury. Disconnect battery ground cable before any electrical repair.

IMPORTANT: Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light goes out.

Battery disconnect switch without indicator light: Engine not equipped with SCR system. No waiting period is required before turning off switch.

See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.



RXA0119184—UN—27JUL11

Business Band Radio Bracket—Headliner Removed To Show Location

NOTE: Only tractors equipped with Business Band Radio Mounting and Wiring Option from factory have business band bracket (A) behind headliner and antenna cables behind right rear corner post cover. See your John Deere dealer for Business Band Radio and Antenna Installation Instructions.

Custom Installation

Custom CB or Business Band radio installation requires special tools and skills to tune antenna for lowest possible VSWR (Voltage Standing Wave Ratio). Qualified professional should be employed or consulted before attempting installation. Contact your John Deere dealer for recommendations. Following specifications are useful to installer.

Specifications for Factory Installed Radio Installation Kit

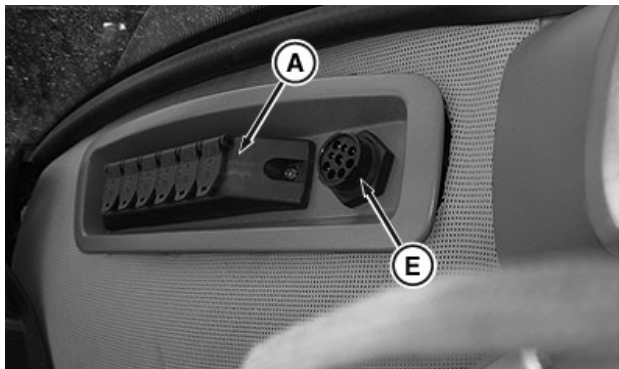
- Roof Antenna Mount: NMO type.
- Cable Specifications: Cable length is 3.6 m (11.8 ft) from antenna mount to PL-259 radio connector. RG-58/U cable has 50 ohms intrinsic impedance.
- Roof Ground Plane: Grounded large antenna counterpoise foil under green cab roof allows installation of either 1/4 or 1/2 wave antenna.
- CB Antenna: Normal CB antenna can be attached to factory installed NMO antenna mount through use of

an appropriate adapter. Special CB antenna already equipped with NMO base may alternatively be used.

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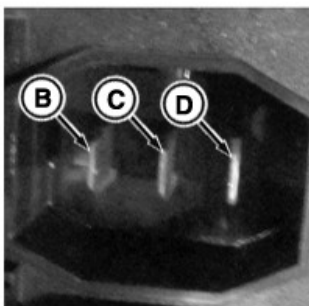
Auxiliary Power Strip Use

IMPORTANT: Power strip is not surge suppressor.
Electrical equipment with program memory requires protection from damage of electrical surges and spikes.



RXA0099078—UN—25FEB09

A—Auxiliary Power Strip
E—Diagnostic Connector (DEALER USE ONLY)



RXA0131998—UN—06MAY13

B—Battery (Unswitched)
C—Ground
D—Battery (Switched)

Power strip (A) provides six 12 volt grounded power outlets for use connecting auxiliary equipment. This power is 30 amp switched and 30 amp unswitched. Outlets are protected by a 30 amp fuse.

Various adapters are available from your John Deere dealer.

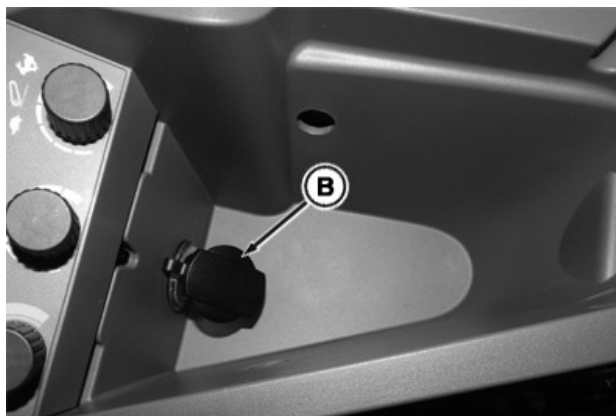
Adapters plug directly into power strip. To change to switched power on adapter, remove small tab at end of slot on plug and rotate plug 180°.

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Accessory Electrical Outlet Use

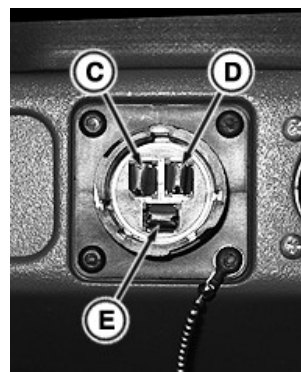


RXA0159796—UN—13JUN17



RXA0141390—UN—02MAY14

12 volt accessory outlets (A) located on right-hand console or outlet (B) in storage box are used when connecting auxiliary equipment.



RXA0141391—UN—02MAY14

Pin (D) provides battery power (hot), pin (C) provides (key) switched power and pin (E) provides ground. For additional information on connections, see appropriate auxiliary equipment installation instructions or your John Deere dealer.

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Connect Compatible Electronic Equipment



RXA0134922—UN—06SEP13

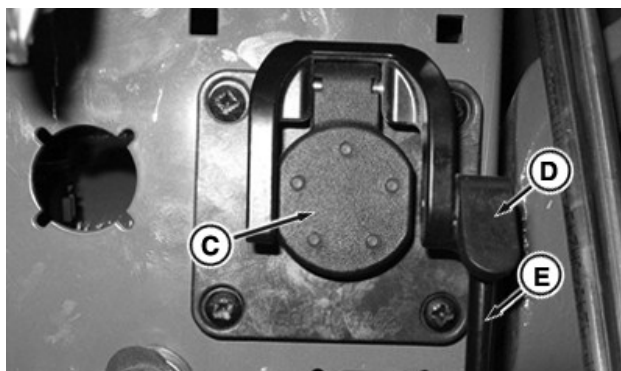


RXA0147008—UN—10MAR15

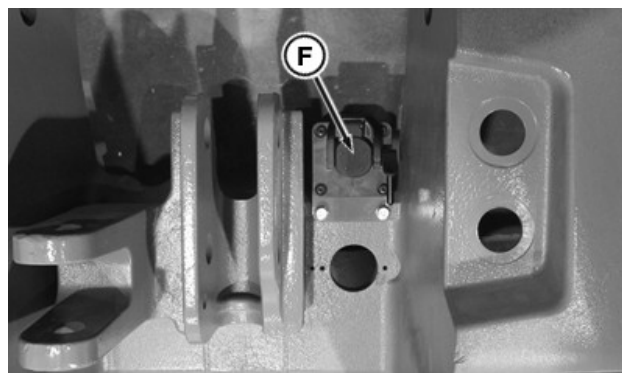
Tractor is ISOBUS ready and offer connections for implements conforming to both ISO 11786 and 11783 (G) standards. ISO 11786 connector (A) provides radar or GPS speed signal., see Configure Tractor for GPS or Radar in this Operator's Manual section.

GreenStar™ corner post connector (B) allows any GreenStar™ display connection. See your John Deere dealer for compatible adapter harnesses.

IMPORTANT: Use ISO 11783 connector only with ISO 11783 compliant components. Other uses could damage tractor electronic components.



RXA0134921—UN—07MAR14



RXA0134924—UN—14AUG13

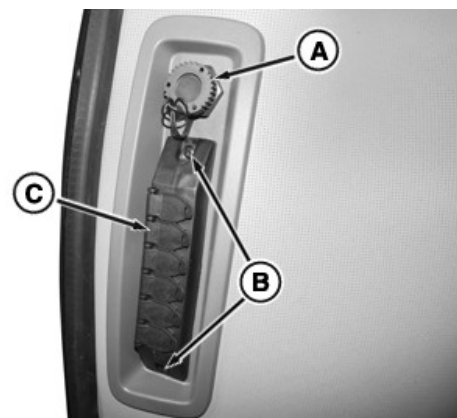
ISOBUS ready preparation includes ISO 11783 connector, on right-hand console, and implement connector (F or C) on tractor front (if equipped) or rear, facilitating tractor/implement communications.

Lift handle (E) to open cover and connect implement harness. Lift the release (D) when disconnecting implement harness from connector (C) on rear of tractor.

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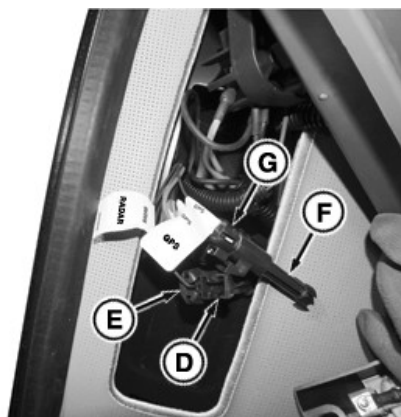
Configure Tractor for GPS or Radar

Tractor comes from factory configured to use radar as ground speed input. To reconfigure tractor to use GPS as the true ground speed input:



RXA0140811—UN—31MAR14

1. Remove diagnostic connector cap (A) and retaining nut.
2. Remove retaining screws (B) and remove auxiliary power strip (C) (if equipped) with cover plate.
3. Inside right-hand console locate one wire lead marked radar and one marked GPS.



RXA0140812—UN—31MAR14



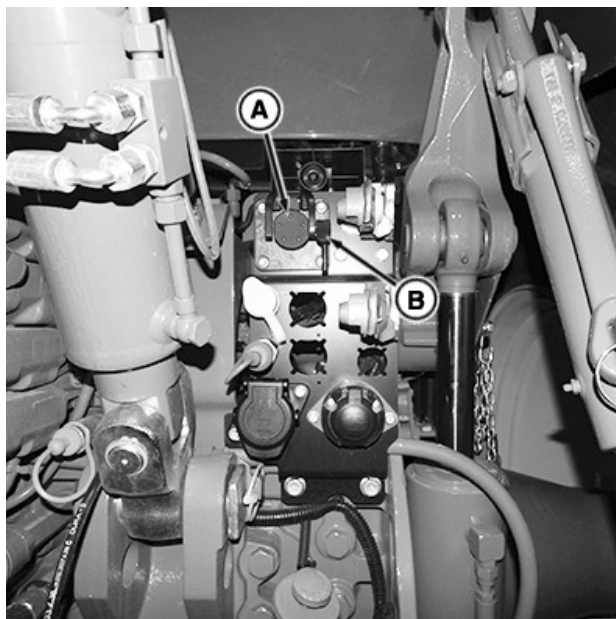
RXA0140813—UN—31MAR14

4. On tractors equipped with radar, disconnect tractor harness connector (D) from radar connector (E). Then, proceed to step 6.
5. On tractors not equipped with radar, locate wire lead marked GPS and proceed to step 6.
6. Remove dust cap (F) from GPS connector (G).
7. Attach GPS connector to tractor harness connector.
8. Install (or leave installed) dust cap on radar connector.
9. Reinstall auxiliary power strip with cover plate.
10. Reinstall diagnostic connector through cover, install cap tether and tighten nut.
11. Reinstall power strip cover retaining screws and attach diagnostic connector cap.

To connect from GPS to radar input, disconnect GPS connector and reconnect radar connector. To perform radar calibration, see Maintenance & Calibrations in CommandCenter™ section of this Operator's Manual.

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Implement Connector

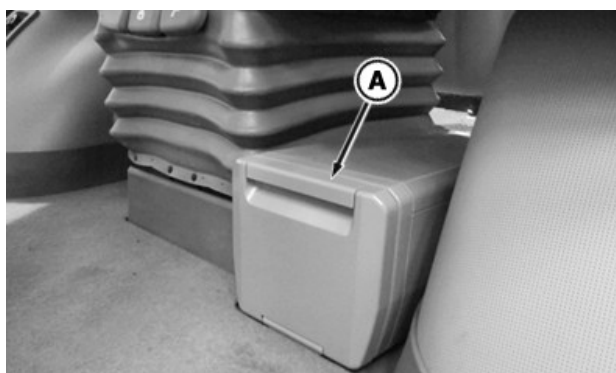


RXA0156759—UN—18JAN17

1. Pull connector latch (B) upwards to unlock implement connector.
2. Open implement connector cover (A).
3. Insert implement harness.
4. Push connector latch downwards to lock implement connector.

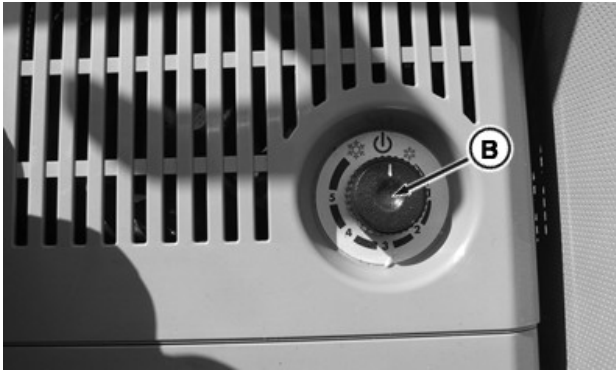
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Refrigerator or Storage Space



RXA0134926—UN—15AUG13

Refrigerator (A) only works when key switch is in RUN or accessory position.



RXA0134923—UN—14AUG13

Adjust refrigerator temperature with control knob (B). Settings are from off to 5, with 5 being the coldest temperature possible.

If refrigerator is not installed, a covered storage space is available.

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HVAC

Climate Controls

For more information, see CommandARM™ Climate, Radio and Lighting Controls in CommandARM™ Controls section of the Operator's Manual.

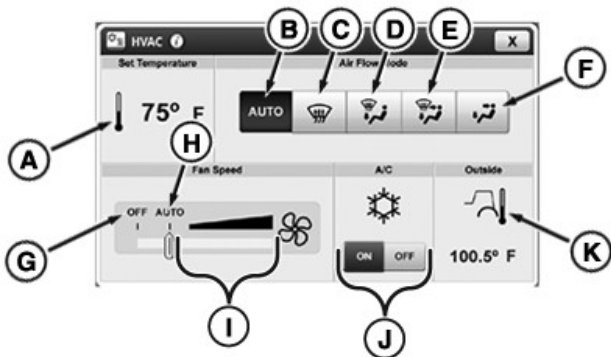
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HVAC Settings—Generation 4 CommandCenter™

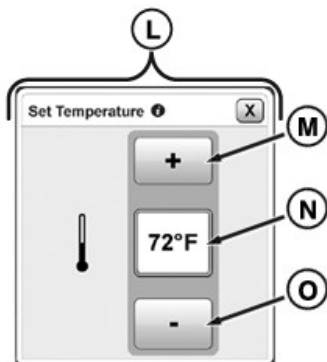


RXA0133716—UN—16JUL13

To access the main page, use HVAC Shortcut Button on Navigation Bar:



RXA0133683—UN—19JUL13



RXA0133684—UN—19JUL13

- A—Set Temperature Module:** Select to access Set Temperature page (L).
- B—Auto Air Flow Toggle:** Select for air flow to be automatically adjusted.
- C—Defrost Toggle:** Select to activate defrost.
- D—Defrost and Floor Toggle:** Select to activate defrost and floor vents.
- E—Defrost, Floor, and Cab Toggle:** Select to activate defrost, floor, and cab vents.
- F—Cab and Floor Toggle:** Select to activate floor and cab vents.

G—Fan OFF: Move slide bar to OFF position to turn fan off.

H—Fan AUTO: Adjust slide bar to AUTO position to have fan speed automatically adjust to maintain set temperature.

I—Fan Increment Bar: Use to adjust fan speed. As slide moves right, fan speed increases. As slide moves left, fan speed decreases.

IMPORTANT: If system is not cooling properly, turn air conditioning switch off to avoid possible compressor damage.

J—A/C Toggle: Use to turn A/C ON or OFF.

K—Outside Temperature Module: Displays the temperature outside of the cab.

L—Set Temperature Page: Page used to adjust cab temperature.

M—Increase Button: Select to increase temperature in cab.

N—Display Temperature Box: Displays the temperature setting.

O—Decrease Button: Select to decrease temperature in cab.

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Performance Ballasting

Ballasting Information and Guidelines for Tractors with Single Tires

Basic Ballasting Definitions

Ballast is mass added to tractor chassis and/or wheels to:

- Increase total weight and/or
- Influence weight distribution between front axle and rear axle (static balance). Static means that front and rear axle loads are determined when tractor is parked.

Weight split is the static weight distribution between front and rear axles. It is expressed as percentages of total tractor static weight supported by front and rear axles. For example, if front axle supports 40% of total static tractor weight, tractor has a 40/60 weight split. Percentage of front axle weight is always stated first in this form.

A properly ballasted tractor for a given type of implement (towed, integral, or semi-integral) has both correct total weight and static balance for that implement type.

Major Considerations

Required ballast amount and mounting location depend on type of implement being used and operating speed.

Ballasting is required to:

- Assure front axle carries sufficient weight for steering security and stability with field draft loads as well as transport in field and on road.
- Provide sufficient traction to efficiently pull high draft loads.
- Provide proper fore-aft balance to minimize occurrence of power hop in MFWD tractors.
- Assure rear axle carries sufficient weight for traction, braking, and stability when a loader or other front implement is attached to front of tractor.

When changing from one implement or attachment to another it may be necessary to reconfigure ballast on tractor.

TS36762,0000259-19-22NOV16

General Guidelines for Tractor Weight Based on PTO Power

IMPORTANT: Do not exceed maximum tractor ballast:

- 7210R, 7230R, 7250R, 7270R, and 7290R - 88 kg/PTO kW (145 lb/PTO hp)
- 7310R - 82 kg/PTO kW (135 lb/PTO hp)

To extend power train life, tractor should never be operated with continuous full-power loads below 6.6 km/h (4.1 mph). With any transmission, ground speed may drop briefly below that level in hard pull situations, but must recover to higher levels during normal operations. This applies to tractors with all types of transmissions. For tractors equipped with IVT™/AutoPowr™ transmission operating in automatic mode, engine will not labor in high draft situations, but minimum ground speed guideline must still be followed.

NOTE: Use of radar to continually monitor wheel slip is recommended. Checking wheel slip manually is possible but will only show slip in area of field where check is performed.

Total tractor weight needed to efficiently deliver power through wheels to ground for field draft applications depends on travel speed. Table shows recommended weight per PTO power rating for three draft speed ranges.

Wheel slip should normally be in the range of 8-12 percent for optimum power delivery efficiency at these field speeds. Wheel slip may briefly rise above this range when tractor encounters a higher draft area in field, but should not remain there continuously. Add more weight to drive wheels if slip is excessive. If there is less than minimum slip percent, ballast should be removed, unless needed for stability.

Recommended Travel Speeds			
Implement Draft	Ground Speed km/h (mph)	Model	PTO Power kg/PTO kW (lb/PTO hp)
Light	8.7 (5.4) and faster	All	73 (120)
Medium	8.7—7.2 (5.4—4.5)		79 (130)
Heavy	7.2 (4.5) and slower	All (Except 7310R)	88 (145)
		7310R (Only)	82 (135)

TS36762,000025A-19-25JUL18

General Weight Split Guidelines

CAUTION: Do not exceed front tire carrying capacities when using high percentages of front weight. See Tire Load Index in Wheels and Tires - General Information section of this Operator's Manual.

As front weight and tread width increase, steering capacity of tractor is reduced.

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

Weight split requirements are based on type of implement or attachment being used. A primary consideration is to maintain sufficient weight on front and rear axles to provide stability and steering security under both field and transport conditions. Other factors as indicated in following tables must also be considered.

Implement Type	MFWD/TLS™
Towed	40/60
Semi-Integral	40/60
Integral	40/60 ^a

^aFront weight requirements are determined by weight of hitch-mounted implements. Add enough front weights to maintain steering control. See Implement Codes in this section of this Operator's Manual.

In all cases percentage on front axle must be increased if needed for steering security and stability.

MFWD: No more than 40% on front axle. This is required for power hop control. See Controlling Power Hop-MFWD Tractors Without TLS™ Plus Front Axle in this section of this Operator's Manual.

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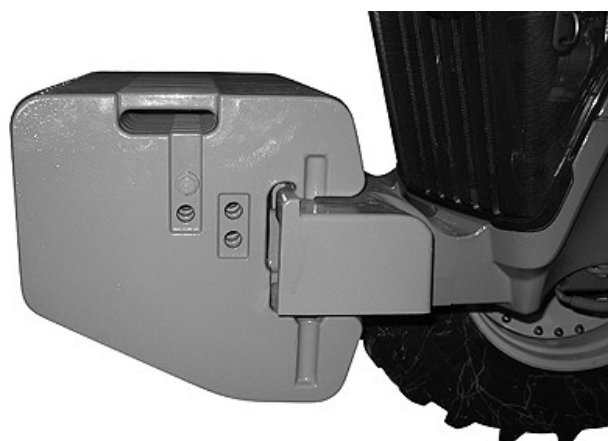
Ballast Options

Ballast is available in several forms and is utilized differently:

- Front suitcase or block weights. Front-mounted weight effectively adds greater weight to front axle and reduce weight to rear axle due to leveraging.
- Rear wheel weights. Rear-mounted weight increases traction on rear axle. It can be used to counterbalance the effect of adding additional front axle weight.
- Liquid-filled tires can be used as ballast, however, should be avoided. See Liquid Ballast Use in this section of this Operator's Manual.

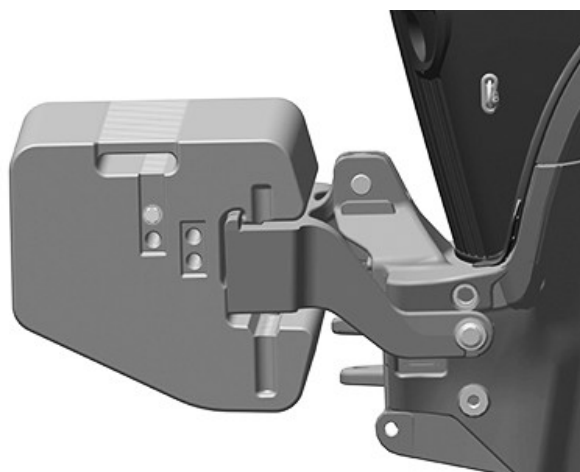
Front Suitcase Weights

Front suitcase weights are mounted in one of two ways:



RXA0151920—UN—21APR16

- Standard front weight support



RXA0151909—UN—21APR16

- Front hitch/PTO-ready option with standard front weight support

Front suitcase weights and standard front weight support are not compatible with a front hitch or a front loader and must be removed before front hitch is installed.

Large Block Weights

Large block weights are installed only on standard (non-ground-engaging) hitch option.

Rear Wheel Weights

Rear wheel weights must be installed with appropriate starter weights. Certain configurations are not available. See Rear Wheels, Tires, and Treads Section in this Operator's Manual.

Ballast			Axle Weight Adjustment kg (lb)	
Location	Type		Front	Rear
Front	Weight Support	Standard	124 (273)	+166 (+366)
		Hitch-Ready	365 (805)	-42 (-93)
	Suitcase		+500 (+1102)	-135 (-298)
			+72 (+159)	-22 (-49)

TLS is a trademark of Deere & Company

	Hitch	Ground-Engaging	544 (1199)	+492 (+1085)	-80 (-176)
		Carrier	479 (1056)	+388 (+855)	-90 (-198)
	PTO		187 (412)	+225 (+496)	-38 (-84)
	Large Block Weights		900 (1984)	+1296 (+2857)	-396 (-873)
			1150 (2535)	+1656 (+3651)	-506 (-1116)
			1500 (3307)	+2190 (+4828)	-690 (-1521)
			1800 (3968)	+2628 (+5794)	-828 (-1825)
Rear	Wheel Weights		70 (154)	—	+70 (+154)
			625 (1378)	—	+625 (+1378)
			900 (1984)	—	+900 (+1984)
			72 (159)	—	+72 (+159)
			205 (452)	—	+205 (+452)

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Ballast Suggestions for Specific Types of Implements used with MFWD Tractors

Recommendations offered as starting points when ballasting for operations with several common types of implements. Some deviations may be needed for specific circumstances.

Towed Draft Implements

Towed draft implements such as disks, chisel plows and field cultivators that place small vertical tongue loads on tractor drawbar.

Without Front Suspension

Model	Ballast Location and Type	
	Front Suitcase Quantity	Rear Wheel Weight kg (lb)
7210R	—	—
7230R / 7250R	0 ^a	1 pair 205 (452)
7270R	6	1 pair each 72 (159) 625 (1378)
7290R / 7310R	12	1 pair each 72 (159) 205 (452) 625 (1378)

^aWith Weight Support

Towed Trailers, Slurry Tanks and Fertilizer Tanks

NOTE: It may be practical to use less front weight with smaller trailers, but steering security and stability must be assured.

In all cases percentage on front axle must be increased if needed for steering security and stability.

Trailers that place a high vertical tongue load on tractor.

Model	Ballast Location and Type	
	Front	Rear Wheel Weight
All	20—24 Suitcase Weights or 900 kg (1984 lb) Block	None required ^a

^aIf rear weights are already installed, it is not necessary to remove them.

Integral and Semi-Integral Implements

Model	Ballast Location and Type	
	Front	Rear Wheel Weight
All	20 Suitcase Weights or 900 kg (1984 lb) Block	—

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Calculate Tractor Ballast Package

⚠ CAUTION: Avoid physical injury or equipment damage due to improper ballast or tire pressure. **Never:**

- Operate tractor if ballast package causes instability or unsafe conditions.
- Exceed maximum axle load capacity.
- Exceed maximum rated tire pressure imprinted on tire sidewall.

Tractor efficiency and service life are increased when:

- tractor is correctly ballasted for work task,
- weight is split appropriately between the front and rear of the tractor, and
- tires are inflated correctly.

Examples show correct method of integrating data from tables and information from this Operator's Manual

section to determine best possible working ballast for individual tractors and operations.

Example 1

Step 1: Tractor Configuration

1A—Show tractor options.

Model	7210R US EPA FT4/EU Stage V
Axle	1150 MFWD
Transmission	e23™
Fuel Fill	Full
PTO hp	170

e23 is a trademark of Deere & Company

1B—Show tire options.

Axle	Front	Rear
Tires	420/90R30	480/80R46

1C—List ballast options.

Axle		Front	Rear
Ballast Weights	Weight Support and Standard Hitch	Yes	—
	Quik-Tatch™	—	—
	Wheel	—	—

Quik-Tatch is a trademark of Deere & Company

Step 2: Calculate Total Tractor Weight

Find and show:

- Unballasted tractor weight. See Unballasted Tractor Weight in this section of this Operator's manual.
- Ballast weights. See Ballast Options in this section of this Operator's Manual.
- Add or subtract front and rear axle weights to find adjusted tractor weight for each axle.
- Add front and rear adjusted tractor weights to calculate total tractor weight.

Axle		Front kg (lb)	Rear kg (lb)
Unballasted Tractor Weight		3609 (7956)	6900 (15212)
Ballast Weights	Weight Support and Standard Hitch	+769 (+1696)	-166 (-366)
	Quik-Tatch™	—	—
	Wheel	—	—
Tractor Weight	Adjusted	4378 (9652) ^a	6734 (14846) ^a
	Total	11112 (24498)	

Quik-Tatch is a trademark of Deere & Company

^aWeigh axle for actual load.

Step 3: Results

3A—Calculate weight split.

- Front axle: divide front axle weight by total tractor weight to find weight split, then multiply result by 100.
- Rear axle: Subtract front axle result from 100.

Ideal weight split is 40% front to 60% rear. See General Weight Split Guidelines in this section of this Operator's Manual.

Axle	Front	Rear
Weight Split %	39	61

3B—Calculate power to weight ratio.

- Divide total tractor weight by PTO hp to find weight to power ratio. PTO hp is listed in Step 1A.

PTO Power kg/kW (lb/hp)	64 (144)
-------------------------	----------

3C—Find recommended implement draft and travel speed.

- Find recommended implement draft and travel speed with PTO power to weight ratio as calculated in Step 3B. See General Guidelines for Tractor Weight Based on PTO Power in this section of this Operator's Manual.

Recommended	Implement Draft	Medium
	Travel Speed km/h (mph)	8.7—7.2 (5.4—4.5)

3D—Determine recommended tire inflation pressures.

- For implements that place light load on drawbar (such as planter or air seeder) use front and rear tire sizes and axle weights to find required inflation pressures. See Recommended Pressure charts in Front and Rear Wheels, Tires, and Treads sections of this Operator's Manual.
- For implements that generate high weight transfer add approximately 50 kPa (0.5 bar, 7 psi) to rear tires, but never exceed maximum rated pressure as imprinted on sidewall. With aid of an assistant, visually check tire deflection when tractor is pulling hard in field to confirm that tires are not under-inflated with these pressures.
- For trailers, tankers, or any heavy implement, rear inflation pressures must be increased substantially to support extra weight at transport speeds. Exact amount depends on load. It is typically more than double the base amount. With implement raised, weigh rear axle of loaded tractor on a platform scale, then find the required inflation pressures. Never exceed tire rating for maximum load or inflation pressure.

Example 2**Step 1: Tractor Configuration****1A—Show tractor options.**

Model	7290R US EPA FT4/EU Stage V
Axle	Triple-Link Suspension (TLS) TM
Transmission	IVT TM
Fuel Fill	Full
PTO hp	242

Triple-Link Suspension (TLS) is a trademark of Deere & Company
IVT is a trademark of Deere & Company

1B—Show tire options.

Axle	Front	Rear
Tires	420/85R34	480/80R50 (Dual)

1C—List ballast options.

Axle		Front	Rear
Ballast Weights	Weight Support	Yes	—
	Quik-Tatch TM	16	
	Wheel	—	72 (159) 1 pair 625 (1378) 1 pair

Quik-Tatch is a trademark of Deere & Company

Step 2: Calculate Total Tractor Weight

Find and show:

- Unballasted tractor weight. See Unballasted Tractor Weight in this section of this Operator's manual.
- Ballast weights. See Ballast Options in this section of this Operator's Manual.
- Add or subtract front and rear axle weights to find adjusted tractor weight for each axle.
- Add front and rear adjusted tractor weights to calculate total tractor weight.

Axle		Front kg (lb)	Rear kg (lb)
Unballasted Tractor Weight		4135 (9116)	7380 (16270)
Ballast Weights	Weight Support	166 (366)	-42 (-93)
	Quik-Tatch TM	991 (2185)	-301 (-664)
	Wheel	—	1394 (3074)
Tractor Weight	Adjusted	5292 (11667) ^a	8431 (18587) ^a
	Total	13723 (30254)	

Quik-Tatch is a trademark of Deere & Company

^aWeigh axle for actual load.

Step 3: Results**3A—Calculate weight split.**

- Front axle: divide front axle weight by total tractor weight to find weight split, then multiply result by 100.
- Rear axle: Subtract front axle result from 100.

Ideal weight split is 40% front to 60% rear. See General Weight Split Guidelines in this section of this Operator's Manual.

Axle	Front	Rear
Weight Split %	39	61

3B—Calculate power to weight ratio.

- Divide total tractor weight by PTO hp to find weight to power ratio. PTO hp is listed in Step 1A.

PTO Power kg/kW (lb/hp)	57 (125)
-------------------------	----------

3C—Find recommended implement draft and travel speed.

- Find recommended implement draft and travel speed with PTO power to weight ratio as calculated in Step 3B. See General Guidelines for Tractor Weight Based on PTO Power in this section of this Operator's Manual.

Recommended	Implement Draft	Medium
	Travel Speed km/h (mph)	8.7—7.2 (5.4—4.5)

3D—Determine recommended tire inflation pressures.

- For implements that place light load on drawbar (such as planter or air seeder) use front and rear tire sizes and axle weights to find required inflation pressures. See Recommended Pressure charts in Front and Rear Wheels, Tires, and Treads sections of this Operator's Manual.
- For implements that generate high weight transfer add approximately 50 kPa (0.5 bar, 7 psi) to rear tires, but never exceed maximum rated pressure as imprinted on sidewall. With aid of an assistant, visually check tire deflection when tractor is pulling hard in field to confirm that tires are not under-inflated with these pressures.
- For trailers, tankers, or any heavy implement, rear inflation pressures must be increased substantially to support extra weight at transport speeds. Exact amount depends on load. It is typically more than double the base amount. With implement raised, weigh rear axle of loaded tractor on a platform scale, then find the required inflation pressures. Never exceed tire rating for maximum load or inflation pressure.

Controlling Power Hop-MFWD Tractors Without TLS™ Plus Front Axle

CAUTION: Avoid physical injury and equipment damage. Never exceed maximum rated tire pressure imprinted on tire sidewall.

Power hop is a condition where tractor exhibits severe bounce and/or pitch motions at field working speeds when pulling a towed implement. It can occur when pulling medium to high draft loads in loose, dry soil on top of a firm base and/or when climbing hills. As a result, tractor cannot maintain pull due to either loss of traction, rough ride or both. Make adjustments only after assuring guidelines for optimum performance with towed implements have been followed. Guidelines:

- No more than 40% of weight on front axle.
- If liquid ballast is used in rear tires, do not exceed 40% fill (4 o'clock valve stem position). See Liquid Ballast Use in this section of this Operator's Manual.
- Set front and rear inflation pressures correctly, based on static axle loads.

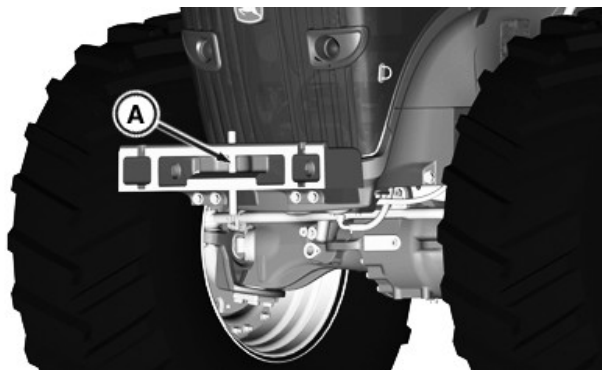
If power hop occurs, perform procedure. Make adjustment described in step, the drive tractor. If power hop still occurs, move to next step. When a step eliminates power hop, begin normal operation.

CAUTION: Avoid physical injury and equipment damage. Never exceed maximum rated tire pressure imprinted on tire sidewall.

1. Increase front inflation pressures by 20.7 kPa (0.2 bar) (3 psi).
2. Increase front inflation pressures in increments of 20.7 kPa 0.2 bar (3 psi). Repeat this step as needed but never exceed maximum rated tire pressure as imprinted on tire sidewall.
3. If maximum rated tire pressure is reached, remove all front ballast weights
4. Install 75% liquid in front tires. Re-inflate front tires to maximum pressure rating for tires.

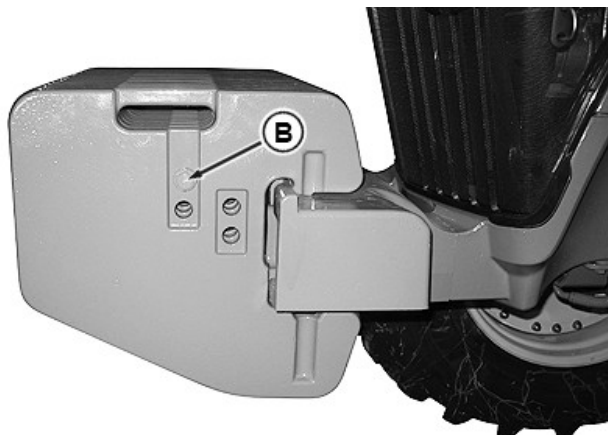
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Install 6 or less Quik-Tatch™ weights



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When required, install Quik-Tatch™ weights, balanced on each side of center pin (A). The first two weights must be installed as a pair.



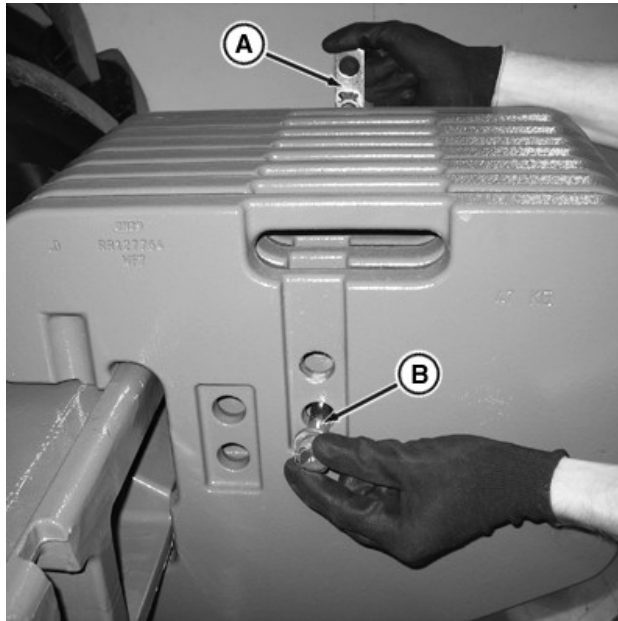
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To hold six weights or fewer in position, insert retaining bolts (B) through holes and secure with a nut. Tighten retaining bolts to 170 N·m (125 lb·ft).

Install Quik-Tatch™ Weights

Up to 24 Quik-Tatch™ weights can be installed on tractors.

Install 8 or more Quik-Tatch™ weights



RXA0113871—UN—09FEB11

When eight or more weights are installed, insert retainers (A) between weights, one with threaded hole upward and the other with threaded hole downward. Tighten retaining bolts (B) to 170 N·m (125 lb·ft).

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Install Rear Wheel Weights

CAUTION: Avoid personal injury. Always use appropriate equipment to install, change, or uninstall weights. If appropriate equipment is not available, have job performed by your John Deere dealer.

IMPORTANT: Avoid equipment damage. Minimum clearance between inside wheel weights and tractor components is 25 mm (1 in).

NOTE: 762 mm (30 in) tread setting limits installation of only one 205 kg (452 lb) weight on inside of wheel.

Use appropriate starter weight with larger wheel weight.

Wheel	Type	Cast	
	Weight Location	Inner	
		Inside	Outside
Weight kg (lb)	625 (1378)	Yes	—
	70 (154) ^a	—	—
	900 (1984)	—	—
	72 (159) ^b	Yes	Yes ^c
	205 (452)	Yes	Yes ^{dc}

^aStarter weight for 900 kg (1984 lb) weight.

^bStarter weight for 205 kg (452 lb) weight.

^cNot compatible with duals.

^dMust be mounted to 72 kg (159 lb) starter weight.

Wheel	Type	Steel		
		Inner		Outer Dual
		Inner ^a	Outside ^b	Outside
Weight kg (lb)	625 (1378)	—	—	—
	70 (154) ^c	—	Yes ^d	Yes ^e
	900 (1984)	—	Yes ^{fdgh}	Yes ^{ige}
	72 (159) ^j	Yes ^k	Yes ^d	Yes ^e
	205 (452)	Yes ^{lk}	Yes ^{md}	Yes ^{le}

^aMini-cast center

^bMini-cast center or flanged axle

^cStarter weight for 900 kg (1984 lb) weight.

^dNot compatible with duals.

^eNot compatible with triples.

^fMust be mounted to 70 kg (154 lb) starter weight.

^gRequires 42-, 46-, or 50-inch diameter rim. Not compatible with other rim sizes.

^hRequires rear tire with load rating greater than 151.

ⁱMust be mounted to 70 kg (159 lb) starter weight.

^jStarter weight for 205 kg (452 lb) weight.

^kNot compatible with flanged axle.

^lMust be mounted to 72 kg (159 lb) starter weight.

^mMust be mounted to 72 kg (159 lb).

To install rear wheel weight:

1. Align weight (A) with wheel.
2. Install and hand-tighten bolts.
3. Tighten bolts to 310 N·m (230 lb·ft) for M16 and 610 N·m (450 lb·ft) for M20 using a star-shaped pattern.
4. Drive tractor approximately 100 m (110 yd).
5. Retighten bolts.
6. Retighten bolts after 3 hours, 10 hours, and every 250 hours of operation thereafter.

To install additional weights, repeat procedure.

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Install Wheel Weights-Flanged Axles

IMPORTANT: Avoid equipment damage. Never use 625 kg (1378 lb) wheel weights on flanged axles.



RXA0113869—UN—09FEB11

A 72 kg (159 lb) starter weight must be attached to wheel disk using three cap screws (A) before 205 kg (452 lb) weights (B) can be attached. Tighten to 610 N·m (450 lb·ft).

One 205 kg (452 lb) weight can be attached to inside of rim.

Two 205 kg (452 lb) weights can be attached to outside of rim.

TS36762,00002B8-19-09NOV17

Add Rear Ballast For Front Loader

CAUTION: Prevent personal injury or death from tractor/loader rollover. Ballast tractor according to table for normal loader operation. Some operations require additional ballast to maximize stability.

Select one of following ballasting options:

Rear Ballast with H480 Loader ^a			
Rear Wheel Configuration		Ballast kg (lb)	
		Axle	Hitch ^b
Singles	Steel	2500 (5510)	—
		750 (1655)	1000 (2205)
	Cast	2310 (5095)	—
		560 (1235)	1000 (2205)
Duals	Steel	1590 (3505)	—
		—	885 (1950)
	Cast	1400 (3085)	—

Rear Ballast with H480 Loader ^a			
Rear Wheel Configuration		Ballast kg (lb)	
		Axle	Hitch ^b
		—	750 (1655)

^aMinimum required with rear tread set at 1800 mm (71 in) or greater. If equipped, include fluid in rear tires in ballast total.

^bBallast must be installed 1200 mm (47.25 in) behind rear axle.

KT81203,000050B-19-29NOV16

Liquid Ballast Use

CAUTION: Avoid physical injury. Installing liquid ballast requires special equipment and training. See your John Deere dealer or a tire service store.

Avoid possible injury and equipment damage due to losing control of tractor. Limit transport speeds to 32 km/h (20 mph) when using liquid ballast.

IMPORTANT: Avoid tire damage. Never fill any tire more than 90% full. Never use alcohol as liquid ballast.

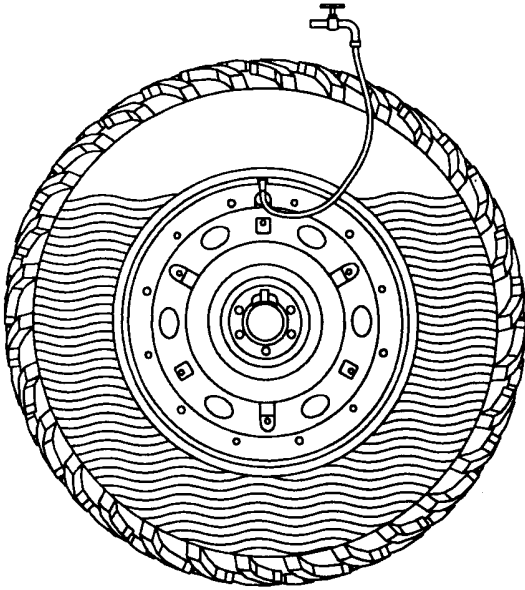
Water or calcium chloride solution can be used to provide economical ballast. Used properly, it will not damage tires, tubes, or rims. However, liquid ballast is not recommended because it results in harsh ride, difficulty in handling, spills if flats occur, and when used in rear tires can result in greater susceptibility to power hop.

A calcium chloride mixture of 420 gram per liter (3.5 lb per gal) of water will not freeze solid above -45 °C (-50 °F). A mixture of 600 gram per liter (5.0 lb per gal) will not freeze solid above -50 °C (-60 °F).

Liquid ballast should be avoided in rear tires since it has a stiffening effect that causes tractor to give a rough ride and generally reduces ability to control power hop. If liquid is used in rear tires, all tire must be filled to same level which should not exceed 40% fill.

Up to 75% fill may be used in MFWD front tires for weight or to provide stiffness to assist in power hop control. *Do this as a last alternative.*

Fill front tires to 40% or 75% full for needed ballast. Fill rear tires to maximum of 40% full. More solution could result in harsh ride. The following charts show how much weight is added in liquid ballast when tire is filled to 40% capacity and 75% capacity.



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Liquid Ballast 75% Full Shown

Liquid Ballast Charts

Rear Tires

Liquid Weight Per Tire		
Tire Size	40% Fill kg (lb)	
	420 g/L (3.5 lb/gal)	600 g/L (5.0 lb/gal)
320/90R54	138 (305)	258 (569)
320/105R54	157 (345)	167 (367)
380/90R50	195 (430)	206 (455)
480/80R46	274 (604)	293 (646)
480/80R50	288 (634)	308 (678)
IF480/80R50		
480/95R50	361 (796)	384 (847)
20.8R42	364 (802)	387 (853)
520/85R42	349 (770)	371 (818)
520/85R46	375 (827)	400 (882)
620/70R42	415 (915)	442 (974)
620/70R46	450 (991)	477 (1058)
650/65R42	401 (884)	429 (947)
650/75R38	460 (1015)	489 (1077)
650/85R38		
IF650/85R38	561 (1237)	597 (1316)
710/70R38	495 (1092)	526 (1159)
710/70R42		
IF710/70R42	558 (1231)	597 (1316)
710/75R42		
IF710/75R42	580 (1279)	618 (1362)
800/70R38		
IF800/70R38	650 (1433)	694 (1529)
IF900/60R42	705 (1552)	752 (1657)

Front Tires

Liquid Weight Per Tire		
Tire Size	40% Fill kg (lb)	
	420 g/L (3.5/gal)	600 g/L (5.0/gal)
320/80R42		
IF320/80R42	94 (207)	100 (220)
320/85R38	92 (203)	97 (214)
380/80R38		
IF380/80R38	138 (304)	148 (326)
380/85R34	129 (284)	139 (307)
420/85R34		
IF420/85R34	175 (386)	187 (413)
420/85R38	205 (453)	219 (483)
420/90R30	178 (391)	190 (420)
16.9R30	180 (398)	189 (420)
480/70R30	183 (404)	197 (434)
480/70R34	203 (448)	216 (477)
540/65R30	197 (436)	210 (462)
540/65R34	225 (496)	239 (527)
540/75R34	264 (582)	281 (619)
600/65R28	243 (537)	258 (569)
600/65R34	281 (620)	300 (661)
600/70R30		
IF600/70R30	307 (676)	326 (718)
620/75R30		
IF620/75R30	332 (732)	354 (780)

Liquid Weight Per Tire		
Tire Size	75% Fill kg (lb)	
	420 g/L (3.5/gal)	600 g/L (5.0/gal)
320/80R42		
IF320/80R42	188 (414)	200 (440)
320/85R38	172 (379)	181 (399)
380/80R38		
IF380/80R38	258 (569)	278 (613)
380/85R34	258 (568)	278 (614)
420/85R34		
IF420/85R34	328 (723)	351 (774)
420/85R38	411 (906)	438 (966)
420/90R30	333 (734)	357 (787)
16.9R30	338 (746)	355 (787)
480/70R30	344 (758)	369 (814)
480/70R34	381 (840)	405 (894)
540/65R30	370 (817)	393 (867)
540/65R34	450 (992)	479 (1056)
540/75R34	529 (1166)	563 (1241)
600/65R28	456 (935)	484 (1067)
600/65R34	563 (1241)	600 (1322)
600/70R30		
IF600/70R30	575 (1268)	611 (1347)

Liquid Weight Per Tire		
Tire Size	75% Fill kg (lb)	
	420 g/L (3.5/gal)	600 g/L (5.0/gal)
620/75R30 IF620/75R30	665 (1466)	708 (1560)

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Implement Codes

CAUTION: Do not attempt to transport an implement without adequate front ballast. Loss of steering control may result.

IMPORTANT: Use a scale to check static weight, especially with heavy implements. Static weight remaining on front wheels with implement lifted should always be at least 50 percent of weight with implement resting on ground.

Determine following:

- MFWD, or TLS™ Plus
- Front tires with or without liquid

Find implement code in John Deere implement operator's manual.

To find implement code for non-John Deere implements, use following procedure:

1. Estimate implement center of gravity (find or estimate fore-and-aft balance point)
2. Measure distance from implement hitch point to center of gravity. Record distance (inches). Add 37 to this figure.
3. Determine implement weight (fully loaded). Record weight.
4. Multiply Step 2 by Step 3. Divide by 1000.
5. Resulting number is implement code.

Use prior information and refer to appropriate chart to determine how many Quik-Tatch™ weights are required.

Implement Code	Quik-Tatch™ Weights Required	
	7210R—7230R MFWD	7250R—7310R TLS™
0—175	—	—
176—204		
205—224		
225—245		
246—266		
267—288		

TLS is a trademark of Deere & Company
Quik-Tatch is a trademark of Deere & Company

Implement Code	Quik-Tatch™ Weights Required	
	7210R—7230R MFWD	7250R—7310R TLS™
289—309	No front weight support	
310—345	0 ^a	
346—351	2	
352—372	4	
373—393	6	No front weight support
394—414	8	0 ^a
415—436	10	2
437—456	12	4
457—472	14	6
473—493	16	8
494—514	18	10
515—535	20	12
536—556	22	14
557—577	24	16
578—591	—	18
592—613		20
614—633		22
634—655		24
Add to implement code when:		
<i>Fluid is added to front tires</i>	60	60
<i>Quick-hitch is removed</i>	15	15

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^aFront weight support only

EC82310,00003FE-19-25JUL18

Ballast Suggestions-Hitch-Mounted Implements

CAUTION: Avoid loss of steering control. Do not attempt to transport an implement without adequate front ballast.

IMPORTANT: Use a scale to check static weight, especially with heavy implements. Static weight remaining on front wheels with implement lifted should always be at least 50% of front axle weight with implement resting on ground.

NOTE: Implements with a center of gravity greater than 610 mm (24 in) will have a higher implement code and will require additional weight on rear axle. (See Implement Codes in this section for more details.)

Determine the following:

1. MFWD or MFWD with TLS™
2. Front tires with or without liquid ballast
3. Implement weight (fully loaded)
4. Record weight.

Approximate Weight kg (lb)		Front Ballast Required (Suitcase Weights)
Implement	Added to Rear Axle by Hitch Load	
1786 (3938)	3015 (6646)	—
1819 (4011)	3070 (6769)	
1914 (4220)	3230 (7122)	
2009 (4429)	3348 (7382)	Support Only
2104 (4638)	3509 (7735)	2
2199 (4847)	3631 (8005)	4
2293 (5056)	3752 (8271)	6
2388 (5265)	3836 (8457)	8
2483 (5475)	3997 (8811)	10
2578 (5684)	4081 (8997)	12
2672 (5893)	4240 (9347)	12

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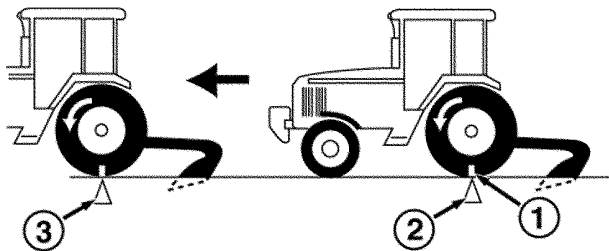
Measure Wheel Slip-Manually

IMPORTANT: To properly measure wheel slip, make sure tire pressures are set for axle loads. See **Recommended Pressures** tables in **Front Wheels, Tires, and Treads** and **Rear Wheels, Tires, and Treads** sections of this Operator's Manual.

NOTE: Automatic wheel slip calibration is more accurate than values obtained manually. Tractors equipped with optional radar unit can automatically determine percentage of wheel slip. Radar must be calibrated correctly.

See *Radar Calibration in CommandCenter™* section of this Operator's Manual.

1. Mark a rear tire.

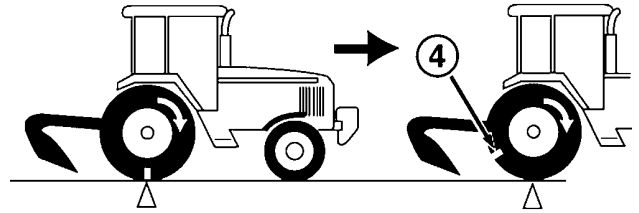


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2. Mark a starting point on ground with tractor moving and implement lowered in ground.
3. Follow tractor and mark ground again where marked tire completes ten full revolutions.
4. Repeat procedure with implement raised at same

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working speed. Count revolutions between same two marks.



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5. Use second count and chart to determine slippage.
6. Ideal slippage is 8—12%. Adjust ballast or load to give correct slippage. available horsepower is greatly reduced when wheel slip drops below minimum percent.

Wheel Slippage Chart		
Wheel Revolutions (Step 4)	% Slip	Action
10	0	Remove Ballast
9-1/2	5	
9	10	Correct Ballast
8-1/2	15	Add Ballast
8	20	
7-1/2	25	
7	30	

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Tire Sidewall Information

Displayed on tire sidewalls is information useful in selecting and working with tires.

520 / 85 R 42 158 A8
(A) (B) (C) (D) (E) (F)

RXA0149658—UN—13AUG15

A—Tire section width —Width in millimeters.
B—Aspect ratio — Ratio of height to tire section width.
C—Construction type —R = Radial, B = Bias.

- D**—Rim diameter –Diameter in inches (not total tire height or group size).
- E**—Load index –Numerical code indicates tire load-carrying capacity. Higher load index number designates higher load capacity. See Tire Load Index chart in this Operator's Manual section.
- F**—Speed rating –Maximum speed tire is designed to travel.

pressure and operating conditions. See Recommended Pressures charts in Wheels, Tires, and Treads section of this Operator's Manual.

- **Safety warnings** - Important information provided by tire manufacturer.

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Additional information that may be displayed on sidewall.

- **Tread pattern** - Indicates tread design and tire usage. Designs offered are all lug- or bar-type tires and are separated into one of three specifications: R1, R1W, or R2.
- **Direction of rotation** - Icon (usually an arrow or group of arrows) indicating tire rotation direction.
- **Manufacturer name** - Name of tire manufacturer.
- **Max load and pressure information** - Maximum load a tire is permitted to carry under specified

Unballasted Tractor Weight Charts (7210R and 7230R)

NOTE: Unballasted weights are calculated by averaging and are figured based on tractor with front Group 42 420/90R30 tires, a full tank of fuel, and no front hitch or PTO. Have your tractor weighed for exact weight splits.

1150 MFWD front axle is only available on 7210R tractors.

Group 47 — 320/90R50

1150/1300 ^a MFWD		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3609 (7956)	3601 (7939)
	Rear	5946 (13109)	5928 (13069)	6726 (14828)	6708 (14789)
	Total	9555 (21065)	9529 (21008)	10335 (22785)	10309 (22727)
Weight Split (%)		38 / 62	37 / 63	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7210R	(100)	(100)	(108)	(108)
	7230R	(92)	(92)	(100)	(100)

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3773 (8318)	3764 (8298)	3773 (8318)	3764 (8298)
	Rear	6008 (13245)	5991 (13208)	6788 (14965)	6771 (14927)
	Total	9781 (21563)	9755 (21506)	10561 (23283)	10535 (23225)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7210R	(103)	(102)	(111)	(111)
	7230R	(94)	(94)	(103)	(103)

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 320/90R54

1150/1300 ^a MFWD		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3609 (7956)	3601 (7939)
	Rear	6076 (13395)	6058 (13356)	7006 (15446)	6988 (15406)

Performance Ballasting

1150/1300 ^a MFWD		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
	Total	9685 (21352)	9659 (21294)	10615 (23402)	10589 (23345)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7210R	(102)	(101)	(111)	(111)
	7230R	(94)	(93)	(103)	(103)

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3773 (8318)	3764 (8298)	3773 (8318)	3764 (8298)
	Rear	6138 (13532)	6121 (13494)	7068 (15582)	7051 (15545)
	Total	9911 (21850)	9885 (21793)	10841 (23900)	10815 (23843)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7210R	(104)	(104)	(114)	(114)
	7230R	(96)	(96)	(106)	(106)

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 380/80R46

1150/1300 ^a MFWD		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3609 (7956)	3601 (7939)
	Rear	5886 (12976)	5865 (12937)	6626 (14744)	6608 (14568)
	Total	9495 (20933)	9469 (20876)	10235 (22564)	10209 (22507)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7210R	(100)	(100)	(107)	(107)
	7230R	(92)	(92)	(99)	(99)

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3773 (8318)	3764 (8298)	3773 (8318)	3764 (8298)
	Rear	5948 (13113)	5931 (13076)	6688 (14744)	6671 (14707)
	Total	9721 (21431)	9695 (21374)	10461 (23063)	10435 (23005)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7210R	(102)	(102)	(110)	(110)
	7230R	(94)	(94)	(101)	(101)

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 380/90R50

1150/1300 ^a MFWD		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3609 (7956)	3601 (7939)
	Rear	6006 (13241)	5988 (13201)	6896 (15203)	6878 (15163)
	Total	9615 (21197)	9589 (21140)	10505 (23160)	10479 (23102)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66

Performance Ballasting

1150/1300 ^a MFWD		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
PTO kg/kw (lb/hp)	7210R	101	101	110	110
	7230R	93	93	101	101

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3773 (7956)	3764 (8298)	3773 (8318)	3764 (8298)
	Rear	6068 (13378)	6051 (13340)	6958 (15340)	6941 (15302)
	Total	9841 (21695)	9815 (21638)	10731 (23658)	10705 (23601)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7210R	103	103	113	112
	7230R	94	94	105	104

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 420/80R46

1150/1300 ^a MFWD		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3609 (7956)	3601 (7939)
	Rear	5936 (13087)	5918 (13047)	6726 (14828)	6708 (14789)
	Total	9545 (21043)	9519 (20986)	10335 (22785)	10309 (22727)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7210R	100	100	108	108
	7230R	92	92	100	100

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3773 (8318)	3764 (8298)	3773 (8318)	3764 (8298)
	Rear	5998 (13223)	5981 (13186)	6788 (14965)	6771 (14927)
	Total	9771 (21541)	9745 (21484)	10561 (23283)	10535 (23226)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7210R	103	102	111	111
	7230R	94	93	101	101

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47— 480/80R46

1150/1300 ^a MFWD		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3609 (7956)	3601 (7939)
	Rear	6020 (13272)	6002 (13232)	6900 (15212)	6882 (15172)
	Total	9629 (21228)	9603 (21171)	10509 (23168)	10483 (23111)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7210R	101	101	110	110
	7230R	93	93	101	101

^aFor 1300 MFWD add 75 kg (166 lb)

Performance Ballasting

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3773 (8318)	3764 (8298)	3773 (8318)	3764 (8298)
	Rear	6082 (13408)	6065 (13371)	6962 (15349)	6945 (15311)
	Total	9855 (21727)	9829 (21669)	10735 (23667)	10709 (23609)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7210R	103	103	113	112
	7230R	94	94	103	103

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 520/85R42

1150/1300 ^a MFWD		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3609 (7956)	3601 (7939)
	Rear	6086 (13417)	6068 (13378)	7066 (15578)	7048 (15538)
	Total	9695 (21374)	9669 (21317)	10675 (23534)	10649 (23477)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7210R	102	102	112	112
	7230R	94	93	103	103

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3773 (8318)	3764 (8298)	3773 (8318)	3764 (8298)
	Rear	6148 (13554)	6131 (13517)	7128 (15715)	7111 (15677)
	Total	9921 (21872)	9895 (21815)	10901 (24033)	10875 (23975)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7210R	104	104	114	114
	7230R	95	95	104	104

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 620/70R42

1150/1300 ^a MFWD		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3609 (7956)	3601 (7939)
	Rear	6274 (13832)	6256 (13792)	7420 (16358)	7402 (16319)
	Total	9883 (21788)	9857 (21731)	11029 (24315)	11003 (24257)
Weight Split (%)		35 / 65	35 / 65	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7210R	104	103	116	116
	7230R	95	95	106	106

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3773 (8318)	3764 (8298)	3773 (8318)	3764 (8298)
	Rear	6336 (13968)	6319 (13931)	7482 (16495)	7465 (16457)
	Total	10109 (22287)	10083 (22229)	11255 (24813)	11229 (24756)

Performance Ballasting

TLS™ ^a		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7210R	106 97	106 97	118 108	118 108
	7230R	97	97	108	108

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 650/65R42

		1150/1300 ^a MFWD		TLS™ ^b	
		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3773 (8318)	3764 (8298)
	Rear	6236 (13748)	6218 (13708)	6298 (13885)	6281 (13847)
	Total	9845 (21705)	9819 (21647)	10071 (22203)	10045 (22145)
Weight Split (%)		37 / 63	37 / 63	38 / 62	38 / 62
PTO kg/kw (lb/hp)	7210R	103	103	106	105
	7230R	95	95	97	96

TLS is a trademark of Deere & Company

^aFor 1300 MFWD add 75 kg (166 lb)

^bFor TLS™ with front brakes add 94 kg (207 lb.)

Group 47 — 710/70R38

1150/1300 ^a MFWD		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3609 (7956)	3601 (7939)
	Rear	6314 (13920)	6296 (13880)	7486 (16504)	7468 (16464)
	Total	9923 (21876)	9897 (21819)	11095 (24460)	11069 (24402)
Weight Split (%)		36 / 64	36 / 64	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7210R	104	104	116	116
	7230R	96	96	107	107

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3773 (8318)	3764 (8298)	3773 (8318)	3764 (8298)
	Rear	6376 (14057)	6359 (14019)	7548 (16640)	7531 (16603)
	Total	10149 (22375)	9691 (21317)	11321 (24959)	11295 (24901)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7210R	107	106	119	119
	7230R	97	97	109	108

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 710/70R38HD

1150/1300 ^a MFWD		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3609 (7956)	3601 (7939)	3609 (7956)	3601 (7939)
	Rear	6398 (14105)	6380 (14065)	7654 (16874)	7636 (16834)
	Total	10007 (22061)	6380 (22004)	11263 (24830)	11237 (24773)
Weight Split (%)		36 / 64	36 / 64	32 / 68	32 / 68
PTO kg/kw (lb/hp)	7210R	105	105	118	118
	7230R	97	96	109	108

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3773 (8318)	3764 (8298)	3773 (8318)	3764 (8298)
	Rear	6460 (14242)	6443 (14204)	7716 (17011)	7699 (16973)
	Total	10233 (22560)	10207 (22503)	11489 (25329)	11463 (25272)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7210R	107	107	121	120
	7230R	98	98	110	110

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

NOTE: Unballasted weights are calculated by averaging and are figured based on tractor with front Group 43 320/80R42 tires, a full tank of fuel, and no front hitch or PTO. Weight your tractor to determine specific weight splits.

1150 MFWD front axle is only available on 7210R tractors.

Group 48 — 380/90R54

1150/1300 ^a MFWD		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3765 (8300)	3757 (8283)	3765 (8300)	3757 (8283)
	Rear	6036 (13307)	6018 (13267)	6956 (15335)	6938 (15296)
	Total	9801 (21607)	9775 (21150)	10721 (23635)	10695 (23578)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7210R	103	103	113	112
	7230R	95	94	103	103

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3929 (8662)	3920 (8642)	3929 (8662)	3920 (8642)
	Rear	6098 (13444)	6081 (13406)	7018 (15472)	7001 (15435)
	Total	10027 (22106)	10001 (22048)	10947 (24134)	10921 (24076)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7210R	105	105	115	115

Performance Ballasting

TLS™ ^a		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
	7230R	96	96	105	105

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 480/80R50

1150/1300 ^a MFWD		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3765 (8300)	3757 (8283)	3765 (8300)	3757 (8283)
	Rear	6116 (13483)	6098 (13444)	7026 (15490)	7008 (15450)
	Total	9881 (21783)	9855 (21726)	10791 (23790)	10765 (23733)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7210R	104	103	113	113
	7230R	95	95	104	104

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3929 (8662)	3920 (8642)	3929 (8662)	3920 (8642)
	Rear	6178 (13620)	6161 (13583)	7088 (15626)	7071 (15589)
	Total	10107 (22282)	10081 (22225)	11017 (24288)	10991 (24231)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7210R	106	106	116	115
	7230R	97	97	106	105

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 520/85R46

1150/1300 ^a MFWD		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3765 (8300)	3757 (8263)	3765 (8300)	3757 (8283)
	Rear	6176 (13615)	6158 (13576)	7246 (15975)	7228 (15935)
	Total	9941 (21916)	9915 (21859)	11011 (24275)	10985 (24217)
Weight Split (%)		38 / 62	38 / 62	34 / 64	34 / 64
PTO kg/kw (lb/hp)	7210R	104	104	116	115
	7230R	96	96	106	106

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™ / AutoPowr™	e23™	IVT™ / AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3929 (8662)	3920 (8642)	3929 (8662)	3920 (8642)
	Rear	10167 (22414)	10141 (22357)	11237 (24773)	11211 (24716)
	Total	6238 (13752)	6221 (13715)	7308 (16111)	7291 (16074)
Weight Split (%)		39 / 61	39 / 61	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7210R	107	106	118	118
	7230R	97	97	108	107

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 620/70R46

1150/1300 ^a MFWD		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3765 (8300)	3757 (8283)	3765 (8300)	3757 (8283)
	Rear	6236 (13748)	6218 (13708)	7366 (16239)	7348 (16200)
	Total	10001 (22048)	9975 (21991)	11131 (24539)	11105 (24483)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7210R	105	105	117	117
	7230R	97	96	107	107

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3929 (8662)	3920 (8642)	3929 (8662)	3920 (8642)
	Rear	6298 (13885)	6281 (13847)	7428 (16376)	7411 (16338)
	Total	10227 (22547)	10201 (22489)	11357 (25038)	11331 (24980)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7210R	107	107	119	119
	7230R	98	98	109	109

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 650/85R38

1150/1300 ^a MFWD		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	10101 (22268)	10075 (22211)	11285 (24936)	11285 (24879)
	Rear	6336 (13968)	6318 (13929)	7546 (16636)	7528 (16596)
	Total	3765 (8300)	3757 (8283)	3765 (8300)	3757 (8283)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7210R	106	106	119	118
	7230R	98	97	109	109

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3929 (8662)	3920 (8642)	3929 (8662)	3920 (8642)
	Rear	6398 (14105)	6381 (14068)	7608 (16773)	7591 (16735)
	Total	10327 (22767)	10301 (22710)	11537 (25435)	11511 (25377)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7210R	108	108	121	121
	7230R	99	99	111	110

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — IF650/85R38

		1150/1300 ^a MFWD		TLS TM ^b	
		e23 TM	IVT TM / AutoPowr TM	e23 TM	IVT TM / AutoPowr TM
		Singles - Cast/Steel/Steel		Singles - Cast/Steel/Steel	
Weight kg (lb)	Front	3765 (8300)	3757 (8283)	3929 (8662)	3920 (8642)
	Rear	6395 (14099)	6377 (14059)	6457 (14235)	6440 (14198)
	Total	10160 (22399)	10134 (22342)	10386 (22897)	10360 (22240)
Weight Split (%)		37 / 63	37 / 63	38 / 62	38 / 62
PTO kg/kw (lb/hp)	7210R	107	106	109	109
	7230R	98	98	100	99

TLS is a trademark of Deere & Company

^aFor 1300 MFWD add 75 kg (166 lb)

^bFor TLSTM with front brakes add 94 kg (207 lb)

Group 48 — 710/70R42

1150/1300 ^a MFWD		e23 TM	IVT TM / AutoPowr TM	e23 TM	IVT TM / AutoPowr TM
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3765 (8300)	3757 (8283)	3765 (8300)	3757 (8283)
	Rear	6416 (14145)	6398 (14105)	7744 (17073)	7726 (17033)
	Total	10181 (22445)	10155 (22388)	11509 (25373)	11483 (25316)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7210R	107	107	121	121
	7230R	98	98	111	111

^aFor 1300 MFWD add 75 kg (166 lb)

TLS TM ^a		e23 TM	IVT TM / AutoPowr TM	e23 TM	IVT TM / AutoPowr TM
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3929 (8682)	3920 (8642)	3929 (8662)	3920 (8642)
	Rear	6478 (14282)	6461 (14244)	7806 (17209)	7789 (17172)
	Total	10407 (22944)	10381 (22886)	11735 (25871)	11709 (25814)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7210R	109	109	123	123
	7230R	100	100	112	112

TLS is a trademark of Deere & Company

^aFor TLSTM with front brakes add 94 kg (207 lb)

Group 48 — 710/70R42HD

1150/1300 ^a MFWD		e23 TM	IVT TM / AutoPowr TM	e23 TM	IVT TM / AutoPowr TM
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3765 (8300)	3757 (8283)	3765 (8300)	3757 (8283)
	Rear	6422 (14158)	6404 (14118)	7756 (17099)	7739 (17059)
	Total	10187 (22458)	10161 (22401)	11521 (25399)	11495 (25342)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7210R	107	107	121	121
	7230R	98	98	111	111

^aFor 1300 MFWD add 75 kg (166 lb)

Performance Ballasting

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	Duals - Cast/Steel/Steel
Weight kg (lb)	Front	3929 (8662)	3920 (8642)	3929 (8662)	3920 (8642)
	Rear	6484 (14295)	6467 (14257)	7818 (17236)	7801 (17198)
	Total	10413 (22957)	10387 (22899)	11747 (25898)	11721 (25840)
Weight Split (%)		38 / 62	38 / 62	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7210R	109	109	123	123
	7230R	100	100	113	112

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — IF710/70R42

		1150/1300 ^a MFWD		TLS™ ^b	
		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Singles - Cast/Steel/Steel	
Weight kg (lb)	Front	6458 (14237)	6439 (14196)	6520 (14374)	6502 (14334)
	Rear	10223 (22537)	10196 (22479)	10449 (23036)	10422 (22976)
	Total	3765 (8300)	3757 (8283)	3929 (8662)	3920 (8642)
Weight Split (%)		37 / 63	37 / 63	38 / 62	38 / 62
PTO kg/kw (lb/hp)	7210R	107	107	110	109
	7230R	99	98	100	100

TLS is a trademark of Deere & Company

^aFor 1300 MFWD add 75 kg (166 lb)

^bFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 800/70R38

1150/1300 ^a MFWD		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3765 (8300)	3757 (8283)	3765 (8300)	3757 (8283)
	Rear	6587 (14522)	6569 (14482)	8046 (17738)	8028 (17699)
	Total	10352 (22822)	10326 (22765)	11811 (26038)	11785 (25982)
Weight Split (%)		36 / 64	36 / 64	32 / 68	32 / 68
PTO kg/kw (lb/hp)	7210R	109	108	124	124
	7230R	100	100	114	114

^aFor 1300 MFWD add 75 kg (166 lb)

TLS™ ^a		e23™	IVT™/ AutoPowr™	e23™	IVT™/ AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3929 (8662)	3920 (8642)	3929 (8662)	3920 (8642)
	Rear	6649 (14659)	6623 (14621)	8108 (17875)	8091 (17838)
	Total	10578 (23321)	10552 (23263)	12037 (26537)	12011 (26480)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7210R	111	111	126	126
	7230R	101	101	115	115

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

TS36762,0000260-19-20AUG18

Unballasted Tractor Weight Charts (7250R and 7270R)

NOTE: Group 47 unballasted weights are calculated by averaging and are figured based on tractor with front Group 42 420/90R30 tires, a full tank of fuel, and no front hitch or PTO. Weigh your tractor for exact weight splits.

Group 47 — 320/90R50

1300 MFWD		e23™	IVT™ /AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
	Rear	6149 (13556)	6132 (13519)	6929 (15276)	6912 (15238)
	Total	9891 (21806)	9865 (21749)	10671 (23526)	10645 (23468)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	87	87	94	94
	7270R	81	81	87	87

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

TLS™ ^a		IVT™ /AutoPowr™	IVT™ /AutoPowr™	e23™	IVT™ /AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
	Rear	6165 (13591)	6148 (13554)	6945 (15311)	10796 (15274)
	Total	10042 (22138)	10016 (22081)	10822 (23858)	110796 (23801)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7250R	89	88	95	95
	7270R	82	82	88	88

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 320/90R54

1300 MFWD		e23™	IVT™ /AutoPowr™	e23™	IVT™ /AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
	Rear	6279 (13843)	6262 (13805)	7209 (15893)	7192 (15856)
	Total	10021 (22093)	9995 (22035)	10951 (24143)	10925 (24086)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	88	88	97	96
	7270R	82	82	89	89

TLS™ ^a		e23™	IVT™ /AutoPowr™	e23™	IVT™ /AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
	Rear	6295 (13878)	6278 (13841)	7225 (15928)	7208 (15891)
	Total	10172 (22425)	10146 (22368)	11102 (24475)	11076 (24418)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	90	89	98	98

Performance Ballasting

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
	7270R	83	83	91	90

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 380/80R46

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
	Rear	6089 (13424)	6072 (13386)	6829 (15055)	6812 (15018)
	Total	9831 (21674)	9805 (21616)	10571 (23305)	10545 (23248)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	87	86	93	93
	7270R	80	80	86	86

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
	Rear	6105 (13459)	6088 (13422)	6845 (15091)	6828 (15053)
	Total	9982 (22006)	9956 (21949)	10722 (23638)	10696 (23580)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7250R	88	88	95	94
	7270R	82	81	88	87

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 380/90R50

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
	Rear	6209 (13688)	6192 (13651)	7099 (15651)	7082 (15613)
	Total	9951 (21938)	9925 (21881)	10841 (23901)	10815 (23843)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	88	88	96	95
	7270R	81	81	89	88

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
	Rear	6225 (13724)	6208 (13686)	7115 (15686)	7098 (15648)
	Total	10102 (22271)	10076 (22213)	10992 (24233)	10966 (24175)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	89	89	97	97
	7270R	82	82	90	90

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 420/80R46

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
	Rear	6139 (13534)	6122 (13497)	6929 (15276)	6912 (15238)
	Total	9881 (21784)	9855 (21727)	10671 (23526)	10645 (23468)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	87	87	94	94
	7270R	81	80	87	87

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
	Rear	6155 (13569)	6138 (13532)	6945 (15311)	6928 (15274)
	Total	10032 (22116)	10006 (22059)	10822 (23858)	10796 (23801)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7250R	88	88	95	95
	7270R	82	82	88	88

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 480/80R46

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
	Rear	6223 (13719)	6206 (13682)	7103 (15659)	7086 (15622)
	Total	9965 (21969)	9939 (21912)	10845 (23909)	10819 (23851)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	88	88	96	95
	7270R	81	81	89	88

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
	Rear	6239 (13755)	6222 (13717)	7119 (15695)	7102 (15657)
	Total	10116 (22302)	10090 (22244)	10996 (24242)	10970 (24184)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	89	89	97	97
	7270R	83	82	90	90

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 520/85R42

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
	Rear	6289 (13865)	6272 (13827)	7269 (16025)	7252 (15988)
	Total	10031 (22115)	10005 (22057)	11011 (24275)	10985 (24218)

Performance Ballasting

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	88	88	97	97
	7270R	82	82	90	90

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
	Rear	6305 (13900)	6288 (13863)	7285 (16061)	7268 (16023)
	Total	10182 (22447)	10156 (22390)	11162 (24608)	11136 (24550)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	90	90	98	98
	7270R	83	83	91	91

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 620/70R42

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
	Rear	6477 (14279)	6460 (14242)	7623 (16806)	7606 (16768)
	Total	10219 (22529)	10193 (22471)	11365 (25056)	11339 (24998)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7250R	90	90	100	100
	7270R	83	83	93	93

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
	Rear	6493 (14315)	6476 (14277)	7639 (16841)	7622 (16804)
	Total	10370 (22862)	10344 (22804)	11516 (25388)	11490 (25331)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	91	91	102	101
	7270R	85	84	94	94

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 650/65R42

		1300 MFWD		TLS™ ^a	
		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Singles - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3877 (8547)	3868 (8527)
	Rear	6439 (14196)	6422 (14158)	6455(14231)	6438(14193)
	Total	10181 (22446)	10155 (22388)	10332 (22778)	10306 (22720)
Weight Split (%)		37 / 63	37 / 63	37 / 63	37 / 63
PTO kg/kw (lb/hp)	7250R	90	90	91	91
	7270R	83	83	84	84

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 710/70R38

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
	Rear	6517 (14368)	6500 (14330)	7689 (16951)	7672 (16914)
	Total	10259 (22618)	10233 (22560)	11431 (25201)	11405 (25144)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7250R	90	90	101	101
	7270R	84	84	93	93

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
	Rear	6533 (14403)	6516 (14365)	7705 (16987)	7688 (16949)
	Total	10410 (22950)	10384 (22892)	11582 (25534)	11556 (25476)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	92	92	102	102
	7270R	85	85	95	94

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 710/70R38HD

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3742 (8250)	3733 (8230)	3742 (8250)	3733 (8230)
	Rear	6601 (14553)	6584 (14515)	7857 (17322)	7840 (17284)
	Total	10343 (22803)	10317 (22745)	11599 (25572)	11573 (25514)
Weight Split (%)		36 / 64	36 / 64	32 / 68	32 / 68
PTO kg/kw (lb/hp)	7250R	91	91	102	102
	7270R	84	84	95	94

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3877 (8547)	3868 (8527)	3877 (8547)	3868 (8527)
	Rear	6617 (14588)	6600 (14550)	7873 (17357)	7856 (17319)
	Total	10494 (23135)	10468 (23077)	11750 (25904)	11724 (25846)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7250R	93	92	104	103
	7270R	86	85	96	96

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

NOTE: Group 48 unballasted weights are calculated by averaging and are figured based on tractor with front Group 44 420/85R38 tires, a full tank of fuel, and no front hitch or PTO. Weight your tractor for exact weight splits.

Group 48 — 380/90R54

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
	Rear	6239 (13755)	6222 (13717)	7159 (15783)	7142 (15745)
	Total	10147 (22371)	10121 (22313)	11067 (24399)	11041 (24341)
Weight Split (%)		39 / 61	39 / 61	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	89	89	98	97
	7270R	83	83	90	90

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
	Rear	6255 (13790)	6238 (13752)	7175 (15818)	7158 (15781)
	Total	10298 (22703)	10272 (22645)	11218 (24731)	11192 (24674)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7250R	91	91	99	99
	7270R	84	84	92	91

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)**Group 48 — 480/80R50**

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
	Rear	6319 (13931)	6302 (13894)	7229 (15937)	7212 (15900)
	Total	10227 (22547)	10201 (22490)	11137 (24553)	11111 (24496)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	90	90	98	98
	7270R	84	83	91	91

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
	Rear	6335 (13966)	6318 (13929)	7245 (15972)	7228 (15935)
	Total	10378 (22879)	10352 (22822)	11288 (24885)	11262 (24828)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7250R	92	91	100	99
	7270R	85	85	92	92

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)**Group 48 — 520/85R46**

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
	Rear	6379 (14063)	6362 (14026)	7449 (16422)	7432 (16385)

Performance Ballasting

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
	Total	10287 (22679)	10261 (22622)	11357 (25038)	11331 (24981)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	91	90	100	100
	7270R	84	84	93	93

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
	Rear	6395 (14099)	6378 (14061)	7465 (16457)	7448 (16420)
	Total	10438 (23012)	10412 (22954)	11508 (25370)	11482 (25313)
Weight Split (%)		39 / 61	39 / 61	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	92	92	101	101
	7270R	85	85	94	94

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 620/70R46

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
	Rear	6439 (14196)	6422 (14158)	7569 (16687)	7552 (16649)
	Total	10347 (22812)	10321 (22754)	11477 (25303)	11451 (25245)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	91	91	101	101
	7270R	84	84	94	94

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
	Rear	6455 (14231)	6438 (14193)	7585 (16722)	7568 (16685)
	Total	10498 (23144)	10472 (23086)	11628 (25635)	11602 (25578)
Weight Split (%)		39 / 61	39 / 61	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	93	92	103	102
	7270R	86	86	95	95

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 650/85R38

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
	Rear	6539 (14416)	6522 (14379)	7749 (17084)	7732 (17046)
	Total	10447 (23032)	10421 (22975)	11657 (25700)	11631 (25642)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	92	92	103	103
	7270R	85	85	95	95

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
	Rear	6555 (14451)	6538 (14414)	7765 (17119)	7748 (17081)
	Total	10598 (23364)	10572 (23307)	11808 (26032)	11782 (25974)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	93	93	104	104
	7270R	87	86	96	96

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — IF650/85R38

		1300 MFWD		TLS™ ^a	
		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3908 (8616)	3899 (8596)	4043 (8913)	4034 (8893)
	Rear	6598 (14546)	6581 (14509)	6614 (14581)	6597 (14544)
	Total	10506 (23162)	10480 (23105)	10657 (23494)	10631 (23437)
Weight Split (%)		37 / 63	37 / 63	38 / 62	38 / 62
PTO kg/kw (lb/hp)	7250R	93	92	94	94
	7270R	86	86	87	87

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 710/70R42

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
	Rear	6619 (14592)	6602 (14555)	7947 (17520)	7930 (17483)
	Total	10527 (23208)	10501 (23151)	11855 (26136)	11829 (26079)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7250R	93	93	105	104
	7270R	86	86	97	97

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
	Rear	6635 (14628)	6618 (14590)	7963 (17555)	7946 (17518)
	Total	10678 (23541)	10652 (23483)	12006 (26468)	11980 (26411)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	94	94	106	106
	7270R	87	87	98	98

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 710/70R42HD

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
	Rear	6625 (14606)	6608 (14568)	7959 (17547)	7942 (17509)
	Total	10533 (23222)	10507 (23164)	11867 (26163)	11841 (26105)
Weight Split (%)		63%	63%	67%	67%
PTO kg/kw (lb/hp)	7250R	93	93	105	104
	7270R	86	86	97	97

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
	Rear	6641 (14641)	6624 (14603)	7975 (17582)	7958 (17544)
	Total	10684 (23554)	10658 (23496)	12018 (26495)	11992 (26437)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	94	94	106	106
	7270R	87	87	98	98

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — IF710/70R42

		1300 MFWD		TLS™ ^a	
		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Singles - Cast/Steel/Steel	
Weight kg (lb)	Front	3908 (8616)	3899 (8596)	4043 (8913)	4034 (8893)
	Rear	6661 (14685)	6643 (14645)	6677 (14720)	6659 (14681)
	Total	10569 (23301)	10542 (23241)	10720 (23633)	10693 (23574)
Weight Split (%)		37 / 63	37 / 63	38 / 62	38 / 62
PTO kg/kw (lb/hp)	7250R	93	93	95	94
	7270R	86	86	88	87

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 800/70R38

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3908 (8616)	3899 (8596)	3908 (8616)	3899 (8596)
	Rear	6790 (14969)	6773 (14932)	8249 (18186)	8232 (18148)
	Total	10698 (23585)	10672 (23528)	12157 (26802)	12131 (26744)
Weight Split (%)		36 / 64	36 / 64	32 / 68	32 / 68
PTO kg/kw (lb/hp)	7250R	94	94	107	107
	7270R	87	87	99	99

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4043 (8913)	4034 (8893)	4043 (8913)	4034 (8893)
	Rear	6806 (15005)	6789 (14967)	8265 (18221)	8248 (18184)

Performance Ballasting

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
	Total	10849 (23918)	10823 (23860)	12308 (27134)	12282 (27077)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7250R	96	95	109	108
	7270R	89	88	100	100

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

NOTE: Group 49 unballasted weights are calculated by averaging and are figured based on tractor with front Group 44 420/85R38 tires, a full tank of fuel, and no front hitch or PTO. Weigh your tractor for exact weight splits.

Group 49 — 480/95R50

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3948 (8704)	3939 (8684)	3948 (8704)	3939 (8684)
	Rear	6396 (14101)	6379 (14063)	7470 (16469)	7453 (16431)
	Total	10344 (22805)	10318 (22747)	11418 (25173)	11392 (25115)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	91	91	101	100
	7270R	84	84	93	93

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4083 (9001)	4074 (8982)	4083 (9001)	4074 (8982)
	Rear	6412 (14136)	6395 (14099)	7486 (16504)	7469 (16466)
	Total	10495 (23137)	10469 (23081)	11569 (25505)	11543 (25448)
Weight Split (%)		39 / 61	39 / 61	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7250R	93	92	102	102
	7270R	86	85	94	94

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 49 — 710/75R42

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3948 (8704)	3939 (8684)	3948 (8704)	3939 (8684)
	Rear	6654 (14670)	6637 (14632)	8047 (17741)	8030 (17703)
	Total	10602 (23374)	10576 (23316)	11995 (26445)	11969 (26387)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7250R	93	93	106	106
	7270R	87	86	98	98

Performance Ballasting

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4083 (9001)	4074 (8982)	4083 (9001)	4074 (8982)
	Rear	6670 (14705)	6653 (14667)	8063 (17776)	8046 (17738)
	Total	10753 (23706)	10727 (23649)	12146 (26777)	12120 (26720)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7250R	95	95	107	107
	7270R	88	88	99	99

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 49 — IF710/75R42

		1300 MFWD		TLS™ ^a	
		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Singles - Cast/Steel/Steel	
Weight kg (lb)	Front	3948 (8704)	3939 (8684)	4083 (9001)	4074 (8982)
	Rear	6673 (14711)	6655 (14672)	6689 (14747)	6671 (14707)
	Total	10621 (23415)	10594 (23355)	10772 (23748)	10745 (23689)
Weight Split (%)		37 / 63	37 / 63	38 / 62	38 / 62
PTO kg/kw (lb/hp)	7250R	94	93	95	95
	7270R	87	87	88	88

^aFor TLS™ with front brakes add 94 kg (207 lb)

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Unballasted Tractor Weight Charts (7290R and 7310R)

NOTE: Group 48 unballasted weights are calculated by averaging and are figured based on tractor with front Group 42 420/90R30 tires, a full tank of fuel, and no front hitch or PTO. Weigh your tractor for exact weight splits.

Group 47 — 320/90R50

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
	Rear	6302 (13894)	6284 (13854)	7082 (15613)	7064 (15573)
	Total	10144 (22364)	10118 (22307)	10924 (24083)	10898 (24026)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	77	77	83	83
	7310R	72	72	78	78

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
	Rear	6318 (13929)	6300 (13889)	7098 (15648)	7080 (15609)
	Total	10295 (22697)	10269 (22639)	11075 (24416)	11049 (24359)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64

Performance Ballasting

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
PTO kg/kw (lb/hp)	7290R	78	78	84	84
	7310R	73	73	79	79

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 320/90R54

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
	Rear	6432 (14180)	6414 (14140)	7362 (16230)	7344 (16191)
	Total	10274 (22650)	10248 (22593)	11204 (24700)	11178 (24644)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	78	78	85	85
	7310R	73	73	80	79

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
	Rear	6448 (14215)	6430 (14176)	7378 (16266)	7360 (16226)
	Total	10425 (22983)	10399 (22926)	11355 (25034)	11329 (24976)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	79	79	86	86
	7310R	74	74	81	81

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 380/80R46

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
	Rear	6242 (13761)	6224 (13722)	6982 (15393)	6964 (15353)
	Total	10084 (22231)	10058 (22175)	10824 (23863)	10798 (23806)
Weight Split (%)		38 / 62	38 / 62	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7290R	77	76	82	82
	7310R	72	72	77	77

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
	Rear	6258 (13797)	6240 (13757)	6998 (15428)	6980 (15388)
	Total	10235 (22565)	10209 (22507)	10975 (24196)	10949 (24138)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7290R	78	78	83	83
	7310R	73	73	78	78

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 380/90R50

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
	Rear	6362 (14026)	6344 (13986)	7252 (15988)	7234 (15948)
	Total	10204 (22496)	10178 (22439)	11094 (24458)	11068 (24401)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	78	77	84	84
	7310R	73	72	79	79

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
	Rear	6378 (14061)	6360 (14021)	7268 (16023)	7250 (15983)
	Total	10355 (22829)	10329 (22771)	11245 (24791)	11219 (24733)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	79	79	85	85
	7310R	74	73	80	80

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 420/80R46

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3842 (8470)	3824 (8453)
	Rear	6292 (13871)	6274 (13832)	7082 (15613)	7064 (15573)
	Total	10134 (22341)	10108 (22285)	10924 (24083)	10898 (24026)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	77	77	83	83
	7310R	72	72	78	78

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
	Rear	6308 (13907)	6290 (13867)	7098 (15648)	7080 (15609)
	Total	10285 (22675)	10259 (22617)	11075 (24416)	11049 (24359)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7290R	78	78	84	84
	7310R	73	73	79	79

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 480/80R46

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
	Rear	6376 (14057)	6358 (14017)	7256 (15997)	7238 (15957)
	Total	10218 (22526)	10192 (22470)	11098 (24467)	11072 (24410)

Performance Ballasting

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	78	77	84	84
	7310R	73	72	79	79

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
	Rear	6392 (14092)	6374 (14052)	7272 (16032)	7254 (15992)
	Total	10369 (22860)	10343 (22802)	11249 (24800)	11223 (24742)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	79	79	86	85
	7310R	74	74	80	80

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 520/85R42

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
	Rear	6442 (14202)	6424 (14162)	7422 (16363)	7404 (16323)
	Total	10284 (22672)	10258 (22615)	11264 (24833)	11238 (24776)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	78	78	86	85
	7310R	73	73	80	80

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
	Rear	6458 (14237)	6440 (14198)	7438 (16398)	7420 (16358)
	Total	10435 (23005)	10409 (22948)	11415 (25168)	11389 (25108)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	79	79	87	87
	7310R	74	74	81	81

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 620/70R42

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
	Rear	6630 (14617)	6612 (14577)	7776 (17143)	7758 (17103)
	Total	10472 (23087)	10446 (23030)	11618 (25613)	11592 (25556)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7290R	80	79	88	88
	7310R	74	74	83	82

Performance Ballasting

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
	Rear	6646 (14652)	6628 (14612)	7792 (17178)	7774 (17139)
	Total	10623 (23420)	10597 (23362)	11769 (25946)	11743 (25889)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	81	81	89	89
	7310R	76	75	84	84

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 650/65R42

		1300 MFWD		TLS™ ^a	
		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Singles - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3977 (8768)	3969 (8750)
	Rear	6592 (14533)	6574 (14493)	6608 (14568)	6590 (14528)
	Total	10434 (23003)	10408 (22946)	10585 (23336)	10559 (23278)
Weight Split (%)		37 / 63	37 / 63	38 / 62	38 / 62
PTO kg/kw (lb/hp)	7290R	79	79	80	80
	7310R	74	74	75	75

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 710/70R38

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
	Rear	6670 (14705)	6652 (14665)	7842 (17289)	7824 (17249)
	Total	10512 (23175)	10486 (23118)	11684 (25759)	11658 (25702)
Weight Split (%)		36 / 64	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7290R	80	80	89	89
	7310R	75	75	83	83

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
	Rear	6686 (14740)	6668 (14700)	7858 (17324)	7840 (17284)
	Total	10663 (23508)	10637 (23450)	11835 (26092)	11724 (26034)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	81	81	90	90
	7310R	76	76	84	84

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 47 — 710/70R38HD

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3842 (8470)	3834 (8453)	3842 (8470)	3834 (8453)
	Rear	6754 (14890)	6736 (14850)	8010 (17659)	7992 (17619)

Performance Ballasting

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
	Total	10596 (23360)	10570 (23303)	11852 (26129)	11826 (26072)
Weight Split (%)		36 / 64	36 / 64	32 / 38	32 / 38
PTO kg/kw (lb/hp)	7290R	81	80	90	90
	7310R	75	75	84	84

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	3977 (8768)	3969 (8750)	3977 (8768)	3969 (8750)
	Rear	6770 (14925)	6752 (14886)	8026 (17694)	8008 (17655)
	Total	10747 (23693)	10721 (23626)	12003 (26462)	11977 (26405)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7290R	82	82	91	91
	7310R	76	76	85	85

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

NOTE: Group 48 unballasted weights are calculated by averaging and are figured based on tractor with front Group 44 420/85R34 tires, a full tank of fuel, and no front hitch or PTO. Weigh your tractor for exact weight splits.

Group 48 — 380/90R54

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
	Rear	6392 (14092)	6374 (14052)	7312 (16120)	7294 (16080)
	Total	10400 (22928)	10374 (22870)	11320 (24956)	11294 (24898)
Weight Split (%)		38 / 62	39 / 61	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	79	79	86	86
	7310R	74	74	81	80

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
	Rear	6408 (14127)	6390 (14088)	7328 (16155)	7310 (16116)
	Total	10551 (23261)	10525 (23204)	11471 (25289)	11445 (25232)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7290R	80	80	87	87
	7310R	75	75	82	81

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 480/80R50

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
	Rear	6472 (14268)	6454 (14229)	7382 (16275)	7364 (16235)
	Total	10480 (23104)	10454 (23047)	11390 (25111)	11364 (25053)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	80	79	87	86
	7310R	75	74	81	81

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
	Rear	6488 (14304)	6470 (14264)	7398 (16310)	7380 (16270)
	Total	10631 (23438)	10605 (23380)	11541 (25444)	11515 (25386)
Weight Split (%)		39 / 61	39 / 61	36 / 64	36 / 64
PTO kg/kw (lb/hp)	7290R	81	81	88	88
	7310R	76	75	82	82

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 520/85R46

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
	Rear	6532 (14401)	6514 (14361)	7602 (16760)	7584 (16720)
	Total	10540 (23237)	10514 (23179)	11610 (25596)	11584 (25538)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	80	80	88	88
	7310R	75	75	83	82

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
	Rear	6548 (14436)	6530 (14396)	7618 (16795)	7600 (16755)
	Total	10691 (23570)	10665 (23512)	11761 (25929)	11735 (25871)
Weight Split (%)		39 / 61	39 / 61	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	81	81	89	89
	7310R	76	76	84	83

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 620/70R46

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
	Rear	6592 (14533)	6574 (14493)	7722 (17024)	7704 (16984)
	Total	10600 (23369)	10574 (23311)	11730 (25860)	11704 (25802)

Performance Ballasting

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	81	80	89	89
	7310R	75	75	83	83

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
	Rear	6608 (14568)	6590 (14528)	7738 (17059)	7720 (17020)
	Total	10751 (23702)	10725 (23644)	11881 (26193)	11855 (26136)
Weight Split (%)		39 / 61	39 / 61	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	82	82	90	90
	7310R	76	76	84	84

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 650/85R38

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
	Rear	6692 (14753)	6674 (14714)	7902 (17421)	7884 (17381)
	Total	10700 (23589)	10674 (23532)	11910 (26257)	11884 (26199)
Weight Split (%)		37 / 63	37 / 63	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	81	81	91	90
	7310R	76	76	85	85

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
	Rear	6708 (14789)	6690 (14749)	7918 (17456)	7900 (17416)
	Total	10851 (23923)	10825 (23865)	12061 (26590)	12035 (26532)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	82	82	92	92
	7310R	77	77	86	86

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — IF650/85R38

		1300 MFWD		TLS™ ^a	
		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Singles - Cast/Steel/Steel	
Weight kg (lb)	Front	4008 (8836)	4000 (8818)	4143 (9134)	4135 (9116)
	Rear	6751 (14883)	6733 (14844)	6767 (14919)	6749 (14879)
	Total	10759 (23719)	10733 (23662)	10910 (24053)	10884 (23995)
Weight Split (%)		37 / 63	37 / 63	38 / 62	38 / 62
PTO kg/kw (lb/hp)	7290R	82	82	83	83
	7310R	77	76	78	77

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 710/70R42

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
	Rear	6772 (14930)	6754 (14890)	8100 (17857)	8082 (17818)
	Total	10780 (23766)	10754 (23708)	12108 (26693)	12082 (26636)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7290R	82	82	92	92
	7310R	77	76	86	86

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
	Rear	6788 (14965)	6770 (14925)	8116 (17893)	8098 (17853)
	Total	10931 (24098)	10905 (24041)	12259 (27026)	12233 (26969)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	83	83	93	93
	7310R	78	78	87	87

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 710/70R42HD

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
	Rear	6778 (14943)	6760 (14903)	8112 (17884)	8094 (17844)
	Total	10786 (23779)	10760 (23721)	12120 (26720)	12094 (26662)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7290R	82	82	92	92
	7310R	77	77	86	86

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
	Rear	6794 (14978)	6776 (14939)	8128 (17919)	8110 (17879)
	Total	10937 (24111)	10911 (24054)	12271 (27052)	12245 (26995)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	83	83	93	93
	7310R	78	78	87	87

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — IF710/70R42

		1300 MFWD		TLS™ ^a	
		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Singles - Cast/Steel/Steel	
Weight kg (lb)	Front	4008 (8836)	4000 (8818)	4143 (9134)	4135 (9116)
	Rear	6814 (15022)	6795 (14980)	6830 (15058)	6811 (15016)

Performance Ballasting

		1300 MFWD		TLS™ ^a	
		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Singles - Cast/Steel/Steel	
	Total	10822 (23858)	10795 (23798)	10973 (24191)	10946 (24131)
Weight Split (%)		37 / 63	37 / 63	38 / 62	38 / 62
PTO kg/kw (lb/hp)	7290R	82	82	83	83
	7310R	77	77	78	78

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 48 — 800/70R38

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4008 (8836)	4000 (8818)	4008 (8836)	4000 (8818)
	Rear	6943 (15307)	6925 (15267)	8402 (18523)	8384 (18484)
	Total	10951 (24142)	10925 (24085)	12410 (27359)	12384 (27302)
Weight Split (%)		37 / 63	37 / 63	32 / 68	32 / 68
PTO kg/kw (lb/hp)	7290R	83	83	94	94
	7310R	78	78	88	88

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4143 (9134)	4135 (9116)	4143 (9134)	4135 (9116)
	Rear	6959 (15342)	6941 (15302)	8418 (18558)	8400 (18519)
	Total	11102 (24475)	11076 (24418)	12561 (27692)	12535 (27634)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7290R	84	84	95	95
	7310R	79	79	89	89

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

NOTE: Group 49 unballasted weights are calculated by averaging and are figured based on tractor with front Group 44 420/85R34 tires, a full tank of fuel, and no front hitch or PTO. Weigh your tractor for exact weight splits.

Group 49 — 480/95R50

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4048 (8924)	4040 (8907)	4048 (8924)	4040 (8907)
	Rear	6549 (14438)	6531 (14398)	7623 (16806)	7605 (16766)
	Total	10597 (23362)	10571 (23305)	11671 (25730)	11645 (25673)
Weight Split (%)		38 / 62	38 / 62	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	81	80	89	89
	7310R	75	75	83	83

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

Performance Ballasting

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4183 (9222)	4175 (9204)	4183 (9222)	4175 (9204)
	Rear	6565 (14473)	6547 (14434)	7639 (16841)	7621 (16801)
	Total	10748 (23695)	10722 (23638)	11822 (26063)	11796 (26005)
Weight Split (%)		39 / 61	39 / 61	35 / 65	35 / 65
PTO kg/kw (lb/hp)	7290R	82	82	90	90
	7310R	76	76	84	84

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 49 — 710/75R42

1300 MFWD		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4048 (8924)	4040 (8907)	4048(8924)	4040 (8907)
	Rear	6807 (15007)	6789 (14967)	8200 (18078)	8182 (18038)
	Total	10855 (23931)	10829 (23874)	12248 (27002)	12222 (26944)
Weight Split (%)		37 / 63	37 / 63	33 / 67	33 / 67
PTO kg/kw (lb/hp)	7290R	83	83	93	93
	7310R	77	77	87	87

TLS™ ^a		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Duals - Cast/Steel/Steel	
Weight kg (lb)	Front	4183 (9222)	4175 (9204)	4183 (9222)	4175 (9204)
	Rear	6823 (15042)	6805 (15002)	8216 (18113)	8198 (18073)
	Total	11006 (24264)	10980 (24206)	12399 (27335)	12373 (27277)
Weight Split (%)		38 / 62	38 / 62	34 / 66	34 / 66
PTO kg/kw (lb/hp)	7290R	84	83	94	94
	7310R	78	78	88	88

TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

Group 49 — IF710/75R42

		1300 MFWD		TLS™ ^a	
		e23™	IVT™/AutoPowr™	e23™	IVT™/AutoPowr™
		Singles - Cast/Steel/Steel		Singles - Cast/Steel/Steel	
Weight kg (lb)	Front	4048 (8924)	4040 (8907)	4183 (9222)	4175 (9204)
	Rear	6826 (15049)	6807 (15007)	6842 (15084)	6823 (15042)
	Total	10874 (23973)	10847 (23913)	11025 (24305)	10998 (24246)
Weight Split (%)		37 / 63	37 / 63	38 / 62	38 / 62
PTO kg/kw (lb/hp)	7290R	83	82	84	84
	7310R	77	77	78	78

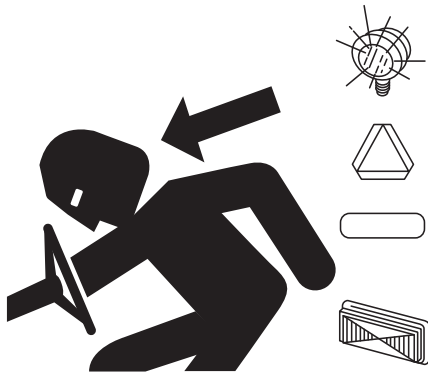
TLS is a trademark of Deere & Company

^aFor TLS™ with front brakes add 94 kg (207 lb)

TS36762,0000262-19-17AUG17

Transport

Drive Tractor on Roads



CAUTION: Avoid personal injury or death from losing control of tractor. When driving tractor on roads:

- Wear seat belts.
- Latch brake pedals together.
- If equipped, use foot throttle instead of speed control lever.
- Reduce speed when driving on icy, wet, or graveled surfaces.
- Ballast tractor correctly (see Performance Ballasting section in this Operator's Manual).
- Prevent wheels from locking and skidding on tractors equipped with IVT™/AutoPowr™ transmission. (See Downhill Operation In Slippery Conditions, in IVT™/AutoPowr™ Transmission section in this Operator's Manual).
- Avoid holes, ditches, sharp turns, hill sides, and obstructions which may cause tractor to roll over.
- Frequently check for traffic from the rear, especially in turns, and use turn signal lights.
- Always operate flashing lights when traveling on a highway or public roads, except where prohibited by law.

Lights—Use headlights and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible and in good working order. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting kit is available from your John Deere dealer.

IMPORTANT: Damage to brakes could result if brake pedals are not locked together during transport when using AutoClutch.

Brakes—Tap brake pedal to ensure differential lock is



RXA0086597—UN—09FEB06

NOT engaged. **Latch brake pedals together before driving on a road.** Avoid hard application of brakes.

MFWD—Disengage MFWD when transporting tractor. When driving on roads, engage AUTO or BRAKE ASSIST position of MFWD switch to provide four wheel braking.

Remote Cylinders—Position control levers appropriately to eliminate possibility of lowering an implement during transport by inadvertently bumping control lever(s). (See procedure in Selective Control Valves section in this Operator's Manual.)

Front or Rear Hitch—Position hitch control lever appropriately to eliminate possibility of lowering an implement during transport by inadvertently bumping raise/lower lever. (See procedure in Front and Rear Hitch sections in this Operator's Manual.)

TS36762,000026C-19-05SEP17

Transport with Ballast

CAUTION: Avoid possible injury or equipment damage when transporting heavy rear-mounted implements.

- Drive slowly over rough ground, regardless of how much ballast is used.
- Add weight to front end if needed to maintain stability and steering control. Heavy pulling and heavy rear-mounted implements tend to lift front wheels.

Use implement code in implement operator's manual to determine the minimum number of front weights required.

TS36762,000026D-19-22NOV16

Tow Loads

CAUTION: Avoid possible injury from losing control while towing a load. Stopping distance increases with speed and weight of towed loads, and on slopes.

Tractor wheels may lock and skid on slippery downhill slopes on tractors equipped with IVT™/AutoPowr™ transmission. See Downhill Operation In Slippery Conditions, in IVT™/AutoPowr™ Transmission section of this Operator's Manual.

Never transport at speeds exceeding implement's maximum transport speed. Before transporting a towed implement, refer to implement operator's manual and implement decals to determine maximum transport speed. This tractor is capable of operating at transport speeds exceeding maximum allowable transport speed for most towed implements. Use implement code in implement operator's manual to determine minimum number of front weights required. Failure to adhere to implement's maximum transport speed or to have correct ballast can result in:

- Loss of control of tractor/implement combination
- Reduced or no ability to stop during braking
- Implement tire failure
- Damage to implement structure or components

When towing equipment without brakes:

- Do not transport at speeds greater than 32 km/h (20 mph).
- Towed device must weigh less than 1.5 times ballasted tractor weight.

When towing equipment with brakes:

- If manufacturer does not specify a maximum transport speed, do not transport at speeds above 40 km/h (24.8 mph).
- When transporting at speeds up to 40 km/h (24.8 mph) the fully loaded implement must weigh less than 4.5 times tractor weight.
- When transporting at speeds between 40 km/h (24.8 mph) to 50 km/h (31 mph), fully loaded implement must weigh less than 3 times the tractor weight.

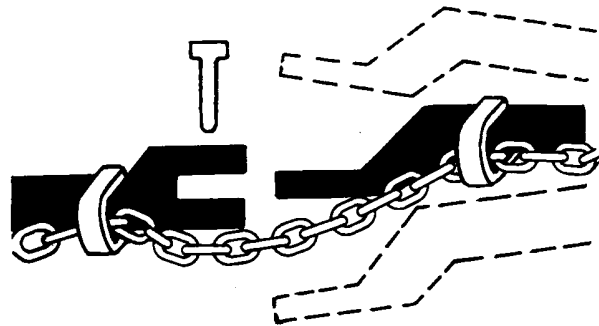
Tractor must be heavy and powerful enough with adequate braking power for towed load. Add ballast to tractor or lighten implement load.

Drive slowly enough to maintain safe control. Be alert for skids. Shift to a lower gear for hillsides, rough ground, and sharp turns, especially when transporting heavy equipment.

Never operate with transmission in neutral position or with clutch disengaged.

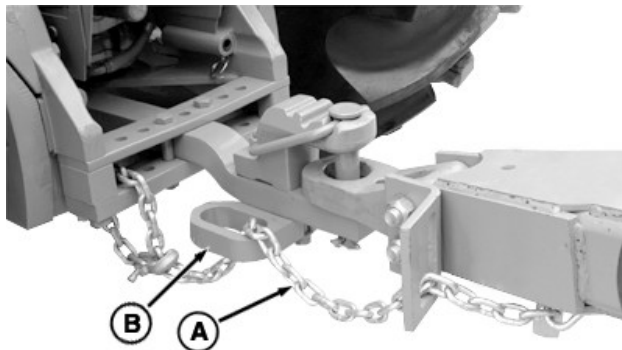
TS36762,000026E-19-14DEC16

Use Safety Chain



TS217—UN—23AUG88

CAUTION: Avoid possible accident and injury by using a safety chain on drawn equipment. Use a safety chain with a strength rating equal to or greater than gross weight of equipment. Provide only enough slack in chain to permit turning.



RXA0082663—UN—28JUL05

Attach safety chain (A) to drawbar support or other specified anchor locations.

IMPORTANT: Do not use safety chain for towing or possible damage to tractor, implement, and drawbar may result. Safety chain is provided only for transport.

Do not use intermediate support (B) as an attaching point, load may break free. As shown, intermediate support is used to keep safety chain from dragging.

Attach and check operation of trailer brakes if equipped.

CAUTION: Slow down when transporting heavy implements.

Drive slowly enough to maintain safe control. Shift to a lower gear for hillsides, rough ground, and sharp turns, especially when transporting heavy equipment.

On icy or graveled grades, be alert for skids which could result in loss of steering control.

Never coast down hill.

Use caution when operating tractor at transport speeds. Reduce speed if towing heavy loads. Heavy towed or rear mounted implements may start swaying in transport. Consult towed equipment operator's manual for recommended transport speeds.

TS36762,000026F-19-05SEP17

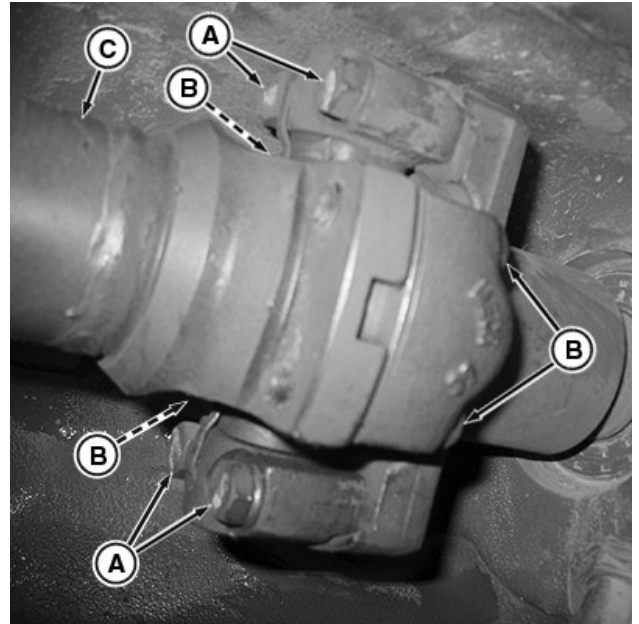
Tow Tractor

CAUTION: Avoid personal injury or death. Disconnect MFWD drive shaft if towing tractor with front wheels on a carrier. Loss of electrical power or transmission-hydraulic system pressure engages MFWD and will pull tractor off carrier, regardless of MFWD switch position.

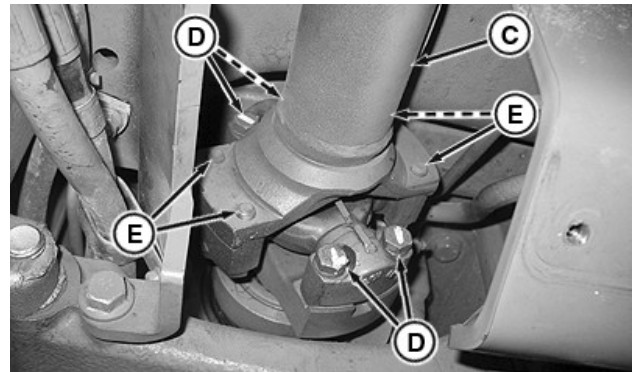
If tractor is ACS™ equipped and hydraulic oil temperature is less than -10° C (14° F), backup pump will not turn on. Tractor will not have brakes or steering. If tractor still must be moved, contact your John Deere dealer.

IMPORTANT: Avoid transmission and power train component damage:

- Never attempt to start tractor by towing. Engine will not start.
- If possible, operate engine above 1250 rpm to provide lubrication, power steering, and power brakes. Have an operator steer and brake tractor.
- Do not tow tractor faster than 8 km/h (5 mph). Do not exceed 3 km/h (2 mph) for first 10 minutes in below freezing temperatures.
- Check transmission-hydraulic oil level. Add 4 L (1 gal) for each 152 mm (6 in) front wheels are raised off the ground. Do not raise wheels more than 305 mm (12 in). Drain excess oil after transporting.



RXA0111186—UN—14FEB11



RXA0111186—UN—14FEB11

1. If equipped with MFWD, disconnect drive shaft if towing tractor with front wheels on a carrier:
 - a. Remove shields.
 - b. Remove both sets of cap screws (A, B) on rear MFWD drive shaft U-joint.
 - c. Remove both sets of cap screws (D, E) on front MFWD drive shaft U-joint.
 - d. Slide MFWD drive shaft (C) forward and out from tractor.
2. Tap brake pedals to make sure differential lock is not engaged.
3. Move reverser to:
 - e23™ Transmission: Move reverser to NEUTRAL position.
 - IVT™/AutoPowr™ Transmission:
 - Engine running: Move reverser to NEUTRAL position.

e23 is a trademark of Deere & Company
 IVT is a trademark of Deere & Company
 AutoPowr is a trademark of Deere & Company

- Engine off: Keep reverser in PARK position.

4. Release park brake. See Tow Mode in this section of this Operator's Manual.

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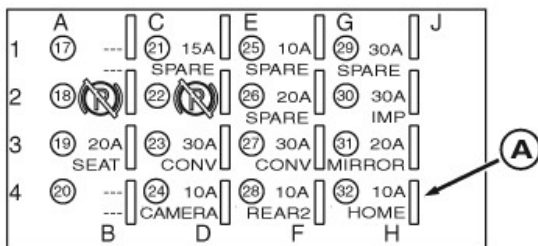
Tow Mode

NOTE: If tractor must be moved immediately, pulling tractor a short distance while tractor is in PARK will not damage brake system.

Before tractor can be towed, park brake must be released, if possible.

Activating backup mode allows tractor to be operated at a maximum of 8 km/h (5 mph) in forward position and 3 km/h (1.8 mph) in reverse.

If tractor loses electrical power, park brake can re-engage. If tractor has no electrical power, a 100 Amp electrical source must be connected, see Use Battery Booster Or Charger in Engine Operation Section of this Operator's Manual.



RXA0155566—UN—09NOV16

NOTE: Removing # 32 fuse (A) diverts hydraulic oil through backup pump which supplies hydraulic oil to brakes and steering. Tractor can safely be moved short distances at lower speeds.

Fold seat backrest down to allow easier access and allow cab lighting to shine on load center when fuses are being inspected, replaced, or removed.

1. Remove fuse # 32 (A) and retain.
2. Turn key switch to RUN position.

NOTE: When tractor is placed in neutral, operator will hear backup pump start. As long as tractor is in Neutral any movement of brake pedals or steering wheel will engage backup pump to supply hydraulic oil as needed.

3. Place tractor in Neutral.

NOTE: When tractor is in park, P is displayed on corner post display. When placed in Neutral, corner post display will show "N", tractor is ready to tow.

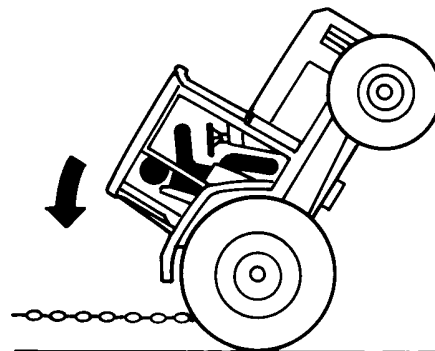
4. Verify transmission is in Neutral by looking at corner post display.

NOTE: If after placing tractor in Neutral, corner post display still displays "P", contact your John Deere dealer for assistance.

5. Steering and braking are supplied by backup pump.
6. When destination is reached, put transmission shift lever in PARK position.
7. Turn key switch to OFF position.
8. Replace removed fuse # 32 to original location.

TS36762,0000273-19-04APR18

Freeing a Mired Machine



TS1645—UN—15SEP95



TS263—UN—23AUG88

Attempting to free a mired machine can involve safety hazards such as the mired tractor tipping rearward, the towing tractor overturning, and the tow chain or tow bar (a cable is not recommended) failing and recoiling from its stretched condition.

Back your tractor out if it gets mired down in mud. Unhitch any towed implements. Dig mud from behind the rear wheels. Place boards behind the wheels to provide a solid base and try to back out slowly. If

necessary, dig mud from the front of all wheels and drive slowly ahead.

If necessary to tow with another unit, use a tow bar or a long chain (a cable is not recommended). Inspect the chain for flaws. Make sure all parts of towing devices are of adequate size and strong enough to handle the load.

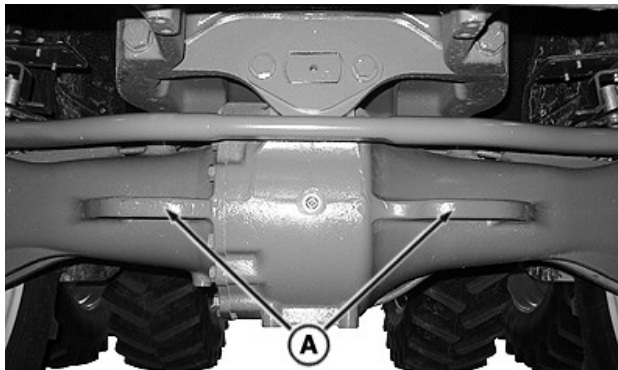
Always hitch to the drawbar of the towing unit. Do not hitch to the front pushbar attachment point. Before moving, clear the area of people. Apply power smoothly to take up the slack: a sudden pull could snap any towing device causing it to whip or recoil dangerously.

DX,MIRE-19-07JUL99

Transport on Carrier

⚠ CAUTION: To avoid accident or injury, securely chain the tractor to carrier. Do not wrap chain around mechanical front-wheel drive shaft or axle housing. Drive carefully.

IMPORTANT: A disabled tractor should be hauled on a flat-bed carrier.



RXA0116174—UN—05MAY11

Attach chain to loop (A) on front axle when securing tractor to carrier.

TS36762,0000272-19-22NOV16

Fuel, Lubricants, and Coolant - General Information

Determine Tractor Engine Type

IMPORTANT: To determine tractor engine type, see **Engine Serial Number in Identification Numbers section of this Operator's Manual.**

Correct engine oil specification and oil change interval is determined by a number of factors. One important consideration is type of engine aftertreatment installed. To determine engine type, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

RX32825,0001798-19-14DEC16

Minimizing the Effect of Cold Weather on Diesel Engines

John Deere diesel engines are designed to operate effectively in cold weather.

However, for effective starting and cold-weather operation, a little extra care is necessary. The following information outlines steps that can minimize the effect that cold weather may have on starting and operation of your engine. See your John Deere dealer for additional information and local availability of cold-weather aids.

Use Winter Grade Fuel

When temperatures fall below 0°C (32°F), winter grade fuel (No. 1-D in North America) is best suited for cold-weather operation. Winter grade fuel has a lower cloud point and a lower pour point.

Cloud point is the temperature at which wax begins to form in the fuel. This wax causes fuel filters to plug.

Pour point is the lowest temperature at which movement of the fuel is observed.

NOTE: On average, winter grade diesel fuel has a lower Btu (heat content) rating. Using winter grade fuel may reduce power and fuel efficiency, but should not cause any other engine performance effects. Check the grade of fuel being used before troubleshooting for low-power complaints in cold-weather operation.

Air Intake Heater

An air intake heater is an available option for some engines to aid cold weather starting.

Ether

An ether port on the intake is available to aid cold weather starting.

 **CAUTION:** Ether is highly flammable. Do not use ether when starting an engine equipped with glow plugs or an air intake heater.

Coolant Heater

An engine block heater (coolant heater) is an available option to aid cold weather starting.

Seasonal Viscosity Oil and Proper Coolant Concentration

Use seasonal grade viscosity engine oil based on the expected air temperature range between oil changes and a proper concentration of low silicate antifreeze as recommended. (See DIESEL ENGINE OIL and ENGINE COOLANT requirements in this section.)

Diesel Fuel Cold Flow Additive

Use John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula), which contains anti-gel chemistry, or equivalent fuel conditioner to treat non-winter grade fuel (No. 2-D in North America) during the cold-weather season. This generally extends operability to about 10°C (18°F) below the fuel cloud point. For operability at even lower temperatures, use winter grade fuel.

IMPORTANT: Treat fuel when outside temperature drops below 0°C (32°F). For best results, use with untreated fuel. Follow all recommended instructions on label.

Biodiesel

When operating with biodiesel blends, wax formation can occur at warmer temperatures. Begin using John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula) or equivalent at 5°C (41°F) to treat biodiesel fuels during the cold-weather season. Use B5 or lower blends at temperatures below 0°C (32°F). Use only winter grade petroleum diesel fuel at temperatures below -10°C (14°F).

Winterfronts

Use of fabric, cardboard, or solid winterfronts is not recommended with any John Deere engine. Their use can result in excessive engine coolant, oil, and charge air temperatures. This can lead to reduced engine life, loss of power and poor fuel economy. Winterfronts may also put abnormal stress on fan and fan drive components potentially causing premature failures.

If winterfronts are used, they should never totally close off the grill frontal area. Approximately 25% area in the center of the grill should remain open at all times. At no time should the air blockage device be applied directly to the radiator core.

Radiator Shutters

If equipped with a thermostatically controlled radiator shutter system, this system should be regulated in such a way that the shutters are completely open by the time the coolant reaches 93°C (200°F) to prevent excessive intake manifold temperatures. Manually controlled systems are not recommended.

If air-to-air aftercooling is used, the shutters must be

completely open by the time the intake manifold air temperature reaches the maximum allowable temperature out of the charge air cooler.

For more information, see your John Deere dealer.

DX,FUEL10-19-13JAN18

Oil Filters

Filtration of oils is critically important for proper operation and lubrication. John Deere brand oil filters have been designed and produced specifically for John Deere applications.

John Deere filters adhere to engineering specifications for quality of the filter media, filter efficiency rating, strength of the bond between the filter media and the element end cap, fatigue life of the canister (if applicable), and pressure capability of the filter seal. Non-John Deere branded oil filters might not meet these key John Deere specifications.

Always change oil filters regularly as specified in this manual.

DX,FILT1-19-11APR11

Fuel

Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590, ASTM D975, or EN 15940 is acceptable for use at all percentage mixture levels.

Required Fuel Properties

In all cases, the fuel shall meet the following properties:

Cetane number of 40 minimum. Cetane number greater than 47 is preferred, especially for temperatures below -20°C (-4°F) or elevations above 1675 m (5500 ft.).

Cloud Point should be below the expected lowest ambient temperature or **Cold Filter Plugging Point** (CFPP) should be a maximum 10°C (18°F) below the fuel cloud point.

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

Diesel fuel quality and sulfur content must comply with all existing emissions regulations for the area in which the engine operates. DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

E-Diesel fuel

DO NOT use E-Diesel (Diesel fuel and ethanol blend). Use of E-Diesel fuel in any John Deere machine may void the machine warranty.

 **CAUTION: Avoid severe injury or death due to the fire and explosion risk from using E-Diesel fuel.**

Sulfur content for Interim Tier 4, Final Tier 4, Stage III B, Stage IV Engines, and Stage V engines

- Use ONLY ultra low sulfur diesel (ULSD) fuel with a maximum of 15 mg/kg (15 ppm) sulfur content.

Sulfur Content for Tier 3 and Stage III A Engines

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 1000—2000 mg/kg (1000—2000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 2000 mg/kg (2000 ppm), contact your John Deere dealer.

Sulfur Content for Tier 2 and Stage II Engines

- Use of diesel fuel with sulfur content less than 2000 mg/kg (2000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 2000—5000 mg/kg (2000—5000 ppm) REDUCES the oil and filter change interval.¹
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

Sulfur Content for Other Engines

- Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) REDUCES the oil and filter change interval.

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

DX,FUEL1-19-13JAN18

Supplemental Diesel Fuel Additives

Diesel fuel can be the source of performance or other operational problems for many reasons. Some causes include poor lubricity, contaminants, low cetane number, and a variety of properties that cause fuel system deposits. These and others are referenced in other sections of this Operator's Manual.

To optimize engine performance and reliability, closely follow recommendations on fuel quality, storage, and handling, which are found elsewhere in this Operator's Manual.

To further aid in maintaining performance and reliability of the engine's fuel system, John Deere has developed a family of fuel additive products for most global markets. The primary products include Fuel-Protect Diesel Fuel Conditioner (full feature conditioner in winter and summer formulas) and Fuel-Protect Keep Clean (fuel injector deposit removal and prevention). Availability of these and other products varies by market. See your local John Deere dealer for availability and additional information about fuel additives that might be right for your needs.

DX,FUEL13-19-07FEB14

Biodiesel Fuel

Biodiesel fuel is comprised of monoalkyl esters of long

¹ See DX,ENOIL12,OEM, DX,ENOIL12,T2,STD, or DX,ENOIL12,T2,EXT for more information on Engine Oil and Filter Service Intervals.

chain fatty acids derived from vegetable oils or animal fats. Biodiesel blends are biodiesel mixed with petroleum diesel fuel on a volume basis.

Before using fuel containing biodiesel, review the Biodiesel Use Requirements and Recommendations in this Operator's Manual.

Environmental laws and regulations can encourage or prohibit the use of biofuels. Operators should consult with appropriate governmental authorities prior to using biofuels.

John Deere Stage V Engines Operating in the European Union

Where the engine is to be operated within the Union on diesel or non-road gas-oil, a fuel with a FAME content not greater than 8% volume/volume (B8) shall be used.

John Deere Engines with Exhaust Filter Except Stage V Engines Operating in the European Union

Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

Biodiesel concentrations above B20 can harm the engine's emission control systems and should not be used. Risks include, but are not limited to, more frequent stationary regeneration, soot accumulation, and increased intervals for ash removal.

John Deere Fuel conditioners or equivalent, which contain detergent and dispersant additives, are required when using biodiesel blends from B10 to B20, and are recommended when using lower biodiesel blends.

John Deere Engines Without Exhaust Filter

Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

These John Deere engines can operate on biodiesel blends above B20 (up to 100% biodiesel). Operate at levels above B20 ONLY if the biodiesel is permitted by law and meets the EN 14214 specification (primarily available in Europe). Engines operating on biodiesel blends above B20 might not fully comply with or be permitted by all applicable emissions regulations. Expect up to a 12% reduction in power and an 18% reduction in fuel economy when using 100% biodiesel.

John Deere fuel conditioners or equivalent, which contain detergent and dispersant additives, are required when using biodiesel blends from B10 to B100, and are recommended when using lower biodiesel blends.

Biodiesel Use Requirements and Recommendations

The petroleum diesel portion of all biodiesel blends must

meet the requirements of ASTM D975 (US) or EN 590 (EU) commercial standard.

Biodiesel users in the U.S. are strongly encouraged to purchase biodiesel blends from a BQ-9000 Certified Marketer and sourced from a BQ-9000 Accredited Producer (as certified by the National Biodiesel Board). Certified Marketers and Accredited Producers can be found at the following website: <http://www.bq9000.org>.

Biodiesel contains residual ash. Ash levels exceeding the maximums allowed in either ASTM D6751 or EN14214 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present).

The fuel filter can require more frequent replacement when using biodiesel fuel, particularly if switching from diesel. Check engine oil level daily prior to starting engine. A rising oil level can indicate fuel dilution of the engine oil. Biodiesel blends up to B20 must be used within 90 days of the date of biodiesel manufacture. Biodiesel blends above B20 must be used within 45 days from the date of biodiesel manufacture.

When using biodiesel blends up to B20, the following must be considered:

- Cold-weather flow degradation
- Stability and storage issues (moisture absorption, microbial growth)
- Possible filter restriction and plugging (usually a problem when first switching to biodiesel on used engines)
- Possible fuel leakage through seals and hoses (primarily an issue with older engines)
- Possible reduction of service life of engine components

Request a certificate of analysis from your fuel distributor to ensure that the fuel is compliant with the specifications provided in this Operator's Manual.

Consult your John Deere dealer for John Deere fuel products to improve storage and performance with biodiesel fuels.

The following must also be considered if using biodiesel blends above B20:

- Possible coking or blocked injector nozzles, resulting in power loss and engine misfire if John Deere fuel additives and conditioners or equivalent containing detergent/dispersants are not used
- Possible crankcase oil dilution (requiring more frequent oil changes)
- Possible lacquering or seizure of internal components
- Possible formation of sludge and sediments
- Possible thermal oxidation of fuel at elevated temperatures
- Possible compatibility issues with other materials

(including copper, lead, zinc, tin, brass, and bronze) used in fuel handling, distribution, and storage equipment

- Possible reduction in water separator efficiency
- Possible damage to paint if exposed to biodiesel
- Possible corrosion of fuel injection equipment
- Possible elastomeric seal and gasket material degradation (primarily an issue with older engines)
- Possible high acid levels within fuel system
- Because biodiesel blends above B20 contain more ash, using blends above B20 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present)

IMPORTANT: Raw pressed vegetable oils are NOT acceptable for use as fuel in any concentration in John Deere engines. Their use could cause engine failure.

DX,FUEL7-19-13JAN18

Lubricity of Diesel Fuel

Most diesel fuels manufactured in the United States, Canada, and the European Union have adequate lubricity to ensure proper operation and durability of fuel injection system components. However, diesel fuels manufactured in some areas of the world may lack the necessary lubricity.

IMPORTANT: Make sure the diesel fuel used in your machine demonstrates good lubricity characteristics.

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

If fuel of low or unknown lubricity is used, add John Deere Fuel-Protect Diesel Fuel Conditioner (or equivalent) at the specified concentration.

Lubricity of BioDiesel Fuel

Fuel lubricity can improve significantly with BioDiesel blends up to B20 (20% BioDiesel). Further increase in lubricity is limited for BioDiesel blends greater than B20.

DX,FUEL5-19-07FEB14

Handling and Storing Diesel Fuel

CAUTION: Reduce the risk of fire. Handle fuel carefully. **DO NOT** fill the fuel tank when engine is running. **DO NOT** smoke while you fill the fuel tank or service the fuel system.

Fill the fuel tank at the end of each day's operation to

prevent water condensation and freezing during cold weather.

Keep all storage tanks as full as practical to minimize condensation.

Ensure that all fuel tank caps and covers are installed properly to prevent moisture from entering. Monitor water content of the fuel regularly.

When using biodiesel fuel, the fuel filter may require more frequent replacement due to premature plugging.

Check engine oil level daily prior to starting engine. A rising oil level may indicate fuel dilution of the engine oil.

IMPORTANT: The fuel tank is vented through the filler cap. If a new filler cap is required, always replace it with an original vented cap.

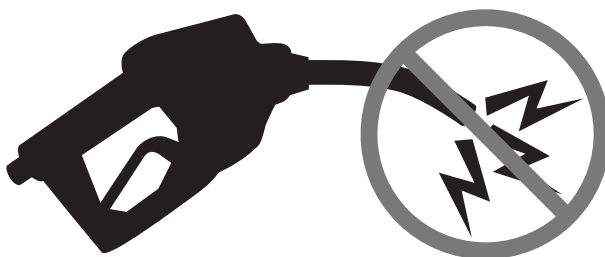
When fuel is stored for an extended period or if there is a slow turnover of fuel, add a fuel conditioner to stabilize the fuel. Keeping the free water drained and treating the bulk fuel storage tank quarterly with a maintenance dose of a biocide will prevent microbial growth. Contact your fuel supplier or John Deere dealer for recommendations.

DX,FUEL4-19-13JAN18

Avoid Static Electricity Risk When Refueling



RG22142—UN—17MAR14



RG21992—UN—21AUG13

The removal of sulfur and other compounds in Ultra-Low

Sulfur Diesel (ULSD) fuel decreases its conductivity and increases its ability to store a static charge.

Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

Static charges can build up in ULSD fuel while it is flowing through fuel delivery systems. Static electricity discharge when combustible vapors are present could result in a fire or explosion.

Therefore, it is important to ensure that the entire system used to refuel your machine (fuel supply tank, transfer pump, transfer hose, nozzle, and others) is properly grounded and bonded. Consult with your fuel or fuel system supplier to ensure that the delivery system is in compliance with fueling standards for proper grounding and bonding practices.

DX,FUEL,STATIC,ELEC-19-12JUL13

Fill Fuel Tank



TS202—UN—23AUG88

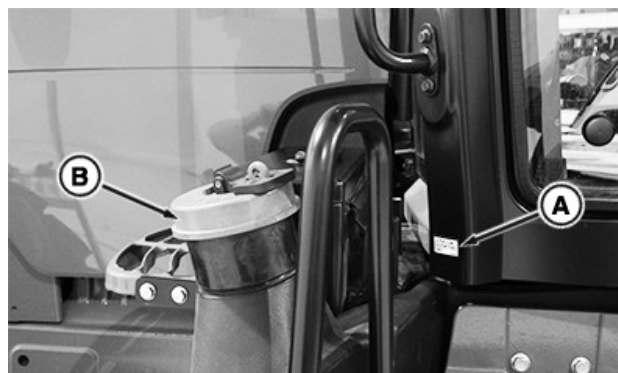
CAUTION: Handle fuel with care: It is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

IMPORTANT: To confirm which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

IMPORTANT: To prevent damage to tractor fuel injection system and other components, never put Diesel Exhaust Fluid (DEF) into fuel tank or fuel system.



RXA0151072—UN—25FEB16

IMPORTANT: For machines with Final Tier 4/Stage V engine, use only ultra low sulfur fuel as specified on decal (A). For other machines, see Diesel Fuel in this section of this Operator's Manual.

IMPORTANT: For machines with Final Tier 4/Stage V engine, best practice is to refill DEF tank each fuel tank is refilled to assure sufficient DEF is always available. See Refilling Diesel Exhaust Fluid (DEF) Tank in Diesel Exhaust Fluid (DEF) section of this Operator's Manual.

Watch fuel level. Low fuel indicator on corner post fuel display will flash when approximately 39 L (10 gal.) of fuel remains. Regardless of fuel level, fill fuel tank at end of each day to prevent condensation in tank.

Condensation can be produced when trapped moist air cools. Use fuel as specified for machine's engine.

To open fuel tank cap (B), lift latch lever and turn 90° counterclockwise, then lift fuel cap from filler neck. Replace and securely latch cap after fueling is complete.

RX32825,0000424-19-16JUL18

Testing Diesel Fuel

A fuel analysis program can help to monitor the quality of diesel fuel. The fuel analysis can provide critical data such as calculated cetane index, fuel type, sulfur content, water content, appearance, suitability for cold weather operations, bacteria, cloud point, acid number, particulate contamination, and whether the fuel meets ASTM D975 or equivalent specification.

Contact your John Deere dealer for more information on diesel fuel analysis.

DX,FUEL6-19-13JAN18

Fuel Filters

The importance of fuel filtration cannot be overemphasized with modern fuel systems. The combination of increasingly restrictive emission regulations and more efficient engines requires fuel

system to operate at much higher pressures. Higher pressures can only be achieved using fuel injection components with very close tolerances. These close manufacturing tolerances have significantly reduced capacities for debris and water.

John Deere brand fuel filters have been designed and produced specifically for John Deere engines.

To protect the engine from debris and water, always change engine fuel filters as specified in this manual.

DX,FILT2-19-14APR11

Diesel Exhaust Fluid (DEF)

Diesel Exhaust Fluid (DEF) — Use in Selective Catalytic Reduction (SCR) Equipped Engines

In order to maintain the emissions performance of the engine, it is essential to use and refill DEF in accordance with the specification.

Diesel exhaust fluid (DEF) is a high purity liquid that is injected into the exhaust system of engines equipped with selective catalytic reduction (SCR) systems. Maintaining the purity of DEF is important to avoid malfunctions in the SCR system. Engines requiring DEF shall use a product that meets the requirements for aqueous urea solution 32 (AUS 32) according to ISO 22241-1.

The use of John Deere Diesel Exhaust Fluid is recommended. John Deere Diesel Exhaust Fluid is available at your John Deere dealer in a variety of package sizes to suit your operational needs.

If John Deere Diesel Exhaust Fluid is not available, use DEF that is certified by the American Petroleum Institute (API) Diesel Exhaust Fluid Certification Program or by the AdBlue™ Diesel Exhaust Fluid Certification Program. Look for the API certification symbol or the AdBlue™ name on the container.



RG30211—UN—08MAR18

In some cases, DEF is referred to by one or more of these names:

- Urea
- Aqueous Urea Solution 32
- AUS 32
- AdBlue™
- NOx Reduction Agent
- Catalyst Solution

DX,DEF-19-13JAN18

Storing Diesel Exhaust Fluid (DEF)

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

Do not ingest DEF. In the event DEF is ingested, contact a physician immediately. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: It is unlawful to tamper with or remove any component of the aftertreatment system. Do not use DEF that does not meet the required specifications or operate the engine with no DEF.

Never attempt to create DEF by mixing agricultural grade urea with water. Agricultural grade urea does not meet the necessary specifications and can damage the aftertreatment system.

Do not add any chemicals or additives to DEF in an effort to prevent freezing. Any chemicals or additives added to DEF can damage the aftertreatment system.

Never add water or any other fluid in place of, or in addition to DEF. Operating with a modified DEF or using an unapproved DEF can damage the aftertreatment system.

The following storage information is provided for reference and is to be used as a guideline only.

It is preferred to store DEF out of extreme ambient temperatures. DEF freezes at -11°C (12°F). Exposure to temperatures greater than 30°C (86°F) can degrade DEF over time.

Dedicated DEF storage containers must be sealed between uses to prevent evaporation and contamination. Containers made of polyethylene, polypropylene, or stainless steel are recommended to transport and store DEF.

Ideal conditions for storage of DEF are:

- Store at temperatures between -5°C and 30°C (23°F and 86°F)
- Store in dedicated containers sealed to avoid contamination and evaporation

Under these conditions, DEF is expected to remain useable for a minimum of 18 months. Storing DEF at higher temperatures can reduce its useful life by approximately 6 months for every 5°C (9°F) temperature above 30°C (86°F).

If unsure how long or under what conditions DEF has been stored, test DEF. See Testing Diesel Exhaust Fluid (DEF).

Long-term storage in the DEF tank (over 12 months) is not recommended. If long-term storage is necessary, test DEF prior to operating engine. See Testing Diesel Exhaust Fluid (DEF).

AdBlue is a trademark of VDA, the German Association of the Automotive Industry.

It is recommended to purchase DEF in quantities that will be consumed within 12 months.

DX,DEF,STORE-19-13JUN13

Refilling Diesel Exhaust Fluid (DEF) Tank



TS1731—UN—23AUG13

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

Do not ingest DEF. In the event DEF is ingested, contact a physician immediately. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: Use only distilled water to rinse components that are used to deliver DEF. Tap water can contaminate DEF. If distilled water is not available, rinse with clean tap water, then thoroughly rinse with ample amounts of DEF.

If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

If DEF is filled into engine fuel tank or other fluid compartment, do not operate engine until system is properly purged of DEF. Contact your John Deere dealer immediately to determine how to clean and purge the system.

Reasonable care should be taken when refilling the DEF tank. Ensure that the DEF tank cap area is free of debris before removing the cap. Seal containers of DEF between use to prevent contamination and evaporation.

Avoid splashing DEF and do not allow DEF to come into contact with skin, eyes, or mouth.

DEF is not harmful to handle, but DEF can be corrosive to materials such as steel, iron, zinc, nickel, copper, aluminum, and magnesium. Use suitable containers to transport and store DEF. Containers made of polyethylene, polypropylene, or stainless steel are recommended.

Avoid prolonged contact with skin. In case of accidental contact, wash skin immediately with soap and water.

Keep anything used to store or dispense DEF clean of dirt and dust. Wash and rinse containers or funnels thoroughly with distilled water to remove contaminants.

If an unapproved fluid, such as diesel fuel or coolant is added to the DEF tank, contact your John Deere dealer immediately to determine how to clean and purge the system.

If water has been added to the DEF tank, a tank cleaning is necessary. See Cleaning DEF Tank in this manual. After refilling the tank, check the DEF concentration. See Testing Diesel Exhaust Fluid (DEF).

The operator must maintain appropriate DEF levels at all times. Check the DEF level daily and refill the tank as needed. A typical engine with EGR will consume approximately 40:1 Fuel:DEF and without EGR 15:1 Fuel:DEF (by volume). The filling port is identified by a blue colored cap embossed with the DEF symbol, shown.

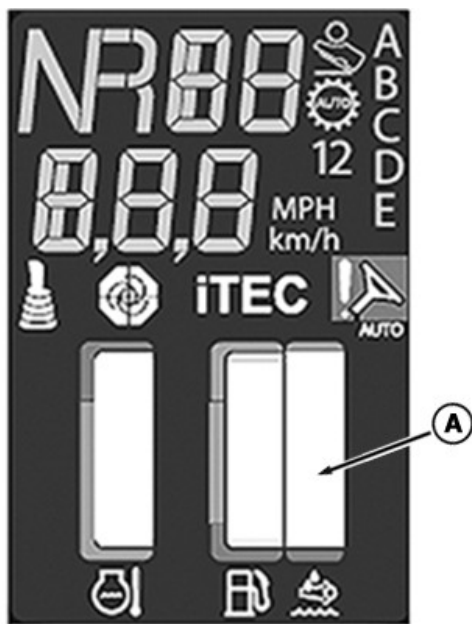
DX,DEF,REFILL-19-13JAN18

Fill DEF Tank - FT4/Stage V Engine

CAUTION: DEF contains urea. Do not get the substance in eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Do not take internally. In event DEF is ingested, contact a physician immediately. Reference Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: To determine tractor engine type, see Engine Serial Number in Identification Numbers Section of this Operator's Manual.

IMPORTANT: Never put DEF in diesel fuel tank, or diesel fuel in DEF tank.



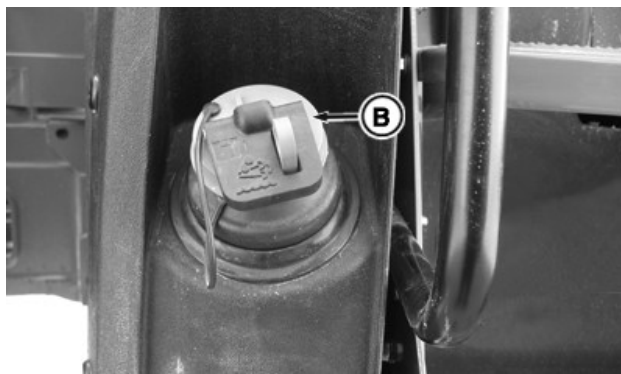
RXA0152773—UN—13JUL16

To avoid drastic changes in tractor performance, always keep DEF level above topmost red mark on cornerpost display (A). Monitor DEF level on cornerpost display and refill as necessary. Refill DEF tank every time tractor is refueled. See Diesel Exhaust Fluid (DEF) — Use in Selective Catalytic Reduction (SCR) Equipped Engines in this section of this Operator's Manual.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and may distort some plastic and rubber components.

To fill DEF tank:

1. Before using containers, funnels, etc. to dispense DEF, wash and rinse items thoroughly with distilled water to remove contaminants.

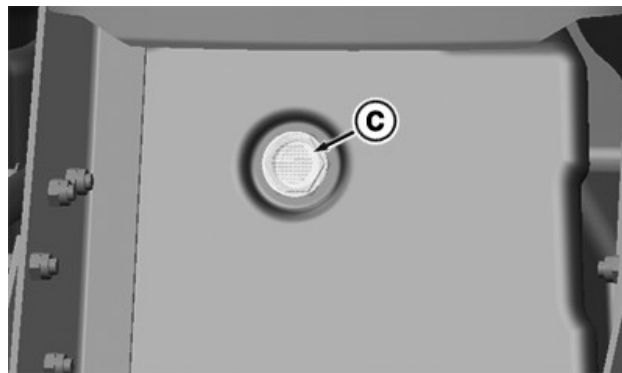


RXA0133405—UN—28JUN13

2. Wipe DEF tank filler cap (B), area around cap and filler neck to reduce chance of contaminating DEF.
3. Lift DEF tank cap latch lever and turn cap 90° counterclockwise.
4. Lift cap from filler neck.

IMPORTANT: Avoid overfilling DEF tank.

Completely filling DEF tank at lower temperatures can cause a blockage in filler neck. If temperatures are expected to reach below -11°C (12°F), do not fill DEF tank more than half way according to DEF level display on corner post. Observe temperature guidelines to assure ability to refill tank.



RXA0143405—UN—10JUL14

5. Using funnel, carefully fill DEF tank. DO NOT over fill DEF tank. While filling, watch DEF sight gauge (C). When DEF is at bottom of gauge, it will take one second to reach top of sight gauge with a high flow (30 L/min.) rate. Best final fill level is determined by ambient air temperature guide:

- Ambient air temperature at or above -11° C (12° F): Completely fill tank.
- Ambient air temperature below -11° C (12° F): Keep fill tank level below the filler neck. Although main portion of DEF tank is heated to keep DEF from freezing, filler neck is not heated. Fluid in neck may freeze, preventing refill DEF tank until fluid melts.

6. Replace and securely latch DEF tank cap. Cap can be locked with a padlock.

7. Carefully clean any spills, using clean (preferably distilled) water.

If an unapproved fluid, such as diesel fuel, or engine coolant is added to vehicle DEF tank, see Diesel Exhaust Fluid (DEF) Tank in Service - Clean section of this Operator's Manual.

RX32825,000179A-19-16JUL18

Testing Diesel Exhaust Fluid (DEF)

IMPORTANT: Using DEF with the correct concentration is critical to engine and aftertreatment system performance. Extended storage and other conditions can adversely alter the DEF concentration.

If DEF quality is questionable, draw a sample out of the

DEF tank or storage tank into a clear container. DEF must be crystal clear with a light ammonia smell. If DEF appears cloudy, has a colored tint, or has a profound ammonia smell, it is likely not within specification. DEF in this condition should not be used. Drain tank, flush with distilled water and refill with new or good DEF. After refilling the tank, check the DEF concentration.

If the DEF passes the visual and smell test, check the DEF concentration with a handheld refractometer calibrated to measure DEF.

DEF concentration should be checked when the engine has been stored for extended periods, or if there is suspicion the engine or packaged DEF fluid has been contaminated with water.

Two approved tools are available through your John Deere dealer:

- JDG11594 Digital DEF Refractometer—A digital tool providing an easy to read concentration measurement
- JDG11684 DEF Refractometer—Low-cost alternative tool providing an analog reading

Follow instructions included with either tool to obtain the measurement.

The correct DEF concentration is 31.8—33.2% urea. If the DEF concentration is not within specification, drain the DEF tank, flush with distilled water and fill with new or good DEF. If packaged DEF is not within specification, dispose of DEF packages and replace with new or good DEF.

DX,DEF,TEST-19-13JUN13

Disposal of Diesel Exhaust Fluid (DEF)

Although there is little issue with minor spillage of DEF on the ground, large amounts of DEF should be contained. If large spills occur, contact local environmental authorities for assistance with clean-up.

If a substantial quantity of DEF is not within specification, contact the DEF supplier for assistance with disposal. Do not dump substantial quantities of DEF onto the ground or send DEF to wastewater treatment facilities.

DX,DEF,DISPOSE-19-13JUN13

Engine Oil

Diesel Engine Oil Service Interval for Operation at High Altitude

To avoid excessive oil degradation and potential engine damage, reduce oil and filter service intervals to 50% of the original recommended values when operating engines at altitudes above **1675 m (5500 ft)**.

Oil analysis may allow longer service intervals.

Use only approved oil types.

Example of Original Hours	Corresponding High Altitude Hours
125	60
150	75
175	85
200	100
250	125
275	135
300	150
350	175
375	185
400	200
500	250

DX,ENOIL,SERV,HIALT-19-11NOV14

John Deere Break-In Plus™ Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, Stage IV, and Stage V

New engines are filled at the factory with John Deere Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In Plus™ Engine Oil, as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

During the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and maximum equal to the interval specified for John Deere Plus-50™ II oil.

After engine overhaul, fill the engine with John Deere Break-In Plus™ Engine Oil.

If John Deere Break-In Plus™ Engine Oil is not available, use an SAE 10W-30 viscosity grade diesel engine oil meeting one of the following:

- API Service Category CK-4
- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

If one of these oils is used during the initial operation of a

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new or rebuilt engine, change the oil and filter between a minimum of 100 hours and a maximum of 250 hours.

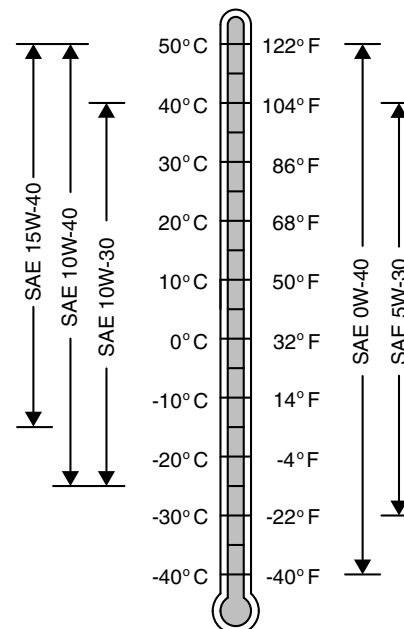
IMPORTANT: Do not use any other engine oils during the initial break-in of a new or rebuilt engine.

John Deere Break-In Plus™ Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

After the break-in period, use John Deere Plus-50™ II or other diesel engine oil as recommended in this manual.

DX,ENOIL16-19-13JAN18

Diesel Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, Stage IV, and Stage V



TS1691—UN—18JUL07

Oil Viscosities for Air Temperature Ranges

Failure to follow applicable oil standards and drain intervals can result in severe engine damage that might not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere oils, parts, or service.

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere Plus-50™ II is the recommended engine oil.

Extended service intervals may apply when John Deere Plus-50™ II engine oil is used. Refer to the engine oil drain interval table and consult your John Deere dealer for more information.

If John Deere Plus-50™ II engine oil is not available,

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engine oil meeting one or more of the following may be used:

- API Service Category CK-4
- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

DO NOT use engine oil containing more than 1.0% sulfated ash, 0.12% phosphorus, or 0.4% sulfur.

Multi-viscosity diesel engine oils are preferred.

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

IMPORTANT: Use only ultra low sulfur diesel (ULSD) fuel with a maximum sulfur content of 15 mg/kg (15 ppm).

DX,ENOIL14-19-14JAN18

Engine Oil and Filter Service Intervals — Interim Tier 4, Final Tier 4, Stage IIIB, Stage IV, and Stage V Engines

Failure to follow applicable oil standards and drain intervals can result in severe engine damage that might not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere oils, parts, or service.

Recommended oil and filter service intervals are based on a combination of oil pan capacity, type of engine oil and filter used, and sulfur content of the diesel fuel. Actual service intervals also depend on operation and maintenance practices.

Approved Oil Types:

- John Deere Plus-50™ II
- “Other Oils” include API CK-4, API CJ-4, ACEA E9, and ACEA E6

Use oil analysis to evaluate the condition of the oil and to aid in selection of the proper oil and filter service interval. Contact your John Deere dealer or other qualified service provider for more information on engine oil analysis.

Change the oil and oil filter at least once every 12 months even if the hours of operation are fewer than the otherwise recommended service interval.

Diesel fuel sulfur content affects engine oil and filter service intervals. Higher fuel sulfur levels reduce oil and filter service intervals.

Use of diesel fuel with sulfur content less than 15 mg/kg (15 ppm) is REQUIRED.

Engine operation at high altitude decreases oil change intervals. See Diesel Engine Oil Service Interval for Operation at High Altitude for additional information.

NOTE: The 500 hour extended oil and filter change interval is only allowed if all of the following conditions are met:

- Use of diesel fuel with sulfur content less than 15 mg/kg (15 ppm)
- Use of John Deere Plus-50™ II oil
- Use of an approved John Deere oil filter

Engine Oil and Filter Service Intervals	
John Deere Plus-50™ II	500 hours
Other Oils	250 hours
Oil analysis may extend the service interval of “Other Oils” to a maximum not to exceed the interval of Plus-50™ II oils. Oil analysis means taking a series of oil samples at 50-hour increments beyond the normal service interval until either the data indicates the end of useful oil life or the maximum service interval of John Deere Plus-50 II oils is reached.	

IMPORTANT: To avoid engine damage:

- Reduce oil and filter service intervals by 50% when using biodiesel blends greater than B20. Oil analysis may allow longer service intervals.
- Use only approved oil types.

DX,ENOIL15,IT4,120toMAX-19-13JAN18

Engine Coolant

Diesel Engine Coolant (engine with wet sleeve cylinder liners)

Failure to follow applicable coolant standards and drain intervals can result in severe engine damage that may not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere coolants, parts or service.

Preferred Coolants

Failure to follow applicable coolant standards and drain intervals can result in severe engine damage that may not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere coolants, parts, or service.

The following pre-mix engine coolants are preferred:

- John Deere COOL-GARD™ II
- John Deere COOL-GARD II PG

COOL-GARD II pre-mix coolant is available in several concentrations with different freeze protection limits as shown in the following table.

COOL-GARD II Pre-Mix	Freeze Protection Limit
COOL-GARD II 20/80	-9°C (16°F)
COOL-GARD II 30/70	-16°C (3°F)
COOL-GARD II 50/50	-37°C (-34°F)
COOL-GARD II 55/45	-45°C (-49°F)
COOL-GARD II PG 60/40	-49°C (-56°F)
COOL-GARD II 60/40	-52°C (-62°F)

Not all COOL-GARD II pre-mix products are available in all countries.

Use COOL-GARD II PG when a non-toxic coolant formulation is required.

Additional Recommended Coolants

The following engine coolant is also recommended:

- John Deere COOL-GARD II Concentrate in a 40—60% mixture of concentrate with quality water.

IMPORTANT: When mixing coolant concentrate with water, do not use less than 40% or greater than 60% concentration of coolant. Less than 40% gives inadequate additives for corrosion protection. Greater than 60% can result in coolant gelation and cooling system problems.

Other Coolants

Other ethylene glycol or propylene glycol base coolants may be used if they meet the following specification:

- Pre-mix coolant meeting ASTM D6210 requirements
- Are nitrite-free

COOL-GARD is a trademark of Deere & Company

- Coolant concentrate meeting ASTM D6210 requirements in a 40—60% mixture of concentrate with quality water

If coolant meeting one of these specifications is unavailable, use a coolant concentrate or pre-mix coolant that has a minimum of the following chemical and physical properties:

- Provides cylinder liner cavitation protection according to either the John Deere Cavitation Test Method or a fleet study run at or above 60% load capacity
- Is formulated with a nitrite-free additive package
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

Water Quality

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

Coolant Drain Intervals

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

When COOL-GARD II or COOL-GARD II PG is used, the drain interval is 6 years or 6000 hours of operation.

If a coolant other than COOL-GARD II or COOL-GARD II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.¹

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

Do not mix ethylene glycol and propylene glycol base coolants.

Do not use coolants that contain nitrites.

DX, COOL3-19-13JAN18

John Deere COOL-GARD™ II Coolant Extender

Some coolant additives gradually deplete during engine operation. For COOL-GARD™ II pre-mix and COOL-GARD II Concentrate, replenish coolant additives between drain intervals by adding COOL-GARD II Coolant Extender.

COOL-GARD is a trademark of Deere & Company

¹ Coolant analysis may extend the service interval of other "Coolants" to a maximum not to exceed the interval of Cool-Gard II coolants. Coolant analysis means taking a series of coolant samples at 1000 hour increments beyond the normal service interval until either the data indicate the end of useful coolant life or the maximum service interval of Cool-Gard II is reached.

COOL-GARD II Coolant Extender should not be added unless indicated by COOL-GARD II Test Strips. These test strips provide a simple, effective method to check the freeze point, additive levels, and pH of your engine coolant.

Test the coolant solution at intervals of 12 months and whenever excessive coolant is lost through leaks or overheating.

IMPORTANT: Do not use COOL-GARD II Test Strips with COOL-GARD II PG.

COOL-GARD II Coolant Extender is a chemically matched additive system for use with all COOL-GARD II coolants. COOL-GARD II Coolant Extender is not intended for use with nitrite-containing coolants.

IMPORTANT: Do not add a supplemental coolant additive when the cooling system is drained and refilled with any of the following:

- John Deere COOL-GARD II
- John Deere COOL-GARD II PG

The use of non-recommended supplemental coolant additives can result in additive drop-out, gelation of the coolant, or corrosion of cooling system components.

Add the recommended concentration of COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

DX,COOL16-19-15MAY13

Operating in Warm Temperature Climates

John Deere engines are designed to operate using recommended engine coolants.

Always use a recommended engine coolant, even when operating in geographical areas where freeze protection is not required.

IMPORTANT: Water may be used as coolant in emergency situations only.

Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation occur when water is used as the coolant, even when coolant conditioners are added.

Drain cooling system and refill with recommended engine coolant as soon as possible.

DX,COOL6-19-15MAY13

Water Quality for Mixing with Coolant Concentrate

Engine coolants are a combination of three chemical

components: ethylene glycol (EG) or propylene glycol (PG) antifreeze, inhibiting coolant additives, and quality water.

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

All water used in the cooling system should meet the following minimum specifications for quality:

Chlorides	<40 mg/L
Sulfates	<100 mg/L
Total solids	<340 mg/L
Total dissolved hardness	<170 mg/L
pH	5.5—9.0

IMPORTANT: Do not use bottled drinking water because it often contains higher concentrations of total dissolved solids.

Freeze Protection

The relative concentrations of glycol and water in the engine coolant determine its freeze protection limit.

Ethylene Glycol	Freeze Protection Limit
40%	-24°C (-12°F)
50%	-37°C (-34°F)
60%	-52°C (-62°F)
Propylene Glycol	Freeze Protection Limit
40%	-21°C (-6°F)
50%	-33°C (-27°F)
60%	-49°C (-56°F)

DO NOT use a coolant-water mixture greater than 60% ethylene glycol or 60% propylene glycol.

DX,COOL19-19-13JAN18

Testing Coolant Freeze Point



TS1732—UN—04SEP13

SERVICEGARD™ Part Number 75240

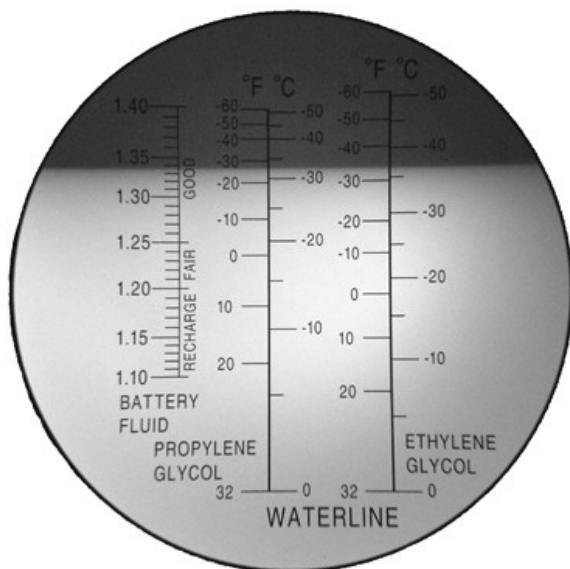


Image with a Drop of 50/50 Coolant Placed on the Refractometer Window
TS1733—UN—04SEP13

The use of a handheld coolant refractometer is the quickest, easiest, and most accurate method to determine coolant freeze point. This method is more accurate than a test strip or a float-type hydrometer which can produce poor results.

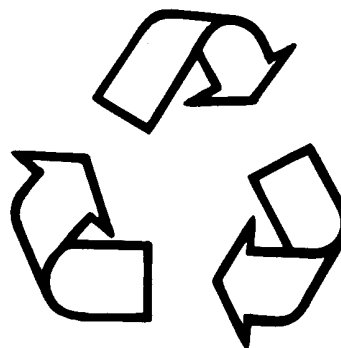
A coolant refractometer is available through your John Deere dealer under the SERVICEGARD™ tool program. Part number 75240 provides an economical solution to accurate freeze point determination in the field.

To use this tool:

1. Allow cooling system to cool to ambient temperatures.
2. Open radiator cap to expose coolant.
3. With the included dropper, collect a small coolant sample.
4. Open the lid of the refractometer, place one drop of coolant on the window and close the lid.
5. Look through the eyepiece and focus as necessary.
6. Record the listed freeze point for the type of coolant (ethylene glycol coolant or propylene glycol) being tested.

DX,COOL,TEST-19-13JUN13

Disposing of Coolant



Recycle Waste

TS1133—UN—15APR13

Improperly disposing of engine coolant can threaten the environment and ecology.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere engine distributor or servicing dealer.

RG,RG34710,7543-19-26APR18

Other Lubricants

Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

DX,LUBST-19-11APR11

Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your John Deere dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to John Deere branded fluids or fluids that have been tested and/or approved for use in John Deere equipment.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER-19-13JAN18

Mixing of Lubricants

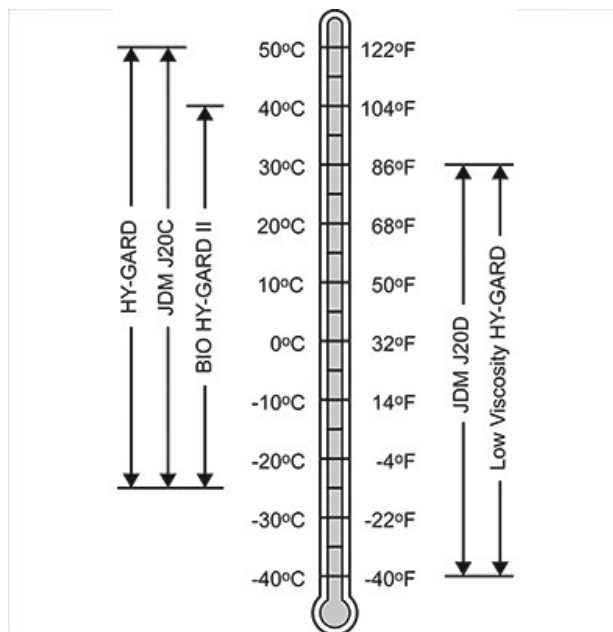
In general, avoid mixing different brands or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance requirements.

Mixing different oils can interfere with the proper functioning of these additives and degrade lubricant performance.

Consult your John Deere dealer to obtain specific information and recommendations.

DX,LUBMIX-19-18MAR96

Transmission and Hydraulic Oil



Oils for Air Temperature Ranges

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere Hy-Gard™
- John Deere Low Viscosity Hy-Gard™

Other oils may be used if they meet one of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

Use John Deere Bio Hy-Gard™ II oil when a biodegradable fluid is required.¹

DX,ANTI-19-01JAN18

Use Correct Viscosity Front PTO Oil in Cold Weather

⚠ CAUTION: Avoid personal injury. Keep PTO area clear of bystanders. PTO shaft or attached implement may rotate prior to engine start in cold weather.

When air temperatures are expected to drop below -5° C

*Hy-Gard is a trademark of Deere & Company
Bio Hy-Gard is a trademark of Deere & Company*

¹ Bio Hy-Gard II meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC-L-33-T-82 test method. Bio Hy-Gard II should not be mixed with mineral oils, because this reduces the biodegradability and makes proper oil recycling impossible.

(23° F), use John Deere Low Viscosity HY-GARD™ oil in the self contained front PTO reservoir.

Other oils can be used if they meet John Deere Standard JDM J20D.

RX32825,000179B-19-22NOV16

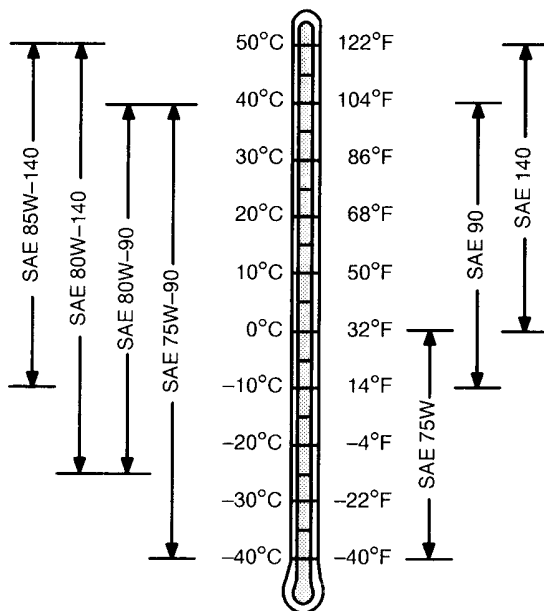
Transmission Recalibration

Tractor transmission is factory filled with John Deere Hy-Gard™ oil.

When changing transmission/hydraulic oil from one viscosity to another, transmission electronic control unit may need to be recalibrated in order to maintain smooth shifting characteristics. See your John Deere dealer.

RX32825,000179C-19-22NOV16

Gear Oil



TS1653—UN—14MAR96

Oil Viscosities for Air Temperature Ranges

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere GL-5 Gear Lubricant

Hy-Gard is a trademark of Deere & Company
Hy-Gard is a trademark of Deere & Company

- John Deere EXTREME-GARD™

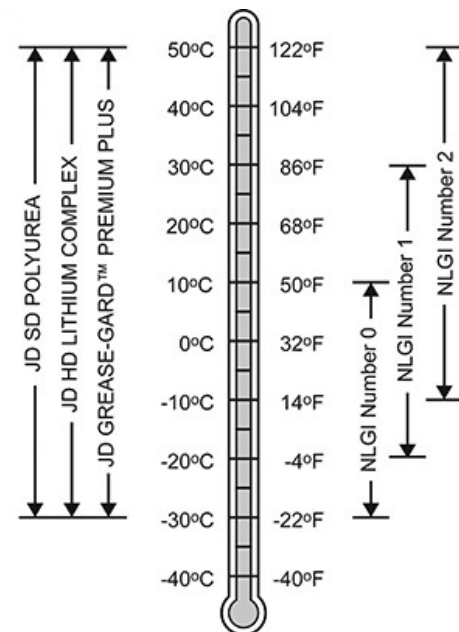
Other oils may be used if they meet the following:

- API Service Category GL-5

DX, GEOIL-19-14APR11

Multipurpose Extreme Pressure (EP) Grease

IMPORTANT: For automated lubrication systems different ambient air temperatures need to be considered.



RG30199—UN—08MAR18

Greases for Air Temperature Ranges

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

John Deere SD Polyurea Grease is preferred.

The following greases are also recommended:

- John Deere HD Lithium Complex Grease
- John Deere Grease-Gard™ Premium Plus

Other greases may be used if they meet the following:

- NLGI Performance Classification GC-LB
- ISO-L-X-BDHB 2 or DIN KP 2 N-10 Lithium Complex, Non-Synthetic Base Oil (100 to 220 mm²/s @ 40°C)

EXTREME-GARD is a trademark of Deere & Company
Grease-Gard is a trademark of Deere & Company

IMPORTANT: Some types of thickeners, base oils, and additives used in greases are not compatible with others. Mixing greases should be avoided. Consult your grease supplier before mixing different types of grease.

DX,GREA1-19-13JAN18

Service - General Information

Service Sections Overview

 **CAUTION:** Avoid personal injury. After completing any service procedure, reinstall any shields or covers that have been removed and close and securely latch hood.

IMPORTANT: This publication is not a detailed service manual. Procedures shown cover routine maintenance and service. For more detailed service information, purchase a Technical Manual through your John Deere dealer.

IMPORTANT: Recommended service intervals are for average conditions. Service more often if tractor is operated under adverse conditions.

Service sections provide information on service processes and procedures.

Fuel, Lubrication, and Coolants Sections:

Information on approved fluids for operation and service. Also included are guides to selection of correct service intervals for such procedures as engine oil refill.

Break-In Service: Perform listed services during first 100 hours of operation.

Engine Oil and Filter Change: Acceptable engine oils based on emissions configuration of tractor engine. Indicate which oil was used for refill and complete data block at each service.

Annual Service: Services listed are performed annually or at some multiple of years. Complete service and data block.

As Required Service: Complete records for services and repairs that are performed at other than regular service intervals.

Daily or 10 Hour and 50 Hour Services: Perform these services every day or every 10 hours and every 50 hours. Forms do not include check boxes. All services listed for these intervals are included on hourly service interval charts.

Hourly Interval Services: Charts are provided based on standard service intervals. Tasks on charts match organization of service procedure sections (example: Service – Clean). Individual service procedures are grouped within these sections (example: Dual Beam Radar Sensor).

When listed operating hours have elapsed, stop tractor as soon as practical and complete all listed services. Check off services as completed.

Engine hour meter can be used to signal time to perform these services. Meter operates whenever engine is running and shows actual accumulated hours of engine operation. Engine hour meter is factory set to 250 hours, but can be reset to any desired elapsed time, see

Service Intervals in CommandCenter™ section of this Operator's Manual.

Master charts are provided for service interval of up to 6000 hours. An additional set of charts allow recording services beyond 6000 hours.

Service Procedure Sections: Various scheduled and unscheduled service procedures are organized by procedure type within six sections. Appropriate Service sections and task names are referenced in Service Record Charts (example: Change: Engine Oil and Filter). Electrical section includes all service information for lighting, fuses, and relays.

Troubleshooting Sections: Procedural troubleshooting is provided, as well as information on dealing with Diagnostic Trouble Codes (DTCs) that may display on the CommandCenter™.

RX32825,0001756-19-11APR18

Service Tasks Performed As Required

IMPORTANT: Perform service tasks when instruments or tractor function indicates they are required, even if at a time other than specified in Service Interval charts.

Occasionally, operating conditions may require a scheduled service to be performed sooner than indicated on Service Interval charts (for example, air filters). When such a task is performed, record its completion in an As Required Service chart.

RX32825,00017C6-19-04JAN17

Identify Tractor Engine Emissions Status

IMPORTANT: To determine tractor engine type, see Engine Serial Number in Identification Number Section of this Operator's Manual.

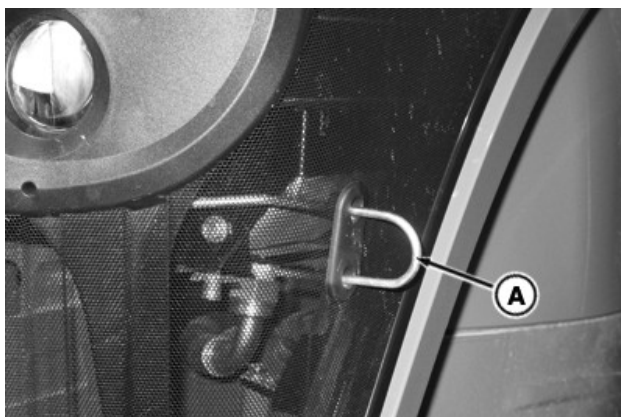
Some service procedures differ depending upon emissions equipment with which tractor engine is equipped.

RX32825,0001764-19-14DEC16

Open Hood

 **CAUTION:** Avoid injury. Close and latch hood securely before starting engine.

CommandCenter is a trademark of Deere & Company



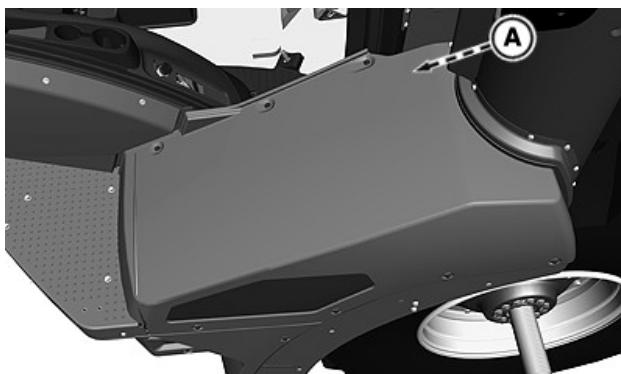
RXA0133488—UN—02JUL13

Pull hood release (A) and raise hood.

KT81203,0000636-19-23JAN17

Diesel Particulate Filter Service

IMPORTANT: Using incorrect or unapproved aftertreatment components can cause damage to vehicle's aftertreatment system and reduce ability of aftertreatment system to function correctly. Never interchange aftertreatment components between Interim Tier 4/Stage III B and vehicles equipped with other aftertreatment systems.



RXA0142544—UN—17JUN14

DPF Filter At Base Of Exhaust Pipe

Exhaust Filter includes Diesel Oxidation Catalyst (DOC) and Diesel Particulate Filter (DPF) (A). DPF is designed to retain residual ash, which is a noncombustible result of additives used in crankcase lubrication oils and the fuel. DPF provides many hours of maintenance free operation. At some point DPF will require professional service to remove accumulated ash. The exact number of hours of operation before service is required will vary depending upon engine's power category, duty cycle and operating conditions, engine oil ash content, and fuel quality. Adhering to John Deere's recommended oil and fuel specifications will maximize the hours of operation before professional DPF service is required.

As engine owner, you are responsible for performing the

required maintenance described in your Operator's Manual. During normal equipment operation DPF maintenance requirements will depend on rate at which ash accumulates in it. As ash levels rise in DPF capacity for soot storage is reduced and the back pressure of the exhaust system will rise more frequently. The dash lamp indicator or diagnostic gauge will indicate when the DPF needs servicing.

Removal of DPF ash must be done by removing DPF from machine and placing it into specialized equipment. Do not remove ash by using water or other chemicals. Removing ash by these methods may damage the material securing the DPF in its canister, resulting in the loosening of the DPF element in the canister and subjecting it to damage from vibration.

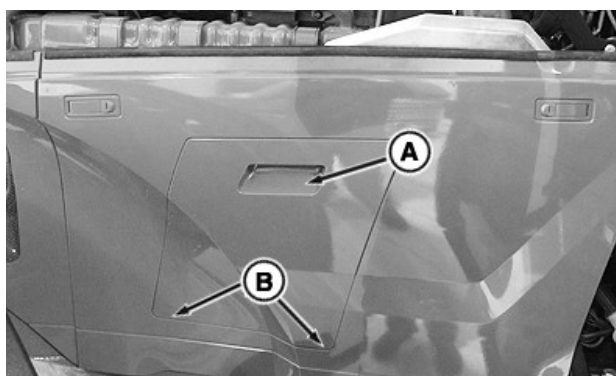
Failure to follow approved ash removal methods may violate U.S. federal, state and local hazardous waste laws, along with damage to DPF resulting in potential denial of the emissions warranty. It is strongly recommended you take the DPF to an authorized John Deere service location or other qualified service provider for servicing.

CAUTION: Avoid fire or injury. Disable exhaust filter cleaning in conditions where it may be unsafe for elevated exhaust temperatures.

Disable automatic exhaust filter cleaning only when necessary.

SV81855,0000165-19-08AUG17

Remove Engine Access Panel



RXA0134202—UN—13AUG13

Engine access panel is located within left-hand engine side shield. It allows access to the engine oil dipstick.

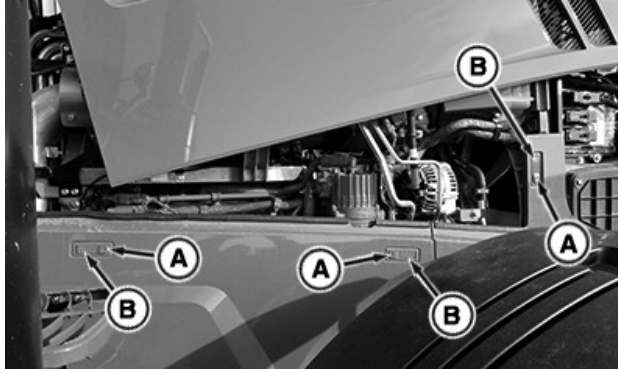
Use hand grip recess (A) and pull outward on panel. Lift panel from alignment tabs along panel bottom edge (B). Panel is secured to tractor with a wire cable.

RX32825,0001758-19-02NOV16

Remove Engine Side Shields

Remove engine side shield on either side of engine for access to most engine components.

1. Open hood, see Open Hood in this Operator's Manual section.



RXA0162808—UN—11APR18

Turn side shield latch lock (A) clockwise 90 degrees.

3. Depress latch buttons (B).
4. Lift shield from alignment brackets within engine compartment.

CAUTION: Never start engine without side shields installed and hood securely closed and latched.

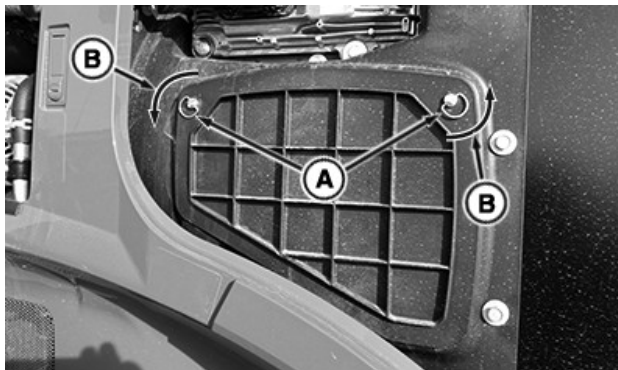
5. Before starting engine, replace shields and secure and lock latch buttons. Securely close hood.

RX32825,0001765-19-18APR18

Remove Radiator Shields

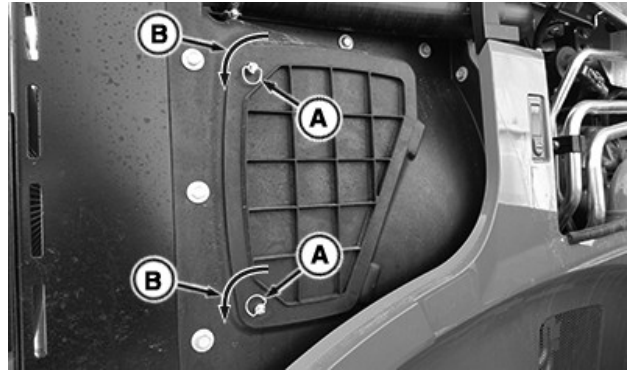
Remove radiator shield on either side of engine for access to area between rear of cooling package and fan..

1. Open hood, see Open Hood in this Operator's Manual section.



RXA0162810—UN—11APR18

Right-Hand Radiator Shield



RXA0162809—UN—11APR18

Left-Hand Radiator Shield

Raise latch loops (A) and twist 90 degrees counterclockwise (B).

3. Pivot shield outward and remove.
4. When work is completed, reinstall shields. Push latch loops flush with shield surface.

CAUTION: Never start engine without hood securely closed and latched.

5. Before starting engine, securely close hood.

RX32825,0001766-19-18APR18

Remove Battery Compartment Cover



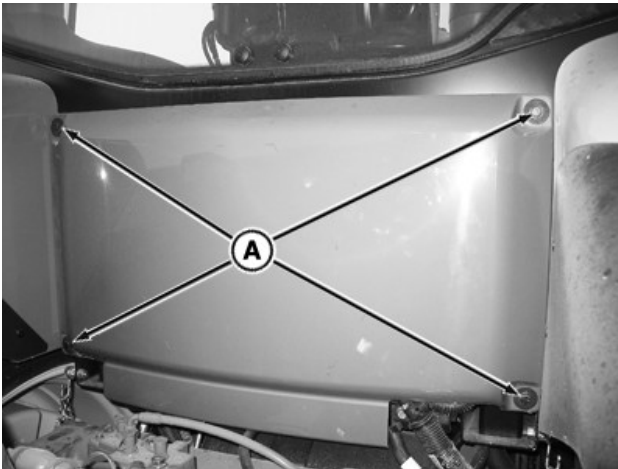
RXA0133316—UN—25JUN13

Remove battery compartment cover to access batteries, connections, and cables.

Grasp handle (A) and pull forward and upward to remove battery compartment cover. Strong magnets hold cover in place.

RX32825,0001759-19-02NOV16

Remove Cab Rear Panel



RXA0110047—UN—26AUG10

Remove cab rear panel to access implement power relay module and fuel tank vent filter.

Remove cap screws (A) and lift rear panel from cab.

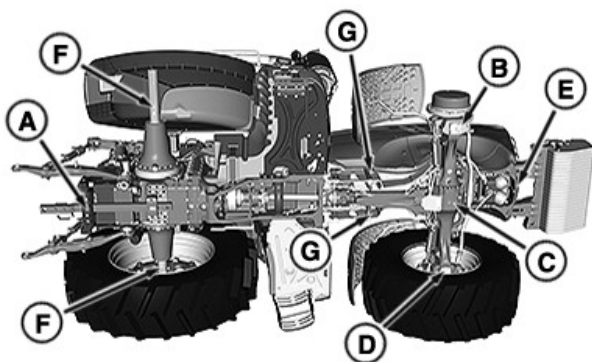
RX32825,000175A-19-02NOV16

Jack Up Tractor - Lifting Points and Support Stand Placement

CAUTION: Use approved lifting equipment only.
Jack up tractor on firm, level ground only.
Before doing any further work on tractor, secure it using suitable support stands.

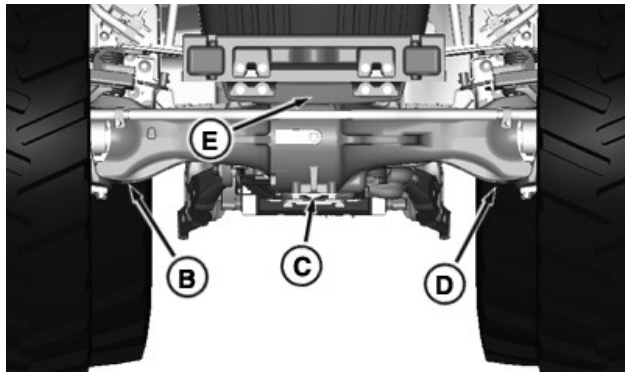
Special John Deere tools shown can be used for this purpose. Support stands are available from your John Deere dealer.

Recommended lifting points for jacking up tractor. Use appropriate and suitable lifting device.



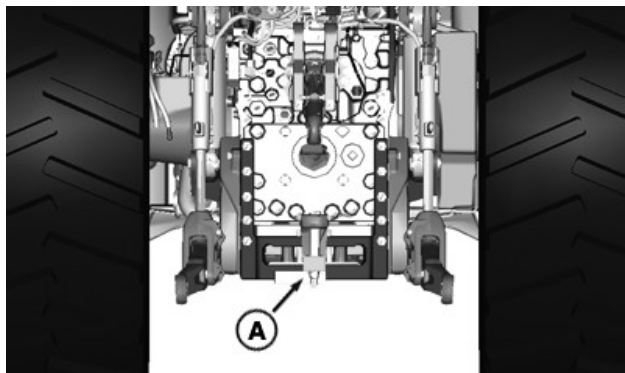
RXA0154546—UN—05OCT16

Underside View, Lift Points/Support Stand Placement



RXA0126239—UN—04MAY12

Front Lift Points



RXA0126241—UN—04MAY12

Rear Lift Point

A— Raise rear of tractor (Example: to remove rear wheel)

B— Raise right-hand end of front axle (Example: to remove right-hand front wheel)

C— Raise center of axle (Use wooden wedges to prevent axle from pivoting)

D— Raise left-hand end of front axle (Example: to remove left-hand front wheel)

CAUTION: Never attempt to lift tractor using front weights or front weight support.

E— Raise front end of tractor under front frame

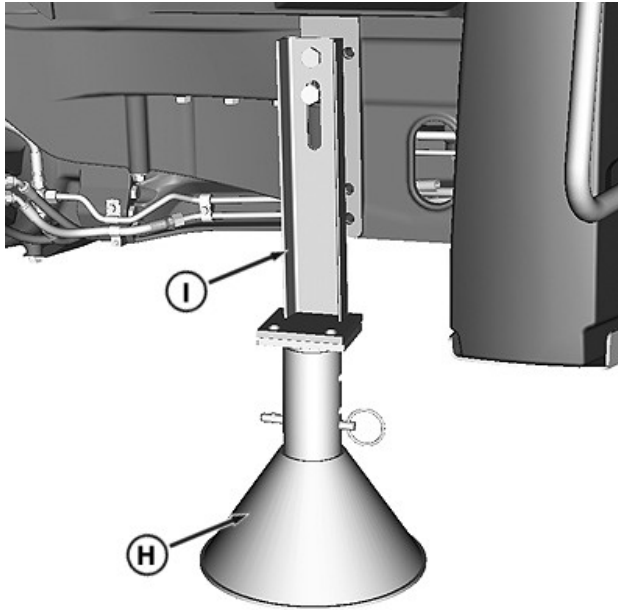
F— Rear axle support stand placement

G— Chassis side support stand placement

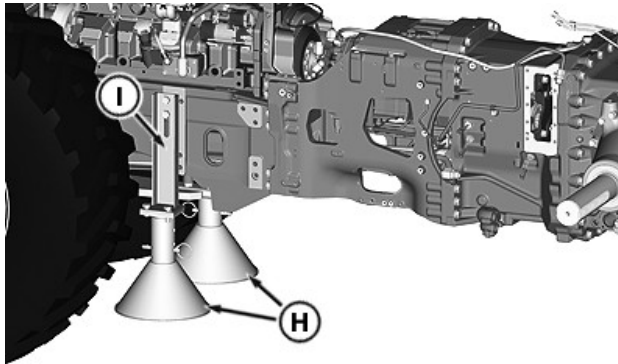
1. Disconnect battery ground cable. See Batteries and Connections in Service - Electrical section of this Operator's Manual.

CAUTION: Avoid personal injury. Always use appropriate equipment to install, change, or uninstall weights. If appropriate equipment is not available, have job performed by your John Deere dealer.

2. Remove front weights or front hitch, if equipped.



RXA0154548—UN—05OCT16



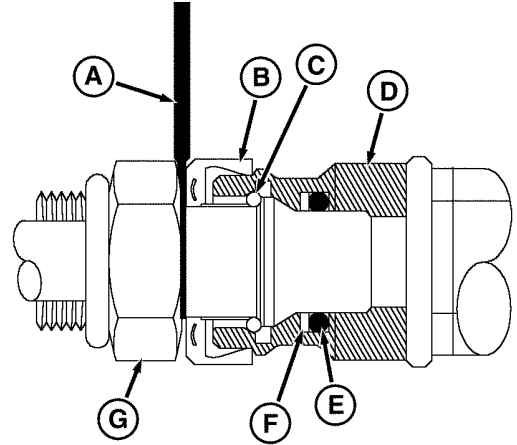
RXA0154549—UN—06OCT16

3. Raise front of tractor and install JT07211 Rear Differential Support Stand (H) with KJD10539 Support Stand Adapter (I) using M20 x 40 mm (10.9 grade) cap screws to both sides of tractor.

TS36762,0000038-19-06SEP17

Service and Connect STC® (Snap-to-Connect) Fittings

CAUTION: Do not disconnect STC® (Snap-to-Connect) fitting when under pressure. Failure to relieve pressure before disconnecting fitting may result in personal injury, damage to equipment or both.



RXA0080095—UN—31MAR05

STC® fittings are used on steel lines, hose connections and come in a variety of sizes. JDG1885 STC® tool (A) is designed as a spacer to move release ring (B) inward which releases retaining ring (C). Purchase tool from your John Deere dealer.

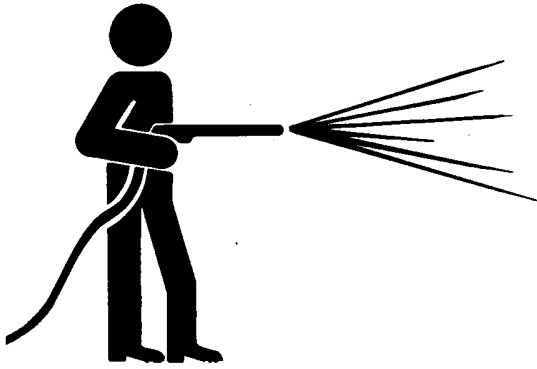
IMPORTANT: Do not use tool to pry fittings apart. Prying with tool may damage fitting and tool.

NOTE: If retaining ring, backup ring (F) or O-ring (E) are damaged, see your John Deere dealer for replacement kit and replace all three parts.

1. Insert correct STC® tool between release ring and fitting.
2. Remove hose or line from connector.
3. Before connecting STC® fitting, check mating surfaces for nicks, scratches or flat spots.
4. Check O-ring, backup ring and retaining ring for wear or damage.
5. Check that female end (D) and male end (G) are clean and free of contaminants.
6. Place release ring on male end fitting.
7. Push fitting halves together until a definite snap and solid stop is felt.
8. Pull back on hose to make sure that fitting halves are locked together.

RX32825,000175C-19-16JUN17

High-Pressure Washer Use

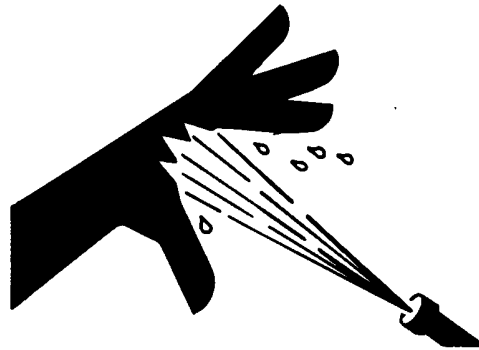


T6642EJ—UN—18OCT88

IMPORTANT: Avoid damage to components. Never aim pressurized water spray directly at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps, exhaust outlet, tank fill openings, or other sensitive parts and components. Reduce pressure and spray at a 45 to 90 degree angle.

RX32825,000175D-19-01NOV16

Do Not Open High-Pressure Fuel System



TS1343—UN—18MAR92

High-pressure fluid remaining in fuel lines can cause serious injury. Do not disconnect or attempt repair of fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system.

Only technicians familiar with this type of system can perform repairs. (See your John Deere dealer.)

DX,WW,HPCR1-19-07JAN03

Do Not Modify Fuel System

IMPORTANT: Increasing horsepower, or altering any aspect of fuel and air delivery on emissions certified engines beyond factory rating, will cause emission levels beyond what is approved by United States Environmental Protection Agency (EPA) or equivalent agency. Violations of regulations may result in substantial fines to persons or companies committing such violations.

Tractor warranty is void if power level is changed from factory specifications.

Do not attempt to service injection pump or fuel injectors. Special training and special tools are required. See your John Deere dealer.

RX32825,000175E-19-01AUG17

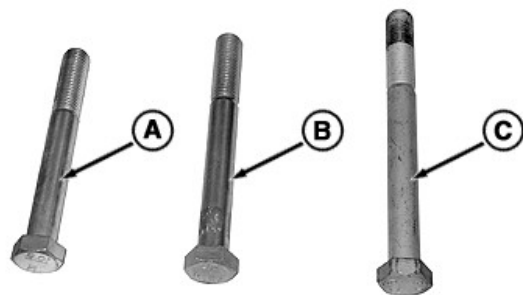
Bleed Fuel System

If Diagnostic Trouble Code (DTC) indicates fuel system problem, and fuel system and filters are found to be correct - or if (even without a DTC present) tractor does not run correctly or fails to start, fuel injection system may need to be bled of air.

Turn key switch to run position. Electric fuel pump will start and bleed air from fuel system. Allow pump to run for 30 seconds to 1 minute before attempting an engine restart. If problem persists, see your John Deere dealer.

SV81855,00001F2-19-21JUL17

Identify Zinc-Flake Coated Fasteners



RXA0073812—UN—03MAR04

Standard cap screws (A) are of a reflective silver color.

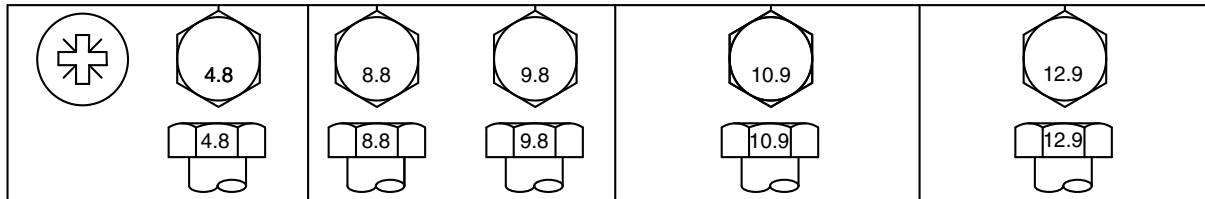
Zinc Plated cap screws (B) are of a reflective bright silver or gold color.

Zinc-Flake Coated cap screws (C) are of a dull silver or gold color.

NOTE: Zinc-Flake Coated fasteners are tightened to lubricated specifications, unless otherwise noted. See Torque Value Charts in this Operator's Manual section.

RX32825,0001761-19-08NOV17

Metric Bolt and Screw Torque Values



TS1742—UN—31MAY18

Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Hex Head ^a		Flange Head ^b		Hex Head ^a		Flange Head ^b		Hex Head ^a		Flange Head ^b		Hex Head ^a		Flange Head ^b	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
M6	3.6	31.9	3.9	34.5	6.7	59.3	7.3	64.6	9.8	86.7	10.8	95.6	11.5	102	12.6	112
M8	8.6	76.1	9.4	83.2	16.2	143	17.6	156	23.8	17.6	25.9	19.1	27.8	20.5	30.3	22.3
			N·m	lb·ft	N·m	lb·ft	N·m	lb·ft								
M10	16.9	150	18.4	13.6	31.9	23.5	34.7	25.6	46.8	34.5	51	37.6	55	40.6	60	44.3
	N·m	lb·ft														
M12	—	—	—	—	55	40.6	61	45	81	59.7	89	65.6	95	70.1	105	77.4
M14	—	—	—	—	87	64.2	96	70.8	128	94.4	141	104	150	111	165	122
M16	—	—	—	—	135	99.6	149	110	198	146	219	162	232	171	257	190
M18	—	—	—	—	193	142	214	158	275	203	304	224	322	245	356	263
M20	—	—	—	—	272	201	301	222	387	285	428	316	453	334	501	370
M22	—	—	—	—	365	263	405	299	520	384	576	425	608	448	674	497
M24	—	—	—	—	468	345	518	382	666	491	738	544	780	575	864	637
M27	—	—	—	—	683	504	758	559	973	718	1080	797	1139	840	1263	932
M30	—	—	—	—	932	687	1029	759	1327	979	1466	1081	1553	1145	1715	1265
M33	—	—	—	—	1258	928	1398	1031	1788	1319	1986	1465	2092	1543	2324	1714
M36	—	—	—	—	1617	1193	1789	1319	2303	1699	2548	1879	2695	1988	2982	2199

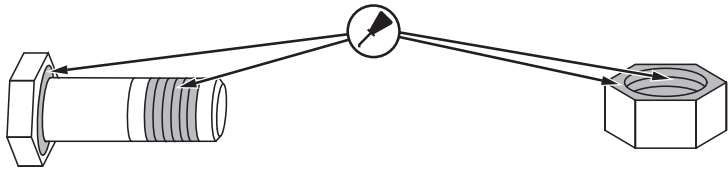
The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.

Service - General Information

Bolt or Screw Size	Class 4.8		Class 8.8 or 9.8		Class 10.9		Class 12.9	
	Hex Head ^a	Flange Head ^b	Hex Head ^a	Flange Head ^b	Hex Head ^a	Flange Head ^b	Hex Head ^a	Flange Head ^b



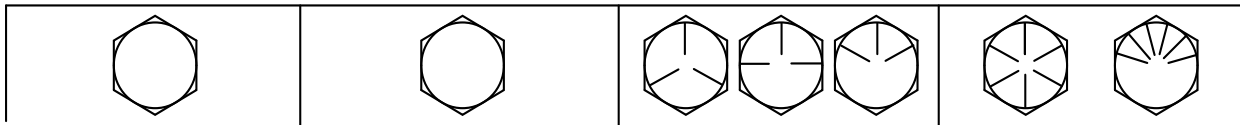
TS1741—UN—22MAY18

^aHex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.

^bHex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ2-19-30MAY18

Unified Inch Bolt and Screw Torque Values



TS1671—UN—01MAY03

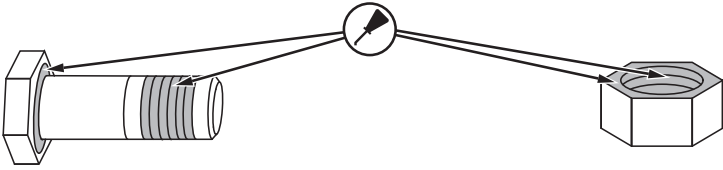
Bolt or Screw Size	SAE Grade 1 ^a				SAE Grade 2 ^b				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Hex Head ^c		Flange Head ^d		Hex Head ^c		Flange Head ^d		Hex Head ^c		Flange Head ^d		Hex Head ^c		Flange Head ^d	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
1/4	3.1	27.3	3.2	28.4	5.1	45.5	5.3	47.3	7.9	70.2	8.3	73.1	11.2	99.2	11.6	103
													N·m	lb·ft	N·m	lb·ft
5/16	6.1	54.1	6.5	57.7	10.2	90.2	10.9	96.2	15.7	139	16.8	149	22.2	16.4	23.7	17.5
									N·m	lb·ft	N·m	lb·ft				
3/8	10.5	93.6	11.5	102	17.6	156	19.2	170	27.3	20.1	29.7	21.9	38.5	28.4	41.9	30.9
					N·m	lb·ft	N·m	lb·ft								
7/16	16.7	148	18.4	163	27.8	20.5	30.6	22.6	43	31.7	47.3	34.9	60.6	44.7	66.8	49.3
	N·m	lb·ft	N·m	lb·ft												
1/2	25.9	19.1	28.2	20.8	43.1	31.8	47	34.7	66.6	49.1	72.8	53.7	94	69.3	103	75.8
9/16	36.7	27.1	40.5	29.9	61.1	45.1	67.5	49.8	94.6	69.8	104	77	134	98.5	148	109
5/8	51	37.6	55.9	41.2	85	62.7	93.1	68.7	131	96.9	144	106	186	137	203	150
3/4	89.5	66	98	72.3	149	110	164	121	230	170	252	186	325	240	357	263
7/8	144	106	157	116	144	106	157	116	370	273	405	299	522	385	572	422
1	216	159	236	174	216	159	236	174	556	410	609	449	785	579	860	634
1-1/8	305	225	335	247	305	225	335	247	685	505	751	554	1110	819	1218	898
1-1/4	427	315	469	346	427	315	469	346	957	706	1051	775	1552	1145	1703	1256
1-3/8	564	416	618	456	564	416	618	456	1264	932	1386	1022	2050	1512	2248	1658
1-1/2	743	548	815	601	743	548	815	601	1665	1228	1826	1347	2699	1991	2962	2185

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.

Service - General Information

Bolt or Screw Size	SAE Grade 1 ^a		SAE Grade 2 ^b		SAE Grade 5, 5.1 or 5.2		SAE Grade 8 or 8.2	
	Hex Head ^c	Flange Head ^d	Hex Head ^c	Flange Head ^d	Hex Head ^c	Flange Head ^d	Hex Head ^c	Flange Head ^d
								

TS1741—UN—22MAY18

^aGrade 1 applies for hex cap screws over 6 in (152 mm) long, and for all other types of bolts and screws of any length.

^bGrade 2 applies for hex cap screws (not hex bolts) up to 6 in (152 mm) long.

^cHex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.

^dHex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ1-19-30MAY18

Break-In Service (100 Hours or Less)

Perform Break-In Checks

IMPORTANT: Initial break-in service interval of a new or rebuilt wet sleeve engine with John Deere Break-In Plus™ oil must last at least 100 hours to assure surface mating of rings and liners has had an opportunity to occur. 100 hour minimum interval applies to all new or rebuilt engines. Maximum service interval is the same as service interval recommended for your engine in Engine Oil and Filter Service Intervals of Fuel, Lubricants and Coolant section of this Operator Manual. To confirm which engine your tractor is equipped with, see Engine Serial Number in Identification Number section of this Operator's Manual.

If engine oil must be added prior to first normal oil change, use John Deere Break-In Plus™ engine oil.

For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in Engine Oil Section of this Operator's Manual.

components. See Front Hitch and Rear Hitch in Service - Lubricate section of this Operator's Manual.

- Inspect tires for cuts or punctures. See Tires in Service - Check section of this Operator's Manual.

After service is performed, reset appropriate service interval hours display to zero. See Service Intervals in CommandCenter™ section of this Operator's Manual.

RX32825,0000747-19-07SEP17

General Break-In

Engine is ready for normal operation. During first 100 hours of operation:

- Operate engine at heavy loads without reaching sustained maximum load
- Avoid idling engine longer than 5 minutes. If engine will idle longer than 5 minutes, stop engine
- Closely observe coolant temperature during operation
- Check engine air intake system hoses and clamps. See appropriate Air Intake System topic in Service - Check section of this Operator's Manual.
- Check for fluid leaks
- Tighten wheel, wheel weight and axle bolts after 3 HOURS, after 10 HOURS and DAILY for first week of operation. See appropriate topic in Service - Tighten section of this Operator's Manual

Daily or 10 Hour Service

Perform normal daily or 10 hour services. See 10 Hour or Daily chart in Service - Record Charts section of this Operator's Manual.

For first 100 hours of tractor operation, perform these additional services daily or every 10 hours:

- Drain water separator. See Water Separator in Service - Check section of this Operator's Manual.
- Check coolant level. See Coolant Level in Service - Check section of this Operator's Manual.
- Lubricate rear and front (if equipped) hitch

Service - Record Charts

Date	Hours of Operation	Engine Oil Used	Signature	Dealer's Stamp

RX32825,000177D-19-13SEP17

As Required Service

IMPORTANT: Some service tasks do not have scheduled requirements. Occasionally, normally scheduled services must be performed outside of their scheduled interval. Completion of these services is necessary when tractor performance or instruments indicate that they are required. See appropriate Service section for information. Record completed service in chart.

Date	Service Completed	Signature	Dealer's Stamp

[illegible]

Service - Record Charts

Date	Service Completed	Signature	Dealer's Stamp

RX32825,0001747-19-12SEP17

Annual Service

IMPORTANT: Not all of these services must be performed each year. Perform services based on number of years of tractor operation completed, regardless of accumulated hours of operation. Record completed service in chart.

Electrical:

• Batteries and connections ^a		
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^aService annually.

Check:

• Seat belts^a • Engine coolant freeze point^a	• Cab suspension system accumulator charge pressure (If Equipped with Hydraulic Cab Suspension)^{ab}	• TLS™ Plus accumulator charge pressure^{cb}
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TLS is a trademark of Deere & Company

^aService annually or every 1000 hours, whichever occurs first.

^bSee your John Deere dealer.

^cService annually or every 1500 hours, whichever occurs first.

Change:

• Engine oil and filter^a • Cab fresh air and recirculation air filters^b • Engine primary and secondary air filters^b	• Engine coolant^c • Trailer air brake air dryer filter^d • In-Line DEF Filter (If Equipped)^e	• DEF tank vent filter^f • DEF dosing unit filter^g
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^aSee Diesel Engine Oil and Filter Service Intervals in Engine Oil section of this Operator's Manual.

^bService annually or every 1000 hours, whichever occurs first.

^cInitial change interval is 6 years of 6000 hours, provided cooling system is topped off using only John Deere Cool-Gard™ II and premix. Subsequent service intervals are dependent upon a number of factors. See Diesel Engine Coolant (engine with wet sleeve cylinder liners) in Engine Coolant section of this Operator's Manual.

^dService every 2 years or 1500 hours, whichever occurs first.

^eService every 3 years.

^fService after first year or first 1500 hours of operation, whichever occurs first. After initial service, change every 3 years or 4500 hours, whichever occurs first.

^gService every 3 years or 4500 hours, whichever occurs first.

Service - Record Charts

Year	Date	Signature	Dealer's Stamp
1			
2			
3			
4			
5			
6			
7			
8			
9			

RX32825,0001748-19-27AUG18

10 Hour or Daily Service

IMPORTANT: Perform these services every 10 hours or daily, whichever occurs first.

Check:

• Engine oil level	• Transmission-hydraulic oil level	
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Lubricate:

• MFWD axle king pins, tie rod ends, and axle pivot fittings ^a	• TLS™ Plus external fittings and U-joints ^a	
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TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours, If operated in extremely wet conditions, lubricate every 10 hours or daily.

RX32825,0001749-19-30AUG17

50 Hour Service

IMPORTANT: Perform these services every 50 hours.

Check:

• Engine oil level	• Transmission-hydraulic oil level	• Tires
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Lubricate:

Service - Record Charts

- MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints^a - TLS™ Plus external fittings, and U-joints^a	Rear hitch^b	Front hitch^b
---	--	---

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

RX32825,000174A-19-26OCT16

250 Hour Service

Check:

☐ Engine oil level	☐ Tires	☐ Transmission PARK system
☐ Transmission-hydraulic oil level	☐ NEUTRAL start system	☐ Front PTO housing oil level

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a	☐ Rear hitch ^b	☐ Wagon hitch
☐ TLS™ Plus external fittings, and U-joints ^a	☐ Front hitch ^b	☐ Deluxe hitch stabilizer

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

KD34109,00006E1-19-23JUL18

500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	
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Check:

☐ Engine oil level	☐ NEUTRAL start system	☐ Engine air intake system
☐ Transmission-hydraulic oil level	☐ Transmission PARK system	☐ Front PTO housing oil level
☐ Tires		

Tighten:

☐ Wheel and wheel weight nuts		
--	--	--

Change:

Service - Record Charts

☐ Engine oil and filter ^a	☐ Fuel filters	
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^aService in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual.
Record oil used in Service - Record Charts - Engine Oil and Filter.

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Deluxe hitch stabilizer ☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension)
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

KD34109,00006E2-19-23AUG18

750 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level	☐ Tires ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Front PTO housing oil level
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Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a	☐ Rear hitch ^b ☐ Front hitch ^b	☐ Wagon hitch ☐ Deluxe hitch stabilizer
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TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

KD34109,00006E3-19-23JUL18

1000 Hour Service

Clean:

Service - Record Charts

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ MFWD or TLS™ axle breather ^a
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TLS is a trademark of Deere & Company

^aService every 1000 hours or annually, whichever occurs first.

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Tires ☐ NEUTRAL start system	☐ Hydraulic Cab Suspension Components or Mechanical Cab Suspension Components ☐ Transmission PARK system ☐ Engine air intake system	☐ Front PTO housing oil level ☐ Engine coolant freeze point ^a ☐ Cab suspension accumulator charge pressure (If Equipped with Hydraulic Cab Suspension) ^{ab} ☐ TLS™ accumulator charge pressure ^{ab}
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TLS is a trademark of Deere & Company

^aService every 1000 hours or annually, whichever occurs first.

^bSee your John Deere dealer.

Tighten:

☐ Wheel and wheel weight bolts		
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Change:

☐ Engine oil and filter ^a ☐ Fuel filters	☐ Cab fresh air and recirculation air filter ^{bc}	☐ Engine primary and secondary air filters bc
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^aService in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

^bService may be required more frequently depending upon operating conditions.

^cService every 1000 hours or annually, whichever occurs first.

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Deluxe hitch stabilizer ☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension)
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TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours, If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

KD34109.00006E4-19-20AUG18

1250 Hour Service

Check:

Service - Record Charts

☐ Engine oil level ☐ Transmission-hydraulic oil level	☐ Tires ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Front PTO housing oil level
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Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a	☐ Rear hitch ^b ☐ Front hitch ^b	☐ Wagon hitch ☐ Deluxe hitch stabilizer
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

KD34109,00006E5-19-23JUL18

1500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ Transmission-hydraulic oil sump screen
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Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Tires	☐ NEUTRAL start system ☐ Transmission PARK system ☐ Engine air intake system	☐ Front PTO housing oil level ☐ Fan belt and fan belt tensioner
--	---	--

Tighten:

☐ Wheel and wheel weight bolts		
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Change:

☐ Engine oil and filter ^a ☐ Fuel filters ☐ MFWD or TLS™ axle housing oil ☐ MFWD or TLS™ wheel hub oil	☐ Transmission-hydraulic and axle oil and filters ^b ☐ Fuel tank vent filter ☐ SCV pilot valve filter ☐ DEF tank vent filter ^c	☐ Trailer air brake air dryer filter ^d ☐ Open crankcase ventilation filter - 6.8 L engine ☐ Front PTO oil and filter
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TLS is a trademark of Deere & Company

TLS is a trademark of Deere & Company

^aPerform service in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

^bCompletion of this service requires performance of tasks specific to each transmission type. See appropriate content in Service - Change section of this Operator's Manual.

^cService after first year or 1500 hours, whichever occurs first. After initial service, change every 3 years or 4500 hours of operation, whichever occurs first.

^dService every 2 years or 1500 hours, whichever occurs first.

Service - Record Charts

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a	☐ Front hitch ^b	☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension)
☐ TLS™ Plus external fittings, and U-joints ^a	☐ Wagon hitch	☐ Draft link support shaft bushing
☐ Rear hitch ^b		

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

KD34109,00006E6-19-23AUG18

1750 Hour Service

Check:

☐ Engine oil level	☐ Tires	☐ Transmission PARK system
☐ Transmission-hydraulic oil level	☐ NEUTRAL start system	☐ Front PTO housing oil level

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a	☐ Rear hitch ^b	☐ Wagon hitch
☐ TLS™ Plus external fittings, and U-joints ^a	☐ Front hitch ^b	☐ Deluxe hitch stabilizer

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

KD34109,00006E7-19-23JUL18

2000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ MFWD or TLS™ Plus axle breather ^a
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TLS is a trademark of Deere & Company

^aService every 1000 hours or annually, whichever occurs first.

Service - Record Charts

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Tires ☐ NEUTRAL start system	☐ Hydraulic Cab Suspension Components or Mechanical Cab Suspension Components ☐ Transmission PARK system ☐ Engine air intake system ☐ Front PTO housing oil level	☐ Engine coolant freeze point ^{ab} ☐ Cab suspension accumulator charge pressure (If Equipped with Hydraulic Cab Suspension) ^b ☐ TLS™ accumulator charge pressure ^{ab}
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TLS is a trademark of Deere & Company

^aService every 1000 hours or annually, whichever occurs first.

^bSee your John Deere dealer.

Tighten:

☐ Wheel and wheel weight bolts		
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Change:

☐ Engine oil and filter ^a ☐ Fuel filters	☐ Cab fresh air and recirculation air filters ^{bc}	☐ Engine primary and secondary air filters bc
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^aService in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

^bService may be required more frequently depending upon operating conditions.

^cService every 1000 hours or annually, whichever occurs first.

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Deluxe hitch stabilizer ☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension)
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments:

KD34109,00006E8-19-20AUG18

2250 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level	☐ Tires ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Front PTO housing oil level
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Lubricate:

Service - Record Charts

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a	☐ Rear hitch ^b ☐ Front hitch ^b	☐ Wagon hitch ☐ Deluxe hitch stabilizer
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments: _____

KD34109,00006E9-19-23JUL18

2500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	
---	---	--

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Tires	☐ NEUTRAL start system ☐ Transmission PARK system	☐ Engine air intake system ☐ Front PTO housing oil level
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Tighten:

☐ Wheel and wheel weight nuts		
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Change:

☐ Engine oil and filter ^a	☐ Fuel filters	
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^aService in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Deluxe hitch stabilizer ☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension)
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service - Record Charts

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments: _____

KD34109,00006EA-19-20AUG18

2750 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level	☐ Tires ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Front PTO housing oil level
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Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a	☐ Rear hitch ^b ☐ Front hitch ^b	☐ Wagon hitch ☐ Deluxe hitch stabilizer
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments: _____

KD34109,00006EB-19-23JUL18

3000 Hour Service

Clean:

☐ Dual beam radar sensor ☐ Optional fuel water separator and filter element	☐ MFWD or TLS™ axle vent breather ^a	☐ Transmission-hydraulic oil sump screen
--	---	---

TLS is a trademark of Deere & Company

^aService may be required more frequently depending upon operating conditions.

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Tires ☐ NEUTRAL start system	☐ Hydraulic Cab Suspension Components or Mechanical Cab Suspension Components ☐ Transmission PARK system ☐ Engine air intake system ☐ Front PTO housing oil level	☐ Fan belt and fan belt tensioner ☐ Engine coolant freeze point ^a ☐ Cab suspension accumulator charge pressure (If Equipped with Hydraulic Cab Suspension) ^{ab} ☐ TLS™ accumulator charge pressure ^{ab} ☐ Engine valve clearance ^b
---	--	---

Service - Record Charts

TLS is a trademark of Deere & Company

^aService every 1000 hours or annually, whichever occurs first.

^bSee your John Deere dealer.

Tighten:

☐ Wheel and wheel weight bolts		
---	--	--

Change:

☐ Engine oil and filter ^a ☐ Fuel filters ☐ Cab fresh air and recirculation air filters ^{bc} ☐ Engine primary and secondary air filters ^{bc}	☐ MFWD or TLS™ wheel hub oil ☐ Transmission-hydraulic and axle oil and filters ^d ☐ Fuel tank vent filter ☐ SCV pilot valve filter	☐ Trailer air brake air dryer filter ^e ☐ Open crankcase ventilation filter - 6.8 L engine ☐ Front PTO oil and filter ☐ MFWD or TLS™ axle housing oil ☐ In-Line DEF Filter (If Equipped)
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TLS is a trademark of Deere & Company

TLS is a trademark of Deere & Company

^aService in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

^bService may be required more frequently depending upon operating conditions.

^cService every 1000 hours or annually, whichever occurs first.

^dCompletion of this service requires performance of tasks specific to each transmission type. See appropriate content in Service - Change section of this Operator's Manual.

^eService every 2 years or 1500 hours, whichever occurs first.

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension) ☐ Draft link support shaft bushing
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TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments:

KD34109,00006EC-19-27AUG18

3250 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level	☐ Tires ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Front PTO housing oil level
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Lubricate:

Service - Record Charts

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a	☐ Rear hitch ^b ☐ Front hitch ^b	☐ Wagon hitch ☐ Deluxe hitch stabilizer
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments: _____

KD34109.00006ED-19-23JUL18

3500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	
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Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Tires	☐ NEUTRAL start system ☐ Transmission PARK system	☐ Engine air intake system ☐ Front PTO housing oil level
--	--	---

Tighten:

☐ Wheel and wheel weight nuts		
--	--	--

Change:

☐ Engine oil and filter ^a	☐ Fuel filters	
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^aService in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Deluxe hitch stabilizer ☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension)
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service - Record Charts

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments:

KD34109,00006EE-19-23AUG18

3750 Hour Service

Check:

☐ Engine oil level	☐ Tires	☐ Transmission PARK system
☐ Transmission-hydraulic oil level	☐ NEUTRAL start system	☐ Front PTO housing oil level

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a	☐ Rear hitch ^b	☐ Wagon hitch
☐ TLS™ Plus external fittings, and U-joints ^a	☐ Front hitch ^b	☐ Deluxe hitch stabilizer

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments:

KD34109,00006EF-19-23JUL18

4000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ MFWD or TLS™ Plus axle breather ^a
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TLS is a trademark of Deere & Company

^aService every 1000 hours or annually, whichever occurs first.

Check:

Service - Record Charts

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Tires ☐ NEUTRAL start system	☐ Hydraulic Cab Suspension Components or Mechanical Cab Suspension Components ☐ Transmission PARK system ☐ Engine air intake system ☐ Front PTO housing oil level	☐ Engine coolant freeze point ^{ab} ☐ Cab suspension accumulator charge pressure (If Equipped with Hydraulic Cab Suspension) ^b ☐ TLS™ accumulator charge pressure ^{ab}
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TLS is a trademark of Deere & Company

^aService every 1000 hours or annually, whichever occurs first.

^bSee your John Deere dealer.

Tighten:

☐ Wheel and wheel weight bolts		
---	--	--

Change:

☐ Engine oil and filter ^a ☐ Fuel filters	☐ Cab fresh air and recirculation air filters ^{bc}	☐ Engine primary and secondary air filters bc
--	--	---

^aService in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

^bService may be required more frequently depending upon operating conditions.

^cService every 1000 hours or annually, whichever occurs first.

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Deluxe hitch stabilizer ☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension)
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments:

KD34109,00006F0-19-05JUL18

4250 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level	☐ Tires ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Front PTO housing oil level
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Lubricate:

Service - Record Charts

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a	☐ Rear hitch ^b ☐ Front hitch ^b	☐ Wagon hitch ☐ Deluxe hitch stabilizer
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments: _____

KD34109,00006F1-19-23JUL18

4500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ Transmission-hydraulic oil sump screen
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Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Tires	☐ NEUTRAL start system ☐ Transmission PARK system ☐ Front PTO housing oil level	☐ Fan belt and fan belt tensioner ☐ Engine air intake system
--	--	---

Tighten:

☐ Wheel and wheel weight bolts		
---	--	--

Change:

☐ Engine oil and filter ^a ☐ Fuel filters ☐ MFWD or TLS™ axle housing oil ☐ MFWD or TLS™ wheel hub oil ☐ Transmission-hydraulic and axle oil and filters ^b	☐ Fuel tank vent filter ☐ SCV pilot valve filter ☐ Trailer air brake air dryer filter ^c ☐ Open crankcase ventilation filter - 6.8 L engine	☐ Front PTO oil and filter ☐ DEF tank vent filter ^d ☐ DEF dosing unit filter ^e ☐ Transmission drive shaft damper ^f
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TLS is a trademark of Deere & Company

TLS is a trademark of Deere & Company

^aService in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

^bCompletion of this service requires performance of tasks specific to each transmission type. See appropriate content in Service - Change section of this Operator's Manual.

^cService every 2 years or 1500 hours, whichever occurs first.

^dService every 3 years or 4500 hours of operation, whichever occurs first.

^eService every 3 years or 4500 hours, whichever occurs first.

^fSee your John Deere dealer.

Lubricate:

Service - Record Charts

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension) ☐ Deluxe hitch stabilizer ☐ Draft link support shaft bushing
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TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments: _____

KD34109,00006F2-19-23AUG18

4750 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level	☐ Tires ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Front PTO housing oil level
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Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a	☐ Rear hitch ^b ☐ Front hitch ^b	☐ Wagon hitch ☐ Deluxe hitch stabilizer
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments: _____

KD34109,00006F3-19-23JUL18

5000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ MFWD or TLS™ Plus axle vent breather
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TLS is a trademark of Deere & Company

Check:

Service - Record Charts

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Tires ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Engine air intake system ☐ Front PTO housing oil level ☐ 3-in-1 hitch	☐ Wagon hitch ☐ Engine coolant freeze point ^a ☐ Cab suspension accumulator charge pressure (If Equipped with Hydraulic Cab Suspension) ^b ☐ TLS™ accumulator charge pressure ^{ab}
---	---	--

TLS is a trademark of Deere & Company

^aService every 1000 hours or annually, whichever occurs first.

^bSee your John Deere dealer.

Tighten:

☐ Wheel and wheel weight bolt nuts		
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Change:

☐ Engine oil and filter ^a ☐ Fuel filters	☐ Cab fresh air and recirculation air filters ^{bc} ☐ Cab recirculation air filter ^b	☐ Engine primary and secondary air filters ^{bc} ☐ Engine crankshaft damper ^d
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^aService in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

^bService may be required more frequently depending upon operating conditions.

^cService every 1000 hours or annually, whichever occurs first.

^dSee your John Deere dealer.

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension) ☐ Deluxe hitch stabilizer
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments:

KD34109,00006F4-19-23AUG18

5250 Hour Service Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level	☐ Tires ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Front PTO housing oil level
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Lubricate:

Service - Record Charts

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a	☐ Rear hitch ^b ☐ Front hitch ^b	☐ Wagon hitch ☐ Deluxe hitch stabilizer
--	---	--

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments: _____

KD34109,00006F5-19-23JUL18

5500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	
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Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Tires	☐ NEUTRAL start system ☐ Transmission PARK system	☐ Engine air intake system ☐ Front PTO housing oil level
--	--	---

Tighten:

☐ Wheel and wheel weight nuts		
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Change:

☐ Engine oil and filter ^a	☐ Fuel filters	
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^aService in accordance with information in appropriate Engine Oil and Filter Service Intervals topic in Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Deluxe hitch stabilizer ☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension)
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TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service - Record Charts

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments: _____

KD34109,00006F6-19-20AUG18

5750 Hour Service

Check:

☐ Engine oil level	☐ Tires	☐ Transmission PARK system
☐ Transmission-hydraulic oil level	☐ NEUTRAL start system	☐ Front PTO housing oil level

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a	☐ Rear hitch ^b	☐ Wagon hitch
☐ TLS™ Plus external fittings, and U-joints ^a	☐ Front hitch ^b	☐ Deluxe hitch stabilizer

TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ Signature: _____ Dealer Stamp: _____

Comments: _____

KD34109,00006F7-19-23JUL18

6000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ MFWD or TLS™ axle breather ^a	☐ Transmission-hydraulic oil sump screen
☐ Optional fuel water separator and filter element		

TLS is a trademark of Deere & Company

^aService every 1000 hours or annually, whichever occurs first.

Check:

☐ Engine oil level	☐ Transmission PARK system	☐ Engine coolant freeze point ^a
☐ Transmission-hydraulic oil level	☐ Engine air intake system	☐ Cab suspension accumulator charge pressure (If Equipped with Hydraulic Cab Suspension) ^b
☐ Tires	☐ Front PTO housing oil level	☐ TLS™ accumulator charge pressure ^{ab}
☐ NEUTRAL start system	☐ Fan belt and fan belt tensioner	☐ Engine valve clearance ^b

Service - Record Charts

TLS is a trademark of Deere & Company

^aService every 1000 hours or annually, whichever occurs first.

^bSee your John Deere dealer.

Tighten:

☐ Wheel and wheel weight bolts		
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Change:

☐ Engine oil and filter ^a ☐ Fuel filters ☐ Cab fresh air and recirculation air filters ^{bc} ☐ Engine primary and secondary air filters ^{bc} ☐ MFWD TLS™ Plus axle housing oil	☐ MFWD or TLS™ Plus wheel hub oil ☐ Transmission-hydraulic and axle oil and filters ^d ☐ Fuel tank vent filter ☐ SCV pilot valve filter	☐ Trailer air brake air dryer filter ^e ☐ Open crankcase ventilation filter - 6.8 L engine ☐ Front PTO oil and filter ☐ Engine coolant ^{f,g}
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TLS is a trademark of Deere & Company

TLS is a trademark of Deere & Company

^aService in accordance with information in appropriate Diesel Oil and Filter Service Intervals topic in Service - Engine Oil section of this Operator's Manual. Record oil used in Service - Record Charts - Engine Oil and Filter.

^bService may be required more frequently depending upon operating conditions.

^cService every 1000 hours or annually, whichever occurs first.

^dCompletion of this service requires performance of tasks specific to each transmission type. See appropriate content in Service - Change section of this Operator's Manual.

^eService every 2 years or 1500 hours, whichever occurs first.

^fInitial change interval is 6 years or 6000 hours, provided cooling system is topped off using only John Deere Cool-Gard™ II and premix. Subsequent service intervals are dependent upon a number of factors. See Drain Intervals for Diesel Engine Coolant in Engine Coolant section of this Operator's Manual.

^gSee your John Deere dealer.

Lubricate:

☐ MFWD axle king pins, tie rod ends, and axle pivot fittings and U-joints ^a ☐ TLS™ Plus external fittings, and U-joints ^a ☐ Rear hitch ^b	☐ Front hitch ^b ☐ Wagon hitch	☐ Deluxe hitch stabilizer ☐ Cab suspension system (If Equipped with Hydraulic Cab Suspension) ☐ Draft link support shaft bushing
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TLS is a trademark of Deere & Company

^aNormal lubrication is every 500 hours. If operated in extremely wet conditions, lubricate every 10 hours or daily.

^bNormal lubrication is every 250 hours. If used daily, lubricate every 50 hours.

Service Completed Date: _____ **Signature:** _____ **Dealer Stamp:**

Comments:

KD34109,00006F8-19-23AUG18

Services Beyond 6000 Hours

Record completion of scheduled services beyond 6000 hours of operation. Use listed equivalent hourly service charts to determine which tasks to perform.

Service - Record Charts

Hour	Charts	Date	Signature	Dealer's Stamp
6250	250			
6500	500			
6750	250			
7000	1000			
7250	250			
7500	1500			
7750	250			
8000	1000			
8250	250			
8500	500			
8750	250			
9000	3000 and 4500			
9250	250			
9500	500			
9750	250			
10000	5000			
10250	250			
10500	500			
10750	250			
11000	1000			
11250	250			
11500	500			
11750	250			
12000	6000			
12250	250			
12500	500			
12750	250			
13000	1000			

Service - Record Charts

Hour	Charts	Date	Signature	Dealer's Stamp
13250	250			
13500	4500			

RX32825,00017B3-19-13SEP17

Service - Clean

Diesel Particulate Filter (DPF)—Final Tier 4/ Stage V Engine

CAUTION: Service beyond automated exhaust filter cleaning requires special tools and procedures, see appropriate additional information in this Operator's Manual section.

Automatic DPF cleaning generates very high temperatures. Disable exhaust filter cleaning in conditions where it may be unsafe for elevated exhaust temperatures.

When exhaust filter and warning light indicators are illuminated:

- Ensure exhaust filter cleaning is set to Auto, see Exhaust Filter System Overview—Final Tier 4/Stage V Engine and Auto Exhaust Filter Cleaning Mode—Final Tier 4/Stage V Engine in Emissions Equipment section of this Operator's Manual.
- Perform parked exhaust filter cleaning (if system allows), see Parked Exhaust Filter Cleaning—Final Tier 4/Stage V Engine in Emissions Equipment section of this Operator's Manual.

If exhaust filter cleaning is set to auto, parked exhaust filter cleaning has been performed and exhaust filter and warning light indicators are still illuminated, contact your John Deere dealer.

RX32825,0001778-19-16JUL18

Exhaust Filter/Diesel Particulate Filter (DPF) Ash Handling and Disposal

CAUTION: Under federal, state, and/or local laws or regulations, Diesel ash may be classified as a hazardous waste. Hazardous wastes must be disposed of in accordance with all applicable federal, state and local laws or regulations governing hazardous waste disposal. Only a qualified service provider should remove ash from the DPF. Personal protective equipment and clothing, maintained in a sanitary and reliable condition, should be used when handling and cleaning a DPF, see your John Deere dealer or qualified service provider for assistance.

RX32825,000177A-19-04APR18

Exhaust Filter Disposal

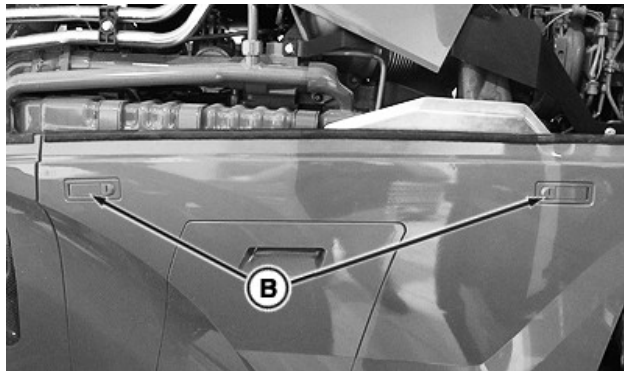
CAUTION: Proper management of an exhaust filter that has reached the end of its useful life is required, since the ash or catalyst material in the device may be classified as hazardous waste under federal, state, and/or local laws or regulations. Used exhaust filters, which include the diesel particulate filter, may be exchanged at any John Deere dealer or qualified service provider.

RX32825,000177B-19-15JUN17

Engine Cooling System

If tractor coolant temperature is excessive, or if debris is seen to be accumulating on cooling system components, clean components to help reduce excess temperatures.

1. Stop engine and remove key.
2. Clean grille and side screens using a brush.
3. Open hood, see Open Hood in Service - General Information section of this Operator's Manual.



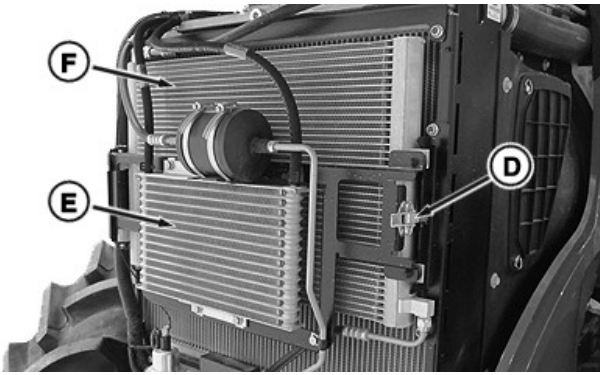
RXA0134193—UN—25JUL13

4. Depress latch buttons (B) to remove left rear side shield.



RXA0134230—UN—29JUL13

5. Depress latch button (C) to remove left front side shield.



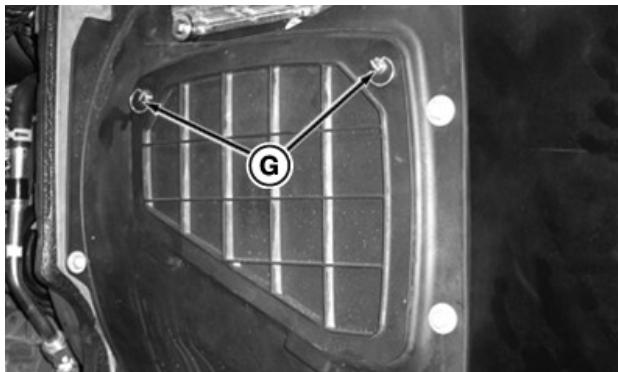
RXA0134241—UN—12SEP13

6. Release air conditioning condenser latch (D) on right side of air conditioning condenser (E) and engine coolant radiator (F).
7. Pivot air conditioning condenser and engine coolant radiator forward and left.

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.

Directing pressurized air at electronic/electrical components or connectors, may cause buildup of static electricity and product malfunctions.

8. Use compressed air or water to clean air conditioning condenser. Straighten any bent fins.



RXA0155932—UN—23NOV16

9. Release fan shroud service door latches (G) on either side of tractor.



RXA0135407—UN—12SEP13

10. Use compressed air or water to clean hydraulic oil cooler (H) and engine coolant radiator. Straighten any bent fins.
11. Reposition and secure components, shields, and hood.

TS36762,0000123-19-08SEP17

Engine and Exhaust Compartments

IMPORTANT: Accumulated crop residue inside engine compartment can reduce engine and cooling system performance. If tractor has been operated in field conditions which might have caused debris accumulation, inspect and clean engine compartment as necessary.

Directing pressurized water at electronic/electrical components, connectors, bearings and hydraulic seals, fuel injection pump or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.

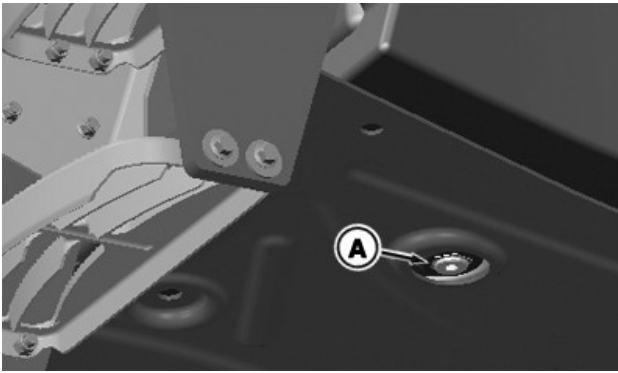
Directing pressurized air at electronic/electrical components or connectors, may cause buildup of static electricity and product malfunctions.

Never steam clean or pour cold water on an injection pump that is operating or hot. Pump could seize.

1. Shut engine off and allow time for engine to cool.
2. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.
3. Remove any crop or debris within engine and exhaust compartments, especially around turbocharger, exhaust manifold, and exhaust aftertreatment system.
4. Reinstall all shields. Close and securely latch hood.

RX32825,000176F-19-29NOV16

Access DEF Tank Drain Plug



RXA0143406—UN—10JUL14

Remove drain plug (A) to drain DEF from tank.

Check O-ring for defects. Replace if needed.

Clean DEF Tank. See Diesel Exhaust Fluid (DEF) Tank in this section of this Operator's Manual.

Clean out any DEF crystallization in threads.

IMPORTANT: Do not over torque drain plug. Over torquing can cause plug to spin in tank and lead to leaks.

Install drain plug and tighten to 25 N·m (18 lb·ft).

TS36762,0000125-19-09NOV17

Cleaning Diesel Exhaust Fluid (DEF) Tank

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.

If foreign material or fluid has been added to the DEF tank, drain the DEF tank, flush, and fill with new DEF.

If DEF quality is in question, pull a sample out of the DEF tank and place into a clear container. DEF should be crystal clear with a light ammonia smell. If DEF appears cloudy, has a colored tint, or has a profound ammonia smell, it is likely not within specification. DEF in this condition should not be used.

1. Remove drain plug (if equipped), and drain or siphon bad DEF from DEF tank.

NOTE: Cleaning can take place with DEF tank installed or removed.

2. Clean DEF tank with new DEF.

DEF must pass visual, smell, and concentration checks before the engine can be ran. See Diesel Exhaust Fluid (DEF) – For Use In Selective Catalytic Reduction (SCR) Equipped Engines in the Fuels, Lubricants, and Coolants Section for more information.

3. Drain or siphon DEF tank.

NOTE: Repeat steps 2—3 until DEF tank has been cleaned.

4. Change DEF dosing unit filter and DEF tank header suction screen.
5. If removed, install DEF tank drain plug.
6. If removed, install DEF tank.
7. Fill DEF tank with new DEF.
8. Check DEF concentration with DEF refractometer, such as JDG11594 or JDG11684. The correct DEF concentration is 31.8% — 33.2%. See your authorized dealer for more information.
9. If DEF is not within specification, does not appear clear, or does not have a slight ammonia smell, contact your authorized dealer.

DX,DEF,CLEANTANK-19-15AUG17

Clean Display

IMPORTANT: Always clean display screen with power off. Cleaning screen while operating could result in unintended button selections.

To clean display, power down and wipe screen with a soft cloth sprayed with a non-ammonia based cleaner, such as John Deere glass or multipurpose cleaner.

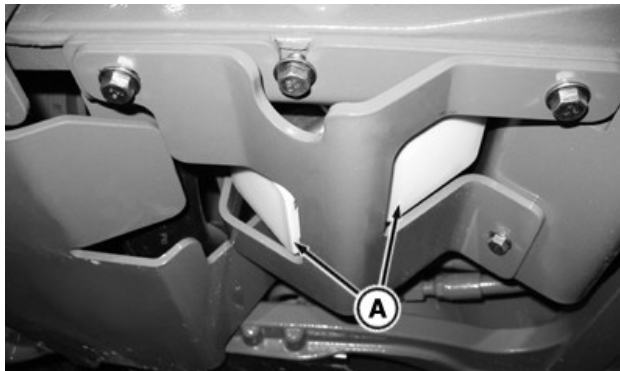
DX,PC,CLEAN,DISP-19-21OCT16

Dual Beam Radar Sensor

IMPORTANT: Inspect radar sensor horns for dirt or debris build up, which may affect accuracy performance. Service may be required more often in some operating conditions.

Avoid use of high pressure washer nozzle pointed directly at radar.

Avoid damage to radar and wiring harness when using sharp tools to remove dirt or packed mud around radar unit.



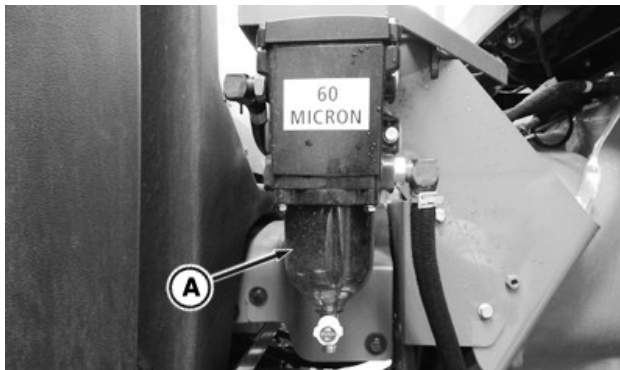
RXA0133518—UN—09JUL13

Dual beam radar sensor (A) is located on bottom of transmission.

1. Check radar sensor for damage.
2. Clean radar sensor with warm water and mild soap.
3. Dry with clean soft cloth.

TS36762.0000127-19-19JUN17

Optional Fuel Water Separator

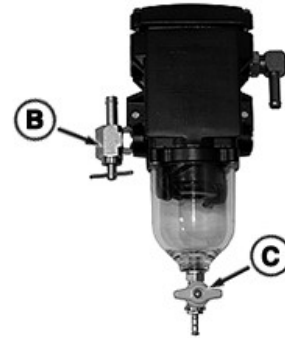


RXA0148376—UN—15JUN15

IMPORTANT: Back flush optional fuel water separator (A) whenever bowl is half full of water or when diagnostic trouble code appears. If, after flushing, trouble code is still displayed, wash filter element, see **Optional Fuel Water Separator Filter Element** in this **Operator's Manual** section. If code persists, change primary and secondary fuel filters.

NOTE: Filter element in water separator can be back flushed up to five times before being cleaned, see **Optional Fuel Water Separator Filter Element** in this **Operator's Manual** section.

1. Shut off engine.



RXA0159880—UN—19JUN17

2. Close fuel shut-off valve (B).



RXA0159881—UN—19JUN17

3. Open bleed screw (D) on top of water separator cover. Allow water and dirt to be released from filter element and settle in bottom of bowl.

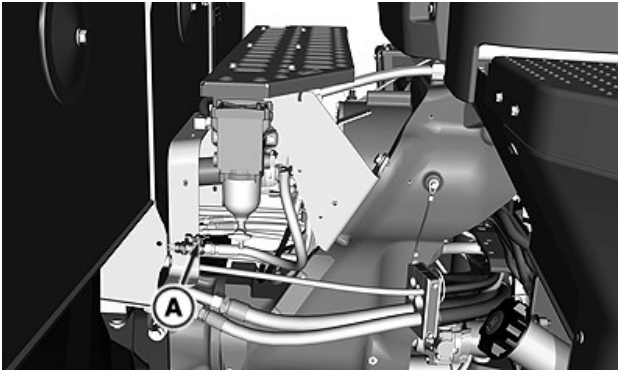
NOTE: Drain fuel into appropriate container and dispose of in accordance with local laws and ordinances.

As fuel, water, and dirt is drained from bowl in step 4, more water and dirt may be flushed from filter element and collect in bottom of bowl.

4. Push IN on drain valve (C) and turn COUNTERCLOCKWISE to drain water and dirt from bowl.
5. Close drain valve and allow water and dirt to settle again.
6. When all dirt and water have been drained, proceed to step 7.
7. Close bleed screw and open fuel shut-off valve.
8. Start and run engine at high idle for at least 2 minutes. If engine will not start or starts and dies, see **Fuel Filters** in **Service - Change** section of this **Operator's Manual**.

TS36762.0000128-19-04APR18

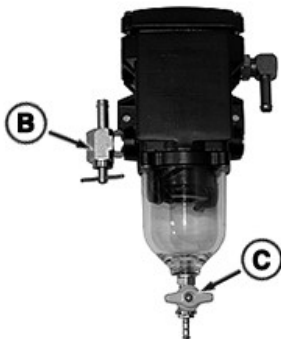
Optional Fuel Water Separator Filter Element



RXA0148087—UN—24APR15

IMPORTANT: Clean optional fuel water separator (A) filter element after each fifth back flushing of water separator assembly. Filter element can be cleaned as often as necessary for an indefinite number of times. Replace element if damaged or if cleaning becomes impossible.

1. Shut off engine.



RXA0159880—UN—19JUN17

2. Close fuel shut-off valve (B).

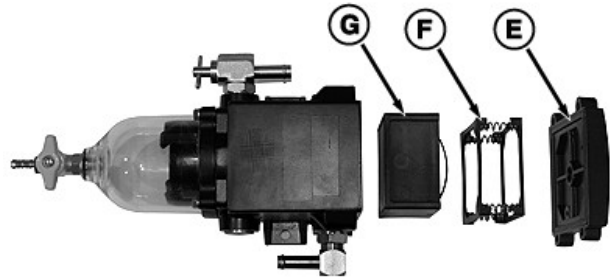
NOTE: Drain fuel into appropriate container and dispose of it in accordance with local laws and ordinances.

3. Open drain valve (C) and drain fuel from bowl.



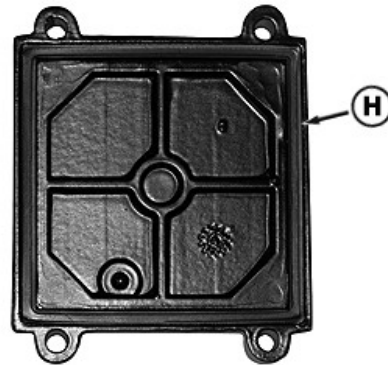
RXA0159882—UN—20JUN17

Loosen lid cap screws (D) evenly in sequence shown.



RXA0159883—UN—19JUN17

5. Remove lid (E), spring cassette (F). Lift filter element (G) from housing using attached handle.
6. Wash filter element in clean diesel fuel or mineral spirits.
7. Carefully inspect filter element for damage. If damaged, or if filter cannot be cleaned, replace filter element.
8. Install cleaned or new filter element and spring cassette.



RXA0159884—UN—19JUN17

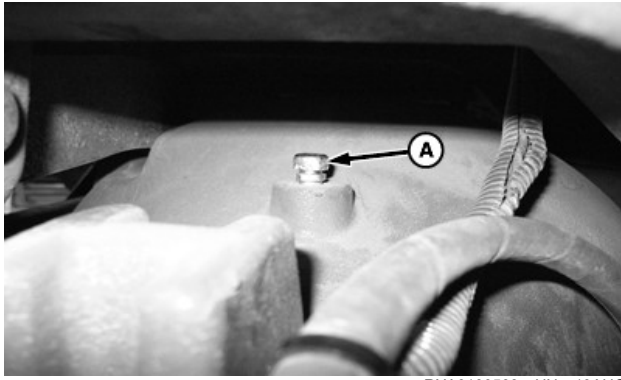
9. Inspect lid gasket (H) condition and replace if necessary.
10. Install lid. Tighten cap screws in sequence as removed.
11. Open fuel shut-off valve.
12. Start and run engine at high idle for at least 2 minutes. If engine will not start or starts and dies, see Fuel Filters in Service - Change section of this Operator's Manual.
13. Shut off engine and check for fuel leaks.

TS36762,0000171-19-05SEP17

MFWD or TLS™ Plus Axle Vent Filter

IMPORTANT: Allowing excess dirt and foreign material to build up in vent filter may cause damage to axle seals.

Interval may vary according to operating conditions.



RXA0109503—UN—19AUG10

Remove axle vent filter (A). If vent filter is packed with dirt, soak in solvent. Clean by blowing air through vent filter (bottom to top).

TS36762,000012A-19-15NOV16

Paint Finish

IMPORTANT: Never use strong soaps, chemical detergents, or cleaning agents containing acids, caustics, or abrasives. It is best to use commercially available non-detergent car wash products which will not remove protective wax, and which may be applied to paint finish.

- Wash tractor regularly, particularly if it has been exposed to herbicides, pesticides, road salt, or other chemical agents.
- Never wash tractor in direct sunlight.
- Rinse all cleaning agents away promptly. Never allow them to dry on painted surface.
- Waxing tractor occasionally is recommended to remove residue from and further protect paint finish. Never use waxes containing abrasive compounds.
- Inspect paint surface during washing or waxing for chips and scratches. Repaint any areas where paint has been damaged.

See your John Deere dealer for cleaners, waxes, and touch-up paints to help enhance paint finishes and which are compatible with your equipment.

RX32825,0001777-19-08NOV16

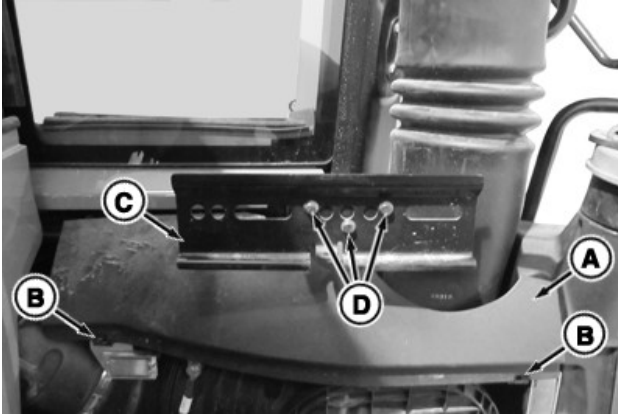
Service - Check

Engine Air Filter Precleaner System

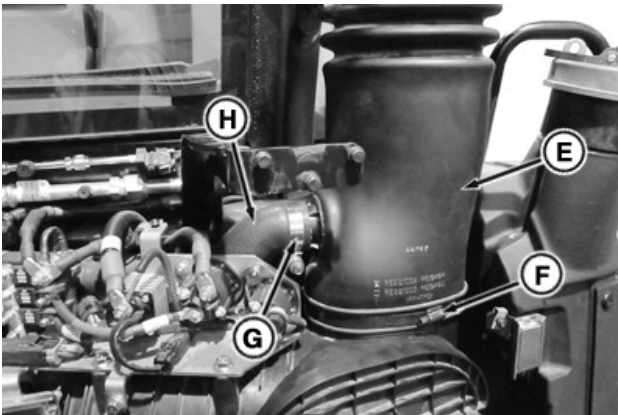
IMPORTANT: Do not remove engine air filters while servicing precleaner system.

NOTE: Service interval may vary due to operating conditions. If engine air filters clog prematurely, intake precleaner components may be dirty. Inspect and clean or replace precleaner components.

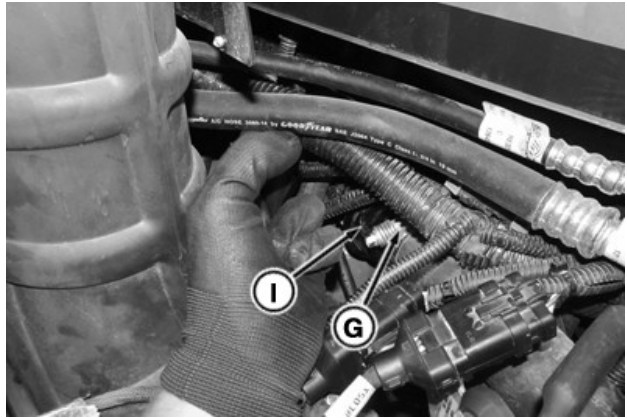
1. Disconnect battery ground (-) cable.
2. Remove battery compartment cover.



3. Remove screws (B) holding aspirator hose cover (A). Remove aspirator hose cover.
4. Remove screws (D) holding tool box support bracket (C). Remove tool box support bracket.



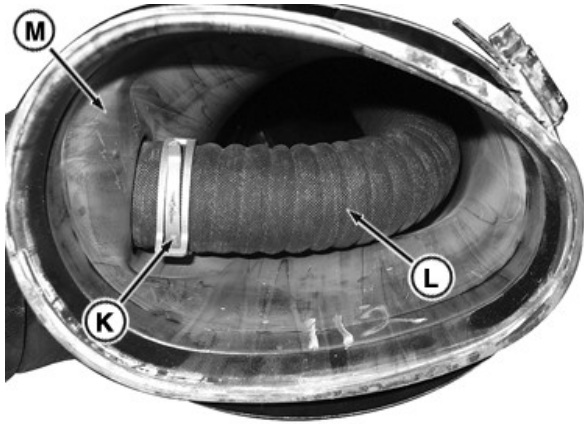
5. Loosen clamp (F) holding precleaner assembly (E) to air cleaner canister.



6. Loosen clamps (G) securing aspirator hose (H) to aspirator check valve (I) and aspirator hose to precleaner assembly (E).
7. Remove aspirator hose (H).

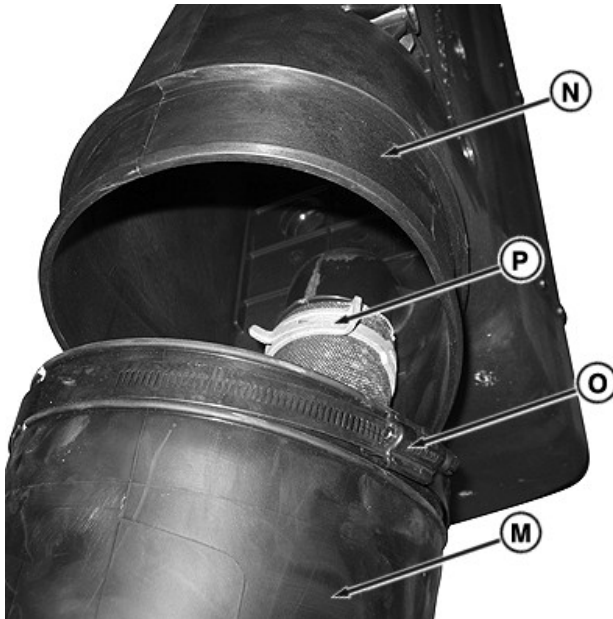


8. Remove cap screws (J) holding precleaner to support bracket and lift precleaner assembly from air cleaner canister.



RXA0155620—UN—10NOV16

9. Remove lower aspirator hose clamp (K) to remove aspirator hose (L) from precleaner extension tube (M).



RXA0155621—UN—10NOV16

10. Loosen clamp (O) holding precleaner (N) to extension tube (M).
11. Remove upper aspirator hose clamp (P) to separate aspirator hose from precleaner. Remove precleaner from extension tube.
12. Inspect components for damage. Replace as necessary.
13. Clean dust from aspirator tubes using compressed air, not to exceed 500 kPa (5 bar) (75 psi).
14. Thoroughly wash precleaner and precleaner extension tube in warm [maximum 65.5° C (150° F)] water mixed with a small amount of commercially available non-detergent car wash product. Rinse in clean water. Thoroughly dry before reinstallation.
15. Check aspirator check valve internal flap for freedom of movement. If flap does not move easily,

remove check valve assembly and clean or replace as necessary.

16. Inspect aspirator hoses for damage or cracking. Replace as necessary.
17. Reassemble all components in reverse order of disassembly. Tighten according to specifications:

Torque — Specification

Aspirator Hose Clamps (G, K, P)	10 N·m (7.4 lb·ft)
Precleaner Mounting Cap	
Screws (J).	25 N·m (18.5 lb·ft)
Precleaner Clamp (F).	6.5 N·m (4.8 lb·ft)
Precleaner to Extension Tube	
Hose Clamp (O).	6.5 N·m (4.8 lb·ft)

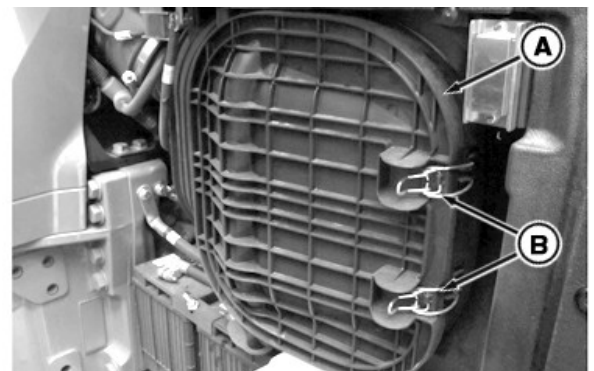
TS36762,000012B-19-13NOV17

Primary and Secondary Engine Air Filters

IMPORTANT: Inspect filters annually or when a related diagnostic trouble code appears. Replacement interval may vary due to operating conditions. If primary filter appears good upon inspection, but diagnostic trouble code remains ON, replace primary engine air filter. Replace secondary engine air filter at every second primary filter change.

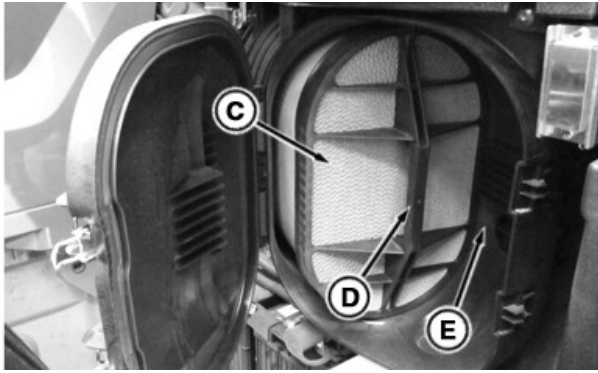
Carefully remove and examine primary and secondary filters for breaks or tears or excessive dirt accumulation. To inspect filters:

1. Remove battery compartment cover.



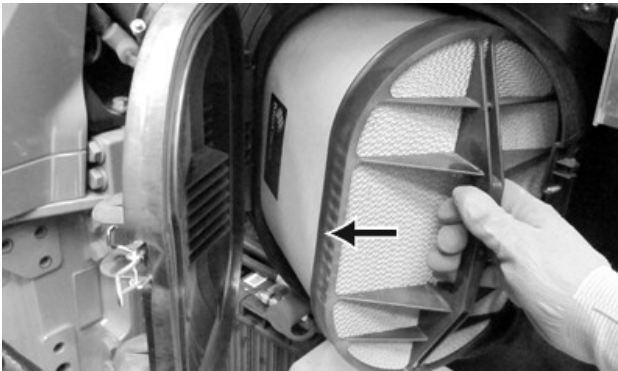
RXA0134187—UN—25JUL13

2. Unfasten two clamps (B) and open filter cover (A).



RXA0134188—UN—25JUL13

3. Pull handle (D) towards front of tractor to release primary air filter from raised retainer (E).



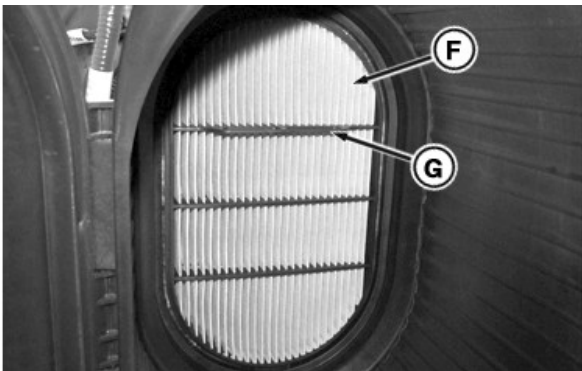
RXA0134189—UN—25JUL13

Remove Primary Filter

4. Pull on handle to remove primary filter (C).
5. Clean dirt from inside of canister and cover.

IMPORTANT: If a filter is dirty, replace it. Do not attempt to clean filters.

6. Carefully inspect primary filter, looking for excessive dirt and debris accumulation or rips in filter element. Replace if excessively dirty or if damaged.



RXA0155766—UN—16NOV16



RXA0134191—UN—25JUL13

Remove Secondary Filter

7. To protect air intake system, only remove secondary filter far enough from canister to allow inspection. Pull on handle (G) to slide top part of secondary filter (F) out first. Inspect secondary filter.

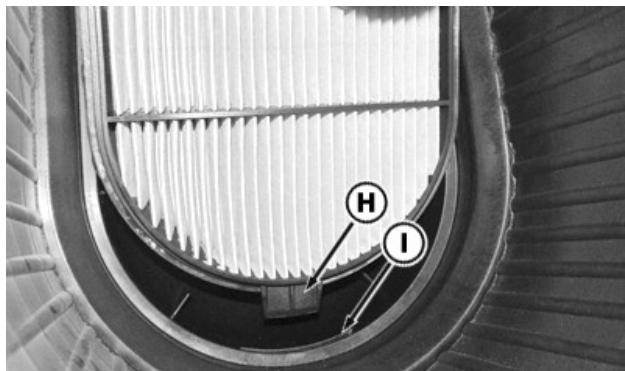
IMPORTANT: Failure to properly install primary and secondary filters will cause damage to engine. When installing primary air filter, make sure filter is properly seated behind raised retainer.

Replace secondary filter every second primary air filter change or if secondary filter is found to be damaged or excessively dirty.

8. If secondary filter is found to be in good condition and has been replaced at last primary filter change, reinsert it into filter canister. Then reinstall original - or install new - primary filter. Replace filter and battery covers.

IMPORTANT: Install new secondary filter immediately to prevent dust from entering air intake system.

9. If secondary filter is damaged or excessively dirty, or if the primary filter has been replaced once before without replacing secondary filter, remove and discard secondary filter.



RXA0155767—UN—16NOV16

Install secondary filter, place tab (H) in slot (I).

11. Firmly press around edge of secondary filter to properly seat filter against filter housing.

12. Install new or reinstall original primary filter.
13. Close cover and fasten cover clamps.
14. Reinstall battery compartment cover.

RX32825,0001797-19-16NOV16

Engine and Exhaust Compartments

IMPORTANT: Accumulated crop residue inside engine compartment can reduce engine and cooling system performance. If tractor has been operated in field conditions which might have caused debris accumulation, inspect and clean engine compartment as necessary.

Directing pressurized water at electronic/electrical components, connectors, bearings and hydraulic seals, fuel injection pump or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45° to 90° angle.

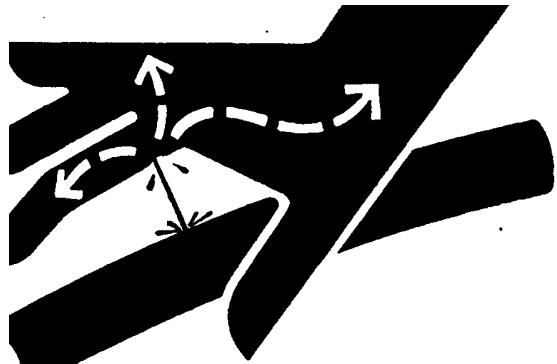
Directing pressurized air at electronic/electrical components or connectors, may cause buildup of static electricity and product malfunctions.

Never steam clean or pour cold water on an injection pump that is operating or hot. Pump could seize.

1. Shut off engine and allow time for engine to cool.
2. Remove front and rear engine side shields, see Remove Front Engine Side Shield and Remove Rear Engine Side Shield in Service-General Information section of this Operator's Manual.
3. Remove any crop or debris within engine and exhaust compartments, especially around turbocharger, exhaust manifold, and exhaust aftertreatment system.
4. Reinstall all engine side shields.
5. Close and securely latch hood.

TS36762,000012C-19-25APR18

Air Conditioning System



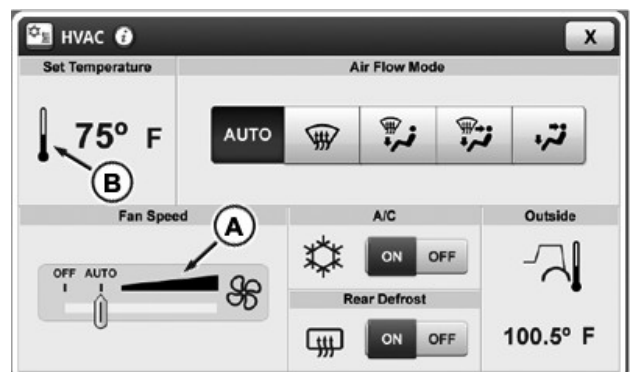
X9811—UN—23AUG88

CAUTION: Avoid possible injury. Improper servicing may cause refrigerant to penetrate eyes and skin or cause burns.

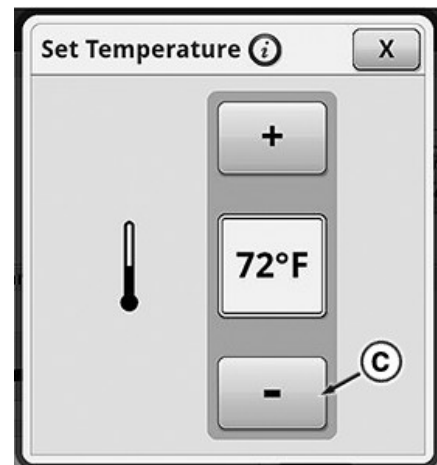
IMPORTANT: R-134a refrigerant must be used in air conditioning system. Service requires special equipment and procedures. See your John Deere dealer.

NOTE: Some oil seepage from compressor shaft seal is normal.

Perform following checks if air conditioning system will not cool, or cooling is intermittent:



RXA0134229—UN—29JUL13



RXA0155935—UN—23NOV16

- Confirm system does not function correctly. Access

HVAC page on CommandCenter™, see HVAC Settings--Generation 4 CommandCenter™ in HVAC section of this Operator's Manual. Set fan increment bar (A) to highest speed. Access Set Temperature page (B) and set temperature to coldest setting (C). Operate engine at 2000 rpm. Check air vents to confirm cold air is not present.

- Inspect and clean cab air filters. Replace filters if necessary, see Cab Recirculation Air Filter in Service - Change section of this Operator's Manual.
- Clean grille and radiator, see Engine Cooling System in Service - Clean section of this Operator's Manual.
- Check air vents for cold air flow.

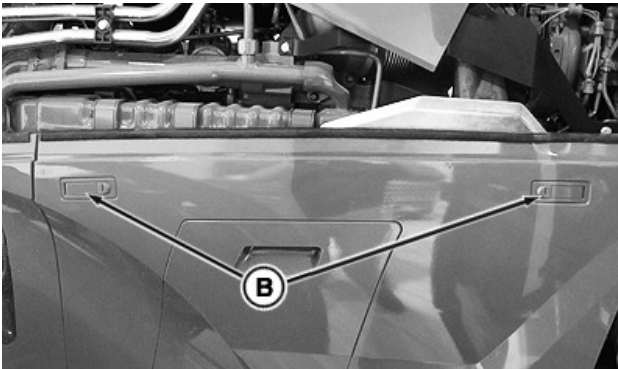
If problems persist, see your John Deere dealer.

TS36762,000012D-19-04APR18

Engine Water Pump Weep Hole

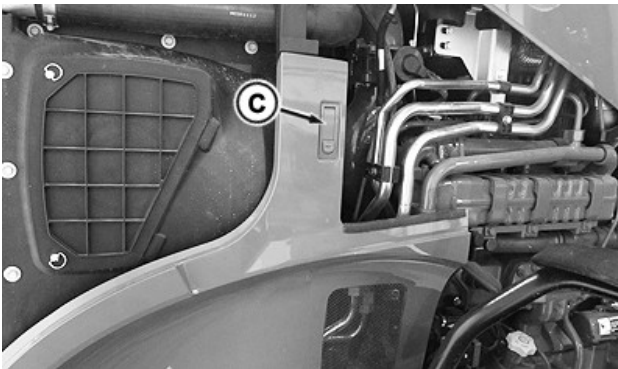
1. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.

CAUTION: Avoid injury. Allow engine sufficient time to cool before checking weep hole.



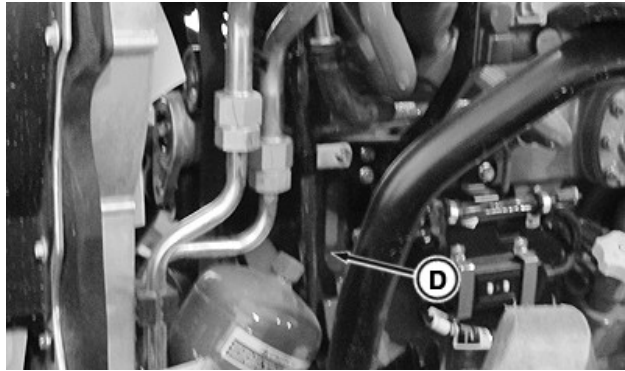
RXA0134193—UN—25JUL13

2. Depress latch buttons (B) to remove left rear side shield.



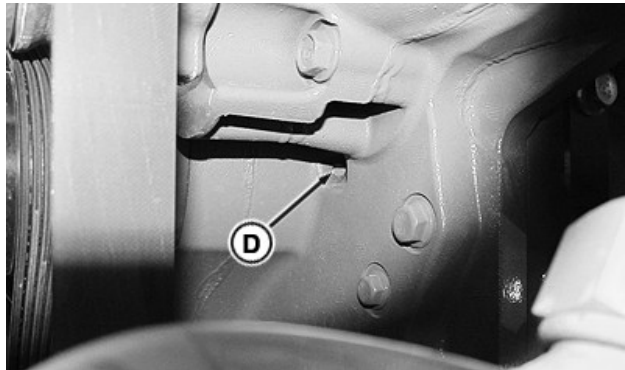
RXA0134230—UN—29JUL13

3. Depress latch button (C) to remove left front side shield.



RXA0134196—UN—25JUL13

Front Left-hand Side of Engine - 9.0 L Shown



RXA0134197—UN—25JUL13

Engine Weep Hole - 9.0 L Shown

4. Inspect weep hole (D) for oil or coolant leakage.
5. Close and secure hood and reinstall side shields.

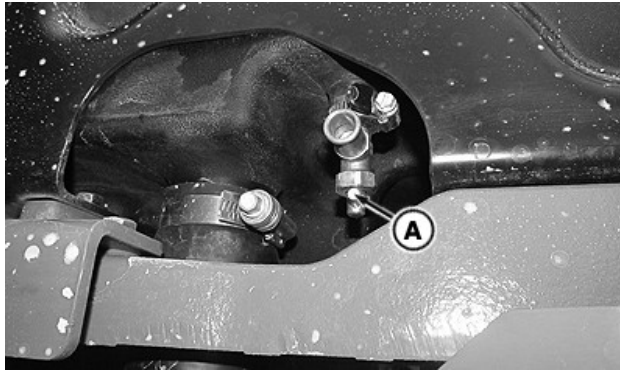
If leakage is detected, see your John Deere dealer to replace complete coolant pump assembly (repair parts are not available).

- Oil leakage indicates a damaged rear seal.
- Coolant leakage indicates a damaged front seal.

TS36762,000012E-19-08SEP17

Fuel Tank Sump

NOTE: Drain fuel tank sump if fuel filters are replaced frequently or water is found in the fuel tank. Service may be required more often under some conditions.



RXA0134215—UN—25JUL13

Drain fitting is recessed into inboard edge of right fuel tank.

IMPORTANT: Use wrench to hold drain fitting while opening or closing tee or damage to tank threads can occur.

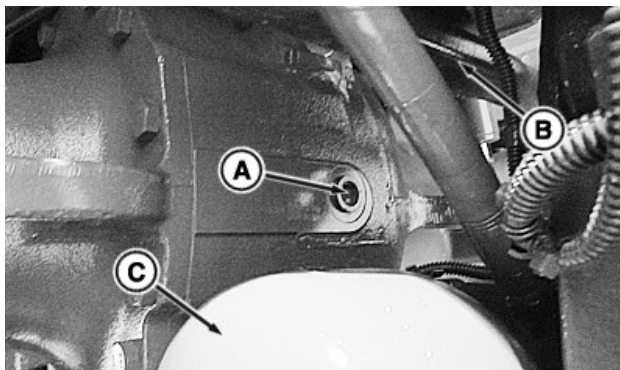
Open drain tee (A).

Drain fuel from tanks until clean fuel appears from tank, then close drain tee

TS36762,000012F-19-08SEP17

MFWD or TLS™ Plus Axle Housing Oil Level

IMPORTANT: If there are any indications of oil leaks, do not operate tractor until the source has been determined and repairs made.



RXA0134206—UN—29JUL13

Left-Hand Side

1. Park tractor on level ground.
2. Remove fill/check plug (A). Oil level should be just below plug hole.
3. If oil level is low, add oil until level is correct. Use John Deere Hy-Gard™ oil as specified in Transmission and Hydraulic Oil in Other Lubricants section of this Operator's Manual.

Hy-Gard is a trademark of Deere & Company

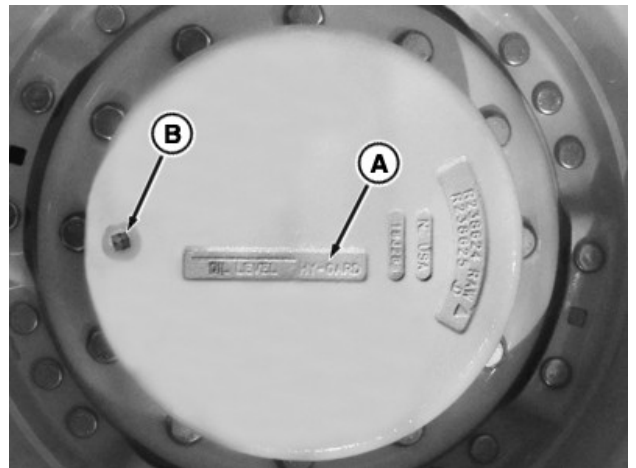
4. Apply pipe sealant with TEFLON®, or equivalent, to threads of fill/check plug (A).
5. Install fill/check plug and tighten to 70 N·m (52 lb·ft).

TS36762,0000130-19-09NOV17

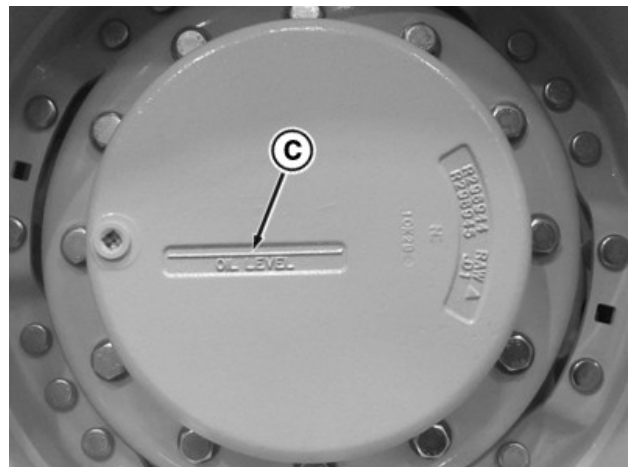
MFWD or TLS™ Plus Wheel Hub Oil Level

IMPORTANT: If there are any indications of oil leaks, do not operate tractor until the source has been determined and repairs made.

1. Park tractor on level ground.



RXA0134236—UN—29JUL13



RXA0129807—UN—26NOV12

2. Maneuver tractor forward or backward until words OIL LEVEL - HY-GARD (A) or OIL LEVEL (C) cast into wheel hub are horizontal.
3. Remove drain/fill plug (B). Oil level should be just below plug hole.

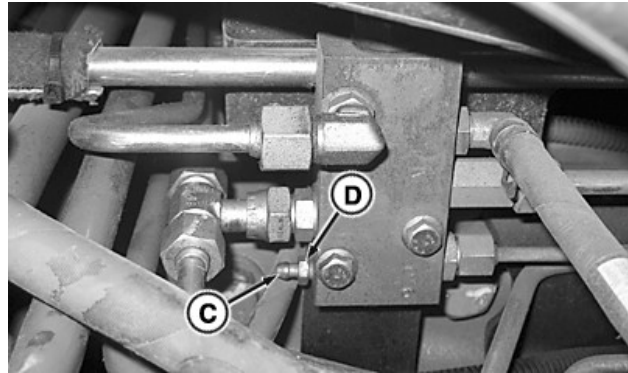
TEFLON is a trademark of Du Pont Co.

IMPORTANT: Use correct lubricant. Wheel hubs with brakes must be filled with John Deere Hy-Gard™ oil as specified in Transmission and Hydraulic Oil in Other Lubricants section of this Operator's Manual.

Wheel hubs without brakes are filled with John Deere GL-5 Gear Lubricant as specified in Gear Oil in Other Lubricants section of this Operator's Manual.

4. If oil level is low, add oil through drain/fill hole. Add correct oil depending upon whether tractor is equipped with front brakes. If tractor is equipped with front brakes, words cast into front hubs will read OIL LEVEL - HY-GARD. Fill front brake hub with John Deere Hy-Gard™ oil. If only words OIL LEVEL are cast into front hubs, tractor is not equipped with front brakes. Use John Deere GL-5 Gear Lubricant.
5. Apply pipe sealant with TEFLON®, or equivalent, to threads of drain/fill plug.
6. Install drain/fill plug and O-ring and tighten to 70 N·m (52 lb·ft).
7. Repeat procedure with other wheel hub.

TS36762,0000131-19-09NOV17



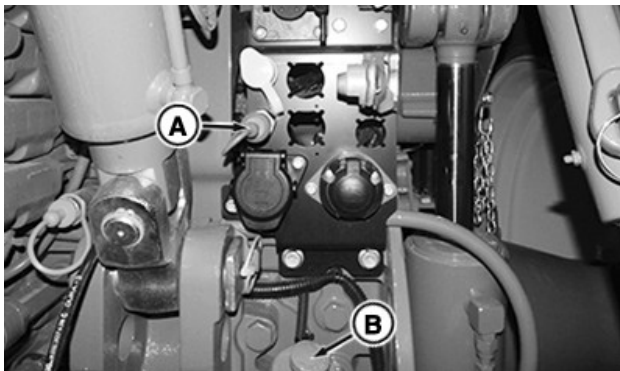
RXA0155631—UN—10NOV16

3. Loosen bleed valve nut (D).
4. Connect a hose onto bleed valve connection (C). Place other end of hose into hydraulic oil filler tube.
5. Start engine.
6. At slow idle, depress brake pedals for approximately 2 minutes.
7. Tighten bleed valve nut with brake pedals depressed.
8. Shut off engine and remove key.
9. Remove hoses and install hydraulic oil filler tube cap.

TS36762,0000132-19-19JUN17

Trailer Hydraulic Brakes

NOTE: An assistant is needed to perform this procedure.



RXA0155625—UN—10NOV16

1. Remove cap and connect a hose to hydraulic trailer brake coupler (A).
2. Remove transmission-hydraulic oil filler tube cap and place other end of hose into oil filler tube (B).

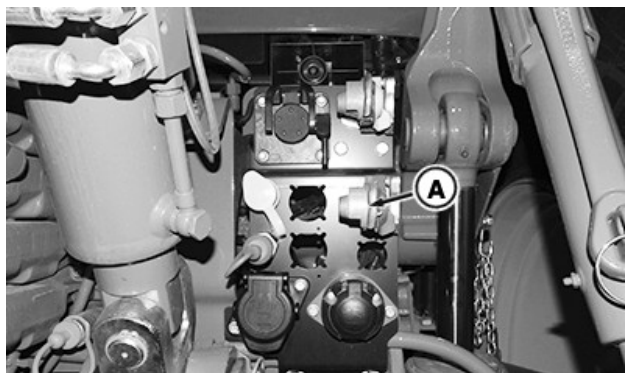
Trailer Air Brakes

NOTE: An assistant is needed to perform this procedure.

Trailer air brakes are equipped with automatic bleed valves. Automatic bleed valves will vent an air/oil/water mixture multiple times during normal operation of tractor.

⚠ CAUTION: To avoid injury, be sure all people are clear of tractor.

1. Start tractor.
2. Wait 1 minute for air tanks to build up pressure.

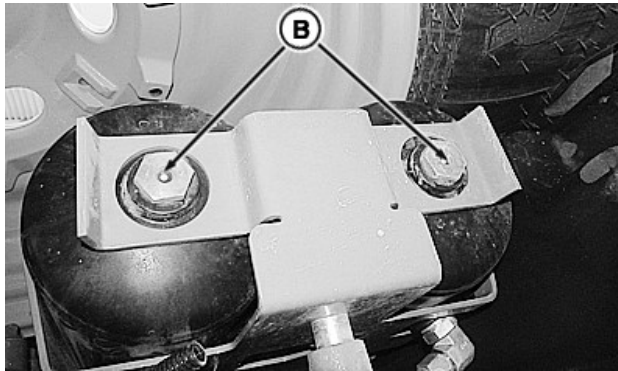


RXA0155637—UN—10NOV16

NOTE: Continuous release of air will not allow trailer air brakes to bleed. Coupler must be cycled in an on/off process.

Hy-Gard is a trademark of Deere & Company
TEFLON is a trademark of Du Pont Co.

- Person 1 repeatedly cycles red trailer air brake coupler (A) on and off.

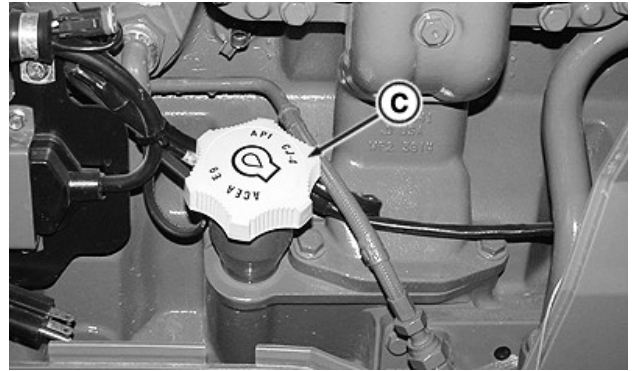


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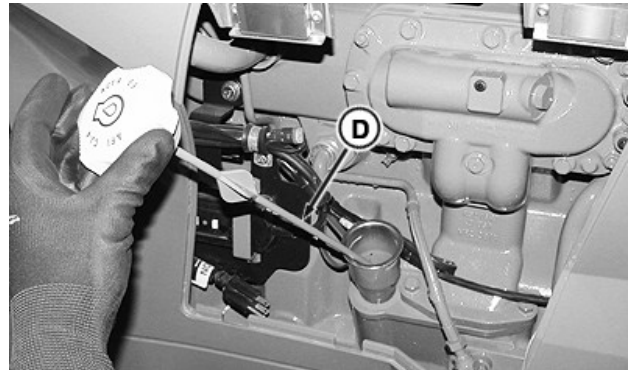
- Air brake bleed valves (B) are located on bottom of trailer brake air tanks. Person 2 places hand below bleed valves, and feels for a release of air, water or oil.

Bleed valves cycle randomly. If they do not operate first time, wait 10 minutes and try this process again. If no venting is observed, contact your John Deere dealer.

TS36762,0000133-19-19JUN17



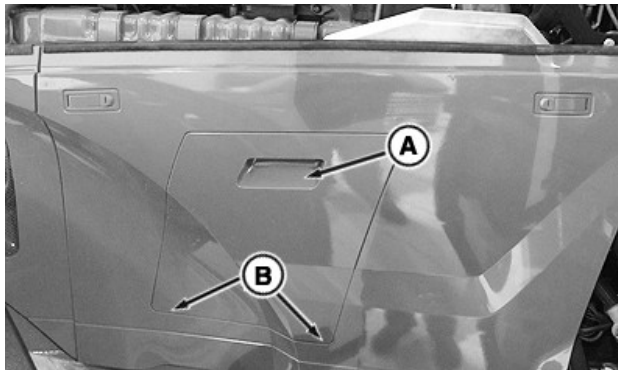
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RXA0134279—UN—13AUG13

Engine Oil Level

- Park tractor on level ground. Stop engine and remove key.



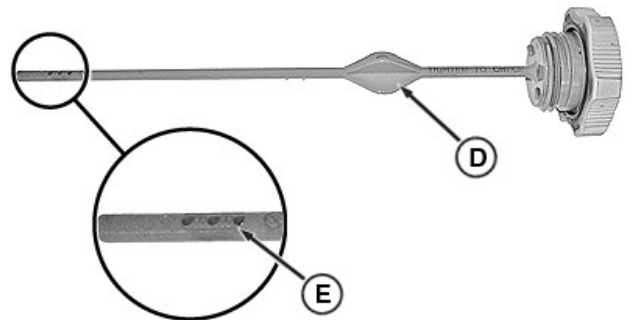
RXA0134202—UN—13AUG13

Engine Access Panel-Left-hand Side

- Remove engine access panel. Pull outward, using hand grip recess (A). Magnets secure top of panel. Lift panel from alignment tabs at bottom (B).

IMPORTANT: Do not operate engine with oil level below "ADD" mark on dipstick.

NOTE: Fully tighten filler cap to check oil. Oil level at top of crosshatch area on dipstick is considered **FULL**.



RXA0109390—UN—16AUG10

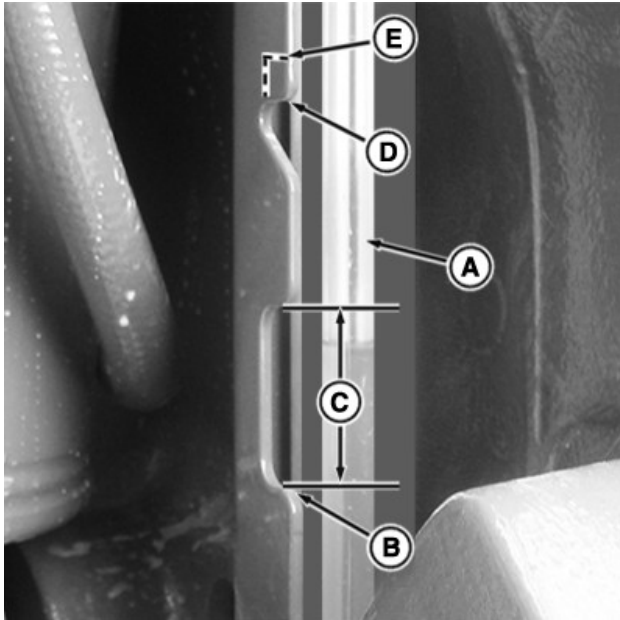
- Dipstick is attached to filler cap (C). Remove cap and clean dipstick. Retighten cap, then remove and check oil level on dipstick (D). Oil level should be between "ADD" mark and top (E) of crosshatch area on dipstick.
- If needed, remove cap and add oil recommended in Engine Oil section of this Operator's Manual.
- Reinstall engine access panel.

TS36762,0000134-19-05SEP17

Transmission-Hydraulic Oil Level

IMPORTANT: While tractor is in operation, oil level will vary above maximum operating level and below normal operating range. For accurate reading closely follow procedure.

1. Park tractor on level ground and fully lower rear hitch.
2. Shut off engine.
3. Wait 30 minutes or until oil level stabilizes in sight tube before checking oil level.



RXA0155639—UN—10NOV16

4. Check oil level in sight glass (A) at rear of tractor.

IMPORTANT: Overfilling transmission-hydraulic oil can result in decreased operating efficiency. Except when operating in side-hill or high volume applications, keep oil level at or slightly below top of normal operating range. Never fill system above maximum operating level.

NOTE: Oil level may need to be adjusted based on expected operating conditions. See special operating condition instructions below.

Hydraulic oil sensor detects a low oil level or hydraulic oil loss. DTC appears on display. Check hydraulic oil level and fill to normal operating range.

5. If transmission-hydraulic oil level is at or below add oil indication (B), slowly add oil to reach top of normal operating range indicator (C). Use oil as specified in Transmission and Hydraulic Oil in Other Lubricants section of this Operator's Manual. From add oil level, adding approximately these amounts of oil will bring oil level to top of normal operating range.

Transmission	Without Optional Auxiliary Oil Reservoir	With Optional Auxiliary Oil Reservoir
IVT/IVT™ /AutoPowrAuto-Powr™	16 L (17 qt)	18 L (19 qt)
e23e23™	16 L (17 qt)	18 L (19 qt)

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
e23 is a trademark of Deere & Company

IMPORTANT: Examine oil level indicator. If tractor is not equipped with optional auxiliary oil reservoir, maximum operating level indication will be as shown (D). If tractor has optional oil reservoir installed, maximum operating level indicator will be higher (E).

If oil appears milky or foamy, oil may be contaminated with water, change oil immediately. If oil is discolored or smells burned, oil may be overheating. See your John Deere dealer.

For Side-Hill Applications or High Oil Volume Requirements: To prevent low oil levels, additional oil may be required when operating on side hills or when using implements which require large volumes of oil to function. Oil level should be at or slightly below maximum operating level (D or E).

TS36762,0000135-19-27AUG18

NEUTRAL Start System

CAUTION: Avoid personal injury or damage to tractor. If engine starts with left-hand or right-hand reverser lever in forward or reverse positions, there is a malfunction in starting circuit. Repair immediately. See your John Deere dealer.

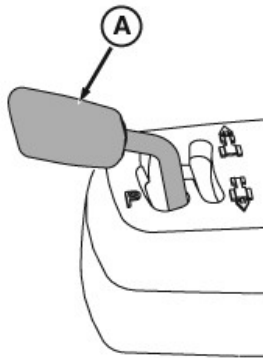
Avoid personal injury. Make sure that everyone is clear of tractor.

1. Park tractor on level ground.
2. Fully depress clutch and brake pedals.
3. Shut off tractor.



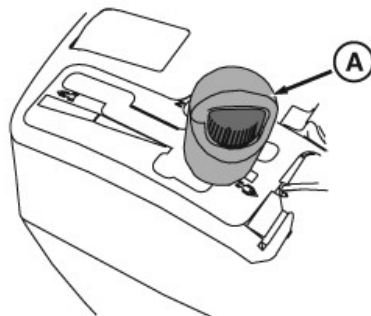
e23

RXA0130963—UN—14FEB13



IVT

RXA0130964—UN—14FEB13



RXA0130965—UN—14FEB13

IVT™/AutoPowr™ Transmission Right-hand Reverser

4. Move reverser lever (A) to any position **except** NEUTRAL or PARK position.

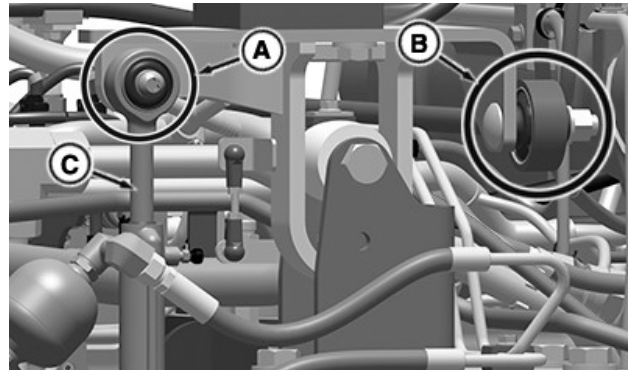
NOTE: Engine should start in NEUTRAL or PARK position only (depending upon transmission type).

5. Attempt to start engine. If engine starts in any position other than NEUTRAL or PARK (depending upon transmission type), neutral start system should be repaired. See your John Deere dealer **immediately**.

Transmission and Reverser Lever Options	Tractor Starts In
e23™ Transmission Left-Hand Reverser	PARK Only
e23™ Transmission Right-Hand Reverser	PARK Only
IVT™/AutoPowr™ Transmission Left-Hand Reverser	PARK or NEUTRAL Only
IVT™/AutoPowr™ Transmission Right-Hand Reverser	PARK Only

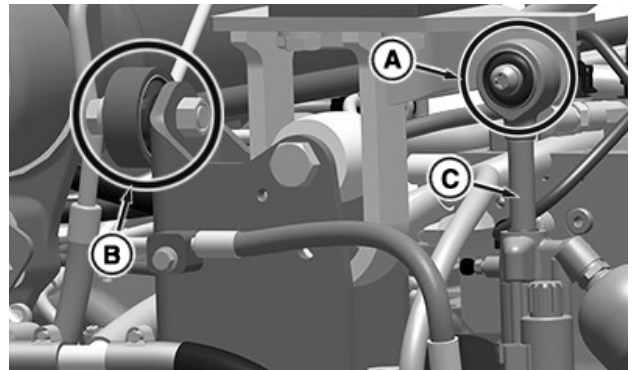
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Hydraulic Cab Suspension Components



RXA0164339—UN—22AUG18

Left-Hand Side Behind and Below Cab



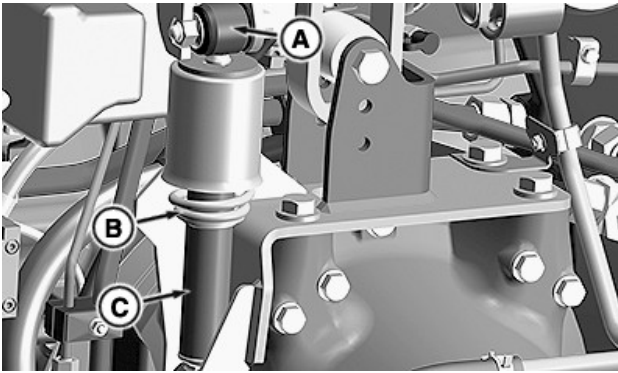
RXA0164340—UN—22AUG18

Right-Hand Side Behind and Below Cab

1. Check suspension cylinder (A) and panhard rod bushing (B) for degraded or missing rubber. If rubber is damaged replace complete bushing assembly.
2. Check suspension cylinder (C) for signs of leaking oil, replace if leaking.

BH38674,0000D54-19-23AUG18

Mechanical Cab Suspension Components



RXA0164062—UN—27AUG18

1. Check bushings (A) for degraded or missing rubber. If rubber is damaged replace complete bushing assembly.
2. Check coil spring (B) for breakage, replace if broken.
3. Check shock (C) for signs of leaking oil, replace if leaking.

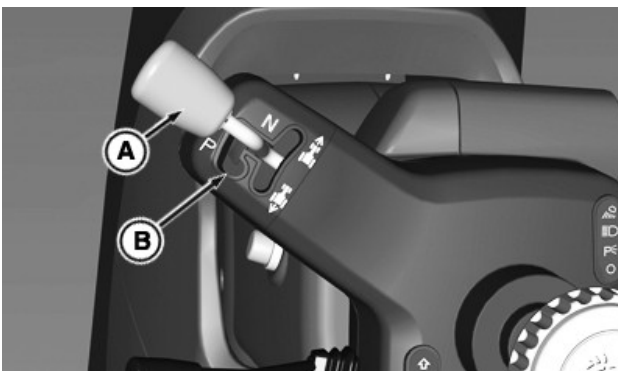
BH38674,000D4F-19-23AUG18

Transmission PARK System

CAUTION: Avoid personal injury or damage to tractor. If engine starts with left-hand or right-hand reverser lever in forward or reverse positions, there is a malfunction in starting circuit. Repair immediately. See your John Deere dealer.

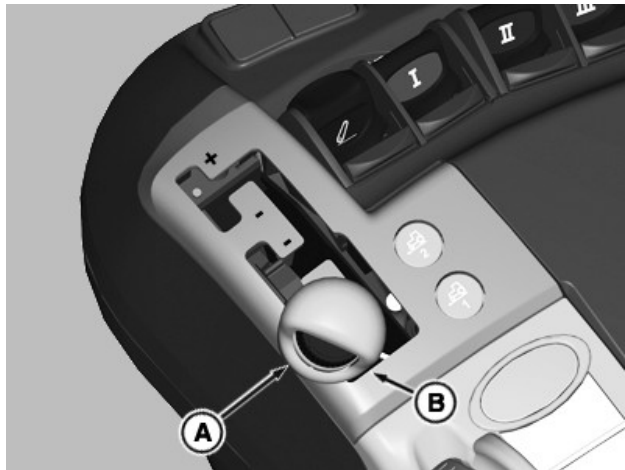
Avoid personal injury. Make sure that everyone is clear of tractor.

1. Position tractor on a 30% incline [1 m (3.3 ft) vertically for every 3 m (9.8 ft) horizontally] with front of tractor facing downward.



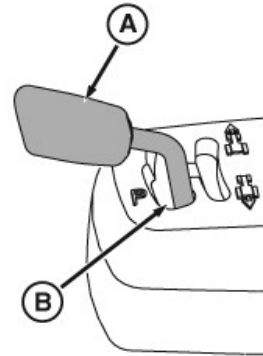
RXA0130966—UN—14FEB13

e23™ Transmission Left-Hand Reverser



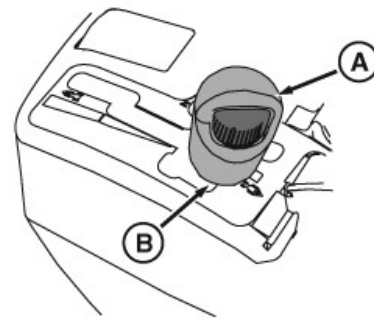
RXA0130967—UN—14FEB13

e23™ Transmission Right-Hand Reverser or 16-Speed Powershift Transmission Reverser



RXA0130968—UN—14FEB13

IVT™/AutoPowr™ Transmission Left-Hand Reverser



RXA0130969—UN—14FEB13

IVT™/AutoPowr™ Transmission Right-Hand Reverser

2. Move reverser lever (A) to PARK position (B).

CAUTION: Avoid injury or property damage. If tractor fails PARK test, repair transmission.

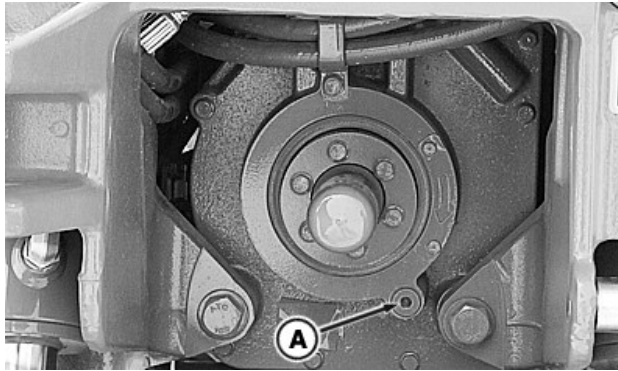
3. If tractor does not hold stationary on incline with reverser lever in PARK position, repair transmission immediately. See your John Deere dealer.

DB71512,0000004-19-05OCT17

Front PTO Housing Oil Level

IMPORTANT: Normal front PTO service interval is every 1500 hours. However, change oil and replace filter after first 250 hours of tractor use. See 1500 Hour Service in this Operator's Manual.

1. Park tractor on level surface.



RXA0134207—UN—25JUL13

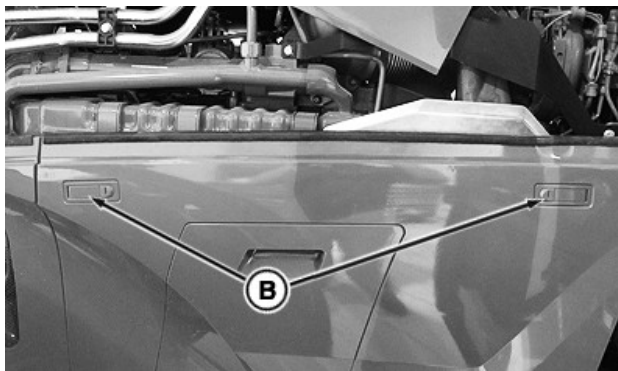
2. Remove plug (A). Oil level should be just below plug hole.
3. If low, add oil until level is correct. See Transmission and Hydraulic Oil in Other Lubricants section of this Operator's Manual.
4. Install plug.

TS36762,0000139-19-14DEC16

Engine Air Intake System—6.8 L Engine

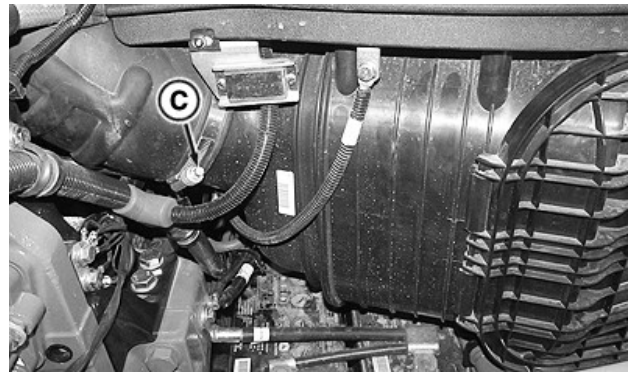
IMPORTANT: To determine which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

1. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.



RXA0134193—UN—25JUL13

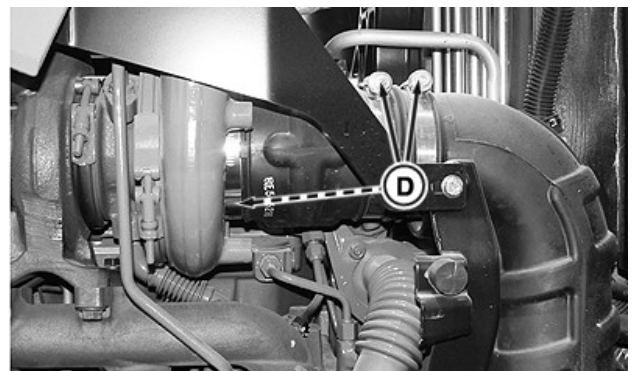
2. Depress latch buttons (B) to remove left-hand rear side shield.
3. Remove battery compartment cover.



RXA0134212—UN—25JUL13

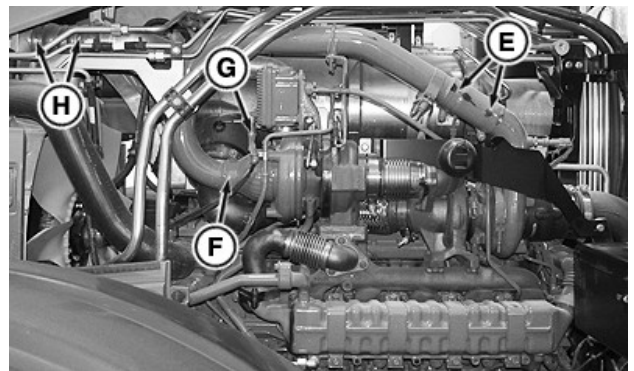
Left-hand Side of Engine

4. Tighten hose clamp (C) after air filter.



RXA0134237—UN—30JUL13

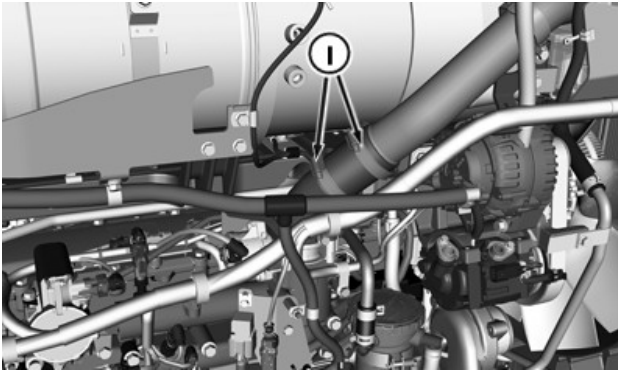
Left-hand Side of Engine



RXA0134252—UN—31JUL13

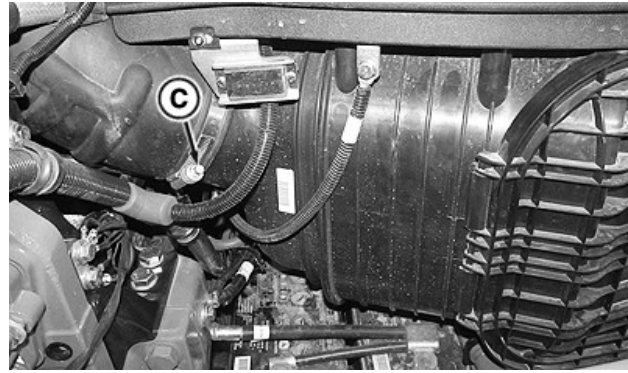
Left-hand Side of Engine

5. Tighten hose clamps before (D) and after (E) first turbocharger.
6. Tighten hose clamps before (F) and after (G) second turbocharger.



RXA0135223—UN—23AUG13

Right-hand Side of Engine



RXA0134212—UN—25JUL13

Left-hand Side of Engine

7. Tighten hose clamps (H) before and after (I) intercooler.

Torque — Specification

Clamp After Second

Turbocharger (G). 20 N·m (178 lb·in)

All Other Clamps (C, D, E, F, H,

I). 10 N·m (88 lb·in)

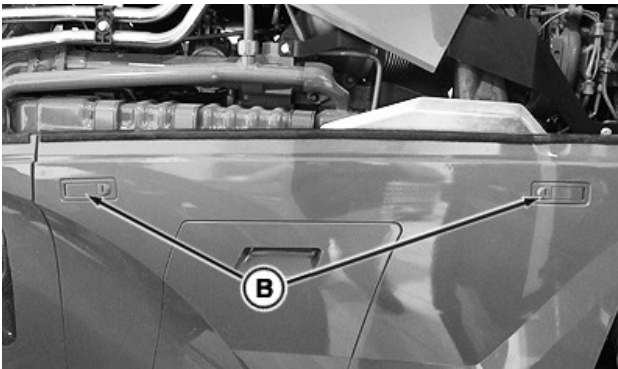
8. Reinstall side shields.
9. Close and secure hood.

TS36762,000013A-19-09NOV17

Engine Air Intake System - 9.0 L Engine

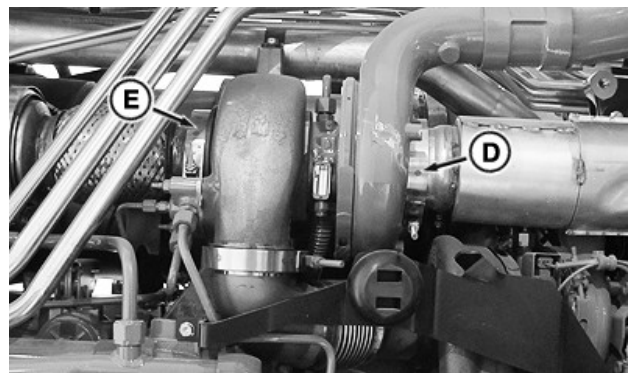
IMPORTANT: To determine which engine your tractor is equipped with, see **Engine Serial Number in Identification Numbers** section of this Operator's Manual.

1. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.



RXA0134193—UN—25JUL13

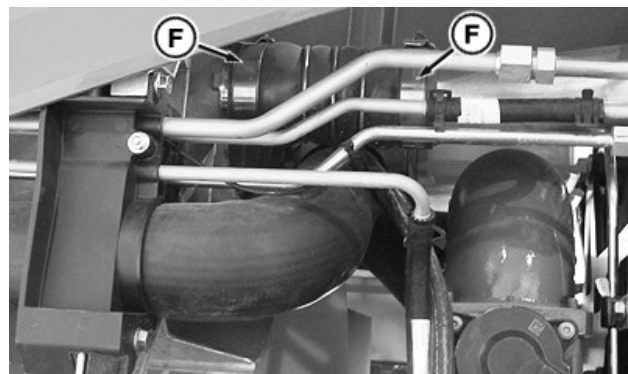
2. Depress latch buttons (B) to remove left-hand rear side shield.
3. Remove battery compartment cover.



RXA0134214—UN—25JUL13

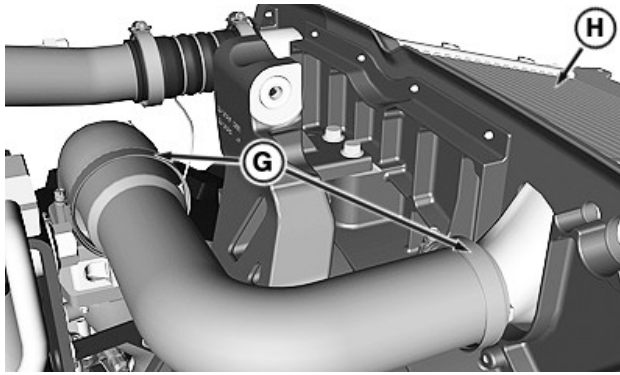
Hose Clamps Before and After Turbocharger (Left-hand Side of Engine)

5. Tighten hose clamps before (D) and after (E) turbocharger.



RXA0134213—UN—25JUL13

Left-hand Side of Engine



RXA0134227—UN—29JUL13

Right-hand Side of Engine

6. Tighten hose clamps before (F) and after (G) intercooler (H).

Torque — Specification

Clamp Before Turbocharger (D). 20 N·m (178 lb·in)
All Other Clamps (C, E, F, G). 10 N·m (88 lb·in)

7. Reinstall side shields.
8. Close and secure hood.

TS36762,000013C-19-09NOV17

Tires

IMPORTANT: Keep tires at recommended pressure to insure maximum performance. See inflation pressure tables in Front and Rear Wheels, Tires, and Treads sections of this Operator's Manual.

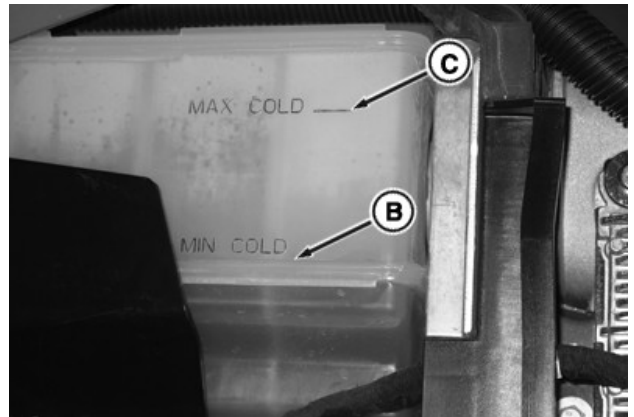
Inspect tires for cuts or breaks and repair. Adjust and maintain tire pressure according to recommended pressure charts for optimum field performance. Check pressure of each tire at least once a week. If tires contain liquid ballast, use a special air-water gauge, and measure with valve stem positioned at bottom.

TS36762,000013D-19-14DEC16

Engine Coolant Level

Coolant level is monitored electrically. When coolant is low a diagnostic trouble code will appear on CommandCenter™. Check coolant level manually and refill system as necessary.

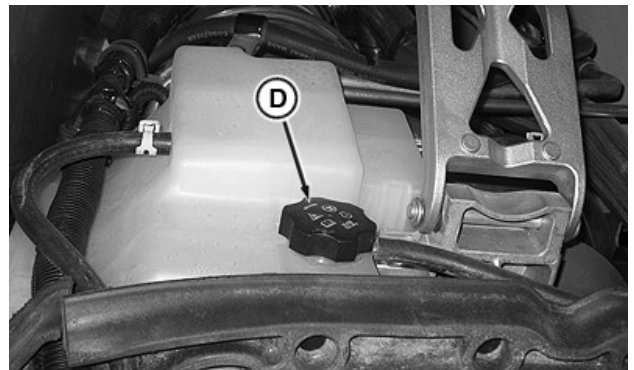
1. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.



RXA0133489—UN—02JUL13

De-aeration Tank

2. Check coolant level on side of deaeration tank. Level should be at or above MIN COLD (B) but below MAX COLD (C). If level is low, before adding coolant, check for any signs of leakage. Repair if necessary.



RXA0133490—UN—02JUL13

IMPORTANT: Do not open deaeration tank cap (D) when engine is warm. Doing so will add air to coolant system.

If coolant level is low, but there is no sign of an external leak, there may be an internal coolant leak. Contact your John Deere dealer.

3. Wait until engine is cool. Remove deaeration tank cap and add coolant. See Engine Coolant section of this Operator's Manual. Do not fill above MAX COLD line.
4. Reinstall deaeration tank cap.
5. Close and secure hood.

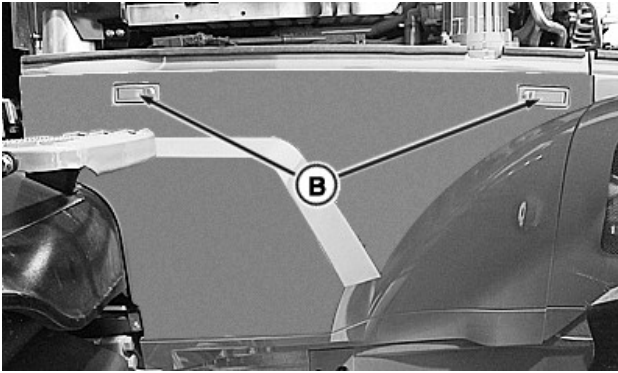
TS36762,000013E-19-31AUG17

Water Separator

IMPORTANT: Water can damage fuel systems. If excessive water is found, draining fuel tanks may be required. See Fuel Tank Sump in this section of this Operator's Manual.

Water in fuel collects in bottom of fuel filters. When separator sensor identifies water in fuel system, service alert indicator flashes on corner post display. Alarm sounds for five seconds and corresponding message appears on CommandCenter™ display.

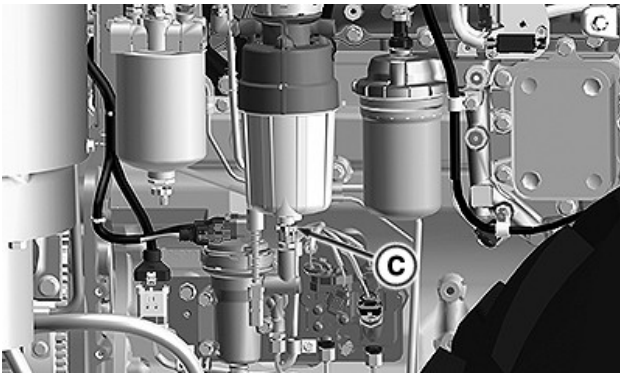
1. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.



RXA0134208—UN—29JUL13

Right-hand Rear Side Shield

2. Depress latch buttons (B) to remove right rear side shield.



RXA0160595—UN—17AUG17

6.8 L Engine



RXA0109392—UN—10SEP10

9.0 L Engine

3. Rotate drain valve nut (C) counterclockwise to open and drain accumulated water.
4. Close drain valve nut.
5. Reinstall side shield.
6. Securely close hood.

TS36762,000013F-19-05SEP17

Engine Coolant Freeze Point

IMPORTANT: Perform coolant service every 1000 hours or annually, whichever comes first.



TS281—UN—15APR13

CAUTION: Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off engine. Only remove cap when cool enough to touch with bare hands. Slowly loosen cap to release pressure before fully removing.

1. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.

IMPORTANT: Do not open de-aeration tank cap when engine is warm. Doing so will add air to coolant system.



9.0 L Engine

RXA0160911—UN—08SEP17

2. Slowly turn de-aeration tank cap (A) to relieve pressure. Remove cap.
3. Test coolant. Use TY26605 Cool-Gard™ II Test Strips available from your John Deere dealer. Follow instructions on back of reader card in test strip pack. Or, a more precise test device is available, see Testing Coolant Freeze Point in Engine Coolant section of this Operator's Manual.
4. Add TY26603 Cool-Gard™ II Extender (available from your John Deere dealer) as indicated by color matrix on reader card in test strip pack. If tank is too full, drain a small amount of coolant from system before extender is added.
5. Visually check cap O-ring for sealing effectiveness. A correctly sealing O-ring will have imprint of tank neck mating surface with no apparent scratches or leak paths. If O-ring is not sealing correctly, replace cap.
6. Install de-aeration tank cap.
7. Close and securely latch hood.

RX32825,00017B2-19-08SEP17

TLS™ Plus Accumulator Charge Pressure

IMPORTANT: Perform service every 1000 hours or annually, whichever comes first.

See your John Deere dealer.

TS36762,0000141-19-15NOV16

Cab Suspension Accumulator Charge Pressure (If Equipped with Hydraulic Cab Suspension)

IMPORTANT: Check cab suspension accumulator charge pressure every 1000 hours or annually, whichever comes first.

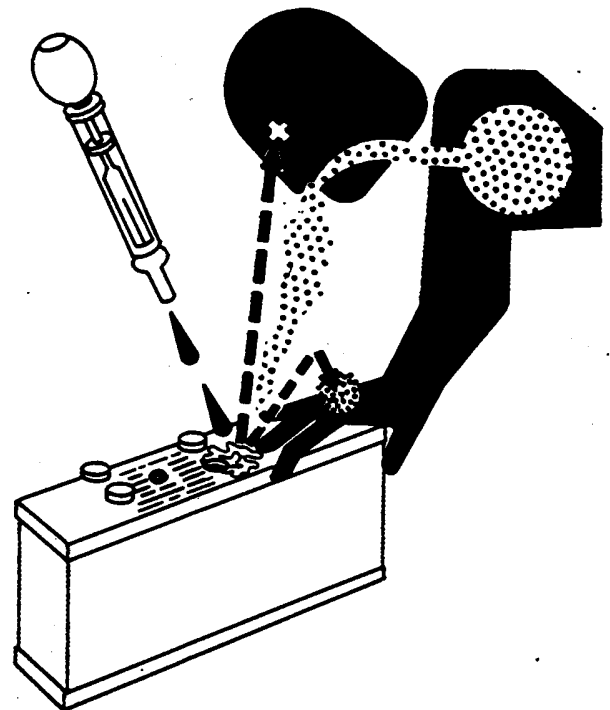
See your John Deere dealer.

TS36762,0000142-19-27AUG18

Handling Batteries Safely



TS204—UN—15APR13



TS203—UN—23AUG88

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace grounded clamp last.

Sulfuric acid in battery electrolyte is poisonous and strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid hazards by:

- Filling batteries in a well-ventilated area
- Wearing eye protection and rubber gloves
- Avoiding use of air pressure to clean batteries
- Avoiding breathing fumes when electrolyte is added
- Avoiding spilling or dripping electrolyte
- Using correct battery booster or charger procedure.

If acid is spilled on skin or in eyes:

1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

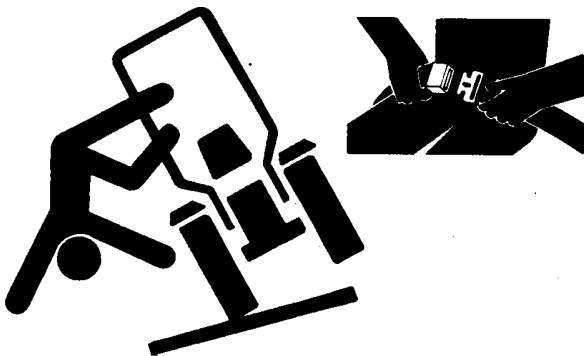
If acid is swallowed:

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 qt.).
3. Get medical attention immediately.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**

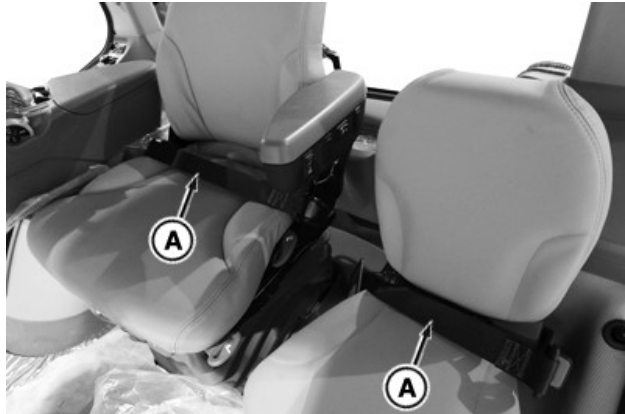
DX,WW,BATTERIES-19-02DEC10

Seat Belts



TS205—UN—23AUG88

CAUTION: If seat belt system, including mounting hardware, buckle, belt, or retractor shows any sign of damage such as cuts, fraying, extreme or unusual wear, discoloration or abrasion, the entire seat belt system should be replaced immediately. Replace belt system only with replacement parts approved for your machine.



RXA0136864—UN—14NOV13

Inspect seat belts (A) and mounting hardware. If seat belts need to be replaced, see your John Deere dealer.

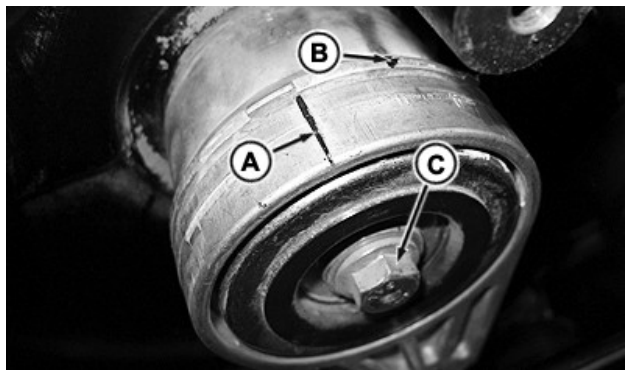
TS36762,0000146-19-05SEP17

Fan Belt Tensioner and Fan Belt

1. Remove fan belt. See Fan Belt in Service – Change section of this Operator's Manual.
2. Examine fan belt tensioner assembly for visible damage. If tensioner is:

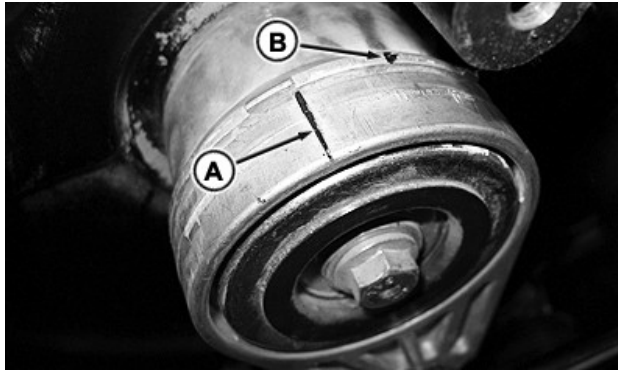
Damaged, secure replacement tensioner, then go to step 6.

Not damaged, go to step 3.



RXA0163039—UN—24APR18

3. Measure 21 mm (13/16 in) from mark on tensioner arm (A) and put mark (B) on mounting bracket.
4. Place torque wrench socket on cap screw (C).



RXA0163040—UN—24APR18

5. Rotate tensioner arm with torque wrench until marks (A and B) align together. Check torque wrench measurement. If measurement is not within 18-23 N·m (159-204 lb·in), replace tensioner. If tensioner:
Must be replaced, go to step 6.
Is within specification, go to step 8.
6. Replace tensioner assembly,
7. Apply thread lock and sealer Loctite® 242 to pivot cap screw. Install cap screw and tighten to 70 N·m (51 lb·ft) torque.
8. Inspect fan belt. If belt is:
Worn or damaged, secure replacement fan belt. Then go to step 9.
In good condition, go to step 9.
9. Install fan belt. See Fan Belt in Service – Change section of this Operator's Manual.

TS36762,0000147-19-25APR18

Engine Valve Clearance

NOTE: To confirm which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

See your John Deere dealer.

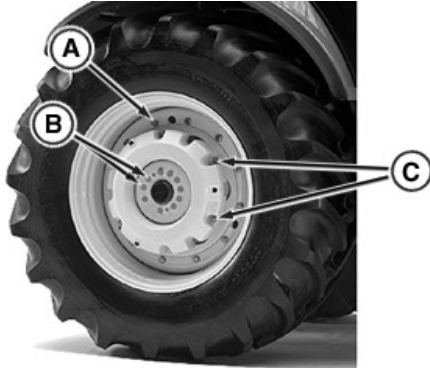
TS36762,0000148-19-14DEC16

Service - Tighten

Wheel and Wheel Weight Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel or wheel weight bolts. Failure to follow torquing procedure may result in personal injury. Wheel and wheel weight bolts are critical and require repeated torquing to assure secure tightness.

IMPORTANT: Failure to follow correct tightening procedure could result in equipment damage.



RXA0098559—UN—16JUN08

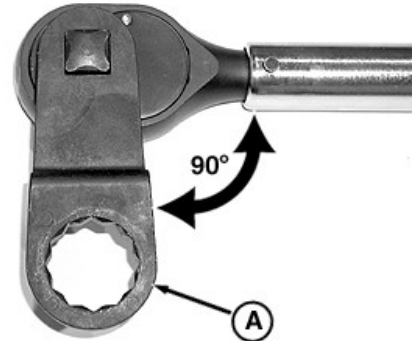
Tighten front and rear wheel bolts (A), hub bolts (B) and wheel weight bolts (C) using appropriate torquing procedures described below.

RX32825,000177F-19-15NOV16

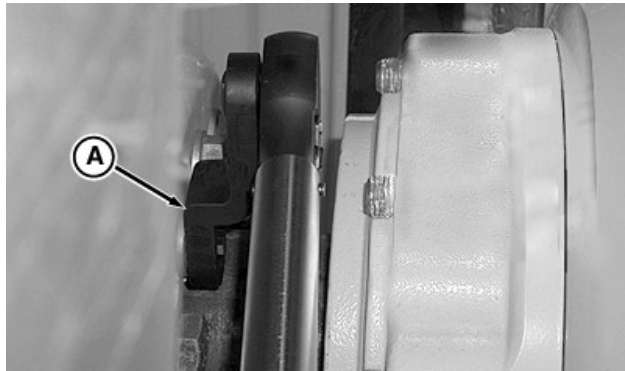
See your John Deere dealer for information on purchasing or fabricating stand.

RX32825,0001780-19-15NOV16

Use Wheel Torque Wrench Adapter



RXA0086802—UN—15FEB06



RXA0086804—UN—15FEB06

Install JDG679 Torque Wrench Adapter (A) [32 mm (3/4 in) drive] improves access to sleeve bolts on inner cast wheels with outside duals in place. See your John Deere dealer.

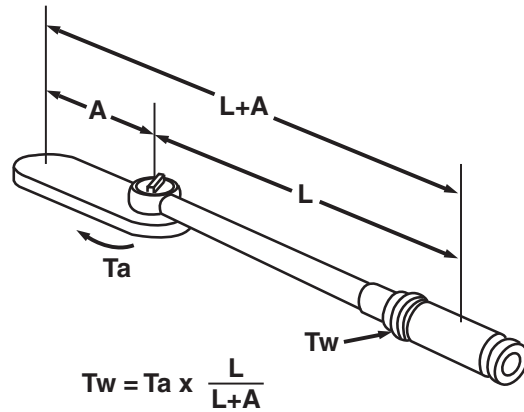
Install adapter at **90° angle** from torque wrench shaft to assure correct torque specification of 610 N·m (450 lb·ft).

Use Wheel Tightening Stand

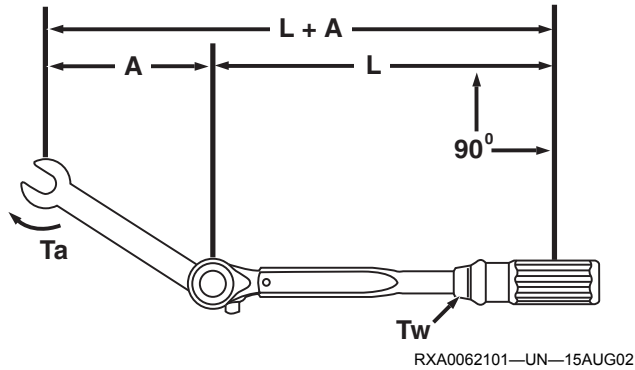


RXA0113539—UN—11FEB11

Wheel tightening stand (A) may be used to aid in tightening wheel and wheel weight hardware. Stand will support torque wrench (B) and extension when tightening bolts at different heights.



RXA0061214—UN—19JUN02



When unable to use adapter at 90° angle from torque wrench shaft, use formula to calculate correct torque wrench setting (Tw) to obtain desired final torque on bolts.

Tw	=	Torque setting on torque wrench
Ta	=	Torque actually being applied to bolt
L	=	Length from point of force (center of the wrench handle) to center of head of torque wrench
A	=	Application distance from center of torque wrench head to center of adapter [95 mm (3.75 in)]

Example: Torque wrench length = 0.91 m (36 in), wrench adapter = 0.1 m (4 in), Value Tw for torque wrench setting is 549 N·m (405 lb·ft).

RX32825,0001781-19-09NOV17

Rear Wheel Weight Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel weight bolts. Failure to follow torquing procedure may result in personal injury. Wheel weight bolts are critical and require repeated torquing to assure secure tightness.

IMPORTANT: Failure to follow tightening procedure could result in equipment damage.



Tighten all wheel weight bolts (A) to 310 N·m (230 lb·ft) for M16 and 610 N·m (450 lb·ft) for M20.

Drive tractor approximately 100 m (100 yd). Then check bolt torque and retighten until bolts maintain torque specification.

IMPORTANT: Keep wheel weight bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

Retighten bolts after working 3 hours, again after 10 hours and daily for first week of operation or until bolts do not move when retorqued.

RX32825,0001782-19-13NOV17

Front Wheel Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow torquing procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

IMPORTANT: Failure to follow tightening procedure could result in equipment damage.



RXA0130317—UN—15JAN13

Tighten all wheel disk to rim bolts (A) to 300 N·m (225 lb·ft) and wheel disk to hub bolts (B) (eight-position and two-position wheels) to 600 N·m (445 lb·ft).

Drive tractor approximately 100 m (100 yd). Then check bolt torque and retighten until bolts maintain torque specification.

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

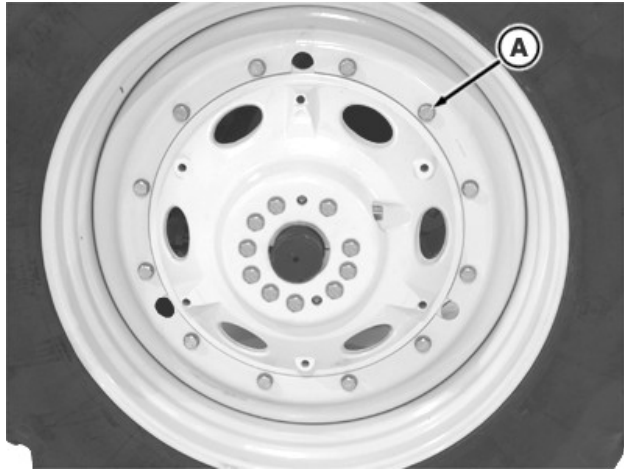
Retighten bolts after working 3 hours, again after 10 hours and daily for first week of operation or until bolts do not move when retorqued.

RX32825,0001783-19-13NOV17

Rear Drive Wheel to Cast Hub Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow torquing procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

IMPORTANT: Failure to follow tightening procedure could result in equipment damage.



RXA0130486—UN—15JAN13

Heavy Duty Cast 10-Bolt Hub

Tighten all wheel to hub bolts (A) to 600 N·m (445 lb·ft).

Drive tractor approximately 100 m (100 yd). Then check bolt torque and retighten until bolts maintain torque specification.

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

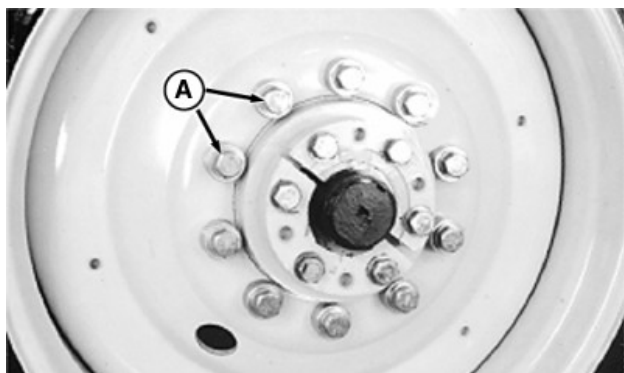
Retighten bolts after working 3 hours, again after 10 hours and daily for first week of operation or until bolts do not move when retorqued.

RX32825,0001784-19-13NOV17

Rear Steel Wheel to Hub Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow torquing procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

IMPORTANT: Failure to follow tightening procedure could result in equipment damage.



RXA0084448—UN—05OCT05

Standard Hub

Tighten all wheel to hub bolts (A) to 600 N·m (445 lb·ft).

Drive tractor approximately 100 m (100 yd). Then check bolt torque and retighten until bolts maintain final torque specification.

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

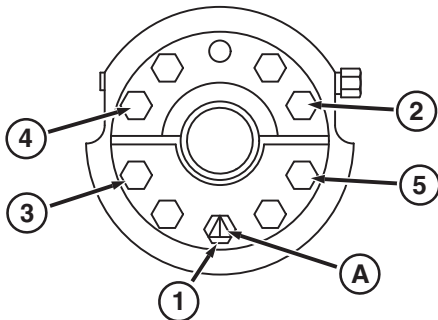
Retighten bolts after working 3 hours, again after 10 hours and daily for first week of operation or until bolts do not move when retorqued.

RX32825,0001785-19-13NOV17

Rear Steel Wheels—Cast Hub Bolts

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

IMPORTANT: Some bolts may loosen as sleeve is tightened. Repeat torquing sequence until ALL sleeve bolts maintain proper torque. Failure to follow procedure could result in damage to equipment.



RXA0155678—UN—11NOV16

Tighten five hub sleeve bolts (1-5) to 204 N·m (150 lb·ft) in sequence shown beginning with center cap screw (A) in lower sleeve.

Tighten bolts to 410 N·m (300 lb·ft) using same tightening sequence.

Drive tractor approximately 100 m (100 yd). Then tighten bolts to 600 N·m (445 lb·ft).

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

Retighten bolts after working 3 hours, again after 10

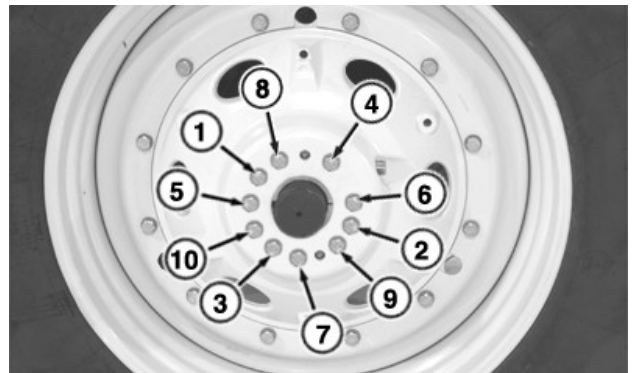
hours and daily for first week of operation or until bolts do not move when retorqued.

RX32825,0001786-19-13NOV17

Rear Wheel Bolts—Heavy-Duty Cast 10-Bolt Hubs

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

IMPORTANT: Some bolts may loosen as sleeve is tightened. Repeat torquing sequence until ALL bolts maintain proper torque. Failure to follow procedure could result in damage to equipment.



RXA0130320—UN—15JAN13

Heavy Duty Cast Drive Hub

Tighten wheel to hub bolts (1-10) to 400 N·m (300 lb·ft) in numerical sequence shown.

Tighten bolts to 610 N·m (450 lb·ft) in numerical sequence shown.

Drive tractor approximately 100 m (100 yd). Using numerical sequence shown, check bolt torque and retighten to 610 N·m (450 lb·ft).

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

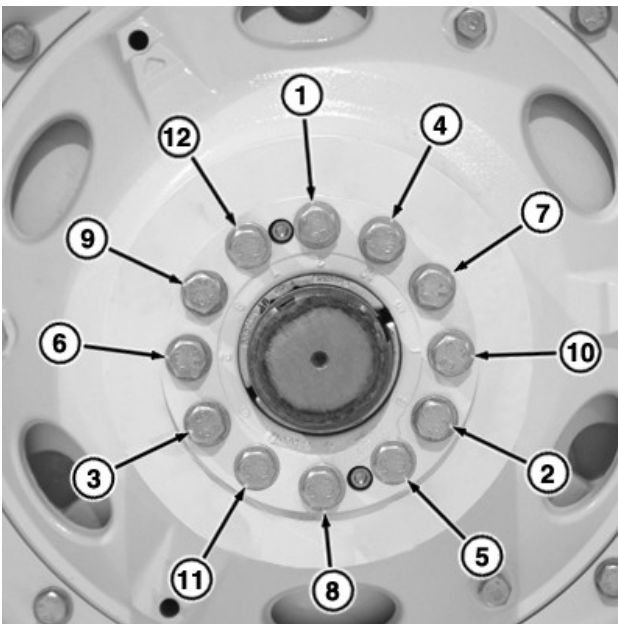
Retighten bolts after working 3 hours, again after 10 hours and daily for first week of operation or until bolts do not move when retorqued.

RX32825,0001787-19-13NOV17

Rear Wheel Bolts—Heavy-Duty 12-Bolt Hubs

⚠ CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts. Failure to follow procedure may result in personal injury. Wheel bolts are critical to operation and require repeated torquing to assure secure tightness.

IMPORTANT: Some bolts may loosen as sleeve is tightened. Repeat torquing sequence until ALL bolts maintain proper torque. Numbers indicating proper torquing sequences are cast into wheel hub. Failure to follow procedure could result in damage to equipment.



RXA0090157—UN—08AUG06

12-Bolt Heavy-Duty Drive Wheel

Tighten wheel to hub bolts (1-12) to 405 N·m (300 lb·ft) in numerical sequence shown until torque is maintained.

Tighten bolts to 610 N·m (450 lb·ft) in numerical sequence shown.

Drive tractor unloaded in a large figure-8 pattern a minimum of four times and retighten bolts to 610 N·m (450 lb·ft) in numerical sequence shown.

IMPORTANT: Keep wheel bolts tightened to specification. If tractor is operated with loose bolts, damage to equipment may occur.

Retighten bolts after working 3 hours, again after 10 hours and daily for first week of operation or until bolts do not move when retorqued.

RX32825,0001788-19-13NOV17

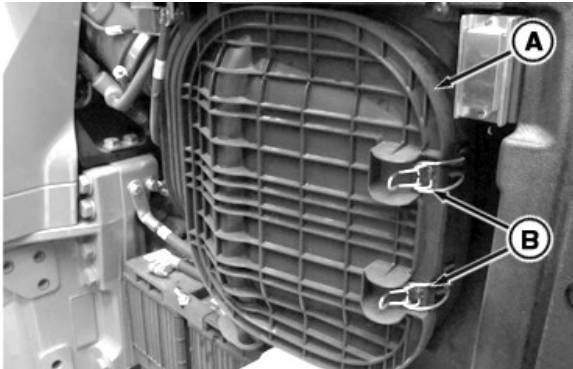
Service - Change

Engine Primary and Secondary Air Filters

IMPORTANT: Inspect filters annually or when a related diagnostic trouble code appears. Replacement interval may vary due to operating conditions. Replace secondary engine air filter at every second primary filter change.

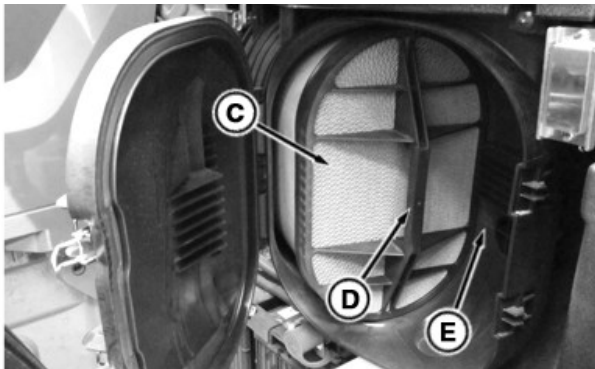
If diagnostic trouble code indicates plugged engine air filter, replace primary filter and inspect or replace secondary filter.

1. Remove battery compartment cover.



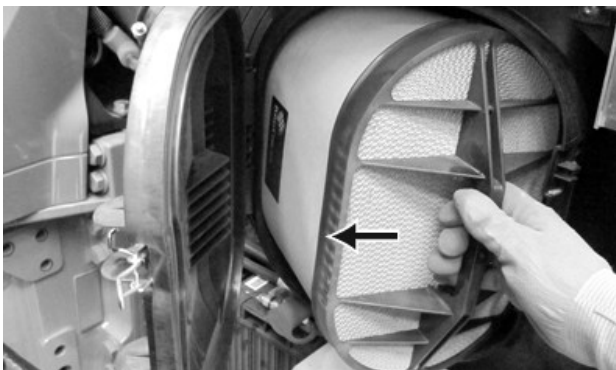
RXA0134187—UN—25JUL13

2. Unfasten two clamps (B) and open filter cover (A).



RXA0134188—UN—25JUL13

3. Pull handle (D) towards front of tractor to release primary air filter from raised retainer (E).



RXA0134189—UN—25JUL13

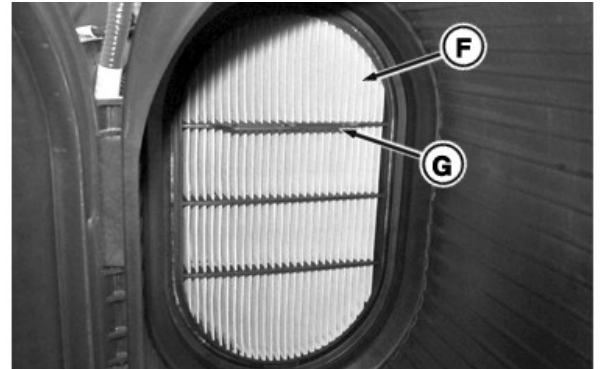
Pull Handle to Remove Primary Air Filter

4. Pull on handle to remove primary filter (C).

5. Clean dirt from inside of canister and cover.

IMPORTANT: If either filter is dirty, replace it. Do not attempt to clean filters.

6. Remove primary air filter.



RXA0155574—UN—09NOV16



RXA0134191—UN—25JUL13

7. To protect air intake system, only remove secondary filter far enough from canister to allow inspection. Pull on handle (G) to slide top part of secondary filter (F) out first. Inspect secondary filter.

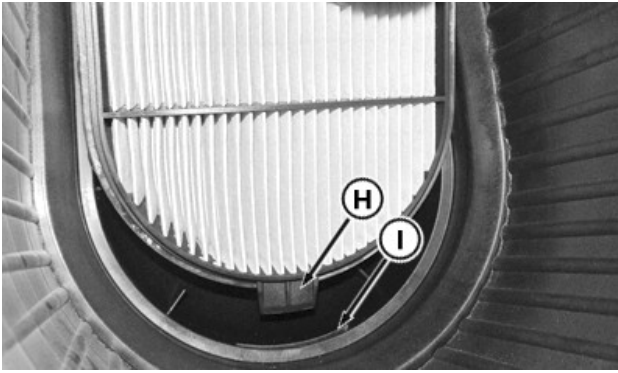
IMPORTANT: Failure to properly install primary and secondary filters will cause damage to engine. When installing primary air filter, make sure filter is properly seated behind raised retainer.

Replace secondary filter every second primary air filter change or if secondary filter is found to be damaged or excessively dirty.

8. If secondary filter is found to be in good condition and has been replaced at last primary filter change, reinsert it into filter canister. Then install new primary filter. Replace filter and battery covers.

IMPORTANT: Install new secondary filter immediately to prevent dust from entering air intake system.

9. If secondary filter is damaged or excessively dirty, or if primary filter has been replaced once before without replacing secondary filter, remove and discard secondary filter.



RXA0155575—UN—09NOV16

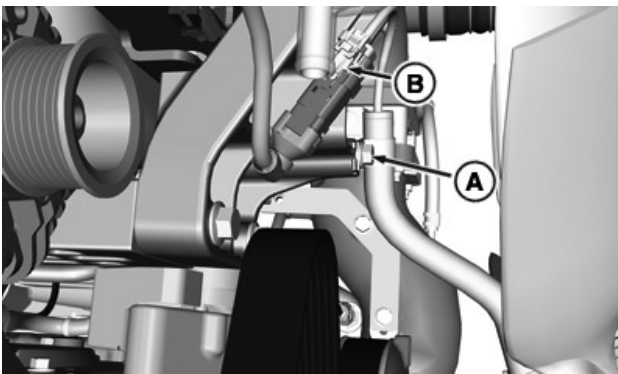
10. To install secondary filter, place tab (H) in slot (I).
11. Firmly press around edge of secondary filter to properly seat filter against filter housing.
12. Install new primary filter.
13. Close filter cover and fasten cover clamps.
14. Reinstall battery compartment cover.

TS36762,000014C-19-08SEP17

Fan Belt

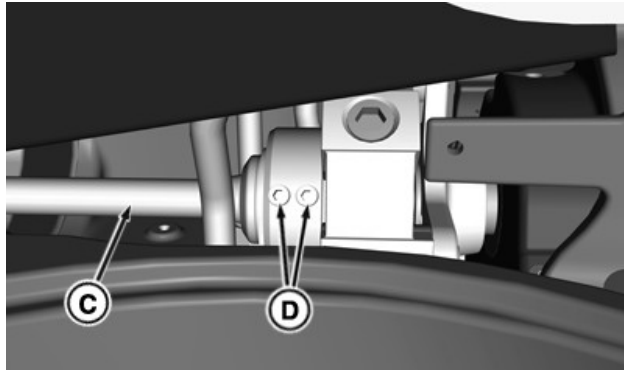
IMPORTANT: Removal of belt requires an assistant.

1. Open hood. See Open Hood in Service-General Information section of this Operator's Manual.
2. Remove engine side shields. See Remove Engine Side Shields in Service – General Information section of this Operator's Manual.



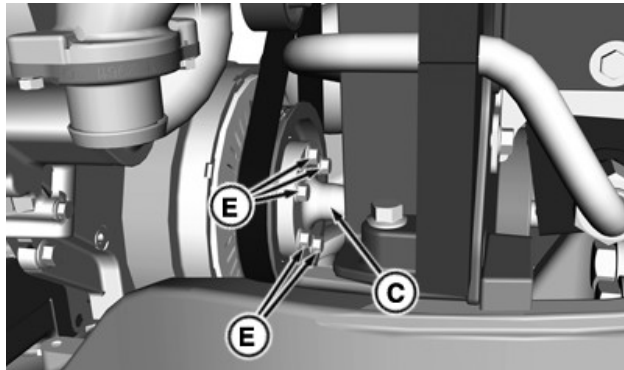
RXA0163027—UN—24APR18

3. Remove cap screw (A).
4. Disconnect fan drive connector (B).
5. If tractor is:
Not equipped with front PTO, go to step 10.
Equipped with front PTO, go to step 6.



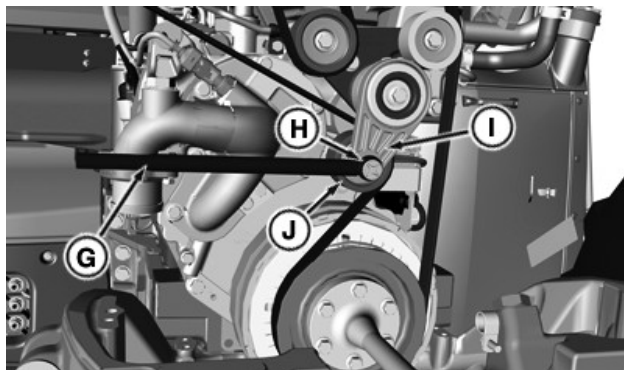
RXA0163028—UN—24APR18

6. Rotate PTO driveshaft (C) using JDG820 Flywheel Rotation Tool. Tool is available from your John Deere dealer.
7. Remove front PTO hub set screws (D).



RXA0163029—UN—24APR18

8. Remove PTO driveshaft cap screws (E).
9. Slide PTO driveshaft forward.



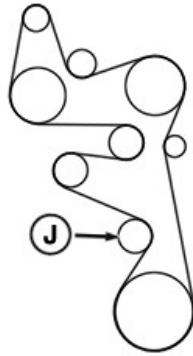
RXA0163030—UN—24APR18

9.0 L Engine Shown

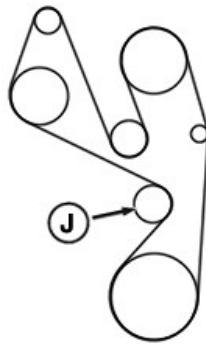
10. Insert 1/2 inch drive ratchet or breaker bar (G) into square hole (H) on belt tensioner arm (I).
11. Twist tensioner arm to reduce tension on belt.
12. While continuing to apply pressure with breaker bar, have assistant remove belt from tensioner pulley (J).
13. Release force on tensioner.
14. Remove belt from remaining pulleys.

IMPORTANT: Belt tension is controlled by an automatic belt tensioner. Tensioner does not require adjustment.

15. Inspect tensioner for function and wear. See Fan Belt Tensioner and Fan Belt in Service – Check section of this Operator's Manual.
16. Inspect pulleys for and wear. Replace if necessary.



RXA0163031—UN—24APR18
6.8 L Engine Fan Belt Routing (Viewed from Front)



RXA0163032—UN—24APR18
9.0 L Engine Fan Belt Routing (Viewed from Front)

17. Install belt onto all pulleys except tensioner.
18. Release tension on tensioner using 1/2 in drive breaker bar.
19. Have assistant install belt around tensioner pulley.
20. Slowly release force on tensioner.
21. Connect fan drive connector.
22. Install clamp cap screw and tighten to 27.5 N·m (243 lb·in) torque.
23. If tractor is:
 - Not equipped with front PTO, go to step 28.
 - Equipped with front PTO, go to step 24.
24. Slide PTO driveshaft rearward.
25. Rotate PTO driveshaft using JDG820 tool.
26. Install PTO driveshaft cap screws and tighten to 73 N·m (54 lb·ft) torque.

27. Install front PTO hub set screws and tighten to 55 N·m (41 lb·ft) torque.

CAUTION: Never start engine without side shields installed and hood securely closed and latched.

28. Install left and right engine side shields.
29. Securely close and latch hood.

DB71512,0000136-19-25APR18

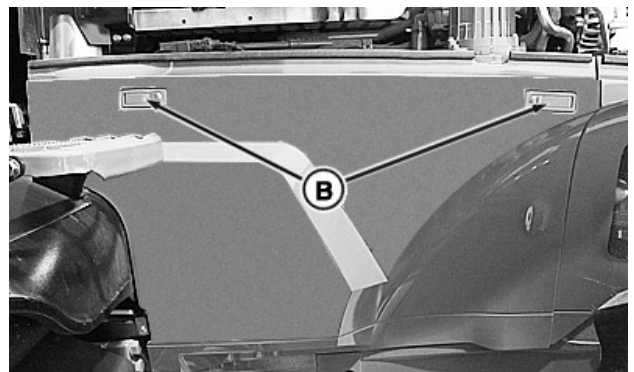
Engine Oil and Filter—6.8 L Engine

IMPORTANT: Sulfur content should not exceed 0.10%. Sulfur content less than 0.10% is preferred. See Engine Oil and Filter Service Intervals in Engine Oil section of this Operator's Manual for your engine.

NOTE: Initial break-in service interval of a new or rebuilt wet sleeve engine with Break-In Plus must go at least 100 hours to assure surface mating of rings and liners has had opportunity to occur. 100 hour minimum applies to all new or rebuilt engines. Maximum service interval are the same as service interval recommendations listed in Engine Oil and Filter Service Intervals in the Engine Oil section of this Operator's Manual for your engine. To determine which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in Engine Oil Section of this Operator's Manual.

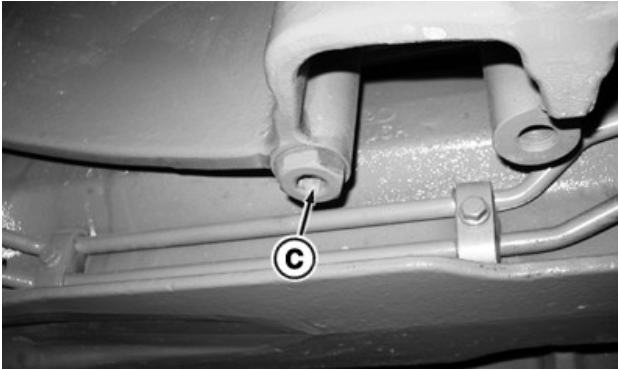
1. Operate engine for approximately 5 minutes to warm oil.
2. Stop engine and remove key.
3. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.



RXA0134208—UN—29JUL13

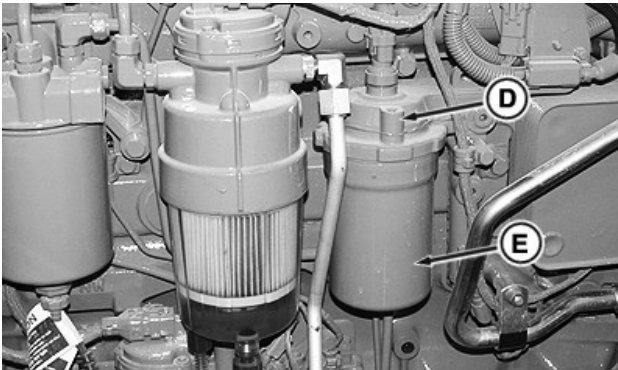
4. Depress latch buttons (B) to remove right side engine access panel.

5. Remove right side engine access panel.
6. Remove engine fill cap (at dipstick).



RXA0116170—UN—06MAY11

7. Put a large catch pan below engine drain plug (C).
8. Remove plug to drain oil while engine is warm.



RXA0154212—UN—28SEP16

9. Using an oil filter wrench, remove oil filter (E) from oil filter housing (D).
10. Dispose of used oil and oil filter in accordance with local laws and ordinances.
11. Lubricate new filter seal with clean oil.
12. Insert oil filter until gasket contacts oil filter housing surface. Hand tighten additional 1/2 turn.
13. Install drain plug after oil has been drained from crankcase. Tighten to 102 N·m (75 lb·ft).

IMPORTANT: Overfilling engine oil may result in loss of engine performance or damage to engine components. Check oil level during refill to assure that correct amount of oil is added.

14. Refill crankcase at engine fill cap with seasonal viscosity grade oil. See Engine Oil section of this Operator's Manual. For crankcase capacity, see Capacities in Specifications section of this Operator's Manual.
15. Check for correct oil level using dipstick.
16. Reinstall right side engine access panel.
17. Securely close hood.

18. Start engine and check for leaks.
19. Stop engine. Recheck oil level. Add oil if necessary.

TS36762,000014A-19-09NOV17

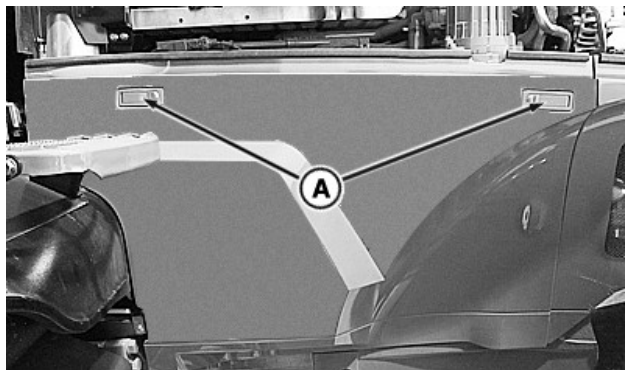
Engine Oil and Filter—9.0 L Engine

IMPORTANT: Sulfur content should not exceed 0.10%. Sulfur content less than 0.10% is preferred. See Engine Oil and Filter Service Intervals in Engine Oil section of this Operator's Manual for your engine.

NOTE: Initial break-in service interval of a new or rebuilt wet sleeve engine with Break-In Plus must go at least 100 hours to assure surface mating of rings and liners has had opportunity to occur. 100 hour minimum applies to all new or rebuilt engines. Maximum service interval are the same as service interval recommendations listed in Engine Oil and Filter Service Intervals in Engine Oil section of this Operator's Manual for your engine. To determine which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

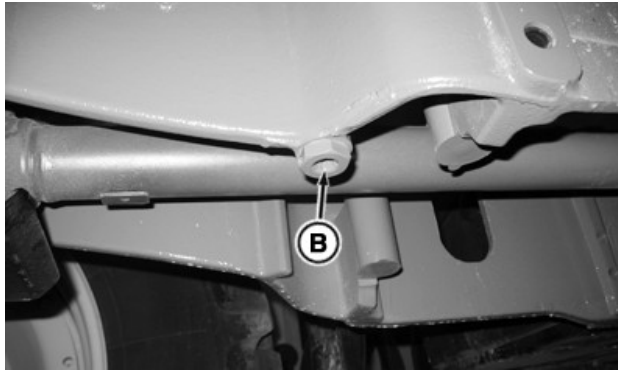
For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in the Engine Oil section of this Operator's Manual.

1. Operate engine for approximately 5 minutes to warm oil.
2. Stop engine and remove key.
3. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.



RXA0160912—UN—08SEP17

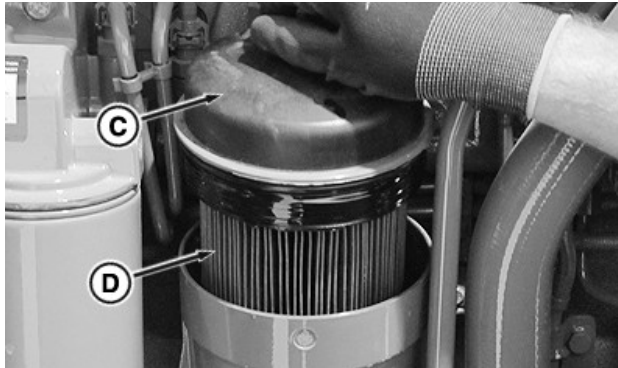
4. Depress latch buttons (A) to remove right side engine access panel.
5. Remove right side engine access panel.
6. Remove engine fill cap (at dipstick).



RXA0160913—UN—08SEP17

7. Put a large catch pan below engine oil drain plug (B).
8. Remove plug to drain oil while engine is warm.

NOTE: Do not remove plug on oil filter housing base. Oil automatically drains back into crankcase when filter is removed.



RXA0160914—UN—08SEP17

9. Using a 32 mm wrench, unscrew oil filter cover (C) and lift as shown. Allow filter (D) to drain into crankcase.
10. Remove filter cover with oil filter attached.

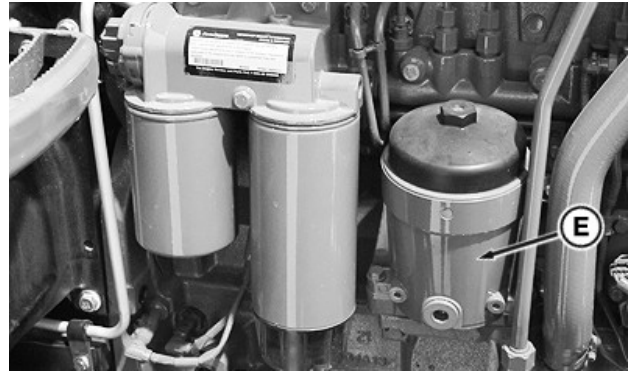


RXA0136207—UN—24OCT13

11. While holding cover, strike filter against solid surface to remove filter as shown.
12. Dispose of used oil and oil filter in accordance with local laws and ordinances.
13. Find new O-ring provided with new filter element.

Lubricate new O-ring with a small amount of engine oil.

14. Remove old O-ring and replace with new O-ring.
15. Press new filter into cover until it snaps into place.



RXA0160915—UN—08SEP17

16. Insert filter and cover into oil filter housing (E). Tighten cover to 40 N·m (30 lb·ft).
17. Install drain plug after oil has been drained from crankcase and tighten to 102 N·m (75 lb·ft).

IMPORTANT: Overfilling engine oil may result in loss of engine performance or damage to engine components. Check oil level during refill to assure that correct amount of oil is added.

18. Refill crankcase with seasonal viscosity grade oil. See Engine Oil in the Engine Oil section of this Operator's Manual. For crankcase capacity, see Capacities in Specifications section of this Operator's Manual.
19. Check for correct oil level using dipstick.
20. Reinstall right side engine access panel.
21. Securely close hood.
22. Start engine and check for leaks.
23. Stop engine. Recheck oil level. Add oil if necessary.

TS36762,000014D-19-13NOV17

Fuel Filters

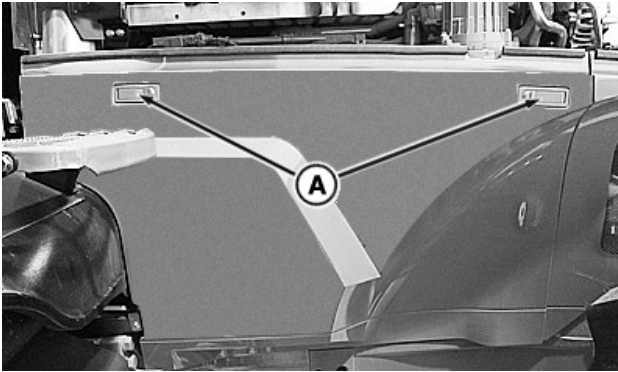
CAUTION: Always shut off engine and remove key before performing maintenance work on fuel filter.

IMPORTANT: To determine which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

IMPORTANT: Drain fuel tank sump if fuel filters are replaced frequently or water in the fuel tank. See Fuel Tank Sump in Service - Check section of this Operator's Manual.

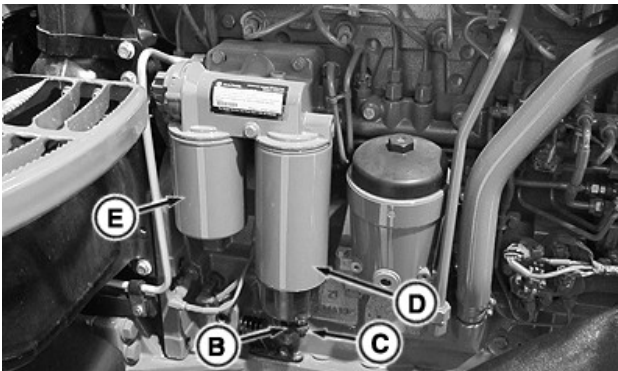
NOTE: Service may be required more often under some conditions.

1. Open hood. See Open Hood in Service-General Information section of this Operator's Manual.



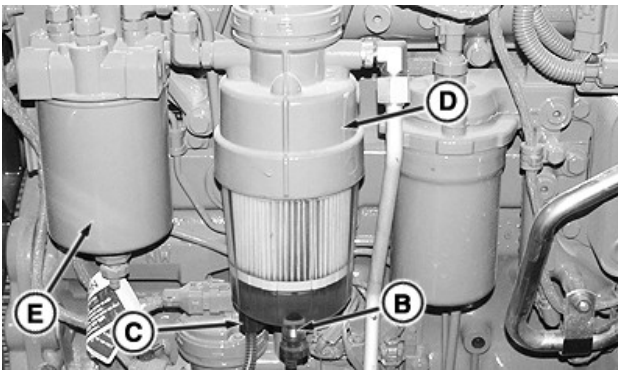
RXA0160912—UN—08SEP17

2. Depress latch buttons (A) to remove right rear side shield.
3. Pull top of shield outward and lift shield from brackets on frame.
4. Clean exterior of filter and mounting area.



RXA0160918—UN—08SEP17

9.0 L Engine



RXA0160919—UN—08SEP17

6.8 L Engine

5. Remove water-in-fuel sensor connector (C).

NOTE: Use a catch pan when draining fuel and removing filter from tractor.

6. Open drain valve (B) and drain fuel.
7. Remove primary (D) and secondary (E) filters and discard.
8. Dispose of drained fuel and used filters in accordance with local laws and ordinances.

IMPORTANT: Do not prefill either fuel filter with fuel.

9. Lubricate gasket for primary fuel filter with fuel, and install canister onto base. Tighten 3/4 turn after packing contacts base.
10. Lubricate primary fuel filter water separator gasket with fuel and install onto filter canister. Tighten 3/4 of a full turn after gasket contacts the base.
11. Lubricate gasket for secondary fuel filter with fuel, and install filter onto base. Tighten 3/4 of a turn after packing contacts base.
12. Connect water-in-fuel sensor connector.
13. Close and secure hood and reinstall side shield.

IMPORTANT: Key must be turned to ON position for 3 minutes before starting engine to provide time to prefill fuel filters. Fuel system is self-bleeding.

Do not try to start engine until 3 minute time elapses or an air lock in fuel system may occur.

14. Turn key to ON position for 3 minutes to allow transfer pump to prefill fuel filters
15. Start and run engine at fast idle for at least 2 minutes.

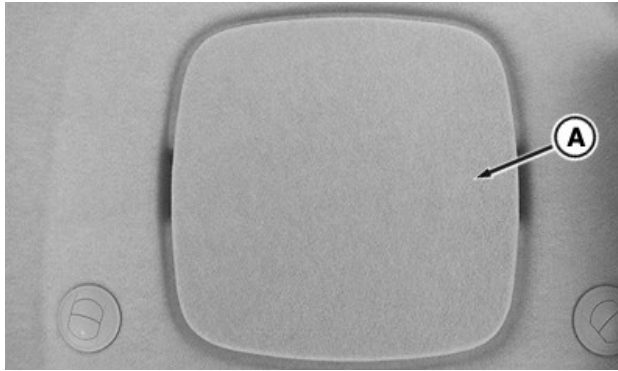
TS36762,000014E-19-08SEP17

Cab Recirculation Air Filter

CAUTION: Cab air filters are not designed to filter out harmful chemicals. Follow instructions in implement Operator's Manual and those given by chemical manufacturer when using agricultural chemicals.

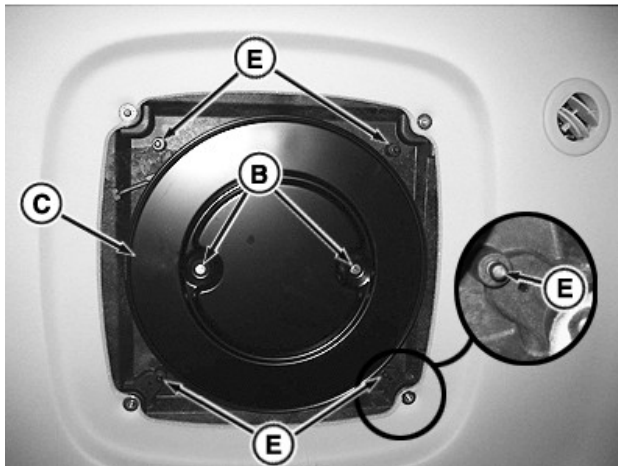
IMPORTANT: Replacement interval can vary according to operating conditions. Normal service is 1000 hours or annually, whichever occurs first.

1. Close entry door to prevent debris getting into cab.



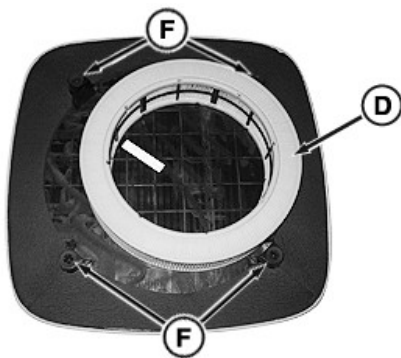
RXA0134243—UN—31JUL13

2. Remove upholstery cover (A) in headliner by grasping outer edges and pulling down.



RXA0100957—UN—17MAR09

3. While holding cover (C) in place with one hand, remove fasteners (B) allowing cover to be lowered.
4. Using a clean cloth, wipe down inside and outside of filter cover.



RXA0100959—UN—17MAR09

5. Remove and discard old recirculation filter (D).
6. Install new filter.
7. Install cover (C) and tighten fasteners (B).
8. Install upholstery cover by lining up ball studs (E) with clip nuts (F) and firmly push up.

TS36762,000014F-19-29JUN17

Cab Fresh Air Filter

CAUTION: Cab air filters are not designed to filter out harmful chemicals. Follow instructions in implement Operator's Manual and those given by chemical manufacturer when using agricultural chemicals.

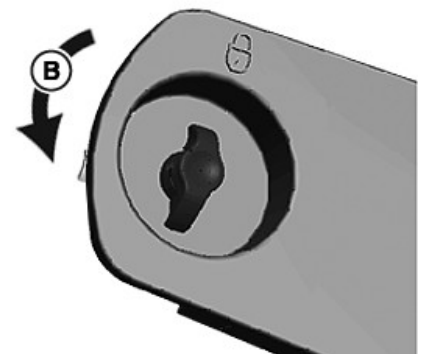
IMPORTANT: Replacement interval can vary according to operating conditions. Normal service is 1000 hours or annually, whichever occurs first.



RXA0099137—UN—19SEP08

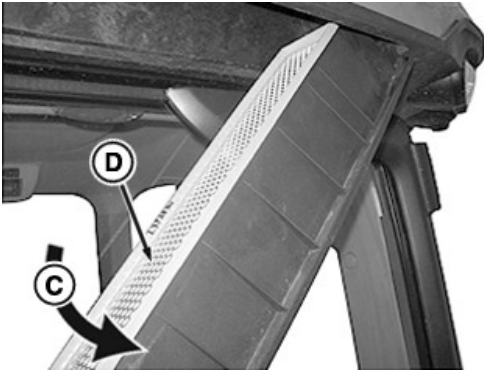
1. Support cover (A).

NOTE: Filter cover latch has three positions; open, latched, and locked. Cover is not locked when in latched position.



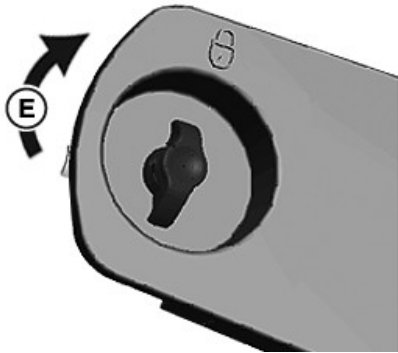
RXA0155037—UN—18OCT16

2. Turn knob fully counterclockwise (B) to unlatch cover.



RXA0155036—UN—18OCT16

3. Swing down (C) cover.
4. Remove and discard old fresh air filter (D).
5. Wipe down inside and outside of filter cover with a clean cloth.
6. Install new filter.



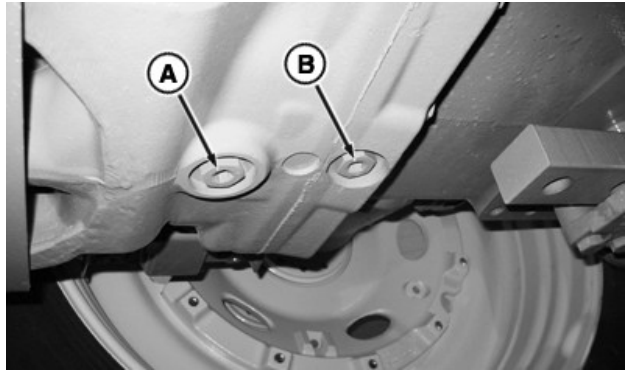
RXA0155035—UN—18OCT16

7. Close cover and turn knob fully clockwise (E) to securely lock latch.

TS36762,0000150-19-06JUL17

Transmission-Hydraulic Oil and Filter

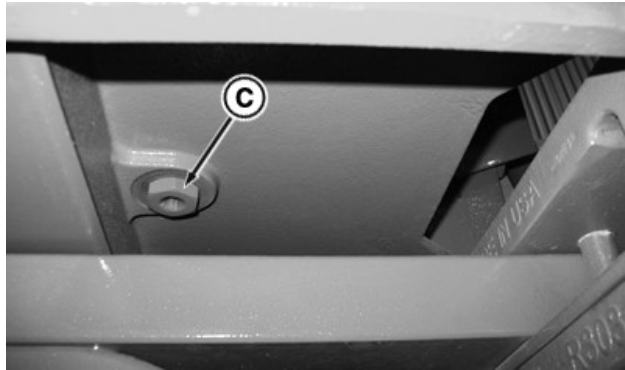
1. Drive tractor to warm transmission-hydraulic oil to 38° C (100° F). Oil temperature is available on CommandCenter™ display. See Warm-Up Transmission-Hydraulic System in Transmission - General Information section of this Operator's Manual.
2. Park tractor on level surface.
3. Lower hitch.
4. Let engine run at idle for 1 to 2 minutes, then stop engine.
5. Move drawbar to side so oil can drain unobstructed.



RXA0133515—UN—09JUL13

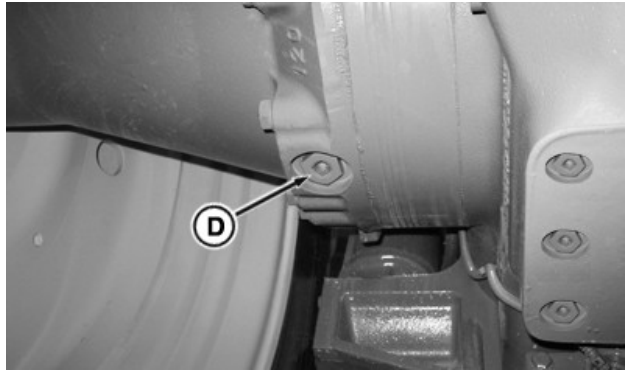
e23™ or IVT™/AutoPowr™ Transmission

6. Remove transmission drain plug (A).
7. Remove reservoir drain plug (B).



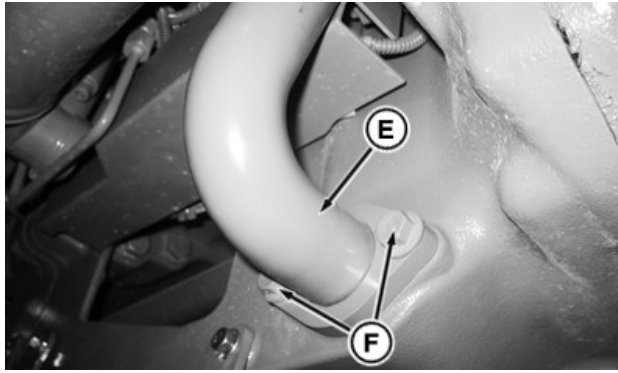
RXA0133516—UN—09JUL13

8. Remove PTO drain plug (C).



RXA0133517—UN—09JUL13

9. Remove each axle final drive drain plug (D) from each axle.

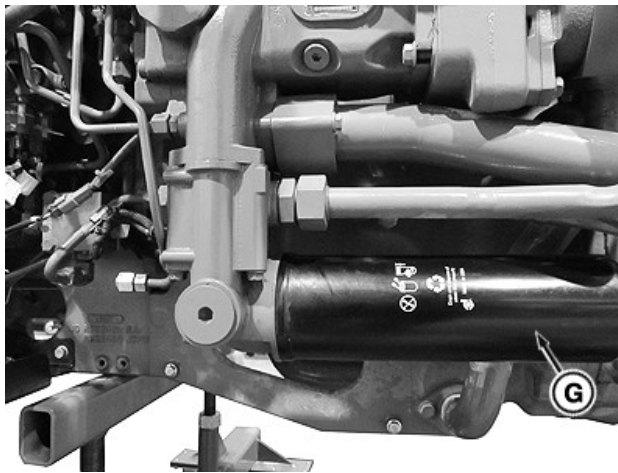


RXA0154556—UN—06OCT16
e23™ or IVT™/AutoPowr™ Transmission - Left-Hand Side

10. Remove suction screen cover cap screw (F).
11. Remove suction screen cover (E).
12. Remove suction screen and wash carefully in cleaning solvent. Blow dry with compressed air.

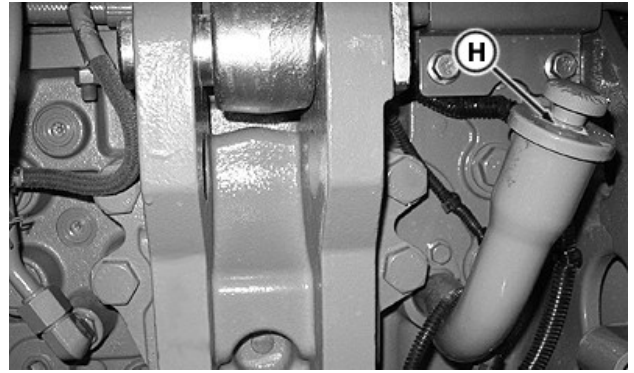
IMPORTANT: When installing scavenge and lube lines on suction screen cover, do not forget to install O-rings. Failure to do so will cause leakage.

13. Install screen and oil lines (if removed). Ensure gaskets and O-rings are correctly positioned.



RXA0154557—UN—11OCT16
Left-Hand Side of Tractor

14. Remove transmission/hydraulic oil filter (G).
15. Lubricate new filter seal with clean hydraulic oil.
16. Install filter until gasket contacts surface. Hand tighten additional 1/2 turn.
17. Install drain plugs after oil has drained and tighten to 102 N·m (75 lb·ft).



RXA0154558—UN—06OCT16
Rear of Tractor

18. Remove fill tube cap (H) and add 160 L (42.3 gal) of hydraulic oil. Use oil as specified in Transmission-Hydraulic Oil in Engine Oil section of this Operator's Manual.

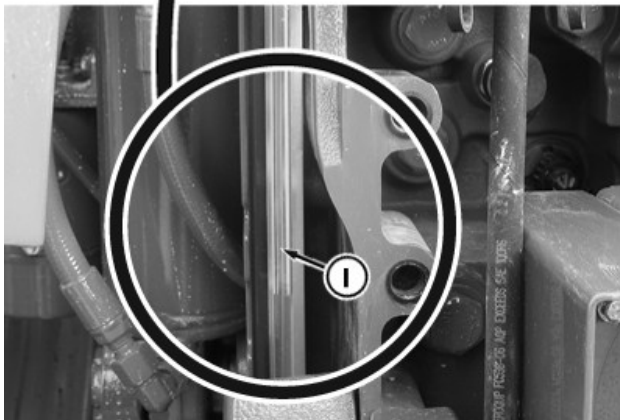
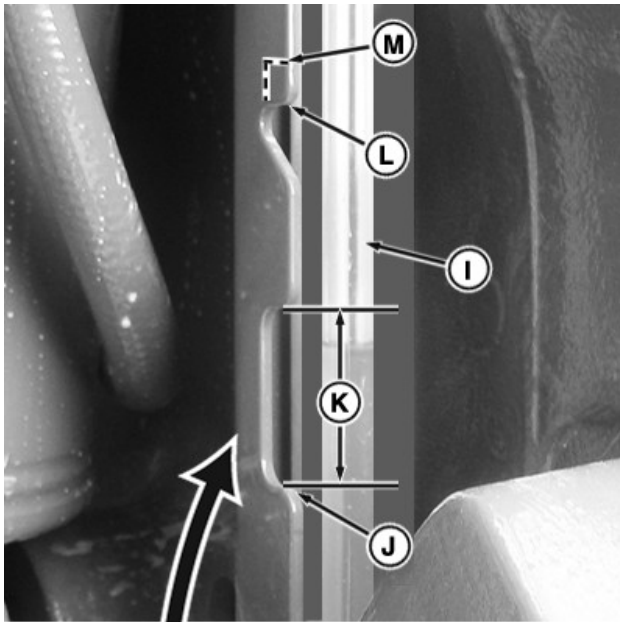
IMPORTANT: Fully insert and firmly tighten fill cap to assure proper hydraulic system operation.

19. Install and firmly tighten fill cap.
20. Start and leave engine at slow idle for 5 minutes. Oil level should rise in sight glass as tractor operates.

IMPORTANT: Wait at least 1/2 hour after engine was shut off to check transmission-hydraulic oil level.

Overfilling transmission-hydraulic oil can result in decreased operating efficiency. Except when operating in side-hill or high volume applications, keep oil level at or slightly below top of normal operating range. Never fill system above maximum operating level.

21. Shut off engine and wait at least 1/2 hour to allow oil to stabilize before checking oil level.



RXA0154559—UN—06OCT16

22. Check oil level in sight glass (I) at rear of tractor.

IMPORTANT: Examine oil level indicator. If tractor is not equipped with optional auxiliary oil reservoir, maximum operating level indication will be as shown (L). If tractor has optional oil reservoir installed, maximum operating level indicator will be higher (M).

NOTE: Oil level may need to be adjusted based on expected operating conditions. See special operating condition instructions below.

23. If transmission-hydraulic oil level is at or below add oil indication (J), slowly add oil to reach top of normal operating range indicator (K). From add oil level, adding approximately these amounts of oil will bring oil level to top of normal operating range.

Transmission	Without Optional Auxiliary Oil Reservoir	Add With Optional Auxiliary Oil Reservoir
IVT TM /AutoPowr TM Auto-Powr TM	16 L (17 qt)	18 L (19 qt)
e23e23 TM	16 L (17 qt)	18 L (19 qt)

IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
e23 is a trademark of Deere & Company

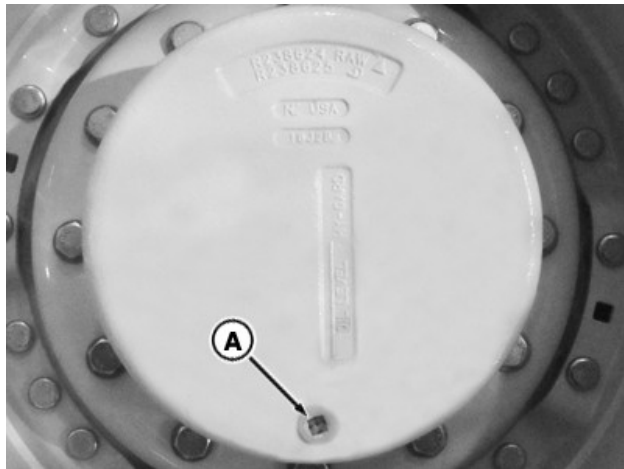
Road Transportation: In applications where tractor is mainly used for road transport and light hydraulic work, adjust oil level to lower end of normal operating range. A lower oil level allows tractor to operate more efficiently at transport speeds with less power loss and heat generation.

For Side-Hill Applications or High Oil Volume Requirements: To prevent low oil levels, additional oil may be required when operating on side hills or when using implements which require large volumes of oil to function. Oil level should be at or slightly below maximum operating level (L or M).

TS36762,0000151-19-27AUG18

MFWD or TLSTM Plus Wheel Hub Oil

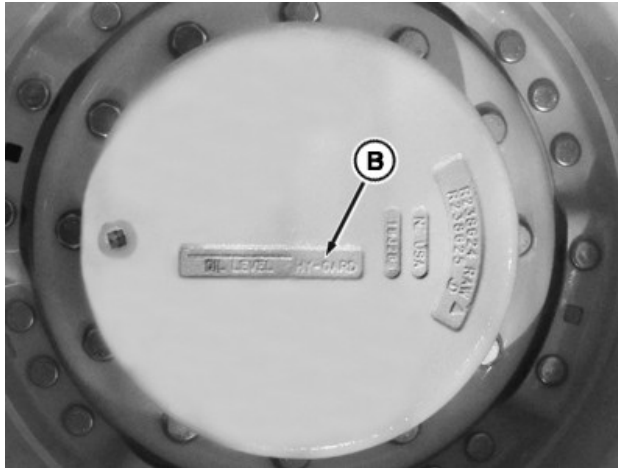
1. Park tractor on level ground.



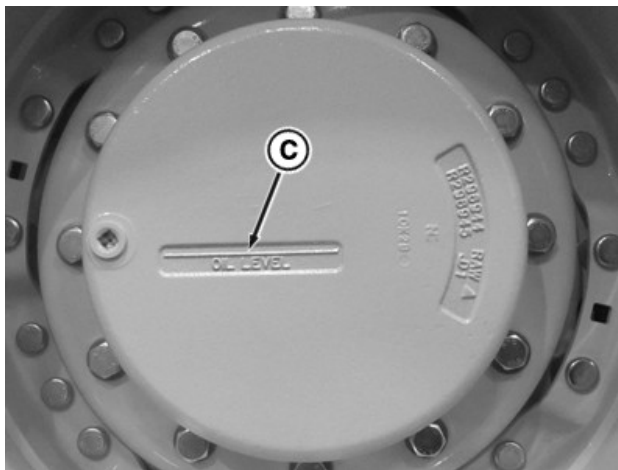
RXA0129809—UN—26NOV12

2. Maneuver tractor forward or backward until drain/fill plug (A) is at bottom of hub.

3. Open drain/fill plug and drain oil.



RXA0129808—UN—26NOV12



RXA0129807—UN—26NOV12

4. When oil has completely drained, maneuver tractor so that words OIL LEVEL - HY-GARD (B) or OIL LEVEL (C) cast into wheel hub are horizontal.

IMPORTANT: Use correct lubricant. Wheel hubs with brakes must be filled with John Deere Hy-Gard™ oil.

Wheel hubs without brakes are filled with John Deere GL-5 Gear Lubricant.

5. Refill wheel hubs with oil. Add correct oil depending upon whether tractor is equipped with front brakes. If tractor is equipped with front brakes, words cast into front hubs will read OIL LEVEL - HY-GARD. Fill front brake hub with John Deere Hy-Gard™ oil.

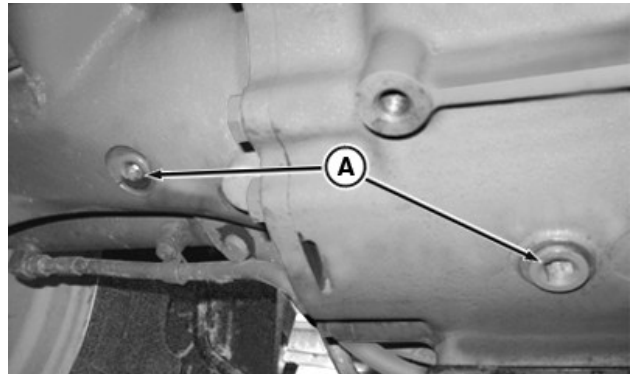
If only words OIL LEVEL are cast into front hubs, tractor is not equipped with front brakes. Use John Deere GL-5 Gear Lubricant.

See Gear Oil or Transmission and Hydraulic Oil in Engine Oil section of this Operator's Manual. For wheel hub capacity, see Capacities in Specifications section of this Operator's Manual.

6. Apply pipe sealant with TEFLON®, or equivalent, to threads of drain/fill plug.
7. Install drain/fill plug and O-ring. Tighten to 70 N·m (52 lb·ft).
8. Repeat procedure with other wheel hub.

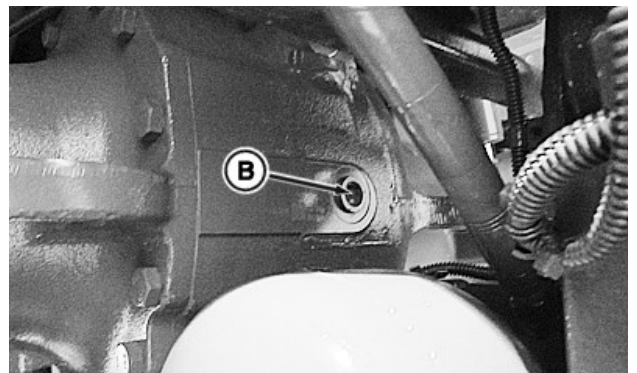
TS36762,0000152-19-13NOV17

MFWD or TLS™ Plus Axle Housing Oil



RXA0154670—UN—11OCT16

1. Drain oil. Remove drain plugs (A) from axle housing and differential housing.
2. Install drain plugs after oil has drained and tighten to 70 N·m (52 lb·ft).



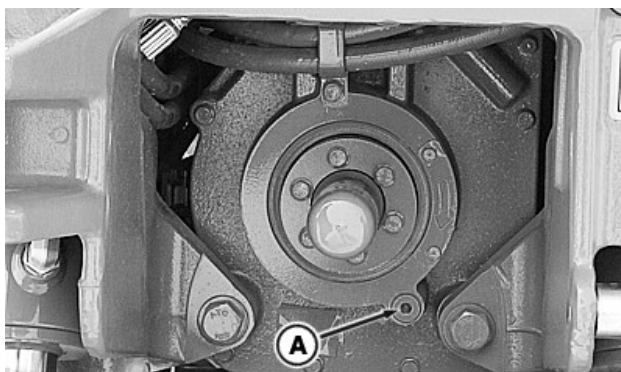
RXA0154669—UN—11OCT16

3. Remove fill/check plug (B).
4. Fill axle housing with John Deere Hy-Gard™ oil as specified in Transmission and Hydraulic Oil in Other Lubricants section of this Operator's Manual. Add oil until level is even with bottom of fill/check hole. For axle housing capacity, see Capacities in Specifications section of this Operator's Manual.
5. When oil level is correct, apply pipe sealant with TEFLON®, or equivalent, to threads of fill/check plug.
6. Install fill/check plug and tighten to 70 N·m (52 lb·ft).

TS36762,0000153-19-13NOV17

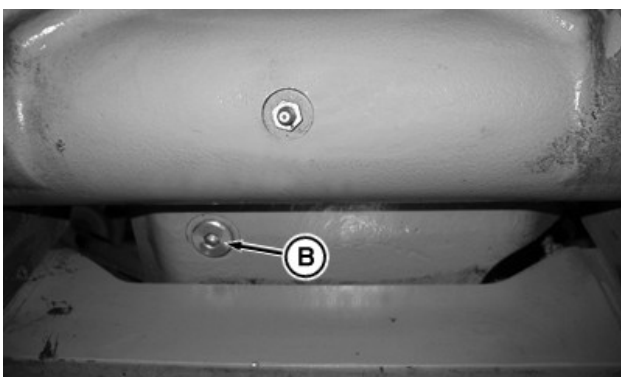
Front PTO Housing Oil and Filter

IMPORTANT: Normal front PTO service interval is every 1500 hours. However, change oil and replace filter after first 250 hours of tractor use.



RXA0134207—UN—25JUL13

1. Remove fill (A) plug.



RXA0110843—UN—29SEP10

2. Remove drain (B) plug.
3. Install drain plug after oil has drained.



RXA0134225—UN—26JUL13

4. Remove filter (C).
5. Lubricate new filter seal with clean hydraulic oil.
6. Install filter until seal contacts surface. Hand tighten additional 1/2 turn.

IMPORTANT: When ambient temperature is expected to drop below -5° C (23° F), use John Deere Low Viscosity Hy-Gard™ oil.

7. Fill with appropriate John Deere Hy-Gard™ as specified in Transmission and Hydraulic Oil or Use Correct Viscosity Front PTO Oil In Cold Weather in Other Lubricants section of this Operator's Manual. Fill through fill hole until oil is even with bottom of hole.
8. Install fill plug.

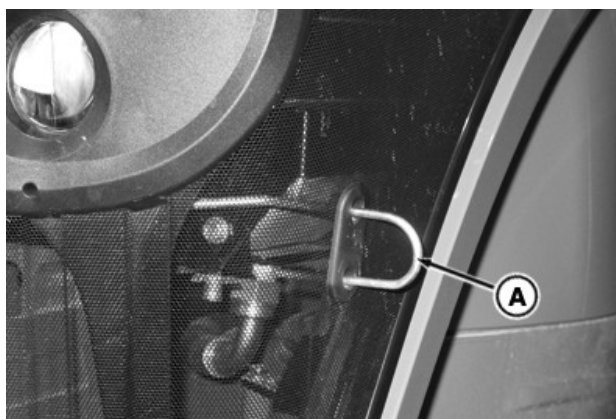
IMPORTANT: Confirm front PTO disconnect is set to allow PTO operation. Oil will not be distributed to drive train if PTO is disconnected.

9. Set front PTO disconnect to turn PTO on. See Operate Front PTO in Front PTO section of this Operator's Manual.
10. Start tractor and operate front PTO for several minutes.
11. Stop tractor and recheck oil level at fill plug. Add additional oil if necessary.

TS36762,0000154-19-14DEC16

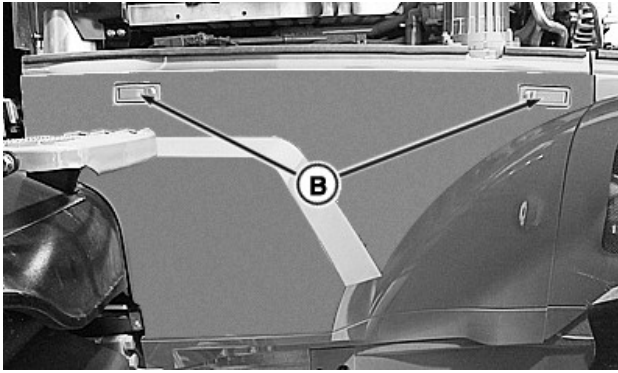
Open Crankcase Ventilation Filter—6.8 L Engine

NOTE: To determine which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.



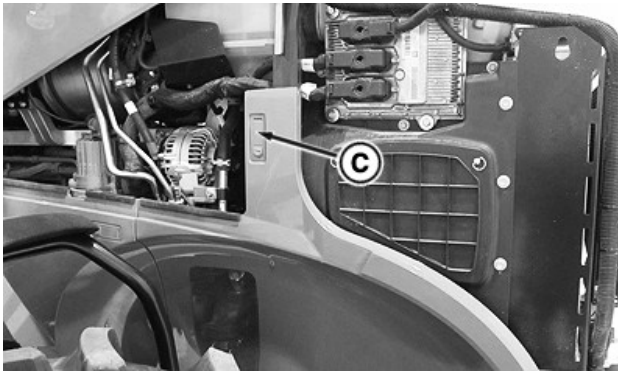
RXA0133488—UN—02JUL13

1. Open hood, see Open Hood-General Information section of this Operator's Manual.



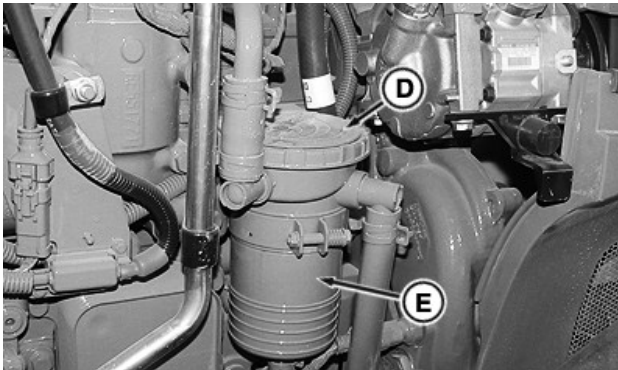
RXA0134208—UN—29JUL13

2. Depress latch buttons (B) and remove right rear side shield.



RXA0134226—UN—26JUL13

3. Depress latch button (C) and remove right front side shield.

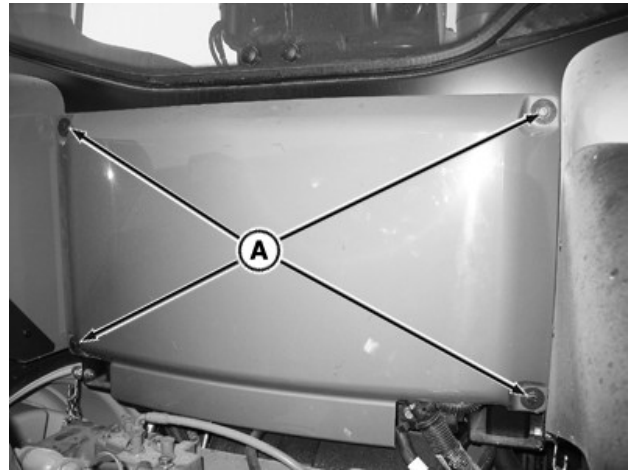


RXA0134239—UN—31JUL13

4. Remove filter lid (D).
5. Remove open crankcase ventilation filter from inside of filter housing (E).
6. To install new filter, align tabs on new filter with tabs on inside of filter housing.
7. Replace lid and hand tighten.
8. Reinstall front and rear side shields.
9. Close and securely latch hood.

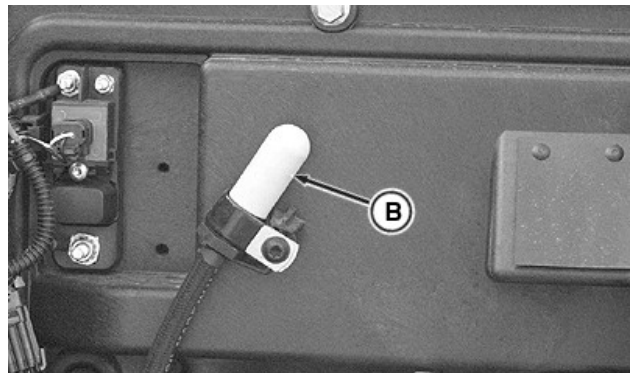
TS36762,0000155-19-14DEC16

Fuel Tank Vent Filter



RXA0110047—UN—26AUG10

Remove four cap screws (A) and lift off cab back panel.



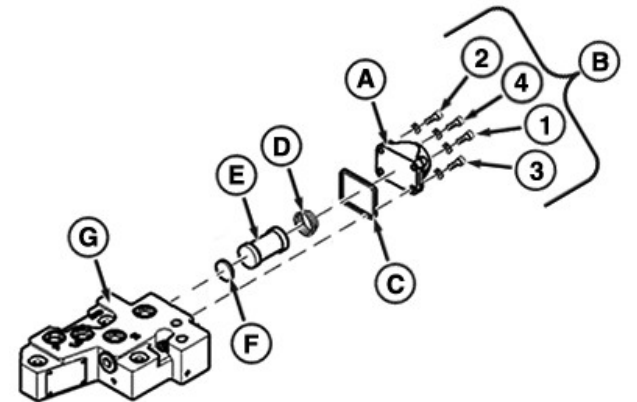
RXA0109380—UN—16AUG10

Fuel tank vent filter (B) is located under back panel on tractor left-hand side.

Remove fuel tank vent filter and install new filter.

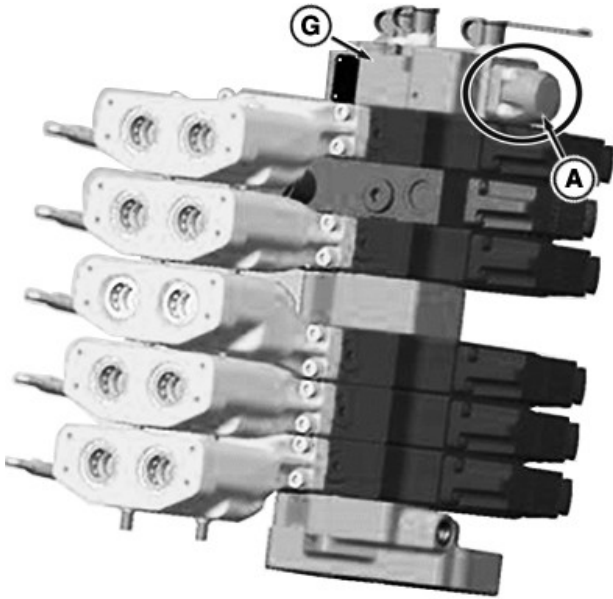
TS36762,0000156-19-05SEP17

SCV Pilot Valve Filter



RXA0152694—UN—11JUL16

1. Remove cap screws (B).



RXA0152693—UN—11JUL16

2. Remove SCV pilot filter cover (A) from SCV pilot filter housing (G).
3. Remove old spring (D), SCV pilot filter (E), and O-ring (F).
4. Install new O-ring, SCV pilot filter, and spring.
5. Replace gasket (C) and SCV pilot filter cover.
6. Install cap screws and tighten to 6 N·m (53 lb-in) in sequence (1, 4, 3, 2).

TS36762,0000157-19-08NOV17

DEF Tank Vent Filter—Final Tier 4/Stage V Engine

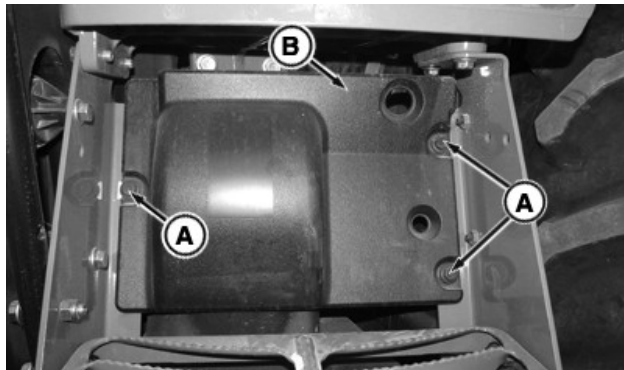
CAUTION: DEF contains urea. Do not get the substance in eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Do not take internally. In event DEF is ingested, contact a physician immediately. Reference Material Safety Data Sheet (MSDS) for additional information.

IMPORTANT: To determine tractor engine type, see Engine Serial Number in Identification Numbers Section of this Operator's Manual.

Initial replacement 1500 hours of operation or 1 year whichever comes first. Thereafter, replace every 4500 hours of operation or every 3 years, whichever comes first.

Using incorrect or unapproved aftertreatment components can cause damage to vehicle's aftertreatment system and reduce ability of aftertreatment system to function correctly. Never interchange aftertreatment components between Interim Tier 4/Stage III B and Final Tier 4/Stage V equipped vehicles.

If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and may distort some plastic and rubber components.



RXA0135357—UN—30AUG13

1. Remove cap screws (A) and shield (B).



RXA0135335—UN—29AUG13

2. Remove DEF tank vent (C) located above DEF dosing unit.
3. Install new DEF tank vent filter.
4. Reinstall DEF tank shield and DEF tank shield cap screws. Tighten to 37 N·m (27 lb-ft).

TS36762,0000158-19-16JUL18

In-Line DEF Filter (If Equipped)

CAUTION: DEF contains urea. Do not get the substance in eyes. If contact occurs, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Do not take internally. In the event DEF is ingested, contact a physician immediately. Reference Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: Prevent damage to tractor emissions system. Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not begin service on filter until battery disconnect switch light has gone out.

See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

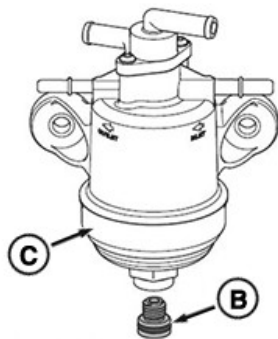
NOTE: If tractor is equipped with in-line DEF filter there is no DEF header filter.

1. Watch indicator light on battery disconnect switch, when indicator light has gone out go to step 2.



Bottom Side of Steps

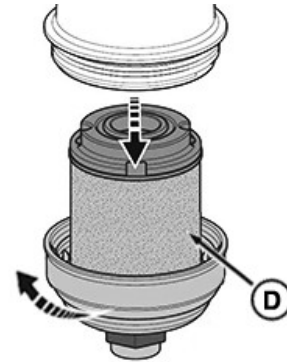
2. Locate DEF pump and in-line DEF filter assembly (A).



RXA0163954—UN—23JUL18

NOTE: Container must hold at least 300 mL (.32 qt).

3. Remove drain plug (B) and drain DEF fluid into a proper container.
4. Rotate filter housing (C) counterclockwise.

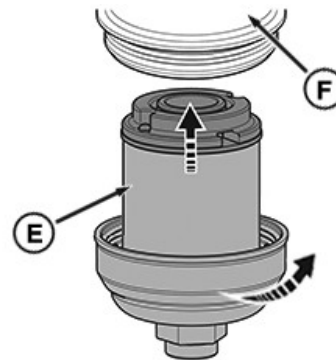


RXA0163956—UN—23AUG18

5. Pull filter assembly down.

NOTE: If necessary, tap filter to loosen.

6. Remove and discard filter (D) and foam compensation element under filter.



RXA0163955—UN—23AUG18

7. Install filter (E) into filter housing (F) rotate clockwise. Tighten housing to 25 N·m (18.4 lb·ft).
8. Inspect O-ring on drain plug. Replace if damaged.
9. Install drain plug. Tighten to 4 N·m (3 lb·ft).

BH38674,0000D46-19-29AUG18

DEF Header Filter—Final Tier 4/Stage V Engine

IMPORTANT: Always use DEF as specified in Diesel Exhaust Fluid (DEF) section of this Operator's Manual.

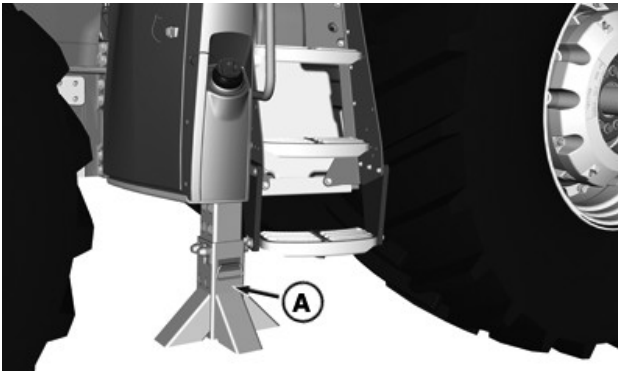
Reduce damage and poor performance issues with DEF system. DEF header filter protects system from low quality or contaminated DEF. Replace as required.

NOTE: A blocked DEF header filter is only one of the several problems which cause listed (Diagnostic Trouble Code) DTC messages to appear.

NOTE: If tractor is equipped with DEF header filter there will be no in-line DEF filter.

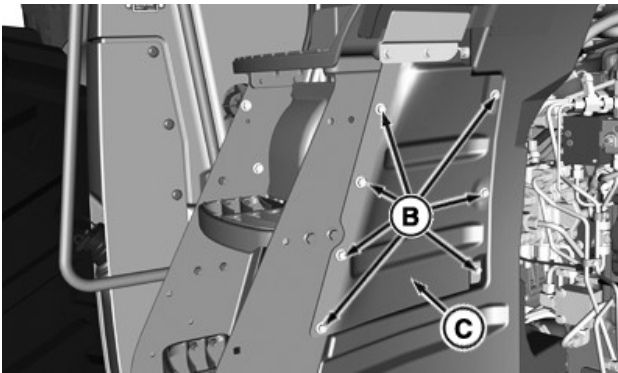
If either DTC message appears on CommandCenter™ display, replace header filter:

- ECU4334.01 - Dosing Unit Pressure Extremely Low
 - ECU4334.18 - Dosing Unit Pressure Moderately Low
1. Stop tractor and place transmission into PARK.
 2. Disconnect (—) battery cable.



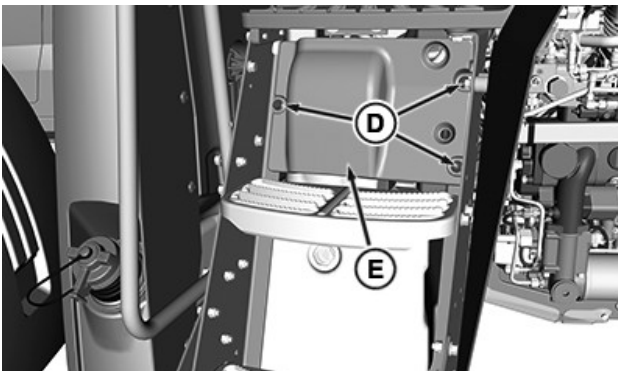
RXA0137647—UN—12DEC13

3. Place jackstand (A) under fuel tank.



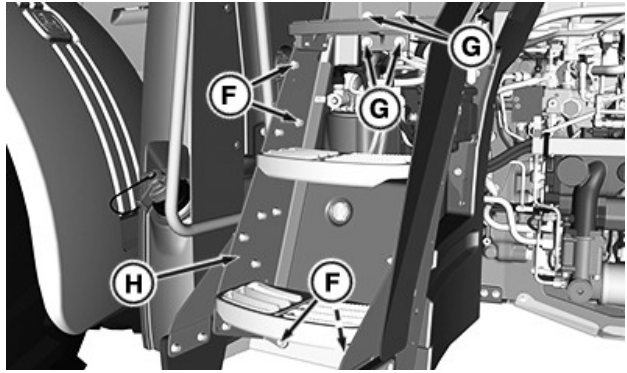
RXA0160458—UN—10AUG17

4. Remove left rear wheel cover cap screws (B) and wheel cover (C).



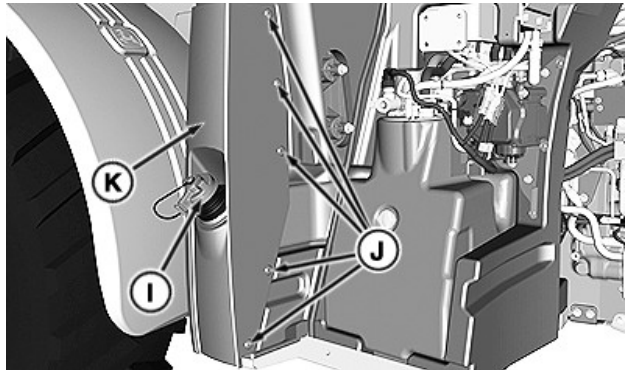
RXA0160459—UN—10AUG17

5. Remove step cover cap screws (D) and step cover (E).



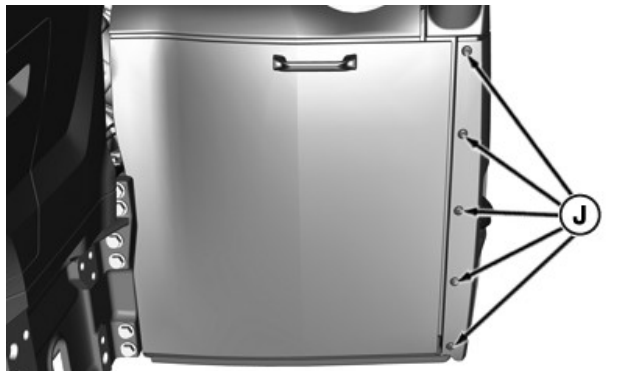
RXA0160460—UN—10AUG17

6. Remove cap screws (F and G) and step assembly (H).



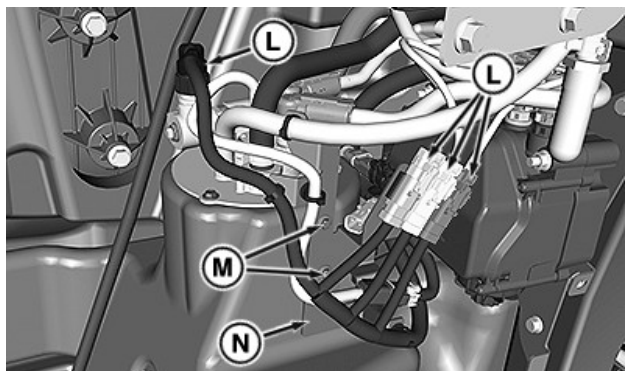
RXA0160461—UN—10AUG17

7. Remove DEF cap (I).



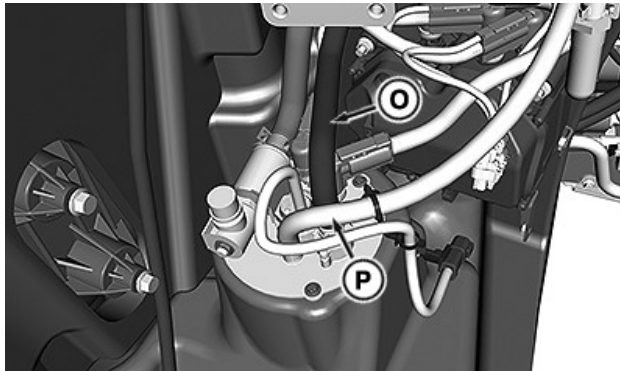
RXA0160462—UN—10AUG17

8. Remove splash guard cap screws (J) and splash guard (K).



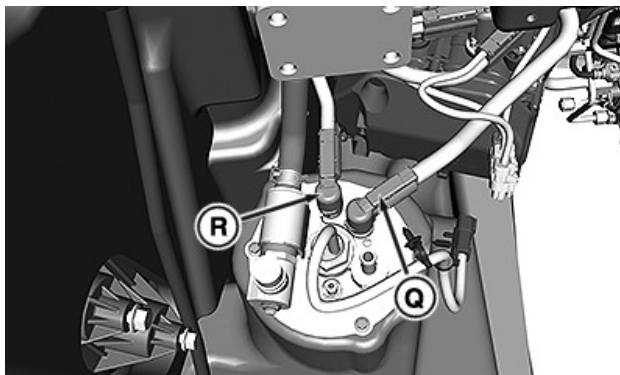
RXA0160463—UN—10AUG17

9. Remove connectors (L), bracket cap screws (M), and bracket (N).



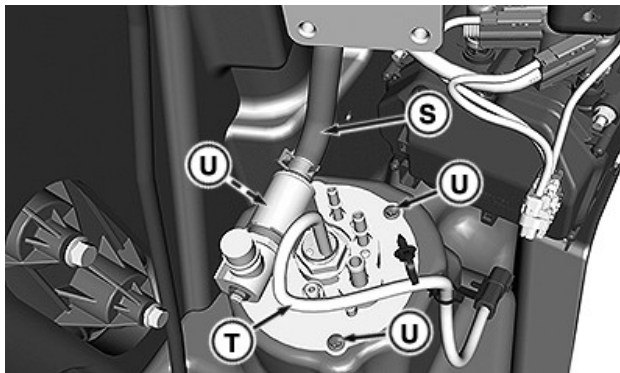
RXA0160464—UN—10AUG17

10. Remove supply line (O) and vent line (P).



RXA0160465—UN—10AUG17

11. Remove DEF supply line (Q) and DEF backflow line (R).



RXA0160466—UN—16AUG17

12. Remove coolant line (S), electrical connector (T), and remove three header-mounted cap screws (U).

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.

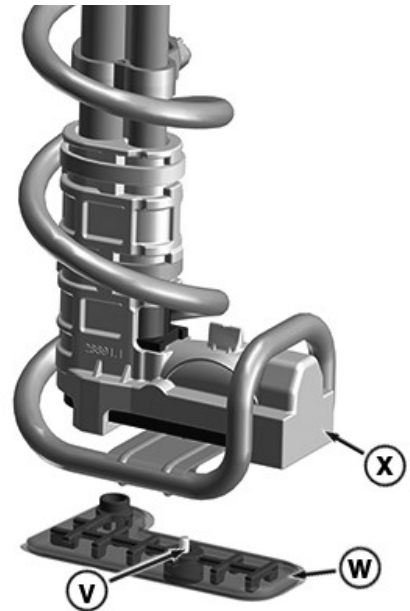
13. Clear all debris from area around DEF tank header.

IMPORTANT: Cap and plug all lines and fittings to prevent contamination. Coolant in DEF causes Selective Catalytic Reduction (SCR) system performance issues.

NOTE: Mark all hoses and wires prior to removal.

14. Remove DEF tank header, inspect O-ring for damage. Replace if necessary.

15. Remove cap screws from DEF tank header locking ring.



RXA0160702—UN—23AUG17

16. Remove DEF header filter retaining screw (V).

17. Remove filter (W) from header assembly (X).

18. Install filter (W).

19. Install screw (V) and tighten to 1 N·m (11 lb·in).

20. Lubricate O-rings with clean DEF.

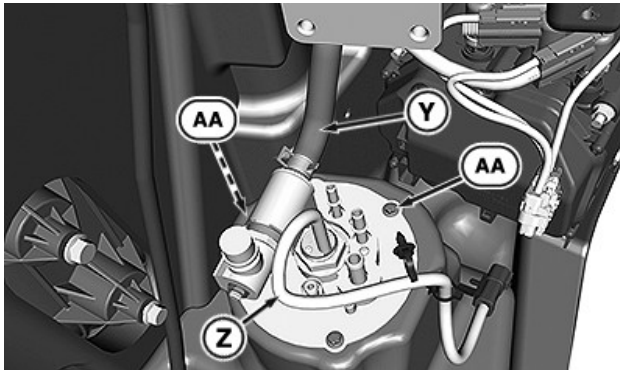
IMPORTANT: Prevent DEF leak by aligning notches on locking ring with plastic tabs on header.

IMPORTANT: Push DEF line onto fitting until you hear a “click” is heard. Then lightly pull back to ensure that it is connected and locked it in place.

NOTE: DEF supply and return lines have unique sized fittings.

IMPORTANT: Plugged DEF header filter may indicate that dosing unit filter is also plugged.

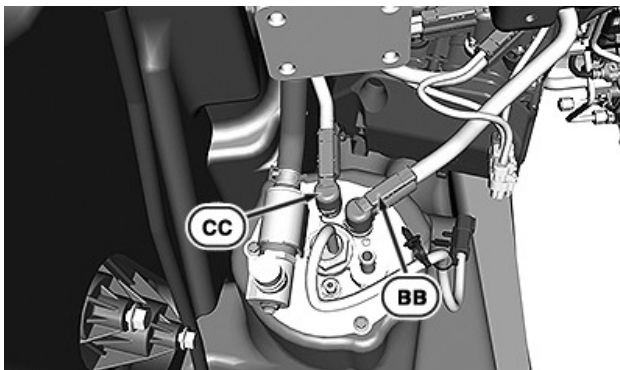
21. Examine header filter. If filter is plugged with contaminants go to step 22. If not plugged, go to step 26.
22. Change DEF dosing unit filter. See Dosing Unit Filter in this Operator's Manual section.
23. Check DEF tank for contaminated DEF. See Testing Diesel Exhaust Fluid (DEF) in DEF section of this Operator's Manual.
24. If DEF is contaminated, drain and clean DEF tank. See Diesel Exhaust Fluid (DEF) Tank in Service - Clean section of this Operator's Manual.
25. Check stored DEF supply. See Testing Diesel Exhaust Fluid (DEF) in DEF section of this Operator's Manual.



RXA0160468—UN—10AUG17

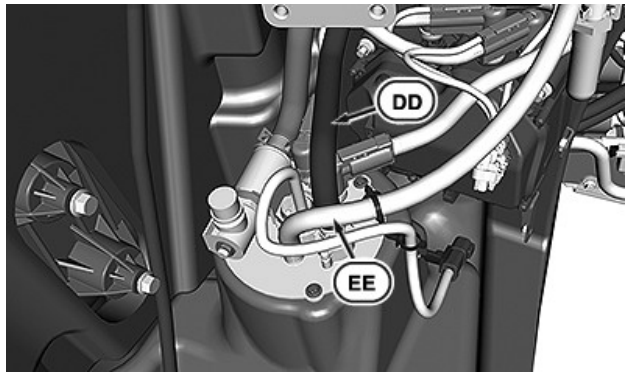
26. Install header assembly and header assembly cap screws (AA). Tighten to 8 N·m (71 lb·in).

27. Connect coolant line (Y) and electrical connector (Z).



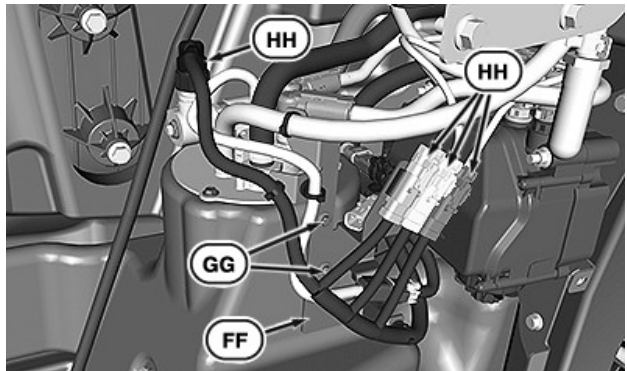
RXA0160469—UN—10AUG17

28. Install DEF supply line (BB) and DEF backflow line (CC).



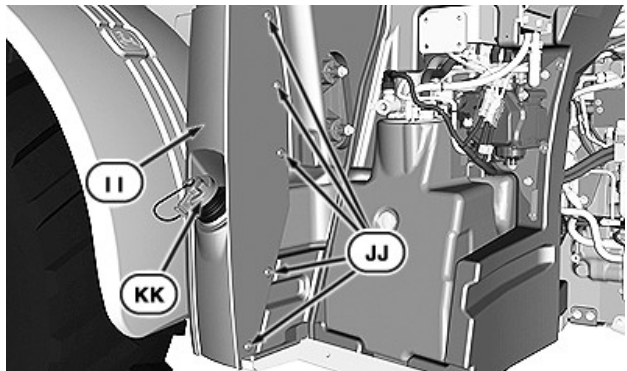
RXA0160470—UN—10AUG17

29. Install supply line (DD) and vent line (EE).



RXA0160471—UN—10AUG17

30. Install bracket (FF), bracket cap screws (GG), and connectors (HH). Tighten to 8 N·m (71 lb·in).



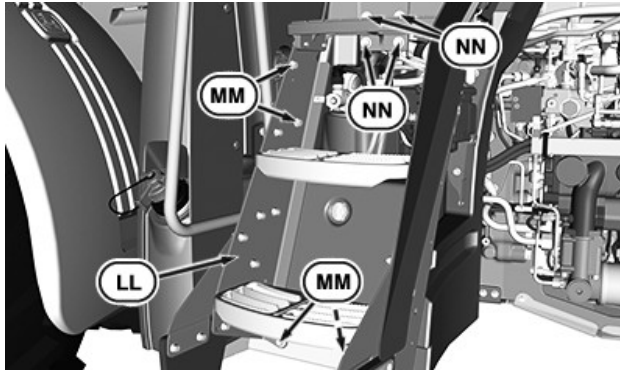
RXA0160472—UN—10AUG17

31. Install splash guard (II) and splash guard cap screws (JJ). Tighten to 8 N·m (71 lb·in).



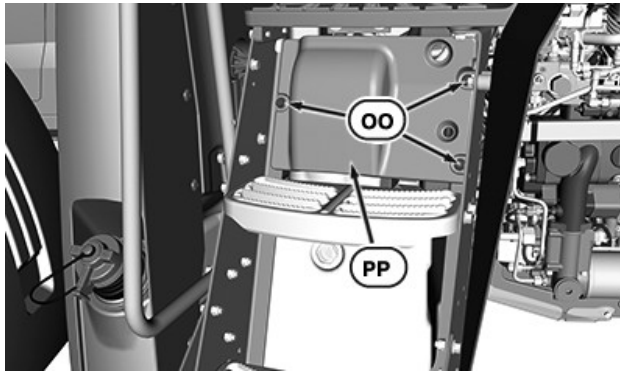
RXA0160473—UN—10AUG17

32. Install DEF cap (KK).



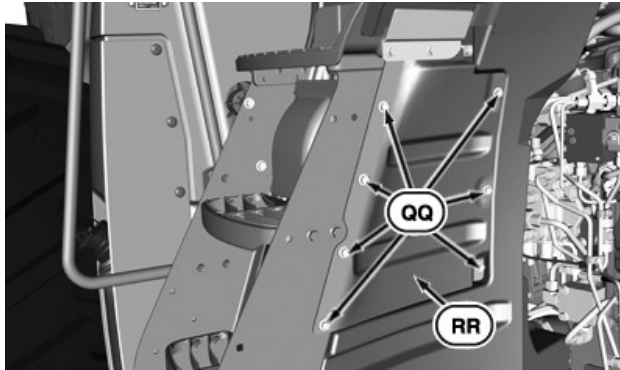
RXA0160474—UN—10AUG17

33. Install step assembly (LL), step bracket cap screws (MM), and step platform cap screws (NN). Tighten step bracket cap screws to 78 N·m (58 lb·ft) and step platform cap screws to 128 N·m (94 lb·ft).



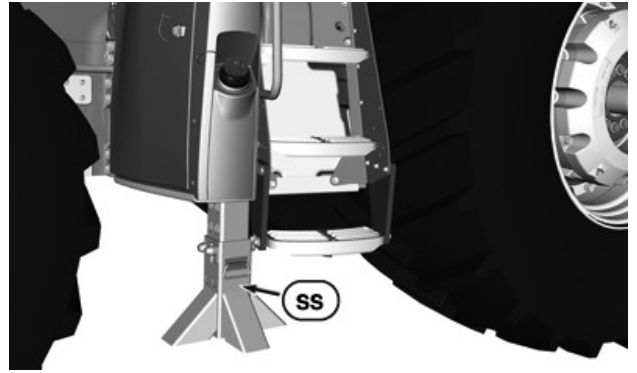
RXA0160475—UN—13NOV17

34. Install step cover (PP) and step cover cap screws (OO). Tighten to 37 N·m (27 lb·ft).



RXA0160476—UN—13NOV17

35. Install wheel cover (RR) and wheel cover cap screws (QQ). Tighten to 37 N·m (27 lb·ft).



RXA0160477—UN—13NOV17

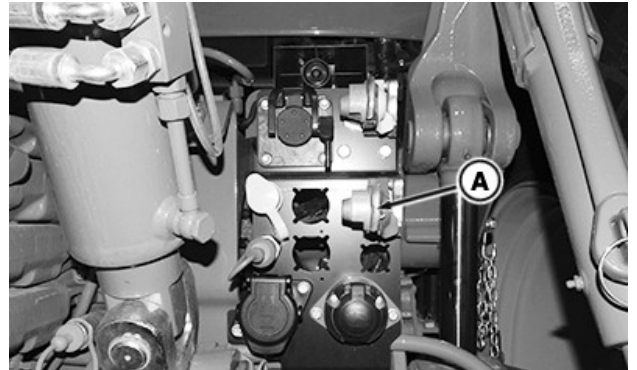
36. Remove jackstand (SS).
37. Connect (—) battery cable.

IMPORTANT: If DTC message reappears, filter may not have been causing problem that generated code. See your John Deere dealer.

38. Start and run tractor.

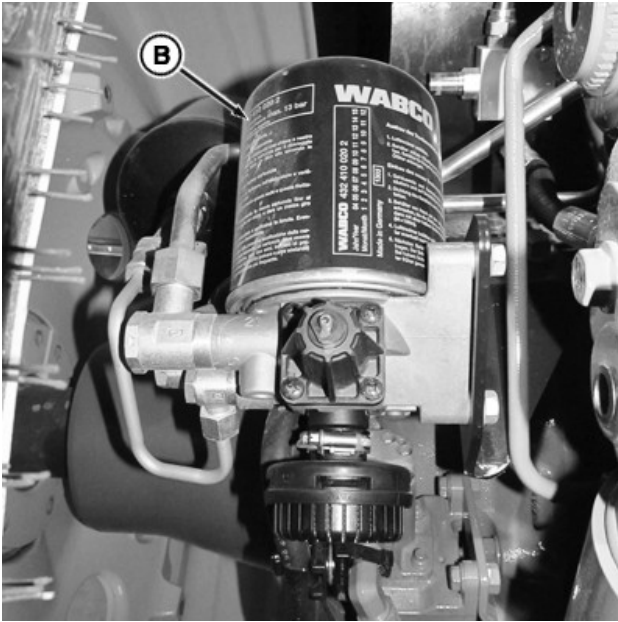
BH38674,0000BF2-19-27AUG18

Trailer Air Brake Dryer Filter



RXA0154698—UN—12OCT16

1. With engine off, manually depress release valve inside red trailer air brake coupler (A).



RXA0154699—UN—12OCT16

2. After all air pressure is released, remove trailer air brake dryer filter (B) with O-ring and discard.
3. Lubricate new filter gasket with clean oil.
4. Install new trailer air brake dryer filter until O-ring contacts air dryer surface. Hand tighten additional 1/2 turn.

TS36762,0000159-19-15NOV16

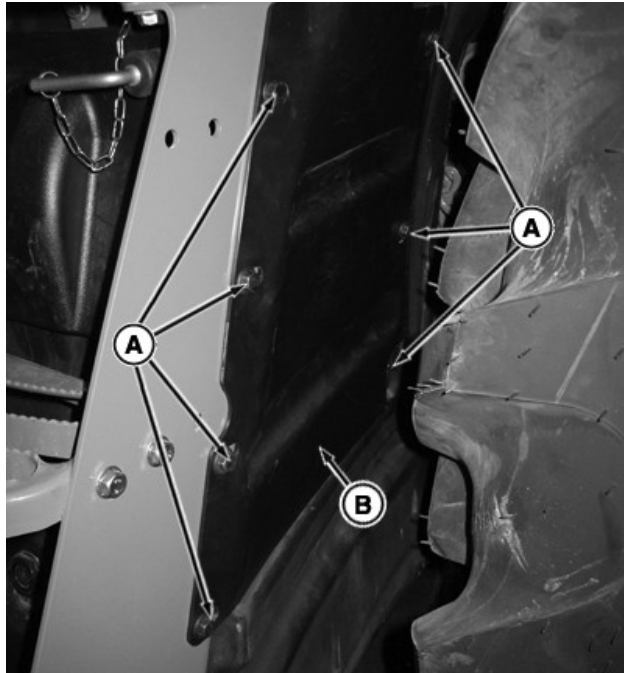
Replace Transmission Drive Shaft Damper

See your John Deere dealer.

TS36762,0000034-19-14NOV16

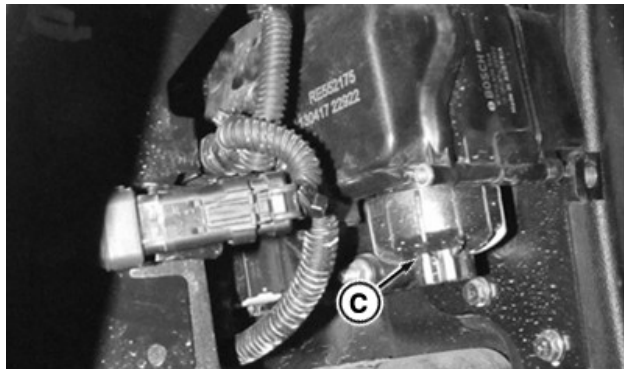
Access DEF Dosing Unit Filter—Final Tier 4/ Stage V Engine

IMPORTANT: Replace every 4500 hours of operation or every 3 years, whichever comes first.



RXA0135317—UN—28AUG13

1. Remove cap screws (A) and shield (B).



RXA0160096—UN—05JUL17

2. Diesel exhaust fluid (DEF) dosing unit filter (C) is located on bottom of dosing unit
3. See Changing Diesel Exhaust Fluid (DEF) Dosing Unit Filter in this section of this Operator's Manual.
4. Install in reverse order and tighten to 37 N·m (27 lb·ft).

TS36762,000015A-19-16JUL18

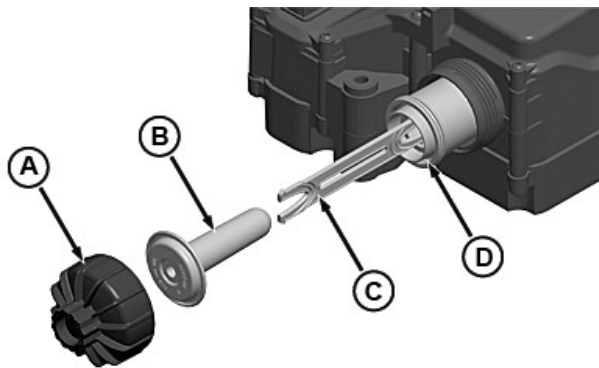
DEF Dosing Unit Filter—Final Tier 4/Stage V Engine

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.

NOTE: Servicing DEF dosing unit filter may require removing additional covers or components, see Access DEF Dosing Unit for location information.



RG22534—UN—21MAR13

1. Remove DEF dosing unit filter cover (A).
2. Remove and discard DEF dosing unit filter equalizing element (B).
3. Insert “Black” end of DEF dosing unit filter tool (C) into DEF dosing unit filter (D) until CLICK is felt or heard indicating DEF dosing unit filter tool is fully engaged.

NOTE: A tool such as a screwdriver can be inserted into DEF dosing unit filter tool slot to assist removal.

4. Pull DEF dosing unit filter tool and DEF dosing unit filter from DEF dosing unit. Discard DEF dosing unit filter and DEF dosing unit filter tool.

IMPORTANT: Plugged DEF dosing unit filter may indicate that header filter is also plugged.

5. Examine dosing unit filter. If filter is plugged with contaminants, go to step 6. If not plugged, go to step 10.
6. Change DEF header filter, see Header Filter in this Operator’s Manual section.
7. Check DEF tank for contaminated DEF, see Testing Diesel Exhaust Fluid (DEF) in Diesel Exhaust Fluid (DEF) section of this Operator’s Manual.
8. If DEF is contaminated, drain and clean DEF tank,

see Diesel Exhaust Fluid (DEF) Tank in Service - Clean section of this Operator’s Manual.

9. Check stored DEF supply, see Testing Diesel Exhaust Fluid (DEF) in Diesel Exhaust Fluid (DEF) section of this Operator’s Manual.
10. Clean DEF dosing unit threads and mating surfaces with distilled water.
11. Lubricate new DEF filter O-rings with clean engine oil. Carefully insert DEF dosing unit filter into DEF dosing unit.
12. Install new DEF dosing unit filter equalizing element into DEF dosing unit filter.
13. Install DEF dosing unit filter cover and tighten to 23 N·m (204 lb·in).

RX32825,0001857-19-15AUG18

Engine Crankshaft Damper

See your John Deere dealer.

TS36762,000015C-19-26JUN17

Engine Coolant

IMPORTANT: Initial change interval is 6 years or 6000 hours, provided cooling system is topped off using only John Deere Cool-Gard™ II and premix and coolant is tested at recommended intervals. Scheduled interval (2 years or 2000 hours) can be extended up to 6 years or 6000 hours depending on coolant used and if coolant is tested at recommended intervals. See Diesel Engine Coolant (engine with wet sleeve cylinder liners) in Engine Coolant section of this Operator’s Manual.

See your John Deere dealer.

TS36762,000015D-19-14DEC16

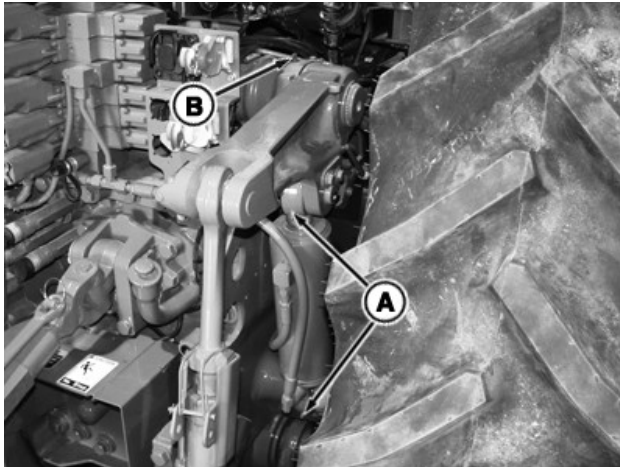
Cool-Gard is a trademark of Deere & Company

Service - Lubricate

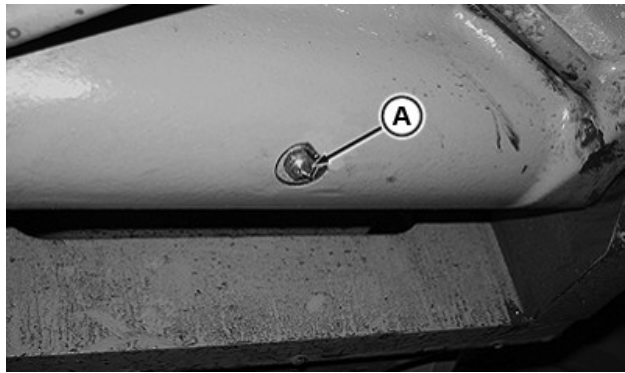
Rear Hitch

IMPORTANT: Normal lubrication is every 250 hours.
If used daily, lubricate every 50 hours.

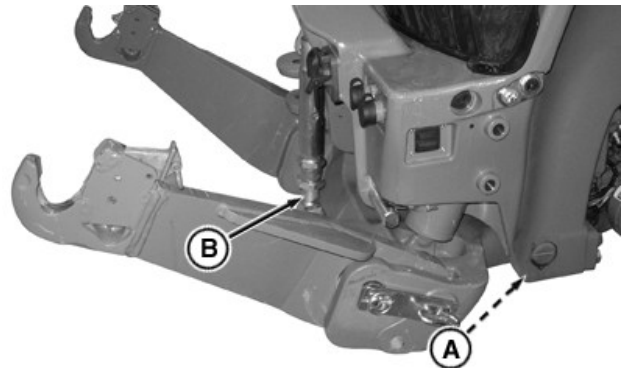
Lower hitch before lubricating hitch components.



RXA0134286—UN—20AUG13



RXA0110637—UN—03SEP10

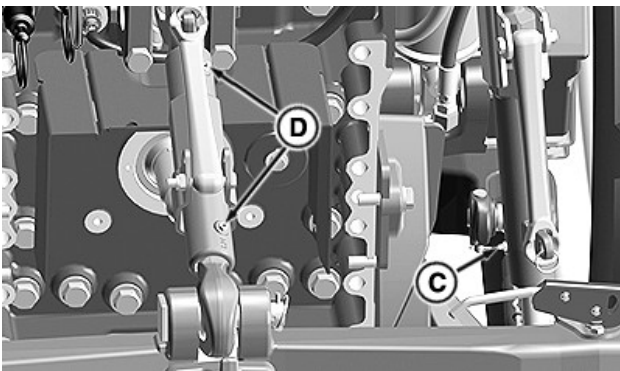


RXA0110655—UN—03SEP10

Grease main pivot point through grease fitting (A) underneath front hitch, and threads on center link (B).

Use John Deere SD Polyurea grease or other grease as specified in Multipurpose Extreme Pressure (EP) Grease in Other Lubricants section of this Operator's Manual.

RX32825,0001792-19-08MAY18



RXA0160596—UN—17AUG17

Lubricate lift cylinders (A), rockshaft (B), and lift arms (C) on both sides of tractor.

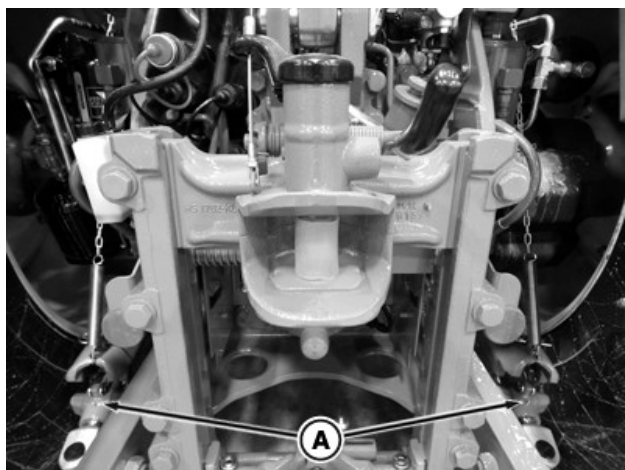
Lubricate mechanical center link (D).

Use John Deere SD Polyurea grease or other grease as specified in Multipurpose Extreme Pressure (EP) Grease in Other Lubricants section of this Operator's Manual.

RX32825,0001791-19-08MAY18

Front Hitch

IMPORTANT: Normal lubrication is every 250 hours.
If used daily, lubricate every 50 hours.



RXA0147023—UN—22JAN15

Lubricate deluxe stabilizers (A).

Use John Deere SD Polyurea grease or other grease as specified in Multipurpose Extreme Pressure (EP)

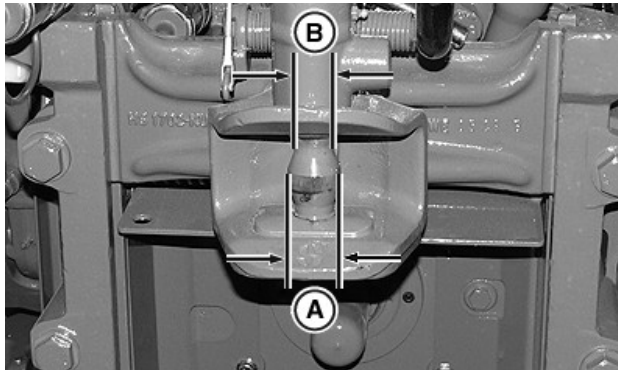
Grease in Other Lubricants section of this Operator's Manual.

SV81855,000035F-19-08MAY18

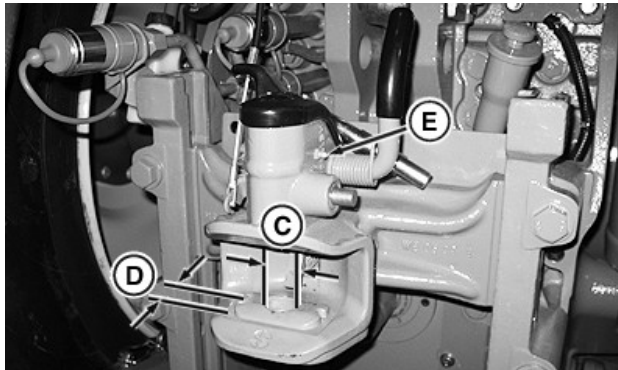
Wagon Hitch

CAUTION: Avoid injury or damage to equipment. Replace parts that have reached or exceeded their wear limit.

Wagon Hitch



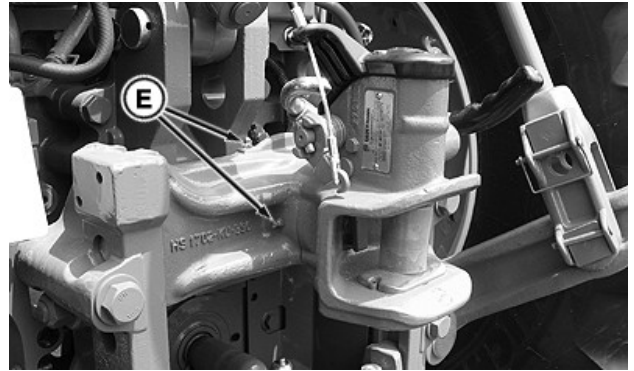
RXA0113614—UN—07FEB11



RXA0113616—UN—07FEB11

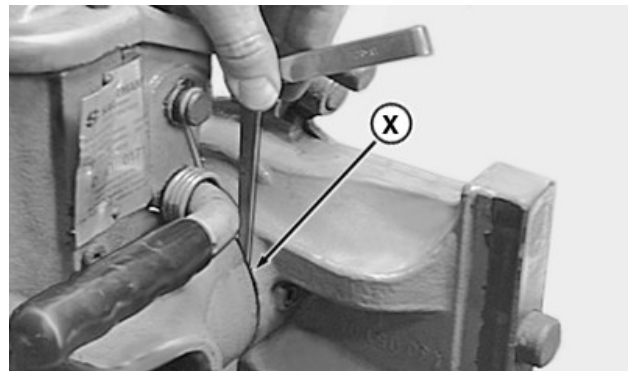
Specifications	
Large Diameter (A)	36 mm (1.42 in) Minimum
Small Diameter (B)	27 mm (1.06 in) Minimum
Receiver Hole Diameter (C)	34 mm (1.33 in) Maximum
Wear Plate Thickness (D) ^a	6 mm (0.24 in) Minimum

^aMinimum Permitted Thickness

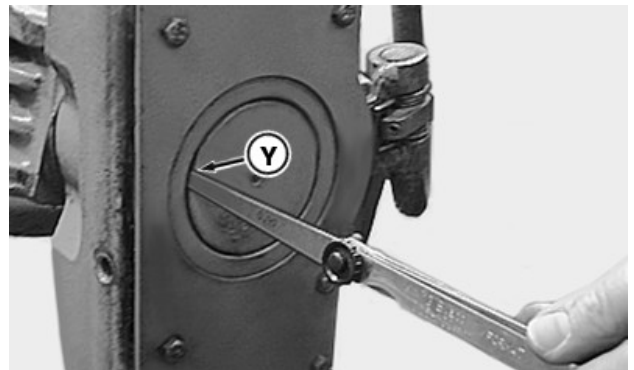


RXA0118760—UN—21JUL11

Lubricate grease fittings (E). Use John Deere multi-purpose grease as specified in Multipurpose Extreme Pressure (EP) Grease in Other Lubricants section of this Operator's Manual.



RXA0155702—UN—15NOV16

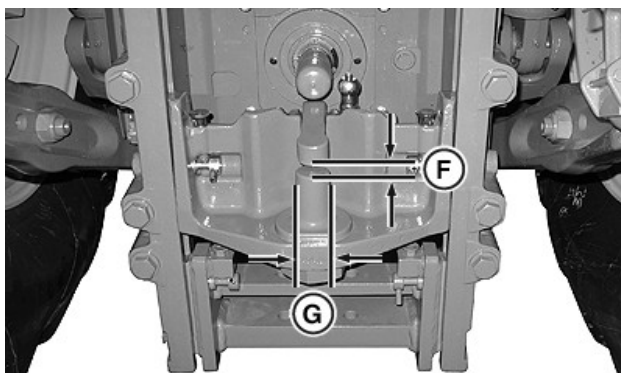


RXA0155703—UN—15NOV16

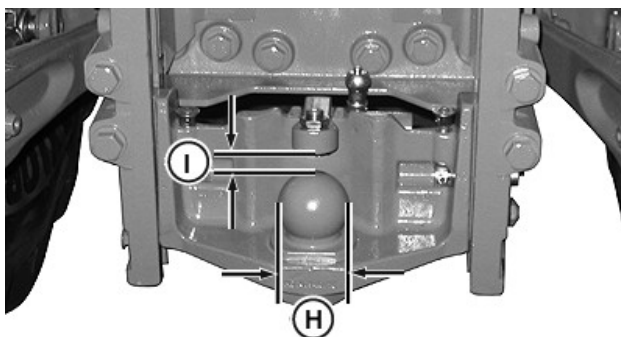
IMPORTANT: If bearing play (Y) is greater than 1.5 mm (0.059 in), replace entire wagon hitch assembly.

Replace internal retaining wire if gap (X) is greater than 3 mm (0.118 in).

Couplings



RXA0155697—UN—15NOV16



RXA0155698—UN—15NOV16

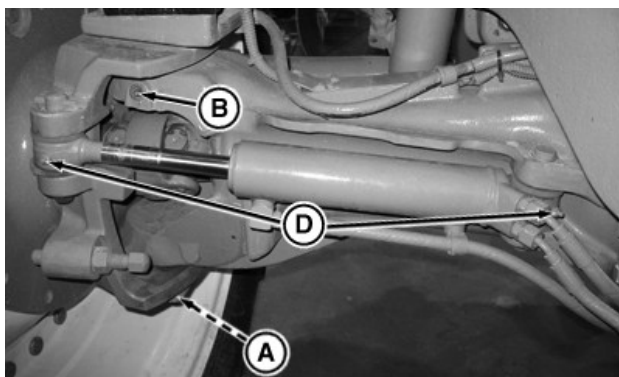
Specifications	
Piton Coupling Pin Diameter (F)	10 mm (0.39 in) Minimum
Gap (G)	41.5 mm (1.63 in) Maximum
Ball Coupling Ball Diameter (H)	4 mm (0.16 in) Minimum
Gap (I)	78 mm (0.39 in) Maximum

RX32825,0001794-19-08MAY18

MFWD or TLS™ Plus Kingpins, Tie Rod Ends, Steering Cylinder, Axle Pivot, and Panhard Rod

IMPORTANT: Normal lubrication is every 500 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.

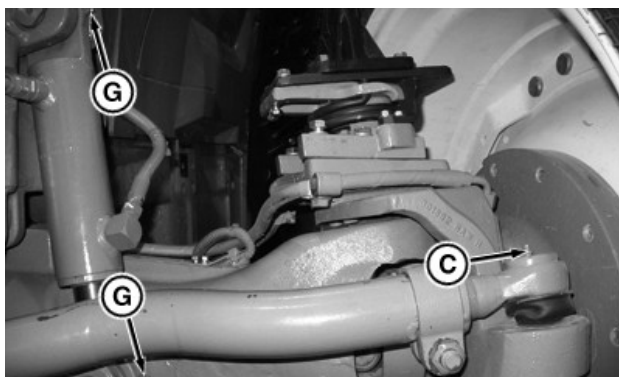
Use John Deere SD Polyurea grease or other grease as specified in Multipurpose Extreme Pressure (EP) Grease in Other Lubricants section of this Operator's Manual.



RXA0109431—UN—16AUG10

Kingpins—Lubricate fittings (A and B) until grease appears at orifice on bottom end of each kingpin bearing.

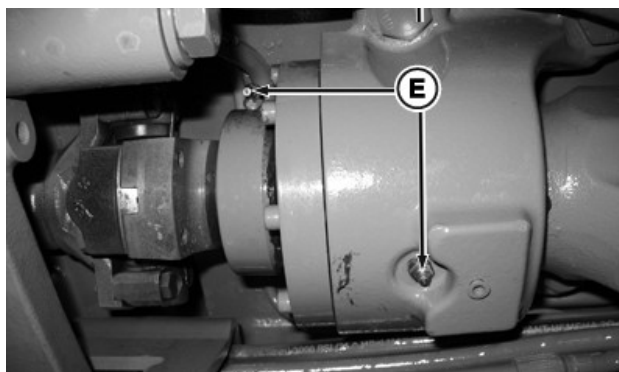
Steering Cylinder—Lubricate fittings (D).



RXA0109440—UN—16AUG10

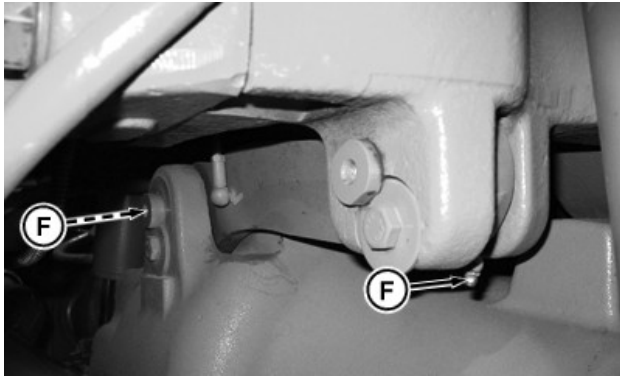
Tie Rods—Lubricate fittings (C).

Axle Cylinder—Lubricate top and bottom fittings (G) (TLS™ Plus Only).



RXA0116166—UN—06MAY11

Axle Pivot—Lubricate front and rear fittings (E) (TLS™ Plus Only).



RXA0109442—UN—16AUG10

Panhard Rod —Lubricate left and right fittings (F) (TLS™ Plus Only).

NOTE: All fittings, except for axle pivot (E) and Panhard rod (F), are the same for left-hand and right-hand sides.

RX32825,000178E-19-08MAY18

MFWD or TLS™ Plus U-Joints

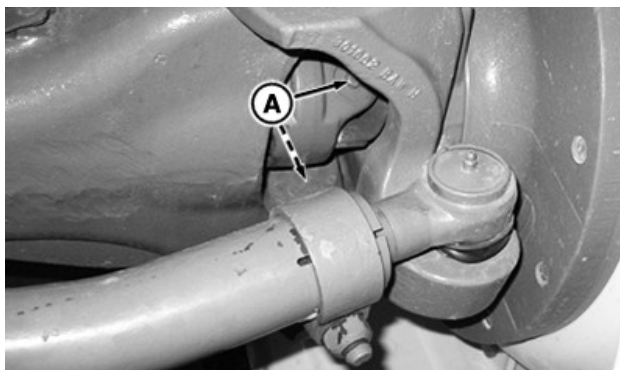
IMPORTANT: Normal service is every 250 hours. If used in extremely wet conditions service daily or every 10 hours.

Use John Deere SD Polyurea grease or other grease as specified in Multipurpose Extreme Pressure (EP) Grease in Other Lubricants section of this Operator's Manual.

Drilled passages in the U-joint allow grease to reach all four bearings from a single grease fitting.

For normal operations, U-joints are sealed and not permanently equipped with grease fittings. To lubricate proceed as follows:

1. Replace plugs with M10 thread 90° grease fittings. See your John Deere dealer for correct part. Tighten to 0.904 N·m (8 lb·in).

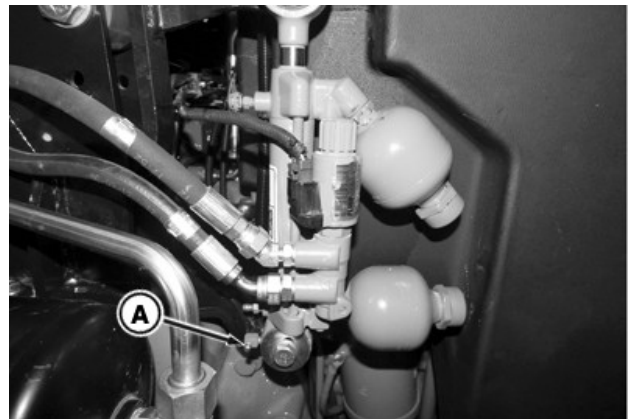


RXA0155643—UN—11NOV16

2. Apply grease to both U-joints at lubrication points (A).

RX32825,000178F-19-08MAY18

Hydraulic Cab Suspension (If Equipped)



RXA0136540—UN—04NOV13

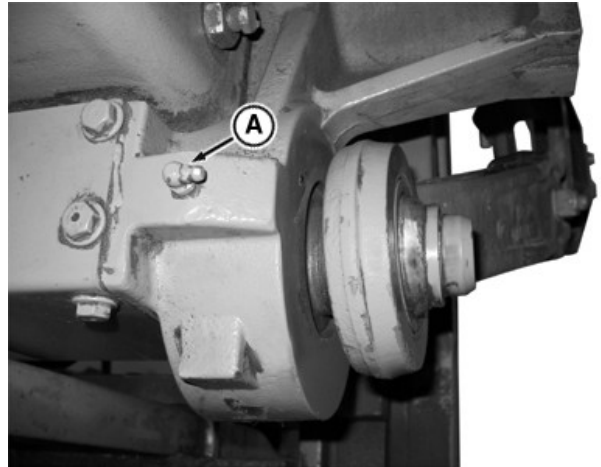
Lubrication Fitting on Cab Suspension System

Lubricate grease fittings (A), on each side of cab, with several strokes of grease gun.

Use John Deere multi-purpose grease as specified in Multipurpose Extreme Pressure (EP) Grease in Other Lubricants section of this Operator's Manual.

RD47322,0000719-19-24AUG18

Draft Link Support Shaft Bushing



RXA0110394—UN—13SEP10

Under Rear Left-hand Side of Tractor

Apply one or two shots of grease to support shaft grease fitting (A). Use John Deere SD Polyurea grease or other grease as specified in Multipurpose Extreme Pressure (EP) Grease in Other Lubricants section of this Operator's Manual.

RX32825,0001793-19-08MAY18

Service - Electrical

Service - Electrical Overview

In addition to fuses and relays mounted in fuse panels (behind operator's seat), tractors are also equipped with solid state load centers located in two electronic control units.

These solid-state load centers replace fused relay circuits previously used. Their primary function is to control the majority of high current loads such as rear fender lights and horn. Load center circuitry monitors loads and voltages providing fast reaction time and ability to alert operator if a circuit overloads or if voltage is out of specification, i.e. open circuit (undercurrent) or short circuit (over-current).

If circuit is faulty and a diagnostic trouble code is generated, circuit will stay OFF and diagnostic trouble code will remain active until circuit is recycled by operator. If circuit or one of its components is turned back ON and problem is no longer present, system will function normally.

As an example, if a light circuit is determined to have an over-current condition, load center system will shut the circuit off. If operator turns light switch off and back on, and system senses zero amps when light controlled by the switch is off, system will turn system back on and normal operation will turn back on.

If total current load of load center exceeds a preset level, software will automatically shut down system, turning off one circuit at a time. Logic circuit will wait a few seconds between circuit shutdowns to determine if total controller current has fallen below preset level, or if additional circuits should be turned off.

Solid state circuits are rated for a fixed value. If additional electrical devices need to be added to tractor, it is recommend to use a power strip or convenience outlets in conjunction with an off/on switch. Splicing into a wire in the wrong location could cause circuit to overload and shut circuit down.

If extra implement lights and controls, such as switches are needed, contact your John Deere dealer. A dealer can provide information on correct method to tie in a light switch with one of accessory wires located in 7 pin terminal on back of tractor.

TS36762,000015E-19-31AUG17

Welding Near Electronic Control Units



TS953—UN—15MAY90

IMPORTANT: Do not jump-start engines with arc welding equipment. Currents and voltages are too high and may cause permanent damage.

1. Disconnect the negative (-) battery cable(s).
2. Disconnect the positive (+) battery cable(s).
3. Connect the positive and negative cables together. Do not attach to vehicle frame.
4. Clear or move any wiring harness sections away from welding area.
5. Connect welder ground close to welding point and away from control units.
6. After welding, reverse Steps 1—5.

DX,WW,ECU02-19-14AUG09

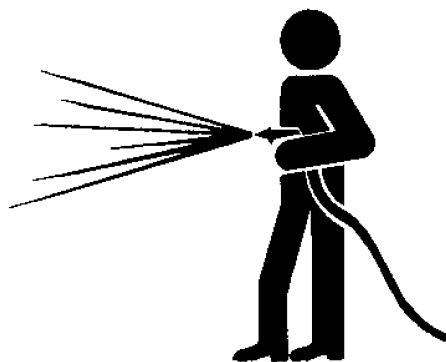
Keep Electronic Control Unit Connectors Clean

IMPORTANT: Do not open control unit and do not clean with a high-pressure spray. Moisture, dirt, and other contaminants may cause permanent damage.

1. Keep terminals clean and free of foreign debris. Moisture, dirt, and other contaminants may cause the terminals to erode over time and not make a good electrical connection.
2. If a connector is not in use, put on the proper dust cap or an appropriate seal to protect it from foreign debris and moisture.
3. Control units are not repairable.
4. Since control units are the components LEAST likely to fail, isolate failure before replacing by completing a diagnostic procedure. (See your John Deere dealer.)
5. The wiring harness terminals and connectors for electronic control units are repairable.

DX,WW,ECU04-19-11JUN09

Compressed Air Use



RW56455—UN—30JUN97

IMPORTANT: Directing pressurized air at electronic/electrical components or connectors, may cause buildup of static electricity and product malfunctions.

TS36762,000015F-19-21JUN17

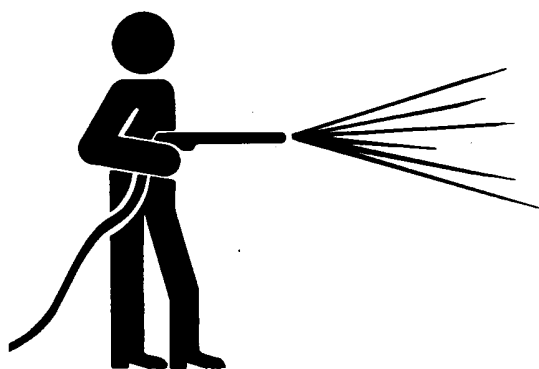
IMPORTANT: Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light goes out.

Battery disconnect switch without indicator light: Engine not equipped with SCR system. No waiting period is required before turning off switch.

See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

TS36762,0000161-19-17JUL18

High-Pressure Washers Use



T6642EJ—UN—18OCT88

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps, exhaust outlet or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle. When washing do not direct any water towards the exhaust or any fill tank openings.

TS36762,0000160-19-21JUN17

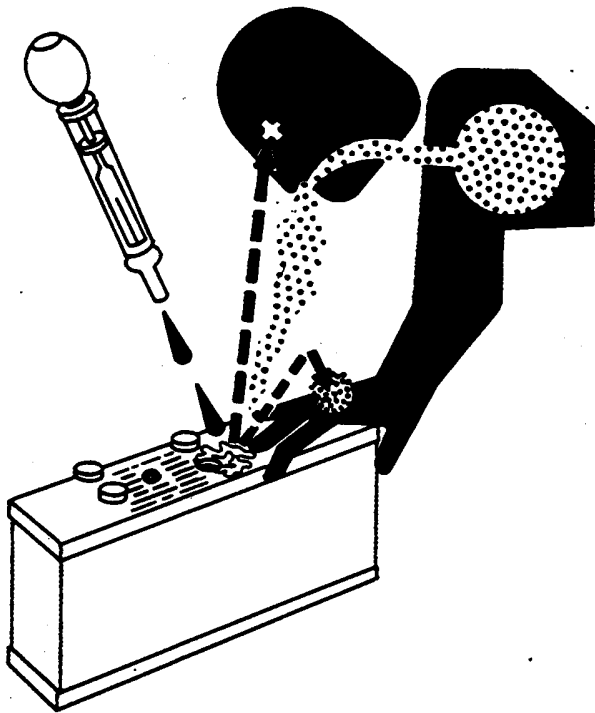
Handling Batteries Safely



TS204—UN—15APR13

Disconnect Battery

CAUTION: Avoid injury or damage to tractor systems from inadvertent contact with electrical power. Disconnect battery when directed.



TS203—UN—23AUG88

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace grounded clamp last.

Sulfuric acid in battery electrolyte is poisonous and strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid hazards by:

- Filling batteries in a well-ventilated area
- Wearing eye protection and rubber gloves
- Avoiding use of air pressure to clean batteries
- Avoiding breathing fumes when electrolyte is added
- Avoiding spilling or dripping electrolyte
- Using correct battery booster or charger procedure.

If acid is spilled on skin or in eyes:

1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

If acid is swallowed:

1. Do not induce vomiting.

2. Drink large amounts of water or milk, but do not exceed 2 L (2 qt.).

3. Get medical attention immediately.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**

DX,WW,BATTERIES-19-02DEC10

Service Batteries and Connections



RXA0086786—UN—14FEB06

CAUTION: It can cause a buildup of static charge leading to potential injury.

Battery gas can explode. Keep sparks and flames away from batteries. Use flashlight to check battery electrolyte level.

Never check battery charge by placing metal object across posts. Use a voltmeter or hydrometer.

Always remove battery ground cables before positive battery cables and connect them last. Do not let disconnected ground terminal touch metal surface.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**

CAUTION: Avoid contact with poisonous sulfuric acid in battery electrolyte. Battery acid can burn skin, damage clothing, and cause blindness if splashed into eyes.

NOTE: Although this battery is a maintenance free battery, conditions such as long periods of operation at high ambient temperatures and excessive engine cranking may require adding water. See label on battery.

For optimum battery performance, keep battery terminals clean and tight. For replacement batteries, follow manufacturer's recommendations.

IMPORTANT: Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light goes out.

Battery disconnect switch without indicator light: Engine not equipped with SCR system. No waiting period is required before turning off switch.

See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

1. Turn off battery disconnect switch.
2. Remove battery compartment cover. See Remove Battery Compartment Cover in Service - General Information section of this Operator's Manual.
3. Disconnect negative battery cables, then positive battery cables.

IMPORTANT: Never use compressed air to clean batteries.

4. Remove any corrosion with terminal brush, then clean terminals and battery posts using baking soda and water solution.
5. Rinse with clean water and air dry.
6. If batteries have been removed for service, slide batteries back into compartment. Install battery retaining clamp.
7. Connect positive battery cables, then connect negative battery cables.
8. Apply thin coat of grease to cable ends.
9. Reinstall battery compartment cover.
10. Turn battery disconnect switch on.

TS36762,0000145-19-21AUG18

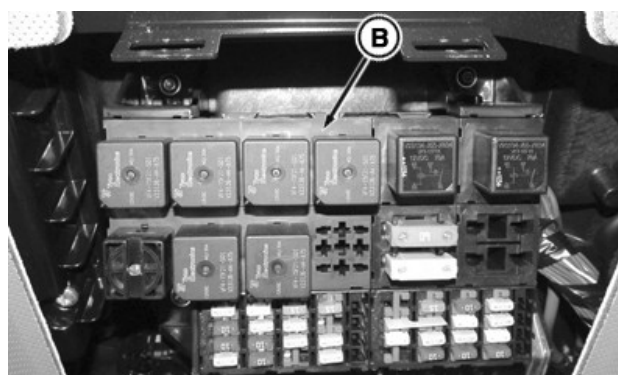
Access Load Center Fuses

NOTE: Fold seat backrest down to allow easier access, and allow cab lighting to shine on load center when fuses are being inspected or replaced.



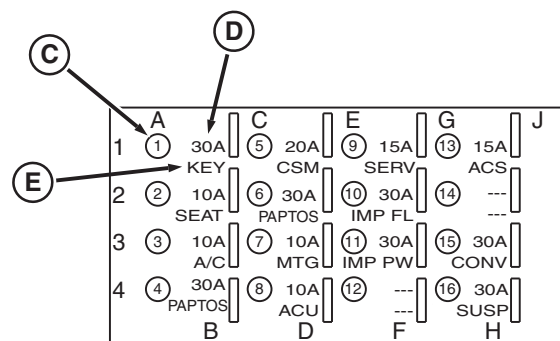
RXA0135034—UN—14AUG13

Cab load center is located behind operator's seat and just below rear window. To access load center, lift up on Operator's Manual holder (A).



RXA0135035—UN—14AUG13

Load center (B) contains fuses and relays.



RXA0154534—UN—05OCT16

Load Center Information

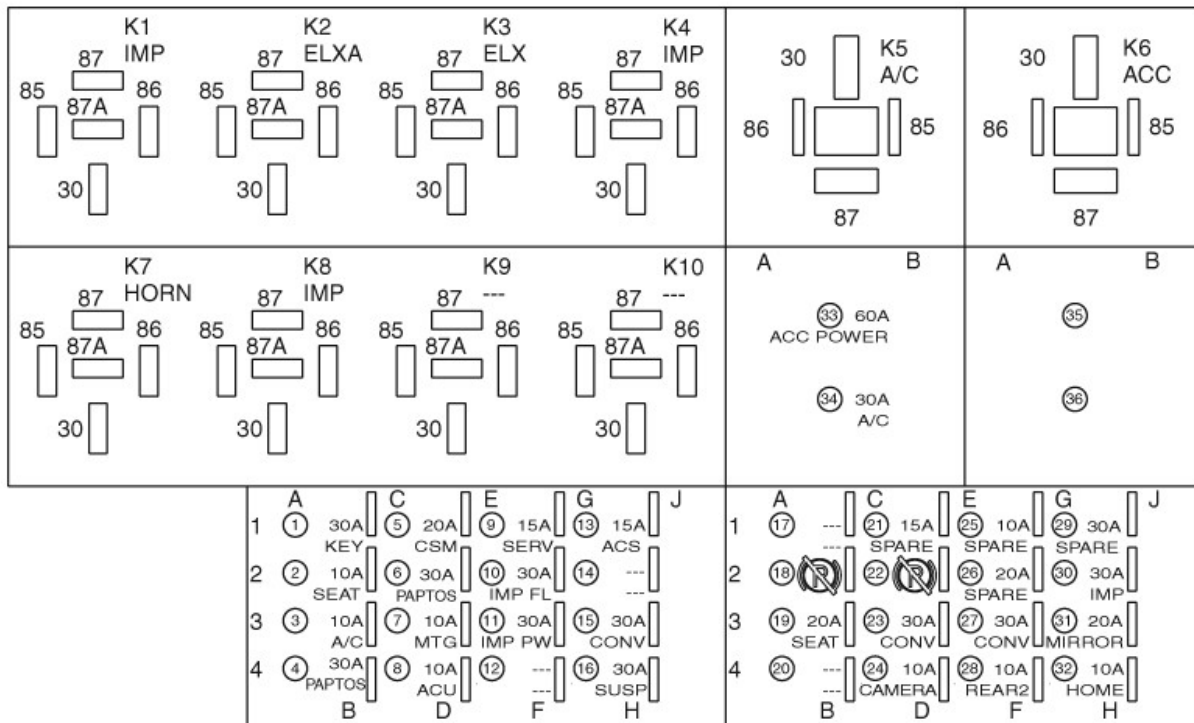
Diagram identifies load center fuse location (C), size (D), and description (E).

IMPORTANT: Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light goes out.

Battery disconnect switch without indicator light: Engine not equipped with SCR system. No waiting period is required before turning off switch.

See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

IMPORTANT: Replacement fuses must be the same rating as original. Ensure key is in OFF position.



RXA0127389—UN—25JAN13

K1—ISO Implement Connector Power Relay

K2—Electronics Relay

K3—Electronics Relay

K4—Implement Accessory Relay

K5—Blower Relay

K6—Accessories Relay

K7—Warning Horn Relay

K8—Implement Flood Relay

K9—Not Used

K10—Not Used

1—Key Switch (30 Amp)

2—Operator Presence Switch (10 Amp)

3—Air Conditioner (10 Amp)

4—PAPTOS (If Equipped)(30 Amp)

5—Radio, Primary Display, and Interior Lights (20 Amp)

6—PAPTOS (If Equipped)(30 Amp)

7—Modular Telematics Gateway (10 Amp)

8—Armrest Control Unit (10 Amp)

9—Server (15 Amp)

10—Implement Flood Lights (30 Amp)

11—Implement Accessory (30 Amp)

12—Not Used

13—ActiveCommand Steering (ACS)[™] (If Equipped) (15 Amp)

14—Not Used

15—Convenience Outlet Battery (30 Amp)

16—Not Used

17—Not Used

18—Park Brake Release

19—Seat Controls (20 Amp)

20—Not Used

21—Spare (15 Amp)

22—Park Brake Release

23—Convenience Outlet Switched (30 Amp)

24—Video Camera Power and Armrest Outlet (10 Amp)

25—Spare (10 Amp)

26—Spare (20 Amp)

27—Convenience Outlet Switched (30 Amp)

28—Rear Chassis Control Unit (10 Amp)

29—Spare (30 Amp)

30—ISO Implement Connector (30 Amp)

31—Remote Mirror (20 Amp)

32—Come Home Mode IVT[™]/AutoPowr[™] (Only)(10 Amp)

33—Accessories Power (60 Amp)

34—Blower Motor (30 Amp)

35—Not Used

36—Not Used

TS36762,0000162-19-21AUG18

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

ActiveCommand Steering is a trademark of Deere & Company

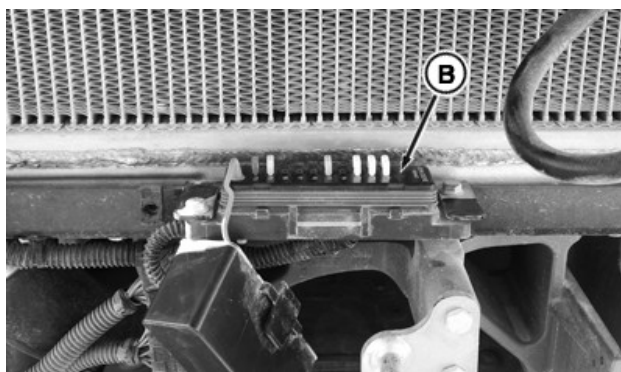
Access Front Load Center

IMPORTANT: Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light goes out.

Battery disconnect switch without indicator light: Engine not equipped with SCR system. No waiting period is required before turning off switch.

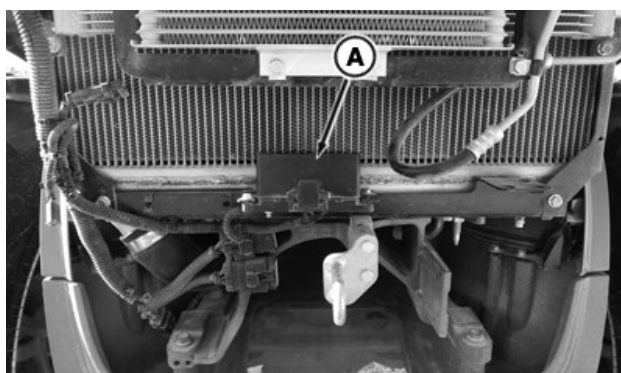
See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

IMPORTANT: Replacement fuses must be the same rating as original. Ensure key is in OFF position.



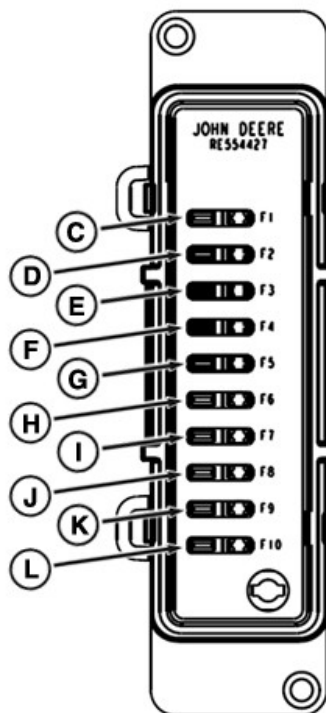
RXA0143404—UN—09JUL14

Open hood, see Open Hood in Service-General Information section of this Operator's Manual. Front load center (B) is at front bottom of radiator.



RXA0143403—UN—09JUL14

Remove load center cover (A). Replace load center cover and securely close hood when service is complete.



RXA0130342—UN—11JAN13

Fuses Identification

- C—F1 - ECU (20 Amp)
- D—F2 - ECU (20 Amp)
- E—F3 - ECU (20 Amp)
- F—F4 - Not Used
- G—F5 - Fuel Transfer Pump (15 Amp)
- H—F6 - Not Used
- I—F7 - Key Switch (10 Amp)
- J—F8 - Steering Control Unit (15 Amp)
- K—F9 - Front Chassis Control Unit 2 (If Equipped with Front Hitch, Front PTO, or Mid-Stack SCV-25 Amp)
- L—F10 - Front Chassis Control Unit 1 (If Equipped with Suspended Front Axle-10 Amp)

TS36762.0000170-19-21AUG18

Access Master Fuses

IMPORTANT: Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light goes out.

Battery disconnect switch without indicator light: Engine not equipped with SCR system. No waiting period is required before turning off switch.

See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

CAUTION: Disconnect both negative and positive battery connections from both batteries prior to fuse inspection or replacement.

IMPORTANT: Do not attempt to disassemble master fuses unless instructed by your John Deere dealer.

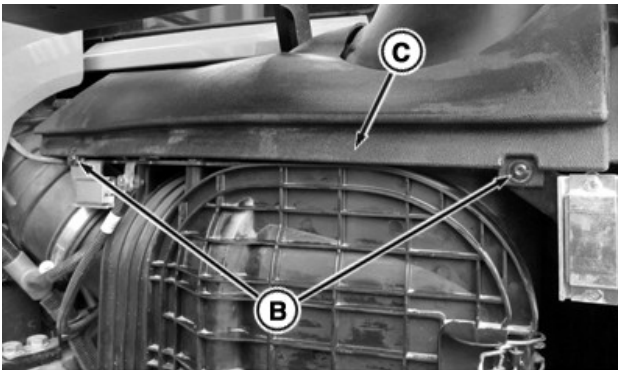
Replacement fuses must be the same rating as original.

Master fuse module is located inside battery compartment.



RXA0135033—UN—15AUG13

Grasp battery compartment cover handle (A) and pull forward and up to remove cover. Strong magnets secure cover.



RXA0135049—UN—14AUG13

Remove top cover retaining screws (B) and remove cover (C) to access master fuse module.

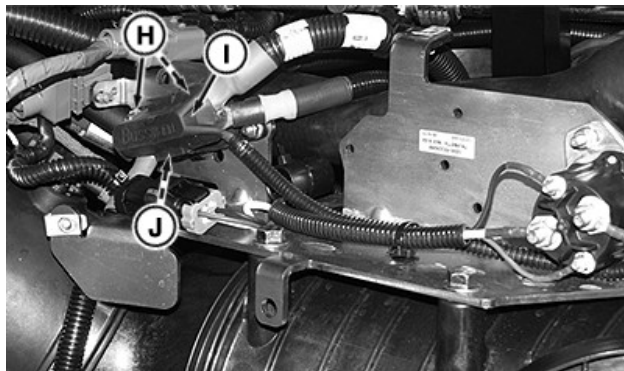
Tractor may be equipped with one of two master fuse configurations.



RXA0135032—UN—15AUG13

Tractor equipped with a back-up hydraulic pump (D):

- Master Fuse (E) — 300 Amps
- Backup Hydraulic Pump (If Equipped) (F) — 250 Amps
- Alternator Battery Relay (G) — 300 Amps

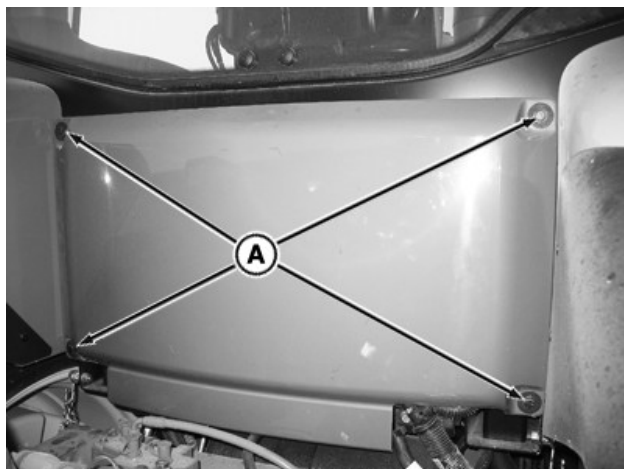


RXA0154535—UN—05OCT16

If tractor not equipped with a back-up pump, remove nuts (H) and cover (I). Single master fuse (J) is rated at 300 Amps.

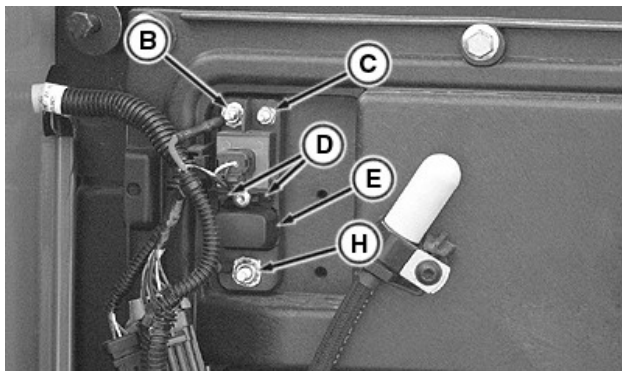
TS36762,0000163-19-21AUG18

Access Implement Power Relay Module Fuses



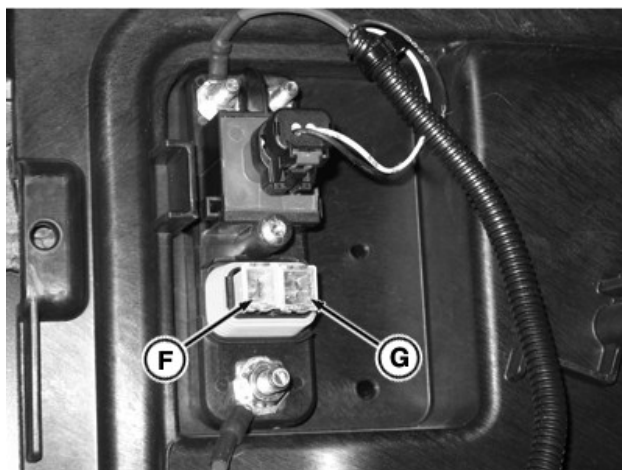
RXA0110047—UN—26AUG10

Remove four cap screws (A) and cab rear cover. Implement Power Relay Module is located in upper left corner of rear cab panel. Module routes power to Implement Bus Breakaway Connector.



RXA0109345—UN—16AUG10

Power comes into module from battery at battery power input stud (H).



RXA0100356—UN—03FEB09

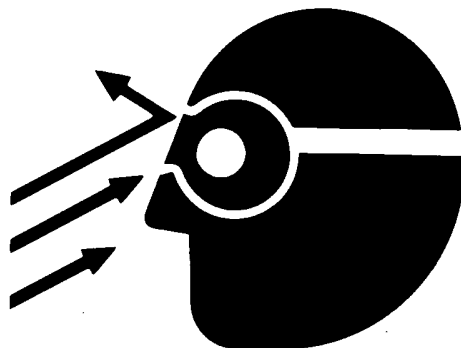
Switched power lug (B) is protected by a 60 Amp fuse (F). Unswitched power lug (C) is protected by a 30 Amp fuse (G).

To Change Fuses

1. Press down on fuse cover tabs (D) and remove fuse cover (E).
2. To remove, pull fuse straight rearward.
3. Replace with new fuse.
4. Reinstall cover and slide tabs over cover edge to secure.

TS36762.0000164-19-24OCT17

Handle Halogen Light Bulbs Safely



TS266—UN—23AUG88



H39474—UN—30JUN00

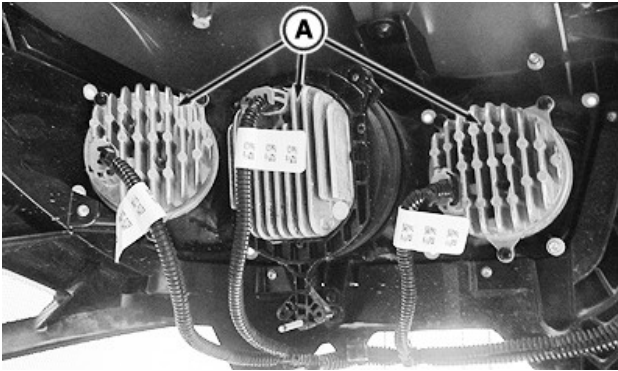
CAUTION: Halogen bulbs (A) contain gas under pressure. Handling a bulb improperly could cause it to shatter into flying fragments. To avoid possible injury:

- Turn light switch off and allow bulbs to cool before changing. Leave switch off until bulb change is done.
- Wear eye protection.
- Handle bulb by its base. Keep bulb oil free; wear gloves to avoid touching glass.
- Do not drop or scratch bulb. Keep moisture away.
- Place used bulb in the new bulb carton and dispose of properly. Keep out of reach of children.

TS36762.0000165-19-05SEP17

Change Front HID/LED Light Assembly

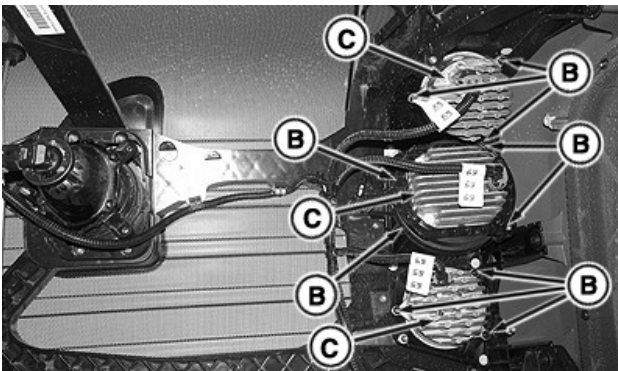
1. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.



RXA0134245—UN—31JUL13

Right-Hand Side Shown

2. Disconnect harness connector (A).



RXA0134248—UN—31JUL13

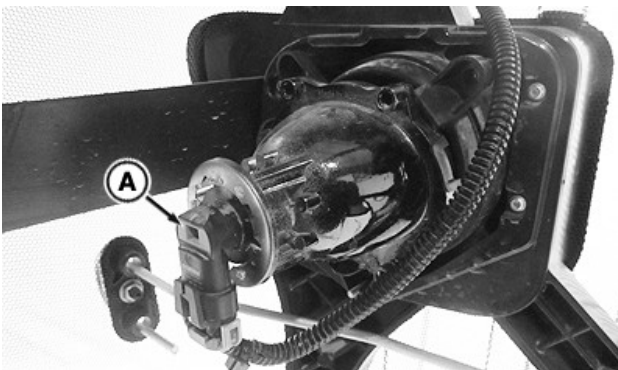
Right-Hand Side Shown

3. Remove screws (B) and light assembly (C).
4. Replace light assembly.
5. Install new light assembly in reverse order of removal.
6. Close and secure hood.

TS36762,0000166-19-05JUL17

Change Front Grille Halogen Light Bulbs

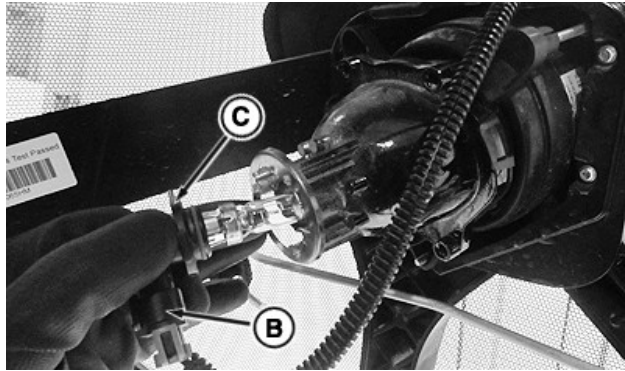
1. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.



RXA0134246—UN—31JUL13

Right-Hand Side Shown

2. Rotate halogen headlight (A) counterclockwise 1/4 turn and remove.



RXA0134247—UN—31JUL13

Right-Hand Side Shown

3. Disconnect wiring harness plug by lifting retaining tab (B).
4. Replace light bulb assembly (C).
5. Install new light bulb in reverse order of removal.
6. Close and secure hood.

TS36762,0000167-19-05JUL17

Adjust Front Grille Lights

Adjust front grill lights, as needed. Perform adjustments on each side of tractor.

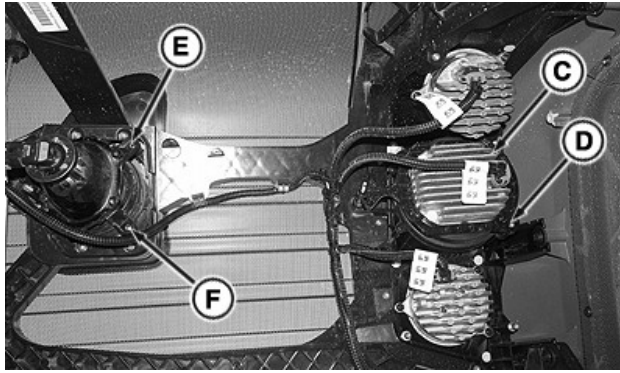
For High Beam Headlights:



RXA0134244—UN—31JUL13

Right-Hand Lights Shown

To lower high beam, turn high beam adjustment screw (A) counterclockwise.



RXA0134249—UN—31JUL13

Right-Hand Lights Shown

To raise and tilt in high beam, turn high beam adjustment screw (C) counterclockwise.

To raise and tilt out high beam, turn high beam adjustment screw (D) counterclockwise.

For Inner Hood Work Light:

To lower low beam headlight, turn low beam adjustment screw (B) counterclockwise.

To raise and tilt in low beam headlight, turn low beam adjustment screw (E) counterclockwise.

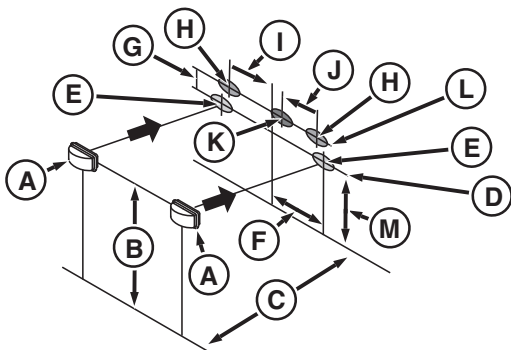
To raise and tilt out low beam headlight, turn low beam adjustment screw (F) counterclockwise.

TS36762,0000168-19-15NOV16

6. Calculate one-half distance determined in step 5.
7. Mark vertical line at distance calculated in step 6 from center of right-hand low beam center.
8. Distance (F) between center of road light low beam and center line should be 914 mm (36 in). Adjust as necessary, see Adjust Front Grille Lights in this section of this Operator's Manual.
9. Turn on road light high beams.
10. Adjust road light high beams so edge of bright area (L) is **at least** one tenth of distance (M) **above** road light low beam centers (E). Distance (G) is approximately 355 mm (14 in).
11. On wall, mark each road light high beam center (H), then mark a horizontal center line between center of road light high beams.
12. Distance (I) between center of road light high beams and center line should be 787 mm (31 in). Adjust as necessary, see Adjust Front Grille Lights in this section of this Operator's Manual.
13. Configure inner hood lights ON.
14. Turn on field lights. Inner hood light beam center (K) should be on horizontal line between centers of road light high beams. Adjust as necessary.
15. Distance (J) between inner hood light beam center (K) and light center line should be 635 mm (25 in). Adjust as necessary.

TS36762,0000169-19-05APR18

Adjust Headlights



RXA0161046—UN—11OCT17

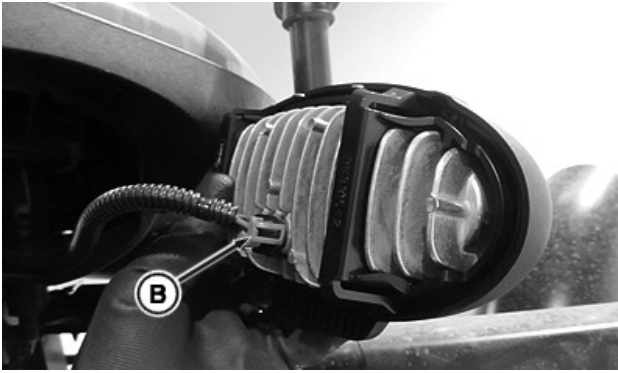
1. Park tractor on level surface with low beam road lights (A) 7.5 meters (25 ft) (C) from a straight wall. Tractor must be perpendicular to wall. Turn on low beam road lights.
2. Measure distance (B) from center of road light low beam lamps to ground.
3. Mark a horizontal line (D) on wall 0.7 times height (B).
4. On wall, mark each road light low beam center (E).
5. Determine total distance between centers of road light low beams.

Change Front, Side And Rear Cab Roof Light Bulb



RXA0134250—UN—31JUL13

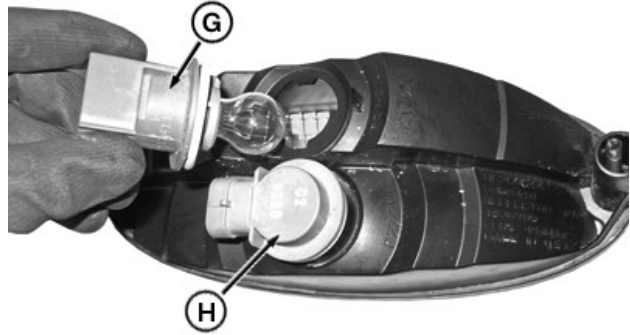
1. Push down light fixture latch tab (A). Remove fixture.



RXA0134251—UN—31JUL13

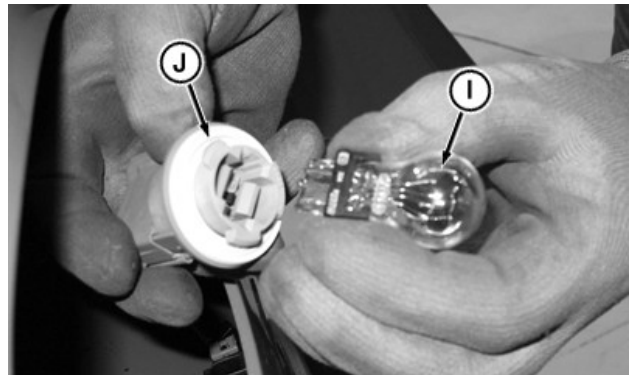
2. Disconnect harness connector (B) and replace light assembly.
3. Connect harness connector.
4. Insert fixture into cab roof until it seats and tab snaps into place.

TS36762,000016A-19-24OCT17



RXA0109544—UN—08OCT10

4. Rotate turn signal (H) or brake light bulb fixture (G) 1/4 turn counterclockwise and remove from housing.
5. Rotate brake light bulb fixture 1/4 turn counterclockwise and remove.



RXA0109551—UN—18AUG10

6. Pull bulb (I) out of fixture (J).
7. Install new bulb in fixture and turn fixture 1/4 turn clockwise to install.
8. Reinstall wiring harnesses.
9. Reinstall lens and screws.

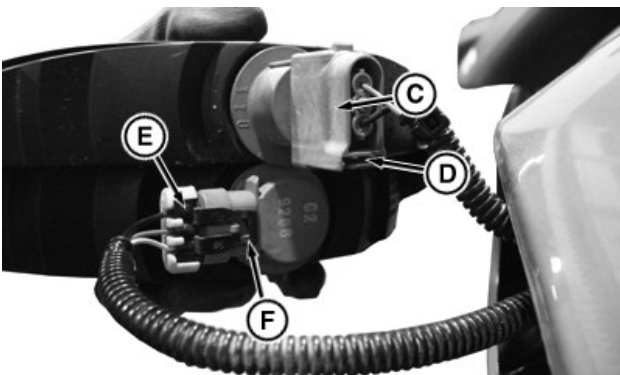
TS36762,000016B-19-24OCT17

Change Brake or Turn Signal Light Bulb



RXA0154536—UN—05OCT16

1. Remove screws (A) and combination tail and brake light lens (B).



RXA0109542—UN—18AUG10

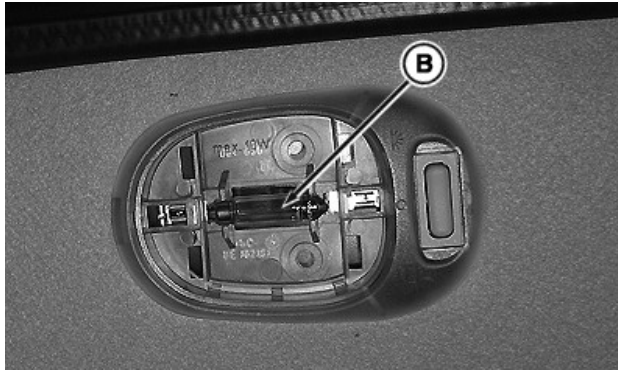
2. Press turn signal tab (D) and remove turn signal wiring harness (C).
3. Lift brake light tab (F) and remove brake light wiring harness (E).

Change Dome Light Bulb



RXA0099130—UN—19SEP08

1. Remove lens cover (A).



RXA0099128—UN—19SEP08

2. Grasp light bulb (B) firmly and pull straight down.
3. Gently push new bulb into fixture until it seats.
4. Reinstall cover.

TS36762,000016C-19-05JUL17

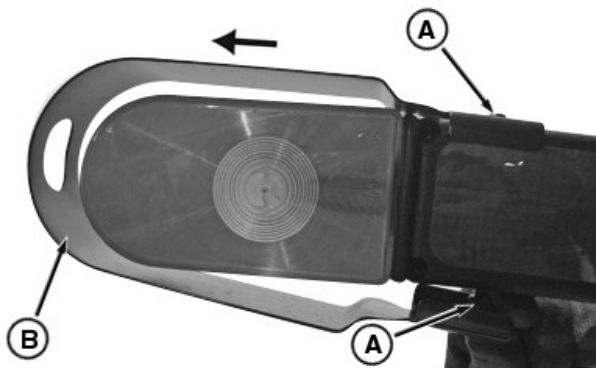


RXA0108613—UN—29JUL10

4. Twist old bulb (D) to remove.
5. Install new bulb.
6. Reassemble housing in reverse order of disassembly.

TS36762,000016F-19-05JUL17

Change Extremity Warning Light Bulb



RXA0108609—UN—29JUL10

1. Loosen screws (A).
2. Slide shield (B) away from lens cover to remove.



RXA0108611—UN—29JUL10

3. Turn lens cover (C) counterclockwise to access light bulb.

Troubleshooting - Procedures

Engine

Symptom	Problem	Solution
Engine hard to start or will not start	Fuel pump not operating properly	Turn key switch on and listen for pumping noise to make sure fuel pump is working
	Incorrect starting procedure	Review starting procedure
	Blown fuse	Replace fuse, see Load Center Fuses in Service - Electrical section of this Operator's Manual
	No fuel	Check fuel tank
	Air in fuel line	Bleed fuel line, turn key switch to RUN position for 60 seconds with engine off
	Cold weather	Use cold weather starting aids
	Slow starter speed	See Starter Turns Over Slowly in Electrical System Troubleshooting
	Crankcase oil too heavy	Use correct oil viscosity
	Incorrect type of fuel	Consult fuel supplier. Use correct fuel type for operating conditions
	Water, dirt, or air in fuel system	Drain, flush, fill, and bleed system
	Clogged fuel filter	Replace filter elements
	Dirty or faulty injectors	See your John Deere dealer
Engine knocks	Injection pump shutoff not reset	Turn key switch to OFF, then to ON
	Insufficient oil	Add oil
	During warm-up, pilot injection system will activate and deactivate depending on engine operating temperature	This is normal operation
	Low coolant temperature	Replace thermostats
Engine runs irregularly or stalls frequently	Engine overheating	See Engine Overheats in Engine Troubleshooting
	Low coolant temperature	Replace thermostats
	Clogged fuel filters	Replace filter elements
	Water, dirt, or air in fuel system	Drain, flush, fill, and bleed system
	Vent on fuel tank obstructed	Clean vent under rear cab panel

Symptom	Problem	Solution
	Dirty or faulty injectors	See your John Deere dealer
Below normal engine temperature	Defective thermostat	Replace thermostats
	Defective temperature gauge or sender	See your John Deere dealer
Throttle does not allow full engine rpm	IVT™/AutoPowr™ Auto Shift (or Load Control) may not be set properly	See IVT/AutoPowr Transmission section of this Operator's Manual
	Maximum Set Speed may be on and limiting max engine rpm	Check the settings for Maximum Set Speed in the CommandCenter™. Make sure full rpm has been selected on display
	Cold oil can limit engine speed to 1500 rpm	Warm up transmission-hydraulic oil See your John Deere dealer
Lack of power	Engine overloaded	Reduce load or shift to lower gear
	Low fast idle speed	Make sure Maximum Set Speed is set to MAX rpm
		Make sure IVT™/AutoPowr™ is set correctly
		See your John Deere dealer
	Intake air restriction	Service air cleaner
	Clogged fuel filters	Replace fuel filter elements
	Incorrect type of fuel	Use correct fuel
	Overheated engine	See Engine Overheats in Engine Troubleshooting
	Below normal engine temperature	Remove and check thermostat
	Incorrect valve clearance	See your John Deere dealer
	Dirty or faulty injectors	See your John Deere dealer
	Turbocharger not functioning	See your John Deere dealer
	Leaking exhaust manifold gasket	See your John Deere dealer
	Implement incorrectly adjusted	See implement operator's manual
	Restricted fuel inlet	Clean or replace fuel line

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Symptom	Problem	Solution
	Incorrect ballast	Adjust ballast to load, see Performance Ballasting section of this Operator's Manual
Low oil pressure	Low oil level	Add oil
	Incorrect type of oil	Drain, fill crankcase with correct quality and viscosity of oil
High oil consumption	Crankcase oil too light	Use correct viscosity oil
	Oil leaks	Check for leaks in lines, around gaskets and drain plug
	Defective turbocharger	See your John Deere dealer
	Restricted engine breather tube	Unclog engine breather tube
Engine emits smoke	Incorrect type of fuel	Use correct fuel
	Clogged or dirty air cleaner	Service air cleaner
	Engine overloaded	Reduce load or shift to a low gear
	Injection nozzles dirty	See your John Deere dealer
	Turbocharger not functioning	See your John Deere dealer
Engine overheats	Dirty radiator core, oil cooler, or grille screens	Remove all trash and clean coolers
	Engine overloaded	Shift to lower gear or reduce load
	Low engine oil level	Add oil as required
	Low coolant level	Fill de-aeration tank to correct level, check radiator, and hoses for loose connections or leaks
	Faulty radiator cap	Replace radiator cap
	Loose or defective fan belt	Check and replace belt as needed
	Cooling system needs flushing	Flush cooling system See your John Deere dealer
	Defective thermostat	Replace thermostat See your John Deere dealer
	Defective temperature gauge or sender	See your John Deere dealer

Symptom	Problem	Solution
High fuel consumption	Clogged or dirty air cleaner	Service air cleaner
	Engine overloaded	Reduce load or shift to lower gear
	Injection nozzles dirty	See your John Deere dealer
	Implement incorrectly adjusted	See implement operator's manual
	Excessive ballast	Adjust ballast to load, see Performance Ballasting section of this Operator's Manual

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Transmission

Symptom	Problem	Solution
Transmission oil overheats	Low oil supply	Fill system with correct oil
	Excessive oil supply	Remove oil as needed
	Oil cooler air passages clogged	Clean oil coolers
	Clogged transmission/hydraulic oil filter	Replace filter
IVT™/AutoPowr™ transmission external vent leaks oil	Clogged scavenge pump screen	Clean screen
Transmission warning displays	Diagnostic trouble code has been stored	Access PTI or PTQ codes in CommandCenter™ display. See Troubleshooting - Diagnostic Trouble Codes (DTC) section of this Operator's Manual
Low transmission oil pressure	Low oil supply	Fill system with correct oil
	Clogged transmission/hydraulic oil filter	Replace filter
Transmission shifts slowly and tractor steers hard	Cold oil	See Warm-Up Transmission in Transmission - General Information section of this Operator's Manual

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CommandCenter is a trademark of Deere & Company

Symptom	Problem	Solution
IVT™/AutoPowr™ or e23™ transmission starts out too fast/slow	No problem	Startup gear can be changed through the CommandCenter™ settings. See Adjust Set Speeds in IVT™/AutoPowr™ Transmission section of the Operator's Manual See Set Startup Gears in e23™ Transmission section of this Operator's Manual If problem persists, see your John Deere dealer

TS36762,0000276-19-25JUL18

Hydraulic System

Symptom	Problem	Solution
Entire hydraulic system fails to function	Low oil supply	Check sight glass and fill system with correct oil
	Clogged transmission-hydraulic filter	Replace filter
	Clogged hydraulic return screen	Clean screen
	Oil cooler air passages clogged	Clean oil cooler
	High-pressure internal leak	See your John Deere dealer
Hydraulic oil overheats	Low or high oil supply	Check sight glass and fill system with correct oil
	Oil cooler air passages clogged	Clean oil cooler
	Internal hydraulic leak	See your John Deere dealer
	Implement hydraulic load not matched to tractor or not properly routed back into tractor hydraulic system	See Hydraulic Connections section of this Operator's Manual
	Mid-mount valve (If Equipped) flow and detent settings incorrect	Adjust settings, see Selective Control Valves (SCV) section of this Operator's Manual
	Clogged transmission-hydraulic oil filter	Replace filter

TS36762,0000277-19-13DEC16

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Hitch

Symptom	Problem	Solution
Insufficient transport clearance	Center link too short	Adjust center link
	Center link in wrong position	Put center link of tractor in correct hole, see Front or Rear Hitch section of this Operator's Manual
	Lift links too short	Adjust lift links
	Implement not level	Level implement
	Implement not correctly adjusted	See implement operator's manual
	Upper height limit not correctly set	Adjust upper height limit in CommandCenter™
Hitch fails to follow lever	Malfunction in lever position sensor circuit or hitch position sensor	See your John Deere dealer
Poor position control	Load/depth mix control on wrong position	Adjust upper height limit in CommandCenter™
	System is reset	Enable system
	Malfunction in lever position sensor circuit or hitch position sensor	See your John Deere dealer
Hitch drops slowly	Hitch rate-of-drop not correctly set	Adjust rate-of-drop in CommandCenter™
Hitch fails to lift or lifts slowly	Excessive load on hitch	Reduce load
	Center link in wrong position	Put center link of tractor in correct hole, see Front or Rear Hitch section of this Operator's Manual
	Hitch valve leak	See your John Deere dealer
	Raise limit switch setting may be limiting lift	Check settings in CommandCenter™
Implement will not operate at desired depth	Lift links too short	Adjust lift links
	Lack of penetration	See implement operator's manual
	Draft sensor failed	See your John Deere dealer
Insufficient or no hitch response to draft load	Load/depth mix control in wrong position	Adjust load/depth mix in CommandCenter™
	System is reset	Enable system

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Symptom	Problem	Solution
	Rate-of-drop too slow	Adjust rate-of-drop in CommandCenter™
Hitch too responsive	Load/depth mix control not correctly set	Adjust load/depth mix in CommandCenter™
Hitch settles too fast after tractor is parked and engine shut off	Internal hydraulic leakage	See your John Deere dealer
Hitch will not move (controls not working, including rear raise/lower switches)	Blown fuse(s)	Replace fuse(s), see Load Center Fuses in Service - Electrical section of this Operator's Manual
External raise/lower switches will not move hitch	Failure of raise/lower switches, connector, or wiring harness	See your John Deere dealer
	Lever in transport lock	Move lever out of transport. Unlock hitch at CommandCenter™

KD34109,000074E-19-04APR18

Selective Control Valve (SCV)

Symptom	Problem	Solution
Remote cylinder will not lift load	Flow check	Cycle SCV levers
	Excessive load	Reduce load
	Hoses not completely installed	Attach hoses correctly
	Incorrect remote cylinder size	Use correct size cylinder
	SCV control lever lock engaged	Release SCV control lever lock
	Incorrect or damaged hose tips	Replace hose tips
Remote cylinder rate of travel too fast or too slow	Incorrect flow rate	Adjust flow rate on CommandCenter™
Direction of remote cylinder travel is reversed	Incorrect hose connections	Reverse hose connections
Hoses will not couple	Incorrect hose male connectors	Replace connectors with ISO standard connectors
Detent does not hold or releases too soon	Detent time set incorrectly	Set time correctly
	Pressure restriction with some implements	Reduce oil flow by changing metering valve setting
	Flow control or detent release setting incorrect	Adjust detent relief setting

Symptom	Problem	Solution
SCV lever does not release	Float is being "commanded"	Do not push lever down in forward position
	Lever mechanism failed	See your John Deere dealer
	Built in pressure leakage with some implements	Increase oil flow by changing metering valve setting, see implement operator's manual
	Flow control or detent release setting incorrect	Adjust detent relief setting
Implement does not operate or does not operate correctly	Incorrect hose connections	Reverse hose connections
		See your John Deere dealer

TS36762,0000279-19-06NOV17

TouchSet™ Depth Control

Symptom	Problem	Solution
Depth control does not function correctly	Implement transport lock-up valve closed	Open valve
	Cylinders not rephased (synchronized)	IMPORTANT: Completely bleed air from depth control system Rephase cylinders
	Machine operating at different depths	See implement operator's manual
	Cylinder leakage	Check for leakage Repair or replace cylinders; see your John Deere dealer
	Insufficient tractor hydraulic pressure	Check tractor hydraulic pressure; use correct size cylinders for tractor pressure
	Hydraulic hoses not connected correctly	Reconnect correctly

TS36762,000027A-19-09JAN17

Electrical System

Symptom	Problem	Solution
Voltage indicator displayed when there is low battery voltage (key ON and engine OFF)	Defective battery	Check electrolyte level and specific gravity
	Low charging voltage	See your John Deere dealer

Symptom	Problem	Solution
Voltage symbol displayed and service alert indicator flashing indicating low charging voltage (engine running)	High resistance in charging circuit	See your John Deere dealer
	Indicator malfunction	See your John Deere dealer
	Low engine speed	Increase speed
	Alternator belt slipping, alternator not charging	Check belt tension
	Defective battery	Check electrolyte level and specific gravity
	Defective alternator	See your John Deere dealer
Voltage symbol displayed and service alert indicators flashing indicating excessive charging voltage	Excessive electrical load	Decrease load
	Faulty connection to alternator	Check wiring connections
	Defective regulator	See your John Deere dealer
Chirping noise from side console	Noise is normal	Solid state electronic drivers are used instead of relays to control turn signal lights. Tractor warning system provides a turn signal indicator beep instead of relay clicking noise.
Batteries will not charge	Loose or corroded connections	Clean and tighten connections
	Sulfated or worn-out batteries	Check electrolyte level and specific gravity
	Loose or defective alternator belt	Adjust belt tension or replace belt
Starter inoperative	Transmission in gear	Place transmission in PARK
	Faulty neutral start switch or starter solenoid malfunction	See your John Deere dealer
	Loose or corroded connections	Clean and tighten loose connections
	Low battery output	See your John Deere dealer
	Blown fuse	Replace fuse, see Load Center Fuses in Service - Electrical section of this Operator's Manual
Starter turns over slowly	Low battery output	Check electrolyte level and specific gravity

Symptom	Problem	Solution
Light system does not function; rest of electrical system functions	Crankcase oil too heavy	Use correct viscosity oil
	Loose or corroded connections	Clean and tighten loose connections
	Blown fuse	Replace fuse, see Load Center Fuses in Service - Electrical section of this Operator's Manual
Entire electrical system does not function	Faulty battery connection	Clean and tighten connections
	Sulfated or worn out batteries	Check electrolyte level and specific gravity
	Blown master fuse	Replace master fuse, see Master Fuses in Service - Electrical section of this Operator's Manual
Blower malfunctioning	Blower does not work	Check for stored codes, total cab electrical load may be exceeding solid-state load center capacity
	Blown fuse	Replace fuse, see Load Center Fuses in Service - Electrical section of this Operator's Manual

TS36762,000027B-19-04APR18

Operator Enclosure

Symptom	Problem	Solution
Blower not keeping dust out of operator enclosure	Defective seal around filter element	Check seal condition
		Check filter for correct installation
	Defective filter	Replace filter
	Excessive air leak	Seal air leaks
	Blower air flow too low	See Blower Air Flow Too Low in Operator Enclosure Troubleshooting
Blower air flow too low	Clogged filter or air intake screen	Clean
	Heater core or evaporator core clogged	Clean
Heater will not shut off	Heater hoses connected incorrectly	See your John Deere dealer
Air conditioner not cooling	Low voltage	See your John Deere dealer
	Low refrigerant	See your John Deere dealer

Symptom	Problem	Solution
	Belt slipping	Check belt tension
	Heater on	Turn heater to off position.
	Compressor stuck	Rock compressor pulley back and forth
Intermittent cooling	Air restriction	Clean side screens, radiator and oil cooler/condenser
Water leaking from roof	Plugged air conditioning condensate drain hoses	Clean drain hoses
	Heater hoses leaking	Replace heater hoses
Seat suspension sticking	Foreign objects under seat	Keep area under seat completely clear
Seat suspension not working	Blown fuse	Replace fuse, see Load Center Fuses in Service - Electrical section of this Operator's Manual
Radio does not function	Blown fuse	Replace fuse, see Load Center Fuses in Service - Electrical section of this Operator's Manual

TS36762,000027C-19-04APR18

Tractor Operation

Symptom	Problem	Solution
Tractor bounces or jumps	Power hop/wheel hop	See Controlling Power Hop-MFWD Tractors Without Front Suspension in the Performance Ballasting section of this Operator's Manual
		Check weight split
		Check ballast
		Check inflation pressures
		See your John Deere dealer

TS36762,000027D-19-13DEC16

Steering System

Symptom	Problem	Solution
No steering	Transmission shift lever in PARK position	Shift lever into NEUTRAL position
	Plugged hydraulic steering filter	Replace steering filter

Symptom	Problem	Solution
	Loss of electrical power to steering controller	Check fuse F13, see Load Center Fuses in Service - Electrical section of this Operator's Manual See your John Deere dealer
	Other electrical or hydraulic malfunctions	Check vehicle monitor for warning codes, see Troubleshooting - Diagnostic Trouble Codes section of this Operator's Manual See your John Deere dealer
Will not turn as short as desired/ expected or difficult to turn under load	Implement causes side loading greater than steering system can overcome when attempting to turn.	Raise implement Slow down during turn or execute turn by doing a series of brief short turns Let drawbar swing Add ballast, see Performance Ballasting section of this Operator's Manual See Drawbar section of this Operator's Manual
	Electrical or hydraulic malfunction	Check vehicle monitor for warning codes, see Troubleshooting - Diagnostic Trouble Codes section of this Operator's Manual See your John Deere dealer
	Plugged transmission hydraulic filter	Replace transmission hydraulic filter
	Implement causing side load on tractor	Adjust implement to eliminate side draft Let drawbar swing Add ballast, see Performance Ballasting section of this Operator's Manual See Drawbar section of this Operator's Manual
	Steering wheel does not self center	See your John Deere dealer
Tractor drifts or pulls to one side	Implement causing side load on tractor	Adjust implement to eliminate side draft Let drawbar swing Add ballast, see Performance Ballasting section of this Operator's Manual See Drawbar section of this Operator's Manual
Will not turn as short as desired/ expected with no load	Electrical or hydraulic malfunction	Check vehicle monitor for warning codes, see Troubleshooting - Diagnostic Trouble Codes section of this Operator's Manual See your John Deere dealer

Symptom	Problem	Solution
	Attempting to turn while stopped (loose soil, heavy ballast); steering load exceeds system capacity	Maintain forward/reverse motion while turning Increase engine speed and/or hold steering wheel against stop for a couple of seconds to allow greater steering force
Will not turn as short as desired/expected (high gear, low engine speed)	Minimum turn radius is naturally greater in high gears and maximum steering pump flow is less at low engine speed	Downshift before turn See appropriate transmission section of this Operator's Manual

TS36762,000027F-19-13JUN17

Premium Radio

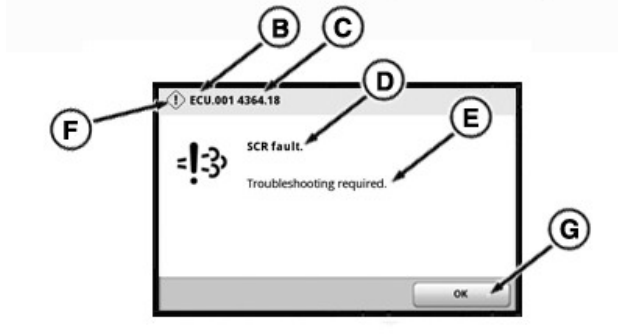
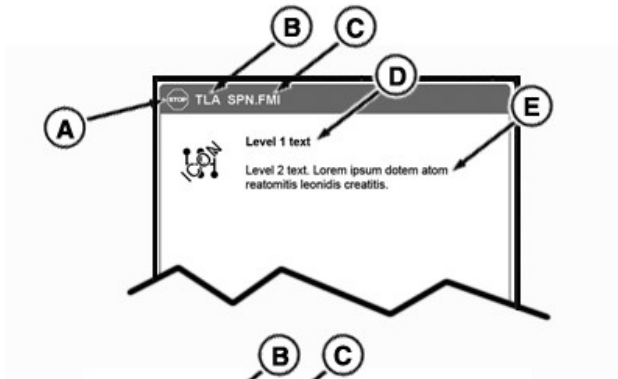
Symptom	Problem	Solution
"DEV ERR" displayed	No playable files on media	Change media
"BLOCKED" displayed	No audio in any source	Verify radio is installed in correct vehicle. Run engine for at least 5 minutes. Restart radio to resolve.
Radio display blank with radio on.	Display in DIM-OFF mode.	Change to DIM-ON mode in radio SETUP mode.

TS36762,0000280-19-25JUN18

Troubleshooting - Diagnostic Trouble Codes (DTC)

STOP and Service Alert Indicators

NOTE: All STOP and Service Alert Indicators are accompanied by an informative message, diagnostic trouble code, and/or fault description shown on CommandCenter™.



RXA0137743—UN—11DEC13

STOP Indicator (A): Light flashes and alarm sounds continuously. A serious malfunction has occurred, requiring immediate attention or the tractor will be damaged. Control unit (B), diagnostic trouble code (C), system (D) and solution (E) are identified on CommandCenter™. When control unit detects a malfunction or condition "out of range", a diagnostic trouble code containing the control unit followed by an industry standard number are displayed. Numbers to the left of the decimal indicate the malfunction and numbers to the right of decimal indicate the condition.

IMPORTANT: Engine will shut down automatically if STOP signal is received when operator is out of the seat for longer than 3 seconds and the transmission control is in PARK. CommandCenter™ display can be reset by cycling key switch.

If situation allows to stop operations immediately, reduce engine speed to idle, then shut down engine and turn key ON to observe CommandCenter™ display for problem identification and solution. It may be necessary to access the stored codes, see Using Diagnostics, Stored Codes and CAN Statistics. Correct problem before restarting.

Service Alert Indicator (F): Light flashes and alarm sounds five times indicating a performance or

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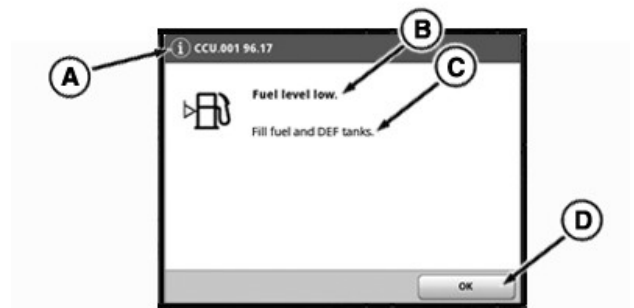
operational problem has been detected, which must be resolved as soon as possible. Some Service Alert Indicators can be "acknowledged" and cleared by pressing OK button (G) CommandCenter™ display. If condition still exists, diagnostic trouble code may reappear later. Continued operations can cause a Service Alert to escalate into a STOP indicator. If appropriate corrective action is not taken soon (serviced, repaired, operated in a different manner), a significant reduction in performance and/or damage to machine will occur.

When Service Alert Indicator is displayed, place tractor in park and shut off engine.

Follow solution on CommandCenter™ or if situation cannot be corrected contact your John Deere dealer.

TS36762,0000281-19-05JUL17

Information Indicator



RXA0154533—UN—05OCT16

In some situations, the Information (INFO) Indicator light comes on continuously and alarm sounds for 2 seconds, indicating a fault condition. CommandCenter™ display shows diagnostic trouble code (A) and fault description including system affected (B), and suggested problem solution (C). Follow problem solution. Tractor operations can continue without damage; but, performance of some functions may be degraded.

Operating in a different manner may correct and clear an out of range condition. Some alerts can be "acknowledged" and cleared by pressing OK button (D). If condition still exists after following solution or pressing OK button, alert may reappear later.

If situation cannot be corrected, see your John Deere dealer.

TS36762,0000282-19-25JUL17

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Access Diagnostic Trouble Codes

NOTE: If problem is not resolved after cycling power to tractor, or following solution on CommandCenter™ page, see your John Deere dealer.

Not all active DTC's are displayed. Follow steps to retrieve stored DTC's.



RXA0133360—UN—26JUL13

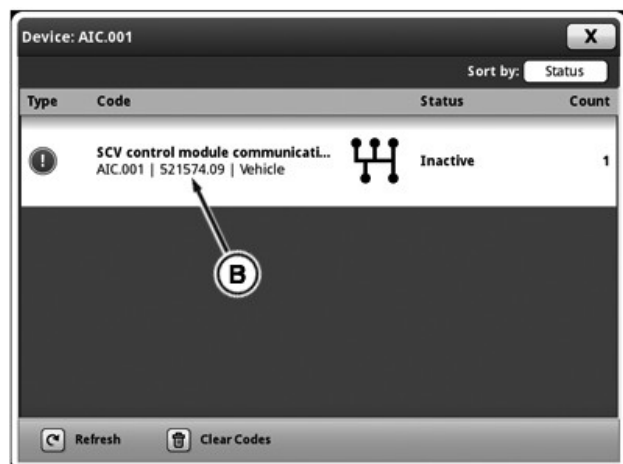
1. Select **Menu**.
2. Select **System** tab.
3. **Diagnostics Center** icon.
4. Select **Trouble Codes** tab.



RXA0133359—UN—26JUL13

Trouble Codes Page

5. Select control unit (A) desired.



RXA0133361—UN—26JUL13

6. Select diagnostic code (B) for code display.

TS36762,0000283-19-05APR18

Service - Storage

Place Tractor in Storage

IMPORTANT: If tractor will not be used for more than three months, the following recommendations for storage and removal from storage will minimize corrosion and deterioration.

NOTE: Whenever possible store tractor in a building or under a roof to avoid damage resulting from prolonged exposure to the elements.

1. Lower hitch.
2. Change engine oil and replace filter (if required).

NOTE: Do not add BioDiesel fuel if placing tractor in storage.

3. Drain fuel tank and add back approximately 19 L (5 gal) of fuel.

IMPORTANT: Final Tier 4/Stage V Engines Only: To determine tractor engine type, see Engine Serial Number in Identification Numbers section of this Operator's Manual. Long-term storage of Diesel Exhaust Fluid (DEF) in vehicle (over six months) is not recommended. If long-term storage is necessary, periodic testing of DEF is recommended to ensure that urea concentration does not fall out of specification.

4. Final Tier 4 and Stage V tractors: Diesel Exhaust Fluid (DEF) has a limited shelf life, but may be stored in vehicle for as long as six months, depending upon storage conditions, see Storing DEF in Diesel Exhaust Fluid (DEF) section of this Operator's Manual. If draining DEF tank is necessary, see Draining DEF Tank in Fuel, Lubricants, and Coolant section of this Operator's Manual for proper procedure.
5. Using plastic bags and either tape or tie-bands, seal air inlets and exhaust, crankcase vent tube, radiator overflow hose, and transmission-hydraulic system fill cap.

IMPORTANT: Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light goes out.

Battery disconnect switch without indicator light: Engine not equipped with SCR system. No waiting period is required before turning off switch.

NOTE: See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

6. If tractor is:

- Equipped with battery disconnect switch with indicator light, wait until indicator light has gone out. Then go to step 7.
- Not equipped with battery disconnect switch indicator light. Go to step 7.

7. Turn off battery disconnect switch.
8. Disconnect batteries. See Service Batteries and Connections in Service – Electrical section of this Operator's Manual.
9. Remove and store batteries in a cool, dry location. Keep batteries charged.¹
10. Coat all exposed (machined) metal surfaces such as lift cylinders and steering cylinder rods with light coat of grease.
11. Lubricate all grease fittings.

If tractor must be stored outside, follow these additional precautions.

1. Cover instrument panel, control levers, and seat with sheets of material or cardboard to protect against sun rays.
2. Thoroughly clean tractor, touching up any scratched or chipped painted surfaces.
3. Wax or cover entire tractor with waterproof material.
4. Raise tires or tracks off the ground and/or cover them to protect from heat and sunlight.

TS36762,0000284-19-17JUL18

Remove Tractor from Storage

1. Remove all coverings placed in or on tractor while preparing for storage.

IMPORTANT: To avoid engine damage, unseal crankcase vent tube.

2. Unseal all openings sealed during storage.
3. Remove any accumulated trash or debris, especially around engine and inside engine compartment.

IMPORTANT: If air conditioning compressor is locked up, engine operation with compressor clutch engaged may damage drive belt or compressor.

4. Rotate air conditioner compressor pulley several turns. If pulley does not turn freely, compressor components may be seized. See your John Deere dealer.

¹ Disconnect battery ground cable for short-term storage periods (20 to 90 days).

5. Check under and around tractor for any evidence of fluid leaks.

IMPORTANT: If transmission-hydraulic oil level was correct at time of storage, and there is no evidence of hydraulic oil leaks, there should be no concern starting tractor even if transmission-hydraulic oil sight glass level is low. Over a period of storage, hydraulic oil may drain into transmission, causing sight glass to read low even when adequate amount of oil is available. If there are indications of oil leaks, do not start tractor until the source has been determined and repairs made. If there are no leakage indications, but there is any doubt about oil level at time of storage, check hydraulic oil level as soon as possible after starting tractor.

6. Check transmission-hydraulic oil level. Add oil as required.
7. Check all other fluid levels. Fill as required.
8. Fill fuel tank.

IMPORTANT: To confirm which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

9. (Final Tier 4 and Stage V engine) If Diesel Exhaust Fluid (DEF) tank has not been drained, test urea concentration, see Testing DEF in Diesel Exhaust Fluid (DEF) section of this Operator's Manual. If concentration is not within specifications, drain and replace with new or good DEF. If DEF tank has been drained, fill tank. See Refilling DEF Tank in Diesel Exhaust Fluid (DEF) section of this Operator's Manual for appropriate procedures.
10. Inspect tires and check tire inflation pressures. See Front or Rear Wheels, Tires and Treads sections of this Operator's Manual.
11. Perform all Daily or 10 Hour service procedures and any other scheduled services as required. See 10 Hour or Daily Service in Service - Record Charts section of this Operator's Manual.
12. Install batteries and connect cables.
13. Turn battery disconnect switch on.
14. Turn key to RUN position for one minute to allow fuel system to prime.

NOTE: While operating engine at slow idle, visually check all instruments and indicators to ensure they function properly.

15. Start and operate engine at slow idle for several minutes.

16. Check tractor functions and systems, including air conditioning.

17. Warm up tractor before putting tractor under load.

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Paint Finish Care

IMPORTANT: Never use strong soaps, chemical detergents, or cleaning agents containing acids, caustics, or abrasives. It is best to use commercially available car wash (non-detergent) products which will not remove protective wax, which may be applied to the paint finish.

- Wash tractor regularly, particularly if it has been exposed to herbicides, pesticides, road salt, or other chemical agents.
- Never wash tractor in direct sunlight.
- All cleaning agents should be rinsed away promptly and not be allowed to dry on painted surface.
- Waxing tractor occasionally is recommended to remove residue from and further protect paint finish. Never use waxes containing abrasive compounds.
- Inspect paint surface during washing or waxing for chips and scratches. Repaint any areas where paint has been damaged.

Your John Deere dealer has a full line of cleaners, waxes, and touch-up paints to help enhance the paint finishes and which are compatible with your equipment.

TS36762,0000286-19-22JUN17

Specifications

Engine

	7210R	7230R	7250R	7270R	7290R	7310R
POWER						
Rated Engine power PS ^a (hp ISO) at 2100 engine rpm (97/68/EC) ^b	154 kW (210 hp)	169 kW (230 hp)	184 kW (250 hp)	199 kW (270 hp)	213 kW (290 hp)	228 kW (310 hp)
Rated Engine power PS ^a (hp ISO) at 2100 engine rpm (ECE-R24)	148 kW (202 hp)	162 kW (221 hp)	177 kW (240 hp)	191 kW (259 hp)	205 kW (278 hp)	219 kW (298 hp)
Rated PTO power (hp SAE) at rated engine speed (2100 erpm) ^{cd}	127 kW (170 hp)	141 kW (189 hp)	153 kW (205 hp)	167 kW (224 hp)	180 kW (242 hp)	194 kW (260 hp)
Rated Speed (rpm)	2100					
Constant Power Range (rpm)	1550 - 2100					
Intelligent Power Management (IPM)	Optional (30 hp)					
Manufacturer	John Deere PowerTech™ PVS (B20 Diesel Compatible) 6.8 L	John Deere PowerTech™ PSS (B20 Diesel Compatible) 6.8 L			John Deere PowerTech™ PSS (B20 Diesel Compatible) 9.0 L	
Aspiration	Single turbocharger, variable geometry turbo	Dual turbochargers, variable geometry turbo with fixed geometry turbo in series				
Compression Ratio	17.2:1	16.0:1				
Displacement	6.8 L (415 in ³)				9.0 L (549 in ³)	
Bore and Stroke	106 x 127 mm (4.19 x 5.0 in)				118.4 x 136 mm (4.66 x 5.35 in)	
Filter, Engine Air	Dual stage					
Type	Diesel, in-line, 6-cylinder, wet-sleeve cylinder liners with 4 valves-in-head					
Lubrication	Full-pressure, full-flow filtration with bypass					
Filter, Oil	Replaceable cartridge-style oil filter					
FUEL SYSTEM (Electronically controlled, high-pressure common rail with electric fuel transfer pump (self-priming))						
Filter System	Two-stage with water separator and service indicator light					
Filter, Primary	10-micron replaceable cartridge with water indication sensor and drain					
Filter, Secondary	2-micron spin-on element					

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^aGerman term for horse power in which one PS is equivalent to .9863 horse power

^b97/68/EC power refers to average (50% MOE) net brake power measured and corrected for ambient conditions according to the EC emissions directive. It is equivalent to internal Deere Standard RES10080, and SAE Standards J1349, J1995.

^cPTO Power for IVT models. PST models will be slightly higher. Does not include optional equipment losses.

^d80% Factory Observed MOE value.

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Capacities

	7210R	7230R	7250R	7270R	7290R	7310R
FUEL TANK						
e23™						
G48 Tires	465 L (123 gal)					
G49 Tires	—		488 L (129 gal)			
IVT™/AutoPowr™						
G47/G48 Tires	520 L (137 gal)					
G49 Tires	—		543 L (143 gal)			
DEF Tank	23 L (6 gal)					
Cooling System	39.5 L (41.75 qt)				44.5 L (47 qt)	

Specifications

	7210R	7230R	7250R	7270R	7290R	7310R
Crankcase, including filter	26 L (27.4 qt)				23 L (24.3 qt)	
TRANSMISSION-HYDRAULIC SYSTEM						
e23™				160 L (42.3 gal) ^a		
IVT™/AutoPowr™				160 L (42.3 gal) ^a		
Front PTO Oil				4.0 L (4.25 qt)		
TLS™ Plus Axle						
With Differential Lock				10.8 L (2.8 gal)		
With Limited Slip				14.4 L (3.8 gal)		
MFWD Axle						
1150	14.4 L (3.8 gal)	—				
1300	—	14.4 L (3.8 gal)				
WHEEL HUBS (Each)						
Without Brakes				3.8 L (4 qt)		
With Brakes				3.9 L (4.1 qt)		

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

TLS is a trademark of Deere & Company

^aActual volume may vary depending on additional SCV's and tractor options.

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Hydraulic

	7210R	7230R	7250R	7270R	7290R	7310R
Type (Closed-center, pressure/flow compensated)						
Selective Control Valves	Standard — 3, 4; Optional — 5, 6					
Main Pump Displacement	Standard — 63 cc; Optional — 85 cc					
Maximum Pressure	20400 ± 300 kPa (2958 ± 43.5 psi)					
Rated Flow						
63 cc Pump	162 L/min (43 gpm)					
85 cc Pump	Optional — 223.3 L/min (59 gpm)					
Available Flow						
At One SCV	132 L/min (35 gpm)					
At Single Front SCV	126 L/min (33 gpm)					
Take-Out Oil Capacity						
e23™	65 or 85 L (17.2 or 22.5 gal) ^a					
IVT™/AutoPowr™	65 or 85 L (17.2 or 22.5 gal) ^a					

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

^aWith auxiliary reservoir

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Transmission and Drive Train

	7210R	7230R	7250R	7270R	7290R	7310R
TRANSMISSION						
e23™ (23F/11R)						
40 km/h (24.8 mph)				Standard		
50 km/h (31.1 mph)				Optional		
IVT™/AutoPowr™						
0.050-42 km/h (0.030-26 mph)				Optional		
0.050-50 km/h (0.030-31 mph)				Optional		
REAR AXLES						
Diameter: 110 mm (4.34 in)						
Length: 2550 mm (100.4 in)	Standard		—			
Length: 3012 mm (118.5 in)	Optional		—			
Diameter: 120 mm (4.72 in)						
Length: 2550 mm (100.4 in)	—		Standard			
Length: 3012 mm (118.5 in)	—		Optional			
REAR WHEEL EQUIPMENT						
Group 47 (Singles and duals)	Optional				—	
Group 48 (Singles and duals)	Optional					
Group 49 (Singles and duals)	—		Optional			
FRONT AXLES						
MFWD (Tread range 1524 to 2235 mm (60 to 88 in))						
1150	Standard		—			
1300	—		Standard			
TLST™ (Tread range 1524 to 2235 mm (60 to 88 in))	Optional					
TLST™ with front brakes						
40 km/h				Optional		
50 km/h				Optional		
DIFFERENTIAL LOCK - REAR AXLE						
Full-locking electrohydraulic	Standard					
DIFFERENTIAL LOCK - FRONT AXLE						
1150 MFWD	Limited Slip		—			
1300 MFWD	—		Limited Slip			
TLST™	Limited Slip					
TLST™ with front brakes	Full-locking electrohydraulic (actuated at same time as rear differential-lock)					
STEERING (Tilt-telescope with memory)						
Hydrostatic Power	Standard — Load-sensing, hydrostatic, flow metering with a 406 mm diameter steering wheel					
ActiveCommand Steering (ACS)™ with electric pump back-up	Optional — Variable ratio 15:1 to 23:1 (3.1 to 5.0 turns lock-to-lock) with Stability Augmentation and passive tactile feedback (345 mm diameter steering wheel)					
BRAKES	Hydraulically-operated wet-disk					

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IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

TLST is a trademark of Deere & Company

ActiveCommand Steering (ACS) is a trademark of Deere & Company

Hitch, Drawbar, and PTO

	7210R	7230R	7250R	7270R	7290R	7310R
3-POINT HITCH: Rear (Electrohydraulic sensing)						
Category 3/3N with Quick-Hitch						
Lift Capacity ^a : 5443 kg (12000 lb)	Standard		—			
Lift Capacity ^a : 6894 kg (15200 lb)	Optional		Standard			
Lift Capacity ^a : 7847 kg (17300 lb)	—		Optional ^b			
Category 3/3N with Hook Ends ^c						
Lift Capacity ^a : 5443 kg (12000 lb) ^d	Standard		—			
Lift Capacity ^a : 6894 kg (15200 lb) ^e	Optional		Standard			
Lift Capacity ^a : 7847 kg (17300 lb) ^f	—		Optional ^b			
3-POINT HITCH: Front						
Category 3N						
Lift Capacity ^a : 3800 kg (8377 lb) ^g	Standard ^h					
DRAWBAR						
Category 3 - Maximum vertical load ⁱ : 1837-2700 kg (4050-6000 lb)	Standard					
Category 3 HD - Maximum vertical load: 4536 kg (10000 lb)	Optional					
3-in-1 Hitch Rails, Wagon Hitch, Ball Hitch, Piton Hitch	Optional ^j					
PTO: Rear (Independent)						
1-3/4 in, 20 spline, 1000 rpm	Standard					
1-3/4 in, 20 spline, 1000 rpm with 1-3/8 in 540/1000 rpm	Optional					
1-3/4 in, 20 spline, 1000 rpm with 1-3/8 in 540/1000/1000E rpm	Optional					
1-3/4 in, 20 spline, 1000 rpm with 1-3/8 in 540/540E/1000 rpm	Optional					
PTO Speed @ Engine rpm	(540/1000 PTO rpm @ 1950 engine rpm) (540E/1000E PTO rpm @ 1750 engine rpm)					
PTO: Front						
1-3/8 in, 6-spline, 1000 rpm ^k	Optional ^l					
1-3/8 in, 21-spline, 1000 rpm ^k	Optional					
1-3/4 in, 20-spline, 1000 rpm ^l	Optional					
PTO Speed @ Engine rpm (1:2 ratio)	1000 PTO rpm @ 1940 rpm					
PTO Power (SAE hp)	175 hp (130 kW) maximum output					

^aLift capacity per OECD measured 24 inch (610 mm) behind the coupler.^bRequires 120 mm diameter axle^cAvailability dependent upon location^dMax lift capacity is 7300 kg (16094 lb) measured 0 mm (0 in) behind the draft link hooks.^eMax lift capacity is 9208 kg (20300 lb) measured 0 mm (0 in) behind the draft link hooks.^fMax lift capacity is 10206 kg (22500 lb) measured 0 mm (0 in) behind the draft link hooks.^gMax lift capacity is 5200 kg (11464 lb) measured 0 mm (0 in) behind the draft link hooks.^hGround-engaging requires premium front hitchⁱDependent on drawbar position^jAvailability dependent upon destination^kClockwise when facing front PTO^lCounter-clockwise when facing front PTO

Electrical System

	7210R	7230R	7250R	7270R	7290R	7310R
ELECTRICAL SYSTEM (two batteries in parallel):						
Alternator/Battery	200 amps / 12 volt (240 amps/12 Volt-Optional)					
Total cold cranking amps	1850 (2-925 CCA Group 31 batteries)					

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Other Equipment

AutoTrac™ Ready	Standard
Modular Telematics Gateway (MTG)	Available with JDLink™ hardware, activations, and Ethernet Harness ^a
Service ADVISOR™ Remote	Available with JDLink™ hardware and activations
CommandCenter™ Video with 4200 Processor	Single video input (Tyco Connector PN 776536-1) for camera using PAL or NTSC signal. Integrated behind rear cab cover. Camera and extension harness available through parts.
CommandCenter™ Video with 4600 Processor	Four video inputs (Tyco Connector PN 776536-1) for camera using PAL or NTSC signal. Integrated behind rear cab cover. Camera and extension harness available through parts.

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JDLink is a trademark of Deere & Company

Service ADVISOR is a trademark of Deere & Company

CommandCenter is a trademark of Deere & Company

^aAvailability dependent upon destination

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Tractor Load/Weights

Maximum Static Vertical Load

	7210R	7230R	7250R	7270R	7290R	7310R
Category 3 Drawbar	1837 kg (4050 lb) ^a ; 2131 kg (4700 lb) ^b ; 2766 kg (6100 lb) ^c					
Category 3 Heavy Duty Drawbar	2994 kg (6600 lb) ^a ; 3493 kg (7700 lb) ^b ; 4536 kg (10000 lb) ^c					
Front MFWD Axle	5500 kg (12125 lb)	6500 kg (14330 lb)				

^aExtended position

^bMedium position

^cFully-retracted

Average Standard Weight

	7210R	7230R	7250R	7270R	7290R	7310R
AVERAGE STANDARD WEIGHT^a						
e23™, TLS™, one pair 450 lb inner weights, front weight support, category 3 hitch with quick-hitch, 480/80R50 rear duals, 380/80R38 front, shipping fuel/DEF	11576 kg (25521 lb)		11674 kg (25738 lb)		12005 kg (26466 lb)	

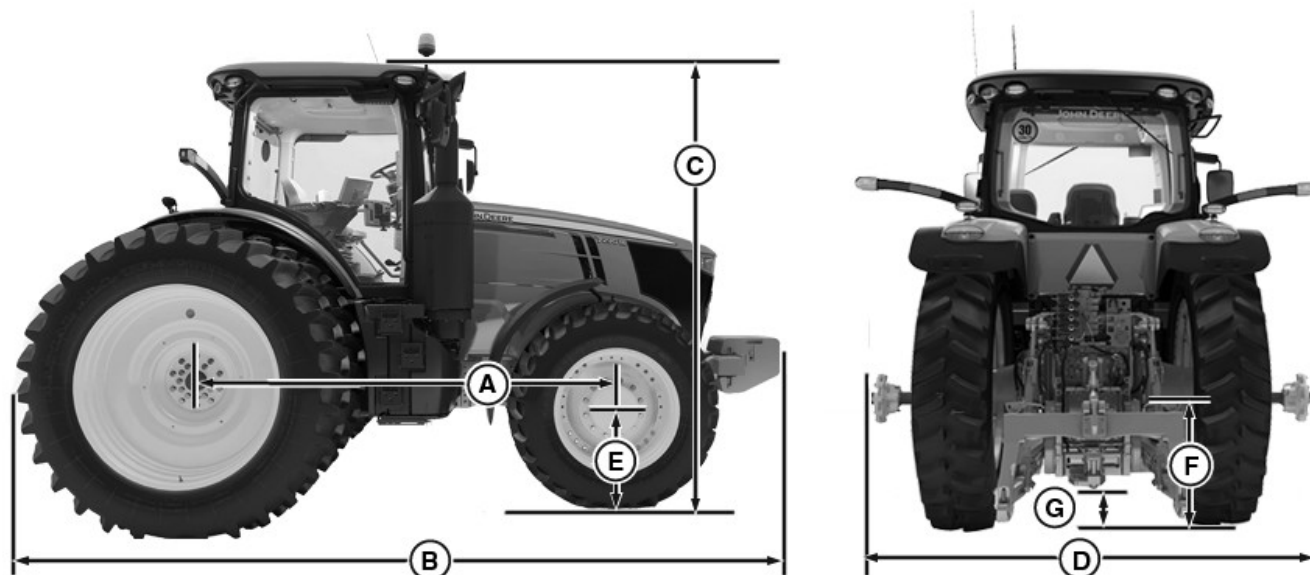
e23 is a trademark of Deere & Company

TLS is a trademark of Deere & Company

^aLess front weights, with shipping fuel

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Overall Dimensions



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	7210R	7230R	7250R	7270R	7290R	7310R
A - WHEELBASE						
MFWD Axles	2925 mm (115 in)					
B - OVERALL LENGTH						
Including rear hitch and front weight support (with no front weights)	5520 mm (217 in)			5540 mm (218 in)		
Including hitch, drawbar, and front weight support (with no front weights)	5520 mm (217 in)			5540 mm (218 in)		
Including hitch, drawbar, and front weight support (with front weights)	5885 mm (232 in)			5905 mm (232.5 in)		
C - OVERALL HEIGHT (Top of Cab)						
Group 47 Rear Tires	3245 mm (128 in)					
Group 48 Rear Tires	3357 mm (132 in)					
Group 49 Rear Tires	—			3446 mm (136 in)		
REAR AXLE DIAMETER	—		110 mm (4.3 in) or 120 mm (4.7 in)			
D - WIDTH (Axle Length)						
Short Axle [110 mm (4.33 in) and 120 mm (4.72 in) Diameter]	2550 mm (100 in)					
Extra Long [110 mm (4.33 in) and 120 mm (4.72 in) Diameter]	3012 mm (119 in)					
E - CROP CLEARANCE						
MFWD With Group 42 Front Tires	612 mm (24 in)					
MFWD With Group 43 Front Tires	634 mm (25 in)					
MFWD With Group 44 Front Tires	—			668 mm (26 in)		
F - CROP CLEARANCE (Rear Axle Housing)						
Group 47 Rear Tires	575 mm (23 in) ^a					
Group 48 Rear Tires	627 mm (25 in) ^a					

Specifications

	7210R	7230R	7250R	7270R	7290R	7310R
Group 49 Rear Tires	—			673 mm (27 in)		
G - DRAWBAR CLEARANCE						
Group 47 Rear Tires	352 mm (14 in)					
Group 48 Rear Tires	420 mm (17 in)					
Group 49 Rear Tires	—			463 mm (18 in)		
GROUND CLEARANCE (MFWD/TLS™ front axle, off-center, assuming 30 in rows)						
Group 42 tires	612 mm (24.1 in)					
Group 43 tires (420/85R34)	634 mm (25.0 in)					
Group 44 tires (420/85R38)	668 mm (26.3 in)					
TURNING RADIUS (MFWD front axle without oscillations stops, centerline of outside front tire, at 60 in treads)						
420/90R30	7.0 m (22.9 ft) @31° turn angle					
380/85R34	6.5 m (21.3 ft) @34° turn angle					
420/90R30	5.2 m (17 ft) @47° turn angle					

TLS is a trademark of Deere & Company

^aMFWD Front Axle

KT81203,000057E-19-16MAY17

Ground Speeds - e23™ Transmission

Ground speeds are at rated engine speed of 2100 rpm

(unless otherwise noted) using maximum rolling circumference.

Ground Speeds - e23™ Transmission - 7210R, 7230R

Tire Group	47		48	
Maximum Rolling Circumference mm (in)	5850 (230)		6164 (243)	
Maximum Ground Speed km/h (mph)	40 (24.8)	50 (31)	40 (24.8)	50 (31)
Gear	km/h (mph)		km/h (mph)	
1	2.4 (1.5)		2.5 (1.5)	
2	2.7 (1.7)		2.9 (1.8)	
3	3.1 (2.0)		3.3 (2.1)	
4	3.6 (2.3)		3.8 (2.4)	
5	4.2 (2.6)		4.4 (2.7)	
6	4.8 (3.0)		5.1 (3.2)	
7	5.5 (3.4)		5.8 (3.6)	
8	6.3 (3.9)		6.6 (4.1)	
9	7.3 (4.5)		7.7 (4.8)	
10	8.4 (5.2)		8.9 (5.5)	
11	9.7 (6.0)		10.2 (6.4)	
12	11.2 (6.9)		11.8 (7.3)	
13	12.9 (8.0)		13.6 (8.5)	
14	14.8 (9.2)		15.6 (9.7)	
15	17.1 (10.6)		18.0 (11.2)	
16	19.8 (12.3)		20.9 (13.0)	
17	22.9 (14.2)		24.1 (15.0)	
18	26.4 (16.4)		27.9 (17.3)	
19	30.5 (19.0)		32.2 (20.0)	
20	35.1 (21.8)		37.0 (23.0)	

Specifications

Tire Group	47		48	
Maximum Rolling Circumference mm (in)	5850 (230)		6164 (243)	
Maximum Ground Speed km/h (mph)	40 (24.8)	50 (31)	40 (24.8)	50 (31)
Gear	km/h (mph)		km/h (mph)	
21	40.0 (24.9) @ 2070 rpm	40.6 (25.2)	40.0 (24.9) @ 1965 rpm	42.8 (26.6)
22	40.0 (24.9) @ 1810 rpm	46.5 (28.9)	40.0 (24.9) @ 1715 rpm	49.0 (30.4)
23	40.0 (24.9) @ 1565 rpm	50.0 (31.1) @ 1955 rpm	40.0 (24.9) @ 1485 rpm	50.0 (31.1) @ 1855 rpm
R1	2.2 (1.4)		2.3 (1.4)	
R2	2.9 (1.8)		3.1 (1.9)	
R3	3.9 (2.4)		4.1 (2.6)	
R4	5.2 (3.2)		5.4 (3.4)	
R5	5.9 (3.7)		6.2 (3.9)	
R6	7.9 (4.9)		8.3 (5.2)	
R7	10.5 (6.5)		11.0 (6.8)	
R8	13.8 (8.6)		14.6 (9.0)	
R9	18.5 (11.5)		19.5 (12.1)	
R10	24.7 (15.4)		26.1 (16.2)	
R11	30.0 (18.6) @ 1915 rpm		30.0 (18.6) @ 1820 rpm	

Ground Speeds - e23™ Transmission - 7250R, 7270R, 7290R, and 7310R

Tire Group	47		48		49	
Maximum Rolling Circumference mm (in)	5850 (230)		6164 (243)		6495 (256)	
Maximum Ground Speed km/h (mph)	40 (24.8)	50 (31)	40 (24.8)	50 (31)	40 (24.8)	50 (31)
Gear	km/h (mph)		km/h (mph)		km/h (mph)	
1	2.3 (1.4)		2.4 (1.5)		2.6 (1.6)	
2	2.7 (1.7)		2.8 (1.7)		2.9 (1.8)	
3	3.1 (1.9)		3.2 (2.0)		3.4 (2.1)	
4	3.5 (2.2)		3.7 (2.3)		3.9 (2.4)	
5	4.1 (2.5)		4.3 (2.7)		4.5 (2.8)	
6	4.7 (2.9)		5.0 (3.1)		5.2 (3.2)	
7	5.4 (3.3)		5.7 (3.5)		6.0 (3.7)	
8	6.2 (3.8)		6.5 (4.0)		6.8 (4.3)	
9	7.1 (4.4)		7.5 (4.7)		7.9 (4.9)	
10	8.2 (5.1)		8.7 (5.4)		9.1 (5.7)	
11	9.5 (5.9)		10.0 (6.2)		10.5 (6.6)	
12	10.9 (6.8)		11.5 (7.2)		12.1 (7.5)	
13	12.6 (7.8)		13.3 (8.3)		14.0 (8.7)	
14	14.4 (9.0)		15.2 (9.5)		16.0 (10.0)	
15	16.7 (10.4)		17.6 (10.9)		18.5 (11.5)	
16	19.4 (12.0)		20.4 (12.7)		21.5 (13.4)	
17	22.4 (13.9)		23.6 (14.6)		24.8 (15.4)	
18	25.8 (16.1)		27.2 (16.9)		28.7 (17.8)	
19	29.8 (18.5)		31.4 (19.5)		33.1 (20.6)	
20	34.3 (21.3)		36.2 (22.5)		38.1 (23.7)	

Specifications

Tire Group	47		48		49	
Maximum Rolling Circumference mm (in)	5850 (230)		6164 (243)		6495 (256)	
Maximum Ground Speed km/h (mph)	40 (24.8)	50 (31)	40 (24.8)	50 (31)	40 (24.8)	50 (31)
Gear	km/h (mph)		km/h (mph)		km/h (mph)	
21	39.7 (24.6)		40.0 (24.9) @ 2010 rpm	41.8 (26.0)	40.0 (24.9) @ 1905 rpm	44.0 (27.4)
22	40.0 (24.9) @ 1850 rpm	45.4 (28.2)	40.0 (24.9) @ 1755 rpm	47.8 (29.7)	40.0 (24.9) @ 1665 rpm	50.0 (31.1) @ 2085 rpm
23	40.0 (24.9) @ 1605 rpm	50.0 (31.1) @ 2005 rpm	40.0 (24.9) @ 1520 rpm	50.0 (31.1) @ 1900 rpm	40.0 (24.9) @ 1445 rpm	50.0 (33.1) @ 1805 rpm
R1	2.2 (1.3)		2.3 (1.4)		2.4 (1.5)	
R2	2.9 (1.8)		3.0 (1.9)		3.2 (2.0)	
R3	3.8 (2.4)		4.0 (2.5)		4.2 (2.6)	
R4	5.0 (3.1)		5.3 (3.3)		5.6 (3.5)	
R5	5.8 (3.6)		6.1 (3.8)		6.4 (4.0)	
R6	7.7 (4.8)		8.1 (5.0)		8.5 (5.3)	
R7	10.2 (6.3)		10.8 (6.7)		11.3 (7.0)	
R8	13.5 (8.4)		14.2 (8.8)		15.0 (9.3)	
R9	18.1 (11.3)		19.1 (11.9)		20.1 (12.5)	
R10	24.2 (15.0)		25.5 (15.8)		26.8 (16.7)	
R11	30.0 (18.6) @ 1965 rpm		30.0 (18.6) @ 1865 rpm		30.0 (18.6) @ 1765 rpm	

TS36762,0000290-19-25JUL18

Ground Speeds - IVT™/AutoPowr™ Transmission

Ground speed is infinitely variable from 20 km/h (12 mph) in reverse to 40 or 50 km/h (24.8 or 31 mph) in forward.

The chart lists minimum engine speed needed to maintain 40 or 50 km/h (24.8 or 31 mph) ground speed using rolling circumference shown. Transmission ratios up to give top speed until engine speed drops below rpm listed.

For example, in Auto mode at full throttle with group 48

tires at 50 km/h (31 mph) ground speeds, if load pulls engine rpm down to 1703 rpm, ground speed will be 50 km/h (31 mph). If the load pulls engine rpm below 1703 rpm, ground speed will decrease.

In manual mode at full throttle, ground speed would also be 50 km/h (31 mph). The transmission will ratio back to give a top speed of 50 km/h (31 mph).

NOTE: Actual rpm may vary from those listed.

Tire sizes used are group nominal. Actual tires sizes can vary up to 2%.

Ground Speeds - IVT™/AutoPowr™ Transmission - 7230R

Tire Group	47		48	
Maximum Rolling Circumference mm (in)	5850 (230)		6164 (243)	
Maximum Ground Speed km/h (mph)	40 (24.8)	1402 rpm ^a	1331 rpm ^a	
	50 (31)	1753 rpm ^a	1664 rpm ^a	

^aMinimum engine speed

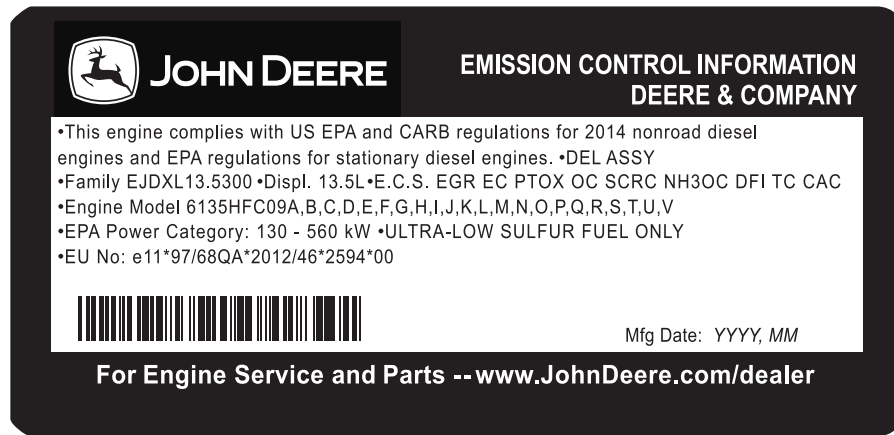
Ground Speeds - IVT™/AutoPowr™ Transmission - 7250R, 7270R, 7290R, and 7310R

Tire Group		47	48	49
Maximum Rolling Circumference mm (in)		5850 (230)	6164 (243)	6497 (256)
Maximum Ground Speed km/h (mph)	40 (24.8)	1436 rpm ^a	1363 rpm ^a	1293 rpm ^a
	50 (31)	1795 rpm ^a	1703 rpm ^a	1616 rpm ^a

^aMinimum engine speed

TS36762,0000291-19-24JUL18

Emissions Control System Certification Label



Engine Emissions Label

RG24291—UN—18SEP13

CAUTION: Statutes providing severe penalties for tampering with emissions controls may apply to the user or dealer.

The emissions warranty applies to those engines marketed by John Deere that have been certified by the United States Environmental Protection Agency (EPA) and/or California Air Resources Board (CARB); and used in the United States and Canada in Non-road equipment. The presence of an emissions label like the one shown signifies that the engine has been certified with the EPA and/or CARB. The EPA and CARB warranties only apply to new engines having the certification label affixed to the engine and sold as stated above in the geographic areas. The presence of an EU number signifies that the engine has been certified with the European Union countries per Directive 97/68/EC. The EPA and/or CARB emissions warranties do not apply to the EU countries.

The emissions label has applicable US EPA and/or CARB regulatory year. The regulatory year determines which warranty statement is applicable to engine. See “EPA Non-road Emissions Control Warranty Statement—Compression Ignition” and “CARB Non-road Emissions Control Warranty Statement—Compression Ignition”. For additional regulatory year warranty statements, see www.JohnDeere.com or contact the nearest John Deere service dealer for assistance.

Emission Control System(s) Laws

The U.S. EPA and California ARB prohibit the removal or rendering inoperative of any device or element of design installed on or in engines/equipment in compliance with applicable emission regulations prior to or after the sale and delivery of the engines/equipment to the ultimate purchaser.

DX,EMISSIONS,LABEL-19-01AUG14

EPA Non-road Emissions Control Warranty Statement—Compression Ignition



JOHN DEERE

DXLOGOV1—UN—28APR09

U.S. AND CANADA EMISSION CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emissions Control Information" label located on the engine. If the engine is operated in the United States or Canada and the Emissions Control information label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine conforms to US EPA nonroad compression-ignition regulations", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines", or "This engine conforms to US EPA and California nonroad compression-ignition emission regulations", also refer to the "California Emission Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emissions-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

JOHN DEERE'S WARRANTY RESPONSIBILITY

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine including all parts of its emission-control system was designed, built and equipped so as to conform at the time of the sale with Section 213 of the Clean Air Act and is free from defects in materials and workmanship which would cause the engine to fail to conform with applicable US EPA regulations for a period of five years from the date the engine is placed into service or 3,000 hours of operation, whichever first occurs.

Where a warrantable condition exists, John Deere will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engine's emissions of any regulated pollutant within the stated warranty period at no cost to you, including expenses related to diagnosing and repairing or replacing emission-related parts. Warranty coverage is subject to the limitations and exclusions set forth herein. Emission-related components include engine parts developed to control emissions related to the following:

Air-Induction System	Aftertreatment Devices
Fuel System	Crankcase Ventilation Valves
Ignition System	Sensors
Exhaust Gas Recirculation Systems	Engine Electronic Control Units

EMISSION WARRANTY EXCLUSIONS

John Deere may deny warranty claims for malfunctions or failures caused by:

- Non-performance of maintenance requirements listed in the Operator's Manual
- The use of the engine/equipment in a manner for which it was not designed
- Abuse, neglect, improper maintenance or unapproved modifications or alterations
- Accidents for which it does not have responsibility or by acts of God

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel can harm the emissions control system of the engine/equipment and is not approved for use.

To the extent permitted by law John Deere is not liable for damage to other engine components caused by a failure of an emission-related part, unless otherwise covered by standard warranty.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISIONS OF MATERIAL AND SERVICES AS SPECIFIED HEREIN. WHERE PERMITTED BY LAW, NEITHER JOHN DEERE NOR ANY AUTHORIZED JOHN DEERE ENGINE DISTRIBUTOR, DEALER, OR REPAIR FACILITY OR ANY COMPANY AFFILIATED WITH JOHN DEERE WILL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Emission_CI_EPA (18Dec09)



JOHN DEERE

**U.S. AND CANADA EMISSION CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS**

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emissions Control Information" label located on the engine. If the engine is operated in the United States or Canada and the Emissions Control information label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine conforms to US EPA nonroad compression-ignition regulations", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines", or "This engine conforms to US EPA and California nonroad compression-ignition emission regulations", also refer to the "California Emission Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emissions-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

JOHN DEERE'S WARRANTY RESPONSIBILITY

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine including all parts of its emission-control system was designed, built and equipped so as to conform at the time of the sale with Section 213 of the Clean Air Act and is free from defects in materials and workmanship which would cause the engine to fail to conform with applicable US EPA regulations for a period of five years from the date the engine is placed into service or 3,000 hours of operation, whichever first occurs.

Where a warrantable condition exists, John Deere will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engine's emissions of any regulated pollutant within the stated warranty period at no cost to you, including expenses related to diagnosing and repairing or replacing emission-related parts. Warranty coverage is subject to the limitations and exclusions set forth herein. Emission-related components include engine parts developed to control emissions related to the following:

Air-Induction System	Aftertreatment Devices
Fuel System	Crankcase Ventilation Valves
Ignition System	Sensors
Exhaust Gas Recirculation Systems	Engine Electronic Control Units

EMISSION WARRANTY EXCLUSIONS

John Deere may deny warranty claims for malfunctions or failures caused by:

- Non-performance of maintenance requirements listed in the Operator's Manual
- The use of the engine/equipment in a manner for which it was not designed
- Abuse, neglect, improper maintenance or unapproved modifications or alterations
- Accidents for which it does not have responsibility or by acts of God

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel can harm the emissions control system of the engine/equipment and is not approved for use.

To the extent permitted by law John Deere is not liable for damage to other engine components caused by a failure of an emission-related part, unless otherwise covered by standard warranty.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISIONS OF MATERIAL AND SERVICES AS SPECIFIED HEREIN. WHERE PERMITTED BY LAW, NEITHER JOHN DEERE NOR ANY AUTHORIZED JOHN DEERE ENGINE DISTRIBUTOR, DEALER, OR REPAIR FACILITY OR ANY COMPANY AFFILIATED WITH JOHN DEERE WILL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Emission_CI_EPA (18Dec09)

TS1721—UN—15JUL13
DX,EMISSIONS,EPA-19-12DEC12

CARB Non-road Emissions Control Warranty Statement—Compression Ignition

Emissions Control Warranty Statement 2016 through 2018



JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT

DXLOGOV1—UN—28APR09

YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emission Control Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine complies with US EPA regulations for stationary emergency diesel engines", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines" also refer to the "California Emissions Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2016 through 2018 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Specifications

Air Induction System

- Intake manifold
- Turbocharger
- Charge air cooler

Fuel Metering system

- Fuel injection system

Exhaust Gas Recirculation

- EGR valve

Catalyst or Thermal Reactor Systems

- Catalytic converter
- Exhaust manifold

Emission control labels

Particulate Controls

- Any device used to capture particulate emissions
- Any device used in the regeneration of the capturing system
- Enclosures and manifolding
- Smoke Puff Limiters

Positive Crankcase Ventilation (PCV) System

- PCV valve
- Oil filler cap

Advanced Oxides of Nitrogen (NOx) Controls

- NOx absorbers and catalysts

SCR systems and urea containers/dispensing systems

Miscellaneous Items used in Above Systems

- Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

Emission_CI_CARB (13Jun14)

Emissions Control Warranty Statement 2016 through 2018

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JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emission Control Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine complies with US EPA regulations for stationary emergency diesel engines", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines" also refer to the "California Emissions Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2016 through 2018 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

RG26035—UN—24JUN14

JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Air Induction System	Emission control labels	Advanced Oxides of Nitrogen (NOx) Controls
• Intake manifold • Turbocharger • Charge air cooler	Particulate Controls • Any device used to capture particulate emissions • Any device used in the regeneration of the capturing system • Enclosures and manifold • Smoke Puff Limiters	• NOx absorbers and catalysts
Fuel Metering system		SCR systems and urea containers/dispensing systems
• Fuel injection system		Miscellaneous Items used in Above Systems
Exhaust Gas Recirculation		• Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware
• EGR valve	Positive Crankcase Ventilation (PCV) System	
Catalyst or Thermal Reactor Systems	• PCV valve • Oil filler cap	
• Catalytic converter • Exhaust manifold		

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

Emission_CI_CARB (13Jun14)

RG26036—UN—24JUN14

Emissions Control Warranty Statement 2019 through 2021



DXLOGOV1—UN—28APR09

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emission Control Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine complies with US EPA regulations for stationary emergency diesel engines", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines" also refer to the "California Emissions Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you

should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2019 through 2021 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Air Induction System • Intake manifold • Turbocharger • Charge air cooler	Emission control labels	Advanced Oxides of Nitrogen (NOx) Controls • NOx absorbers and catalysts
Fuel Metering system • Fuel injection system	Particulate Controls • Any device used to capture particulate emissions • Any device used in the regeneration of the capturing system • Enclosures and manifolding • Smoke Puff Limiters	SCR systems and urea containers/dispensing systems
Exhaust Gas Recirculation • EGR valve	Positive Crankcase Ventilation (PCV) System • PCV valve • Oil filler cap	Miscellaneous Items used in Above Systems • Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware
Catalyst or Thermal Reactor Systems • Catalytic converter • Exhaust manifold		

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

Emission_CI_CARB (01Feb17)

Emissions Control Warranty Statement 2019 through 2021

DXLOGOV1 —UN—28APR09



JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emission Control Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine complies with US EPA regulations for stationary emergency diesel engines", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines" also refer to the "California Emissions Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2019 through 2021 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

RG29280—UN—02FEB17

JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Air Induction System	Emission control labels	Advanced Oxides of Nitrogen (NOx) Controls
• Intake manifold • Turbocharger • Charge air cooler	Particulate Controls • Any device used to capture particulate emissions • Any device used in the regeneration of the capturing system • Enclosures and manifolding • Smoke Puff Limiters	• NOx absorbers and catalysts
Fuel Metering system		SCR systems and urea containers/dispensing systems
• Fuel injection system		Miscellaneous Items used in Above Systems
Exhaust Gas Recirculation	Positive Crankcase Ventilation (PCV) System	• Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware
• EGR valve	• PCV valve • Oil filler cap	
Catalyst or Thermal Reactor Systems		
• Catalytic converter • Exhaust manifold		

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

Emission_CI_CARB (01Feb17)

RG29281—UN—27FEB17
DX,EMISSIONS,CARB-19-03FEB17

Required Emission-Related Information

Service Provider

A qualified repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems with original or equivalent replacement parts. However, warranty, recall, and all other services paid for by John Deere must be performed at an authorized John Deere service center.

DX,EMISSIONS,REQINFO-19-12JUN15

Limited Battery Warranty

NOTE: Applicable in North America only. For complete machine warranty, reference a copy of the John Deere warranty statement. Contact your John Deere dealer to obtain a copy.

To Secure Warranty Service

The purchaser must request warranty service from a John Deere dealer authorized to sell John Deere batteries, and present the battery to the dealer with the top cover plate codes intact.

Free Replacement

Any new battery which becomes unserviceable (not merely discharged) due to defects in material or workmanship within 90 days of purchase will be replaced free of charge. Installation costs will be covered by warranty if (1) the unserviceable battery was installed by a John Deere factory or dealer, (2) failure occurs within 90 days of purchase, and (3) the replacement battery is installed by a John Deere dealer.

Pro Rata Adjustment

Any new battery which becomes unserviceable (not merely discharged) due to defects in material or workmanship more than 90 days after purchase, but before the expiration of the applicable adjustment period, will be replaced upon payment of the battery's current list price less a pro rata credit for unused months of service. The applicable adjustment period is determined from the Warranty Code printed at the top of the battery and chart below. Installation costs are not covered by warranty after 90 days from the date of purchase.

This Warranty Does Not Cover

Breakage of the container, cover, or terminals.

Depreciation or damage caused by lack of reasonable and necessary maintenance or by improper maintenance.

Transportation, mailing, or service call charges for warranty service.

Limitation of Implied Warranties and Purchaser's Remedies

To the extent permitted by law, neither John Deere nor any company affiliated with it makes any warranties, representations or promises as to the quality, performance or freedom from defect of the products

covered by this warranty. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TO THE EXTENT APPLICABLE, SHALL BE LIMITED IN DURATION TO THE APPLICABLE ADJUSTMENT PERIOD SET FORTH HERE. THE PURCHASER'S ONLY REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON JOHN DEERE BATTERIES ARE THOSE SET FORTH HERE. IN NO EVENT WILL THE DEALER, JOHN DEERE OR ANY COMPANY AFFILIATED WITH JOHN DEERE BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. (Note: Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages. So these limitations and exclusions may not apply to you.) This warranty gives you specific legal rights, and you may also have some rights which vary from state to state.

No Dealer Warranty

The selling dealer makes no warranty of it's own and the dealer has no authority to make any representation or promise on behalf of John Deere, or to modify the terms or limitations of this warranty in any way.

Pro Rata Months of Adjustment

Warranty Code	Warranty Period
A	40 Months
B	36 Months
C	24 Months

NOTE: If your battery is not labeled with a warranty code, it is a warranty code "B".

DX,BATWAR,NA-19-16APR92

Carbon Dioxide Emissions (CO₂)



JOHN DEERE

EMISSION CONTROL INFORMATION DEERE & COMPANY

•This engine complies with US EPA and California regulations for 2018 nonroad diesel engines and EPA regulations for stationary diesel engines. •DEL ASSY

•Family JJDXL09.0308 •Disp:9.0L •ECS:EGR PTOX OC SCRC NH3OC ECM DFI TC CAC

•Engine Model 6090CI550A.B.C.D.E.F

•EPA Power Category: 130 - 560 kW •ULTRA-LOW SULFUR FUEL ONLY

•FEL 0.01 g/kW-hr PM

e#####



R565819

Mfg Date: YYYY, MM

For Engine Service and Parts -- www.JohnDeere.com/dealer

EU Contact: John Deere -- BP11013 -- 45401 Fleury les Aubrais Cedex France

Engine Emissions Label

RXA0164555 —UN—13SEP18

A—Family

B—Europe Family

NOTE: If your engine emissions label lists both a family number (A) and a Europe family number (B), reference the Europe family number using the chart.

NOTE: The first letter of the family number is not utilized for family identification on the chart.

To identify the carbon dioxide (CO₂) output, locate the engine emissions label. Find the appropriate family on the emissions label and reference the chart.

Family	CO ₂ Output
_JDXL02.9323	668 g/kWh
_JDXL06.8324	683 g/kWh
_JDXL09.0325	646 g/kWh
_JDXL13.5326	661 g/kWh

This CO₂ measurement results from testing over a fixed test cycle under laboratory conditions a(n) (parent) engine representative of the engine type (engine family) and shall not imply or express any guarantee of the performance of a particular engine.

DX,EMISSIONS,CO2-19-12JAN18

Identification Numbers

Identification Plates

Each tractor has the identification plates shown on these pages. The letters and numbers stamped on the plates identify a component or assembly. ALL these characters are needed when ordering parts or identifying a tractor or component for any John Deere product support program.

Also, they are needed for law enforcement to trace your tractor if it is ever stolen. ACCURATELY record these characters in the spaces provided in each of the following photographs. Additionally in a separate and secure location, maintain an up-to-date inventory of all product and component serial numbers.

RW29387,00003B7-19-22JUN16

Product Identification Number

Product Identification Number

* _ _ _ _ _ *



RXA0162308—UN—23FEB18

Identification plate (A) is located on right-hand tractor frame.

Position 10—Character designating year of manufacture.

Position 11—Transmission Option Code

Code	F	G	H	J	K
Year	2015	2016	2017	2018	2019

Transmission Option Codes	
S	e23™
D	IVT™/AutoPowr™

e23 is a trademark of Deere & Company

IVT is a trademark of Deere & Company

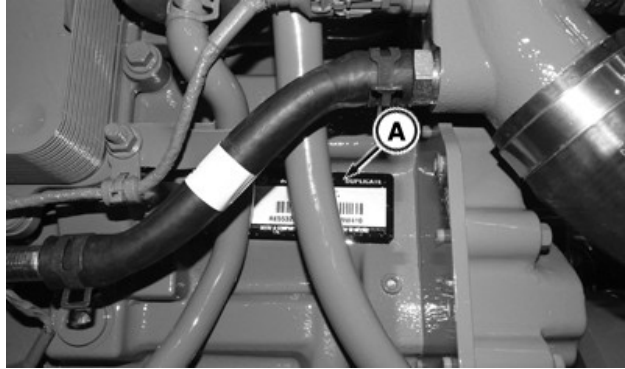
AutoPowr is a trademark of Deere & Company

KT81203,0000591-19-25JUL18

Engine Serial Number

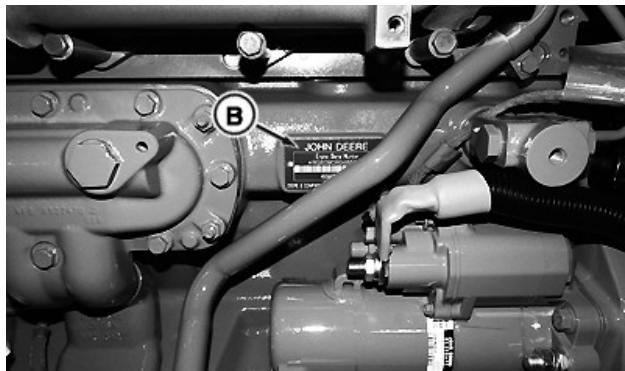
Serial Number

* _ _ _ _ _ *



RXA0142519—UN—02JUL14

6.8 L engine (A) serial number plate is located on right-hand side under the open crankcase ventilation filter housing .



RXA0142520—UN—02JUL14

9.0 L engine (B) serial number plate is located on left-hand side above starter.



RXA0134418—UN—02AUG13

Positions 5 and 6—Characters designate engine displacement (C)

Position 7—Character designates engine emission level (D)

Identification Numbers

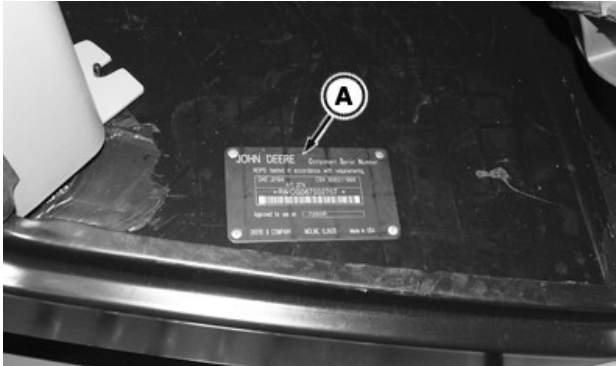
Fifth and Sixth Characters	
6.8 L Engine	68
9.0 L Engine	90

Seventh Character	
Final Tier 4/Stage V	U

TS36762,0000295-19-17JUL18

Cab Serial Number

Serial Number



RXA0142622—UN—02JUL14

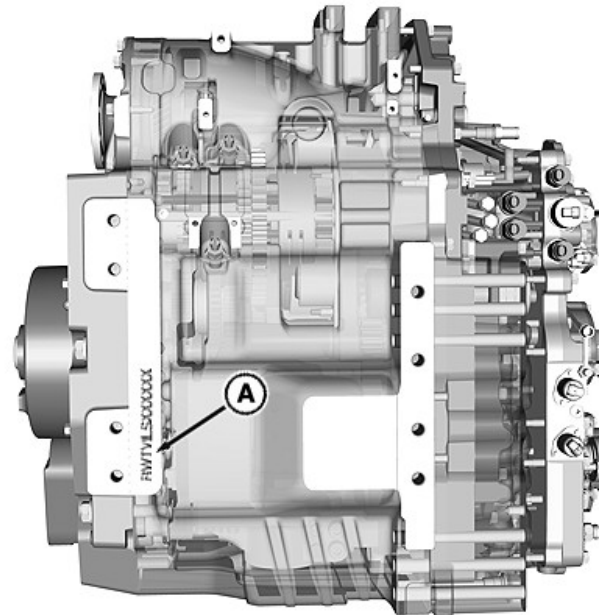
Serial number plate (A) is located underneath floor mat, inside cab entry door.

TS36762,0000296-19-06SEP17

Transmission Serial Number

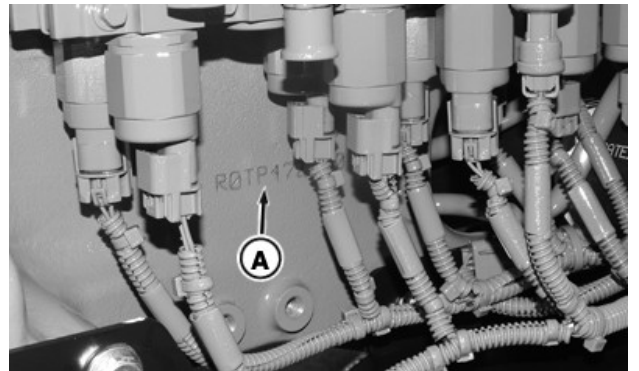
Serial Number

Record serial number (A) in space provided.



RXA0144023—UN—05AUG14

IVT™/AutoPowr™ Transmission (Stamped Into Left-Hand Side Approximately 15 cm (6 in) Below Engine Air Cleaner Mounting Bracket)



RXA0144021—UN—05AUG14

e23™ Transmission (Left-Hand Side Lower Rear Side of Transmission Housing)

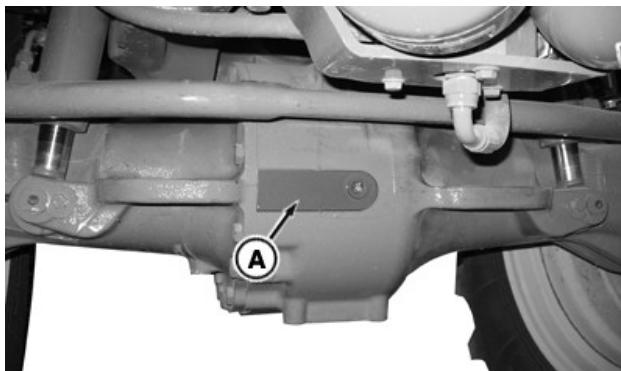
NOTE: Green paint covers number.

KD34109,00006F9-19-20AUG18

Axle Serial Number

Serial Number

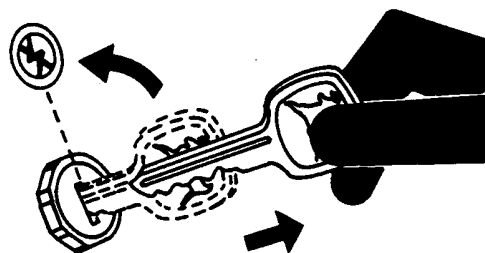
Record serial number (A) in space provided.



RXA0135521—UN—13SEP13
MFWD/TLS™ Plus Axle (Stamped into Front Side of Housing)

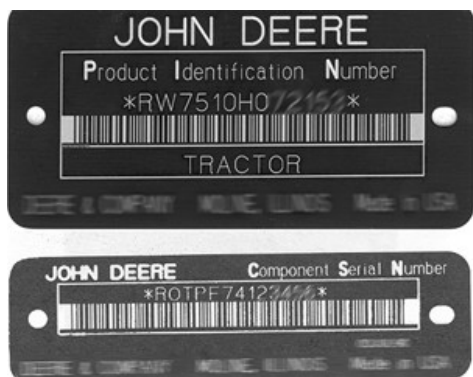
TS36762,000029A-19-06SEP17

Keep Machines Secure



TS230—UN—24MAY89

Keep Proof of Ownership



TS1680—UN—09DEC03

1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
 - Mark your machine with your own numbering system
 - Take color photographs from several angles of each machine

DX,SECURE1-19-18NOV03

1. Install vandal-proof devices.
2. When machine is in storage:
 - Lower equipment to the ground
 - Set wheels to widest position to make loading more difficult
 - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.

DX,SECURE2-19-18NOV03

Change of Ownership

Subsequent Ownership Second Owner

Serial Number:	Tractor Model:
Engine Number:	Registration Number:
Previous Owner:	New Owner:
Address:	Address:
Purchase Date: Hours at Purchase:	Dealer's Stamp <i>(only if sold through a dealer)</i>

Third Owner

Serial Number:	Tractor Model:
Engine Number:	Registration Number:
Previous Owner:	New Owner:
Address:	Address:
Purchase Date: Hours at Purchase:	Dealer's Stamp <i>(only if sold through a dealer)</i>

Predelivery

Predelivery Checklist

NOTE: Make a copy of this checklist and complete while performing.

NOTE: Tractor may not be equipped with some options listed.

The following inspection, adjustment and service work was performed prior to delivery of this machine.

Perform air conditioning pre-run procedure:

IMPORTANT: Reduce chance of air conditioning compressor damage. Complete pre-run procedure when tractor:

Arrived at dealership

Has not been run for over 29 days

- ☐ 1. Start tractor and run engine low idle.
- ☐ 2. Turn air conditioning system to high.
- ☐ 3. Air cleaner elements are installed correctly.
- ☐ 4. Run tractor for at least three minutes.
- ☐ 5. Shut off tractor.

Perform following checks before operating tractor:

- ☐ 1. Engine oil level is between low and full marks.
- ☐ 2. Coolant level is correct.
- ☐ 3. Air cleaner elements are installed correctly.
- ☐ 4. Air intake system clamps are tight.
- ☐ 5. Transmission-hydraulic and axle oil levels are correct.
- ☐ 6. Lubrication fittings are greased.
- ☐ 7. Shields, guards, handrails and steps are installed correctly.
- ☐ 8. Exterior and interior labels are smooth and neat.

Tractor is free of:

- ☐ 9. Coolant leaks.
- ☐ 10. Engine oil leaks.
- ☐ 11. Fuel leaks.
- ☐ 12. Transmission, hydraulic and axle oil leaks.
- ☐ 13. Paint defects.

Perform checks inside cab:

- ☐ 1. Check for diagnostic trouble codes. If codes are present, record codes and see Service ADVISOR™ to resolve and repair as needed. Clear all codes.
- ☐ 2. All brake systems operate correctly.
 - Service brakes
 - Parking brake
 - Hydraulic or air trailer brake (if equipped)

- Secondary brake (If equipped)
- ☐ 3. Transmission operates correctly (including PARK position).
- ☐ 4. Neutral start switch operates correctly.
- ☐ 5. SCVs operate correctly.
- ☐ 6. Rear and front hitches operate correctly.
- ☐ 7. Rear and front PTOs operate correctly.
- ☐ 8. Warning system lights and instrument displays and gauges operate correctly.
- ☐ 9. All lights operate correctly in all switch positions.
- ☐ 10. Engine fast and slow idle are set correctly.
- ☐ 11. Seat can be adjusted properly.
- ☐ 12. Check seat belt integrity. Seat belt latches function correctly.
- ☐ 13. Doors operate correctly.
- ☐ 14. Cab is clean and upholstery appearance neat.
- ☐ 15. Premium radio region code set for location.
- ☐ 16. Radio operates correctly.
- ☐ 17. Washers and wipers operate correctly.
- ☐ 18. Heater, ventilation and air conditioning system operates correctly. For details see separate information leaflet in tractor cab.
- ☐ 19. All optional equipment is installed and operates correctly.

Dealer Services:

- ☐ 1. Thoroughly wash tractor.
- ☐ 2. Charge battery and set battery date code.
- ☐ 3. Check and adjust tire pressure.
- ☐ 4. Adjust wheel spacing for customer needs.
- ☐ 5. Check and adjust toe-in, pivoting fenders and steering stops.

IMPORTANT: Retighten wheel bolts after working 3 hours and again after 10 hours. Continue to tighten to specified torque daily during first week of operation.

- ☐ 6. Tighten wheels and weights to specifications (even if no adjustments are made).
- ☐ 7. Tighten loader bracket hardware to specifications.
- ☐ 8. Reposition all components from shipping to operating positions (for example, mirrors.)
- ☐ 9. Adjust all lights, including extremity transport warning lights and beacon light. Check all lights for compliance with local regulations.
- ☐ 10. Adjust hitch components and lock in position.
- ☐ 11. Install Slow Moving Vehicle emblem (if required).
- ☐ 12. Check optional trailer hitches for proper operation.
- ☐ 13. If a loader is installed and tractor is equipped with

TouchSet™ hydraulic control, ensure that detent times are set to 0. Recalibrate joystick (if required).

- ☐ 14. Set up CommandCenter™ display to customer preference.
- ☐ 15. Activate Automatic Exhaust Cleaning Mode in CommandCenter™.
- ☐ 16. Install StarFire™ receiver.
- ☐ 17. Set up JDLink™ customer account.
- ☐ 18. Perform test drive. Verify correct function of all systems, including transmission, brakes, and steering.
- ☐ 19. Calibrate radar.
- ☐ 20. Check for diagnostic trouble codes. If codes are present, record codes and see Service ADVISOR™ to resolve and repair as needed. Clear all codes.

Date and signature of dealer/service technician:

BH38674,0000D24-19-29JUN18

*TouchSet is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company
StarFire is a trademark of Deere & Company
JDLink is a trademark of Deere & Company
Service ADVISOR is a trademark of Deere & Company*

Delivery Checklist and Certificate

Make two copies of this form. Complete one copy for customer and retain a second copy for dealer records.

☐ Customer Copy

☐ Dealer Copy

Delivery Checklist

At dealership:

- ☐ Predelivery inspection completed
- ☐ All necessary forms and literature available
- ☐ Labels installed
- ☐ Customer specified attachments and options installed or available

IMPORTANT: Retighten wheel bolts after working 3 hours and after 10 hours. Tighten to specified torque daily during first week of operation.
☐ Check hardware is tight on frame, drawbar support, wheels and wheel weights

At delivery area with customer:

Shown and explained:

- ☐ All machine warning labels
 - ☐ Machine serial number locations
 - ☐ Operator's Manual
 - ☐ Help Text access and function
 - ☐ Machine and attachment service points
 - ☐ Tire maintenance and care
 - ☐ Maintenance schedules and tasks
 - ☐ Break-in service procedures
 - ☐ Warranty coverage and procedures
- ##### *Demonstrated operating procedures:*
- ☐ Engine—throttle, starting and stopping
 - ☐ Transmission

- ☐ Steering
- ☐ Brakes
- ☐ Front and rear hitch and SCVs
- ☐ Three-point hitch adjustment
- ☐ Pick-up hitch or other specialized hitch or drawbar
- ☐ Differential lock
- ☐ PTO
- ☐ iTEC™ system
- ☐ Lights
- ☐ Wipers
- ☐ Heater and air conditioning
- ☐ CommandCenter™ display and controls
- ☐ Operator's seat

iTEC is a trademark of Deere & Company

CommandCenter is a trademark of Deere & Company

Delivery Certificate

Serial number:

Vehicle Model:

OM Number:

Issue:

Registration No.:

Engine No.:

Delivery Date:

Owner's Name:

Delivery Hours:

Street Address:

Dealership:

City/State:

Dealer's Stamp:

ZIP/Postal Code/Country:

Predelivery

I hereby confirm receiving the tractor in good condition complete with Operator's Manual. I have received the Operator's Manual. All necessary work upon delivery has been carried out and I have been informed of the safe method of operation and the mandatory daily maintenance work as per the Delivery Checklist.

Customer's Signature: _____ Dealership Instructor's Signature: _____

Date: _____ Date: _____

BH38674,0000D25-19-30MAY18

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John Deere Service Literature Available

Technical Information

Technical information can be purchased from John Deere. Publications are available in print or CD-ROM format.

Orders can be made using one of the following:

- John Deere Technical Information Store: **www.JohnDeere.com/TechInfoStore**
- Call 1-800-522-7448
- Contact your John Deere dealer

Available information includes:



TS189—UN—17JAN89

PARTS CATALOGS list service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.



TS191—UN—02DEC88

OPERATOR'S MANUALS providing safety, operating, maintenance, and service information.



TS224—UN—17JAN89

TECHNICAL MANUALS outlining service information for your machine. Included are specifications, illustrated assembly and disassembly procedures, hydraulic oil flow diagrams, and wiring diagrams. Some products have separate manuals for repair and diagnostic information. Some components, such as engines, are available in a separate component technical manual.



TS1663—UN—10OCT97

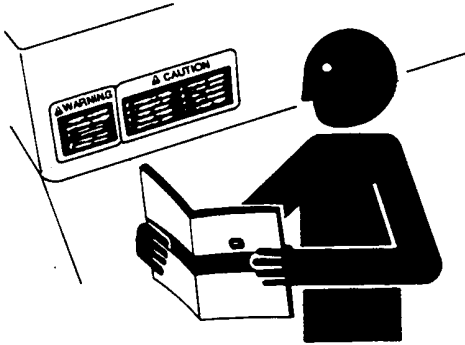
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- Agricultural Primer series covers technology in farming and ranching.
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John Deere Service Keeps You On The Job

John Deere Is At Your Service



TS201—UN—15APR13

CUSTOMER SATISFACTION is important to John Deere.

Our dealers strive to provide you with prompt, efficient parts and service:

- Maintenance and service parts to support your equipment.
- Trained service technicians and the necessary diagnostic and repair tools to service your equipment.

CUSTOMER SATISFACTION PROBLEM RESOLUTION PROCESS

Your John Deere dealer is dedicated to supporting your equipment and resolving any problem you may experience.

1. When contacting your dealer, be prepared with the following information:

- Machine model and product identification number
- Date of purchase
- Nature of problem

2. Discuss problem with dealer service manager.

3. If unable to resolve, explain problem to dealership manager and request assistance.

4. If you have a persistent problem your dealership is unable to resolve, ask your dealer to contact John Deere for assistance. Or contact the Ag Customer Assistance Center at 1-866-99DEERE (866-993-3373) or e-mail us at www.deere.com/en_US/ag/contactus/.

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