



# 5075GV, 5090GV, 5075GN, 5090GN, 5100GN, and 5075GL Tractors



**JOHN DEERE**



## OPERATOR'S MANUAL

**5075GV, 5090GV, 5075GN, 5090GN,  
5100GN, and 5075GL Tractors**

**OMER444695 ISSUE B9 (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 GmbH & Co. KG**  
**John Deere Werk Mannheim**

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# Introduction

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## 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 the first 100 hours, schedule an after-sale inspection with your 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.

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# Glossary

## Glossary

	O	Medium speed
	++	Fastest speed
Revolutions per Minute	rpm	Abbreviation
Air-Conditioning System	A/C	System used for conditioning the air in the operator's cab
Alternating Current	AC	Electrical current that reverses its direction at regularly recurring intervals
Accessories	ACC	Secondary electrical system
Armrest Control Unit	ACU	Armrest control for operating the tractor functions
AutoQuad Plus Transmission	AQ+	Partial power-shiftable transmission
Air Quality System	AQS	System used to control conditioned air in the operator's cab
Automatic Temperature Control	ATC	Abbreviation
Cold Cranking Amperes	CCA	Amperage of a battery at low temperatures
CommandCenter™	CC	Computerized system for tractor monitoring
Component Technical Manual	CTM	Component Technical Manual
Diesel Exhaust Fluid	DEF	<b>Diesel Exhaust Fluid</b>
Direct Current	DC	Electrical current flowing in one direction only
Diesel particulate filter	DPF	Abbreviation
Dynamic Weighing System	DWS	System for recording weights and quantities (front loader)
Engine Control Unit	ECU	Computerized system used to govern engine speed
Electrohydraulic	EH	Electrically controlled hydraulic valve functions
Electro-Hydraulic Depth Control	EHDC	Abbreviation
Electro-Hydraulic Selective Control Valve	EH-SCV	Selective control valve driven with electrical magnetic switches
Electronics	ELX	Abbreviation
Electronic Self-Leveling	ESL	Electronic self-leveling of the loader tool (front loader)
Forward Set Speed	FSS	Speed control for Infinitely Variable Transmission
Gallons per Minute	gpm	Volume flow, measured for the period of one minute
Hitch Control Unit	HCU	Computerized system used to control hitch functions
Heavy-Duty Type	HD	Abbreviation
High Intensity Discharge	HID	A specific type of Xenon worklights that are used for front lighting
Hitch Slip Command	HSC	Computer supported system for supporting the draft response control of the hitch
Instrument Control Unit	ICU	Computerized system controlling tractor warning functions
Ignition	IGN	Control for starting and stopping the engine
Implement Management System	IMS	System used to control functions when turning at end of a field
International Standards Organization	ISO	Abbreviation
Electronic Operator Support	iTEC	Abbreviation for <b>Intelligent Total Equipment Control</b>
Liters per Minute	L/min	Volume flow, measured for the period of one minute
Leveling to Horizon	LTH	Automatic alignment of the loader tool when changing the driving conditions (tilt/inclination), (front loader)
Mechanical Front-Wheel Drive	MFWD	Mechanically powered front axle
PowrQuad-Plus Transmission	PQ+	Partial power-shiftable transmission
Pressure Control Valve	PCV	Device to regulate pressure in a system
Product identification number	PIN	Serial number for product identification
Power Take-Off	PTO	Abbreviation
Return-to-Position	RTP	Bring loader boom and loader tool automatically to preselected position (front loader)
Control Unit for SCV Valve	SCU	Computerized system used to control selective control valve functions
Selective Control Valve	SCV	Device used to control remote hydraulic functions
Slow Moving Vehicle	SMV	Warning sign on the rear of the tractor
Tractor-Implement Automation	TIA	<b>Tractor Implement Automation</b>
Front-Axle Suspension	TLS	Front-Wheel Drive Axle

Glossary

**Trademarks**

Trademarks		Trademarks	
AutoPowr™	Trademark of Deere and Company	iTEC™ Basic	Trademark of Deere and Company
AutoPowr™/IVT™	Trademark of Deere and Company	iTEC™ Pro	Trademark of Deere and Company
AutoQuad™ II	Trademark of Deere and Company	IVT™	Trademark of Deere and Company
AutoQuad™ PLUS	Trademark of Deere and Company	IVT Selector™	Trademark of Deere and Company
AutoTrac™	Trademark of Deere and Company	JLink™	Trademark of Deere and Company
Bio Hy-Gard™	Trademark of Deere and Company	JOffice™	Trademark of Deere and Company
ClimaTrak™	Trademark of Deere and Company	John Deere	Trademark of Deere and Company
ComfortGard™	Trademark of Deere and Company	Oilscan™	Trademark of Deere and Company
ComfortGard Deluxe™	Trademark of Deere and Company	Parallel Tracking™	Trademark of Deere and Company
CommandARM™	Trademark of Deere and Company	Plus-50™	Trademark of Deere and Company
CommandCenter™	Trademark of Deere and Company	PowerTech™	Trademark of Deere and Company
CommandQuad™	Trademark of Deere and Company	PowerTech™ Plus	Trademark of Deere and Company
COOL-GARD™	Trademark of Deere and Company	PowerZero™	Trademark of Deere and Company
COOL-GARD II™	Trademark of Deere and Company	PowrQuad™	Trademark of Deere and Company
CoolScan™	Trademark of Deere and Company	PowrQuad™ PLUS	Trademark of Deere and Company
CoolScan PLUS™	Trademark of Deere and Company	PowrReverser™	Trademark of Deere and Company
Deere™	Trademark of Deere and Company	Service ADVISOR™	Trademark of Deere and Company
DieselScan™	Trademark of Deere and Company	SERVICEGARD™	Trademark of Deere and Company
FieldCruise™	Trademark of Deere and Company	StarFire™	Trademark of Deere and Company
Field Doc™	Trademark of Deere and Company	StarFire™ iTC	Trademark of Deere and Company
Field Office™	Trademark of Deere and Company	StellarSupport™	Trademark of Deere and Company
GreenStar™	Trademark of Deere and Company	SyncroPlus™	Trademark of Deere and Company
Hy-Gard™	Trademark of Deere and Company	TLS™	Trademark of Deere and Company
ILS™	Trademark of Deere and Company	Tractor-Implement Automation™	Trademark of Deere and Company
iTEC™	Trademark of Deere and Company	Triple Link Suspension™	Trademark of Deere and Company

OULXA64.0003F82-19-15MAY18

# Safety

## Recognize Safety Information



T81389—UN—28JUN13

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

Follow recommended precautions and safe operating practices.

DX,ALERT-19-29SEP98

## 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

## Understand Signal Words



**▲ WARNING**

**▲ CAUTION**

TS187—19—30SEP88

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

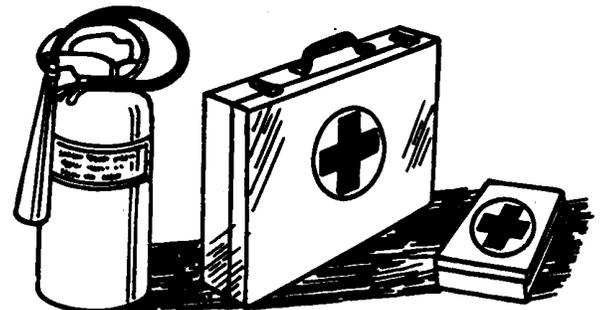
**WARNING;** The signal word WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

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

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

DX,SIGNAL-19-05OCT16

## Prepare for Emergencies



TS291—UN—15APR13

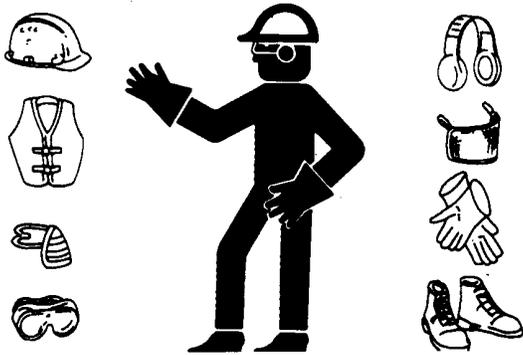
Be prepared if a fire starts.

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

## 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

## 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 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,VW,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:

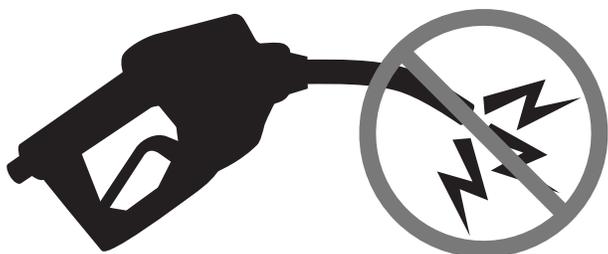
1. Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
2. Aim low. Point the extinguisher at the base of the fire.
3. Squeeze the lever slowly and evenly.
4. Sweep the nozzle from side-to-side.

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.

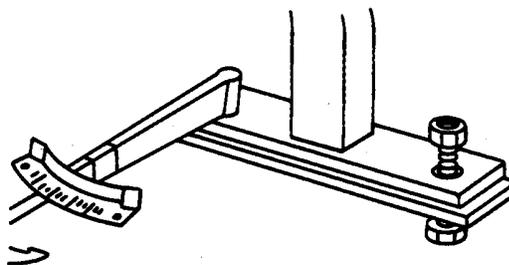
Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

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.

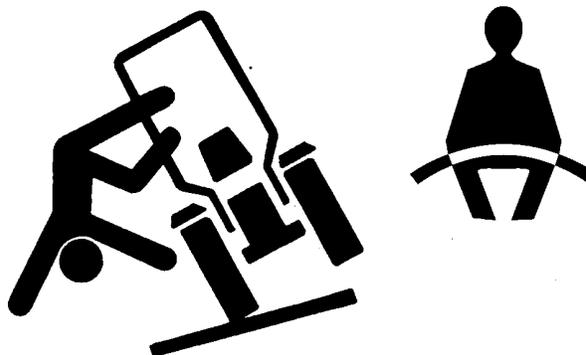
The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting. A damaged ROPS should be replaced, not reused.

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.

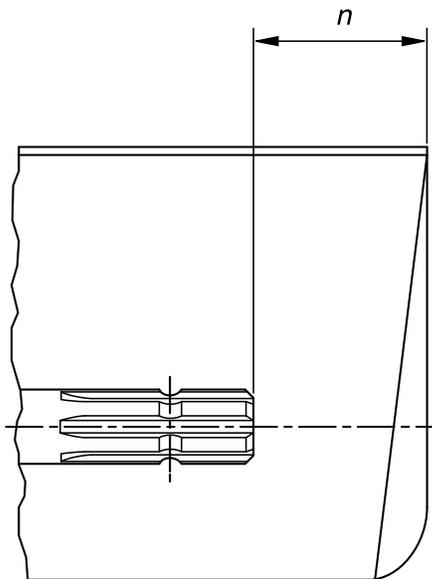
- Snug the seat belt across the hips.
- If this machine is operated with the ROPS folded (for example, to enter a low building), drive with extreme caution. DO NOT USE a seat belt with the ROPS folded.
- Return the ROPS to the raised, fully extended position as soon as the machine is operated under normal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

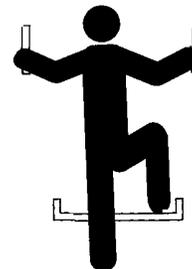
Do not raise implements high enough to damage the tractor master shield or guard of primary implement PTO driveshaft. Detach the PTO driveline shaft if it is necessary to increase implement height. (See Attching/ Detaching PTO Driveline)

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

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

DX,ROPS1-19-22AUG13

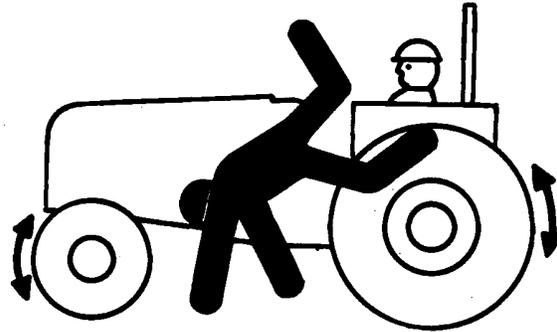
## Read Operator's Manuals for ISOBUS Controllers

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*

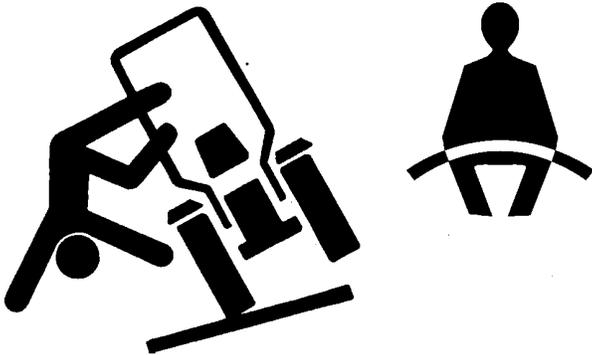
DX,WW,ISOBUS-19-15JUL15

## Operating the Tractor Safely



TS290—UN—23AUG88

## 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.



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.

- 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,

*GreenStar is a trademark of Deere & Company*

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

### Driving Concerns

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

### Towing Loads

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

### Parking and Leaving the Tractor

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

### Common Accidents

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

The most common accidents involving tractors:

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

DX,WW,TRACTOR-19-28FEB17

### Avoid Backover Accidents



PC10857XW—UN—15APR13

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

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

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

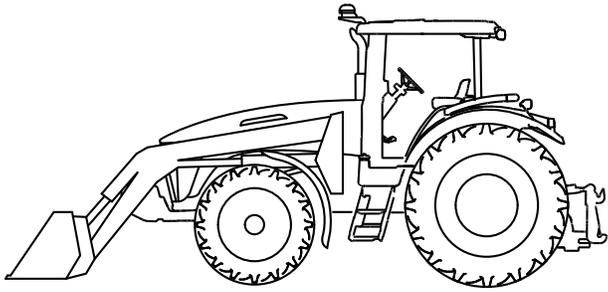
### Limited Use in Forestry Operation

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

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

DX,WW,FORESTRY-19-12OCT11

## Operating the Loader Tractor Safely



TS1692—UN—09NOV09

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

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

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

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

Do not use loader as a work platform.

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

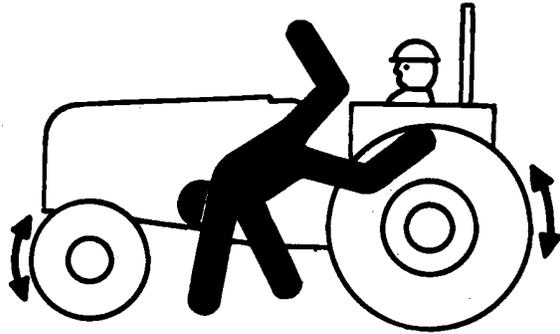
Lower loader to ground before leaving operators station.

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

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

DX,WW,LOADER-19-18SEP12

## Keep Riders Off Machine



TS290—UN—23AUG88

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

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

DX,RIDER-19-03MAR93

## Instructional Seat

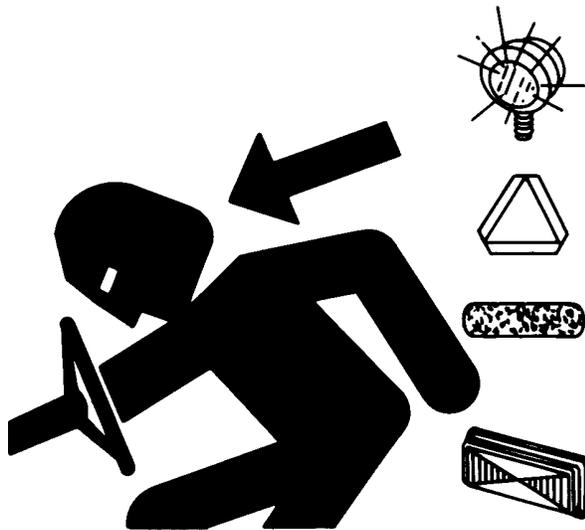


TS1730—UN—24MAY13

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

DX,SEAT,NA-19-22AUG13

## Use Safety Lights and Devices



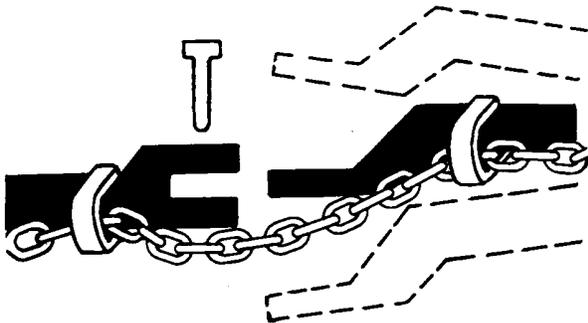
TS951—UN—12APR90

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

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

DX,FLASH-19-07JUL99

## Use a Safety Chain



TS217—UN—23AUG88

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

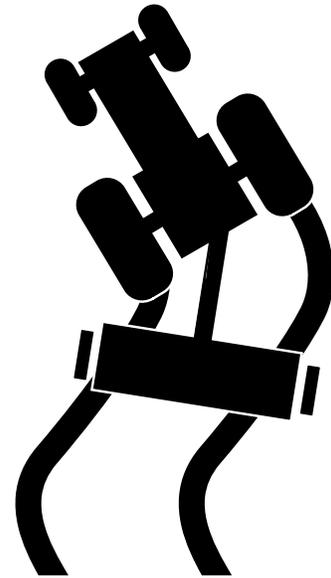
Using the appropriate adapter parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning.

See your John Deere dealer for a chain with a strength

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

DX,CHAIN-19-03MAR93

## Transport Towed Equipment at Safe Speeds



TS1686—UN—27SEP06

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

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

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

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

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

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

**Implements with brakes:**

- If the manufacturer does not specify a maximum

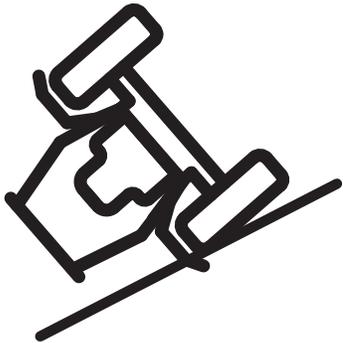
transport speed, do not tow at speeds greater than 40 km/h (25 mph).

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

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

DX,TOW1-19-28FEB17

### Use Caution on Slopes, Uneven Terrain, and Rough Ground



RXA0103437—UN—01JUL09

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

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

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

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

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

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

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

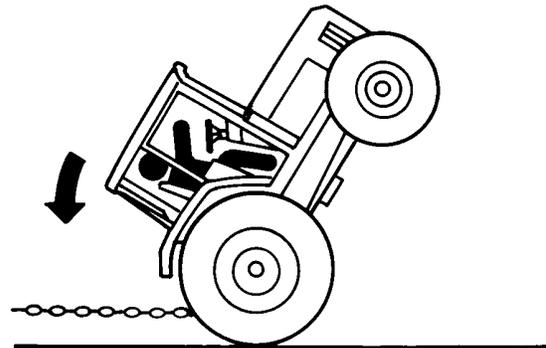
Choose a low ground speed so you will not have to stop or shift while on a slope.

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

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

DX,WW.SLOPE-19-28FEB17

### Freeing a Mired Machine



TS1645—UN—15SEP95



TS263—UN—23AUG88

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

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

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

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

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

DX,MIREd-19-07JUL99

## Avoid Contact with Agricultural Chemicals



TS220—UN—15APR13



TS272—UN—23AUG88

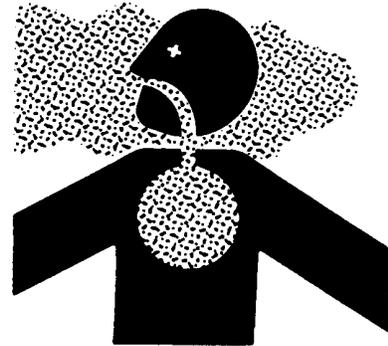
This enclosed cab does not protect against inhaling vapor, aerosol or dust. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

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

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

DX,CABS-19-25MAR09

## Handle Agricultural Chemicals Safely



TS220—UN—15APR13



A34471

A34471—UN—11OCT88

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

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

Reduce risk of exposure and injury:

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

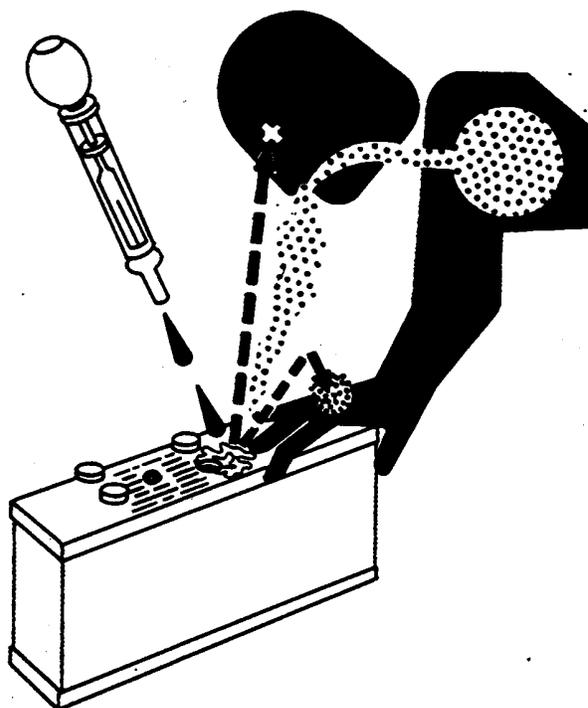
- After handling chemicals, always bathe or shower and change clothes. Wash clothing before wearing again.
- Seek medical attention immediately if illness occurs during or shortly after use of chemicals.
- Keep chemicals in original containers. Do not transfer chemicals to unmarked containers or to containers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

DX,WW,CHEM01-19-24AUG10

## Handling Batteries Safely



TS204—UN—15APR13



TS203—UN—23AUG88

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

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

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

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

### Avoid hazards by:

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

### If acid is spilled on skin or in eyes:

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

### If acid is swallowed:

1. Do not induce vomiting.

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

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

DX,WW,BATTERIES-19-02DEC10

### Avoid Heating Near Pressurized Fluid Lines

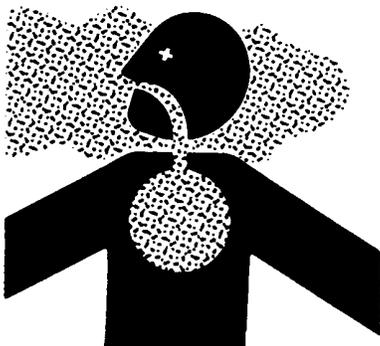


TS953—UN—15MAY90

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

DX,TORCH-19-10DEC04

### Remove Paint Before Welding or Heating



TS220—UN—15APR13

Avoid potentially toxic fumes and dust.

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

Remove paint before heating:

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

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

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

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

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

Dispose of paint and solvent properly.

DX,PAINT-19-24JUL02

### Handle Electronic Components and Brackets Safely



TS249—UN—23AUG88

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

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

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

DX,WW,RECEIVER-19-24AUG10

### Practice Safe Maintenance



TS218—UN—23AUG88

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

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

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

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

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

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

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

DX,SERV-19-28FEB17

### Avoid Hot Exhaust



RG17488—UN—21AUG09

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

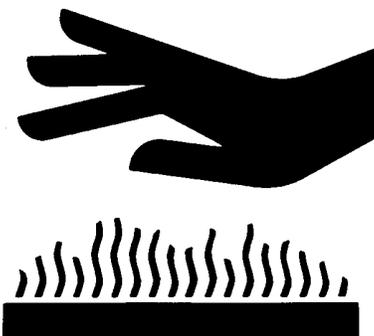
Exhaust parts and streams become very hot during operation. Exhaust gases and components reach temperatures hot enough to burn people, ignite, or melt common materials.

DX,EXHAUST-19-20AUG09

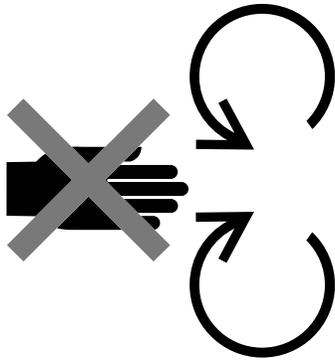
### Clean Exhaust Filter Safely



TS227—UN—15APR13



TS271—UN—23AUG88



TS1693—UN—09DEC09



TS1695—UN—07DEC09

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

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

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

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

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

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

Avoid contact with these components until cooled to safe temperatures.

If service procedure requires engine to be running:

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

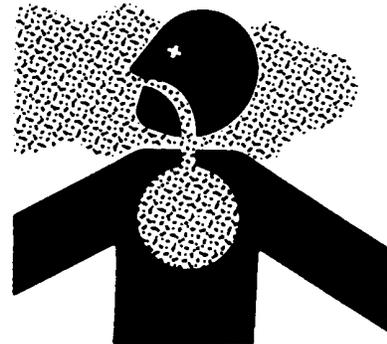
Keep hands, feet, and clothing away from power-driven parts.

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

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

DX,EXHAUST,FILTER-19-12,JAN11

## Work In Ventilated Area



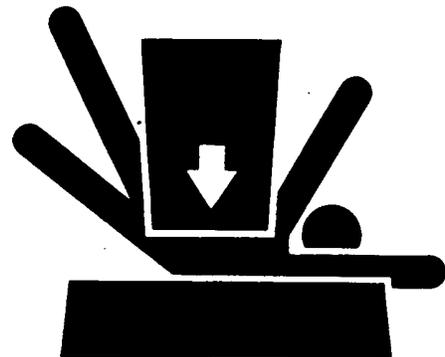
TS220—UN—15APR13

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

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

DX,AIR-19-17FEB99

## Support Machine Properly



TS229—UN—23AUG88

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

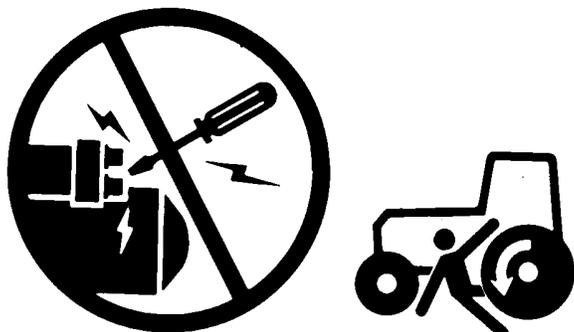
Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load.

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

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

DX,LOWER-19-24FEB00

## Prevent Machine Runaway



TS177—UN—11JAN89

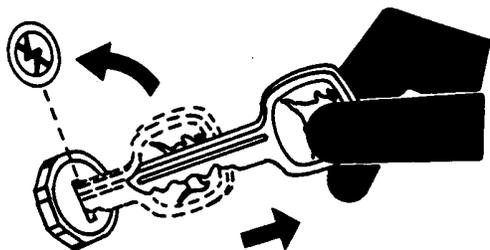
Avoid possible injury or death from machinery runaway.

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

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

DX,BYPAS1-19-29SEP98

## Park Machine Safely



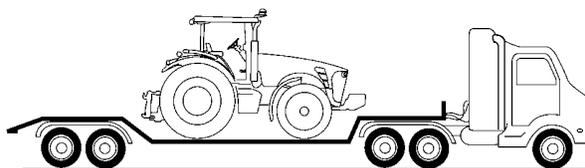
TS230—UN—24MAY89

Before working on the machine:

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

DX,PARK-19-04JUN90

## Transport Tractor Safely



RXA0103709—UN—01JUL09

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

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

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

DX,WW,TRANSPORT-19-19AUG09

## Service Cooling System Safely



TS281—UN—15APR13

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

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

DX,WW,COOLING-19-19AUG09

## Service Accumulator Systems Safely



TS281—UN—15APR13

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

Relieve pressure from the pressurized system before removing accumulator.

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

Accumulators cannot be repaired.

DX,WW,ACCLA2-19-22AUG03

## Service Tires Safely



RXA0103438—UN—11JUN09

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

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

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

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

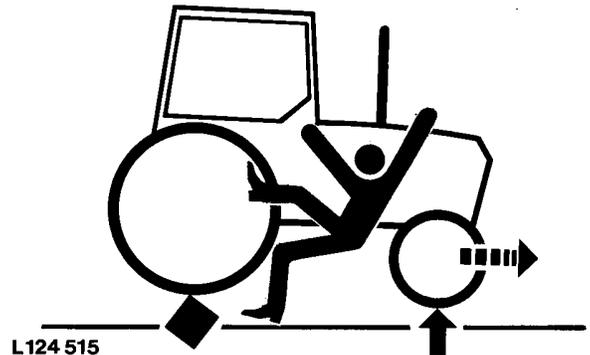
hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

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

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

DX,WW,RIMS-19-28FEB17

## Service Front-Wheel Drive Tractor Safely



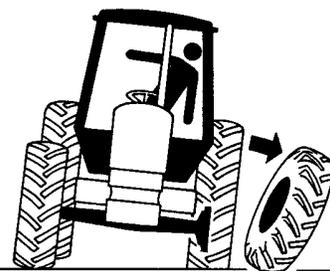
L124 515

L124515—UN—06AUG94

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

DX,WW,MFWD-19-19AUG09

## Tightening Wheel Retaining Bolts/Nuts



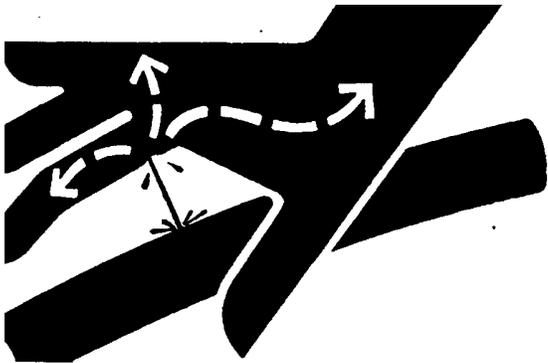
L124 516

L124516—UN—03JAN95

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

DX,WW,WHEEL-19-12OCT11

## Avoid High-Pressure Fluids



X9811—UN—23AUG88

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

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

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

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

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

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

DX,FLUID-19-12OCT11

## Do Not Open High-Pressure Fuel System



TS1343—UN—18MAR92

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

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

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

DX,WW,HPCR1-19-07JAN03

## Store Attachments Safely



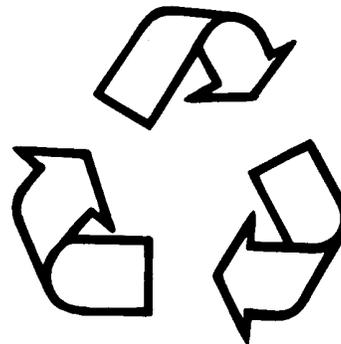
TS219—UN—23AUG88

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

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

DX,STORE-19-03MAR93

## Decommissioning — Proper Recycling and Disposal of Fluids and Components



TS1133—UN—15APR13

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

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

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

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

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DX,DRAIN-19-01JUN15

# Safety Decals

## Replace Safety Signs



TS201—UN—15APR13

Replace missing or damaged safety signs. Use this operator's manual for correct safety sign placement.

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

RA84036,0001712-19-13JUN18



LX245334 19

LX245334—19—23NOV15  
RA84036,0001713-19-09OCT18

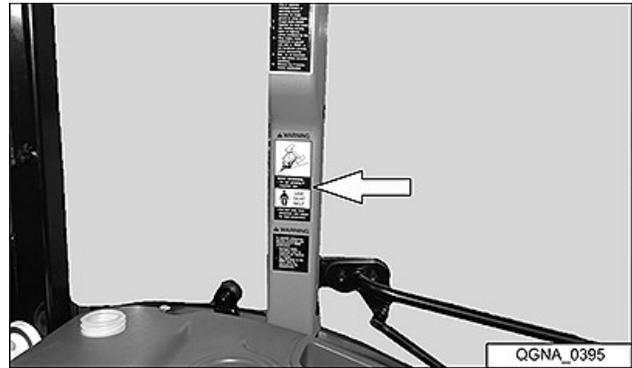
## Riders (Open Operator Station)



QGNA0390—UN—02NOV15

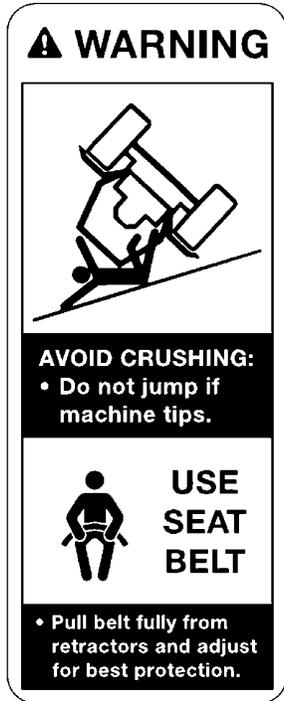
(Open Operator Station)

## Use Seat Belt Properly (Cab)



QGNA0395—UN—02NOV15

(Cab)



LX245329 19

LX245329—19—19NOV15  
RA84036.0001714-19-09OCT18



L 174025

LX263963—19—20NOV15  
RA84036.0001715-19-03OCT18

### Avoid Crushing, Use Seat Belt Properly (Open Operator Station)

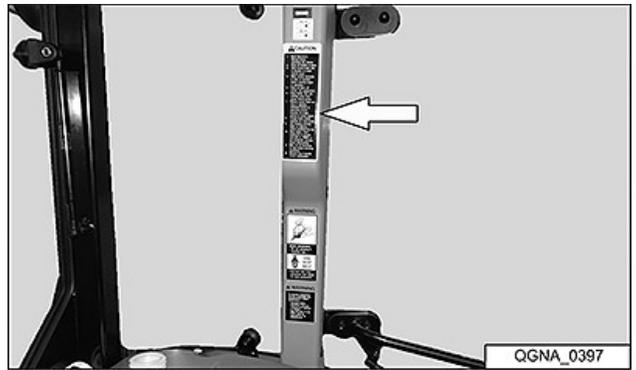


QGNA\_0384

QGNA0384—UN—02NOV15

Open Operator Station

### Operate Tractor Safely (Cab)



QGNA\_0397

QGNA0397—UN—02NOV15

Cab

# CAUTION

1. Read Operator's Manual before operating this tractor.
2. Keep all shields in place.
3. Hitch towed loads only to drawbar to avoid rearward upset.
4. Make certain everyone is clear of machine before starting engine or operation.
5. Keep all riders off tractor and equipment.
6. Keep hands, feet and clothing away from power-driven parts.
7. Reduce speed when turning or applying individual brakes or operating around hazards, on rough ground or steep slopes.
8. Couple brake pedals together for road travel.
9. Use flashing warning lights on highway unless prohibited by law.
10. Stop engine, lower implement to ground and shift to "PARK" or set handbrake securely before dismounting.
11. Wait for all movement to stop before servicing machinery.
12. Remove key if leaving tractor unattended.

R186020A

LX245328 19

LX245328—19—23NOV15  
RA84036,0001716-19-24SEP18

## Operate Tractor Safely (Open Operator Station)



QGNA0386—UN—02NOV15

(Open Operator Station)

**CAUTION**

1. Read Operator's Manual before operating this tractor.
2. Keep all shields in place.
3. Hitch towed loads only to drawbar to avoid rearward upset.
4. Make certain everyone is clear of machine before starting engine or operation.
5. Keep all riders off tractor and equipment.
6. Keep hands, feet and clothing away from power-driven parts.
7. Reduce speed when turning or applying individual brakes or operating around hazards, on rough ground or steep slopes.
8. Couple brake pedals together for road travel.
9. Use flashing warning lights on highway unless prohibited by law.
10. Stop engine, lower implement to ground and shift to "PARK" or set handbrake securely before dismounting.
11. Wait for all movement to stop before servicing machinery.
12. Remove key if leaving tractor unattended.

R186020A

LX245328 19

LX245328—19—23NOV15  
RA84036.0001717-19-09OCT18

**Starter Motor (Cab)**



QGNA\_0093

QGNA0093—UN—02NOV15

(Cab)



LX245335 19

LX245335—19—19NOV15  
RA84036.0001718-19-09OCT18

**Starter Motor (Open Operator Station)**



APY01848—UN—07FEB18

(Open Operator Station)



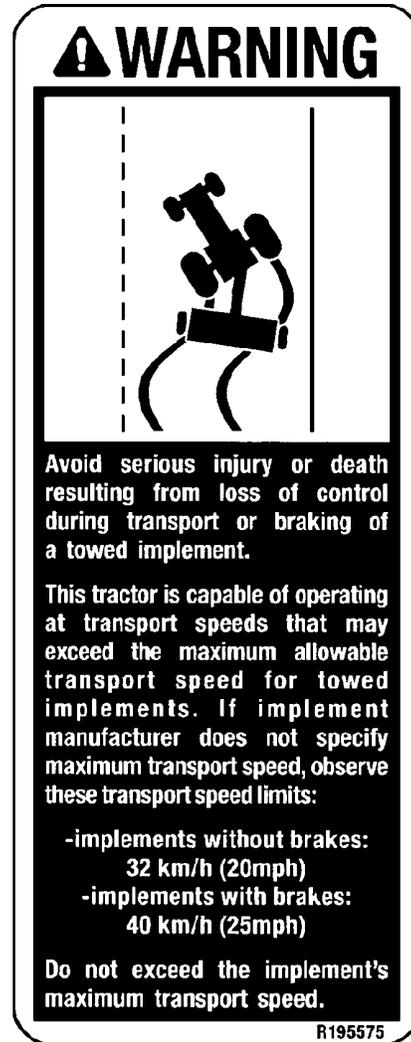
APY01849—UN—07FEB18  
RA84036,0001719-19-09OCT18

### Towing Loads Safely (Cab)



(Cab)

QGNA0392—UN—02NOV15



LX245332 19

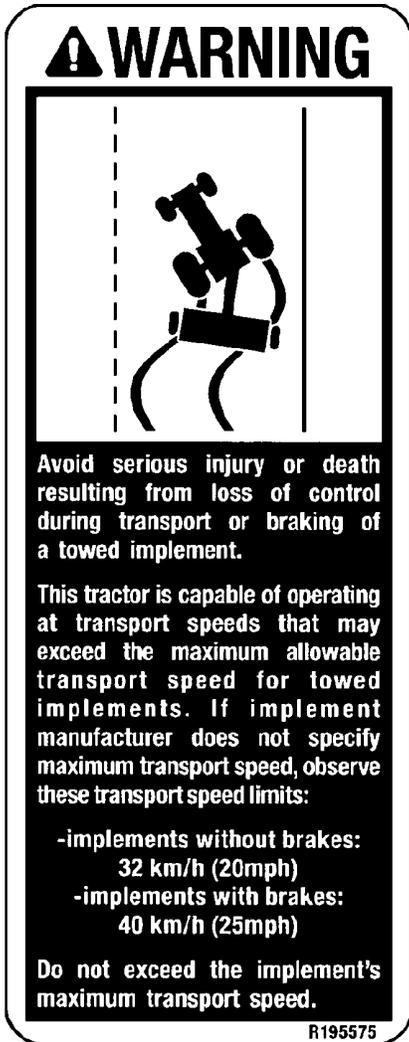
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RA84036,000171A-19-09OCT18

### Towing Loads Safely (Open Operator Station)



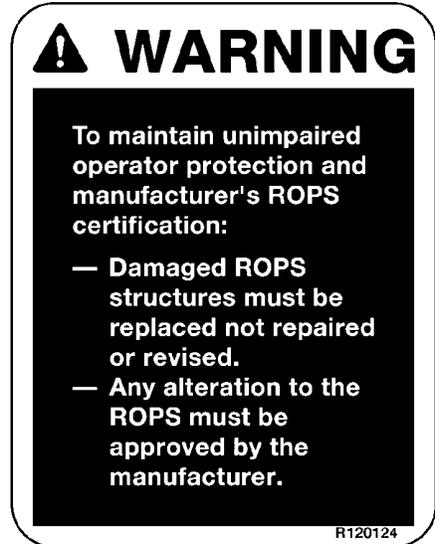
(Open Operator Station)

QGNA0383—UN—02NOV15



LX245332 19

LX245332—19—19NOV15  
RA84036,000171B-19-09OCT18



LX245330 19

LX245330—19—19NOV15  
RA84036,000171C-19-08OCT18

**Do Not Modify ROPS (Open Operator Station)**

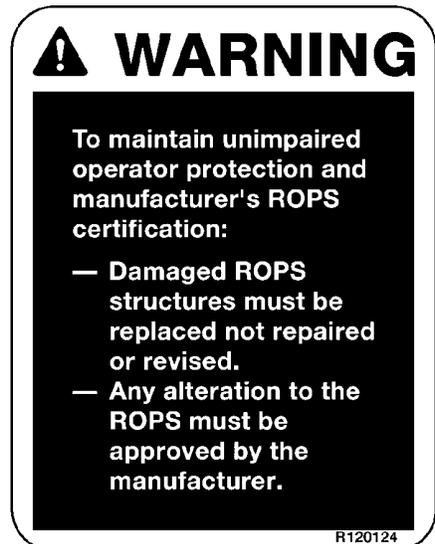


QGNA\_0387  
QGNA0387—UN—02NOV15

**Do Not Modify ROPS (Cab)**



QGNA\_0393  
QGNA0393—UN—02NOV15



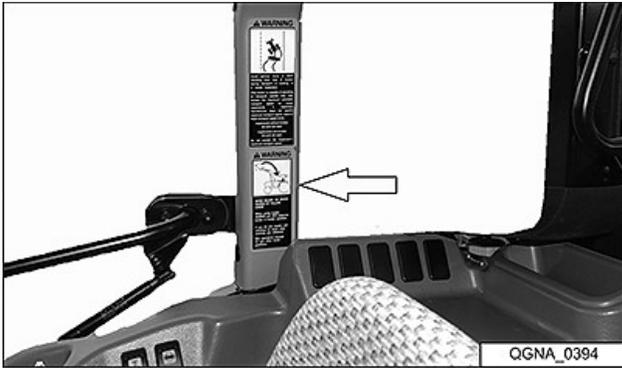
LX245330 19

LX245330—19—19NOV15

RA84036,000171D-19-08OCT18

**Caution When Operating The Front Loader  
(Open Operator Station)**

**Caution When Operating The Front Loader  
(Cab)**



(Cab)

QGNA0394—UN—02NOV15



(Open Operator Station)

QGNA0385—UN—02NOV15



LX245333 19

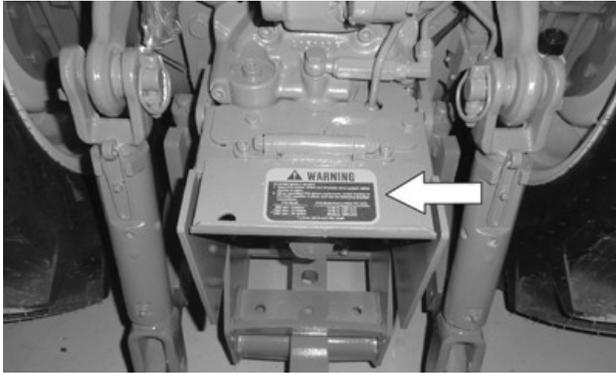
LX245333—19—19NOV15  
RA84036,000171E-19-09OCT18



LX245333 19

LX245333—19—19NOV15  
RA84036,000171F-19-09OCT18

## Caution When Operating Rear PTO



APY01850—UN—07FEB18

**! WARNING**

**TO AVOID BODILY INJURY:**

1. Keep PTO master shield and all power drive system safety shields in place.
2. When operating PTO driven implements, install drawbar in the down position if offset, and use the following drawbar instructions:

<u>PTO Shaft</u>	<u>PTO Shaft End to Hitch Pin Hole</u>
540 rpm - 6 spline	14.00 in. (356 mm)
1000 rpm - 21 spline	16.00 in. (407 mm)
*1000 rpm - 20 spline	20.00 in. (508 mm)

\*1.75 in. (44.5 mm) dia. shaft S

LX263962—19—23NOV15  
RA84036.0001720-19-13JUN18

# Vehicle Overview

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## Product Identification View



*5075GV, 5090GV, 5075GN, 5090GN, 5100GN (Cab)*

APY01803—UN—05DEC17



*5075GV, 5090GV, 5075GN, 5090GN, 5100GN (Open Operator Station)*

APY01805—UN—07DEC17



*5075GL (Open Operator Station)*

APY01802—UN—05DEC17

RA84036.0001711-19-08OCT18

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# Operator's Manual - General Information

## Scope of This Manual

This publication is not a detailed service manual. It contains information meant primarily for machine operation and routine maintenance. For more detailed service information, order a Technical Manual through your authorized John Deere dealer.

RA84036,000173A-19-21JUN18

## Operator Manual Usage Information

### Using this Manual:

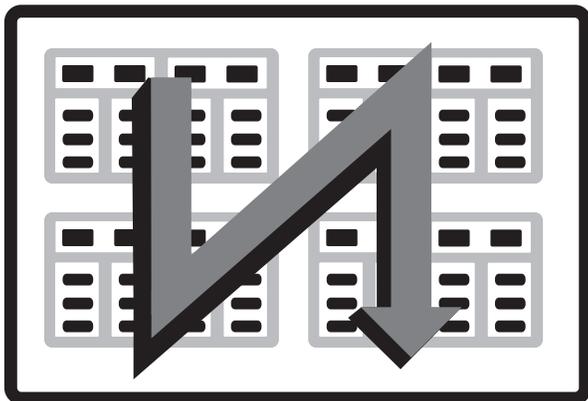
The information provided in this manual is divided into sections. The sections are organized by typical machine features or functional systems (Engine, Electrical, Hydraulic, Transmission, etc). These sections are identified at the top of each page. Specific information within each section is organized into modules. These modules are enclosed in boxes and the main modules are identified by a heading at the top left. Page numbers identify the section as well as the number of the page in the section.

By reviewing this manual frequently you will learn which section to turn to for specific information. For example:

- Safety information is covered at the beginning.
- Operation of all features and systems is covered in the first half of the manual.
- Maintenance Intervals are in the middle of the manual.
- Maintenance of all the features and systems is covered in the second half of the manual.
- Specifications are covered at the end.

A detailed table of contents appears before Safety information and there is an alphabetical index at the very end of the manual.

The Operator's Manual content flows as sequential reading down one column of text and graphic then over to the top of the next column as shown.



W28329—UN—18OCT17

RA84036,0001896-19-06SEP18

## Comply with Operator's Manuals of Implement Manufacturers



TS201—UN—15APR13

**CAUTION:** Before operating the tractor in conjunction with a mounted implement or trailer, it is the responsibility of the operator to make himself familiar with the relevant Operator's Manuals. Operator errors may have serious consequences.

Operator's Manuals and the safety decals on mounted implements and trailers provide important information on how to operate them safely. For this reason, it is important to make yourself familiar with them before starting work. Operator's Manuals must be provided for all operators of the tractor.

RA84036,000173B-19-21JUN18

## Operator Training Required

- Read this manual carefully before operating tractor.
- Operate tractor in an open, unobstructed area under direction of an experienced operator.
- Learn use of all controls.

RA84036,000173C-19-21JUN18

# Operating the Engine

## Engines with Turbocharger

**IMPORTANT:** If the engine stalls when in operation, restart it **IMMEDIATELY**. This will prevent the turbocharger from overheating.

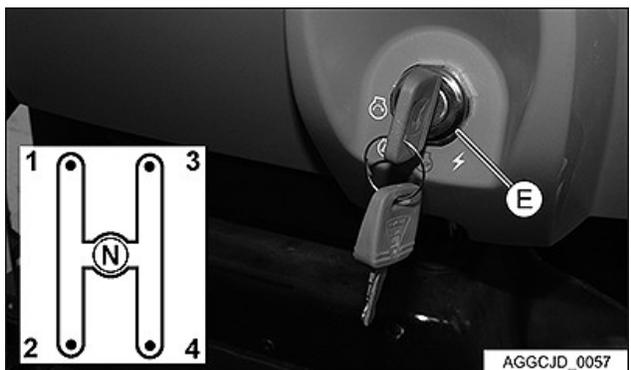
Most damage to the turbocharger is caused by not following the correct procedure when starting and shutting off the engine. After starting and before shutting off, idle the engine without load for at least 30 seconds.

RA84036,000173D-19-21JUN18

*NOTE: If the tractor is equipped with the neutral start switch on the transmission, the gear lever has to be in neutral position. Otherwise the engine does not start.*

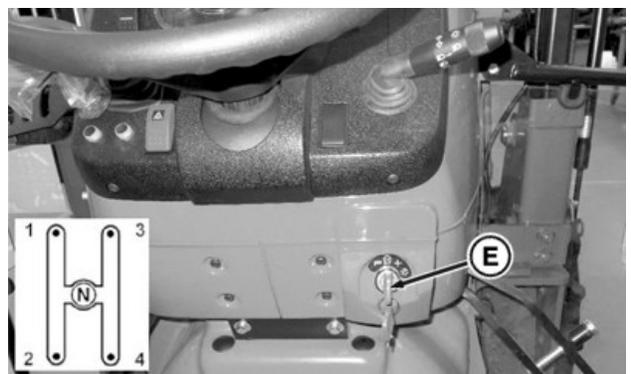
RA84036,000173E-19-09OCT18

## Neutral Start Switch



(5GV, 5GN)

AGGCJD0057—UN—02NOV15



(5GL)

PY42822—UN—02JUL17

E—Key Switch

**CAUTION:** If a range and a gear are selected with the engine running and the reverse drive lever is not in neutral position, the tractor starts moving. Always engage park brake and put the gear lever in **NEUTRAL** position before restarting the tractor. Otherwise the tractor moves slightly even with the reverse drive lever in neutral position.

## Starting the Engine



TS220—UN—15APR13

**CAUTION:** Prevent asphyxiation. Engine exhaust fumes can cause sickness or death to you or someone else.

If you must operate engine in a building, make sure that there is adequate ventilation. Either use an exhaust pipe extension to remove the exhaust fumes or open doors and windows to bring enough outside air into the area.

Also refer to Prevent Machine Runaway in the Safety (Section 05) of this manual.

*NOTE: If temperature is below 5°C (40°F), refer to Minimizing the Effect of Cold Weather on Diesel Engines in the Diesel Fuel (Section 200A) in this manual.*



QGNA0172—UN—02NOV15

A—Hitch Control Lever

1. Check fuel gauge to be sure that there is plenty of fuel in the tank.
2. Place hitch control lever (A) in lower position.
3. Check the indicator lights for alternator and the

engine oil pressure to ensure that there is oil pressure. The indicator lights come on when key switch is turned to the ON position.

If either light does not function properly, contact your authorized dealer.



QGNA0173—UN—02NOV15

**B—Selective Control Valve Levers**

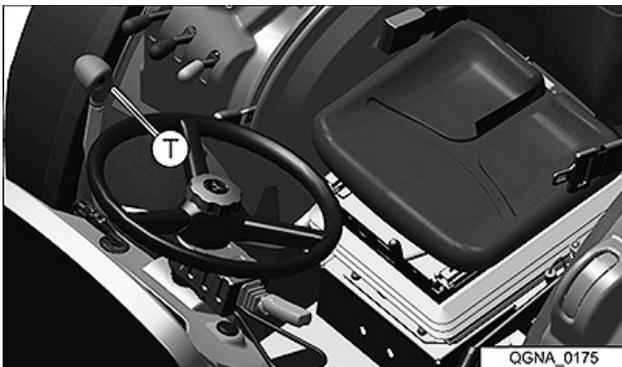
4. Set selective control valve levers (B) to neutral position.



PY34584—UN—03MAR17

**C—Hand Throttle Lever**

5. Move hand throttle lever (C) to a medium speed setting (first third of lever travel).



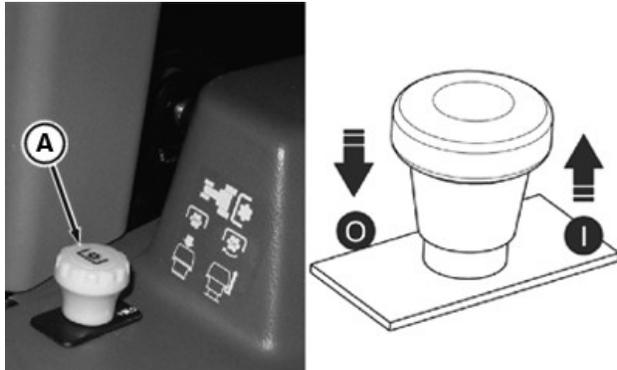
QGNA0175—UN—02NOV15

**T—Gear Shift Lever**

6. Move gearshift lever (T) to neutral.

**NOTE:** The engine does not start if gearshift lever (T) is in engaged position.

**IMPORTANT:** Tractors with 24/12 speed transmission: first move the reverse drive lever to neutral position. Then move the reverse drive lever to the desired travel direction for moving the tractor.



PY34585—UN—15FEB17

**24/12 Speed Transmission (5GV, 5GN)**



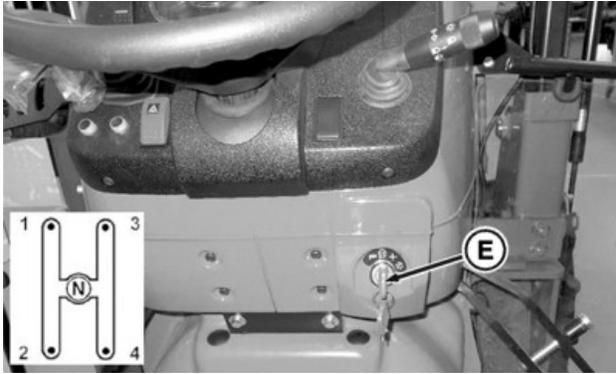
QGNA0061—UN—02NOV15

**12/12 Speed Transmission (5GV, 5GN)**



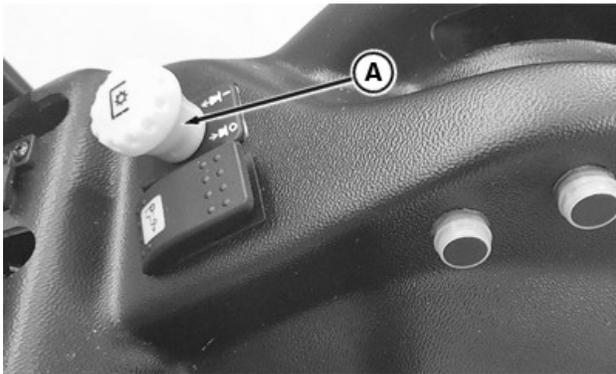
QGNA0043—UN—02NOV15

**5GV, 5GN**



PY42822—UN—02JUL17

5GL



APY01804—UN—03JAN18

5GL

A—PTO Clutch Lever  
E—Key Switch

*NOTE: The engine does not start if PTO clutch lever (A) or the PTO switch (A) are in engaged position.*

- Turn key in key switch (E) clockwise to end position. Release key as soon as engine starts.

**IMPORTANT: DO NOT** operate starting motor more than 20 seconds at a time. If engine does not start, turn the key to the ZERO position. Wait at least one minute for the starting motor to cool before trying again.

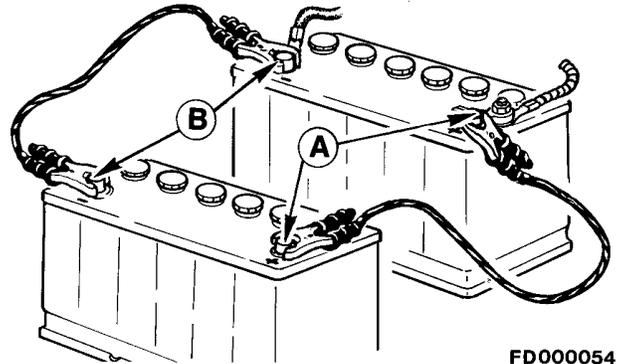
Do not adjust hand throttle lever. Run engine for a few minutes. At temperatures below 0°C (32° F), extend warm-up period accordingly.

**CAUTION:** Never operate the engine in a closed building. Make sure that there is plenty of ventilation.

Danger of asphyxiation.

RA84036,000173F-19-08OCT18

## Start with a Booster Battery



FD000054  
FD000054—UN—26JAN95

A—Positive Pole  
B—Negative Pole

**CAUTION:** Gas given off by batteries is highly explosive. Keep sparks and naked flames away from batteries. Be sure that polarity is correct before making connections: ground cable to negative pole and starter cable to positive pole of battery.

Reversed polarity damages the electrical system. Always connect positive cable first and then negative cable.

Connections to allow an additional 12-volt battery to be brought into the circuit represent an effective aid to starting. Connect positive poles (A) of battery before connecting negative poles (B).

RA84036,0001740-19-21JUN18

## Start the Engine with a Slave Battery

**CAUTION:** It is permissible to start a tractor with a slave battery only if that tractor is equipped with jump-start connections authorized by John Deere. If a tractor is not equipped with connections for jump-starting with a slave battery, then the discharged or defective battery must be replaced with a battery that is sufficiently charged. Have this work performed by your John Deere dealer.

**CAUTION:** For danger of injury, danger of explosion, take safety precautions. See Handling Batteries Safely in Safety (Section 05) of this manual.

**CAUTION:** Be sure that polarity is correct before making connections.

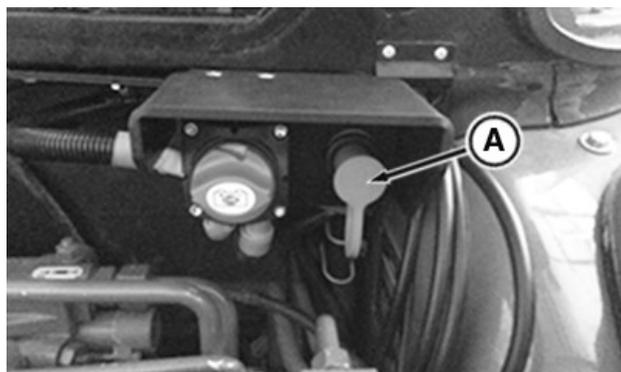
**CONNECT:** Connect positive terminal (+) first and then negative battery terminal (—).  
**DISCONNECT:** Disconnect negative battery terminal (—) first and then positive terminal (+). Reversed polarity damages the electrical system.

**IMPORTANT:** Cables used for jump-starting must be connected only to the (+) and (—) terminals provided for this purpose.

For jump-starting, use cables that cannot be incorrectly connected (to avoid reversed polarity) and have an approximately 70 mm<sup>2</sup> cross-section; in addition, the terminals must be insulated.

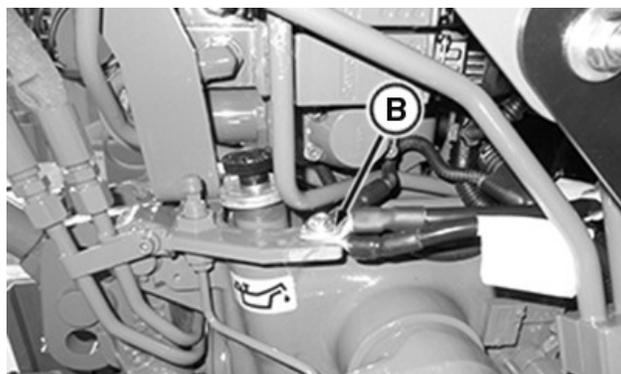
**IMPORTANT:** If the engine is to be started using a slave battery or run for a short time without battery, do not raise engine speed above 1000 rpm. Furthermore, use additional current (lights) while engine is running.

**IMPORTANT:** With battery disconnected, insulate the positive battery terminal (+) properly to protect the alternator from damage. Contact your John Deere dealer for more information.



APY11002—UN—22AUG18

Positive Battery Terminal (+)



APY11003—UN—22AUG18

Negative Battery Terminal (—)

A—Positive Battery Terminal (+)  
 B—Negative Battery Terminal (—)

The tractor can be equipped with a jump-start connector (A). The connector is used to allow jump-starting by an additional 12 V battery.

The jump-start is located closed to the battery cut-off switch (if fitted) on the rear side of the tractor.

To connect to the jump connector, remove the cover from the connector (A). Connect positive pole (+) before connecting negative poles (-) to the tractor chassis (B).

**IMPORTANT:** Be sure that the polarity is correct before making connections.

Always connect positive terminal (+) first and then negative terminal (-).

Reversed polarity damages the electrical system.

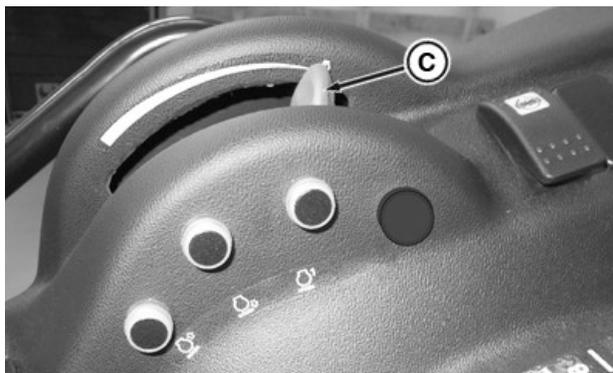
When work is finished, first disconnect negative terminal (-) and then positive terminal (+). Fit the cover on the connector (B).

RA84036,0001741-19-22AUG18

## Stop the Engine



PY34584—UN—03MAR17



APY01854—UN—07FEB18

5GL

C—Hand Throttle

**CAUTION:** Lower mounted implements or equipment to the ground before leaving the tractor.

**IMPORTANT:** Cooling of certain engine parts is provided by engine oil. Stopping a hot engine suddenly can cause damage to these parts by overheating or lack of lubrication.

1. Pull hand throttle (C) back for low idle position. Allow engine idling for 1 to 2 minutes.
2. Turn key switch to the OFF position.

**CAUTION:** Remove ignition key to prevent operation by untrained personnel.

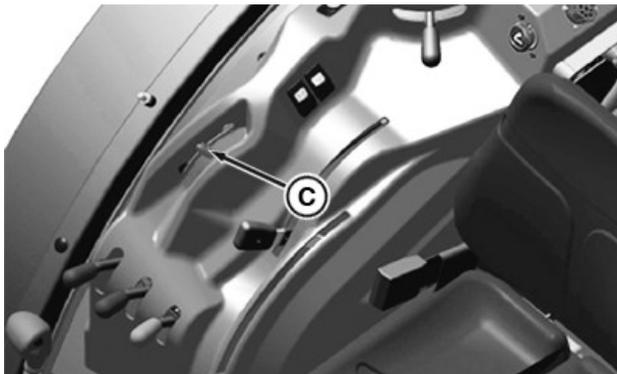
RA84036,0001742-19-08OCT18

### Restart a Stalled Engine

Should the engine stall when operating under load, restart it immediately to prevent abnormal heat build up and continue with normal operation or operate at slow idle for 1 or 2 minutes before stopping.

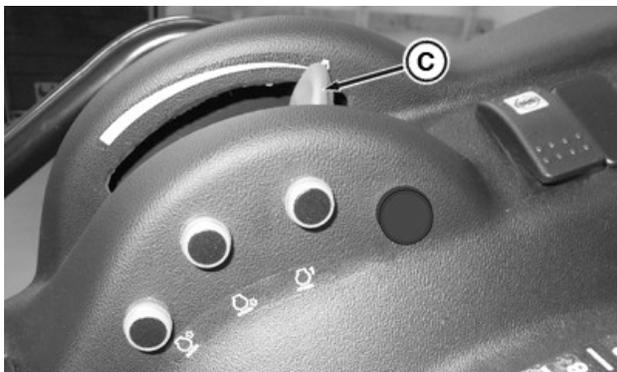
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### Change Engine Speeds



5GV, 5GN

PY34584—UN—03MAR17

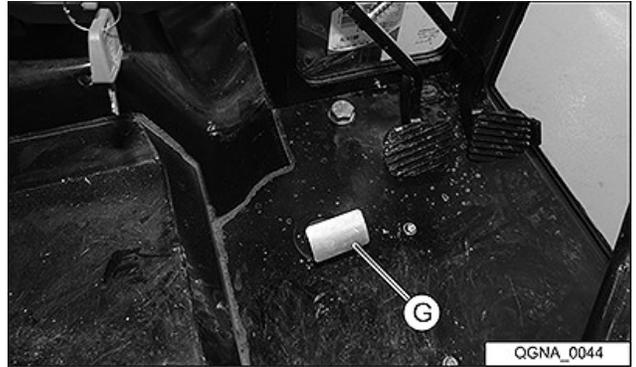


5GL

APY01854—UN—07FEB18

#### C—Hand Throttle

To increase speed, push hand throttle (C) forward.



QGNA\_0044  
QGNA0044—UN—02NOV15

#### G—Foot Throttle

To increase engine speed temporarily above the hand throttle setting, depress foot throttle (G).

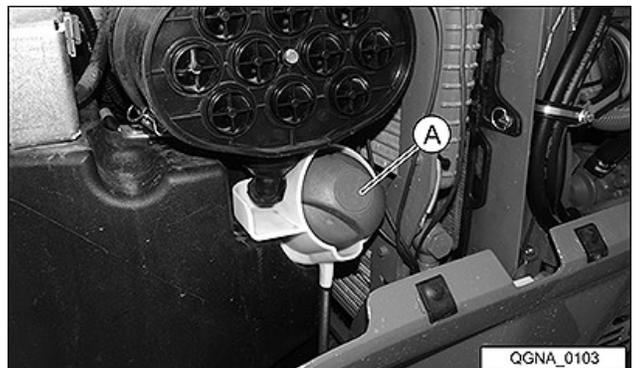
RA84036,0001744-19-08OCT18

### Fill DEF Tank (Diesel Exhaust Fluid)

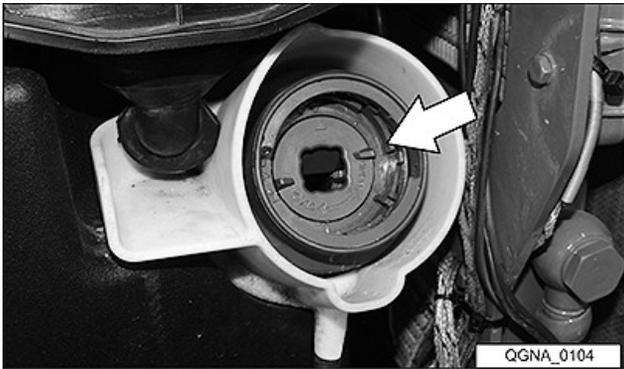


TS220—UN—15APR13

**CAUTION:** Operate only in ventilated places.  
Handle DEF fluid carefully. Do not eat, drink, or smoke when using this product.  
Always stop the engine before operating the machine.



QGNA\_0103  
QGNA0103—UN—02NOV15



QGNA\_0104  
QGNA0104—UN—02NOV15

5. Clean the filter only with water and dry with compressed air.
6. Install filter in reverse order.

**IMPORTANT: If the DEF filter is damaged, always replace it with an original filter.**

See Drain Sediment from DEF (Diesel Exhaust Fluid) Tank and Replace the Supply Module Filter in Service — Change (section 220E) in this manual.

RA84036,0001745-19-21JUN18

**A—Cap**

1. Open the hood.
2. Unscrew the cap (A).
3. Fill DEF tank only at the bottom of the filler neck.

**Specification**

DEF Tank Capacity  
(useful)—Capacity . . . . . 9.3 L (2.46 gal)

**Specification**

DEF Tank Capacity  
(total)—Capacity . . . . . 10.3 L (2.72 gal)

**IMPORTANT: If DEF leakage is observed, wash the affected area only with water.**

**Checking and Cleaning the DEF (Diesel Exhaust Fluid) Filter**



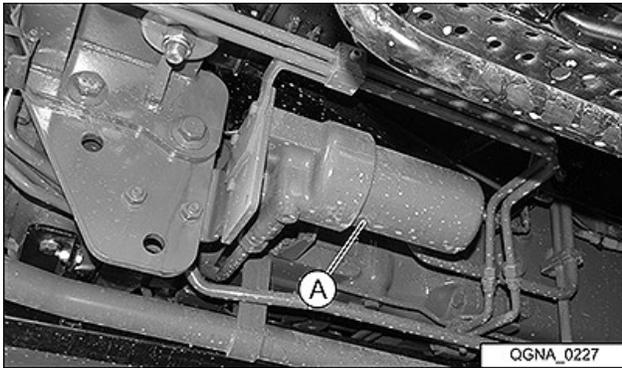
TS220—UN—15APR13

**CAUTION: Operate only in ventilated places.**  
**Handle DEF fluid carefully. Do not eat, drink, or smoke when using this product.**  
**Always stop the engine before operating on the machine.**

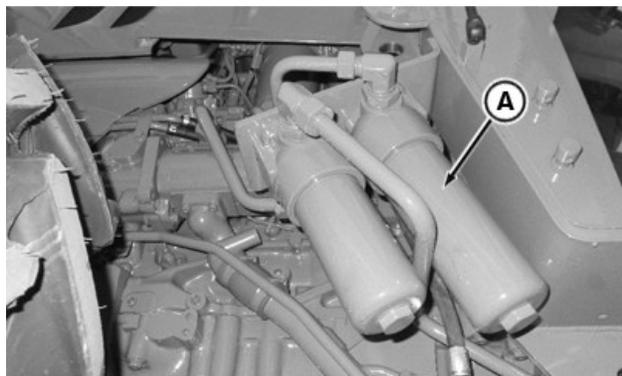
1. Open the hood.
2. Unscrew the cap.
3. Unscrew the DEF filter by hand. Respect the turning direction as indicated on the filter.
4. Pull out the DEF filter.

# Cold Weather Operation

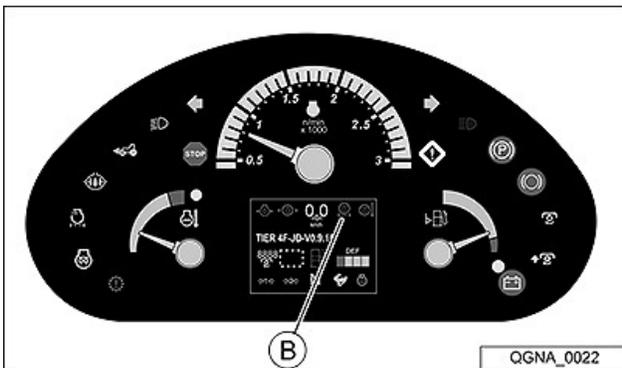
## Cold-Weather Operation



(5GV, 5GN)



(5GL)



- A—Hydraulic System Filter
- B—Transmission Oil Filter Indicator Light

If the oil is cold, the hydraulic function, including steering, goes slow.

*NOTE: Cold oil does not flow easily through the filter screen or hydraulic system filter (A).*

Once the oil is warmed up, the hydraulic system (including the steering system) operates normally again.

**IMPORTANT: To prevent damage to the hydraulic pump or relief valve, warm-up time MUST NOT be less than 2 to 3 minutes.**

1. Start engine and run it at about 1000 rpm.
2. Turn and hold steering wheel in full left or right position.

*NOTE: Applies on the PowrReverser transmission only. If the oil filter is clogged while oil is at normal operating temperature, the transmission oil filter indicator light (B) glows.*

RA84036.0001746-19-08OCT18

# Aftertreatment Equipment (DOC/DPF)

## Exhaust Filter Cleaning, General Information



ICONCC058—UN—06JUN13  
Automatic Exhaust Filter  
Cleaning Activated



ICONCC059—UN—06JUN13  
Automatic Exhaust Filter  
Cleaning not Activated

The tractor is equipped with an efficient exhaust filter cleaning system. Sensors monitor the condition of the exhaust system and initiate the cleaning process when the load on the exhaust filter becomes excessive.

1. **Passive exhaust filter cleaning** always occurs when the engine is at moderate or high loads.
2. **Automatic exhaust filter cleaning** is started when soot in the exhaust filter reaches a certain level.

**NOTE:** If unable to inhibit regeneration of the DPF because of broken set-up buttons, immediately go to the dealer. Avoid standing in areas of fire hazard due to the presence of unburned hydrocarbons.

3. Manually initiated **exhaust filter cleaning with tractor parked** enables the operator to start the cleaning process manually when a corresponding message appears on the digital display.
4. **Service cleaning** requires you to contact your John Deere dealer.

**IMPORTANT:** Recommended practice is to keep automatic exhaust filter cleaning activated.

**Comply with safety instructions; see Clean Exhaust Filter Safely in Safety (Section 05) in this manual.**

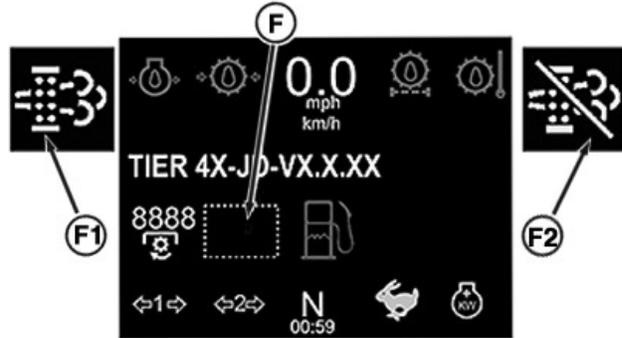
Tips for avoiding the service cleaning or filter cleaning with tractor parked:

- Do not deactivate automatic exhaust filter cleaning until it is necessary.
- Avoid unnecessary idling.
- Do not interrupt cleaning process unless it is necessary.
- If possible, do not shut off the engine while the indicator light for the exhaust filter cleaning is on.
- Take note of information displayed for the operator, and act accordingly.

**NOTE:** It is important to use high-quality consumable.

RA84036,0001761-19-10JUL18

## Aftertreatment General Warning (Tractor with DPF System)



APY12370—UN—04DEC18

(F) message		
F1	Warning Light	Automatic or Manual Regeneration ongoing
F2	Warning Light	Regeneration Inhibited
F1	Warning Light (Light Blinking)	Manual Regeneration is required

MS76789,000066C-19-19DEC18

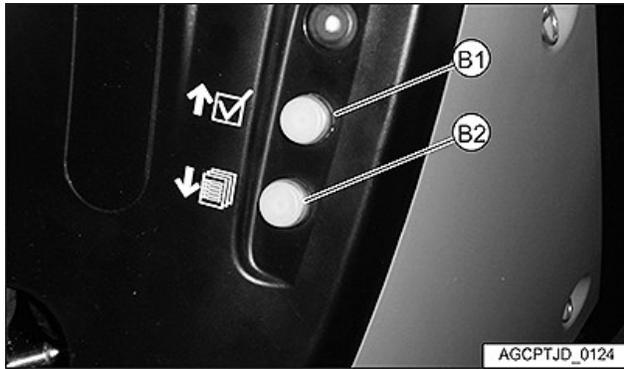
## Access the DPF Menu on the Digital Display

**NOTE:** See *Digital Display - User Interface in Digital Display (Section 30C)* of this manual.

**NOTE:** It is necessary to stop the tractor and engage the park brake before accessing the menu.

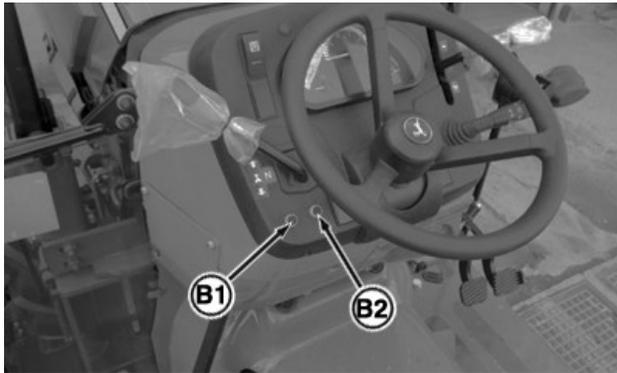
If the tractor speed exceeds zero, the menu is automatically closed.

Functions of buttons		
	B1	B2
Pressed for less than 0.3 seconds	Navigate upward	Navigate downward
Pressed for 1 second or longer	Confirm entry	Enter and exit the sub menu



(5GV, 5GN)

AGCPTJD0124—UN—02NOV15



(5GL)

PY42803—UN—02JUL17

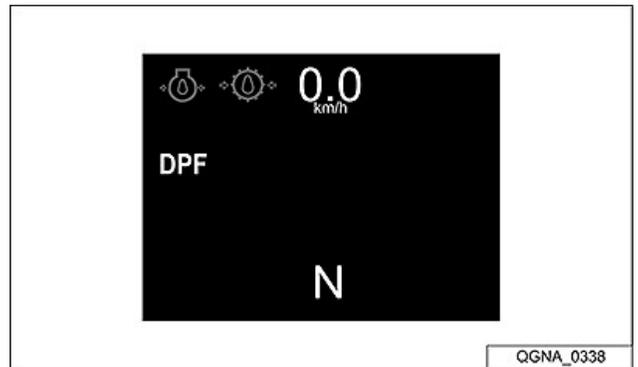


QGNA0338—UN—02NOV15

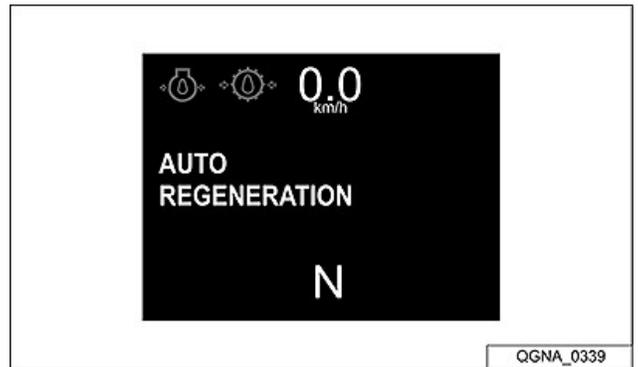
With the key switch in ON position, press and hold button (B2) for 1 second. Press button (B1) for navigating to the DPF menu (DPF is displayed).

	Select and confirm	Select and confirm
After accessing the DPF menu	AUTO REGEN. (recommended)	OK (recommended setting)
		NO
	MANUAL REGEN.	OK - (starts the procedure for manual regeneration)
		NO

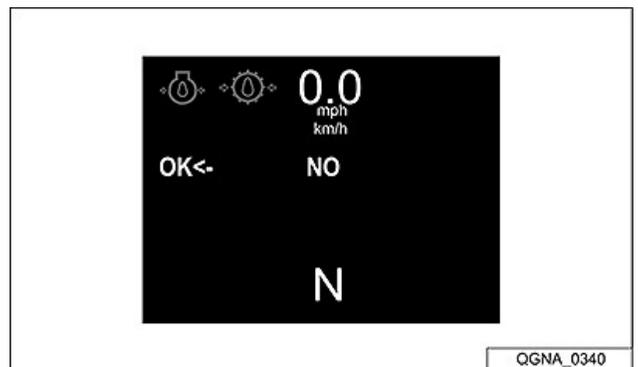
**Automatic Exhaust Filter Cleaning:**



QGNA0338—UN—02NOV15



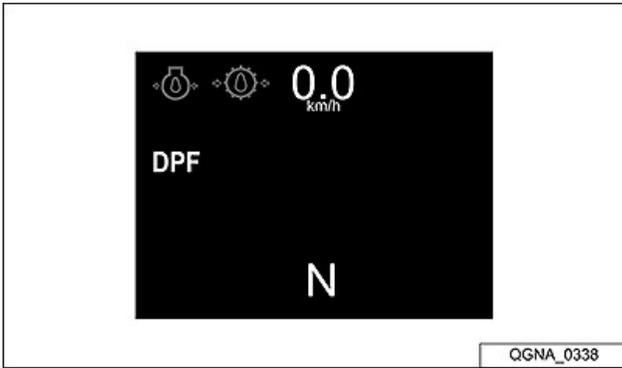
QGNA0339—UN—02NOV15



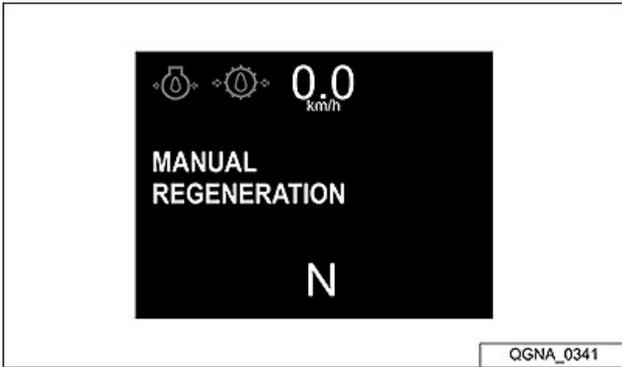
QGNA0340—UN—02NOV15

1. Access the DPF menu, then press and hold button (B1) for 1 second.
2. Select AUTO REGEN., then press and hold button (B1) for 1 second.
  - Select OK and activate the automatic exhaust filter cleaning.
  - Select NO and disable the automatic exhaust filter cleaning.

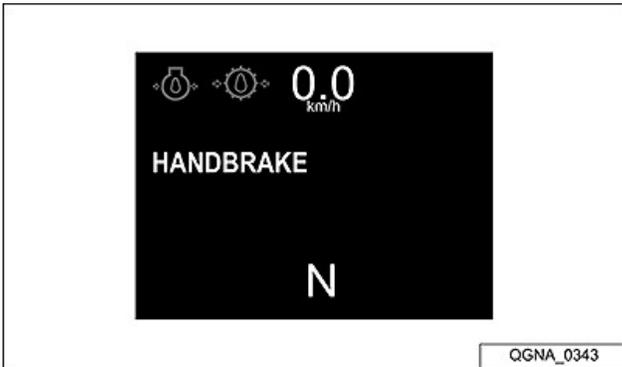
**Manually Initiated Exhaust Filter Cleaning:**



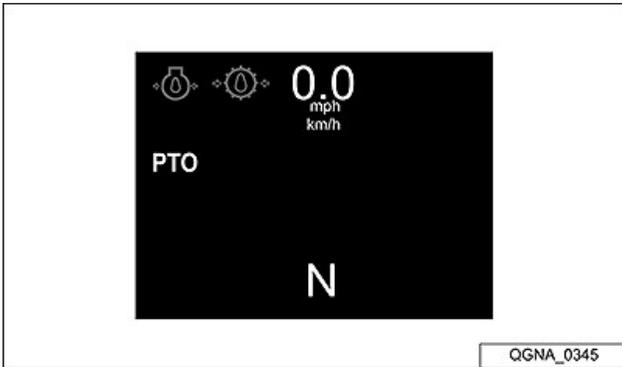
QGNA0338—UN—02NOV15



QGNA0341—UN—02NOV15



QGNA0343—UN—02NOV15

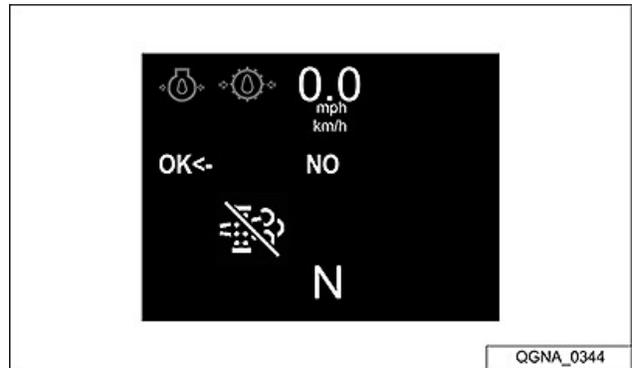


QGNA0345—UN—02NOV15

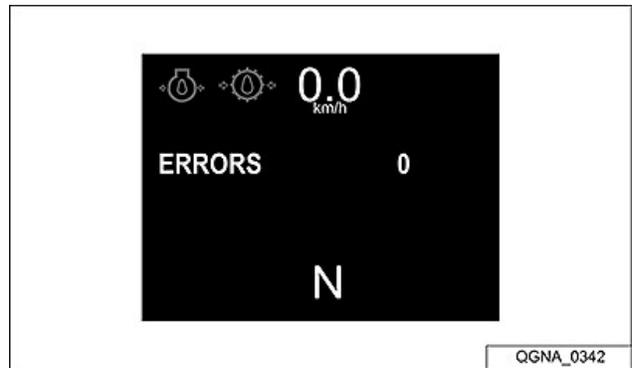
1. Stop the tractor, apply the park brake, and switch off PTO.
2. Access the DPF menu, then press and hold button (B1) for 1 second.

3. Select MANUAL REGENERATION then select OK, then press and hold button (B1) for 1 second.

If NO is selected and confirmed, the menu is closed without starting the regeneration.



QGNA0344—UN—02NOV15



QGNA0342—UN—02NOV15

4. The control unit checks the safety requirements. A message is displayed when the requirements are not met.
  - a. HANDBRAKE is displayed if park brake is not applied. Apply park brake and proceed.
  - b. PTO is displayed if PTO is switched on. Switch off PTO and proceed.
  - If safety requirements are met, REGENERATION flashes. DPF regeneration is in progress.
  - If safety requirements are not met, ERROR flashes for 3 seconds. Then the system exits the menu and returns to the hour meter information. Restart the regeneration at step 1.

**IMPORTANT: Do not operate any controls during the regeneration process. The engine is controlled with the control unit and engine speed is set to 1500 rpm automatically. The regeneration process is aborted immediately when the controls are operated manually.**

7. After COMPLETED appears, wait for 3 seconds and then exit the DPF menu. The cleaning process for the exhaust filter is completed.

## DPF Soot Load, General Information



ICONCC058—UN—06JUN13  
F1 - Automatic or  
Manual Regeneration  
Ongoing



ICONCC059—UN—06JUN13  
F2 - Regeneration  
Inhibited



ICONCC058—UN—06JUN13  
F1 - Light Blinking — Manual Regeneration is Required

The tractor is equipped with an efficient DPF cleaning system. Sensors monitor the condition of the DPF system and initiate the Regeneration process when the load on the DPF becomes excessive.

1. **Automatic exhaust filter cleaning** is started when soot in the exhaust filter reaches a certain level.

### Display Information:

The Icon (F1) on the display is switched on during the regeneration

2. **Inhibit regeneration active:** When this function is active, the automatic regeneration is inhibited.

### Display Information:

The Icon (F2) on the display is switched on. The function stays active till a different set is selected by the menu (Automatic regeneration selected). If the function is active and the icon (F1) start flashing, a regeneration is requested.

3. **Manual regeneration Active:** When this function is activated, a forced regeneration is performed. In order to start the manual regeneration the engine need to be warm up (coolant temperature > 80°C). The tractor needs to be parked on a flat surface and kept in safety condition (message shown on the display):

- Handbrake engaged, (tractor speed = 0)
- PTO OFF

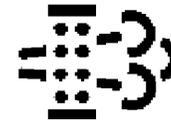
If all the safety conditions are respected and the engine coolant temperature is higher than 80°C, the regeneration start. In case that the safety conditions are not respected during the regeneration process, the regeneration is aborted.

### Display Information:

The Icon (F1) on the display is switched on during the regeneration. The engine speed is set at 2000 rpm On the display the message “MANUAL REGENERATION” Flashes. When the regeneration is finished, the message “COMPLETED” appears.

MS76789,0000670-19-19DEC18

## Manual Regeneration, General Information



ICONCC058—UN—06JUN13  
Light Blinking — Manual Regeneration is Required

1. When the DPF lamp is switched ON, manual DPF regeneration is required.
2. Park the vehicle in a safe place and warm up the engine (coolant temperature > 60°C).
3. Engage the park brake, disengage the PTO, and put gearshift lever in neutral position .

**IMPORTANT: Do not press the clutch pedal or foot throttle pedal while manual regeneration operation.**

4. Press the DPF cleaning switch.
5. The engine increases its idling speed to start the manual DPF regeneration.
6. The idling speed of the engine returns to the original idling speed and the DPF lamp is switched OFF. This indicates completion of the manual DPF regeneration
7. Once the manual DPF regeneration is completed, the operator can operate the vehicle normally.

MS76789,0000672-19-05DEC18

## DPF Soot Load

Soot Load	Less than 90%	90%—130%	130%—170%	170%—230%	More than 230%
Action Required	No Action	Possible automatic regeneration (managed by the ECU)	Automatic regeneration enabled, Manual regeneration requested	Soft engine derate (25% engine power derate applied).	Strong engine derate (55% engine power derate applied).

*Aftertreatment Equipment (DOC/DPF)*

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				<i>NOTE: Contact certified dealer</i>	<i>NOTE: Contact certified dealer</i>
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MS76789,0000683-19-19DEC18

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# Aftertreatment Equipment (DOC/SCR)

## DEF Warning Messages



- 1—Low DEF level
- 2—Poor DEF quality
- 3—SCR system total failures / tampering

LX228713—UN—13JAN16

The system will distinguish among 3 failure categories.

There are up to 4 inducement steps:

Type of reaction is the same for all categories, only time to reaction differs

Driver information	Warning lamp activated
First step	25% torque reduction
Second step	65% torque reduction, 40% engine speed reduction
Final step	Machine idle, limited to 50% maximum engine torque

### General Items

General items

- Vehicle reach final inducement after 4 hours of operation after failure detection.
- Three full power restarts (validation restarts for healing) can be operated during the 4 hours time frame.
- Validation restarts:
  - Validation restarts are allowed at any time after failure detection (within 4 hours time frame).
  - Validation restarts are key cycle locked to avoid unintended activation.
  - Validation restarts are limited to 30 minutes each.

After expiring of the 30 minutes the engine is immediately ramped down to final inducement (idle + 50% max. torque)

Validation restart are available only for failures that need heated up after treatment system or active dosing – not for electrical failures, DEF quality or DEF level.

Procedure:

1. Key-off; wait at least 6 min. (to allow after-run ECU procedure); key-on for 10 sec.
2. Key-off for 10 sec.; key-on for 10 sec.; cranking the engine.

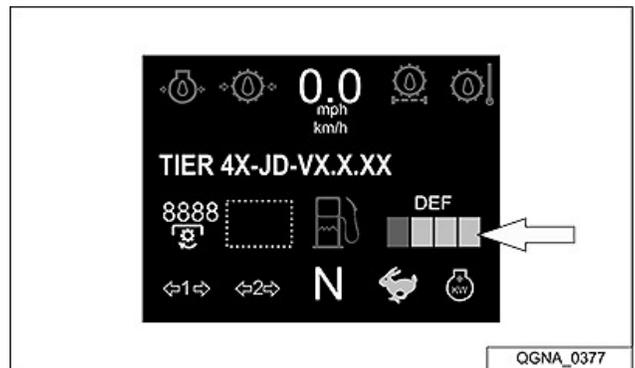
Yellow warning light appears when a failure has been detected, and stay on until failure has been removed

Red warning light appears when the inducement starts (engine loss of power), and stay on until failure has been removed

In case of multiple failure, the relevant icons shows alternately (one after the other)

RA84036.0001747-19-21JUN18

## DEF Level Warning

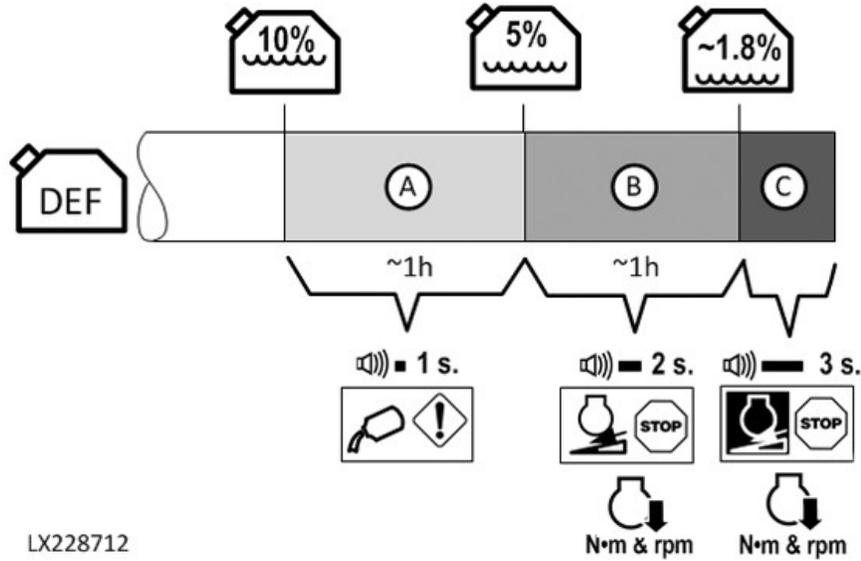


QGNA0377—UN—02NOV15

The Urea level indicator will take the form of “graf bar”. Each “bar” will represent a value, in percentage, equal to 25 % of the total tank level (four bars = 100 %)

Urea level will be displayed:

- If the Urea Level decreases and reach the limit of 25%, , the buzzer will be commanded ON for 1 second.
- If 10 %<= Urea Level <= 25 % each time a key on/ power on event occurs the buzzer will be commanded on for 1 second.
- For DEF Level < 10 %, the inducement strategy will describe the behavior.



LX228712

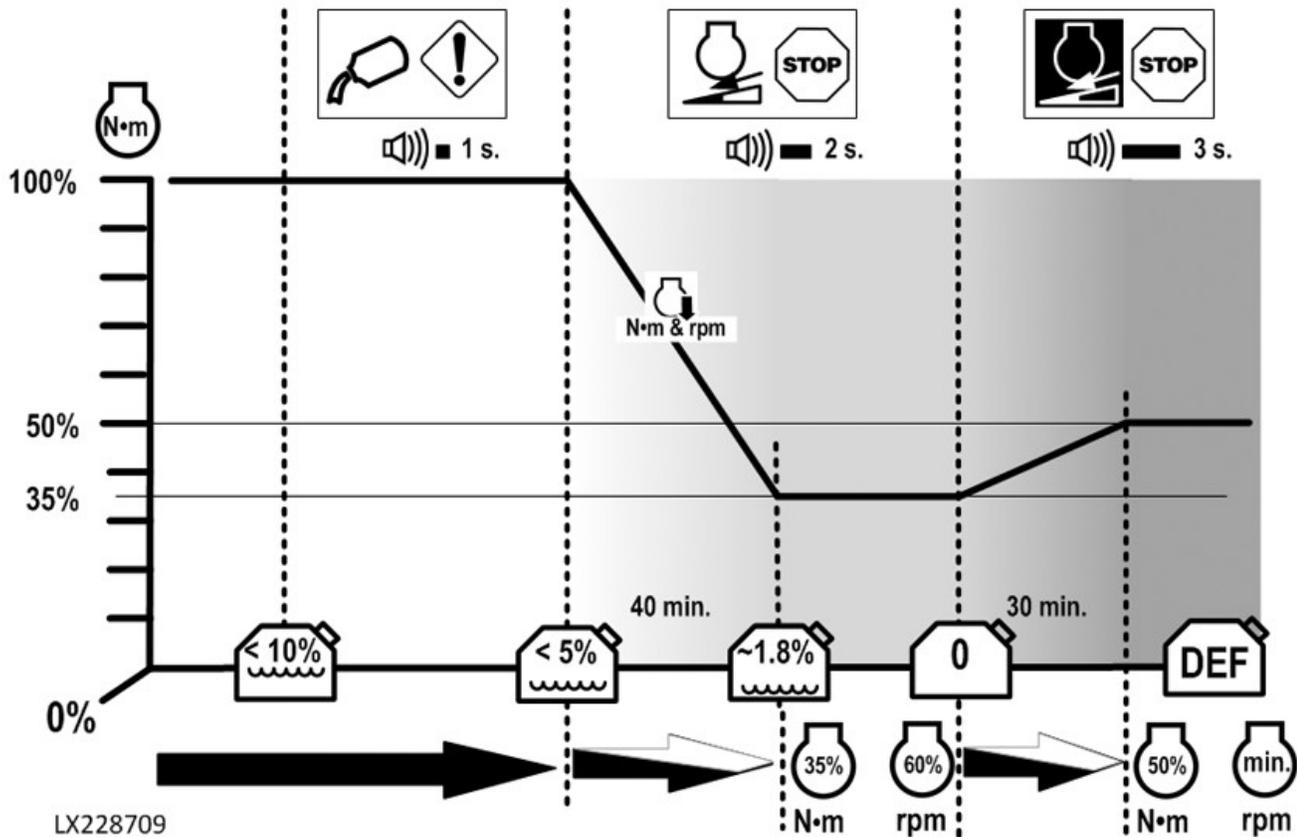
LX228712—UN—14JAN16

A — Operator warning activated.

B — 65 % torque reduction and 40% engine speed limitation (immediately ramped in within 40 minutes).

C — Engine commanded to idle immediately ramped in within 30 minutes.

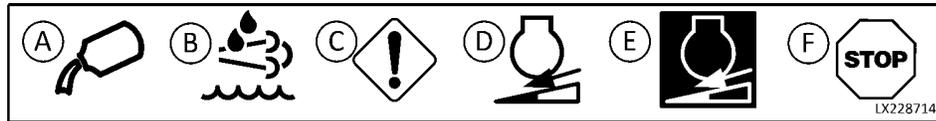
NOTE: A small amount DEF is saved for cooling the DEF module.



LX228709—UN—13JAN16

*Aftertreatment Equipment (DOC/SCR)*

DEF LEVEL WARNING						
DEF level	Yellow CAUTION Light	1st STOP Warning Light	2nd STOP Warning Light	Torque	Engine speed	Time
>10%	-	-	-	100%	100%	-
<10% ... >5%	X	-	-	100%	100%	-
< 5% ... >1,8%	-	X	-	35%	60%	Within 40min
1.8% ... empty	-	X	-	35%	60%	-
empty	-	-	X	50%	Idle	Within 30min
empty	-	-	X	50%	Idle	-

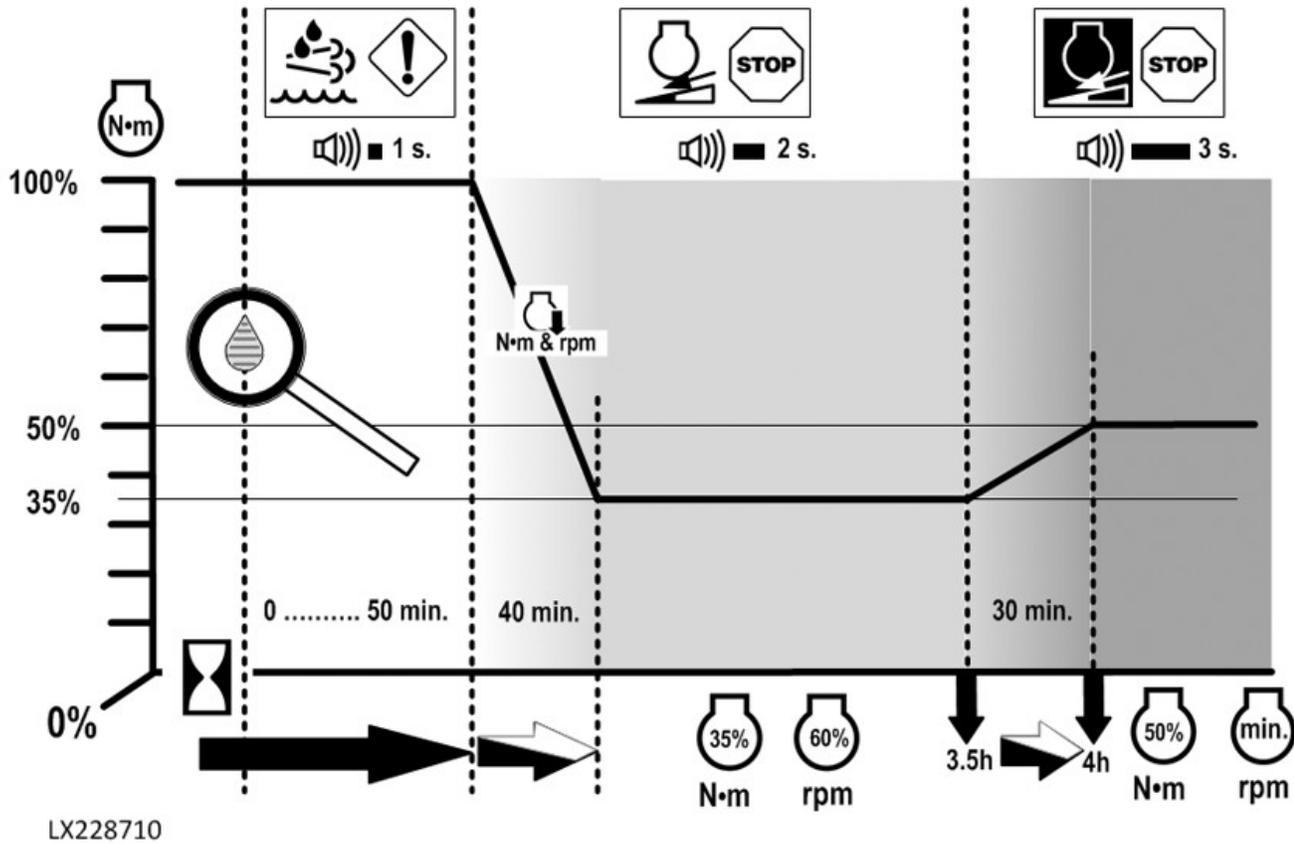


LX228714—UN—14JAN16

(CAN) Signal status	Instrument Panel Messages
DEF Level > 10%	NO ACTION
10% < DEF Level < 5%	Driver Warning: The icon (A) will be displayed and the yellow CAUTION light (C) comes ON. The buzzer sounds for 1 second.
5% < DEF Level < 1,8%	Second Step: The icon (D) will be displayed and the red STOP Warning Light (F) comes ON. The buzzer sounds for 2 seconds.
DEF Level < 1,8%	Driver Warning: The icon (E) will be displayed and the red STOP Warning Light (F) comes ON. The buzzer sounds for 3 seconds.

RA84036,0001748-19-21JUN18

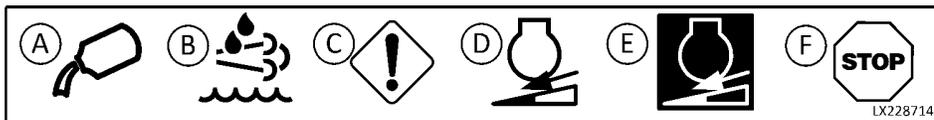
Poor DEF Quality Warning



LX228710

LX228710—UN—13JAN16

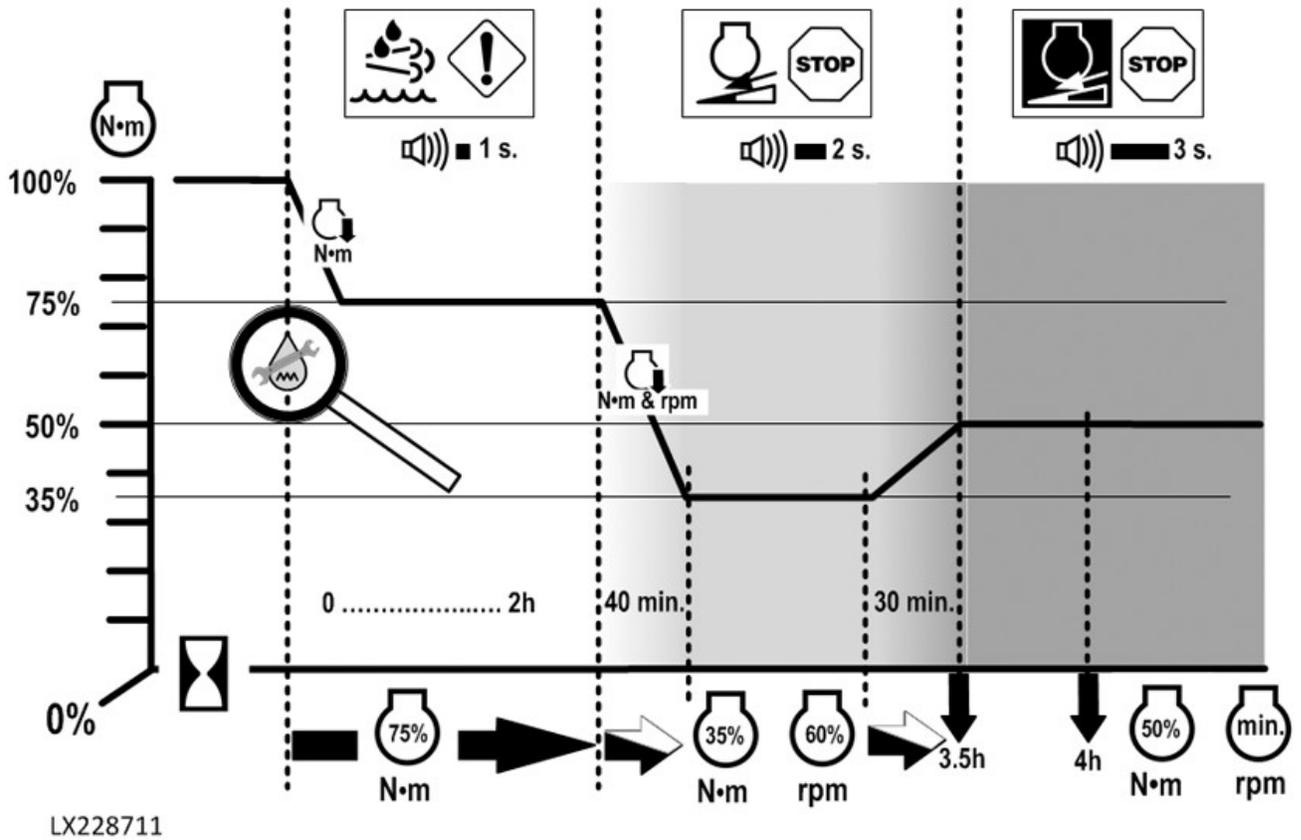
Poor DEF Quality Warning						
DEF quality	Yellow CAUTION Light	1st STOP Warning Light	2nd STOP Warning Light	Torque	Engine speed	Time
OK	-	-	-	100%	100%	-
NOT OK	X	-	-	100%	100%	Within 50 minutes
NOT OK	-	X	-	35%	40%	Within 40 minutes
NOT OK	-	X	-	35%	40%	Within 120 minutes
NOT OK	-	-	X	50%	Idle	Within 30 minutes



LX228714—UN—14JAN16

(CAN) Signal status	Instrument Panel Messages
DEF Quality = OK	NO ACTION
Poor DEF Quality detected	Driver Warning: The icon (B) will be displayed and the yellow CAUTION light (C) comes ON. The buzzer sounds for 1 second.
Poor DEF Quality detected	Second Step: The icon (D) will be displayed and the red STOP Warning Light (F) comes ON. The buzzer sounds for 2 seconds.
Poor DEF Quality detected	Driver Warning: The icon (E) will be displayed and the red STOP Warning Light (F) comes ON. The buzzer sounds for 3 seconds.

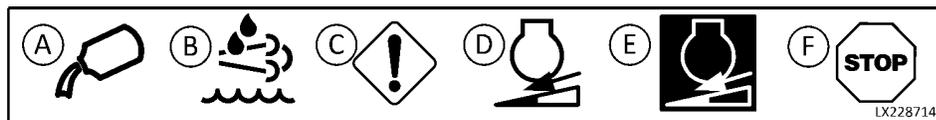
SCR System Failures/Tampering Warning



LX228711

LX228711—UN—14JAN16

SCR SYSTEM FAILURES / TAMPERING						
SCR failures/tampering	Yellow CAUTION Light	1st STOP Warning Light	2nd STOP Warning Light	Torque	Engine speed	Time
NO	-	-	-	100%	100%	-
YES	X	-	-	75%	100%	Within 25 minutes
YES	X	-	-	75%	100%	95 minutes
YES	-	X	-	35%	40%	Within 40 minutes
YES	-	X	-	35%	40%	170 minutes
YES	-	X	-	50%	Idle	Within 30 minutes
YES	-	-	X	50%	Idle	-



LX228714

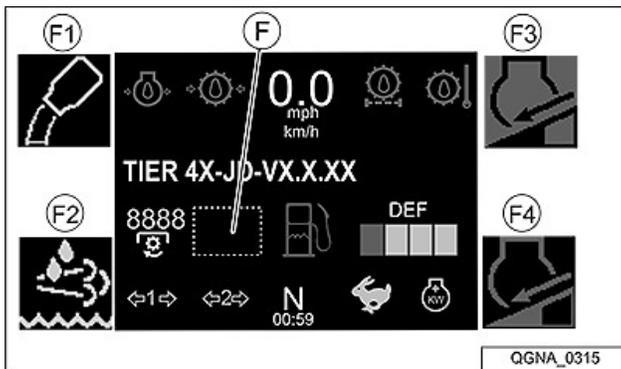
LX228714—UN—14JAN16

## Aftertreatment Equipment (DOC/SCR)

(CAN) Signal status	Instrument Panel Messages
NO SCR Technical Failure	NO ACTION
SCR Technical Failure	Driver Warning: The icon (B) will be displayed and the yellow CAUTION light (C) comes ON. The buzzer sounds for 1 second.
SCR Technical Failure	Second Step: The icon (D) will be displayed and the red STOP Warning Light (F) comes ON. The buzzer sounds for 2 seconds.
SCR Technical Failure	Driver Warning: The icon (E) will be displayed and the red STOP Warning Light (F) comes ON. The buzzer sounds for 3 seconds.

RA84036,000174A-19-21JUN18

### Aftertreatment General Warning (Tractor with SCR System)



QGNA0315—UN—02NOV15

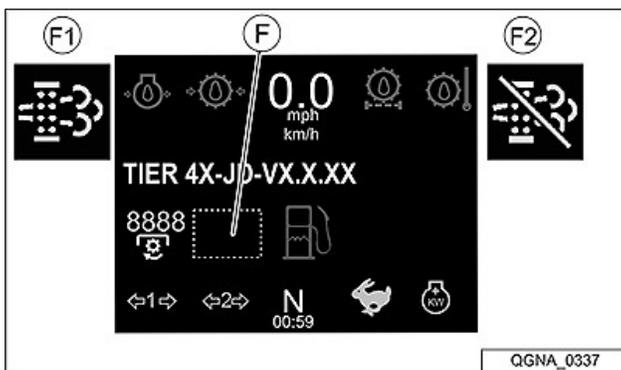
(F) Message		
F1	Warning Amber Light	Automatic Exhaust Filter Cleaning Activated
F2	Warning Amber Light	Automatic Exhaust Filter Cleaning not Activated

MS76789,0000685-19-20DEC18

(F) message		
F1	Warning Amber Light	Low DEF Level
F2	Warning Amber Light	DEF Poor Quality
F3	Red Stop Light	Engine Power Slow Down
F4	Red Stop Light	Engine at Idle rpm

MS76789,0000684-19-20DEC18

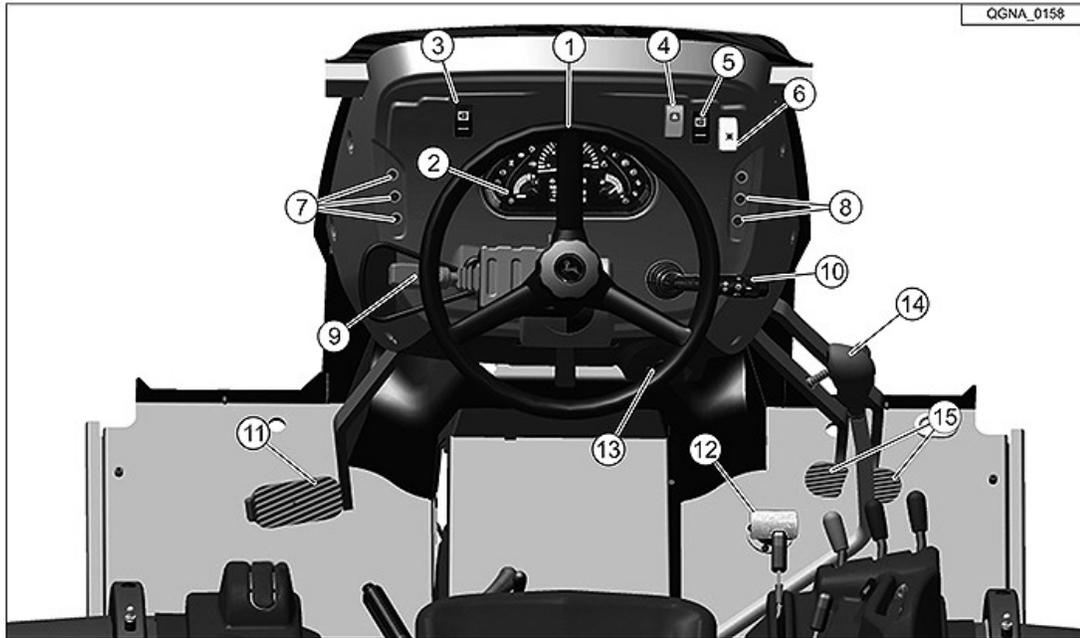
### Aftertreatment General Warning (Tractor without SCR System)



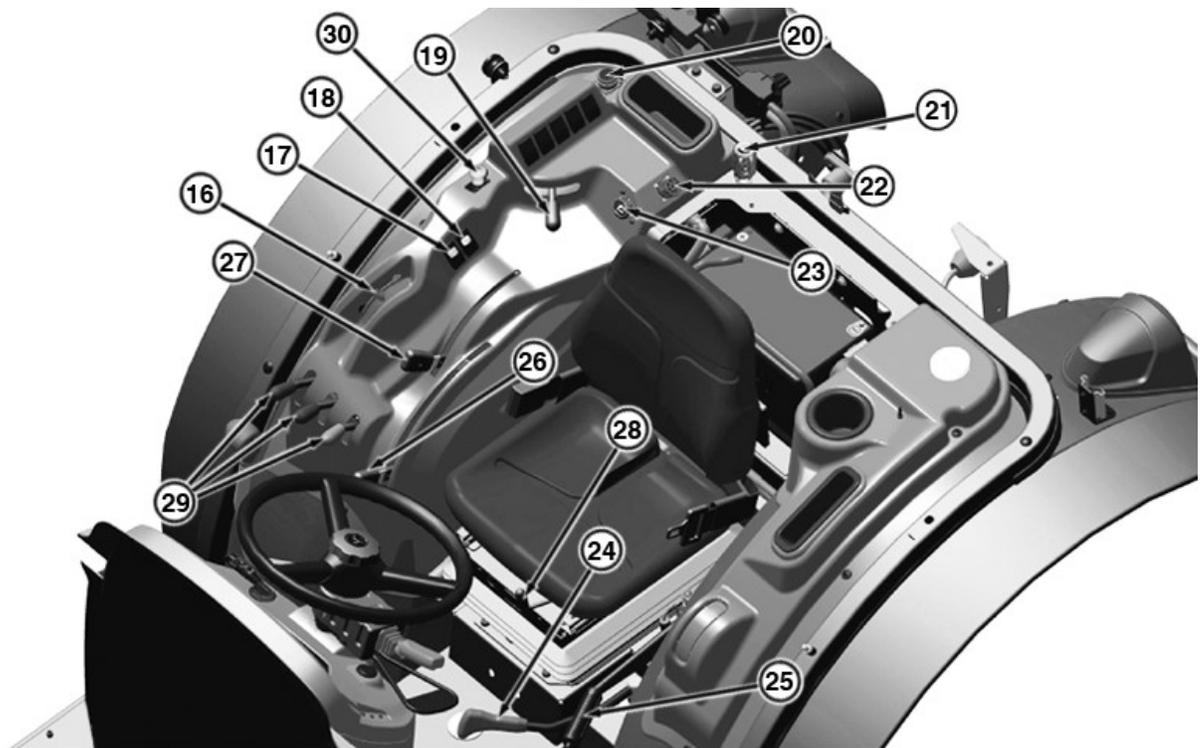
QGNA0337—UN—02NOV15

# Controls

## Vehicle Controls (5GV, 5GN) (Cab)



QGNA0158—UN—02NOV15



PY34581—UN—15FEB17

- 1—Steering Wheel
- 2—Instrument Panel
- 3—Beacon Light Switch
- 4—Hazard Warning Light Switch
- 5—Headlight Switch
- 6—Front PTO Switch
- 7—Cruise Control Switches
- 8—Programming Switches
- 9—Reverser Lever
- 10—Light, Horn, and Turn Signal Switch
- 11—Clutch Pedal

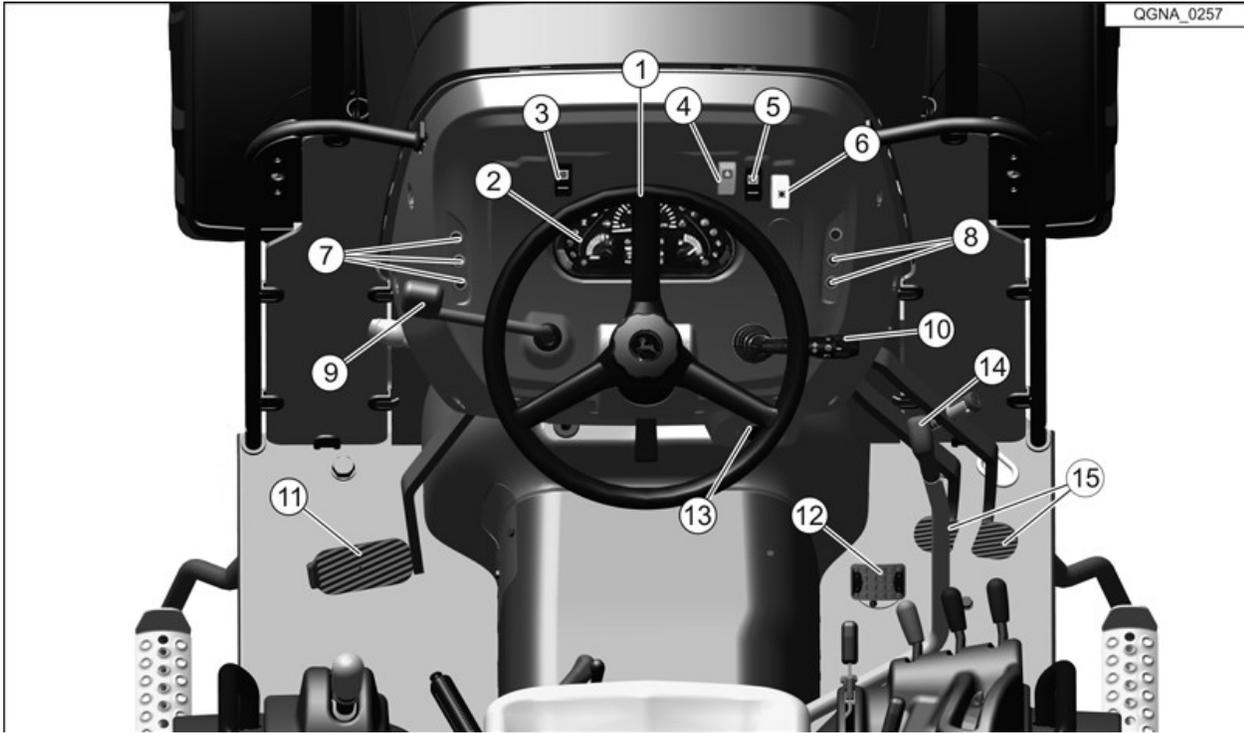
- 12—Accelerator Pedal
- 13—Key Switch
- 14—Gear Shift Lever
- 15—Left and Right Brake Pedals
- 16—Hand Throttle Lever
- 17—Differential Lock Switch
- 18—Front-Wheel Drive Switch
- 19—SCV Lever (No. 4)
- 20—Socket
- 21—Flow Regulator Valve Control Knob
- 22—Diagnostic Socket

- 23—Cigarette Lighter
- 24—Range Shift Lever
- 25—Park Brake Lever
- 26—Hitch Position Control Lever

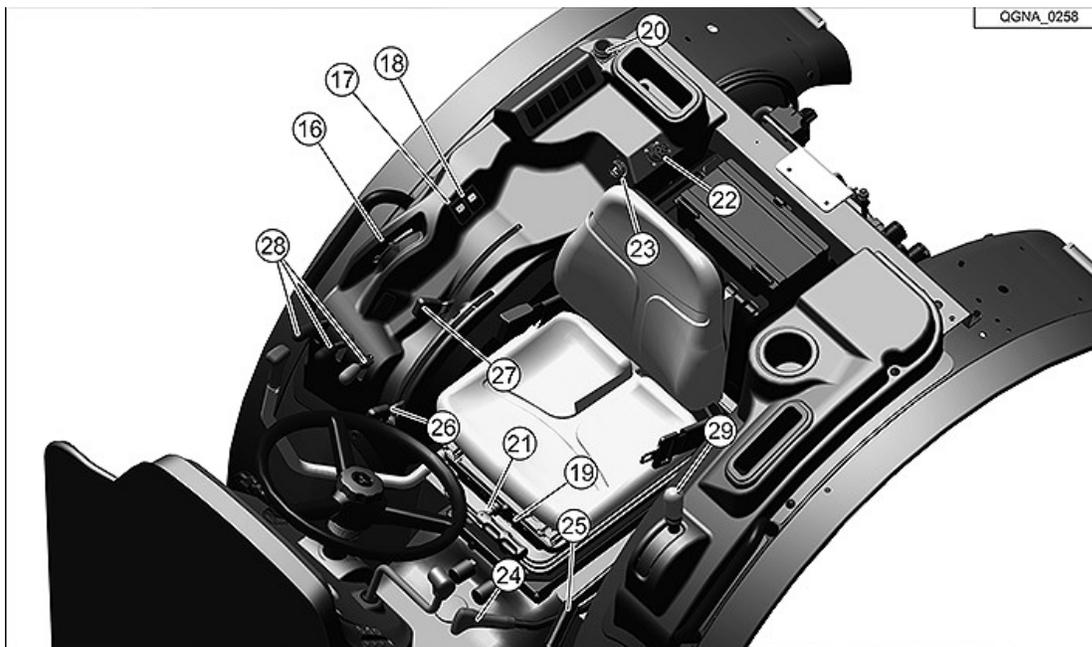
- 27—Hitch Load Control Lever
- 28—Seat fore/aft Adjustment
- 29—SCV Levers (No. 1, 2 and 3)
- 30—Rear PTO Switch

RA84036.000174B-19-08OCT18

Vehicle Controls (5GV, 5GN) (Open Operator Station)



QGNA0257—UN—10MAR16



QGNA0258—UN—02NOV15

- 1—Steering Wheel
- 2—Instrument Panel
- 3—Beacon Light Switch
- 4—Hazard Warning Light Switch

- 5—Headlight Switch
- 6—Front PTO Switch
- 7—Cruise Control Switches
- 8—Programming Switches

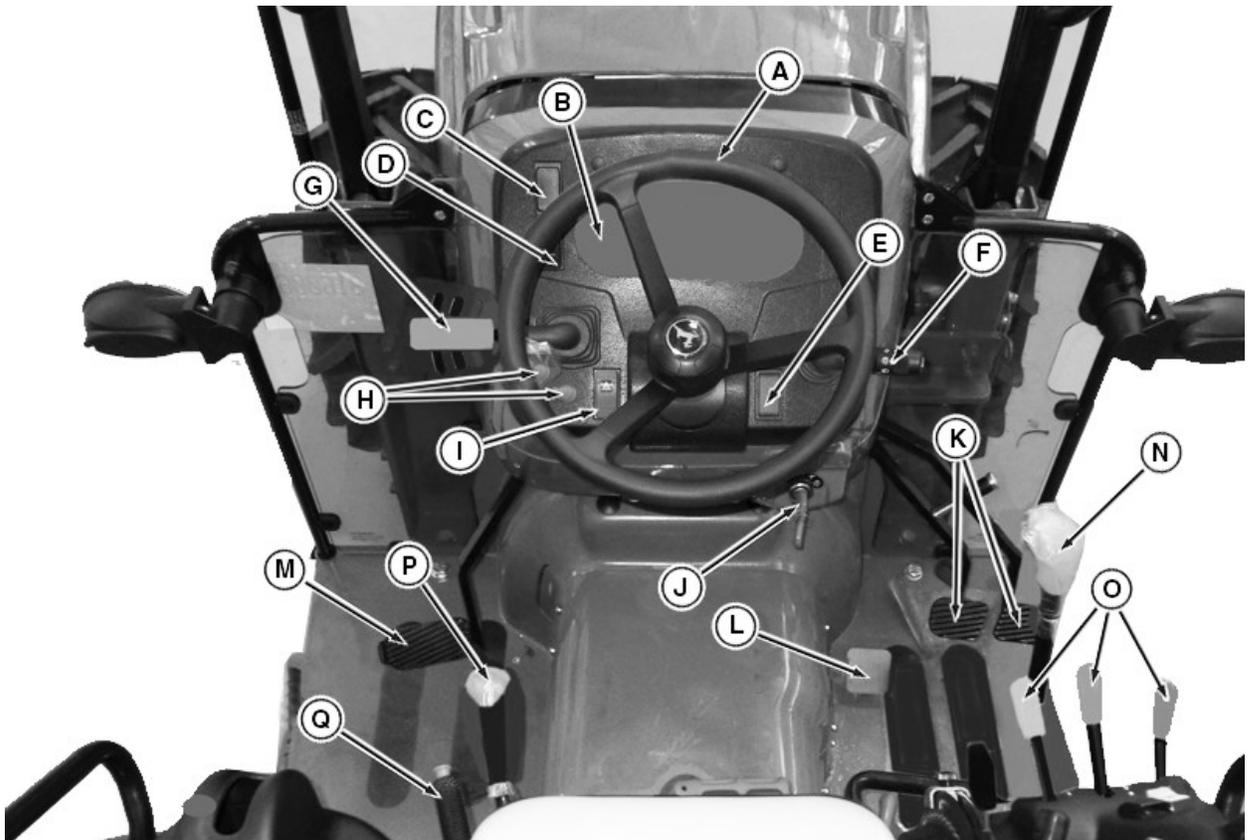
## Controls

- 9—Reverser Lever
- 10—Light, Horn, and Turn Signal Switch
- 11—Clutch Pedal
- 12—Accelerator Pedal
- 13—Key Switch
- 14—Gear Shift Lever
- 15—Left and Right Brake Pedals
- 16—Hand Throttle Lever
- 17—Differential Lock Switch
- 18—Front-Wheel Drive Switch
- 19—Seat fore/aft Adjustment Lever

- 20—Socket
- 21—Seat Suspension Adjustment Lever
- 22—Diagnostic Socket
- 23—Cigarette Lighter
- 24—Range Shift Lever
- 25—Park Brake Lever
- 26—Hitch Position Control Lever
- 27—Hitch Load Control Lever
- 28—SCV Levers (No. 1, 2 and 3)
- 29—Rear PTO Switch

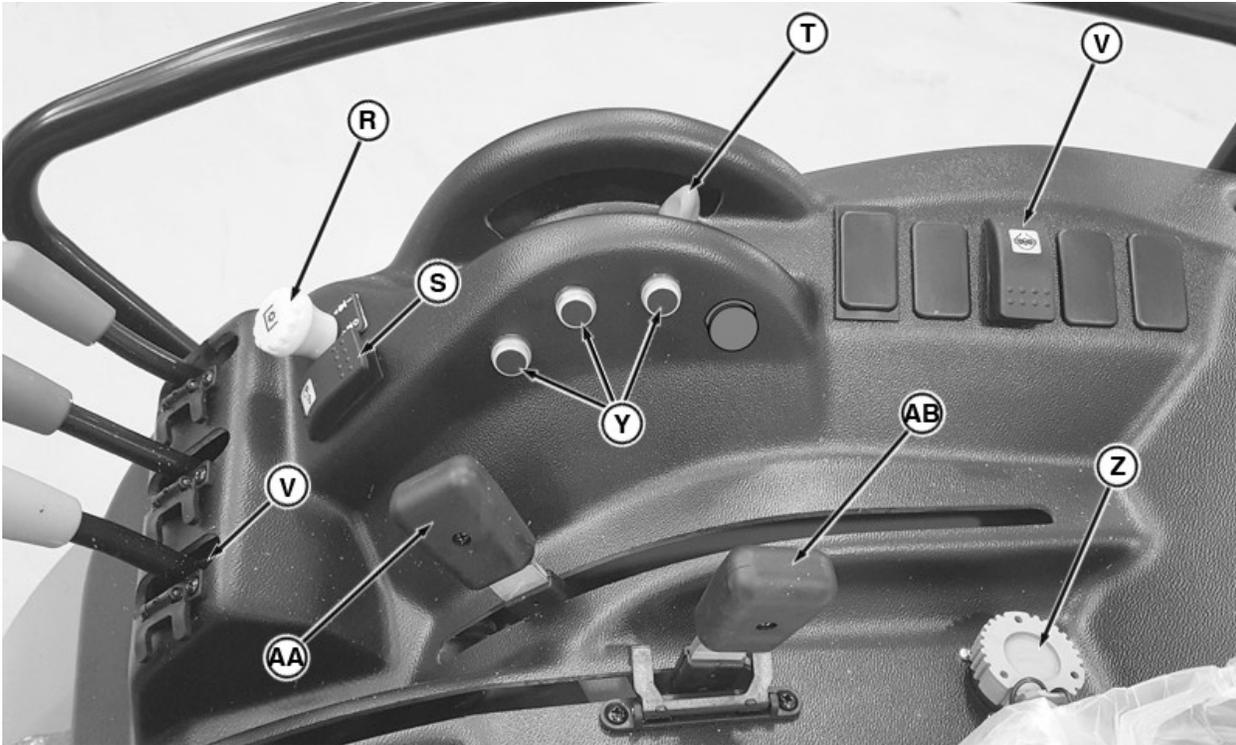
RA84036,000174C-19-24SEP18

## Vehicle Controls (5GL)



Vehicle Controls

PY28362—UN—27SEP16

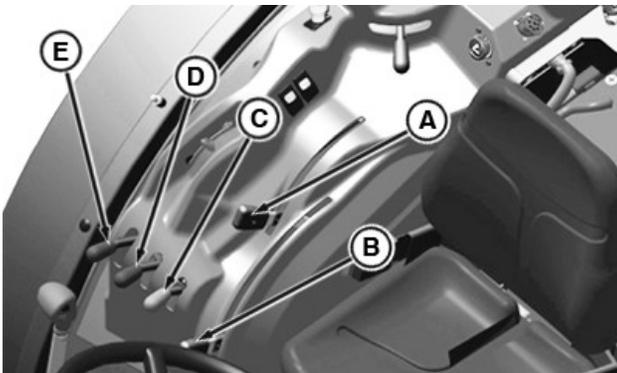


APY01851—UN—07FEB18

- A—Steering Wheel
- B—Instrument Panel
- C—Beacon Light Switch
- D—Not Used
- E—Trailer Brake Valve Warning Light
- F—Light, Horn, and Turn Signal Switch
- G—Reverser Lever
- H—Programming Switches
- I—Hazard Warning Light Switch (amber warning lights)
- J—Ignition Key Switch
- K—Left and Right Brake Pedals
- L—Accelerator Pedal
- M—Clutch Pedal
- N—Gear Shift Lever
- O—Selective Control Valve Levers
- P—Range-Shift Lever
- Q—Park Brake Lever
- R—Rear PTO Switch
- S—Front-Wheel Drive Switch
- T—Hand Throttle Lever
- V—Differential Lock Switch
- Y—Cruise Control Switches
- Z—Diagnostic Socket
- AA—Hitch Load Control Lever
- AB—Hitch Position Control Lever

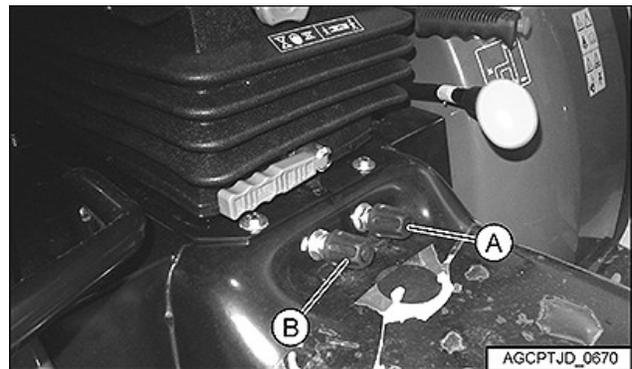
RA84036,000174D-19-24SEP18

**Vehicle Controls**



PY34582—UN—15FEB17

- A—Hitch Load Control Lever
- B—Hitch Position Control Lever
- C—First Selective Control Valve Lever
- D—Second Selective Control Valve Lever
- E—Third Selective Control Valve Lever



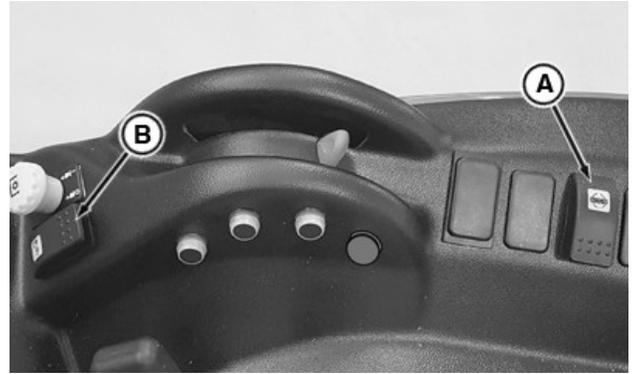
AGCPTJD\_0670  
AGCPTJD0670—UN—02NOV15

- A—Adjusting Knob - Hitch Rate-Of-Drop Valve
- B—Adjusting Knob - Hitch Sensitivity Control Valve



A—Park Brake Lever

QGNA0160—UN—02NOV15

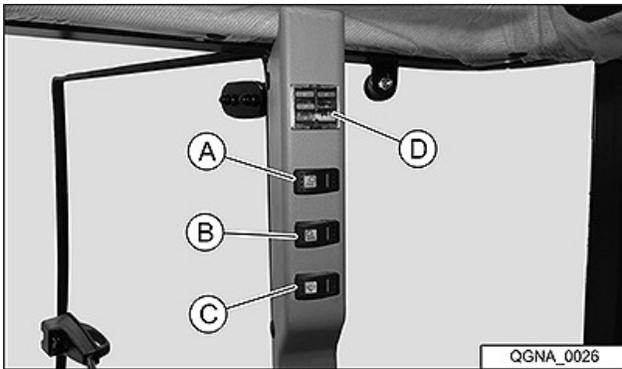


(5GL)

APY01852—UN—07FEB18

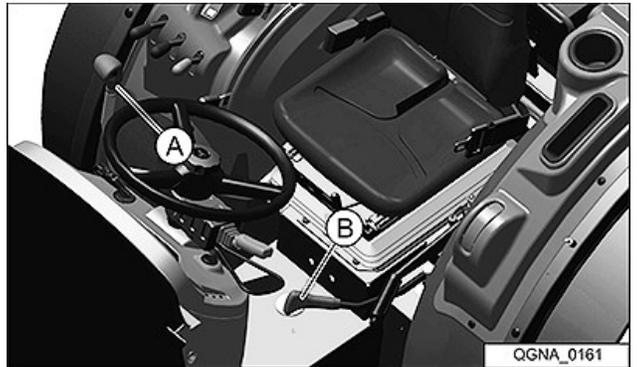
*NOTE: The auxiliary brake system can be used to brake the tractor when the service brake fails.*

A—Differential Lock Switch  
B—Front-Wheel Drive Switch



A—Front Roof Worklights Switch  
B—Rear Roof Worklights Switch  
C—Wiper and Washer Switch  
D—Fuse box (cab)

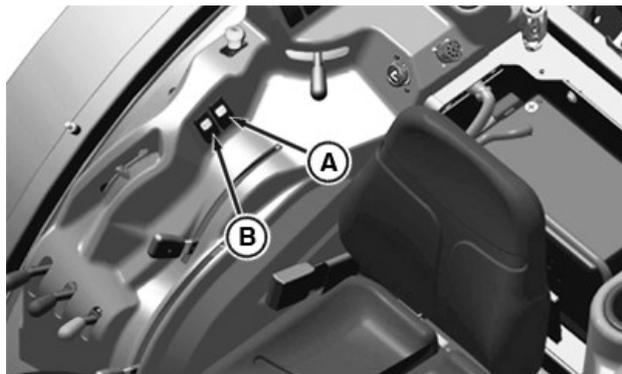
QGNA0026—UN—02NOV15



(5GV, 5GN)

QGNA0161—UN—02NOV15

Right-Hand cab post switches:



(5GV, 5GN)

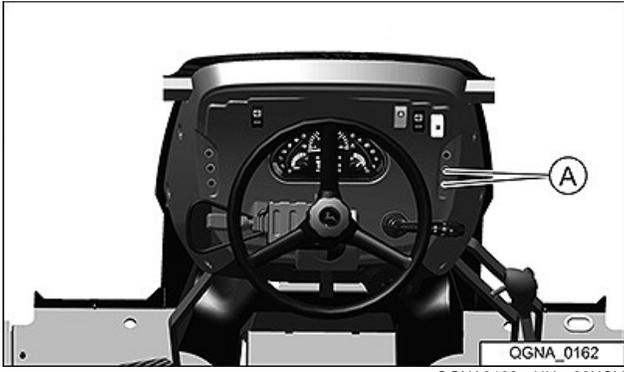
PY34583—UN—15FEB17



(5GL)

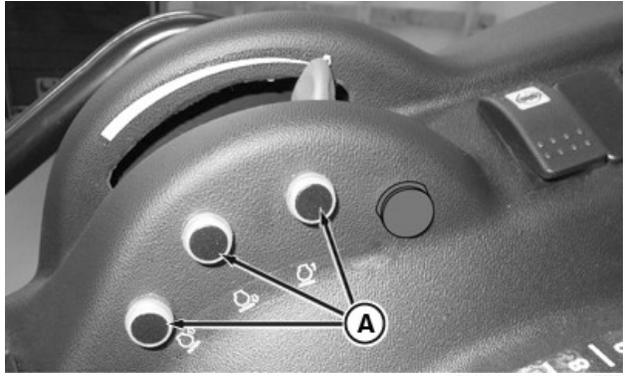
APY01808—UN—07DEC17

A—Gear Shift Lever (mechanical version shown)  
B—Range Shift Lever



(5GV, 5GN)

QGNA0162—UN—02NOV15

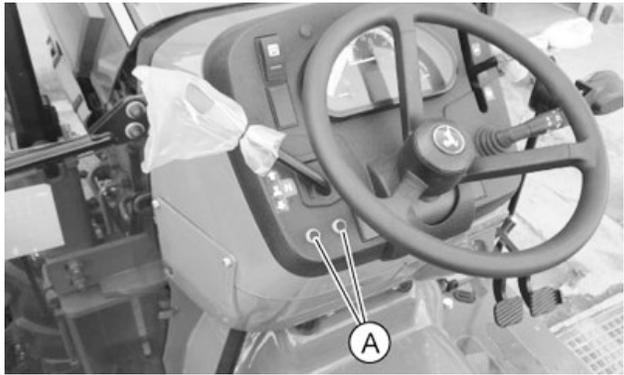


(5GL)

APY01853—UN—07FEB18

**A—Cruise Control Switches**

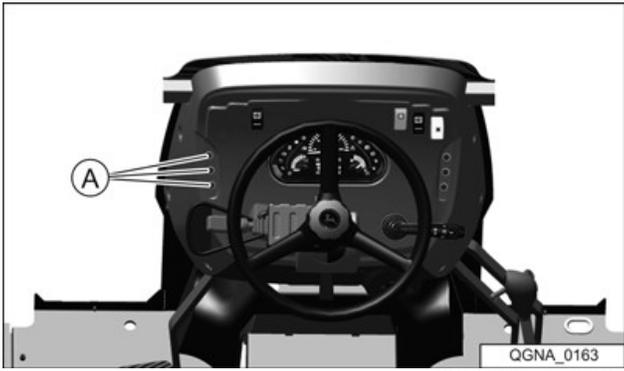
RA84036.000174E-19-08OCT18



(5GL)

APY01809—UN—07DEC17

**A—Programming Switches**

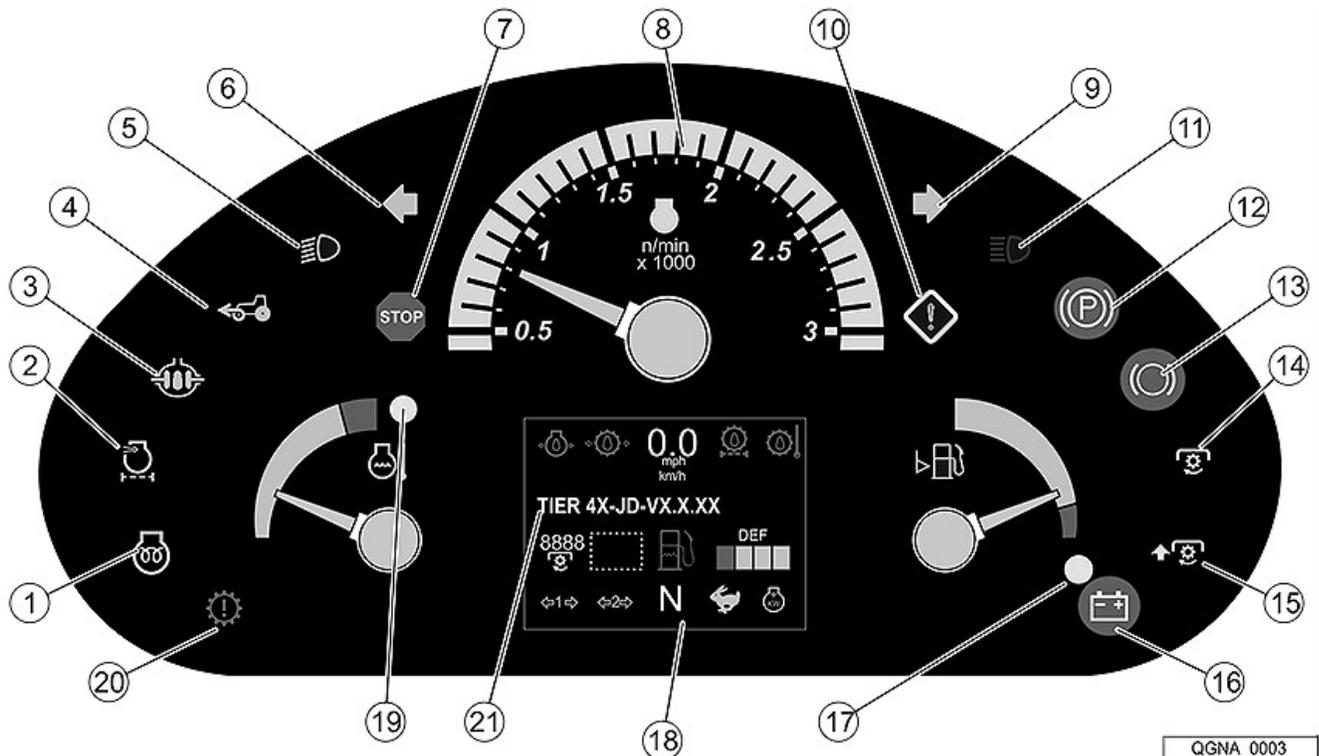


(5GV, 5GN)

QGNA0163—UN—25NOV15

# Instrument Panel

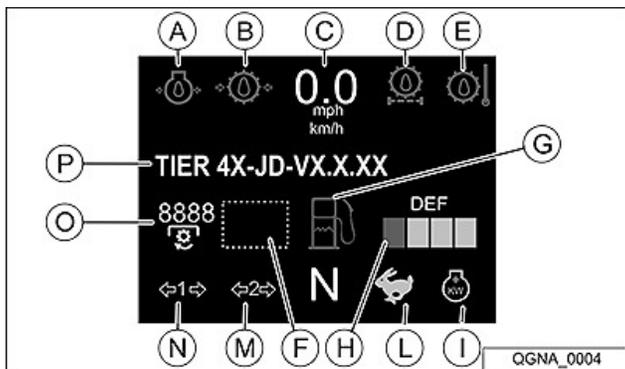
## Instruments and Indicator Lights



QGNA\_0003

QGNA0003—UN—02NOV15

1. Preheater Indicator Light - Indicates that the preheater is activated; turn key switch to start position only when preheating sequence has finished.
2. Air Cleaner Restriction Indicator Light - Comes on when engine air cleaner is clogged.
3. Differential Lock Indicator Light - Comes on when differential lock is switched on.
4. Front-Wheel Drive Indicator Light - Comes on when front-wheel drive is switched on.
5. Low Beam Indicator Light - Comes on when low beam is switched on.
6. Flashing Indicator Light on Left - Starts flashing when left turn signal light or hazard warning lights are switched on.
7. STOP Warning Light - If this warning light comes on, park the tractor and stop the engine.
8. Tachometer - Indicates crankshaft speed in revolutions per minute.
9. Flashing Indicator Light on Right - Starts flashing when right turn signal light or hazard warning lights are switched on.
10. Yellow CAUTION Light - Flashes when a malfunction occurs (review the error messages).
11. High Beam Indicator Light - Comes on when switch is in "high beam" position.
12. Park Brake Indicator Light - Comes on when the park brake is activated.
13. Brake Oil Level Indicator Light - Comes on when the brake oil level is low.
14. Rear PTO Indicator Light - Comes on when the rear PTO is switched on.
15. Ground Drive PTO Indicator Light - Comes on when the ground drive PTO is activated.
16. Alternator Indicator Light - Comes on when there is a problem in the charging system.
17. Fuel Level Warning Light - Comes on when fuel level is low.
18. Digital Display - Displays information for the operator.
19. Engine Coolant Temperature Warning Light - Comes on when coolant temperature is high.
20. Transmission Failure Light - For PowrReverser transmission only.
21. Front PTO Indicator Light - Comes on when the front PTO is switched on.

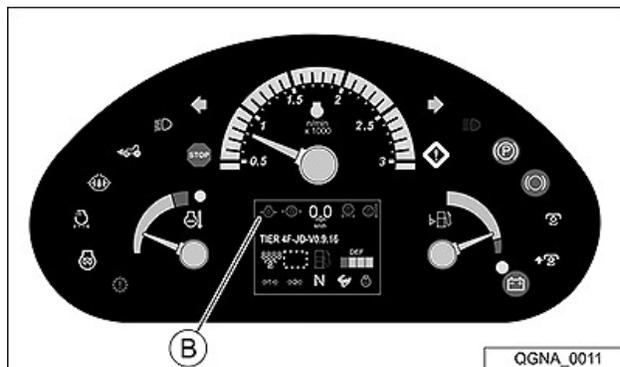


QGNA\_0004

- A—Engine Oil Pressure Indicator Light - Comes on when engine oil pressure is low.
- B—Transmission Low Oil Pressure Light - Comes on when transmission oil pressure is low.
- C—Speedometer, Digital Display
- D—Transmission Oil Filter Indicator light - Comes on when the transmission oil filter is clogged.
- E—Transmission Oil Temperature Light - Comes on when oil temperature is high.
- F—Inducement General Warning
- G—Water in Fuel Indicator Light
- H—DEF Level Indicator
- I—Indicator Light for BOOST - the icon lights up when BOOST is activated.
- L—High-Speed Indicator Light - Comes on when electrohydraulic Hi-Lo transmission is in Hi mode.
- M—Turn Signal Indicator Light (second trailer)
- N—Turn Signal Indicator Light (first trailer)
- O—Displays the Rear PTO Speed
- P—Line for Digital Messages

RA84036,000174F-19-25SEP18

### Engine Oil Pressure Indicator Light



QGNA\_0011  
QGNA0011—UN—02NOV15

B—Engine Oil Pressure Indicator Light

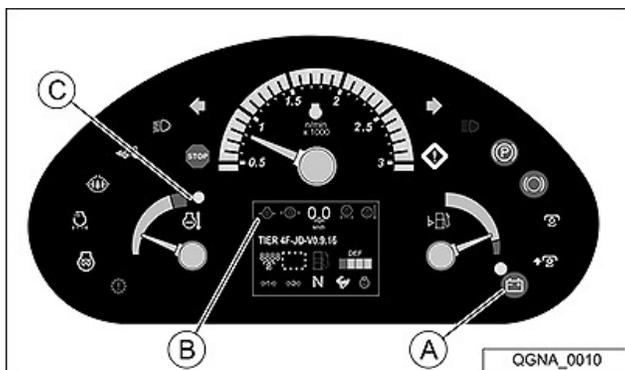
**IMPORTANT: NEVER** operate engine without sufficient oil pressure. If indicator light glows longer than 5 seconds under normal operating conditions, stop engine and check for cause.

Engine oil pressure indicator light (B) will glow if engine oil pressure is low. Indicator light comes on when key is turned to engage starting motor and goes out when engine starts.

If low oil level is not the problem, see your John Deere dealer.

RA84036,0001753-19-21JUN18

### Observe Instruments After Starting the Engine



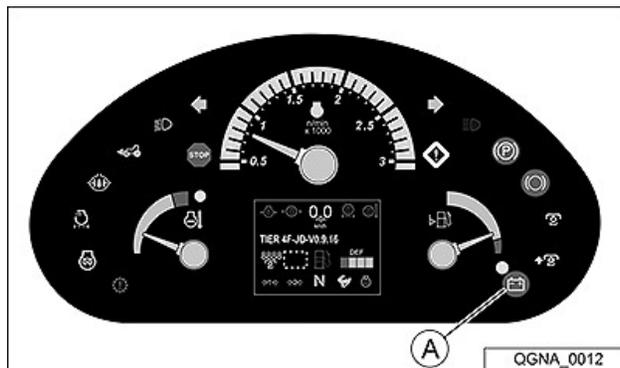
QGNA\_0010

- A—Alternator Indicator Light
- B—Engine Oil Pressure Indicator Light
- C—Coolant Temperature Gauge

**IMPORTANT:** If alternator indicator light (A) or engine oil pressure indicator light (B) fails to go out or coolant temperature gauge (C) indicates hot, stop engine and determine the cause.

RA84036,0001752-19-21JUN18

### Alternator Indicator Light



QGNA\_0012  
QGNA0012—UN—02NOV15

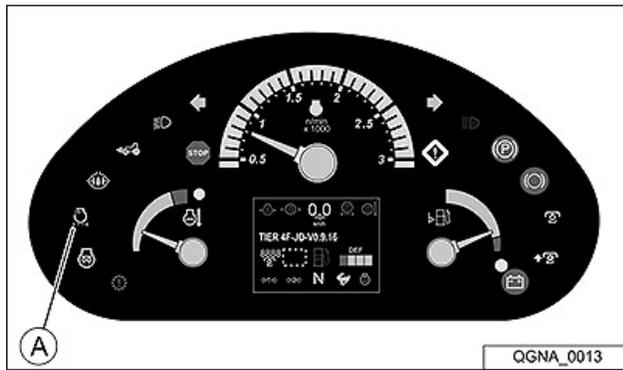
A—Alternator Indicator Light

The alternator indicator light (A) will glow when alternator output is low. Indicator light comes on when key is turned to engage starting motor and goes out when engine starts.

If indicator light glows longer than 5 seconds under normal operating conditions, stop engine and check for cause. If a loose or broken fan belt is not the cause, see your authorized dealer.

RA84036,0001754-19-21JUN18

### Air Cleaner Indicator Light

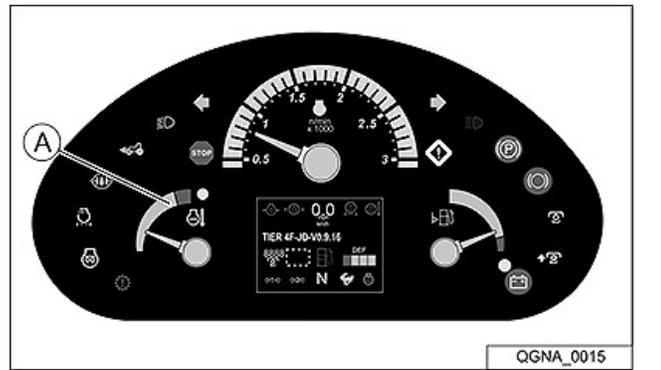


A—Air Cleaner Indicator Light

The air cleaner indicator light (A) comes on when the air cleaner is restricted. Replace air cleaner as soon as possible.

RA84036.0001755-19-21JUN18

### Coolant Temperature Gauge



A—Coolant Temperature Gauge

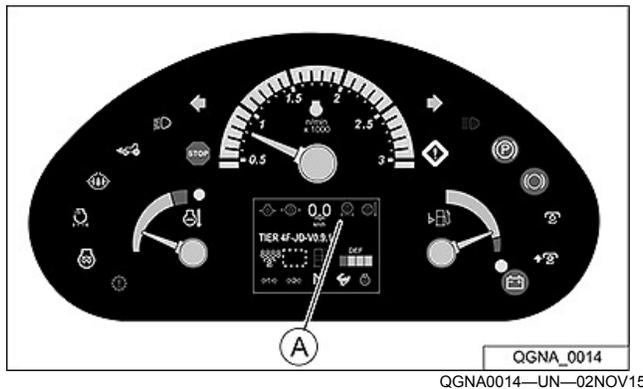
The needle on the coolant temperature gauge (A) rises as engine warms up. If the needle reaches red zone, stop engine and determine the cause.

Check coolant level in the coolant expansion tank and radiator when engine cools. Also check grille, radiator, and radiator screen for plugging. Check fan belt tension. If the problem is not corrected, see your John Deere dealer.

RA84036.0001757-19-21JUN18

### Transmission Oil Filter Indicator Light

*NOTE: This is applicable only for tractors with with 24/12 speed transmission.*



A—Transmission Oil Filter Indicator Light

The transmission oil filter indicator light (A) will glow if oil filter becomes plugged. Replace oil filter as soon as possible.

RA84036.0001756-19-21JUN18

### Observe Fuel Level



A—Fuel Gauge

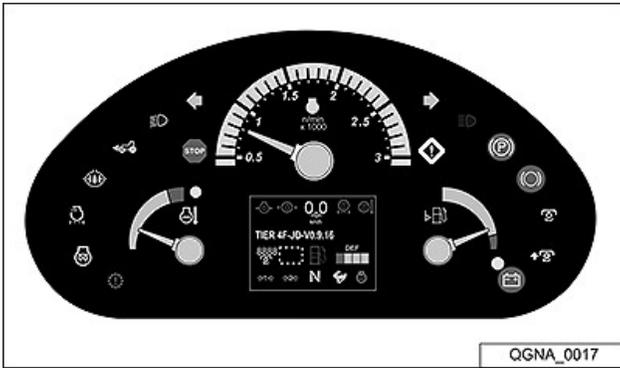
**IMPORTANT: Use diesel fuel only. See Diesel Fuel (section 200A) for fuel specifications.**

Refuel before fuel gauge (A) reaches empty mark.

If the tractor runs out of fuel and does not start in several tries, air must be bled from the fuel system. See Drain Water and Sediment from Fuel Filter in Service — Change (section 220E) in this manual.

RA84036.0001758-19-21JUN18

## Warm Up the Engine



QGNA0017—UN—02NOV15

Normal operating speed is 1200 to 2300 rpm and within these limits engine can be put under full load.

RA84036,000175B-19-21JUN18

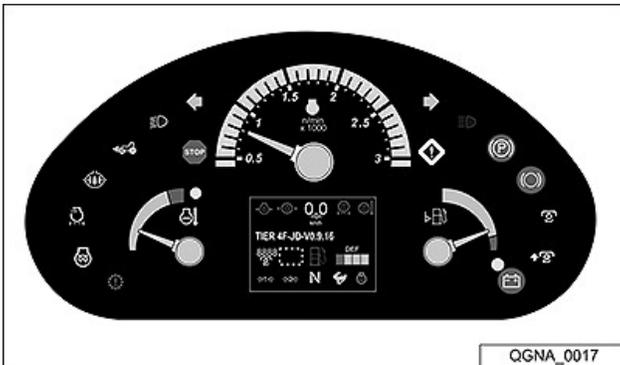
Do not place the tractor under a full load until engine is properly warmed up.

1. Run engine at about 1500 rpm for several minutes.
2. Run engine at about 1900 rpm and under light load until engine reaches normal operating temperature.

*NOTE: If hydraulic functions are slow, refer to Cold-Weather Operation in Hitch (section 50) in this manual.*

RA84036,0001759-19-21JUN18

## Avoid Idling the Engine



QGNA0017—UN—02NOV15

Allowing engine to idle at low rpm uses fuel inefficiently, and can cause a build-up of carbon in the engine.

If tractor must be left with the engine running more than 3 or 4 minutes, adjust engine speed above 1200 rpm.

RA84036,000175A-19-21JUN18

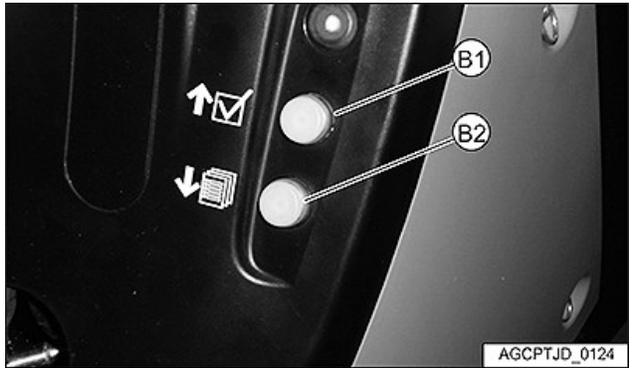
## Observe Engine Work and Idle Speeds

Low idle speed should be 825 to 875 rpm. At light or no load, full throttle speed increases to 2460—2510 rpm.

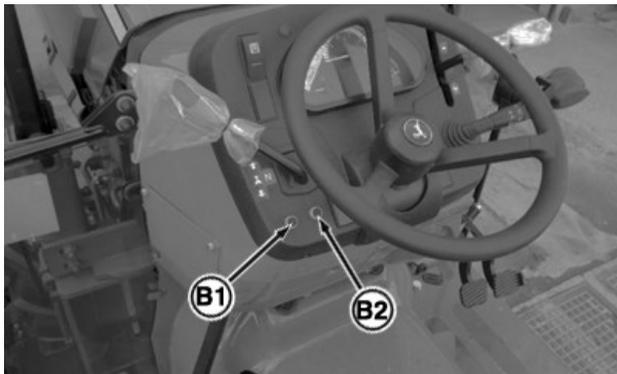
Engine rated speed is 2300 rpm.

# Digital Display

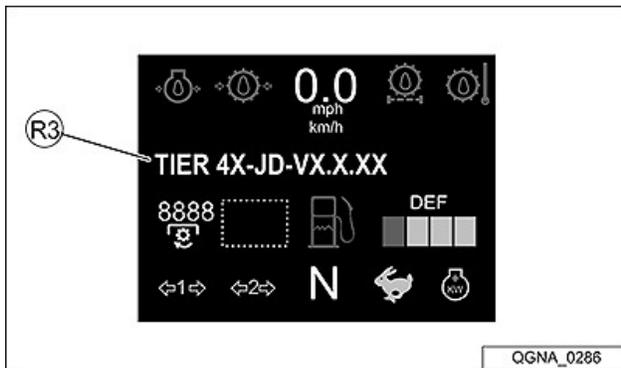
## Digital Display - User Interface



AGCPTJD\_0124  
AGCPTJD0124—UN—02NOV15  
(5GV, 5GN)



PY42803—UN—02JUL17  
(5GL)



QGNA\_0286  
QGNA0286—UN—02NOV15

With the key switch in ON position, the digital display shows the hours of operation in row (R3). Information is provided in the language selected in the user menu. Default language is English.

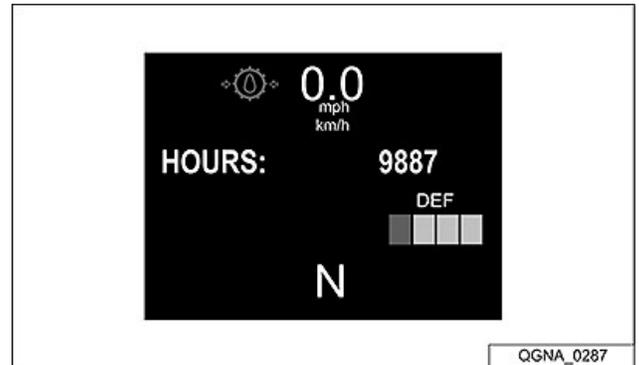
B1 and B2 can be used to change information displayed in row (R3) as follows:

1. Hour meter
2. Fuel consumption
3. DPF load in percent
4. Coolant temperature
5. Transmission oil temperature (only if equipped with PowrReverser transmission)
6. PTO speed

## 7. Front-Wheel Drive Status

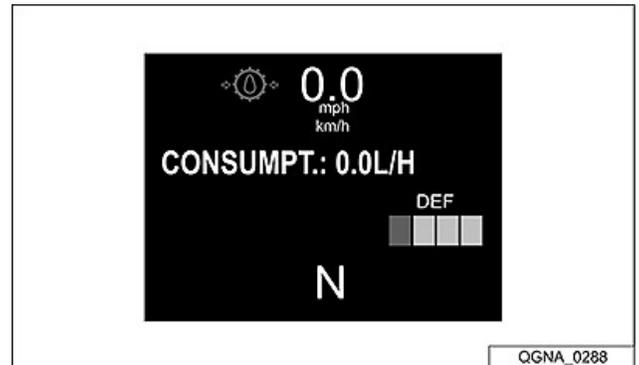
*NOTE: The button functions are different depending on how long the buttons are pressed.*

Functions of buttons		
	B1	B2
Pressed for less than 0.3 seconds	Navigate upward	Navigate downward
Pressed for 1 second or longer	Confirm entry	Access and exit the sub menu



QGNA\_0287  
QGNA0287—UN—02NOV15

### 1. Hour Meter



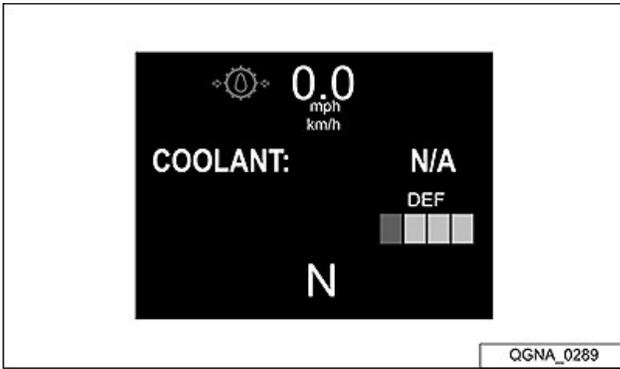
QGNA\_0288  
QGNA0288—UN—02NOV15

### 2. Fuel Consumption

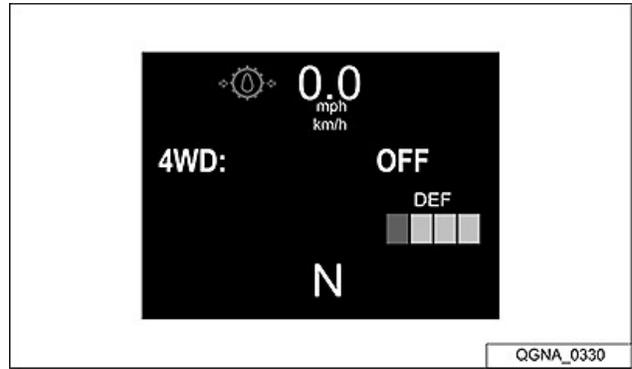


QGNA\_0348  
QGNA0348—UN—02NOV15

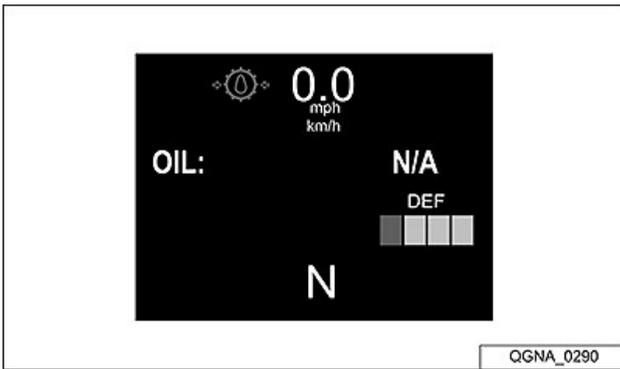
### 3. DPF load in Percent



4. Coolant Temperature

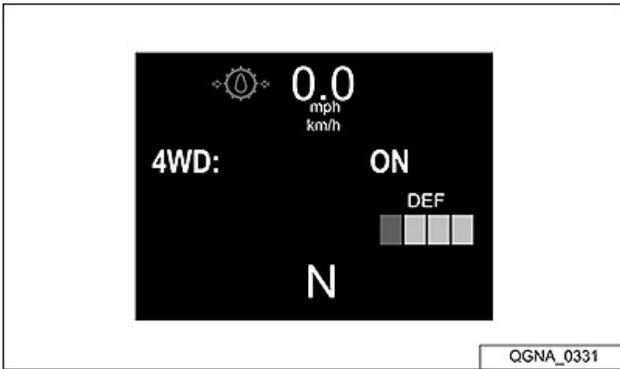


7. Front-Wheel Drive ON, AUTO, or OFF (depending on the status of MFWD)

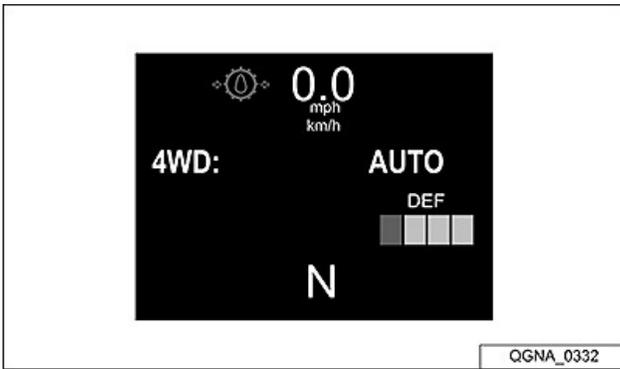


5. Transmission Oil Temperature (only if equipped with PowerReverser transmission)

6. PTO Speed (appears if the front PTO ratio set is other than 000).



QGNA0331—UN—02NOV15

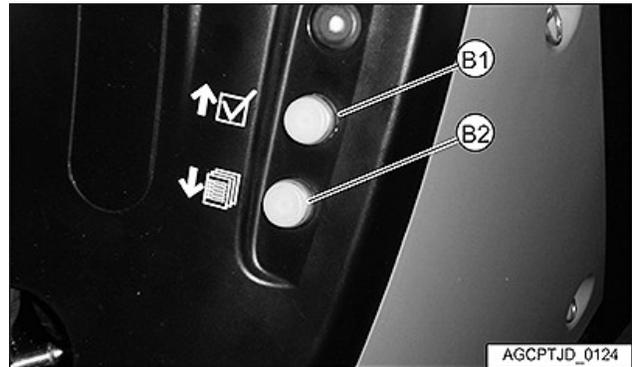


QGNA0332—UN—02NOV15

RA84036,000175C-19-08OCT18

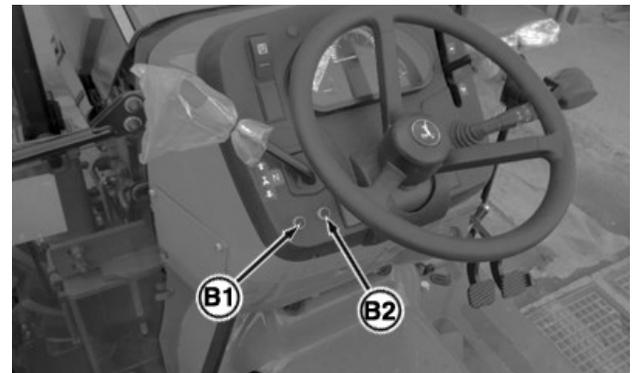
## User Menu

Accessing the menu:



(5GV, 5GN)

AGCPTJD0124—UN—02NOV15



(5GL)

PY42803—UN—02JUL17

**NOTE:** Stop the tractor and engage the park brake before accessing the menu. The menu is automatically closed if the tractor moves.

Functions of buttons		
	B1	B2
Pressed for less than 0.3 seconds	Navigate upward	Navigate downward
Pressed for 1 second or longer	Confirm entry	Access and exit the sub menu (pages)

To access the menu: With the key switch in ON position, press and hold the button (B2) for 1 second.

To navigate to pages: Press button (B1) or (B2) to switch between the different pages.

To exit the menu: Press (B1) and (B2) simultaneously for 1 second.

**Available pages:**

A - LANGUAGE

B - UNIT

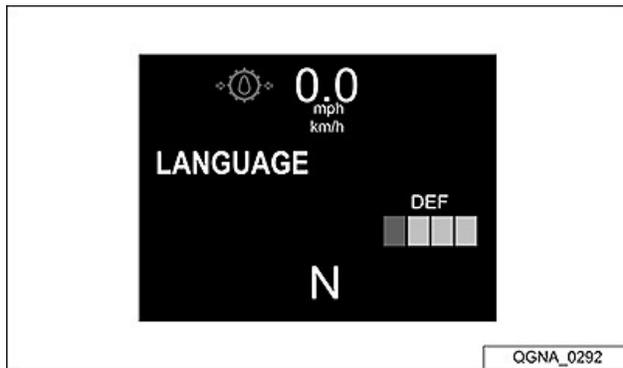
C - TRANSMISSION ERRORS

D - ENGINE ERRORS

E - DPF (5075 models only)

F - HC STRATEGY INHIBITION (5090/5100 models only)

G - PTO SETTINGS



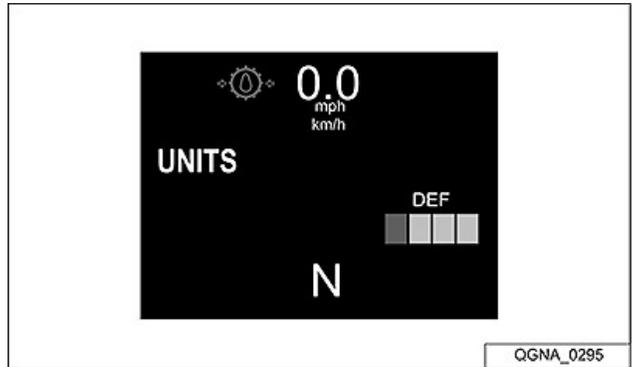
QGNA0292—UN—02NOV15

**A - LANGUAGE:** Press button (B1) or (B2) and navigate to the LANGUAGE page.

Default language is English. Press button (B2) for 1 second to access the page, then use buttons (B1) or (B2) to select the desired language.

Press button (B1) for 1 second to confirm selection. An arrow appears next to the newly selected language.

Press button (B2) 1 second and return to the menu.



QGNA0295—UN—02NOV15

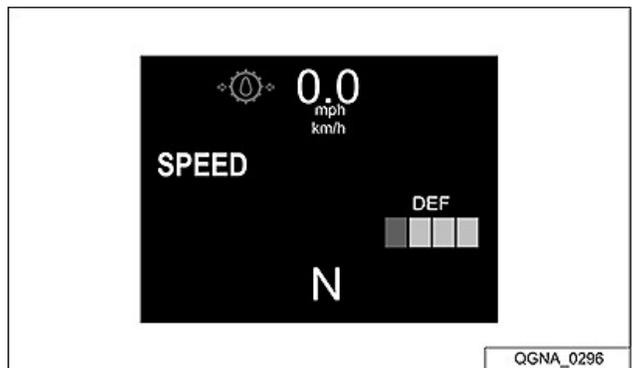
**B - UNIT SETTINGS:** Press button (B1) and navigate to the UNIT SETTINGS page. Press button (B2) for 1 second to access the page.

Use the buttons (B1) and (B2) to switch between the units. Select unit to be changed by pressing (B1) for 1 second. An arrow appears next to the unit to mark the current selection. Select unit with button (B1) or (B2). Press button (B1) for 1 second to confirm the input.

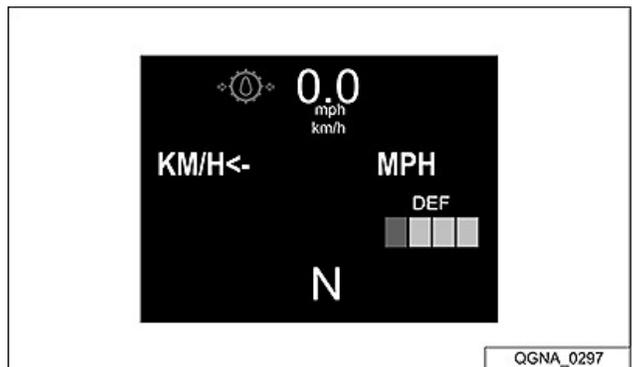
Repeat procedure for all other units.

Press button (B2) for 1 second to exit the page.

B - UNIT SETTINGS:	Unit 1	Unit 2
a) SPEED	km/h	mph
b) TEMPERATURE	°C	°F
c) ENGINE POWER	kW	hp



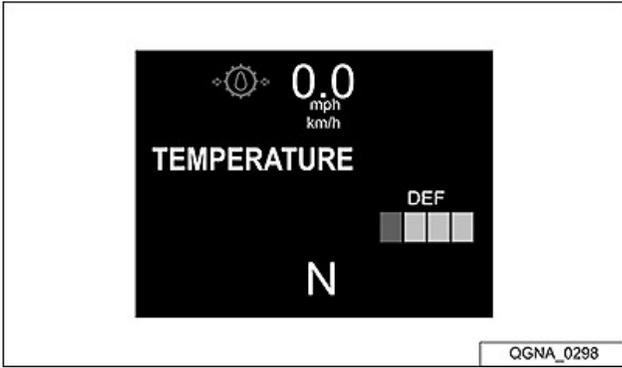
QGNA0296—UN—02NOV15



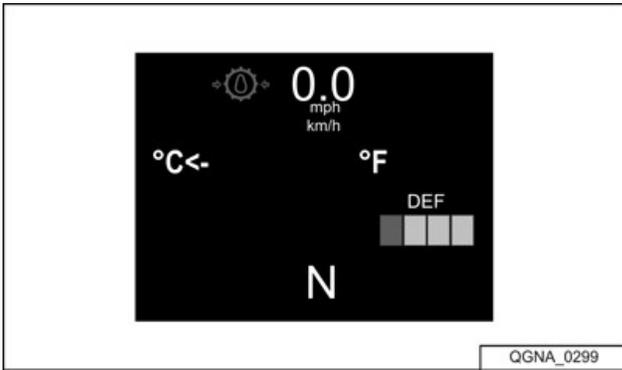
QGNA0297—UN—02NOV15

**B.a) SPEED:** Select unit to be changed by pressing (B1) for 1 second. An arrow appears next to the unit to mark

the current selection. Select unit with button (B1) or (B2). Press button (B1) for 1 second to confirm the input and to exit the page.

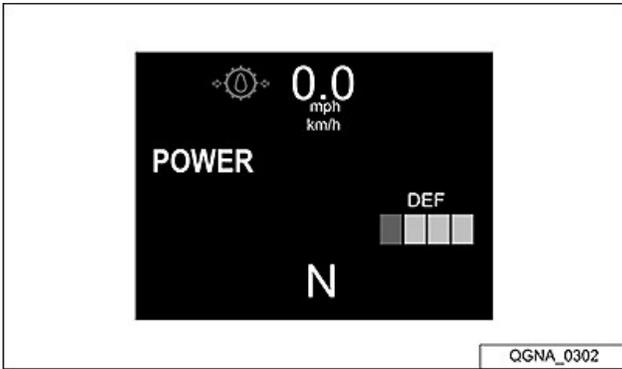


QGNA0298—UN—02NOV15

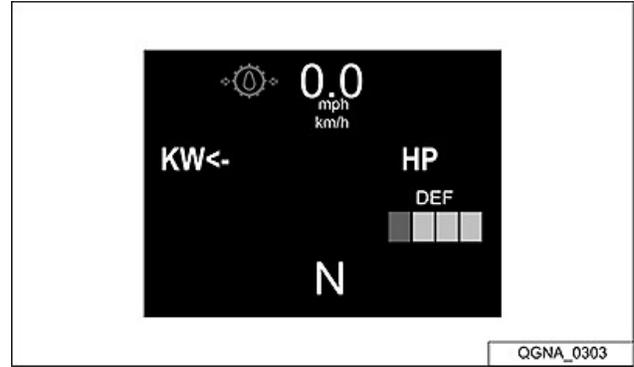


QGNA0299—UN—11JAN16

**B.b) TEMPERATURE:** Select unit to be changed by pressing (B1) for 1 second. An arrow appears next to the unit to mark the current selection. Select unit with button (B1) or (B2). Press button (B1) for 1 second to confirm the input and to exit the page.

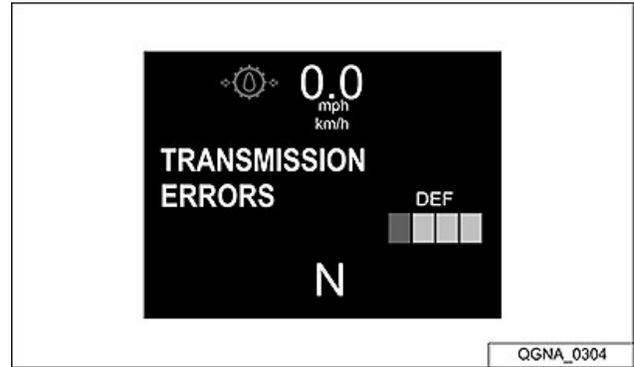


QGNA0302—UN—02NOV15

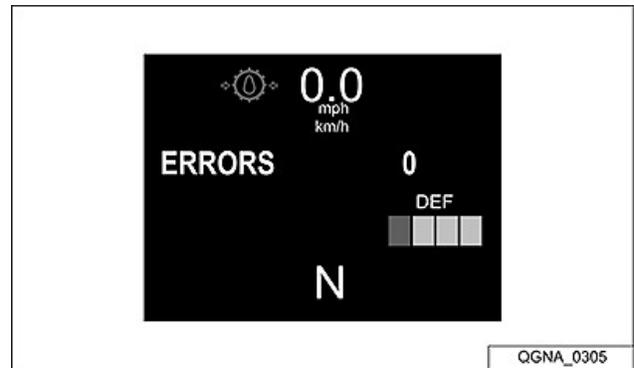


QGNA0303—UN—02NOV15

**B.c) POWER:** The display mode of the power expressed by the PTO. It is calculated as a product of the torque detected by the torque meter (hp is the default setting). Select unit to be changed by pressing (B1) for 1 second. An arrow appears next to the unit to mark the current selection. Select unit with button (B1) or (B2). Press button (B1) for 1 second to confirm the input and to exit the page.



QGNA0304—UN—02NOV15

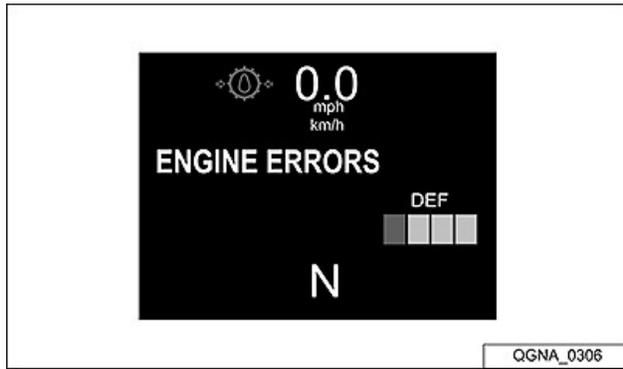


QGNA0305—UN—02NOV15

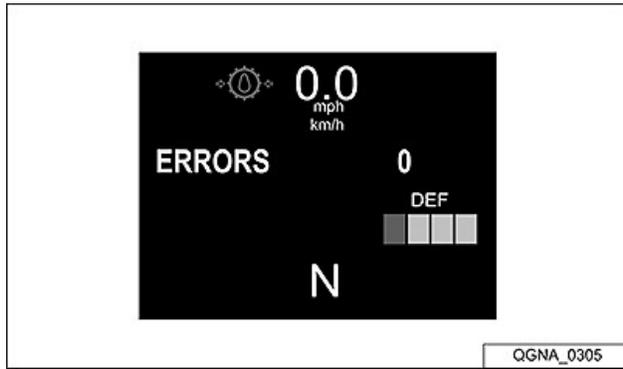
**C - TRANSMISSION ERRORS:**

1. Access the menu and press (B1) or (B2) until the Transmission Error Sub Menu is displayed.
2. Transmission Errors Sub Menu: Once in this menu, the message X ERRORS appears, with X indicating the number of errors active at that moment.
3. If errors are present, it is possible to access the list by pressing and holding button B1 for 1 second. Press buttons B1 or B2 and scroll through the list of errors.

By pressing and holding B2 for 1 second, the operator returns to the user menu.



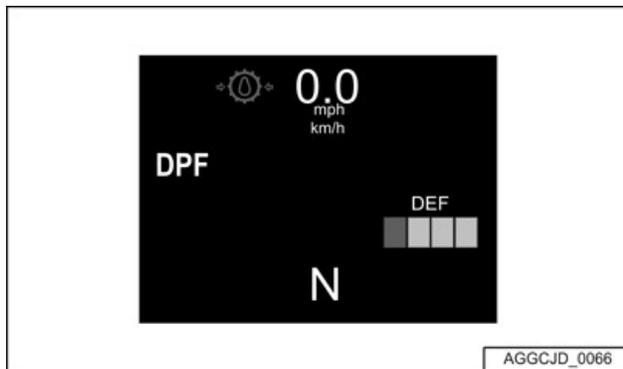
QGNA0306—UN—02NOV15



QGNA0305—UN—02NOV15

**D - ENGINE ERRORS:**

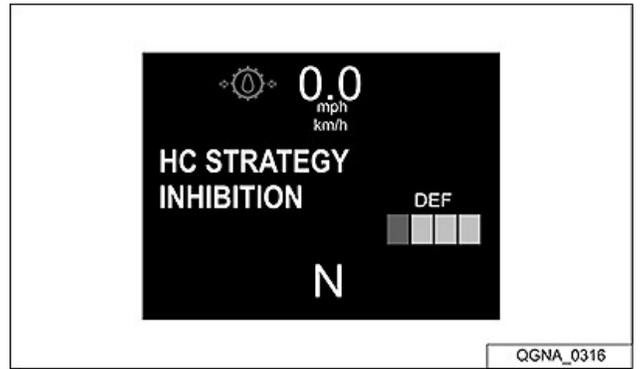
1. Access the menu and press (B1) or (B2) until the Engine Error Sub Menu is displayed.
2. Engine Errors Sub Menu: Once in this menu, the message X ERRORS appears, with X indicating the number of errors active at that moment.
3. If errors are present, it is possible to access the list by pressing and holding button B1 for 1 second. Press buttons B1 or B2 and scroll through the list of errors. By pressing and holding B2 for 1 second, the operator returns to the user menu.



AGGCJD0066—UN—12JAN16

**E - DPF Sub Menu:**  
(5075 models only)

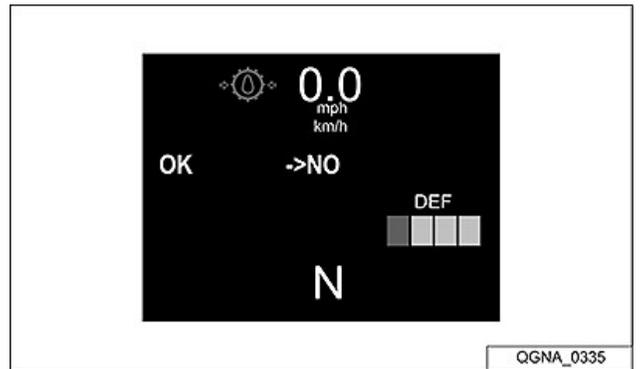
See Access the DPF Menu on the Digital Display in the Digital Display (Section 30C) of this manual.



QGNA0316—UN—02NOV15

**F - HC STRATEGY INHIBITION Sub Menu: (5090/5100 models only)**

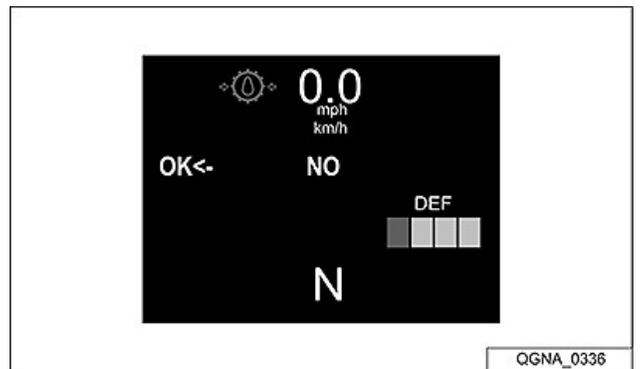
Due to default settings, no information is shown on the display since the function is active.



QGNA0335—UN—02NOV15

**NO = NO INHIBITION**

Engine low idle increasing strategy for HC accumulation is enabled. The engine speed increases independently by the ECU, when the HC accumulation level exceeds a threshold.



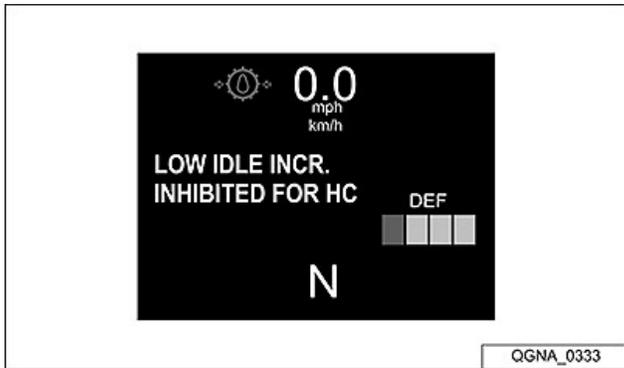
QGNA0336—UN—02NOV15

**OK = IHIBITION**

Engine low idle increasing strategy for HC accumulation is inhibited. The engine speed increases independently by the ECU.

**IMPORTANT: Set this function only if strictly needed and not longer as necessary.**

*NOTE: This function will be automatically set to "NO INHIBITION" after each engine restart.*



QGNA0333—UN—02NOV15

The following message appears on the display when the function is activated.

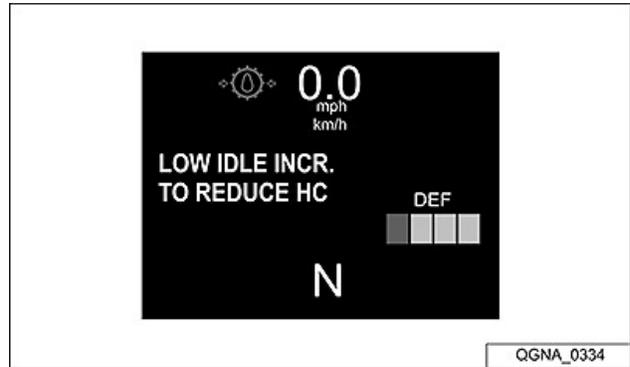
LOW IDLE INCR.  
INHIBITED FOR HC

The message appears in 2 minutes intervals.



AGGCJD0068—UN—10MAR16

*NOTE: Do not inhibit the enhancement of the low idle for longer time periods. When the message "Low Idle Incr. Desired" appears on the display, inhibition must be removed by selecting the "NO" option in the "HC Strategy Inhibition" sub menu.*

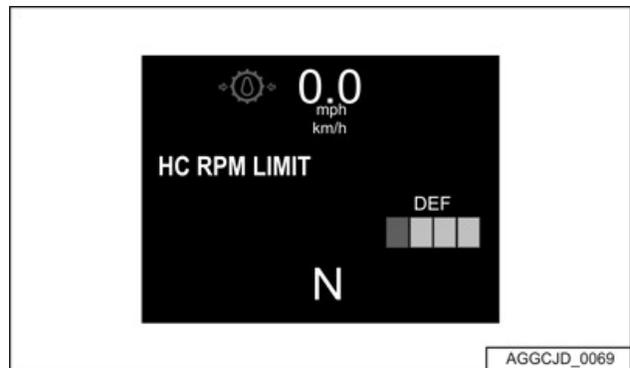


QGNA0334—UN—02NOV15

If the function is not activated, the following message appears:

LOW IDLE INCR.  
TO REDUCE HC

This message informs the operator that the engine changes the minimum engine speed (up to 1100 1/min) in order to respect anti-pollution parameters.



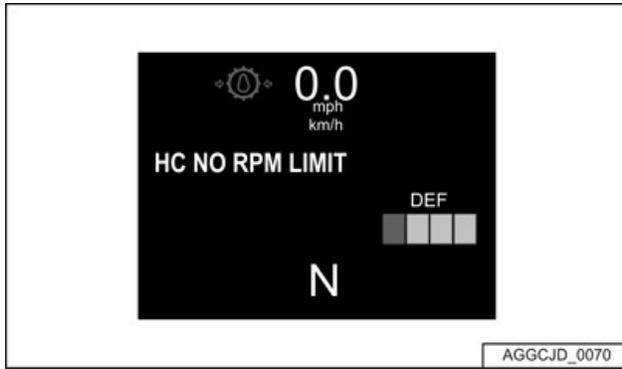
AGGCJD0069—UN—10MAR16

The following message appears on the display: HC RPM LIMIT

This indicates that the ECU commands the engine speed to level up to 1100 1/min (recovery procedure).

If HC value decreases, the following message appears: HC NO RPM LIMIT

This message informs the operator that the ECU exits from the recovery procedure. The engine speed will be limited to 1100 1/min until the next engine restart (engine OFF/ON).



AGGCJD0070—UN—10MAR16

When HC value decreases, the following message appears: HC NO RPM LIMIT

This indicates that the ECU has stopped the recovery procedure. The engine speed is still limited to 1100 1/ min until the next restart of the engine (OFF/ON).

**G - PTO SETTING:**

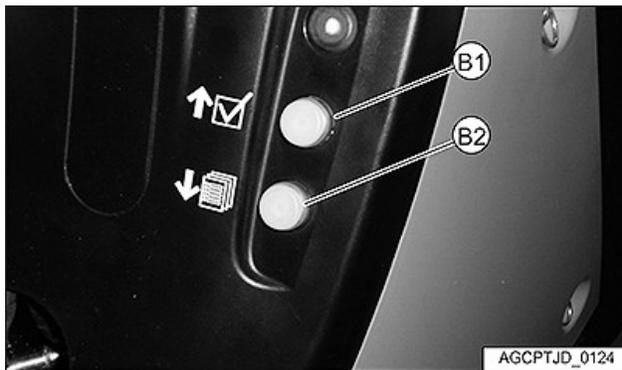
*NOTE: PTO SETTING is a menu which is used by the dealer only if calibrations are required.*

RA84036,000175D-19-08OCT18

**Digital Display - Initial Setup (Matching with Tractor)**

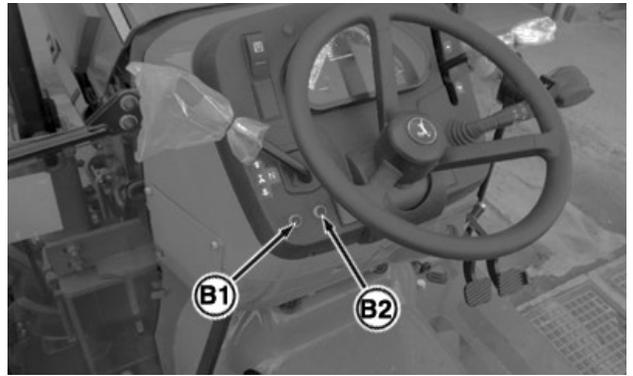
*NOTE: The initial setup is required to align the control unit settings with the tractor configuration. If malfunctions occur have the settings checked by your John Deere Dealer.*

**Accessing the Setup Menu**

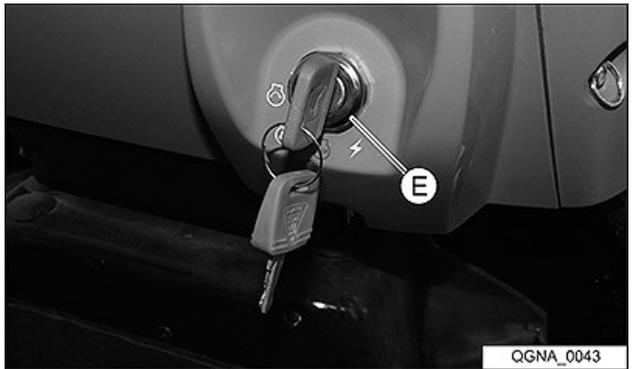


AGCPTJD0124—UN—02NOV15

(5GV, 5GN)

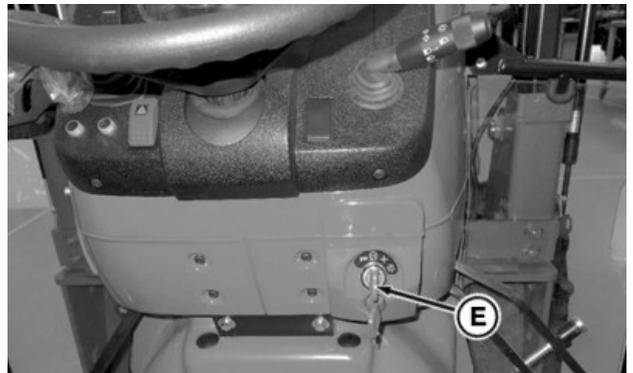


(5GL)



QGNA0043—UN—02NOV15

(5GV, 5GN)



(5GL)

- B1—Program Button
- B2—Program Button
- E—Key

*NOTE: Stop the tractor and engage the park brake before accessing the menu.*

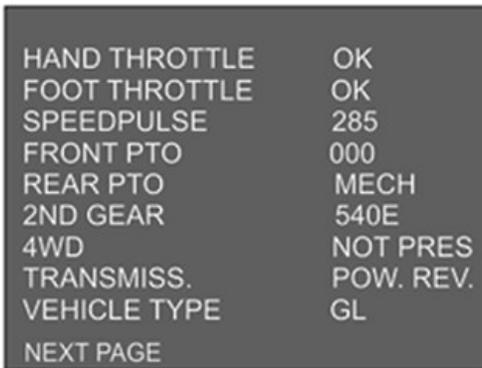
*The menu is automatically closed if the tractor moves.*

Functions of buttons		
	B1	B2
Pressed for less than 0.3 seconds	Navigate upward	Navigate downward

Functions of buttons		
Pressed for 1 second or longer	Confirm entry	Access and exit the sub menu (pages)

- 1.To access the initial setup menu, press and hold the buttons (B1) and (B2) simultaneously, then turn key switch in ON position.
- 2.After entering the initial setup menu, use the buttons (B1) and (B2) to select the relevant sub menu. Press and hold button (B2) for 1 second to access the selected sub menu.
- 3.Press (B1) and (B2) simultaneously for 1 second to exit the initial setup menu.

**Initial Setup Menu — Menu presentation**



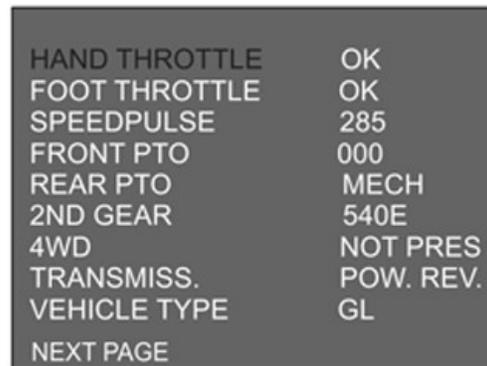
APY05081—UN—16APR18



APY12305—UN—18OCT18

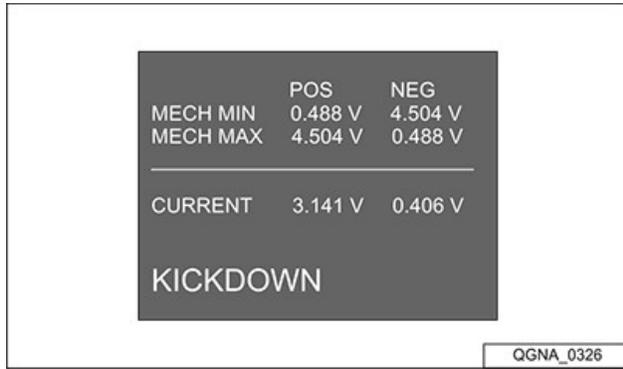
Initial Setup Menu	
	electrohydraulic PowrReverser <b>MEC</b> - tractors with mechanic PowrReverser
Type of Vehicle	<b>Standard Orchard Vineyard</b>
Fuel Tank (input number depending on the tractor model & options)	<b>412584</b> - 5075 model with Front PTO <b>412591</b> - 5075 model without Front PTO <b>437272</b> - 5090 and 5100 models with Front PTO <b>437262</b> - 5090 and 5100 models without Front PTO
TCE (EHS - Electronic Hitch Sensing)	<b>Not present</b> - tractor not equipped with EHS <b>Present</b> - tractor equipped with EHS
H4 Lights (additional working lights)	<b>Not present</b> - tractor not equipped with worklights <b>Present</b> - tractor equipped with worklights
Hyd BOSCH (electrohydraulic SCVs)	<b>Not present</b> - tractor not equipped with electrohydraulic SCVs <b>Present</b> - tractor equipped with electrohydraulic SCVs
Damper	Possible setups are: <b>465589</b> - If tractor is equipped with the NEW clutch damper. <b>426097</b> - If tractor is equipped with the OLD clutch damper. <b>MECH</b> - If tractor is equipped with mechanical transmission.

**HAND THROTTLE**

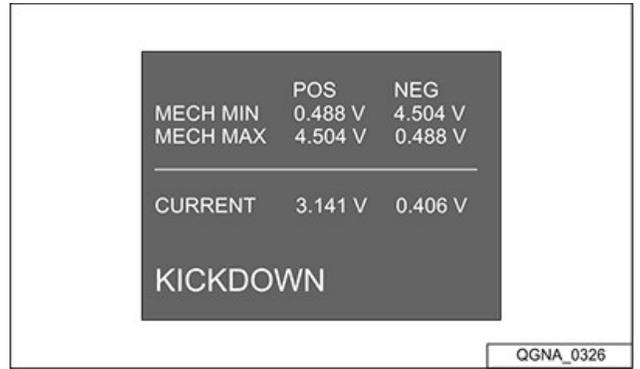


APY05082—UN—16APR18

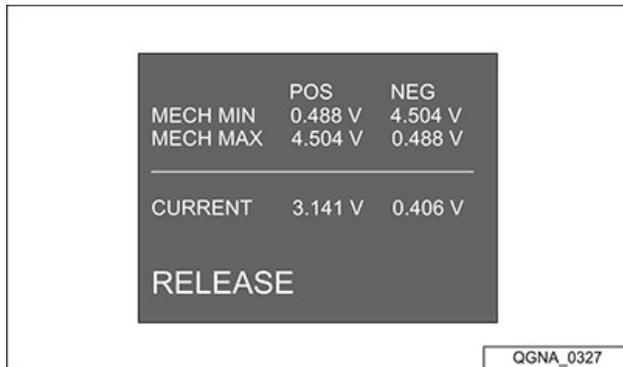
Initial Setup Menu	
SUB MENU	SETTINGS
Hand Throttle (calibration)	Follow instructions of display
Foot Throttle (calibration)	Follow instructions of display
Speed Pulse (parameter depending on tires)	Note: Find input parameter in the tire size overview.
Front PTO Ratio	Input three digits - xxx
Rear PTO (gear selection)	<b>MEC</b> - mechanically actuated <b>HYD</b> - hydraulically actuated
Second Gear (rear PTO with 540E speed)	Input <b>540E</b>
4WD (front-wheel drive)	<b>Not present</b> - tractor not equipped with MFWD <b>Present</b> - tractor equipped with MFWD
Reverser (type of transmission)	<b>POW</b> - tractors with



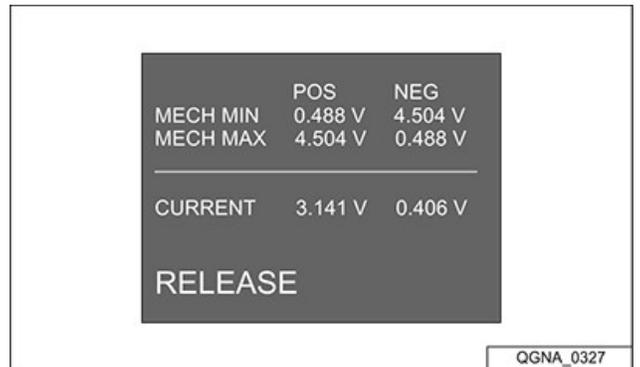
QGNA0326—UN—02NOV15



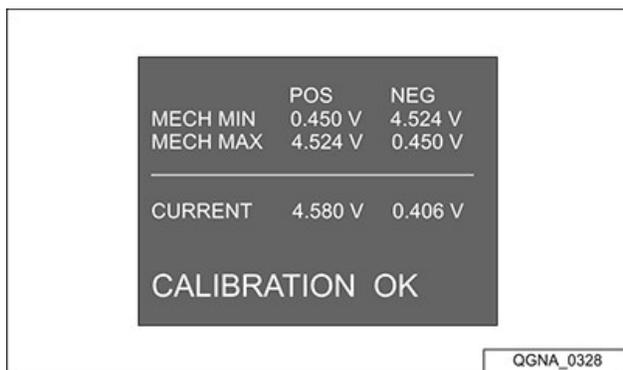
QGNA0326—UN—02NOV15



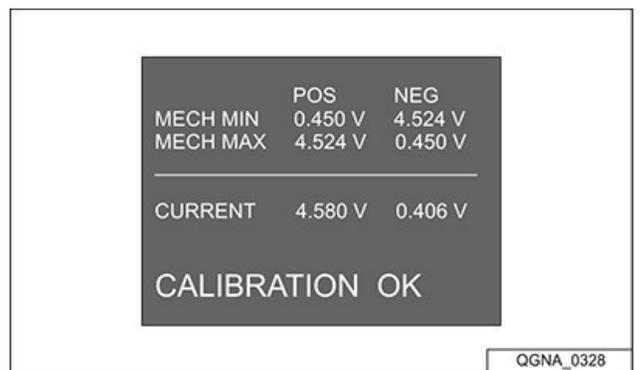
QGNA0327—UN—02NOV15



QGNA0327—UN—02NOV15



QGNA0328—UN—02NOV15



QGNA0328—UN—02NOV15

For the hand throttle calibration, follow the messages on the display. Fully press and release the hand throttle 4 times. Calibration is completed when CALIBRATION OK is displayed.

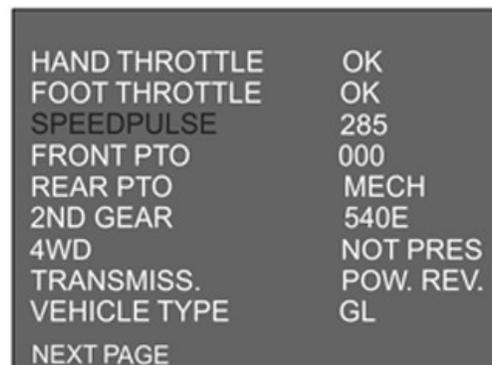
For the foot throttle calibration, follow the messages on the display. Fully press and release the hand throttle 4 times. Calibration is completed when CALIBRATION OK is displayed.

**FOOT THROTTLE**

**SPEED PULSE**



APY05083—UN—16APR18



APY05084—UN—16APR18

## Digital Display

The output of the speed sensor is impulses depending on the wheel rpm. For the travel speed calculation, it is important to enter parameter accordingly to the correct tire size.

After accessing the speed pulse menu, the first (left side) digit flashes. The entry can be changed by using buttons (B1) and (B2). To confirm the entry press and hold button B1 longer than 1 second (the next digit begins flashing). To skip digits without changing it,

simply press and hold (B1) longer than 1 second (the next digit begins flashing).

With the final digit (right side) flashing, press, and hold (B1) for 1 second to start over with the first digit.

*NOTE: To exit the submenu at any time press and hold button B2 for 1 second.*

Select Appropriate Tire Size				Rolling circumference (m)	Input Parameter Accordingly to Tractor	
Rear Tires					30 km/h	40 km/h
320/70-R20	11.2-R20	280/85-R20	—	2.955	361	287
360/70-R20	12.4-R20	320/85-R20	—	3.128	341	271
380/70-R20	—	—	—	3.225	331	263
320/70-R24	11.2-R24	280/85-R24	—	3.285	325	258
360/70-R24	12.4-R24	320/85-R24	—	3.423	311	247
9.5-R28	250/85-R28	—	—	3.402	313	249
380/70-R24	13.6-R24	340/85-R24	—	3.566	299	237
320/70-R28	11.2-R28	280/85-R28	—	3.585	297	236
480/65-R24	—	—	—	3.68	290	230
420/70-R24	14.9-R24	380/85-R24	—	3.714	287	228
360/70-R28	12.4-R28	320/85-R28	—	3.743	285	226
380/70-R28	13.6-R28	340/85-R28	—	3.87	275	219
480/70-R24	16.9-R24	420/85-R24	13.6-R28	3.921	272	216
480/65-R28	—	—	—	3.98	268	213
420/70-R28	14.9-R28	380/85-R28	—	4.057	263	209
420/70-R30	14.9-R30	380/85-R30	—	4.214	253	201
480/70-R28	16.9-R28	420/85-R28	—	4.235	252	200
12.4-R36	320/85-R36	—	—	4.362	244	194
540/65 R30	—	—	—	4.39	243	193
480/70-R30	16.9-R30	420/85-R30	—	4.423	241	191
480/70-R34	16.9-R34	420/85-R34	—	4.729	225	179
18.4-R26	—	—	—	4.285	249	198
18.4-R34	13.6-R38	—	—	4.838	220	175
16.9-R38	—	—	—	4.995	213	170
1/23/2026	—	—	—	4.805	222	176
15.5 - R38	—	—	—	4.712	226	180
18.4-R30	—	—	—	4.629	230	183

### FRONT PTO Ratio

HAND THROTTLE	OK
FOOT THROTTLE	OK
SPEEDPULSE	285
FRONT PTO	000
REAR PTO	MECH
2ND GEAR	540E
4WD	NOT PRES
TRANSMISS.	POW. REV.
VEHICLE TYPE	GL
NEXT PAGE	

After accessing the front PTO ratio menu, the first (left side) digit flashes. The entry can be changed by using buttons (B1) and (B2). To confirm the entry press and hold button B1 longer than 1 second (the next digit begins flashing). To skip digits without changing it, simply press and hold (B1) longer than 1 second (the next digit begins flashing).

With the final digit (right side) flashing, press, and hold (B1) for 1 second to start over with the first digit.

*NOTE: During normal operation, these digits show the value of the rear PTO if active. Otherwise it does not appear.*

*NOTE: To exit the submenu at any time press and hold button B2 for 1 second.*

**4WD**

**REAR PTO**

HAND THROTTLE	OK
FOOT THROTTLE	OK
SPEEDPULSE	285
FRONT PTO	000
REAR PTO	MECH
2ND GEAR	540E
4WD	NOT PRES
TRANSMISS.	POW. REV.
VEHICLE TYPE	GL
NEXT PAGE	

APY05086—UN—16APR18

It is possible to move from one option to another using buttons B1 and B2.

Options are:

**MECH**

**HYDR**

Select the required option and confirm by pressing button B1 for 1 second. Press and hold button B2 for 1 second to exit the sub menu.

**2ND GEAR**

HAND THROTTLE	OK
FOOT THROTTLE	OK
SPEEDPULSE	285
FRONT PTO	000
REAR PTO	MECH
2ND GEAR	540E
4WD	NOT PRES
TRANSMISS.	POW. REV.
VEHICLE TYPE	GL
NEXT PAGE	

APY05087—UN—16APR18

It is possible to move from one option to another using buttons B1 and B2.

Option:

**540E**

Select the required option and confirm by pressing button B1 for 1 second. Press and hold button B2 for 1 second to exit the sub menu.

HAND THROTTLE	OK
FOOT THROTTLE	OK
SPEEDPULSE	285
FRONT PTO	000
REAR PTO	MECH
2ND GEAR	540E
4WD	NOT PRES
TRANSMISS.	POW. REV.
VEHICLE TYPE	GL
NEXT PAGE	

APY05088—UN—16APR18

It is possible to move from one option to another using buttons B1 and B2.

Options are:

**NOT PRES** - tractor is not equipped with MFWD

**PRES** - tractor is equipped with MFWD

Select the required option and confirm by pressing button B1 for 1 second. Press and hold button B2 for 1 second to exit the sub menu.

**TRANSMISS.**

HAND THROTTLE	OK
FOOT THROTTLE	OK
SPEEDPULSE	285
FRONT PTO	000
REAR PTO	MECH
2ND GEAR	540E
4WD	NOT PRES
TRANSMISS.	POW. REV.
VEHICLE TYPE	GL
NEXT PAGE	

APY05089—UN—16APR18

HAND THROTTLE	OK
FOOT THROTTLE	OK
SPEEDPULSE	285
FRONT PTO	000
REAR PTO	MECH
2ND GEAR	540E
4WD	NOT PRES
TRANSMISS.	POW. REV.
VEHICLE TYPE	STANDARD
NEXT PAGE	

QGNA\_0324

QGNA0324—UN—02NOV15

It is possible to move from one option to another using buttons B1 and B2.

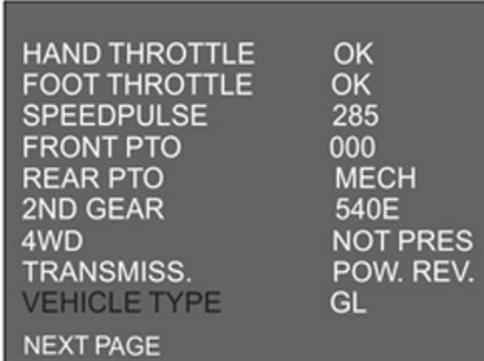
Options are:

**POW. REV.** - Tractors with the electrohydraulic power reverser

**MEC** - Tractors with the mechanical power reverser

Select the required option and confirm by pressing button B1 for 1 second. Press and hold button B2 for 1 second to exit the submenu.

**VEHICLE TYPE**



APY05090—UN—16APR18

It is possible to move from one option to another using buttons B1 and B2.

Options are:

**GL**

**ORCHARD**

**VINEYARD**

Select the required option and confirm by pressing button B1 for 1 second. Press and hold button B2 for 1 second to exit the sub menu.

*NOTE: 1) During the next setup, the display returns to the values stored previously.*

*2) All the set parameters are suggested simultaneously. The number flashes (which is being modified).*

*3) The operator can leave the sub menu at any time.*

**FUEL TANK**



APY11007—UN—01NOV18

It is possible to move from one option to another using buttons B1 and B2.

Options are:

**412584** - 5075 model with Front PTO

**412591** - 5075 model without Front PTO

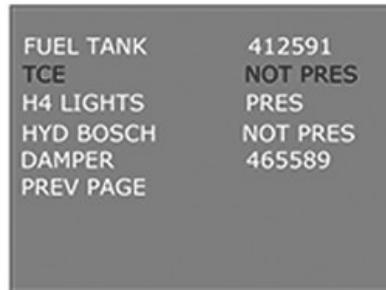
**437272** - 5090 and 5100 models with Front PTO

**437262** - 5090 and 5100 models without Front PTO

**452262** - 5075 model 5GL only

Select the required option and confirm by pressing button B1 for 1 second. Press and hold button B2 for 1 second to exit the sub menu.

**TCE (EHS - Electronic Hitch Sensing)**



APY11008—UN—01NOV18

It is possible to move from one option to another using buttons B1 and B2.

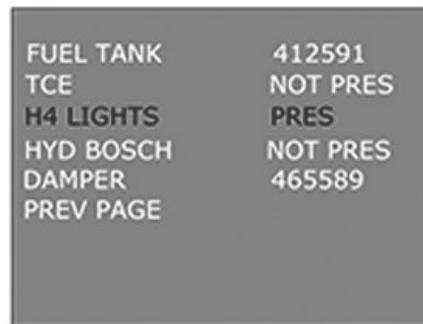
Options are:

**NOT PRES** - tractor is not equipped with EHS

**PRES** - tractor is equipped with EHS

Select the required option and confirm by pressing button B1 for 1 second. Press and hold button B2 for 1 second to exit the sub menu.

**H4 LIGHTS (Additional H4 Farm Headlights)**



APY11009—UN—01NOV18

It is possible to move from one option to another using buttons B1 and B2.

Options are:

**NOT PRES** - tractor is not equipped with the additional farm head lights

**PRES** - tractor is equipped with the additional farm head lights

Select the required option and confirm by pressing button B1 for 1 second. Press and hold button B2 for 1 second to exit the sub menu.

**HYD BOSCH (Electrohydraulic SCVs)**



APY11010—UN—01NOV18

It is possible to move from one option to another using buttons B1 and B2.

Options are:

**NOT PRES** - tractor is not equipped with electrohydraulic SCVs

**PRES** - tractor is equipped with electrohydraulic SCVs

Select the required option and confirm by pressing button B1 for 1 second. Press to exit the submenu.

*NOTE: Remember to save the changes before exiting the menu (press B1 for 1 second).*

To leave the setup menu, press and hold button B2, B1 (t2), and B2 (t2) for 1 second. The message END appears at the center of the screen with 16 digits. A power latch (key-off, key-on) is recommended after setting.

**DAMPER**



APY11011—UN—01NOV18

It is possible to move from one option to another using buttons B1 and B2.

Options are:

**465589** - If tractor is equipped with the NEW clutch damper.

**426097** - If tractor is equipped with the OLD clutch damper.

**MECH** - If tractor is equipped with Mechanical transmission.

Select the required option and confirm by pressing button B1 for 1 second. Press to exit the sub menu.

*NOTE: Remember to save the changes prior to exit the menu (press B1 for 1 second).*

To leave the setup menu, turn the key OFF.

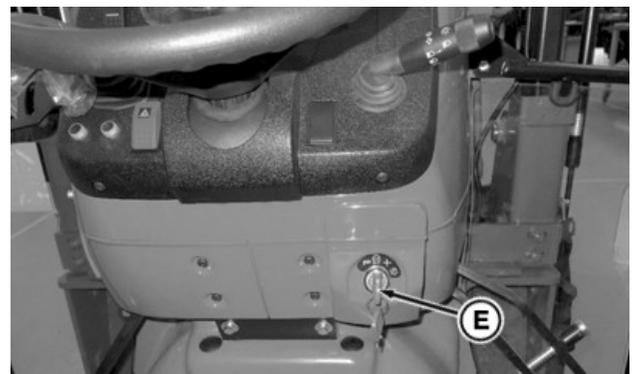
RA84036,000175E-19-01NOV18

**Oil Service Message Reset**



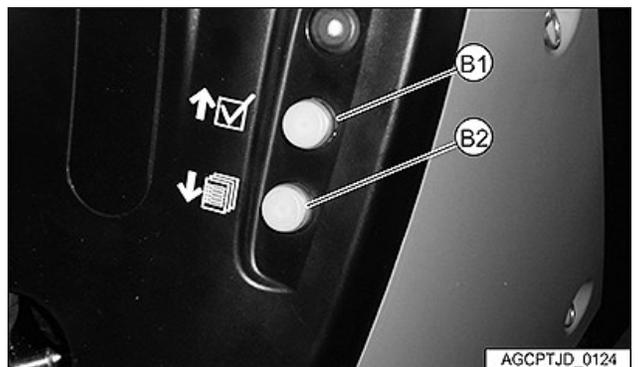
QGNA0043—UN—02NOV15

(5GV, 5GN)



PY42851—UN—03JUL17

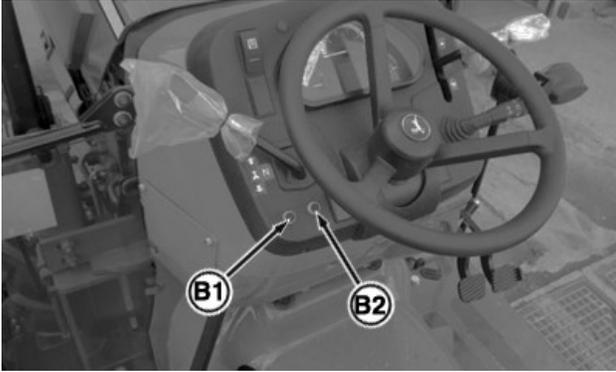
(5GL)



AGCPTJD\_0124

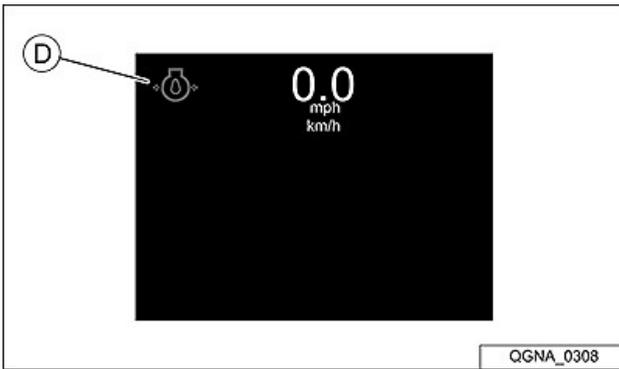
AGCPTJD0124—UN—02NOV15

(5GV, 5GN)



PY42803—UN—02JUL17

(5GL)



QGNA\_0308

QGNA0308—UN—02NOV15

- B1—Program Button**
- B2—Program Button**
- D—Icon**
- E—Key**

After changing the engine oil, it is necessary to reset the timer of the oil life-time monitoring system.

Proceed as follows to reset the timer:

1. Turn the key (E) in the ON position without starting the engine.
2. Wait 6 seconds.
3. Press and hold the buttons (B1) and (B2) for at least 15 seconds.
4. At the end of the 15 seconds, icon (D) begins flashing and the buzzer sounds for a short time to indicate the end of the procedure.
5. At this point, you can use the tractor normally.

*NOTE: The procedure can be performed only once in the same trip. A further attempt has no effect on the timer.*

RA84036.000175F-19-08OCT18

# Drive Train

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## Drive System - Overview

- Front-Wheel Drive
- Differential lock
- Brakes
- Transmission - General Information
- PowrReverser Transmission (24-12)

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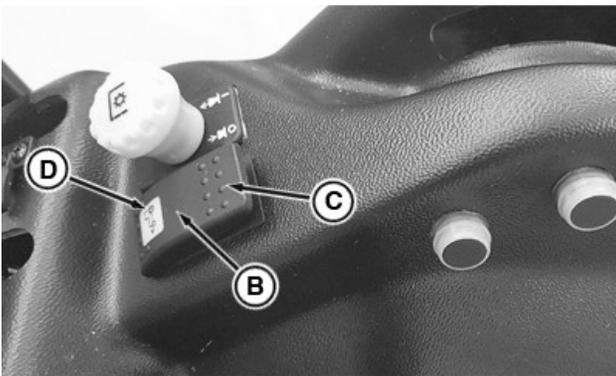
RA84036,0001730-19-27SEP18

# Front-Wheel Drive

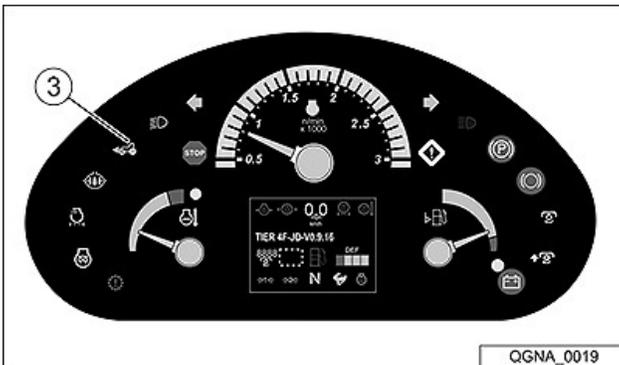
## Operate Front-Wheel Drive



(5GV, 5GN) PY34589—UN—15FEB17



(5GL) APY01826—UN—27DEC17



QGNA\_0019  
QGNA0019—UN—02NOV15

- B—Front-Wheel Drive Switch
- C—Switching ON the Front-Wheel Drive
- D—Switching OFF the Front-Wheel Drive
- 3—Front-Wheel Drive Indicator Light

Use front-wheel drive as required for better traction.

**CAUTION:** Front-wheel drive greatly increases traction. When this option is used, extra caution is needed on slopes. Compared to 2-wheel drive, a front-wheel drive tractor maintains traction on steeper slopes, increasing the possibility of a tip over.

When driving on icy, wet, or graveled surfaces, reduce speed and make sure that tractor is properly ballasted to avoid skidding and loss of steering control. For best control, engage front-wheel drive (if equipped).

**IMPORTANT:** To extend tire life, engage front-wheel drive only when needed. **DO NOT** engage front-wheel drive when driving at high speed on public roads.

**IMPORTANT:** Electro-hydraulically actuated front-wheel drive only:

The front-wheel drive can be engaged and disengaged in all gears (forward and reverse) on-the-go and under load without using the clutch. Anticipate the need for front-wheel drive and make sure that neither of the rear wheels are slipping. Then engage or disengage when minimum torque is being used and the tractor is moving slowly.

When tractor speed exceeds 23 km/h (14 mph), the electro-hydraulically actuated front-wheel drive disengages automatically.

Press the front-wheel drive switch (B) to engage the front-wheel drive in position (C) and to disengage in position (D). Indicator light (3) glows when front-wheel drive is engaged.

*NOTE:* Once engaged, the 4WD mode remains active until disengaged, even if the engine has been shut down.

*NOTE:* When the brakes are applied, front-wheel drive cuts in automatically regardless of the position selected at the front-wheel drive switch. In this case, the indicator light (3) does not come on.

Keeping pressed the front-wheel drive switch (B) longer than 3 seconds allows the front-wheel drive to be engaged permanently, independently from vehicle speed and brakes usage. In this case, the message 4WD ON appears on the digital display for about 3 seconds; the indicator (3) glows until front-wheel drive is disengaged.

RA84036,0001763-19-08OCT18

# Differential Lock

## Use Differential Lock



(5GV, 5GN) PY34588—UN—15FEB17



(5GL) APY01825—UN—27DEC17

A—Switch

**CAUTION:** DO NOT operate tractor at high speed or turn the tractor when the differential lock is engaged.

**IMPORTANT:** To prevent damage to the power train, DO NOT engage differential lock when one wheel is spinning and the other is stopped.

When one wheel starts to lose traction, engage differential lock using the differential lock switch (A).

**IMPORTANT:** The electrohydraulic differential lock disengages when an individual brake pedal is pressed and engages again after the pedal has been released. Press differential lock switch (A) again and disengage the differential lock.

**When tractor speed exceeds 14 km/h (9 mph), the electrohydraulic differential lock disengages automatically.**

Unequal traction keeps the lock engaged. When traction equalizes, lock disengages itself by spring action. If lock does not disengage, depress one brake pedal and then the other.

If tires repeatedly slip, then get traction, then slip again, hold pedal in the engaged position.

RA84036,0001764-19-08OCT18

# Brakes

## Stop the Tractor

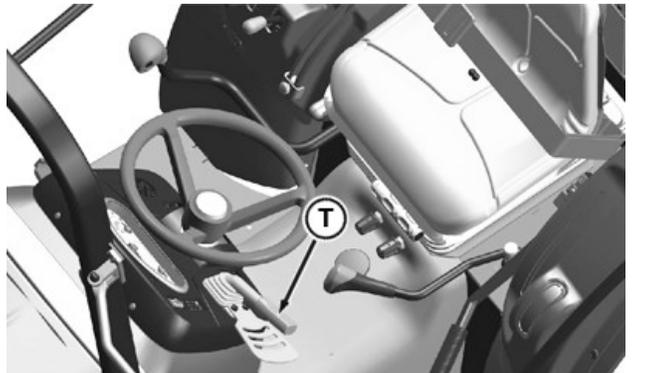


Reverse Drive Lever (mechanically actuated) (5GV, 5GN)

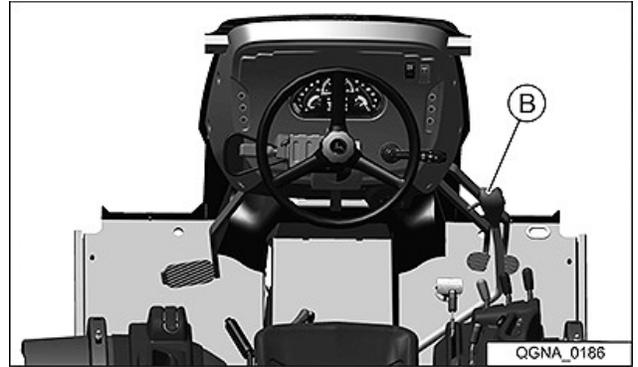


QGNA0181—UN—02NOV15

Reverse Drive Lever (electrically actuated) (5GV, 5GN)

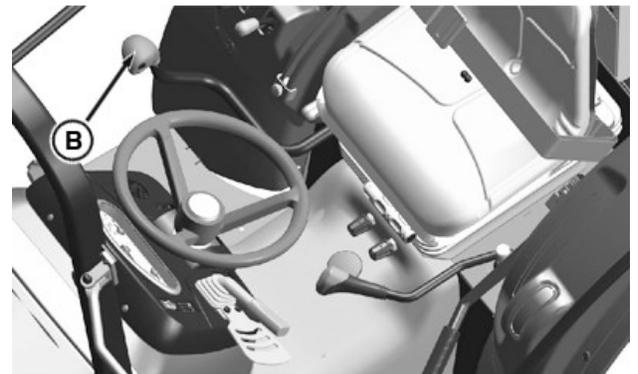


(5GL)



QGNA0186—UN—02NOV15

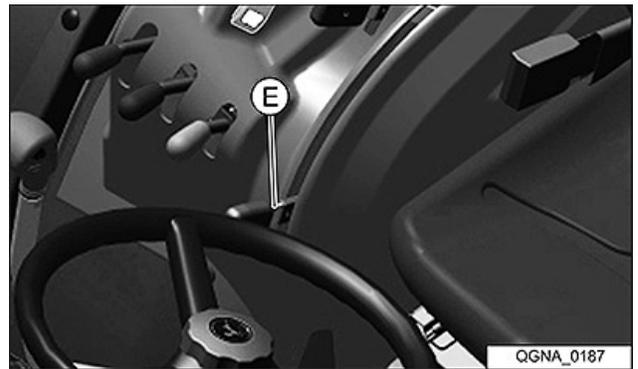
(5GV, 5GN)



(5GL)

### B—Gearshift Lever

3. Place gearshift lever (B) in neutral position.



QGNA0187—UN—02NOV15

### E—Hitch Control Lever

4. Lower equipment to the ground using hitch control lever (E).

### T—Reverse Drive Lever

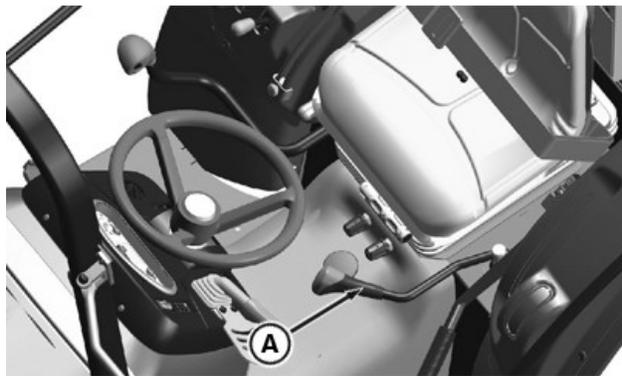
**⚠ CAUTION:** Always engage park brake before dismounting tractor. Leaving transmission in gear with engine stopped, without engaging the park brake, DOES NOT prevent tractor from moving.

1. Stop tractor by using the brakes.
2. Place reverse drive lever (T) in neutral position.



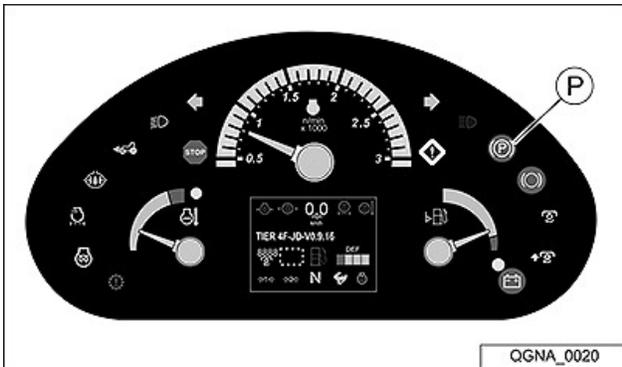
(5GV, 5GN)

QGNA\_0188 QGNA0188—UN—02NOV15



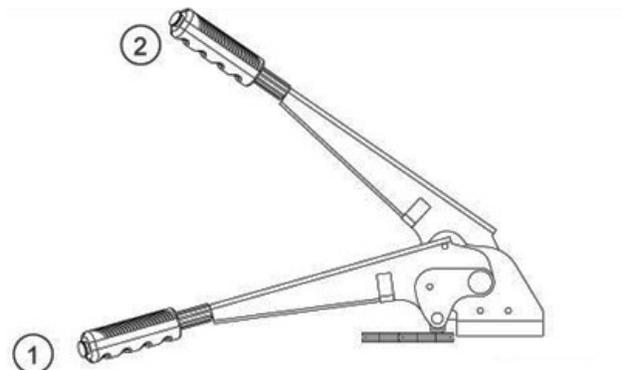
(5GL)

APY01829—UN—27DEC17



QGNA\_0020 QGNA0020—UN—02NOV15

5. Pull park brake lever (A) up to engage park brake. Lever locks in raised position and the park brake indicator light (P) will glow.



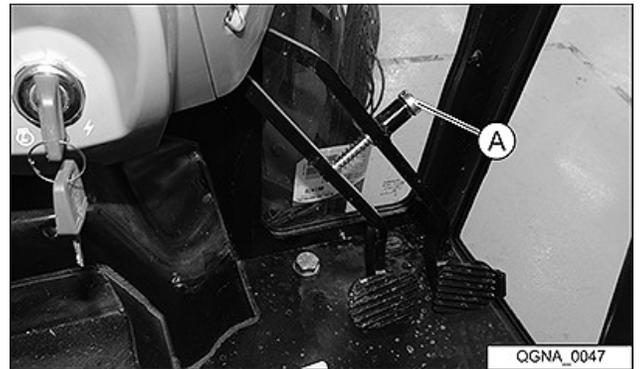
APY01830—UN—27DEC17

A—Park Brake Lever  
P—Park Brake Indicator Light

**IMPORTANT:** The park brake is correctly engaged only when it is locked in the upper position (2). Do not attempt to perform any regulation/adjustment to the park brake system. Have the system checked only by your authorized dealer.

RA84036,0001765-19-08OCT18

## Use Brakes



QGNA\_0047 QGNA0047—UN—02NOV15

A—Brake Pedal Locking Pin

**CAUTION:** Before driving the tractor on a public road, lock brake pedals together using locking pin (A). Use brake lightly and cautiously at transport speeds.

When negotiating sharp turns, use individual brake to assist steering. Disengage brake pedal locking pin (A) and depress only one brake pedal.

To stop the tractor, depress both brake pedals.

**IMPORTANT:** To prevent unnecessary wear, never ride the brakes by resting a foot on the pedals.

Reduce speed if towed load weighs more than the tractor and is not equipped with brakes. Avoid hard braking applications. Consult implement operator's manual for recommended transport speeds.

Use additional caution when transporting towed loads under adverse conditions, when turning, or stopping on inclines.

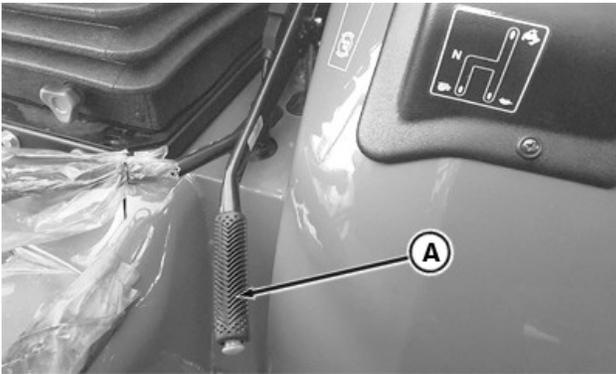
RA84036,0001766-19-08OCT18

## Park the Tractor

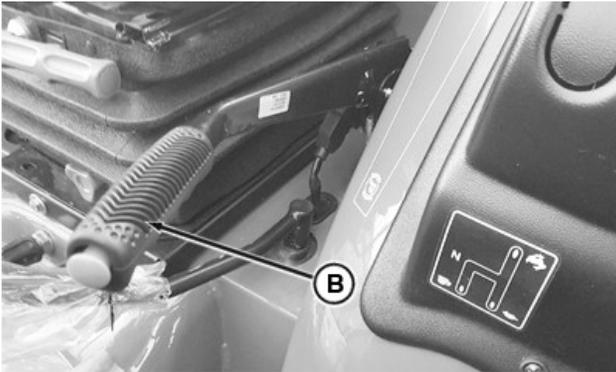
Apply the park brake when parking or operating the tractor from a stationary position.

RA84036,0001767-19-21JUN18

## Parking Brake



APY01831—UN—17JAN18



APY01832—UN—17JAN18

- A—Park Brake Lever Position (A)
- B—Park Brake Lever Position (B)

### Park brake lever is in OFF position (A) – Lever not engaged

Park brake is not engaged only when it is locked in the down position.

### Park brake lever is in ON position (B) - Lever engaged

Park brake is correctly engaged when it is locked on the first catch of the ratchet.

*NOTE: The park brake has an additional catch of the ratchet in upper position which compensates for park brake wear.*

Do not attempt to perform any regulation/adjustment to the park brake system. Have the system checked only by your authorized dealer.

RA84036,0001768-19-21JUN18

## Chock Block



L102664

L102664—UN—03JAN95

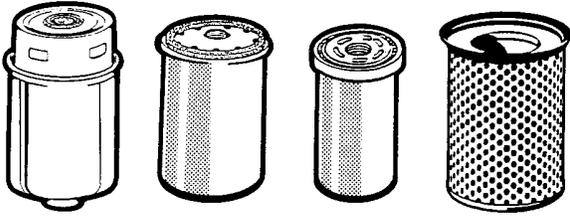
Place chock block in front of or behind rear wheel, when parking the tractor on sloping ground.

RA84036,0001769-19-21JUN18

# Transmission - General Information

## Reduce Fuel Consumption

### Service Correctly

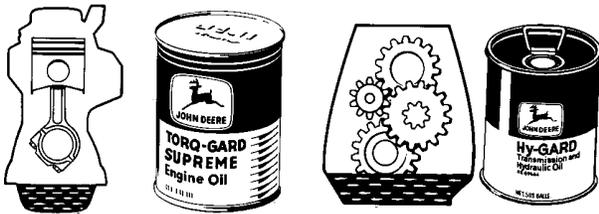


LX007829

LX007829—UN—15AUG94

Replace air cleaner element and fuel, engine oil, and transmission/hydraulic filter elements at specified service intervals. See Service Intervals (section 210B) in this manual.

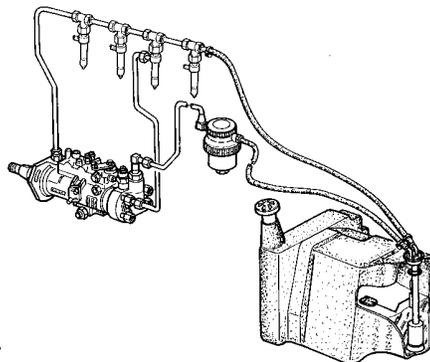
Use only John Deere filters.



L103 642

L103642—UN—15AUG94

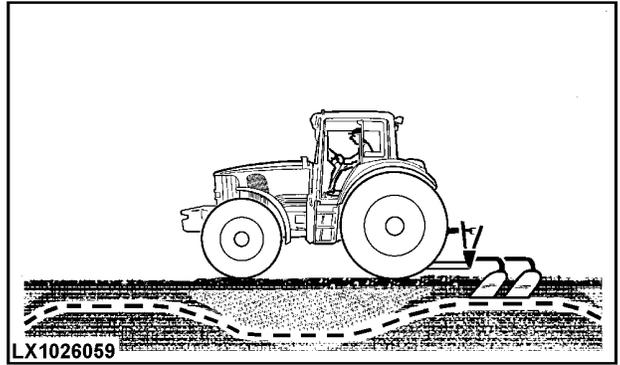
Use recommended oils and lubricants only. See Fuel, Lubricants, Hydraulic Oil, and Coolant (section 200) and Other Lubricants (section 200E) in this manual for specific recommendations.



LX000347

LX000347—UN—15AUG94

Have the fuel system checked regularly by your John Deere dealer.

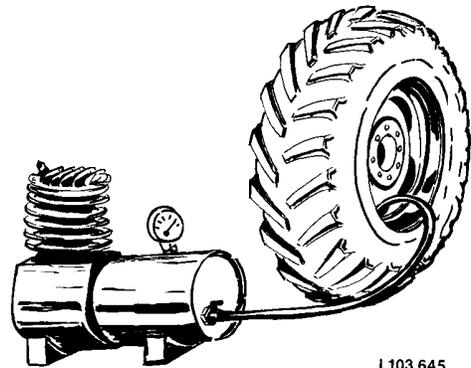


LX1026059

LX1026059—UN—18MAY01

Have the hitch control function checked regularly by your John Deere dealer.

## Drive with Correct Tire Pressure

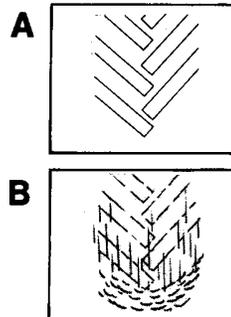


L103 645

L103645—UN—15AUG94

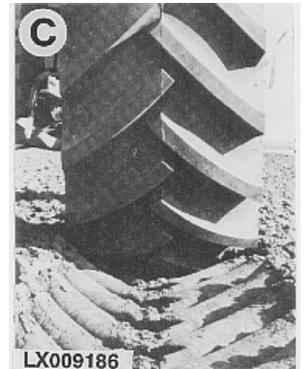
Adapt tire pressures to type of work and ground conditions (Consult your John Deere dealer or local tire agent).

## Choose Correct Ballast



LX009185

LX009185—UN—01SEP94



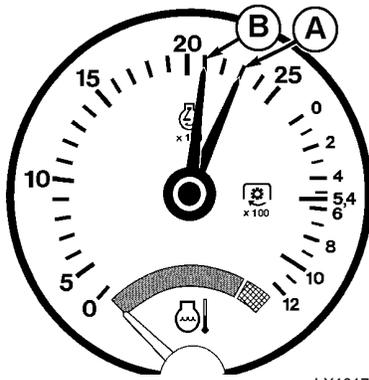
LX009186

LX009186—UN—01SEP94

- A—Too Much Ballast
- B—Too Little Ballast
- C—Correct Ballast

Choose ballast to obtain 10 to 15% wheel slip. Use no more ballast than necessary; reduce ballast for light work.

Select Correct Gear



LX1017710

LX1017710—UN—01OCT97

RA84036,000176A-19-21JUN18

A—Engine rpm  
B—Engine under Load

Always drive in the highest possible gear that keeps working rpm in the proper torque curve to avoid stalling. For light load operation, use a higher gear and lower engine speed. This saves fuel and reduces wear.

Choose a gear so that engine rpm (A), when the engine is not under load, drops 150 to 250 rpm compared to when the tractor is operating and the engine is under load (B).

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

Travel Speeds

Travel Speeds, 30 km/h (18.5 mph) - 12/12 Speed Transmission (5GV, 5GN)

30 km/h (18.6 mph)		12/12 Speed Transmission, Travel Speed at Engine Speed of 2300 rpm													
Rear Tire Index Radius (SRI)		650 mm (25.59 in)		625 mm (24.60 in)		600 mm (23.62 in)		575 mm (22.63 in)		570 mm (22.43 in)		560 mm (22.04 in)		550 mm (21.65 in)	
RANGE	GEAR	km/h	mph	km/h	mph	km/h	mph	km/h	mph	km/h	mph	km/h	mph	km/h	mph
1	1	1.5	0.9	1.4	0.9	1.4	0.8	1.3	0.8	1.3	0.8	1.3	0.8	1.3	0.8
	2	2.2	1.3	2.1	1.2	2.0	1.2	1.9	1.1	1.9	1.1	1.9	1.1	1.8	1.1
	3	3.1	1.9	3.0	1.8	2.9	1.7	2.8	1.7	2.7	1.6	2.7	1.6	2.6	1.6
	4	4.5	2.7	4.4	2.6	4.2	2.5	4.0	2.4	4.0	2.4	3.9	2.3	3.8	2.3
2	1	3.7	2.2	3.6	2.1	3.4	2.1	3.3	2.0	3.3	2.0	3.2	1.9	3.2	1.9
	2	5.4	3.3	5.2	3.1	5.0	3.0	4.8	2.9	4.8	2.9	4.7	2.8	4.6	2.8
	3	7.9	4.7	7.6	4.5	7.3	4.4	7.0	4.2	6.9	4.1	6.8	4.1	6.7	4.0
	4	11.4	6.8	10.9	6.6	10.5	6.3	10.1	6.0	10.0	6.0	9.8	5.9	9.6	5.8
3	1	10.0	6.0	9.6	5.8	9.2	5.5	8.8	5.3	8.8	5.3	8.6	5.2	8.5	5.1
	2	14.6	8.8	14.0	8.4	13.5	8.1	12.9	7.7	12.8	7.7	12.6	7.5	12.3	7.4
	3	21.1	12.7	20.3	12.2	19.5	11.7	18.7	11.2	18.5	11.1	18.2	10.9	17.9	10.7
	4	30.5	18.3	29.4	17.6	28.2	16.9	27.0	16.2	26.8	16.1	26.3	15.8	25.8	15.5

Travel Speeds, 40 km/h (25 mph) - 24/12 Speed Transmission (5GV, 5GN)

40 km/h (25 mph)		24/12 Speed Transmission, Travel Speed at Engine Speed of 2300 rpm														
Rear Tire Index Radius (SRI)		650 mm (25.59 in)		625 mm (24.60 in)		600 mm (23.62 in)		575 mm (22.63 in)		570 mm (22.43 in)		560 mm (22.04 in)		550 mm (21.65 in)		
RANGE	GEAR	Hi-Lo	km/h	mph	km/h	mph										
1	1	LO	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.4	0.3
		HI	0.6	0.4	0.6	0.4	0.6	0.3	0.6	0.3	0.5	0.3	0.5	0.3	0.5	0.3
	2	LO	0.8	0.5	0.7	0.4	0.7	0.4	0.7	0.4	0.7	0.4	0.7	0.4	0.7	0.4
		HI	0.9	0.5	0.9	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5
	3	LO	1.1	0.7	1.1	0.6	1.0	0.6	1.0	0.6	1.0	0.6	1.0	0.6	0.9	0.6
		HI	1.3	0.8	1.3	0.8	1.2	0.7	1.2	0.7	1.2	0.7	1.1	0.7	1.1	0.7
	4	LO	1.6	1.0	1.6	0.9	1.5	0.9	1.4	0.9	1.4	0.9	1.4	0.8	1.4	0.8
		HI	1.9	1.1	1.8	1.1	1.8	1.1	1.7	1.0	1.7	1.0	1.6	1.0	1.6	1.0
2	1	LO	2.4	1.5	2.3	1.4	2.2	1.3	2.2	1.3	2.1	1.3	2.1	1.3	2.1	1.2

**Transmission - General Information**

	2	HI	2.9	1.7	2.7	1.6	2.6	1.6	2.5	1.5	2.5	1.5	2.5	1.5	2.4	1.4	
		LO	3.5	2.1	3.4	2.0	3.3	2.0	3.1	1.9	3.1	1.9	3.1	1.8	3.0	1.8	
	3	HI	4.2	2.5	4.0	2.4	3.8	2.3	3.7	2.2	3.6	2.2	3.6	2.2	3.5	2.1	
		LO	5.1	3.1	4.9	3.0	4.7	2.8	4.5	2.7	4.5	2.7	4.4	2.7	4.3	2.6	
	4	LO	7.4	4.5	7.1	4.3	6.9	4.1	6.6	3.9	6.5	3.9	6.4	3.8	6.3	3.8	
		HI	8.7	5.2	8.4	5.0	8.0	4.8	7.7	4.6	7.6	4.6	7.5	4.5	7.4	4.4	
	3	1	LO	10.7	6.4	10.3	6.2	9.9	5.9	9.5	5.7	9.4	5.6	9.2	5.5	9.1	5.4
			HI	12.6	7.6	12.1	7.3	11.6	7.0	11.1	6.7	11.0	6.6	10.8	6.5	10.6	6.4
2		LO	15.7	9.4	15.1	9.0	14.5	8.7	13.8	8.3	13.7	8.2	13.5	8.1	13.2	7.9	
		HI	18.4	11.0	17.7	10.6	17.0	10.2	16.2	9.7	16.1	9.7	15.8	9.5	15.5	9.3	
3		LO	22.6	13.6	21.8	13.1	20.9	12.5	20.0	12.0	19.9	11.9	19.5	11.7	19.2	11.5	
		HI	26.6	15.9	25.5	15.3	24.5	14.7	23.5	14.1	23.3	14.0	22.9	13.7	22.5	13.5	
4		LO	32.8	19.7	31.5	18.9	30.3	18.2	29.0	17.4	28.7	17.2	28.2	16.9	27.7	16.6	
		HI	38.5	23.1	37.0	22.2	35.5	21.3	34.0	20.4	33.7	20.2	33.1	19.9	32.5	19.5	

**Travel Speeds, 40 km/h (25 mph) - 24/12 Speed Transmission (5GL)**

40 km/h (25 mph)		24/12 Speed Transmission, Travel Speed at Engine Speed of 2300 rpm						
Rear Tire Index Radius (SRI)		575 mm (22.63 in)		550 mm (21.65 in)		525 mm (20.66 in)		
RANGE	GEAR	Hi-Lo	km/h	mph	km/h	mph	km/h	mph
1	1	LO	0.5	0.3	0.5	0.3	0.5	0.3
		HI	0.6	0.4	0.6	0.4	0.6	0.4
	2	LO	0.8	0.5	0.7	0.4	0.7	0.4
		HI	0.9	0.6	0.9	0.6	0.8	0.5
	3	LO	1.1	0.7	1.1	0.7	1.0	0.6
		HI	1.3	0.8	1.3	0.8	1.2	0.7
4	LO	1.6	1.0	1.6	1.0	1.5	0.9	
	HI	1.9	1.2	1.8	1.1	1.7	1.1	
2	1	LO	2.5	1.6	2.3	1.4	2.2	1.4
		HI	2.9	1.8	2.8	1.7	2.6	1.6
	2	LO	3.5	2.2	3.4	2.1	3.2	2.0
		HI	4.1	2.5	4.0	2.5	3.8	2.4
	3	LO	5.2	3.2	4.9	3.0	4.7	2.9
		HI	6.1	3.8	5.8	3.6	5.5	3.4
4	LO	7.5	4.7	7.2	4.5	6.8	4.2	
	HI	8.8	5.5	8.4	5.2	8.0	5.0	
3	1	LO	10.8	6.7	10.4	6.5	9.9	6.2
		HI	12.7	7.9	12.2	7.6	11.6	7.2
	2	LO	15.5	9.6	14.9	9.3	14.2	8.8
		HI	18.2	11.3	17.4	10.8	16.7	10.4
	3	LO	22.8	14.2	21.8	13.5	20.9	13.0
		HI	26.8	16.7	25.6	15.9	24.5	15.2
4	LO	33.0	20.5	31.6	19.6	30.1	18.7	
	HI	38.7	24.0	37.0	23.0	35.4	22.0	

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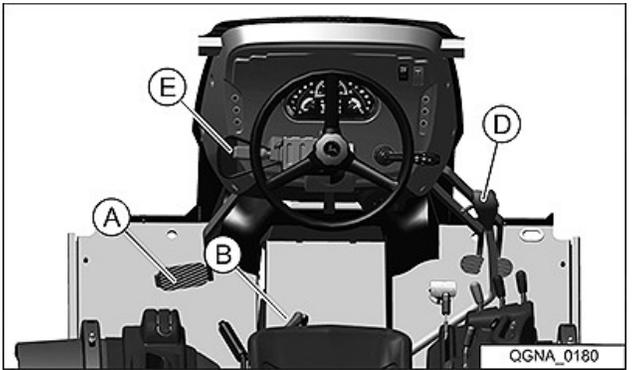
# PowerReverser Transmission

## Shifting Transmission

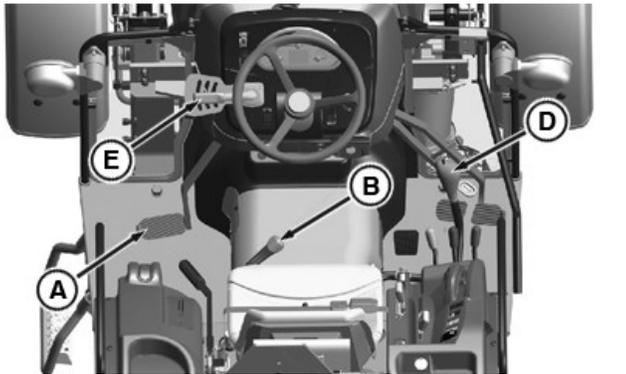
24/12 Power Reverser transmission (5GV, 5GN, 5GL)  
Range, Gear, Mechanical Splitter, and  
Electrohydraulic Hi-Lo Shifts:

**IMPORTANT:** To prevent unnecessary wear, never  
"ride" the clutch by resting a foot on the pedal.

To prevent transmission damage, do not make  
range shifts on-the-go.



(5GV, 5GN) (Cab)



(5GL)

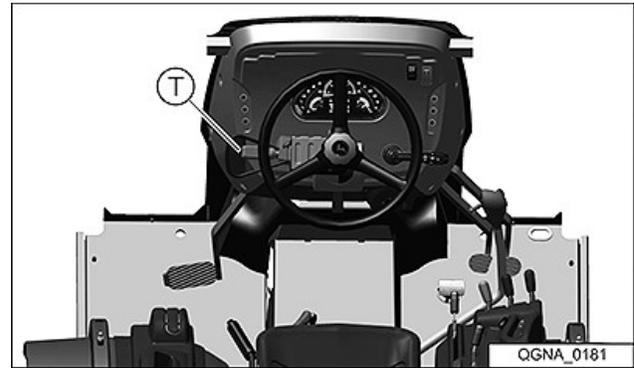
**A—Clutch Pedal**  
**B—Range Shift Lever**  
**D—Gear Shift Lever**  
**E—Reverse Drive Lever**

Depress clutch pedal (A) and stop the tractor before  
shifting the range shift lever (B) and reverse drive lever  
(E).

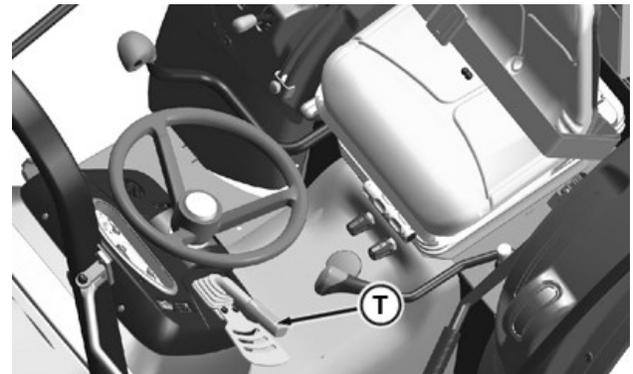
Depress clutch pedal (A) before shifting the gearshift  
lever (D). Gears (1), (2), (3), and (4) can be shifted  
on-the-go.

Release the clutch pedal gradually to take up load  
smoothly.

## Reverse Drive Lever



(5GV, 5GN) (electrically actuated)



(5GL)

### T—Reverse Drive Lever

The reverse drive lever (T) has three positions:

- Forward
- Neutral
- Reverse

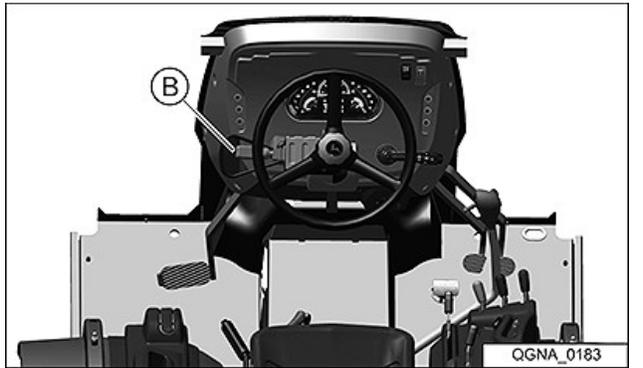
**NOTE:** The 24/12 speed transmission can be operated  
without depressing the clutch.

For further information, see *Shifting Transmission –  
24/12 Speed Transmission* in this section

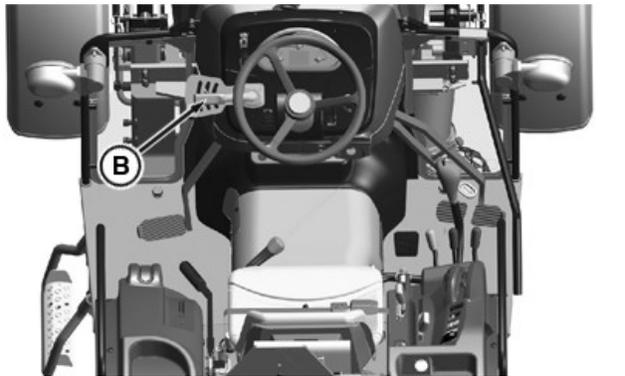
Press clutch pedal and then move the lever (T) in the  
desired direction:

- Push lever from neutral to front for forward travel.
- Pull lever from neutral to rear for reverse travel.

### Shifting Transmission - 24/12 Speed Transmission



(5GV, 5GN)



(5GL)

#### B—Reverse Drive Lever

To prevent transmission damage, do not make range shifts on-the-go.

Depress clutch pedal and stop the tractor before shifting the range shift lever. If the oil temperature is low, shift ranges only with gearshift lever in neutral position.

The reverse drive lever (B) has three positions:

- Forward
- Neutral
- Reverse

The reverse drive lever (B) and the gearshift lever can be shifted on-the-go without depressing the clutch pedal.

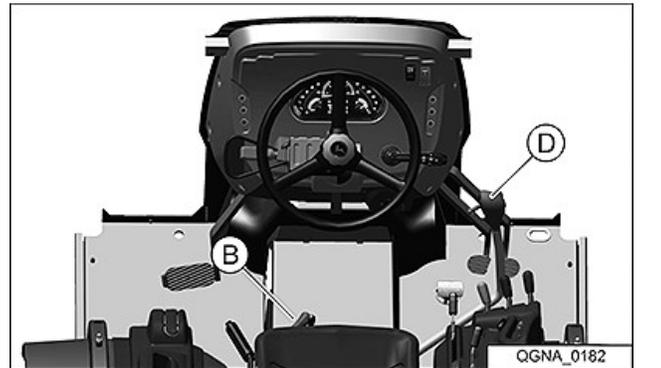
- Push lever (B) from neutral to front for forward travel.
- Pull lever (B) from neutral to rear for reverse travel.

**CAUTION:** If a range and a gear are selected with the engine running and the reverse drive lever is not in neutral position, the tractor starts moving.

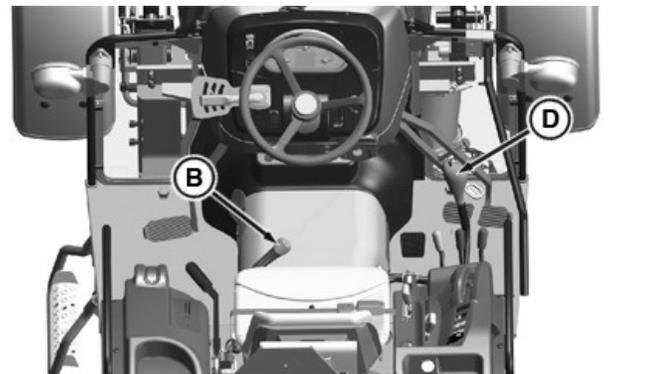
On tractors with 24/12 speed transmission, always engage park brake and put the gear lever in NEUTRAL position before restarting the tractor.

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### Operate Transmission Shift Levers



(5GV, 5GN)



(5GL)

#### B—Range Shift Lever D—Gear Shift Lever

The transmission gearshift lever (D) operates in an H-pattern.

- Center position is neutral.
- Move the lever from neutral to the left and forward to select the first gear.
- Move the lever from neutral to the left and rearward to select the second gear.
- Move the lever from neutral to the right and forward to select the third gear.
- Move the lever from neutral to the right and rearward to select the fourth gear.

#### Range Shifting (all tractors)

The transmission range lever (B) has three positions:

- Forward is low range.

- Rearward is high range.
- To the right and forward is the creeper.

RA84036,000176D-19-15OCT18

### Select a Gear



QGNA0017—UN—02NOV15

**IMPORTANT:** To extend drive train life and avoid excessive soil compaction and rolling resistance, avoid ballasting for **CONTINUOUS** full power operations in gears slower than B-2 gear. When using front-wheel drive, ballasting to one gear slower is appropriate.

Operate tractor in any gear with engine speeds between 1500 rpm and 2300 rated engine rpm. Within these limits the engine can be put under full load. For light load operation, use a higher gear and lower engine speed. This saves fuel and reduces wear.

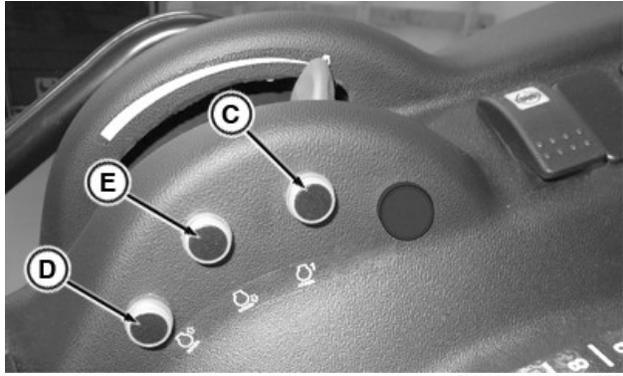
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### Cruise Control



QGNA0207—UN—02NOV15

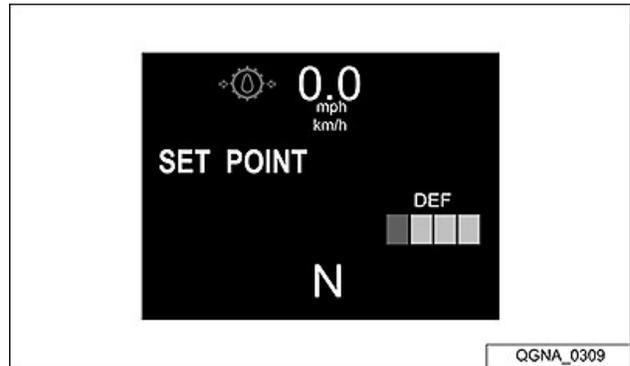
(5GV, 5GN)



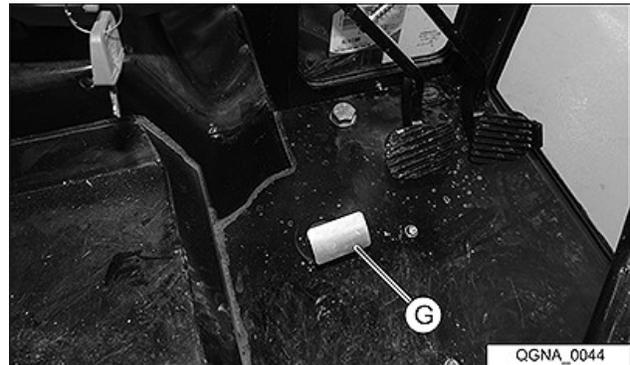
(5GL)

- C—Cruise Control Activation and Memory 1 Button
- D—Increasing the Engine Speed
- E—Decreasing the Engine Speed

### Cruise Control Activation



QGNA0309—UN—02NOV15



QGNA0044—UN—02NOV15



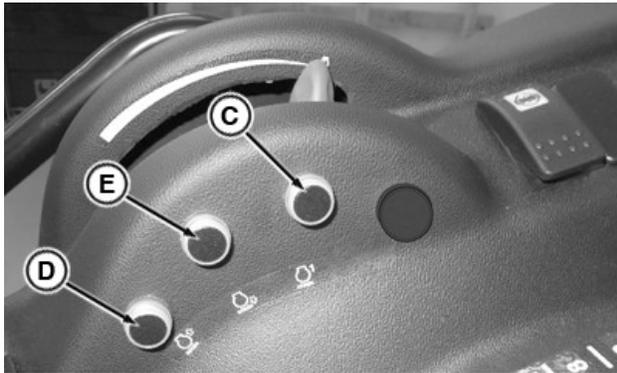
(5GV, 5GN)

QGNA0207—UN—02NOV15

- C—Cruise Control Activation and Memory 1 Button
- D—Increasing the Engine Speed
- E—Decreasing the Engine Speed
- G—Foot Throttle

With engine ON, press the cruise control activation and memory 1 button (C) until the message SETPOINT appears on the digital display. Adjust the desired engine speed by the foot throttle (G) or the hand throttle (A).

Press the cruise control activation and memory 1 button (C) longer than 3 seconds to confirm the setting.



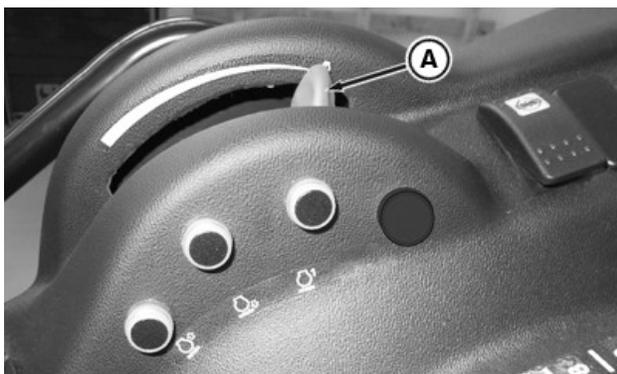
(5GL)

APY01855—UN—07FEB18



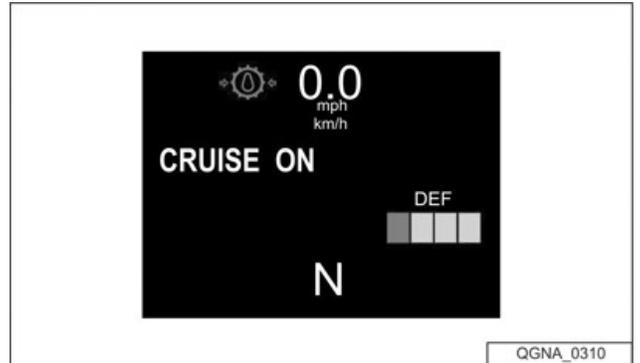
(5GV, 5GN)

PY34587—UN—15FEB17



(5GL)

APY01856—UN—07FEB18

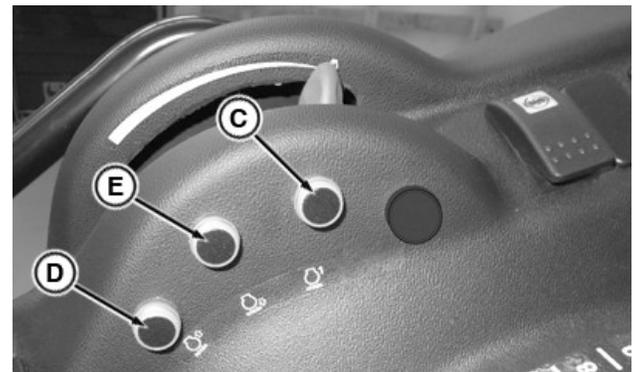


QGNA0310—UN—15JAN16



(5GV, 5GN)

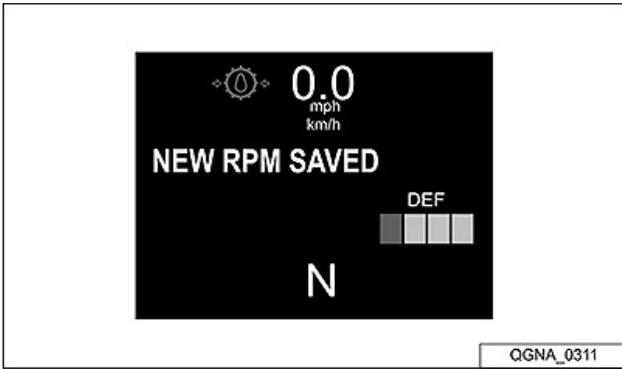
QGNA0207—UN—02NOV15



(5GL)

APY01855—UN—07FEB18

A—Hand Throttle



QGNA0311—UN—02NOV15

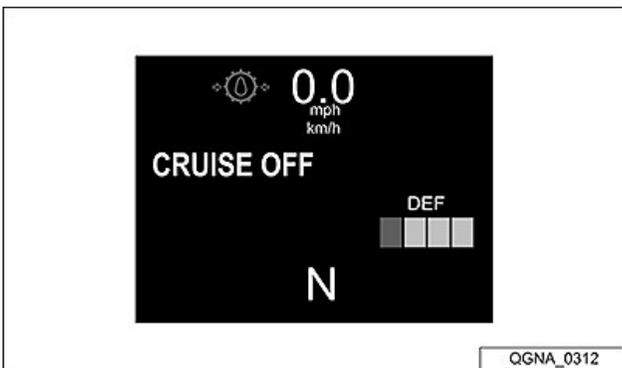
- C—Cruise Control Activation and Memory 1 Button
- D—Increasing the Engine Speed
- E—Decreasing the Engine Speed

The message CRUISE ON appears on the digital display and indicates the activation of cruise control. If the hand or foot throttle is released, the engine speed is maintained at the value stored.

The engine speed can be corrected in steps of 25 rpm by pressing buttons (D) and (E). Use the button (D) to increase or button (E) to decrease the speed. The current engine speed is then stored as default.

To change the engine speed, press the cruise control activation and memory 1 button (C) longer than 3 seconds. The message NEW RPM SAVED appears on the digital display.

**Cruise Control Deactivation**

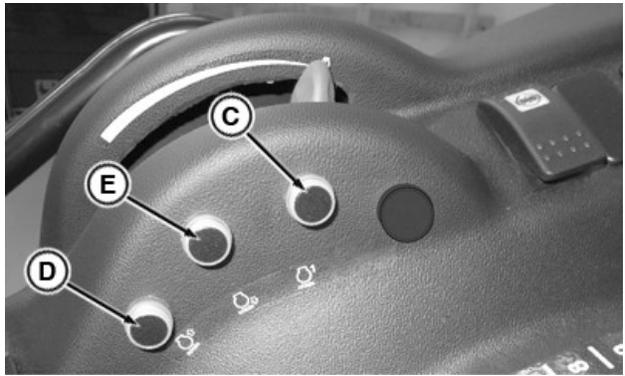


QGNA0312—UN—02NOV15



QGNA0207—UN—02NOV15

(5GV, 5GN)



APY01855—UN—07FEB18

(5GL)

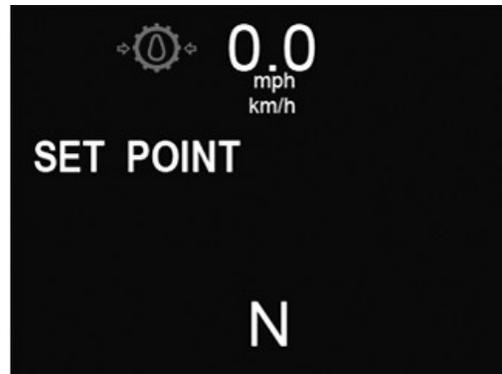
- C—Cruise Control Activation and Memory 1
- D—Increasing the Engine Speed
- E—Decreasing the Engine Speed

Press cruise control activation and memory 1 button (C) shorter than 3 seconds to switch OFF the cruise control. The message "CRUISE OFF" appears on the digital display.

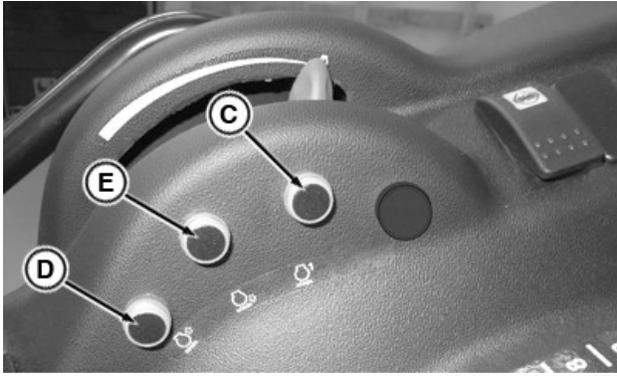
*NOTE: With the cruise control ON at tractor speeds above 14 km/h (9 mph), activation of the brake pedals (both or only one side) switches off the cruise control. The settings for cruise control will be deleted after switching OFF the tractor.*

RA84036,000176F-19-09OCT18

**Manually Adjusting the Engine Speed Memory MEM1**



PY31993—UN—09NOV16



APY01855—UN—07FEB18

(5GL)

- C—Cruise Control Activation and Memory 1 Button**
- D—Increasing the Engine Speed**
- E—Decreasing the Engine Speed**

Reach the desired engine speed using the hand throttle or foot throttle.

- To save the engine speed reached in engine speed memory 1, press the Cruise Control Activation and Memory 1 button (C) for more than 3 seconds.

When the new value is saved in the engine speed memory, the confirmation message SET POINT appears on the instrument panel display.

The engine speed memory is automatically activated after the save has been confirmed. The engine speeds remain stored and available for following start-ups.

RA84036.0001770-19-09OCT18

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# Mechanical Transmission

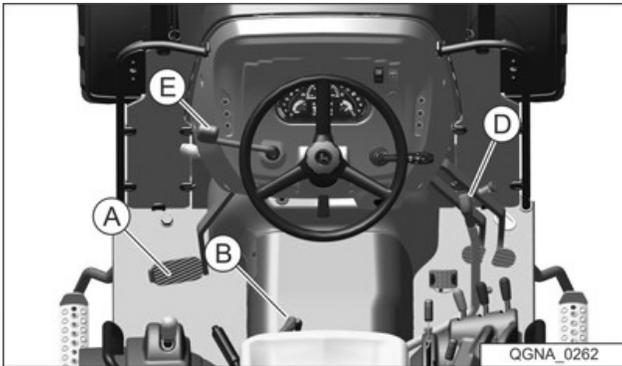
## Shifting Transmission

### 12/12 Mechanical Transmission (Mechanical Hi-Lo) (5GV, 5GN)

Range, Gear, Mechanical Splitter, and Electrohydraulic Hi-Lo Shifts:

**IMPORTANT: To prevent unnecessary wear, never "ride" the clutch by resting a foot on the pedal.**

**To prevent transmission damage, do not make range shifts on-the-go.**



(5GV, 5GN) (Open Operator Station)  
QGNA0262—UN—15JAN16

A—Clutch Pedal  
B—Range Shift Lever  
D—Gear Shift Lever  
E—Reverse Drive Lever

Depress clutch pedal (A) before shifting the mechanical Hi-Lo shift lever (C). The mechanical Hi-Lo can be shifted on-the-go.

Release the clutch pedal gradually to take up load smoothly.

### Reverse Drive Lever



(5GV, 5GN) (Mechanically Actuated)  
QGNA0263—UN—21DEC15

T—Reverse Drive Lever

The reverse drive lever (T) has three positions:

- Forward
- Neutral

- Reverse

Press clutch pedal and then move the lever (T) in the desired direction:

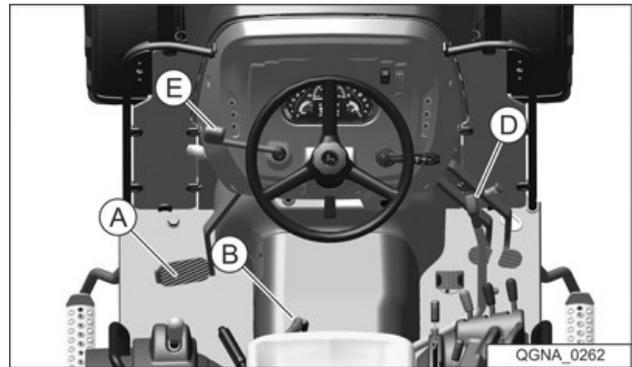
- Push lever from neutral to front for forward travel.
- Pull lever from neutral to rear for reverse travel.

### 12/12 Mechanical Transmission (Electrohydraulic Hi-Lo) (5GV, 5GN)

Range, Gear, Mechanical Splitter, and Electrohydraulic Hi-Lo Shifts:

**IMPORTANT: To prevent unnecessary wear, never "ride" the clutch by resting a foot on the pedal.**

**To prevent transmission damage, do not make range shifts on-the-go.**



(5GV, 5GN)  
QGNA0262—UN—15JAN16

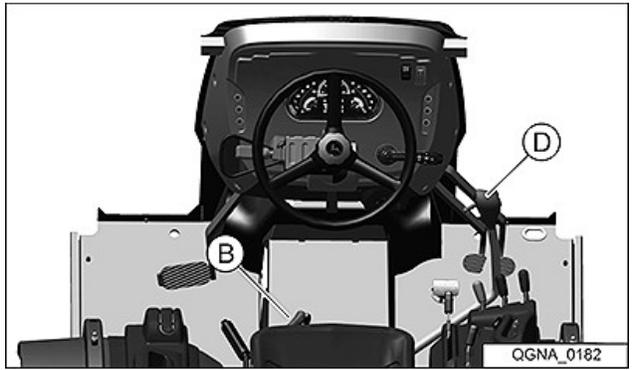
A—Clutch Pedal  
B—Range Shift Lever  
D—Gear Shift Lever  
E—Reverse Drive Lever

Depress clutch pedal (A) and stop the tractor before shifting range shift lever (B) and reverse drive lever (E).

Depress clutch pedal (A) before shifting the gear shift lever (D). Gears (1—4) can be shifted on the go

MS76789,0000651-19-16OCT18

## Operate Transmission Shift Levers



(5GV, 5GN)

QGNA0182—UN—02NOV15

**IMPORTANT:** To extend drive train life and avoid excessive soil compaction and rolling resistance, avoid ballasting for **CONTINUOUS** full power operations in gears slower than B-2 gear. When using front-wheel drive, ballasting to one gear slower is appropriate.

Operate tractor in any gear with engine speeds between 1500 rpm and 2300 rated engine rpm. Within these limits the engine can be put under full load. For light load operation, use a higher gear and lower engine speed. This saves fuel and reduces wear.

MS76789,0000653-19-16OCT18

**B—Range Shift Lever**  
**D—Gear Shift Lever**

The transmission gearshift lever (D) operates in an H-pattern.

- Center position is neutral.
- Move the lever from neutral to the left and forward to select the first gear.
- Move the lever from neutral to the left and rearward to select the second gear.
- Move the lever from neutral to the right and forward to select the third gear.
- Move the lever from neutral to the right and rearward to select the fourth gear.

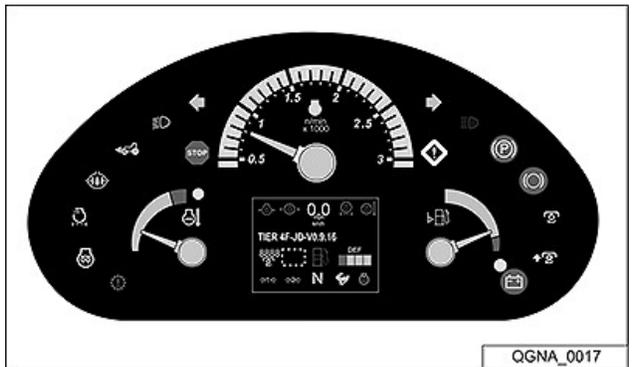
### Range Shifting (all tractors)

The transmission range lever (B) has three positions:

- Forward is low range.
- Rearward is high range.
- To the right and forward is the creeper.

MS76789,0000652-19-16OCT18

## Select a Gear



QGNA0017—UN—02NOV15

# PTO Shaft and Hitch

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## **Maximum Lifting Force**

Information on maximum lifting force can be found in the Specifications (section 500A) in this manual.

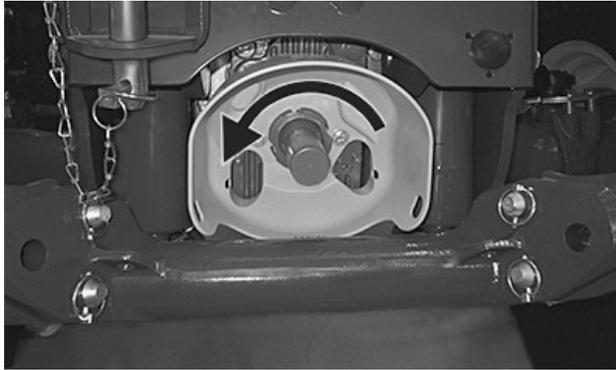
*NOTE: Legal restrictions relating to axle loads and tire load capacity must be complied with. Due to these legal restrictions, maximum permitted lifting force may be less than the stated value.*

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RA84036,0001771-19-10JUL18

# Front PTO

## Front PTO

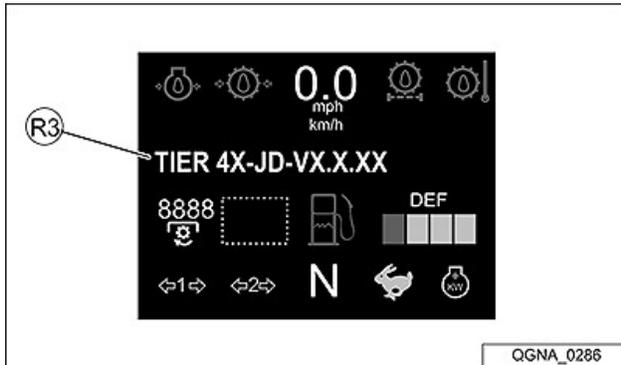


AGCPDJ0047—UN—13JAN14

**CAUTION:** The counterclockwise-rotating front PTO uses a stub shaft with six splines and operates at a rated speed of 1000 rpm (engine speed 2060 rpm).



QGNA\_0346  
QGNA0346—UN—02NOV15



QGNA\_0286  
QGNA0286—UN—02NOV15

### Operating the Front PTO:

**CAUTION:** Always disengage the PTO when not in use.

High-inertia implements do not come to a standstill the moment a PTO is shifted to the disengaged position. Do NOT approach the implement while it is coasting down. Do not work on the implement until it has stopped.

**Switching ON the PTO:** Release safety lock mechanism and operate rocker switch (1). The PTO starts rotating and switch back light indicates that switch

is in ON position. The message FRONT PTO ON is displayed on row (R3) of the digital display.

The current speed of the Front PTO is displayed on row (R3) of the digital display when selected by the menu.

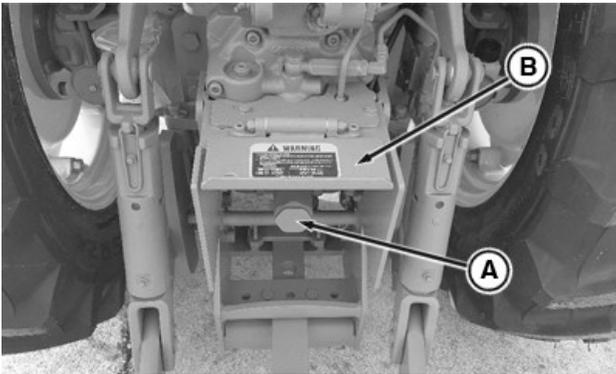
**Switching OFF the PTO:** Press rocker switch (1), switch back light goes out. The message FRONT PTO OFF is displayed on row (R3) of the digital display.

*NOTE: If the engine is shutoff while the front PTO is running to restart the engine, the front PTO must be switched off by pressing rocker switch (1).*

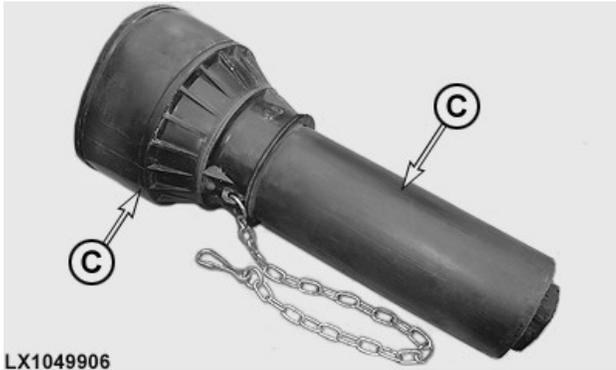
RA84036,0001772-19-21JUN18

# Rear PTO

## PTO Guard



APY01836—UN—02JAN18



LX1049906

LX1049906—UN—18FEB11



TS276—UN—23AUG88

- A—PTO Cap
- B—Master Shield
- C—Guard

**CAUTION:** Remove PTO cap (A) only when the PTO is to be used.

As soon as PTO-driven implement is removed, reinstall cap over PTO stub shaft.

The master shield (B) can be folded up to allow an implement to be connected, but it must be folded down again afterwards. *There are various versions of the PTO guard that are not shown here.*

**CAUTION:** Operate the PTO only if the master shield is in the position shown. Switch off the PTO before raising the implement.

**CAUTION:** Before using the PTO, the maximum permissible angle of articulation on the telescoping driveline must be determined. During operation, there must be no contact between the PTO guard and the telescoping driveline, which is important when turning corners.

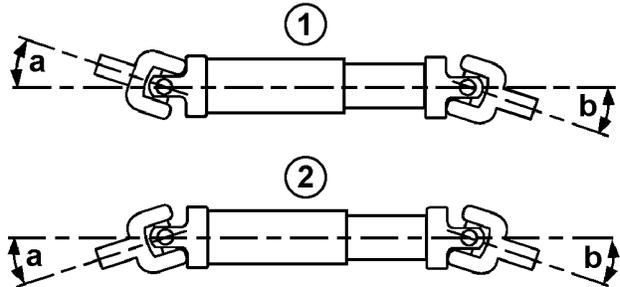
With Type 3 PTOs (dia. 45 mm (1.77 in), 20 splines), clearance in the area of the PTO guard is restricted. Always keep in mind when operating; avoid unnecessary damage.

Wear gloves when connecting the PTO.

**CAUTION:** Always put a guard (C) on the telescoping driveline, which prevents it from turning with the shaft. Operate the telescoping driveline only if the guard installed. It covers the PTO shaft completely and never turns with the shaft.

RA84036,0001773-19-21JUN18

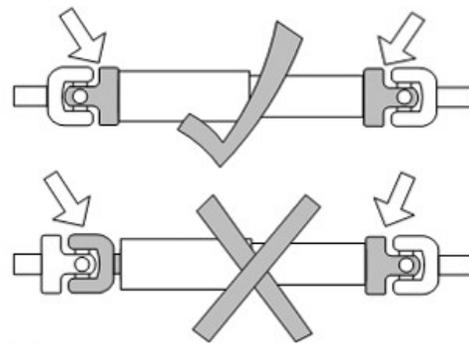
## Operating Instructions



LX1049749

LX1049749—UN—21MAY10

Articulation on Telescoping Driveline



LX1049900

LX1049900—UN—22FEB11

Align Forks Correctly

- 1—Z-Shaped Layout
- 2—W-Shaped Layout

As far as possible, angles (a) and (b) at the universal joints must be the same at both ends of the telescoping driveline.

In applications where it is not the case (for example, sharp turns with PTO engaged), it is recommended to use a continuous-velocity driveshaft.

*NOTE: The two schematic drawings do not show any guards on the telescoping driveline. A guard is mandatory when using telescoping drivelines.*

**IMPORTANT: Only operating conditions described in the Operators Manuals of the various implements are permitted. It applies particularly to the maximum permissible angle of articulation, to the use of freewheel clutches and overload clutches, and to the prescribed amount of overlap when shaped pipes are pushed together.**

**IMPORTANT: Before using a PTO-driven implement, ensure that the telescoping driveline is lubricated regularly. Comply with instructions in the Operators Manual provided by the manufacturer.**

**IMPORTANT: On multi-component telescoping drivelines, the yokes at each end must be aligned as shown. The yokes at each end must NOT be at 90° to one another as shown in illustration Align Forks Correctly**

RA84036,0001774-19-21JUN18

### Attaching PTO-Driven Implement

**CAUTION:** Shut off engine and disengage PTO before attaching PTO-driven equipment.

**CAUTION:** High-inertia implements do not come to a standstill the moment the PTO control lever is shifted to the disengaged position. Do NOT approach the implement while it is coasting down. Do not work on the implement until it has stopped.

**CAUTION:** Before attempting to clean, adjust, or lubricate a PTO-driven machine, the 3-point hitch, or universal joint, always make sure that the PTO is switched off and stopped, the tractor engine is shut off, and the ignition key is removed.

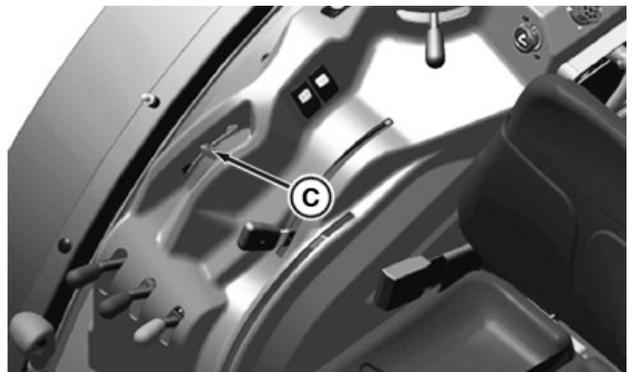
1. Turn key off to stop engine.
2. Attach implement to tractor before connecting PTO drive line. Lock 3-point hitch in upward position if it is not to be used.
3. Rotate PTO shield upward for clearance. With engine off, turn shaft slightly by hand if necessary to line up

splines. Connect drive line to PTO shaft. Pull out on shaft to be sure that drive line is locked to PTO shaft. Place PTO shield in downward position.

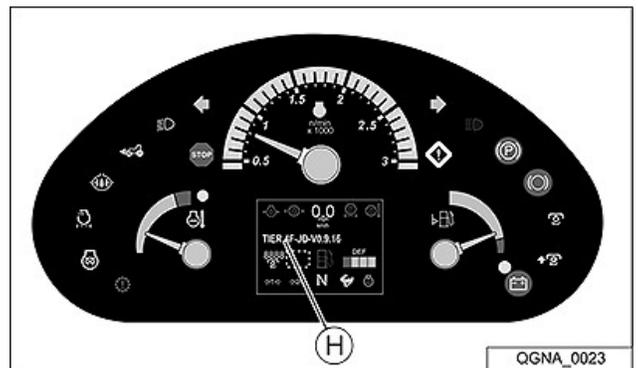
4. Be sure that all shields are in place and in good condition. Operate the PTO only if the master shield is properly installed. WITH ENGINE STOPPED, check integral shields on the drive line by making sure that they rotate freely on shaft. Lubricate or repair as necessary.
5. Check carefully for any interference. Make sure that the 3-point hitch is locked in the upward position if it is not used.

RA84036,0001775-19-21JUN18

### Operating the Rear PTO (Mechanical Version)



PY34584—UN—03MAR17



QGNA\_0023 QGNA0023—UN—02NOV15

C—Hand Throttle Lever  
H—Digital Display

*NOTE: Engine never starts, when the PTO clutch lever is engaged.*

1. Start engine and, using hand throttle lever (C), select correct engine speed for PTO operation.

Rated PTO speeds are achieved at the following engine speeds:

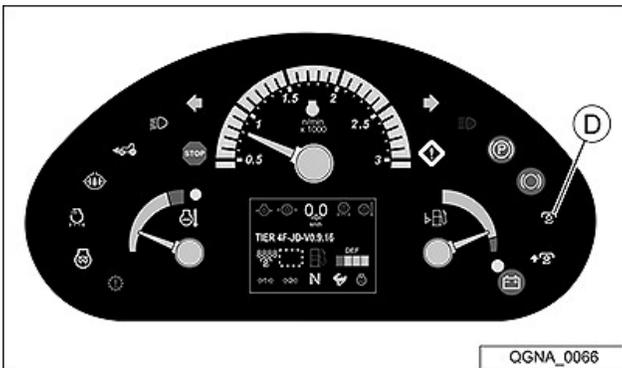
540 rpm rear PTO . . . . .	1938 rpm
540E rpm rear PTO . . . . .	1648 rpm

**NOTE:** Direct reading of PTO rpm value is possible on digital display (H) when the PTO is engaged.



QGNA\_0065

QGNA0065—UN—02NOV15



QGNA\_0066

QGNA0066—UN—02NOV15

**B**—PTO Engagement Lever  
**D**—PTO Indicator

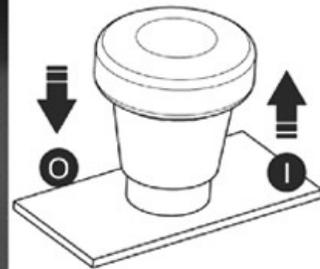
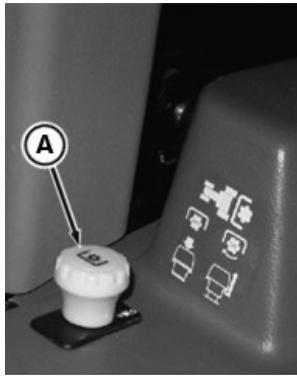
2. Move PTO engagement lever (B) forward to engage the PTO. PTO indicator (D) lights up when the PTO is engaged.
3. Pull lever (B) back to disengage PTO.

**CAUTION:** Turn key off to stop engine and make sure that all mechanisms have stopped before cleaning out machine or the adjustment to PTO driven implement.

RA84036,0001776-19-09OCT18

### Operating the Rear PTO (Electrohydraulic Version)

**NOTE:** The electrohydraulic rear PTO is available for 24/12 transmission only.



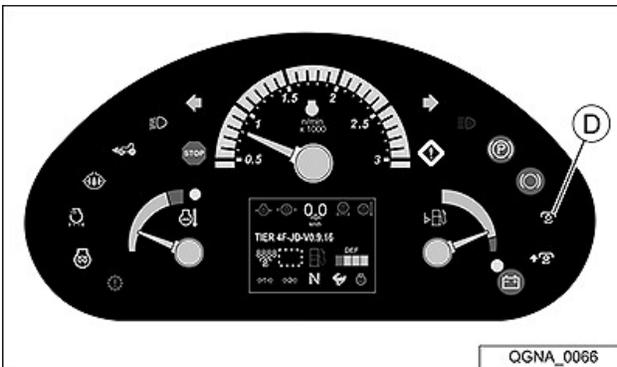
(5GV, 5GN)

PY34585—UN—15FEB17



(5GL)

APY01837—UN—02JAN18



QGNA\_0066

QGNA0066—UN—02NOV15

**A**—PTO Switch  
**D**—Indicator Light (ON when PTO engaged)

To engage the PTO, pull the switch (A).

To disengage the PTO, push the switch (A).

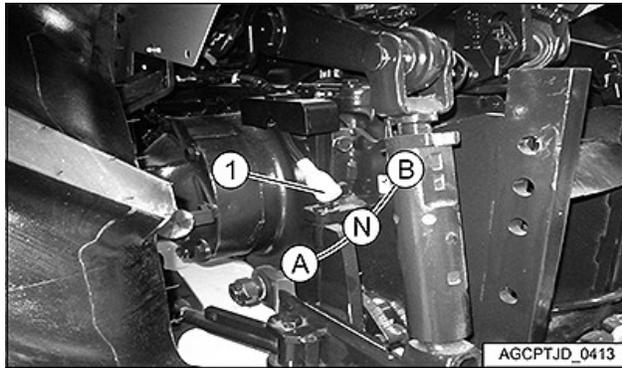
Indicator light (D) turns ON when the PTO is engaged and OFF when the PTO is disengaged.

**NOTE:** With PTO ON, if the engine rpm drops under the value of 700 rpm for more than 2 seconds continuously, the PTO is automatically turned OFF.

With PTO ON, if the engine rpm drops under the value of 450 rpm, the PTO is automatically and immediately turned OFF in order to avoid the engine stall.

RA84036,0001777-19-09OCT18

## Selecting PTO Speeds



AGCPTJD0413—UN—02NOV15

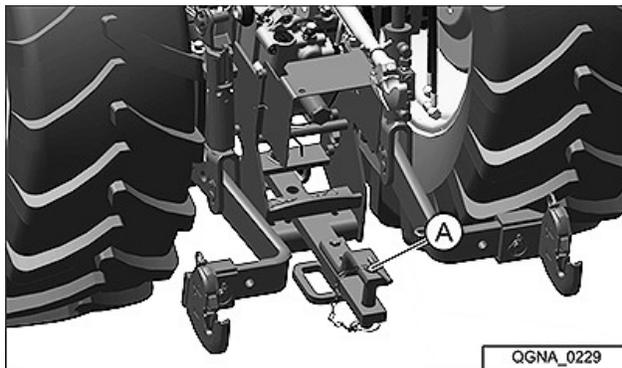
- A—PTO Speed 540 rpm
- N—Neutral
- B—PTO Speed 540E rpm
- 1—Lever

Select PTO speed with lever (1) if the tractor is equipped with 540 and 540E PTO. This lever is on the left side control console. Move lever in position (A) for 540 or rearward in position (B) for 540E operation. Position (N) is neutral. When the tractor is equipped with single speed PTO only, the lever (1) is not present .

**IMPORTANT: The PTO speed selector lever is used only when no equipment is connected to the PTO.**

RA84036.0001778-19-21JUN18

## Drawbar



QGNA0229—UN—02NOV15

The tractor is equipped with a drawbar with vertical load allowed (A).

For maximum traction and efficiency, position the drawbar in the center, short position. See operator's manual of implement for more information.

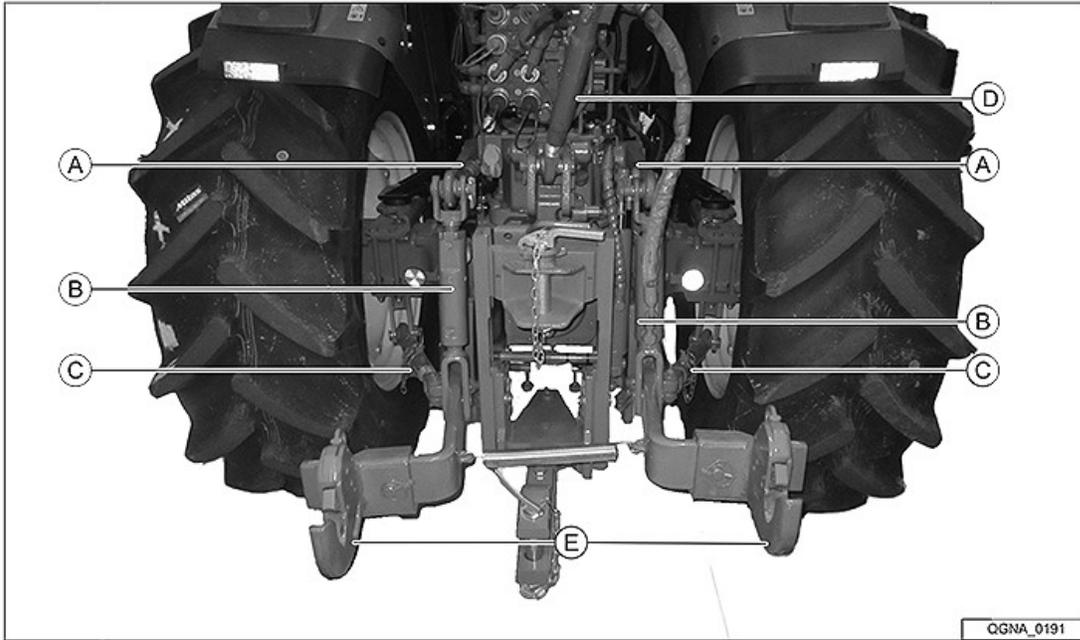
Maximum permissible static vertical loads and towable loads are stated in the Specifications (section 500A).

*NOTE: Check and replace components subjected to wear and tear. Contact your John Deere dealer or see Service Intervals for more information.*

RA84036,0001779-19-10JUL18

# Rear Hitch

## Three-Point Hitch Components

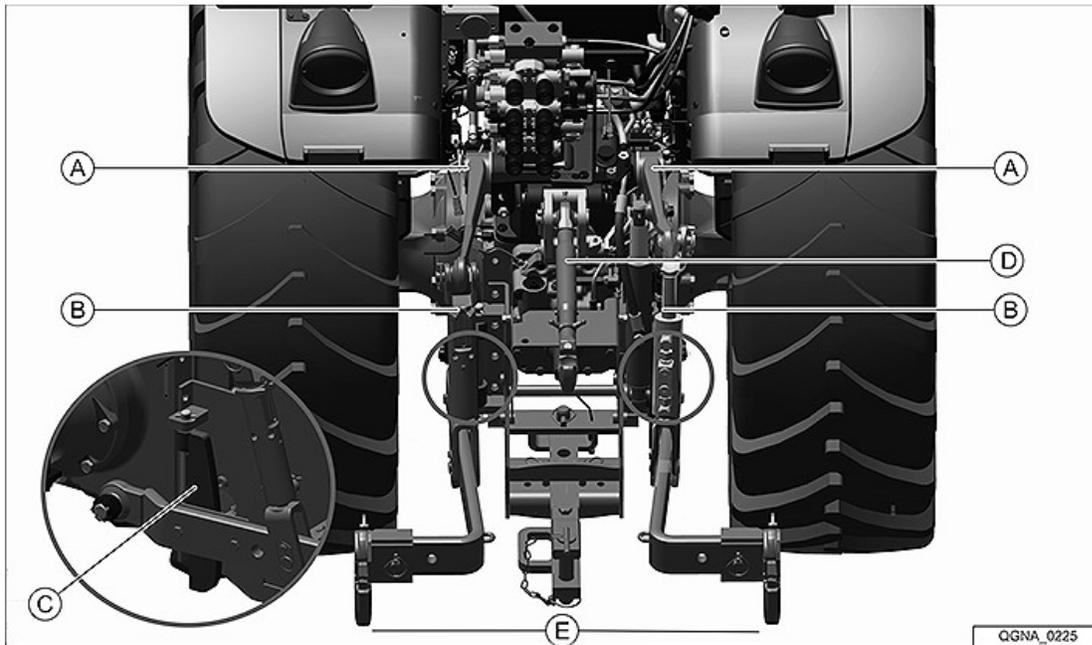


Tractor with Telescopic Stabilizing System

QGNA0191—UN—02NOV15

- A—Lift Arms
- B—Lift Links
- C—Stabilizing System

- D—Center Link
- E—Draft Links



Tractor with Mechanical Stabilizing System

QGNA0225—UN—02NOV15

- A—Lift Arms
- B—Lift Links
- C—Stabilizing System

- D—Center Link
- E—Draft Links

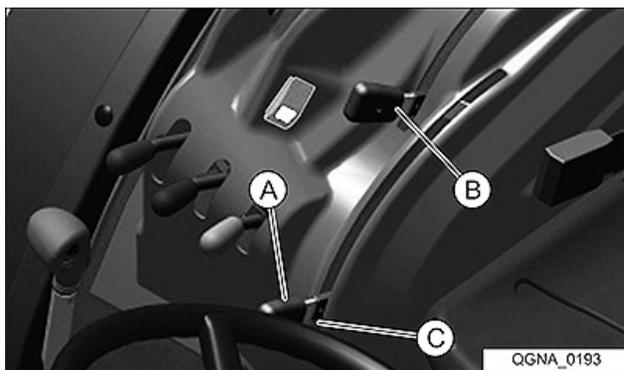
RA84036.000177B-19-21JUN18

## Match Tractor Power to Implement

**IMPORTANT:** Tractor power should be matched to the size of certain implements. Excessive power can damage an implement, and too large an implement can damage the tractor. (Refer to your implement operator's manual for minimum and maximum power requirements before attaching an implement.)

RA84036,000177A-19-21JUN18

## Hitch Control Levers



QGNA\_0193  
QGNA0193—UN—02NOV15

A—Position Control Lever  
B—Draft Control Lever  
C—Stop Knob

The hitch position is controlled by the two levers, the position control lever (A) and the draft control lever (B).

**CAUTION:** To avoid unintentional lowering of the implement during transport, use stop knob (C) to lock position control lever (A).

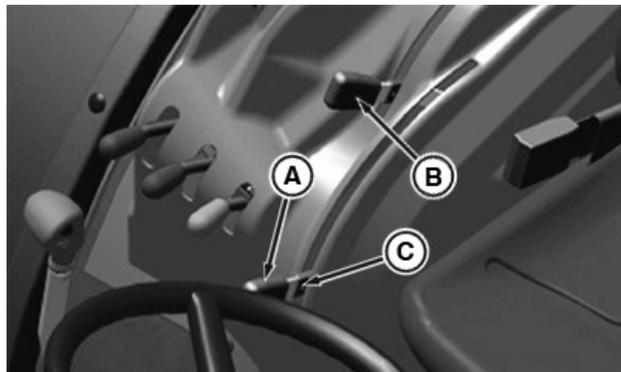
During transport and when hitch is not in use, push draft control lever (B) all the way forward.

The position control lever (A) raises the 3-point hitch when pulled rearward and lowers the 3-point hitch when moved forward. For further information, refer to Use the Hitch Position Control in this section.

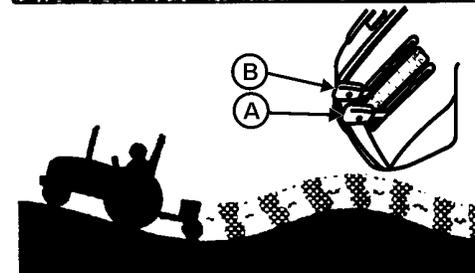
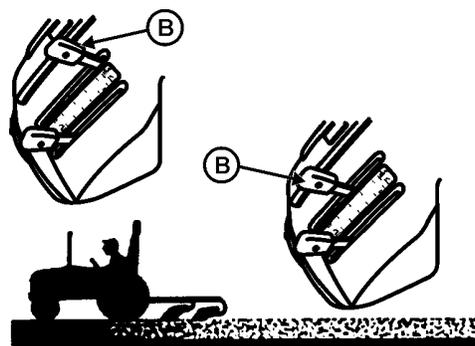
The draft control lever (B) controls the 3-point hitch position relative to draft loads. For further information, refer to Use the Draft Control in this section.

RA84036,000177C-19-21JUN18

## Use the Hitch Position Control



PY34590—UN—15FEB17



PULX001011

PULX001011—UN—07AUG08

A—Position Control Lever  
B—Draft Control Lever  
C—Stop Knob

**CAUTION:** To prevent unexpected movement of hitch, move the draft control lever (B) to full forward position before attaching an implement.

Move draft control lever (B) forward when you DO NOT want hitch to adjust automatically to draft load, such as attaching implement to tractor.

Use position control lever (A) to control the 3-point hitch position. Position control is used for transporting implements and end-of-field operations.

**IMPORTANT:** Be careful not to raise implement too far, as it can damage the rear part of the tractor.

**⚠ CAUTION:** To avoid unintentional lowering of the implement during transport, use stop knob (C) to lock position control lever (A).

During transport and when hitch is not in use, push draft control lever (B) all the way forward.

Place position control lever (A) at the desired depth. It gives CONSTANT DEPTH of implements on level terrain and for non-ground engaging implements, such as spreaders or sprayers.

FLOAT operation for implements with skids or depth gauge wheels designed to carry full implement weight. Push both levers (A) and (B) all the way forward so implement can follow the ground contour.



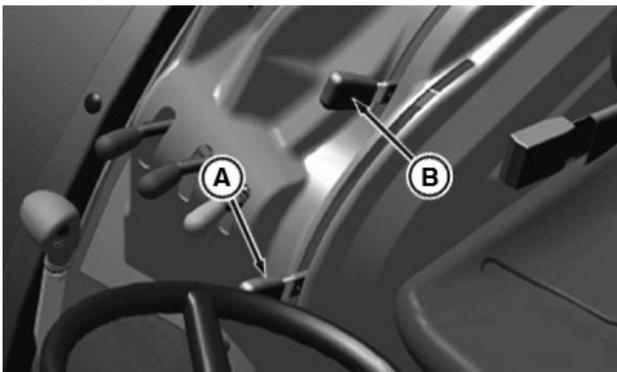
D—Ring Nut

### Position Control Lever Stop

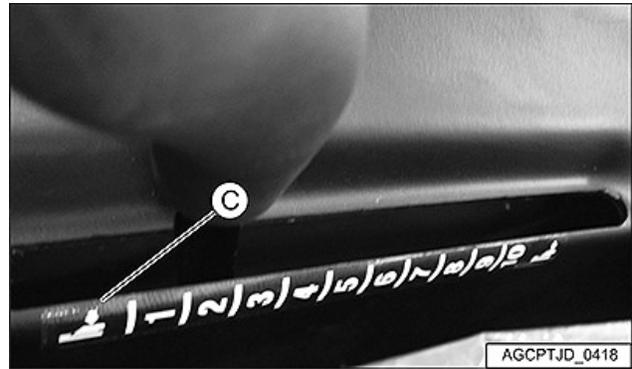
For convenience, set adjustable depth. Operate implement a few minutes and determine proper height, then unscrew ring nut (D). Move stop up against lever, and lock stop in position by tightening ring nut (D). Then the hitch lowers to same position each time lever is pushed forward to stop.

AGCPTJD0633—UN—02NOV15

### Use the Draft Control



PY34591—UN—15FEB17



AGCPTJD0418—UN—02NOV15

A—Position Control Lever  
B—Draft Control Lever  
C—Stop

The hitch is equipped with a variable draft control system.

Use draft control when:

- Operating with a fully mounted implement in hilly and swale terrain. The implement raises and lower to follow the ground contours while maintaining a nearly constant depth.
- Operating in varying soil conditions. The implement is raised slightly to get through tough spots so you do not have to shift to a lower gear.

**⚠ CAUTION:** When the hitch is not in use, push draft control lever (B) all the way forward.

Draft control lever (B) controls amount of load required before 3-point hitch responds. With lever moved fully forward to the position marked OFF, there is no draft control. Placing the lever toward the rear position reduces the amount of draft load required to override the position setting set by the position control lever (A) and raise the hitch.

The draft sensitivity range is changed with repositioning the center link. For further information, refer to Position the Center Link in this section.

For the draft control operation, initially move position control lever (A) in its fully forward position. Then move the draft control lever (B) in the fully rearward (least draft) position. Now, with the tractor moving, push the draft control lever (B) forward to increase the load to the desired setting.

Pull position control lever (A) rearward to set maximum depth of implement. Set the position control lever stop (C) so control lever can be brought back to the same position each time. The maximum depth prevents the hitch from lowering all the way when the tractor begins to slip. The position control lever (A) can also be raised slightly to override the draft control setting to help get through slippery spots without getting stuck.

The position control lever (A) can be moved fully rearward to raise the 3-point hitch at the end of the field.

RA84036,000177E-19-21JUN18

### Position Control Lever Stop



AGCPTJD\_0633  
AGCPTJD0633—UN—02NOV15

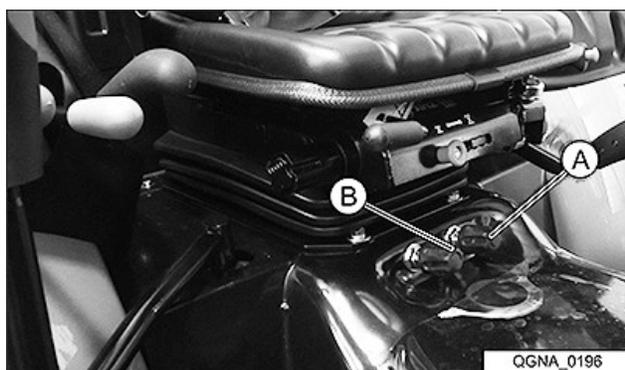
#### D—Ring Nut

For convenience, set adjustable depth. Operate the implement for a few minutes and determine proper height, then unscrew ring nut (D). Move stop up against lever, and lock stop in position by tightening ring nut (D). Then the hitch lowers to same position each time lever is pushed forward to stop.

RA84036,000177F-19-21JUN18

### Adjust the Rate-of-Drop

**CAUTION:** Excessive rate-of-drop causes damage or injury. Fully lowering the implement requires at least 2 seconds.



QGNA\_0196  
QGNA0196—UN—02NOV15

- A—Rate-Of-Drop Adjusting Knob
- B—Sensitivity Adjusting Knob

Hitch drops faster when a heavy implement is attached. Adjust rate-of-drop so that it is slow enough to be safe and prevent implement damage.

Turn rate-of-drop adjusting knob (A) clockwise to slow down hitch drop. Turn counterclockwise to increase the rate-of-drop. Rate-of-drop knob is also called implement

lock. When the knob is fully screwed in, the implement will not lower down, even if the position control lever is fully down. Use implement lock while transporting implement.

### Adjust the Sensitivity

Turn hitch sensitivity adjusting knob (B) clockwise to increase the sensitivity of hitch. Turn counterclockwise to reduce sensitivity.

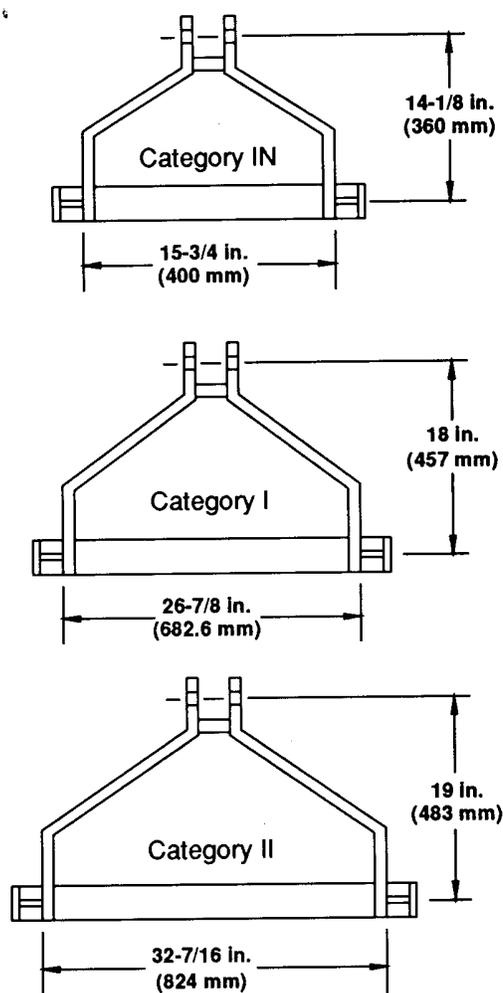
This adjustment is in addition to the different positioning of center link. See Position the Center Link in this Section.

In some specific cases, the high sensitivity of the hitch involves vibrations.

To eliminate vibrations, turn the knob (B) progressively counterclockwise.

RA84036,0001780-19-21JUN18

### Prepare the Implement



LV616—19—13JUN94

Category IN and I 3-Point Hitches are narrower and used on smaller implements than Category II

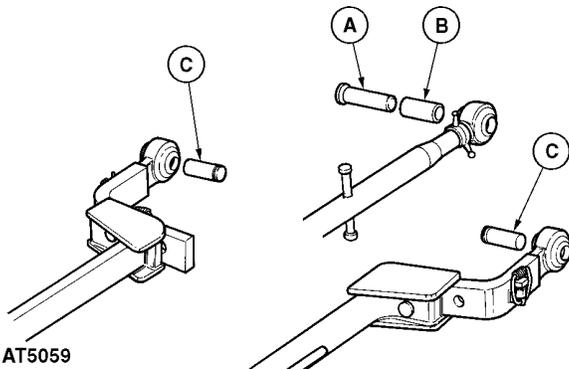
implements. Refer the chart to identify implement category.

Category II implements have the top hole of the implement mast located 483 mm (19 in) above the lower pins. Drill another hole in top mast or extend top mast if necessary.

Hitch Category	Mast Height	Width Between Lower Pins	Pin Sizes	
			Lower	Upper
IN	360 mm (14-1/8 in)	400 mm (15-3/4 in)	22 mm (7/8 in)	19 mm (3/4 in)
I	457 mm (18 in)	682.6 mm (26-7/8 in.)	22 mm (7/8 in)	19 mm (3/4 in)
II	483 mm (19 in)	824 mm (32-7/16 in)	28 mm (1-1/8 in)	25.4 mm (1 in)

RA84036,0001781-19-21JUN18

### Converting Category II Hitch to Category IN or Category I



AT5059—UN—28AUG97

A—Pin  
B—Bushing  
C—Bushing

Tractor center link and draft link ends are sized for Category II implement attaching pins.

If Category IN or Category I implements are to be used, the Category II hitch can be converted as follows:

Install bushing (B) to reduce diameter of the center link end. Smaller implement mast pin (A) is also needed when bushing is installed.

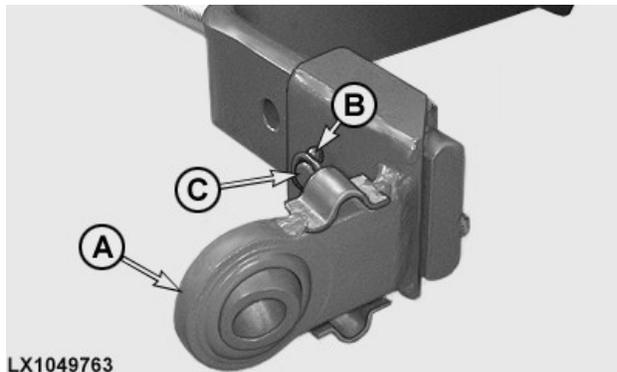
Install bushings (C) in end of draft links.

See your John Deere dealer for parts.

**NOTE:** Refer to *Positioning Draft Link Ends* in this section for further information on hitch conversions.

RA84036,0001782-19-21JUN18

### Positioning Draft Link Ends



LX1049763—UN—19JUL10

A—Bracket  
B—Lock Pin  
C—Pin

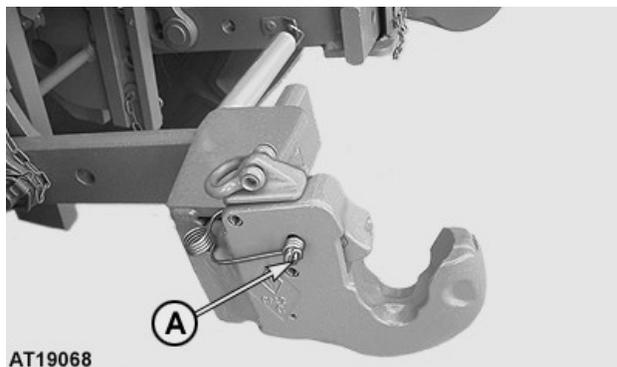
Draft link ends are adjustable for Category IN, I, and II implements.

The different positions are obtained by changing the position of the brackets (A) after removing lock pin (B) and pin (C).

Reinstall pin (C) and lock pin (B) once the desired setting is obtained.

RA84036,0001783-19-21JUN18

### Quick-Coupling (Hook-Type) Draft Links



AT19068—UN—20SEP06

A—Lock parts kit

These draft links are intended for Category I and Category II implements. Implements can be attached to and removed from the draft links without the driver having to leave the seat.

#### Lock for Draft Link Hooks

**CAUTION:** Draft links must be secured against opening accidentally in the following circumstances:

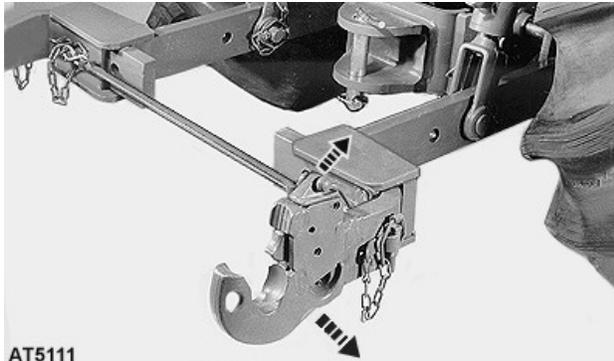
- When implements with an asymmetrical load are attached (for example, side-mounted mowing unit).

- When driving through high-growing bushes and trees (for example, when working in the forest).

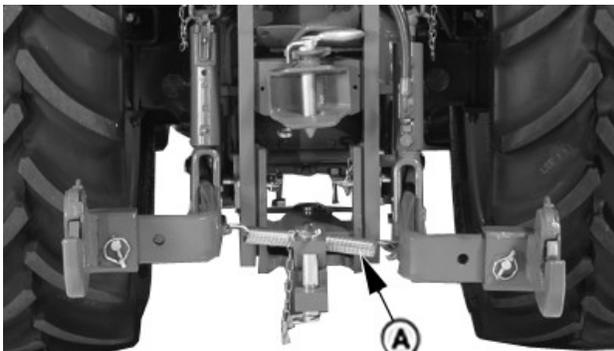
Use John Deere AL165485 lock parts kit (A) at both of the coupler hooks.

RA84036.0001784-19-21JUN18

## Attaching Implements



AT5111—UN—17APR00



PULX002185—UN—17OCT08

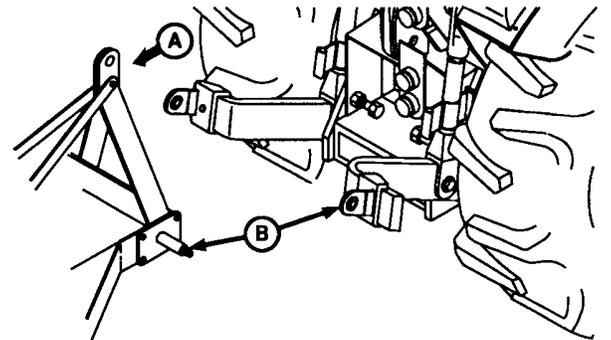
### A— Adjusting Spring Rod

1. Remove adjusting spring rod (A) (If equipped).
2. With draft links lowered, reverse tractor until the coupler hooks are below the implement hitch pins.
3. Slowly raise draft links until pins are engaged in coupler hooks and locked into position.
4. Adjust center link to required length and attach to top attaching point of the implement mast.

**CAUTION:** Make certain that implement is correctly locked to coupler hooks.

RA84036.0001785-19-21JUN18

## Attach Implements to 3-Point Hitch



LV734—UN—25JUN94

A—Implement  
B—Hitch Point

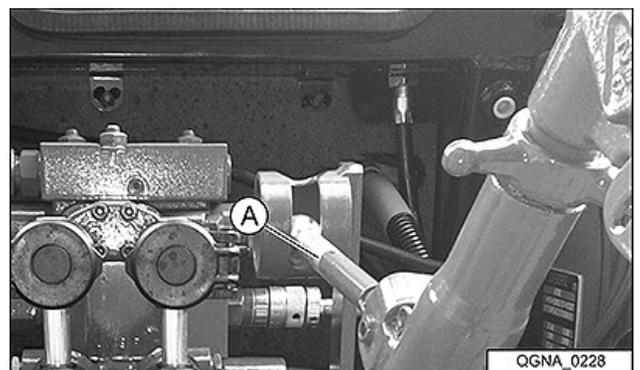
1. Be sure that the drawbar does not interfere with the implement. If necessary, move the drawbar ahead, or remove it. Check for any other potential interference points.

**CAUTION:** Do not stand between tractor and implement unless the park brake is applied firmly.

**CAUTION:** Prevent unexpected movement of hitch by placing draft sensing lever in the forward or OFF position before attaching implement to hitch.

**IMPORTANT:** When attaching 3-point hitch mounted or drawn implements for the first time, conduct a trial. The trial is to ensure that implement is not damaging the cab in any position. With hitch-mounted implements, pay attention to the highest lift position; with drawn implements, be careful when turning sharply.

2. Back tractor up to implement (A) so hitch points (B) align. Place transmission levers in neutral, engage park brake, and stop engine BEFORE leaving the tractor seat.
3. To remove the center link from the transport hook, lift center link locking rod (A).



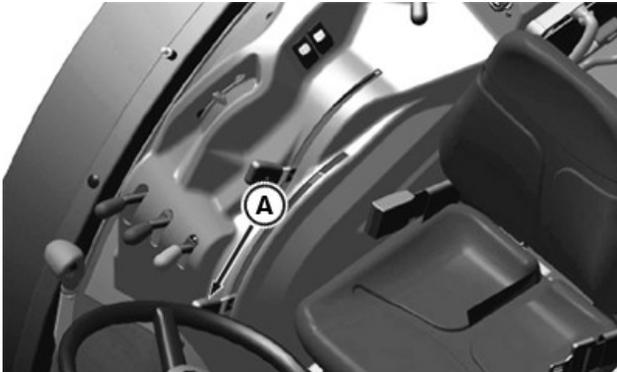
QGNA\_0228

QGNA0228—UN—02NOV15

A—Locking Rod

4. Attach center link to implement top mast.
5. Adjust center link and lift links as necessary. See Level the Hitch in this section.

**CAUTION:** To avoid bodily injury or machine damage whenever an implement, implement quick coupler, or other attachment is connected to the tractor 3-point hitch, check full range of operation for interference, binding, or PTO separation.



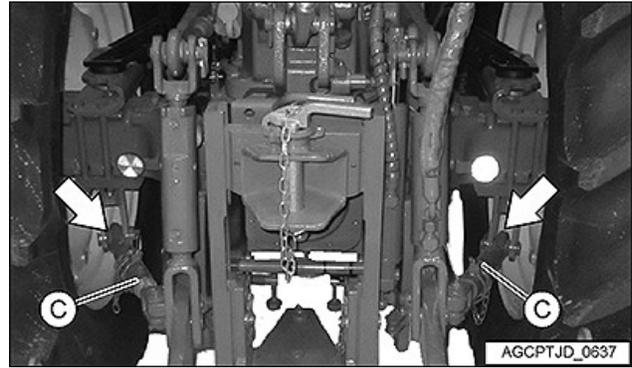
PY34592—UN—15FEB17

A—Position Control Lever

6. Using position control lever (A) lower implement, then raise slowly and check for any point of interference.

RA84036,0001786-19-21JUN18

When needed to limit side sway, adjust out blocks away from frame to contact draft links and limit side-to-side motion.



AGCPTJD0637—UN—02NOV15

Stabilizer Bars

C—Stabilizer Bars

**Stabilizer Bars:**

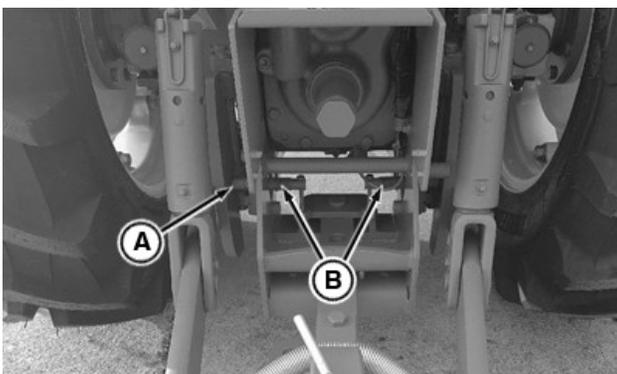
The draft links can be stabilized using these stabilizer bars (C). No tools are required.

**IMPORTANT:** Do NOT let the draft links or lift links come into contact with the tires or other tractor components. When the draft links are raised (even with no implement attached), the stabilizer bars must be locked.

RA84036,0001787-19-21JUN18

**Adjust Sway Blocks**

*NOTE:* Check implement operator's manual for instruction on whether to allow side sway.



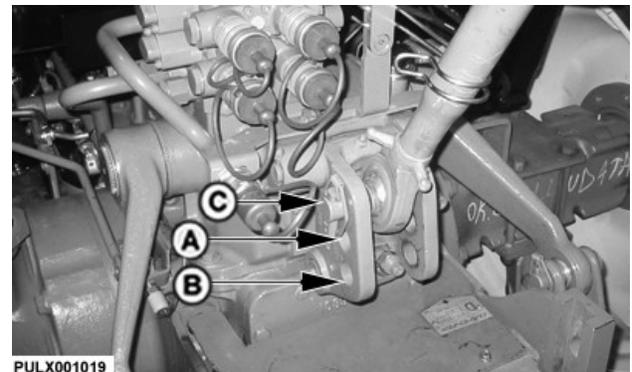
APY01833—UN—28DEC17

A—Sway Blocks  
B—Screw

Sway blocks (A) are used to limit side sway of draft links. Adjust sway blocks by changing the length of the screws (B) on one side for work outside centered position of the implement.

If attachment (plow, disk) needs side sway in operating position, adjust sway blocks tight to the frame by turning screws (B).

**Position the Center Link**



PULX001019—UN—07AUG08

A—Middle Hole — Moderate Sensitivity  
B—Lower Hole — Highest Sensitivity  
C—Upper Hole — Least Sensitivity

The center link bracket has holes which allow three different positions for attaching the center link. The position affects the draft sensing sensitivity.

**Move the center link attachment to holes (A) or (C) if:**

- Excessive hitch activity or hunting occurs in draft control operation.

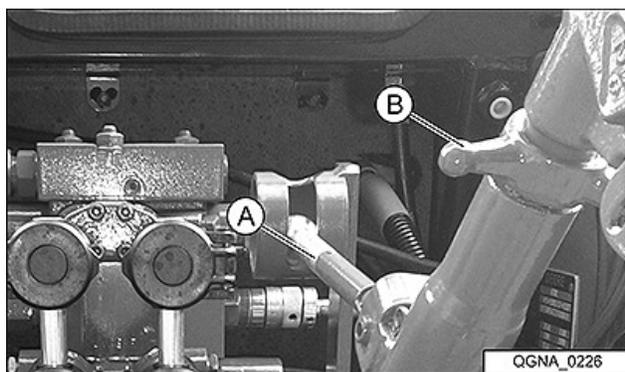
- The rear of the implement raises too much when lifted. The lowest position provides the greatest lifting height and less lifting force and is used when working with a plow.
- The draft control lever range is too small.

**Move the center link attachment to holes (A) or (B) if:**

- The hitch response in draft control operation is unsatisfactory, and the engine speed drops too far before raising the implement.
- The rear of the implement droops and drags the ground as the implement is lifted.

RA84036.0001788-19-21JUN18

**Level the Hitch**



A—Locking Rod  
B—Ring Nut

QGNA\_0226—UN—02NOV15

1. Lower implement to take off weight hitch.
2. Adjust center link to level the implement front to rear:  
Unlock locking rod (A). Loosen ring nut (B). Rotate center link body clockwise to lengthen center link or counterclockwise to shorten it.

Length of link must be kept within the following limits (measured at the center link ends):

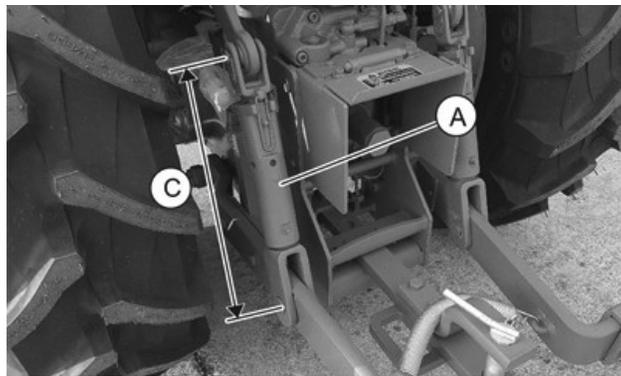
- Minimum length 518 mm (20.4 in)
- Maximum length 718 mm (28.3 in)

Depending on the tractor configuration, adjust to:

- Minimum length 530 mm (20.9 in)
- Maximum length 730 mm (28.7 in)

**IMPORTANT: DO NOT deviate from the specified dimensions. Link body threads could be damaged.**

Relock the locking rod (A) if the link is not in use.



APY01834—UN—28DEC17

A—Sleeve  
C—Length of Link

3. Adjust right-hand or left-hand link to level implement side to side: Slide up the sleeve (A) then turn it clockwise to raise draft link or counterclockwise to lower it.

After the adjustments of the lower level align the slot in the sleeve (A) with the pin in the rod to prevent turning of parts during operation.

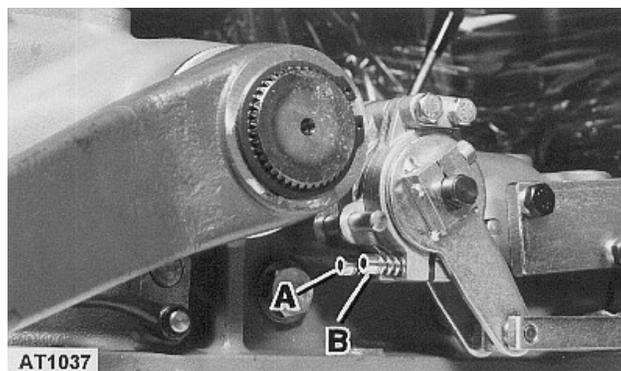
Length (C) of links must be kept within the following limits:

- Minimum length 430 mm (17 in)
- Maximum length 560 mm (22 in)

RA84036.0001789-19-21JUN18

**Adjust Hitch Control Lever Friction**

**IMPORTANT: Ensure that the engine is not running and the hitch is in lowered position.**



A—Position Control Lever Screw  
B—Draft Control Lever Screw

AT1037—UN—27NOV96

If the position or draft control levers do not stay in set position, increase relevant lever friction by tightening screw (A) and/or screw (B). Tighten the screws until the desired friction is obtained.

RA84036.000178A-19-21JUN18

# Hydraulic System

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## Maximum Permissible Oil Withdrawal

To operate large hydraulic cylinders such as those used on tipping trailers, 10 liters (2.6 gal) of oil may be drawn from the transmission case through the connecting lines.

This figure applies when the oil in the transmission case is at the minimum mark on the dipstick. If the oil is up to the maximum mark, a further 5 liters (1.3 gal) may be withdrawn.

Never perform heavy jobs such as towing, operating a PTO, or driving fast when withdrawal results in the oil level dropping below the minimum mark.

If necessary, a further 10 liters (2.6 gal) may be added to the transmission case; this increases the amount that may be withdrawn accordingly.

During oil withdrawal, the tractor should not be inclined in any direction by more than 18° (32 %). If the tractor is inclined more than 18° (32 %), only a correspondingly lower quantity of oil may be withdrawn.

For refilling, use only John Deere Hy-Gard™ Transmission and Hydraulic Oil or its equivalent.

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# Hydraulic Connections

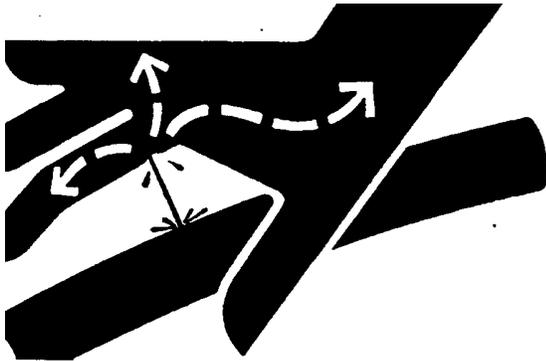
## Use Correct Hose Tips

If your tractor is equipped with a selective control valve (SCV), the coupler receptacles accept a standard hose tip as recommended by ISO<sup>1</sup> and SAE<sup>2</sup>. Adapters are available to allow connecting the older John Deere hose tips to the ISO couplers on your tractor.

RA84036,000178C-19-21JUN18

## Connecting and Disconnecting Cylinder Hoses

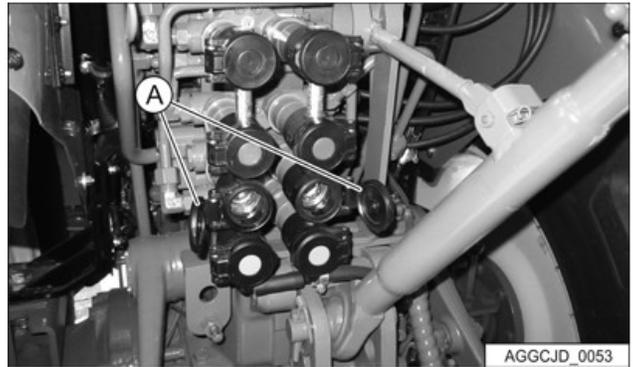
### Connecting



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. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

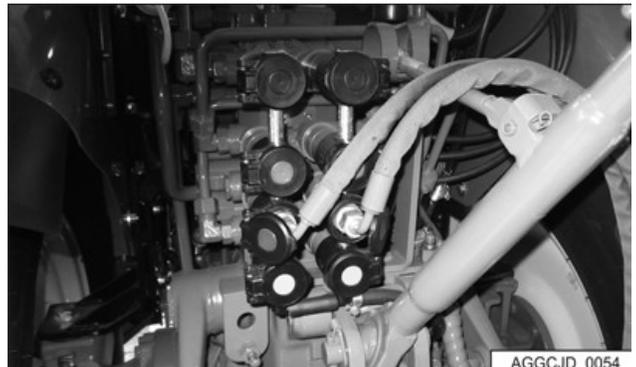
If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene can result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



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AGGCJD0053—UN—10MAR16

### A—Covers

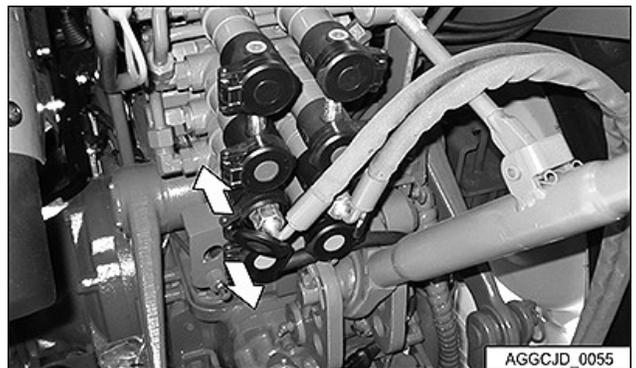
1. Remove dust caps (if equipped) from hose ends.
2. Open covers (A) on couplers and clean.
3. Make sure that hose end and coupler receptacles are clean.



AGGCJD 0054  
AGGCJD0054—UN—10MAR16

4. Check hose connection and see which coupler is used for extending cylinder. This hose must be connected to the couplers in order to extend cylinder when SCV levers are moved rearward or inward.

**⚠ CAUTION:** Hydraulic hoses can fail due to physical damage, kinks, age, and exposure. Check hoses regularly. Replace damaged hoses.



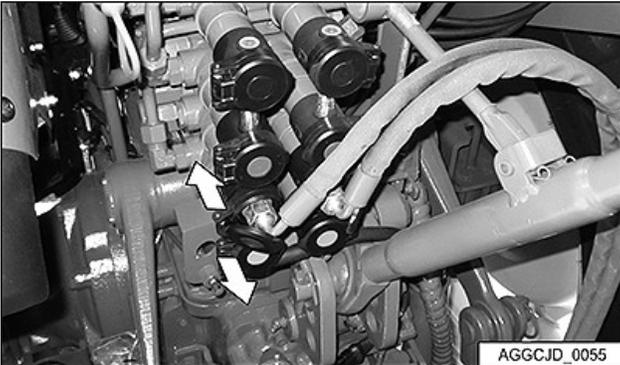
AGGCJD 0055  
AGGCJD0055—UN—02NOV15

5. To connect each hose, push hose tip firmly into the coupler receptacle.

<sup>1</sup> International Standards Organization  
<sup>2</sup> Society of Automotive Engineers

- Pull lightly on hose to make sure that connection is tight.

### Disconnecting



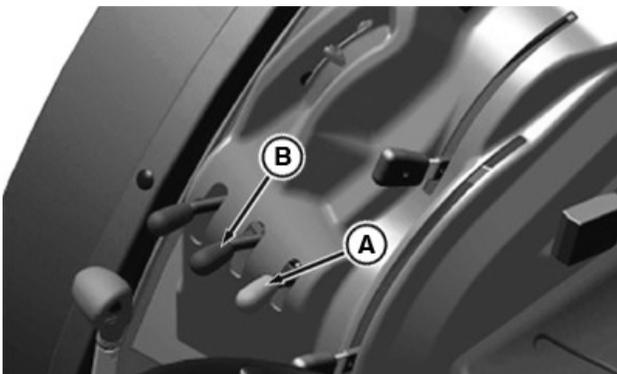
AGGCJD0055  
AGGCJD0055—UN—02NOV15

- If possible, retract the remote cylinder as much as possible to protect the cylinder rod from damage.
- With as much hydraulic pressure as possible relieved from hoses, pull hoses from couplers.
- Make sure dust plugs for receptacles and dust caps for hoses are clean, then reinstall.

RA84036,000178D-19-21JUN18

### Connect Hose Under Pressure

**IMPORTANT:** Implement must be raised slightly, by pulling back lever (A), or (B) to reset coupler check valves, before it can be moved.



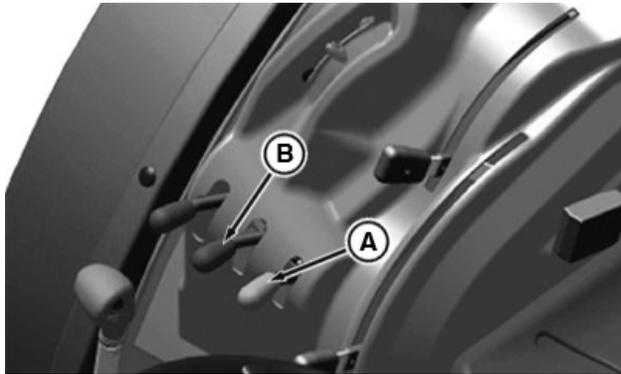
PY34595—UN—15FEB17

A—Lever  
B—Lever

Clean the hose tip and coupler receptacle, if any of the hoses are accidentally be disconnected from the tractor during use. Hoses can be reinstalled. See Connecting Cylinder Hoses in this section with minimal loss of oil.

RA84036,000178E-19-21JUN18

### Neutral Position



PY34595—UN—15FEB17

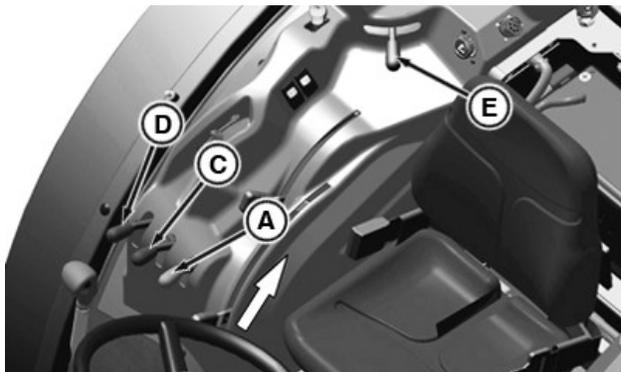
A—Lever  
B—Lever

Spring pressure returns levers (A) and (B), to a centered position. In this position, the remote cylinder is hydraulically locked in position with the help of the control lever.

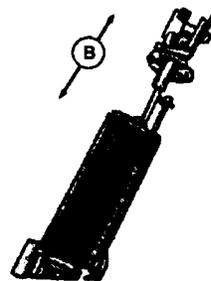
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### Retracting and Extending Cylinder

#### Retracting



PY34596—UN—15FEB17



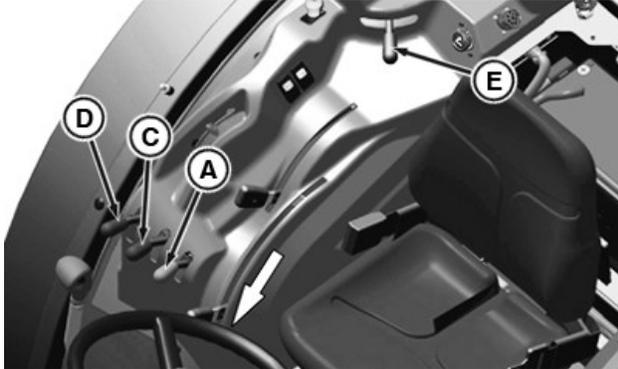
A—Lever  
B—Cylinder  
C—Lever  
D—Lever  
E—Lever

M47174—UN—31JAN92

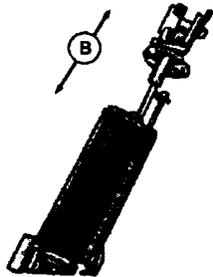
Pull lever (A), (C), (D) or (E) from neutral to the rear and hold it against spring pressure.

It retracts cylinder (B) (arrow down) connected to SCV I, II, III, or IV coupler receptacles.

### Extending



PY34597—UN—15FEB17



M47174—UN—31JAN92

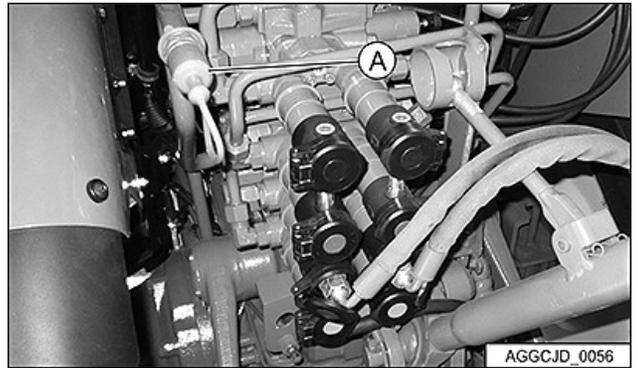
- A—Lever
- B—Cylinder
- C—Lever
- D—Lever
- E—Lever

Push lever (A), (C), (D), or (E) from neutral to the front and hold it against spring pressure.

It extends cylinder (B) (arrow up) connected to SCV I, II, III, or IV coupler receptacles.

RA84036,0001790-19-21JUN18

### Return to Sump



AGGCJD\_0056  
AGGCJD0056—UN—02NOV15

#### A—Quick Coupler

For some applications (for example the front loader), it is necessary to connect the oil return hose to the sump via quick coupler (A).

RA84036,0001791-19-21JUN18

# Selective Control Valves - Controls

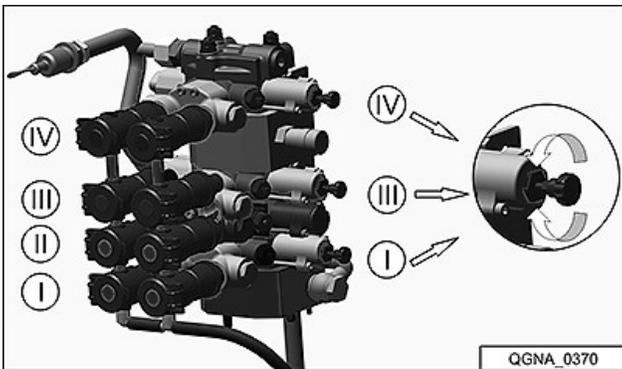
## Selective Control Valve (SCV) Levers

### Control Lever Detents - Settings

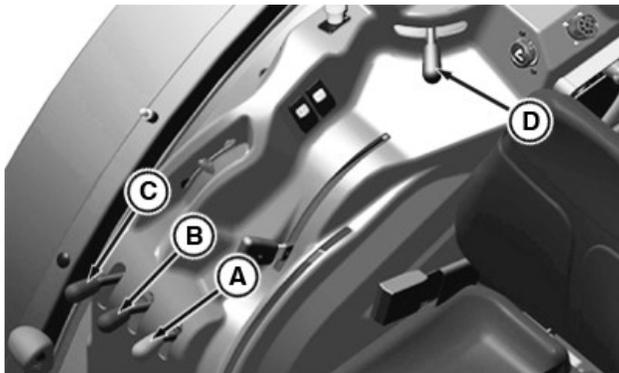
Each section of the SCVs has selectable detents, used to change control lever operations to meet operating requirements of different implements. Detent settings do only affect the lever positions "Extend" and "Retract." There is no effect to the "Float" position.

Selector Knob Detent Setting	Control Lever Detent
Screwed in (Loader Operation)	No Detent: Lever returns to neutral when released
Unscrewed (Hydraulic Motor Operation)	Continuous Detent: Lever remains in operating position until manually returned to neutral

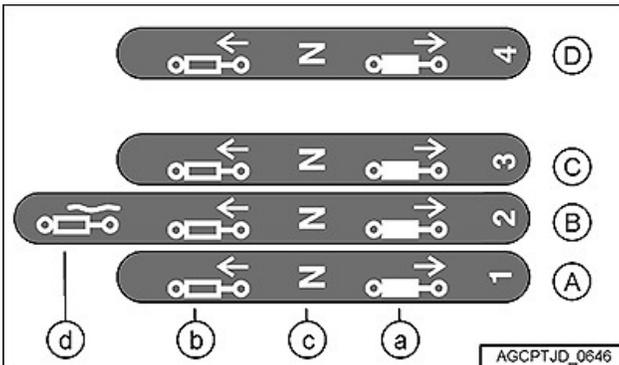
### Operating the Control Levers



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QGNA0370—UN—02NOV15



PY34593—UN—15FEB17



AGCPTJD\_0646  
AGCPTJD0646—UN—02NOV15

A—No. 1 Selective Control Valve Lever  
B—No. 2 Selective Control Valve Lever (without detent)

C—No. 3 Selective Control Valve Lever  
D—No. 4 Selective Control Valve Lever  
a—Retract  
b—Extend  
c—Neutral Position  
d—Float Position

Extend and Retract Cylinders: With hoses properly connected to couplers, pull lever back to extend the remote cylinder or push forward to retract.

- When the selector knob is set to No Detent (Loader) position, lever returns to neutral when released.
- When the selector knob is set to Continuous Detent position (Hydraulic Motor) lever must be manually returned to neutral.

With the lever in neutral, remote cylinder is hydraulically locked in position.

Float Position: Push lever (B) forward, through retract, into detent to operate "Float" feature. "Float" operation allows the cylinder to extend and retract freely, such as when an implement follows ground contour. Manually return the lever to neutral when "Float" is no longer required.

The control levers (A), (B), (C) and (D) can have up to four settings depending on the configuration identified by the decals.

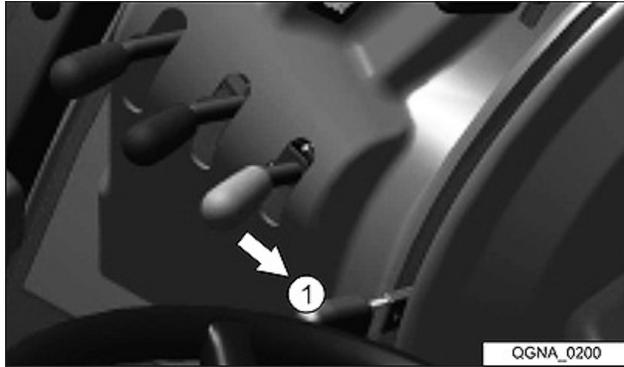
The remote cylinder retracts when the lever is moved backwards to the "Retract" position.

The remote cylinder extends when the lever is moved forward to the "Extend" position.

The remote cylinder is held in place when the lever is in "Neutral."

When the lever is in the "Float" position (that is, piston moves freely inside the remote cylinder), the mounted implement follows the ground contours.

*NOTE: After the engine has been switched-off, Continuous Detent is automatically deactivated within 20 seconds. If this function is manually set (by the relevant knob on the valve), it is restored when the engine is switched-on again. To avoid continuous Detent engagement, completely unscrew the knob to reach No Detent position.*



QGNA\_0200  
QGNA0200—UN—02NOV15

**Activation of the mechanical SCVs:**

The mechanical SCVs are kept in neutral position (safety condition) by a mechanical detent system.

In order to activate the SCV, pull lever as for direction (1), then move forward or backwards as needed.

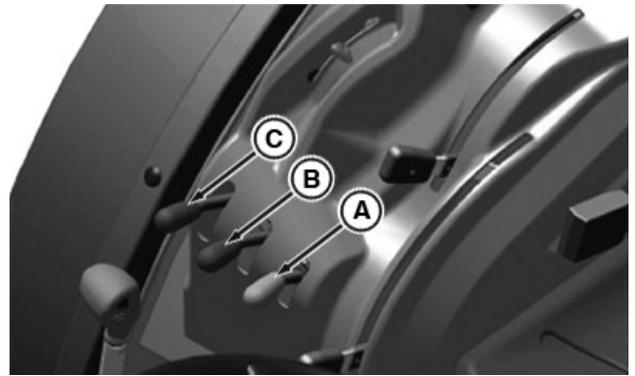
**⚠ CAUTION:** When using front loader, **ALWAYS** put SCV control knobs in NO Detent (Loader) position. If you do not, loader will continue to move after control lever is released.

The risk of the load falling onto the driver is increased when the load is moved in the raised position. Especially if the loader is used to lift pallets or bales with the load raised above the driving position.

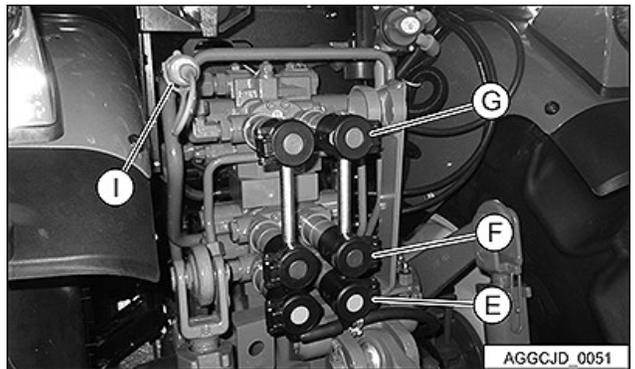
See Safety (section 05) in this manual.

RA84036.0001792-19-25JUN18

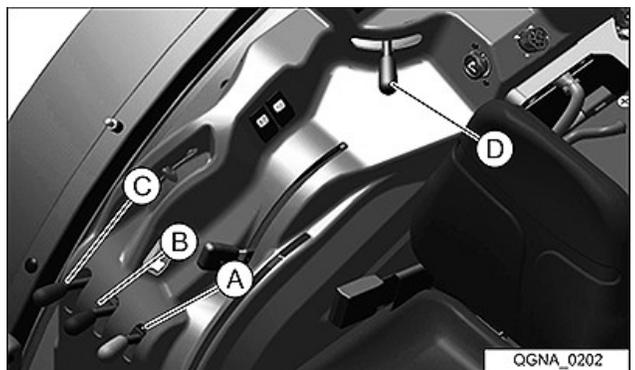
**Control Lever and Coupler Identification**



PY34594—UN—15FEB17  
Tractor with 3 SCVs (5GV, 5GN, 5GL)



AGGCJD\_0051  
AGGCJD0051—UN—02NOV15  
Tractor with 3 SCVs (5GV, 5GN, 5GL)



QGNA\_0202  
QGNA0202—UN—02NOV15  
Tractor with 4 SCVs (5GV, 5GN)

**⚠ WARNING**

**AVOID INJURY OR DEATH  
CAUSED BY FALLING  
LOADS**

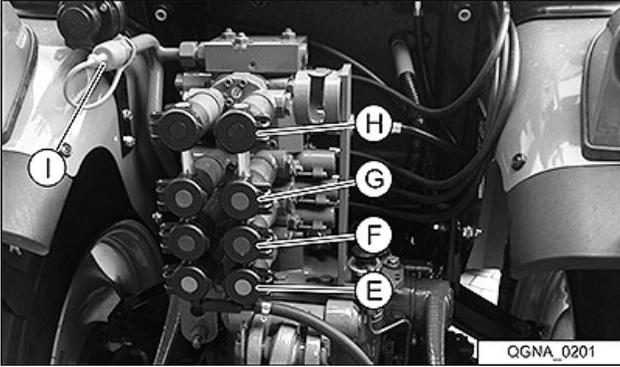
When using loader  
**ALLWAYS** put SCV selector  
knobs in loader position.

*If you do not, loader will  
continue to move after  
controls are released.*

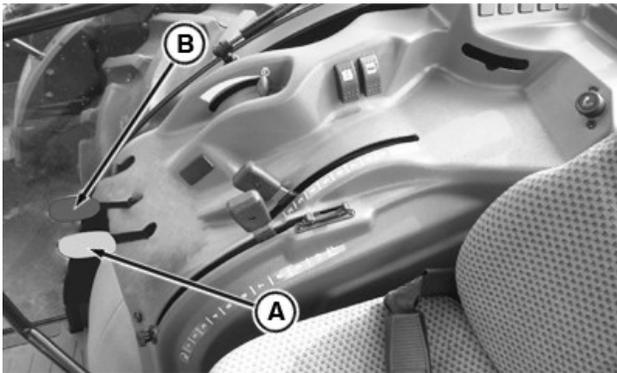
See operators manual for  
use of other knob  
positions.

LX245333 19

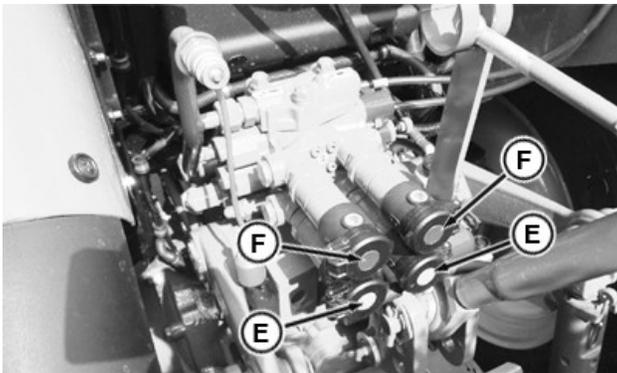
LX245333—19—19NOV15



Tractor with 4 SCVs (5GV, 5GN)



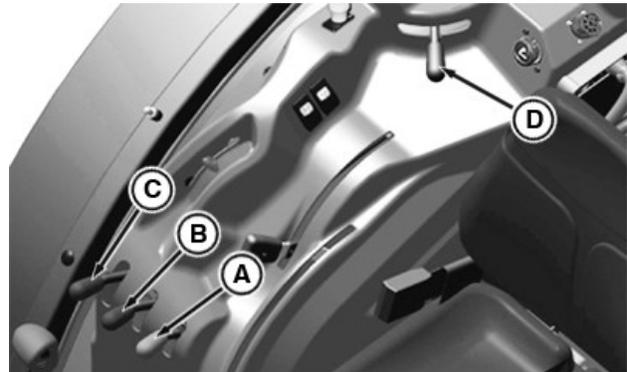
Tractor with 2 SCVs (5GV, 5GN, 5GL)



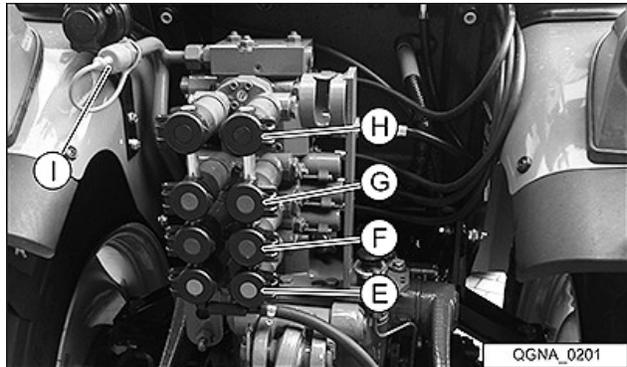
Tractor with 2 SCVs (5GV, 5GN, 5GL)

- Fore/aft movement of lever (B) operates the couplers (F) <sup>1</sup>.
- Fore/aft movement of lever (C) operates the couplers (G) <sup>1</sup>.
- Fore/aft movement of lever (D) operates the couplers (H) <sup>1</sup>.

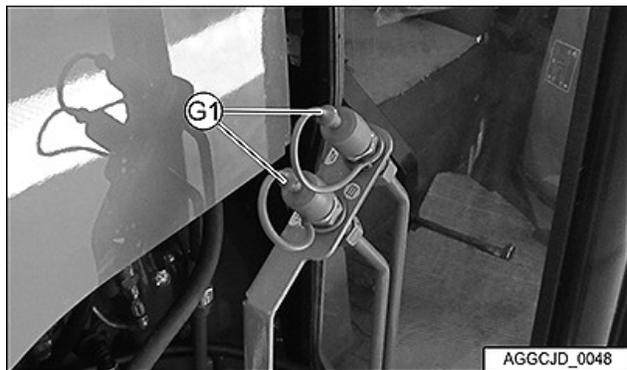
NOTE: 5GL model depending on configuration, could have up to three additional double acting SCVs.



PY34593—UN—15FEB17



QGNA\_0201  
QGNA0201—UN—02NOV15



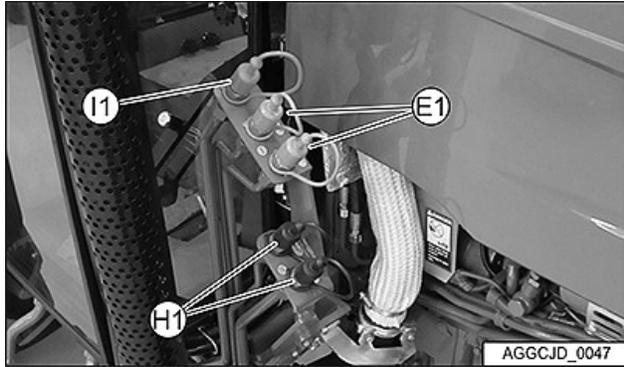
AGGCJD\_0048  
AGGCJD0048—UN—02NOV15

- A—Lever
- B—Lever
- C—Lever
- D—Lever
- E—Couplers
- F—Couplers
- G—Couplers
- H—Couplers
- I—Pressure Free Return Couplers

**Standard Version**

Depending on configuration, the tractor could have up to four additional double acting SCVs:

- Fore/aft movement of lever (A) operates the couplers (E).



AGGCJD0047—UN—02NOV15

- A—Lever
- B—Lever
- C—Lever
- D—Lever
- E—Couplers
- F—Couplers
- G—Couplers
- H—Couplers
- I—Pressure Free Return Couplers
- E1—Mid-mounted Couplers
- G1—Mid-mounted Couplers
- H1—Mid-mounted Couplers
- I1—Pressure Free Return Couplers

### Optional Version

The tractor can be equipped with four additional single/double-acting SCVs and a flow regulator valve.

- Fore/aft movement of lever (A) operates the rear couplers (E) and the mid-mounted couplers (E1).
- Fore/aft movement of lever (B) operates the rear couplers (F).
- Fore/aft movement of lever (C) operates the rear couplers (G) and the mid-mounted couplers (G1).
- Fore/aft movement of lever (D) operates the rear couplers (H) and the mid-mounted couplers (H1).
- The flow regulator valve splits the amount of oil for the SCVs between the 3<sup>rd</sup> SCVs/hitch and 4<sup>th</sup> SCV.

*NOTE: On tractors equipped with three pumps, the flow regulator affects only the splitting of oil between the SCVs and does not affect the hitch. Pressure-free return couplers (I) and (I1) are used to return oil from the equipment (implement) to the tank.*

*NOTE: 5GL model depending on configuration, could have up to three additional double acting SCVs.*

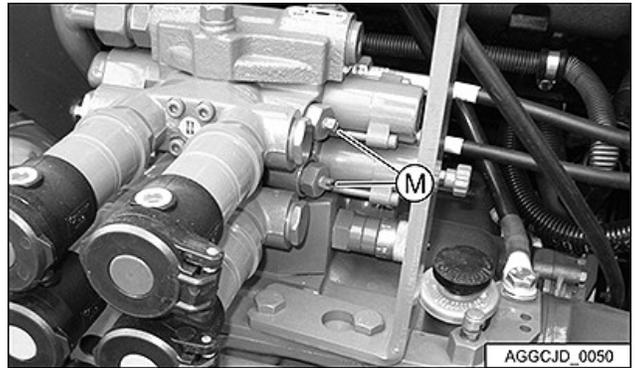
RA84036.0001793-19-09OCT18

### Operating the SCV Control Levers

See Hydraulic Connections (section 70A) and Selective Control Valves - Controls (section 70B) of this manual for more information.

RA84036.0001794-19-10JUL18

### Double/Single Acting SCVs Conversion



AGGCJD0050—UN—02NOV15

M—Screw

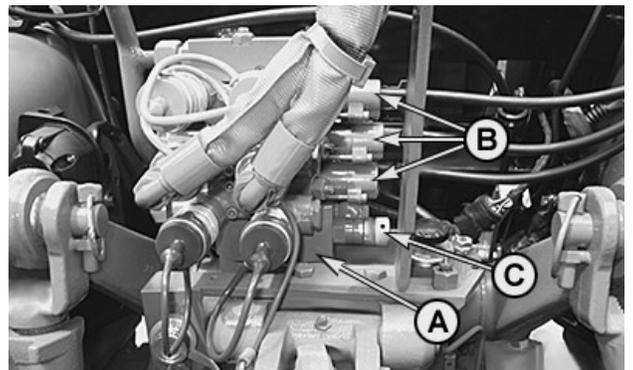
The spool valves are fitted with a square drive screw (M) for conversion between double and single acting.

Unscrew the screw until the mechanical stop is felt.

To use a spool valve in single acting mode, connect the implements hose to the left-hand outlet.

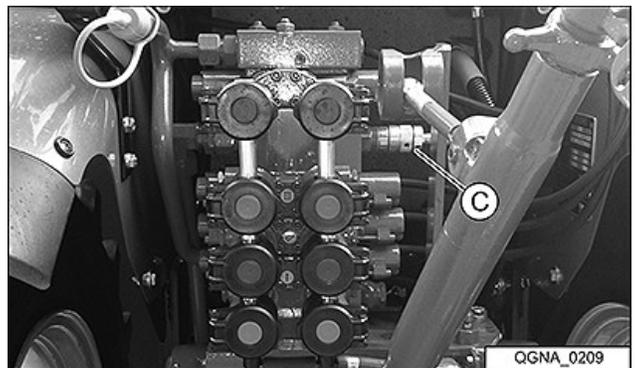
RA84036.0001795-19-25JUN18

### Flow Divider Valve



AGCPTJD0419—UN—15JUL13

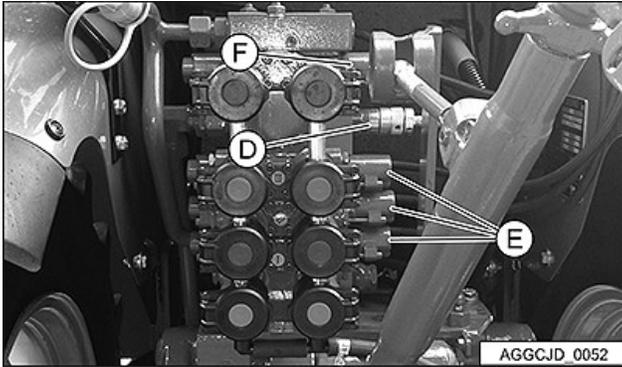
Tractor with 3 SCVs



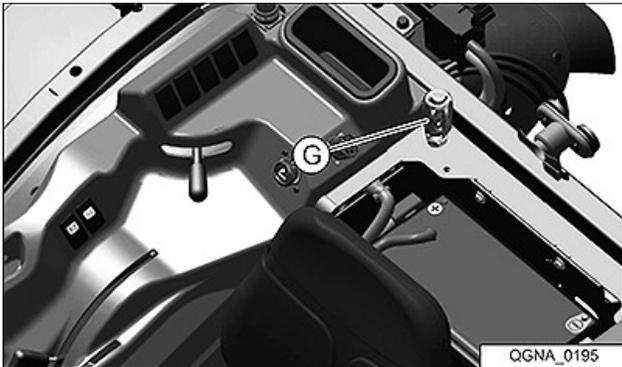
QGNA\_0209

QGNA0209—UN—02NOV15

Tractor with 4 SCVs (5GV, 5GN)



AGGCJD0052—UN—02NOV15



QGNA0195—UN—02NOV15

*NOTE: On tractors equipped with the third pump, the flow divider is used only to divide the flow for the SCVs.*

*NOTE: 5GL model depending on configuration, could have up to three additional double acting SCVs.*

RA84036,0001796-19-09OCT18

- A—Flow Divider Valve
- B—Double Acting SCVs/hitch
- C—Adjusting Knob
- D—Flow Regulator Valve
- E—Double-Acting SCVs/hitch
- F—Double-Acting SCVs
- G—Knob (Cab Version)

The tractor is equipped with a flow divider valve (A), which splits the amount of oil for the SCVs between the double-acting SCVs/hitch (B) and hitch.

With knob (C), this allocation can be adjusted infinitely from 90% for hitch and 10% for double-acting SCVs to 10% for hitch and 90% for double-acting SCVs.

Turn knob (C) clockwise = Up to 90% of oil to hitch.

Turn knob (C) counterclockwise = Up to 90% of oil to SCVs I, II, and III.

### Flow Regulator Valve Control

The tractor is equipped with a flow regulator valve (D), which splits the amount of oil for the SCVs between the double-acting SCVs/hitch (E) and double-acting SCVs (F)

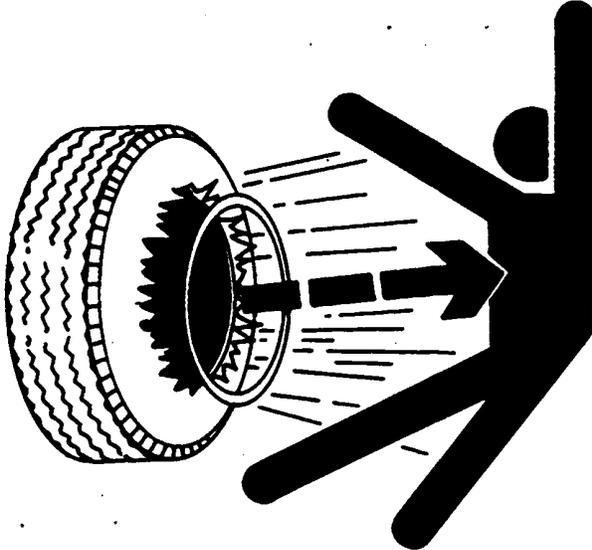
With knob (G), this allocation can be adjusted infinitely from 90% for double-acting SCVs (E) and 10% for double-acting SCV (F) to 10% for double-acting SCVs (E) and 90% for double-acting SCV (F).

Turn knob (G) clockwise = Up to 90% of oil to SCVs I, II, or III and hitch.

Turn knob (G) counterclockwise = Up to 90% of oil to SCV III or IV.

# Wheels and Tires

## Service Tires Safely



TS211—UN—15APR13

**CAUTION:** 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.

RA84036,0001797-19-25JUN18

## Changing Wheels Safely



LX1049987

LX1049987—UN—15JUL11

KJD10581—Wheel Dolly  
JT02043—Support Stand, 482 to 736 mm (19 to 29 in)  
JT02044—Support Stand, 863 to 1117 mm (34 to 44 in)

Due to the big size and the heavy weight of tractor wheels, pay attention to the following points when changing wheels:

- Before changing wheels, place tractor on firm, level ground.
- Engage park lock <sup>1</sup> and prevent the tractor from rolling away by putting down chock blocks.
- Remove the ignition key to prevent unauthorized operation.
- When removing rear wheels, prevent front axle oscillation by using wedges.
- When jacking up the tractor, only use the recommended lifting points. See Jack Up the Tractor - Lifting Points in Service — General Information (section 210) in this manual.
- Use a stable jack with sufficient lifting force. See Loads and Weights in Specifications (section 500A) in this manual.
- Stop jacking up the tractor when the wheel is completely off the ground.
- Use a suitable wheel dolly, especially when removing a rear wheel. It is available as a special tool (KJD10581) at your John Deere dealer.
- Support the tractor with the support stands, when a wheel is removed. It is available as a special tool (JT02043 and JT02044) at your John Deere dealer.
- When installing wheels, make sure that the correct torques are applied. See Tighten Wheel Bolts in this section.

**CAUTION:** Do not operate the tractor until the wheel change has been completed.

When changing wheels, make sure that no one is standing in the danger zone.

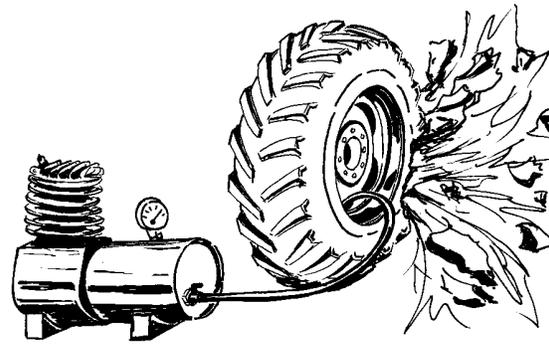
When removing a wheel, make sure that the tractor is supported safely.

<sup>1</sup> If not equipped with the park lock, apply park brake instead.

When storing removed wheels, make sure that they cannot fall.

RA84036,0001798-19-25JUN18

### Mounting Tires



Z 20924  
Z20924—UN—15AUG94

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion, which may result in serious injury or death. Do NOT attempt to mount a tire unless you have the proper equipment and experience to perform the job safely. Instead have it done by your John Deere dealer or a qualified tire repair service.

When seating tire beads on rims, never exceed maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, relubricate bead, and reinflate.

Detailed agricultural tire mounting instructions, including the necessary safety precautions, are available from your local tire manufacturer agents.

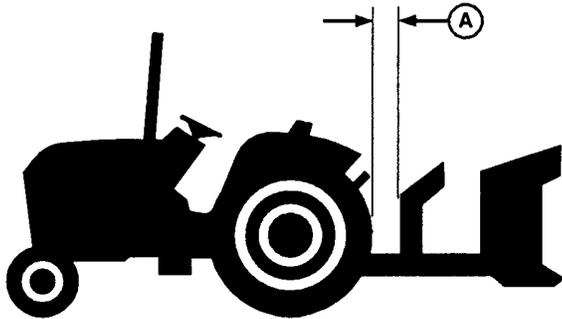
RA84036,000179C-19-25JUN18

### Tire Combinations

In order to achieve maximum drawbar pull, maintain proper steerability, reduce tire wear, and fuel consumption, comply with the correct tire combinations as shown in the table. If front tires show excessive wear in comparison with rear tires, the front tires must be replaced in order to maintain the predetermined tire ratio.

**IMPORTANT:** When replacing tires, consult your tire dealer. Never mix worn and new tires, bias, and radial tires or tires with different diameters. It reduces the tire lifetime and decreases the overall tractor performance. Using other tire combination, apart from the tire combination chart, causes the premature tire and power train wear.

### Check Implement-to-Tire Clearance



LV736—UN—25JUN94

**IMPORTANT:** Check for adequate clearance (A) between outside diameter of the tire and implement with hitch in raised position.

When large diameter rear tires are installed on a tractor with a 3-point hitch, a quick coupler or similar device is required to provide adequate implement-to-tire clearance.

RA84036,0001799-19-25JUN18

### Tire Pressures

Long life and satisfactory performance of the tires depend on proper tire inflation. Under-inflation of tires leads to rapid wear. Over-inflated tires reduce traction and increase wheel slippage.

Since correct tire pressures depend not only on working conditions and load but also on tractor model, tire size, and manufacturer, we recommend that you approach your John Deere dealer or tire company for advice.

RA84036,000179B-19-25JUN18

Tire Combinations - Tractors With Front-Wheel Drive

5GV		5GN	
Rear tires	Front tires	Rear tires	Front tires
250/85 R28	6.50-16	320/85 R28	7.50 R16

*Wheels and Tires*

280/85 R28	6.50-16	380/70 R24	260/70 R16
320/85 R24	6.50-16	340/85 R28	7.50 R16
360/70 R24	240/70 R16	340/85 R28	280/70 R18
360/70 R28	280/70 R16	340/85 R28	8.25-16
320/85 R28	7.50 R16	420/70 R28	280/70 R18
340/85 R24	6.50-16	380/85 R28	7.50 R18
340/85 R24	10.0/75-15.3	380/85 R28	280/70 R18
340/85 R28	7.50 R16	480/65 R28	280/70 R18
340/85 R28	8.25-16	280/85 R28	260/70 R16
320/85 R24	260/70 R16	—	—
340/85 R24	260/70 R16	—	—
280/85 R28	260/70 R16	—	—
420/70 R28	280/70 R18	—	—
380/70 R24	260/70 R16	—	—
380/85 R28	280/70 R18	—	—
250/85 R28	6.00-16	—	—
<b>Tire Combinations - Tractors Without Front-Wheel Drive</b>			
<b>5GV</b>		<b>5GN</b>	
<b>Rear tires</b>	<b>Front tires</b>	<b>Rear tires</b>	<b>Front tires</b>
9.5 R28	6.00-16	280/85 R28	6.00-16
280/85 R28	6.00-16	320/85 R28	6.00-16
360/70 R24	6.00-16	340/85 R24	6.00-16
320/85 R28	6.50-16	340/85 R28	6.50-16
340/85 R24	6.00-16	340/85 R28	7.50-16
<b>Tire Combinations - Tractors with 4WD, with Front Adjustable Rims</b>			
<b>5GL</b>			
<b>Rear Tires</b>	<b>Rear Rims</b>	<b>Front Tires</b>	<b>Front Rims</b>
380/70 R20	W11x20 in	260/70 R16	W8x16 in
360/70 R24	W12x24 in	280/70 R16	W8x16 in
380/70 R24	W12x24 in	280/70 R16	W8x16 in
440/65 R24	W15Lx24 in	280/70 R18	W9x18 in

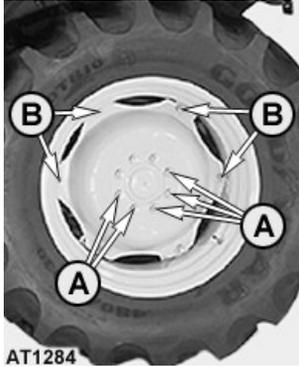
RA84036.000179A-19-25JUN18

# Front Wheels, Tires, and Tread Widths

## Tighten Wheel Bolts

### Tighten Rear Wheel Nuts and Bolts

**IMPORTANT:** Check tightness of rim, disk, and wheel bolts after 10 hours every time you replace wheels.



AT1284

AT1284—UN—13JUN01

(A) —Disk to Axle Flange  
(B) —Rim to Disk

#### Specification

(A)—Torque. . . . .	400 N·m (295 lb-ft)
(B) M18 bolt—Torque. . . . .	280 N·m (207 lb-ft)
(B) M16 bolt—Torque. . . . .	210 N·m 155 lb-ft)

### Tighten Front Wheel Nuts (Tractors without Front Wheel Drive)

**IMPORTANT:** Check tightness of rim, disk, and wheel bolts after 10 hours every time you replace wheels.



AT1285

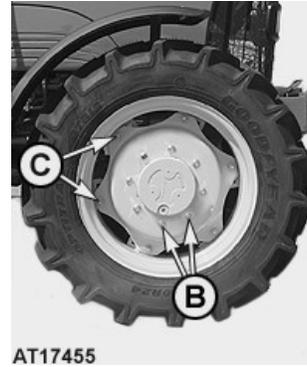
AT1285—UN—13JUN01

#### Specification

Disk to the axle flange (tractors without front wheel drive)—Torque. . . . .	175 N·m (130 lb-ft)
--	---------------------

### Tighten Wheel Nuts of Front Wheel Drive Axle

**IMPORTANT:** Check tightness of rim, disk, and wheel bolts after 10 hours every time you replace wheels.



AT17455

AT17455—UN—20JUL07

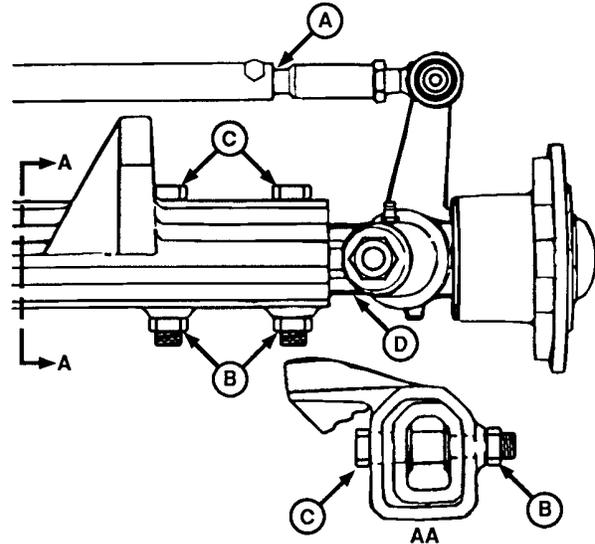
(B) —Disk to Axle Flange  
(C) —Rim to Disk

#### Specification

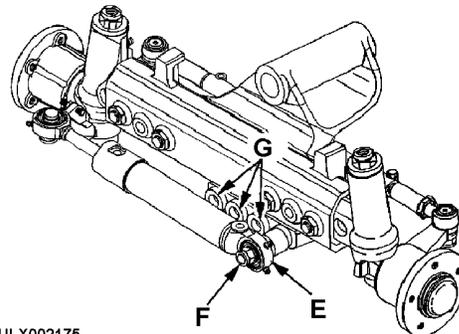
(B) Disk to the axle flange—Torque. . . . .	300 N·m (220 lb-ft)
(C) M18 bolt—Torque. . . . .	280 N·m (207 lb-ft)
(C) M16 bolt—Torque. . . . .	210 N·m (155 lb-ft)

RA84036.00017A2-19-25JUN18

## Adjusting Front Axle Tread Width



LV810—UN—08JUL94



PULX002175

PULX002175—UN—16OCT08

A—Tie Rod Length

- B—Nuts
- C—Cap Screws
- D—Axle Knee
- E—Steering Cylinder
- F—Lock Nut
- G—Holes

**IMPORTANT: DO NOT place jack under the engine oil pan.**

1. Jack up the front end of tractor.
2. When making large tread adjustments it is necessary to change the tie rod length (A) before or during axle adjustments. See Check Toe-In and Adjust Toe-In in this section.
3. Change the steering cylinder (E) anchoring position to axle body in relation to the change of tread width using the available holes (G). Tighten lock nut (F) to the specification.

**Specification**

Lock nut (F)—Torque. . . . . 250 N·m  
184 lb·ft

4. Remove nuts (B), cap screws (C), and bushings from the front axle (two on each side).
5. Slide axle knees (D) to desired position. Adjust both sides to the same spacing.
6. Reinstall cap screws (C), bushings, and nuts (B) on each side. Tighten hardware to the specification.

**Specification**

Hardware—Torque. . . . . 150 N·m  
110 lb·ft

7. Set toe-in. See Check Toe-In and Adjust Toe-In in this section.

RA84036,00017A1-19-10JUL18

**Check Toe-In**

**With Front Wheel Drive Axle**

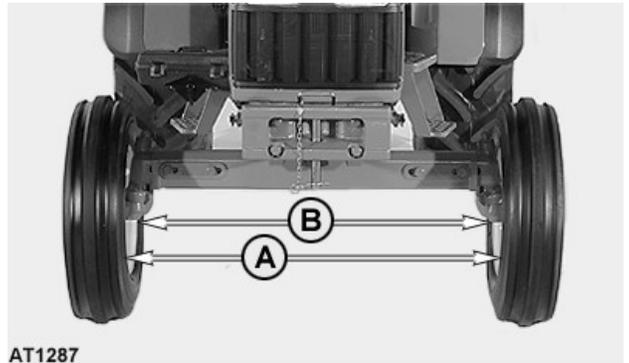


TMD0085—UN—02NOV15

1. Disengage front wheel drive and park tractor on smooth, level surface. Steer front wheels straight ahead. Stop engine.

2. Measure distance (A) between the center line of tires at the hub level in front of the axle, using an outside bar of each tire.
3. Move tractor back about 1 m (3 ft) so mark is at the hub level behind the axle. Again measure distance between tires at same point on tire.
4. Determine the difference between front and rear measurements. If the front measurement is smaller, toe is “in.” If the rear is smaller, toe is “out.” Toe-in should be less than 2 mm (1/12 in).

**Without Front Wheel Drive**



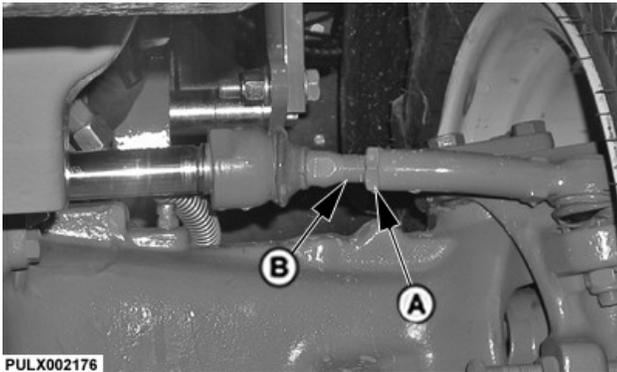
AT1287—UN—27JUN01

1. Park machine on a smooth, level surface.
2. Turn steering wheel so front wheels are in the straight-ahead position. Stop engine.
3. Measure distance (A) between tires at the hub level in front of axle. Record measurement and mark the tires.
4. Move tractor back about 1 m (3 ft), so mark is at the hub level behind the axle. Again, measure distance between tires at same point on tire. Record measurement.
5. Determine the difference between front and rear measurements. If the front measurement is smaller, toe is “in.” If the rear is smaller, toe is “out.”
6. Distance (A) at the front of tires must be 3—6 mm (1/8—1/4 in) less than the distance measured at rear of tires. Adjust toe-in if necessary. See Adjust Toe-In in this section.

RA84036,000179D-19-10JUL18

## Adjust Toe-In

### With Front Wheel Drive Axle



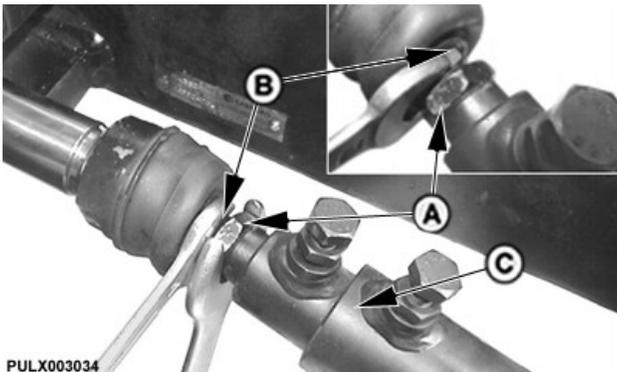
A—Lock nut  
B—Inner Rod

1. Loosen lock nuts (A) on both ends of tie rod.
2. Adjust both sides equally by rotating the inner rod (B) to lengthen or shorten the tie rod. Adjust toe-in to 0—2 mm (0—1/12 in).

Tie Rod Rotation	Approximate Change in Toe-in
1/8 turn	4 mm (3/16 in)
1/4 turn	8 mm (3/8 in)
1/2 turn	16 mm (5/8 in)

3. Tighten lock nuts (A) to 120 N·m (88 lb·ft).

### Without Front Wheel Drive



A—Inner Tube  
B—Lock nut  
C—Tie Rod

1. Loosen lock nuts (B) on both ends of tie rod.
2. Turn inner tube (A) to lengthen or shorten the tie rod (C) until toe-in is 3—6 mm (0.12—0.24 in).

Tie Rod Rotation	Approximate Change in Toe-In
1/2 turn	8 mm (0.31 in)
1 turn	16 mm (0.63 in)

3. Tighten lock nuts (B) to 140 N·m (103 lb·ft).

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## Tread Adjustment (without Front-Wheel Drive) (5GV, 5GN)

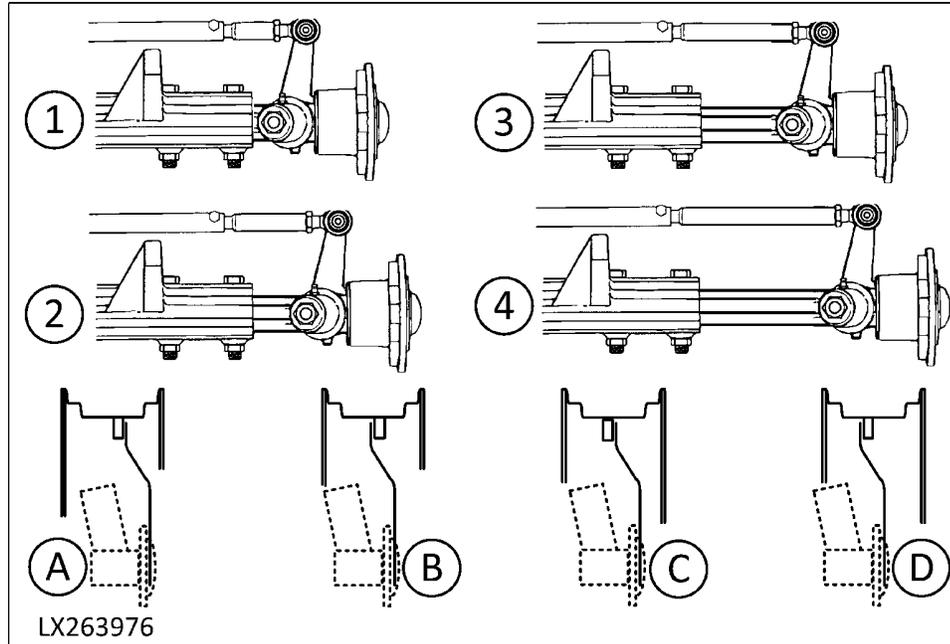
Front wheel tread is adjusted by repositioning the wheel disks. In addition, the complete wheel can be installed on the other side of the tractor. The arrow on the side wall of tire must point in the direction of forward travel. If front wheels are removed to adjust tread, tighten front wheel attaching nuts to specified torque. See Tighten Wheel Bolts in this section.

**IMPORTANT:** Always mount nuts on the rim side.

*NOTE:* The illustration shows the right-hand front wheel. Tread widths are measured at the lowest point of the tires.

## Front-Wheel Tread Adjustment - without Front-Wheel Drive (5GV)

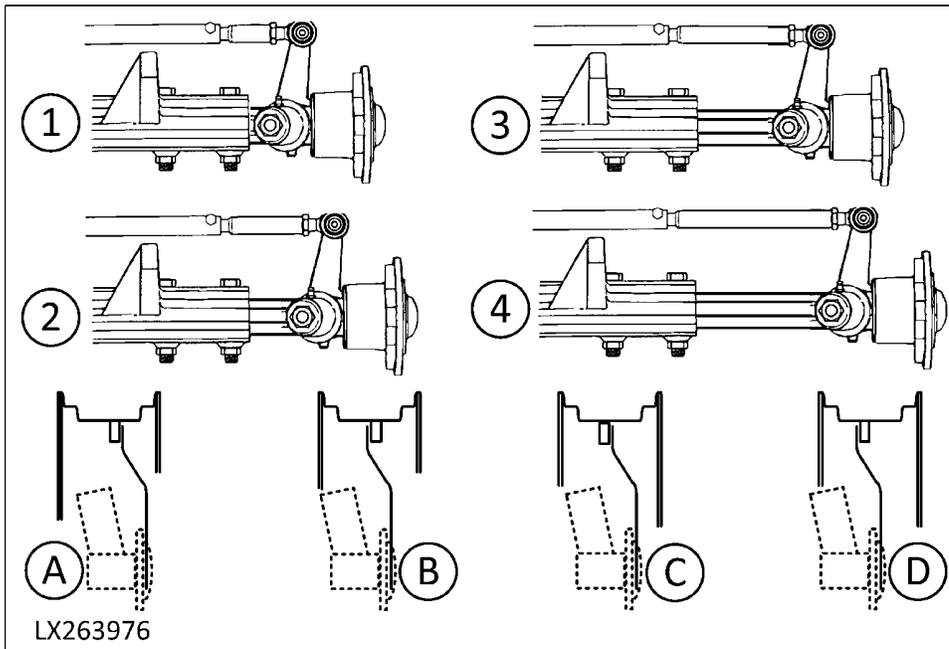
Front Wheels, Tires, and Tread Widths



LX263976—UN—08DEC15

Front Wheel Tread Settings, 5GV Without Front-Wheel Drive										
Front Tires	Rim	Unit	Wheel and Disk in Axle Arm Position 1				Wheel and Disk in Axle Arm Position 2			
			1D	2A	2B	2C	2D			
1A	1B	1C	1D	2A	2B	2C	2D			
6.00-16	4.00Ex16 in	mm	776	—	974	—	876	—	1074	—
		in	31	—	38	—	34	—	42	—
6.50-16	5.50Fx16 in	mm	809	885	869	945	909	985	969	1045
		in	32	35	34	37	36	39	38	41
Front Tires	Rim	Unit	Wheel and Disk in Axle Arm Position 3				Wheel and Disk in Axle Arm Position 4			
			3D	4A	4B	4C	4D			
3A	3B	3C	3D	4A	4B	4C	4D			
6.00-16	4.00Ex16 in	mm	976	—	1174	—	1076	—	1274	—
		in	38	—	46	—	42	—	50	—
6.50-16	5.50Fx16 in	mm	1009	1085	1069	1145	1109	1185	1169	1245
		in	40	43	42	45	44	47	46	49

**Front-Wheel Tread Adjustment - without Front-Wheel Drive (5GN)**



LX263976—UN—08DEC15

Front Wheel Tread Settings, 5GN Without Front-Wheel Drive

Front Tires	Rim	Unit	Wheel and Disk in Axle Arm Position 1			Wheel and Disk in Axle Arm Position 2				
			1D	2A	2B	2C	2D			
1A	1B	1C	1D	2A	2B	2C	2D			
6.00-16	4.00Ex16 in	mm	776	—	974	—	876	—	1074	—
		in	31	—	38	—	34	—	42	—
6.50-16	5.50Fx16 in	mm	809	885	869	945	909	985	969	1045
		in	32	35	34	37	36	39	38	41
7.50-16	5.50Fx16 in	mm	—	883	867	943	—	983	967	1043
		in	—	35	34	37	—	39	38	41

Front Tires	Rim	Unit	Wheel and Disk in Axle Arm Position 3			Wheel and Disk in Axle Arm Position 4				
			3D	4A	4B	4C	4D			
3A	3B	3C	3D	4A	4B	4C	4D			
6.00-16	4.00Ex16 in	mm	976	—	1174	—	1076	—	1274	—
		in	38	—	46	—	42	—	50	—
6.50-16	5.50Fx16 in	mm	1009	1085	1069	1145	1109	1185	1169	1245
		in	40	43	42	45	44	47	46	49
7.50-16	5.50Fx16 in	mm	—	1083	1067	1143	—	1183	1167	1243
		in	—	43	42	45	—	47	46	49

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**Tread Adjustment (with Front-Wheel Drive) (5GV, 5GN)**

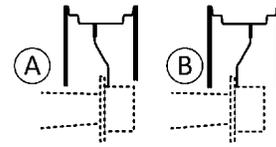
Front wheel tread is adjusted by repositioning or reversing the rims or by reversing the wheel disks. In addition, the complete wheel can be installed on the other side of the tractor. The arrow on the side wall of tire must point in the direction of forward travel. If front

wheels are removed to adjust tread, tighten front wheel attaching nuts to specified torque. See Tighten Wheel Bolts in this section.

**IMPORTANT: Always mount nuts on the rim side.**

*Front Wheels, Tires, and Tread Widths*

**NOTE:** The illustration shows the right-hand front wheel.  
Tread widths are measured at the lowest point of the tires.



LX211142—UN—08DEC15

2 Position Rim

<b>5GV Front-Wheel Tread Settings (with Front-Wheel Drive)</b>				
Front Tires	Rim	Unit	Position of Rim and Wheel Disks	
	2 Position WELDED		A	B
6.00-16	4.50Ex16 in	mm	819	1007
		in	32	40
6.50-16	4.50Ex16 in	mm	—	1006
		in	—	40
7.50 R16	5.50Fx16 in	mm	—	982
		in	—	37
10.0/75-15.3	9.00x15.3 in	mm	—	1012
		in	—	40
240/70 R16	W8x16 in	mm	—	1024
		in	—	40
260/70 R16	W8x16 in	mm	—	1023
		in	—	40
280/70 R16	W8x16 in	mm	—	1022
		in	—	40
8.25-16	5.50Fx16 in	mm	—	981
		in	—	39
280/70 R18	W9x18 in	mm	—	995
		in	—	39

<b>5GN Front-Wheel Tread Settings (with Front-Wheel Drive)</b>				
Front Tires	Rim	Unit	Position of Rim and Wheel Disks	
	2 Position WELDED		A	B
7.50 R16	5.50Fx16 in	mm	911	1047
		in	36	41
260/70 R16	W8x16 in	mm	—	1088
		in	—	43
280/70 R18	W9x18 in	mm	—	1060
		in	—	42
8.25-16	5.50Fx16 in	mm	910	1046
		in	36	41
7.50 R18	5.50Fx18 in	mm	939	1019
		in	37	40

<b>5GL Front-Wheel Tread Settings (with Front-Wheel Drive)</b>				
Front Tires	Rim	Unit	Position of Rim and Wheel Disks	
	2 Position WELDED		A	B
260/70 R16	W8x16 in	mm	1067	1223
		in	42	48

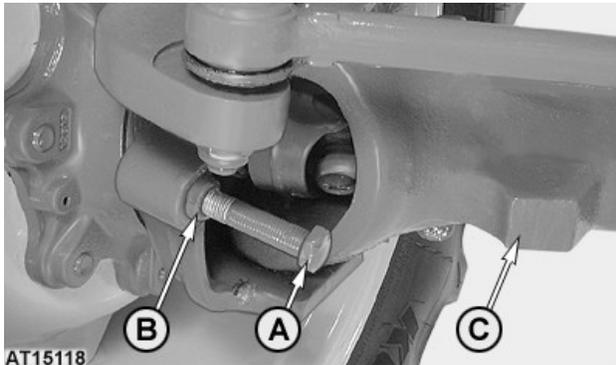
*Front Wheels, Tires, and Tread Widths*

280/70 R16	W8x16 in	mm	1066	1222
		in	42	48
280/70 R18	W9x18 in	mm	1065	1225
		in	42	48

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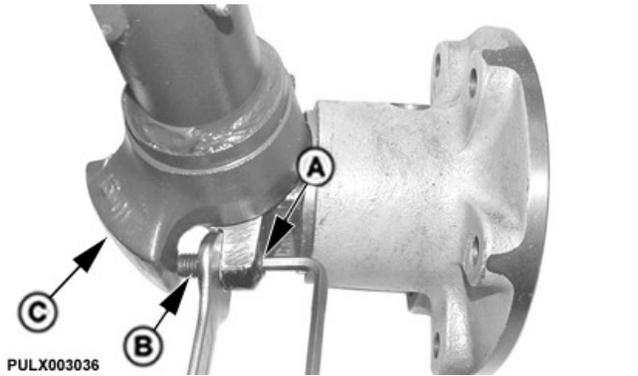
# Steering Stop and Fender — Settings

## Steering Angle Adjustment



AT15118 AT15118—UN—24SEP03

Front axle with front-wheel drive



PULX003036 PULX003036—UN—04FEB09

Front axle without front-wheel drive

- A—Adjusting Screw
- B—Lock Nut
- C—Stop

**NOTE:** The tractor must be ready for operation when the steering angle is adjusted. Tires, fenders, implements, and different types of ballast are factors that affect each tractor differently.

Steering angle must be the same on both sides.

**CAUTION:** The engine must be shut off when the adjustment is made. **RISK OF CRUSHING!**

1. Lift front of tractor until the front axle can swing to its limits.
2. Support the tractor safely.
3. Move the right side of the axle upwards until it reaches the stop (C).
4. Turn the steering to full lock in both directions.
5. Measure the distance between the wheels and the other tractor components.
6. If necessary, loosen lock nut (B) and adjust steering angle as per specification using screw (A).

### Specification

Minimum Clearance, Steering	
Stop—Distance. . . . .	25 mm 1 in.

7. Tighten lock nut to specified torque.

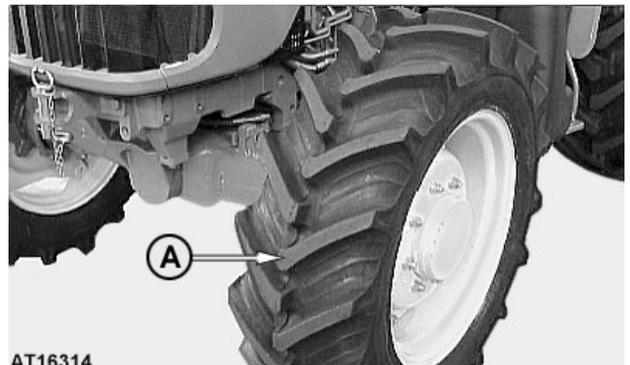
### Specification

Front axle without front-wheel drive—Torque. . . . .	56 N·m 41 lb·ft
Front axle with front-wheel drive—Torque. . . . .	150 N·m 110 lb·ft

8. Repeat this procedure on the left side.

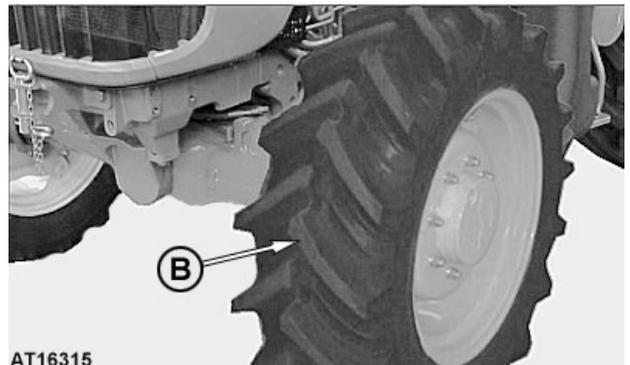
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## Direction of Tire Rotation



AT16314

AT16314—UN—24JUN03



AT16315

AT16315—UN—18SEP03

When mounting or changing tires, make sure arrow on flank of tires points in the direction of forward travel (A).

When tractors with front wheel drive are to be used primarily for transport purposes or front loader operation turn tires against usual rolling direction of tire lugs (B). Tire life is increased by 25 to 30% and better traction is achieved.

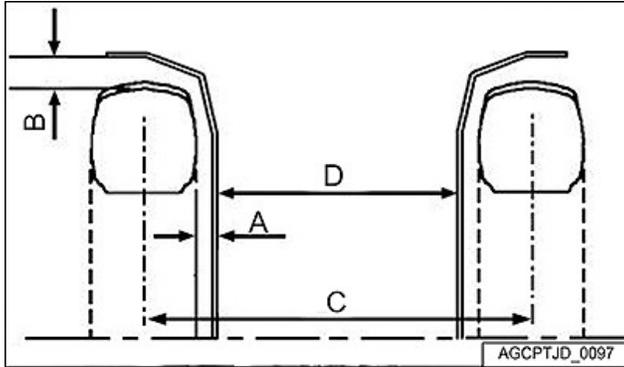
Because of reduced traction and tire self-cleaning effects, this arrangement is not recommended for field work under wet conditions.

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# Rear Wheels, Tires, and Tread Widths

## Observe Rear Wheel Tread Width Limitations

**IMPORTANT:** Check clearance (A) and (B) between tires and fenders before changing rear tires.



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The tires must clear the fenders by at least:

		Fixed Width		
A = min. 15 mm (0.59 in)	B = min. 30 mm (11.92 in)	D		
		5GV	5GN	5GL
		450 mm	520	520
17.71 in	20.47 in	20.47 in		

Tire size	GV					
	Minimum value					
	A		B		C	
	mm	in	mm	in	mm	in
280/85 R28	50.7	2.00	94.0	3.70	879	34.61
320/85 R28	35.2	1.39	60.0	2.36	879	34.61
250/85 R28	28.0	1.10	118.0	4.65	783	30.83
360/70 R24	53.0	2.09	114.0	4.49	956	37.64
340/85 R24	53.0	2.09	94.5	3.72	958	37.72
320/85 R24	17.5	0.69	110	4.33	843	33.19
360/70 R28	21.7	0.85	66.0	2.60	875	34.45
340/85 R28	39.8	1.57	40.0	1.57	926	36.46
380/70 R24	54.0	2.13	93.0	3.66	958	37.72
420/70 R28	64.0	2.52	24.0	0.94	1038	40.87
9.5 R28	20.5	0.81	125.0	4.92	756	29.76
380/85 R28	22.5	0.89	38.8	1.53	927	36.50

Tire size	GN					
	Minimum value					
	A		B		C	
	mm	in	mm	in	mm	in
280/85 R28	55.7	2.19	94.0	3.70	959	37.76
320/85 R28	40.2	1.58	60.0	2.36	959	37.76
340/85 R24	58.0	2.28	95.0	3.74	1038	40.87
340/85 R28	19.2	0.76	40.0	1.57	955	37.60
380/70 R24	45.5	1.79	96.0	3.78	1038	40.87
380/85 R28	23.0	0.91	8.0	0.31	1007	39.65
420/70 R28	69.0	2.72	24.0	0.94	1118	44.02
480/65 R28	52.9	2.08	43.9	1.73	1126	44.33

## Rear Wheels, Tires, and Tread Widths

Tire size	GL							
	Maximum Value							
	A		B (Fender 20")		B (Fender 24")		C	
	mm	in	mm	in	mm	in	mm	in
380/70 R20	19	0.74	42	1.65	108	4.25	965	37.99
	1	0.03	2	0.07	4	0.15	38	1.49
360/70 R24	62	2.44	-	-	70	2.75	1039	40.90
	2	0.07	-	-	3	0.11	41	1.61
380/70 R24	49	1.92	-	-	52	2.04	1039	40.90
	2	0.07	-	-	2	0.07	41	1.61
440/65 R24	22	0.86	-	-	47	1.85	1043	41.06
	1	0.03	-	-	2	0.07	41	1.61

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### Tread Adjustment - Rear Wheels (5GV, 5GN)

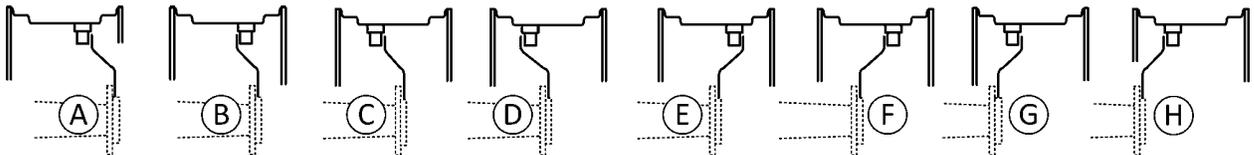
Rear wheel tread is adjusted by repositioning or reversing the rims or by reversing the wheel disks. In addition, the complete wheel can be installed on the other side of the tractor. The arrow on the side wall of tire must point in the direction of forward travel.

#### IMPORTANT: Always mount nuts on the rim side.

**The distance between the side wall of the tire and the fender must not be less than 15 mm (0.6 in). Distance between the edge of tire and fender must not be less than 30 mm (1.18 in).**

*NOTE: The illustration shows the right-hand rear wheel. Tread widths are measured at the lowest point of the tires.*

After adjustment has been completed tighten wheel retaining bolts to specified torque. See Break-In Period (section 30) in this manual. If wheels are removed to adjust tread, tighten wheel retaining bolts or nuts to specified torque. See Tighten Wheel Bolts in Operating the Tractor (section 45) in this manual.

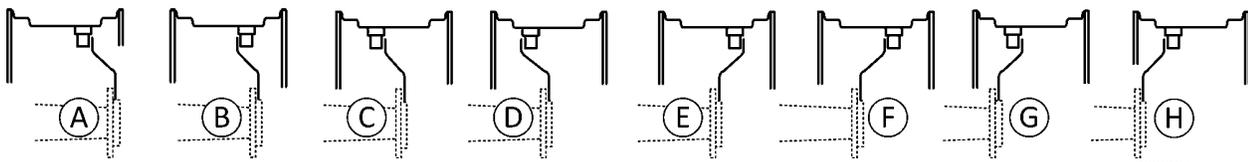


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5GV, Rear-Wheel Tread Settings										
Rear Tires	Rim	Unit	Position of Rim and Wheel Disks							
	8 Position Adjustable		A	B	C	D	E	F	G	H
340/85 R24	W12x24 in	mm	—	—	—	959	—	958	1014	1127
		in	—	—	—	38	—	38	40	44
320/85 R24	W10x24 in	mm	—	—	—	961	843	956	1016	1129
		in	—	—	—	38	33	38	40	44
360/70 R24	W10x24 in	mm	—	—	—	961	—	956	1016	1129
		in	—	—	—	38	—	38	40	44
380/70 R24	W12x24 in	mm	—	—	—	959	—	958	1014	1127
		in	—	—	—	38	—	38	40	44
280/85 R28	W10x28 in	mm	—	—	—	879	923	1034	1168	1279
		in	—	—	—	35	36	41	46	50
320/85 R28	W10x28 in	mm	—	—	—	879	923	1034	1168	1279
		in	—	—	—	35	36	41	46	50
250/85 R28	W8x28 in	mm	—	783	—	826	974	1083	1017	1126
		in	—	31	—	33	38	43	40	44
340/85 R28	W12x28 in	mm	—	—	—	-	927	1038	1164	1275

Rear Wheels, Tires, and Tread Widths

5GV, Rear-Wheel Tread Settings										
Rear Tires	Rim	Unit	Position of Rim and Wheel Disks							
	8 Position Adjustable		A	B	C	D	E	F	G	H
		in	—	—	—	-	36	41	46	50
360/70 R28	W12x28 in	mm	—	—	—	875	927	1038	1164	1275
		in	—	—	—	34	36	41	46	50
9.5 R28	W8x28 in	mm	—	756	—	853	947	1056	1044	1153
		in	—	30	—	34	37	42	41	45
420/70 R28	W12x28 in	mm	—	—	—	—	—	1038	1164	1275
		in	—	—	—	—	—	41	46	50
380/85 R28	W12x28 in	mm	—	—	—	—	927	1038	1164	1275
		in	—	—	—	—	36	41	46	50



LX203964—UN—26AUG13

5GN, Rear-Wheel Tread Settings										
Front Tires	Rim	Unit	Position of Rim and Wheel Disks							
	8 Position Adjustable		A	B	C	D	E	F	G	H
280/85 R28	W10x28 in	mm	—	—	—	959	1003	1114	1248	1359
		in	—	—	—	38	39	44	49	54
320/85 R28	W10x28 in	mm	—	—	—	959	1003	1114	1248	1359
		in	—	—	—	38	39	44	49	54
340/85 R24	W12x24 in	mm	—	—	—	1039	-	1038	1094	1207
		in	—	—	—	41	-	41	43	48
340/85 R28	W12x28 in	mm	—	—	—	955	1007	1118	1244	1355
		in	—	—	—	38	40	44	49	53
380/70 R24	W12x24 in	mm	—	—	—	1039	-	1038	1094	1207
		in	—	—	—	41	-	41	43	48
380/85 R28	W12x28 in	mm	—	—	—	-	1007	1118	1244	1355
		in	—	—	—	-	40	44	49	53
420/70 R28	W12x28 in	mm	—	—	—	—	—	1118	1244	1355
		in	—	—	—	—	—	44	49	53
480/65 R28	W15Lx28 in	mm	—	—	—	—	—	1126	1236	1347
		in	—	—	—	—	—	44	49	53

5GL, Rear-Wheel Tread Settings										
Front Tires	Rim	Unit	Position of Rim and Wheel Disks							
	8 Position Adjustable		A	B	C	D	E	F	G	H
380/70 R20	W11x20 in	mm	—	—	—	966	994	1106	1114	1226
		in	—	—	—	38	39	44	44	48
360/70 R24	W12x24 in	mm	—	—	—	1039	—	1308	1094	1207
		in	—	—	—	41	—	51	43	48
380/70 R24	W12x24 in	mm	—	—	—	1039	—	1308	1094	1207
		in	—	—	—	41	—	51	43	48
440/65 R24	W15Lx24 in	mm	—	—	—	—	1043	1156	1208	1321

*Rear Wheels, Tires, and Tread Widths*

5GL, Rear-Wheel Tread Settings										
Front Tires	Rim	Unit	Position of Rim and Wheel Disks							
	8 Position Adjustable		A	B	C	D	E	F	G	H
		in	—	—	—	—	41	46	48	52

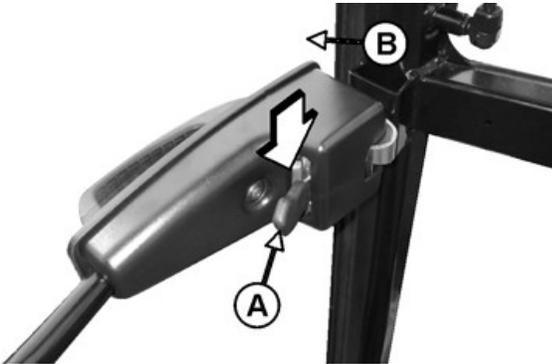
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# Operator's Station and Cab

## Emergency Exits

In an emergency, exit the cab through the cab doors. It is also possible to exit the cab through the open rear window.

### Exit Through Doors



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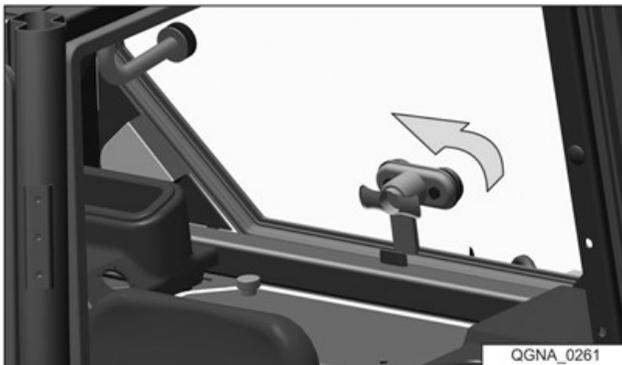


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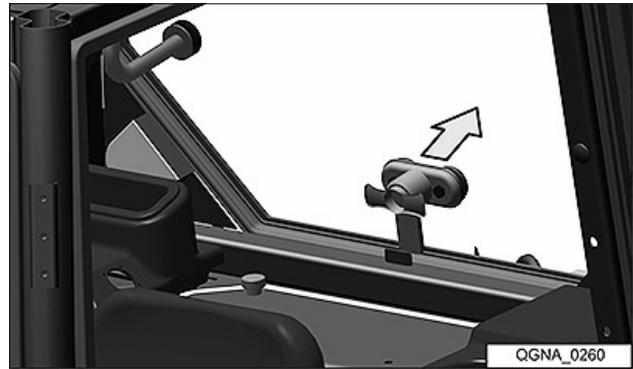
A—Latch  
B—Door

To open, pull down latch (A) and push door (B) outwards.

### Exit Through Rear Window



QGNA0261—UN—15JAN16

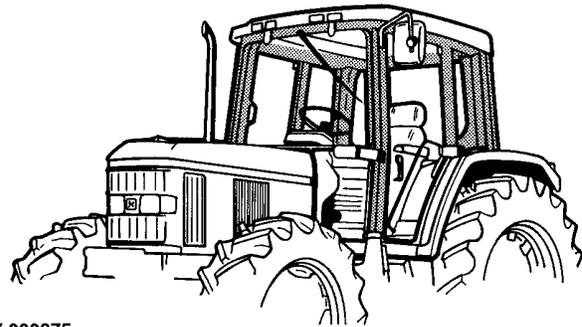


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To open, turn the lever to the left and push window outwards.

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## Roll-Over Protective Structure



LX 000375

LX000375—UN—03JAN95

**CAUTION:** A four-post roll-over protective structure (ROPS) is incorporated into each operator's cab. On this construction, do not, under any circumstances, modify structural members by welding on additional parts, drilling holes, or cutting or grinding. Disregarding this instruction affects the rigidity of the ROPS.

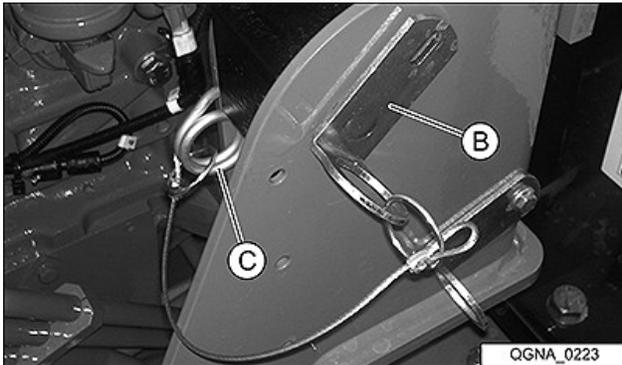
A tractor roll-over places a severe strain on the ROPS. Therefore, replace the ROPS immediately if structural members have been bent, buckled or otherwise damaged.

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## Operating Roll-Over Protective Structure

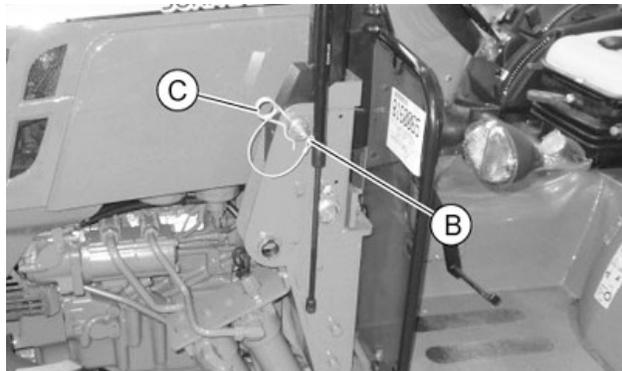


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QGNA0009—UN—02NOV15



QGNA\_0223  
QGNA0223—UN—02NOV15

(5GV, 5GN)



APY01816—UN—06MAR18

(5GL)

B—Headed Pin  
C—Quick-Lock Pin

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

The protection offered by ROPS is impaired if ROPS is subjected to structural damage, as in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting. A damaged ROPS should be replaced, not reused. Any alteration to the ROPS must be approved by the manufacturer.

Always keep upper part of ROPS pinned in vertical position (as pictured) when operating tractor. If the tractor is operated with ROPS folded (for example, to enter a low building) drive with extreme caution.

Do not use a seat belt if operating with ROPS folded down or without ROPS.

Fold the ROPS up again as soon as the tractor is operated under normal conditions.

### To lower ROPS:

1. Remove quick-lock pins (C) and headed pins (B).
2. Lower ROPS onto stops.
3. Reinstall pins (B) and (C) to lock ROPS in down position.

### Folding ROPS into operating position:

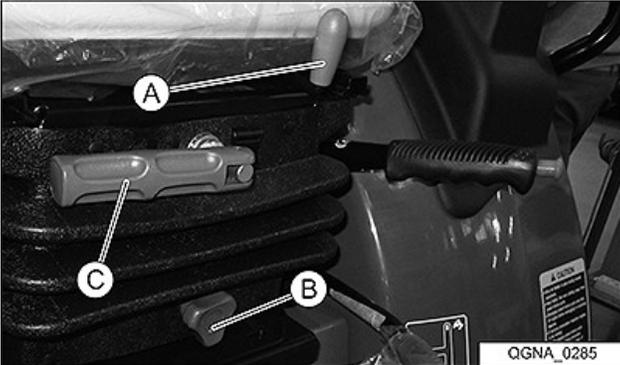
1. Remove quick-lock pins (C) and headed pins (B).
2. Lift ROPS to position shown. Install pins (B) and quick-lock pins (C).

RA84036,00017A9-19-09OCT18

# Seat Adjustment

## Seat Adjustment

### Adjusting Operator's Seat Position (Standard and Comfort Seat)



QGNA0285—UN—02NOV15

- A—Lever
- B—Knob
- C—Adjusting Lever

#### Seat fore/aft adjustment:

Move lever (A) and slide seat forward or backward to desired position.

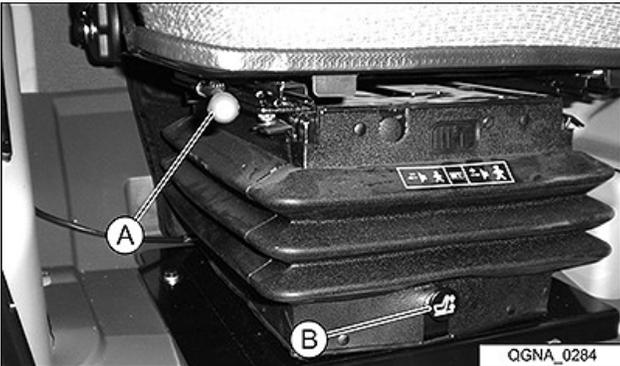
#### Seat height adjustment:

Turn knob (B) to adjust the desired seat height.

#### Seat suspension adjustment:

Turn the adjusting lever (C) to the desired vertical travel range.

### Adjusting Operator's Seat Position (Air Suspension Seat)



QGNA0284—UN—02NOV15



QGNA0378—UN—02NOV15

- A—Lever
- B—Knob

Move the lever (A) and slide seat forward or backward to desired position.

To adjust the seat height, operate the lower knob (B).

RA84036,00017AA-19-02JUL18

# Mirrors

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## Mirrors (Open Operator Station)



AGCPTJD0716—UN—02NOV15

**A—Mirror**

To adjust the mirror (A), loosen the clamp screw, move the mirror to the desired position, and retighten the clamp screw.

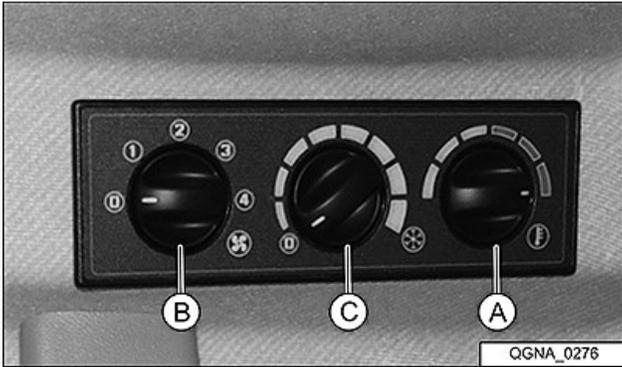
**⚠ CAUTION: Make sure that the mirrors are always clean and correctly adjusted.**

RA84036,00017AB-19-02JUL18

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# Heater / Ventilation / Air Conditioning (HVAC)

## Heater and Air Conditioning System Controls

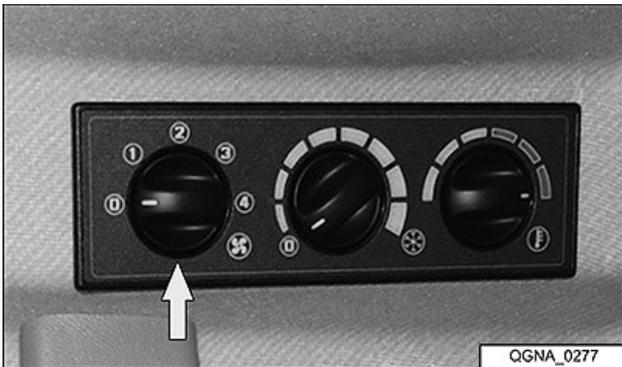


Tractors with Air Conditioning System

- A—Heater Control
- B—Blower Control
- C—Air Conditioner Control

The cab has been designed to produce comfortable working conditions for the operator with all the windows closed. Fresh air can be brought in from outside the cab or the heated or cooled air within the cab can be recirculated.

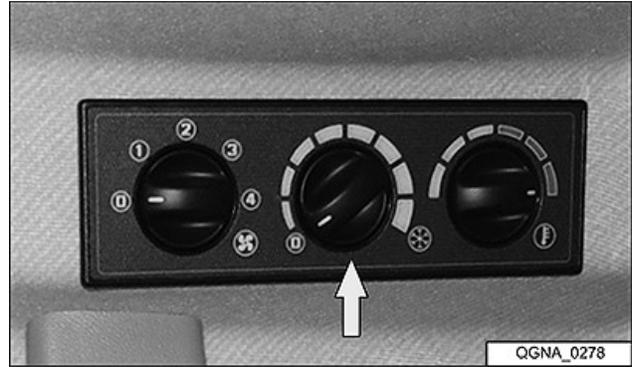
The air conditioning system is operated with the following controls:



QNA0277—UN—02NOV15

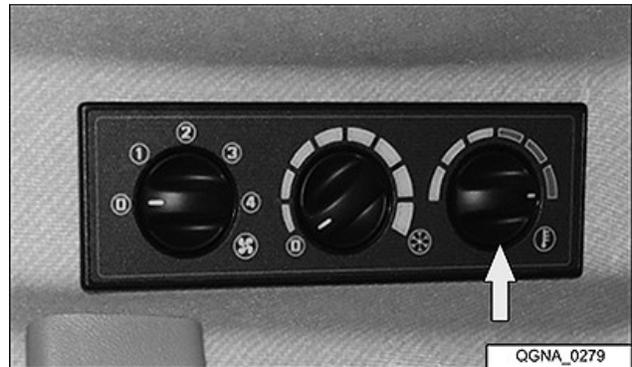
Blower control knob operates the four-speed blower fan. Turn the knob counterclockwise to switch off the fan.

**NOTE:** When the air conditioning system is switched on and fan switch is off, fan operates at fan speed (1).



QNA0278—UN—02NOV15

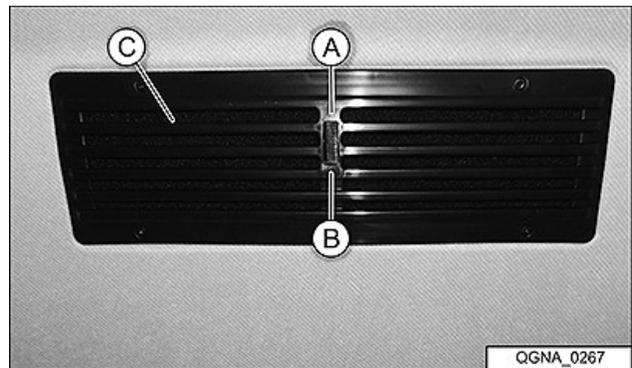
Air conditioner control knob is used to adjust the desired temperature. Turn the knob counterclockwise to switch off and clockwise to cool the air. Always turn off when not in use.



QNA0279—UN—02NOV15

Heat control knob is used to adjust the heat delivered. Turn the knob counterclockwise to switch off and clockwise to heat the air. Full heat output is available when the engine reaches full operating temperature.

### Air Recirculation Control



QNA0267—UN—02NOV15

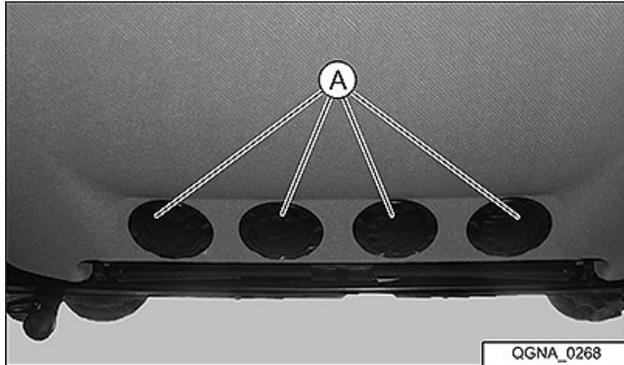
- A—Close
- B—Open
- C—Vent

Move up air recirculation control toward (A) (close) to maximize fresh air into the cab. Moving the air recirculation control down toward (B) (open) recirculates the air in the cab. The recirculated air passes through the vents (C), the air filter and back into the blower.

Move up air recirculation control toward (A) (close) to

obtain fresh air from outside the cab that gives the maximum cooling effect with the air conditioning off.

**Air Flow Louvers**



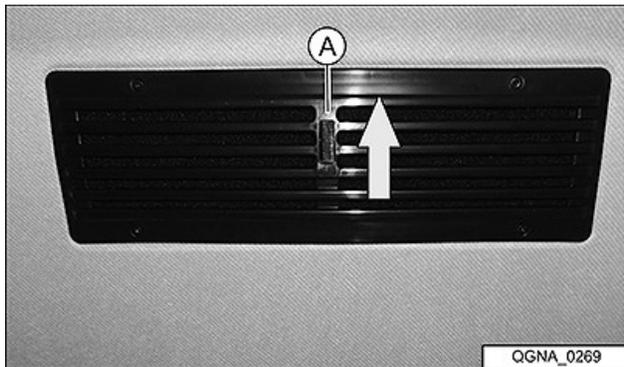
QGNA\_0268  
QGNA0268—UN—02NOV15

**A—Air Flow Louvers**

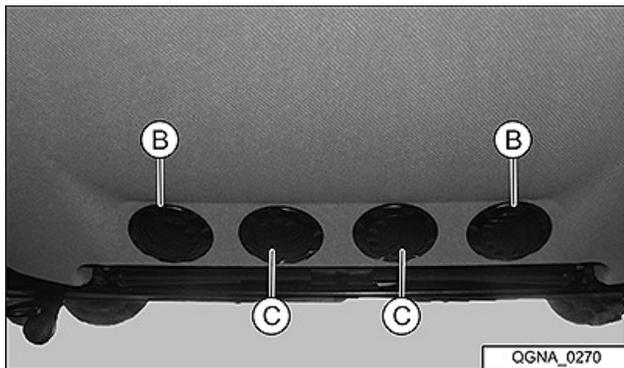
Fresh air enters into the cab from the outside and passes through the air filter, blower, heater, and air conditioner evaporator. It is blown through a set of four adjustable louvers (A) above the windshield.

**! CAUTION:** The cab air filter is designed to remove dust from the air but not exclude chemical vapor. Follow the chemical manufacturer's directions regarding protection from hazardous chemicals.

**Cold-Weather Operation**



QGNA\_0269  
QGNA0269—UN—02NOV15



QGNA\_0270  
QGNA0270—UN—02NOV15

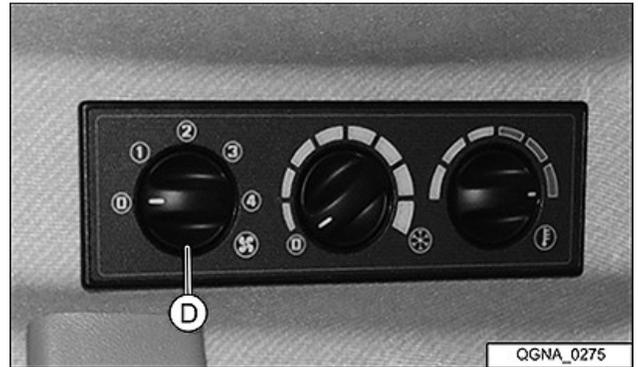
**A—Air Recirculation Control**  
**B—Louvers**

**C—Louvers**  
**D—Blower Control**

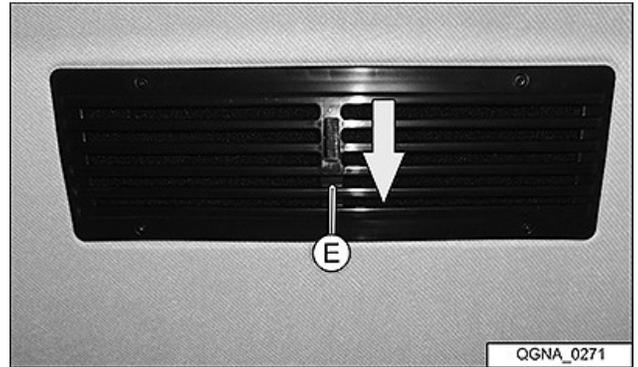
Open the air recirculation control (A) to recirculate air that has already been heated which gives the maximum heating effect.

It is necessary to adjust the opening of the various louvers (B) and (C) to balance the heat output between the windshield and rear window.

To move large quantities of heat to the floor, open the left-hand and right-hand louvers in row (B) and close or partially close the others. Set the blower control (D) to full speed.



QGNA\_0275  
QGNA0275—UN—02NOV15



QGNA\_0271  
QGNA0271—UN—02NOV15

**D—Blower Control**  
**E—Air Recirculation Control**

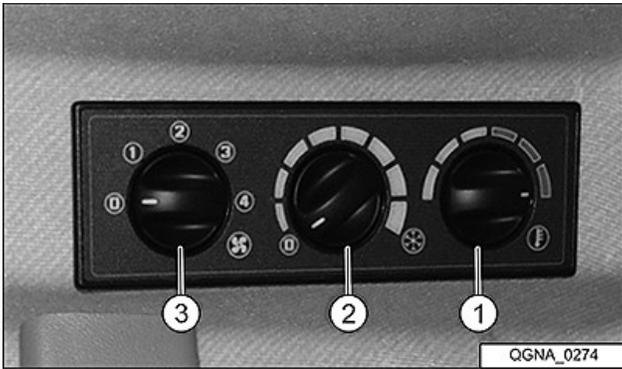
**Defrosting the Windshield**

Close the air recirculation control (E) to remove the humidity in the cab. When clear, open the air recirculation control to recirculate air that has already been heated. Open and direct the louvers (B) and (C) to the windshield. Set the blower control (D) to maximum.

**Dusty Conditions**

Close the air recirculation control (E) and run the blower on maximum to pressurize the air in the cab.

**Air Conditioning Operation**  
**Operating the System**



- 1—Heater Control
- 2—Air Conditioner Temperature Control
- 3—Blower Control

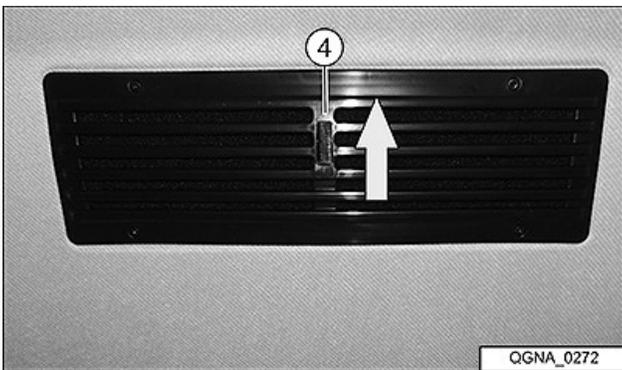
QGNA0274—UN—02NOV15

Make sure that all doors, windows, and the roof hatch are closed.

Make sure that the heater control (1) is turned off.

When the engine is running, turn on the air conditioning and temperature control (2).

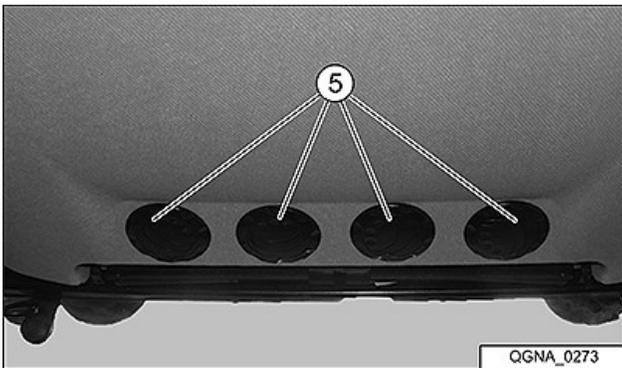
Turn on the blower control (3) to mid speed.



- 4—Air Recirculation Control

QGNA0272—UN—02NOV15

Fully open the air recirculation control (4) by moving left, which recirculates the air that has been already cooled to give the best cooling effect.



- 5—Louvers

QGNA0273—UN—02NOV15

Open and adjust the louvers (5) to obtain the best cooling for the ambient temperature and humidity. Lower blower speeds result in cooler air.

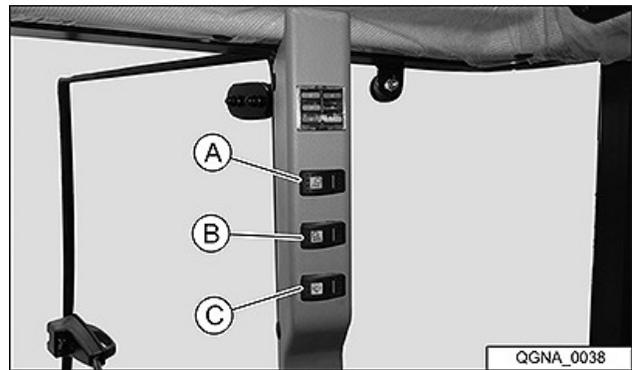
When the desired temperature has been obtained, adjust the blower speed and temperature control to maintain the cooling level. If problems are experienced with the system, immediately inspect for a clogged condenser, which is at the front of the engine radiator.

**IMPORTANT:** Switch on the air conditioning system for approximately 20 minutes every month, even in the cooler seasons. It lubricates the moving parts of the system, for example, the compressor, and prevents loss of refrigerant.

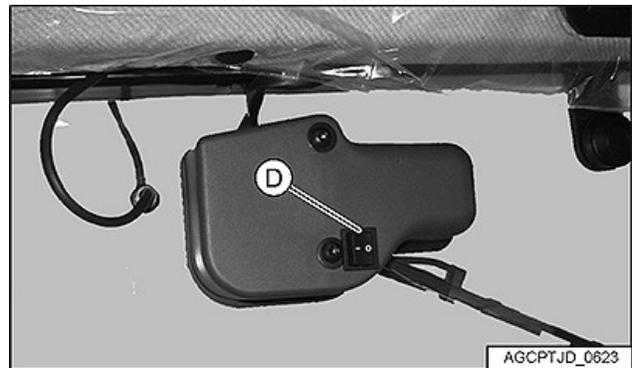
If the blower stops working, set the fan control knob to position 4 and wait at least 1 minute to allow the fan resistor to cool down. Then restart the blower by switching the control knob to any intermediate position (1 / 2 / 3). If the problem persists, contact your authorized dealer.

RA84036,00017AC-19-02JUL18

### Operator's Cab Switches



QGNA0038—UN—02NOV15



AGCPTJD0623—UN—02NOV15

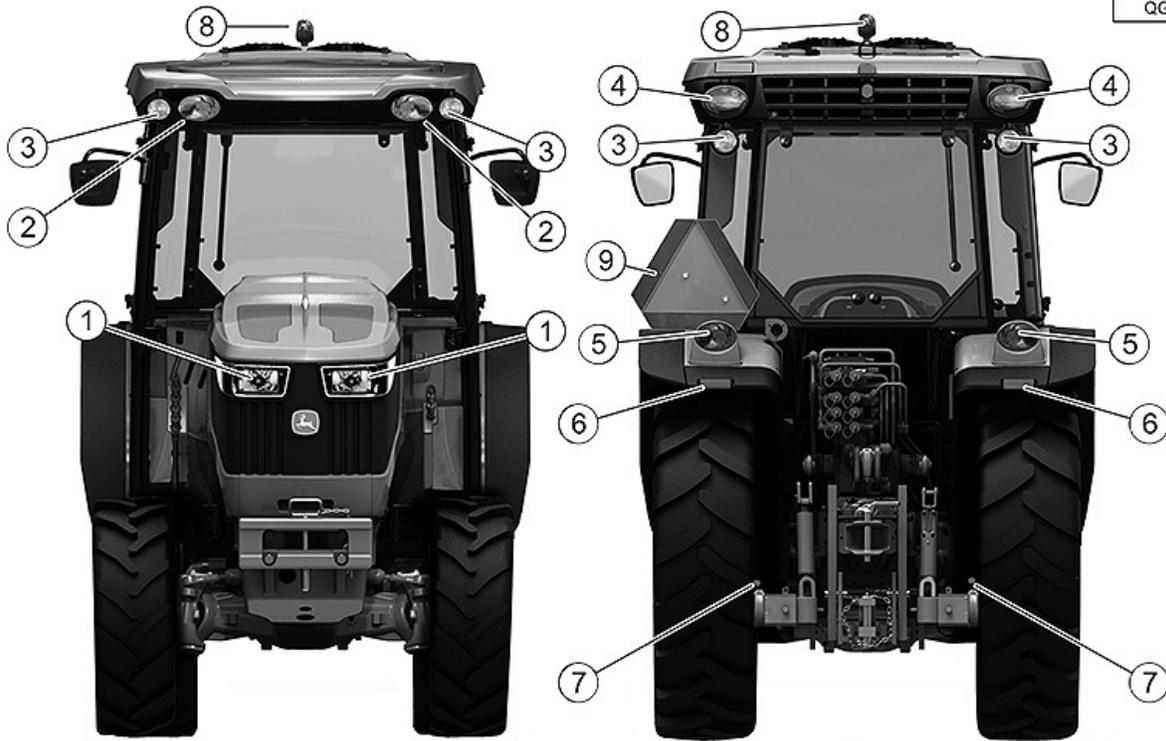
- A—Front Work Light Switch
- B—Rear Work Light Switch
- C—Windshield Wiper and Washer Switch
- D—Rear Window Wiper Switch

The cab switches are located in the post on the right-hand side.

RA84036,00017AD-19-02JUL18

# Lights

## Total View - Lights (Cab) (5GV, 5GN)



QGNA\_0005

- 1—Headlights, High and Low Beam
- 2—Front Turn Signal and Clearance Lights
- 3—Worklights
- 4—Rear Turn Signal Lights (amber warning lights)
- 5—Tail Lights and Brake Lights

- 6—Reflectors
- 7—Reflectors
- 8—Beacon Light
- 9—Reflector for Slow Moving Vehicles

QGNA0005—UN—02NOV15

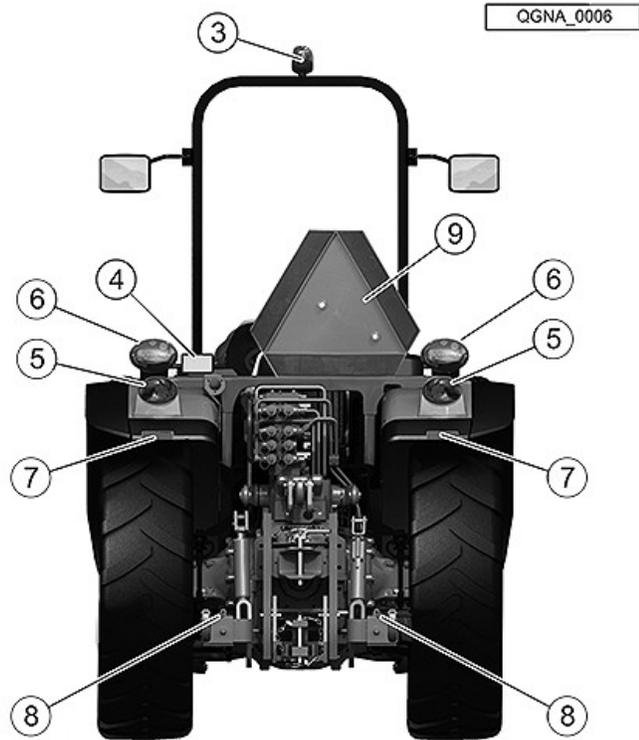
**CAUTION:** Never use worklights on public roads.

Clean all light lenses before driving on public roads.

*NOTE: If a bulb on one side is replaced, also replace the bulb on the other side.*

RA84036,00017AE-19-09OCT18

**Total View - Lights (2-Post ROPS) (5GV, 5GN)**



QGNA\_0006

- 1—Headlights, High and Low Beam
- 2—Front Turn Signal and Clearance Lights
- 3—Beacon Light
- 4—Worklights
- 5—Tail Lights and Brake Lights

- 6—Rear Turn Signal Lights (amber warning lights)
- 7—Reflectors
- 8—Reflectors
- 9—Reflector for Slow Moving Vehicles

QGNA0006—UN—02NOV15

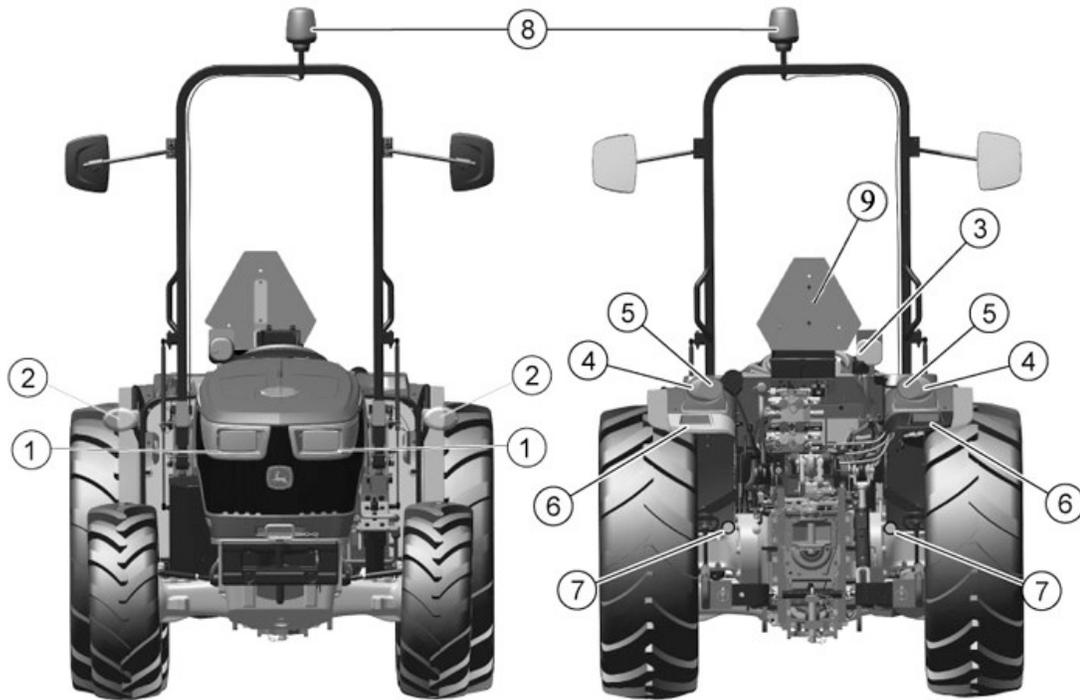
**⚠ CAUTION: Never use worklights on public roads.**

**Clean all light lenses before driving on public roads.**

*NOTE: If a bulb on one side is replaced, also replace the bulb on the other side.*

RA84036.00017AF-19-09OCT18

Total View - Lights (2-Post ROPS) (5GL)



(5GL)

APY01811—UN—13FEB18

- 1—Headlights, High and Low Beam
- 2—Front Turn Signal and Clearance Lights
- 3—Worklights
- 4—Rear Turn Signal Lights
- 5—Tail Lights and Brake Lights

- 6—Reflectors
- 7—Reflectors
- 8—Beacon Light
- 9—Reflector for Slow Moving Vehicle

**CAUTION:** Never use worklights on public roads.

Clean all light lenses before driving on a public road.

*NOTE: If a bulb on one side is replaced, also replace the bulb on the other side.*

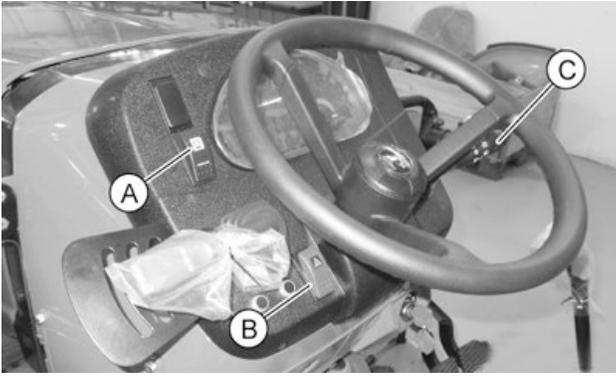
RA84036,00017B0-19-09OCT18

Light Switch and Horn Switch



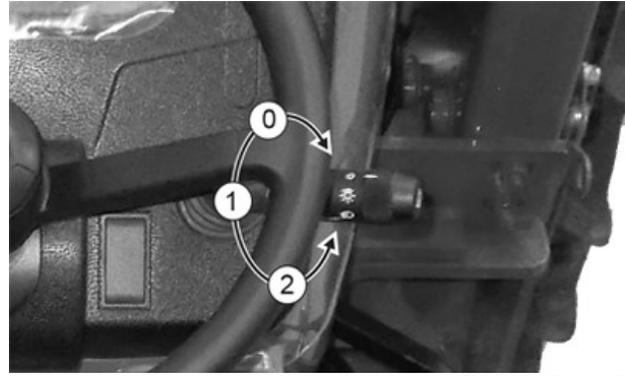
(5GV, 5GN)

QGNA0165—UN—02NOV15



(5GL)

APY01812—UN—08DEC17



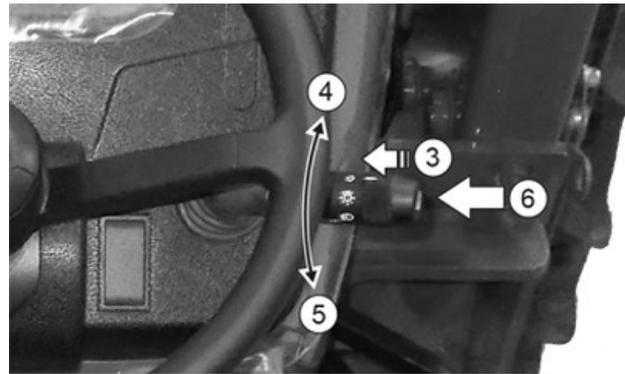
(5GL)

PY42808—UN—02JUL17

- A—Beacon Light Switch (option)
- B—Hazard Warning Light Switch
- C—H4 Farm Headlight Switch (option)
- D—Multifunction switch for Lightning System

**NOTE:** For more details of multifunction switch for lightning system, see *Light Switch and Turn Signal Switch* in this section.

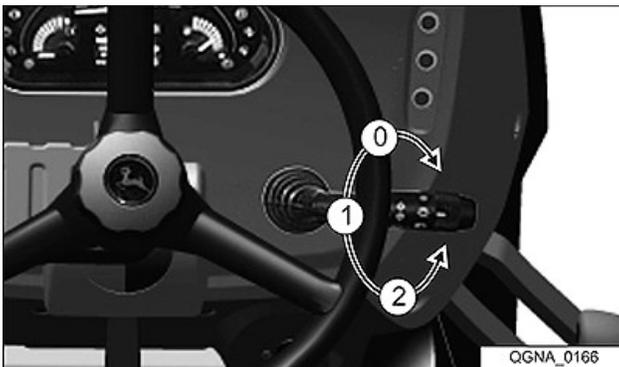
RA84036,00017B1-19-09OCT18



(5GL)

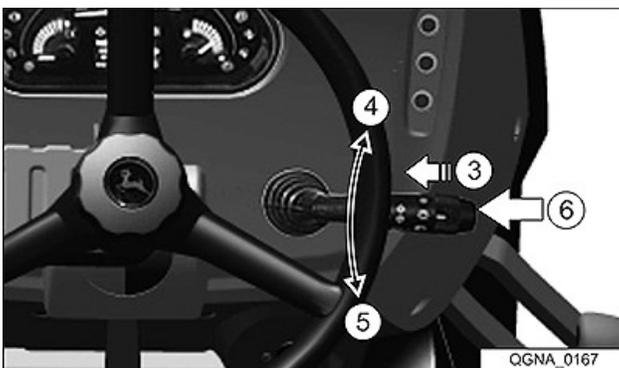
PY42809—UN—02JUL17

### Light Switch and Turn Signal Switch



(5GV, 5GN)

QGNA0166—UN—02NOV15



(5GV, 5GN)

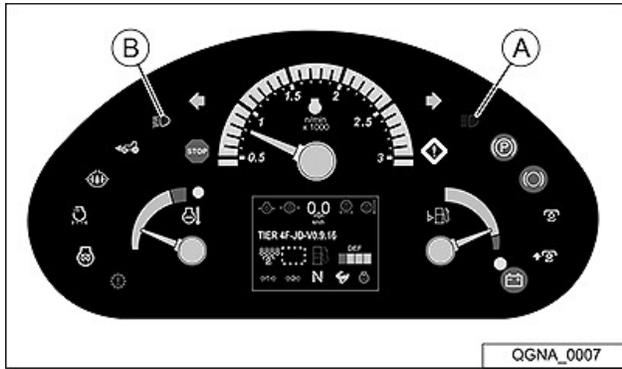
QGNA0167—UN—02NOV15

Position	Function
0	OFF (fully rotated clockwise). Pull upward and release to FLASH with the HIGH beam.
1	First position (counterclockwise): Instrument panel and rocker switches backlights, tail lights ON. Pull upward and release to FLASH the HIGH beam.
2	Second position (counterclockwise): Instrument panel backlight, LOW beam ON. Pull upward and release to FLASH the HIGH beam.
2+3	Pull upward and release to FLASH the HIGH beam. Pull downward to have HIGH beam ON permanently.
4	Left turn signal lights ON.
5	Right turn signal lights ON.
6	Push switch to activate horn.

RA84036,00017B2-19-09OCT18

### Low Beam and High Beam Indicator Light

**NOTE:** Refer *Light Switch and Turn Signal Switch* for positions and functions of the lights switch.



QGNA\_0007  
QGNA0007—UN—02NOV15

- A—High Beam Indicator Light
- B—Low Beam Indicator Light

High beam indicator light (A) comes on when light switch is turned to position (3) and the switch is pulled in direction of the steering wheel.

Low beam indicator light (B) comes on when light switch is turned to position (2). See Light Switch and Horn Switch in this section.

RA84036.00017B3-19-02JUL18

### Wake up Mode



PY31809—UN—26AUG16

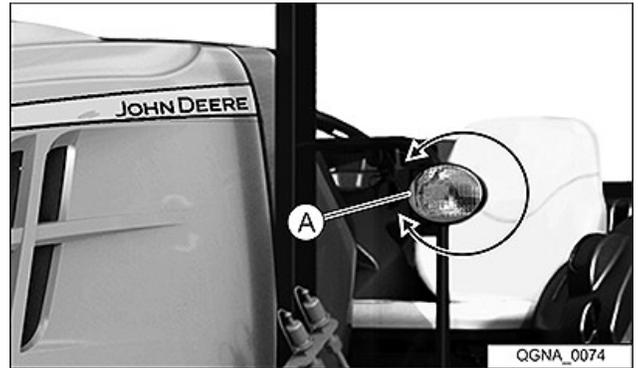
If the key is switched in Park position and the position light are switched ON, the display is turned ON in order to show the position light status.

### OFF Mode

If the key is switched OFF, the display is turned OFF accordingly (OFF Mode).

RA84036.00017B4-19-02JUL18

### Front Clearance Lights, Turn Signal Lights, and Tail Lights



QGNA\_0074  
QGNA0074—UN—02NOV15

(Open Operator Station)



QGNA\_0075  
QGNA0075—UN—02NOV15

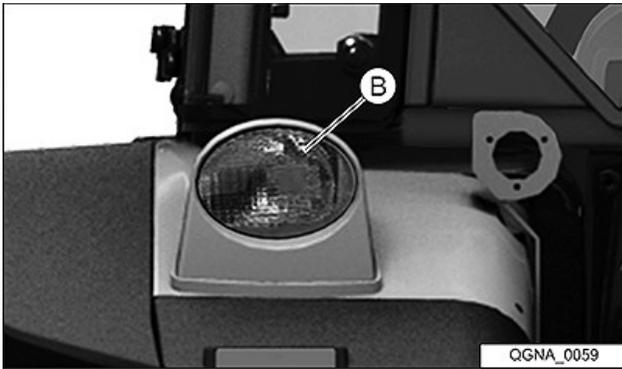
(Cab)

#### A—Front Clearance Lights and Turn Signal Lights

On tractors with open operator's station, fold out front turn signal lights (A) to the correct position before driving on public roads.

*NOTE: For tractors with open operator's station, front turn signal lights (A) can be folded. It is to avoid contact with the tree branches during work in orchards or similar.*

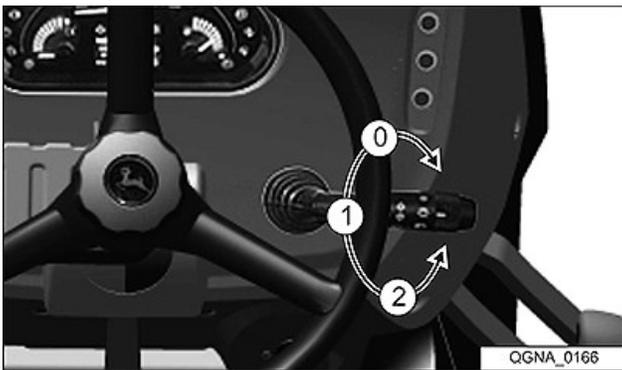
The red tail lights (B) go on when the light switch is turned to position (1) or (2). Be sure that tail light lenses are clean before driving on a public road, so that other drivers can see the lights easily.



QGNA\_0059

QGNA0059—UN—02NOV15

(5GV, 5GN)



QGNA\_0166

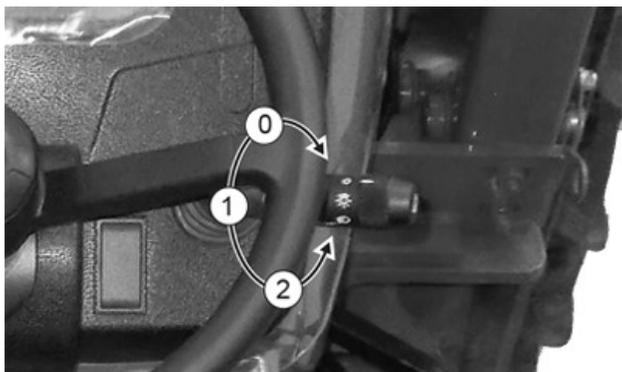
QGNA0166—UN—02NOV15

(5GV, 5GN)



APY01813—UN—08DEC17

(5GL)



PY42808—UN—02JUL17

(5GL)

**B—Tail Lights**

RA84036,00017B5-19-09OCT18

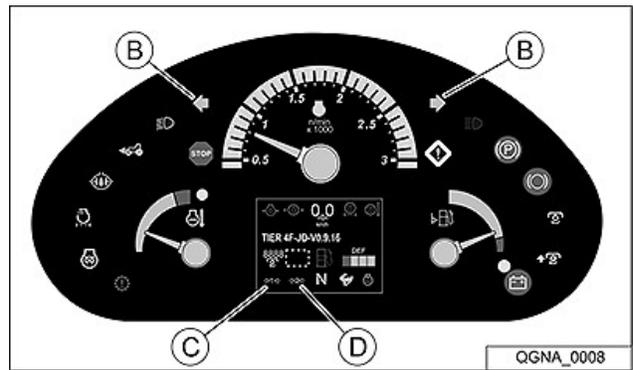
**Turn Signal Lights**



QGNA\_0169

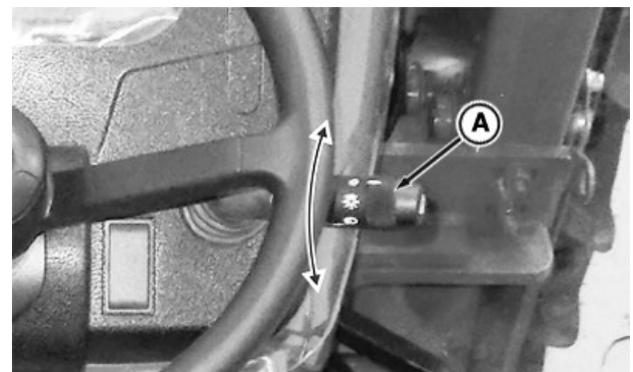
QGNA0169—UN—02NOV15

(5GV, 5GN)



QGNA\_0008

QGNA0008—UN—02NOV15



PY34662—UN—13JUL17

(5GL)

- A—Turn Signal Switch**
- B—Turn Signal Indicator Lights**
- C—Turn Signal Indicator Light for First Trailer**
- D—Turn Signal Indicator Light for Second Trailer**

Move turn signal switch (A) from the center (off) position forward to indicate a left-hand turn or backward to indicate a right-hand turn. Indicator lights (B), at the instrument panel, flashes to signal turn direction.

When towing one trailer, the indicator light (C) is flashing.

When towing two trailers, the indicator lights (C) and (D) are flashing.

RA84036,00017B6-19-09OCT18

### Hazard Warning Light Switch (Amber Warning Light Switch)



QGNA\_0168  
QGNA0168—UN—02NOV15

(5GV, 5GN)



PY42810—UN—02JUL17

(5GL)

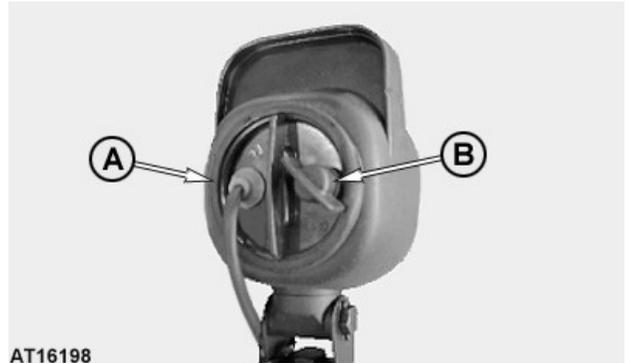
A—Hazard Warning Light Switch

**IMPORTANT:** Use the hazard warning lights (amber warning lights) as requested by local regulations.

Use the switch (A) to operate the hazard warning lights (amber warning light) when driving on public roads.

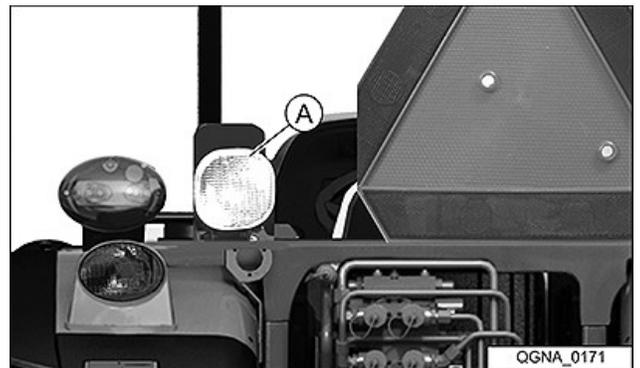
RA84036,00017B7-19-09OCT18

### Worklight Switches (Open Operator Station)



AT16198

AT16198—UN—07FEB03



QGNA\_0171

QGNA0171—UN—02NOV15

A—Rear Worklight  
B—Worklight Switch

**CAUTION:** Do not switch on worklights when driving on public roads.

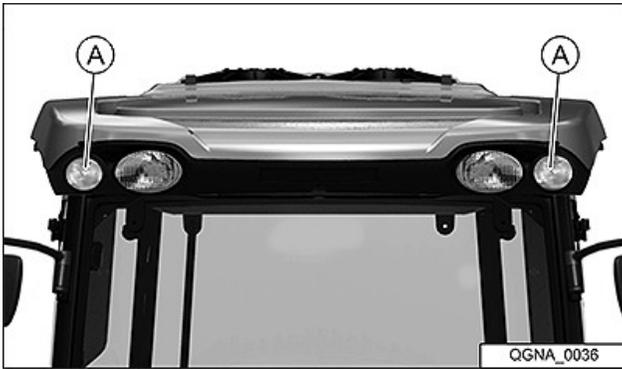
On tractors with open operator's station, the worklight (A) is switched on by worklight switch (B).

Adjust the work lights (A) by turning them to the desired position.

RA84036,00017B8-19-25SEP18

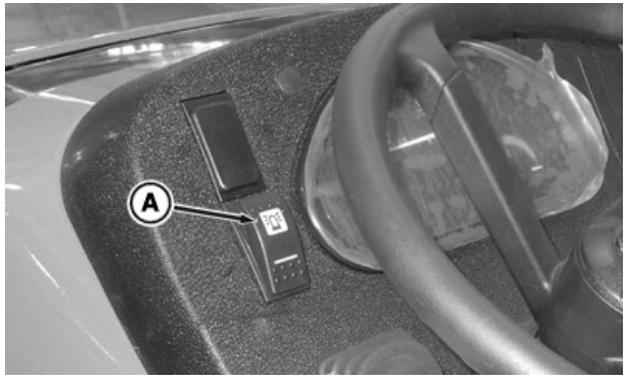
### Worklight Switches (Cab)

**CAUTION:** Do not switch on worklights when driving on public roads.



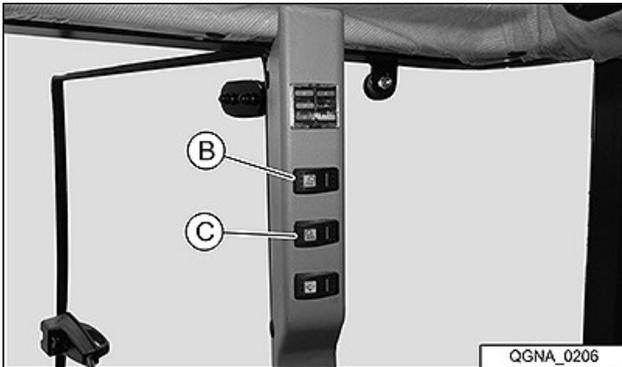
QGNA\_0036

QGNA0036—UN—02NOV15



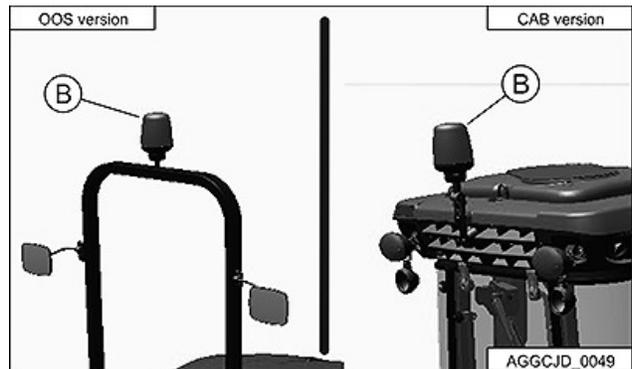
PY42811—UN—02JUL17

(5GL)



QGNA\_0206

QGNA0206—UN—02NOV15



AGGCJD\_0049

AGGCJD0049—UN—02NOV15

Left (open operator station) / Right (cab)

- A—Front Worklight
- B—Front Worklight Switch
- C—Rear Worklight Switch

On tractors with cab, the work light is switched on by the worklight switch in the post on the right-hand side.

RA84036.00017B9-19-25SEP18

- A—Beacon Light Switch
- B—Beacon Light

The beacon light (B) is turned on by switch (A). Use beacon light as required by local regulations.

RA84036.00017BA-19-09OCT18

### Beacon Light (Optional)



PY34599—UN—07MAR17

(5GV, 5GN)

### H4 Farm Headlights (Optional)



QGNA\_0347

QGNA0347—UN—02NOV15



AGGCJD0046—UN—02NOV15

- A—Switch
- B—H4 Farm Headlights

If equipped, the H4 farm headlights are mounted on the cab frame.

Use the switch (A) to operate the H4 farm headlights (B).

Switch (A) allows the operator to choose between normal headlights and these additional lights (for example, when front attachments are installed). Comply with legal restrictions when driving on public roads.

RA84036,00017BB-19-09OCT18

## Dome Light



QGNA0314—UN—02NOV15

- A—Dome Light

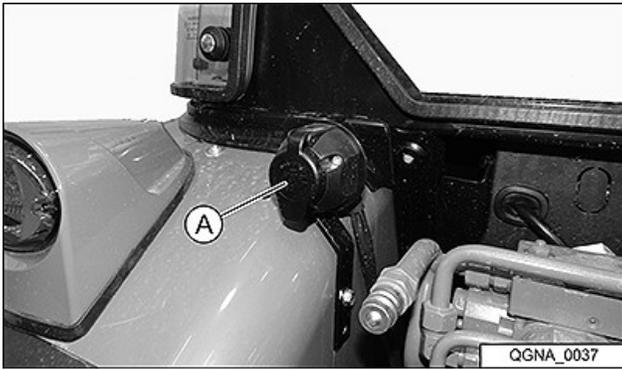
The dome light (A) can be switched on by the switch at the light.

RA84036,00017BC-19-02JUL18

# Power Outlet Sockets

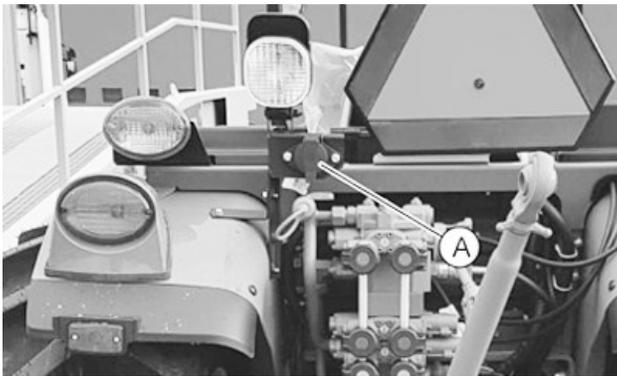
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## Seven-Terminal Trailer Socket



(5GV, 5GN)

QGNA0037—UN—02NOV15



(5GL)

APY01814—UN—08DEC17

### A—Socket

Socket (A) allows lights, turn signals, and other electrical equipment on a trailer or implement to be connected.

Always use additional lighting on a mounted implement if socket conceals the turn signals and other lights at the rear of the tractor.

*NOTE: Suitable plugs can be obtained from your dealer.*

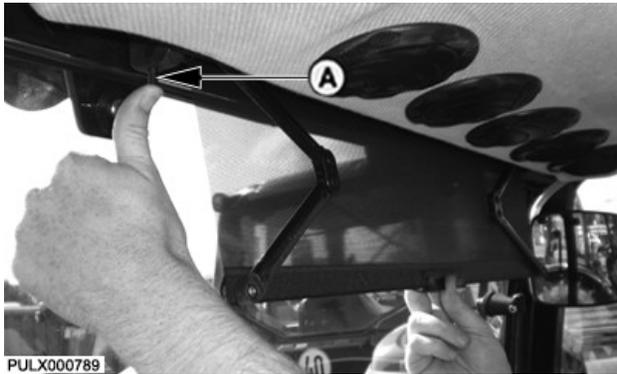
RA84036,00017BD-19-09OCT18

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# Accessories

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## Sun Visor



PULX000789—UN—30JUL08

### A—Button

A front sun visor is available.

Push button (A) for partial or complete rewinding of the curtain.

Guide curtain movement by hand to avoid any damage to it.

RA84036,00017BE-19-02JUL18

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## Tool Box



QGNA0224—UN—02NOV15

### A—Tool Box

The tool box (A) can be used for storing a number of tools.

RA84036,00017BF-19-04JUL18

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# Performance Ballast

## Select Ballast

**CAUTION:** When determining front and rear axle ballast, ensure that permissible axle loads and the maximum permissible machine weight (including mounted implements) are not exceeded. See Specifications (section 500A) in this manual

Comply with local regulations regarding installation and maximum permissible number of weights. In order to maintain steerability, at least 20% of the unladen mass must be on the front axle. Unladen mass is the mass of the tractor without special equipment, attachments, and trailer ballast but with hydraulic oil and lubricants, a full fuel tank, and an operator weighing 75 kg (165 lb).

**CAUTION:** Use suitable lifting tackle/hoists while handling weights.

Safety and performance of your tractor depend on correct ballasting of the front axle (front weights) and rear axle (wheel weights, filling tires with liquid ballast, pickup weight).

RA84036,00017C0-19-02JUL18

## Ballast Limitations

Ballast is limited by either tire capacity or tractor capacity. Each tire has a recommended carrying capacity which is not to be exceeded.

If greater traction is needed, a larger single tire can be used.

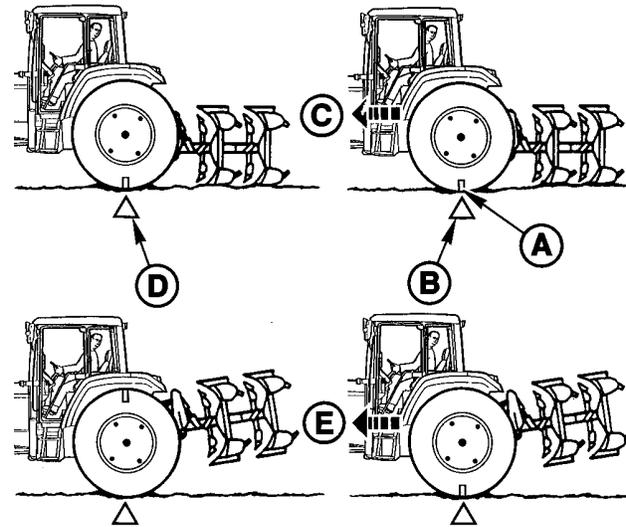
In this case, choose a tire which is approved for your tractor model. For front wheel drive versions, the correct front-to-rear tire combination is to be maintained.

For further information and details, see your authorized dealer.

**IMPORTANT:** Under no circumstances must axle and tire capacity be exceeded. For weights, See Specifications (section 500A) in this manual.

RA84036,00017C1-19-10JUL18

## Measuring Rear Wheel Slip



LX 000402

LX000402—UN—15AUG94

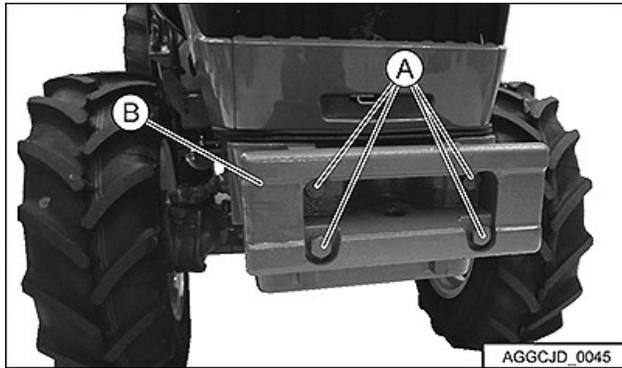
1. Mark tire (A).
2. Mark starting point on the ground (B).
3. Drive tractor forward with implement lowered until ten revolutions of the rear wheel have been made (C).
4. Again place a marker on the ground (D).
5. Now raise implement and again drive between the two markers on the ground. Note number of revolutions made between the two markers (E).

The number of revolutions gives the following percentage of wheel slip:

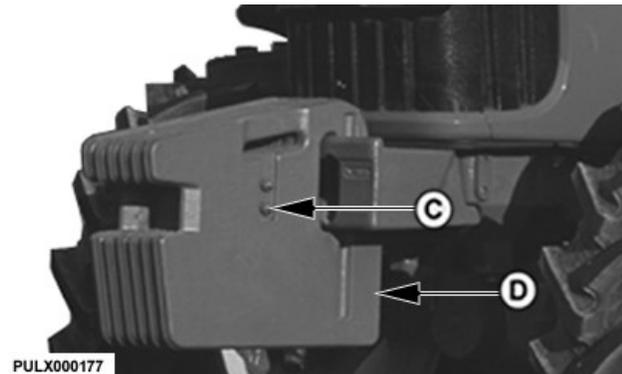
- 10.0 revolutions = 0% wheel slip
- 9.5 revolutions = 5% wheel slip
- 9.0 revolutions = 10% wheel slip
- 8.5 revolutions = 15% wheel slip
- 8.0 revolutions = 20% wheel slip
- 7.5 revolutions = 25% wheel slip
- 7.0 revolutions = 30% wheel slip

RA84036,00017C2-19-02JUL18

## Installing Front Weights



AGGCJD 0045  
AGGCJD0045—UN—02NOV15



PULX000177

PULX000177—UN—04MAR08

- A—Screw (4 used)
- B—Basic Weight
- C—Screw (2 used)
- D—Front Weight

**IMPORTANT:** Tighten the basic weight attaching screws (A) to 390 N·m (287 lb·ft) and the screws (C) on front weights (D) to 230 N·m (170 lb·ft).

Install the basic weight (B) with screws (A) and place additional weights (D) as required. Secure them with screws (C).

**IMPORTANT:** When installing six or more front weights, they must be installed to form a jaw.

RA84036,00017C4-19-02JUL18

## Ballasting Front Wheel Drive Tractors

Ideal tire slippage for front wheel drive tractors is 8-12 %. To reduce the wheel slip to this level, more weight is needed on the front than on tractors without front wheel drive. The ideal weight split is 40 % front, 60 % rear, of total tractor weight.

RA84036,00017C5-19-02JUL18

## With Weight in 3-Point Hitch

*NOTE:* Keep the 3-point hitch raised while driving, which maximizes the ground clearance.

**CAUTION:** Only lower the pick-up weight to the ground when the tractor is parked.

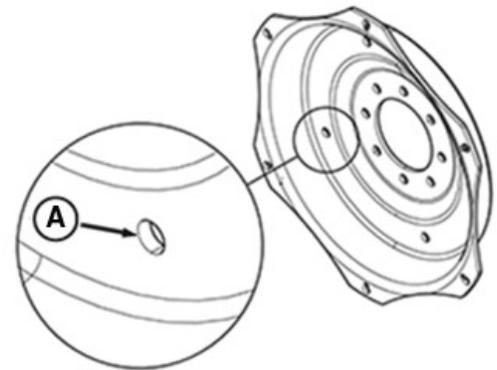
**IMPORTANT:** Always make sure that the tractor is balanced/ballasted properly.

**IMPORTANT:** Never use the hitch jaw that is in the front of the pick-up weight for towing loads.

RA84036,00017C6-19-02JUL18

## Rear Wheel Weights

**IMPORTANT:** When installing weights, use appropriate lifting equipment or have the job performed by your John Deere Dealer.



APY11004—UN—22AUG18

If the tractor is equipped with rear rim's flange with holes (A) for weights mounting, a John Deere ballast can be fitted 43 kg (95 lb).

Up to 3 weights 43 kg (95 lb) on each side can be fitted.

The maximum total weight applicable on the rear axle is 258 kg (569 lb).

RA84036,000188C-19-22AUG18

## Front Weights

One basic weight and additional front weights may be installed on the tractor, if necessary. See the table for information on the various ballast configurations that may be installed on each tractor type.

On **all tractors:** up to 12 additional weights, 50 kg (110 lb), 30 kg (66 lb), 25 kg (55 lb) each, can be installed on the basic weight.

**⚠ CAUTION: Additional front ballast may be needed for transporting rear mounted implements. When implement is raised, drive slowly over rough ground, regardless of how much ballast is used.**

**⚠ CAUTION: See Maximum Permissible Axle Loads and Total Weights. See Specifications (section 500A) in this manual.**

Tractor >>>	GV-GN					
	kg	lb	kg	lb	kg	lb
Basic weight (a)	65	143	65	143	65	143
Max. number of weights	12		12		10	
Weight each	50	110	30	66	25	55
Total additional weight (b)	600	1323	360	794	250	551
Total weight (a)+(b)	665	1466	425	937	315	694

RA84036,00017C3-19-09OCT18

# Transport

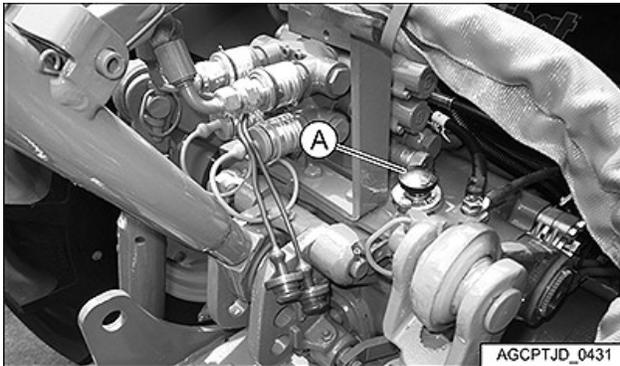
## Transporting the Tractor

A disabled tractor is best transported on a flatbed carrier.

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

RA84036,00017C7-19-02JUL18

## Towing Tractor



AGCPTJD0431—UN—02NOV15

A—Dipstick

**IMPORTANT: NEVER tow the tractor faster than 16 km/h (10 mph). Have an operator steer and brake tractor.**

**When the engine is not running, more force is required to turn the steering wheel and pedal travel is longer (no hydraulic assistance).**

**IMPORTANT: To prevent damage to the transmission/hydraulic system, observe the following precautions:**

1. Be sure that transmission/hydraulic system oil is to the full mark on the dipstick (A). If the tractor is to be towed with the front wheels raised, add 1 liter of oil for each 9 cm (3-1/2 in) the wheels are raised. **DO NOT** raise front wheels more than 30 cm (12 in) above ground.

*NOTE: After transporting tractor, drain oil that was added for towing.*

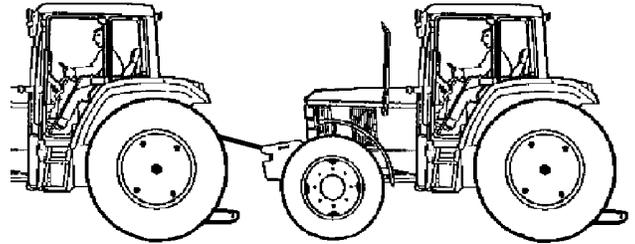
2. Make sure that the differential lock is disengaged.
3. Make sure that range and gearshift levers are in neutral.

**IMPORTANT: Switch off front-wheel drive if the engine can run. If the engine is not capable of running, disconnect the universal-jointed driveshaft; this prevents excessive wear on the tires.**

**IMPORTANT: The jaw hitch at the front weight is used for towing on metaled roads only.**

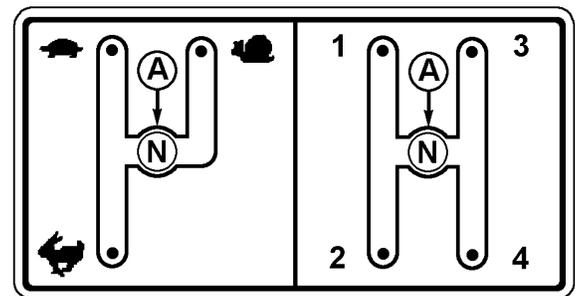
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## Tow the Tractor



AT1277

AT1277—UN—12JUN01



AT1289

AT1289—UN—05JUL01

A—Neutral Position

A disabled tractor is best transported on a flatbed carrier. See Transporting the Tractor in Transport (section 110) in this manual.

**CAUTION: Never tow the tractor at a speed greater than 10 km/h (6.2 mph).**

Shift the gear-shift lever to neutral position (A) and the range-shift lever to the neutral position (A).

**IMPORTANT: On tractors with front-wheel drive, switch off front-wheel drive if the engine is running.**

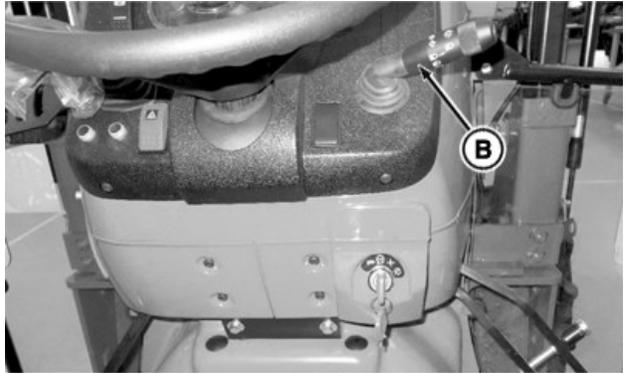
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## Driving Tractor on Public Roads

**CAUTION:** When driving on a public road, use accessory lights and devices for an adequate warning to operators of other vehicles. Check local governmental regulations. Various safety devices are available from your authorized dealer. Keep safety items in good condition. Replace missing or damaged items.

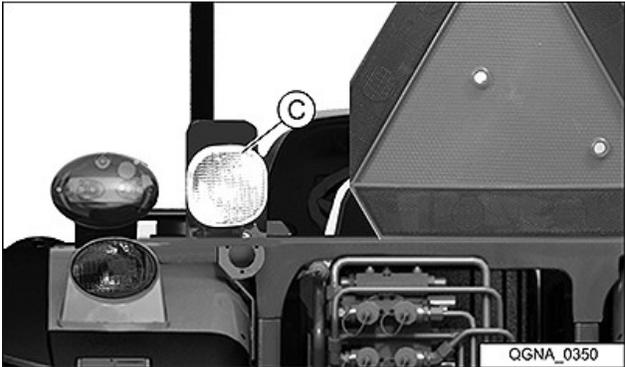
**NEVER** operate rear facing worklight when transporting tractor. A clear bright light at the rear of the tractor could confuse drivers of other vehicles as they approach from the rear.

Before operating tractor on a road, lock brake pedals together. Use brake lightly and cautiously at transport speeds.



PY42828—UN—02JUL17

(5GL)



QGNA\_0350

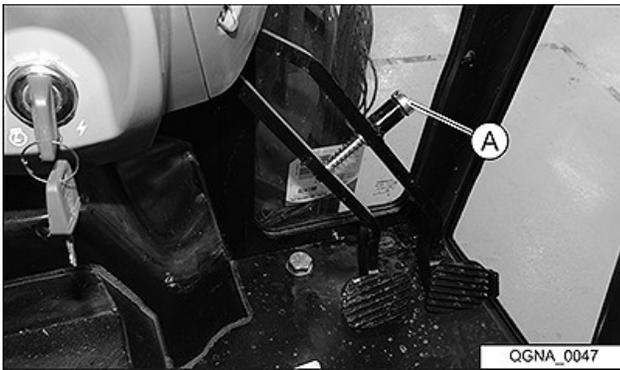
QGNA0350—UN—02NOV15



QGNA\_0349

QGNA0349—UN—02NOV15

**B—Light Switch**  
**C—Rear Worklights**



QGNA\_0047

QGNA0047—UN—02NOV15

**A—Locking Pin**

**IMPORTANT:** Refer to Lights in Service — Electrical System (section 220B) in this manual for detailed descriptions of lighting operations and functions.

1. Couple brake pedals together using locking pin (A). Avoid hard applications of brakes. Reduce speed if towed load weighs more than the tractor and is not equipped with brakes (refer to implement operator's manual for recommended transport speeds).

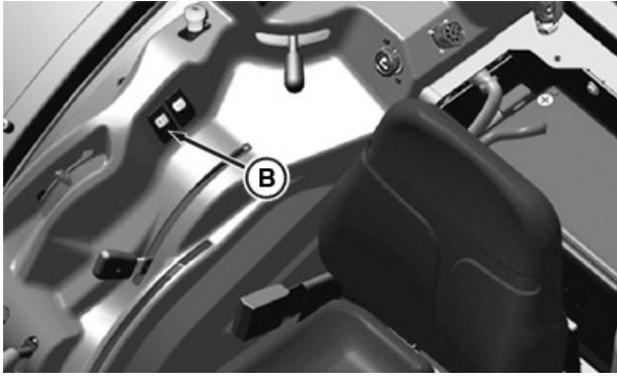


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QGNA0178—UN—02NOV15

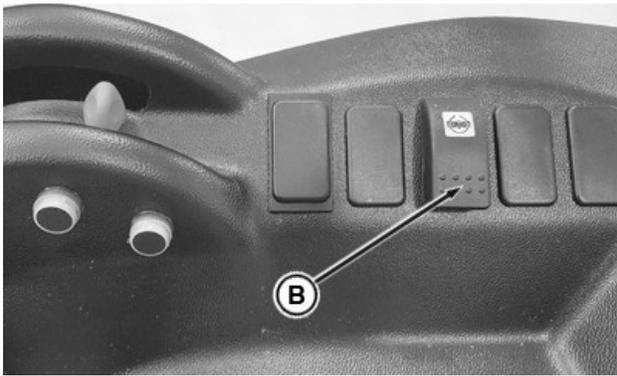
(5GV, 5GN)

2. Turn the light switch (B) to the full beam headlights or the low beam headlights position. Never use rear worklights (C). Always dim headlights before meeting another vehicle. Keep headlights properly adjusted.
3. Use turn signals when turning. Be sure to return the turn signal switch to center position after turning.



PY34586—UN—15FEB17

(5GV, 5GN)



APY01818—UN—06MAR18

(5GL)

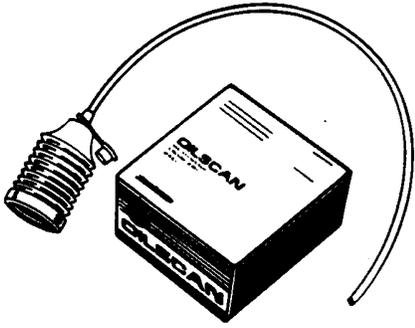
**B—Switch**

4. Disengage front-wheel drive using switch (B). Driving on hard surfaces with front-wheel drive engaged results in excessive wear of front tires.
5. Do not engage the differential lock. See Use Differential Lock in Differential Lock (section 50B).
6. Drive slowly enough to maintain control at all times. Slow down for hillsides, rough ground, and sharp turns, especially when transporting heavy, rear mounted equipment.
7. Before going down a hill, shift to a gear low enough to control speed without using brakes. Never coast downhill.
8. When driving downhill on icy or graveled grades, be alert for skids which could result in loss of steering control. To decrease chance of skids, reduce speed and be sure that tractor has proper ballast.
9. Use additional caution when transporting towed loads under adverse surface conditions and when turning or braking on inclines. Be sure that wheel tread is adjusted wide to provide maximum stability.

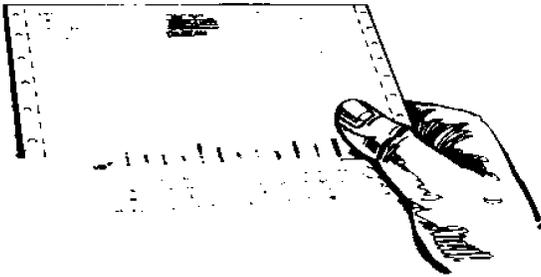
# Fuel, Lubricants, Hydraulic Oil and Coolant

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## OilsCan™ and CoolScan™



T6828AB—UN—15JUN89



T6829AB—UN—26AUG11

OilsCan™ and CoolScan™ are John Deere sampling programs to help you monitor machine performance and identify potential problems before they cause serious damage.

Oil and coolant samples should be taken from each system before its recommended change interval.

Check with your John Deere dealer for the availability of OilsCan™ and CoolScan™ kits.

DX,OILSCAN-19-13SEP11

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# Diesel Fuel

## Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590 or ASTM D975 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 43 minimum.** Cetane number greater than 47 is preferred, especially for temperatures below  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) or elevations above 1675 m (5500 ft.).

**Cold Filter Plugging Point (CFPP)** should be at least  $5^{\circ}\text{C}$  ( $9^{\circ}\text{F}$ ) below the expected lowest temperature or **Cloud Point** below the expected lowest ambient temperature.

**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).

### Sulfur content for Interim Tier 4, Final Tier 4, Stage III B, and Stage IV 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.
- **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.**

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## 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

## Lubricity of Diesel Fuel

Most diesel fuels manufactured in the United States, Canada, and the European Union have adequate

lubricity to ensure proper operation and durability of fuel injection system components. However, diesel fuels manufactured in some areas of the world may lack the necessary lubricity.

**IMPORTANT: Make sure the diesel fuel used in your machine demonstrates good lubricity characteristics.**

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

If fuel of low or unknown lubricity is used, add John Deere Fuel-Protect Diesel Fuel Conditioner (or equivalent) at the specified concentration.

### Lubricity of BioDiesel Fuel

Fuel lubricity can improve significantly with BioDiesel blends up to B20 (20% BioDiesel). Further increase in lubricity is limited for BioDiesel blends greater than B20.

DX,FUEL5-19-07FEB14

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### 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

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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 Stage V Engines Operating in the European Union

Where the engine is to be operated within the Union on diesel or non-road gas-oil, a fuel with a FAME content not greater than 8% volume/volume (B8) shall be used.

### John Deere Engines with Exhaust Filter Except Stage V Engines Operating in the European Union

Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

Biodiesel concentrations above B20 can harm the engine's emission control systems and should not be used. Risks include, but are not limited to, more frequent stationary regeneration, soot accumulation, and increased intervals for ash removal.

John Deere Fuel conditioners or equivalent, which contain detergent and dispersant additives, are required when using biodiesel blends from B10 to B20, and are recommended when using lower biodiesel blends.

### John Deere Engines Without Exhaust Filter

Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

These John Deere engines can operate on biodiesel blends above B20 (up to 100% biodiesel). Operate at levels above B20 ONLY if the biodiesel is permitted by law and meets the EN 14214 specification (primarily available in Europe). Engines operating on biodiesel blends above B20 might not fully comply with or be permitted by all applicable emissions regulations. Expect up to a 12% reduction in power and an 18% reduction in fuel economy when using 100% biodiesel.

John Deere fuel conditioners or equivalent, which contain detergent and dispersant additives, are required when using biodiesel blends from B10 to B100, and are recommended when using lower biodiesel blends.

### Biodiesel Use Requirements and Recommendations

The petroleum diesel portion of all biodiesel blends must meet the requirements of ASTM D975 (US) or EN 590 (EU) commercial standard.

Biodiesel users in the U.S. are strongly encouraged to purchase biodiesel blends from a BQ-9000 Certified Marketer and sourced from a BQ-9000 Accredited Producer (as certified by the National Biodiesel Board). Certified Marketers and Accredited Producers can be found at the following website: <http://www.bq9000.org>.

Biodiesel contains residual ash. Ash levels exceeding the maximums allowed in either ASTM D6751 or EN14214 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present).

The fuel filter can require more frequent replacement when using biodiesel fuel, particularly if switching from diesel. Check engine oil level daily prior to starting engine. A rising oil level can indicate fuel dilution of the

engine oil. Biodiesel blends up to B20 must be used within 90 days of the date of biodiesel manufacture. Biodiesel blends above B20 must be used within 45 days from the date of biodiesel manufacture.

When using biodiesel blends up to B20, the following must be considered:

- Cold-weather flow degradation
- Stability and storage issues (moisture absorption, microbial growth)
- Possible filter restriction and plugging (usually a problem when first switching to biodiesel on used engines)
- Possible fuel leakage through seals and hoses (primarily an issue with older engines)
- Possible reduction of service life of engine components

Request a certificate of analysis from your fuel distributor to ensure that the fuel is compliant with the specifications provided in this Operator's Manual.

Consult your John Deere dealer for John Deere fuel products to improve storage and performance with biodiesel fuels.

The following must also be considered if using biodiesel blends above B20:

- Possible coking or blocked injector nozzles, resulting in power loss and engine misfire if John Deere fuel additives and conditioners or equivalent containing detergent/dispersants are not used
- Possible crankcase oil dilution (requiring more frequent oil changes)
- Possible lacquering or seizure of internal components
- Possible formation of sludge and sediments
- Possible thermal oxidation of fuel at elevated temperatures
- Possible compatibility issues with other materials (including copper, lead, zinc, tin, brass, and bronze) used in fuel handling, distribution, and storage equipment
- Possible reduction in water separator efficiency
- Possible damage to paint if exposed to biodiesel
- Possible corrosion of fuel injection equipment
- Possible elastomeric seal and gasket material degradation (primarily an issue with older engines)
- Possible high acid levels within fuel system
- Because biodiesel blends above B20 contain more ash, using blends above B20 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present)

**IMPORTANT: Raw pressed vegetable oils are NOT acceptable for use as fuel in any concentration in John Deere engines. Their use could cause engine failure.**

DX,FUEL7-19-13JAN18

## 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.

# Engine Oil

## John Deere Break-In Plus™ Engine Oil

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 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.

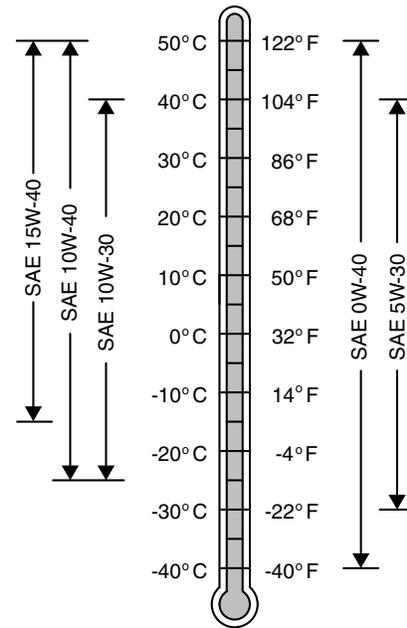
**IMPORTANT: Do not use any other engine oils during the initial break-in of a new or rebuilt engine.**

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.

RA84036,00017CB-19-02JUL18

## Diesel Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, and Stage IV



TS1691—UN—18JUL07

Oil Viscosities for Air Temperature Ranges

Use oil viscosity based on the expected air temperature range during the period between oil changes.

If John Deere Plus-50™ II engine oil is not available, engine oil meeting one or more of the following may be used:

Oil specifications	Recommended Oil
Premium oils 15W-40 API CJ-4	John Deere Plus-50™ II (SAE 15W-40 CJ-4, CI-4, CH-4, SM, SL, SJ)

Plus-50 is a trademark of Deere & Company

DO NOT use engine oil containing more than 1.0% sulfated ash, 0.12% phosphorus, or 0.4% sulfur.

**Multi-viscosity diesel engine oils are preferred.**

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

**IMPORTANT: Use only ultra low sulfur diesel (ULSD) fuel with a maximum sulfur content of 15 mg/kg (15 ppm).**

RA84036,00017CC-19-02JUL18

Break-In Plus is a trademark of Deere & Company  
Plus-50 is a trademark of Deere & Company.

## Engine Oil and Filter Service Intervals

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 interval.**
- **Use only approved oil types.**

Engine oil and filter change intervals:	
After the first 100 hours of operation	Drain brake-in oil and refill with recommended engine oil. Replace engine oil filter
Every 250 hours of operation	If Bio-Diesel blends greater than B20 are used or if oils, other as recommended are used.
Every 500 hours of operation	If STANDARD fuel compliant to the EN 590 (2005/55 - 2005/78) is used. The use of additives is discouraged. A fuel known as BIO DIESEL is allowed only if it is compliant with the EN EN 14214 - ASTM 6751 norm, mixed in standard fuel with a maximum percentage of 20%. If recommended oil is used.

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RA84036,00017CD-19-02JUL18

# Engine Coolant

## Diesel Engine Coolant

### Preferred Coolants

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
- 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

COOL-GARD is a trademark of Deere & Company

- 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. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

**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.**

RA84036.00017CE-19-02JUL18

## Operating in Warm Temperature Climates

John Deere engines are designed to operate using recommended engine coolants.

Always use a recommended engine coolant, even when operating in geographical areas where freeze protection is not required.

**IMPORTANT: Water may be used as coolant in emergency situations only.**

**Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation occur when water is used as the coolant, even when coolant conditioners are added.**

**Drain cooling system and refill with recommended engine coolant as soon as possible.**

DX,COOL6-19-15MAY13

## Water Quality for Mixing with Coolant Concentrate

Engine coolants are a combination of three chemical components: ethylene glycol (EG) or propylene glycol (PG) antifreeze, inhibiting coolant additives, and quality water.

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

All water used in the cooling system should meet the following minimum specifications for quality:

Chlorides	<40 mg/L
Sulfates	<100 mg/L

Total solids	<340 mg/L
Total dissolved hardness	<170 mg/L
pH	5.5—9.0

**IMPORTANT: Do not use bottled drinking water because it often contains higher concentrations of total dissolved solids.**

### Freeze Protection

The relative concentrations of glycol and water in the engine coolant determine its freeze protection limit.

Ethylene Glycol	Freeze Protection Limit
40%	-24°C (-12°F)
50%	-37°C (-34°F)
60%	-52°C (-62°F)
Propylene Glycol	Freeze Protection Limit
40%	-21°C (-6°F)
50%	-33°C (-27°F)
60%	-49°C (-56°F)

DO NOT use a coolant-water mixture greater than 60% ethylene glycol or 60% propylene glycol.

DX,COOL19-19-13JAN18

### Testing Diesel Engine Coolant

Maintaining adequate concentrations of glycol and inhibiting additives in the coolant is critical to protect the engine and cooling system against freezing, corrosion, and cylinder liner erosion and pitting.

Test the coolant solution at intervals of 12 months or less and whenever excessive coolant is lost through leaks or overheating.

### Coolant Test Strips

Coolant test strips are available from your John Deere dealer. These test strips provide a simple, effective method to check the freeze point and additive levels of your engine coolant.

### When Using John Deere COOL-GARD II

John Deere COOL-GARD II Premix™, COOL-GARD II PG Premix and COOL-GARD II Concentrate are maintenance free coolants for up to six years or 6000 hours of operation, provided that the cooling system is topped off using only John Deere COOL-GARD II Premix or COOL-GARD II PG premix. Test the coolant condition annually with coolant test strips designed for use with John Deere COOL-GARD II coolants. If the test strip chart indicates that additive is required, add John Deere COOL-GARD II Coolant Extender as directed.

Add only the recommended concentration of John

Deere COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

### When Using Nitrite-Containing Coolants

Compare the test strip results to the supplemental coolant additive (SCA) chart to determine the amount of inhibiting additives in your coolant and whether more John Deere Liquid Coolant Conditioner should be added.

Add only the recommended concentration of John Deere Liquid Coolant Conditioner. DO NOT add more than the recommended amount.

### Coolant Analysis

For a more thorough evaluation of your coolant, perform a coolant analysis. The coolant analysis can provide critical data such as freezing point, antifreeze level, pH, alkalinity, nitrite content (cavitation control additive), molybdate content (rust inhibitor additive), silicate content, corrosion metals, and visual assessment.

Contact your John Deere dealer for more information on coolant analysis.

DX,COOL9-19-11APR11

### Supplemental Coolant Additives

Some coolant additives will gradually deplete during engine operation. For nitrite-containing coolants, replenish coolant additives between drain intervals by adding a supplemental coolant additive as determined necessary by coolant testing.

John Deere Liquid Coolant Conditioner is recommended as a supplemental coolant additive for nitrite-containing coolants.

John Deere Liquid Coolant Conditioner is not designed for use with John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, or COOL-GARD II Concentrate.

**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

If other coolants are used, consult the coolant supplier and follow the manufacturer's recommendation for use of supplemental coolant additives.

The use of non-recommended supplemental coolant additives may result in additive drop-out and gelation of the coolant.

Add the manufacturer's recommended concentration of supplemental coolant additive. DO NOT add more than the recommended amount.

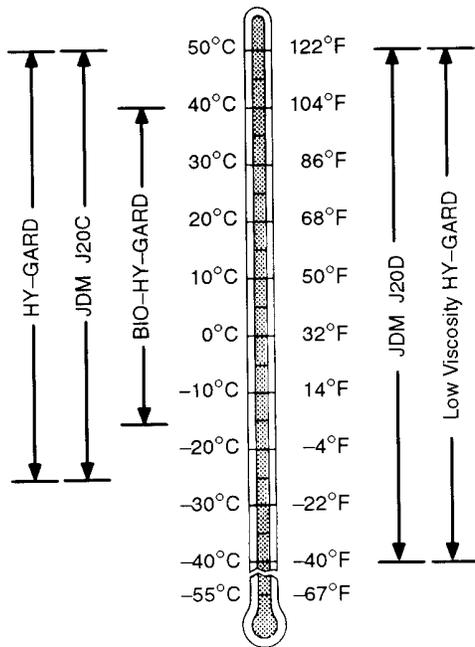
*COOL-GARD is a trademark of Deere & Company*

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# Other Lubricants

## Transmission and Hydraulic Oil



TS1625—UN—12DEC94

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™

John Deere BIO-HY-GARD™ oil is also recommended.

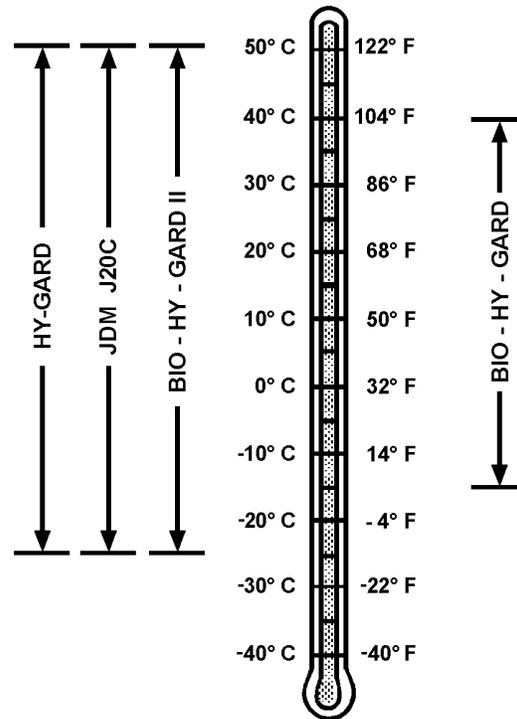
Other oils may be used if they meet one of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

Arctic oils (such as Military Specification MIL-L-46167B) may be used at temperatures below -30°C (-22°F).

DX,HYOIL2-19-01DEC94

## Front-Wheel Drive Axle Oil



LX1033632

LX1033632—UN—29APR04

Use oil with a viscosity based on the expected air temperature range during the period between oil changes.

The following oil is preferred.

John Deere HY-GARD™

Other oils may be used if they meet the following:

John Deere Standard JDM J20C

Use one of the following oils when a biodegradable fluid is required:

John Deere BIO-HY-GARD II™<sup>1</sup> or BIO-HY-GARD™<sup>1</sup>

**NOTE:** Do NOT use BIO-HY-GARD on braked axles.

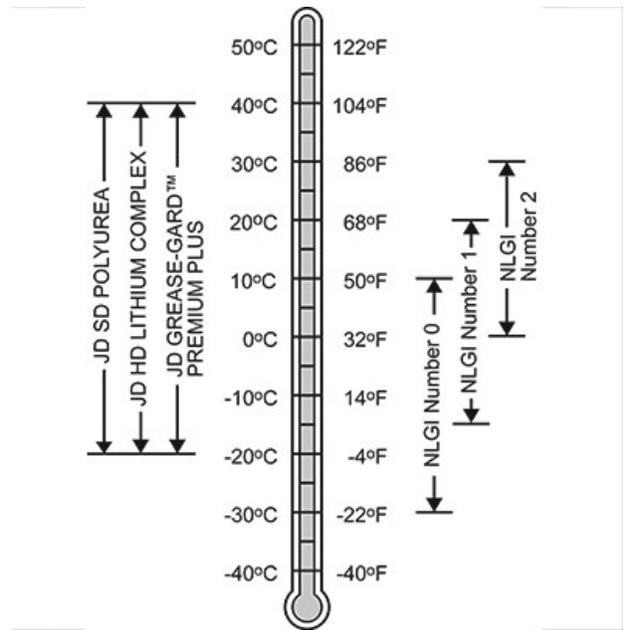
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BIO-HY-GARD II is a trademark of Deere & Company.

<sup>1</sup> BIO-HY-GARD II meets or exceeds the minimum biodegradability of 80 % within 21 days according to CEC L-33-A-93 test method. BIO-HY-GARD meets or exceeds the minimum biodegradability of 80 % within 21 days according to CEC L-33-T-82 test method. These oils should not be mixed with mineral oils because this reduces the biodegradability and makes proper oil recycling impossible.

HY-GARD is a registered trademark of Deere & Company.  
BIO-HY-GARD is a trademark of Deere & Company.

## Grease for Automated Lubrication Systems



RG30202—UN—08MAR18

Grease 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 (per ISO 6743-9) or DIN KP 2 N-20 (per DIN 51825) Lithium Complex, Non Synthetic Base Oil (100 to 220 mm<sup>2</sup>/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,GREA2-19-13JAN18

## Mixing of Lubricants

In general, avoid mixing different brands or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance requirements.

Mixing different oils can interfere with the proper

functioning of these additives and degrade lubricant performance.

Consult your John Deere dealer to obtain specific information and recommendations.

DX,LUBMIX-19-18MAR96

## Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

DX,LUBST-19-11APR11

## Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your John Deere dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to John Deere branded fluids or fluids that have been tested and/or approved for use in John Deere equipment.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER-19-13JAN18

# Service — General Information

## Safe Maintenance and Cleaning



TS249—UN—23AUG88

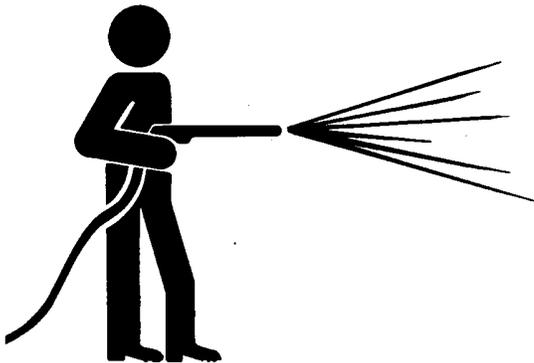
**CAUTION:** To perform service work at locations that are difficult to reach, it is essential to use suitable platforms or safety ladders.

Particular care is required when performing service work and cleaning jobs at locations that are difficult to reach, for example, adjusting roof-mounted lights, servicing the cooling system, adjusting the right outside mirror on tractors without a door on the right side and many other similar tasks.

**CAUTION:** It is NOT permissible to stand on tractor components to perform such tasks unless the tractor components are intended for this purpose. There is a high risk of falling, especially if the tractor components are wet, dirty, or coated with ice.

RA84036,0001859-19-03JUL18

## Using High-Pressure Washers

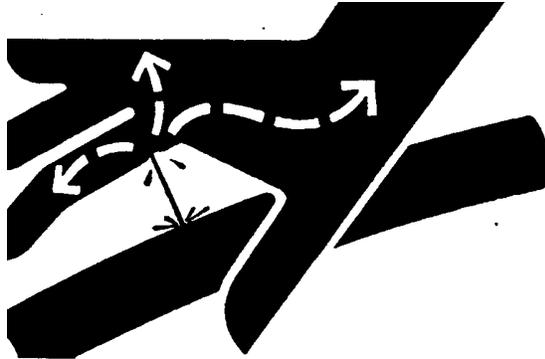


T6642EJ—UN—18OCT88

**IMPORTANT:** Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps, or other sensitive parts and components may cause product malfunctions. Reduce pressure and spray at a 45 to 90° angle.

RA84036,000185A-19-03JUL18

## 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

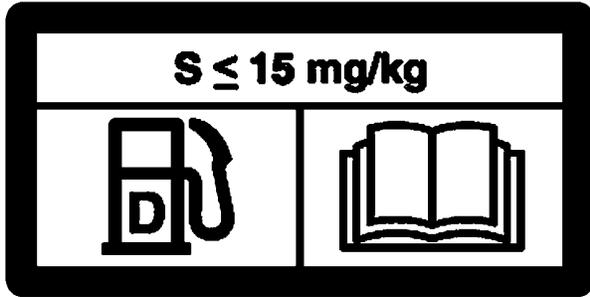
## Storing Fuel

If there is a very slow turnover of fuel in the fuel tank or supply tank, it may be necessary to add a fuel conditioner to prevent water condensation. Contact your

John Deere dealer for proper service or maintenance recommendations.

DX,FUEL-19-03MAR93

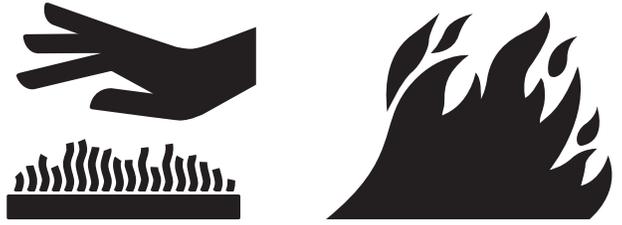
### Ultra Low Sulfur Fuel



AGCPTJD0744—UN—18AUG14

**IMPORTANT:** When this label is present, use Ultra Low Sulfur Fuel only.

RA84036.000185B-19-03JUL18



RG17488—UN—21AUG09

A—Hood

The hood (A) is a protective element.

**CAUTION:** Never perform any service work near rotating or moving parts. Never remove or open any service doors or other guards when engine is running or hot. No service must be performed on or around the engine with engine running.

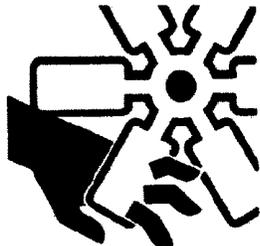
Prevent unintentional operation of engine or starting motor when hood is open or guards are removed.

RA84036.000185C-19-03JUL18

### When Performing Services

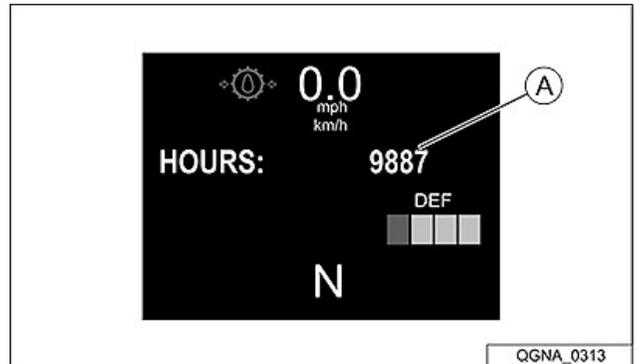


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QGNA0212—UN—02NOV15



T133592—UN—15APR13

### Lubrication and Periodic Service



QGNA\_0313  
QGNA0313—UN—02NOV15

**CAUTION:** Do not lubricate or adjust the tractor while the engine is running.

**IMPORTANT:** Recommended service intervals are for average conditions. Service more often if tractor is operated under adverse conditions.

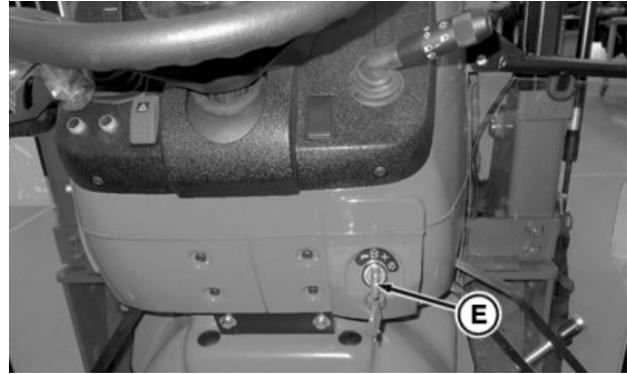
The intervals at which the various parts are checked, lubricated, serviced, or adjusted are based on the actual hours of operation as shown on the hour meter (A). The hour meter operates whenever the engine is running and shows the accumulated hours of engine operation.

Using hour meter (A) as a guide, perform all services at the hourly intervals indicated on the following pages.

Always check to make sure that the hour meter is serviceable.

After servicing, cleaning, or repairing your machine, reinstall any safety guards or shields before operating the tractor again.

RA84036,000185D-19-03JUL18



PY42851—UN—03JUL17

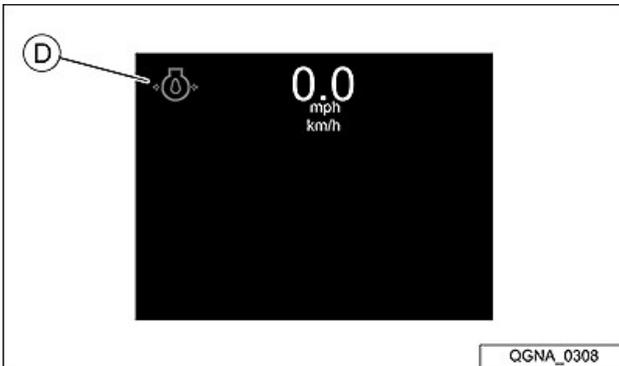
(5GL)

### Oil Service Message Reset (5075 Model)

**IMPORTANT:** Reset Oil Service Message after each oil change. Failure to follow this procedure leads to engine derate.

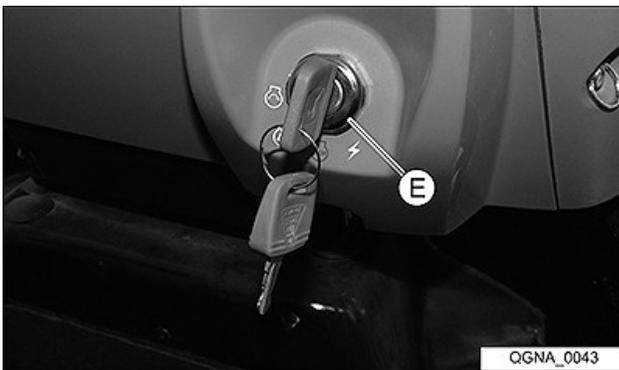
After changing the engine oil, it is necessary to reset the timer of the oil life, time monitoring system.

Proceed as follows to reset the timer:



QGNA\_0308

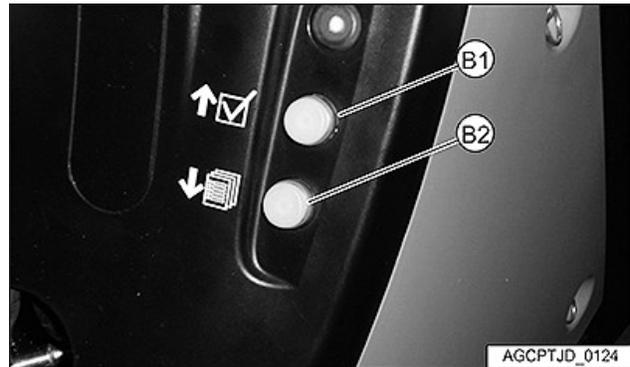
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QGNA0043—UN—02NOV15

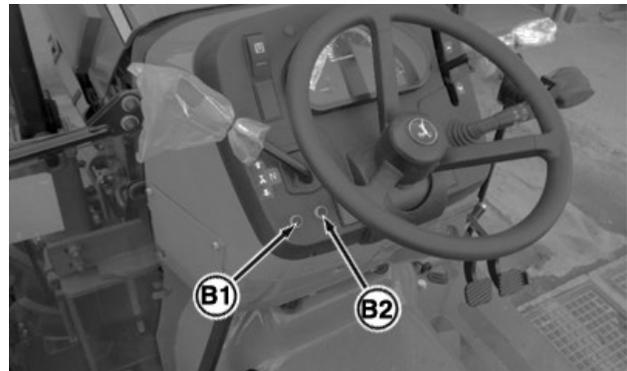
(5GV, 5GN)



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(5GV, 5GN)



PY42803—UN—02JUL17

(5GL)

D—Icon  
E—Key  
B1—Button  
B2—Button

1. Put the key (E) in the key-on without starting the engine.
2. Wait 6 seconds.
3. Press and hold the buttons (B1) and (B2) for at least 15 seconds.
4. After 15 seconds, icon (D) starts flashing and the buzzer sounds for a short time which indicates the end of the procedure.
5. At this point, you can use the tractor normally.

*NOTE: The procedure can be performed only once in the same trip. A further attempt has no effect on the timer.*

RA84036,000185E-19-09OCT18

## Use Correct Lubricant

**IMPORTANT: Use only lubricants meeting specifications outlined in Fuels and Lubricants section when performing tractor service.**

RA84036,000185F-19-03JUL18

## Other Service Jobs

If the tractor is used in wet and muddy terrain, apply extra lubrication as follows:

- Front axle—lubricate pivot pin and king pins (tractors without front-wheel drive).
- Front axle and driveshaft (tractors with front-wheel drive).
- Lubricate front axle wheel bearings.
- Lubricate all universal joints including universal joint shaft from transmission to front-wheel drive axle.
- Lubricate rear axle bearings.
- 3-point hitch—lubricate all grease fittings.
- Trailers hitch—lubricate all grease fittings.

These jobs are described in other service section in this manual.

RA84036,0001860-19-03JUL18

## Oil Vapor Recirculation System Maintenance

Let your authorized dealer check the blow-by filter.

RA84036,0001861-19-03JUL18

## Turbo Compressor Maintenance

Let your authorized dealer check the turbo compressor.

RA84036,0001862-19-03JUL18

## Overhaul Injection Pump

Ask your authorized dealer to perform this service.

RA84036,0001863-19-03JUL18

## 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

## Tire Pressures

Long life and satisfactory performance of the tires depend on proper tire inflation. Under-inflation of tires leads to rapid wear. Over-inflated tires reduce traction and increase wheel slippage.

The correct tire pressure depends not only on working conditions and load, but also on the tractor model, tire size, and manufacturer, we recommend that you approach your John Deere dealer or tire company for advice. The tire pressures shown in the table are considered as a standard guide only. The tire pressures shown are for field operation. If you are operating 20% or more of the time on roads, increase tire pressures according to the manufacturer's specifications.

*NOTE: Refer to Maximum Permissible Axle Load in Relation to Tires (Normal Operation) in Specifications (section 500A) in this manual.*

Rear wheels	Front wheels
All tires: 160 kPa (1.6 bar) (23 psi)	Tires 260/70-16: 240 kPa (2.4 bar) (35 psi)
	Tires 280/70-16: 160 kPa (1.6 bar) (23 psi)

RA84036,0001864-19-03JUL18

## Inspect All Tires

Inspect tires and check inflation pressures. For the correct tire pressures, refer to Specifications (section 500A) in this manual for more information concerning tire pressures.

RA84036,0001865-19-03JUL18

## Service Tractor Safety

Disengage power to attachments and stop engine before making any repairs or adjustments.

Do not change engine governor setting or overspeed engine.

Keep the vehicle and attachments in good operating condition.

Keep safety devices in place and in working condition.

Keep all nuts, bolts, and screws tight to be sure the equipment is in safe, working condition.

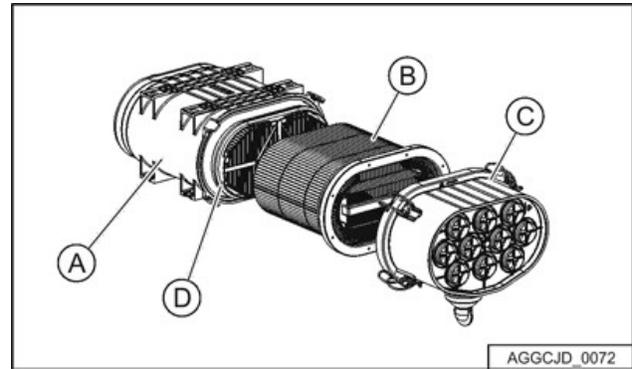
**⚠ CAUTION: Before you work on any part of the engine, stop the engine, and let it cool. Hot engine parts can burn skin on contact.**

Check if the reverse drive lever is in neutral position, before running the engine.

**⚠ CAUTION: Be careful to prevent clothing, jewelry, or long hair from getting caught in the fan blades, drive belts, or any other moving engine parts.**

Unauthorized modifications to the machine impair the function and/or safety and affect the machine life.

RA84036,0001866-19-03JUL18



AGGCJD\_0072

AGGCJD0072—UN—10MAR16

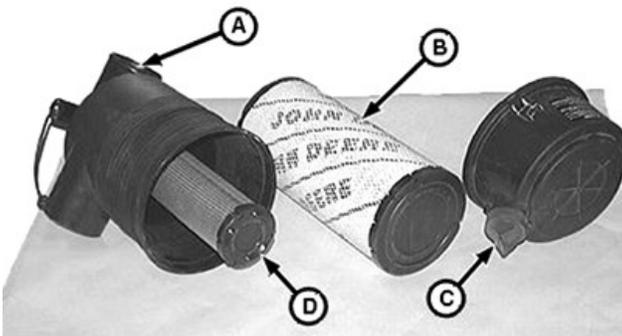
(5090GV, 5090GN, 5100GN)

- A—Air Cleaner Canister
- B—Primary Air Cleaner Element
- C—Dust Unloader Valve
- D—Secondary Element

Air enters the intake system through the open end of the air cleaner canister (A). A major portion of the dust is separated out by air turbulence action caused by the primary air cleaner element (B). This dust is then passed out into the radiator inlet air flow through the dust unloader valve (C). If the primary element becomes plugged, dust gets filtered out by the secondary element (D).

RA84036,0001867-19-09OCT18

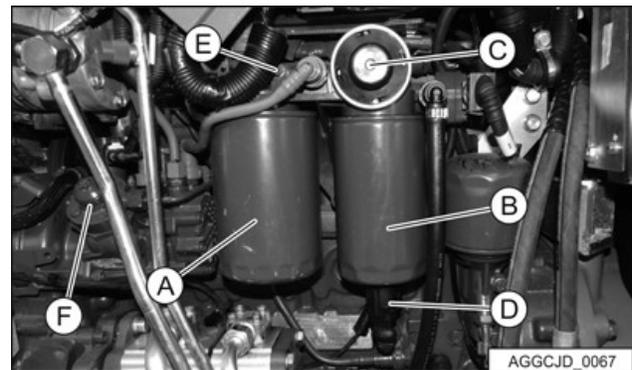
## Air Intake System Components



LX205078—UN—11NOV13

(5075GV, 5075GN, 5075GL)

## Fuel System Components



AGGCJD\_0067

AGGCJD0067—UN—21JAN16

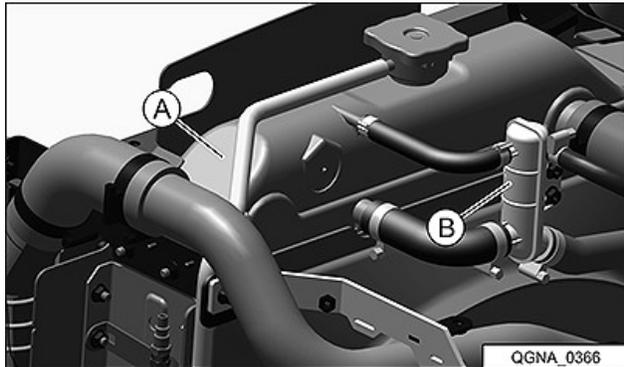
- A—Fuel Prefilter
- B—Fuel Filter
- C—Priming Pump
- D—Water Separator Bowl
- E—Fuel System Bleeding Screw
- F—Fuel Pump

RA84036,0001868-19-03JUL18

## Engine Cooling System Components

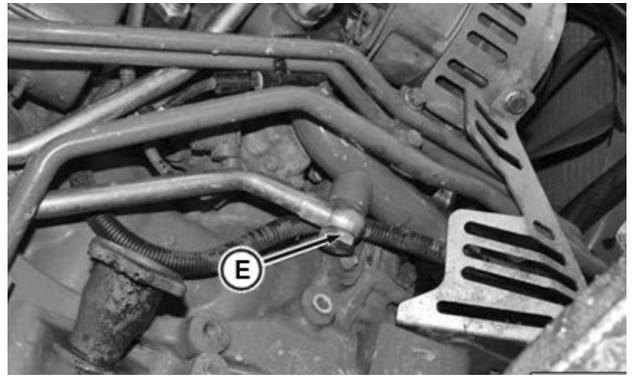


TS281—UN—15APR13



5GV, 5GN)

QGNA0366—UN—02NOV15



PY28244—UN—25AUG16

- A—Radiator
- B—Level Tank
- C—Upper Radiator Hose
- D—Thermostat Housing
- E—Drain Plug
- F—Tank Cap

**CAUTION:** Remove radiator cap only when the engine is cold. Slowly loosen cap to first stop to relieve pressure before removing completely.

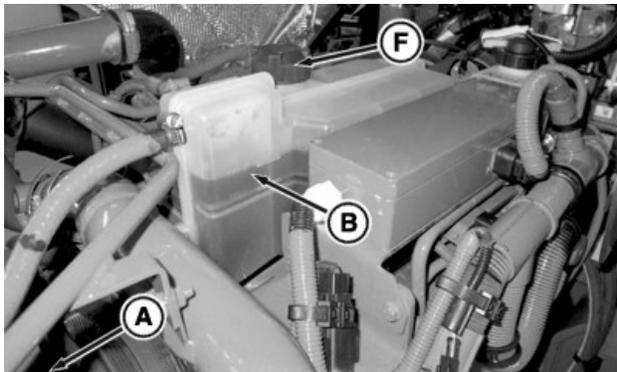
Check coolant level. See Check Coolant Level in Service — Checks (section 220D) in this manual.

**IMPORTANT:** Never pour cold water into the cooling system of a hot engine, as it can crack the cylinder block or head. **DO NOT** operate engine without coolant for even a few minutes.

If the coolant has been drained or changed, the cab heating system should be engaged, for at least 10 minutes to bleed the air out of the system while the engine is running.

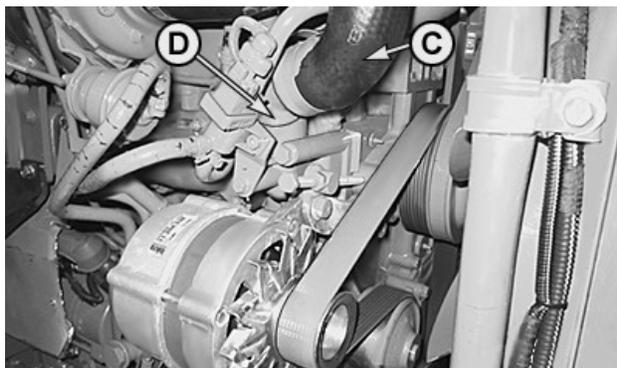
Check coolant level through the coolant level tank (B). See Check Coolant Level in Service — Checks (section 220D) in this manual.

RA84036,0001869-19-09OCT18



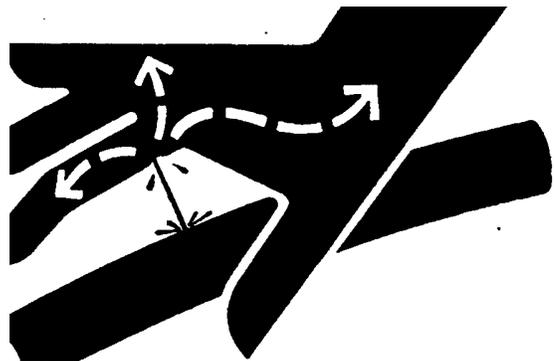
(5GL)

PY42836—UN—02JUL17

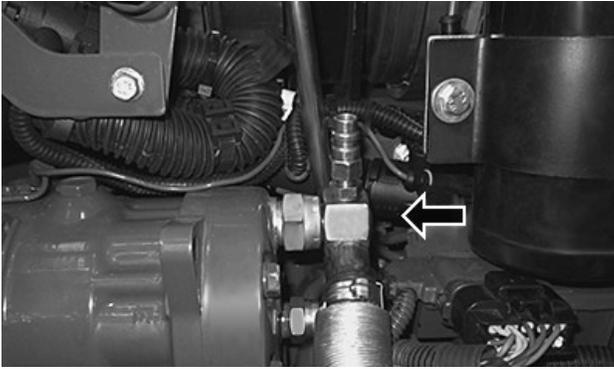


AGCPTJD0090—UN—27MAY13

## Air-Conditioning System



X9811—UN—23AUG88



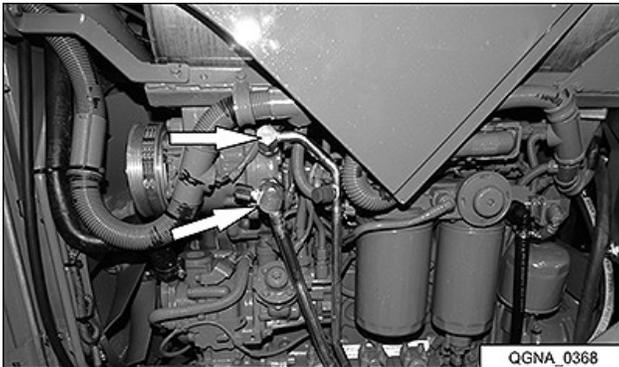
AGCPTJD0092—UN—27MAY13

**⚠ CAUTION:** Refrigerant is harmful to the eyes and skin. If a leak is detected, put on safety glasses and wear protective clothing. Call your John Deere dealer, who has the special equipment required to service and repair the air-conditioning circuit.

*NOTE:* Cleaning front grille, side panels, radiator, and condenser, as well as checking and cleaning the cab air filter, need special equipment for avoiding damage.

For any service required for the air conditioning system, contact your John Deere Dealer. See *Service Intervals* (section 210B) in this manual.

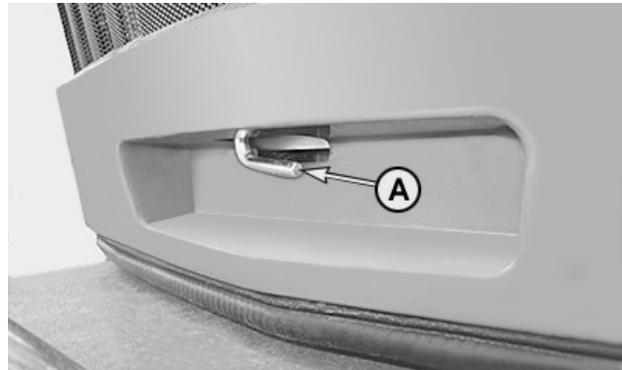
RA84036,000186A-19-03JUL18



QGNA\_0368  
QGNA0368—UN—02NOV15

### Open Hood (Version 1)

Release the latch (A) and open the hood.



AGCPTJD0088—UN—21MAY13

A—Latch

If the cooling effect is intermittent, clean the front grille, side panels, radiator, and condenser. Check and clean cab air filter if necessary. If all these procedures do not solve the problem and the system still does not work properly, the refrigerant level in the system is low. See your John Deere dealer.

**⚠ CAUTION:** The refrigerant in the system is under pressure. If it escapes it can penetrate the skin or the eyes and it can cause burns.

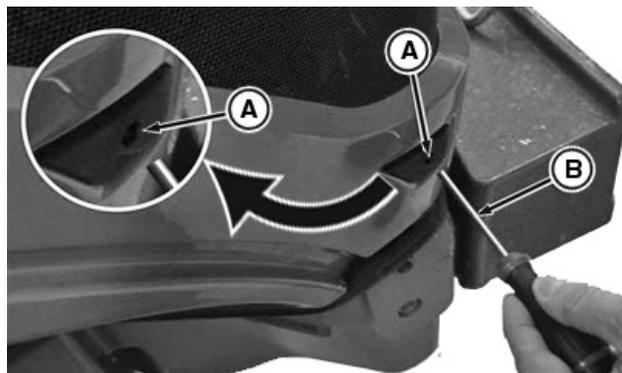
**IMPORTANT:** The system is filled with R-134a refrigerant. Servicing it requires special procedures and equipment. See your John Deere dealer.

RA84036,000186B-19-22AUG18

At ambient temperatures below 0°C (32°F), operate the compressor by switching on the air conditioning system for 10 to 15 minutes at least once in a month. Run the engine at 1500 rpm. This usage ensures that the seals in the compressor are lubricated and prevent them from becoming dry and brittle.

### Open Hood (Version 2)

**IMPORTANT:** Frequently check air conditioning components for leaks or damage. Wear protective clothing. Air conditioning components that are contaminated with oil indicate the possibility of a refrigerant leak. If there is any doubt, contact your John Deere Dealer.



PY28237—UN—25AUG16

5GV and 5GN Tractor Models

A—Hole

**IMPORTANT:** Never open refrigerant lines, as it allows all the refrigerant to escape.

**B—Tool**

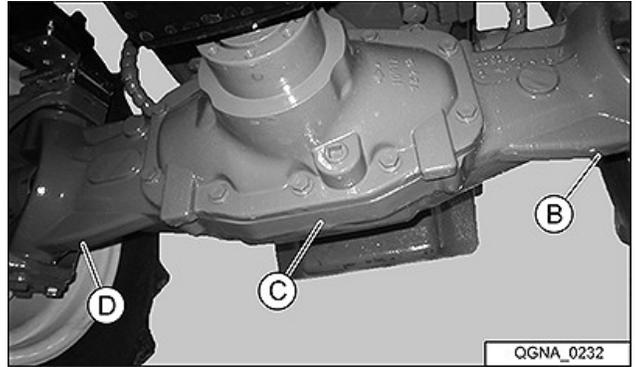
In order to open the hood, insert a suitable tool (B) into the hole (A).

Push the latch to free the hood and at the same time lift it from the front.

To close the hood, push it fully down.

An audible click signals engagement of the locking catch. Check that the hood is properly closed.

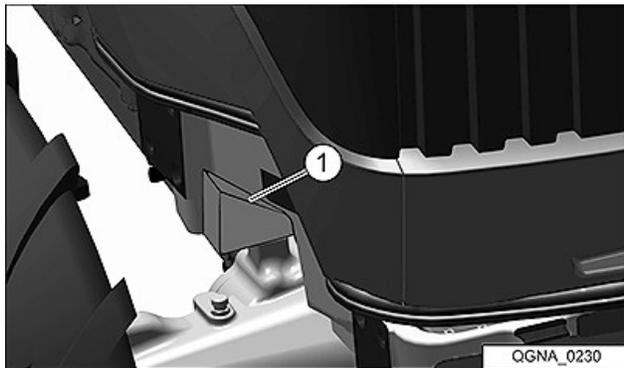
RA84036,000188D-19-22AUG18



**Jack Up the Tractor - Lifting Points**

The illustrations show the recommended lifting points for jacking up the tractor. Use a stable lifting jack with sufficient lifting force. See Loads and Weights in Specification (section 500A) in this manual.

**Raise rear of tractor:**



Wooden Wedges



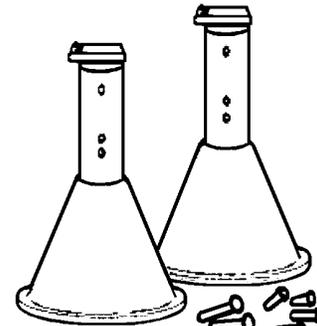
Raise Rear of Tractor

- 1—Wooden Wedges
- A—Raise Rear of Tractor

**Raise front of tractor:**



- B—Raise Right End of Axle, for example, to Remove Right Front Wheel
- C—Raise Center of Axle (Use Wooden Wedges to Prevent Axle from Tilting)
- D—Raise Left End of Axle, for example, to Remove Left Front Wheel
- E—Raise Front End of Tractor under the Basic Weight



JT07211

JT07211—UN—14DEC06

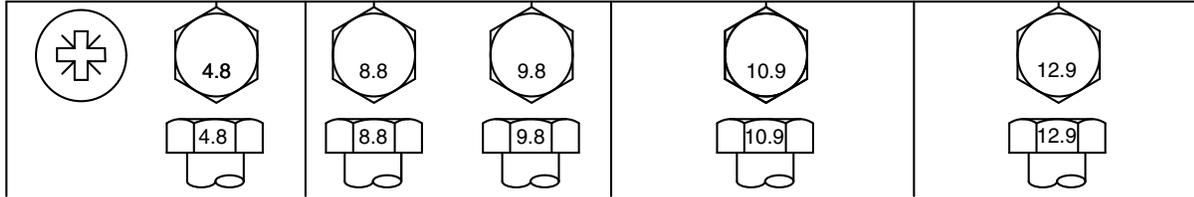
JT02043 und JT02044 Support Stands

- JT02043—Support Stand, 482 to 736 mm (19 to 29 in.)
- JT02044—Support Stand, 863 to 1117 mm (34 to 44 in.)

**⚠ CAUTION: Use approved lifting equipment only.**  
**Jack up tractor on firm, level ground only.**  
 Before doing any further work on the tractor, first secure it using a suitable support stands. The special John Deere tools shown can be used for this purpose. These support stands are available from your John Deere dealer.

RA84036,000186C-19-03JUL18

## Metric Bolt and Screw Torque Values



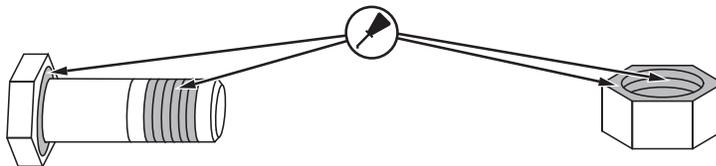
TS1742—UN—31MAY18

Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Hex Head <sup>a</sup>		Flange Head <sup>b</sup>		Hex Head <sup>a</sup>		Flange Head <sup>b</sup>		Hex Head <sup>a</sup>		Flange Head <sup>b</sup>		Hex Head <sup>a</sup>		Flange Head <sup>b</sup>	
	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.



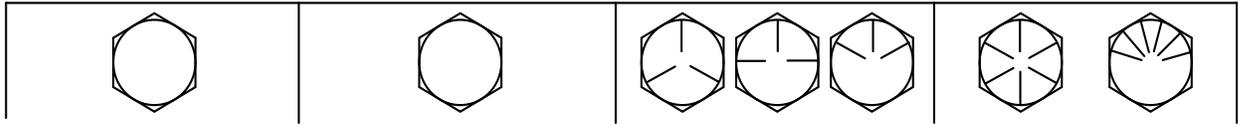
TS1741—UN—22MAY18

<sup>a</sup>Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.

<sup>b</sup>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



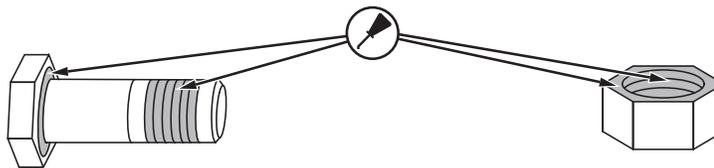
TS1671—UN—01MAY03

Bolt or Screw Size	SAE Grade 1 <sup>a</sup>				SAE Grade 2 <sup>b</sup>				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Hex Head <sup>c</sup>		Flange Head <sup>d</sup>		Hex Head <sup>c</sup>		Flange Head <sup>d</sup>		Hex Head <sup>c</sup>		Flange Head <sup>d</sup>		Hex Head <sup>c</sup>		Flange Head <sup>d</sup>	
	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
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
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
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
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

<sup>a</sup>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.

<sup>b</sup>Grade 2 applies for hex cap screws (not hex bolts) up to 6 in (152 mm) long.

<sup>c</sup>Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.

<sup>d</sup>Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX.TORQ1-19-30MAY18

# Service Intervals

## Information

This Operator's Manual contains service schedules for your tractor. To obtain the best performance, economy and service life from your tractor, ensure that all service is carried out according to the Operator's Manual. It is recommended that your John Deere dealer perform the service work and afterwards stamp the appropriate page in this Operator's Manual.

All John Deere oils, grease, and service products have been optimally designed to provide your tractor with maximum protection and performance. For this reason, we recommend using only genuine John Deere service products and replacement parts.

Keeping an accurate account of all service performed on your tractor will help you to obtain the best price should you decide to sell it. A prospective buyer can see from these records that your tractor has been serviced on a regular basis. This Operator's Manual also serves as an added means of security since the entire history of the tractor can be easily traced.

To protect your rights under the warranty, ensure all scheduled services are carried out and then recorded. If your tractor is covered by an extended warranty (John Deere PowerGard™), it is important to keep these records for the duration of the warranty period.

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RA84036,000182B-19-03JUL18

## Service (Daily / Every 10, 50, 250, 500, and 750 Hours)

Service Procedure	Perform all tasks marked - In addition carry out the 10-hour service				
	Every 10 hours or daily	After the first 50 hours	Every 250 hours	Every 500 hours	Every 750 hours
Lights - Check that all lights (including headlights) are functioning properly	•				
Fuel system - Drain water and sediment from the fuel filter.	• <sup>a</sup>				
Engine - Remove any dirt from area surrounding the engine	•				
Engine - Check oil level	•				
Cooling system/air-conditioning system - Clean the radiator and condenser, fins, and screens	•				
Cooling system - Check coolant level	•				
Transmission and hydraulic system - Check the oil level	•				
Air cleaner - Clean the dust unloading valve	•				
Three-point hitch - Lubricate lift links and rockshaft (only when operating in wet and muddy conditions)	•				
Trailer hitch - Lubricate all grease fittings (only when operating in wet and muddy conditions)	•				
Front-wheel drive axle - Lubricate pivot pin and king pins (only when operating in wet and muddy conditions)	•				
Front-wheel drive axle - Lubricate wheel bearings (only when operating in wet and muddy conditions)	•				
Front-wheel drive axle - Lubricate all universal joints including universal joint shaft from transmission to the front-wheel drive axle (only when operating in wet and muddy conditions)	•				
Rear axle - Lubricate bearings (only when operating in wet and muddy conditions)	•				
Transmission - Replace transmission oil filter, check oil level				•	
Engine - Change engine oil		•		•	
Engine - Change engine oil filter				•	
Clutch and PTO clutch - Check free play				•	
Brake system - Check oil level			•	•	•

## Service Intervals

Service Procedure	Perform all tasks marked - In addition carry out the 10-hour service				
	Every 10 hours or daily	After the first 50 hours	Every 250 hours	Every 500 hours	Every 750 hours
Brake system - Check free play of the park brake and foot brakes			•	•	•
Drawbar - Check torque on attaching screws			•	•	•
Steering system - Lubricate tie rod ends			•	•	•
Wheels - Check torque of wheel and rim bolts (check after the first 10 hours, the first 50 and every 500 hours)	•	•		•	•
Front-wheel drive axle or front axle - Lubricate pivot pin and king pins			•	•	•
Front axle - Lubricate wheel bearings			•	•	•
Front-wheel drive axle - Lubricate all universal joints including universal joint shaft from transmission to the front-wheel drive axle			•	•	•
Front-wheel drive axle - Check oil level in the axle housing and final drive housings			•	•	•
Rear axle - Lubricate bearings			•	•	•
Check neutral start circuit			•	•	•
Alternator drive belt - Check for wear and damages, check belt tension			•	•	•
Fuel system - Replace fuel filter, fuel prefilter, and bleed fuel system				•	
Fuel system - Drain residue from the fuel tank				•	
DEF system - Drain residue from the DEF tank				•	
Three-point hitch - Lubricate lift links and rockshaft				•	
Air intake hoses - Check connections for leaks				•	
Components of drawbar and trailer hitches - Check all components for wear, check all components function properly				•	
Clean radiator				•	
Check condition of the alternator drive belt				•	
Check engine speeds, have speeds adjusted by your John Deere dealer					•
Front axle pivot pins - Have your John Deere dealer check the end play					•
Cab and ROPS - Check torque of mounting bolts and nuts					•

<sup>a</sup>A sensor automatically generates a message in the display.

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## Service (Every 1000, 1250, 1500, 3000 Hours and Annually Services)

Service Procedure	Perform all tasks marked - In addition carry out the 10-hour service				
	Every 1000 hours	Every 1250 hours	Every 1500 hours	Every 3000 hours	Annually
Transmission - Replace transmission oil filter, check oil level	•		•	•	
Engine - Change engine oil	•		•	•	•
Engine - Change engine oil filter	•		•	•	•
Clutch and PTO clutch - Check free play	•		•	•	
Brake system - Check oil level	•	•	•	•	
Brake system - Check free play of the park brake and foot brakes	•	•	•	•	
Drawbar - Check torque on attaching screws	•	•	•	•	
Steering system - Lubricate tie rod ends	•	•	•	•	
Wheels - Check torque of wheel and rim bolts	•	•	•	•	
Trailer hitch - Lubricate all grease fittings	•	•	•	•	
Front-wheel drive axle or front axle - Lubricate pivot pin and king pins	•	•	•	•	
Front axle - Lubricate wheel bearings	•	•	•	•	
Front-wheel drive axle - Lubricate all universal joints including universal joint shaft from transmission to the front-wheel drive axle	•	•	•	•	
Front-wheel drive axle - Check oil level in the axle housing and final drive housings	•	•	•	•	
Rear axle - Lubricate bearings	•	•	•	•	

## Service Intervals

Service Procedure	Perform all tasks marked - In addition carry out the 10-hour service				
	Every 1000 hours	Every 1250 hours	Every 1500 hours	Every 3000 hours	Annually
Check neutral start circuit	•	•	•	•	
Alternator drive belt - Check for wear and damages, check belt tension	•	•	•	•	
Fuel system - Replace fuel filter, fuel prefilter, and bleed fuel system	•		•	•	
Fuel system - Drain residue from the fuel tank	•		•	•	
DEF system - Drain residue from the DEF tank	•		•	•	
Three-point hitch - Lubricate lift links and rockshaft	•		•	•	
Air intake hoses - Check connections for leaks	•		•	•	
Components of drawbar, and trailer hitches - Check all components for wear, check all components function properly	•		•	•	
Check engine speeds, have speeds adjusted by your John Deere dealer			•	•	
Front axle pivot pins - Let the John Deere dealer check the end play			•	•	
Cab and ROPS - Check torque of mounting bolts and nuts			•	•	
Transmission and hydraulic system - Replace suction strainer			•	•	
Transmission and hydraulic system - Change oil and replace oil filter			•	•	
Front-wheel drive axle - Drain oil and refill with fresh oil			•	•	
Brake system - Have brake system oil changed by your John Deere dealer			•	•	
Air intake system - Replace air cleaner			•	•	
Check turbo compressor			•	•	
Oil vapor recirculation system maintenance			•	•	
Injection pump, overhaul				•	
Replace diesel particulate filter (5075 model)				•	
Replace DOC SCR Filters				•	
Clean/replace radiator pressure cap				•	
Change cooling system cooling fluid				•	
Replace the alternator drive belt and replace water pump				•	
Replace the supply module filter (DEF system)				•	
Inspect seat belt for damage and ensure proper working order					•
Inspect hydraulic hoses					•
Transmission - Replace transmission oil filter (Third pump - OPTIONAL), check oil level (only 5GL model)				•	

RA84036,000182D-19-03JUL18

### Information on Changing Engine Oil

Change engine oil at least **once a year**. Service intervals vary depending on the type of engine oil used and the sulfur content of the diesel fuel. When changing engine oil, always change the oil filter.

At every oil change, note the type of oil used in the service record. The next oil change is determined using the table below.

Engine oil and filter change intervals:	
After the first 100 hours of operation	Drain break-in oil and refill with recommended engine oil. Replace engine oil filter.
Every 250 hours of operation	If biodiesel blends greater than B20 are used or if oils, other than recommended, are used.
Every 500 hours of operation	If STANDARD fuel compliant to the EN 590 (2005/55 - 2005/78) is used. The use of additives is

Engine oil and filter change intervals:	
	discouraged. A fuel known as BIODIESEL is allowed only if it is compliant with the EN 14214 - ASTM 6751 norm, mixed in standard fuel with a maximum percentage of 20%. If recommended oil is used.

Oil specifications, TIER 3, Stage III	Oil specifications, Interim Tier 4, Final Tier 4, Stage IIIB, and Stage IV
Premium oils 10W-30 API CJ-4 / CI-4 Plus / CI-4 Premium oils 15W-40 CPI CJ-4 / CI-4 Plus / CI-4	Premium oils 10W-40 API CJ-4

RA84036,000182E-19-03JUL18

### Engine Oil and Filter Change

<p><b>Filled with:</b></p> <input type="checkbox"/> John DeerePlus-50™ II <input type="checkbox"/> John DeereTorq-Gard™ Supreme <input type="checkbox"/> 15W-40 CPI CJ-4 <input type="checkbox"/> 15W-40 CPI CI-4 Plus <input type="checkbox"/> 15W-40 CPI CI-4 <input type="checkbox"/> 10W-30 API CJ-4 <input type="checkbox"/> 10W-30 API CI-4 Plus <input type="checkbox"/> 10W-30 API CI-4	<p><b>Filled with:</b></p> <input type="checkbox"/> John Deere Plus-50™ II <input type="checkbox"/> John Deere Torq-Gard™ Supreme <input type="checkbox"/> 15W-40 CPI CJ-4 <input type="checkbox"/> 15W-40 CPI CI-4 Plus <input type="checkbox"/> 15W-40 CPI CI-4 <input type="checkbox"/> 10W-30 API CJ-4 <input type="checkbox"/> 10W-30 API CI-4 Plus <input type="checkbox"/> 10W-30 API CI-4	<p><b>Filled with:</b></p> <input type="checkbox"/> John Deere Plus-50™ II <input type="checkbox"/> John Deere Torq-Gard™ Supreme <input type="checkbox"/> 15W-40 CPI CJ-4 <input type="checkbox"/> 15W-40 CPI CI-4 Plus <input type="checkbox"/> 15W-40 CPI CI-4 <input type="checkbox"/> 10W-30 API CJ-4 <input type="checkbox"/> 10W-30 API CI-4 Plus <input type="checkbox"/> 10W-30 API CI-4
Hours of operation: .....	Hours of operation: .....	Hours of operation: .....
Date: .....	Date: .....	Date: .....
<b>Next refill:</b>	<b>Next refill:</b>	<b>Next refill:</b>
Hours of operation: .....	Hours of operation: .....	Hours of operation: .....
Or date: .....	Or date: .....	Or date: .....
Signature: .....	Signature: .....	Signature: .....
Dealer's Stamp:	Dealer's Stamp:	Dealer's Stamp:

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 Torq-Gard is a trademark of Deere & Company

*Service Intervals*

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### Engine Oil and Filter Change

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**Engine Oil and Filter Change**

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Torq-Gard is a trademark of Deere & Company*

*Service Intervals*

<p><b>Filled with:</b></p> <p><input type="checkbox"/> John Deere Plus-50™ II</p> <p><input type="checkbox"/> John Deere Torq-Gard™ Supreme</p> <p><input type="checkbox"/> 15W-40 CPI CJ-4</p> <p><input type="checkbox"/> 15W-40 CPI CI-4 Plus</p> <p><input type="checkbox"/> 15W-40 CPI CI-4</p> <p><input type="checkbox"/> 10W-30 API CJ-4</p> <p><input type="checkbox"/> 10W-30 API CI-4 Plus</p> <p><input type="checkbox"/> 10W-30 API CI-4</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Filled with:</b></p> <p><input type="checkbox"/> John Deere Plus-50™ II</p> <p><input type="checkbox"/> John Deere Torq-Gard™ Supreme</p> <p><input type="checkbox"/> 15W-40 CPI CJ-4</p> <p><input type="checkbox"/> 15W-40 CPI CI-4 Plus</p> <p><input type="checkbox"/> 15W-40 CPI CI-4</p> <p><input type="checkbox"/> 10W-30 API CJ-4</p> <p><input type="checkbox"/> 10W-30 API CI-4 Plus</p> <p><input type="checkbox"/> 10W-30 API CI-4</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Filled with:</b></p> <p><input type="checkbox"/> John Deere Plus-50™ II</p> <p><input type="checkbox"/> John Deere Torq-Gard™ Supreme</p> <p><input type="checkbox"/> 15W-40 CPI CJ-4</p> <p><input type="checkbox"/> 15W-40 CPI CI-4 Plus</p> <p><input type="checkbox"/> 15W-40 CPI CI-4</p> <p><input type="checkbox"/> 10W-30 API CJ-4</p> <p><input type="checkbox"/> 10W-30 API CI-4 Plus</p> <p><input type="checkbox"/> 10W-30 API CI-4</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>
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RA84036,0001833-19-09OCT18

### Engine Air Cleaner and Cab Air Filters, Service

<b>Change the engine air cleaner and cab air filters every 2 years or after every 1500 hours of operation, whichever comes first.</b>		
<b>Work done:</b> Hours of operation: ..... Date: .....	<b>Work done:</b> Hours of operation: ..... Date: .....	<b>Work done:</b> Hours of operation: ..... Date: .....
<b>Next service:</b> Hours of operation: ..... Or date: .....	<b>Next service:</b> Hours of operation: ..... Or date: .....	<b>Next service:</b> Hours of operation: ..... Or date: .....
Signature: ..... Dealer's Stamp:	Signature: ..... Dealer's Stamp:	Signature: ..... Dealer's Stamp:

<b>Change the engine air cleaner and cab air filters every 2 years or after every 1500 hours of operation, whichever comes first.</b>		
<b>Work done:</b> Hours of operation: ..... Date: .....	<b>Work done:</b> Hours of operation: ..... Date: .....	<b>Work done:</b> Hours of operation: ..... Date: .....
<b>Next service:</b> Hours of operation: ..... Or date: .....	<b>Next service:</b> Hours of operation: ..... Or date: .....	<b>Next service:</b> Hours of operation: ..... Or date: .....
Signature: ..... Dealer's Stamp:	Signature: ..... Dealer's Stamp:	Signature: ..... Dealer's Stamp:

Service Intervals

NOTE: Difficult operating conditions (such as extremely dusty environments) may shorten this service interval. See Replace Cab Air Filters in the Section 220E, Service — Change.

RA84036,0001834-19-03JUL18

Engine Air Cleaner and Cab Air Filters, Service

Change the engine air cleaner and cab air filters every 2 years or after every 1500 hours of operation, whichever comes first.

<b>Work done:</b> Hours of operation: ..... Date: .....	<b>Work done:</b> Hours of operation: ..... Date: .....	<b>Work done:</b> Hours of operation: ..... Date: .....
<b>Next service:</b> Hours of operation: ..... Or date: .....	<b>Next service:</b> Hours of operation: ..... Or date: .....	<b>Next service:</b> Hours of operation: ..... Or date: .....
Signature: ..... Dealer's Stamp:	Signature: ..... Dealer's Stamp:	Signature: ..... Dealer's Stamp:

*Service Intervals*

**Change the engine air cleaner and cab air filters every 2 years or after every 1500 hours of operation, whichever comes first.**

<p><b>Work done:</b></p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next service:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Work done:</b></p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next service:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Work done:</b></p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next service:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>
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*NOTE: Difficult operating conditions (such as extremely dusty environments) may shorten this service interval. See Replace Cab Air Filters in the Section 220E, Service — Change.*

RA84036,0001835-19-09OCT18

**Activated Carbon Filters in Cab, Service (If Equipped)**

<b>Change the activated carbon filters of the cab every year or after every 250 hours of operation, whichever comes first.</b>		
<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:	<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:	<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:

<b>Change the activated carbon filters of the cab every year or after every 250 hours of operation, whichever comes first.</b>		
<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:	<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:	<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:

Service Intervals

*NOTE: Difficult operating conditions (such as extremely dusty environments) may shorten this service interval.*

RA84036,0001836-19-03JUL18

**Activated Carbon Filters in Cab, Service (If Equipped)**

Change the activated carbon filters of the cab every year or after every 250 hours of operation, whichever comes first.		
<b>Work done:</b> Hours of operation: ..... Date: .....	<b>Work done:</b> Hours of operation: ..... Date: .....	<b>Work done:</b> Hours of operation: ..... Date: .....
<b>Next service:</b> Hours of operation: ..... Or date: .....	<b>Next service:</b> Hours of operation: ..... Or date: .....	<b>Next service:</b> Hours of operation: ..... Or date: .....
Signature: .....	Signature: .....	Signature: .....
Dealer's Stamp:	Dealer's Stamp:	Dealer's Stamp:

*Service Intervals*

**Change the activated carbon filters of the cab every year or after every 250 hours of operation, whichever comes first.**

<p><b>Work done:</b></p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next service:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Work done:</b></p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next service:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Work done:</b></p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next service:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>
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*NOTE: Difficult operating conditions (such as extremely dusty environments) may shorten this service interval.*

RA84036,0001837-19-03JUL18

### Activated Carbon Filters in Cab, Service (If Equipped)

<b>Change the activated carbon filters of the cab every year or after every 250 hours of operation, whichever comes first.</b>		
<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:	<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:	<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:

<b>Change the activated carbon filters of the cab every year or after every 250 hours of operation, whichever comes first.</b>		
<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:	<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:	<b>Work done:</b> Hours of operation: ..... Date: .....  <b>Next service:</b> Hours of operation: ..... Or date: .....  Signature: .....  Dealer's Stamp:

Service Intervals

NOTE: Difficult operating conditions (such as extremely dusty environments) may shorten this service interval.

RA84036,0001838-19-03JUL18

**Activated Carbon Filters in Cab, Service (If Equipped)**

Change the activated carbon filters of the cab every year or after every 250 hours of operation, whichever comes first.

<b>Work done:</b> Hours of operation: ..... Date: .....	<b>Work done:</b> Hours of operation: ..... Date: .....	<b>Work done:</b> Hours of operation: ..... Date: .....
<b>Next service:</b> Hours of operation: ..... Or date: .....	<b>Next service:</b> Hours of operation: ..... Or date: .....	<b>Next service:</b> Hours of operation: ..... Or date: .....
Signature: ..... Dealer's Stamp:	Signature: ..... Dealer's Stamp:	Signature: ..... Dealer's Stamp:

*Service Intervals*

<b>Change the activated carbon filters of the cab every year or after every 250 hours of operation, whichever comes first.</b>		
<p><b>Work done:</b></p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next service:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Work done:</b></p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next service:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Work done:</b></p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next service:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>

*NOTE: Difficult operating conditions (such as extremely dusty environments) may shorten this service interval.*

RA84036.0001839-19-03JUL18

**Cooling System, Service**

<b>Drain, flush and fill coolant system with fresh Cool-Gard™ II. Interval for 5GV, 5GN, 5GF is every 3000 hours of operation.</b>		
<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>

*Cool-Gard is a trademark of Deere & Company*

<b>Drain, flush and fill coolant system with fresh Cool-Gard™ II. Interval for 5GV, 5GN, 5GF is every 3000 hours of operation.</b>		
<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>

## Cooling System, Service

<b>Drain, flush and fill coolant system with fresh Cool-Gard™ II. Interval for 5GV, 5GN, 5GF is every 3000 hours of operation.</b>		
<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>

*Cool-Gard is a trademark of Deere & Company*

<b>Drain, flush and fill coolant system with fresh Cool-Gard™ II. Interval for 5GV, 5GN, 5GF is every 3000 hours of operation.</b>		
<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Filled with:</b>  <input type="checkbox"/> Cool-Gard™ II</p> <p>Hours of operation: .....</p> <p>Date: .....</p> <p><b>Next refill:</b></p> <p>Hours of operation: .....</p> <p>Or date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>

*Service Intervals*

**Yearly Service**

<ul style="list-style-type: none"> <li>• Change engine oil and replace oil filter (perform service every year or after every 500 hours of operation, whatever comes first)</li> <li>• Inspect Seat Belt (if equipped) for damage and ensure proper working order</li> <li>• Check condition of Diesel Engine Coolant; Use Coolant test strips to check engine coolant</li> <li>• Check hydraulic hoses for wear and leaks.</li> <li>• Tighten the screws on the front loader bracket.</li> <li>• Change activated carbon filters, if equipped. <i>See Activated Carbon Filters in Cab, Service (If Equipped) in this section.</i></li> </ul>		
<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>
<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>

<ul style="list-style-type: none"> <li>• Change engine oil and replace oil filter (perform service every year or after every 500 hours of operation, whatever comes first)</li> <li>• Inspect Seat Belt (if equipped) for damage and ensure proper working order</li> <li>• Check condition of Diesel Engine Coolant; Use Coolant test strips to check engine coolant</li> <li>• Check hydraulic hoses for wear and leaks.</li> <li>• Tighten the screws on the front loader bracket.</li> <li>• Change activated carbon filters, if equipped. <i>See Activated Carbon Filters in Cab, Service (If Equipped) in this section.</i></li> </ul>		
<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>
<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>	<p><b>Inspection completed:</b></p> <p>Date: .....</p> <p>Signature: .....</p> <p>Dealer's Stamp:</p>

*Service Intervals*

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RA84036,000183C-19-03JUL18

## Yearly Service

- Change engine oil and replace oil filter (perform service every year or after every 500 hours of operation, whatever comes first)
- Inspect Seat Belt (if equipped) for damage and ensure proper working order
- Check condition of Diesel Engine Coolant; Use Coolant test strips to check engine coolant
- Check hydraulic hoses for wear and leaks.
- Tighten the screws on the front loader bracket.
- Change activated carbon filters, if equipped. *See Activated Carbon Filters in Cab, Service (If Equipped) in this section.*

<b>Inspection completed:</b>  Date: .....  Signature: .....  Dealer's Stamp:	<b>Inspection completed:</b>  Date: .....  Signature: .....  Dealer's Stamp:	<b>Inspection completed:</b>  Date: .....  Signature: .....  Dealer's Stamp:
<b>Inspection completed:</b>  Date: .....  Signature: .....  Dealer's Stamp:	<b>Inspection completed:</b>  Date: .....  Signature: .....  Dealer's Stamp:	<b>Inspection completed:</b>  Date: .....  Signature: .....  Dealer's Stamp:

- Change engine oil and replace oil filter (perform service every year or after every 500 hours of operation, whatever comes first)
- Inspect Seat Belt (if equipped) for damage and ensure proper working order
- Check condition of Diesel Engine Coolant; Use Coolant test strips to check engine coolant
- Check hydraulic hoses for wear and leaks.
- Tighten the screws on the front loader bracket.
- Change activated carbon filters, if equipped. *See Activated Carbon Filters in Cab, Service (If Equipped) in this section.*

<b>Inspection completed:</b>  Date: .....  Signature: .....  Dealer's Stamp:	<b>Inspection completed:</b>  Date: .....  Signature: .....  Dealer's Stamp:	<b>Inspection completed:</b>  Date: .....  Signature: .....  Dealer's Stamp:
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*Service Intervals*

<b>Inspection completed:</b> Date: .....	<b>Inspection completed:</b> Date: .....	<b>Inspection completed:</b> Date: .....
Signature: .....	Signature: .....	Signature: .....
Dealer's Stamp:	Dealer's Stamp:	Dealer's Stamp:

RA84036,000183D-19-03JUL18

### 50 Hour Service

**After the first 50 hours of operation:**

- Wheels and Rims

Note: In addition, perform service checks after 10 hours. See Service (Daily / Every 10, After First 50, Every 250, 500 and 750 Hours) in this section.

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

RA84036,000183E-19-03JUL18

### 250 Hour Service

**CLEAN:**

- Engine, Dust Unloading Valve
- Engine, Crank case vent tube
- Engine, Cab Air Filters

**ELECTRICAL SYSTEM:**

- Neutral Start circuit
- Battery, Check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw

**CHECK:**

- Engine oil level
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil levels
- Front PTO, oil level
- Brake Fluid, level
- Brakes and pedal free travel

**CHANGE:**

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

500 Hour Service

CLEAN:

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Radiator, Oil Cooler
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Cab Air Filters

ELECTRICAL SYSTEM:

- Neutral Start System
- Battery electrolyte level
- Check lights

CHECK SCREW TORQUES:

- Wheels and rims
- Drawbar Attaching Screw

CHECK:

- Engine, coolant level
- Engine, drive belt
- Engine, air intake hoses (leakage)
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Trailer hitches, functional check
- Trailer hitch: Check torque

CHANGE:

- Engine oil \*\*
- Engine oil filter \*\*
- Engine, fuel filter, and fuel prefilter, Supply module filter

LUBRICATE:

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)

NOTE: Also perform the following service tasks: Service Every 250 Operating Hours.

\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch, and pick-up hitch, and replace components as necessary.

\*\* See Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

## 750 Hour Service

**CLEAN:**

- Engine, Dust Unloading Valve
- Engine, Crank case vent tube
- Engine, Cab Air Filters
- Fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral Start circuit
- Battery, Check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts

**CHECK:**

- Engine oil level
- Engine, check engine speeds
- Engine, check and adjust valve clearance
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Front axle, pivot pin - check end play

**CHANGE:**

- Transmission/hydraulic system, oil filter

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

**1000 Hour Service**

**CLEAN:**

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Radiator, Oil Cooler
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Cab Air Filters

**ELECTRICAL SYSTEM:**

- Neutral Start circuit
- Battery, Check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Trailer hitch: Check torque

**CHECK:**

- Engine, valve clearance Adjustment
- Engine, coolant test strips to check condition of Diesel Engine Coolant
- Engine, coolant level
- Engine, drive belt
- Engine, air intake hoses (leakage)
- Hydraulic hoses (leakage)
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Seat Belt (if equipped)
- Trailer hitches, functional check

**CHANGE:**

- Engine drive belt
- Engine oil \*\*
- Engine oil filter \*\*
- Transmission/hydraulic system, oil filter
- Engine, fuel filter, and fuel prefilter

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)

\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch, and pick-up hitch, and replace components as necessary.

\*\* See *Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.*

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date:.....

Work carried out by: .....

## 1250 Hour Service

**CLEAN:**

- Engine, Dust Unloading Valve
- Engine, Crank case vent tube
- Engine, Fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral Start circuit check
- Battery, Check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw

**CHECK:**

- Engine oil level
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel

**CHANGE:**

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

1500 Hour Service

CLEAN:

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Radiator, Oil Cooler
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Cab Air Filters

ELECTRICAL SYSTEM:

- Neutral Start circuit check
- Battery, check electrolyte level
- Check lights

CHECK SCREW TORQUES:

- Wheels and rims
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts

CHECK:

- Engine, check engine speeds
- Engine, Valve clearance adjustment
- Engine, coolant level
- Engine, drive belt
- Engine, air intake hoses (leakage)
- Check turbo compressor
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil levels
- Front axle, check end play of the front axle pivot pin
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Trailer hitches, functional check
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Trailer hitch: Check torque

CHANGE:

- Engine oil \*\*
- Engine oil filter \*\*
- Engine air cleaner
- Engine, fuel filter, and fuel prefilter
- Cab Air Filters
- Transmission/hydraulic system, oil
- Transmission/hydraulic system, oil filter
- Front wheel drive axle, oil in final drives, and differential housing
- Supply Module Filter
- Brake system oil
- Front PTO, oil
- Transmission/hydraulic system, suction strainer
- Oil Vapor Recirculation System Maintenance
- Turbo Compressor Maintenance

LUBRICATE:

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

NOTE: Also perform the following service tasks: Service Every 250, 500, and 750 Operating Hours

\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch, and pick-up hitch, and replace components as necessary.

\*\* See Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date:.....

Work carried out by: .....

### 1750 Hour Service

**CLEAN:**

- Engine, Dust Unloading Valve
- Engine, Crank case vent tube
- Engine, Fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral Start circuit check
- Battery, Check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw

**CHECK:**

- Engine oil level
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil levels
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Trailer hitches, functional check
- Trailer hitch: Check torque

**CHANGE:**

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

**2000 Hour Service**

**CLEAN:**

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Radiator, Oil Cooler
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Cab Air Filters

**ELECTRICAL SYSTEM:**

- Neutral Start circuit check
- Battery, check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts
- Trailer hitch: check torque

**CHECK:**

- Engine, Valve clearance adjustment
- Engine, coolant test strips to check condition of Diesel Engine Coolant
- Engine, coolant level
- Engine, drive belt
- Engine, air intake hoses (leakage)
- Hydraulic hoses (leakage)
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Trailer hitches, functional check

**CHANGE:**

- Engine drive belt
- Engine oil \*\*
- Engine oil filter \*\*
- Transmission/hydraulic system, oil filter
- Engine, fuel filter and fuel prefilter
- Front PTO, oil
- Front PTO oil filter

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch and pick-up hitch, and replace components as necessary.

\*\* See *Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.*

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

## 2250 Hour Service

**CLEAN:**

- Engine, Dust Unloading Valve
- Engine, Crank case vent tube
- Engine, fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral Start circuit check
- Battery, Check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Front axle mounting
- Operator's cab, open operator's station and ROPS, check mounting bolts

**CHECK:**

- Engine oil level
- Engine, check engine speeds
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Front axle, check end play of front axle pivot pin

**CHANGE:**

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

2500 Hour Service

**CLEAN:**

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Radiator, Oil Cooler
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Cab Air Filters

**ELECTRICAL SYSTEM:**

- Neutral Start circuit check
- Battery, check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts

**CHECK:**

- Engine, check engine speeds
- Engine, coolant level
- Engine, drive belt
- Engine, air intake hoses (leakage)
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Trailer hitches, functional check
- Trailer hitch: check torque

**CHANGE:**

- Engine oil \*\*
- Engine oil filter \*\*
- Engine, fuel filter and fuel prefilter
- Transmission/hydraulic system, oil
- Transmission/hydraulic system, oil filter
- Transmission/hydraulic system, suction strainer
- Front PTO, oil
- Front PTO oil filter

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch, and pick-up hitch, and replace components as necessary.

\*\* See Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

## 2750 Hour Service

**CLEAN:**

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral start circuit, check
- Battery, check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw

**CHECK:**

- Engine oil level
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Trailer hitches, functional check
- Trailer hitch: check torque

**CHANGE:**

**LUBRICATE**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

3000 Hour Service

CLEAN:

- Engine, crank case vent tube
- Clean Dust Unloading Valve
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Radiator, pressure cap, Oil cooler
- Cab Air Filters

ELECTRICAL SYSTEM:

- Neutral Start circuit check
- Battery, check electrolyte level
- Check lights
- Alternator

CHECK SCREW TORQUES:

- Wheels and rims
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts

CHECK:

- Engine, check valve clearance
- Engine, check engine speeds
- Engine, coolant level
- Engine, air intake hoses (leakage)
- Engine, Radiator Pressure Cap
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front axle, check end play of the front axle pivot pin
- Brake fluid, level
- Brakes and pedal free travel
- Check turbo compressor
- Clutch pedal, free travel
- PTO actuation, free travel
- Trailer hitches, functional check
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Trailer hitch: Check torque

CHANGE:

- Engine, flush cooling system and replace coolant
- Engine oil \*\*
- Engine oil filter \*\*
- Engine air cleaner
- Engine drive belt
- Engine, flush cooling system and replace coolant
- Engine, fuel filter, and fuel prefilter
- Transmission/hydraulic system, oil filter
- Transmission oil filter (Third pump (optional), check oil level (only 5GL model))
- Front wheel drive axle, oil in final drives, and differential housing
- Transmission/hydraulic system, oil
- Transmission/hydraulic system, suction strainer
- Engine, Oil Vapor Recirculation System
- Engine, diesel particulate filter
- Engine, DOC SCR Filters
- Supply module filter
- Radiator pressure cap
- Engine, drive belt
- Brake system oil
- Front PTO, oil
- Front PTO oil filter
- Water pump
- Injection pump

LUBRICATE:

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch, and pick-up hitch, and replace components as necessary.

\*\* See Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

### 3250 Hour Service

**CLEAN:**

- Engine, Dust Unloading Valve
- Engine, crank case vent tube
- Engine, Fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral start circuit, check
- Battery, check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw

**CHECK:**

- Engine oil level
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Trailer hitches, functional check
- Trailer hitch: check torque

**CHANGE:**

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

**3500 Hour Service**

**CLEAN:**

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Radiator, Oil Cooler
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Cab Air Filters

**ELECTRICAL SYSTEM:**

- Neutral start circuit, check
- Battery, check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts

**CHECK:**

- Engine, coolant level
- Engine, drive belt
- Engine, air intake hoses (leakage)
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil levels
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Trailer hitches, functional check
- Trailer hitch: Check torque

**CHANGE:**

- Engine oil \*\*
- Engine oil filter \*\*
- Engine, fuel filter, and fuel prefilter
- Transmission/hydraulic system, oil filter
- Front PTO, oil
- Front PTO oil filter

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and driveshaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch and pick-up hitch, and replace components as necessary.

\*\* See *Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.*

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

### 3750 Hour Service

**CLEAN:**

- Engine, Dust Unloading Valve
- Engine, Crank case vent tube
- Engine, Fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral Start circuit check
- Battery, Check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts

**CHECK:**

- Engine oil level
- Engine, check engine speeds
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Front axle, check end play of front axle pivot pin
- Trailer hitches, functional check
- Trailer hitch: check torque

**CHANGE:**

- Transmission/hydraulic system, oil filter

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

**4000 Hour Service**

**CLEAN:**

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Radiator, Oil Cooler
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Cab Air Filters

**ELECTRICAL SYSTEM:**

- Neutral Start circuit check
- Battery, check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw

**CHECK:**

- Engine, check and adjust valve clearance
- Engine, coolant test strips to check condition of Diesel Engine Coolant
- Engine, coolant level
- Engine, drive belt
- Engine, air intake hoses (leakage)
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Trailer hitches, functional check
- Trailer hitch: check torque

**CHANGE:**

- Engine drive belt
- Engine oil \*\*
- Engine oil filter \*\*
- Engine, fuel filter and fuel prefilter
- Transmission/hydraulic system, oil filter
- Front PTO, oil
- Front PTO oil filter
- Alternator drive belt

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch, and pick-up hitch, and replace components as necessary.

\*\* See *Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.*

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date:.....

Work carried out by: .....

## 4250 Hour Service

**CLEAN:**

- Engine, Dust Unloading Valve
- Engine, Crank case vent tube
- Engine, fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral Start circuit
- Battery, Check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Front axle mounting
- Operator's cab, open operator's station and ROPS, check mounting bolts

**CHECK:**

- Engine oil level
- Engine, check engine speeds
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Front axle, check end play of front axle pivot pin

**CHANGE:**

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

**4500 Hour Service**

**CLEAN:**

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Radiator, Oil Cooler
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Cab Air Filters

**ELECTRICAL SYSTEM:**

- Neutral Start circuit check
- Battery, check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts

**CHECK:**

- Engine, check engine speeds
- Engine, coolant level
- Engine, drive belt
- Engine, air intake hoses (leakage)
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front axle, check end play of front axle pivot pin
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Trailer hitches, functional check
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Trailer hitch: check torque

**CHANGE:**

- Engine oil \*\*
- Engine oil filter \*\*
- Transmission/hydraulic system, oil filter
- Engine air cleaner
- Engine, fuel filter and fuel prefilter
- Transmission/hydraulic system, oil filter
- Front wheel drive axle, oil in final drives and differential housing
- Brake system oil
- Front PTO, oil
- Front PTO oil filter

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch, and pick-up hitch, and replace components as necessary.

\*\* See *Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.*

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

### 4750 Hour Service

**CLEAN:**

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral start circuit, check
- Battery, check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw

**CHECK:**

- Engine oil level
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Trailer hitches, functional check
- Trailer hitch: check torque

**CHANGE:**

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

5000 Hour Service

CLEAN:

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Radiator, Oil Cooler
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Cab Air Filters

ELECTRICAL SYSTEM:

- Neutral Start circuit check
- Battery, check electrolyte level
- Check lights

CHECK SCREW TORQUES:

- Wheels and rims
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts
- Trailer hitch: Check torque

CHECK:

- Engine, Valve clearance adjustment
- Engine, coolant test strips to check condition of Diesel Engine Coolant
- Engine, coolant level
- Engine, drive belt
- Engine, air intake hoses (leakage)
- Hydraulic hoses (leakage)
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Trailer hitches, functional check

CHANGE:

- Engine, drive belt
- Engine oil \*\*
- Engine oil filter \*\*
- Transmission/hydraulic system, oil filter
- Engine, fuel filter, and fuel prefilter
- Transmission/hydraulic system, oil
- Transmission/hydraulic system, suction strainer
- Front PTO, oil
- Front PTO oil filter

LUBRICATE:

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and driveshaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

\*\* See Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

**5250 Hour Service**

**CLEAN:**

- Engine, Dust Unloading Valve
- Engine, Crank case vent tube
- Engine, fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral Start circuit check
- Battery, Check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Front axle mounting
- Operator's cab, open operator's station and ROPS, check mounting bolts

**CHECK:**

- Engine oil level
- Engine, check engine speeds
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Front axle, check end play of front axle pivot pin

**CHANGE:**

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

5500 Hour Service

CLEAN:

- Engine, rocker arm cover ventilation
- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Radiator, Oil Cooler
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Cab Air Filters

ELECTRICAL SYSTEM:

- Neutral Start circuit check
- Battery, check electrolyte level
- Check lights

CHECK SCREW TORQUES:

- Wheels and rims
- Front axle mounting
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts

CHECK:

- Engine, check engine speeds
- Engine, coolant level
- Engine, drive belt
- Engine, air intake hoses (leakage)
- Engine, ground connection
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Trailer hitches\*\*\*
- Trailer hitch: check torque

CHANGE:

- Engine oil\*\*, engine oil filter\*\*
- Engine, fuel filter and fuel prefilter
- Transmission/hydraulic system, oil filter
- Front PTO, oil
- Front PTO oil filter

LUBRICATE:

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

\*\* See Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.

\*\*\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch, and pick-up hitch, and replace components as necessary.

Operating hours: ..... Comments: ..... Dealer's Stamp:

Date: .....

Work carried out by: .....

**5750 Hour Service**

**CLEAN:**

- Engine, crank case vent tube
- Engine, Dust Unloading Valve
- Engine, Fuel filter (drain residue)

**ELECTRICAL SYSTEM:**

- Neutral start circuit, check
- Battery, check electrolyte level
- Check lights

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw

**CHECK:**

- Engine oil level
- Engine, coolant level
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Trailer hitches, functional check
- Trailer hitch: check torque

**CHANGE:**

- Transmission/hydraulic system, oil filter

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

## 6000 Hour Service

**CLEAN:**

- Engine, crank case vent tube
- Clean Dust Unloading Valve
- Fuel tank (drain residue)
- DEF tank (drain residue)
- Radiator, pressure cap, Oil cooler
- Cab Air Filters

**ELECTRICAL SYSTEM:**

- Neutral Start circuit check
- Battery, check electrolyte level
- Check lights
- Alternator

**CHECK SCREW TORQUES:**

- Wheels and rims
- Drawbar Attaching Screw
- Operator's cab, open operator's station and ROPS, check mounting bolts

**CHECK:**

- Engine, check valve clearance
- Engine, check engine speeds
- Engine, coolant level
- Engine, air intake hoses (leakage)
- Engine, Radiator Pressure Cap
- Engine, drive belt
- Transmission/hydraulic system, oil level
- Front-wheel drive axle, oil level
- Front axle, check end play of front axle pivot pin
- Front PTO, oil level
- Brake fluid, level
- Brakes and pedal free travel
- Clutch pedal, free travel
- PTO actuation, free travel
- Trailer hitches, functional check
- Components of drawbar, tow hitch (piton fix/ball-type), trailer hitch\*
- Trailer hitch: check torque

**CHANGE:**

- Transmission/hydraulic system, oil
- Engine oil \*\*
- Engine oil filter \*\*
- Engine air cleaner
- Engine drive belt
- Engine, flush cooling system and replace coolant
- Engine, fuel filter and fuel prefilter
- Transmission/hydraulic system, oil filter
- Transmission oil filter (Third pump (optional), check oil level (only 5GL model))
- Front wheel drive axle, oil in final drives and differential housing
- Transmission/hydraulic system, oil
- Transmission/hydraulic system, suction strainer
- Engine, Oil Vapor Recirculation System
- Engine, diesel particulate filter
- Engine, DOC SCR Filters
- Supply module filter
- Radiator pressure cap
- Engine, drive belt
- Brake system oil
- Front PTO, oil
- Front PTO oil filter
- Water pump
- Injection pump

**LUBRICATE:**

- Lubricate all grease fittings
- Front Axle, Wheel Bearing
- Front Axle, tie-rod joints
- Front Axle, Knuckle pin bearing
- Front-Wheel Drive Axle, Universal Joint Shafts
- Front Axle, Pivot Pin, King Pin (Tractors without Four Wheel Drive)
- Front axle and drive shaft (tractors with front-wheel drive)
- Rear Axle Bearings
- 3-point hitch, lubricate all grease fittings.
- Lubricate Hub Bearings (Tractors without Four Wheel Drive)
- Trailer hitch

\* Check for wear at swinging drawbar, tow hitch (piton fix/ball-type), wagon hitch, and pick-up hitch, and replace components as necessary.

\*\* See *Change Engine Oil and Replace Oil Filter in Service — Change (section 220E) in this manual.*

Operating hours: ..... Comments: .....

Dealer's Stamp:

Date: .....

Work carried out by: .....

*Service Intervals*

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**Information About Further Services**

**IMPORTANT:** The following pages are for the documentation of all further services. Perform service work as described in the Operator's Manual. Refer to the Service Booklet to find a list with the jobs involved at each service interval.

The following table illustrates which service interval should be applied when operating hours reach a certain level.

**EXAMPLE:** A machine with 7500 hours on the hour meter needs to be serviced. To do this, find out which service is applicable. The table shows that the 1250 and the 1500-hour services must be performed when 7500 hours are on the hour meter.

Operating hours:	Service to be performed:	Operating hours:	Service to be performed:
3250	250	6750	750
3500	500	7000	1000
3750	750 + 1250	7250	250
4000	2000	7500	1250 + 1500
4250	250	7750	250
4500	1500	8000	2000
4750	250	8250	750
5000	1000 + 1250	8500	500
5250	750	8750	1250
5500	500	9000	3000
5750	250	9250	250
6000	6000	9500	500
6250	1250	9750	750
6500	500	10000	1250 + 2000

**Example showing how to fill out a record of further services:**

<p>The service performed corresponds to a .....<b>1250 + 1500</b>..... hour service.</p> <p>Comments: .....</p> <p>xxx</p> <p>xxx</p> <p>xxx</p>	<p>Hours of operation displayed:.....<b>7500</b></p> <p>Date:.....xxx</p> <p>Signature:.....xxx</p> <p>Stamp:</p>
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**Record for Further Services**

<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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*Service Intervals*

<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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*Service Intervals*

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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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*Service Intervals*

<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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*Service Intervals*

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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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*Service Intervals*

<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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*Service Intervals*

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<p>The service performed corresponds to a ..... hour service.</p> <p>Comments: .....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>Hours of operation displayed: .....</p> <p>Date: .....</p> <p>Signature: .....</p> <p>Stamp:</p>
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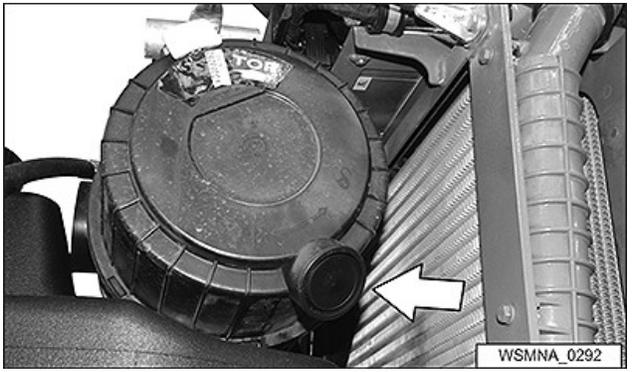
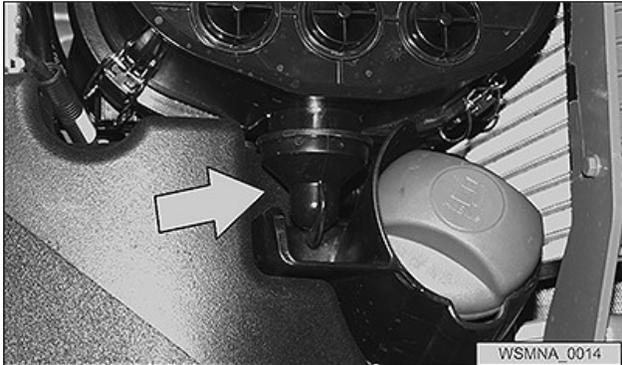
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# Service — Cleaning

## Cleaning the Dust Unloading Valve

**IMPORTANT:** Never run the engine when the dust unloading valve is removed.



(5075 Models)

During harvest, grass and chaff can adversely affect the performance of the dust unloading valve. Remove and clean the dust unloading valve as necessary. Replace damaged valve immediately.

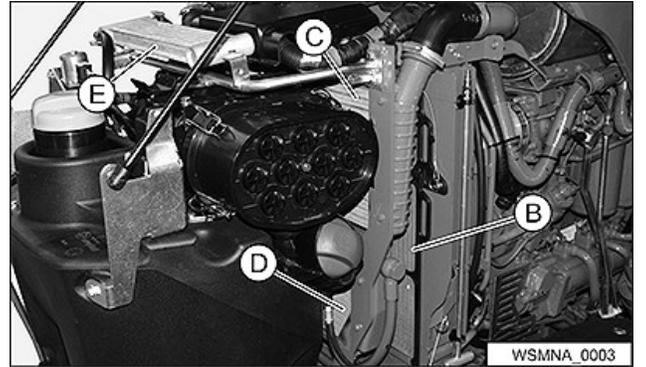
*NOTE: In dusty conditions, clean the dust unloading valve every day.*

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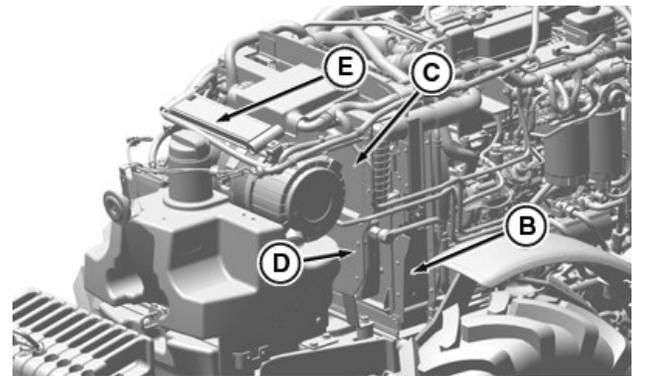
## Clean Radiator and Oil Cooler



QGNA0213—UN—02NOV15



(5GV, 5GN)



(5GL)

A—Front Grille  
B—Radiator  
C—Air Cooler  
D—Oil Cooler  
E—Fuel Cooler

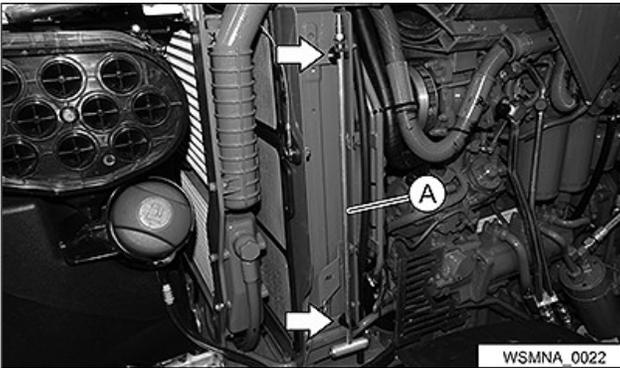
1. Whenever dirt builds up on the front grille (A), stop engine and clean it with a brush.
2. Open the hood and see if dirt has built up on the charge air cooler (C), radiator (B), oil cooler (D), and fuel cooler (E). If so, remove it using the specific tool and compressed air. See Radiators Cleaning in this Section.

**⚠ CAUTION:** Reduce compressed air pressure to less than 210 kPa (2 bar) (30 psi) when using for cleaning purposes. Clear area of bystanders, guard against flying chips, and wear personal protection equipment including eye protection.

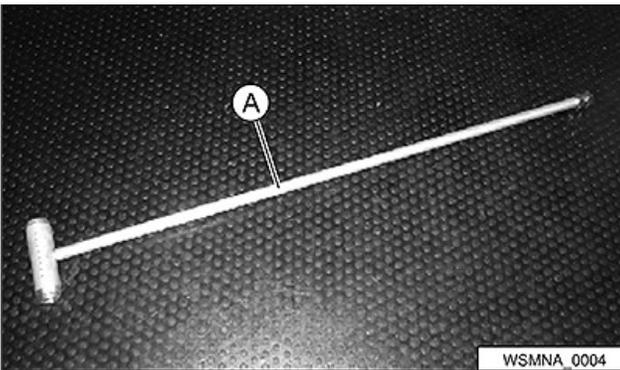
3. If a more thorough cleaning is necessary, clean radiator (B) from behind with compressed air or water. Straighten any bent fins.

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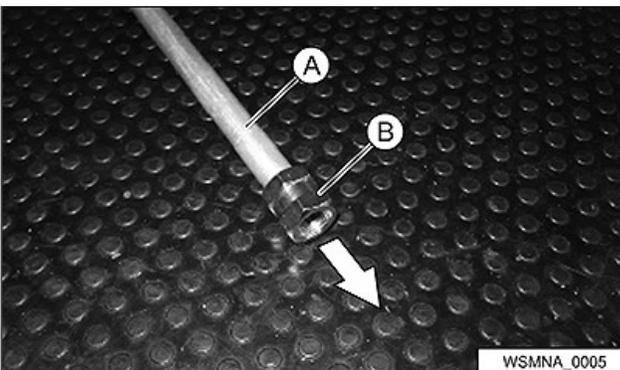
## Radiators, Cleaning



WSMNA\_0022  
WSMNA0022—UN—29SEP15



WSMNA\_0004  
WSMNA0004—UN—29SEP15

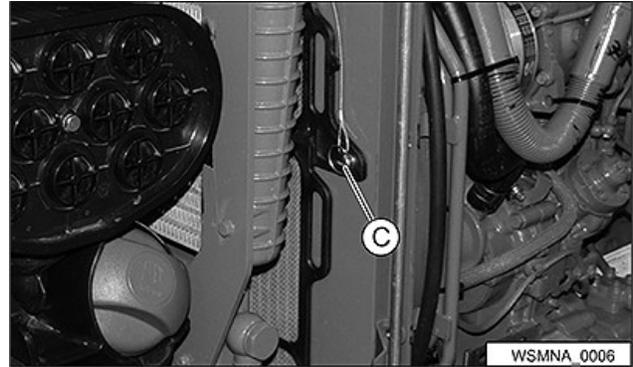


WSMNA\_0005  
WSMNA0005—UN—29SEP15

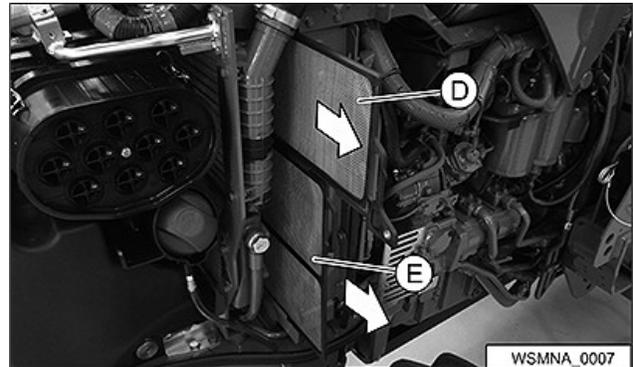
**A—Special Tool**  
**B—Fitting**

Clean the radiator by using the special tool (A) fixed on the left side of the radiator.

1. Open the hood.
2. Remove the engine left-hand side panel.
3. Unhook the special tool (A) from the radiator and connect it to the compressed air line through the fitting (B).

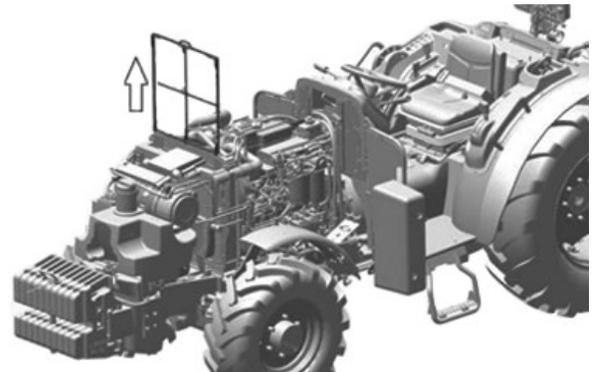


WSMNA\_0006  
WSMNA0006—UN—29SEP15



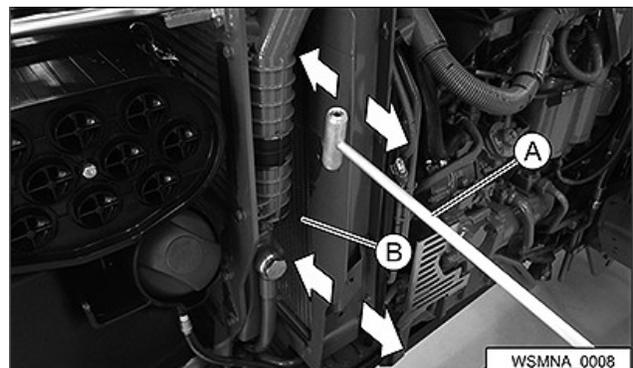
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WSMNA0007—UN—29SEP15

(5GV, 5GN)

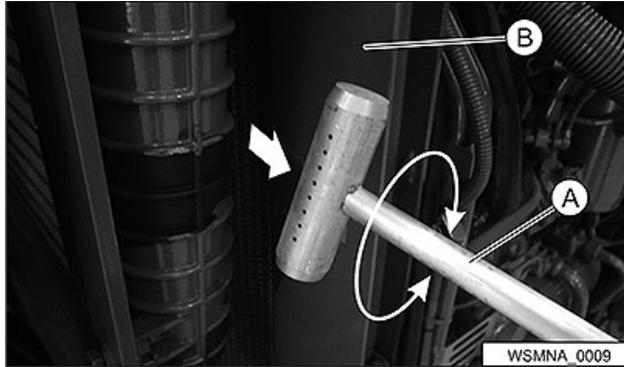


(5GL)

PY31981—UN—05OCT16



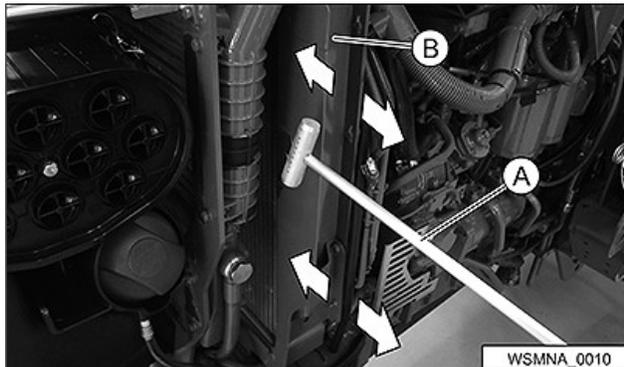
WSMNA\_0008  
WSMNA0008—UN—29SEP15



WSMNA\_0009  
WSMNA0009—UN—29SEP15

- A—Special Tool
- B—Radiator
- C—Pin
- D—Upper Grille
- E—Lower Grille

4. Unlock and remove the pin (C).
5. Remove and clean the upper grille (D) and lower grille (E).
6. Clean the radiator (B) using special tool (A) as illustrated.
7. Extract the special tool (A) from the radiator (B) and rotate it.



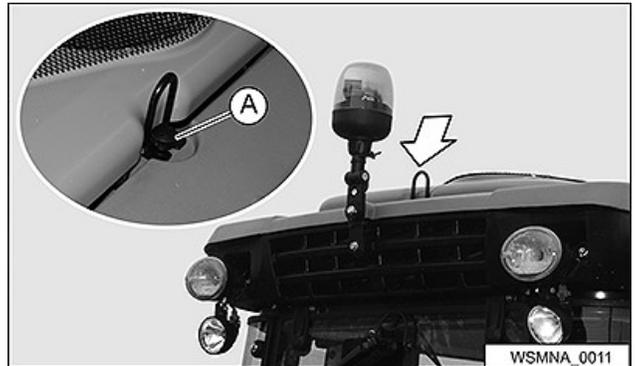
WSMNA\_0010  
WSMNA0010—UN—29SEP15

- A—Special Tool
- B—Radiator

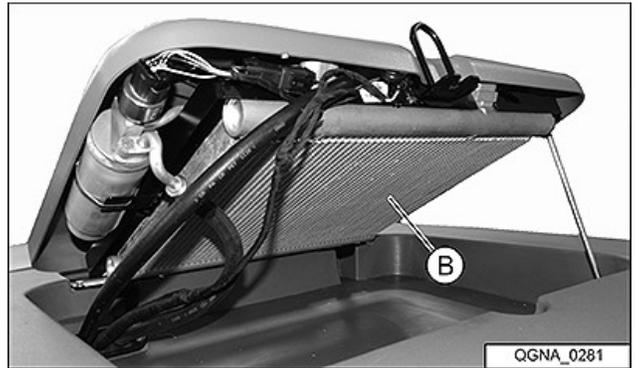
8. Clean both sides of the radiators (B) using special tool (A) as illustrated.
9. Disconnect the special tool (A) from the compressed air line and place it on the left-hand side of the radiator.
10. Reinstall the other removed components in reverse order.

RA84036,0001827-19-09OCT18

## Clean Air-Conditioning System Condenser



WSMNA\_0011  
WSMNA0011—UN—02NOV15



QGNA\_0281  
QGNA0281—UN—02NOV15

- A—Screw
- B—Condenser

Loosen knurled-head screw (A). Pull out cover for cleaning condenser (B).

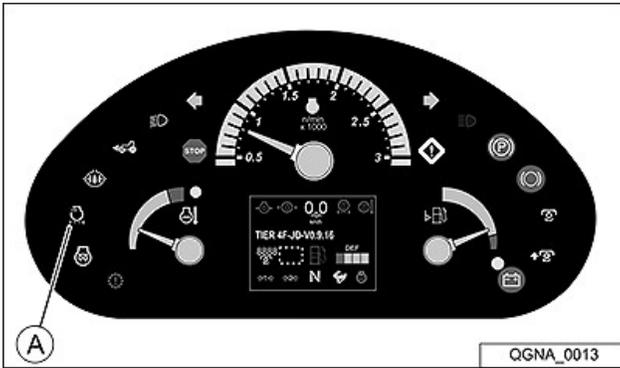
Clean the condenser (B) by blowing it with compressed air.

Take care not to bend any fins - Straighten any bent fins.

**IMPORTANT:** Reduce compressed air pressure to less than 210 kPa (2 bar) (30 psi) using for cleaning purposes. Clear area of bystanders, guard against flying chips, and wear personal protection equipment including eye protection.

RA84036,0001828-19-03JUL18

## Service Air Cleaner at Regular Intervals



A—Air Cleaner Restriction Light

A dual element air cleaner is standard.

**IMPORTANT: Check unloading valve frequently. Frequently empty the valve to keep it from filling with dust. If valve is allowed to fill with dust, air cleaner element becomes plugged rapidly.**

A dirty element is indicated when the air cleaner restriction light (A) is on. A dirty element can result in loss of power or excessive smoke.

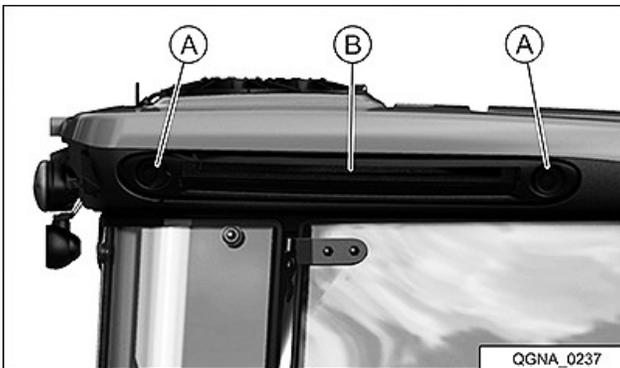
Replace air cleaner elements at least once a year. Replace the primary element after cleaning it five times.

Remove the smaller secondary element only to replace it, which is normally once a year.

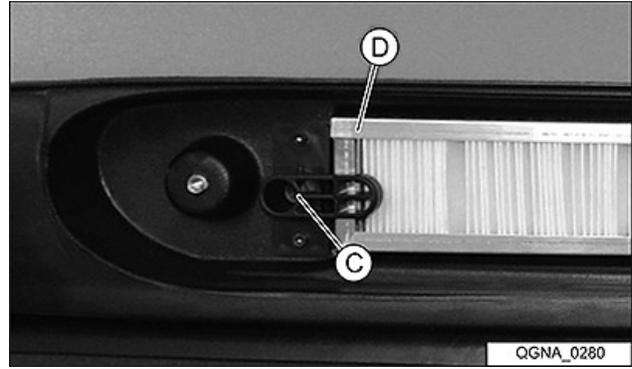
RA84036,0001829-19-03JUL18

## Clean Cab Air Filters

**IMPORTANT: The cab air filters do not protect against inhaling harmful pesticides. If pesticide-use instructions require respiratory protection, wear an appropriate respirator inside the cab.**



QGNA0237—UN—02NOV15



QGNA0280—UN—02NOV15

A—Screws  
B—Filter Cover  
C—Lever  
D—Cab Air Filter Element

Every time the engine primary filter element is serviced, also remove the cab air filters (one on each side) and the recirculated air filter. Clean them with compressed air directed from the clean side.

Remove screws (A) and filter cover (B). On both ends of the filter, turn lever (C) upwards.

Remove the cab air filter element (D).

Replace cab air filters when replacing the engine primary filter element (after 1500 hours of operation or 2 years, whichever comes first).

RA84036,000182A-19-03JUL18

## 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

# Service — Electrical System

## Observe Electrical Service Precautions



TS204—UN—15APR13



QGNA\_0264  
QGNA0264—UN—02NOV15

A—Positive Cable  
B—Negative (Ground) Cable

**CAUTION:** Keep all sparks and flames away from batteries, as gas given off by electrolyte is explosive. To avoid sparks, connect negative (ground) cable (B) last and disconnect it first. When using a booster battery, follow instructions in Operating the Engine (section 20).

To avoid shocks and burns, disconnect battery negative (ground) cable (B) before servicing any part of the electrical system, and then remove positive cable (A) if removing battery.

Keep all electrical shields in place.

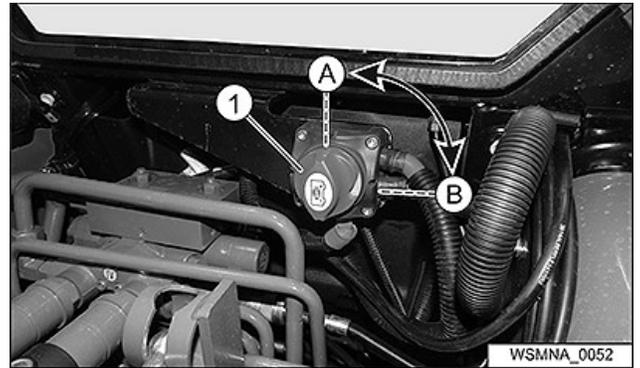
**CAUTION:** Depending on the manufacturers, the arrangement of battery connections may differ.

Pay close attention to the symbols marked on the battery.

To avoid sparks, connect negative (ground) cable last and disconnect it first.

RA84036,0001813-19-10JUL18

## Battery Cut-off Switch (If Equipped)



WSMNA\_0052  
WSMNA0052—UN—02NOV15

1—Battery Cut-off Switch  
A—ON Position  
B—OFF Position

The battery cut-off switch (1) allows the battery to disconnect from the electrical system.

The battery cut-off switch is in the bonnet, close to the battery.

- To disconnect the battery, turn the switch (1) to position (B) = OFF
- To connect the battery, turn switch (1) to position (A) = ON

**IMPORTANT:** This vehicle is equipped with a battery cut-off switch that allows the battery to disconnect from the electric system.

The cut-off switch is not a safety switch and **CANNOT** be used to stop the engine.

Never use the battery cut-off switch when the engine is still running: Switch-off the engine, and wait at least 1 minute before activating the cut-off switch to avoid serious damage to the vehicle electric/electronic system. In addition, the voltage peaks that occur at the alternator are dangerous.

**IMPORTANT:** Before turning the battery cut-off switch to the OFF position, wait at least 1 minute from the last engine stops (key - off). It allows the various control units to disconnect properly.

After turning the battery cut-off switch to the ON position, wait at least 10 seconds before turning the ignition key to start the engine. It allows the various control units to operate correctly.

**CAUTION:** To avoid shock and burns, disconnect the battery before servicing on any part of the electrical system.

RA84036,0001814-19-10JUL18

## Battery

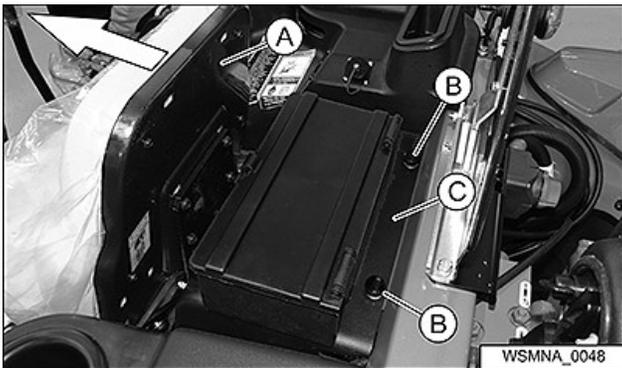
### Clean and Check Battery



QGNA\_0265  
QGNA0265—UN—02NOV15

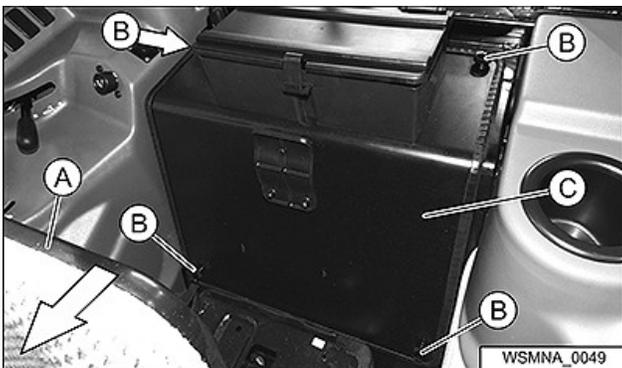
Wipe battery with a damp cloth. Clean and tighten connections if needed. It is not necessary to check fluid level (maintenance-free battery).

### Remove and Install Battery



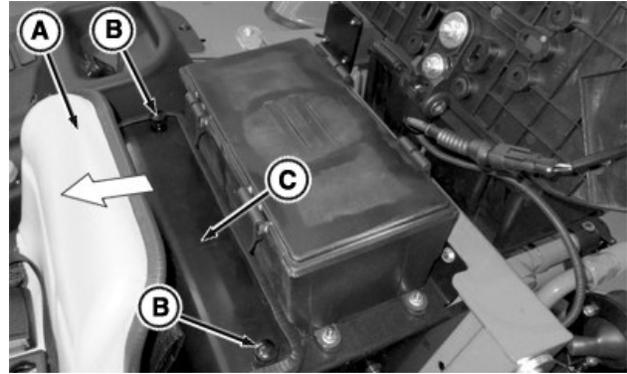
WSMNA\_0048  
WSMNA0048—UN—02NOV15

(5GV, 5GN)



WSMNA\_0049  
WSMNA0049—UN—02NOV15

(5GV, 5GN)



PY42824—UN—02JUL17

(5GL)

- A—Seat
- B—Fasteners
- C—Battery Cover

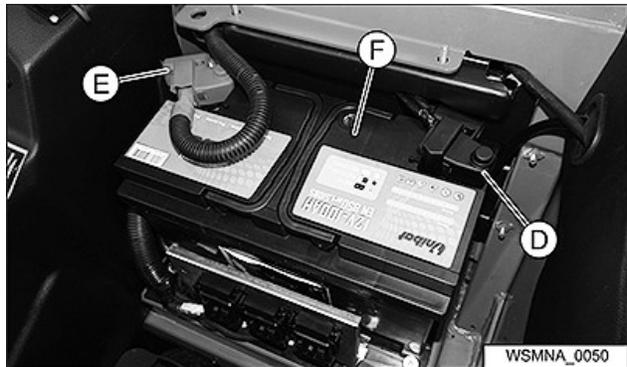
**CAUTION:** Depending on the manufacturers, the arrangement of battery connections can differ.

To avoid sparks, connect negative (ground) cable last and disconnect it first.

Pay close attention to the symbols marked on the battery.

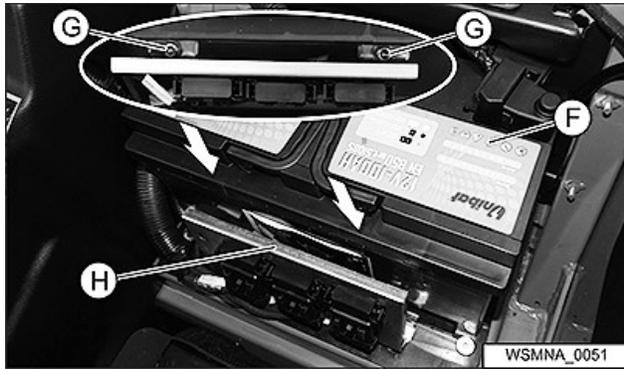
To avoid shocks and burns, disconnect battery ground cable before servicing any part of the electrical system.

1. Disconnect the battery. See Battery Cut-Off Switch (If Equipped) in this section.
2. Move the seat (A) forward.
3. Remove fasteners (B).
4. Remove battery cover (C) together with the tool box.



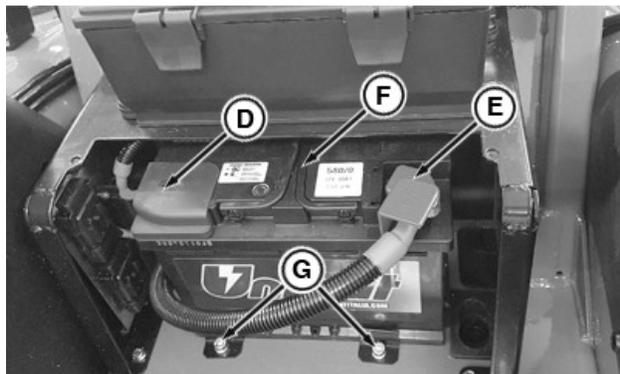
WSMNA\_0050  
WSMNA0050—UN—02NOV15

(5GV, 5GN)



(5GV, 5GN)

WSMNA\_0051  
WSMNA0051—UN—02NOV15



(5GL)

APY01840—UN—03JAN18

- D—Negative (Ground) Cable
- E—Positive Cable
- F—Battery
- G—Screws
- H—Bracket

5. Remove protective cap (black) and disconnect ground (—) cable (D) from battery (F).
6. Remove protective cap (red) and disconnect positive (+) cable (E) from battery (F).
7. Remove the screws (G).
8. Remove metal bracket (H) together with fuse boxes.
9. Remove battery (F) from the battery tray.
10. Install in reverse order.
11. Connect the battery. See Battery Cut-Off Switch (If Equipped) in this section.

## Servicing



QGNA\_0264  
QGNA0264—UN—02NOV15

- A—Positive Cable
- B—Negative (Ground) Cable

1. Keep battery clean by wiping with a damp cloth. Keep connections (A) and (B) clean and tight.

**⚠ CAUTION: To avoid sparks, connect negative (ground) cable last and disconnect it first. Pay close attention to the symbols marked on the battery.**

2. Keep battery fully charged, especially during cold weather. If a battery charger is connected, connect the positive lead to the positive battery terminal (A). Then connect the negative charger lead to the negative battery terminal (B).

## Replacement

**⚠ CAUTION: To avoid sparks, connect negative (ground) cable last and disconnect it first. Pay close attention to the symbols marked on the battery.**

When replacing battery, use a John Deere battery or equivalent.

Battery Specifications: 12 V (100 Ah)

## Charging



TS204—UN—15APR13



A—Positive Cable  
B—Negative (Ground) Cable

QGNA\_0264  
QGNA0264—UN—02NOV15

Under normal use, it is not necessary to add an electrolyte to maintenance-free batteries. Keep battery fully charged, especially during cold weather.

**CAUTION:** Gas given off by the battery is explosive. Keep sparks and flames away from battery. Before connecting or disconnecting a battery charger, turn off charger.

1. With charger off, connect positive battery charger lead to the positive battery terminal (A), then connect negative charger lead to the negative battery terminal (B).
2. Turn on charger and recharge the battery. While using the charger, follow the instructions given by the manufacturer.
3. To disconnect the battery charger, turn off charger. Remove negative charger lead first, followed by positive charger lead.

RA84036,0001816-19-09OCT18

## Bulb Replacement — Safety Instructions

When replacing a bulb, always comply with the following safety instructions:

- CAUTION:** Always switch the lights off before you change a bulb.
- CAUTION:** First allow the bulb to cool down (may cause burns).
- CAUTION:** Wear safety goggles and gloves when changing the bulb.
- CAUTION:** The bulb is made of glass and contains gas; the bulb is under high pressure, so there is a risk of it shattering.
- CAUTION:** Do NOT use any bulbs that have fallen on the ground or have scratches on their surface, as there is a risk of them shattering.

**CAUTION:** Make sure that the bulb is seated correctly in its holder in the light.

**CAUTION:** Check the light for signs of damage and make sure the seals are seated correctly.

**IMPORTANT:** Use only bulbs that require 12 volts and are of the same type and wattage as the bulb that is being replaced.

**IMPORTANT:** Never touch the glass surface of the bulb, hold it only by its base.

**IMPORTANT:** Use a clean cloth and alcohol to remove any fingerprints from the glass bulb.

RA84036,0001817-19-03JUL18

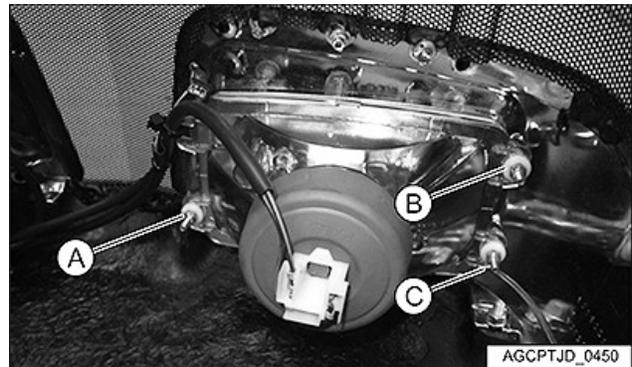
## Checking on Lights

Check that the lights are operating correctly, especially before driving on public roads.

Comply with all legal regulations.

RA84036,0001818-19-03JUL18

## Adjusting the Head Lights



A—Nut  
B—Nut  
C—Nut

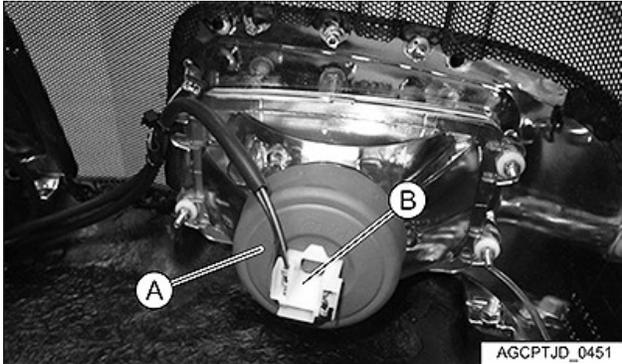
AGCPTJD\_0450  
AGCPTJD0450—UN—02NOV15

1. Open the hood.
2. Turn nuts (A) and (B) counterclockwise to adjust the light upward or clockwise to adjust the light downward.
3. To adjust the light towards the inside, turn nut (A) counterclockwise and nuts (B) and (C) clockwise. Always turn nuts (B) and (C) synchronous to the opposite direction nut (A) was turned.
4. To adjust the light towards the outside, turn nut (A) clockwise and nuts (B) and (C) counterclockwise. Always turn nuts (B) and (C) synchronous to the opposite direction nut (A) was turned.

5. Close hood and check the adjustment using a head light tester.

RA84036,0001819-19-03JUL18

## Replace Head Light Bulbs



AGCPTJD\_0451  
AGCPTJD0451—UN—02NOV15

A—Dust Protector Cap  
B—Connector

1. Turn OFF ignition.
2. Remove connector (B) from the bulb socket.
3. Remove dust protector cap (A).
4. Remove bulb.
5. Install new bulb, protector cap (A), and connector (B).

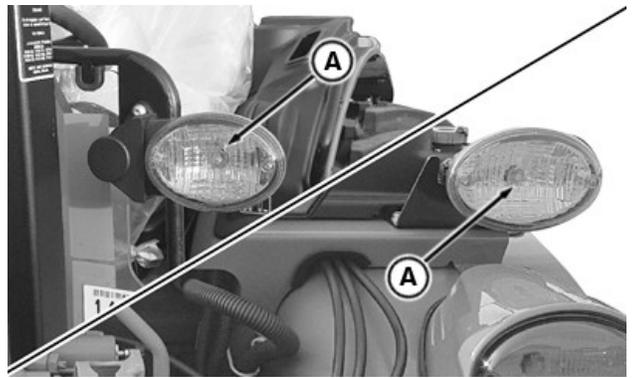
RA84036,000181A-19-03JUL18

## Replace Clearance, Brake, Turn Signal Light Bulbs and SMV Lights



APY01841—UN—03JAN18

(Cab)



APY01842—UN—03JAN18

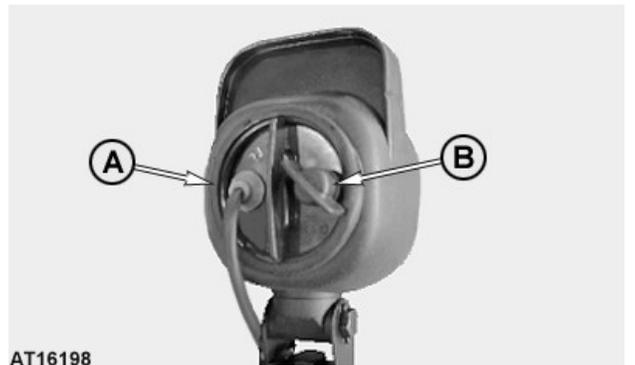
(Open Operator Station)

A—Lens

1. Turn OFF ignition.
2. Unscrew the two screws and remove the lens (A).
3. Push the bulb into the socket against the spring force and turn it to unlock. Release bulb and pull it out of the socket.
4. Slide new bulb into the socket, push it inside against the spring, and then turn to lock it.
5. Clean and reinstall the lens (A).

RA84036,000181B-19-09OCT18

## Replace Rear Working Light Bulb



AT16198

AT16198—UN—07FEB03

A—Working Light  
B—Cap

1. Turn OFF ignition.
2. Remove cap (B), push the bulb into the socket against the spring force, and turn it to unlock. Release bulb and pull it out of the socket.
3. Slide new bulb into the socket, push it inside against the spring, and then turn to lock it. Clean lens and install cap (B).

RA84036,000181C-19-03JUL18

## Checking of the charge state of the battery



QGNA0157—UN—02NOV15

The battery is a sealed maintenance-free type.

Use a multimeter to check the battery charge: voltage value must be 12V.

**IMPORTANT: It is not allowed to open a maintenance-free battery**

RA84036,000181D-19-03JUL18

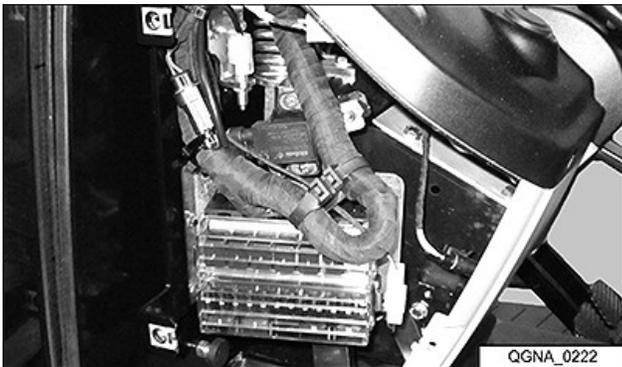
## Starting Motor

If the starting motor fails to operate after the starter switch has been operated, the complete starter system must be thoroughly checked. Check specific gravity of battery with an hydrometer and make sure that none of the cables are broken or worn through and that none of the cable connections are loose or corroded.

If the above checks fail to improve the operation of the starting motor, see your John Deere dealer.

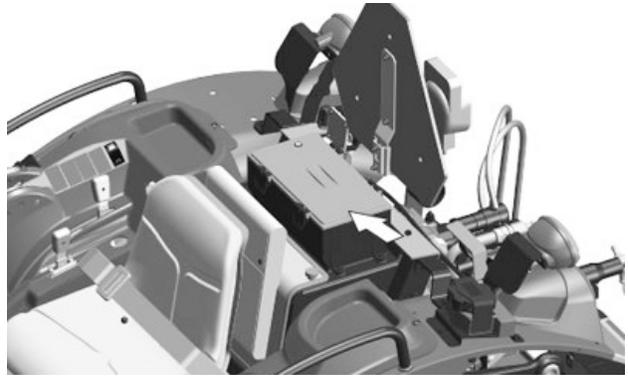
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## Fuse Box



QGNA0222—UN—02NOV15

(5GV, 5GN)



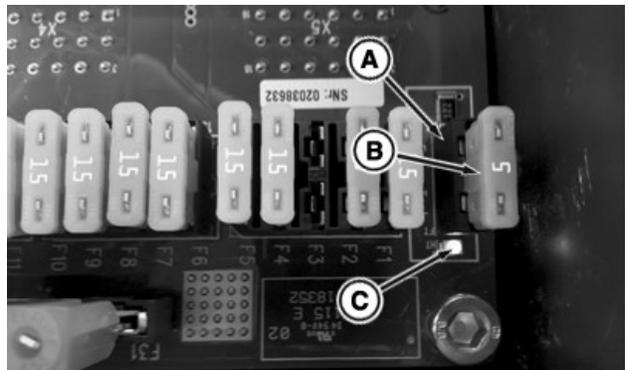
APY01815—UN—08DEC17

(5GL)

Remove left-hand side cover of the instrument unit to gain access to the main fuse box. See Fuses and Relays in the Service—Electrical System (section 220B) in this manual.

RA84036,000181F-19-09OCT18

## Fuse Check



PY42842—UN—11JUL17

A—Fuse Test Connector  
B—Fuse  
C—LED

It is possible to check the fuse by the fuse test connector (A).

Fit the fuse (B) to be checked on the connector (A) and check if the LED (C) is switched ON.

If the LED (C) is ON, the fuse is OK.

If not, replace the fuse (B).

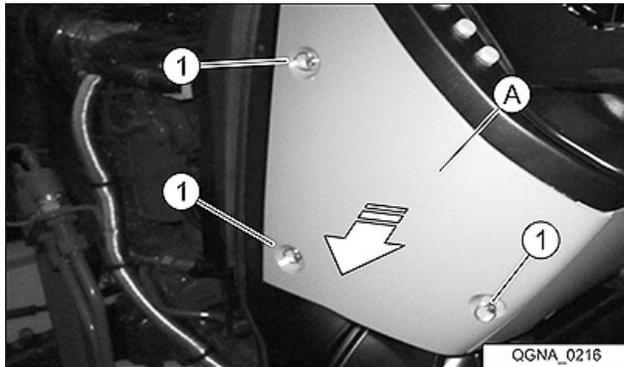
**NOTE:** The fuse check can be performed with the Start key OFF and the battery cut-off ON.

RA84036,0001822-19-03JUL18

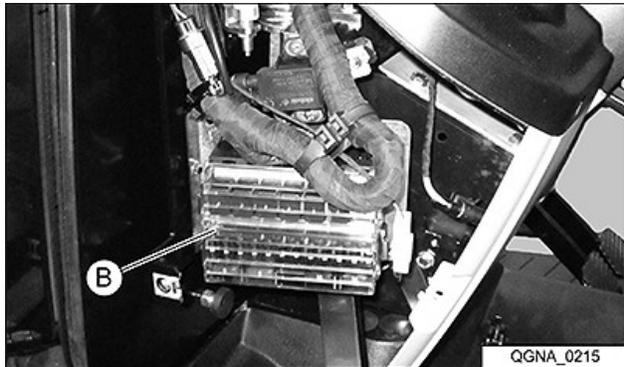
## Main Fuses and Relays (5GV, 5GN)

**IMPORTANT:** To prevent damage to the electrical system, NEVER use a fuse with a rating higher than the one already installed. If the original size fuse does not carry electrical load and continues to blow, have the electrical system checked by your John Deere dealer.

### Main Fuse Box



QGNA0216—UN—02NOV15



QGNA0215—UN—02NOV15

- 1—Screws
- A—Cover
- B—Fuse Box

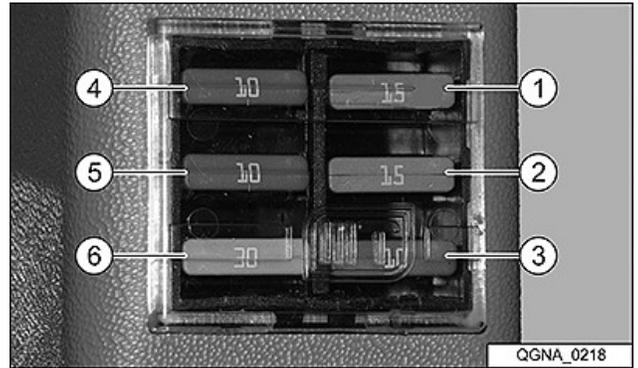
The main fuse box is located inside the left-hand panel of the dash panel.

Loosen screws (1) and remove cover (A) to access the fuse box (B).

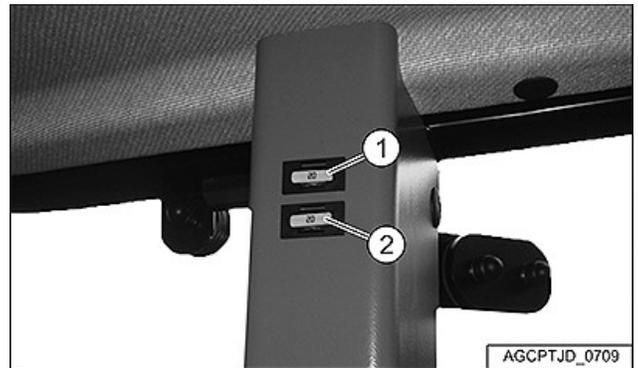
RA84036,0001820-19-09OCT18

## Fuse Box (Cab) (If Equipped) (5GV, 5GN)

### Cab Fuse Box (If Equipped)



QGNA0218—UN—02NOV15



AGCPTJD0709—UN—02NOV15

The cab fuses are located in the post on the right-hand side.

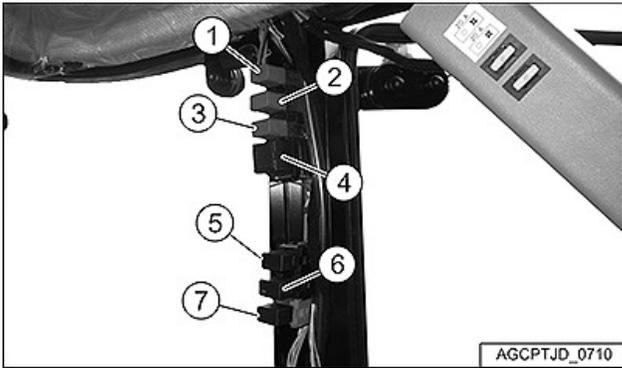
Post at the right side of cab		
Position	Type	Function
1	15 A	Front Work Lights
2	15 A	Rear Work Lights
3	10 A	Radio (+15); Rear Window Wiper
4	10 A	Radio (+30); Courtesy Light
5	10 A	Windshield Wiper; Windscreen Washer Pump
6	30 A	Air Conditioning Module

Post at the left side of cab		
Position	Type	Function
1	20 A	Fan motor
2	20 A	Fan motor

RA84036,0001899-19-09OCT18

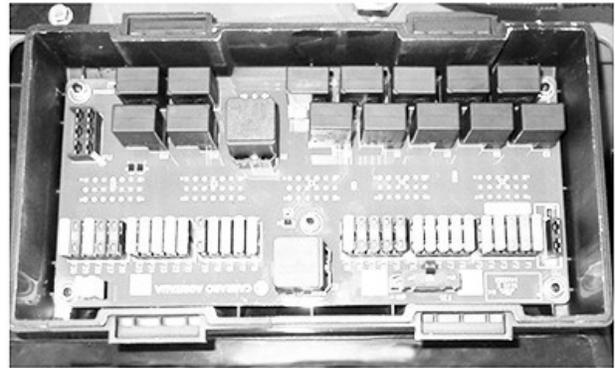
## Relays (Cab) (5GV, 5GN)

### Relays in the Cab



AGCPTJD0710—UN—02NOV15

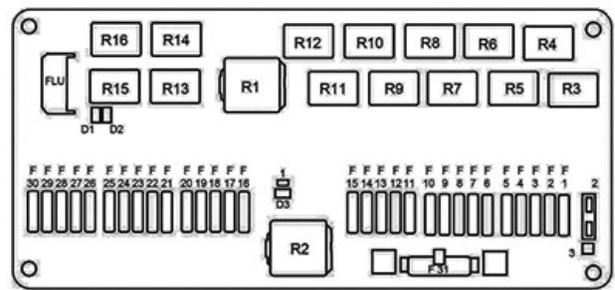
Open the block (A) to access the fuse box (B).



APY12303—UN—12OCT18

Relays in the cab		
Position	Type	Function
1	30 A	Front Working Light
2	30 A	Rear Working Light
3	20 A	Air-conditioning Clutch
4	70 A	Power Supply
5	20 A	Micro Relay for Fan (series)
6	20 A	Micro Relay for Fan (parallel)
7	15-25 A	Micro Relay for Fan

RA84036.000189A-19-09OCT18

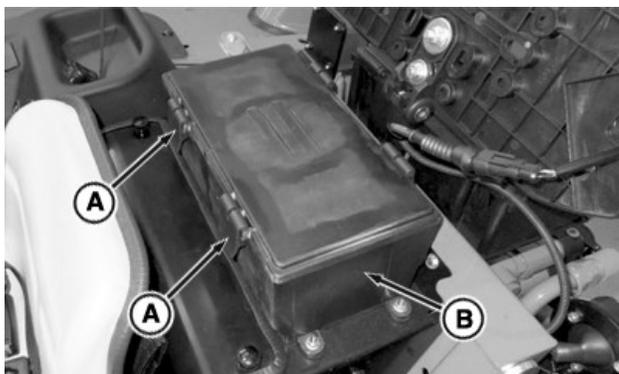


APY12302—UN—12OCT18

## Main Fuses and Relays (5GL)

**IMPORTANT:** To prevent damage to the electrical system, NEVER use a fuse with a rating higher than the one already installed. If the original size fuse does not carry electrical load and continues to blow, have the electrical system checked by your John Deere dealer.

### Main Fuse Box



PY42841—UN—02JUL17

A—Block  
B—Fuse Box

The main fuse box is located in a box, placed over the battery cover.

RELAYS		
Relay	Type	Description
R1	70 A	Starter Relay
R2	50 A	Not Used
R3	30/15 A	High Beam
R4	30/15 A	H4
R5	30/15 A	Low Beam
R6	30/15 A	H4
R7	30/15 A	Not Used
R8	30/15 A	Not Used
R9	30/15 A	Not Used
R10	30/15 A	Not Used
R11	30/15 A	RHS Stop Light Relay
R12	30/15 A	LHS Stop Light Relay
R13	30/15 A	Not Used
R14	30/15 A	Not Used
R15	30/15 A	PWM Enabler
R16	30/15 A	Not Used

Fuses		
Position	Type	Function
F1	15 A	High Beam
F2	5 A	RHS Tail Light
F3	15 A	LHS Tail Light
F4	15 A	Low Beam
F5	15 A	Not Used

F6	15 A	Not Used
F7	15 A	HAZARD +30
F8	15 A	3-Pole Socket +30
F9	15 A	Beacon Light, OOS rear worklight
F10	15 A	Not Used
F11	10 A	+30 Tractor ECU
F12	10 A	Not Used
F13	10 A	Not Used
F14	10 A	Not Used
F15	20 A	Not Used
F16	20 A	Not Used
F17	15 A	Not Used
F18	15 A	Not Used
F19	30 A	Not Used
F20	7.5 A	+15 Engine ECU
F21	15 A	Not Used
F22	25 A	3-Pole Socket +15
F23	15 A	Stop Light
F24	15 A	Not used
F25	15 A	+15 Tractor ECU
F26	10 A	Sensors
F27	10 A	PTO
F28	10 A	Front PTO and Valve
F29	10 A	Horn, Flasher unit, and RHS, LHS SMV, turn light
F30	20 A	Not used
F31	50 A	Key switch Supply

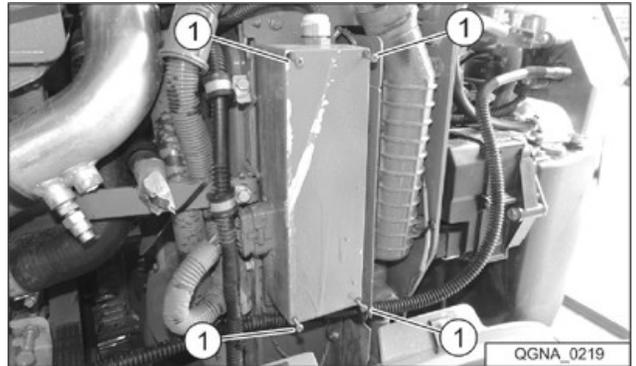
OTHER	
Position	Function
D1	PWM Enabling
D2	PWM Enabling
D3	Diode
1	CAN Resistance
2	Fuse Test Port

3	Fuse Test LED
FLU	FLU Noise Filter (24+12 PowrReverser Transmission)

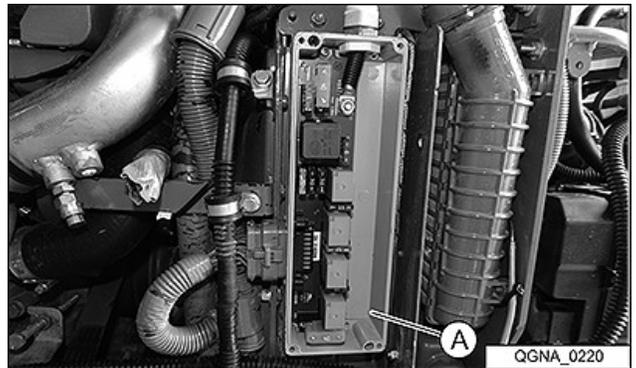
RA84036.0001821-19-15OCT18

### Engine Fuses and Relays (5GV, 5GN)

Other fuses and relays are on the right-hand side of the engine, close to the radiators.

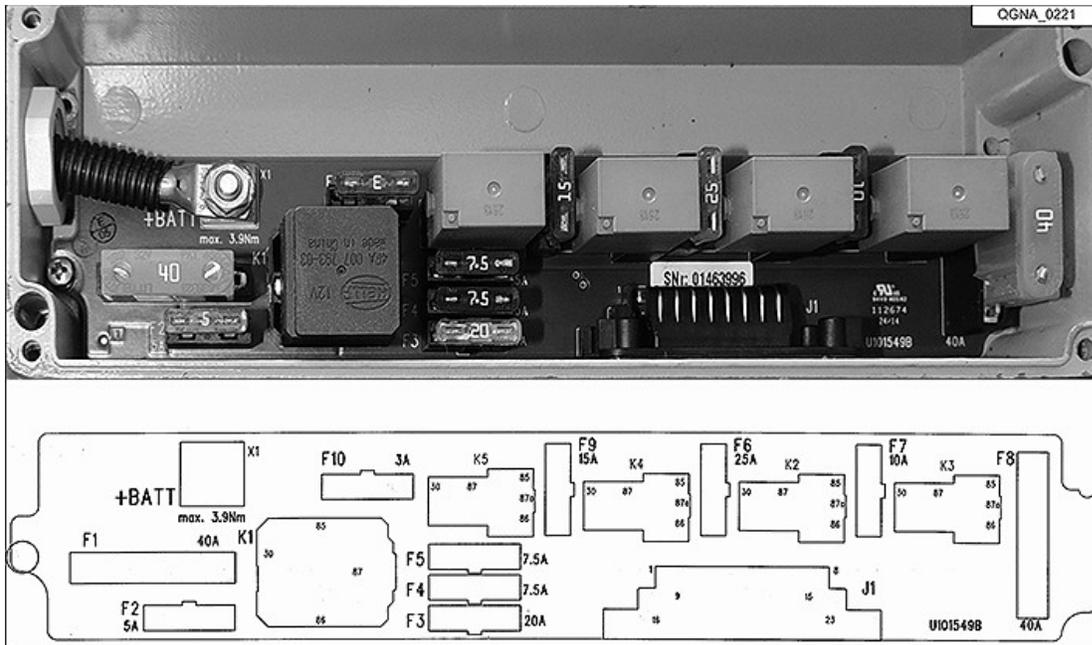


QGNA\_0219 QGNA0219—UN—22DEC15



QGNA\_0220 QGNA0220—UN—02NOV15

**Tractors with SCR System:** Loosen screws (1) and remove cover to access the fuse box (A).



QGNA0221—UN—02NOV15

**Tractors without SCR System (5GV, 5GN)**

FUSES		
Position	Type	Function
F1	40 A	Main fuse
F2	5 A	Main relays solenoid
F3	20 A	ECU pin 3-5
F4	7.5 A	ECU pin 1
F5	7.5 A	Relay solenoids power supply
F6	25 A	Auxiliary relay PS
F7	10 A	SCR relay PS
F8	40 A	Heater control unit power supply
F9	15 A	Fuel heater
F10	3 A	EHC (option)

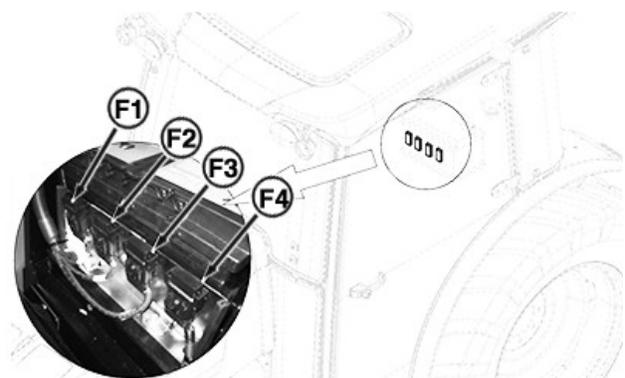
  

RELAYS		
Position	Function	Size
K1	Main	MAXI 50 A
K2	Auxiliary	MINI 15 A
K3	SCR	MINI 15 A
K4	Fuel heater	MINI 15 A
K5	EHC (option)	MINI 15 A

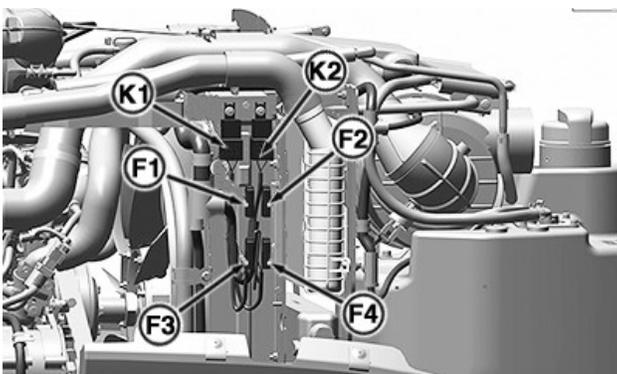
FUSES		
Position	Type	Function
F1	7.5 A	Sensor fuse
F2	20 A	ECU protection fuse
F3	7.5 A	ECU protection fuse
F4	20 A	Fuel heater fuse

RELAYS		
Position	Function	Size
K1	Main	70 A
K2	Fuel heater	70 A



APY12304—UN—15OCT18



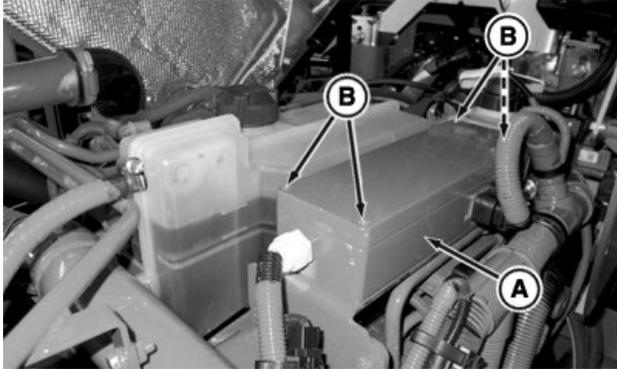
APY12301—UN—12OCT18

FUSES		
Position	Type	Function
F1	50 A	Main harness fuse
F2	50 A	Glow plug fuse
F3	70 A	Engine, ECU fuse
F4	70 A	Cab MAXI fuse

RA84036.000189B-19-31OCT18

### Engine Fuses and Relays (5GL)

Loosen screws (B) and remove cover to access the fuse box (A).



PY42847—UN—02JUL17

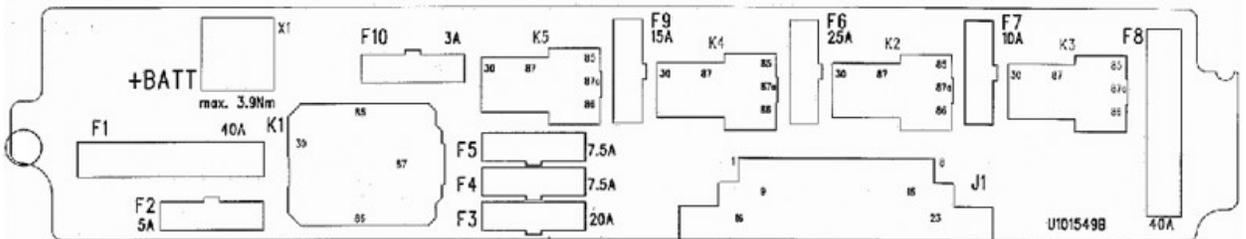
A—Fuse Box  
B—Screws

FUSES		
Position	Type	Function
F1	40 A	Main Fuse
F2	5 A	Main Fuse Main Relays Solenoid

F3	20 A	ECU Pin 3-5
F4	7.5 A	ECU Pin 1
F5	7.5 A	Relay Solenoids Power Supply
F6	25 A	Not Used
F7	10 A	Not Used
F8	40 A	Not Used
F9	15 A	Fuel Heater
F10	3 A	EHC (option)

RELAYS		
Position	Type	Function
K1	Main	50 A
K2	Not Used	15 A
K3	Not Used	15 A
K4	Fuel Heater	15 A
K5	EHC (option)	15 A

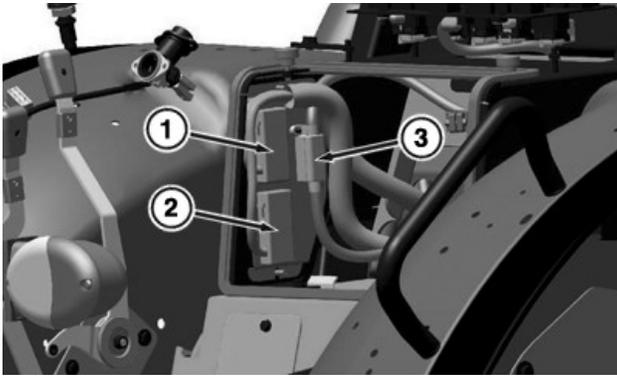
Engine fuses and relays are on the upper side of the engine.



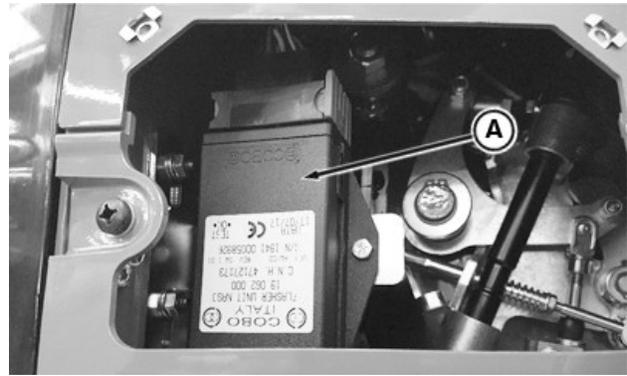
PY34440—UN—17NOV16  
RA84036,000189C-19-09OCT18

### Main Power Supply Fuses and Additional Relays (5GL)

It is on the battery side.



PY42844—UN—02JUL17



APY01843—UN—03JAN18

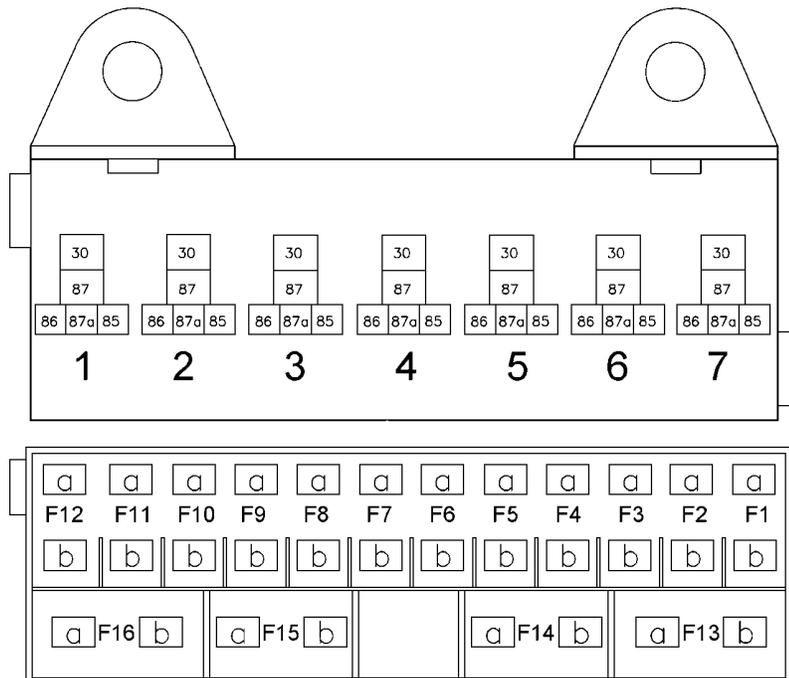
FUSES			
Position	Fuses	Function	Size
1	F01—P40	Glow Plug Fuse	60 A
2	F02—P41	Engine ECU Fuse	70 A
3	F03—P39	Fuse and Relay Board Power Supply	125 A

FUSES		
Position	Function	Size
1	SMV Flasher Unit	21 W 12 V

RA84036,000189D-19-09OCT18

It is on the left-hand side on the dashboard cowl.

### Fuse and Relay Box (Mechanical Transmission) (5GV, 5GN)



AGCPTJD0329—UN—27JUN13

RELAYS	
Relay	Description
K1	Low Beam
K2	High Beam
K3	Right Stop Light
K4	H4 Low Beam (option)

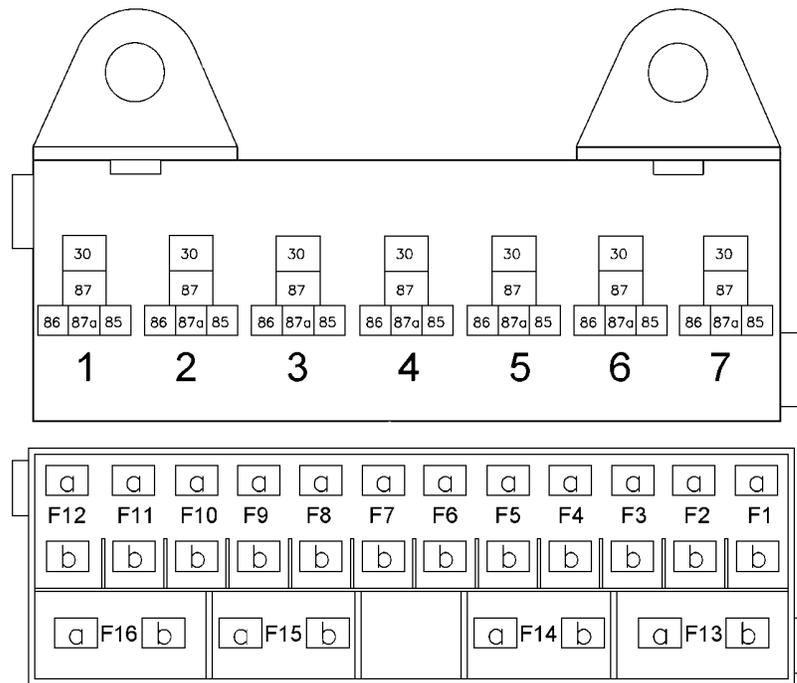
K5	H4 High Beam (option)
K6	Left Stop Light
K7	Rear Work Light (ROPS only)

Fuses (Tractors with Open Operators Station)		
Position	Type	Function
F1	7.5 A	+15 Engine ECU
F2	10 A	3-Terminal Power Outlet Socket (+15)
F3	10 A	3-Terminal Power Outlet Socket (+30); Cigarette Lighter
F4	7.5 A	MFWD Valve; MFWD Switch; Foot Throttle Sensor; Speed Sensor
F5	15 A	Air Seat; Cab +15; DEPORT; Front PTO Valve; Auxiliary Fuel Tank
F6	7.5 A	PTO switches; PTO valve; Hand Throttle Sensor; Differential Lock Pressure Switch; MFWD Pressure Switch; Differential Lock Switch
F7	7.5 A	Dashboard +15; Hi-Lo Switches; HI-LO (24+24)
F8	10 A	Dashboard +30

Fuses (Tractors with Open Operators Station)		
Position	Type	Function
F9	15 A	Beacon Light
F10	15 A	Power Supply Trailer Socket; Stop Lights
F11	10 A	Horn; Turn Signal Lights
F12	15 A	Slow Moving Vehicle (SMV) amber light
F13	15 A	Low Beam
F14	15 A	High Beam
F15	5 A	Right clearance lights and tail lights; backlights
F16	5 A	Left clearance lights and tail lights

RA84036,0001897-19-31OCT18

### Fuse and Relay Box (PowrReverser Transmission) (5GV, 5GN)



AGCPT,JD0329—UN—27JUN13

RELAYS	
Relay	Description
K1	Low Beam
K2	High Beam
K3	Right Stop Light
K4	H4 Low Beam (option)
K5	H4 High Beam (option)
K6	Left Stop Light
K7	Rear work light (ROPS only)

Fuses		
Position	Type	Function
F1	7.5 A	+15 Engine ECU
F2	10 A	3-Terminal power outlet socket (+15)
F3	10 A	3-Terminal power outlet socket (+30); cigarette lighter
F4	7.5 A	MFWD valve; MFWD switch; Foot Throttle Sensor; Speed Sensor
F5	15 A	Air Seat; Cab +15; DEPORT; Front PTO Valve; Auxiliary Fuel Tank
F6	7.5 A	PTO Switches; PTO Valve; Hand Throttle Sensor; Differential Lock Pressure Switch; MFWD Pressure Switch; Differential Lock Switch

<b>Fuses</b>		
<b>Position</b>	<b>Type</b>	<b>Function</b>
F7	7.5 A	Dashboard +15; Hi-Lo Switches; +15, PR
F8	10 A	Dashboard +30; +30 PR
F9	15 A	Beacon Light
F10	15 A	Power Supply Trailer Socket; Stop Lights
F11	10 A	Horn; Turn signal Lights
F12	15 A	Slow Moving Vehicle (SMV) Amber Light
F13	15 A	Low Beam
F14	15 A	High Beam
F15	5 A	Right Clearance Lights and Tail Lights; Backlights
F16	5 A	Left Clearance Lights and Tail Lights

RA84036,0001898-19-31OCT18

# Maintenance — Checking Hardware Torques

## Tighten Wheel Bolts

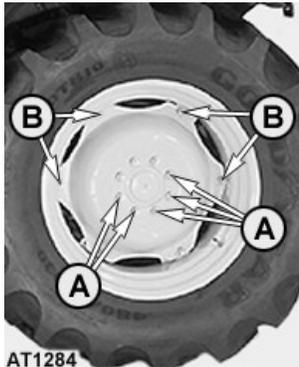
Tighten wheel bolts. See *Wheels, Tires, and Treads* (section 65) in this manual.

RA84036,0001810-19-03JUL18

## After the First 4 and 8 Hours of Operation

### Tighten Rear Wheel Nuts and Bolts to Specified Torque

**IMPORTANT:** Check tightness of rim, disk, and wheel bolts after 10 hours every time you replace wheels.



AT1284—UN—13JUN01

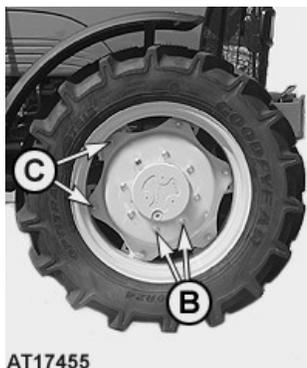
**A** —Disk to Axle Flange  
**B** —Rim to Disk

#### Specification

Disk to Axle Flange (A)—Torque. . . . . 400 N·m (295 lb·ft)  
Rim to Disk (B) M18  
bolt—Torque. . . . . 280 N·m (207 lb·ft)  
Rim to Disk (B) M16  
bolt—Torque. . . . . 210 N·m (155 lb·ft)

### Tighten Wheel Nuts of Front Wheel Drive Axle

**IMPORTANT:** Check tightness of rim, disk, and wheel bolts after 10 hours every time you replace wheels.



AT17455—UN—20JUL07

**B** —Disk to Axle Flange  
**C** —Rim to Disk

#### Specification

Rim to Disk (C)—Torque. . . . . 300 N·m (220 lb·ft)  
Disk to Axle Flange (B) M18  
bolt—Torque. . . . . 280 N·m (207 lb·ft)  
Disk to Axle Flange (B) M16  
bolt—Torque. . . . . 210 N·m (155 lb·ft)

### Tighten Front Wheel Nuts and Bolts to Specified Torque

**IMPORTANT:** Check tightness of rim, disk, and wheel bolts after 10 hours every time you replace wheels.



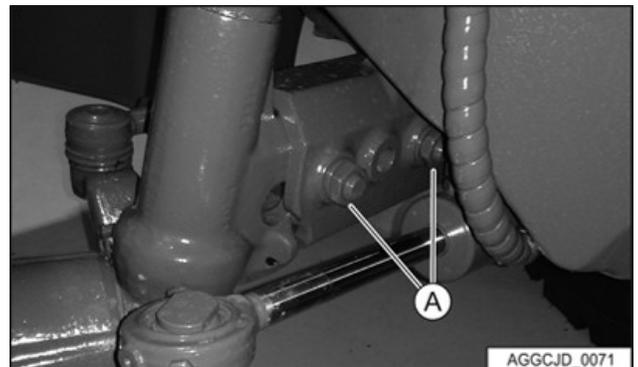
AT1285—UN—13JUN01

**A** — Disk to axle flange

#### Specification

Disk to Axle Flange (tractors without front-wheel drive)—Torque. . . . . 175 N·m (130 lb·ft)

### Adjustable Front Axle (Tractors without Front Wheel Drive)



AGGCJD0071—UN—10MAR16

**A** —Axle Bolts

#### Specification

Axle Bolts (A)—Torque. . . . . 150 N·m (110 lb·ft)  
RA84036,0001811-19-09OCT18

### Mounting Bolts of Operator's Cab / Open Station and ROPS

Check mounting bolts for tightness.

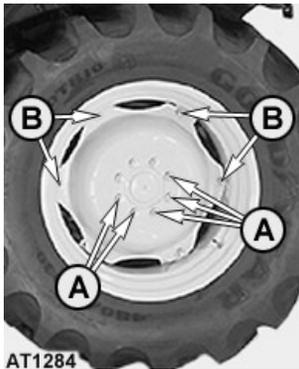
RA84036,0001812-19-03JUL18

# Service — Checks

## Check Torque of Wheel and Rim Bolts

### Tighten Rear Wheel Nuts and Bolts to Specified Torque

**IMPORTANT:** Check tightness of rim, disk, and wheel bolts after 10 hours every time you replace wheels.



AT1284—UN—13JUN01

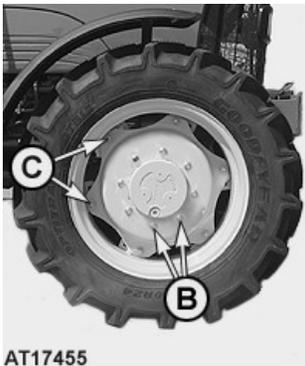
(A) —Disk to Axle Flange  
(B) —Rim to Disk

#### Specification

Disk to Axle Flange (A)—Torque. . . . .	400 N·m (295 lb·ft)
Rim to Disk (B) M18	
Bolt—Torque. . . . .	280 N·m (207 lb·ft)
Rim to Disk (B) M16	
Bolt—Torque. . . . .	210 N·m 155 lb·ft)

### Tighten Wheel Nuts of Front Wheel Drive Axle

**IMPORTANT:** Check tightness of rim, disk, and wheel bolts after 10 hours every time you replace wheels.



AT17455—UN—20JUL07

(B) —Disk to Axle Flange  
(C) —Rim to Disk

#### Specification

Rim to Disk (C)—Torque. . . . .	300 N·m (220 lb·ft)
Disk to Axle Flange (B) M18	
Bolt—Torque. . . . .	280 N·m (207 lb·ft)
Disk to Axle Flange (B) M16	
Bolt—Torque. . . . .	210 N·m 155 lb·ft)

### Tighten Front Wheel Nuts and Bolts to Specified Torque

**IMPORTANT:** Check tightness of rim, disk, and wheel bolts after 10 hours every time you replace wheels.



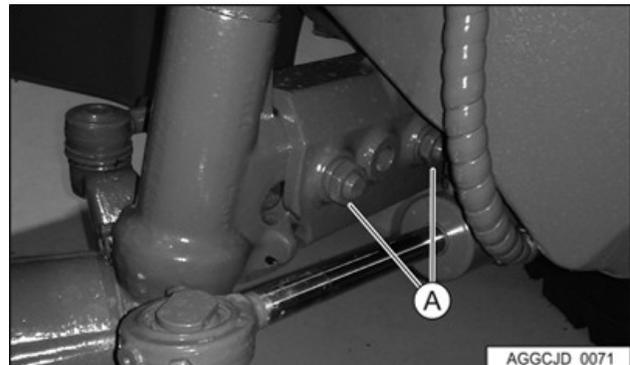
AT1285—UN—13JUN01

(A) —Disk to Axle Flange

#### Specification

Disk to Axle Flange (tractors without front-wheel drive)—Torque. . . . .	175 N·m (130 lb·ft)
--	---------------------

### Adjustable Front Axle (Tractors without Front Wheel Drive)



AGGCJD0071—UN—10MAR16

(A) —Axle Bolts

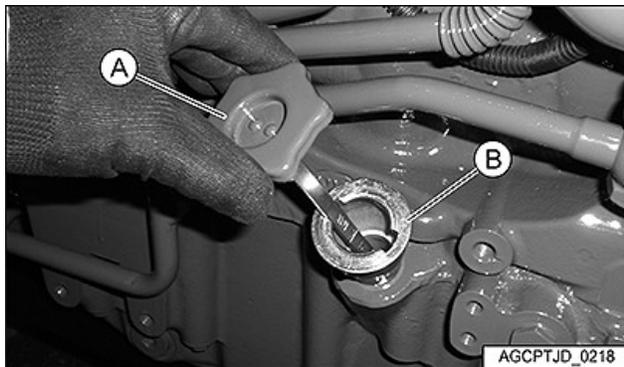
#### Specification

(A)—Torque. . . . .	150 N·m (110 lb·ft)
---------------------	---------------------

RA84036,00017F7-19-03JUL18

### Check Engine Oil Level

Park tractor on level ground to check engine oil level.



AGCPTJD0218—UN—02NOV15

A—Dipstick  
B—Filler Neck

Remove dipstick (A), wipe clean, and reinsert it fully. Once again remove the dipstick and check oil level.

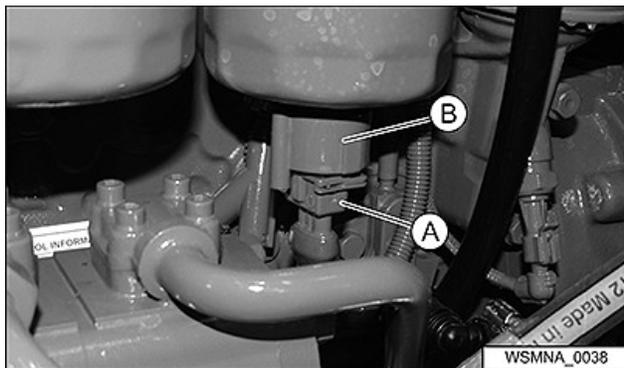
Correct oil level is in between the two marks on the dipstick.

**IMPORTANT: DO NOT** operate engine when oil level is below the low mark on dipstick.

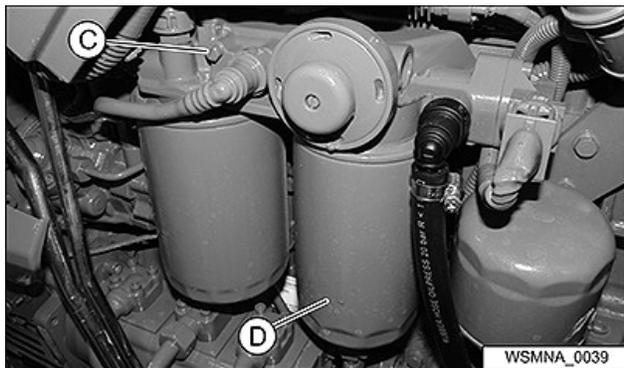
If level is low, add specified oil through filler neck (B) until even with the upper mark. See Engine Oil (section 200C) in this manual.

RA84036,00017F8-19-03JUL18

### Check the Fuel Filter



WSMNA\_0038—UN—02NOV15



WSMNA0039—UN—02NOV15

A—Connector  
B—Drain Screw

C—Bleed Screw  
D—Fuel Filter

**CAUTION:** Never open the fuel system when engine is hot. Handle fuel with care, it is highly flammable. Do not replace fuel filter while smoking or when near open flame or sparks.

1. Disconnect the battery. See Battery Cut-Off Switch (If Equipped) in Service — Electrical System (section 220B).
2. Remove connector (A).
3. Open drain screw (B) and bleed screw (C).

*NOTE: Place a small container under the drain screw and catch the draining fuel.*

4. Retighten drain screw (B) as soon as fuel and any water and sediment deposits have drained out.

**IMPORTANT: Do not allow** draining fuel to soil the drive belt or the environment.

5. Operate the hand primer on the fuel transfer pump until fuel appears at the bleed screw (C).
6. Tighten bleed screw (C) after air has been removed from the system.
7. Reconnect the connector (A).
8. Connect the battery. See Battery Cut-Off Switch (If Equipped) in Service — Electrical System (section 220B).
9. Start the engine and run it at idle speed for a few minutes to eliminate any residual air. Check fuel system for leaks.

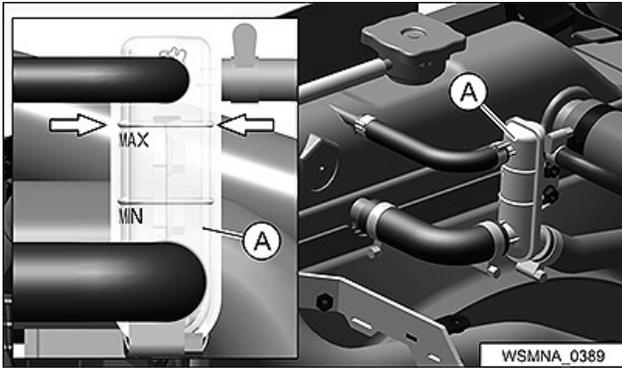
RA84036,00017FA-19-10JUL18

### Check Coolant Level

**CAUTION:** Only remove radiator cap when engine is cold. Slowly loosen cap to first stop to relieve pressure before removing completely.

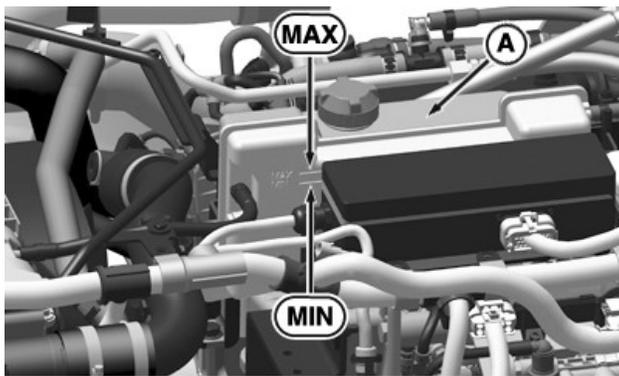


TS281—UN—15APR13



(5GV, 5GN)

WSMNA0389—UN—02NOV15



(5GL)

PY42820—UN—02JUL17

**A—Coolant Level Tank**

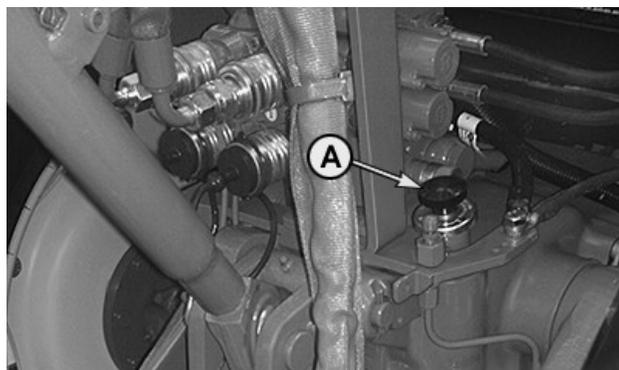
Check coolant level in radiator through the coolant level tank (A).

Coolant level with a cold engine is near the MAX level mark on the level tank (A). Add coolant if necessary.

If you find it necessary to top up the level several times after short trips, have the system checked by an authorized dealer.

RA84036,00017FC-19-09OCT18

**Check Transmission/Hydraulic System Oil Level**



AGCPTJD0377—UN—11JUL13

**A—Dipstick**

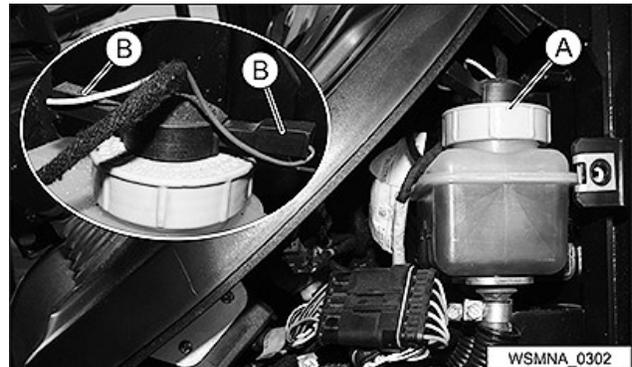
**IMPORTANT:** Check oil level when oil is cold. If possible, check the oil level after tractor has not been in use for several hours.

1. Park tractor on level ground.
2. Apply park brake (transmission in neutral).
3. Lower draft links and front-mounted implements.
4. Remove dipstick (A) and wipe clean. Fully insert the dipstick and remove again. Oil level must be between the full mark and end of dipstick.
5. Add specified oil at (A) if level is low. See Transmission and Hydraulic Oil in Other Lubricants (section 200E) in this manual.

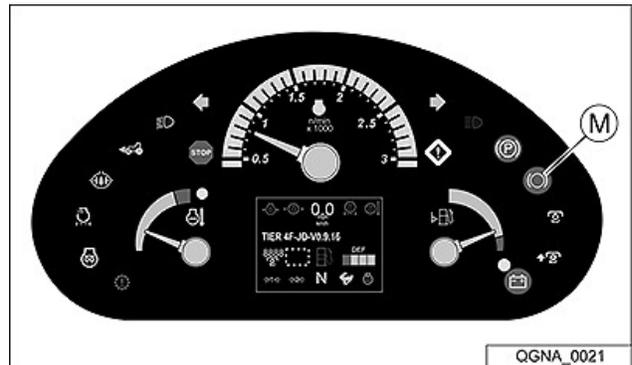
If using implements that require a greater quantity of oil in the hydraulic circuit, the oil level must be up to mark “XXX.”

RA84036,00017FD-19-03JUL18

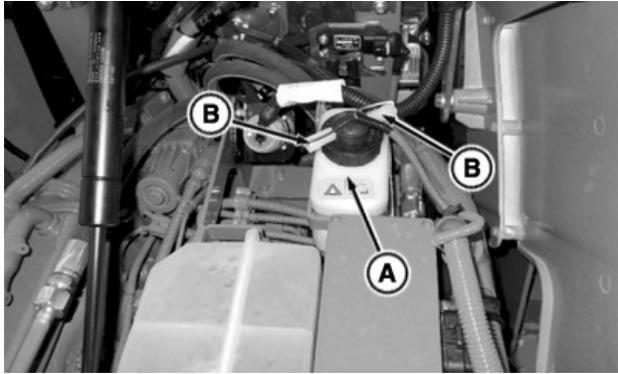
**Check Brake System Oil Level**



WSMNA\_0302  
WSMNA0302—UN—02NOV15



QGNA\_0021  
QGNA0021—UN—02NOV15



PY42848—UN—02JUL17

(5GL)

- A—Cap
- B—Connectors
- M—Indicator Light

The brakes are hydraulically operated by an independent circuit and have a separate oil reservoir.

If oil level is low, disconnect connectors (B), remove cap (A), and add John Deere low viscosity Hy-Gard™ JD20D or 10W20 mineral oil.

When the key switch is ON and the oil level in the brake system is low, the indicator light (M) illuminates.

To check the electrical system, press the top of the cap; indicator light (M) must illuminate.

If the oil level is low, check for leakage.

**CAUTION:** For any brake system service, see your authorized John Deere dealer.

RA84036,00017FF-19-09OCT18

### Check Brake Operation



QGNA,0214—UN—02NOV15

Shut off the engine and check that the brakes are operating properly:

1. One at a time, press down on the left and right brake pedals (do this several times to each pedal). Distinct resistance should be noticeable at each of the two

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pedals. If no resistance can be felt at the pedals, see your authorized dealer.

2. Check to make sure that the pedals do not settle to the end of stroke within 10 seconds after being applied. If leakage exceeds this rate, or if one pedal settles faster than the other, see your John Deere dealer.
3. Press both pedals down at the same time. Distinct resistance should occur at both pedals at roughly the same height. If the height at which resistance is experienced differs by more than 51 mm (2 in), contact your authorized dealer.

**IMPORTANT:** Any noticeable drift downward from the point of resistance indicates brake leakage. Contact your authorized dealer.

**Distinct pedal resistance and balance between the left and right pedals are important for emergency braking with the two brakes coupled together.**

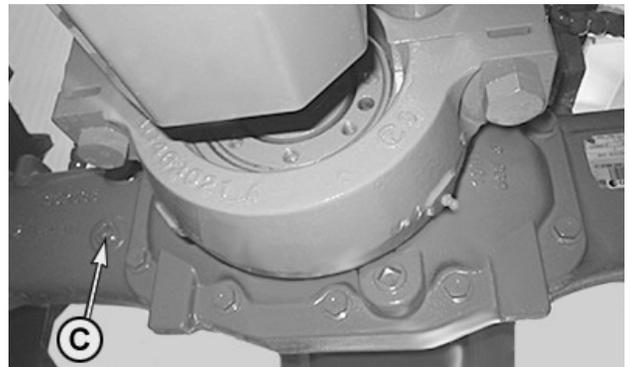
RA84036,0001800-19-03JUL18

### Check Oil Levels in Front-Wheel Drive Axle



LX1032970

LX1032970—UN—03JUL03



AGCPTJD0557—UN—16DEC13

1. Turn wheel until OIL LEVEL mark (B) on final drives (both sides) is horizontal.
2. Remove level plugs (C). Oil level must be with the plug bore.
3. If level is low, add specified oil. See Front-Wheel

Drive Axle Oil in Other Lubricants (section 200E) in this manual.

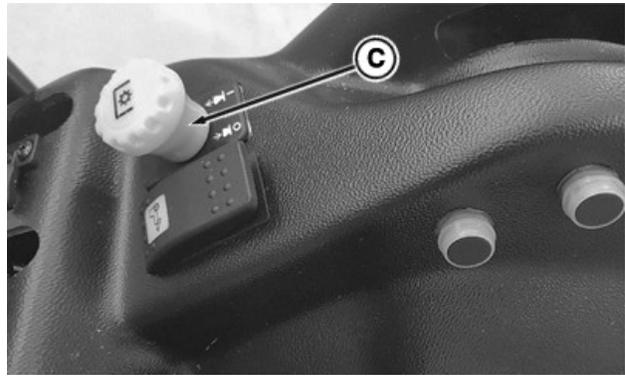
- Reinstall level plugs (C) and tighten to the specification.

**Specification**

Level Plug (C)—Torque. . . . . 60 N·m  
44 lb·ft

*NOTE: Change oil in the axle housing and final drives after the first 100 hours of operation. Then replace after every 1500 hours of operation or once every 2 years, whichever occurs first.*

RA84036,0001801-19-03JUL18



APY01859—UN—13FEB18

(5GL)

**C—PTO Switch**  
**T—Gearshift Lever**

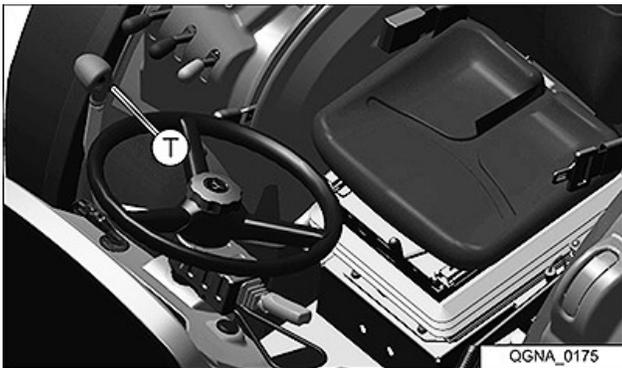
- Move gearshift lever (T) out of neutral and turn the key switch to start position. Starting motor must NOT start engine.
- Engage PTO switch (C) and turn the key switch to start position. Starting motor must NOT start engine.

RA84036,0001802-19-09OCT18

**Check Neutral Start System – 24/12 Transmission**

When the key switch is turned, start the engine only if the gearshift lever (T) is in neutral position and PTO switch (C) is in disengaged position.

**CAUTION:** If starting motor starts engine in one or both of the following steps, have the neutral start system repaired by your authorized dealer.



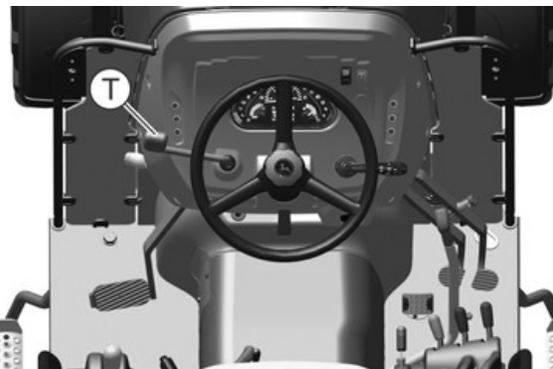
QGNA\_0175

QGNA0175—UN—02NOV15



PY34598—UN—15FEB17

**Check Neutral Start System – 12/12 Transmission**



QGNA0263—UN—21DEC15



QGNA\_0061

QGNA0061—UN—02NOV15

**A—PTO Lever**  
**T—Reverser Lever**

When the key switch is turned, start the engine only if

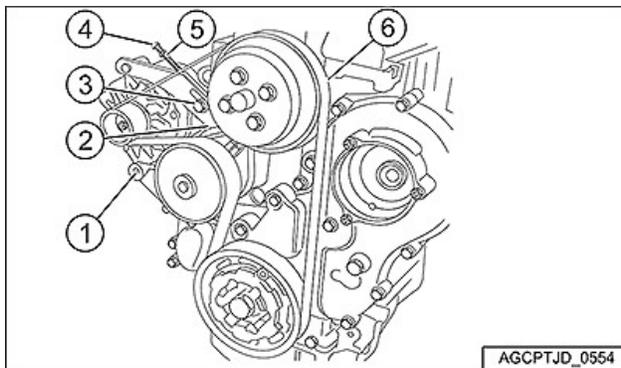
the reverser lever (T) is in neutral position and PTO lever (A) is disengaged.

**⚠ CAUTION:** If starting motor starts engine in one or both of the following steps, have the neutral start system repaired by your authorized dealer.

1. Move reverser lever (T) out of neutral and turn the key switch to start position. Starting motor must NOT start engine.
2. Engage PTO lever (A) and turn the key switch to start position. Starting motor must NOT start engine.

RA84036.0001803-19-03JUL18

### Check Belt Wear and Belt Tension



AGCPTJD\_0554  
AGCPTJD0554—UN—02NOV15

- 1—Nut
- 2—Oblong Holder Opening
- 3—Screw
- 4—Screw
- 5—Locknut
- 6—Belt

1. Remove the bolt (3).
2. Loosen the locknut (5).
3. Remove nut (1).
4. Screw the screw (4) until the end of the oblong holder (2) opening is in contact with the screw (3).
5. Check the condition and tension of the belt (6).
6. Once the belt tension is reached, tighten the mounting bolt (3), the locknut (5), and the nut (1).

*NOTE:* For the value of belt tension, refer to relevant CTM (Component Technical Manual).

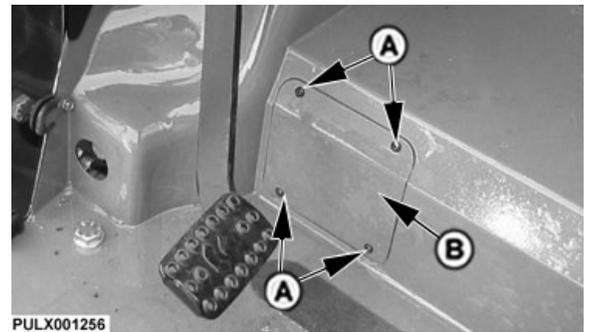
RA84036.0001804-19-03JUL18

### Check Torque of Drawbar Attaching Screws

Check all parts for wear and damage. Check torque of attaching screws. Let your authorized dealer perform this service.

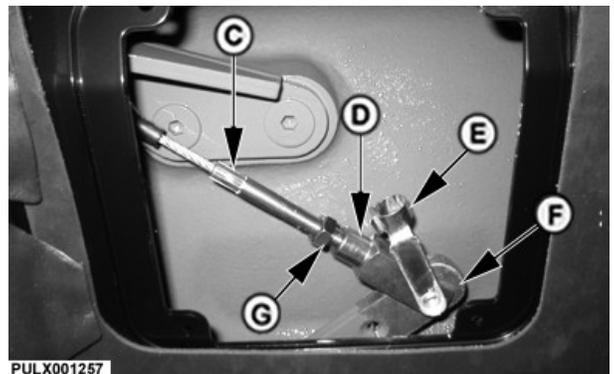
RA84036.0001805-19-03JUL18

### Check Clutch Pedal Free Travel



PULX001256

PULX001256—UN—22JAN09



PULX001257

PULX001257—UN—22JAN09

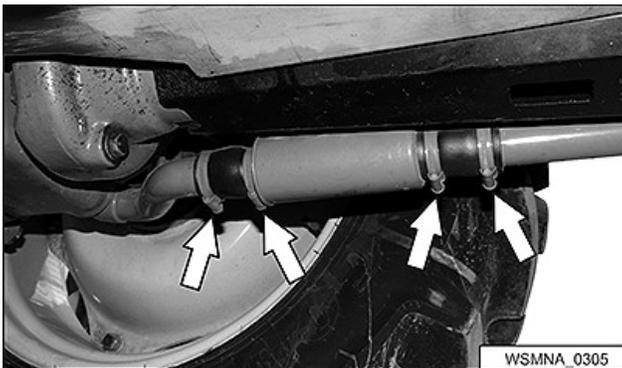
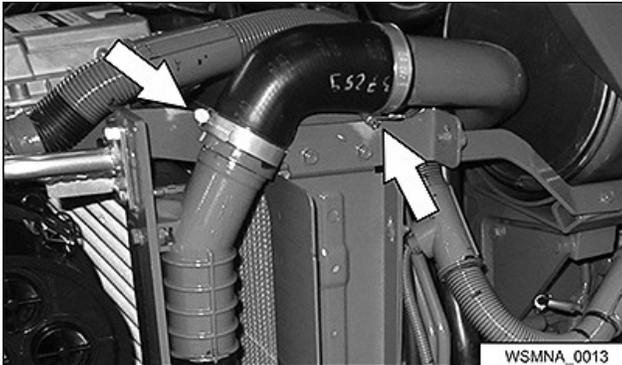
- A—Screws
- B—Cover
- C—Cable
- D—Yoke
- E—Pin
- F—Clutch Lever
- G—Lock Nut

1. To check and adjust, unscrew screws (A) and remove cover (B).
2. Disconnect the linkage.
3. Move up clutch lever (F) all the way.
4. Turn yoke (D) until the holes in yoke and clutch lever (F) are aligned.
5. Check if pin (E) can be inserted in the holes.
6. Connect clutch lever (F) and yoke (D) using pin (E) and lock nut (G).
7. Depress the clutch pedal 10 times.
8. Release lock nut (G) on pin (E).
9. Repeat steps 3 through 5.
10. Turn yoke (D) counterclockwise by 2½ turns to move the clutch lever (F) towards the right.
11. Connect clutch lever (F) and yoke (D) using pin (E) and lock nut (G).
12. Select a gear and make sure that clutch does not drag.
13. Adjustment is complete if step 12 is OK. If not,

repeat steps 9 through 12 turning yoke (D) by 2 turns.

RA84036,0001806-19-03JUL18

### Check Hoses and Hose Clamps



Check hose clamps of the following systems for tightness:

- Air cleaner to engine intake or turbocharger
- Cooling system
- Hydraulic system
- Fuel system

Check all hoses for cracks, which could cause leaks or failure. Replace as necessary.

RA84036,0001807-19-03JUL18

### Check Components of Drawbar and Trailer Hitches

Perform functional check. Check all components for wear and damage.

RA84036,0001808-19-03JUL18

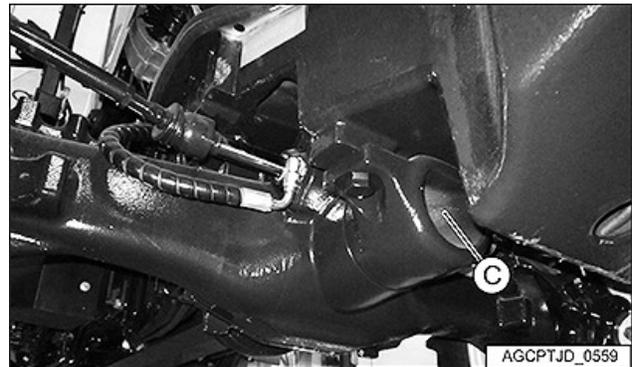
### Check Engine Idle Speeds

Engine Idle Speeds	
Slow idle	800—900 1/min (rpm)
Fast idle	2400—2500 1/min (rpm)

If idle speeds are not correct, see your authorized dealer.

RA84036,0001809-19-10JUL18

### Check and Lubricate Front Axle Pivot Pin



Ask your John Deere dealer to check the front axle pivot pin (C) for correct end play.

RA84036,000180A-19-03JUL18

### Check the Seat Belt (If Equipped)

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 the belt system only with replacement parts approved for your machine. See your John Deere dealer if the belt needs to be changed.

RA84036,000180B-19-03JUL18

### Check Condition of Diesel Engine Coolant

John Deere Cool-Gard™ II Premix and Cool-Gard™ II Concentrate are maintenance free coolants for up to 6 years or 6000 hours of operation, provided that the cooling system is topped off using only John Deere Cool-Gard™ II Premix. Test the coolant condition annually with the coolant test strips designed for use with John Deere Cool-Gard™ II coolants. If the test strip chart indicates that additive is required, add John Deere Cool-Gard™ II Coolant Extender as directed.

RA84036,000180C-19-03JUL18

*Cool-Gard is a trademark of Deere & Company*

## **Radiator Pressure Cap Check**

Ask your authorized dealer to perform this service.

RA84036,000180D-19-03JUL18

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## **Inspect Hydraulic Hoses**

**IMPORTANT:** Check hydraulic hoses regularly – at least once a year – for leaks, kinks, cuts, tears, rubbing, bulges, corrosion, exposed fabric, and other signs of wear and damage.

Replace worn or damaged hoses immediately.

Replacement hoses are available from your John Deere dealer.

RA84036,000180E-19-03JUL18

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## **Inspect Alternator**

Ask your authorized dealer to perform this service.

RA84036,000180F-19-03JUL18

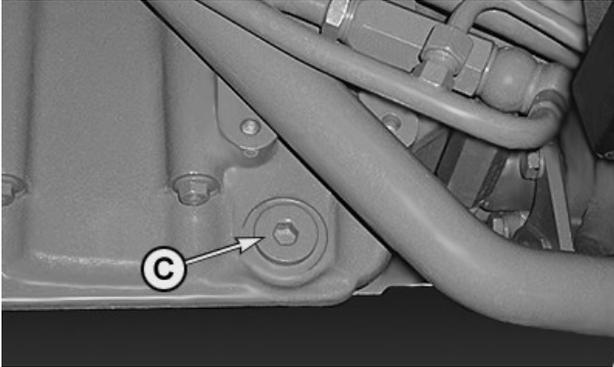
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# Service — Change

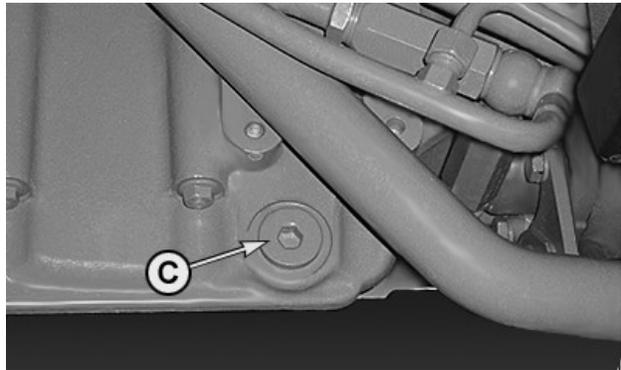
## Change Engine Oil

Perform oil change when oil is warm. Stop engine and remove ignition key.

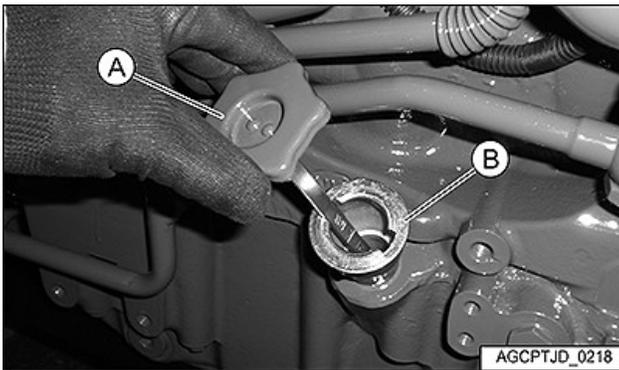
**⚠ CAUTION: Avoid burns due to HOT oil. Wear gloves when draining oil.**



AGCPTJD0512—UN—27AUG13



AGCPTJD0512—UN—27AUG13



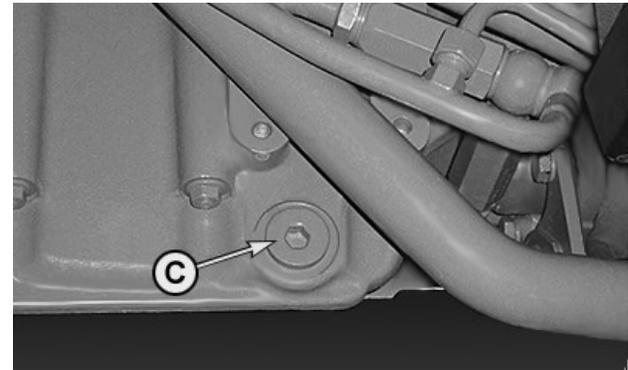
AGCPTJD\_0218  
AGCPTJD0218—UN—02NOV15

A—Dipstick  
B—Filler Neck  
C—Drain Plug

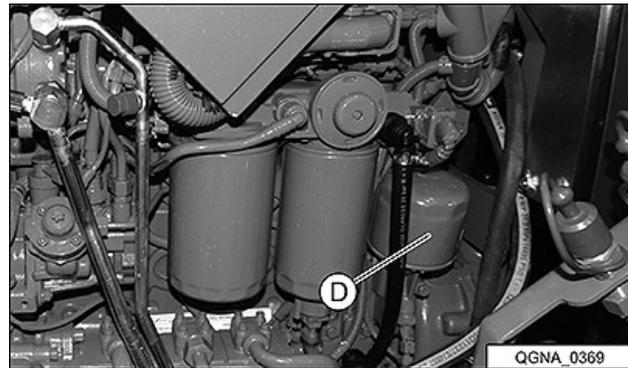
1. Remove the two oil drain plugs (C) on both sides of engine and drain oil. Trap oil in a suitable container.
2. Install and tighten drain plugs (use new seal rings).
3. Fill up with specified oil quantity through filler neck (B).
4. Close hood, run engine for short time, and check for leaks at the filter base and drain plugs.
5. Stop engine, wait 15 minutes, and then recheck oil level.
6. Remove dipstick (A), wipe clean, and reinsert it fully. Remove dipstick once again and check oil level.
7. The oil must be up the XXX mark on the dipstick (A). If necessary, top up with oil.

RA84036.00017E0-19-03JUL18

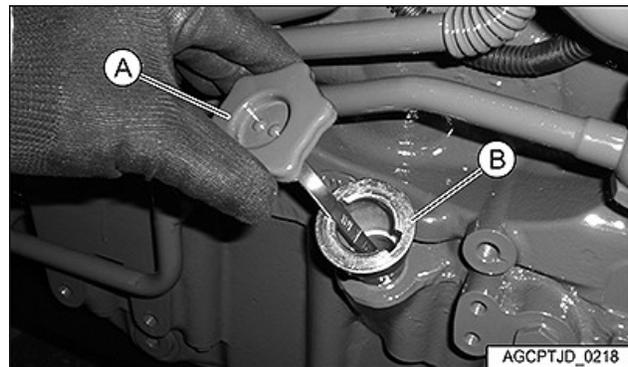
## Change Engine Oil and Replace Oil Filter



AGCPTJD0512—UN—27AUG13



QGNA\_0369  
QGNA0369—UN—02NOV15



AGCPTJD\_0218  
AGCPTJD0218—UN—02NOV15

F5C Engine

A—Dipstick  
B—Filler Neck  
C—Drain Plug  
D—Engine Oil Filter

Perform oil change when oil is warm. Stop engine and remove the ignition key.

**⚠ CAUTION: Avoid burns due to HOT oil. Wear gloves when draining oil.**

1. Remove the two oil drain plugs (C) on both sides of engine and drain oil. Trap oil in a suitable container.
2. Open hood and unscrew engine oil filter (D).
3. Apply a film of oil on the gasket before installing the new filter. Hand tighten the oil filter plus 1/2 turn.

4. Install and tighten drain plugs (use new seal rings).
5. Fill up with specified oil quantity through filler neck (B).
6. Close hood, run engine for short time, and check for leaks at the filter base and drain plugs.
7. Stop engine, wait 15 minutes, and then recheck oil level.
8. Remove dipstick (A), wipe clean and reinsert it fully. Remove dipstick once again and check oil level.
9. The oil must be up the XXX mark on the dipstick (A). If necessary, top up with oil.

RA84036,00017E1-19-03JUL18

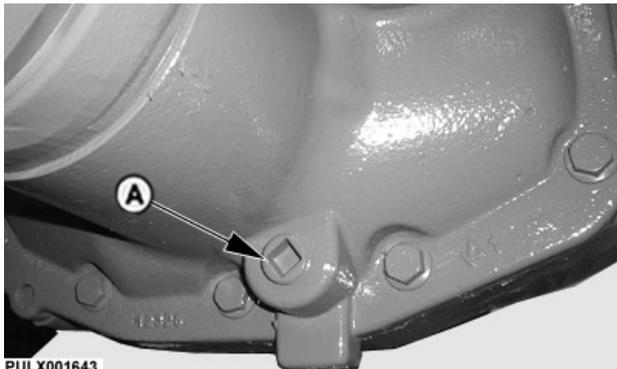
### Changing Oil in Front-Wheel Drive Axle

Replace oil in the axle housing and final drives after the first 100 hours of operation. Then replace after every 1500 hours of operation or once every 2 years, whichever occurs first. Always use a transmission oil listed in Other Lubricants (section 200E) in this manual.

Always drain oil while it is still warm, such as immediately after a prolonged period of operation.

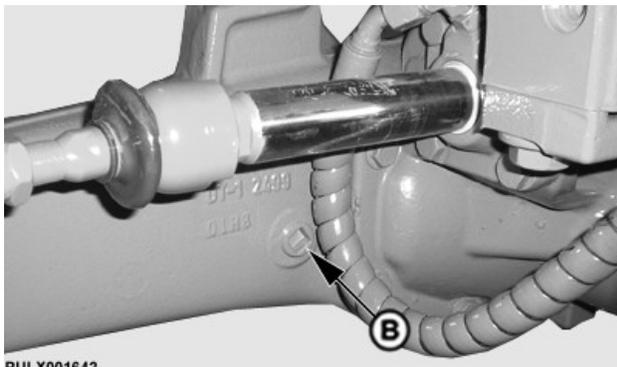
RA84036,00017E2-19-03JUL18

### Change Oil in Front-Wheel Drive Axle Housing



PULX001643

PULX001643—UN—26SEP08



PULX001642

PULX001642—UN—26SEP08

1. Remove drain plug (A) and drain oil into a suitable container.
2. Reinstall drain plug (A) and tighten to the specification.

#### Specification

Plug (A)—Torque . . . . . 70 N·m  
52 lb·ft

3. Remove oil level/filler plug (B).
4. Refill with John Deere Hy-Gard™ oil; see Front-Wheel Drive Axle Oil in Other Lubricants (section 200E) in this manual. Oil should be level with the plug bore.
5. Reinstall plug (B) and tighten to the specification.

#### Specification

Plug (B)—Torque . . . . . 70 N·m  
52 lb·ft

For capacities, see capacities in Specifications (section 500A) in this manual.

RA84036,00017E3-19-03JUL18

### Change Oil in Front-Wheel Drive Final Drives



LX1032970

LX1032970—UN—03JUL03

1. Position the tractor on level ground to ensure correct oil levels when refilling.
2. Turn wheel until drain plug (C) is at the bottom. Remove drain plug and drain oil into a suitable container.
3. Turn the wheel until OIL LEVEL mark (B) is horizontal.
4. Refill with John Deere Hy-Gard™ oil; see Front-Wheel Drive Axle Oil in Other Lubricants (section 200E) in this manual. Oil should be level with the plug bore.
5. Reinstall drain plug (C) and tighten to the specification. Repeat steps for the other side.

Hy-Gard is a trademark of Deere & Company

**Specification**

Plug (C)—Torque. . . . . 60 N·m  
44 lb·ft

**IMPORTANT: Recheck oil level after 30 minutes. Add oil as needed.**

For capacities, see capacities in Specifications (section 500A) in this manual.

RA84036,00017E4-19-03JUL18

**Change Brake System Oil**

**CAUTION:** Any service of the brake system must be performed by your authorized dealer.

RA84036,00017E5-19-03JUL18

**Change Engine Coolant**

Have engine cooling system drained, flushed and refilled by your authorized dealer.

RA84036,00017E6-19-03JUL18

**Change Cooling System Coolant**

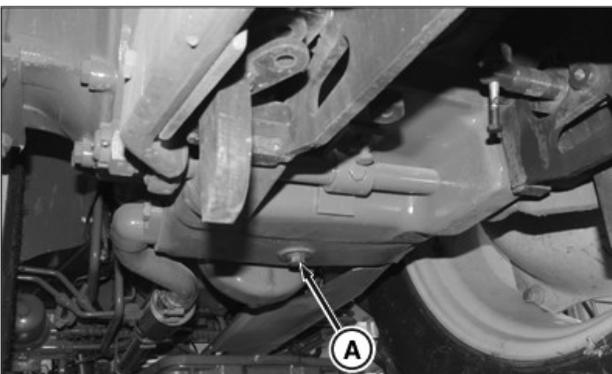
Ask your authorized dealer to perform this service.

RA84036,00017E7-19-03JUL18

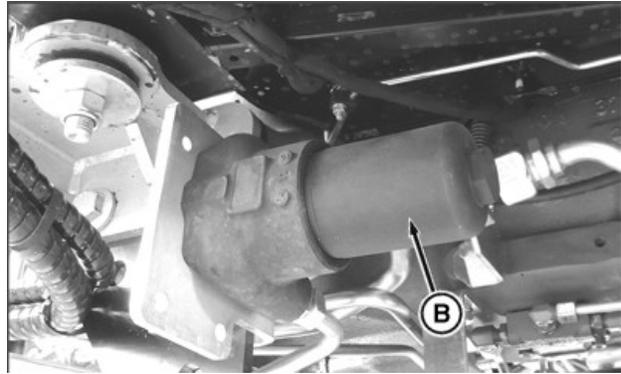
**Replace Transmission Hydraulic Oil and Filters/Screen**

1. Remove the drain plug (A) and drain transmission oil. Collect the transmission oil in a vessel.

*NOTE: Suitable container should be arranged to collect the hydraulic oil.*

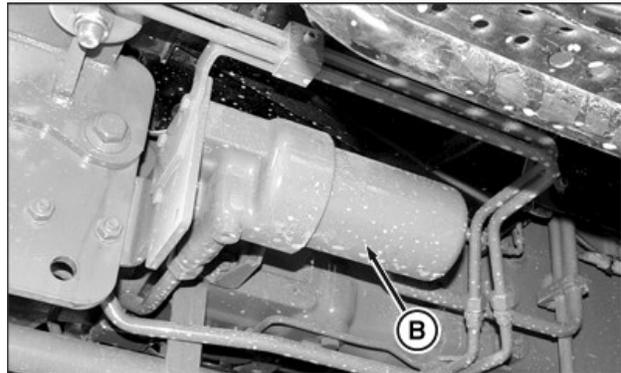


PY32516—UN—24NOV16



PY32517—UN—24NOV16

(Mechanical Transmission)

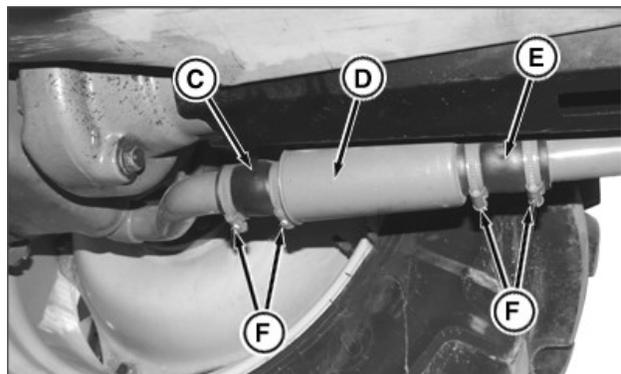


PY32518—UN—24NOV16

(Electrohydraulic Power Reverser Transmission)

A—Drain Plug  
B—Filter

2. Remove filter cover (B) with an internal cartridge.
3. Clean the filter properly.
4. Apply a film of oil on gasket and install the new cartridge.
5. Hand tighten filter appropriately (1/2 turn).



PY32519—UN—24NOV16

C—Hose  
D—Oil Filter  
E—Hose  
F—Clamp (4 used)

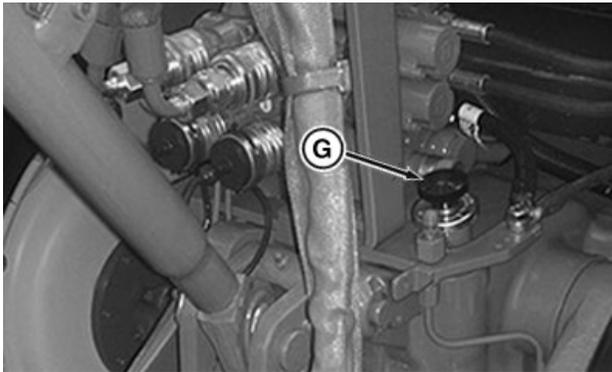
6. Remove the clamps (F).

7. Slide hose (C) forward and hose (E) rearward to replace oil filter (D).
8. Install all parts in reverse order.
9. Refill transmission with specified oil capacity.

**Specification**

Transmission/Hydraulic Oil, 12/	
12—Capacity	39 L 10.30 gal
Transmission/Hydraulic Oil, 24/	
12—Capacity	43 L 11.40 gal

10. Run engine at idle condition for several seconds.
11. Check hydraulic oil level. Remove dipstick (G) and wipe clean. Fully insert the dipstick and remove again. Oil level should be between the top and bottom marks.
12. Check for leakage.



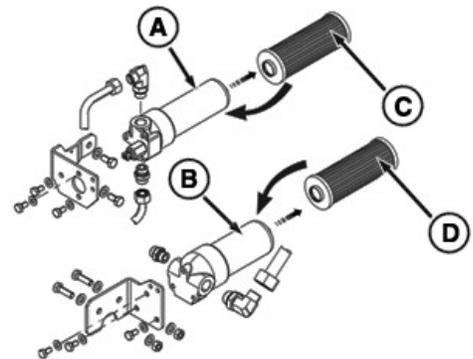
PY32520—UN—24NOV16

G—Dipstick

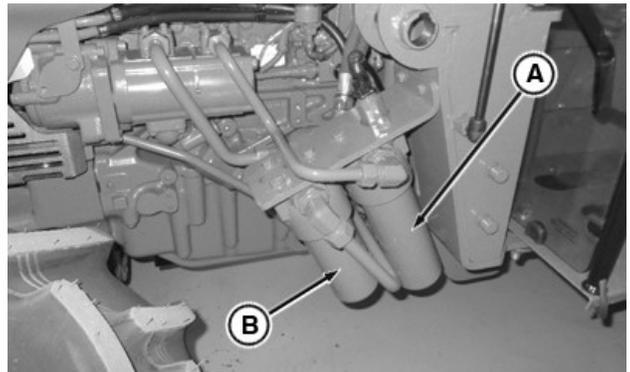
RA84036,00017E8-19-09OCT18



TS281—UN—15APR13



PY34430—UN—16NOV16



APY01844—UN—03JAN18

### Replace Transmission/Hydraulic Oil Filter Cartridge (First and Second Pump) (5GL)

**CAUTION:** Do not perform the oil change while the oil is hot, as there is the risk of injury.

**CAUTION:** Before working on hydraulic oil filters, ensure that the hydraulic oil is cold. Wear impervious, protective gloves. Otherwise there is a risk of burns, injuries, and/or health problems.

- A—Hydraulic Filter Bowls
- B—Hydraulic Filter Bowls
- C—Filter Cartridges
- D—Filter Cartridges

1. Disconnect the battery. See Battery Cut-Off Switch (If Equipped) in Service — Electrical System (section 220B).
2. Arrange a suitable container for collecting the hydraulic oil.
3. Unscrew the hydraulic filter bowls (A) and (B) using a filter wrench.
4. Remove the filter cartridges (C) and (D).
5. Properly clean the filter bowls (A) and (B) and their seats.
6. Apply a film of oil on the gaskets.
7. Install new filter cartridges (C) and (D).

- Refit the filter bowls (A) and (B), and tighten to the specification.

**Specification**

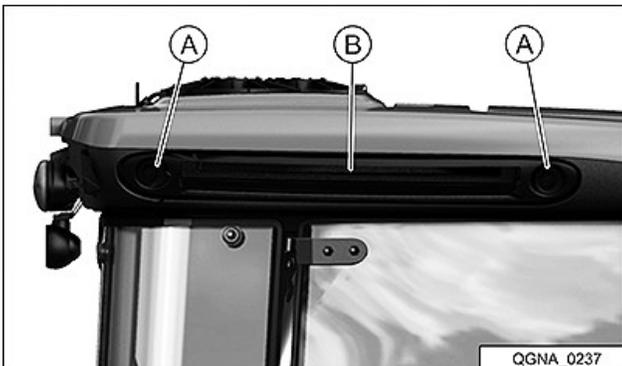
Filter Bowls (A) and (B)—Torque . . . . . 70 N·m  
51.62 lb·ft

- Restore the transmission oil level with proper oil. See Capacities in Specifications (section 500A) and Transmission and Hydraulic Oil in Other Lubricants (section 200E) in this manual.
- Reconnect the Battery. See Battery Cut-Off Switch (If Equipped) in Service — Electrical System (section 220B).
- Run the engine for several seconds.
- Check the hydraulic oil level. See Check Transmission/Hydraulic System Oil Level in Service — Checks (section 220D) in this manual.
- Check for leakage.

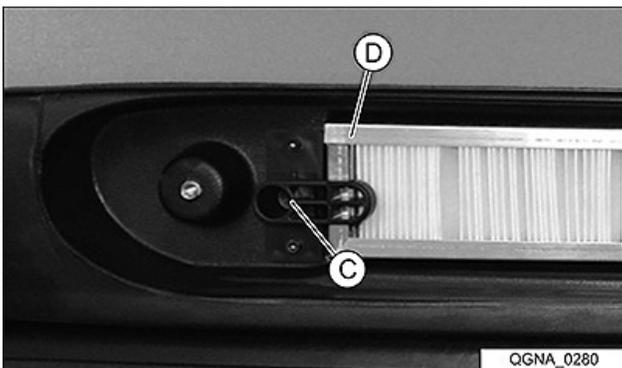
RA84036,00017E9-19-10JUL18

## Replace Cab Air Filters

**IMPORTANT:** The cab air filters do not protect against inhaling harmful pesticides. If pesticide-use instructions require respiratory protection, wear an appropriate respirator inside the cab.



QGNA0237—UN—02NOV15



QGNA0280—UN—02NOV15

- A—Screws
- B—Filter Cover
- C—Lever

## D—Cab Air Filter Element

Replace cab air filters when changing the engine primary filter element (after 1500 hours of operation or 2 years, whichever comes first).

- Remove screws (A) and filter cover (B).
- On both ends of the filter, turn lever (C) upwards.
- Remove cab air filter element (D), and replace it with a new one.

RA84036,00017EA-19-03JUL18

## Replace Diesel Particulate Filter

Ask your authorized dealer to perform this service.

RA84036,00017EB-19-03JUL18

## Replace Alternator Drive Belt

Ask your authorized dealer to perform this service.

RA84036,00017EC-19-03JUL18

## Replace Water Pump

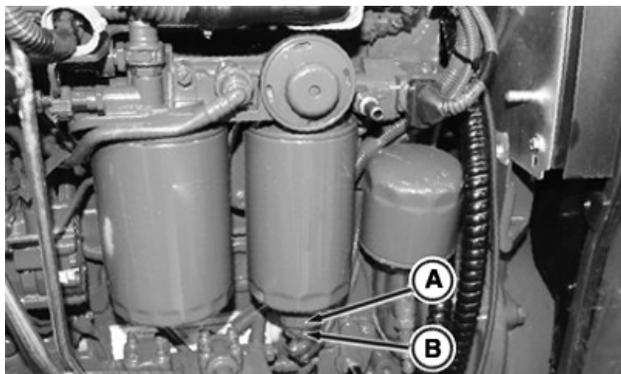
Ask your authorized dealer to perform this service.

RA84036,00017ED-19-03JUL18

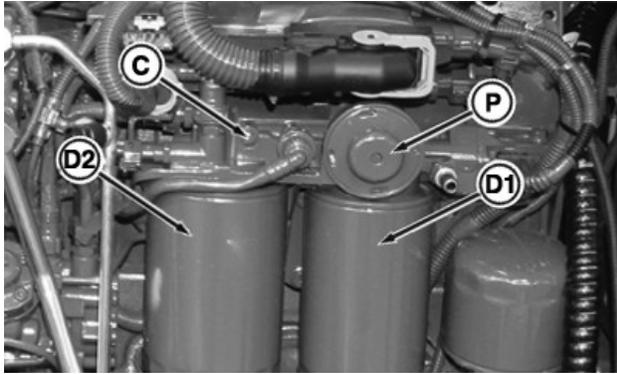
## Replace Fuel Filter

**CAUTION:** Before starting work, make sure that the engine is cold.

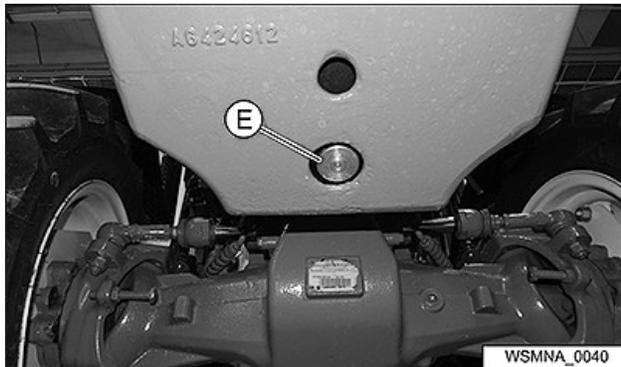
**CAUTION:** Handle fuel with care, it is highly flammable. Never perform work on the fuel system while smoking, or next to open flames or sparks.



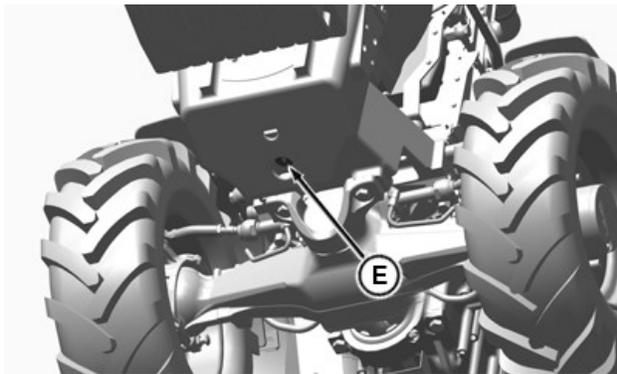
PY34429—UN—15NOV16



PY42853—UN—01AUG17



WSMNA\_0040  
WSMNA0040—UN—02NOV15



PY28364—UN—27SEP16

(5GL)

- A—Connector
- B—Water-in-Fuel Sensor
- C—Bleed Screw
- D1—Fuel Prefilter
- D2—Fuel Filter
- E—Fuel Tank Drain Screw
- P—Hand Primer

1. Disconnect the battery. See Battery Cut-Off Switch (If Equipped) in Service — Electrical System (section 220B).
2. Open the hood and remove the left-hand engine side panel.
3. Remove connector (A).
4. Position a suitable container under the water-in-fuel sensor (B) and collect the draining fuel.
5. Unscrew the water-in-fuel sensor (B) and the bleed screw (C).

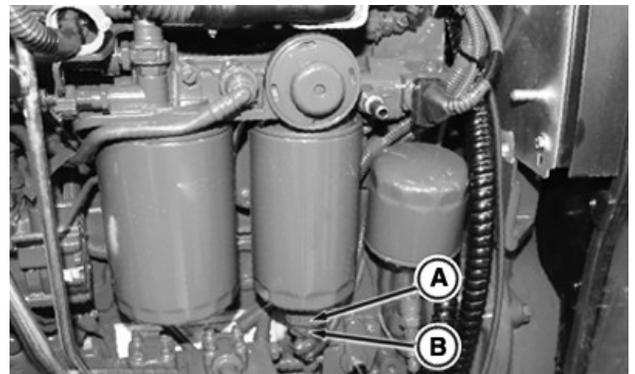
**IMPORTANT:** Do not allow draining fuel to soil the drive belt or the environment.

6. Unscrew the fuel prefilter (D1) and fuel filter (D2) cartridges.
7. Clean the gasket seat on the support and slightly oil the gasket on the new fuel filter.
8. Screw the new fuel filter cartridges (D1) and (D2) on their seats and hand-tighten them. Make sure that the gaskets are correctly seated.

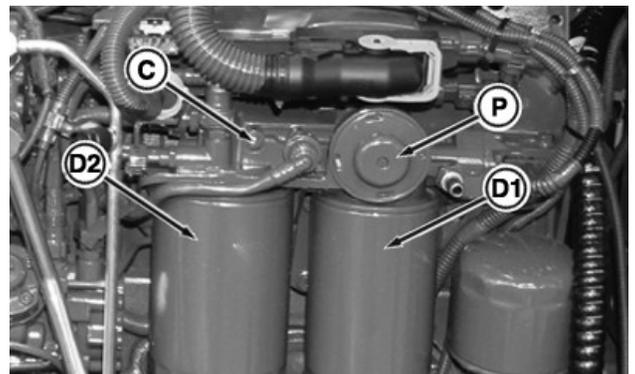
Tighten to the specification.

**Specification**

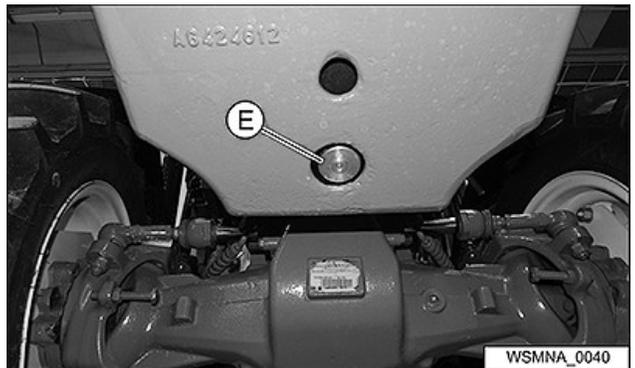
Fuel Filter Cartridges (D1) and (D2)—Torque. . . . .	20 N·m 14.75 lb·ft
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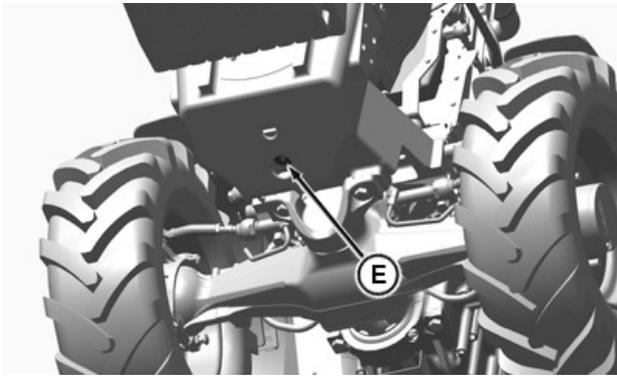
PY34429—UN—15NOV16



PY42853—UN—01AUG17



WSMNA\_0040  
WSMNA0040—UN—02NOV15

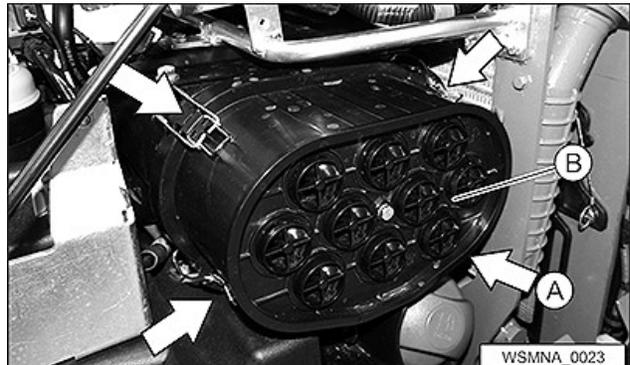


PY28364—UN—27SEP16

(5GL)

## Replace and Clean Engine Air Filter

**IMPORTANT:** Never run the engine without the primary filter element.



WSMNA\_0023  
WSMNA0023—UN—02NOV15

- A—Connector
- B—Water-in-Fuel Sensor
- C—Bleed Screw
- D1—Fuel Prefilter
- D2—Fuel Filter
- E—Fuel Tank Drain Screw
- P—Hand Primer

9. Retighten water-in-fuel sensor (B) to the specification (or by hand).

### Specification

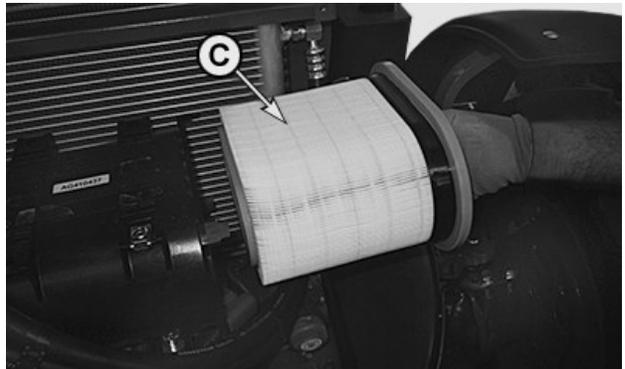
Water-in-Fuel Sensor  
(B)—Torque. . . . . 1.8 ± 0.65 N·m  
1.32 lb·ft

10. Operate the hand primer (P) on the fuel transfer pump until fuel appears at the bleed screw (C).
11. Tighten the bleed screw (C) after air has been removed from the system.
12. Connect the connector (A).
13. Connect the battery. See Battery Cut-Off Switch (If Equipped) in Service — Electrical System (section 220B).
14. Start the engine and let it run at idle for a few minutes to eliminate any residual air. Check fuel system for leaks.
15. If water is present in the fuel prefilter (D1), arrange a suitable container to collect the fuel. Open the drain screw (E) and drain the accumulated moisture and sediment from the fuel tank.
16. After having drained off any water deposits, retighten the drain screw (E) to the specification.

### Specification

Drain Screw (E)—Torque. . . . . 30 N·m  
22.12 lb·ft

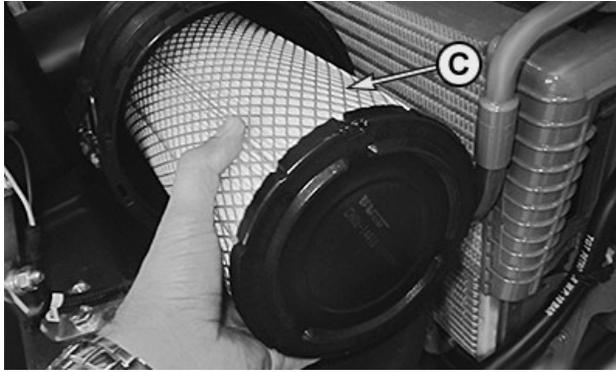
17. Install the left-hand engine side panel and close the hood.



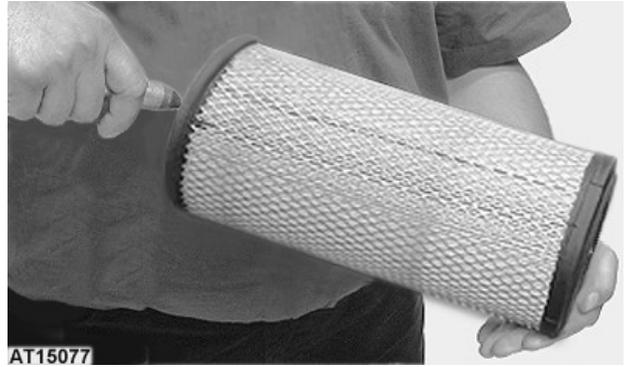
AGCPTJD0510—UN—27AUG13



AGCPTJD0543—UN—16DEC13  
5075 Models



AGCPTJD0544—UN—16DEC13  
5075 Models



AT15077  
5075 Models  
AT15077—UN—06AUG03

- A—Lock
- B—Cover
- C—Primary Filter Element

If the air cleaner indicator light comes on during operation, remove and clean the primary filter element (C).

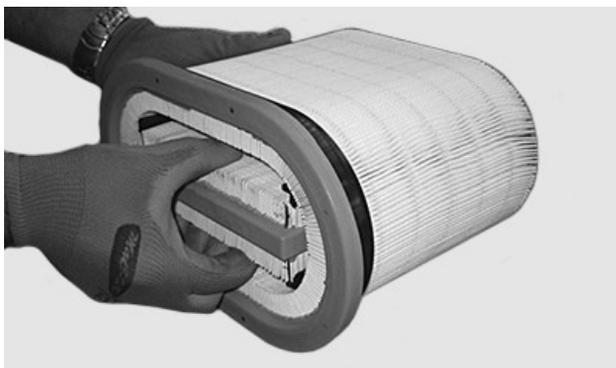
The service interval can be extended briefly, for example, until the next suitable opportunity. Provided the filter is serviced properly, this will not adversely affect its performance.

The primary filter element (C) can be cleaned up to 5 times. Thereafter, it must be replaced after 1500 hours of operation or 2 years, whichever comes first.

1. Open the hood and release locks (A). Remove cover (B).
2. Pull the primary filter element (C) out of the filter housing.
3. Install in reverse order.
4. Put on cover (B) and engage locks (A).

**IMPORTANT: Never close the hood or start the engine unless the filter is locked securely.**

### Cleaning a Dusty Filter Element



AGCPTJD0502—UN—27AUG13

If tapping element does not remove dust, blow out the dust with compressed air by inserting nozzle inside the element and blowing from the inside of the filter to the outside.

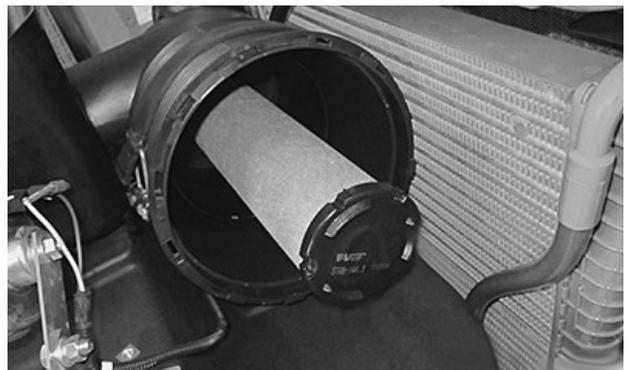
Pressure must not exceed 600 kPa (6 bar) (90 psi).

Replace element if air filter indicator light continues glowing after the element has been cleaned.

### Secondary (Safety) Filter Element



AGCPTJD0503—UN—27AUG13



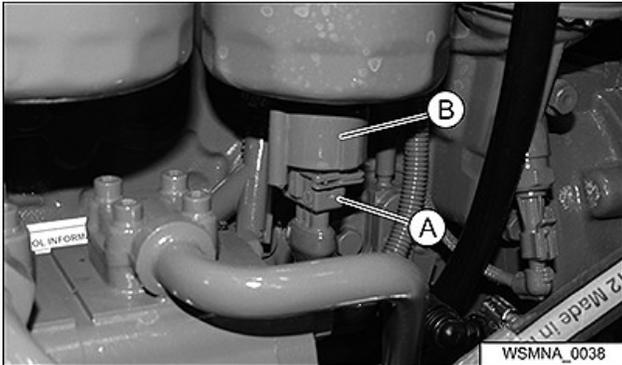
AGCPTJD0547—UN—16DEC13  
5075 Models

This filter element must be changed if it becomes damaged. Change it at every fifth change of the air filter primary filter element or after 1500 hours of operation.

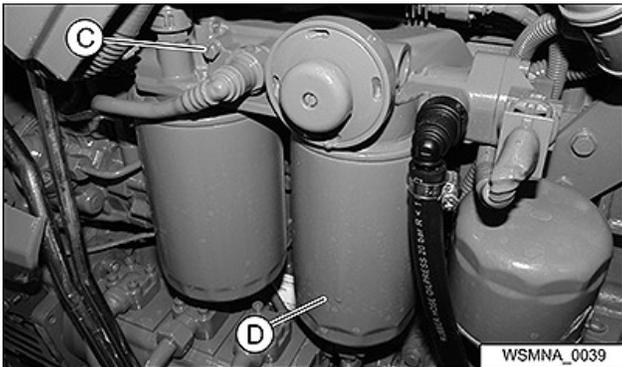
**IMPORTANT: Always replace secondary (safety) filter element. Do not attempt to clean it.**

RA84036,00017EF-19-03JUL18

### Drain Water and Sediment from Fuel Filter



WSMNA\_0038  
WSMNA0038—UN—02NOV15



WSMNA\_0039  
WSMNA0039—UN—02NOV15

- A—Connector
- B—Drain Screw
- C—Bleed Screw
- D—Fuel Filter

**CAUTION: CAUTION: Never open the fuel system when engine is hot. Handle fuel with care, it is highly flammable. Do not replace fuel filter while smoking or when near open flame or sparks.**

1. Disconnect the battery. See Battery Cut-Off Switch (If Equipped) in Service — Electrical System (section 220B).
2. Remove the connector (A).
3. Open drain screw (B) and bleed screw (C).

**NOTE:** Place a small container under the drain screw and catch draining fuel.

4. Retighten drain screw (B) as soon as fuel and any water and sediment deposits have drained out.

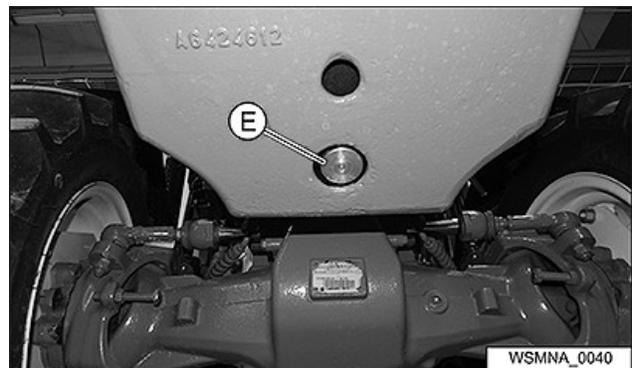
**IMPORTANT: Do not allow draining fuel to soil the drive belt or the environment.**

5. Operate the hand primer on the fuel transfer pump until fuel appears at the bleed screw (C).
6. Close bleed screw (C) after air has been removed from the system.
7. Reconnect the connector (A).
8. Connect the battery. See Battery Cut-Off Switch (If Equipped) in Service — Electrical System (section 220B).
9. Start the engine and run it at idle speed for a few minutes to eliminate any residual air. Check fuel system for leaks.

RA84036,00017F0-19-10JUL18

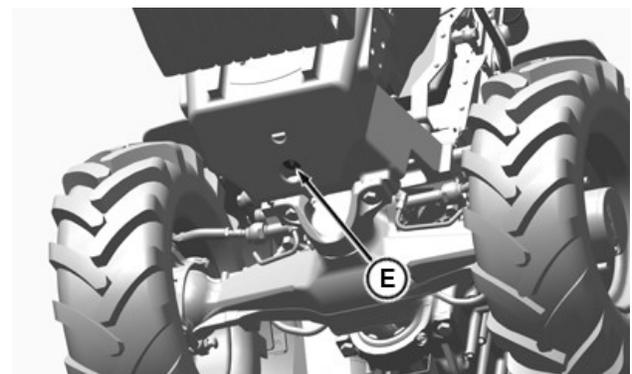
### Drain Water and Sediment from Fuel Tank

**CAUTION: Never open the fuel system when engine is hot. Handle fuel with care, it is highly flammable. Do not replace fuel filter while smoking or when near open flame or sparks.**



WSMNA\_0040  
WSMNA0040—UN—02NOV15

(5GV, 5GN)



PY28364—UN—27SEP16

(5GL)

**E—Drain Screw**

Arrange a suitable container to collect draining fuel.

Open the drain screw (E) to drain accumulated moisture and sediment from the fuel tank. After draining off any water deposits, retighten drain screw (E) until it is hand-tight.

**NOTE:** Place a small container under the drain screw to catch draining fuel.

RA84036,00017F1-19-09OCT18

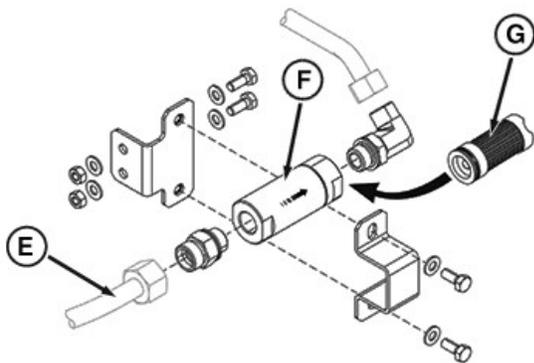
### Replace Transmission/Hydraulic Oil Filter Cartridge (Third Pump) (5GL)

**CAUTION:** Do not perform the oil change while the oil is hot, as there is the risk of injury.

**CAUTION:** Before working on hydraulic oil filters, ensure that the hydraulic oil is cold. Wear impervious, protective gloves. Otherwise there is a risk of burns, injuries, and/or health problems.

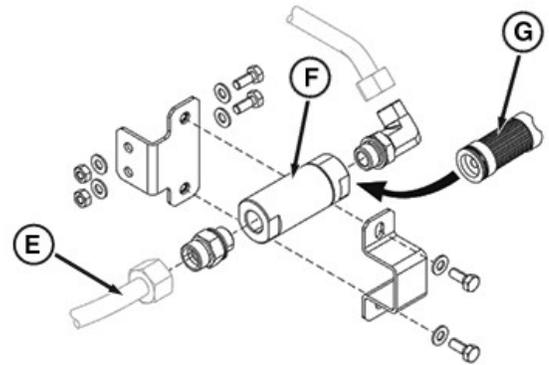


TS281—UN—15APR13



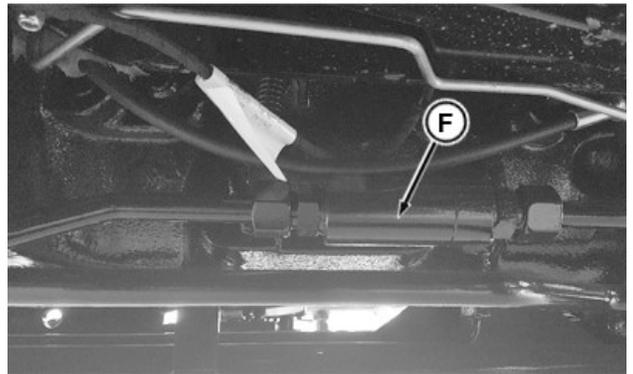
PY33430—UN—20OCT16

Removal



PY33432—UN—20OCT16

Installation



APY01845—UN—03JAN18

E—Oil Pipe  
F—Filter Cap  
G—Filter Cartridge

1. Disconnect the battery. See Battery Cut-Off Switch (If Equipped) in Service — Electrical System (section 220B).
2. Arrange a suitable container for collecting the hydraulic oil.
3. Disconnect the oil pipe (E).
4. Unscrew the filter cap (F).
5. Remove the filter cartridge (G).
6. Properly clean the filter cap (F) and its seat.
7. Apply a film of oil on the gasket.
8. Install new filter cartridge (G).
9. Refit the filter cap (F) and tighten to the specification.

#### Specification

Filter Cap (F)—Torque. . . . . 70 N·m  
51.62 lb·ft

10. Reconnect the oil pipe (E).
11. Restore the transmission oil level with proper oil. See Capacities in Specifications (section 500A) and Transmission and Hydraulic Oil in Other Lubricants (section 200E) in this manual.
12. Reconnect the battery. See Battery Cut-Off Switch

(If Equipped) in Service — Electrical System (section 220B).

13. Run the engine for several seconds.
14. Check the hydraulic oil level. See Check Transmission/Hydraulic System Oil Level in Service — Checks (section 220D) in this manual.
15. Check for leakage.

RA84036,00017F2-19-10JUL18

**NOTE:** Place a small container under the drain screw to catch draining fluid.

**IMPORTANT:** If fluid leakage is observed, wash the affected area only with water.

RA84036,00017F3-19-03JUL18

### Drain Sediment from DEF (Diesel Exhaust Fluid) Tank

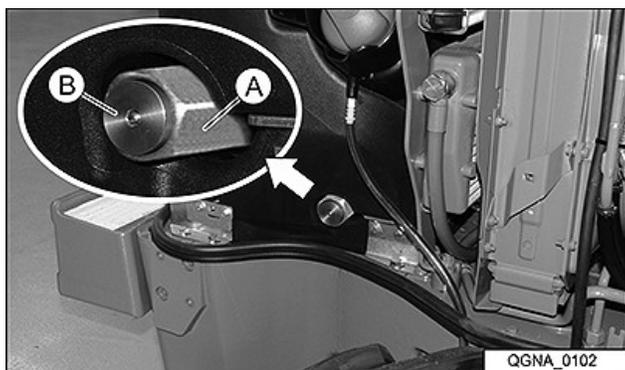


TS220—UN—15APR13



TS220—UN—15APR13

**CAUTION:** Operate only in ventilated places.  
 Handle DEF fluid carefully. Do not eat, drink, or smoke when using this product.  
 Always stop the engine before operating on the machine.

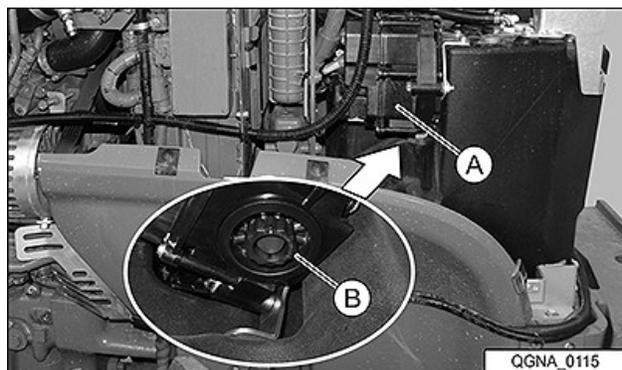


QGNA\_0102  
 QGNA0102—UN—02NOV15

A—Extension  
 B—Drain Screw

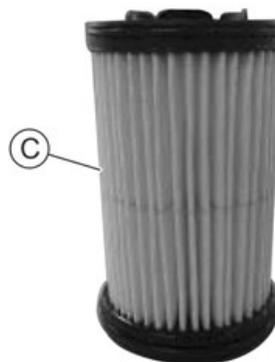
**CAUTION:** Operate only in ventilated places  
 Handle DEF fluid carefully. Do not eat, drink, or smoke when using this product.  
 Always stop the engine before operating on the machine.

1. Open the hood.
2. Remove the engine left side panel.
3. Keep extension (A) blocked with a suitable tool.
4. Unscrew the DEF tank drain screw (B) to bleed accumulated moisture and sediment from the DEF tank. Tighten drain screw (B) when clear DEF runs from fitting.



QGNA\_0115  
 QGNA0115—UN—02NOV15

A—Supply Module  
 B—Filter Cap



QGNA0116—UN—21DEC15

**C—Supply Module Filter**

1. Open the hood.
2. Remove the engine right side panel.
3. Unscrew the filter cap (B) of the Supply Module (A).

*NOTE: Place a small container under the drain cap to catch draining fluid.*

4. Remove the Supply Module Filter (C) and replace it with a new one.
5. Screw the filter cap (B) as per the specification.

**Specification**

Filter Cap (B)—Torque. . . . . 20-25 N·m  
 15-18 lb·ft

**IMPORTANT: Always replace the Supply Module Filter element, do not attempt to clean it.**

**Always replace the Supply Module Filter with an original spare part.**

**If fluid leakage is observed, wash the affected area only with water.**

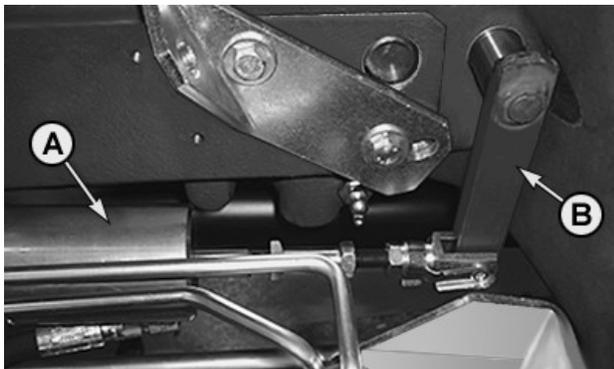
RA84036,00017F4-19-03JUL18

**Replace DOC SCR Filters**

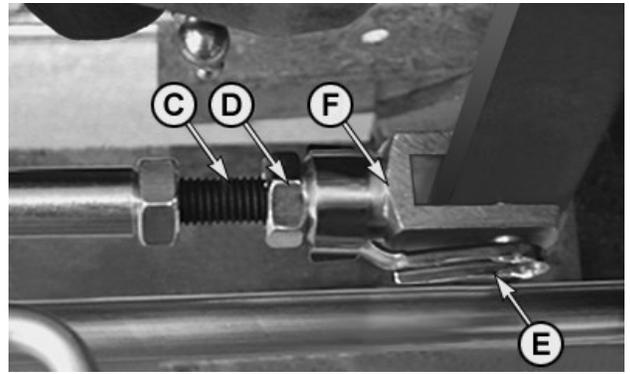
Ask your authorized dealer to perform this service.

RA84036,00017F5-19-03JUL18

**Adjust PTO Clutch Linkage**



AGCPTJD0518—UN—15JAN14



AGCPTJD0519—UN—15JAN14

- A—Actuator
- B—PTO lever
- C—Rod
- D—Lock Nut
- E—Clip Pin
- F—Yoke

1. Loosen the nut (D).
2. Remove the pin E from the yoke (F).
3. Move the PTO lever (B) to the left until it meets the stroke end position (PTO bearing is in contact with the PTO clutch fingers).
4. Keeping the PTO lever (B) in position, turn the yoke (F) so that the hole of the yoke (F) is aligned with the one of the PTO lever (B).  
  
Starting from this point, turn the yoke (F) by 1.5 rotations to extend the rod (C).
5. Match the PTO lever (B) and the yoke (F) with the pin (E) and tighten the nut (D).

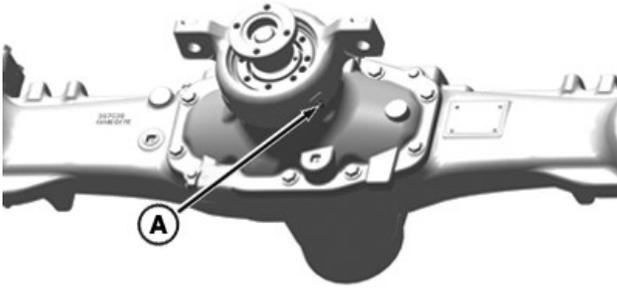
RA84036,00017F6-19-03JUL18

# Service — Lubrication

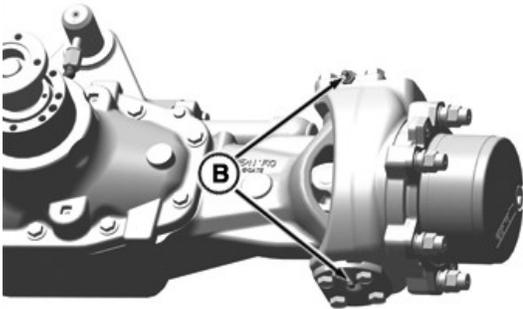
## Lubricate Front-Wheel Drive Axle

Apply several shots of multipurpose grease to the grease fitting (A), (B), (C), and (D).

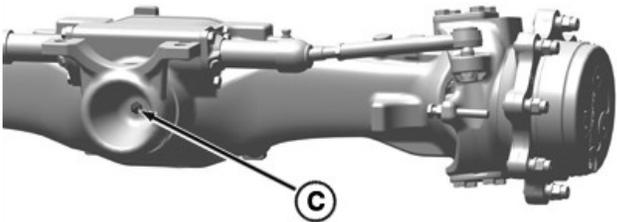
RA84036,00017D9-19-03JUL18



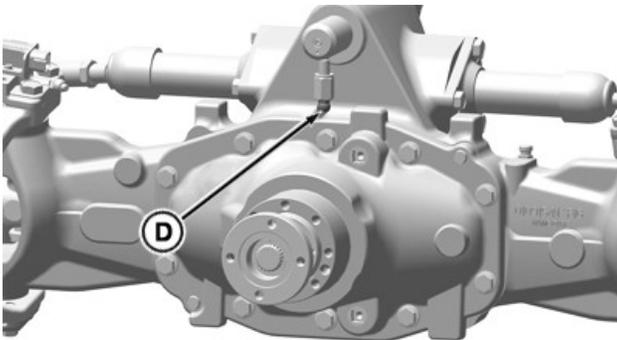
PY34404—UN—15NOV16



PY34405—UN—15NOV16



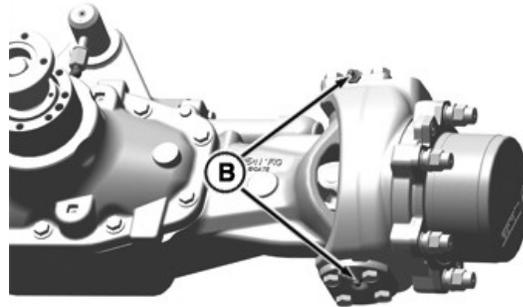
PY34406—UN—15NOV16



PY34407—UN—15NOV16

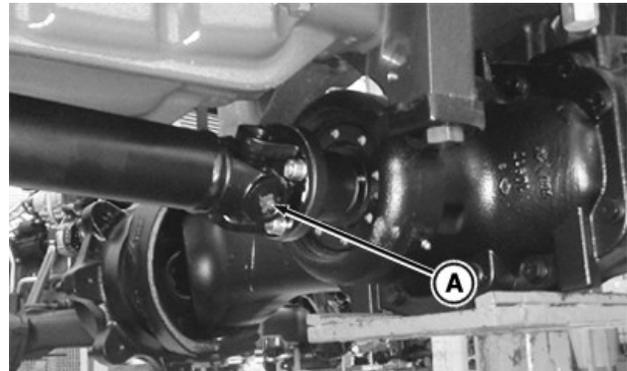
- A—Grease Fitting
- B—Grease Fitting
- C—Grease Fitting
- D—Grease Fitting

## Lubricate Front Axle King Pins

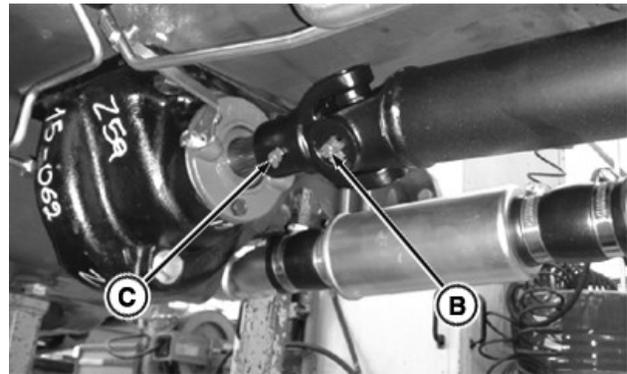


PY34405—UN—15NOV16

On tractors equipped with front-wheel drive axle, apply several shots of multi-purpose grease to upper and lower front axle king pin fittings (B).



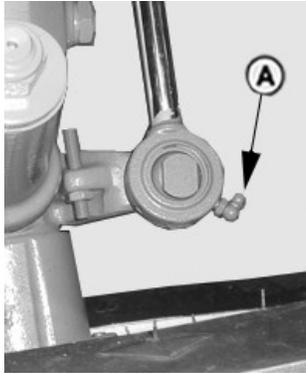
PY34408—UN—15NOV16



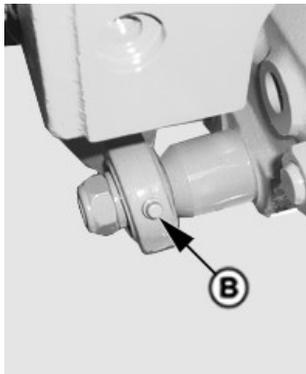
PY34409—UN—15NOV16

- A—Grease Fitting
- B—Grease Fitting
- C—Grease Fitting

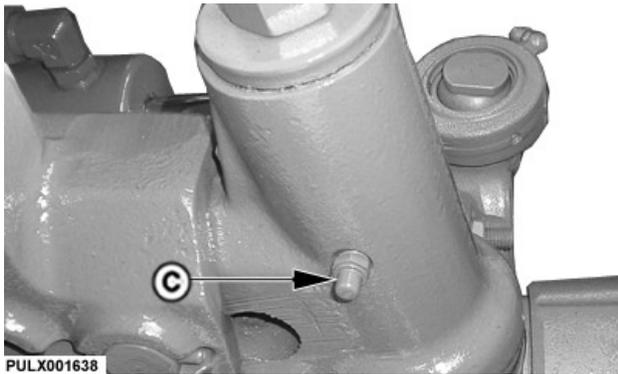
On tractors equipped with the front wheel drive axle, apply several shots of multi-purpose grease to grease fittings (A), (B), and (C).



PULX001646—UN—26SEP08



PULX001644—UN—26SEP08



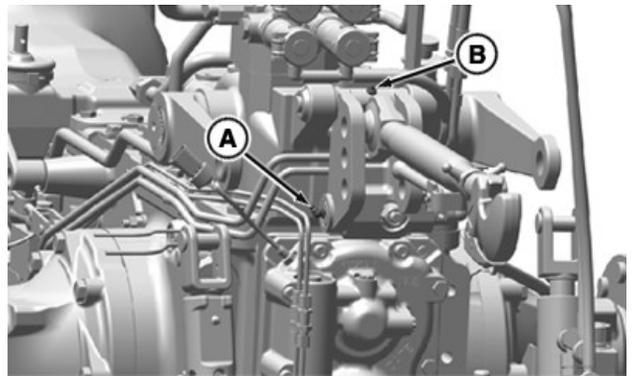
PULX001638

PULX001638—UN—26SEP08

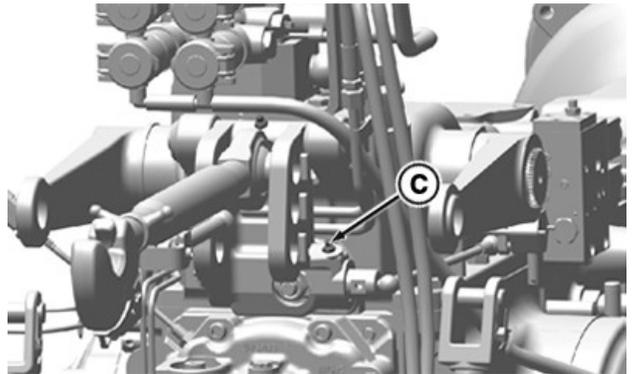
On tractors equipped with the adjustable front axle, apply several shots of multi-purpose grease to fittings (A), (B), and (C).

RA84036.00017DA-19-03JUL18

## Lubricate 3-Point Hitch



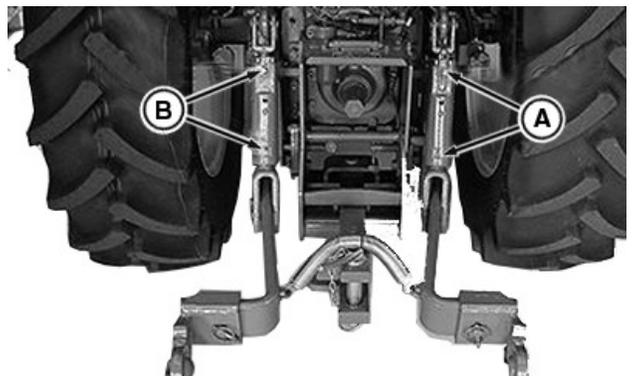
PY34413—UN—15NOV16



PY34414—UN—15NOV16

A—Fitting  
B—Fitting  
C—Fitting

1. Apply several shots of multi-purpose grease to fittings (A), (B), and (C).



PY28262—UN—25AUG16

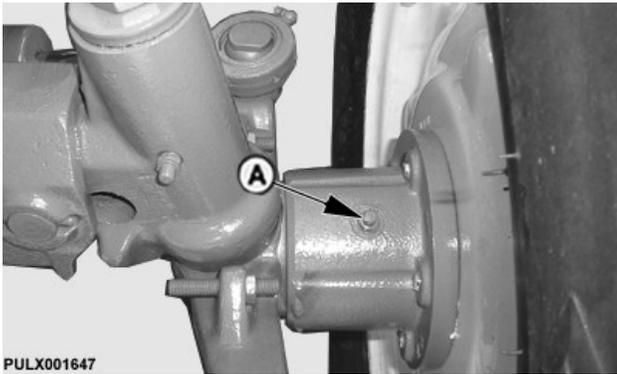
A—Right-hand Lift Link  
B—Left-hand Lift Link

2. Lubricate 3-point hitch in shorter intervals when operating in wet and muddy conditions.

Lubricate right-hand lift link (A) and left-hand lift link (B) with several strokes of multi-purpose grease. See Other Lubricants (section 200E) in this manual.

RA84036.00017DB-19-10JUL18

## Lubricate Hub Bearings (Tractors Without Front-Wheel Drive)



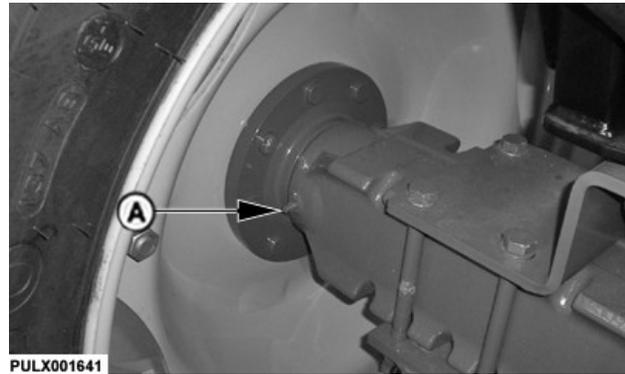
PULX001647

PULX001647—UN—26SEP08

Lubricate hub bearings (A) on both sides with several strokes of multipurpose grease.

RA84036,00017DC-19-03JUL18

## Lubricate Rear Axle Bearings



PULX001641

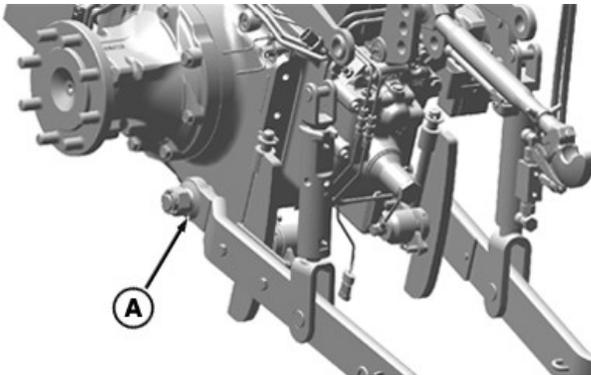
PULX001641—UN—26SEP08

*Rear axle design depends on tractor configuration*

Lubricate grease fittings (A) for rear axle bearings on both sides with several strokes of multi-purpose grease. See See Other Lubricants (section 200E) in this manual.

RA84036,00017DE-19-10JUL18

## Lubricate Draft Links



PY34416—UN—15NOV16

**A—Draft Links**

Lubricate draft links (A) on both sides with several strokes of multi-purpose grease.

RA84036,00017DD-19-03JUL18

## Lubricate

Lubricate the following items every 10 hours of operation when operating in wet or muddy conditions:

- Front axle pivot pin
- Front axle king pins
- Tie rod ends

Use specified multi-purpose grease. See Other Lubricants (section 200E) and Service Intervals (section 210B) in this manual.

RA84036,00017DF-19-10JUL18

# Troubleshooting

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## Diagnostic Trouble Codes - Operator Information

The most diagnostic trouble codes are stored on the control unit. Some diagnostic trouble codes are

displayed on the digital display automatically. See the table for more information.

RA84036,00017D2-19-03JUL18

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## Engine Troubleshooting

Symptom	Problem	Solution
<b>Engine hard to start or will not start</b>	Improper starting procedure.	Reviewing starting procedure.
	No fuel.	Check fuel tank.
	Air in fuel system.	Bleed fuel system.
	Hand primer left raised.	Push primer down.
	Cold weather.	Use cold weather starting procedure.
	Slow starter speed.	See "Starter Cranks Slowly".
	Crankcase oil too heavy.	Use oil of proper viscosity.
	Improper type of fuel.	Consult fuel supplier; use proper type fuel for operating conditions.
	Water, dirt, or air in fuel system.	Drain, flush, fill and bleed system.
	Clogged fuel filter.	Replace filter element.
	Dirty or faulty injectors.	Have John Deere dealer check injectors.
	Injection pump shut-off not reset.	Turn key switch to "OFF" then to "ON".
	Fuel shut-off valve closed.	Open fuel shut-off valve.
<b>Engine knocks</b>	Insufficient oil.	Add oil.
	Injection pump out of time.	See your John Deere dealer.
	Low coolant temperature.	Remove and check thermostat.
<b>Engine runs irregularly or stalls frequently</b>	Engine overheating.	See "Engine Overheats".
	Low coolant temperature.	Remove and check thermostat.
	Clogged fuel filter.	Replace filter element.
	Water, dirt, or air in fuel system.	Drain, flush, fill, and bleed system.
	Dirty or faulty injectors.	Have John Deere dealer check injectors.

## *Troubleshooting*

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<b>Symptom</b>	<b>Problem</b>	<b>Solution</b>
	Improper type of fuel.	Use proper fuel.
<b>Below normal engine temperature</b>	Defective temperature gauge or sender.	Check gauge, sender and connections.
<b>Lack of power</b>	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 fuel filter.	Replace filter element.
	Improper type of fuel.	Use proper fuel.
	Overheated engine.	See "Engine Overheats".
	Below normal engine temperature.	Remove and check thermostat.
	Improper valve clearance.	See your John Deere dealer.
	Dirty or faulty injectors.	Have John Deere dealer check injectors.
	Injection pump out of time.	See your John Deere dealer.
	Turbocharger not functioning.	See your John Deere dealer.
	Leaking exhaust manifold gasket.	See your John Deere dealer.
	Implement improperly adjusted.	See implement operator's manual.
	Restricted fuel line.	Clean or replace fuel line.
	Restricted return line.	Clean or replace return line.
	Improper ballast.	Adjust ballast to load.
<b>Low oil pressure</b>	Low oil level.	Add oil.
	Improper type of oil.	Drain, fill crankcase with oil of proper viscosity and quality.
<b>High oil consumption</b>	Crankcase oil too light.	Use proper viscosity oil.
	Oil leaks.	Check for leaks in lines, around gaskets and drain plugs.
	Restricted crankcase vent tube.	Clean vent tube.
	Defective turbocharger.	See your John Deere dealer.
<b>Engine emits white smoke</b>	Improper type fuel.	Use proper fuel.

## *Troubleshooting*

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<b>Symptom</b>	<b>Problem</b>	<b>Solution</b>
	Low engine temperature.	Warm up engine to normal operating temperature.
	Defective thermostat.	Remove and check thermostat.
	Defective injection nozzles.	See your John Deere dealer.
	Engine out of time.	See your John Deere dealer.
<b>Engine emits black or grey exhaust smoke</b>	Improper type of fuel.	Use proper fuel.
	Clogged or dirty air cleaner.	Service air cleaner.
	Engine overloaded.	Reduce load or shift to a low gear.
	Injection nozzles dirty.	See your John Deere dealer.
	Engine out of time.	See your John Deere dealer.
	Turbocharger not functioning.	See your John Deere dealer.
<b>Engine overheats</b>	Dirty radiator core, 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 proper level, check radiator, expansion tank, and hoses for loose connection or leaks.
	Faulty radiator cap.	See your John Deere dealer.
	Loose or defective fan belt.	Adjust belt tension; replace belt, if necessary
	Cooling system needs flushing.	Flush cooling system.
	Defective thermostat.	Remove and check thermostat.
	Defective temperature gauge or sender.	See your John Deere dealer.
	Incorrect grade of fuel.	Use proper fuel.
<b>High fuel consumption.</b>	Improper type of fuel.	Use proper fuel.
	Clogged or dirty air cleaner.	Service air cleaner.
	Engine overloaded.	Reduce load or shift to a lower gear.
	Improper valve clearance.	See your John Deere dealer.

## *Troubleshooting*

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<b>Symptom</b>	<b>Problem</b>	<b>Solution</b>
	Injection nozzles dirty.	See your John Deere dealer.
	Engine out of time.	See your John Deere dealer.
	Implement improperly adjusted.	See implement operator's manual.
	Low engine temperature.	Check thermostat.
	Excessive ballast.	Adjust ballast to load.
	Defective turbocharger.	See your John Deere dealer.
	Restricted air intake system.	Check system.
	Plugged crankcase vent tube.	Clean vent tube.

RA84036,00017D3-19-03JUL18

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### **Transmission Troubleshooting**

<b>Symptom</b>	<b>Problem</b>	<b>Solution</b>
<b>Transmission oil overheats</b>	Low oil supply.	Fill system with correct oil.
	Clogged transmission-hydraulic oil filter.	Replace filter.
	Internal hydraulic leak.	See your John Deere dealer.
	Hitch feedback linkage improperly adjusted.	Reset linkage. See your John Deere dealer.
	Hydraulic motor not connected correctly.	See your John Deere dealer.
<b>Low transmission pressure.</b>	Low oil supply.	Fill system with correct oil.
	Clogged transmission-hydraulic oil filter.	Replace filter.

RA84036,00017D4-19-03JUL18

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### **Brakes Troubleshooting**

<b>Symptom</b>	<b>Problem</b>	<b>Solution</b>
<b>No solid pedal feel</b>	Air in system.	See your John Deere dealer.
<b>Pedal settles</b>	Rear brake piston seal leaking.	See your John Deere dealer.
<b>Excessive pedal travel</b>	Air in system.	See your John Deere dealer.

## Troubleshooting

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Symptom	Problem	Solution
<b>Brakes drag during transport</b>	Brakes out of adjustment.	See your John Deere dealer.

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RA84036,00017D5-19-03JUL18

### Rockshaft and Quick-Coupler 3-Point Hitch Troubleshooting

Symptom	Problem	Solution
<b>Insufficient transport clearance</b>	Center link too long.	Adjust center link.
	Lift links too long.	Adjust lift links.
	Implement not level.	Level implement.
	Implement not properly adjusted.	See implement operator's manual.
	Center link in upper holes.	Move center link to lower holes.
	Sway chains adjusted too short.	Lengthen sway chains.
<b>Hitch drops slowly</b>	Rockshaft rate-of-drop control not properly set.	Adjust rate-of-drop knob.
<b>Hitch fails to lift or lifts slowly</b>	Excessive load on hitch.	Reduce load.
	Hitch fails to lift or lifts slowly	Adjust flow divider valve and /or change the allocation.
	Low oil level.	Fill system with proper oil.
	Hydraulic oil too cold.	Allow oil to warm.
	Transmission-hydraulic oil filter clogged.	Replace filter.
	Transmission-hydraulic filter screen clogged.	Clean or replace screen.
<b>Implement will not operate at desired depth</b>	Lift links too short.	Adjust lift links.
	Lack of penetration.	See implement operator's manual
	Improper setting of limit stop.	Reset position limit.
	Improper setting of draft lever.	See section "Rockshaft and Three-Point Hitch".
<b>Insufficient or no hitch response to draft load</b>	Center link in upper holes.	Move center link to lower holes.
	Draft control lever in "Off" position.	Move lever rearward.
	Lift links too short.	Adjust lift links.

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## Troubleshooting

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Symptom	Problem	Solution
	Flow divider valve closed	Adjust flow divider valve and/or change the allocation
	Lack of penetration.	See implement operator's manual.
	Rate-of-drop too slow.	Adjust rate-of-drop valve.
<b>Hitch too responsive</b>	Center link in lower holes.	Move center link to upper holes.
	Sensitivity valve set too responsive	Adjust sensitivity valve
<b>Hitch drops too fast</b>	Rate-of-drop set too fast.	Adjust rate-of-drop.

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### Remote Hydraulic Cylinders Troubleshooting

Symptom	Problem	Solution
<b>Direction of remote cylinder travel is reversed</b>	Improper hose connections.	Reverse hose connections.
<b>Hoses will not couple</b>	Improper hose male tips.	Replace tip with ISO Standard tips.
<b>Remote cylinder will not lift load</b>	Excessive load.	Reduce load.
	Flow divider valve closed.	Adjust flow divider valve.
	Hoses not completely installed.	Attach hoses correctly.
	Incorrect remote cylinder size.	Use correct size cylinder.
<b>Automatic return to neutral position of no. 2 SCV lever does not function and direction of remote cylinder travel is reversed</b>	Improper hose connections.	Reverse hose connections.

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### Electrical System Troubleshooting

Symptom	Problem	Solution
<b>Battery will not charge</b>	Loose or corroded connections.	Clean and tighten connections.
	Sulfated or worn-out battery.	Replace battery.
	Loose or defective fan belt.	Adjust belt tension or replace belt.
<b>Charging system indicator glows with engine running</b>	Low engine speed.	Increase speed.
	Defective battery.	Replace battery.
	Defective alternator.	See your John Deere dealer.

*Troubleshooting*

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<b>Symptom</b>	<b>Problem</b>	<b>Solution</b>
	Slipping fan belt.	Tighten belt.
<b>Starter inoperative</b>	Gear shift lever in gear.	Move lever to neutral.
	PTO lever in engaged position.	Move PTO lever to disengaged position.
	Low battery output.	Charge or replace battery.
	Blown fuse.	Replace fuse.
<b>Starter cranks slowly</b>	Low battery output.	Charge or replace battery.
	Crankcase oil too heavy.	Use proper viscosity oil.
	Loose or corroded connections.	Clean and tighten loose connections.
<b>Light system does not function; rest of electrical system functions</b>	Blown fuse.	Replace fuse.
<b>Entire electrical system does not function</b>	Faulty battery connection.	Clean and tighten connections.
	Sulfated or worn-out batteries.	Replace battery.
	Blown fuse.	Replace fuse.
<b>Relay(s) sticking or nonfunctional; repeated failures</b>	Diode to protect circuit from arcing has failed.	Replace diode module.

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# Storage

## Storage for Long Period

The following storage preparations are good for long term tractor storage up to one year. When this time is up, run the engine until it reaches operating temperature and operate some hydraulic functions. Afterwards retreat tractor for an extended storage period.

**IMPORTANT: Any time your tractor will not be used for over six (6) months, the following recommendations for storing it and removing it from storage will help to minimize corrosion and deterioration.**

Change engine oil and replace filter. Change transmission oil and filter. Used oil will not give adequate protection.

Clean air cleaner.

Draining and flushing of cooling system is not necessary if engine is to be stored only for several months. However, for extended storage periods of a year or longer, it is recommended that the cooling system be drained, flushed and refilled. Refill with appropriate coolant.

Fill the fuel tank.

Remove fan/alternator belt, if desired.

Remove and clean battery. Store it in a cool, dry place and keep it fully charged.

Clean the exterior of the tractor with salt-free water and touch up any scratched or chipped painted surfaces with a good quality paint.

Coat all exposed (machined) metal surfaces with grease or corrosion inhibitor if not feasible to paint.

Seal all openings such as the vent tube and exhaust outlet.

Store the machine in a dry, protected place. If the tractor must be stored outside, cover it with a waterproof canvas or other suitable protective material and use a strong waterproof tape.

Block up the tractor so that tires do not touch the ground. Protect tires from heat and sunlight.

Secure clutch pedal in disengaged position.

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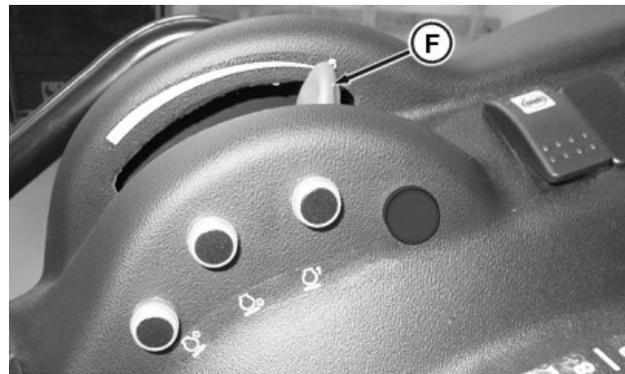
## Remove Tractor from Storage

1. Check tire inflation pressure, see Specifications (section 500A) in this manual.
2. Unseal all openings sealed when storing tractor.
3. Install battery.

**IMPORTANT: On tractors with cab, if the air conditioner compressor has seized, do not run the engine with compressor clutch engaged. Drive belt or compressor damage could be the result.**

4. On tractors with cab: check that compressor pulley moves freely and is not seized.
5. Adjust tension of the alternator/fan belt. On tractors with cab, adjust tension of the compressor drive belt.
6. Release clutch pedal.
7. Check levels of engine oil, transmission-hydraulic oil, and engine coolant. Add if necessary.
8. Drain a small amount of fuel from the fuel tank to purge any moisture condensation that has collected.
9. Fill fuel tank.
10. Perform all appropriate 10 hour, 250 hour, and 500 hour services as instructed. See Service (Daily / Every 10, 50, 250, 500, and 750 Hours) (section 210B) in this manual.

**IMPORTANT: DO NOT operate starting motor more than 20 seconds at a time. Wait at least 2 minutes for the motor to cool before trying again.**



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F—Hand Throttle

11. Pull hand throttle (F) all the way back and start engine until oil pressure rises.
12. Connect wiring lead to fuel injection pump shutoff solenoid.
13. Start engine. Operate engine at low idle for several minutes. Warm up carefully and check all systems before placing tractor under load.

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# Specifications

## Engine

Tractor Model	5075	5090	5090 IPM	5100	5100 IPM
Engine Type	F5DFL413C*E	F5GFL413L*B	F5GFL413K*B	F5GFL413J*B	F5GFL413H*B
Aspiration	Turbocharger and Air-to-Air After-Cooled		Turbocharger and Air-to-Air After-Cooled		Turbocharger and Air-to-Air After-Cooled
Power at Rated Speed (acc. to 97/68 EEC)	55 kW (75 hp) at 2300 rpm	67 kW (91 hp) at 2300 rpm	71 kW (97 hp) at 2300 rpm	75 kW (102 hp) at 2300 rpm	77 kW (105 hp) at 2300 rpm
Maximum Torque	321 N·m at 1500 rpm	366 N·m at 1500 rpm		401 N·m at 1500 rpm	404 N·m at 1500 rpm
Number of Cylinders	4	4		4	
Bore	99 mm (3.89 in)	99 mm (3.89 in)		99 mm (3.89 in)	
Stroke	110 mm (4.32 in)	110 mm (4.32 in)		110 mm (4.32 in)	
Displacement	3387 cm <sup>3</sup> (206.7 in <sup>3</sup> )	3387 cm <sup>3</sup> (206.7 in <sup>3</sup> )		3387 cm <sup>3</sup> (206.7 in <sup>3</sup> )	
Compression Ratio	17 : 1	17 : 1		17 : 1	
Firing order	1—3—4—2	1—3—4—2		1—3—4—2	
Valve Clearance					
Intake Valve Clearance	0.25 +/- 0.05	0.25 +/- 0.05		0.25 +/- 0.05	
Exhaust Valve Clearance	0.50 +/- 0.05	0.50 +/- 0.05		0.50 +/- 0.05	
Slow Idle	800—900 rpm	800—900 rpm		800—1000 rpm	
Fast Idle	2400—2500 rpm	2400—2500 rpm		2400—2500 rpm	
Rated Engine Speed	2300 rpm	2300 rpm		2300 rpm	
Operating Speed Range	1200—2300 rpm	1200—2300 rpm		1200—2300 rpm	
Engine Oil Capacity (including oil filter)	9.5 L (2.50 gal)	9.5 L (2.50 gal)		9.5 L (2.50 gal)	
Speed for PTO Operation					
540 rpm Rear PTO	1938 rpm	1938 rpm		1938 rpm	
540E rpm Rear PTO	1648 rpm	1648 rpm		1648 rpm	

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## JD After Treatment System

After Treatment System	5075 GV—5075GN	5075 GL	5090GV—5090GN	5100GV—5100GN
	DOC + DPF (under bonnet)	DOC + DPF (Out of bonnet)	DOC + SCR (under bonnet)	DOC + SCR (under bonnet)

MS76789,000066E-19-05DEC18

## DPF Soot Load

Soot Load	Less than 90%	90%—130%	130%—170%	170%—230%	More than 230%
Action Required	No Action	Possible automatic regeneration (managed by the ECU)	Automatic regeneration enabled, Manual regeneration requested	Soft engine derate (25% engine power derate applied). <i>NOTE: Contact certified dealer</i>	Strong engine derate (55% engine power derate applied). <i>NOTE: Contact certified dealer</i>

## Specifications

MS76789,000066F-19-19DEC18

### Transmission

Transmission	Availability
12/12 Synchronized Gears (5GN and 5GV Tractor Models only)	
24/12 Synchronized Gears with electrohydraulic high-low and declutch switch on the gearshift lever	
Gear Selections	Lever
Shifting	Manual
Final Drive	Planetary Gear
<b>Clutch</b>	
12/12 Transmission (5GN and 5GV Tractor Models only)	Dual, Dry
24/12 Transmission	PTO, Electrohydraulic Wet Clutch

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### Hydraulic System

Type	Position and Draft Control
Pump	Tandem Gear
Pump Displacement	
Steering	11 cm <sup>3</sup> (0.67 in <sup>3</sup> )
Implement	25 cm <sup>3</sup> (1.53 in <sup>3</sup> )
Implement (optional)	11 cm <sup>3</sup> (0.67 in <sup>3</sup> )
Flow Rate <sup>a</sup> (1 gal/min = 3.7854 L/min)	
Steering	29.8 L/min (7.9 gal/min)
Implement	66.8 L/min (17.65 gal/min)
Implement (optional)	28.9 L/min (7.6 gal/min)
Maximum Pressure	
Steering	19000—19500 kPa (190—195 bar) (2756—2683 psi)
Implement	19000—19500 kPa (190—195 bar) (2756—2683 psi)
Steering System	Hydrostatic Power
SCV Flow Rate <sup>a</sup>	59 L/min (15.6 gal/min)
Base configuration	10—36 L/min (2.64—9.52 gal/min)
2 Pumps + Flow Regulator Configuration	8—40 L/min (2.11—10.58 gal/min)
3 Pumps + Flow Regulator Configuration	0—32 L/min (0—8.46 gal/min)

<sup>a</sup>Flow rate at 90% pump efficiency and engine at rated speed

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### Electrical System

Type	12 V, Negative Ground
Battery	12 V, 100 Ah
Alternator <sup>a</sup>	95 A
Starting Motor	12 V, 4.2 kW

<sup>a</sup>Tractors with Cab

## Specifications

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### Fuel System

Type ..... | High-Pressure Common Rail Injection System

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### Capacities

#### Fuel Tank Capacity

Tractor Models	Tractor without Front PTO		Tractor with Front PTO		Auxiliary Fuel Tank (OPT)	
	L	gal	L	gal	L	gal
5090 / 5100	75.5	19.9	50	13.2	20	5.28
5075GV / 5075GN	86	22.7	64.5	17		
5075	74	19.6	—	—	—	—

DEF Tank, total (5GV and 5GN Tractor Models only)	10.3 L (10.92 qt)
DEF Tank, effective (5GV and 5GN Tractor Models only)	9.3 L (9.88 qt)
<b>Cooling System</b>	
Tractors without cab	10 L (10.6 qt)
Tractors with cab	12 L (12.72 qt)
<b>Crankcase (including filter change)</b>	
	9.5 L (10.04 qt)
<b>Transmission/Hydraulic System <sup>a</sup></b>	
— 12/12 Transmission with Front-Wheel Drive	39 L (10.30 gal)
— 24/12 Transmission with Front-Wheel Drive	43 L (11.4 gal)
<b>Front-Wheel Drive Axle</b>	
<b>5GV</b>	
Final Drive, each	0.6 L (0.6 qt)
Axle Housing	4 L (4.24 qt)
<b>5GN</b>	
Final Drive, each	0.4 L (0.42 qt)
Axle Housing	3 L (3.18 qt)
<b>5GL</b>	
Final Drive, each	0.6 L (0.6 qt)
Axle Housing	3.5 L (3.7 qt)
<b>Brake System</b>	
Oil Reservoir	0.5 L (0.53 qt)
<b>Air Conditioning System(5GV and 5GN Tractor Models only)</b>	
R-134a refrigerant	1 kg (35.274 oz)

<sup>a</sup>Oil volume varies depending on the configuration of the hydraulic system

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## Sound Level

Maximum Pass-by Noise Measurement method in accordance with Directive 2009/63/EC											
Models	5GV				5GN						5GL
	5075		5090		5075		5090		5100		5075
Exhaust system	Horizontal	Vertical	Horizontal								
In motion dB (A)	80.0	79.0	81.0	80.0	79.0	79.0	79.0	79.0	79.0	79.0	82.0
Stationary dB (A)	82.0	81.0	79.0	80.0	82.0	82.0	82.0	82.0	82.0	82.0	81.0
Engine speed (rpm)	2450		2450		2450		2450		2450		2450

Maximum Sound Level at the Operator's Ear Measurement method in accordance with Directive 2009/76/EC, Annex II											
Models	5GV				5GN						5GL
	5075		5090		5075		5090		5100		5075
Exhaust system	Horizontal	Vertical	Horizontal								
ROPS	85.0	84.0	84.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	86.0
Cab closed dB (A)	81.0	80.0	79.0	80.0	79.0	77.0	79.0	77.0	79.0	77.0	—
Cab opened dB (A)	82.0	81.0	81.0	81.0	81.0	79.0	81.0	79.0	81.0	79.0	—
Engine speed (rpm)	2450		2450		2450		2450		2450		2450

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## Brakes

Type	Oil immersed multi-disk
Number of Disks per Side	5
Outer diameter of Disks	165 mm (6.5 in)
Inner diameter of Disks	110 mm (4.3 in)

Park Brake . . . . . Mechanical lever, activates foot brake  
 Brake Assist . . . . . Automatically engaged when the brakes are applied

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## Three-Point Hitch

Three Point Hitch Category - I, II, and 1N

Three-Point Hitch	Kg	lb
Maximum Lifting Force	2400	5290
Hitch Lift Capacity at 610 mm	1630	3593
Additional Cylinder Maximum Lift Capacity – ball ends <sup>a</sup>	3040	6700

<sup>a</sup>Optional (3 tons)

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## Loads and Weights

Maximum Permissible Vertical Loads

Drawbar + Hammer Strap	750 kg (1653 lb)
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*NOTE: Traffic regulations in certain countries restrict the permissible loads and total weight to figures lower than the quoted in the table.*

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## Towable Loads

Depending on how the towed load is braked, the following weights and speeds are permitted:

Maximum Towable Load . . . . . 8000 kg (17637 lb)

There is a legal limit in force that restrict weights and/or travel speeds to figures lower than these quoted here.

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Specifications

## Shipping Weights

Shipping Weights of Tractors with Front-Wheel Drive						
	5GV		5GN		5GL	
	kg	lb	kg	lb	kg	lb
Front	1140	1230	1170	1240	1360	2992
Rear	1470	1860	1550	1870	1545	3399
Total	2610	3090	2740	3110	2905	6391

Shipping Weights of Tractors without Front-Wheel Drive				
	5GV		5GN	
	kg	lb	kg	lb
Front	1035	1085	1040	1125
Rear	1465	1710	1540	1860
Total	2500	2795	2580	2895

*NOTE: Tare weight (according to EEC 74/150) is the unladen weight of tractor in running order, excluding optional accessories but including coolant, oils, full fuel tank, tools, and operator (75 kg) (165 lb).*

Maximum Permissible Load on Tractors without Front-Wheel Drive				
	5GV		5GN	
	kg	lb	kg	lb
Front	1800	3968	1800	3968
Rear	3000	6614	3000	6614
Total	4100	9039	4200	9259
Total 3 t	3500	7716	3500	7716

Maximum Permissible Load on Tractors with Front-Wheel Drive				
	5GV		5GN	
	kg	lb	kg	lb
Front	2000	4409	2200	4850
Rear	3000	6614	3100	6834
Total*	4100	9039	4400	9700
Total 3 t	3500	7716	3500	7716

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## Maximum Permissible Axle Loads and Total Weights

Maximum Permissible Load on Tractors without Front-Wheel Drive				
	5GV		5GN	
	kg	lb	kg	lb
Front	1800	3968	1800	3968
Rear	3000	6614	3000	6614
Total	4100	9039	4200	9240
Total 3 t	3500	7716	3500	7716

## Specifications

Maximum Permissible Load on Tractors with Front-Wheel Drive						
	5GV		5GN		5GL	
	kg	lb	kg	lb	kg	lb
Front	2000	4400	2200	4850	2000	4400
Rear	3000	6614	3100	6834	2500	5500
Total <sup>a</sup>	4100	9039	4400	9700	4200	9240
Total 3 t	3500	7716	3500	7716	3500	7716

<sup>a</sup>In certain countries limited to 3500 kg (7716 lb)

**NOTE:** The maximum permissible total weight is the weight of tractor and equipment allowed for driving on public roads up to 40 km/h (25 mph), without, however, exceeding individual axle and tire capacity.

**CAUTION:** Under no circumstances must this weight be exceeded.

**IMPORTANT:** Comply with maximum load capacity of tires.

**NOTE:** Traffic regulations in certain countries may restrict the permissible axle loads and total weight to figures lower than these quoted above.

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### Maximum Permissible Axle Load in Relation to Tires (Normal Operation)

**IMPORTANT:** The maximum permissible axle load must never be exceeded even though the tire load capacity is higher.

**NOTE:** The axle loads quoted here for normal operation apply only for travel speeds up to 40 km/h (25 mph) and at recommended inflation pressure.

**NOTE:** Traffic regulations in certain countries may restrict the permissible axle loads and total weight to figures lower than the quoted in the tables.

**NOTE:** Maximum tire load capacity depends on the recommended tire pressure. Use of tires with a load capacity exceeding the front-wheel drive axle load capacity allows lowering of the recommended tire pressure without any effect on the permissible front axle load. This can be advantageous when operating in difficult ground conditions. When reducing the tire pressure, refer to load capacity tables and tire pressure recommendations of the relevant tire manufacturers.

5GV Without Front-Wheel Drive												
Maximum Permissible Front Axle Load 1800 kg (3968 lb)												
Maximum Permissible Rear Axle Load 3000 kg (6614 lb)												
Rear Tires	Load Index (LI)	Tire Load Capacity (value for two tires per axle)				Inflation Pressure	Front Tires	Load Index (LI)	Tire Load Capacity (value for two tires per axle)			
		kg	lb	bar	psi				kg	lb	bar	psi
9.5 R28	109 A8	kg	2060	bar	1.6	6.00-16	8 PR	kg	1340	bar	3.3	
		lb	4542	psi	23			lb	2954	psi	48	
280/85 R28	118 A8	kg	2640	bar	1.6	6.00-16	8 PR	kg	1340	bar	3.3	
		lb	5820	psi	23			lb	2954	psi	48	
360/70 R24	122 A8	kg	3000	bar	1.6	6.00-16	8 PR	kg	1340	bar	3.3	
		lb	6614	psi	23			lb	2954	psi	48	
320/85 R28	124 A8	kg	3200*	bar	1.6	6.50-16	8 PR	kg	1500	bar	4.2	
		lb	7055*	psi	23			lb	3307	psi	61	
340/85 R24	125 A8	kg	3300*	bar	1.6	6.00-16	8 PR	kg	1340	bar	3.3	
		lb	7275*	psi	23			lb	2954	psi	48	
* exceeds the maximum permissible axle load.												
5GV With Front-Wheel Drive												
Maximum Permissible Front Axle Load 2000 kg (4409 lb)												
Maximum Permissible Rear Axle Load 3000 kg (6614 lb)												
Rear Tires	Load Index (LI)	Tire Load Capacity	Inflation Pressure	Front Tires	Load Index (LI)	Tire Load Capacity	Inflation Pressure					

### Specifications

		(value for two tires per axle)						(value for two tires per axle)			
		kg		bar				kg		bar	
250/85 R28	112 A8	kg	2240	bar	1.6	6.50-16	99 A8	kg	1550	bar	3.2
		lb	4938	psi	23			lb	3417	psi	46
250/85 R28	112 A8	kg	3200*	bar	1.6	6.00-16	8 PR	kg	1400	bar	4
		lb	7055*	psi	23			lb	3086	psi	58
280/85 R28	118 A8	kg	2640	bar	1.6	260/70 R16	109 A8	kg	2060*	bar	2.4
		lb	5820	psi	23			lb	4542*	psi	35
280/85 R28	118 A8	kg	2640	bar	1.6	6.50-16	99 A8	kg	1550	bar	3.2
		lb	5820	psi	23			lb	3417	psi	46
320/85 R24	122 A8	kg	3000	bar	1.6	6.50-16	99 A8	kg	1550	bar	3.2
		lb	6614	psi	23			lb	3417	psi	46
360/70 R24	122 A8	kg	3000	bar	1.6	240/70 R16	104 A8	kg	1800	bar	2.4
		lb	6614	psi	23			lb	3968	psi	35
360/70 R28	125 A8	kg	3300*	bar	1.6	280/70 R16	112 A8	kg	2240*	bar	2.4
		lb	7275*	psi	23			lb	4938*	psi	35
320/85 R28	124 A8	kg	3200*	bar	1.6	7.50 R16	100 A8	kg	1600	bar	3.2
		lb	7055*	psi	23			lb	3527	psi	46
340/85 R24	125 A8	kg	3300*	bar	1.6	10.0/75-15.3	8 PR	kg	2300*	bar	3
		lb	7275*	psi	23			lb	5071*	psi	44
340/85 R24	125 A8	kg	3300*	bar	1.6	260/70 R16	109 A8	kg	2060*	bar	2.4
		lb	7275*	psi	23			lb	4542*	psi	35
340/85 R24	125 A8	kg	3300*	bar	1.6	6.50-16	99 A8	kg	1550	bar	3.2
		lb	7275*	psi	23			lb	3417	psi	46
340/85 R28	127 A8	kg	3500*	bar	1.6	7.50 R16	100 A8	kg	1600	bar	3.2
		lb	7716*	psi	23			lb	3527	psi	46
320/85 R24	122 A8	kg	3000	bar	1.6	260/70 R16	109 A8	kg	2060*	bar	2.4
		lb	6614	psi	23			lb	4542*	psi	35
340/85 R28	127 A8	kg	3500*	bar	1.6	8.25-16	8 PR	kg	1800	bar	2.4
		lb	7716*	psi	23			lb	3968	psi	35
420/70 R28	133 A8	kg	4120*	bar	1.6	280/70 R18	114 A8	kg	2360*	bar	2.4
		lb	9083*	psi	23			lb	5203*	psi	35

\* exceeds the maximum permissible axle load.

5GN Without Front-Wheel Drive											
Maximum Permissible Front Axle Load 1800 kg (3968 lb)											
Maximum Permissible Rear Axle Load 3100 kg (6834 lb)											
Rear Tires	Load Index (LI)	Tire Load Capacity (value for two tires per axle)		Inflation Pressure		Front Tires	Load Index (LI)	Tire Load Capacity (value for two tires per axle)		Inflation Pressure	
280/85 R28	118 A8	kg	2640	bar	1.6	6.00-16	8 PR	kg	1340	bar	3.3
		lb	5820	psi	23			lb	2954	psi	48
320/85 R28	124 A8	kg	3200*	bar	1.6	6.00-16	8 PR	kg	1340	bar	3.3
		lb	7055*	psi	23			lb	2954	psi	48
340/85 R24	125 A8	kg	3300*	bar	1.6	6.00-16	8 PR	kg	1340	bar	3.3
		lb	7275*	psi	23			lb	2954	psi	48
340/85 R28	127 A8	kg	3500*	bar	1.6	6.50-16	8 PR	kg	1500	bar	4.2
		lb	7716*	psi	23			lb	3307	psi	61
340/85 R28	127 A8	kg	3500*	bar	1.6	7.50-16	8 PR	kg	1740	bar	3.7
		lb	7716*	psi	23			lb	3836	psi	54

\* exceeds the maximum permissible axle load.

### 5GN With Front-Wheel Drive

## Specifications

Maximum Permissible Front Axle Load 2200 kg (4850 lb)											
Maximum Permissible Rear Axle Load 3100 kg (6834 lb)											
Rear Tires	Load Index (LI)	Tire Load Capacity (value for two tires per axle)		Inflation Pressure		Front Tires	Load Index (LI)	Tire Load Capacity (value for two tires per axle)		Inflation Pressure	
		kg	lb	bar	psi			kg	lb	bar	psi
320/85 R28	124 A8	kg	3200*	bar	1.6	7.50 R16	100 A8	kg	1600	bar	3.2
		lb	7055*	psi	23			lb	3527	psi	46
380/70 R24	125 A8	kg	3300*	bar	1.6	260/70 R16	109 A8	kg	2060	bar	2.4
		lb	7275*	psi	23			lb	4542	psi	35
340/85 R28	127 A8	kg	3500*	bar	1.6	7.50 R16	100 A8	kg	1600	bar	3.2
		lb	7716*	psi	23			lb	3527	psi	46
340/85 R28	127 A8	kg	3500*	bar	1.6	280/70 R18	114 A8	kg	2360*	bar	2.4
		lb	7716*	psi	23			lb	5203*	psi	35
340/85 R28	127 A8	kg	3500*	bar	1.6	8.25-16	8 PR	kg	1800	bar	2.9
		lb	7716*	psi	23			lb	3968	psi	42
420/70 R28	133 A8	kg	4120*	bar	1.6	280/70 R18	114 A8	kg	2360*	bar	2.4
		lb	9083*	psi	23			lb	5203*	psi	35
380/85 R28	133 A8	kg	4120*	bar	1.6	7.50 R18	102 A8	kg	1700	bar	3.2
		lb	9083*	psi	23			lb	3748	psi	46
380/85 R28	133 A8	kg	4120*	bar	1.6	280/70 R18	114 A8	kg	2360*	bar	2.4
		lb	9083*	psi	23			lb	5203*	psi	35
280/85 R28	118 A8	kg	3300*	bar	1.6	260/70 R16	109 A8	kg	2060	bar	2.4
		lb	7275*	psi	23			lb	4542	psi	35
480/65 R28	139 A8	kg	4860*	bar	1.6	280/70 R18	114 A8	kg	2360*	bar	2.4
		lb	10714*	psi	23			lb	5203*	psi	35

\* exceeds the maximum permissible axle load.

Maximum Permissible Front Axle Load 2000 kg(4409 lb)											
Maximum Permissible Rear Axle Load 2500 kg (5511 lb)											
5GL 4WD Technical Permissible Weight 4200 kg (9259 lb)											
Rear Tires	Load Index (LI)	Tire Load Capacity (value for two tires per axle)		Inflation Pressure		Front Tires	Load Index (LI)	Tire Load Capacity (value for two tires per axle)		Inflation Pressure	
		kg	lb	bar	psi			kg	lb	bar	psi
360/70 R20	120 A8	kg	2800	bar	1.6	240/70 R16	104 A8	kg	1800	bar	2.4
		lb	6172	psi	23			lb	3967	psi	35
360/70 R24	122 A8	kg	3000	bar	1.6	280/70 R16	112 A8	kg	2240	bar	2.4
		lb	6612	psi	23			lb	4937	psi	35
360/70 R24	122 A8	kg	3000	bar	1.6	260/70 R16	109 A8	kg	2060	bar	2.4
		lb	6612	psi	23			lb	4540	psi	35
380/70 R20	122 A8	kg	3000	bar	1.6	260/70 R16	109 A8	kg	2060	bar	2.4
		lb	6612	psi	23			lb	4540	psi	35
380/70 R20	122 A8	kg	3000	bar	1.6	180/95 R16 (6.50 R16)	105 A8	kg	1850	bar	3.2
		lb	6612	psi	23			lb	4077	psi	46
380/70 R24	125 A8	kg	3000	bar	1.6	280/70 R16	112 A8	kg	2240	bar	2.4
		lb	6612	psi	23			lb	4937	psi	35
380/70 R24	125 A8	kg	3000	bar	1.6	280/70 R18	114 A8	kg	2360	bar	2.4
		lb	6612	psi	23			lb	5201	psi	35
440/65 R24	128 A8	kg	3950	bar	1.6	280/70 R18	114 A8	kg	2360	bar	2.4
		lb	8705	psi	23			lb	5201	psi	35

RA84036,000187C-19-03JUL18

*Specifications*

**Load Capacity of Tires with Front Loader**

To obtain precise figures, see the tire manual provided by the tire manufacturer.

Load capacity with the front loader is obtained by multiplying the load capacity of the tire by the percentage given in the table (load capacity varies from tire manufacturer to tire manufacturer).

Permissible Load Capacity in Percent					
Speed		Without Front-Wheel Drive	With Front-Wheel Drive	With Front-Wheel Drive	With Front-Wheel Drive
		PR <sup>a</sup> tires	PR <sup>a</sup> tires	A6 <sup>a</sup> tires	A8 <sup>b</sup> tires
km/h	mph	%	%	%	%
8	5.0	150	140	150	150
15	9.0	—	—	134	134
20	12.5	135	120	123	123
25	15.5	115	107	111	111
30	18.5	100	100	100	107
35	21.5	—	—	95	103
40	25.0	—	—	90	100

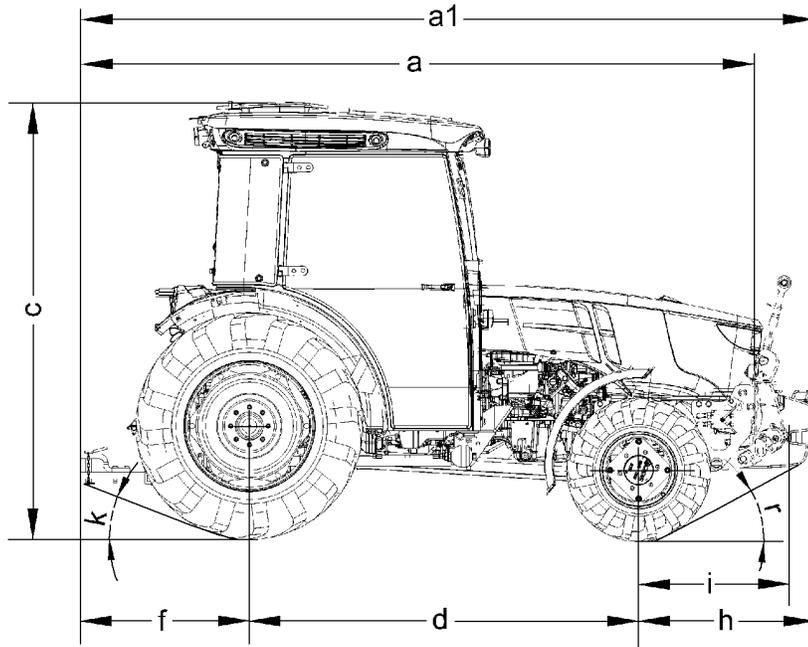
<sup>a</sup>Tires up to 30 km/h (18.5 mph)

<sup>b</sup>Tires up to 40 km/h (25 mph)

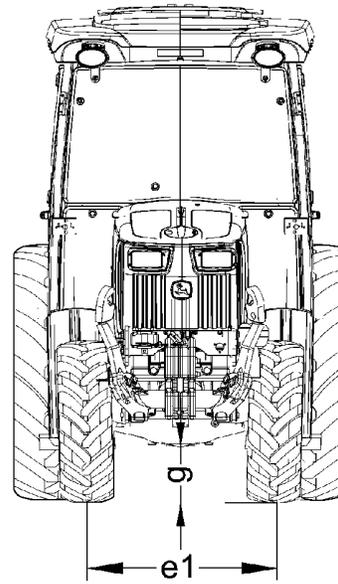
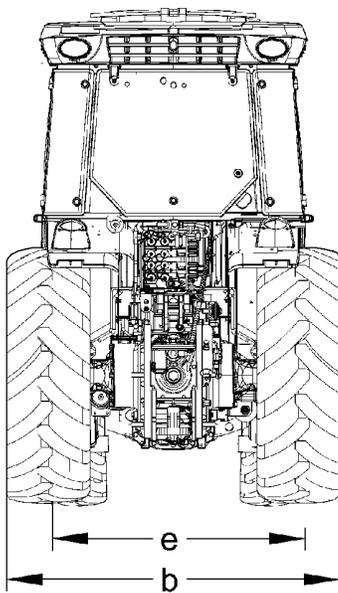
**NOTE:** Maximum travel speed with the front loader is 8 km/h (5 mph). Max. front tread width with the front loader is 1.80 m (71 in).

RA84036,000187D-19-03JUL18

Dimensions (Cab) (5GV, 5GN)



AGCPTJD0655—UN—06NOV14



AGCPTJD0656—UN—29OCT14

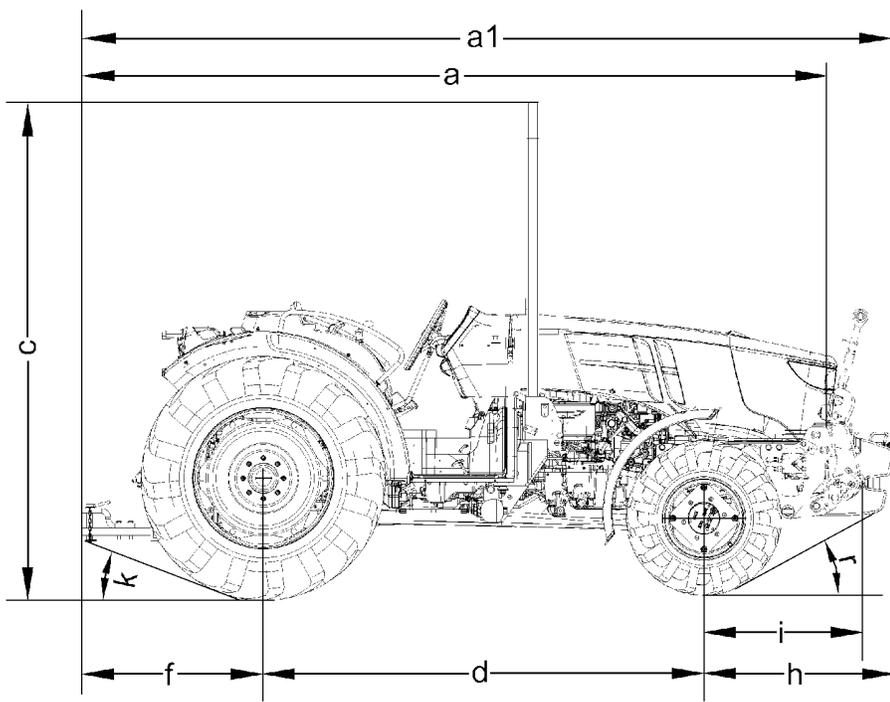
5GV and 5GN with Cab All dimensions in mm.		GV	GN
a	2WD	3995	3995
	4WD	3995	3995
a1	2WD	4319	4319

*Specifications*

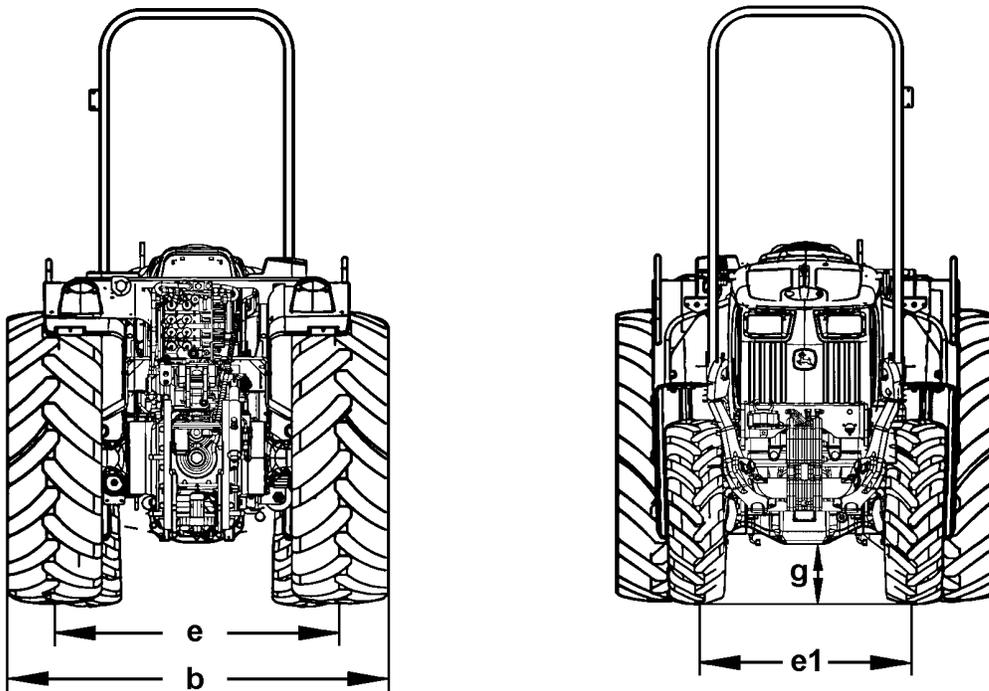
	4WD	4319	4319
b max	2WD	1642	1785
	4WD	1642	1785
c	2WD	2325	2350
	4WD	2334	2371
d	2WD	2098	2098
	4WD	2098	2098
e1	2WD	776—974	776—974
	4WD	825—1048	846—1112
e	2WD	848—1279	955—1359
	4WD	848—1279	955—1359
f	2WD	1063	1063
	4WD	1063	1063
g min	2WD	292.26	292
	4WD	227	254
g max	2WD	292.26	322
	4WD	267	289
h	2WD	1163	1163
	4WD	1159	1156
i	2WD	1019	1019
	4WD	1016	1012
r	2WD	20°	20°
	4WD	20°	20°
k	2WD	14°	16°
	4WD	14°	16°
Front Tires	2WD	6.50—16	7.50—16
	4WD	7.50—16	7.50—18
Rear Tires	2WD	320/85 R28	340/85 R28
	4WD	340/85 R28	380/85 R28

RA84036,000187E-19-25SEP18

Dimensions (ROPS) (5GV, 5GN)



AGCPTJD0726—UN—06NOV14



AGCPTJD0427—UN—24JUL13

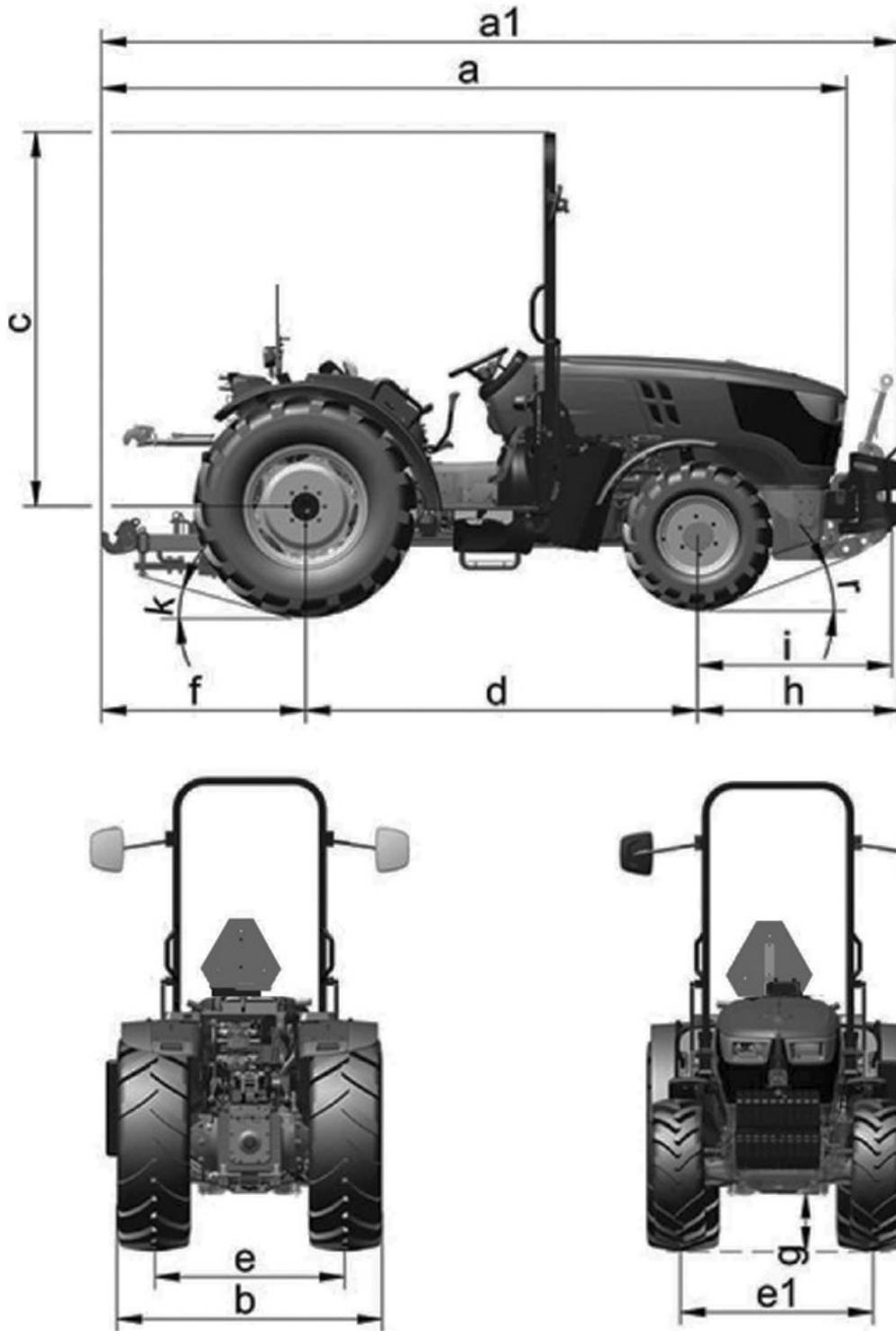
Dimensions, 5GV, 5GN, and 5GF with ROPS. All dimensions in mm.		GV	GN
a	2WD	3995	3995
	4WD	3995	3995
a1	2WD	4319	4319
	4WD	4319	4319

*Specifications*

b max	2WD	1642	1785
	4WD	1642	1785
c	2WD	2460	2469
	4WD	2469	2490
d	2WD	2098	2098
	4WD	2098	2098
e1	2WD	776—974	776—974
	4WD	825—1048	846—1112
e	2WD	848—1279	955—1359
	4WD	848—1279	955—1359
f	2WD	1063	1063
	4WD	1063	1063
g min	2WD	292	292
	4WD	227	254
g max	2WD	292	322
	4WD	267	289
h	2WD	1163	1163
	4WD	1159	1156
i	2WD	1019	1019
	4WD	1016	1012
r	2WD	20°	20°
	4WD	19.23°	20.48°
k	2WD	14.48°	15.64°
	4WD	14.48°	15.64°
Front Tires	2WD	6.50-16	7.50-16
	4WD	7.50-16	7.50-18
Rear Tires	2WD	320/85 R28	340/85 R28
	4WD	340/85 R28	380/85 R28

RA84036.000187F-19-25SEP18

Dimensions (Open Operator Station) (5GL)



APY01847—UN—17JAN18

All dimensions in mm.	
4WD	OOS
	5GL
a	3959
a1 <sup>a</sup>	4340

## Specifications

b	1246—1776
c	1987
d	2085
e1	1011—1278
e	965—1321
f	1083
g	225—300
h <sup>a</sup>	1172
l	1033
r <sup>b</sup>	21°
k <sup>b</sup>	9°

<sup>a</sup>With 30 kg ballast

<sup>b</sup>Values determined with minimum radius

RA84036,0001880-19-25SEP18

### Safety Note Regarding the Subsequent Installation of Electrical and Electronic Appliances and/or Components

The machine is equipped with electronic components whose function may be influenced by electromagnetic radiation from other appliances. Such influences may be hazardous, so take the following safety instructions into account:

No tampering with the tractor's on-board electrical system is permitted. Subsequent installation of electrical/electronic appliances in the machine must make use of the sockets and connectors provided for this purpose. In every case, the user must verify whether the installation affects the electronics or other components. This applies particularly to:

- Implement control units/monitors
- Performance monitors
- Audio/video systems, communications systems

In particular, subsequently installed electrical/electronic components must comply with the relevant edition of EMC Directive 89/336/EEC, and be CE marked.

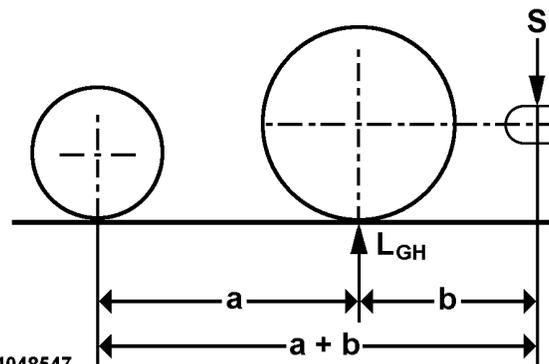
If mobile communication systems (e.g. radio communication, telephone) are to be installed subsequently, the following extra requirements must be met:

- Only devices with an approval complying with the valid national regulation (i.e. BZT approval in Germany) shall be installed;
- The device shall be installed securely;
- Portable or mobile devices may be operated in the vehicle only if connected to a fixed outside antenna;
- Transmitters shall be installed separately from the vehicle's electronics;
- The antenna must be installed in a professional manner, with a good ground connection between the antenna and the vehicle ground.

Wiring, installation and maximum permissible current supply must be as stated in the installation instructions of the machine manufacturer.

RA84036,0001881-19-03JUL18

### How to Calculate Maximum Permissible Download on Trailer Hitch



LX1048547

LX1048547—UN—20JUL09

Calculation of maximum permissible download at the trailer hitch in relation to Load Index (LI)

- The load index can be read on the sidewall of the tire. If the index is not provided, refer to the tire's load capacity as quoted by the tire manufacturer.
- The load index is quoted in conjunction with a Speed index (SI)
- As a rule, the load capacity of the tire in kg can be derived directly from the LI; see the following table:

LI	kg	LI	kg	LI	kg	LI	kg
90 ..	600	111 ..	1090	132 ..	2000	153 ..	3650
91 ..	615	112 ..	1120	133 ..	2060	154 ..	3750
92 ..	630	113 ..	1150	134 ..	2120	155 ..	3875
93 ..	650	114 ..	1180	135 ..	2180	156 ..	4000
94 ..	670	115 ..	1215	136 ..	2240	157 ..	4125
95 ..	690	116 ..	1250	137 ..	2300	158 ..	4250

LI	kg	LI	kg	LI	kg	LI	kg
96 ..	710	117 ..	1285	138 ..	2360	159 ..	4375
97 ..	730	118 ..	1320	139 ..	2430	160 ..	4500
98 ..	750	119 ..	1360	140 ..	2500	161 ..	4625
99 ..	775	120 ..	1400	141 ..	2575	162 ..	4750
100 ..	800	121 ..	1450	142 ..	2650	163 ..	4875
101 ..	825	122 ..	1500	143 ..	2725	164 ..	5000
102 ..	850	123 ..	1550	144 ..	2800	165 ..	5150
103 ..	875	124 ..	1600	145 ..	2900	166 ..	5300
104 ..	900	125 ..	1650	146 ..	3000	167 ..	5450
105 ..	925	126 ..	1700	147 ..	3075	168 ..	5600
106 ..	950	127 ..	1750	148 ..	3150	169 ..	5800
107 ..	975	128 ..	1800	149 ..	3250	170 ..	6000
108 ..	1000	129 ..	1850	150 ..	3350	171 ..	6150
109 ..	1030	130 ..	1900	151 ..	3450	172 ..	6300
110 ..	1060	131 ..	1950	152 ..	3550	173 ..	6500

As a general rule, SI A8 implies a top speed of 40 km/h (25 mph), while SI B implies a top speed of 50 km/h (31 mph). If the SI is different, the manufacturer's instructions apply.

Calculate maximum trailer hitch download as follows:

$$S = \frac{(H_{max} - L_{GH}) * a}{a + b}, \text{ where}$$

- $H_{max}$  = the smaller value from 2\*load capacity of a tire on the rear axle and the maximum permissible rear axle load in kg
- $L_{GH}$  = the mass in kg acting on the ground through the rear wheels (to be ascertained by weighing)
- $a$  = the wheelbase (the horizontal distance between the front and rear axles)
- $b$  = the rear overhang (the horizontal distance between the center of the rear axle and center of the hitch point)

Example of how to calculate maximum trailer hitch download:

- Given that: Empty mass on rear axle  $L_{GH}$  = 1800 kg
- Wheelbase  $a$  = 2100 mm
- Overhang  $b$  = 600 mm
- Tire marking = 130A8
- Maximum permitted speed of tractor = 40 km/h (25 mph)
- Permissible rear axle load = 3500 kg
- $H_{max}$  = 3500 kg (1900 kg \* 2 = 3800 kg, rear axle load = 3500 kg)

$$S = \frac{(3500 \text{ kg} - 1800 \text{ kg}) * 2100 \text{ mm}}{2100 \text{ mm} + 600 \text{ mm}} = 1322 \text{ kg}$$

**CAUTION:** At least 20% of the vehicle's total unladen mass must be on the front axle.

Trailer hitch download must not exceed the trailer hitch limit specified by the manufacturer.

RA84036,0001882-19-03JUL18

### How to Calculate Permissible Mass

#### Calculating permissible tractor mass and permissible trailer mass on the basis of the D value

EC-approved, dynamically tested trailer hitches are always provided with a D value. This is calculated as follows:

$$D = \frac{G * A * B}{A + B}, \text{ where}$$

- $D$  = D value of hitch
- $G$  = Gravitational constant 9.81 m/s<sup>2</sup>
- $A$  = Tractor mass
- $B$  = Trailer mass

To calculate trailer mass for a given D value and a given tractor mass, and to calculate tractor mass for a given D value and a given trailer mass, use the following formulas:

$$\text{Tractor mass } A = \frac{D * B}{G * B - D}$$

$$\text{Trailer mass } B = \frac{D * A}{G * A - D}$$

**NOTE:** If when calculating A the product of G\*B exceeds the D value, or if when calculating B the product of G\*A exceeds the D value, then the result of this calculation is negative. Even so, the D value is sufficient for every combination of tractor mass and trailer mass.

Example of how to calculate permissible trailer mass:

- Given that: D value,  $D$  = 55 kN = 55000 N
- Tractor mass  $A$  = 7000 kg

$$B = \frac{55000 \text{ N} * 7000 \text{ kg}}{55000 \text{ N} - 55000 \text{ N}} = 28163 \text{ kg}$$

9.81 m/s<sup>2</sup> \* 7000 kg - 55000 N

Pay close attention to permissible towed mass and tractor mass!

RA84036,0001883-19-03JUL18

## Vibration

All operator's seats approved by John Deere are component type-approved in accordance with 78/764/EEC, being allocated an average of the vibration acceleration actually measured at the seat ( $a_{ws}$ ), equivalent to  $\leq 1.25 \text{ m/s}^2$ .

This value must NOT be used to calculate vibration stress as per 2002/44/EC! Local John Deere dealers can provide assistance in assessing vibration stress.

Measures to reduce vibration may include:

- Appropriate style of driving, e.g. not too fast
- Correctly ballasted tractor
- Correctly adjusted operator's seat
- Correct tire pressure

RA84036,0001884-19-03JUL18

## Safety Note Regarding the Subsequent Installation of Electrical and Electronic Appliances and/or Components

The machine is equipped with electronic components whose function may be influenced by electromagnetic radiation from other appliances. Such influences may be hazardous. Therefore, observe the following safety instructions:

No tampering with the tractor's on-board electrical system is permitted. Subsequent installation of electrical/electronic appliances in the machine must make use of the sockets and connectors provided for this purpose. In every case, the user must verify whether the installation affects the electronics or other components. This applies particularly to:

- Implement control units/monitors
- Performance monitors
- Audio/video systems, communications systems

In particular, subsequently installed electrical/electronic components must comply with the relevant edition of EMC Directive 2004/108/EC, and be CE marked.

If mobile communication systems (e.g. radio communication, telephone) are to be installed subsequently, the following extra requirements must be met:

- Only devices with an approval complying with the

valid national regulation (i.e. BZT approval in Germany) shall be installed

- The device shall be installed securely
- Portable or mobile devices may be operated in the vehicle only if connected to a fixed outside antenna
- Transmitters shall be installed separately from the vehicle's electronics
- The antenna must be installed in a professional manner, with a good ground connection between the antenna and the vehicle ground

Wiring, installation and maximum permissible current supply must be as stated in the installation instructions of the machine manufacturer.

RA84036,0001885-19-03JUL18

## 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

**FPT — EPA Non-road Emissions Control Warranty Statement—Compression Ignition**

**US Environmental Protection Agency (EPA) Warranty Statement**

FPT Industrial S.p.A. warrants to the ultimate purchaser and each subsequent purchaser that the engine is designed, built and equipped so as to conform with US Environmental Protection Agency (EPA) 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 for a period of:

- 2 years or 1,500 hours of operation, whichever occurs first, for engines less than 19 kW (25 Hp)
- 5 years or 3,000 hours of operation, whichever occurs first, for engines greater than or equal to 19 kW (25 Hp)

NOTE: This warranty applies to all units operated in the United States or Canada.

**COVERAGE**

The model year, class of diesel engine, and emission application determination for your engine are identified on the Emission Control Information Label. This label is affixed to one of the following areas of the engine: the top of engine's rocker arm cover, the right-hand side of the oil pan, and the right-hand side of the engine front gear cover. The warranty period begins on the date the new equipment is sold to the first retail purchaser. The presence of the emission control label is the indication that the engine conforms to the applicable standards. Any emission control system parts which are proven defective during normal use will be repaired or replaced during the warranty period.

The engine owner has responsibility to perform all the required maintenance listed in the Owner's Manual. FPT Industrial S.p.A. will not deny an emission warranty claim solely because no record of maintenance exists; however, a claim may be denied if failure to perform maintenance resulted in the failure of a warranted part.

It is recommended that replacement parts used for maintenance or repairs be FPT Industrial S.p.A. Service Parts to maintain the quality originally designed into your emission certified engine. The use of non- FPT Industrial S.p.A. parts does not invalidate the warranty on other components unless the use of such parts causes damage to warranted parts.

The manufacturer is liable for damages to other engine components caused by the failure of any warranted emission control system part. FPT Industrial S.p.A. is not responsible for failures resulting from improper repair or the use of parts that are not genuine FPT Industrial S.p.A. or FPT Industrial S.p.A. approved parts.

**COMPONENT COVERAGE**

New engines certified for sale and registered will have the following items covered by the emission warranty, depending on the emission level of the engine, if the items were first installed on the new engine as original equipment:

**Fuel injection system:**

- Fuel injection pump
- Fuel injectors
- Fuel injection lines

**Air induction system:**

- Intake manifold
- Turbocharger system (includes exhaust manifold)
- Charge air cooler

**Positive Crankcase Ventilation (PCV) system:** (if applicable)

- PCV valve
- Oil fill cap

**Exhaust after treatment**

- Devices:** (if applicable)
- Diesel Oxidation Catalyst (DOC)
  - Diesel Particulate Filter (DPF)
  - Selective Catalytic Reduction

## Specifications

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Cold Start Enrichment Systems  
Electronic Control Units, Sensors,  
Solenoids, and Wiring harnesses  
used in above systems

**Exhaust Gas Recirculation**  
**Systems: (EGR)**  
• EGR valve assembly  
• EGR cooler

(SCR)  
• Diesel Exhaust Fluid (DEF) tank  
and dispensing systems

### EMISSION WARRANTY EXCLUSIONS

- Repairs arising from storage deterioration, failure to maintain the equipment, negligence, alteration, improper use of the equipment, collision or other accident, vandalism, or other casualty, or operation beyond rated capacity or specification.
- Repairs arising from abuse or neglect, including but not limited to: operation without adequate coolant or lubricants, adjustments to the fuel system outside equipment specifications, over-speeding, improper storage, starting, warm-up, or shutdown practices, incorrect fuel or contaminated fuel, oil or other fluids.
- Normal maintenance services, such as engine tune-ups, engine fuel system cleaning, checks, adjustments and shimming.
- Items replaced due to customer demand.
- Labor charges performed by anyone except a dealer authorized by contract to repair the equipment, unless they qualify under special provisions (i.e. outside labor).
- Any and all travel costs for items such as towing, service calls, or transporting a unit to and from the place where the warranty service is performed.
- Normal maintenance costs, including but not limited to: lubricants, coolants, fluids, fuel, filters, and associated labor. Lubricants, filters, and coolants may qualify for warranty reimbursement if they require replacement as a DIRECT RESULT of a defect in material or workmanship.
- Claims involving the inspection or reconditioning of units after storage or prior use.
- Repairs arising from service performed by agents not approved by FPT Industrial S.p.A..
- Repairs arising from any unauthorized modification to the product or the use of non- FPT Industrial S.p.A. parts, implements or attachments.
- Removal, replacement, or installation of non- FPT Industrial S.p.A. optional equipment, attachments or components.
- Premiums charged for overtime labor costs or out of shop expenses.
- Economic loss including lost profits, crop loss, equipment rental, or other expense.
- Unauthorized modification or updating machines without a warrantable failure.
- Any and all costs of dealer shop supplies incurred with repairs, including but not limited to: solvents, cleaners, anti-seize lubricants, loctite, sealant, adhesive, oil-dry, shop towels, etc.
- Failure of the machine, its implements or attachments caused by improper field application or loading.
- Any and all costs for coolant, fuel, or lube (oil) analysis including supplies and lab recommendations.
- Cost associated with cleaning of machine in preparation for servicing.

## EPA Non-road Emissions Control Warranty Statement—Compression Ignition

### US Environmental Protection Agency (EPA) Warranty Statement

FPT Industrial S.p.A. warrants to the ultimate purchaser and each subsequent purchaser that the engine is designed, built and equipped so as to conform with US Environmental Protection Agency (EPA) 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 for a period of:

- 2 years or 1,500 hours of operation, whichever occurs first, for engines less than 19 kW (25 Hp)
- 5 years or 3,000 hours of operation, whichever occurs first, for engines greater than or equal to 19 kW (25 Hp)

NOTE: This warranty applies to all units operated in the United States or Canada.

### COVERAGE

The model year, class of diesel engine, and emission application determination for your engine are identified on the Emission Control Information Label. This label is affixed to one of the following areas of the engine: the top of engine's rocker arm cover, the right-hand side of the oil pan, and the right-hand side of the engine front gear cover. The warranty period begins on the date the new equipment is sold to the first retail purchaser. The presence of the emission control label is the indication that the engine conforms to the applicable standards. Any emission control system parts which are proven defective during normal use will be repaired or replaced during the warranty period.

The engine owner has responsibility to perform all the required maintenance listed in the Owner's Manual. FPT Industrial S.p.A. will not deny an emission warranty claim solely because no record of maintenance exists; however, a claim may be denied if failure to perform maintenance resulted in the failure of a warranted part.

It is recommended that replacement parts used for maintenance or repairs be FPT Industrial S.p.A. Service Parts to maintain the quality originally designed into your emission certified engine. The use of non-FPT Industrial S.p.A. parts does not invalidate the warranty on other components unless the use of such parts causes damage to warranted parts.

The manufacturer is liable for damages to other engine components caused by the failure of any warranted emission control system part. FPT Industrial S.p.A. is not responsible for failures resulting from improper repair or the use of parts that are not genuine FPT Industrial S.p.A. or FPT Industrial S.p.A. approved parts.

### COMPONENT COVERAGE

New engines certified for sale and registered will have the following items covered by the emission warranty, depending on the emission level of the engine, if the items were first installed on the new engine as original equipment:

#### Fuel injection system:

- Fuel injection pump
- Fuel injectors
- Fuel injection lines

Cold Start Enrichment Systems  
Electronic Control Units, Sensors,  
Solenoids, and Wiring harnesses  
used in above systems

#### Air induction system:

- Intake manifold
- Turbocharger system (includes exhaust manifold)
- Charge air cooler

#### Positive Crankcase Ventilation (PCV) system: (if applicable)

- PCV valve
- Oil fill cap

#### Exhaust Gas Recirculation Systems: (EGR)

- EGR valve assembly
- EGR cooler

#### Exhaust after treatment Devices: (if applicable)

- Diesel Oxidation Catalyst (DOC)
- Diesel Particulate Filter (DPF)
- Selective Catalytic Reduction (SCR)
- Diesel Exhaust Fluid (DEF) tank and dispensing systems

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#### EMISSION WARRANTY EXCLUSIONS

- Repairs arising from storage deterioration, failure to maintain the equipment, negligence, alteration, improper use of the equipment, collision or other accident, vandalism, or other casualty, or operation beyond rated capacity or specification.
- Repairs arising from abuse or neglect, including but not limited to: operation without adequate coolant or lubricants, adjustments to the fuel system outside equipment specifications, over-speeding, improper storage, starting, warm-up, or shutdown practices, incorrect fuel or contaminated fuel, oil or other fluids.
- Normal maintenance services, such as engine tune-ups, engine fuel system cleaning, checks, adjustments, shimming,
- Items replaced due to customer demand.
- Labor charges performed by anyone except a dealer authorized by contract to repair the equipment, unless they qualify under special provisions (i.e. outside labor).
- Any and all travel costs for items such as towing, service calls, or transporting a unit to and from the place where the warranty service is performed.
- Normal maintenance costs, including but not limited to: lubricants, coolants, fluids, fuel, filters, and associated labor. Lubricants, filters, and coolants may qualify for warranty reimbursement if they require replacement as a DIRECT RESULT of a defect in material or workmanship.
- Claims involving the inspection or reconditioning of units after storage or prior use.
- Repairs arising from service performed by agents not approved by FPT Industrial S.p.A.
- Repairs arising from any unauthorized modification to the product or the use of non- FPT Industrial S.p.A. parts, implements or attachments.
- Removal, replacement, or installation of non- FPT Industrial S.p.A. optional equipment, attachments or components.
- Premiums charged for overtime labor costs or out of shop expenses.
- Economic loss including lost profits, crop loss, equipment rental, or other expense.
- Unauthorized modification or updating machines without a warrantable failure.
- Any and all costs of dealer shop supplies incurred with repairs, including but not limited to: solvents, cleaners, anti-seize lubricants, loctite, sealant, adhesive, oil-dry, shop towels, etc.
- Failure of the machine, its implements or attachments caused by improper field application or loading.
- Any and all costs for coolant, fuel, or lube (oil) analysis including supplies and lab recommendations.
- Cost associated with cleaning of machine in preparation for servicing.

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## FPT — CARB Non-road Emissions Control Warranty Statement—Compression Ignition

### CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

If you have any questions regarding your warranty rights and responsibilities, you should contact NAFTA Technical Service Group at 1-630-481-2905 or email: [fpt-na-warranty@fptindustrial.com](mailto:fpt-na-warranty@fptindustrial.com).

#### CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

California Air Resources Board and FPT Industrial S.p.A. are pleased to explain the emission control system warranty on 2015 through 2017 off-road diesel engines. In California, new heavy-duty off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. FPT Industrial S.p.A. 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, FPT Industrial S.p.A. will repair your heavy-duty off-road engine at no cost to you including diagnosis, parts and labor.

#### MANUFACTURER'S WARRANTY COVERAGE:

The 2015-2017 heavy-duty off-road engines are warranted for 5 years or 3000 hours, whichever comes first. If any emission related part on your engine is defective, the part will be repaired or replaced by FPT Industrial S.p.A..

**OWNER'S WARRANTY RESPONSIBILITIES:**

As the off-road engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. FPT Industrial S.p.A. recommends that you retain all receipts covering maintenance on your off-road engine, but (manufacturer's name) cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

- As the off-road engine owner, you should however be aware that FPT Industrial S.p.A. may deny you warranty coverage if your off-road engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.
- Your engine is designed to operate on (fuel) only. Use of any other fuel may result in your engine no longer operating in compliance with California's emissions requirements.
- You are responsible for initiating the warranty process. The CARB suggests that you present your off-road engine to a JOHN DEERE DEALER as soon as a problem exists. The warranty repairs should be completed by the dealer as expeditiously as possible.

**CALIFORNIA EMISSION CONTROL WARRANTY PARTS LIST:**

**Fuel injection system:**

- Fuel injection pump
- Fuel injectors
- Fuel injection lines

**Air induction system:**

- Intake manifold
- Turbocharger system (includes exhaust manifold)
- Charge air cooler

**Positive Crankcase Ventilation (PCV) system (if applicable):**

- PCV valve
- Oil fill cap

**Exhaust Gas Recirculation Systems:(EGR)**

- EGR valve assembly
- EGR cooler

**Exhaust after treatment Devices (if applicable):**

- Diesel Oxidation Catalyst (DOC)
- Diesel Particulate Filter (DPF)
- Selective Catalytic Reduction (SCR)
- Diesel Exhaust Fluid (DEF) tank and dispensing systems

Cold Start Enrichment Systems

Electronic Control Units, Sensors, Solenoids, and Wiring harnesses used in above systems

Miscellaneous items used in above systems, such as hoses, belts, connectors, tubing, gaskets, and mounting hardware

Emission Control Information Labels

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## CARB Non-road Emissions Control Warranty Statement—Compression Ignition

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California Air Resources Board and FPT Industrial S.p.A. are pleased to explain the emission control system warranty on 2015 through 2017 off-road diesel engines. In California, new heavy-duty off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. FPT Industrial S.p.A. 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, FPT Industrial S.p.A. will repair your heavy-duty off-road engine at no cost to you including diagnosis, parts and labor.

#### MANUFACTURER'S WARRANTY COVERAGE:

The 2015-2017 heavy-duty off-road engines are warranted for 5 years or 3000 hours, whichever comes first. If any emission related part on your engine is defective, the part will be repaired or replaced by FPT Industrial S.p.A.

#### OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. FPT Industrial S.p.A. recommends that you retain all receipts covering maintenance on your off-road engine, but (manufacturer's name) cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

- As the off-road engine owner, you should however be aware that FPT Industrial S.p.A. may deny you warranty coverage if your off-road engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.
- Your engine is designed to operate on (fuel) only. Use of any other fuel may result in your engine no longer operating in compliance with California's emissions requirements.
- You are responsible for initiating the warranty process. The ARB suggests that you present your off-road engine to a JOHN DEERE DEALER as soon as a problem exists. The warranty repairs should be completed by the dealer as expeditiously as possible.

#### CALIFORNIA EMISSION CONTROL WARRANTY PARTS LIST:

##### Fuel injection system:

- Fuel injection pump
- Fuel injectors
- Fuel injection lines

##### Air induction system:

- Intake manifold
- Turbocharger system (includes exhaust manifold)
- Charge air cooler

##### Positive Crankcase Ventilation (PCV) system (if applicable):

- PCV valve
- Oil fill cap

##### Exhaust Gas Recirculation Systems: (EGR)

- EGR valve assembly
- EGR cooler

##### Exhaust after treatment Devices (if applicable):

- Diesel Oxidation Catalyst (DOC)
- Diesel Particulate Filter (DPF)
- Selective Catalytic Reduction (SCR)
- Diesel Exhaust Fluid (DEF) tank and dispensing systems

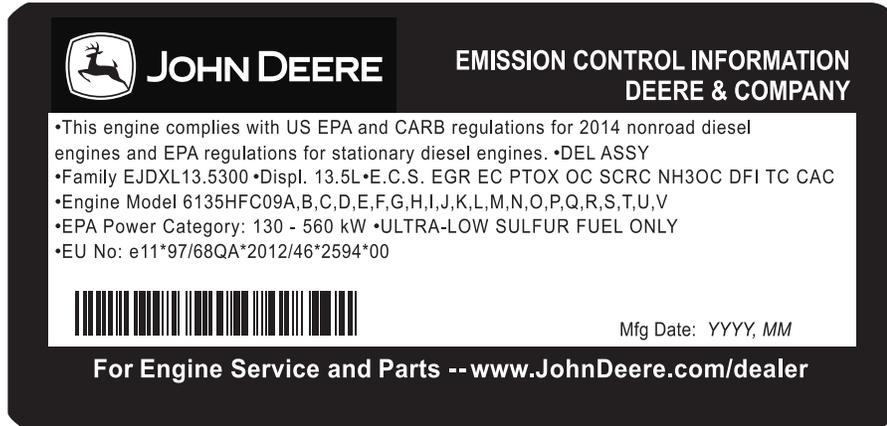
Cold Start Enrichment Systems

Electronic Control Units, Sensors, Solenoids, and Wiring harnesses used in above systems

Miscellaneous items used in above systems, such as hoses, belts, connectors, tubing, gaskets, and mounting hardware

Emission Control Information Labels

## Emissions Control System Certification Label



Engine Emissions Label

RG24291—UN—18SEP13

**⚠ CAUTION: Statutes providing severe penalties for tampering with emissions controls may apply to the user or dealer.**

The emissions warranty applies to those engines marketed by John Deere that have been certified by the United States Environmental Protection Agency (EPA) and/or California Air Resources Board (CARB); and used in the United States and Canada in Non-road equipment. The presence of an emissions label like the one shown signifies that the engine has been certified with the EPA and/or CARB. The EPA and CARB warranties only apply to new engines having the certification label affixed to the engine and sold as stated above in the geographic areas. The presence of an EU number signifies that the engine has been certified with the European Union countries per Directive 97/68/EC. The EPA and/or CARB emissions warranties do not apply to the EU countries.

The emissions label has applicable US EPA and/or CARB regulatory year. The regulatory year determines which warranty statement is applicable to engine. See “EPA Non-road Emissions Control Warranty Statement—Compression Ignition” and “CARB Non-road Emissions Control Warranty Statement—Compression Ignition”. For additional regulatory year warranty statements, see [www.JohnDeere.com](http://www.JohnDeere.com) or contact the nearest John Deere service dealer for assistance.

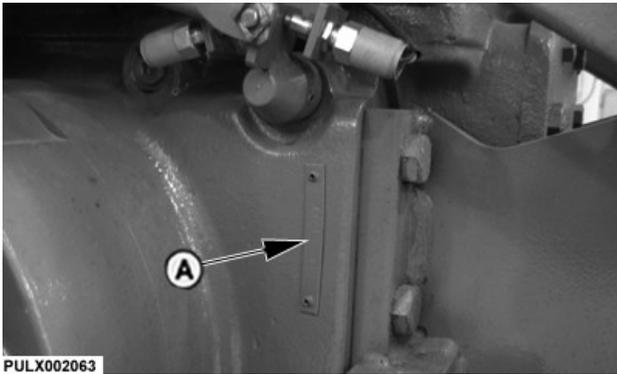
### Emission Control System(s) Laws

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

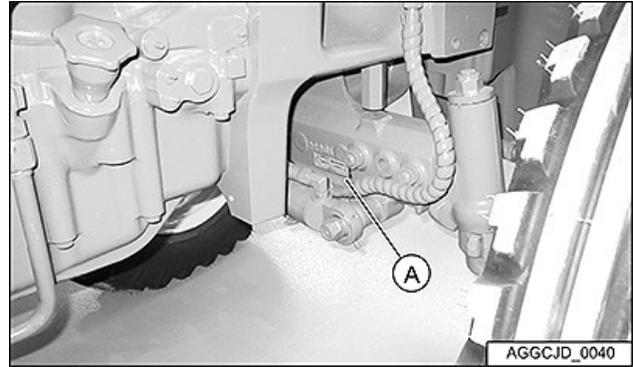


### Transmission Serial Number



The transmission (drive train) serial number (A) is located at the rear of the machine on the bottom left-hand corner of the PTO housing.

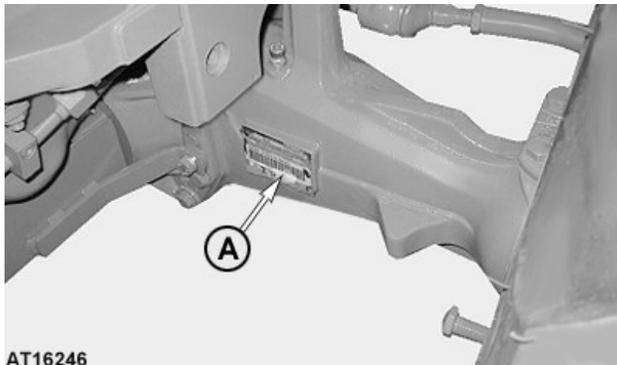
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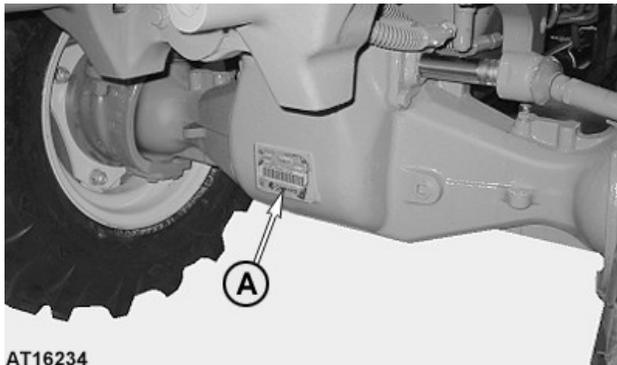
Tractor without MFWD

The Front Wheel Drive serial number plate (A) is located on the rear side of the right-hand axle housing.

### Front Axle Serial Number



Tractor with MFWD



Tractor with MFWD

Front Wheel Drive Serial Number \_\_\_\_\_

RA84036,0001736-19-18JUN18

# Change of Ownership

## List of Owners

<b>Machine Identification</b>	
Serial Number:	Tractor Model:
Engine Number:	Registration Number:

<b>1st Change of Ownership</b>	
First Owner:	Second Owner:
Address: ..... .....	Address: ..... .....
Purchase Date:  Hours at Purchase:	Dealer's Stamp <i>(only if sold through a dealer)</i>

<b>2nd Change of Ownership</b>	
Second Owner:	Third Owner:
Address: ..... .....	Address: ..... .....
Purchase Date:  Hours at Purchase:	Dealer's Stamp <i>(only if sold through a dealer)</i>

<b>3rd Change of Ownership</b>	
Third Owner:	Fourth Owner:
Address:	Address:

Change of Ownership

<p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p>
<p>Purchase Date:</p> <p>Hours at Purchase:</p>	<p>Dealer's Stamp <i>(only if sold through a dealer)</i></p>

RA84036,0001731-19-18JUN18

# Service — Predelivery Inspection

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## Service Procedure

The following inspection, adjustment, and service work were performed prior to the delivery of the machine.

1. Oil levels of the following systems have been checked and refilled if necessary:

- 1.1 Engine oil\*
- 1.2 Transmission and hydraulic oil\*
- 1.3 Front-wheel drive axle, oil\*
- 1.4 Brake fluid\*

2. Screws and nuts of the following components have been tightened to the specified torque:

- 2.1 Wheels and rims
- 2.2 Additional weights (if equipped)

3. All grease fittings have been lubricated.

4. Guards and shields have been checked.

5. Battery charge checked; battery recharged if necessary.

6. Operator's cab controls have all been checked (heater, blower, windshield wiper, and windshield washer).

7. Initial operation of the air-conditioning system according to break-in instructions (compressor connected and air-conditioning system activated).\*\*\*

8. Operator's seat can be adjusted properly.

9. Seat belt has been checked (if equipped).

10. Headlights have been adjusted.\*\*

11. Lights are working properly.

12. Instrument panel gauges and indicator lights are working properly.

13. Neutral start switch is working properly.

14. Engine shutoff device is working properly.

15. Transmission shifting mechanism is working properly.

16. PTOs are working properly.

17. Hitch is working properly.

18. Selective control valves are working properly.

19. Trailer hitches are working properly.

20. Tire pressure has been checked and, if necessary, corrected.

21. Steering angle on the front-wheel drive axle has been checked.

22. Pivoting fenders have been adjusted.

23. Steering system is working properly.

24. Park brake checked.

25. Foot brakes have been checked.

26. Settings of the multi-function lever have been checked (if equipped).

27. Paintwork and decals have been checked and are OK.

28. A test drive has been performed.

29. Front-wheel toe-in has been checked with tractor fully ballasted.

30. The following systems have been checked and are free of leaks:

- 30.1 Engine cooling system
- 30.2 Fuel system
- 30.3 Hydraulic system
- 30.4 Brake system

\* Top up with oil only if oil level is at or below MIN mark.

\*\* Lights checked for compliance with local regulations and adjusted if necessary (also additional lights, if equipped).

\*\*\* For details, see separate information leaflet in tractor cab.

Date and signature of dealer/service technician:

.....

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**Copy for Dealer**

Serial Number: \_\_\_\_\_

OM Number: \_\_\_\_\_ Issue: \_\_\_\_\_

Engine No.: \_\_\_\_\_

Owner's Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Vehicle Model: \_\_\_\_\_

Registration No.: \_\_\_\_\_

Delivery Date: \_\_\_\_\_

Delivery Hours: \_\_\_\_\_

Dealer: \_\_\_\_\_

Dealer's Stamp:

**At the Dealer**

- Predelivery inspection completed (see the following pages)
- All necessary forms and literature available
- Decals installed
- Customer specified attachments/options are installed/available
- Wheel treads adjusted as specified

**At Delivery Area with Customer:**

*Shown and Explained*

- All warning labels on machine
- Location of all serial numbers on machine
- Operator's Manual
- Lubrication points on machine and attachments
- Tire maintenance and care
- Use of lubrication and maintenance schedules
- Warranty procedure

*Demonstration of Operating Procedures*

- Operator's seat
- Consoles/digital displays
- Differential lock
- Transmission
- Starting and stopping
- Steering
- Brakes
- Speed control
- Lights
- Wipers
- Heater
- Air-conditioning system
- PTOs
- Hitch and SCVs
- Pick-up hitch
- Three-point hitch adjustment

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 check list on the following page.

Signature of owner:

Date:



**Copy for Owner**

Serial number: \_\_\_\_\_

Vehicle Model: \_\_\_\_\_

OM Number: \_\_\_\_\_ Issue: \_\_\_\_\_

Registration No.: \_\_\_\_\_

Engine No.: \_\_\_\_\_

Delivery Date: \_\_\_\_\_

Owner's Name: \_\_\_\_\_

Delivery Hours: \_\_\_\_\_

Address: \_\_\_\_\_

Dealer: \_\_\_\_\_

\_\_\_\_\_

Dealer's Stamp:

\_\_\_\_\_

**At the Dealer**

- Predelivery inspection completed (see the following pages)
- All necessary forms and literature available
- Decals installed
- Customer specified attachments/options are installed/available
- Wheel treads adjusted as specified

**At Delivery Area with Customer:**  
*Shown and Explained*

- All warning labels on machine
- Location of all serial numbers on machine
- Operator's Manual
- Lubrication points on machine and attachments
- Tire maintenance and care
- Use of lubrication and maintenance schedules
- Warranty procedure

*Demonstration of Operating Procedures*

- Operator's seat
- Consoles/digital displays
- Differential lock
- Transmission
- Starting and stopping
- Steering
- Brakes
- Speed control
- Lights
- Wipers
- Heater
- Air-conditioning system
- PTOs
- Hitch and SCVs
- Pick-up hitch
- Three-point hitch adjustment

Date and signature of dealer/instructor:

RA84036.0001710-19-13JUN18

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