9RX Tractors (Serial No. 807001-) North American Edition I8

JOHN DEERE

OPERATOR'S MANUAL

9RX Tractors (Serial No. 807001-) North American Edition

OMRE592526 ISSUE I8 (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.

John Deere Waterloo Works
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.

RW29387,00000CC-19-16JUN14

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.

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

RW29387,00001CC-19-10JUL12

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AutoPowr™	Trademark of Deere and Company
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Glossary

Glossary of Terms

Term	Abbreviation	Description of Definition
[Ag] or [Scraper]		Identification abbreviation
Agriculture Tractor	[Ag]	Tractor primary application
Scraper Tractor	[Scraper]	Tractor primary application
Alternating Current	AC	Electrical current that reverses its direction at regularly recurring intervals
Air Conditioning	A/C	System used for conditioning the air in the cab
Accessory	ACC	Secondary electrical system
Air Quality System	AQS	System used to control conditioned air in the cab
Automatic Powershift Control System	APS	System used to control automatic transmission shifting
Armrest Control Unit	ACU	Armrest control used to control tractor functions
Cold Cranking Amperes	CCA	Refers to a battery's capability to perform during cold weather operation
Circulator Motor		Symbols for circulator motor speeds
	O	Medium Speed
	++	Fastest Speed
Chassis Control Unit	CCU	Computerized system for tractor monitoring
Component Technical Manual	CTM	Technical manual developed for the servicing of major components
Direct Current	DC	Electrical current flowing in one direction only
Engine Control Unit	ECU	Computerized system used to govern engine speed
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
Engine Revolutions Per Minute	erpm	Abbreviation
Gallons Per Minute	gpm	Amount of fluid over a period of one minute
Hitch Control Unit	HCU	Computerized system used to control hitch functions
High Intensity Discharge	HID	Type of field lights use for front lighting
High Pressure Common Rail	HPCR	Fuel injection system on the engine
Hitch Slip Command	HSC	Computerized system used to supplement hitch draft control
Ignition	IGN	Control for starting and stopping the tractor
Implement Management System	iTEC	Computerized system used to perform multi-functional tractor tasks
International Standards Organization	ISO	Standards organization
Mechanical Front Wheel Drive	MFWD	A powered front axle which is driven mechanically from the transmission
Number	No.	Abbreviation
Product Identification Number	PIN	Serial number relating to tractor identification
Powershift Transmission Control Software	PTP	Computerized system used to control transmission shift functions
Pressure Control Valve	PCV	Valve used to control pressure within a system
Powershift Transmission	PST	Abbreviation
Power Take-Off	PTO	Abbreviation
Revolutions Per Minute	rpm	Abbreviation
Society of Automotive Engineers	SAE	Standards Organization
Selective Control Valve	SCV	Device used to control remote hydraulic functions
Selective Control Unit	SCU	Computerized system used to control selective control valve functions for selective control valves 1, 2, and 3
Selective Control Option	SCo	Controller for selective control valves 4 and 5
Slow Moving Vehicle	SMV	Warning sign on the rear of the tractor
Set-Up Panel	SUP	Operator control panel used to set selective control valve function

RW29387,00005B8-19-23JUL18

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



TS187—19—30SEP88

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

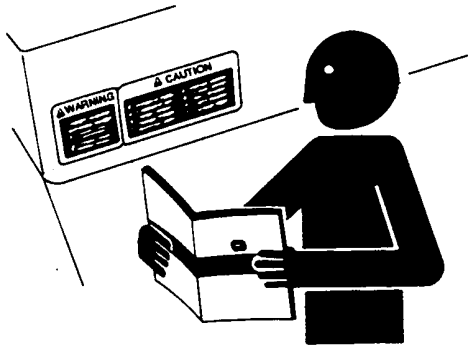
WARNING; The signal word WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

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.

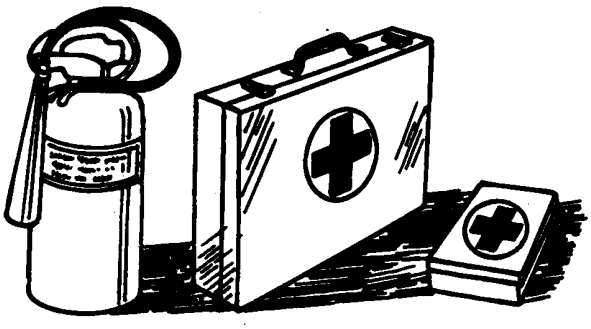
Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

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

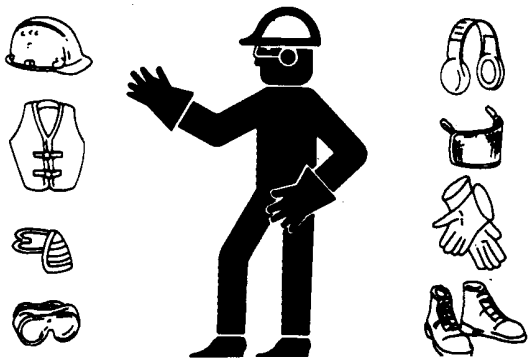
Be prepared if a fire starts.

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



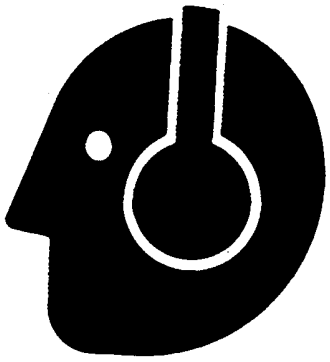
TS206—UN—15APR13

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,WW,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:

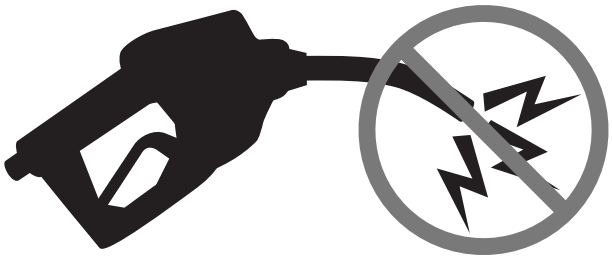
1. Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
2. Aim low. Point the extinguisher at the base of the fire.
3. Squeeze the lever slowly and evenly.
4. Sweep the nozzle from side-to-side.

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.

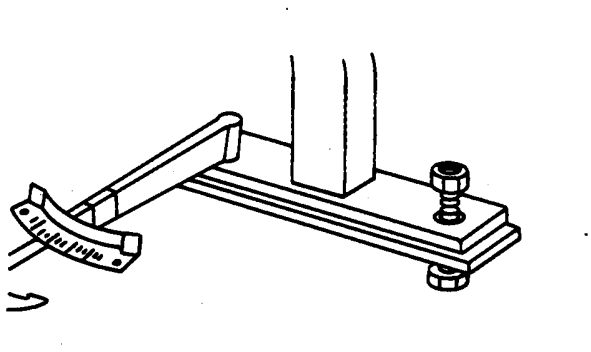
Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

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.

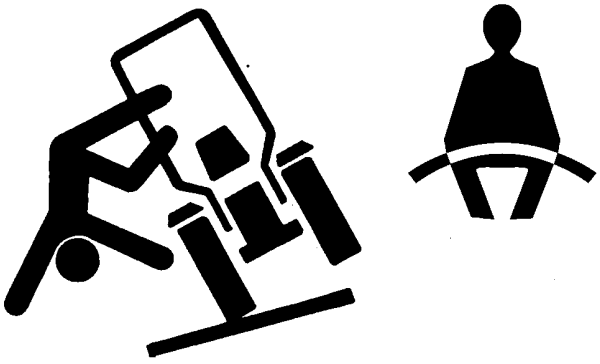
The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting. A damaged ROPS should be replaced, not reused.

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.

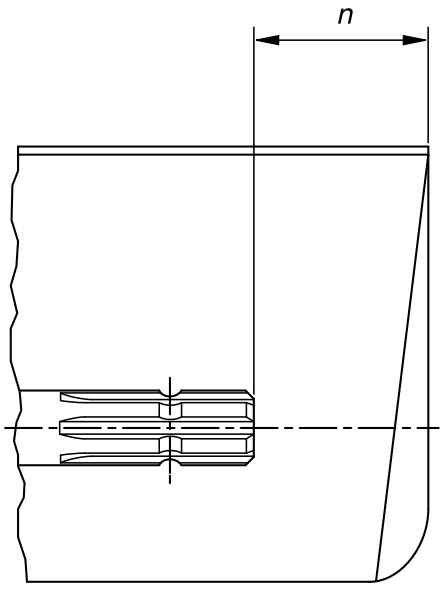
- If this machine is operated with the ROPS folded (for example, to enter a low building), drive with extreme caution. DO NOT USE a seat belt with the ROPS folded.
- Return the ROPS to the raised, fully extended position as soon as the machine is operated under normal conditions.

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.

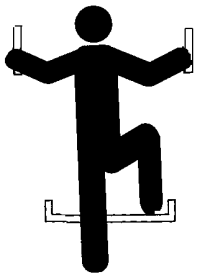
Do not raise implements high enough to damage the tractor master shield or guard of primary implement PTO driveshaft. Detach the PTO driveline shaft if it is necessary to increase implement height. (See Attching/ Detaching PTO Driveline)

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

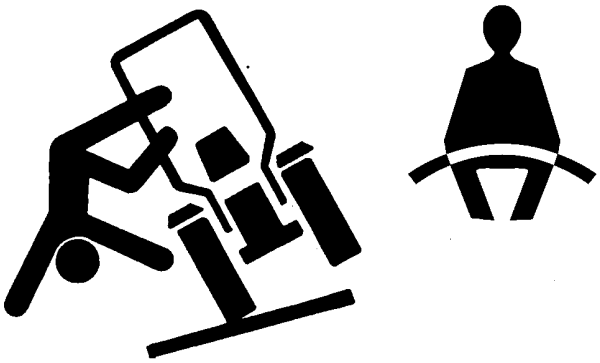
Read Operator's Manuals for ISOBUS Controllers

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.

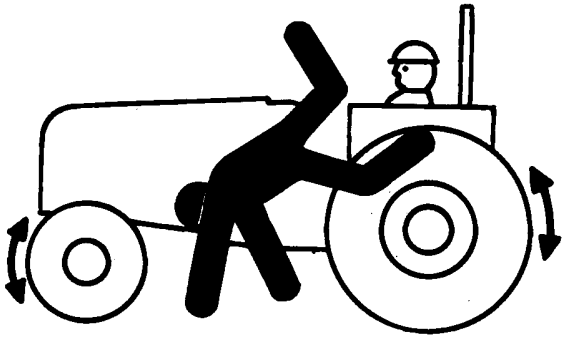
- Hold the latch and pull the seat belt across the body.
- Insert the latch into the buckle. Listen for a click.
- Tug on the seat belt latch to make sure that the belt is securely fastened.
- Snug the seat belt across the hips.

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

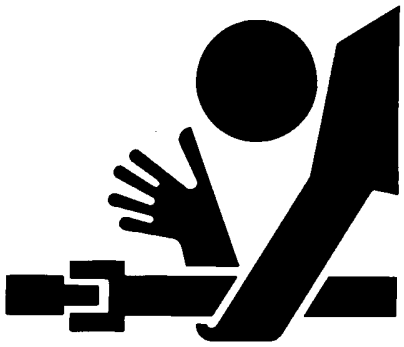
Inspect seat belt and mounting hardware at least once a year. Look for signs of loose hardware or belt damage, such as cuts, fraying, extreme or unusual wear, discoloration, or abrasion. Replace only with replacement parts approved for your machine. See your John Deere dealer.

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.

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- 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

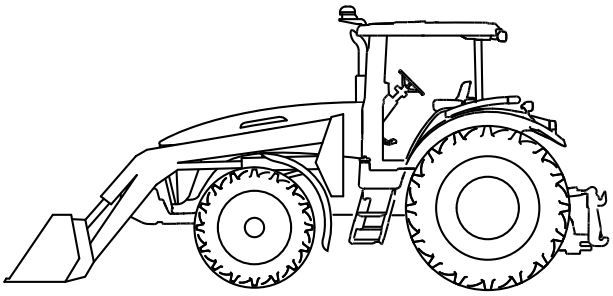
Limited Use in Forestry Operation

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.

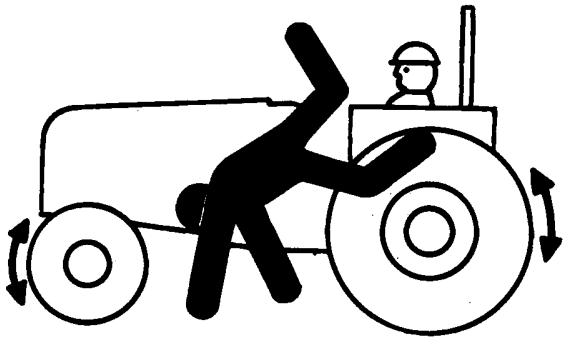
Lower loader to ground before leaving operators station.

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 clampers).

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

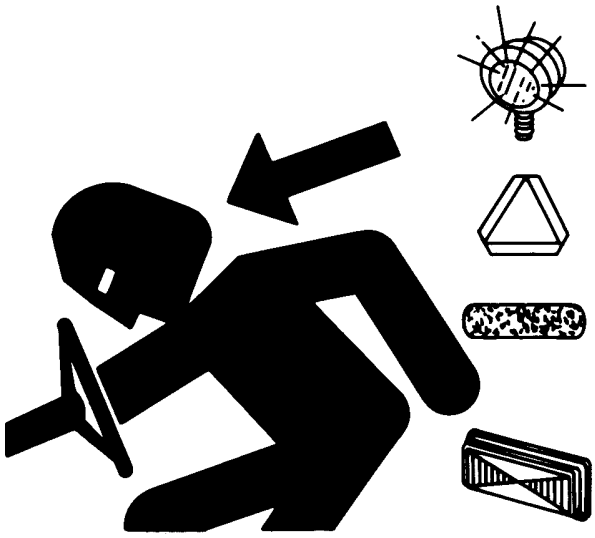


TS1730—UN—24MAY13

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



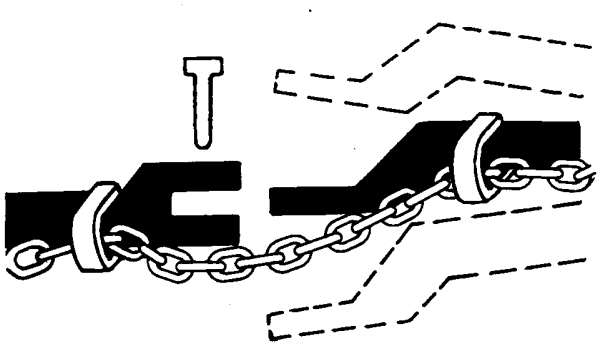
TS951—UN—12APR90

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

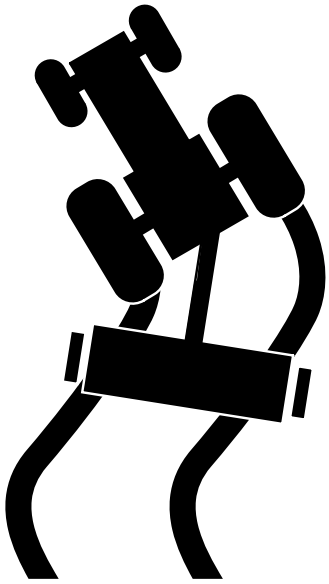
A safety chain will help control drawn equipment should it accidentally separate from the drawbar.

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

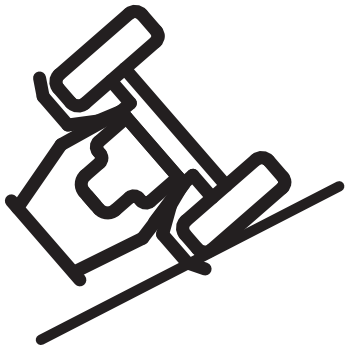
transport speed, do not tow at speeds greater than 40 km/h (25 mph).

- 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

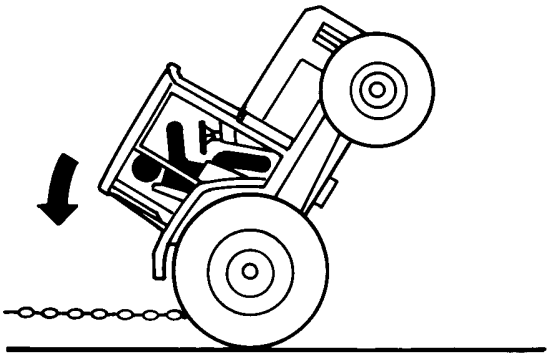
Choose a low ground speed so you will not have to stop or shift while on a slope.

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.

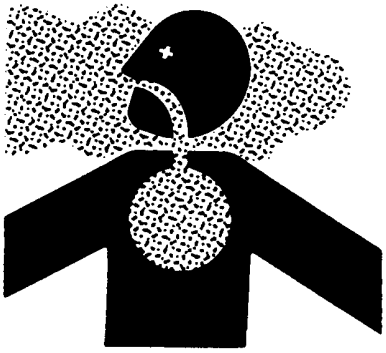
If necessary to tow with another unit, use a tow bar or a long chain (a cable is not recommended). Inspect the chain for flaws. Make sure all parts of towing devices are of adequate size and strong enough to handle the load.

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

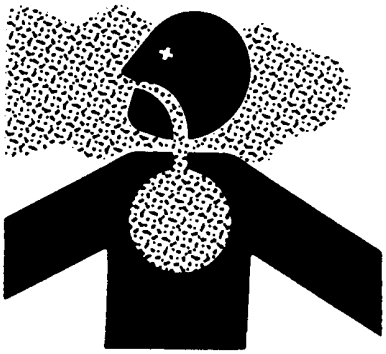
This enclosed cab does not protect against inhaling vapor, aerosol or dust. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

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.

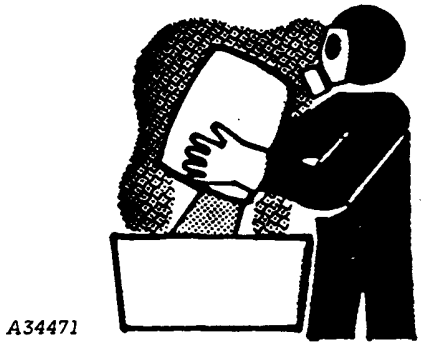
Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.

DX,CABS-19-25MAR09

Handle Agricultural Chemicals Safely



TS220—UN—15APR13



A34471—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.

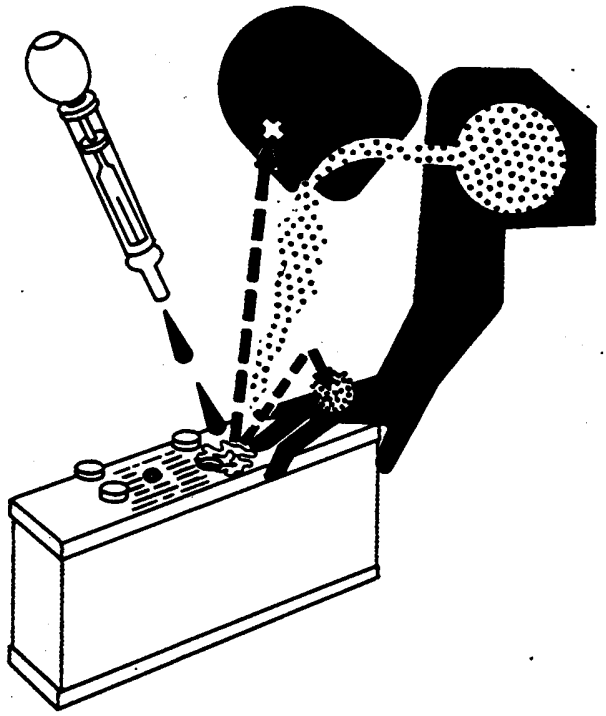
- After handling chemicals, always bathe or shower and change clothes. Wash clothing before wearing again.
- Seek medical attention immediately if illness occurs during or shortly after use of chemicals.
- Keep chemicals in original containers. Do not transfer chemicals to unmarked containers or to containers 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

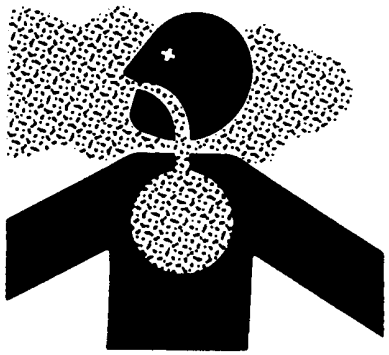


TS953—UN—15MAY90

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.

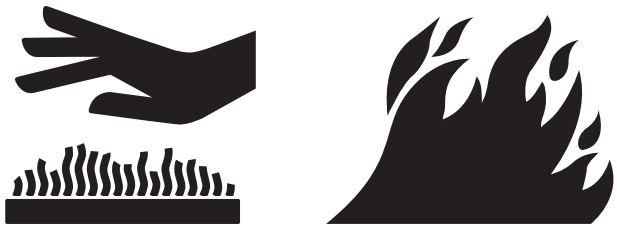
On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

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.

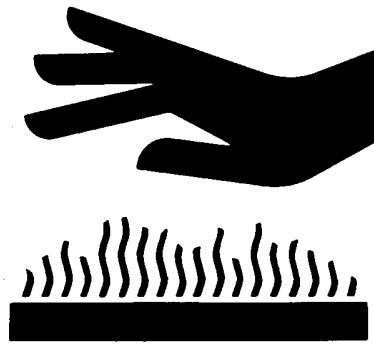
Exhaust parts and streams become very hot during operation. Exhaust gases and components reach temperatures hot enough to burn people, ignite, or melt common materials.

DX,EXHAUST-19-20AUG09

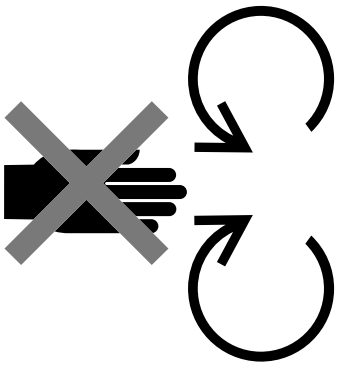
Clean Exhaust Filter Safely



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

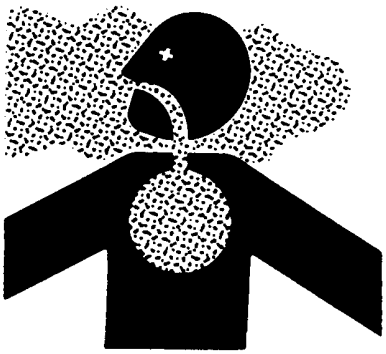
Keep hands, feet, and clothing away from power-driven parts.

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-19-12JAN11

Work In Ventilated Area



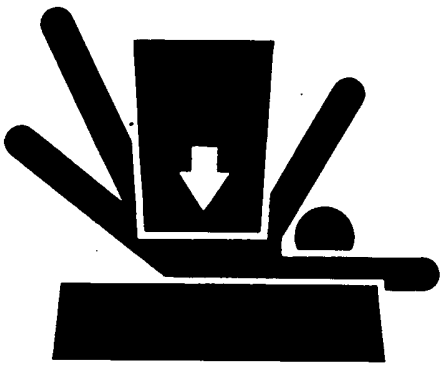
TS220—UN—15APR13

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

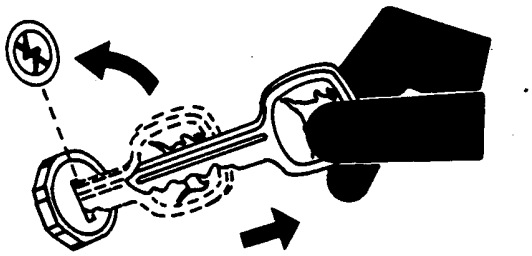
Avoid possible injury or death from machinery runaway.

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



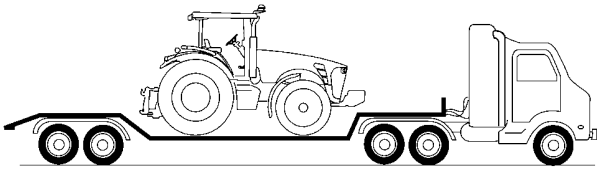
TS230—UN—24MAY89

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.

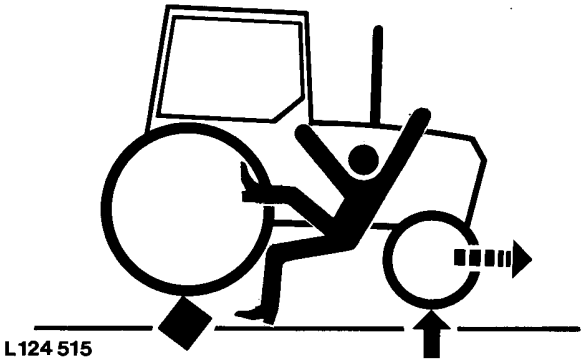
When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

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

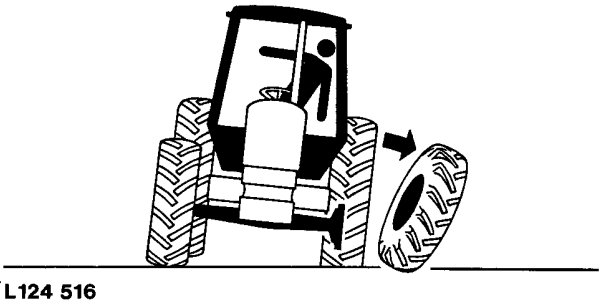


L124515—UN—06AUG94

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

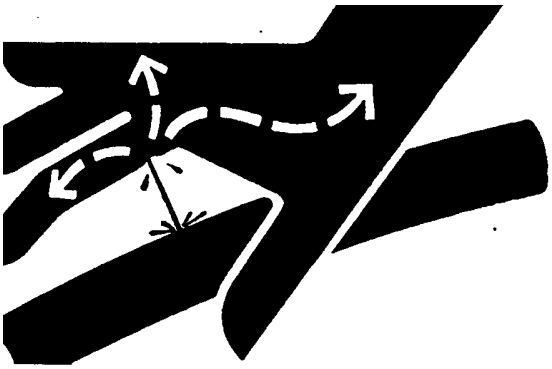


L124516—UN—03JAN95

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



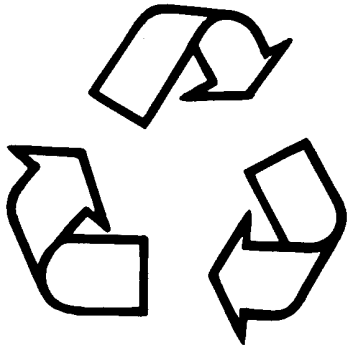
TS219—UN—23AUG88

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.

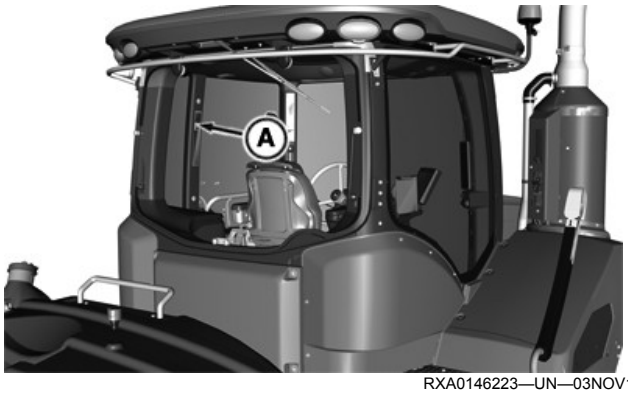
DX,DRAIN-19-01JUN15

Safety Signs

Operator's Manual



RXA0146406—19—24NOV14



RXA0146223—UN—03NOV14

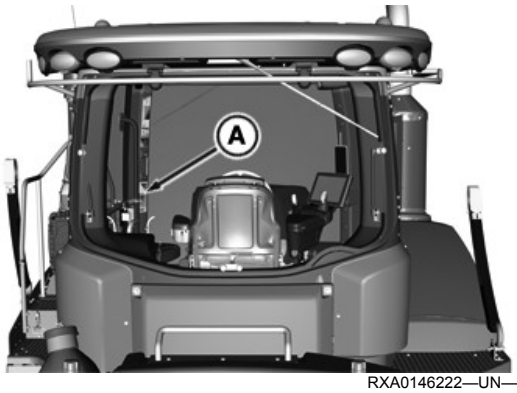
A— Before Operating Tractor Label (Left-Hand Side Cab Post)

RD47322,00006A8-19-04AUG17

Instructional Seat (If Equipped)



RXA0139152—19—07FEB14



RXA0146222—UN—03NOV14

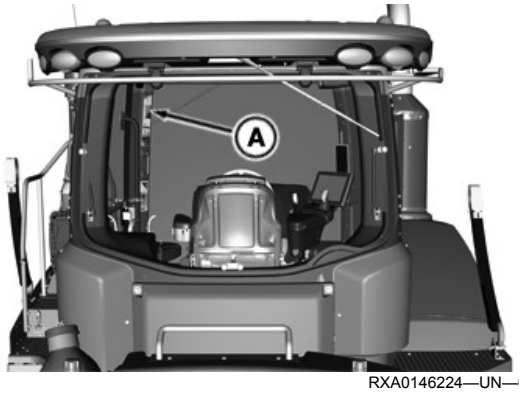
A— Use Instructional Seat Label (Left-Hand Front Cab Post)

RD47322,00006AA-19-04AUG17

Seat Belt



RXA0161467—19—30NOV17



RXA0146224—UN—03NOV14

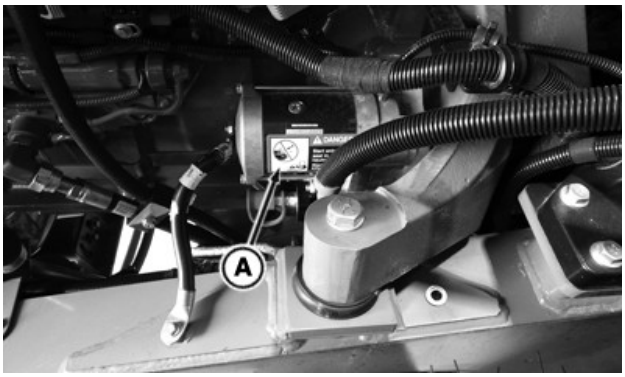
A— Transport and ROPS Warning Label (Left-Hand Front Cab Post)

RD47322,00006A9-19-01DEC17

Starter



RXA0146409—19—26NOV14



RXA0138946—UN—30MAY14

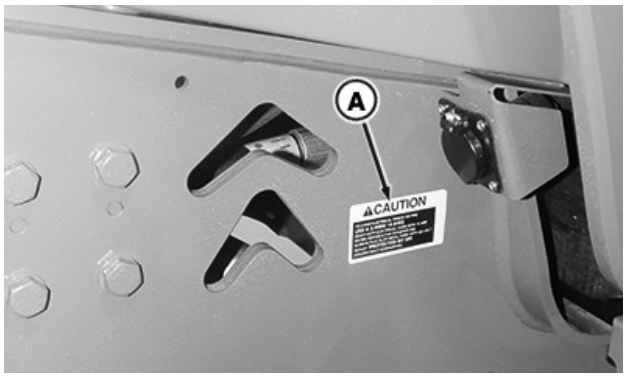
A— Starter Label

RD47322,00006AB-19-04AUG17

Engine Block Heater—13.5 L Engine



RXA0164782—19—07SEP18



RXA0164781—UN—07SEP18

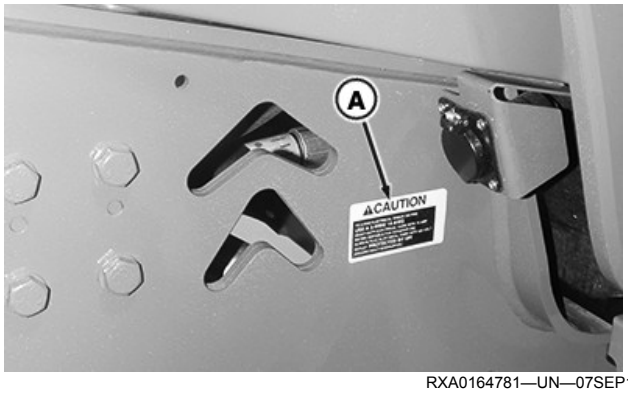
A—Engine Heater Label (Right-Hand Side of Tractor)

RD47322,00006AD-19-07SEP18

Engine Block Heater—15 L Engine



RXA0164782—19—07SEP18



RXA0164781—UN—07SEP18

A—Engine Heater Label (Right-Hand Side of Tractor)

RD47322,00006AE-19-07SEP18

Park Brake (Stored Energy)



RXA0146441—19—02DEC14



RXA0138856—UN—31JAN14

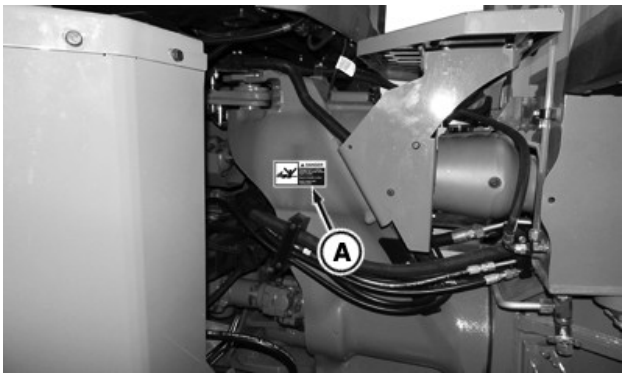
A— Park Brake Label

RD47322,00006B1-19-04AUG17

Rotating Driveline [Ag]



RXA0146402—19—21NOV14

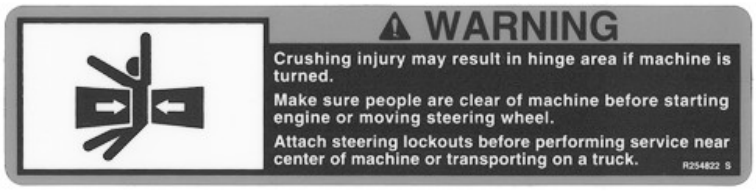


RXA0138860—UN—30MAY14

A— Rotating Driveline Label (Left-Hand and Right-Hand)

RD47322,00006B2-19-26JUL18

Hinge Area





RXA0138858—UN—30MAY14

RXA0146394—19—19NOV14



RXA0142950—UN—24JUN14

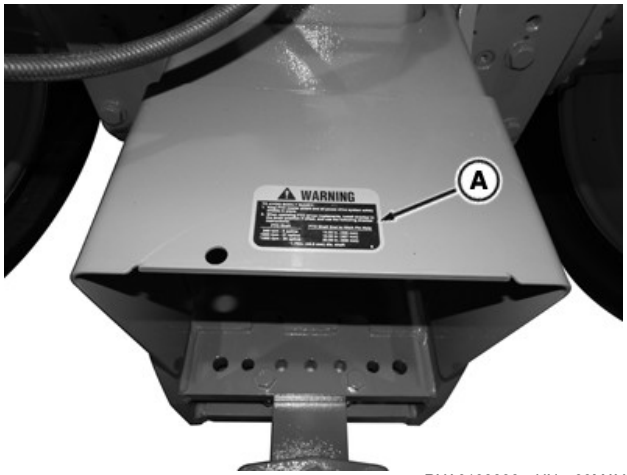
A— Hinge Area Label (Left-Hand and Right-Hand)

KT81203,0000957-19-04AUG17

Rear PTO Shield (If Equipped) [Ag]



RXA0146396—19—21NOV14



RXA0138836—UN—30MAY14

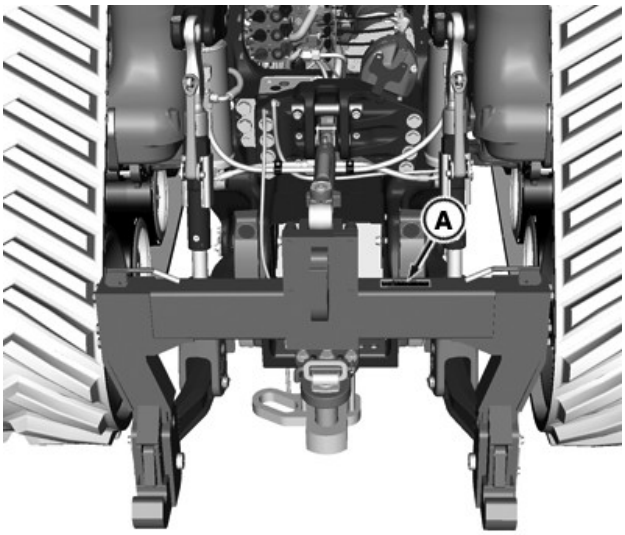
A— PTO Label

RD47322,00006B3-19-26JUL18

Quick-Hitch (If Equipped) [Ag]



RXA0146404—19—21NOV14



RXA0148038—UN—16APR15

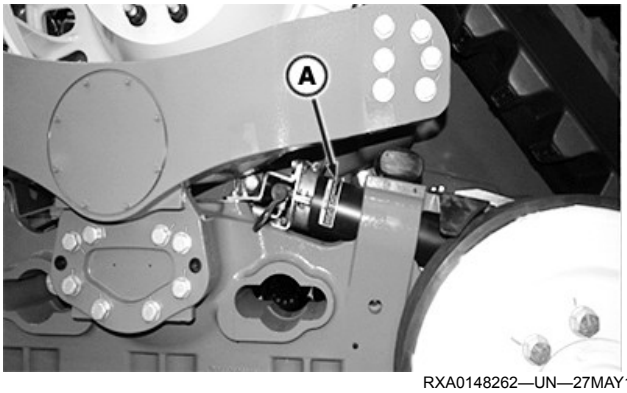
A— Quick-Hitch Label

RD47322,00006B4-19-26JUL18

Track Accumulators



RXA0146397—19—20NOV14



RXA0148262—UN—27MAY15

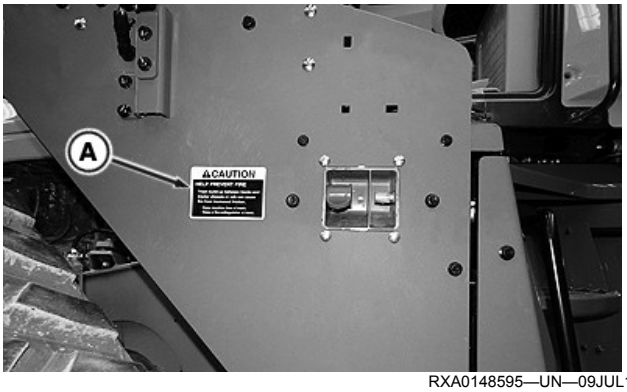
A— Accumulator Label (Left-Hand and Right-Hand, Front and Rear Axles)

RD47322,00008F7-19-04AUG17

Trash Build-Up



RXA0158971—19—26APR17

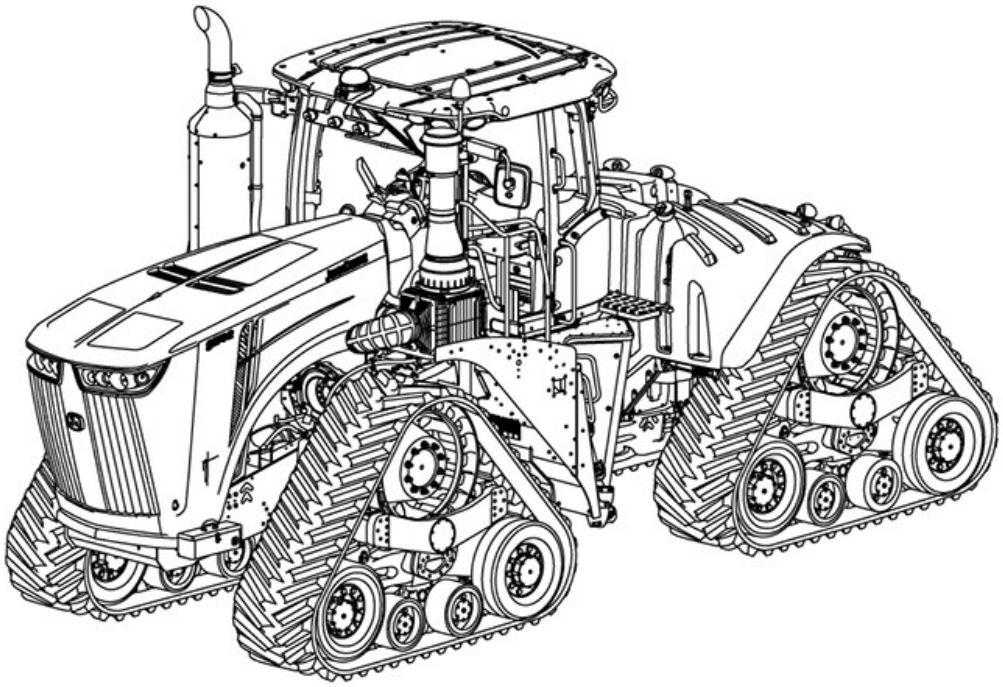


RXA0148595—UN—09JUL15

A— Trash Label

KT81203,000024E-19-04AUG17

9RX Series Tractor



RXA0157889—UN—15FEB17

9RX Series Tractor (Typical)

KD34109,00001DA-19-15FEB17

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

9RX Series Tractor

Your 9RX 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.

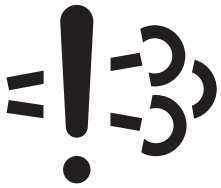
The tractor's quiet, comfortable, and intuitive CommandView™ III Cab provides a secure base of operations. A totally redesigned CommandARM™, ten inch CommandCenter™ Display, and a seat with a 40-degrees of swivel, help keep you comfortable and productive during long hours spent in the cab.

KD34109,00001DC-19-02OCT17

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

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

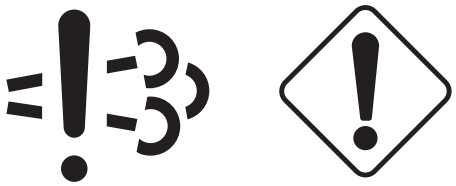
Warning Indicator illuminates when a condition exists which requires operator action.



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.

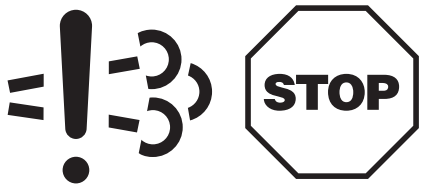
- Engine power is normal.
- Machine operation is normal.
- Place machine in a safe state.
- Contact service provider.



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

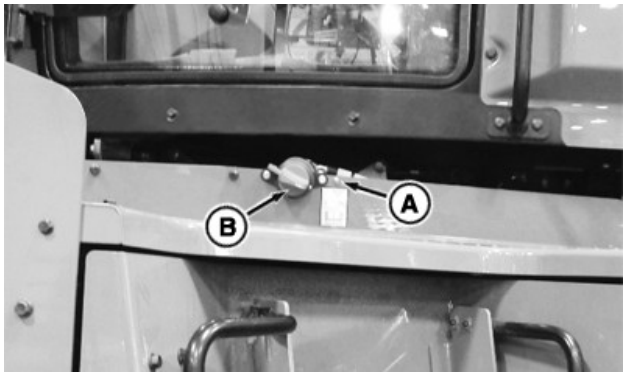
Battery Disconnect Switch

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.

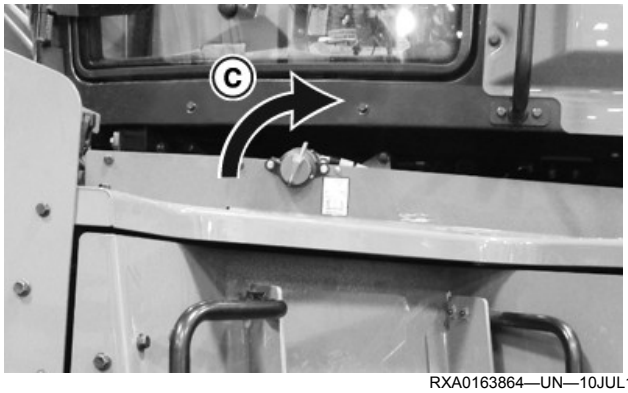
During a long storage period, always turn battery disconnect switch to off position. If battery disconnect switch is left on, battery could lose charge.

1. Stop tractor and place transmission into PARK.



RXA0163863—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.

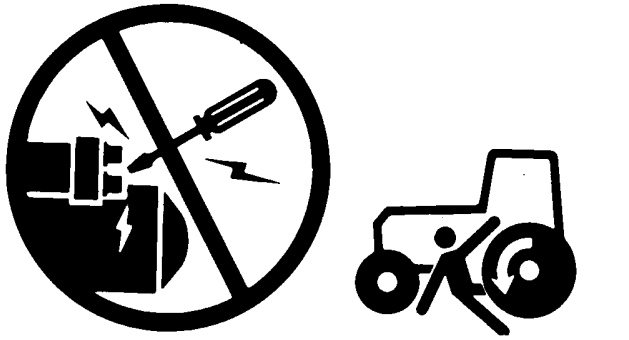


RXA0163864—UN—10JUL18

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

RX32825,0000010-19-17JUL18

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.

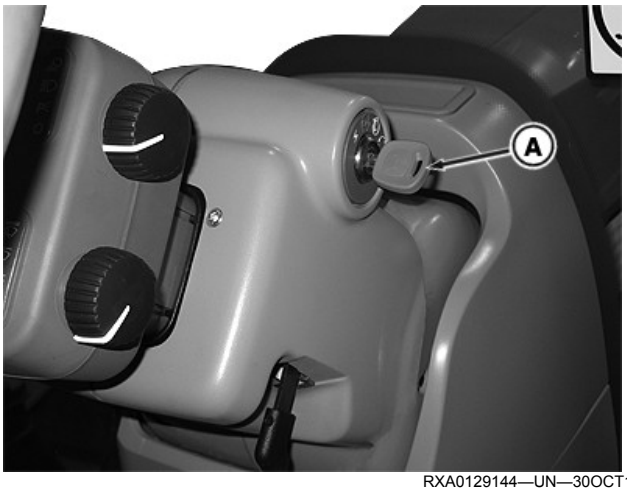
Do not start engine by shorting across starter terminals. Tractor will start in gear if normal circuitry is bypassed. Start engine ONLY from operator seat.

Before Starting Tractor

1. Move SCV levers to NEUTRAL position.
2. Disengage PTO [Ag].
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 1500 rpm at temperatures below -18°C (0°F).

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

KT81203,00000D0-19-20APR18

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 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 [Ag] load.

For maximum tractor performance:

- Ensure that tractor is correctly ballasted, see Performance Ballasting section of this Operator's Manual.
- For transmission information, see e18™ Powershift 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.

IMPORTANT: 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

KT81203,00000C9-19-20APR18

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. Stop tractor and pull throttle back to slow idle position.
2. Depress clutch and brake pedals.

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3. Put transmission in PARK position.
4. Lower all equipment to the ground.
5. Make sure SCV levers are in NEUTRAL position.
6. [Ag] Pull rear PTO (if equipped) switch rearward to disengage PTO.

CAUTION: Remove key to prevent accidents.

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

KT81203,00000D1-19-21AUG18

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

Following are guidelines to reduce fuel consumption:

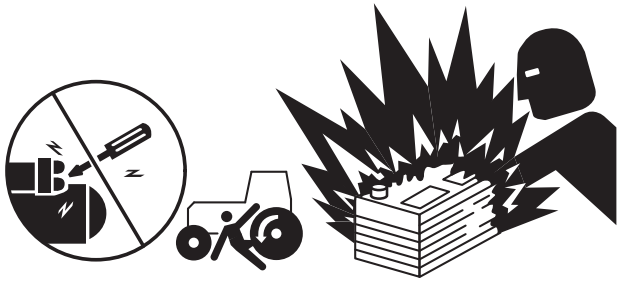
- Replace air cleaner elements and fuel, engine oil, and transmission/hydraulic filter elements at specified service intervals, see Service - Record Charts section of this Operator's Manual or when indicated by CommandCenter™ display messages.
- Use recommended oils and lubricants only, see Fuel, Lubricants, and Coolant sections of this Operator's Manual.
- Adjust hitch function for most efficient operation, see TouchSet Depth Control Section of this Operator's Manual.
- Ballast tractor for conditions, see Performance Ballasting Section of this Operator's Manual.
- Always drive in highest possible gear with reduced engine speed. Choose a gear so engine speed drops 150-250 rpm when tractor is operating and engine is under load. See e18™ Powershift Transmission section of this Operator's Manual.

NOTE: For light work, reduce engine speed below 2000 rpm. Select a 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.

KT81203,00000D2-19-29AUG18

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.

CAUTION: 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 sear, with transmission in neutral or park.

IMPORTANT: Be sure 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 booster batteries are producing 12 volt charge.

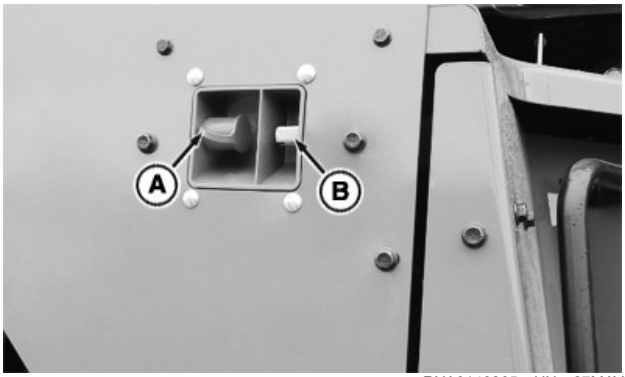
Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off until light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

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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 this Operator's Manual section.

Booster Battery



RXA0148265—UN—27MAY15

1. Remove cap and attach red (positive) battery cable end to remote positive starter terminal (A) and positive terminal of booster battery.
2. Attach black (ground) battery cable to negative terminal of booster battery. Attach other end to remote ground post (B).
3. When tractor has started, remove negative cable from tractor.
4. Remove negative cable from booster battery.
5. Remove positive cable from battery.
6. Remove positive cable from tractor.

Battery Charger

IMPORTANT: Set battery charger at nominal 12 volt and no more than 16 volt maximum. Consult battery charger manufacturers operator's manual.

1. Assure battery charger is turned off.
2. Remove cap and attach positive (red) charger lead to remote positive starter terminal.
3. Attach black (ground) negative charger lead to remote ground post.
4. Switch charger on and charge battery according to charger manufacturers operator's manual.
5. Switch charger off.
6. When tractor has started, remove negative charger lead from tractor.
7. Remove positive lead from tractor.

KT81203,000024B-19-05SEP18

Cold Weather Operation

Cold Weather Starting—With Starting Aid

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.

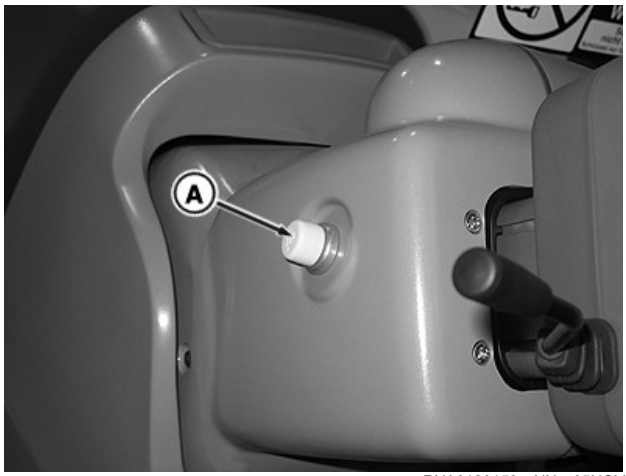
NOTE: Use of cold weather starting option is recommended when starting tractor at or below -6 ° C (21 °F).

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

- 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.

GH15097,00003E2-19-30JUN17

Cold Weather Starting And Operation—Internal Starting Aid

Internal starting aid alters fuel injection timing to enhance starting. Operating time of starting aid is dependent upon coolant temperature and hand throttle position.

Use following procedure:



RXA0138501—UN—21JAN14

1. Put hand throttle (A) in slow idle (900 rpm) position.
2. Start engine.
3. Leave hand throttle in slow idle position.

Operating Characteristics After Start of Engine:

- Operating cycle time varies from 3—30 seconds depending on temperature after engine is started.
- Moving hand throttle from the slow idle position will cancel starting aid cycle.
- Engine may run rougher and have increased diesel knock after end of starting aid cycle. This is normal.
- Engine will run smoother as engine temperature increases.

e18™ Powershift Transmission Cold Weather Operating Characteristics:

- When temperature is -10 °C (14°F) or lower it may take one minute to get parking brake released with operator in seat and transmission in gear. Several shifts between PARK and NEUTRAL may be required.
- When temperature is -10 °C (14°F) or above it may

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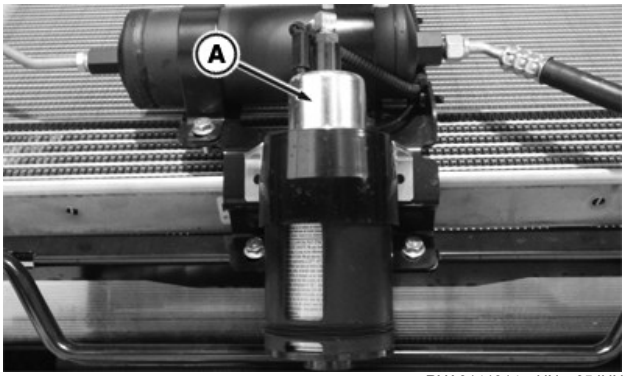
take 3 seconds to get parking brake released with operator in seat.

- When shift lever is moved to NEUTRAL, corner post display will show “N” for three seconds. If park brake does not release “N” will change back to “P”. Move shift lever back to PARK then back to NEUTRAL until “N” displays more than three seconds.
- During cold weather starting, transmission will not shift into 14F through 18F speeds until normal operating temperature has been reached. Delayed shifting, slow hydraulic operation, hard steering, and limited engine rpm may also be noticeable until operating temperature is obtained.

TO84419,00000B2-19-01AUG17

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 cans inside cab.



RXA0141914—UN—05JUN14

1. Raise hood to access canister (A).
2. Remove safety cap and plastic spray nozzle from new can.
3. Loosen canister and remove old can.

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

4. Install new can and tighten canister.

TO84419,000039B-19-25JUL17

Engine Coolant Heater Use—13.5 L or 15 L Engines



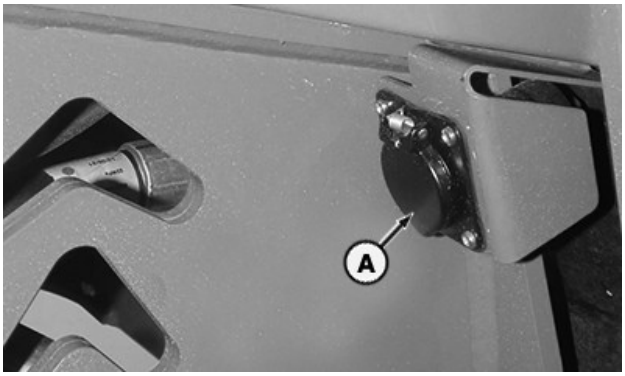
TS210—UN—23AUG88

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 220 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 interrupter on tractor protects tractor only, not electrical wiring supplying power to tractor. Test ground fault interrupter before each use.

NOTE: Extremely cold weather may require 1—2 hours to heat engine.



RXA0164452—UN—05SEP18

Front Right-Hand Side of Tractor

Connect engine coolant heater plug (A), located on right-hand side of engine, to a ground fault protected 120 volt electrical outlet.

A 1000 W engine coolant heater is available from your John Deere dealer.

BH38674,0000D90-19-06SEP18

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.

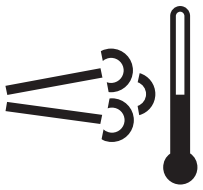
KT81203,00000CE-19-17JUL18

Aftertreatment Indicators Overview



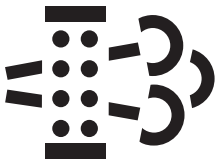
RG22487—UN—21AUG13

Diesel Exhaust Fluid Indicator



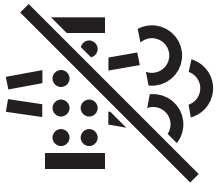
RG22488—UN—21AUG13

Engine Emissions Temperature Indicator



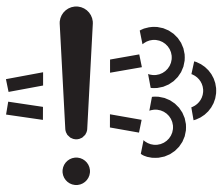
RG22489—UN—21AUG13

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.

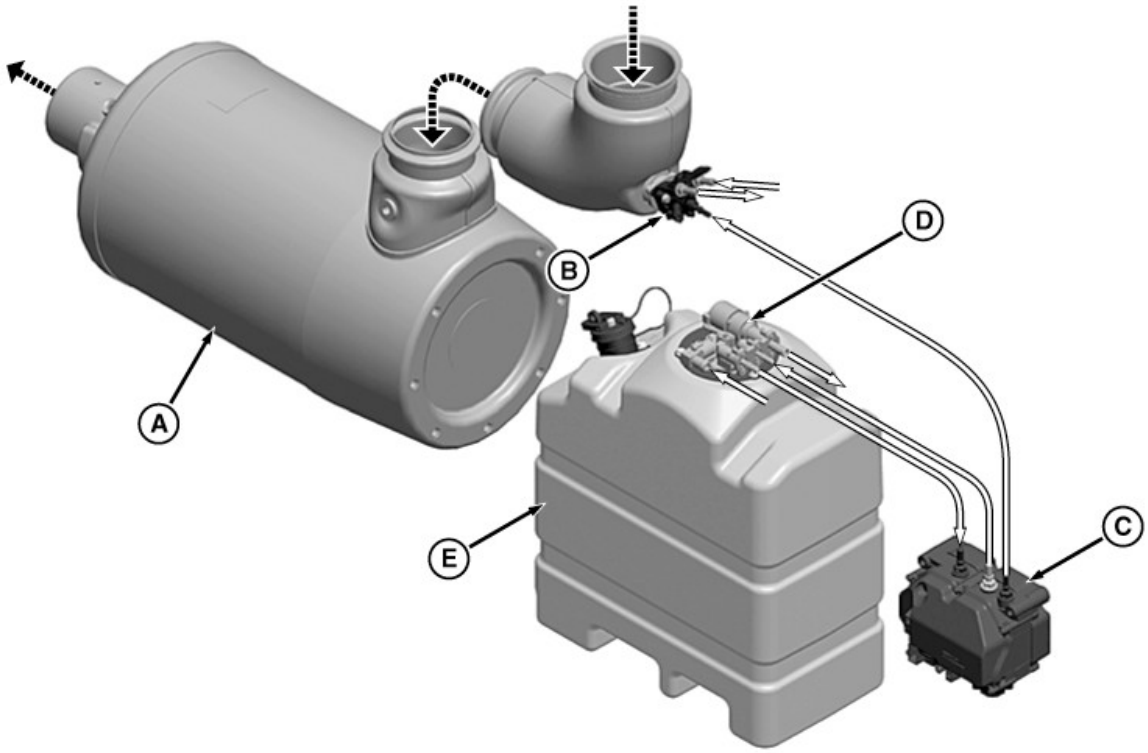
The auto cleaning disabled indicator illuminates when the operator has engaged the request to disable the auto exhaust filter cleaning function. This icon remains illuminated until the operator re-engages automatic exhaust filter cleaning from the diagnostic gauge. Disabling auto mode is not recommended 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



RG22427—UN—14FEB13

SCR System

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 as required. Corner Post Display Indicators and CommandCenter™ prompts provide operator information related to exhaust filter system activity.

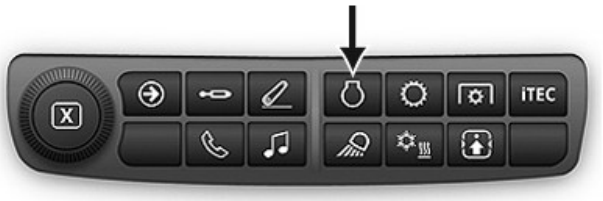
NOTE: Tractors equipped with 15 L engines will automatically perform an initial exhaust filter cleaning after a few hours of operation. This procedure may have occurred prior to tractor delivery. If procedure begins, allow full completion of process.

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.

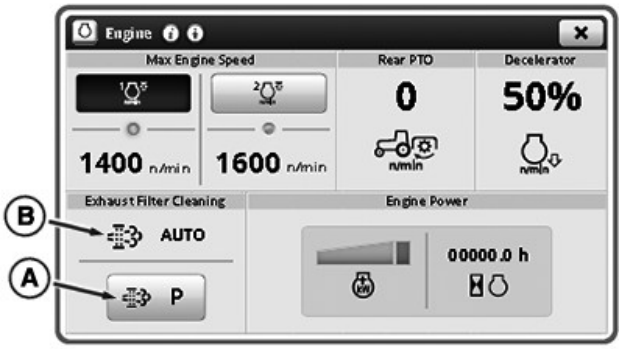
Do not disable automatic exhaust filter cleaning unless absolutely necessary. Repeated disabling or ignoring prompts to perform manual or parked cleaning procedure causes additional engine power limitation and can eventually lead to required dealer service.

Perform AUTO Exhaust Filter Cleaning:



RXA0133711—UN—16JUL13

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

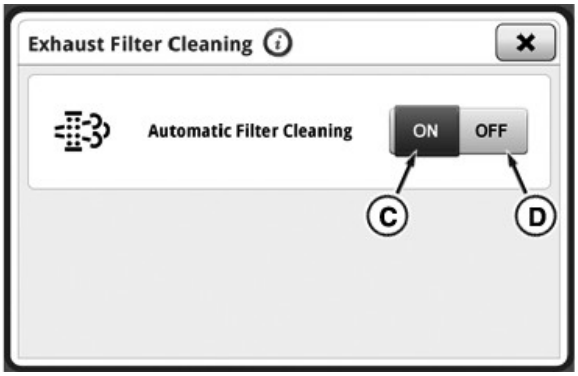


RXA0153765—UN—02SEP16

Ag Options Shown

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.



RXA0160986—UN—26SEP17

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.

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

TO84419,0000396-19-20APR18

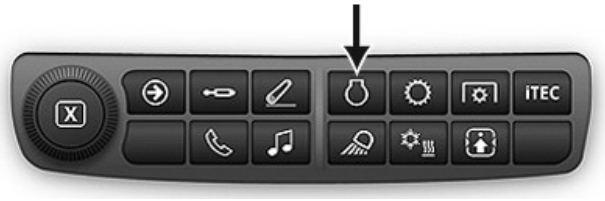
Parked Exhaust Filter Cleaning—Final Tier 4/Stage V Engine

⚠ 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.

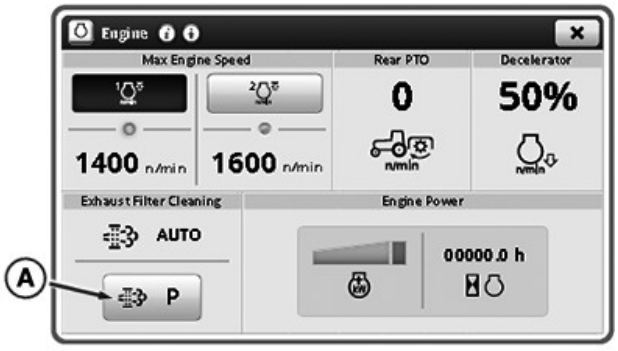
NOTE: Tractors equipped with 15 L engines will automatically perform an initial exhaust filter cleaning after a few hours of operation. This procedure may have occurred prior to tractor delivery. If procedure begins, allow full completion of process.

Perform Parked Exhaust Filter Cleaning:



RXA0133711—UN—16JUL13

1. Press Engine Shortcut Button on Navigation Bar.



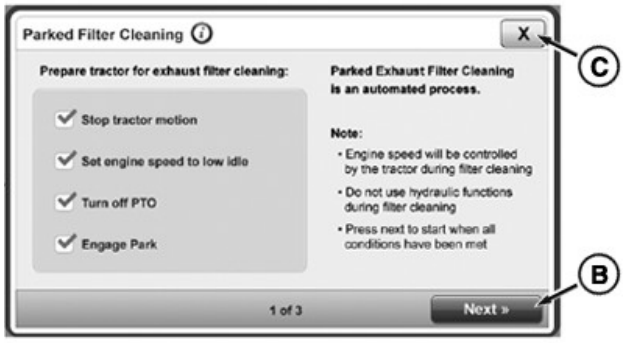
RXA0153799—UN—02SEP16

Ag Options Shown

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 [Ag]
   - 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 is 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 and 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.

TO84419,00002DA-19-20APR18

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.

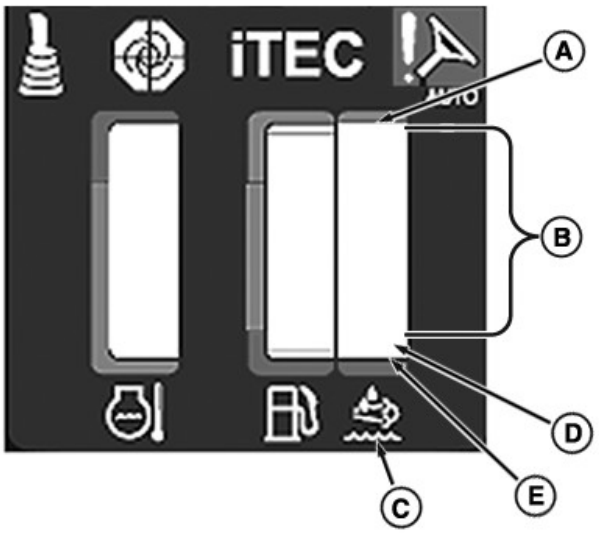
CommandCenter is a trademark of Deere & Company

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. Never interchange aftertreatment components between Interim Tier 4/Stage III B and Final Tier 4/Stage V equipped vehicles.

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.



RXA0160337—UN—01AUG17

Tractor electronic systems monitor DEF level to assure proper performance. Corner Post Display shows 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 Refilling Diesel Exhaust Fluid (DEF) in the Diesel Exhaust Fluid (DEF) section of this Operator's Manual.

DEF level and operation changes:

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

Low DEF Level 1 (D)—When DEF level drops to first red bar, 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.

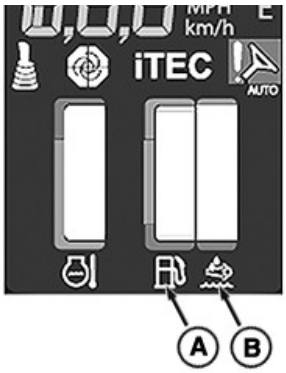
NOTE: DEF indicator light continues to flash at Low DEF Level 2 on tractors equipped with 15 L engines.

Low DEF Level 2 (E)—When DEF level falls below this point, 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.

TO84419,0000398-19-17APR18

Low Fuel or Low DEF Warning



RXA0154695—UN—12OCT16

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

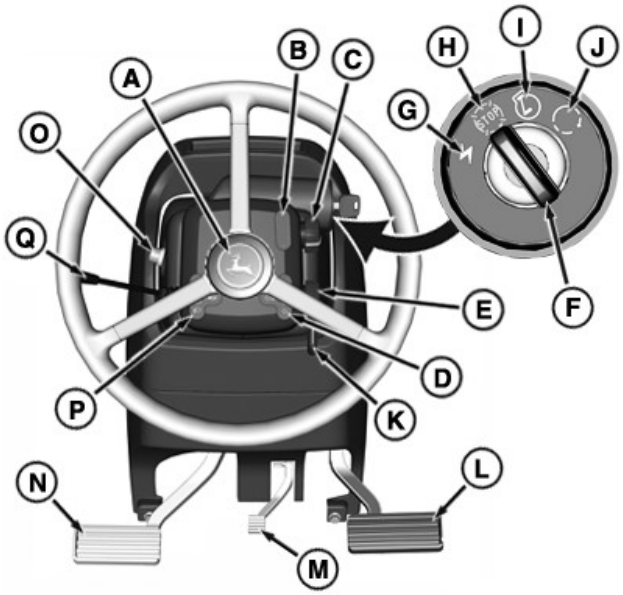
IMPORTANT: Prevent damage to tractor emissions system. Battery disconnect switch with indicator light: Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not turn disconnect switch off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

Front Console



RXA0157262—UN—01FEB17

Front Console

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 Pedal
M—Steering Wheel Tilt Release
N—Clutch Pedal
O—Starting Aid Switch (If Equipped)
P—Turn Signal Icon, Road/Field Light Icon and Horn Icon
Q—Turn Signal Lever/Horn

TO84419,00003C7-19-17MAR17

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.



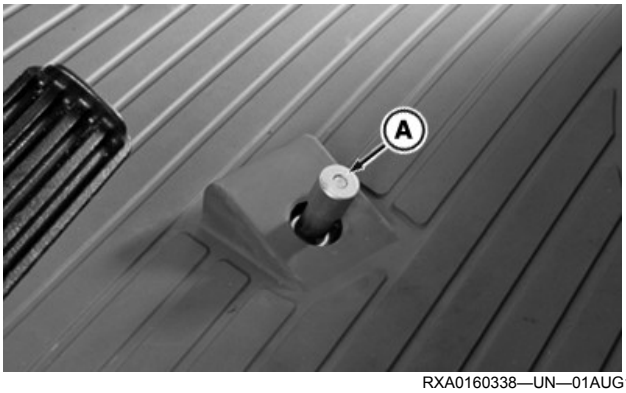
RXA0136449—UN—06NOV13

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 Decelerator



RXA0160338—UN—01AUG17

Use foot decelerator (A), to slow down engine rpm, when turning at end of field.

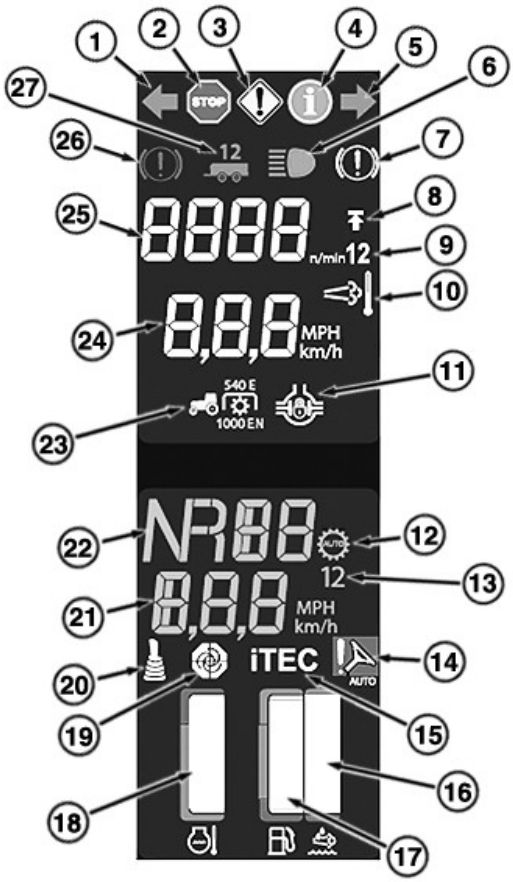
For more information on foot decelerator use, see Foot Decelerator in Brakes section of this Operator's Manual.

KT81203,0000160-19-17APR18

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

Corner Post Display

Corner Post Display



RXA0153153—UN—04AUG16

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)
8—Maximum Set Speed Indicator
9—Maximum Set Speed Selection (1 or 2)
10—Exhaust Filter Cleaning Indicator
11—Differential Lock Indicator
12—Efficiency Manager Indicator
13—Efficiency Manager Set Speed Indicator
14—AutoTrac™ Indicator
15—iTEC™ Indicator
16—Diesel Exhaust Fluid (DEF) Gauge (FT4/Stage V Engine Only)
17—Fuel Gauge
18—Coolant Temperature Gauge
19—Tractor Automation Indicator
20—ISOBUS Auxillary Mode Indicator
21—Set Speed
22—Current Gear/Range
23—PTO Indicator (If Equipped) [Ag]
24—Vehicle Ground Speed
25—Tachometer
26—Brake Warning Indicator (Red)
27—Trailer Indicator (If Equipped)

TO84419,0000044-19-20APR18

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.

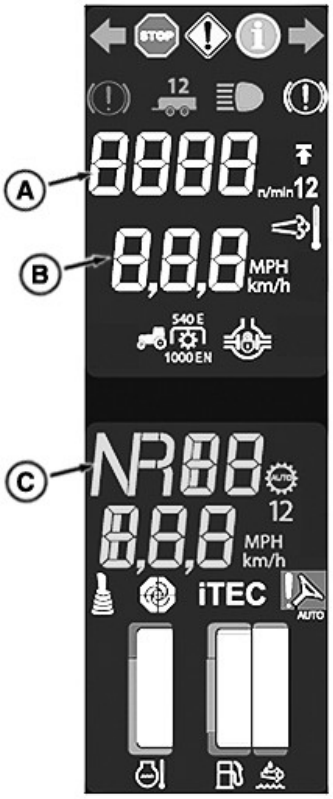
Information Indicator (C): Light illuminates continuously and alarm sounds for two seconds, indicating possible fault condition.

TS36762,000018A-19-17APR18

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iTEC is a trademark of Deere & Company

CommandCenter is a trademark of Deere & Company

Digital Indicators—Tachometer, Ground Speed and Transmission



RXA0153154—UN—04AUG16

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

B—Ground Speed Indicator: Displays ground 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.

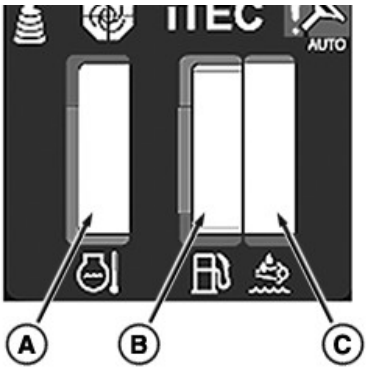
If "- - -" is displayed, no gear signal is being received.

Efficiency Manager™: Shows set speeds 1 or 2.

PST Only: Shows gear selected.

TO84419,0000046-19-25JUL17

Gauges—Coolant Temperature, DEF Level and Fuel Level



RXA0160352—UN—02AUG17

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 (DEF) is only available on FT4/ Stage V engine equipped tractors. DEF gauge will not show up if not equipped with those engines.

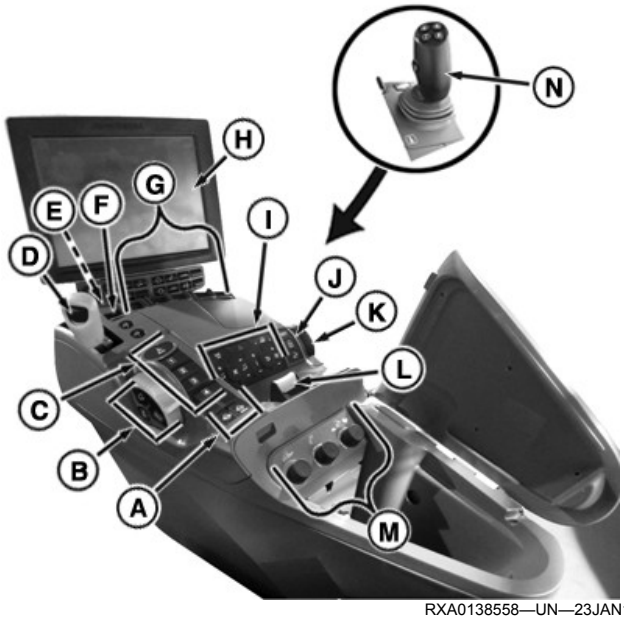
C—Diesel Exhaust Fluid (DEF) Gauge (If Equipped): Displays diesel exhaust fluid level. Each lighted segment represents 4% of DEF fluid tank total capacity. When DEF fluid tank is full, all segments are lit. When only bottom segment is lit, tank is nearly empty. DEF fluid tank should be filled whenever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

SV81855,0000105-19-18JUL18

Efficiency Manager is a trademark of Deere & Company

CommandARM™ Controls

CommandARM™ with Generation 4 CommandCenter™ Display



RXA0138558—UN—23JAN14

Ag CommandARM™ Shown

A—Differential Lock
B—Hand Throttle Control
C—iTEC™ & AutoTrac™ Resume
D—Speed Control Lever/Shift Lever
E—SCV Control Lever Lock/ISB Lock Button
F—Hitch Lever [Ag]/SCV Lever [Scraper]
G—SCV Control Levers
H—Generation 4 CommandCenter™ Display
I—Climate, Radio and Lighting Controls
J—Set/Lock/Resume Buttons [Ag]
K—Depth Adjust Hitch Dial [Ag]
L—PTO Lever [Ag]
M—Load Depth/ Upper Limit/ Drop Rate Hitch Dials [Ag]
N—Joystick (If Equipped)

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

SV81855,00000B0-19-20APR18

CommandARM™ Hitch Controls [Ag]



RXA0158491—UN—29MAR17

A—Hitch Control Lever (If Equipped)
B—Set Point Button
C—Hitch Control Lever Lock
D—Return to Lower Set Point
E—Depth Adjust Hitch Dial
F—Drop Rate Hitch Dial
G—Upper Limit Hitch Dial
H—Load Depth Hitch Dial

KT81203,000013B-19-20APR18

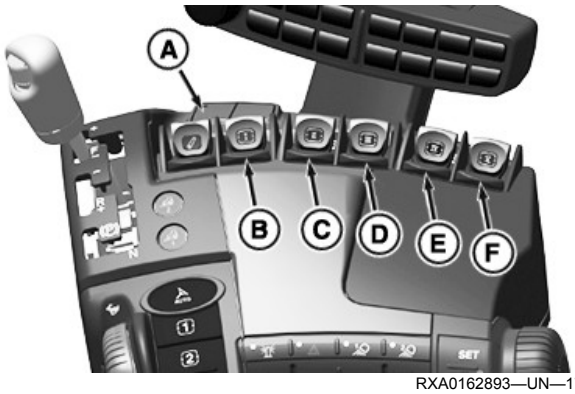
CommandARM™ SCV Control Levers

Tractors without hitch may have up to eight SCVs installed.

[Ag] Tractors equipped with hitch may have up to six SCVs installed.

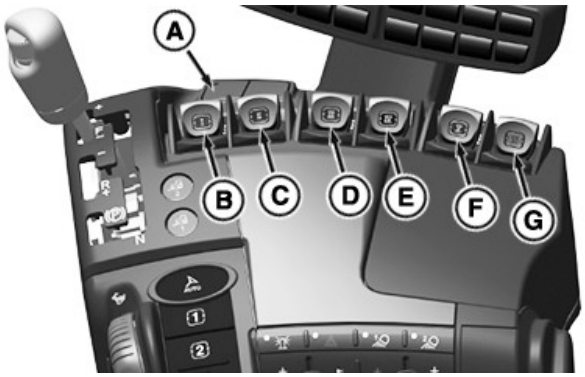
Reconfigurable SCV Controls allows operator to match device with various implement functions. This process is called “Assignment” input to function, see Controls Setup in CommandCenter™ section of this Operator’s Manual for more information.

iTEC is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company



RXA0162893—UN—17APR18

SCV Control Levers [Ag]



RXA0160353—UN—02AUG17

SCV Control Levers [Scraper]

A—SCV Control Lever Lock
B—SCV 1 Control Lever
C—SCV 2 Control Lever
D—SCV 3 Control Lever
E—SCV 4 Control Lever
F—SCV 5 Control Lever
G—SCV 6 Control Lever [Scraper]

SCV control lever lock (A) locks out control of SCVs by SCV control levers only.

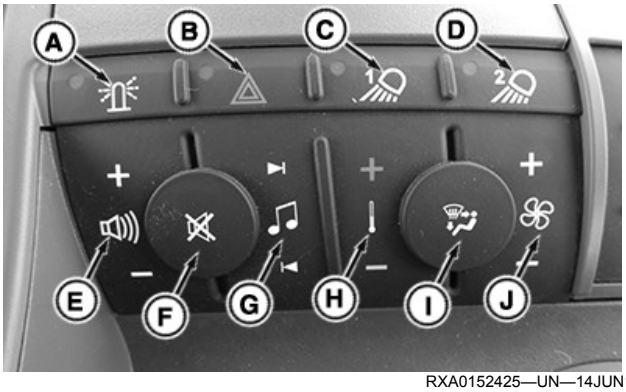


RXA0133735—UN—17JUL13

Controls Setup icon appears on SCV control levers that are reconfigurable.

SV81855,00000B3-19-20APR18

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 [Ag]

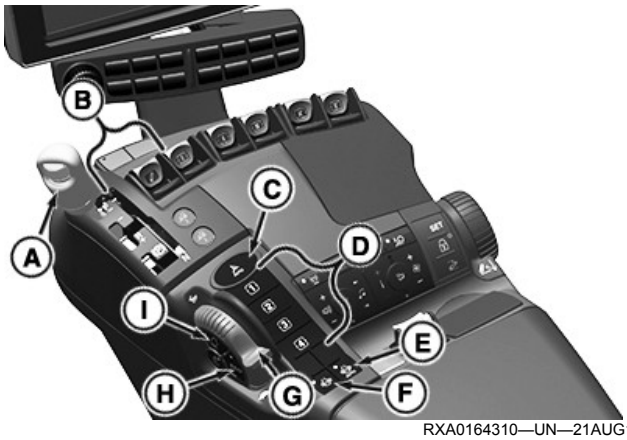


RXA0142354—UN—09JUN14

A—PTO Control Lever

TS36762,0000191-19-20APR18

CommandARM™ Left-Hand Side Controls



RXA0164310—UN—21AUG18

Ag CommandARM™ Shown

A—Transmission Shift Lever
B—SCV Control Lever Lock/ISB Button
C—AutoTrac™ Resume Button
D—iTEC™ Buttons
E—Auto Differential Lock Button
F—Differential Lock Button
G—Hand Throttle Control
H—ECO ON/OFF Button
I—Maximum Set Speed ON/OFF Button

SV81855,00000B6-19-21AUG18

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

Rear Hitch or PTO Availability

[Ag] PTO or rear hitch options are available only on an agricultural tractor.

[Scraper] For scraper tractor, ignore CommandCenter™ content that pertains to these options.

RX32825,0000004-19-09AUG18

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

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)



PC17355—UN—03DEC13

4200 and 4600 CommandCenter™

- 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



PC25545—UN—19APR18

4600 Processor

4200 Processor

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

4600 Processor

- 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

CommandCenter is a trademark of Deere & Company

Wi-Fi is a registered trademark of Wi-Fi Alliance.

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.

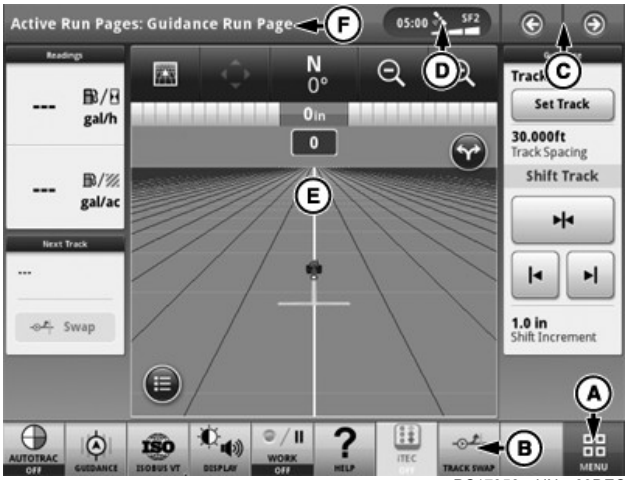
RF Exposure Guidance: This equipment complies with FCC and Industry Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 2.5 cm (1 in.) between the radiator and persons. This transmitter must not be co-located 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



PC17269—UN—15JUL13

Menu Button

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



RXA0147924—UN—13APR15

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



RXA0134978—UN—07AUG13

Audio

Audio

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



RXA0162901—UN—18APR18

AutoLoad™

AutoLoad™ [Scraper]

- Use AutoLoad™ application to adjust AutoLoad™ settings.
- For more information, see Scraper Information section of this Operator's Manual.



RXA0134955—UN—07AUG13

Engine

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.



RXA0134979—UN—07AUG13

HVAC

HVAC

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



RXA0134980—UN—07AUG13

iTEC™

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.



RXA0134956—UN—07AUG13

Lights

Lights

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



RXA0134981—UN—07AUG13

Maintenance and Calibrations

Maintenance and Calibrations

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

iTEC is a trademark of Deere & Company



RXA0134982—UN—07AUG13

Phone

Phone

- Use Phone application to make/receive calls through CommandCenter™.
- For more information, see Radio Operation section of this Operator's Manual.



RXA0134957—UN—07AUG13

PTO

PTO [Ag]

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



RXA0134958—UN—07AUG13

Rear Hitch

Rear Hitch [Ag]

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



RXA0134983—UN—07AUG13

SCV

SCV

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



RXA0152447—UN—27JUN16

Steering

Steering

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



RXA0152439—UN—20JUN16

Trailer Brake

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.



RXA0134984—UN—07AUG13

Transmission

Transmission

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

KT81203,0000115-19-20APR18

Operating System Applications Overview



PC15302—UN—19MAR13

Operating System Applications Package

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

CommandCenter is a trademark of Deere & Company



PC23955—UN—24MAR17

Calculator

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

COM Port Settings



PC25540—UN—18APR18

COM Port Settings

- 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



PC15326—UN—08JUL13

Controls Setup

- 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



PC16674—UN—18MAR13

Date and Time

- 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



PC17272—UN—17JUL13

Diagnostics Center

- 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



PC16685—UN—18MAR13

Display and Sound

- 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



PC20410—UN—22MAY15

Equipment Manager

- 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



PC17260—UN—11JUL13

Fields and Boundaries

- 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



PC16671—UN—18MAR13

File Manager

- 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.

Flags



PC25539—UN—18APR18

Flags

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

Help Center



PC16684—UN—18MAR13

Help Center

- 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



PC16682—UN—18MAR13

ISOBUS VT



PC15293—UN—18MAR13

ISOBUS VT Menu

- 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.

Language and Units



PC16677—UN—18MAR13

Language and Units

- 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



PC16678—UN—18MAR13

Layout Manager

- 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



PC15318—UN—16MAY13

Machine Monitor

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

Mapping



PC20413—UN—11MAY15

Mapping

- 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



PC17363—UN—16DEC13

Remote Display Access

- 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



PC22543—UN—22APR16

Settings Manager

- 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



PC15346—UN—11JUL13

Software Manager

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

StarFire™



PC17388—UN—15MAY14

StarFire

- 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



PC17262—UN—12JUL13

Users and Access

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

Video



PC23956—UN—24MAR17

Video

- 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



PC23092—UN—26SEP16

Wireless Settings

- 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.

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StarFire is a trademark of Deere & Company

Work Monitor



PC15317—UN—16MAY13

Work Monitor

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

Work Setup



PC20415—UN—11MAY15

Work Setup

- 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



PC21878—UN—24NOV15

Work Totals

- 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



PC15301—UN—19MAR13

AMS Applications Package

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



PC16676—UN—18MAR13

AutoTrac™ Guidance

- 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



PC24721—UN—14SEP17

AutoTrac™ Turn Automation

- 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



PC20399—UN—16FEB15

Overlap Control

- 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



PC20399—UN—16FEB15

Section Control

- 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



PC24722—UN—18SEP17

Sharing

- 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™ 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



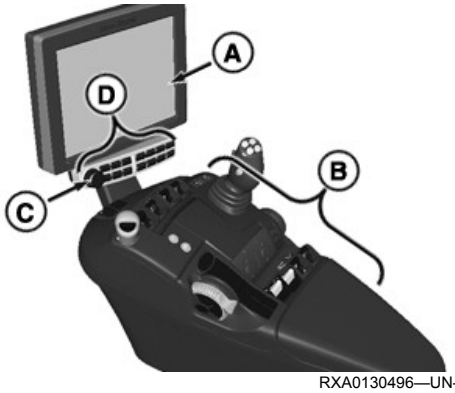
RXA0135012—UN—12AUG13

- 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.

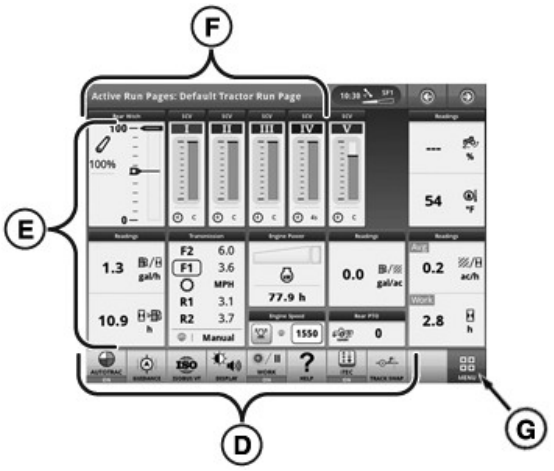


RXA0130496—UN—09APR13

CommandCenter™ and CommandARM™

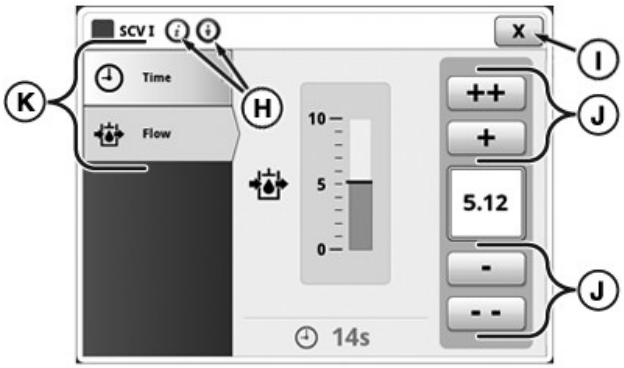
CommandCenter is a trademark of Deere & Company

AutoTrac is a trademark of Deere & Company



RXA0137128—UN—19NOV13

Run Page



RXA0137084—UN—13DEC13

Module Functions

Navigating CommandCenter™ Pages

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.

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

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CommandARM is a trademark of Deere & Company

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.

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.

KT81203,0000056-19-10JUN14

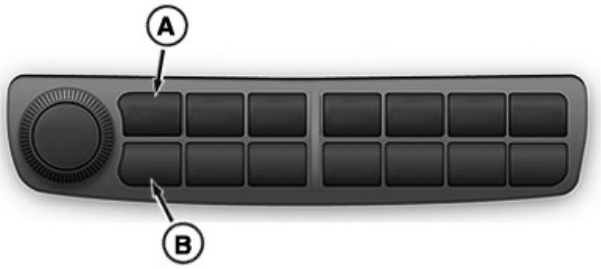
Power Display On and Off

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.



RXA0148512—UN—25JUN15

Navigation Bar

Perform hard rest 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.



PC23154—UN—10OCT16

Swap Button

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.

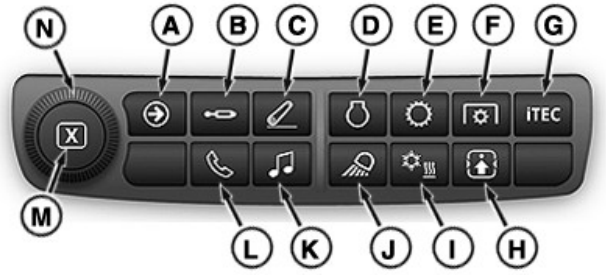
For more information on extended monitor, see onscreen help.

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

Shortcut Buttons

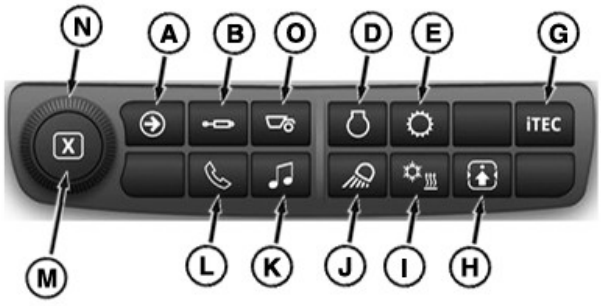
NOTE: In most cases, agricultural navigation bar is used as a visual example.

Generation 4 CommandCenter™ navigation bar shortcut buttons allow direct access to specific applications. Agricultural [Ag] and scraper [Scraper] navigation bars have slightly different configurations.



RXA0132501—UN—15MAY13

Agricultural Navigation Bar [Ag]



RXA0161045—UN—11OCT17

Scraper Navigation Bar [Scraper]

A—Next Run Page
B—SCV
C—Rear Hitch [Ag]

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D—Engine
E—Transmission
F—PTO [Ag]
G—iTEC™
H—Controls Setup
I—HVAC
J—Lights
K—Audio
L—Phone
M—Close Button
N—Adjustment Dial
O—AutoLoad™ [Scraper]

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.

KD34109,000075F-19-20APR18

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***



PC15319—UN—20MAY13

A—Day Mode
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



PC15320—UN—20MAY13

A—Day Settings
B—Night Settings

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



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



PC15322—UN—20MAY13

Display Volume

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

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

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Multiple Displays



PC15323—UN—20MAY13

Multiple Displays

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.



PC20416—UN—12MAY15

GS3 2630 Display

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:

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GreenStar is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company

SeedStar is a trademark of Deere & Company

- 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



PC15314—UN—15MAY13

Date and Time

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



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



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

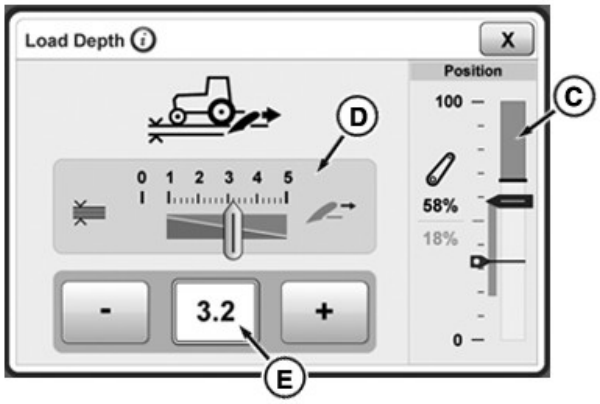
Various methods are provided to allow selection and modification of CommandCenter™ pages and values.



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.

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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



PC15346—UN—11JUL13

Software Manager

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:

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- Chinese
- English
- French
- German
- Italian
- Portuguese
- Russian
- 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



PC15348—UN—11JUL13

USB Drive

Software updates are available for download from:

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.



PC23905—UN—17MAR17

Details Button

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



PC23906—UN—17MAR17

Enter Code Button

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



PC16682—UN—18MAR13

ISOBUS VT

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



PC15293—UN—18MAR13

ISOBUS VT Menu

1. Select Menu button within ISOBUS VT.



PC17281—UN—10SEP13

Remote Software Updates

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

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JDLink is a trademark of Deere & Company

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

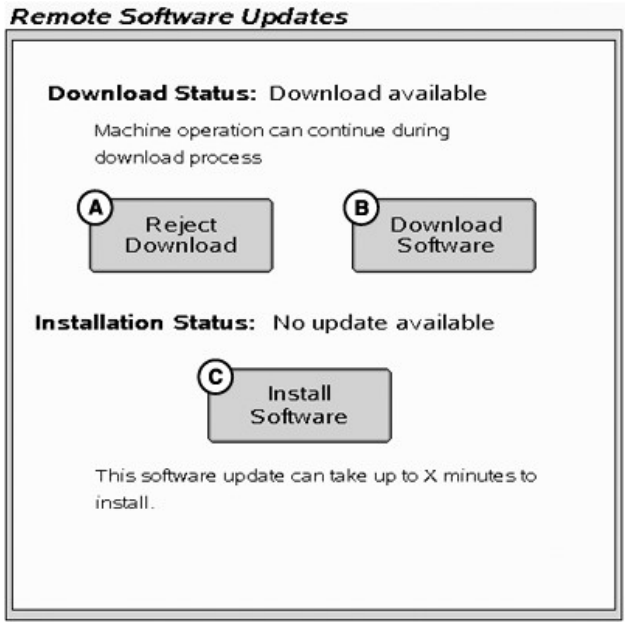
Software Update Available

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



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.

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Install Updates



PC20420—UN—13NOV15

Update Ready for Install

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

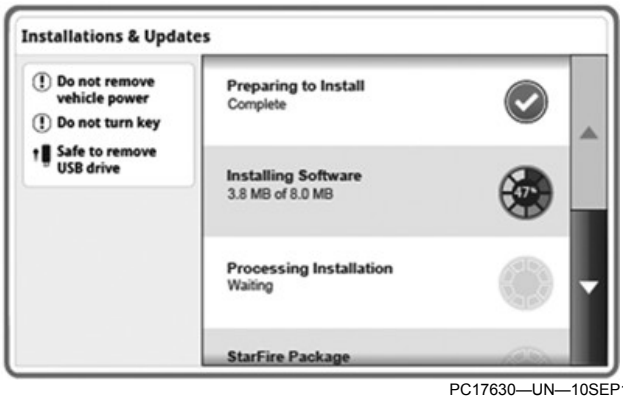


PC12672—UN—28JUN10

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

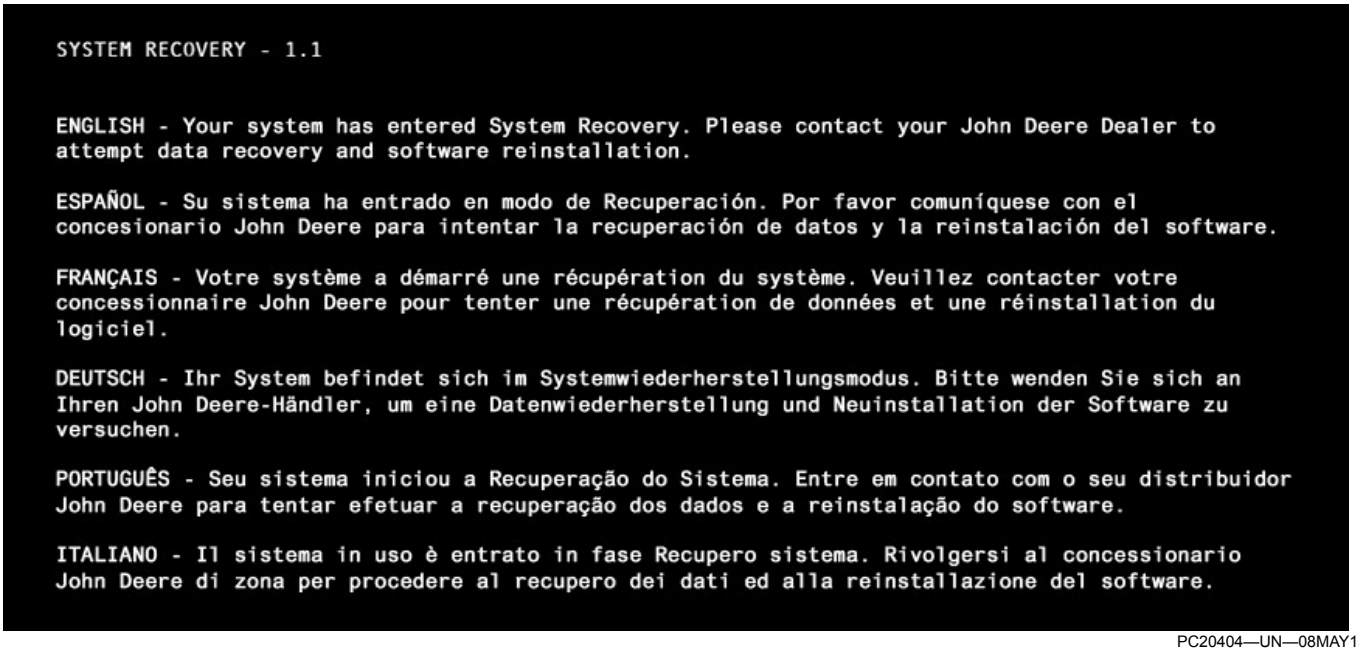
Troubleshooting — Reprogramming

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.

Symptom	Problem	Solution
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. *NOTE: Remote Software Updates should be available at all times, whether there is a payload or not.*	Cannot access Remote Software Updates page on the display.	Check harness and connections to MTG.

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

System Recovery



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



PC17363—UN—16DEC13

Remote Display Access

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



PC16671—UN—18MAR13

File Manager

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



PC17398—UN—22OCT14

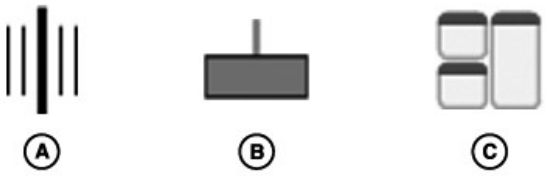
Settings

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



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.



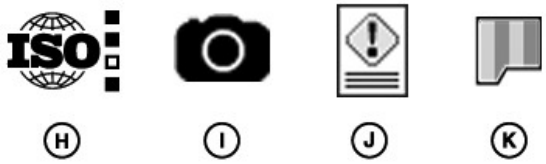
PC24719—UN—14SEP17

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



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.)

CommandCenter is a trademark of Deere & Company

- 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



PC21844—UN—16NOV15

Data Sync

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



PC20405—UN—30APR15

Import Data

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.

Apex is a trademark of Deere & Company

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

- 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



PC20406—UN—30APR15

Export Data

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



PC20407—UN—30APR15

Delete Data

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

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Apex is a trademark of Deere & Company

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



PC17272—UN—17JUL13

Diagnostics Center

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



PC15331—UN—08JUL13

Hide Diagnostics Center

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



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



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:

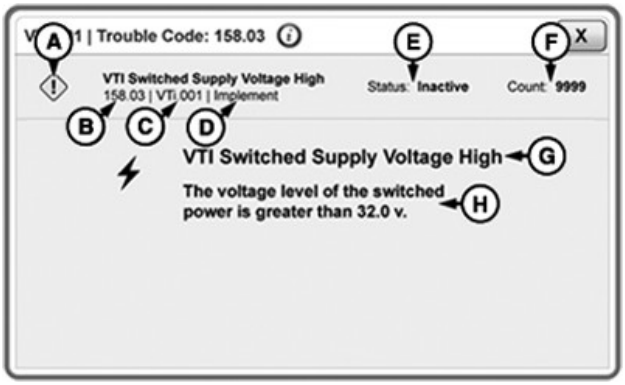
Code

- 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.

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

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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 work group. Use Sharing application to make changes to these settings.

DX,PC,DIAG,DATASYNC-19-23OCT17

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Service ADVISOR is a trademark of Deere & Company

Users and Access



PC17262—UN—12JUL13

Users and Access

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



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



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.



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



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



PC16678—UN—18MAR13

Layout Manager

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



PC15336—UN—10JUL13

Active Set

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



PC15341—UN—10JUL13

Add Run Page Button

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



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



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



PC17386—UN—15MAY14



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

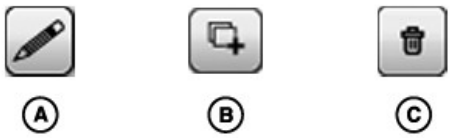


PC15340—UN—10JUL13

All Run Pages

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



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



PC15341—UN—10JUL13

Add New Button

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



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



PC15342—UN—10JUL13

Move Module

Once added to run page, select module to highlight it. Press and slide module to move it to an open area.

Remove Module



PC15343—UN—10JUL13

Remove Module Button

Select module to highlight it, and select Remove button.

DX,PC,LAYOUT,ADDRUNPAGES-19-07APR17

Fields and Boundaries



PC17260—UN—11JUL13

Fields and Boundaries Application

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:

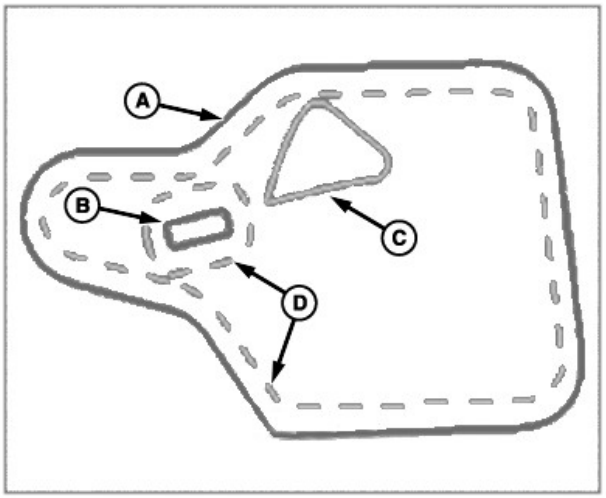
- Filter guidance track list.
- Associate new tracks to the field when they are created.
- Begin new or continue previous work data.

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

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

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AutoTrac™ Guidance



PC16676—UN—18MAR13

Guidance

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



PC20410—UN—22MAY15

Equipment Manager

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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

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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



PC15318—UN—16MAY13

Machine Monitor

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



PC15317—UN—16MAY13

Work Monitor

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



PC15324—UN—21MAY13

Maintenance and Calibrations

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



PC23946—UN—22MAR17

Radar Calibration

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



PC23947—UN—22MAR17

Wheel Slip Calibration

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.

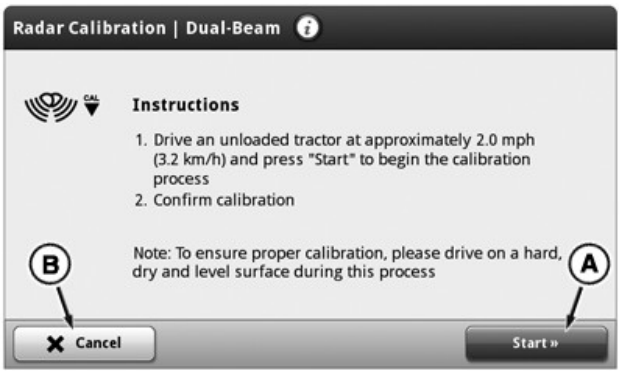
Perform radar calibration if:

- Radar speed and track speed are not equal when slip is not present.
- Radar device was installed/replaced.
- 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 confirm radar calibration.

If radar calibration is unsuccessful after three attempts, see your John Deere™ dealer.

KT81203,00008AD-19-19JUL17

Slip Calibration

CAUTION: Avoid injury. Perform calibration in safe and open area that is clear of objects and bystanders.

Perform slip calibration if:

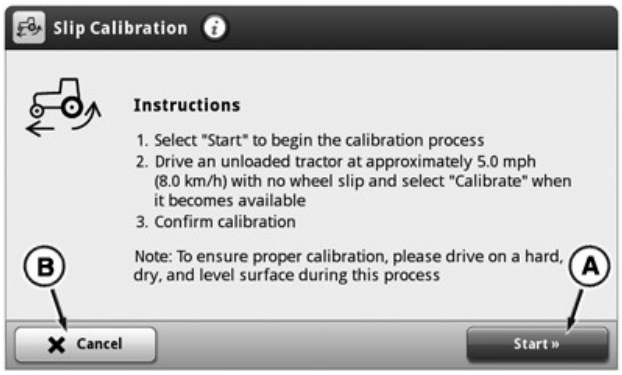
- Radar calibration has been performed.
- Slip is displayed when slip should not be present.
- Ballast of tractor was changed.



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 slip calibration icon to appear.



RXA0147582—UN—10MAR15

5. Select **Slip Calibration icon.**

NOTE: Slip calibration can be canceled by selecting cancel button (B).

6. Select Start button (A) to begin 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).

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RXA0147584—UN—10MAR15

9. Select OK button (D) to complete slip calibration.

If slip calibration is unsuccessful after three attempts, see your John Deere™ dealer.

KT81203,00008AE-19-19JUL17

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

Steering



RXA0152447—UN—27JUN16

Steering

Steering application allows operator to access and adjust steering settings.

Navigate to Steering

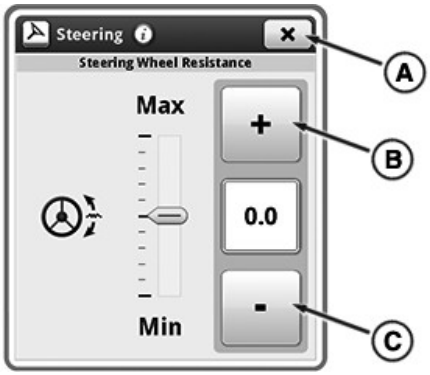
1. Select Menu.
2. Select Machine Settings tab.
3. Select Steering application.

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.



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

Controls Setup



PC15326—UN—08JUL13

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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.

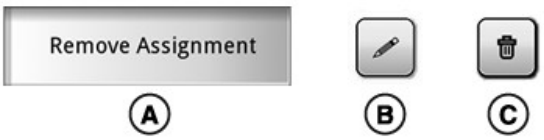
- **Integrated Tractor Joystick:** assign to control tractor and implement functions (e.g. front hitch).
- **CommandARM™ Levers and iTEC™ Buttons:** assign to control tractor and implement functions (e.g. rear hitch).
- **Third-Party Devices:** any mechanism, John Deere or non-John Deere, attached to 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:



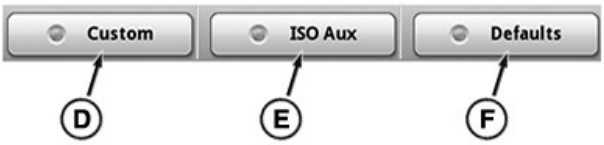
RXA0156706—UN—11JAN17

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).

CommandARM is a trademark of Deere & Company
iTEC is a trademark of Deere & Company

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



PC22543—UN—22APR16

Settings Manager

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

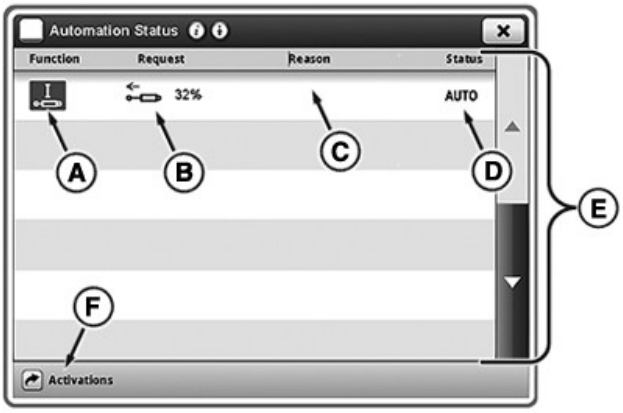
Automation Status allows control of various tractor functions. Automation Status displays which tractor functions are being controlled and their current status.

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



PC16682—UN—18MAR13

ISOBUS VT

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).

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.

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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



PC17388—UN—15MAY14

StarFire Receiver

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

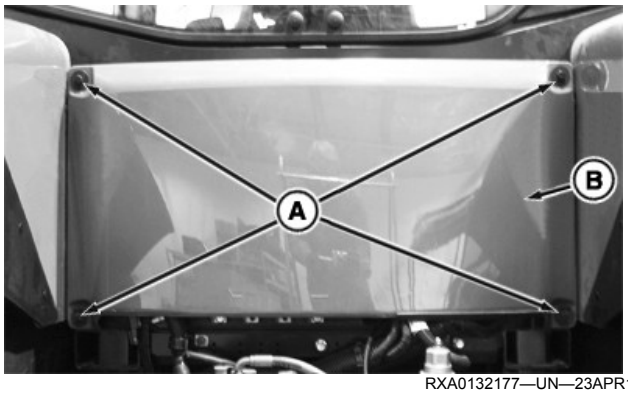
Install Video Display Camera

IMPORTANT: Avoid damaging camera by mounting camera securely to equipment and in location where camera will not be pinched, crushed, kicked, or knocked off.

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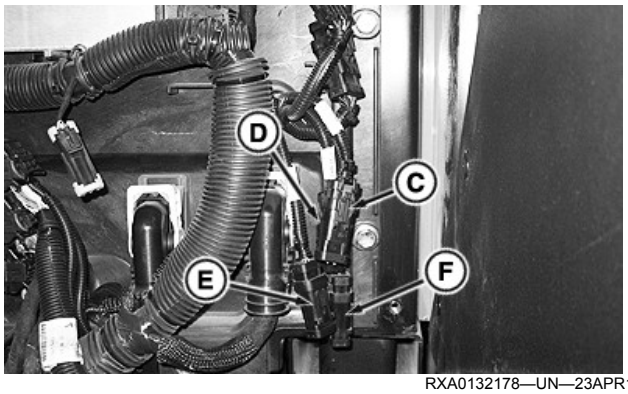
NOTE: Camera placement is limited to video camera cable length. Consider camera field of view when selecting location.

Tractors equipped with 4200 processor will have one camera input connector and 4600 processor will have four camera input connectors.



RXA0132177—UN—23APR13

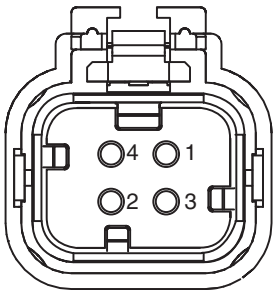
Remove Rear Panel



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



PC15312—UN—15MAY13

Video

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



PC23948—UN—22MAR17

Camera Icon

If more than one camera is connected, choose between video inputs by selecting different camera numbers.

Mirror Video



PC23949—UN—22MAR17

Mirror Video Button

Select Mirror Video button to simulate a rear view mirror. This swaps left and right sides of video image.

Contrast



PC23950—UN—22MAR17

Video Contrast Icon

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

[a] *XM 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.

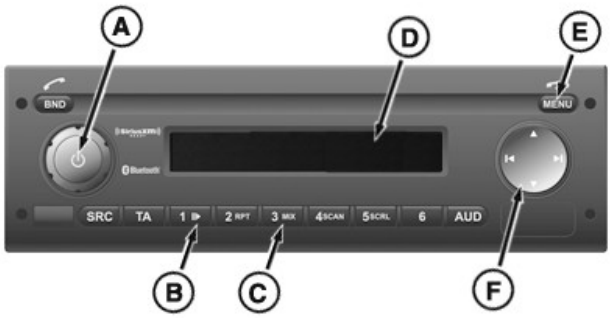
*NOTE: Playlist must be created on computer and saved as *.m3u or *.pls.*

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.

Bluetooth is a trademark of Bluetooth SIG

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
AUSTRLNZ	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 FCC[1] 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 party responsible for compliance could void the user's

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[1] FCC = Federal Communications Commission

authority to operate the equipment.

KT81203,0000581-19-05JAN17

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.

KT81203,0000967-19-12JUN18

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 Oprerator's Manual section.

KT81203,00009B1-19-13JUN18

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.

KT81203,00004C2-19-06JUN18

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.

KT81203,00004C3-19-28NOV16

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

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Bluetooth is a trademark of Bluetooth SIG

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.

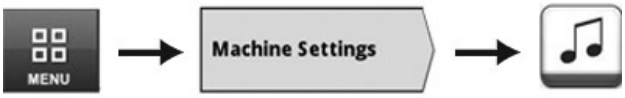
When radio is on, radio page navigates to home page of current source selected. When radio is off, content blocker displays.

NOTE: Selecting radio source will not turn on radio. Turn on radio by pressing power button on radio faceplate.



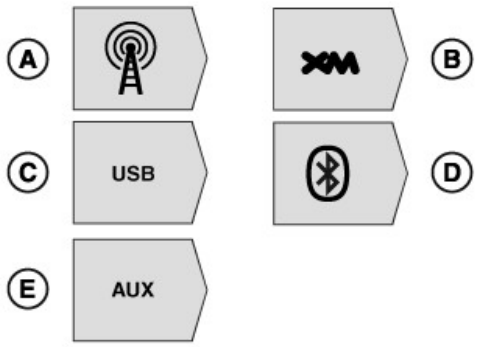
RXA0133718—UN—16JUL13

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:



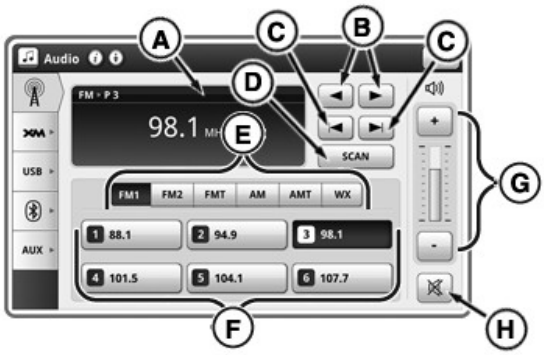
RXA0163496—UN—04JUN18

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,

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press preset for 3 seconds, while on desired station, until “beep” sounds. Press again to tune radio to saved station. Six presets are pre-programed 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.

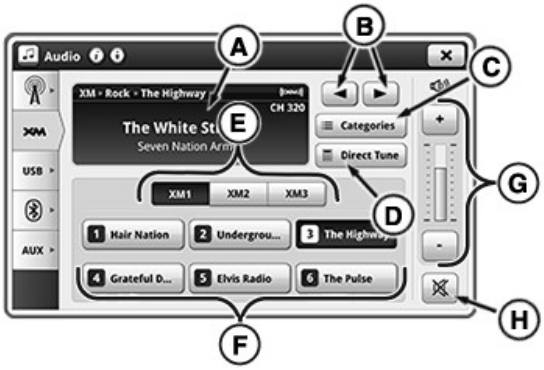
G—Volume Adjustment: Adjust volume.

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)

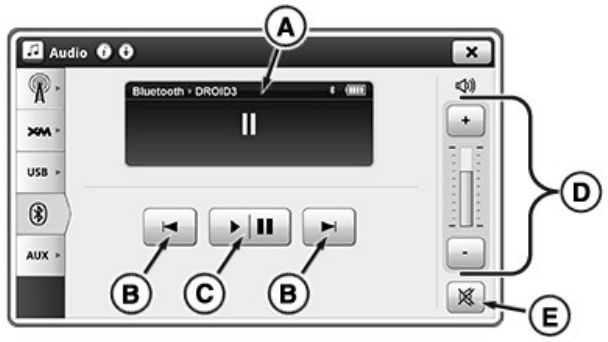
Navigate to Bluetooth® home page. See Select Radio Source with Generation 4 CommandCenter™ in this Operator’s Manual section.

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™

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Bluetooth is a trademark of Bluetooth SIG



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.

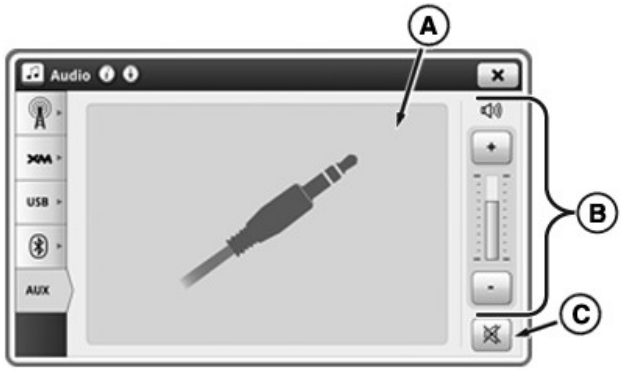
E—Mute: Silence sound.

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

CommandCenter is a trademark of Deere & Company

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.

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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.



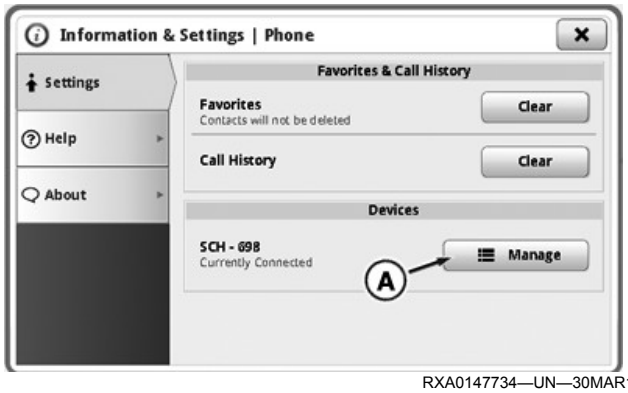
RXA0133719—UN—16JUL13

Use phone advanced settings to connect devices paired to radio or add new devices to paired list.



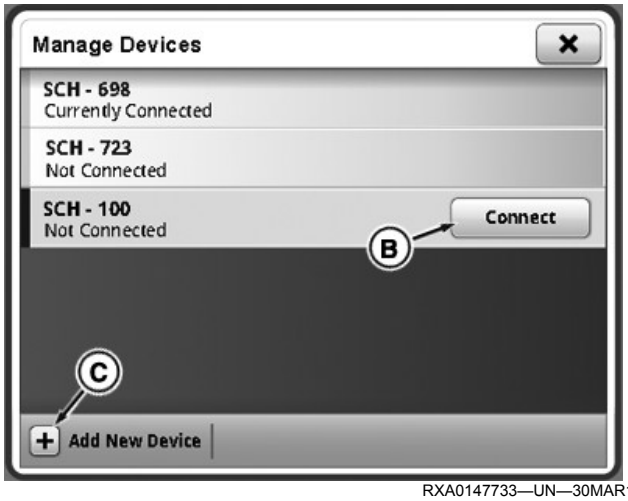
RXA0147944—UN—13APR15

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:

Bluetooth is a trademark of Bluetooth SIG
CommandCenter is a trademark of Deere & Company



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.

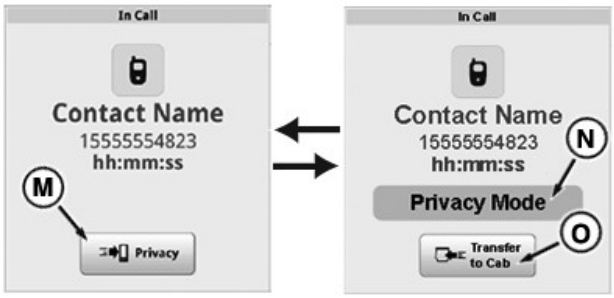
H—Mute Button: Mutes microphone.

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

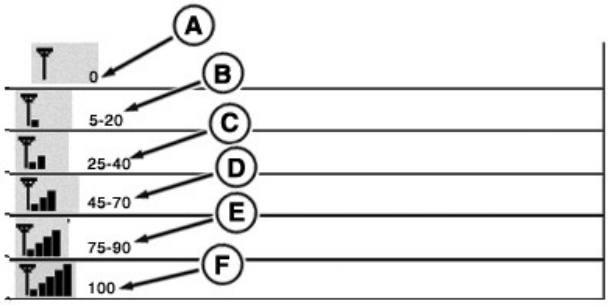
M—Privacy Mode Button: Transfers phone audio from cab speakers to phone speakers during call.

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

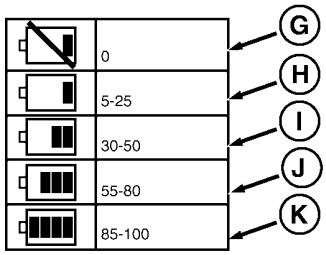
Phone Signal Strength and Battery Charge



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).

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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.

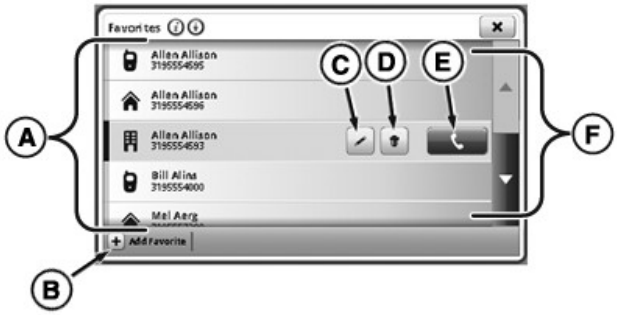
Maximum number of phone numbers that can be stored in CommandCenter™ is 25. Maximum number of characters in phone number is 21.

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.

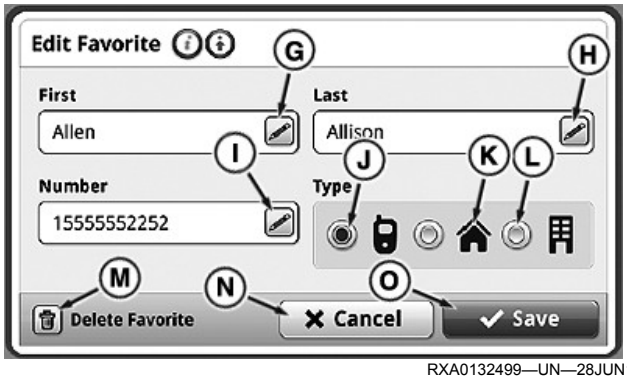
B—Add Favorite Button: Select to add contact manually.

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.

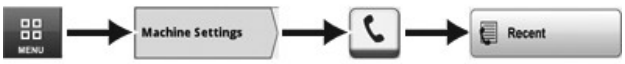
CommandCenter is a trademark of Deere & Company

O—Save Button: Select to save edits.

KT81203,00004D3-19-03APR18

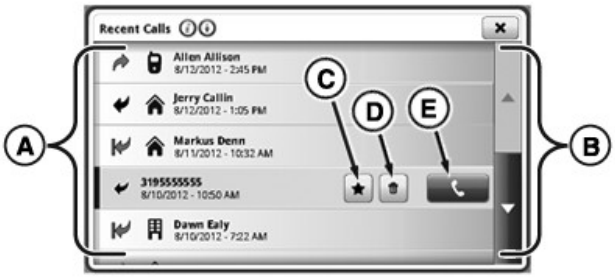
Recent Calls

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.

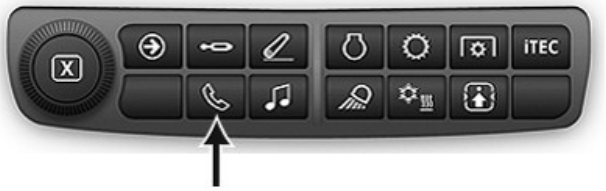
D—Delete Button: Select to delete contact from favorites.

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.



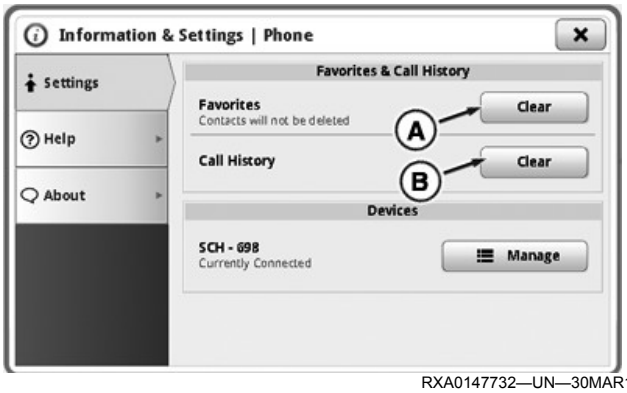
RXA0133719—UN—16JUL13

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

CommandCenter is a trademark of Deere & Company

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

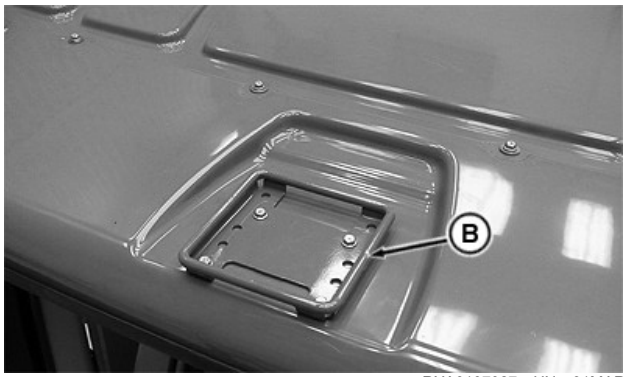
Mount StarFire™ Receiver

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.

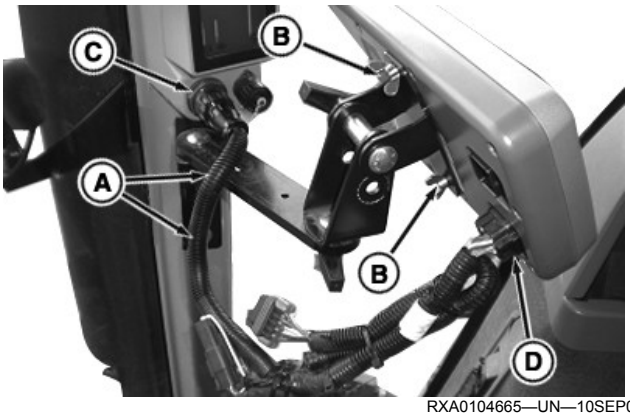
See your John Deere dealer for compatible adapter harnesses.

TS36762,0000194-19-18NOV16

Install GreenStar™ System Components

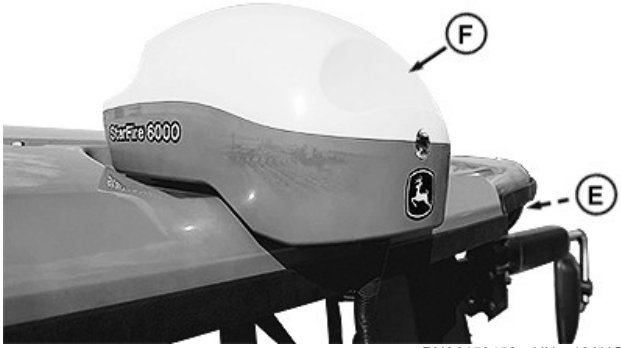
IMPORTANT: This vehicle employs one or more CAN bus networks. Connecting unapproved devices to vehicle network(s) may cause machine to degrade in performance or fail to perform properly. Further, unapproved devices that attempt control of tractor functions should not be connected to implement network (ISOBUS).

AutoTrac is a trademark of Deere & Company



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).

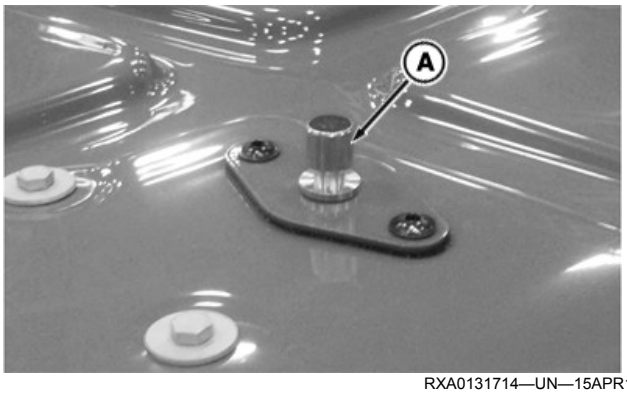
NOTE: See your John Deere dealer for compatible adapter harnesses.

TS36762,0000195-19-18NOV16

Install Machine Communications Radio (MCR) Antenna (If Equipped)

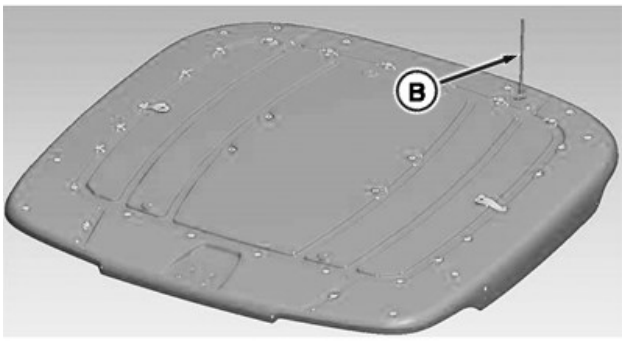
NOTE: This antenna is only available for machines that have a factory installed Machine Communications Radio. Refer to John Deere Machine Communications Radio operator's manual for more information.

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

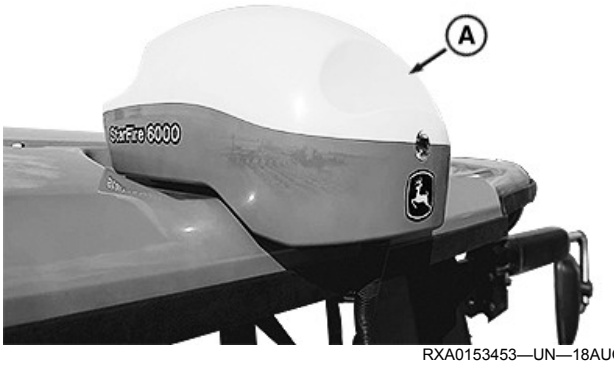
3. Screw MCR antenna (B) onto MCR antenna post.

TS36762,0000196-19-09AUG18

Connect AutoTrac™ Assisted Steering System

NOTE: Electro-hydraulic steering is required for AutoTrac™ to function.

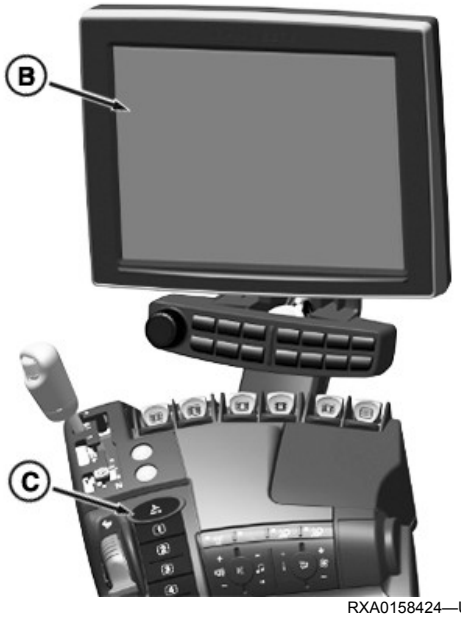
Refer to Generation 4 Applications operator's manual for detailed instructions.



RXA0153453—UN—18AUG16

StarFire is a trademark of Deere & Company

AutoTrac is a trademark of Deere & Company



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

StarFire is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company

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.

For example, one sequence made up of series of functions, operations, and distances used at start of field and second sequence used at water way in center of field. Each sequence can include up to 20 functions. Sequences remain in memory until deleted or overwritten, even if electrical current is switched off.

A sequence is a course of events from start of first function to completion of last function that the operator can start by pressing an iTEC™ button.



RXA0158412—UN—29MAR17

iTEC™ Functionality		
	Item	Function(s)
A	Transmission	Upshift or downshift in Forward Gear
B	Rear Hitch (If Equipped) [Ag]	Raise Detent and Lower Detent, and Fast Lower
C	SCVs (CommandARM™)	Extend, Retract, Float, and Cancel
D	Rear PTO (If Equipped) [Ag]	On/Off
E	iTEC ™ Buttons	1/2/3/4
F	Differential Lock	On/Off/Auto

iTEC™ pages are accessed through CommandCenter™ .

KD34109,000041D-19-20APR18

CommandCenter™ Pages Descriptions and Functions

iTEC™ Main Page



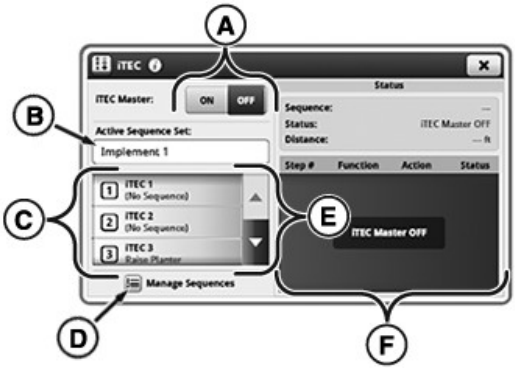
RXA0133714—UN—16JUL13

Use shortcut button or follow alternative path:



RXA0145566—UN—01OCT14

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **iTEC™ Icon.**



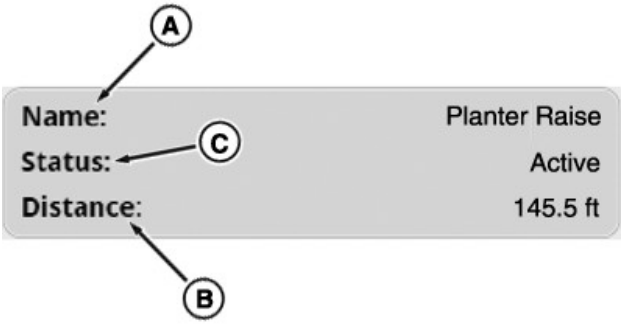
RXA0158043—UN—02MAR17

- **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.
- **F — Status List:** Shows status of each iTEC™ sequence step as sequence progresses.

KT81203,00004D7-19-10MAY17

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CommandCenter is a trademark of Deere & Company

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.

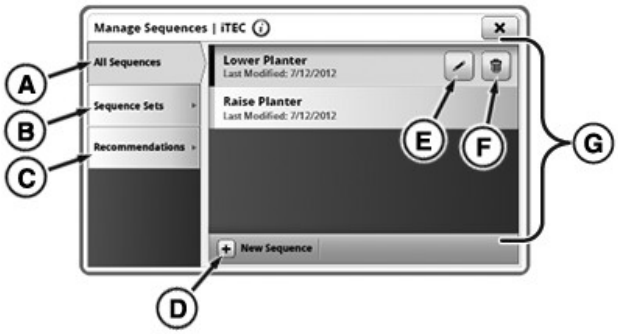
KT81203,00004D8-19-10APR18

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:



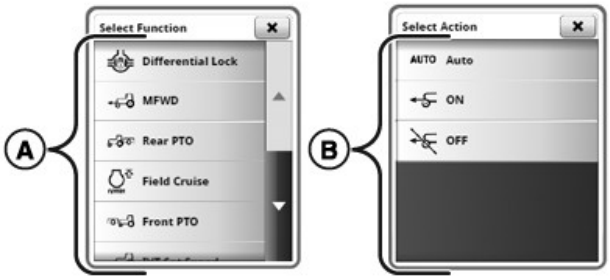
RXA0158059—UN—02MAR17

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.

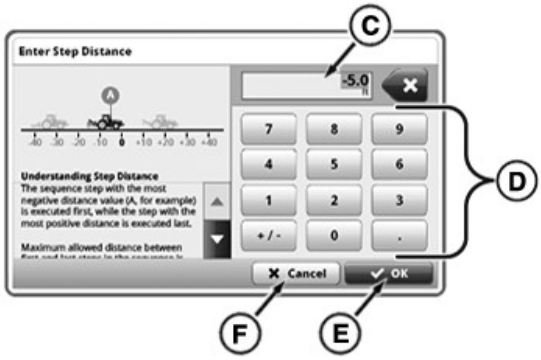
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[1] *Sequences pauses or cannot start if this condition exists. Correct condition to resume sequence.*



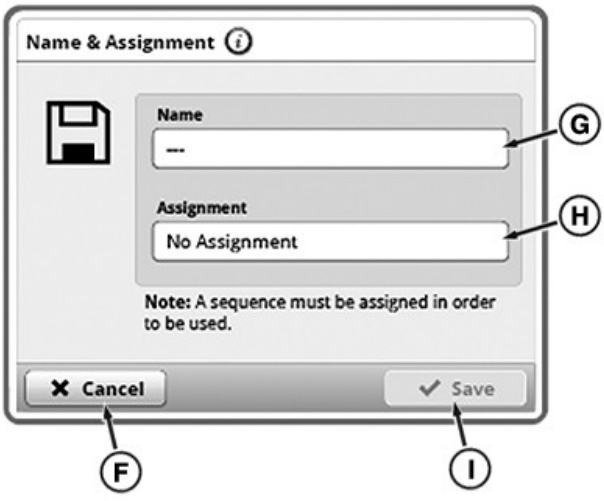
RXA0158057—UN—02MAR17

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.

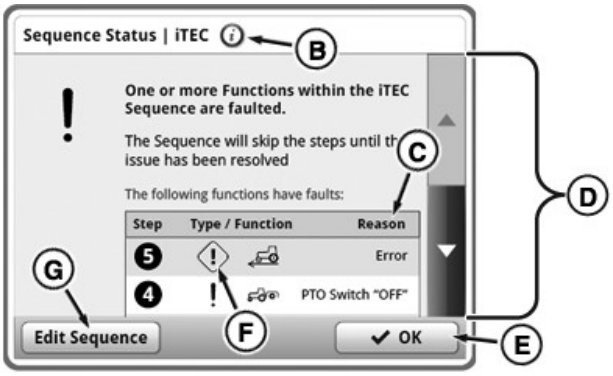
12. Select Sequence Assignment box (H). Select assignment, if desired, and select **Save/OK button** when complete.
13. Select **Save button (I)** to save sequence.

KT81203,00004D9-19-08NOV17

Sequence Step Status



RXA0131170—UN—05MAR13



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

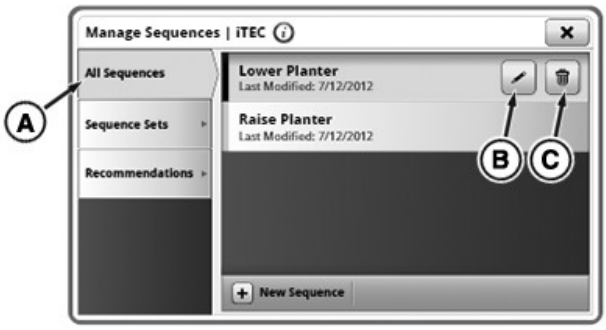
From iTEC™ main page:



RXA0129723—UN—06MAR13

1. Select **Manage Sequences button.**

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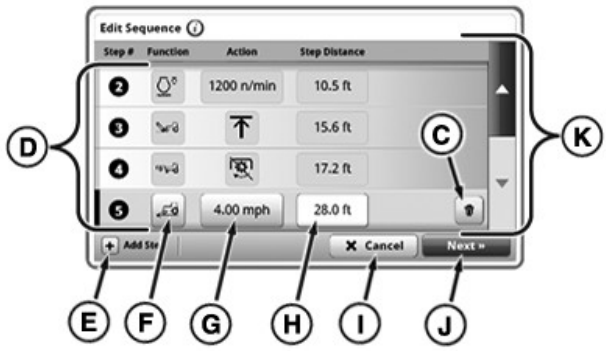


RXA0158049—UN—02MAR17

2. Select All Sequences tab (A).
3. Select desired sequence.

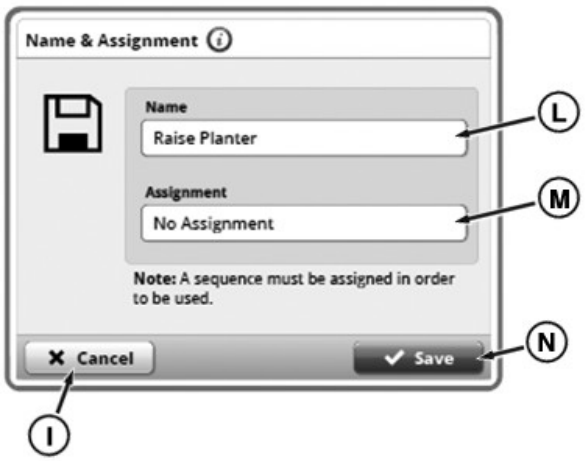
NOTE: Trash button (C) removes sequence or step within sequence.

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

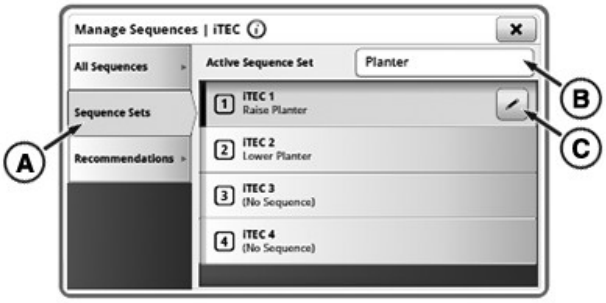
Sequence Sets Page

From iTEC™ main page, use following steps:



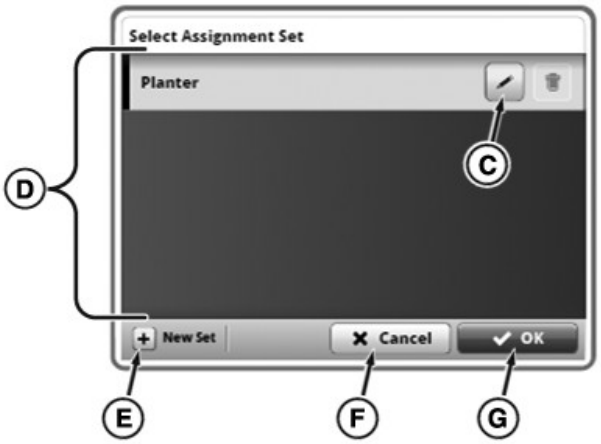
RXA0129723—UN—06MAR13

1. Select **Manage Sequences button.**



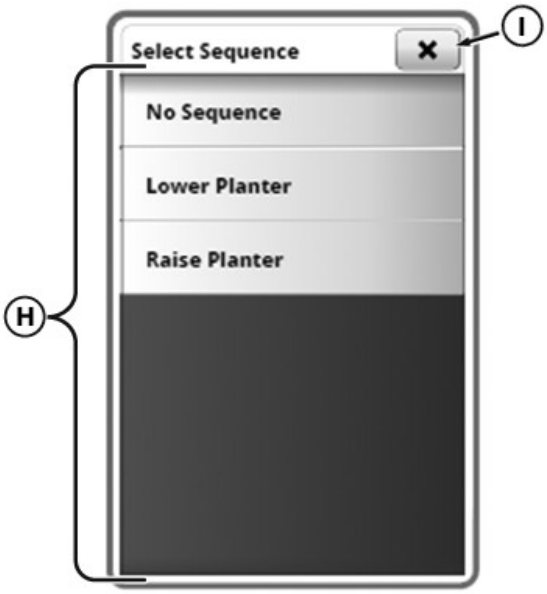
RXA0158311—UN—15MAR17

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

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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).

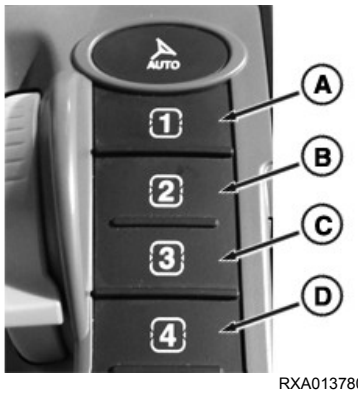
KT81203,00004DD-19-01SEP17

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).

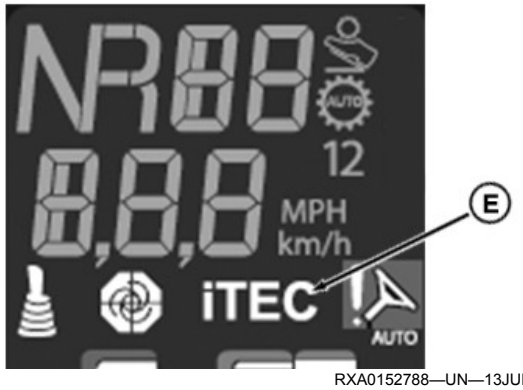
[Ag] If a PTO function is included in sequence, PTO must be engaged manually, using PTO switch, for initial engagement.

Before performing sequence using SCV functions, relevant SCV levers must be in neutral position.



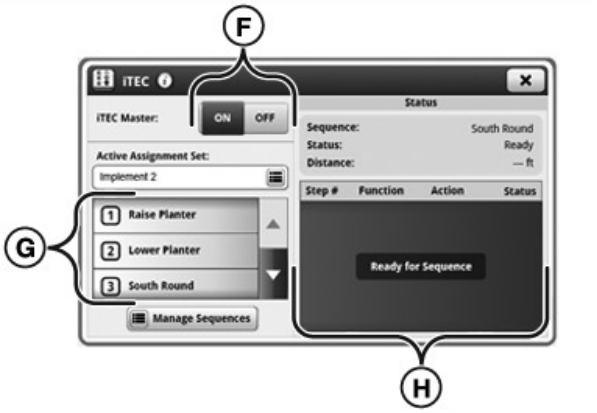
RXA0137808—UN—22JAN14

Abort current sequence at any time by again pressing same **iTEC™ Sequence Button (A-D)** used for starting sequence. Currently active commanded functions will be canceled (for example, hitch motion or SCV flow will stop if previously initiated as part of sequence [Ag]).



RXA0152788—UN—13JUL16

iTEC™ Indicator (E) is illuminated when active.



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.

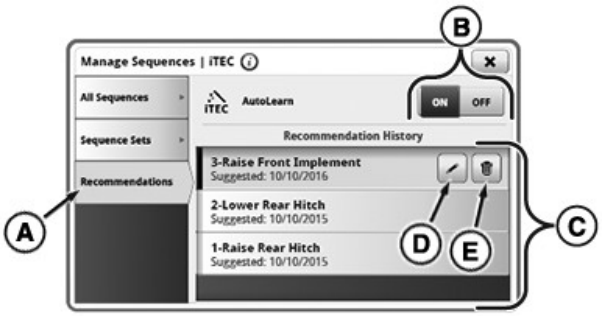
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CommandARM is a trademark of Deere & Company

3. Sequence steps appear in **Status Area (H)** and show progression of steps.

KD34109,0000760-19-20APR18

Recommendations (AutoLearn)



RXA0158056—UN—02MAR17

Recommendations (AutoLearn) Page

NOTE: AutoLearn is ON by default. To turn AutoLearn OFF, use AutoLearn ON/OFF toggle (B) .

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.

From iTEC™ main page, use following steps:

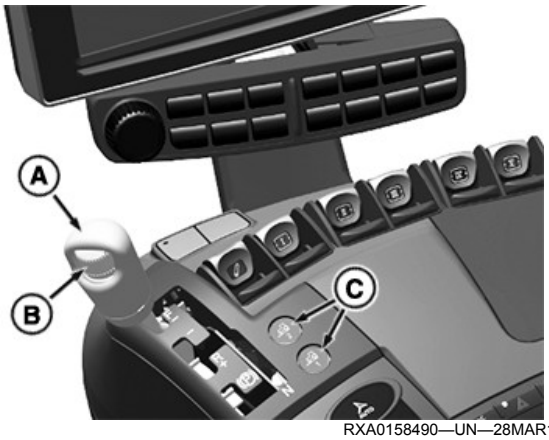


RXA0129723—UN—06MAR13

1. Select **Manage Sequences button.**
2. Select Recommendations (AutoLearn) tab (A).
3. Review recommendation history (C).
4. To edit or assign recommended sequence, select edit button (D). To remove sequence from list, select trash button (E).

TO84419,00000FD-19-11AUG17

iTEC™ Functions—*Efficiency Manager™*



RXA0158490—UN—28MAR17

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.

SV81855,00000D2-19-06JUL17

iTEC is a trademark of Deere & Company

Efficiency Manager is a trademark of Deere & Company

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.

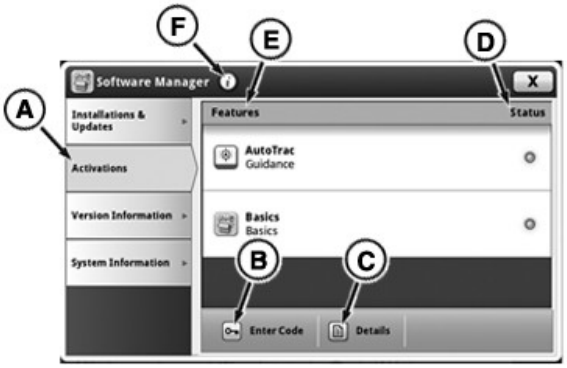
An activation code is required to allow TIA™ to function. Contact your John Deere dealer with tractor serial number and implement make, model, and serial number. Dealer obtains activation code through John Deere StellarSupport™.



RXA0131994—UN—22APR13

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

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

Tractor-Implement Automation™ — Status Page



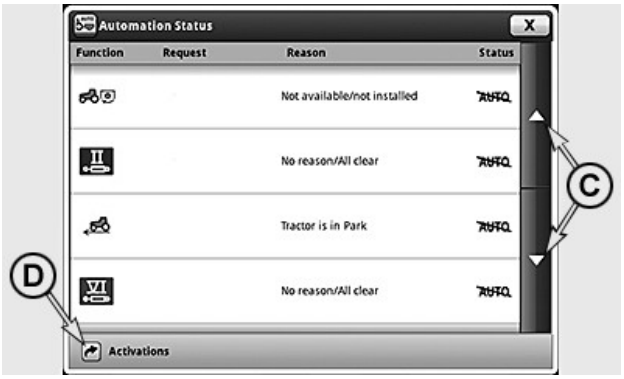
LX1057101—UN—23JUL13

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.

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TIA is a trademark of Deere & Company



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 [Ag]

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.

KD34109,0000761-19-20APR18

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

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.

NOTE: When transferring control to the implement, Efficiency Manager™ mode will engage.

Speed may always be reduced.

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CommandARM is a trademark of Deere & Company
Efficiency Manager is a trademark of Deere & Company

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 [Ag]

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.

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).

KD34109,0000762-19-20APR18

Drive Strategy 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.
- No malfunctions present in transmission.
- Transmission not in PARK.

To disengage control:

- Manually select a drive strategy.
- Place transmission in PARK.

KD34109,00006DD-19-22AUG17

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Drivetrain Overview

Tractor drivetrain consists of:

- Transmission: e18™ Powershift
- Differential: Differential, differential lock, final drives, and axles
- Brakes: Rear or front and rear
- Mechanical, electronic, and hydraulic control systems

KD34109,000023F-19-07FEB18

Drivetrain Protection

IMPORTANT: To extend drivetrain and track life, avoid excessive soil compaction, and reduce rolling resistance: avoid adding excessive ballast. Never add ballast that results in operating with heavy loads and with continuous full-power below 6.6 km/h (4.1 mph). For 9RX Narrow [Ag], avoid operation with continuous full-power loads below 7.5 km/h (4.7 mph).

NOTE: When tractor is operated under heavy load and low engine rpm, Powershift transmission may default to NEUTRAL. PARK engages once track speed drops below 1.75 km/h (1.0 mph) for vehicle protection.

To engage transmission, move Powershift transmission lever to PARK, reduce load, and then shift back into desired operating gear.

A TIP Diagnostic Trouble Code (DTC) is and displayed when default to PARK condition occurs.

Drivetrain protection system is gear-sensitive and is not apparent in most situations. It does not affect load starting and only affects operations in gears with maximum operating speeds below 6.6 km/h (4.1 mph). Full engine horsepower, plus 10 percent power bulge is available in all other gears. Tractor is traction limited, not power limited, at slow ground speeds.

Electronic engine controls provide protection from drivetrain overloading. Engine horsepower is automatically reduced to protect drivetrain components when:

- Air Filter Restriction Warning DTC is activated (CCU 000107.00). Engine performance is reduced. Service engine air filter immediately. See Engine Primary and Secondary Air Filters in Service - Change section of this Operator's Manual.
- Fuel filter(s) become plugged resulting in a loss of power due to a reduction in delivered fuel. Service engine fuel filter immediately. See Fuel Filters in Service - Change section of this Operator's Manual.
- See your John Deere dealer.

Seeding Hydraulic Intelligent Power Management (IPM)

IPM provides controlled power boost of up to 18 kW (25 hp) and additional power in derate situations up to 55 kW (75 hp) to tractor when, at least one SCV numbered V to VIII is:

- Set to continuous flow
- Set to 50% or greater flow rate
- Detent activated

Power increase is only provided when required by system.

Adjust transmission settings for IPM maximum efficiency. Suggested settings may increase shift occurrences, but allows engine to stay in the desired boosted power range.

1. Select transmission custom mode page. See Efficiency Manager™ Custom Transmission Settings in e18™ Powershift Transmission section of this Operator's Manual.
2. Select Engine Speed Droop PTO ON module.
3. Adjust droop percentage to 15%.
4. Select Engine Speed Droop PTO OFF module.
5. Adjust droop percentage to 15%.

IPM is available as a factory- or dealer-installed option. See your John Deere dealer.

Gear	Power hp (kW)						
	9420RX [Ag]	9470RX	9520RX	9570RX	9620RX [Ag]		
					Without IPM	Base with SCV[a]	With Seeding Hydraulic IPM
1	420 (309)	470 (346)	520 (382)	518 (381)	520 (382)	545 (401)	595 (438)
2	420 (309)	470 (346)	520 (382)	518 (381)	520 (382)	545 (401)	595 (438)
3	420 (309)	470 (346)	520 (382)	544 (400)	545 (401)	570 (419)	620 (456)
4	420 (309)	470 (346)	520 (382)	570 (419)	570 (419)	595 (438)	645 (474)
5	420 (309)	470 (346)	520 (382)	570 (419)	595 (438)	620 (456)	645 (474)
6	420 (309)	470 (346)	520 (382)	570 (419)	620 (456)	620 (456)	645 (474)

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Gear	Power hp (kW)						
	9420RX [Ag]	9470RX	9520RX	9570RX	9620RX [Ag]		
					Without IPM	Base with SCV[a]	With Seeding Hydraulic IPM
7	420 (309)	470 (346)	520 (382)	570 (419)	620 (456)	620 (456)	645 (474)

[a] *If equipped with Hi-Flow hydraulics system.*

KT81203,0000261-19-07SEP18

Differential Lock

IMPORTANT: Engage differential lock before entering situation where slippage may occur or when all tracks appear to be turning at same speed. If engaged after slippage occurs, damage to differential could result.

Differential Lock latches front and rear axles together to provide best traction possible for slippery field conditions.

Engage differential lock by selecting either of the two operating positions:



RXA0141547—UN—12MAY14

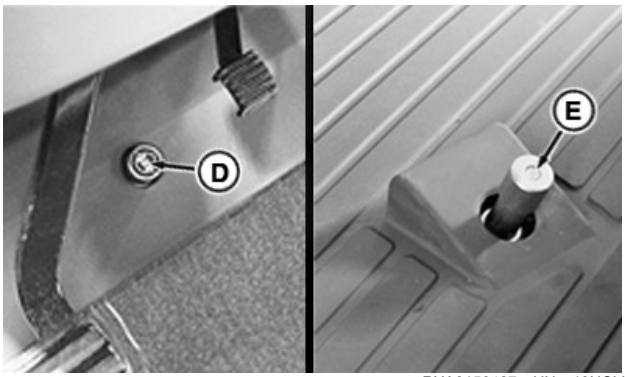


RXA0153159—UN—04AUG16

Ag Corner Post Display Shown

Auto Lock — Enter auto lock by pressing AUTO lock switch (A) on CommandARM™. When in auto lock, AUTO lock switch and differential lock indicator (C) are illuminated. Differential lock indicator turns on or off depending on engagement state of differential lock.

- Differential lock disengages when any of the following conditions are met:
  - At startup
  - Track speed is more than 23 km/h (14 mph)
  - Brake pedal is depressed



RXA0150427—UN—10NOV15

  - Foot decelerator (E) is depressed
  - Steering angle greater than selected value

Differential lock disengagement steering angle may be user selected, see Change Differential Lock Disengagement Steering Angle in this section of this Operator's Manual.

- Engages when all the following conditions are met:
  - Track speed falls below 19 km/h (12 mph)
  - Steering angle less than selected value
  - Brake is released

Manual Lock — Enter manual lock by pressing and holding either manual lock switch (B) on CommandARM™ or differential lock floor switch (D). After releasing switch (B) or (D), differential lock will return to previous operating state. When in manual mode, manual lock switch and differential lock indicator are illuminated.

KT81203,00001BB-19-20APR18

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 3°. Any custom settings are maintained until readjusted.

Adjust steering angle to disengage differential lock:



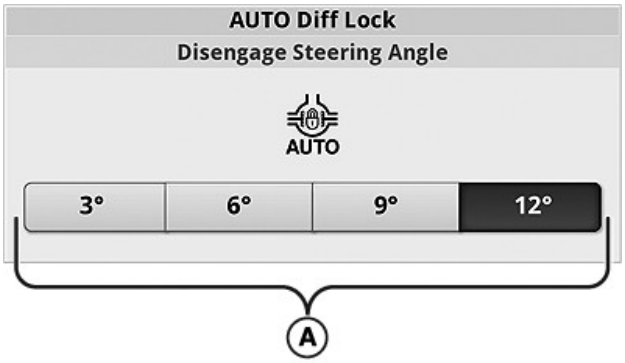
RXA0133712—UN—16JUL13

1. Select Transmission Shortcut button on Navigation Bar.



RXA0130326—UN—11JAN13

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).

KD34109,00007BF-19-27JUN18

Brakes

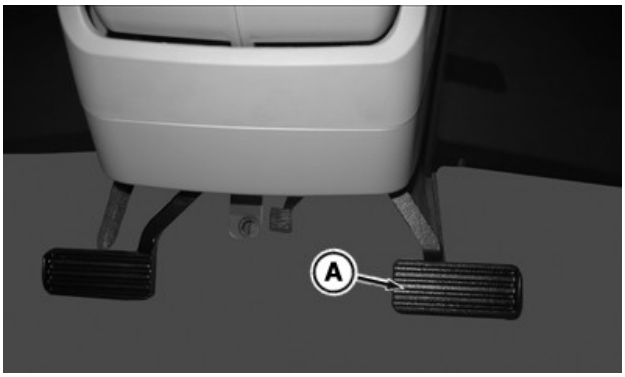
Brake Use

CAUTION: Avoid possible personal injury. Reduce speed if towed load weighs more than tractor or transporting loads under adverse conditions. Avoid hard braking applications, see implement manual and Transport Section.

IMPORTANT: Avoid unnecessary wear on brakes. DO NOT rest foot on brake pedal during tractor operation.

NOTE: Brake life can be extended when stopping large loads by using a combination of engine motoring and service brake torque to slow the vehicle. This can be achieved by downshifting and then using service brakes to further slow vehicle and bring engine speed to idle.

Test brakes with engine stopped to be sure manual brake system is functioning, see Service - Check section of this Operator's Manual.



RXA0135769—UN—26SEP13

Press brake pedal (A) to stop tractor while disengaging clutch.

Maintain at least 1800 engine rpm during aggressive braking events to ensure adequate cooling oil flow is directed to vehicle brakes. Do not over speed engine as it may cause damage to engine or transmission components.

TO84419,00000C9-19-10APR18

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

Hydraulic Trailer Brakes

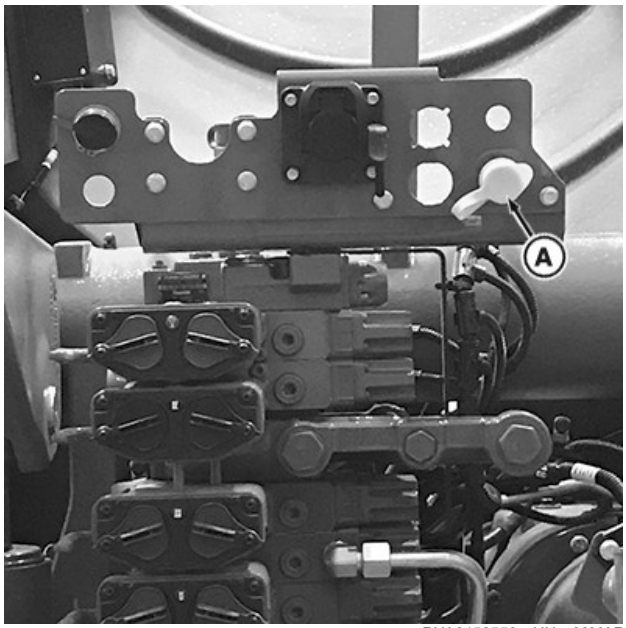
CAUTION: Avoid possible injury from losing control of tractor when operating on downhill slopes. Tractor tracks may lock and skid on steep or slippery downhill slopes.

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IMPORTANT: Operating tractor with three scrapers requires tractor and all scraper pans be equipped with hydraulic trailer brakes. Reference Towed Loads and Transport with Ballast in Transport section of this Operator's Manual.

Recommendations to reduce brake wear:

- **Make sure pressure hose is connected.**
- **Select same gear for both downhill and uphill driving.**
- **Regularly check hydraulic trailer brake for proper operation.**



RXA0158550—UN—30MAR17

Remove cap from trailer brake coupler (A). Ensure hose coupler is clean before connecting to trailer brake coupler.

Depress brake pedal to operate hydraulic trailer brake. Braking effect depends on pressure applied to brake pedal.

KT81203,000015D-19-28JUL17

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.

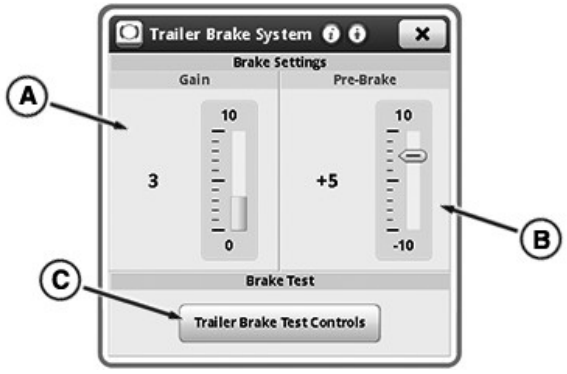
Brake Gain

Brake Gain allows operator to adjust brake to be more aggressive to match trailer requirements.

Modify when:

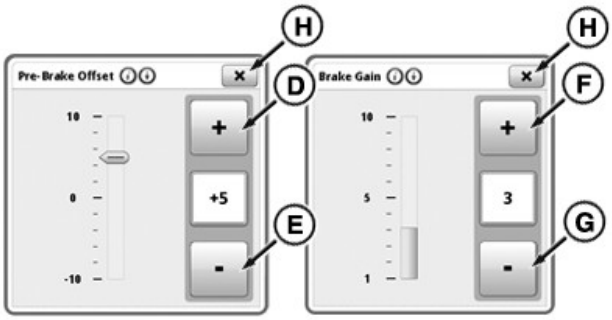
- Trailer is slow to stop.
- Trailer wheels lock up when brakes applied.

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

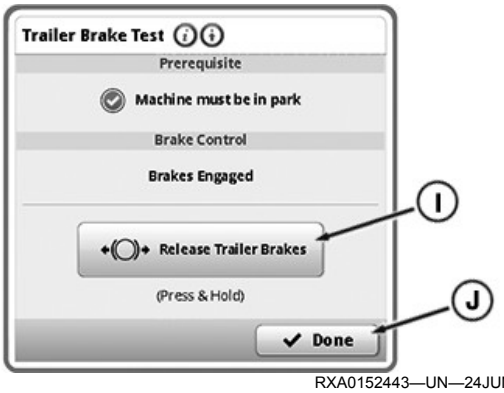
Tractors equipped with dual-line hydraulic trailer brakes have a Trailer Brake Test. Use test to confirm tractor's park brake will hold both tractor and trailer if the trailer brakes are released when parked. The Trailer Brake Test overrides the default park state of the braking system and forces brakes 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.

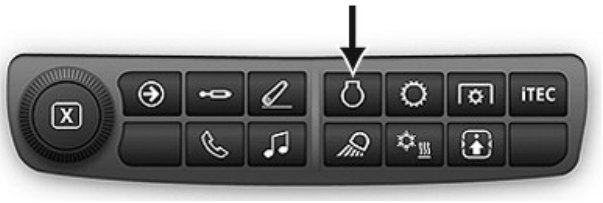
KT81203,0000519-19-04APR18

Engine Brake — 15 L Engine (If Equipped)

IMPORTANT: Engine braking system assists vehicle's service brakes in slowing down vehicle. Never use only engine brakes to stop vehicle.

Do not exceed governed engine speed when operating engine brakes. Engine damage can occur.

Tractors with 15 L engines may be equipped with an engine braking system. Engine brakes reduce tractor speed during transport by the use of engine compression, allowing for less wear on service brakes.



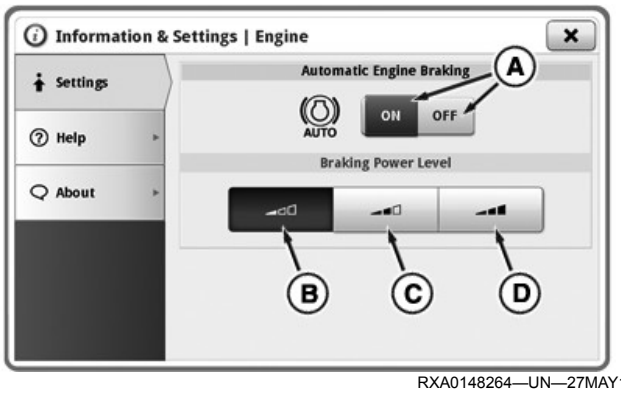
RXA0133711—UN—16JUL13

1. Select **Engine Shortcut button on Navigation Bar.**



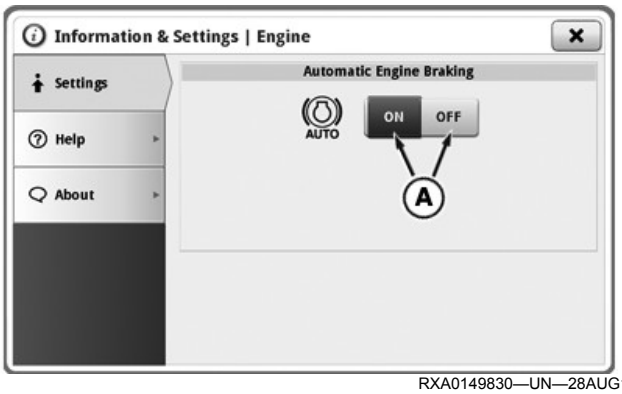
RXA0147944—UN—13APR15

2. Select **Advanced Setting icon.**
3. Select **Settings tab.**



RXA0148264—UN—27MAY15

Engine Information & Settings Page (Early Version)



RXA0149830—UN—28AUG15

Engine Information & Settings Page (Late Version)

4. Turn engine brake ON using ON/OFF toggle (A)

Use engine brake when traveling under load on level surfaces. Three user selectable braking power level settings can be used depending on load weight, speed and road conditions:

- Low (B): 33-percent engine braking power. Use when transporting light loads.
- Medium (C): 67-percent engine braking power. Use when transporting light/medium loads.

- High (D): 100-percent engine braking power. Use when transporting heavy loads.

KT81203,0000253-19-10APR18

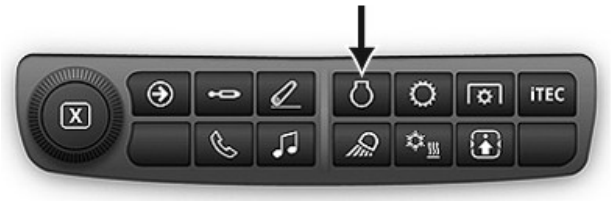
Foot Decelerator

NOTE: Engine must be running to operate foot decelerator.

Use foot decelerator, to slow down engine rpm, when turning at end of field.

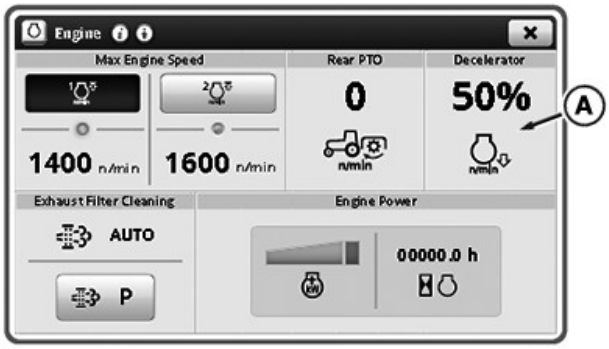
NOTE: When using Efficiency Manager™ and depressing foot decelerator, transmission downshifts to startup gear may occur in order to reduce wheel speed. To reduce number of shifts (see Set Start Gears in e18™ Powershift Transmission section of this Operator's Manual).

Adjust Engine RPM Decelerator Percentage:



RXA0133711—UN—16JUL13

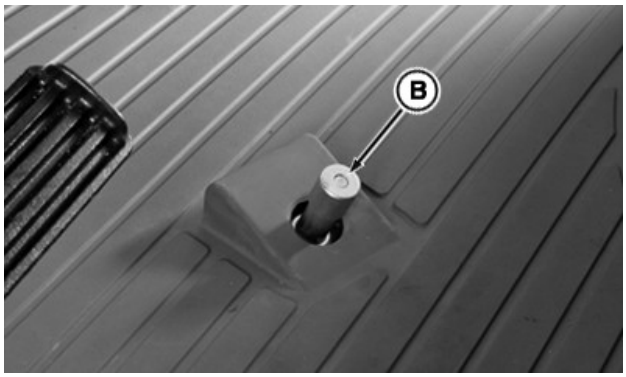
1. Press **Engine Shortcut Button on Navigation Bar.**



RXA0153796—UN—02SEP16

Ag Options Shown

2. Select decelerator percentage module (A) to adjust maximum engine (throttle) rpm. Decelerator percentage can be adjusted from 50 to 95 percent.



RXA0160127—UN—06JUL17

3. Push foot decelerator (B) to lower engine rpm. Speed resumes when foot decelerator is released.

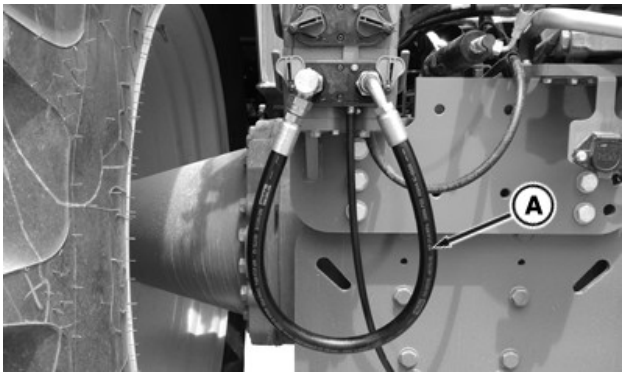
TO84419,00000C0-19-20APR18

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Warm-Up Transmission-Hydraulic System

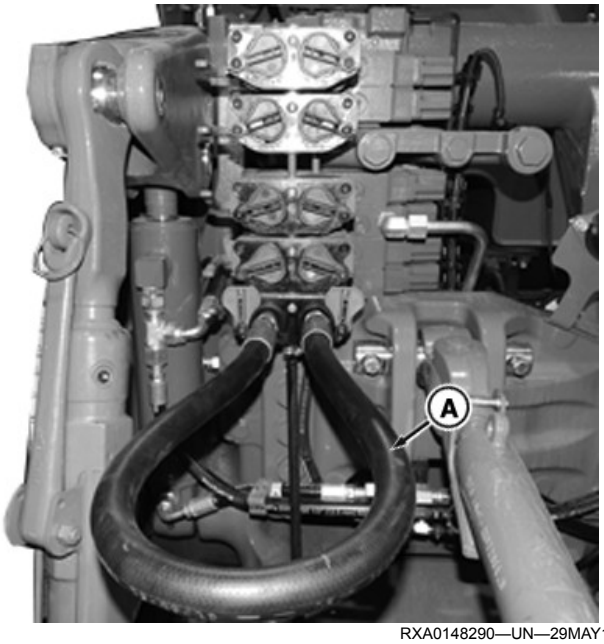
Set Detent Time

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).



RXA0142310—UN—10JUN14

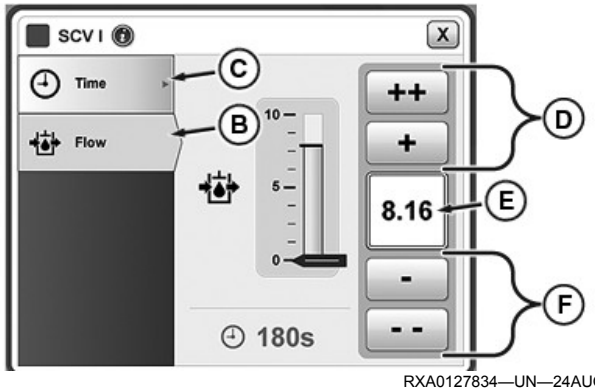
Jumper Hose Install to SCV Coupler [Scraper]



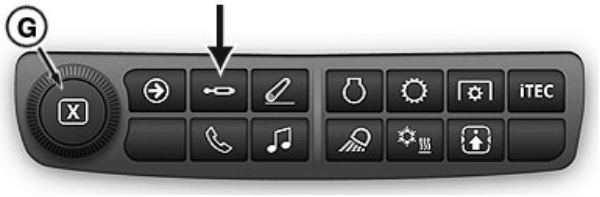
RXA0148290—UN—29MAY15

Jumper Hose Install to SCV Coupler [Ag]

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.
6. Select SCV I Time tab (C).



RXA0127834—UN—24AUG12

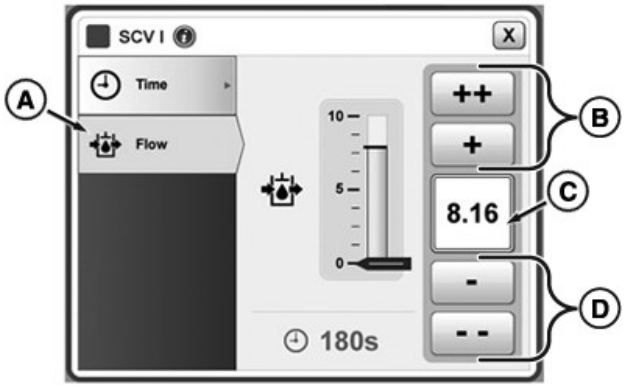


RXA0141641—UN—22MAY14

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

NOTE: Flow is displayed in increments of 0.04 beginning at 0.04 through 10 located in input box (C). Pushing (+) increases flow by 0.04, pushing (+ +) increases flow by 1.00, and by pushing (-) and (- -) decreases flow setting by same increments.



RXA0131683—UN—28MAR13

1. Select SCV I flow tab (A).



RXA0131233—UN—09MAY13

2. Set SCV I flow to 8.00 or above (C) by pressing buttons (B) to increase flow or buttons (D) to decrease flow setting. Adjustment dial (G) can be used to increase or decrease desired detent flow setting.

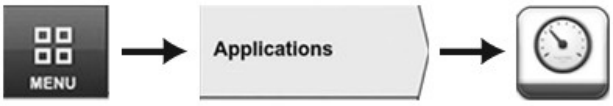


RXA0142612—UN—16JUN14

CommandArm™

3. Pull SCV I (E) and SCV II (F) levers to extend detent.
4. Operate engine at 1400 rpm.

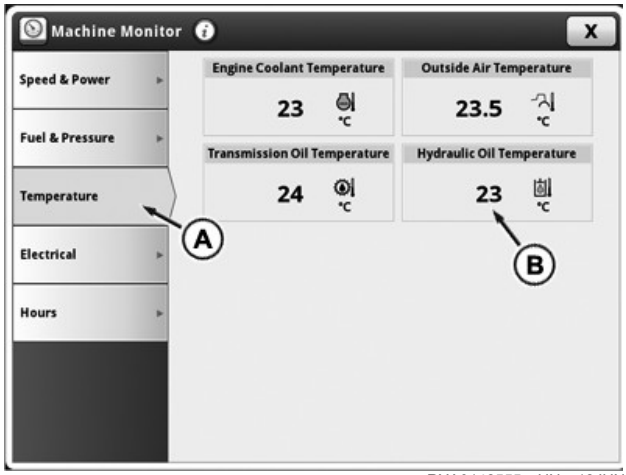
Monitoring Hydraulic Oil Temperature



RXA0126813—UN—12JUN12

Menu → Applications Tab → Machine Monitor Icon.

1. Select **Menu.**
2. Select **Applications tab.**
3. Select **Machine Monitor icon.**



RXA0142555—UN—12JUN14

Temperature Display on Machine Monitor Page

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.

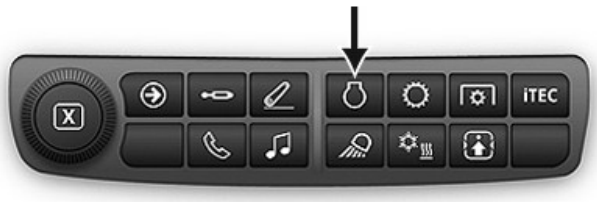
KT81203,0000252-19-10JUL18

Activate and Set Maximum Set Speed

Limiting engine speed in light load situations may improve fuel economy. Maximum Set Speed utilizes a constant speed governor curve, providing instant response to varying loads. Two different Maximum Set Speed speeds can be set, enabling operator to toggle quickly from one to the other.

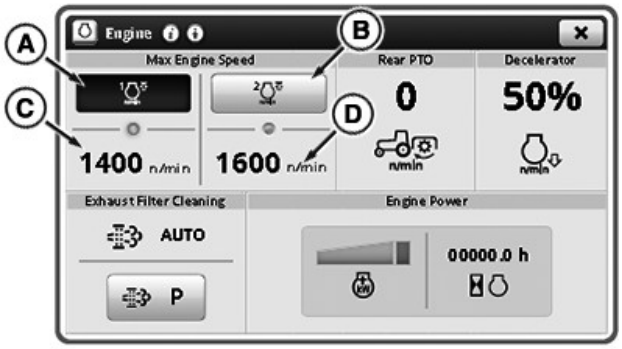
Activate Maximum Set Speed

Engine must be running for Maximum Set Speed adjustment to operate.



RXA0133711—UN—16JUL13

1. Select Engine Shortcut Button on Navigation Bar



RXA0153804—UN—02SEP16

Ag Options Shown

2. When engine page appears, select Maximum Set Speed 1 (A) or 2 (B) On/Off toggle button.



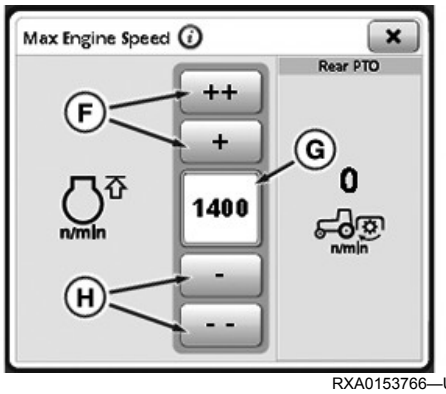
RXA0139472—UN—24FEB14

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 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.



RXA0153766—UN—02SEP16

Ag Options Shown

2. When Maximum Set Speed 1 or 2 page appears, select desired speed by using Maximum Set Speed increase (F) or decrease (H) button. “++” and “- -” buttons increase or decrease values at higher rate than “+” and “-” buttons. Maximum Set Speed value appears in Maximum Set Speed input box (G).

TO84419,00002DC-19-20APR18

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 1500 RPM with PTO [Ag] off. Transmission downshifts and engine speeds up to Maximum Set Speed set speed, to compensate for increasing workloads. Available engine speed range is 1500 RPM to Maximum Set Speed 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 set speed, to compensate for increasing workloads. Available engine speed range is ECO engine speed setting to Maximum Set Speed set speed.

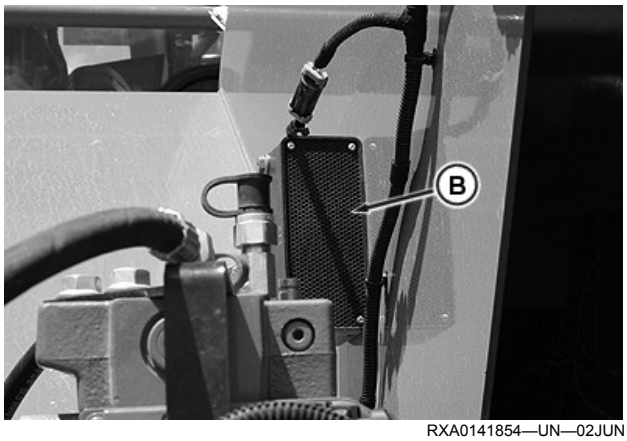
Manual: Operator sets engine speed using hand throttle. Engine speed stays constant, but limited by Maximum Set Speed set speed.

KT81203,0000109-19-31MAY18

Backup Alarm

CAUTION: Backup alarm emits an audible sound to alert anyone near by. Tractor will be traveling in a reverse direction.

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



RXA0141854—UN—02JUN14

NOTE: Backup alarm (B) is located on rear cross member.

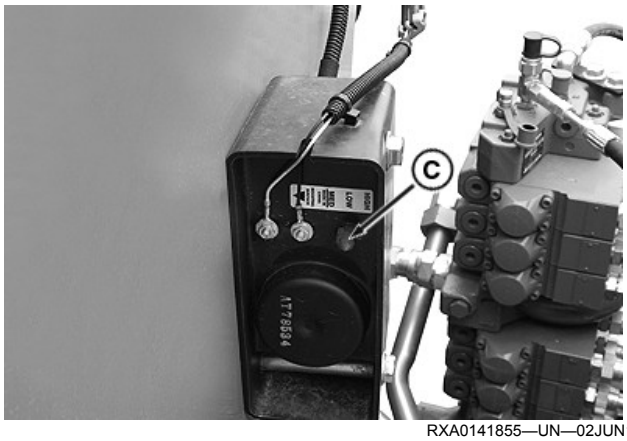


RXA0158409—UN—28MAR17

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:

- High
- Low
- Medium



RXA0141855—UN—02JUN14

Volume Control (Rear View)

Turn volume control knob (C), on back of alarm, to desired setting.

Turn Backup Alarm ON/OFF

Use Transmission Advanced Settings to turn Backup Alarm ON or OFF.

To access the Transmission Advanced Settings page:



RXA0133712—UN—16JUL13

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



RXA0130326—UN—11JAN13

2. Select **Advanced Settings icon.**
3. Select **Settings tab.**

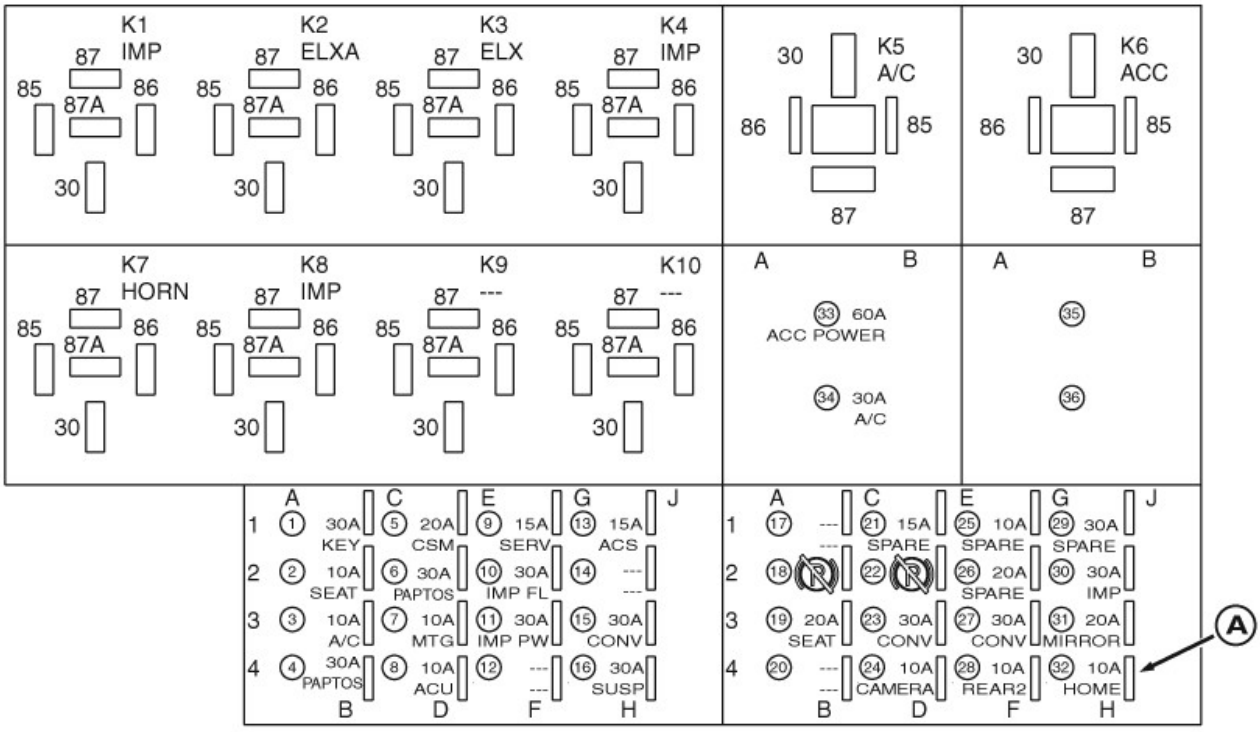


RXA0160203—UN—12JUL17

4. Use Backup Alarm toggle (D) to turn backup alarm ON or OFF.

TO84419,00000CC-19-12JUL17

Come-Home Mode



RXA0129610—UN—25JAN13

A—Fuse #32

⚠ 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. While in come-home mode, engine speed is limited to 1500 rpm and first gear in any range.

1. Remove fuse #32 (A) and retain.
2. Turn key switch to START position.
3. Enable backup steering. Go to diagnostic addresses. See Diagnostics Center in CommandCenter™ section of this Operator's Manual.
4. Select correct controller:
   - XSB – tractor equipped with ACS™ (ActiveCommand Steering).
   - XSC – tractor equipped with AutoTrac™.
5. Go to address 025 and select Back Up Mode On.
6. Press Accept.
7. 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.

8. Depress clutch pedal.
9. Select Forward or Reverse direction.
10. Release clutch pedal to put tractor in motion.
11. When destination is reached, cycle key switch ON and OFF to return to Back Up Mode Off setting.
12. Replace fuse #32.

KT81203,00001E5-19-02FEB17

CommandCenter is a trademark of Deere & Company
ACS is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company

Operate the e18™ Powershift Transmission

CAUTION: Avoid personal injury or damage to tractor. If engine starts with shift lever in forward or reverse positions, there is a malfunction of 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 since serious transmission damage can result.**
- **Never attempt to start tractor by towing or pushing.**
- **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).**
- **Avoid excessive ballast.**
- **Avoid continuous operation under full throttle and full load conditions below 1800 rpm.**
- **Fully depress clutch pedal to completely disengage clutch.**

NOTE: The seat assembly contains an operator presence safety device to prevent initiation of movement of tractor without operator sitting in the seat.

NOTE: When tractor is loaded to a very low engine speed, powershift transmission can default to NEUTRAL, then PARK engages once wheel speed drops below 1.75 km/h (1.0 mph) for drivetrain protection.

To re-engage transmission, move lever to PARK, reduce load, and then shift into desired operating gear.

A diagnostic trouble code is stored and displayed when this condition occurs.



RXA0158409—UN—28MAR17

Ag CommanARM™ Shown

Transmission is shifted using shift lever (A) on CommandARM™ .

Transmission can be shifted, without use of clutch pedal, either into a forward or reverse direction.

Clutch pedal allows operator maximum manual control of modulation for ease of connecting to implements, operating in confined areas, or slow movement of tractor during precise maneuvers. Depress clutch pedal to preselect a forward or reverse command gear.



RXA0160988—UN—26SEP17

When shift lever is moved to NEUTRAL position, parking brake release 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 an F or an R along with commanded gear.

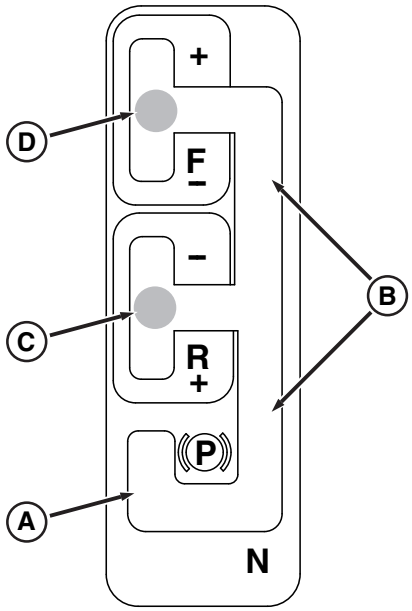
Engine only starts with shift lever in PARK or NEUTRAL position. Shifts are made one at a time by bumping lever. Pushing and holding lever or pulling and holding lever results in continuous up or down shifts.

DB71512,000005E-19-20APR18

CommandARM is a trademark of Deere & Company

Shift e18™ Transmission

Shift Lever Positions



RXA0107694—UN—18MAY10

PARK — Rear slot (A) — Park brake applied when lever is fully forward in slot.

NEUTRAL — Right slot (B) — Park brake is released when lever is moved to right slot.

Reverse — Center slot (C) — Tractor begins moving rearward when lever enters this slot. Push lever forward for downshifts and pull rearward for upshifts.

Forward — Front slot (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. Use a higher gear and lower engine speed for light load operation to save fuel and reduce wear. Under full load conditions, use full throttle engine speed.

Transmission starts out in command gears. Default command gears are F7 and R2. Start default command gears can be changed to different forward (F1-F13) or reverse (R1-R6) gear, see Set Start Gears in this Operator's Manual section.

Each time transmission enters forward or reverse section of shift pattern, transmission starts in command gear, shown on corner post display.

Once placed in forward or reverse, command gear changes to last gear of operation before shifting to NEUTRAL.

Initial command gear can also be changed prior to initiating motion to match operation.

Forward gear between F1 and F13 can be preselected by depressing clutch pedal and pushing or pulling shift lever until desired command gear is displayed.

Reverse gear between R1 and R6 can be preselected by depressing clutch pedal and pulling or pushing shift lever until desired command gear is displayed.

Transmission starts out in preselected forward or reverse gear when clutch pedal is released.

Cold Weather

NOTE: Delayed shifting, slow hydraulic operation, hard steering, and limited engine rpm can also be noticeable until operating temperature is obtained.

When temperature is -10°C (14°F) or lower it can take several minutes to get park brake released with operator in seat and transmission in gear. Several shifts between PARK and NEUTRAL can be required.

When temperature is -10°C (14°F) or above it can take three seconds to get park brake released 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.

During cold weather starting, transmission will not shift above F13 until normal operating temperature has been reached.

Shifting From Reverse

Highest forward gear transmission will automatically shift to the last gear selected, when shifting from reverse. For example, if transmission is in F11 and is shifted to reverse, and then back to forward, transmission would shift to a gear in forward that is the minimum of F11 or previously selected gear in forward, while in forward when shifting from reverse.

However, if transmission is in F13 or higher and tractor is stopped by using the clutch or shifting to NEUTRAL and not shifted through reverse, transmission is in F13 when shifted to forward again.

Shifting—Without Using Clutch Pedal

Gear-to-Gear — Push (or pull) lever forward or backward into slot to shift up or down to selected gear. Transmission shifts one gear at a time until lever is released.

Rapid Gear-to-Gear — Bump lever to quickly shift up or down to selected gear. Transmission can skip gears, if lever is moved faster than transmission can shift.

Shifting—Using Clutch Pedal

IMPORTANT: Clutch pedal must be fully depressed to completely disengage clutch for correct operation. Shifting while clutch is partially engaged may damage clutch.

Gear-to-Gear — Hold or bump lever to shift up or down until desired gear is displayed. Transmission goes into commanded gear when clutch pedal is released.

Rapid Shift

When tractor is in a light load condition, such as transport, transmission can be shifted very fast by rapidly bumping shift lever.

To reach transport speed quickly, depress clutch pedal and rapidly bump shift lever to F13. Transmission shifts directly to F13 when clutch is released. Once tractor is underway in F13, bump shift lever to F18.

Press and Hold Shifting

Holding the shift control lever in the up or down position, the transmission shifts through the gears one gear at a time.

Double Shift

With tractor under load, transmission can be made to shift two gears at a time when operating in gears F5 — F12 by double bumping shift lever to slow down or speed up when making headland turns. A double bump down shift is also useful in field operation when hitting a tough spot.

Shuttle Shifting (Direction Change)

IMPORTANT: Shuttle shifting is not recommended when connecting tractor to implements.

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. Shuttle shifting can be performed between gears F11 and R3 .

IMPORTANT: This method is not recommended when connecting tractor to implements.

Ground Speed Matching

CAUTION: Avoid possible accident and injury from loss of vehicle control. Never coast down hill.

NOTE: When Efficiency Manager™ is engaged, F13 is replaced by the Forward Start Gear.

When tractor is moving at speeds above F13 and clutch pedal is depressed, tractor slows. Transmission matches current ground speed when clutch pedal is released.

Transmission will not match ground speeds as clutch is released after tractor slows when clutch pedal is depressed at speeds below F13. Transmission remains in F13 even if tractor comes to complete stop.

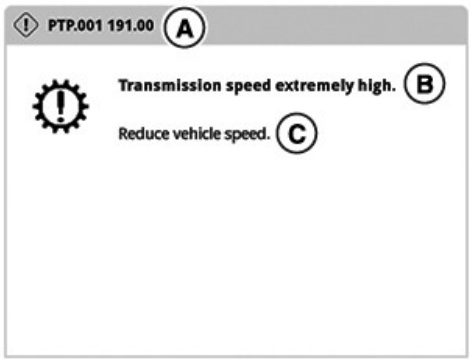
In manual mode transmission will not up shift to match ground speed as clutch is released, if tractor speeds up while clutch pedal is depressed.

RD47322,0000518-19-10APR18

Avoid Tractor Overspeed

IMPORTANT: Do not overspeed tractor as damage may occur to tractor components.

If overspeed occurs, a Diagnostic Trouble Code (DTC) appears on CommandCenter™ indicating:



RXA0154565—UN—06OCT16

- **Line (A): PTP.001 191.00**
- **Line (B): Transmission speed extremely high.**
- **Line (C): Reduce vehicle speed.**

For more information on DTCs, see Troubleshooting - Diagnostic Trouble Codes (DTC) section of this Operator's Manual.

KT81203,000040A-19-27SEP17

Set Start Gears

Two forward start gears and one reverse gear can be set.



RXA0133712—UN—16JUL13

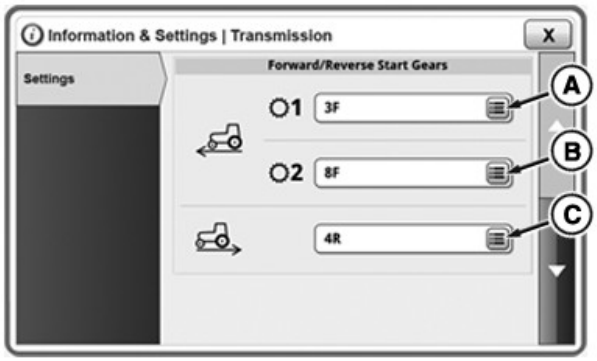
CommandCenter is a trademark of Deere & Company

Press **Transmission Shortcut Button on Navigation Bar.**



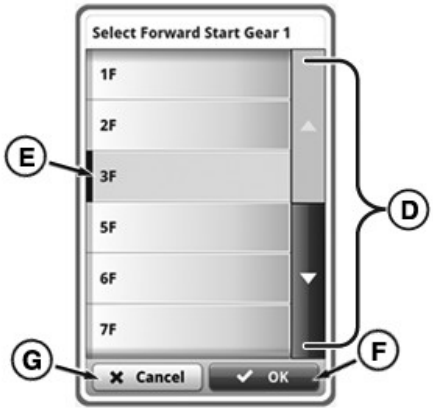
RXA0130326—UN—11JAN13

1. Press **Advanced Settings icon.**
2. Press **Settings tab.**
3. Select desired Start Gear to set.



RXA0143042—UN—01JUL14

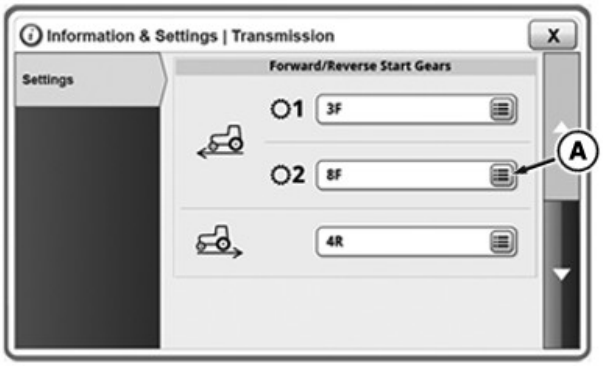
Press Forward Start Gear 1 (A), or 2 (B) or Reverse Start Gear (C) button. List of available gears appear.



RXA0143039—UN—01JUL14

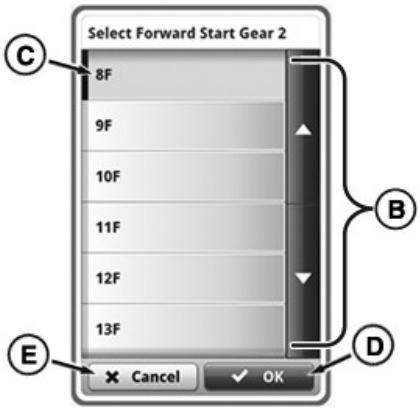
4. Scroll through list of gears (D).
5. Select desired gear (E) and press OK button (F) to finish selection or (G) to cancel.

Select Forward Start Gear 2



RXA0143043—UN—01JUL14

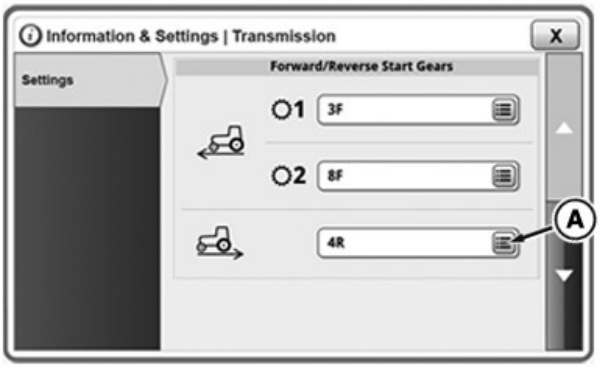
1. Press Forward Start Gear 2 button (A). List of forward gears appears.
2. Scroll through list of gears (B).



RXA0143040—UN—01JUL14

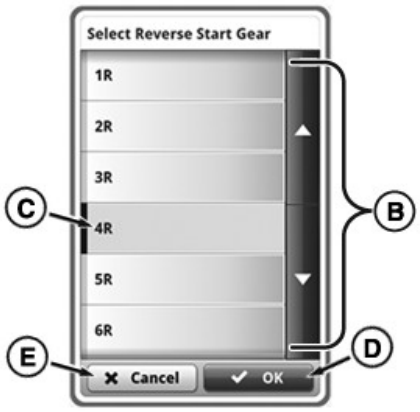
3. Select desired gear (C) and press OK button (D) to finish selection or (E) to cancel.

Select Reverse Start Gear



RXA0143044—UN—01JUL14

1. Press Reverse Start Gear 2 button (A). List of forward gears appears.



RXA0143041—UN—01JUL14

2. Scroll through list of gears (B).
3. Select desired gear (C) and press OK button (D) to finish selection or (E) to cancel.

RD47322,00006B7-19-27JUL17

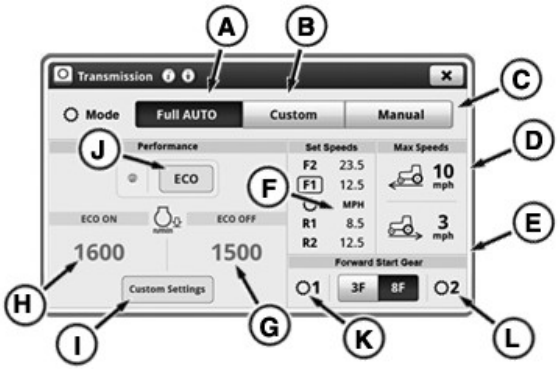
CommandCenter™ Transmission Main Page

The e18™ transmission offers three modes to optimize fuel efficiency and load control from tractor.



RXA0133712—UN—16JUL13

- **Full Auto Mode (A) —** Automatically adjusts Fuel Economy Minimum Engine Speed, allowing tractor to use most fuel efficient engine speed under light load. This mode automatically responds to loads created by use of hitch or SCVs (load anticipation). During PTO use, top engine speed is automatically limited to provide appropriate PTO speed.



RXA0143051—UN—26JUN14

A— Full AUTO Mode
B— Custom Mode
C— Manual Mode
D— Maximum Forward Speed Module
E— Maximum Reverse Speed Module
F— Set Speeds Module
G— ECO Engine Speed Off Module
H— ECO Engine Speed On Module
I— Custom Settings Button
J— ECO Level Button
K— Forward Start Gear 1
L— Forward Start Gear 2

- **Custom Mode (B) —** Operator can choose Engine Speed Droop, Minimum Engine Speed, or Load Anticipation reactions.
- **Manual Mode (C) —** Operator can choose Engine Speed Droop, Minimum Engine Speed, or Load Anticipation reactions.

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

Forward maximum speed (D) or reverse maximum speed (E) displays maximum forward or reverse speed limits. To change maximum speed, select appropriate maximum speed module. Max Speed Forward or Max Speed Reverse page appears. Use increase (+) or decrease (-) Buttons to set maximum speed. If operator changes maximum forward or reverse speed below current set speed, set speed decreases to maximum speed and vehicle speed would decrease.

RD47322,00006B8-19-27JUL17

Efficiency Manager™ on the e18™ 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™

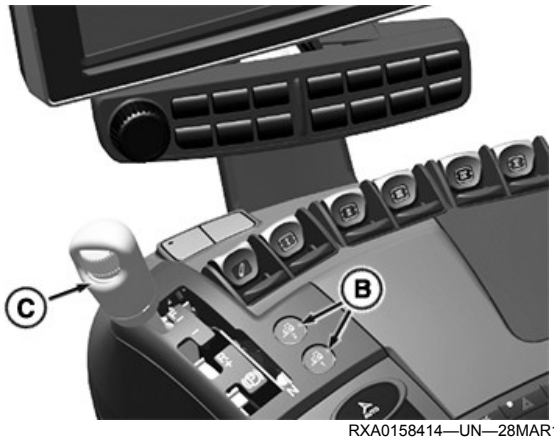


RXA0160987—UN—26SEP17

- The Efficiency Manager™ indicator light (A) is on the corner post display.

Efficiency Manager is a trademark of Deere & Company

- 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.



RXA0158414—UN—28MAR17

Ag CommandARM™ Shown

- 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 (C) 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™,

KD34109,000080C-19-26JUL18

Efficiency Manager™ on e18™ Transmission in Manual Mode



RXA0154275—UN—03OCT16

Ag CommandARM™ Shown

- 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.

KD34109,000080D-19-24JUL18

e18™ Custom Mode Settings

NOTE: Settings discussed can only be modified when Efficiency Manager™ is in Custom or Manual Mode.

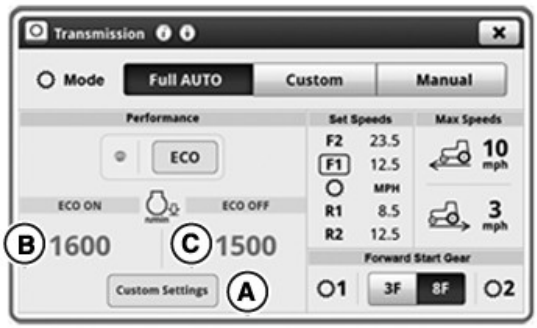
iTEC is a trademark of Deere & Company
Efficiency Manager is a trademark of Deere & Company



RXA0133712—UN—16JUL13

Press Transmission Shortcut Button on Navigation Bar.

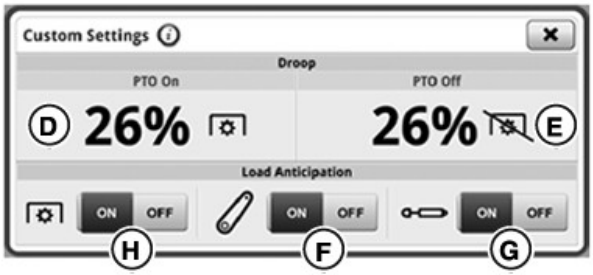
On Mode bar, select Custom Mode.



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.

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.

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.

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.

Load Anticipation

e18 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) activation.

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.

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CommandARM is a trademark of Deere & Company

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.

KD34109,000080E-19-26JUL18

Scraper Tractor Drawbar [Scraper]

Scraper tractors are only equipped with a drawbar. There is no hitch or PTO option for a scraper tractor.

KD34109,0000764-19-20APR18

Attach PTO-Driven Implement [Ag]

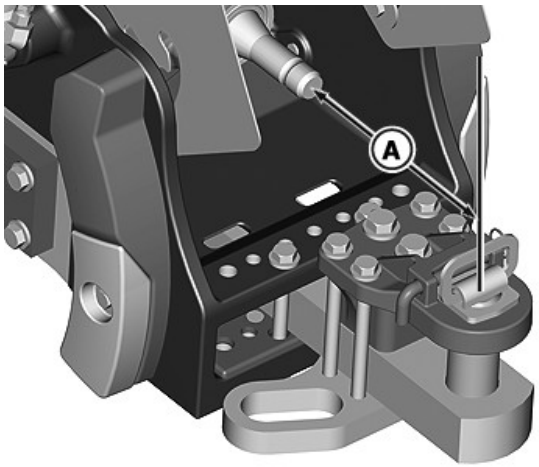


TS1644—UN—22AUG95

CAUTION: Entanglement in rotating driveline can cause serious injury or death.

Keep PTO 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 PTO driveline is stopped before making adjustments, connections, or cleaning PTO-driven equipment.



RXA0142225—UN—09JUN14

PTO Shaft	PTO Shaft End to Hitch Pin Hole (A) mm (in)
1000 rpm - 20 Splines[a]	508 (20)

[a] *45 mm (1-3/4 in) Shaft Diameter*

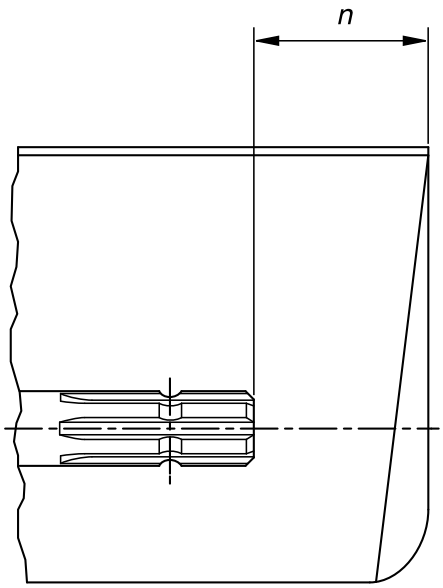
1. Lock drawbar in center position.
2. Remove clevis assembly.
3. Attach implement to drawbar before connecting PTO driveline. If implement will be connected to quick-hitch, be sure drawbar will not interfere.
4. Connect drive line to PTO shaft. Turn shaft slightly by hand to line up splines. Be sure yoke is in correct position and firmly locked.
5. Move PTO shield into position for PTO shaft size being used

GH15097,0000647-19-16JUL18

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.

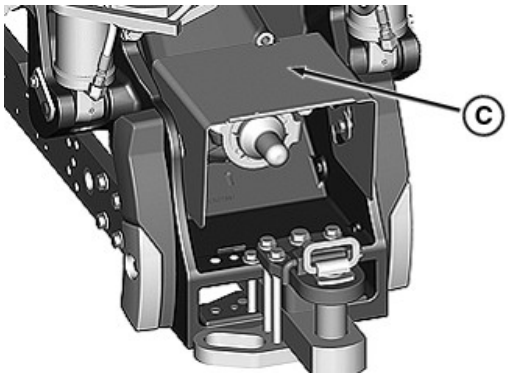
Do not raise implements high enough to damage the tractor master shield or guard of primary implement PTO driveshaft. Detach the PTO driveline shaft if it is necessary to increase implement height. (See Attching/ Detaching PTO Driveline)

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

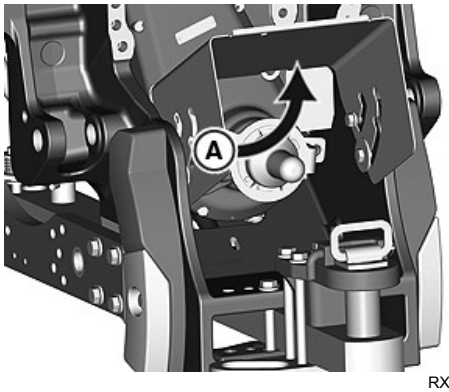
Use PTO Master Shield (If Equipped)



RXA0142441—UN—11JUN14

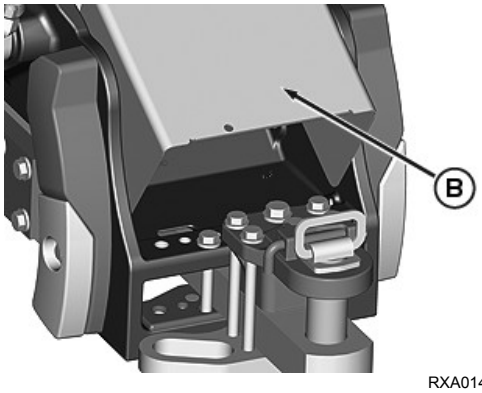
PTO Master Shield (Standard Position)

CAUTION: Avoid possible injury. Tractor master shield should be in place at all times except for special applications as directed in the implement operator's manual. Do not use shield as a step.



RXA0142439—UN—11JUN14

Master shield can be tipped up in raised position (A) to provide clearance while connecting PTO shaft. *DO NOT* operate PTO with shield in raised position.



RXA0142440—UN—11JUN14

Master shield can be lowered (B) to improve drawbar visibility, when drawbar is being used without PTO.

GH15097,0000648-19-06SEP17

PTO Engine Speed



RXA0153163—UN—04AUG16

Corner Post Display

A—Tachometer
B—PTO Indicator

Correct engine speed is very important. Run engine at 1895 engine rpm for 1000 rpm PTO speed operation with 45 mm (1-3/4 in) 20 spline shaft.

GH15097,00008D3-19-26OCT16

Operate PTO

CAUTION: Avoid personal injury. Stop engine and allow PTO driveline to stop before adjusting, connecting, 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 if operator leaves seat with PTO engaged. PTO does not disengage when operator is off seat.

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RXA0142354—UN—09JUN14

Push PTO control lever (A) down and forward to engage PTO. PTO indicator on corner post monitor will light.

IMPORTANT: If PTO disengages during start up in cold weather operation, wait 5 minutes before reengaging PTO to avoid damage.

Tractor software will NOT allow operator to reengage PTO immediately if engine rpm drops excessively due to heavy load at PTO startup. There will be a 10-15 second delay before operator can reengage PTO. This delay allows clutch to cool before it is reengaged.

Pull PTO control lever to disengage clutch and PTO brake will engage automatically.

NOTE: If engine is stopped and then restarted while PTO is running, PTO will not operate. Disengage PTO control switch and then engage PTO again.

GH15097,00008D2-19-28JUL17

PTO Engagement Rate



RXA0133713—UN—16JUL13

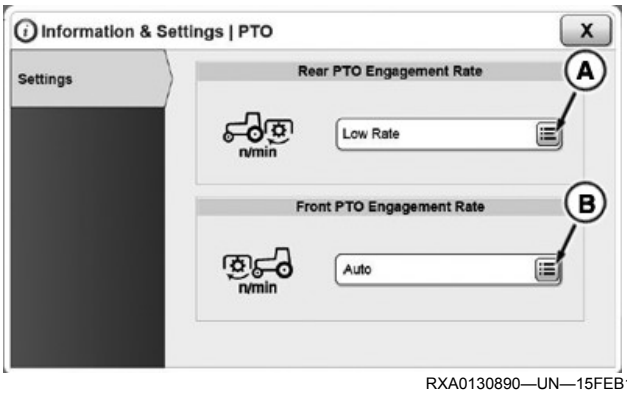
Navigation Bar PTO Shortcut Button

Use navigation bar PTO button or follow alternative path:

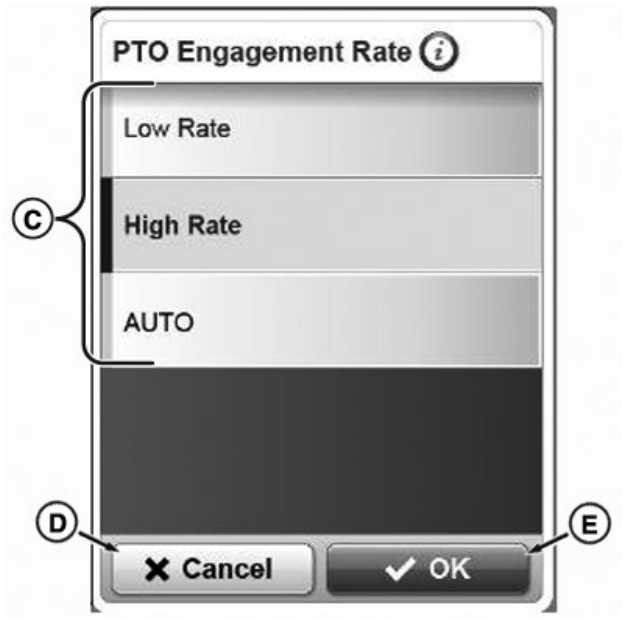


RXA0148323—UN—05JUN15

1. Select **Menu button.**
2. Select **Machine Settings tab.**
3. Select **PTO button.**
4. Select **Information and Settings icon.**
5. Select **Settings tab.**



RXA0130890—UN—15FEB13



RXA0130891—UN—15FEB13

A—Rear PTO Engagement Rate Button
B—Front PTO Engagement Rate Button (If Equipped)
C—PTO Engagement Rate Settings
D—Cancel Button
E—OK Button

Operator can select from three different engagement rates for both front and rear PTO: AUTO, Low, and High.

AUTO: Used for most implements, and is 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.

Low: Can be used where gradual PTO start-up is required, or if Auto engagement is too aggressive or inconsistent.

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High: Can be used for applications where PTO clutch engagement must be aggressive.

IMPORTANT: If problems with PTO clutch engagement occur in Auto setting and Under Speed Diagnostic Trouble Code is displayed, change PTO engagement setting in CommandCenter™ from Auto to High Rate to prevent power train damage.

Operating PTO with excessive load could damage PTO clutch and other components. When excessive load is detected, PTO automatically disengages. Wait 15 seconds before attempting to reengage PTO. If problem occurs during engagement, PTO speed may need to be decreased.

GH15097,0000793-19-19SEP17

Rear Hitch



RXA0160206—UN—13JUL17

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):

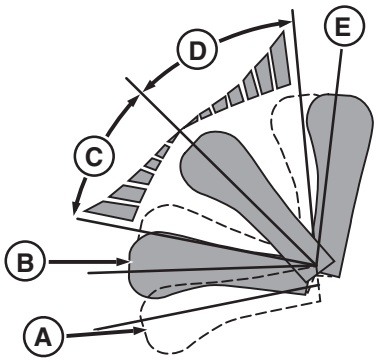
- Drop Rate Hitch Dial (C)
- Upper Limit Hitch Dial (D)
- Load Depth Hitch Dial (E)

Settings may also be adjusted with CommandCenter™ .

KD34109,00006C2-19-19JUL18

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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.

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



RXA0158410—UN—28MAR17

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.

GH15097,0000867-19-23JUL18

Rear Hitch Lock

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.

1. Raise hitch with hitch control lever or hitch depth adjust dial.



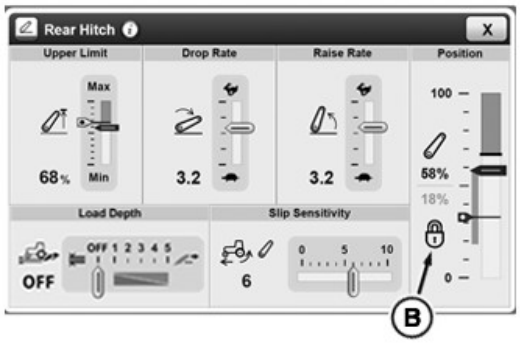
RXA0158416—UN—28MAR17

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.



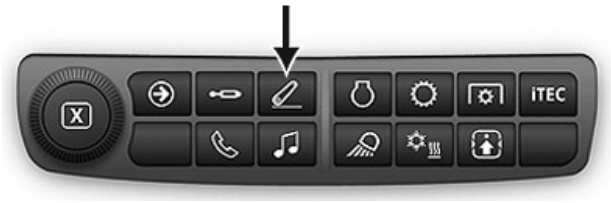
RXA0164015—UN—19JUL18

When hitch lock indicator (B) is visible, hitch does not respond to hitch depth adjust dial, and hitch control lever cannot lower hitch.

GH15097,00008D8-19-19JUL18

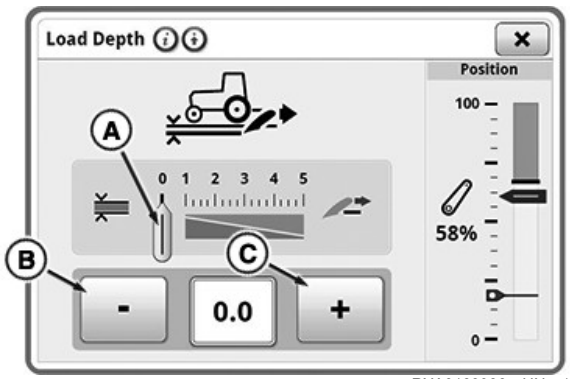
Adjust Load/Depth Control (Draft Response)

Load/depth control allows control of movement of hitch while working. Correct adjustment provides better control of implement depth and operating efficiency.

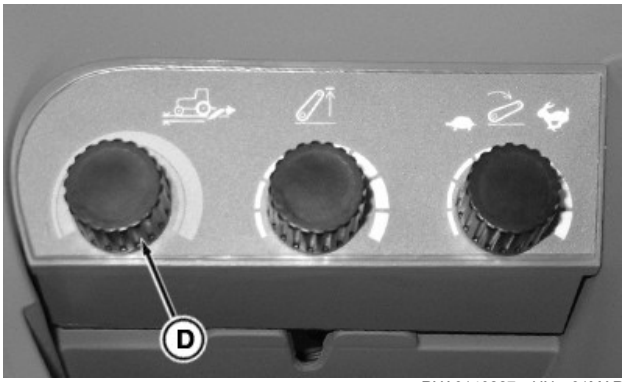


RXA0133710—UN—16JUL13

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

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.

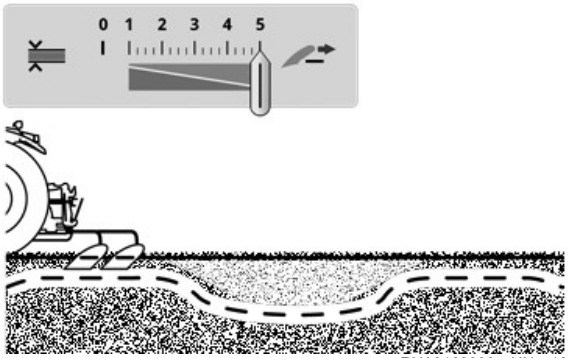
TS36762,00001D5-19-23JUL18

Draft Control Use

Use draft control to help maintain operating depth of non-floating tillage equipment in rolling terrain. Draft control also helps if tractor altitude/pitch and rear wheel sinkage force implement deeper than desired. Higher load depth values respond better to rolling terrain but are more sensitive to soil density variation. Lower values stay more consistent with field soil changes but are less responsive to hills. Ideal setting depends on implement type and field conditions.

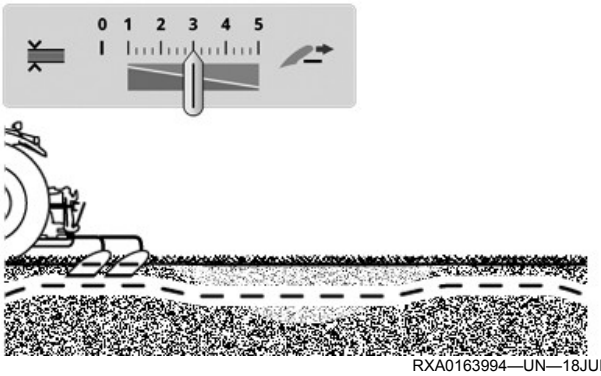
Load depth setting determines range of movement. The higher the value, the larger the range of movement (more draft response). The lower the value, the smaller the range of movement (less draft response). Adjust setting in CommandCenter™ or with load depth hitch dial (if equipped). For more information, see Adjust Load/Depth Control (Draft Response) in this Operator's Manual section.

While in draft control mode, hitch can move above and below setting based on soil type and/or terrain. If setting is causing implement to go lower than desired, set to 1 and increase slip control sensitivity. See Adjust Slip Sensitivity in this Operator's Manual section.



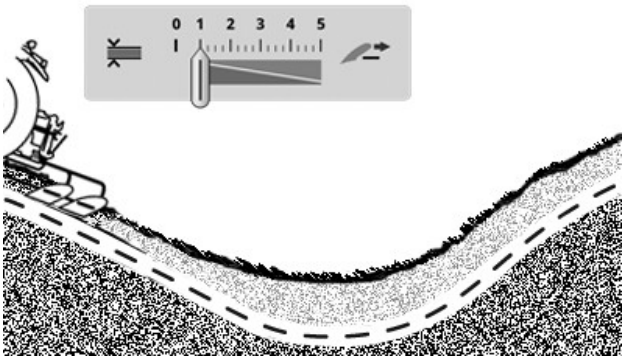
RXA0163993—UN—18JUL18

If Soil Varies, High Value Causes More Depth Variation



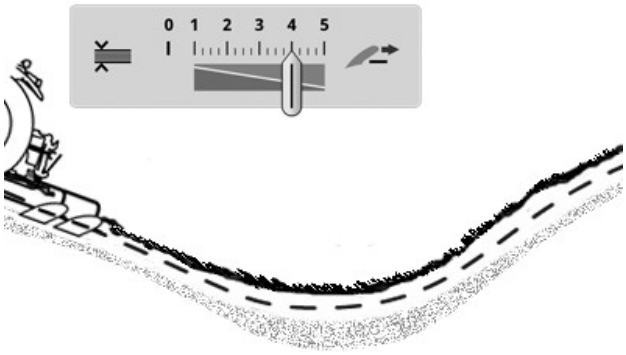
RXA0163994—UN—18JUL18

If Soil Varies, Middle Value Causes Less Depth Variation



RXA0163995—UN—18JUL18

In Rolling Terrain, Low Value Causes More Depth Variation



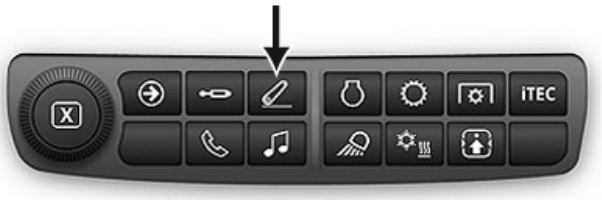
RXA0163996—UN—18JUL18

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.

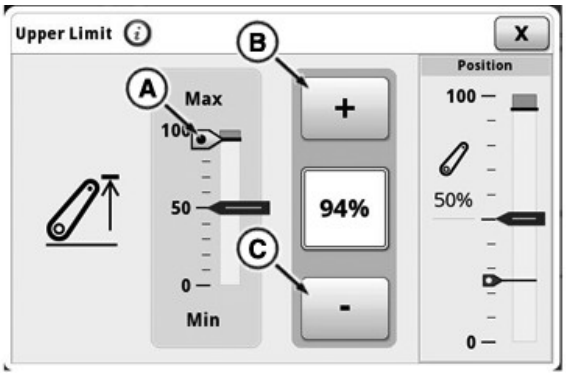
TS36762,00001D6-19-21AUG18

Adjust Rear Hitch Upper Limit

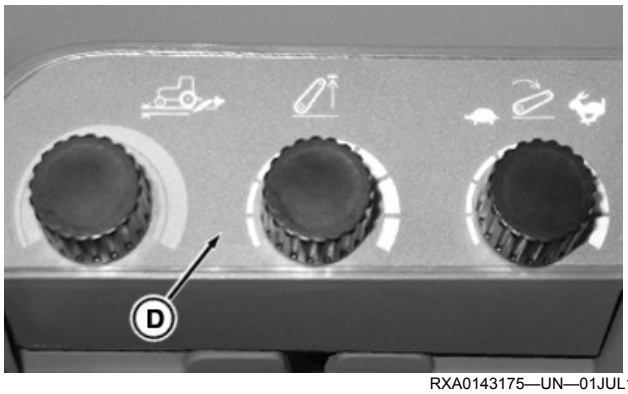


RXA0133710—UN—16JUL13

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).

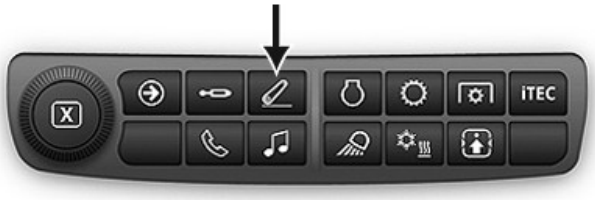
   Changes to upper limit are immediate.

   When the upper limit is the same as the hitch position, hitch follows upper limit.

TS36762,00001D7-19-19JUL18

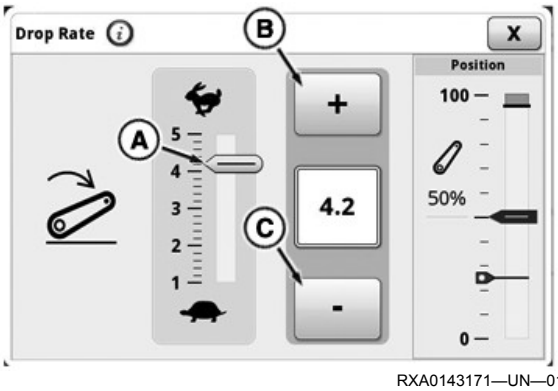
Adjust Rear Hitch Drop Rate

⚠ CAUTION: Avoid physical injury or machine damage due to excessive drop speed. Fully lowering implement should take a minimum of 2 seconds.

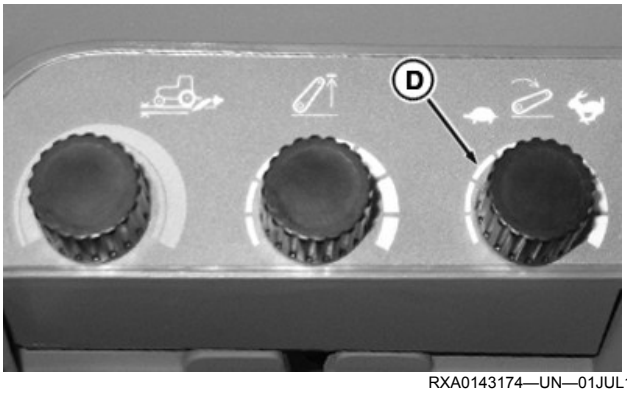


RXA0133710—UN—16JUL13

1. Press rear hitch shortcut button on navigation bar.
2. Select rear hitch drop rate module.



RXA0143171—UN—01JUL14



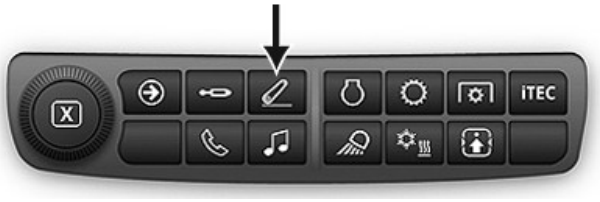
RXA0143174—UN—01JUL14

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.

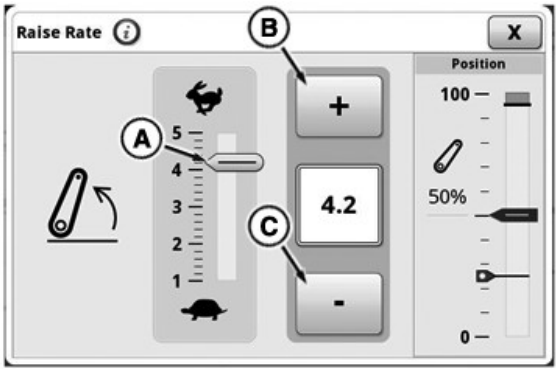
TS36762,00001D8-19-19JUL18

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.

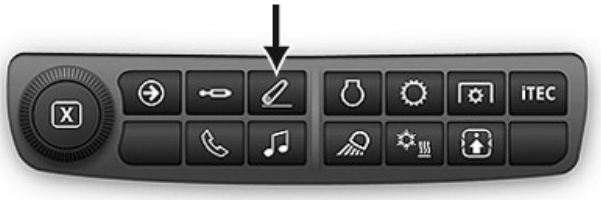
TS36762,00001D9-19-18JUL18

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.

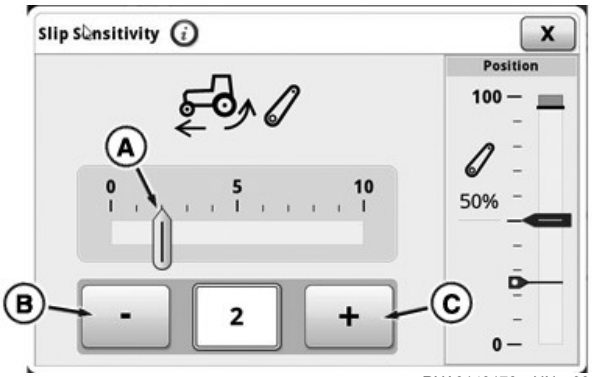
Operate hitch with draft sensing only, or with draft sensing and hitch slip. Hitch slip adjustment is independent from draft response.

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.

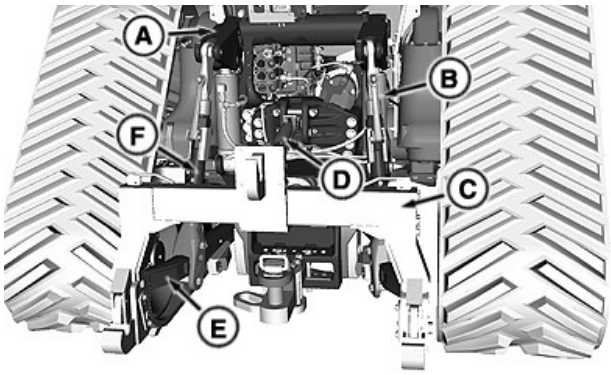
Put hitch control lever in float position. Lift links can be adjusted for lateral float. See Adjust Lateral Float in this Operator's Manual section.

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

Hitch Components



RXA0147842—UN—29APR15

A—Lift Arms
B—Lift Cylinders
C—Quick-Hitch
D—Center Link
E—Draft Links
F—Lift Links

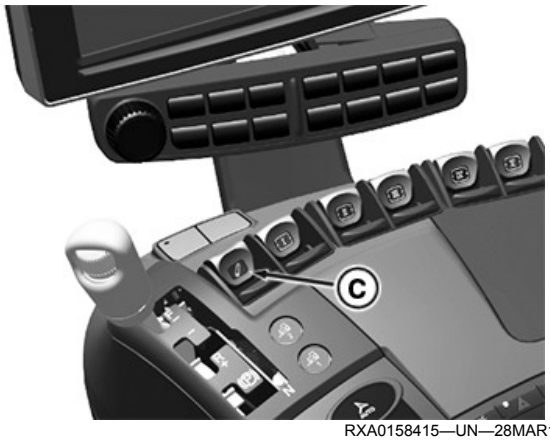
GH15097,0000927-19-16JUL18

Hitch External Switches

CAUTION: To prevent injury or damage caused by tractor movement, be sure transmission is in PARK position before using remote raise/lower switches. Stay clear of interference points when using remote raise/lower switches.

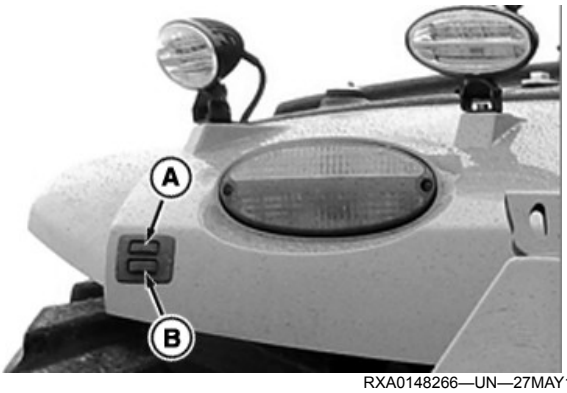
Rear hitch external raise/lower switches are located on left rear fender.

NOTE: Hitch moves at slower speed when using external raise/lower switches.



RXA0158415—UN—28MAR17

CommandARM™ hitch control lever (C) cannot be used simultaneously with external raise/lower switches.



RXA0148266—UN—27MAY15

Push on top external switch (A) to raise hitch.

Push on bottom external switch (B) to lower hitch.

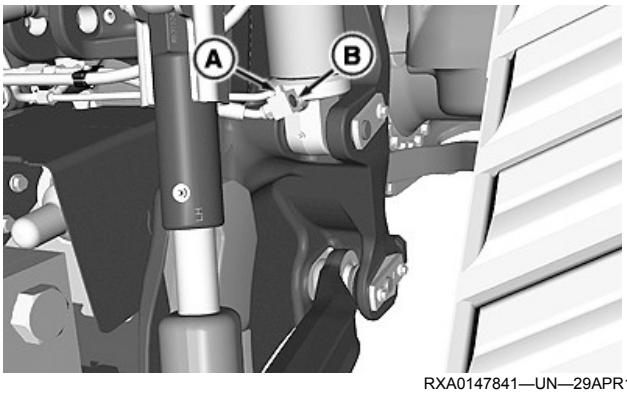
TO84419,000004C-19-24APR18

Manual Lowering

CAUTION: Avoid personal injury or death. Do not disconnect any hitch sensors, solenoids, or connectors from hitch control valve when engine is operating or key switch is ON. Unexpected hitch movement can occur. Stay clear of hitch area when starting engine or manually lowering hitch.

Hitch manual lowering is possible when hydraulic pressure and/or electrical power is not available.

CommandARM is a trademark of Deere & Company



RXA0147841—UN—29APR15

Hitch manual lowering drain valve (A) is located on lower right-hand side lift cylinder.

Remove plastic plug (B) to access valve. Turn valve counterclockwise to lower hitch.

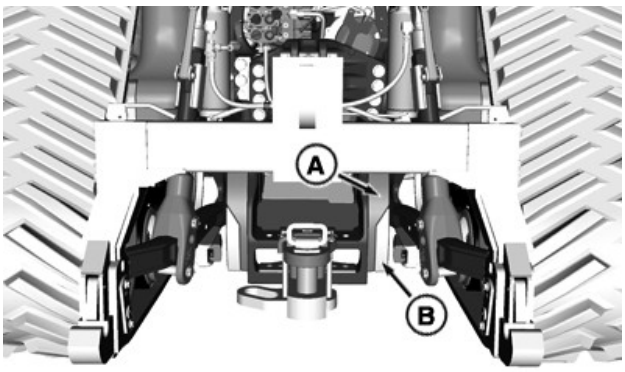
NOTE: Hitch cannot be raised mechanically. Both hydraulic and electrical power are required to raise hitch.

Turn valve clockwise and install plug after hitch has been lowered.

GH15097,0000926-19-28JUL17

Sway Blocks

IMPORTANT: Prevent interference of draft links with tracks. Be sure that distance between tracks is at least 1168 mm (46 in) with equal distance from middle of tractor. If distance between tracks must be less than 1168 mm (46 in), sway is limited.



RXA0147843—UN—29APR15

A—Tapered Side
B—Sway Blocks

Install sway blocks (B) with thick end toward frame, to minimize hitch movement.

Tighten attaching bolts to 230 N·m (170 lb·ft).

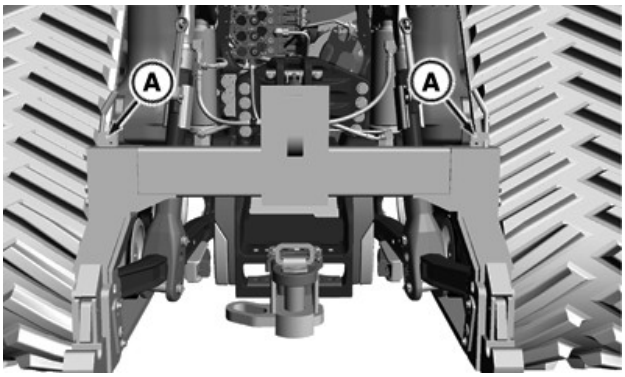
Move each sway block to opposite side of tractor to allow sway when hitch is lowered. Install sway blocks with tapered sides (A) outward from frame.

GH15097,0000928-19-29SEP17

Attach Implement to Quick-Hitch

CAUTION: To avoid bodily injury or machine damage:

- **Correctly attach implement.**
- **Put transmission in PARK position and check full range of hitch for interference, binding, or PTO separation whenever an implement is attached.**
- **Do not stand between tractor and implement.**



RXA0147844—UN—29APR15

1. Pull up on coupler latch handles (A).



RXA0158417—UN—28MAR17

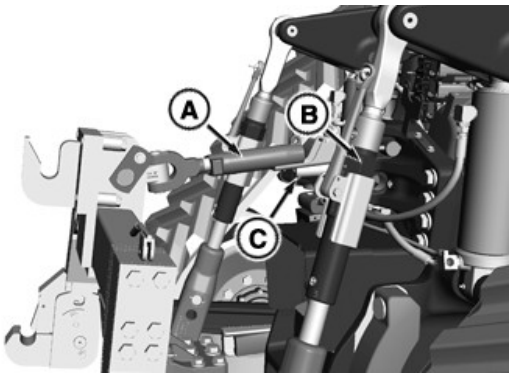
2. Lower hitch control lever (B) until quick-hitch hooks are lower than implement hitch pins.
3. Back up tractor to implement.
4. Raise hitch enough to engage implement pins in hooks.
5. Push coupler latch handles down to lock implement to quick-hitch.
6. Connect hydraulic hoses and electrical connections.
7. Slowly pull hitch control lever to raise implement.

Lower implement to ground and adjust upper height limit control if necessary.

GH15097,0000929-19-16JUL18

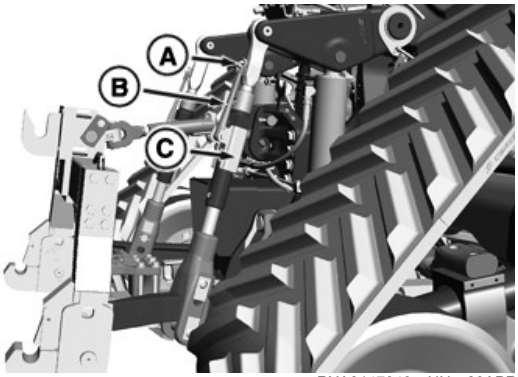
Adjust Implement Level

1. Adjust center link to level implement front-to-rear.



RXA0147948—UN—29APR15

2. Remove lock ring (C). Disengage handle (B) and rotate center portion (A) to lengthen or shorten center link to 747—868 mm (29.5—34.3 in).
3. Push handle down and install lock ring to hold center link in position. Measure between centers of attaching pins.

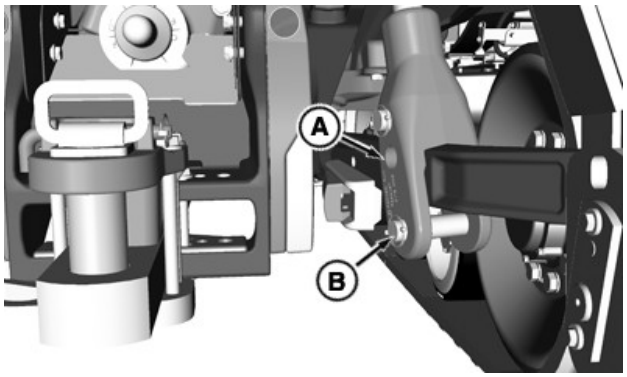


RXA0147949—UN—29APR15

4. Adjust either lift link to level implement side-to-side. Remove lock ring (A) to release lift link sleeve handle (B). Position sleeve on lift link hex to rotate center portion (C) with handle.
5. Measure between centers of lift link attaching pins. Adjustment length is 1030—1150 mm (40.5— 45.3 in)

GH15097,000092B-19-08DEC17

Lateral Float



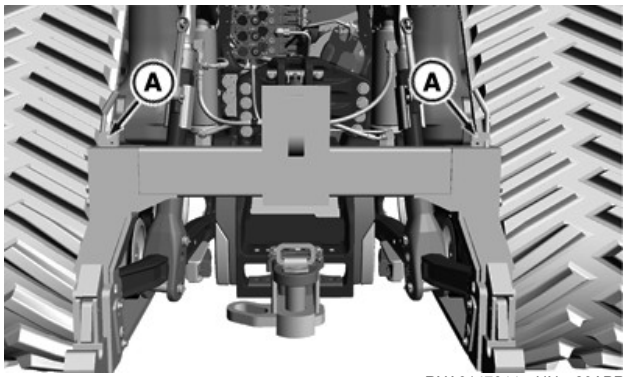
RXA0147951—UN—29APR15

Lateral float pins in upper holes (A) allow either draft link to raise slightly as implement follows ground surface.

Lateral float pins in lower holes (B) hold implement rigidly.

GH15097,000092C-19-28JUL17

Detach Implement From Quick-Hitch



RXA0147844—UN—29APR15

1. Raise both latch levers (A) with implement raised.
2. Disconnect hydraulic hoses and electrical connections.
3. Lower implement to ground. Continue lowering quick-hitch until hook clears implement hitch pins.
4. Carefully drive tractor away from implement.

GH15097,000092A-19-16JUL18

Hitch Conversion — *Category 4/4N Convertible Quick-Hitch*

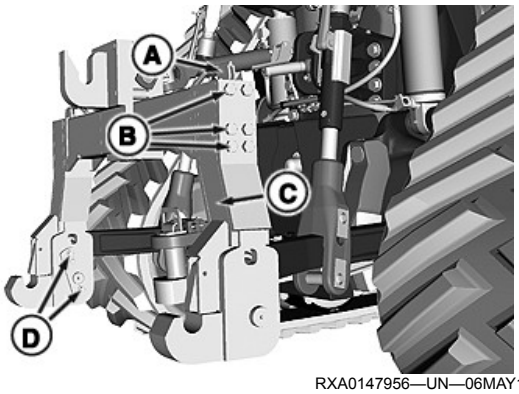
Quick-hitch is convertible to Category 4 or Category 4N. Use Category 4 whenever possible, especially for heavy loads. Greater width gives more strength.

NOTE: Your John Deere™ Dealer can supply parts to adapt Category 4/4N quick-hitch to Category 3 implements.

Use following procedure to convert quick-hitch:

CAUTION: Use proper lifting device when converting coupler. Failure to do so can result in personal injury.

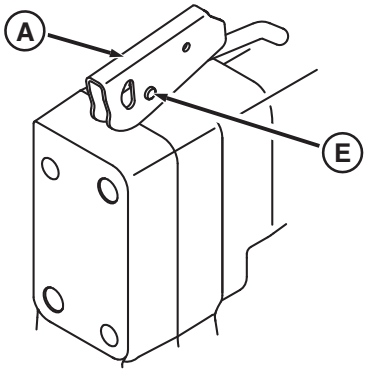
1. Support center of quick-hitch.



RXA0147956—UN—06MAY15

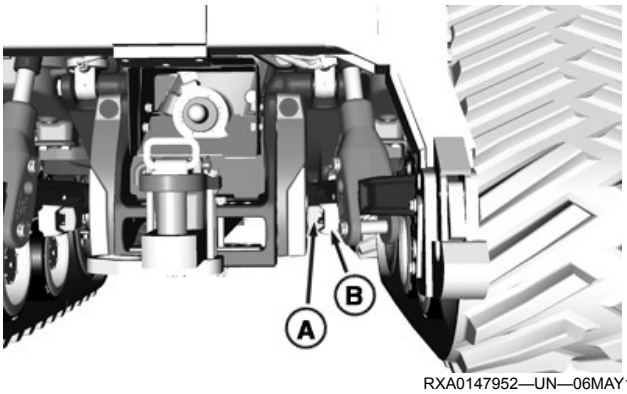
2. Remove pin retaining bolts (D) and pins from draft link.
3. Remove side member cap screws (B).
4. Switch ends with quick-hitch side members (C) (left-hand member to right-hand end and right-hand member to left-hand end). Tighten cap screws to 425 N·m (315 lb·ft).

IMPORTANT: Lower coupler hook must be kept under pressure before removing roll pin, to hold lock rod in place.



RXA0142591—UN—16JUN14

5. Flip latch handle around by removing roll pin (E).
6. Turn coupler latch handle (A) inward and reinstall roll pin (E).
7. Flip handle down in lock position.



RXA0147952—UN—06MAY15

Draft Link Bumper

8. Loosen draft link bumper retaining cap screw (A).

NOTE: Position thick ends (B) forward on draft links for Category 4 or thin ends back for Category 4N.

9. Adjust bumper by sliding on draft link on cap screw to desired clearance position.
10. Tighten cap to 230 N·m (170 lb·ft).
11. Perform same steps on opposite side for equal clearance between sway blocks and bumpers.
12. Cycle hitch to ensure that there is no hitch interference.

GH15097,000092D-19-16JUL18

Converting Category 4N/3 Convertible Quick-Hitch Lower Hooks

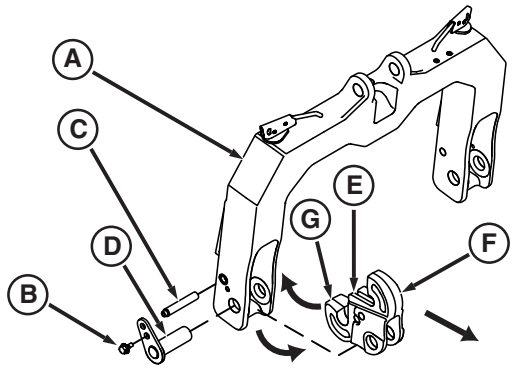
CAUTION: Use proper lifting device when converting coupler. Failure to do so can result in personal injury.

NOTE: Use Category 4N whenever possible.

A second person is recommended to align components during conversion.

If category 4 lower hooks are used on category 3 implements, bushings are needed over category 3 pins; these bushings can be purchased through your John Deere dealer.

NOTE: Lower hooks are not marked for left-hand or right-hand side. Do not move lower hooks from one side to other.



RXA0091394—UN—07NOV06

1. Support quick-hitch frame (A).
2. Remove cap screw (B).
3. Remove pin (D), then pin (C).

NOTE: Because lower hook (E) has category 3 hook (F) on one end and category 4N hook (G) on opposite end, it is used for both category 3 and 4N simply by turning it end for end.

4. Remove lower hook by rotating it down and to rear of coupler, then sliding it out at front of coupler.
5. Install lower hook, with desired end facing out. Using a reverse motion of removal, rotate it up and in.
6. Install pin, retainer, and cap screw.

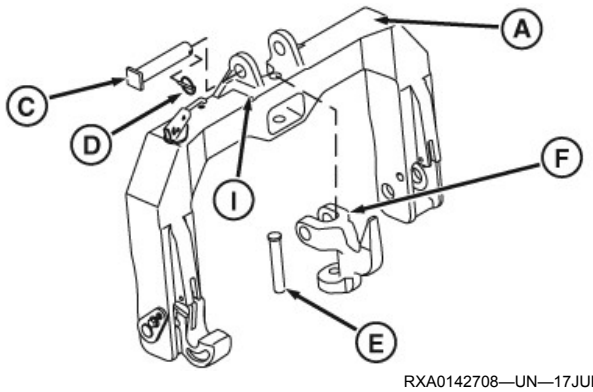
GH15097,000092E-19-16JUL18

Converting Category 4N/3 Convertible Quick-Hitch Upper Hook

CAUTION: Use proper lifting device when converting coupler. Failure to do so can result in personal injury.

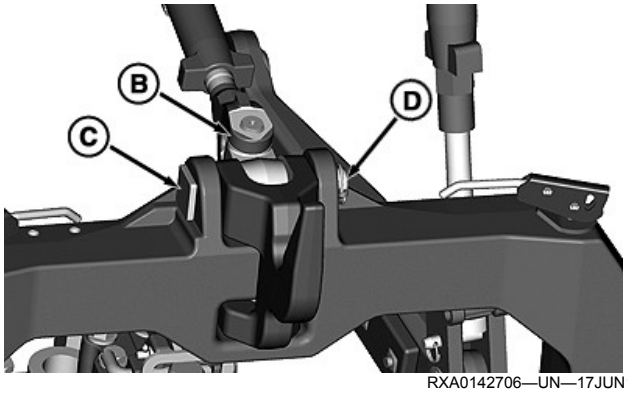
NOTE: A second person is recommended to align components during conversion.

It is recommended to use Category 4 upper hook if implement set up allows. The Category 3 upper hook may be overloaded with very high draft loads.



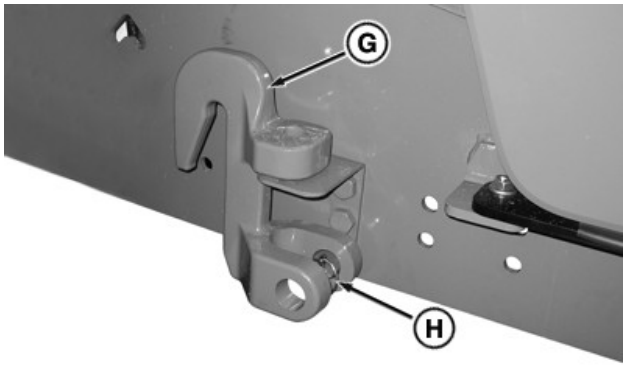
RXA0142708—UN—17JUN14

1. Support quick-hitch frame (A).



RXA0142706—UN—17JUN14

2. Remove quick lock pin (D) and pin (C) to release center link (B).
3. Remove pin (E) and upper hook (F).



RXA0147950—UN—29APR15

4. Remove pin (H) to remove stored upper hook (G) and replace with upper hook previously removed from quick-hitch.

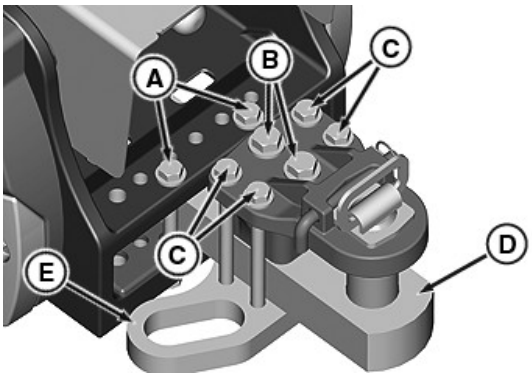
NOTE: Pin (C) must be installed left to right. Shoulder (I) will keep retaining pin (B) from being installed if pin (C) is installed incorrectly.

5. Use reverse sequence of steps to remove upper hook from quick-hitch. Install previously stored upper hook into quick-hitch.

GH15097,000092F-19-16JUL18

Drawbar [Ag]

Drawbar Load Limits



RXA0141870—UN—30MAY14

IMPORTANT: Avoid equipment damage. Never exceed maximum static vertical load on drawbar (D). Drive slowly when moving heavy draft loads.

1. Attach drawbar brace (E) and hammerstrap to drawbar (D).
2. Insert and tighten M20 cap screws (A and C) to 610 N·m (450 lb·ft) and M22 cap screws (B) to 750 N·m (553 lb·ft).

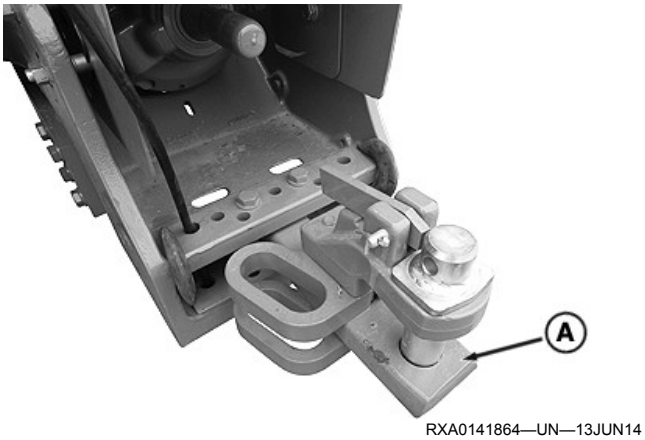
Drawbar Type	Drawbar Load Limits - Maximum Static Vertical Load kg (lb)				
	Model				
	9420RX	9470RX	9520RX	9570RX	9620RX
Category 5					
With heavy-duty drawbar support	Standard — 5440(12000)[a]				
With heavy-duty drawbar support and category 4 conversion kit	Optional — 5440(12000)[a]		—		

[a] *Maximum static vertical load with drawbar in short position.*

EC82310,000002C-19-11DEC17

Selecting Drawbar Position

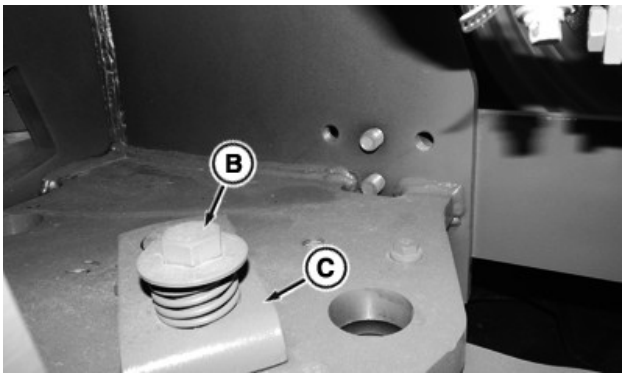
IMPORTANT: Drawbar must be positioned, as instructed in Attach PTO-Driven Implement in PTO, Hitch, and Drawbar section of this Operator's Manual, for PTO-driven implement.



RXA0141864—UN—13JUN14

Drawbar (A) length can be extended:

1. Loosen drawbar locking bolts.

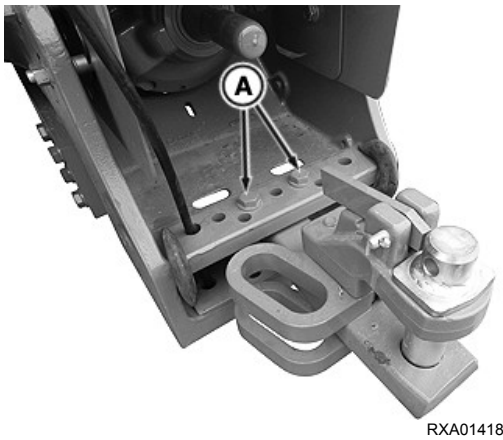


RXA0160176—UN—10JUL17

2. Remove front pivot pin retainer cap screws, washers, and spacers (B). Remove pivot pin retainer (C).
3. Slide drawbar to desired position.
4. Install pivot pin retainer, spacers, washers, and cap screws. Tighten cap screws to 435 N·m (322 lb·ft).
5. Install and tighten drawbar locking bolts to 435 N·m (322 lb·ft).

GH15097,0000640-19-27NOV17

Adjusting Drawbar Side-to-Side



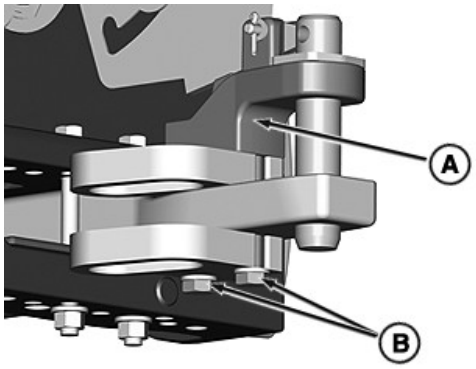
RXA0141865—UN—13JUN14

1. Remove drawbar locking bolts (A).
2. Slide drawbar to desired position.
3. Install a locking bolt against each side of drawbar. Tighten to 435 N·m (322 lb·ft).

GH15097,0000641-19-27NOV17

Install Clevis Assembly — Category 4 Drawbar

IMPORTANT: Avoid equipment damage: correctly attach clevis assembly.



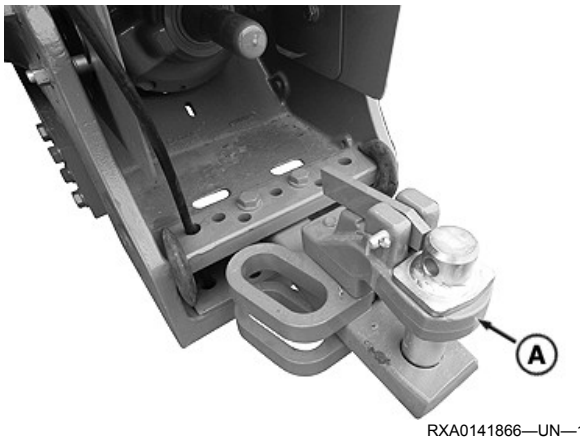
RXA0141898—UN—05JUN14

1. Attach clevis assembly (A) on top of drawbar.
2. Tighten two cap screws (B) to 750 N·m (553 lb·ft).

TO84419,0000104-19-27NOV17

Clevis Assembly Use — Category 4 Drawbar

IMPORTANT: When PTO shaft may cause interference, remove clevis assembly.



RXA0141866—UN—13JUN14

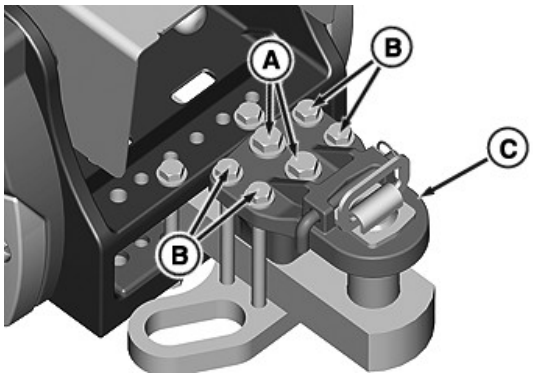
Clevis assembly (A) must be attached *only* to the top of the drawbar.

If towed implement also has a clevis assembly, insert pin only through tractor drawbar. DO NOT insert pin through all four members.

TO84419,0000105-19-13JUL17

Install Clevis Assembly — Category 5 Drawbar

IMPORTANT: Avoid equipment damage: correctly attach clevis assembly.



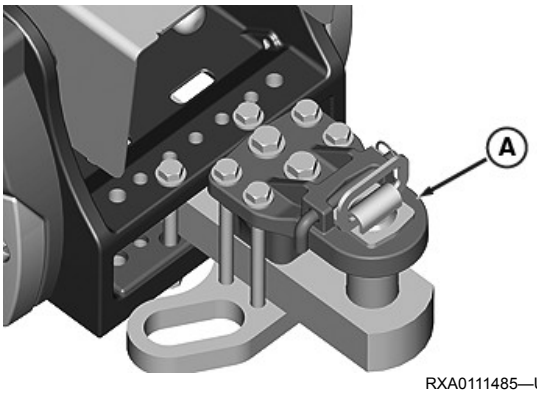
RXA0141899—UN—05JUN14

1. Attach clevis assembly (A) to top of drawbar.
2. Tighten two center M24 cap screws (B) to 750 N·m (553 lb·ft).
3. Tighten four outer M20 cap screws (C) to 610 N·m (450 lb·ft).

TO84419,0000106-19-13JUL17

Clevis Assembly Use — Category 5 Drawbar

IMPORTANT: Before using PTO shaft, or whenever it might cause interference, remove clevis assembly.



RXA0111485—UN—27OCT10

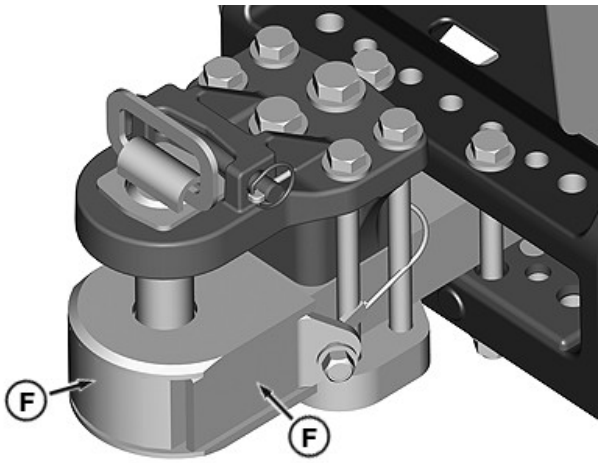
Clevis assembly (A) must be attached *only* to the top of the drawbar.

If towed implement also has a clevis assembly, insert pin only through tractor drawbar. DO NOT insert pin through all four members.

TO84419,0000107-19-13JUL17

Use Correct Drawbar Pin — Category 5 to 4

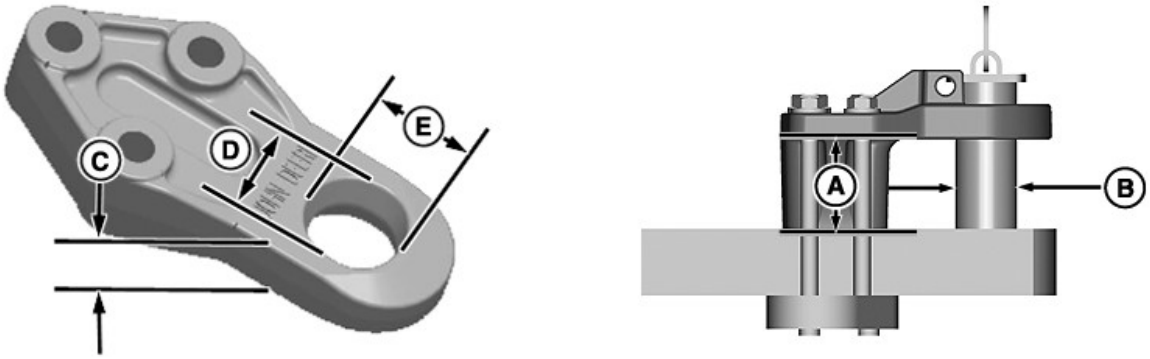
IMPORTANT: Use Category 5 drawbar pin for implements that produce drawbar loads requiring more than 348 kW (467 HP) engine power level rating or 300kW (400 HP) PTO power level rating for proper operation. Contact implement manufacturer for information on how to properly convert implement to accept Category 5 drawbar pin.



RXA0141903—UN—05JUN14

See your John Deere dealer to purchase an Adapter Kit (F) for tractors equipped with a Category 5 drawbar when attaching to implements equipped with a Category 4 hitch link if approved by implement manufacturer.

Use Category 5 drawbar pin furnished with tractor to attach implements that have a Category 5 hitch link. See table for dimensions. Consult implement Operator's Manual or manufacturer to determine proper size of drawbar pin for implement attaching system. Operating tractor and implements with drawbar category combinations which are improperly sized for implement power requirements could result in premature wear or failure of hitch components.



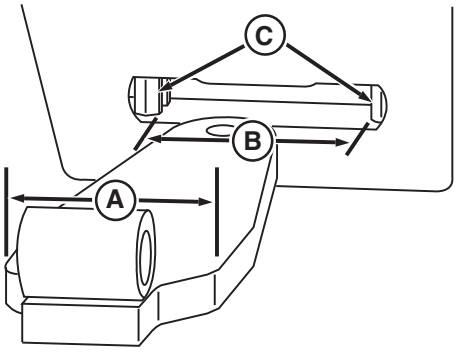
RXA0160175—UN—10JUL17

Category	Hitch Link Dimensions mm (in)				
	Tractor Drawbar		Implement Hitch Link		
	Hitch Pin Diameter (B)	Drawbar Opening Height (A)	Slot Length (E)	Slot Width (D) (Minimum)	Link Thickness (C)
4	50 (1.97)	90 (3.54)	55 — 70 (2.17 — 2.75)	55 (2.17)	50 (1.97)
5	70 (2.76)	100 (3.94)	73 — 85 (2.87 — 3.35)	73 (2.87)	60 (2.36)

TO84419,0000108-19-18SEP17

Install Drawbar or Quick-Attach in Short Drawbar Support

Use scraper drawbar when scraper tongue weight exceeds design specifications of agricultural tractor drawbar. The scraper drawbar is shorter which minimizes weight transfer to rear axle. Follow scraper recommendations for drawbar installation.

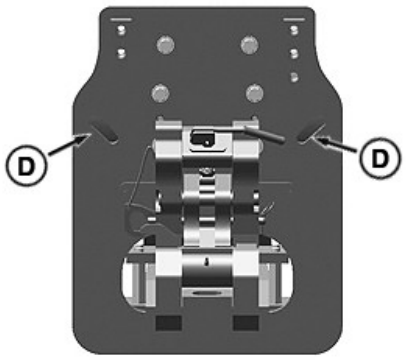


RXA0064878—UN—23JAN03

IMPORTANT: Adjust hex bushings (C) when installing scraper drawbar.

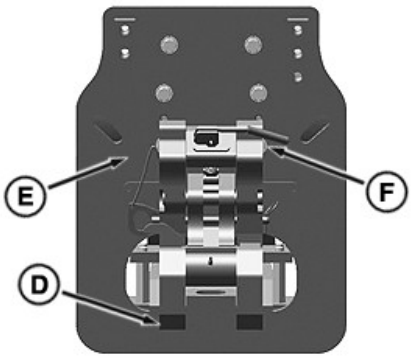
NOTE: All four (4) locking bolts should be kept clean to maintain maximum torque.

1. Loosen drawbar locking bolts and bushings, underside of support.
2. Measure width of drawbar area (A) resting on drawbar support.
3. Rotate bushings so distance (B) between bushings is as close to drawbar width as possible.



RXA0142716—UN—21JUL14

Scraper Drawbar Support



RXA0148253—UN—29MAY15

Quick-Attach Drawbar

4. Slide short drawbar or quick-attach drawbar (D) into support.
5. Install front drawbar pin.
6. Tighten drawbar locking bolts to 430 N·m (320 lb·ft).
7. Remove locking pin (E) and lift handle (F) to operate quick-attach drawbar.

IMPORTANT: Recheck Locking Bolt Torque Specification.

8. Check and retighten drawbar support bolts after first 10, 50, and 100 hours of scraper operation.

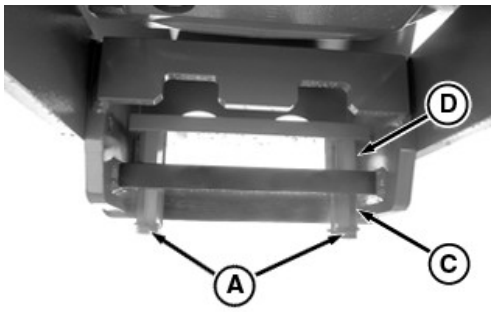
RW29387,00004F2-19-30AUG17

Short Scraper Drawbar Conversion

Scraper drawbar support is designed to accept a larger drawbar and can be converted for use with smaller scraper drawbar. Follow scraper recommendations for drawbar installation.



RXA0082032—UN—05JUL05

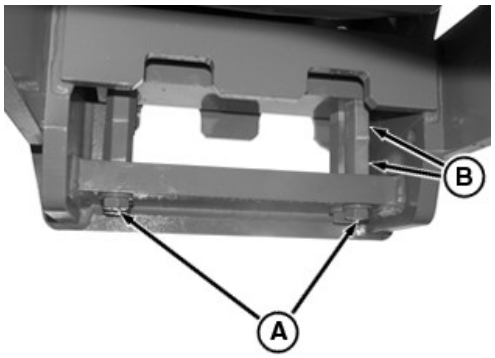


RXA0082012—UN—05JUL05

Smaller Scraper Drawbar Support Setup

IMPORTANT: Adjust hex bushings (C) when installing scraper drawbar.

NOTE: All four locking bolts must be kept clean to maintain maximum torque.



RXA0082010—UN—05JUL05

Larger Scraper Drawbar Support Setup

1. Loosen and remove drawbar support cap screws (A) and bushings (B).
2. Place lower bushings on cap screws with lock washers.
3. Reinstall cap screws with lower bushings and upper bushings (D) to drawbar support.
4. Measure width of drawbar area with drawbar resting on drawbar support.
5. Rotate bushings so distance between bushings is as close to drawbar width as possible.
6. Slide drawbar into support.
7. Install front drawbar pin.
8. Tighten drawbar locking bolts to 430 N·m (320 lb·ft).

IMPORTANT: Recheck Locking Bolt Torque Specification.

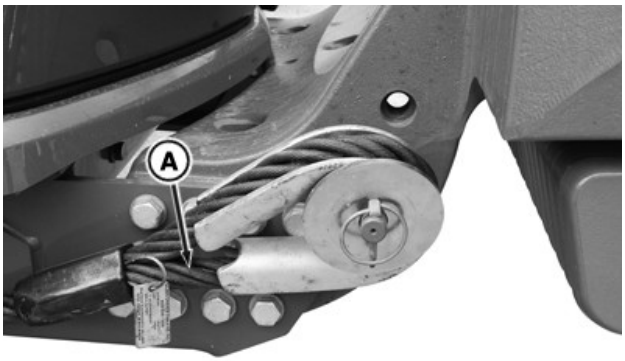
9. Check and retorque drawbar support bolts after first 10, 50, and 100 hours of scraper operation.

RW29387,00004F3-19-30AUG17

Tow Cable

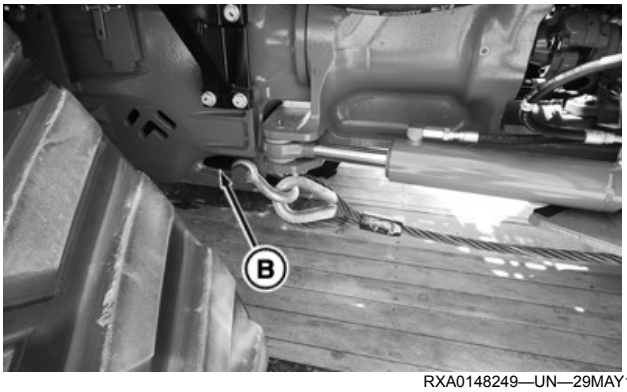
IMPORTANT: Avoid possible tractor damage:

1. **Correctly use tow cable by pulling from front of tractor in straight forward direction.**
2. **Keep cable tight to limit cable side movement and interference with right front track.**
3. **Do not use tow cable to hook tractors in tandem to pull draft load.**
4. **Pulling tractor with loaded equipment can cause excessive strain on drawbar support and is greatly increased by speed and rough ground conditions.**
5. **Inspect tow cable and/or drawbar pin for wear and replace when necessary.**
6. **Attach tow cable to storage bracket and keep tight, when not in use.**



RXA0142715—UN—24JUN14

Use tow cable (A) to pull tractor or tractor with scraper from soft or wet soil conditions.



RXA0148249—UN—29MAY15

Attach tow cable to drawbar support (B).

GH15097,0000932-19-30AUG17

Hydraulics - General Information

Hydraulic System Overview

Hydraulics system provides lubrication, power and control to many tractor subsystems. Transmission, steering, brakes, and hitch [Ag] 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.

TS36762,00002C7-19-23APR18

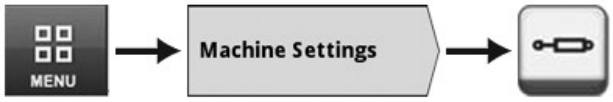
Configure SCV Modes

CAUTION: Avoid unwanted movements and possible accidents. Do not operate front loaders in conjunction with Intelligent Total Equipment Control (iTEC™).



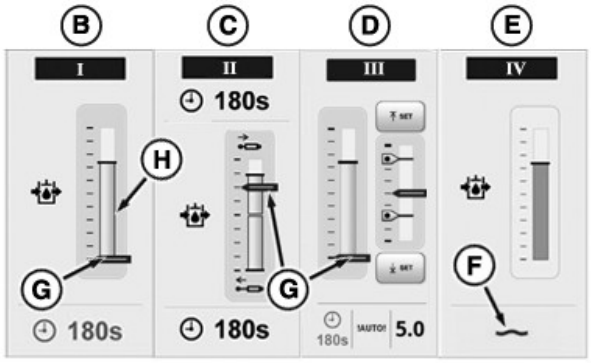
RXA0151873—UN—15APR16

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:

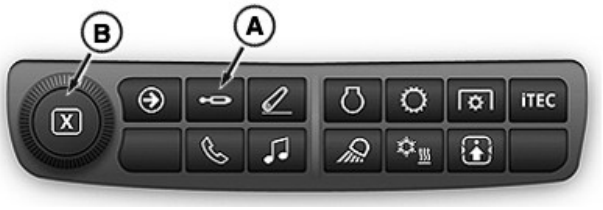
- Standard mode - SCV I (B).
- Independent mode - SCV II (C).
- Feature mode - SCV III (D).

Float symbol (F) appears when an SCV is set to float (SCV IV (E).

TS36762,00001EB-19-04APR18

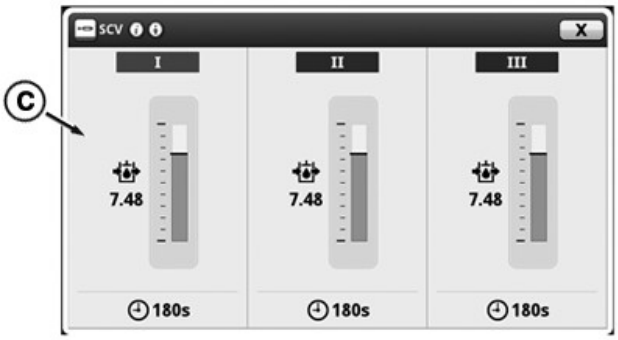
Configure SCV - Standard Mode

In standard mode, an SCV can have one time detent setting and one flow detent setting which apply to both extend and retract.



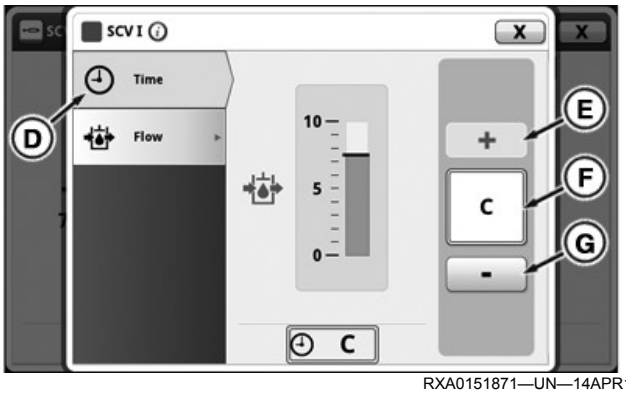
RXA0151869—UN—14APR16

Press **SCV shortcut button on Navigation Bar** (A).



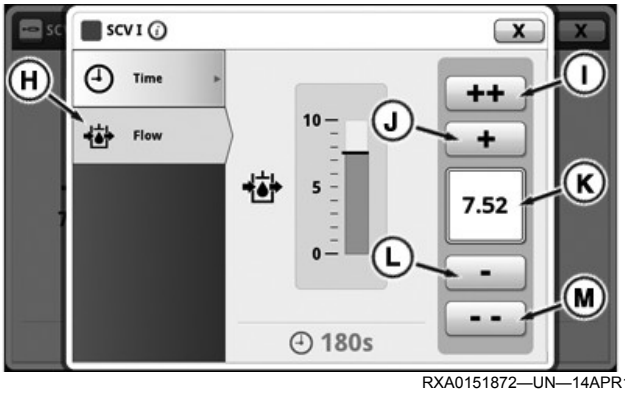
RXA0151870—UN—14APR16

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

Activate Independent Mode



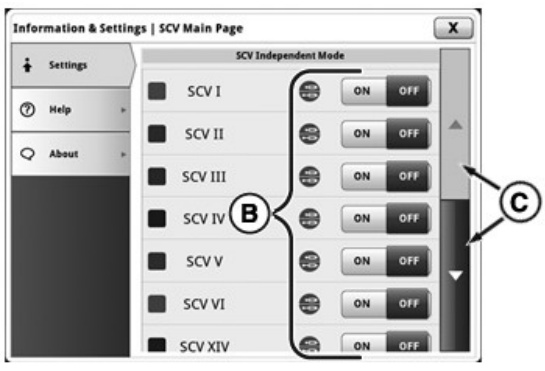
RXA0151873—UN—15APR16

1. Press **SCV shortcut button on Navigation Bar** (A).



RXA0130326—UN—11JAN13

2. Press **Advanced Settings Icon.**
3. Press **Settings tab.**



RXA0151874—UN—15APR16

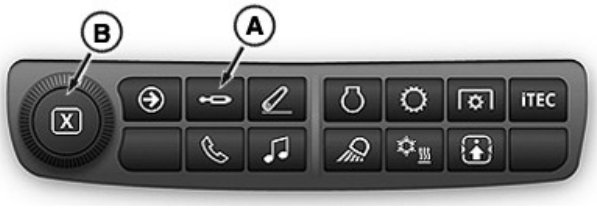
Use toggles (B) to switch Independent Mode on or off for each SCV.

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

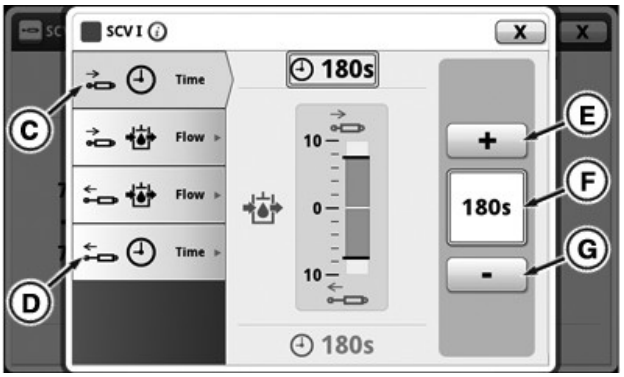
Some implements require different extend and retract times and flow detents to function correctly. SCVs in Independent Mode have two detent flow and two detent time settings, one for extend and one for retract.



RXA0151869—UN—14APR16

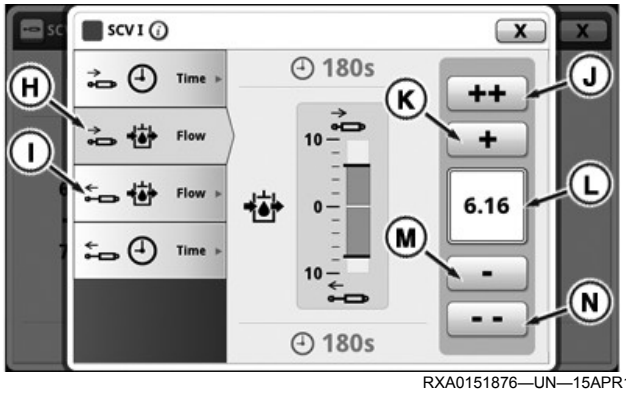
Press **SCV shortcut button on Navigation Bar** (A).

1. Select an SCV that is in Independent Mode.



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

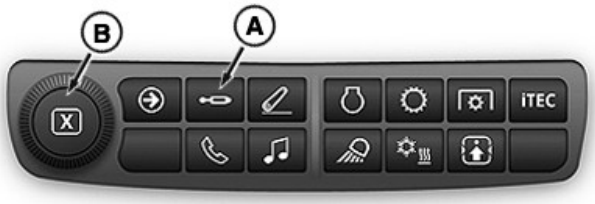
4. Select Detent Flow Retract tab (H) or Detent Flow Extend tab (I).
5. Input box (L) displays flow rate set. Flow is shown in increments of 0.04 beginning at 0.04 and increasing to 10. Press increase button (+) (K) will increase flow by 0.04 with each press. Press fast increase button (+ +) (J) to increase 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

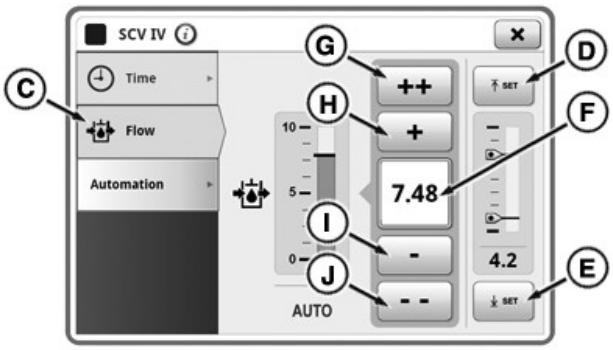
Feature mode requires an optional connector. To use feature mode, connect implement to tractor before turning key switch to ON. When connected through ISOBUS or implement connector, SCVs automatically enter feature mode and page displays with feature options.

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

Flow Sharing

The hydraulic flow sharing feature ensures SCV functions set at continuous receive priority flow. Flow sharing allows the critical functions to continue without risking productivity. Functions set to "Continuous" are presumed critical for implement operation and receive priority before functions set in "Timed Detent". If the requested SCV flow exceeds the available pump flow, the SCVs reduce flow to the non-continuous functions before reducing flow to continuous functions. If all functions are set to "Continuous", and the requested flow exceeds the available pump flow, the tractor reduces flow to all SCVs equally.

For maximum performance, it is necessary to properly configure the tractors SCVs and that the implement is properly connected per the implement operator's manual and this operator's manual. See Implement Connection Examples in Hydraulic Connections section of this Operators Manual. Failure to do so could result in reduced hydraulic performance such as longer than expected raise/lower times due to flow sharing being activated.

Tractors equipped with high-flow hydraulics, SCVs can be supplied by different pumps (except scraper), see

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Connecting Implements to High Flow Hydraulic SCVs in Hydraulic Connections section of this Operators Manual.

1. For every SCV set to continuous flow, adjust the flow rate to be the lowest rate possible for optimal implement operation. Not all functions require continuous flow and timed SCVs set too long can lead to flow sharing if they overlap with continuous flow SCVs.
2. Check all connections for proper hookup. Whenever possible connect return connections to SCV return ports or power beyond return port.
3. Hydraulic flow is engine speed dependent, if a function is slow increase engine rpm to increase flow.
4. For timed detent functions adjust flow first and then detent time as necessary from observation to provide desired implement function.
5. [Ag] On high flow hydraulic system equipped tractor, try to balance hydraulic loading between the two circuits.
6. To turn off flow sharing setting, see SCV Flow Share Setting in Selective Control Valves section of this Operators Manual.
7. If implement functions remain slow, see your John Deere dealer.

BH38674,0000D4E-19-27AUG18

Total Rear SCV Flow

1. Check flow setting for each function independently, see implement operator's manual Specifications section to determine correct motor flow settings.

   Following can 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 examples 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 examples 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 [Ag] 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.

SCV Pump Flow (Approximate) L/min (gal/min)		
Engine rpm	**90 cc Pump**	**90 cc and 85 cc Pumps**
1000	106.4 (28)	207.3 (55)
1500	159.5 (42)	310.9 (82)
2000	212.7 (56)	414.6 (110)
2100	220 (58)	435 (115)

SCV Flow (Approximate) L/min (gal/min)		
SCV Flow Settings	**90 cc Pump[a]**	**90 cc and 85 cc Pumps[b]**
0.1[c]	—	—
1.0	1.9 (0.5)[d]	4.3 (1.1)
2.0	6.1 (1.6)	11.3 (3.0)
3.0	13.6 (3.6)	19.4 (5.1)
4.0	20.4 (5.4)	27.6 (7.3)
5.0	28.0 (7.4)	35.2 (9.3)
6.0	40.9 (10.8)	49.9 (12.4)
7.0	62.1 (16.4)	72.0 (19.0)
8.0	81.4 (21.5)	95.3 (25.2)
9.0	107.1 (28.3)	118.6 (31.4)
10.0	132.0 (35.0)	159.0 (42.0)

[a] At 2000 rpm and 454 kg (1000 lbs) of load at point of use.
[b] 3/4 in coupler is only available for SCV I as a field installed kit or for a Scraper Tractor Configuration.
[c] 0.1 = Minimum Flow Setting
[d] Observed under no load.

Hitch Flow [Ag]	
Hitch Cylinder Diameter mm	Flow L/min (gal/min)
90/100	71.0 (18.7)
120/120	88.0 (23.2)

RD47322,00002C3-19-24APR18

Six-Position SCV Control Levers

CAUTION: To avoid personal injury, ensure that hoses are not reversed. If hoses are reversed, cylinder extends when it should retract.

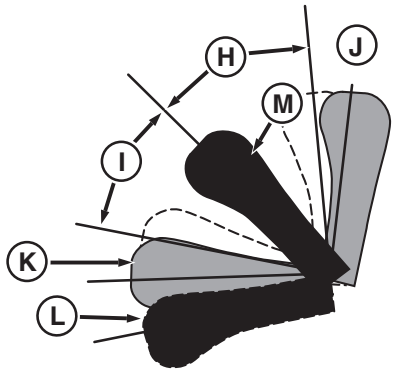
Prevent possible personal injury. Shut off engine, move SCV control levers to neutral position and press SCV control lever lock before attaching implements to prevent unintentional implement movement.

NOTE: CommandARM™ configuration can vary depending on options.



RXA0158418—UN—28MAR17

- **SCV Control Lever Lock (G):** Locks out control inputs (On SCV levers (A) through (E) only).



RXA0158419—UN—29MAR17

- **Neutral (M):** Lever returns to center position when released, except in float position.
- **Extend (H):** (Rearward between Neutral and Extend Detent positions) Variable flow to extend cylinder, proportional to lever movement and flow settings; flow stops when released.
- **Retract (I):** (Forward between Neutral and Retract Detent positions) Variable flow to retract cylinder, proportional to lever movement and flow settings; flow stops when released.
- **Extend Detent Position (J):** (Rearward to "click" position) Timed flow to extend cylinder, based on detent time setting and at a rate set by flow rate control see SCV Control Lever—Extend and Extend Detent Position in this Operator's Manual section. Returns to neutral when released.
- **Retract Detent Position (K):** (Forward to "click" position) Timed flow to retract cylinder, based on detent time setting and rate set by flow rate control see SCV Control Lever—Retract and Retract Detent Position in this Operator's Manual section. Returns to neutral when released.

NOTE: To relieve hydraulic pressure in implement, move SCV control lever to float position, while engine is running.

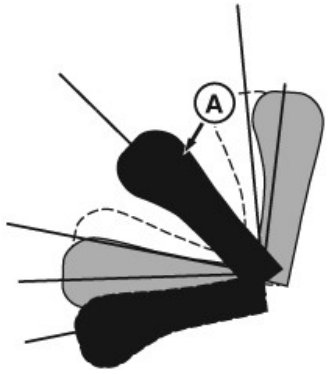
- Float can be used to allow hydraulic motors to coast when shutting down implement.

  Float (L): (Down into locked position) Valves open to sump to allow cylinder to freely extend or retract. Allows implement to follow ground contour. Pull up and out of locked position to disengage.

Push SCV lever cover (F) forward when SCV is not in use.

RD47322,00004C0-19-08NOV17

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.

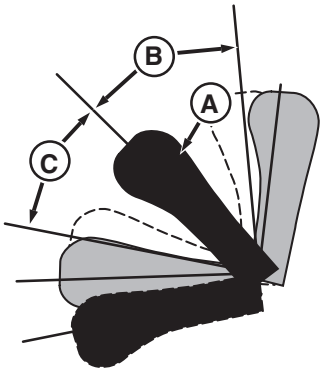
Levers in extend or retrait positions automatically return to neutral when released. Float position remains detented.

NOTE: SCV control lever should be in neutral position at tractor startup.

At tractor startup, lever positions are ignored until lever is cycled to neutral.

RD47322,000087D-19-23JUN17

SCV Control Lever—Extend and Retract Position



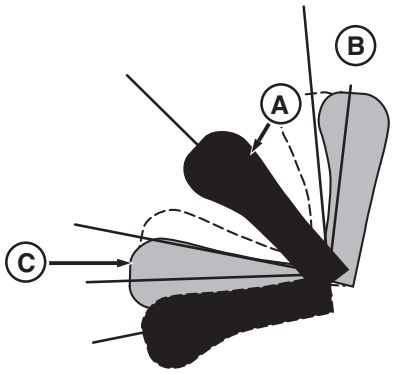
RXA0151813—UN—13APR16

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.

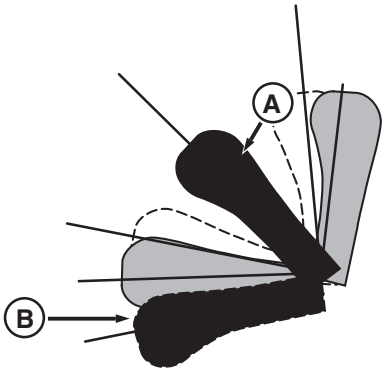
Flow timing begins when the lever returns to neutral after being in the extend or retract detent position for less than 0.8 seconds.

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

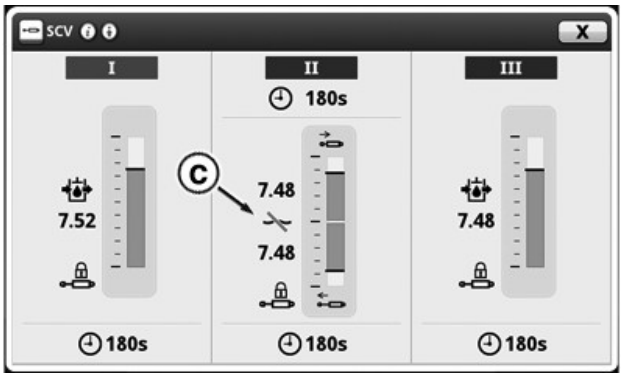


RXA0151815—UN—13APR16

Push SCV control lever (A) all the way forward (B) to

CommandCenter is a trademark of Deere & Company

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

CommandARM™ Joystick (If Equipped)

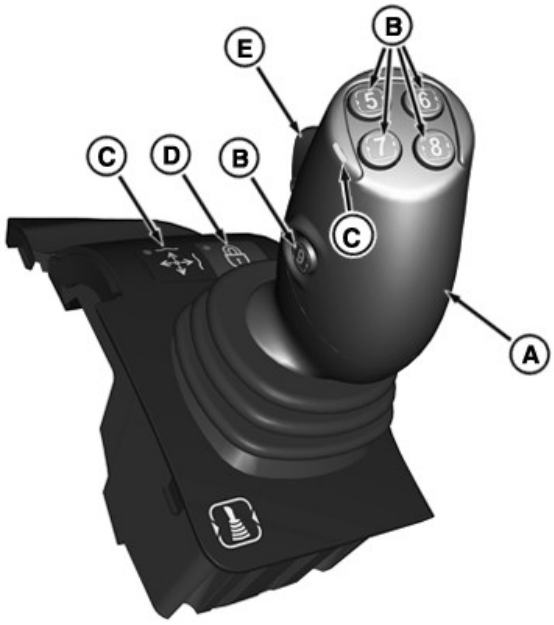
NOTE: Joystick is compatible on tractors with up to 6 SCVs.

Operating SCVs With Joystick



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 rear SCV(s) functions.
- Operator can select transmission gear upshifts using (button 5) (B) and downshifts (button 7) (B) located on top of the lever.
- Joystick activation indicator light (C) is ON when joystick is active.
- Joystick lock (D) is used to lock out electro-hydraulic functions for SCV(s) assigned to Jjoystick.
- Rocker switch (E) operates combinations of programmed SCV(s) functions.
- 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.

RD47322,00004C6-19-10JUL17

CommandARM™ Joystick (If Equipped) - Custom Setup



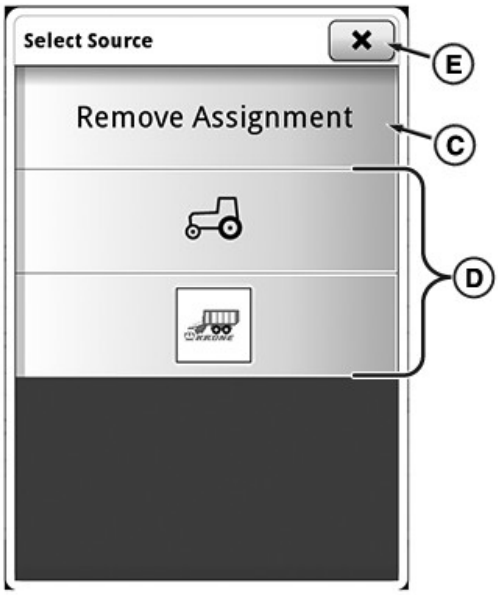
RXA0138550—UN—23JAN14

1. Press **Controls Setup Shortcut Button on Navigation Bar**.



RXA0156213—UN—16DEC16

2. Select Joystick (A).
3. Select desired reconfigurable assignment (B).

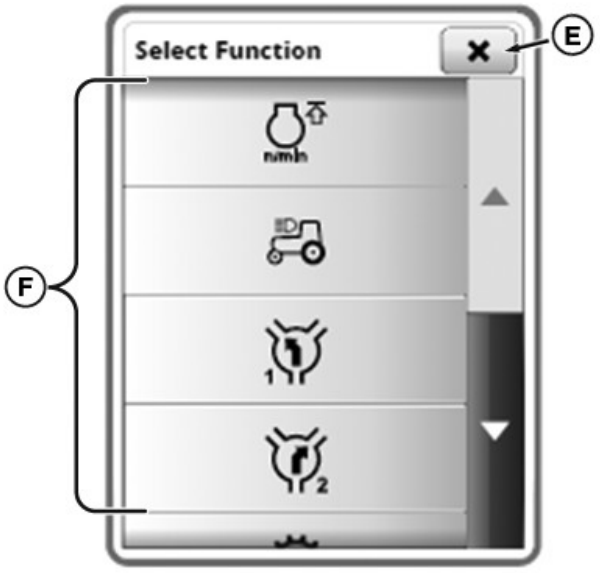


RXA0156214—UN—16DEC16

4. Select Source (D).

   To remove assignment, select Remove Assignment button (C).

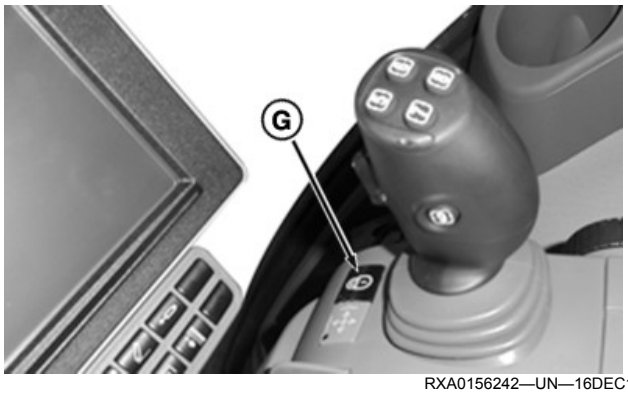
   To cancel assignment process, selecting close button (E).



RXA0156215—UN—16DEC16

5. Select Function (F).

   To cancel assignment process, selecting close button (E).



RXA0156242—UN—16DEC16

6. Unlock Joystick with Joystick Unlock/Lock button (G).

   Default assignments activate automatically.



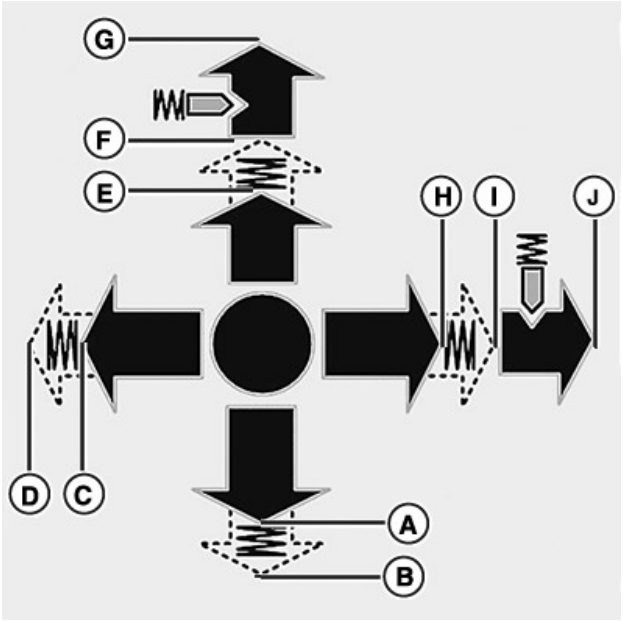
RXA0156241—UN—16DEC16

7. Select custom button (H) button to activate manually set assignments.

KD34109,00006AB-19-10APR18

CommandARM™ Joystick (If Equipped) - Layout and Joystick Lever Functions

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.



RXA0155031—UN—18OCT16



RXA0155032—UN—18OCT16

- **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.

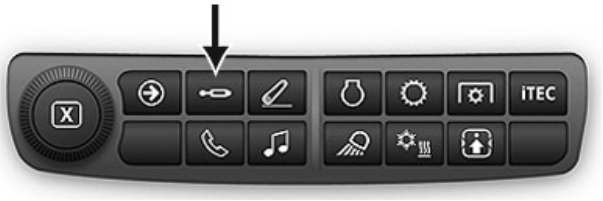
NOTE: Some functions shown may not be available depending upon what options the tractor is equipped with.

KD34109,00006AC-19-25JUL17

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.



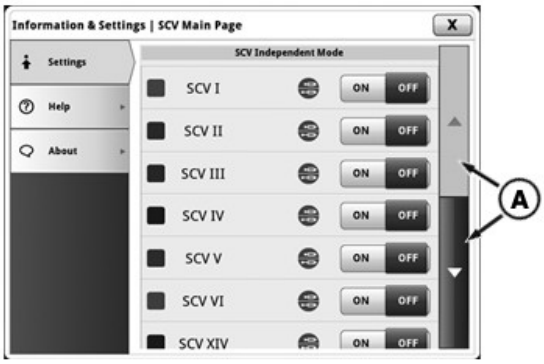
RXA0133709—UN—16JUL13

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

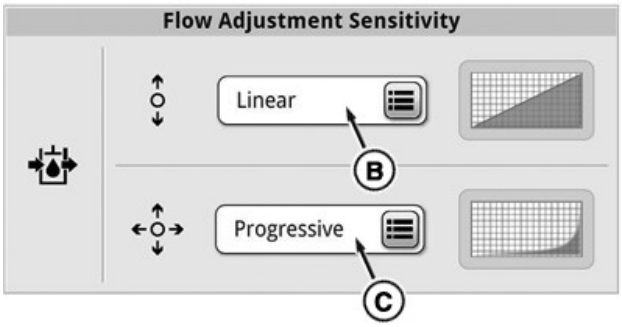


RXA0130326—UN—11JAN13

2. Press **Advanced Settings Icon.**
3. Press **Settings Tab.**

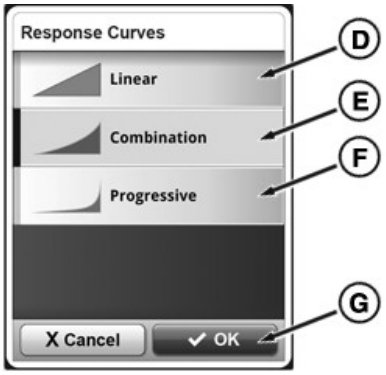


RXA0137874—UN—18DEC13



RXA0137875—UN—18DEC13

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

SCV Flow Sharing Setting

Hydraulic flow sharing reduces flow to non-critical functions ensuring priority flow to critical functions. See SCV Flow Sharing in Hydraulic Connections section of this Operator's Manual for more information.

NOTE: It is recommended to turn flow sharing OFF for Tillage work and ON for seeding applications.

Flow Sharing is factory set to ON. Any adjustment to setting is maintained until readjusted.



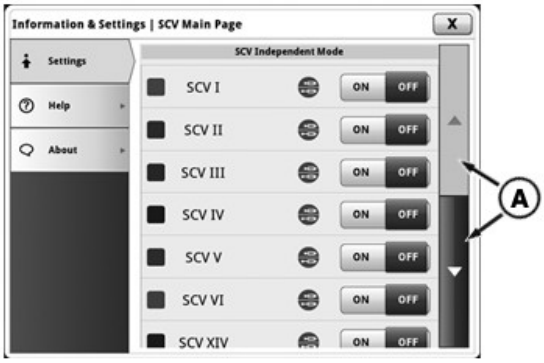
RXA0133709—UN—16JUL13

1. Press SCV Shortcut Button on Navigation Bar.

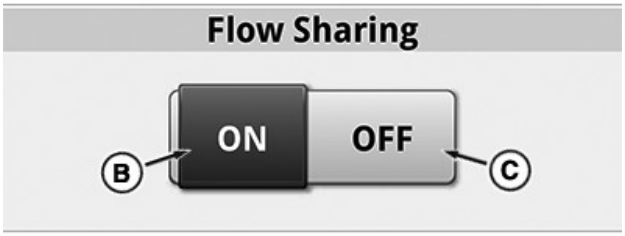


RXA0130326—UN—11JAN13

2. Press Advanced Settings Icon.
3. Press Settings Tab.



RXA0137874—UN—18DEC13

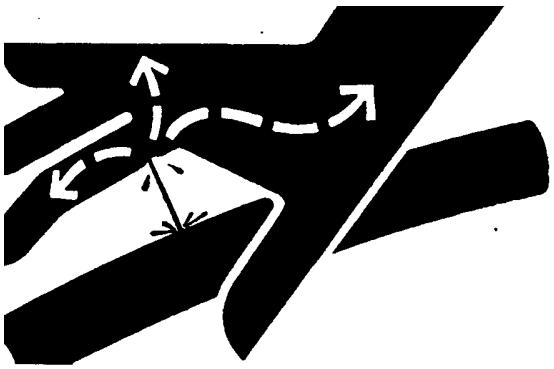


RXA0163812—UN—02JUL18

4. Using scroll bar (A), scroll down to Flow Sharing. Select ON (B) to enable or OFF (C) to disable flow sharing.

KD34109,0000806-19-25JUL18

Connecting Hydraulic Hoses—Rear of Tractor



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.

CAUTION: Engage Joystick Lock (If Equipped) and SCV Control Lever Lock before attaching or detaching hydraulic hoses to prevent unintentional implement movement and possible personal injury.

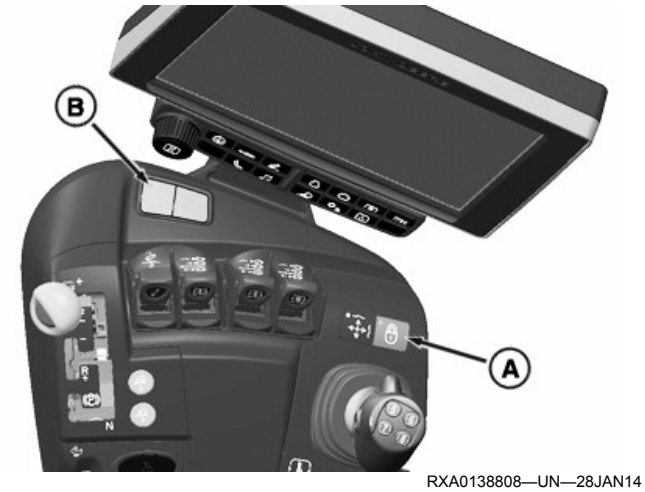
IMPORTANT: Hydraulic hoses can fail due to physical damage, kinks, age, and exposure. Check hoses regularly and make sure all are connected as straight as possible.

Any dirt, dust, or other foreign material can damage hydraulic system. Thoroughly clean hydraulic hoses and SCVs before connecting implement to tractor.

IMPORTANT: Steam cleaning or using a high pressure washer in the area around the SCV connections and electronics may 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.

1. Lock out SCV controls:



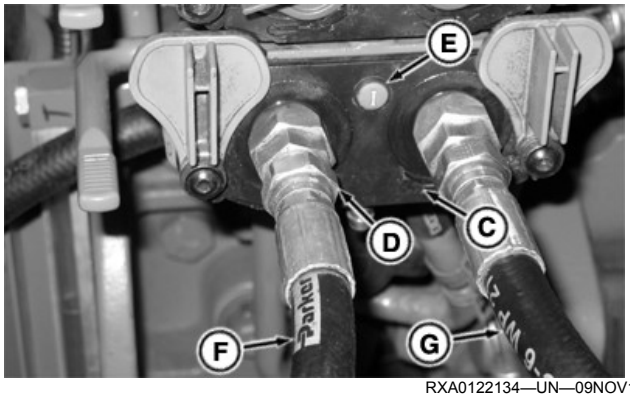
RXA0138808—UN—28JAN14

- Joystick—Press Joystick Lock (A).
- CommandARM™—Press SCV Control Lever Lock (B).

2. Clean dust covers. Rotate dust covers up to expose couplers.

IMPORTANT: Be sure to correctly connect remote hydraulic hoses to couplers. If hose connections are reversed, machine will not respond to system controls as expected.

Rear SCV
Extend=Left Port
Retract=Right Port



RXA0122134—UN—09NOV11

NOTE: Remote cylinder couplers are designated I through VIII (E) with I being the bottom coupler.

3. Check if symbols on coupler identification plate (C) or (D), indicating cylinder movement, match cylinder travel direction.
4. 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).
5. Push hoses firmly into couplers.

TouchSet is a trademark of Deere & Company

NOTE: SCVs are color coded for easier identification. Hose identification kits are available from your John Deere dealer.

SCV Numbers and Corresponding Colors	
SCV	
Number	Color
I	Green
II	Blue
III	Brown
IV	Black
V	Violet
VI	Gray
VII [Ag]	White
VIII [Ag]	Light Green

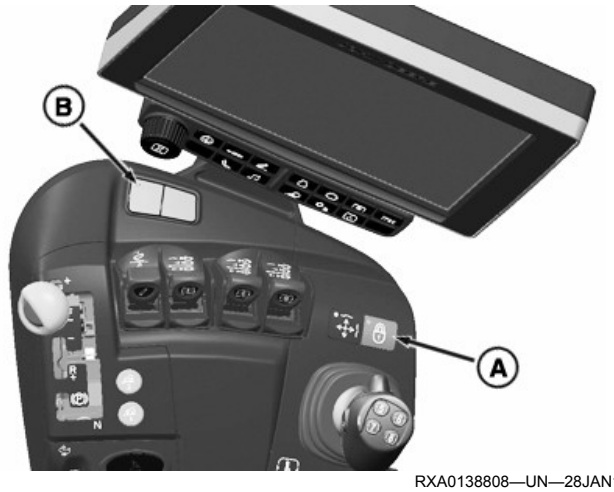
RD47322,0000340-19-10MAY18

Disconnecting Hydraulic Hoses—Rear of Tractor

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.

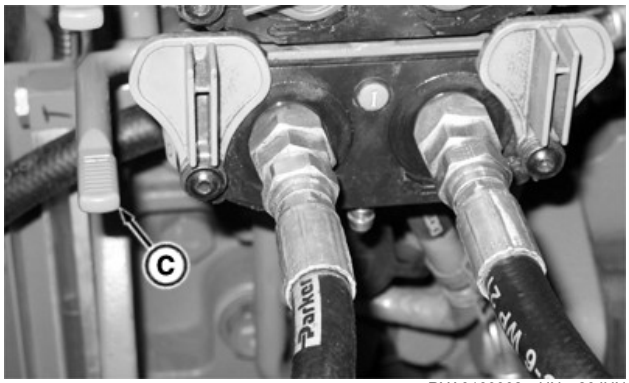
CAUTION: Prevent possible personal injury. Lock out SCV controls before detaching implements to prevent implement movement.

3. Lock out SCV controls:



RXA0138808—UN—28JAN14

- Joystick — Press Joystick lock (A).
- CommandARM™ SCV — Press SCV control lever lock (B).



RXA0160002—UN—26JUN17

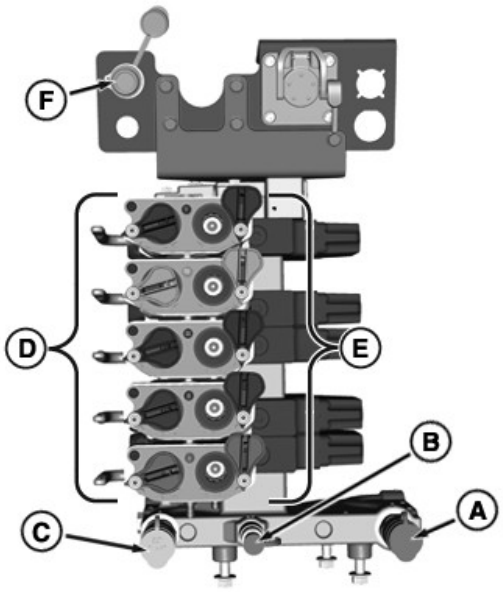
4. Push SCV hose release lever (C) down slightly to relieve any pressure buildup of trapped oil before removing hoses.

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 lever to extract hoses.

5. Pull hoses **straight** out from couplers.
6. Clean coupler area before closing dust cover.
7. Rotate dust covers down to cover couplers.

RD47322,0000341-19-09MAY18

Standard Hydraulic Component Identification [AG]



RXA0161210—UN—26OCT17

Models 9420RX and 9470RX

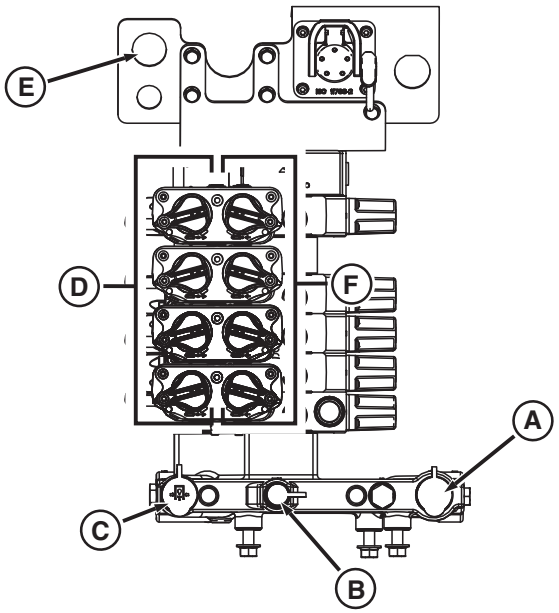
A— Return Coupler (Motor Return)

B— Load Sense Coupler
C— Pressure Coupler
D— Extend Couplers
E— Retract Couplers
F— Sump Coupler (Motor Case Drain)

The seventh and eighth SCVs are only available as field installation kits.

RD47322,00006BE-19-27JUL18

Standard Hydraulic Component Identification [Scraper]



RXA0160579—UN—15AUG17
Standard Hydraulic Component Identification

A— Power-Beyond Return Port
B— Power-Beyond Load Sense Coupler
C— Power-Beyond Pressure Port
D— Extend Ports
E— Motor Seal Drain Port
F— Retract Ports

NOTE: SCV covers are color coded for easy identification.

SCV Number	Corresponding Color
SCV I	Green
SCV II	Blue
SCV III	Brown
SCV IV	Black
SCV V	Violet
SCV VI	Gray

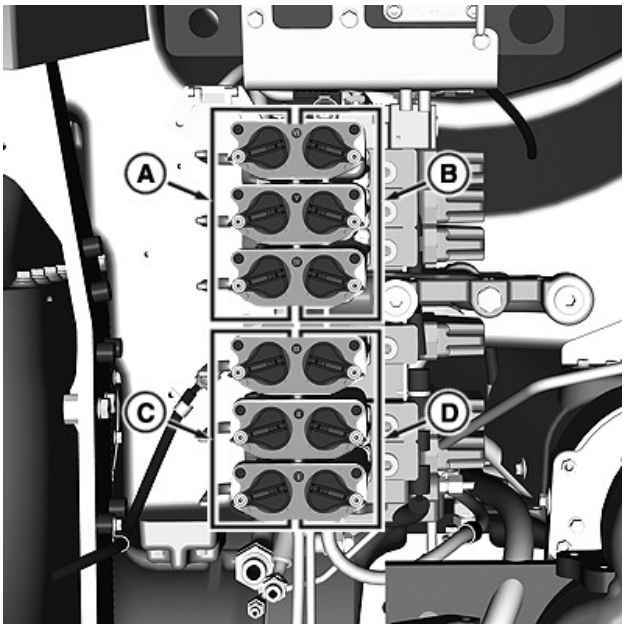
SCV Color Codes

RD47322,00009F5-19-09MAY18

High Flow Hydraulic Component Identification [AG]

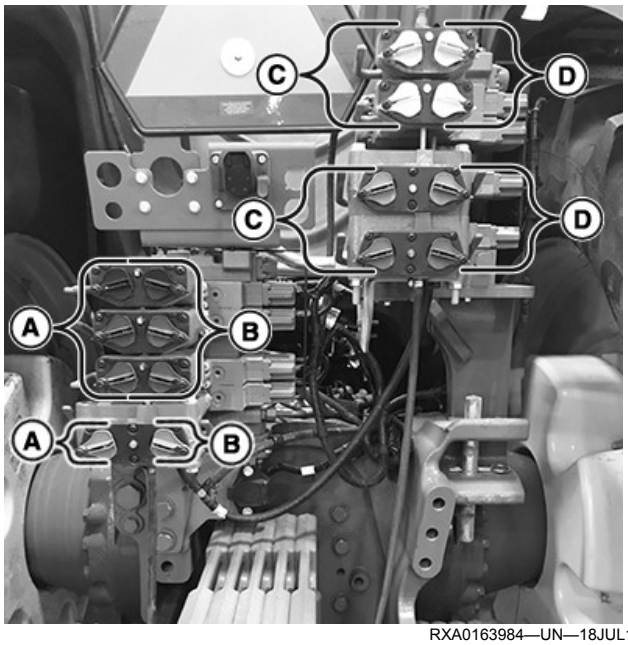
NOTE: Tractor equipped with optional SCVs VII and VIII is also equipped with Intelligent Power Management (IPM). If an air seeder is connected to SCV VI to VIII, follow guidelines found in air seeder operators manual (example: John Deere 1870 or 1895 Air Seeder). See Drivetrain Protection in Drivetrain section of this Operator's Manual.

SCVs I-III are supplied by primary pump, SCVs IV-VI (If equipped) are supplied by secondary pump. SCVs IV-VI are recommended for orbital motor use.



RXA0148178—UN—11MAY15
High Flow SCV Couplers Shown

SCVs I-IV are supplied by primary pump, SCVs V-VIII are supplied by secondary pump. SCVs V-VIII are recommended for orbital motor use or air seeder.



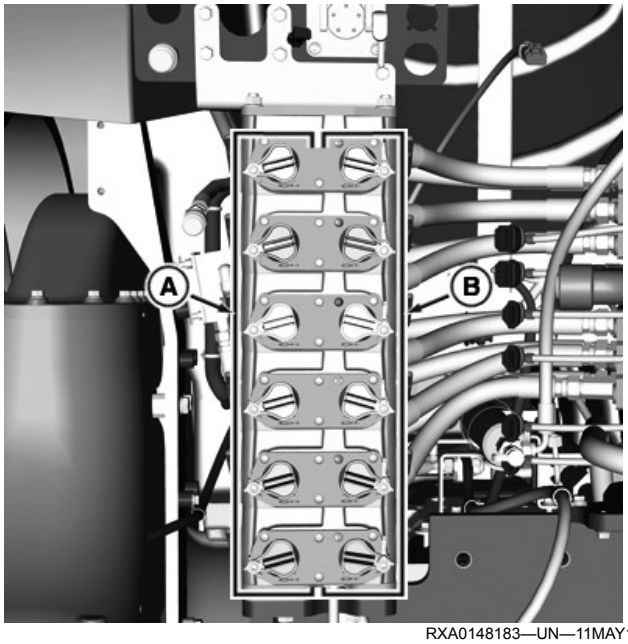
RXA0163984—UN—18JUL18

High Flow SCV Couplers Shown

A— Extend Couplers 90cc Pump
B— Retract Couplers 90cc Pump
C— Extend Couplers 85cc Pump
D— Retract Couplers 85cc Pump

RD47322,00006BD-19-31AUG18

High Flow Hydraulic Component Identification [Scraper]



RXA0148183—UN—11MAY15

High Flow Couplers

A— Extend Ports
B— Retract Ports

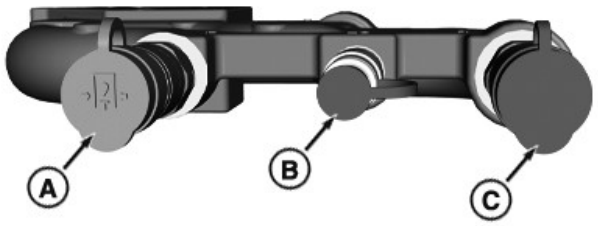
High Flow Hydraulic Component Identification

SCV Numbers And Corresponding Colors	
SCV Number	**Color**
SCV I	Green
SCV II	Blue
SCV III	Brown
SCV IV	Black
SCV V	Violet
SCV VI	Gray

Both the 90 cc and 85 cc pumps supply hydraulic oil to all six SCVs

RD47322,00009F4-19-27JUL18

Using Load-Sensing Hydraulic System—Power-Beyond



RXA0138768—UN—27JAN14

Power-Beyond Coupler

A— Pressure Coupler
B— Load Sense Coupler
C— Return Coupler (Motor Return)

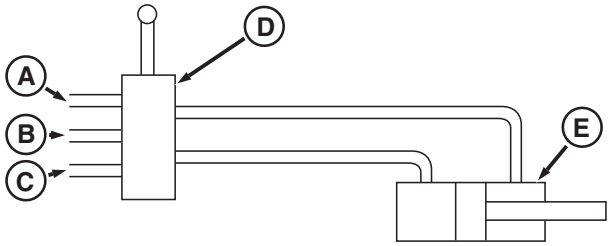
Power-beyond is used as a pressure/flow source for auxiliary functions equipped with independent flow control valves. Use power-beyond when:

- Tractor SCV control is not needed
- 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 used. Certain equipment can require modification. See your John Deere dealer.

RD47322,00002D4-19-20FEB18

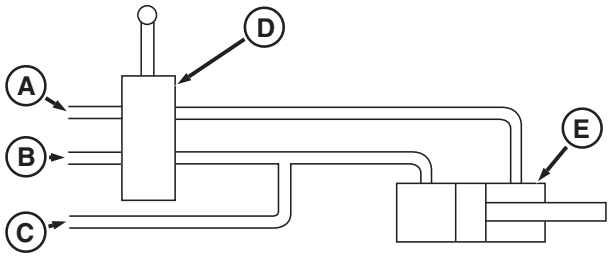
Examples Using Load-Sensing Hydraulic System—Power-Beyond



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.

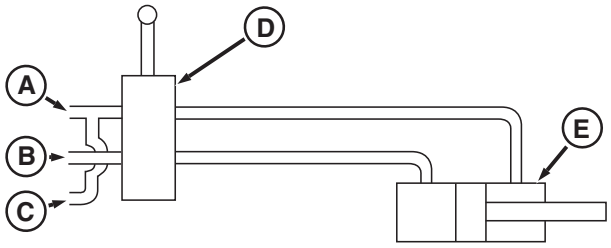
NOTE: Example 1 is the preferred practice.



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.

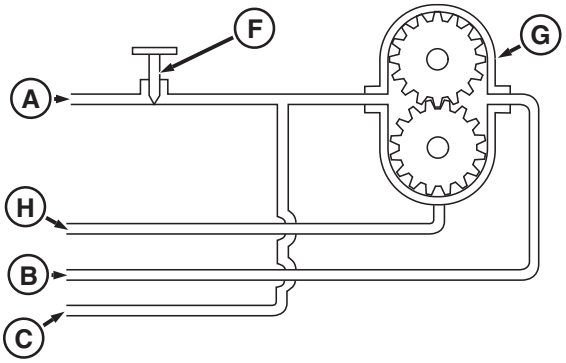


RXA0138269—UN—17JAN14

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.

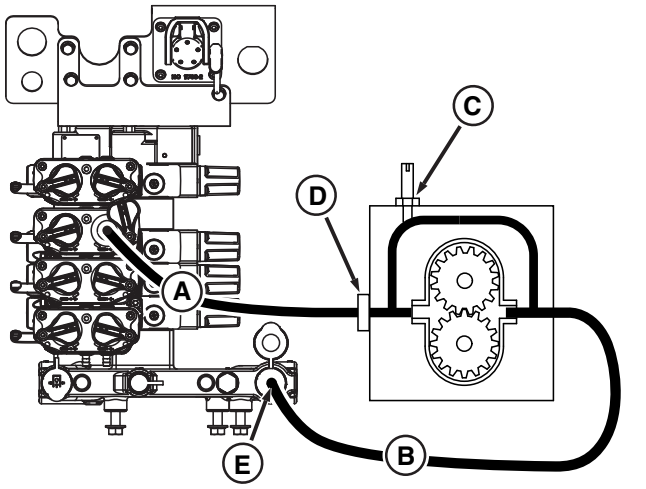
RD47322,00002D5-19-20FEB18

Using Hydraulic Spray Pumps

NOTE: For Ag high flow, it is recommended that the hydraulic motor be connected to the top SCV's (85cc high flow pump).

Not recommended for high flow scraper hydraulics.

1. Follow spray pump manufacturers recommendations for pump model selection, setup and operation.
2. In general select the smallest displacement motor recommended for multiple hydraulic function operation. The smaller displacement will lower total hydraulic flow demand and improve overall system performance.



RXA0111991—UN—18NOV10

Spray Pump (Less Hitch)

A— Pressure Line
B— Return Line
C— Needle Valve (Closed)
D— Inlet Line Orifice (Remove)
E— Pressure Coupler

3. Connect motor pressure line (A) to retract coupler of SCV (right-hand side).

NOTE: Use of SCV 3, 4, or 5 for standard hydraulic system is suggested. Use SCV 4 or 5 for High Flow hydraulic system and no hitch. Use SCV 3 or 4 for High Flow hydraulic system and with hitch.

IMPORTANT: Some motors are not equipped with over-speed protection. Extended operation above recommended speed can cause failure.

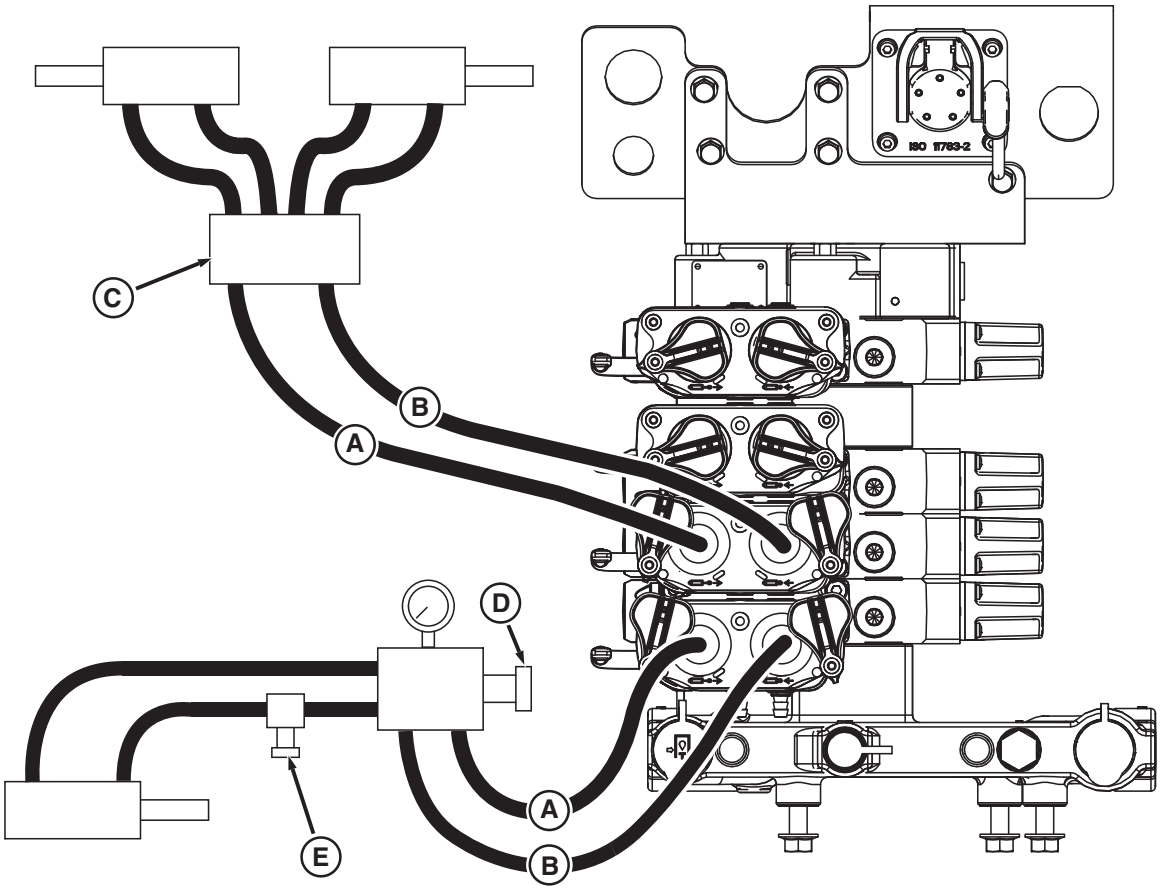
4. Connect return line (B) to return coupler (E).

IMPORTANT: Use of neutral SCV lever position to stop pump can allow trapped high pressure oil to damage pump seals. Use float position when stopping motor.

5. Activate SCV by moving lever forward to retract detent position and adjust hydraulic flow rate per pump manufacturers guidelines.
6. Shut off spray pump by moving SCV control lever to float position (full forward and down). Stopping spray pump by moving SCV to neutral position will cause high pressure oil to be trapped between SCV and pump. This can cause damage to spray pump seals. This applies to motors using the SCV pressure and return couplers.

RD47322,00006C1-19-10APR18

Implement Connection Example 1—Pressure Control Valve Applications (Grain Drills or Air Seeders with Constant Down-Pressure System)—Less Hitch—Standard Hydraulics [AG]



RXA0126556—UN—29MAY12

A—Extend Coupler Line
B—Retract Coupler Line
C—Selector Valve
D—Pressure Control Valve
E—Implement Transport Lock Valve

NOTE: For Ag high flow, it is recommended that the hydraulic motor be connected to the top SCV's (85cc high flow pump).

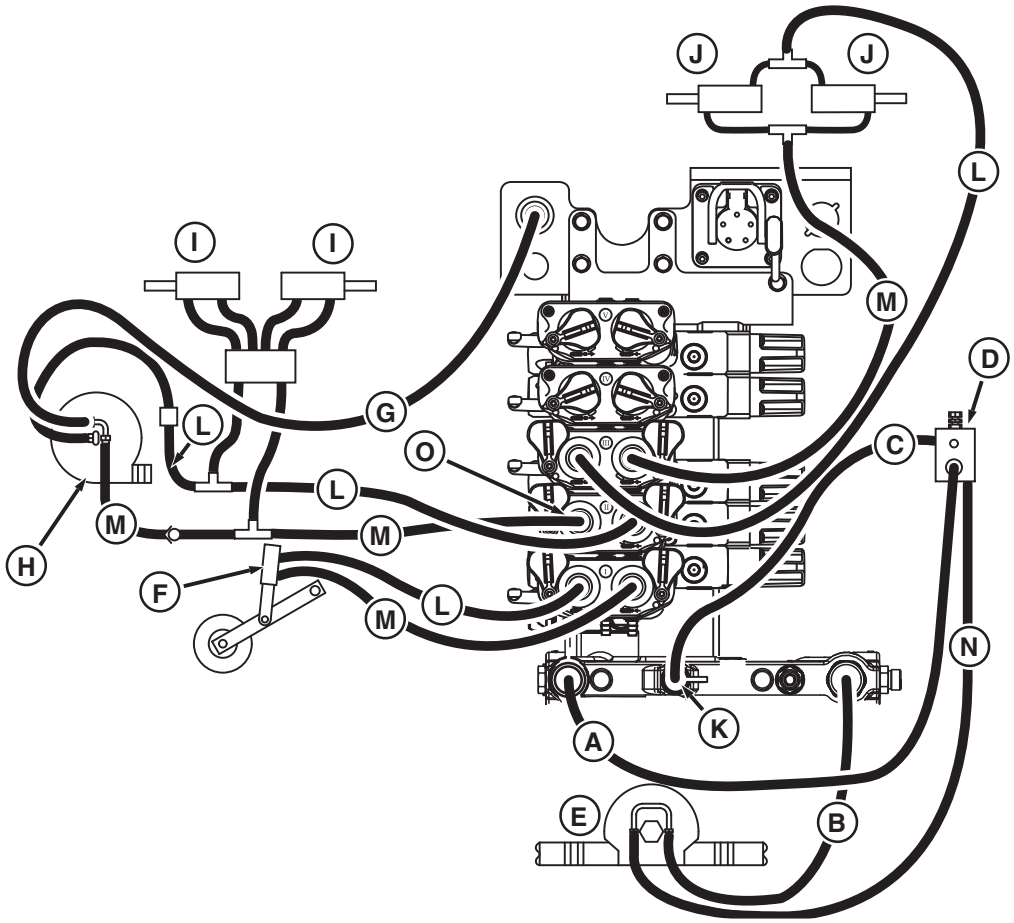
Not recommended for high flow scraper hydraulics.

For implements using active down force set flow control to continuous and move lever to detent position.

This will cause hydraulic pump to operate at maximum pressure which may cause overheating of hydraulic oil if at the same time outside air temperature is high. To avoid this problem, try not to operate more than one hydraulic motor with tractor hydraulic system when active down force is being used.

RD47322,00006C2-19-09MAY18

Implement Connection Example 2—Motor Application Using Motor Case Drain—Less Hitch —Standard Hydraulics [AG]



RXA0126115—UN—03MAY12

Implement Connection Example 2

A— Pressure Line
B— Return Line
C— Load Sense Line
D— Control Valve
E— Vacuum Motor
F— Raise/Lower Cylinder
G— Motor Case Drain (Sump Line)
H— Fan
I— Marker
J— Fold
K— Load Sense Coupler
L— Extend Coupler Line
M— Retract Coupler Line
N— Controlled Flow Line
O— Hose Tip

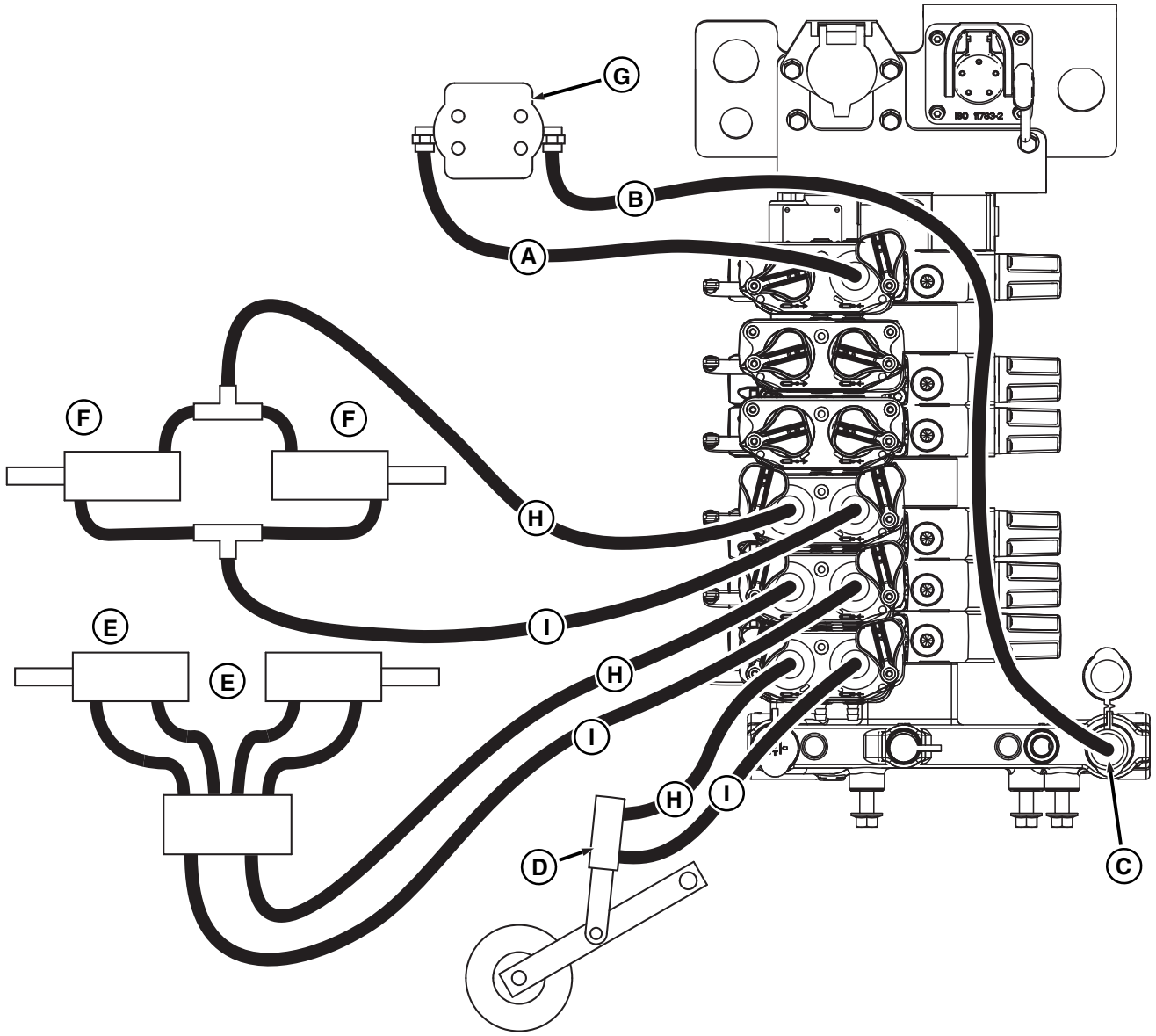
NOTE: On Ag high flow hydraulics-equipped tractors, it is recommended to correct hydraulic motor powered components to top SCVs. The SCVs receive oil from system 85cc high flow pump.

In this motor application (E) is being operated from power-beyond which requires a load sense connection (C) to signal hydraulic pump for operation.

The second motor (H) is equipped with motor case drain (sump line) (G). Pressure oil comes from the retract port on the SCV and return oil is routed to the extend port. When motor return oil is routed to an SCV, a special return hose tip (O) with check valve is required to prevent high pressure oil from moving back toward the motor and possibly damaging the seals. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral causes motor to stop abruptly and can damage seals.

RD47322,00006C3-19-09MAY18

Implement Connection Example 3—Closed Center Valve, Pump at High Pressure—Less Hitch—Standard Hydraulics [AG]



RXA0111994—UN—18NOV10

A— Pressure Line
B— Return Line
C— Return coupler (Motor Return)
D— Raise/Lower cylinder
E— Markers
F— Fold
G— Hydraulic Motor
H— Extend Coupler Line
I— Retract Coupler Line

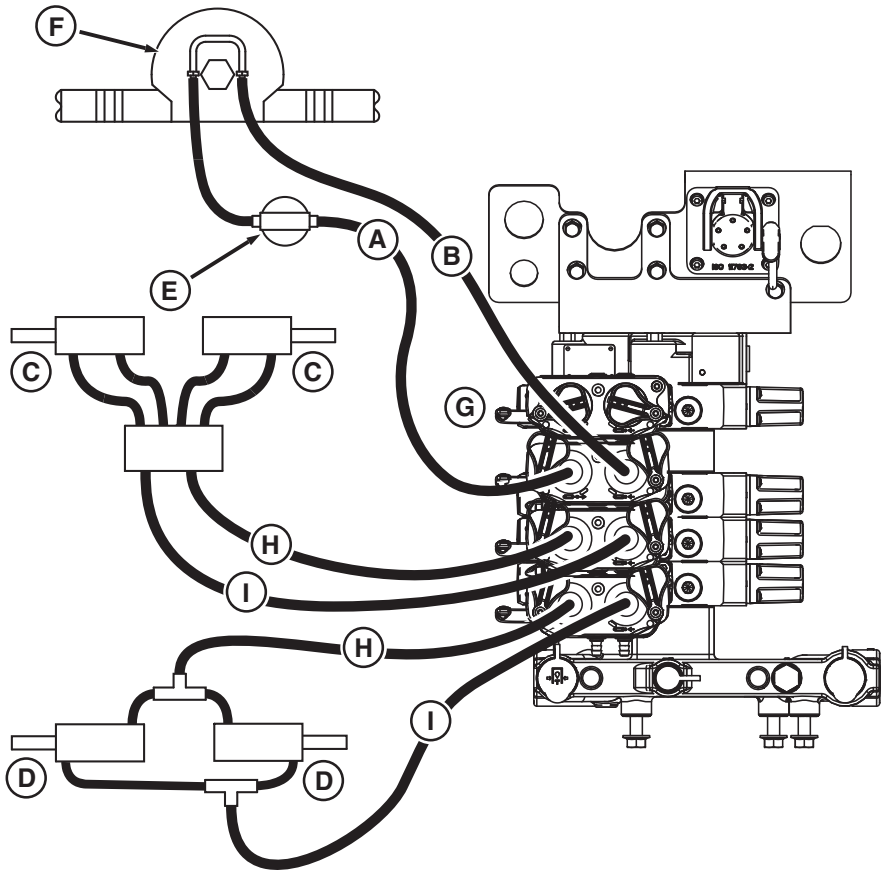
NOTE: For Ag high flow, it is recommended that the hydraulic motor be connected to the top SCV's (85 cc high flow pump).

Not recommended for high flow scraper hydraulics.

In this application motor (G) receives pressure oil from the retract coupler on SCV. Return oil is routed to power-beyond return port. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral can cause motor to stop abruptly and may damage seals. Since return oil is routed to power-beyond return port, no special hose tip is required.

RD47322,00006C4-19-09MAY18

Implement Connection Example 4—Planter with Vacuum Motor and Return Line to SCV Using Motor Return Tip—Less Hitch—Standard Hydraulics [AG]



RXA0111995—UN—18NOV10

A— Return Line
B— Pressure Line
C— Marker
D— Fold
E— Flow Control Valve (Wide Open)
F— Vacuum Motor
G— Special Hose Tip
H— Extend Coupler Line Motor return Tip
I— Retract Coupler Line

NOTE: For Ag high flow, it is recommended that the hydraulic motor be connected to the top SCV's (85cc high flow pump).

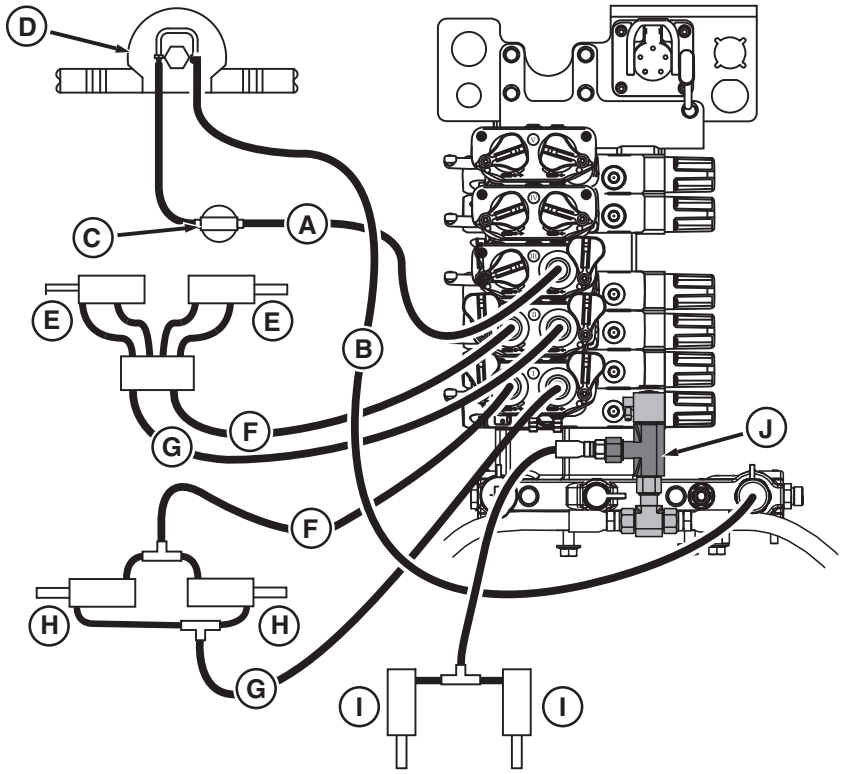
Not recommended for high flow scraper hydraulics.

In this application vacuum motor (F), similar to a planter blower, receives pressure oil from the retract coupler on SCV. Since return oil is routed to an SCV, a special return hose tip (G) with check valve is required to prevent high pressure oil from moving back toward the motor and possibly damaging the seals. When motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral will cause motor to stop abruptly and may damage seals.

Flow control valve (E) should be wide open and flow controlled by SCV setup panel. If flow is controlled by flow control valve, it will cause hydraulic pump to operate at maximum pressure which may cause overheating of hydraulic oil if at the same time outside air temperature is high.

RD47322,00006C5-19-09MAY18

Implement Connection Example 5—Planter with Vacuum Motor and Return Line to Motor Return—With Hitch—With Lift Assist—Standard Hydraulics [AG]



RXA0126116—UN—15MAY12

A— Pressure Line
B— Return Line
C— Flow Control Valve (Wide Open)
D— Vacuum Motor
E— Planter Fold
F— Extend Coupler Line
G— Retract Coupler Line
H— Markers
I— Lift Assist Cylinders
J— T-Fitting and Hydraulic Hose

NOTE: For Ag high flow, it is recommended that the hydraulic motor be connected to the top SCV's (85 cc high flow pump).

Not recommended for high flow scraper hydraulics.

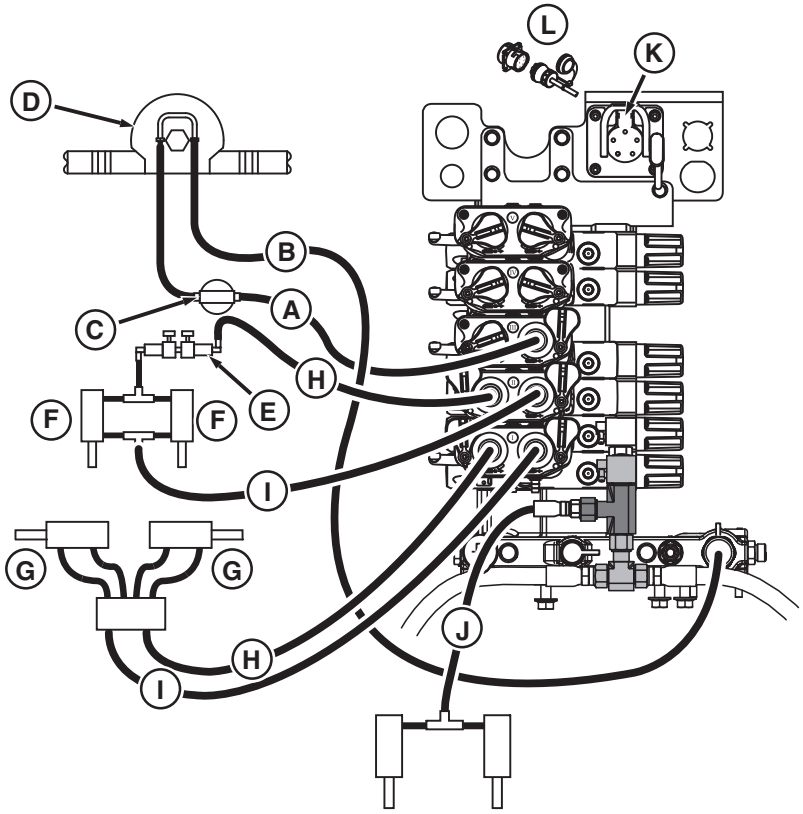
In this application vacuum motor (D) receives pressure oil from the retract coupler of SCV. Return oil is routed to power-beyond return port. If return hose is equipped with special return hose tip, it can be connected directly to left-hand side of coupler three. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral will cause motor to stop abruptly and may damage seals.

Control valve (C) is wide open and flow is controlled by tractor control panel. If valve is used to control oil flow, pump will operate at maximum pressure which may cause overheating of hydraulic oil if at the same time outside air temperature is high.

Connect lift assist cylinders (I) using T-fitting and hydraulic hose (J) to hitch lowering valve. The hitch lever controls the lift assist cylinders.

RD47322,00006C6-19-09MAY18

Implement Connection Example 6—Planter with Vacuum Motor and Return Line to Motor Return—With Hitch—Implement Lift Assist—Standard Hydraulics [AG]



RXA0126182—UN—15MAY12

A— Pressure Line
B— Return Line
C— Flow Control Valve (Wide Open)
D— Vacuum Motor
E— Control Valve
F— Lift Assist
G— Markers
H— Extend Coupler Line
I— Retract Coupler Line
J— Implement Lift Assist
K— 9-Pin Implement Connector
L— 9-Pin Connector for TouchSet™ Depth Control

NOTE: For Ag high flow, it is recommended that the hydraulic motor is connected to top SCV's (85 cc high flow pump).

Not recommended for high flow scraper hydraulics.

In this application vacuum motor (D) receives pressure oil from the retract coupler of SCV. Return oil is routed to power-beyond return port. If return hose is equipped with special planter return hose tip, it can be connected directly to left-hand side of coupler three. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral will cause motor to stop abruptly and may damage seals.

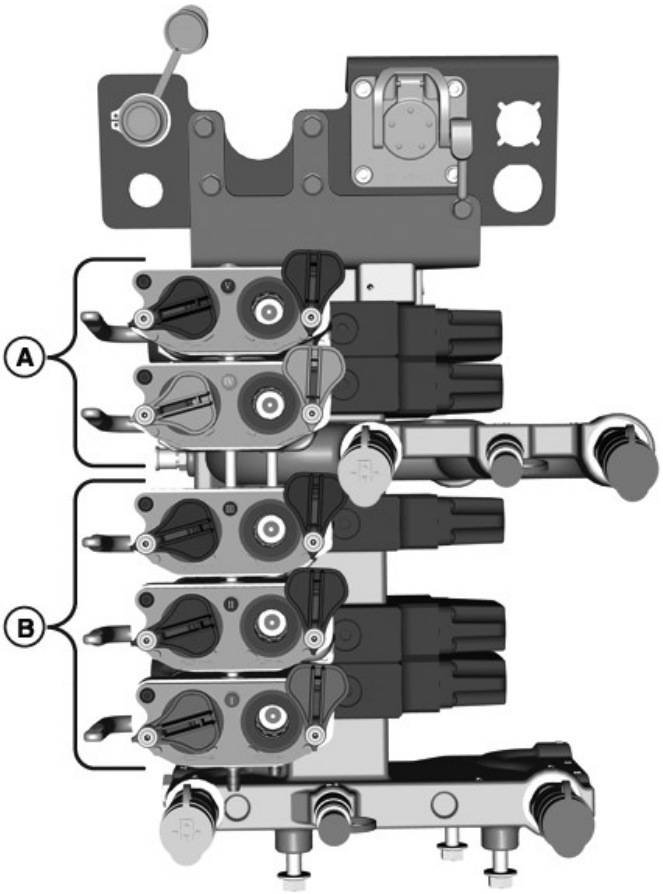
Control valve (C) is wide open and flow is controlled by tractor control panel. If valve is used to control oil flow, pump will operate at maximum pressure which may cause overheating of hydraulic oil if at the same time outside air temperature is high.

Implement lift assist (J) controlled by hitch lever when activating hitch valve.

SCV #1 is used to control both the hitch valve and lift assist. The 9-pin implement connector harness (K) contains a loop circuit that disables tractor hitch control unit when it is connected to 9-pin connector for TouchSet™ depth control (L) that is wired into tractor main electrical harness.

RD47322,00006C7-19-09MAY18

Connecting Implements to High Flow Hydraulic SCV's [AG]



RXA0138822—UN—29JAN14

High Flow Hydraulic SCV Stack (5 SCVs with Hitch Valve)

A— 85cc Pump SCV Couplers

NOTE: For Ag high flow, it is recommended that the hydraulic motor be connected to the top SCV's (85cc high flow pump). Not recommended for high flow scraper hydraulics

1. The high flow hydraulic system consists of one 90cc primary pump for bottom SCV's (B) and one 85cc secondary pump for top two SCV's (A).
2. The 85cc pump supplies oil to top two SCV's. It is recommended these SCV's be used for low pressure and high flow functions. Most hydraulic motors use 19 to 26.5 L/min (5 to 7 gpm) per motor and a pressure of around 100 bar (1450 psi) to operate.

   Use top two SCVs to operate hydraulic motors such as air seeders, sprayers and vacuum planters. Using the secondary pump when operating hydraulic motors will improve fuel economy, reduce power loss and reduce heating of hydraulic oil. This reduces hydraulic system interactions with steering, brakes, raise, lower, active down force, etc.

B— 90cc Pump SCV Couplers

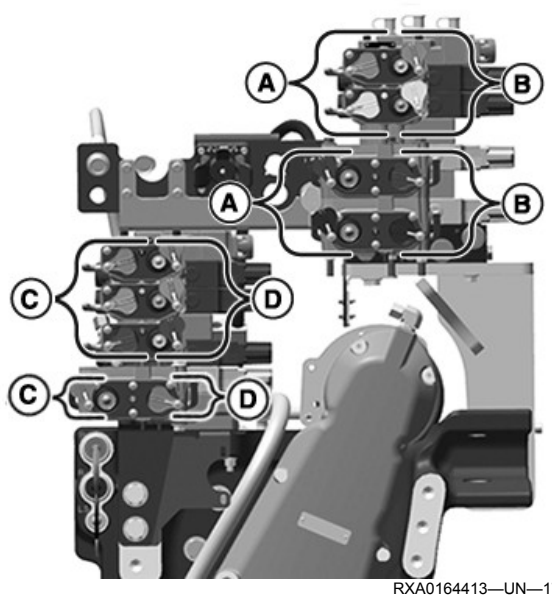
IMPORTANT: Hydraulic and cooling system overheating can result if implement is not connected correctly into hydraulic system.

The secondary pump and top two couplers can provide high pressure to the same functions as the primary pump, however, the benefits of improved fuel economy and reduced power loss disappear. There is an increased chance of system interactions with hydraulic motors being on the same pump as other hydraulic functions which typically means increased vacuum level or blower motor speed fluctuations. Under some conditions, more heat can be generated which places increased load on the cooling system.

3. The 90cc pump supplies oil to bottom SCV's. It is recommended these SCV's be used for high pressure and low flow functions, such as air seeders, large cylinders, and active down force systems.

RD47322,00006C8-19-09MAY18

Connecting Implements to Air Seeder Special High Flow Hydraulic SCV's [AG]



RXA0164413—UN—17SEP18

High Flow Hydraulic SCV Stack (5 SCVs with Hitch Valve)

A— 85cc Pump SCV Extend Couplers
B— 85cc Pump SCV Retract Couplers
C— 90cc Pump SCV Extend Couplers
D— 90cc Pump SCV Retract Couplers

NOTE: For Ag high flow, it is recommended that the hydraulic motor be connected to the top SCV's (85cc high flow pump). Not recommended for high flow scraper hydraulics

1. The high flow hydraulic system consists of one 90cc primary pump for bottom SCV's (B) and one 85cc secondary pump for top two SCV's (A).
2. The 85cc pump supplies oil to top two SCV's. It is recommended these SCV's be used for low pressure and high flow functions. Most hydraulic motors use 19 to 26.5 L/min (5 to 7 gpm) per motor and a pressure of around 100 bar (1450 psi) to operate.

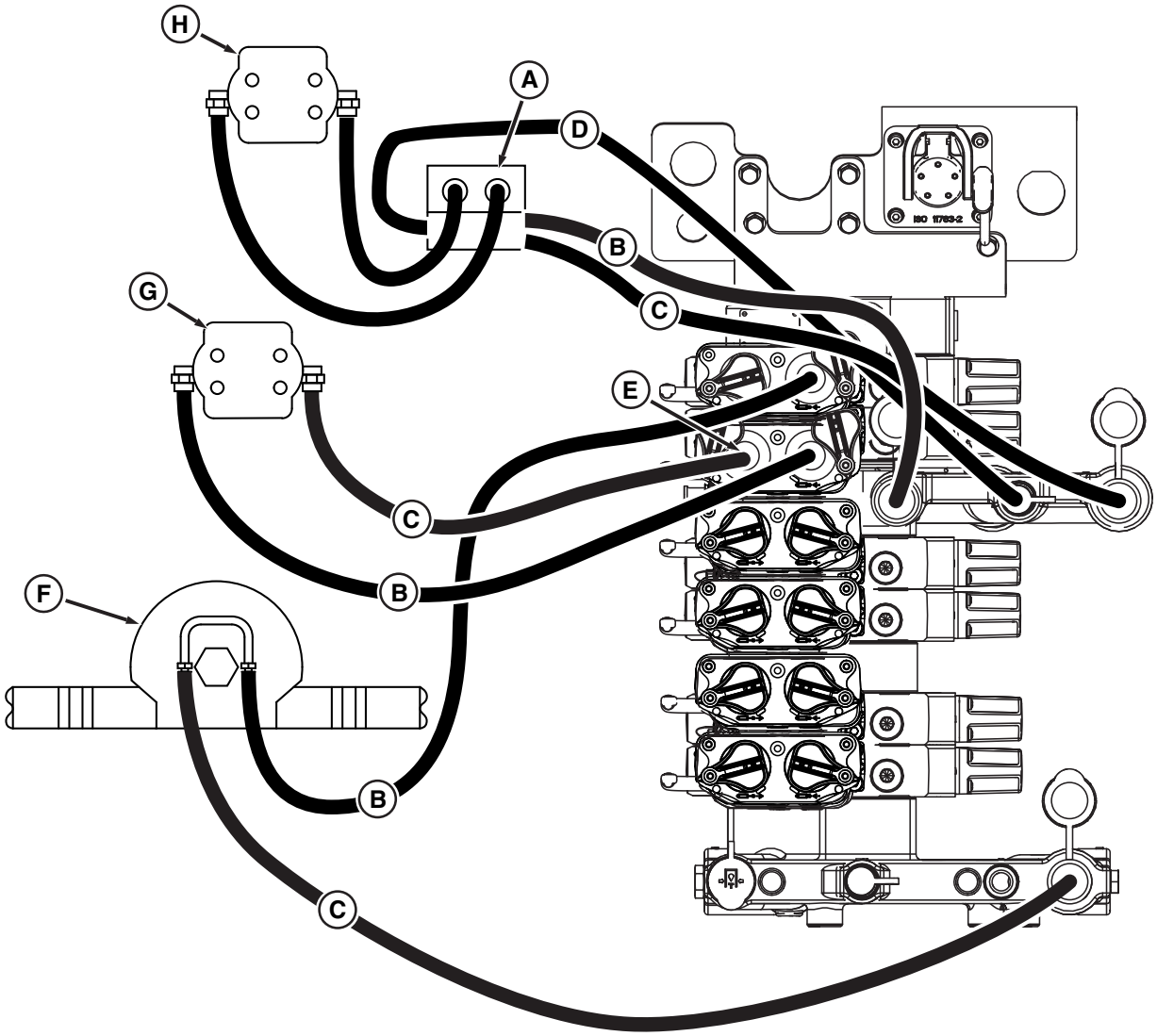
   Use top two SCVs to operate hydraulic motors such as air seeders, sprayers and vacuum planters. Using the secondary pump when operating hydraulic motors will improve fuel economy, reduce power loss and reduce heating of hydraulic oil. This reduces hydraulic system interactions with steering, brakes, raise, lower, active down force, etc.

IMPORTANT: Hydraulic and cooling system overheating can result if implement is not connected correctly into hydraulic system.

   The secondary pump and top two couplers can provide high pressure to the same functions as the primary pump, however, the benefits of improved fuel economy and reduced power loss disappear. There is an increased chance of system interactions with hydraulic motors being on the same pump as other hydraulic functions which typically means increased vacuum level or blower motor speed fluctuations. Under some conditions, more heat can be generated which places increased load on the cooling system.
3. The 90cc pump supplies oil to bottom SCV's. It is recommended these SCV's be used for high pressure and low flow functions, such as air seeders, large cylinders, and active down force systems.

BH38674,0000D8C-19-31AUG18

Implement Connection Example 1—Implement Control Valves—Less Hitch—High Flow Hydraulics [AG]



RXA0111998—UN—18NOV10

A— Variable Rate Drive
B— Pressure Line
C— Return Line
D— Load Sense Line
E— Return Hose Tip
F— Vacuum Motor
G— Hydraulic Motor
H— Hydraulic Motor

NOTE: For Ag high flow, it is recommended that the hydraulic motor be connected to the top SCV's (85 cc high flow pump).

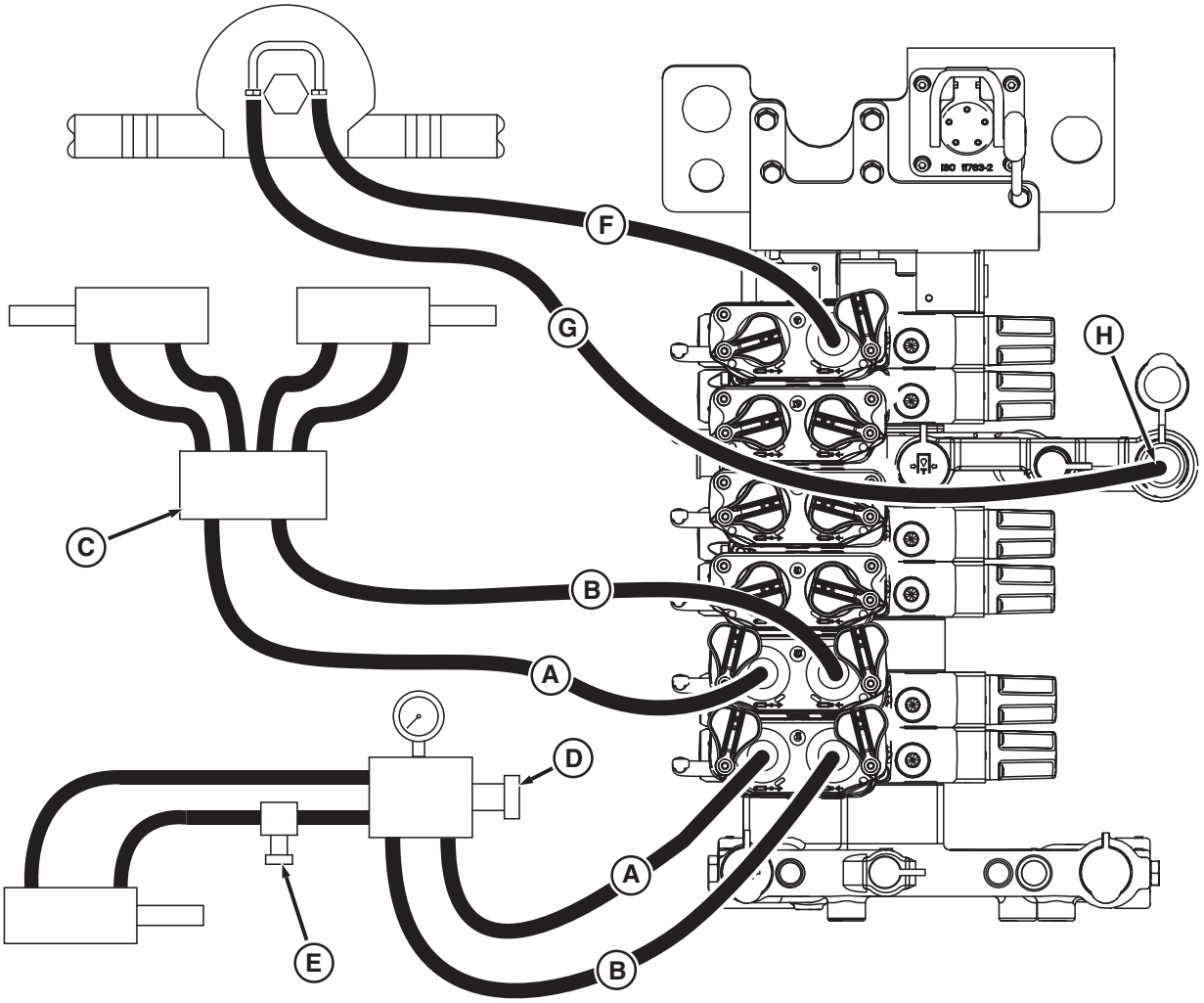
In this application vacuum motor (F) receives pressure oil from the retract port of SCV. Return oil is routed to the high flow power-beyond return port. If return hose is equipped with special return hose tip, it can be connected directly to left-hand side of coupler. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral causes motor to stop abruptly and can damage seals.

Hydraulic motor (G) receives pressure oil from the retract port of SCV. Since return oil is routed to extend port of an SCV, a special return hose tip with check valve is required to prevent high pressure oil from moving back toward the motor and possibly damaging the seals.

Hydraulic motor (H) receives pressure oil from power-beyond port and return oil is routed to power-beyond return port. In this application, both hydraulic motors and vacuum motor are being operated by the secondary hydraulic pump.

RD47322,00006C9-19-09MAY18

Implement Connection Example 2—Pressure Control Valve Applications (Grain Drills or Air Seeders with Constant Down-Pressure System)—Less Hitch—High Flow Hydraulics [AG]



RXA0126557—UN—17JUN14

A— Extend Coupler Line
B— Retract Coupler Line
C— Selector Valve
D— Pressure Control Valve
E— Implement Transport Lock Valve
F— Pressure Line
G— Return Line
H— Return Hose Tip

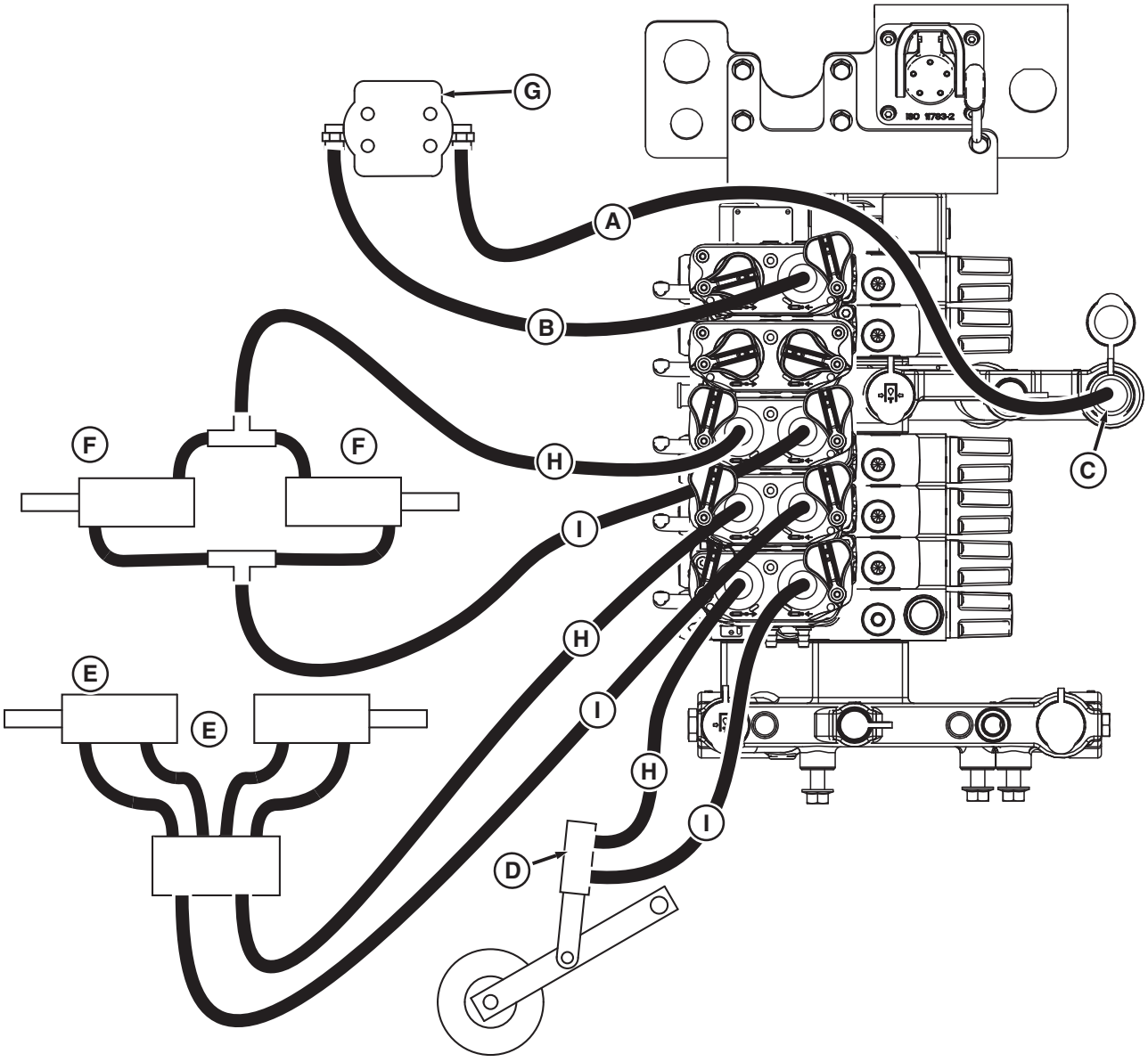
In this application vacuum motor receives pressure oil from the retract port of SCV. Since return oil is routed to extend port of SCV a special return hose tip (H) with check valve is required to prevent high pressure oil from moving back toward the motor and possibly damaging the seals. Another option would be to route return oil to power-beyond return port which would not require a special return hose tip. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral causes motor to stop abruptly and can damage seals.

For implements using active down force set flow control to continuous and move lever to detent position.

This causes hydraulic pump to operate at maximum pressure which can cause overheating of hydraulic oil if at the same time outside air temperature is high. To avoid this problem, try not to operate more than one hydraulic motor with tractor hydraulic system when active down force is being used.

RD47322,00006CA-19-09MAY18

Implement Connection Example 3—Closed Center Valve, Pump at High Pressure—Less Hitch—High Flow Hydraulics [AG]



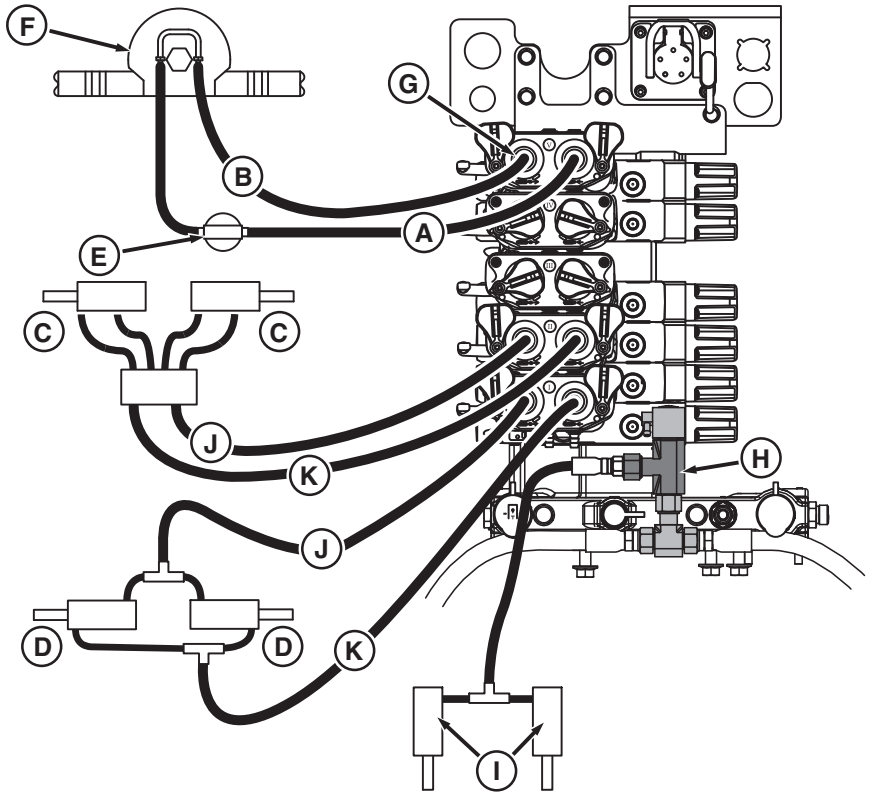
RXA0112000—UN—18NOV10

A— Return Line
B— Pressure Line
C— Return coupler (Motor Return)
D— Raise/Lower cylinder
E— Markers
F— Fold
G— Hydraulic Motor
H— Extend Coupler Line
I— Retract Coupler Line

In this application hydraulic motor (G) receives pressure oil from the retract port of SCV. Return oil is routed to power-beyond return port. If return hose is equipped with special return hose tip, it can be connected directly to left-hand side of coupler. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral causes motor to stop abruptly and can damage seals.

RD47322,00006CB-19-09MAY18

Implement Connection Example 4—Planter with Vacuum Motor and Return Line to SCV Using Motor Return Tip—With Hitch—High Flow Hydraulics [AG]



RXA0126183—UN—03MAY12

A— Pressure Line
B— Return Line
C— Marker
D— Fold
E— Flow Control Valve (Wide Open)
F— Vacuum Motor
G— Motor Return Tip
H— T-fitting and Hydraulic Hose
I— Lift Assist Cylinders
J— Extend Coupler Line
K— Retract Coupler Line

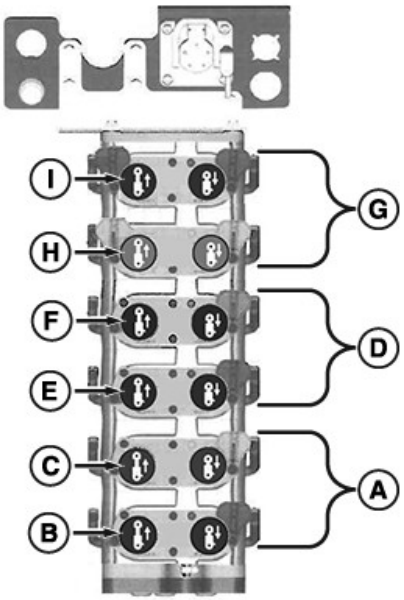
In this application vacuum motor (F) receives pressure oil from the retract port of SCV. Since return oil is routed to an SCV, a special return hose tip (G) with check valve is required to prevent high-pressure oil from moving back toward the motor and possibly damaging the seals. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral causes motor to stop abruptly and possible damage to seals.

Control valve (E) is wide open and flow is controlled by tractor control panel. If valve is used to control oil flow, pump operates at maximum pressure which can cause overheating of hydraulic oil if at the same time outside air temperature is high.

Connect lift assist cylinders (I) with T-fitting and hydraulic hose (H) to hitch lowering valve. The hitch lever controls the lift assist cylinders.

RD47322,00006CC-19-09MAY18

Scraper Connection Example: Pulling 1, 2, and 3 Scrapers [Scraper]



RXA0160401—UN—04AUG17

Pull Scraper Connection Examples

A— Scraper 1
B— SCV 1 (Lift Cylinders)
C— SCV 2 (Gate/Dump Cylinders)
D— Scraper 2
E— SCV 3 (Lift Cylinders)
F— SCV 4 (Gate/Dump Cylinders)
G— Scraper 3
H— SCV5 (Lift Cylinders)
I— SCV 6 (Gate/Dump Cylinders)

RD47322,000039F-19-31JUL18

Implements Requiring Large Volumes of Oil

CAUTION: Do not add hydraulic oil to reservoir with engine running. Hydraulic reservoir can overflow.

NOTE: Do not overfill the hydraulic reservoir.

Lower the implement to have maximum oil in the reservoir during the checking procedure.

Cycle all implement cylinders after starting tractor.

IMPORTANT: Do not overfill hydraulic reservoir. Lower implement to ensure maximum oil is in reservoir during oil level check.

Check the hydraulic oil reservoir sight gauge level, see Transmission-Hydraulic Reservoir/Axle Oil Level in the Service - Check Section of this Operator's Manual.

Lower implement to ground to return the most oil to the reservoir.

Recheck oil level when implement is removed.

Add oil if required.

Drain any excess oil from hydraulic reservoir using reservoir drain plug.

RD47322,00006CD-19-10APR18

Scraper Hydraulic Hose Tips [Scraper]

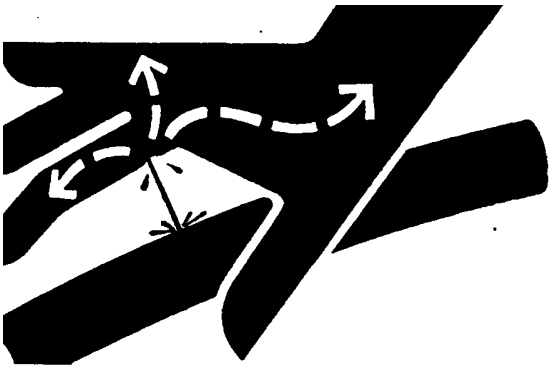
Recommended John Deere scraper hydraulic hose tips for hoses with flat face O-ring seal connectors and couplers with O-ring boss ports.

Size		Part Number	
Scraper Hose	SCV Coupler	Hose Tip	Hose-to-Coupler Adapter
-8 (0.5 in)	0.5 in	AR94522[a]	38H1161
-12 (0.75 in)	0.5 in	AN233013	38H1163
-12 (0.75 in)	0.75 in	AT117365[b]	38H1163

[a] *Standard Ag Coupler*
[b] *High Flow Coupler*

RD47322,000039E-19-09MAY18

Attaching Implement and Control System



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.

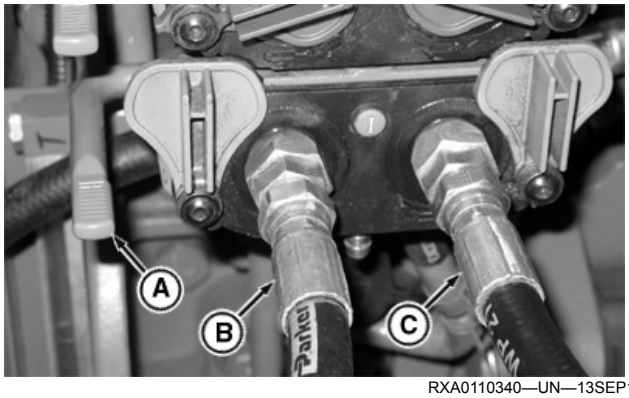
If an accident occurs, see a doctor immediately. Any fluid injected into skin must be surgically removed within a few hours or gangrene can result.

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 [Ag] 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 or disconnecting implement position sensor. Connect or disconnect with engine running can cause system faults. Shut off engine and restart to restore correct function.

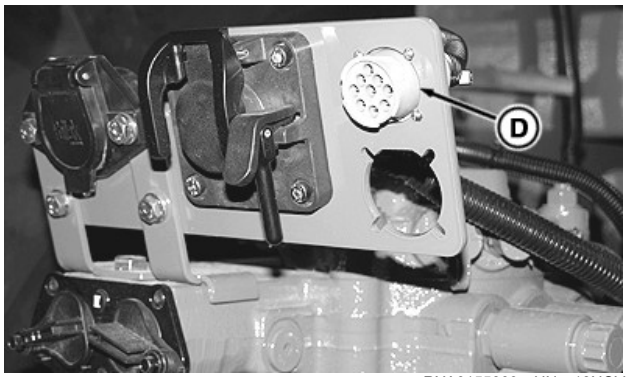
3. Shut off engine.

IMPORTANT: 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). See Reset Implement Connector in this Operator's Manual section.

KD34109,0000765-19-23APR18

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.

Tractor selective control valve (SCV I) is used to control raising, lowering, and setting of implement depth electronically without leaving cab.

1. Connect implement to tractor.



RXA0133709—UN—16JUL13

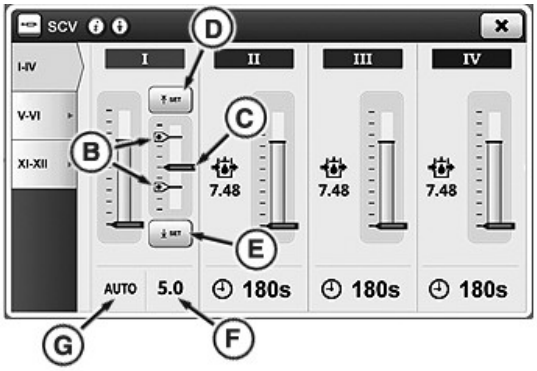
2. Press SCV shortcut button on navigation bar or follow alternative path.



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):

- 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).

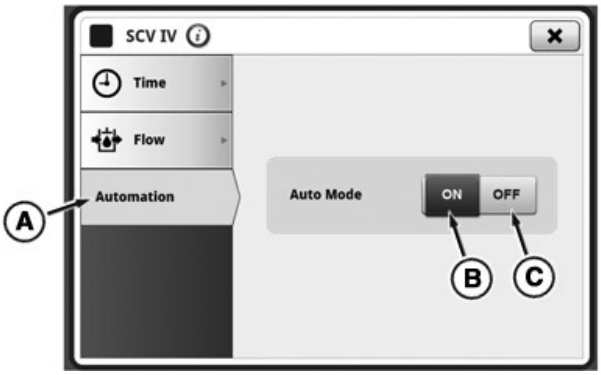
KD34109,0000813-19-14AUG18

Use TouchSet™ Depth Controls

Activate TouchSet™ Automation Mode

During field use, activate automation mode.

TouchSet is a trademark of Deere & Company



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.

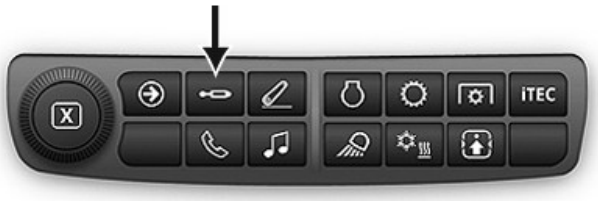
DB71512,0000001-19-26JUN17

Laser Scraper—for Scrapers Equipped with Scraper Control Unit

NOTE: Used primarily in areas requiring automated laser guidance system for scraper applications.

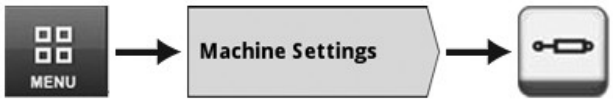
SCVs I and III are used to control raising, lowering, and setting of implement depth electronically without leaving cab.

1. Connect tractor to implement using SCV I and/or III.



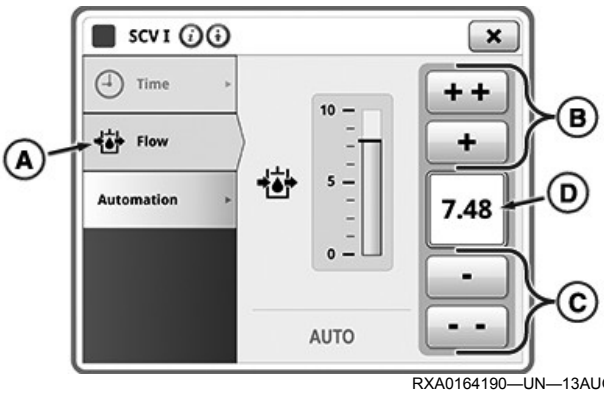
RXA0133709—UN—16JUL13

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.

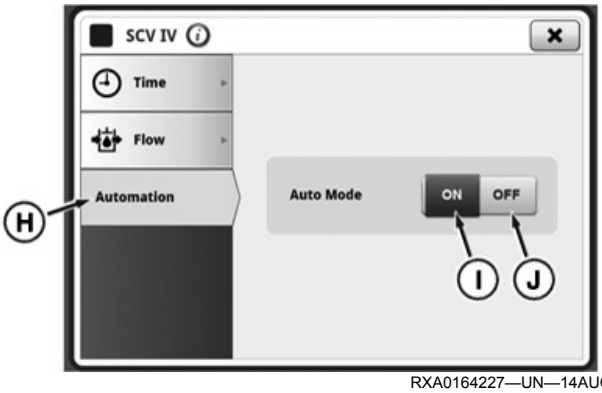
SCV Levers



RXA0164226—UN—13AUG18

Control SCVs and activate automatic scraper control system using corresponding SCV control levers I (F) and III (G).

Automation



RXA0164227—UN—14AUG18

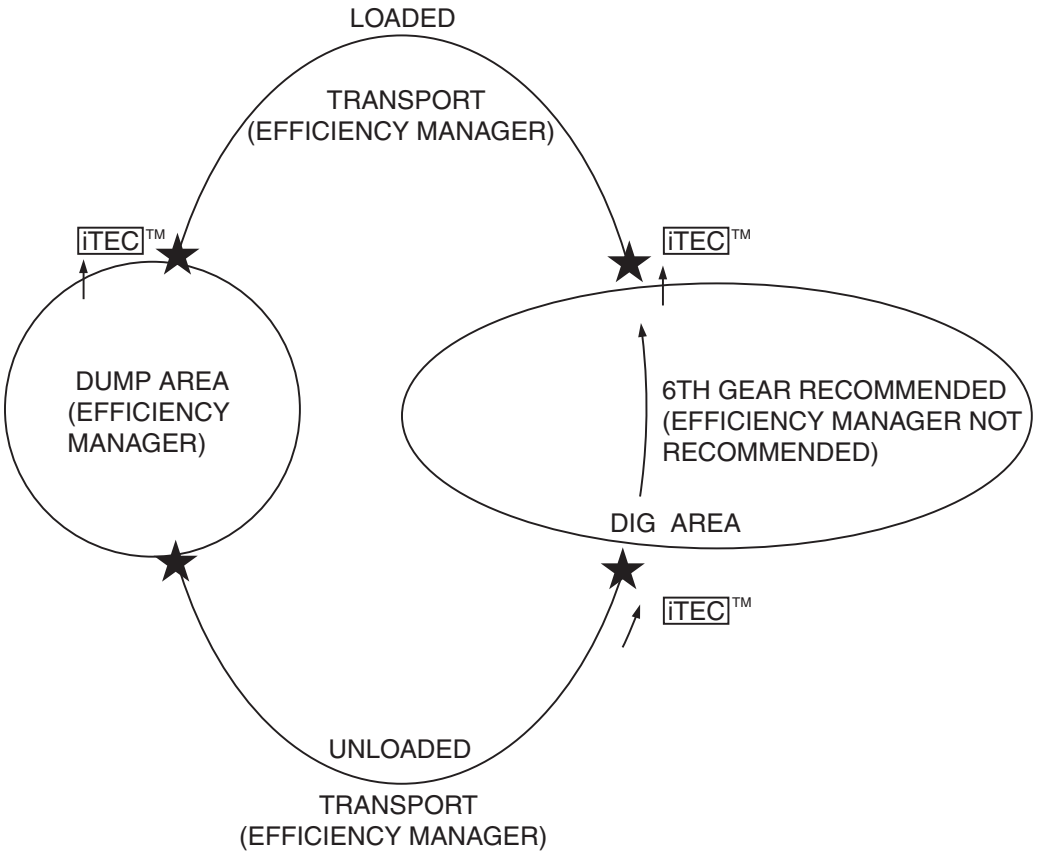
Automation tab (H) allows enabling/disabling of AUTO Mode (feature mode). When disabled, SCV changes to

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.

RD47322,00002A6-19-14AUG18

Scraper Operation Cycle



RXA0130746—UN—01FEB13

IMPORTANT: Operating tractor with three scrapers requires tractor and all scraper pans be equipped with hydraulic trailer brakes. Reference Towed Loads and Transport with Ballast in Transport Section of Operator's Manual.

Never exceed:

- **Maximum tractor ballast of 28123 kg (62000 lb) with 65% on the front axle.**
- **10206 kg (22500 lb) maximum scraper tongue load with short scraper drawbar.**
- **8391 kg (18500 lb) maximum for scraper tractors with regular long scraper (Ag) drawbar support.**

Towed Scrapers:

Scraper Tractor Application Guidelines	
Trailer Brakes	**Maximum Towed Load**
Without	1.5 times tractor weight[a]
With	4.5 times tractor weight.

[a] *Limited to 32 km/h (20 mph) without trailer brakes*

Follow manufacturer's Scraper Operation Recommendations and instruction in attaching and using scraper:

NOTE: Following these operating guidelines could result in extended tractor and scraper life as well as increased production.

- Limit depth of cut to maintain a loading speed higher than 6.4 km/h (4 mph). For maximum power performance operate in 6th forward gear.
- Maintain minimum engine rpm of 1850 or higher in the cut.
- Ballast tractor correctly to maintain optimum track slip of 8-12%.
- Shallow cuts at higher speeds will extend drivetrain life and increase overall productivity.
- Use iTEC™ (Intelligent Total Equipment Control) to combine downshifts/upshifts, raise/lower scrapers or other functions when returning to dig area or to/from transport part of cycle. (See Intelligent Total Equipment Control (iTEC™) Section.)
- Drawbar height should be set so scraper cutting edge hits the ground before the scraper bottom. See Scraper Operator's Manual.
- Load downhill and/or towards the fill area when conditions allow.

- Set scraper(s) on ground before top loading.
- Activate differential lock before loading, disengage before turning.
- Use of differential lock should be limited to tough and wet areas or during the cut.
- Do not downshift below grounds speeds of 6.4 km/h (4 mph) when under load.
- Reduce speed and shift down before descending a hill.
- When possible load in 6th gear or above and target 1900-2150 rpm.
- Minimize all steering input during scraper loading.
- Avoid high speed dynamic maneuvers especially when loaded. (Sudden turns, transitions from slopes to flat surfaces, or heavy or sudden braking maneuvers.)
- Do not load in a turn.
- Do not turn tracks into the tongue of the scraper.
- Maintain a smooth haul road and fill area.
- See operators manual for operating/service instructions and AutoLoad™ setup if equipped.

Efficiency Manager™ Recommendations

NOTE: When using AutoLoad™ will also exit Efficiency Manager™

- Use Transmission Efficiency Manager™ for transport.
- Use both Efficiency Manager™ speed settings for transport. One speed setting at transport speed and the other at digging speed. Use the second Efficiency Manager™ speed setting to downshift tractor and bring ground speed closer to dig speed before switching to manual mode.

  Example:

  - Use set speed 2 for transport, set speed 1 for approaching loading and unloading area.
  - Disengage efficiency manager before entering the cut.

RD47322,00009DE-19-21FEB18

Weight Transfer Limits

IMPORTANT: Do not exceed 10206 kg (22500 lb) maximum scraper tongue load transfer to short scraper drawbar and 8391 kg (18500 lb) maximum scraper tongue load transfer to long scraper drawbar. Excess weight transferred to tractor may cause structural or drivetrain damage.

When pulling a direct mounted scraper a portion of scraper and payload weight will be transferred to tractor. This additional weight on tractor can significantly improve productivity during the load cycle, especially when pulling two scrapers in tandem. After first scraper is loaded, tractor will have more pulling capability and will be able to load second bowl much faster, resulting in significantly reduced cycle times.

RD47322,00000EC-19-20FEB18

Scraper/Tractor Attachment

IMPORTANT: Failure to observe operating limits and follow proper operating procedures may reduce life of tractor and cause premature chassis, drivetrain and track system failures.

Proper machine operation is important to extend life of tracks, drivetrain and undercarriage, avoid downtime, and maximize operating efficiency.

Tongue Height

Height of scraper tongue determines angle of cutting edge relative to ground. If tongue is too low, bottom of scraper bowl will drag in cut. If tongue is too high, scraper will be difficult to control in cut. Optimum height for tongue is 46 to 53 cm (18 to 21 in) from ground. Adjust tongue up or down through assemblies of hitch and yoke. When operating in soft conditions raising tongue height may improve ground clearance during transport. Tongue of rear scraper should be set at same height as front. See scraper operator's manual.

Drawbar Height

Drawbar height should be set so scraper cutting edge hits the ground before scraper bottom. See scraper operator's manual.

RD47322,00000ED-19-20FEB18

Loading Techniques

Loading Methods

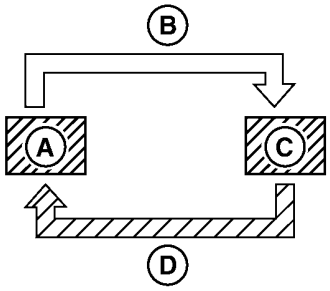
There are three common loading techniques.

- Pull Loading - tractor pulling scraper(s) is preferred loading method. Generally the most economical method for loading scrapers.
- Push Loading - uses separate vehicle to push scraper. Only push load a scraper which is designed to be push loaded (i.e. ejector models). It is critical that push vehicle speed not exceed pull tractor speed or track overrun and slippage on drive wheels can result.

IMPORTANT: To prevent excessive shock loading into tractor through drawbar and hydraulic system during loading sequence when top loading, always lower scraper to ground before beginning loading cycle.

- Top Loading (i.e. excavator) - uses scraper as a haul unit loaded by an excavator.

Working Cycle Automation



RXA0119628—UN—09AUG11

Working Cycle Automation

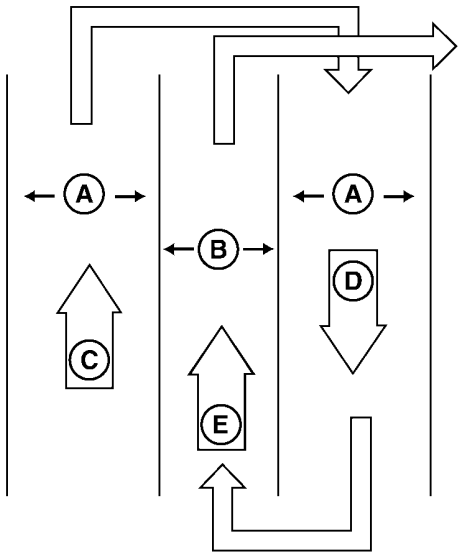
A— Dig Area
B— Loaded Transport
C— Dump Area
D— Unloaded Transport

Use iTEC™ (Intelligent Total Equipment Control) to combine downshifts and upshifts, raise or lower scrapers or automate other functions when returning to dig area (A) or entering loaded (B) or unloaded transport (D) parts of cycle. See Intelligent Total Equipment Control (iTEC™) section of this Operator's Manual.

Use Efficiency Manager™ for transport portions of cycle, not during loading operations. See Operate the e18™ Powershift Transmission in e18™ Powershift Transmission section of this Operator's Manual.

Limit depth of cut to maintain a loading speed higher than 6.4 km/h (4 mph)

Loading Sequence



RXA0119629—UN—09AUG11

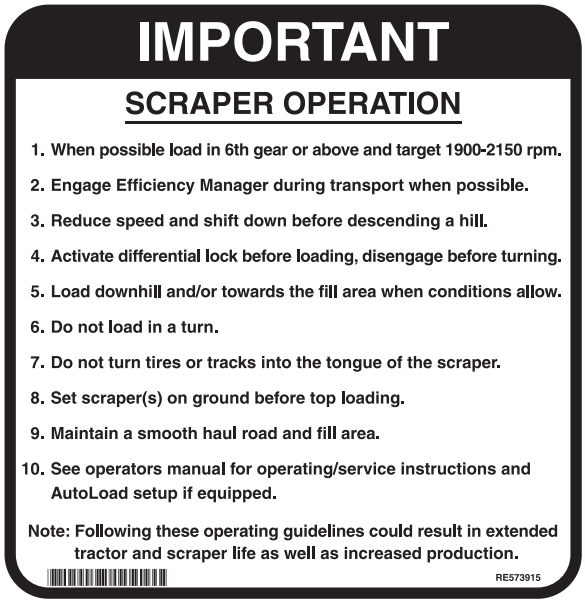
A— Scraper Width
B— Less Than Scraper Width
C— First Cut
D— Second Cut
E— Third Cut

After making first cut (C), make second cut (D) parallel to first at a distance from first cut that is less than scraper width (B). On third pass (E) pick up material between first two cuts.

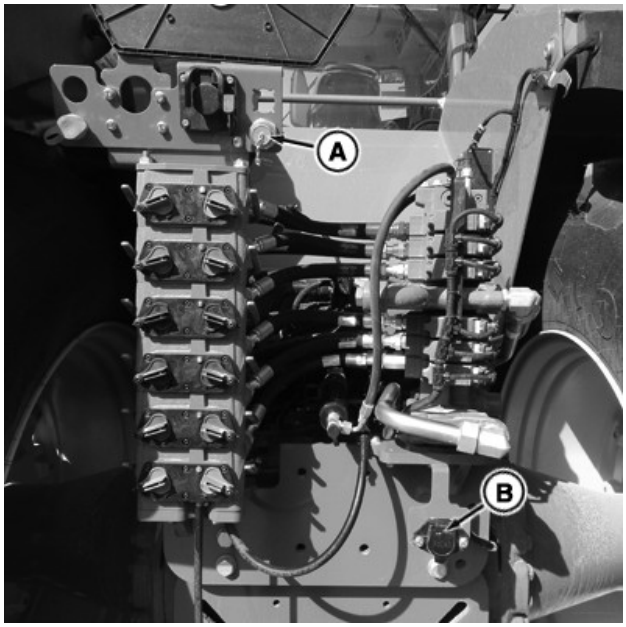
When loading a direct mounted scraper in tandem with another scraper it is most efficient to load front scraper bowl first.

RD47322,00000EE-19-24AUG17

Connect AutoLoad™ Harness

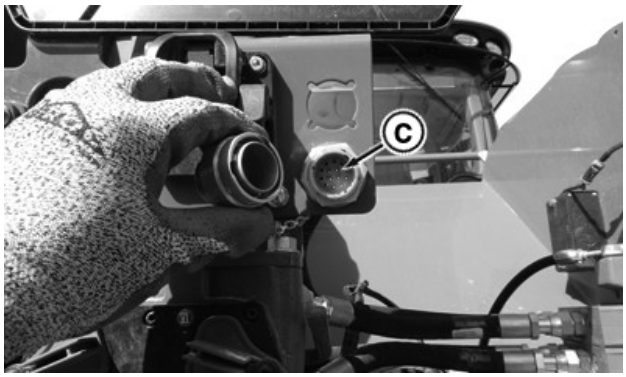


RXA0146278—19—28AUG15



RXA0142561—UN—17JUN14

AutoLoad™ Outlet



RXA0142562—UN—17JUN14

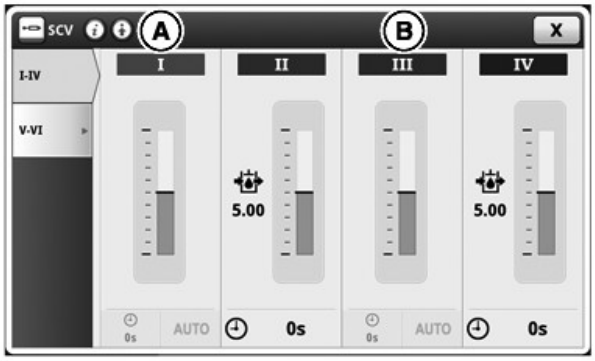
A—Cover
B—Scraper Light Plug
C—Tractor Plug

1. Remove AutoLoad™ Outlet cover (A).
2. Connect AutoLoad™ harness from scraper to tractor AutoLoad™ outlet (C).
3. Refer to Scraper Operation label for proper scraper operation or Scraper Information section.

RD47322,00004DA-19-11AUG17

AutoLoad™ Displays

Main SCV Page



RXA0141182—UN—28APR14

When an AutoLoad™ scraper is attached to the tractor, the main SCV page will display AutoLoad™ specific information for each AutoLoad™ related SCV as shown for SCV I (A) and SCV III (B).

The SCV flow rate is available to be edited for AutoLoad™ controlled SCVs. Timed detents are not available for AutoLoad™ controlled SCVs.

The AutoLoad™ status text is used to inform the operator if an AutoLoad™ related issue has occurred. The display will show one of the following.

AUTO AutoLoad™ system working normally

~~AUTO~~ AutoLoad™ stalled. Hydraulics unable to move scraper, increase flow rate to attempt recovery.

!AUTO! AutoLoad™ related fault exists. AutoLoad™ feature disabled.

Accessing AutoLoad™ Page



RXA0138437—UN—02APR14

Press **AutoLoad™ shortcut button on Navigation Bar or follow alternative path:**

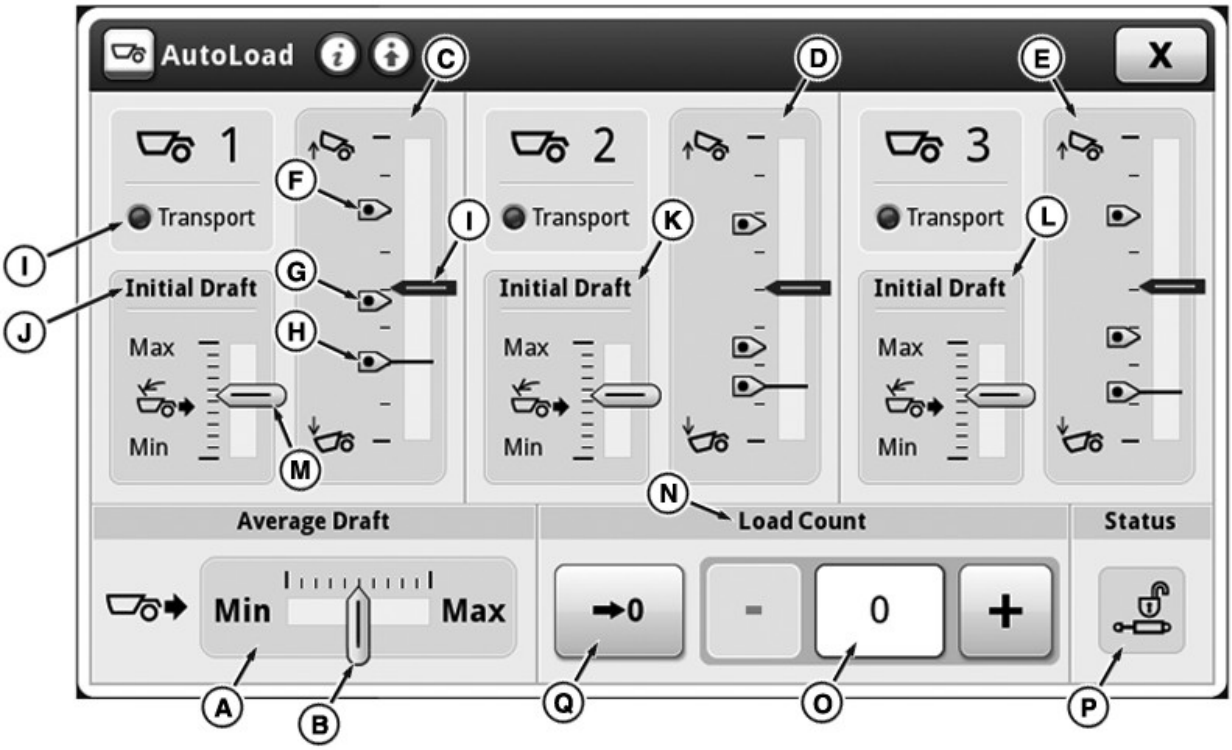


RXA0160862—UN—31AUG17

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **AutoLoad™ icon.**

RD47322,00000C5-19-19SEP17

Scraper Control Panel Reference



RXA0141183—UN—29APR14

SDU Display

A— Average Draft Region
B— Average Draft Indicator
C— Scraper 1 Position Region
D— Scraper 2 Position Region
E— Scraper 3 Position Region
F— Upper "Transport" Height
G— Lower "Ready" (Dump) Height
H— Ground Level "Loading" (Entering the Cut) Height
I— Position Indicator
J— Scraper 1 Initial Draft Setting
K— Scraper 2 Initial Draft Setting
L— Scraper 3 Initial Draft Setting
M— Initial Draft Indicator
N— Load Counter Region
O— Load Count Value
P— Hydraulic Cylinder Lock/Unlock
Q— Reset Load Count

The AutoLoad™ page provides information regarding the setup and status of the AutoLoad™ System.

Region (A) is the average draft adjustment. Average draft is the working load the system will try to maintain after fully entering the cut. The current average draft setting is represented by the indicator (B). The draft indicator is to the left for a lighter cut and to the right for a more aggressive cut.

Regions (C), (D), and (E) display scraper position information for the first, second and third scrapers if they are AutoLoad™ compatible. If the scraper or scrapers are not attached, the region will not be displayed. Three setpoints are depicted in each scraper: upper "Transport" height (F), lower "Ready" (dump) height (G), and ground level "Loading" entering the cut height (H). Ground level "Loading" entering the cut height includes a black horizontal bar. The position indicator (I) is the current position of the scraper relative to the setpoints. The position indicator (I) is the current position of the scraper relative to the setpoints. The AutoLoad™ scraper state will change color depending on the current phase of the digging process. Refer to the **Scraper State Color Scheme Table** shown on next page.

Regions (J), (K) and (L) display the initial draft setting information for the first, second and third scrapers, if they are AutoLoad™ compatible. If not the scraper will not be displayed. Initial draft is the work load the system will try to achieve when entering the cut. The indicator (M) represents the initial draft setting for that scraper. The further up is the lighter cut and further down is a more aggressive cut.

Region (N) is the load counter (O) and (Q) is the load count reset. This feature allows the operator to keep a record of the number of scraper loads hauled. If AutoLoad™ is enabled, the load counter can be set to

automatically increment every time a scraper exits the cut. The operator can also manually increment or decrement the value as desired. See AutoLoad™ Settings Section.

Scraper Status Color Scheme Table

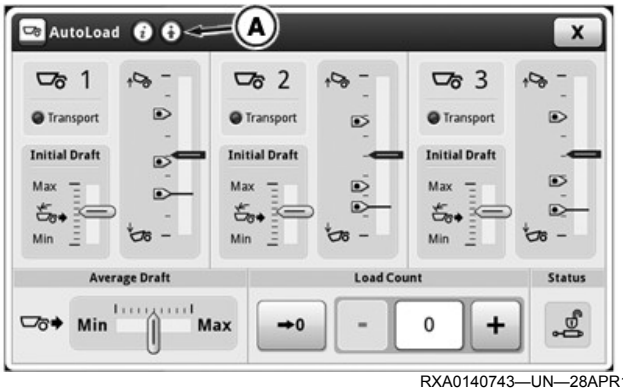
The status indicator will change color in relation to the current status of the AutoLoad™ system.

AutoLoad™ Faulted	**Silver**
AutoLoad™ Entering Cut (Initial Draft)	**Green**
AutoLoad™ Ready	**Orange**
AutoLoad™ Loading	**Blue**
AutoLoad™ Transport Mode	**Black**

RD47322,00000C4-19-20MAY14

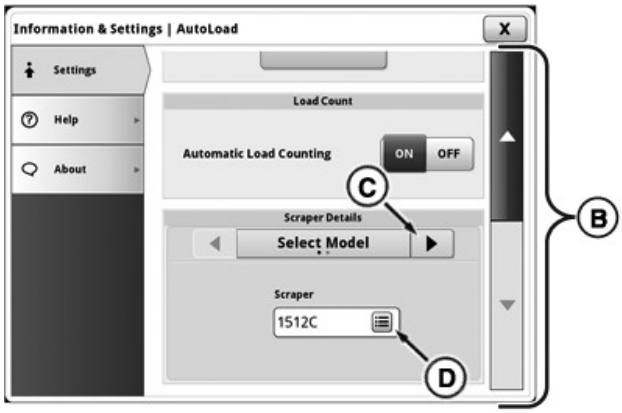
AutoLoad™ Settings - Setting Auto Dimensions

The following procedure explains how to enter scraper information, set AutoLoad™ options.

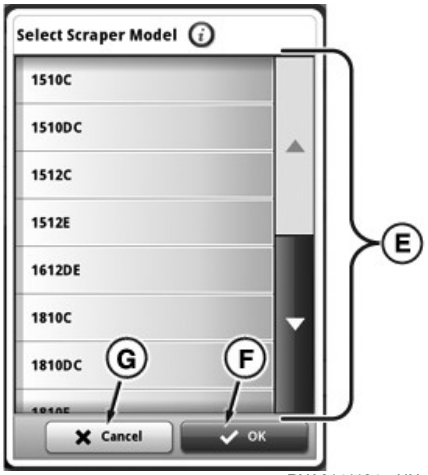


RXA0140743—UN—28APR14

Press the advanced settings button (A) to access AutoLoad™ Setup.



RXA0140745—UN—28APR14

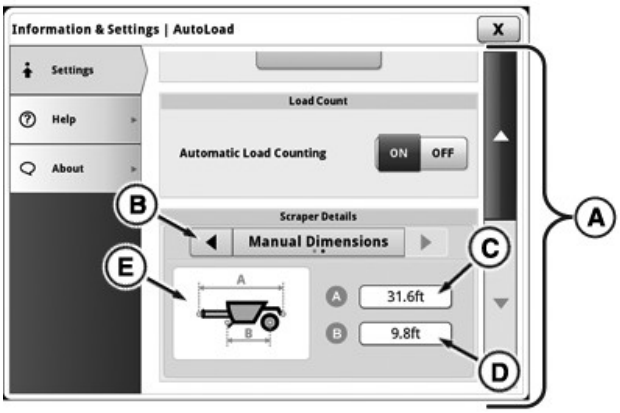


RXA0141184—UN—10JUN14

The scraper dimensions can be entered either manually or from a list of John Deere scraper models by scrolling up or down arrows (B) and pressing Select Model right arrow button (C). Press (D) to select model of scraper. Scrolling with up or down arrows (E), then press the model from a list John Deere model of scrapers. After model has been selected press OK button (F) or cancel button (G).

Manual Dimensions

NOTE: Scraper dimensions can only be entered if the tractor, drawbar, and scraper(s) are equipped the AutoLoad™ components.



RXA0140744—UN—28APR14

Scroll up or down using arrows (A) and pressing Manual Dimensions arrow button (B). Enter two measurements under manual dimensions - enter the scraper length (C), and cutting blade-to-axle (D) dimensions shown. After dimension (C) or (D) is pressed, a number pad will pop up for entering dimensions. Reference (E) is used by the AutoLoad™ software to improve system performance. Scraper length (C) is the distance between the scraper front tongue pin and the rear pin connecting a tandem scraper. The blade-to-axle (D) is the distance from the shallowest cutting blade tip to the rear axle. The dimensions for John Deere scrapers are listed in scraper dimension chart below.

NOTE: AutoLoad™ will increment the load count each time the automated cut is deactivated; either by manually taking over scraper control or by detenting to the upper set position.

If the automated cut is stopped and restarted, the load count increments twice. The load count needs to be manually corrected, if desired.

AutoLoad™ counts each individual scraper(s) load, NOT the number of cycles.

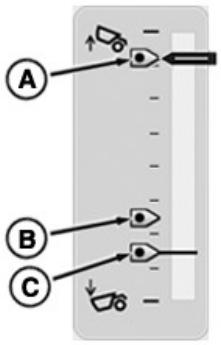
Scraper Dimension Chart		
Scraper Model	**Scraper Tongue Pin to Rear Pin Length (ft) (C)**	**Scraper Blade to Rear Axle Length (ft) (D)**
1510C	24.3	8.3
1510DC	24.3	8.3
1512C	23.3	7.6
1810C	27.0	9.3
1810DC	27.0	9.3
1812C	24.3	8.3
1812DC	24.3	8.3
1814C	24.6	7.6
1814DC	24.6	7.6
2112C	29.2	9.6
2112DC	29.2	9.6
1512E	27.7	7.8
1612DE	27.7	7.8
1810E	29.2	9.3
2010DE	29.2	9.3
2010DE Two Tire	31.2	10.5
1814E	26.3	7.8
2014DE	26.3	7.8
2112E	31.6	9.8
2412DE	32.8	9.8
2412DE Two Tire	33.9	10.5

RD47322,00000C6-19-12DEC17

Using AutoLoad™

Set Height Positions

In order to operate AutoLoad™, three stored position set points for each scraper need to be set: the upper “Transport”, lower “Ready” (dump), and ground level “Loading” (entering the cut) heights. The upper and lower set points allow the scraper(s) to be quickly returned to preset positions by detenting the SCV lever associated with that scraper’s lift cylinder. Ground level “Loading” (entering the cut) is the position at which the scraper begins the cut. These position set points are set using the Scraper setup panel.



RXA0141637—UN—21MAY14

Scraper Position Display

The upper “Transport” (A) height is the highest desired scraper position (example: transport height). To raise the scraper to the upper set point, the AutoLoad™ enabled SCV lever is detented rearward (extend detent).

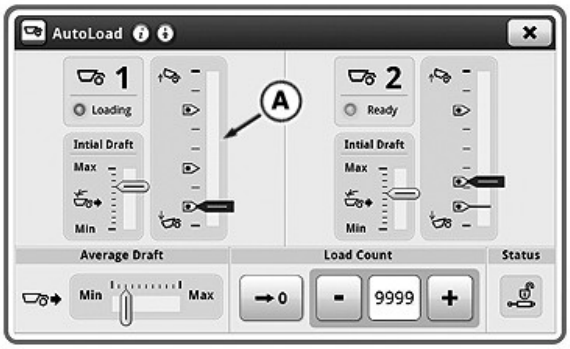
The lower “Ready” (B) height is the lowest desired scraper position (example: dump height). To lower the scraper to the lower set point, the AutoLoad™ enabled SCV lever is detented forward (retract detent).

Ground level “Loading” (C) height is the position at which the scraper begins to fully enter the cut. This

value is required by AutoLoad™ algorithm but not available as a quick return position by SCV lever detent.

RD47322,00000C8-19-10AUG17

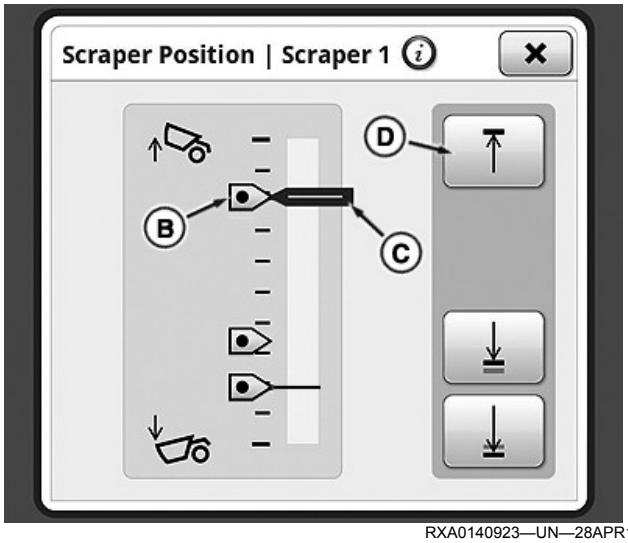
Set Scraper “Transport” Height



RXA0140921—UN—08APR14

Scraper Position

Touch scraper position overlay (A).



RXA0140923—UN—28APR14

Transport Height

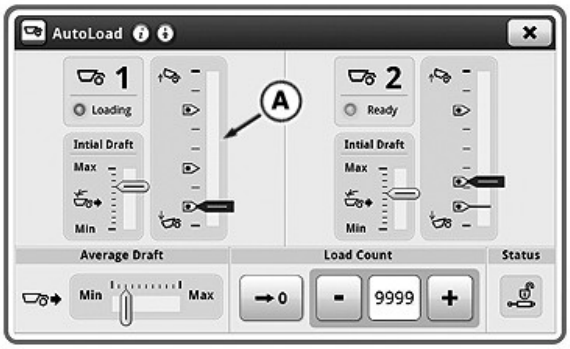
Raise the scraper to the desired upper transport set height position (B), the scraper position indicator (C) will reflect accordingly. With the blade correctly positioned, save the upper transport height by pressing the upper limit set button (D).

Once Complete, the upper transport point is ready to use.

The upper transport height point can be changed at any time by repeating the above procedure.

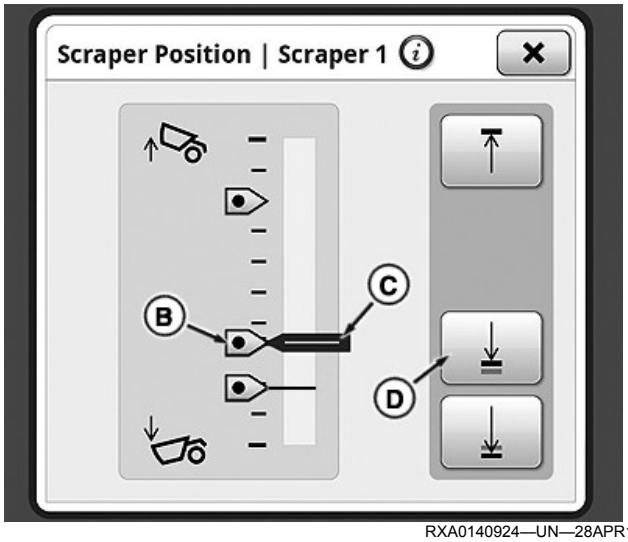
RD47322,00000C9-19-10AUG17

Set Scraper “Ready” (Dump) Height



RXA0140921—UN—08APR14

Touch scraper position overlay (A).



RXA0140924—UN—28APR14

Lower the scraper to the desired lower “Ready” (or Dump) set point (B) position for dumping, the scraper position indicator (C) will reflect accordingly. Save the lower limit (dump) set point by pressing the press lower limit Set button (D).

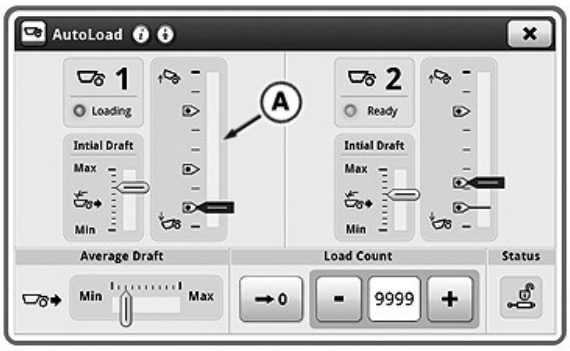
Once complete, the new lower set point is ready to use.

The ready (dump height) set point can be changed at any time by repeating the above procedure.

RD47322,00000CA-19-10AUG17

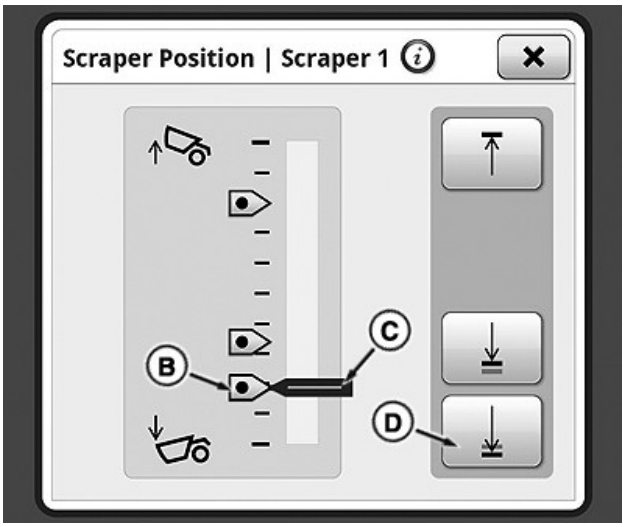
Set Scraper Ground “Loading” Entering the Cut Height

NOTE: John Deere™ recommends that the drop center blades be lowered to penetrate the ground, allowing outer blades to touch the ground when setting ground level loading (entering the cut) position.



RXA0140921—UN—08APR14

Touch scraper position overlay (A).



RXA0140922—UN—08APR14

Lower the scraper to the desired ground level loading position (B), the scraper position indicator (C) will reflect accordingly. With the blade correctly positioned, save the ground level set point by pressing the ground level loading set button (D).

Once complete, the ground level loading set height is ready to use.

The ground level loading set point can be changed at any time by repeating the above procedure.

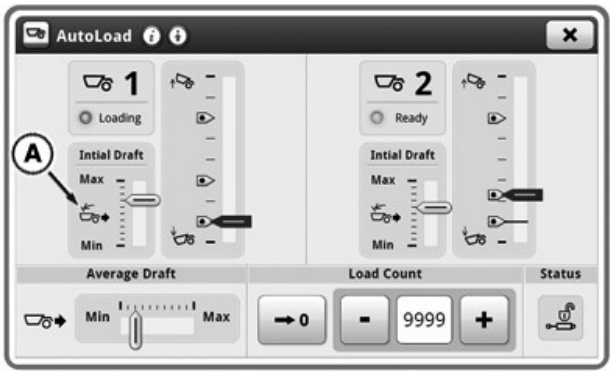
RD47322,00000CB-19-10AUG17

AutoLoad™ Operation

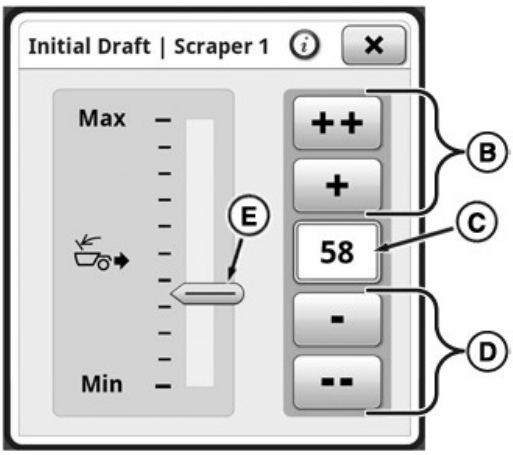
Setting Initial Draft Load Setting

NOTE: When making a lighter cut the indicator is to the left and in a more aggressive cut the indicator is to the right.

The Initial draft setting is the means by which the operator can tune the work load of the system when entering the cut. The initial draft setting is affective for roughly the first half of the cut.



RXA0140925—UN—09APR14



RXA0140939—UN—09APR14



RXA0141289—UN—25APR14

A— Initial Draft
B— Increase Initial Draft Buttons
C— Input Box
D— Decrease Initial Draft Buttons
E— Initial Draft Display Region
F— Adjusting Dial on Navigation bar

The initial draft setting can be accessed by pressing the initial draft button (A). When pressed, the corresponding initial draft display (e.g. region (E) as shown) will become highlighted. The current draft setting (E) is then increased by pressing the increase initial draft buttons (+, + +) (B) or decrease initial draft (-, - -) (D). Also turning adjusting dial (F) can be used to increase or decrease initial draft.

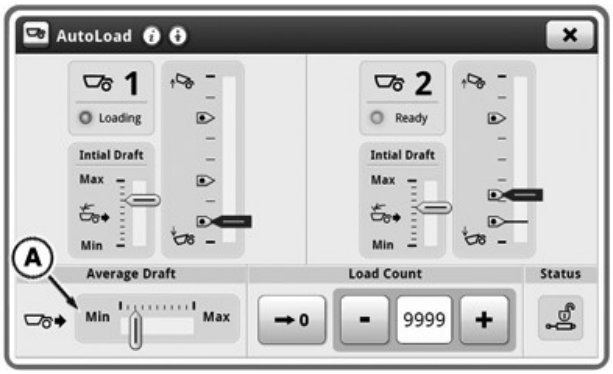
If after the blade enters the cut and the working load is too light (i.e. cut too light and high engine RPM), try increasing the initial draft load setting.

If after the blade enters the cut and the working load is too great (i.e. cut too deep making an initial “scoop” cut and engine lugs too low before recovering), try decreasing the initial draft load setting.

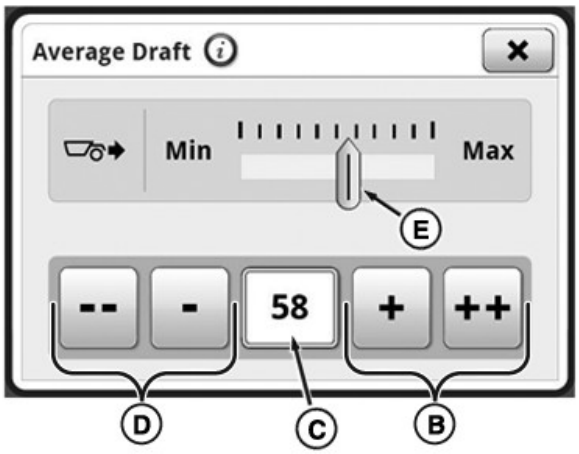
NOTE: Draft is displayed in increments of 1 beginning at 0 through 250 located in input box (E). Pressing (+) will increase draft by 1, pressing (++) increases draft by 10, and by pressing (-) and (- -) will decrease draft by the same increments.

Average Draft Load

The average draft setting is the means by which the operator can tune the work load of the system after fully entering the cut. The average draft setting is affective for roughly the last half of the cut. This setting is the same for all scrapers and only set in one location.



RXA0140940—UN—09APR14



RXA0140955—UN—10APR14



RXA0141289—UN—25APR14

A— Average Draft
B— Increase Average Draft Buttons
C— Input Box
D— Decrease Average Draft Buttons
E— Average Draft Display Region
F— Adjustment Dial on Navigation bar

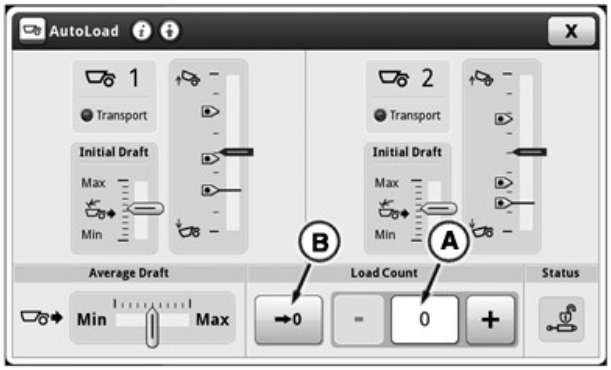
The average draft setting can be accessed by pressing the average draft button (A). When pressed, the corresponding average draft display (e.g. region (E) as shown) will become highlighted. The average draft setting is then increased by pressing the increase average draft buttons (+, + +) (B) or decreased by pressing the decreasing average draft buttons (-, - -) (D). Also turning adjusting dial (F) can be used to increase or decrease average draft.

NOTE: Draft is displayed in increments of 1 beginning at 0 through 250 located in input box (E). Pressing (+) will increase draft by 1, pressing (++) increases draft by 10, and by pressing (-) and (- -) will decrease draft by the same increments.

NOTE: If the working load consistently becomes too light in the latter part of a scraper's cut (i.e. depth too shallow and/or engine RPM higher then desired), try increasing the average draft load setting before the next dig cycle.

Load Counter

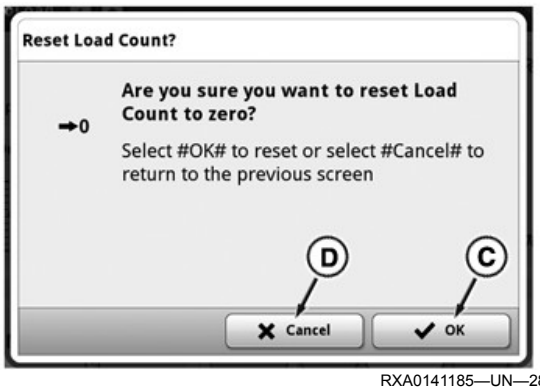
NOTE: Maximum Load Counter value is 9999 loads, then goes back to zero.



RXA0141186—UN—28APR14

Load counter (A) allows operator to keep a record of the number of scraper loads hauled. If AutoLoad™ is enabled, the load counter can be set to automatically increment each time a specific scraper exits the cut.

The operator can also manually increment or decrement the value as desired by pressing the + or - buttons.

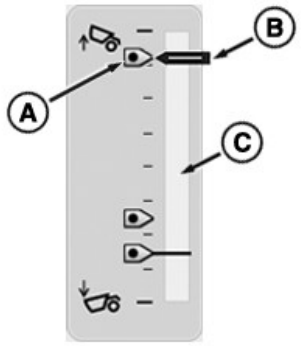


RXA0141185—UN—28APR14

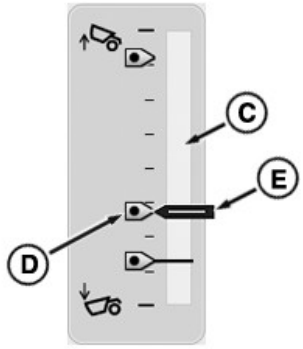
To reset (or zero out) load count press (B), then confirm

reset by pressing OK button (C) or press cancel button (D) to retain load count number.

Using the Transport and Ready Set Height Positions



RXA0141290—UN—07MAY14



RXA0141291—UN—07MAY14

AutoLoad™ can store two scraper positions called set height positions for each scraper: the transport height set position (A) and lower ready (dump) set position (D). The set height positions can be used to quickly return the scrapers to these known locations by SCV detents.

To return the scraper at the transport height set position (A), detent the associated SCV lever rearward (extend). The scraper will then rise to and maintain position at the transport set height.

NOTE: Returning to the transport height is dependent on the position before detent.

- *If position is below the transport height, a detent rearward will raise the scraper to the transport height set position.*
- *If position is above the transport height, a detent rearward will have no effect.*

When at the transport height set position (A), the scraper position indicator (B) will point to the top edge of the set point region (C) in the position display region for the related scraper.

To return the scraper to the lower ready (dump) height set position (D), detent the associated SCV lever forward (retract). The scraper will then lower and maintain position at the lower ready (dump) height set position.

NOTE: Returning to the lower ready (dump) height is dependent on the position before detent.

- *If position is above the lower ready (dump) height set position, a detent forward will lower the scraper to the lower ready (dump) set position.*
- *If position is below the lower ready (dump) height set position, a detent forward will have no effect.*

When at the lower ready (dump) height set position (D), the scraper position indicator (E) will point to the bottom area of the rectangle (C) in the position display region for the related scraper.

RD47322,00000CD-19-10AUG17

AutoLoad™ Set Up Wizard

Accessing Set Up Wizard

The set up wizard is for those operators new to setting up the AutoLoad™ system. For those familiar with AutoLoad™, the set points can be set and modified without using the wizard if desired. It is provided for convenience and training.

The wizard will go through the steps required to set the three set points (upper “Transport”, lower “Ready” (dump) and ground level “Loading”(entering the cut)) for each AutoLoad™ scraper currently connected to the tractor.

The AutoLoad™ set up wizard can be accessed from AutoLoad™ settings page. See *AutoLoad™ Settings* in this Section.

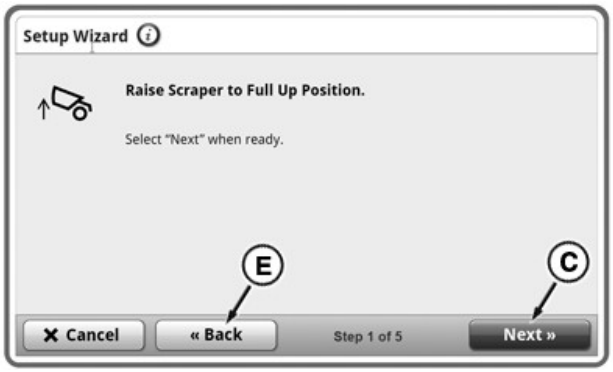
Set Up Wizard



RXA0140836—UN—02APR14



RXA0140830—UN—02APR14



RXA0140831—UN—02APR14

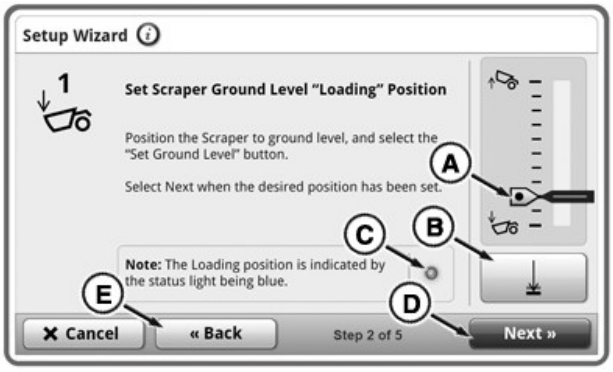
A— Setup Wizard Button
B— Setup Overview
C— Next Button
D— Cancel Button
E— Back Button

Preparing The System

1. To start the setup wizard, press Setup Wizard button (A).
2. Read through the setup overview (B) then press next button (C) to proceed or cancel button (D) to cancel setup.
3. Before storing the set points, raise all the scrapers to the full up position. This will keep scrapers from inadvertently contacting the ground during the process. When complete, advance to the next page by selecting the next button (C).

The wizard will go through the steps required to set the three set points (upper Transport height, lower Ready (dump) height, and ground level Loading entering the cut height) for each AutoLoad™ scraper currently connected to the tractor.

Set Scraper Ground Level Set Point



RXA0140832—UN—02APR14

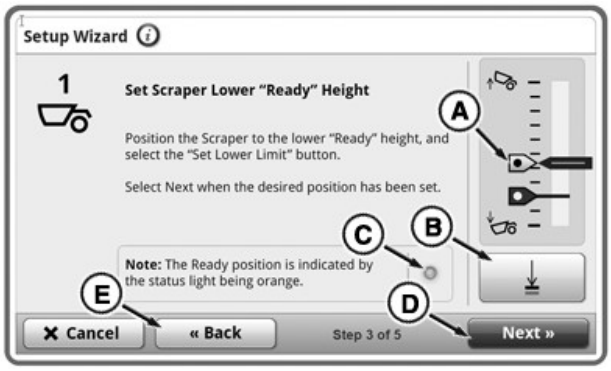
A— Scraper Ground Level Position Indicator
B— Ground Level Loading (entering the cut) Set Button
C— Status Light
D— Next Button
E— Back Button

1. Lower the front scraper to desired location of the ground level loading height (indicator A). See *Position The Scraper For Ground Level Loading (entering the cut) Height* in this Section.

NOTE: The Loading position is indicated by the status light (C) being blue.

2. After positioning the scraper, save the set point by pressing the Set Ground Level Loading set button (B) to store ground level.

Set Scraper Lower "Ready" Height



RXA0140833—UN—03APR14

A— Scraper "Ready" (or Dump) Height
B— Set Lower Ready Set Button
C— Status Light
D— Next Button
E— Back Button

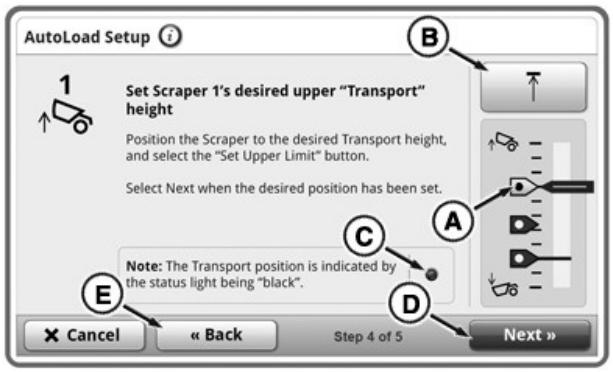
1. Raise scraper to the desired ready or dump height. Save the set point by pressing set lower limit button (B) to store the ready (dump) height.

NOTE: The "Ready" (or Dump) position is indicated by the status light (C) being orange.

2. Once complete, the ready (or dump) height is ready to use.

The ready (dump) height set point can be changed at any time by repeating the above procedure.

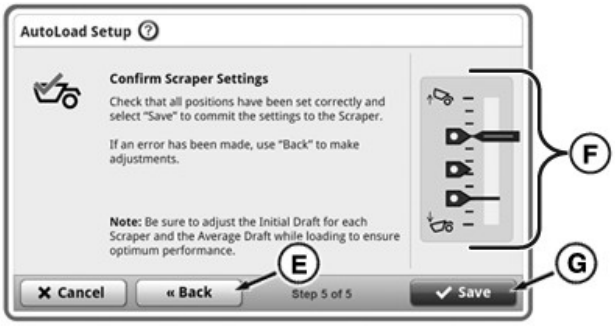
Set Scraper Transport Height



RXA0140834—UN—02APR14

1. Position scraper to desired Transport height (Upper Limit) (A), and select the “Upper Limit” button (B).

NOTE: The Transport position is indicated by the status light (C) being black.



RXA0140835—UN—02APR14

A— Scraper Transport (Upper Limit) Indicator
B— Set Upper Limit button
C— Status Light
D— Next Button
E— Back Button
F— Set Positions
G— Save Button

2. Press Next button (D) when desired position has been set or press Back button (E).

   Once complete, the transport height is ready to use. The transport height set point can be changed at any time by repeating the above procedure.

3. Check that all set positions (F) have been set correctly and press “Save” button (G) to commit the settings to the scraper. If an error has been made, use Back button (E) to make adjustments.

NOTE: Be sure to adjust the Initial Draft for each Scraper and the Average Draft while loading to ensure optimum performance.

RD47322,00000CE-19-11AUG17

General Track Use Guidelines

IMPORTANT: Avoid track and track system component damage, pre-condition tracks.

- **Before driving tractor on road for first time, pre-condition tracks, see Perform Track Systems Break-In in Service-Break-In (100 Hours or Less) section in this Operator's Manual.**
- **Avoid traveling at high speeds with new set of tracks and wheels, especially during the first 50-100 hours.**

To extend drivetrain and track life, avoid excessive soil compaction, and reduce rolling resistance: avoid adding excessive ballast. Never add ballast that results in operating with heavy loads and with continuous full-power below 6.6 km/h (4.1 mph). For 9RX Narrow [Ag], avoid operation with continuous full-power loads below 7.5 km/h (4.7 mph).

Avoid track and drivetrain damage. For tractors equipped with 30- and 36- inch tracks and 120 inch spacing, never use:

- **3-point hitch**
- **Spray tanks**
- **Front-mounted blade**
- **Scraper**

Trash buildup can cause fire from increased friction. Remove trash from trash buildup points between track and tractor frame.

Avoid operating track in grease, oil, or other petroleum chemicals. Avoid spilling these materials on track and wheels during service.

Maximizing Track Life

Track carcasses are designed to exceed tread wear out, so long as integrity of carcass is maintained. It is critical to keep moisture out of the steel carcass and to avoid situations where localized cable overloading could occur. Track machine owners are advised to follow these guidelines to achieve maximum track life and avoid operational problems, all of which results in lower cost per operating hour:

- **Minimize roading. Excessive roading can increase track wear up to 15 times field wear rates**
  - Minimize transport weight during road transport.
  - Reduce maximum travel speed especially during high ambient conditions.
- **Use correct operational techniques**
  - Avoid skidding and tread bar scrubbing on hard surfaces to reduce track wear.
  - Use care when crossing ditches or transitions while making turns. Diagonal crossing of ditches causes track to become unsupported in the center and with idler hitting opposite embankment, can cause momentary loss of tension that can drop center section down and outside drive or idler wheels, making derailing a much higher risk if in a turn.
- **Maintain correct track tension**
  - Under-tension causes rapid wear on tracks and inside surface of belt due to slippage and potentially cause material buildup.
  - Over-tension adds extra load and stress to undercarriage bearings, internal track cables, and track frame.
- **Keep irregular material out of tracks**

  Sharp hard material inside the track is primary reason for localized track tears and subsequent entry points for moisture into track carcass.

EC82310,000060F-19-13SEP18

Tracks Service

Service information for track system is located in Service sections of this Operators Manual.

Service Tasks	See
Track Wear	Service — Check
Track Alignment	
Track Tension	
Drive and Idler Wheels, and Mid-Rollers	
Trash Buildup	
Drive Wheel Hub Housing Oil	
Mid-Rollers Oil Level	
Drive Wheel, Idler Wheel, and Mid-Roller Cap Screws	Service — Tighten
Track Tension Cylinder	Service — Lubricate

EC82310,0000525-19-08AUG18

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

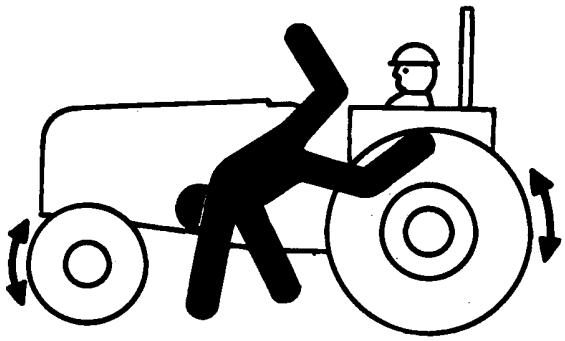
CAUTION: During application of hazardous pesticides, pesticide residue can build up on the inside or outside of the vehicle. Clean vehicle according to use instructions of hazardous pesticides.

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

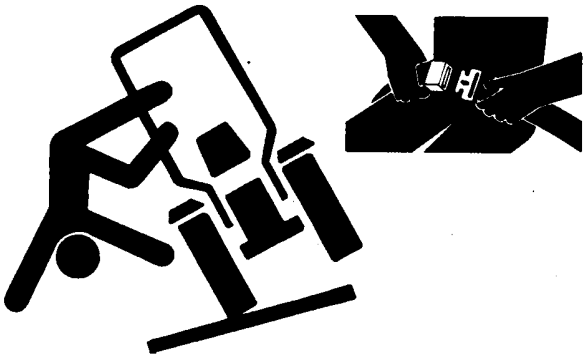
Keep Operator Station Window and Door Closed

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.

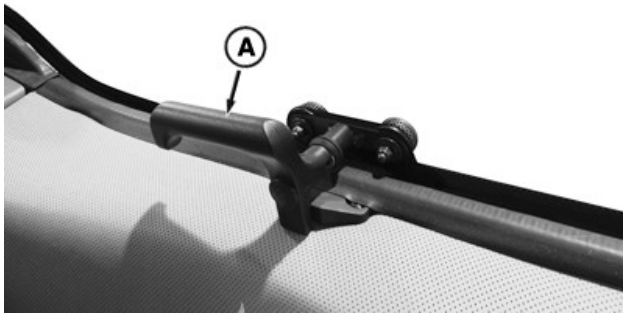
Instructional seat is provided only for training operators or diagnosing machine problems. Keep all other riders off tractor and equipment. Always wear seat belt.

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

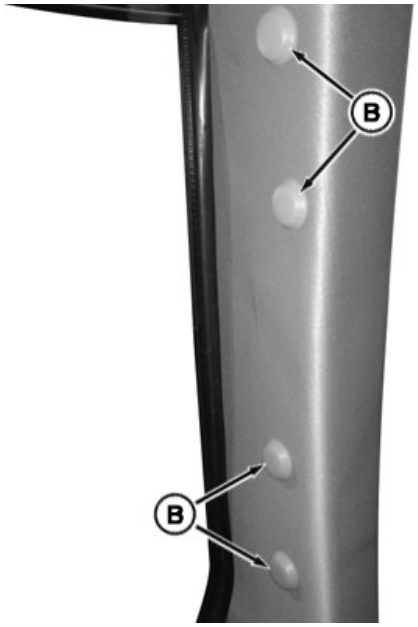
To open window, lift lever (A) and push out glass.

KT81203,000057F-19-27JUN17

Monitor Bracket Mounts



RXA0147009—UN—10MAR15

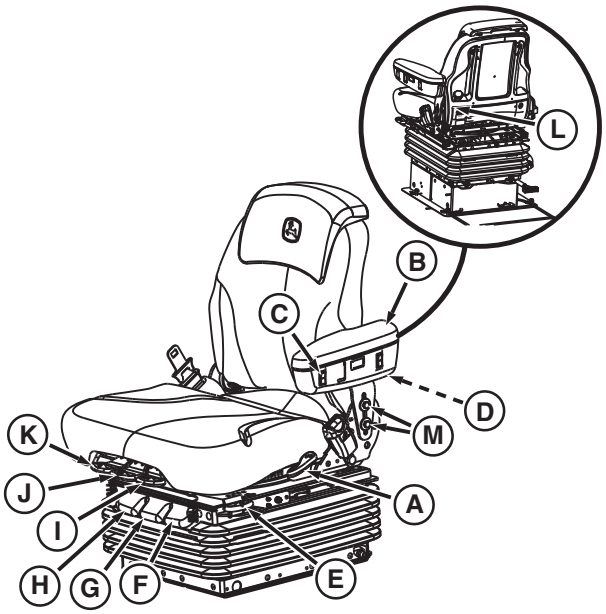


RXA0147010—UN—10MAR15

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

Adjust ComfortCommand™ Seat



RXA0151480—UN—17FEB16

NOTE: [Scraper] Scraper tractors are equipped with a 3 inch (76.2 mm) seat belt to meet MSHA and OSHA standards.

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.

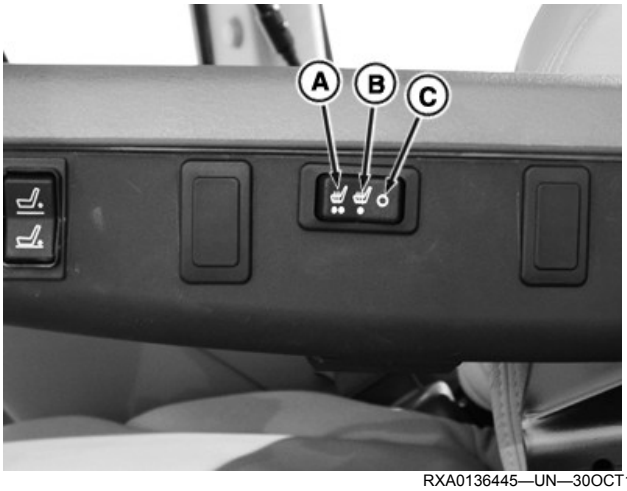
K—Fore/Aft Cushion Adjustment - Pull to adjust cushion forwards or backwards.

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.

KD34109,0000766-19-25APR18

Adjust Heated Leather Seat

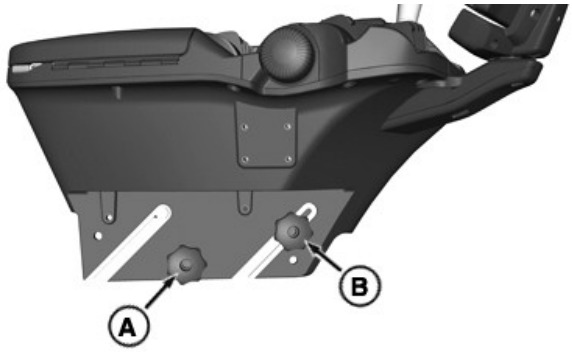


RXA0136445—UN—30OCT13

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 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™.

CommandARM is a trademark of Deere & Company

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

Use Instructional Seat

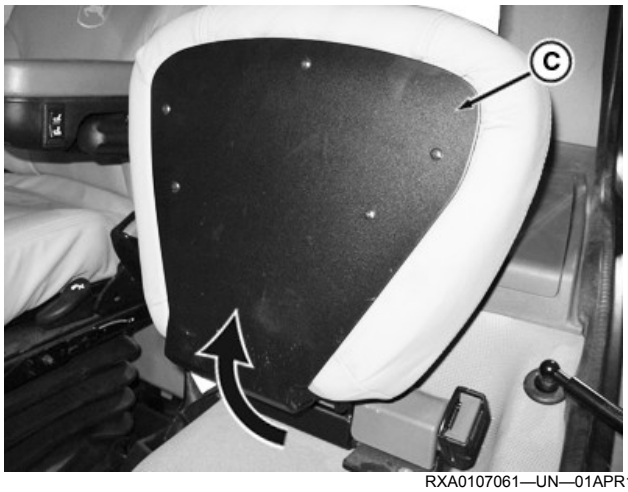


RXA0107055—UN—01APR10

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

Operator Presence Sensor (If Equipped)

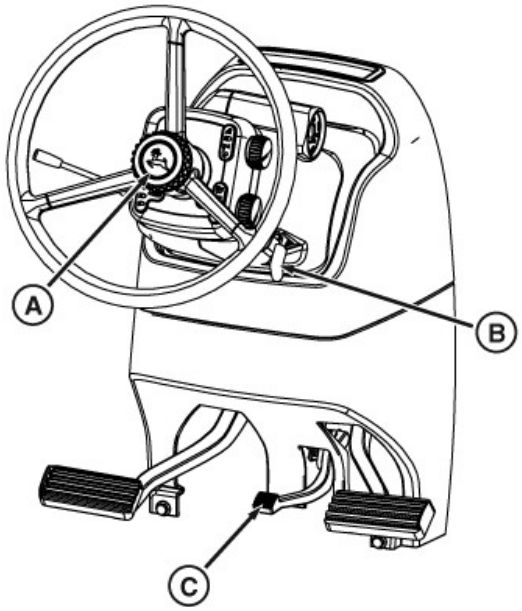
CAUTION: Neither PTO [Ag] nor SCV automatically disengage when system senses operator is out of seat.

Audible warning sounds if operator leaves the seat with transmission in NEUTRAL position, PTO engaged [Ag], or SCV left in detent flow position. After 5 seconds, audible warning sounds will stop.

KT81203,000018C-19-25APR18

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.



RXA0133769—UN—29JUL13

Telescope: Rotate telescope knob (A) counterclockwise. Extend or retract steering wheel to desired position. Rotate knob clockwise to lock.

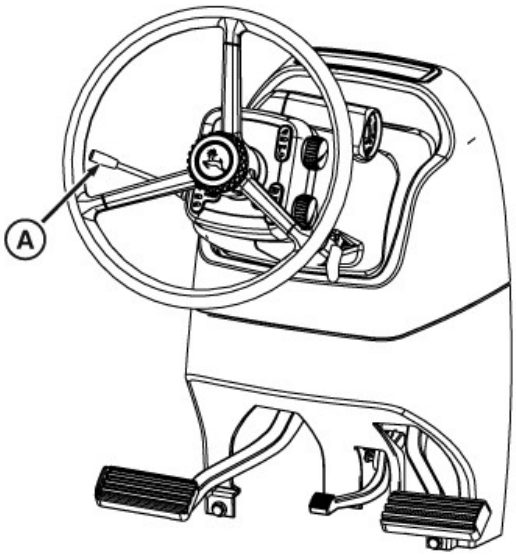
Memory: Push down on column pedal (C). Fully raise steering column. Release pedal to latch column at top of travel.

Push down on column pedal, latch releases. Lower steering wheel to previous tilt setting.

Tilt: Pull up on tilt lever (B) and move steering column to desired position. Release lever to lock.

LT63082,00000D4-19-26JUN17

Operate Horn

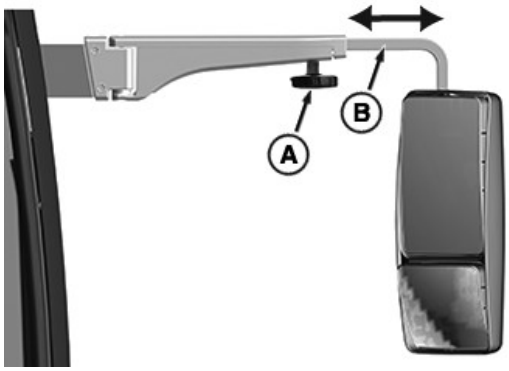


RXA0134346—UN—29JUL13

Push in on end of turn signal lever (A) to sound horn.

GH15097,00005D7-19-10JUL17

Manual Mirror



RXA0156208—UN—15DEC16

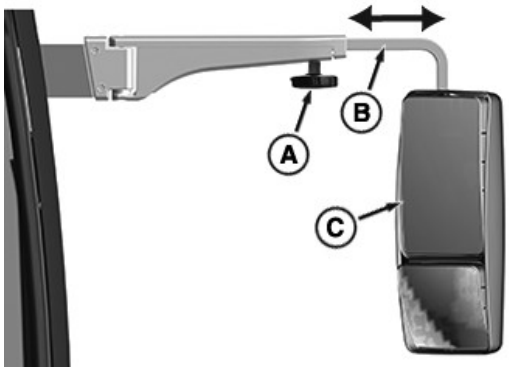
Right-Hand Manual Mirror

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

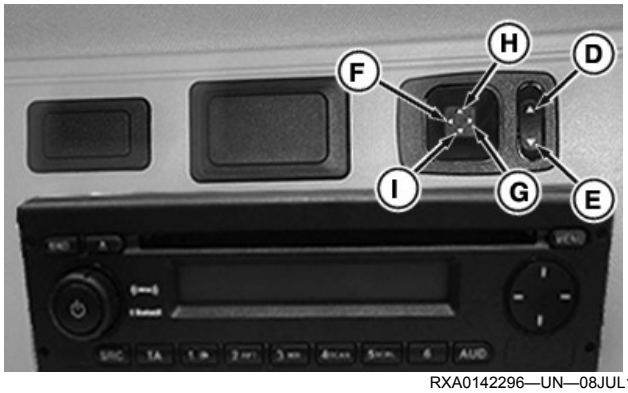
Electric Mirror



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.

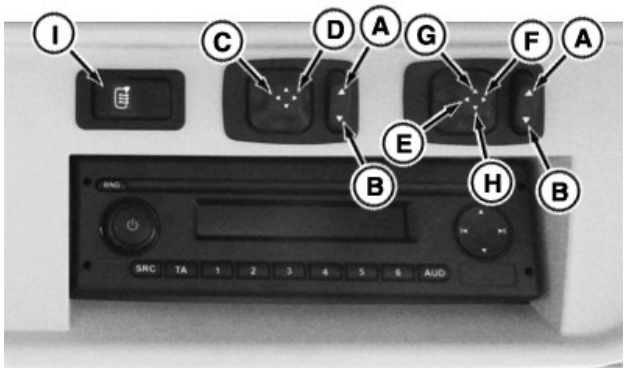


RXA0142296—UN—08JUL14

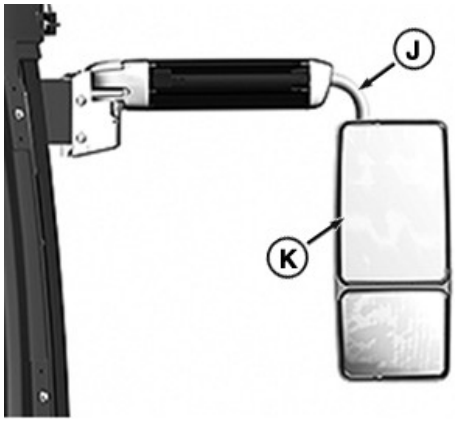
4. Select right (D) or left (E) mirror.
5. Push adjustment switch to angle mirror (C) left (F) or right (G).
6. Push adjustment switch to tilt mirror up (H) or down (I).

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).

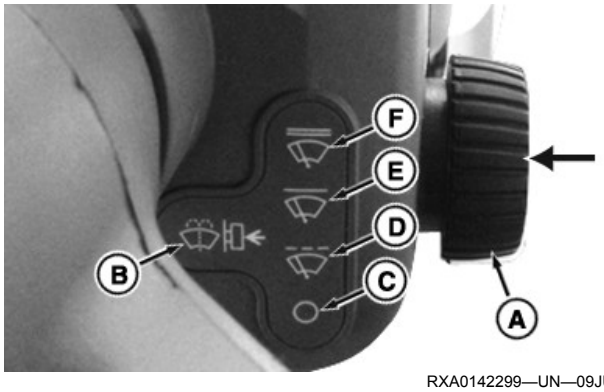
4. Push adjustment switch to angle mirror left (E) or right (F).

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

Wiper Washer

Operate Front Windshield Wiper and Washer



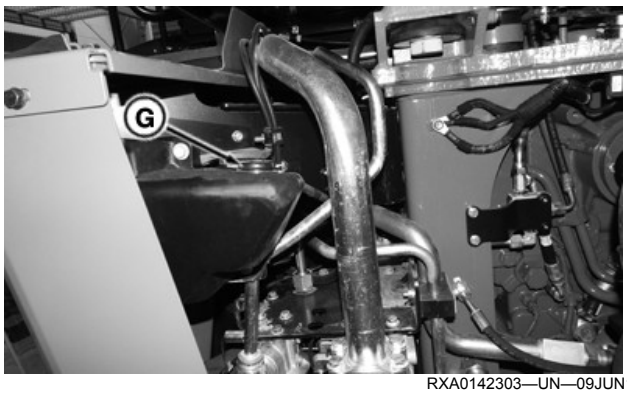
RXA0142299—UN—09JUN14

A—Windshield Wiper/Washer Knob
B—Washer Icon
C—Off
D—Intermittent Speed
E—Slow Speed
F—Fast Speed

Wiper/washer knob (A) has four positions:

- OFF
- Intermittent Operation
- Slow Speed
- Fast Speed

Push knob in to operate front windshield washer.



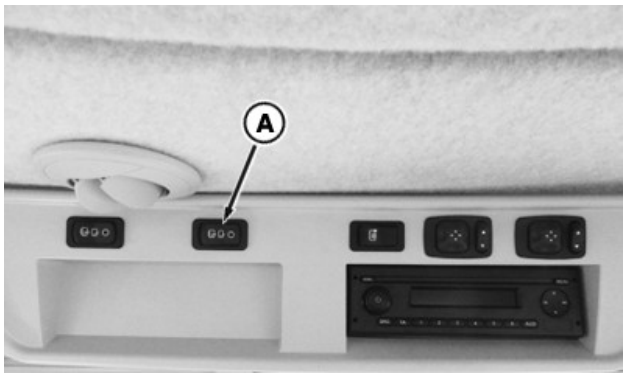
RXA0142303—UN—09JUN14

Windshield washer reservoir (G) is on left-hand side of the gudgeon, above the hydraulic filters.

Fill reservoir with non-freezing windshield washer fluid.

TO84419,000009A-19-27AUG17

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.

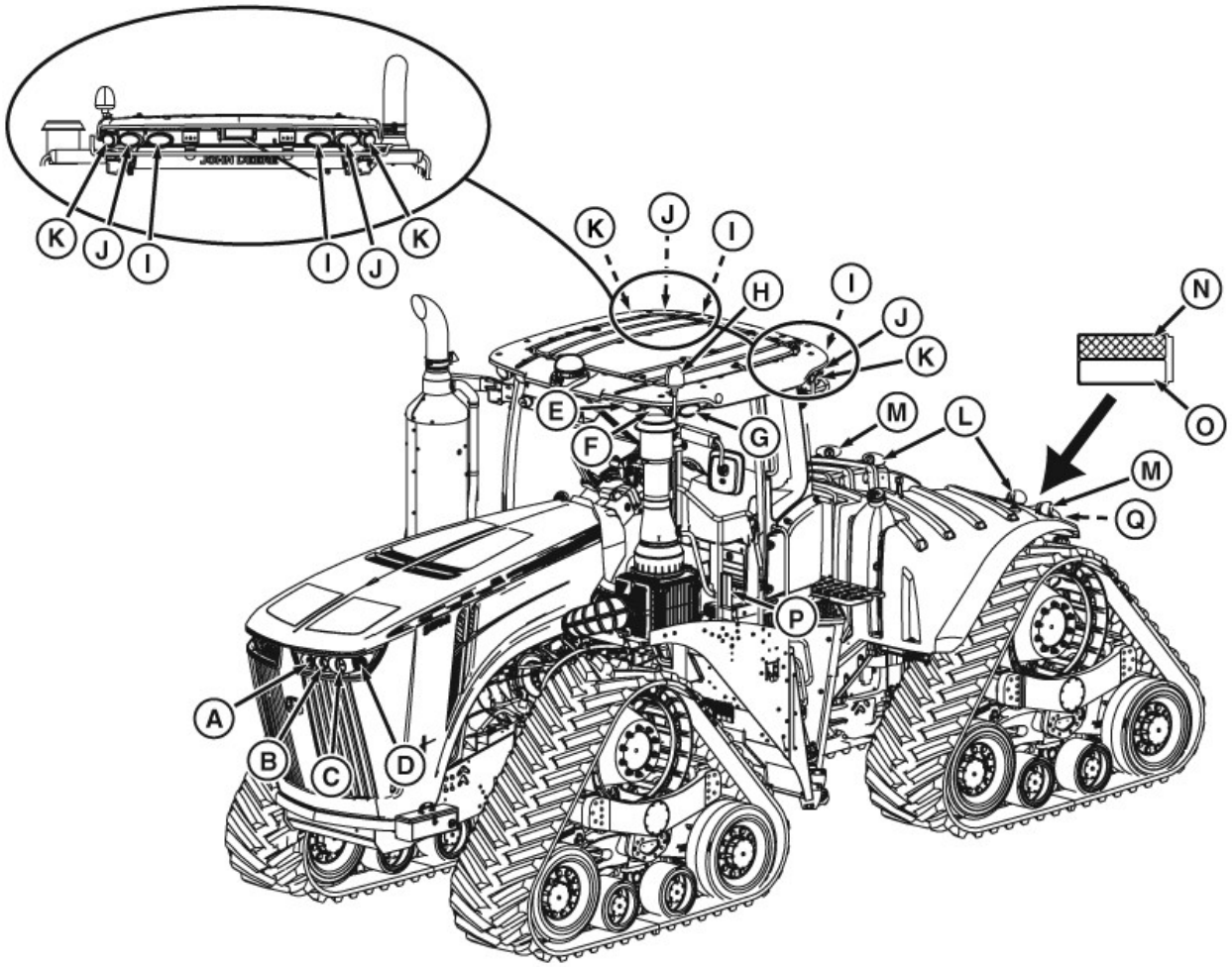
Center—ON position. Right-hand wiper is activated.

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



RXA0148155—UN—10JUN15

A—Inner Hood Lights
B—Road Lights (Low Beam)
C—Road Lights (High Beam)
D—Outer Hood Lights
E—Front Inner Roof Lights
F—Front Outer Roof Indicator Lights
G—Front Side Roof Lights
H—Rotary Beacon Lights (If Equipped)
I—Rear Inner Roof Lights
J—Rear Outer Roof Indicator Lights
K—Rear Side Roof Light
L—Rear Inner Fender Light
M—Rear Outer Fender Light
N—Amber Lens
O—Red Lens
P—Extremity Indicator Lights
Q—Rear Fender Tail/Brake/Indicator Lights

All lights are same on both sides of tractor, except rotary beacon (H) in Deluxe and Premium lighting packages and grill mounted center work lights (A) in Premium lighting package. In Premium lighting package, right grill mounted center work light is Halogen or LED (depending on option).

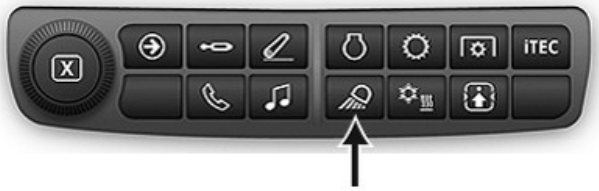
KT81203,0000245-19-12MAY15

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.

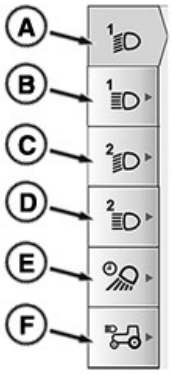
Dim road lights to low-beam for oncoming vehicles. Avoid using worklights on public roadways or highways which could temporarily blind or confuse other drivers.

Promptly replace or repair damaged or lost lighting devices. See your John Deere dealer.



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.



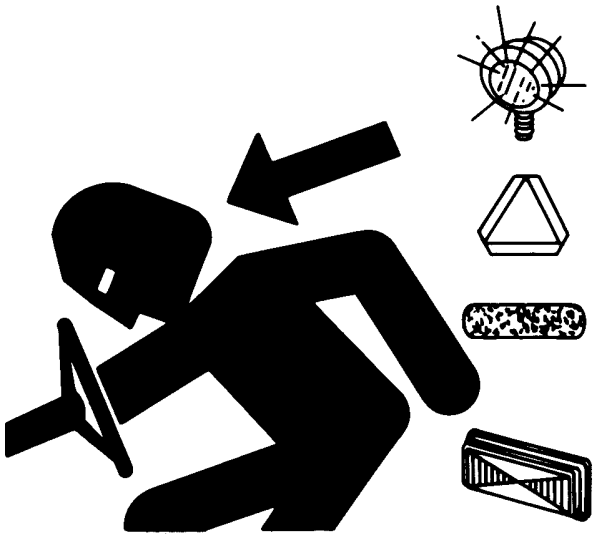
RXA0137114—UN—05DEC13

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

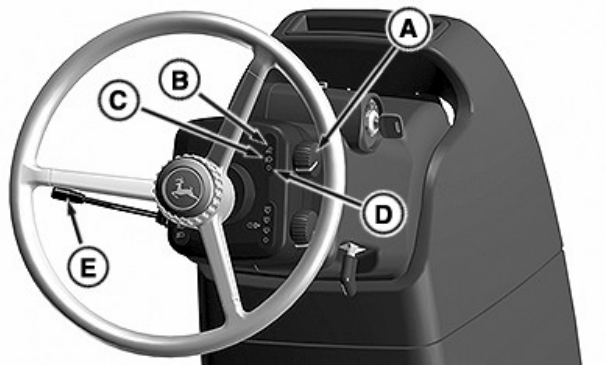


TS951—UN—12APR90

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

Programming delay lighting allows operator 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 is all lights chosen on exit lighting page and will be activated for time selected for Exit Timeout. Field exit lighting will be enabled when light switch has been in “Field” position 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 the light switch and key switch are turned off do not matter.

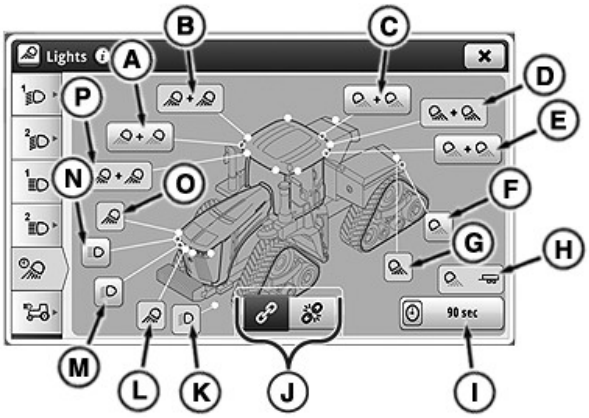
Road exit lighting is all lights chosen on exit lighting page and will be activated for time selected for Exit Timeout. Road exit lighting will be enabled when light switch has been in “Road” position for at least 10 seconds during the current key switch cycle. Road exit lighting will then be activated when light switch and key switch are turned off. The order which the light switch and key switch are turned off do not matter.



RXA0147935—UN—13APR15

Menu → Machine Settings Tab → Lights Icon → Exit Lighting Tab

1. Select **Menu.**
2. Select **Machine Settings tab.**
3. Select **Lighting icon.**
4. Select **Exit Lighting tab.**

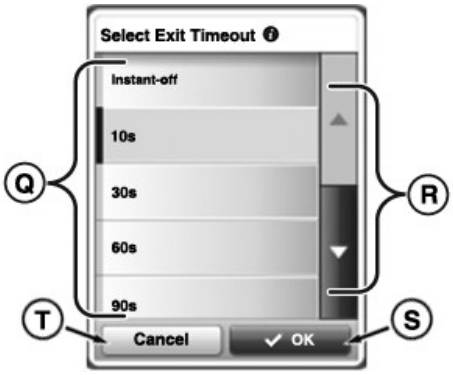


RXA0148168—UN—18MAY15

Exit Lights Page

A—Front Outer Roof Lights Button
B—Front Side Roof Lights Button
C—Rear Inner Roof Lights Button
D—Rear Outer Roof Lights Button
E—Rear Side Roof Lights Button
F—Rear Outside Fender Lights Button
G—Rear Inner Fender Lights Button
H—Implement Lights Button
I—Exit Light Timeout Button
J—Link/Unlink Toggle
K—Road (Low and High Beam)/Clearance Lights Button (European tractors only)
L—Inner Hood Lights Button
M—Low Beam Hood Lights Button
N—High Beam Hood Lights Button
O—Outer Hood Lights Button
P—Front Inner Roof Lights Button

5. Select desired lights and deselect unwanted lights. Use Link/UnlinkToggle (J) if operator wishes to select a set (link) or only select the right or left light in a set (unlink) where applicable. Lights F-G and K-O are always linked and will always select both the left and right lights.
6. Select Exit Light Timeout button (I).



RXA0142961—UN—25JUN14

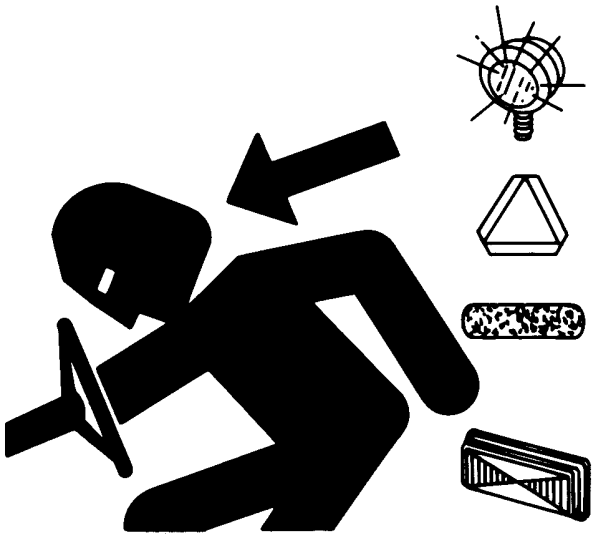
Exit Timeout Selection

Q—Time Selection Interval List
R—Scroll Bar
S—OK Button
T—Cancel Button

7. When options appear, select desired time intervals (Q) before lights automatically turn OFF and select OK button (S).

KT81203,000024A-19-11APR18

Operate Turn Signals and High/Low Beam



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.

NOTE: When turn signal is activated, a short audible chirping sound will be heard.

Turn Signals:



RXA0135292—UN—04SEP13

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.

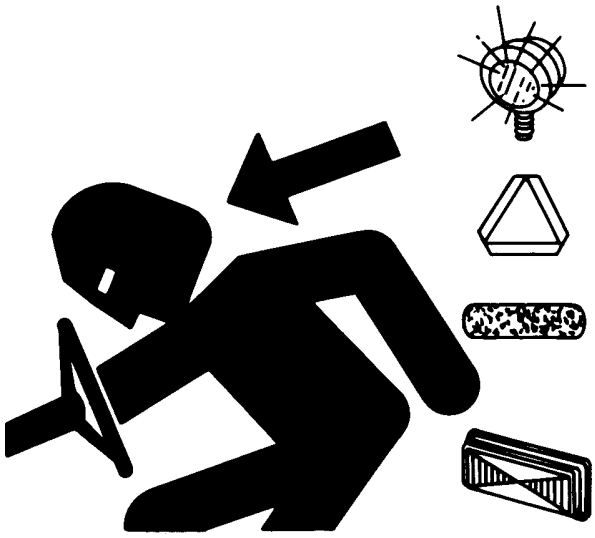
High/Low Beam:

Push lever (A) forward to activate high beam headlights; high beam indicator comes on. Pull lever into center position to operate low beam. Pull lever rearward and release to momentarily activate high beams.

Dim Road Lights to low beam for oncoming vehicles.

SV81855,0000053-19-28AUG17

Safety Lights and Devices



TS951—UN—12APR90

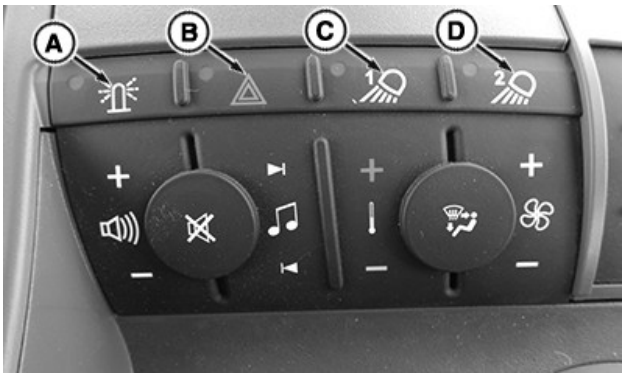
CAUTION: Avoid injury or death caused by collision with another vehicle. Follow local laws and regulations for equipment lighting and marking. Comply with all traffic regulations.

While operating tractor on public roadways or highways, day or night:

- **Make sure Slow Moving Vehicle (SMV) emblem is installed and visible.**
- **Switch on flashing warning lights, except where prohibited by law.**
- **Use road lighting.**
- **Dim headlights for oncoming vehicles.**
- **Use turn signals when turning.**
- **Use extremity warning lights when tractor width exceeds 3.7 m (12 ft).**
- **Frequently check for traffic approaching from rear.**
- **Make sure that all lighting and marking devices are functional and clean.**
- **Promptly replace or repair damaged or lost lighting devices. Implement lighting kit is available from your John Deere dealer.**

LT63082,0000143-19-13JUL17

CommandARM™ Light Buttons



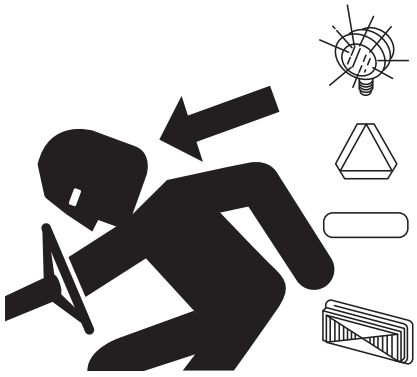
RXA0152426—UN—14JUN16

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

Hazard Lights and Extremity Warning Lights



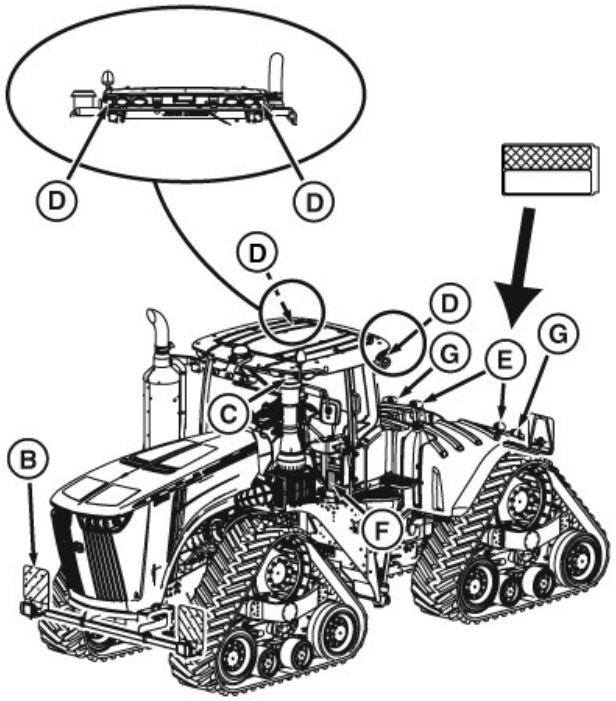
RXA0086584—UN—09FEB06

Use Safety Lights and Devices

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 (F) 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 at night OR during the day. 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.

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CommandARM is a trademark of Deere & Company



RXA0148159—UN—10JUN15

Cab Amber Lights

A—Hazard Light Button
B—Road (Low and High Beam)/Indicator/Clearance (Equipped with Amber Lens) Lights
C—Front Outer Roof Indictor Lights
D—Rear Outer Roof Indicator Lights
E—Rear Fender Indicator Lights
F—Extremity Warning Lights
G—Red Tail/Brake Light

NOTE: Depending on region and installed equipment lights (B, C, D, E, F and G) may not all be available as indicator lights when Hazard Switch is activated.



RXA0156107—UN—09DEC16

Push Hazard Light button (A) to activate flashing amber hazard lights (B, C, D, E, F and G).

IMPORTANT: To avoid damage, Extremity Warning lights may be retracted when parking tractor in storage building.

Extremity Warning lights operate with Hazard Light button “ON”.

Adjust Extremity Warning lights no more than 400 mm (16 in) from widest point of tractor.

KT81203,0000249-19-28JUL17

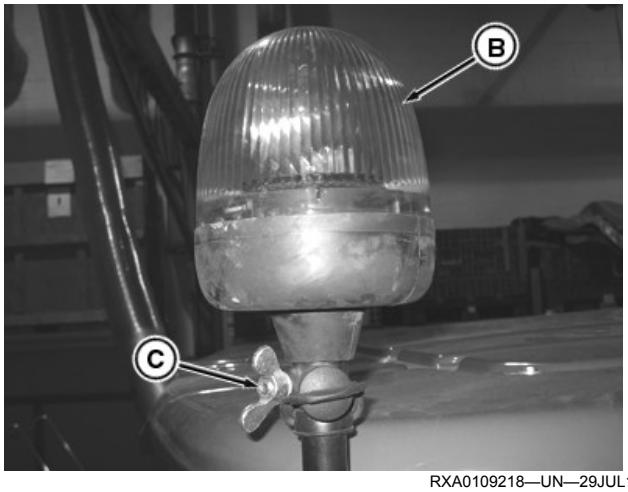
Rotary Beacon Light

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

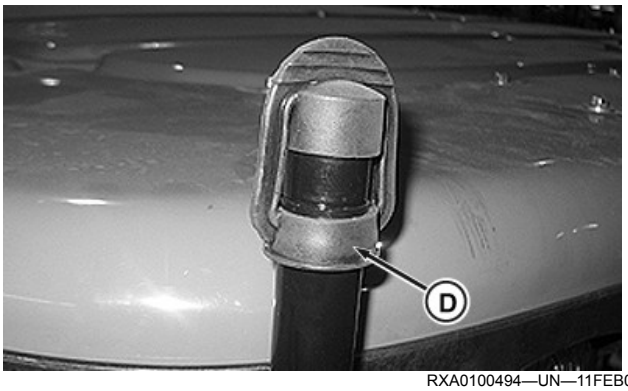
Push Rotary Beacon switch (A) to activate Rotary Beacon light.



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.



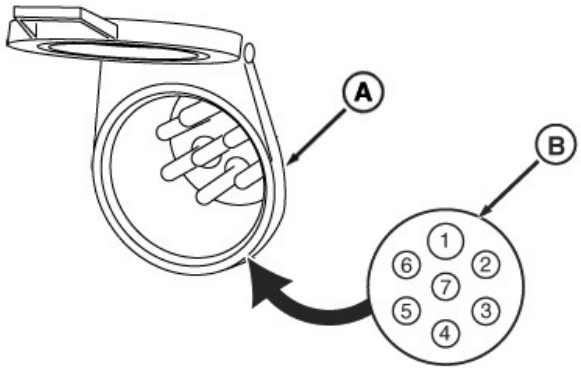
RXA0100494—UN—11FEB09

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

Pull-Down Sunshade

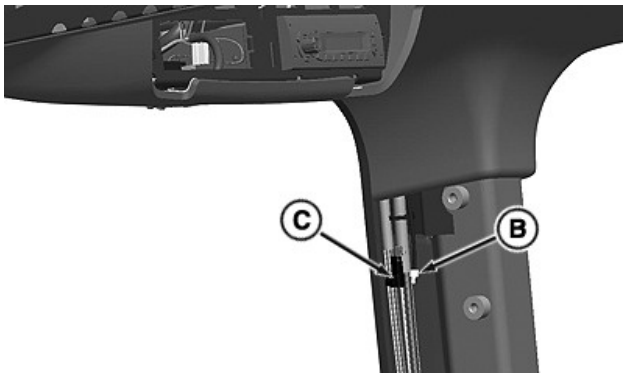


RXA0133298—UN—25JUN13

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

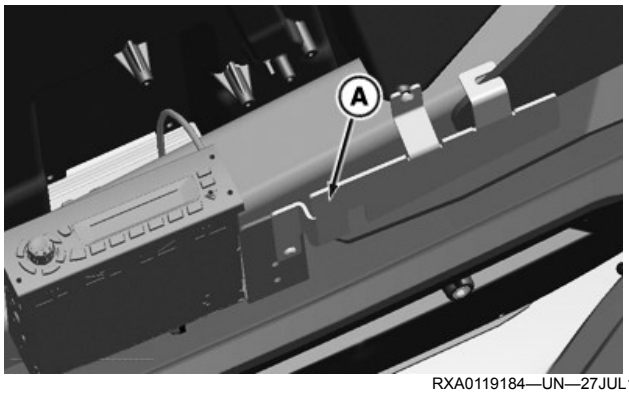
CAUTION: Never mount business band radio antenna to rear of cab. Never route antenna cable (B) near harness for electrical system controllers or operator controls. Failure to follow these precautions could expose operator to radio frequency energy levels higher than recommended by American National Standards 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

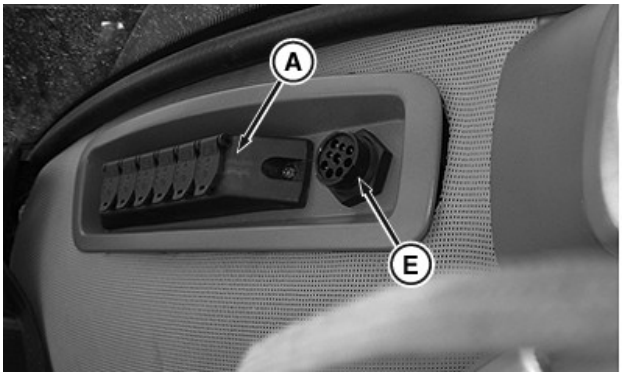
- Roof Antenna Mount: NMO type.
- Cable Specifications: Cable length is 3.6 m (11.8 ft) from antenna mount to PL-259 radio connector. RG-58/U cable has 50 ohms intrinsic impedance.
- Roof Ground Plane: Grounded large antenna counterpoise foil under green cab roof allows installation of either 1/4 or 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.

TS36762,0000254-19-21AUG18

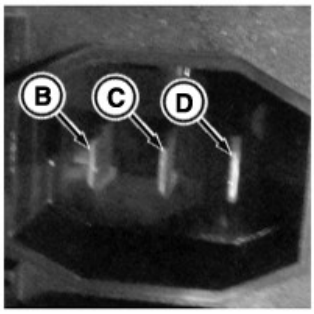
Auxiliary Power Strip Use

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.

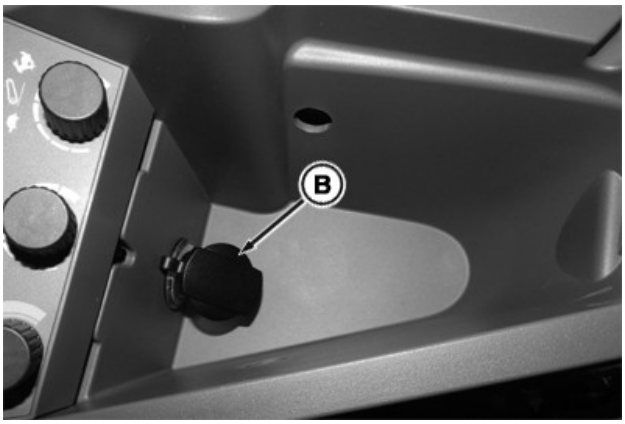
Adapters plug directly into power strip. To change to switched power on adapter, remove small tab at end of slot on plug and rotate plug 180°.

TS36762,0000255-19-29NOV16

Accessory Electrical Outlet Use

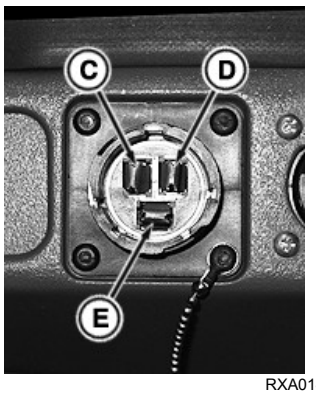


RXA0159796—UN—13JUN17



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.

KD34109,00006AD-19-06SEP17

Connect Compatible Electronic Equipment



RXA0134922—UN—06SEP13

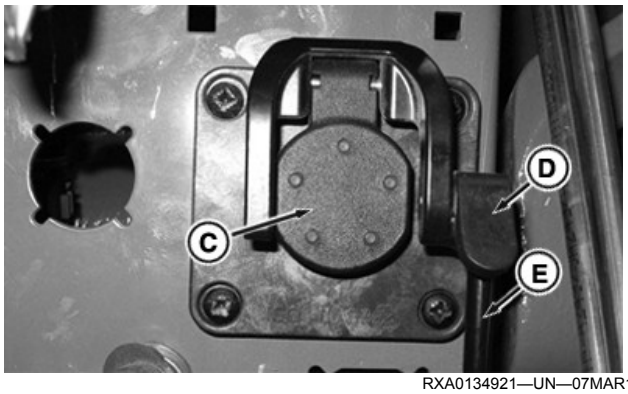


RXA0147008—UN—10MAR15

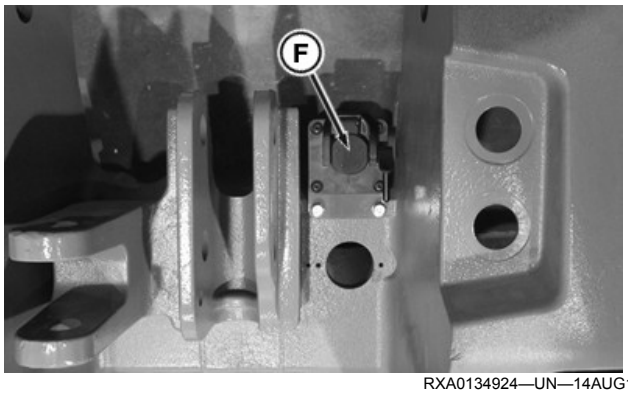
Tractor is ISOBUS ready and offer connections for implements conforming to both ISO 11786 and 11783 (G) standards. ISO 11786 connector (A) provides radar or GPS speed signal., see Configure Tractor for GPS or Radar in this Operator's Manual section.

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

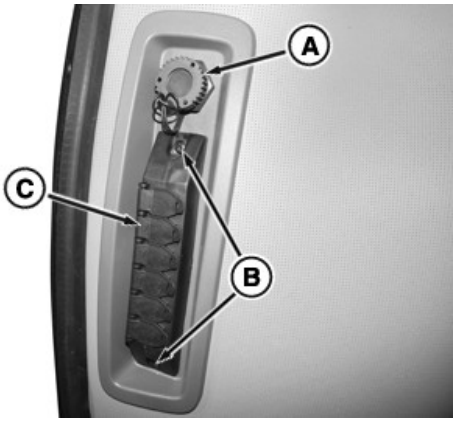
ISOBUS ready preparation includes ISO 11783 connector, on right-hand console, and implement connector (F or C) on tractor front (if equipped) or rear, facilitating tractor/implement communications.

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.

TS36762,0000256-19-04APR18

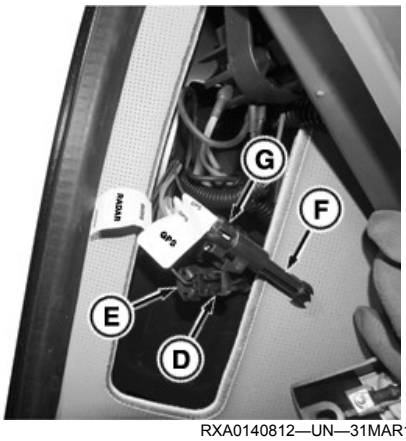
Configure Tractor for GPS or Radar

Tractor comes from factory configured to use radar as ground speed input. To reconfigure tractor to use GPS as the true ground speed input:

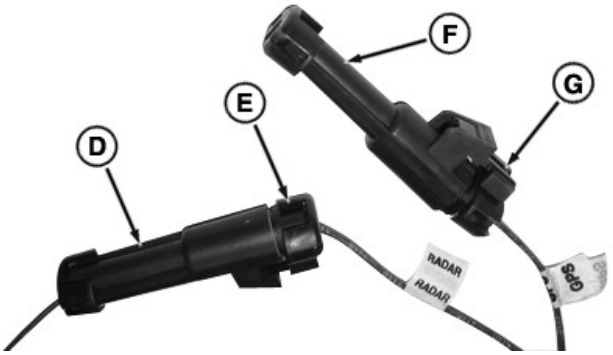


RXA0140811—UN—31MAR14

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



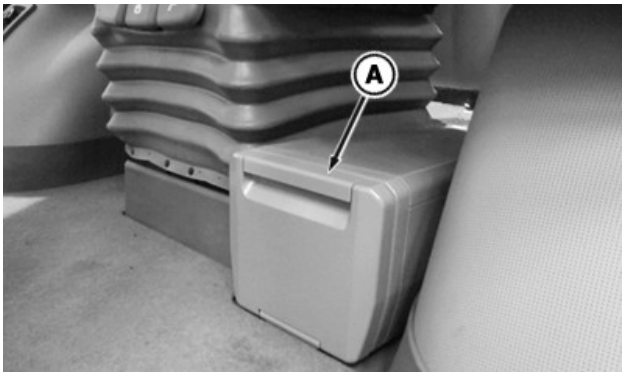
RXA0140813—UN—31MAR14

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.

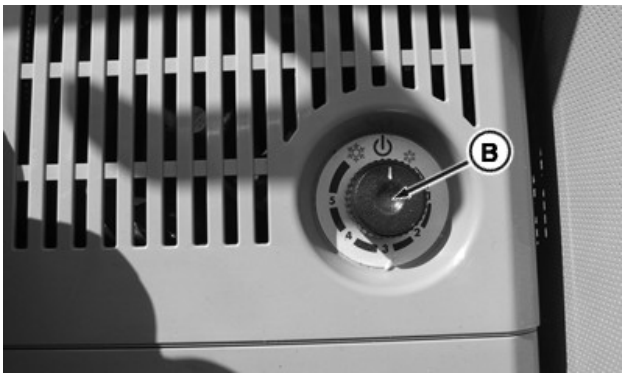
TS36762,0000257-19-04APR18

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.

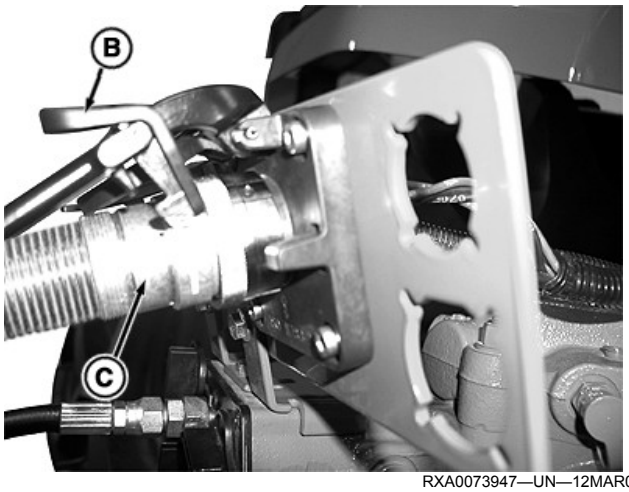
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Implement Connector Use



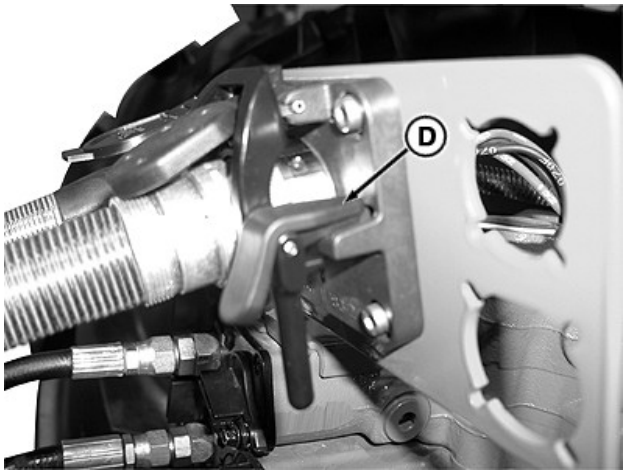
RXA0073943—UN—12MAR04

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RXA0073947—UN—12MAR04

Push release lever (A), open connector and insert implement connector (C). Connector latch (B) will be in raised position.

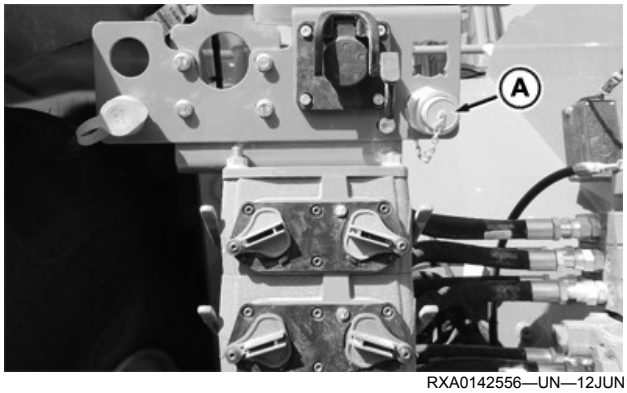


RXA0073945—UN—12MAR04

Lower latch until lever (D) is in latched position. This will prevent implement harness from being pulled out of connector.

TO84419,00000A7-19-25JUL17

Use AutoLoad™ Harness Connector [Scraper]



RXA0142556—UN—12JUN14

Remove cap and connect harness from scraper to tractor AutoLoad™ harness connector (A).

KT81203,0000163-19-25APR18

Climate Controls

For more information, see CommandARM™ Climate, Radio and Lighting Controls in CommandARM™ Controls section of the Operator's Manual.

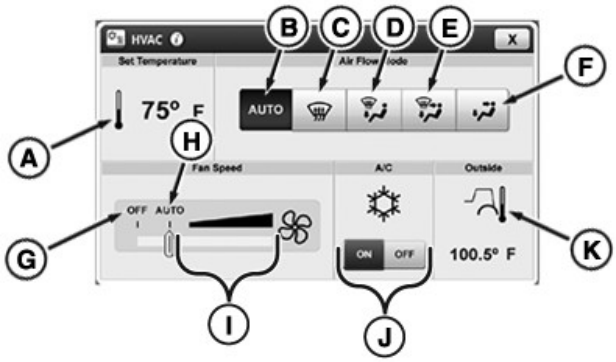
KT81203,0000515-19-30JAN17

HVAC Settings—Generation 4 CommandCenter™

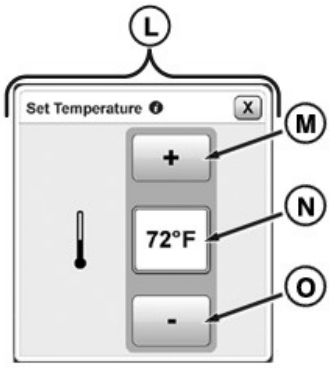


RXA0133716—UN—16JUL13

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.

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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.

KT81203,0000517-19-25APR18

Performance Ballasting

Ballast Recommendations

Ag

Additional ballast not allowed if tractor is equipped with hitch, or hitch and PTO.

IMPORTANT: Do not operate tractor at weight exceeding maximum ballasted weight. Warranty may be voided due to "overload" conditions. Reduce load if unable to obtain correct ballast without exceeding maximum ballasted weight.

To extend drivetrain and track life, avoid excessive soil compaction, and reduce rolling resistance: avoid excessive ballast. Never add ballast that results in operating with heavy loads and with continuous full-power below 6.6 km/h (4.1 mph).

For 9RX Narrow tractor, avoid operation with continuous full-power loads below 7.5 km/h (4.7 mph).

Do not operate tractor with:

- **Extreme draft loads requiring two tractors hooked in tandem.**
- **Tow hooks. Adding tow hooks is not an option.**

Optional front axle reinforcements and frame supports are required when mounting front sprayer tanks or front-mounted blade. (Front-mounted blade not approved for 9RX Narrow tractor, or for tractor equipped with 762 mm or 914 mm (30 or 36 inch) tracks and 3048 mm (120 in) spacing. See your John Deere dealer for mounting instructions.

For front spray tanks:

- **Do not exceed 1136 L (300 gal) capacity on each side.**
- **Intended for spray or fertilizer application purposes only, not for extra ballast.**

Use only as much ballast as necessary. Adjust ballast as tractor use changes. Correct ballast allows for most efficient use of available power to tractor but cannot make up for an implement which is too big for tractor.

Adding ballast cannot overcome incorrect engine speed settings. For correct ballast, measure amount of track slip, see Measure Track Slip in this section of this Operator's Manual.

Ballast Limitations

Wide 762 mm (30 in) or 914 mm (36 in) tracks

Maximum ballasted weight is 28122 kg (62000 lb). Maximum ballasted weight is defined as tractor equipped with:

- All options
- Full fuel
- All ballast
- All attachments added or affixed by whatever means to the machine at any point, except for the hitch or drawbar.

Narrow 457 mm (18 in) or 610 mm (24 in) tracks

IMPORTANT: Do not add ballast. Normally-equipped tractors are sufficiently ballasted without additional weight. High draft loads at speeds below 7.5 km/h (4.7 mph) may cause damage to tracks that is not covered by warranty.

Ballast Options

Equipment configuration determines maximum quantity of Quik-Tatch™ weights. A maximum of eighteen 43 kg (95 lb) Quik-Tatch™ weights can be added to rear of tractor as long as maximum ballasted weight does not exceed limits listed above.

Tractors with 762 mm (30 in) or 914 mm (36 in) tracks, and 88 inch tread spacing may add front weight support, and a maximum of sixteen 43 kg (95 lb) Quik-Tatch™ weights. Front ballast is never permitted on 120" tread spacing machines.

See Quik-Tatch™ Weight Use in this section of this Operator's Manual.

[Scraper]

IMPORTANT: Avoid tractor weight exceeding base shipping weight as warranty can be voided due to "overload" conditions.

To extend drivetrain and track life, avoid excessive soil compaction, and reduce rolling resistance: never operate with heavy loads and with continuous full-power below 6.6 km/h (4.1 mph).

Ballast Limitations

Maximum tractor weight is limited to 27216 kg (60000 lb).

Non-Approved Uses

- Extreme Draft Loads — Requiring two tractors hooked in tandem.
- Tow Hooks — Adding tow hooks is not an option.

KT81203,000096A-19-13SEP18

Quik-Tatch is a trademark of Deere & Company

Mounted Attachments [Ag]

IMPORTANT: Optional front axle reinforcements and frame supports are required when mounting front sprayer tanks or front-mounted blade. (Front-mounted blade not approved for 9RX Narrow tractor, or for tractor equipped with 762 mm or 914 mm (30 or 36 inch) tracks and 3048 mm (120 in) spacing. See your John Deere dealer for mounting instructions.

For front spray tanks:

- **Do not exceed 1136 L (300 gal) capacity on each side.**
- **Intended for spray application purposes only: not for extra ballast.**
- **Must use spray tank reinforcement kit.**
- **Tanks should be empty for road travel.**

Non-approved uses:

- **Scrapers — Without proper tractor/scraper drawbar and frame/axle supports (9420RX, 9470RX, 9520RX, 9570RX and 9620RX). Scrapers not approved for 9RX Narrow tractors.**
- **Tile Plows.**
- **Dozer Blade — Front-Mounted Blade - Not approved for 9RX Narrow tractor, or for tractor equipped with 762 mm or 914 mm (30 or 36 inch) tracks and 3048 mm (120 in) spacing.**
- **Fully Mounted Hitch Implements — With center of gravity more than 609 mm (24 in) beyond hitch points.**
- **Fully Mounted Hitch Implements — Total weight exceeds 6350 kg (14000 lb) - Category 4 (Without additional implement mounted lift-assist).**
- **Fully Mounted Hitch Implements — Total weight exceeds 6123 kg (13500 lb) - Category 3 (Without additional implement mounted lift-assist).**

KD34109,00006FC-19-13SEP18

Measure Track Slip [Ag]

IMPORTANT: Track slip measurement requires an implement attached to tractor. Manual measurement also requires an assistant. Avoid physical injury. Ensure assistant is clear of tractor and implement during procedure.

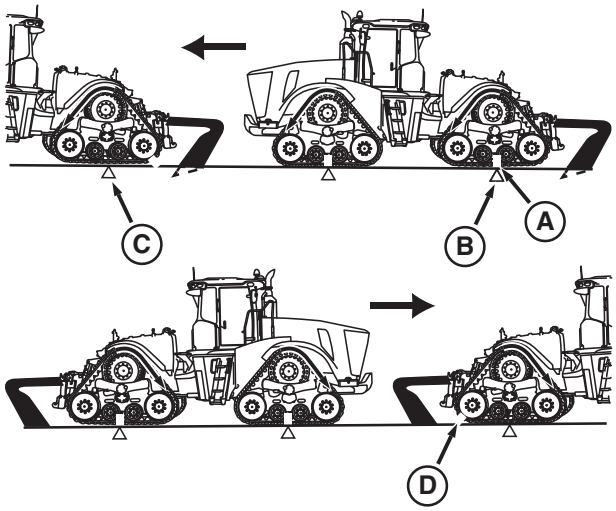
Adding ballast cannot overcome incorrect engine speed settings. Under normal field conditions, ideal track slip is 2-5%. If track slip is:

- Less than 2%, remove ballast. Do not remove ballast if required for stability.
- More than 5%, add ballast. Do not exceed 28122 kg (62000 lb) maximum ballasted tractor weight.

There are two methods to measure track slip:

- Automatic: Track slip is measured automatically in tractors with optional (factory- or dealer-installed) dual-beam radar[1], see Machine Monitor in CommandCenter™ section of this Operator's Manual.
- Manual: For tractors without dual-beam radar, follow procedure below.

To manually measure track slip:



RXA0152657—UN—03APR17

1. Mark a location on drive wheel (A) easily viewable by assistant.
2. Mark starting point on ground (B).
3. Lower implement and drive tractor forward at working speed.
4. Have assistant follow tractor and mark ground when drive wheel completes 10 full revolutions (C).
5. Raise implement and return tractor to original starting point. Line-up mark on drive wheel with starting point or make new mark on drive wheel.
6. With implement raised, drive tractor forward at working speed.
7. Have assistant follow tractor and count drive wheel revolutions (to the nearest 1/4 revolution) (D) until you reach the previously marked end-point.
8. Use the second count to determine track slip on

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[1] Radar requires calibration for correct measurement, see Radar Calibration and Slip Calibration in CommandCenter™ section of this Operator's Manual.

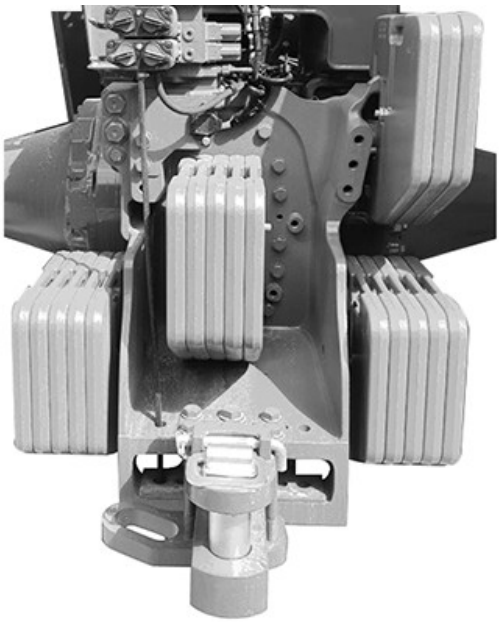
chart. Ideal slip is 2-5%. If indicated, adjust ballast and repeat procedure.

Drive Wheel Revolutions	Track Slip %	Ballast Adjustment
10	0	Remove Ballast
9-7/8	1	
9-3/4	2	No Adjustment Required
9-1/2	5	
9-1/4	7	Add Ballast[a]
9	10	

[a] *Never exceed 28122 kg (62000 lb) maximum ballasted tractor weight.*

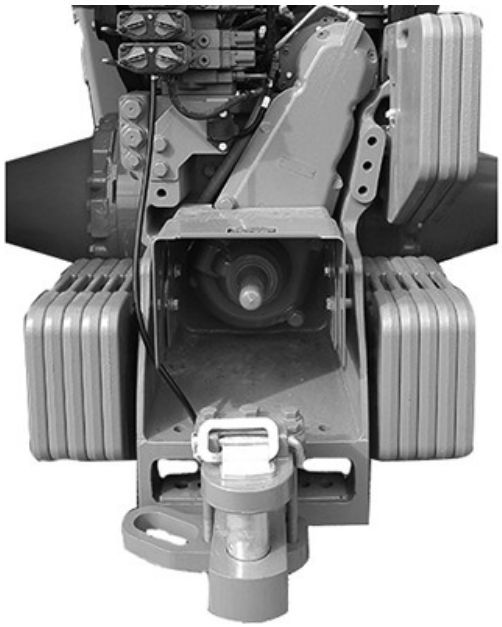
EC82310,00000C5-19-09JUL18

Quik-Tatch™ Weight Use [Ag]



RXA0152658—UN—07SEP16

Maximum Ballast Configuration Without PTO and Hitch



RXA0153814—UN—07SEP16

Maximum Ballast Configuration With PTO

Additional ballast not allowed if tractor equipped with hitch, or hitch and PTO.

IMPORTANT: Do not operate tractor at weight exceeding maximum ballasted weight of 28122 kg (62000 lb). Warranty may be voided due to "overload" conditions. Reduce load if unable to obtain correct ballast without exceeding maximum ballasted weight.

Equipment configuration determines maximum quantity of Quik-Tatch™ weights. A maximum of 18 43 kg (95 lb) Quik-Tatch™ weights can be added to rear of tractor as long as maximum ballasted weight does not exceed 28122 kg (62000 lb).

Equipment Configuration		Allowable Quik-Tatch™ Weights[a]
Without PTO and Hitch		18
With	PTO	13
	Hitch	0
	Hitch and PTO	

Quik-Tatch is a trademark of Deere & Company

[a] *Do not operate tractor at weight exceeding maximum ballasted weight of 28122 kg (62000 lb).*

Install Quik-Tatch™ Weights

To install 5 or fewer weights:

1. Position weight on bracket.
2. Install retaining bolts through hole.

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3. Tighten nut to 230 N·m (170 lb·ft).

EC82310,00000C6-19-09JUL18

Weight Chart - Narrow Track (If Equipped) [Ag]

CAUTION: Avoid physical injury or equipment damage. Never exceed maximum listed speed for load at drawbar and rear axle.

IMPORTANT: Failure to follow road transport recommendations could cause track damage and void warranty.

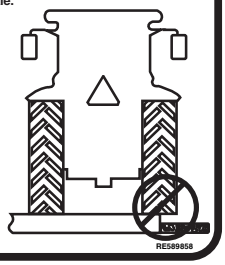
- **Attachments such as chemical tanks can add significant axle loads.**
- **Never exceed tractor's or implement's maximum transport speed. Speed is based on tractor capability.**
- **Speed settings can be locked. See Users and Access in the CommandCenter™ section of this Operator's Manual.**

Maximum Transport Speed with Axle Weight

Highest Single Axle Weight	18" Tracks	24" Tracks
	Max Speed	Max Speed
Tractor [1]	26mph (42km/h)	26mph (42km/h)
35,000lbs (15,900kg)	21mph (34km/h)	26mph (42km/h)
45,000lbs (20,400kg)	16mph (26km/h)	23mph (37km/h)
55,000lbs (24,900kg)	13mph (21km/h)	20mph (32km/h)

1. Tractor only, or up to 32,000lbs (14,500kg) on a single axle.

- High transport speeds with heavy axle loads can damage track components.
- Always operate with tracks fully supported - avoid driving on the edge of the road.
- Speeds shown are for 75˚F(24˚C) outside air temperature. Reduce speed by 1mph(1.6km/h) for every 15˚F(8˚C) warmer than 75˚F(24˚C) .
- Maximum speed can be retricted in the CommandCenter™.
- See Operators Manual Transport Section for detailed speed restriction during transport.



Loads listed in table are for reference only. Weigh front and rear axles individually when payload is added - include front-mounted spray tanks.

RXA0164450—19—05SEP18

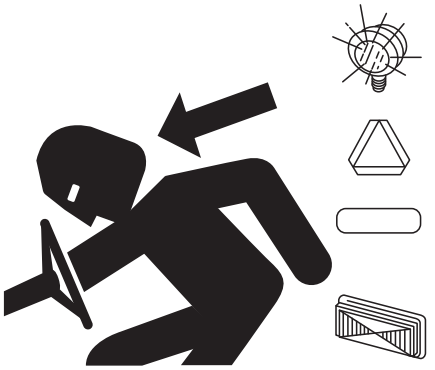
Weight and Recommended Speed with Typical Implements					
Application	Implement	Weight/Load kg (lb)		Maximum Transport Speed km/h (mph)	
		Drawbar/Hitch	Rear Axle	Tracks	
				18 inch	24 inch
Primary Tillage	11 shank disk ripper (gangs, without rolling baskets)	220 (484)	13608 (30000)	41.8 (26)[a]	41.8 (26)[a]
Secondary Tillage	45' field cultivator	499 (1100)	14061 (31000)	41.8 (26)[a]	41.8 (26)[a]
Secondary Tillage	40' vertical tillage tool	817 (1800)	14515 (32000)	41.8 (26)[a]	41.8 (26)[a]
Secondary Tillage	60' liquid applicator (2400 gal) - empty	1637 (3608)	15422 (34000)	35.4 (22)[a]	41.8 (26)[a]
Secondary Tillage	45' mulch finisher	1905 (4200)	15876 (35000)	33.7 (21)[a]	41.8 (26)[a]
Other	1500 bu grain cart - empty	1724 (3800)	15876 (35000)	33.7 (21)[a]	41.8 (26)[a]
Planters	24 row 30" spacing planter with central bulk hopper	3493 (7700)	18144 (40000)	28.9 (18)	40.2 (25)[a]
Planters	47 row 15" spacing planter with central bulk hopper	3783 (8340)	18597 (41000)	27.3 (17)	38.6 (24)[a]
Planters	36 row 30" planter with central bulk hopper	5579 (12300)	20865 (46000)	25.7 (16)	37.0 (23)[a]
Planters	Hitch-mounted, 24 row 30" spacing planter with central bulk hopper	5897 (13000)	21319 (47000)	24.1 (15)	35.4 (22)[a]
Planters	48 row 30" planter with central bulk hopper	7983 (17600)	24494 (54000)	20.9 (13)	32.1 (20)

[a]Never exceed implement's maximum transport speed. For guidelines on towing equipment with and without trailer brakes, see Towed Loads and Transport with Ballast in this Operator's Manual section.

BH38674,0000BFB-19-06SEP18

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Driving Tractor on Roads



RXA0161723—UN—15JAN18



RXA0161724—UN—15JAN18

CAUTION: Avoid personal injury or death from losing control of tractor. When driving tractor on roads:

- **Wear seat belts.**
- **Reduce speed when driving on icy, wet, or graveled surfaces.**
- **Prevent tracks from locking and skidding on tractors transporting heavy loads.**
- **Avoid holes, ditches, sharp turns, hillsides, and obstructions which may cause tractor to roll over.**
- **Frequently check for traffic from 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.

Brakes—Tap brake pedal to ensure differential lock is NOT engaged. Avoid hard application of brakes.

Remote Cylinders—Position control levers in lock position to eliminate possibility of lowering an implement during transport by inadvertently bumping control lever (s), see procedure in Six Position SCV Control Levers in Selective Control Valves section in this Operator's Manual.

[Ag] Rear Hitch—Position or lock hitch in transport position to eliminate possibility of lowering an implement during transport by inadvertently bumping control lever. See procedure in Hitch section of this Operator's Manual.

GH15097,0000933-19-26APR18

Extended Road Transport

IMPORTANT: Never exceed implement's maximum transport speed. Avoid roading at high speeds with a new set of tracks and wheels, especially during first full season of operation.

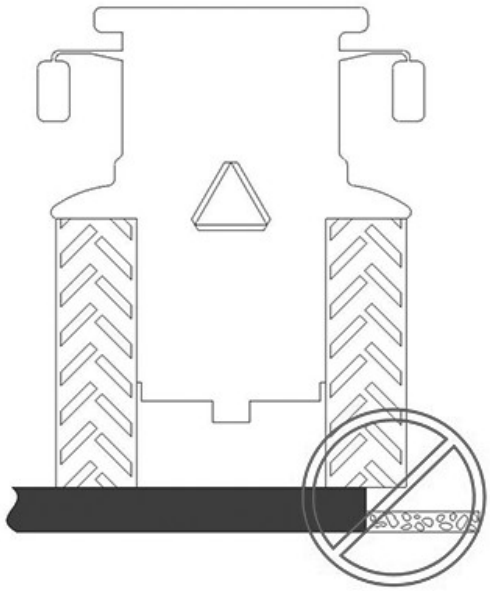
Reduce transport speed for long distances with implements at maximum allowable weight:

- Hitch [Ag] 9072 kg (20000 lb)
- Vertical Drawbar [Ag] 5440 kg (12000 lb)
- Vertical Drawbar [Scraper] 10,206 kg (22,500 lb)

Damage to tracks and elastomeric coated wheels may result due to heat if operating at or near these load limits, especially at high ambient temperatures, for more than two hours. If continuous travel greater than two hours is required, it is recommended to reduce transport speed or long term track, mid-roller, or idler wheel heat damage may result.

9RX Narrow Track Tractors Only [Ag]

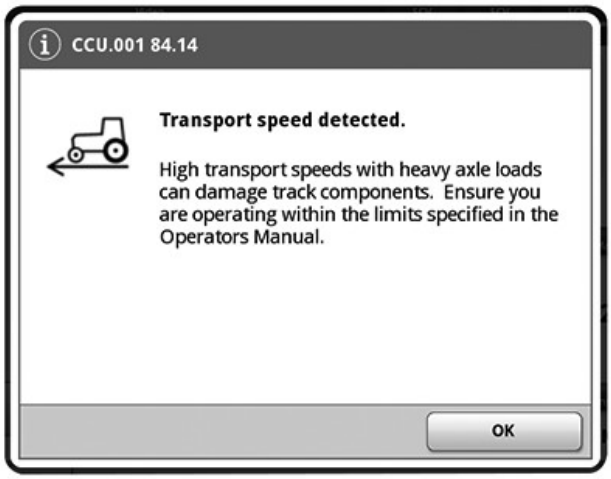
IMPORTANT: Driving on edge of road may cause severe damage to track components.



RXA0160970—UN—14SEP17

- 75°F (24°C) outside air temperature. Reduce speed by 1 mph (1.6 kph) for every 15°F (8°C) warmer than 75°F (24°C).
- Failure to follow road transport recommendations could void warranty.

Extended high transport speed will activate warning. If warning is visible, verify speed and axle weights match reference charts.



RXA0161251—UN—01NOV17

Maximum Transport Speed by Weight 18 inch Track	
Single Axle Weight[a] kg (lb)	Transport Speed km/h (mph)
14500 (32000)	42 (26)
15000 (33000)	37 (23)
15400 (34000)	35 (22)
15900 (35000)	34 (21)
16300 (36000)	32 (20)
17200 (38000)	31 (19)
18100 (40000)	29 (18)
19500 (43000)	27 (17)
20900 (46000)	26 (16)
22200 (49000)	24 (15)
23600 (52000)	23 (14)
25400 (56000)	21 (13)
27200 (60000)	19 (12)

[a]*Extra weight can be caused by fuel, DEF fluid, mud, and debris.*

Maximum Transport Speed by Weight 24 inch Track	
Single Axle Weight[a] kg (lb)	Transport Speed km/h (mph)
16800 (37000)	42 (26)
18100 (40000)	40 (25)
19500 (43000)	38 (24)
20900 (46000)	37 (23)
22200 (49000)	35 (22)
23600 (52000)	34 (21)

Maximum Transport Speed by Weight 24 inch Track	
Single Axle Weight[a] kg (lb)	Transport Speed km/h (mph)
24900 (55000)	32 (20)
27200 (60000)	31 (19)

[a]*Extra weight can be caused by fuel, DEF fluid, mud, and debris.*

TS36762,000035E-19-10MAY18

Towed Loads and Transport with Ballast

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 tracks may lock and skid on slippery downhill slopes when tractors are transporting heavy loads.

Never exceed implement's maximum transport speed. Before transporting a towed implement, refer to implement operator's manual and implement decals to determine the maximum transport speed. This tractor is capable of operating at transport speeds which exceed maximum allowable transport speed for most towed implements. Failure to adhere to the 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**

Guidelines for Towing Equipment without Brakes:

- **Do not transport at speeds greater than 32 km/h (20 mph).**
- **Must weigh less than 1.5 times the ballasted tractor weight.**

Guidelines for Towing Equipment with Brakes:

- **If manufacturer does not specify a maximum transport speed, do not transport at speeds above 40 km/h (25 mph).**
- **When transporting at speeds up to 40 km/h (25 mph) fully loaded implement must weigh less than 4.5 times tractor weight.**
- **When transporting at speeds between 40 km/h (25 mph) and 50 km/h (31 mph), fully loaded implement must weigh less than 3 times the tractor weight.**

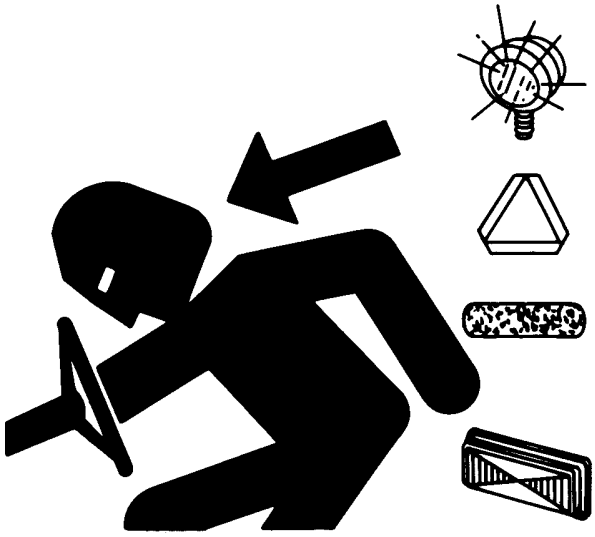
Tractor must be heavy and powerful enough with adequate braking power for towed load. Add ballast to tractor or lighten implement load.

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.

KD34109,00006FF-19-02NOV17

Use Safety Lights and Devices



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.

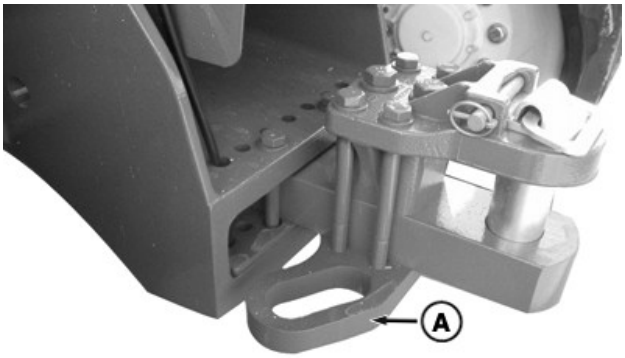
Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean, and in good working order. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting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

TO84419,0000153-19-26APR18

Safety Chains Use

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 the gross weight of equipment. Provide only enough slack in the chain to permit turning.

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.



RXA0150482—UN—08DEC15

Route safety chain through loop (A) and attach to drawbar support.

KT81203,0000259-19-26APR18

Carrier Transport



RW13091—UN—07DEC88

Transport on Carrier Safely

CAUTION: Shift transmission lever into PARK, stop engine and remove key before working in hinge area.

IMPORTANT: Avoid damage to track and track systems. When transporting track tractor equipped with extended axles, special procedures and equipment are required, see Load Extended Axle Width Track Tractor in this Operator's Manual section.

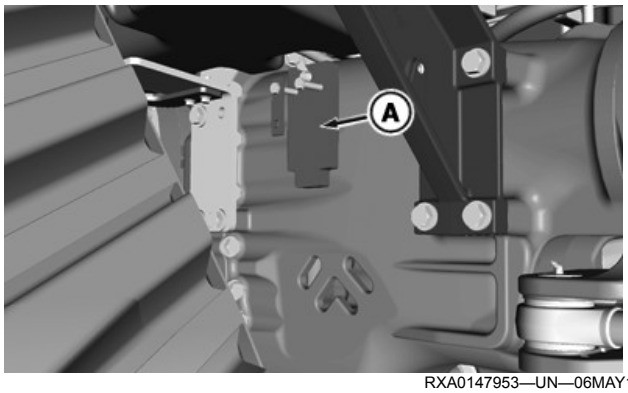
IMPORTANT: Install hinge lock, originally equipped with tractor, on hinge cylinders before transporting tractor.

15 L engine equipped tractor: avoid equipment damage, remove exhaust tip before transport.

IMPORTANT: Remove hinge lock from hinge area before operating tractor.

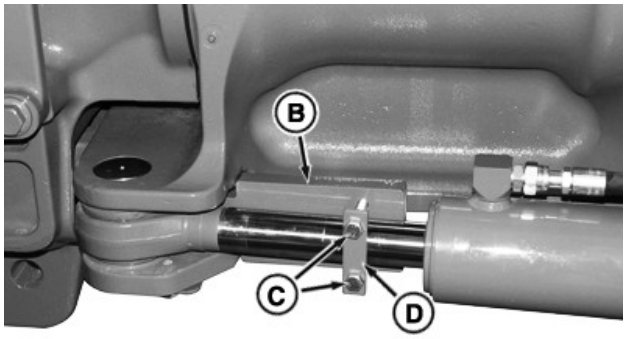
Best method of transporting a disabled tractor is to haul it on a flatbed carrier.

Steer tractor straight ahead, shift transmission lever into PARK and turn OFF engine.



RXA0147953—UN—06MAY15

Remove left and right-hand hinge locks (A) from tractor frame storage location.



RXA0160311—UN—27JUL17

Installed Hinge Lock

Install lock (B) behind cylinder and secure with cap screws (C) and retaining plate (D). Tighten cap screws to hold in place.

Chain tractor to trailer securely and drive slowly.

Remove hinge locks before unloading tractor.

Replace locks on tractor frame storage location as shown (A).

"T" Hook Locations

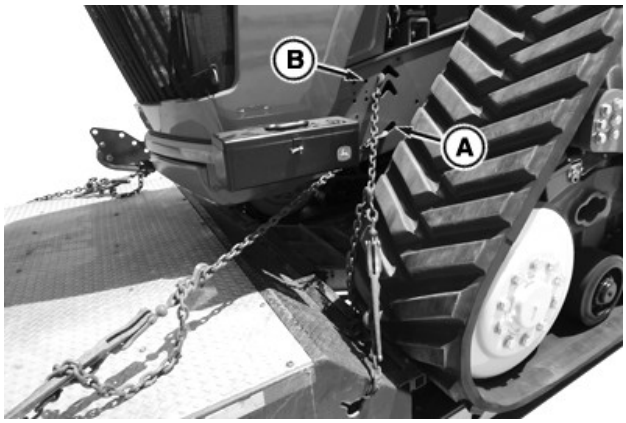
CAUTION: To avoid accident or injury, securely chain tractor to carrier. Drive carefully.

IMPORTANT: Attach tie downs only to frame "T" hook slots and drawbar support when securing tractor on a carrier.

15 L engine equipped tractor: avoid equipment damage, remove exhaust tip before transport.

Transport a disabled tractor on a flat bed trailer.

1. Engage PARK position.



RXA0148245—UN—27MAY15

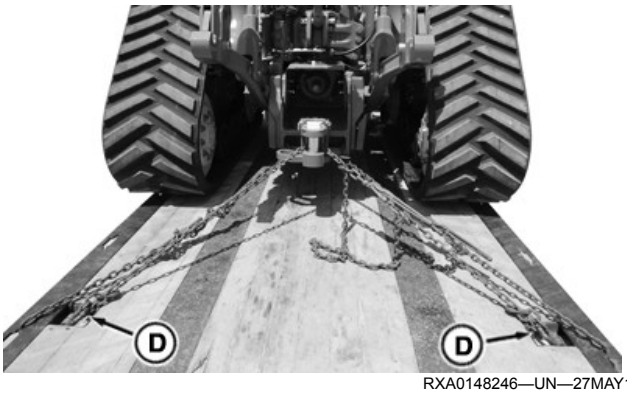
2. Attach chain using left and right-hand side front tie down loops (A) and/or left and right-hand side "T" hook slots (B) and tension chains forward and down to trailer frame.



RXA0148247—UN—27MAY15

3. Attach chain to rear tie down loop (C) on left and right-hand side of frame and tension chains forward and down to trailer frame.

NOTE: Use a protective material to prevent paint damage to drawbar support.



RXA0148246—UN—27MAY15

4. Attach chains to each side of rear drawbar support (D) to secure tractor to carrier.



RXA0153718—UN—30AUG16

5. Fold left and right-hand side mirrors (E) forward.
6. Fold left and right-hand extremity lights forward, if equipped.
7. Remove beacon light, if equipped.
8. Attach over dimension flags (F) to axles.
9. After traveling a short distance, check load shift to ensure tie downs are secure.

TO84419,0000156-19-11APR18

Load Extended Axle Width Track Tractor [Ag]

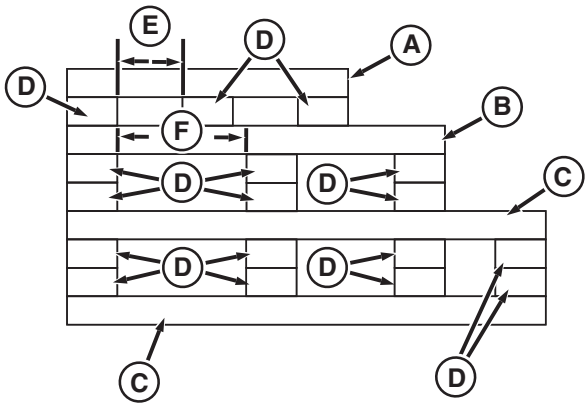
IMPORTANT: Avoid damage to track and track systems. Load and transport track tractor equipped with extended axles only as instructed. Always use wooden ramps described, even if trailer is equipped with pull-out ramps.

Transport tractor only on removable gooseneck trailer equipped with aluminum or cast iron outriggers. Install 51 mm (2 in) by 305 mm (12 in) wooden planks placed onto outriggers.

Build Loading Ramps

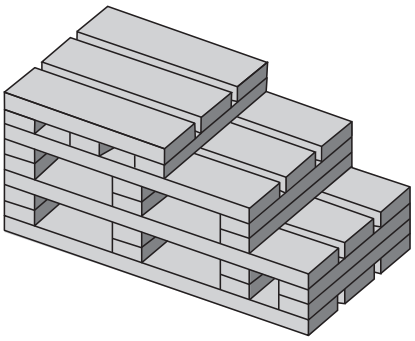
Use wooden ramps to load and unload tractor. Ramps reduce the incline tracks must ascend and descend when moving tractor. Ramps are constructed of 51 mm (2 in) by 102 mm (4 in) lumber. Cutting list:

Part	Length mm (in)	Number of Pieces
A	483 (19)	3
B	737 (29)	3
C	915 (36)	6
D	305 (12)	17



RXA0162412—UN—07MAR18

Left-Hand Side View (Image Not to Scale)



RXA0162413—UN—07MAR18

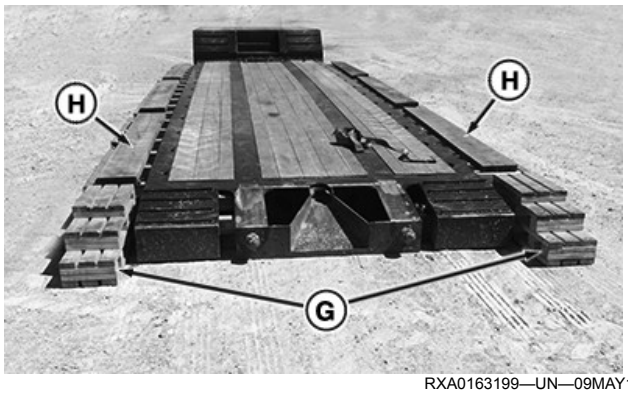
Pictorial View (Image Not to Scale)

Assemble as shown. Dimensions E (102 mm (4.025 in)) and F (229 mm (9.025)) locate center support blocks. Secure parts with 102 mm (4 in) nails or screws. Install parts A through C evenly across parts D. There will be gaps between the long deck parts (A through C) after installation (see pictorial view).

Load Tractor

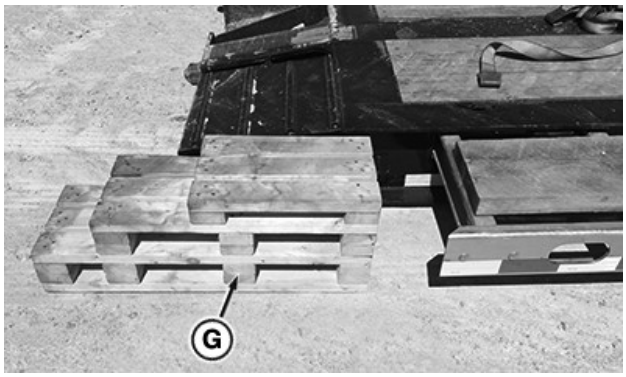


RXA0162414—UN—07MAR18



RXA0163199—UN—09MAY18

1. Place wooden ramps (G) 305 mm (12 in) or less behind and aligned with outriggers equipped with 51 mm (2 in) by 305 mm (12 in) wooden planks (H).



RXA0162416—UN—07MAR18

CAUTION: Avoid injury and damage to equipment. Place observers a distance from loading process to assure that ramps do not move and tractor is loaded correctly.

2. Move tractor slowly toward ramps, aligning tracks with ramps.



RXA0162417—UN—07MAR18

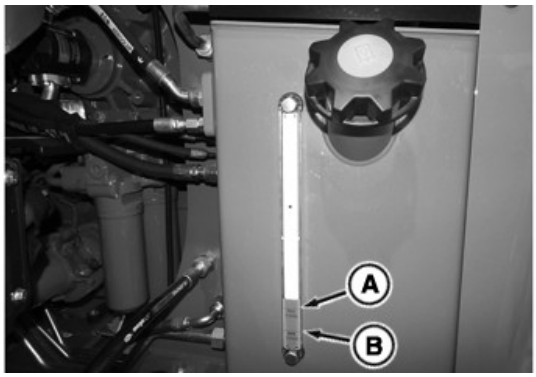
3. Drive tractor slowly up ramps and then onto outrigger planks.
4. Place tractor in Park and shutoff engine.
5. Secure tractor to trailer, see Carrier Transport in this OM section.
6. Unload tractor using ramps and observers. Drive slowly.

RX32825,0000007-19-17JUL18

Towing—Engine Will Start

IMPORTANT: Avoid damage to transmission and hydraulic systems. Operate engine above 1250 rpm to provide adequate system lubrication. All pressure indicator lights must be off.

Never tow tractor faster than 8 km/h (5 mph) for a maximum distance of 8 km (5 mile).



RXA0142406—UN—10JUN14

1. Ensure hydraulic oil reservoir level in sight gauge is between FULL COLD (A) and MIN COLD (B) marks. See Transmission-Hydraulic Oil Level in Service - Check section of this Operator's Manual.
2. Attach tow bar to drawbar.
3. With transmission in PARK, start tractor.
4. Operate engine above 1250 rpm.



RXA0158489—UN—28MAR17

Scraper CommandARM™ Shown

5. Move shift lever to NEUTRAL position (C). “N" on cornerpost display will illuminate.
6. Steer and brake tractor while being towed.
7. After towing is complete, place shift lever in PARK.

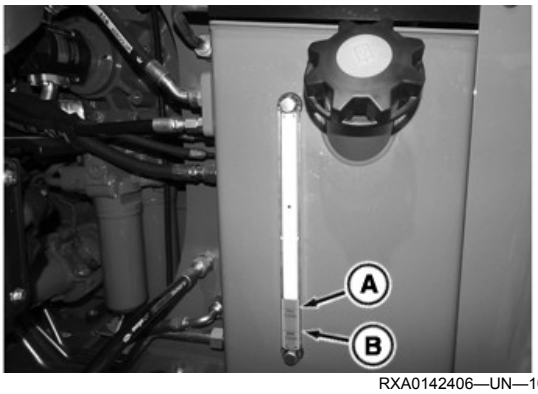
RX32825,000018A-19-26APR18

Towing—Engine Will Not Start

CAUTION: If tractor is ACS™ equipped and oil hydraulic oil temperature is less than -10°C (14° F), backup pump will not turn on. Tractor brakes or steering will not function. If tractor still must be moved, contact your John Deere.

IMPORTANT: Never attempt to start tractor by towing.

Never tow tractor faster than 8 km/h (5 mph) for a maximum distance of 8 km (5 mi).



RXA0142406—UN—10JUN14

1. Ensure hydraulic oil reservoir level in sight gauge is between FULL COLD (A) and MIN COLD (B) marks, see Transmission-Hydraulic Oil Level in Service - Check section of this Operator’s Manual.
2. Attach tow bar to drawbar.

IMPORTANT: 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.

3. Open load center behind seat, see Access Load Center Fuses in Service - Electrical section of this Operator’s manual.
4. Remove fuse F32 (10 Amp) and fuse:
   - F3 (10 Amp) - tractor equipped with 13.5 L engine.
   - FE11 (30 Amp) - tractor equipped with 15 L engine.
5. Install the removed fuses into correct locations **F18 (10 Amp) and F22 (10 Amp or 30 Amp).**

IMPORTANT: Park brake must be released before towing. Special tools are required. See your John Deere dealer.

6. Install appropriate Park Brake Release Hand Pump Kit components.
7. Turn key switch to ON position, required to pump off park brake manually.
8. Follow kit instructions to manually release spring-applied park brake.
9. Enable backup steering. Go to diagnostic addresses, see Diagnostics Center in CommandCenter™ section of this Operator’s Manual.
10. Select correct control unit:
    - XSB – tractor equipped with ACS™ (ActiveCommand Steering).
    - XSC – tractor equipped with AutoTrac™ .

CAUTION: Brakes are not part of hydraulic backup system and braking is achieved through manual effort only. Extra force is required for braking.

If tractor is AutoTrac™ equipped and address XSC 25 is present, turn Back Up Mode On. If address XSC 25 is not available, tractor is not equipped with backup pump – proceed to step 13. If tractor does not have backup pump, extra force is required for steering as well as braking.

NOTE: If equipped with backup pump, when Back Up Mode is enabled, turning steering wheel activates backup pump. Pump should be heard operating.

11. Go to address 25 and select Back Up Mode On.
12. Press Accept.
13. Before closing CommandCenter™ display, go to PTP 055 to monitor park brake pressure. Ensure to pump power pack to a target value of 1800 kPa (18 bar) (261 psi) displayed at address PTP 055.
14. Press Close Window (X) until CommandCenter™ returns to normal operation.

CommandCenter is a trademark of Deere & Company
ACS is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company



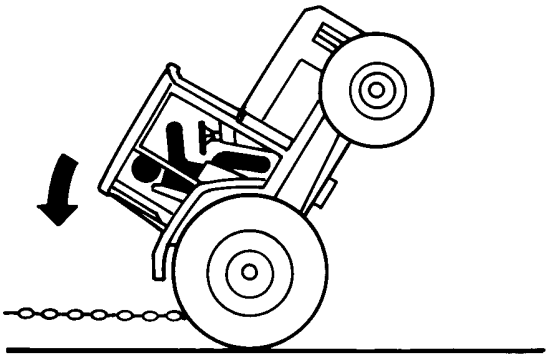
RXA0158489—UN—28MAR17

Scraper CommandARM™ Shown

15. Move shift lever to NEUTRAL position (C).
16. Steer and brake tractor while being towed.
17. After towing is complete, place shift lever in PARK.
18. Cycle key switch ON and OFF to return address 025 to Back Up Mode Off.
19. Return all removed fuses to original locations.

SV81855,00002B1-19-26APR18

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

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

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

Lubricity of Diesel Fuel

Most diesel fuels manufactured in the United States,

[1] *See DX,ENOIL12,OEM, DX,ENOIL12,T2,STD, or DX,ENOIL12,T2,EXT for more information on Engine Oil and Filter Service Intervals.*

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.

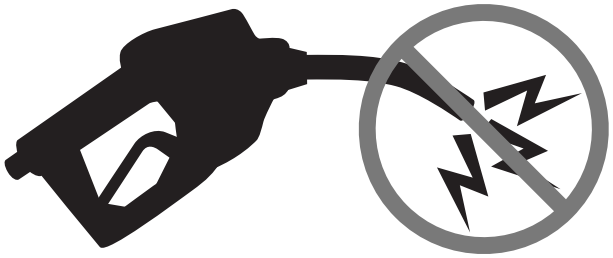
When fuel is stored for an extended period or if there is a slow turnover of fuel, add a fuel conditioner to stabilize the fuel. Keeping the free water drained and treating the bulk fuel storage tank quarterly with a maintenance dose of a biocide will prevent microbial growth. Contact your fuel supplier 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

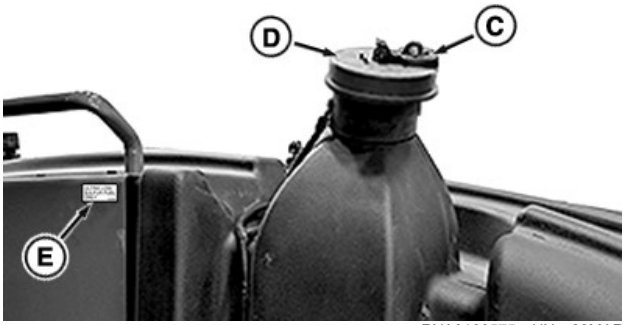


TS202—UN—23AUG88

CAUTION: Avoid possible personal injury or fire:

- **Fuel is highly flammable, handle it with care.**
- **Do not refuel while smoking or when near open flame or sparks.**
- **Stop engine when refueling.**
- **Clean up spilled fuel.**
- **Fill fuel tank outdoors.**
- **Keep machine clean of accumulated trash, grease, and debris.**

IMPORTANT: Prevent damage to tractor fuel injection system, emissions system, and other components. Never put Diesel Exhaust Fluid (DEF) into fuel tank or fuel system. If DEF is introduced into the fuel tank, see your John Deere dealer.



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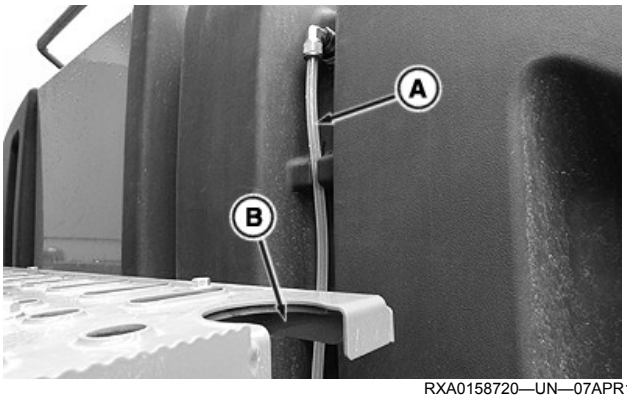
IMPORTANT: Prevent damage to engine and emissions system components. If tractor is equipped with Final Tier 4/Stage V engine, use only ultra low sulfur fuel as prescribed by decal (E). Tractors with other emissions specifications may use other fuels. See Diesel Fuel in this Operator's Manual section.

To determine which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

NOTE: Final Tier 4/Stage V engine equipped tractors require DEF to operate. It is suggested that DEF tank is filled each time tractor is refueled. See Fill DEF Tank - FT4/Stage V Engine in Diesel Exhaust Fluid (DEF) section of this Operator's Manual.

IMPORTANT: Each fuel tank is vented through filter at top of each tank. See Fuel Tank Vent Filters in Service - Change section of this Operator's Manual.

NOTE: When digital display fuel gauge flashes, approximately 20 to 25 gallons of fuel remains.



RXA0158720—UN—07APR17

Approximately 132 L (35 gal) of fuel remains when fuel level is at bottom of sight tube (A).

1. Place fuel nozzle in fuel nozzle holder (B) before climbing steps.
2. Stand on platform.
3. Raise fuel cap lock lever (C).
4. Rotate fuel cap (D) counterclockwise.
5. Remove fuel cap and fill fuel tanks. Filling fuel tanks at end of each day prevents condensation in tank.
6. Place fuel nozzle back in fuel nozzle holder and replace and lock cap before climbing down from platform.

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Biodiesel Fuel

Biodiesel fuel is comprised of monoalkyl esters of long 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 and Cummins® 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 and Cummins® Engines with Exhaust Filter Except Stage V Engines Operating in the European Union John Deere

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 John Deere

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)

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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.

KD34109,000075C-19-27MAR18

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)

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.



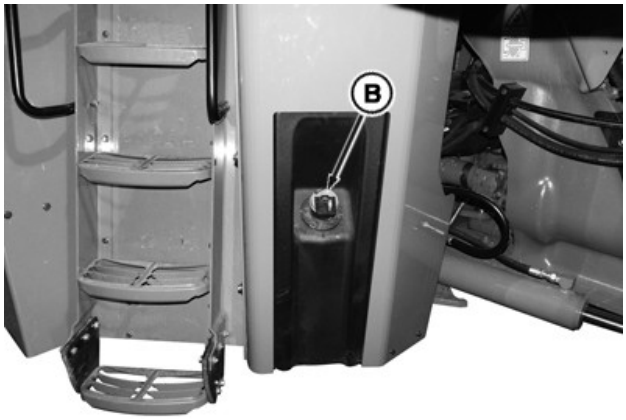
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To avoid drastic changes in tractor performance, always keep DEF level above topmost red mark on corner post display (A). Monitor DEF level on cornerpost display and refill as necessary. Refill DEF tank every time tractor is refueled, see Diesel Exhaust Fluid (DEF) — Use in Selective Catalytic Reduction (SCR) Equipped Engines in this Operator's Manual section.

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.



RXA0142157—UN—06JUN14

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.

5. Using funnel, carefully fill DEF tank. DO NOT over fill DEF tank. 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.

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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

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

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 — Final Tier 4/Stage V 13.5 L Engine

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 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.

SV81855,00002A5-19-23JUL18

Break-In Engine Oil Use — Final Tier 4/ Stage V 15 L Engines

IMPORTANT: Special "break-in" engine oils (including John Deere Break-In or Break-In Plus™ Oil) are not recommended for new or rebuilt 15 L engines. Use the same lubricating oil that will be used during normal operation, see Diesel Engine Oil - Interim Tier 4, Final Tier 4, Stage IIIB, and Stage V in this Operator's Manual section.

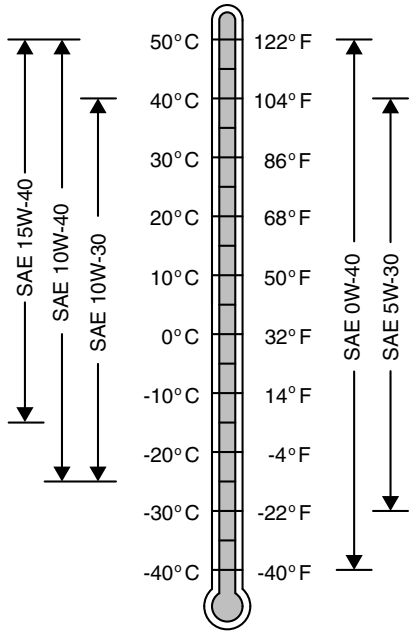
15 L engines are not shipped from the factory with break-in oil installed. Use recommended diesel engine oils. Do not use break-in oils.

RX32825,000017A-19-19JUL18

Break-In Plus is a trademark of Deere & Company

Plus-50 is a trademark of Deere & Company.

Diesel Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, Stage IV, and Stage V



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, 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.

Plus-50 is a trademark of Deere & Company

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 — Final Tier 4/Stage V 13.5 L Engines

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.

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 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.

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.**

Approved Oil Types:

- John Deere Plus-50™ II.
- “Other Oils” include API CJ-4, ACEA E9, and ACEA E6.

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.	

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Engine Oil and Filter Service Intervals — Final Tier 4/Stage V 15 L Engine

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.

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 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.

IMPORTANT: To avoid engine damage:

- **BioDiesel blends greater than B20 are not recommended in 15 L engines. Oil analysis may allow longer service intervals.**
- **Use only approved oil types.**

Approved Oil Types:

- John Deere Plus-50™ II.
- “Other Oils” include API, CK-4, CJ-4, ACEA E9, and ACEA E6.

NOTE: The 400 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	400 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.	

SV81855,00002C0-19-19JUL18

Plus-50 is a trademark of Deere & Company

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
- 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

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 I 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.

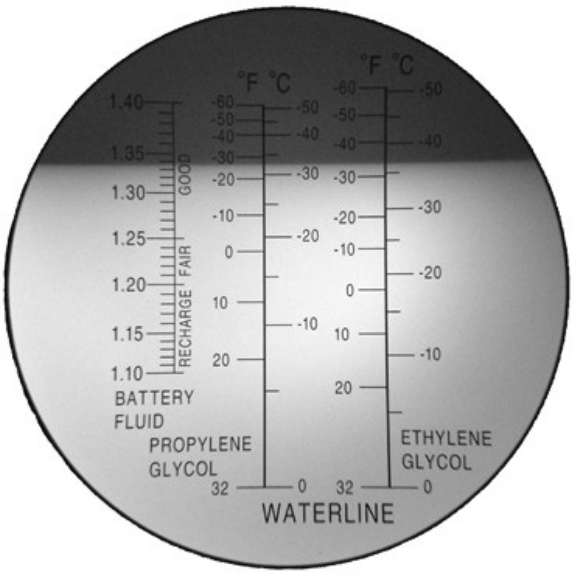
DX,COOL19-19-13JAN18

Testing Coolant Freeze Point



TS1732—UN—04SEP13

SERVICEGARD™ Part Number 75240



TS1733—UN—04SEP13

Image with a Drop of 50/50 Coolant Placed on the Refractometer Window

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.

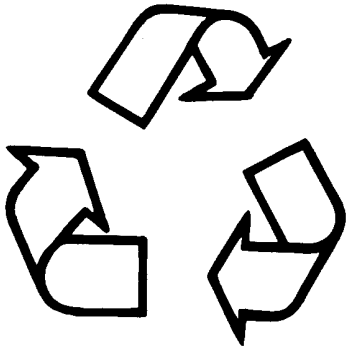
A coolant refractometer is available through your John Deere dealer under the SERVICEGARD™ tool program. Part number 75240 provides an economical solution to accurate freeze point determination in the field.

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



TS1133—UN—15APR13

Recycle Waste

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.

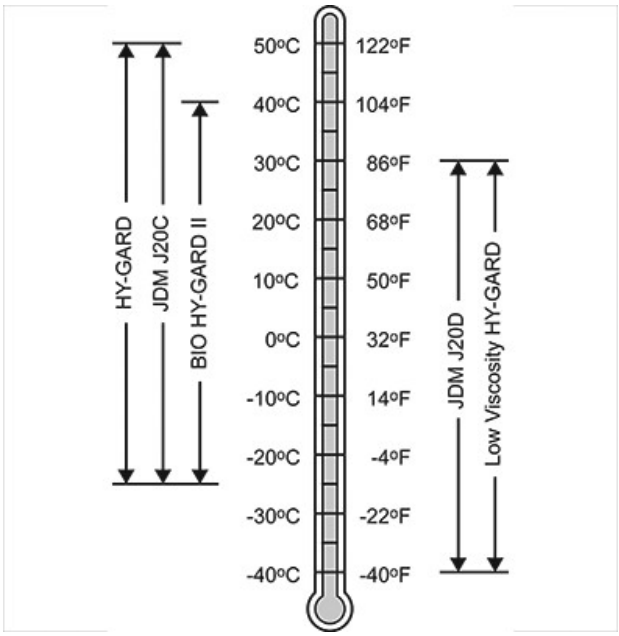
Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere engine distributor or servicing dealer.

RG,RG34710,7543-19-26APR18

SERVICEGARD is a trademark of Deere & Company

Other Lubricants

Transmission and Hydraulic Oil



RG30204—UN—08MAR18

Oils for Air Temperature Ranges

IMPORTANT: To ensure proper shift quality, an oil meeting Hy-Gard™ or JDM J20C specifications must be used.

Shift quality problems and/or drivetrain damage may occur if the Hy-Gard™ or JDM J20C specifications are not followed.

Tractor transmission/axle and hydraulic reservoir is factory filled with John Deere Hy-Gard™ JDM J20C oil.

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]

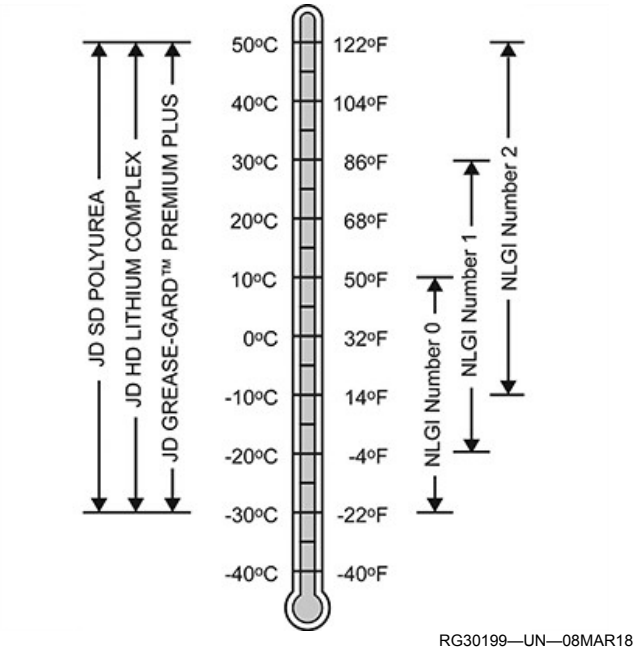
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Hy-Gard is a trademark of Deere & Company
Bio Hy-Gard is a trademark of Deere & Company

[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.*

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)

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

Grease-Gard is a trademark of Deere & Company

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

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

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

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™ .

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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

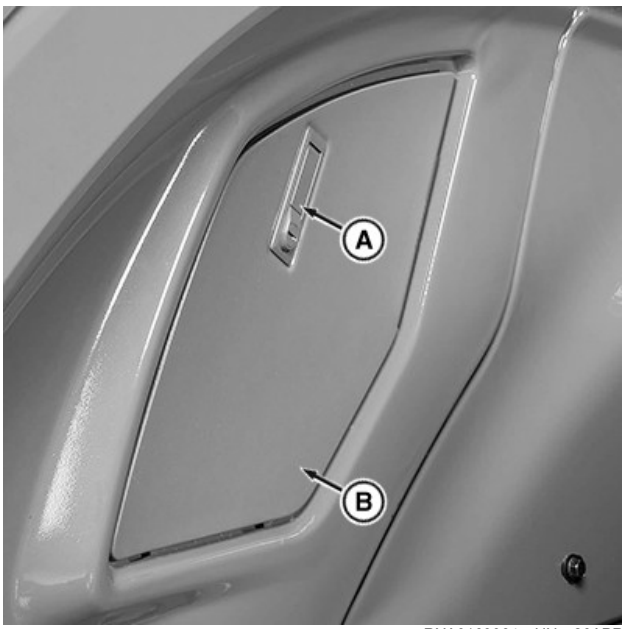


RXA0141758—UN—30MAY14

Pull hood release (A) and raise hood.

KT81203,0000846-19-14JUN17

Remove Engine Access Panel



RXA0163064—UN—26APR18

CAUTION: Avoid physical injury and equipment damage:

- **Never start engine with shields removed or hood open.**
- **Always close and securely latch hood.**

Push latch (A) to open engine side shield panel (B).

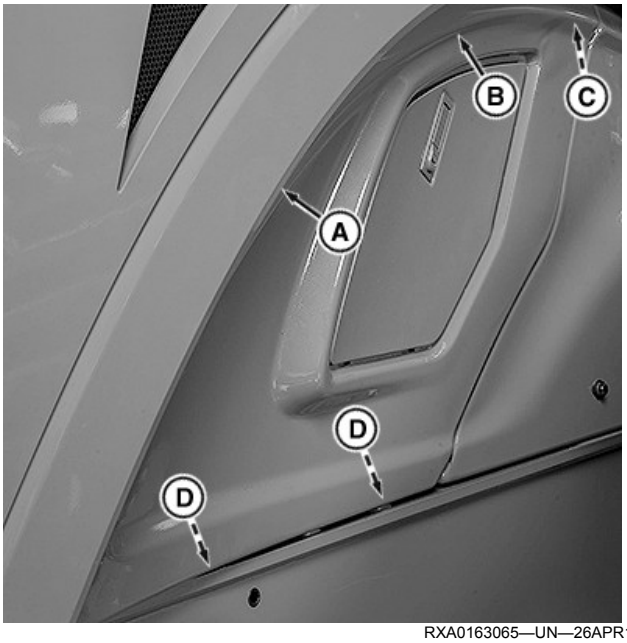
BH38674,0000D1B-19-22AUG18

Remove Front Engine Side Shield

CAUTION: Avoid physical injury and equipment damage:

- **Never start engine with shields removed or hood open.**
- **Always close and securely latch hood.**

1. Open hood, see Open Hood in this Operators Manual section.



RXA0163065—UN—26APR18

2. Push latch (A) and remove top of engine side shield (B) from magnet (C).
3. Lift engine side shield from alignment posts (D).

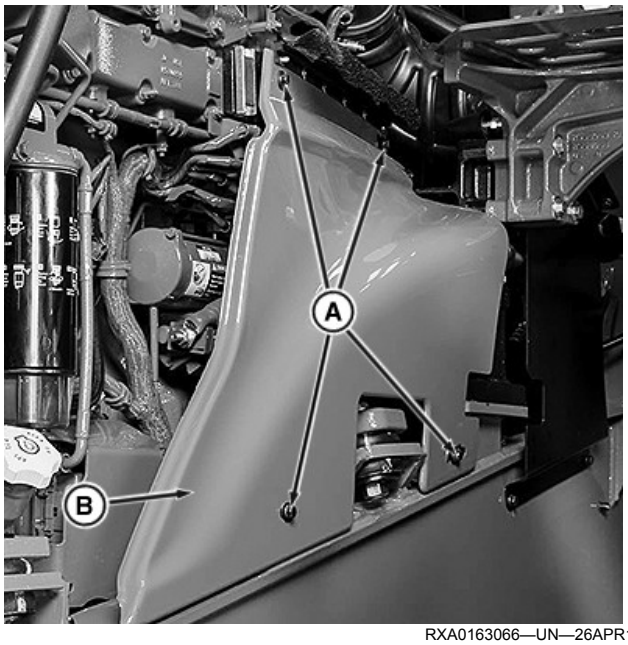
BH38674,0000D1C-19-22AUG18

Remove Rear Engine Side Shield

CAUTION: Avoid physical injury and equipment damage:

- **Never start engine with shields removed or hood open.**
- **Always close and securely latch hood.**

1. Open hood, see Open Hood in this Operator's Manual section.
2. Remove front engine side shield, See Remove Front Engine Side Shield in the Operator's Manual section.



RXA0163066—UN—26APR18

3. Remove cap screws (A) and rear engine side shield (B).

4. When reinstalling rear engine side shield torque bolts to 40 N·m (30 lb·ft).

BH38674,0000D1D-19-22AUG18

Jack Up Tractor - Lifting Points and Support Stand Placement (2010-52-EU)

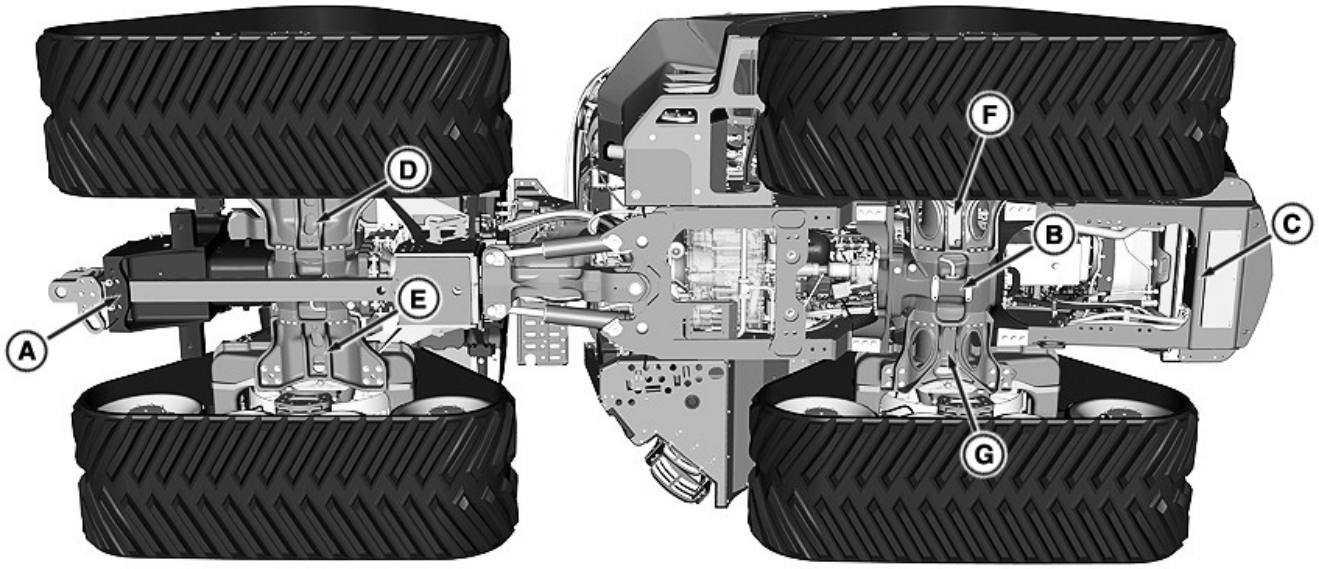
CAUTION: Use approved lifting equipment only.

Install DFRW254-Gudgeon Oscillation Stop-Axle (J) to prevent oscillation during axle removal. Failure to do so may result in injury. DFRW254 is shown on the following page.

Jack up tractor on firm, level ground only. Before doing any further work on tractor, secure it using suitable support stands.

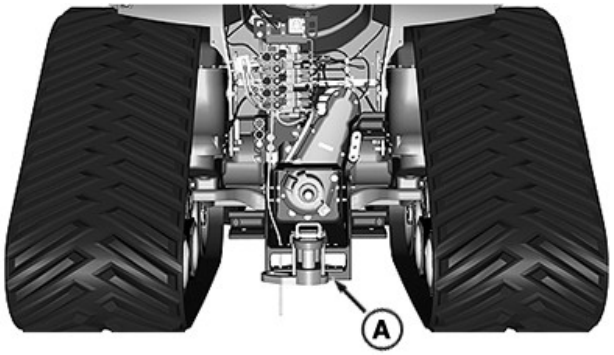
Special John Deere tools shown can be used for this purpose. Support stands are available from your John Deere dealer.

Recommended lifting points for jacking up tractor. Use appropriate and suitable lifting device.



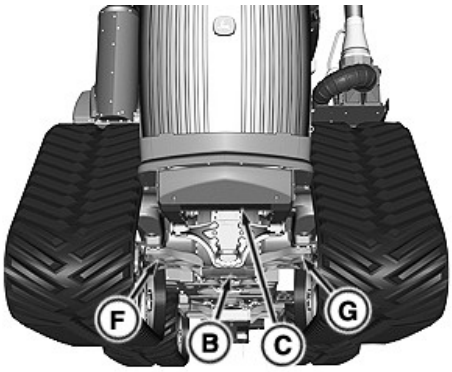
RXA0162488—UN—12MAR18

Underside Lift Points



RXA0162497—UN—13MAR18

Rear Drawbar



RXA0162399—UN—01MAR18

Front Lift Points

A— Raise rear of tractor (example: to remove or adjust rear tracks)

B— Raise center of front differential housing

CAUTION: Never attempt to lift tractor using front weights, front weight support, or the cooling package cleanout cover.

C— Raise front end of tractor under the frame

D— Raise right-hand side of rear axle (example: to remove right-hand rear track)

E— Raise left-hand side of rear axle (example: to remove left-hand rear track)

F— Raise right-hand side of front differential (example: to remove right-hand front track)

G— Raise left-hand side of front differential (example: to remove left-hand front track)

1. Disconnect battery ground cable. See Service Batteries and Connectors 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. Install front support stands:

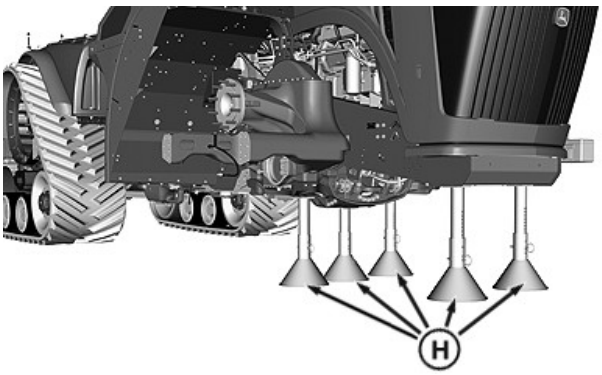
   NOTE: Grease fitting may need removed to allow for tool access.



RXA0162411—UN—06MAR18

   a. Install DFRW254—Gudgeon Oscillation Stop—DR Axle (J) to keep frame from oscillating.

   b. Lift tractor until approximately 200 mm (8 in) clearance exists between belt tread and ground.



RXA0162400—UN—01MAR18

JT07211 Support Stands Placement

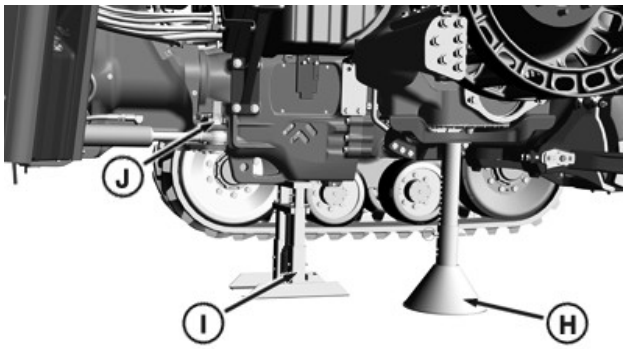
   c. Install JT07211 Support Stands (H) under each placement point.

3. Install rear support stands:

   NOTE: Grease fitting may need removed to allow for tool access.

   a. Install DFRW254—Gudgeon Oscillation Stop—DR Axle (J) to keep frame from oscillating.

   b. Lift tractor until approximately 200 mm (8 in) clearance exists between belt tread and ground.



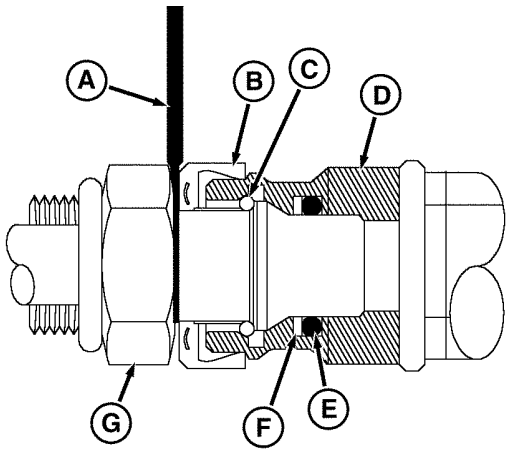
RXA0162401—UN—01MAR18

c. Install JT05725 Universal Support Stand (I).

EC82310,0000514-19-13MAR18

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.

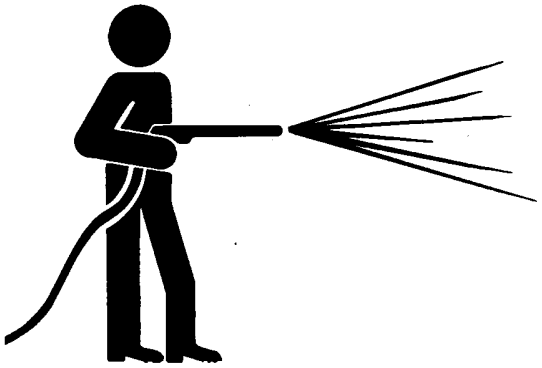
NOTE: If retaining ring, backup ring (F) or O-ring (E) are damaged, see your John Deere dealer for replacement kit and replace all three parts.

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 contaminates.
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

STC is a trademark of Eaton Corporation

High-Pressure Washer Use



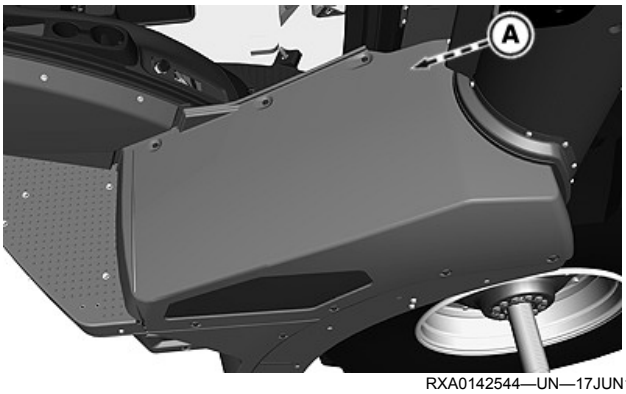
T6642EJ—UN—18OCT88

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

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

Exhaust Filter / Diesel Particulate Filter Ash Handling and Disposal

CAUTION: Under federal, state, and/or local laws or regulations, diesel particulate filter 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.

TO84419,00001C8-19-20JUL17

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.

TO84419,00001C9-19-20JUL17

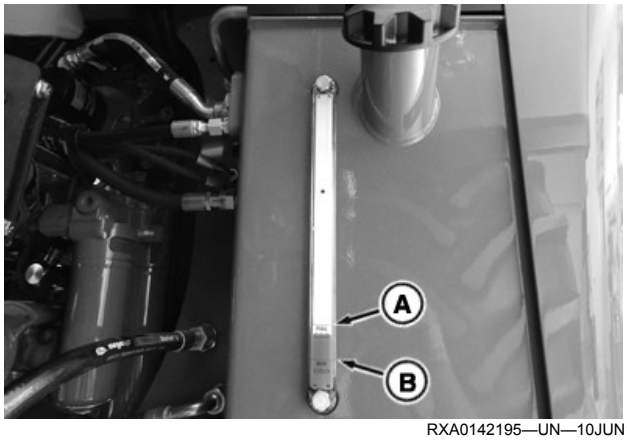
Transmission Calibration

When to Calibrate

Transmission calibration is recommended when:

- A clutch solenoid or valve is replaced.
- Shift quality has degraded.
- Transmission filters are replaced.
- Transmission hydraulic fluid is changed.
- Transmission system control unit (PTP) is replaced.
- Transmission is removed for maintenance or replaced for any reason.

Check Oil Level and Warm-Up Procedure Before Calibration



RXA0142195—UN—10JUN14

1. Check oil level sight gauge in hydraulic oil reservoir. Oil level should be between Full Cold (A) and Min. Cold (B) marks.

NOTE: Only calibrate transmission if shift characteristics change after transmission oil and filter change.

Do not perform oil check soon after transporting tractor in 15th or a higher gear.

IMPORTANT: Poor shift quality or transmission damage may occur if incorrect transmission-hydraulic oil is used, see Transmission and Hydraulic Oil in Other Lubricants section of this Operator's Manual.

2. Heat hydraulic oil, see Warm-Up Transmission-Hydraulic System in Transmission - General Information section of this Operator's Manual.
3. When oil is at desired temperature, drive to a level surface.

NOTE: DO NOT depress brake pedal during this portion of oil warming procedure. If brake pedal is depressed, additional oil will flow to axles and result in inaccurate oil level reading.

4. Shift transmission lever to PARK. Set engine speed at 1800 rpm and run for 5 minutes.

IMPORTANT: Do not operate tractor if oil level is below "Min Cold" mark (B) in sight gauge with engine off.

NOTE: Reduce engine speed to slow idle, shut engine OFF, and wait 5 minutes for oil to stabilize.

CAUTION: Perform transmission calibration with tractor in an open, outdoor area on flat ground. Do not permit others near tractor during procedure.

Verify park brake is functioning properly.

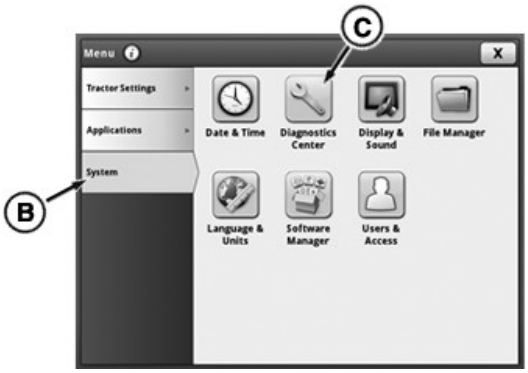
While calibrating, remain in the operator's seat. Depending on transmission-hydraulic oil temperature at start of procedure, calibration typically takes 12-15 minutes.

IMPORTANT: Serious damage to transmission may result if oil level is inadequate.

5. Make sure Efficiency Manager™ is disabled.

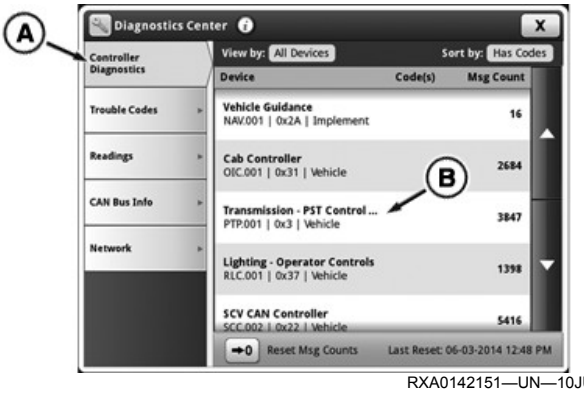


RXA0142149—UN—10JUN14



RXA0142150—UN—10JUN14

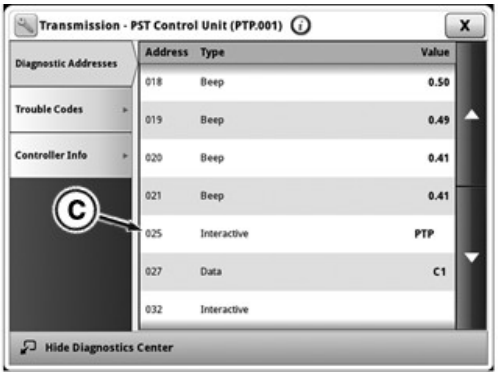
6. Press the Menu button (A) and select System Tab (B).
7. Select Diagnostic Center Icon (C).



RXA0142151—UN—10JUN14

8. Select Controller Diagnostics Tab (A).
9. Select Transmission-PST Control (PTP.001) (B) from list.

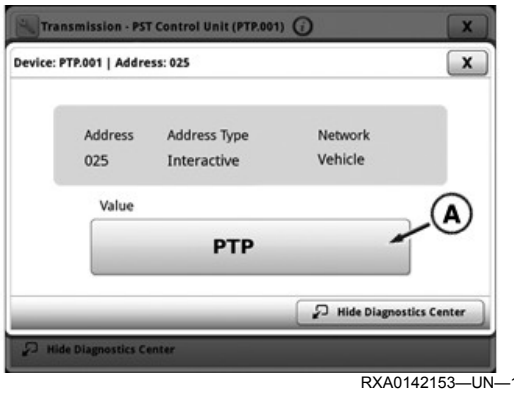
Efficiency Manager is a trademark of Deere & Company



RXA0142152—UN—10JUN14

10. Select Address 025 (C) in drop down menu.

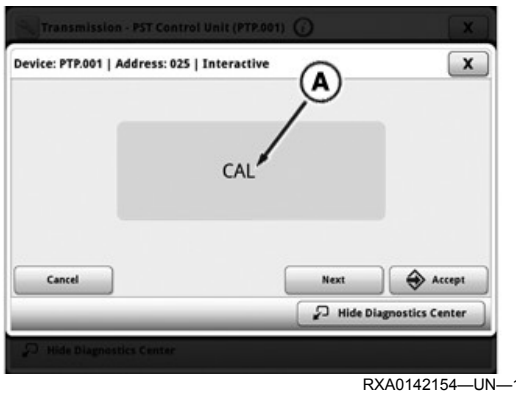
CAUTION: Leave shift lever in PARK. Placing shift lever in F or R results in tractor movement.



RXA0142153—UN—10JUN14

11. PTP should appear on Secondary Display Unit display. Press PTP button (A).

IMPORTANT: Do not leave seat. Operator presence must be detected in this step to allow calibration to continue.



RXA0142154—UN—10JUN14

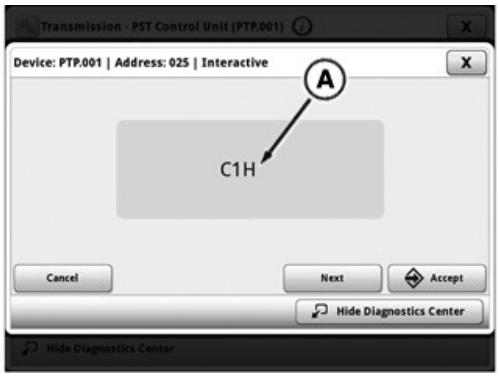
12. When CAL (A) appears on Secondary Display Unit display, transmission calibration is ready to begin.
13. Adjust throttle to 1650 engine rpm.

CAUTION: If "P" is NOT displayed on corner post display, do not proceed with calibration. Leave shift lever in PARK. Lever movement to F position will result in unintended tractor movement. Return to Step 2.

14. Move shift lever to N position. P should be displayed on the corner post PDU display.
15. Move shift lever to F position to start calibration.
16. If CLD appears, transmission oil temperature has dropped to less than 50°C (122°F) PTP will halt calibration until temperature has increased sufficiently to allow calibration to restart. If oil temperature (available in PTP Address 33) is more than a few degrees below 50°C (122°F), manually heat oil.

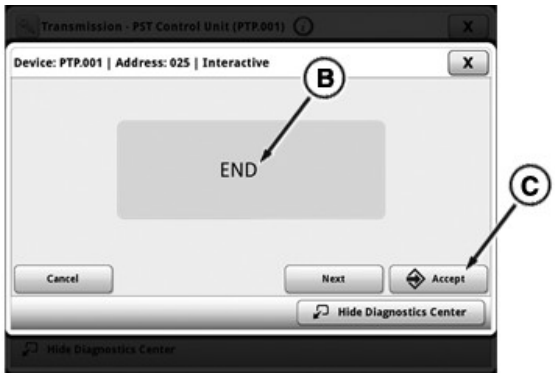
NOTE: Once calibration begins, do not manually change throttle position, move shift lever, or depress clutch pedal. Calibration will be aborted.

NOTE: If calibration aborts due to a fault (for example: no engine or transmission activity is heard for a period of 30 seconds or longer), a three-letter fault message is displayed. Record code. Another calibration attempt may be made if desired, see Abort Transmission Calibration in this section of this Operator's Manual.



RXA0142193—UN—10JUN14

17. When calibration starts, C1H (A) appears. C1H indicates Clutch 1 Hold calibration is in progress. As calibration continues, clutch hold calculations for clutches C2, CR, CA, CB, CC, CL, CM, and CH follows. Display indicates which step is being performed during process.
18. When all nine clutch hold stage calibrations are complete, C1F displays as next phase of calibration begins. C1F indicates that Clutch 1 Fill time calibration is in progress. As calibration continues, clutch fill calculations for clutches C2, CR, CA, CB, CC, CM, and CH follows. Display indicates which step is being performed during process.



RXA0142194—UN—10JUN14

19. When END (B) appears, calibration is complete.

NOTE: Use correct calibration exit procedure to avoid generating unnecessary Diagnostic Trouble Codes (DTCs).

20. Move shift lever from F to PARK.
21. Throttle down.
22. Press Accept button (C) to save and exit calibration

NOTE: Display shows instructions for operator and malfunctions that have occurred. If a malfunction is displayed during calibration, new data is not stored.

23. Turn off the engine. PTP will store new calibration.

Calibration Fault	Meaning	Instruction
CLD	Transmission oil is below 50°C (122°F). Automatic warm-up is in progress.	No action required. Wait for automatic warm-up to warm oil to 50°C (122°F). Calibration begins automatically once temperature is reached.
OIL	Transmission oil temperature is below minimum temperature of 10°C (50°F) to begin automatic warm-up.	Manually heat hydraulic oil to 50°C (122°F), see manual Warm-up for Calibration at beginning of this section.
SPD	Engine speed is not within required range of 1600-1700 rpm to begin or continue calibration.	Set engine speed to 1650 rpm.
CLU	Clutch pedal is not UP or was depressed by operator during calibration.	Make sure that clutch pedal is fully UP, and do not depress during calibration.
NOP	Operator is not in seat when calibration is initiated.	Remain seated during transmission calibration.
FLT	Transmission oil filters are restricted.	Replace transmission filters. Retry calibration after filter replacement.

SV81855,0000256-19-26APR18

Abort Transmission Calibration

PTP aborts calibration, and will make no changes to stored calibration values from last complete calibration if:

- Significant tractor motion is detected
- Address number is incremented or decremented by operator
- System detects problem during calibration
- Shift lever is moved out of gear
- Engine speed moves above or below calibration limits

If calibration aborts, transmission system reverts to last good calibration. If recalibration is still required, a new calibration procedure must be started. Calibration cannot be restarted from point at which it stopped.

SV81855,0000257-19-20JAN15

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

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.)

SV81855,00001E9-19-16JAN15

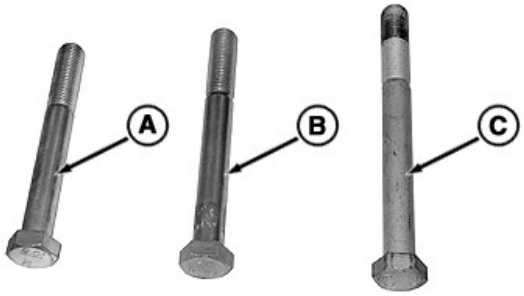
Bleed Fuel System

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.

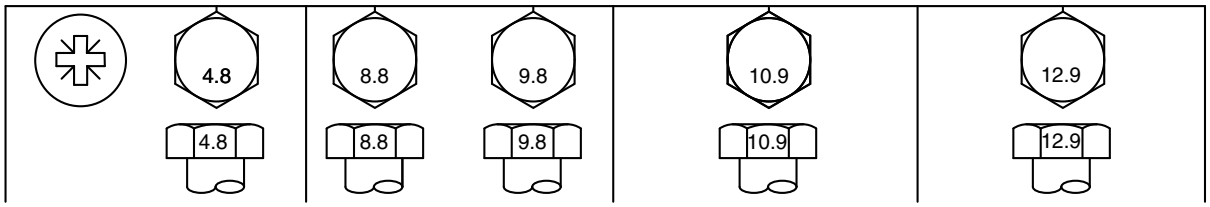
Zinc-Flake Coated cap screws (C) are of a dull silver or gold color.

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

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Metric Bolt and Screw Torque Values



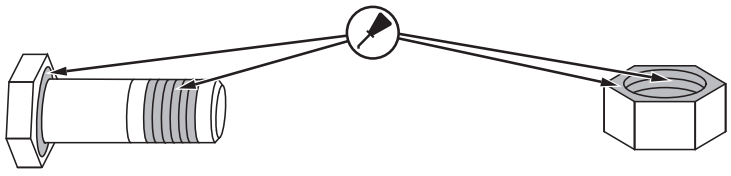
TS1742—UN—31MAY18

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
									N·m	lb·ft	N·m	lb·ft	N·m	lb·ft	N·m	lb·ft
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.

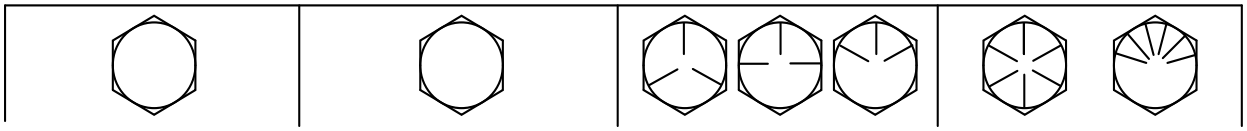


TS1741—UN—22MAY18

[a]Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.
[b]Hex 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



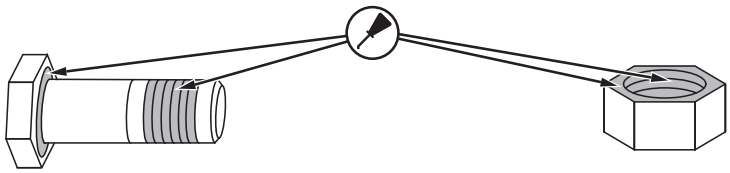
TS1671—UN—01MAY03

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.



TS1741—UN—22MAY18

[a]Grade 1 applies for hex cap screws over 6 in (152 mm) long, and for all other types of bolts and screws of any length.
[b]Grade 2 applies for hex cap screws (not hex bolts) up to 6 in (152 mm) long.
[c]Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.
[d]Hex 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 Services

IMPORTANT: To confirm which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

IMPORTANT: Special "break-in" engine oils (including John Deere Break-In or Break-In Plus™ Oil) are not recommended for new or rebuilt 15 L engines. Use the same lubricating oil that will be used during normal operation. See Diesel Engine Oil in Engine Oil section of this Operator's Manual. Maximum service interval is the same as service interval recommended for your engine listed in Engine Oil and Filter Service Intervals for your engine. For subsequent oil changes, see Engine Oil and Filter Service Intervals Engine Oil section of this Operator's Manual.

IMPORTANT: Initial break-in service interval of a new or rebuilt wet sleeve engine with John Deere™ Break-In Plus™ must last at least 100 hours to assure surface mating of rings and liners has had an opportunity to occur. 100 hour minimum applies to all new or rebuilt John Deere engines. Maximum service interval is the same as service interval recommended for your engine listed in Engine Oil and Filter Service Intervals for your engine. For subsequent oil changes, see Engine Oil and Filter Service Intervals in Engine Oil section of this Operator's Manual.

IMPORTANT: Performance problems and cab and component damage may occur if correct exhaust tip is not installed. If correct tip is not installed, see your John Deere dealer.



RXA0142925—UN—25JUN14

Install exhaust tip (A) with outlet facing forward.

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 Service - Check Section of this Operator's Manual.
- Check for fluid leaks
- Tighten drive and idler wheel-to-hub cap screws after 3 hours, after 10 hours and daily for first week of operation. See Service - Tighten section of this Operator's Manual.
- Follow tracks systems break-in procedures. See Perform Track Systems Break-In in this section of this Operator's Manual.
- Tractors equipped with 15 L engines will automatically perform an initial engine regeneration after at least 4 hours of operation. This procedure may have occurred prior to tractor delivery. If regeneration begins, allow full completion of process. See Parked Exhaust Filter Cleaning in Emissions Equipment section of this Operator's Manual.

Daily or 10 Hour Service

Perform normal daily or 10 hour services. See 10 Hour or Daily Service in Service - Record Charts section of this Operator's Manual.

For first 100 hours of tractor operation, also 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 Service - Check section of this Operator's Manual.
- Lubricate hitch (if equipped) components. See Service - Lubricate section of this Operator's Manual.
- Inspect track belts for any damage. See Perform Track Systems Break-In in this 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.

After the break-in period, use John Deere Plus-50™ II or other diesel engine oil as recommended in this manual.

RX32825,0000004-19-21JUL17

Perform Track Systems Break-In

Break-In Overview

IMPORTANT: Avoid roading at high speeds with a new set of tracks and wheels, especially during first 50-100 operating hours. Damage to drive lugs and wheels may result.

Break-In Plus is a trademark of Deere & Company

Track systems break-in takes place during first season of use. Correct break-in helps reduce amount of initial drive lug wear. During break-in, drive lugs and idlers undergo a “polishing in” process which:

- Scours out excess rubber flash inside drive wheels.
- Embeds fine dust particles in rubber surfaces to remove tackiness of new rubber.

Surface polishing reduces frictional heating in tracks system. During break-in, new rubber surfaces require contact with a dry lubricant such as soil. Avoid high speed operation (roading or higher speed tillage) where track system is run in absence of dust generated by dry soil contact (wet conditions or paved roads). Operating in these conditions for lengthy periods may cause excessive early hour drive lug wear.

Perform initial break-in and alignment before any high-speed tractor operation. Excessively clean frictional track components (belts, drive wheels, front idlers and mid-rollers) can generate significant heat if run unlubricated. This heat is capable of damaging components. Break in and align new components as outlined.

Initial Break-In

IMPORTANT: Avoid track and track system component damage. Before driving tractor on road for first time, pre-condition tracks with loose soil or clay based lubricant. Repeat application of lubricant or soil at least every 50 miles until destination is reached.

After installation of new or cleaned track belts or other frictional components, expose clean components to materials to lubricate and break them in.

- Work tractor in field in loose soil for at least 15 minutes.
- If tractor cannot be exposed to loose soil, use a “clay based” granular material (clay based lubricant, kitty litter, oil-dry absorbent or talc powder) to introduce a “joint” area between drive wheels and belts continuously for at least 15 minutes.

After Break-In

IMPORTANT: After initial 100 hour break-in and alignment, long-term break-in process (up to 400 hours) will likely occur. During this period, maximize exposure of tracks to soft soil and minimize high speed, heavily loaded transport operation.

TS36762,000034B-19-29SEP17

Service - Record Charts

Engine Oil and Filter Change

IMPORTANT: Engine oil change intervals can vary depending upon operating conditions. Use only oil approved for your engine emissions type. See Engine Oil section in this Operator's Manual. Record completed service in chart.

Date	Hours of Operation	Engine Oil Used	Signature	Dealer's Stamp

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

Date	Service Completed	Signature	Dealer's Stamp

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.

Check:

• Seat belts	• Engine coolant freeze point[a]	• Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[bc]

Vari-Cool is a trademark of Deere & Company
[a]Check annually or every 1000 operating hours, whichever occurs first.
[b]13.5 L engine.
[c]Check annually or every 500 operating hours, whichever occurs first.

Change:

• Engine oil and filter[ab] • Cab recirculation and fresh air filters[c]	• Engine primary and secondary air filters[c] • Engine coolant[d]	• DEF tank vent filter—Final Tier 4/Stage V engine[e] • DEF dosing unit filter—Final Tier 4/Stage V engine[f] • In-Line DEF Filter[g]

[a]Service in accordance with information in appropriate Diesel 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.
[b]Change at least once per year.
[c]Change annually or every 1000 operating hours, whichever occurs first.
[d]INITIAL change interval is 6 years or 6000 operating hours, provided cooling system is topped off using only John Deere Cool-Gard™ II and premix. SCHEDULED interval (2 years or 2000 operating hours) can be extended up to 6 years and 6000 operating hours, depending upon coolant being used. See Drain Intervals for Diesel Engine Coolant in Engine Coolant section of this Operator's Manual.
[e]Change after first year or first 1500 operating hours, whichever occurs first. After initial service, change every 3 years or 4500 operating hours, whichever occurs first.
[f]Change every 4500 operating hours or 3 years, whichever occurs first.
[g]Service every 3 years.

Lubricate:

• Vari-Cool™fan drive—Final Tier 4/Stage V engine[ab]		

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Lubricate annually or every 500 operating hours, whichever occurs first.

Electrical:

• Batteries and connections[a]		

[a]*Service annually.*

Year	Date	Signature	Dealer's Stamp
1			
2			
3			
4			
5			
6			
7			
8			
9			

EC82310,00004B1-19-16AUG18

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 • Track alignment	• Track wear • Drive and idler wheels and mid-rollers • Drive wheel scraper clearance	• Track trash buildup • Hydraulic accumulator [Scraper]

Lubricate:

• Lower drive line bearings[a]		

[a]*Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.*

EC82310,00004B2-19-04MAY18

50 Hour Service

IMPORTANT: Perform these services every 50 hours.

Check:

• Engine oil level • Transmission-hydraulic oil level • Track alignment	• Track wear • Drive and idler wheels and mid-rollers • Track trash buildup	• Drive wheel scraper clearance • Hydraulic accumulator [Scraper]

Lubricate:

• Rear hitch [Ag][a] • Hinge pins	• Steering pins • Heavy duty lift link pins [Ag][b]	• Hose support bracket [Scraper]

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]If hitch is in use.

EC82310,00004B3-19-04MAY18

250 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Track alignment ☐ Track wear	☐ Drive and idler wheels and mid-rollers ☐ Track trash buildup ☐ Drive wheel scraper clearance	☐ NEUTRAL start system ☐ Transmission PARK system ☐ Hydraulic accumulator [Scraper]

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder	☐ PTO drive shaft [Ag] ☐ Heavy duty lift link pins [Ag][c] ☐ Hose support bracket [Scraper]

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004B4-19-04MAY18

400 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Track alignment	☐ Track wear ☐ Drive and idler wheels and mid-rollers ☐ Track trash buildup	☐ Drive wheel scraper clearance ☐ Hydraulic accumulator [Scraper]

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a] *15 L engine*
[b] *Service in accordance with information in appropriate Diesel 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.*
[c] *Change at least once per year.*
[d] *Change every 400 operating hours or as indicated, whichever occurs first.*

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins	☐ Steering pins ☐ Track tension cylinder	☐ Heavy duty lift link pins [Ag][b] ☐ Hose support bracket [Scraper]

[a] *Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.*
[b] *If hitch is in use.*

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004B5-19-04MAY18

500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Track alignment ☐ Track wear	☐ Drive and idler wheels and mid-rollers ☐ Track trash buildup ☐ Drive wheel scraper clearance ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Engine air intake system ☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab] ☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a] *13.5 L engine.*
[b] *Check annually or every 500 operating hours, whichever occurs first.*

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a] *13.5 L engine.*
[b] *Service in accordance with information in appropriate Diesel 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.*
[c] *Change at least once per year.*
[d] *Change every 500 operating hours or as indicated, whichever occurs first.*

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][e]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft	☐ PTO drive shaft [Ag]	

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004B6-19-23JUL18

750 Hour Service

Check:

☐ Engine oil level	☐ Drive and idler wheels and mid-rollers	☐ NEUTRAL start system
☐ Transmission-hydraulic oil level	☐ Track trash buildup	☐ Transmission PARK system
☐ Track alignment	☐ Drive wheel scraper clearance	☐ Hydraulic accumulator [Scraper]
☐ Track wear		

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ PTO drive shaft [Ag]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][c]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft		

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004B7-19-07MAY18

800 Hour Service

Check:

☐ Engine oil level	☐ Track wear	☐ Drive wheel scraper clearance
☐ Transmission-hydraulic oil level	☐ Drive and idler wheels and mid-rollers	☐ Hydraulic accumulator [Scraper]
☐ Track alignment	☐ Track trash buildup	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a]15 L engine
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 400 operating hours or as indicated, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004B8-19-07MAY18

1000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	

Check:

☐ Engine oil level	☐ Track trash buildup	☐ Transmission PARK system
☐ Transmission-hydraulic oil level	☐ Drive wheel scraper clearance	☐ Engine air intake system
☐ Track alignment	☐ Cab Suspension Bushings	☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab]
☐ Track wear	☐ Undercarriage articulation bumper stops	☐ Engine coolant freeze point[c]
☐ Drive and idler wheels and mid-rollers	☐ NEUTRAL start system	☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.
[c]Check annually or every 1000 operating hours, whichever occurs first.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[abc] ☐ Fuel filters[ad]	☐ Cab recirculation and fresh air filters[e]	☐ Engine primary and secondary air filters[e]

[a]13.5 L engine.
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 500 operating hours or as indicated, whichever occurs first.
[e]Change annually or every 1000 operating hours, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder ☐ PTO drive shaft [Ag]	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd] ☐ Heavy duty lift link pins [Ag][e] ☐ Hose support bracket [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004B9-19-03JUL18

1200 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Track alignment	☐ Track wear ☐ Drive and idler wheels and mid-rollers ☐ Track trash buildup	☐ Drive wheel scraper clearance ☐ Hydraulic accumulator [Scraper]

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a]15 L engine
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 400 operating hours or as indicated, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004BA-19-07MAY18

1250 Hour Service

Check:

☐ Engine oil level	☐ Drive and idler wheels and mid-rollers	☐ NEUTRAL start system
☐ Transmission-hydraulic oil level	☐ Track trash buildup	☐ Transmission PARK system
☐ Track alignment	☐ Drive wheel scraper clearance	☐ Hydraulic accumulator [Scraper]
☐ Track wear		

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ PTO drive shaft [Ag]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][c]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft		

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004BB-19-07MAY18

1500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ Aftertreatment fuel injector—15 L engine[a]

[a]See your John Deere dealer.

Check:

☐ Engine oil level	☐ Track trash buildup	☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab]
☐ Transmission-hydraulic oil level	☐ Drive wheel scraper clearance	☐ Auxiliary drive belt and drive belt tensioner
☐ Track alignment	☐ NEUTRAL start system	☐ Idler wheel hub and mid-roller oil level
☐ Track wear	☐ Transmission PARK system	☐ Suspension mount clearance (narrow track) [Ag]
☐ Drive and idler wheels and mid-rollers	☐ Engine air intake system	☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[abc]	☐ Transmission-hydraulic oil and filters	☐ SCV pilot valve filter
☐ Fuel filters[ad]	☐ Transmission-hydraulic vent filter	☐ Engine cooling system radiator cap—15 L engine
☐ Fuel tank vent filters	☐ DEF tank vent filter—Final Tier 4/Stage V engine[e]	

[a]13.5 L engine.
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 500 operating hours or as indicated, whichever occurs first.
[e]Change after first year or first 1500 operating hours, whichever occurs first. After initial service, change every 3 years or 4500 operating hours, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][e]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft	☐ PTO drive shaft [Ag]	

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

BH38674,0000CCD-19-04MAY18

1600 Hour Service

Check:

☐ Engine oil level	☐ Track wear	☐ Drive wheel scraper clearance
☐ Transmission-hydraulic oil level	☐ Drive and idler wheels and mid-rollers	☐ Hydraulic accumulator [Scraper]
☐ Track alignment	☐ Track trash buildup	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a] *15 L engine*
[b] *Service in accordance with information in appropriate Diesel 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.*
[c] *Change at least once per year.*
[d] *Change every 400 operating hours or as indicated, whichever occurs first.*

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a] *Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.*
[b] *If hitch is in use.*

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004BD-19-07MAY18

1750 Hour Service

Check:

☐ Engine oil level	☐ Drive and idler wheels and mid-rollers	☐ NEUTRAL start system
☐ Transmission-hydraulic oil level	☐ Track trash buildup	☐ Transmission PARK system
☐ Track alignment	☐ Drive wheel scraper clearance	☐ Hydraulic accumulator [Scraper]
☐ Track wear		

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ PTO drive shaft [Ag]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][c]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft		

[a] *Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.*
[b] *Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.*
[c] *If hitch is in use.*

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004BE-19-07MAY18

2000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Track alignment ☐ Track wear ☐ Drive and idler wheels and mid-rollers	☐ Track trash buildup ☐ Drive wheel scraper clearance ☐ Cab Suspension Bushings ☐ Undercarriage articulation bumper stops ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Engine air intake system ☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab] ☐ Engine coolant freeze point[c] ☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.
[c]Check annually or every 1000 operating hours, whichever occurs first.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[ab] ☐ Fuel filters[c]	☐ Cab recirculation and fresh air filters[d]	☐ Engine primary and secondary air filters[d]

[a]Service in accordance with information in appropriate Diesel 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.
[b]Change at least once per year.
[c]Change every 500 operating hours or as indicated, whichever occurs first.
[d]Change annually or every 1000 operating hours, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][e]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft	☐ PTO drive shaft [Ag]	

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004BF-19-03JUL18

2250 Hour Service

Check:

☐ Engine oil level	☐ Drive and idler wheels and mid-rollers	☐ NEUTRAL start system
☐ Transmission-hydraulic oil level	☐ Track trash buildup	☐ Transmission PARK system
☐ Track alignment	☐ Drive wheel scraper clearance	☐ Hydraulic accumulator [Scraper]
☐ Track wear		

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ PTO drive shaft [Ag]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][c]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft		

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004C0-19-07MAY18

2400 Hour Service

Check:

☐ Engine oil level	☐ Track wear	☐ Drive wheel scraper clearance
☐ Transmission-hydraulic oil level	☐ Drive and idler wheels and mid-rollers	☐ Hydraulic accumulator [Scraper]
☐ Track alignment	☐ Track trash buildup	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a]15 L engine
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 400 operating hours or as indicated, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004C1-19-07MAY18

2500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	

Check:

☐ Engine oil level	☐ Drive and idler wheels and mid-rollers	☐ Transmission PARK system
☐ Transmission-hydraulic oil level	☐ Track trash buildup	☐ Engine air intake system
☐ Track alignment	☐ Drive wheel scraper clearance	☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab]
☐ Track wear	☐ NEUTRAL start system	☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a] *13.5 L engine.*
[b] *Service in accordance with information in appropriate Diesel 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.*
[c] *Change at least once per year.*
[d] *Change every 500 operating hours or as indicated, whichever occurs first.*

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder ☐ PTO drive shaft [Ag]	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd] ☐ Heavy duty lift link pins [Ag][e] ☐ Hose support bracket [Scraper]

Vari-Cool is a trademark of Deere & Company
[a] *Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.*
[b] *Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.*
[c] *13.5 L engine.*
[d] *Lubricate annually or every 500 operating hours, whichever occurs first.*
[e] *If hitch is in use.*

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004C2-19-07MAY18

2750 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Track alignment ☐ Track wear	☐ Drive and idler wheels and mid-rollers ☐ Track trash buildup ☐ Drive wheel scraper clearance	☐ NEUTRAL start system ☐ Transmission PARK system ☐ Hydraulic accumulator [Scraper]

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder	☐ PTO drive shaft [Ag] ☐ Heavy duty lift link pins [Ag][c] ☐ Hose support bracket [Scraper]

[a] *Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.*
[b] *Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.*
[c] *If hitch is in use.*

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004C3-19-07MAY18

2800 Hour Service

Check:

☐ Engine oil level	☐ Track wear	☐ Drive wheel scraper clearance
☐ Transmission-hydraulic oil level	☐ Drive and idler wheels and mid-rollers	☐ Hydraulic accumulator [Scraper]
☐ Track alignment	☐ Track trash buildup	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a]15 L engine
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 400 operating hours or as indicated, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004C4-19-07MAY18

3000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ Aftertreatment fuel injector—15 L engine[a]

[a]See your John Deere dealer.

Check:

☐ Engine oil level	☐ Drive wheel scraper clearance	☐ Engine coolant freeze point[c]
☐ Transmission-hydraulic oil level	☐ Undercarriage articulation bumper stops	☐ Auxiliary drive belt and drive belt tensioner
☐ Track alignment	☐ NEUTRAL start system	☐ Idler wheel hub and mid-roller oil level
☐ Track wear	☐ Transmission PARK system	☐ Engine valve clearance[d]
☐ Drive and idler wheels and mid-rollers	☐ Engine air intake system	☐ Suspension mount clearance (narrow track) [Ag]
☐ Track trash buildup	☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab]	☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.
[c]Check annually or every 1000 operating hours, whichever occurs first.
[d]See your John Deere dealer.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[abc] ☐ Fuel filters[ad] ☐ Fuel tank vent filters ☐ Transmission-hydraulic oil and filters	☐ Transmission-hydraulic vent filter ☐ DEF tank vent filter—Final Tier 4/Stage V engine[e] ☐ SCV pilot valve filter ☐ Engine cooling system radiator cap—15 L engine	☐ Cab recirculation and fresh air filters[f] ☐ Engine primary and secondary air filters[f] ☐ Transmission drive shaft damper[gh] ☐ Engine crankcase breather filter element—15 L engine ☐ In-Line DEF Filter

[a]13.5 L engine.
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 500 operating hours or as indicated, whichever occurs first.
[e]Change after first year or first 1500 operating hours, whichever occurs first. After initial service, change every 3 years or 4500 operating hours, whichever occurs first.
[f]Change annually or every 1000 operating hours, whichever occurs first.
[g]Normal duty service is every 4500 operating hours. If used in heavy duty operations (such as scraper applications), change every 3000 operating hours.
[h]See your John Deere dealer.

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder ☐ PTO drive shaft [Ag]	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd] ☐ Heavy duty lift link pins [Ag][e] ☐ Hose support bracket [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

BH38674,0000CCE-19-16AUG18

3200 Hour Service

Check:

☐ Engine oil level	☐ Track wear	☐ Drive wheel scraper clearance
☐ Transmission-hydraulic oil level	☐ Drive and idler wheels and mid-rollers	☐ Hydraulic accumulator [Scraper]
☐ Track alignment	☐ Track trash buildup	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a] 15 L engine
[b] Service in accordance with information in appropriate Diesel 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.
[c] Change at least once per year.
[d] Change every 400 operating hours or as indicated, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a] Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b] If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004C6-19-07MAY18

3250 Hour Service

Check:

☐ Engine oil level	☐ Drive and idler wheels and mid-rollers	☐ NEUTRAL start system
☐ Transmission-hydraulic oil level	☐ Track trash buildup	☐ Transmission PARK system
☐ Track alignment	☐ Drive wheel scraper clearance	☐ Hydraulic accumulator [Scraper]
☐ Track wear		

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ PTO drive shaft [Ag]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][c]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft		

[a] Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b] Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c] If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004C7-19-07MAY18

3500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Track alignment ☐ Track wear	☐ Drive and idler wheels and mid-rollers ☐ Track trash buildup ☐ Drive wheel scraper clearance ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Engine air intake system ☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab] ☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a]13.5 L engine.
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 500 operating hours or as indicated, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder ☐ PTO drive shaft [Ag]	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd] ☐ Heavy duty lift link pins [Ag][e] ☐ Hose support bracket [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004C8-19-07MAY18

3600 Hour Service

Check:

☐ Engine oil level	☐ Track wear	☐ Drive wheel scraper clearance
☐ Transmission-hydraulic oil level	☐ Drive and idler wheels and mid-rollers	☐ Hydraulic accumulator [Scraper]
☐ Track alignment	☐ Track trash buildup	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a]15 L engine
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 400 operating hours or as indicated, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004C9-19-07MAY18

3750 Hour Service

Check:

☐ Engine oil level	☐ Drive and idler wheels and mid-rollers	☐ NEUTRAL start system
☐ Transmission-hydraulic oil level	☐ Track trash buildup	☐ Transmission PARK system
☐ Track alignment	☐ Drive wheel scraper clearance	☐ Hydraulic accumulator [Scraper]
☐ Track wear		

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ PTO drive shaft [Ag]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][c]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft		

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004CA-19-07MAY18

4000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	

Check:

☐ Engine oil level	☐ Track trash buildup	☐ Engine air intake system
☐ Transmission-hydraulic oil level	☐ Drive wheel scraper clearance	☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab]
☐ Track alignment	☐ Undercarriage articulation bumper stops	☐ Engine coolant freeze point[c]
☐ Track wear	☐ NEUTRAL start system	☐ Hydraulic accumulator [Scraper]
☐ Drive and idler wheels and mid-rollers	☐ Transmission PARK system	

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.
[c]Check annually or every 1000 operating hours, whichever occurs first.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[ab]	☐ Cab recirculation and fresh air filters[d]	☐ Engine primary and secondary air filters[d]
☐ Fuel filters[c]		

[a]Service in accordance with information in appropriate Diesel 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.
[b]Change at least once per year.
[c]Change every 500 operating hours or as indicated, whichever occurs first.
[d]Change annually or every 1000 operating hours, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][e]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft	☐ PTO drive shaft [Ag]	

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004CB-19-04MAY18

4250 Hour Service

Check:

☐ Engine oil level	☐ Drive and idler wheels and mid-rollers	☐ NEUTRAL start system
☐ Transmission-hydraulic oil level	☐ Track trash buildup	☐ Transmission PARK system
☐ Track alignment	☐ Drive wheel scraper clearance	☐ Hydraulic accumulator [Scraper]
☐ Track wear		

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ PTO drive shaft [Ag]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][c]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft		

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004CC-19-07MAY18

4400 Hour Service

Check:

☐ Engine oil level	☐ Track wear	☐ Drive wheel scraper clearance
☐ Transmission-hydraulic oil level	☐ Drive and idler wheels and mid-rollers	☐ Hydraulic accumulator [Scraper]
☐ Track alignment	☐ Track trash buildup	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a]15 L engine
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 400 operating hours or as indicated, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004CD-19-07MAY18

4500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ Aftertreatment fuel injector—15 L engine[a]

[a]See your John Deere dealer.

Check:

☐ Engine oil level	☐ Track trash buildup	☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab]
☐ Transmission-hydraulic oil level	☐ Drive wheel scraper clearance	☐ Auxiliary drive belt and drive belt tensioner
☐ Track alignment	☐ NEUTRAL start system	☐ Idler wheel hub and mid-roller oil level
☐ Track wear	☐ Transmission PARK system	☐ Suspension mount clearance (narrow track) [Ag]
☐ Drive and idler wheels and mid-rollers	☐ Engine air intake system	☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[abc] ☐ Fuel filters[ad] ☐ Fuel tank vent filters ☐ Transmission-hydraulic oil and filters	☐ Transmission-hydraulic vent filter ☐ DEF tank vent filter—Final Tier 4/Stage V engine[e] ☐ SCV pilot valve filter	☐ Engine cooling system radiator cap—15 L engine ☐ Transmission drive shaft damper[fg] ☐ DEF dosing unit filter—Final Tier 4/Stage V engine[h]

[a]13.5 L engine.
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 500 operating hours or as indicated, whichever occurs first.
[e]Change after first year or first 1500 operating hours, whichever occurs first. After initial service, change every 3 years or 4500 operating hours, whichever occurs first.
[f]Normal duty service is every 4500 operating hours. If used in heavy duty operations (such as scraper applications), change every 3000 operating hours.
[g]See your John Deere dealer.
[h]Change every 4500 operating hours or 3 years, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder ☐ PTO drive shaft [Ag]	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd] ☐ Heavy duty lift link pins [Ag][e] ☐ Hose support bracket [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

BH38674,0000CCF-19-04MAY18

4750 Hour Service

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Track alignment ☐ Track wear	☐ Drive and idler wheels and mid-rollers ☐ Track trash buildup ☐ Drive wheel scraper clearance	☐ NEUTRAL start system ☐ Transmission PARK system ☐ Hydraulic accumulator [Scraper]

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ PTO drive shaft [Ag]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][c]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft		

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004CF-19-07MAY18

4800 Hour Service

Check:

☐ Engine oil level	☐ Track wear	☐ Drive wheel scraper clearance
☐ Transmission-hydraulic oil level	☐ Drive and idler wheels and mid-rollers	☐ Hydraulic accumulator [Scraper]
☐ Track alignment	☐ Track trash buildup	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a]15 L engine
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 400 operating hours or as indicated, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004D0-19-07MAY18

5000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Track alignment ☐ Track wear ☐ Drive and idler wheels and mid-rollers	☐ Track trash buildup ☐ Drive wheel scraper clearance ☐ Undercarriage articulation bumper stops ☐ NEUTRAL start system ☐ Transmission PARK system	☐ Engine air intake system ☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab] ☐ Engine coolant freeze point[c] ☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.
[c]Check annually or every 1000 operating hours, whichever occurs first.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[abc] ☐ Fuel filters[ad]	☐ Cab recirculation and fresh air filters[e] ☐ Engine primary and secondary air filters[e]	☐ Engine crankshaft damper[af]

[a]13.5 L engine.
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 500 operating hours or as indicated, whichever occurs first.
[e]Change annually or every 1000 operating hours, whichever occurs first.
[f]See your John Deere dealer.

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder ☐ PTO drive shaft [Ag]	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd] ☐ Heavy duty lift link pins [Ag][e] ☐ Hose support bracket [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004D1-19-04MAY18

5200 Hour Service

Check:

☐ Engine oil level	☐ Track wear	☐ Drive wheel scraper clearance
☐ Transmission-hydraulic oil level	☐ Drive and idler wheels and mid-rollers	☐ Hydraulic accumulator [Scraper]
☐ Track alignment	☐ Track trash buildup	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a] *15 L engine*
[b] *Service in accordance with information in appropriate Diesel 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.*
[c] *Change at least once per year.*
[d] *Change every 400 operating hours or as indicated, whichever occurs first.*

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a] *Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.*
[b] *If hitch is in use.*

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004D2-19-07MAY18

5250 Hour Service

Check:

☐ Engine oil level	☐ Drive and idler wheels and mid-rollers	☐ NEUTRAL start system
☐ Transmission-hydraulic oil level	☐ Track trash buildup	☐ Transmission PARK system
☐ Track alignment	☐ Drive wheel scraper clearance	☐ Hydraulic accumulator [Scraper]
☐ Track wear		

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ PTO drive shaft [Ag]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][c]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft		

[a] *Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.*
[b] *Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.*
[c] *If hitch is in use.*

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004D3-19-07MAY18

5500 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	

Check:

☐ Engine oil level ☐ Transmission-hydraulic oil level ☐ Track alignment ☐ Track wear	☐ Drive and idler wheels and mid-rollers ☐ Track trash buildup ☐ Drive wheel scraper clearance ☐ NEUTRAL start system	☐ Transmission PARK system ☐ Engine air intake system ☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab] ☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a]13.5 L engine.
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 500 operating hours or as indicated, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder ☐ PTO drive shaft [Ag]	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd] ☐ Heavy duty lift link pins [Ag][e] ☐ Hose support bracket [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004D4-19-07MAY18

5600 Hour Service

Check:

☐ Engine oil level	☐ Track wear	☐ Drive wheel scraper clearance
☐ Transmission-hydraulic oil level	☐ Drive and idler wheels and mid-rollers	☐ Hydraulic accumulator [Scraper]
☐ Track alignment	☐ Track trash buildup	

Change:

☐ Engine oil and filter[abc]	☐ Fuel filters[ad]	

[a] *15 L engine*
[b] *Service in accordance with information in appropriate Diesel 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.*
[c] *Change at least once per year.*
[d] *Change every 400 operating hours or as indicated, whichever occurs first.*

Lubricate:

☐ Rear hitch [Ag][a]	☐ Steering pins	☐ Heavy duty lift link pins [Ag][b]
☐ Hinge pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]

[a] *Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.*
[b] *If hitch is in use.*

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004D5-19-07MAY18

5750 Hour Service

Check:

☐ Engine oil level	☐ Drive and idler wheels and mid-rollers	☐ NEUTRAL start system
☐ Transmission-hydraulic oil level	☐ Track trash buildup	☐ Transmission PARK system
☐ Track alignment	☐ Drive wheel scraper clearance	☐ Hydraulic accumulator [Scraper]
☐ Track wear		

Lubricate:

☐ Rear hitch [Ag][a]	☐ Heavy-duty gudgeon bearings	☐ PTO drive shaft [Ag]
☐ Hinge pins	☐ Lower drive line bearings[b]	☐ Heavy duty lift link pins [Ag][c]
☐ Steering pins	☐ Track tension cylinder	☐ Hose support bracket [Scraper]
☐ Telescoping drive shaft		

[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

EC82310,00004D6-19-07MAY18

6000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ Aftertreatment fuel injector—15 L engine[a]

[a]See your John Deere dealer.

Check:

☐ Engine oil level	☐ Drive wheel scraper clearance	☐ Engine coolant freeze point[c]
☐ Transmission-hydraulic oil level	☐ Undercarriage articulation bumper stops	☐ Auxiliary drive belt and drive belt tensioner
☐ Track alignment	☐ NEUTRAL start system	☐ Idler wheel hub and mid-roller oil level
☐ Track wear	☐ Transmission PARK system	☐ Engine valve clearance[d]
☐ Drive and idler wheels and mid-rollers	☐ Engine air intake system	☐ Suspension mount clearance (narrow track) [Ag]
☐ Track trash buildup	☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab]	☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.
[c]Check annually or every 1000 operating hours, whichever occurs first.
[d]See your John Deere dealer.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[ab] ☐ Fuel filters[c] ☐ Fuel tank vent filters ☐ Transmission-hydraulic oil and filters ☐ Transmission-hydraulic vent filter	☐ DEF tank vent filter—Final Tier 4/Stage V engine[d] ☐ SCV pilot valve filter ☐ Engine cooling system radiator cap—15 L engine ☐ Cab recirculation and fresh air filters[e]	☐ Engine primary and secondary air filters[e] ☐ Transmission drive shaft damper[fg] ☐ Engine crankcase breather filter element—15 L engine ☐ Engine coolant[h]

[a]Service in accordance with information in appropriate Diesel 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.
[b]Change at least once per year.
[c]Change every 500 operating hours or as indicated, whichever occurs first.
[d]Change after first year or first 1500 operating hours, whichever occurs first. After initial service, change every 3 years or 4500 operating hours, whichever occurs first.
[e]Change annually or every 1000 operating hours, whichever occurs first.
[f]Normal duty service is every 4500 operating hours. If used in heavy duty operations (such as scraper applications), change every 3000 operating hours.
[g]See your John Deere dealer.
[h]INITIAL change interval is 6 years or 6000 operating hours, provided cooling system is topped off using only John Deere Cool-Gard™ II and premix. SCHEDULED interval (2 years or 2000 operating hours) can be extended up to 6 years and 6000 operating hours, depending upon coolant being used. See Drain Intervals for Diesel Engine Coolant in Engine Coolant section of this Operator's Manual.

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder ☐ PTO drive shaft [Ag]	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd] ☐ Heavy duty lift link pins [Ag][e] ☐ Hose support bracket [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

BH38674,0000CD0-19-04MAY18

Services - 6250 to 8800 Hours

Record completion of scheduled services 6250 to 8800 hours of operation. Use listed equivalent hourly service charts to determine which tasks to perform.

Hour	Charts	Date	Signature	Dealer's Stamp
6250				
6400				
6500				
6750				

Hour	Charts	Date	Signature	Dealer's Stamp
6800				
7000				
7250				
7400				
7500				
7750				
7800				
8000				
8250				
8400				
8500				
8750				
8800				

RX32825,0001835-19-13SEP17

9000 Hour Service

Clean:

☐ Dual beam radar sensor	☐ Optional fuel water separator and filter element	☐ Aftertreatment fuel injector—15 L engine[a]

[a]See your John Deere dealer.

Check:

☐ Engine oil level	☐ Drive wheel scraper clearance	☐ Engine coolant freeze point[c]
☐ Transmission-hydraulic oil level	☐ Undercarriage articulation bumper stops	☐ Auxiliary drive belt and drive belt tensioner
☐ Track alignment	☐ NEUTRAL start system	☐ Idler wheel hub and mid-roller oil level
☐ Track wear	☐ Transmission PARK system	☐ Engine valve clearance[d]
☐ Drive and idler wheels and mid-rollers	☐ Engine air intake system	☐ Suspension mount clearance (narrow track) [Ag]
☐ Track trash buildup	☐ Vari-Cool™ fan drive and belt—Final Tier 4/ Stage V engine[ab]	☐ Hydraulic accumulator [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]13.5 L engine.
[b]Check annually or every 500 operating hours, whichever occurs first.
[c]Check annually or every 1000 operating hours, whichever occurs first.
[d]See your John Deere dealer.

Tighten:

☐ Drive wheel nuts, idler wheel, and mid-roller cap screws	☐ Drawbar support cap screws	

Change:

☐ Engine oil and filter[abc] ☐ Fuel filters[ad] ☐ Fuel tank vent filters ☐ Transmission-hydraulic oil and filters ☐ Transmission-hydraulic vent filter	☐ DEF tank vent filter—Final Tier 4/Stage V engine[e] ☐ SCV pilot valve filter ☐ Engine cooling system radiator cap—15 L engine ☐ Cab recirculation and fresh air filters[f] ☐ Engine primary and secondary air filters[f]	☐ Transmission drive shaft damper[gh] ☐ DEF dosing unit filter—Final Tier 4/Stage V engine[i] ☐ Engine crankcase breather filter element—15 L engine ☐ Front drive shaft u-joints[h]

[a]13.5 L engine.
[b]Service in accordance with information in appropriate Diesel 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.
[c]Change at least once per year.
[d]Change every 500 operating hours or as indicated, whichever occurs first.
[e]Change after first year or first 1500 operating hours, whichever occurs first. After initial service, change every 3 years or 4500 operating hours, whichever occurs first.
[f]Change annually or every 1000 operating hours, whichever occurs first.
[g]Normal duty service is every 4500 operating hours. If used in heavy duty operations (such as scraper applications), change every 3000 operating hours.
[h]See your John Deere dealer.
[i]Change every 4500 operating hours or 3 years, whichever occurs first.

Lubricate:

☐ Rear hitch [Ag][a] ☐ Hinge pins ☐ Steering pins ☐ Telescoping drive shaft	☐ Heavy-duty gudgeon bearings ☐ Lower drive line bearings[b] ☐ Track tension cylinder ☐ PTO drive shaft [Ag]	☐ Vari-Cool™ fan drive—Final Tier 4/Stage V engine[cd] ☐ Heavy duty lift link pins [Ag][e] ☐ Hose support bracket [Scraper]

Vari-Cool is a trademark of Deere & Company
[a]Under normal usage, lubricate every 250 operating hours. If used daily, lubricate every 50 operating hours.
[b]Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.
[c]13.5 L engine.
[d]Lubricate annually or every 500 operating hours, whichever occurs first.
[e]If hitch is in use.

Service Completed Date: _____ Signature: _____ Dealer Stamp:

Comments:

BH38674,0000CD1-19-04MAY18

Services Beyond 9000 Hours

Record completion of scheduled services beyond 9000 hours of operation. Use listed equivalent hourly service charts to determine which tasks to perform.

Hour	Charts	Date	Signature	Dealer's Stamp
9250				
9400				
9500				
9750				
9800				
10000				
10250				
10400				
10500				
10750				
10800				
11000				

KD34109,000035F-19-13SEP17

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:

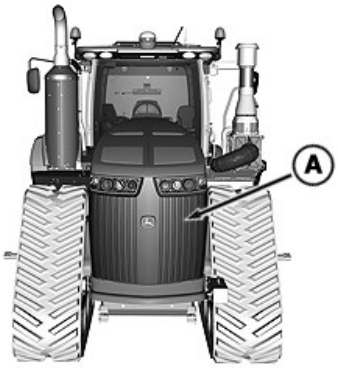
- Ensure exhaust filter cleaning is set to Auto, see Exhaust Filter System Overview—Final Tier 4/Stage V Engine and Auto Exhaust Filter Cleaning Mode—Final Tier 4/Stage V Engine in Emissions Equipment section of this Operator's Manual.
- Perform parked exhaust filter cleaning (if system allows), see 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

Engine Cooling System—13.5 L Engine

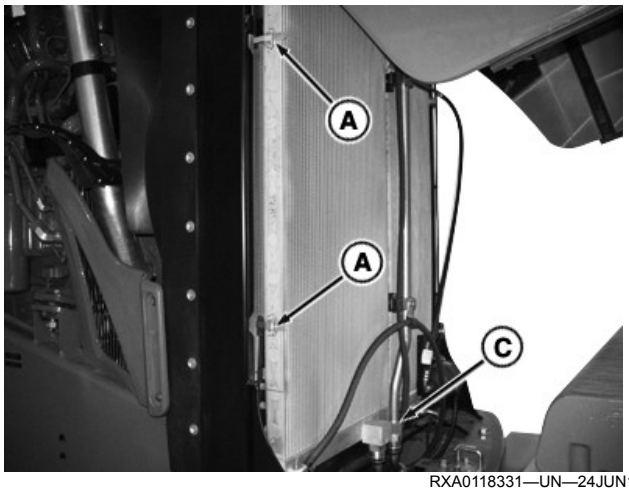
Turn engine OFF.



RXA0148250—UN—29MAY15

Clean grille screen (A) using a brush or compressed air.

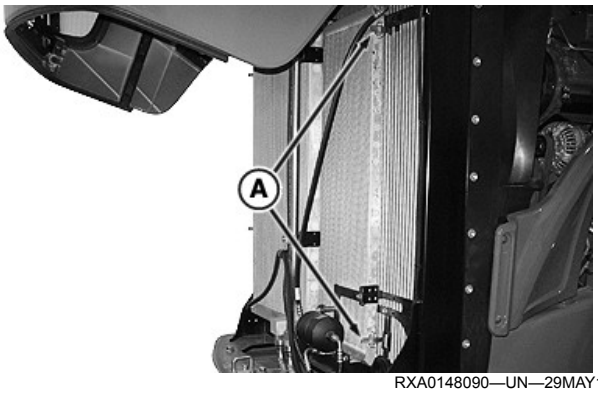
Clean trash from engine compartment shields.



RXA0118331—UN—24JUN11

Use caution when oil-fuel cooler is opened. Steel cooler line may contact air conditioner line when cooler is at a 30° angle. Steel line fitting (C) does not rotate and can cause damage to the line fitting if extended too far.

Release hood latch and raise hood.



RXA0148090—UN—29MAY15

Release air conditioning condenser retaining clips (A) to swing condenser forward for better cleaning access.



RXA0118338—UN—23JUN11

Use compressed air to clean air conditioning condenser (B) using compressed air.



RXA0118333—UN—23JUN11

Release oil-fuel cooler retaining clips (A) to swing cooler (D) forward.

Use compressed air to clean radiator. Straighten any bent radiator fins.

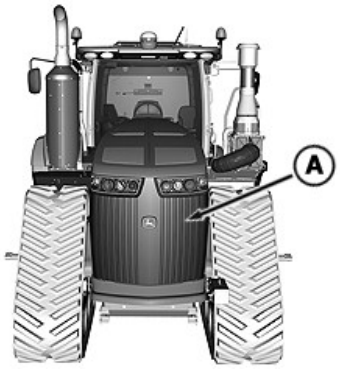
Close air conditioning condenser and oil-fuel cooler and lock the retaining clips.

Gently lower hood and firmly close until hood latch is locked.

SV81855,0000363-19-16AUG17

Engine Cooling System—15 L Engine

Turn engine OFF.

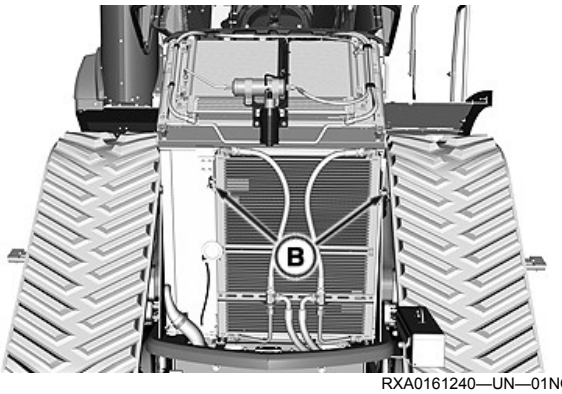


RXA0148250—UN—29MAY15

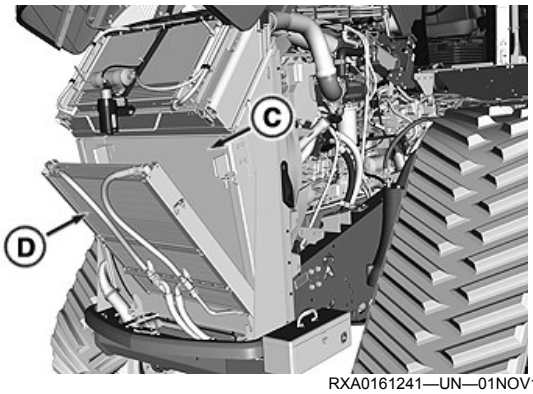
Clean grille screen (A) using a brush or compressed air.

Clean trash from engine compartment shields.

Release hood latch and raise hood.



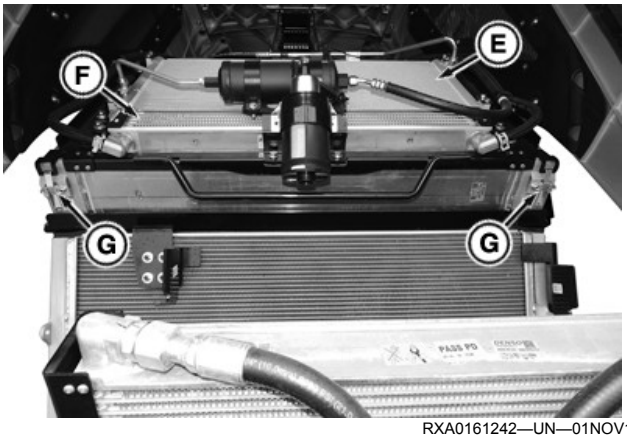
RXA0161240—UN—01NOV17



RXA0161241—UN—01NOV17

Release oil cooler (D) retaining pins (B) to lower oil cooler forward carefully for easier cleaning access.

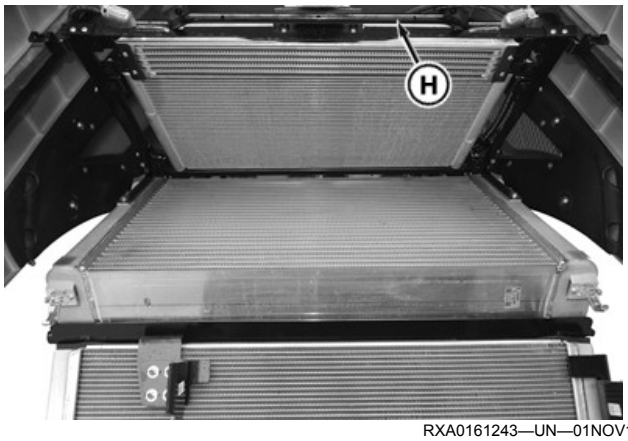
Use compressed air to clean oil cooler and radiator (C).



RXA0161242—UN—01NOV17

Release Air Conditioning retaining pins (G) and lift air conditioning condenser (E) and fuel cooler (F) up for easier cleaning access.

Use compressed air to clean air conditioning condenser and fuel cooler.



RXA0161243—UN—01NOV17

Close air conditioning condenser and oil-fuel cooler using handle (H). Pull air conditioning condenser and fuel cooler out to unlock and lower carefully. Lock retaining pins.

Lift oil cooler up and lock retaining pins.

Gently lower hood and firmly close until hood latch is locked.

SV81855,0000364-19-30OCT17

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

DEF Tank Filler Neck Filter

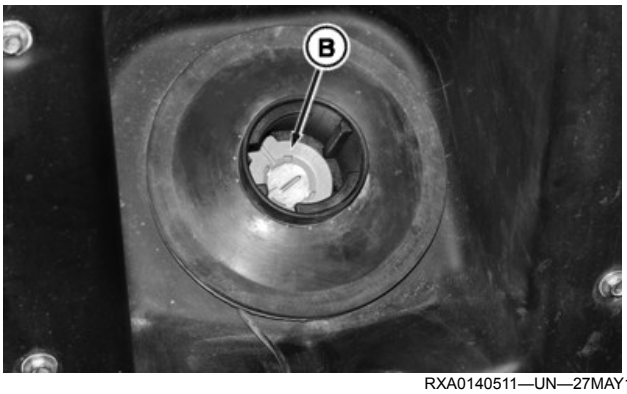
If DEF fill slows, clean tank filler neck filter.

1. Place transmission in Park and shut off engine.



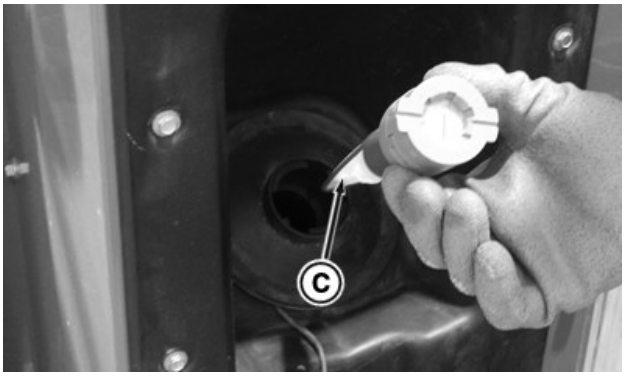
RXA0140510—UN—27MAY14

2. Open DEF tank cap (A).



RXA0140511—UN—27MAY14

3. Turn filter retainer (B) counterclockwise until it unlocks, then pull straight out of DEF tank.



RXA0140512—UN—27MAY14

4. Clean filler neck filter (C) with warm water to remove any debris.
5. Install in reverse order.

SV81855,000027F-19-14NOV17

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

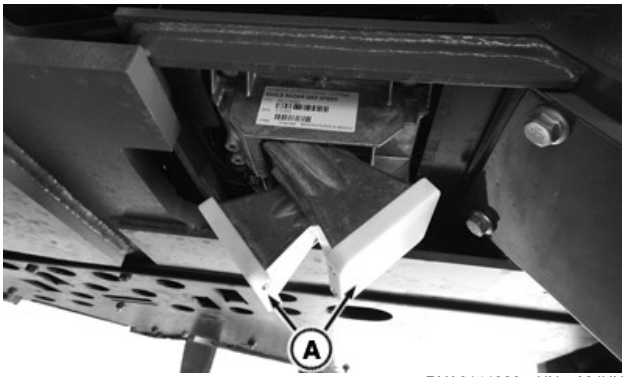
Dual Beam Radar Sensor

IMPORTANT: Inspect radar sensor horns for dirt or debris build up, which affects accuracy performance.

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.

1. Check radar sensor for damage.

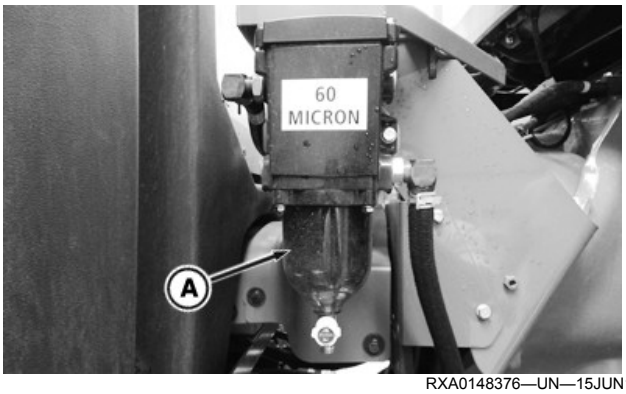


RXA0141826—UN—02JUN14

2. Clean radar sensor horns (A) with warm water and mild soap.
3. Dry with clean soft cloth.

RX32825,000064B-19-19JUL17

Optional Fuel Water Separator

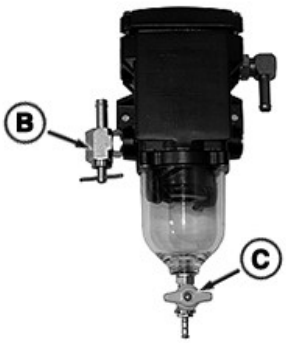


RXA0148376—UN—15JUN15

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.

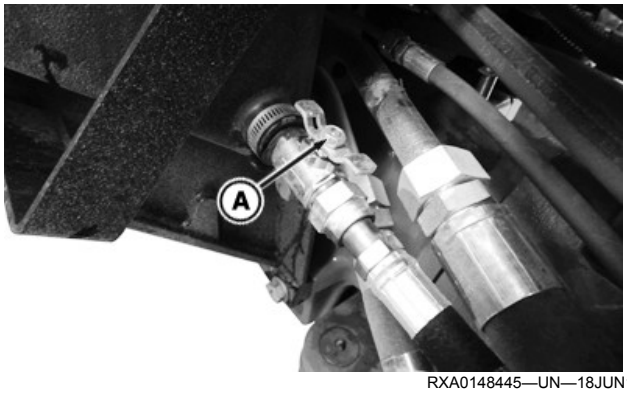
4. Push IN on drain valve (C) and turn COUNTERCLOCKWISE to drain water and dirt from bowl.
5. Close drain valve and allow water and dirt to settle again.
6. When all dirt and water have been drained, proceed to step 7.
7. Close bleed screw and open fuel shut-off valve.
8. Start and run engine at high 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

IMPORTANT: Clean 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.



RXA0148445—UN—18JUN15

Fuel Shutoff (Located Under Fuel Water Separator)

2. Close fuel shut-off valve (A).

NOTE: Drain fuel into appropriate container and dispose of it in accordance with local laws and ordinances.

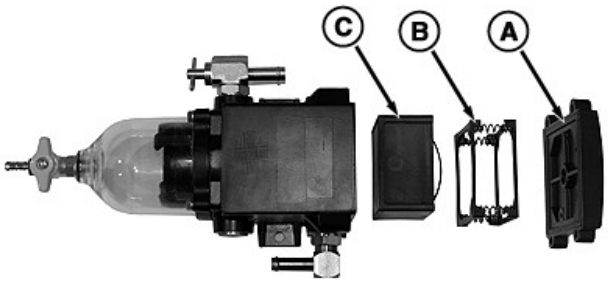
3. Open drain valve and drain fuel from bowl.



RXA0084320—UN—26SEP05

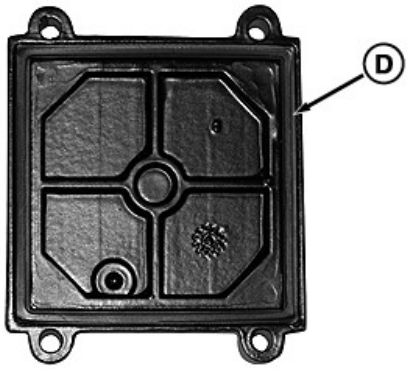
Water Separator Lid

4. Loosen lid cap screws evenly in sequence shown.



RXA0084322—UN—26SEP05

5. Remove lid (A), spring cassette (B). Lift filter element (C) 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.



RXA0084324—UN—26SEP05

9. Inspect lid gasket (D) condition and replace if necessary.



RXA0084320—UN—26SEP05

Lid Cap Screw Tightening Sequence

10. Install lid. Tighten cap screws in sequence shown.
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.

BH38674,0000007-19-15AUG17

Aftertreatment Fuel Injector—15 L Engine

See your John Deere dealer to perform this service.

SV81855,00002C1-19-19JUL17

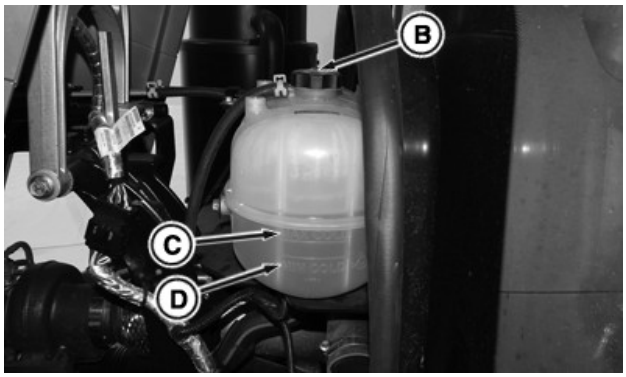
Engine Coolant Level

Coolant level is monitored electrically. When coolant is low a diagnostic trouble code will appear on the CommandCenter™.



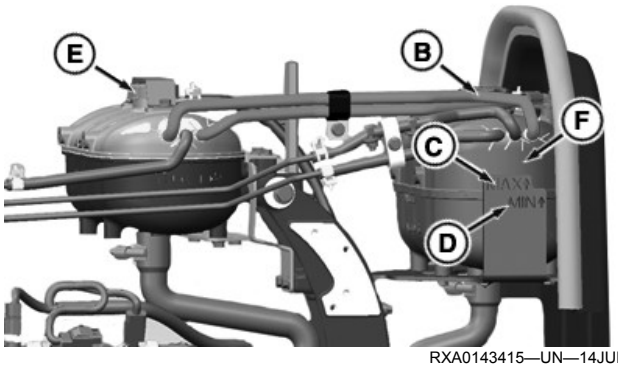
RXA0141758—UN—30MAY14

1. Pull hood release (A) and raise hood.



RXA0141827—UN—30MAY14

13.5 L Engine



RXA0143415—UN—14JUL14

15 L Engine (Left-Hand Side)

2. Check coolant level on side of de-aeration tank. Level should be at or above MIN COLD line (D). If level is low, before adding coolant check for any signs of leakage. Repair if necessary.

IMPORTANT: Do not open de-aeration tank cap (B) when engine is warm. Doing so will add air to coolant system.

NOTE: 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.

NOTE: 15 L engine, fill rear coolant tank (F) through de-aeration tank cap (B).

Radiator pressure cap (E) controls pressure in coolant tanks and for water pump.

3. Wait until engine is cool. Remove de-aeration tank cap (B) and add coolant as specified in Engine Coolant section of this Operator's Manual. Do not fill above MAX COLD line (C). Reinstall de-aeration tank cap.
4. Lower and secure hood.

SV81855,00001C6-19-20FEB18

Engine Coolant Freeze Point

IMPORTANT: Perform coolant service every 1000 hours or annually, whichever comes first.



TS281—UN—15APR13

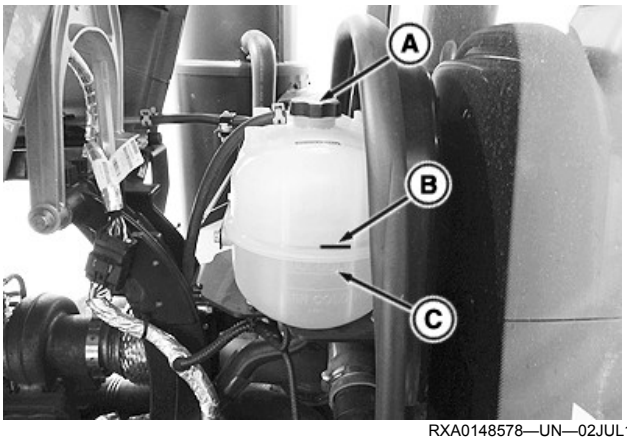
CAUTION: Explosive release of fluids from pressurized cooling system can cause serious burns.

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.

IMPORTANT: Do not open de-aeration tank cap when engine is warm. Doing so will add air to coolant system.

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RXA0148578—UN—02JUL15

Surge Tank Cap-13.5 L Engine (Shown)

A—Cap
B—Max Cold Line
C—Min Cold Line

2. Slowly turn de-aeration tank cap (A) to relieve pressure. Remove cap.

NOTE: More precise test device is available, see Testing Coolant Freeze Point in Engine Coolant section of this Operator's Manual.

3. Test coolant freeze point using a coolant refractometer available through your John Deere™ dealer. See Testing Coolant Freeze Point in Engine Coolant section of this Operator's Manual.

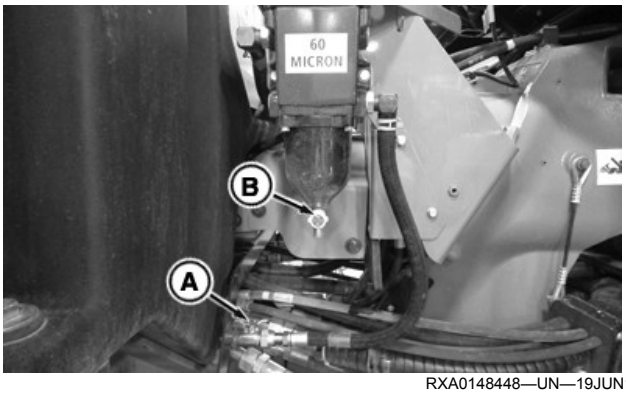
NOTE: Visually check cap O-ring for sealing effectiveness. A correctly sealing O-ring will have imprint of tank neck mating surface with no apparent scratches or leak paths. If O-ring is not sealing correctly, replace cap.

4. Install de-aeration tank cap.
5. Close and secure hood.

RX32825,000065E-19-30OCT17

Optional Fuel/Water Separator

1. Shut off engine and remove engine access panel, see Remove Engine Access Panel in Service - General Information section of this Operator's Manual.



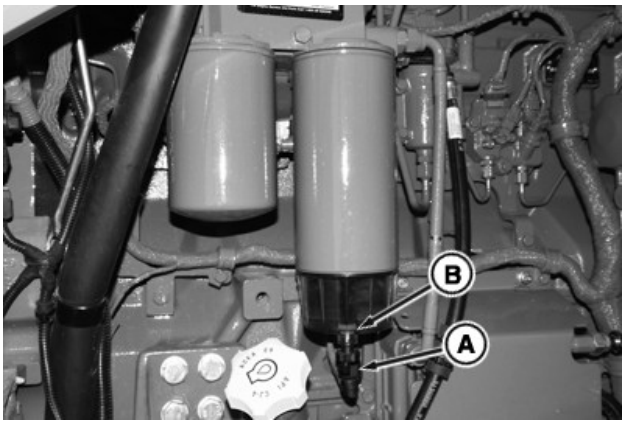
RXA0148448—UN—19JUN15

2. Close fuel shutoff valve (A).
3. Open drain valve (B) to release any water from fuel water separator.
4. Close drain valve and reopen fuel shutoff valve.

BH38674,0000008-19-26APR18

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.

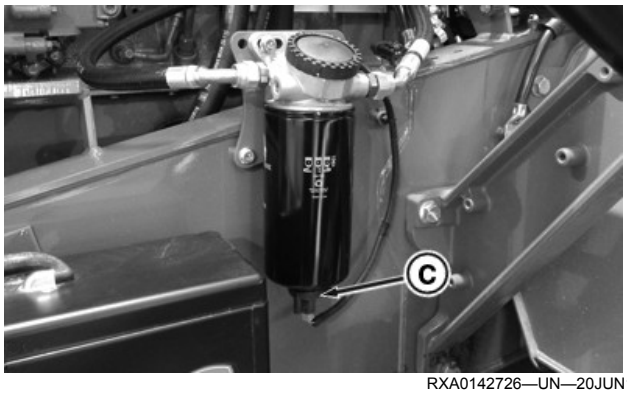


RXA0141831—UN—30MAY14

13.5 L Engine

13.5 L engine: In addition to a Fuel Water Separator, water can also be drained from fuel system through fuel filters. Turn drain valve nut (A) to release water from fuel filters.

On some filters, tabs (B) are visible and will drop when drain valve nut is opened. Turn drain valve nut completely counterclockwise to drain water.



RXA0142726—UN—20JUN14

15 L Engine

15 L engine without fuel water separator: Fuel filter is located on gudgeon step. Turn drain valve (C) to drain water.

SV81855,000028A-19-12APR18

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.

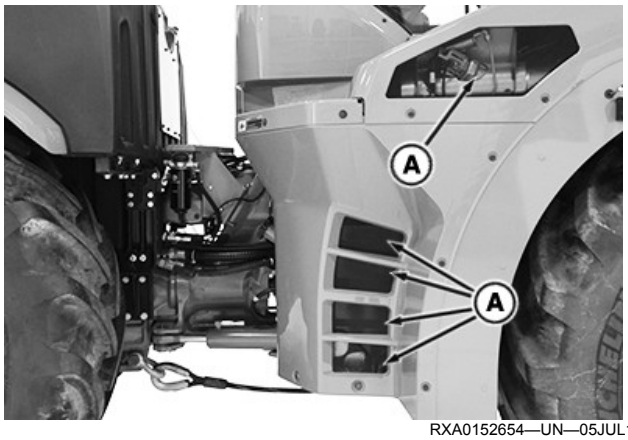
Never steam clean or pour cold water on an injection pump that is operating or hot. Pump could seize.

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

Outer Exhaust Screens

IMPORTANT: Reduce possibility of damage to SCR system. Keep screen unrestricted.



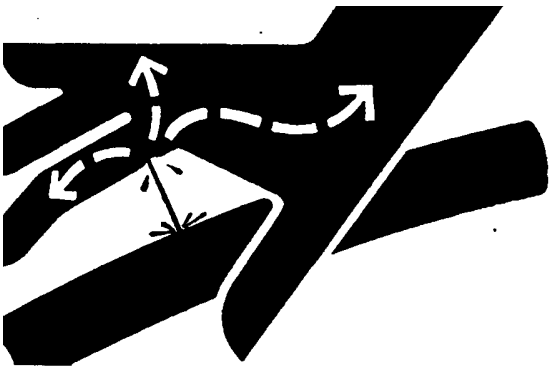
RXA0152654—UN—05JUL16

Right-Hand Panel

Inspect outer exhaust screens (A). Clean out debris as necessary.

SV81855,000027D-19-18JUL17

Air Conditioning System



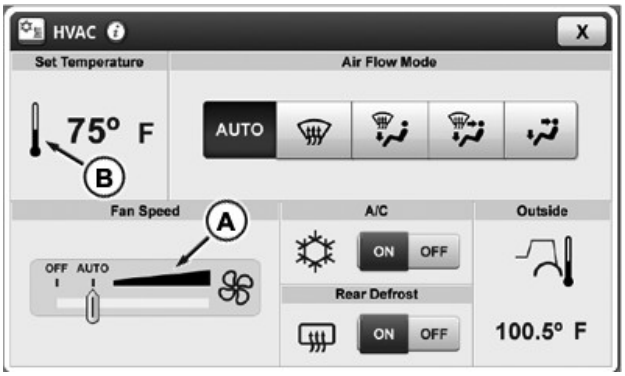
X9811—UN—23AUG88

CAUTION: Avoid possible injury. Improper servicing may cause refrigerant to penetrate eyes and skin or cause burns.

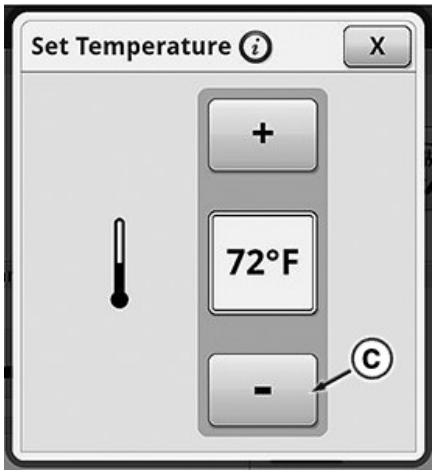
IMPORTANT: R-134a refrigerant must be used in air conditioning system. Service requires special equipment and procedures. See your John Deere dealer.

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

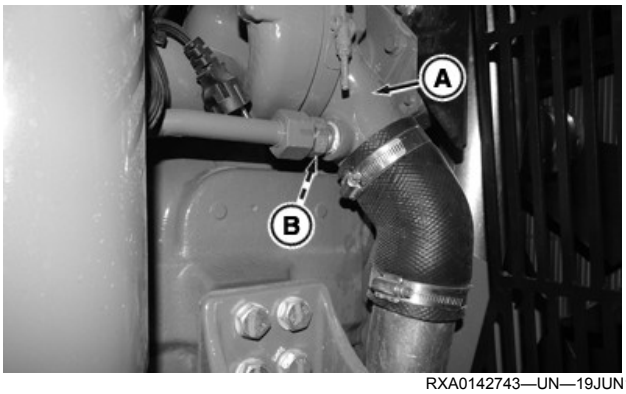
- Confirm system does not function correctly. Access HVAC page on CommandCenter™, see HVAC Settings--Generation 4 CommandCenter™ in HVAC section of this Operator's Manual. Set fan increment bar (A) to highest speed. Access Set Temperature page (B) and set temperature to coldest setting (C). Operate engine 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.

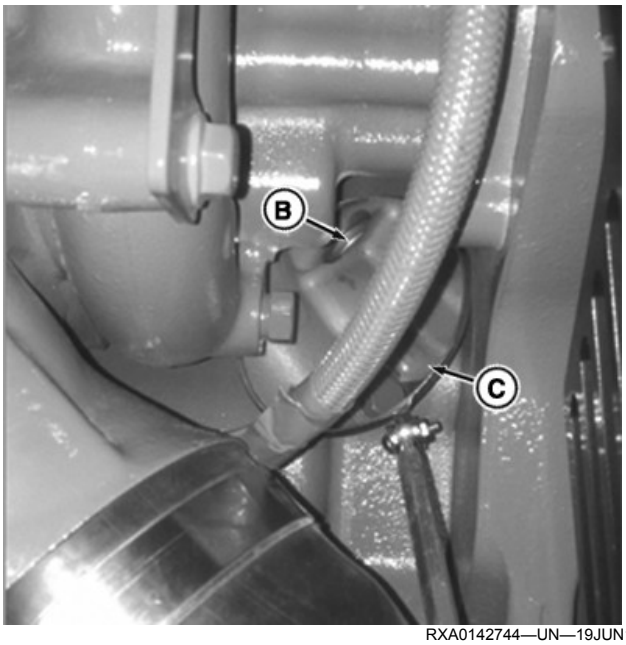
TS36762,000012D-19-04APR18

Engine Water Pump Weep Hole—13.5 L Engine

1. Remove front engine side shield, see Remove Front Engine Side Shield in Service - General Information section of this Operator's Manual.



RXA0142743—UN—19JUN14



RXA0142744—UN—19JUN14

2. Inspect weep hole (B) on under side of water pump (A) for oil or coolant leakage. Use mirror (C) to assist in locating weep hole.
   - Oil leakage indicates a damaged water pump seal.
   - Coolant leakage indicates a damaged front seal.

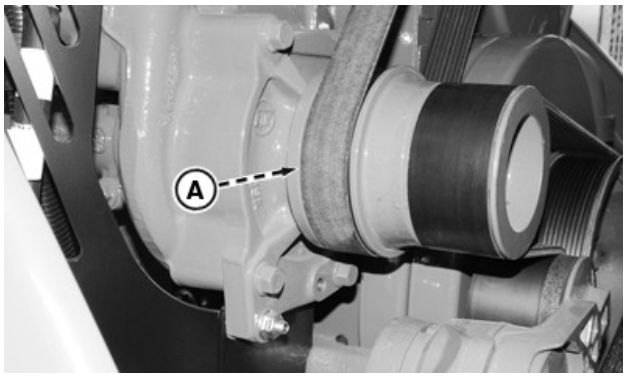
   If leakage is detected, see your John Deere dealer.
3. Install front engine side shield, close and secure hood.

TO84419,00001CE-19-26APR18

Engine Water Pump Seal—15 L Engine

1. Remove front engine side shield, see Remove Front Engine Side Shield in Service - General Information section of this Operator's Manual..

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RXA0141838—UN—02JUN14

2. Visually inspect engine, especially around water pump (A), and ground below engine for any leaks or puddles.

   If leakage is detected, see your John Deere dealer.

3. Install front engine side shield and close hood.

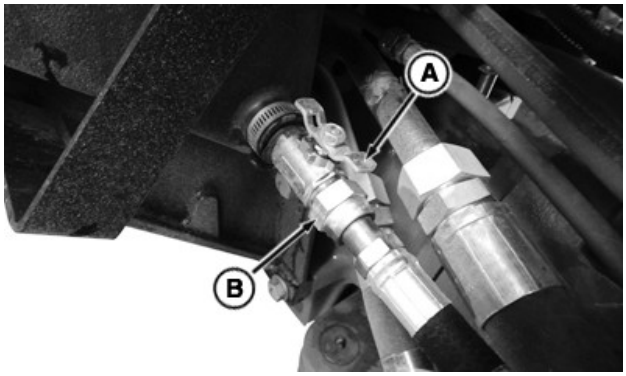
SV81855,000028D-19-26APR18

Fuel Tank Sump

NOTE: Drain fuel tank sump if fuel filters are replaced frequently or water in the fuel tank. Service may be required more often under some conditions.

1. Place a catch pan under the drain tee.

IMPORTANT: Use wrench to hold drain fitting while opening or closing tee or damage to tank threads can occur.



RXA0148377—UN—15JUN15

2. Use a wrench and remove drain cap (B).
3. Turn drain tree (A) by hand. Drain fuel until clean, water free fuel appears.

IMPORTANT: Drain tree should be hand tight. If wrench must be used, apply least force necessary to avoid damaging fitting and threads.

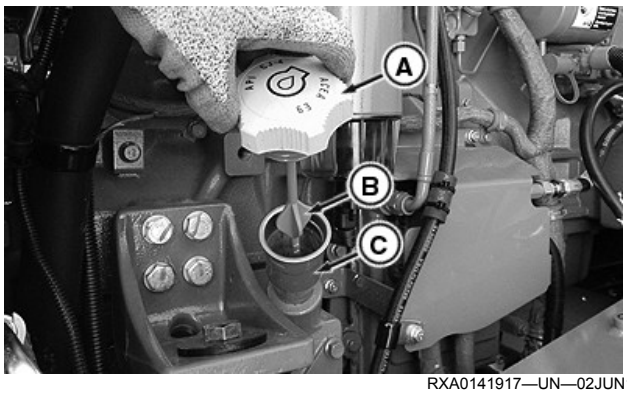
4. Tighten drain tree by hand to close.
5. Attach drain cap. Tighten with wrench.

BH38674,0000002-19-26JUL17

Engine Oil Level—13.5 L Engine

1. Remove engine access panel, see Remove Engine Access Panel in Service - General Information section of this Operator's Manual.

NOTE: Most reliable oil level is determined before starting engine, after tractor has been parked on level ground for several hours or overnight.



RXA0141917—UN—02JUN14

13.5 L Engine

2. Remove fill cap (A) and check oil level on dipstick (B) with tractor on level ground.



RXA0141918—UN—02JUN14

3. Oil level on dipstick is considered FULL when oil is within cross-hatched area (D).

IMPORTANT: Do not operate engine with oil level below cross-hatched area on dipstick.

4. If oil is required:
   - Remove fill cap.
   - Add oil through fill tube (C), see Diesel Engine Oil in Engine Oil section of this Operator's Manual.

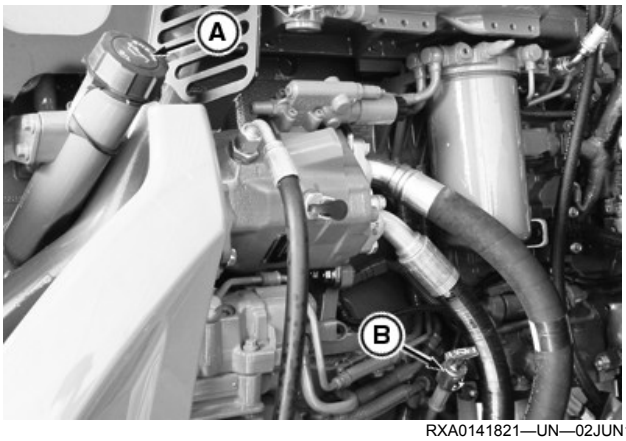
Tighten fill cap securely and install engine access panel.

RX32825,000062F-19-26APR18

Engine Oil Level—15 L Engine

1. Remove engine access panel, see Remove Engine Access Panel in Service - General Information section of this Operator's Manual.

NOTE: Most reliable oil level is determined before starting engine, after tractor has been parked on level ground for several hours or overnight.



RXA0141821—UN—02JUN14



RXA0141822—UN—02JUN14

NOTE: Dipstick is a different location (B) than fill tube.

Remove dipstick (C) and check oil level with tractor on level ground before starting tractor.



RXA0141823—UN—02JUN14

3. Oil level on dipstick is considered FULL when oil is within cross-hatched area (D).

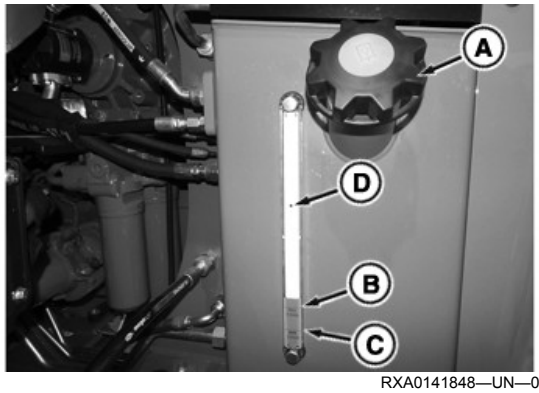
IMPORTANT: Do not operate engine with oil level below cross-hatched area on dipstick.

4. If oil is required:
   - Remove fill cap.
   - Add oil, see Diesel Engine Oil in Engine Oil section of this Operator's Manual.
5. Insert dipstick and install engine access panel.

RD47322,000033E-19-26APR18

Transmission-Hydraulic Oil Level

IMPORTANT: Poor shift quality or transmission damage may occur if incorrect oil is used, see Transmission and Hydraulic Oil in Other Lubricants section of this Operator's Manual.



RXA0141848—UN—02JUN14

Transmission-Hydraulic Oil Sight Gauge

Do not operate tractor if oil level is at or below MIN COLD mark (C) in sight gauge with engine off.

If topping off oil in hydraulic reservoir, use sight gauge marks to estimate volume and add to transmission fill tube.

Hydraulic oil reservoir does not hold all system hydraulic oil capacity. Transmission and front and rear axles hold additional system oil. If possible, check oil level prior to first start of day. Ambient temperature should be 7° C (45° F) or above.

For implements and applications requiring high volumes of oil transfer (for example - large air seeders or pulling 3 scrapers), hydraulic reservoir can be filled up to High Volume Takeout Oil Mark (D). Additional capacity is 58.5 L (15.4 gal) above MIN COLD (C).

1. Check tractor and implement for leaks daily, before start-up.
2. Park tractor on level ground with implement fully lowered.
3. Place transmission shift lever in PARK.
4. Start engine and set engine speed set to 1200 rpm.

5. Run engine for five minutes.
6. Shut off engine and wait five minutes for oil level to stabilize.

IMPORTANT: Contaminated or overheated oil may cause damage to transmission-hydraulic system components. Oil which is:

- **Milky or foamy may be contaminated with water. Change oil immediately.**
- **Discolored or smells burned may have been overheated. See your John Deere dealer.**

7. Check hydraulic reservoir oil level using sight gauge located on right-hand side of gudgeon area. Examine oil in sight gauge for milky or foamy appearance.

NOTE: As tractor and hydraulic system temperature increases, oil level will rise in reservoir.

Oil level in reservoir fluctuates depending upon volume of oil exchanged with an attached implement. If low oil level results in hydraulic pressure drop, a STOP engine light will come on.

8. Open hydraulic reservoir cap (A). Check for burned oil odor.
9. If reservoir oil level is between FULL COLD (B) and MIN COLD (C) marks, tractor can be used for normal operation. Volume difference between MIN COLD and FULL COLD marks is about 11.4 L (3 gal).
10. If reservoir oil level is below MIN COLD mark, add oil to hydraulic oil reservoir. Remove hydraulic oil reservoir cap and add oil, see Transmission-Hydraulic Oil in Service - Change section of this Operator's Manual.

RX32825,000184B-19-12APR18

Track Alignment

IMPORTANT: Avoid operating track in grease, oil, or other petroleum chemicals. Avoid spilling these materials on tracks during servicing of tractor.

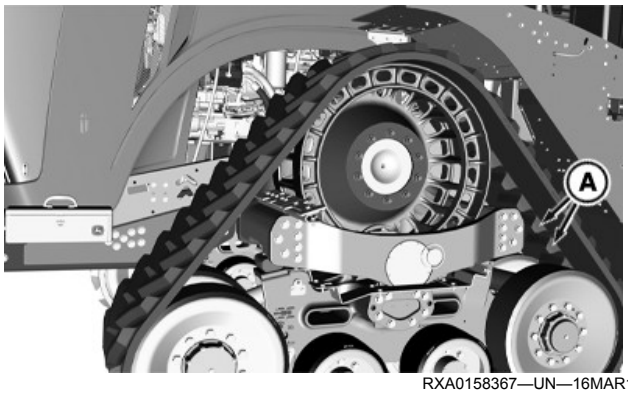
Avoid debris buildup in any of the frame area. Clean as necessary.

NOTE: When tractor is new, track alignment has been preset at factory. Alignment should not be adjusted until after completion of initial break-in.

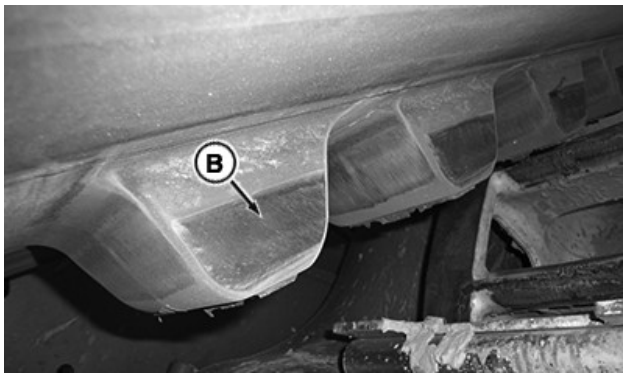
After initial break-in and alignment have been completed, the complete break-in process will occur during the first full operating season. During this time, operate tractor:

• In soft soil as much as possible.

• In high speed transport situations as little as possible - especially when pulling an implement.



RXA0158367—UN—16MAR17

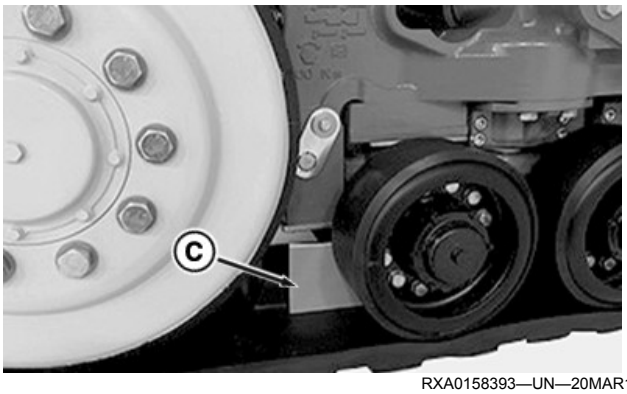


RXA0158368—UN—16MAR17

1. Inspect drive lugs (A) for side wear. Compare wear on inboard and outboard sides of drive lugs. Even in routine operating conditions, drive lugs will exhibit wear as shown (B), especially during break-in side slope operation. Only perform alignment if there is significant difference in wear between the two sides of a drive lug.
2. If significant differences in drive lug wear are noted, go to step 3.

IMPORTANT: Tracks will typically move from side to side during operation, so some drive lug side contact is normal. Track does not need to be centered to achieve proper alignment. If track passes shim check, track alignment is correct.

3. Fabricate 77 mm (3 in) by 204 mm (8 in) track alignment check gauge (shim) from:
   - 3.2 mm (1/8 in) thick metal (wide track).
   - 4.8 mm (3/16 in) thick metal (narrow track).
4. Drive tractor 45 m (150 ft) on level ground. A road is generally not suitable, due to crown of road surface.
5. While still moving, shift to neutral and allow tractor to coast to a stop with no braking or steering input.
6. When tractor stops, shift tractor to PARK and shut off engine.



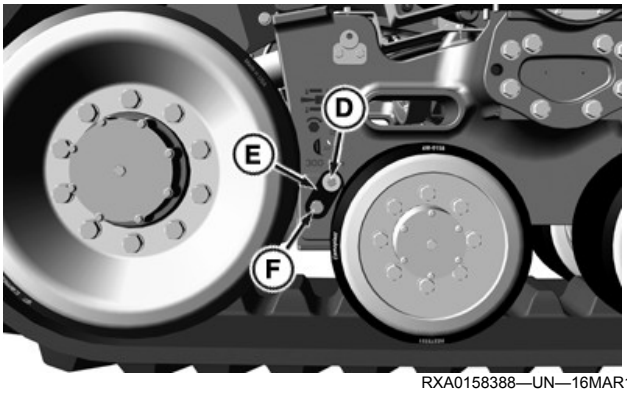
RXA0158393—UN—20MAR17

7. Insert fabricated shim between outboard front mid-roller and drive lug (C). Shim should fit freely all the way down to the track inner surface.
8. Repeat clearance check on outboard front mid-rollers.

NOTE: Complete alignment check on all track assemblies before performing any adjustment.

9. If track is aligned but drive lug side wear does not decrease after break-in or have recently accelerated, contact see your John Deere dealer.
10. No alignment adjustment is required if shim fits freely on both sides of drive lug and drive lug is not contacting front mid-roller - even if not equally centered in distance inboard to outboard sides. Go to step 18.

    If shim does not fit on one side, adjust track alignment. Go to step 11.

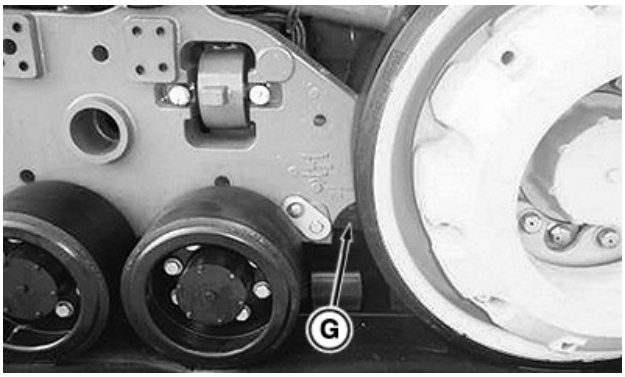


RXA0158388—UN—16MAR17

11. Remove lock plate spacer and bolts (D) and lock plates (E) from inboard and outboard sides of track to be adjusted.
12. On side you want track to move away from, loosen adjustment bolt (F) one turn.

IMPORTANT: Avoid damage to special cap screws through incorrect installation or tightening procedures. Use only unpowered hand tools and ratcheting “click” type or equivalent torque wrench to tighten properly.

IMPORTANT: Do not apply excessive force to adjustment bolt. Damage to track frame casting can occur from over-torque.



RXA0161031—UN—05OCT17

Check to see if adjustment lever (G) has been adjusted to it’s maximum lateral position.

- If lever is hitting casting, refer to diagram on casting. Adjust alignment bolts to first re-center lever. Then apply one turn to move track left on undercarriage.
- If lever movement is hindered by debris buildup, clean as needed.

NOTE: One turn is the recommended increment. One half turn may be used as a final adjustment. Adjustments larger than one turn may result in unpredictable alignment results.

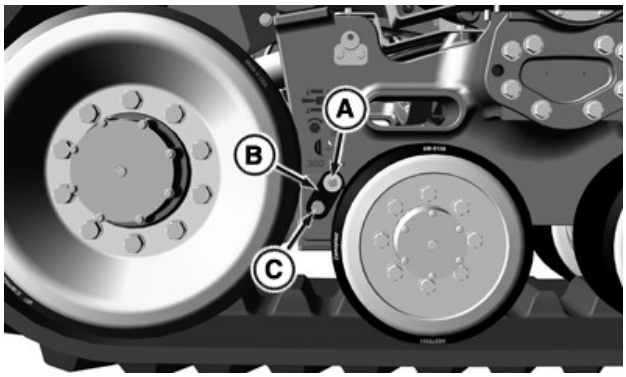
13. Tighten adjustment bolt on the opposite side to 300 N·m (221 lb·ft).
14. Tighten adjustment bolt, loosened in Step 12 to 300 N·m (221 lb·ft).

IMPORTANT: Avoid incorrect alignment and potential damage to track and track assembly components. Never make adjustments larger than one turn. Unpredictable track alignment results may occur.

NOTE: One turn is the recommended adjustment increment. One-half turn may be used as the final adjustment.

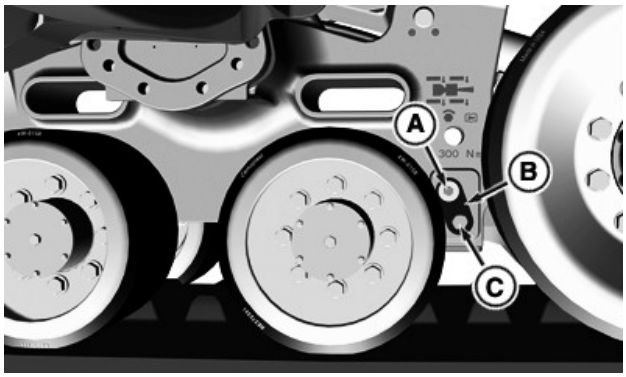
15. In most circumstances, a single adjustment is all that should be done. Track should then run until next scheduled adjustment check in order to give it time to stabilize in new setting.

NOTE: Lock plates are reversible to double the available index increments. It may be necessary to increase torque on special cap screw slightly to advance it to next available lock plate index position.



RXA0147877—UN—06APR15

Outside Track Frame



RXA0147878—UN—06APR15

Inside Track Frame

16. Install lock plates (B) and with spacer and bolt (A). Tighten bolt to 130 N·m (95 lb·ft).
17. Confirm inside and outside adjustment bolts (C) are tight on each track frame.
18. If track has been aligned but drive lug side wear does not decrease after break-in or has recently accelerated, see your John Deere Dealer.

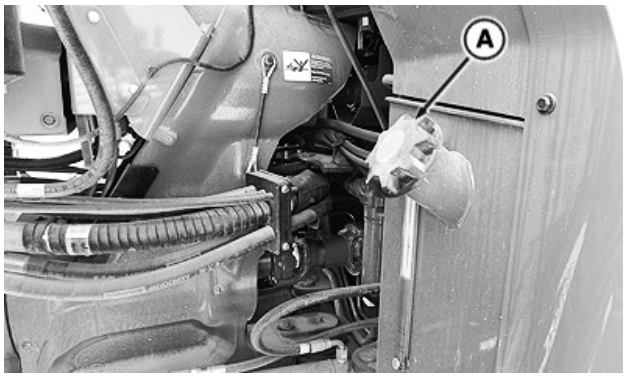
TS36762,0000346-19-21AUG18

Track Tension

IMPORTANT: If light indicator on Corner Post Display and Diagnostic Trouble Code (DTC) appear indicating tracks need tensioning follow procedure below.

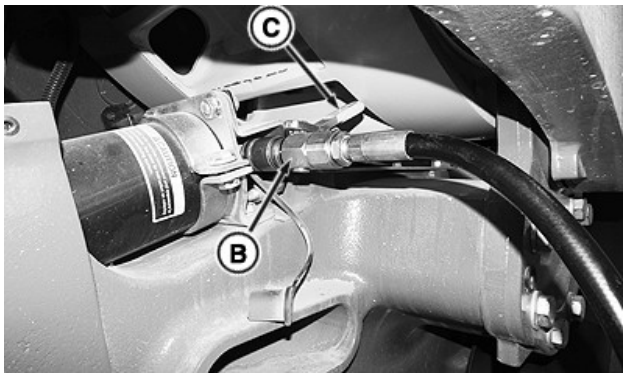
Tension Track

NOTE: Requires track tension hose kit, see your John Deere dealer.



RXA015270—UN—20OCT15

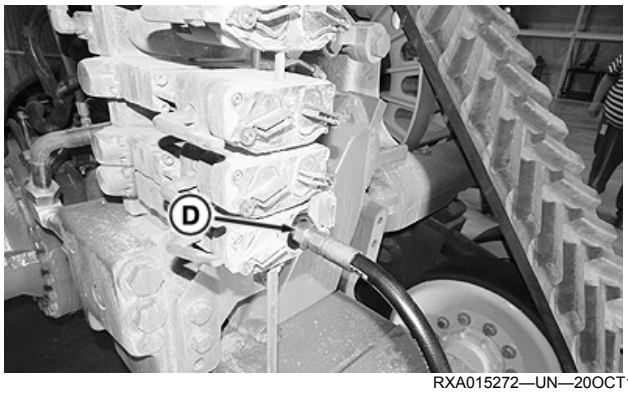
1. Remove hydraulic oil reservoir fill cap (A).



RXA015271—UN—20OCT15

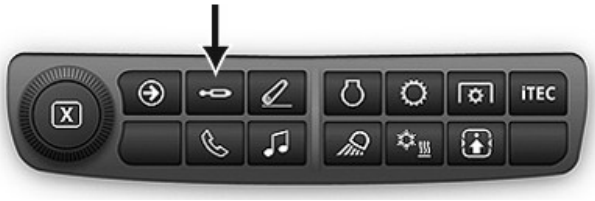
Track Tension/Detension Hose

2. Remove cap from tension cyclinder receptacle and attach tension hose coupler (B)



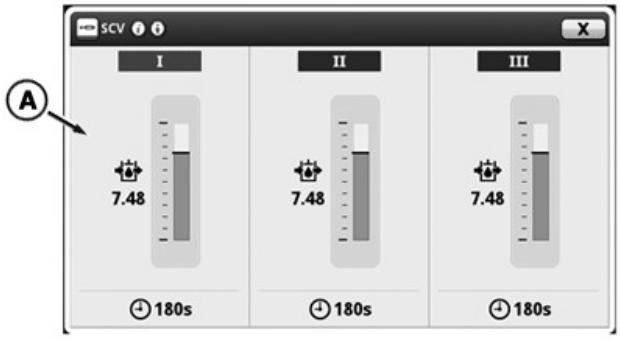
RXA015272—UN—20OCT15

3. With the hose valve handle (C) closed, install other end of tension hose into extend side of SCV I coupler (D) .



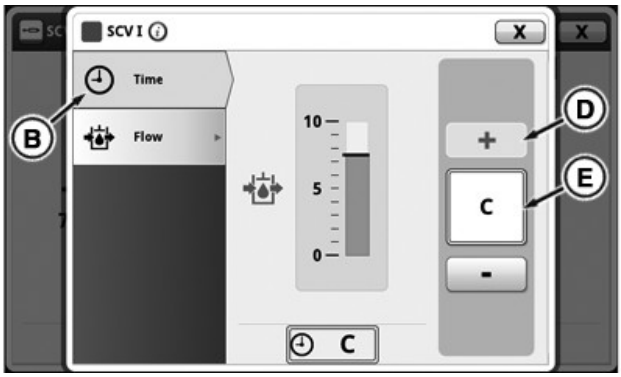
RXA0133709—UN—16JUL13

4. Start engine and press SCV shortcut button on Navigation Bar.



RXA0131602—UN—19AUG13

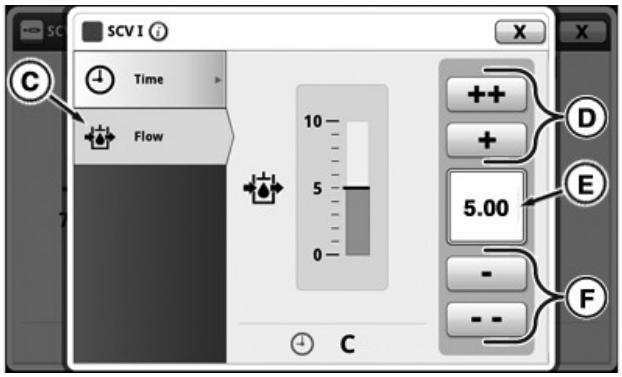
5. Select SCV I (A) on SCV main page.



RXA0143723—UN—16JUL14

SCV Detent Time

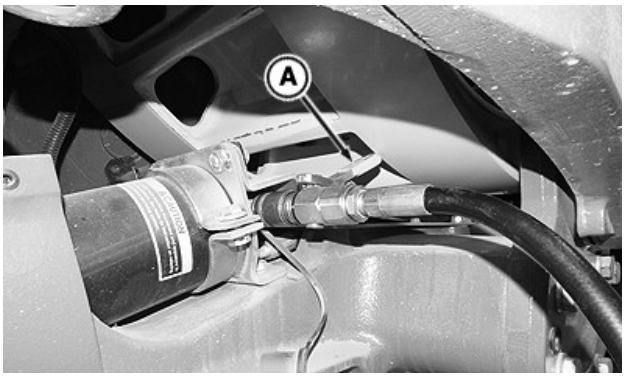
6. Select Time tab (B).
7. Press (+) (D) detent time button to increase detent time to continuous (E).



RXA0143724—UN—16JUL14

SCV Detent Flow

8. Select Flow tab (C).
9. Press (+ or ++) (D) detent flow buttons to increase or (- or - -) (F) to decrease detent flow setting to 5.00 (E).
10. **Pull** SCV I control lever rearward to **extend** position.



RXA015273—UN—20OCT15

11. Exit tractor and open hose valve handle (A) on tension hose.
12. Allow track to tension for three minutes.
13. Push SCV I lever back to neutral position
14. Stop engine.
15. Close hose valve handle and disconnect hose from tension cylinder receptacle.
16. Clean up any oil that may have spilled or leaked during process.

CAUTION: If any oil has spilled or bubbled out of reservoir fill spout during tensioning process, contact your John Deere Dealer for possible repair of track tensioning system.

17. Replace cap on hydraulic reservoir.

Detension Track

CAUTION: Escaping fluid under pressure can penetrate skin and cause serious injury.

Avoid 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.

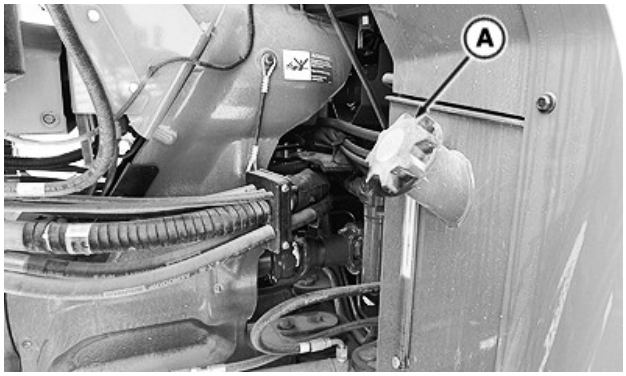
If an accident occurs, see a doctor immediately. Any fluid injected into skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department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

CAUTION: Avoid possible personal injury. Tension kit valve should be in closed position when attaching either end of hose.

IMPORTANT: Foreign material can damage the hydraulic system. Keep hydraulic couplers free from debris.

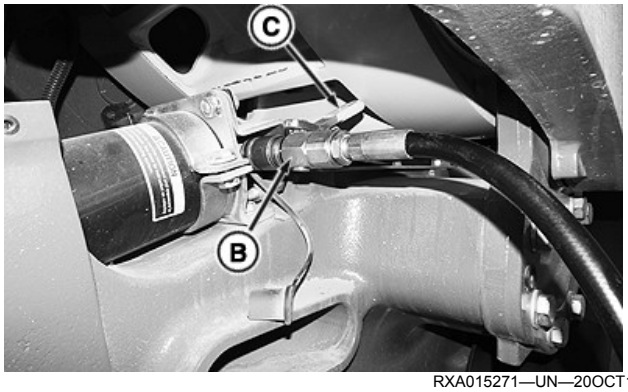
IMPORTANT: Track tensioning is best performed when hydraulic oil in reservoir is less than 38°C (100°F), and track tensioning components are at least 4.5°C (40°F).

Use track tension/detension hose kit obtained from your John Deere™ Dealer.



RXA015270—UN—20OCT15

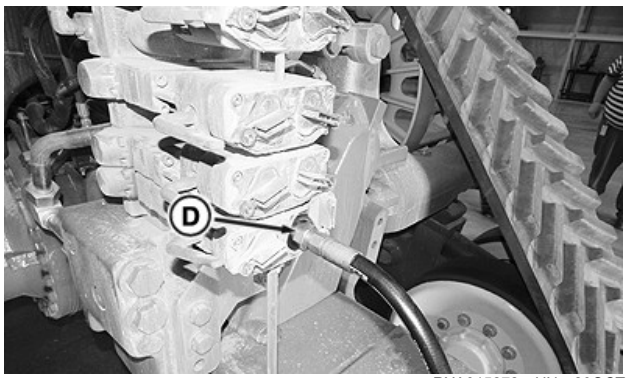
1. Remove hydraulic oil reservoir fill cap (A).



RXA015271—UN—20OCT15

Track Tension/Detension Hose

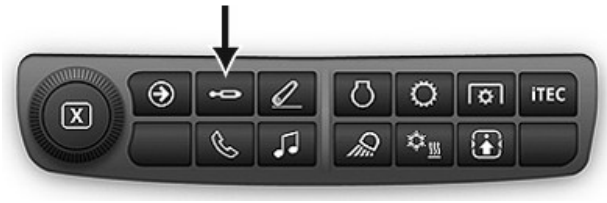
2. Remove cap from tension cylinder receptacle and attach tension hose coupler (B).



RXA015272—UN—20OCT15

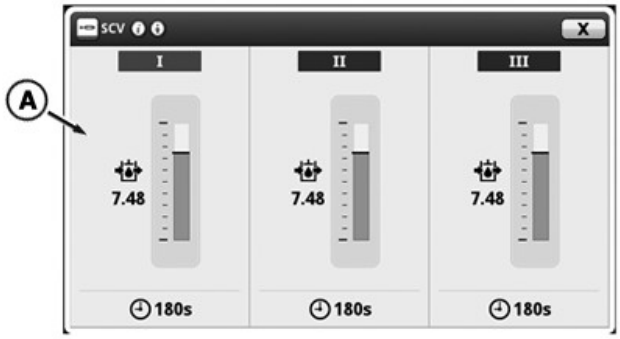
SCV I Coupler

3. With the hose valve handle (C) closed, install other end of tension hose into SCV I extend side of receptacle (D).



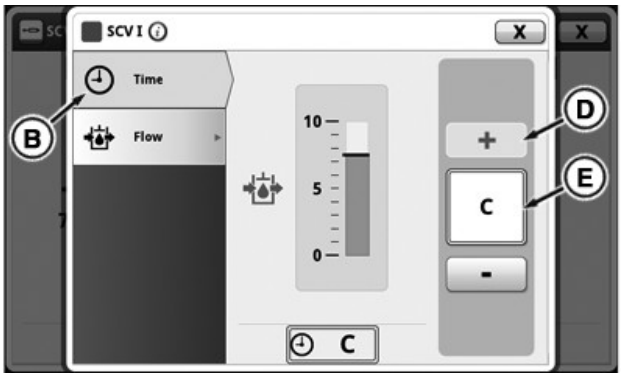
RXA0133709—UN—16JUL13

4. Start engine and press SCV shortcut button on Navigation Bar.



RXA0131602—UN—19AUG13

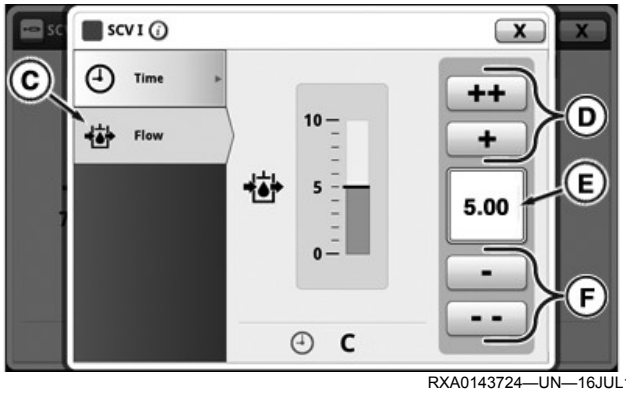
5. Select SCV I (A) on SCV main page.



RXA0143723—UN—16JUL14

SCV Detent Time

6. Select Time tab (B).

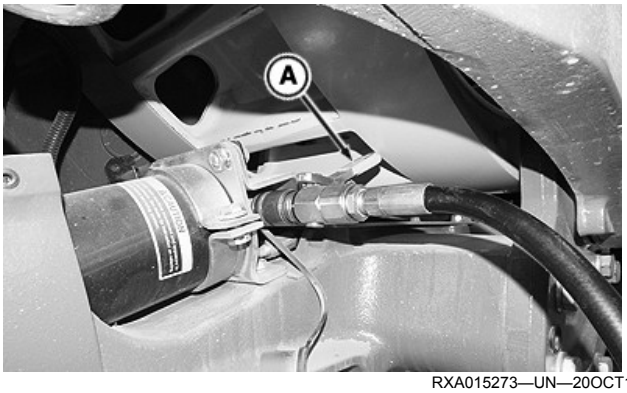


RXA0143724—UN—16JUL14

SCV Detent Flow

7. Press (+) (D) detent time button to increase detent time to continuous (E).

8. Select Flow tab (C).
9. Press (+ or ++) (D) detent flow buttons to increase or (- or - -) (F) to decrease detent flow setting to 5.00 (E).
10. **Push** SCV I control lever forward to **retract** position.



RXA015273—UN—20OCT15

11. Exit tractor and open hose valve handle (A) on tension hose.
12. Allow track to detension for three minutes.
13. Pull SCV I lever back to neutral position.
14. Stop engine.
15. Close hose valve handle and disconnect hose from tension cylinder receptacle.
16. Clean up any oil that may have spilled or leaked during process.

CAUTION: If any oil has spilled or bubbled out of reservoir fill spout during detensioning process, contact your John Deere Dealer for possible repair of track tensioning system.

17. Replace cap on hydraulic reservoir.

EC82310,0000026-19-29AUG18

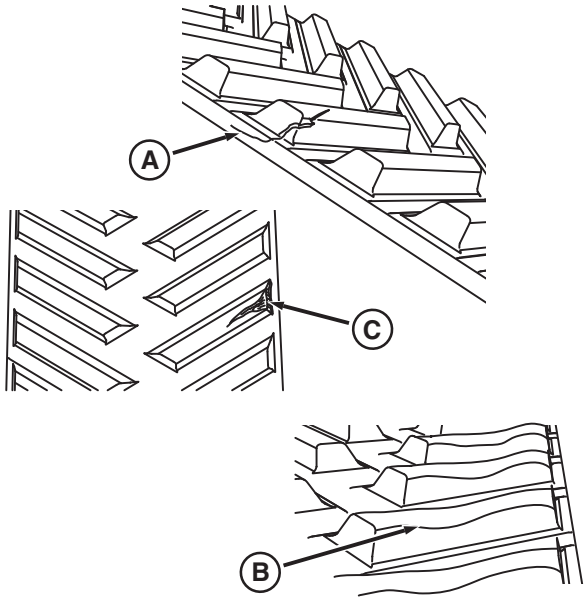
Track Wear

CAUTION: Trash build-up can cause fire from increased friction. Remove trash from trash build-up points between track and tractor frame. Remove Trash Buildup.

IMPORTANT: Avoid operating tractor in grease, oil, or other petroleum chemicals. Avoid spilling these materials on track and wheels during service.

Avoid damage to hydraulic components. Use care around tension cylinder connections and hydraulic lines.

Remove any embedded sharp objects from inside or outside of tracks.



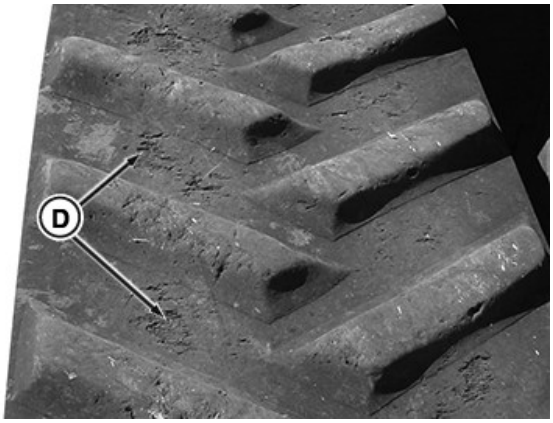
RXA0147257—UN—17JUN15

Check track for major operational problems. It is normal to see cracking (A), uneven wear (B), or chipping or chunking (C) on tracks during use.

Check inside of track for any exposed cables. If any loose ends are seen, cut off cable flush with track surface. Then see your John Deere dealer.

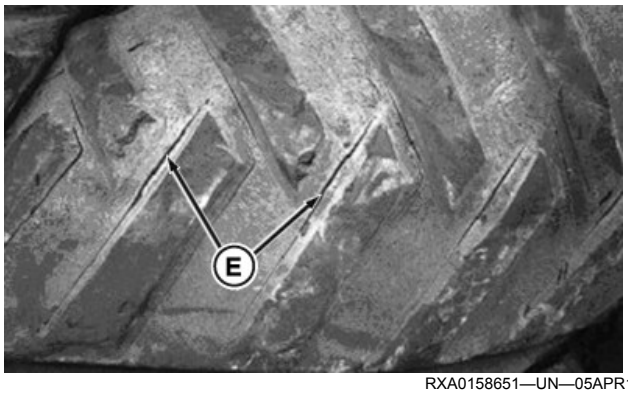
Check track for torn or missing treads. If tread has been damaged and part of tread is loose, trim loose portion off to avoid further damage to track carcass.

Check track inner guide or drive lugs for condition. Note if wear patterns have changed since the last inspection and if track alignment may need to be checked. If any guide or drive lugs are loose or missing, see your John Deere dealer.



RXA0158650—UN—05APR17

Check for exposed plies (D) between tread. It is normal during mid to end of life to see some exposed plies between the treads. If large sections of the track carcass are torn, loose, or missing, see your John Deere dealer.



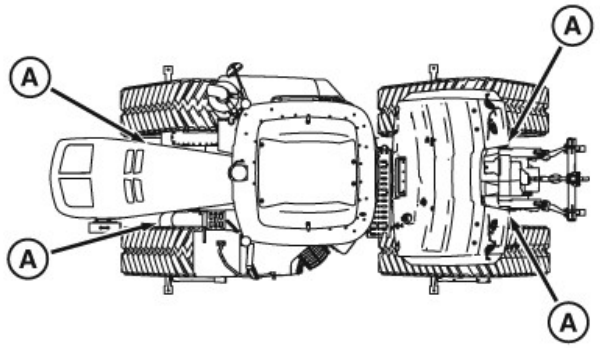
RXA0158651—UN—05APR17

Check for flex cracking (E). It is normal to see some flex cracking develop during life of track.

TS36762,000034E-19-03OCT17

Track Trash Buildup

IMPORTANT: Avoid operating tractor in grease, oil, or other petroleum chemicals. Avoid spilling these materials on track and wheels during service.



RXA0158552—UN—28MAR17

Trash Build-Up Points

CAUTION: Trash build-up can cause fire from increased friction. Remove trash from trash build-up points between track and tractor frame.

Clean trash from any area around track assemblies, especially from build-up points between track and tractor frame (A).

Remove any debris or material buildup on top of frame reaction arms. Buildup can wear down rubber on drive wheels and reduce their ability to transfer power to track.

Check for material buildup between drive wheels and front idler wheels. Buildup can damage or crush guide lugs and can increase chances of derailing track. If guide lug tip damage is seen, it may be due to material buildup.

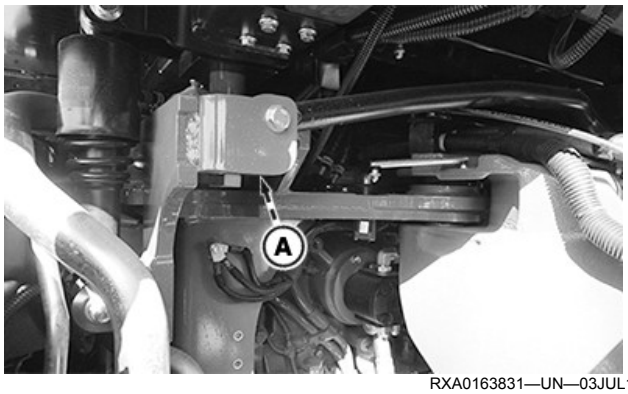
Remove any debris or material packed inside drive wheel sprocket pockets (where track drive lugs engage).

Inspect outer surface of drivewheel for material buildup, see Service - Adjust Drivewheel Scraper if material buildup on sprocket outer surface is noted.

If excessive trash buildup becomes a problem, optional sprocket and debris rejection guards are available. See your John Deere dealer.

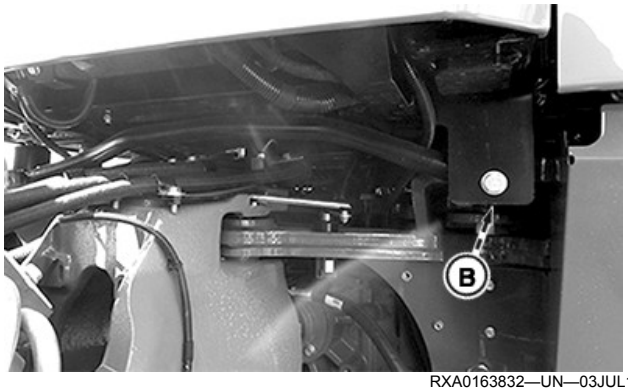
TS36762,0000351-19-12APR18

Cab Suspension Bushings



RXA0163831—UN—03JUL18

Left-Hand Side Behind and Below Cab



RXA0163832—UN—03JUL18

Right-Hand Side Behind and Below Cab



RXA0157989—UN—06MAR17

Left-Hand Side Below Cab Door

Check bushings: Left-hand (A), right-hand (B), and left-hand side under cab door (C) for degraded or missing rubber. If rubber is damaged replace complete bushing assembly.

BH38674,0000D55-19-22AUG18

Undercarriage

CAUTION: Avoid possibility of fire. Trash build-up can cause fire from increased friction. Remove trash from trash build-up points (G) between track and tractor frame.

IMPORTANT: Avoid operating tractor in grease, oil, or other petroleum chemicals. Avoid spilling these materials on track and wheels during service. Replace mid-rollers in sets if significant thickness wear is seen on an opposite side wheel.

IMPORTANT: Do not pair worn idlers or mid-roller wheels with new wheels on the same axle. Overloading of the opposite side mid-roller may occur. Or correct track alignment may become more difficult in the case of different circumference idler wheels.

1. Remove any debris or material buildup on top of frame reaction arms. Buildup can wear down rubber on drive wheels and reduce their ability to transfer power to track.

2. Check for material buildup between drive wheels and front idler wheels. Buildup can damage or crush guide lugs and increase chances of derailing track. If drive lug tip damage is seen, it may be due to material buildup.

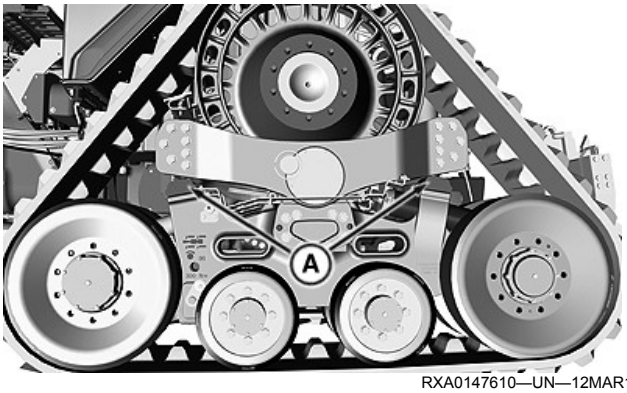
3. Check for material buildup inside the sprocket, in sprocket pockets where the drive lug engages, or on outer surface of sprocket. Remove any buildup in pockets or external surface to avoid damage to track and drive lugs. If material buildup is noted on sprocket, adjust scraper if required. See Drive Wheel Scraper Clearance in Service – Check section of this Operator's Manual.

TS36762,0000348-19-15MAR17

Undercarriage Articulation Bumper Stops

Inspect articulation bumper stop:

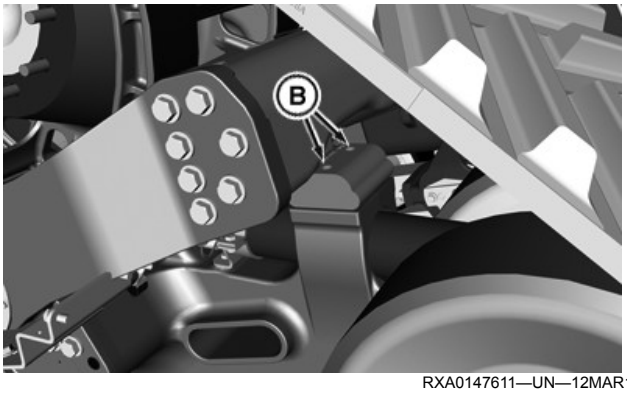
1. Park tractor on level surface to inspect bumpers.



RXA0147610—UN—12MAR15

2. Inspect each articulation bumper stop (A) for damage, excessive wear, or if it is bent of deformed.
3. Damage may be chunking, chipping, or cracking of bumper. If any damage is found, replace bumper.

Replace articulation bumper stop:



RXA0147611—UN—12MAR15

1. Remove cap screws (B).
2. Install new bumper stop.
3. Tighten cap screws to 10 N·m (7 lb·ft).

SV81855,00003A4-19-21FEB18

Drive, Mid-Rollers, and Idler Wheels

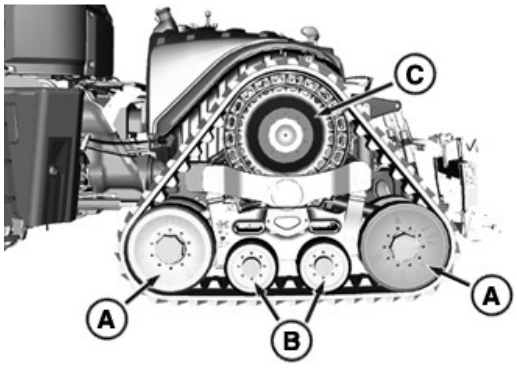
CAUTION: Trash build-up can cause fire from increased friction. Remove trash from trash build-up points between track and tractor frame, see Service Check - Remove Trash Buildup.

IMPORTANT: Avoid operating tractor in grease, oil, or other petroleum chemicals. Avoid spilling these materials on track and wheels during service.

Replace mid-rollers in sets if significant difference in coating thickness is seen on an opposite side of axle wheel.

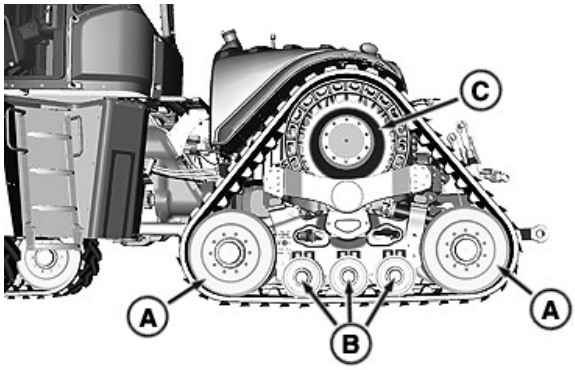
Do not pair worn idler and mid-roller wheels with new wheels on the same axle. Unevenly worn mid-rollers may overload and damage opposite mid-rollers. Unevenly worn drive or idler wheels may negatively impact track alignment.

Avoid damage to hydraulic components. Use care around tension cylinder connections and hydraulic lines.



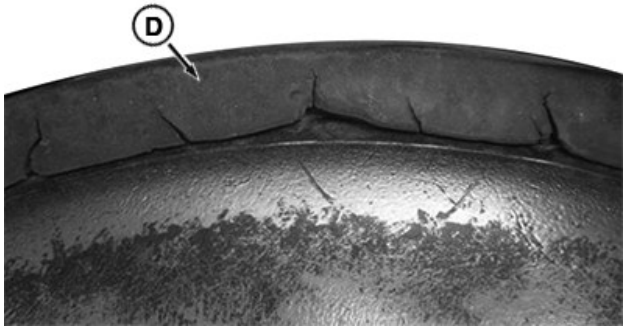
RXA0147242—UN—11FEB15

Wide Track



RXA0148370—UN—12JUN15

Narrow Track



RXA0158389—UN—17MAR17

Check rubber coating for chunking, chipping, or cracking on idler (A) and mid-rollers (B). Wheels typically see rubber wear at edges. Significant edge wear (D) may be evident, but wheel will still perform as intended.

Typical wear patterns in the rubber are numerous small nicks and chunks, some small sections with rubber loss, and slight amount of rubber separation at edges.

Check rubberized wheels for embedded rocks, nails, or other sharp objects. Remove if found. Embedded objects can cause internal damage to track if left in place.

Check wheel bolts for signs of being loose. Wheels are subjected to very high track tension loads and bolts can become loose if not correctly tightened, see Mid-Roller and Drive and Idler Wheel Fasteners in Service - Tighten section of this Operator's manual.

Inspect and remove any material build up on face of drive wheel (C). remove any material in pockets and between drive bars. Remove excessive material within undercarriage frame.

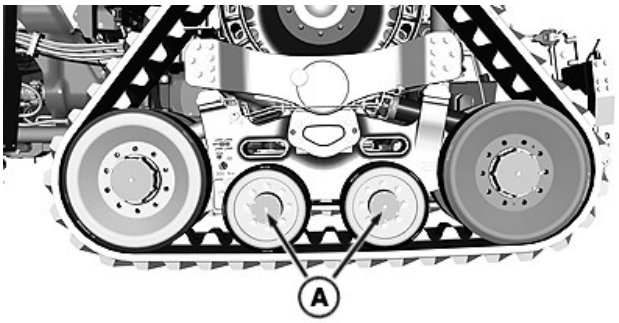
Inspect idlers and mid-rollers for operational problems. It is normal to see some edge wear on idlers or mid-rollers during service. Replace wheels when:

- More than 1/3 of the coating is missing all the way around wheel.
- Any area where coating loss extends across entire wheel width.
- Lack of coating thickness causes dirt build-up on wheel outer surface to begin.
- Any flat spots are visible which may indicate wheel has stopped turning.

KT81203,0000969-19-12APR18

Mid-Rollers Oil Level

1. Park tractor on level surface.
2. Shut off tractor and put transmission into PARK.



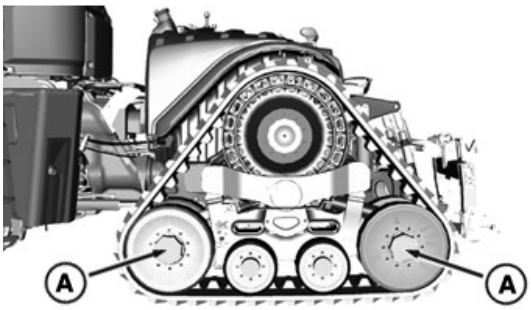
RXA0147253—UN—13FEB15

3. Remove oil fill plug (A) on each mid-roller on front and rear axles.
4. Check oil levels.
5. If oil level is below bottom of a plug hole, fill to bottom of plug hole with John Deere Hy-Gard™ oil or equivalent, see Transmission and Hydraulic Oil in Other Lubricants section of this Operator's Manual.
6. Reinstall plugs and tighten to 34 N·m (24 lb·ft) torque.
7. Repeat procedure on opposite side of tractor.

SV81855,0000371-19-12APR18

Idler Wheel Hub Oil Level

1. Park tractor on level surface.
2. Shut off tractor and put transmission into PARK.



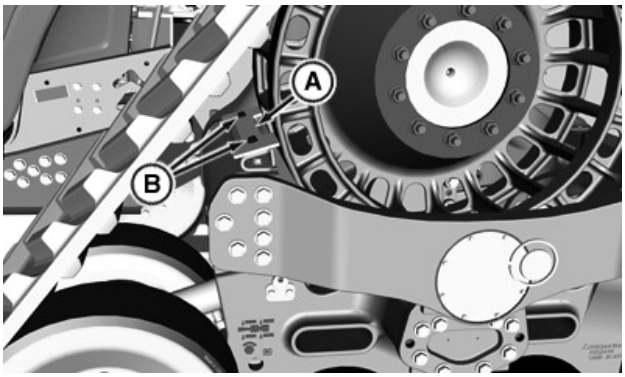
RXA0147254—UN—12FEB15

3. Remove oil fill plug (A) on each idler wheel hub on front and rear axles.
4. Check oil levels.
5. If oil level is below bottom of a plug hole, fill to bottom of plug hole with John Deere Hy-Gard™ oil or equivalent, see Transmission and Hydraulic Oil in Other Lubricants section of this Operator's Manual.
6. Reinstall plugs and tighten to 34 N·m (24 lb·ft) torque.
7. Repeat procedure on opposite side of tractor.

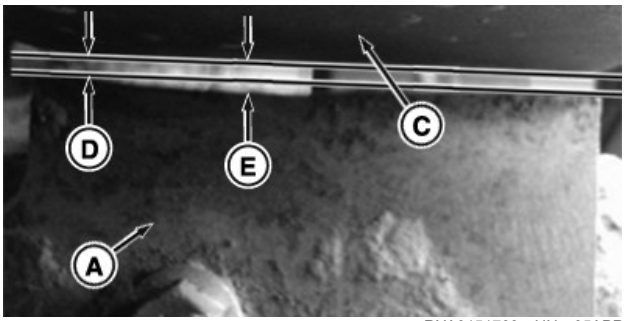
SV81855,0000372-19-12APR18

Hy-Gard is a trademark of Deere & Company

Drive Wheel Scraper Clearance



RXA0147612—UN—12MAR15



RXA0151763—UN—05APR16

Each drive wheel (C) has a scraper (A) to remove debris from drive wheel and prevent damage to inner track components and drive lugs.

1. Measure clearance between scraper edge and drive wheel face. Minimum clearance is 3 mm (1/8 in) (D) and maximum clearance is 5 mm (3/16 in) (E).

   To adjust scraper:

2. Loosen cap screws (B).
3. Position scraper 3 mm (1/8 in) from face of drive wheel and proceed to step 7. If any part of scraper edge exceeds 5 mm (3/16 in) clearance, proceed to step 4.
4. Remove cap screws.
5. Choose option for scraper service:
   - Grind scraper edge flat perpendicular to scraper side.
   - Flip scraper end-to-end.
   - Replace scraper.
6. Position scraper to 3 mm (1/8 in) of clearance.
7. Tighten cap screws to 120 N·m (88 lb·ft).

SV81855,00003A3-19-26OCT17

NEUTRAL Start System

CAUTION: 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.



RXA0158486—UN—28MAR17

4. Move gear shift lever (A) from PARK position to a forward gear.

CAUTION: If tractor fails this test, contact your John Deere dealer immediately.

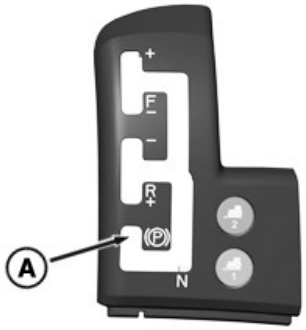
5. Attempt to start engine. If engine starts in any lever position other than NEUTRAL or PARK, repair system immediately. See your John Deere dealer.
6. Repeat step 5 with transmission in a reverse gear.

RX32825,000063C-19-18JUL17

Transmission PARK System

CAUTION: Avoid personal injury. Make sure that everyone is clear of tractor.

1. Position tractor on a 20 % incline (0.6 m (2 ft) vertically for every 3.0 m (10 ft) horizontally) with front of tractor facing downward.



RXA0140499—UN—16APR14

Right-Hand Reverser Lever PARK Position

2. Move transmission shift lever (A) into PARK position.

CAUTION: If tractor fails this test, contact your John Deere™ dealer immediately.

3. If tractor does not hold on incline in PARK position, repair transmission PARK system immediately, see your John Deere dealer.

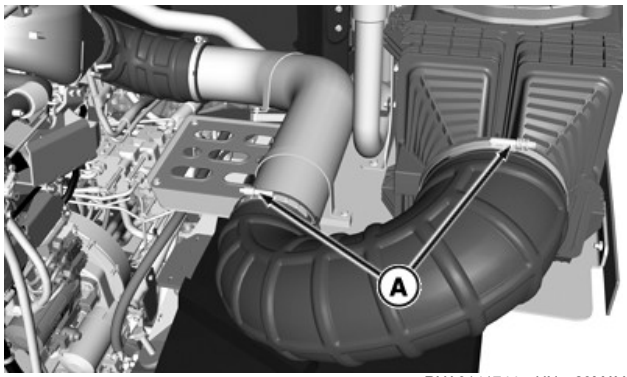
RX32825,000063D-19-18JUL17

Engine Air Intake System—13.5 L Final Tier 4/Stage V Engine

1. Open hood, see Open Hood in Service - General section of this Operator's Manual.
2. Remove front and rear engine side shield, see Remove Front Engine Side Shield and Remove Rear Engine Side Shield of this Operator's Manual.

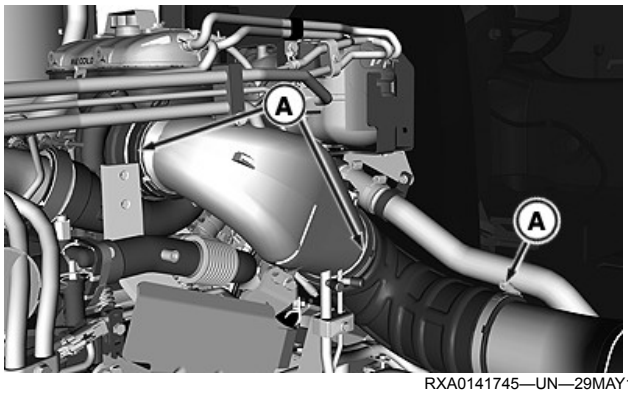
IMPORTANT: Operating engine with loose air intake clamps may allow dust entry into system and damage to engine.

NOTE: Not all air intake clamps are shown, but all need to be checked and tightened.



RXA0141744—UN—29MAY14

Air Intake System - Left Side



RXA0141745—UN—29MAY14

Air Intake System - Right Side

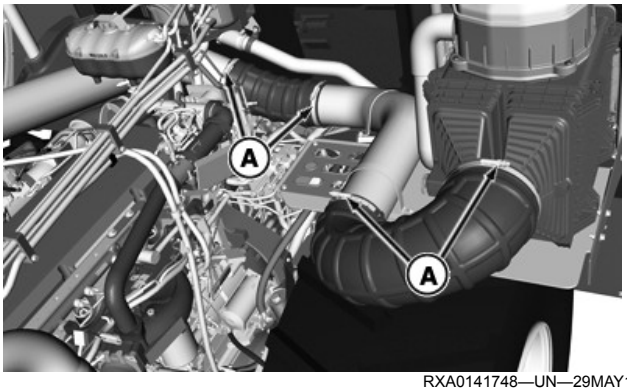
3. Check air intake system for loose clamps (A) or cap screws.
4. Tighten air intake system clamps to 8 N·m (5 lb·ft).

SV81855,0000283-19-19JUL18

Engine Air Intake System—15 L Engine

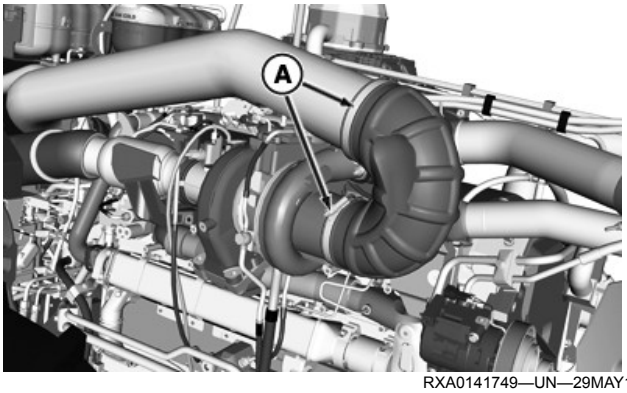
IMPORTANT: Operating engine with loose air intake clamps may allow dust entry into system and damage to engine.

NOTE: Not all air intake clamps are shown, but all need to be checked and tightened.



RXA0141748—UN—29MAY14

Left-Hand Side of Engine



RXA0141749—UN—29MAY14

Right-Hand Side of Engine

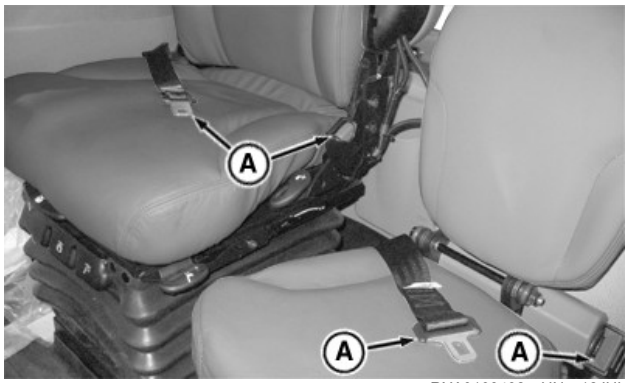
Check air intake system for loose clamps (A) or cap screws.

Tighten air intake system clamps to 8 N·m (70 lb·in).

SV81855,0000285-19-08NOV17

Seat Belts

CAUTION: If the seat belt system, including the 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 the belt system only with replacement parts approved for your machine.



RXA0108482—UN—12JUL10

Inspect seat belts (A) and mounting hardware. If seat belts or system components require replacement, see your John Deere dealer.

RX32825,000065F-19-18JUL17

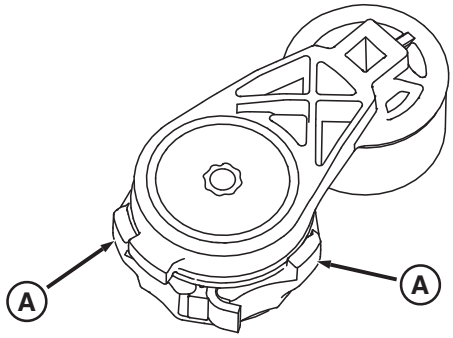
Engine Auxiliary Drive Belt and Drive Belt Tensioner

NOTE: Fan belt tensioner is only used on 9.0 L or 13.5 L Tier 2/Stage II or Tier 3/Stage IIIA engine.

Pulley or dust shield can be serviced separately from spring tensioner. Spring tensioner is serviced as an assembly.

For clarity, alternator and other components are not shown. Belt tensioner assembly remains on tractor during tests.

1. Remove front engine side shields. See Remove Front Engine Side Shields in Service – General Information section of this Operator's Manual.

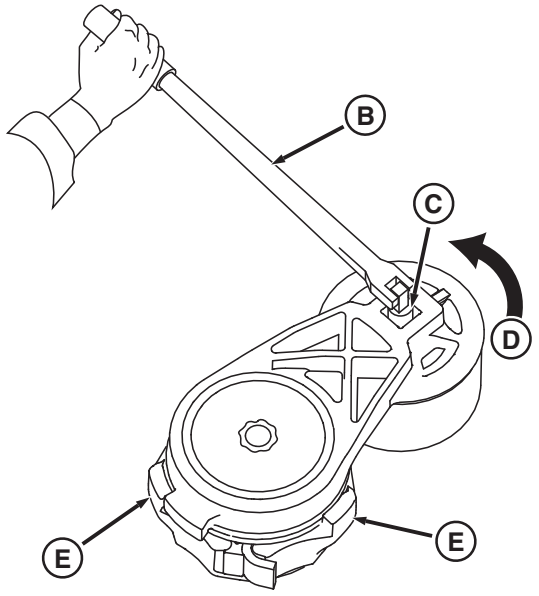


RXA0162898—UN—18APR18

2. Examine belt tensioner assembly. Replace tensioner if:
   - A spring stop (A) is cracked or missing.
   - Any part of tensioner assembly is cracked or broken.

   If tensioner will not be replaced, go to step 3.

   If tensioner must be replaced, replace, and then go to step 9.



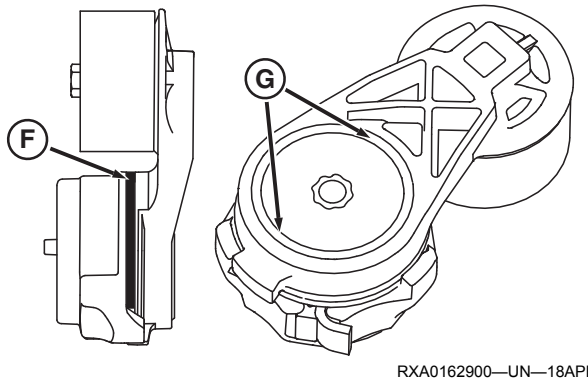
RXA0162899—UN—18APR18

3. With belt installed, insert 1/2 inch drive ratchet or breaker bar (B) into the square hole (C) on belt tensioner arm.
4. Twist tensioner arm (D) to reduce tension on belt. Twist as far as tensioner allows.
5. If belt is against free arm stops (E) replace belt. See step 13 for belt service procedure locations. After replacing belt, go to step 5.
6. With belt tension released, examine belt tracking (wear) mark on pulley. If tracking mark is 6.4 mm (1/4 inch) or more wider than belt, replace tensioner assembly. If tensioner assembly will:

   Not be replaced, go to step 7.

   Be replaced, replace and then go to step 9.
7. Remove belt. See step 14 for belt service procedure locations.

IMPORTANT: Do not pry between pulley and spring case.



RXA0162900—UN—18APR18

8. Rotate tension arm slowly using 1/2 inch drive ratchet or breaker bar. Replace tensioner if:
   - Arm does not rotate smoothly between arm stops (E).
   - Metal to metal contact is present between arm and spring case (F) or arm and end cap (G).

   If tensioner will not be replaced, go to step 9.

   If tensioner must be replaced, replace, and then go to step 14.
9. If tensioner must be replaced, release tension on belt and remove belt (if not already done).
10. Remove tensioner pivot cap screw.
11. Replace tensioner assembly.
12. Apply thread lock and sealer Loctite® 242 to pivot cap screw.
13. Install cap screw and tighten to 70 N·m (51 lb·ft) torque.
14. Install belt. Depending upon engine type, in Service - Change section of this Operator's Manual, see:

    Fan Belt – 9.0 L or 13.5 L Tier 2/Stage II or Tier 3/Stage IIIA Engine in this Operator's Manual section.

    Vari-Cool™ Fan Belt—9.0 L Final Tier 4/Stage V Engine

    Vari-Cool™ Fan Belt—13.5 L Final Tier 4/Stage V Engine

    Engine Auxiliary Drive Belt - 9.0 L or 13.5 L Engine

⚠ CAUTION: Never start engine without side shields installed and hood securely closed and latched.

15. Install front engine side shields.
16. Close and securely latch hood.

RX32825,000066F-19-18JUL18

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

Loctite is a trademark of Henkel Corporation
Vari-Cool is a trademark of Deere & Company

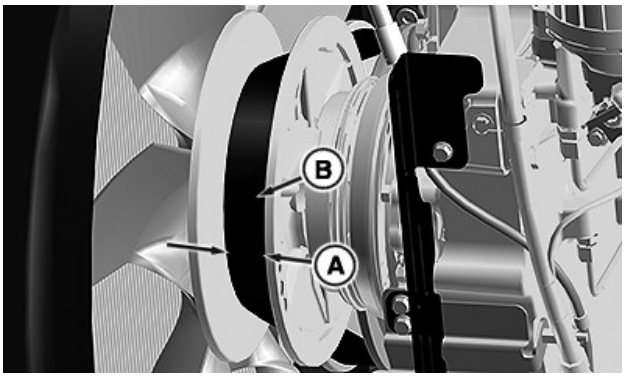
Vari-Cool™ Fan Drive and Belt—13.5L Final Tier 4/Stage V Engine

IMPORTANT: Avoid damage to Vari-Cool fan drive. Check drive assembly and belt every 500 hours or annually, whichever occurs first.

1. Remove front engine side shield, see Remove Front Engine Side Shield in Service - General section of this Operator's Manual.
2. Check fan drive assembly for leaking grease or hydraulic oil. If leakage is found, see your John Deere dealer

IMPORTANT: Damaged Vari-Cool™ components may generate a Diagnostic Trouble Code (DTC). If Diagnostic Trouble Codes for Vari-Cool™ fan drive are displayed, see your John Deere dealer.

NOTE: Operating with fan belt less than specified width may generate Diagnostic Trouble Code (DTC)



RXA0162285—UN—21FEB18

Vari-Cool Fan Belt

3. Measure width of fan belt (A). Replace belt when width is 36 mm (1.4 in) or less, see Vari-Cool Fan Belt in Service - Change section of this Operator's Manual.
4. Check fan belt (B) and replace if damaged or excessively worn, see Vari-Cool™ Fan Belt in Service - Change section of this Operator's Manual.

NOTE: While Vari-Cool™ fan drive is accessible, perform fan drive lubrication, see Vari-Cool™ Fan Drive - 13.5L Final Tier 4 or Stage V Engine in Service - Lubricate section of this Operator's Manual.

5. Reinstall front engine side shield.
6. Close and secure hood.

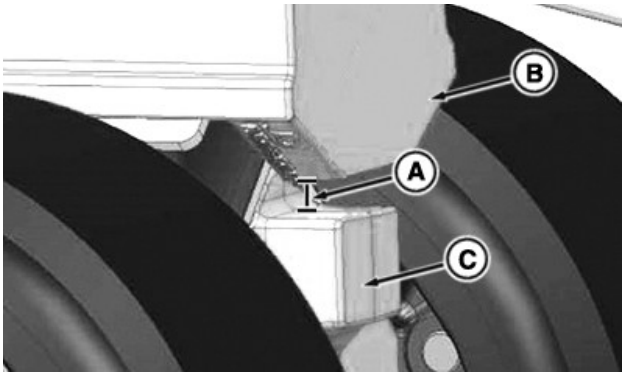
RX32825,0001837-19-18JUL18

Suspension Mount Clearance (Narrow Track)

1. Remove implements.

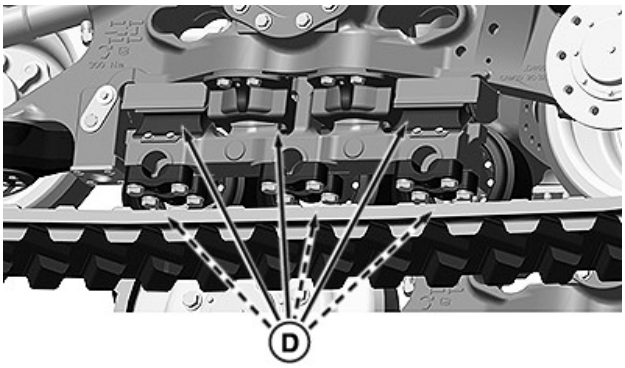
⚠ CAUTION: Dispose of chemicals in manner consistent with local regulations.

2. Drain contents of spray tanks.
3. Park tractor on level surface. Stop tractor and remove key.



RXA0156203—UN—15DEC16

4. Measure gap (A) between V-block vertical stop (B) and beam vertical stop (C) at front and rear on all four undercarriage units.



RXA0156204—UN—03OCT17

Midrollers removed for illustration purposes.

5. If either measured gap on an undercarriage unit is less than 6 mm (0.25 in.), replace all six suspension mounts (D) on that undercarriage unit. See your John Deere dealer.

TS36762,00002BB-19-11SEP17

Front Driveshaft Health (FDH) Sensor System



RXA0162182—UN—15FEB18

FDH sensor system monitors front driveshaft for proper operation when rotating. If a problem occurs, sensor triggers a Stop Engine (A) or Service Alert (B) light, an audible warning, and causes a diagnostic code to be displayed on CommandCenter™.

1. If Stop Engine warning occurs, stop tractor immediately in a safe location.
2. If Service Alert warning occurs, FDH system requires service and may be disabled. Service FDH system as soon as possible.
3. See your John Deere dealer to fully diagnose and repair problem indicated by code.

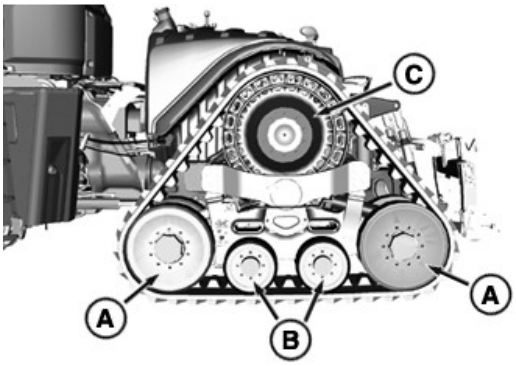
BH38674,0000CB8-19-14MAR18

Mid-Roller, Drive, and Idler Wheel Fasteners

IMPORTANT: Avoid operating tractor in grease, oil, or other petroleum chemicals. Avoid spilling these materials on track and wheels during service.

If tractor is operated with loose cap screws, they may become worn and it may be necessary to replace them.

Retighten track cap screws after working 3 hours, and daily or every 10 hours during the first week of operation.



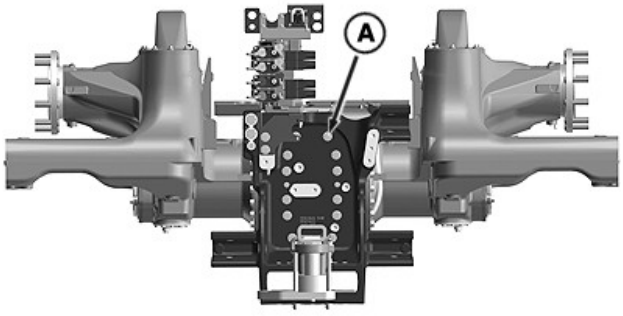
RXA0147242—UN—11FEB15

Inspect and tighten cap screws to specifications.

Torque — Specification	
Front Idler Wheel (A)	1070 N·m (789 lb·ft)
Mid-Roller (B)	450 N·m (332 lb·ft)
Mid-Roller (B) (Narrow)	320 N·m (236 lb·ft)
Drive Wheel (C)	650 N·m (479 lb·ft)

KT81203,0000968-19-11DEC17

Drawbar Support Cap Screws



RXA0150415—UN—05NOV15

Heavy-Duty Double Reduction Axle Drawbar Support

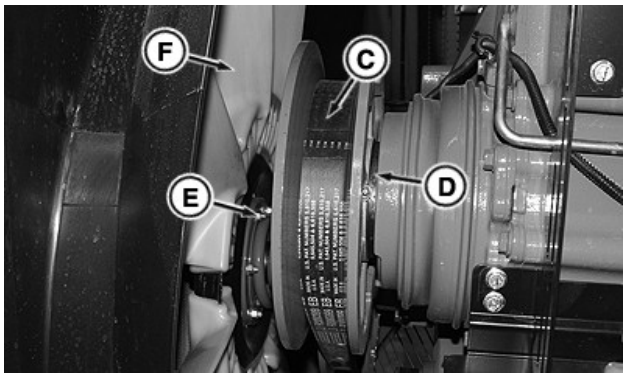
Inspect and tighten stabilizer cap screws and drawbar support cap screws (A) to 490 N·m (361 lb·ft).

SV81855,00003FB-19-03MAY18

Vari-Cool™ Fan Belt—13.5 L Final Tier 4/ Stage V Engine

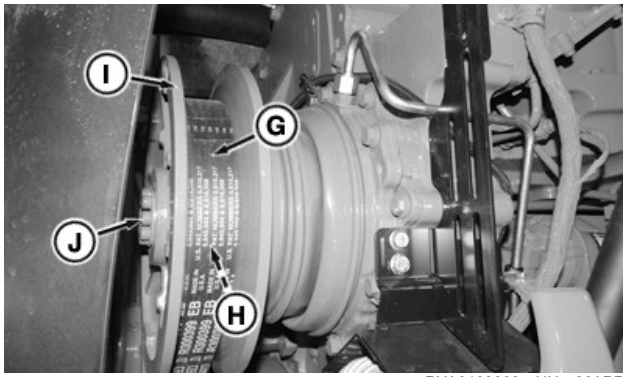
1. Disconnect negative battery cable. See Service Batteries and Connectors - 13.5 L Engine in Service - Electrical section of this Operator's Manual.
2. Remove front engine side shield, See Remove Front Engine Side Shield in Service - General Information section of this Operator's Manual.

NOTE: Alternator not shown for clarity purposes.



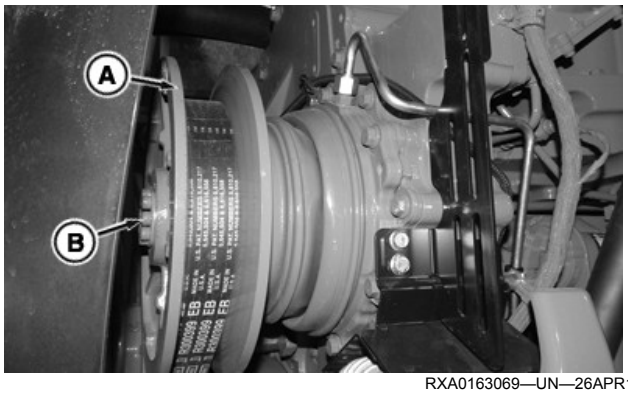
RXA0163067—UN—26APR18

3. Hold front sheave (A) and remove eight cap screws (B).
4. Remove front sheave evenly off shaft.



RXA0163068—UN—26APR18

5. Belt (C) and inner sheave (D) should stay on shaft. Remove six cap screws and nuts (E) and carefully position fan (F) against radiator.
6. Remove belt through opening between fan and hub.
7. Discard old belt.
8. Install new fan belt between fan and hub so that it is positioned between lower sheave halves.
9. Slide fan into place, install cap screws and nuts and tighten to 35 N·m (26 lb·ft).



RXA0163069—UN—26APR18

10. Pull belt (G) onto drive shaft (H) and against rear sheave.

IMPORTANT: When installing front sheave, make sure that belt remains loose and is not pinched between sheaves.

Clean mating surfaces of front sheave and shaft.

11. Install front sheave (I).
12. Hold front drive sheave and tighten six cap screws (J) to 37 N·m (27 lb·ft).
13. Reinstall diverter panel and cap screws. Tighten to 21 N·m (15 lb·ft).
14. Connect negative battery cable.

NOTE: Starting engine with belt loose between sheaves allows belt to climb out of groove between sheaves. Belt will correctly position itself within a few seconds after engine is started.

15. Start engine and run at idle for 15 seconds. Turn off engine.

CAUTION: Keep hands away from exposed fan blades. Blades have sharp edges which may result in personal injury.

16. Remove right-hand side front shield and make sure that belt is correctly positioned between sheaves.
17. Reinstall front engine side shield, close and secure hood

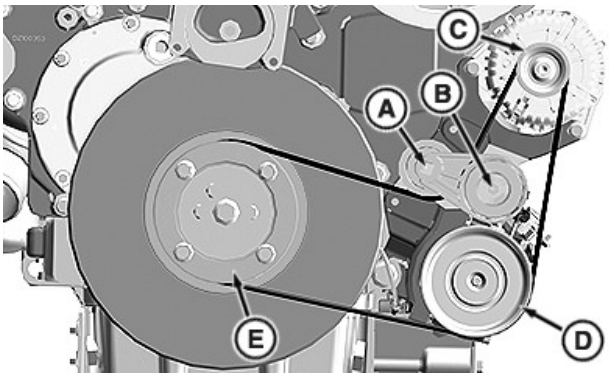
SV81855,00002A4-19-18JUL18

Auxiliary Drive Belt—13.5 L Engine

1. Remove front engine side shield, see Remove Front Engine Side Shield in Service - General section of this Operator's Manual.

IMPORTANT: Keep tension off belt during removal.

NOTE: Removal and installation of fan belt requires an assistant.



RXA0162433—UN—07MAR18

1/2 in Drive Socket Wrench

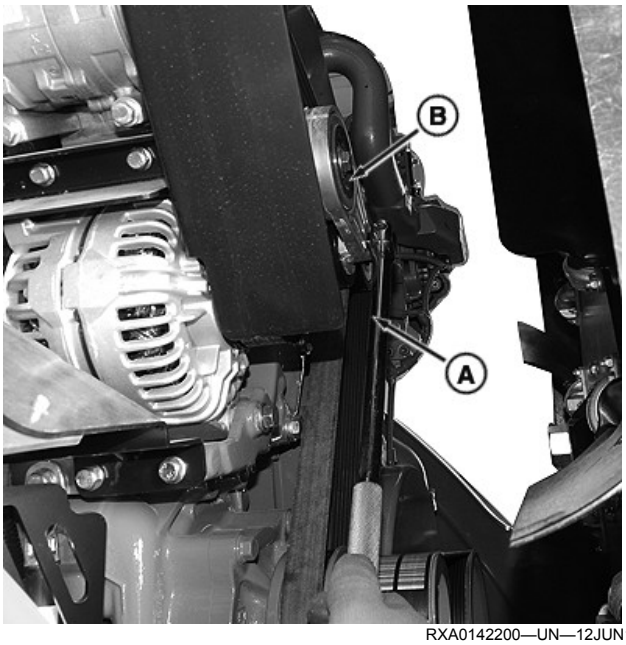
2. Insert 1/2 in drive socket wrench into square hole (A) on tensioner arm (B).
3. Push down on wrench handle to relieve tension on drive belt.
4. Have assistant remove auxiliary belt from alternator pulley (C).
5. Remove belt from idler air conditioner pulley (D) and crankshaft pulley (E).
6. Discard old belt.
7. Install new belt to crankshaft pulley, idler then air conditioner pulley.
8. Install belt on alternator pulley.
9. Remove 1/2 in drive socket wrench and restore tension on new belt.
10. Install front engine side shield and close hood.

BH38674,0000CC0-19-02MAY18

Engine Auxiliary Drive Belt—15 L Engine

1. Remove front engine side shield, see Remove Front Engine Side Shield in Service - General Information section of this Operator's Manual.

IMPORTANT: Removal of belt requires an assistant.

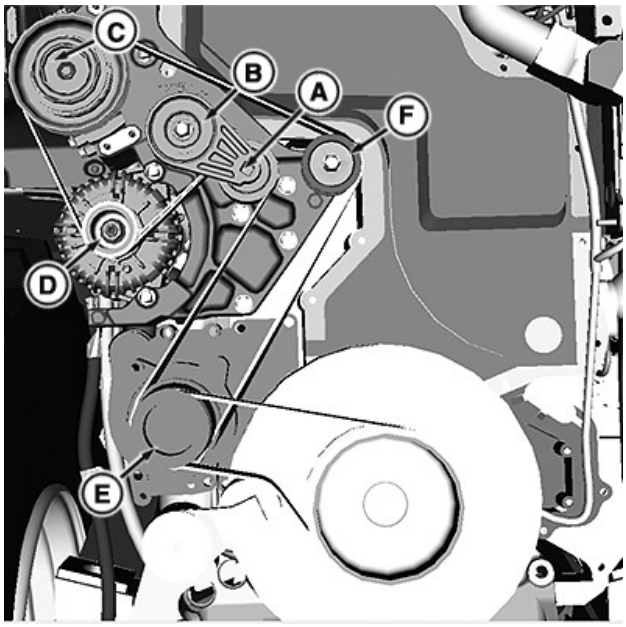


RXA0142200—UN—12JUN14

2. Release tension on drive belt. Insert 1/2 inch drive socket wrench into square hole (A) on tensioner arm (B). Twist tensioner clockwise.
3. While continuing to apply force with breaker bar, have assistant remove auxiliary belt from air conditioner pulley (C).
4. Relax tension and completely remove belt.

IMPORTANT: Belt tension is controlled by an automatic belt tensioner. Tensioner does not require adjustment.

5. Inspect belt tensioner. See Engine Auxiliary Drive Belt and Drive Belt Tensioner in Service - Check section of this Operator's Manual.



RXA0142199—UN—06JUN14

Auxiliary Drive Belt Layout

Install new belt on all pulleys except tensioner pulley. Drive belt layout chart shows correct belt routing.

7. Using breaker bar, release tension on tensioner pulley and position belt over pulley.
8. Slowly relax force on breaker bar.
9. Check engine water pump belt for wear or damage. Replace if necessary. See Engine Water Pump Drive Belt in this Operator's Manual section.

CAUTION: Never start engine without side panels installed and hood securely closed and latched.

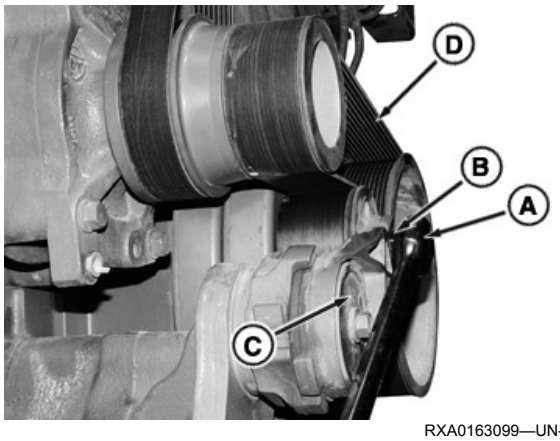
10. Install engine side shields.
11. Close and secure hood.

SV81855,00001D1-19-02MAY18

Engine Water Pump Drive Belt—15 L Engine

1. Remove front engine side shield, see Remove Front Engine Side Shield in Service - General Information section of this Operator's Manual.

IMPORTANT: Removal of belt requires an assistant.



RXA0163099—UN—02MAY18

2. Release tension on drive belt. Insert 1/2 inch drive ratchet or breaker bar (A) into square hole (B) on tensioner arm (C). Twist tensioner counterclockwise.
3. While continuing to apply force with breaker bar, have assistant remove water pump belt from water pump pulley (D).
4. Relax tension and completely remove belt.

IMPORTANT: Belt tension is controlled by an automatic belt tensioner. Tensioner does not require adjustment.

5. Inspect belt tensioner. See Engine Auxiliary Drive Belt and Drive Belt Tensioner in Service - Check section of this Operator's Manual.
6. Install new belt on all pulleys except tensioner pulley.
7. Using breaker bar, release tension on tensioner pulley and position belt over pulley.
8. Slowly relax force on breaker bar.
9. Check auxiliary engine drive belt for wear or damage. Replace if necessary. See Engine Auxiliary Drive Belt—15 L Engine in this Operator's Manual section.

CAUTION: Never start engine without side panels installed and hood securely closed and latched.

10. Install engine side shields.
11. Close and secure hood.

RX32825,0000009-19-02MAY18

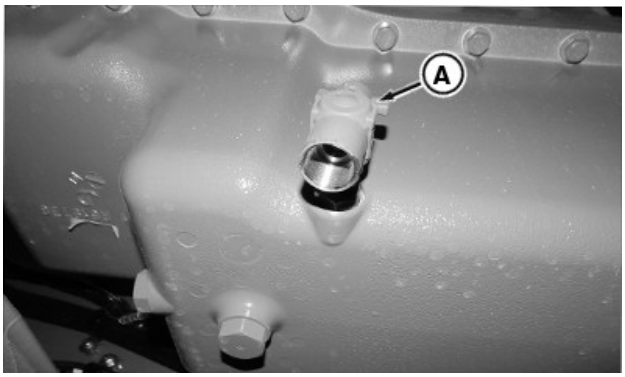
Engine Oil and Filter—13.5 L Engine

IMPORTANT: Sulfur content should not exceed 0.10%. Sulfur content less than 0.10% is preferred. Refer to Fuel, Lubricants, and Coolant section for more information on oil change intervals.

NOTE: The 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 the surface mating of the rings and liners has had an opportunity to occur. The 100 hour minimum applies to all new or rebuilt engines. The maximum service interval is the same as the service interval recommendations listed in Engine Oil and Filter Service Intervals for your engine. To confirm which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

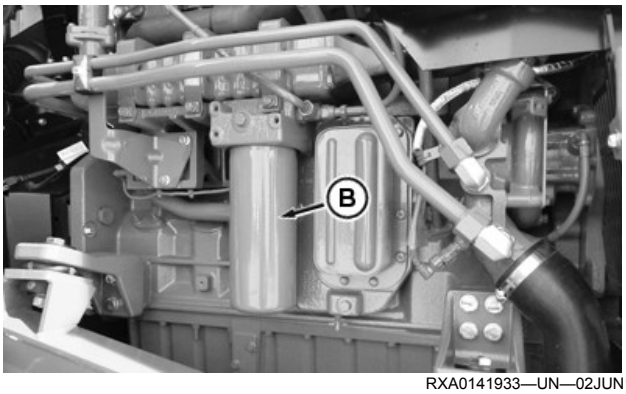
For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in the Engine Oil section of this Operator's Manual.

1. Operate engine approximately 5 minutes to warm oil.
2. Stop engine.



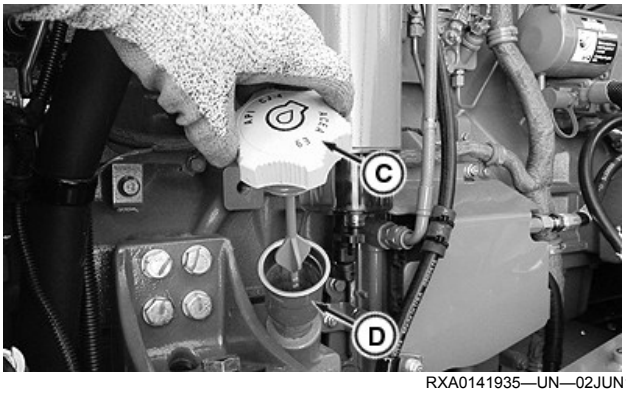
RXA0141931—UN—02JUN14

3. Turn crankcase drain fitting (A) to drain oil. Use enough containers for 75.7 L (20 gal.) and direct flow with attached valve hose.
4. Tighten fitting after oil is completely drained.
5. Remove front engine side shield, see Remove Front Engine Side Shield in Service - General Information section of this Operator’s Manual.



RXA0141933—UN—02JUN14

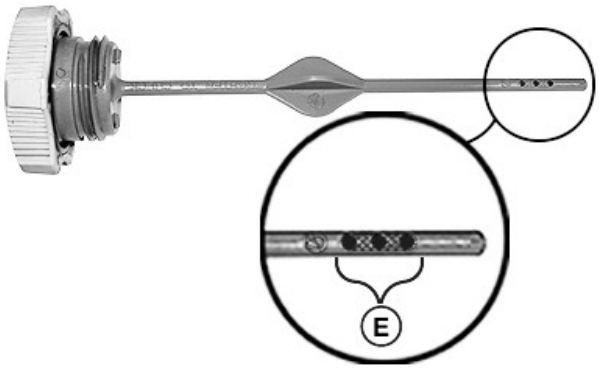
6. Remove filter (B) and remove old O-ring. Clean filter mounting surface with clean dry cloth.
7. Apply a thin film of oil to new O-ring and install new filter.
8. Hand-tighten filter element, then turn filter element 1-1/4 turn after gasket contact. Filter wrench is required. Do not overtighten.



RXA0141935—UN—02JUN14

9. Remove engine oil fill cap (C) and refill crankcase using fill tube (D). Use seasonal viscosity grade oil as specified in Engine Oil section of this Operator’s Manual. For crankcase capacity, see Capacities in Specifications section of this Operator's Manual.
10. Start and run engine for a two minutes. Then stop engine and check for oil leaks.

NOTE: Engine oil level indicator is a dipstick with a "crosshatched" area with a "safe" zone. Anywhere in the dipstick crosshatched safe zone is considered FULL.



RXA0110097—UN—10DEC10

11. Recheck oil level with dipstick to ensure that level is in crosshatched (E) “safe” zone area.
12. Reinstall front engine side shield and close hood.

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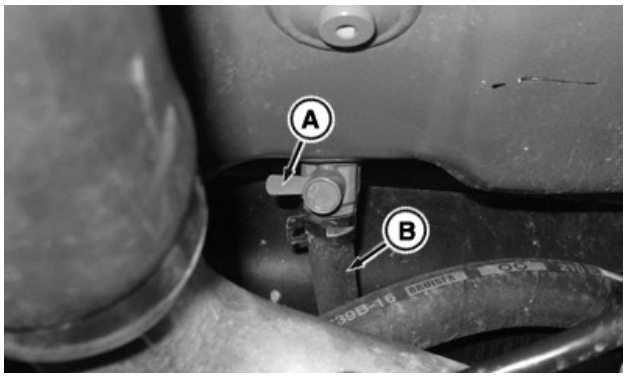
Engine Oil and Filter—15 L Engine

IMPORTANT: Fuel sulfur content should not exceed 0.10%. Fuel sulfur content less than 0.10% is preferred. Refer to Fuel, Lubricants, and Coolant section for more information on oil change intervals.

NOTE: No initial break-in service required for new or rebuilt engines. The maximum service interval is the same as the service interval recommendations listed in Engine Oil and Filter Service Intervals for your engine. To confirm which engine your tractor is equipped with, see Engine Serial Number in Identification Numbers section of this Operator's Manual.

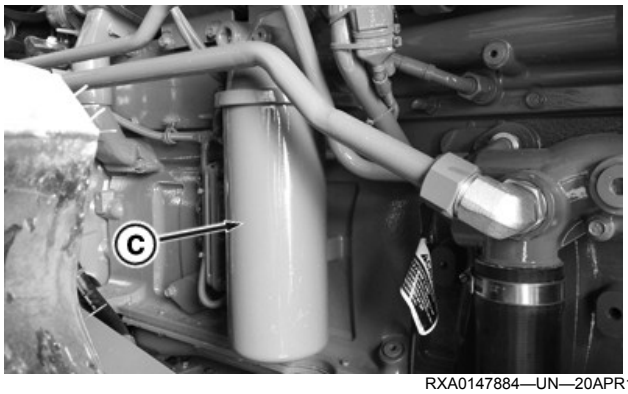
For subsequent oil changes, see Engine Oil and Filter Service Intervals in Engine Oil section of this Operator's Manual.

1. Operate engine approximately 5 minutes to warm oil.
2. Stop engine.



RXA0147883—UN—20APR15

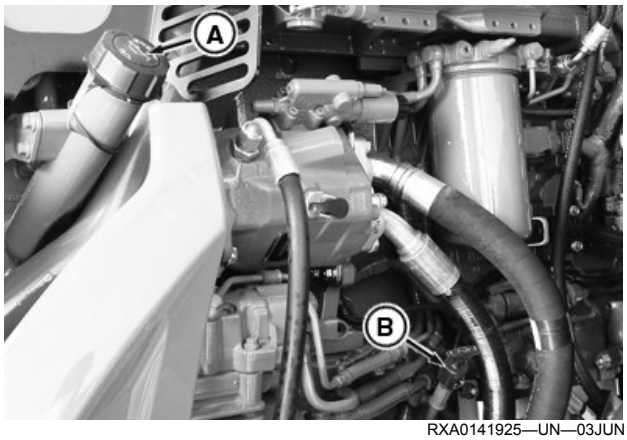
3. Locate engine drain valve (A) located inside right-hand engine side frame.
4. Turn crankcase drain valve (A) to drain engine oil. Use enough containers for 75.7 L (20 gal) capacity and direct oil flow with engine oil drain hose (B).
5. Close drain valve after all oil has been drained.
6. Remove front engine side shield, see Remove Front Engine Side Shield in Service General - Information section of this Operator’s Manual.



RXA0147884—UN—20APR15

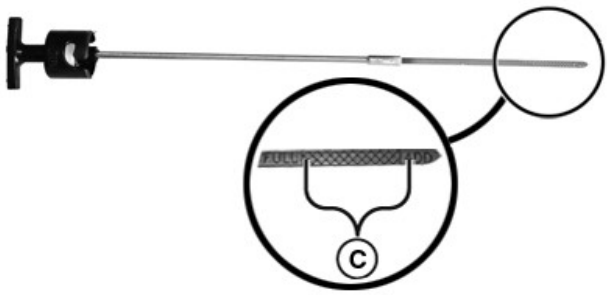
7. Remove filter (C) and old gasket. Clean filter mounting surface with clean dry cloth.
8. Apply thin film of oil to new gasket.
9. Fill filter with clean engine oil, approximately 1.9 L (0.5 gal).
10. Install gasket and filter.
11. Hand-tighten filter element until gasket contacts filter head surface. Use filter wrench to tighten an extra 3/4 to 1 turn after gasket contact. Refer to instructions on filter. Do not overtighten.

IMPORTANT: Do not overfill engine. Excess oil can cause loss of efficiency.



RXA0141925—UN—03JUN14

12. Remove engine oil fill cap (A) and fill crankcase using fill tube. Use seasonal viscosity grade oil as specified in Engine Oil section of this Operator’s Manual. For crankcase capacity, see Capacities in Specifications section of this Operator's Manual.



RXA0141926—UN—03JUN14

13. Check oil level with dipstick (B), to ensure that oil level is in crosshatched “safe” area (C).
14. Start and run engine for two minutes. Then stop engine and check for oil leaks.

NOTE: Engine oil level indicator is a dipstick with a "crosshatched" area with a "safe" zone. Anywhere in the dipstick crosshatched safe zone is considered full.

15. Recheck oil level with dipstick (B), to ensure that oil level is in crosshatched “safe” zone area (C).
16. Install front engine side shield and close hood.

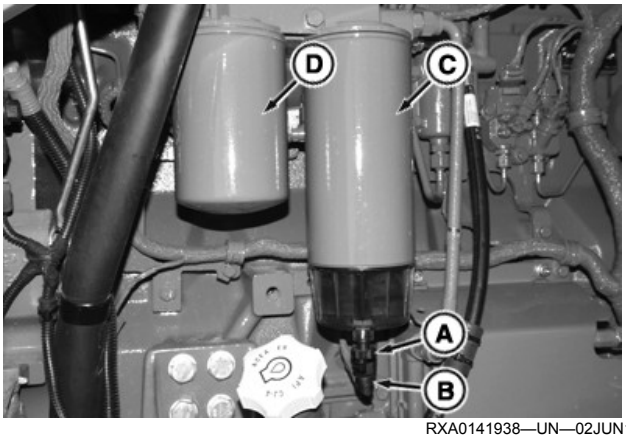
SV81855,000027B-19-26APR18

Fuel Filters—13.5 L Engine

1. Remove engine access panel, see Remove Engine Access Panel in Service - General section of this Operator’s Manual.

IMPORTANT: Replace fuel filter elements anytime audible alarm sounds and diagnostic trouble codes indicate plugged fuel filters (low fuel pressure). If no alarm sounds replace filters after 500 hours operation

2. Thoroughly clean exterior of fuel filter/water separator assembly and surrounding area.



RXA0141938—UN—02JUN14

3. Drain water and contaminants from primary filter into suitable container by opening drain valve (A) on bottom of separator.
4. Dispose of drained material in accordance with local laws and ordinances.
5. Disconnect the water-in-fuel sensor connector (B) from primary filter.
6. Remove primary filter (C), secondary filter (D), and gaskets and discard.

IMPORTANT: DO NOT prefill either fuel filter with fuel.

7. Lubricate gasket for primary fuel filter with fuel, and install canister onto base. Tighten 3/4 turn after packing contacts base.
8. 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.
9. Lubricate gasket for secondary fuel filter with fuel, and install filter onto base. Tighten 3/4 turn after packing contacts base.
10. Connect water-in-fuel separator sensor harness.
11. Install engine access panel.

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 after 3 minute time elapses or an air lock in the fuel system may occur.

12. Start engine and run high idle for 2 minutes.

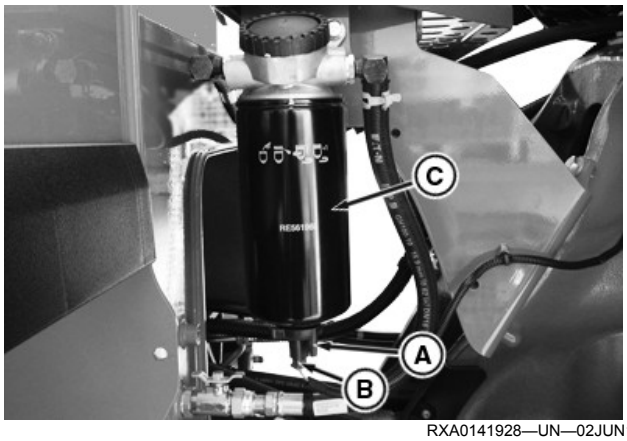
RX32825,000064D-19-26APR18

Fuel Filters—15 L Engine

1. Remove front engine access panel, see Remove Engine Access Panel in Service - General Information section of this Operator’s Manual.

IMPORTANT: Replace fuel filter elements anytime audible alarm sounds and diagnostic trouble codes indicate plugged fuel filters (low fuel pressure). If no alarm sounds replace filters after 400 hours operation

2. Thoroughly clean exterior of fuel filter/water separator assembly and surrounding area.



RXA0141928—UN—02JUN14

3. Drain water and contaminants from primary filter into suitable container by opening drain valve (A) on bottom of filter.
4. Dispose of drained material in accordance with local laws and ordinances.
5. Disconnect the water-in-fuel sensor connector (B) from primary filter.



RXA0141924—UN—02JUN14

6. Remove primary filter (C), secondary filter (D), and gaskets and discard filters.

IMPORTANT: Remove secondary filter plug (if equipped) before installing. DO NOT prefill either fuel filter with fuel.

7. Lubricate gasket for primary fuel filter with fuel, and install canister onto base. Tighten 3/4 turn after packing contacts base.
8. 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.
9. Lubricate gasket for secondary fuel filter with fuel, and install filter onto base. Tighten 3/4 turn after gasket contacts base.
10. Connect water-in-fuel sensor connector harness.
11. Install engine access panel.

IMPORTANT: Turn key ON for 3 minutes before starting engine to provide time to prefill fuel filters. Fuel system is self-bleeding.

Do not attempt to start engine until prefill is complete or a fuel system air lock may occur.

12. Start engine and run high idle for 2 minutes.

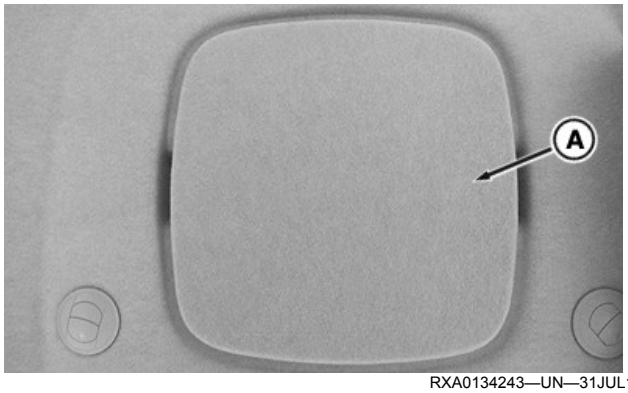
SV81855,000027A-19-26APR18

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.

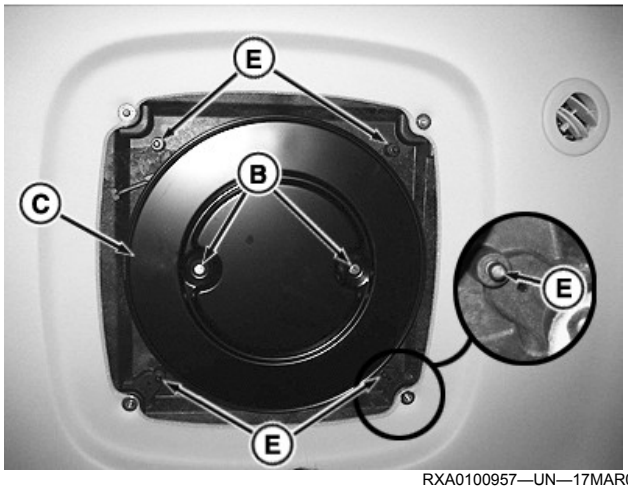
IMPORTANT: Replacement interval can vary according to operating conditions. Normal service is 1000 hours or annually, whichever occurs first.

1. Close entry door to prevent debris getting into cab.



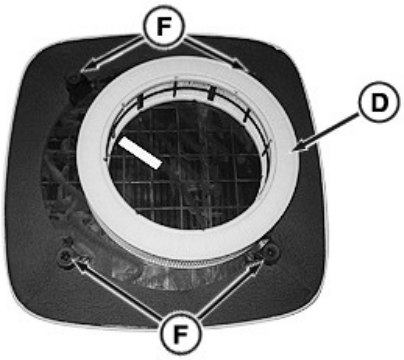
RXA0134243—UN—31JUL13

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.

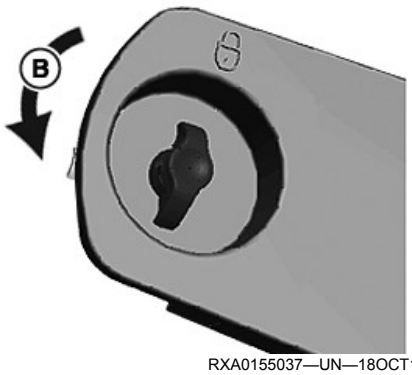
IMPORTANT: Replacement interval can vary according to operating conditions. Normal service is 1000 hours or annually, whichever occurs first.



RXA0099137—UN—19SEP08

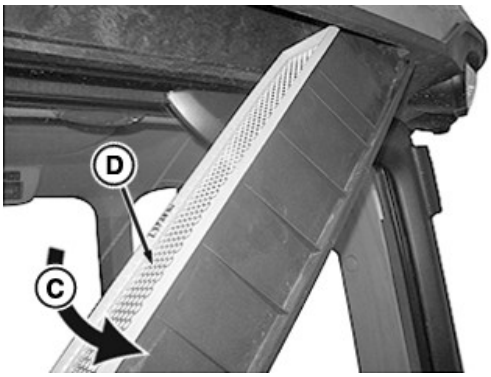
1. Support cover (A).

NOTE: Filter cover latch has three positions; open, latched, and locked. Cover is not locked when in latched position.



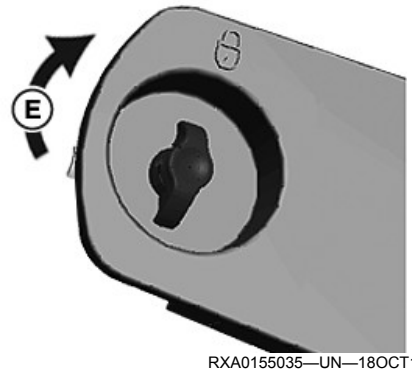
RXA0155037—UN—18OCT16

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.

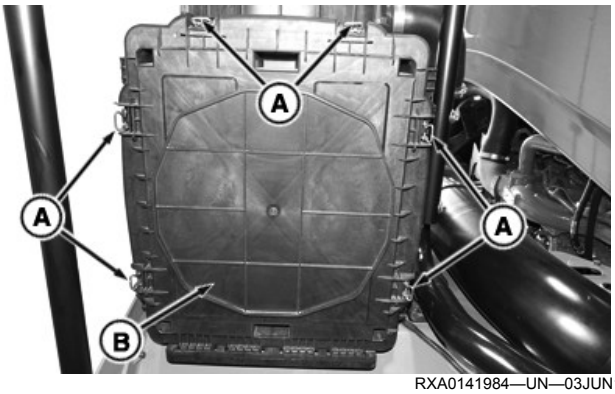
TS36762,0000150-19-06JUL17

Engine Primary and Secondary Air Filters

IMPORTANT: When Engine Air Filter Restriction Warning is activated, engine performance is reduced. Service engine air filter immediately.

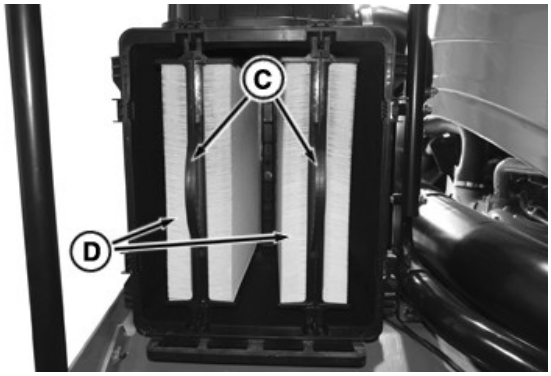
IMPORTANT: Service interval may vary due to operating conditions. Replace secondary air filter every second primary air filter change.

1. Inspect filters and intake seals. Replace filter if seal gap or damage is found.
2. Replace primary engine air filters if diagnostic trouble code remains on.



RXA0141984—UN—03JUN14

3. Unfasten clips (A) and remove air filter cover (B).



RXA0164245—UN—15AUG18

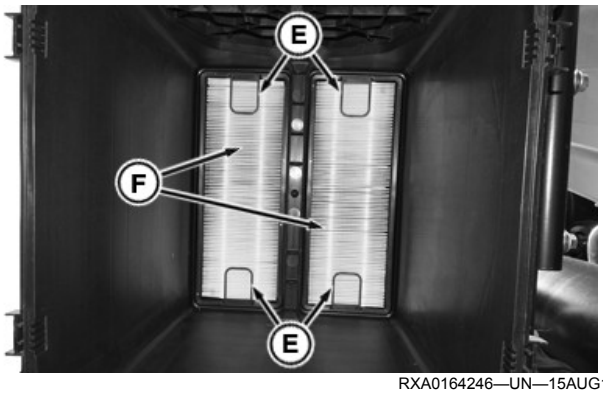
4. Grasp primary air filter handles (C). Pull air filters (D) from filter housing track.
5. Remove filters from filter housing.

IMPORTANT: Do not attempt to clean engine air filters.

6. Inspect filter for damage or waviness in pleats. Such conditions may indicate over use or contact with water. Replace filter if problem is found.

IMPORTANT: Replace secondary filters every other primary filter change.

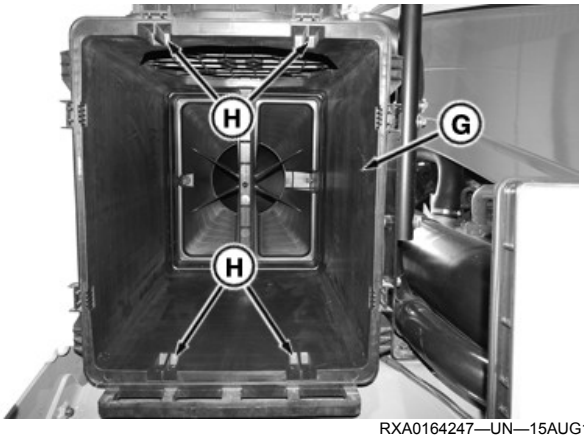
Install new secondary filters immediately to prevent dust from entering air intake system.



RXA0164246—UN—15AUG18

7. Pull on tabs (E) to remove secondary filters (F).
8. Inspect filters for damage. Replace if necessary.

NOTE: A very small amount of dust coating interior surface of filter housing is not unusual. If larger debris or significant amount of dust or dirt is found, check filters, filter housing, and air intake system for leaks.



RXA0164247—UN—15AUG18

9. Clean debris and dirt from filter housing (G). Use cloth dampened with water.

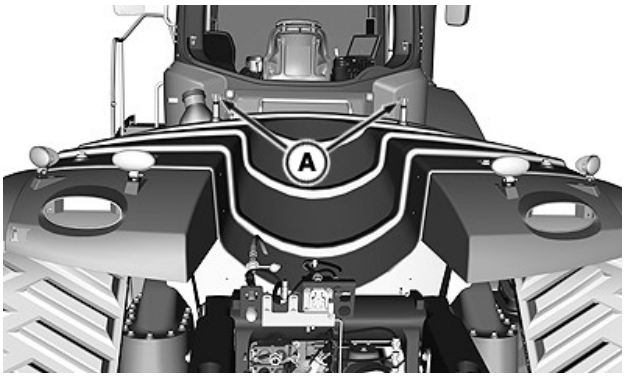
IMPORTANT: Incorrect installation of secondary filter tab may result in engine damage.

10. Replace secondary air filters.
11. Push filters firmly back to properly seat in filter housing.
12. Install primary filters into filter housing slots (H).
13. Slide filters rearward to properly seat into filter housing.
14. Install air filter cover and fasten cover clips.

RX32825,0000667-19-15AUG18

Fuel Tank Vent Filters

1. Clean off dirt and debris before removing vent filters.

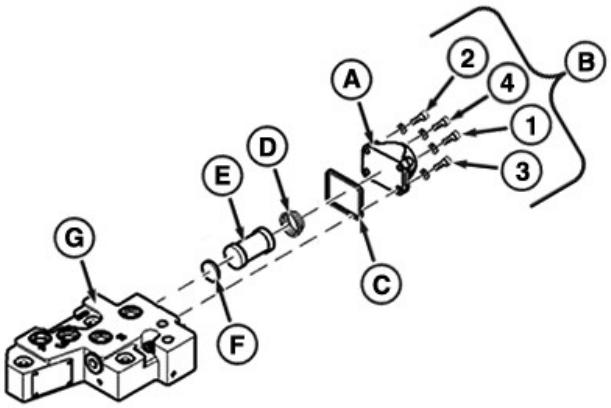


RXA0147249—UN—13FEB15

2. Remove left-hand and right-hand fuel tank vent filters (A).
3. Replace with new tank vent filters.

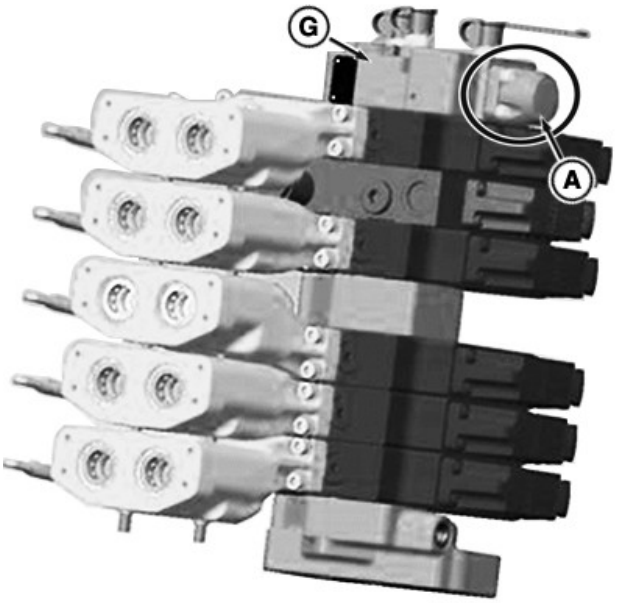
SV81855,000036F-19-26JUL17

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.

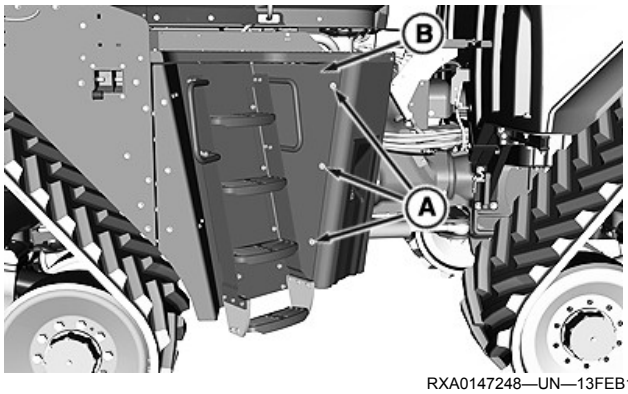
IMPORTANT: To determine tractor engine type, see Engine Serial Number in Identification Numbers Section of this Operator's Manual.

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.

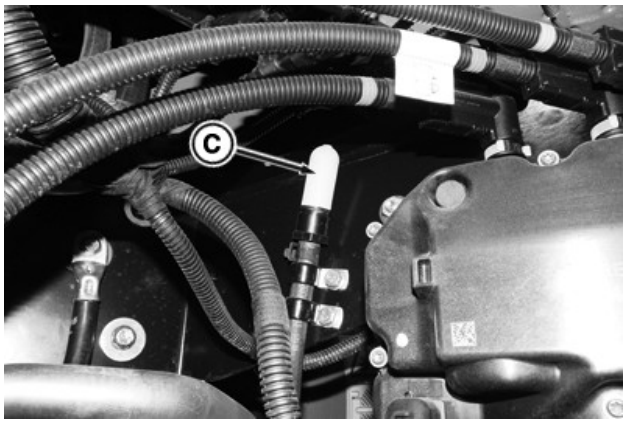
If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and may distort some plastic and rubber components.

NOTE: Procedure is similar for tractors with battery disconnect.



RXA0147248—UN—13FEB15

1. Remove cap screws (A) and open panel (B).



RXA0142031—UN—03JUN14

2. Remove DEF tank vent filter (C) located above DEF dosing unit.
3. Install new DEF tank vent filter.
4. Close panel and tighten cap screws to 73 N·m (54 lb·ft).

SV81855,000036C-19-23JUL18

In-Line DEF Filter

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.

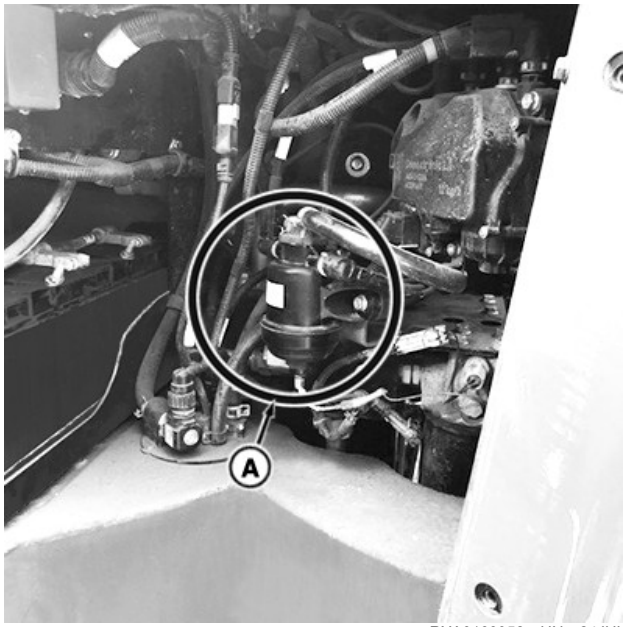
IMPORTANT: Prevent damage to tractor emissions system. Tractor is equipped with an engine which uses a Selective Catalytic Reduction (SCR) system. Light is illuminated during Diesel Exhaust Fluid (DEF) purge from system. Do not begin service on filter until battery disconnect switch light has gone out.

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

NOTE: A blocked DEF header filter is one of several possible problems which will cause listed (diagnostic Trouble Codes) DTC messages to appear.

- *ECU4334.01 - Dosing Unit Pressure Extremely Low*
- *ECU4334.18 - Dosing Unit Pressure Moderately Low*

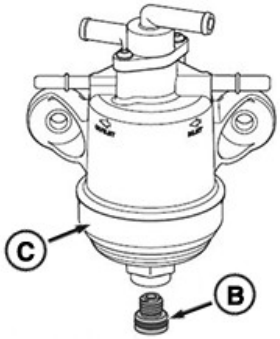
1. Watch indicator light on battery disconnect switch, when indicator light has gone out go to step 2.



RXA0163952—UN—24JUL18

Inside Battery Compartment Door

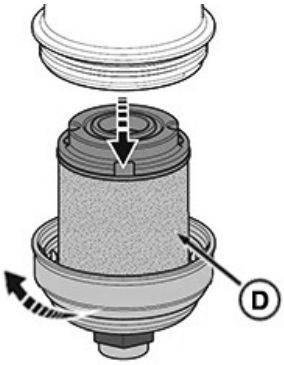
2. Locate DEF pump and inline DEF filter assembly (A).



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.

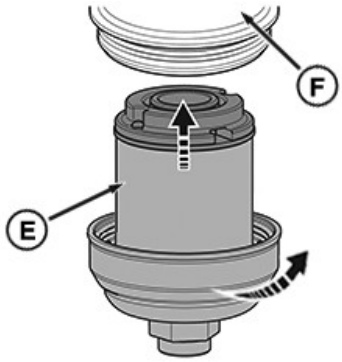


RXA0163956—UN—23AUG18

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 housing into DEF pump (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).

BH38674,0000D44-19-11SEP18

Transmission-Hydraulic Oil and Filters

IMPORTANT: Prevent premature axle failure. Carefully follow drain and fill procedure.

NOTE: Recalibrate transmission only if transmission shift characteristics change after transmission oil and filter change, see Transmission Calibration in Service - General Information section of this Operator's Manual.

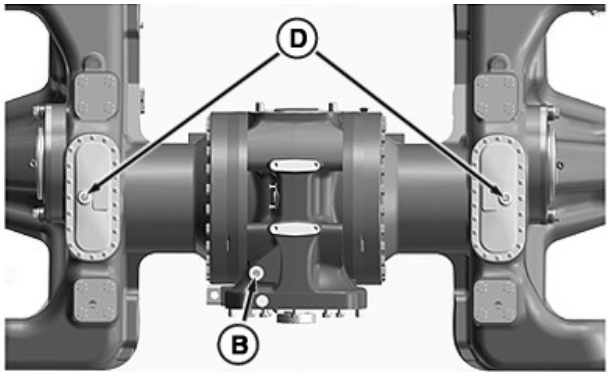
Maximum transmission/hydraulic oil reservoir/axles volume is 265.5 L (71.0 gal), depending on option configuration. Select appropriately sized containers for draining oil.

1. Park tractor on level ground, place transmission in PARK and shut off engine. Allow oil to cool for few minutes.



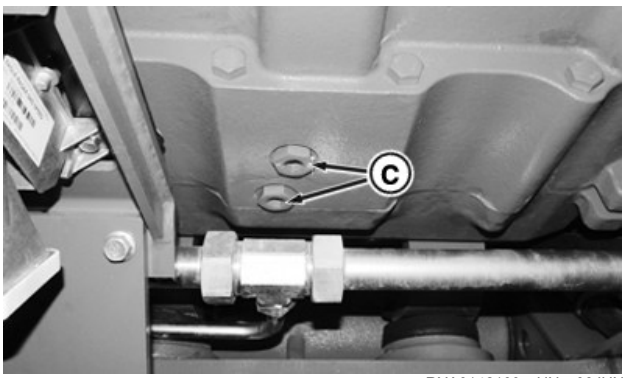
RXA0141856—UN—02JUN14

2. Remove hydraulic reservoir drain plug (A) in gudgeon area and direct oil into a catch oil container.



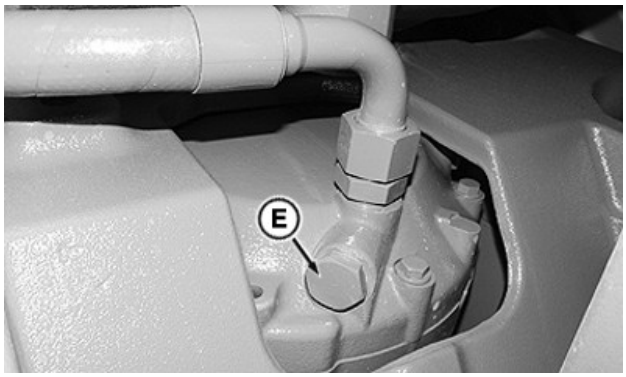
RXA0150421—UN—11NOV15

3. Remove axle plug (B) to drain oil.



RXA0142109—UN—06JUN14

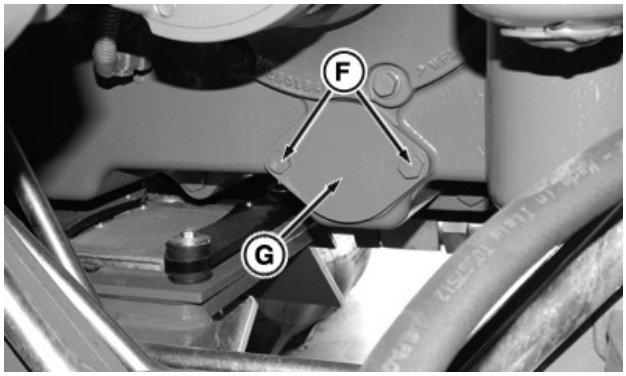
4. Remove two transmission plugs (C) to drain oil.
5. Remove final drive drain plugs (D) to drain oil



RXA0161062—UN—16OCT17

6. If PTO equipped, remove dropbox plug (E).
7. Reinstall reservoir drain plug.
8. Reinstall transmission drain plug and tighten to 70 N·m (52 lb·ft).
9. Reinstall all removed front and rear axle drain plugs. Tighten to 70 N·m (52 lb·ft).
10. If equipped, reinstall PTO dropbox drain plug and tighten to 70 N·m (52 lb·ft).

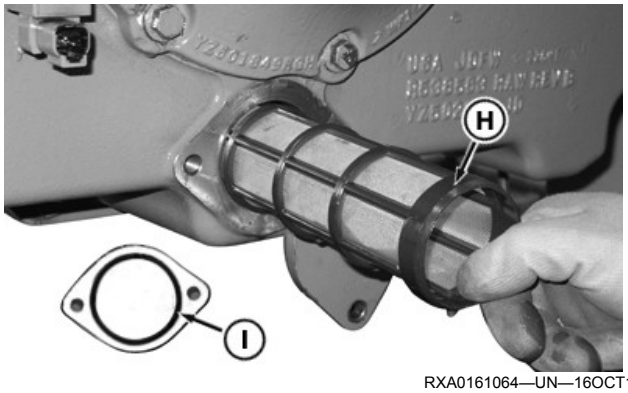
NOTE: Some parts in illustration have been removed to better show transmission suction screen.



RXA0161063—UN—16OCT17

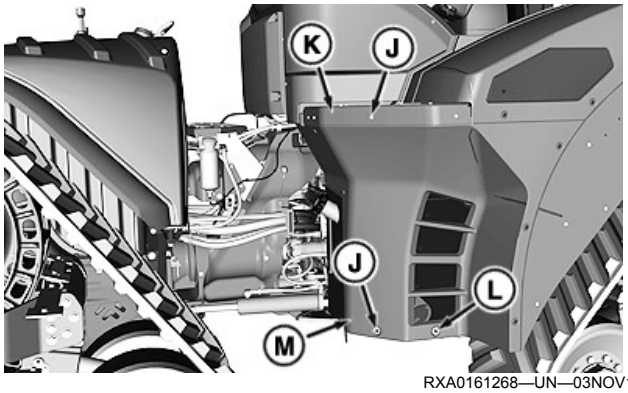
Transmission-Rear View

11. Remove suction screen cover cap screws (F) and remove cover (G) from rear of transmission.



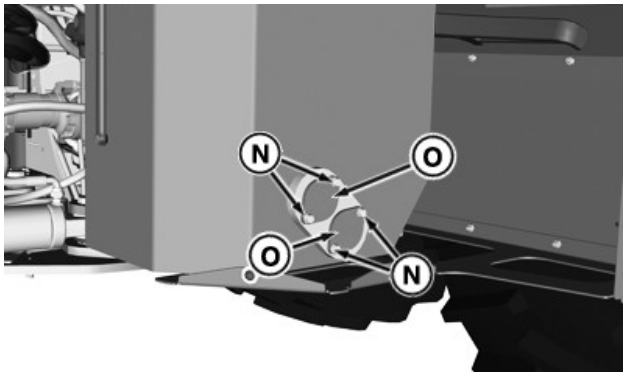
RXA0161064—UN—16OCT17

12. Remove suction screen (H) and clean with a solvent.
13. Remove and discard O-ring (I) on suction screen cover.
14. Inspect for debris in suction screen cavity using a flashlight or magnet.
15. Install new O-ring on cover.
16. Reinstall suction screen and cover. Tighten cap screws to 55 N·m (40 lb·ft).



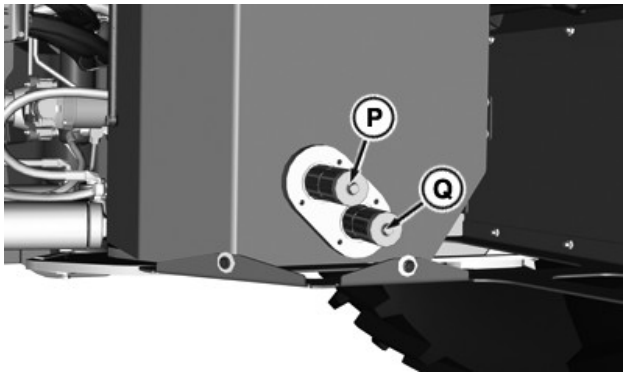
RXA0161268—UN—03NOV17

17. Remove platform cap screws (J) and remove platform step (K).
18. Remove panel cap screws (L) and remove lower shield panel (M).



RXA0161066—UN—16OCT17

19. Remove screen cover cap screws (N) and both screen covers (O).

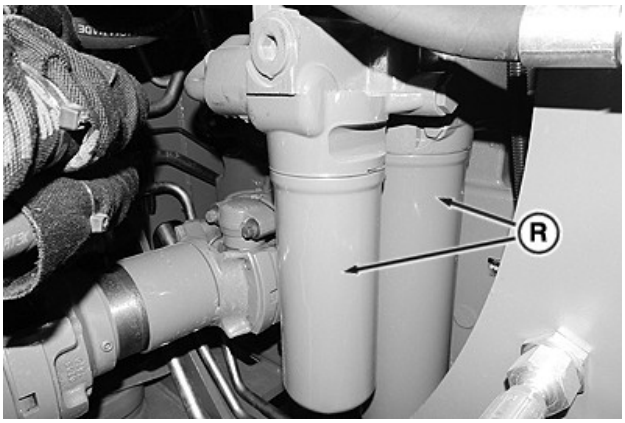


RXA0161067—UN—16OCT17

20. Remove axle lube suction screen (P) and clean with a solvent.

21. Remove charge pump suction screen (Q) and clean with a solvent.
22. Reinstall suction screens and covers. Tighten cap screws to 79 N·m (58 lb·ft).
23. Reinstall lower panel and tighten cap screws to 37 N·m (27 lb·ft).
24. Reinstall platform and tighten cap screws to 73 N·m (54 lb·ft).

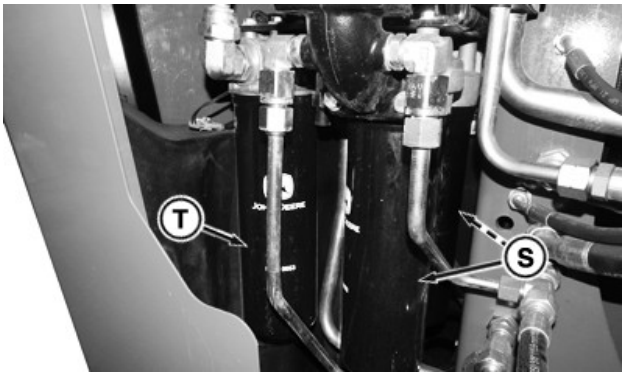
NOTE: Approximately 1.9 L (2 qts) of oil is lost when changing filter. Size drain pan accordingly.



RXA0161068—UN—16OCT17

25. Remove transmission oil filters (R), at right-hand rear of transmission.
26. Lubricate new filter O-rings with hydraulic oil and install filters. Tighten one-half turn after O-rings contact filter housing base.

IMPORTANT: Replace hydraulic oil or axle oil filters every 1500 hours or when indicator illuminates.



RXA0161070—UN—16OCT17

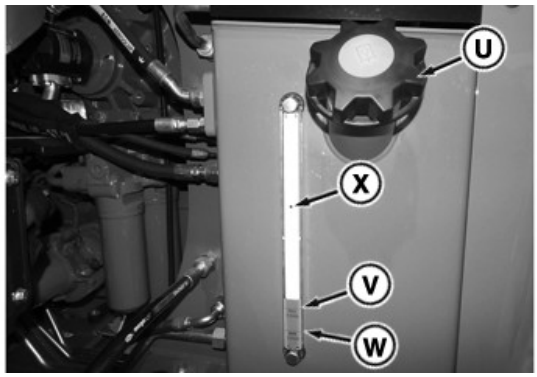
27. Remove hydraulic oil filters (S), on left-hand side of gudgeon.
28. Replace axle oil filter (T), located next to hydraulic oil filters (S).
29. Lubricate hydraulic oil and double reduction axle oil filter O-rings with hydraulic oil and install on tractor. Tighten one half turn after O-ring contacts filter housing base.

NOTE: Hydraulic oil reservoir does not hold all system hydraulic oil . Transmission and front and rear axles also hold additional system oil.

If possible, check oil level prior to first start of day. Ambient temperature should be 7°C. (45°F) or above. Oil level in the reservoir fluctuates depending upon the volume of oil exchanged with an attached implement.

For applications or implements requiring high volumes of oil transfer (for example - large air seeders or pulling three scrapers), hydraulic reservoir can be filled up to High Volume Takeout Oil Mark 58.5 L (15.4 gal) above MIN COLD.

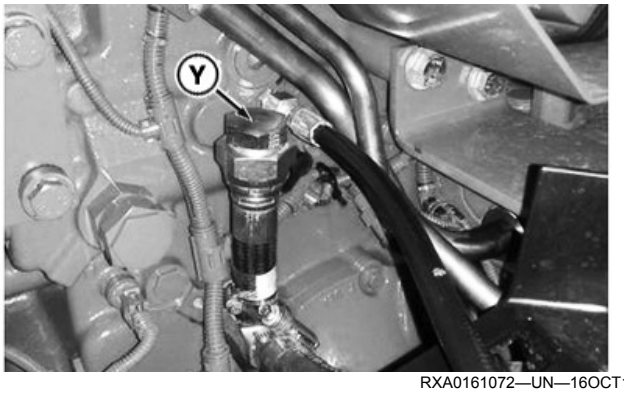
NOTE: For Transmission-Hydraulic Oil System Capacities (with Filters), see Capacities in Specifications section of this Operator's Manual.



RXA0161071—UN—16OCT17

30. Remove hydraulic oil reservoir fill cap (U) and add hydraulic oil to the reservoir.
31. Reinstall and tighten hydraulic reservoir fill cap.

IMPORTANT: Fill transmission with prescribed quantity of oil to ensure lubrication of transmission lube pump at startup.



RXA0161072—UN—16OCT17

32. Prefill transmission with 37.9 L (10.0 gal) of transmission-hydraulic oil at fill tube (Y). See Transmission and Hydraulic Oil in Other Lubricants section of this Operator’s Manual.

IMPORTANT: Do not depress brake pedal during this step. If brake pedal is depressed, additional oil flows to axles and result in an inaccurate oil level check.

33. Place transmission in PARK.
    a. Start Engine
    b. Run engine at 1200 rpm for 5 minutes.
34. Shut engine OFF and wait 5 minutes for oil level to stabilize.

NOTE: Confirm that oil level does not fall too low if tractor is to be used with implements with large hydraulic cylinders that remove large volumes of oil from the hydraulic system. Place implement in position that requires maximum amount of oil. Oil level should be near High Volume Takeout Oil Mark position on sight gauge.

35. Check to ensure transmission-hydraulic reservoir oil level is visible between Min Cold and Full Cold marks in the sight gauge. If oil level is visible between Min Cold and Full Cold, tractor can be used for normal operation. Oil level in reservoir rises as temperature increases. Replace the transmission-hydraulic oil reservoir vent filter, see Transmission-Hydraulic Vent Filter in this Operator's Manual section.

NOTE: Volume capacity between Min Cold mark and Full Cold mark is 11.4 L (3 gal).

36. If oil level is below Min Cold is sight gauge, add oil through reservoir cap.

IMPORTANT: Excess hydraulic oil can result in decreased engine power and decrease fuel economy.

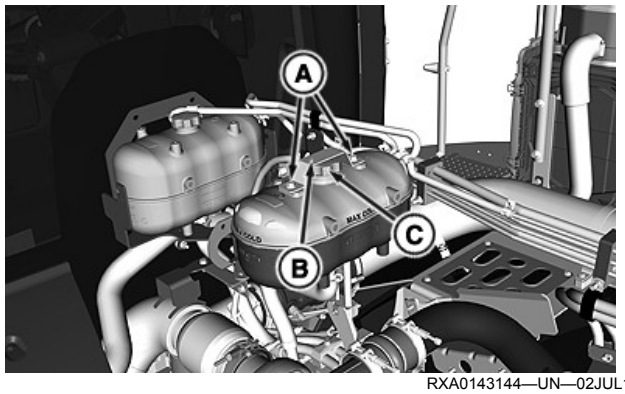
37. If oil level is above Full Cold mark, remove enough oil to bring it down to Full Cold mark level.

    Remove drain plug under hydraulic oil reservoir and direct oil into a container.

SV81855,0000370-19-13APR18

Engine Cooling System Radiator Cap—15 L Engine

1. Raise hood.

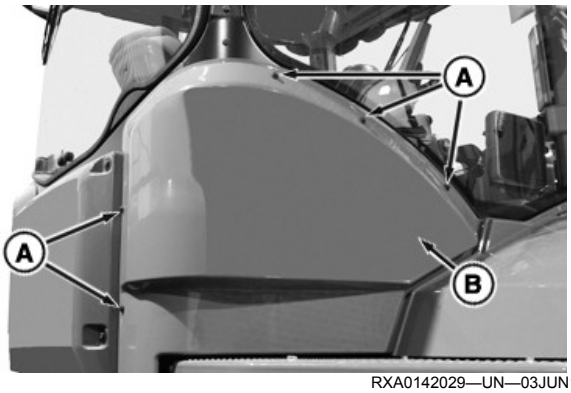


RXA0143144—UN—02JUL14

2. Remove cap screws (A) and bracket (B) from over cap.
3. Remove radiator pressure cap (C)
4. Replace with new radiator pressure cap.
5. Reinstall bracket and tighten cap screws to 20 N·m (15 lb·ft).
6. Close hood.

SV81855,00002C2-19-09NOV17

Transmission-Hydraulic Vent Filter



RXA0142029—UN—03JUN14

1. Remove right-hand rear cab panel retaining cap screws (A) and remove cab panel (B).



RXA0142030—UN—03JUN14

2. Release retaining hose clamps to remove vent filter (C) from hose.

3. Install new filter onto hose and secure with retaining hose clamps.

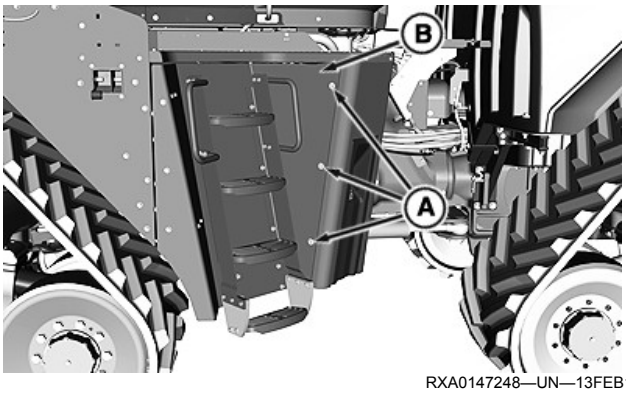
IMPORTANT: Do not over tighten retaining screws. Overtightening may result in damage to cab panels.

4. Reinstall cab panel and tighten retaining cap screws.

RX32825,0000653-19-20OCT17

Access DEF Dosing Unit Filter—Final Tier 4 or Stage V Engine

IMPORTANT: Replace every 4500 hours of operation or every 3 years, whichever comes first.



RXA0147248—UN—13FEB15

1. Remove cap screws (A) and panel (B).



RXA0161214—UN—26OCT17

2. Replace DEF dosing unit filter (C), located on bottom of dosing unit, see DEF Dosing Unit Filter in this Operator's Manual section.
3. Install shield. Tighten cap screws to 73 N·m (54 lb·ft).

SV81855,000036D-19-19JUL18

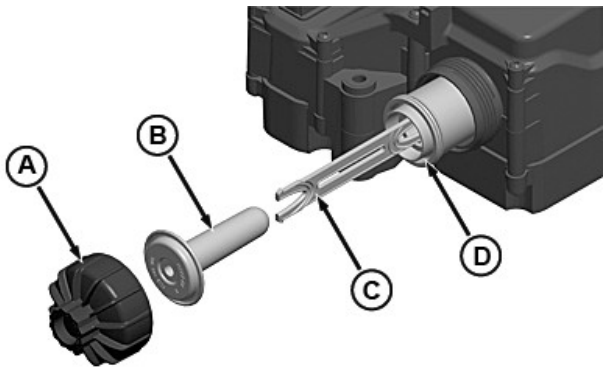
DEF Dosing Unit Filter—Final Tier 4/Stage V Engine

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.
5. Examine dosing unit filter. If filter is plugged with contaminants, go to step 6. If not plugged, go to step 10.
6. Check DEF tank for contaminated DEF, see Testing Diesel Exhaust Fluid (DEF) in Diesel Exhaust Fluid (DEF) section of this Operator's Manual.

7. If DEF is contaminated, drain and clean DEF tank, see Diesel Exhaust Fluid (DEF) Tank in Service - Clean section of this Operator's Manual.
8. Check stored DEF supply, see Testing Diesel Exhaust Fluid (DEF) in Diesel Exhaust Fluid (DEF) section of this Operator's Manual.
9. Clean DEF dosing unit threads and mating surfaces with distilled water.
10. Lubricate new DEF filter O-rings with clean engine oil. Carefully insert DEF dosing unit filter into DEF dosing unit.
11. Install new DEF dosing unit filter equalizing element into DEF dosing unit filter.
12. Install DEF dosing unit filter cover and tighten to 23 N·m (204 lb·in).

BH38674,0000D52-19-15AUG18

Transmission Drive Shaft Damper

IMPORTANT: In normal operating conditions, replace damper every 4500 hours. In heavy duty operations, replace every 3000 hours. See your John Deere dealer.

RX32825,0000674-19-14JUL17

Engine Coolant—13.5 L Engine

IMPORTANT: READ ENTIRE PROCEDURE BEFORE BEGINNING. Special tools and other products are needed to complete procedure.

Thermostat, thermostat gasket, and de-aeration tank cap should be replaced whenever system is flushed.

INITIAL change interval is 6 years or 6000 operating hours, provided cooling system is topped off using only John Deere Cool-Gard™ II and premix. SCHEDULED interval (2 years or 2000 operating hours) can be extended up to 6 years and 6000 operating hours, depending upon coolant being used. See Drain Intervals for Diesel Engine Coolant in Engine Coolant section of this Operator's Manual.

NOTE: When service is performed on cooling system, make sure to check coolant daily for the next three days of operation. The most effective way to check coolant level is when tractor engine is cool. If coolant is low, fill de-aeration tank to mark on tank.



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 first stop to relieve pressure before removing completely.

1. Park tractor, turn key switch to OFF and allow radiator 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 sections of this Operator's Manual.

NOTE: Throughout the draining, flushing and filling procedure, turn temperature knob to highest setting (B) and leave set to the highest setting to ensure that fluids are drained from heating/Air conditioning unit. If either temperature knob is not set to highest setting or key switch is not turned to RUN, system will not completely drain.

See your John Deere dealer for recommendations on cleaning solutions.

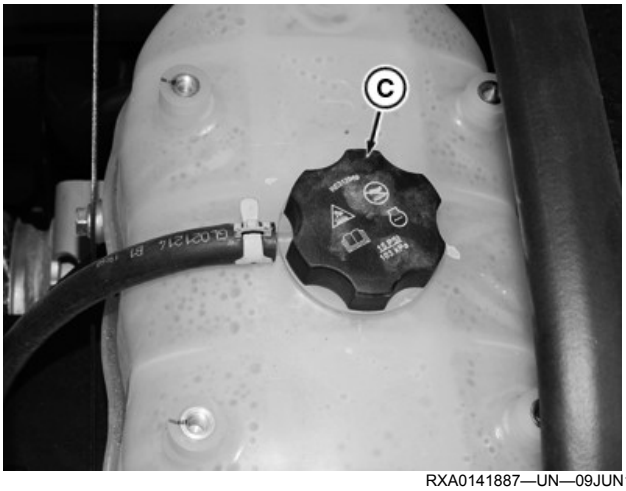


RXA0141883—UN—04JUN14



RXA0158422—UN—28MAR17

3. Turn key to RUN (A), then turn temperature knob (B) to highest setting.



RXA0141887—UN—09JUN14

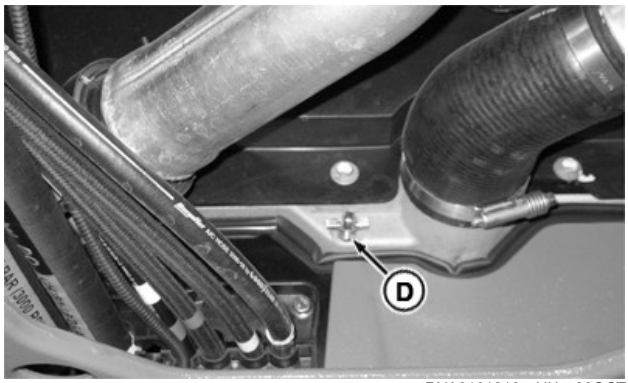
4. Open hood and remove de-aeration tank cap (C).



TS281—UN—15APR13

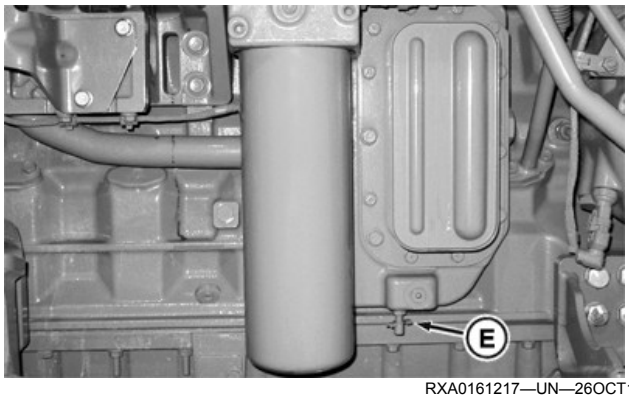
CAUTION: Explosive release of fluids from pressurized cooling system can cause serious burns.

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



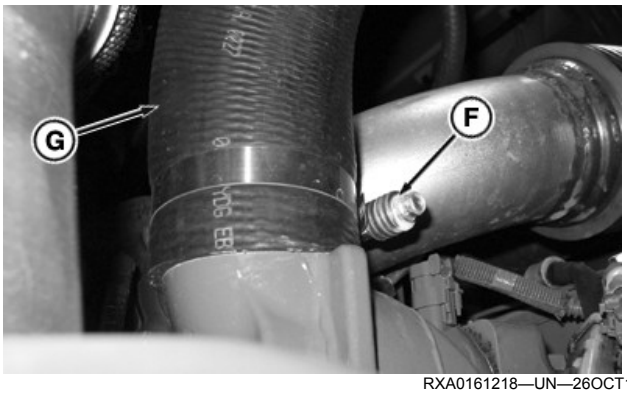
RXA0161216—UN—26OCT17

5. Place catch pan under radiator drain valve (D).
6. Open radiator drain valve and drain coolant into catch pan.
7. Place catch pan under engine drain valve.



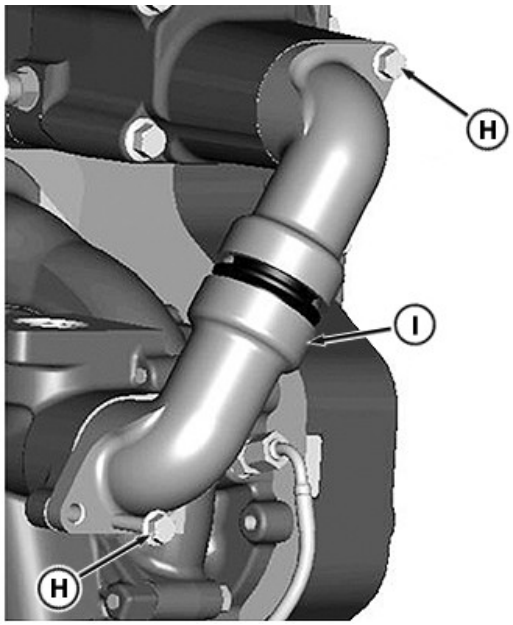
RXA0161217—UN—26OCT17

8. Open engine drain valve (E) and drain coolant into catch pan.
9. Allow radiator and engine to drain.



RXA0161218—UN—26OCT17

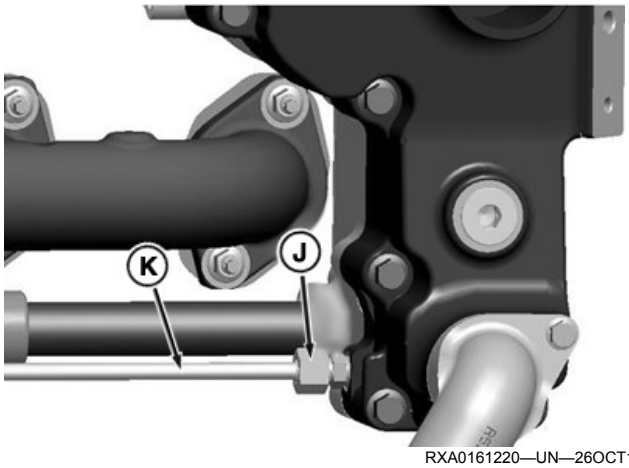
10. Loosen hose clamp (F) and slide hose (G) off of thermostat housing.



RXA0161219—UN—26OCT17

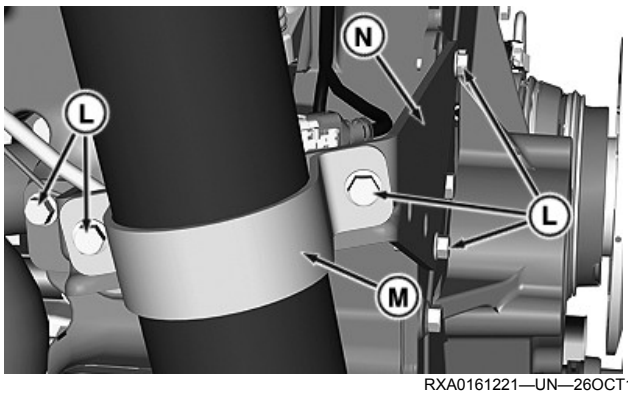
11. Remove cap screws (H) and remove coolant by-pass tube assembly (I).

NOTE: Coolant by-pass tube assembly does not need to be taken apart.



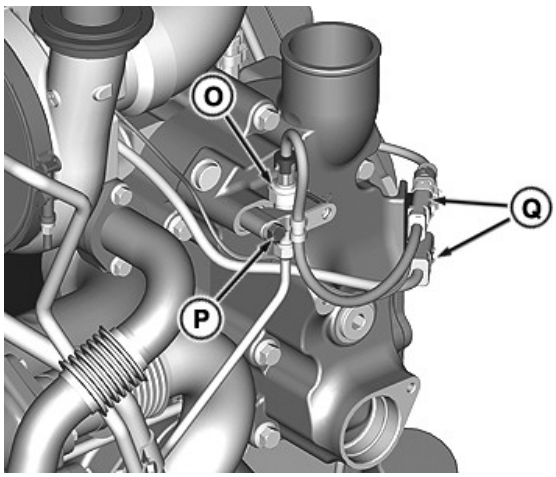
RXA0161220—UN—26OCT17

12. Remove coolant return line (K) by removing fitting on thermostat housing (J) and rear top liner cooling fitting with O-ring.



RXA0161221—UN—26OCT17

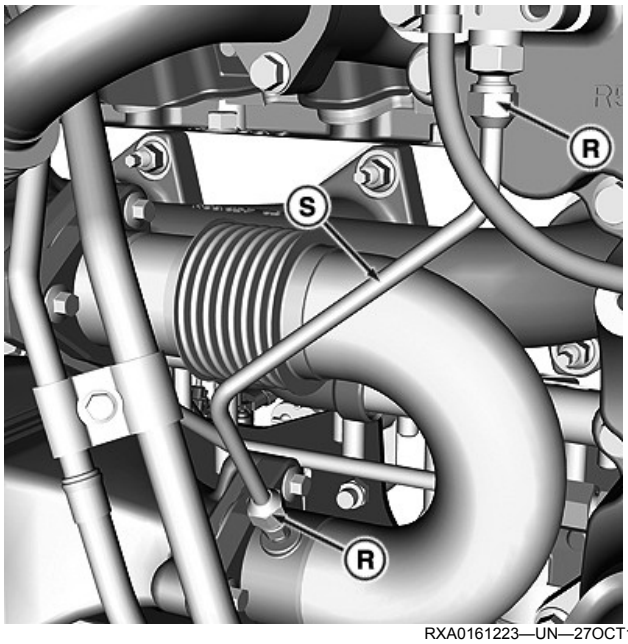
13. Remove cap screws (L), bracket (M), and brace (N).



RXA0161222—UN—26OCT17

14. Remove cap screw (P).

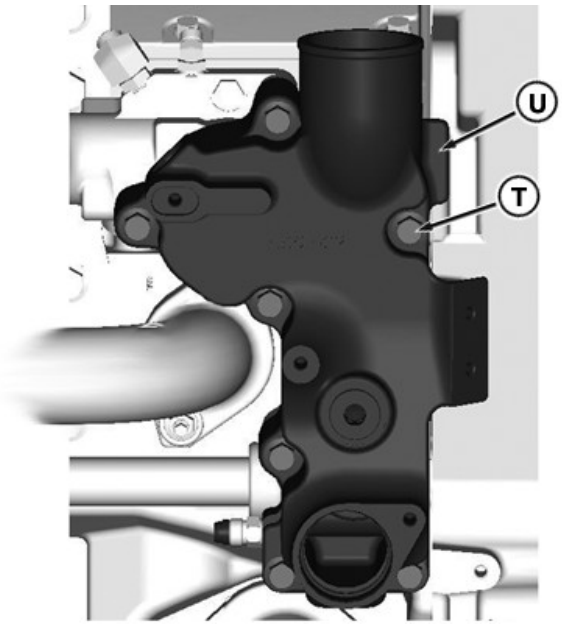
IMPORTANT: Handle pressure line with caution. Line is easily damaged and can cause engine problems.



RXA0161223—UN—27OCT17

15. Loosen fittings (R) and rotate hard line (S) enough to remove housing.

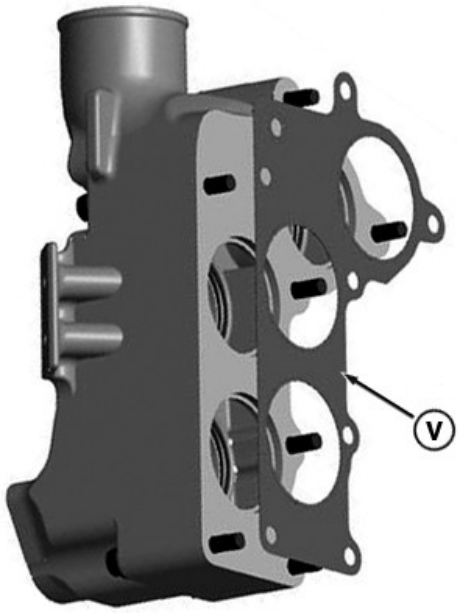
16. Remove pressure sensor (O) and electrical hardware (Q).



RXA0161224—UN—26OCT17

17. Remove six 85 mm cap screws, one 100 mm cap screw (T), and thermostat housing (U).
18. Remove old thermostats and clean sealing area.

NOTE: During draining, filling, and flushing, coolant system will not have thermostat installed.



RXA0161225—UN—26OCT17

19. Replace gasket (V) and housing.
20. Replace previously removed coolant return line assembly, coolant by-pass hose assembly, hard line, electrical hardware, bracket, brace, cap screws, radiator hose and clamp.
21. Close engine drain valve, and radiator drain valve.
22. Dispose of old coolant in accordance with local laws and ordinances.

IMPORTANT: Never pour cold water or coolant into hot engine.

NOTE: See your John Deere dealer for recommendations on cleaning solutions.

23. Fill high pressure coolant system at de-aeration tank with cooling system cleaning solution.
24. Install de-aeration cap and close hood.

CAUTION: Make sure hood is closed before starting engine.

25. Start engine and run at a minimum of 1500 rpm for 15 minutes.
26. Shut off engine and allow cleaning solution to cool.
27. Make sure temperature knob is turned to highest setting, then turn key switch to Run position.



TS281—UN—15APR13

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

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

28. Open hood, remove de-aeration cap, put drain pans in place, then open radiator and engine drain valves.
29. Allow cooling system to completely drain.
30. Close engine drain valve, and radiator drain valve.
31. Dispose of cleaning solution in accordance with local laws and ordinances.
32. Fill high pressure coolant system at de-aeration tank with clean water.

IMPORTANT: Never pour cold water or coolant into hot engine.

33. Install de-aeration cap and close hood.

CAUTION: Make sure hood is closed before starting engine.

34. Start engine and run at a minimum of 1500 rpm for 15 minutes.
35. Shut off engine and allow water to cool.
36. Make sure temperature knob is turned to highest setting. then turn key to Run.

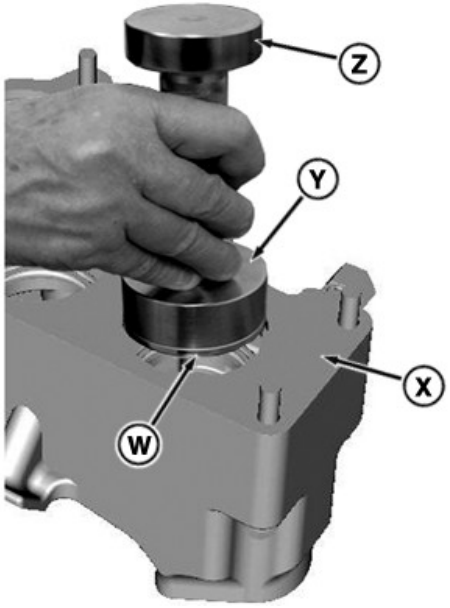


TS281—UN—15APR13

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

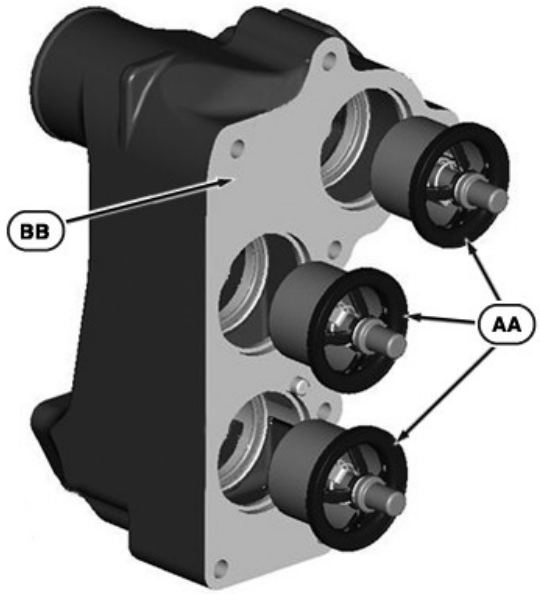
Only remove cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

37. Open hood, remove de-aeration cap, put drain pans in place, then open radiator and engine drain valves.
38. Allow radiator to drain.



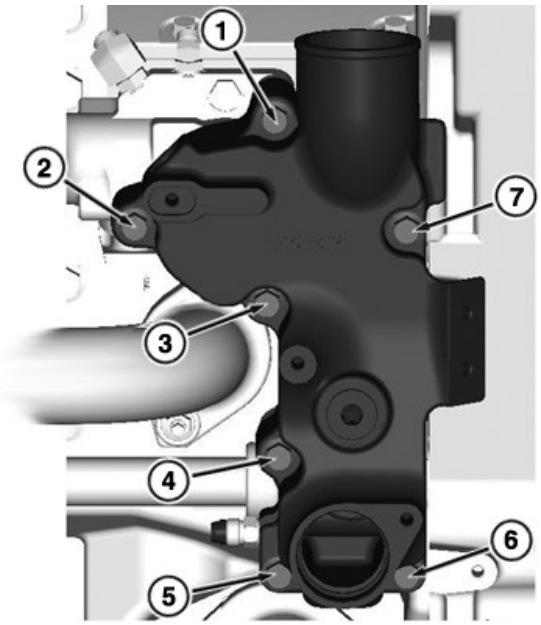
RXA0161226—UN—26OCT17

39. Remove radiator hose and clamp, bracket, brace, cap screws, electrical hardware, coolant return assembly, coolant bypass assembly, thermostat housing (X) and gasket.
40. Install lip seals (W) using handle JDG8092 (Z) and seal installer JDG11202 (Y).
41. Apply light coat of RTV silicone sealant to new gasket.



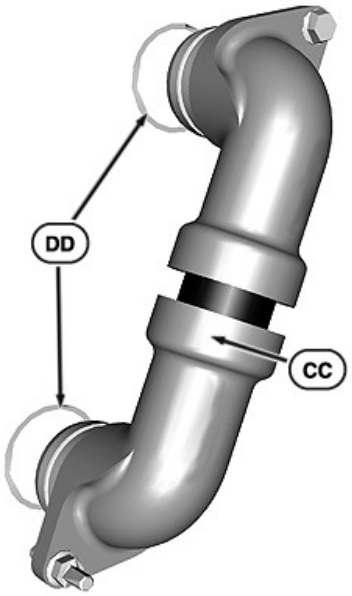
RXA0161227—UN—26OCT17

42. Install new thermostats (AA), new gasket (BB) and reinstall housing.



RXA0161228—UN—26OCT17

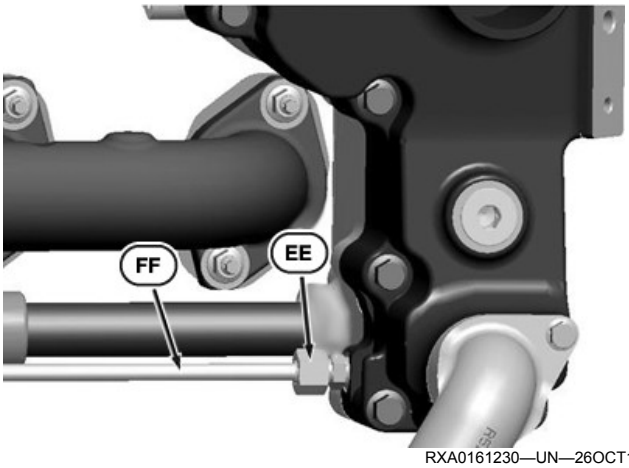
43. Tighten cap screws to 50 N·m (39 lb·ft) in order from 1 to 7.



RXA0161229—UN—26OCT17

44. Replace previously removed by-pass tube assembly (CC) and new O-rings (DD). Tighten cap screws to 37 N·m (27 lb·ft).

IMPORTANT: When installing rear top liner cooling fitting, apply Loctite® 242 thread locker to fitting threads and tighten fitting to specification. Apply AR54749 soap solution to O-ring when installing return line to thermostat housing.



RXA0161230—UN—26OCT17

45. Replace previously removed return line (FF) with fitting (EE) and rear top liner cooling fitting with O-ring. Tighten cap screws to 13.5 N·m (10 lb·ft).
46. Replace hard line and tighten fittings to 19 N·m (14 lb·ft).
47. Replace cap screw and electrical hardware. Tighten cap screw to 20 N·m (14 lb·ft).
48. Replace bracket and brace. Tighten cap screws to 30 N·m (22 lb·ft).

Loctite is a trademark of Henkel Corporation

49. Replace previously removed hose and clamp.
50. Close engine drain valve and radiator drain valve.
51. Dispose of drain clean water in accordance with local laws and ordinances.
52. Fill high pressure coolant system at de-aeration tank with new coolant solution. For cooling system capacity, see Capacities in Specifications section of this Operator's Manual.

CAUTION: Make sure hood is closed before starting engine.

IMPORTANT: Never pour cold water or coolant into hot engine.

NOTE: Coolant may seep out of the de-aeration tank overflow vent as air is purged from the coolant system.

Level may change when tractor is running or during the next few cycles.

It is highly recommended the cooling system is checked for leaks after draining, flushing and refilling to ensure tractor performance. Consult your John Deere Dealer for procedure and appropriate tools.

53. Install de-aeration cap, Install engine side shields, close hood, start engine, and run for a minimum of 1500 rpm for 15 minutes.

SV81855,0000341-19-26APR18

Engine Coolant—15 L Engine

See your John Deere dealer.

SV81855,000029C-19-23FEB17

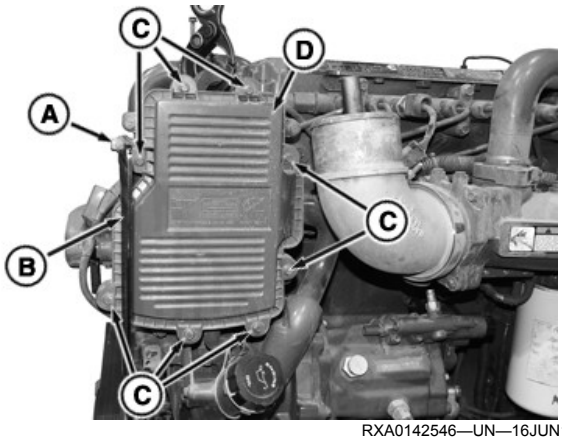
Engine Crankshaft Damper—13.5 L Engine

See your John Deere dealer.

RW29387,00001BC-19-16AUG17

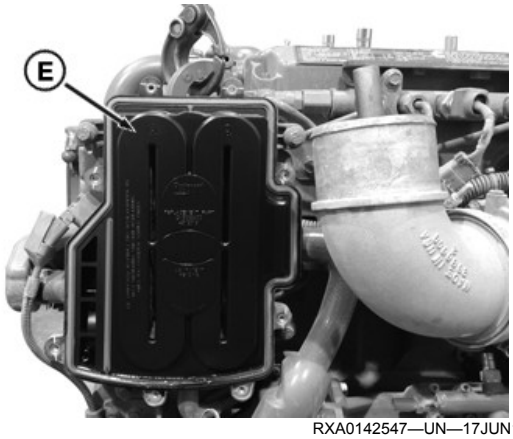
Engine Crankcase Breather Filter Element —15 L Engine

1. Open hood.



RXA0142546—UN—16JUN14

2. Remove cap screw (A) and finger guard (B).
3. Remove eight cap screws (C) and cover (D).



RXA0142547—UN—17JUN14

4. Replace and install new filter (E).
5. Replace cover and tighten cap screws to 5 N·m (45 lb·in).
6. Reinstall finger guard and tighten cap screw to 73 N·m (54 lb·ft).
7. Close hood.

RW29387,00000D5-19-09NOV17

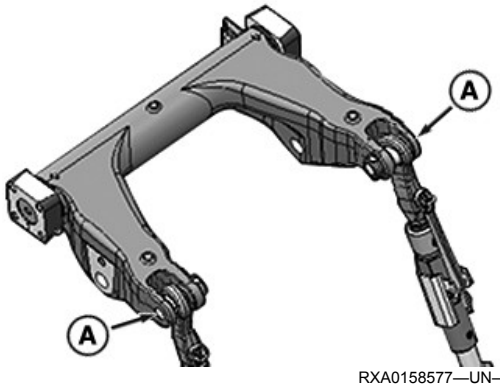
Front Drive Shaft U-Joints

See your John Deere dealer.

KD34109,0000312-19-28MAR17

Heavy Duty Lift Link Pins (Optional)

IMPORTANT: Prevent damage to hitch pins. Grease daily when hitch is in use.



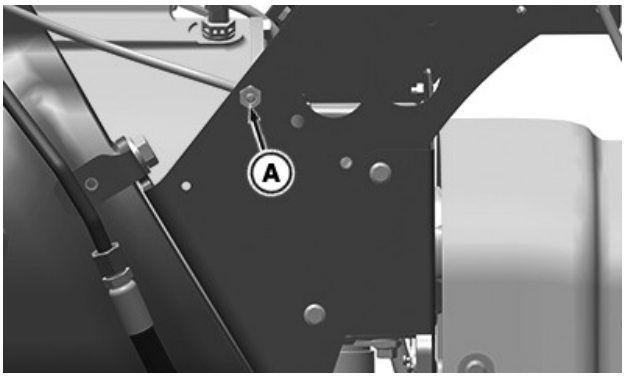
RXA0158577—UN—29MAR17

Lubricate hitch lift link pins (A). Use John Deere SD Polyurea grease or equivalent. See Grease in Other Lubricants section of this Operator's Manual.

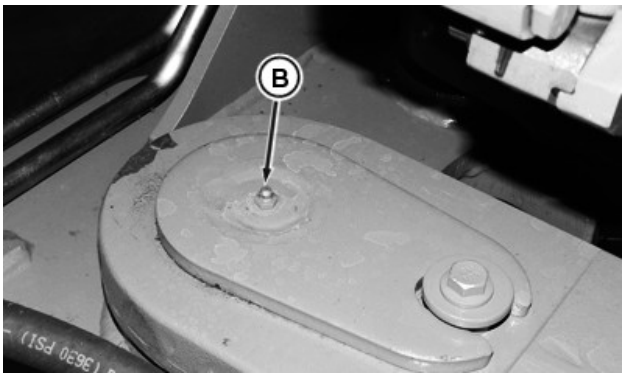
RX32825,0000638-19-13JUL17

Hinge Pins

CAUTION: Place tractor in PARK and remove key before working in hinge area.



RXA0162410—UN—06MAR18



RXA0141970—UN—02JUN14

Lubricate upper (A) and lower hinge pins (B).

Use John Deere SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section of this Operator's Manual.

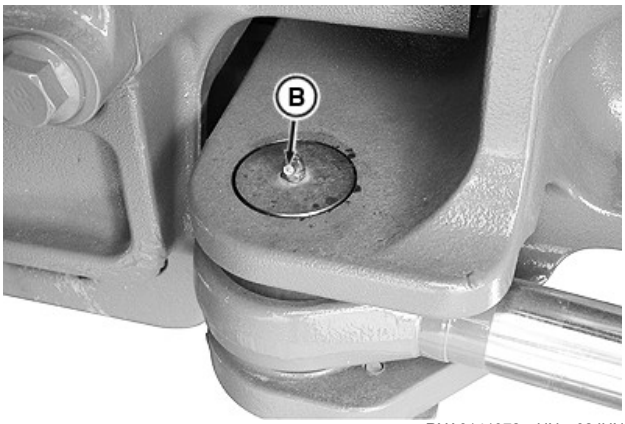
TS36762,0000352-19-06MAR18

Steering Pins

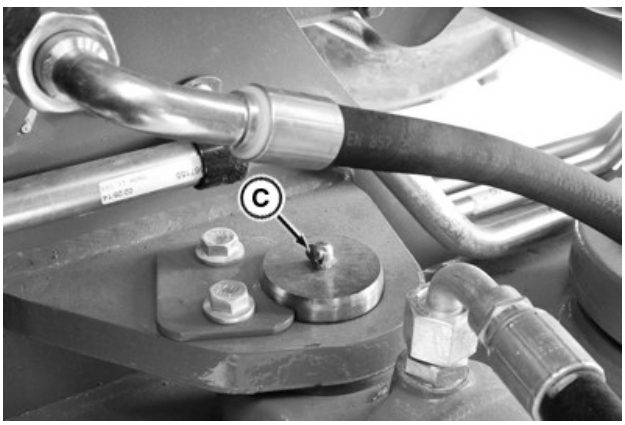
CAUTION: Place tractor in PARK and remove key before working in hinge area.



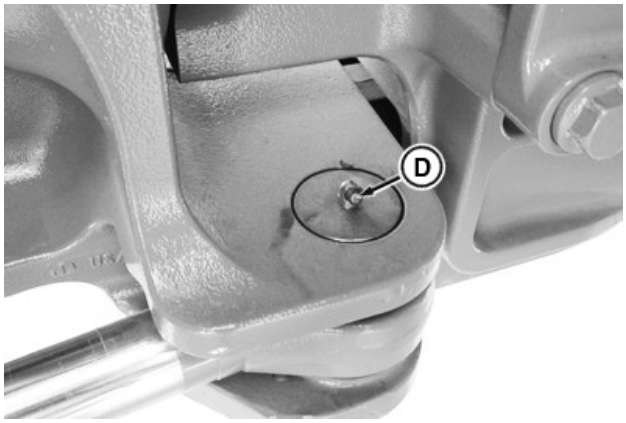
RXA0141971—UN—02JUN14



RXA0141972—UN—02JUN14



RXA0141973—UN—02JUN14



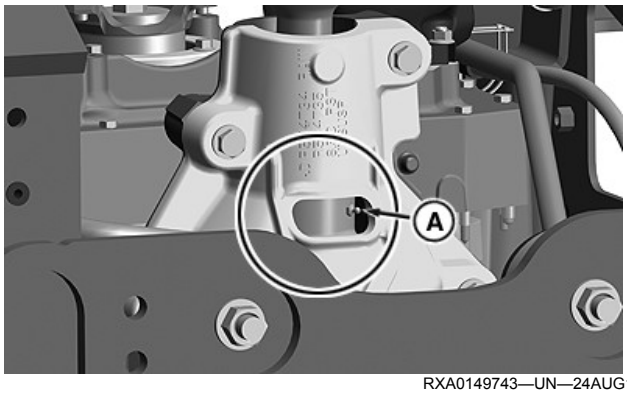
RXA0141974—UN—02JUN14

Lubricate right-hand front (A) and rear (B), left-hand front (C) and rear (D) steering pin bushings.

Use John Deere SD Polyurea grease or other grease as specified in Grease in Other Lubricants section of this Operator's Manual.

RX32825,000063A-19-13JUL17

Telescoping Drive Shaft

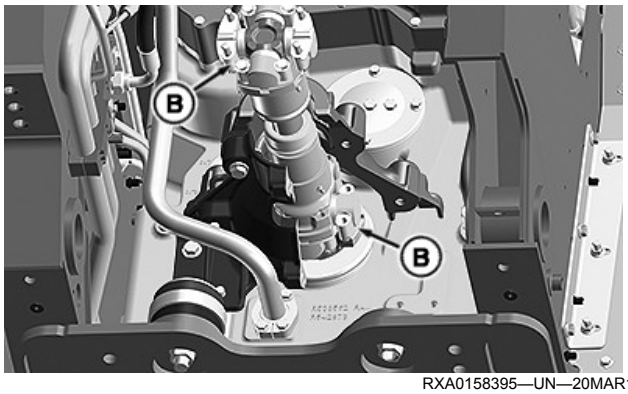


RXA0149743—UN—24AUG15

Transmission to Front Axle Drive Shaft (View From Under Tractor)

Lubricate telescoping transmission to front axle drive shaft lubrication fitting (A).

Use John Deere SD Polyurea grease or other grease as specified in Grease in Other Lubricants section of this Operator's Manual.

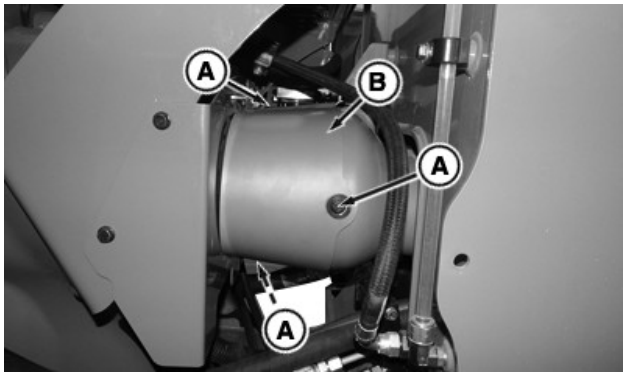


RXA0158395—UN—20MAR17

Inspect universal joints (B) for discoloration and looseness. If problem is detected, see your John Deere dealer.

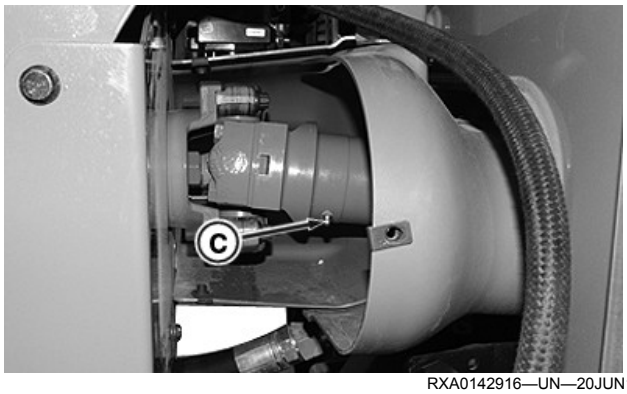
RX32825,000063F-19-22AUG17

PTO Drive Shaft



RXA0142745—UN—20JUN14

1. Remove three cap screws (A) and remove PTO shield (B) to access to PTO lubrication fitting. Rotate PTO shaft so fitting can be easily accessed for lubrication.



RXA0142916—UN—20JUN14

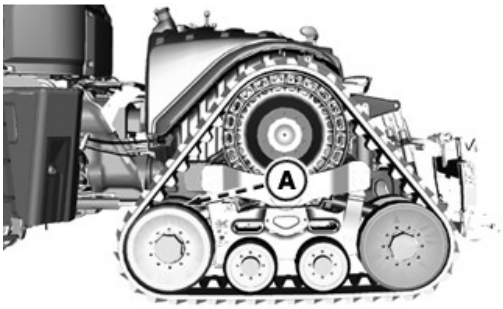
Rear PTO Shaft Fitting (With Parts Removed)

2. Lubricate rear PTO shaft fitting (C). Use John Deere SD Polyurea grease or other grease as specified in Grease in Other Lubricants section of this Operator's Manual.

3. Reinstall PTO drive shaft shield. Tighten cap screws to 28 N·m (21 lb·ft).

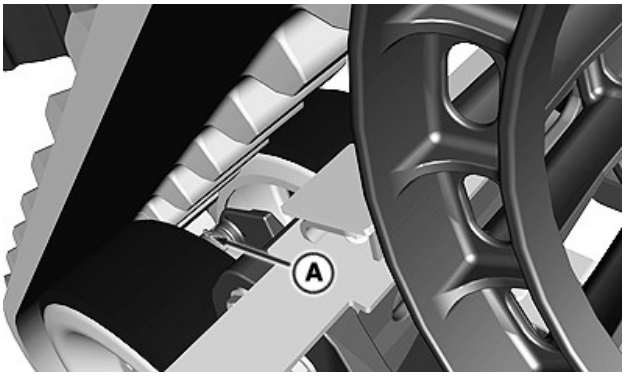
RX32825,0000640-19-27NOV17

Track Tension Cylinder



RXA0147245—UN—11FEB15

Tension Cylinder Fittings



RXA0147246—UN—13FEB15

Lower Tension Cylinder Fitting

Apply several shots of grease to tension cylinder grease fittings (A) at each end of cylinder.

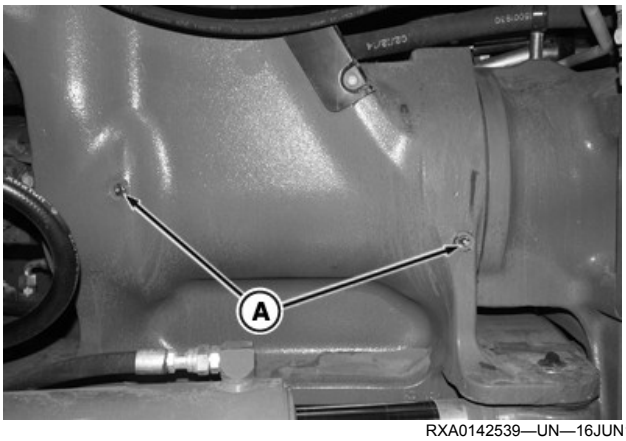
Use John Deere HD Grease. See Grease in Other Lubricants section of this Operator's Manual.

SV81855,0000368-19-26JUL17

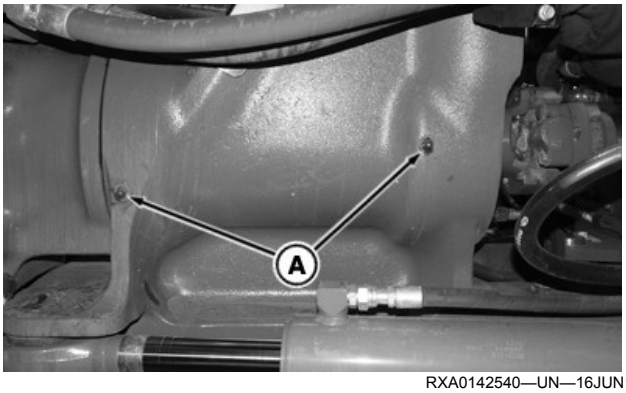
Heavy-Duty Gudgeon Bearings

IMPORTANT: Over-lubrication of bearings may result in damage to bearings, seals, and drive shaft.

Use only hand pump grease gun. other grease gun types fill grease cavity too quickly and displace bearing seal. Grease then may bypass bearing, leaving it improperly lubricated.



RXA0142539—UN—16JUN14



RXA0142540—UN—16JUN14

Lubricate heavy-duty gudgeon tapered roller bearing fittings (A) on both left-hand and right-hand side and on top of gudgeon. Give each fitting approximately 40 pumps of grease.

Use John Deere SD Polyurea grease or other grease as specified in Grease in Other Lubricants section of this Operator's Manual.

RX32825,0000641-19-13JUL17

Lower Drive Line Bearings

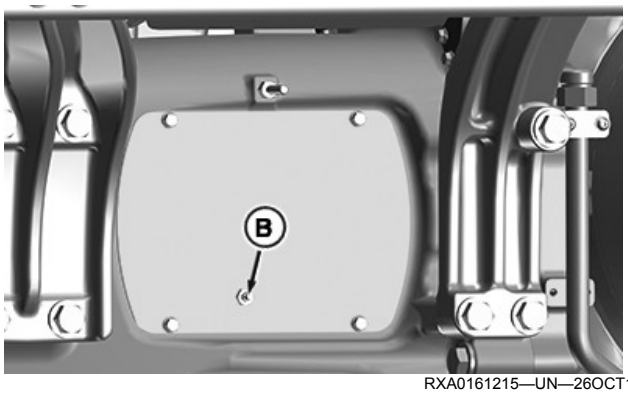
IMPORTANT: Normal lubrication is every 250 operating hours. If used in extremely wet conditions, lubricate daily or every 10 operating hours.

IMPORTANT: Avoid drivetrain damage. Operate tractor at low speeds (below 10 mph (16 km/h)) for first 6 hours.

IMPORTANT: Use only hand pump grease gun. Other types of grease guns fill the grease cavity at greater speed. This can push retention seal out of position, allowing grease to enter gudgeon center cavity and leaving bearing improperly lubricated.



RXA0141923—UN—02JUN14



RXA0161215—UN—26OCT17

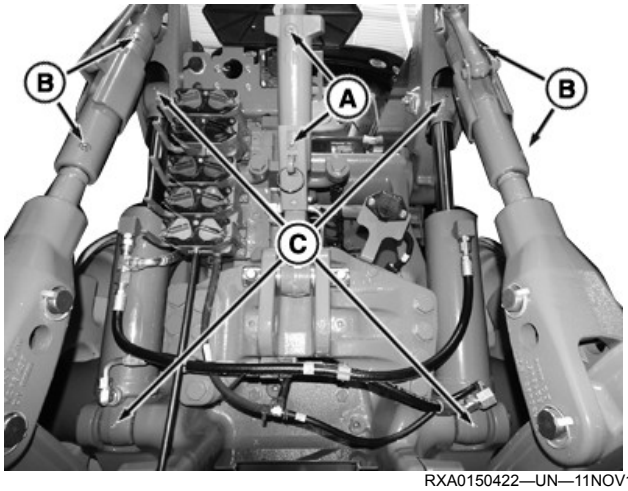
Lubricate front (A) and rear (B, if equipped) lower drive line bearing lubrication fittings.

Use John Deere SD Polyurea grease or other grease as specified in Grease in Other Lubricants section of this Operator's Manual.

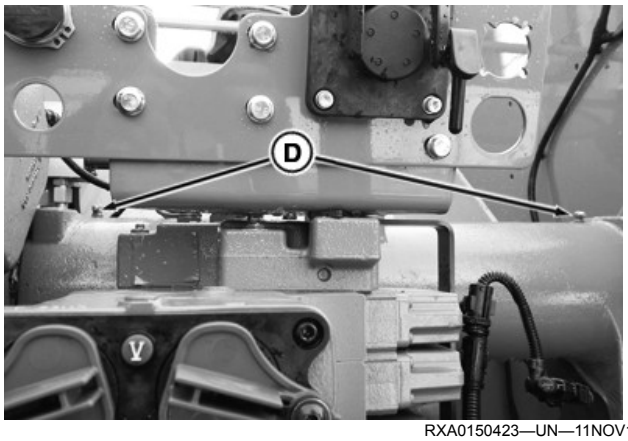
RX32825,0000642-19-16FEB18

Rear Hitch

IMPORTANT: Normal service is every 250 hours. If used daily, service every 50 hours.



RXA0150422—UN—11NOV15



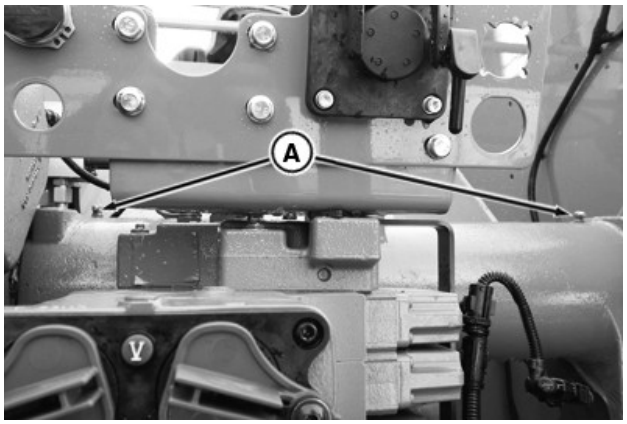
RXA0150423—UN—11NOV15

Lubricate center link (A), lift link (B), lift cylinders (C), and rockshaft (D) hitch fittings.

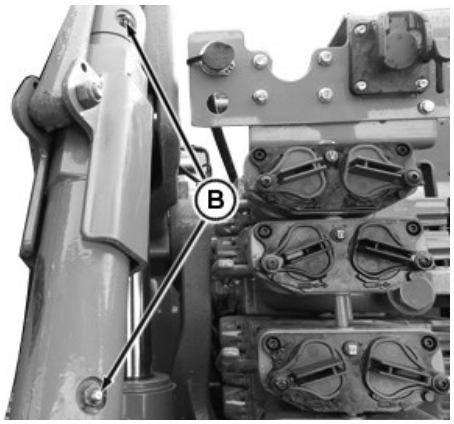
Use John Deere SD Polyurea grease or equivalent. See Grease in Other Lubricants section of this Operator's Manual.

RX32825,0000643-19-08NOV17

Lift Cylinders and Rockshaft



RXA0141976—UN—02JUN14



RXA0141977—UN—20JUN14

Rockshaft Assembly

Lubricate lift cylinder pin fittings (B) on both sides of tractor. Lubricate left-hand (A) and right-hand side rockshaft fittings. See Grease in Other Lubricants

section of this Operator's Manual for correct grease to use.

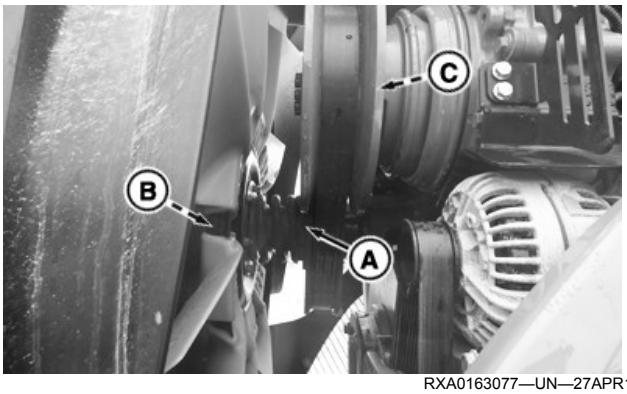
TO84419,0000199-19-13JUL17

Vari-Cool™ Fan Drive—13.5 L Final Tier 4/ Stage V Engine

1. Remove front engine side shields, see Remove Front Engine Side Shield in Service - General Information section of this Operator's Manual.

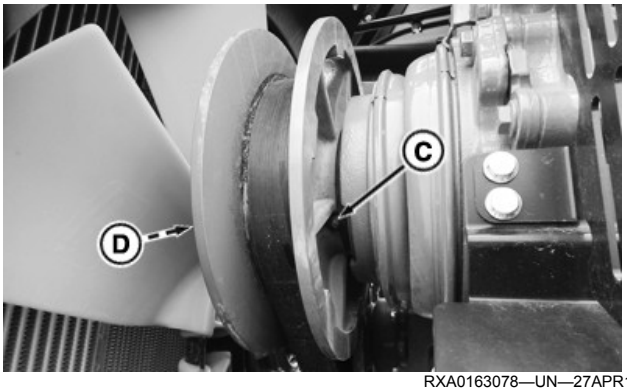
IMPORTANT: Grease only one driver and driven shaft fittings. The fitting on opposite side provides fan balance and service position convenience.

If more than 50 pumps of TY25744 Extreme Duty Synthetic Grease required, contact your John Deere dealer to replace internal seals and inspect shaft splines.



RXA0163077—UN—27APR18

Pump TY25744 Extreme Duty Synthetic Grease into shaft lubrication fitting (A) until grease is visible coming from driven shaft vent (B).



RXA0163078—UN—27APR18

2. Grease fan driver sheave lubrication fitting (C) until grease is visible at driver vent opening (E).
3. Reinstall diverter panel and tighten cap screws to 20 N·m (14 lb·ft).
4. Reinstall finger guard and tighten cap screws.
5. Install front engine side shields, close and secure hood.

SV81855,00001A0-19-19JUL18

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

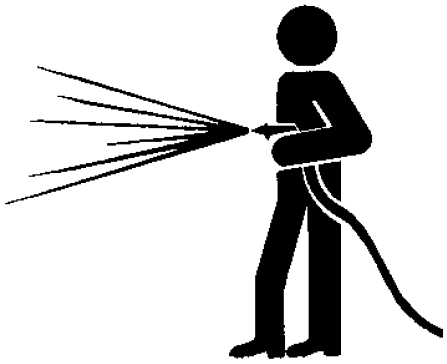
Keep Electronic Control Unit Connectors Clean

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

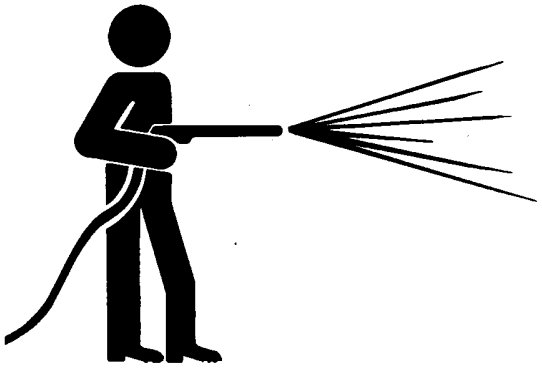


RW56455—UN—30JUN97

IMPORTANT: Directing pressurized air at electronic/electrical components or connectors, may cause buildup of static electricity and product malfunctions.

TO84419,0000228-19-25JUL17

High-Pressure Washer 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.

TO84419,0000215-19-20JAN17

Disconnect Battery

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

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.

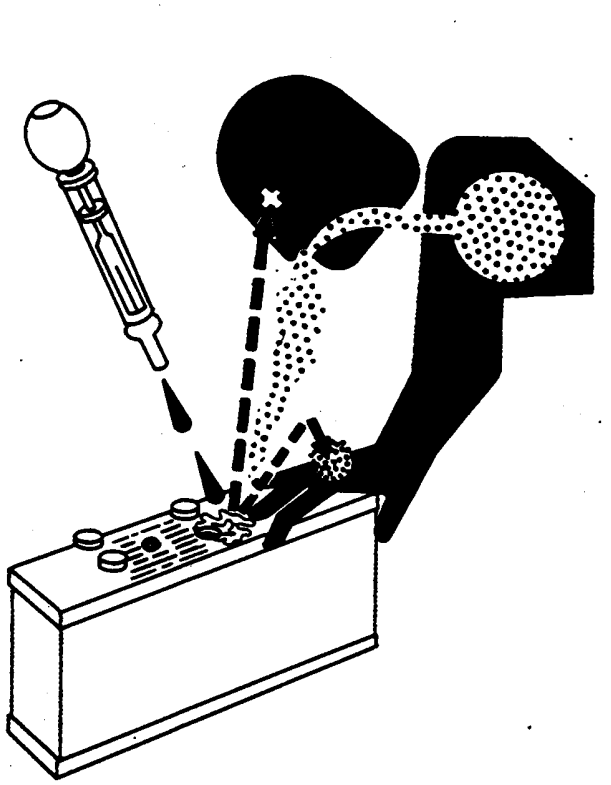
See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

TS36762,0000161-19-17JUL18

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

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.

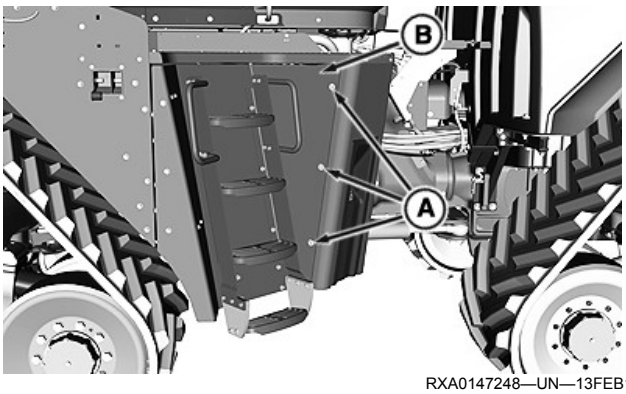
For optimum battery performance, keep battery terminals clean and tight. For replacement batteries, follow manufacturer's recommendations.

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.

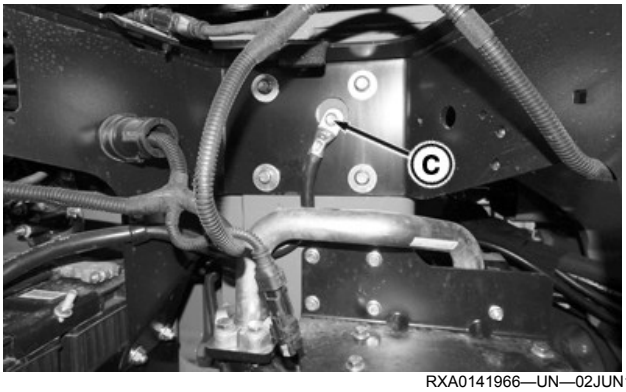
See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

1. If tractor is:
   - Equipped with battery disconnect switch with indictor light, wait until indicator light has gone out. Then go to step 2.
   - Not equipped with battery disconnect switch indicator light. Go to step 2.
2. Turn off battery disconnect switch.



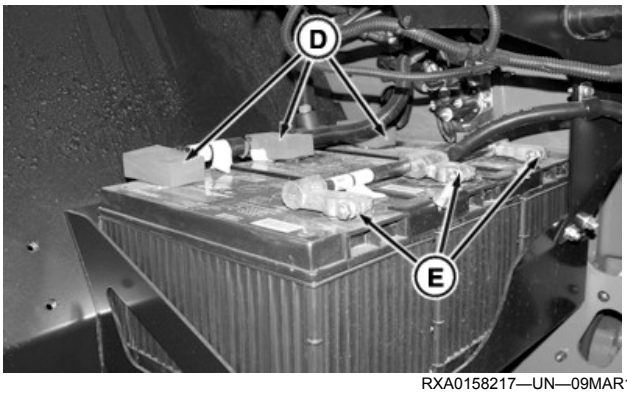
RXA0147248—UN—13FEB15

3. Remove three cap screws (A).
4. Swing open battery compartment cover (B).



RXA0141966—UN—02JUN14

5. Disconnect the single point ground cable (C).



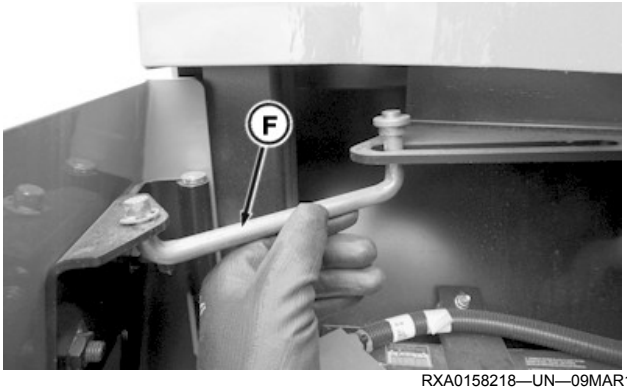
RXA0158217—UN—09MAR17

13.5 L Engine Tractor Batteries

6. Disconnect negative battery cables (E), then positive battery cables (D).

IMPORTANT: Never use compressed air to clean batteries.

7. Remove any corrosion with a terminal brush, then clean terminals and battery posts using a baking soda and water solution.
8. Rinse with clean water and air dry.
9. If batteries have been removed for service, slide batteries back into compartment. Install battery retaining clamp.
10. Install battery retaining clamp.
11. Connect positive battery cables, then connect negative battery cables.
12. Apply thin coat of grease to cable ends.
13. Connect single point ground cable to tractor frame.



RXA0158218—UN—09MAR17

14. Lift battery panel latch (F) up to close battery compartment cover.
15. Reinstall and tighten battery compartment cover cap screws.
16. Turn battery disconnect switch on.

SV81855,000036A-19-21AUG18

Access Load Center 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.

IMPORTANT: Replacement fuses must be same rating as original. Ensure key is in OFF position.

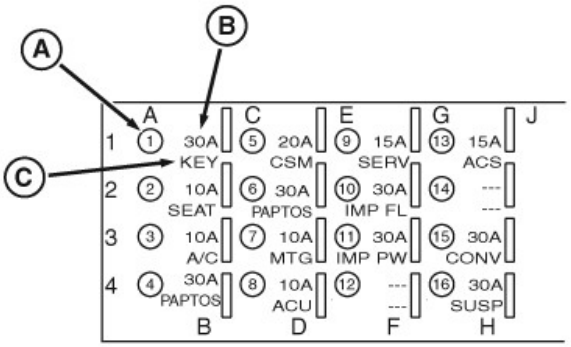
NOTE: The seat backrest can be folded down to allow easier access to the Load Center Fuses. It improves lighting and allows easier access for fuse replacement.



RXA0108495—UN—12JUL10

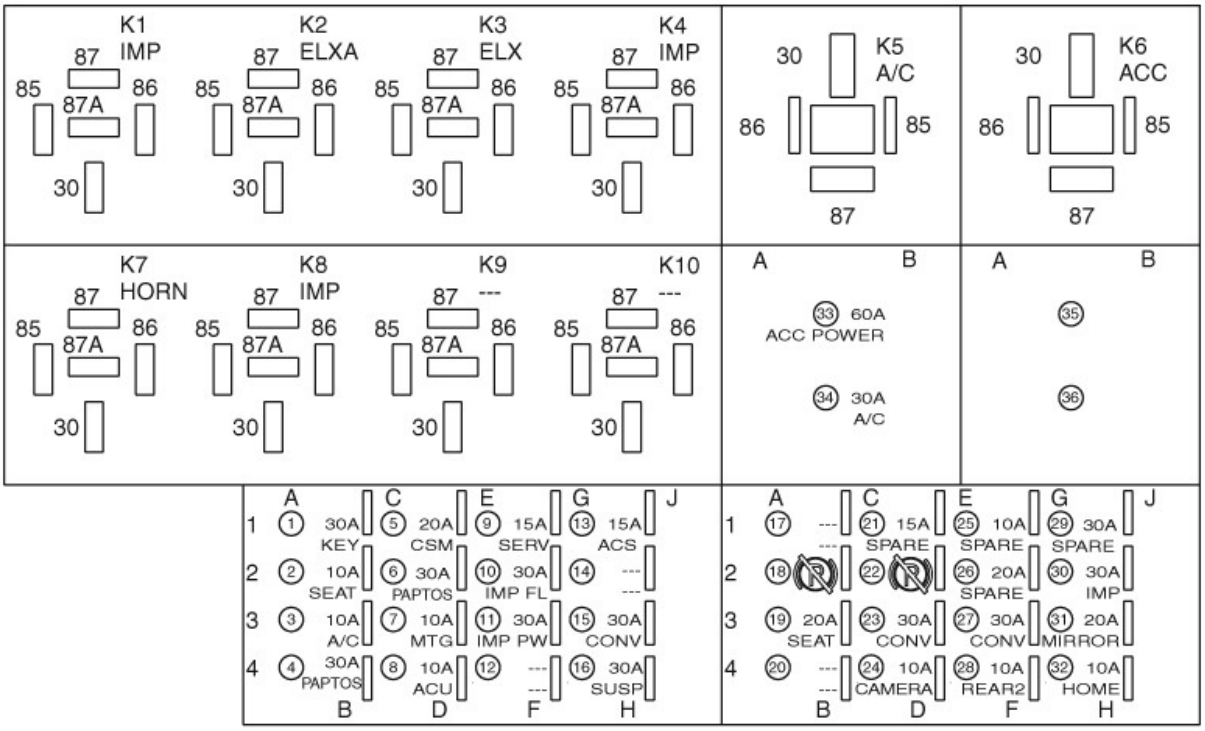
Load center is found directly behind the operator's seat and just below the rear cab window. To access load center, lift on Operator's Manual holder (A).

Diagram identifies load center fuse location, size, and description.



RXA0129611—UN—25JAN13

A—Fuse Location Number
B—Fuse Size
C—Fuse Use/Description

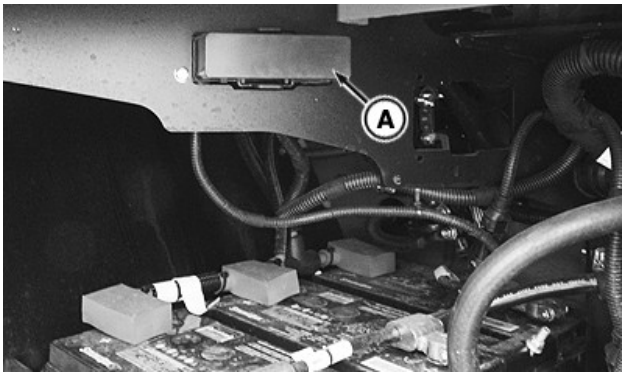


RXA0127389—UN—25JAN13

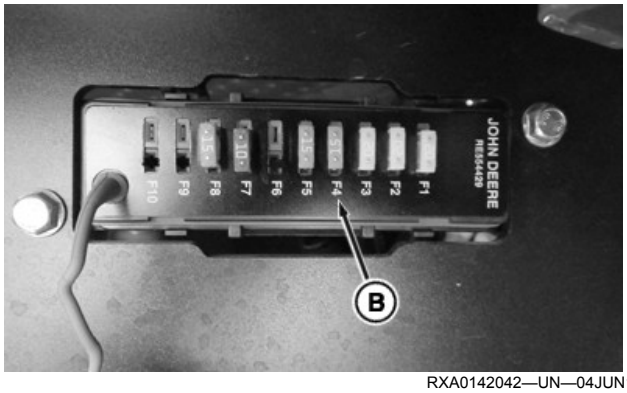
Relay and Fuse Locations

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—Not Used
5—Radio, Primary Display, and Interior Lights (20 Amp)
6—Not Used
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—Steering Controller (15 Amp)
14—Not Used
15—Convenience Outlet Battery (30 Amp)
16—Tracks Suspension (Tracks Only) (30 Amp)
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 (10 Amp)
33—Accessories Power (60 Amp)
34—Blower Motor (30 Amp)
35—Not Used
36—Not Used

Load center 1 is located in battery compartment. Open battery compartment cover.



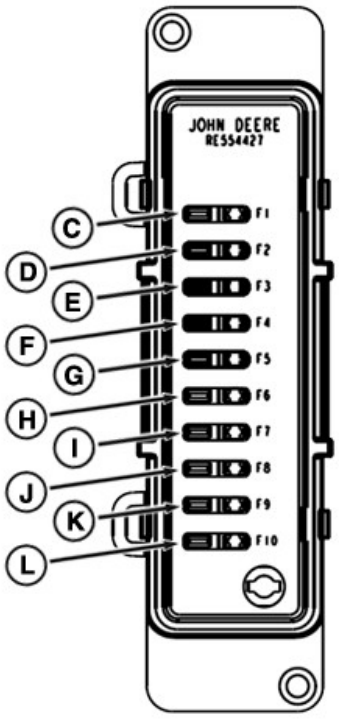
RXA0142041—UN—04JUN14



RXA0142042—UN—04JUN14

A—Load Center Cover
B—Load Center Fuse Panel

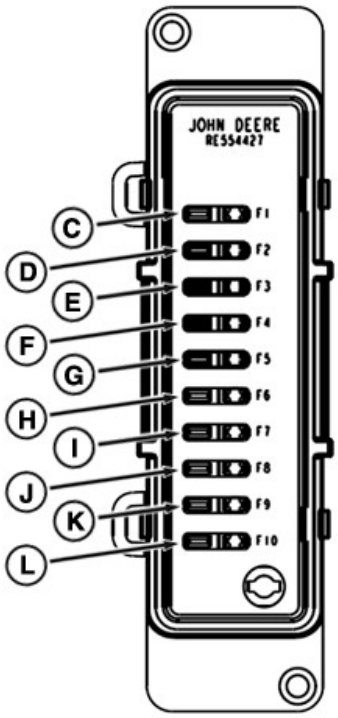
Load Center for 13.5 L Engine Tractor



RXA0130342—UN—11JAN13

C—F1 - ECU (20 Amp
D—F2 - ECU (20 Amp)
E—F3 - ECU (20 Amp)
F—F4 - Dosing Pump (15 Amp)
G—F5 - Fuel Transfer Pump (15 Amp)
H—F6 - Not Used
I—F7 - Key Switch (10 Amp)
J—F8 - ActiveCommand Steering (ACS)™ Control Unit (If ACS™ Equipped) or AutoTrac™ Control Unit (If AutoTrac™ Equipped) (15 Amp)
K—F9 - Front Chassis Control Unit 2 (25 Amp)
L—F10 - Front Chassis Control Unit 1 (HydraCushion™ Suspension-If Equipped) (10 Amp)

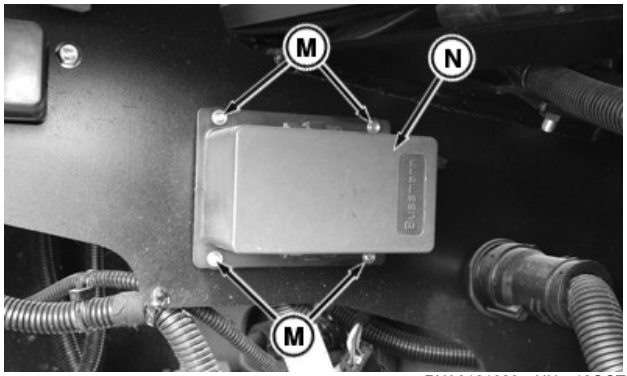
Load Centers for 15 L Engine



RXA0130342—UN—11JAN13

C—F1 - ECU (20 Amp)
D—F2 - Not Used
E—F3 - DEF Heaters (20 Amp)
F—F4 - After Treatment
G—F5 - DEF Supply Pump (15 Amp)
H—F6 - A/C Compressor
I—F7 - Key Switch (10 Amp)
J—F8 - Steering System, AutoTrac Control Unit (If Equipped with AutoTrac) (10 Amp)
K—F9 - Not Used
L—F10 - Not Used

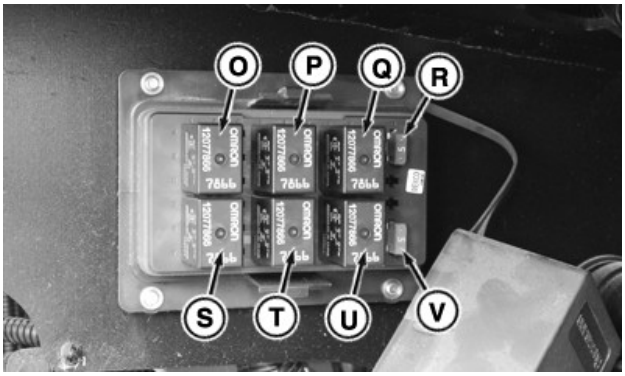
Load Center 2 is located near engine.



RXA0161089—UN—18OCT17

KEXX Cover

ActiveCommand Steering is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company
HydraCushion is a trademark of Deere & Company



RXA0161090—UN—18OCT17

KEXX Fuses and Relays

M—Cap Screws (4 used)
N—Cover
O—A/C Compressor Clutch Relay
P—Line Heater Relay (PRESSURE)
Q—Aftertreatment Relay
R—Alternator
S—DEF Supply Relay
T—Line Heater Relay (RETURN)
U—Line Heater Relay (SUCTION)
V—ECU

SV81855,0000349-19-21AUG18

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.

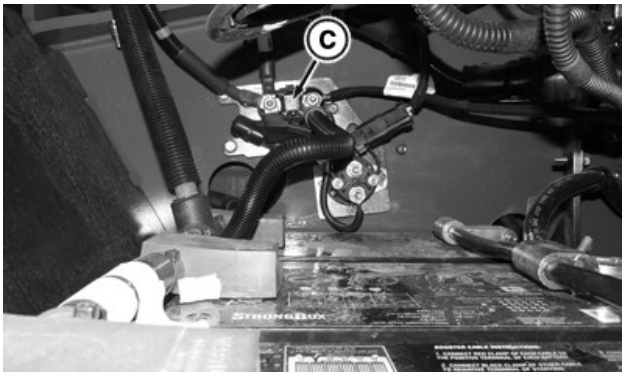
See Battery Disconnect Switch in Engine Operation section of this Operator's Manual.

IMPORTANT: Replacement fuses must be same rating as original. Ensure key is in OFF position.

Do not attempt to disassemble master fuse unless instructed by your John Deere dealer.

CAUTION: Insure both negative (—) and positive (+) battery connections are disconnected from both batteries prior to fuse inspection or replacement.

Tractors have three master fuses.



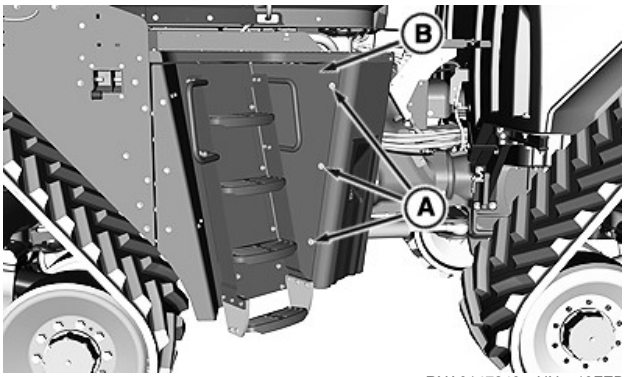
RXA0142334—UN—10JUN14

Master Fuse without ACS

1. Disconnect battery ground (-) cable.

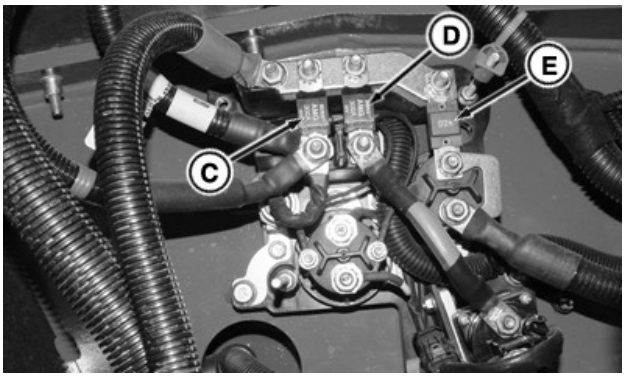
NOTE: Master fuse (C) is located within battery panel of tractor. Master fuse is connected across both posts of junction box.

2. Remove cap screws (A) and open panel (B) to expose master fuses.



RXA0147248—UN—13FEB15

The master fuses are:



RXA0142038—UN—04JUN14

Master Fuse with ACS

- Master Fuse-300 Amps (C)
- Alternator Battery Fuse-300 Amps (D)
- Backup Hydraulic Pump Fuse - 400 Amps (E)

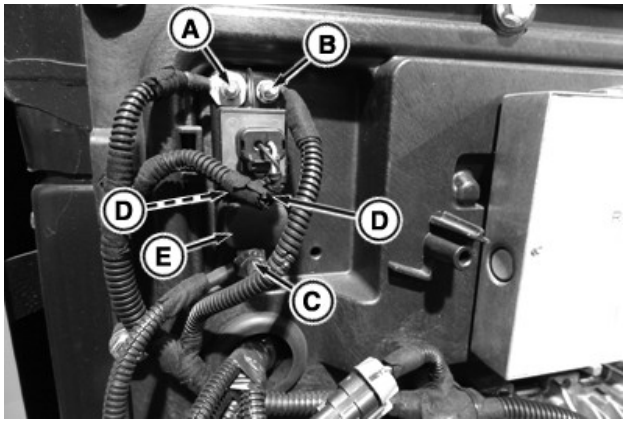
SV81855,000036E-19-21AUG18

Access Implement Power Relay Module Fuses

IMPORTANT: Replacement fuse must be same rating as original.

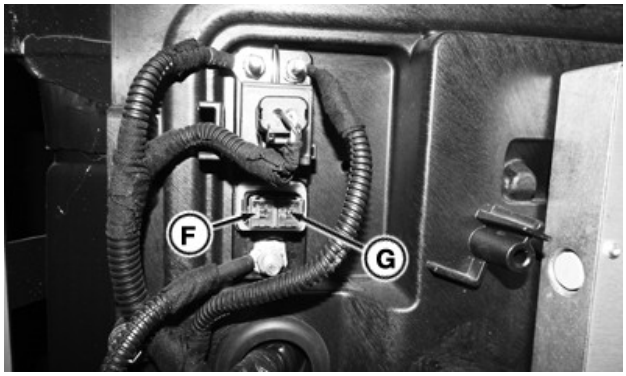
Turn key to OFF position before replacing any fuses.

Remove cab back panel. In upper left-hand corner is a relay module to route power to implement CAN Bus Breakaway Connector.



RXA0142135—UN—05JUN14

Implement Power Relay Module



RXA0142136—UN—05JUN14

Top left-hand module stud is switched power lug (A) protected by a 60 amp fuse (F). Top right-hand module stud is unswitched power lug (B) protected by a 30 amp fuse (G).

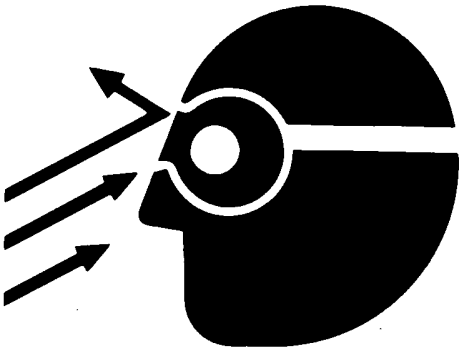
Bottom center is the battery power input stud (C).

To Change Fuses

1. Press down on fuse cover tabs (D) and remove fuse cover (E).
2. To remove, pull fuse straight back.
3. Insert new fuse.
4. Replace cover and slide tabs over cover edge to hold in place.

TO84419,00001DA-19-24JUL17

Handle Halogen Light Bulbs Safely



TS266—UN—23AUG88



H39474—UN—30JUN00

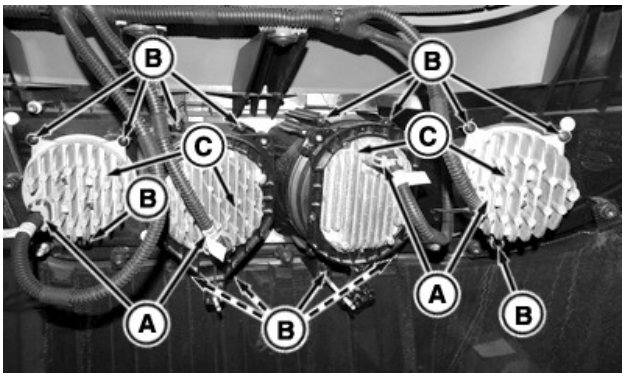
CAUTION: Halogen bulbs (A) contain gas under pressure. Handling a bulb improperly could cause it to shatter into flying fragments. To avoid possible injury:

- **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. Raise hood.



RXA0158062—UN—03MAR17

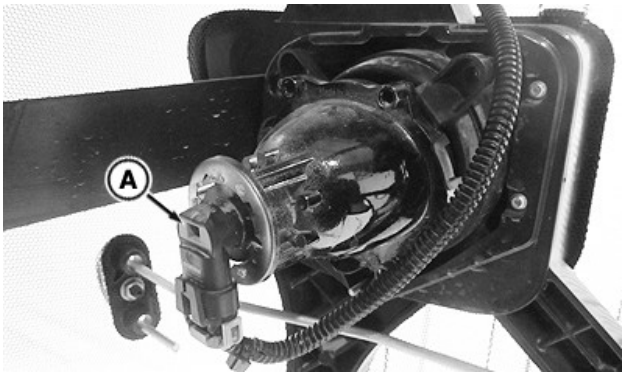
Right-Hand Side Shown

2. Disconnect harness connector (A).
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.

SV81855,00001FA-19-20JUL17

Change Front Grille Halogen Light Bulbs

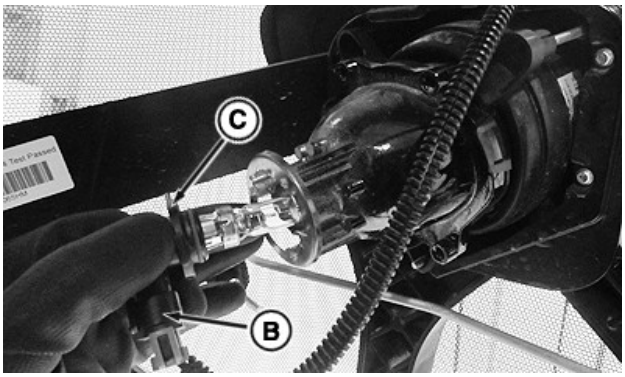
1. Open hood, see Open Hood in Service-General Information section of this Operator's Manual.



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

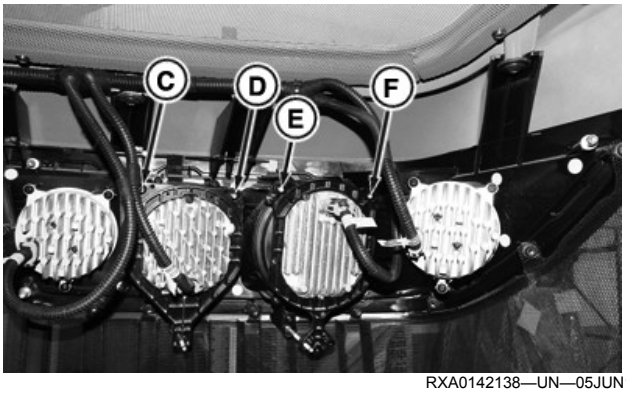
To adjust front grille lights:

For Low Beam Headlights:



RXA0147256—UN—12FEB15

1. To lower low beam aim, turn low beam adjustment screw (A) clockwise.



RXA0142138—UN—05JUN14

To raise and tilt out low beam headlights, turn low beam adjustment screw (E) clockwise.

To raise and tilt in low beam headlights, turn low beam adjustment screw (F) clockwise.

For High Beam Headlights:

2. To lower high beam aim, turn high beam adjustment screw (B) clockwise.

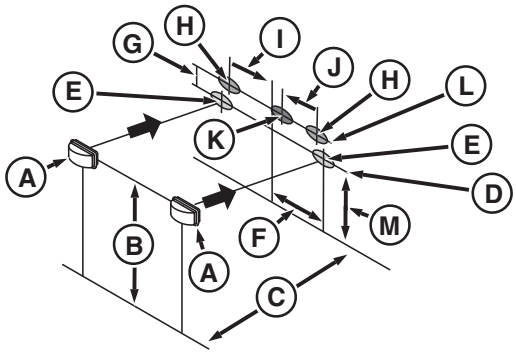
   To raise and tilt out high beam, turn high beam adjustment screw (C) clockwise.

   To raise and tilt in high beam, turn high beam adjustment screw (D) clockwise.

3. Repeat for opposite side of tractor.

SV81855,0000374-19-31OCT17

Adjust Headlights

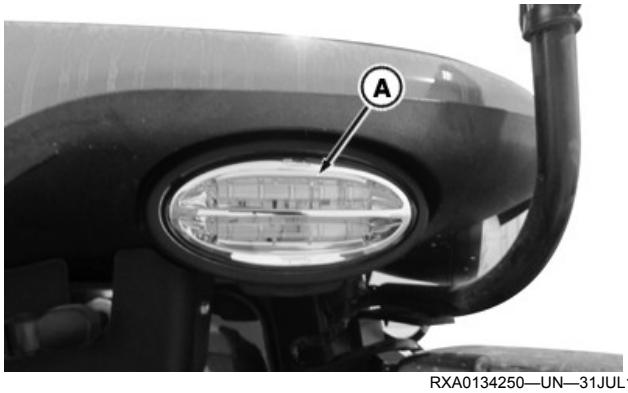


RXA0161046—UN—11OCT17

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.
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.

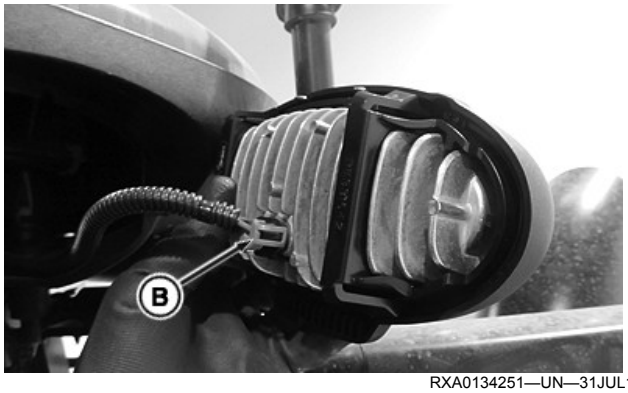
TS36762,0000169-19-05APR18

Change Front, Side And Rear Cab Roof Light Bulb



RXA0134250—UN—31JUL13

1. Push down light fixture latch tab (A). Remove fixture.

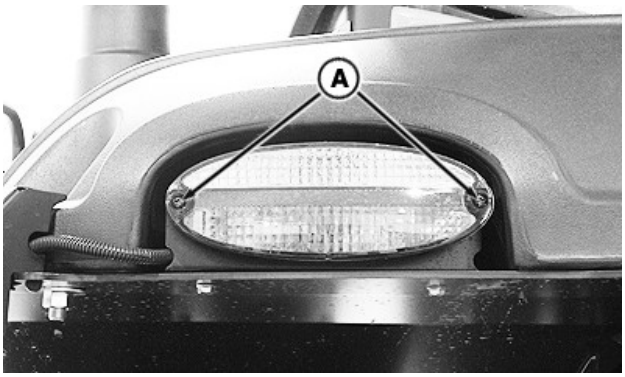


RXA0134251—UN—31JUL13

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.

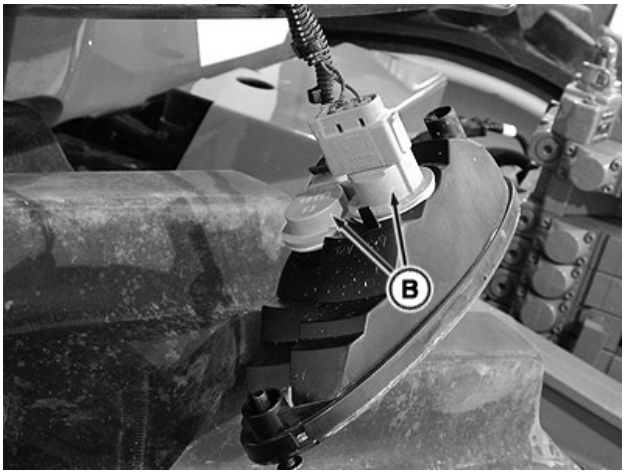
TS36762,000016A-19-24OCT17

Change Brake or Turn Signal Light Bulb



RXA0137101—UN—19NOV13

1. Remove screws (A) and take out light assembly.



RXA0137102—UN—19NOV13

2. Turn bulb (B) counterclockwise 1/4 turn and pull out to remove.
3. Install new bulb in fixture and turn 1/4 turn clockwise.
4. Reinstall assembly and screws.

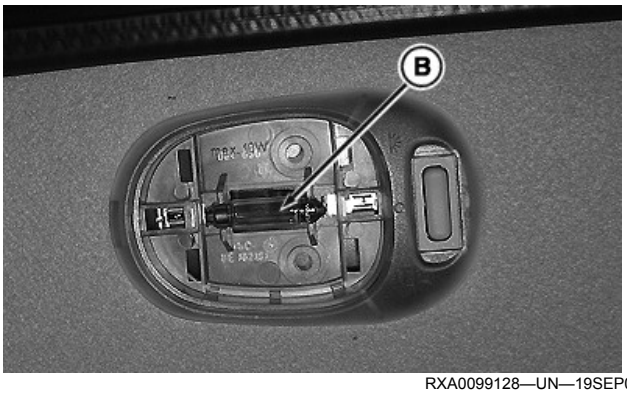
SV81855,00001FF-19-11JUL17

Change Dome Light Bulb



RXA0099130—UN—19SEP08

1. Remove lens cover (A).

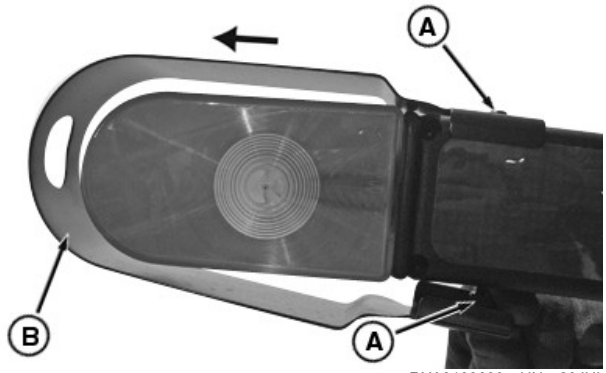


RXA0099128—UN—19SEP08

2. Grasp light bulb (B) firmly and pull straight down.
3. Gently push new bulb into fixture until it seats.
4. Reinstall cover.

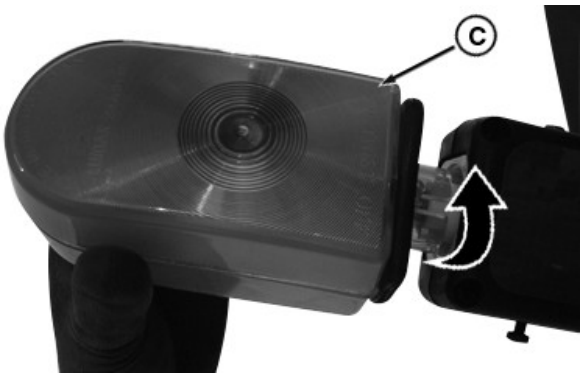
TS36762,000016C-19-05JUL17

Change Extremity Warning Light Bulb



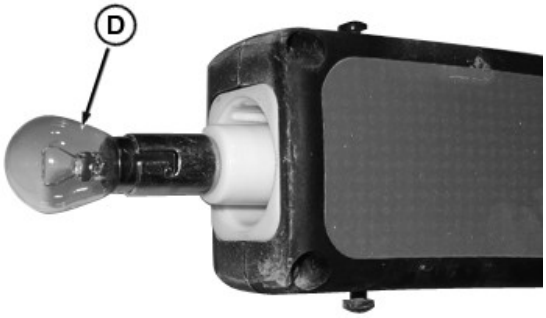
RXA0108609—UN—29JUL10

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.



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

Troubleshooting - Procedures

Engine

Symptom	Problem	Solution
Engine hard to start or will not start	Incorrect starting procedure	Review starting procedure
	No fuel	See Bleeding Fuel System
	Air in fuel line	Bleed fuel line
	Cold weather	Use cold weather starting aids
	Slow starter speed	See Starter Cranks Slowly
	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
	Clogged sump screen	Drain tank, clean or replace screen
	Dirty or faulty injectors	Have John Deere dealer check injectors
Engine knocks	Insufficient oil	Add oil
	Low coolant temperature	Replace thermostats
	Engine overheating	See Engine Overheats
	Valve lash	See your John Deere dealer
Engine runs irregularly or stalls frequently	Low coolant temperature	Replace thermostats
	Clogged in-line filter or fuel filter	Replace filters and flush in-line filter
	Clogged sump screen	Drain tank, clean or replace screen
	Water, dirt, or air in fuel system	Drain, flush, fill and bleed system
	Restricted fuel line	Clean or replace fuel line
	Dirty or faulty injectors	Have John Deere dealer check injectors
Below normal engine temperature	Defective thermostat or thermostat incorrectly installed	Remove and check thermostats
	Defective temperature gauge or sender	Check gauge, sender and connections

Symptom	Problem	Solution
	Viscous fan locked up	See your John Deere dealer
Lack of power	Engine overloaded	Reduce load or shift to lower gear
	Low fast idle speed	See your John Deere dealer
	Intake air restriction	Service air cleaner
	Clogged in-line filter or fuel filter	Replace filter(s)
	Clogged sump screen	Drain tank, clean or replace screen
	Incorrect type of fuel	Use correct fuel
	Overheated engine	See Engine Overheats
	Below normal engine temperature	Replace thermostats
	Incorrect valve clearance	See your John Deere dealer
	Dirty or faulty injectors	Have John Deere dealer check injectors
	Turbocharger not functioning	See your dealer
	Leaking exhaust manifold gasket	See your dealer
	Implement incorrectly adjusted	See implement operator's manual
	Restricted fuel line	Clean or replace fuel line
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
	Incorrect oil refill	See Check Engine Oil in Daily or 10 Hour section
	Oil leaks	Check for leaks in lines, around gaskets and drain plug
	Defective turbocharger	See your John Deere dealer
Engine emits white 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

Symptom	Problem	Solution
	Incorrect starting procedure	See Starting the Engine, in Operate the Engine section
	Injection nozzles dirty	See your John Deere dealer
	Engine out of time	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
	Engine overloaded	Shift to lower gear or reduce load
	Low engine oil level	Check oil level. Add oil as required
	Low coolant level	Fill radiator to correct level, check radiator and hoses for loose connections or leaks
	Faulty radiator cap	See your John Deere dealer
	Loose or defective fan belt	Check belt tensioner. Replace as needed
	Cooling system needs flushing	Flush cooling system
	Defective thermostat	Replace thermostats
	Defective temperature gauge or sender	See your John Deere dealer
High fuel consumption	Incorrect type of fuel	Use correct fuel
	Clogged or dirty air cleaner	Service air cleaner
	Engine overloaded	Reduce load or shift to lower gear
	Incorrect valve clearance	See your John Deere dealer
	Injection nozzles dirty	See your John Deere dealer
	Implement incorrectly adjusted	See implement operator's manual
	Low engine temperature	Replace thermostats
	Defective turbocharger	See your John Deere dealer
Engine power reduced	Operating with heavy load and full power	See Drivetrain Protection—9420RX, 9470RX, 9520RX, 9570RX, and 9620RX in Drivetrain section of this Operator’s Manual

KT81203,00009A3-19-21FEB18

Transmission-Hydraulic-Axles

Symptom	Problem	Solution
Transmission slippage	Riding clutch pedal	Remove foot from clutch pedal
	Excessive load on tractor	Lower gear and/or reduce load
	Transmission filter indicator light on	Change filter element or have your John Deere™ Dealer repair
	Plugged transmission sump screens.	Clean sump screens.
	Plugged filters	Replace filters.
	Low oil.	Refill oil.
Tractor will not move in any gear	Check for active diagnostic code	See your John Deere™ Dealer
	Transmission malfunction	Remove and inspect transmission suction screen for metal particles or See your John Deere™ Dealer
	Transmission drive line broken	Repair or have your John Deere™ Dealer repair
Tractor lacks power or moves slow	Transmission slipping	Have your John Deere™ Dealer repair
	Transmission in too high a gear	Downshift to lower gear
	Excessive load	Transmission in wrong gear for operating conditions
Transmission shifts too slow	Sticking clutch solenoid valve	Have your John Deere™ Dealer repair
	Pump malfunction	Have your John Deere™ Dealer repair
	Transmission filter indicator light on	Change filter element
Transmission warning displays	Diagnostic trouble code has been stored	Access PTP codes in the CommandCenter™ display. See Diagnostic Trouble Codes section
Transmission shifts too fast	High transmission system pressure	Have your John Deere™ Dealer repair
	Transmission requires calibration	See Transmission Calibration in Service - General Information section of this Operator's Manual
Transmission shift quality changed	Transmission requires calibration	See Transmission Calibration in Service - General Information section of this Operator's Manual

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Symptom	Problem	Solution
	Transmission shifts without direct operator input	If in manual mode, verify that clutch is not being used excessively
Transmission system overheats	Sticking clutch solenoid valve	Have your John Deere™ Dealer repair
	Pump malfunction	Have your John Deere™ Dealer repair
	Transmission filter indicator light on	Change filter element or see your John Deere™ Dealer to repair
	Excessive load	Lighten load or use lower gear
	Plugged front grille screens	Clean debris from front grille screens
	Plugged hydraulic cooler	Clean debris from hydraulic cooler
Transmission alarm sounds and red stop engine indicator light on	Transmission filter restricted	Stop engine. Change transmission filter element
Excessive transmission noise (Under load or no load)	Parts worn or damaged in transmission	Have your John Deere™ Dealer repair
Excessive tractor vibration	Transmission or transmission pump malfunction	Have your John Deere™ Dealer repair
	Parts worn or damaged in transmission	Have your John Deere™ Dealer repair
Excessive noise	Transmission pump malfunction	Have your John Deere™ Dealer repair
	Excessive backlash in gear train	Have your John Deere™ Dealer repair
CommandCenter™ hydraulic display icon appears	Axle filter is restricted	Replace axle filter
Entire hydraulic system functions are slow	Hydraulic filters are restricted	Replace hydraulic filters
Entire hydraulic system fails to function	Clogged hydraulic filters	Replace hydraulic filters
	Oil cooler air passages clogged	Clean oil cooler
	High-pressure internal leak	See your John Deere™ Dealer
Hydraulic oil overheats	Oil cooler air passages clogged	Clean oil cooler
	Internal hydraulic leak	See your John Deere™ Dealer
	Implement hydraulic load not matched to tractor	See your John Deere™ Dealer

TO84419,00001EB-19-13JUN17

Hydraulic System

Symptom	Problem	Solution
Entire hydraulic system fails to function	Low oil supply	Fill system with correct oil
	Clogged hydraulic filters	Replace hydraulic filter
	Oil cooler air passages clogged	Clean oil cooler
	High-pressure internal leak	See your John Deere™ Dealer
Hydraulic oil overheats	Low oil supply	Fill system with correct oil
	Oil cooler air passages clogged	Clean oil cooler
	Clogged transmission oil filter	Replace transmission filter
	Internal hydraulic leak	See your John Deere™ Dealer
	Implement hydraulic load not matched to tractor	See your John Deere™ Dealer

TO84419,00001EC-19-13JUN17

Brakes

Symptom	Problem	Solution
No solid pedal feel (Engine Off)	Air in system	See your John Deere™ Dealer
Pedal settles (Engine Off)	Brake piston seals leaking	See your John Deere™ Dealer
	Brake bleeder not correctly closed	See your John Deere™ Dealer
	Leakage in pump control system at brake valve	See your John Deere™ Dealer
Excessive pedal travel or kickback (With Engine On)	Leakage in pump control system	See your John Deere™ Dealer
	Air in system	See your John Deere™ Dealer
	Brake piston seals leaking	See your John Deere™ Dealer
	Brake bleeder not correctly closed	See your John Deere™ Dealer

TO84419,00001ED-19-13JUN17

Hitch

Symptom	Problem	Solution
Insufficient transport clearance	Center link too long	Adjust center link

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Symptom	Problem	Solution
	Lift links too long	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
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	Turn load/depth mix control to the left
	System is reset	Enable system
	Calibration fuse inadvertently moved	Be sure key switch is OFF and move fuse to spare position
	Malfunction in lever position sensor circuit or hitch position sensor	See your John Deere™ Dealer
Hitch drops slowly	Hitch rate-of-drop control not correctly set	Adjust rate-of-drop knob
Hitch fails to lift or lifts slowly	Excessive load on hitch	Reduce load
	Center link in wrong position	Adjust upper height limit
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	Turn load/depth mix control to the right
	System is reset	Enable system
	Rate-of-drop too slow	Adjust rate-of-drop knob
Hitch too responsive	Load/depth mix control not correctly set	Turn load/depth mix control to the left
Hitch settles too fast after tractor is parked and engine is shut off	Internal circuit leakage	See your John Deere™ Dealer
Hitch will not move (controls not working, including rear raise/lower switch)	Fuse(s) blown	Replace fuses
	Engine not running	Start engine

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Symptom	Problem	Solution
Rear raise/lower switch will not move hitch	Failure of raise/lower switch, connector, or wiring harness	See your John Deere™ Dealer
	Lever in transport	Move lever out of transport

TO84419,00001EE-19-13JUN17

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
Remote cylinder rate of travel too fast or too slow	Incorrect flow rate	Adjust flow rate
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
	SCV lever is not being released to neutral	Release SCV lever from detent to neutral in less than 0.8 seconds
SCV lever does not release	SCV float is being ”commanded”	Do not push lever down in forward position
	Lever mechanism failed	See your John Deere™ Dealer
Implement does not operate or does not operate correctly	Incorrect hose connections	See hose connection examples in Remote Hydraulic Connections section
		See your John Deere™ Dealer

TO84419,00001EF-19-07NOV17

Electrical System

Symptom	Problem	Solution
Voltage indicator flashing when there is low battery voltage (key ON and engine stopped)	Defective battery	Check electrolyte level and specific gravity

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Symptom	Problem	Solution
	Low charging voltage	Have your John Deere™ Dealer check charging circuit
	High resistance in charging circuit	Have your John Deere™ Dealer check charging circuit
	Indicator malfunction	Have your John Deere™ Dealer check indicator
Voltage and SERVICE ALERT indicators flashing indicating low charging voltage (engine running)	Low engine speed	Increase speed
	Alternator belt slipping	Check belt tension
	Defective battery	Check electrolyte level and specific gravity
	Defective alternator	Have your John Deere™ Dealer check alternator
	Excessive electrical load	Decrease load
Voltage and SERVICE ALERT indicators flashing indicating excessive charging voltage	Faulty connection to alternator	Check wiring connections
	Defective regulator	Have your John Deere™ Dealer check alternator
	Excessive electrical load	Decrease load
Voltage indicator flashing indicating excessive charging voltage	Faulty connection to alternator	Check wiring connections
	Defective regulator	Have your John Deere™ Dealer check alternator
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 belts
Starter inoperative	Transmission in gear	Place transmission in PARK
	Faulty or maladjusted 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

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Symptom	Problem	Solution
	Blown fuse	Replace fuse
Starter cranks slowly	Low battery output	Check electrolyte level and specific gravity
	Crankcase oil too heavy	Use correct viscosity oil
	Loose or corroded connections	Clean and tighten loose connections
Light system does not function; rest of electrical system functions	Blown fuse	Replace fuse
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 fuse	Replace fuse
Blower malfunctioning	Blower does not work	Check all blower fuses
Blower operates only in PURGE	Blown blower resistor	See you John Deere™ Dealer

TO84419,00001F0-19-13JUN17

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
	Belt slipping	Check belt tension

Symptom	Problem	Solution
	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

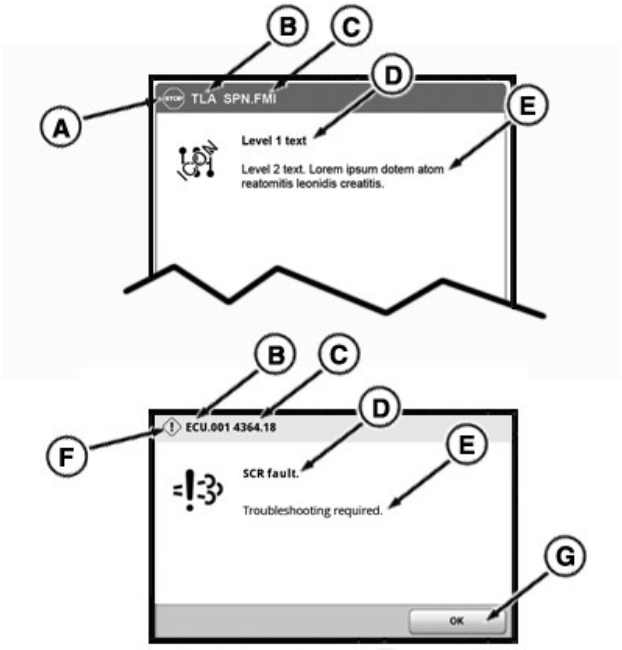
Premium Radio

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

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.

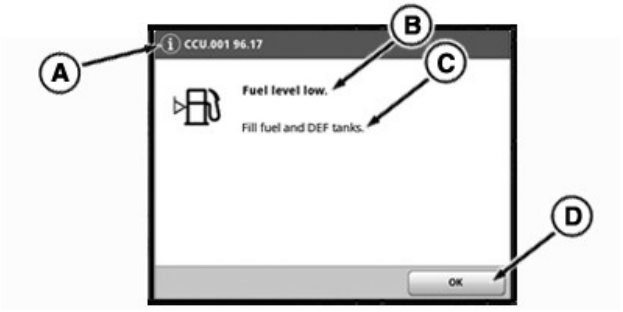
Service Alert Indicator (F): Light flashes and alarm sounds five times indicating a performance or operational problem has been detected, which must be resolved as soon as possible. Some Service Alert Indicators can be ”acknowledged” and cleared by pressing OK button (G) CommandCenter™ display. If condition 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

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.

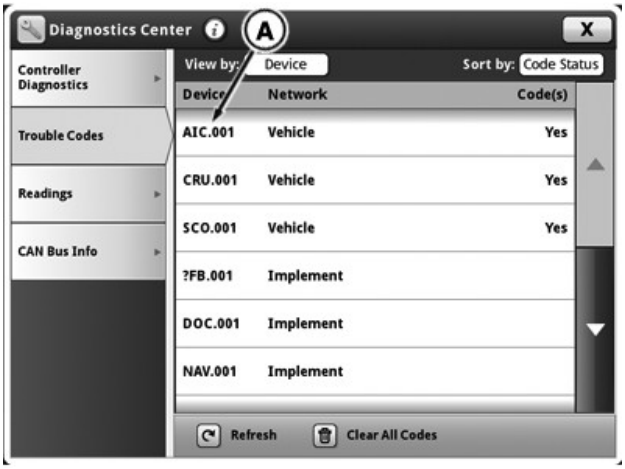
CommandCenter is a trademark of Deere & Company

Not all active DTC's are displayed. Follow steps to retrieve stored DTC's.



RXA0133360—UN—26JUL13

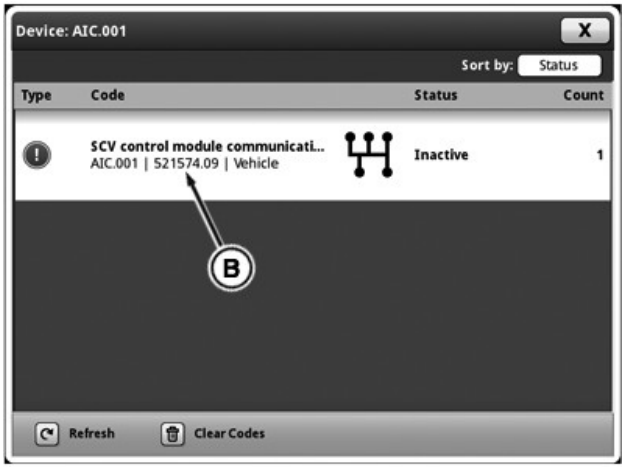
1. Select **Menu.**
2. Select **System tab.**
3. **Diagnostics Center icon.**
4. Select **Trouble Codes tab.**



RXA0133359—UN—26JUL13

Trouble Codes Page

5. Select control unit (A) desired.



RXA0133361—UN—26JUL13

6. Select diagnostic code (B) for code display.

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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 indictor 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.
5. Check auxiliary drive belt for cracking and, if

[1] Disconnect battery ground cable for short-term storage periods (20 to 90 days).

serviceable, install auxiliary drive belt on air conditioning compressor pulley.

6. 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.

7. Check transmission-hydraulic oil level. Add oil as required.
8. Check all other fluid levels. Fill as required.
9. 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.

10. (Final Tier 4 and Stage V engines) If Diesel Exhaust Fluid (DEF) tank has not been drained, test urea concentration, see Testing Diesel Exhaust Fluid (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 Fill Diesel Exhaust Fluid (DEF) Tank in Diesel Exhaust Fluid (DEF) section of this Operator's Manual for appropriate procedures.
11. Inspect tracks for cuts, rips or tears, see Tracks section of this Operator's Manual.
12. Perform all Daily or 10 Hour services and any other scheduled services as required, see 10 Hour or Daily Service in Service - Record Charts section of this Operator's Manual.
13. Install batteries and connect cables.
14. Turn battery disconnect switch on.
15. Turn key switch 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.

16. Start and operate engine at slow idle for several minutes.
17. Check tractor functions and systems, including air conditioning.
18. 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: John Deere

[Ag]	9420RX	9470RX	9520RX
POWER			
Rated Engine power PS[a](hp ISO) at 2100 engine rpm (97/68/EC)[b]	420 hp (309 kW)	470 hp (346 kW)	520 hp (382 kW)
Rated Engine power PS[a](hp ISO) at 2100 engine rpm (ECE-R24)	403 hp (297 kW)	451 hp (332 kW)	499 hp (367 kW)
Rated PTO power (hp SAE) at rated PTO speed (1895 erpm)[cd]	335 hp (249 kW)		
Rated Engine Speed	2100 rpm		
Governed Speed Range	900—2200 rpm		
Operating Speed Range	1500—2100 rpm		
Slow Idle	900 ±10 rpm		
Fast Idle	2240 ± 25 rpm		
ENGINE MANUFACTURER			
Final Tier 4/Stage V	John Deere PowerTech™ 13.5 L PSS (B20 Diesel Compatible)		
Rated Speed	2100 rpm		
Type	Diesel, in-line, 6-cylinder, wet-sleeve cylinder liners with 4 valves-in-head		
Aspiration	Dual series turbocharger with fixed geometry first stage, variable geometry second stage, air-to-air aftercooling, and cooled exhaust gas recirculation		
Filter, engine air	Dual stage with exhaust aspiration		
Displacement	13.5 L (824 in^3)		
Bore and stroke	132 x 165 mm (5.20 x 6.50 in)		
Compression Ratio	16.0:1		
Lubrication	Full pressure, full-flow filtration with bypass		
Filter, Oil	Replaceable spin-on style oil filter		
FUEL			
Injection Pump Type	Electronically controlled unit injectors, electronic governor (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		
Air Cleaner	Dry-type with secondary element		
COOLING			
Type	103 kPa (1.03 bar) (15 psi)		
Fan Drive	Variable-ratio belt drive		
Thermostats	3 heavy-duty (2 large and 1 small)		

PowerTech is a trademark of Deere & Company
[a]German term for horse power in which one PS is equivalent to .9863 horse power
[b]97/68/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.
[c]Does not include optional equipment losses.
[d]80% Factory Observed MOE value.

[Scraper]	9470RX	9520RX	9570RX
POWER			
Rated Engine power PS[a](hp ISO) at 2100 engine rpm (97/68/EC)[b]	470 hp (346 kW)	520 hp (382 kW)	570 hp (419 kW)
Rated Engine power PS[a](hp ISO) at 2100 engine rpm (ECE-R24)	451 hp (332 kW)	499 hp (367 kW)	547 hp (402 kW)
Rate PTO power (hp SAE) at rated PTO speed (1895 erpm)[cd]	—		
Rated Speed	2100 rpm		
Governed Speed Range	900—2200 rpm		
Operating Speed Range	1500—2100 rpm		

[Scraper]	9470RX	9520RX	9570RX
Slow Idle	900 ±10 rpm		
Fast Idle	2200 ±25 rpm		
ENGINE			
Final Tier 4/Stage V	John Deere PowerTech™ PSS 13.5 L (B20 Diesel Compatible)		QSX15 Cummins® 15 L
Rated Speed	2100 rpm		
Type	Diesel, In-Line, 6-Cylinder, Wet-Sleeve Cylinder Liners With 4 Valves-In-Head		
Aspiration	Dual Series Turbocharger With Fixed Geometry First Stage, Variable Geometry Second Stage, Air-to-Air Aftercooling, and Cooled Exhaust Gas Recirculation		Single Variable geometry turbocharger, air-to-air aftercooling, and cooled exhaust gas recirculation
Filter, engine air	Dual Stage With Exhaust Aspiration		
Displacement	13.5 L (824 in^3)		
Bore	132 mm (5.20 in)		
Stroke	165 mm (6.50 in)		
Compression Ratio	16.0:1		
Lubrication	Full Pressure, Full-Flow Filtration With Bypass		
Filter, Oil	Replaceable Spin-On Style Oil Filter		
FUEL (Electronically controlled, electronic unit injectors (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		
Air Cleaner	Dry-Type with Secondary Element		
COOLING			
Type	103 kPa (1.03 bar) (15 psi)		
Fan Drive	Variable Ratio Belt Drive		
Thermostats	Three Heavy-Duty (Two Large, One Small)		

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Cummins is a trademark of Cummins Inc.
[a]German term for horse power in which one PS is equivalent to .9863 horse power
[b]97/68/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.
[c]Does not include optional equipment losses.
[d]80% Factory observed MOE value.

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Engine: QSX15 Cummins®

[Ag]	9570RX	9620RX
POWER		
Final Tier 4/Stage V Engine		
Rated Engine power PS[a](hp ISO) at 2100 engine rpm (97/68/EC)[b]	570 hp (419 kW)	620 hp (456 kW)
Rated Engine power PS[a](hp ISO) at 2100 engine rpm (ECE-R24)	547 hp (402 kW)	595 hp (438 kW)
Rated PTO power (hp SAE) at rated PTO speed (1895 erpm)[cde]	335 hp (250 kW)	
Rated Engine Speed	2100 rpm	
ENGINE MANUFACTURER		
Final Tier 4/Stage V	QSX15 Cummins® 15 L (912 in^3) (B20 Diesel Compatible)	
Type	Diesel, in-line, 6-cylinder, wet-sleeve cylinder liners with 4 valves-in-head	

[Ag]	9570RX	9620RX
Aspiration	Single variable geometry turbocharger, air-to-air aftercooling, and cooled exhaust gas recirculation	
Filter, engine air	Dual stage with exhaust aspiration	
Displacement	15 L (912 in^3)	
Bore and Stroke	137 x 169 mm (5.39 x 6.65 in)	
Compression Ratio	17.2:1	
Lubrication	Full-pressure, full-flow filtration with bypass	
Filter, Oil	Replaceable spin-on style oil filter	
FUEL (High-pressure common rail (self-priming))		
Filter System	2-stage with water separator and service indicator light	
Filter, Primary	7-micron spin-on style with water in fuel sensor and drain	
Filter, Secondary	3-micron spin-on element	
Air Cleaner	Dual stage with exhaust aspiration	
COOLING		
Type	103 kPa (1.03 bar) (15 psi)	
Fan Drive	Hydraulic drive	
Thermostats	One	

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[a]German term for horse power in which one PS is equivalent to .9863 horse power
[b]97/68/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.
[c]Does not include optional equipment losses.
[d]80% Factory Observed MOE value.
[e]Rated values are stated when tractor is stationary.

[Scraper]	9570RX
POWER	
Final Tier 4/Stage V Engine	
Rated Engine power PS[a](hp ISO) at 2100 engine rpm (97/68/EC)[b]	570 hp (419 kW)
Rated Engine power PS[a](hp ISO) at 2100 engine rpm (ECE-R24)	547 hp (402 kW)
Rated Engine Speed	2100 rpm
ENGINE	
Final Tier 4/Stage V	QSX15 Cummins® 15 L (912 in^3) (B20 Diesel Compatible)
Type	Diesel, in-line, 6-cylinder, wet-sleeve cylinder liners with 4 valves-in-head
Aspiration	Single bariable geometry turbocharger air-to-air aftercooling and cooled exhaust gas recirculation
Filter, engine air	Dual stage with exhaust aspiration
Displacement	15 L (912 in^3)
Bore and Stroke	137 x 169 mm (5.39 x 6.65 in)
Compression Ratio	17.2:1
Lubrication	Full-pressure, full-flow filtration with bypass
Filter, Oil	Replaceable spin-on style oil filter
FUEL (High-pressure common rail (self-priming))	
Filter System	Two-stage with water separator
Filter, Primary	7-micron spin-on style with water in fuel sensor and drain
Filter, Secondary	3-micron spin-on element
Air Cleaner	Dual stage with exhaust aspiration
COOLING	
Type	103 kPa (1.03 bar) (15 psi)

[Scraper]	9570RX
Fan Drive	Hydraulic Drive
Thermostats	One

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[a]German term for horse power in which one PS is equivalent to .9863 horse power
[b]97/68/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.

[Scraper]	9570RX Scraper
POWER	
Final Tier 4/Stage V Engine	
Rated Engine power PS[a](hp ISO) at 2100 engine rpm (97/68/EC)[b]	570 hp (419 kW)
Rated Engine power PS[a](hp ISO) at 2100 engine rpm (ECE-R24)	547 hp (402 kW)
Rated Engine Speed	2100 rpm
Governed Speed Range	900—2200 rpm
Operating Speed Range	1500—2100 rpm
Slow Idle	900 ±10 rpm
Fast Idle	2240 ±25 rpm
ENGINE	
Final Tier 4/Stage V	QSX15 Cummins® 15 L (912 in^3) (B20 Diesel Compatible)
Rated Speed	2100 rpm
Type	Diesel, In-Line, 6-Cylinder, Wet-Sleeve Cylinder Liners With 4 valves-in-head
Aspiration Final Tier 4/Stage V	Single Variable geometry turbocharger air-to-air aftercooling and cooled exhaust gas recirculation
Filter, engine air	Dual stage with exhaust aspiration
Displacement	15 L (912 in^3)
Bore	137 mm (5.39 in)
Stroke	169 mm (6.65 in)
Compression Ratio	17.2:1
Lubrication	Full-pressure, full-flow filtration with bypass
Filter, Oil	Replaceable spin-on style oil filter
FUEL	
Injection Pump Type	High Pressure Common Rail
Filter System	Two stage with water separator
Filter, Primary	7 micron spin-on style with water in fuel sensor and drain
Filter, Secondary	3 micron spin-on element
Air Cleaner	Dual Stage with exhaust aspiration
COOLING	
Type	103 kPa (1.03 bar) (15 psi)
Fan Drive	Hydraulic Drive
Thermostats	One

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[a]German term for horse power in which one PS is equivalent to .9863 horse power
[b]97/68/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.

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Capacities

	9420RX	9470RX	9520RX	9570RX	9620RX
FUEL TANK FILL	1514 L (400 gal)				
DEF TANK	83 L (22 gal)				
COOLING SYSTEM (Includes de-aeration tank)					
PowerTech™ PSS	56.5 L (14.9 gal)			—	
QSX15 Cummins®	—			62 L (16.3 gal)	
ENGINE CRANKCASE OIL (Includes filter)					
PowerTech™ PSS	48 L (12.7 gal)			43.5 L (11.5 gal)[a]	
QSX15 Cummins®	—			43.5 L (11.5 gal)[a]	
HYDRAULIC/TRANSMISSION/AXLE OIL					
Without 3-point rear hitch and PTO	220 L (58 gal)				
With 3-point rear hitch and PTO	227 L (60 gal)				
HYDRAULIC RESERVOIR REFERENCE MARKS					
FULL COLD Mark	93 L (24.5 gal)				
MIN COLD Mark	81 L (21.5 gal)				
High-volume take-out oil mark[bc]	140 L (37 gal)				
TRANSMISSION/HYDRAULIC RESERVOIR					
High-flow hydraulics	268.5 L (71 gal)		—		

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Cummins is a trademark of Cummins Inc.
[a]41.6 L Crankcase, 1.9 Pre-fill Filter (11.0 gal Crankcase, 0.5 gal Pre-fill Filter)
[b]Dot half way up the sight tube.
[c] For applications requiring large volumes of oil (For example an Air Seeder).

[Scraper]	9470RX	9520RX	9570RX
Fuel Tank Fill	1514 L (400 gal)		
DEF Tank	83 L (22 gal)		
COOLING SYSTEM (Includes de-aeration tank)			
John Deere PowerTech™ PSS	56.5 L (14.9 gal)		—
QSX15 Cummins®	—		62 L (16.3 gal)
ENGINE CRANKCASE OIL (Includes filter)			
John Deere PowerTech™ PSS	48 L (12.7 gal)		43.5 L (11.5 gal)
QSX15 Cummins®	—		43.5 L (11.5 gal)[a]
HYDRAULIC RESERVOIR VOLUME REFERENCE MARKS			
FULL COLD Mark	93 L (24.5 gal)		
MIN COLD Mark	81 L (21.5 gal)		
High Volume Take Out Oil Mark (Dot half way up the sight tube)[b]	140 L (37 gal)		
HYDRAULIC/TRANSMISSION/AXLE OIL			

[Scraper]	9470RX	9520RX	9570RX
Without 3-point rear hitch and PTO	223 L (59 gal)[c]		

PowerTech is a trademark of Deere & Company
Cummins is a trademark of Cummins Inc.
PowerTech is a trademark of Deere & Company
[a]41.6 L Crankcase, 1.9 L Pre-fill filter (11.0 gal Crankcase, 0.5 gal Pre-fill filter)
[b]For applications requiring large volumes of oil (For example pulling 3 scrapers.)
[c]Double reduction axle

SV81855,00003A7-19-12SEP18

Hydraulics

[Ag]	9420RX	9470RX	9520RX	9570RX	9620RX
Type	Axial piston: closed-center pressure/flow compensated				
Selective Control Valves (SCVs)	Electro-hydraulic: Standard — 4-6; Optional — 8[a]				
Maximum Pressure	20000 kPa (2900 psi)				
MAXIMUM PUMP FLOW					
Base hydraulics	220 L/min (58 gpm)				
High flow	435 L/min (115 gpm)				
DISPLACEMENT					
Base hydraulics	90 cm^3 (5.4 in^3)				
High flow	Main — 90 cm^3 (5.4 in^3); Secondary — 85 cm^3 (5.2 in^3)				
AVAILABLE FLOW (Approximate flow values at 2100 engine rpm)					
Base hydraulics (at a single SCV — 1/2 in coupler)	132 L/min (35 gpm)				
High flow (at a single SCV — 3/4 in coupler[a])	159 L/min (42 gpm)				

[a]Field installed

[Scraper]	9470RX	9520RX	9570RX
Type	Axial piston: closed-center, pressure/flow compensated		
Selective Control Valves (SCVs)	Electro-hydraulic: Standard — 4; Optional — 6		
Maximum pressure	20000 kPa (207 bar) (2900 psi)		
MAXIMUM PUMP FLOW			
Base hydraulics	220 L/min (58 gpm)		
High flow	435 L/min (115 gpm)		
DISPLACEMENT			
Base hydraulics	90 cm^3 (5.4 in^3)		
High flow	Main — 90 cm^3 (5.4 in^3); Secondary — 85 cm^3 (5.2 in^3)		
AVAILABLE FLOW (Approximate flow values at 2100 engine rpm)			
Base hydraulics (at a single SCV — 1/2 in coupler)	132 L/min (35 gpm)		
High flow (at a single SCV — 3/4 in coupler)	159 L/min (42 gpm)		

SV81855,00003A8-19-27APR18

Transmission and Power Train

[Ag]	9420RX	9470RX	9520RX	9570RX	9620RX
e18™ POWERSHIFT TRANSMISSION					
e18™ Transmission with Efficiency Manager™ 40 kph (25 mph) (18 forward, 6 reverse)	Standard				
Type	Electronically-activated wet-disk clutch				
AXLE FINAL DRIVES					
Bull gear and double idler with floating pinion	Standard				
AXLES					
Front and rear axle supports	—	Optional[ab]			
TRACK BELTS	Camso™ 3500-, 4500-, and 6500-Series Track Belts				
Narrow Belt					
457 mm (18 in)	Standard	Optional		—	
610 mm (24 in)	Optional			—	
Wide Belt					
762 mm (30 in)	—	Standard			
914 mm (36 in)	—	Optional			
DIFFERENTIAL LOCK					
Full-locking electrohydraulic	Standard				
Auto disengagement for various selectable turn angles	Standard				
STEERING					
Hydraulic power-steering with electric pump back-up	Standard				
ActiveCommand Steering (ACS)™	Optional				
BRAKES					
Hydraulic power, wet disc, self adjusting on front and rear axle	Standard				
Hydraulic trailer brakes	Optional				

Efficiency Manager is a trademark of Deere & Company
Camso is a trademark of Camso Inc.
ActiveCommand Steering (ACS) is a trademark of Deere & Company
[a]*With 30- or 36-in tracks*
[b]*Included with 3-point hitch*

[Scraper]	9470RX	9520RX	9570RX
e18™ POWERSHIFT TRANSMISSION			
e18™ Transmission with Efficiency Manager™ 40 kph (25 mph) (18 forward, 6 reverse)	Standard		
Type	Electronically-activated wet-disk clutch		
AXLE FINAL DRIVES			
Bull gear and double idler with floating pinion	Standard		
AXLES			
Front and rear axle supports	Standard		
TRACK BELTS	Camso™DURADRIVE™6500 Scraper Special Track Belts		

[Scraper]	9470RX	9520RX	9570RX
30-in (762 mm) wide belt	Standard		
36-in (914 mm) wide belt	—		
DIFFERENTIAL LOCK			
Hydraulic power-steering with electric pump back-up	Standard		
ActiveCommand Steering (ACS)™	Standard		
STEERING			
Hydraulic power-steering with electric pump back-up	Standard		
Active Command Steering (ACS)	Optional		
BRAKES			
Hydraulic power, wet disk, self adjusting on front and rear axle	Standard		
Hydraulic trailer brakes	Optional		

Efficiency Manager is a trademark of Deere & Company
Camso is a trademark of Camso Inc.
DURADRIVE is a trademark of Camso Inc.
ActiveCommand Steering (ACS) is a trademark of Deere & Company

KT81203,000096B-19-17JUL18

PTO [Ag], Hitch [Ag], and Drawbar

[Ag]	9420RX	9470RX	9520RX	9570RX	9620RX
PTO (Independent)					
1-3/4 in, 20-spline 1000-rpm	Optional				
3-POINT HITCH (Electric-Hydraulic with Draft-Sensing)					
Category 4N/3 with Quik-Coupler					
6804 kg (15000 lb)	Optional		—		
9072 kg (20000 lb)	Optional		—		
Category 4N/4 with Quik-Coupler					
6804 kg (15000 lb)	Optional				
9072 kg (20000 lb)	Optional				
DRAWBAR					
Category 5 with Heavy-Duty Drawbar Support					
5440 kg (12000 lb) Maximum Vertical Load[a]	Standard				
Category 5 with Heavy-Duty Drawbar Support and Category 4 Conversion Kit					
5440 kg (12000 lb) Maximum Vertical Load[a]	Optional		—		

[a]*Maximum vertical load when drawbar is in short position.*

[Scraper]	9470RX	9520RX	9570RX
DRAWBAR			
Drawbar Support for Short Scraper Drawbars	Standard		

SV81855,00003AA-19-27APR18

Electrical

[Ag]	9420RX	9470RX	9520RX	9570RX	9620RX
Alternator/Battery	Standard — 200 amps / 12 Volt; Optional — 240 amps / 12 Volt				
Total Cold Cranking Amps	2775 (3-925 CCA)[a]			3700 (4-925 CCA)[b]	

[a] *Three batteries in parallel, negative ground*
[b] *Four batteries in parallel, negative ground*

[Scraper]	9470RX	9520RX	9570RX
Alternator/Battery	Standard — 200 amps / 12 Volt; Optional — 240 amps / 12 Volt		
Total Cold Cranking Amps	2775 (3-925 CCA)[a]		3700 (4-925 CCA)[b]

[a] *Three batteries in parallel, negative ground*
[b] *Four batteries in parallel, negative ground*

SV81855,00003A9-19-01AUG18

Other Equipment

[Ag]	9420RX	9470RX	9520RX	9570RX	9620RX
AutoTrac™ Ready	Standard				
Modular Telematics Gateway (MTG)	Available with JDLink™ Ultimate and Ethernet Harness (Availability dependent upon destination)				
Service ADVISOR™ Remote	Capable with JDLink™ Select and Ultimate				
ISOBUS Implement Connection	Standard (ISO 11783)				
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.				
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.				

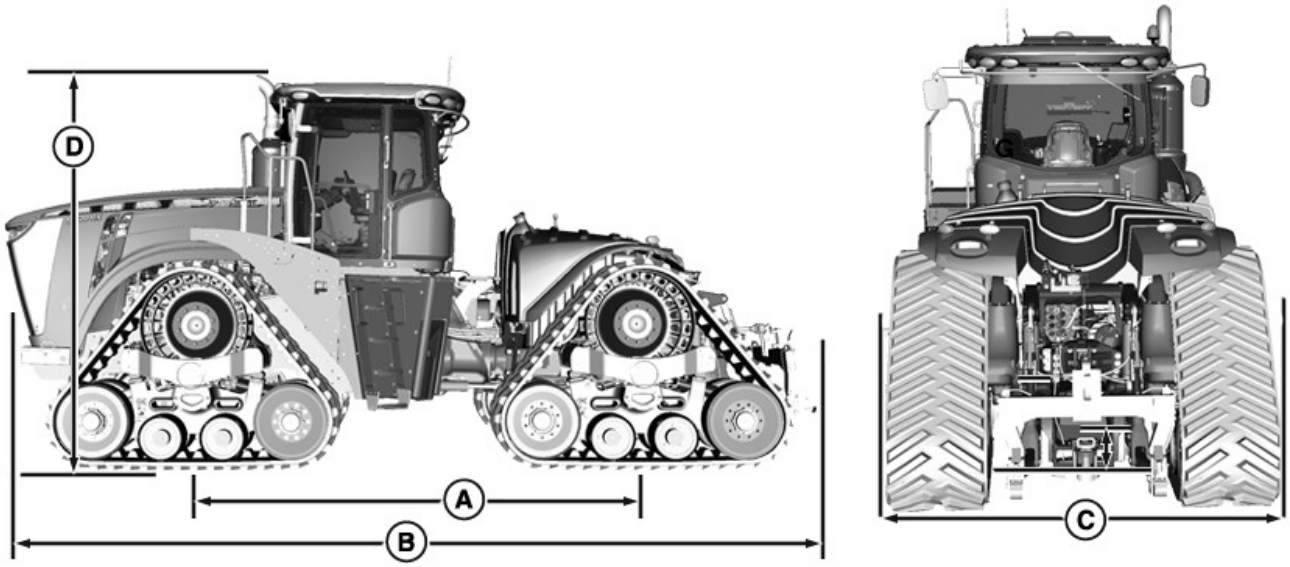
AutoTrac is a trademark of Deere & Company
JDLink is a trademark of Deere & Company
Service ADVISOR is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

[Scraper]	9470RX	9520RX	9570RX
AutoTrac™ Ready	Standard		
Modular Telematics Gateway (MTG)	Available JDLink™ Ultimate and Ethernet Harness (Availability dependent upon destination)		
Service ADVISOR™ Remote	Capable with JDLink™ Select and Ultimate		
ISOBUS Implement Connection	Standard (ISO 11783)		
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.		
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.		

AutoTrac is a trademark of Deere & Company
JDLink is a trademark of Deere & Company
Service ADVISOR is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company

SV81855,00003AC-19-27JUL18

Overall Dimensions

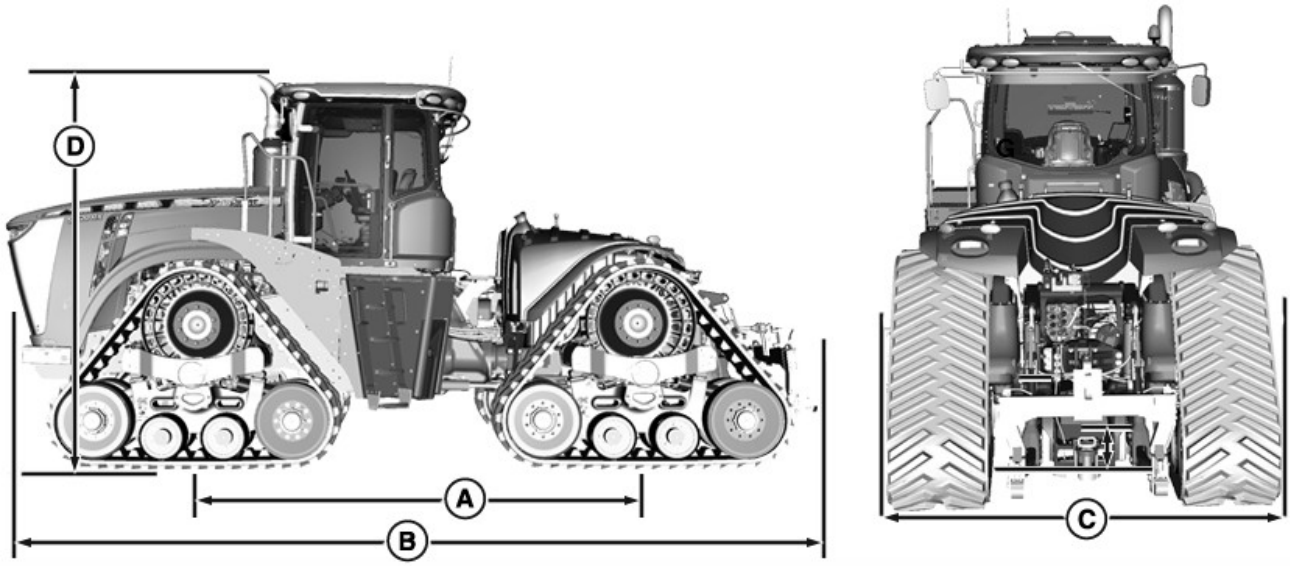


RXA0160705—UN—23AUG17

[Ag]	9420RX	9470RX	9520RX	9570RX	9620RX
LENGTH (mm (in))					
Wheelbase **(A)**	4154 (163.5)				
Overall Length (including hitch and coupler) **(B)**	8180 (322.0)				
OVERALL WIDTH (C)					
Belt Width - 457.2 mm (18 in)	Standard	Optional		—	
Track Spacing					
2032 mm (80 in)	2489 mm (98.0 in)			—	
2235 mm (88 in)	2692 mm (112.0 in)			—	
3048 mm (120 in)	3505 mm (144.0 in)			—	
Belt Width - 609.6 mm (24 in)	Optional			—	
Track Spacing					
2032 mm (80 in)	2642 mm (104.0 in)			—	
2235 mm (88 in)	2845 mm (112.0 in)			—	
3048 mm (120 in)	3658 mm (144.0 in)			—	
Belt Width - 762 mm (30 in)	—	Standard			
2215 mm (87.2 in)	—	2977 mm (117.3 in)			
3048 mm (120 in)	—	3810 mm (150 in)			
Belt Width - 914 mm (36 in)	—	Optional			
2215 mm (87.2 in)	—	3130 mm (123.2 in)			
3048 mm (120 in)	—	3963 mm (156 in)			
OVERALL HEIGHT (D) (mm (in))					
Top of Roof	3707 (145.9 in)				
Top of Beacon	3919 (154.3 in)				
Top of Exhaust					
13.5L	3696 (145.5 in)				

[Ag]	9420RX	9470RX	9520RX	9570RX	9620RX
15L	4006 (157.7 in)				
TURNING RADIUS (m (ft))					
30-in and 36-in Track	6.4 (21.0)				
GROUND CLEARANCE (mm (in))					
Ground to bottom of drawbar	403 (15.9)				
Ground to drawbar support casting	336 (13.2)				
Ground to bolt	312 (12.3)				
Estimated Shipping Weight[a]	24494 kg (54000 lb)				
Maximum Ballast Level	28123 kg (62000 lb)				

[a] *Tractor equipped with standard tracks, without PTO, and without 3-point hitch.*



RXA0160705—UN—23AUG17

[Scraper]	9470RX	9520RX	9570RX
LENGTH (mm (in))			
Wheelbase **(A)**	4154 (163.5)		
Overall Length **(B)**	7697 (303)		
OVERALL WIDTH (mm (in))			
Overall Width (Wide Tracks) **(C)**	2977 (117.2)		
OVERALL HEIGHT (D)			
Top of Roof	3701 mm (145.7 in)		
Top of Beacon	3830 mm (150.8 in)		
Top of Exhaust			
13.5L	3538 mm (139.3 in)		
15L	4006 mm (157.7 in)		
TURNING RADIUS (m (ft))			
Wide Track	9.2 (30.2)		

[Scraper]	9470RX	9520RX	9570RX
GROUND CLEARANCE (mm (in))			
Drawbar	400 (15.7)		
Estimated Shipping Weight (kg (lb))	26761 (59000)		
Maximum Ballast Level (kg lb))	28123 (62000)[a]		

[a]*Equipped with 762 mm (30 in) Tracks*

SV81855,00003AD-19-06SEP18

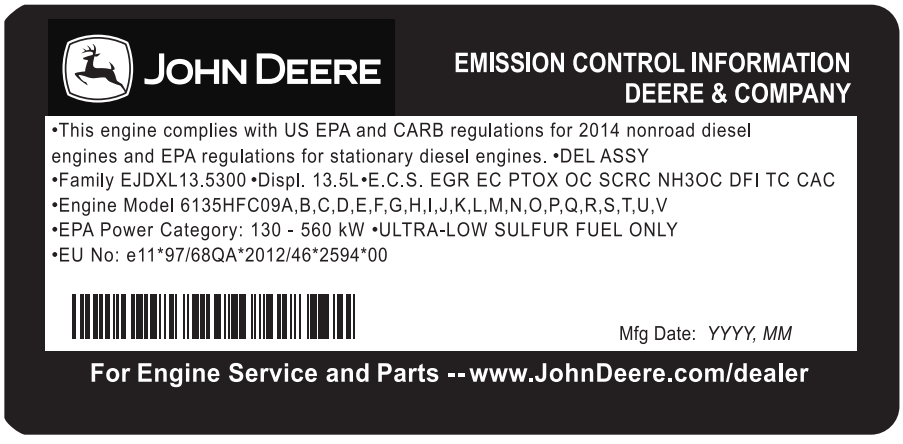
Ground Speeds—e18™ PowerShift Transmission

Ground speeds are at rated engine speed of 2100 rpm.

Gear	km/h (mph)
F1	4.0 (2.5)
F2	4.9 (3.0)
F3	5.5 (3.4)
F4	6.1 (3.8)
F5	6.7 (4.2)
F6	7.5 (4.7)
F7	8.3 (5.2)
F8	9.2 (5.7)
F9	10.2 (6.3)
F10	11.4 (7.1)
F11	12.6 (7.8)
F12	14.0 (8.7)
F13	15.5 (9.6)
F14	17.2 (10.3)
F15	21.3 (13.2)
F16	26.2 (16.3)
F17	32.2 (20.0)
F18	39.6 (24.6)
R1	-4.0 (-2.5)
R2	-5.5 (-3.4)
R3	-6.1 (-3.8)
R4	-8.3 (-5.2)
R5	-9.2 (-5.7)
R6	-12.6 (-10.3)

BH38674,0000009-19-15NOV16

Emissions Control System Certification Label



RG24291—UN—18SEP13

Engine Emissions Label

⚠ 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
Fuel System
Ignition System
Exhaust Gas Recirculation Systems
Aftertreatment Devices
Crankcase Ventilation Valves
Sensors
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
Fuel System
Ignition System
Exhaust Gas Recirculation Systems
Aftertreatment Devices
Crankcase Ventilation Valves
Sensors
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

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 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:

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

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 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

- 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)

RG26036—UN—24JUN14

Emissions Control Warranty Statement 2019 through 2021

JOHN DEERE

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

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 (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

- 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 (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

Cummins® — CARB Non-road Emissions Control Warranty Statement

California Emission Control Warranty Statement, Off-Highway

Your Warranty Rights and Obligations
The California Air Resources Board and Cummins Inc., are pleased to explain the emission control system warranty on your 2017, 2018, and 2019 model year engine. In California, new heavy-duty off-road diesel engines must be designed, built and equipped to meet the State's stringent anti-smog standards. Cummins Inc. ® 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.

Where a warrantable condition exists, Cummins Inc. will repair your heavy-duty off-road diesel engine at no cost to you including diagnosis, parts and labor.

Manufacturer's Warranty Coverage
This warranty coverage for 2017, 2018, and 2019 model year heavy-duty off-road engines is provided for 5 years or 3,000 hours of engine operation, whichever first occurs from the date of delivery of the engine to the first user. If any emission-related part on your engine is defective, the part will be repaired or replaced by Cummins Inc..

Owner's Warranty Responsibilities
As the engine owner, you are responsible for the performance of the required maintenance listed in your Cummins® Owners and/or Operation and Maintenance Manual. Cummins Inc. recommends that you retain all receipts covering maintenance on your engine, but Cummins Inc. cannot deny warranty solely for the lack of receipts or for your failure to substantiate the performance of all scheduled maintenance.

You are responsible for presenting your engine to a Cummins® dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

As an engine owner, you should also be aware that Cummins Inc. may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

If you have any questions regarding your warranty rights and responsibilities, you should contact Cummins® Customer Relation Department at 1-800-343-7357 or the California Air Resources Board at 9528 Telstar Avenue, El Monte, CA 91731.

A warranted part which is scheduled for replacement as required maintenance is warranted up to the first schedule replacement point.

Prior to the expiration of the applicable warranty, Owner must give notice of any warranted emission control failure to a Cummins® distributor, authorized dealer or other repair location approved by Cummins Inc. and deliver the engine to such facility for repair. Repair locations are listed in Cummins® United States and Canada Service Directory.

Owner is responsible for incidental costs such as: communication expenses, meals, lodging incurred by Owner or employees of Owner as a result of a Warrantable Condition.

Owner is responsible for "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs, and other losses resulting from a Warrantable Condition.

Last Modified: 13-Sep-2018
Cummins is a trademark of Cummins Inc.

California Emission Control System Warranty Coverage

This list of emission control parts may be covered by the emission control system warranty under certain failure modes:

Aftertreatment System	**Base Engine System**
Component	**Component**
Aftertreatment Electroconnections	Cam Shaft
Aftertreatment Fuel Drain Valve	Cam Shaft Valve Lobe
Aftertreatment Fuel Injector/Regulator	Coolant Temperature Sensor

Aftertreatment Fuel Pressure Sensor	Crankcase Breather
Aftertreatment Fuel Shut-off Valve	Engine Oil Pressure Sensor
Aftertreatment Injector Manifold	Engine Oil Temperature
Aftertreatment Inlet and Outlet Modules	Engine Speed, Position Sensor, Cam Position Sensor
Aftertreatment Temperature Interface Module	Exhaust Valve
Aftertreatment System (cont')	**EGR System**
Component	**Component**
Aftertreatment Temperature Sensors	EGR Cooler
Decomposition Tube	EGR Differential Pressure Sensor
DEF Dosing Unit (Pump)	EGR Mixer/Venturi
DEF Dosing Valve	EGR Temperature Sensor
Diesel Oxidation Catalyst	EGR Mixer/Venturi
Diesel Particulate Filter (except for ash maintenance)	EGR Valve
Diesel Particulate Filter Differential Pressure Sensor	
NOx Sensors	
SCR Catalyst	
Air Handling	**Electronic Control System**
Component	**Component**
Barometric Air Pressure Sensor	Engine Control Module
Exhaust Gas Pressure Sensor	Engine Control Module Calibration
Exhaust Manifold	
Air Handling (cont')	**Fuel System**
Component	**Component**
Charge Air Cooler and Associated Plumbing	Fuel Lines
Intake Manifold	Fuel Pressure Sensor
Intake Manifold Temperature/Pressure Sensor	Fuel Pump
Turbocharger Actuator	Injector
Turbocharger Assembly	Secondary Fuel Pressure/Temperature Sensor
Turbocharger Compressor Inlet Air Temperature Sensor	
Turbocharger Speed Sensor	

Last Modified: 25-Oct-2013
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Replacement Parts
Cummins recommends that any service parts used for maintenance, repair or replacement of emission control systems be new, genuine Cummins or Cummins approved rebuilt parts and assemblies, and that the engine be serviced by a Cummins distributor, authorized dealer or the repair location approved by Cummins. The owner may elect to have maintenance, replacement or repair of the emission control parts performed by a facility other than a Cummins distributor, an authorized dealer or a repair location approved by Cummins, and may elect to use parts other than new genuine Cummins or Cummins approved rebuilt parts and assemblies for such maintenance, replacement or repair; however, the cost of such service or parts will not be covered under this emission control system warranty.

Cummins Responsibilities
Repairs and service will be performed by any Cummins distributor, authorized dealer or other repair location approved by Cummins using new, genuine Cummins or Cummins approved rebuilt parts and assemblies. Cummins will repair any of the emission control parts found by Cummins to be defective without charge for parts or labor (including diagnosis which results in determination that there has been a failure of a warranted emission control part).

Emergency Repairs
In the case of an emergency where a Cummins distributor, authorized dealer, or other repair location approved by Cummins is not available, repairs may be performed by any available repair location using any replacement parts. Cummins will reimburse the Owner for expenses (including diagnosis), not to exceed the manufacturer's suggested retail price for all warranted parts replaced and labor charges based on the manufacturer's recommended time allowance for the warranty repair and the geographically appropriate hourly labor rate. A part not being available within 30 days or a repair not being complete within 30 days constitutes an emergency. Replaced parts and paid invoices must be presented at a Cummins authorized repair facility as a condition of reimbursement for emergency repairs not performed by a Cummins distributor, authorized dealer, or other repair location approved by Cummins.

Warranty Limitations
Cummins is not responsible for failures resulting from Owner or operator abuse or neglect, such as: operation without adequate coolant, fuel or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or air intake systems; improper storage, starting, warm- up, run-in or shutdown practices.

The manufacturer warrants to the ultimate purchaser and each subsequent purchaser that the engine is designed, built, and equipped so as to conform with all applicable regulations adopted by the Air Resources Board, and that it is free from defects in materials and workmanship which cause the failure of a warranted part.

Any warranted part which is not scheduled for replacement as required maintenance, or which is scheduled only for regular inspection to the effect of "repair or replace as necessary" is warranted for the warranty period.

Any warranted part which is scheduled for replacement as required maintenance is warranted for the period of time prior to the first scheduled replacement point for that part.

The owner will not be charged for diagnostic labor which leads to the determination that a warranted part is defective, if the diagnostic work is performed at a warranty station.

The manufacturer is liable for damages to other engine components caused by the failure under warranty of any warranted part.

Cummins is not responsible for failures resulting from improper repair or the use of parts which are not genuine Cummins or Cummins approved parts.

These warranties, together with the express commercial warranties and emission warranty are the sole warranties of Cummins®. There are no other warranties, express or implied, or of merchantability or fitness for a particular purpose.

Last Modified: 7-Apr-2016

California Emission Control Warranty Statement, Off-Highway

Your Warranty Rights and Obligations
The California Air Resources Board and Cummins Inc., are pleased to explain the emission control system warranty on your 2017, 2018, and 2019 model year engine. In California, new heavy-duty off-road diesel engines must be designed, built and equipped to meet the State's stringent anti-smog standards. Cummins Inc. ® 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 emissions 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 emmission-related assemblies.

Where a warrantable condition exists, Cummins Inc. will repair your heavy-duty off-road diesel engine at no cost to you including diagnosis, parts and labor.

Manufacturer's Warranty Coverage
This warranty coverage for 2017, 2018 and 2019 model year heavy-duty off-road engines is provided for 5 years or 3,000 hours of engine operation, whichever first occurs from the date of delivery of the engine to the first user. If any emission-related part on your engine is defective, the part will be repaired or replaced by Cummins Inc..

Owner's Warranty Responsibilities
As the engine owner, you are responsible for the performance of the required maintenance listed in your Cummins® Owners and/or Operation and Maintenance Manual. Cummins Inc. recommends that you retain all receipts covering maintenance on your engine, but Cummins Inc. cannot deny warranty solely for the lack of receipts or for your failure to substantiate the performance of all scheduled maintenance.

You are responsible for presenting your engine to a Cummins® dealer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

As an engine owner, you should also be aware that Cummins Inc. may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

If you have any questions regarding your warranty rights and responsibilities, you should contact Cummins® Customer Relation Department at 1-800-343-7357 or the California Air Resources Board at 9528 Telstar Avenue, El Monte, CA 91731.

A warranted part which is scheduled for replacement as required maintenance is warranted up to the first schedule replacement point.

Prior to the expiration of the applicable warranty, Owner must give notice of any warranted emission control failure to a Cummins® distributor, authorized dealer or other repair location approved by Cummins Inc. and deliver the engine to such facility for repair. Repair locations are listed in Cummins® United States and Canada Service Directory.

Owner is responsible for incidental costs such as: communication expenses, meals, lodging incurred by Owner or employees of Owner as a result of a Warrantable Condition.

Owner is responsible for "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs, and other losses resulting from a Warrantable Condition.

Last Modified: 13-Sep-2018
Cummins is a trademark of Cummins Inc.

RXA0164557—UN—14SEP18

California Emission Control System Warranty

Coverage

This list of emission control parts may be covered by the emission control system warranty under certain failure modes:

Aftertreatment System	**Base Engine** System
Component	**Component**
Aftertreatment Electroconnections	Cam Shaft
Aftertreatment Fuel Drain Valve	Cam Shaft Valve Lobe
Aftertreatment Fuel Injector/Regulator	Coolant Temperature Sensor
Aftertreatment Fuel Pressure Sensor	Crankcase Breather
Aftertreatment Fuel Shut-off Valve	Engine Oil Pressure Sensor
Aftertreatment Injector Manifold	Engine Oil Temperature
Aftertreatment Inlet and Outlet Modules	Engine Speed, Position Sensor, Cam Position Sensor
Aftertreatment Temperature Interface Module	Exhaust Valve
Aftertreatment System (cont')	**EGR System**
Component	**Component**
Aftertreatment Temperature Sensors	EGR Cooler
Decomposition Tube	EGR Differential Pressure Sensor
DEF Dosing Unit (Pump)	EGR Mixer/Venturi
DEF Dosing Valve	EGR Temperature Sensor
Diesel Oxidation Catalyst	EGR Mixer/Venturi
Diesel Particulate Filter (except for ash maintenance)	EGR Valve
Diesel Particulate Filter Differential Pressure Sensor	
NOx Sensors	
SCR Catalyst	
Air Handling	**Electronic Control System**
Component	**Component**
Barometric Air Pressure Sensor	Engine Control Module
Exhaust Gas Pressure Sensor	Engine Control Module Calibration
Exhaust Manifold	
Air Handling (cont')	**Fuel System**
Component	**Component**
Charge Air Cooler and Associated Plumbing	Fuel Lines
Intake Manifold	Fuel Pressure Sensor
Intake Manifold Temperature/Pressure Sensor	Fuel Pump
Turbocharger Actuator	Injector
Turbocharger Assembly	Secondary Fuel Pressure/Temperature Sensor
Turbocharger Compressor Inlet Air Temperature Sensor	
Turbocharger Speed Sensor	

Last Modified: 25-Oct-2013
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RXA0164558—UN—13SEP18

Replacement Parts
Cummins recommends that any service parts used for maintenance, repair or replacement of emission control systems be new, genuine Cummins or Cummins approved rebuilt parts and assemblies, and that the engine be serviced by a Cummins distributor, authorized dealer or the repair location approved by Cummins. The owner may elect to have maintenance, replacement or repair of the emission control parts performed by a facility other than a Cummins distributor, an authorized dealer or a repair location approved by Cummins, and may elect to use parts other than new genuine Cummins or Cummins approved rebuilt parts and assemblies for such maintenance, replacement or repair; however, the cost of such service or parts will not be covered under this emission control system warranty.

Cummins Responsibilities
Repairs and service will be performed by any Cummins distributor, authorized dealer or other repair location approved by Cummins using new, genuine Cummins or Cummins approved rebuilt parts and assemblies. Cummins will repair any of the emission control parts found by Cummins to be defective without charge for parts or labor (including diagnosis which results in determination that there has been a failure of a warranted emission control part).

Emergency Repairs
In the case of an emergency where a Cummins distributor, authorized dealer, or other repair location approved by Cummins is not available, repairs may be performed by any available repair location using any replacement parts. Cummins will reimburse the Owner for expenses (including diagnosis), not to exceed the manufacturer's suggested retail price for all warranted parts replaced and labor charges based on the manufacturer's recommended time allowance for the warranty repair and the geographically appropriate hourly labor rate. A part not being available within 30 days or a repair not being complete within 30 days constitutes an emergency. Replaced parts and paid invoices must be presented at a Cummins authorized repair facility as a condition of reimbursement for emergency repairs not performed by a Cummins distributor, authorized dealer, or other repair location approved by Cummins.

Warranty Limitations
Cummins is not responsible for failures resulting from Owner or operator abuse or neglect, such as: operation without adequate coolant, fuel or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or air intake systems; improper storage, starting, warm- up, run-in or shutdown practices.

The manufacturer warrants to the ultimate purchaser and each subsequent purchaser that the engine is designed, built, and equipped so as to conform with all applicable regulations adopted by the Air Resources Board, and that it is free from defects in materials and workmanship which cause the failure of a warranted part.

Any warranted part which is not scheduled for replacement as required maintenance, or which is scheduled only for regular inspection to the effect of "repair or replace as necessary" is warranted for the warranty period.

Any warranted part which is scheduled for replacement as required maintenance is warranted for the period of time prior to the first scheduled replacement point for that part.

The owner will not be charged for diagnostic labor which leads to the determination that a warranted part is defective, if the diagnostic work is performed at a warranty station.

The manufacturer is liable for damages to other engine components caused by the failure under warranty of any warranted part.

Cummins is not responsible for failures resulting from improper repair or the use of parts which are not genuine Cummins or Cummins approved parts.

These warranties, together with the express commercial warranties and emission warranty are the sole warranties of Cummins®. There are no other warranties, express or implied, or of merchantability or fitness for a particular purpose.

Last Modified: 7-Apr-2016

RXA0164559—UN—13SEP18
EC82310,0000764-19-14SEP18

Cummins® — EPA Non-Road Emissions Control Warranty Statement

Emission Warranty

Products Warranted

This Emission Warranty applies to new Engines marketed by Cummins® that are used in the United States* and Canada in vehicles designed for Industrial Off-Highway use. This Warranty applies to Engines delivered to the ultimate purchaser on or after April 1, 1999, for Engines up to 750 horsepower and on or after January 1, 2000, for Engines 751 horsepower and over.

Coverage

Cummins® warrants to the ultimate purchaser and each subsequent purchaser that the Engine is designed, built, and equipped so as to conform at the time of sale by Cummins with all U.S. Federal emission regulations applicable at the time of manufacture and that it is free from defects in workmanship or material which would cause it not to meet these regulations within the longer of the following periods: (A) ***Five years or 3,000 hours of operation for industrial applications, five years or 3,500 hours of operation for industrial spark-ignited Engines (GTA855, G855, G5.9C, G8.3-C, GTA8.9E, QSK19G) and five years or 2,500 hours of operation for industrial spark-ignited Engines (GKTA19-GC), whichever occurs first, as measured from the date of delivery of the Engine to the ultimate purchaser, or (B) The Base Engine Warranty.

If the vehicle in which the Engine is installed is registered in the state of California, a separate California Emission Warranty also applies.

Limitations

Engines with an emissions certification listed below must be operated using only diesel fuel having no more than the corresponding maximum sulfur content. Failure to use the specified fuel as listed in the Cummins® Fuel Bulletin #3379001 Table 1 (Cummins Inc. Required Diesel Fuel Specifications) can damage the Engine and aftertreatment system within a short period of time. This damage could cause the Engine to become inoperable and failures attributable to the use of incorrect fuels will be denied Warranty Coverage. Fuel specifications also need to comply with local fuel regulations (EN590 for Europe and ASTM D975 for North America) for Warranty eligibility.

Cummins is a trademark of Cummins Inc.

Maximum sulfur levels by emissions certification level as listed on the Engine's dataplate are:	
EPA 2007/2010/2013	MAX 15 parts per million
EPA Tier 4 Interim / Final	MAX 15 parts per million
EU Stage IIIB 2011	MAX 15 parts per million
Euro 4/5	MAX 50 parts per million
Euro 6	MAX 10 parts per million

Failures, other than those resulting from defects in materials or workmanship, are not covered by this Warranty.

Cummins® is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolant or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling, or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine. Cummins is also not responsible for failures caused by incorrect oil, fuel, or diesel exhaust fluid or by water, dirt, or other contaminants in the fuel, oil, or diesel exhaust fluid.

Cummins® is not responsible for non-Engine repairs, "downtime" expenses, cargo damage, fines, all business costs, or other losses resulting from a Warrantable Failure.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

* United States includes American Samoa, the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico, and the U.S. Virgin Islands.
** Alternators, starters, and fans ARE covered for the duration of the Base Engine Warranty on A Series and B3.3 Engines.
** Alternators and starters are covered for the duration of the Base Engine Warranty on QSK23 Engines.
*** Emissions Warranty for BLPG Industrial Off-Highway Engines is 5 years / 3,500 hours.

Emission Warranty

Products Warranted

This Emission Warranty applies to new Engines marketed by Cummins that are used in the United States* and Canada in vehicles designed for Industrial Off-Highway use. This Warranty applies to Engines delivered to the ultimate purchaser on or after April 1, 1999, for Engines up to 750 horsepower and on or after January 1, 2000, for Engines 751 horsepower and over.

Coverage

Cummins warrants to the ultimate purchaser and each subsequent purchaser that the Engine is designed, built and equipped so as to conform at the time of sale by Cummins with all U.S. Federal emission regulations applicable at the time of manufacture and that it is free from defects in workmanship or material which would cause it not to meet these regulations within the longer of the following periods: (A) ***Five years or 3,000 hours of operation for industrial applications, five years or 3,500 hours of operation for industrial spark-ignited Engines (GTA855, G855, G5.9C, G8.3-C, GTA8.9E, QSK19G) and five years or 2,500 hours of operation for industrial spark-ignited Engines (GKTA19-GC), whichever occurs first, as measured from the date of delivery of the Engine to the ultimate purchaser, or (B) The Base Engine Warranty.

If the vehicle in which the Engine is installed is registered in the state of California, a separate California Emission Warranty also applies.

Limitations

Engines with an emissions certification listed below must be operated using only diesel fuel having no more than the corresponding maximum sulfur content. Failure to use the specified fuel as listed in the Cummins Fuel Bulletin #3379001 Table 1 (Cummins Inc. Required Diesel Fuel Specifications) can damage the Engine and aftertreatment system within a short period of time. This damage could cause the Engine to become inoperable and failures attributable to the use of incorrect fuels will be denied Warranty Coverage. Fuel specifications also need to comply with local fuel regulations (EN590 for Europe and ASTM D975 for North America) for Warranty eligibility.

Maximum sulfur levels by emissions certification level as listed on the Engine's dataplate are:	
EPA 2007/2010/2013	max. 15 parts per million
EPA Tier 4 Interim / Final	max. 15 parts per million
EU Stage IIIB 2011	max. 15 parts per million
Euro 4/5	max. 50 parts per million
Euro 6	max. 10 parts per million

Failures, other than those resulting from defects in materials or workmanship, are not covered by this Warranty.

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolant or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine. Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel exhaust fluid.

Cummins is not responsible for non-Engine repairs, "downtime" expenses, cargo damage, fines, all business costs or other losses resulting from a Warrantable Failure.

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* United States includes American Samoa, the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico and the U.S. Virgin Islands.
** Alternators, starters, and fans ARE covered for the duration of the Base Engine Warranty on A Series and B3.3 Engines.
** Alternators and starters are covered for the duration of the Base Engine Warranty on QSK23 Engines.
*** Emissions Warranty for BLPG Industrial Off-Highway Engines is 5 years / 3,500 hours.

RG26034—UN—28JUL14
DX,EMISSIONS,CUMMINS,EPA-19-01AUG14

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.

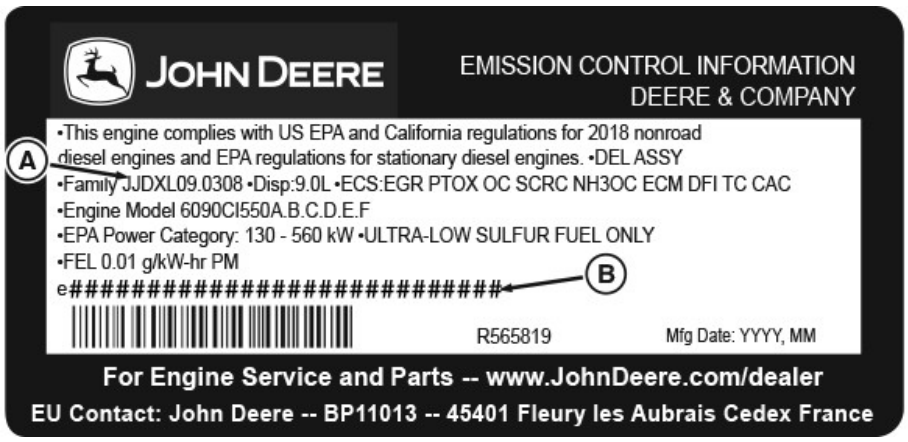
Pro Rata Months of Adjustment

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 (CO_2)



RXA0164555—UN—13SEP18

Engine Emissions Label

A—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.

B—Europe Family

NOTE: The first letter of the family number is not utilized for family identification on the chart.

To identify the carbon dioxide (CO_2) 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 CO_2 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.

EC82310,000075C-19-13SEP18

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

*_ _ _ _



RXA0160138—UN—07JUL17

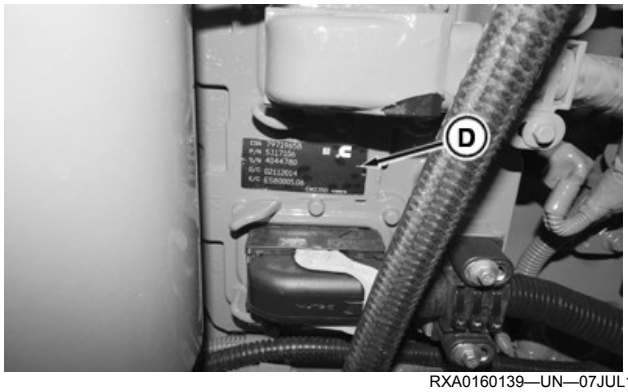
15 L Engine Serial Number Plate Location

Identification plate (C) is on left-hand side of engine valve cover.

The engine dataplate, on top of the rocker lever cover, provides the model identification and other important data about the engine.

Have the following engine data available when communicating with a Cummins® Authorized Repair Location. The information on the dataplate is **mandatory** when sourcing service parts:

1. Engine serial number (ESN)
2. Control parts list (CPL)
3. Model
4. Indicates the Emissions Control Systems



RXA0160139—UN—07JUL17

15 L Engine Control Module (ECM) Dataplate

The Engine Control Module (ECM) Dataplate (D) is on left-hand side of engine, on front of the ECM.

The abbreviations on the dataplate are explained as follows:

- P/N = part number
- ESN = engine serial number
- S/N = serial number
- D/C = date code
- E/C = engine calibration

SV81855,000002E-19-07MAY18

Cab Serial Number

Serial Number

_____



RXA0142516—UN—26JUN14

Identification plate (A) is located on cab floor panel, inside entry door and under the floor mat.

TO84419,000021E-19-17JUL17

Transmission Serial Number

Serial Number

_____



RXA0142107—UN—05JUN14

Identification plate (A) for Powershift is located on right-hand rear of transmission case, near the transmission filters.

TO84419,000021F-19-17JUL17

Track Serial Numbers

Front Track

Left Track Serial Number

* ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ *

Right Track Serial Number

* ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ *

Rear Track

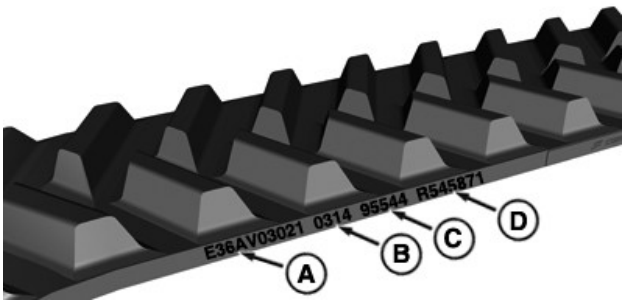
Left Track Serial Number

* ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ *

Right Track Serial Number

* ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ *

Track identification numbers consists of:



RXA0145009—UN—23SEP14

- Camso manufacturer number (A) a combination of ten letters and numbers on track edges.
- Camso DURABUILT™ track manufacturer date (B): four digits indicating date of manufacture. Example: 0314 (March 2014).
- Five digits indicate track serial number (C).
- John Deere part number (D) is a letter followed by six numbers. Example: R123456.

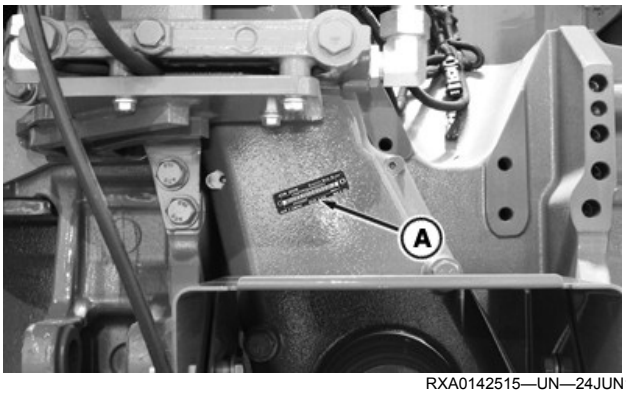
SV81855,0000322-19-02AUG17

PTO Dropbox Serial Number [Ag]

Serial Number

___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

DURABUILT is a trademark of Camso Inc.



RXA0142515—UN—24JUN14

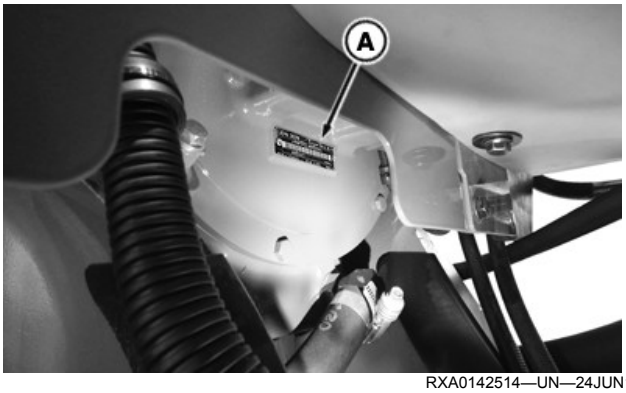
Identification plate (A) is on PTO drop box at rear of tractor.

TO84419,0000220-19-07MAY18

PTO Clutch Serial Number [Ag]

Serial Number

___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___



RXA0142514—UN—24JUN14

PTO Clutch Serial Number (Bottom View)

Identification plate (A) is on PTO clutch in the gudgeon area.

TO84419,0000221-19-07MAY18

Keep Proof of Ownership

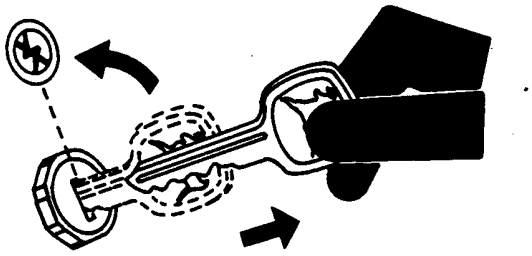


TS1680—UN—09DEC03

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

Keep Machines Secure



TS230—UN—24MAY89

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 *(only if sold through a dealer)*

Third Owner

Serial Number:	Tractor Model:
Engine Number:	Registration Number:
Previous Owner:	New Owner:
Address:	Address: . . . .
Purchase Date: Hours at Purchase:	Dealer's Stamp *(only if sold through a dealer)*

TS36762,000029B-19-23NOV16

Predelivery

Predelivery Checklist

NOTE: Make a copy of this checklist and complete while performing.

NOTE: Tractors equipped with 15 L engines will automatically perform an initial engine regeneration after at least 4 hours of operation. This procedure may have occurred prior to tractor delivery. If regeneration begins, allow full completion of process. See Parked Exhaust Filter Cleaning in Operating the Engine section of vehicle Operator's Manual.

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
>> Hydraulic and air trailer brakes
>> Parking brake
>> Secondary brake
☐ 3. Transmission operates correctly (including PARK position).
☐ 4. Neutral start switch operates correctly.
☐ 5. SCVs operate correctly.
☐ 6. Hitch operates correctly.
☐ 7. PTO operates 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.

IMPORTANT: Muffler extension increases tractor height. Be aware of clearance restrictions when transporting tractor.

☐ 3. Replace transport rain cap with muffler extension.
☐ 4. Check and adjust tire pressure.
☐ 5. Adjust wheel spacing for customer needs.
☐ 6. Check track tread settings and track alignment.
☐ 7. Check and adjust steering stops.

IMPORTANT: Failure to follow track tractor road transport recommendations may void tractor warranty. See Transport section and General Track Use Guidelines in Tracks – General Information section of this Operator's Manual.

Service ADVISOR is a trademark of Deere & Company

☐ 8. Perform track system break-in procedure. See Perform Track Systems Break-In in Break-In Service (100 Hours or Less) section of this Operator's Manual.

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.

☐ 9. Tighten wheels and weights to specifications (even if no adjustments are made).

☐ 10. Tighten track drive wheel, drive wheel sleeve, idler wheel and mid-roller cap screws to specifications (even if no adjustments are made).

☐ 11. Reposition all components from shipping to operating positions (i.e. mirrors.)

☐ 12. Adjust all lights, including extremity transport warning lights and beacon light. Check all lights for compliance with local regulations.

☐ 13. Adjust hitch components and lock in position.

☐ 14. Install Slow Moving Vehicle emblem (if required).

☐ 15. Set up CommandCenter™ display to customer preference.

☐ 16. Activate Automatic Exhaust Cleaning Mode in CommandCenter™.

☐ 17. Install StarFire™ receiver.

☐ 18. Set up JDLink™ customer account.

☐ 19. Perform test drive. Verify correct function of all systems, including transmission, brakes, and steering.

☐ 20. Calibrate radar.

☐ 21. 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:

RX32825,0001838-19-29JUN18

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 the Dealer:
□ Predelivery inspection completed
□ All necessary forms and literature available
□ Labels installed
□ Customer specified attachments and options are installed or available

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.
□ **Check hardware is tight on frame, drawbar support, wheels, and wheel weights or track system components**

At Delivery Area with Customer:
(shown and explained)
□ All warning labels on machine
□ Location of all serial numbers on machine
□ Operator's Manual
□ Help Text access and function
□ Lubrication and service points on machine and attachments
□ Tire or track maintenance and care
□ Use of lubrication and maintenance schedules
□ Break-in service procedures
□ Warranty coverage and procedure

Demonstrated operating procedures:
□ Engine—throttle, starting and stopping
□ Transmission
□ Steering
□ Brakes
□ Hitch and SCVs
□ Differential lock
□ PTO
□ Three-point hitch adjustment
□ iTEC™ system
□ Lights
□ Wipers
□ Heater
□ 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: _____

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: _____

KT81203,0000635-19-10APR18

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Wheel Slip Calibration 30C-40
Wheels, drive 220B-14
Wiper and washer, operating
Rear window 90D-1
Windshield 90D-1
Work Monitor 30C-39
Recording 30C-39

Z

Zinc-Flake
Coated Fasteners 210-10

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:



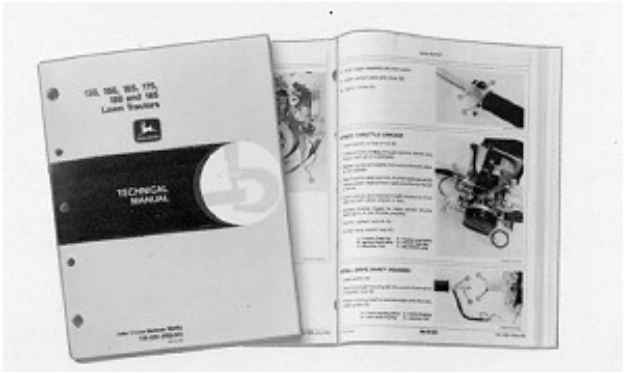
TS189—UN—17JAN89

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.



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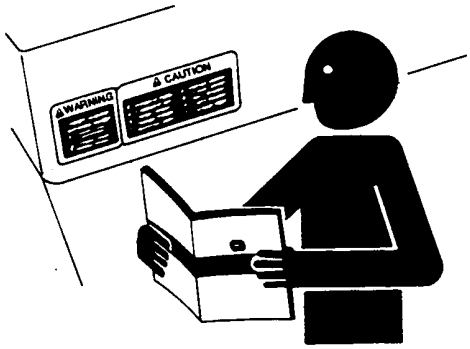
EDUCATIONAL CURRICULUM including five comprehensive series of books detailing basic information regardless of manufacturer:

- Agricultural Primer series covers technology in farming and ranching.
- Farm Business Management series examines "real-world" problems and offers practical solutions in the areas of marketing, financing, equipment selection, and compliance.
- Fundamentals of Services manuals show you how to repair and maintain off-road equipment.
- Fundamentals of Machine Operation manuals explain machine capacities and adjustments, how to improve machine performance, and how to eliminate unnecessary field operations.
- Fundamentals of Compact Equipment manuals provide instruction in servicing and maintaining equipment up to 40 PTO horsepower.

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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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