5055E, 5065E and 5075E Tractors Operator's Manual (Mexico Edition)

OPERATOR'S MANUAL

5055E, 5065E and 5075E Tractors (Mexico Edition)

OMSJ23689 ISSUE L0 (ENGLISH)

John Deere India Pvt. Ltd
Mexico Edition
PRINTED IN U.S.A.

Introduction

Foreword

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This manual and the 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.

If you are not the original owner of this machine, it is in your interest to contact your local John Deere dealer to inform them of this unit's serial number. This will help John Deere notify you of any issues or product improvements.

JB06590,0000593 -19-14JUL09-1/1

Identification View

PY15613 —UN—07AUG13

John Deere 5E - Cab Tractor

PY18789 —UN—01OCT13

John Deere 5E - Cab Tractor (Downdraft)

NOTE: Tractor shown may have optional equipments.

Continued on next page

SD74272,0000024 -19-06FEB15-1/2

PY9649 —UN—18JUN09

John Deere 5E - IOOS Tractor

NOTE: Tractor shown may have optional equipments.

SD74272,0000024 -19-06FEB15-2/2

Contents

Continued on next page

Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

COPYRIGHT © 2020
DEERE & COMPANY
Moline, Illinois
All rights reserved.
A John Deere ILLUSTRUCTION ™ Manual
Previous Editions
Copyright © 2016

Continued on next page

Continued on next page

Continued on next page

Recognize Safety Information

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.

T81389 —UN—28JUN13

DX,ALERT -19-29SEP98-1/1

Understand Signal Words

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.

TS187 —19—30SEP88

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 -19-05OCT16-1/1

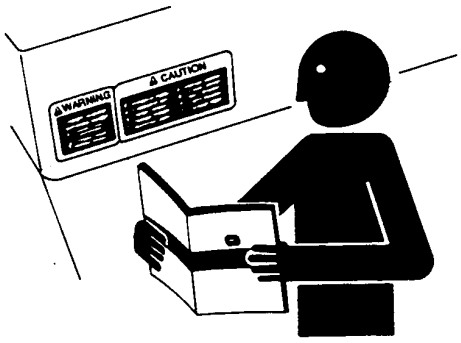
Follow Safety Instructions

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.



TS201 —UN—15APR13

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

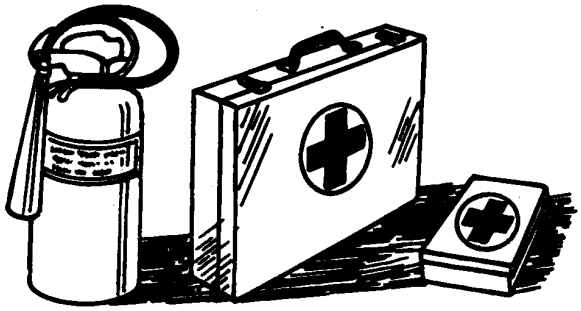
DX,READ -19-16JUN09-1/1

Prepare for Emergencies

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.



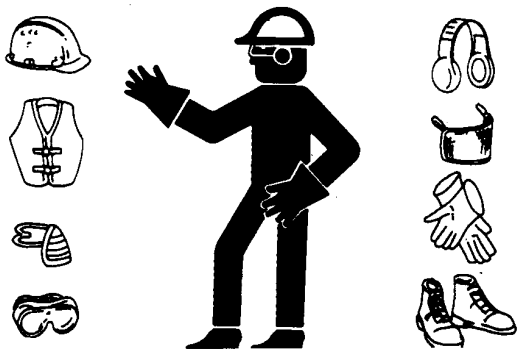
TS291 —UN—15APR13

DX,FIRE2 -19-03MAR93-1/1

Wear Protective Clothing

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.



TS206 —UN—15APR13

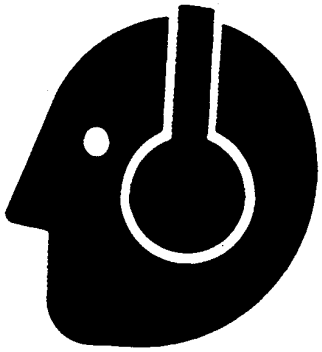
DX,WEAR2 -19-03MAR93-1/1

Protect Against Noise

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.



TS207 —UN—23AUG88

DX,NOISE -19-03OCT17-1/1

Handle Fuel Safely—Avoid Fires

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.

TS202 —UN—23AUG88

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 -19-12OCT11-1/1

Handle Starting Fluid Safely

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.

TS1356 —UN—18MAR92

DX,FIRE3 -19-14MAR14-1/1

Fire Prevention

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

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

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

DX,WW,TRACTOR,FIRE,PREVENTION -19-12OCT11-1/1

In Case of Fire

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:

TS227 —UN—15APR13

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 -19-22AUG13-1/1

Avoid Static Electricity Risk When Refueling

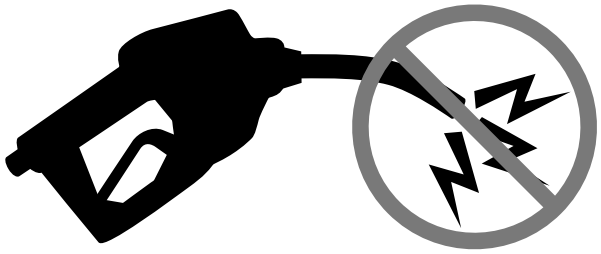
The removal of sulfur and other compounds in Ultra-Low Sulfur Diesel (ULSD) fuel decreases its conductivity and increases its ability to store a static charge.

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.

RG22142 —UN—17MAR14



RG21992 —UN—21AUG13

DX,FUEL,STATIC,ELEC -19-12JUL13-1/1

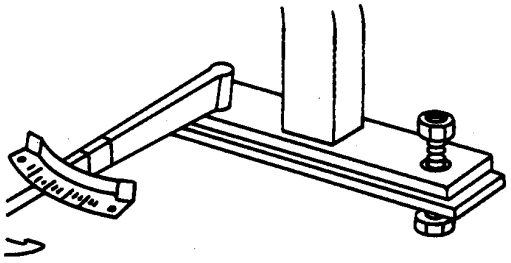
Keep ROPS Installed Properly

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.



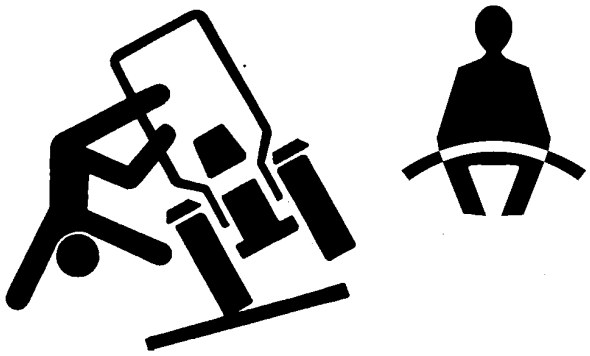
TS212 —UN—23AUG88

DX,ROPS3 -19-12OCT11-1/1

Use Foldable ROPS and Seat Belt Properly

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.



TS1729 —UN—24MAY13

DX,FOLDROPS -19-22AUG13-1/1

Stay Clear of Rotating Drivelines

Entanglement in rotating driveline can cause serious injury or death.

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

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

Wear close fitting clothing. Stop the engine and be sure that PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

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

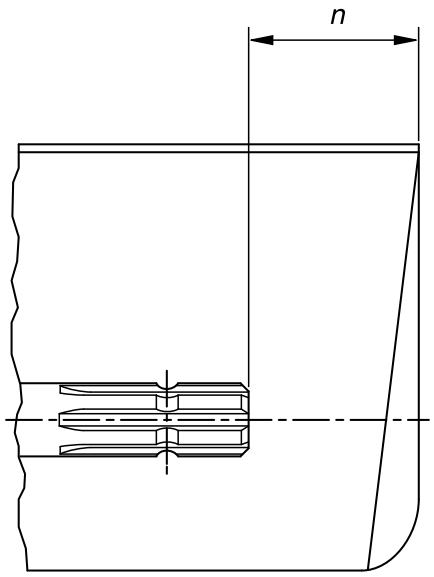
Do not install any adapter device that results in a portion of the rotating implement shaft, tractor shaft, or the adapter to be unguarded. The tractor master shield shall overlap the end of the splined shaft and the added adaptor device as outlined in the table.

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

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

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

TS1644 —UN—22AUG95



H96219 —UN—29APR10

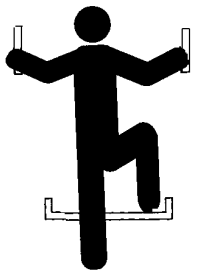
PTO Type	Diameter	Splines	n ± 5 mm (0.20 in.)
1	35 mm (1.378 in.)	6	85 mm (3.35 in.)
2	35 mm (1.378 in.)	21	85 mm (3.35 in.)
3	45 mm (1.772 in.)	20	100 mm (4.00 in.)
4	57.5 mm (2.264 in.)	22	100 mm (4.00 in.)

DX,PTO -19-28FEB17-1/1

Use Steps and Handholds Correctly

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.



T133468 —UN—15APR13

DX,WW,MOUNT -19-12OCT11-1/1

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.

GreenStar is a trademark of Deere & Company

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 -19-15JUL15-1/1

Use Seat Belt Properly

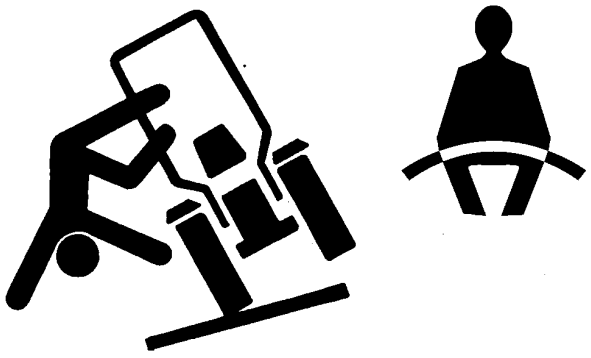
Avoid crushing injury or death during rollover.

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

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

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

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



TS1729 —UN—24MAY13

DX,ROPS1 -19-22AUG13-1/1

Operating the Tractor Safely

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.
- Operators must be mentally and physically capable of accessing the operator's station and/or controls, and operating the machine properly and safely.
- Never operate machine when distracted, fatigued, or impaired. Proper machine operation requires the operator's full attention and awareness.
- This tractor is not intended to be used as a recreational vehicle.
- Read this operator's manual before operating the tractor and follow operating and safety instructions in the manual and on the tractor.
- Follow operation and ballasting instructions found in the operator's manual for your implements/attachments, such as front loaders.
- Follow the instructions outlined in the operator's manual of any mounted or trailed machinery or trailer. Do not operate a combination of tractor-machine or tractor-trailer unless all instructions have been followed.
- Make sure that everyone is clear of machine, attached equipment, and work area before starting engine or operation.
- Stay clear of the three-point linkage and pickup 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 a 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.

Heated and Ventilated Operator's Seat

- An overheated seat heater can cause a burn injury or damage to the seat. To reduce the risk of burns, use caution when using the seat heater for extended periods of time, especially if the operator cannot feel temperature change or pain to the skin. Do not place objects on the seat, such as a blanket, cushion, cover, or similar item, which can cause the seat heater to overheat.

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 the 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 are:

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

DX,WW,TRACTOR -19-08MAY19-1/1

Avoid Backover Accidents

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.

PC10857XW —UN—15APR13

DX,AVOID,BACKOVER,ACCIDENTS -19-30AUG10-1/1

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 -19-12OCT11-1/1

Operating the Loader Tractor Safely

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.

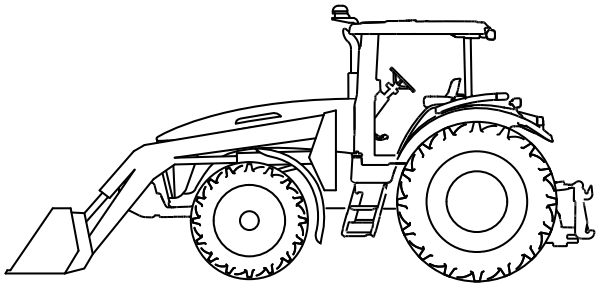
Never allow anyone to walk or work under a raised loader.

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



TS1692 —UN—09NOV09

falling onto the operators station. To prevent loads from falling onto the operators station, always use appropriate implements for specific applications (that is, manure forks, round bale forks, round bale grippers, and clampers).

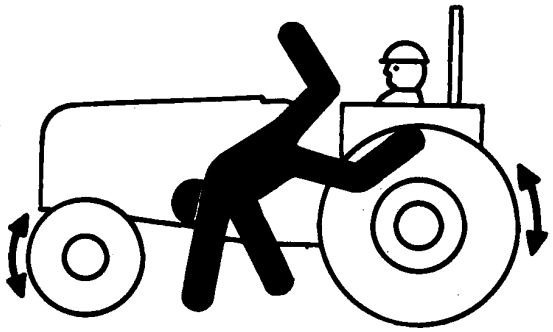
Ballast tractor in accordance to Ballast Recommendations in PREPARE TRACTOR section.

DX,WW,LOADER -19-18SEP12-1/1

Keep Riders Off Machine

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.

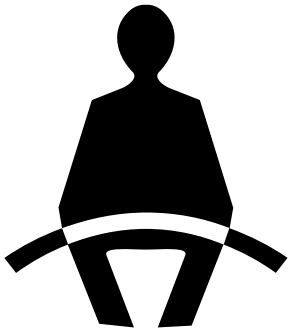


TS290 —UN—23AUG88

DX,RIDER -19-03MAR93-1/1

Instructional Seat

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



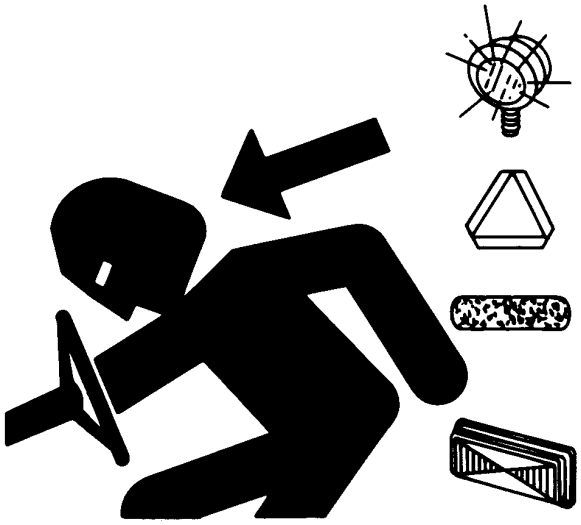
TS1730 —UN—24MAY13

DX,SEAT,NA -19-22AUG13-1/1

Use Safety Lights and Devices

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.



TS951 —UN—12APR90

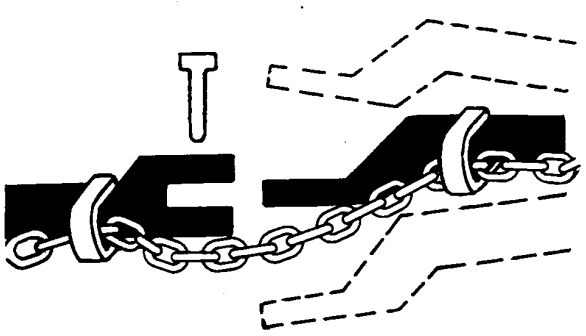
DX,FLASH -19-07JUL99-1/1

Use a Safety Chain

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.



TS217 —UN—23AUG88

DX,CHAIN -19-03MAR93-1/1

Transport Towed Equipment at Safe Speeds

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

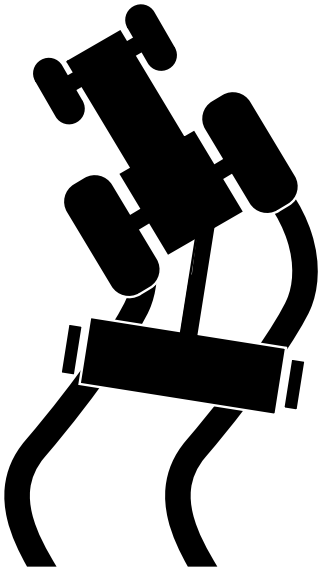
Implements shall be equipped with brakes if the maximum fully loaded weight is greater than 1500 kg (3307 lbs) and greater than 1.5 times the weight of the towing unit.

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.



TS1686 —UN—27SEP06

- 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 -19-28FEB17-1/1

Use Caution on Slopes, Uneven Terrain, and Rough Ground

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.

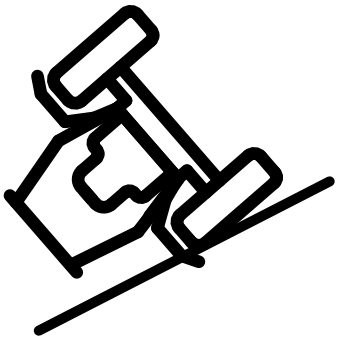
Danger of overturn increases greatly with narrow tread setting, at high speed.

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



RXA0103437 —UN—01JUL09

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 -19-28FEB17-1/1

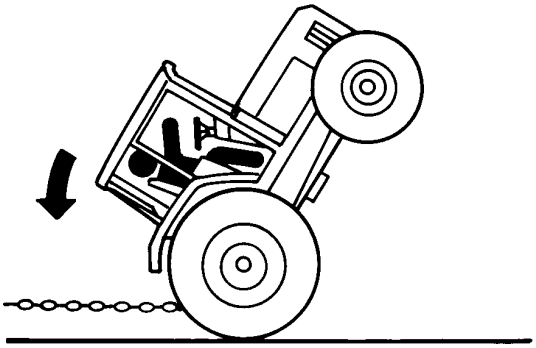
Freeing a Mired Machine

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.



TS1645 —UN—15SEP95

TS263 —UN—23AUG88

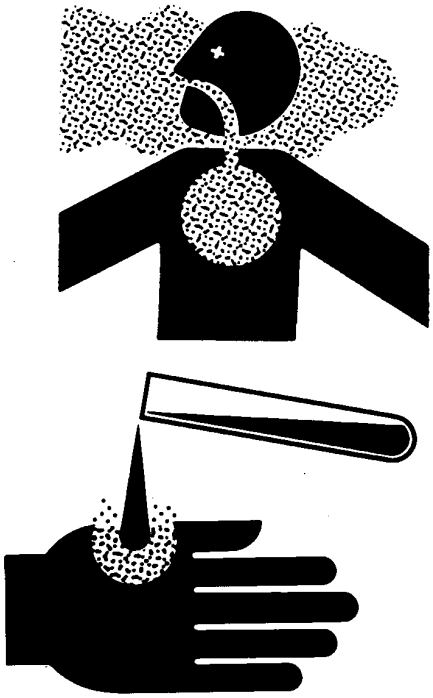
DX,MIRED -19-07JUL99-1/1

Avoid Contact with Agricultural Chemicals

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.



TS220 —UN—15APR13

TS272 —UN—23AUG88

DX,CABS -19-25MAR09-1/1

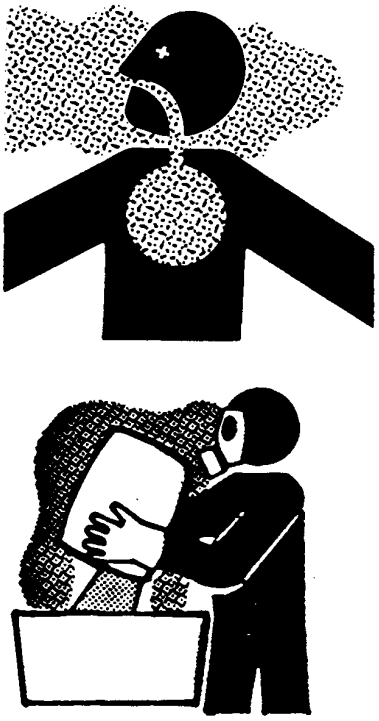
Handle Agricultural Chemicals Safely

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.



TS220 —UN—15APR13

A34471 —UN—11OCT88

A34471

- 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 -19-24AUG10-1/1

Handling Batteries Safely

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:

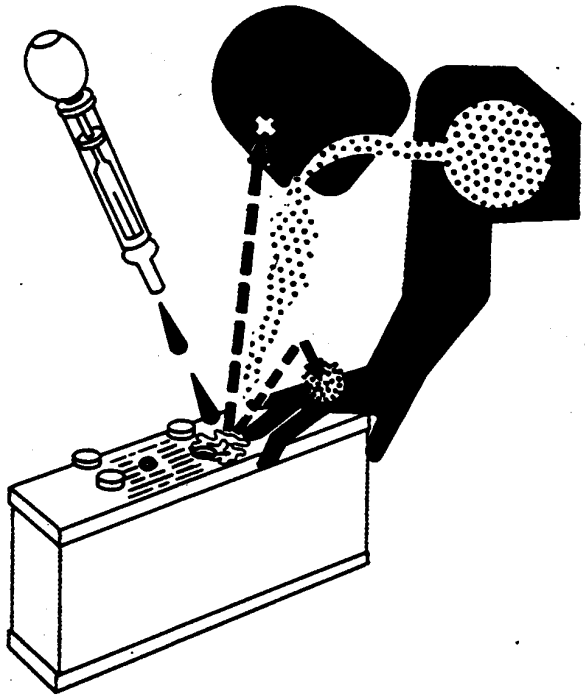
1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

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.**

TS204 —UN—15APR13



TS203 —UN—23AUG88

DX,WW,BATTERIES -19-02DEC10-1/1

Avoid Heating Near Pressurized Fluid Lines

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.

TS953 —UN—15MAY90

DX,TORCH -19-10DEC04-1/1

Remove Paint Before Welding or Heating

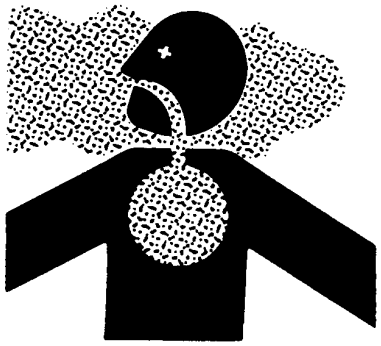
Avoid potentially toxic fumes and dust.

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.



TS220 —UN—15APR13

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 -19-24JUL02-1/1

Handle Electronic Components and Brackets Safely

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.

TS249 —UN—23AUG88

DX,WW,RECEIVER -19-24AUG10-1/1

Practice Safe Maintenance

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.

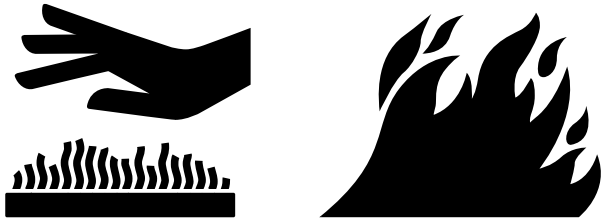
TS218 —UN—23AUG88

DX,SERV -19-28FEB17-1/1

Avoid Hot Exhaust

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.



RG17488 —UN—21AUG09

DX,EXHAUST -19-20AUG09-1/1

Clean Exhaust Filter Safely

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.

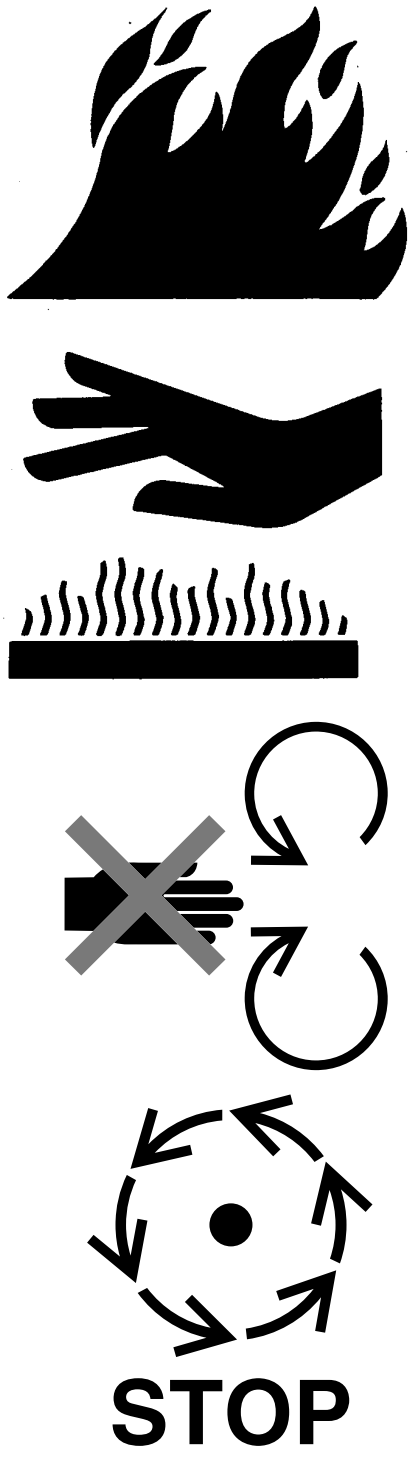
If service procedure requires engine to be running:

- 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.



TS227 —UN—15APR13

TS271 —UN—23AUG88

TS1693 —UN—09DEC09

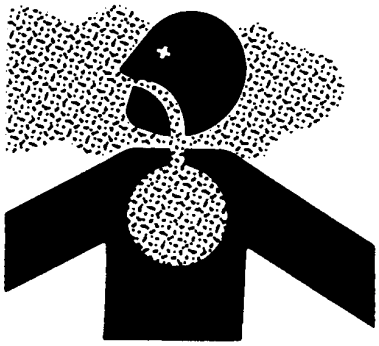
TS1695 —UN—07DEC09

DX,EXHAUST,FILTER -19-12JAN11-1/1

Work In Ventilated Area

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.



TS220 —UN—15APR13

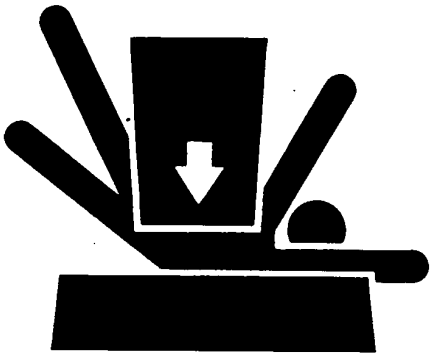
DX,AIR -19-17FEB99-1/1

Support Machine Properly

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 raced 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.



TS229 —UN—23AUG88

DX,LOWER -19-24FEB00-1/1

Prevent Machine Runaway

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.

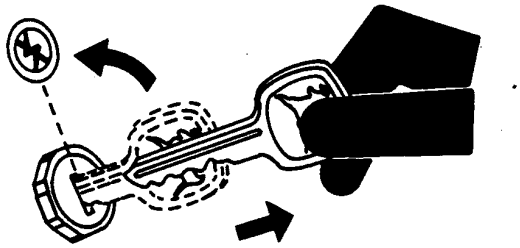
TS177 —UN—11JAN89

DX,BYPAS1 -19-29SEP98-1/1

Park Machine Safely

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.



TS230 —UN—24MAY89

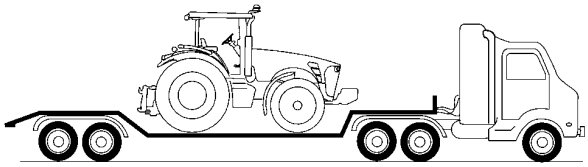
DX,PARK -19-04JUN90-1/1

Transport Tractor Safely

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.



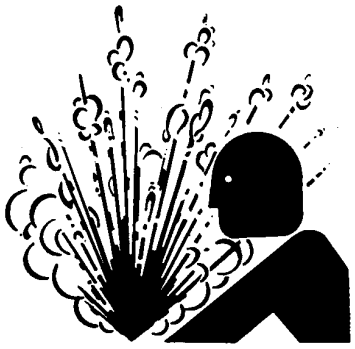
RXA0103709 —UN—01JUL09

DX,WW,TRANSPORT -19-19AUG09-1/1

Service Cooling System Safely

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.



TS281 —UN—15APR13

DX,WW,COOLING -19-19AUG09-1/1

Service Accumulator Systems Safely

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.

TS281 —UN—15APR13

DX,WW,ACCLA2 -19-22AUG03-1/1

Service Tires Safely

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.

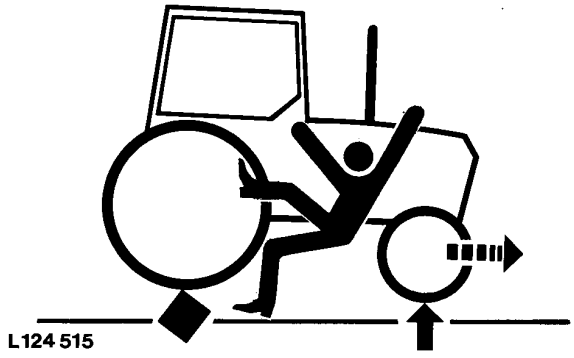
RXA0103438 —UN—11JUN09

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 -19-28FEB17-1/1

Service Front-Wheel Drive Tractor Safely

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.

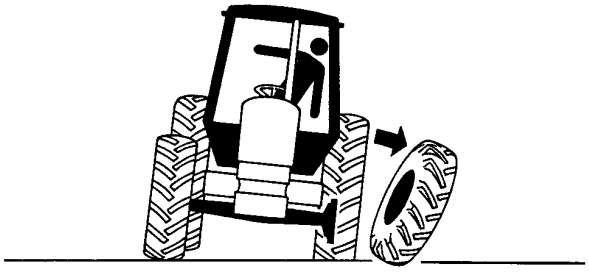


L124515 —UN—06AUG94

DX,WW,MFWD -19-19AUG09-1/1

Tightening Wheel Retaining Bolts/Nuts

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



L124516 —UN—03JAN95

DX,WW,WHEEL -19-12OCT11-1/1

Avoid High-Pressure Fluids

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.

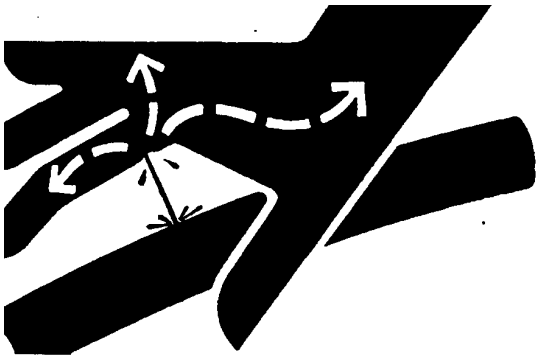
Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

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.



X9811 —UN—23AUG88

DX,FLUID -19-12OCT11-1/1

Do Not Open High-Pressure Fuel System

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.)

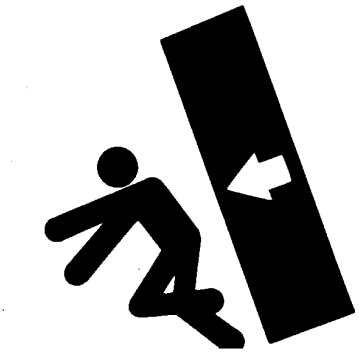
TS1343 —UN—18MAR92

DX,WW,HPCR1 -19-07JAN03-1/1

Store Attachments Safely

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.



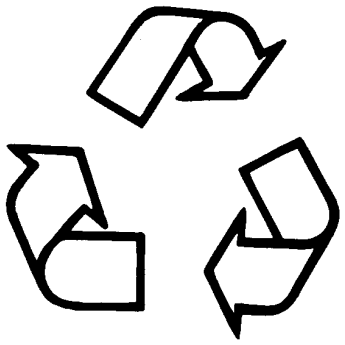
TS219 —UN—23AUG88

DX,STORE -19-03MAR93-1/1

Decommissioning — Proper Recycling and Disposal of Fluids and Components

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.



TS1133 —UN—15APR13

DX,DRAIN -19-01JUN15-1/1

Safety Signs

Pictorial Safety Signs

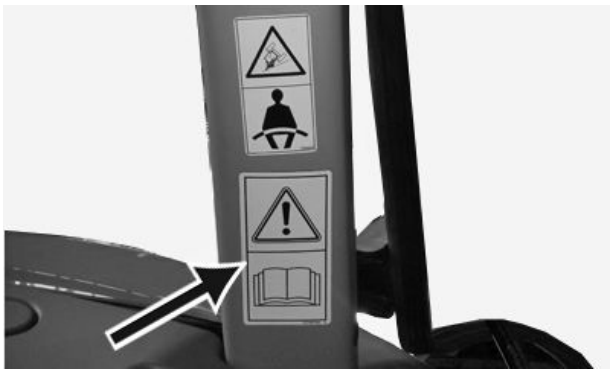
IMPORTANT: Install new safety signs if old signs are damaged, lost or cannot be read. Install a new safety sign when replacing any part that previously had a safety sign.

Safety signs are affixed at several important places on this machine. They are intended to point out potential danger. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information on how to avoid personal injury. These safety signs, their location on the machine and a brief explanatory text are shown below.

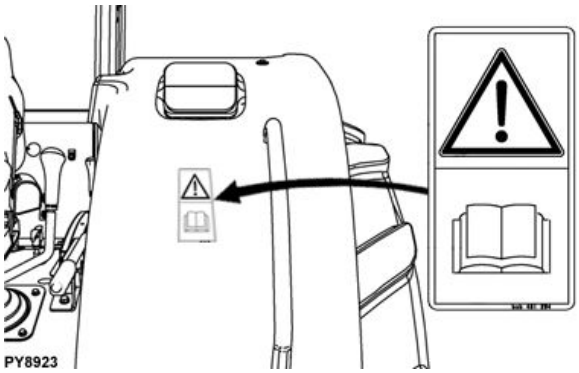
TS231 —19—07OCT88

HK75640,0000116 -19-12JAN18-1/1

Operator's Manual



Left-hand Side of the Operator—Cab



PY18807 —UN—09DEC14

PY8923 —UN—05FEB09

On Left Side Fender—IOOS

⚠ CAUTION: Avoid the risk of injury.

This Operator's Manual contains important information necessary for safe machine operation and explanation of safety signs. Carefully observe all safety rules to avoid accidents.

P/N: CC40740

PY15695 —UN—21DEC12

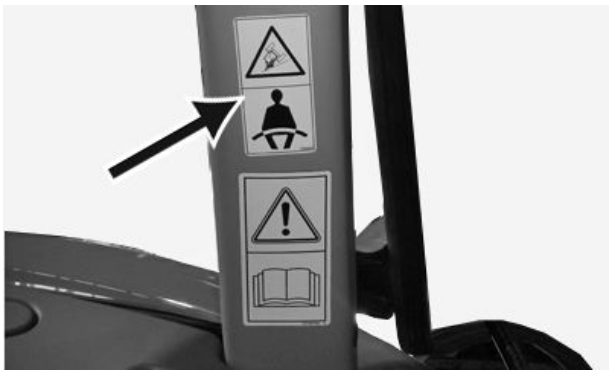
HK75640,0000117 -19-12JAN18-1/1

Use Seat Belt—Cab

CAUTION: Avoid crushing injury or death during rollover.

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

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



Left-hand Side of the Operator—Cab

PY18808 —UN—09DEC14

Use Seat Belt Properly

PY16929 —UN—15JUL13

HK75640,0000118 -19-12JAN18-1/1

Use Seat Belt — IOOS

CAUTION: Avoid crushing injury or death during rollover.

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.

Hold the latch and pull the seat belt across the body.

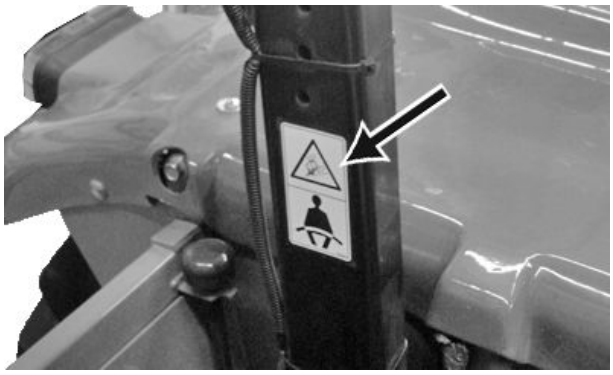
Insert the latch into the buckle. Listen for a click.

Tug on the seat belt latch to make sure that the belt is securely fastened.

Snug the seat belt across the hips.

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.



PY18435 —UN—11JUL14

Left-hand Side of ROPS—IOOS

PY16929 —UN—15JUL13

P/N: T302221

HK75640,0000119 -19-12JAN18-1/1

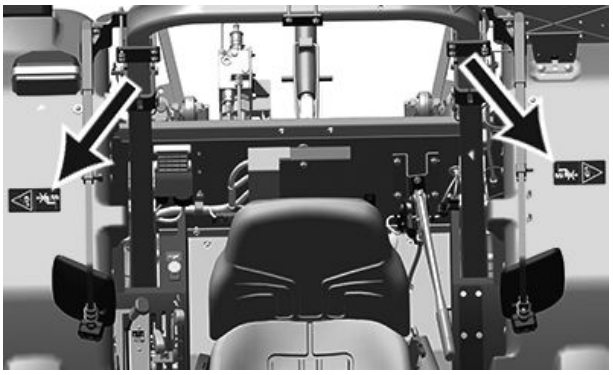
Riders — IOOS

CAUTION: Avoid falling and being struck.

Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off the machine.

Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.



PY18437 —UN—09MAR17

PY11235 —UN—12NOV10

P/N: L64996

HK75640,000011A -19-12JAN18-1/1

ROPS in Normal Position — IOOS

CAUTION: 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.

PY18436 —UN—11JUL14

Right Side of ROPS—IOOS

PY15860 —UN—23SEP13

P/N: R127350

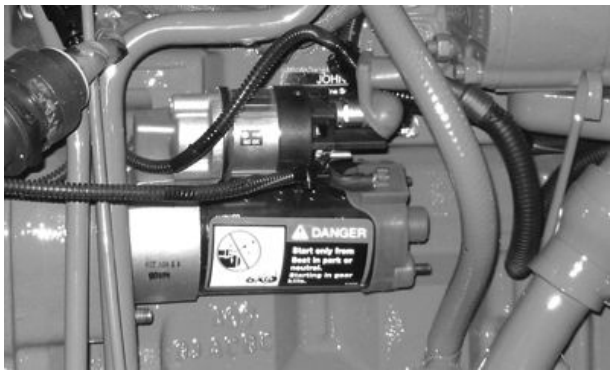
HK75640,000011B -19-12JAN18-1/1

Danger Decal — Starting Engine

Start only from the seat in park or neutral.

Starting in gear kills.

NOTE: This decal is applicable other than Power Reverser™ Tractors.



PY17691 —UN—22MAR13

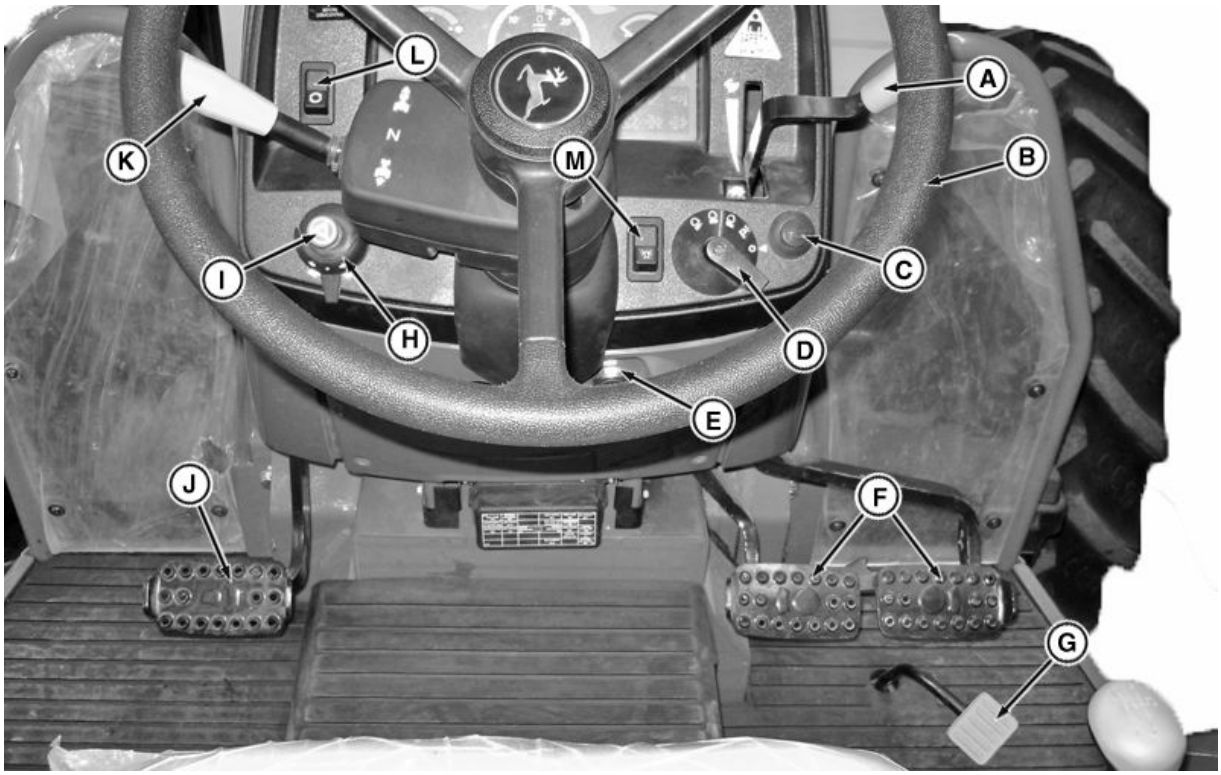
PY17638 —UN—19DEC12

P/N: R140208

Power Reverser is a trademark of Deere & Company

WKJQUWJ,000046E -19-02JUL20-1/1

Tractor Controls — IOOS (PowrReverser™ Transmission)

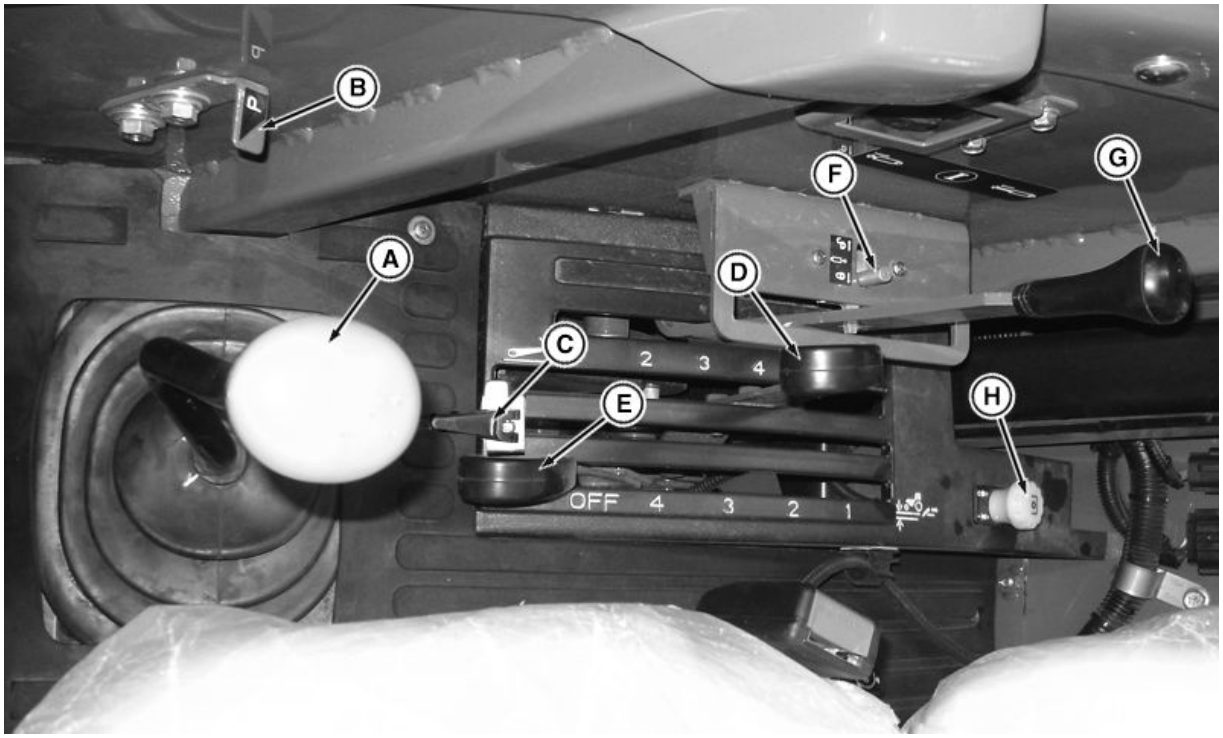


PY18440 —UN—11JUL14

A— Hand Throttle Lever
B— Steering Wheel
C— Horn Switch
D— Light Switch
E— Key Switch
F— Brake Pedals
G— Foot Throttle
H— Turn Signal Switch
I— Hazard Light Switch
J— Clutch Pedal
K— FNR Lever
L— Roll Mode Switch
M— Beacon Light Switch

SD74272,000002B -19-03JUL14-1/1

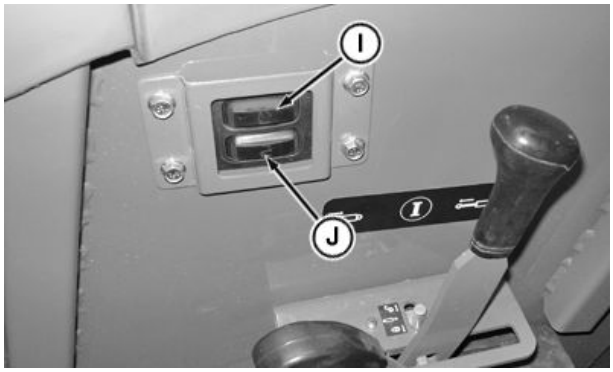
Tractor Controls — Right-Hand Panel IOOS (PowrReverser™ Transmission)



PY18441 —UN—11JUL14

Right Side Control

A— Gear Shift Lever
B— Park Pawl Position
C— Position Control Stop Knob
D— Position Control Lever
E— Draft Control Lever
F— SCV Lever Lock
G— SCV I Lever
H— Electro-Hydraulic PTO Switch (Only For PowrReverser™ Transmission)
I— Quick Raise Switch
J— Quick Lower Switch

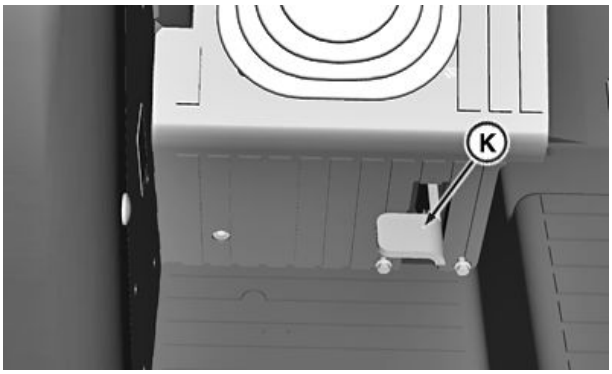


PY18442 —UN—11JUL14

EQRL Controls

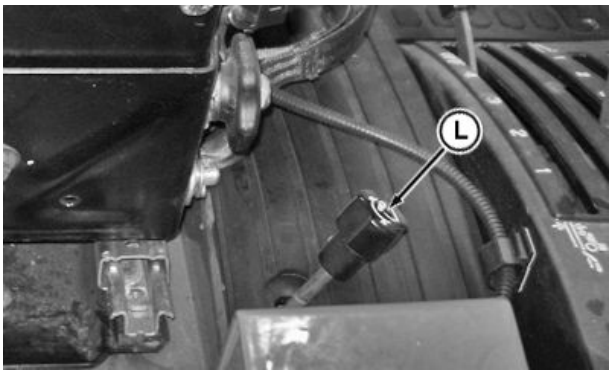
PowrReverser is a trademark of Deere & Company

Continued on next page



PY18443 —UN—11JUL14

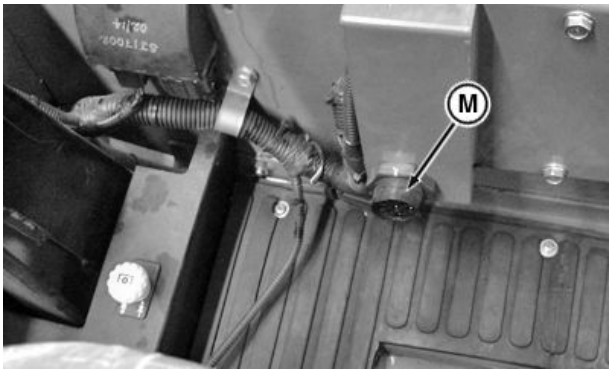
Differential Lock Pedal



PY18444 —UN—11JUL14

Below the Seat

K— Differential Lock Pedal
L— Rockshaft Rate-Of-Drop Knob
M— Service Advisor Port

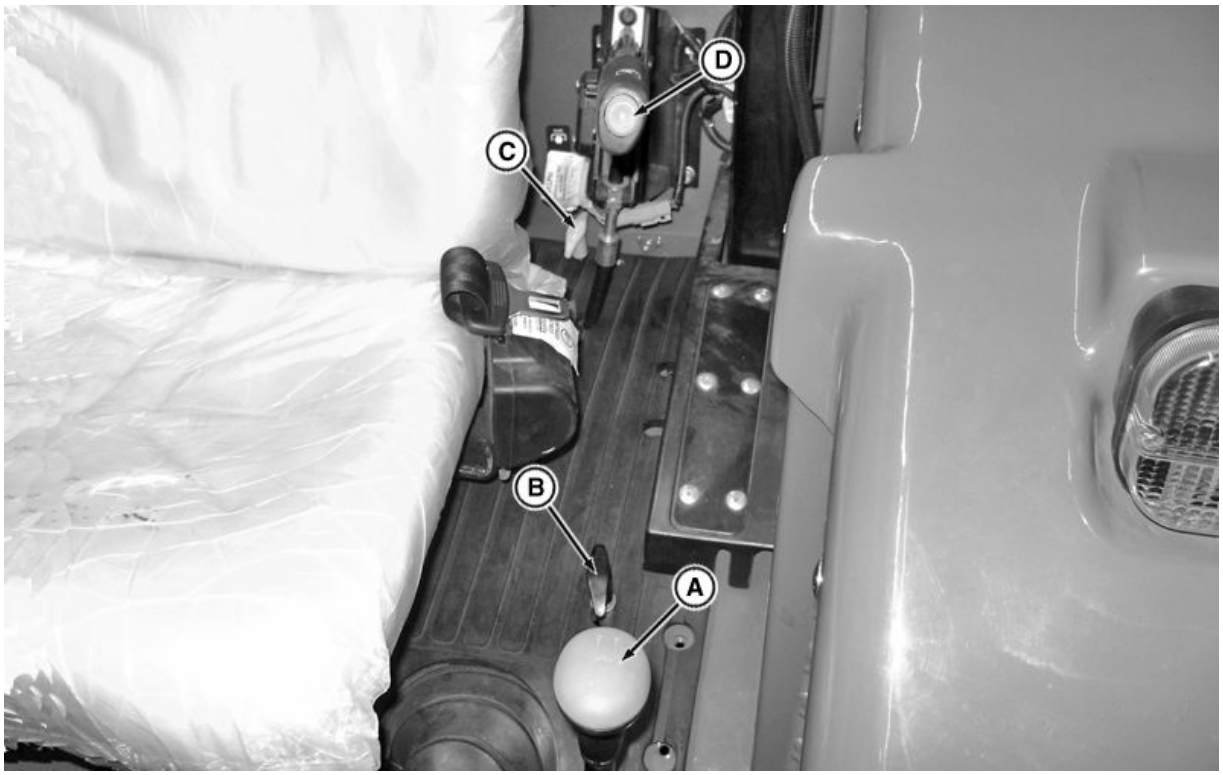


PY18445 —UN—11JUL14

Behind the Seat

SD74272,000002C -19-14JUL14-2/2

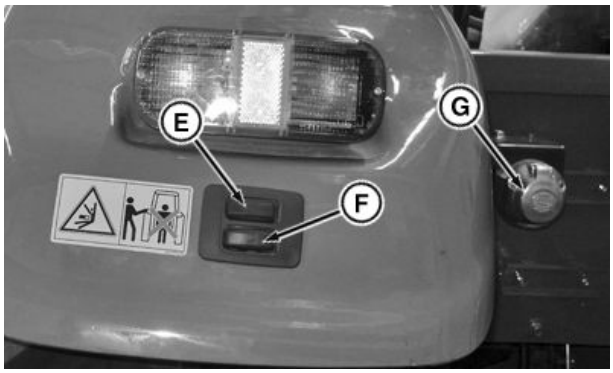
Tractor Controls — Left-Hand Panel IOOS (PowrReverser™ Transmission)



PY18446 —UN—11JUL14

Left Side Control

A— Rang Shift Lever
B— Mechanical Front-Wheel Drive (MFWD) Lever (If Equipped)
C— Economy PTO Lever
D— Secondary Brake Lever
E— Quick Raise Switch
F— Quick Lower Switch
G— Seven-Terminal Outlet

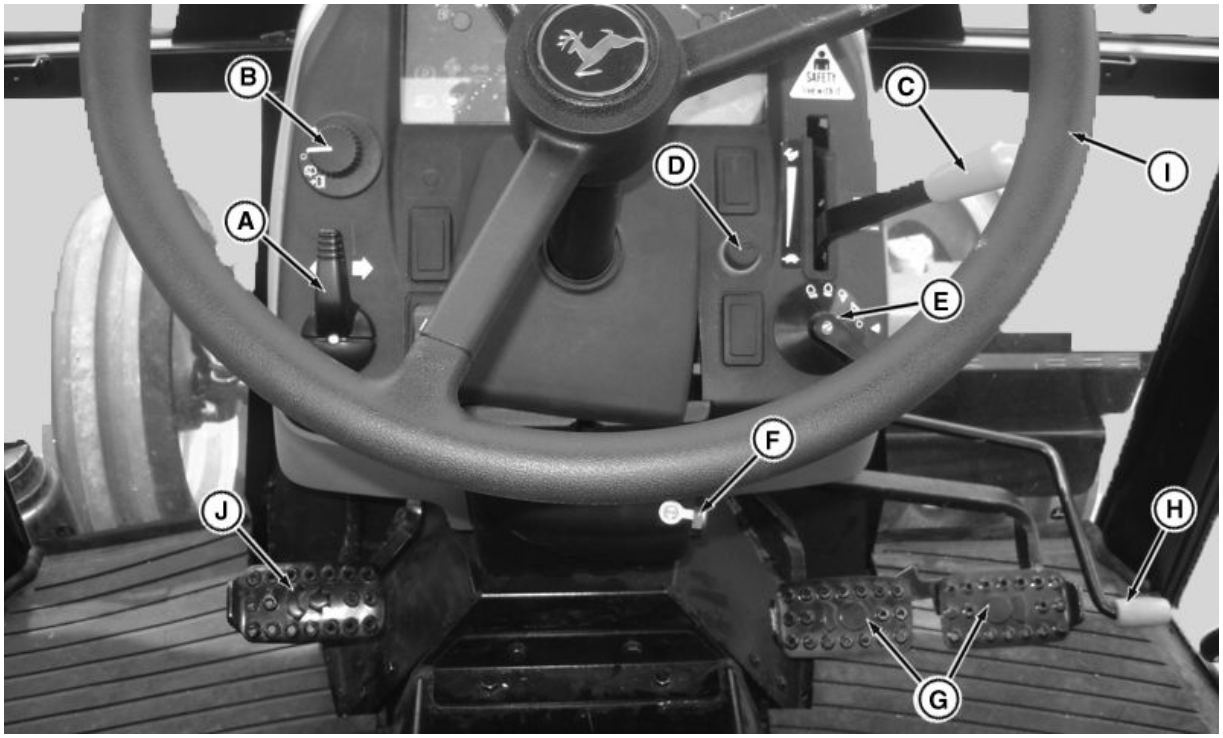


PY18447 —UN—11JUL14

Rear Left Side of Tractor

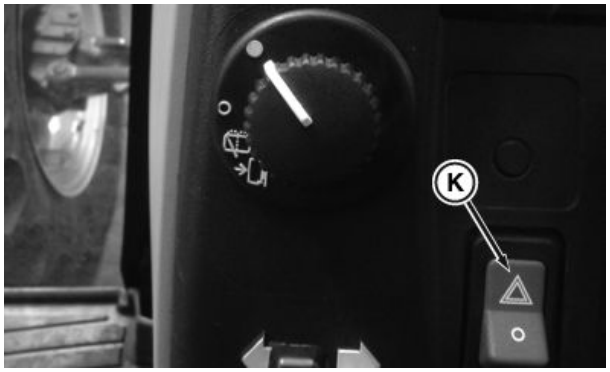
SD74272,000002D -19-14JUL14-1/1

Tractor Controls — Cab (SyncShuttle Transmission)



PY18299 —UN—03SEP13

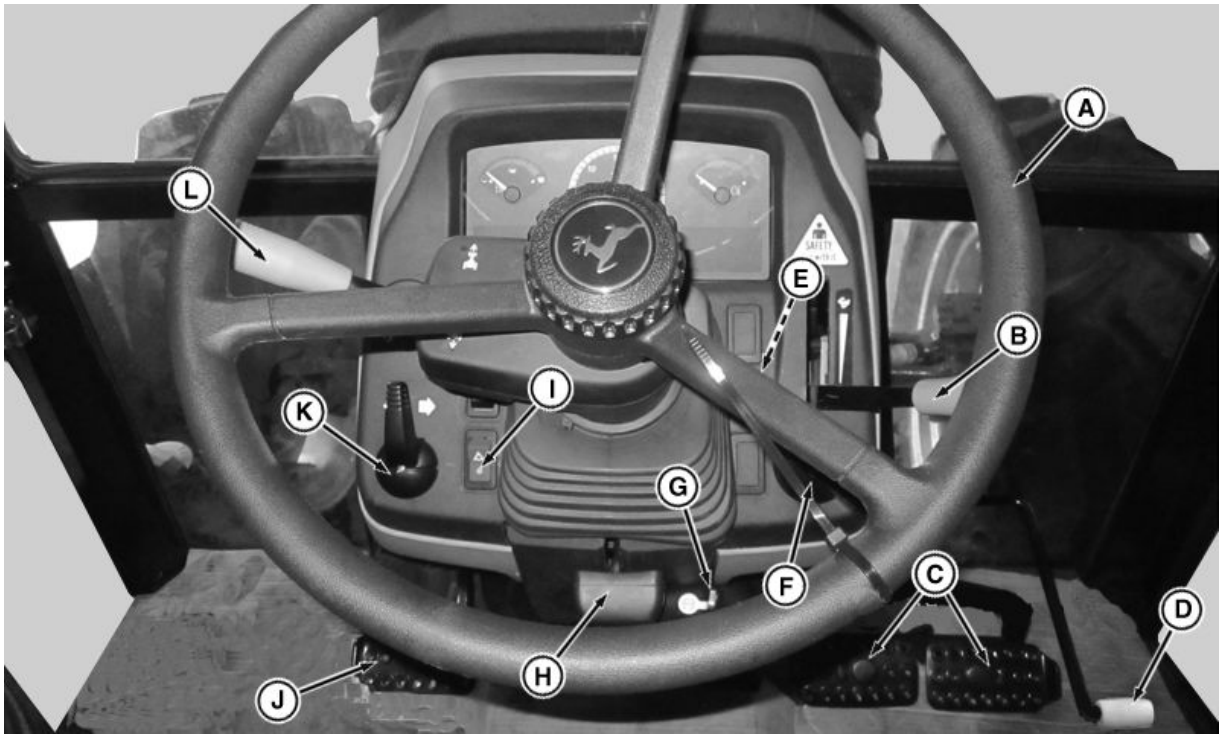
A—Turn Signal Switch
B—Wiper Switch
C—Hand Throttle Lever
D—Horn Switch
E—Light Switch
F—Key Switch
G—Brake Pedals
H—Foot Throttle
I— Steering Wheel
J— Clutch Pedal
K—Hazard Light Switch



PY15556 —UN—27DEC12

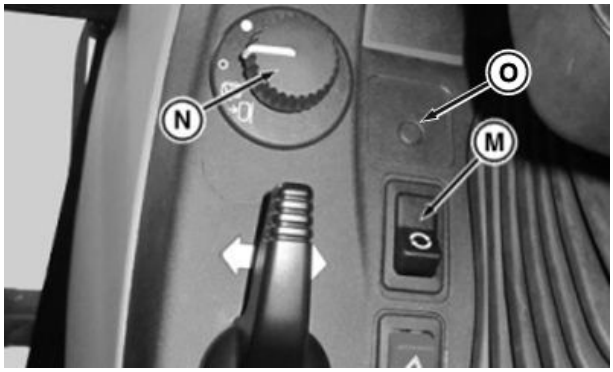
SD74272,00005CA -19-12DEC14-1/1

Tractor Controls — Cab (PowrReverser™ Transmission)



PY18266 —UN—12AUG13

A— Steering Wheel
B— Hand Throttle
C— Brake Pedals
D— Foot Throttle
E— Horn
F— Light Switch
G— Key Switch
H— Steering Wheel Tilt Lever (If Equipped)
I— Hazard Light Switch
J— Clutch Pedal
K— Turn Signal Switch
L— FNR Lever
M— Roll Mode Switch
N— Wiper Switch
O—Modulation Kit Slot

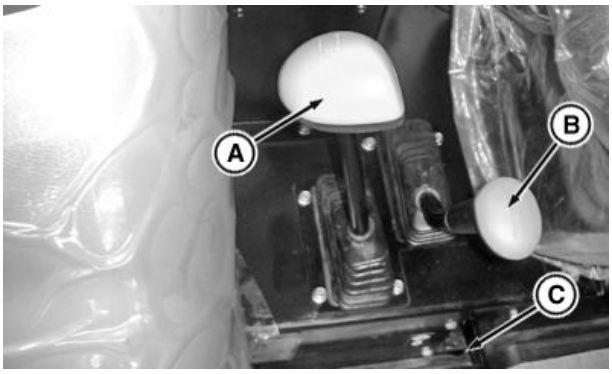


PY18965 —UN—21MAY14

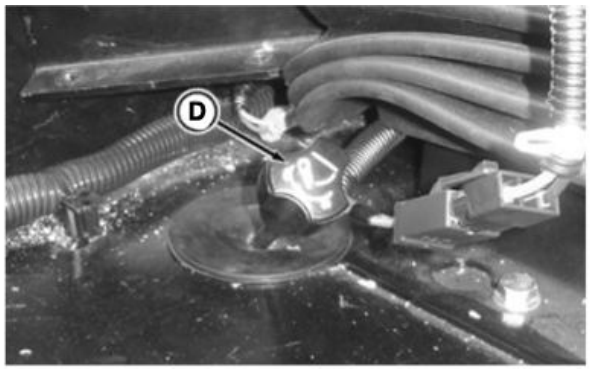
PowrReverser is a trademark of Deere & Company

SD74272,00005CB -19-21MAY14-1/1

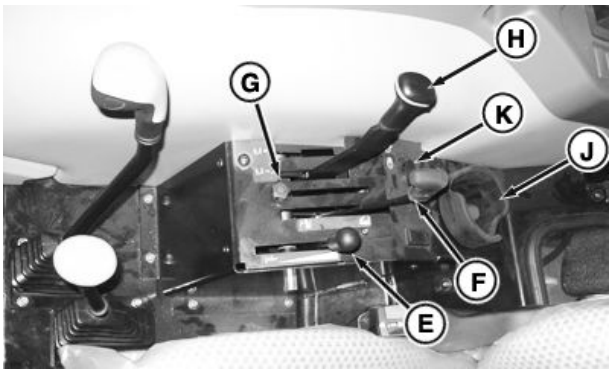
Tractor Controls — Right-Hand Panel (Cab)



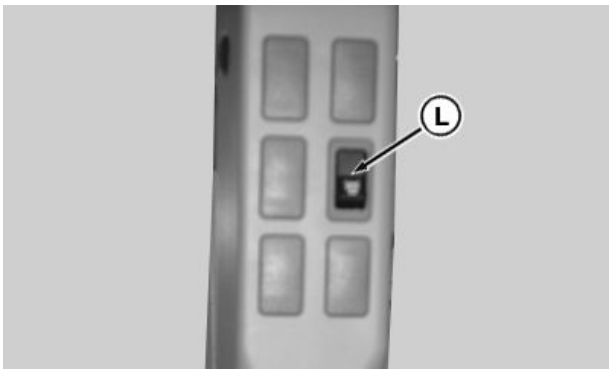
PY18269 —UN—13OCT14



PY18959 —UN—21MAY14



PY18958 —UN—21MAY14



PY18779 —UN—16SEP13

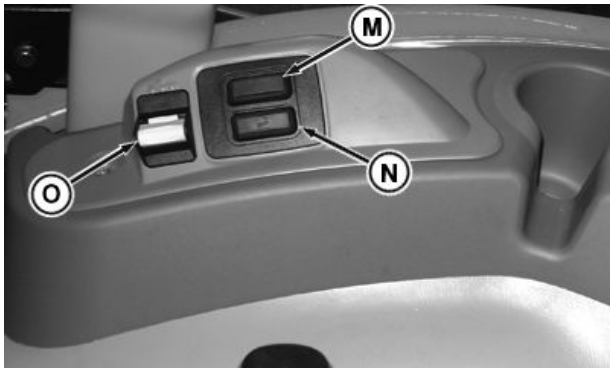
A— Gear Shift Lever
B— Range Shift Lever
C— Differential Lock Pedal
D— Rockshaft Rate-Of-Drop Knob
E— Draft Control Lever
F— Position Control Lever
G— Position Control Stop Knob
H— SCV I Lever
J— Water Bottle Holder
K— SCV Lever Lock
L— Beacon Light Switch

Continued on next page

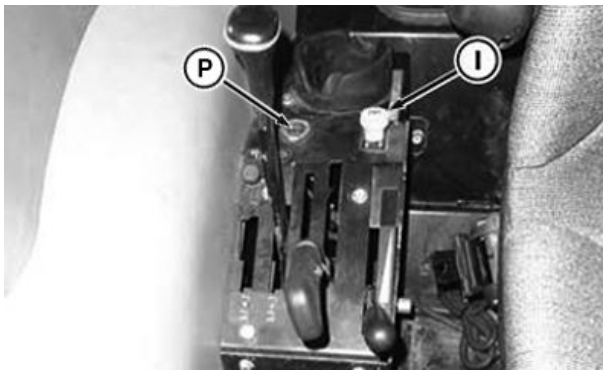
SK35149,000038A -19-11DEC14-1/2

NOTE: There are two options for Electro-Hydraulic PTO on-off switch, as shown in graphics with callouts (I) and (O). Refer to the appropriate Electro-Hydraulic PTO on-off switch information as per your tractor configuration.

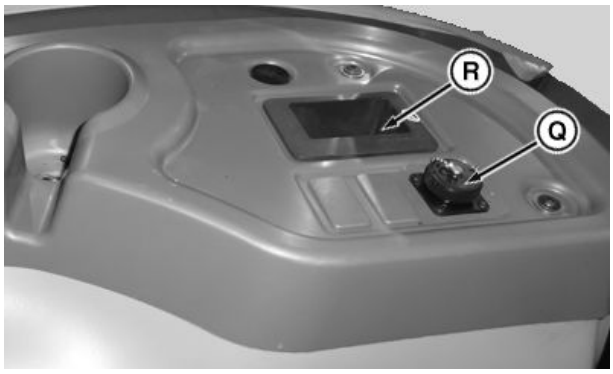
I— Electro-Hydraulic PTO on-off Switch (Only For PowrReverser™ Transmission)
M—Quick Raise Switch
N—Quick Lower Switch
O— Electro-Hydraulic PTO on-off Switch (Only For PowrReverser™ Transmission)
P—12-Volt Accessory Electrical Outlet
Q—12-Volt Accessory Electrical Outlet
R—Tray



PY18960 —UN—28NOV14



PY18977 —UN—12DEC14



PY22905 —UN—12DEC14

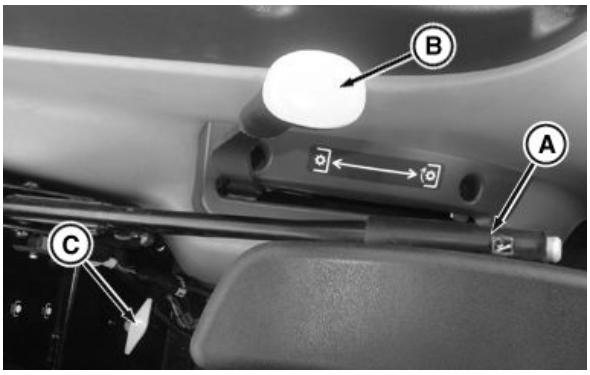
Left-hand Side

PowrReverser is a trademark of Deere & Company

SK35149,000038A -19-11DEC14-2/2

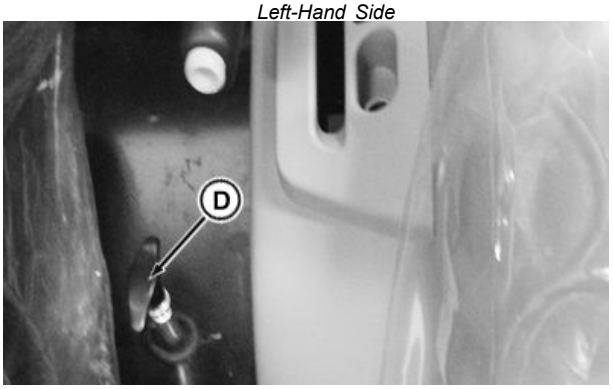
Tractor Controls — Left Hand Panel (Cab)

A— Secondary Brake Lever
B— PTO Lever (Only for Sync Shuttle Transmission)
C— Economy PTO Lever
D— Mechanical Front-Wheel Drive (MFWD) Lever (If Equipped)



PY15558 —UN—07JUL14

Left-Hand Side



PY15561 —UN—14AUG13

Left Side of Seat

SD74272,00005CD -19-02JUL14-1/1

Tractor Controls—Differential Lock Pedal

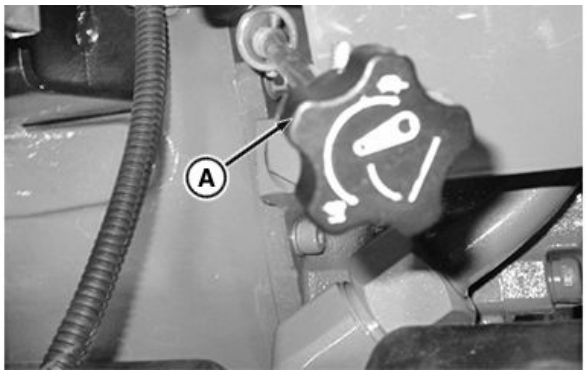
A—Differential Lock Pedal

PY15571 —UN—03AUG12

SV86979,000005D -19-03AUG12-1/1

Tractor Controls—Rockshaft Rate-of-Drop Knob

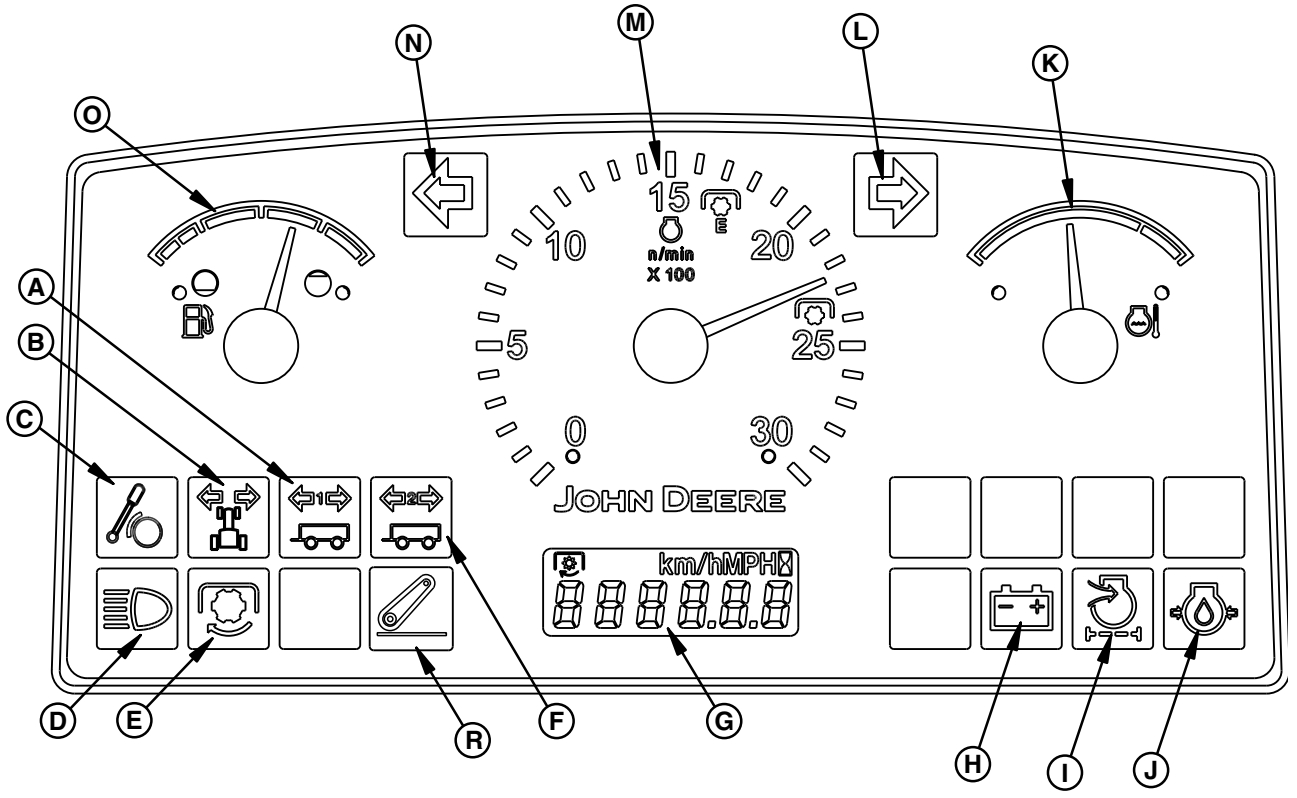
A— Rockshaft Rate-of-Drop Knob



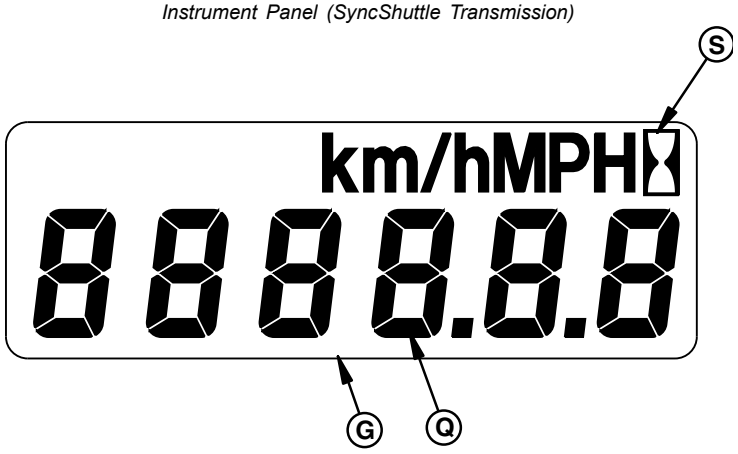
PY35616 —UN—23NOV16

SV86979,000005E -19-23NOV16-1/1

Instrument Panel — (SyncShuttle Transmission)



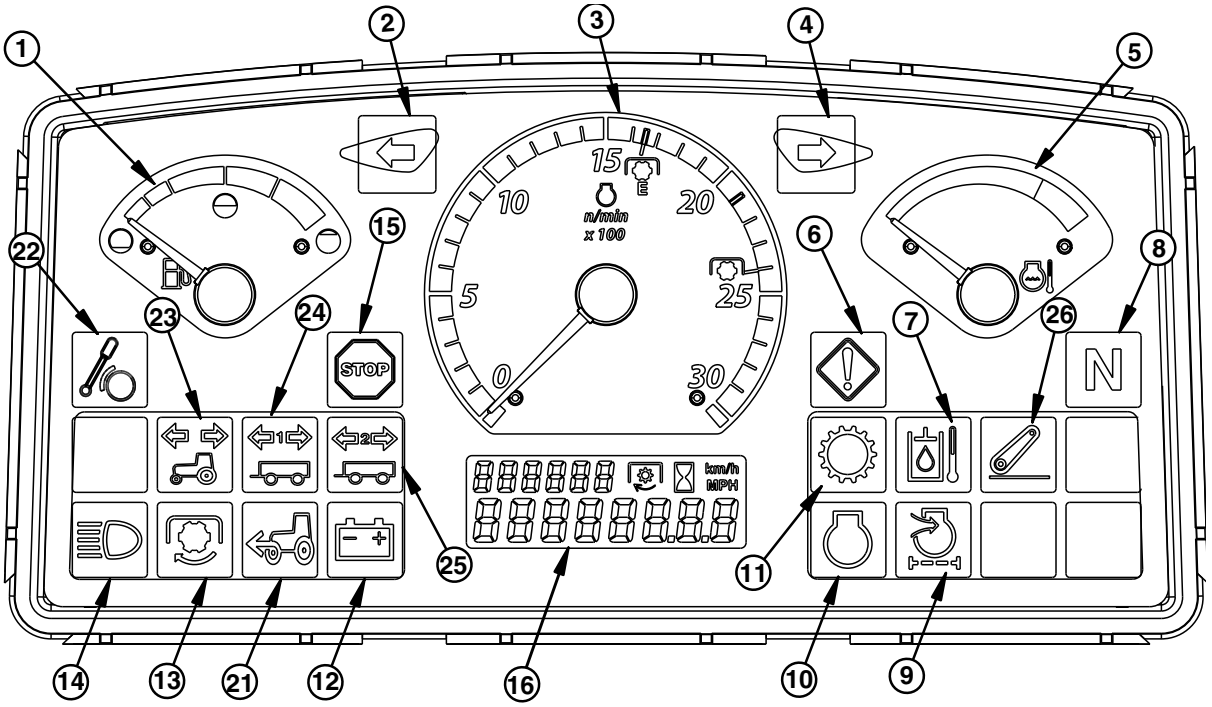
Instrument Panel (SyncShuttle Transmission)



A—Trailer 1 Indicator
B—Vehicle Indicator
C—Secondary Brake Indicator
D—High Beam Indicator
E—PTO Engaged Indicator
F—Trailer 2 Indicator
G—Information Display
H—Battery Charge Indicator
I— Engine Air Cleaner Restriction Indicator
J—Engine Oil Pressure Indicator
K—Coolant Temperature Gauge
L—Right Turn Indicator
M—Tachometer
N—Left Turn Indicator
O—Fuel Gauge
Q—Vehicle Information Display
R—QRL Indicator
S—Hour Meter Icon

SD74272,00005CE -19-11DEC14-1/1

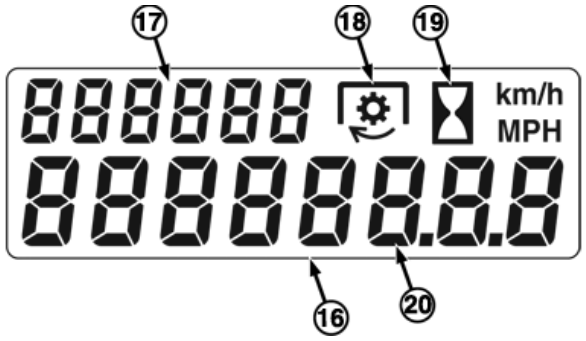
Instrument Panel — (PowrReverser™ Tractors)



Instrument Panel (PowrReverser™ Tractors)

JS86122,00002D0 -19-26AUG14-1/2

NOTE: Hour Meter/Ground Speed (LCD Digital) (19) displays hours when tractor is not moving. When tractor is moving, display switches to ground speed. When tractor is stopped, display changes back to hours.



1— Fuel Level Gauge
2— Left Turn Indicator
3— Tachometer
4— Right Turn Indicator
5— Engine Coolant Temperature Gauge
6— Service Alert Indicator
7— Hydraulic Oil Temperature
8— Neutral Indicator
9— Engine Air Cleaner Restriction Indicator
10— Engine Information Indicator
11— Transmission Information Indicator
12— Battery Charge Indicator
13— PTO Engaged Indicator
14— High Beam Indicator
15— Engine Stop Indicator
16— Vehicle Information Display
17— Hour Spent
18— PTO Icon
19— Hour Meter Icon
20— Active PTO Speed and Vehicle Speed
21— MFWD Engaged Indicator
22— Secondary Brake Indicator
23— Vehicle Indicator
24— Trailer 1 Indicator
25— Trailer 2 Indicator
26— QRL Indicator

JS86122,00002D0 -19-26AUG14-2/2

Information Display (Roll Mode Switch)

Roll mode switch (A) controls two different information display modes, “Normal” and “Diagnostic”.

Information Display - Normal Mode

Roll mode switch (A) and information display (B) default to the normal mode. In normal mode: Information display (B) provides a numeric representation of engine hours, vehicle speed, or PTO speed.

- Press and release the roll mode switch (A) to cycle through the information display (B) values (engine hours, vehicle speed, and PTO speed).

Roll Mode Sequence Order
Engine Hours
Vehicle Speed[a]
PTO Speed[a]
Regeneration Progress Stage 1[b]
Regeneration Progress Stage 2[b]
Regeneration Progress Stage 3[b]

[a] *If Equipped.*
[b] *Item(s) shall only be available when a valid value is present.*

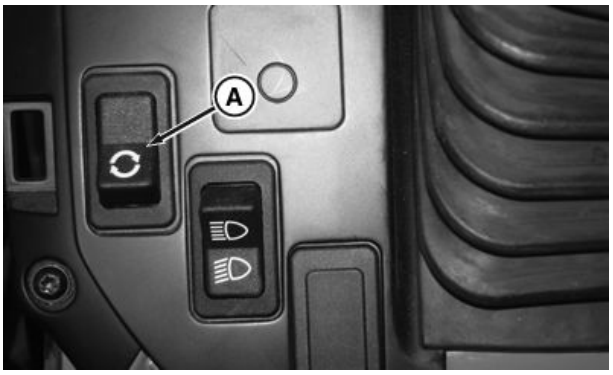
- Engine hours are displayed when the key switch is first turned on.
- Engine hours are displayed for at least 7 seconds before automatically switching to any other value.
- Display (B) automatically transitions to the vehicle speed when the tractor begins moving.
- Display (B) automatically transitions to PTO speed when the PTO is engaged.
- Display (B) disables automatic scrolling once roll mode switch (A) is pressed or used to scroll through display modes.
- PTO speed is only displayed, when the enable PTO speed display is configured in ICC diagnostic address 026 (1 = enabled) (If vehicle is equipped with electrohydraulic PTO.)
- The display (B) only re-enables automatic scrolling when the key switch is cycled on and off.
- During exhaust filter cleaning process, the display (B) transitions through the various exhaust filter cleaning states.

Information Display – Diagnostic Mode

The diagnostic mode has two levels of access; “Customer” and “Technician”.

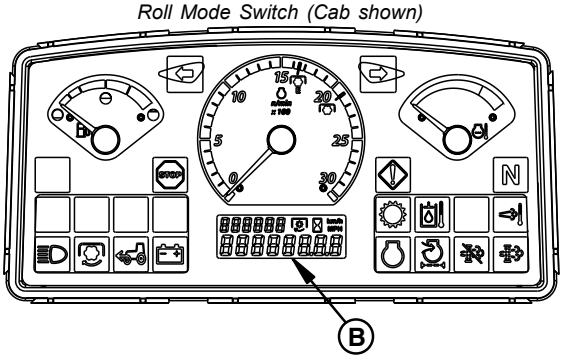
- Customer access — Press and hold roll mode switch for 5 seconds to begin diagnostic session. This action allows access to see diagnostic trouble codes and a limited amount of diagnostic addresses.
- Technician access — **Only for John Deere dealer use.** Accesses everything in customer mode plus vehicle set up, configuration, and calibration.

Customer access; recall, record, and clear diagnostic trouble codes:



Roll Mode Switch (Cab shown)

PY16305 —UN—08AUG12



PY18426 —UN—18JUN14

A— Roll Mode Switch **B— Information Display**

- Press and hold the roll mode switch for 5 seconds to begin diagnostic session.
- Upon entering diagnostics, any active or previously active codes automatically appear in a scrolling fashion with each one showing the control unit (3 letter abbreviation) and the code number (XXXXXX.XX).
- To view and/or clear diagnostic trouble codes for any given control unit, do the following:

1. Use the right turn signal switch to scroll to the desired control unit.
2. Press and release the roll mode switch to enter the diagnostic addresses for that desired control unit.
3. Use the right turn signal switch to scroll to diagnostic address 001 for that desired control unit.
4. If codes are present the word "codes" appears. If not, the word "none" appears.
5. Press and release the roll mode switch to view all code details for this control unit.
6. Any codes present in that control unit appears there in scrolling fashion for multiple codes.
7. To access the option for clearing codes for this selected control unit, press and release the right turn signal switch.
8. The question "CLR ?" appears.
9. To clear the codes, press and release the roll mode switch.
10. To go back to the entire control unit list, press and release the left turn signal switch.
11. Proceed to the next desired control unit by repeating steps 1-10.

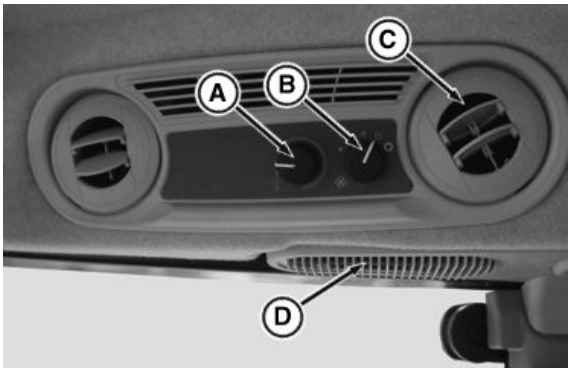
Continued on next page

SD74272,000001B -19-17JUN14-1/2

SD74272,000001B -19-17JUN14-2/2

Overhead Control Panel — (For Heater Only)

A— Heater Temperature Control Knob
B— Blower Speed Knob
C— Directional Air Louver (6 used)
D— Recirculating Air Intake (2 used)



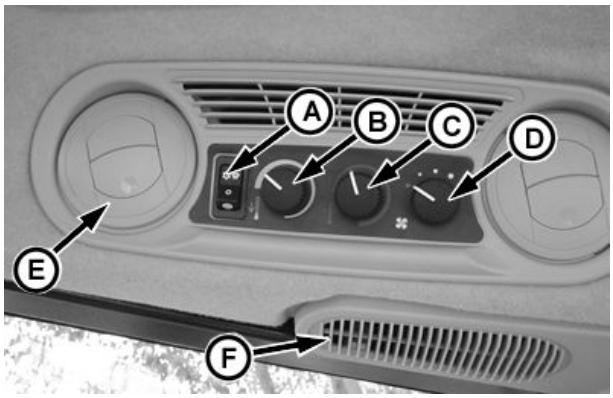
PY15623 —UN—28AUG12

Right-Hand Side

SD74272,00005D0 -19-16SEP13-1/1

Overhead Control Panel For HVAC

A— Air Conditioning/Defrost Switch
B— Air Conditioning Temperature Control Knob
C— Heater Temperature Control Knob
D— Blower Speed Knob
E— Directional Air Louver (6 used)
F— Recirculating Air Intake (2 used)



P12646A —UN—04JUL05

Right-Hand Side

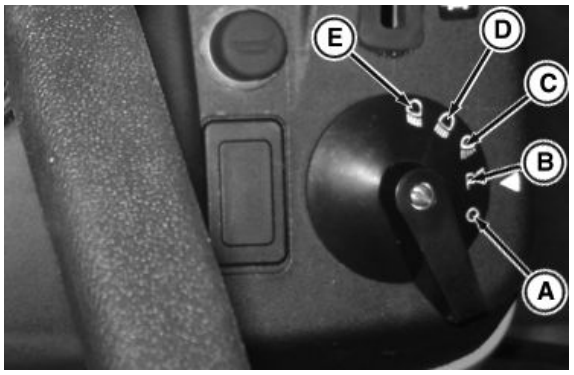
SD74272,00005D1 -19-12AUG13-1/1

Lights — Cab

Light Switch Positions

Tractor light switch has five positions:

A— Lights Off
B— Parking Lights
C— Flood Lights
D— High Beam Headlights
E— Low Beam Headlights



PY15565 —UN—21NOV12

Cab Shown

Switch Position	Position Lights	Tail Lights	Flood Lights	Head Lights
A—Off	Off	Off	Off	Off
B—Parking	On	On	Off	Off
C— Flood Lights	Off	Off	On	On—High Beams
D—High Beam	On	On	Off	On—High Beams
E— Low Light Beam	On	On	Off	On—Low Beams

SD74272,00005C8 -19-07JUL14-1/1

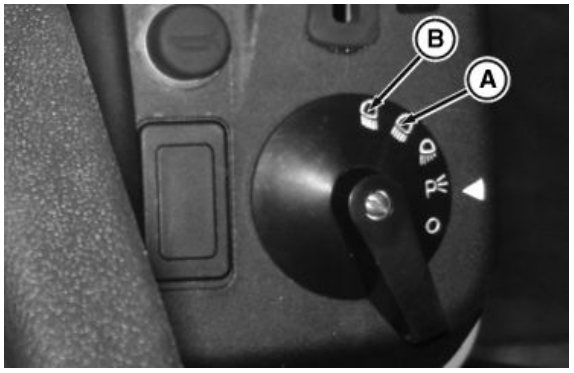
Use Headlights

Dual-beam headlights (C) are switched on by turning light switch to either high beam headlight position (A), or low beam headlight position (B).

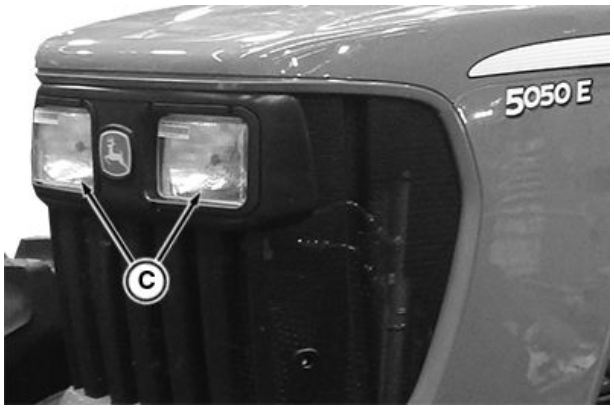
Always dim lights before meeting another vehicle.

Keep headlights adjusted properly. (See Adjust Headlights in Service section.)

A—High Beam Headlight Position
B—Low Beam Headlight Position
C—Headlights



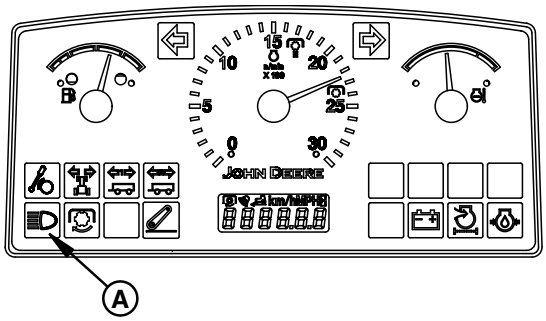
PY15566 —UN—21NOV12



PY15567 —UN—30SEP16

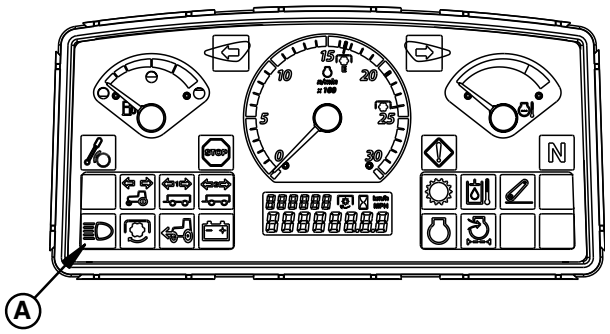
SV86979,0000058 -19-02AUG12-1/1

High Beam Indicator



Sync Shuttle Only

PY18946 —UN—21MAY14



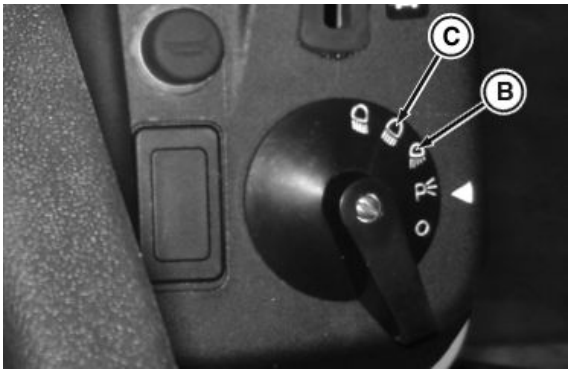
PowrReverser™ Only

PY18925 —UN—23APR14

High beam indicator (A) should glow with key in ON or OFF position and light switch in following positions:

- High beam lights position (C)
- Flood lights position (B)

A— High Beam Indicator
B— Flood Lights Position
C— High Beam lights Position



PY15624 —UN—24DEC12

JS86122,00002D1 -19-20MAY14-1/1

Use Tail Lights

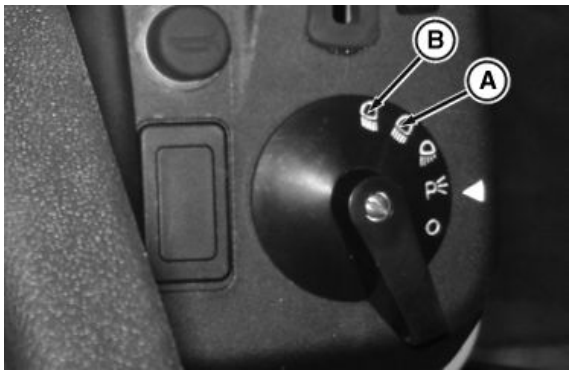
Red tail lights (C) are switched on when light switch is on either high beam headlight position (A), low beam headlight position (B) or park position.

Be sure tail light lenses are clean before driving on a road, so other drivers can see them easily.

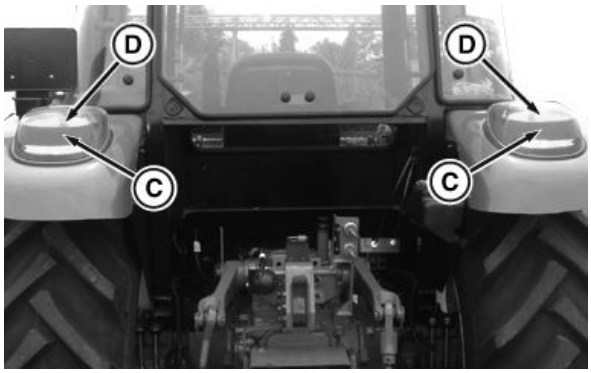
CAUTION: Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use hand signals or turn signal lights.

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible 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.

A—High Beam Headlight Position
B—Low Beam Headlight Position
C—Tail Lights
D—Turn Signal Lights



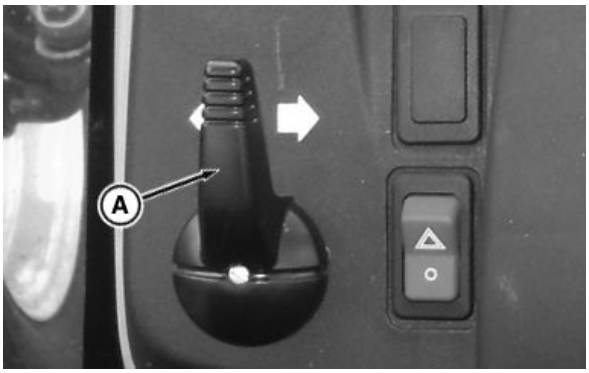
PY15566 —UN—21NOV12



PY15569 —UN—02AUG12

SK35149,000038B -19-21MAY14-1/1

Use Turn Signals

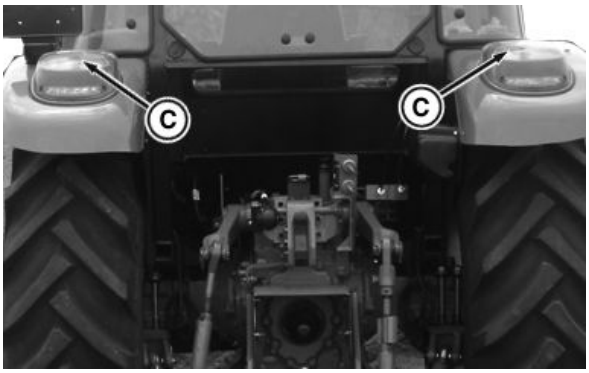


PY15572 —UN—03AUG12

Turn Signal Switch

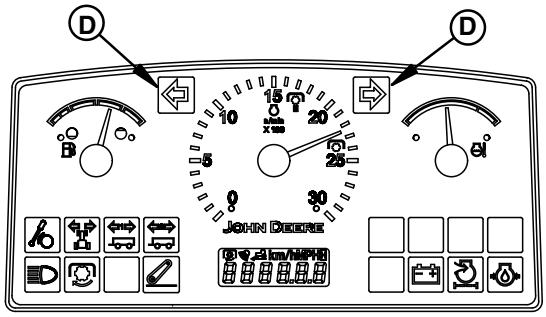
PY15575 —UN—06AUG12

Front Turn Signal Lights



PY15573 —UN—29AUG12

Back Turn Signal Lights



PY18947 —UN—21MAY14

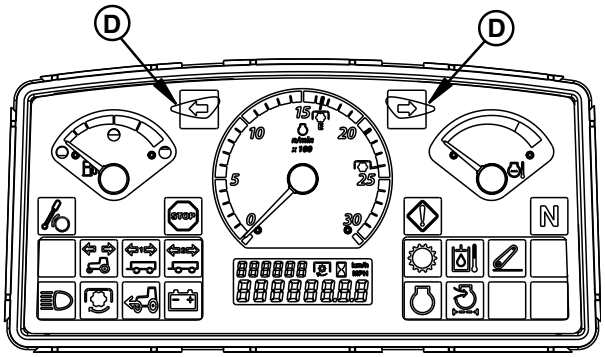
Sync Shuttle

Move turn signal switch (A) left to indicate left-hand turn or right for right-hand turn. Indicator lights (D) will flash to signal turn direction.

When switch is in right side position, front and rear turn lights on right-hand side will flash. When switch is in left side position, front and rear turn lights on left-hand side will flash.

NOTE: Be sure to manually return switch to center position after turning.

A— Turn Signal Switch
B— Front Turn Signal Light
C— Rear Turn Signal Lights
D— Turn Signal Indicators

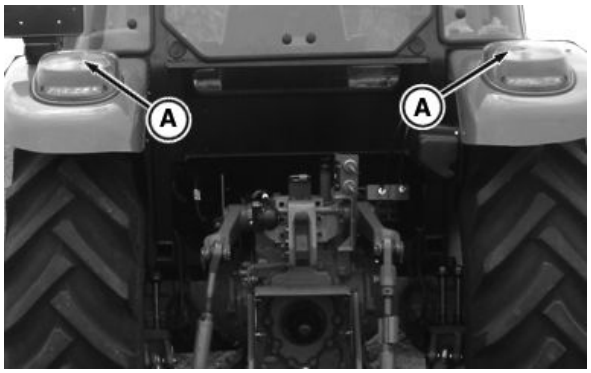


PY18926 —UN—23APR14

PowrReverser

JS86122,00002D2 -19-20MAY14-1/1

Use Hazard Lights



PY15574 —UN—06AUG12

Rear Turn Light

PY15575 —UN—06AUG12

Front Turn Light

All four turn signal lights (two front and two rear) start to blink when hazard light switch (C) is in on position. Use hazard lights to warn approaching vehicles when tractor is stopped on the road.

A— Turn Signal Light on Rear Side
B— Turn Signal Light on Front Side
C— Hazard Light Switch

PY15576 —UN—04AUG17

Hazard Switch

SV86979,00002DF -19-04FEB13-1/1

Using Flood Lights

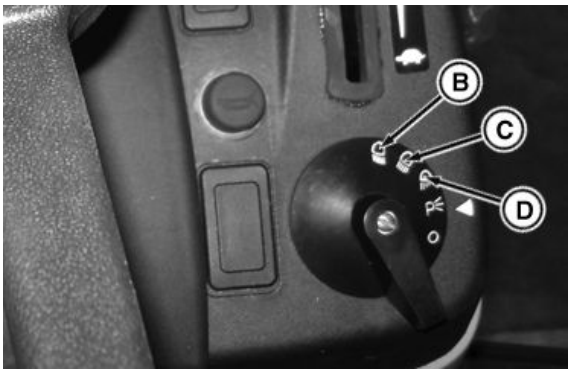
CAUTION: When operating on a road, move light switch to either high beam lights position- (C) or low (dim) beam lights position (B). Never use flood lights when transporting on roads. Clear, bright lights at the rear of the tractor could confuse drivers of other vehicles as they approach from the rear.

NOTE: Flood lights can be adjust freely by hand.

Flood light position (D) is for field work only. Do NOT use when driving on public roads. Flood lights are on when switch is turned to flood light position (D).

A— Rear Floodlights
B— Low Beam Headlight (Low position)
C— High Beam Headlights
D— Flood Lights Position

PY15625 —UN—24DEC12

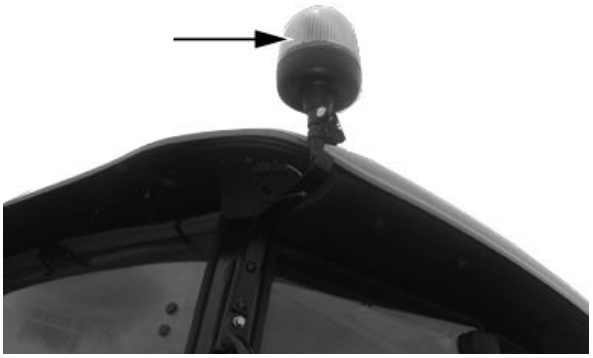


PY15626 —UN—21NOV12

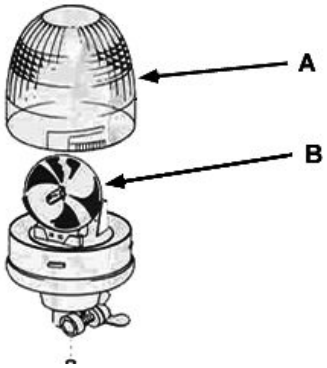
SV86979,000036A -19-11MAR13-1/1

Use Beacon Light

The beacon light can be used as a control and a warning signal for industrial plants and building sites.

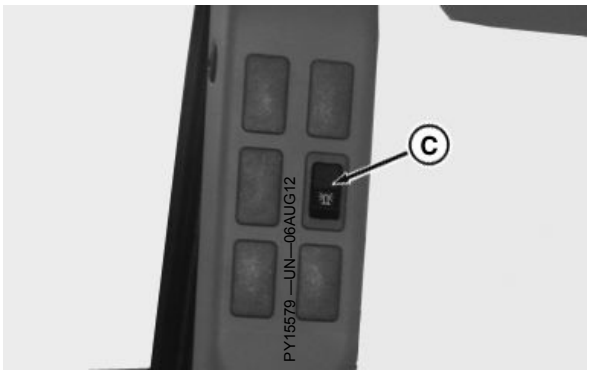


PY15578 —UN—06AUG12



PY1430

PY1430 —UN—26JUN06



PY15579 —UN—06AUG12

A—Dome
B—Bulb
C—Switch

Changing the bulb – Turn dome (A) counterclockwise and remove from locking tabs. Replace the bulb. Replace the dome if necessary, and turn clockwise until locked with the tabs.

IMPORTANT: Do not touch or dirty the inside surface of the reflector.

NOTE: To use the beacon light, operate switch (C) on the right side of the seat. Avoid operating the beacon light during starting of the tractor.

SV86979,0000061 -19-03SEP12-1/1

Use Go Home Feature (If equipped)

Go home feature has been provided for the operator to have a clear visibility at night time during the engine shut off condition.

To use Go Home Feature, the following steps must be followed:

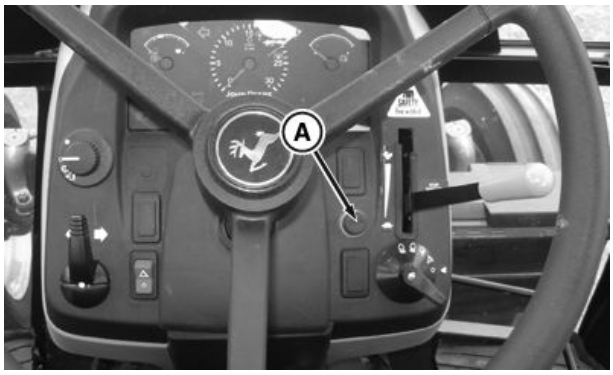
- Park the Tractor
- Move the key to OFF position
- Press the Horn Switch within 15 seconds

After pressing Horn Switch, Go Home Feature will be activated. Person can easily walk home in the headlights. After 30 seconds, Headlights will be switched off automatically.

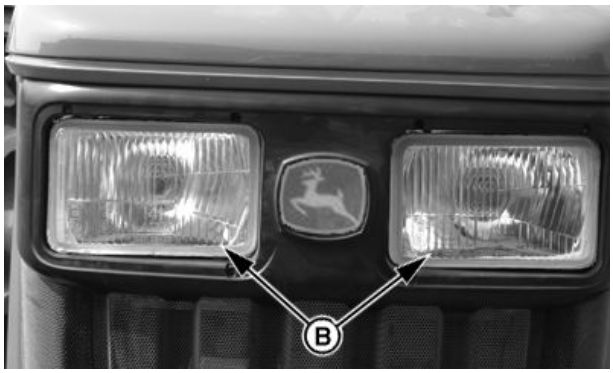
NOTE: Go home feature available with EQRL variants only.

Go Home Feature is used for tractor parking at remote side in the darkness.

A—Horn Switch **B—Head Lights**



PY22916 —UN—30DEC14



PY11267 —UN—27JAN11

SD74272,00001CC -19-02JAN15-1/1

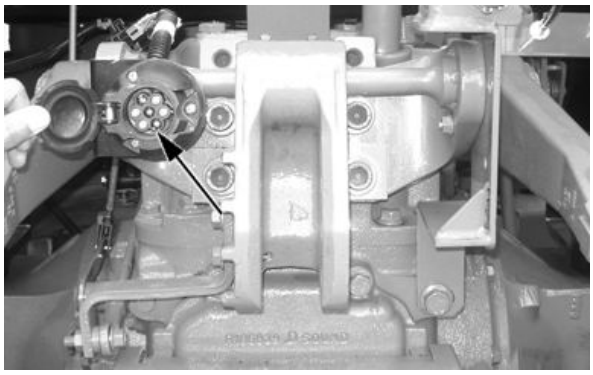
Seven-Terminal Outlet

Outlet (A) is used to connect lights, turn signals, and remote electrical equipment on trailers or implements. Always use auxiliary light on towed implement when tractor rear signals and other lights are obscured.

NOTE: Matching plug is available through your John Deere dealer.

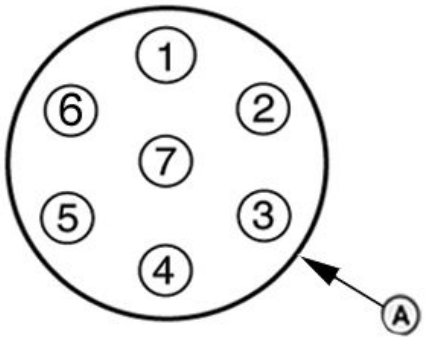
Terminal	Function	Wire Color
1	Left Turn Light	Green
2	Accessory	Red
3	Ground	Black
4	Right Turn Light	Green
5	Tail Light	Gray
6	Brake Light	Blue
7	Tail Light	Gray

A—Seven-Terminal Outlet



PY15580 —UN—07AUG12

Rear Side of Tractor



PY5606

PY5606 —UN—06MAR07

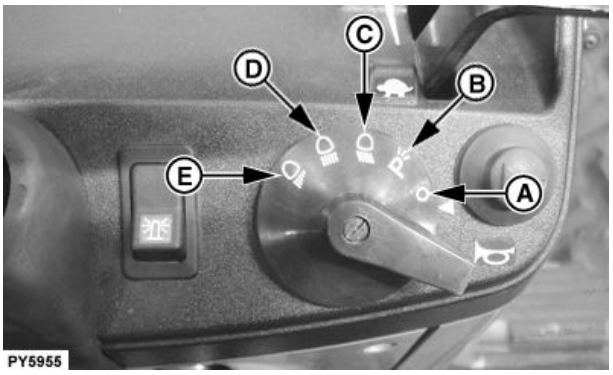
Seven-Terminal Outlet

SV86979,0000062 -19-20DEC12-1/1

Light Switch Positions

Tractor light switch has five positions:

A—Lights Off
B—Position Lights
C—Low Beam Headlights
D—High Beam Headlights
E—High Beam Headlights and Flood Light



PY5955 —UN—12OCT09

Switch Position	Position Lights	Tail Lights	Field Light	Headlights
A—Off	Off	Off	Off	Off
B—Position	On	On	Off	Off
C—Low Beam	On	On	Off	On—Low Beams
D—High Beam	On	On	Off	On—High Beams
E—High Beam Headlights and Flood Light	Off	Off	On	On—High Beams

PU00210,000027E -19-05FEB09-1/1

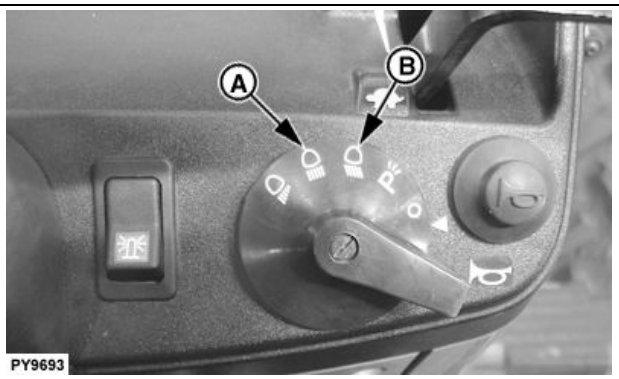
Use Headlights

Dual-beam headlights (C) are switched on by turning light switch to either high beam headlight position (A), or low beam headlight position (B).

Always dim lights before meeting another vehicle.

Keep headlights adjusted properly. (See Adjust Headlights in Service section.)

A—High Beam Headlight Position
B—Low Beam Headlight Position
C—Headlights



PY9693 —UN—12OCT09

PY9694 —UN—12JUL09

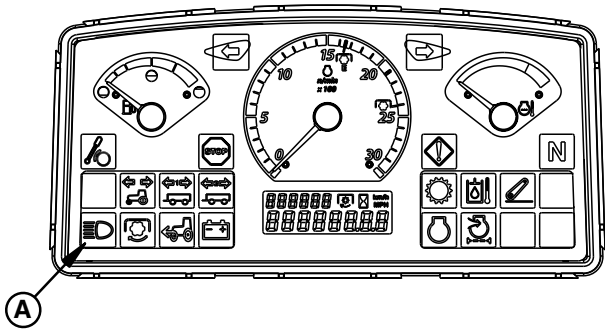
SA61034,00006E0 -19-05FEB09-1/1

High Beam Indicator

High beam indicator (A) should glow with key in ON or OFF position and light switch in following positions:

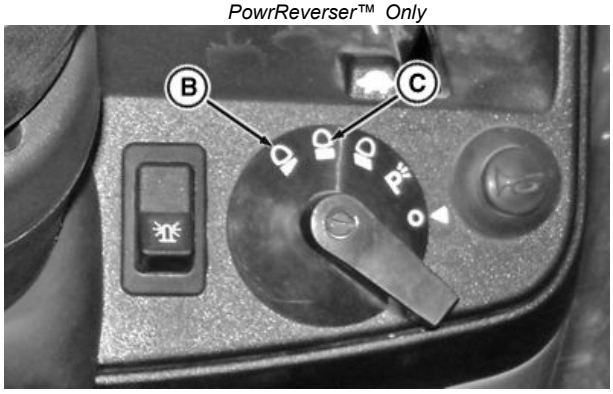
- High beam lights position (C)
- Flood lights position (B)

A— High Beam Indicator
B— Flood Lights Position
C— High Beam Lights Position



PY18925 —UN—23APR14

PowrReverser™ Only



PY18449 —UN—11JUL14

SD74272,0000037 -19-07JUL14-1/1

Use Tail Lights

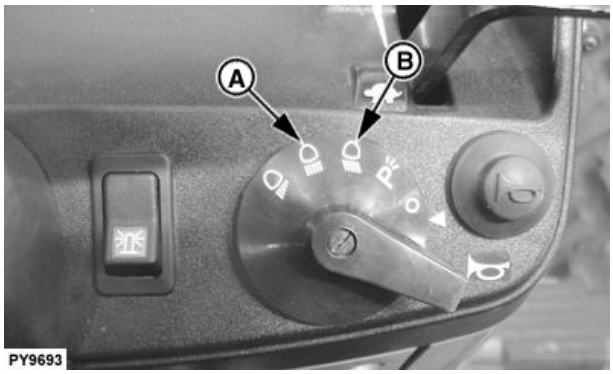
Red tail lights (C) are switched on when light switch is on either high beam headlight position (A) or low beam headlight position (B).

Be sure tail light lenses are clean before driving on a road, so other drivers can see them easily.

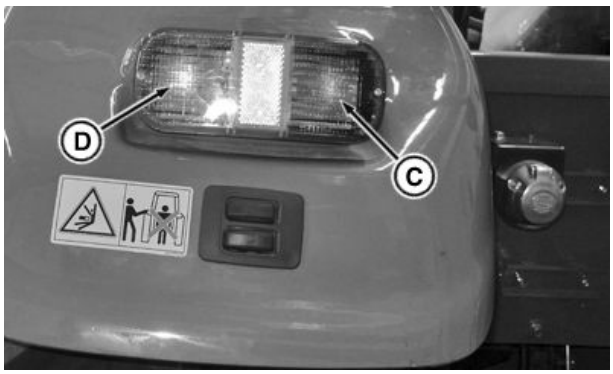
CAUTION: Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use hand signals or turn signal lights.

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible 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.

A—High Beam Headlight Position
B—Low Beam Headlight Position
C—Tail Lights
D—Turn Signal Lights



PY9693 —UN—12OCT09

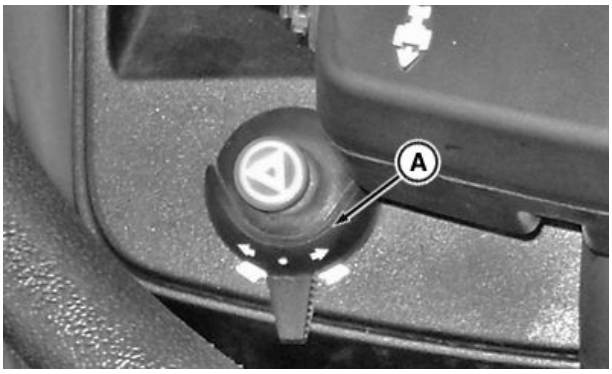


PY18450 —UN—11JUL14

Left Side Tail Lights Shown

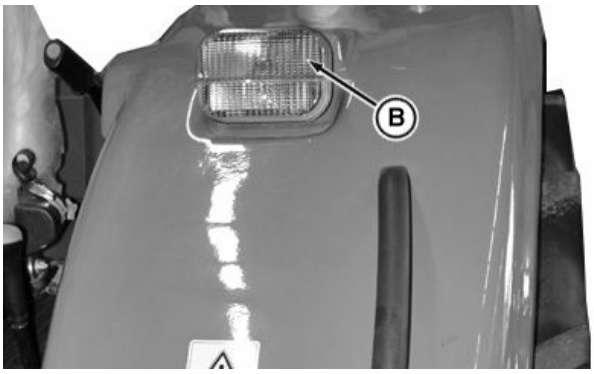
SD74272,0000038 -19-07JUL14-1/1

Use Turn Signals



PY18451 —UN—11JUL14

Turn Signal Switch

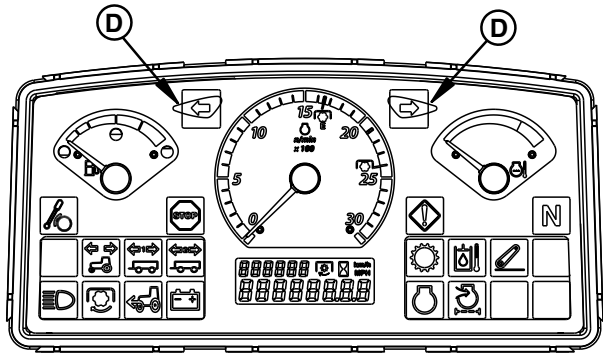


PY18453 —UN—11JUL14

Front Turn Signal Lights - Right Side Shown

PY18452 —UN—11JUL14

Rear Turn Signal Lights



PY18926 —UN—23APR14

PowrReverser

A— Turn Signal Switch
B— Front Turn Signal Light
C— Rear Turn Signal Lights
D— Turn Signal Indicators

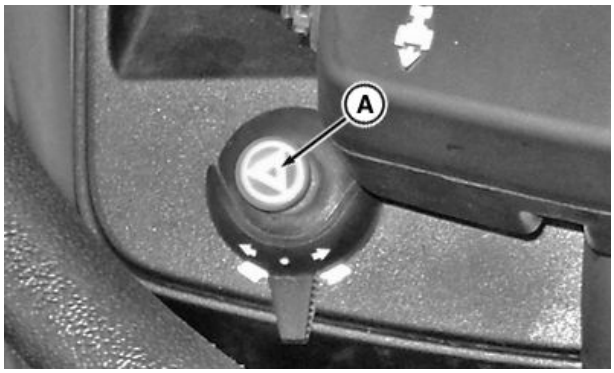
Move turn signal switch (A) left to indicate left-hand turn or right for right-hand turn. Indicator lights (D) will flash to signal turn direction.

When switch is in right side position, front and rear turn lights on right-hand side will flash. When switch is in left side position, front and rear turn lights on left-hand side will flash.

NOTE: Be sure to manually return switch to center position after turning.

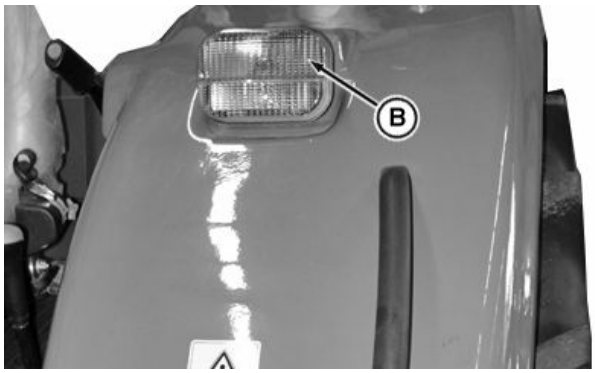
SD74272,0000039 -19-14JUL14-1/1

Use Hazard Lights



PY18454 —UN—11JUL14

Hazard Switch



PY18453 —UN—11JUL14

Right Side Front Turn Light Shown

All four turn signal lights (two front and two rear) start to blink when hazard light switch (A) is pulled out. Use hazard lights to warn approaching vehicles when tractor is stopped on the road.

A— Hazard Light Switch
B— Turn Signal Light on Front Side
C— Turn Signal Light on Rear Side

PY18452 —UN—11JUL14

Rear Turn Lights

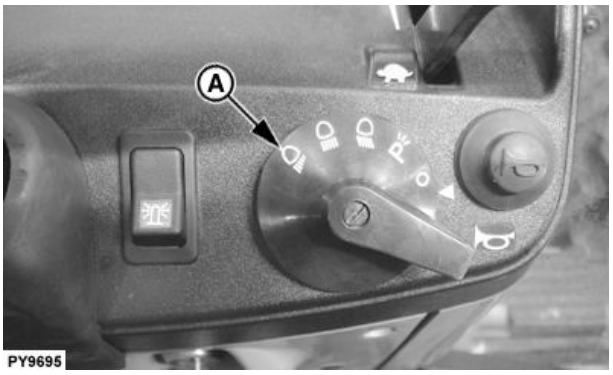
SD74272,000003A -19-07JUL14-1/1

Use Flood Light

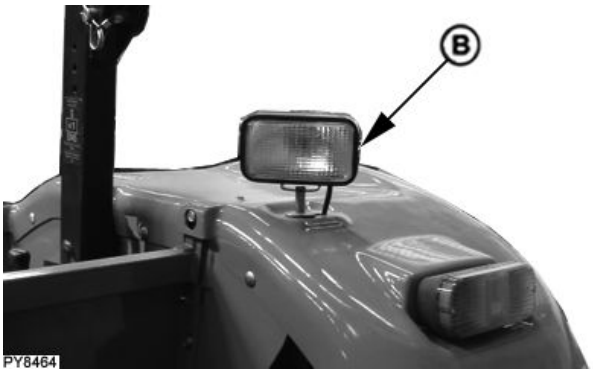
Flood light (B) is switched on by flood light position (A) of light switch.

CAUTION: When operating on a road, move light switch to either high beam or low beam headlight position. Never use flood light when transporting. A clear, bright light at the rear of the tractor could confuse drivers of other vehicles as they approach from the rear.

A—Flood Light Position **B—Flood Light**



PY9695 —UN—12OCT09



PY8464 —UN—13JUL09

JB06590,00004F2 -19-18JUN09-1/1

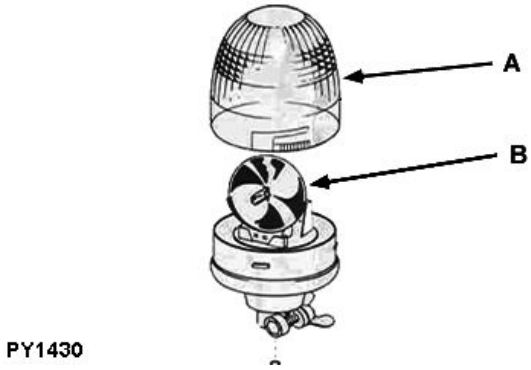
Use Beacon Light

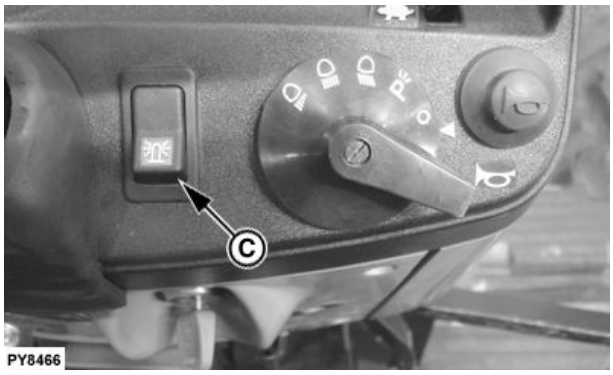
The beacon light can be used as a control and a warning signal for industrial plants and building sites.

PY8465 —UN—15DEC08

PY10461 —UN—06MAY10

For Turkey only





PY1430 —UN—26JUN06

PY8466 —UN—12OCT09

A—Dome **B—Bulb** **C—Switch**

Changing the bulb – Turn dome (A) counterclockwise and remove from locking tabs. Replace the bulb. Replace the dome if necessary, and turn clockwise until locked with the tabs.

IMPORTANT: Do not touch or dirty the inside surface of the reflector.

NOTE: To use the beacon light, operate switch (C) on the right side of the instrument panel. Avoid operating the beacon light during starting of the tractor.

AH98466,0000EC4 -19-06MAY10-1/1

Use Go Home Feature (If equipped)

Go home feature has been provided for the operator to have a clear visibility at night time during the engine shut off condition.

To use Go Home Feature, the following steps must be followed:

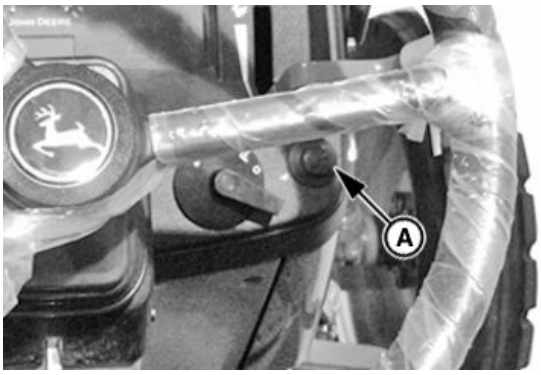
- Park the Tractor
- Move the key to OFF position
- Press the Horn Switch within 15 seconds

After pressing Horn Switch, Go Home Feature will be activated. Person can easily walk home in the headlights. After 30 seconds, Headlights will be switched off automatically.

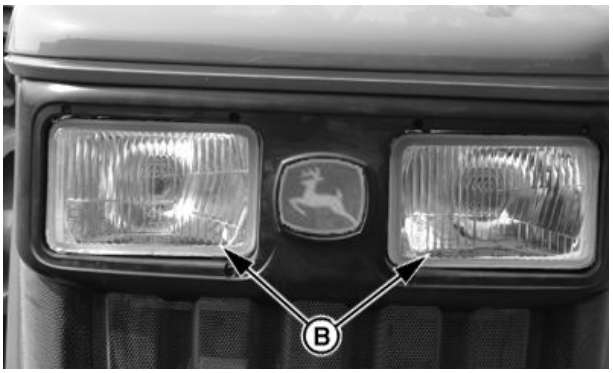
NOTE: Go home feature available with EQRL variants only.

NOTE: Go Home Feature is used for tractor parking at remote side in the darkness.

A—Horn Switch **B—Head Lights**



PY11266 —UN—27JAN11



PY11267 —UN—27JAN11

SP21231,0000A11 -19-01JAN15-1/1

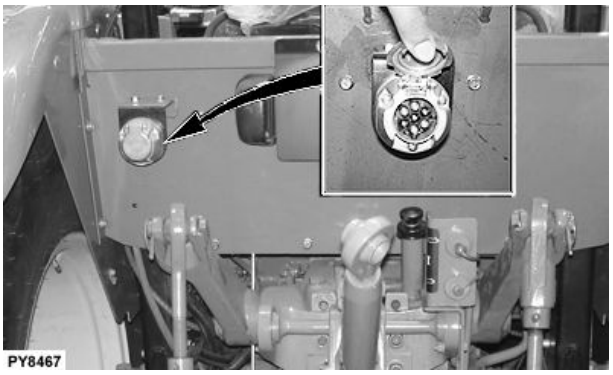
Seven-Terminal Outlet

Outlet (A) is used to connect lights, turn signals, and remote electrical equipment on trailers or implements. Always use auxiliary light on towed implement when tractor rear signals and other lights are obscured.

NOTE: Matching plug is available through your John Deere dealer.

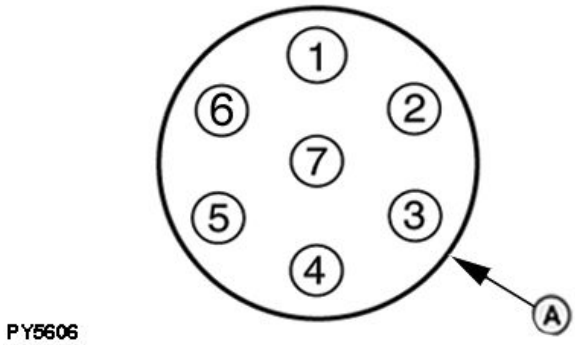
Terminal	Function	Wire Color
1	Left Turn Light	Green
2	Accessory	Red
3	Ground	Black
4	Right Turn Light	Gray/Red
5	Tail Light	Gray
6	Brake Light	Blue
7	Tail Light	Gray

A—Seven-Terminal Outlet



Rear Side of Tractor

PY8467 —UN—29AUG09



Seven-Terminal Outlet

PY5606 —UN—06MAR07

JB06590,00004F4 -19-31JUL09-1/1

Cab Classification According to EN 15695-1 (When Applying Plant Protection Products and Liquid Fertilizers)

Cab classification according to EN 15695-1 provides information on the effectiveness of protection against harmful substances offered by the cab.

Categories 1—4 are used for classification and specified on a label inside the cab.

Replace label if missing or damaged. See your John Deere dealer.

Category 1 — The cab does not offer any protection against substances which are harmful to health.
Category 2 — The cab offers protection against solid airborne particles such as dust, but not against aerosols and vapors.
Category 3 — The cab offers protection against dust and aerosols (liquid airborne substances such as spray), but not against vapors.
Category 4 — The cab offers protection against dust, aerosols, and vapors.

CAUTION: Before working in an environment containing hazardous substances, that is, when using pesticides, check whether the cab offers sufficient protection. Refer to the product data sheets of the spraying liquid manufacturer specifying the category required for the cab.

CAUTION: In case of category 3 and 4 cabs, find out whether the installed filters have been checked according to EN 15695-1:2009 and whether they are suitable for the chemical being used (refer to the manufacturer information)

PY18275 —UN—14AUG13

Back, left side of the operator

before working in an environment containing hazardous substances.

CAUTION: The cab air filters must be serviced as specified. See Section "Lubrication and Periodic Service" or "Service - As Required" and "Service - Once a Year" in this Operator's Manual.

CAUTION: Refer to product data sheets and product identification of the crop protection chemicals. These contain important information on how to avoid hazards.

The following requirements must be met to offer best protection:

1. All seals (on door, windows and roof) in good condition
2. Doors, windows, and roof closed
3. Grommets for cables in the cab sealed properly
4. Fan ON
5. Cab air filters must be in good condition.

SD74272,00005D4 -19-13AUG13-1/1

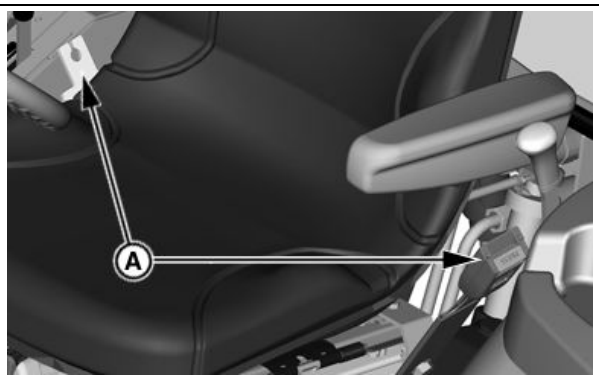
Using Seat Belt

CAUTION: Use a seat belt when you operate with a rollover protective structure (ROPS) to minimize injuries from the accidents such as an overturn.

To properly retain operator, seat belt (A) must fit snugly across abdomen. Seat belt extends as necessary to fit comfortably.

Inspect seat belt and mounting hardware annually. (See INSPECT SEAT BELTS in General Maintenance and Inspection section.)

A—Seat Belt



PY15581 —UN—07AUG12

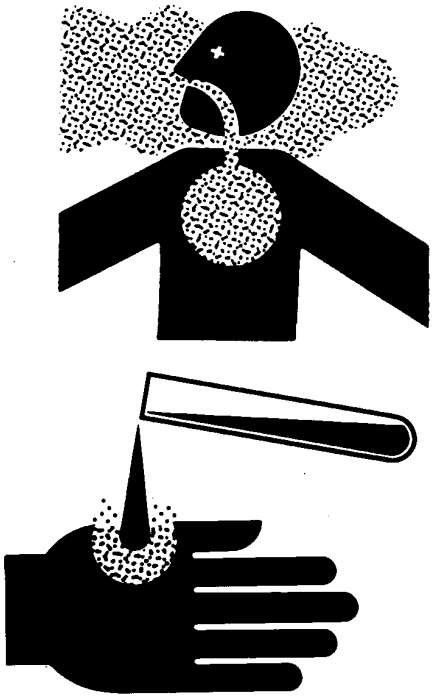
SV86979,00002E1 -19-05FEB13-1/1

Avoid Contact with Agricultural Chemicals

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.



TS220 —UN—15APR13

TS272 —UN—23AUG88

DX,CABS -19-25MAR09-1/1

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.

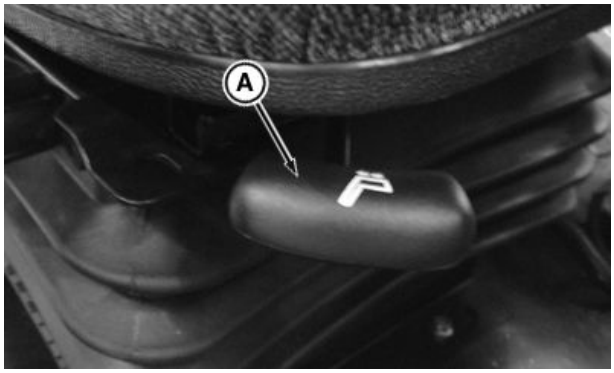
When exposed to hazardous pesticides, clean exterior and interior of vehicle daily to keep free of the accumulation of visible dirt and contamination.

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.

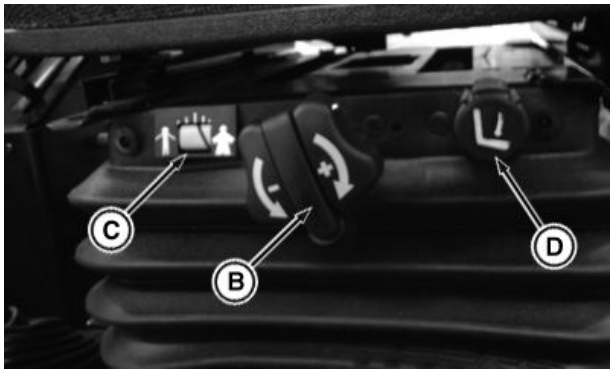
DX,CABS2 -19-24JUL01-1/1

Adjusting Seat

CAUTION: To avoid accidents, adjust seat before driving.



PY16098 —UN—22JUN12



PY16099 —UN—22JUN12

A—Forward/Backward Adjustment Lever
B—Weight Adjustment Lever
C—Display Window
D—Height Adjustment Lever

Forward or Backward: Lift lever (A), move seat to desired position and release lever to lock in position.

Weight: Rotate lever (B) away from seat and turn:

- Clockwise—Increase load
- Counterclockwise—Reduce load

NOTE: Suspension should not bottom out when properly adjusted.

Desired weight setting appears in display window (C). Rotate lever toward seat when done.

Height: To adjust the seat upward, rotate knob (D) clockwise. To adjust downward, rotate the knob (D) counterclockwise.

SV86979,00002E2 -19-05FEB13-1/1

Accessory Electrical Outlets

NOTE: Outlet is protected by 30-amp fuses.

A—12-Volt Power Outlet

PY16100 —UN—23JUN12

SV86979,0000067 -19-08AUG12-1/1

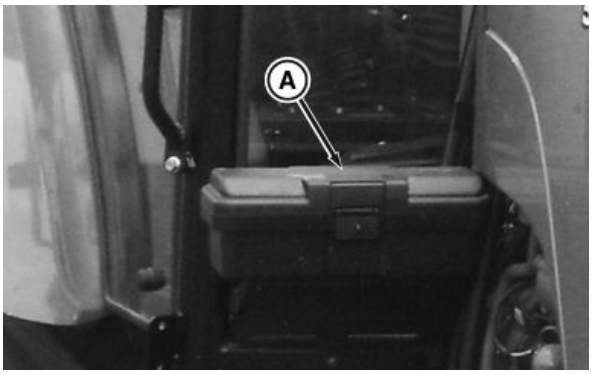
Use Tool Box

IMPORTANT: The tool box is not intended to carry heavy objects or to be used as a seat.

The tractor is equipped with a portable tool box (A). It is fitted near the right side rail. Pull the latch upward to open the tool box.

For safety reasons, never drive the tractor with tool box open. The content of the tool box should not exceed 10 kg (22 lb).

A—Tool Box



PY15582 —UN—08AUG12

SV86979,0000066 -19-08AUG12-1/1

Opening Windows

Front, Side and rear windows can be opened for better ventilation.

NOTE: Front window opening option is available for heater only cab.

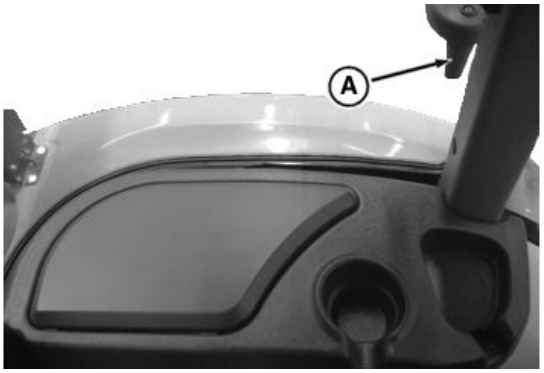
Side: Pull handle (A) toward rear and push to lock open.

Rear: Rotate handle (B) clockwise and push out.

Front: Rotate handle (C) clockwise and push out.

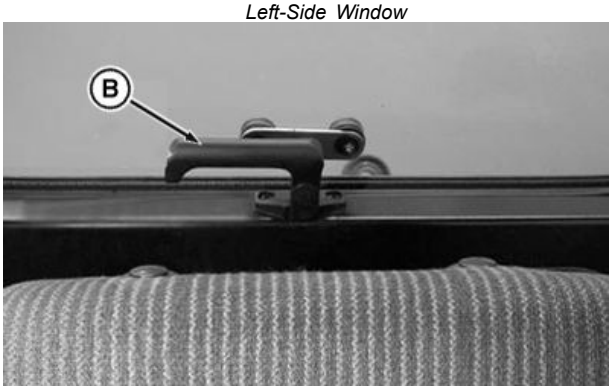
NOTE: Rear window opening provides a large exit path if cab doors are blocked in case of an emergency.

A—Side Window Handle
B—Rear Window Handle
C—Front Window Handle (Heater Only)



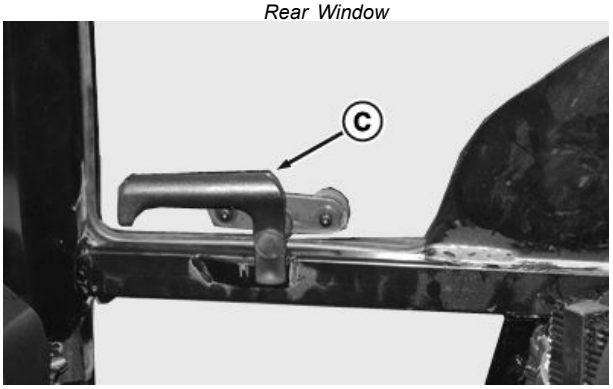
Left-Side Window

PY16142 —UN—23JUN12



Rear Window

PY16143 —UN—23JUN12



Front Window (Heater Only)

PY18790 —UN—01OCT13

SV86979,0000068 -19-26SEP13-1/1

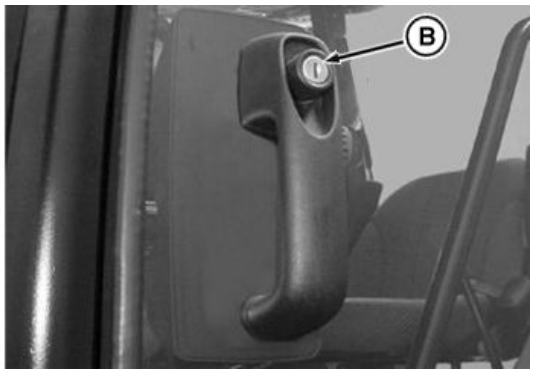
Opening Door

Pull handle (A) from inside of cab and push door to open.

Press knob (B) from outside of cab and pull door to open.

A—Handle **B—Knob**

PY16144 —UN—23JUN12

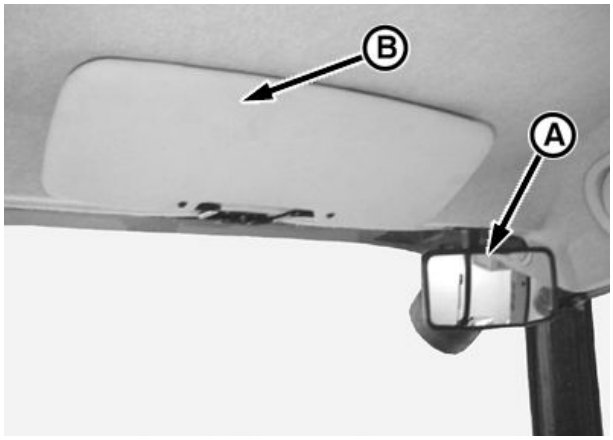


PY16145 —UN—23JUN12

SV86979,00002E5 -19-05FEB13-1/1

Inside Rear View Mirror and Sun Visor

A—Inside Rear View Mirror (If Equipped) **B—Sun Visor**



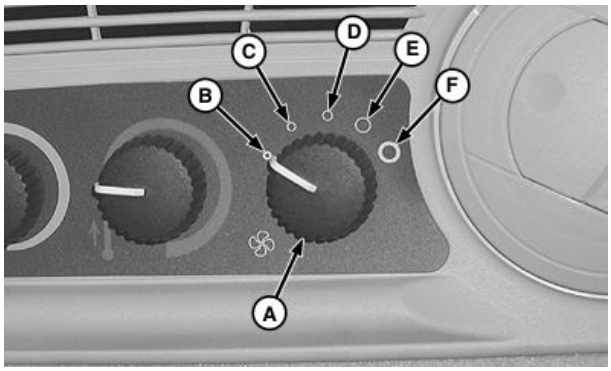
P12679 —UN—24NOV03

SD74272,00005D5 -19-13AUG13-1/1

Adjusting Blower Speed

Turn control knob (A) to desired setting. For rapid cab cool down, use the purge setting (F).

A—Blower Speed Control Knob
B—Off
C—Low
D—Medium
E—High
F—Purge



LV8414 —UN—14JUL03

SV86979,000006C -19-08AUG12-1/1

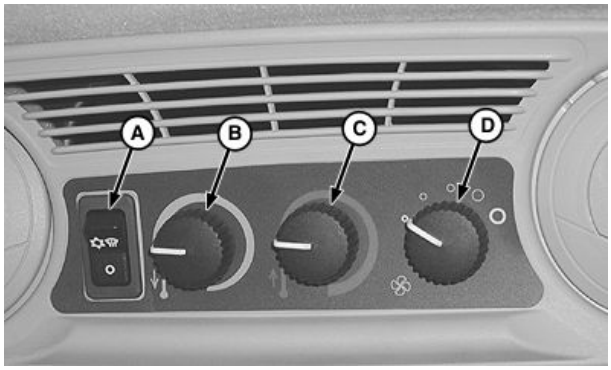
Controlling Temperature

Push top half of switch (A) to turn air conditioning and deicing ON and push bottom half to turn it OFF.

Turn control knob (B) to adjust air conditioning temperature.

Turn control knob (C) to adjust heater temperature.

A—Air Conditioning and Deicing Switch (If Equipped)
B—Air Conditioning Temperature Control Knob (If Equipped)
C—Heater Temperature Control Knob
D—Blower Speed Control Knob



LV8415 —UN—14JUL03

SV86979,000006D -19-08AUG12-1/1

Deicing, Demisting, or Defrosting Windshield (HVAC Only)

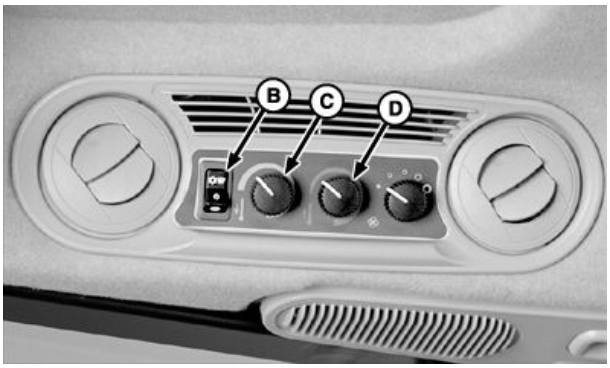
1. Aim two front vents (A) toward windshield.

NOTE: Closing middle and rear vents will help clear windshield faster.

2. Press top half of deicing switch (B) and turn A/C temperature control knob (C) to full counterclockwise position.
3. Turn heater temperature control knob (D) clockwise to obtain desired temperature.

A—Front Vent
B—Deicing Switch
C—A/C Temperature Control Knob
D—Heater Temperature Control Knob

LV8596 —UN—14AUG03



LV10324 —UN—21SEP04

SV86979,000006E -19-08AUG12-1/1

Optimizing Air Conditioner and Heater Performance

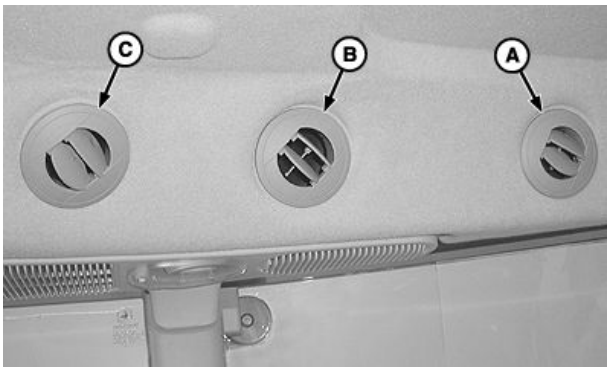
Adjust individual vents to target heating or cooling:

- Position front vents (A) toward legs and mid-body.
- Position middle vents (B) toward your head.
- Position rear vents (C) toward your back.

NOTE: For maximum cooling effect, turn heater temperature control knob (D) to full counterclockwise position.

Position all vents (A, B, and C) down to heat the floor and feet.

A—Front Vent
B—Middle Vent
C—Rear Vent
D—Heater Temperature Control Knob



LV10325 —UN—21SEP04

LV10326 —UN—21SEP04

SV86979,000006F -19-08AUG12-1/1

Operating Windshield Wiper and Washer

Rotate wiper switch (A) to move windshield wipers to Off or On position.

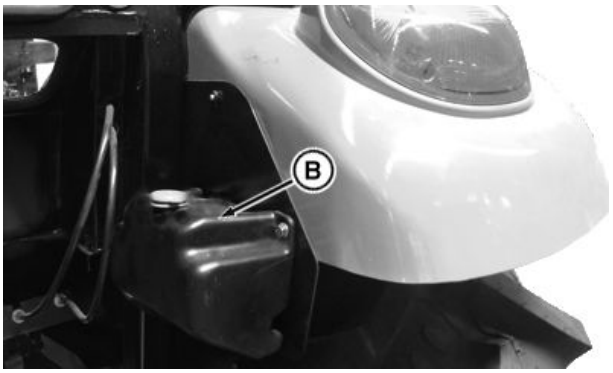
Push switch to activate windshield washer.

Fill reservoir (B) with non-freezing windshield washer fluid. Reservoir is located behind cab on inside of right rear fender.

A—Windshield Wiper/Washer Switch

B—Washer Fluid Reservoir

PY16146 —UN—10SEP12



PY16147 —UN—23JUN12

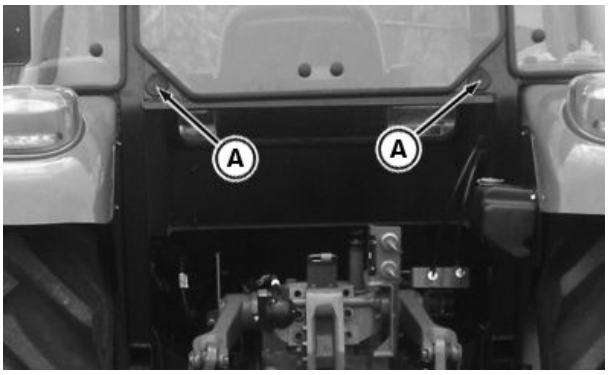
Rear, Right-Hand Side

SV86979,0000070 -19-26DEC12-1/1

Routing Cables and Harnesses

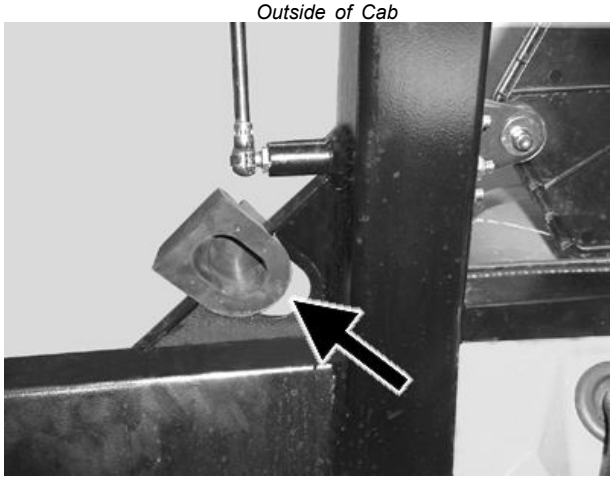
Rear window frame of cab has two openings, allowing cables/harnesses to be routed. Open the window and remove rubber plugs (A). Cut rubber plugs at the incisions provided, to allow cables/harnesses to be routed through the plugs. Connect the cable/harness ends, insert rubber plugs and close the window.

A—Rubber Plugs



PY16148 —UN—24DEC12

Outside of Cab



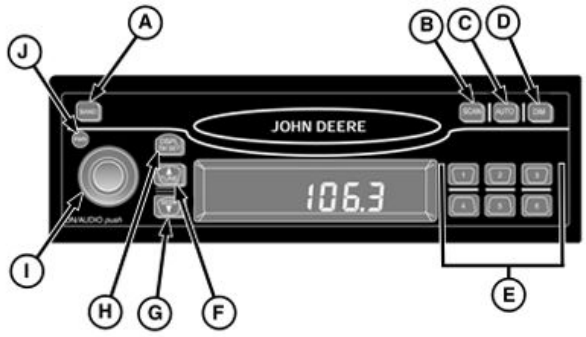
P12682 —UN—24NOV03

Inside of Cab

SV86979,0000071 -19-08AUG12-1/1

Operating Radio (If Equipped)

1. Press BAND (A) to select FM1, FM2, AM, SAT, or WX (Weather).
2. Press TUNE (F) once to turn to the next higher station. Press SEEK (G) once to turn to the next lower station.
3. Press and hold both TUNE (F) and BAND (A) to switch between manual tune mode and “seek” mode.
4. Holding SEEK longer than half a second begins the “seek” function. When a station with a strong enough signal is found, “seek” function will stop at that station.
5. Press SCAN (B) to scan all stations. When a strong enough signal is found, the station will play for 5 seconds then continue to scan until SCAN is pressed again.
6. Adjust volume, bass, treble, fade, and balance by pressing and releasing ON/AUDIO knob (I) repeatedly until desired function appears on display. Rotate ON/AUDIO knob for adjustment.
7. Adjust brightness of display by pressing (D) until “DIM” appears on display. Rotate ON/AUDIO knob to adjust.



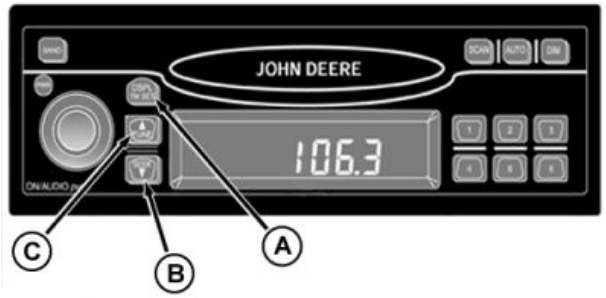
LV12461 —UN—12APR05

A—Band
B—Scan
C—Auto Preset
D—Dim
E—Preset Stations
F—Tune
G—Seek
H—Display/Time Set
I— On/Audio/Volume
J— Power

SV86979,0000150 -19-24DEC12-1/1

Setting Clock (If Equipped)

1. Switch ignition to ON position.
2. Press and hold DSPL/TM SET (A) button until the “hours” digits flash.
3. Press SEEK (B) or TUNE (C) to set the correct hour.
4. Press and hold DSPL/TM SET until the “minutes” digits flash.
5. Press SEEK or TUNE to set correct minute. The seconds are reset to zero when minute setting is changed.

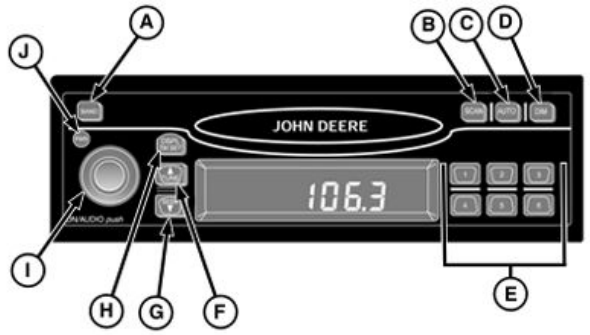


RW26907 —UN—05APR00

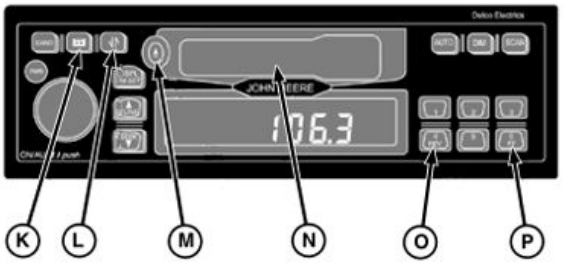
A—DSPL/TM SET
B—SEEK
C—TUNE

SV86979,0000151 -19-12SEP12-1/1

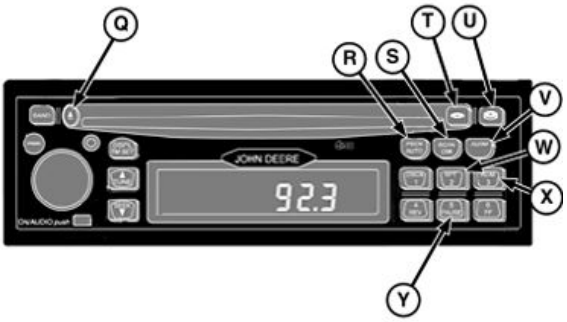
Operating Cassette Tape or Compact Disc Player—If Equipped



LV12461 —UN—12APR05



LV12462 —UN—12APR05



LV12463 —UN—12APR05

A—Band
B—Scan
C—Auto Preset
D—Dim
E—Preset Stations
F—Tune
G—Seek
H—Display/Time Set
I— On/Audio/Volume
J— Power
K—Tape
L—Tape Reverse
M—Eject Tape
N—Tape Slot
O—Rewind Tape
P—Fast Forward Tape
Q—Eject CD
R—Pre-Scan/Auto
S—Scan/Dim
T—CD Mode
U—CD Changer Mode
V—Alarm
W—CD Repeat
X—CD Random
Y—CD Pause

Operating cassette tape player

1. Turn receiver ON.
2. Insert cassette into slot (N). If radio is playing, press (K) to play the cassette.
3. Press (L) to play the opposite side of the tape.
4. Press (O) to rewind.
5. Press (P) to fast forward.
6. Press (M) to eject tape.
7. If receiver detects a defective cassette, “BAD TAPE” will appear on the display and the tape will be ejected.

Operating compact disc player

1. Turn ignition and receiver ON.
2. Insert compact disc into slot, label side up.
3. Press (F) to forward to the next track. Press (G) to reverse to the beginning of the track.
4. Press (W) to repeat the current track. Press (X) for random track selection.
5. Press and hold (O) to fast reverse. Release to play at normal speed.
6. Press (Y) to pause the CD. Press (Y) again to resume play.
7. Press and hold (P) to fast forward. Release button to play at normal speed.
8. Press (Q) to eject CD.
9. Press (S) to advance to the next track on the CD. The CD will play 10 seconds of that track and then play each successive track for 10 seconds. Press again to cancel.

SV86979,0000152 -19-12SEP12-1/1

Using Dome Light

Dome light switch (A) has three positions:

- ON turns the dome light on.
- Dome light comes on when left-hand door is opened and off when left-hand door is closed.
- OFF turns the dome light off.

IMPORTANT: Before exiting cab, turn dome light to OFF or DOOR position to avoid causing battery to lose its charge.

A—Dome Light Switch

LV8418 —UN—14JUL03

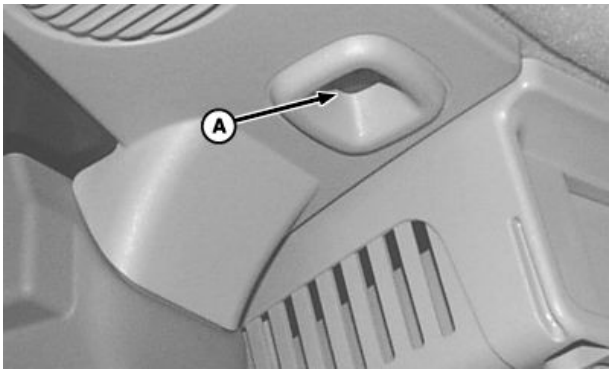
SV86979,0000076 -19-08AUG12-1/1

Using Courtesy Light

Courtesy light (A) is on when light switch is in the following positions:

- Position 1 (High Beam Lights)
- Position 2 (Low Beam Lights)
- Position 3 (Work Lights)
- Position 4 (Parking Lights)

A—Courtesy Light



Light above Right-Hand Control Panel

LV09217 —UN—22JUL04

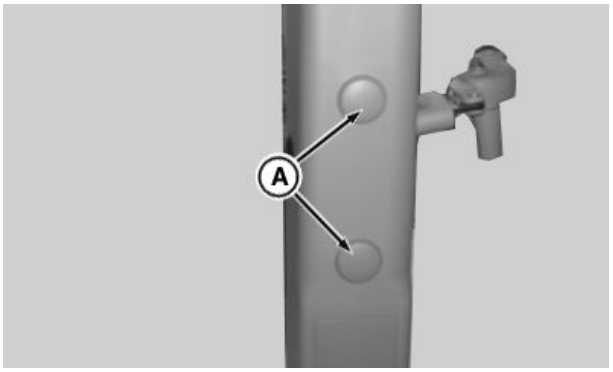
SD74272,00005C9 -19-20JUN16-1/1

Using Monitor Mounts

There is locations to attach monitors and controls in the cab:

- Right center post (remove plugs [A]).

A—Plugs (Mounting Locations)



PY18276 —UN—14AUG13

SD74272,00005D6 -19-13AUG13-1/1

Operate Foldable ROPS

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 specified torque.

The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, as in an overturn incident, or is altered in anyway 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 tractor is operated with ROPS folded (e.g. to enter a low building) drive with extreme caution and DO NOT use seat belt.

Fold the ROPS up again as soon as the tractor is operated under normal conditions.

To lower ROPS crossbar (A):

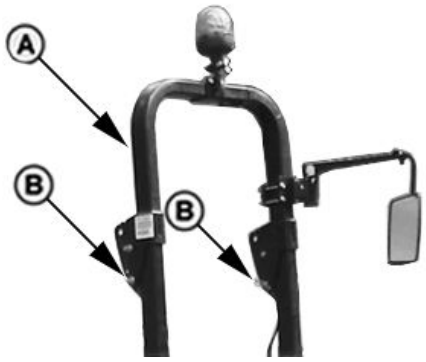
NOTE: Remove beacon light before folding ROPS or it will interfere with the center link of the hitch. In case the beacon light is mounted on the side (when used with canopy) it will interfere with the fender.

1. Remove quick-lock pins (C) and headed pins (B).
2. Lower crossbar (A) of ROPS onto stops.
3. Reinstall pins (B and C) into holes in ROPS to lock crossbar down.

To put ROPS in operating position:

1. Lift crossbar (A) of ROPS to position shown.
2. Install pins (B) and quick-lock pins (C).

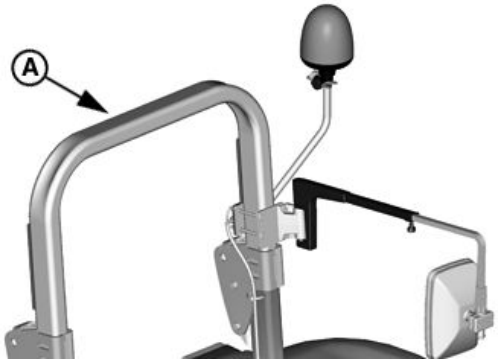
A—ROPS Crossbar
B—Headed Pins
C—Quick-Lock Pins



PY8447

ROPS—Operating Position

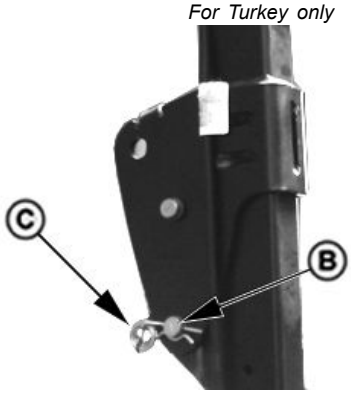
PY8447 —UN—21APR09



PY10462

For Turkey only

PY10462 —UN—06MAY10



PY8448

Reinstall Pins

PY8448 —UN—21APR09

AH98466,0000EC5 -19-06MAY10-1/1

Using Seat Belt

CAUTION: Use a seat belt when you operate with a roll-over protective structure (ROPS) to minimize chance of injury from an accident such as an overturn. DO NOT use seat belt when ROPS is folded down.

To properly retain operator, seat belt (A) must fit snugly across abdomen. Seat belt extends as necessary to fit comfortably.

Inspect seat belt and mounting hardware annually. (See INSPECT SEAT BELTS in General Maintenance and Inspection section.)

A—Seat Belt

PY16006 —UN—04JUN12

SD74272,0000534 -19-13MAY13-1/1

Select Seat Position—Standard Seat

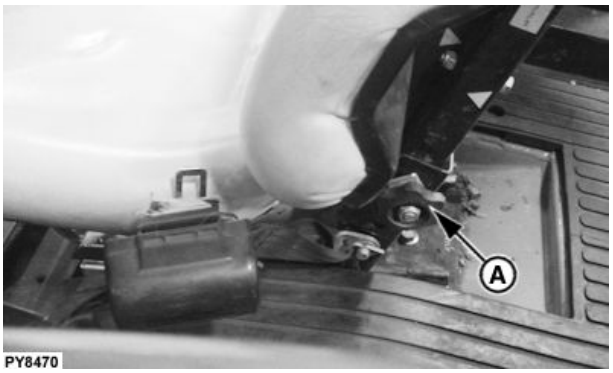
There are two seat adjustments available:

To raise or lower seat: Use a wrench to adjust height adjustment knob (A) to desired seat height.

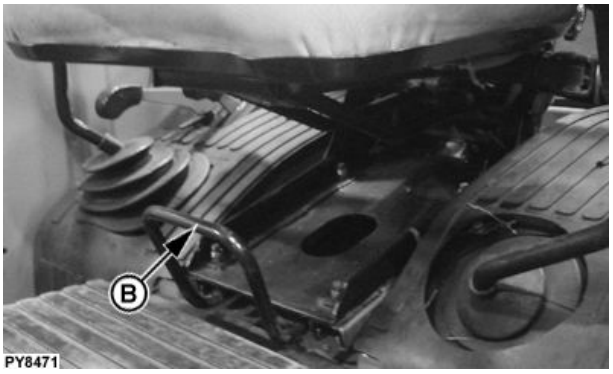
To adjust the fore-and-aft position of the seat: Move lever (B) and slide seat closer to or away from dashboard and controls.

A—Seat Height Adjustment Knob

B—Seat Adjustment Lever—Fore or Aft



PY8470 —UN—28JUL09



PY8471 —UN—28JUL09

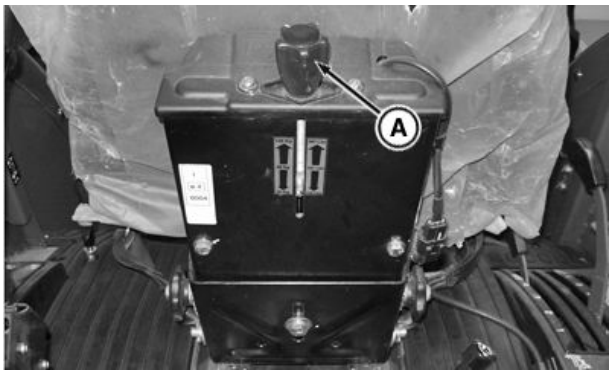
JB06590,00004F5 -19-19JUN09-1/1

Adjust Ride Comfort

Adjustment knob is located behind seat.

Weight markings are given on the rear of seat. Turn adjustment knob (A) for a firm or soft seat suspension, according to operator's weight.

A—Adjustment Knob



PY18455 —UN—11JUL14

SD74272,000003B -19-07JUL14-1/1

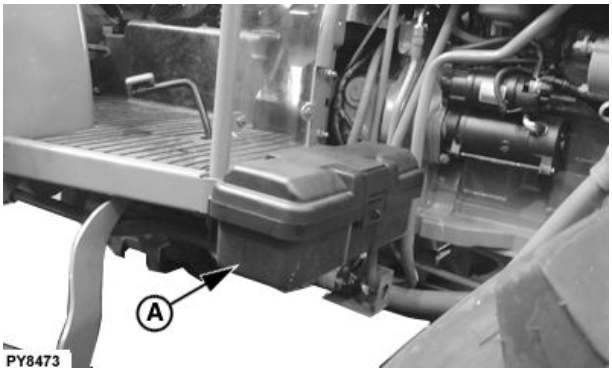
Use Tool Box

IMPORTANT: The tool box is not intended to carry heavy objects or to be used as a seat.

The tractor is equipped with a portable tool box (A). It is fitted near the right side rail. Pull the latch upward to open the tool box.

For safety reasons, never drive the tractor with tool box open. The content of the tool box should not exceed 10 kg (22 lb).

A—Tool Box



PY8473 —UN—12OCT09

SA61034,00006F6 -19-15DEC08-1/1

Break-In Period

Observe Engine Operation Closely

IMPORTANT: The engine is ready for normal operation. Be extra cautious during the first 100 hours, until you become thoroughly familiar with the sound and feel of your new tractor. Stay extra attentive and alert.

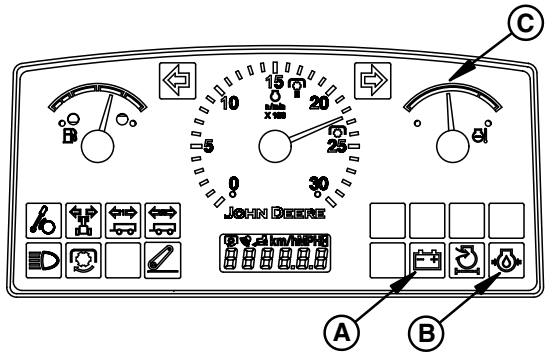
Warm up tractor carefully. Check battery charge indicator (A), oil pressure indicator (B), coolant temperature gauge (C) and engine information indicator (D).

Avoid unnecessary engine idling.

Check engine oil, coolant, transmission/hydraulic, and mechanical front wheel drive (if equipped) fluid levels frequently. Watch for fluid leaks.

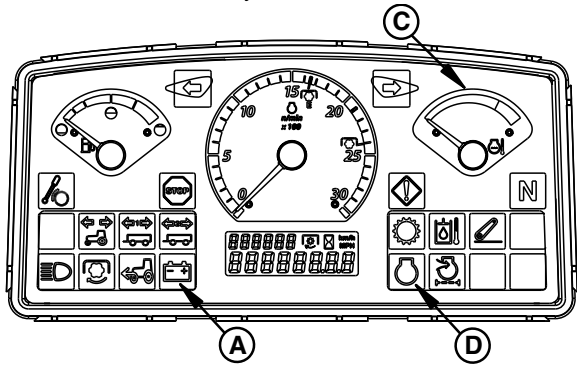
NOTE: If engine oil must be added, use seasonal viscosity grade oil. Use only lubricants meeting specifications given in the Fuels, Lubricants, and Coolant section.

A— Battery Charge Indicator
B— Oil Pressure Indicator
C— Coolant Temperature Gauge
D— Engine Information Indicator



PY18948 —UN—21MAY14

Sync Shuttle



PY18927 —UN—23APR14

PowrReverser

JS86122,00002D9 -19-20MAY14-1/1

Break-In Service

IMPORTANT: Keep wheel hardware tight to avoid tractor damage. Check wheel hardware torque before operating, twice during first ten hours of operation, after fifty hours of operation, and periodically thereafter.

During the First 10 Hours of Operation:

Perform daily or 10 hours service. (See Service Intervals in Lubrication and Maintenance section.)

Tighten wheel hardware. (See Wheels, Tires, and Treads section.)

After the First 50 Hours of Operation:

Tighten wheel hardware. (See Wheels, Tires, and Treads section.)

Check alternator/fan belt tension and tighten air intake and cooling system hose clamps.

Perform 50 Hours Service.

After the First 100 Hours of Operation:

Replace transmission-hydraulic filter element.

Change engine oil and filter.[1]

[1] See Engine Break-In Oil in Service section for additional information.

SS01820,0000A6F -19-06JUN07-1/1

Daily Service Before Starting Engine

NOTE: Park tractor on level ground before executing checks.

1. Check engine oil level. Clean dipstick (A) and reinsert fully. Withdraw it again and check oil level. The window for safe operation of engine is when the oil level is between the upper and lower marks of the dipstick.

   Do not operate the engine if oil level is below minimum mark. In this case, add recommended oil. (See “Fuels, Lubricants, Coolant” section.)

2. Check coolant level of radiator expansion tank (C). If the engine is cold and coolant level is below LOW, add coolant to expansion tank until level reaches LOW mark.

NOTE: With engine cold, coolant level should be at LOW mark. At operating temperature coolant level of a tractor should be at FULL mark.

3. Lubricate the following points every 10 hours if operating the tractor in extremely wet or excessively muddy conditions.

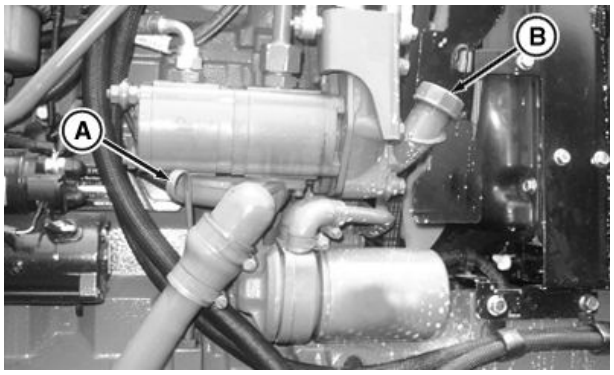
   - Front axle pivot pin
   - Steering transmission axle
   - Ends of coupling bar

4. Lubricate the following items after pressure washing, if necessary:

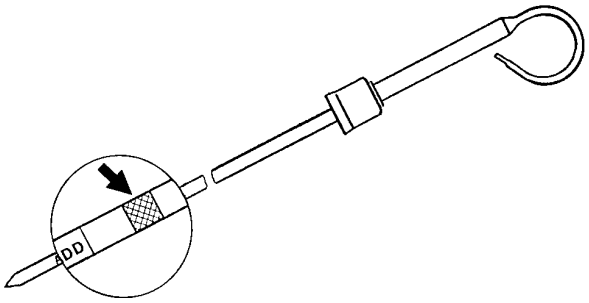
   - Hood latch
   - Operator's seat slide rails

5. Check hydraulic oil level of transmission. Withdraw dipstick and clean it. Insert dipstick fully. Oil level should be between the marks on the dipstick. If level is low add oil.

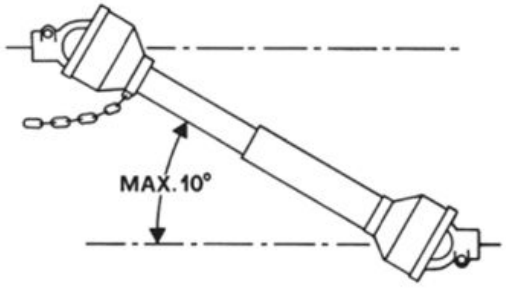
A—Dipstick
B—Oil Filler Port
C—Radiator Expansion Tank
D—Radiator Cap



PY16566 —UN—09AUG12



PY6494 —UN—09MAY07



PY15584 —UN—25NOV13

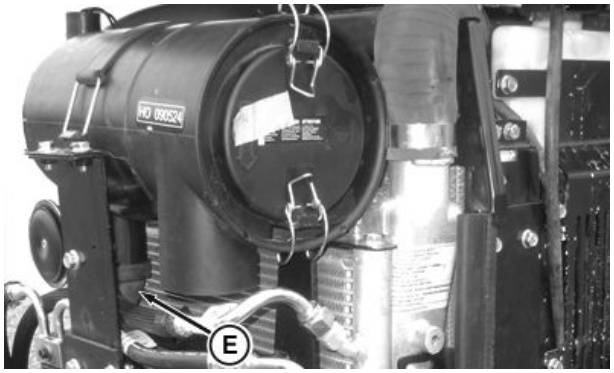
SV86979,00002D8 -19-07JUL14-1/3

IMPORTANT: Never run the engine when the dust unloading valve is removed!

6. Remove deposits by squeezing the valve.

   During harvesting, grass and chaff may adversely affect the performance of the dust unloading valve. Remove and clean the dust unloading valve as necessary. Replace damaged valve immediately.

E—Dust Unloading Valve



Dust Unloading Valve of Cab Tractor Shown

PY16568 —UN—09AUG12

Continued on next page

SV86979,00002D8 -19-07JUL14-2/3

7. Make sure that the hose of the rocker arm cover ventilation is not pinched.

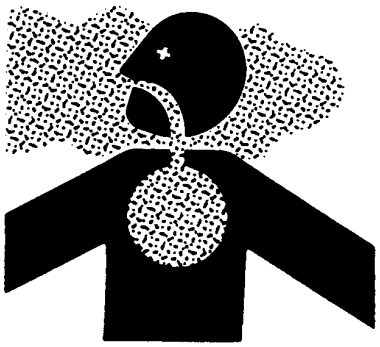
   Remove any dirt from the hose end.

PY16569 —UN—09AUG12

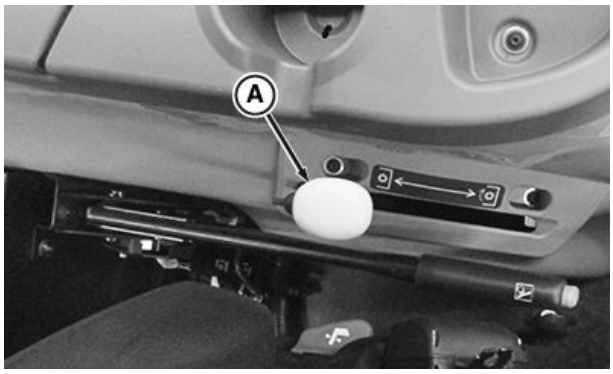
Rocker Arm Cover Ventilation

SV86979,00002D8 -19-07JUL14-3/3

Before Starting the Engine — Cab (SyncShuttle)



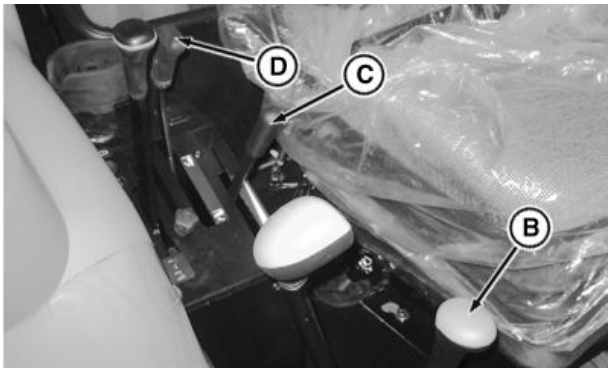
Engine Exhaust Fumes



TS220 —UN—15APR13

PY21301 —UN—29JUL14

Left Side



PY16571 —UN—20AUG13

Right Side

A—PTO Lever
B—Range Shift Lever
C—Draft Control Lever
D—Position Control Lever

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

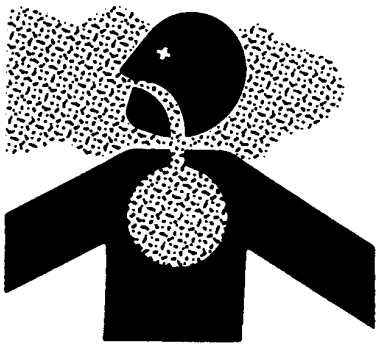
If you must operate engine in a building, be positive there is adequate ventilation. Either use an exhaust pipe extension to remove the exhaust fumes or open doors and windows to bring enough outside air into the area.

1. Check fuel gauge to be sure tractor has plenty of fuel.
2. Place range shift lever (B) in neutral (N) and PTO lever (A) in OFF position. Starter will not operate if range shift lever and PTO lever are not in these positions.
3. Place control levers (C and D) in lowered position.
4. Check indicators. Indicators should illuminate momentarily when key switch is turned to the ”ON” position.

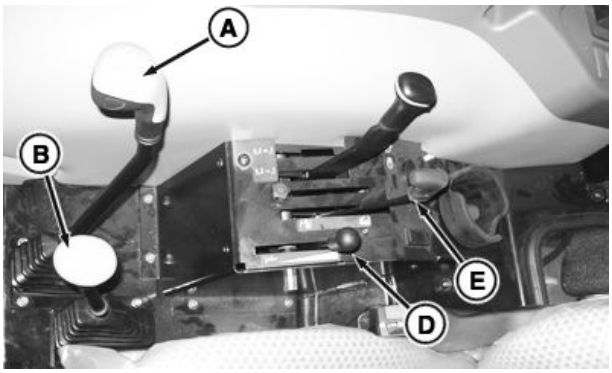
   If any indicator does not function properly, see your John Deere dealer.

RM87422,000000B -19-08AUG14-1/1

Before Starting the Engine — Cab (PowrReverser™)

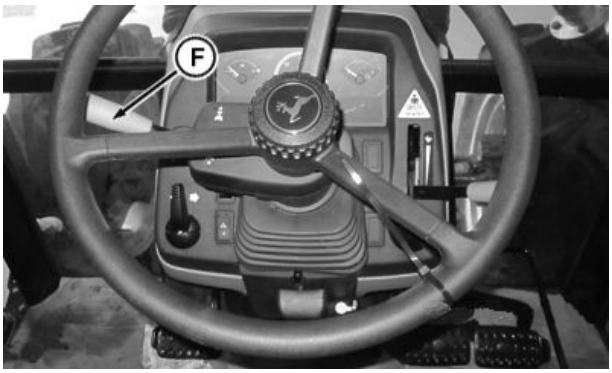


TS220 —UN—15APR13



PY18961 —UN—21MAY14

PY18962 —UN—21MAY14



PY18278 —UN—14AUG13

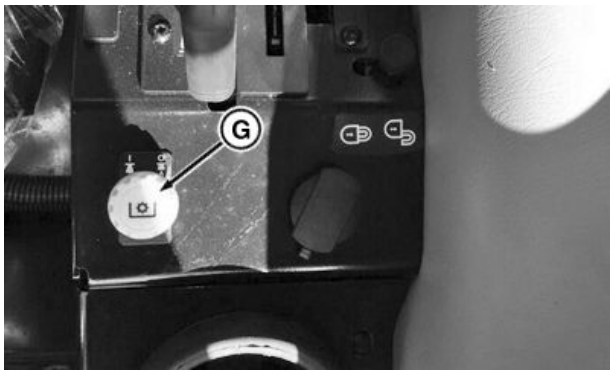
⚠ CAUTION: Prevent asphyxiation. Engine exhaust fumes can cause sickness or death to you or someone else.

If you must operate engine in a building, be positive 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.

1. Check fuel gauge. Be sure that tractor has plenty of fuel.
2. Place FNR lever (F) in NEUTRAL Position.
3. Before starting the tractor place gearshift lever (A) and range shift lever (B) in NEUTRAL and PTO switch (C or G) in OFF position.
4. Place rockshaft control levers (D and E) in lowered position.
5. Check indicator lights. Indicators should illuminate when key switch is turned to the ON position.

   If any indicator does not function properly, see your John Deere dealer.

NOTE: There are two options for Electro-Hydraulic PTO switch, as shown in graphics with callouts (C) and (G). Refer to the appropriate Electro-Hydraulic PTO switch information as per your tractor configuration.



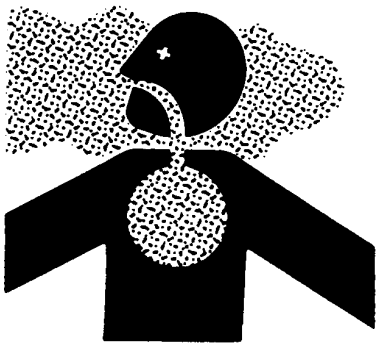
PY21486 —UN—28NOV14

A—Gear Shift Lever
B—Range Shift Lever
C—Electro-Hydraulic PTO Switch
D—Rockshaft Draft Control Lever
E—Rockshaft Position Control Lever
F—FNR Lever
G—Electro-Hydraulic PTO Switch

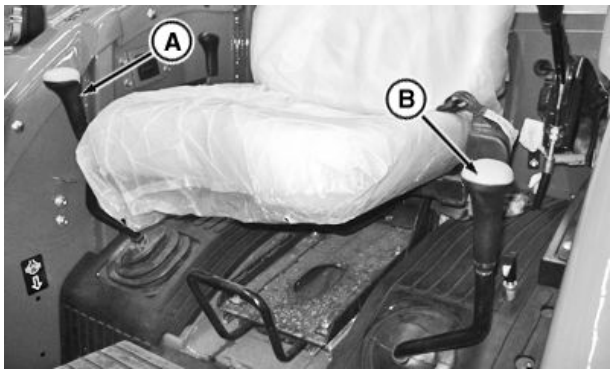
PowrReverser is a trademark of Deere & Company

SD74272,00001A6 -19-11DEC14-1/1

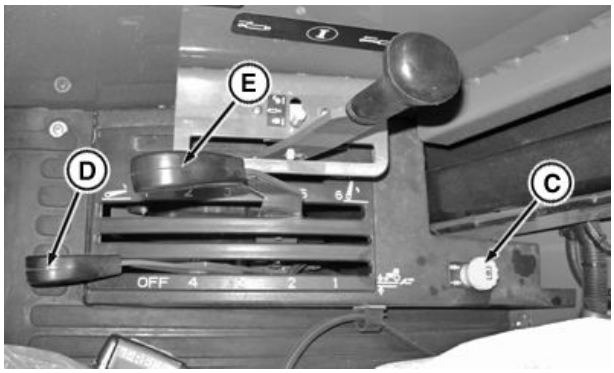
Before Starting the Engine — IOOS (PowrReverser™)



TS220 —UN—15APR13



PY18456 —UN—11JUL14



PY18457 —UN—11JUL14

PY18458 —UN—11JUL14

A—Gear Shift Lever
B—Range Shift Lever
C—PTO Switch
D—Rockshaft Draft Control Lever
E—Rockshaft Position Control Lever
F—FNR Lever

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

If you must operate engine in a building, be positive 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.

1. Check fuel gauge to be sure tractor has plenty of fuel.
2. Place FNR lever (F) in NEUTRAL Position.
3. Before starting the tractor place gear shift lever (A) and range shift lever (B) in NEUTRAL and PTO switch (C) in OFF position.
4. Place rockshaft control levers (D and E) in lowered position.
5. Check indicator lights. Indicators should illuminate when key switch is turned to the ON position.

   If any indicator does not function properly, see your John Deere dealer.

SD74272,000003C -19-07JUL14-1/1

Start the Engine

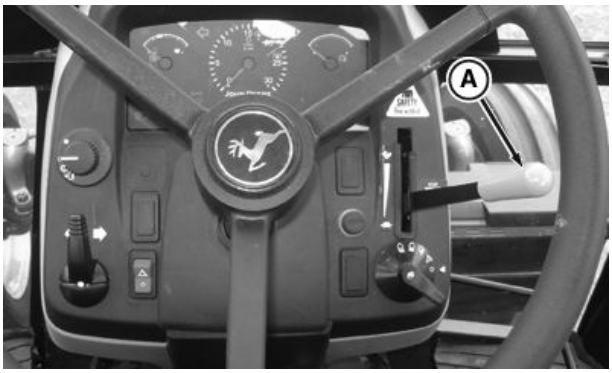
PY18459 —UN—11JUL14

Hand Throttle - IOOS Shown

PY8893

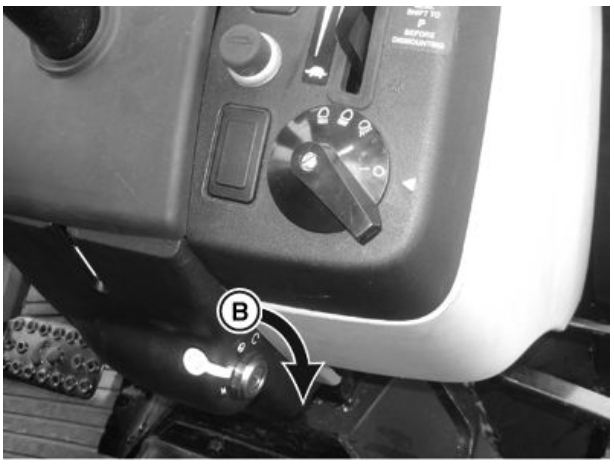
PY8893 —UN—21APR09

Key Switch - IOOS Shown



PY16572 —UN—09AUG12

Hand Throttle - Cab Shown



PY16573 —UN—21NOV12

Key Switch - Cab Shown

NOTE: If the tractor equipped with creeper, start the engine with the range lever in neutral position and gear lever in park position.

1. Push hand throttle (A) forward off idle position (approximately 1/3 of full throttle). Engine may not start with throttle pulled completely down.

⚠ CAUTION: Avoid possible injury or death from a machine runaway.

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

Start engine only from operator's seat with transmission in NEUTRAL.

NEVER start engine while standing on ground.

IMPORTANT: DO NOT run a cold engine at full throttle.

2. Depress clutch pedal and turn key switch fully clockwise (B) to engage starter. Release key when engine starts. If key is released before engine starts, wait until starter and engine stop turning before trying again.

TS177 —UN—11JAN89

A—Hand Throttle **B—Key Switch On**

IMPORTANT: DO NOT operate starter more than 20 seconds at a time. If engine does not start, wait at least two minutes for the starter motor to cool before trying again. If engine does not start in four attempts, refer to Troubleshooting section.

Continued on next page

VP27597,00002EE -19-01DEC16-1/2

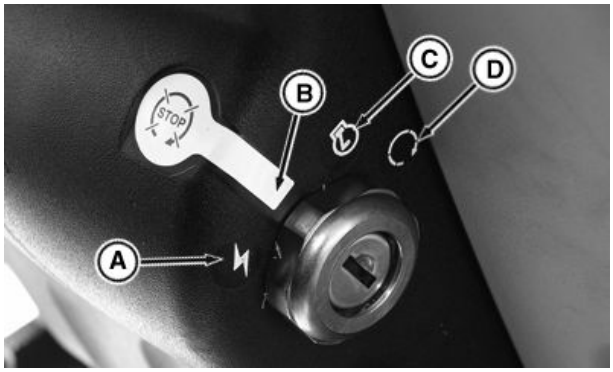
VP27597,00002EE -19-01DEC16-2/2

Cold Weather Starting Procedure Using Intake Air Heater System

Key switch positions are as shown in the figure

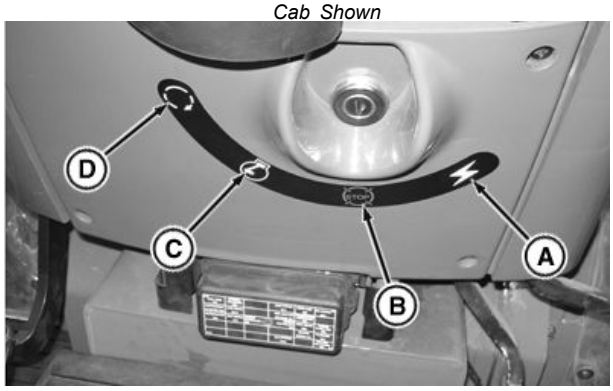
CAUTION: DO NOT use starting fluid in tractor equipped with an intake air heater system. (See your John Deere dealer for a complete list of other starting aids available.)

A—Accessory Position
B—Stop Position
C—Run Position
D—Start Position



PY16693 —UN—20OCT12

Cab Shown



PY18460 —UN—11JUL14

IOOS Shown

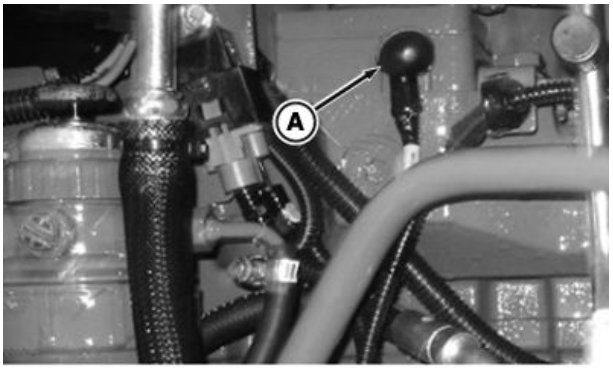
Continued on next page

SD74272,000003E -19-21JUN16-1/2

Tractors are equipped with an intake air heater system. An electric heating element (A) warms the intake air.

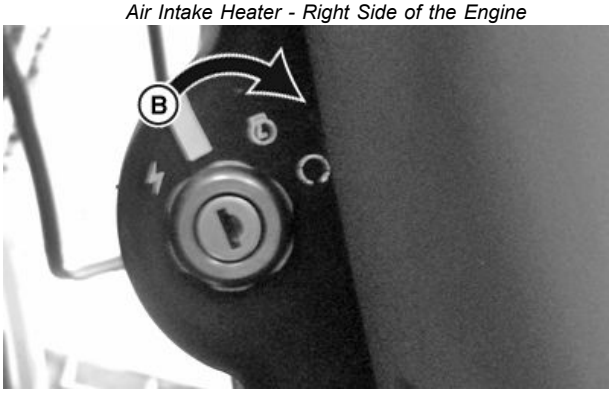
1. To activate cold weather starting device, turn key (B) to RUN position, push in and hold for:
   - 10 or 15 seconds for temperatures above 0°C (32°F)
   - 30 seconds for temperatures below 0°C (32°F)
2. Depress clutch pedal and turn key switch clockwise (B) to start engine.
3. If engine runs rough, activate the intake air heater system by holding in on the key switch (B) until engine runs smoothly.

A— Electric Heating Element **B— Key Switch**



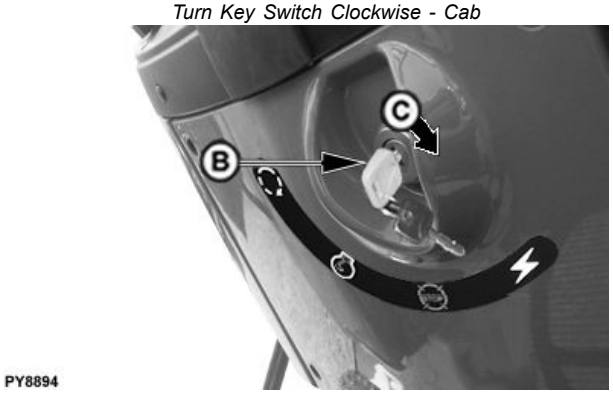
PY18966 —UN—21MAY14

Air Intake Heater - Right Side of the Engine



PY28111 —UN—21JUN16

Turn Key Switch Clockwise - Cab



PY8894 —UN—21APR09

Turn Key Switch Clockwise - IOOS

SD74272,000003E -19-21JUN16-2/2

Using Engine Coolant Heater (If Equipped)

CAUTION: To avoid shock or hazardous operation, always use a three-wire heavy-duty electrical cord (minimum gauge 10 AWG and no longer than 7.6 m [25 ft]) equipped with three connectors. If a two-to-three contact adapter is used at the wall receptacle, connect green wire to a good ground.

Immerse element in coolant before connecting heater to power source. NEVER energize heater in air.

Located on side of the engine, the 110-volt coolant heater warms the engine coolant, reduces oil drag, eases starting, and shortens warm-up time.

TS210 —UN—23AUG88

Connect heater plug to a ground fault protected 110-volt electrical outlet.

SV86979,0000081 -19-09AUG12-1/1

Check Engine Indicators and Gauges — (Sync Shuttle)

IMPORTANT: If charging system or oil pressure indicator (D or B) fails to go out, or temperature gauge (A) indicates a hot temperature, stop engine and determine the cause.

Coolant Temperature Gauge (A)

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

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

Oil Pressure Indicator (B)

Oil pressure indicator will light if engine oil pressure is low. Indicator should light when key is turned to RUN position and go out when engine starts.

IMPORTANT: NEVER operate engine without sufficient oil pressure. If indicator stays lit for longer than five seconds under normal operating conditions, stop engine and check for cause.

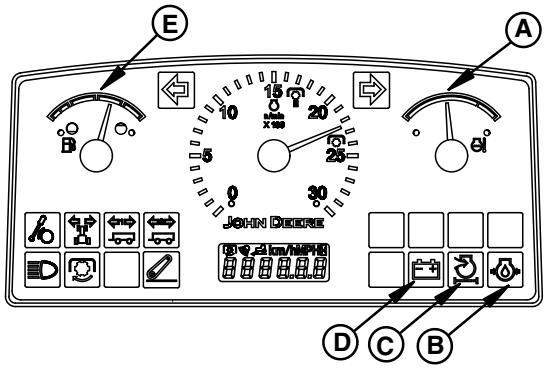
If low oil level is not the problem, see your John Deere dealer.

Air Restriction Indicator (C)

Air restriction indicator will light if air cleaner becomes plugged. Service air cleaner as soon as possible. (See procedure in Service—250 Hours section.)

Battery Charge Indicator (D)

Charging system indicator will light when alternator output is low. Indicator should light when key is turned to RUN position, and go out when engine starts.



PY18949 —UN—21MAY14

A— Coolant Temperature Gauge
B— Oil Pressure Indicator
C— Air Restriction Indicator
D— Battery Charge Indicator
E— Fuel Level Gauge

If indicator stays lit for longer than 5 sec. in normal operation, stop engine and check for cause. If loose or broken fan belt is not the cause, see your John Deere dealer.

Fuel Level Gauge (E)

Stop to refuel before fuel gauge reaches empty mark.

IMPORTANT: Use diesel fuel only. See Fuel, Lubricants and Coolant section for fuel specifications.

Should tractor run out of fuel and not start in several tries, air must be bled from fuel system. (See Bleed Fuel System in Service section.)

SK35149,0000387 -19-20MAY14-1/1

Check Engine Indicators and Gauges — (PowrReverser™)

IMPORTANT: If charging system or engine information indicator (D or B) fails to go out, or temperature gauge (A) indicates a hot temperature, stop engine and determine the cause.

Coolant Temperature Gauge (A)

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

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

Engine Information Indicator (B)

If engine information indicator remains illuminated after starting engine, stop engine immediately.

Check engine oil level, engine oil cooler, and engine oil filter. If low oil level is not the problem, see your John Deere dealer.

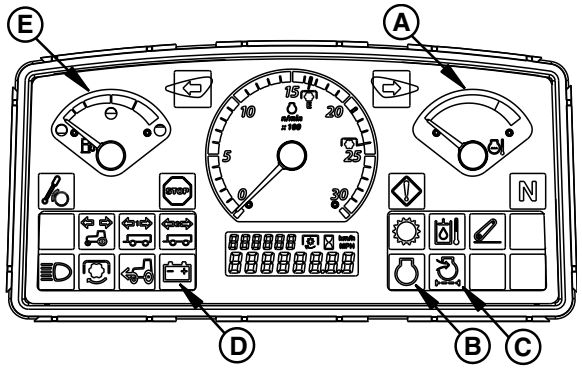
IMPORTANT: NEVER operate engine without sufficient oil pressure. If indicator stays lit for longer than five seconds under normal operating conditions, stop engine and check for cause.

Air Restriction Indicator (C)

Air restriction indicator will light if air cleaner becomes plugged. Service air cleaner as soon as possible. (See procedure in Service—250 Hours section.)

Battery Charge Indicator (D)

If indicator stays lit for longer than 5 sec. in normal operation, stop engine and check for cause. If loose or broken fan belt is not the cause, see your John Deere dealer.



PY18928 —UN—23APR14

A— Coolant Temperature Gauge
B— Engine Information Indicator
C— Air Restriction Indicator
D— Battery Charge Indicator
E— Fuel Level Gauge

Fuel Level Gauge (E)

Stop to refuel before fuel gauge reaches empty mark.

IMPORTANT: Use diesel fuel only. See Fuel, Lubricants and Coolant section for fuel specifications.

Should tractor run out of fuel and not start in several tries, air must be bled from fuel system. (See Bleed Fuel System in Service section.)

PowrReverser is a trademark of Deere & Company

JS86122,00002D3 -19-23APR14-1/1

Stop/Operator Alert Indicator — (PowrReverser™)

ENGINE STOP Indicator (A): Light illuminates and audible alarm beeps to alert operator that a serious malfunction has occurred, which requires immediate attention or the tractor will be damaged.

Immediately stop operations, reduce engine speed to idle, then shut down engine. Correct problem before restarting.

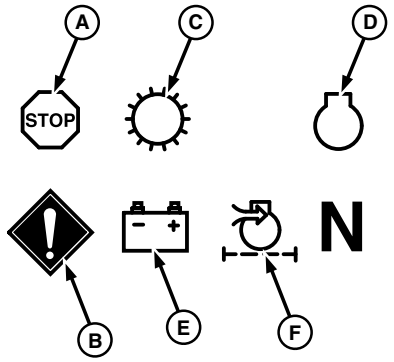
Malfunctions that will cause STOP indicator light to come on include:

- Low engine oil pressure
- High hydraulic oil temperature (PowrReverser/Wet Clutch Tractors)
- High coolant temperature

Service ALERT Indicator (B): Light illuminates and audible alarm beeps to inform operator that a performance or operational problem has been detected, which needs to be resolved as soon as possible. Continued operations can cause a Operator Alert to escalate into a STOP indicator. If appropriate corrective action is not taken soon (serviced, repaired, operated in a different manner), a significant reduction in performance will occur, resulting in machine damage.

Malfunctions that will cause Service indicator light to come on include:

PowrReverser is a trademark of Deere & Company



P15313 —UN—26MAR08

STOP Indicator

A—STOP Indicator
B—Operator Alert Indicator
C—Transmission Information Indicator (PowrReverser/Wet Clutch Tractors)
D—Engine Information Indicator
E—Charging System Indicator
F—Engine Air cleaner Restriction indicator

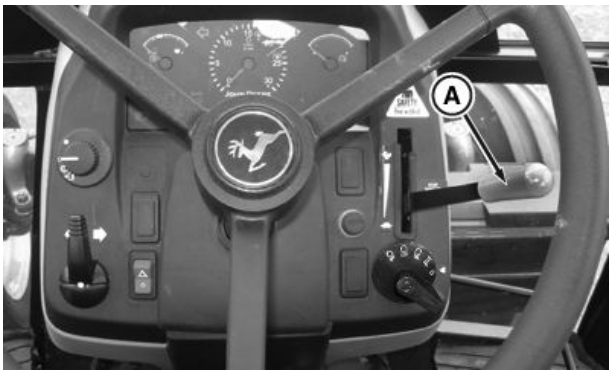
- Low engine oil pressure
- High hydraulic oil temperature (PowrReverser/Wet Clutch Tractors)
- High coolant temperature
- Rear PTO switch on and operator out of seat

SD74272,00005DC -19-17SEP13-1/1

Change Engine Speeds

To increase speed, push hand throttle (A) forward.
To temporarily increase engine speed above hand throttle setting, depress foot throttle (B).

A—Hand Throttle **B—Foot Throttle**



PY28110 —UN—21JUN16

Cab Shown

PY16574 —UN—09AUG12

Cab Shown

SV86979,000007F -19-21JUN16-1/1

Recommended Engine Speeds and Operating Procedures

Tachometer (A) shows engine rpm, read in hundreds.

Warming Up Engine

Do not place tractor under full load until it is properly warmed up.

1. Idle engine at 1200—1500 rpm for several minutes.
2. Run engine at about 1900 rpm and under light load until engine reaches normal operation condition.

Avoid Idling Engine

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, minimum engine speed should be 1200 rpm.

Observe Engine Work and Idle Speeds

Slow idle speed should be 850 rpm (-50/+25). At light or no load, full throttle speed will increase to 2600 rpm (-25/+50).

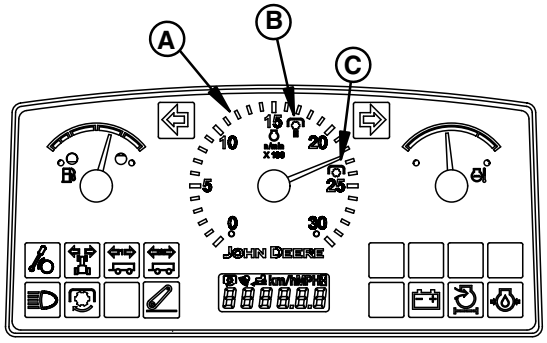
Normal working speed is 1400—2400 rpm rated speed. Within these limits engine can be put under full load.

For correct PTO speed, run engine at:

- 2400 rpm for standard 540 rpm operation
- 1705 rpm for economy 540 rpm operation

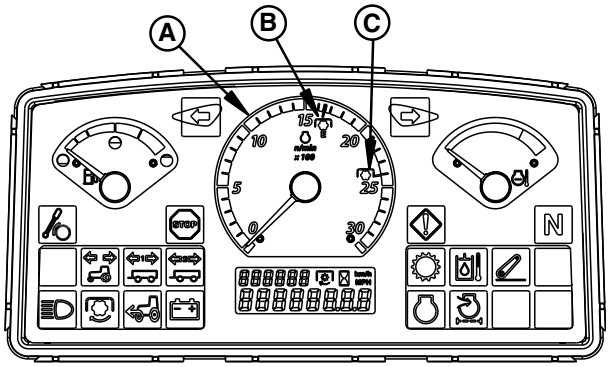
Restarting Stalled Engine

Should the engine stall when operating under load, depress clutch and 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.



PY18950 —UN—21MAY14

Instrument Cluster — Sync Shuttle



PY18929 —UN—23APR14

Instrument Cluster — PowrReverser™

A—Tachometer
B—1705 rpm Mark (Economy PTO rpm)
C—2400 rpm Mark (Standard PTO rpm)

JS86122,00002D4 -19-20MAY14-1/1

Use Tachometer/Hour Meter

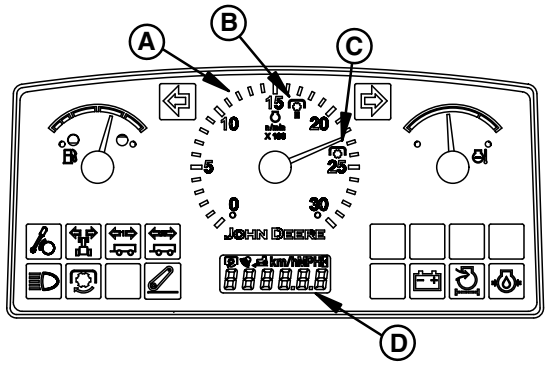
Tachometer (A) shows engine rpm, read in hundreds.

For standard 540 rpm PTO speed, increase engine speed until tachometer needle is aligned with 2400 rpm mark (C).

For economy 540 rpm PTO speed, increase engine speed until tachometer needle is aligned with 1705 rpm mark (B).

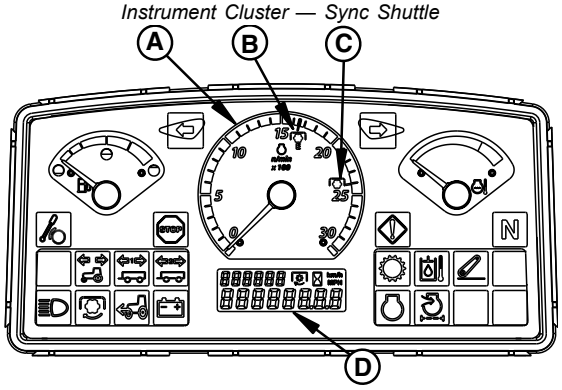
Hour meter (D) shows hours of operation in full hours and tenths.

A—Tachometer
B—1705 rpm Mark
C—2400 rpm Mark
D—Hour Meter



PY18951 —UN—21MAY14

Instrument Cluster — Sync Shuttle

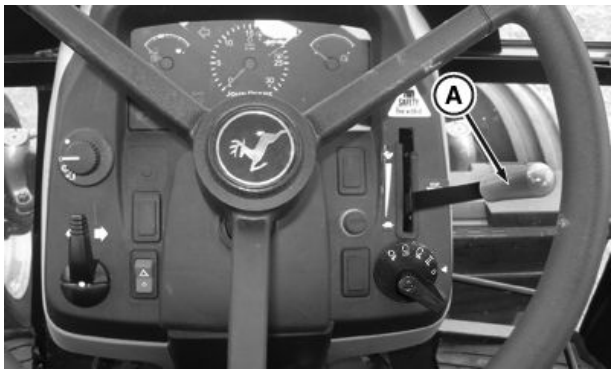


PY18930 —UN—23APR14

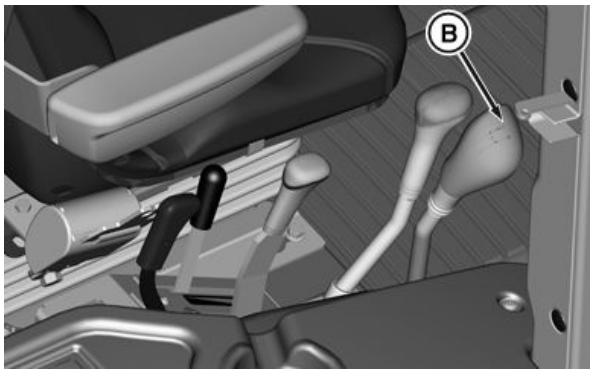
Instrument Cluster — PowrReverser™

JS86122,00002D5 -19-20MAY14-1/1

Stopping the Engine—(SyncShuttle)



PY28110 —UN—21JUN16



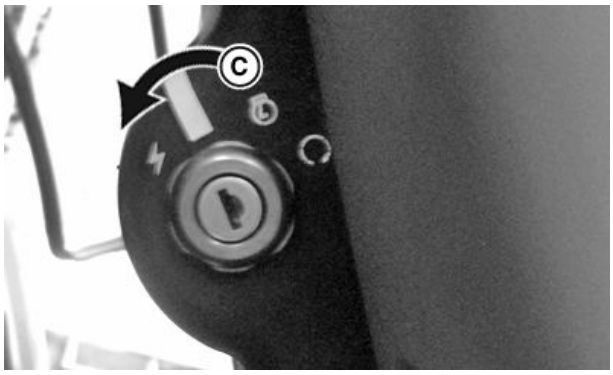
PY15588 —UN—10AUG12

1. Pull hand throttle (A) back to low idle position. Allow engine to idle for one—two minutes.
2. Push gearshift lever (B) to Neutral position.

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

3. Turn key switch to the ”OFF” position (C).

CAUTION: Remove key from key switch to prevent operation by untrained personnel.

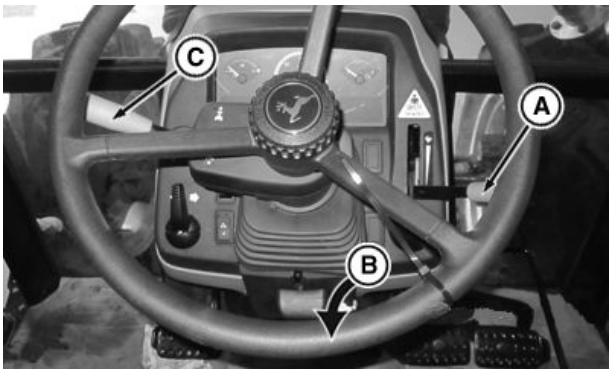


PY28112 —UN—21JUN16

A— Hand Throttle
B— Gear Shift Lever
C— Key Switch Off Position

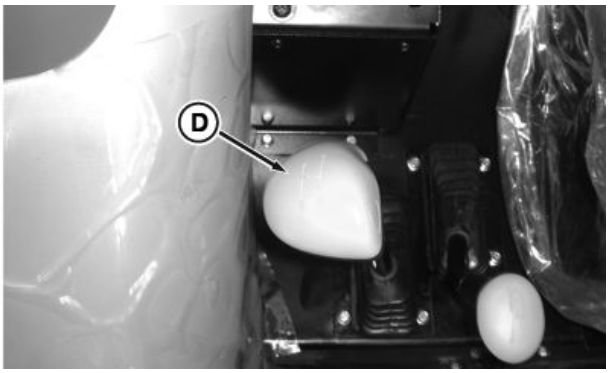
SV86979,0000084 -19-21JUN16-1/1

Stopping the Engine (PowrReverser™)



PY18282 —UN—14AUG13

Cab Shown



PY18780 —UN—16SEP13

Cab Shown

1. Pull hand throttle (A) back to slow idle position.
2. Put gear shift lever (D) and PowrReverser™ lever (C) in NEUTRAL.
3. Lower all equipment to the ground, put all SCV levers in NEUTRAL and disengage PTO.
4. Allow engine to idle for one to two minutes.

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

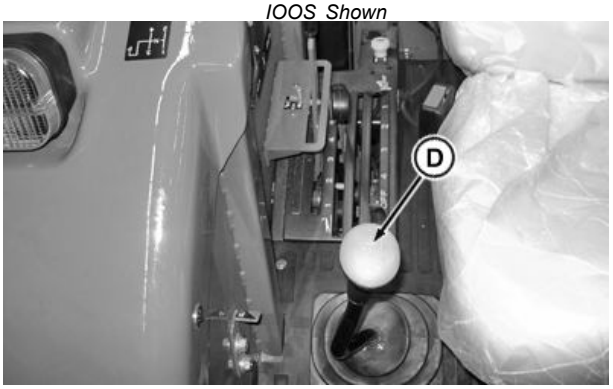
5. Turn key switch to the OFF position (B).

CAUTION: Remove key from key switch to prevent operation by untrained personnel.

A—Hand Throttle
B—Key Switch OFF
C—PowrReverser™ Lever
D—Gear Shift Lever

PY18461 —UN—11JUL14

IOOS Shown



PY18462 —UN—11JUL14

IOOS Shown

PowrReverser is a trademark of Deere & Company

SD74272,0000040 -19-07JUL14-1/1

Using a Booster Battery or Charger

CAUTION: Battery gas is explosive. Keep sparks and flames away from battery. Make last connection and first disconnection at a point away from booster battery.

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

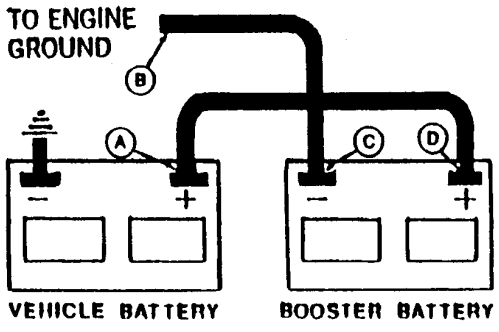
When using two or more booster batteries, batteries MUST be connected in PARALLEL. DO NOT connect batteries in SERIES.

TS204 —UN—15APR13

SV86979,0000088 -19-10AUG12-1/2

Booster Battery

1. Access battery. (See procedure in Maintenance—Electrical System section.)
2. Connect red positive (+) booster cable to booster battery positive post (D).
3. Connect other end of positive (+) booster cable to tractor battery positive (+) post (A).
4. Connect black negative (—) booster cable to booster battery negative (—) post (C).
5. Connect other end of negative (—) booster cable to engine ground (B), away from battery and starter.
6. Turn key to START position.
7. When engine starts, remove negative (—) cable first, then positive (+) cable.



M71044 —19—24JUL90

A—Tractor Battery Positive (+) Post
B—Engine Ground
C—Booster Battery Negative (—) Post
D—Booster Battery Positive (+) Post

Battery Charger

1. With charger OFF, attach red positive lead to positive (+) battery terminal and negative charger lead to a good ground on the engine block, away from battery.

IMPORTANT: DO NOT set battery charger to higher than 12 VOLTS.

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

SV86979,0000088 -19-10AUG12-2/2

Operator Training Required

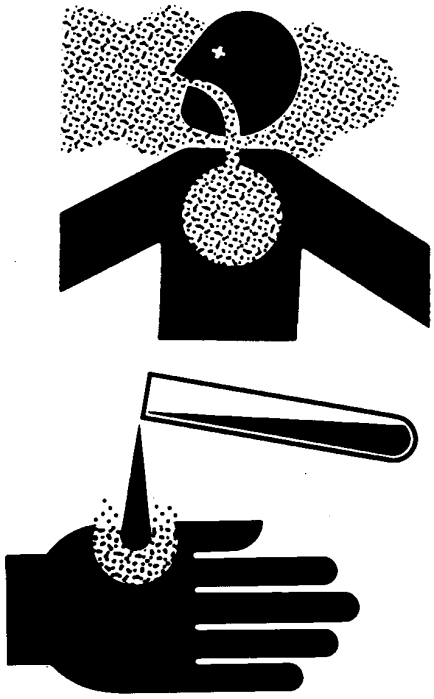
- Study the Operation section of this manual before operating tractor.
- Operate tractor in an open, unobstructed area under direction of an experienced operator.
- Learn use of all controls.
- Operator experience is required to learn moving, stopping, turning and other operating characteristics of tractor.

MX,DTIP,AA -19-18MAR92-1/1

Avoid Contact with Agricultural Chemicals

CAUTION: This enclosed cab does not protect against inhaling vapor, aerosol or dust.

1. When operating in an environment where pesticides are present, wear a long-sleeved shirt, long-legged pants, shoes, and socks.
2. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.
3. Wear personal protective equipment as required by the pesticide use instructions when leaving the enclosed cab:
   - into a treated area
   - to work with contaminated application equipment such as nozzles which must be cleaned, changed or redirected
   - to become involved with mixing and loading activities
4. Before 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.
5. Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.



TS220 —UN—15APR13

TS272 —UN—23AUG88

SV86979,000008A -19-10AUG12-1/1

Cleaning Tractor of Hazardous Pesticides

CAUTION: Avoid personal injury. Clean inside of cab and outside of tractor after application of hazardous pesticides. Pesticide residue can build up.

Clean exterior and interior of tractor daily to prevent contamination:

1. Sweep or vacuum the floor of cab.
2. Clean headliners and inside cowlings of cab.
3. Wash entire exterior of tractor.
4. Dispose of any wash water with hazardous concentrations of active or non-active ingredients according to published regulations or directives.

SV86979,000008B -19-10AUG12-1/1

Driving on Public Roads

Driving on Public Roads — OOS

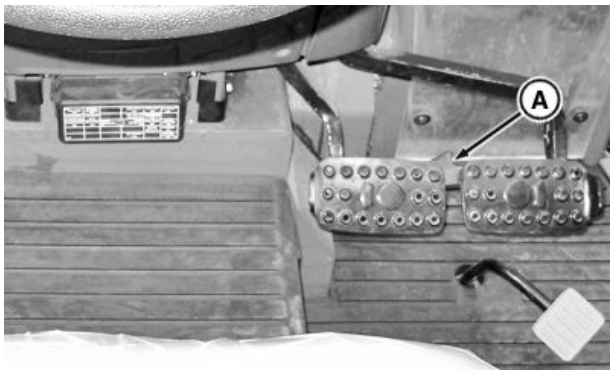
CAUTION: When transporting on a public road or highway, use accessory lights and devices for adequate warning to operators of other vehicles. Check local governmental regulations. Various safety devices are available from your John Deere dealer. Keep safety items in good condition. Replace missing or damaged items.

Observe the following precautions when operating the tractor on the road:

1. Ballast tractor correctly.
2. Use foot throttle instead of hand throttle.

CAUTION: Before operating tractor on a road, lock brake pedals together. Use brake lightly and cautiously at transport speeds.

3. Couple brake pedals together using brake locking bar (A). Avoid hard applications of brakes. Reduce speed if towed load weighs more than the tractor and is not equipped with brakes.



PY18463 —UN—11JUL14

A—Brake Locking Bar

Use additional caution when transporting towed loads under adverse surface conditions and when turning or braking on inclines. Be sure wheel tread is adjusted wide to provide maximum stability.

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

Continued on next page

SD74272,0000041 -19-07JUL14-1/5

4. Check local laws and regulations for lighting requirements. Be sure Slow Moving Vehicle (SMV) emblem and warning lamps are clean and visible. If towed or rear-mounted equipment obstructs these safety devices, install SMV emblem and warning lamps on equipment. (See your John Deere dealer.)

   A seven-terminal outlet at rear of tractor supplies power to warning lights on towed or rear-mounted equipment. (See description of outlet in Lights section.)

5. **MFWD (if equipped):** To reduce tire wear, disengage front wheel drive.

6. **Loader Cylinders (if equipped):** Engage transport lock to eliminate possibility of loader movement during transport by inadvertently bumping the multi-function control lever.

7. **Rear Hitch:** Lock hitch in transport position to eliminate the possibility of lowering an implement during transport by inadvertently bumping the raise/lower lever.

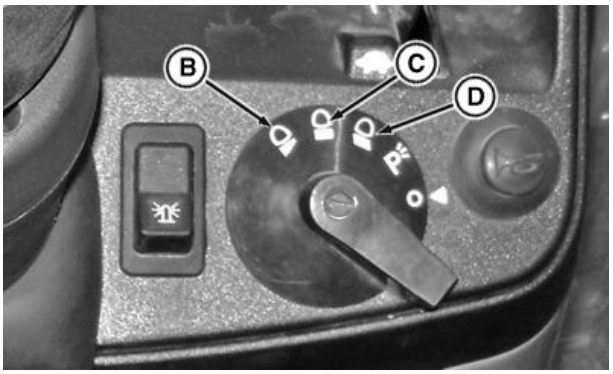
8. Turn light switch to position (D).

   Always turn light switch to dim lights position (D) when meeting another vehicle. Never use any other lights which could blind or confuse other drivers.

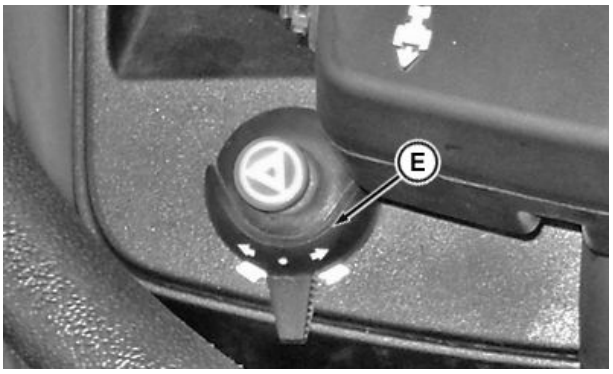
9. Use turn signal when turning. Be sure to return lever (E) to center position after turning.

10. Drive slowly enough to maintain safe control at all times. Before descending a hill, shift to a gear low enough to control speed without using brakes. Slow down for rough ground, and sharp turns, especially when transporting heavy, rear mounted equipment.

PY18464 —UN—11JUL14



PY18465 —UN—11JUL14



PY18466 —UN—11JUL14

A—Reflex Reflector
B—Bright Headlights, and Flood Light
C—Bright Headlights, Tail Lights and Warning Light Position
D—Dim Headlights, Tail Lights and Warning Light Position
E—Turn Signal Lever

Continued on next page

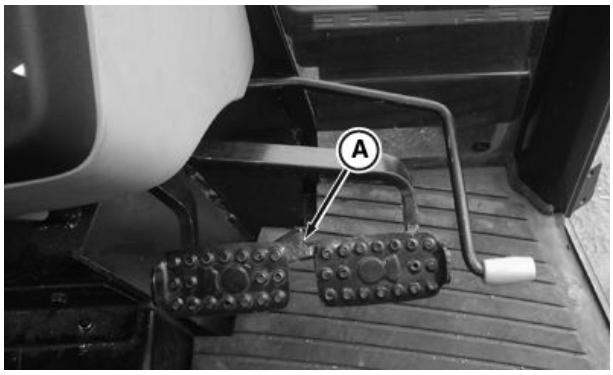
SD74272,0000041 -19-07JUL14-2/5

Driving on Public Roads — Cab

CAUTION: When transporting on a public road or highway, use accessory lights and devices for adequate warning to operators of other vehicles. Check local governmental regulations. Various safety devices are available from your John Deere dealer. Keep safety items in good condition. Replace missing or damaged items.

Observe the following precautions when driving tractor on roads:

1. Ballast tractor correctly.
2. **Cab:** Clean windows and adjust rear-view mirrors.
3. Use foot throttle instead of hand throttle.



PY16577 —UN—13AUG12

A—Brake Locking Bar

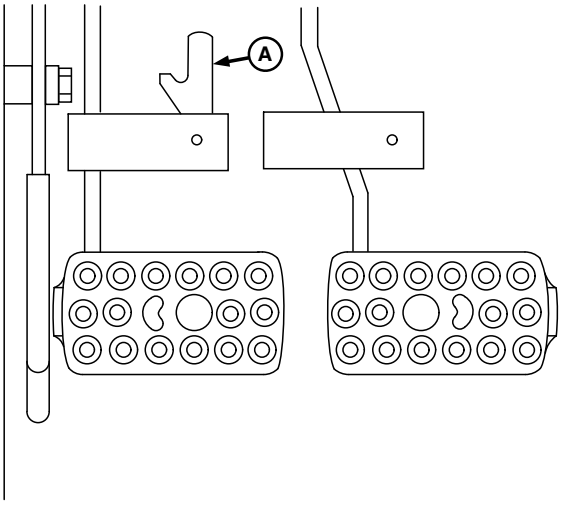
SD74272,0000041 -19-07JUL14-3/5

CAUTION: Before operating tractor on a road, lock brake pedals together. Use brakes lightly and cautiously at transport speeds.

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

4. Couple brake pedals together using brake pedal locking bar (A). Avoid hard application of brakes. Reduce speed if towed load weighs more than the tractor and is not equipped with brakes. (Consult implement operator's manual for recommended transport speeds.)

   Use additional caution when transporting towed loads under adverse surface conditions and when turning or braking on inclines. Be sure wheel tread is adjusted wide to provide maximum stability.



P9915 —UN—13NOV00

A—Brake Pedal Locking Bar

Continued on next page

SD74272,0000041 -19-07JUL14-4/5

5. Check local laws and regulations for lighting requirements. Be sure turn signal lights (B) and tail lights (A) are clean and visible.

   A seven-terminal outlet at rear of tractor supplies power to warning lights on towed or rear-mounted equipment. (See description of outlet in Lights section.)

6. **MFWD (if equipped):** To reduce tire wear, disengage front wheel drive.

7. **Loader Cylinders (if equipped):** Engage transport lock to eliminate possibility of loader movement during transport by inadvertently bumping the multi-function control lever.

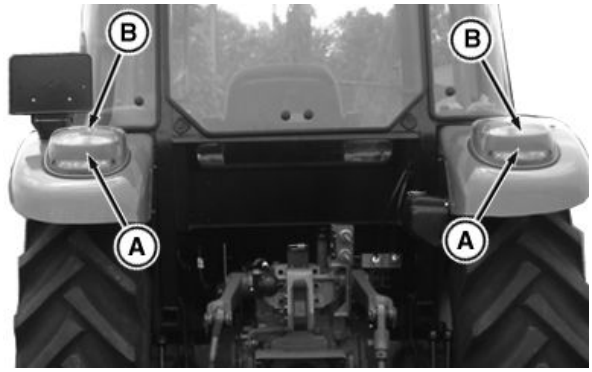
8. Rear Hitch: Lock hitch in transport position to eliminate the possibility of lowering an implement during transport by inadvertently bumping the raise/lower lever.

9. Turn light switch to position (E).

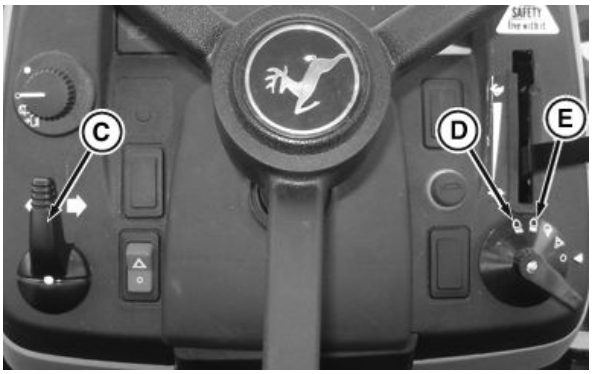
   Always turn light switch to low beam position (D) when meeting another vehicle. Never use flood lights or any other lights which could blind or confuse other drivers.

10. Using turn signals when turning, be sure to return lever (C) to center position after turning.

11. Drive slowly to maintain safe control. Before descending a hill, shift to a gear low enough to control speed without using brakes. Slow down for rough ground and sharp turns, especially when transporting heavy, rear-mounted equipment.



PY16578 —UN—10AUG12



PY16579 —UN—10AUG12

A—Tail Lights
B—Turn Signal Lights
C—Turn Signal Lever
D—Low Beam Headlight Position
E—High Beam Headlight Position

SD74272,0000041 -19-07JUL14-5/5

Operating Sync Shuttle Transmission

Range shift lever (A) provides three speed ranges: A, B and C.

Gear shift lever (B) provides three forward (1, 2, 3) and one reverse travel speed.

- Nine forward speeds are available when using range and gear shift levers
- Three reverse speeds are available when using range shift lever

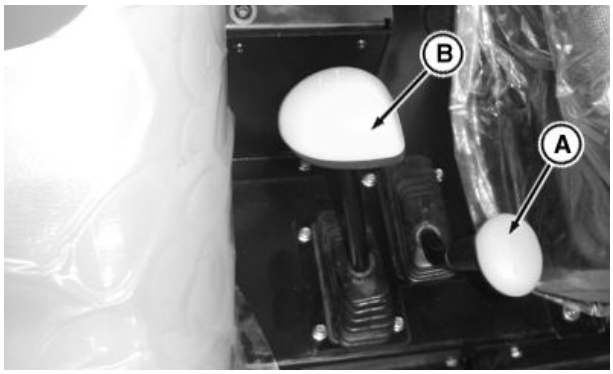
IMPORTANT: Top shaft synchronizer works only on speed gears. To prevent transmission damage, do not attempt to change range while in motion. To shift into a different range; stop tractor, depress clutch pedal fully and decrease engine speed.

The clutch pedal must be FULLY depressed in order to make a gear (speed) shift. If the clutch pedal is not fully depressed, the shift lever can not be moved beyond neutral. Should this occur, depress the clutch pedal further. If the clutch pedal free travel is out of specification, see your John Deere dealer to readjust clutch pedal linkage.

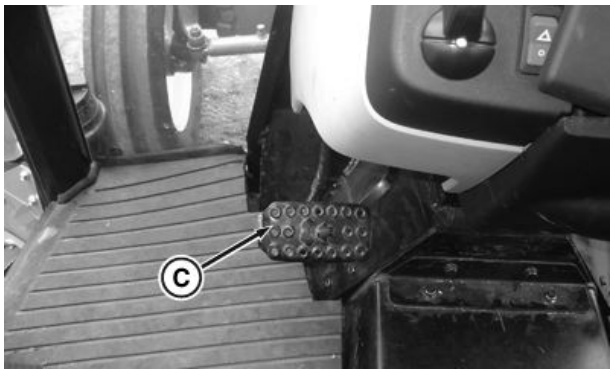
To prevent unnecessary clutch wear, never "ride" the clutch by resting foot on the pedal.

Range Shift: Tractor must come to a **complete stop** when shifting into any speed range.

1. After the tractor has stopped, lower engine rpm to idle speed.
2. Depress clutch pedal FULLY.
3. Select desired speed range (A, B, C).
4. Slowly release clutch pedal to gradually take up load.
5. Increase engine speed once shift is completed.



PY16588 —UN—20AUG13



PY16589 —UN—13AUG12

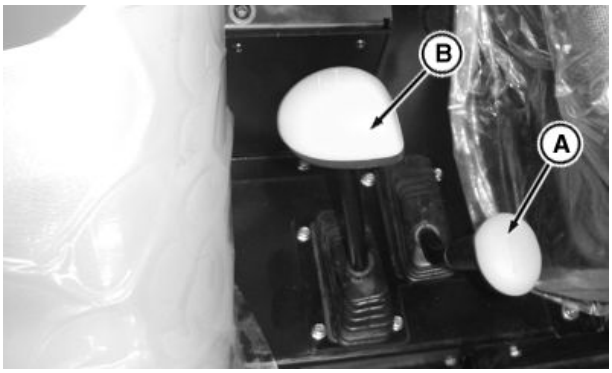
A—Range Shift Lever
B—Gear Shift Lever
C—Clutch Pedal

Gear (speed) Shift: Changing gears can be made **on-the-go**, without stopping.

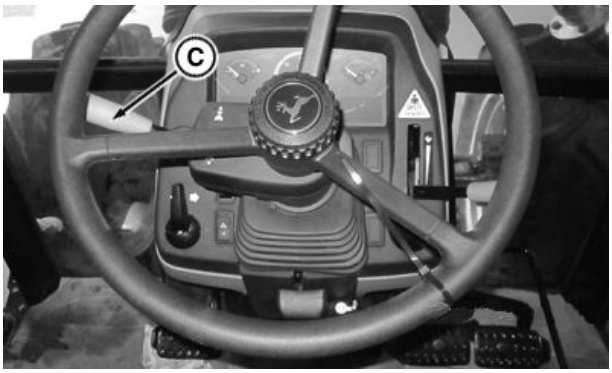
1. With tractor in motion, depress clutch pedal (C) FULLY.
2. Select desired speed (1, 2, 3).
3. Slowly release clutch pedal to gradually take up load.

SV86979,000008D -19-14AUG13-1/1

Operating PowrReverser™ Transmission

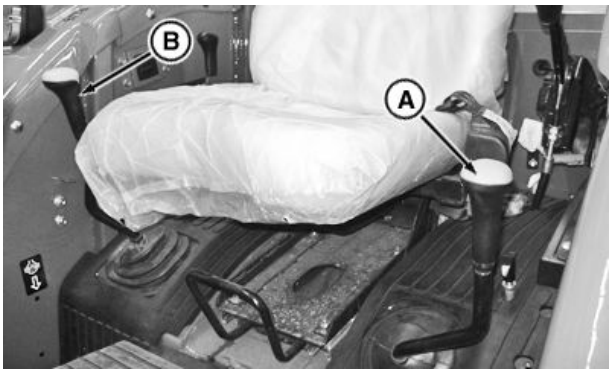


PY18284 —UN—14AUG13



PY18283 —UN—14AUG13

Cab Shown



PY18467 —UN—11JUL14

PY18468 —UN—11JUL14

IOOS Shown

PowrReverser Lever — IOOS

A—Range Shift Lever **B—Gear Shift Lever** **C—FNR Lever**

Range shift lever (A) provides three speed ranges: A, B and C.

Gear shift lever (B) provides four forward and four reverse travel speeds (1, 2, 3, 4).

FNR lever (C) provides travel direction (forward or reverse).

NOTE: The clutch pedal must be fully depressed one time after engine is started.

This is normally done when engaging a speed gear from neutral. When the tractor is started with speed gear engaged (FNR is in neutral), the tractor will not move when the FNR lever is set to F or R, until the clutch pedal has been fully depressed one time.

- Twelve forward and twelve reverse speeds are available when using range and gear shift levers.

IMPORTANT: Top shaft synchronizer works only on speed gears. To prevent transmission damage, do not attempt to change range while in motion. To shift into a different range; stop tractor, depress clutch pedal fully and decrease engine speed.

The clutch pedal must be FULLY depressed in order to make a gear (speed) shift. If the clutch pedal is not fully depressed, the shift lever can not be moved beyond neutral. Should this occur, depress the clutch pedal further. If the clutch pedal free travel is out of specification, see your John Deere dealer to readjust clutch pedal linkage.

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

FNR lever: With tractor stopped, select desired travel direction (forward or reverse). Travel direction change can be done without depressing the clutch pedal.

Range Shift: Tractor must come to a **complete stop** when shifting into any speed range.

1. After the tractor has stopped, lower engine rpm to idle speed.
2. Depress clutch pedal FULLY.
3. Select desired speed range (A, B, C).
4. Slowly release clutch pedal to gradually take up load.
5. Increase engine speed once shift is completed.

Gear (speed) Shift: Changing gears can be made **on-the-go**, without stopping.

1. With tractor in motion, depress clutch pedal (C) FULLY.
2. Select desired speed (1, 2, 3, 4).
3. Slowly release clutch pedal to gradually take up load.

Continued on next page

SD74272,0000042 -19-07JUL14-1/2

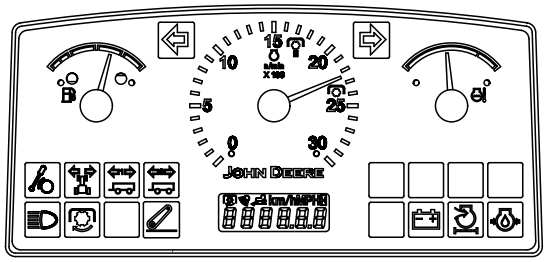
SD74272,0000042 -19-07JUL14-2/2

Selecting a Gear

IMPORTANT: To extend drive train life and avoid excessive soil compaction and rolling resistance when using ballast, operate one gear lower than normal.

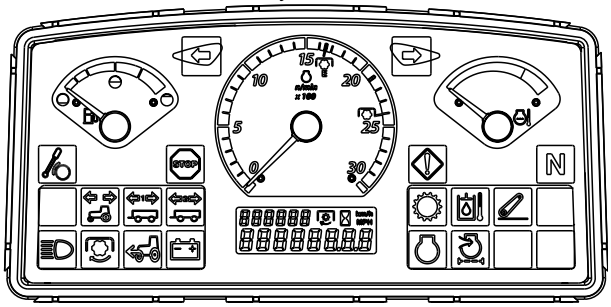
The tractor may be operated in any gear with engine speeds between 1400 rpm and 2400 rated engine rpm. Within these limits the engine can be put under full load. For light load operation, use a higher gear and lower engine speed. This saves fuel and reduces wear.

Ground Speed Estimates for different tire sizes are located in Specifications section.



PY18952 —UN—21MAY14

Sync Shuttle



PY18931 —UN—23APR14

PowrReverser™

JS86122,00002D6 -19-20MAY14-1/1

Use Brakes

⚠ CAUTION: Before operating tractor on a road, lock pedals together. Use brake lightly and cautiously at transport speeds.

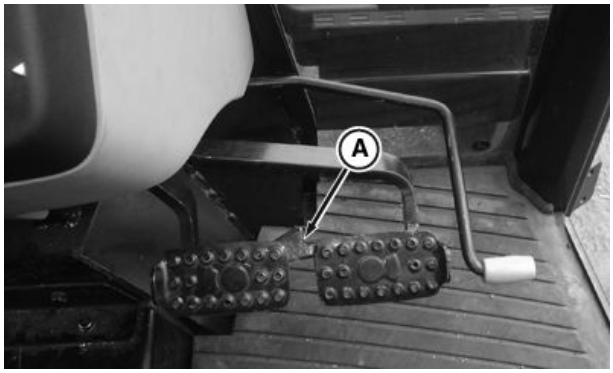
Use individual brakes to assist in making sharp turns. Disengage brake pedal locking bar (A) and depress only one brake pedal.

To stop tractor, depress both brake pedals.

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

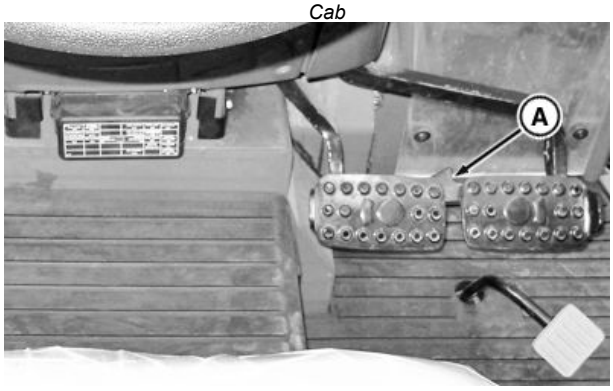
Reduce speed if towed load is not equipped with brakes and weighs more than the tractor. Avoid hard braking applications. Use additional caution when transporting towed loads under adverse conditions, when turning or stopping on inclines.

A—Brake Pedal Locking Bar



PY16577 —UN—13AUG12

Cab



PY18463 —UN—11JUL14

IOOS

SD74272,0000043 -19-07JUL14-1/1

Use Differential Lock

CAUTION: DO NOT operate tractor at high speed or attempt to turn with differential lock engaged.

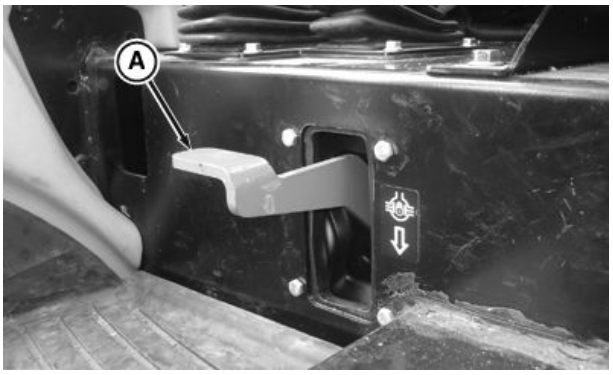
IMPORTANT: To prevent damage to drive train, DO NOT engage differential lock when one wheel is spinning and the other is completely stopped by the respective brake.

When one wheel starts to lose traction, engage differential lock by depressing pedal (A) down.

Keep the pedal pressed until the traction at both tires equalizes and tractor comes out of the ditch. If lock does not disengage, depress one brake pedal and then the other.

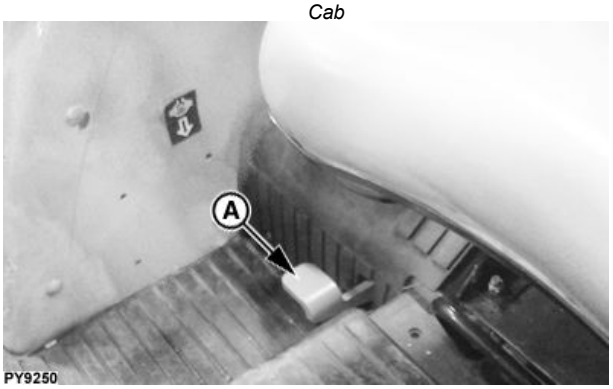
If tires repeatedly slip, then grip, and slip again, hold pedal in the engaged position.

A—Differential Lock Pedal



PY16590 —UN—13AUG12

Cab



PY9250 —UN—28JUL09

IOOS

SD74272,0000044 -19-14JUL14-1/1

Operating Mechanical Front Wheel Drive (If Equipped)

Use mechanical front wheel drive (MFWD) as required for better traction.

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

When driving on icy, wet or graveled surfaces, reduce speed and be sure tractor is properly ballasted to avoid skidding and loss of steering controls, engage mechanical front wheel drive.

IMPORTANT: To extend tire life engage mechanical front heel drive when needed . DO NOT engage when driving on hard surfaces.

DO NOT install tire chains on tractor front wheels, chains will strike and damage tractor.

To prevent transmission damage, DO NOT engage or disengage mechanical front wheel drive on the go.

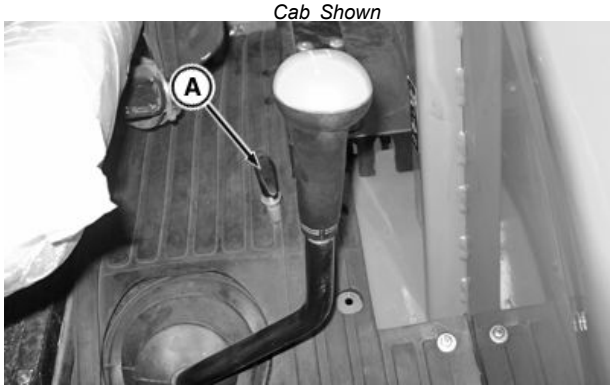
While towing an implement and pushing down on MFWD lever to disengage, lever may resist to disengage MFWD. When this occurs the load must first be relieved from the power train. See step 3 below.

Front-wheel drive may be engaged and disengaged while in motion

1. To engage, pull up on MFWD lever (A).
2. To disengage, push lever back down.
3. If lever will not go down easily, this means the load must first be relieved from power train. Operator may push down on lever while doing one of the following in order to relieve load:
   - Reduce speed and drive tractor straight ahead at for a few feet.
   - Stop tractor, then operate in reverse direction for a short distance, if changing from a forward direction.

PY16591 —UN—13AUG12

Cab Shown



PY18469 —UN—11JUL14

IOOS Shown

A—MFWD Lever

SD74272,0000060 -19-14JUL14-1/1

Stopping Tractor (Cab — SyncShuttle)

CAUTION: Always engage the PARK brake lever before dismounting. Leaving transmission in gear with engine off may not prevent tractor from moving.

IMPORTANT: Tractor must be at stationary position before engaging the PARK brake lever.

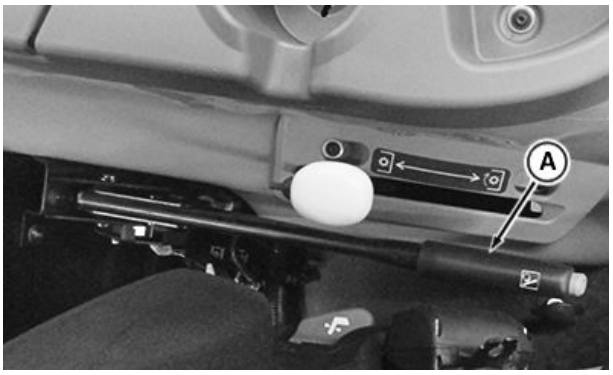
1. Pull lever (A) to engage park brake.
2. Lower all equipment to ground using position control lever (D).
3. Pull hand throttle (B) down to low idle position. Allow engine to idle for 1 to 2 minutes.

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

CAUTION: Remove the key from key switch to prevent operation by untrained personnel.

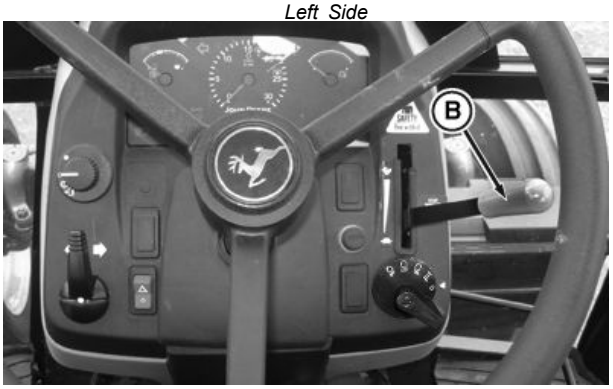
4. Turn key switch (E) to OFF position.

A—Secondary Brake Lever
B—Hand Throttle
C—Draft Control Lever
D—Position Control Lever
E—Key Switch



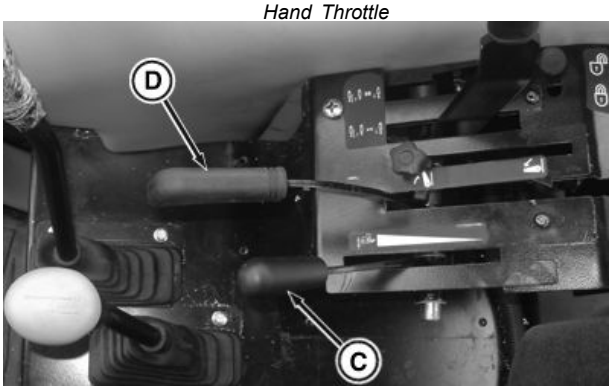
Left Side

PY21303 —UN—29JUL14



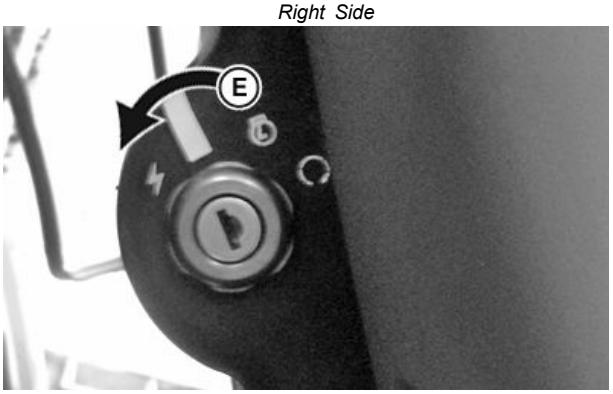
Hand Throttle

PY28114 —UN—21JUN16



Right Side

PY16594 —UN—14AUG12



Key Switch Off Position

PY28115 —UN—21JUN16

RM87422,000000D -19-21JUN16-1/1

Stopping Tractor (Cab — PowrReverser™)

1. Stop tractor travel by depressing on clutch pedal first or while using the brakes.
2. Put gearshift lever (A) or PowrReverser™ lever (B) in NEUTRAL before or while using the brakes.

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

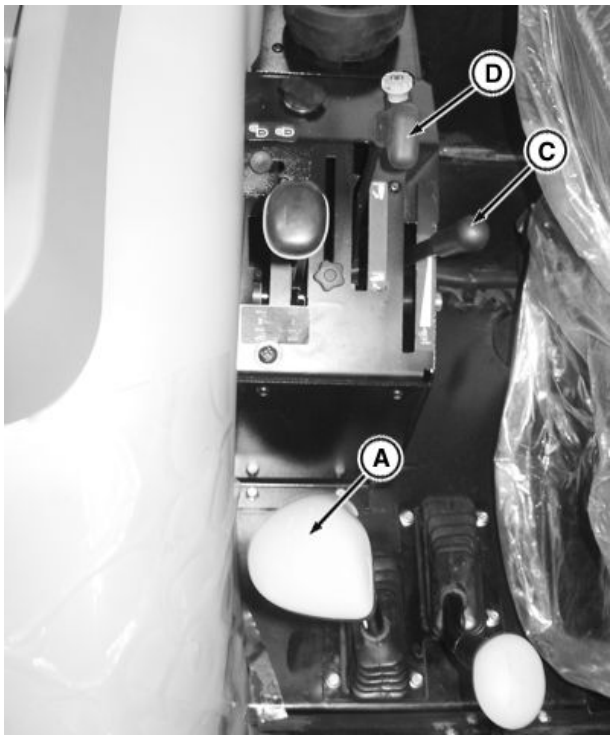
3. Pull hand throttle (E) down to slow idle position. Allow engine to idle for 1—2 minutes.
4. Pull lever (F) to engage park brake.
5. Lower all equipment to ground using position control lever (C and D).
6. Put all SCV levers in NEUTRAL.
7. Disengage PTO.

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

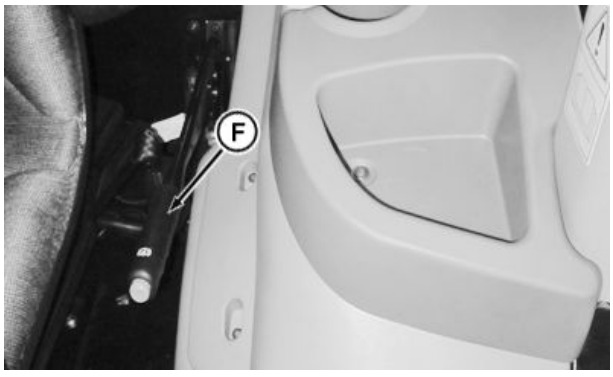
8. Turn key to STOP position and remove from switch.

A—Gear Shift Lever
B—PowrReverser™ Lever
C—Draft Control Lever
D—Position Control Lever
E—Hand Throttle
F—Secondary Brake Lever

PY18286 —UN—14AUG13



PY18287 —UN—14AUG13



PY18288 —UN—14AUG13

PowrReverser is a trademark of Deere & Company

SD74272,00005E4 -19-11DEC14-1/1

Stopping Tractor (IOOS — PowrReverser™)

1. Stop tractor travel by depressing on clutch pedal first or while using the brakes.
2. Put gearshift lever (A) or PowrReverser™ lever (B) in NEUTRAL before or while using the brakes.

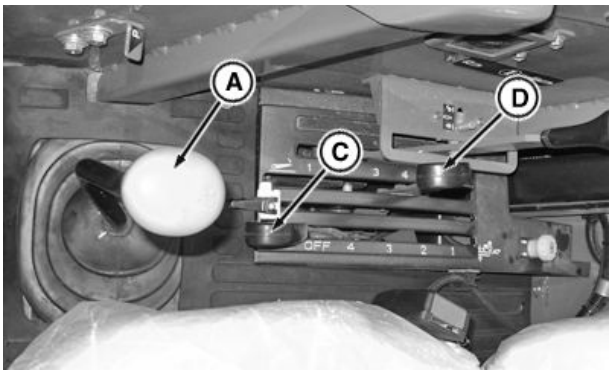
IMPORTANT: Cooling of certain engine parts is provided by engine oil. Stopping a hot engine suddenly could cause damage to these parts by overheating or lack of lubrication.

3. Pull hand throttle (E) down to slow idle position. Allow engine to idle for 1—2 minutes.
4. Pull lever (F) to engage park brake.
5. Lower all equipment to ground using position control lever (C and D).
6. Put all SCV levers in NEUTRAL.
7. Disengage PTO.

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

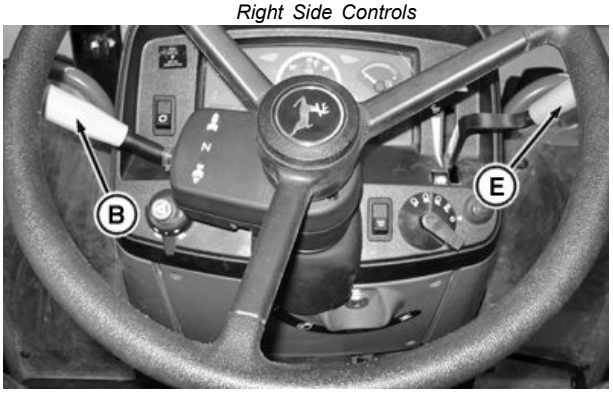
8. Turn key to STOP position and remove from switch.

A—Gear Shift Lever
B—PowrReverser™ Lever
C—Draft Control Lever
D—Position Control Lever
E—Hand Throttle
F—Secondary Brake Lever

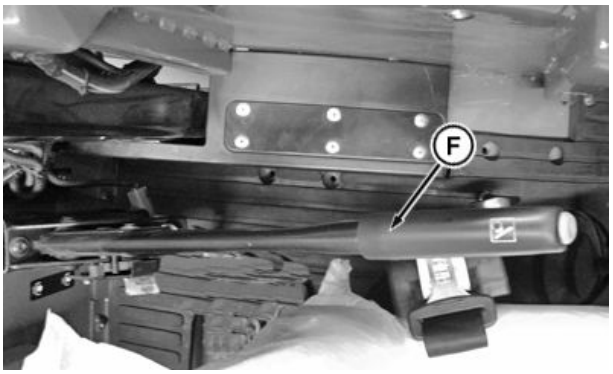


PY18470 —UN—11JUL14

Right Side Controls



PY18471 —UN—11JUL14



PY18472 —UN—11JUL14

Left Side Controls

PowrReverser is a trademark of Deere & Company

SD74272,0000045 -19-14JUL14-1/1

Hydraulic Trailer Brake Valve (If Equipped)

1. Remove dust plug (B) from trailer brake valve (A)
2. Connect trailer brake pressure hose to the connecting port (C), making sure that all connections are clean & fixed properly.
3. Depress brake pedals to operate hydraulic trailer brake.The braking effect depends on pressure applied to the brake pedals.

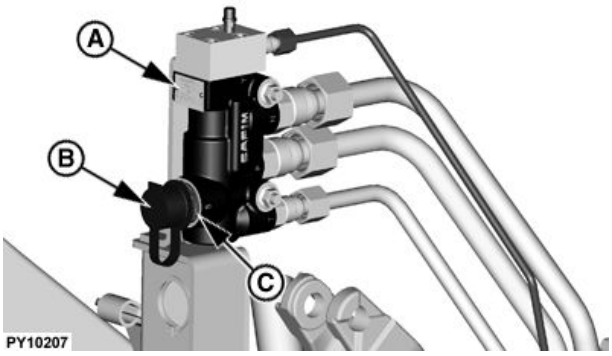
CAUTION: Never exceed a speed of 25 km/h (15mph) when travelling with hydraulically braked trailers.

IMPORTANT: To prevent undue wear on the brakes, observe the following points:

Make sure that the pressure hose is connected properly.

When driving downhill, select the same gear you would for driving uphill.

Check the hydraulic trailer brake regularly to make sure that it is functioning correctly.



PY10207 —UN—08DEC09

A—Trailer Brake valve
B—Dust Plug
C—Trailer Brake Hose Connecting Port

SV86979,0000257 -19-21DEC12-1/1

Loader Operation Speed Limit

CAUTION: 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).

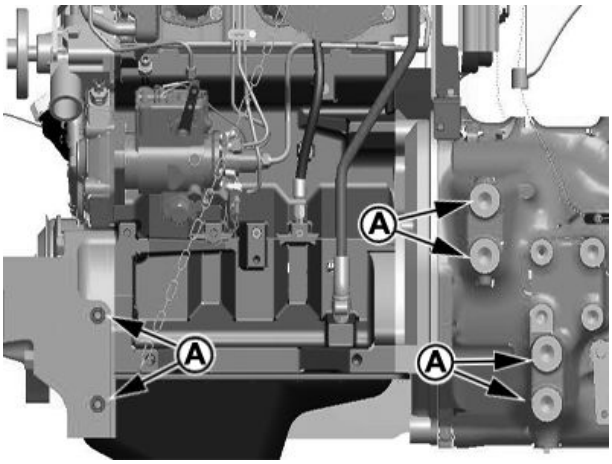
Reduce speed as required to ensure good tractor and loader stability.

JB06590,0000598 -19-21JUL09-1/1

Loader Fixation Points

To attach loader to the tractor loader brackets are mounted on tractor at various points (A) as shown.

A—Loader Bracket Mounting Points



PY12299 —UN—28DEC11

SK35149,0000308 -19-26SEP13-1/1

Using Emergency Exit (Cab)

Rear window opening provides a large exit path if the cab door(s) or sides of cab are blocked in an emergency situation.

PY16154 —UN—25JUN12

SD74272,000020B -19-23JUN12-1/1

Use Caution on Hillsides

OOS: Operate only with the Roll-Over Protective Structure (ROPS) in the UP or extended position whenever possible. Always use your seat belt when the ROPS is in the UP or extended position to minimize chance of injury from an overturn accident.

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

Never drive near the edge of a gully or steep embankment—it might cave in.

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

MFWD (if equipped): While mechanical front wheel drive greatly increases traction, it does not increase the stability of the tractor. With MFWD engaged, the tractor can climb steeper slopes, but does NOT become more stable. 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.

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

Hitch towed loads only to drawbar. When using a chain, take up the slack slowly.

SD74272,000020C -19-23JUN12-1/1

Come-Home Mode

CAUTION: When driving tractor in come-home mode, do not exceed tractor limited capability.

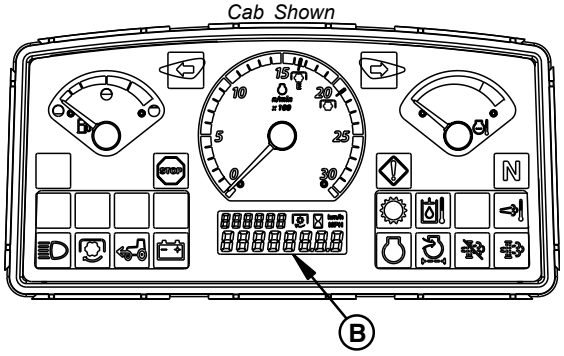
Come-home mode may be used if tractor becomes inoperable due to failures and must be moved. While in come-home mode, engine speed is limited to 1500 rpm.

1. Turn key switch to START position.
2. Press and hold roll mode switch (A) for 5 seconds to display first control unit screen.
3. Stored diagnostic trouble codes (DTC) appear on instrument cluster control (ICC) LCD display (B). If codes appear, record the code information.
4. Move turn signal switch (C) to right-hand side to scroll and select PTR.
5. Press and release the roll mode switch (A) to enter PTR address space.
6. Use repeated cycles of the turn signal switch (C) to right-hand side to scroll the address 100 (diagnostic address).
7. Press and release roll mode switch to enable the data entry.
8. Move turn signal switch (C) to right-hand side to change 0 to 1.
9. Press and release roll mode switch (A) to save the data entry.
10. Stand up off the seat and then sit back down. There must be an active code for PTR523966.31 – come home mode detected. The throttle must be limited to 1500 rpm.
11. Step on brake pedal momentarily.

CAUTION: Before operating tractor verify correct operation of steering and brakes. In some situations braking may require additional force due to lower hydraulic pressure.

APY35464 —UN—20APR20

Cab Shown



PY18426 —UN—18JUN14

A—Roll Mode Switch
B—LCD Display
C—Turn Signal Switch

12. Move range shift lever in A range and gearshift lever in first gear, depress clutch pedal and put the Forward, Neutral, Reverse lever in FORWARD.
13. Release clutch pedal, there must be a 3-4 seconds delay and clutch must slowly engage.

NOTE: Come home mode deactivate, if the ignition off. Perform the same procedure for activation of come home mode.

LGCKF7U,000055A -19-14MAY20-1/1

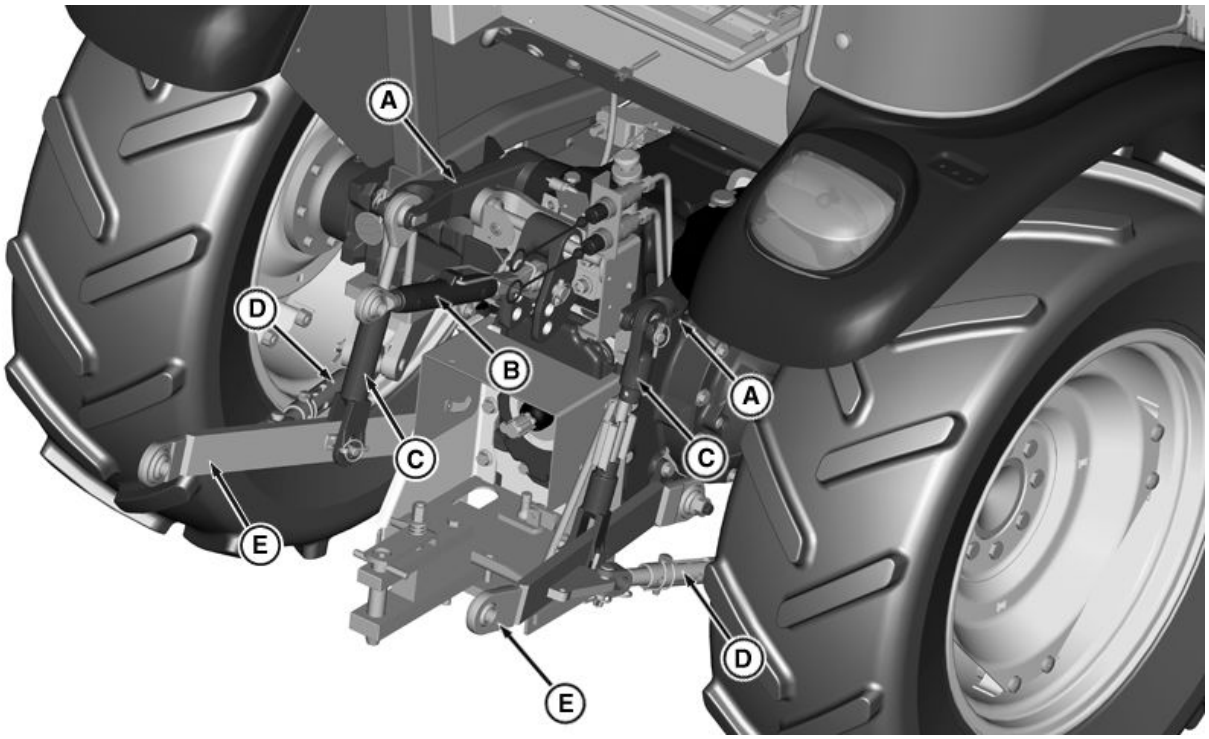
Rockshaft and 3-Point Hitch

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.)

PU00210,0000267 -19-14JUL06-1/1

3-Point Hitch Components

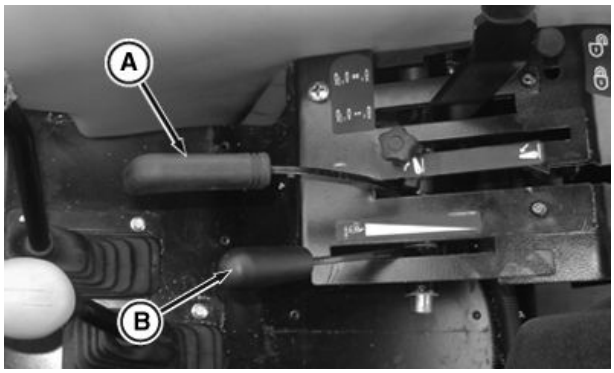


PY16596 —UN—14AUG12

A— Lift Arms
B— Center Link
C— Lift Links
D— Stabilizer Bars
E— Draft links

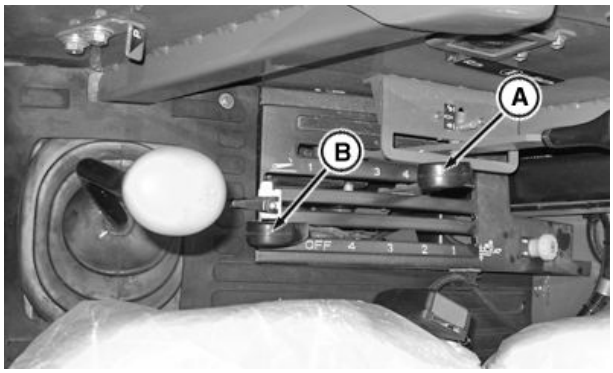
SV86979,0000095 -19-08JUL14-1/1

Hitch Control Levers



PY16597 —UN—14AUG12

Right Side Controls - Cab



PY18473 —UN—11JUL14

Right Side Controls - IOOS

A—Position Control Lever **B—Draft Control Lever**

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

Position control lever (A) raises the hitch when moved rearward, and lowers the hitch when moved forward. See Use Position Control, in this section, for more information.

Draft control lever (B) controls hitch position according to draft loads. See Use Draft Control, in this section, for more information.

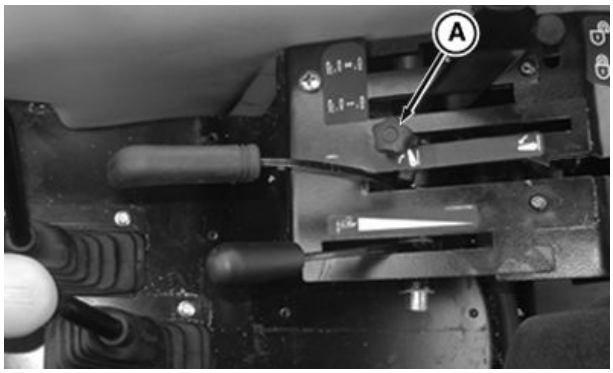
SD74272,0000046 -19-08JUL14-1/1

Set Position Control Lever Stop

NOTE: Position control lever stop is used when operating depth or height needs to be repeated.

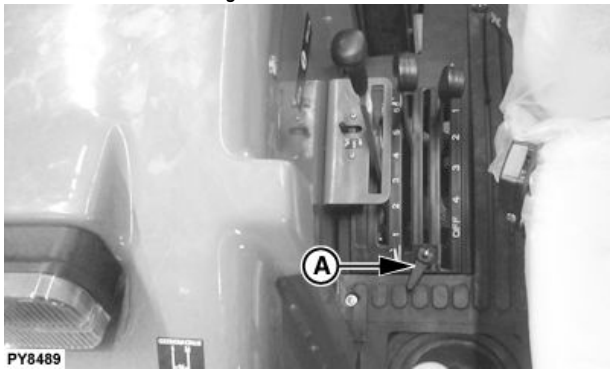
1. Operate implement for a few minutes to determine proper depth or height.
2. Loosen lever stop (A) and slide against position control lever. Lock stop in position by turning clockwise. Hitch will now lower to the same position each time control lever is pushed forward to the stop.

A—Lever Stop



PY16598 —UN—22AUG12

Right Side Controls - Cab

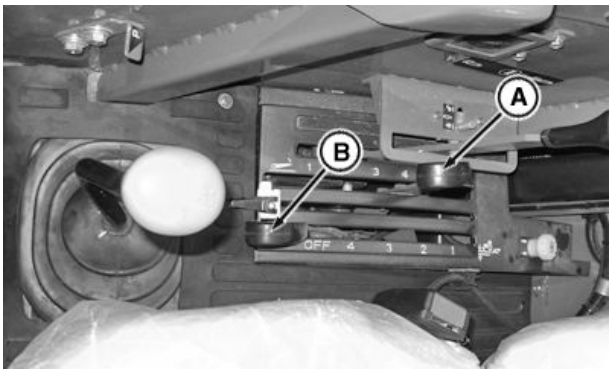


PY8489 —UN—12OCT09

Right Side Controls - IOOS

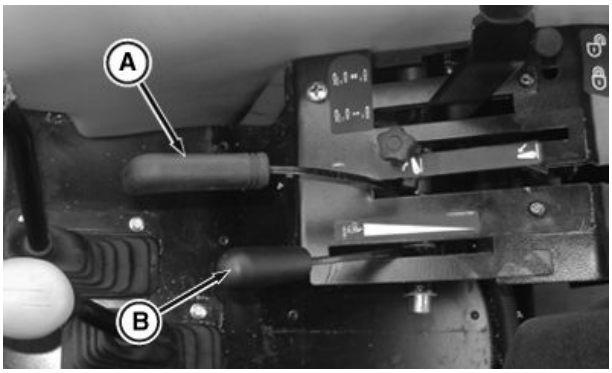
SD74272,0000047 -19-08JUL14-1/1

Using Rockshaft Position Control



PY18473 —UN—11JUL14

Control Levers of IOOS



PY16597 —UN—14AUG12

Control Levers of Cab

⚠ CAUTION: To prevent unexpected movement of rockshaft, place draft control lever (B), in a full forward position before attaching an implement.

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

Use position control lever (A) to control hitch movement and depth. Position control should be used for the following applications:

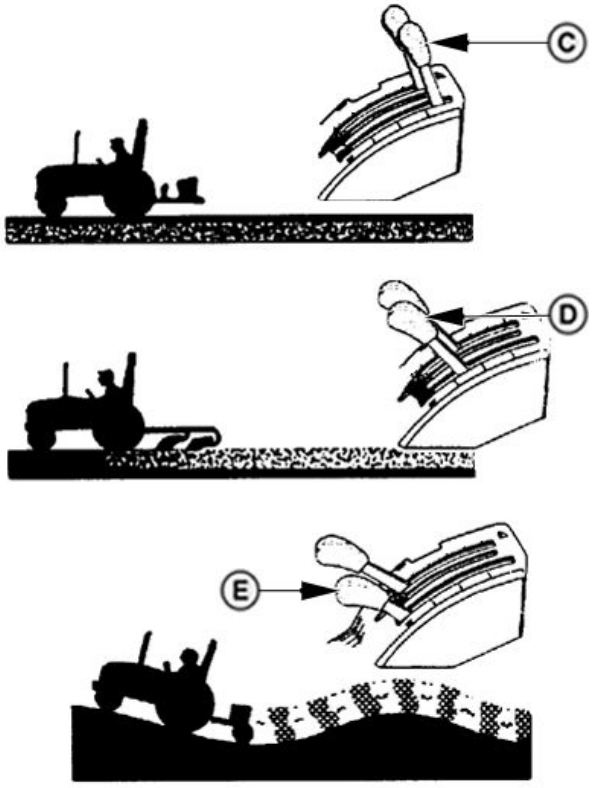
TRANSPORT of implements and end of field turn-around. Position control lever should be moved fully rearward (C) for transport for both load and non-load sensing usage.

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

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

NOTE: Lift links can be adjusted for implement float. (See ADJUSTING IMPLEMENT FLOAT in this section.)

A—Position Control Lever
B—Draft Control Lever
C—Position Control Lever In Rearward Position
D—Position Control Lever In Desired Depth Position
E—Position Control Lever And Draft Control Lever In Float Position



PY18781 —UN—17SEP13

SD74272,0000048 -19-08JUL14-1/1

Use Rockshaft Draft Control

The hitch is equipped with variable draft control system.

Use draft load sensing when:

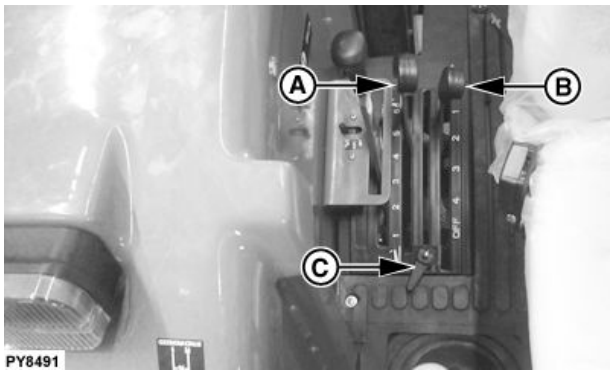
- Operating with a fully mounted implement in hill and swale terrain. The implement will raise and lower to follow the ground contours while maintaining a nearly constant depth.
- Operating in varying soil conditions. The implement is raised slightly to get through tough spots so you do not have to shift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

Draft control lever (B) controls amount of load required before hitch responds. When lever is moved all the way down, there is no draft sensing. Pulling the lever up reduces the amount of draft load required to override the position set by lever (A) and to raise the hitch.

Draft sensitivity ranges can be changed by repositioning the center link. (See Position Center Link, in this section, for additional information.)

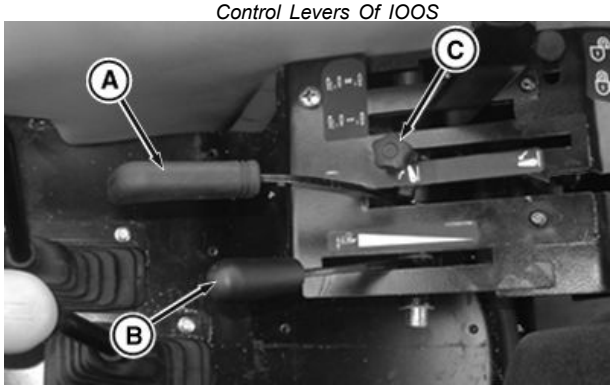
For draft load sensing operation:

- Initially place position control lever (A) in its fully rearward position and the draft control lever (B) in the fully forward (least draft) position.
- With tractor moving, pull position control lever (A) backward to set implement operating depth. Set position control lever stop (C) so control lever can be brought back to the same exact position. When the tractor begins to slip, pull draft control lever (B) upward until desired draft sensing level is obtained.
- Position control lever (A) can also be raised slightly to override the draft control setting to help get through slippery spots without getting stuck.



PY8491 —UN—12OCT09

Control Levers Of IOOS



PY16599 —UN—22AUG12

Control Levers Of Cab

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

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

SD74272,0000049 -19-08JUL14-1/1

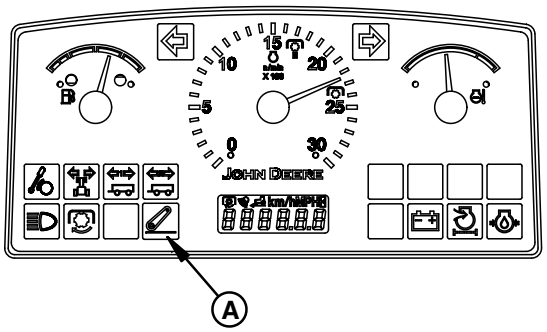
Quick Raise and Lower System Indicator (If Equipped)

Indicator (A) warns of a malfunction in the Quick raise and lower system. (See your John Deere dealer.)

QRL Error Indication: This will provide the input to Instrument Cluster to indicate errors in the QRL system. The different errors will be indicated through this single tell tale indicator as defined below:

NOTE: Blink patterns are considered in percentage calculations for 1 second time. Indicator blinks in amber color.

Any saviour error/Motor short/Motor not rotating	Continuous ON
Switch faulty (switch short/ switch open)	Blink with 50% duty cycle (Flash rate 2 blinks/sec)
Switch/Motor not connected	Blink with duty cycle 30% ON & 70% OFF (Flash rate 2 blinks/sec)
Motor Overcurrent	Blink with 50% duty cycle (Flash rate 5 blinks/sec)



PY18955 —UN—21MAY14

Quick Raise and Lower Indicator

A—Quick Raise and Lower Indicator

SK35149,0000388 -19-21MAY14-1/1

Operate Electronic Quick Raise and Lower Switch (If equipped)

⚠ CAUTION: Avoid possible injury or death from tractor movement. Put transmission in PARK before using external raise and lower switches. Stay clear of rotating drive lines and interference points.

EQRL Switch (Rear Left Fender)

Press and hold the EQRL switch to move the rear hitch.

NOTE: Once switch is released implement remains at that position only.

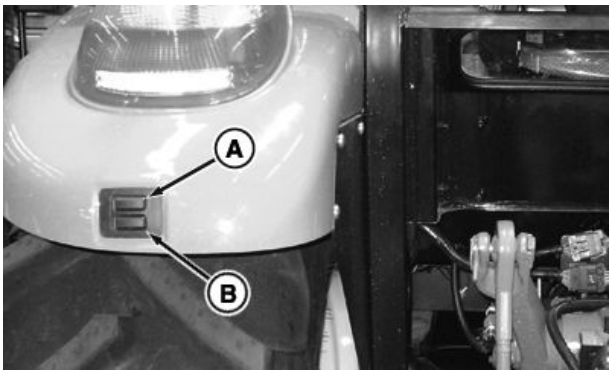
Implement is raised when raise switch (A) is pressed and hold.

Implement is lowered when lower switch (B) is pressed and hold.

Switch can be pressed any number of times till the desired full raise-lower position is attained.

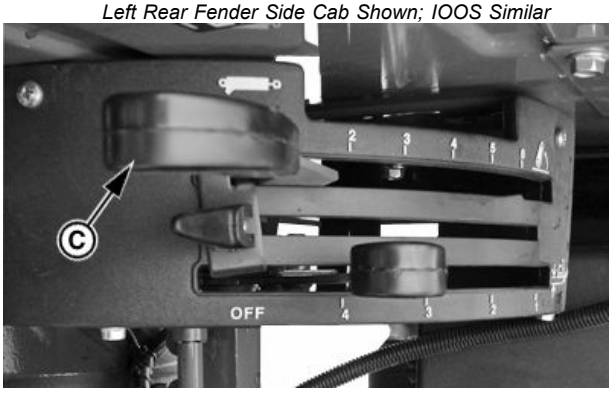
NOTE: External position control (fender mounted) raises or lowers rear hitch at a slower rate and ignores height/depth settings.

IMPORTANT: Once the rear hitch control switch is activated, do not operate hitch through position control lever.



PY18956 —UN—21MAY14

Left Rear Fender Side Cab Shown; IOOS Similar



PY11274 —UN—28JAN11

Cab Shown; IOOS Similar

A—Rear Hitch Raise Switch
B—Rear Hitch Lower Switch
C—Position Control Lever

Continued on next page

SK35149,0000389 -19-14NOV16-1/2

EQRL Switch (Front Right Fender)

IMPORTANT: Never operate the EQRL switch when the rear hitch is in full raise-lower position.

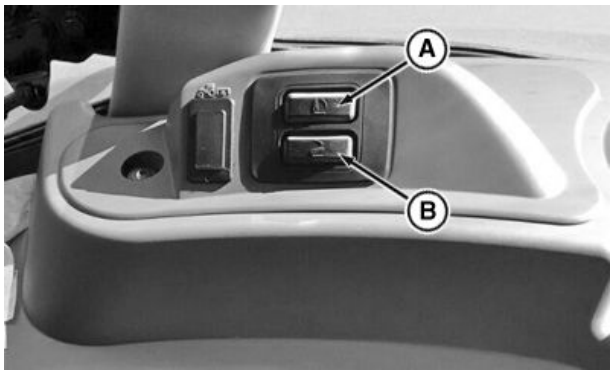
Switch ON the ignition and wait for the beep from instrument cluster. Check for any fault codes for EQRL system in instrument cluster. If no fault codes present start the engine and wait for battery charging indicator to go OFF. Press quick raise switch (A) once to raise the rear hitch and press the quick lower switch (B) once to lower the rear hitch completely or to the level set by position control lever. Hitch lift limit by switch (A) can be adjusted manually for three settings to the maximum 50%, 75%, or 95% of full lift achieved by position control lever with deviations of ± 5%.

IMPORTANT: Never press and hold the EQRL switch once raise-lower operation is started.

Never press the EQRL switch more that three times once raise-lower operation is stared.

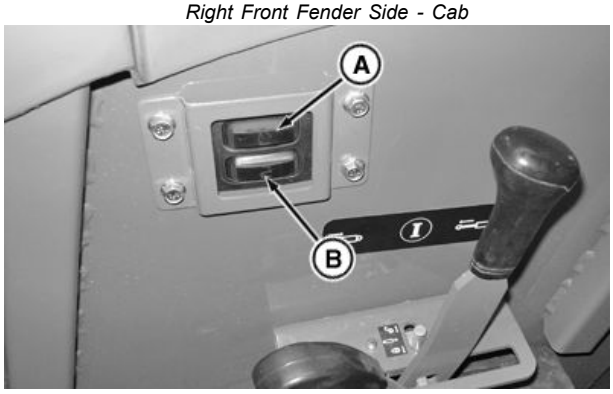
NOTE: System goes in Safe Mode with fault code appearing in instrument cluster if any abnormal operation of EQRL Switch is detected and EQRL switch operation stops. The system is operational only in the next ignition cycle. This is to safe guard the EQRL Motor and ECU from defect.

A—Quick Raise Switch **B—Quick Lower Switch**



PY18957 —UN—28NOV14

Right Front Fender Side - Cab



PY18474 —UN—11JUL14

Right Front Fender Side - IOOS

SK35149,0000389 -19-14NOV16-2/2

Adjust Hitch Rate-of-Drop/Implement Lock

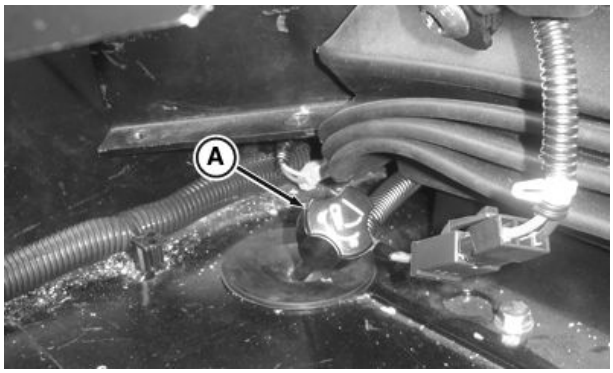
CAUTION: Excessive rate-of-drop may cause damage or injury. Fully lowering implement should require at least two seconds.

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

Turn hitch rate-of-drop knob (A), located under right-hand rear of seat, clockwise to slow hitch drop.

Turn knob counterclockwise to increase rate-of-drop.

Rate-of-drop knob is also called implement lock. When knob is fully screwed in, implement will not lower down even if position control lever is fully down. Use implement lock while transporting implement.



PY16600 —UN—22AUG12

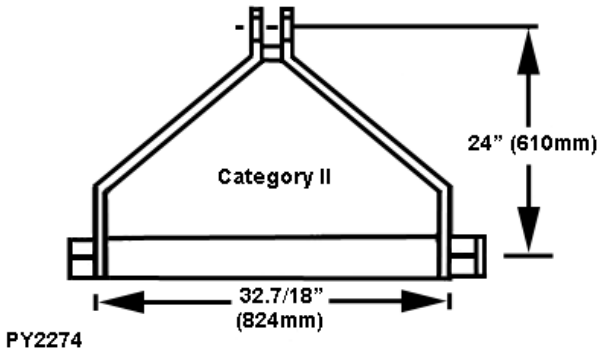
A—Rate-Of-Drop/Implement Lock Knob

SV86979,000009A -19-14AUG12-1/1

Prepare Implement

Category II implements should have the top hole of the implement mast located 610 mm (24 in.) above the lower pins. Drill another hole in top mast or extend top mast if necessary.

Category	Mast Height	Width Between Lower Pins	Pin Size	
			Lower	Upper
II	610 mm (24 in.)	824 mm (32-7/16 in.)	28.7 mm (1-1/8 in.)	25.5 mm (1 in.)



PY2274 —UN—07JUN06

PU00210,000026F -19-17JUL07-1/1

Convert Category II Hitch to Category I

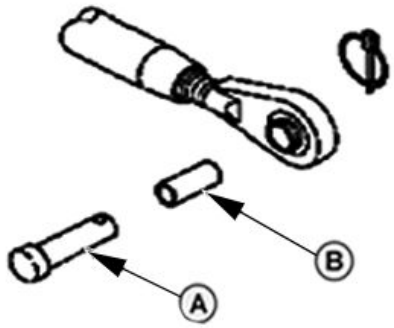
Center link end is sized for Category II implement attaching pin.

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

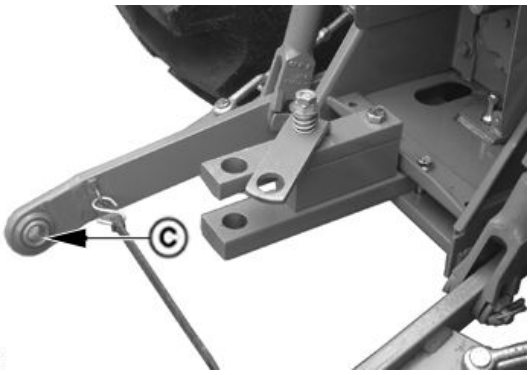
1. Insert bushing (B) in center link end. Smaller implement mast pin (A) is also needed when bushing is installed.
2. Adjust balls (C) in draft link ends to fit over implement pins.

See your John Deere dealer for parts.

A—Mast Pin
B—Center Link Bushing
C—Draft Link Balls



PY5982 —UN—30APR07



PY6169 —UN—13SEP06

SS01820,0000A7D -19-17JUL07-1/1

Position Center Link

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

Standard position is (C).

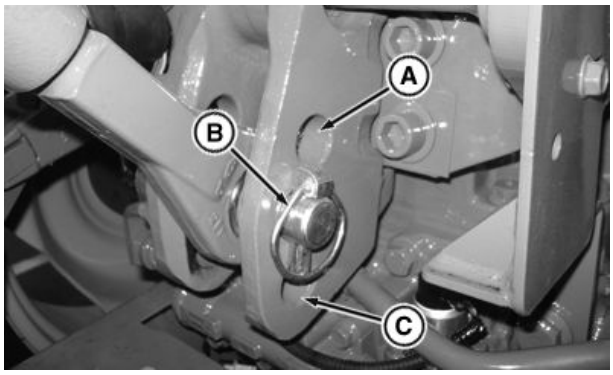
Move the center link attachment to hole (B) if:

- Excessive hitch activity or hunting occurs in draft control operation.
- The rear of the implement raises too much when lifted. The implement weight which can be lifted is reduced slightly with the center link attachment in the lower holes.
- The draft control lever range is too small.

Move the center link attachment to hole (C) if:

- The hitch seems unresponsive in draft control operation and allows the engine speed to drop too far before raising the hitch.
- The rear of the implement droops and drags the ground as the implement is lifted.

Upper hole (A) eliminates nearly all draft sensing.



PY16601 —UN—27AUG13

A—Upper Hole
B—Middle Hole
C—Lower Hole

Use upper hole (A) during transportation.

NOTE: Implements with 610 mm (24 in.) high Category II mast will use the upper two holes.

SV86979,000009B -19-14AUG12-1/1

Attach Implements to 3-Point Hitch

1. Be sure drawbar will not interfere. If necessary, move drawbar ahead, or remove it. Check for any other potential interference.

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

2. Back tractor up to implement (A) so hitch points align. Place transmission in neutral (N), stop the engine and engage brakes BEFORE leaving the tractor seat.

IMPORTANT: Be sure to stop the engine and engage park brake before entering the area between tractor and implement.

3. Slip draft links over implement hitch pins (B), and retain with quick-lock pins.

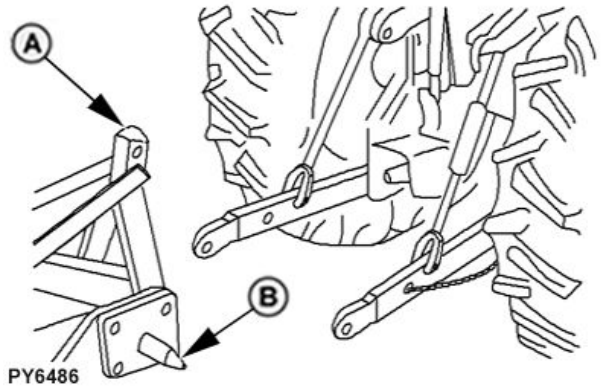
NOTE: Quick-lock pins can be stored on draft links (through holes in sway chain ears) when not in use.

4. To remove center link from transport hook, lift center link locking clip (D), and rotate tab (C) to rear of center link clip.
5. Attach center link to implement top mast.
6. Adjust center link and lift links as necessary. (See Leveling 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.

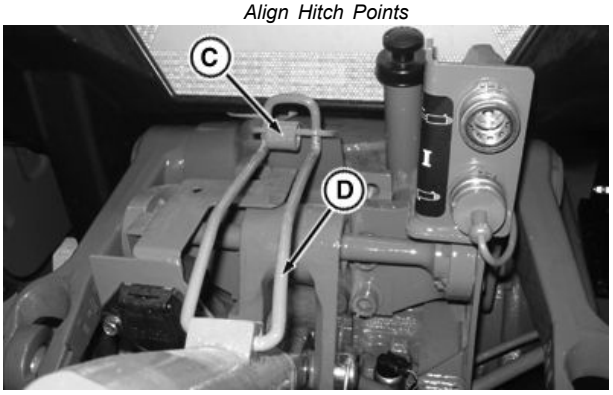
7. Using position control lever (E), lower and raise implement slowly and check for any point of interference.

A—Implement
B—Implement Hitch Pins
C—Tab
D—Center Link Locking Clip
E—Position Control Lever
F—Draft Control Lever



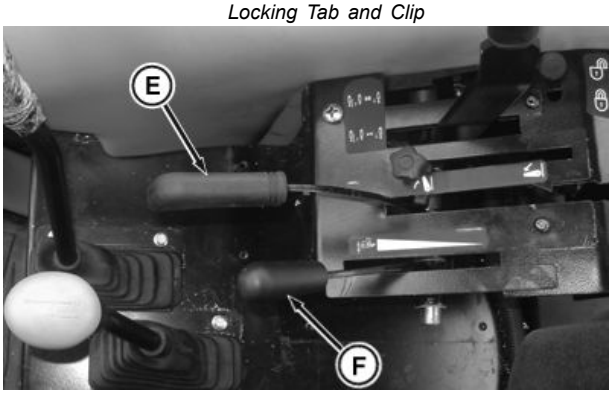
Align Hitch Points

PY6486 —UN—13MAR07



Locking Tab and Clip

PY16602 —UN—27AUG13



Right Side Controls - Cab Shown

PY16603 —UN—16AUG12

SV86979,000009C -19-08JUL14-1/1

Adjust Hitch Side Sway

The stabilizer bar can be used to adjust the draft links to Category I (bar length 444 mm; 17.5 in.) or Category II (bar length 425 mm; 16.7 in.). Do this by turning adjuster (A) until its end is level with the groove in threaded rod (B).

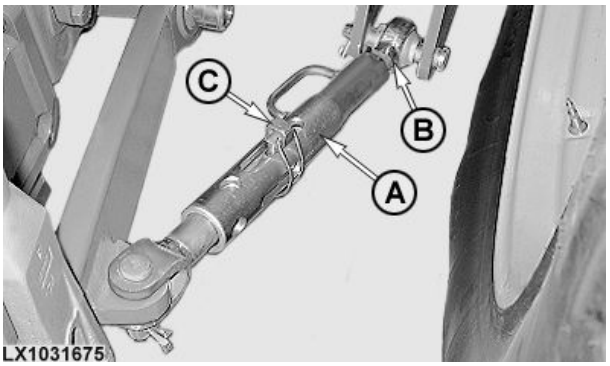
When properly adjusted for Category I, the shorter slot is uppermost. For Category II, the longer slot is uppermost.

Pin (C) can be used to fix the draft link or to set it for lateral sway.

Even in position 1 (as shown), the draft links can sway to a slight extent. If special circumstances require even this sway to be eliminated, install pin (C) behind the end of rod (D) and turn the adjuster until the draft links are rigid.

- Position 1 = fixed (no lateral sway)
- Position 2 = lateral sway

A—Adjuster
B—Threaded Rod
C—Pin
D—Rod



LX1031675 —UN—19FEB03

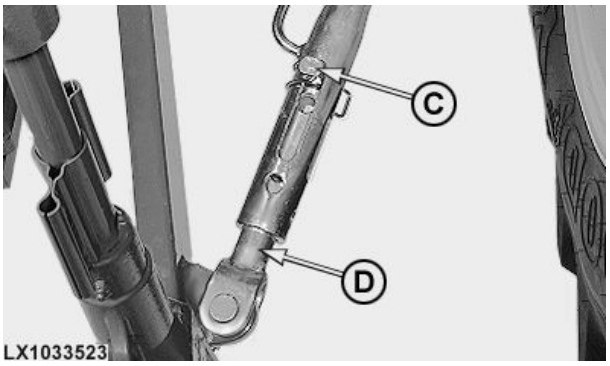
Stabilizer Bar

LX1031676 —UN—06MAR03

LX1031677 —UN—19FEB03

Position 1

Position 2



LX1033523 —UN—19NOV03

SV86979,000009D -19-03SEP12-1/1

Leveling Hitch

1. Lower implement to take weight off hitch.

IMPORTANT: DO NOT attempt to overextend center link beyond limits of locking clip or lift links past the stops. Link body threads could be damaged.

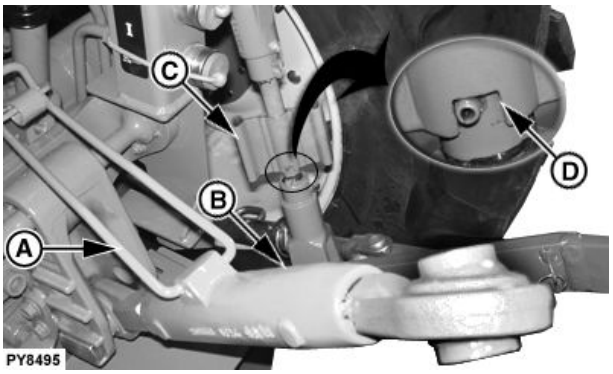
NOTE: Maximum adjustment range of the center link can only be obtained if the ends are positioned equally within the body when attached to an implement.

2. Adjust center link to level implement front-to-rear. Unlatch locking clip (A). Rotate center link body (B) clockwise to lengthen center link or counterclockwise to shorten it. Be sure to latch the locking clip.
3. Adjust right-hand link to level implement side-to-side. Lift locking handle (C) and turn 1/4 turn to engage slot (D) onto roll-pin in the center portion of the lift link.

   Turn crank handle (C) clockwise to raise draft link.

   Turn crank handle (C) counterclockwise to lower draft link.

   After adjustment, lift handle (C) and turn to engage slot (D) onto the lower body to prevent change of adjustment during operation.
4. The left-hand lift link is also adjustable in length to accommodate different tire sizes.



PY8495 —UN—31AUG09

A—Locking Clip
B—Center Link Body
C—Locking Handle
D—Slot

To change the left-hand lift link length, remove the upper lift link pin and rotate the upper end assembly clockwise to shorten or counterclockwise to lengthen, and then reinstall the upper pin and locking pin.

Adjust left and right lift links to accommodate various tire sizes. Set the lift links to have fully-lowered draft link balls approximately 17 cm (7 in.) off the ground for greatest range of usable hitch motion.

SA61034,0000715 -19-16DEC08-1/1

Adjust Lateral Float

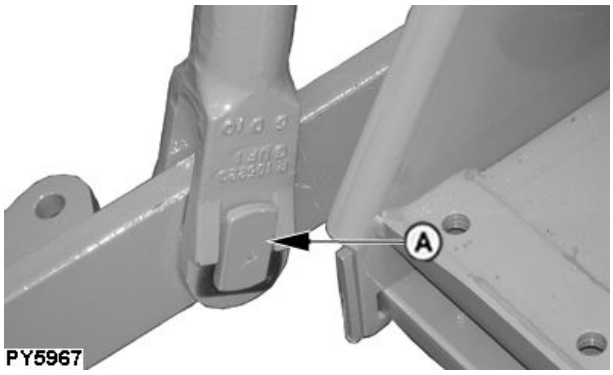
To allow the draft link to raise slightly as implement follows ground contour, place head of float pin and rectangular washer on the inside end of the pin in a vertical position (A).

To hold implement in rigid position, place head of float pin and rectangular washer in horizontal position (B).

Use lift link pins in the float position for hitch-mounted implements such as a cultivator or mower, which have ground gauging skids or wheels which may cause the implement to twist in relation to the tractor.

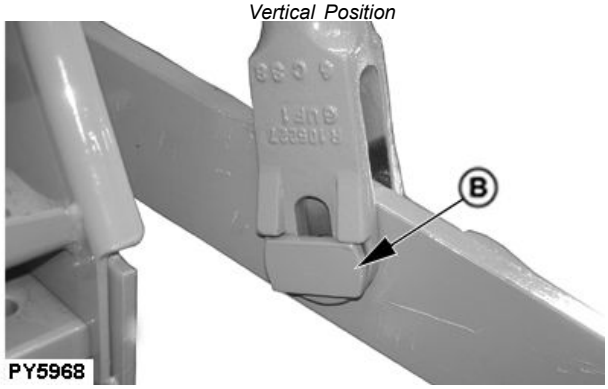
Use the rigid position for implements such as plows and ground engaging implements that should not twist.

A—Pin in Vertical Position **B—Pin in Horizontal Position**



PY5967 —UN—20JUL06

Vertical Position



PY5968 —UN—20JUL06

Horizontal Position

PU00210,000028D -19-17JUL07-1/1

Attach Implements to 3-Point Hitch

1. Be sure drawbar will not interfere. If necessary, move drawbar ahead, or remove it. Check for any other potential interference.

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

2. Back tractor up to implement (A) so hitch points align. Place transmission in neutral (N), stop the engine and engage brakes BEFORE leaving the tractor seat.

IMPORTANT: Be sure to stop the engine and engage park brake before entering the area between tractor and implement.

3. Slip draft links over implement hitch pins (B), and retain with quick-lock pins.

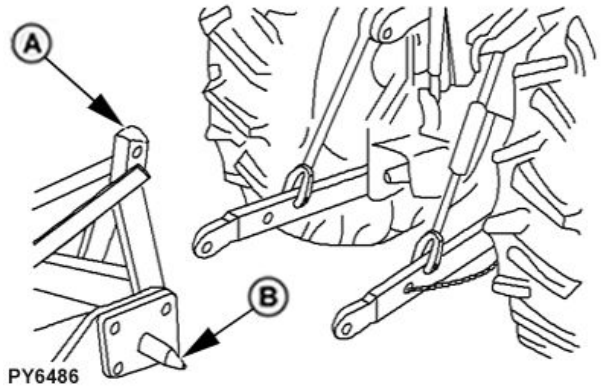
NOTE: Quick-lock pins can be stored on draft links (through holes in sway chain ears) when not in use.

4. To remove center link from transport hook, lift center link locking clip (D), and rotate tab (C) to rear of center link clip.
5. Attach center link to implement top mast.
6. Adjust center link and lift links as necessary. (See Leveling 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.

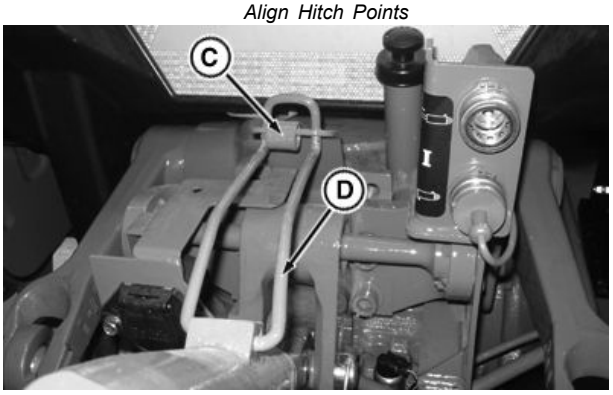
7. Using position control lever (E), lower and raise implement slowly and check for any point of interference.

A—Implement
B—Implement Hitch Pins
C—Tab
D—Center Link Locking Clip
E—Position Control Lever
F—Draft Control Lever



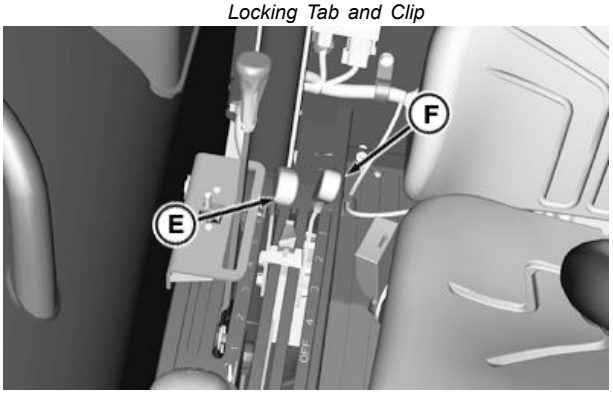
Align Hitch Points

PY6486 —UN—13MAR07



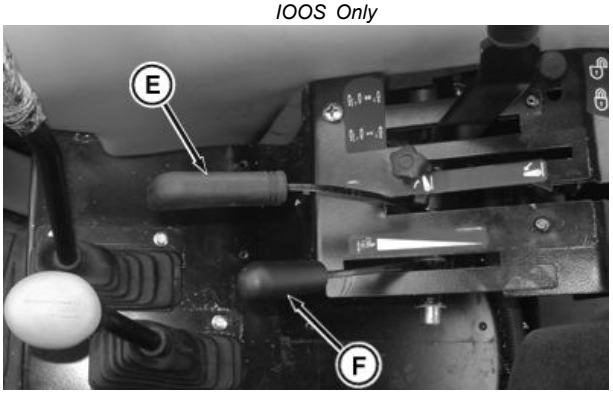
Locking Tab and Clip

PY16602 —UN—27AUG13



IOOS Only

PY18857 —UN—17FEB14



Cab Only

PY16603 —UN—16AUG12

SK35149,0000340 -19-10JUL14-1/1

Warm up Hydraulic System Oil

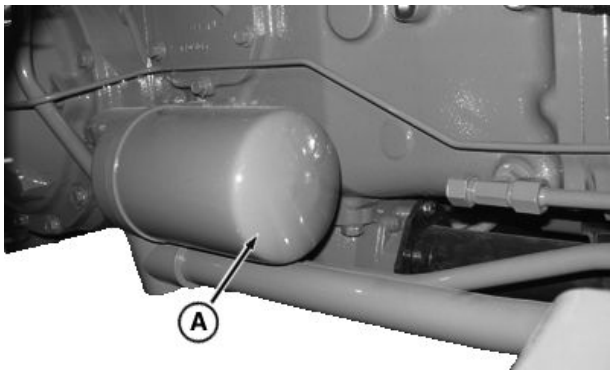
Hydraulic system may be slow to function when tractor is started in cold weather. This is because cold oil will not flow as easily through hydraulic oil filter (A).

Steering may be slow until system warms up.

Hydraulic system will function normally when oil warms up.

IMPORTANT: To prevent damaging hydraulic pump or relief valve, DO NOT exceed two to three minutes warm-up time with steering wheel held in full left or full right turn position.

1. Depress clutch pedal, start engine and idle at about 1000 rpm.
2. Turn and hold steering wheel in full left or right turn.



PY16176 —UN—26JUN12

Below Right Side of Operator' Platform (Near Rear Axle)

A—Hydraulic Oil Filter

SD74272,00005E5 -19-10SEP13-1/1

Use Correct Hose Tips

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

[1]*International Standards Organization*
[2]*Society of Automotive Engineers*

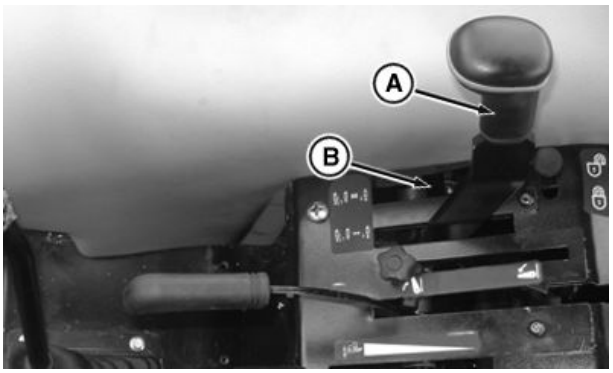
MX,RHIP,AA -19-18MAR92-1/1

Control Lever and Coupler Identification

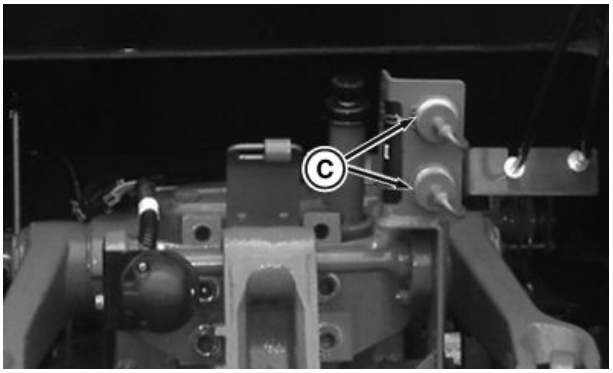
Fore and aft movement of SCV lever (A) operates couplers (C).

The SCV has a detented float position when lever (A) is moved in the fully forward direction.

A— SCV I Lever
B— SCV II Lever (If Equipped)
C— SCV Couplers



PY16604 —UN—18AUG12



PY16605 —UN—18AUG12

Continued on next page

SV86979,00002C6 -19-11DEC14-1/2

The multi-function lever (if equipped) has two basic directions of

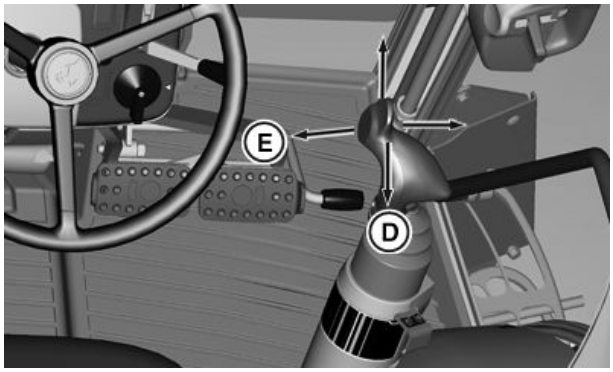
movement to control oil flow to the mid-mount couplers, located on the side of the tractor.

- Forward and backward (D) operates coupler I (F).
- Inward and outward (E) operates coupler II (G).

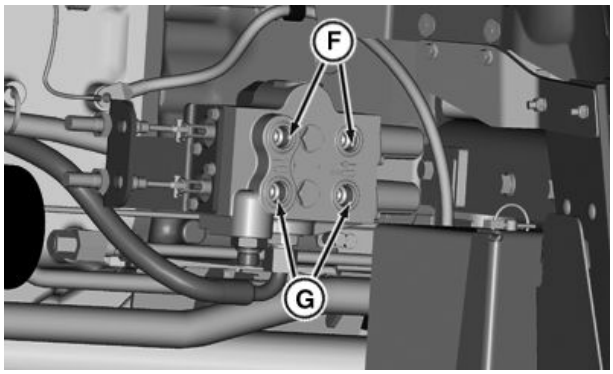
The multi-function lever detents to a float position when moved fully forward.

The multi-function lever detents to regenerative position when moved fully outward.

D— Forward and Backward—Float
E— Inward and Outward—Regenerative
F— Mid-Mount Coupler I—Float (If Equipped)
G— Mid-Mount Coupler II—Regenerative (If Equipped)



PY15594 —UN—18AUG12



PY15595 —UN—18AUG12

SV86979,00002C6 -19-11DEC14-2/2

Control Lever and Coupler Identification — IOOS

Fore and aft movement of SCV lever (A) operates couplers (B).

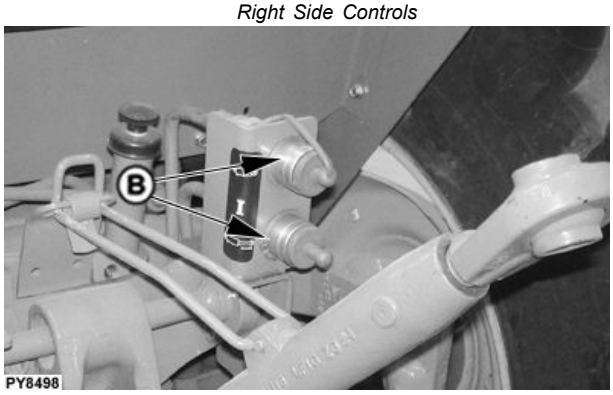
The SCV has a detented float position when lever (A) is moved in the fully forward direction.

NOTE: SCV II is optional and operation of SCV II is same as SCV I.

A— SCV I Lever
B— SCV Couplers

PY18476 —UN—11JUL14

Right Side Controls



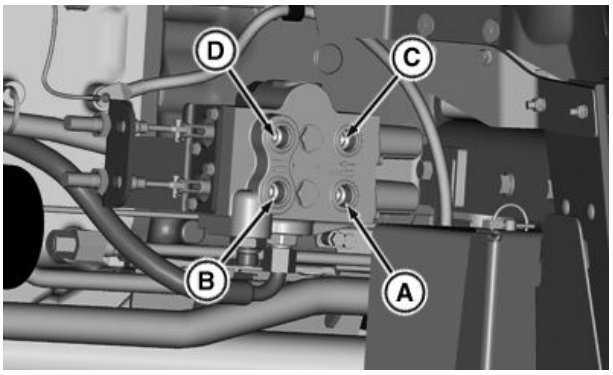
PY8498 —UN—19JUN09

SCV Couplers

SD74272,000004A -19-14JUL14-1/1

Mid-Mount Valve Coupler Identification (If Equipped)

A—Bucket Cylinder—Rod End (Yellow)
B—Bucket Cylinder—Head End (Black)
C—Boom Cylinder—Head End (Blue)
D—Boom Cylinder—Rod End (Red)



PY16180 —UN—26JUN12

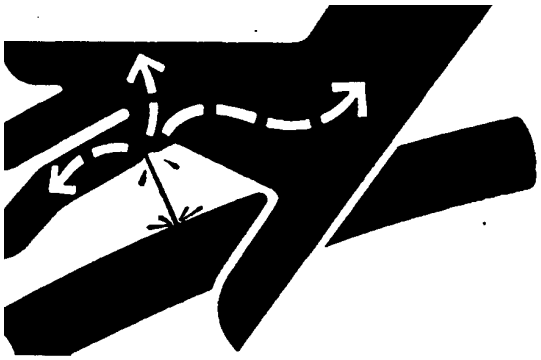
Two-Function Mid-Mount Valve

SV86979,00000A5 -19-18AUG12-1/1

Connect Cylinder Hoses

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 may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



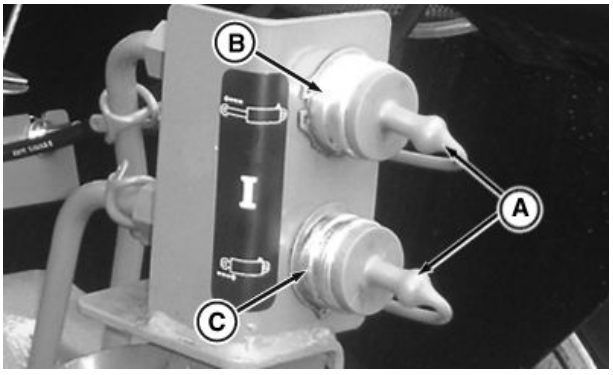
X9811 —UN—23AUG88

SV86979,00000A0 -19-20AUG14-1/2

1. Remove dust plugs from hose end.
2. Pull dust plugs (A) from couplers.
3. Make sure that hose end and couplers are clean.
4. Coupler (B) receives cylinder extend hose.
5. Coupler (C) receives cylinder retract hose.

CAUTION: Hydraulic hoses can fail due to physical damage, kinks, age, and exposure. Check hoses regularly. Replace damaged hoses. See your John Deere dealer.

6. To connect each hose, push hose tip firmly into coupler. Pull lightly on hose, make sure that positive connection was made.



PY16606 —UN—16AUG12

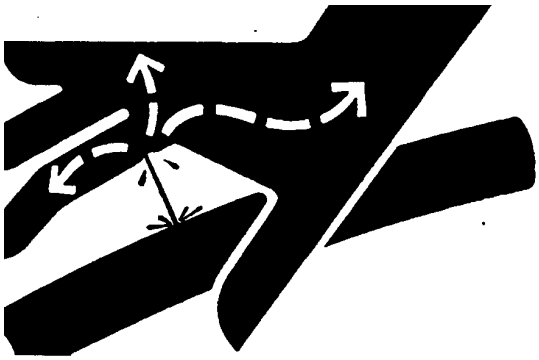
A—Dust Plug
B—Coupler
C—Coupler

SV86979,00000A0 -19-20AUG14-2/2

Connect Cylinder Hoses—Mid-Mount Valve (If Equipped)

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by moving all rear SCV control levers and mid-mount multi-function lever in all directions to relieve 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 from Deere & Company Medical Department in Moline, Illinois, U.S.A.



X9811 —UN—23AUG88

SV86979,00002C7 -19-29JAN13-1/2

NOTE: Hose connections at mid-mount valve are color-coded.

1. Match hoses to couplers using color-coded dust caps/plugs.

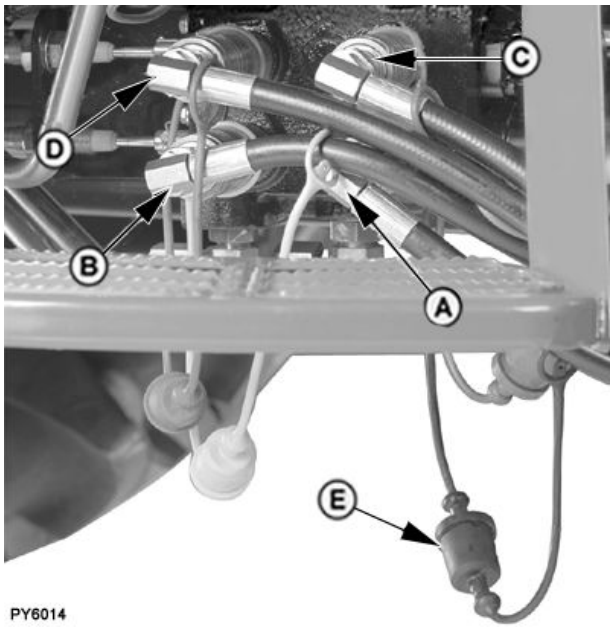
Key	Tie Band/Plug/Cap Color	Hydraulic Function
A	Yellow	Bucket Cylinder—Head End
B	Black	Bucket Cylinder—Rod End
C	Blue	Lift Cylinder—Head End
D	Red	Lift Cylinder—Rod End

Loader Hoses

2. Remove dust caps from hose ends.
3. Pull dust plugs from valve couplers.

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

4. Make sure that hose end and couplers are clean, push hose tip firmly into coupler. Pull on hose to make sure that positive connection is made.
5. Connect mating (color-coded) plugs and caps (E) together.



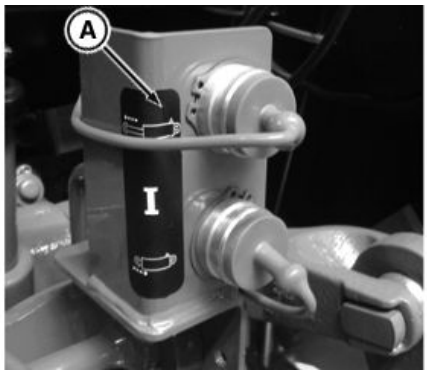
PY6014 —UN—27JUL06

Mid Mount SCV Valve

A—Bucket Cylinder-Rod End
B—Bucket Cylinder-Head End
C—Lift Cylinder-Head End
D—Lift Cylinder-Rod End
E—Caps

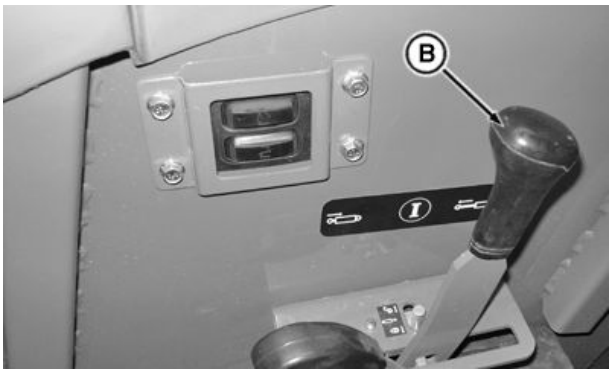
SV86979,00002C7 -19-29JAN13-2/2

Connect Single-Acting Cylinder



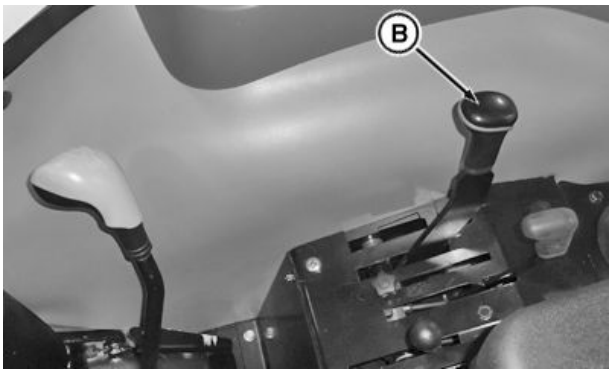
PY16040 —UN—26JUN12

A—SCV I Outlet **B—SCV I Control Lever**



PY18475 —UN—11JUL14

SCV I Lever — OOS



PY17981 —UN—11JUN14

SCV I Lever — Cab

In order for lever (B) to work properly, a single-acting cylinder should be connected only to SCV I Outlet in the extend position (top coupler) (A).

IMPORTANT: Volume of oil required to extend cylinder must not lower transmission-hydraulic oil level. Check oil level with cylinder fully extended. (See Transmission-Hydraulic System)

Push SCV I control lever full forward to use “float” position to lower single-acting cylinder.

“Float” position allows a cylinder to extend and retract freely and uses no engine power.

SD74272,000004B -19-14JUL14-1/1

Correcting Reversed Cylinder Response

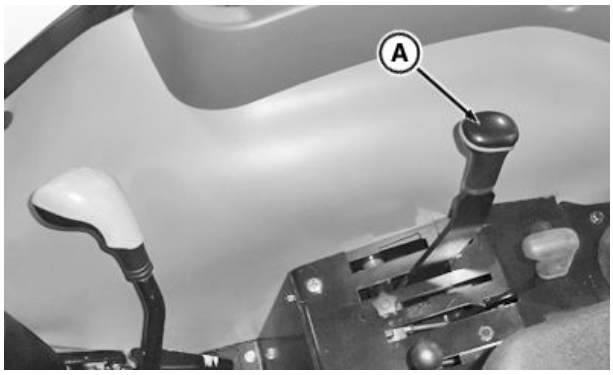
CAUTION: If cylinder response is reversed, extending when it should retract, reverse cylinder hose connections at coupler.

MX,RHIP,IA1 -19-24JUL95-1/1

Neutral Lever Position

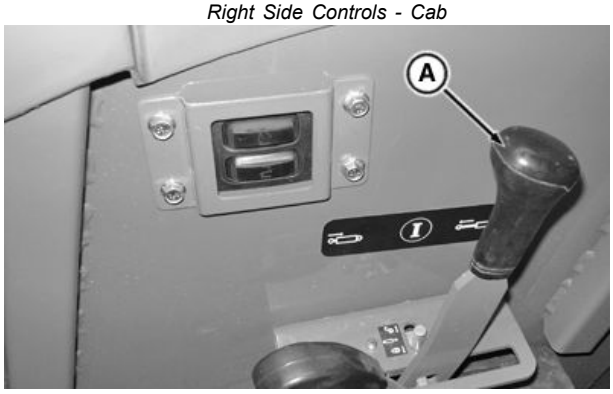
Spring pressure brings lever (A) back to centered position (except when lever is fully forward in the ”Float” position). When the control levers are in the centered position, the remote cylinder is hydraulically locked in position.

A—SCV I Lever



PY17983 —UN—11JUN14

Right Side Controls - Cab

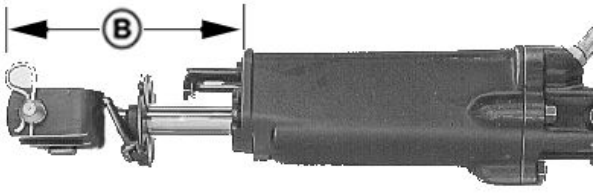


PY18476 —UN—11JUL14

Right Side Controls - IOOS

SD74272,000004C -19-11DEC14-1/1

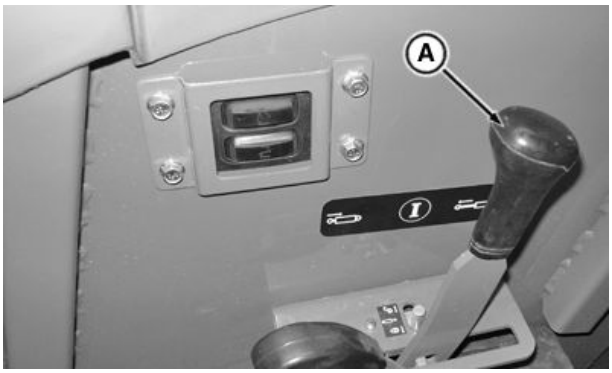
Extend/Retract Cylinder



PY6487 —UN—20NOV18

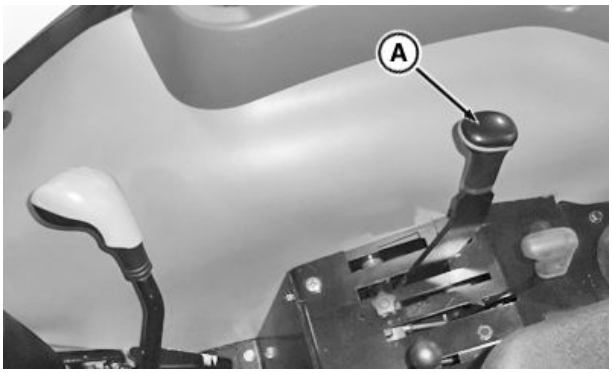
Cylinder

A—Control Lever **B—Extend and Retract Cylinder**



PY18476 —UN—11JUL14

IOOS



PY17983 —UN—11JUN14

Cab

Extend Cylinder

Pull lever (A) to the rear of neutral and hold it against spring pressure. This extends cylinder (B) (up arrow) connected to couplers I and in most cases raises implement. Lever returns to neutral when released.

Retract Cylinder

Push lever (A) forward and hold it against spring pressure. This retracts cylinder (B) connected to SCV couplers and in most cases lowers implement. Lever returns to neutral when released.

Float Position

Push lever full forward into detent to operate Float feature. Float operation allows cylinder to extend and retract freely, such as when an implement follows ground contour.

IMPORTANT: When FLOAT is not needed, manually move lever back to neutral position to prevent accidental use of "Float".

SD74272,000004D -19-08JUL14-1/1

Multi-Function Lever Function (If Equipped)

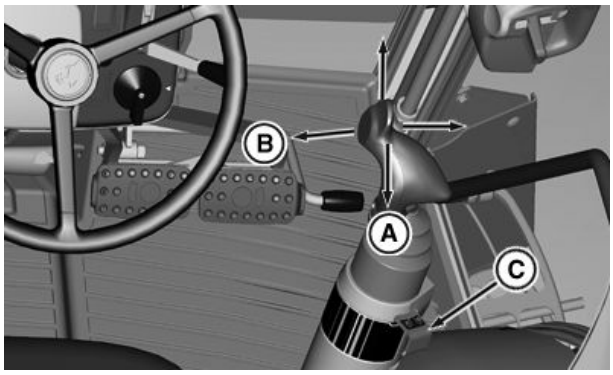
The Control lever or the SCV I and SCV II has four directions of movement to enable simultaneous controls of two functions.

Forward and back direction (A) has the following positions:

- Pulled fully rearward- Extend position
  SCV I is normally connected to the loader boom cylinder and raises when the lever is pulled rearward.
- Spring centered-Off and lock position
  SCVs are locked to hold the boom and bucket in position.
- Pushed slightly forward-Retract position
  Boom cylinder is lowered, valve can be metered to control rate of lowering.
- Pushed fully forward-Float position
  SCV connects both cylinder ports to the return circuit. Loader boom can move freely to follow ground contour. Lever must be manually returned to neutral.

Inward and outward direction (B) has the following position :

- Pushed slightly outward-Extend position
  SCV II is normally Connected to the bucket cylinder and dumps when the lever is moved to the right.
- Pushed fully outward-Regenrative position Provides faster loader bucket dump. Reduces cavitation.



PY16186 —UN—26JUN12

A—Forward and Backward Direction
B—Inward and Rearward Direction
C—Transport Lock

Lever returned to neutral by valve spring

- Pulled inward-Retract position.
  Flow to the bucket cylinder can be metered to slowly roll the bucket upward.

TRANSPORT LOCK

Loader control lever has a transport lock (C). Pull the transport lock lever upwards to lock the lever and push it downwards to unlock.

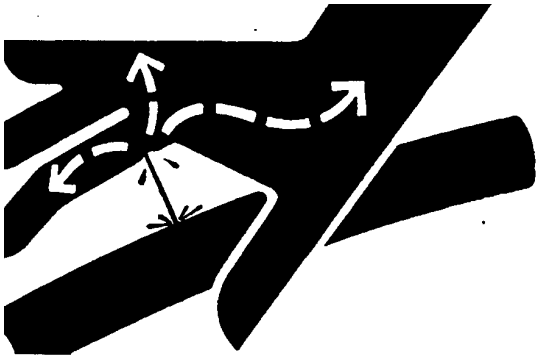
SV86979,00002C8 -19-29JAN13-1/1

Disconnect Cylinder Hoses

1. If possible, retract remote cylinder as much as possible to protect cylinder rod from damage.

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 may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.



X9811 —UN—23AUG88

2. With as much hydraulic pressure relieved as possible from hoses, pull hoses from couplers.
3. Make sure that dust plugs for couplers and dust caps for hoses are clean. Install dust plugs and caps on hoses.

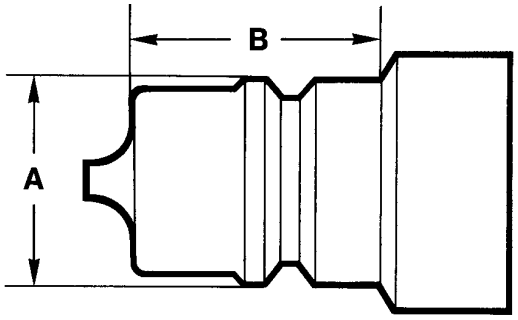
JB06590,00004FF -19-19JUN09-1/1

Hose Unions

The hose unions used must comply with ISO standards.

Dimension (A) must be between 23.66 and 23.74 mm (0.931 and 0.934 in.).

Dimension (B) must be at least 24 mm (0.945 in.).



LX 006613

LX006613 —UN—15AUG94

JB06590,000059D -19-23JUL09-1/1

Match Tractor Power to Implement

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

PU00210,00002A9 -19-15MAY20-1/1

Observe Drawbar Load Limitations

IMPORTANT: Certain heavy equipment, such as a loaded single-axle trailer, can place excessive strain on drawbar (A). Strain is greatly increased by speed and rough terrain. Do not exceed maximum static vertical load on drawbar.

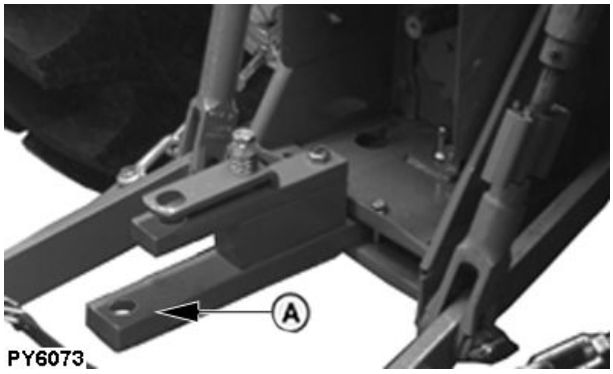
Drive slowly with heavy loads.

Drawbar MAXIMUM Static Vertical Load—Specification

Fully Extended Position—Static Vertical Load	760 kg (1675 lb)
Fully Retracted Position—Static Vertical Load	1120 kg (2470 lb)

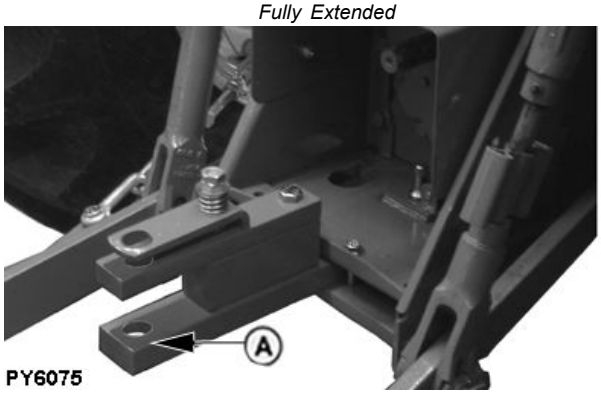
NOTE: Offset and heavy duty drawbars are available as an option. See your John Deere dealer for detailed information on optional drawbars.

A—Drawbar



PY6073 —UN—02AUG06

Fully Extended



PY6075 —UN—02AUG06

Fully Retracted

PU00210,00002AA -19-17JUL07-1/1

Select Drawbar Position

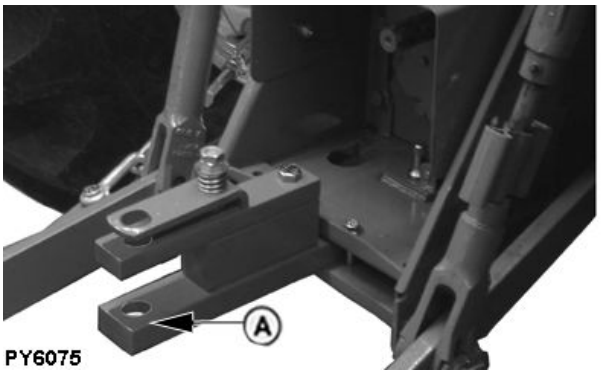
For maximum traction and efficiency, drawbar (A) should be positioned in center, fully retracted position. (See implement operator's manual for more information.)

If needed, drawbar can be offset from center using slots provided in the drawbar support.

IMPORTANT: For drawn PTO-driven implements, drawbar must be extended to proper position.

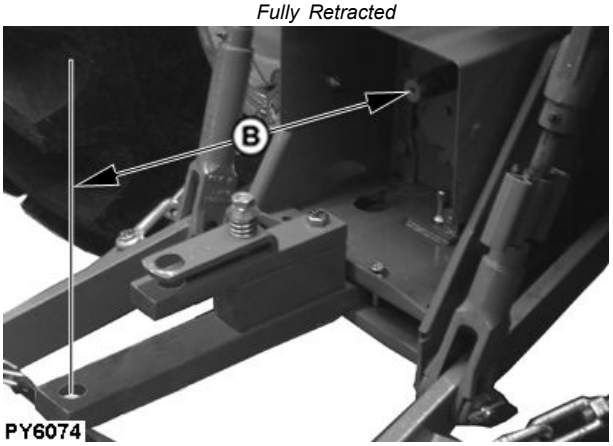
Drawbar Positions	
PTO Shaft	**PTO Shaft End-to-Hitch Pin Hole (B)**
540 rpm (6 spline)	356 mm (14 in.)
1000 rpm (21 spline)	407 mm (16 in.)

A—Drawbar **B—Distance**



PY6075 —UN—02AUG06

Fully Retracted



PY6074 —UN—29AUG06

Fully Extended

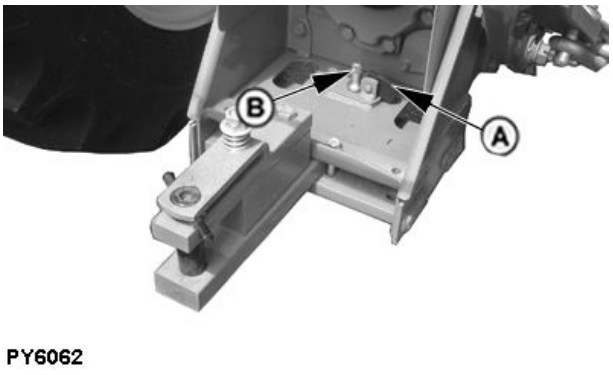
PU00210,00002AB -19-17JUL07-1/1

Adjust Drawbar Length and Offset

1. Lift retaining latch (A).
2. Remove drawbar pin (B).
3. Slide drawbar to desired position.

   If moving from centered to offset position, remove drawbar and slide through offset slots in support.
4. Install drawbar pin and rotate latch to retain in-place.

A—Retaining Latch **B—Drawbar Pin**



PY6062 —UN—01AUG06

PU00210,00002AC -19-17JUL07-1/1

Stay Clear of Rotating Drivelines

Entanglement in rotating driveline can cause serious injury or death.

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

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

Wear close fitting clothing. Stop the engine and be sure that PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

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

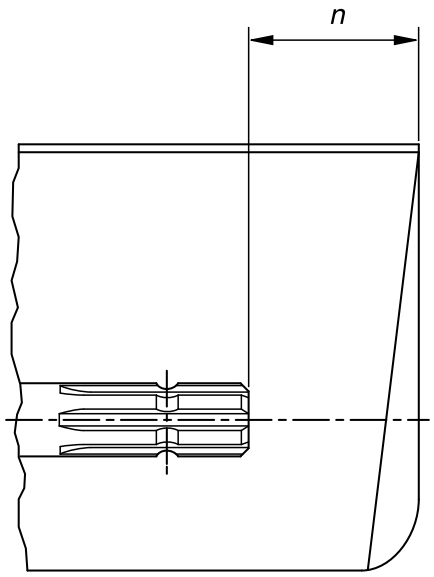
Do not install any adapter device that results in a portion of the rotating implement shaft, tractor shaft, or the adapter to be unguarded. The tractor master shield shall overlap the end of the splined shaft and the added adaptor device as outlined in the table.

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

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

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

TS1644 —UN—22AUG95



H96219 —UN—29APR10

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 -19-28FEB17-1/1

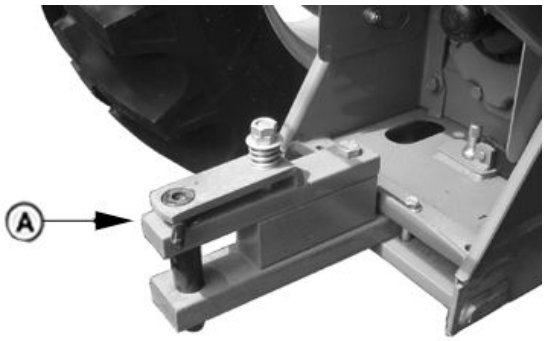
Attach PTO-Driven Implement

CAUTION: Stop engine and engage park brake before attaching implement or working in area of implement hitch.

1. Turn key to ”OFF” position to stop engine.
2. If PTO driven implement will be attached to drawbar (A), the drawbar must be positioned so there is 355 mm (14 in.) between end of PTO shaft and center of drawbar pin hole. Make sure drawbar locking pins and spring pins are in place. If implement will be connected to 3-point hitch, be sure drawbar will not interfere. Remove it if necessary.

NOTE: There are two holes at the front of the drawbar. Place the drawbar pin in the second hole for the proper 355 mm (14 in.) length.

3. Attach implement to tractor before connecting PTO drive line. Raise hitch to upward position if it is not to be used.
4. 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 drive line is locked to PTO shaft. Place PTO shield in downward position.



PY7421

PY7421 —UN—11JUL07

A—Drawbar

5. Be sure all shields are in place and in good condition. Never operate PTO unless master shield is properly installed. WITH ENGINE STOPPED, check integral shields on drive line by making sure they rotate freely on shaft. Lubricate or repair as necessary.
6. Check carefully for any interference, make sure hitch is raised to the upper position if it is not used.

SA61034,0000722 -19-17DEC08-1/1

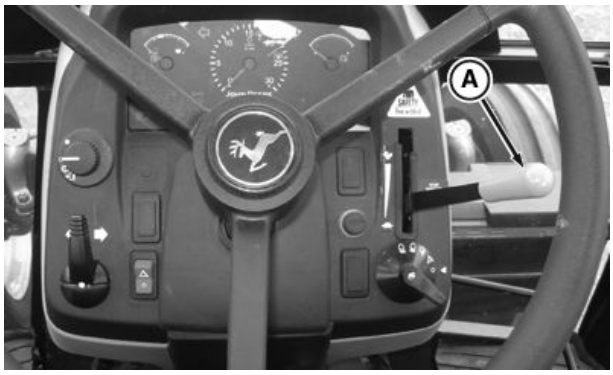
Operate Tractor PTO — (SyncShuttle)

1. Start engine and push hand throttle lever (A) forward until tachometer indicates PTO rated speed of 1705 rpm (B) for 540E operation or 2400 rpm (C) for standard 540 operation.
2. Move PTO lever (D) forward to engage PTO.
3. Pull lever (E) up for economical 540 operation and push it down for 540 standard operation.

CAUTION: Turn key OFF to stop engine, put tractor in park position and make sure that all mechanisms have stopped before cleaning out machine or making any adjustments to PTO driven implement.

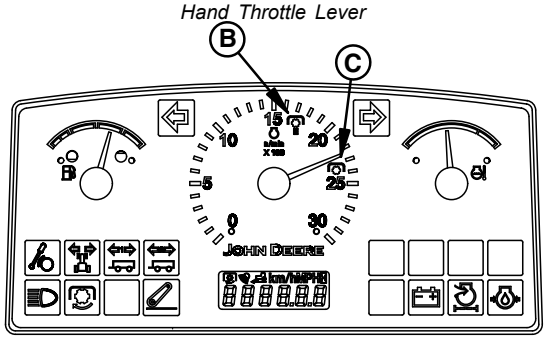
4. Pull PTO lever (D) back to disengage PTO.

A—Hand Throttle Lever
B—540E Operation Speed
C—540 Standard Operation Speed
D—PTO Lever
E—PTO 540/540E Shift Lever



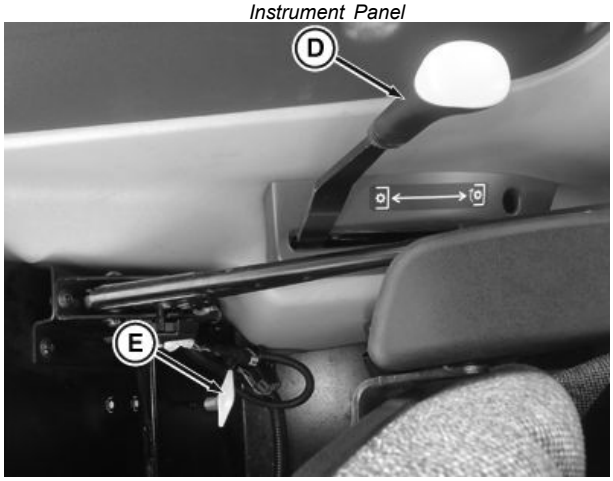
Hand Throttle Lever

PY16572 —UN—09AUG12



Instrument Panel

PY18953 —UN—21MAY14



Left Side Controls

PY16608 —UN—18AUG12

SD74272,000069E -19-16DEC14-1/1

Operate Tractor PTO — (PowrReverser™)

1. Start engine and push hand throttle lever (A) forward until tachometer indicates PTO rated speed of 2400 rpm for 540 operation.

A—Hand Throttle Lever

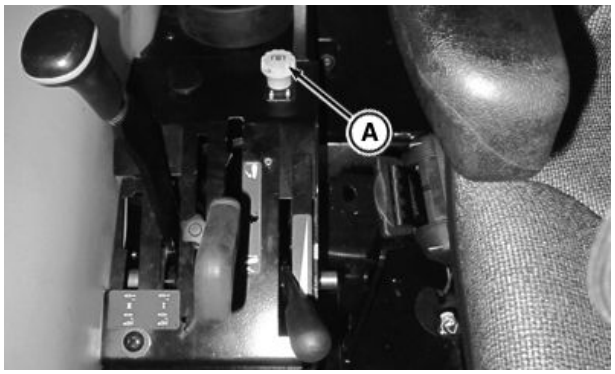
PY18289 —UN—14AUG13

Cab Shown; IOOS Similar

PowrReverser is a trademark of Deere & Company

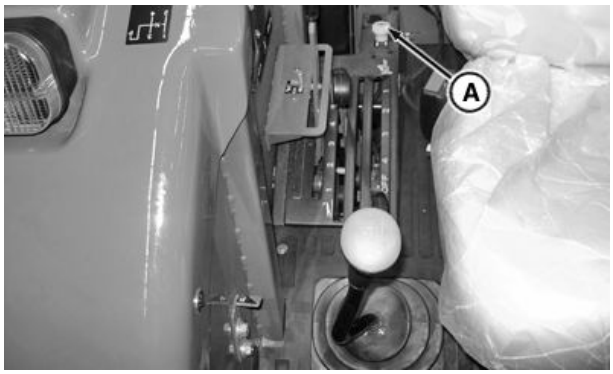
Continued on next page

JS86122,00002D7 -19-11DEC14-1/2



PY16219 —UN—14AUG13

Cab Shown



PY18477 —UN—11JUL14

IOOS Shown

PY17685 —UN—10JAN13

PTO 540/540E Shift lever (Cab Shown; IOOS Similar)

PY18963 —UN—28NOV14

Cab Shown

2. **PTO Switch (A):** Pull the PTO Switch (A) up, to engage PTO. Indicator light (B) turns on when PTO is engaged.

   Cab with PTO Switch (E): Push in PTO switch (E) and then upward to put PTO switch in ENGAGED position. Indicator light (B) turns on when PTO is engaged.

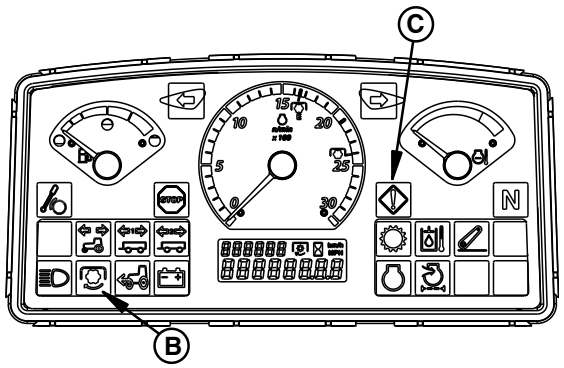
3. Pull lever (D) up for economical 540 operation and push it down for 540 standard operation.

CAUTION: Avoid personal injury. Stop engine and allow PTO driveline to stop before adjusting, connecting, or cleaning PTO-driven implement.

To avoid entanglement with rotating shaft, always disengage PTO when not in use.

4. **PTO Switch (A):** Push the PTO switch (A) down to disengage PTO.

   Cab with PTO Switch (E): To switch off the PTO, pull PTO switch (E) back.



PY18933 —UN—23APR14

A—PTO Switch
B—PTO Indicator Light
C—Service Alert Indicator
D—PTO 540/540E Shift Lever
E—PTO Switch

JS86122,00002D7 -19-11DEC14-2/2

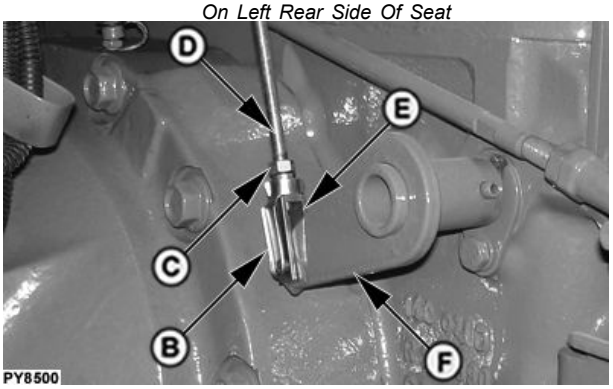
Adjust 540/540E PTO Lever and Linkage

1. Move economy PTO lever (A) to downward (standard PTO) position.
2. Remove pin (B).
3. Loosen lock nut (C).
4. Adjust rod (D) length.
5. Tighten lock nut (C).
6. Install pin (B).

A—Economy PTO Lever
B—Spring Locking Pin
C—Lock Nut
D—Rod
E—Yoke
F—Arm

On Left Rear Side Of Seat

PY16609 —UN—18AUG12



Near Rear Axle - Left Side

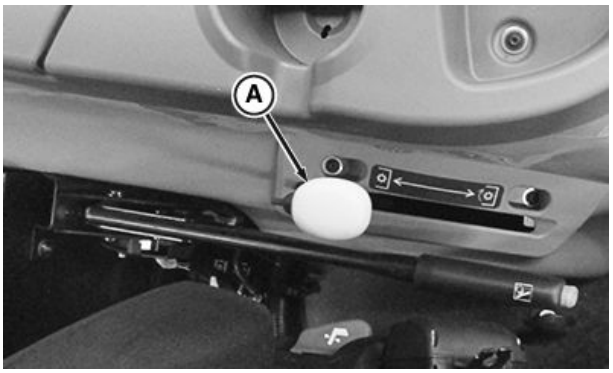
PY8500 —UN—17DEC08

SA61034,0000723 -19-18AUG12-1/1

Adjust PTO Clutch Operating Cable — (Sync Shuttle)

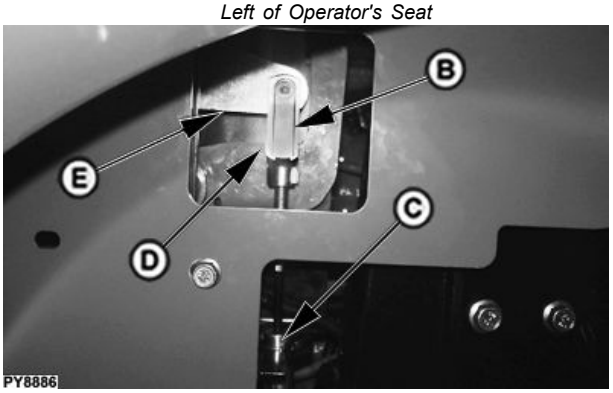
1. Move PTO clutch lever (A) to rear (disengaged) position.
2. Remove spring locking pin (B).
3. Rotate clutch arm (E) counterclockwise until free play is removed (slight resistance).
4. Adjust yoke (D) until spring locking pin can be installed through yoke and arm.
5. Install spring locking pin through yoke and arm.

A—PTO Clutch Lever
B—Spring Locking Pin
C—Cable
D—Yoke
E—Clutch Arm



Left of Operator's Seat

PY21301 —UN—29JUL14



View through Left Rear Tire Rim

PY8886 —UN—21APR09

SV86979,00000AA -19-29JUL14-1/1

Performance Ballasting

Planning for Maximum Productivity

Proper ballasting is an important factor in tractor performance. Maximum productivity can be achieved only if tractor weight is appropriate for the job.

John Deere provides additional information on performance ballasting in two of the manuals in the series "Fundamentals of Machine Operations".

(See John Deere Service Literature Available in this manual.):

- "Tractors" provides information on determining correct tractor weight and ballast selection.
- "Machinery Management" provides information on implement matching and increasing productivity.
- Your John Deere dealer can assist you with information on these subjects.

SV86979,00000AB -19-18AUG12-1/1

Use Proper Ballast

The amount of ballast required and especially the locations of ballast weights depend very much on type of implement being used and operating speed. Ballasting is required to:

1. Assure front axle carries sufficient weight for steering security and stability with the field draft loads as well as transport in field and on road.
2. Provide sufficient traction to pull efficiently high draft loads.
3. Provide proper fore/aft balance to minimize occurrence of a power hop in MFWD tractors.
4. Assure rear axle carries sufficient weight for traction, braking, and stability when a loader or other front implement is attached to front of tractor.
5. When changing from one implement or attachment to another it is necessary to reconfigure ballast on tractor.

SD74272,0000215 -19-17MAR20-1/1

Select Ballast Carefully

Match amount of ballast needed for each job. What is right for one job may be wrong for another job. Ballast for traction and stability.

CAUTION: When determining front and rear axle ballast, ensure that permissible axle loads and maximum permissible machine weight (including mounted implements) are not exceeded (see Specifications Section in Operator's Manual). Comply with local regulations regarding installation and maximum permissible number of weights. In order to maintain steerability, at least 20% of unladen mass must be on front axle. Unladen mass is mass of tractor without special equipment, attachments, trailer, or ballast, but with hydraulic oil and lubricants, a full fuel tank and an operator weighing 75 kg.

CAUTION: Use suitable lifting tackle/hoists when handling weights. Safety and performance of your tractor depend on correct ballasting of front axle (front weights) and rear axle (wheel weights, filling tires with liquid ballast, pick-up weight).

Factors determining amount of ballast:
- Soil surface-loose or firm
- Type of implement-integral/semi-integral or towed
- Travel speed-slow or fast
- Tractor power output-partial or full load
- Tires-single, oversize, or dual

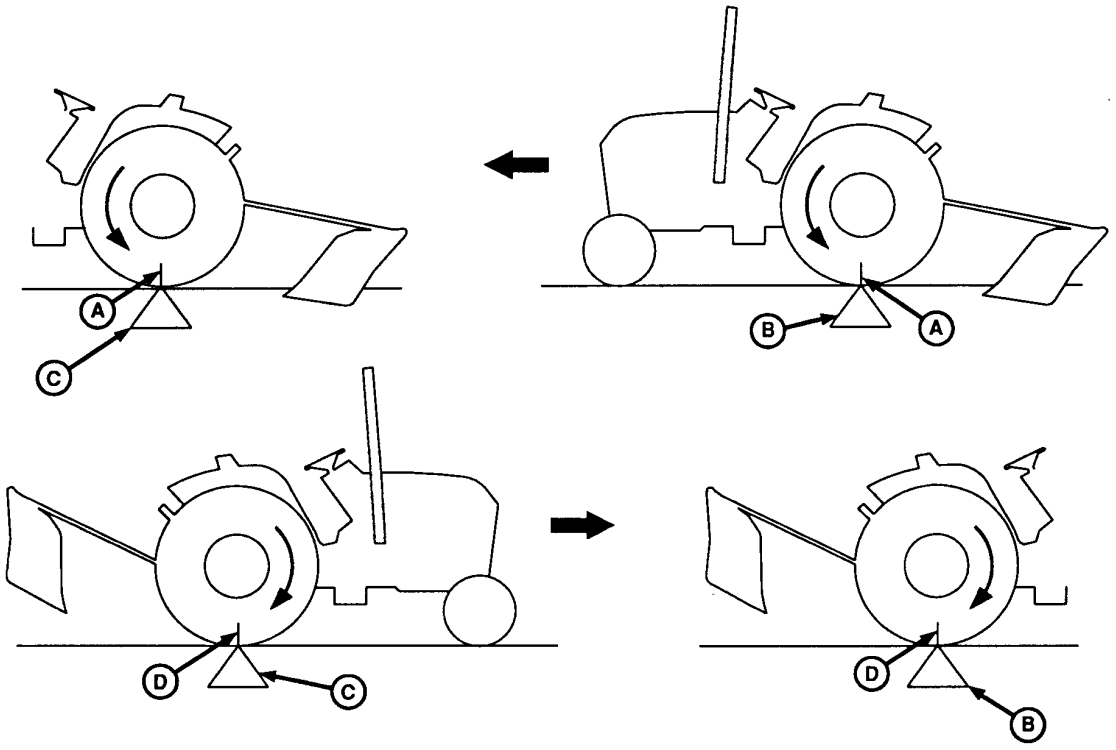
SD74272,0000216 -19-23APR15-1/1

Ballasting for Front Loader

Follow ballasting instructions of the front loader operator's manual.

JB06590,0000599 -19-21JUL09-1/1

Measure Wheel Slip—Manually



LV733 —UN—25JUN94

1. Draw a visible mark (A) on one rear tire (a chalk mark is recommended).
2. With tractor working, mark a starting point (B) on the ground at the place where tire mark (A) meets the ground.
3. Mark the ground again where tire mark (A) completes 10 full revolutions (C).
4. With implement raised return in the opposite direction. At the second mark on the ground (C) remark tire (D).
5. While driving the tractor along the same path (implement raised), count the tire revolutions required to reach starting point (B).
6. Use the return tire revolution count and Wheel Slippage.

NOTE: Ideal wheel slippage. 10—15 percent for two-wheel drive tractors or 8—12 percent for four-wheel drive tractors.

7. Adjust ballast or load to give correct slippage.

NOTE: Available horsepower is greatly reduced when wheel slip drops below 10 percent.

WHEEL SLIPPAGE CHART		
Non-Loaded Wheel Revolutions (Step 5)	Estimated % Slip	Recommended Action
10	0	Remove Ballast
9-1/2	5	Remove Ballast
9	10	Proper Ballast
8-1/2	15	Proper Ballast
8	20	Add Ballast
7-1/2	25	Add Ballast
7	30	Add Ballast

PU00210,0000279 -19-18AUG12-1/1

Ballast Limitations

Ballast should be limited by either tire capacity or tractor capacity. Each tire has a recommended carrying capacity which should not be exceeded (see Wheels, Tires and Treads section). If a greater amount of weight is needed for traction, a larger single tire should be considered.

Ballast can be added as either liquid or cast iron.

MX,BAIP,QA2 -19-24JUL95-1/1

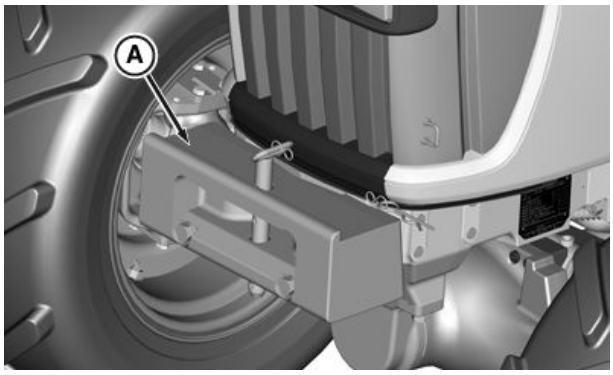
Ballast Front End for Transport

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.

Specification	
Basic Weight—Weight	63 kg (138.9 lb)

1. Install basic weight (A).
2. Install and tighten weight retaining bolts to specification.

Specification	
Basic Weight Bolts—Torque	385 N·m (284 lb-ft)



PY16611 —UN—18AUG12

A—Basic Weight

SV86979,00000AD -19-18AUG12-1/1

Determine Maximum Rear Ballast

IMPORTANT: DO NOT overload tires. If maximum weight shown in chart is not enough for safety, reduce load or install heavier ply tires.

To extend power train life, avoid excessive soil compaction and rolling resistance, avoid adding too much ballast. Remove ballast if tractor engine labors when pulling heavy loads in the first three gears. When using mechanical front wheel drive, ballasting to one gear slower is appropriate.

Chart shows carrying capacity per tire.

MAXIMUM LOAD PER WHEEL @ 30 KMPH		
Tire Size Bias ply Tires	Ply Rating	Capacity kg (lb)
160/95 R 46 [a]		1600 (3527)
14.9 R 28		1000 (2205)
13.6 R 36		971 (2140)
16.9 R 28		1182 (2605)
16.9 R 30		1213 (2675)

[a] *Tire Pressure = 5 bar*

SD74272,00005EC -19-07AUG14-1/1

Determine Maximum Front Ballast

Use appropriate front ballast for a particular operating condition. Tractors equipped with MFWD must have adequate ballast to balance front wheel load. Remove ballast when it is no longer needed.

Chart shows carrying capacity per tire.

IMPORTANT: DO NOT overload tires. If maximum weight shown in chart is not enough for safety, reduce load or install tires with a higher load rating.

MAXIMUM LOAD PER WHEEL @ 30 KMPH		
MFWD		
Tire Size	Ply Rating	Capacity kg (lb.)
8.3 - 28[a]		875 (1929)
9.5-24 (Radial)		1105 (2436)
11.2-24 (Radial)		1305 (2877)
12.4-20 (Radial)		1460 (3219)
12.4-24 (Radial)		1605 (3538)

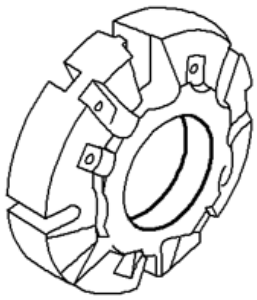
[a] *Tire Pressure = 2.4 bar Maximum Load Per Wheel @40 KMPH*

SD74272,00005ED -19-08AUG14-1/1

Use Cast Iron Weights

Cast iron weights are available in 45 kg (99.20 lb) version. See your John Deere dealer for more information and recommendations on weight use and placement.

Specification	
Cast Iron Weights—Weight	45 kg (99.20 lb)



PY6488

PY6488 —UN—13MAR07

SD74272,00006A7 -19-24SEP13-1/1

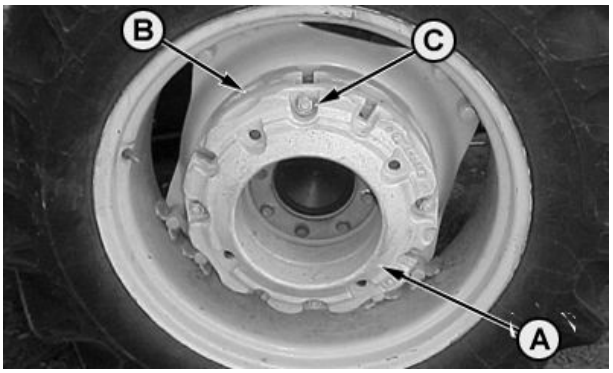
Install Rear Cast Iron Weights

CAUTION: Optional cast iron weight weighs 45 kg (99.20 lb.). Handle with care! Use appropriate equipment or have the job done by John Deere dealer.

NOTE: Two cast iron weights at each rear tire is a standard installation for Turkey tractors and rest of the tractors have one cast iron weights at each rear tire as a standard installation.

1. Attach first weight to wheel disk.
2. To install more weights (A), install bolts in previous weight (B). Rotate the added weight for aligning bolts with weight holes (C).
3. Tighten attaching bolts securely. Tighten again after a few hours service. Check tightness regularly.

NOTE: No additional ballast weight with 160/95 R 46 tire size.



PY1635 —UN—17FEB06

A—Additional Weight
B—Weight
C—Weight Holes

RM87422,0000004 -19-08AUG14-1/1

Use Liquid Weight

CAUTION: Installing liquid ballast requires special equipment and training. See John Deere dealer or a tire service store.

IMPORTANT: NEVER fill tire to more than 90 percent full. More solution would leave too little air space to absorb shocks. Damage to tire could occur.

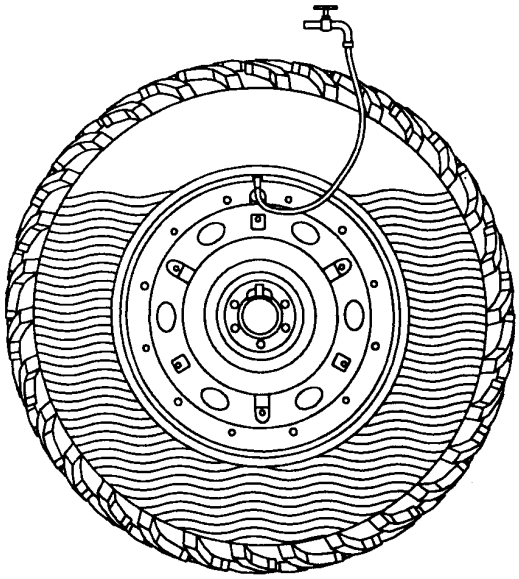
A solution of water and calcium chloride provides safe, economical ballast. Used properly, it will not damage tires, tubes, or rims.

Use calcium chloride to prevent water from freezing. A mixture of 0.4 kg/L (3.5 lb./gal.) of calcium chloride not freezes solid above -45 °C (-50 °F).

NOTE: Use of alcohol as liquid ballast is not recommended. Calcium chloride solution is heavier and more economical.

Fill tubeless tires slightly above valve level (minimum 75 percent full). Less solution would expose part of rim, possibly causing corrosion. Tube-type tires filled to any level below 90 percent.

Charts on this page show how much each tire size holds if filled to 75 percent full.



RW25003 —UN—07JUL93

LIQUID WEIGHT FOR FRONT TIRES With 0.6 kg/L (5 lb./gal.) Calcium Chloride Solution	
MFWD	
Tire Size	**Liquid Weight per Tire kg (lb.)—75% Full**
8.3 - 28	Not Applicable
9.5 R 24	95 (209)
11.2 R 24	115 (253)
12.4 R 20	121(267)
12.4 R 24	150 (330)

LIQUID WEIGHT FOR REAR TIRES With 0.6 kg/L (5 lb./gal.) Calcium Chloride Solution	
Tire Size	**Liquid Weight per Tire kg (lb.)—75% Full**
160/95 R 46	Not Applicable
13.6 R 36	224 (494)
14.9 R 28	261 (575)
16.9 R 28	339 (747)
16.9 R 30	355 (782)

SD74272,00005EE -19-07AUG14-1/1

Using Implement Codes

CAUTION: DO NOT attempt to transport an implement without adequate front ballast. Lack of steering control may result.

John Deere engineers have developed a code to determine how much front ballast is needed for stability and steering control.

1. Find implement code in implement operator's manual.
2. Use the following chart to determine how many Quik-Tatch™ front weights are required on your tractor model.

   To use chart, find the implement code range in the left column into which your implement code fits. Then move to the right until you are beneath the column which identifies your tractor configuration. The number you find at this point in the chart is the number of Quik-Tatch™ weights needed.

   Example: An implement with a code 100 to be used on an MFWD tractor with a quick-coupler, but without liquid in the front tires, requires 4 front weights.

Quik-Tatch is a trademark of Deere & Company

With maximum front ballast, do not attempt to transport an implement whose code exceeds:

- 137 for MFWD Tractor

NUMBER OF Quik-Tatch™ WEIGHTS NEEDED		
MFWD		
Implement Code	Without Liquid in Front Tires	With Liquid in Front Tires
0—87	0	—
88—97	2	0
98—107	4	2
108—117	6	4
118—127	8	6
128—137	—	8

SD74272,000032A -19-04SEP12-1/1

Service Tires Safely

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

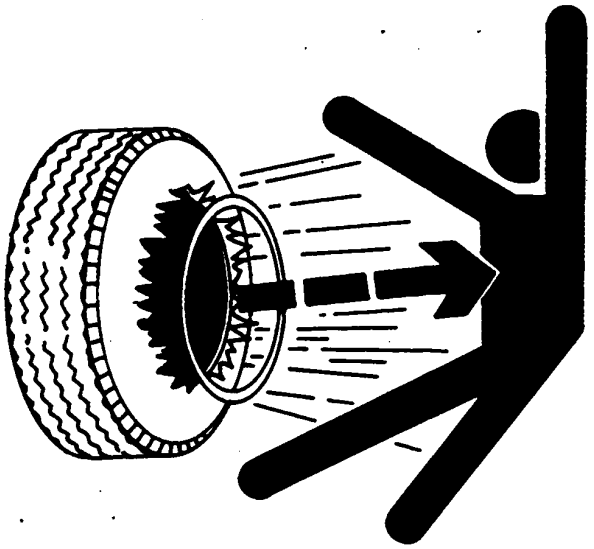
Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

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.



TS211 —UN—15APR13

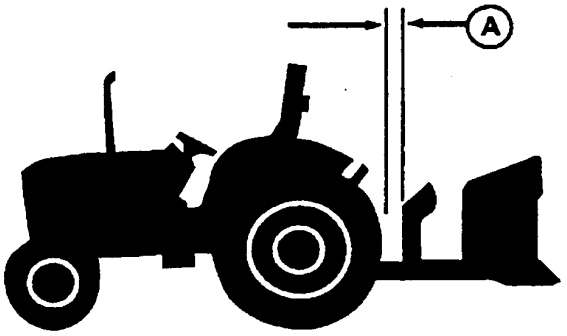
DX,RIM1 -19-27OCT08-1/1

Check Implement-to-Tire Clearance

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.

A—Clearance



M47177 —UN—31JAN92

MX,WTIP,AA1 -19-21APR94-1/1

Check Tire Inflation Pressure

Check tires daily for damage or noticeably low pressure.

At least every 100 hours of operation, check inflation pressure with a gauge. Use an accurate gauge having 10 kPa (0.1 bar) (1 psi) graduations.

If tires contain liquid ballast, use a special air-water gauge and measure with valve stem at bottom.

NOTE: When furrow plowing or during hillside operation, tire pressure can be increased 28 kPa (0.28 bar) (4 psi) ABOVE maximum to prevent tire wrinkling or buckling.

IMPORTANT: Always check inflation pressure with an accurate tire gauge to prevent over-inflation. Over-inflation reduces performance and increases strain of both tire and rim.

NOTE: Following inflation information applies to both front and rear tires and Tire Inflation Pressure Chart.

1. All inflation pressures are calculated for 29 km/h (18 mph) travel speeds for both diagonal (bias) ply and radial ply tires.
2. Operation of tires at the inflation pressures listed on chart will result in optimum tractive performance of the tire/vehicle system. Correctly inflated radial tires will show a large deflection of the sidewall or “cheeks”. This is normal and will not hurt the tire if the inflation pressure is maintained.
3. Inflation pressures less than 80 kPa (12 psi) should be monitored regularly because of the increased risk of low pressure air leaks (especially due to leaking valve cores).
4. Tractors operating on steep side slopes should increase inflation pressures 28 kPa (4 psi) above the values listed to compensate for lateral weight transfer.
5. Tires run as singles in high traction conditions sometimes experience bead slip if the bead was not fully seated or if too much lubricant was used to mount the tire. Increasing the inflation pressure will compensate for this condition but will not cause reduced traction. Consult your tire dealer if this problem occurs.
6. If higher load capacities are needed, contact your John Deere dealer for tire manufacturers load and inflation table information.

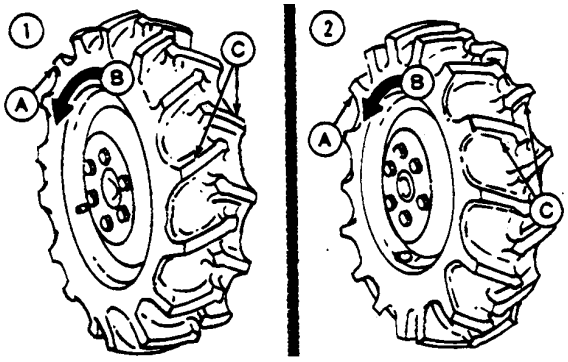
MX,WTIP,BA1 -19-29JUL94-1/1

Tire Inflation Pressure Chart

Front Tires		With Little or No Added Weight			With Maximum Ballast or Heavy Mounted Implement		
Tire Size	**Ply Rating**	**kPa**	**bar**	**psi**	**kPa**	**bar**	**psi**
8.3-28		100	1	14.50	240	2.4	34.80
9.5 R 24		100	1	14.50	240	2.4	34.80
11.2 R 24		100	1	14.50	240	2.4	34.80
12.4 R 20		100	1	14.50	240	2.4	34.80
12.4 R 24		83	0.83	12	221	2.2	32
Rear Tires		**With Little or No Added Weight**			**With Maximum Ballast or Heavy Mounted Implement**		
Tire Size	**Ply Rating**	**kPa**	**bar**	**psi**	**kPa**	**bar**	**psi**
160/95 R 46		240	2.4	34.80	500	5	72.51
13.6 R 36		100	1	14.50	170	1.7	24.65
14.9 R 28		97	0.97	14	165	1.65	24
16.9 R 28		83	0.83	12	152	1.52	22
16.9 R 30		83	0.83	12	152	1.52	22

SD74272,000069F -19-07AUG14-1/1

Select Front Tire Rolling Direction



RW5510 —UN—06APR89

A—Left-Hand Tire Viewed From Rear **B—Rolling Direction Of Tire** **C—Tire Lugs**

1. Under most conditions, front tires (A) should be mounted with the direction of tire lugs (C) the same as the tire rolling direction (B).
2. If tractor is mainly used for loader operations, lug direction may be reversed on the MFWD axle for improved tire wear.

SV86979,00000AF -19-20AUG12-1/1

Tighten Wheel/Axle Hardware Correctly

CAUTION: NEVER operate tractor with a loose rim, wheel, hub, or axle.

Any time hardware is loosened, tighten to specified torque.

NOTE: Follow checking procedure when a new tractor is first used, or wheels have been off.

1. After driving tractor about 100 m (109 yd), and before placing it under load, tighten hardware to specified torque.
2. Check hardware after working 3 hours and again after 10 hours.
3. Check all hardware frequently and keep it tight.

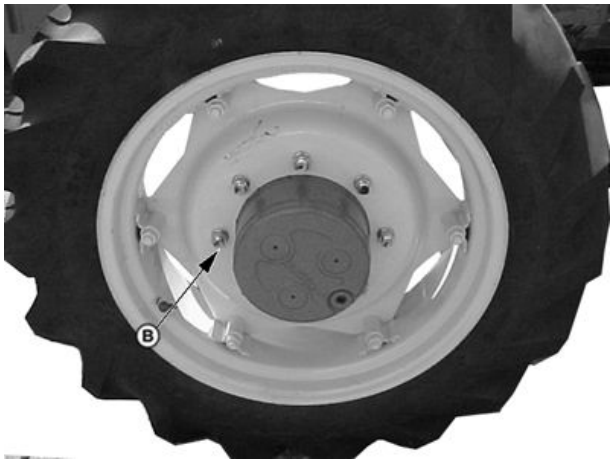
SS01820,0000A82 -19-06JUN07-1/1

Tighten Bolts—MFWD Axle

Tighten bolts in the following locations to specifications:

	Specification
Wheel Rim-to-Disk Bolts—Torque	245 N·m (180 lb-ft)
Wheel Disk-to-Axle Flange Bolts—Torque	310 N·m (130 lb-ft)

B—Disk-To-Flange



PY4370 —UN—10JAN05

Disk-to-Flange Bolts-4WD

SV86979,00000B0 -19-20AUG12-1/1

Tighten Bolts—Rear Axle

Tighten bolts in the following locations to specifications:

	Specification
Rear Axle Rim-to-Disk —Torque	245 N·m (180 lb-ft)
Rear Axle Disk-to-Flange —Torque	550 N·m (406 lb-ft)

A—Rim-To-Disk Bolts **B—Disk-To-Flange Bolts**

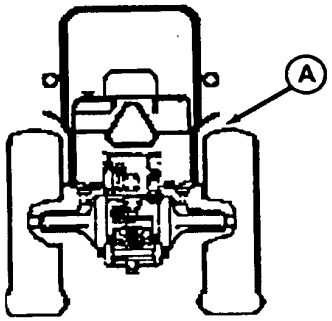
PY4426

PY4426 —UN—15JUN06

PU00210,00001C8 -19-10APR07-1/1

Observe Rear Wheel Tread Width Limitations

IMPORTANT: Tires must have at least 25 mm (1 in.) clearance with fenders (A). When large diameter rear tires are installed, check clearance between tire and fenders.



M47179 —UN—31JAN92

MX,WTIP,DA1 -19-23JUN94-1/1

Tread Settings—Multi-Position Rear Wheels

Wheel tread on rear axle with multi-position wheels can be adjusted by repositioning or exchanging the rims or by reversing the wheel disks.

Wheel tread can also be adjusted by exchanging the complete wheel to the opposite side of the tractor (this allows the disk to be changed from dished-in to dished-out position without disassembling the wheel). When changing rear wheels from one side to the other, the arrow on side wall of tire points in the direction of forward rotation.

The diagrams below show the position of the wheel disk according to the rim to provide a different tread setting.

A study of these diagrams, before attempting to change tread settings, will avoid unnecessary work.

IMPORTANT: After setting wheel spacing, tighten rim-to-disk and disk-to-flange bolts. Drive tractor 100 m (109 yd.) and tighten again.

Specification	
Multi-Position Rear Wheels Rim-to-Disk—Torque	245 N·m (180 lb.-ft.)
Multi-Position Rear Wheels Disk-to-Flange—Torque	550 N·m (406 lb.-ft.)

NOTE: Tread settings are measured at bottom of centerline.

STEEL AND CAST DISKS
REAR TREAD WIDTH
Centerline-to-Centerline

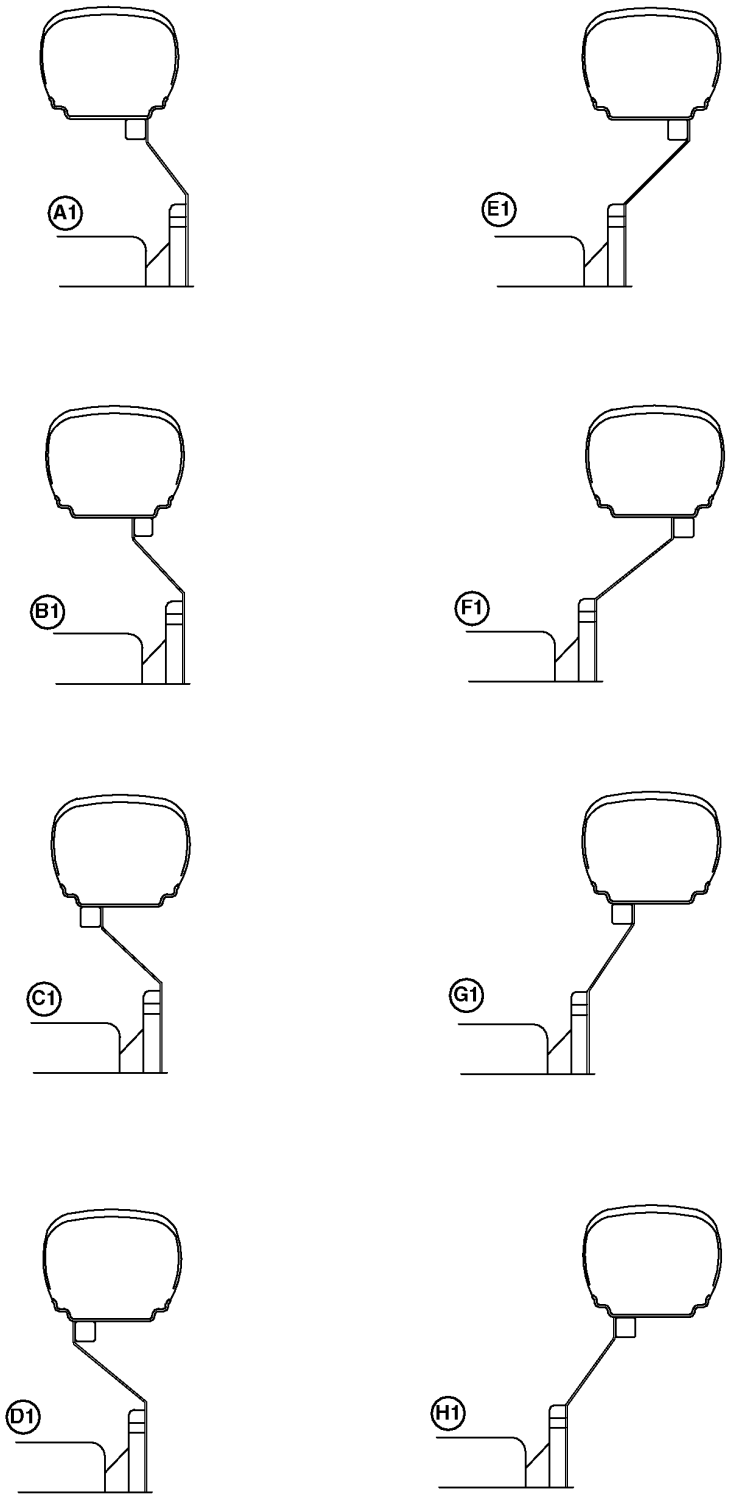
STEEL DISK

			Narrow Track Tractor
Diagram	**Tread Setting[a]**		**Tread Setting**
Tire Sizes	14.9 R 28 16.9 R 28	16.9 R 30	160/95 R 46
A1	Not available	Not available	Not available
B1	Not available	Not available	Not available
C1	Not available	Not available	Not available
D1	Not available	Not available	Not available
E1	1513 mm (59.6 in.)	1563 mm (61.5 in.)	Not available
F1	1617 mm (63.7 in.)	1665 mm (65.6 in.)	Not available
G1	1716 mm (67.6 in.)	1668 mm (65.7 in.)	Not available
G1[b]	1919 mm (75.6 in.)	1871 mm (73.7 in.)	Not available
H1	1820 mm (71.7 in.)	1770 mm (69.7 in.)	Not available
H1[b]	2024 mm (79.7 in.)	1973 mm (77.7 in.)	Not available
Special Settings	Not available	Not available	1148 mm (45.20 in.)

[a] 1417 mm is the minimum tread Setting
[b] Requires 102 mm (4.0 in.) axle spacers.

Continued on next page

RM87422,0000009 -19-07AUG14-1/3



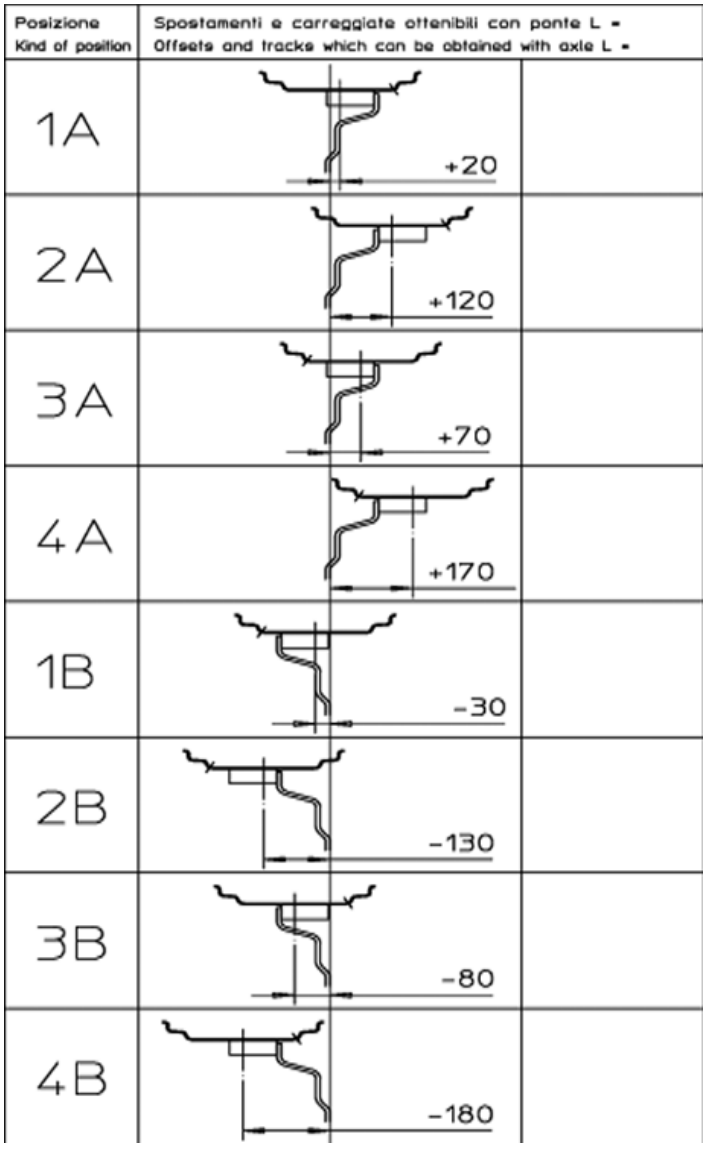
PY15697 —UN—24DEC12

Continued on next page

RM87422,0000009 -19-07AUG14-2/3

Tread setting for -Multiposition Rear Wheels (Tire size 13.6-36)[1]

Tread Setting for -Multiposition Rear Wheels (Tire size 13.6-36)			
	Rear Tire Width		
Diagram	Tire Size	Track Width	Comment
1A	13.6 R 36	1415	Available
2A	13.6 R 37	1215	Not Available
3A	13.6 R 38	1315	Not Available
4A	13.6 R 39	1115	Not Available
1B	13.6 R 40	1515	Available
2B	13.6 R 41	1715	Available
3B	13.6 R 42	1615	Available
4B	13.6 R 43	1815	Not Available



PY12300 —UN—29DEC11

[1]*For Turkey only*

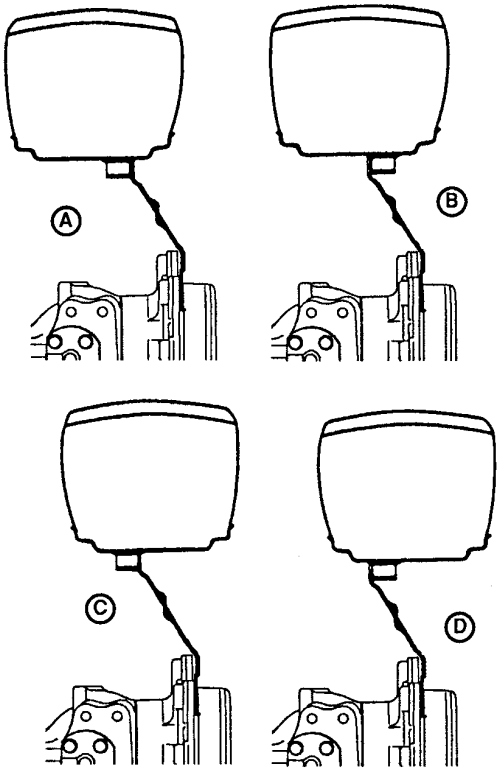
RM87422,0000009 -19-07AUG14-3/3

Tread Setting—Multi-Position MFWD Wheels

Wheel tread on MFWD axle with multi-position wheels can be adjusted by repositioning or exchanging the rims or by reversing the wheel disks.

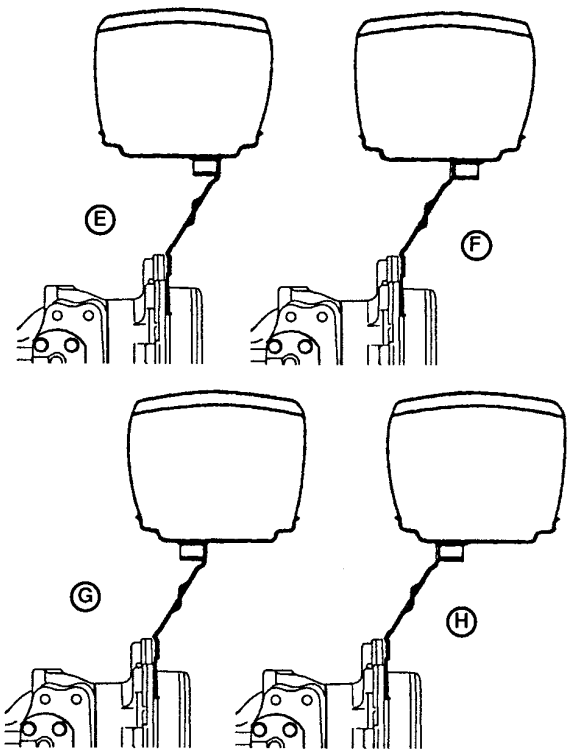
Wheel tread can also be adjusted by exchanging the complete wheel to the opposite side of the tractor. This allows the disk to be changed from dished-in to dished-out position without disassembling the wheel. When changing MFWD wheels from one side to the other, the arrow on side wall of tire points in the direction of forward rotation. In certain applications, MFWD equipped tractors may operate with the arrows in the opposite direction. See Selecting Front Tire Rolling Direction.

The diagrams show the position of the wheel disk according to the rim to provide a different tread setting. Perform this procedure before changing tread width in order to avoid unnecessary work.



LV601 —UN—22APR94

Tread Setting—Multi-Position MFWD Wheels



LV602 —UN—22APR94

Tread Setting—Multi-Position MFWD Wheels

IMPORTANT: After setting wheel spacing, tighten MFWD wheel rim-to-disk bolts and MFWD wheel disk-to-hub nuts to specification. Drive tractor 100 m (109 yd.) and tighten again.

Item	Measurement	Specification
MFWD Wheel Rim-to-Disk Nuts	Torque	245 N·m (180 lb.-ft.)
MFWD Wheel Disk-to-Hub Nuts	Torque	310 N·m (228 lb.-ft.)

NOTE: Tread settings are measured at bottom centerline of tire.

MULTI-POSITION MFWD WHEELS TREAD WIDTH
Centerline-to-centerline

	Diagram							
Tire	A	B	C	D	E	F	G	H
9.5 R 24	1367 mm (53.8 in.)	1480 mm (58.3 in.)	1519 mm (59.8 in.)	1632 mm (64.3 in.)	1667 mm (65.6 in.)	1780 mm (70.1 in.)	1819 mm (71.6 in.)	1932 mm (76.1 in.)
11.2 R 24		1454 mm (57.2 in.)	1545 mm (60.8 in.)	1657 mm (65.2 in.)	1642 mm (64.6 in.)	1754 mm (69.1 in.)	1845 mm (72.6 in.)	

Continued on next page

RM87422,000000A -19-05AUG14-1/2

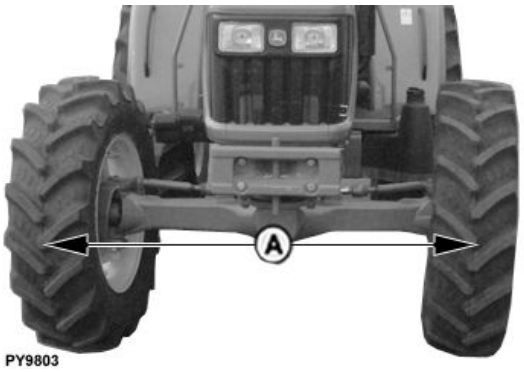
12.4 R 20		1482 mm (58.3 in.)	1592 mm (62.7 in.)	1630 mm (64.2 in.)	1666 mm (65.6 in.)	1704 mm (67.1 in.)	1814 mm (71.4 in.)	
12.4 R 24		1510 mm (59.44 in.)	1600 mm (62.99 in.)	1702 mm (67.0 in.)	1603 mm (63.11 in.)	1700 mm (66.90 in.)		
8.3 X 28[a]	—	—	—	—	—	—		

[a] 1140 mm track width axle oscillation of 6.5 degree and inner wheel turning angle of 26 degree

RM87422,000000A -19-05AUG14-2/2

Check Toe-In (MFWD Tractor)

1. Disengage MFWD and park tractor on smooth, level surface. Steer front wheels straight ahead. Stop engine.
2. Measure distance (A) between centerline of tires at hub level in front of axle. Record measurement and mark the tires.
3. Move tractor back about 1 m (3 ft), so mark is at hub level behind the axle. Again, measure distance between tires at same point on tire. Record measurement.
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". The difference may be in either direction (toe-in or toe-out), but should be less than 3 mm (1/8 in.). Adjust toe-in if necessary. (See procedure in this section.)



PY9803 —UN—01JUL09

A—MFWD Axle Toe-In Distance

JB06590,0000508 -19-22JUN09-1/1

Adjust Toe-In (MFWD Tractor)

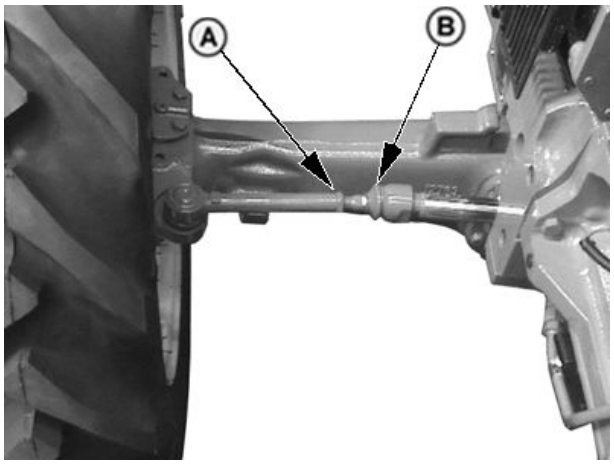
1. Loosen jam nuts (A) on both ends of tie rod.
2. Adjust both sides equally by rotating the inner rod (B) to lengthen or shorten tie rod, as needed to obtain toe-in of less than 3 mm (1/8 in.).

Tie Rod Rotation	Approximate Change
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 jam nuts to specification.

Specification

MFWD Tie Rod Jam Nuts—Torque..... 120 N·m (88 lb-ft)



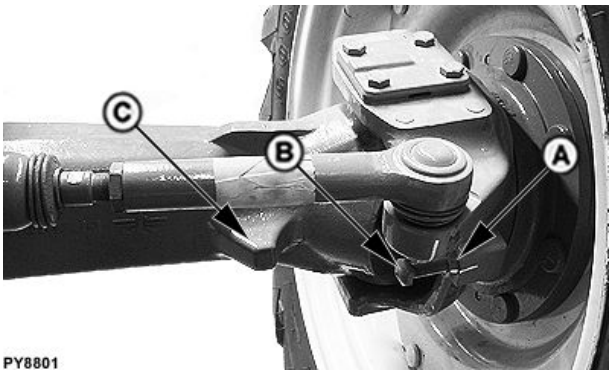
PY4490 —UN—16JAN05

A—Tie Rod Jam Nuts **B—Inner Rod**

PU00210,0000A6C -19-17JUL07-1/1

Set MFWD Steering Stops Turning Radius

1. Raise and support the front of the tractor so the MFWD axle can be oscillated to its stops.
2. Slowly turn the steering wheel to the left until the steering cylinder travel has reached its limit, the steering stops, or the tires are within 25 mm (1 in.) of the grille screen or the side panels.
3. Raise the left side of the axle against its stop and measure the clearance between the tire and the nearest tractor component. The distance should not be less than 25 mm (1 in.).
4. Loosen the locking nut (A) on the steering stop and adjust the steering stop bolt (B) so it touches the steering stop (C). It may be necessary to shorten the stop bolt (B) in order to obtain the maximum turning angle.
5. Tighten steering stop bolt retaining lock nut (A) to 125 N·m (92 lb-ft).
6. Turn wheel fully to the left. Impact knuckle housing to steering stop five times.
7. Tighten steering stop bolt retaining nuts again to specification.



PY8801 —UN—18DEC08

A—Steering Stop Locking Nut
B—Steering Stop Bolt
C—Steering Stop

Specification	
Steering Stop Bolt Retaining Lock Nut—Torque	125 N·m (92 lb-ft)

8. Repeat above steps for the right side.

NOTE: Wide tread settings and large tire sizes will increase turn radius slightly.

SA61034,0000724 -19-19DEC08-1/1

Use Correct Tire Combinations

In order to achieve maximum drawbar pull, maintain proper steerability, reduce tire wear and fuel consumption, comply with the correct tire combinations shown on Tire Compatibility Chart.

Should mechanical front wheel drive front tires show excessive wear in comparison with rear tire, the front tires must be replaced in order to maintain the predetermined tire ratio.

IMPORTANT: When replacing tires, consult your tire dealer. Mixing worn and new tires, bias and radial or tires of different diameters or loaded radii can reduce tire life and overall tractor performance.

Using any tire combination, other than those listed on the Tire Compatibility Chart, could result in premature tire and driveline wear due to excessive underspeed or overspeed.

MX,WTIP,OA1A -19-24JUL95-1/1

Tire Compatibility Chart

NOTE: The following chart details which front tires are compatible with an available rear tire. The rear tires are indicated above the compatible front tires, for MFWD along with the relevant tractor model.

Rear Tire [a]	**5055E MFWD**	**5065E MFWD**	**5075E MFWD**
160/95 R 46	X	X	X
14.9 R 28	X	X	
13.6 R 36	X	X	X
16.9 R 28		X	
16.9 R 30			X
Front Tire [a]			
8.3 x 28	X	X	X
9.5 R 24	X		
11.2 R 24		X	
12.4 R 20	X	X	
12.4 R 24	X	X	X

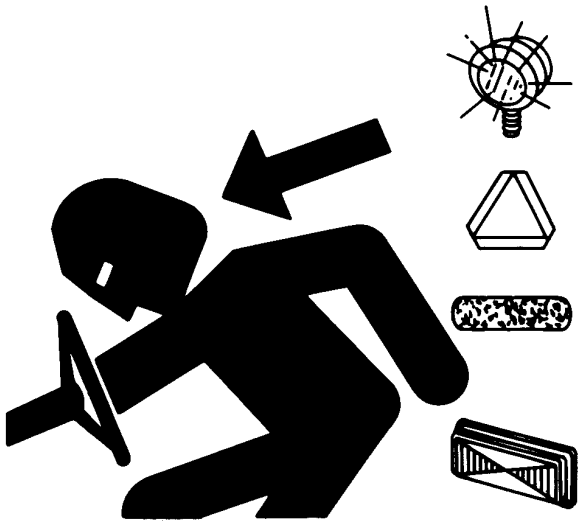
[a] *Few tire specifications are specific to only Turkey market*

RM87422,0000006 -19-07AUG14-1/1

Use Safety Lights and Devices

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.



TS951 —UN—12APR90

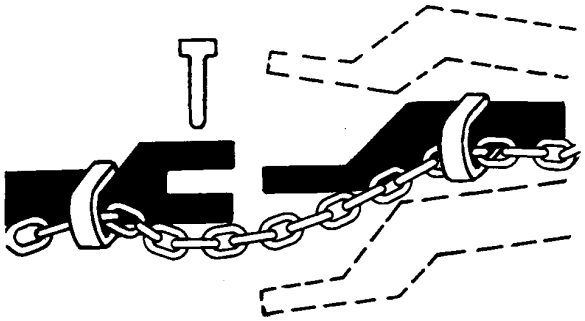
DX,FLASH -19-07JUL99-1/1

Use a Safety Chain

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.



TS217 —UN—23AUG88

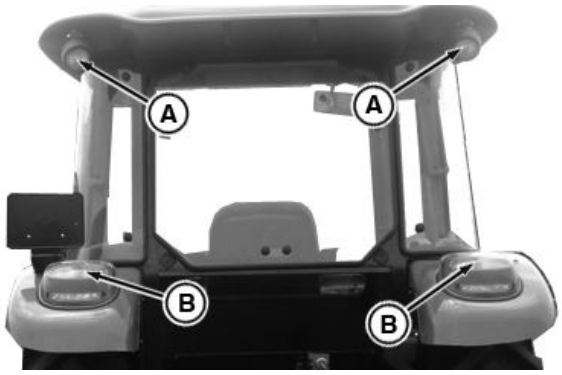
DX,CHAIN -19-03MAR93-1/1

Driving Tractor on Roads

CAUTION: When operating on a road, move light switch to either high beam lights position or low (dim) beam lights position. Never use flood lights when transporting on roads. Clear, bright lights at the rear of the tractor could confuse drivers of other vehicles as they approach from the rear.

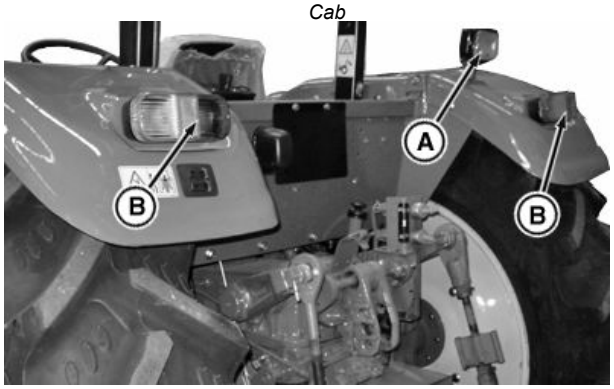
1. Before operating tractor on highway be sure flashing hazard lights work properly, Install auxiliary lighting to equipment **as required for safety and by local regulations**.

A—Flood Lights **B— Tail Lights**



PY15698 —UN—24DEC12

Cab



PY18478 —UN—11JUL14

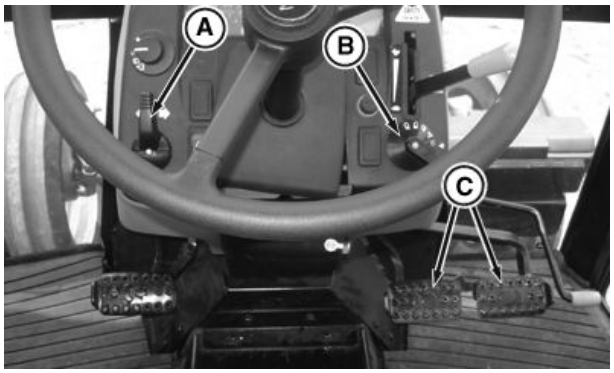
IOOS

SK35149,0000304 -19-08JUL14-1/5

IMPORTANT: Refer to Lights section for detailed descriptions of lighting operations and functions.

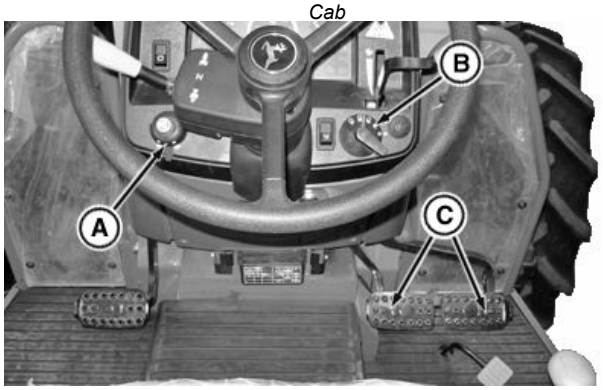
2. Turn light switch (B) to high beam headlights or low beam headlights position. Never use bright lights which are visible from the rear. Always dim headlights before meeting another vehicle. Keep headlights properly adjusted.
3. Use turn signals when turning. Be sure to return turn signal lever (A) to center position after turning.
4. Couple brake pedals (C) together before driving on a road. Avoid hard applications of brakes.

A—Turn Signal Switch **C—Brake Pedals**
B—Light Knob Switch



PY16612 —UN—20AUG12

Cab



PY18479 —UN—11JUL14

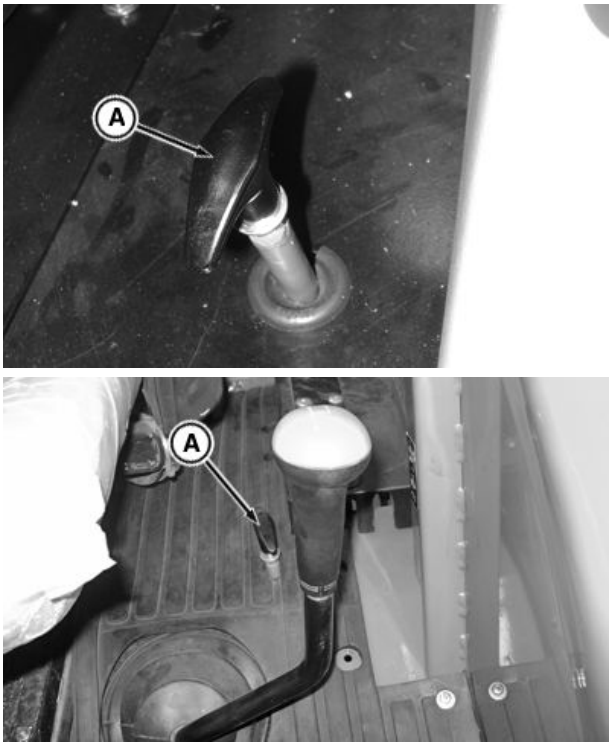
IOOS

Continued on next page

SK35149,0000304 -19-08JUL14-2/5

5. Disengage mechanical front wheel drive (A) when transporting tractor with MFWD. Excessive front tire wear will result from transporting on hard surfaces with the MFWD engaged.
6. Drive slowly enough to maintain safety 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 down hill with clutch disengaged. This can overspeed clutch disc and cause severe clutch damage.
8. When transporting 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 tractor has proper ballast.

A—MFWD Control Lever



PY16591 —UN—13AUG12

PY18469 —UN—11JUL14

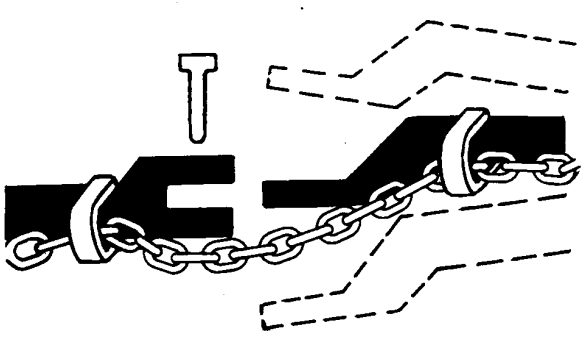
Left Side of Seat - IOOS

SK35149,0000304 -19-08JUL14-3/5

⚠ CAUTION: A safety chain will help 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.

IMPORTANT: Safety chain is provided for transport only. It must not be used for pulling or towing implements, or other items, not attached to drawbar, or damage to your tractor may result.

NOTE: Attach trailer brakes (if equipped) and check for proper operation.



TS217 —UN—23AUG88

Lock drawbar pin in place, and use safety chain to help control drawn equipment should it accidentally separate from drawbar while transporting.

9. Transporting Towed Loads:

Continued on next page

SK35149,0000304 -19-08JUL14-4/5

CAUTION: 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.

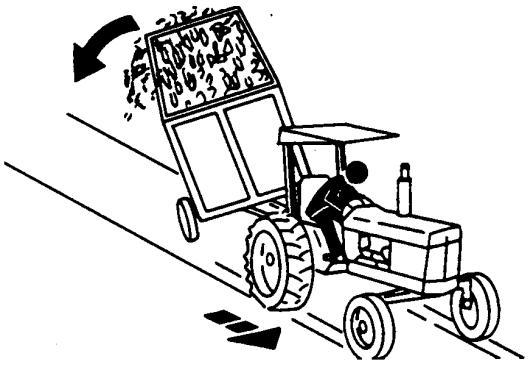
Observe these recommended maximum road speeds, or local speed limits which may be lower:

If towed equipment does not have brakes, do not travel more than 32 km/h (20 mph) and do not tow loads more than 1.5 times the tractor weight.

If towed equipment has brakes, do not travel more than 40 km/h (25 mph) and do not tow loads more than 4.5 times the tractor weight.

Ensure the load does not exceed the recommended weight ratio. Add ballast to recommended maximum for tractor, lighten the load, or get a heavier towing unit. The tractor must be heavy and powerful enough with adequate braking power for the towed load. Use additional caution when towing loads under adverse surface conditions, when turning, and on inclines.

10. Use caution when operating tractor at transport speeds. Reduce speed if towed load weighs more than tractor and is not equipped with brakes. (See Towed Equipment operator's manual for recommended transport speeds.)
11. Use additional caution when transporting towed loads under adverse surface conditions, when turning and on inclines.
12. Heavy towed or rear mounted implements may start swaying in transport. Excessive swaying will result in loss of steering control. Drive slowly and avoid quick turns of steering wheel. Refer to your implement operator's manual regarding maximum travel speed limitations.



TS216 —UN—23AUG88

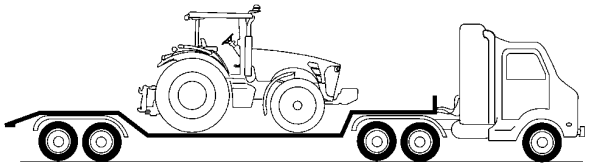
SK35149,0000304 -19-08JUL14-5/5

Transport Tractor Safely

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.



RXA0103709 —UN—01JUL09

DX,WW,TRANSPORT -19-19AUG09-1/1

Towing Tractor

CAUTION: Remove MFWD drive shaft if towing tractor with front wheels on a carrier. Loss of transmission-hydraulic system pressure will engage the MFWD and pull tractor off the carrier, even with lever in the DISENGAGED position.

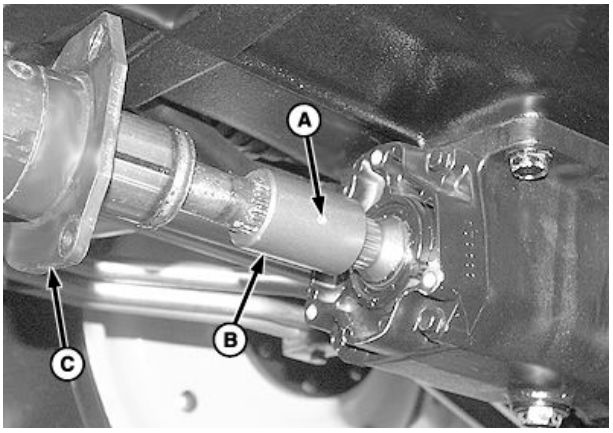
IMPORTANT: To avoid transmission and drive train component damage, NEVER attempt to start tractor by towing; engine will not start.

1. When towing tractor with front wheels on a carrier, remove drive shaft:
   a. Remove three cap screws and slide drive shaft shield (C) away from drop housing. Repeat on opposite end.
   b. Remove spring pin (A) using a punch and hammer.
   c. Support drive shaft and slide coupler (B) toward drop housing.
   d. Remove drive shaft, shields and couplers.
2. **Sight glass (If Equipped):** Check transmission-hydraulic oil level in sight glass (D). (See Check Transmission-Hydraulic Oil Level in Lubrication Section). Add 1 L (1 qt) for each 90 mm (3-1/2 in.) front wheels are raised off the ground. DO NOT raise front wheels more than 305 mm (12 in.). Drain excess oil after transporting.
3. **Dipstick (If Equipped):** Be sure transmission-hydraulic system oil is to the full mark on the dipstick (E). If the tractor is to be towed with the front wheels raised, add 1 liter of oil for each 90 mm (3-1/2 in.) the wheels are raised. DO NOT raise front wheels more than 305 mm (12 in.) above ground. Drain excess oil after transporting.
4. Tap brake pedals to make sure differential lock is not engaged.
5. Disengage PTO and move range and gear shift levers to NEUTRAL.
6. For PowrReverser™ Transmission, put EH directional reverser lever in NEUTRAL.
7. If possible, operate engine above 1250 rpm to provide lubrication, power steering, and power brakes. Have an operator steer and brake tractor.
8. Do not tow a tractor faster than 8 km/h (5 mph). Do not exceed 3 km/h (2 mph) for the first 10 minutes in below freezing temperatures.

After Towing

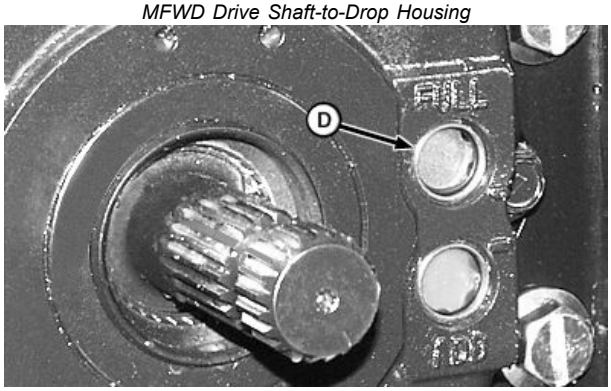
Apply multipurpose grease to MFWD couplers and shaft splines, and install drive shaft assembly.

PowrReverser is a trademark of Deere & Company



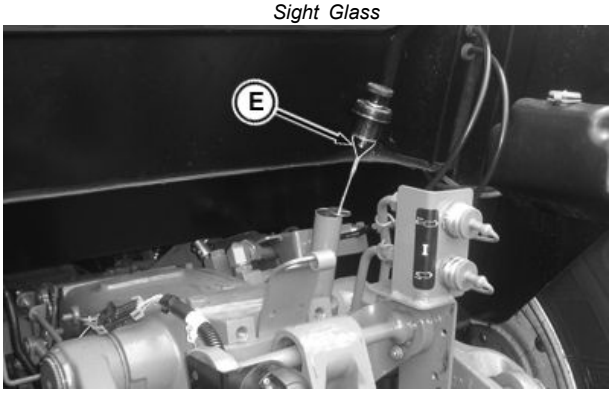
LV9702 —UN—24AUG04

MFWD Drive Shaft-to-Drop Housing



LV12796 —UN—20SEP06

Sight Glass



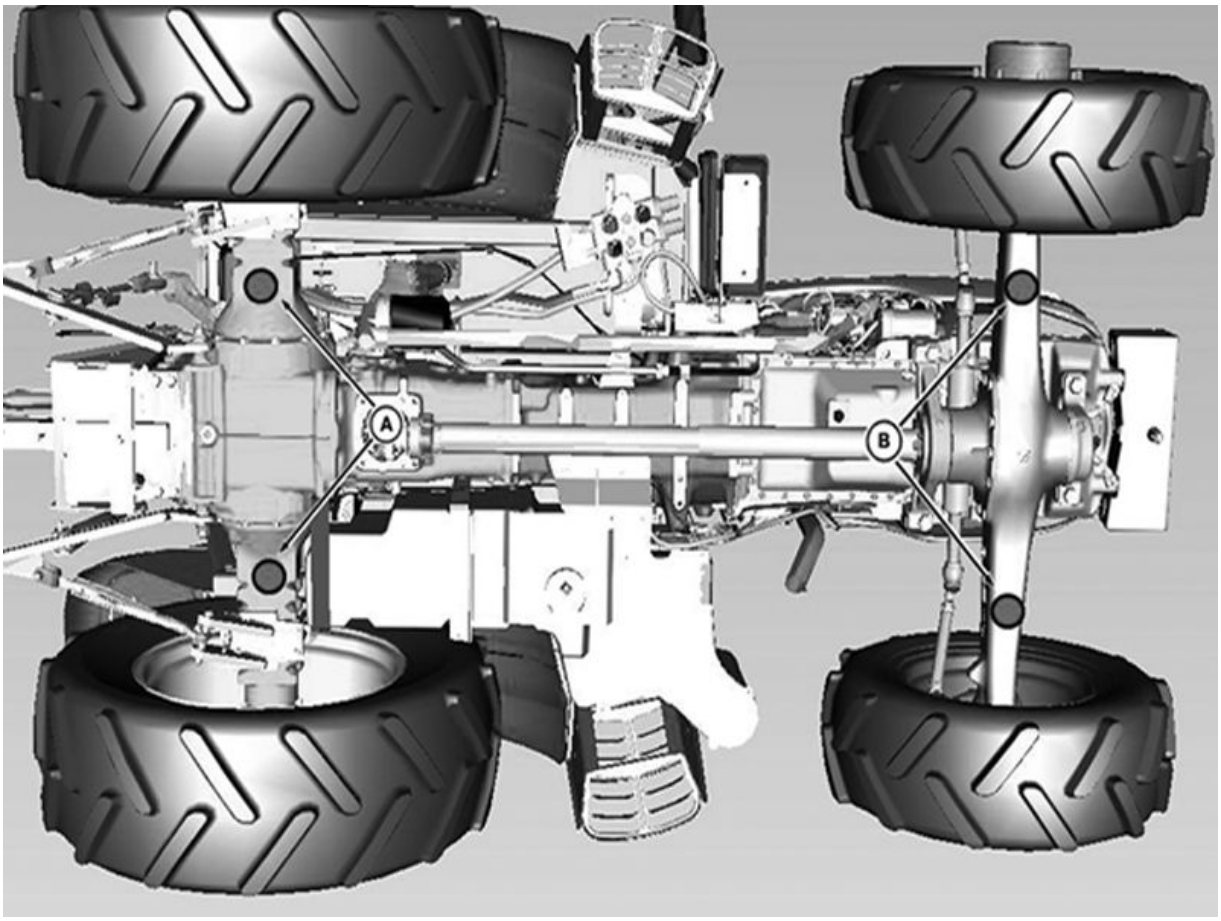
PY17688 —UN—24JAN13

A—Spring Pin
B—Coupler
C—Drive Shaft Shield
D—Sight Glass
E—Transmission/Hydraulic Oil Dipstick

Drain excess transmission-hydraulic oil to lower level back to full.

SD74272,00006A1 -19-10SEP13-1/1

Jacking Points on Tractor



PY12298 —UN—28DEC11

A—Rear-End Jacking Point **B—Front-End Jacking Point**

Vehicle jack can be applied at rear-end jacking points (A) that is, at the differential casing to jack up the vehicle from the rear side.

To jack up the vehicle from front, apply jack at the front-end jacking points (B) that is, front axle as shown.

CAUTION: Use approved lifting equipment only.

Jack up the tractor on firm & leveled ground only.

Before doing any further work on tractor, first secure it using suitable jack stands. Special John Deere tools can be used for this purpose. These jack stands are available at the nearest John Deere dealer.

AK50421,00001B9 -19-24MAR20-1/1

Fuels, Lubricants, and Coolant

Handle Fuel Safely—Avoid Fires

Use only diesel fuel.

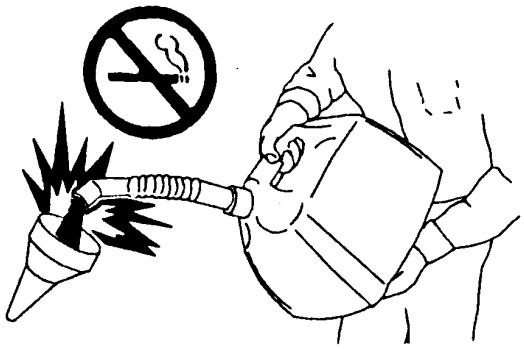
Handle fuel with care, it is highly flammable.

DO NOT refuel machine:
- While you smoke.
- When machine is near open flame or sparks.
- When engine is running. STOP engine.

Fill fuel tank outdoors.

Help prevent fires:
- Clean oil, grease and dirt from machine.
- Clean up spilled fuel immediately.

Do not store machine with fuel in tank in a building where fumes may reach an open flame or spark.



M73115 —UN—09MAR90

MX,FIRE,5A1 -19-22JUL94-1/1

Handle Fluids Safely—Avoid Fires

When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.

TS227 —UN—15APR13

DX,FLAME -19-29SEP98-1/1

Fuel Storage

Buy good quality, clean fuel from a reputable supplier.

Proper fuel storage is critically important. Use clean storage and transfer tanks. Periodically drain water and sediment from bottom.

Avoid storing fuel over long periods of time. If there is a slow turnover of fuel in the fuel tank or supply tank, it is necessary to add John Deere Diesel Fuel Conditioner to prevent water condensation. (See nearest John Deere dealer for proper service or maintenance recommendations.)

Store fuel in a convenient place away from buildings.

NOTE: To reduce fuel gelling and control wax separation during cold weather, John Deere Fuel Flow Improver, or equivalent, is added to fuel or bulk storage tank.

PU00210,00001CC -19-17MAR20-1/1

Water Quality for Mixing with Coolant Concentrate

Engine coolants are a combination of three chemical components: ethylene glycol (EG) or propylene glycol (PG) antifreeze, inhibiting coolant additives, and quality water.

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

All water used in the cooling system should meet the following minimum specifications for quality:

Chlorides	<40 mg/L
Sulfates	<100 mg/L
Total solids	<340 mg/L
Total dissolved I hardness	<170 mg/L
pH	5.5—9.0

IMPORTANT: Do not use bottled drinking water because it often contains higher concentrations of total dissolved solids.

Freeze Protection

The relative concentrations of glycol and water in the engine coolant determine its freeze protection limit.

Ethylene Glycol	Freeze Protection Limit
40%	-24°C (-12°F)
50%	-37°C (-34°F)
60%	-52°C (-62°F)
Propylene Glycol	**Freeze Protection Limit**
40%	-21°C (-6°F)
50%	-33°C (-27°F)
60%	-49°C (-56°F)

DO NOT use a coolant-water mixture greater than 60% ethylene glycol or 60% propylene glycol.

DX,COOL19 -19-13JAN18-1/1

Testing Coolant Freeze Point

The use of a handheld coolant refractometer is the quickest, easiest, and most accurate method to determine coolant freeze point. This method is more accurate than a test strip or a float-type hydrometer which can produce poor results.

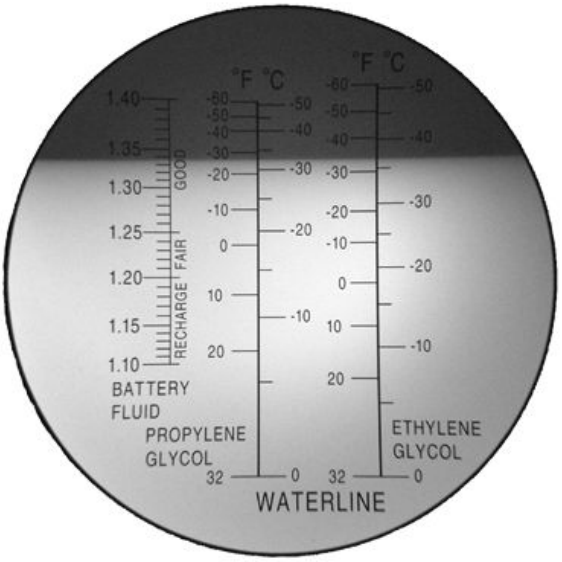
A coolant refractometer is available through your John Deere dealer under the SERVICEGARD™ tool program. Part number 75240 provides an economical solution to accurate freeze point determination in the field.

To use this tool:

1. Allow cooling system to cool to ambient temperatures.
2. Open radiator cap to expose coolant.
3. With the included dropper, collect a small coolant sample.
4. Open the lid of the refractometer, place one drop of coolant on the window and close the lid.
5. Look through the eyepiece and focus as necessary.
6. Record the listed freeze point for the type of coolant (ethylene glycol coolant or propylene glycol) being tested.

TS1732 —UN—04SEP13

SERVICEGARD™ Part Number 75240



TS1733 —UN—04SEP13

Image with a Drop of 50/50 Coolant Placed on the Refractometer Window

SERVICEGARD is a trademark of Deere & Company

DX,COOL,TEST -19-13JUN13-1/1

Cold Weather Operation

Additional information on cold weather operation is available from your John Deere dealer.

MX,FLIP,B -19-18MAR92-1/1

Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590, ASTM D975, or EN 15940 is acceptable for use at all percentage mixture levels.

Required Fuel Properties

In all cases, the fuel shall meet the following properties:

Cetane number of 40 minimum. Cetane number greater than 47 is preferred, especially for temperatures below –20 °C (–4 °F) or elevations above 1675 m (5500 ft.).

Cloud Point should be below the expected lowest ambient temperature or **Cold Filter Plugging Point** (CFPP) should be a maximum 10°C (18°F) below the fuel cloud point.

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

Diesel fuel quality and sulfur content must comply with all existing emissions regulations for the area in which the engine operates. DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

Materials such as copper, lead, zinc, tin, brass and bronze should be avoided in fuel handling, distribution and storage equipment as these metals can catalyze fuel oxidation reactions which can lead to fuel system deposits and plugged fuel filters.

E-Diesel fuel

DO NOT use E-Diesel (Diesel fuel and ethanol blend). Use of E-Diesel fuel in any John Deere machine may void the machine warranty.

CAUTION: Avoid severe injury or death due to the fire and explosion risk from using E-Diesel fuel.

[1]See DX,ENOIL12,OEM, DX,ENOIL12,T2,STD, or DX,ENOIL12,T2,EXT for more information on Engine Oil and Filter Service Intervals.

Sulfur Content for Interim Tier 4, Final Tier 4, Stage III A and B, Stage IV, and Stage V Engines Above 560 kW

- Use ONLY diesel fuel with a maximum of 500 mg/kg (500 ppm) sulfur content.

Sulfur Content for Interim Tier 4, Final Tier 4, Stage III B, Stage IV Engines, and Stage V Engines

- Use ONLY ultra low sulfur diesel (ULSD) fuel with a maximum of 15 mg/kg (15 ppm) sulfur content.

Sulfur Content for Tier 3 and Stage III A Engines

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 1000—2000 mg/kg (1000—2000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 2000 mg/kg (2000 ppm), contact your John Deere dealer.

Sulfur Content for Tier 2 and Stage II Engines

- Use of diesel fuel with sulfur content less than 2000 mg/kg (2000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 2000—5000 mg/kg (2000—5000 ppm) REDUCES the oil and filter change interval.[1]
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

Sulfur Content for Other Engines

- Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) REDUCES the oil and filter change interval.

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

DX,FUEL1 -19-13JUL20-1/1

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 -19-13JAN18-1/1

Minimizing the Effect of Cold Weather on Diesel Engines

John Deere diesel engines are designed to operate effectively in cold weather.

However, for effective starting and cold-weather operation, a little extra care is necessary. The following information outlines steps that can minimize the effect that cold weather may have on starting and operation of your engine. See your John Deere dealer for additional information and local availability of cold-weather aids.

Use Winter Grade Fuel

When temperatures fall below 0°C (32°F), winter grade fuel (No. 1-D in North America) is best suited for cold-weather operation. Winter grade fuel has a lower cloud point and a lower pour point.

Cloud point is the temperature at which wax begins to form in the fuel. This wax causes fuel filters to plug. **Pour point** is the lowest temperature at which movement of the fuel is observed.

NOTE: On average, winter grade diesel fuel has a lower Btu (heat content) rating. Using winter grade fuel may reduce power and fuel efficiency, but should not cause any other engine performance effects. Check the grade of fuel being used before troubleshooting for low-power complaints in cold-weather operation.

Air Intake Heater

An air intake heater is an available option for some engines to aid cold weather starting.

Ether

An ether port on the intake is available to aid cold weather starting.

CAUTION: Ether is highly flammable. Do not use ether when starting an engine equipped with glow plugs or an air intake heater.

Coolant Heater

An engine block heater (coolant heater) is an available option to aid cold weather starting.

Seasonal Viscosity Oil and Proper Coolant Concentration

Use seasonal grade viscosity engine oil based on the expected air temperature range between oil changes and a proper concentration of low silicate antifreeze as recommended. (See DIESEL ENGINE OIL and ENGINE COOLANT requirements in this section.)

Diesel Fuel Cold Flow Additive

Use John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula), which contains anti-gel chemistry, or equivalent fuel conditioner to treat non-winter grade fuel (No. 2-D in North America) during the cold-weather season. This generally extends operability to about 10°C (18°F) below the fuel cloud point. For operability at even lower temperatures, use winter grade fuel.

IMPORTANT: Treat fuel when outside temperature drops below 0°C (32°F). For best results, use with untreated fuel. Follow all recommended instructions on label.

Biodiesel

When operating with biodiesel blends, wax formation can occur at warmer temperatures. Begin using John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula) or equivalent at 5°C (41°F) to treat biodiesel fuels during the cold-weather season. Use B5 or lower blends at temperatures below 0°C (32°F). Use only winter grade petroleum diesel fuel at temperatures below -10°C (14°F).

Winterfronts

Use of fabric, cardboard, or solid winterfronts is not recommended with any John Deere engine. Their use can result in excessive engine coolant, oil, and charge air temperatures. This can lead to reduced engine life, loss of power and poor fuel economy. Winterfronts may also put abnormal stress on fan and fan drive components potentially causing premature failures.

If winterfronts are used, they should never totally close off the grill frontal area. Approximately 25% area in the center of the grill should remain open at all times. At no time should the air blockage device be applied directly to the radiator core.

Radiator Shutters

If equipped with a thermostatically controlled radiator shutter system, this system should be regulated in such a way that the shutters are completely open by the time the coolant reaches 93°C (200°F) to prevent excessive intake manifold temperatures. Manually controlled systems are not recommended.

If air-to-air aftercooling is used, the shutters must be completely open by the time the intake manifold air temperature reaches the maximum allowable temperature out of the charge air cooler.

For more information, see your John Deere dealer.

DX,FUEL10 -19-13JAN18-1/1

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

Continued on next page

- 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 -19-13JAN18-2/2

Fill Fuel Tank

CAUTION: Handle fuel with care: It is highly flammable. DO NOT refuel the machine while smoking or when near open flame or sparks.

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

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

Fill fuel tank at end of each days operation. This prevents condensation in tank as moist air cools.

Specification	
For Cab Fuel Tank—Capacity	approx. 82 ± 4 L

Specification	
ForIOOS Fuel Tank—Capacity	approx. 68 ± 3.5 L

IMPORTANT: The fuel tank uses a sealed filler cap. If a new filler cap is required, always replace it with a sealed cap.

TS202 —UN—23AUG88

NOTE: To reduce fuel gelling and control wax separation during cold weather, John Deere Fuel Flow Improver, or equivalent, may be added to fuel or bulk storage tank.

SV86979,0000156 -19-16JUL14-1/1

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 -19-13JAN18-1/1

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 -19-11APR11-1/1

Diesel Engine Break-In Oil — Non-Emissions Certified and Certified Tier 1, Tier 2, Tier 3, Stage I, Stage II, and Stage III

New engines are filled at the factory with either John Deere Break-In™ or John Deere Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In™ or Break-In Plus™ Engine Oil, respectively, 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.

If John Deere Break-In™ Engine Oil is used during the initial operation of a new or rebuilt engine, change the oil and filter at a maximum of 100 hours.

If John Deere Break-In Plus™ Engine Oil is used, change the oil and filter at a minimum of 100 hours and a maximum equal to the interval specified for John Deere Plus-50™ II or Plus-50™ oil.

After engine overhaul, fill the engine with either John Deere Break-In™ or Break-In Plus™ Engine Oil.

If John Deere Break-In™ or Break-In Plus™ Engine Oil is not available, use an SAE 10W-30 viscosity grade diesel engine oil meeting one of the following and change the oil and filter at a maximum of 100 hours of operation:

- API Service Classification CE
- API Service Classification CD
- API Service Classification CC
- ACEA Oil Sequence E2
- ACEA Oil Sequence E1

Break-In is a trademark of Deere & Company.
Break-In Plus is a trademark of Deere & Company
Plus-50 is a trademark of Deere & Company.

IMPORTANT: Do not use Plus-50™ II, Plus-50™, or engine oils meeting any of the following for the initial break-in of a new or rebuilt engine:

API CK-4	**ACEA E9**
API CJ-4	**ACEA E7**
API CI-4 PLUS	**ACEA E6**
API CI-4	**ACEA E5**
API CH-4	**ACEA E4**
API CG-4	**ACEA E3**
API CF-4	
API CF-2	
API CF	

These oils do not allow the engine to break in properly.

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, John Deere Plus-50™, or other diesel engine oil as recommended in this manual.

DX,ENOIL4 -19-02NOV16-1/1

Diesel Engine Oil — Tier 2 and Stage II

Failure to follow applicable oil standards and drain intervals can result in severe engine damage that might not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere oils, parts, or service.

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere Plus-50™ II oil is preferred.

John Deere Plus-50™ is also recommended.

John Deere Torq-Gard™ is also allowed.

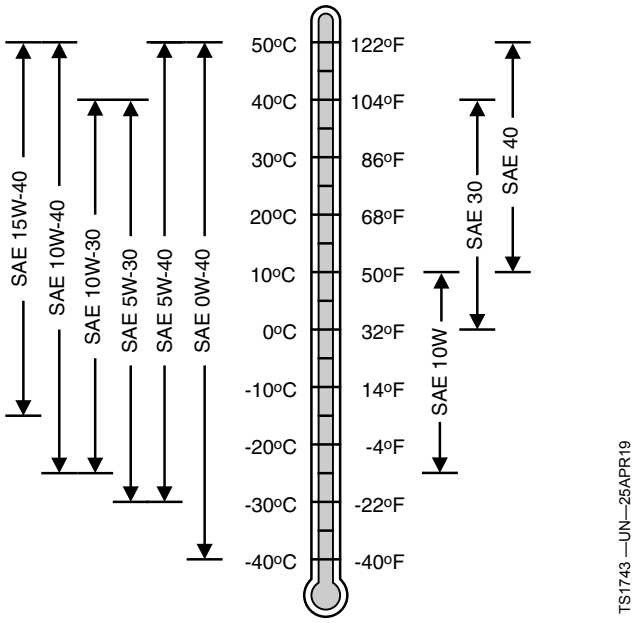
Other oils may be used if they meet one or more of the following standards:

- API Service Category CK-4
- API Service Category CJ-4
- API Service Category CI-4 PLUS
- API Service Category CI-4
- API Service Category CH-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E7
- ACEA Oil Sequence E6
- ACEA Oil Sequence E5
- ACEA Oil Sequence E4

Multi-viscosity diesel engine oils are preferred.

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

Plus-50 is a trademark of Deere & Company
Torq-Gard is a trademark of Deere & Company



Oil Viscosities for Air Temperature Ranges

DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

DX,ENOIL7 -19-23APR19-1/1

Oil Filters

Filtration of oils is critical to proper operation and lubrication.

Always change filters regularly as specified in this manual.

Use filters meeting John Deere performance specifications.

DX,FILT -19-18MAR96-1/1

Diesel Engine Coolant (engine with wet sleeve cylinder liners)

Failure to follow applicable coolant standards and drain intervals can result in severe engine damage that may not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere coolants, parts, or service.

Preferred Coolants

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
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- 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
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

Water Quality

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

Coolant Drain Intervals

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

When COOL-GARD II or COOL-GARD II PG is used, the drain interval is 6 years or 6000 hours of operation.

If a coolant other than COOL-GARD II or COOL-GARD II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.[1]

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

Do not mix ethylene glycol and propylene glycol base coolants.

Do not use coolants that contain nitrites.

COOL-GARD is a trademark of Deere & Company

[1]Coolant analysis may extend the service interval of other "Coolants" to a maximum not to exceed the interval of Cool-Gard II coolants. Coolant analysis means taking a series of coolant samples at 1000 hour increments beyond the normal service interval until either the data indicate the end of useful coolant life or the maximum service interval of Cool-Gard II is reached.

DX,COOL3 -19-25AUG20-1/1

Liquid Coolant Conditioner

John Deere Liquid Coolant Conditioner (part number RE23182) is recommended for wet-sleeve diesel engines not having a coolant filter option. Other conditioners may be used if they contain non-chromate inhibitors.

CAUTION: Coolant conditioner contains alkali. AVOID contact with eyes. Avoid prolonged or repeated contact with skin. DO NOT take internally. In case of contact, immediately wash skin with soap and water. For eyes, flush with large amounts of water for at least 15 minutes. Call physician. Keep out of reach of children.

IMPORTANT: DO NOT use liquid conditioner if engine is equipped with a John Deere Coolant Filter Conditioner, since the correct inhibitors are already contained inside the filter. If both are used, a gel-type deposit is created which could inhibit heat transfer and block coolant flow. John Deere Liquid Coolant Conditioner does not protect against freezing.

Add 30 ml of John Deere Liquid Coolant Conditioner for every liter of coolant added (4 fluid ounces per gallon).

RG4690 —UN—14DEC88

When servicing cooling system at 750 hours, only 1/2 of the original charge is required.

Coolant Conditioner Required			
Model	**Coolant Capacity**	**With Fresh Coolant**	**At 750 Hour Service**
5055E, 5065E and 5075E	9.5 L (10 qt)	285 mL (10 oz)	142 mL (5 oz)

SA61034,0000068 -19-13FEB09-1/1

Transmission and Hydraulic Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

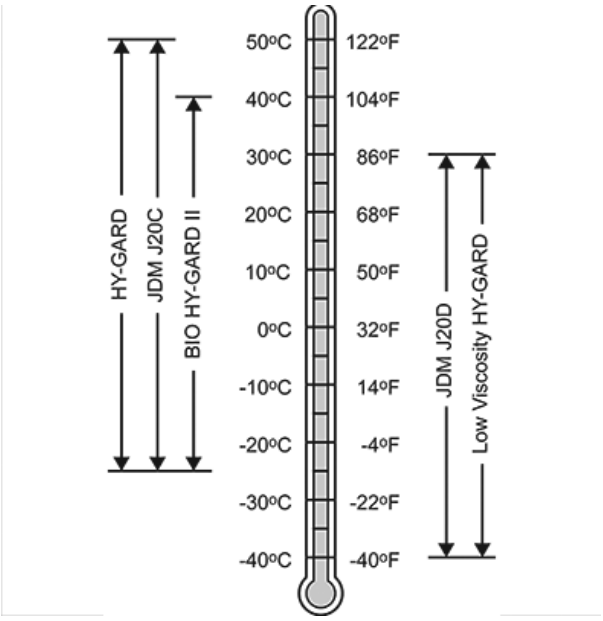
The following oils are preferred:

- John Deere Hy-Gard™
- John Deere Low Viscosity Hy-Gard™

Other oils may be used if they meet one of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

Use John Deere Bio Hy-Gard™ II oil when a biodegradable fluid is required.[1]



RG30204 —UN—08MAR18

Oils for Air Temperature Ranges

Hy-Gard is a trademark of Deere & Company
Bio Hy-Gard is a trademark of Deere & Company

[1] Bio Hy-Gard II meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC-L-33-T-82 test method. Bio Hy-Gard II should not be mixed with mineral oils, because this reduces the biodegradability and makes proper oil recycling impossible.

DX,ANTI -19-01JAN18-1/1

Front-Wheel Drive Axle Oil

Use oil with a viscosity based on the expected air temperature range during the period between oil changes.

The following oil is recommended:

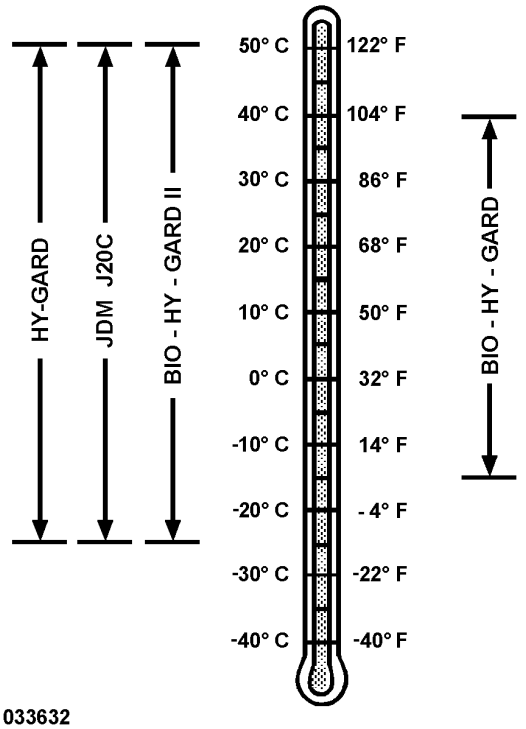
John Deere HY-GARD™

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™[1] or BIO-HY-GARD™[1]



LX1033632

HY-GARD is a trademark of Deere & Company.
BIO-HY-GARD II is a trademark of Deere & Company.
BIO-HY-GARD is a trademark of Deere & Company.

[1]BIO-HY-GARD II meets or exceeds the minimum biodegradability of 80 % within 21 days according to CEC L-33-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.

LX,OILFA2 -19-30APR04-1/1

Use Correct Hydraulic-Transmission Filter Element

To protect systems, replace transmission-hydraulic oil filter with a John Deere service filter element. Minimum and maximum performance specifications are printed on John Deere filters. Other filters may be used if they meet these performance specifications.

See Lubrication and Maintenance section for recommended filter change intervals.

MX,FLIP,H -19-18MAR92-1/1

Multipurpose Extreme Pressure (EP) Grease

IMPORTANT: For automated lubrication systems different ambient air temperatures need to be considered.

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

John Deere SD Polyurea Grease is preferred.

The following greases are also recommended:

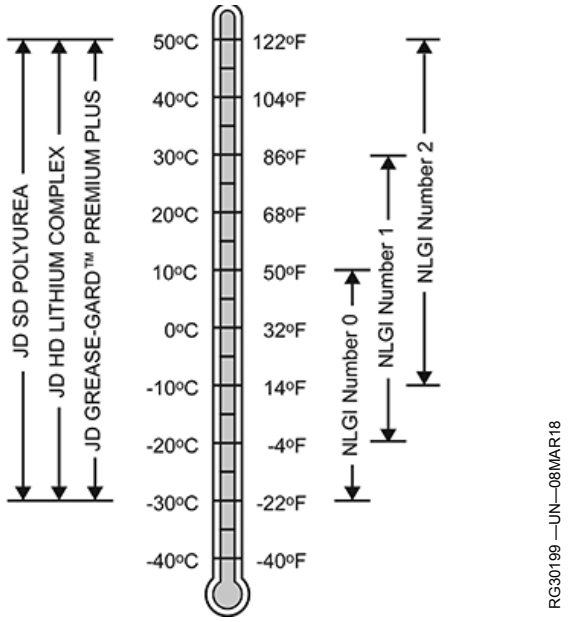
- John Deere HD Lithium Complex Grease
- John Deere Grease-Gard™ Premium Plus

Other greases may be used if they meet the following:

- NLGI Performance Classification GC-LB
- ISO-L-X-BDHB 2 or DIN KP 2 N-10 Lithium Complex, Non-Synthetic Base Oil (100 to 220 mm2/s @ 40°C)

IMPORTANT: Some types of thickeners, base oils, and additives used in greases are not compatible with others. Mixing greases should be avoided. Consult your grease supplier before mixing different types of grease.

Grease-Gard is a trademark of Deere & Company



Greases for Air Temperature Ranges

DX,GREA1 -19-13JAN18-1/1

Maintenance and Service Intervals

Additional Service Information

This is not a detailed service manual. It contains only information needed for operation and routine maintenance.

If you want more detailed service information, order a Technical Manual through your John Deere dealer.

SV86979,00000D3 -19-22AUG12-1/1

Service Tractor Safely

John Deere 5075E Tractor Shown

PY15613 —UN—07AUG13

Continued on next page

SV86979,00000D4 -19-06FEB15-1/2

PY9649 —UN—18JUN09

John Deere 5075E Tractor Shown

NOTE: Tractors shown may have optional equipment.

Disconnect power to attachments and stop engine before making any repairs or adjustments.

Do not change engine governor setting or over speed 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.

Before you work on any part of the engine, stop the engine, and let it cool. Hot engine parts can burn skin on contact.

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 may impair the function and/or safety and affect machine life.

SV86979,00000D4 -19-06FEB15-2/2

Service Interval Chart—Daily or 10 hours / Every 50 hours / First 100 hours / Every 250 hours

Item	Daily or 10 hours	Every 50 hours	First 100 hours	Every 250 hours
Check engine oil level	•			
Check coolant level	•			
Drain water and sediment from fuel tank and fuel filter[a]	•			
Lubricate front axle pivot pins [b]	•			
Lubricate rear axle bearings [b]	•			
Clean and check battery		•		
Inspect all tires		•		
Lubricate front axle pivot pins		•		
Check transmission-hydraulic system oil level		•		
Check MFWD axle hub oil level		•		
Inspect tractor for loose nuts and bolts		•		
Replace transmission-hydraulic oil filter			•	
Change engine break-in oil and filter			•	
Inspect hose clamps on the air intake system & coolant system			•	
Service air cleaner[c]				•
Check oil level in MFWD axle and wheel hubs				•
Inspect alternator/fan belt				•
Lubricate 3-point hitch				•
Change engine oil and filter				•
Replace transmission-hydraulic filter				•
Adjust clutch pedal free play[d]				•
Check neutral start system				•

[a]The fuel filter must be drained when water or debris is evident in the sediment bowl. If this reoccurs more than three days in a row, then drain the sediment from the fuel tank. Run engine for a minimum of 20 seconds, re-check and if more water collects, drain the fuel tank.
[b]Only necessary in extremely wet or muddy conditions
[c]Service more often if operated in extremely dusty conditions.
[d]For Mechanical dry clutch

SD74272,00005F0 -19-19AUG13-1/1

Service Interval Chart—Every 500 Hours / Every 600 Hours / Every1200 Hours / Annually / 2000 Hours or Two Years

Item	Every 500 Hours	Every 600 Hours	Every 1200 Hours	Annually	2000 Hours / Two Years
Replace fuel filters	•				
Clean operator enclosure/cab air filters[a]	•				
Clean engine crankcase vent tube (OCV)		•			
Check and tighten all hoses and hose clamps		•			
Change MFWD axle and wheel hub oil		•			
Check cooling system for leaks		•			
Check Secondary brake (if equipped)		•			
Lubricate rear axle bearings		•			
Check engine idle speeds		•			
Check front axle pivot pin		•			
Change transmission-hydraulic oil and filter			•		
Clean transmission-hydraulic pickup screen			•		
Replace air cleaner elements				•	
Inspect seat belt				•	
Replace operator enclosure/cab air filters				•	
Drain, flush and refill engine cooling system [b]					•

[a] *Service more often if operated in extremely dusty conditions.*
[b] *See your John Deere dealer for service.*

SJ15074,000056B -19-04OCT18-1/1

Service—As Required

- Adjust Hand Throttle Friction
- Inspect Engine Air Cleaner Elements[1]
- Inspect Engine Air Intake System[1]
- Check operator enclosure/cab air filters
- Service air-conditioning system
- Clean Front Grille, Side Screens, Radiator, Condenser (cab) and Oil, Fuel or Air Coolers (if equipped)
- Clean and Check Battery
- Drain water and sediment from fuel tank and fuel filter
- Lubricate Operator Seat Slide Rails
- Replace Bulbs; Floodlights, Headlights, Tail/Turn Lights and Warning Lights
- Adjust Headlights

[1] *Service more often if operated in extremely dusty conditions.*

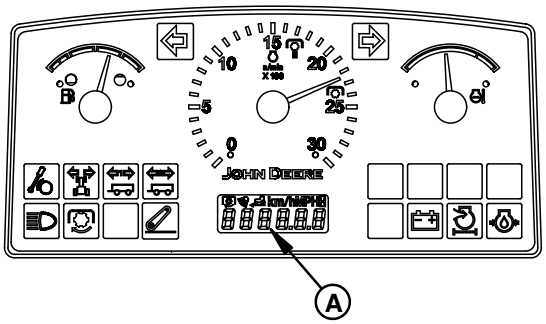
SV86979,00000D7 -19-26DEC12-1/1

Observe Service Intervals

Using hour meter (A) as a guide, perform all services at the hourly intervals indicated on the following pages. Keep a service record on charts provided in the Lubrication and Maintenance Record Charts section.

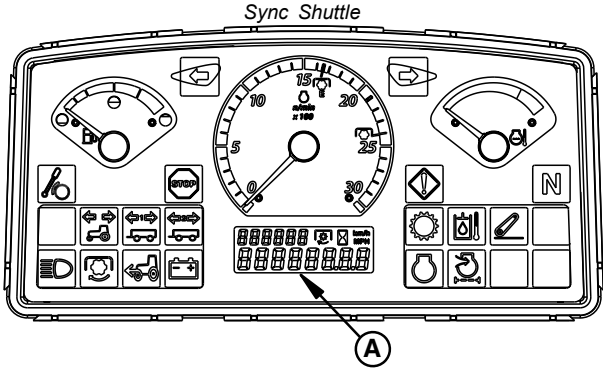
IMPORTANT: Recommended service intervals are for average conditions. Service more often if tractor is operated under adverse conditions.

A—Hour Meter



PY18954 —UN—21MAY14

Sync Shuttle



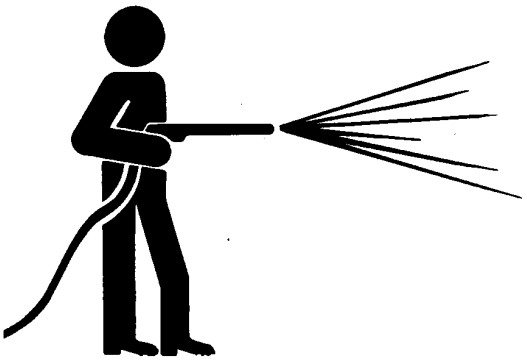
PY18934 —UN—23APR14

PowrReverser™

JS86122,00002D8 -19-21MAY14-1/1

Using High-Pressure Washers

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.

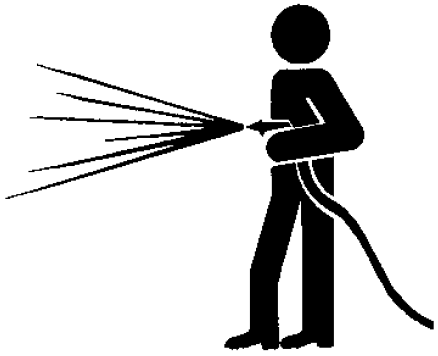


T6642EJ —UN—18OCT88

SV86979,00000D8 -19-22AUG12-1/1

Using Compressed Air

IMPORTANT: Directing pressurized air at electronic/electrical components or connectors, may cause build-up of static electricity and product malfunctions.



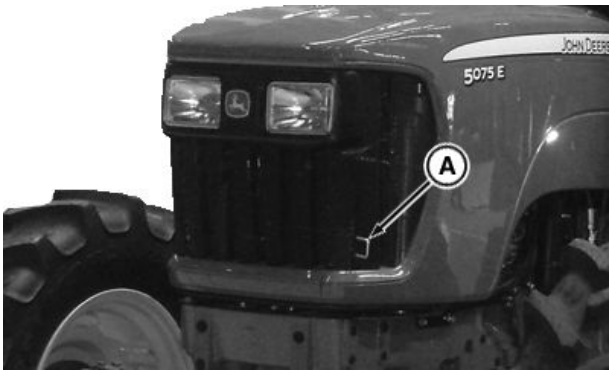
RW56455 —UN—30JUN97

SV86979,00000D9 -19-22AUG12-1/1

Open Hood

1. Pull hood latch release (A) out to unlock hood.
2. Raise hood. The cylinders will help raise the hood and keep it in this position once it is completely up.

A—Hood Latch Release



PY16059 —UN—12JUN12

SV86979,00000DB -19-22AUG12-1/1

Inspect Engine Air Intake Filters

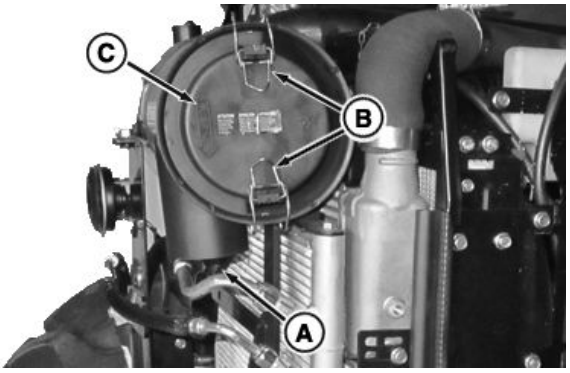
Service Interval—250 Hours

A dual element air cleaner is standard. A dirty primary element is indicated when air restriction indicator on instrument panel illuminates. A dirty element can result in loss of power or excessive smoke.

Clean primary element when indicator on instrument panel illuminates or every 250 hours.

Both elements should be replaced at the same time annually, regardless of condition.

1. Raise hood.
2. Release Latch (B) and remove Cover (C) from sideways.



PY16221 —UN—16SEP13

A—Lug
B—Latch
C—Cover

Continued on next page

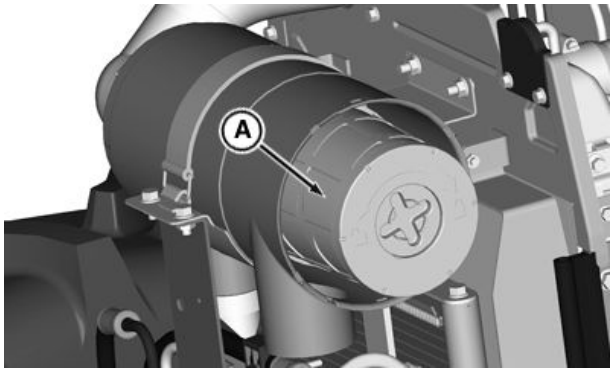
SV86979,00000DC -19-03JAN13-1/3

3. Rotate Primary filter element anticlock wise to remove. Do not use excessive force. If filter does not pull out with ease, check for unlock position to remove safely.
4. Clean primary element by tapping gently on palm of your hand. DO NOT tap element against a hard surface. Clean element with blowing compressed air (Max pressure of 1.3 Bar /20 PSI). Hold nozzle next to inner surface, and move up and down pleats.

IMPORTANT: DO NOT direct air against outside of element, as it might force dirt through to inside.

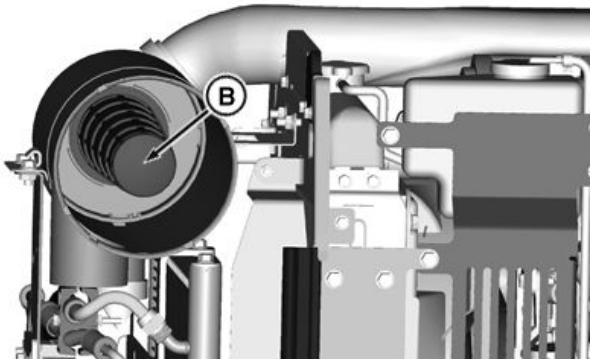
5. Clean out any dirt in canister taking care not to damage the secondary filter element (B).
6. Secondary filter element (B) should only be removed when being replaced. If it looks dirty or damaged do not attempt to clean, replace it. Removal of the secondary element (B) is similar to removal of the primary element.

A—Primary Filter Element **B—Secondary Filter Element**



PY16222 —UN—24AUG12

Primary Element



PY16223 —UN—30AUG12

Secondary Element

SV86979,00000DC -19-03JAN13-2/3

7. Install secondary element, primary element carefully.

IMPORTANT: If primary filter is not damaged and indicator on instrument panel remains illuminated, replace both filters.

8. Close cover and raise catch.
9. Lower hood.

PY16224 —UN—12JUL12

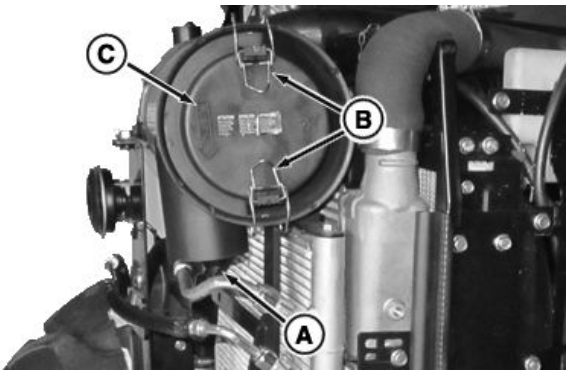
SV86979,00000DC -19-03JAN13-3/3

Replace Engine Air Intake Filters

Service Interval—Annually*
** Interval can vary according to operating conditions*

1. Raise hood.
2. Release latch (B) and remove Cover (C) from sideways.

A—Lug
B—Latch
C—Cover



PY16221 —UN—16SEP13

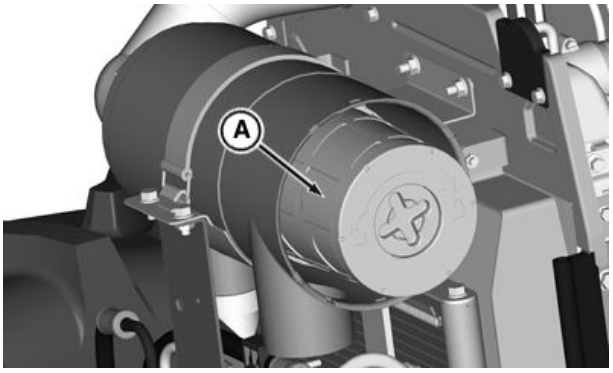
SD74272,00006A6 -19-10SEP13-1/3

3. Rotate Primary element filter (A) anticlock wise to remove. Do not use excessive force. If filter does not pull out with ease, move side-to-side to remove safely.
4. Removal of Secondary filter (B) is similar to removal of Primary filter (A).

NOTE: When installing the air cleaner canister, make sure that the dust unloader valve is facing down.

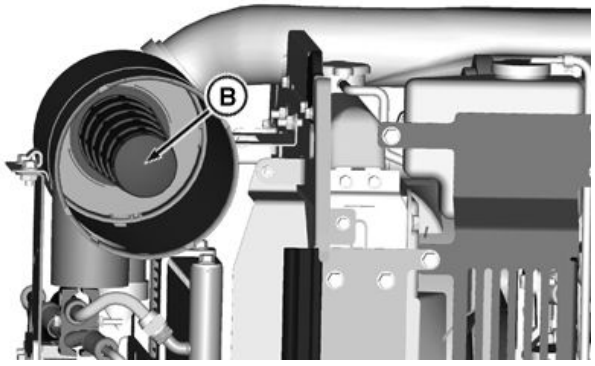
5. Install new secondary filter element (B) carefully and lock the filter by rotating the ¼ turn in clockwise direction.

A—Primary Filter Element
B—Secondary Filter Element



PY16222 —UN—24AUG12

Primary Element



PY16223 —UN—30AUG12

Secondary Element

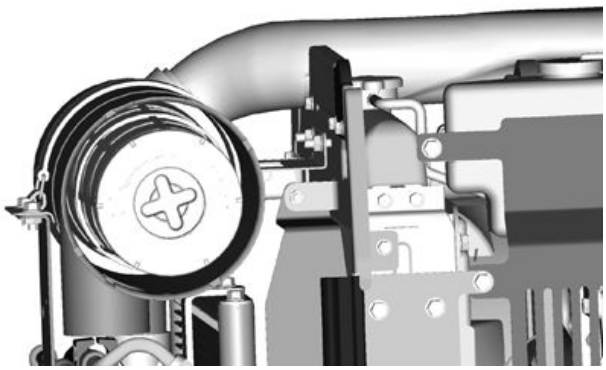
Continued on next page

SD74272,00006A6 -19-10SEP13-2/3

6. Installation of new primary filter element (A) is similar to installation of the secondary filter element (B).

NOTE: Make sure that both of the primary filter and secondary filter are sealed/seated/installed properly. Also clips on the outer cover of the air cleaner are fixed properly.

7. Close cover and raise Latch.
8. Lower hood.



PY16344 —UN—11SEP12

SD74272,00006A6 -19-10SEP13-3/3

Inspect Engine Air Intake System

IMPORTANT: Do not overtighten clamps.

Make sure all air intake clamps are tight.

Check all pipes for dents and other imperfections. Replace as necessary.

Check all hoses for cracks that may cause leaks or possible failure. Replace as necessary.

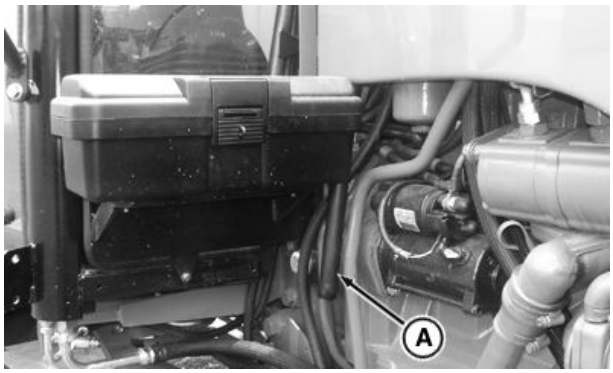
SV86979,00000DE -19-22AUG12-1/1

Clean Engine Crankcase Vent Tube

Service Interval—600 Hours

CAUTION: Reduce compressed air 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.

1. Locate crankcase vent port on top right-hand side of engine.
2. Remove crankcase vent tube (A) from engine.
3. Wash in solvent or blow clean with compressed air. Inspect tube for damage, replace if necessary.
4. Install vent tube. Make sure vent tube is not kinked or pinched.



PY16225 —UN—16JUL12

Left-Hand Side Shown

A—Crankcase Vent Tube

SV86979,00000DF -19-22AUG12-1/1

Check Engine Idle Speeds

Service Interval— 600 Hours

Slow (turtle) idle speed is attained with hand throttle all the way down.

Fast (rabbit) idle speed is attained with hand throttle all the way up.

NOTE: Hand throttle position will directly relate with label on right-hand side of instrument panel.

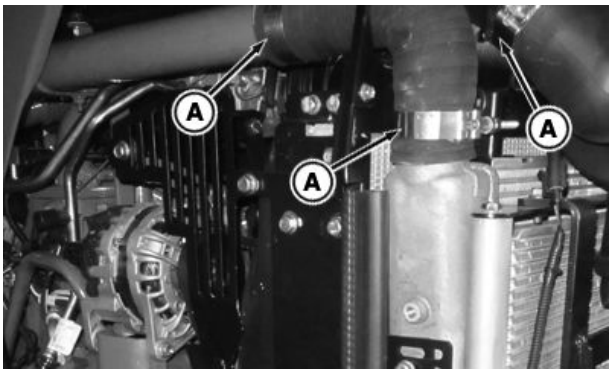
If idle speeds are not correct, see your John Deere dealer.

5055E,5065E,5075E—Specification

Slow Idle—Speed	800—875 rpm
Fast Idle—Speed	2575—2650 rpm Maximum

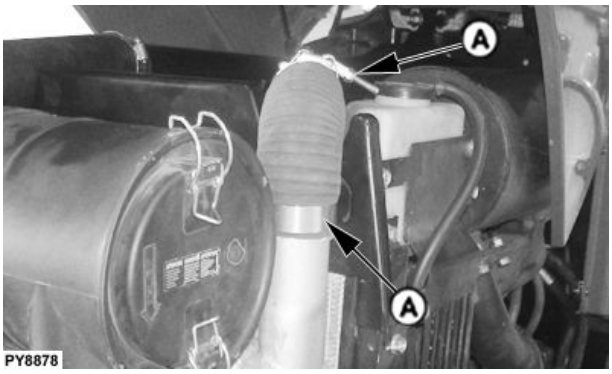
SV86979,00000E0 -19-22AUG12-1/1

Tighten Hose Clamps



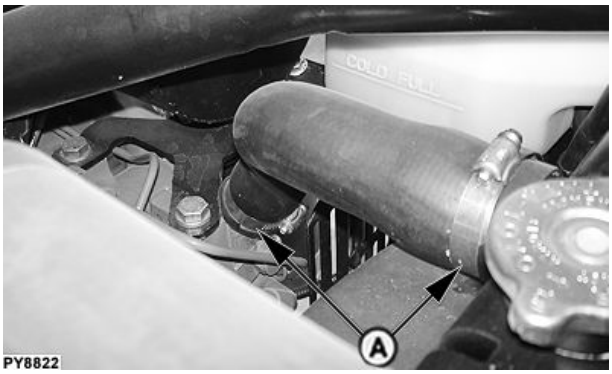
PY18782 —UN—17SEP13

Air Filter-to-Turbocharger and Intercooler-to-Intake Manifold



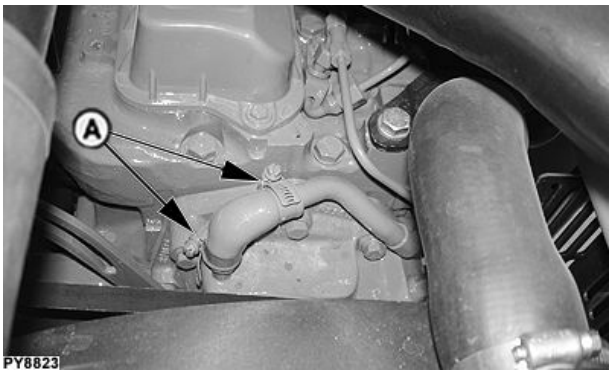
PY8878 —UN—21JUN09

Intercooler-to-Turbocharger



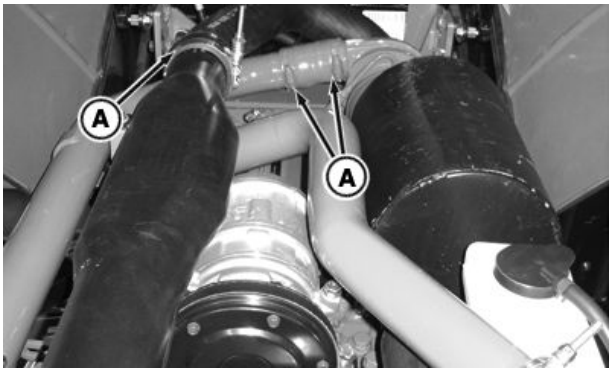
PY8822 —UN—21APR09

Radiator-to-Thermostat Cover



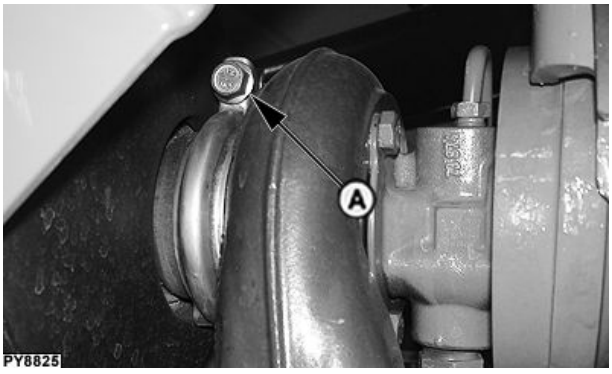
PY8823 —UN—21APR09

Water Pump



PY18788 —UN—25SEP13

Engine Crankcase Vent Tube and Other Hoses Going to Turbocharger



PY8825 —UN—21APR09

Turbocharger-to-Muffler

A—Hose Clamps

Check the following system hose clamps for tightness:

- Air cleaner to engine intake or turbocharger
- Engine cooling
- Hydraulics
- Fuel

Check all hoses for cracks which could cause leaks or possible failure. Replace as necessary.

SK35149,0000305 -19-25SEP13-1/1

Inspect Tractor for Loose Hardware

Item	Measurement	Specification
Basic Weight Retaining Bolt	Torque	385 N·m (284 lb.-ft.)
Adjustable Front Axle-to-Knee Bolts	Torque	480 N·m (354 lb.-ft.)
MFWD Axle Rim-to-Disk Nuts	Torque	245 N·m (181 lb.-ft.)
MFWD Axle Disk-to-Flange Nuts	Torque	310 N·m (229 lb.-ft.)
Adjustable Front Axle Disk-to-Flange Bolts	Torque	175 N·m (130 lb.-ft.)
Rear Axle Rim-to-Disk Bolts	Torque	245 N·m (181 lb.-ft.)
Rear Axle Disk-to-Flange Bolts	Torque	550 N·m (406 lb.-ft.)
Multi-Position Rear Wheels Rim-to-Disk	Torque	175 N·m (130 lb.-ft.)
Front Axle Bolts	Torque	480 N·m (354 lb.-ft.)
ROPS Mounting Bolts	Torque	410 N·m (302 lb.-ft.)
Cab Mounting Bolts	Torque	350 N·m (258 lb.-ft.)

SV86979,00000E4 -19-08AUG14-1/1

Check Neutral Start System — Sync Shuttle Transmission (If Equipped)

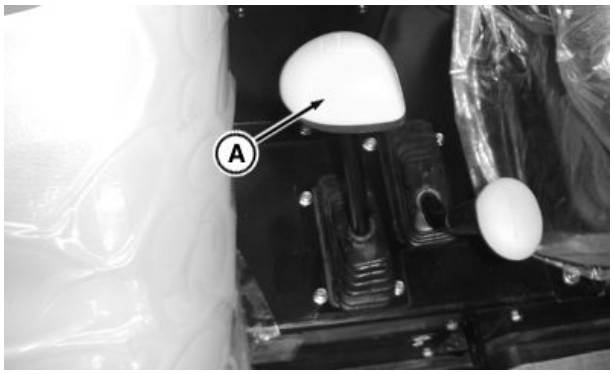
Your John Deere tractor is equipped with interlocks to prevent inadvertent movement when the engine is started. Turning the key switch with the clutch pedal depressed should crank the engine if all of the following conditions exist:

- Gearshift lever (A) in NEUTRAL
- PTO lever (B) in disengaged position

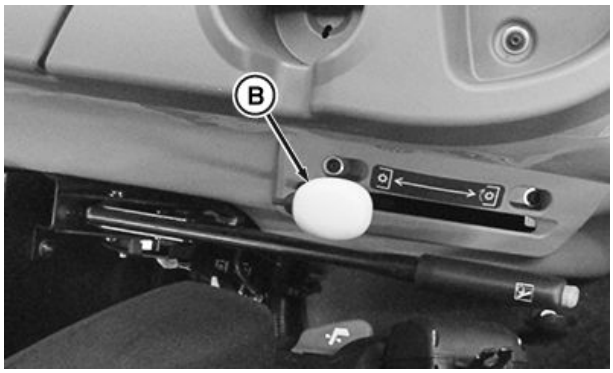
CAUTION: If starter turns engine in any of the following steps, have the neutral start system repaired by your John Deere dealer.

Turning the key switch to the start position should NOT start the engine, if either of the following exist:

- Gearshift lever (A) in gear (not in NEUTRAL position)
- PTO lever (B) in engaged position



PY15602 —UN—20AUG13



PY21302 —UN—29JUL14

A—Gearshift Lever **B—PTO Control Lever**

RM87422,000000C -19-29JUL14-1/1

Check Neutral Start System — PowrReverser™ Transmission (If Equipped)

Service Interval—250 Hours

Transmission Control

1. Make sure that everyone is clear of tractor.
2. Fully depress clutch and brake pedals.
3. Move PowrReverser™ lever (A) to FORWARD or REVERSE position.
4. Start engine. If engine starts in either of these positions, neutral start system should be repaired. See your John Deere dealer **immediately**.

Engine should start with lever in NEUTRAL position only.

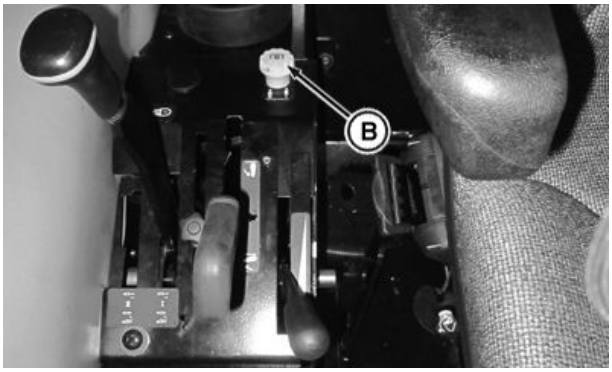
PY18292 —UN—16AUG13

Cab Shown; IOOS is similar

A—PowrReverser Lever

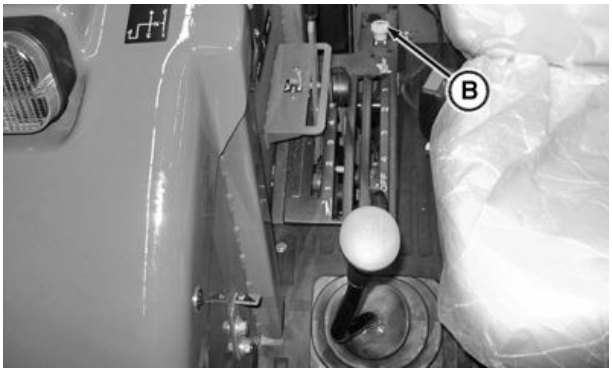
SD74272,00005E8 -19-27JAN15-1/2

PTO Switch



PY18293 —UN—16AUG13

Cab Shown



PY18480 —UN—11JUL14

IOOS Shown

1. Fully depress clutch and brake pedals.
2. **PTO on-off Switch (B):** Pull PTO switch (B) upward to ENGAGED position.

   Cab with PTO on-off Switch (C): Push in PTO switch (C) and then upward to put PTO switch in ENGAGED position.
3. Start engine. If engine starts in this position, neutral start system should be repaired. See your John Deere dealer **immediately**.

Engine should start with PTO switch (B or C) in DISENGAGED position only. (for 9X3 Sync Shuttle Transmission)

NOTE: There are two options for Electro-Hydraulic PTO switch, as shown in graphics with callouts (B) and (C). Refer to the appropriate Electro-Hydraulic PTO switch information as per your tractor configuration.

PY18962 —UN—21MAY14

Cab Shown

B—PTO Switch

C—PTO Switch

SD74272,00005E8 -19-27JAN15-2/2

Inspect Seat Belt

Service Interval—Annually

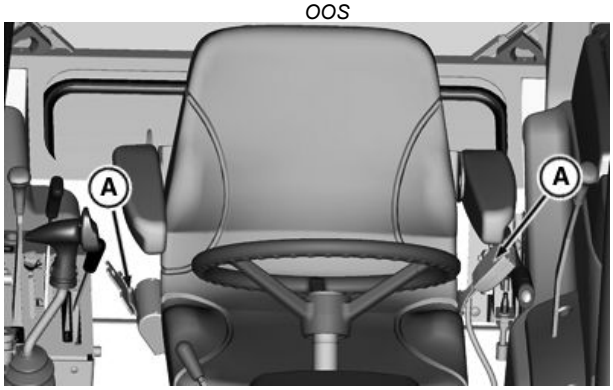
CAUTION: If the seat belt system, including the mounting hardware, buckle, belt or retractor show any sign of damage such as cuts, fraying, extreme or unusual wear, discoloration or abrasion, the entire seat belt system should be replaced immediately. Replace the belt system only with replacement parts approved for your machine.

Inspect seat belts (A) and mounting hardware. If seat belts need to be replaced, see your John Deere dealer.

A—Seat Belt

PY16006 —UN—04JUN12

OOS



PY16097 —UN—22JUN12

Cab

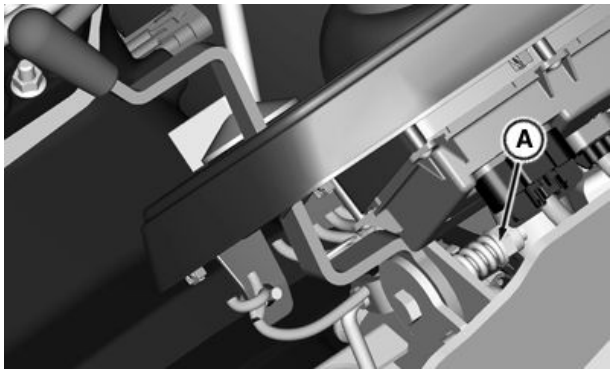
SD74272,00002FC -19-05JUN14-1/1

Adjust Hand Throttle Friction

Adjust spring tension by loosening or tightening cap screw and lock nut (A) until throttle lever movement is smooth throughout range of travel with only slight drag.

Adjust throttle friction cap screw until specified amount of resistance is measured at throttle lever knob.

Specification	
Hand Throttle Friction Cap Screw—Resistance	49 N (11 lb-force)



PY16063 —UN—16JUL12

Under Dashboard

A—Cap Screw and Lock Nut

SV86979,00000E7 -19-11DEC14-1/1

Inspect Tires

Service Interval—Weekly/50 Hours

- Check tires daily for damage or noticeably low pressure.
- Have any cuts or breaks repaired as soon as possible.
- Protect tires from exposure to sunlight, petroleum products and chemicals.
- Drive carefully. Try to avoid rocks and sharp objects.

IMPORTANT: Minimum pressures may be used only for light loads and only if tractor has no added weight. If you install ballast or mounted implements, or if you pull heavy loads, increase pressure.

- Check tires with an accurate gauge having 10 kPa (0.1 bar) (1 psi) graduations. If tires contain liquid ballast, use a special air-water gauge and measure with valve stem positioned toward bottom.

Refer to TIRE INFLATION PRESSURE CHART in Wheels, Tires and Treads section.

SV86979,00000E8 -19-22AUG12-1/1

Clean Cab Air Filters

Service Interval—500 hours*
** Interval can vary according to operating conditions*

Recirculation Filters (Inside Cab)

CAUTION: The air filters are not designed to filter out harmful chemicals. Follow the instructions in the implement operator manual and chemical manufacturer when using agricultural chemicals.

NOTE: There are filters on both sides of cab. Left-hand side is shown.

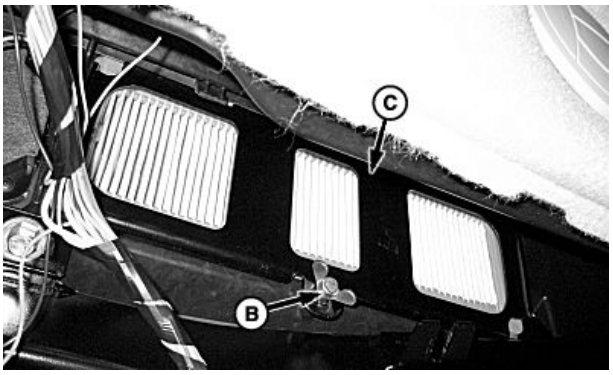
1. Pry off cover (A). (Pull down along window.)
2. Remove wing screw (B), filter retainer (C), and filter (D).
3. Inspect filter for holes or damage. Inspect rubber seal for cracks or wear. Replace as necessary.

NOTE: Do NOT clean filter with water or compressed air. Cleaning the filter is not recommended and it must be replaced as needed.

4. Replace filter when it becomes dirty. It can require replacing filter more often in dusty conditions.
5. Install filter with a rubber seal toward the filter retainer (C).
6. Install filter retainer (C) , wing screw (B), and cover (A).
7. Repeat procedure on the opposite side.

A—Cover
B—Wing Screw
C—Filter Retainer
D—Filter

P14487 —UN—30OCT07



P14488 —UN—30OCT07

P14490 —UN—30OCT07

Continued on next page

SV86979,00002C5 -19-18MAR20-1/2

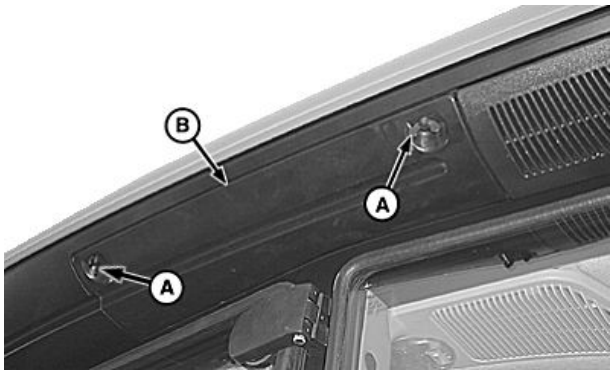
Fresh Air Filters (Outside Cab)

1. Remove two wing screws (A) and cover (B).
2. Remove wing screws (C), filter retainer (D), and filter (E).
3. Inspect filter (E) for holes or damage. Inspect rubber seal for cracks or wear. Replace as necessary.

NOTE: Do not clean filter with water or compressed air. Cleaning the filter is not recommended and it must be replaced as needed.

4. Replace filter when it becomes dirty. It requires replacing filter more often in dusty conditions.
5. Install filter (E) with a rubber seal toward cab.
6. Install filter retainer (D) and wing screws (A).
7. Install cover and wing screws (A).
8. Repeat procedure on the opposite side.

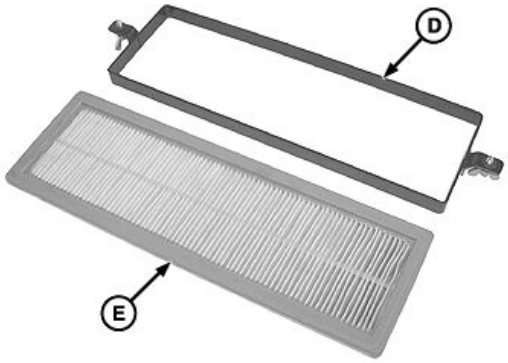
A—Wing Screw
B—Filter Cover
C—Wing Screw
D—Filter Retainer
E—Filter



P14491 —UN—30OCT07

Under Roof, Above Cab Door

P14489 —UN—30OCT07



P14492 —UN—30OCT07

SV86979,00002C5 -19-18MAR20-2/2

Service Air Conditioner (If Equipped)

CAUTION: Refrigerants are under pressure. Improper servicing can cause refrigerant to penetrate eyes and skin or cause burns.

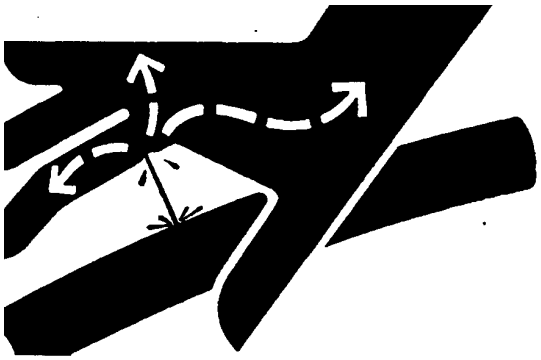
IMPORTANT: R-134a refrigerant must be used. It requires special equipment and procedures. See nearest John Deere dealer.

NOTE: Some oil seepage from the compressor shaft seal is normal.

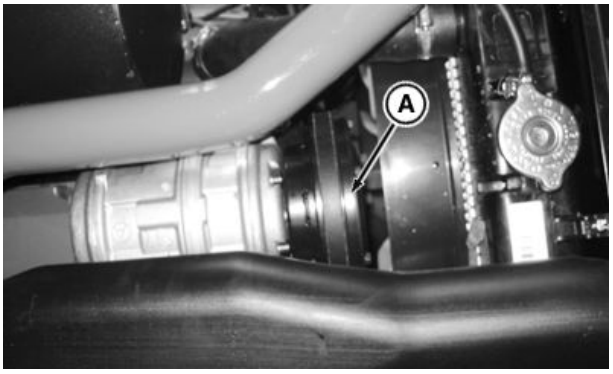
Check the following if air conditioner is not cooling, or if cooling is intermittent:

- If clutch of air conditioner slips after tractor has been in storage, compressor can be stuck. STOP engine and turn key switch to OFF position. Remove cap screws and compressor clutch cover (A). Rotate clutch hub back and forth to free compressor.

A— Compressor Clutch Cover



X9811 —UN—23AUG88

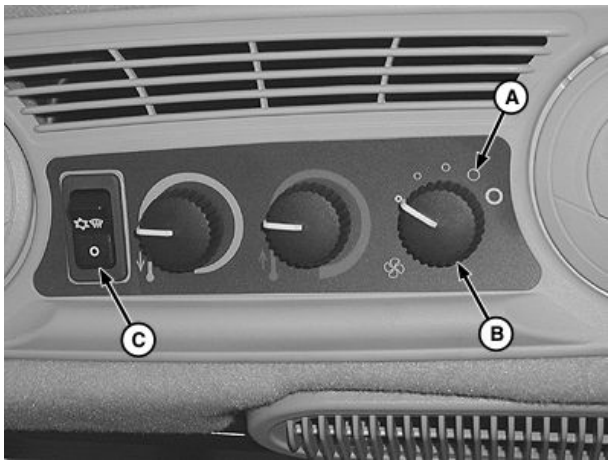


PY16227 —UN—20AUG13

SV86979,00000EB -19-18MAR20-1/2

- Run engine at 2000 rpm. Push top half of air conditioner and defrost switch (C) and set blower control knob (B) to high position (A). If air flow is not cool, system can be low on refrigerant. See nearest John Deere dealer.
- If cooling is intermittent, clean front grille, side vents, radiator, and condenser . If the problem is not solved, see nearest John Deere dealer.
- Inspect operator enclosure (cab) filters for restriction. (See Clean Cab Air Filters in this section). If the problem persists, see nearest John Deere dealer.

A—High Position
B—Blower Control Knob
C—Air Conditioner and Defrost Switch



LV8577 —UN—14AUG03

SV86979,00000EB -19-18MAR20-2/2

Cleaning Engine Compartment

Clean as necessary, especially around potential hot spots such as turbocharger, exhaust manifold and muffler.

IMPORTANT: DO NOT use steam cleaner or high pressure washer in area of fan drive. High pressure could force dirt past seals in drive hub.

Never steam clean or pour cold water on an injection pump that is operating or hot. Pump could seize.

SV86979,00000EC -19-22AUG12-1/1

Keep ROPS Installed Properly (IOOS)

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 are impaired if ROPS is subjected to structural damage, as in an overturn incident, or is in anyway 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.

When installation of equipment on a machine necessitates loosening or removing Roll-Over Protective Structure (ROPS) (A), mounting bolts (B) should be tightened to specification.

Specification	
ROPS Mounting Bolts—Torque	420 N·m (310 lb.-ft.)

Inspect ROPS mounting hardware every 250 hours for proper torque or replacement.

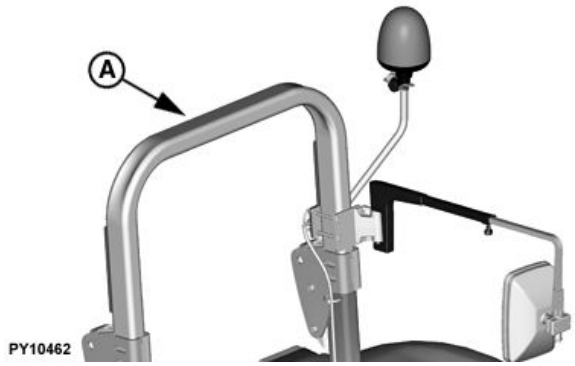
TO LOWER ROPS CROSSBAR (A):

1. Remove quick-lock pins (D) and headed pins (C) on both side of ROPS.
2. Lower crossbar (A) of ROPS onto stops.
3. Reinstall pins (C and D) into bottom holes in ROPS to lock down crossbar.

CAUTION: Always keep upper part of ROPS pinned in vertical position (as pictured) when operating tractor. If tractor is operated with ROPS folded (for example, to enter a low building) drive with extreme caution and DO NOT use seat belt.

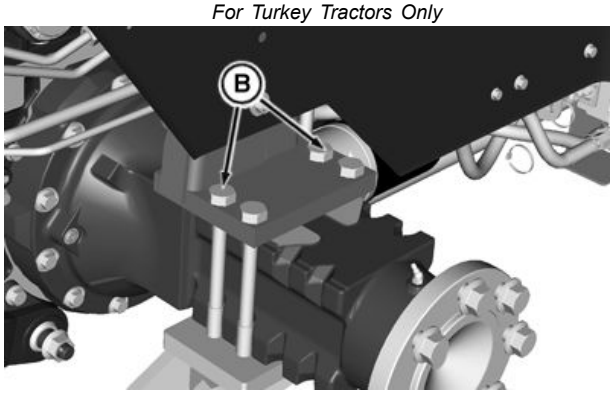
Fold the ROPS up again as soon as the tractor is operated under normal conditions.

A—ROPS Crossbar
B—Mounting Bolts (8 used)
C—Headed Pins (2 used)
D—Quick-Lock Pin

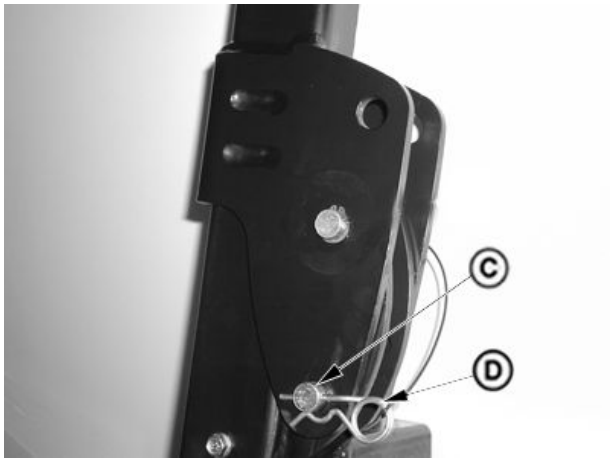


PY10462 —UN—06MAY10

For Turkey Tractors Only



PY18360 —UN—01APR14



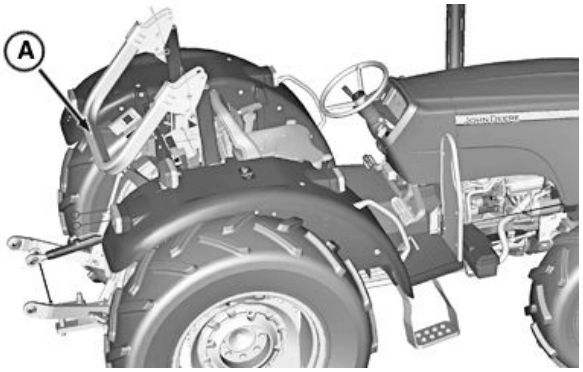
PY4049 —UN—22SEP06

Continued on next page

TO PUT ROPS IN OPERATING POSITION:

Lift crossbar (A) of ROPS to vertical position. Install pins (C) and quick-lock pins (D) into bottom holes in ROPS to lock in position.

A—ROPS Crossbar



PY18481 —UN—11JUL14

MP73369,0000097 -19-13JAN16-2/2

Use Correct Lubricant

IMPORTANT: Use only lubricants meeting specifications outlined in Fuels, Lubricants and Coolant section when performing tractor service.

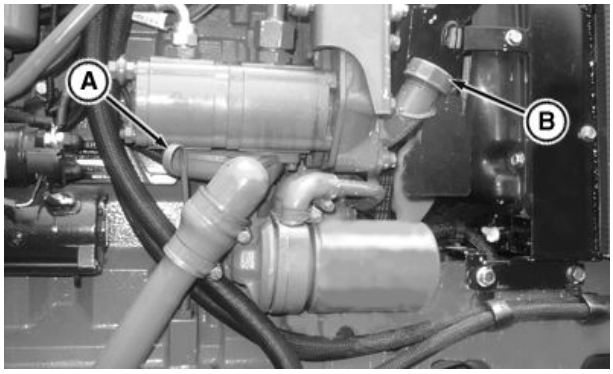
SV86979,00000F0 -19-22AUG12-1/1

Check Engine Oil Level

NOTE: Make sure to insert dipstick all the way in to check oil level.

1. Park tractor on level ground and shut off engine. Remove key.
2. Pull out Engine oil dipstick (A). Oil level should be between two marks on dipstick.
3. If level is low, add oil through oil filler hole until even with upper mark. DO NOT overfill. Use seasonal viscosity grade oil. (See Fuels, Lubricants and Coolant section.)

IMPORTANT: Do not operate engine with oil level below low mark on dipstick.



PY16233 —UN—14APR14

A—Engine Oil Dipstick **B—Enigne Oil Filler Cap**

SV86979,00000F1 -19-02JAN13-1/1

Change Engine Oil and Filter

SERVICE INTERVAL

Initial — 100 hours

Regular — 250 hours

IMPORTANT: Change engine oil every 125 hours if diesel fuel has a high sulfur content, refer to Diesel Engine Oil in section 85 Fuel, Lubricants, and Coolant.

NOTE: Engine oil and filter should be changed at least once a year.

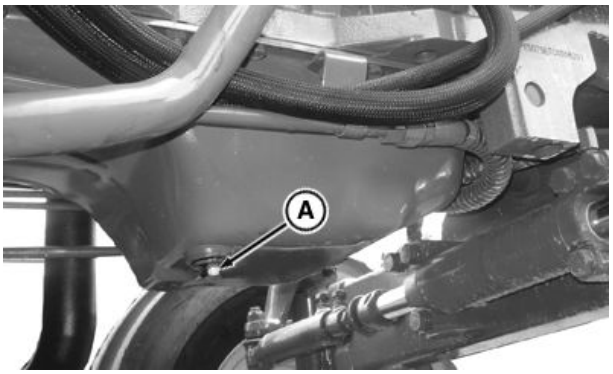
1. Operate engine to warm oil.
2. Park tractor on level ground and SHUT OFF engine. Remove key.
3. Remove oil drain plug (A) and drain oil.
4. Open hood.
5. Remove engine oil filter (B).

NOTE: Make sure that old filter gasket is completely removed from housing before installing new filter.

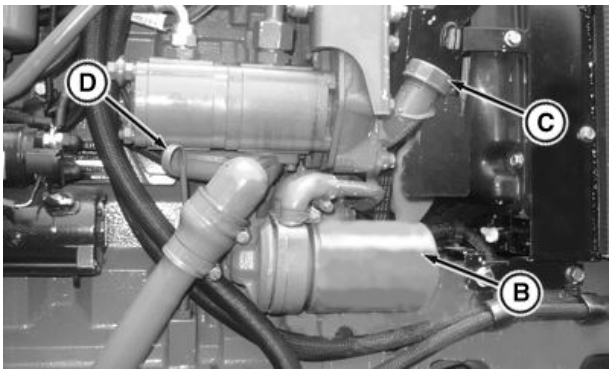
6. Apply a film of oil on new oil filter gasket and install new filter. Hand-tighten plus 1/2 turn.
7. Install drain plug (A).
8. Add oil to filler (C). (See Diesel Engine Oil in section 85 Fuel, Lubricants, and Coolant.)

Specification	
Engine Crankcase Oil—Capacity	8.5 L (9 qt.)

9. Start engine and inspect drain plug (A) and filter (B) for leaks..



PY16302 —UN—17JUL12



PY16301 —UN—17JUL12

A—Drain Plug
B—Engine Oil Filter
C—Engine Oil Filler Cap
D—Dipstick

10. Stop engine and remove key.

NOTE: If oil leaks in excess see your John Deere dealer.

11. Recheck oil level, add if necessary.
12. Lower hood.

SV86979,00002C4 -19-29JAN13-1/1

Check Transmission-Hydraulic Oil Level

Service Interval—Every 50 Hours

IMPORTANT: Routine checks will help prevent downtime. The operator can aid in preventive maintenance by documenting all leak and malfunction problems. Since the transmission operates in oil, it is very important to keep oil clean and at correct level at all times.

1. Operate engine at approximately 1000 rpm for at least one minute.
2. Move rockshaft lever full forward to lower hitch all the way down.
3. Stop engine and wait an additional three minutes before checking oil level.
4. **For Sync Shuttle transmission only :**

   Remove dipstick (A) and wipe it clean. Insert dipstick fully. Oil level should be between full mark and end of dipstick.

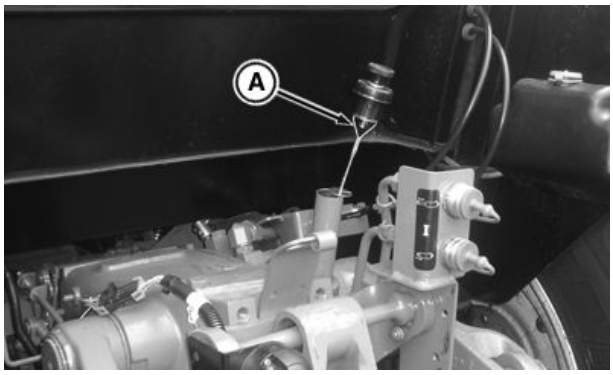
   If oil level is below the lower mark, remove filler cap and add oil.
5. **For PowrReverser™ transmission only :**

   Wipe sight glass clean and check oil level. Oil level should be in between Full mark (B) in upper window and Add mark (C) in lower window.

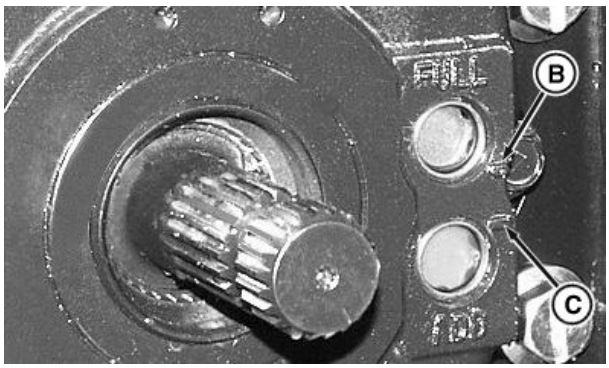
NOTE: As long as Add mark (C) in lower window is full, there is no requirement of oil top up. Full mark (B) in upper window is the full oil level indicator, beyond that oil is not required to be filled.

   Add oil from oil filling port (D) if oil level is low.
6. Install transmission-hydraulic oil filling cap.

A—Transmission-Hydraulic Oil dipstick
B—Full mark/Upper sight glass
C—Add mark/Lower sight glass
D—Transmission-Hydraulic Oil filling port

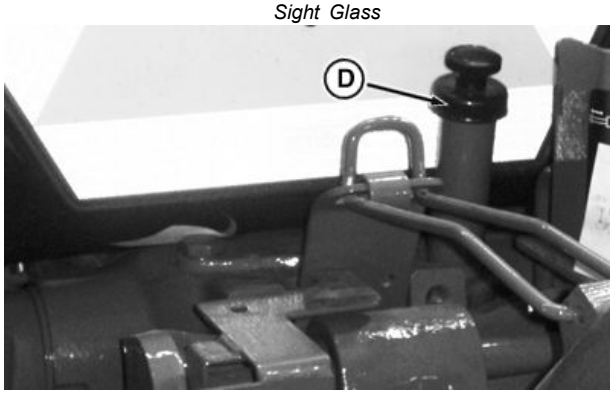


PY16230 —UN—17JUL12



PY17689 —UN—24JAN13

Sight Glass



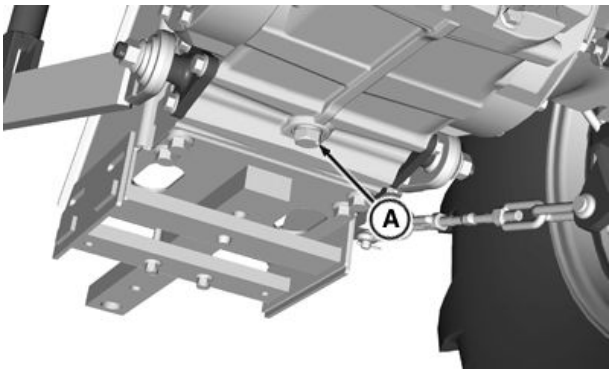
PY16056 —UN—20DEC12

Oil Filling Port

SD74272,0000262 -19-24JAN13-1/1

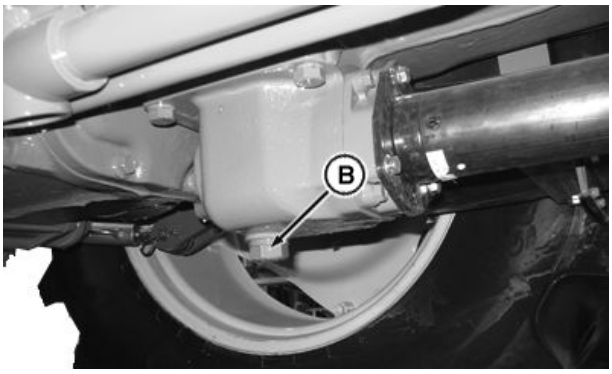
Change Transmission-Hydraulic Oil and Filter

Service Interval—1200 Hours



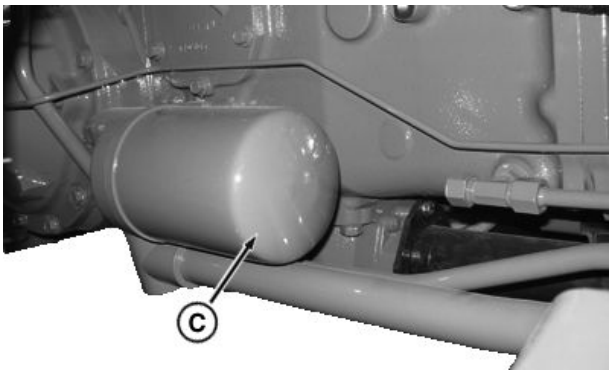
PY16333 —UN—29AUG12

Transmission Drain Plug



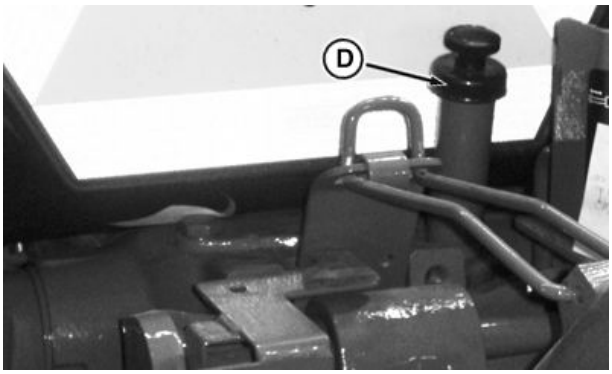
PY16334 —UN—29AUG12

Drop Housing Drain Plug



PY16231 —UN—17JUL12

Oil Filter



PY16056 —UN—20DEC12

Dipstick

A—Transmission Case Drain Plug
B—MFWD Drop Housing Drain Plug
C—Oil Filter
D—Dipstick

1. Lower rockshaft to remove trapped oil.

NOTE: The approximate transmission case oil capacity for Sync Shuttle is 38 L (10 gal) and for PowrReverser™ is 43.5 L (11.54 gal).

2. Remove drain plug (A) from transmission case and drain out oil. Dispose of waste oil properly.
3. If equipped with MFWD axle, also remove drain plug (B) in drop housing.
4. Replace oil filter (C) while changing oil. Apply a film of oil to new filter gasket and install new filter. Hand tighten only.
5. Fill system with transmission-hydraulic oil. (See Fuels, Lubricants and Coolant section.)

Specification	
Sync Shuttle Transmission Oil (MFWD)—Capacity	38 L (10 gal)
PowrReverser Transmission Oil (MFWD)—Capacity	43.5 L (11.54 gal)

6. Check oil level at dipstick (D) or sight glass (If equipped) after filling, and again after operating for five minutes.

PowrReverser is a trademark of Deere & Company

SD74272,0000297 -19-07OCT13-1/1

Clean Transmission-Hydraulic Pickup Screen

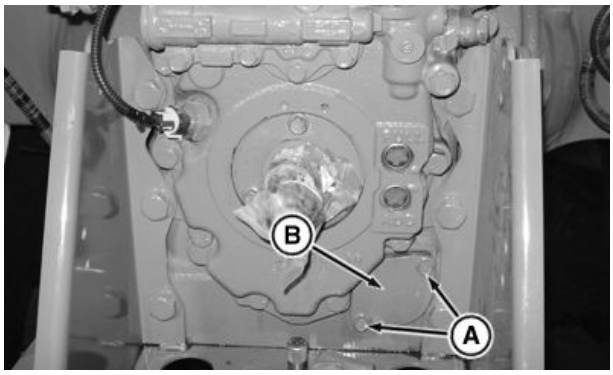
Service Interval—1200 Hours

1. Drain transmission-hydraulic oil. (See Change Transmission-Hydraulic Oil and Filter in this section.)

NOTE: The approximate transmission case oil capacity for Sync Shuttle is 38 L (10 gal) and for PowrReverser™ is 43.5 L (11.54 gal).

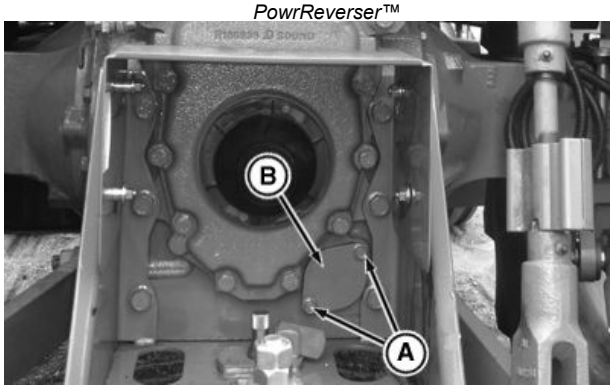
2. Remove two cap screws (A) and remove screen cover (B).
3. Remove screen and examine it for damage. Replace if necessary. Clean screen in solvent and blow dry with compressed air.
4. Carefully install screen so the front of screen is inserted in hole at front of differential case.
5. Fill system with transmission-hydraulic oil. (See Change Transmission-Hydraulic Oil and Filter in this section.)

A—Cap Screws **B—Screen Cover**



PY16070 —UN—16AUG13

PowrReverser™



PY16232 —UN—17JUL12

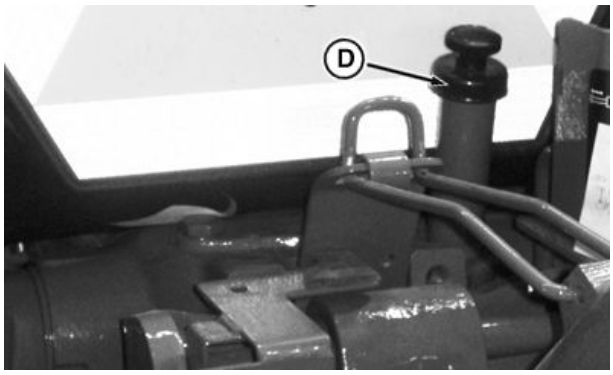
Sync Shuttle

PowrReverser is a trademark of Deere & Company

SD74272,0000298 -19-06SEP13-1/2

6. Check oil level at dipstick (D) or at sight glass (If equipped) after filling, and again after operating for five minutes.

D—Transmission - Hydraulic Oil Dipstick

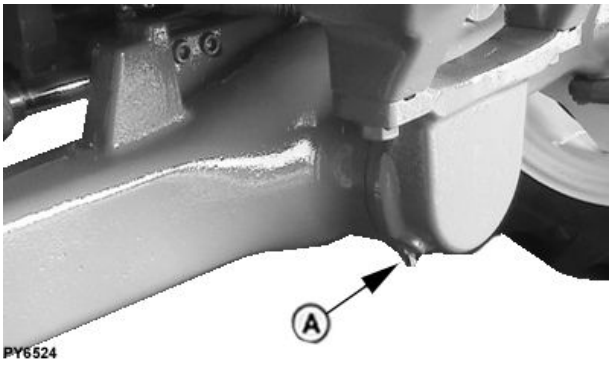


PY16056 —UN—20DEC12

SD74272,0000298 -19-06SEP13-2/2

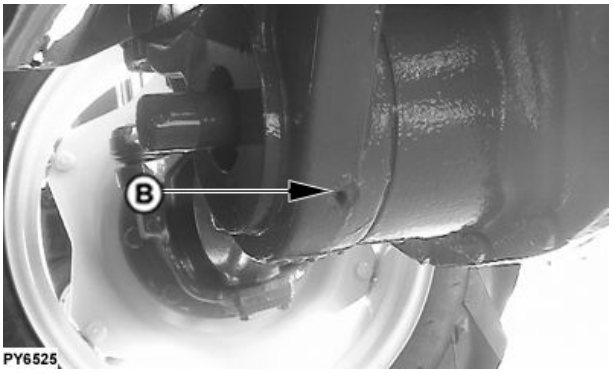
Lubricate Front Axle Pivot Pins

Service Interval—Weekly / 50 Hours*
** Daily / 10 Hours if operated in extremely wet or muddy conditions*



Right Side of MFWD Axle - DANA

PY6524 —UN—06NOV06



Back Side of MFWD Axle - DANA

PY6525 —UN—06NOV06

A—MFWD Front Pivot Jerk **B—MFWD Rear Pivot Jerk**

Lubricate MFWD front pivot (A) and rear pivot (B) with several shots of multipurpose grease. (See Fuels, Lubricants and Coolant section.)

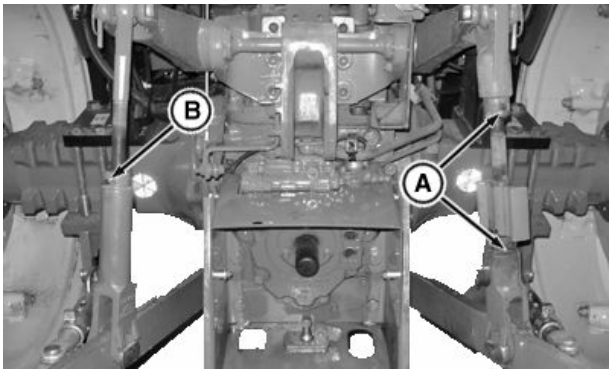
SD74272,0000299 -19-04SEP12-1/1

Lubricate Hitch Components

Lubricate right lift link (A) and left lift link (B) with several shots of multipurpose grease. (See Fuels, Lubricants and Coolant section.)

Service Interval—250 Hours

A—Right Lift Link **B—Left Lift Link**



PY18482 —UN—11JUL14

SV86979,00000F9 -19-10JUL14-1/1

Check MFWD Axle Wheel Hub Oil Level

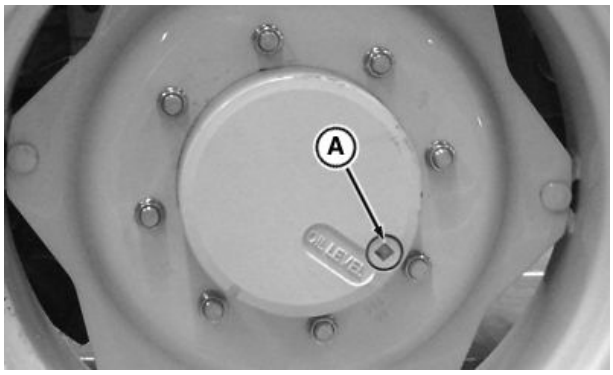
Service Interval—50 Hours

1. Park tractor on level surface.
2. Turn wheel hubs until the words OIL LEVEL are horizontal.
3. Remove plug (A). Oil level should be just below plug hole.
4. If low, add oil through same hole. Add John DeereHy-Gard™ Transmission/Hydraulic Oil. (See Fuels, Lubricants and Coolant section.)
5. Install plug and tighten to specifications.

Specification	
Plug-to-Hub—Torque	150 N·m (110 lb-ft)

6. Repeat procedure on opposite wheel hub.

Hy-Gard is a trademark of Deere & Company



PY16236 —UN—17JUL12

A—Plug

SV86979,00000FA -19-01OCT13-1/1

Change MFWD Axle Wheel Hub Oil

Service Interval

Regular—600 hours

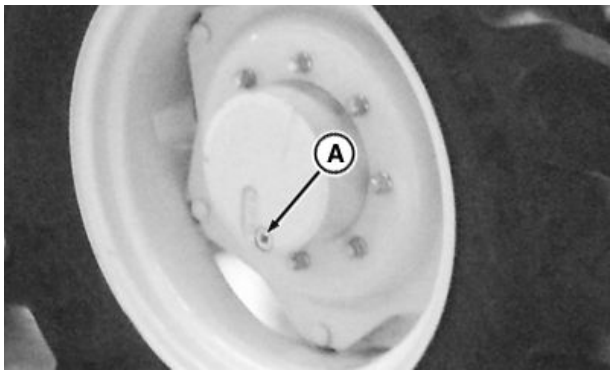
NOTE: Approximate wheel hub oil level (Each Side) is 0.8 L (0.21 gal.).

1. Park tractor on level surface.
2. Rotate wheel until drain or fill port plug (A) is at bottom of hub.
3. Remove plug and drain oil.

NOTE: Collect the drained oil in a suitable container and dispose off appropriately.

4. After oil has drained, rotate wheel until drain or fill port is positioned horizontally.
5. Add oil until level is just below edge of hole. John Deere Standard Hy-Gard™ Transmission/Hydraulic Oil is recommended. (See Fuels, Lubricants and Coolant section.)
6. Install plug and tighten to specifications.

Hy-Gard is a trademark of Deere & Company



PY16237 —UN—17JUL12

A— Drain or Fill Port Plug

Specification	
Plug-to-Hub—Torque	150 N·m (110 lb.-ft.)

7. Repeat procedure on opposite wheel hub.

SV86979,00002C3 -19-01OCT13-1/1

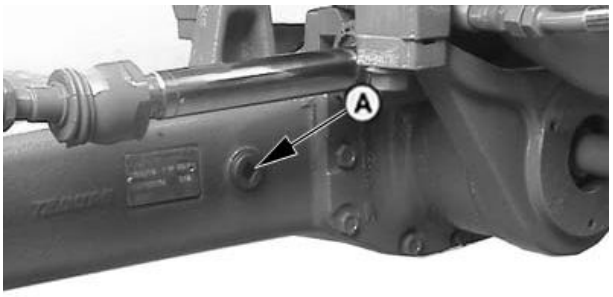
Check MFWD Axle Housing Oil Level

Service Interval—50 Hours

1. Park tractor on level surface.
2. Remove plug (A). Oil level should be approximately 12 mm (1/2 in.) below edge of plug hole.
3. If low, add oil through same hole. John Deere Hy-Gard™ Transmission/Hydraulic Oil is recommended. (See Fuels, Lubricants and Coolant section.)
4. Install plug and tighten to specifications.

Specification	
Plug-to-Axle Housing—Torque	150 N·m (110 lb-ft)

Hy-Gard is a trademark of Deere & Company



PY6507

PY6507 —UN—06NOV06

A—Plug

SV86979,00000FC -19-01OCT13-1/1

Change MFWD Axle Housing Oil

Service Interval

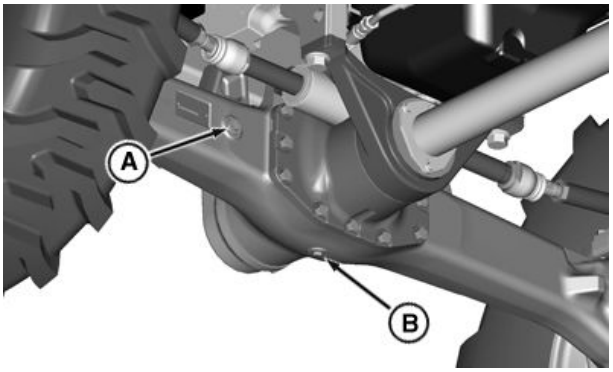
Regular—600 Hours

NOTE: Approximate wheel hub oil level is 4.5 L (1.19 gal).

1. Park tractor on level surface.
2. Remove plugs (A and B).
3. After oil has drained, apply pipe sealant with TEFLON®, or equivalent, to threads of plug (B).
4. Install plug and tighten to specifications.
5. Add oil until approximately 12 mm (1/2 in.) below edge of plug port (A). John Deere Hy-Gard™ Transmission/Hydraulic Oil is recommended. (See Fuels, Lubricants and Coolant section.)
6. Install plug and tighten to specifications.

Specification	
Plugs-to-Axle Housing—Torque	150 N·m (110 lb-ft)

TEFLON is a trademark of Du Pont Co.
Hy-Gard is a trademark of Deere & Company



PY16238 —UN—17JUL12

A—Inspection/Fill Plug **B—Drain Plug**

IMPORTANT: To avoid damage to internal axle components, check oil level after 30 minutes.

7. After approximately 30 minutes of operation, recheck oil level. (See procedure in this section.)

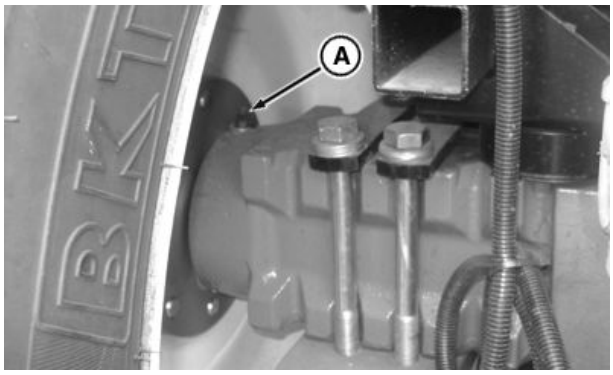
SV86979,00000FD -19-01OCT13-1/1

Lubricate Rear Axle Bearings

Lubricate rear axle fittings (A), both sides, with several shots of multi-purpose grease. (See Fuels, Lubricants and Coolant section.)

Service Interval—600 Hours*
** Weekly / 50 Hours if operated in extremely wet or muddy conditions*

A—Rear Axle Fittings



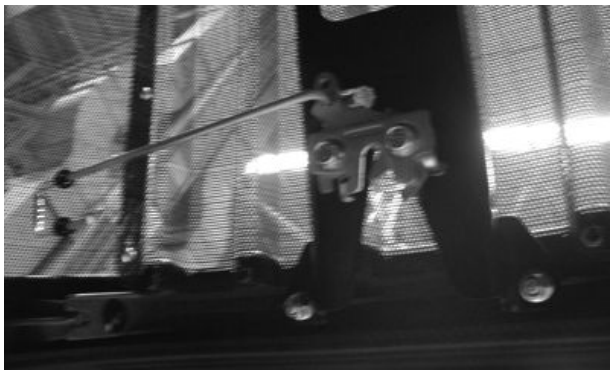
PY16239 —UN—17JUL12

Left-Hand Side Shown

SV86979,00000FF -19-22AUG12-1/1

Lubricate Hood Latch

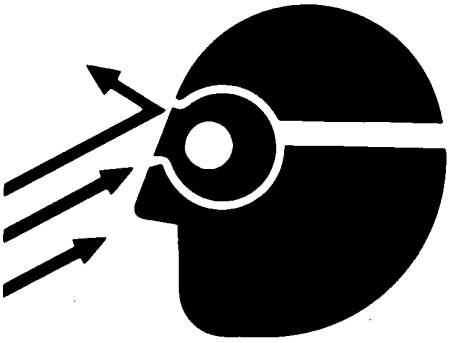
NOTE: This procedure is only necessary after pressure washing.



PY16241 —UN—17JUL12

SV86979,0000101 -19-22AUG12-1/1

Clean Grille, Radiator, Charge Air Cooler (CAC), and Fuel Cooler (SyncShuttle)



TS266 —UN—23AUG88

PY8840 —UN—21JUN09

A—Grille

1. Whenever dirt builds up on front grille (A), stop engine and brush clean.

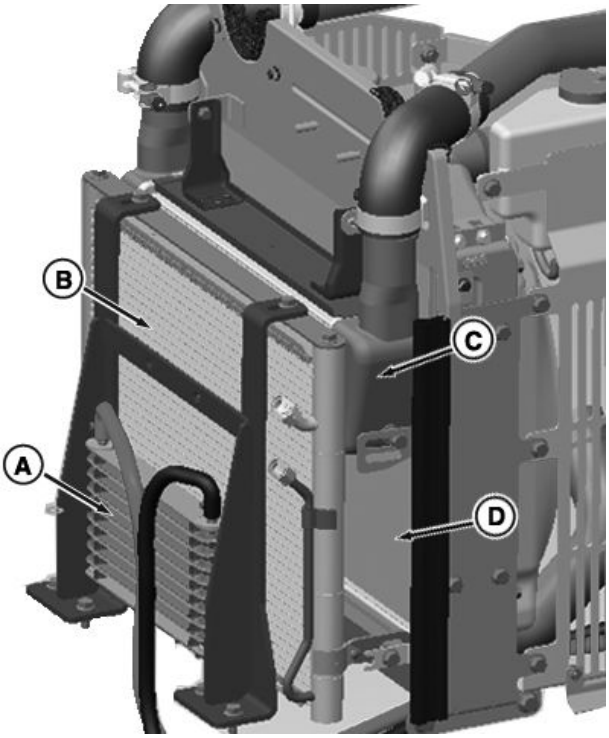
⚠ CAUTION: Reduce compressed air to less than 210 kPa (2 bar) (30 psi) when using for cleaning purposes. Clear area of bystanders, guard against flying chips, and wear personal protection equipment including eye protection.

Continued on next page

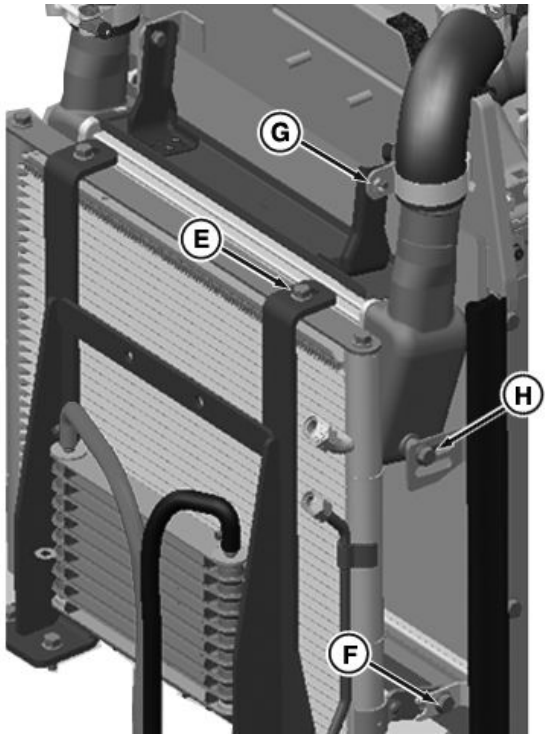
SV86979,0000137 -19-25FEB15-1/2

2. Clean fuel cooler (A) and front of the condenser (B) at the installed condition.
3. Loosen the screws (E) and (F). Slide the condenser (B) along the slot at screw (F).
4. Clean the front of the charge air cooler (C).
5. Loosen the screws (G) and (H). Tilt charge air cooler about screw (G) until it is close to condenser (B).
6. Clean radiator (D) front surface.
7. If a more thorough cleaning is necessary, clean radiator from behind with compressed air or water. Straighten any bent fins.

A—Fuel Cooler (only for 5075E)
B—Condenser
C—Charge Air Cooler
D—Radiator
E—Screws (2 used)
F—Screws (2 used)
G—Screws (2 used)
H—Screws (2 used)



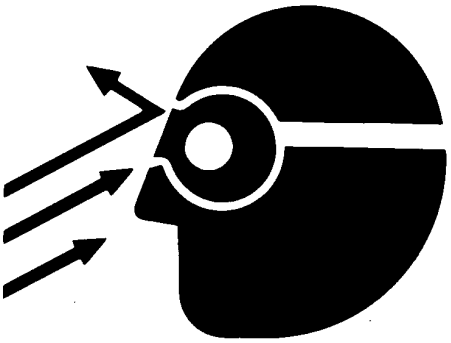
PY18783 —UN—17SEP13



PY18784 —UN—17SEP13

SV86979,0000137 -19-25FEB15-2/2

Clean Grille, Radiator, Charge Air Cooler (CAC), Oil Cooler and Fuel Cooler (PowrReverser™)



TS266 —UN—23AUG88

PY8840 —UN—21JUN09

A—Grille

Whenever dirt builds up on front grille (A), stop engine and brush clean.

⚠ CAUTION: Reduce compressed air 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.

PowrReverser is a trademark of Deere & Company

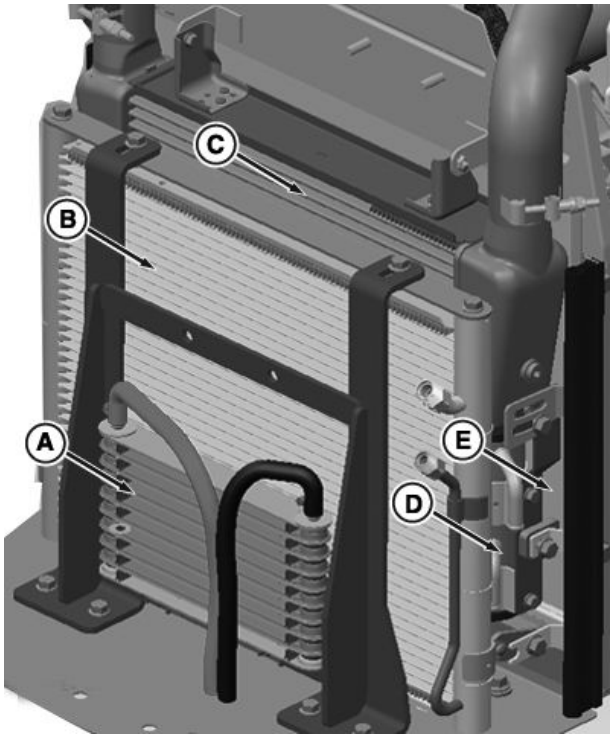
Continued on next page

SK35149,0000306 -19-10JUL14-1/3

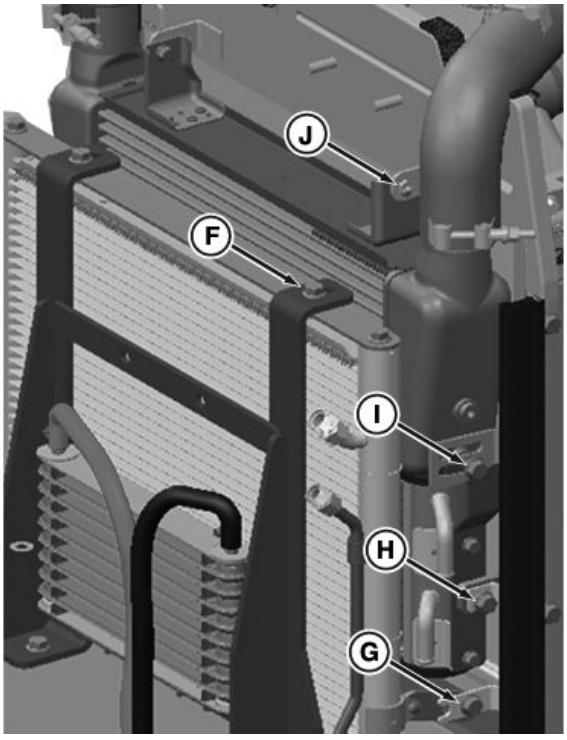
For Cab

1. Clean fuel cooler (A) and front of the condenser (B) at the installed condition.
2. Loosen the screws (F) and (G). Slide the condenser (B) along the slot at screw (G).
3. Clean the front of the charge air cooler (C) and oil cooler (D).
4. Loosen the screws (J) and (I). Tilt charge air cooler about screw (J) until it is close to condenser (B).
5. Remove Screws (H) and slide the oil cooler (D) close to condenser (B).
6. Clean radiator (E) front surface.
7. If a more thorough cleaning is necessary, clean radiator from behind with compressed air or water. Straighten any bent fins.

A—Fuel Cooler (only for 5075E)
B—Condenser
C—Charge Air Cooler
D—Oil Cooler
E—Radiator
F—Screws (2 used)
G—Screws (2 used)
H—Screws (2 used)
I— Screws (2 used)
J—Screws (2 used)



PY18785 —UN—17SEP13



PY18786 —UN—17SEP13

Continued on next page

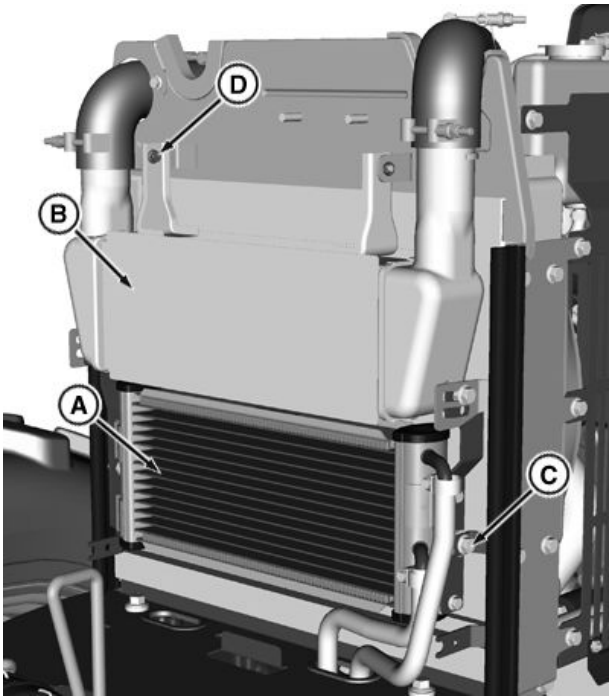
SK35149,0000306 -19-10JUL14-2/3

For IOOS

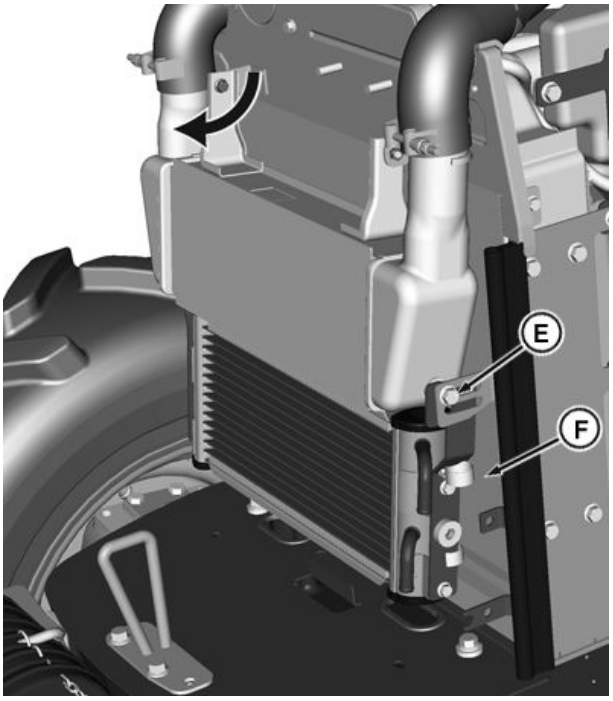
1. Clean front surface of oil cooler (A) and charge air cooler (B) at the installed position.
2. Remove cap screw (C) from both sides.
3. Loosen the cap screws (E) and screws (D). Slide the charge air cooler (B) along the slot at cap screws (E).

   Tilt charge air cooler about screw (D) until it is restricted.
4. Clean radiator (F) front surface.
5. If a more thorough cleaning is necessary, clean radiator from behind with compressed air or water. Straighten any bent fins.

A—Oil Cooler
B—Charge Air Cooler
C—Cap Screw (2 Used)
D—Screws (2 Used)
E—Cap Screws (2 Used)
F—Radiator



PY18483 —UN—11JUL14



PY18484 —UN—11JUL14

SK35149,0000306 -19-10JUL14-3/3

Check Coolant Level

Service Interval—Daily / 10 Hours

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

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

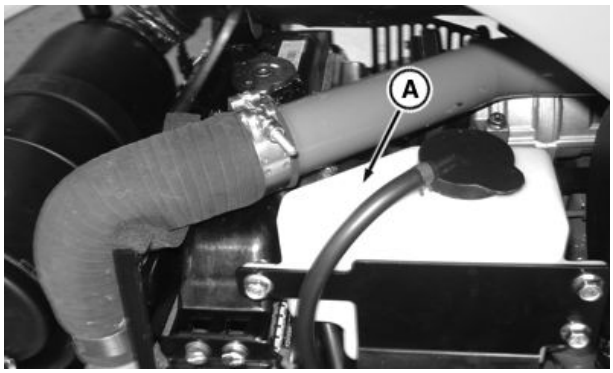
Never pour cold water into the cooling system of a hot engine, as it might crack cylinder block or head. Do not operate engine without coolant for even a few minutes.

1. Raise hood.

NOTE: Coolant level should be checked when engine is COOL.

2. Check level in coolant reservoir (A) BEFORE starting tractor.
3. If engine is COOL and level is below **MIN COLD** mark, remove cap and add coolant to reservoir to bring level between **MIN** and **MAX COLD** mark.
4. Install cap and lower hood.

TS281 —UN—15APR13



PY16246 —UN—20AUG13

A—Coolant Reservoir

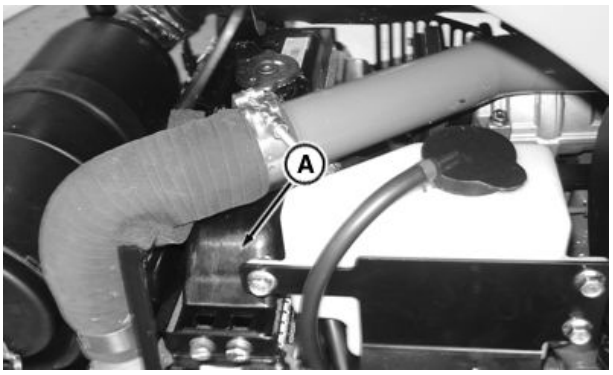
SV86979,000010A -19-20JUN16-1/1

Check Cooling System for Leaks

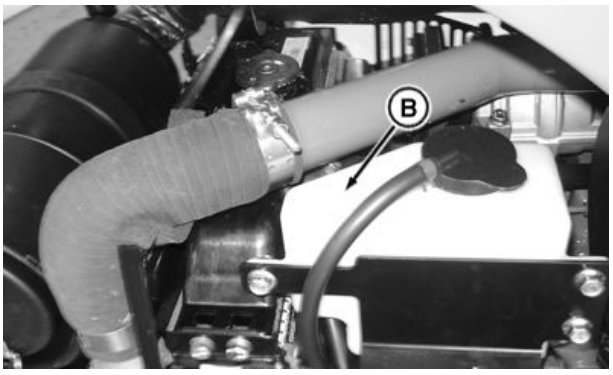
Service Interval—600 Hours

1. Check around base of radiator (A) for pinholes, cracks or any sign of coolant leakage.
2. Inspect coolant reservoir (B) for holes, cracks or any sign of coolant leakage.
3. Inspect area around thermostat housing (C) for cracks, or any sign of coolant leakage.

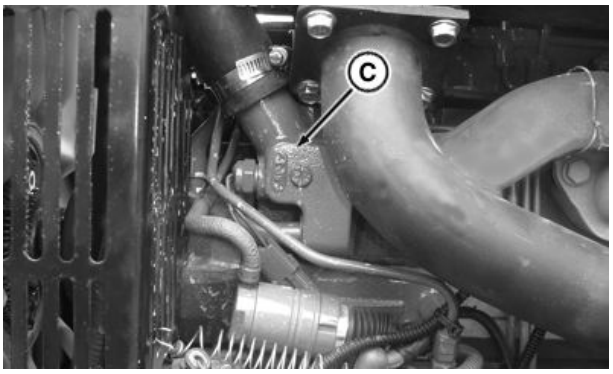
A—Radiator
B—Coolant Reservoir
C—Thermostat Housing



PY16247 —UN—20AUG13



PY16248 —UN—20AUG13



PY16249 —UN—18JUL12

SV86979,000010B -19-23AUG12-1/1

Flush Cooling System and Replace Thermostat

Service Interval —2000 Hours / 2 Years*

**** 5000 hours / 5 Years** if John Deere COOL-GARD is used.*

Have your John Deere dealer drain old coolant, flush the entire system, install new thermostat and fill with clean antifreeze solution.

SV86979,000010C -19-23AUG12-1/1

Flush Cooling System

For efficient operation, drain old coolant, flush the entire system, and fill with clean antifreeze solution at least once every two years.

CAUTION: DO NOT remove radiator cap or drain coolant until coolant is cold (temperature gauge should be below the green striped zone). Always loosen radiator cap or drain cock slowly to relieve any excess pressure.

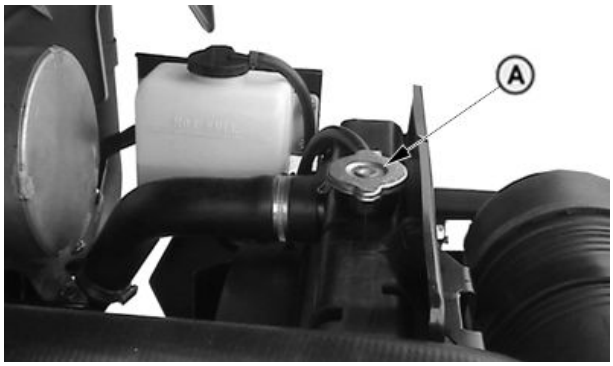
1. Drain coolant - Remove radiator cap (A). Open drain valve (B) on radiator and drain coolant from radiator. Drain coolant from engine block.

IMPORTANT: Thermostat must be removed to ensure a thorough flush.

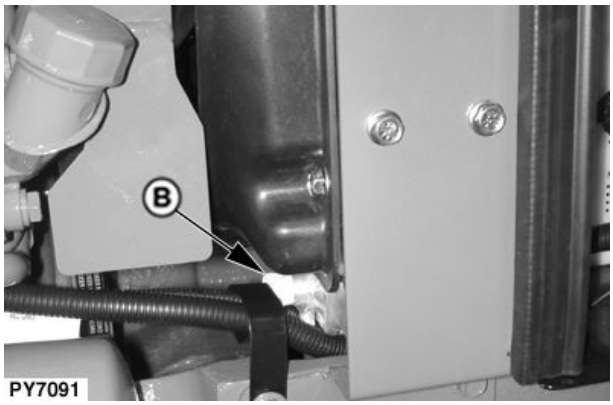
2. Remove thermostat cover (D), remove thermostat, and install cover (without thermostat). Tighten cap screws to specification.

Specification	
Thermostat Cover Cap Screws—Torque	47 N·m (35 lb-ft)

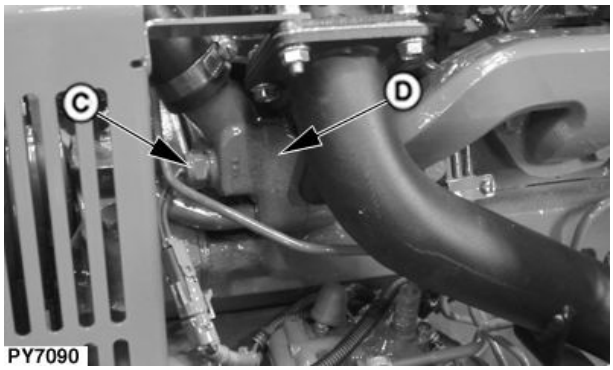
3. Flush system with water - Close all drain valves/plugs and fill system with clean water. Run engine about 10 minutes to stir up possible rust or sediment. Stop engine and drain water from system before rust and sediment settle.
4. Flush system with radiator cleaner - Close all drain valve/plugs, reinstall cold start aid switch (C) and fill the cooling system with a good commercial radiator cleaner and water. Follow instructions provided with cleaner. Stop engine and immediately drain system.
5. Flush system with water - Close all drain valves/plugs, reinstall cold start aid switch (C) and fill with clean water to flush the system. Run the engine about 10 minutes, then drain out flushing water.



PY4157 —UN—28AUG04



PY7091 —UN—28JUN07



PY7090 —UN—28JUN07

A—Radiator Cap
B—Drain Valve
C—Cold Start Aid Switch
D—Thermostat Cover

Continued on next page

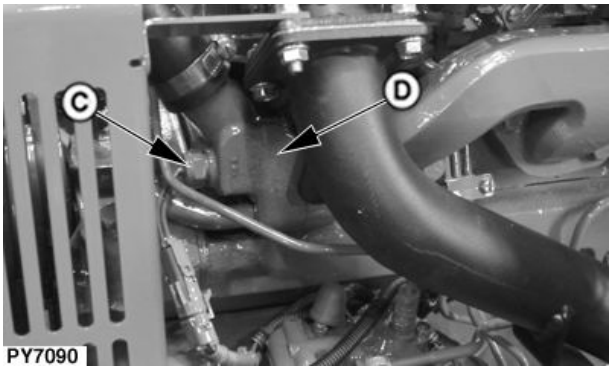
SV86979,000010D -19-27DEC12-1/2

6. Remove thermostat cover (D) and clean off the gasket material. Apply gasket sealant to new gasket and install thermostat and cover. Tighten cap screws to specification.

Specification

Thermostat Cover Cap Screws—Torque..... 47 N·m (35 lb-ft)

7. Fill with fresh coolant - Close all drain valves/plugs and fill with a mixture of antifreeze, soft water, and coolant conditioner as specified in the Fuels, Lubricants, and Coolant section.
8. Check coolant level - Fill radiator to the top of the filler neck and fill the recovery tank to the “LOW” mark. Run the engine until operating temperature is reached. Let the engine cool (preferably overnight) and recheck the coolant level. Coolant level with a cold engine should be at the “LOW” mark. An engine at operating temperature should have a coolant level at the “FULL” mark. When filling the cooling system it may require several operating/cooling periods to stabilize the coolant level in the system. Add make-up coolant to the recovery tank as needed to bring the coolant level to the correct mark.



PY7090 —UN—28JUN07

C—Cold Start Aid Switch **D—Thermostat Cover**

SV86979,000010D -19-27DEC12-2/2

Winterize Cooling System

IMPORTANT: Draining cooling system WILL NOT protect against freezing if antifreeze is weak, since system does not drain completely.

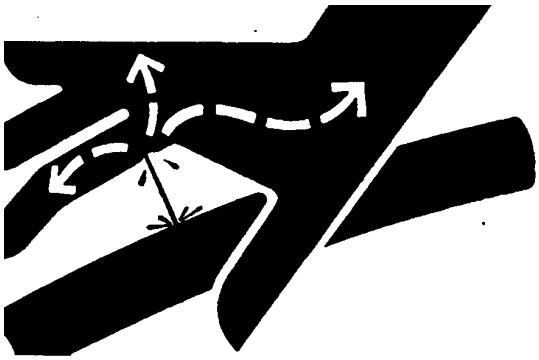
1. Prior to cold weather, be sure cooling system contains 50 to 67 percent antifreeze. (See Engine Coolant in Fuels, Lubricants, and Coolant section.)
2. After adding antifreeze, run engine until it reaches operating temperature. This mixes solution uniformly and circulates it through the entire system.

SV86979,000010E -19-23AUG12-1/1

Do Not Modify Fuel System

CAUTION: Escaping fluid under pressure can penetrate the skin, causing serious injury. Avoid the hazard by relieving system pressure before disconnecting pressurized lines. 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 from Deere & Company Medical Department in Moline, Illinois, U.S.A.



X9811 —UN—23AUG88

IMPORTANT: Use only Fuel outlined in "Fuels, Lubricants and Coolant" section.

Modification or alteration of the injection pump, the injection pump timing, or the fuel injectors in ways not recommended by the manufacturer will terminate the warranty obligation to the purchaser. (See warranty information inside front cover.)

Do not attempt to service injection pump or fuel injectors yourself. Special training and special tools are required. (See your John Deere dealer.)

SV86979,000010F -19-23AUG12-1/1

Drain Water and Sediment From Fuel Tank and Fuel Filter

Service Interval—Daily / 10 Hours

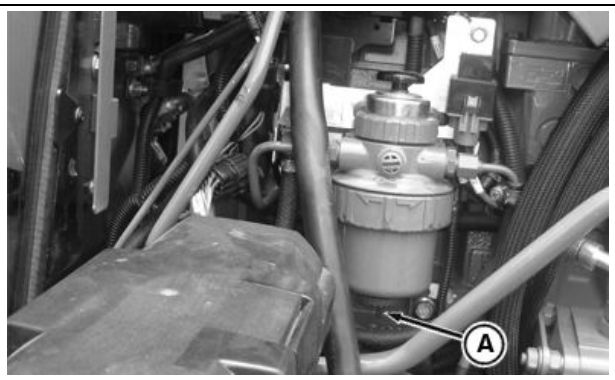
CAUTION: Never open the fuel system when engine is hot. Handle fuel with care, it is highly flammable. Do not replace fuel filter while smoking or when near open flame or sparks.

NOTE: Place a small container under drain fitting to catch draining fuel. Dispose of waste properly.

IMPORTANT: The fuel filter must be drained when water or debris are evident in the sediment bowl. If this reoccurs more than three days in a row then drain the sediment from the fuel tank.

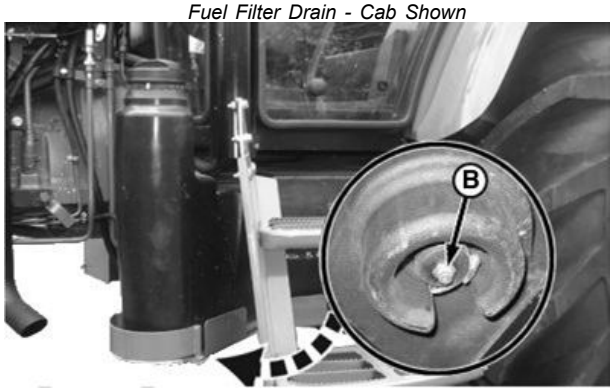
1. Open fuel filter drain plug (A) to bleed accumulated moisture and sediment from filter. Tighten drain when clear fuel runs from drain.
2. If water was present in fuel filter, open fuel tank drain plug (B) to bleed accumulated moisture and sediment from the fuel tank. After draining off any water deposits, retighten drain plug (B).

A—Fuel Filter Drain Plug **B—Fuel Tank Drain Plug**



PY16250 —UN—02JAN13

Fuel Filter Drain - Cab Shown



PY15700 —UN—02JAN13

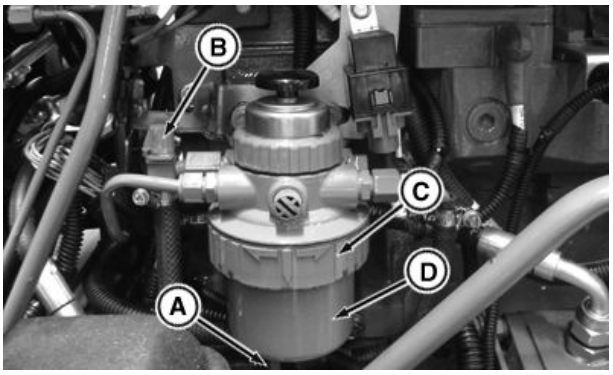
Fuel Tank Bottom - Cab Shown

SV86979,00002F5 -19-10JUL14-1/1

Replace Fuel Filter / Water Separator

Service Interval—500 Hours

1. Connect a drain line to drain port (A) and place a suitable container under drain.
2. Close fuel shut-off (B).
3. Loosen drain port and drain fuel from filter.
4. Loosen retaining ring (C) and fuel filter (D) and filter seal.
5. Discard old filter. Inspect filter seal for cracks, breaks or other signs of leaking. Replace as necessary.
6. Install new filter and seal. Tighten retaining ring until it snaps into place. Do not overtighten.
7. Bleed fuel system. (See procedure in this section.)



PY16252 —UN—18JUL12

A—Drain Port
B—Fuel Shut Off
C—Retaining Ring
D—Fuel Filter

SV86979,0000112 -19-02JAN13-1/1

Bleed Fuel System

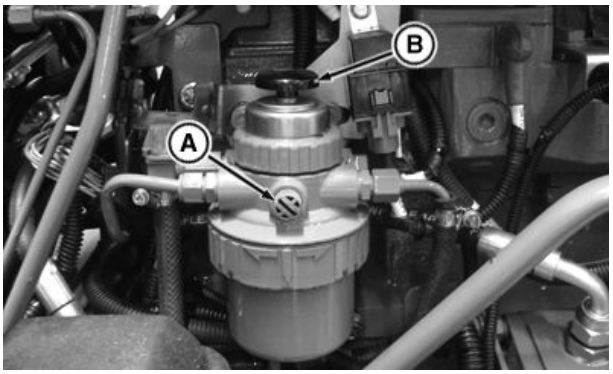
IMPORTANT: Any time the fuel system has been opened up for service (lines disconnected or filters removed), it will be necessary to bleed air from the system.

NOTE: A second person will be needed for the following procedure.

The fuel system can be bled at two locations:
- Fuel Filter
- Fuel Injection Pump

Fuel Filter

1. Open bleed vent screw (A).
2. Pump hand primer (B) until fuel runs out smoothly without spiting.
3. When no air bubbles are seen close vent screw.
4. Pump the hand primer until resistance is felt.
5. Repeat until no air bubbles flow from vent screw.



PY16253 —UN—18JUL12

Cab Shown; IOOS Similar

A—Bleed Vent Screw
B—Hand Primer

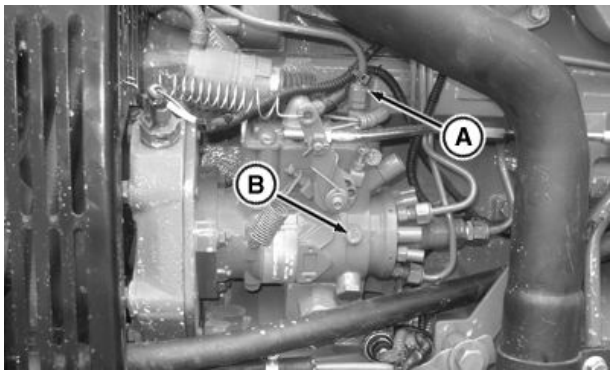
Continued on next page

SV86979,0000113 -19-10JUL14-1/2

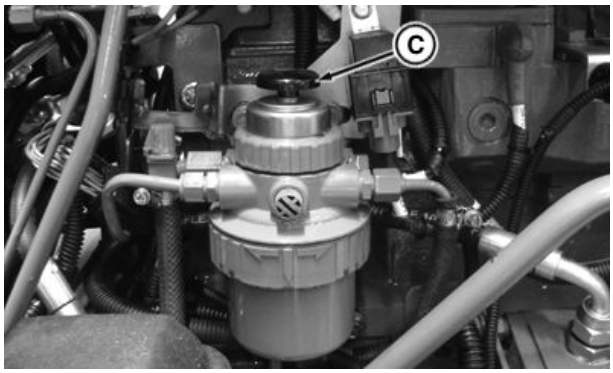
Fuel Injection Pump

1. Loosen fuel return line (A) at fuel injection pump.
2. Loosen injection pump bleed screw (B).
3. When no air bubbles are seen tighten fuel return line and bleed screw.
4. Pump the hand primer until resistance is felt.
5. Repeat until no air bubbles flow from fuel return line.

A—Fuel Return Line
B—Bleed Screw
C—Hand Primer



PY16254 —UN—18JUL12



PY16255 —UN—18JUL12

SV86979,0000113 -19-10JUL14-2/2

Electrical Service Precautions

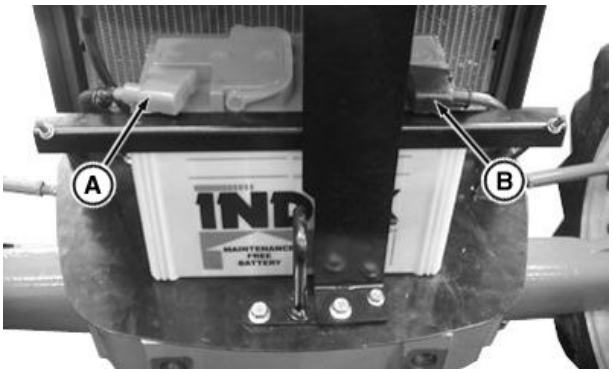
CAUTION: Keep all sparks and flames away from batteries, as gas given off by electrolyte is explosive. When using a booster battery, follow instructions in Operating the Engine section.

To avoid shocks and burns, disconnect negative (-) cable (B) before servicing any part of the electrical system.

Keep battery cover (not shown) and all electrical shields in place.

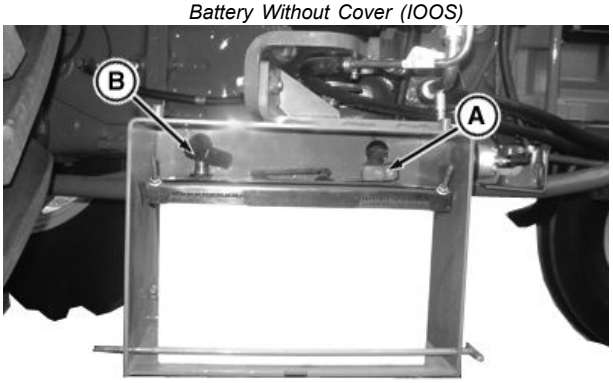
A—Positive (+) Battery Cable B—Negative (—) Battery Cable

TS204 —UN—15APR13



PY16258 —UN—18JUL12

Battery Without Cover (IOOS)



PY16256 —UN—18JUL12

Battery Without Cover (Cab)

SD74272,0000050 -19-10JUL14-1/1

Inspect Alternator/Fan Belt Tensioner

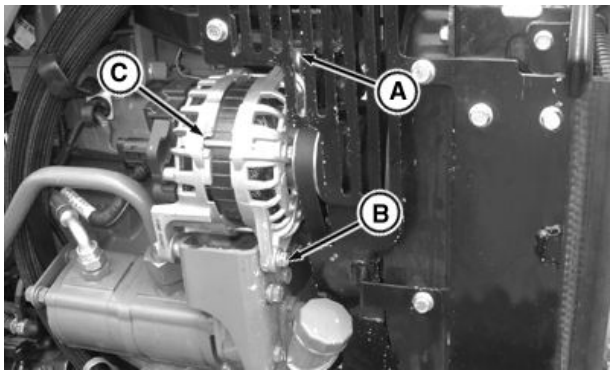
Replace if worn or damaged. (See procedure in Service section.)

NOTE: Run engine for five minutes to warm a cold belt. Let a hot belt cool for 15 minutes before adjustment.

Check tension by pressing belt midway between pulleys. Belt should deflect about 19 mm (3/4 in.) at 89 N (20 lb force).

IMPORTANT: Pry against alternator frame only.

Adjust tension by loosening cap screw (A) and mounting bolt (B). Apply force to alternator frame (C) until belt tension is correct. Tighten cap screw and bolt.



PY16261 —UN—19JUL12

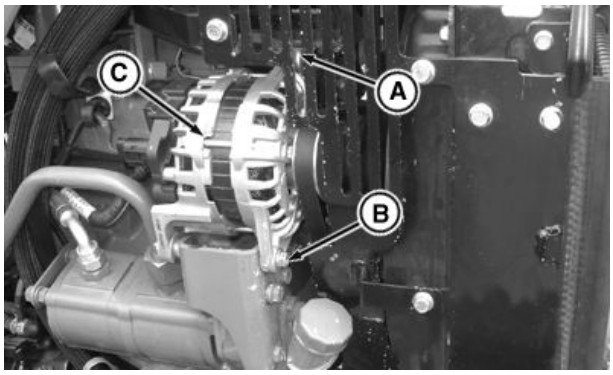
A— Alternator Cap Screw
B— Alternator Bolt
C— Alternator

SV86979,0000115 -19-02JAN13-1/1

Replace Alternator/Fan Belt

1. Raise hood.
2. Loosen cap screw (A) and bolt (B) and rotate the alternator (C) to free the belt.
3. Remove belt from drive pulley.
4. Install new belt in reverse order of removal.
5. Adjust belt tension.

A—Alternator Cap Screw
B—Alternator Bolt
C—Alternator



PY16261 —UN—19JUL12

SV86979,0000116 -19-02JAN13-1/1

Charge Battery

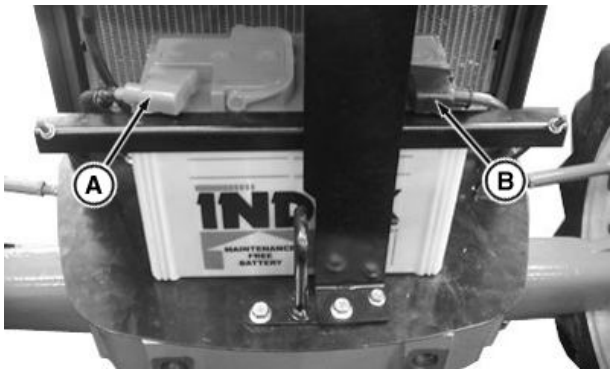
CAUTION: Gas given off by battery is explosive. Keep sparks and flames away from battery. Before connecting or disconnecting a battery charger, turn charger off. Make last connection and disconnection at a point away from battery.

1. With charger off, attach positive battery charger lead to positive (+) battery terminal (A). Attach negative charger lead to tractor frame, away from the battery.
2. Follow the instructions provided by the charger.
3. To disconnect battery charger, turn charger off. Remove negative charger lead first, then positive lead.

A—Positive (+) Battery Terminal

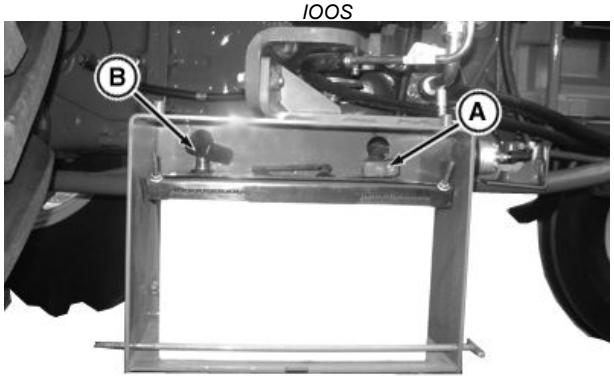
B—Negative (-) Battery Terminal

TS204 —UN—15APR13



PY16258 —UN—18JUL12

IOOS



PY16256 —UN—18JUL12

Cab

SD74272,0000052 -19-10JUL14-1/1

Clean Battery

Service Interval—50 Hours / Weekly

1. Stop engine. (See procedure in Operating the Engine section.)
2. Remove battery cover. (See ACCESS BATTERY in this section.)
3. Wipe battery with a damp cloth. Clean and tighten connections, if needed.
4. Install cover and lower hood.

SV86979,0000118 -19-23AUG12-1/1

Check Battery Condition

Service Interval—50 Hours / Weekly

CAUTION: 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 it last.

TS204 —UN—15APR13

1. Use a battery hydrometer to check specific gravity of electrolyte in each cell. Charge battery if reading is below 1.215. Replace battery if difference between cells is more than 0.050 or if battery will not charge above 1.225.
2. Always correct specific gravity reading for electrolyte temperature variation. Add 0.004 to the reading obtained in step one for every 10 °F above 80 °F (add 0.007 to the reading for every 10° above 27 °C). Subtract at same rate if electrolyte temperature is below 80 °F (27 °C). Correct specific gravity of a fully charged battery is 1.265 to 1.280.
3. A battery is considered fully charged when three consecutive hydrometer readings, taken at hourly intervals, show no rise in specific gravity.

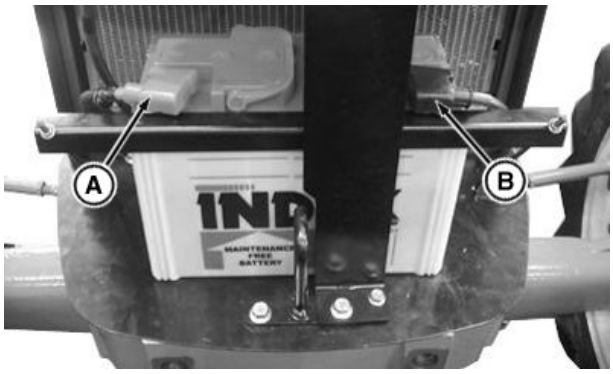
SV86979,0000119 -19-23AUG12-1/1

Remove Battery

Remove Battery (IOOS)

CAUTION: To avoid sparks, disconnect negative cable (A) first and connect it last.

1. Raise hood.
2. Remove battery cover.
3. Disconnect negative (—) battery cable (B).
4. Disconnect positive (+) battery cable (A).
5. Loosen nuts securing battery hold-down and rotate the holder down, freeing the battery.
6. Lift and slide the battery from the battery tray.



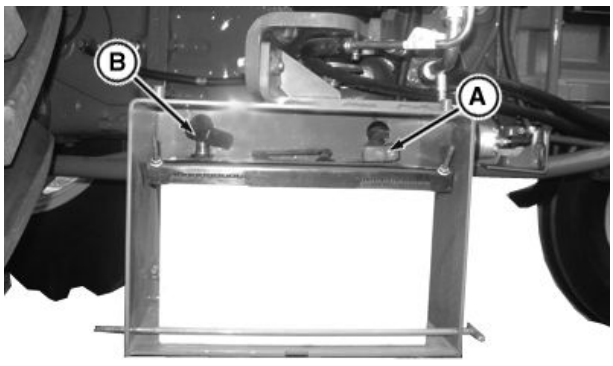
PY16258 —UN—18JUL12

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

SD74272,0000053 -19-10JUL14-1/2

Remove Battery (Cab)

1. Remove battery cover by loosen the screw on right side.
2. Disconnect negative (—) battery cable (B).
3. Disconnect positive (+) battery cable (A).
4. Loosen nuts securing battery hold-down and rotate the holder down, freeing the battery.
5. Slide the battery forward from the battery tray.



PY16256 —UN—18JUL12

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

SD74272,0000053 -19-10JUL14-2/2

Battery Replacement Specifications — Cab

When replacing battery, use John Deere battery or equivalent. See your John Deere dealer.

	Specification
Battery—Volts	12 Volts
Ampere Rating	68 AH
Cold Cranking Amps at -17.8 °C (0 °F)	800 CCA

SV86979,000011C -19-16JUL14-1/1

Battery Replacement Specifications — IOOS

When replacing battery, use John Deere battery or equivalent. See your John Deere dealer.

	Specification
Battery—Volts	12 Volts
Ampere Rating	64 AH
Cold Cranking Amps at -18 °C (0 °F)	622 CCA

SD74272,0000054 -19-16JUL14-1/1

Battery Replacement Specifications — (For India, Asia, and Africa Market Only)

When replacing battery, use John Deere battery or equivalent. See your John Deere dealer.

	Specification
Battery—Volts	12 Volts
Ampere Rating	85 AH
Cold Cranking Amps at -17.8 °C (0 °F)	800 CCA

SD74272,00001BD -19-17DEC14-1/1

Service Battery

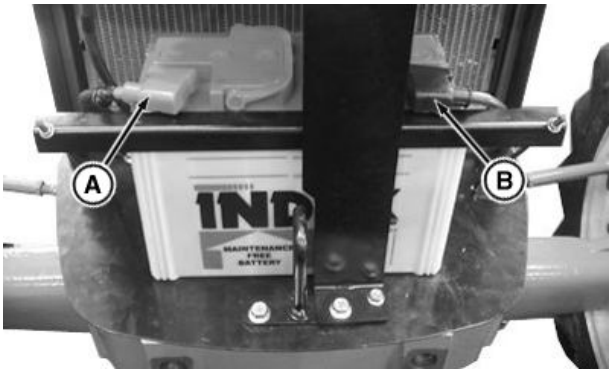
1. Keep battery clean by wiping with a damp cloth. Keep terminals (A and B) clean and tight. To remove any corrosion, wash terminals with a solution of four parts water to one part baking soda.

CAUTION: To avoid sparks, disconnect negative (ground) cable first and connect it last.

2. Keep battery fully charged, especially during cold weather. If a battery charger is connected, attach positive cable to the positive (+) battery terminal (A). Connect the negative (-) battery charger cable to a good ground on tractor frame.
3. Coat terminals with a small amount of grease.

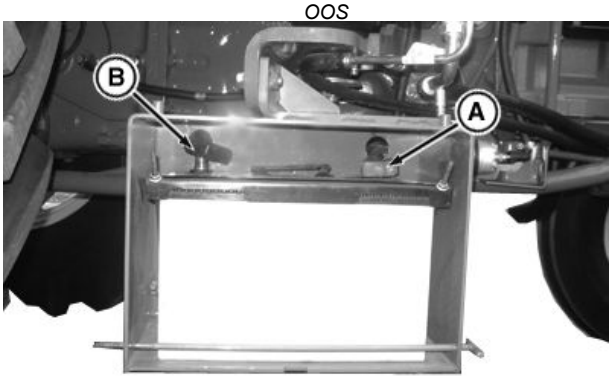
A—Positive (+) Battery Terminal

B—Negative (—) Battery Terminal



PY16258 —UN—18JUL12

OOS



PY16256 —UN—18JUL12

CAB

SD74272,0000283 -19-25JUL12-1/1

Access Fuses and Relays

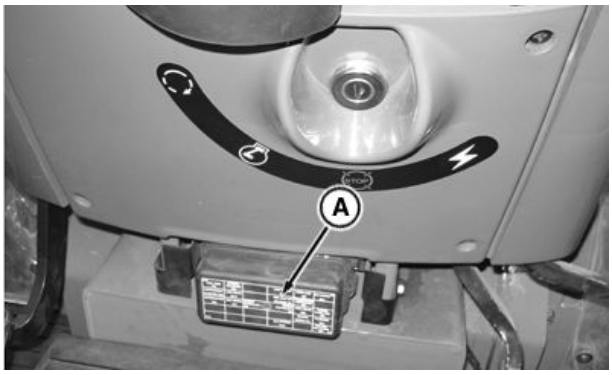
To remove fuse box cover:
- **IOOS** — Pinch tabs and pull off cover (A).
- **Cab** — Pry off cover (B).

Fuse Rating	Color
5 Amp	Orange
10 Amp	Red
15 Amp	Blue
20 Amp	Yellow
30 Amp	Green

IMPORTANT: Do not replace original fuse with higher rated fuse or machine damage may occur.

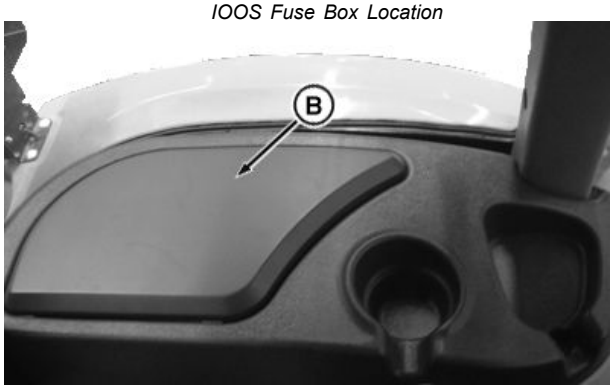
If original size fuse will not carry electrical load and continues to blow contact your John Deere dealer.

A—Fuse Box Cover (IOOS) **B—Fuse Box Cover (Cab)**



IOOS Fuse Box Location

PY18485 —UN—11JUL14



Cab Fuse Box Location

PY16262 —UN—19JUL12

SD74272,0000055 -19-14JUL14-1/1

Load Center - 1 Fuses and Relays—IOOS (PowrReverser™ Transmission)

A12					A1
F20	F16		F04	F05	F03
F11	F07		F19	F13	
F08	F17	F15	F14	F06	F09
				F10	F18
			F02		F12
E12					E1

APY32741 —UN—06FEB20

F02— ELX Fuse, 10 Amp
F03— Key Switch Fuse, 30 Amp
F04— Light Switch Fuse, 30 Amp
F05— Work Lamp Fuse, 10 Amp
F06— High Beam Fuse, 20 Amp
F07— Low Beam Fuse, 20 Amp
F08— Alternator Fuse, 10 Amp
F09— License Plate Lamp Fuse, 10 Amp
F10— Beacon Switch Fuse, 10 Amp
F11— Instrument Cluster Fuse, 20 Amp
F12— ECU for QRL System Fuse, 20 Amp
F13— Transmission Controller Fuse, 10 Amp
F14— Vehicle Controller -2, 10 Amp
F15— Vehicle Controller -1, 10 Amp
F16— Optional Accessory, 20 Amp
F17— Seat Switch Fuse, 10 Amp
F18— Flasher Fuse, 10 Amp
F19— Fuel Shutoff Solenoid, 10 Amp
F20— Fuel Pump, 10 Amp

SD74272,0000056 -19-09FEB20-1/1

Load Center - 2 Fuses and Relays—IOOS— (PowrReverser™ Transmission)

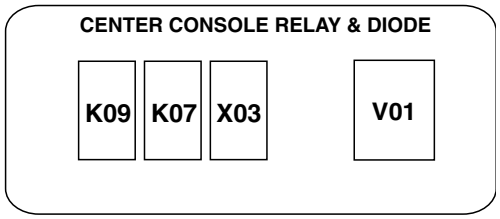
PY18487 —UN—12JUL14

K01— Nutral Start Relay
K05— Fuel Pump Relay
K06— Not Neutral Relay
K08— Electrohydraulic System Relay

SD74272,0000057 -19-11JUL14-1/1

Center Console Relay and Diode—IOOS (PowrReverser™ Transmission)

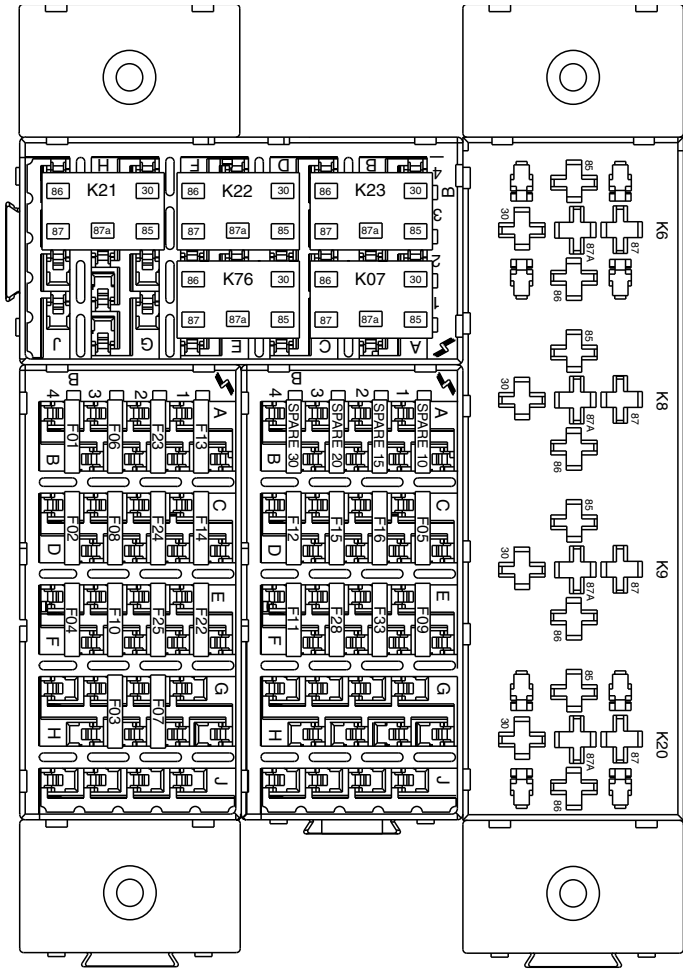
PY18488 —UN—12JUL14



K09— Optional Accessory Relay
K07— Transmission Enable Relay
X03— Electronic Flasher Relay
V01— Diode Module

SD74272,0000058 -19-11JUL14-1/1

Load Center Fuses and Relays—Cab (sync shuttle Transmission)



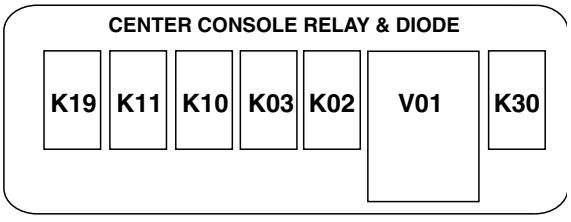
PY15627 —UN—05FEB13

K06— Trailer Power Relay
K07— Accessory Relay
K08— Rear Work Relay
K09— Front Work Relay
K20— HVAC Relay
K21— Wiper Relay
K22— Left Blower Relay
K23— Right Blower Relay
K76— Fuel Transfer Pump Relay
SPARE 10— Spare Fuse, 10 Amp
SPARE 15— Spare Fuse, 15 Amp
SPARE 20— Spare Fuse, 20 Amp
SPARE 30— Spare Fuse, 30 Amp
F01— key Switch , 30 Amp
F02— Hazard Switch, 30 Amp
F03— Dome Lamp Switch, 10 Amp
F04— Light Switch, 20 Amp
F05— Loader Lights, 10 Amp
F06— Junction Block , 30 Amp
F07— Turn Signal Switch , 10 Amp
F08— Instrument Cluster , 10 Amp
F09— Brake Pedal Switch, 15 Amp
F10— Trailer , 30 Amp
F11— Junction Block, 30 Amp
F12— Radio , 10 Amp
F13— Rear Work , 30 Amp
F14— Front Work , 30 Amp
F15— Clearance Lamp, 10 Amp
F16— Loader Lights, 10 Amp
F22— Seat Switch , 10 Amp
F23— HVAC , 30 Amp
F24— Wiper , 20 Amp
F25— Left Blower , 20 Amp
F28— Clearance Lamp, 10 Amp
F33— Flood Light , 10 Amp

SV86979,0000122 -19-16AUG13-1/1

Center Console Relay and Diode—Cab (sync shuttle Transmission)

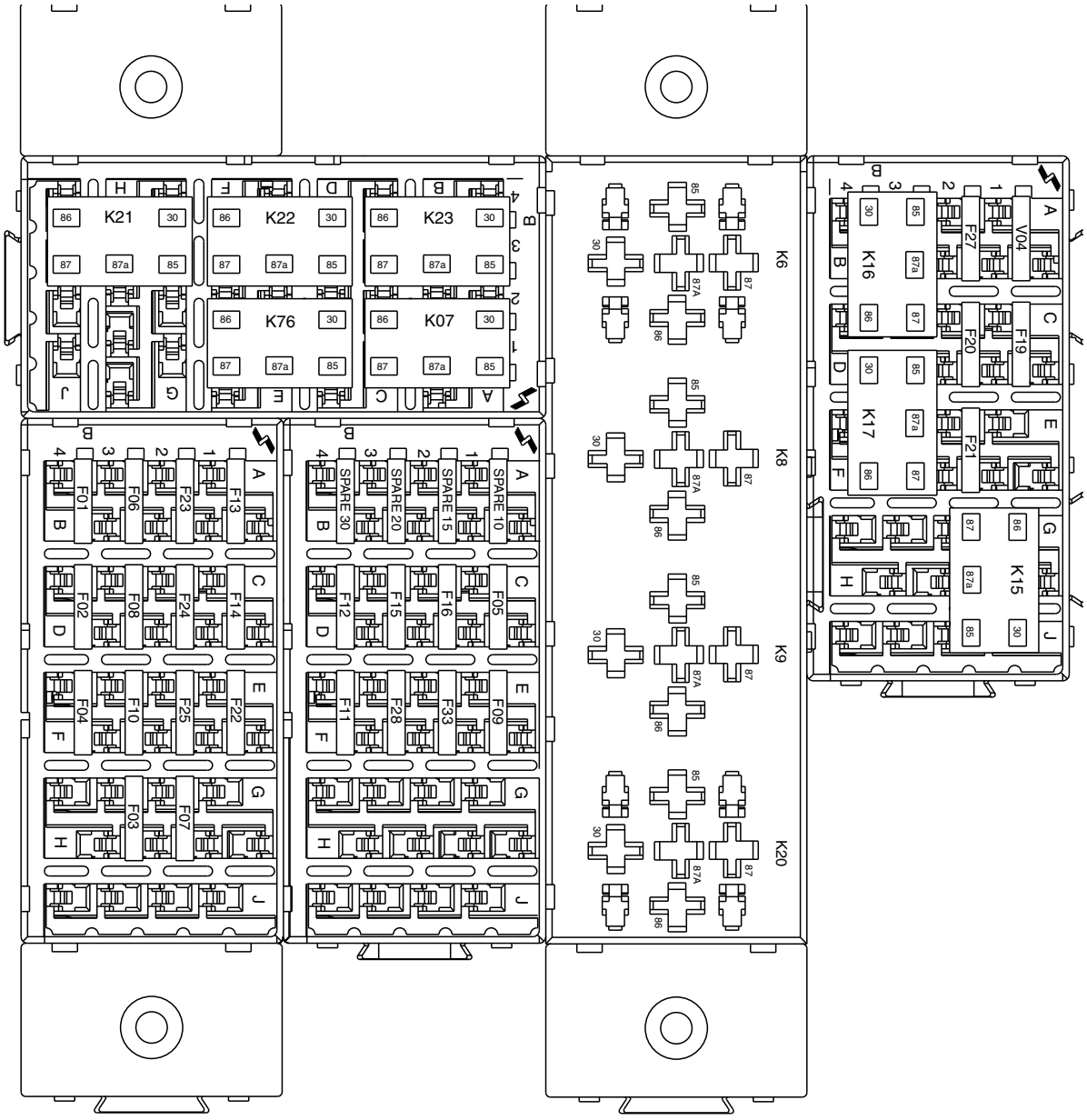
PY15717 —UN—05FEB13



K19— Neutral Latch Relay
K11— Neutral Relay
K10— Fuel Flow Relay
K03— Right Turn Relay
K02— Left Turn Relay
V01— Diode Module
K30— Flasher Relay

SV86979,00002ED -19-16AUG13-1/1

Load Center Fuses and Relays—Cab (PowrReverser™ Transmission)



Continued on next page

SD74272,0000288 -19-27SEP12-1/2

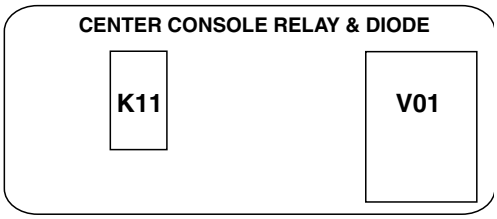
F01— Key Switch Fuse, 20 Amp
F02— Warning Lights and Turn Lights Fuse, 30 Amp
F03— Dome Light and Radio Fuse, 10 Amp
F04— Light Switch Fuse, 20 Amp
F05— Low Beam Headlights Fuse, 10 Amp
F06— Junction Block Fuse, 30 Amp
F07— Turn Signal Light Switch Fuse, 10 Amp
F08— Instrument Cluster Fuse, 10 Amp
F09— Brake Pedal Switch Fuse, 15 Amp
F10— Trailer Auxiliary Power Fuse, 30 Amp
F11— Junction Block Fuse, 30 Amp
F12— Radio Fuse, 10 Amp
F13— Rear Work Lights Fuse, 30 Amp
F14— Front Work Lights Fuse , 30 Amp
F15— Tail Lights Fuse, 10 Amp
F16— High Beam Headlights Fuse, 10 Amp
F19— Electro-Hydraulic Control Unit and Service ADVISOR Fuse, 10 Amp
F20— Electrohydraulic System Power Fuse, 10 Amp
F21— Electrohydraulic Control Unit Fuse, 10 Amp
F22— Seat Switch Fuse, 10 Amp
F23— HVAC and Right Blower Fuse, 30 Amp
F24— Front Wiper Fuse, 20 Amp
F25— Left Blower, 20 Amp
F27— PowrReverser™ Backup Alarm Fuse, 5Amp
F28— Tail Lights Fuse, 10 Amp
F33— Work Lights Fuse, 10 Amp
SPARE 10—Spare Fuse, 10 Amp
SPARE 15—Spare Fuse, 15 Amp
SPARE 20—Spare Fuse, 20 Amp
SPARE 30—Spare Fuse, 30 Amp
K06— Trailer Power Relay
K07— Accessory Relay
K08— Rear Work Light Relay
K09— Front Work Lights Relay
K15— Electrohydraulic System Relay
K16— Not Neutral Relay
K17— Transmission Enable Relay
K20— HVAC Relay
K21— Wiper System Relay
K22— Left Blower Relay
K23— Right Blower Relay
K76— Fuel Transfer Pump Relay
V04— Diode

PowrReverser is a trademark of Deere & Company

SD74272,0000288 -19-27SEP12-2/2

Center Console Relay and Diode—Cab (PowrReverser™ Transmission)

PY18236 —UN—25JUN13



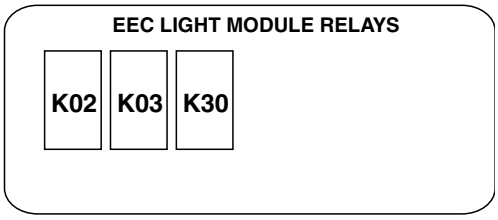
K11— Neutral Relay
V01— Diode Module

SD74272,0000591 -19-25JUN13-1/1

EEC Light Module Relays—Cab (PowrReverser™ Transmission)

K02— Right Turn Relay
K03— Left Turn Relay
K30— Flasher Relay

PY18294 —UN—16AUG13



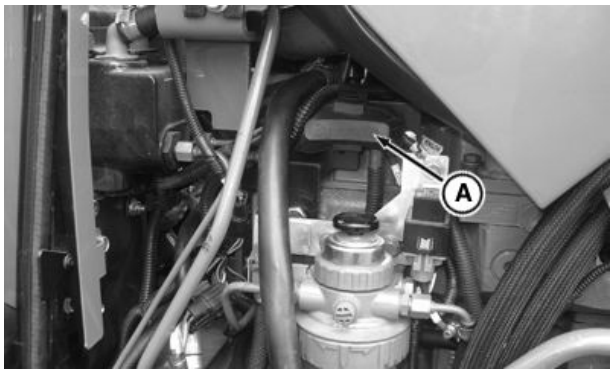
SD74272,00005E9 -19-16AUG13-1/1

Fusible Link Location

Electrical circuits are protected by a fusible link.

Raise hood. Fusible link junction block (A) is located on right-hand side of engine.

A—Fusible Link Junction Block (F26)



PY16263 —UN—19JUL12

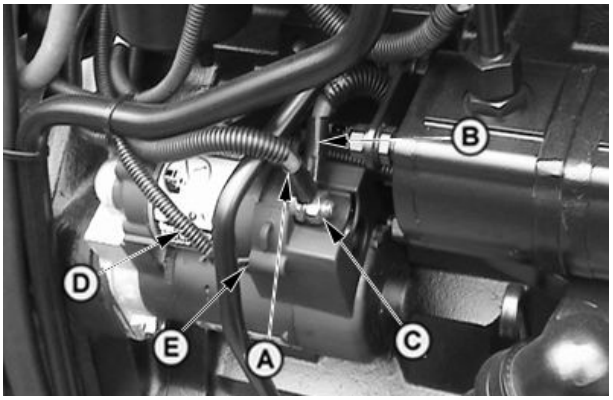
SV86979,0000124 -19-23AUG12-1/1

Starter Wiring Connections

IMPORTANT: Disconnect battery negative (ground) cable before servicing any part of electrical system. Make all other connections before connecting ground cable.

Connect large battery cable (A) and alternator cable (B) to large solenoid post (C). Connect the small white wire (D) to solenoid terminal (E).

A—Large Battery Cable
B—Alternator Cable
C—Large Solenoid Post
D—Small White Wire
E—Solenoid Terminal



PY4037 —UN—17JUL04

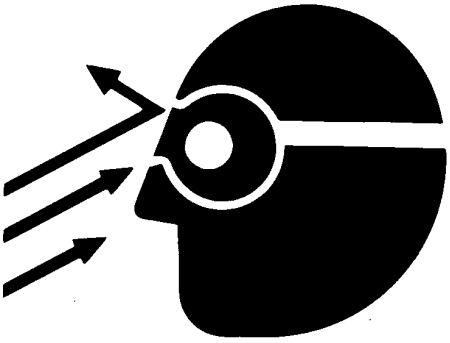
SV86979,0000125 -19-23AUG12-1/1

Handling Halogen Light Bulbs Safely

CAUTION: Halogen bulbs (A) contain gas under pressure. Handling a bulb improperly could cause it to shatter into flying fragments. To avoid possible injury:

- **Handle bulb by its base. Keep bulb oil free; wear gloves to avoid touching glass.**
- **Turn off light switch and allow bulbs to cool before changing. Leave switch off until bulb change is done.**
- **Wear eye protection.**
- **Do not drop or scratch bulb. Keep away moisture.**
- **Place used bulb in the new bulb's carton and dispose of properly. Keep out of reach of children.**

A—Halogen Bulb



TS266 —UN—23AUG88

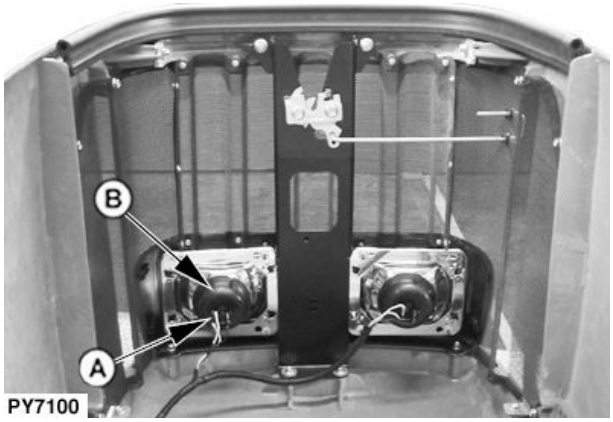
H39474 —UN—30JUN00

SV86979,0000127 -19-23AUG12-1/1

Replace Headlight Element

1. Remove headlight connector (A).
2. Remove dust boot (B).

A—Headlight Connector **B—Dust Boot**



PY7100 —UN—28JUN07

Hood - Upside Down

SV86979,0000128 -19-23AUG12-1/2

3. Twist collar (C).
4. Remove bulb (D).

CAUTION: A halogen bulb is pressurized and may shatter. Protect bulb against abrasions and scratches.

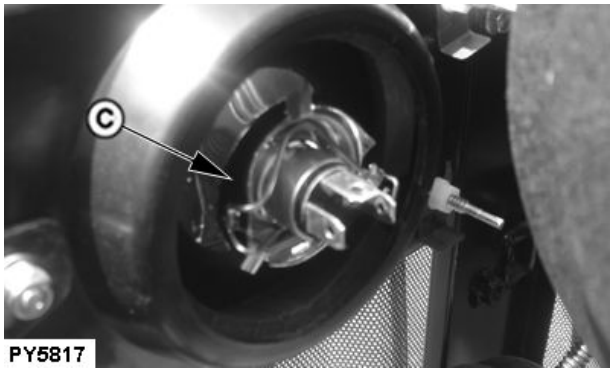
To guard against personal injury, wear protective eyeglasses and clothing when handling bulb. Turn power off when installing and before removing bulb. Dispose of bulb with care.

Allow bulb to cool before removing.

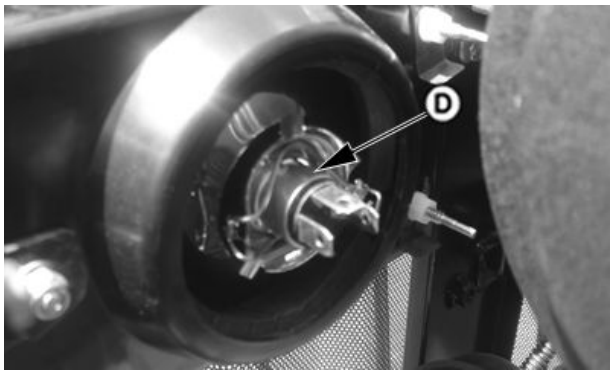
Read and follow all bulb manufacturers installation instructions.

5. Install bulb, collar, seal and connector in reverse order.

C—Collar **D—Bulb**



PY5817 —UN—16JUN06



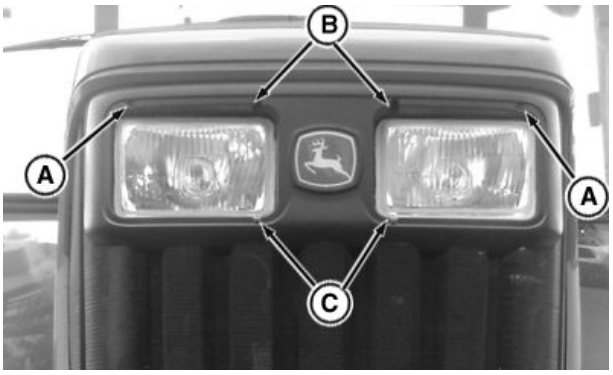
PY5818 —UN—20NOV18

SV86979,0000128 -19-23AUG12-2/2

Adjust Headlights

IMPORTANT: Apply penetrating spray lubricant to the threads of top and bottom adjusting screws before starting procedure. If this is not done, it will be quite hard to turn adjusting screws in either direction.

1. Turn screws (A and B) counterclockwise to lower beam or clockwise to raise beam.
2. Turn screw (A) counterclockwise and screws (B and C) clockwise an equal number of turns on each screw.
3. Turn screw (B and C) counterclockwise and screws (A) clockwise an equal number of turns on each screw.



PY16265 —UN—19JUL12

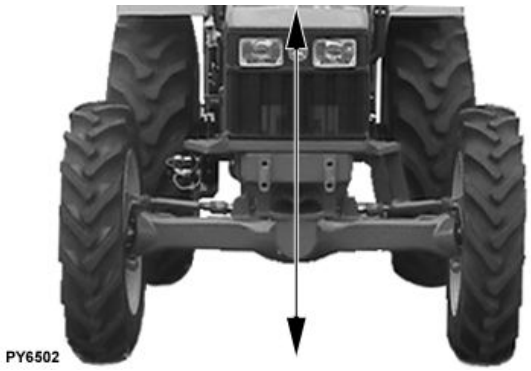
A—Headlight Mounting Screw
B—Headlight Mounting Screw
C—Headlight Mounting Screw

SV86979,0000129 -19-23AUG12-1/1

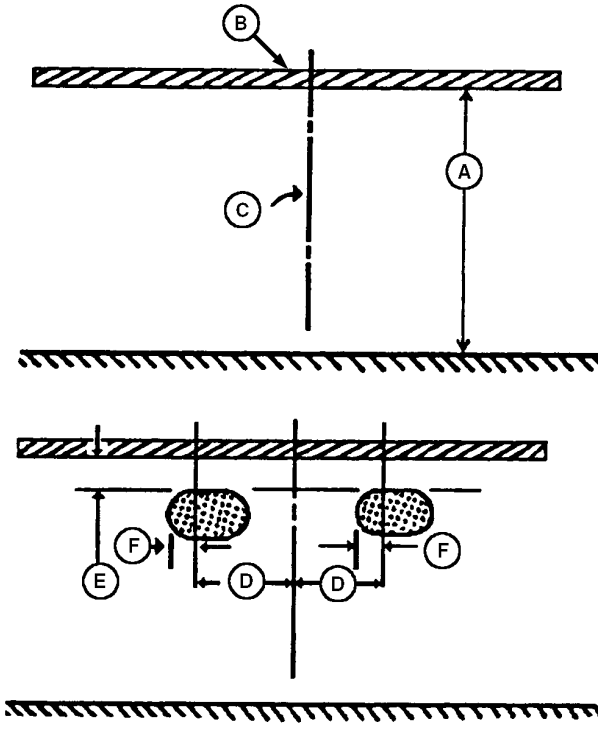
Aim Headlights

1. Park tractor on level ground, with lights 8 m (25 ft) from a wall.
2. Measure from top of hood to the ground (A). Place a strip of masking tape (B) on the wall at the same height.
3. Place a piece of tape, folded in the middle to make a point, on the top front center of the hood.
4. Using the hood tape as a guide, sight across steering wheel and hood to locate tractor centerline. Mark tractor centerline (C) on wall.
5. From tractor centerline (C), mark a point 130 mm (5 in.) out in each direction (D). This mark locates a point directly in front of center of each headlight.
6. Turn light switch to dim position.
7. Locate small zone of bright light projected by each lamp. Cover other lamps if necessary. Top of zone (E) should be 130 mm (5 in.) below the tape. Left edge of zone (F) should be 130 mm (5 in.) left of lamp location marked (D).
8. To adjust headlights. (See Adjust Headlights in this section.)

A—Distance from Top of Hood to the Ground
B—Masking Tape
C—Tractor Center Line
D—130 mm Distance from Center Line
E—Top of zone
F—Left Edge of Zone



PY6502 —UN—06NOV06



LV3020 —UN—10JUN99

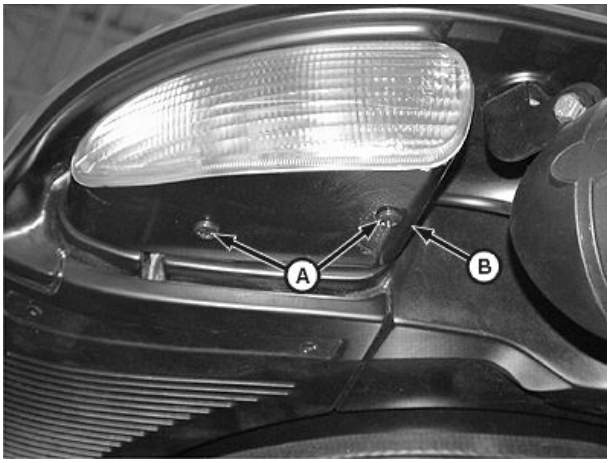
SV86979,000012A -19-23AUG12-1/1

Replace Roof Hazard Light Bulb (If Equipped)

NOTE: Procedure is the same for all warning lights on machine.

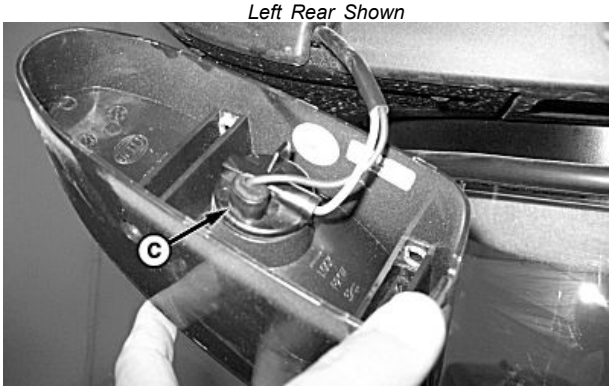
1. Remove socket head screws (A) and lens (B).
2. Twist and pull to remove bulb socket (C) from lens.
3. Gently push and turn bulb (D) to remove.
4. Install new bulb.
5. Reinstall bulb sockets to lens.
6. Inspect rubber seal for cracks that may cause leaks. Replace if necessary.
7. Reinstall lens (B) with previously removed socket head screws (A).

A—Socket Head Screws
B—Lens
C—Bulb Socket
D—Bulb



LV5559 —UN—29NOV00

Left Rear Shown



P14710 —UN—05NOV07

P14711 —UN—05NOV07

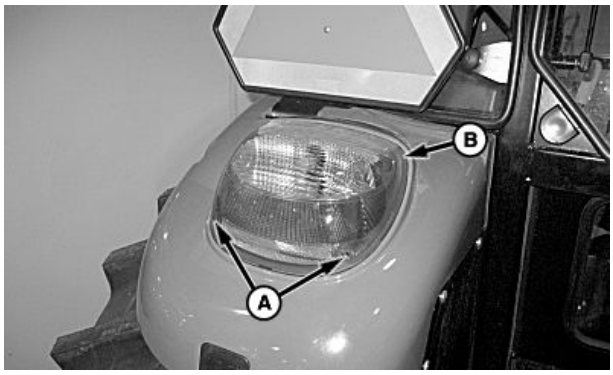
SV86979,000012B -19-16AUG13-1/1

Replace Tail and Turn Light Bulbs—Cab

NOTE: Procedure is the same for both sides of machine.

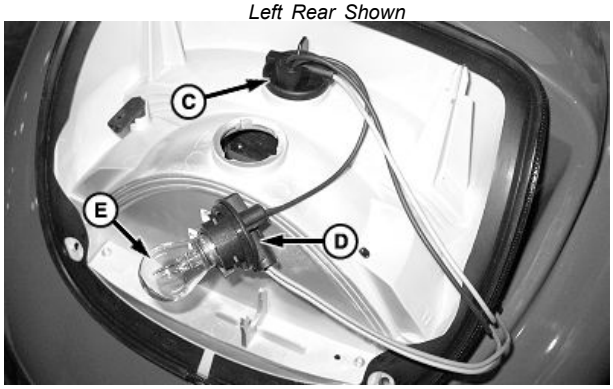
1. Remove screws (A) and cover (B).
2. Twist and pull to remove sockets (C) and (D) from lens.
3. Gently push and turn bulb (E) to remove.
4. Install new bulb.
5. Reinstall sockets to lens.
6. Inspect rubber seal for cracks that may cause leaks. Replace if necessary.
7. Reinstall lens (B) with previously removed screws (A).

A—Screws
B—Lens
C—Turn Signal Socket
D—Tail Light Socket
E—Bulb



P14708 —UN—05NOV07

Left Rear Shown



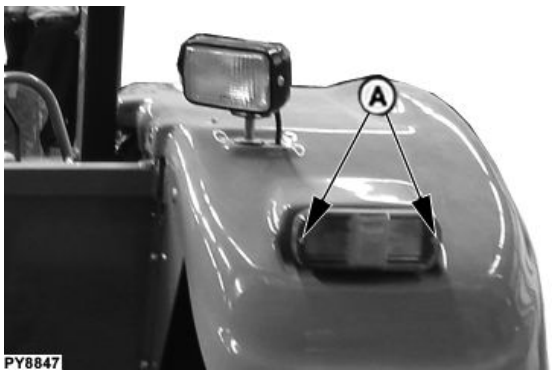
P14709 —UN—05NOV07

SV86979,00002F4 -19-11JUL14-1/1

Replace Tail and Turn Light Bulbs—IOOS

1. Remove screws (A).
2. Remove lens.
3. Push and twist to release bulb from socket.
4. Reverse this procedure to reassemble light.

A— Cap Screws (2 used)



PY8847 —UN—23DEC08

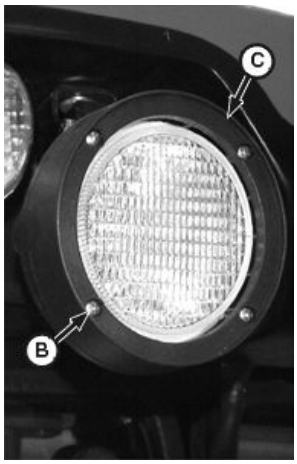
SD74272,0000059 -19-11JUL14-1/1

Replace Floodlight Element—Cab

1. Pry off cover (A).
2. Remove screws (B), retaining ring (C) and floodlight bezel (E) from housing.
3. Disconnect connectors (D).
4. Release clip. Remove and discard old bulb.
5. Inspect rubber seal for cracks that may cause leaks. Replace if necessary.
6. Slide new bulb into floodlight bezel (E) and reapply clip.
7. Connect bezel to connector.
8. Reinstall bezel, screws, and cover.

A—Cover
B—Screw (4 used)
C—Retaining Ring
D—Wiring Connector
E—Floodlight Bezel

LV5569 —UN—07DEC00



LV5570 —UN—07DEC00

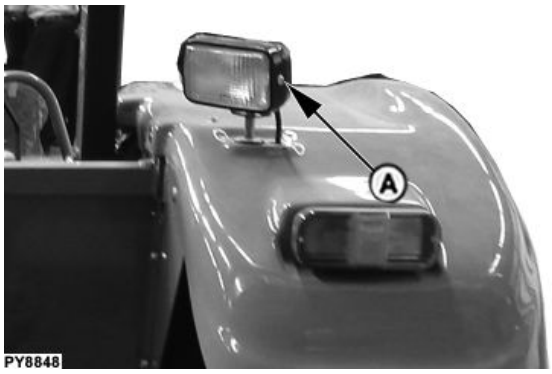
LV5571 —UN—07DEC00

SV86979,000012F -19-11JUL14-1/1

Replace Flood Light Element—IOOS

1. Loosen mounting hardware (A) and rotate flood light up to access cover fastening screw.
2. Remove screw, light cover and light from housing.
3. Disconnect wiring leads from bulb.
4. Rotate bulb counterclockwise and remove.
5. Reverse the procedure to reassemble the flood light.

A—Mounting Hardware



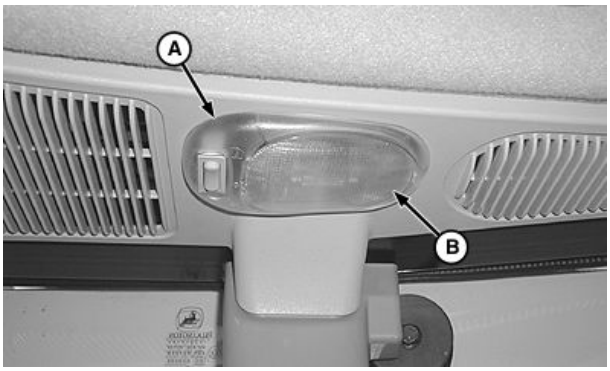
PY8848 —UN—23DEC08

SD74272,000005A -19-11JUL14-1/1

Replace Dome Light Bulb

1. Remove dome light cover (B) from dome light housing (A) using a screwdriver.
2. Pull dome light bulb (C) from socket. Replace dome light bulb.
3. Install dome light cover to dome light housing.

A—Dome Light Housing
B—Dome Light Cover
C—Dome Light Bulb



LV8588 —UN—14AUG03

LV8587 —UN—14AUG03

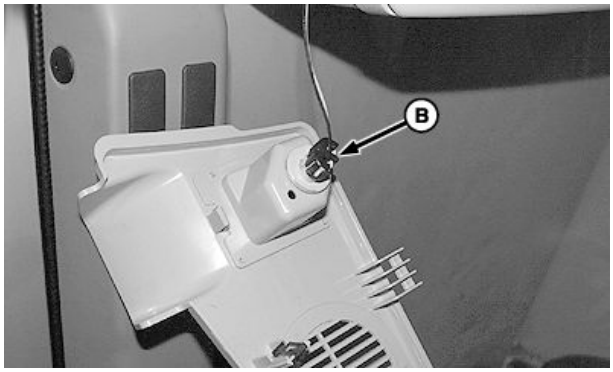
SV86979,0000130 -19-23AUG12-1/1

Replacing Controls Illumination Light Bulb

1. Pry off panel (A).
2. Rotate light bulb retainer (B) counterclockwise approximately 1/4 turn and remove.
3. Pull out light bulb.
4. Install new bulb in reverse order of removal.

A—Panel
B—Light Bulb Retainer

LV9515 —UN—07AUG04



LV9598 —UN—07AUG04

SV86979,0000131 -19-23AUG12-1/1

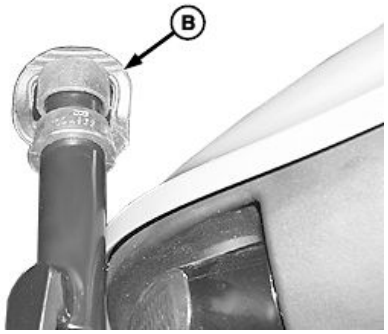
Replacing Rotary Beacon Light Bulb

CAUTION: Halogen bulbs contain gas under pressure. Handling a bulb improperly could cause it to shatter into flying fragments. (See HANDLING HALOGEN LIGHT BULBS SAFELY in this section.)

1. Loosen wing nut (A) and remove rotary beacon light assembly.
2. Install rubber cap (B).

A—Wing Nut
B—Rubber Cap

LV9693 —UN—19AUG04

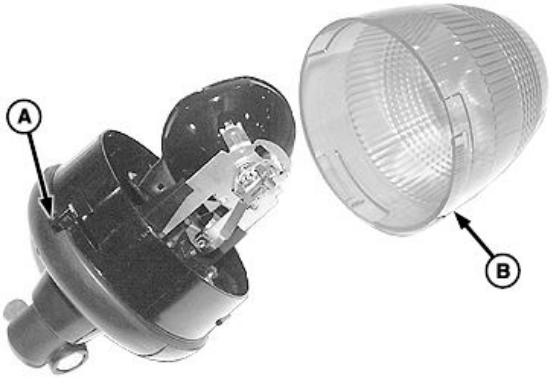


LV9694 —UN—19AUG04

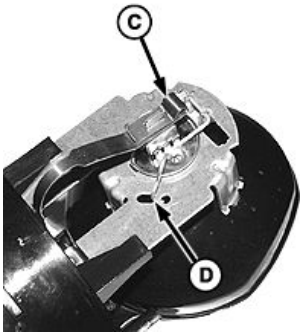
SV86979,0000132 -19-23AUG12-1/2

3. Depress tab (A) and rotate lens (B) counterclockwise to remove.
4. Pull tab (C) away from bulb.
5. Unlatch retaining spring (D) and remove light bulb (E).
6. Install new bulb in reverse order of removal.

A—Tab
B—Lens
C—Tab
D—Retaining Spring
E—Bulb



LV9695 —UN—19AUG04



LV9696 —UN—19AUG04

LV9697 —UN—19AUG04

SV86979,0000132 -19-23AUG12-2/2

Engine Troubleshooting

Symptom	Problem	Solution
Engine hard to start or will not start	Improper starting procedure.	Reviewing starting procedure.
	No fuel.	Check fuel tank.
	Air in fuel tank.	Bleed fuel tank.
	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.
Engine knocks	Insufficient oil.	Add oil.
	Injection pump out of time.	See your John Deere dealer.
	Low coolant temperature.	See your John Deere dealer.
	Engine overheating.	See ”Engine Overheats”.
Engine runs irregularly or stalls frequently	Low coolant temperature.	See your John Deere dealer.
	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.
	Improper type of fuel.	Use proper fuel.

Continued on next page

Symptom	Problem	Solution
Engine temperature below normal	Defective temperature gauge or sender.	Check gauge, sender, and conditions.
Lack of power	Engine overloaded.	Reduce load or shift to lower gear.
	Low fast idle speed.	See your John Deere dealer.
	Intake air restriction.	Service air cleaner.
	Clogged fuel filter.	Replace filter element.
	Improper type of fuel.	Use proper fuel.
	Overheated engine.	See ”Engine Overheats”.
	Engine temperature below normal	See your John Deere dealer.
	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.	See your John Deere dealer.
	Restricted return line.	See your John Deere dealer.
	Improper ballast.	Adjust ballast to load.
Low oil pressure	Low oil level.	Add oil.
	Improper type of oil.	Drain, fill crankcase with oil of proper viscosity and quality.
High oil consumption	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.

Continued on next page

Symptom	Problem	Solution
	Defective turbocharger.	See your John Deere dealer.
Engine emits white smoke	Improper type fuel.	Use proper fuel.
	Low engine temperature.	Warm up engine to normal operating temperature.
	Defective thermostat.	See your John Deere dealer.
	Defective injection nozzles.	See your John Deere dealer.
	Engine out of time.	See your John Deere dealer.
	Cold start advance or light load advance not functioning.	See your John Deere dealer.
Engine emits black or gray exhaust smoke	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.
Engine overheats	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, coolant recovery tank, and hoses for loose connection or leaks.
	Faulty radiator cap.	Replace cap.
	Loose or defective fan belt(s).	Adjust belt tension(s).
	Cooling system needs flushing.	Flush cooling system.
	Defective thermostat.	See your John Deere dealer.
	Defective temperature gauge or sender.	See your John Deere dealer.

Continued on next page

Symptom	Problem	Solution
	Incorrect grade of fuel.	Use proper fuel.
High fuel consumption	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.
	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.	See your John Deere dealer.
	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.

SS01820,0000A95 -19-12JUN07-4/4

Transmission Troubleshooting

Symptom	Problem	Solution
Transmission oil overheats	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 plumbed correctly.	See your John Deere dealer.
Low transmission pressure.	Low oil supply.	Fill system with correct oil.
	Clogged transmission-hydraulic oil filter.	Replace filter.

MX,TSIP,BA2 -19-24JUL95-1/1

Hydraulic System Troubleshooting

Symptom	Problem	Solution
Entire hydraulic system fails to function	Low oil supply.	Fill system with correct oil.
	Clogged transmission-hydraulic filter.	Replace filter.
	Clogged transmission-hydraulic pickup screen.	Clean pickup screen.
	High-pressure internal leak.	See your John Deere dealer.
Hydraulic oil overheats	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 plumbed correctly.	See your John Deere dealer.

LV,5010T,B -19-03JUN97-1/1

Deluxe Selective Control Valve Troubleshooting (If Equipped)

Symptom	Problem	Solution
Flow control knob will not turn	Dirt build-up.	Clean dirt from flow control knob and shaft.
Remote cylinder rate-of-travel too fast or too slow	Incorrect flow control adjustment.	Adjust flow control.
Detent does not hold SCV lever or releases too soon	Detent selector in wrong position.	Turn selector to correct position.
	Pressure restriction with some implements.	Reduce oil flow by changing flow control setting.
	Flow control or detent setting incorrect.	Adjust flow control and/or detent setting.
SCV lever does not release	Detent selector not in automatic detent position.	Turn selector to correct position.
	Built-in pressure leakage with some implements.	Increase oil flow by changing flow control setting.
	Flow control or detent setting incorrect.	Adjust flow control and/or detent setting.

SV86979,0000153 -19-14SEP12-1/1

Brakes Troubleshooting

Symptom	Problem	Solution
No solid pedal feel	Air in system.	See your John Deere dealer.
Pedal settles	Rear brake piston seal leaking.	See your John Deere dealer.
Excessive pedal travel	Air in system.	See your John Deere dealer.
Brakes drag during transport	Brakes out of adjustment.	See your John Deere dealer.

MX,TSIP,DA1 -19-24JUL95-1/1

Rockshaft and Quick-Coupler 3-Point Hitch Troubleshooting

Symptom	Problem	Solution
Insufficient transport clearance	Center link too long.	Adjust center link.
	Lift links to long.	Adjust lift links.
	Implement not level.	Level implement.
	Implement not properly adjusted.	See implement operator's manual.
	Front of center link in upper holes.	Move center link to lower holes.
	Sway chains adjusted to short.	Lengthen sway chains.
Hitch drops slowly	Rockshaft rate-of-drop control not properly set.	Adjust rate-of-drop knob.
Hitch fails to lift or lifts slowly	Excessive load on hitch.	Reduce load.
	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 pickup screen clogged.	Clean or replace pickup screen.
Implement will not operate at desired depth	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 Rockshaft and 3-Point Hitch section.
Insufficient or no hitch response to draft load	Front attachment of center link in upper holes.	Move center link attachment to lower bracket holes.
	Draft control lever in “Off” position.	Move lever rearward.
	Lift links too short.	Adjust lift links.
	Lack of penetration.	See implement operator's manual.
	Rate-of-drop too slow.	Adjust rate-of-drop valve.
Hitch too responsive	Front attachment on center link in lower bracket holes.	Move center link attachment to upper bracket holes.

Continued on next page

LV,5010T,C -19-03JUN97-1/2

Symptom	Problem	Solution
	Improper draft sensing adjustment.	Move lever forward.
Hitch drops too fast	Rate-of-drop set too fast.	Adjust rate-of-drop.
Rockshaft control levers "drift". Levers too loose.	Friction disks are loose.	Adjust rockshaft control lever friction. See procedures in "Rockshaft and 3-Point Hitch" section or see your John Deere dealer.

LV,5010T,C -19-03JUN97-2/2

Quick Raise and Lower (QRL) Troubleshooting

Symptom	Problem	Solution
QRL switches are not working	Loose or false wiring connection at switch end	Check and connect wiring harness properly at switch end
	QRL ECU have a problem	Check QRL ECU for its proper functioning and contact John Deere dealer
		Check QRL ECU wiring connections
3 point linkages not responding to QRL switch functions	Low transmission/hydraulic oil	Fill transmission/hydraulic oil to its desired quantity
	Transmission/hydraulic oil not circulating in the rockshaft system	Start engine and keep it in idle condition for few seconds so that transmission/hydraulic oil starts circulating I the rockshaft system
QRL motor not running	Loose or false wiring connection at motor end	Check and connect wiring harness properly at motor end
	Motor damaged	check and replace motor if damaged
QRL Indicator not giving any indication when QRL problem occurs	Loose or false wiring connection at QRL indicator end	Check instrument cluster and QRL indicator wiring connections and connect them properly
	QRL ECU not sending signals to QRL indicator	Check QRL ECU for its proper functioning and contact John Deere dealer
		Check QRL ECU wiring connections

SP21231,000088D -19-02APR14-1/1

Remote Hydraulic Cylinders Troubleshooting

Symptom	Problem	Solution
Direction of remote cylinder travel is reversed	Improper hose connections.	Reverse hose connections
Hoses will not couple	Improper hose male tips.	Replace tip with ISO standard tips.
Remote cylinder will not lift load	Excessive load.	Reduce load.
	Hoses not completely installed.	Attach hoses correctly.
	Incorrect remote cylinder size.	Use correct size cylinder.
Direction of cylinder travel reverses on #2 SCV	SCV lever moved to regenerate position.	Reverse hose couplings.

MX,TSIP,FA3 -19-02JUN99-1/1

Electrical System Troubleshooting

Symptom	Problem	Solution
Battery will not charge	Loose or corroded connections.	Clean and tighten connections.
	Sulfated or worn-out battery.	Check electrolyte level and specific gravity.
	Loose or defective alternator/fan belt.	Adjust belt tension or replace belt.
Charging system indicator glows with engine running	Low engine speed.	Increase speed.
	Defective battery.	Check electrolyte level and specific gravity.
	Defective alternator.	See your John Deere dealer.
	Slipping alternator/fan belt.	Adjust belt tension.
Starter cranks slowly	Low battery output.	Check electrolyte level and specific gravity.
	Crankcase oil too heavy.	Use proper viscosity oil.
	Loose or corroded connections.	Clean and tighten loose connections.
Light system does not function; rest of electrical system functions	Blown fuse.	Replace fuse.
Entire electrical system does not function	Faulty battery connections.	Clean and tighten connections.
	Sulfated or worn-out battery.	Check electrolyte level and specific gravity.
	Blown fuse.	Replace fuse.
Relay(s) sticking or nonfunctional; repeated failures	Diode to protect circuit from arcing has failed.	See your John Deere dealer.

LV,5010T,E -19-09SEP97-1/1

Heater and A/C System (Cab) Troubleshooting

Symptom	Problem	Solution
All cab electrical switches do not work	Loose, defective or blown fusible link.	See your John Deere dealer.
Blower malfunctioning	Blower does not work.	Check both blower fuses.
Blower operates only in purge position	One of two fuses blown.	Replace fuse.
	Blown blower resistance assembly.	See your John Deere dealer.
Heater does not work	Low coolant level.	Check coolant level; add if necessary.
	Faulty thermostat.	See your John Deere dealer.
	Heater control valve not functioning properly.	See your John Deere dealer.
	Heater core or hoses clogged or damaged.	Flush cooling system. Replace heater core or hoses. See your John Deere dealer.
Air conditioning does not work	Compressor belt loose or slipping.	Replace belt if necessary.
	Blown fuse.	Replace fuse.
	Defective switch.	See your John Deere dealer.
	Faulty wiring or loose connections.	See your John Deere dealer.
	Defective compressor clutch.	See your John Deere dealer.
Drafts	Poor air distribution	Adjust directional air louvers. Set blower switch to medium or low positions.
Inadequate air flow	Clogged air filters.	Clean filters.
	Evaporator core air flow restricted.	Clean evaporator and housing with compressed air.
	Faulty blower fan motors.	See your John Deere dealer.
	Defective blower switch.	See your John Deere dealer.
	Faulty wiring or loose connections.	See your John Deere dealer.
Water leaking or dripping from evaporator core compartment	Loose hose clamp.	Tighten clamp.

Continued on next page

Symptom	Problem	Solution
	A/C drip pan dirty.	Clean evaporator pan and outlet with compressed air.
	A/C drain tubes plugged.	Clean drain tubes.
Strange odors inside operator's cab	Dirty air filters.	Clean filters.
	Evaporator condenser pan dirty.	Clean pan and outlet with compressed air.
	Drain tubes plugged.	Clean drain tubes.
	Tobacco smoke and tar on evaporator exterior.	Clean filters.
Partial frosting and sweating of lines combined with poor cooling	Compressor belt slipping.	Replace belt.
	Loss of refrigerant.	Check system for leaks. See your John Deere dealer.
	Restricted or clogged liquid line.	See your John Deere dealer.
	Expansion valve malfunctioning.	See your John Deere dealer.
Ice flecks blowing from evaporator	Control dial set too low.	Adjust the temperature control to a warmer position.
Failure to cool	Insufficient blower speed.	Increase blower speed.
	Dirty air filters.	Clean filters.
	Debris on front grille and side screens.	Clean grille and screens.
	Lint or dirt on condenser fins.	Blow out condenser fins with compressed air.
	Refrigerant is lost or extremely low.	See your John Deere dealer.
	Loose compressor drive belt.	Replace belt.
	Compressor clutch not engaging.	See your John Deere dealer.
	Expansion valve not functioning.	See your John Deere dealer.
	Restriction in refrigerant system.	See your John Deere dealer.
	Faulty wiring or loose connections.	See your John Deere dealer.
	Defective temperature control switch.	See your John Deere dealer.

Continued on next page

Symptom	Problem	Solution
	Outside temperature too low. Below 21 °C (70 °F).	Wait until day gets warmer. If there is a malfunction in system, see your John Deere dealer.
	Condenser is overheating.	Clean condenser screens, cores and fins of condenser and radiator.
	Severe restriction in high side.	See your John Deere dealer.
	Burned out clutch field or faulty field.	See your John Deere dealer.
	Short circuit in control circuit or failure of a switch in circuit.	See your John Deere dealer.
Hissing noise at expansion valve	Loss of refrigerant.	Check system for leaks. See your John Deere dealer.
	Restriction in refrigerant system.	Check for kinks in hoses. Check receiver-dryer for uniformity of temperature. If temperature is not uniform, see your John Deere dealer.

SV86979,0000154 -19-14SEP12-3/3

Wiper(s), Worklights, Dome Light and Radio (Cab) Troubleshooting

Symptom	Problem	Solution
All cab electrical switches do not work	Loose, defective or blown fusible link.	See your John Deere dealer.
Window wiper(s) and washer will not run	Blown fuse.	Replace fuse.
	Defective switch(es).	See your John Deere dealer.
	Defective motor(s).	See your John Deere dealer.
	Faulty wiring or loose connections.	See your John Deere dealer.
Floodlights do not work	Blown fuse.	Replace fuse.
	Defective switch.	See your John Deere dealer.
	Faulty wiring or loose connections.	See your John Deere dealer.
Dome light does not work	Blown fuse.	Replace fuse.
	Defective bulb or switch.	Replace bulb or see your John Deere dealer.
	Defective door switch(es).	See your John Deere dealer.
	Faulty wiring or loose connections.	See your John Deere dealer.
Radio does not work	Blown fuse.	Replace fuse.

SV86979,0000155 -19-14SEP12-1/1

Place Tractor in Long-Term Storage

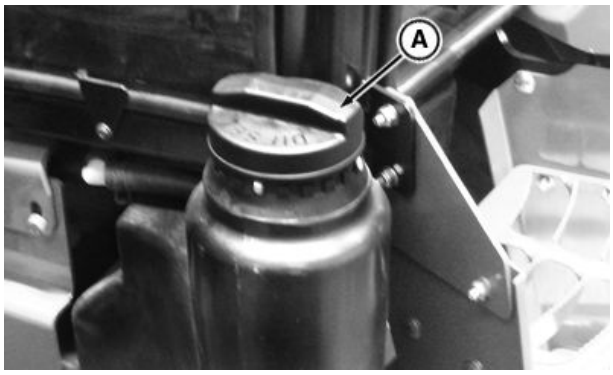
IMPORTANT: If the tractor will not be used for several months, the following recommendations for storage and removal from storage will minimize corrosion and deterioration.

NOTE: Use Engine Storage Kit available from your John Deere dealer.

Perform the following steps for long-term tractor storage:

1. Service engine air cleaner. (See SERVICE ENGINE AIR INTAKE AND PRE-CLEANER in General Maintenance and Inspection section.)
2. If coolant in tractor is more than 2 years old, flush cooling system. (See DRAIN, FLUSH AND REFILL COOLING SYSTEM in Maintenance—Cooling System section). Add 50% antifreeze water mixture. Test coolant for adequate cold-weather protection.
3. Change engine oil and filter (See procedure in Lubrication section).
4. Drain fuel tank. Remove fuel tank fill cap (A) and add 4 L (1 gal) of fuel. Install cap.
5. Remove alternator/fan belt after it has cooled.

[1]Disconnect battery ground cable for short-term storage periods (20 to 90 days).



PY16195 —UN—27JUN12

Left-Hand Side of Cab Tractor Shown

A—Fuel Tank Fill Cap

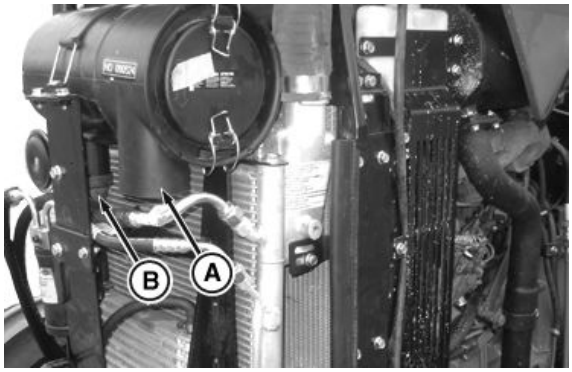
6. Remove and clean battery. Store in a cool, dry place. Keep it charged. [1]
7. Tie or block clutch pedal in the disengaged position.
8. Coat exposed metal surfaces such as the adjustable front axles, if extended, with grease or a corrosion inhibitor.

Continued on next page

LGCKF7U,0000576 -19-25APR20-1/2

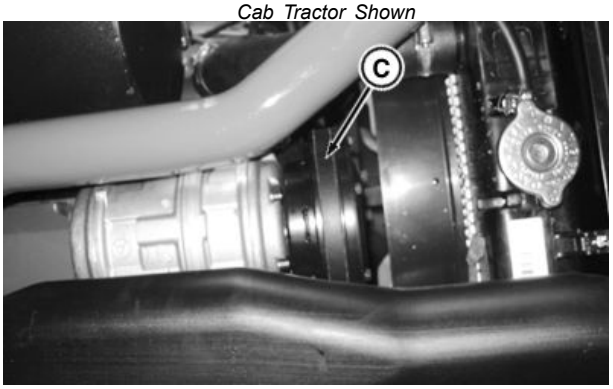
9. Use tape to seal air cleaner inlet (A), dust unloader valve (B), exhaust pipe, crankcase fill cap, fuel fill cap, coolant recovery tank, and transmission/hydraulic system fill cap.
10. Cover dash with opaque material to prevent gauges from fading.
11. Raise tires off ground. Protect from heat and sunlight.
12. Thoroughly clean tractor. Touch up any painted surfaces that are scratched or chipped.
13. If the tractor must be stored outside, cover it with a waterproof material.
14. **Cab:** Rotate air conditioner compressor pulley (C) several turns once a month to prevent seizure of compressor.

A—Air Cleaner Inlet
B—Dust Unloader Valve
C—Air Conditioner Compressor Pulley (If Equipped)



PY15628 —UN—03SEP12

Cab Tractor Shown



PY16269 —UN—20AUG13

Air conditioner Compressor (Only for Cab Tractors)

LGCKF7U,0000576 -19-25APR20-2/2

Remove Tractor from Storage

Perform the following steps to remove tractor from storage:

1. Check tire inflation pressure. (See Wheels, Tires, and Treads section.) Lower tires to ground.
2. Remove all coverings.
3. Unseal all openings sealed during storage.
4. Install battery.
5. Remove ties or block which secured clutch pedal down.

IMPORTANT: Cab tractor: If air conditioner compressor is seized, engine operation with compressor clutch engaged damages belt or compressor.

6. **Cab:** Check that air conditioner compressor pulley moves freely and is not seized.
7. Install alternator/fan belt.
8. Check levels of engine oil, transmission/hydraulic oil, and engine coolant. Add fluids as needed.
9. Drain a small amount of fuel from fuel tank to purge any moisture condensation that has collected.
10. Fill fuel tank.
11. Perform all appropriate services listed in Maintenance and Service Intervals section, as dictated by elapsed storage period.
12. Check instruments and indicators by turning key switch to RUN position.

IMPORTANT: Do not operate starter more than 20 seconds at a time, and wait at least two minutes for starter to cool before trying again.

13. Make sure gearshift lever and PowrReverser™ lever (if equipped) is in neutral (“N”) and PTO control lever is in disengaged position. Pull hand throttle (A) all the way back, depress clutch pedal and start engine until oil pressure rises. Turn key switch to OFF position.
14. Connect fuel shutoff solenoid wiring leads/connectors.
15. Depress clutch pedal and start engine. Operate engine at low idle for several minutes. Warm up carefully and check all systems before placing tractor under load.

PY18459 —UN—11JUL14

IOOS Shown

PY28110 —UN—21JUN16

Cab Shown

A—Hand Throttle Lever

SD74272,000005E -19-21JUN16-1/1

Paint Finish Care

Washing tractor regularly will preserve the finish. Wash tractor in indirect sunlight. All cleaning agents should be flushed promptly and not allowed to dry on the paint surface.

IMPORTANT: Do not use hot water, strong soaps or chemical detergents. Use liquid hand, dish or car washing (non detergent) soaps. Cleaning agents containing acid or abrasives should not be used.

Waxing tractor occasionally may be necessary to remove residue from paint finish. Do not use waxes containing abrasive compounds.

Inspect paint surface, during washing or waxing, for chips and scratches. Repaint any areas where paint has been removed. Paint materials are available from your John Deere dealer.

SV86979,0000136 -19-24AUG12-1/1

General Specifications

NOTE: Specifications and design subject to change without notice.

Tractor Model	5055E	5065E	5075E
Engine & Engine Auxiliary			
Engine Model	3029 H	3029 H	3029 H
Certification as per 77/537EEC (CTQ)	Stage III A	Stage III A	Stage III A
Gross Flywheel power @ rated rpm, SAE J1349, hp.	55	65	75
IOOS			
PTO hp. @ rated rpm, hp. (12x12 PR - IOOS)	42.5	46	59.5
Cab HVAC			
PTO hp. @ rated rpm, hp. (9x3 SyncShuttle - Cab)	39.5	43.6	57.2
PTO hp. @ rated rpm, hp. (12x12 PR - Cab)	38	42.1	55.7
Cab Heater Only			
PTO hp. @ rated rpm, hp. (9x3 SyncShuttle - Cab)	43.5	47.6	61
Rated ERPM	2400	2400	2400
Nominal Engine Torque	205 NM @ 1800 rpm	230 NM @ 1800 rpm	258 NM @ 1800 rpm
No. of cylinders	3		
Bore, mm	106.5		
Stroke, mm	110		
Displacement, Liters	2.9		
Compression Ratio	19.0:1		
Firing Order	1 - 2 - 3		
Low Idle, rpm	850, -50/+25		
High Idle, rpm	2600, -25/+50		
Operating Range, rpm	1400-2400		
Fuel Shut Off	Electric		
Cold Start	Available		
Cooling Package	Liquid cooled with overflow reservoir		
Fan	Viscous fan		
Radiator	48 mm	56 mm	56 mm
CAC	Yes	Yes	Yes
Aspiration	Turbocharged	Turbocharged	Turbocharged
Combustion	Direct injection	Direct injection	Direct injection
FIP	Rotary	Rotary	Rotary
Muffler	Under hood	Under hood	Under hood
Fuel cooler	Not provided	Not provided	Provided, 8 Plate
Air Cleaner	FKB-6”		
Engine shut off	Electrical shut off		
Fuel tank	Mid fill, Under platform		
Lift pump	Yes		
Anti-Freeze	50:50		
Transmission			

Continued on next page

Tractor Model	5055E	5065E	5075E
Shift Pattern	H		
Clutch Type	Dual		
Clutch size (inch)	11"		
Material of traction clutch plate	Cerametallic		
Service brake	Hydraulic Actuated oil immersed disk brake.		
Park Brake	Park Pawl		
Secondary Brake	Parking brake used as secondary brake. Performance per EEC 89/179		
Trailer brake	Optional		
Material of PTO clutch plate	Cerametallic		
No of speeds (SyncShuttle Transmission)	9 Forward Gears 3 Reverse Gears		
No of speeds (PowrReverser™ Transmission)	12 Forward Gears 12 Reverse Gears		
Gear shifter location	Right-hand side		
PTO- Standard	540 @ 2400 engine rpm		
PTO- Economy	540E @1705 engine rpm	540E @1705 engine rpm	540E @1705 engine rpm
Differential lock	Standard, Pedal operated	Standard, Pedal operated	Standard, Pedal operated
Rear axle	10 series	10 series	10 series
Hydraulic			
Pump			
Single or Tandem	Tandem		
Pump rpm @ engine rpm	1:1		
Hydraulic system			
Pump Displacement—Steering	11.9 cu cm (0.73 cu. in.)		
Pump Displacement—Implement	20 cu cm (1.22 cu. in.)		
Steering	25.7 L/min. (6.8 gpm)		
Implement	43.1 L/min. (11.4 gpm)		
Rockshaft & SCV			
Rockshaft Make	JD		
Control valve make	Eaton		
SCV make	Eaton		
Rock shaft pressure, bar	195±5		
Controls	Draft & position		
External tapping for return line	Available		
Rate of drop	Available		
Power beyond	Optional as kit		
SCV-I	Standard with neutral lock		
SCV-II	Optional as kit		
Hitches			
3 point linkage, Cat	Cat I and II		
3 point linkage, Type	Cast		
Lift capacity at hitch points	1800@hitch Ball		
Lift capacity at 24" behind hitch balls, Kg	1448		
Retainer	Available		

Continued on next page

Tractor Model	5055E	5065E	5075E
Rear - wagon coupling	Swinging Drawbar with clevis.		
Steering System			
Type	Power Steering		
Steering column - IOOS (PR) and Cab (SyncShuttle)	Standard, Non-Collapsible, and Not-tilt able		
Steering column - Cab (PowrReverser™ Transmission)	Standard, Non-Collapsible and with Tilt option		
Steering wheel- Wheel dia. / Rim dia., mm	406 / 26.2		
Steering valve Isolators	Available		
Steering pressure, bar	135		
Chassis			
Wheels and Tires			
Mechanical Front Wheel Drive (MFWD)	In Base	In Base	In Base
Rear Tire Size	160/95 R 46 [a] 14.9 R28 13.6 R 36	160/95 R 46[a] 14.9 R 28 13.6 R 36 16.9 R 28	160/95 R 46[a] 13.6 R 36 16.9 R 30
Front Tire Size	8.3 x 28, Bias[a] 9.5 R 24 12.4 R 20 12.4 R 24	8.3 x 28, Bias[a] 11.2 R 24 12.4 R 20 12.4 R 24	8.3 x 28, Bias[a] 12.4 R 24
Turning Radius			
Turning Radius W / brakes, mm	3940 mm	3940 mm	3940 mm
Turning Radius without brakes, mm	4650 mm	4650 mm	4650 mm
ADD on weights			
Front weight support type	EU- 66 kg		
Rear weights- optional	Available	Available	Available
ROPS	Cab Frame	Cab Frame	Cab Frame
Electrical			
For IOOS			
Battery voltage	12 V		
Battery Cold Cranking Amps	622 CCA		
Ampere Rating	64 Ah		
Alternator	70 Amp		
For Cab			
Battery voltage	12 V		
Battery Cold Cranking Amps	800 CCA		
Ampere Rating	68 Ah		
Alternator	90 Amp		
Starter-All	12 V , 2.5 kW		
Capacities (L)			
Fuel Tank	Open Operator Station—68 ± 3.5 L Cab—82 ± 4 L		
Engine Sump	8.5		
Transmission (SyncShuttle)	38		
Transmission (PowrReverser™)	43.5		
Cooling System	9.5		
Mechanical Front Wheel Drive (MFWD) Axle			

Continued on next page

Tractor Model	5055E	5065E	5075E
Differential Housing	4.5L		
Wheel Hub (Each)	0.8L		

[a]*For SyncShuttle Transmission)*

NOTE: (Specifications and design subject to change without notice.)

SD74272,00001BC -19-26DEC14-4/4

Overall Dimensions and Weights

NOTE: Specifications and design subject to change without notice.

All dimensions are of a machine equipped with in base tires.

Tractor Model	5055E	5065	5075
DIMENSIONS			
Wheelbase — MFWD	2050 mm		
Overall Length — MFWD	3774 mm		
Ground-to-Cab Top	2716 ± 15 mm		
Rear Axle Centerline-to-Cab Top	1760 mm		

For Cab

Tractor Model	5055E	5065	5075
DIMENSIONS			
Wheelbase—MFWD	2050 mm		
Overall Length—MFWD	3774 mm		
Ground-to-ROPS Top	2485 ± 15 mm		
Rear Axle Centerline-to-ROPS Top	1785 mm		

For IOOS

RM87422,0000007 -19-08AUG14-1/1

Loads For Tractor

Coupling Device		Drawbar 4WD
Maximum Vertical Load(N)		950
Towable Mass (Kg)	Unbraked	2800
	Independently Braked	4000
	Inertia Braked	8000
	Assisted Braked	8000
Combination Mass Tractor + Trailor 4WD		12200

SD74272,00005F3 -19-19AUG13-1/1

Sound Level

Max. sound level at operator's ear	86 dB(A)	Measurement method in accordance with Directive 2009/76/EC (1), supplement II
	or	
	90 dB(A)	Measurement method in accordance with Directive 2009/76/EC (1), supplement I
Max. pass-by noise	89 dB(A)	Measurement method in accordance with Directive 2009/63/EC (2)

AK50421,00001F7 -19-15JUL14-1/1

Ground Speed Estimates — (Sync Shuttle Transmission)

NOTE: Ground Speed (km/h) at 2400 rpm engine speed.

NOTE: For 5055E and 5065E MFWD Turkey tractors, ground speeds are change as compared to other 5055E and 5065E tractors, where as 5075E MFWD Turkey tractors have the same ground speeds as of other 5075E tractors.

NOTE: Tire size of 160/95 R 46 has same SRI (725mm) as 13.6 - R 36 tires, so speeds will remain same as 13.6 - R 36 speeds.

Rear tire size: 16.9 x 30	
Gear	Speed (km/h) - For MFWD
A1	2.06
A2	2.97
A3	4.47
B1	4.86
B2	7.02
B3	10.55
C1	13.34
C2	19.26
C3	28.98
A-R	3.46
B-R	8.17
C-R	22.42

Rear tire size: 14.9 x 28	
Gear	Speed (km/h) - For MFWD
A1	2.0
A2	2.8
A3	4.3
B1	4.6
B2	6.7
B3	10.0
C1	12.7
C2	18.3
C3	27.6
A-R	3.3
B-R	7.8
C-R	21.3

Rear tire size: 13.6-36	
Gear	Speed (km/h) - For MFWD
A1	2.22
A2	3.20
A3	4.82
B1	5.23
B2	7.56
B3	11.37
C1	14.37
C2	20.75

Continued on next page

Rear tire size: 13.6-36	
C3	31.22
A-R	3.73
B-R	13.05
C-R	24.16

Rear tire size: 16.9 x 28 Radial [a]	
Gear	Speed (km/h) - For MFWD
A1	2.1
A2	3.0
A3	4.5
B1	4.9
B2	7.0
B3	10.6
C1	13.4
C2	19.3
C3	29.1
A-R	3.5
B-R	8.2
C-R	22.5

[a] *For Turkey Market Only*

SD74272,00005F5 -19-07AUG14-2/2

Ground Speed Estimates — (PowrReverser™Transmission)

NOTE: Ground Speed (km/h) at 2400 rpm engine speed.

	Speed (km/h)			
Gear	**Rear tire size : 14.9 R 28 (R 650 mm)**	**Rear tire size : 16.9 R 28 (R 700 mm)**	**Rear tire size : 16.9 R 30 (R 675 mm)**	**Rear tire size : 13.6 R 36 (R 725 mm)**
A1	1.5	1.6	1.6	1.7
A2	2.1	2.2	2.2	2.3
A3	2.8	3	2.9	3.1
A4	3.8	4.1	3.9	4.2
B1	4.3	4.7	4.6	4.9
B2	5.9	6.4	6.2	6.7
B3	8.1	8.8	8.5	9.1
B4	10.8	11.7	11.3	12.2
C1	12.5	13.6	13.1	14.1
C2	17.1	18.6	17.9	19.2
C3	23.3	25.3	24.4	26.3
C4	31.2	34	32.8	35.2
Rev A1	-1.6	-1.8	-1.7	-1.9
Rev A2	-2.2	-2.4	-2.3	-2.5
Rev A3	-3.1	-3.3	-3.2	-3.4
Rev A4	-4.1	-4.5	-4.3	-4.6
Rev B1	-4.7	-5.1	-5	-5.3
Rev B2	-6.4	-7	-6.8	-7.3
Rev B3	-8.8	-9.6	-9.2	-9.9
Rev B4	-11.8	-12.8	-12.4	-13.3
Rev C1	-13.7	-14.9	-14.3	-15.4
Rev C2	-18.6	-20.3	-19.5	-21
Rev C3	-25.4	-27.7	-26.7	-28.7
Rev C4	-34	-37.1	-35.7	-38.4

PowrReverser is a trademark of Deere & Company

RM87422,0000008 -19-25JUL14-1/1

Correction Factors For Other Tire Sizes

To calculate ground speeds for tractors equipped with rear tires other than 16.9-28(R650 mm), R1 tires, multiply the ground speeds shown for the 16.9-28 (R650 mm), R1 tires from above chart with correction factor.

Correction factor is calculated by: Rolling radius of new tire/Rolling radius of tire for which ground speed are known.

Example: Correction factor for 14.9-28 (R622 mm) with respect to 16.9-29 (R650 mm)= 622/650.

Example: Ground speed of 14.9- 28 (R622 mm) at B-2, 2400 engine RPM.

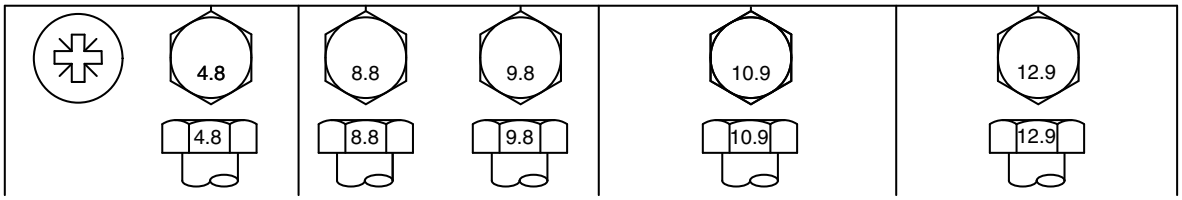
5.93km/h)*(622/650)= 5.67km/h

NOTE: Speed and correction factor information is based on rolling circumference information which vary with tire manufacturer.

SD74272,00006A3 -19-06SEP13-1/1

Metric Bolt and Screw Torque Values

TS1742 —UN—31MAY18



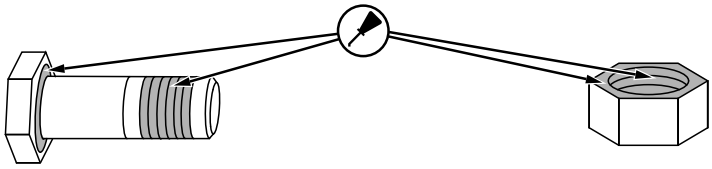
Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
M6	3.6	31.9	3.9	34.5	6.7	59.3	7.3	64.6	9.8	86.7	10.8	95.6	11.5	102	12.6	112
									N·m	lb·ft	N·m	lb·ft	N·m	lb·ft	N·m	lb·ft
M8	8.6	76.1	9.4	83.2	16.2	143	17.6	156	23.8	17.6	25.9	19.1	27.8	20.5	30.3	22.3
			N·m	lb·ft	N·m	lb·ft	N·m	lb·ft								
M10	16.9	150	18.4	13.6	31.9	23.5	34.7	25.6	46.8	34.5	51	37.6	55	40.6	60	44.3
	N·m	lb·ft														
M12	—	—	—	—	55	40.6	61	45	81	59.7	89	65.6	95	70.1	105	77.4
M14	—	—	—	—	87	64.2	96	70.8	128	94.4	141	104	150	111	165	122
M16	—	—	—	—	135	99.6	149	110	198	146	219	162	232	171	257	190
M18	—	—	—	—	193	142	214	158	275	203	304	224	322	245	356	263
M20	—	—	—	—	272	201	301	222	387	285	428	316	453	334	501	370
M22	—	—	—	—	365	263	405	299	520	384	576	425	608	448	674	497
M24	—	—	—	—	468	345	518	382	666	491	738	544	780	575	864	637
M27	—	—	—	—	683	504	758	559	973	718	1080	797	1139	840	1263	932
M30	—	—	—	—	932	687	1029	759	1327	979	1466	1081	1553	1145	1715	1265
M33	—	—	—	—	1258	928	1398	1031	1788	1319	1986	1465	2092	1543	2324	1714
M36	—	—	—	—	1617	1193	1789	1319	2303	1699	2548	1879	2695	1988	2982	2199

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench.
DO NOT use these values if a different torque value or tightening procedure is given for a specific application.
For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.

TS1741 —UN—22MAY18

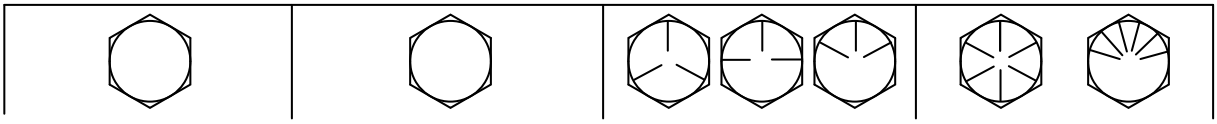


[a]Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.
[b]Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ2 -19-30MAY18-1/1

Unified Inch Bolt and Screw Torque Values

TS1671 —UN—01MAY03



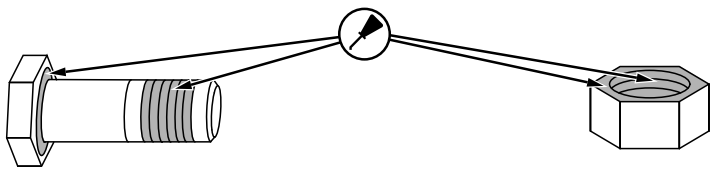
Bolt or Screw Size	SAE Grade 1[a]				SAE Grade 2[b]				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
1/4	3.1	27.3	3.2	28.4	5.1	45.5	5.3	47.3	7.9	70.2	8.3	73.1	11.2	99.2	11.6	103
													N·m	lb·ft	N·m	lb·ft
5/16	6.1	54.1	6.5	57.7	10.2	90.2	10.9	96.2	15.7	139	16.8	149	22.2	16.4	23.7	17.5
									N·m	lb·ft	N·m	lb·ft				
3/8	10.5	93.6	11.5	102	17.6	156	19.2	170	27.3	20.1	29.7	21.9	38.5	28.4	41.9	30.9
					N·m	lb·ft	N·m	lb·ft								
7/16	16.7	148	18.4	163	27.8	20.5	30.6	22.6	43	31.7	47.3	34.9	60.6	44.7	66.8	49.3
	N·m	lb·ft	N·m	lb·ft												
1/2	25.9	19.1	28.2	20.8	43.1	31.8	47	34.7	66.6	49.1	72.8	53.7	94	69.3	103	75.8
9/16	36.7	27.1	40.5	29.9	61.1	45.1	67.5	49.8	94.6	69.8	104	77	134	98.5	148	109
5/8	51	37.6	55.9	41.2	85	62.7	93.1	68.7	131	96.9	144	106	186	137	203	150
3/4	89.5	66	98	72.3	149	110	164	121	230	170	252	186	325	240	357	263
7/8	144	106	157	116	144	106	157	116	370	273	405	299	522	385	572	422
1	216	159	236	174	216	159	236	174	556	410	609	449	785	579	860	634
1-1/8	305	225	335	247	305	225	335	247	685	505	751	554	1110	819	1218	898
1-1/4	427	315	469	346	427	315	469	346	957	706	1051	775	1552	1145	1703	1256
1-3/8	564	416	618	456	564	416	618	456	1264	932	1386	1022	2050	1512	2248	1658
1-1/2	743	548	815	601	743	548	815	601	1665	1228	1826	1347	2699	1991	2962	2185

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench.
DO NOT use these values if a different torque value or tightening procedure is given for a specific application.
For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.

TS1741 —UN—22MAY18



[a]Grade 1 applies for hex cap screws over 6 in (152 mm) long, and for all other types of bolts and screws of any length.
[b]Grade 2 applies for hex cap screws (not hex bolts) up to 6 in (152 mm) long.
[c]Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.
[d]Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ1 -19-30MAY18-1/1

Emissions Control System Certification Label

WARNING: Statutes providing severe penalties for tampering with emissions controls may apply at the user's location.

The emissions warranty described below applies only 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 in non-road mobile (self-propelled or portable/transportable[1]) 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 governed by the regulating agencies.

NOTE: The hp/kW rating on the engine emissions certification label specifies the gross engine hp/kW, which is flywheel power without fan. In most applications this will not be the same rating as the advertised vehicle hp/kW rating.

PY15708 —UN—05FEB13

Sample Emission Label

[1]*Equipment moved at least once every 12 months.*

SV86979,00002EC -19-11JUL14-1/1

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 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.

JB06590,000059C -19-23JUL09-1/1

Identification Numbers

Identification Plates

Each tractor has the identification plates shown on these pages. The letters and numbers stamped on the plates identify a component or assembly. ALL these characters are needed when ordering parts or identifying a tractor or component for any John Deere product support program. Also, they are needed for law enforcement to trace your tractor if it is ever stolen. ACCURATELY record these characters in the spaces provided in each of the following photographs.

SV86979,000013F -19-28AUG12-1/1

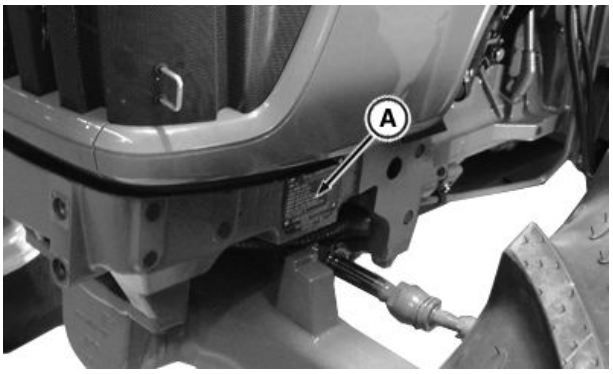
Product Identification Number

Product identification number (PIN) plate is located on the left front support member of the tractor.

Record serial number below.

Tractor Serial Number_____

A—Product Identification Number Plate



PY18296 —UN—03SEP13

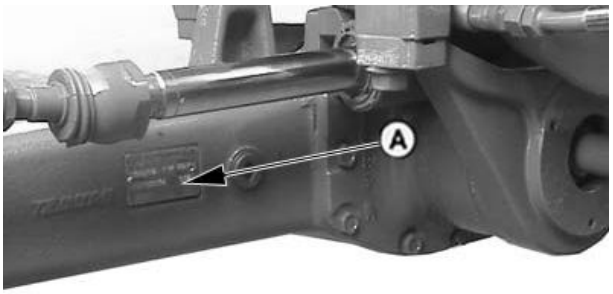
SD74272,00005F6 -19-19AUG13-1/1

Record Mechanical Front Wheel Drive (MFWD) Serial Number

The MFWD serial number plate (A) is located on the rear side of the right-hand axle housing.

MFWD Serial Number_____

A—MFWD Serial Number Plate



PY6528

PY6528 —UN—06NOV06

SD74272,00005F7 -19-19AUG13-1/1

Record Engine Serial Number

Serial number plate (A) is located on the right-hand side of the engine block between the starter solenoid and the hydraulic pump.

Engine Serial Number_____

A—Serial Number Plate

PY7419

PY7419 —UN—10JUL07

SD74272,00005F8 -19-10SEP13-1/1

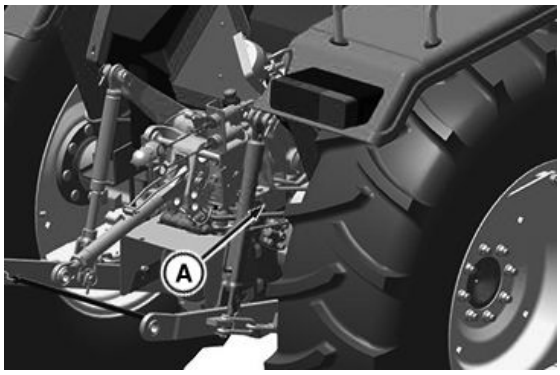
Record Transmission Serial Number (Power Reverser)

Power Reverser™ Transmission serial number (A) is stamped on the rear right-hand side of the case differential near PTO cover.

NOTE: Components may be removed for clear view of the transmission serial number location.

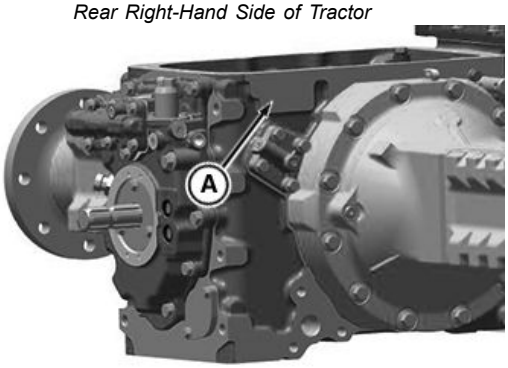
Transmission Serial Number_____

A—Transmission Serial Number



APY19467 —UN—22JUL19

Rear Right-Hand Side of Tractor



APY19469 —UN—23JUL19

Power Reverser is a trademark of Deere & Company

RP32883,000073A -19-01AUG19-1/1

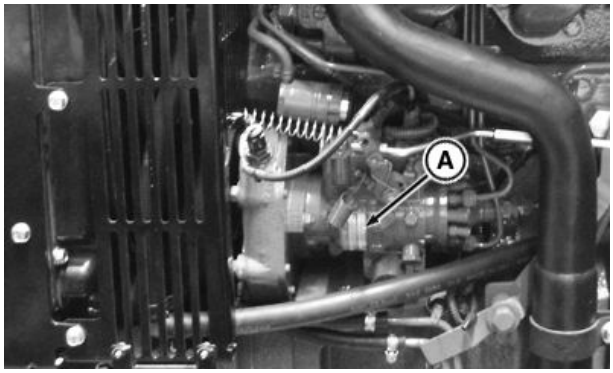
Fuel Injection Pump Serial Number

Serial number plate (A) is located on the side of pump.

Record serial number below.

Fuel Injection Pump Serial Number _____

A—Fuel Injection Pump Serial Number Plate



PY16196 —UN—27JUN12

SD74272,00005F9 -19-19AUG13-1/1

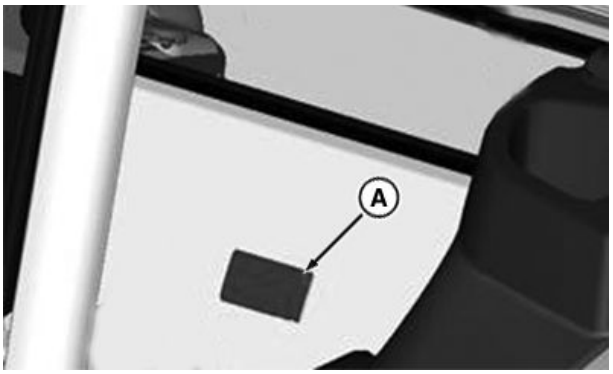
Cab Serial Number

Serial number is located below the rear implement window, behind the operator seat.

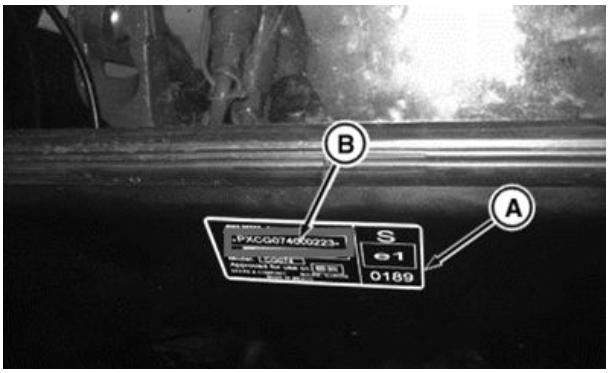
Record serial number below.

Cab Serial Number _____

A—Cab Serial Number Plate **B—Cab Serial Number**



PY22983 —UN—06JUL15



PY22982 —UN—06JUL15

Sample Cab Serial Number Shown

VP52664,000016E -19-06JUL15-1/1

ROPS Serial Number

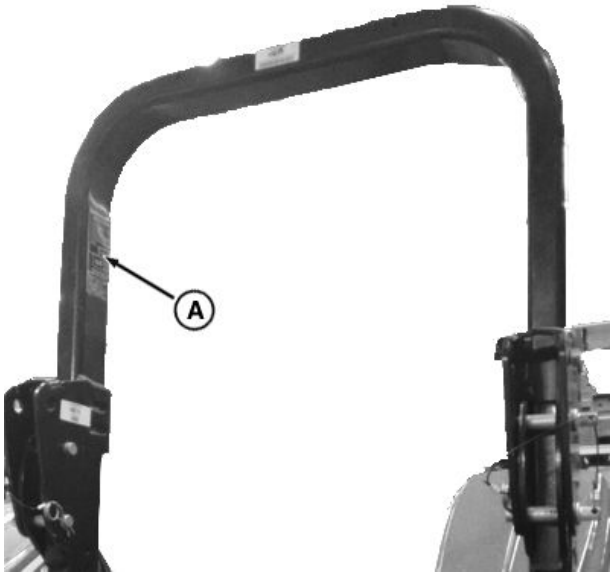
IMPORTANT: Ensure ROPS serial number plate is visible all the time, DO NOT mount mirror on certification plate.

ROPS serial number plate (A) is located on the ROPS (inner side).

Record serial number below.

ROPS Serial Number _____

A—ROPS Serial Number Plate



PY47118 —UN—15NOV17

APY41764 —UN—06DEC20

WKJQUWJ,00008C7 -19-13DEC20-1/1

Keep Proof of Ownership

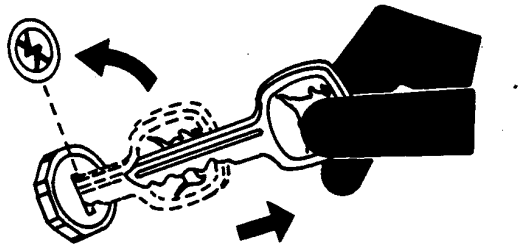
1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
   - Mark your machine with your own numbering system
   - Take color photographs from several angles of each machine

TS1680 —UN—09DEC03

SV86979,0000146 -19-28AUG12-1/1

Keep Machines Secure

1. Install vandal-proof devices.
2. When machine is in storage:
   - Lower equipment to the ground
   - Set wheels to widest position to make loading more difficult
   - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.



TS230 —UN—24MAY89

SV86979,0000147 -19-28AUG12-1/1

Lubrication Maintenance Record Charts

Daily / 10 Hour Service Record

- Check engine oil level
- Check coolant level
- Drain water and sediment from fuel tank and fuel filter [1]
- Lubricate front axle pivot pins[2]
- Lubricate rear axle bearings[2]

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

[1]The fuel filter must be drained when water or debris is evident in the sediment bowl. If this reoccurs more than three days in a row, then drain the sediment from the fuel tank. Run engine for a minimum of 20 seconds, re-check and if more water collects, drain the fuel tank.
[2]Only necessary in extremely wet or muddy conditions

SD74272,00005FA -19-19AUG13-1/1

Every 50 Hour Service Record

- Clean and check battery
- Inspect all tires
- Lubricate front axle pivot pins
- Check transmission-hydraulic system oil level
- Check MFWD axle hub oil level
- Inspect tractor for loose nuts and bolts

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

SD74272,00005FB -19-19AUG13-1/1

First 100 Hour Service Record

☐ Replace transmission-hydraulic oil filter.
☐ Change engine break-in oil and filter.
☐ Inspect hose clamps on the air intake system & coolant system.

Date: ____________________

Hours: ____________________

SV86979,00002CD -19-30JAN13-1/1

250 Hour Service Record

- Service air cleaner [1]
- Check oil level in MFWD axle and wheel hubs
- Inspect alternator/fan belt
- Lubricate 3-point hitch
- Check neutral start system
- Replace transmission-hydraulic filter
- Change engine oil and filter [2]
- Adjust clutch pedal free play[3]

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

[1]Service more often if operated in extremely dusty conditions.
[2]When using any lubricant other than TorqGARD or PLUS 50, service interval is 250 hours.
[3]For Mechanical dry clutch.

SV86979,00002CE -19-30JAN13-1/1

500 Hour Service Record

- Replace fuel filters
- Clean operator enclosure/cab air filters [1]

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

[1] *Service more often if operated in extremely dusty conditions.*

SV86979,00002CF -19-30JAN13-1/1

600 Hour Service Record

- Clean engine crankcase vent tube (OCV)
- Change MFWD axle and wheel hub oil
- Check cooling system for leaks
- Lubricate rear axle bearings
- Check engine idle speeds
- Check front axle pivot pin
- Check and tighten all hoses and hose clamps
- Check Secondary brake(if equipped)

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

SD74272,00005FC -19-11NOV13-1/1

1200 Hour Service Chart

Every 1200 Hours

- Change transmission-hydraulic oil and filter
- Clean transmission-hydraulic pickup screen
- Check and adjust valve clearance
- Check engine speeds

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

SV86979,00002D1 -19-30JAN13-1/1

Annual Service Chart

Annually

- Replace air cleaner elements
- Inspect seat belt
- Replace operator enclosure air filters/cab air filters

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

SJ15074,000056C -19-04OCT18-1/1

2000 Hour Service Chart

Every 2 Years or 2000 Hours (Whichever Comes First)

- Adjust engine valve clearance
- Flush cooling system

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

SV86979,000025F -19-26DEC12-1/1

As Required Service Chart

Service as Required

- Replace fuel filter
- Drain water and sediment from fuel tank
- Service air cleaner
- Adjust throttle friction
- Inspect Engine Air Intake System
- Check operator enclosure/cab air filters
- Clean Front Grille, Side Screens, Radiator, Condenser (cab) and Oil, Fuel or Air Coolers (if equipped)
- Lubricate Operator Seat Slide Rails
- Replace Bulbs; Floodlights, Headlights, Tail/Turn Lights and Warning Lights
- Adjust Headlights
- Service air-conditioning system

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

SV86979,000025E -19-26DEC12-1/1

John Deere Service

John Deere Parts

We help minimize downtime by putting genuine John Deere parts in your hands in a hurry.

That's why we maintain a large and varied inventory—to stay a jump ahead of your needs.

TS100 —UN—23AUG88

DX,IBC,A -19-04JUN90-1/1

The Right Tools

Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly . . . to save you time and money.

TS101 —UN—23AUG88

DX,IBC,B -19-04JUN90-1/1

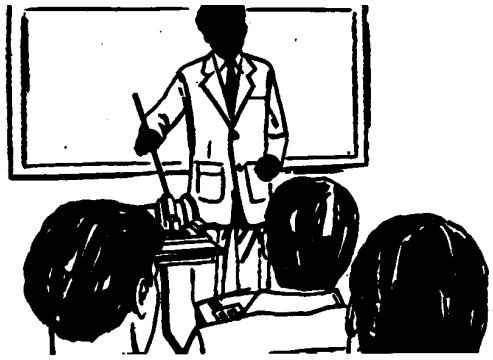
Well-Trained Technicians

School is never out for John Deere service technicians.

Training schools are held regularly to be sure our personnel know your equipment and how to maintain it.

Result?

Experience you can count on!



TS102 —UN—23AUG88

DX,IBC,C -19-04JUN90-1/1

Prompt Service

Our goal is to provide prompt, efficient care when you want it and where you want it.

We can make repairs at your place or at ours, depending on the circumstances: see us, depend on us.

JOHN DEERE SERVICE SUPERIORITY: We'll be around when you need us.

TS103 —UN—23AUG88

DX,IBC,D -19-04JUN90-1/1

Index

Continued on next page

Continued on next page

Continued on next page

Continued on next page

T

Continued on next page