

Operator's Manual of 300, 304, B350 and 2C-354 Tractors



OPERATOR'S MANUAL JOHNDEERE 30 ~ 35 HP Series Wheeled Tractors (May 2016)

OMSU37873 ISSUE E6 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

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

If this product contains a gasoline engine:

⚠ WARNING

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

The State of California requires the above two warnings.

Additional Proposition 65 Warnings can be found in this manual.

约翰迪尔 (宁波) 农业机械有限公司

在中国平版印刷



Introduction

Foreword

Read this manual carefully to learn how to operate and service your machine correctly. Otherwise, personal injury or damage to the machine may occur. This manual and safety signs on the machine are also available in other languages. (Please purchase them from John Deere dealer.)

This manual is indispensable to the machine. In case of machine resale, please pass this manual to the new machine owner.

All measurements in this manual are provided in both metric and customary values. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific wrench.

"Right side" and "left side" are determined according to the forward travelling direction.

Record the product identification numbers in "Technical specifications" or "Identification number" section (p.I.N.). Accurately record all the numbers of the machine may facilitate tracing the machine in case it is stolen. Your dealer also needs those numbers when you order parts. File the identification numbers in a safe place away from 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 performs a pre-delivery inspection. After the first 100 operating 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"). Using this machine in any other ways is considered as violation of the intended use. The manufacturer accepts no liability for damage or injury resulting from such misuse, and risks incurred must be borne solely by the user. Compliance with and strict adherence to the conditions of operation, service and repair specified by the manufacturer also constitute essential elements for the intended use.

This tractor should be operated, serviced and repaired only by persons who are familiar with all its particular features and are acquainted with relevant safety rules. Accident prevention practices, all other generally recognized safety, occupational protection and road traffic regulations must be observed at all times. Any unauthorized modifications carried out on this tractor will exempt the manufacturer from all liability of any resulting damage or injury.

This tractor performance standard is Q/NTJ 1162-2015
JOHNDEERE 30 ~ 35 hp series wheeled tractor.

N400041,0001F50 -19-11MAR15-1/1

Identification Diagram



NOTE: Tractor shown may have optional equipment.

N4A0003859 —UN—10NOV14
N400041,0001F51 -19-11MAR15-1/1

See supplementary information

After manuals are printed, customers may occasionally get new or revised information. To provide you with updated information, supplements are prepared and sent to you together with the machine publication package.

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

- Description sheets
- Installation instructions
- Publication supplements

Before reading the manual, please look through the machine publication package to see if any supplementary

information has been provided. If supplied, read such information to know which procedures are impacted or modified by the revised instructions. Pay particular attention to "CAUTION" and "IMPORTANT" statements. "CAUTION" statements are about your safety, the safety of others and the safe operation of machine. "IMPORTANT" statements refer to machine adjustment, maintenance and servicing.

Manual is revised annually. Upon revision, supplementary information is incorporated to the manual directly, and not printed separately.

N400041,0001F52 -19-11MAR15-1/1

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Safety information

Recognizing Safety Information

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

Follow recommended precautions and safe operating practices.



N400041,0001F53 -19-11MAR15-1/1

TS1389 —UN—28JUN13

Understanding Signal Words

Signal words DANGER, WARNING or CAUTION are used together with safety-alert symbols. DANGER means very serious injury may occur.

DANGER or WARNING symbols are placed at some specially dangerous positions. General precautions are listed under CAUTION symbols. In this manual, the word CAUTION also reminds you to pay attention to safety information.

 **DANGER**

 **WARNING**

 **CAUTION**

N400041,0001F54 -19-11MAR15-1/1

TS187 —19—30SEP88

Following 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. Never let untrained personnel to operate this machine.

Keep your machine in proper working condition. Unauthorized machine modifications may adversely affect machine functions and/or safety, as well as machine service life.



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

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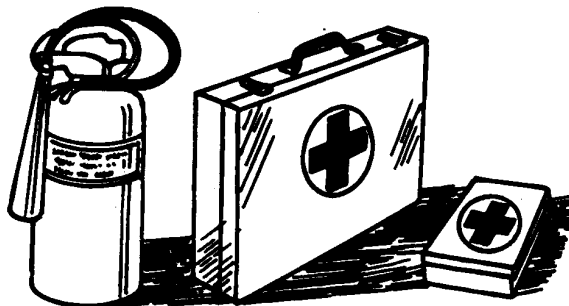
TS201 —UN—15APR13

Preparing for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

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



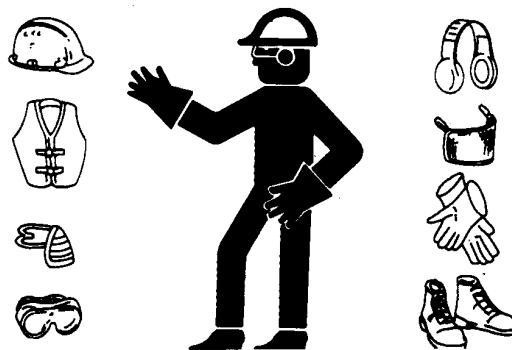
TS291 —UN—15APR13

N400041,0001F56 -19-11MAR15-1/1

Wearing Protective Clothing

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

Safe operation of equipment requires an operator to concentrate much. When operating the machine, do not wear radio or music headphones.



TS206 —UN—15APR13

N400041,0001F57 -19-11MAR15-1/1

Protecting Against Noise

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear suitable hearing protective devices, such as earmuffs or earplugs, to protect against loud noise.



TS207 —UN—23AUG88

N400041,0001F58 -19-11MAR15-1/1

Handling Fuel Safely — Fire Prevention

Use fuel with caution: Fuel is highly flammable. Do not refuel the machine while smoking or when being close to open flame or sparks.

Always stop engine before refueling machine. Always fill the fuel tank in an outdoor environment.

Prevent fire by keeping machine clear of accumulated dirt, grease and debris. Always wipe away spilled fuel.

Use only an approved fuel container for transporting flammable liquids.

Never refill fuel container on a pickup truck with plastic base gasket. Always place fuel container on the ground before refilling. Before removing container lid, put fuel dispenser nozzle in contact with fuel container. Keep that while filling.



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

N400041,0001F59 -19-11MAR15-1/1

TS202 —UN—23AUG88

Handling Starting Fluid Safely

Starting fluid is highly flammable.

When using it, keep it away from any sparks or flame. Starting fluid should be kept away from batteries and cables.

When storing high-pressure starting fluid tank, in order to avoid accidental leak, lid must be closed. Container should be stored in a cool and safe place.

Do not burn or prick starting fluid tank.



N400041,0001F5A -19-11MAR15-1/1

TS1356 —UN—18MAR92

Fire Prevention

To reduce risk of fire, always check and clean the tractor.

- Birds or other animals may build a nest or bring other combustible materials to engine compartment or exhaust system. Daily check and clean the tractor before first use.
- Forage, crops or other debris may accumulate 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. Tractor must be regularly checked and cleaned throughout the day.
- Regularly and thoroughly clean the tractor according to routine maintenance procedures in the Operator's

Manual. That can greatly reduce the risk of fire and 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.
- Always check fuel lines, fuel tank, lids and connectors for damage, cracks or leaks. Replace as necessary.

Comply with all operation and safety procedures on the machine and in the Operator's Manual. While checking and cleaning, be alert of the hot engine and exhaust components. Before any checking or cleaning, engine must be switched off. Set gearbox in parking or apply parking brake and remove the key. Removing the key can prevent others to start the tractor while being checked and cleaned.

N400041,0001F5B -19-11MAR15-1/1

In Case of Fire

⚠ CAUTION: Do not take risk, so as to avoid injuries.
If the fire is too fierce, do not attempt to put it off.

When any sign of fire is found, immediately stop the machine. Signs of fire include burning smell, smoke or flames.

If you can safely put off the fire, be sure to follow the instructions on fire extinguisher. If no instructions are found on fire extinguisher, follow the general principles below:

1. Remove fire extinguisher from bracket.
2. Approach the fire from leeward direction.
3. Pull safety pin from extinguisher.
4. Hold the fire extinguisher handle. Aim the hose at root of flame.
5. Squeeze fire extinguisher handle to eject extinguishing agent.



6. Moving nozzle back and forth, so that extinguishing agent covers the flame.

N400041,0001F5C -19-11MAR15-1/1

TS227 —UN—15APR13

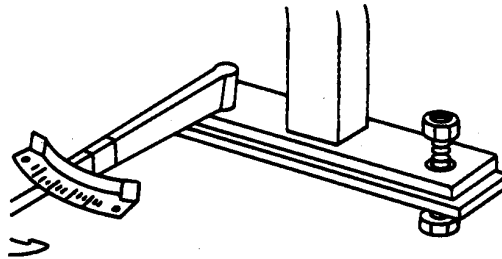
Keeping Roll-Over Protective Structure (ROPS) Properly in Place

Make certain all parts are reinstalled correctly if ROPS is loosened or removed for any reason. Tighten mounting bolts to required torque.

If structure of ROPS is damaged, for example due to a roll-over accident or welding, bending, drilling or cutting, its protection function is then affected. Damaged ROPS must be replaced, and never be re-used.

The seat is part of safety section of ROPS. Use only tractor seats that are approved by John Deere for replacement.

Any modifications to ROPS should obtain the approval from manufacturer.



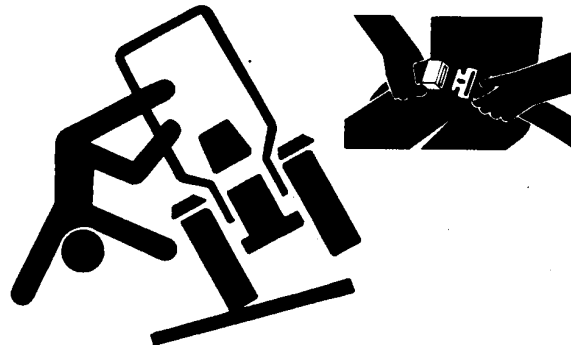
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TS212 —UN—23AUG88

Proper Use of Foldable ROPS and Seat Belt

If tractor is equipped with a foldable ROPS, it must be fully extended and locked in place. Drive tractor extremely carefully, if ROPS needs to be folded (e.g. to enter low-rise building). When ROPS is folded, never use seat belt.

Once tractor resumes to normal operation status, immediately raise ROPS, extend it fully and lock that in place. When ROPS is fully extended and locked in place, fasten the seat belt.



N400041,0001F5E -19-11MAR15-1/1

TS205 —UN—23AUG88

Staying Clear of Rotating Drive Shafts

Being drawn into rotating drive shafts may result in serious injury or death.

Keep tractor master shield and drive shaft shields in place at all times. Make sure that rotating shield can move properly.

Wear tight fitting clothes. Before adjusting, attaching, or cleaning the PTO shaft driven implements, switch off the engine first and make sure that the PTO shaft has stopped.

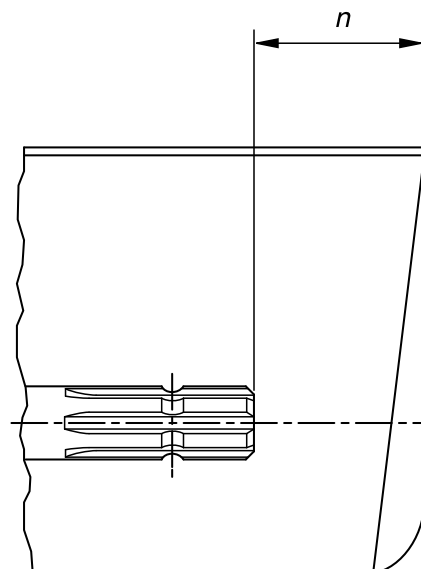
Do not install any adapter device between tractor and main implement PTO drive shaft. That device will provide power from the 1000 rpm tractor to the implement to run over 540 rpm.

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

Types of PTO shaft	Diameter	Spline	$n \pm 5 \text{ mm (0.20 in.)}$
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.)



T51644 —UN—22AUG95



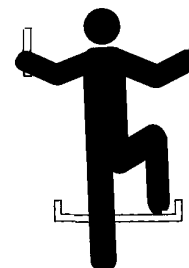
H86219 —UN—29APR10

N400041,0001F5F -19-11MAR15-1/1

Proper Use of Steps and Handrails

When getting on or off the machine, face to the machine to avoid falls. Maintain three-point contact with step, handrail and railing.

When mud, snow or water is on steps, be particularly careful not to slip. Keeping steps clean and free of any lubricating grease or oil. When getting off the machine, never jump out. When machine is in motion, never attach or detach implements.



T133488 —UN—15APR13

N400041,0001F60 -19-11MAR15-1/1

Reading ISOBUS Implement Operator's Manual

Apart from GreenStar applications, display can also be used on other implements which comply with ISO 11783 standard. This includes capability to control ISOBUS implements. When used in this manner, information and implement control functions placed on the display are provided by the implement and are the responsibility of

the implement manufacturer. Some of these implement functions may pose a hazard either to the operator or to a bystander. Read the Operator's Manual provided by the implement manufacturer and observe all safety messages in manual and on implement prior to use.

NOTE: Refer to ISO 11783 standard in regard to ISOBUS.

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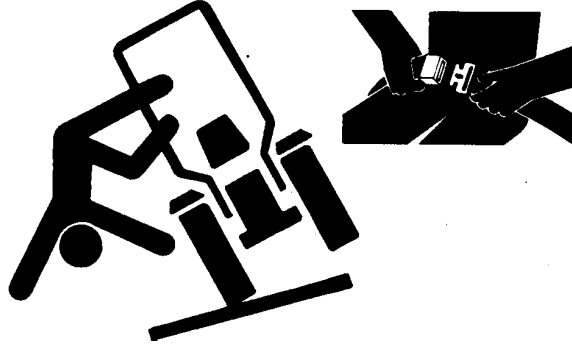
Proper Use of Seat Belt

When driving a machine with ROPS or cab, remember to wear seat belt. That can minimize injury in case of roll-over accident.

If there is no ROPS or cab, do not use seat belt.

If fastener, buckle, strap or retractor of seat belt is damaged, replace the entire seat belt.

Seat belt and its fasteners should be checked at least once a year. Check for loose fasteners or belt damage, such as a cut, scratch, severe or abnormal damage, fading or abrasion. Replace only with replacement parts approved for your machine. Please contact John Deere dealer.



TS205 —UN—23AUG88

N400041,0001F62 -19-11MAR15-1/1

Operating Tractor Safely

Following simple precautions can reduce risk of accidents:

- Only use tractor for its intended purpose, such as pushing, pulling, towing, driving and transporting agricultural equipment.
- This tractor cannot be used as recreational vehicle.
- Read the Operator's Manual before operating the tractor. Comply with instructions and safety information stated in tractor Operator's Manual.
- Follow operating instructions and ballasting requirements stated in implement / accessory Operator's Manual.
- Before starting the engine or operating the machine, ensure that no bystanders are next to the machine and attached devices.
- Keep hands, feet and clothing away from power-driven parts.

About driving

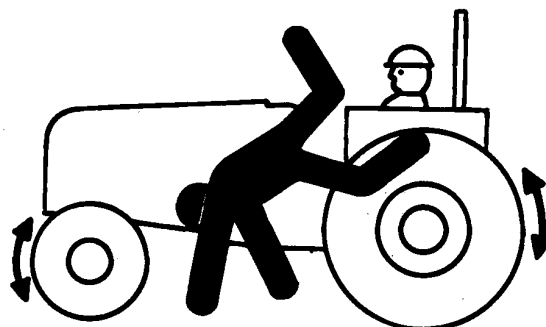
- Never get on or off a moving tractor.
- Make sure that children and irrelevant personnel are kept away from tractors and all equipment.
- If tractor is not equipped with seat and seat belt approved by John Deere, never ride in the tractor.
- Make sure that all guards / protective plates are in place.
- When driving on roads, use appropriate visible and audible signals.
- Before parking, drive the tractor to road side.
- Reduce speed when turning, braking or operating on dangerous, rugged or steep road.
- When driving on roads, brake pedal lock plate should be engaged.
- When stopping on slippery road, apply brake gently and repeatedly.

Towed load

- Be careful when towing heavy load and when stopping it. Stopping distance increases with speed and weight of towed load as well as with steepness of slope. Towed loads (with or without brakes) that are too heavy for the tractor or are towed too fast can lead to loss of control.
- Consider the total weight of the equipment and its load.
- Towed load should only be mounted at designated location, so as to avoid roll-over.

Tractor parking and getting off

- Before getting off, first disengage selective control valve, disengage PTO shaft, switch off engine and



- lower implement / accessory to the ground. Firmly apply parking brake and engage parking pawl. And, if you need to leave the tractor, remove the key.
- After engine is off, even transmission is set in gear, that cannot prevent tractor from running away.
 - Never get close to PTO shaft or implement that is in motion.
 - Wait for all movement to stop before servicing machinery.

Common accidents

Unsafe and incorrect operation may result in accidents. Be alert to hazards of tractor operation.

Common failures of tractor include:

- Tractor roll-over
- Collision with motor vehicle
- Improper starting procedures
- Getting drawn into PTO shaft
- Fall from tractor
- Clash or stuck upon attaching

N400041,0001F63 -19-11MAR15-1/1

TS290 —UN—23AUG88

TS276 —UN—23AUG88

Avoid Roll-Over Accidents!

Before moving machine, be sure that all persons are clear of machine path. Look around and see if visibility is optimal. If view is obstructed or in close quarters, arrange a signalman in case of reverse driving.

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

N400041,0001F64 -19-11MAR15-1/1

Limited Use for Forestry Operation

John Deere tractors are intended for forestry operations only, e.g. transporting and stationary operations, such as wood-sawing, propulsion or for implements that are driven by PTO shaft, hydraulic or electrical system.

Under normal operation, these applications do not incur any danger of falling or squeezing in other objects.

Forestry operations that are out of these applications, such as transporting and shipping, need to be equipped with appropriate components, e.g. falling objects protective structure (FOPS) and/or operation protective structure (OPS). Contact John Deere dealer for special parts.

N400041,0001F65 -19-11MAR15-1/1

Safe Driving of Loader Tractor

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

To avoid tractor roll-over and damage of front tire and tractor, when loader is loaded, speed must not exceed 10 kph (6 mph).

To avoid damage of tractor, when tractor is equipped with 3 m front axle, never use front loader or spray machine tank.

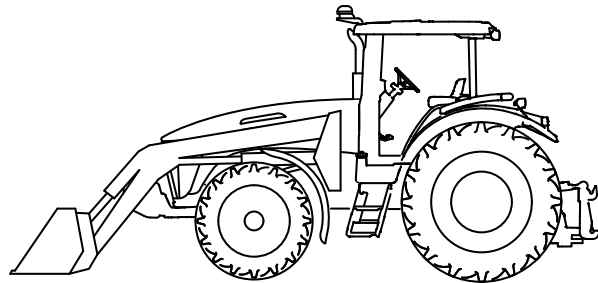
Never allow anyone to walk or work under a raised loader.

Do not use the loader as a work platform.

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

Lower loader to the ground before leaving operator's station.

Even if equipped with ROPS or cab roof, protection against danger caused by objects falling on operator's



TS1692 —UN—09NOV09

station is still insufficient. To avoid loaded object falling to operator's station, special tools must be used to complete loading operation (for example, manure fork, round bale fork, round bale jaw and gripping jaw).

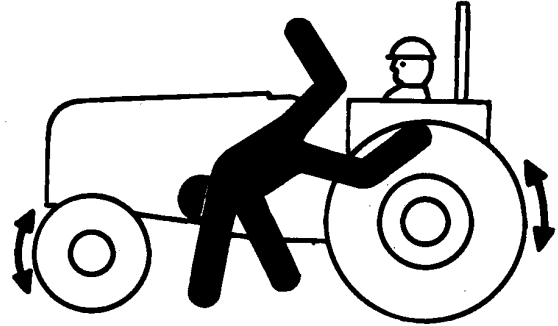
Tractor ballasting should follow the requirements stated in "Recommended Ballasting" of chapter "Preparing Tractor".

N400041,0001F66 -19-11MAR15-1/1

Keeping Riders Off Machine

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

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. In addition, riders also affect the operator's vision, adversely affecting the safe operation of machine.



TSS290 —UN—23AUG88

N400041,0001F67 -19-11MAR15-1/1

Instructor's Seat

If there is an instructor's seat, it can only be used for operator training and for diagnosing machine failures.



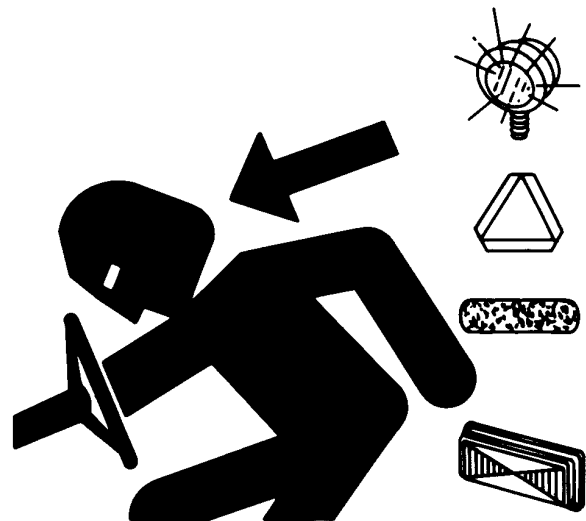
RXA0103436 —UN—15JUN09

N400041,0001F68 -19-11MAR15-1/1

Using Safety Lights and Devices

Avoid collisions with other road users. Slowly drive tractor with attachments or towed equipment as well as self-propelled machine on roads. Often check the rear traffic conditions, especially when turning, remember to use turn signal lights.

Headlights, flashing warning lights and turn signals can be used in day time or at night. Follow local regulations on equipment lighting and usage of signs. Make that others can see your lights and signs. Keep them in good condition. Replace or repair lights and signs that are damaged or missing. John Deere dealer can provide an implement safety lighting kit.



TSS51 —UN—12APR90

N400041,0001F69 -19-11MAR15-1/1

Transporting Towed Implements at Safe Speed

Exceeding the maximum transport speed is prohibited. The transport speed of this tractor is higher than the maximum permissible transport speed of most implements.

Before transporting towed implements, determine the maximum transport speed according to information stated on implement labels or implement Operator's Manual. Never exceed the maximum transport speed of implement during transport. Exceeding the maximum transport speed may lead to the following:

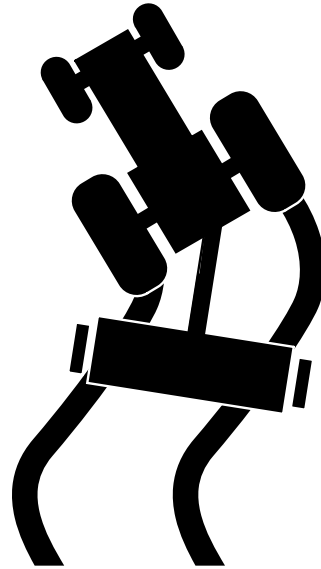
- Loss of control of tractor/implement
- Reduced or no ability to stop during braking
- Implement tire failure
- Damage to implement structure or its components

Implements without brake:

- Do not transport at speed over 32 kph (20 mph).
- Must weigh below 1.5 times of tractor weight or under 1.5 t (3300 lb.) when fully loaded.

Implements with brake:

- If manufacturer does not state the maximum transport speed, do not tow at transport speed over 40 kph (25 mph).
- When transporting at speed up to 40 kph (25 mph), fully loaded implement must weigh below 4.5 times of tractor weight.



- When transporting at speed 40-50 kph (25-31 mph), fully loaded implement must weigh below 3 times of tractor weight.

TS1686 —UN—27SEP06

N400041,0001F6A -19-11MAR15-1/1

Be cautious on slopes and uneven terrain

When operating tractor on slopes, avoid pits, trenches and obstacles so as to prevent roll-over. Do not turn sharply when driving upslope.

Driving forward to leave a gully, mudland or up a steep slope may lead to tractor roll-over. If possible, try reverse driving to leave such places.

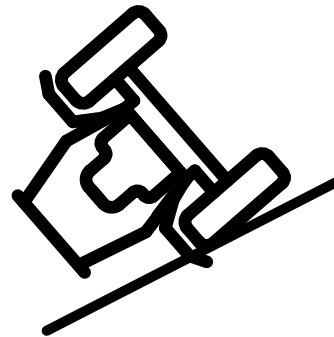
Tractor with narrow wheelbase and at high speed is most prone to roll-over.

It is impossible to list all factors that can lead to tractor roll-over. Pay attention to every situation that can affect the stability.

Slope is a major factor causing loss of control and roll-over, leading to serious injury or death. Be extra cautious when operating on slopes

Never drive near gullies, pits, ditches, steep embankment edges or puddles. If wheels are at edge or fall into troughs, machine may suddenly roll over.

Select a lower ground speed, so that it is not necessary to stop or shift gear on slopes.



Avoid to start, stop or turn around on slopes. If wheels lose traction, disengage PTO shaft and then drive slowly down the slope.

Keep speed slow and stable when operating on slopes. Never change speed or direction suddenly, that may cause machine roll-over.

RXA0103437 —UN—01JUL09

N400041,0001F6B -19-11MAR15-1/1

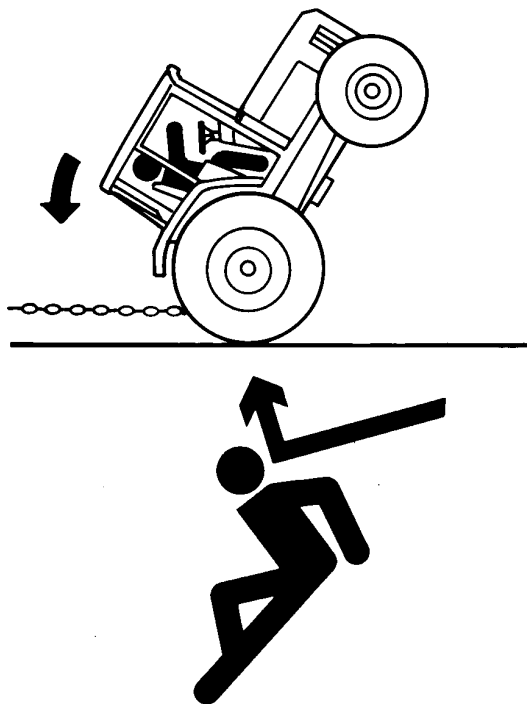
Freeing Mired Machine

Attempting to drag a machine out of mud pits may involve safety hazards, such as the mired tractor may roll over backward, the towing tractor may turn over, and the towing chains or towing rods (using cables is not recommended) fail and rebound from stretched state.

If a tractor is mired in mud pits, drive reversely to leave. Separate all towed implements. Dig out the mud behind the rear wheels. Place wooden boards behind the wheels to provide a solid base. Then, try to drive in reverse direction slowly. As necessary, dig out mud in front of wheels and drive tractor forward slowly.

If another tractor is deployed for towing, use only towing rods or long chains (using cables is not recommended). Check chains for flaws. Make sure all parts of towing devices are of adequate size and strong enough to handle the load.

Must mount them on the drawbar of towing machine. Mounting at the front push rod mounting point is strictly prohibited. Keep bystanders away before starting. Start slowly: Sudden start with much power may cause dangerous fibrillation and rebound of towing device.



N400041,0001F6C -19-11MAR15-1/1

TS1645 —UN—15SEP95

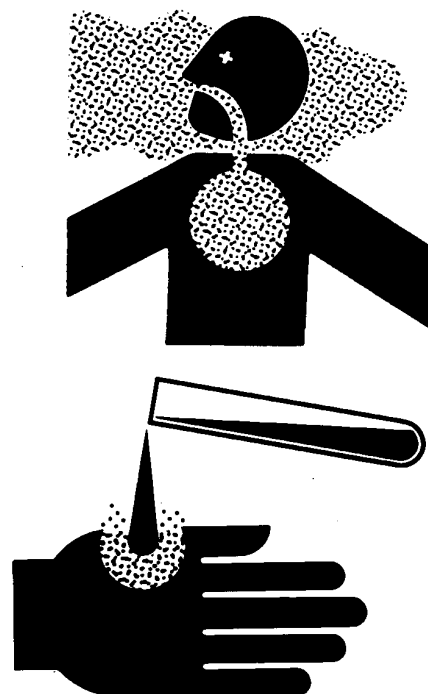
TS263 —UN—23AUG88

Avoiding Contact with Pesticides

A closed cab cannot stop vapor, mist or dust particles from entering. If using respiratory protective measures is stipulated in the pesticide usage instructions, wearing a proper respirator in cab is compulsory.

Before leaving the cab, wear personal protective equipment as specified in the pesticide usage instructions. When re-entering the cab, take off the personal protective equipment and store it in the sealed box or other sealed container outside the cab. Or, you can place it in a pesticide-proof storage, e.g. plastic bag, in the cab.

Before entering the cab, wipe your shoes or boots to clear dirt or other contaminated particles.



N400041,0001F6D -19-11MAR15-1/1

TS220 —UN—15APR13

TS272 —UN—23AUG88

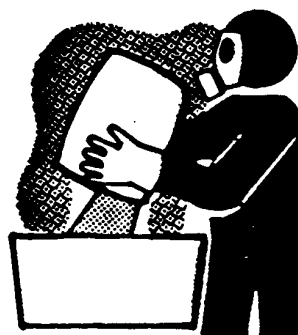
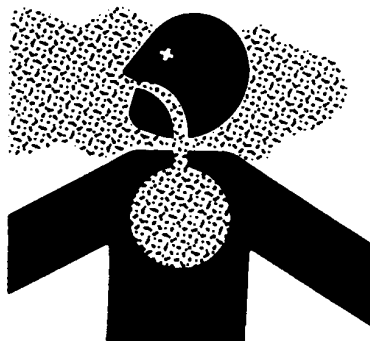
Handling Pesticides Safely

Agricultural chemicals such as fungicides, herbicides, pesticides, rodenticides and fertilizers, etc., if used improperly, can be harmful to health or to the environment.

When using pesticides, follow relevant instructions on the label about effectiveness, safety and law regulations.

To minimize the dangers posed and injuries caused by chemicals:

- Wear appropriate personal protective equipment as recommended by the manufacturer. In the absence of manufacturer's instructions, observe and comply with the followings:
 - Chemicals with **DANGER** label: Toxic. Under normal circumstances, use protective spectacles, breathing mask, gloves and skin protection products.
 - Chemicals with **WARNING** label: Moderately toxic. Under normal circumstances, use protective spectacles, gloves and skin protection products.
 - Chemicals with **CAUTION** label: Slightly toxic. Under normal circumstances, use gloves and skin protection products.
- Avoid inhaling vapor, aerosol or dust.
- When in contact with chemical, ensure that soap, water and towel are available nearby. If chemical contacts skin, hands, or face, wash immediately with soap and water. If chemical gets into eyes, flush immediately with water.
- After using chemicals, wash face and hands before eating, drinking, smoking or going to toilet.
- Never smoke, eat or drink while handling chemicals.
- Take a shower and change clothes after handling chemicals. Wash clothing before wearing again.
- If feeling unwell while handling chemicals or shortly after that, seek medical attention immediately.
- Keep chemicals in original containers. Do not put chemicals into unlabeled containers or into containers that are used for food or drinks.



A34471

- Chemicals should be stored at a safe and closed place which is away from food or feed. Do not allow children to get close to it.
- Always dispose of containers properly. Wash empty containers three times. Press them flat and dispose of them.

TS220 —UN—15APR13

A34471 —UN—11OCT88

N400041,0001F6E -19-11MAR15-1/1

Handling Battery Safely

Gas released from battery may cause an explosion. 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 ground cable (-) clamp first and connect it 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 electrolyte in a well-ventilated area
- Wearing eye protection and rubber gloves
- Avoiding use of compressed air to clean batteries
- Avoiding breathing fumes when electrolyte is added
- Avoiding spilling or dripping electrolyte
- Using correct battery booster or charger procedure.

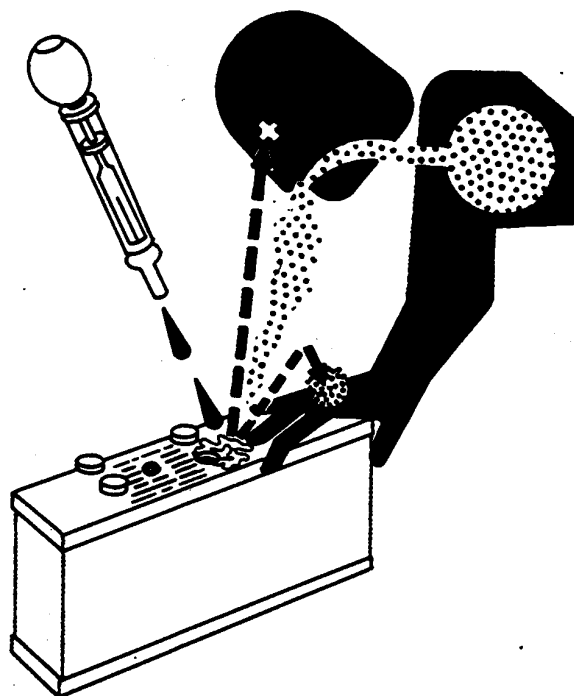
If acid is spilled on skin or in eyes:

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. Seek medical attention immediately.

If acid is swallowed:

1. Do not induce vomiting.
2. Drink large amount of water or milk, but do not exceed 2 L (2 qt.).
3. Seek medical attention immediately.

Warning: Battery terminals, connectors and related accessories contain lead and lead compounds, as well as chemicals known to cause cancer or reproductive disease in California. **Wash hands after handling batteries.**



TS204 —UN—15APR13

TS203 —UN—23AUG88

N400041,0001F6F -19-11MAR15-1/1

Avoiding 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 blast-burning near pressurized fluid lines or other flammable materials. Pressurized fluid lines can accidentally burst when heat goes beyond permitted range.



TS953 —UN—15MAY90

N400041,0001F70 -19-11MAR15-1/1

Removing Paint before Welding or Heating.

Avoid toxic fumes and dust that may arise.

When heating paint by welding, soldering, or blast-burning may produce harmful fumes.

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 a certified respiratory mask and then perform heating or welding operation.
- If you sand or grind away paint, avoid breathing in the dust. Wear certified respiratory mask.
- If solvent or paint stripper is used, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from work place. Before welding or heating, wait at least 15 minutes for fumes to disperse.

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



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

Dispose of paint and solvent properly.

N400041,0001F71 -19-11MAR15-1/1

TS220 —UN—15APR13

Handling Electronic Components and Brackets Safely

When installing or removing electronic components on equipment, serious injury may result if they fall. Use a ladder or work platform to easily reach the mounting location. Use firm and secure handles and kick boards. Never install or remove components in rainy and snowy weather.

If RTK base station is to be installed or serviced on a tower or other high structures, using certified climbing tools is compulsory.

In case of installing or servicing a GPS receiver antenna mast on implements, please use proper lifting techniques and wear proper protective equipment. Antenna mast is very heavy and is difficult to handle. If you cannot get close to the fixing position when standing on the ground



or on a platform, two people are needed to carry out installation or removal work.

N400041,0001F72 -19-11MAR15-1/1

TS249 —UN—23AUG88

Safe Maintenance Methods

Understand service procedures before work. Keep work area clean and dry.

Never carry out lubrication, maintenance or adjustment work when machine is running. Keep hands, feet and clothing from power-driven components. Disconnect all power supply and release pressure through control elements. Lower implements onto the ground and switch off the engine. Remove key. Wait for machine to cool down.

When parts need to be raised for maintenance work, firmly support those parts for the sake of safety.

Make sure that all components are in good condition and properly installed. Fix problems immediately. Replace worn or damaged parts. Clear accumulated lubricating grease, engine oil or debris.

Disconnect battery ground cable (-) before adjusting electrical system of self-propelled machine or carrying out welding on machine.

Disconnect tractor wire harness before servicing electrical system components of towed implement, or before welding on machine.



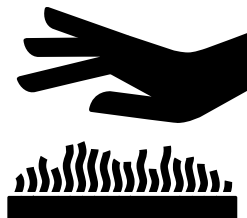
TS218 —UN—23AUG88

N400041,0001F73 -19-11MAR15-1/1

Avoiding Hot Exhaust

Servicing the machine or attachments when the engine is running may result in serious personal injuries. Avoid exposure to hot exhaust or contact between skin and hot exhaust components.

When machine is running, temperature of exhaust and related components is very high. Exhaust and components may reach a temperature hot enough to cause burns, ignite, or melt general materials.



RG17488 —UN—21AUG09

N400041,0001F74 -19-11MAR15-1/1

Cleaning Exhaust Filter Safely

During exhaust filter cleaning, engine runs at raised idling speed and at high temperature for an extended period. Exhaust and exhaust filter components may reach a temperature hot enough to cause burns, ignite or melt general materials.

Keep machine away from people, animals or structures prone to damage caused by hot exhaust or components. Do not put flammable materials and vapors close to exhaust, so as to prevent potential fire or explosion. Keep exhaust outlet away from people and anything that can melt, burn or explode.

During or after exhaust filter cleaning, carefully check the machine and its surrounding area for flames and debris.

Adding fuel when engine is running may cause fire or explosion. Always stop engine before refueling machine and clean up any spilled fuel.

Remember to switch off the engine when placing machine on a truck or towing it on trailer.

Touching exhaust components when they are still hot may result in serious personal injury.

Avoid touching such parts until they are cooled down to a safe temperature.

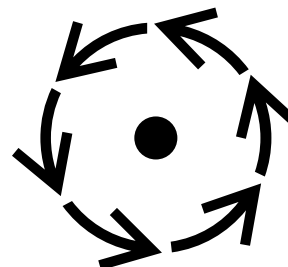
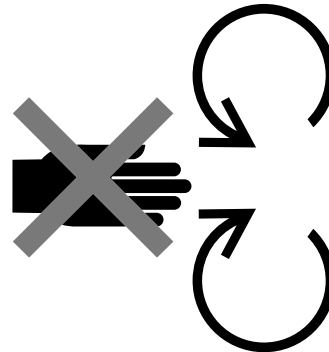
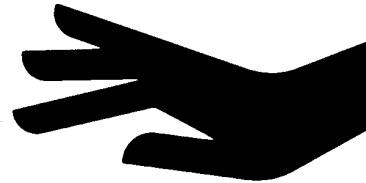
If service procedure requires engine to be running:

- Only engage power-driven parts required by service procedure.
- Ensure that no people is around the operator's station and machine.

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

Before leaving operator's station, be sure not to set to running shift. Apply parking brake and disconnect power supply of accessories or tools.

When machine is to be unattended, switch off engine and remove the key (if provided).



STOP

TS227 —UN—15APR13

TS271 —UN—23AUG88

TS1683 —UN—09DEC09

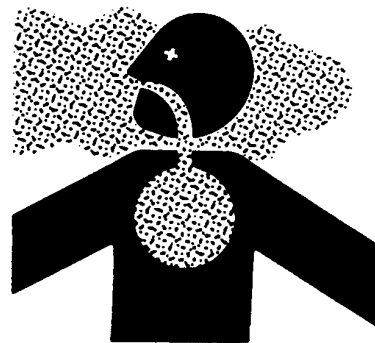
TS1685 —UN—07DEC09

N400041,0001F75 -19-11MAR15-1/1

Keeping Good Ventilation in Work Area

Engine exhaust 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 exhaust pipe extension is not available, open the door for air circulation.



TS220 —UN—15APR13

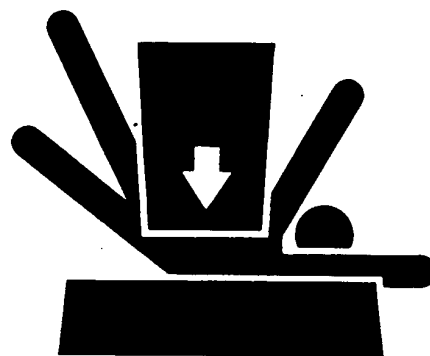
N400041,0001F76 -19-11MAR15-1/1

Supporting Machine Properly

Always lower attachments or implements onto ground before you work on machine. If the work requires lifting machine or implement, it must be supported safely and properly. If at raised position for a long time, hydraulic support device may lower or leak.

It is prohibited to use cinder blocks, hollow bricks or other materials which may break under sustained loads to support the machine. Never work under the machine if only one jack is used as support. Please follow recommended procedures in this manual to operate.

When implements or attachments are mounted to the machine, always follow safety precautions stated in the implement or attachment Operator's Manual.



TS229 —UN—23AUG88

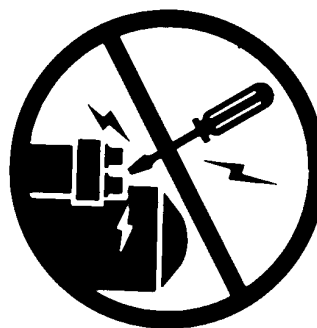
N400041,0001F77 -19-11MAR15-1/1

Preventing Machine Runaway

Avoid injury or death that is caused by machine being out of control.

Do not start engine by shorting across starter terminals. Avoiding normal circuitry allows machine to start when transmission is in gear.

Never start the engine when operator is standing on the ground. Start the engine only when sitting on operator's seat and transmission is set in neutral or parking position.



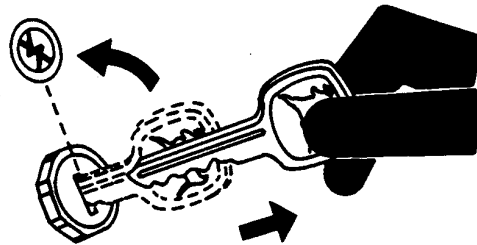
TS177 —UN—11JAN89

N400041,0001F78 -19-11MAR15-1/1

Parking Machine Safely

Before working on machine:

- Lower all implements onto the ground.
- Stop the engine and remove the key.
- Disconnect battery ground cable.
- Hang "Do Not Use" sign in cab.



TS230 —UN—24MAY89

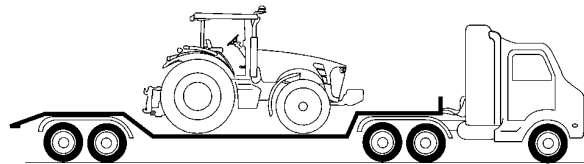
N400041,0001F79 -19-11MAR15-1/1

Transporting Tractor Safely

Tractor that cannot be driven should best be transported by a platform trailer. Use chains to firmly secure the tractor on the platform trailer. Specific positions for fixing machines are available on the axle and tractor frame.

Before transporting the tractor by a platform trailer or train, make sure that the engine hood on the tractor engine, tractor doors, roof opening (if any) and windows are closed properly.

Towing speed of the tractor should not exceed 10 kph (6 mph). An operator must steer and brake the tractor under tow.



RXA0103709 —UN—01JUL09

N400041,0001F7A -19-11MAR15-1/1

Servicing Cooling System Safely

Explosive ejection of fluid from pressurized cooling system can cause serious burns.

Switch of the engine. Remove fill cap only after it is cooled down and can be touched with bare hands. Slowly loosen cap to first stop to release pressure before removing completely.



TS281 —UN—15APR13

N400041,0001F7B -19-11MAR15-1/1

Servicing Accumulator System Safely

Fluids or gases leaked from pressurized accumulators that are used in air-conditioning, hydraulic, and air braking systems can cause serious injury. Excessively high temperature can cause accumulator explosion and accidental rupture of pressurized pipes. Welding or blast-burning near pressurized accumulator or pressurized pipes is prohibited.

Before removing the accumulator, release pressure from pressurized system.

Before removing the accumulator, release pressure from hydraulic system. Never attempt to release hydraulic system or accumulator pressure by loosening a connector.

Accumulators cannot be repaired.



TS281 —UN—15APR13

N400041,0001F7C -19-11MAR15-1/1

Servicing 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. Never inflate tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause a rise in air pressure resulting in tire explosion. Welding can structurally weaken or deform the wheel.

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

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

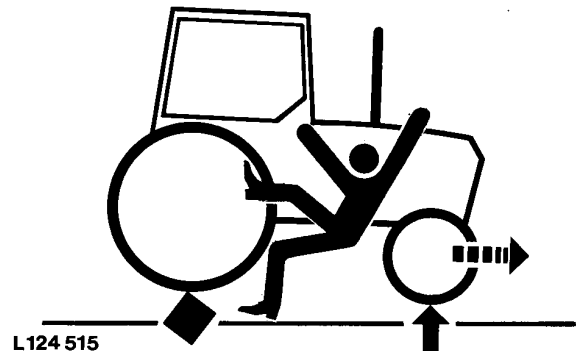


RXA0103438 —UN—11JUN09

N400041,0001F7D -19-11MAR15-1/1

Servicing Front-Wheel Driven Tractor Safely

Jack up rear-wheels from the ground and support them firmly, so as to service the front-wheel driven tractor. Use engine power to make wheels rotate. Use similar method to support the front-wheels. If front wheels cannot be jacked up from ground, in case of power failure or loss of transmission hydraulic system pressure, front drive wheels engage and rear wheels are pulled away from support. Under this situation, even if the switch is at disengaged position, front wheels can still engage.



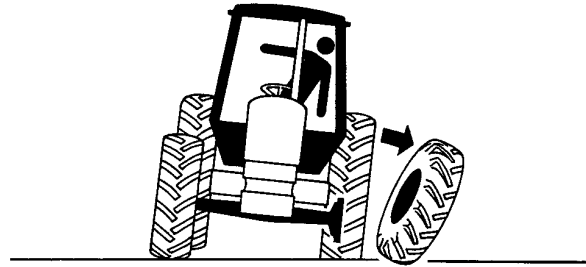
L124 515

L124515 —UN—06AUG04

N400041,0001F7E -19-11MAR15-1/1

Tightening Wheel Retaining Bolts / Nuts

Tighten wheel retaining bolts / nuts according to intervals stated in "Break-in" and "Maintenance" sections.



L124 516

L124516 —UN—03JAN95

N400041,0001F7F -19-11MAR15-1/1

Avoiding High Pressure Fluids

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

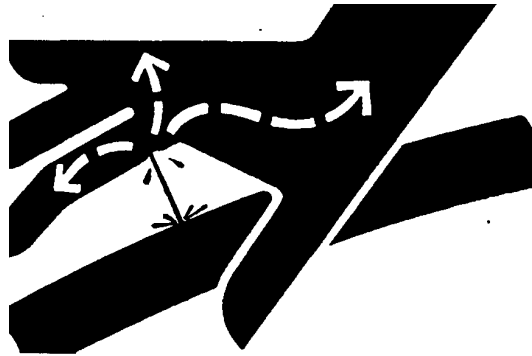
Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

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

To avoid danger, release pressure before disconnecting hydraulic or other lines. Tighten all connectors before applying pressure.

Use cardboards to check for leaks. Protect hands and body from pressurized fluids.

If accident happens, immediately seek medical treatment. Any fluid penetrated into skin must be removed, within a few hours, by means of surgery. Otherwise, it may lead to



skin damage. Doctors who are unfamiliar with this type of injury should refer to relevant medical books or consult relevant doctors. Such information is available by calling 1-800-822-8262 or +1 309-748-5636 to get assistance from Deere Company Medical Department in Moline, Illinois, USA.

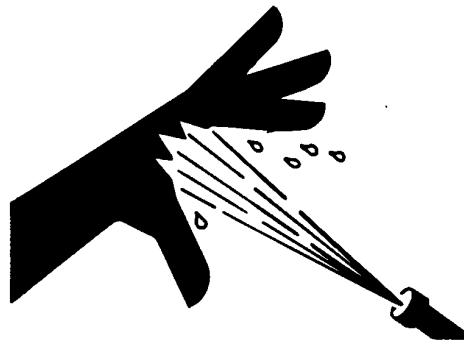
X9811 —UN—23AUG88

N400041,0001F80 -19-11MAR15-1/1

Never Open High Pressure Fuel System

High pressure fluid remaining in fuel lines can cause serious injury. Do not disconnect or attempt to repair fuel lines, sensors, or any other components between high pressure fuel pump and high pressure common rail (HPCR) fuel system engine nozzle.

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



TS1343 —UN—18MAR92

N400041,0001F81 -19-11MAR15-1/1

Storing Attachments Safely

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

Securely store implements and attachments in order to prevent them from falling. Keep children who are playing around and bystanders away from storage area.



N400041,0001F82 -19-11MAR15-1/1

TS219 —UN—23AUG88

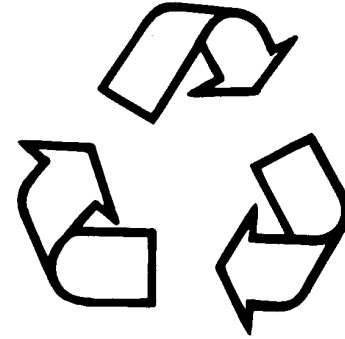
Disposing of Waste Properly

Improper disposal of waste harms the environment and ecological balance. John Deere equipment may contain hazardous wastes: Lubricating oil, fuel, coolant, brake fluid, filters and batteries, etc.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air-conditioning refrigerants escaping into the air can damage the Earth's atmosphere. According to government regulations, it may be required to perform recycling and reuse of refrigerant waste through authorized air-conditioning service centers.



Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.

N400041,0001F83 -19-11MAR15-1/1

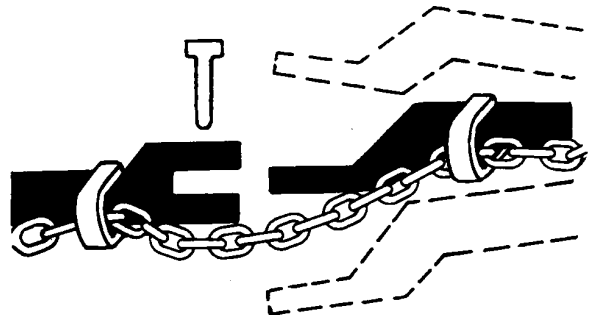
TS1133 —UN—15APR13

Using Safety Chain

A safety chain can help control drawn equipment should it be accidentally separated from the drawbar.

Use appropriate connector to attach safety chain to tractor drawbar frame or other specified anchor location. Provide enough chain slack to allow for turning.

Contact John Deere dealer for a safety chain with rated strength equal to or greater than the gross weight of the towed machine. Never use safety chain to tow implement.



N400041,0001F84 -19-11MAR15-1/1

TS217 —UN—23AUG88

Safety Signs

Replace damaged or missing safety signs

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

Keep safety signs clean and in good condition. Safety signs are available for replacement. Please contact your John Deere dealer.

N400041,0001F85 -19-11MAR15-1/1

Operator's Manual



N4A0003860 —UN—10NOV14

On Dashboard



Signs

PUC1613 —UN—03NOV08

"Operator's manual" contains important information for safe machine operation. Strictly follow all safety regulations to avoid accidents.

N400041,0001F86 -19-11MAR15-1/1

Riders



N4A0003861 —UN—10NOV14

Above left fender



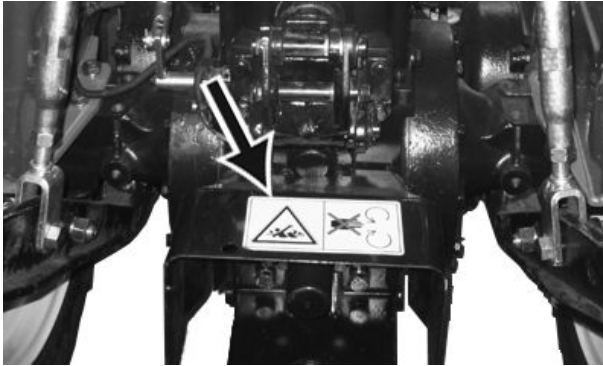
Signs

PUC1615 —UN—03NOV08

Unauthorized riding may lead to rider falling off, seriously injured or killed. Never carry riders.

N400041,0001F87 -19-11MAR15-1/1

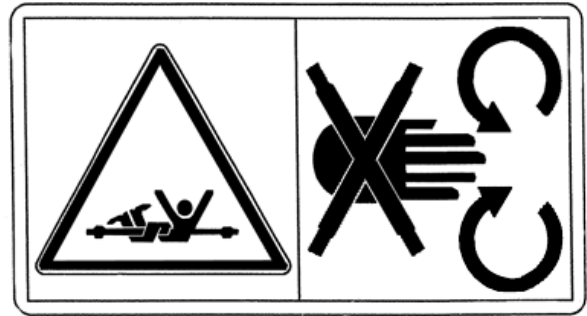
Staying Clear of PTO Drive Shaft



N4A0003862 — UN—10NOV14

On PTO shaft shield

Being drawn into rotating drive shaft can cause serious injury or death. Keep drive shaft shields in place at all times. Make sure that rotating shields turn freely. Wear



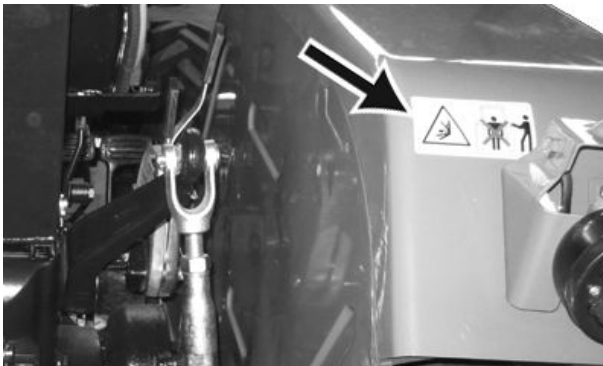
Decal

tight fitting clothes. Stop the engine and make sure that PTO drive shaft is stopped before making adjustments, connections, or cleaning PTO driven equipment.

N400041,0001F88 -19-11MAR15-1/1

PUC1619 — UN—21NOV08

Rocker Arm Shaft Control



N4A0003863 — UN—10NOV14

At rear side of right fender

Stay clear of 3-point hitch lifting area when operating the rocker arm shaft.

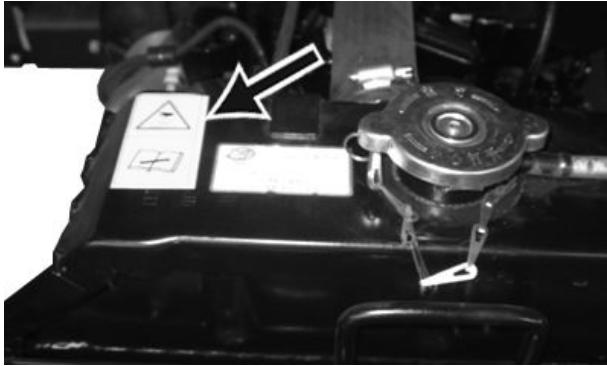


Signs

N400041,0001F89 -19-11MAR15-1/1

PUC1633 — UN—27NOV08

Radiator



N4A0003864 —UN—10NOV14

At radiator



Decal

Pressurize cooling system. To prevent burns caused by accidental ejection of steam and hot coolant:

- Wait until radiator has cooled down before touching

- Remove radiator cap slowly

PUC1620 —UN—21NOV08

N400041,0001F8A -19-11MAR15-1/1

Battery

To ensure personal safety and to extend battery life, please strictly observe safety instructions of batteries.



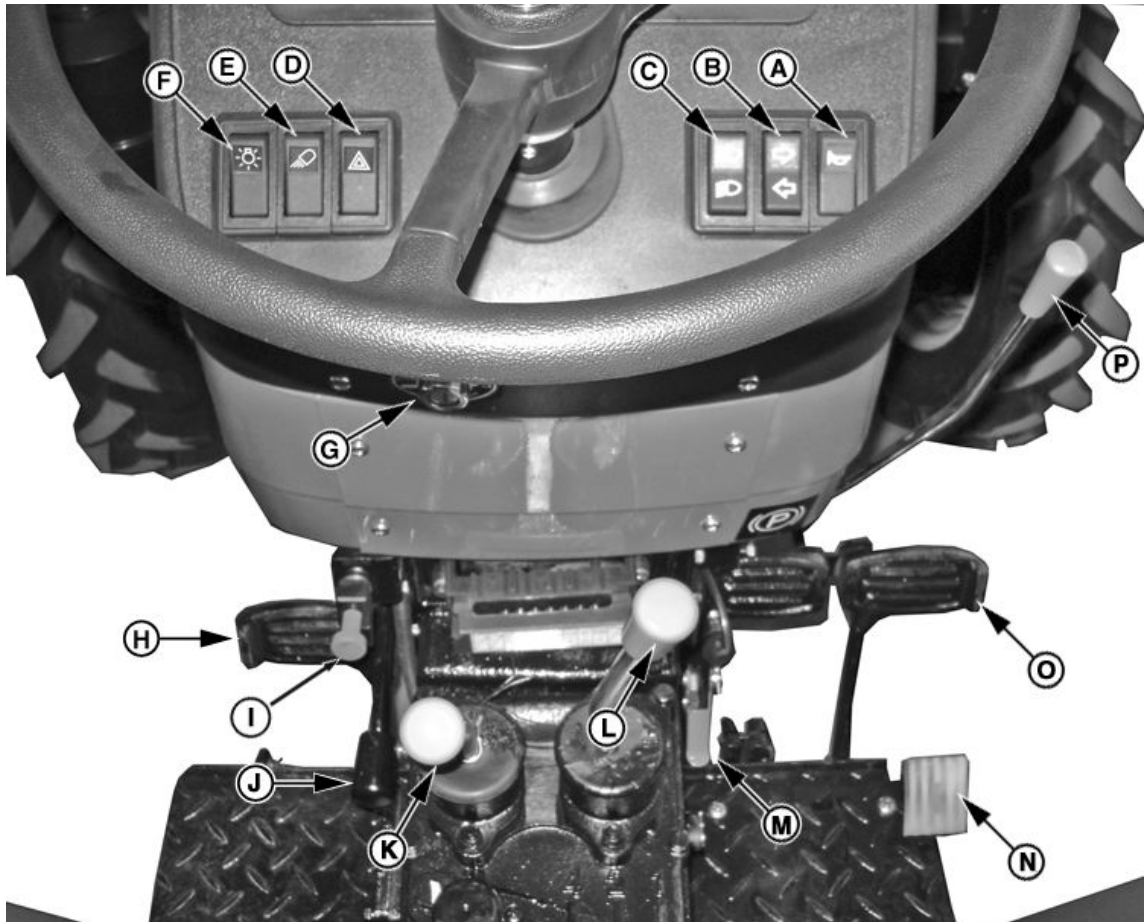
N4A0003865 —UN—10NOV14

On top of battery

N400041,0001F8B -19-11MAR15-1/1

Control Devices and Instruments

Tractor Control Devices



A—Horn Switch
B—Turn-Signal Light Switch
C—High/Low Beam Switch
D—Warning Light Switch

E—Worklight Switch
F—Light Switch
G—Keyswitch
H—Clutch Pedal
I— Shut-Off Cable

J— MFWD Lever
K—Range Shift Lever
L—Main Shift Lever
M—Park Brake Lever

N—Foot Throttle
O—Brake Pedal
P—Hand Throttle

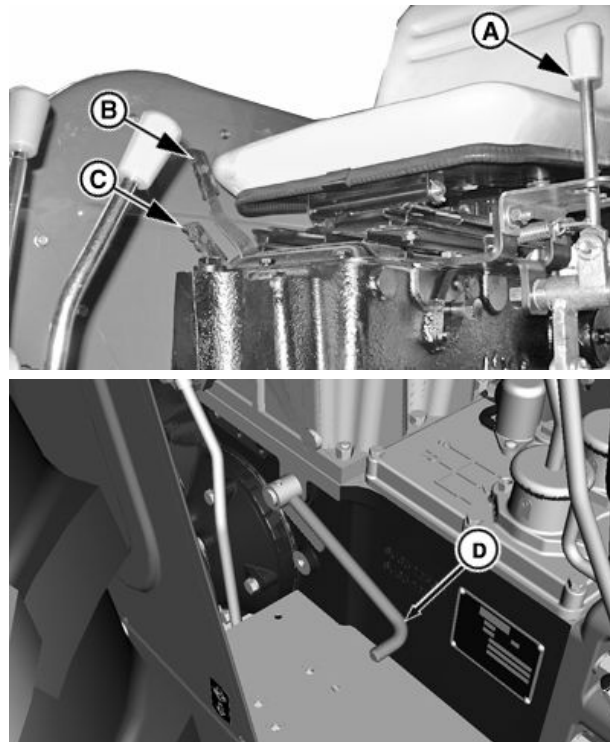
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N400041,0002A4B -19-22JAN16-1/2

N4A0003871 —UN—11NOV14

A—PTO Lever
B—Draft Control Lever

C—Position Control Lever
D—Differential Lock Pedal



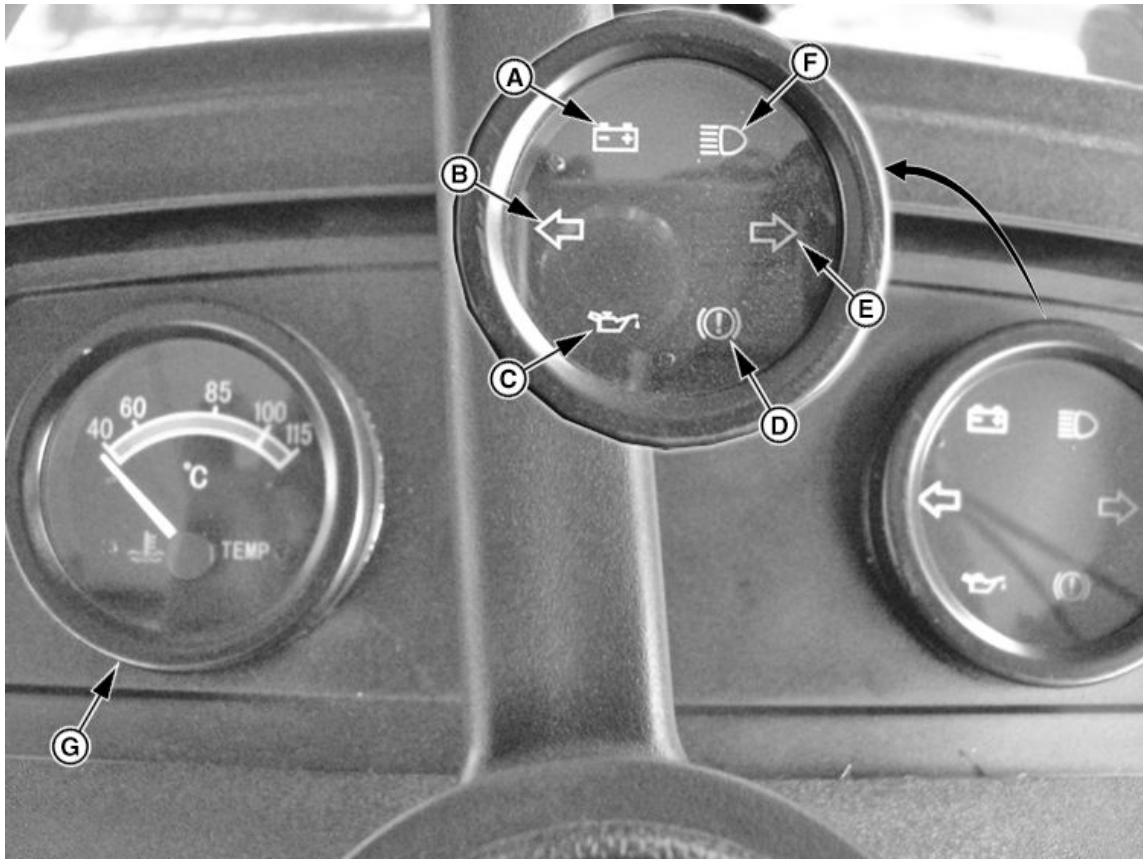
PUC5029 —UN—07OCT10

N440004108 —UN—01JUN15

N400041,0002A4B -19-22JAN16-2/2

Dashboard

Mechanical Pump Model



A—Battery Charging Indicator
B—Left Turn-Signal Indicator

C—Oil Pressure Alarm Indicator
D—Air Pressure Alarm Indicator

E—Right Turn-Signal Indicator
F—High Beam Indicator

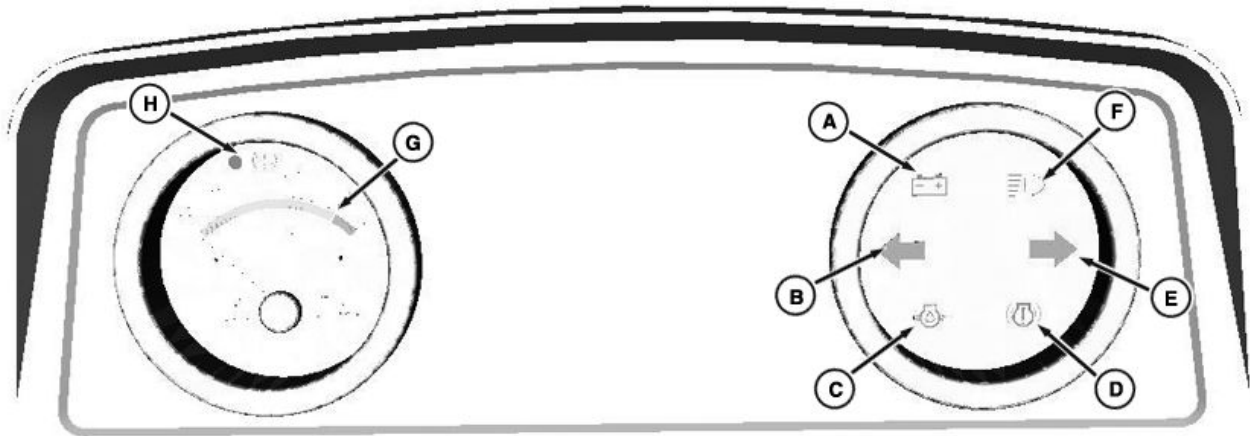
G—Water Temperature Gauge

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N400041,0002A4C -19-22JAN16-1/2

PUC5030 —UN—05OCT10

Electric Pump Model



A—Battery Charging Indicator
B—Left Turn-Signal Indicator

C—Oil Pressure Alarm Indicator
D—ECU Fault Indicator
E—Right Turn-Signal Indicator

F—High Beam Indicator
G—Water Temperature Gauge
H—Air Pressure Alarm Indicator

N4A0004341 —UN—22JAN16

N400041,0002A4C -19-22JAN16-2/2

Lights

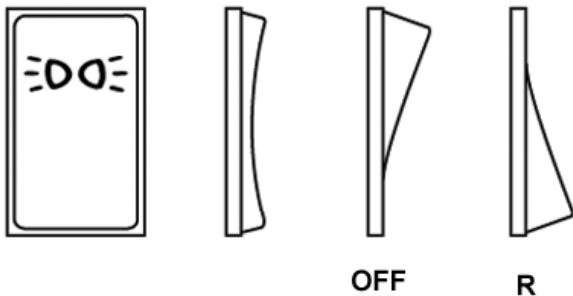
Light switch position

Tractor light switch has two positions.

Light Switch		
Function	Taillights	Headlights
Off	Off	Off
Road	ON	ON

R—ROAD Position

OFF—OFF Position



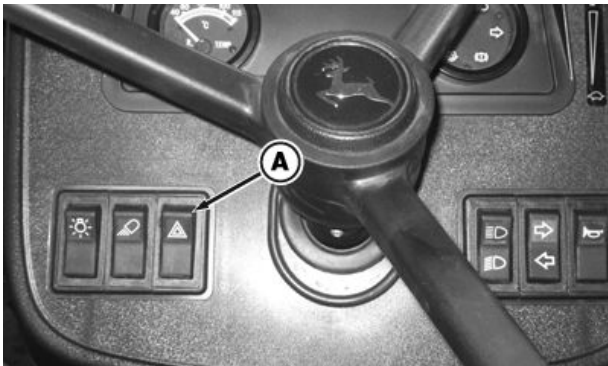
PUC5153 —UN—02NOV10

N400041,0002A4D -19-22JAN16-1/5

Warning Light Switch

It is only used to switch ON warning lights.

A—Warning Light Switch



N4A0003873 —UN—11NOV14

N400041,0002A4D -19-22JAN16-2/5

High/Low Beam Switch

High/Low beam switch is used to set bright headlights or dimmed headlights.

NOTE: When light switch is at ROAD position and high/low beam is on, use high/low beam switch to set the brightness of headlights.

A—High/Low Beam Switch



N4A0003874 —UN—11NOV14

Continued on next page

N400041,0002A4D -19-22JAN16-3/5

Turn Signal Light Switch

Turn signal light switch is to set turning signals.

A—Turn-Signal Light Switch



N4A0003875 —UN—11NOV14

N400041,0002A4D -19-22JAN16-4/5

Work Light Switch

Work light switch is to control work light.

A—Worklight Switch



N4A0003876 —UN—11NOV14

N400041,0002A4D -19-22JAN16-5/5

Using Headlights and Work Light

CAUTION: When operating tractor on a road, set high/low beam switch to either bright or dim position. When transporting, never use work light. Excessively bright lights may make drivers of other vehicles difficult to see when they approach.

Dual-beam headlights are used in daytime or at night. When driving on highways, set light switch to ROAD position.

Always set high/low beam switch to low beam position before approaching other vehicles.

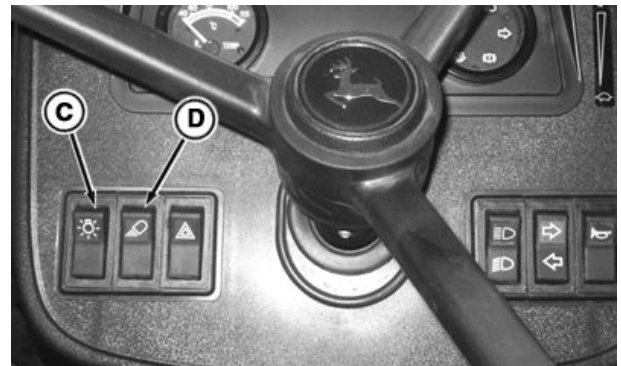
Adjust headlights properly. (Refer to section "Adjust headlights" in chapter "Maintenance - Electrical system".)

IMPORTANT: Work light at the rear may blur the vision of drivers of other vehicles when they approach from behind. When driving or transporting tractor on roads, use road lights only, never use work light.

Work light should only be used in fields. Never use work lights on roads.

A—Headlights
B—Worklight

C—Light Switch
D—Worklight Switch



PUC2885 —UN—02MAR10

N4A0003886 —UN—11NOV14

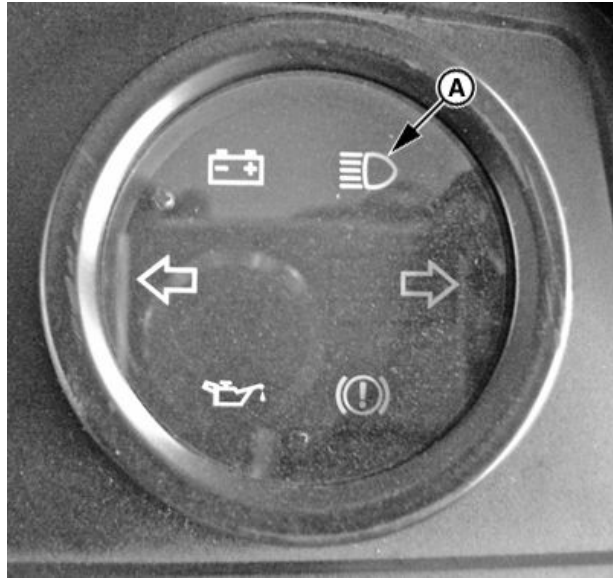
N4A0003877 —UN—11NOV14

N400041,0002A4E -19-22JAN16-1/1

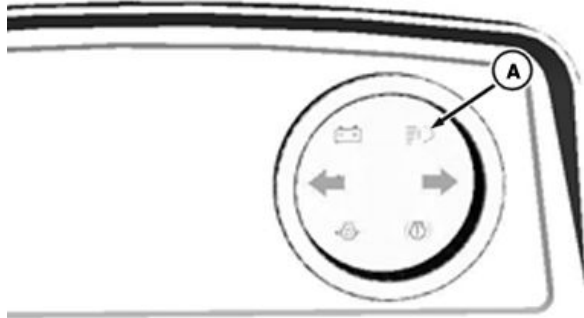
Using High Beam Indicator

When high/low beam switch is set to high beam position, high beam indicator (A) glows.

A—High Beam Indicator



Mechanical Pump Model



Electric Pump Model

PUC5031 —UN—05OCT10

N4A0004342 —UN—22JAN16

N400041,0002A4F -19-22JAN16-1/1

Using Taillights, Clearance Lights and Warning Lights

When tractor light switch (C) is at ROAD position, taillights (B) are ON.

Make sure that taillight lenses are clean before driving tractor on roads, so that other drivers can see them easily.

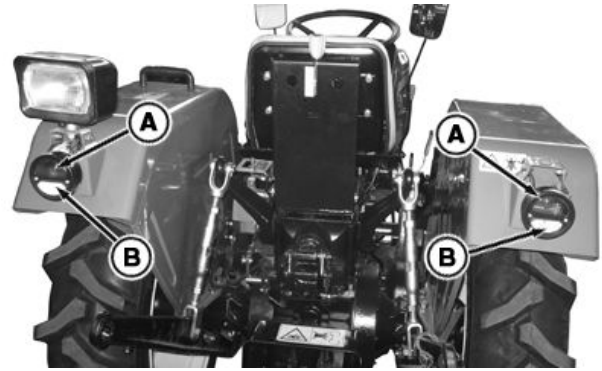
CAUTION: To prevent collision with other road users, slowly drive self-propelled machine and tractor that is with attachments or towed equipment. Often check the traffic condition behind, especially when turning, use hand signs or turn signal lights to indicate that.

Use headlights, warning lights, and turn signal light no matter at day time or at night. Follow local regulations on equipment lighting and usage of signs. Keep lighting and signs visible and in good operating condition. If lights and signs are damaged or missing, replace or repair them. John Deere dealer can provide an implement safety lighting kit.

Warning lights can be controlled by warning light switch (D) to ON or OFF.

Flashing warning light does not indicate turning. Switch off warning lights before operating turn signal lights.

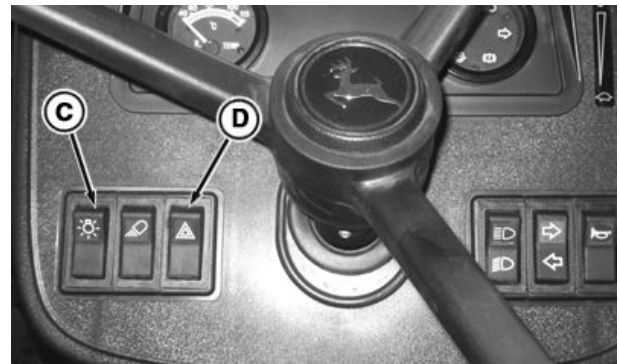
A—Warning Lights C—Light Switch
B—Taillights - Clearance Lights D—Warning Light Switch



N4A0003887 —UN—11NOV14



N4A0003879 —UN—11NOV14



N4A0003878 —UN—11NOV14

N400041,0002A50 -19-22JAN16-1/1

Use turn signal lights

IMPORTANT: Turn signal light switch (A) is not functional when warning lights are flashing. Before operating turn signal light switch, use warning light switch to switch off warning lights.

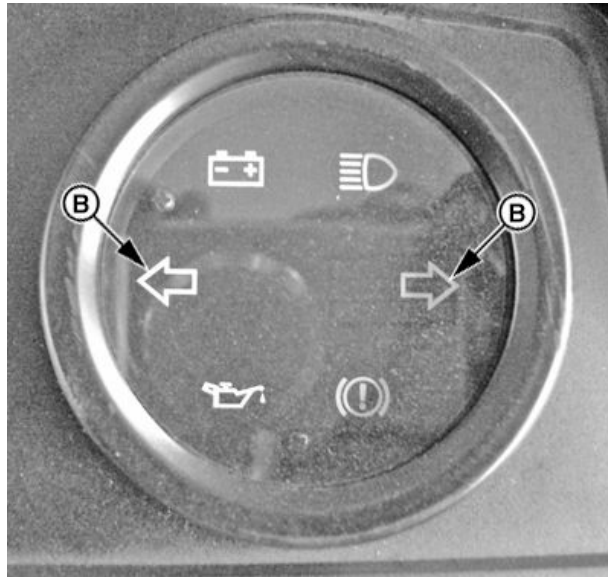
Press turn signal light switch (A) down to indicate left turn and up to indicate right turn. Turn signal indicator (B) on dashboard flashes to indicate turning direction.

NOTE: Be sure to manually set turn signal light switch (A) to center position after turning.

A—Turn-Signal Light Switch B—Turn-Signal Indicator

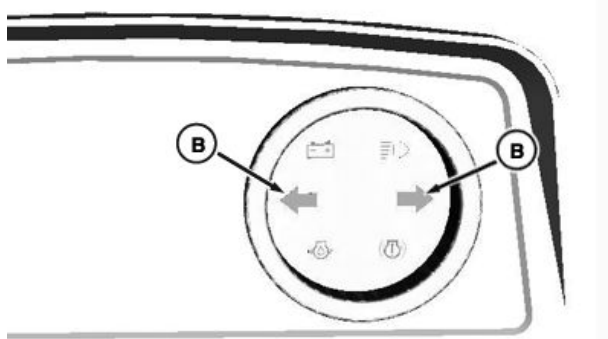


N4A0003875 —UN—11NOV14



Mechanical Pump Model

PUC5032 —UN—05OCT10



Electric Pump Model

N4A0004343 —UN—22JAN16

N400041,0002A51 -19-22JAN16-1/1

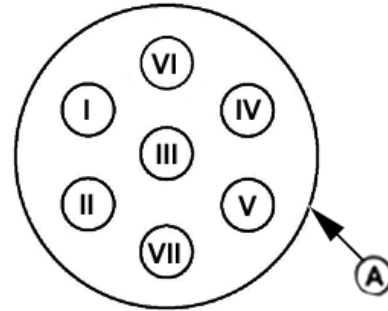
7-Pin Outlet

7-pin outlet (A) is for connecting lights, turn signal lights and electrical equipment on trailer or implement. Always use auxiliary lights on towed implement when tractor rear signals and other lights are obscured.

NOTE: Relevant plugs are available through your John Deere dealer.

Terminal	Function	Wire color
1	Left turn signal light	Blue
2	N/A	
3	Communal loop	Black
4	Right turn signal light	White
5	Taillights	Orange
6	Brake light	Green
7	N/A	

A—7-Pin Outlet



N400041,0002A52 -19-22JAN16-1/1

PUC1828 —UN—08FEB09

PUC1711 —UN—16JAN09

Operator Station

Seat Adjustment

NOTE: Use these instructions as guidelines. Since everybody is different, make the final settings according to personal preferences. Each operator should make adjustments that suit him the best.

Two types of seat adjustments are available:

1. Seat position adjustment: Pull seat position adjustment handle (A). Adjust seat backward or forward against the base plate. After adjustment, release the handle to lock the seat.
2. Seat comfort adjustment: According to operator's weight, turn the seat comfort adjustment knob (B) clockwise or counter-clockwise to a satisfactory position.

A—Seat position adjustment handle

B—Seat comfort adjustment knob



N4A0003888 —UN—11NOV14



N4A0003889 —UN—11NOV14

N400041,0001F94 -19-11MAR15-1/1

Using seat belt

CAUTION: When operating machine with ROPS, wear a seat belt, in order to reduce the possibility of getting injured in case of roll-over accident. When ROPS is folded, never use the seat belt.

To properly secure the operator, seat belt (A) should be fastened around the entire abdomen. If needed, extend the seat belt for better comfort.

Inspect seat belt and mounting parts annually. (Refer to "Service Intervals" in chapter "Maintenance and Service Intervals".)

A—Seat Belt



PUC1831 —UN—08FEB09

N400041,0001F95 -19-11MAR15-1/1

Break-In Period

Strictly observe engine operating principles

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

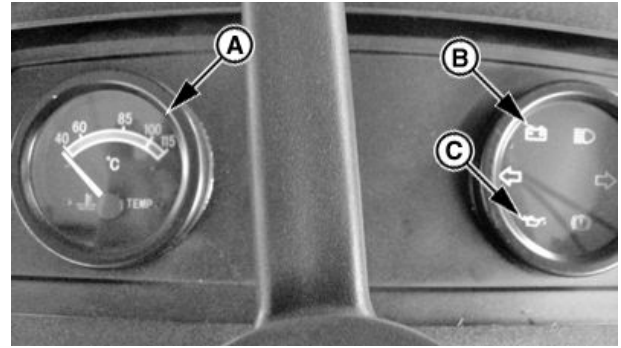
Warm up tractor carefully. Check battery charging indicator (B), oil pressure alarm indicator (C) and water temperature gauge (A).

Avoid unnecessary engine idling (5 minutes).

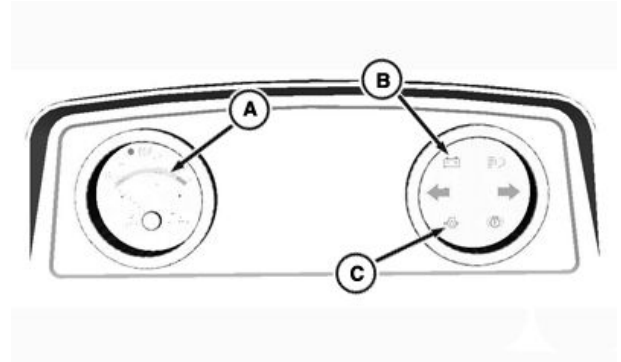
Check engine oil, coolant, transmission/hydraulic oil, and MFWD (if equipped) fluid levels frequently. Check for fluid leaks.

NOTE: If engine oil needs to be filled, use oil of proper seasonal viscosity grade. Only use lubricants that meet specifications stated in section "Fuels, lubricants, and coolant".

A—Water Temperature Gauge C—Oil Pressure Alarm Indicator
B—Battery Charging Indicator



Mechanical Pump Model



Electric Pump Model

PUC5034 —UN—05OCT10

N4A0004344 —UN—22JAN16

N400041,0002A53 -19-22JAN16-1/1

Servicing during break-in period

IMPORTANT: Keep wheel parts fastened to avoid tractor damage. Check torque on wheel bolts before operating, twice during first 10 operating hours and regularly after 50 operating hours.

During the first 10 operating hours:

Only use specified engine oil, if needed. (Refer to "Diesel oil" in section "Fuels, lubricants and coolant".)

Perform services listed for 10 operating hours in "Service interval chart". (Refer to chapter "Maintenance and service intervals".)

Tighten wheel bolts. (Refer to section "Wheels, tires and thread".)

After the first 50 operating hours:

Tighten wheel bolts. (Refer to section "Wheels, tires and thread".)

Check alternator/fan belt tension. (Refer to "Adjust alternator / fan belt" of section "Maintenance - Power system".)

Tighten air intake system bolts. Check gasket for damage. (Refer to section "Checking Air Intake System" in chapter "General Maintenance and Inspection".)

Check cooling system hose clamps. (Refer to section "Checking and Tightening All Hoses and Hose Clamps" in chapter "General Maintenance and Inspection".)

Check brake linkage and brake pedal free stroke. (Refer to section "Adjust brake pedal free stroke" in chapter "General maintenance and inspection".)

Check clutch linkage and clutch pedal free stroke. (Refer to "Adjust clutch pedal free stroke" in chapter "General maintenance and inspection".)

Check PTO clutch linkage. (Refer to section "Adjusting PTO Clutch Control Lever" in chapter "Drawbar and PTO Shaft".)

Perform services listed for 50 and 10 operating hours in "Service interval chart". (Refer to chapter "Maintenance and service intervals".)

After the first 100 operating hours:

Clean the hydraulic system oil filter / strainer. Replace if necessary. (Refer to section "Servicing Hydraulic System Oil Filter / Strainer" in chapter "Lubrication".)

Change MFWD front axle housing oil. (Refer to "Change MFWD front axle housing oil" in chapter "Lubrication".)

Change engine oil and cleaner. (Refer to section "Changing Engine Oil and Filter" in chapter "Lubrication".)

Perform maintenance at 100 operating hours, 10 operating hours, as well as 50 operating hours.

N400041,0002A54 -19-22JAN16-1/1

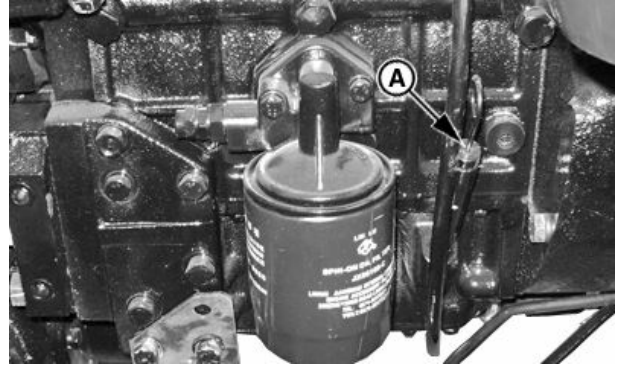
Prestart Check

Prestart daily service

NOTE: Park tractor on level ground before performing checks.

1. Check engine oil level. Remove oil dipstick (A) and clean it. Then, re-insert it completely. Take out oil dipstick and check oil level. The safe operating range is between the upper and lower marks of dipstick. (Refer to section "Check engine oil level" in chapter "Lubrication".)

Never operate the engine if oil level is below the lower mark. In this case, add recommended engine oil. (Refer to chapter "Fuel, lubricants and coolant".)



A—Engine Oil Level Dipstick

PUC5173 —UN—08NOV10

N400041,0001F98 -19-11MAR15-1/3

2. Check pre-filter (A) of air filter. (Refer to section "Servicing Air Filter" in chapter "General Maintenance and Inspection".)

A—Pre-filter



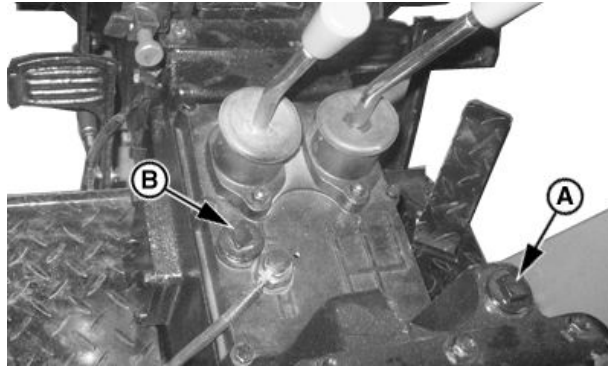
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N400041,0001F98 -19-11MAR15-2/3

PUC2892 —UN—03MAR10

3. Check transmission and hydraulic system oil level. Check hydraulic oil level at dipstick (A) and transmission oil level at dipstick (B). Remove and clean oil dipsticks. Then, re-insert them fully. Take out oil dipsticks and check oil levels. The safe operating range is between the upper and lower marks of dipstick. If oil level is low, refill oil through fill port. (Refer to section "Check transmission/hydraulic system oil level" in chapter "Lubrication".)
4. Empty water and sediment in sediment bowl. (Refer to section "Checking Sediment Bowl" in chapter "Maintenance — Fuel System".)
5. Check coolant/water level in radiator. Refill coolant/water if needed. (Refer to section "Check coolant level" in "Maintenance — Cooling system".)
6. Check MFWD axle and wheel hub oil level.
7. Check fuel level.
8. Check inflation pressure of front and rear wheels. If needed, adjust according to required technical specifications.

IMPORTANT: If operating in extremely wet or muddy conditions, lubricate several



A—Hydraulic Oil Level Dipstick B—Transmission Oil Level Dipstick

additional components daily as well. (Refer to section "Lubricating Steering Main Shaft" in chapter "Lubrication".)

PUC2893 —UN—03MAR10

N400041,0001F98 -19-11MAR15-3/3

Operating Engine

Before Starting Engine

⚠ CAUTION: Avoid suffocation. Fumes emitted from engine may cause sickness or death.

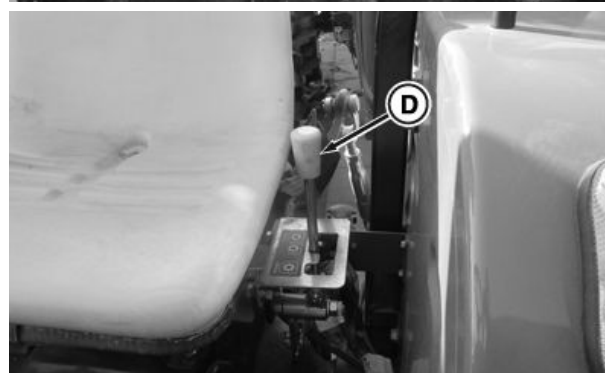
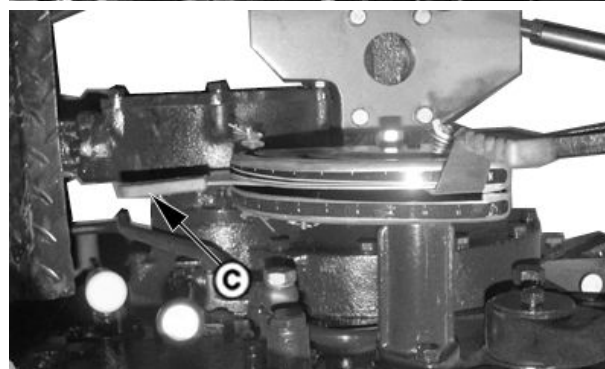
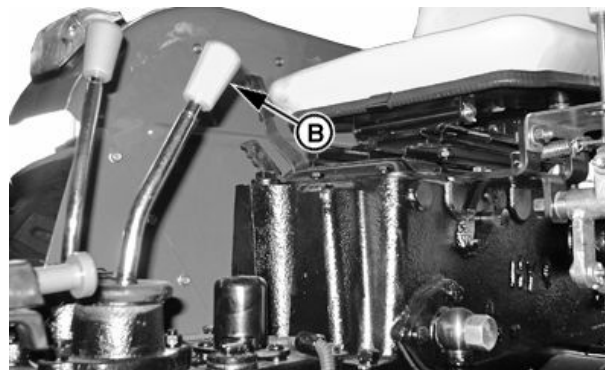
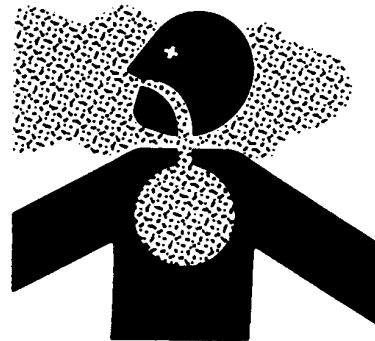
In case of operating engine in a building, make sure that ventilation is adequate. Either use an exhaust pipe extension to get exhaust fumes out, or open doors and windows, to let sufficient air outside flow into the indoor area.

1. Check fuel gauge to be sure that tractor has sufficient fuel.
2. Disengage PTO lever (D) and set range shift lever (B) in neutral position. Starter will not operate if PTO lever (D) and range shift lever (B) are not in these positions.
3. Place position control lever (C) in lower position.
4. Check charging system (battery) indicator and oil pressure alarm indicator. When keyswitch is turned to ON position, they should flash.

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

B—Range Shift Lever
C—Position Control Lever

D—PTO Lever



N400041,0002A55 -19-22JAN16-1/1

TS220 —UN—15APR13

PUC5035 —UN—05OCT10

PUC0046 —UN—07APR09

N4A0003908 —UN—05DEC14

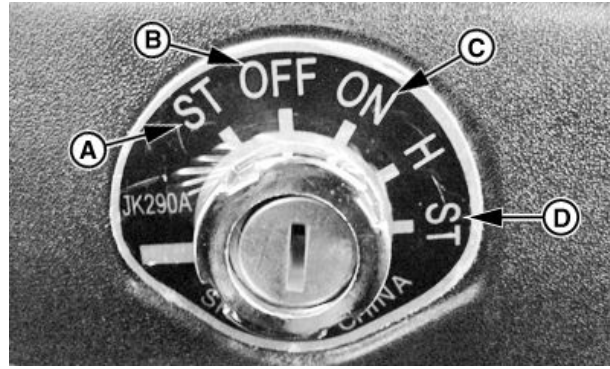
Keyswitch positions

START position (A/D) - When starting the engine, turn switch to START position. Key will return to ON position when released. Refer to following steps for proper starting procedure.

OFF position (B) - Turn switch from ON position to OFF position to shut down electrical accessories. Make sure that keyswitch is at ON position when engine is running.

ON position (C) - Turn key to start position. After key is released, key returns to ON position. When key is at ON position, circuit is connected and engine can run.

ON position - Turn key to ON position, so that circuit is connected, but do not start the engine.



A—START Position
B—OFF Position

C—ON Position
D—START Position

N400041,0002A56 -19-22JAN16-1/1

PUC5175 —UN—19NOV10

Starting Engine

1. Push hand throttle (C) backward (approximately 1/3 of lever stroke) to increase engine speed. Engine may not start with throttle at completely forward position.

C—Hand Throttle



Continued on next page

N400041,0002A57 -19-22JAN16-1/2

N4A0003900 —UN—23NOV14

CAUTION: Avoid injury or death caused by machine runaway.

Do not start engine by shorting across starter terminals. Avoiding normal circuitry allows machine to start when transmission is in gear.

CAUTION: Apply parking brake before starting engine.

Only start engine when sitting in operator seat, and gearbox range shift lever is at parking or neutral position. Never start engine while standing on ground.

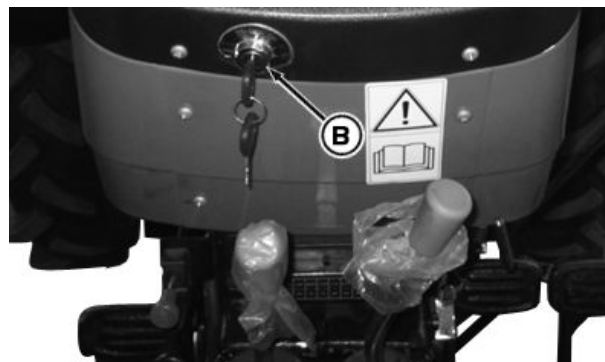
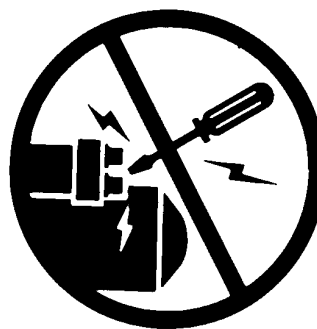
IMPORTANT: Never run a cold engine at full throttle.

2. Make sure that range shift lever is at neutral position and PTO lever at disengaged position. Press clutch pedal (A). Turn keyswitch (B) completely clockwise to START position. After engine has started, release key. If key is released before engine starts, wait until starter and engine stop running before trying again. Check that all indicators are off after engine has started.

IMPORTANT: Do not operate starter more than 15 seconds at a time. If engine does not start, wait for at least 2 minutes for the starter motor to cool down before trying again. If engine does not start in three attempts, refer to chapter "Troubleshooting".

A—Clutch Pedal

B—Keyswitch



N400041,0002A57 -19-22JAN16-2/2

TS177 —UN—11JAN89

PUC5036 —UN—05OCT10

N4A0003902 —UN—23NOV14

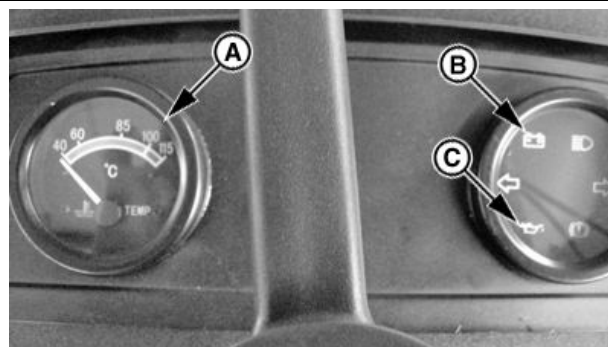
Check meters after engine has started

Mechanical Pump Model

IMPORTANT: If battery charging indicator (B) or oil pressure alarm indicator (C) remains on, or if reading of water temperature gauge (A) falls to the red zone, stop the engine and find out the cause.

A—Water Temperature Gauge
B—Battery Charging Indicator

C—Oil Pressure Alarm Indicator



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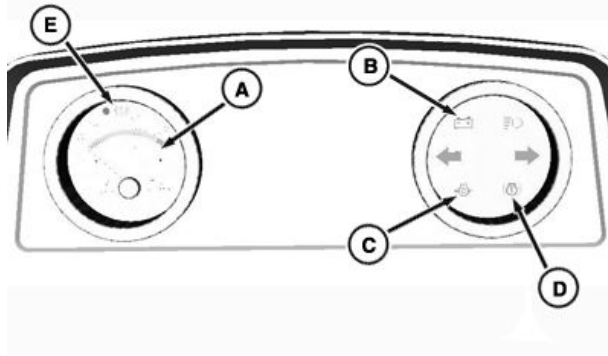
N400041,0002A58 -19-22JAN16-1/2

PUC5034 —UN—05OCT10

Electric Pump Model

IMPORTANT: If battery charging indicator (B), oil pressure alarm indicator (C), ECU fault indicator (D) or air pressure alarm indicator (E) remains on, or if reading of water temperature gauge (A) falls to the red zone, stop the engine and find out the cause.

- | | |
|--------------------------------|--------------------------------|
| A—Water Temperature Gauge | D—ECU Fault Indicator |
| B—Battery Charging Indicator | E—Air Pressure Alarm Indicator |
| C—Oil Pressure Alarm Indicator | |



N4A0004345 —UN—22JAN16

N400041,0002A58 -19-22JAN16-2/2

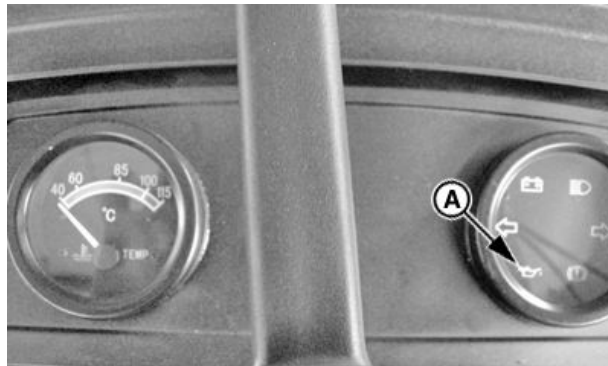
Oil Pressure Alarm Indicator

If engine oil pressure falls below minimum, oil pressure alarm indicator (A) glows and remains on.

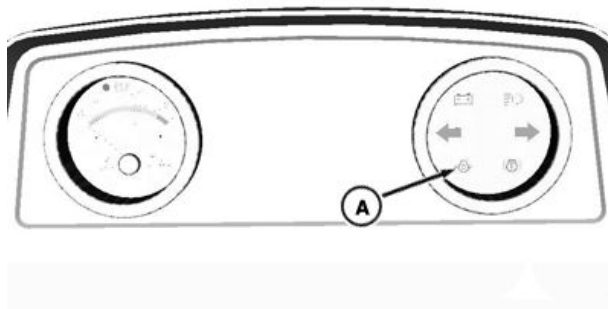
IMPORTANT: Never operate engine without sufficient oil pressure. If indicator stays on for over 5 seconds, under normal operating conditions, stop the engine and find out the cause.

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

- A—Oil Pressure Alarm Indicator



Mechanical Pump Model



Electric Pump Model

PUC5038 —UN—05OCT10

N4A0004346 —UN—22JAN16

N400041,0002A59 -19-22JAN16-1/1

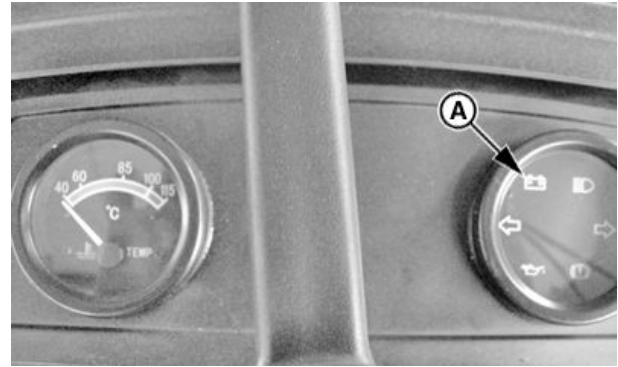
Battery Charging Indicator

Battery charging indicator (A) is on when alternator output is low. Indicator should glow when key is turned to START position; It goes off when engine starts.

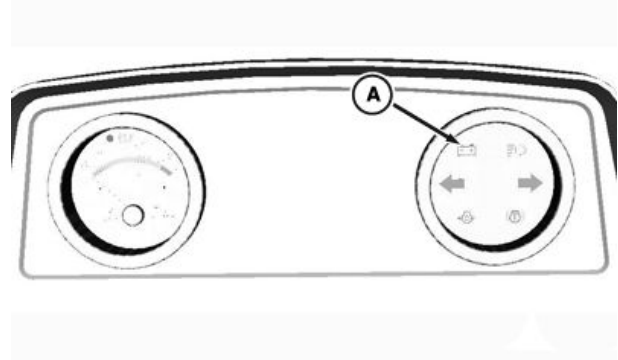
If indicator stays on for over 5 seconds, under normal operating conditions, stop the engine and find out the cause.

If loose or broken fan belt is not the cause, please contact your John Deere dealer.

A—Battery Charging Indicator



Mechanical Pump Model



Electric Pump Model

N400041,0002A5A -19-22JAN16-1/1

PUC5039 —UN—05OCT10

N4A0004347 —UN—22JAN16

Air Pressure Alarm Indicator

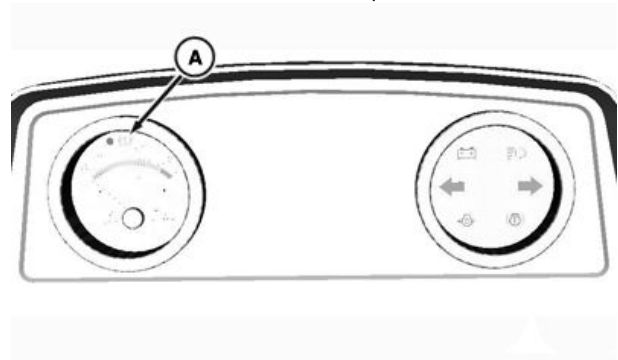
If air pressure of pneumatic trailer brake is insufficient, air pressure alarm indicator (A) glows.

Indicator should glow shortly when key is turned to START position; It goes off when engine starts.

A—Air Pressure Alarm Indicator



Mechanical Pump Model



Electric Pump Model

N400041,0002A5B -19-22JAN16-1/1

PUC5040 —UN—05OCT10

N4A0004348 —UN—22JAN16

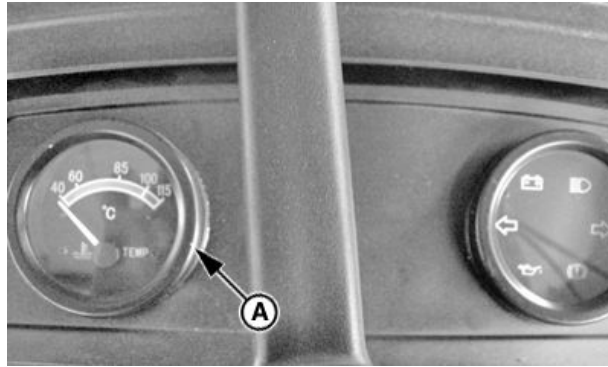
Water temperature gauge

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

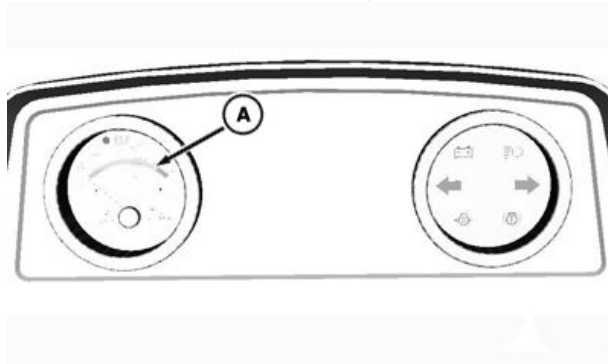
CAUTION: DO NOT remove radiator cap until water has cooled down. Slowly loosen radiator cap to release excessive pressure.

Check water level in radiator after engine has cooled down. Also check front grille on engine hood and radiator for blockage. Check fan belt tension. If problem is not solved, please contact your John Deere dealer.

A—Water Temperature Gauge



Mechanical Pump Model



Electric Pump Model

N400041,0002A5C -19-22JAN16-1/1

PUC5041 —UN—05OCT10

N4A0004349 —UN—25JAN16

Change engine speed

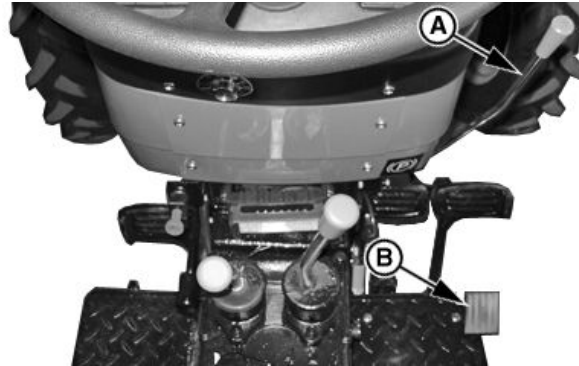
Use hand throttle (A) to increase or decrease engine speed. Engine remains at set speed until hand throttle is moved again.

Maximum speed is attained with lever all the way up, and minimum speed with lever all the way down.

Use foot throttle (B) to temporarily increase engine speed. Once foot throttle is released, engine reverts to the previous speed.

A—Hand Throttle

B—Foot Throttle



N400041,0002A5D -19-22JAN16-1/1

PUC5043 —UN—05OCT10

Warming Up Engine

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

1. Run engine at about 800-1000 rpm idling speed for several minutes.

2. Run engine under light load at 1900 rpm until engine reaches normal operating condition.

N400041,0002A5E -19-22JAN16-1/1

Restarting Stalled Engine

IMPORTANT: Strictly observe the following, or damage to turbocharger and booster may result.

If engine stalls when operating under load, press clutch immediately and restart, to prevent abnormal accumulation of heat in engine. Continue with normal operation or run engine at low idling speed for 1 or 2 minutes before stopping the engine.

N400041,0002A5F -19-22JAN16-1/1

Avoid running the engine at idling speed

Engine idling uses fuel inefficiently and may cause build-up of carbon in engine.

If tractor must be left for over 3 or 4 minutes with engine running, minimum engine speed should be 1200 rpm.

N400041,0002A60 -19-22JAN16-1/1

Observing Engine Operating Speed and Idling Speed

Low idling speed should be 750 ± 30 r/min.

Under light load or no-load, tractor maximum throttle speed can rise to 2376 r/min (30 hp), 2538 r/min (32 hp), 2592 r/min (35 hp).

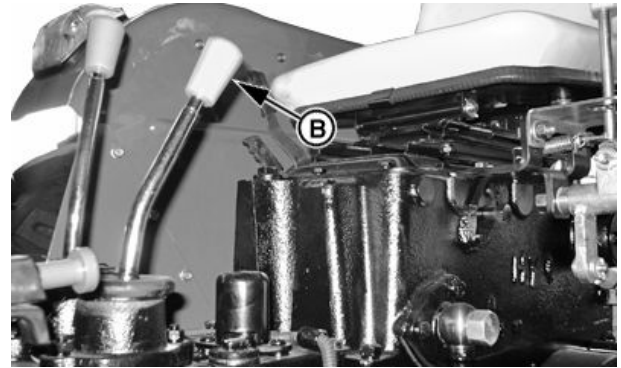
Normal operating rated speed should be 1400 ~ 1600 r/min (state 3 emission: 30 hp), 1500 ~ 1650 r/min (state 3 emission: 32, 35 hp), 1500 ~ 1680 r/min (state 2 emission: 30, 32 hp), 1600 ~ 1800 r/min (state 2 emission: 35 hp). Within those limits, engine can operate under full load.

N400041,0002A61 -19-22JAN16-1/1

Switching Off Engine

1. Set range shift lever (B) in neutral position.

B—Range Shift Lever



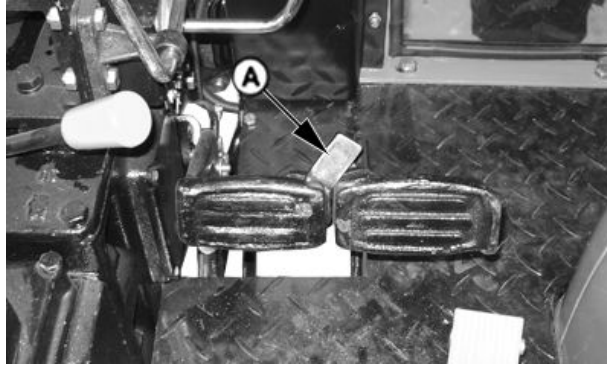
PUC5035 —UN—05OCT10

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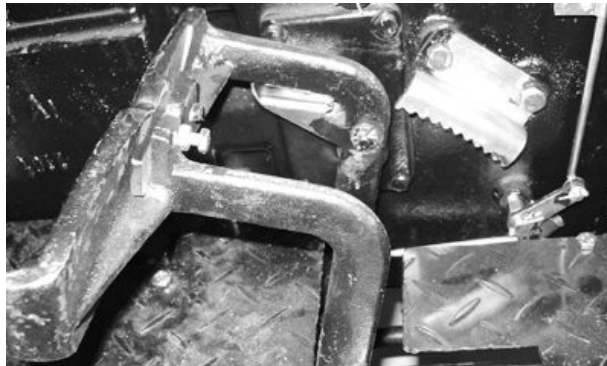
N400041,0002A62 -19-22JAN16-1/6

2. Use lock bar (A) to lock the two brake pedals together. Use wrench to tighten bolts and keep pedals locked together.

A—Brake Pedal Lock Bar



PUC1845 —UN—11FEB09



PUC1846 —UN—11FEB09

N400041,0002A62 -19-22JAN16-2/6

3. Press brake pedal and pull parking brake lever (A) to apply parking brake.

IMPORTANT: Certain engine parts should be cooled down by engine oil. Sudden stop of hot engine can cause damage to these parts, owing to overheating or lack of lubrication.

A—Park Brake Lever



PUC1847 —UN—11FEB09

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N400041,0002A62 -19-22JAN16-3/6

4. Push hand throttle (C) forward to low idling position, so that engine runs at idling speed for 1-2 minutes. 。

C—Hand Throttle



N4A0003900 —UN—23NOV14

N400041,0002A62 -19-22JAN16-4/6

5. Pull shut-off cable (A) backward (located at bottom left of control device bracket). Hold it until engine is completely stopped.

A—Shut-Off Cable



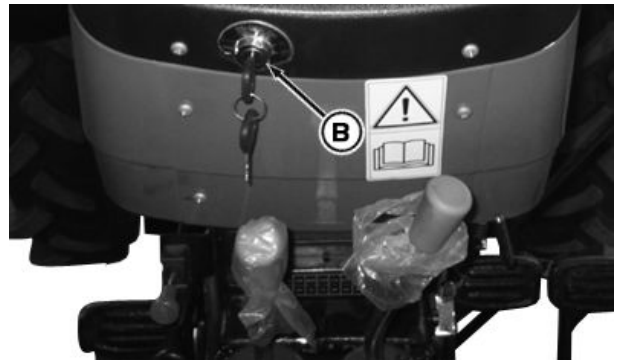
PUC5044 —UN—05OCT10

N400041,0002A62 -19-22JAN16-5/6

6. Turn keyswitch (B) to OFF position.

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

B—Keyswitch



N4A0003902 —UN—23NOV14

N400041,0002A62 -19-22JAN16-6/6

Driving Tractor

Operator must be trained

- Read and understand the "Operating Engine" section of this manual before operating the tractor.
- Operate the tractor in an open and unobstructed area, under the guidance of an experienced operator.
- Learn how to use all controllers.
- Learn how to start, stop, steer the tractor, as well as other characteristics and gain experience.

N400041,0001FA7 -19-11MAR15-1/1

Driving on Roads

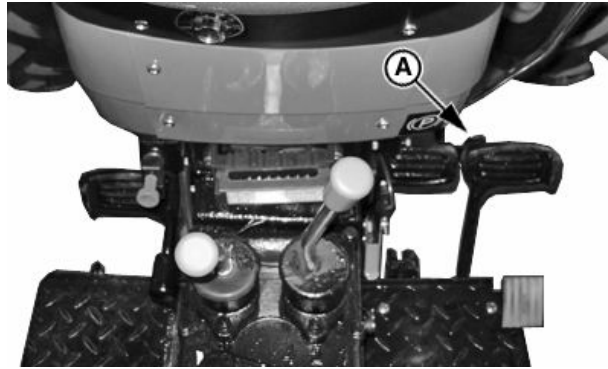
CAUTION: When transporting on public road or highway, use auxiliary lights and devices to properly alert other drivers. Please observe relevant local governmental regulations. John Deere dealer can provide various safety devices. Keep safety devices in good condition. Replace missing or damaged signs.

Observe following precautions when driving tractor on the road:

CAUTION: Before driving tractor on the road, lock brake pedals together. Apply brakes gently and cautiously at transport speed.

1. Use brake pedal lock bar (A) and bolt wrench to lock brake pedals together. Avoid braking suddenly. Reduce speed if towed load weighs more than the tractor and is not equipped with brakes. (For recommended transport speed, refer to operator's manual of implements.)

Be extra cautious when transporting towed loads under adverse road conditions, and when turning or



A—Brake Pedal Lock Bar

braking on slopes. Make sure that wheel tread is adjusted to proper width to provide maximum stability.

IMPORTANT: To avoid unnecessary wear, never "press" the brake pedal continuously by resting a foot on it.

PUC5045—UN—05OCT10

Continued on next page

N400041,0001FA8 -19-11MAR15-1/2

2. Check local laws and regulations about lighting requirements. Keep warning light (A) and taillight (B) clean and visible. If towed or rear-mounted equipment obstructs those safety devices, install warning light on equipment. (Please contact John Deere dealer.)

3. Set light switch (E) to ROAD position and high/low beam switch (D) to high beam position.

When approaching other vehicles, set high/low beam switch (D) to low beam position. Never use work lights (if equipped) or any lights which may blur the vision of other drivers.

4. When turning, use turn signal light switch (C). Be sure to return turn signal switch (C) to center position after turning.
5. Always drive slowly for the sake of safety. Before driving downhill, shift in low gear, so as to control speed without applying brakes. Slow down on uneven surface or when turning sharply, especially when transporting heavy rear mounted equipment.
6. To reduce tire wear, be sure to disengage front wheel drive (if equipped).

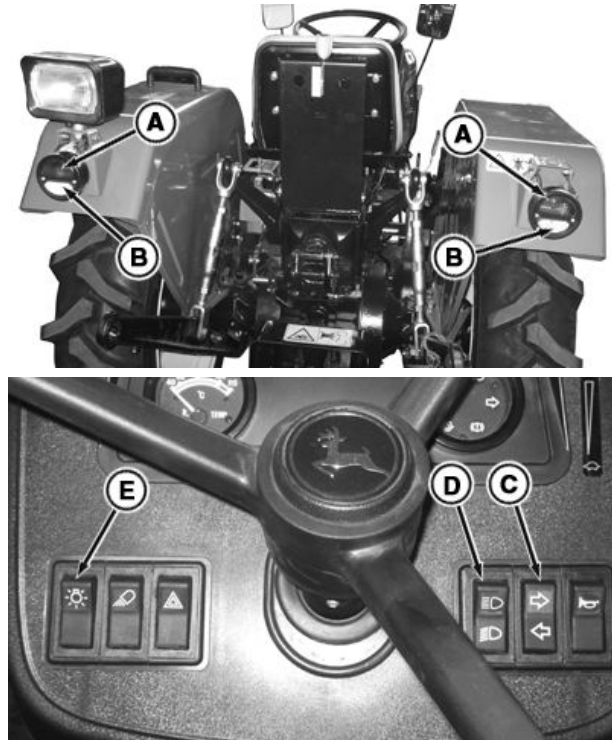
A—Warning Lights

B—Taillights

C—Turn Signal Light Switch

D—High/Low Beam Switch

E—Light Switch



N4A0003887 —UN—11NOV14

N4A0003890 —UN—12NOV14

N400041,0001FA8 -19-11MAR15-2/2

Be cautious on slopes

Always wear seat belt when rollover protection frame is in upper position.

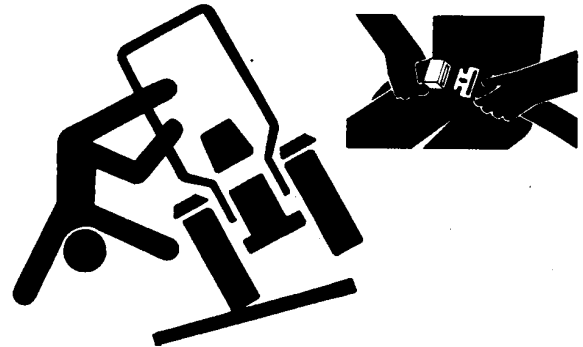
When driving on slopes, avoid holes, ditches, and obstructions so as to avoid rolling over. Do not turn sharply when driving upslope.

Never drive near the edge of a gully or steep embankment — to prevent falling in.

Driving forward out of a ditch or mud or driving up a steep slope may cause tractor to roll over. If possible, drive backward in those situations.

⚠ CAUTION: Avoid injury! Be particularly cautious when driving tractor on slopes. When driving tractor on slopes, engage MFWD to increase traction and make 4-wheel braking possible. Be aware that MFWD enables tractor to drive on dangerous slopes, but also increases the possibility of rollover.

Engage MFWD to improve braking on slopy, icy, wet or graveled surfaces. Add counterweight to the tractor and



drive at reduced speed to avoid slipping or loss of steering control.

Tractor may easily turn over with narrow tread setting and at high speed.

Mount towed loads only to drawbar. When using chains, tighten them slowly.

TS205 —UN—23AUG88

N400041,0001FA9 -19-11MAR15-1/1

Operate gearbox

Range shift lever (A) provides 2 forward speed ranges: High and low.

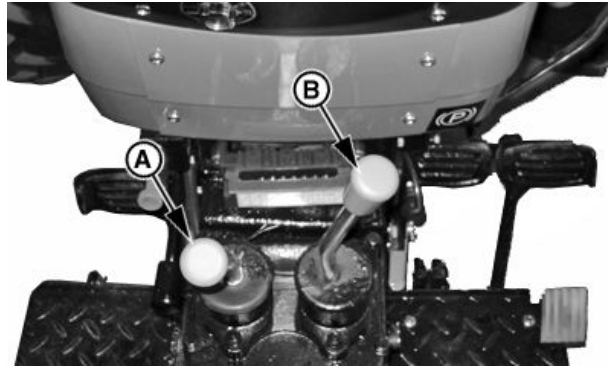
Main shift lever (B) has 4 forward speeds: Gear 1, gear 2, gear 3, gear 4 and one reverse gear.

Combination of range shift lever (A) and main shift lever (B) includes 8 forward gears and 2 reverse gears.

Main and range shift levers must be in neutral position in order to start the engine.

A—Range Shift Lever

B—Main Shift Lever



PUC5176 —UN—19NOV10

N400041,0001FAA -19-11MAR15-1/1

Gearbox Shifting

IMPORTANT: To avoid damage to gearbox, never shift gear while driving. To avoid unnecessary wear, never "press" the clutch pedal by resting a foot on it.

Before shifting gear by setting range shift lever or main shift lever, press clutch pedal (A) and stop the tractor. Release clutch pedal gradually to take up load smoothly.

A—Clutch pedal



PUC5036 —UN—05OCT10

N400041,0001FAB -19-11MAR15-1/1

Selecting Gear

IMPORTANT: To extend life of driveline and to avoid excessive soil compaction and rolling drag, do not mount counterweights onto tractor when gear is below H-1 and under continuous full power. Before front wheel drive is used, set ballasting to one lower gear.

When engine speed is 1265-2300 rpm, tractor can be operated in any gear. Within those limits, engine can operate under full load. For light load operation, use high gear and low engine speed. That can save fuel and reduce wear.

N400041,0001FAC -19-11MAR15-1/1

Apply brake

CAUTION: Before operating tractor on a road, use lock bar (B) to lock pedals together, and use wrench to tighten the bolts. Under transport speed, lightly press brake pedal.

When operating in fields, do not lock brake pedals together. On the contrary, gently press right brake pedal to help make a sharp right turn; Slightly press left brake pedal to help make a sharp left turn.

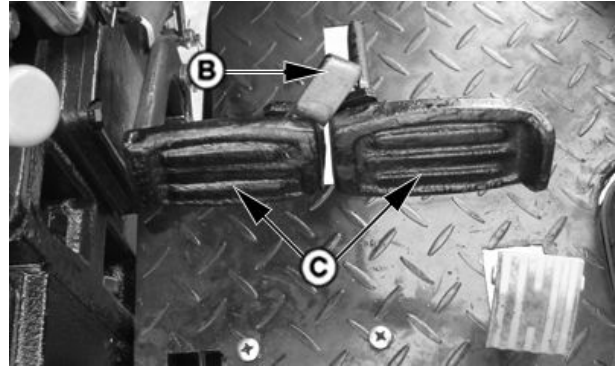
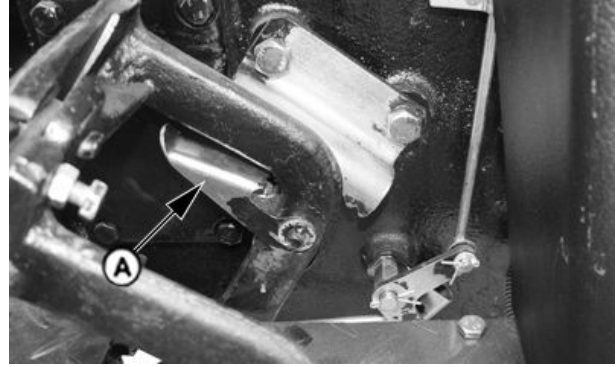
Use brake pedal lock bar (B) to lock pedals together and stop the tractor completely. After that, press brake pedal and pull parking brake lever (A) upward. Use wrench to tighten the bolts of brake pedal lock bar.

Release parking brake lever (A). Press brake pedal (C) and push parking brake lever (A) downward.

IMPORTANT: To prevent unnecessary wear, do not rest the feet onto brake pedals.

Reduce speed if towed load is not equipped with brakes and is heavier than the tractor. Avoid braking suddenly. For recommended transport speeds, refer to Operator's Manual of towed implements.

Be extra cautious when transporting towed loads under adverse road conditions, and when turning or braking on slopes.



A—Parking brake lever
B—Brake pedal lock bar

C—Brake pedals

N400041,0001FAD -19-11MAR15-1/1

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PUC1852 —UN—11FEB09

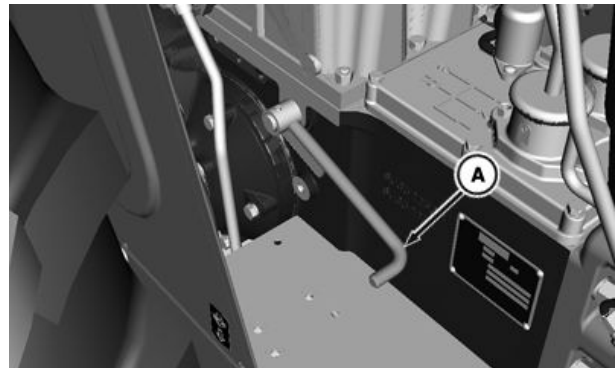
Using Differential Lock

CAUTION: Never operate tractor at high speed or attempt to turn with engaged differential lock.

IMPORTANT: To prevent damage to the driveline, never engage differential lock when one wheel is turning while another wheel is completely stopped.

When a wheel begins to lose friction, stop the tractor and press differential lock pedal (A) to engage differential lock. Before engaging differential lock, tractor wheels must be stopped or turning at the same speed. If possible, engage differential lock before tires slip.

Unequal traction keeps differential lock engaged. When traction is equal, differential lock disengages through spring action. If differential lock does not disengage, press one brake pedal and then another.



A—Differential Lock Pedal

If tire slips repeatedly, gains friction and then slips again, keep pedal at engaged position.

N400041,0001FAE -19-01JUN15-1/1

N4A0004109 —UN—01JUN15

Operating MFWD

Use MFWD as required for better draft.

CAUTION: MFWD greatly increases traction. If this option is used, be extra cautious when on slopes. Compared with 2WD, MFWD can maintain traction on steeper slopes, thereby increasing the risk of roll-over.

When driving on icy, wet or gravel surfaces, reduce speed and be sure tractor is loaded with proper counterweights to avoid skids and loss of steering control. Front-wheel drive provides better control under these road conditions.

IMPORTANT: To extend front tire life, engage front-wheel drive only when needed in the field. Front tires turn slightly faster than rear tires with MFWD engaged and will wear very quickly if driven in MFWD mode on hard surface for an extended period. Unless absolutely necessary, never engage MFWD when driving on hard surfaces.

Never install tire chains on front wheels - Chains may hit and damage tractor.

While towing an implement, pushing down MFWD lever to disengage front-wheel drive may not make it disengaged. If lever cannot be pushed down in an attempt to disengage MFWD, that means the load must first be relieved from power train. Refer to step 3 below.

MFWD can be engaged or disengaged while in motion.



A—MFWD Lever

1. To engage MFWD, pull up MFWD lever (A).
2. To disengage MFWD, push down lever (A).
3. If lever does not come up easily, this means the load must first be relieved from driveline. To relieve load, operator may need to perform one or more of the following steps:
 - Drive tractor a few meters straight forward.
 - Stop tractor, then drive it a bit backward.
 - Raise implement slightly.
 - Disengage any ground-engaging implement in use.

PY14652 —UN—28JUN12

N400041,0001FAF -19-11MAR15-1/1

Stop tractor

CAUTION: Apply parking brake before leaving the tractor. If engine is off but transmission is still in gear, that may not prevent tractor from runaway.

1. Set range shift lever (B) in neutral position. Press brake pedal until tractor stops. Use lock bar to lock brake pedal together. Use wrench to tighten bolts of brake pedal lock bar. Press brake pedal. Then, pull up parking brake lever (A).

2. Lower all implements to the ground.

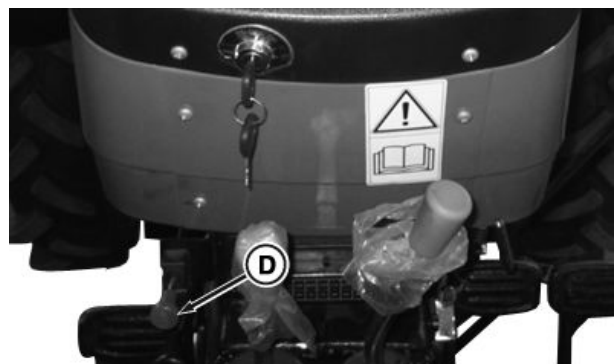
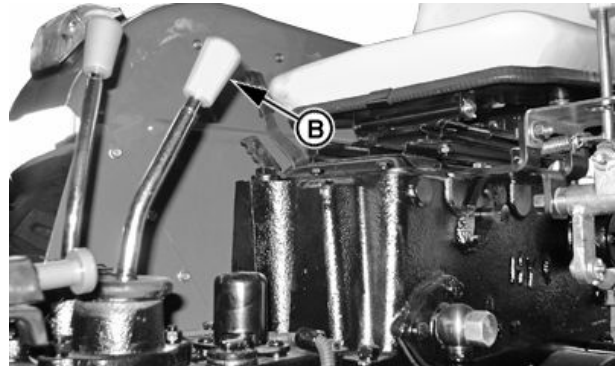
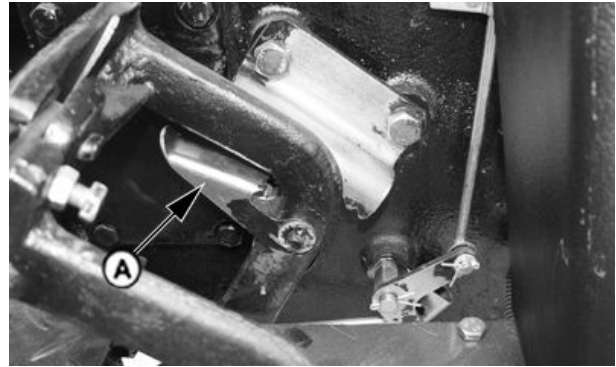
IMPORTANT: Certain engine parts should be cooled down by engine oil. Stopping a hot engine suddenly can damage those parts because of overheating or lack of lubrication.

3. Push hand throttle (C) forward to low idling position. Let engine idle for 1 to 2 minutes.
4. Pull shut-off cable (D) backward and hold it until engine is completely stopped.
5. Turn key to OFF position and remove it.

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

A—Parking Brake Lever
B—Range Shift Lever

C—Hand Throttle
D—Shut-Off Cable



PUC1847 —UN—11FEB09

PUC5035 —UN—05OCT10

PUC5048 —UN—08OCT10

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N400041,0001FB0 -19-11MAR15-1/1

Rocker Arm Shaft and 3-Point Hitch

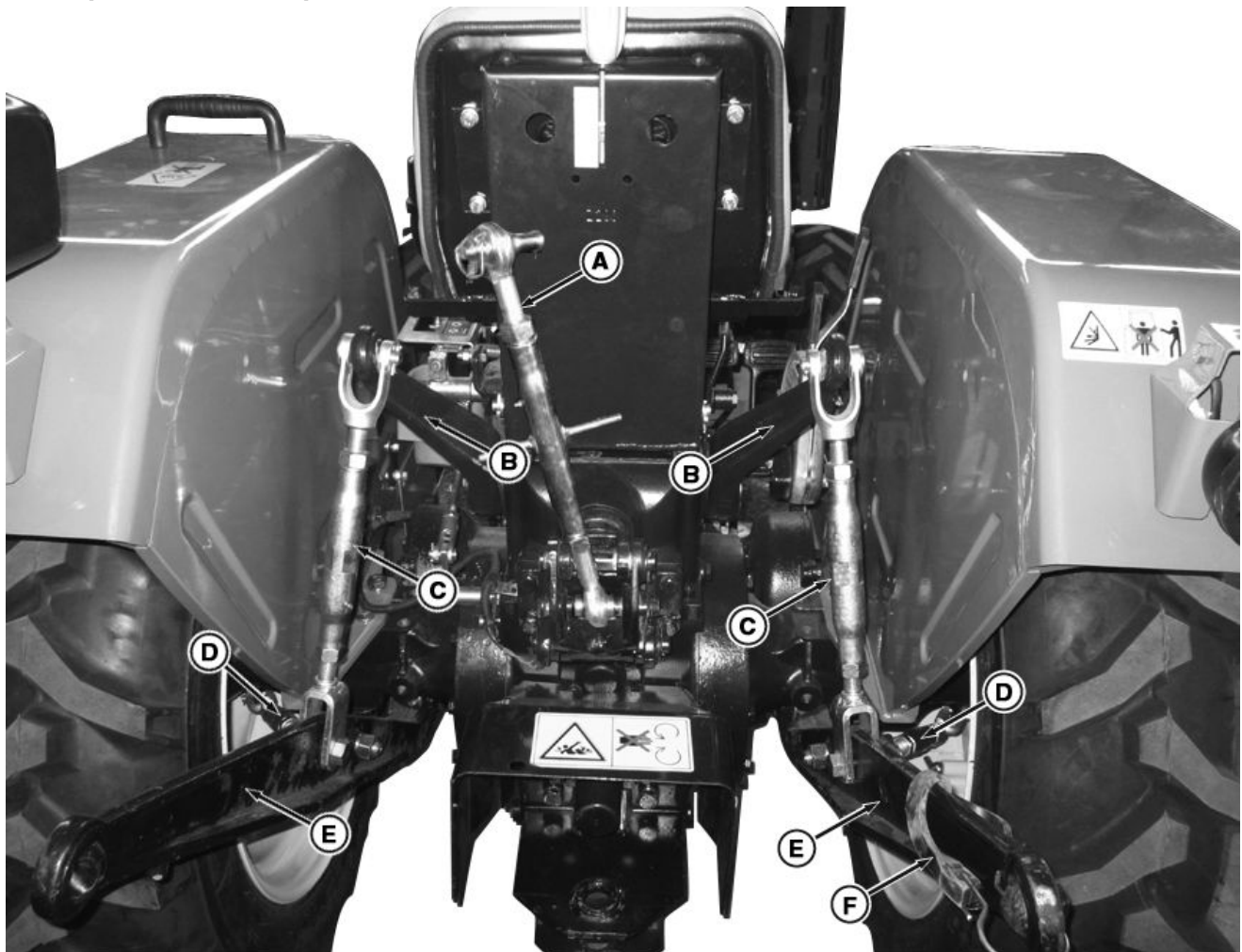
Tractor power should match implements

IMPORTANT: Tractor power should be matched to the size of certain implements. Excessive tractor power can damage an implement. Also, an oversize implement can damage

tractor. (Prior to installing implement, refer to implement operator's manual about minimum and maximum power requirements.)

N400041,0001FB1 -19-11MAR15-1/1

Three-point hitch components



A—Upper Lever
B—Lift Arm

C—Oblique Lever
D—External Stopper Chain

E—Draft Links
F—Rubber Stopper Chain

N40003894 —UN—16NOV14

N400041,0001FB2 -19-11MAR15-1/1

Rocker Arm Shaft Control Lever

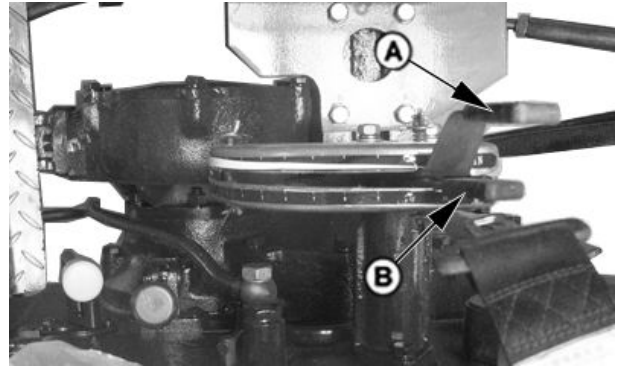
Rocker arm shaft is controlled by position control lever (B) and draft control lever (A).

Pull position control lever (B) backward, hitch will rise. Push it forward, hitch will lower. (Refer to "Using Rocker Arm Shaft Position Control" in this chapter for more information.)

Draft control lever (A) controls hitch position relative to draft loads. (Refer to "Using Rocker Arm Shaft Draft Control" in this chapter for more information.)

A—Draft Control Lever

B—Position Control Lever



PUC0035 —UN—03APR09

N400041,0001FB3 -19-11MAR15-1/1

Using Rocker Arm Shaft Position Control

CAUTION: To prevent unexpected movement of rocker arm shaft, push draft control knob all the way down before attaching an implement.

Push draft control lever (A) all the way down when you do not want rocker arm shaft to adjust automatically to draft load, such as when attaching implement to tractor.

Use position control lever (B) to control hitch movement and depth. Use position control for the following applications:

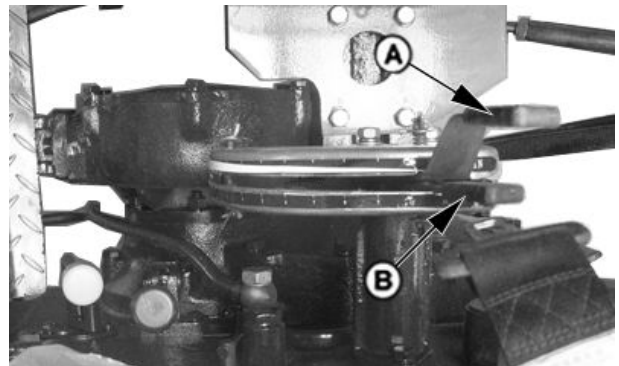
CONSTANT DEPTH is used for implements on level terrain and for implements that do not touch the ground, such as spreaders or sprayers. Place position control lever (B) at desired depth.

TRANSPORT is used when transporting implements and when turning at end of field. Move position control lever (B) fully backward during transport for usage with or without load sensing.

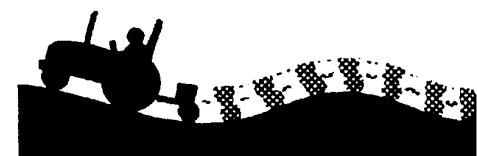
FLOAT is used for implements with skids or depth gauge wheels designed to carry full implement weight. Push position control lever (B) all the way forward and draft control lever (A) all the way down so implement can follow the ground contour.

A—Draft Control Lever

B—Position Control Lever



PUC0035 —UN—03APR09



P9043 —UN—01AUG00

N400041,0001FB4 -19-11MAR15-1/1

Using Rocker Arm Shaft Draft Control

Rocker arm shaft is equipped with variable draft control system.

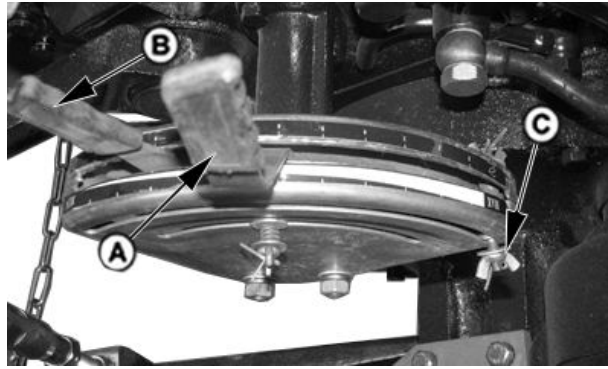
Use draft load sensing when any one of the following conditions applies:

- Operating with a fully mounted implement on uneven terrain. The implement rises and lowers to follow the ground contours while maintaining a nearly constant depth.
- Operating in varying soil conditions. Slightly lift implement to pass through uneven ground, so that does not need to change to a lower gear.

Draft control lever (A) controls amount of load required before hitch responds. With lever placed all the way down, there is no draft sensing. Pulling the lever up increases the amount of draft load required to override the position set by position control lever (B) and to raise the rocker arm shaft.

For draft load sensing operation:

- Initially, place position control lever (B) in its fully forward position and draft control lever (A) in the lowest (least draft) position.
- When tractor is in motion, pull position control lever (B) backward to set implement operating depth. Set handwheel (C) so control lever can be brought back to



A—Draft Control Lever
B—Position Control Lever

C—Handwheel

the same exact position. When the tractor begins to slip, pull draft control lever (A) upward until desired draft sensing level is obtained.

- Alternatively, slightly lift position control lever (B) to override draft control settings. That helps vehicle pass through slippery point and avoids being stuck.
- Position control lever (B) can be moved fully backward to raise the hitch at the end of the field.

N400041,0001FB5 -19-11MAR15-1/1

PUC0044 —UN—03APR09

Adjusting Rocker Arm Shaft Rate-of-Drop

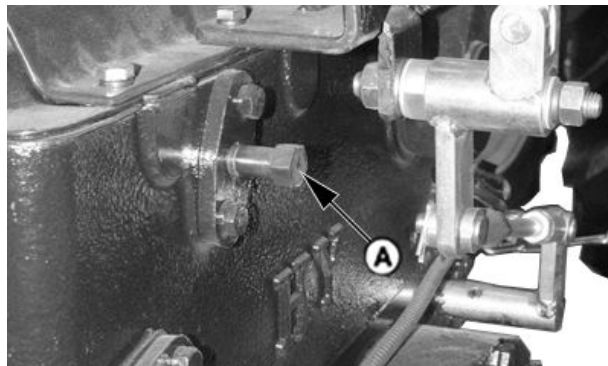
CAUTION: Excessive rate-of-drop may cause damage to equipment or injury to machine operator. Fully lowering implement requires at least 2 seconds.

Rocker arm shaft drops faster when mounted with a heavy implement. Adjust rate-of-drop screw so that it is slow enough to be safe and prevent implement damage.

Turn screw clockwise to slow down rocker arm shaft rate-of-drop; Turn it counterclockwise to speed up rate-of-drop.

To lock rocker arm shaft in position, turn screw clockwise to the stop.

To unlock rocker arm shaft, turn screw counterclockwise and reset rate-of-drop per instructions above.



A—Rate-of-Drop Screw

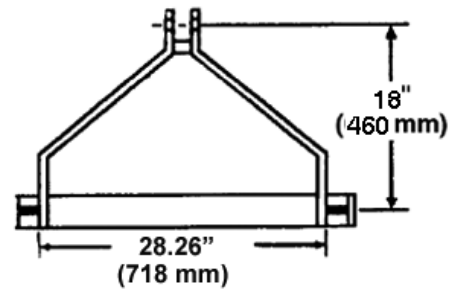
N400041,0001FB6 -19-11MAR15-1/1

PUC0033 —UN—03APR09

Preparing Implement

Category I implements should have the top hole of the implement mast located 460 mm (18 in.) above the lower pins. Drill another hole in top mast or extend top mast if necessary.

Mast height	Width between lower pins	Pin size	
		Lower	Upper
460 mm (18 in.)	718 mm (28.26 in.)	22 mm (0.86 in.)	19 mm (0.74 in.)



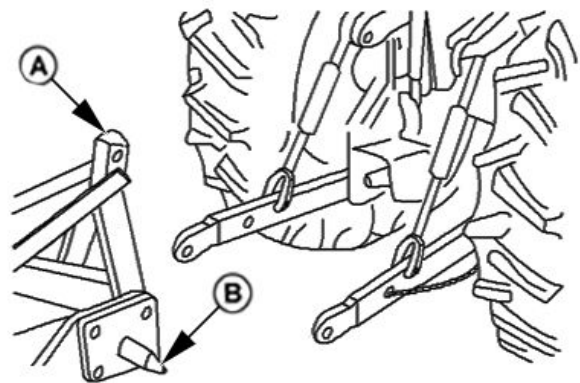
Implement Mast

N400041,0001FB7 -19-11MAR15-1/1

PY14671 —UN—13JUL12

Mount implement to 3-point hitch

1. Make sure that drawbar does not interfere. If necessary, move drawbar forward or remove it. Check for any other potential interference.
2. Drive tractor back to implement (A) to align hitch points. Set shift lever in neutral position. Pull parking brake lever upward.
3. Push hand throttle all the way forward and allow engine to idle for 1 to 2 min., then turn off the engine.
4. Slip draft links over implement hitch pins (B) on both sides and fix them with lock pins.
5. Mount upper lever to implement mast. Fix it with pins and lock pins.
6. Adjust upper lever and oblique lever as necessary. (Refer to section "Leveling Hitch" in this chapter.)



A—Implement

B—Implement Hitch Pins

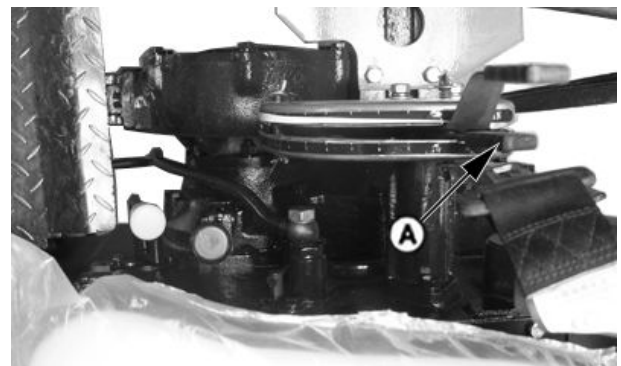
N400041,0001FB8 -19-11MAR15-1/2

PUC1754 —UN—05JAN09

CAUTION: When an implement, implement quick coupler, or other attachment is mounted to 3-point hitch, to avoid personal injury or machine damage, check the whole operating area for interference, binding or PTO shaft disengagement.

7. Use position control lever (A) to lower or raise implement slowly. Check for any interference.

A—Position Control Lever



N400041,0001FB8 -19-11MAR15-2/2

PUC0036 —UN—03APR09

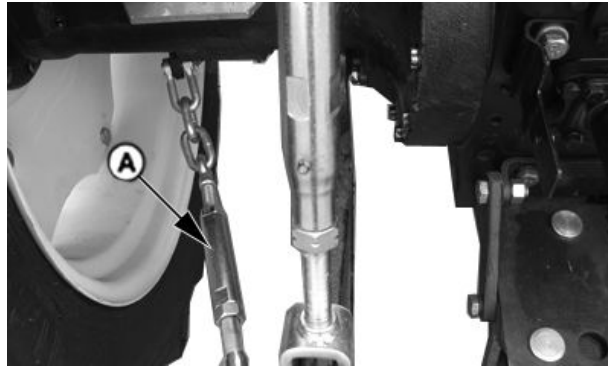
Adjusting Stopper Chain

NOTE: Refer to Operator's Manual of implement to check if side sway is allowed.

IMPORTANT: Never shorten external stopper chain to a length which hinders hitch be raised completely. If external stopper chain hinders hitch to be raised, hydraulic pressure relief valve opens, causing engine oil overheating and damage to pump or equipment.

NOTE: If draft link is not mounted onto implement, use external stopper chain and rubber stopper chain to limit draft link not to touch rear tire.

When rocker arm shaft is raised for transport, loosen lock nut on oblique lever screw tube (A) and turn oblique lever screw tube (A), to lengthen or shorten external stopper



A—Oblique Lever Screw Tube

chain to adjust implement side sway. After adjustment, re-tighten nuts.

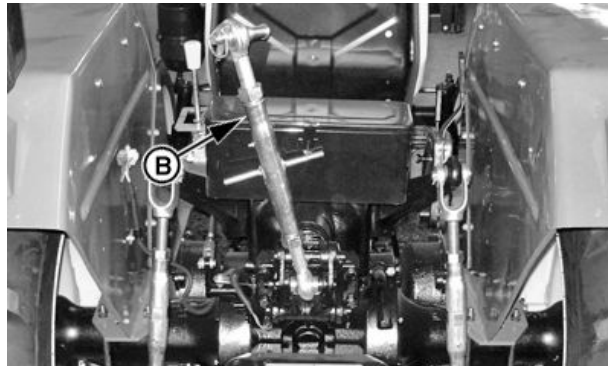
N400041,0001FB9 -19-11MAR15-1/1

PUC1862—UN—11FEB09

Leveling Hitch

1. Lower implement to take counterweight off hitch.

B—Middle Section of Upper Lever



N400041,0001FBA -19-11MAR15-1/2

PUC5178—UN—19NOV10

IMPORTANT: Never set upper lever exceeding lock hoop or raise oblique lever above stopper. Otherwise, thread on lever will be damaged.

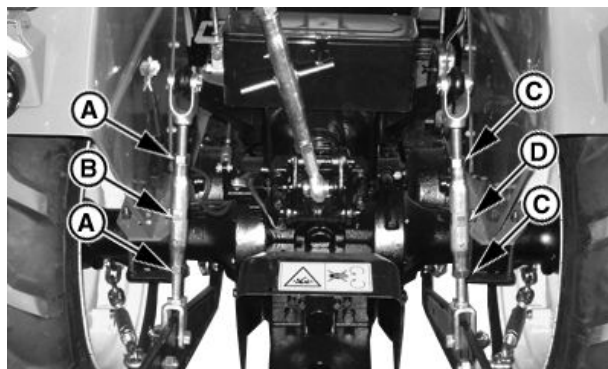
NOTE: When mounted to implement, only when both ends of upper lever are equally placed in the middle section of the lever, maximum adjustment range of upper lever can be achieved.

2. Adjust right oblique lever (D) and left oblique lever (B) to level implement.

Loosen lock nut (A) and turn oblique lever screw tube to raise or lower left draft link.

Loosen lock nut (C) and turn oblique lever screw tube to raise or lower right draft link.

3. Adjust left and right oblique levers in order to fit different tire sizes or implement heights. To achieve maximum range of hitch movement, fix oblique levers,



A—Lock Nuts (2 pieces)
B—Left Oblique Lever

C—Nuts (2 pieces)
D—Right Oblique Lever

so that when fully lowered, draft link ball will be about 200 mm (7.87 inches) from the ground.

N400041,0001FBA -19-11MAR15-2/2

PUC5179—UN—19NOV10

Drawbar and PTO Shaft

Observe drawbar loading limitations

IMPORTANT: Certain heavy equipment, such as a loaded single-axle trailer, can place excessive strain on drawbar. Strain is greatly increased by speed and rough ground.

Static vertical load on drawbar should not exceed specification.

Drive slowly under much load.

Specification

Static Vertical Load, Short	
Position — Capacity.....	1120 kg (2469 lb.)
Static Vertical Load,	
Extended Position —	
Capacity.....	760 kg (1675 lb.)

N400041,0001FBB -19-11MAR15-1/1

Using Swinging Drawbar

To allow drawbar to swing sideways, pull out clip (A) on retaining pin. Remove retaining pin (B). If full swing of drawbar is needed, remove clip and retaining pin on opposite side.

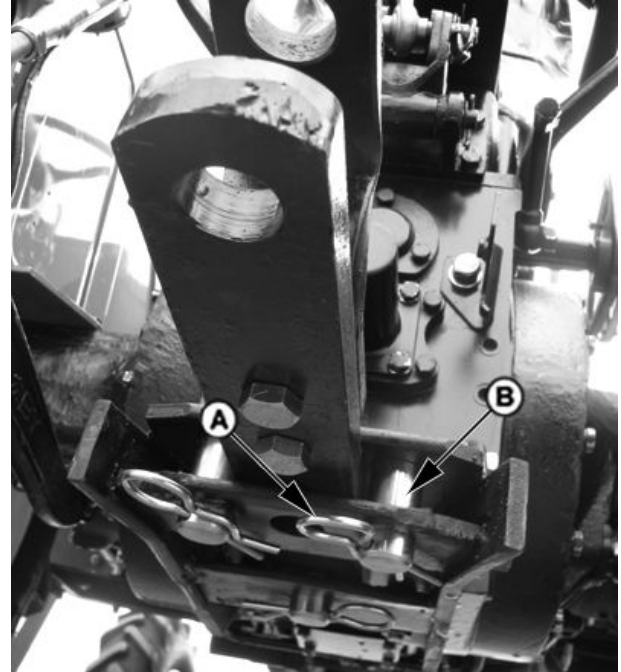
That facilitates turning under load.

Install retaining pin (B) and clip (A) at all other times.

IMPORTANT: Install retaining pin (B) and clip (A) to prevent drawbar from swinging freely during transport of towed loads.

A—Clip

B—Retaining Pin

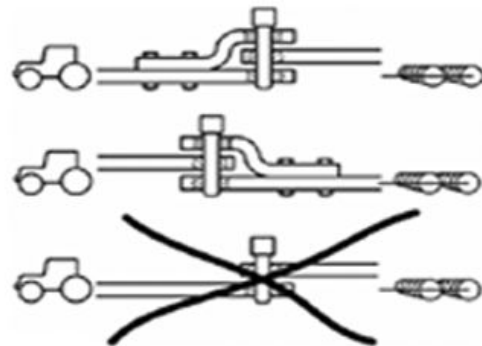


PUC1865 —UN—11FEB09

N400041,0001FBC -19-11MAR15-1/1

Using Drawbar Properly

IMPORTANT: When using drawbar, comply with local traffic regulations. Use suitable and approved hitch pins only. Only assemble drawbar as shown in diagram.



PUC1443 —UN—24OCT07

N400041,0001FBD -19-11MAR15-1/1

Staying Clear of Rotating Drivelines

Being drawn to rotating drive shafts may result in serious injury or death.

Keep tractor master shield and drive shaft shields in place at all times. Make sure that rotating shields can turn smoothly.

Wear tight fitting clothes. Stop the engine and make sure that PTO drive shaft is stopped before adjusting, connecting, or cleaning PTO driven implement.



TS1644—UN—22AUG95

N400041,0001FBE -19-11MAR15-1/1

Attaching PTO Driven Implement

1. Attach implement to tractor before connecting PTO drive shaft. If hitch is not used, raise it to upper position.

CAUTION: To avoid injury, stop engine before attaching implement or working in area of implement hitch.

2. Set shift lever to NEUTRAL position. Press park brake pedal and secure park brake.
3. Press down hand throttle, so that engine runs at idling speed for 1-2 minutes. Shut off engine.

IMPORTANT: To avoid unnecessary damage, be sure to follow relevant implement operating instructions.

IMPORTANT: When using PTO driven implement, remove trailer and install PTO guard.

4. If implement needs to be mounted to 3-point hitch, ensure that drawbar is not interfered. Remove drawbar if necessary.
5. When engine is off, turn shaft slightly by hand if necessary to align splines. Connect drive shaft to PTO shaft. Pull out on shaft to be sure that drive line is locked to PTO shaft.
6. Check carefully for any interference. Make sure that hitch is raised to upper position if not in use.

N400041,0001FBE -19-15DEC15-1/1

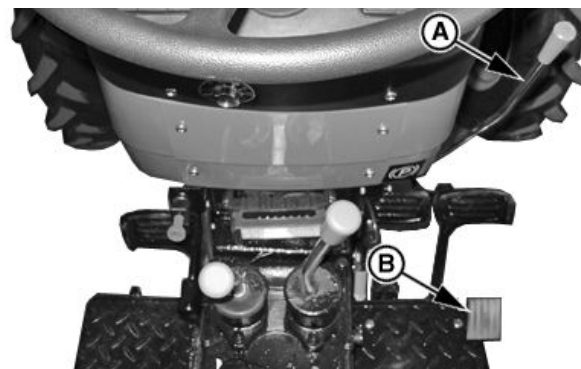
Operate tractor PTO shaft

NOTE: Engine will not start if PTO drive control lever is engaged.

1. Press clutch pedal, start engine and pull hand throttle lever (A) backward until engine speed is sufficient to start PTO implement. Engine speed must not exceed 2300 rpm.

A—Hand Throttle Handle

B—Foot Throttle Pedal



PUC5043—UN—05OCT10

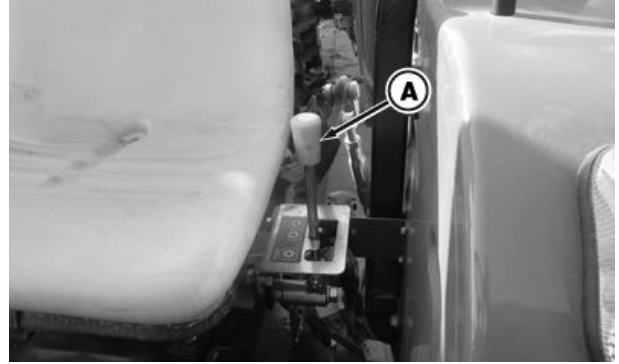
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N400041,0001FC0 -19-01JUN15-1/2

2. Move PTO lever (A) forward or backward to engage PTO shaft.
3. When PTO operates, increase engine speed from 540 rpm to 1990 rpm, from 720 rpm to 2025 rpm.
4. Set PTO lever (A) to neutral position, in order to disengage PTO.

CAUTION: Turn key to OFF position to stop the engine. Press brake pedal and apply parking brake. Before washing machine or adjusting PTO driven implement, make sure that all mechanical systems have stopped.

A—PTO Lever



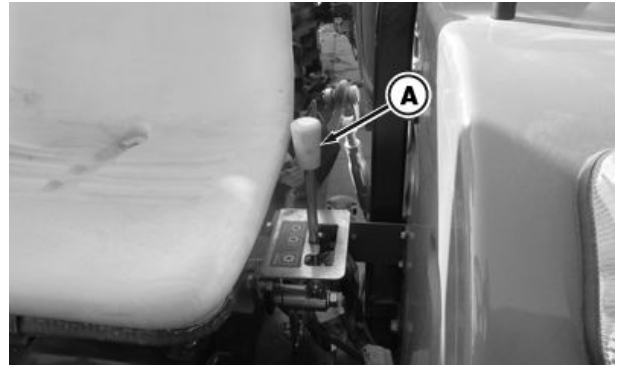
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N400041,0001FC0 -19-01JUN15-2/2

Adjusting PTO Clutch Control Lever

1. Set PTO shaft (A) to neutral position (center position).

A—PTO Lever



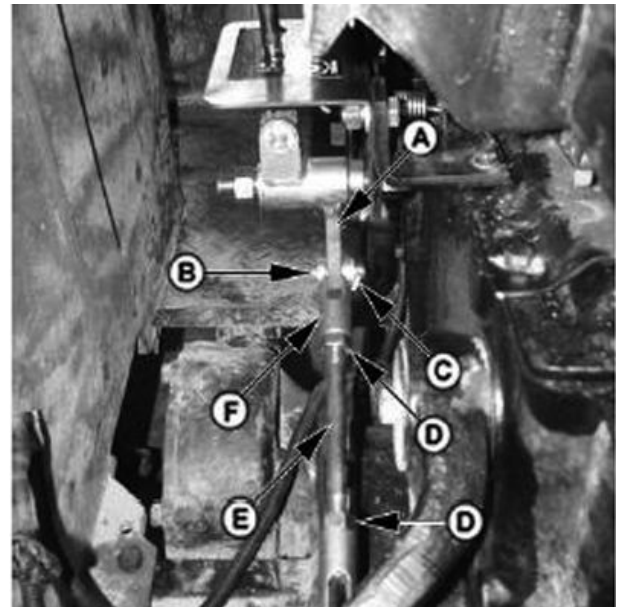
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N400041,0001FC1 -19-11MAR15-1/2

2. Remove cotter pin (C) and pin (B).
3. Disconnect PTO lever (A) from link end (F).
4. Move PTO lever (A) until free stroke ends (resistance is felt).
5. Loosen lock nuts (D).
6. Adjust tensioner (E) so that link end (F) can be connected to PTO lever (A).
7. Install pin (B) through link end (F) and PTO lever (A).
8. Install cotter pin (C).

A—PTO Lever
B—Pin
C—Cotter pin

D—Nuts (2 pieces)
E—Tensioner
F—Link End



N4A0003899 —UN—20NOV14

N400041,0001FC1 -19-11MAR15-2/2

Concrete Weight

Attain maximum productivity

Proper ballasting is an important factor in tractor performance. Maximum productivity can be achieved only if tractor weight is appropriate for the operation.

John Deere FMO (Fundamentals of Machine Operations) publications provide in-depth information on farming subjects. TRACTOR discusses methods of determining correct tractor weight and ballast selection. MACHINERY

MANAGEMENT includes information on tractor and implement matching, and on ways to increase productivity. (You may use the form at the end of this manual to order such publications.)

Your John Deere dealer can provide you with information on these subjects.

N400041,0001FC2 -19-11MAR15-1/1

Select counterweight carefully

Select counterweight amount needed for the job. Counterweight amount which is right for one job may be wrong for another job. Counterweight is to enhance traction and stability of tractor.

Factors determining counterweight amount:

- Soil surface: Soft or hard.
- Implement types: Fully-mounted, semi-mounted or towed.
- Driving speed: Low speed or high speed.
- Tractor power output: Partly loaded or fully loaded.
- Tire: Single tire, oversize tire or dual tire.

N400041,0001FC3 -19-11MAR15-1/1

Matching Counterweight to Load

Do not use counterweight unless it is necessary; Remove counterweight when it is no longer needed.

Instead of loading tractor heavily, try to reduce load. Operating with light load at high speed is more economical and more efficient.

Too less counterweight		Counterweight is too much	
1.	Frequent wheel slip	1.	Increased load
2.	Power loss due to churning soil	2.	Shortens gearbox life
3.	Excessive tire wear	3.	Power loss due to carrying extra load
4.	Waste fuel	4.	Tire strain
5.	Productivity decreases	5.	Soil compaction
		6.	Waste fuel
		7.	Low productivity

N400041,0001FC4 -19-11MAR15-1/1

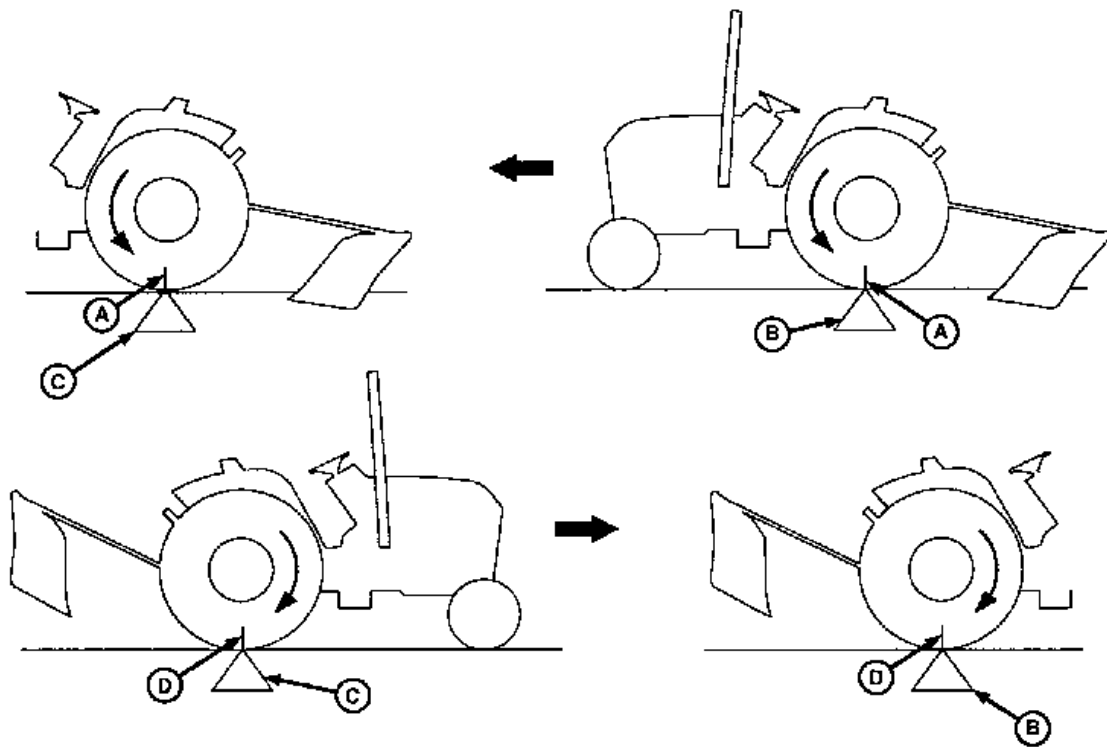
Checking Counterweight

The best way to check for correct counterweight is to measure the amount of drive wheel travel reduction (wheel slip). Under normal field conditions, 2WD tractor stroke loss should be 10-15%, 4WD tractor stroke loss is 8-12%.

If wheel slip is serious, add counterweight to tractor drive wheels. If wheel slip is less than the minimum requirement, appropriately remove counterweight.

N400041,0001FC5 -19-11MAR15-1/1

Measure rear wheel slip — manually



A—Initial Tire Mark
B—Ground Starting Point

C—Ground Mark after 10
Revolutions

D—Second Tire Mark

1. Make a visible mark (A) on rear tire (recommend to mark with chalk).
2. In case tractor is running and implement has been lowered to the ground, mark a starting point (B) on ground. That point should be where the tire mark (A) contacts the ground.
3. When tire mark (A) turns till 10 revolutions, make a mark (C) on ground again.
4. Raise implement and drive reversely in opposite direction. When in contact with the second mark (C) on the ground, make a second mark (D) on the tire.
5. When driving tractor on the same path (implement is raised), count the required tire revolutions till starting point (B) is reached.
6. Use the no-load wheel revolution count in "Wheel Slip Rate Chart" below to find out slip rate.

7. Adjust ballasting or load to obtain correct slip rate.

NOTE: If tire slip rate is lower than the lowest slip rate, available power is seriously lost.

Tire slip rate chart		
No load wheel revolutions (step 5)	Estimated slip rate %	Recommended actions
10	0	Remove counterweight
9-1/2	5	Remove counterweight
9	10	Correct counterweight
8-1/2	15	Correct counterweight
8	20	Add counterweight
7-1/2	25	Add counterweight
7	30	Add counterweight

NOTE: For 2WD tractor, optimal tire slip rate is 10-15%;
For MFWD tractor, that is 8-12%.

N400041,0001FC6 -19-11MAR15-1/1

PUC1450 —UN—21NOV08

Counterweight limit

Ballasting should depend on carrying capacity of tires and tractor. Each tire has a recommended carrying capacity which should not be exceeded (see "Wheels, tires and treads" section). If more counterweight is needed for traction, a larger tire should be considered.

Liquid or cast iron counterweight can be added.

N400041,0001FC7 -19-11MAR15-1/1

Adding Counterweight at Front for Transport

CAUTION: Front counterweight may be needed for transporting rear-mounted implement. When implement is lifted, drive slowly over uneven surface regardless of how much counterweight is used.

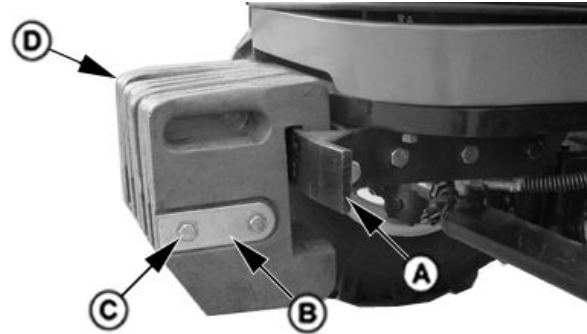
CAUTION: Please use proper lifting equipment.

Specification

Front counterweight—
Mass..... Standard: 0; Optional: 91 kg (201 lb.) (7 pieces) or 104 kg (229 lb.) (8 pieces)

Up to 8 counterweights can be added.

1. Install front counterweight bracket (A) and basic counterweight.
2. Install additional counterweights (D) as required.
3. Install plate (B) and bolts (C). Tighten bolts (C).



A—Front Counterweight Bracket
B—Plate

C—Bolts (2 pieces)
D—Counterweight

PUC1868—UN—13FEB09

JL31334,0000AC3 -19-03JUL15-1/1

Adding Counterweight on Tractor

For higher stability, add counterweight to tractor front end. Front wheels may be lifted when pulling heavy load and using heavy rear-mounted implement. Add enough counterweight to facilitate steering control and prevent rollover.

Refer to implement operator's manual to determine the minimum number of front counterweights required for your tractor model.

N400041,0001FC9 -19-11MAR15-1/1

Determining Maximum Rear Counterweight

IMPORTANT: Do not overload tires. Maximum counterweight shown in chart is not enough to ensure safety. Reduce load or install heavier ply tires.

Too much counterweight may cause excessive soil compaction and turning resistance, and shorten life of driveline. Counterweight should never exceed the weight required to provide traction for continuous full power loads in third gear. Remove counterweight if tractor engine labors when pulling heavy loads in the first three gears.

When tractor drives at 7 kph (4.3 mph), rear wheel counterweight should not be so much that engine cannot support full load at rated

speed. If driving speed is below 7 kph (4.3 mph), engine operates irregularly or stalls, that means rear wheel counterweight is too much.

Chart below shows carrying capacity of single tire.

Single wheel maximum load		
Tire Size Bias ply tire	Ply Rate	Capacity kg (lb.)
9.5-24 R-1	8	940 (2072)
9.5-24 PR-1 (paddy round - optional)	6	1315 (2899)
11.2-24 R-1	8	1045 (2304)
11.2-24 PR-1 (paddy round - optional)	6	1465 (3229)

JL31334,0000AC5 -19-03JUL15-1/1

Determine maximum front counterweight

Use appropriate front counterweight for a particular operating condition. 2WD tractor only needs counterweight enough to maintain safe steering control. Remove counterweight when it is no longer needed.

Chart below shows carrying capacity of single tire.

IMPORTANT: Do not overload tires. If the maximum load capacity of single tire shown in chart below is not enough to ensure safety and stability, reduce gross load of tractor or install tires with higher load capacity.

Single wheel maximum load		
Tire Size	Ply Rate	Capacity kg (lb.)
5.00-15 F-1	4	365 (805)
6.00-16 R-1	6	495 (1091)
6.5-16 PR-1 (paddy round - optional)	6	565 (1245)

JL31334,0000AC4 -19-03JUL15-1/1

Use cast iron counterweights

Cast iron counterweights can be used for rear tires. They can be installed inside or outside of wheels. Contact your John Deere dealer for more information and recommendations on use and placement of counterweights.

Specification

Rear Counterweight —
 Mass..... Standard: 80 kg (176 lb.)
 (2 pieces); Optional: 0 or 160 kg (353 lb.) (4
 pieces) or 240 kg (529 lb.) (6 pieces)

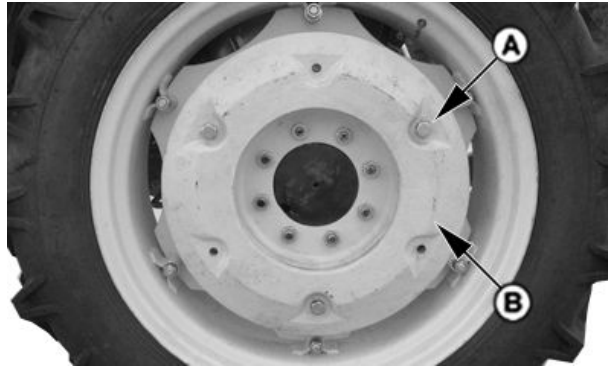
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Install rear cast iron counterweight

IMPORTANT: Maximum number of counterweights that can be installed at rear is 4 on each tire.

CAUTION: Each rear counterweight weighs 40 kg (88.2 lb.). Handle it with care! Please use appropriate installation equipment or have the job done by your Deere dealer.

1. Use nuts and bolts (A) to mount first counterweight (B) to wheel disk.
2. Use proper nuts and bolts to install other counterweights.
3. Tighten all bolt retaining nuts according to required technical specification. Tighten again after several operating hours. Regularly check the tightness of bolts.



A—Nuts and Bolts (6 pieces)

B—First Counterweight

PUC1869 —UN—13FEB09

N400041,0001FCD -19-11MAR15-1/1

Wheels, Tires and Tread Width

Safely service tires

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

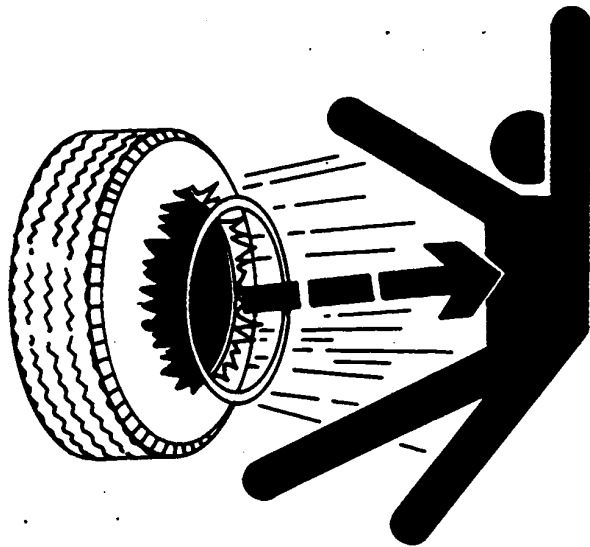
Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Never inflate tires above the recommended pressure.

Never weld or heat a wheel and tire assembly. The heat can cause a rise in air pressure resulting in tire explosion. Welding can structurally weaken or deform the wheel.

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

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



TS211 —UN—15APR13

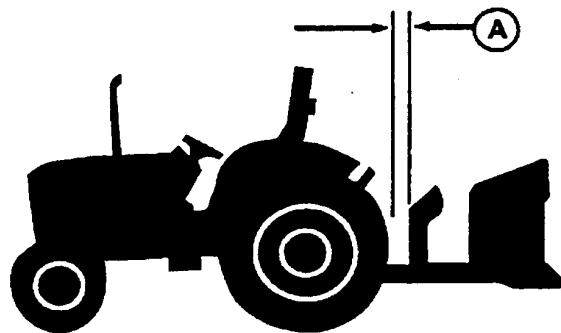
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Check implement-to-tire clearance

IMPORTANT: When hitch is lifted, check for adequate clearance (A) between outside diameter of tire and implement.

When large diameter rear tires are installed on a tractor with 3-point hitch, use quick coupler or similar device to provide adequate implement-to-tire clearance.

A—Clearance



M47177 —UN—31JAN92

N400041,0001FCF -19-11MAR15-1/1

Check tire inflation pressure

Daily check tires for damage or if tire pressure is significantly too low.

At least every 100 operating hours, use a gauge to check inflation pressure. Use an accurate gauge having 10 kPa (0.1 bar) (1 psi) graduations.

If tire has liquid counterweight, use a specific gas-liquid manometer to measure when inflation nozzle is at lower part.

NOTE: When plowing or operating on slope, increase tire pressure to 28 kPa (0.28 bar) (4 psi) above maximum to prevent tire wrinkling or twisting.

IMPORTANT: Always check inflation pressure with an accurate tire pressure gauge to prevent over-inflation. Over-inflation reduces performance and increases strain on both tire and rim.

NOTE: Inflation information below applies to both front and rear tires and to the tire inflation pressure chart.

1. All inflation pressures are calculated on the basis of 29 km/h (18 mph) driving speed.
2. Tires at the inflation pressures listed in the chart can achieve optimum tire/vehicle traction performance.
3. Inflation pressures less than 80 kPa (0.8 bar) (11.6 psi) should be monitored regularly because of the increased risk of low pressure air leaks (especially due to leaking valve cores).
4. If tractor operates on slope, increase inflation pressure 28 kPa (0.28 bar) (4 psi) above the listed value to compensate for lateral weight transfer.
5. Tires run as singles under high traction may experience bead slip if the bead is not fully seated or if too much lubricant has been used upon tire installation. Increase inflation pressure to compensate while that does not reduce traction. Consult your tire dealer if this problem occurs.
6. If higher load capacity is needed, contact your John Deere dealer for tire manufacturer's load and inflation information.

N400041,0001FD0 -19-11MAR15-1/1

Tire inflation pressure chart

Front tires		With little or no counterweight, e.g. when transporting			With maximum counterweight or mounted heavy implement, e.g. when farming		
Tire Size	Level	kPa	(bar)	(psi)	kPa	(bar)	(psi)
5.00-15 F-1	8	165-220	(1.65-2.2)	(23.9-31.9)	165-220	(1.65-2.2)	(23.9-31.9)
6.00-16 R-1	6	120-160	(1.2-1.6)	(17.4-23.2)	120-160	(1.2-1.6)	(17.4-23.2)
6.5-16 PR-1 paddy round	6	120-160	(1.2-1.6)	(17.4-23.2)	120-160	(1.2-1.6)	(17.4-23.2)
Rear tires		With little or no counterweight			With maximum counterweight or mounted heavy implement, e.g. when farming		
Tire Size	Level	kPa	(bar)	(psi)	kPa	(bar)	(psi)
9.5-24 R-1	8	80-120	(0.8-1.2)	(11.6-17.4)	80-120	(0.8-1.2)	(11.6-17.4)
9.5-24 PR-1 (paddy round)	6	80-120	(0.8-1.2)	(11.6-17.4)	80-120	(0.8-1.2)	(11.6-17.4)
11.2-24 R-1	8	80-120	(0.8-1.2)	(11.6-17.4)	80-120	(0.8-1.2)	(11.6-17.4)
11.2-24 PR-1 (paddy round)	6	80-120	(0.8-1.2)	(11.6-17.4)	80-120	(0.8-1.2)	(11.6-17.4)

N400041,0001FD1 -19-11MAR15-1/1

Tighten wheel/axle fasteners correctly

⚠ CAUTION: Never operate tractor with a loose rim, wheel or axle.

Once any fastener is loose, tighten it according to required technical specifications.

NOTE: Perform checking procedure when using a new tractor for the first time, or wheels have been taken off.

1. After driving tractor for about 100 m (328 ft.), and before placing it under load, tighten fasteners to specified torque.
2. Check fasteners after working 3 hr. and again after 10 hr.
3. Check all fasteners regularly and keep them tightened.

N400041,0001FD2 -19-11MAR15-1/1

Tightening Nuts - Rear Axle

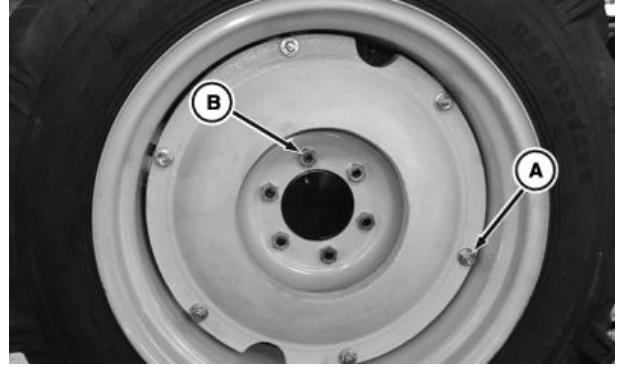
Tighten bolts to specification at the locations below:

Specification

Drive shaft spoke and wheel rim retaining nuts—Torque.....	146-180 N.m (107-132 lb.-ft.)
Drive wheel spoke and drive shaft retaining nuts—Torque.....	199-235 N.m (146-173 lb.-ft.)

A—Drive Shaft Spoke and Wheel Rim Retaining Nuts (12 pieces)

B—Drive Wheel Spoke and Drive Shaft Rim Retaining Nuts (12 pieces)



N4A0002902 —UN—10SEP13

N400041,0001FD3 -19-11MAR15-1/1

Tightening Nuts - MFWD Axle

Tighten nuts to specified torque in the following locations:

Specification

Drive wheel spoke and drive shaft retaining nuts—Torque.....	199-235 N.m (146-173 lb.-ft.)
--	-------------------------------

A—Nuts (12 pieces)



PUC0018 —UN—24MAR09

N400041,0001FD4 -19-11MAR15-1/1

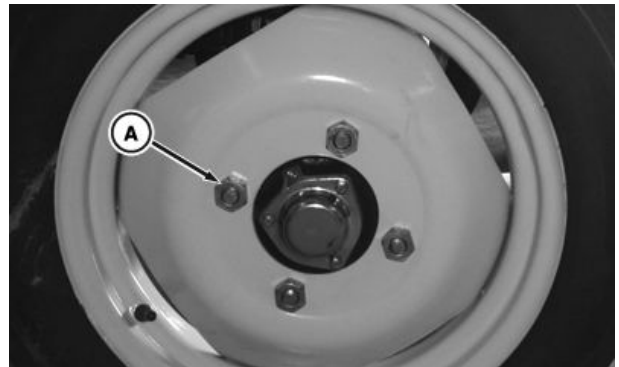
Tightening Nuts - 2WD Axle

Tighten bolts to specification at the locations below:

Specification

Guide wheel spoke and wheel hub retaining nuts—Torque.....	199-235 N.m (146-173 lb.-ft.)
--	-------------------------------

A—Guide Wheel Spoke and Wheel Hub Retaining Nuts (8 pieces)



N4A0002903 —UN—10SEP13

N400041,0001FD5 -19-11MAR15-1/1

Tread Settings - Multi-Position Rear Wheels

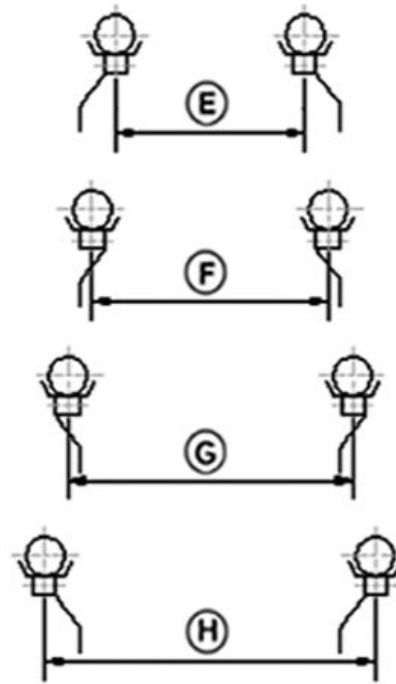
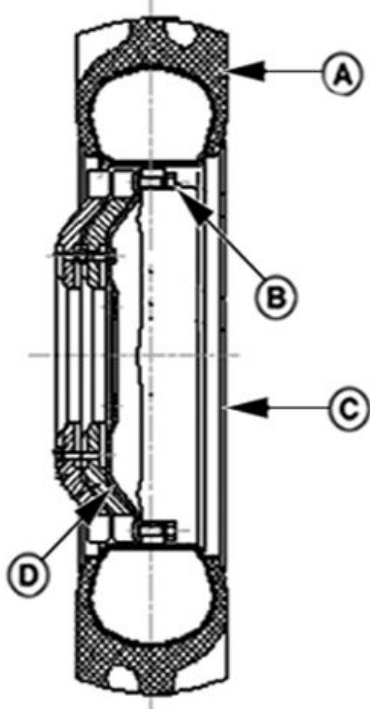
Rear axle tread with multi-position tire can be adjusted by repositioning or replacing wheel rim or by exchanging wheel disk.

Tread can also be adjusted by changing the entire tire to another side of tractor. (With this method, wheel disc changes from recessing to protruding without disassembling the tire.) When changing rear wheel from

one side to another, arrow on tire sidewall should point forward.

Wheel disc and rim settings for different treads are shown in the chart below.

Before changing tread setting, refer to this chart for better effectiveness.



A—Tire Assembly

B—Rim Bolts

C—Rim
D—Disk

IMPORTANT: After setting wheel tread, tighten rim-to-disc and disc-to-flange bolts. Drive tractor 100 m (328 ft.) and tighten them again.

Specification

Drive shaft spoke and wheel rim retaining nuts—Torque..... 146 ~ 180 N.m (107 ~ 132 lb.-ft.)

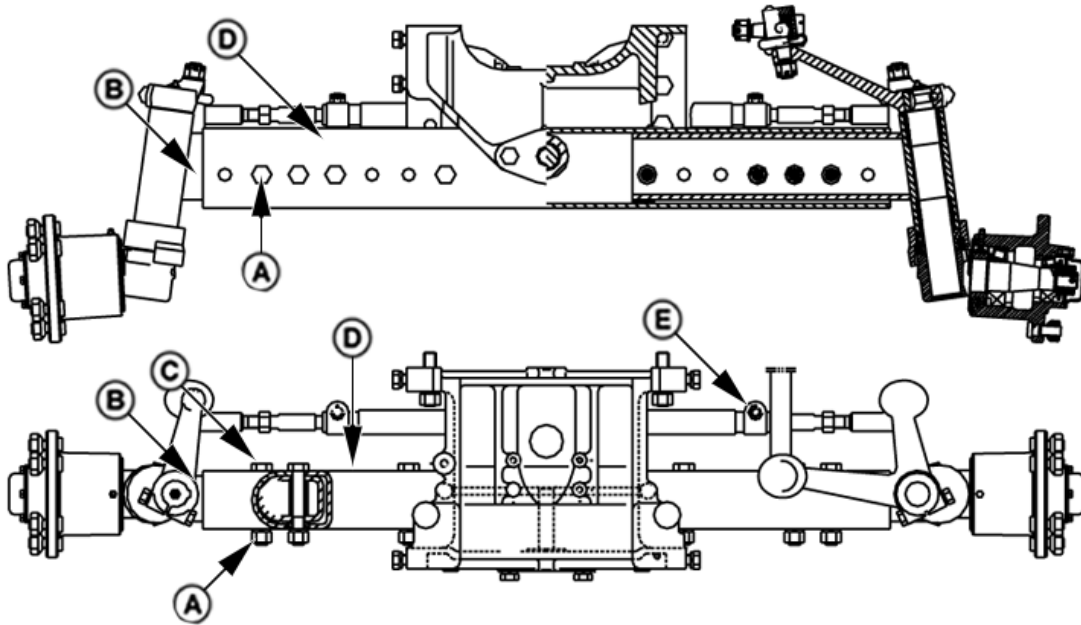
Drive wheel spoke and drive shaft retaining nuts—Torque..... 199 ~ 235 N.m (146 ~ 173 lb.-ft.)

Tread width (centerline-to-centerline)		
Diagram	Tire specifications	
	9.5-24 R-1	11.2-24 R-1
E	1100 mm (43.3 in.)	1130 (45.5 in.)
F	1200 mm (47.2 in.)	1230 (48.4 in.)
G	1300 mm (51.2 in.)	1330 (52.4 in.)
H	1400 mm (55.1 in.)	1430 (56.3 in.)

N400041,0001FD6 -19-11MAR15-1/1

PUC5180—UN—29NOV10

Adjusting Front Wheel Tread (2WD)



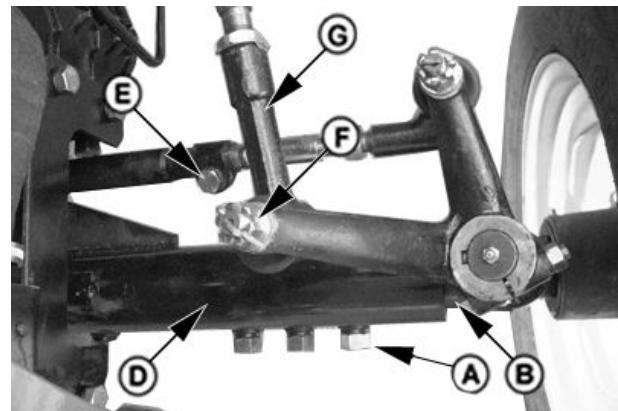
Both sides of front axle can be lengthened by 100 mm (3.94 in.). Make sure that adjustments on both sides are equal.

1. Use jack to lift tractor front.
2. Remove cap screws (C) and lock nuts (A).
3. Remove sleeve (B) from front axle beam (D).
4. Remove clamp screws (E) of tie rod linkage as well as lock nuts (F) of drag link (G).
5. Slide axle knees to desired position. Both sides should be adjusted to same spacing.
6. Install sleeve (B) into front axle beam (D). Install cap screws (C) and nuts (A) on both sides. Tighten cap screws (C) to specification.

Specification

Adjust front-axle-to-knee
screws (C)—Torque..... 144 - 160 N.m (106 - 118 lb.-ft.)
Tie rod clamp screws
(E)—Torque..... 90 N.m (66 lb.-ft.)

7. Set toe-in. Refer to "Checking and Adjusting Toe-In" according to axle type of tractor.



A—Nuts (6 pieces)
B—Sleeve
C—Cap Screws (6 pieces)
D—Front Axle Beam

E—Clamp Screws (2 pieces)
F—Lock Nuts
G—Lever

N400041,0001FD7 -19-11MAR15-1/1

PUC0041—UN—03APR09

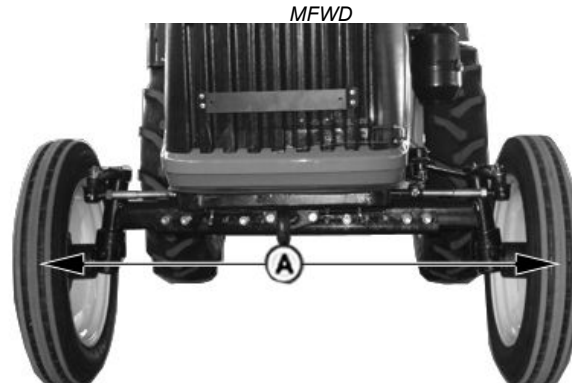
PUC0019—UN—24MAR09

Checking Toe-In

1. Park machine on level ground.
2. Turn steering wheel so that front wheels are in straight ahead position. Switch off engine.
3. Measure distance (A) between tire tread midpoints at hub level in front of axle. Record measured value and mark on tires.
4. Drive tractor backward for about 1 m (3 ft.) so that marks turn to hub level behind axle. Measure distance between tire midpoints again. Record measured value.
5. Find out difference between front and rear measurements. If the front measurement is smaller, that is "toe-in". If the rear measurement is smaller, that is "toe-out".
6. Distance between midpoints at tire front should be 3-11 mm less than distance measured at tire rear. Adjust toe-in if necessary. (Refer to relevant procedures in this section.)



PUC5181 —UN—30NOV10



PUC5182 —UN—30NOV10

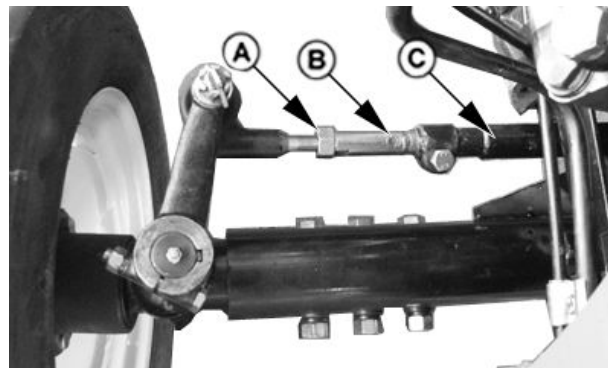
N400041,0001FD8 -19-11MAR15-1/1

Adjusting Toe-In (2WD)

1. Loosen nuts (A) on tie rod (C).
2. Use extender (B) to lengthen or shorten the tie rods on both sides of tractor equally. Adjust toe-in to 3-11 mm.
3. After adjustment, tighten nuts.

Specification

Tie Rod Nuts—Torque..... 90 N.m (66 lb.-ft.)



PUC0021 —UN—24MAR09

A—Nuts (2 pieces)
B—Extender

C—Tie Rod

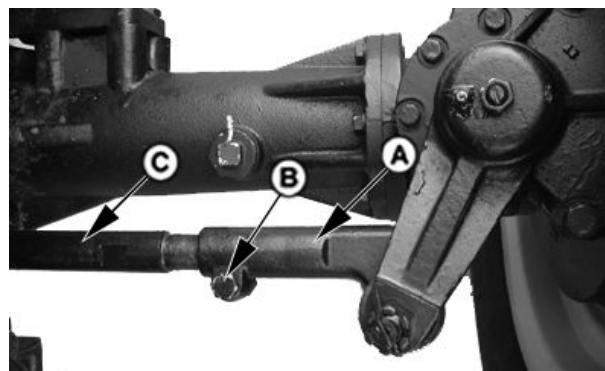
JL31334,0000AB3 -19-01JUL15-1/1

Adjusting Toe-In (MFWD - if Equipped)

1. Loosen lock nuts (B) of sleeve (A).
2. Turn steering tie rod (C) and adjust toe-in.
3. Adjust steering tie rods on both sides of tractor equally. Adjust toe-in to 3-11 mm.
4. After adjustment, tighten nuts.

Specification

Steering tie rod
nut—Torque..... 50 N.m (35 lb.-ft.)



A—Sleeve
B—Nuts (2 pieces)

C—Tie Rod

N400041,0001FDA -19-11MAR15-1/1

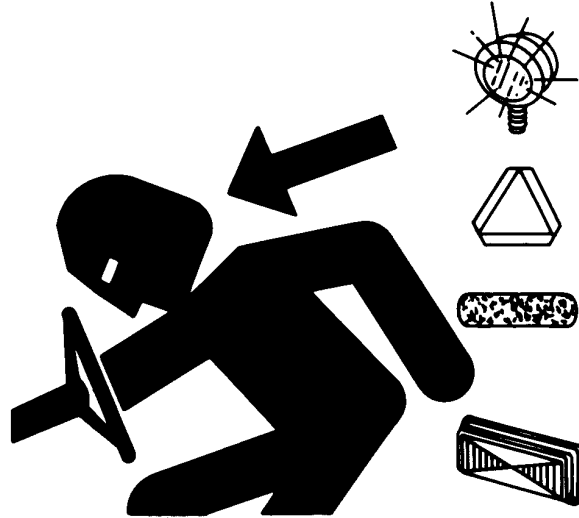
PUC1872 —UN—13FEB09

Transport

Use safety lights and devices

Avoid collisions with other road users. Slowly drive tractor with attachments or towed equipment as well as self-propelled machine on roads. Often check the rear traffic conditions, especially when turning, remember to use turn signal lights.

Headlights, flashing warning lights and turn signals can be used in day time or at night. Follow local regulations on equipment lighting and usage of signs. Make that others can see your lights and signs. Keep them in good condition. Replace or repair lights and signs that are damaged or missing. John Deere dealer can provide an implement safety lighting kit.



TS951 —UN—12APR90

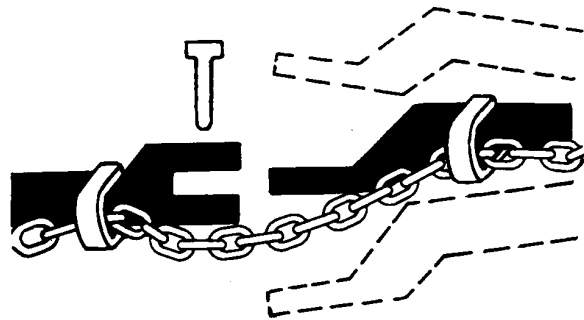
N400041,0001FDB -19-11MAR15-1/1

Use safety chain

A safety chain can help control drawn equipment should it be accidentally separated from the drawbar.

Use appropriate connector to attach safety chain to tractor drawbar frame or other specified anchor location. Provide enough chain slack to allow for turning.

Contact John Deere dealer for a safety chain with rated strength equal to or greater than the gross weight of the towed machine. Never use safety chain to tow implement.



TS217 —UN—23AUG88

N400041,0001FDC -19-11MAR15-1/1

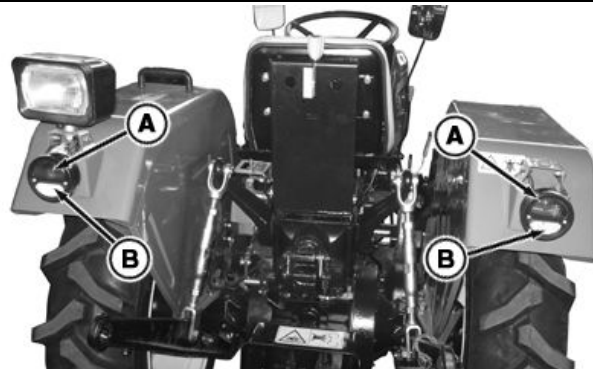
Drive tractor on roads

CAUTION: Observe the following precautions when operating tractor on roads.

1. Before operating tractor on roads, make sure that taillights (B) and flashing warning lights (A) work properly. Install reflectors and auxiliary lighting equipment as per safety instructions and local regulations.

CAUTION: Never use reflectors (if equipped) when transporting tractor. Excessively bright lights at tractor rear may blur the vision of other drivers who approach from behind. Use only road lights upon transporting.

IMPORTANT: Refer to section "Lights" for detailed description of lighting operations and functions.



A—Warning lights

B—Taillights

N4A0003887 —UN—11NOV14

Continued on next page

N400041,0001FDD -19-11MAR15-1/6

2. Always use turn signal lights when turning. Be sure to manually set turn signal light switch (A) to center position after turning.

A—Turn Signal Light Switch



N4A0003875 —UN—11NOV14

N400041,0001FDD -19-11MAR15-2/6

3. Before driving tractor on roads, use lock bar (A) to lock brake pedals together and use wrench to tighten bolts. Avoid braking suddenly.

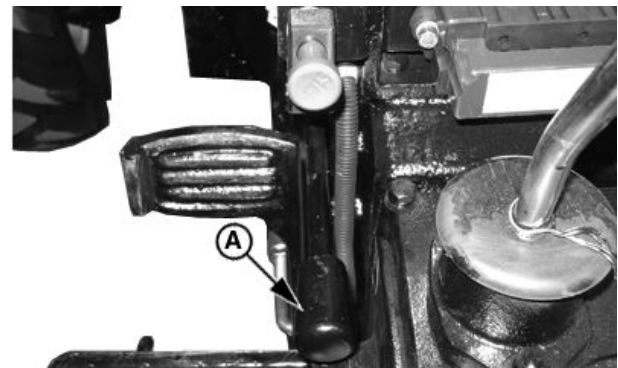
A—Brake Pedal Lock Bar



PUC5045 —UN—05OCT10

N400041,0001FDD -19-11MAR15-3/6

4. Disengage MFWD lever (A) when transporting on hard surface.
5. Always drive slowly for the sake of safety. Drive slowly on slopes or rough ground, or when making sharp turns, especially when transporting heavy rear-mounted equipment.
6. Before driving downhill, set to a lower gear so that speed can be controlled without applying brakes. Never coast downhill with disengaged clutch. This can overspeed clutch friction disks and cause severe clutch damage.
7. When transporting on icy or graveled slopes, beware of tractor slip which may result in loss of steering control. To avoid slip, reduce speed and equip the tractor with proper counterweight.



A—MFWD Lever

PUC5047 —UN—08OCT10

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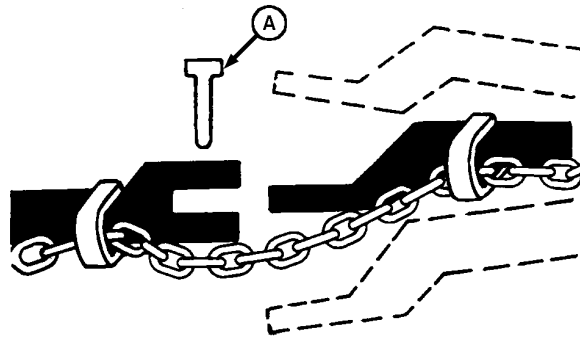
N400041,0001FDD -19-11MAR15-4/6

CAUTION: A safety chain will help control towed implement, should it accidentally separate from drawbar. Use appropriate connector to attach safety chain to tractor drawbar frame or other specified anchor location. Provide enough chain slack to allow for turning. Contact John Deere dealer for a safety chain with rated strength equal to or greater than the gross weight of the towed machine. Never use safety chain to tow implement.

IMPORTANT: Safety chain is for transport use only. It must not be used for pulling or towing implements or other items not mounted onto drawbar. Otherwise, that may damage the tractor.

8. To transport towed loads:

Lock drawbar pin (A) in place. Use safety chain to help control drawn equipment should it be accidentally separated from the drawbar during transport.



A—Drawbar Pin

LV4421—UN—02NOV99

N400041,0001FDD -19-11MAR15-5/6

CAUTION: Stopping distance increases with speed and weight of towed load as well as with steepness of slope. If towed load, either with or without brakes, is too heavy relative to the tractor or load speed is too fast, that may cause tractor being out of control. Take the total weight of the equipment and its load into consideration.

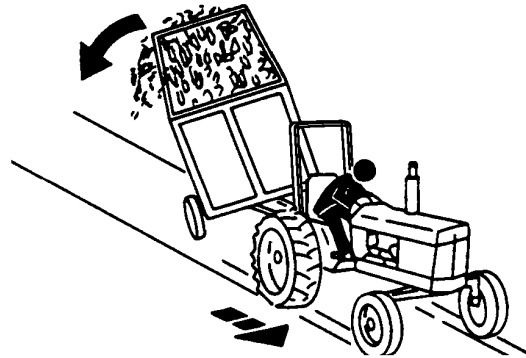
Observe these recommended maximum road speeds or local speed limits, whichever is lower:

If towed equipment is without brakes, driving speed should not exceed 32 kph (20 mph). And, towed load should not exceed 1.5 times of tractor weight.

If towed equipment is with brakes, driving speed should not exceed 40 kph (25 mph). And, towed load should not exceed 4.5 times of tractor weight.

Make sure the load does not exceed the recommended weight ratio. Add recommended maximum counterweight to tractor. Reduce load or use heavier towing equipment. Tractor should be heavy and powerful enough with adequate braking capacity for towing. Be particularly cautious under adverse road conditions, when turning or driving on slopes.

9. Stay cautious when driving tractor at transport speeds. Reduce speed if towed load weighs more than



tractor and is not equipped with brakes. (Refer to recommended transport speeds in Operator's Manual of towed equipment.)

10. Be particularly cautious when transporting towed loads when road conditions are poor, making a turn or driving on slopes.
11. Heavy towed or rear-mounted implements may sway during transport. Excessive swaying will result in loss of steering control. Drive slowly and avoid quick turns of steering wheel. For maximum speed limit, refer to your implement Operator's Manual.

LV4042—UN—09JUL99

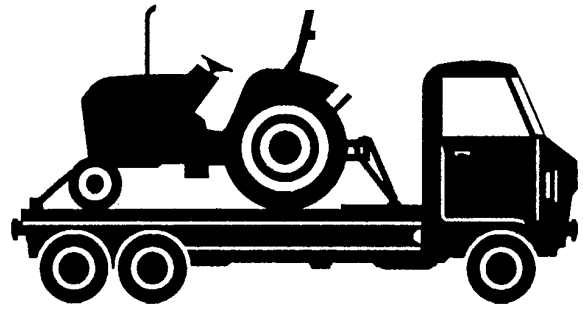
N400041,0001FDD -19-11MAR15-6/6

Using Flatbed Carrier to Transport

⚠ CAUTION: Use chains to secure tractor on flatbed carrier. Drive flatbed carrier slowly.

The best method to transport a non-running tractor is to haul it on a flatbed carrier.

IMPORTANT: Seal exhaust pipe to prevent dirt from entering and damaging engine.



LV610 —UN—22APR94

N400041,0001FDE -19-11MAR15-1/1

Fuels, Lubricants and Coolants

Handling Fuel Safely — Avoid Fire

Use diesel fuel only.

Fuel is highly flammable. Handle it with care.

Do not refuel under the following conditions:

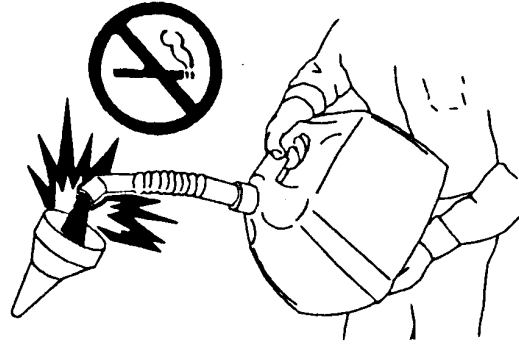
- when you are smoking.
- when the machine is near open flame or sparks.
- when the engine is running. Switch off engine.

Always fill the fuel tank in an outdoor environment.

Help prevent fire

- Clear oil, grease and dirt in the machine.
- Wipe away spilled fuel at once.

If machine has fuel in tank, do not store it in a place near an open flame or sparks.



MT73115 —UN—09MAR90

N400041,0001FDF -19-11MAR15-1/1

Handle fluid safely — Avoid fire

When you work around fuel, do not smoke or work with fuel near heaters or other fire hazards.

Keep flammable fluid away from fire hazards. Do not incinerate or puncture a pressurized container.

Make sure that the machine is clear of trash, grease and debris.

Do not store oily rags because they can be ignited and burn spontaneously.



TS227 —UN—15APR13

N400041,0001FE0 -19-11MAR15-1/1

Handling and storing of diesel fuel

CAUTION: Reduce fire hazards. Handle fuel with care. Do not fill the fuel tank when engine is running. Do not smoke while you are filling the fuel tank or servicing the fuel system.

Fill the fuel tank at the end of each operating day, to prevent water condensation and freezing during cold weather.

Keep all storage tanks as full as practicable to minimize condensation.

Make sure that the fuel tank cap is properly installed to prevent ingress of water. Monitor the water content of fuel regularly.

If biodiesel is used, the replacement frequency of fuel filter may be higher, as it is more prone to be blocked.

Check the engine oil level daily before starting the engine. If the engine oil level rises, that implies the engine oil is mixed with fuel.

IMPORTANT: Vent the fuel tank through the fuel tank cap. When replacing fuel tank caps, only use original products.

When the fuel is stored for an excessively long period or its turnover is slow, add fuel conditioner to stabilize the fuel and prevent water condensation. Contact local fuel supplier for recommendations.

N400041,0001FE1 -19-11MAR15-1/1

Cold weather operation

IMPORTANT: Choice of viscosity is very critical for the operation of gearbox in cold weather. Warming up procedures are required when operating the gearbox at temperatures lower than the minimum critical temperature of engine oil.

NOTE: Refer to section "Transmission and hydraulic oil" in this chapter for the minimum viscosity required for specific gearbox operation temperature.

Warming-up procedures

If auxiliary heating source is used to warm up the gearbox, warm up the transmission oil to the required minimum temperature before operating.

As an alternative procedure, operate tractor for about 20 minutes when gearbox is in neutral position, or until oil has been warmed up to the previously recommended minimum temperature.

N400041,0001FE2 -19-11MAR15-1/1

Hot Weather Operation

NOTE: Refer to section "Transmission and hydraulic oil" in this chapter for the correct viscosity required for specific gearbox operation temperature.

Use engine oil of higher than normal viscosity under the following conditions:

- Ambient temperature is constantly above 30°C (86°F).
- Frequent stop-and-go driving in hot weather.
- Repeated driving on steep slopes in hot weather.

N400041,0001FE3 -19-11MAR15-1/1

Diesel

Consult local fuel supplier about properties of 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 that meet EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590 or ASTM D975 is acceptable for use at all percentage mixture levels.

Required fuel properties

In all cases, the fuel shall meet the following properties:

Cetane number should be at least 40. Recommend to use fuel of cetane number over 47, especially at temperatures below -20°C (-4°F) or altitude over 1675 m (5500 ft).

Cold Filter Plugging Point (CFPP) should be at least 5°C (9°F) below the expected lowest temperature or **Cloud Point** below the expected lowest ambient temperature.

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. Maximum scar diameter of 0.45 mm is optimal.

Diesel quality and fuel sulfur content must comply with all emission regulations of the area where the engine operates. Never use diesel with sulfur content over 10000 mg/kg (10000 ppm).

Sulfur content for interim tier 4, final tier 4, stage III B, and stage IV engines

- Only use ultra low sulfur diesel (ULSD) with sulfur content not exceeding 15 mg/kg (15 ppm).

Sulfur content for tier 3 and stage III A engines

- Diesel with sulfur content less than 1000 mg/kg (1000 ppm) is recommended.
- Use of diesel with sulfur content 1000-2000 mg/kg (1000-2000 ppm) shortens engine oil and filter change interval.
- Before using diesel with sulfur content over 2000 mg/kg (2000 ppm), please contact your John Deere dealer.

Sulfur content for tier 2 and stage II engines

- Diesel with sulfur content less than 2000 mg/kg (2000 ppm) is recommended.
- Use of diesel with sulfur content 2000-5000 mg/kg (2000-5000 ppm) shortens engine oil and filter change interval.
- Before using diesel with sulfur content over 5000 mg/kg (5000 ppm), please contact your John Deere dealer.

Sulfur content for other engines

- Diesel with sulfur content less than 5000 mg/kg (5000 ppm) is recommended.
- Use of diesel with sulfur content over 5000 mg/kg (5000 ppm) shortens engine oil and filter change interval.

IMPORTANT: Never mix diesel engine oil or any other types of lubricating oil with diesel fuel.

Improper use of fuel additive may cause damage to fuel injection device of diesel engine.

N400041.0001FE4 -19-11MAR15-1/1

Diesel lubricity

Most diesel produced in the United States, Canada, and the European Union has certain level of lubricity to ensure proper operation and durability of fuel injection system components. However, diesel produced in some parts of the world lacks the required lubricity.

IMPORTANT: Make sure that the diesel used in your machine has adequate lubricity.

In accordance with ASTM D6079 or ISO 12156-1 measurement standard, fuel lubricity should pass maximum wear scar 0.45 mm diameter.

If fuel of low or unknown lubricity is used, add John Deere premium diesel conditioner (or other similar products) according to specified density.

Biodiesel lubricity

Mixing with biodiesel up to B20 (20% biodiesel) can greatly improve fuel lubricity. Mixing with more than B20 cannot improve fuel lubricity further.

N400041.0001FE5 -19-11MAR15-1/1

Test diesel

Fuel analysis facilitates the monitoring of diesel quality. Fuel analysis provides a range of critical data, e.g. cetane number, fuel type, sulfur content, water content, appearance features, adaptability in cold weather

operation, bacteria value, cloud point, acid value, contaminated particulate amount and whether the fuel meets required technical specifications.

Contact John Deere dealer for more information about engine oil analysis.

N400041,0001FE6 -19-11MAR15-1/1

Fill the fuel tank

CAUTION: Please handle fuel safely: It is highly flammable. Do not refuel the machine while smoking or when being close to open flame or sparks.

Stop the engine before refueling the machine. Always fill the fuel tank in an outdoor environment.

Keep machine clean of accumulated trash, grease and debris so as to prevent fire. Always wipe away spilled fuel.

Fill the fuel tank through fuel tank filler cap (A). Fill the fuel tank at the end of each working day. That helps prevent moist air from cooling and condensing in fuel tank.

Specification

Fuel tank —Capacity..... 40 L (10.56 gal.)

NOTE: Under cold weather, to avoid diesel gelation and paraffin, add John Deere diesel flow improver or equivalent product to fuel or large storage tank.

A—Fuel Tank Filler Cap



TS202 —UN—23AUG88

PUC5050 —UN—06OCT10

N400041,0001FE7 -19-11MAR15-1/1

Alternative and synthetic lubricant

Lubricant which is different from the recommended ones in this manual may need to be used in certain areas.

In your area, certain John Deere coolant and lubricant may not be available for purchase.

Please consult John Deere dealer to obtain relevant information and recommendations.

Synthetic lubricant that has required properties specified in this manual can also be used.

The temperature ranges and maintenance cycles stated in this manual are applicable to both conventional lubricant and synthetic lubricant.

If lubricant produced by recycled materials has required properties, you may also use it.

N400041,0001FE8 -19-11MAR15-1/1

Storage of lubricant

Using only clean lubricant to achieve maximum equipment efficiency.

Use clean containers to store lubricant.

Store lubricant and its container in a place which is dry, dust-free and away from other contaminants. Store container on its side to avoid accumulation of water and dirt.

Label the container properly to ensure that contents can be correctly identified.

Properly dispose of all old containers and any residual lubricant inside.

N400041,0001FE9 -19-11MAR15-1/1

Diesel Engine Break-In Oil

New engines, at factory state, have been filled with John DeereBreak-In™ or John DeereBreak-In Plus™ engine break-in oil. During the break-in period, when necessary, refill John Deere Break-In™ or Break-In Plus™ engine break-in oil to maintain the required oil level.

When running engine under different operating conditions, minimize running at idling speed, especially under heavy load. That facilitates various engine components to break in properly.

If John Deere engine break-in oil is used in the first time running of a new or refurbished engine, change engine oil and filter after not more than 250 operating hours.

If John Deere Break-In Plus engine break-in oil is used, the shortest interval for changing engine oil and filter is 100 operating hours, while the longest interval equals to specified change interval of John Deere Plus-50™ II or Plus-50 engine oil.

After engine overhaul, fill in John Deere Break-In™ or Break-In Plus™ engine break-in oil.

If John Deere Break-In or Break-In Plus engine break-in oil is not available, please use diesel engine oil which meets one of the following conditions and is of 10W-30 viscosity grade recommended by the American Automotive Engineers Association. Change engine oil and filter after not more than 100 operating hours:

- API Service Classification CE

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.

- API Service Classification CD
- API Service Classification CC
- ACEA Oil Sequence E2
- ACEA Oil Sequence E1

IMPORTANT: During the first break-in of a new or refurbished engine, using Plus-50™ II, Plus-50 or engine oil that meets the following conditions is strictly prohibited:

API CJ-4	ACEA E9
API CI-4 PLUS	ACEA E7
API CI-4	ACEA E6
API CH-4	ACEA E5
API CG-4	ACEA E4
API CF-4	ACEA E3
API CF-2	
API CF	

These engine oils cannot allow the engine to break in properly.

John Deere Break-In Plus™ engine break-in oil is suitable for all John Deere diesel engines that are of emissions certification grade.

After break-in, use John DeerePlus-50™II, John Deere Plus-50 or other diesel engine oil recommended in this manual.

N400041,0001FEA -19-22FEB16-1/1

Diesel engine oil

Use oil with corresponding viscosity according to the expected air temperature range during the period between oil changes.

It is preferred to use John DeerePLUS-50™ II oil.

Using John Deere Plus-50™ engine oil is also recommended.

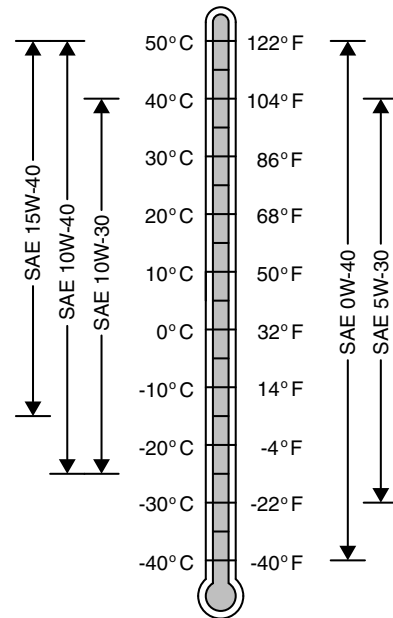
If one or more of the following requirement is met, other engine oil can also be used:

- John Deere Torq-Gard™
- 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
- ACEA Oil Sequence E3

Using diesel engine oil of complex viscosity is the best

Diesel quality and fuel sulfur content must comply with all emission requirements of the area where the engine operates.

*Plus-50 is a trademark of Deere & Company.
Torq-Gard is a trademark of Deere Company*



Oil viscosity under different temperature ranges

Using diesel with sulfur content over 10000 mg/kg (10000 ppm) is strictly prohibited.

N400041,0001FEB -19-11MAR15-1/1

TS1689 —UN—18JUL07

Engine oil filter

Oil filtration is highly critical for the normal operation and proper lubrication of the machine.

Regularly replace filters as specified in this manual.

Use filters that comply with the John Deere property requirements.

N400041,0001FEC -19-11MAR15-1/1

Heavy-duty diesel engine coolant

Engine cooling system has been fully pre-filled with coolant. That prevents rusting and liner pitting for the whole year. Coolant is not frozen when the winter temperature does not fall below -37°C (-34°F). If protection against lower temperature is required, please consult John Deere dealer.

It is recommended to use the following engine coolants:

- John Deere COOL-GARD™ II Premix
- John Deere COOL-GARD II PG Premix

Please use John Deere COOL-GARD II PG Premix when non-toxic coolant is needed.

Other recommended coolants

It is also recommended to use the following engine coolants:

- Mixed concentration of John Deere COOL-GARD II diluted with quality water is 40% to 60%.

John Deere COOL-GARD II Premix and COOL-GARD II concentrated coolants do not need supplementary additive.

Other coolants

John Deere COOL-GARD II and COOL-GARD II PG coolants may not be available in the area where maintenance work is carried out.

If this coolant is not available, you may use concentrated coolants for heavy-duty diesel engines or pre-diluted coolants, which should meet the following chemical and physical requirements:

COOL-GARD is a trademark of Deere Company

- Use nitrite-free and high-quality additives.
- When equipment load is equal to or more than 60%, conduct John Deere cavitation test method or quick test for cylinder liner cavitation protection.
- This may protect the cooling system metals (cast iron, aluminum and copper alloys, such as brass) from corrosion.

The following coolant mixtures should contain specified additives:

- Diluted (40% - 60%) ethylene glycol base or propylene glycol base heavy-duty coolant
- Ethylene glycol base or propylene glycol base heavy-duty concentrated coolant, when to be used, should be diluted in 40%-60% with quality water.

Water quality

Water quality is very important to the performance of cooling system. It is recommended to use distilled water, deionized water, demineralized water to mix with ethylene glycol and propylene glycol base engine concentrated coolants.

IMPORTANT: Using cooling system sealing additives or antifreeze that contains sealing additives is strictly prohibited.

Do not mix ethylene glycol base and propylene glycol base coolants.

Using coolants which contain nitrite is strictly prohibited.

N400041,0001FED -19-11MAR15-1/1

Liquid Coolant Conditioner

John Deere liquid coolant conditioner is recommended for wet-sleeve diesel engines, which is without coolant filter option. Please contact your John Deere dealer. Other conditioners containing non-chromate inhibitors can also be used.

CAUTION: Coolant additive contains alkali. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Never drink it. In case of contact with skin, immediately wash skin with soap and water. If it gets into eyes, flush them with large amount of water for at least 15 minutes. Seek medical attention. Keep it away from children.

CAUTION: Never remove radiator cap or drain coolant before coolant is cooled down. Slowly loosen radiator cap to release excessive pressure.

IMPORTANT: DO NOT use liquid conditioner if engine is equipped with John Deere coolant filter conditioner, since the correct inhibitors are already contained inside the filter. If both are used at the same time, gelatinous



precipitates form, obstructing heat transfer and coolant flow. John Deere coolant conditioners cannot prevent freezing.

Add 30 ml John Deere liquid coolant conditioner (1 fl. oz./quart) for every liter of coolant added. When servicing cooling system at 2000 hours, only 1/2 of the original charge is required.

N400041,0001FEE -19-11MAR15-1/1

RG4690 —UN—14DEC88

Transmission and Hydraulic Oil

Use oil with corresponding viscosity according to the expected air temperature range during the period between oil changes.

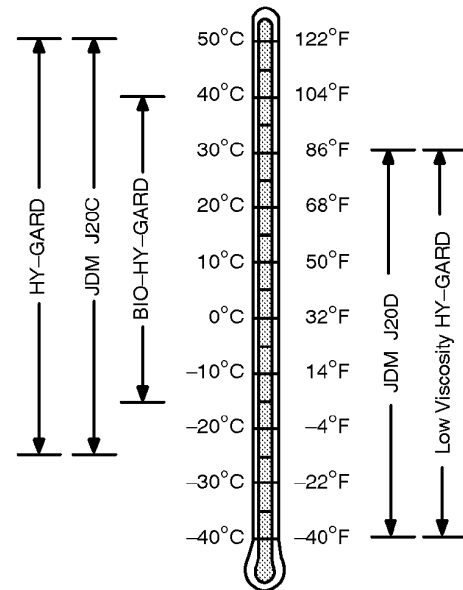
It is recommended to use following oil:

- John DeereHY-GARD™
- John Deere low viscosityHY-GARD™

Oil that meets one of the following requirements can also be used:

- John Deere standard JDM J20C
- John Deere standard JDM J20D

When biodegradable oil is required, you may use John Deere BIO-HY-GARD™.¹



HY-GARD is a trademark of Deere Company
BIO-HY-GARD is a trademark of John Deere Company

¹ According to CEC-L-33-T-82 test method, BIO-HY-GARD can reach at least 80% biodegradation in 21 days. BIO-HY-GARD cannot be mixed with mineral oil. Otherwise, biodegradability will decrease and lubricant cannot be reused.

N400041,0001FEF -19-11MAR15-1/1

TS1660 —UN—10OCT97

Use correct transmission/hydraulic oil filter elements

To protect the system, replace transmission/hydraulic oil filter with John Deere service filter elements. Minimum and maximum performance technical specifications are printed

on John Deere filters. Other filters may also be used if those performance technical specifications are met.

Refer to section "Lubrication and service" for the recommended filter change intervals.

N400041,0001FF0 -19-11MAR15-1/1

Lubricating grease

Select lubricating grease according to NLGI viscosity index and the expected ambient air temperature range during service interval period.

It is preferred to use John Deere SD Polyurea lubricating grease.

Lubricating greases below are also recommended:

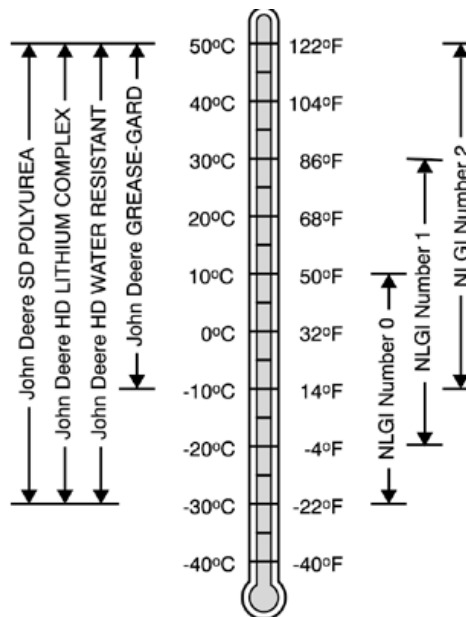
- John Deere HD Lithium Complex lubricating grease
- John Deere HD Water Resistant lubricating grease
- John Deere GREASE-GARD™

Other lubricating greases that meet following requirements can also be used:

- NLGI performance category GC-LB

IMPORTANT: Some lubricating grease thickeners are not compatible with other lubricating greases. Please consult lubricating grease supplier before mixing different brands of lubricating greases.

GREASE-GARD is a trademark of Deere Company



Lubricating greases for different temperature ranges

TS1673 — UN—31OCT03

N400041,0001FF1 -19-11MAR15-1/1

Maintenance and Service Intervals

Additional Service Information

This section cannot substitute the detailed technical manual. It contains only information needed for operation and routine maintenance. If you need more detailed

service information, please order Technical Manual through your John Deere dealer.

N400041,0001FF2 -19-11MAR15-1/1

Service tractor safely

Before carrying out repairs or adjustments, disconnect power to auxiliary equipment, and switch off the engine.

Do not overspeed engine.

Keep vehicle and attachments in good operating condition.

Keep safety devices in place and in good operating condition.

Keep all nuts, bolts and screws tightened and equipment in safe operating condition.

Before working on any parts of the engine, stop the engine and let it cool down. Hot engine parts can burn skin upon contact.

Engine can start only when shift lever is at neutral position.

Be careful not to let clothing, jewelry or long hair be drawn in by fan vanes, drive belts or other moving engine parts.

Unauthorized modifications to the machine may impair machine performance and/or safety as well as shorten machine life.



PUC5052—UN—06OCT10

N400041,0001FF3 -19-11MAR15-1/1

Service Interval Chart — Daily or 10, 50, 250 operating hours

Contents	Daily or 10 Operating Hours	50 Hours	250 Hours
Check water separator	•		
Check engine oil level	•		
Check coolant level	•		
Check hydraulic system oil level	•		
Check transmission system oil level	•		
Check steering system hydraulic oil level	•		
Check air intake system	•		
Service air front cleaner	•		
Check sediment bowl	•		
Service air cleaner		•	
Check if fasteners are loose		•	
Clean and check batteries		•	
Check tires		•	
Lubricate MFWD front axle swing seat ^a		•	
Lubricate steering main shaft ^a		•	
Drain water and sediment from fuel tank			•
Check MFWD front axle housing oil level			•
Adjust alternator / fan belt			•
Lubricate 3-point hitch lift link			•
Check and clean fuel tank vent cleaner			•
Check neutral start system			•
Adjust brake pedal free travel			•
Adjust clutch pedal free travel			•
Check and tighten ROPS fasteners (if equipped)			•

^aIn extremely wet or muddy conditions, shorten service interval to 10 operating hours.

N400041,0001FF4 -19-25JAN16-1/1

Service Interval Chart — 500 Operating Hours — 1000 Operating Hours — Every Year — 2 Years or 2000 Operating Hours

Items	500 hours	1000 hours	Every year	2 years or 2000 operating hours
Changing engine oil and filter ^a	•			
Changing fuel filter	•			
Servicing hydraulic system oil filter / strainer	•			
Cleaning engine crankshaft vent pipe	•			
Checking and tightening all hoses and hose clamps	•			
Checking cooling system for leakage	•			
Lubricating rear axle bearings ^b	•			
Checking engine idling speed	•			
Changing hydraulic oil filter / strainer		•		
Changing hydraulic system oil		•		
Changing transmission system oil		•		
Changing steering system hydraulic oil		•		
Adjusting engine valve clearance		•		
Changing MFWD front axle housing oil		•		
Checking seat belt			•	
Flushing cooling system				•

^aWhen using any lubricant other than TorqGARD or PLUS 50, shorten service interval to 200 operating hours

^bIn extremely wet or muddy conditions, shorten service interval to 50 operating hours.

N400041,0001FF5 -19-11MAR15-1/1

Service after First 100 Operating Hours

For service after first 100 operating hours, refer to section 30 "Break-in period".

N400041,0001FF6 -19-11MAR15-1/1

Using Proper Lubricant

IMPORTANT: When servicing tractor, use lubricant that meets technical specifications stated in section "Fuel, lubricants and coolant".

N400041,0001FF7 -19-11MAR15-1/1

General Maintenance and Inspection

Service air filter

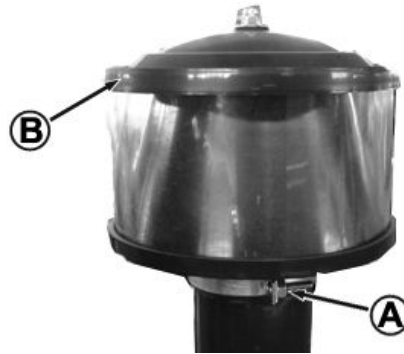
Air Pre-Filter

Service interval — Daily In dusty conditions, increase the frequency

1. Loosen clamp (A).
2. Remove pre-filter (B) and clean.
3. Install pre-filter (B) and tighten clamp (A).

A—Clamp

B—Pre-Filter



N400041,0001FF8 -19-11MAR15-1/2

PUC5193 —UN—13JAN11

Air Filter

Service interval — 50 operating hours Interval can vary according to operating conditions

CAUTION: Stop tractor for one hour if engine is hot. Service it again after oil returns to oil cup.

1. Loosen clamps (A) and remove oil cup (B).
2. Empty and clean oil cup.
3. Remove wire elements (C) which support the upper of oil cup (B).
4. Check wire elements (C) for damage. If it is damaged, replace it with a new wire element.
5. If it is not damaged, use gasoline to wash oil cup (B) and wire elements (C). (Element can also be cleaned in diesel.)
6. Add clean oil into the oil cup (B) to the oil level mark.
7. Install wire elements (C) and oil cup (B).

A—Clamps (3 pieces)
B—Oil Cup

C—Wire Elements (2 pieces)



N400041,0001FF8 -19-11MAR15-2/2

PUC5194 —UN—13JAN11

PUC5195 —UN—13JAN11

Checking Air Intake System

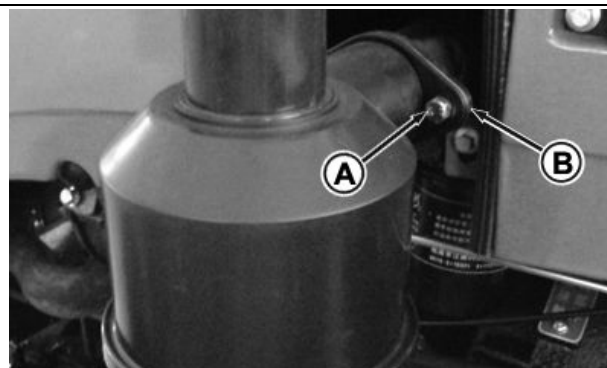
Service interval — Daily

Check if air cleaner mounting screws (A) are tight.

Check gasket (B) for damage. Replace it when needed.

A—Screws (2 pieces)

B—Gasket



N400041,0001FF9 -19-11MAR15-1/1

PUC5210 —UN—13JAN11

Checking Water Separator

Service Interval — Daily

Daily check for stagnant water and carry out maintenance.

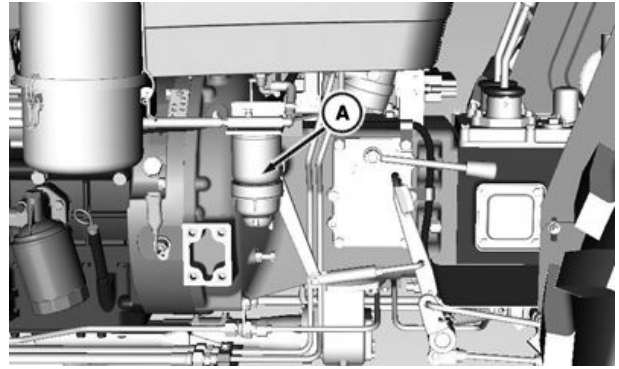
After driving every 15000 ~ 20000 km or 300 ~ 400 hours, replace filter core.

⚠ CAUTION: This is fuel coarse filter, can only be installed for primary use.

⚠ CAUTION: When using hand pump, first open vent bolt. Improper use can affect engine performance.

When replacing filter core:

1. Apply a little oil on seal.
2. After seal and filter holder have complete contact, use hand to tighten 3/4 to 1 turn.
3. Start engine and check for leakage.

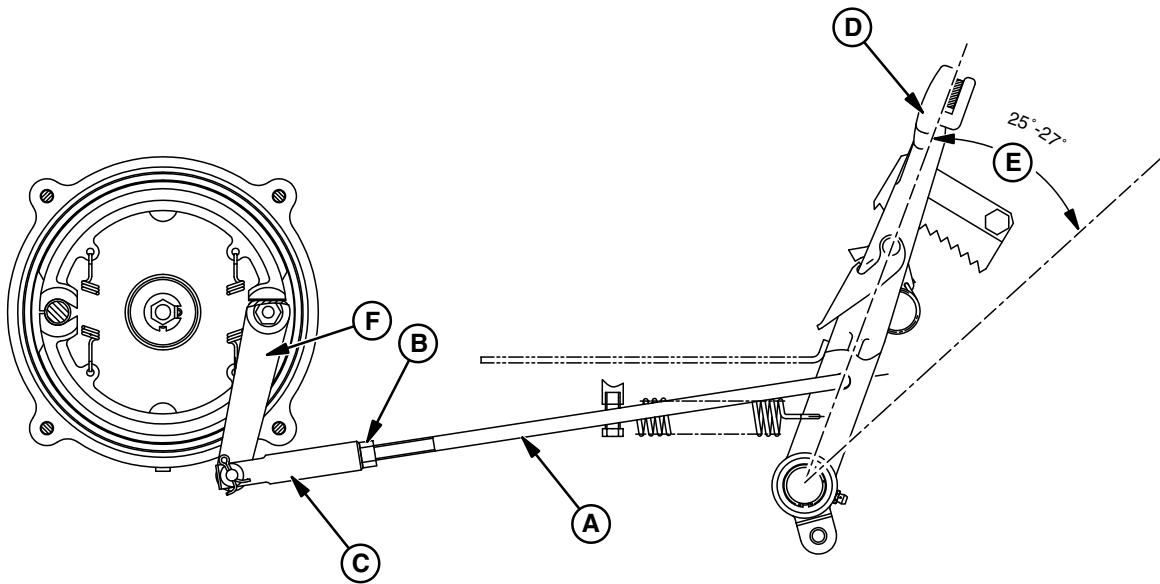


A—Water Separator

N4A0004350 —UN—25JAN16

N400041,0002A63 -19-25JAN16-1/1

Adjusting Brake Pedal Free Stroke



A—Lever
B—Nut
C—Yoke

D—Brake Pedal
E—Brake Pedal Stroke

F—Cam Arm

Service interval — 250 hours

NOTE: To ensure safety in running, brake should be adjusted. Clearance between friction band and brake hub should be enlarged due to the wearing of friction band over a long service.

1. Park on level ground. Chock wheels to prevent machine from moving.
2. Unlock brake pedal linkage.
3. Apply force on one of the brake pedals. Measure angle (E) between engaged pedal and disengaged pedal.
4. Adjust brake linkage until angle (E) meets specification.

Specification

Brake Pedal Stroke —

Angle..... 25°-27°

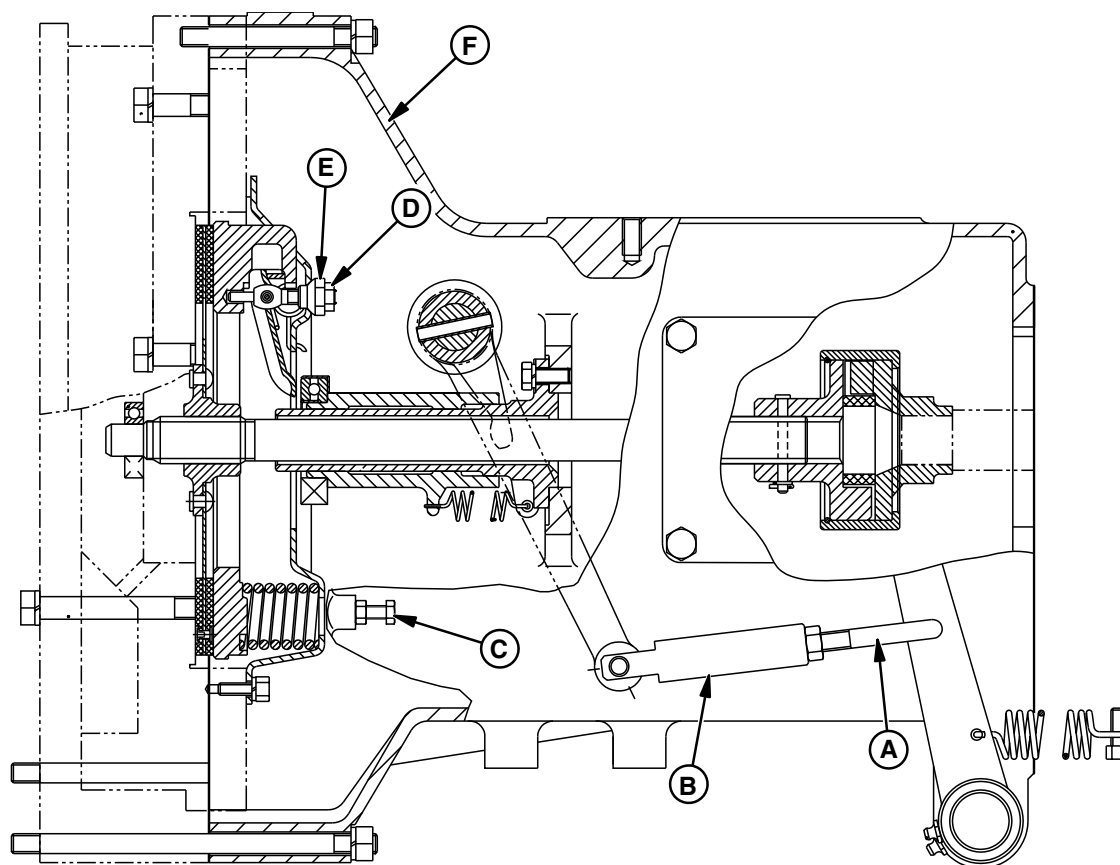
5. To adjust brake linkage, loose lock nut (B) and adjust fork (C) to change the rod length (A).
6. If wearing of friction band is severe, adjust rod length by inverting cam arm (F) of the brake.
7. Make sure that free stroke is same for both left and right pedals.

IMPORTANT: Adjust free stroke on both pedals to the same given specification. Otherwise, sharp reflex on one side may cause accident upon abrupt braking.

PUC5183 —JUN—07DEC10

N400041,0001FFA -19-11MAR15-1/1

Adjusting Clutch Pedal Free Travel



A—Push Rod
B—Adjusting Fork

C—Limit Screw
D—Lock Nut

E—Clutch Lever Adjusting Nut F—Housing

Service Interval — 250 Hours

1. Turn adjusting fork (B) to shorten or lengthen push rod (A) and to adjust free stroke to specification. Tighten lock nut on push rod (A) after adjustment.

Specification

Single-Acting
Clutch Pedal Free
Stroke—Distance..... 12-21 mm
(0.47-0.83 in.)

2. Adjust limit screw (C) to adjust working stroke to 80-110 mm (3.15-4.33 in.).

3. Turn limit screw (C) to increase or decrease length of clutch lever until desired free stroke is set. Tighten limit screw (C) after adjustment.
4. To adjust working stroke to maximum, loosen lock nut (D) and tighten three adjusting nuts (E) at the same time. But (2 kinds of nuts) turning angle must be the same. Check adjustment result through operating release clutch. Tighten lock nut (D) after adjustment and testing.

JL31334,0000AB4 -19-01JUL15-1/1

PUC5184—UN—07DEC10

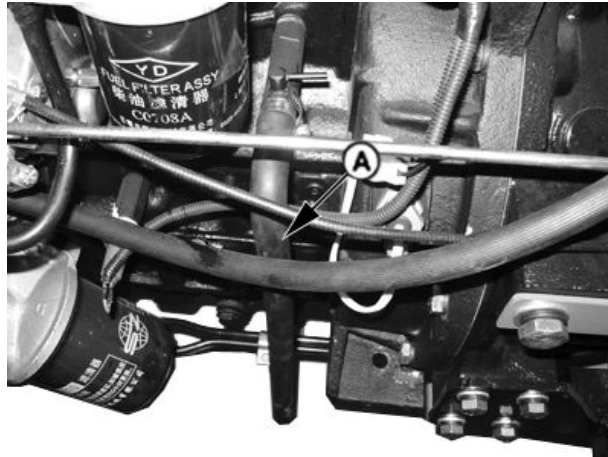
Cleaning Engine Crankshaft Vent Pipe

Service interval — 500 operating hours

CAUTION: Compressed air pressure should not exceed 210 kPa (2 bar) (30 psi) when used for cleaning. Bystanders should stay away. Guard against flying fragments and wear personal protective equipment, including protective eyewear.

Remove crankcase vent tube (A) from engine. Clean with solvent or dry with compressed air. Install vent pipe valve cap to engine. Make sure that vent pipe is not kinked or squeezed.

A—Crankcase Vent Pipe



PUC1720—UN—02JAN09

N400041,0001FFC -19-11MAR15-1/1

Checking Engine Idling Speed

Service Interval — 500 Operating Hours

Push hand throttle all the way forward to switch to slow idling speed.

Pull hand throttle all the way backward to switch to fast idling speed.

If idling speed is not correct, please contact John Deere dealer.

Specification

Engine Speed—Low	
Idling Speed.....	750±30 r/min
Engine speed—High	
Idling Speed.....	≤2376 r/min (30 hp model)
	≤2538 r/min (32 hp model)
	≤2592 r/min (35 hp model)

JL31334,0000ABF -19-01JUL15-1/1

Adjusting Engine Valve Clearance

Service interval — 1000 operating hours

Ask John Deere dealer to check or adjust engine valve clearance.

N400041,0001FFE -19-11MAR15-1/1

Checking and Tightening All Hoses and Hose Clamps

Service interval — 500 operating hours

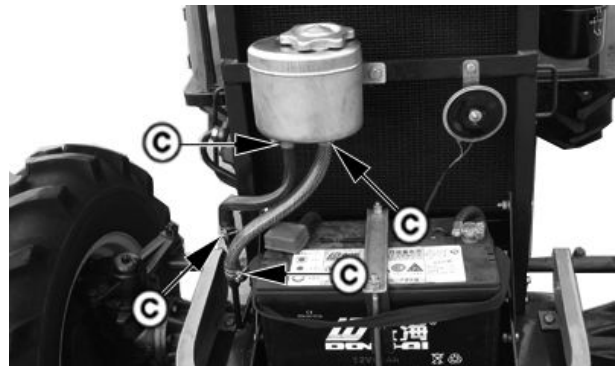
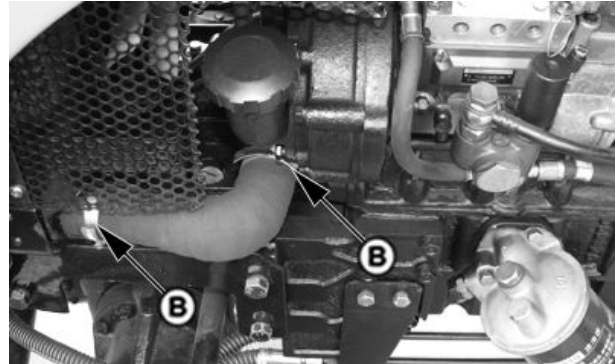
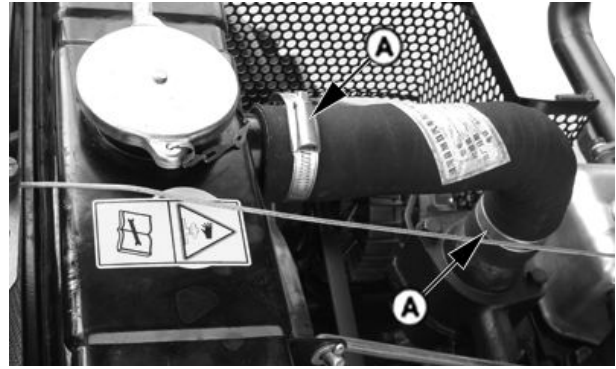
Check if following system hoses and hose clamps are tight. If they are loose, tighten them.

- Engine air intake system
- Engine cooling system
- Hydraulic system
- Fuel System

Check all hoses for cracks which may cause leakage or failure. Replace them when needed.

A—Radiator Upper Hose Clamps (2 pieces)
B—Radiator Lower Hose Clamps (2 pieces)

C—Steering Oil Reservoir Hose Clamps (4 pieces)



PUC1880 —UN—13FEB09

PUC1881 —UN—13FEB09

PUC1882 —UN—13FEB09

N400041,0001FFF -19-11MAR15-1/1

Checking if Fasteners are Loose

Service interval — 50 operating hours

Item	Measurement	Specification
Counterweight retaining bolts	Torque	230 N.m (170 lb.-ft.)
Drive shaft spoke and wheel rim retaining nuts	Torque	146 ~ 180 N.m (170 ~ 132 lb.-ft.)
Drive wheel spoke and drive shaft retaining nuts	Torque	199 ~ 235 N.m (146 ~ 173 lb.-ft.)
Guide wheel spoke and wheel hub retaining nuts	Torque	199 ~ 235 N.m (146 ~ 173 lb.-ft.)
Front shaft bushing and auxiliary bushing connecting nut	Torque	100 ~ 120 N.m (73 ~ 88 lb.-ft.)

N400041,0002000 -19-11MAR15-1/1

Checking Neutral Start System

Service interval — 250 hours

Your John Deere tractor is equipped with interlocks to prevent inadvertent movement when the engine is started. Press clutch pedals. If all following conditions are satisfied, turning the keyswitch can start the engine:

- Range shift lever (B) is at neutral position.
- PTO lever is at disengaged position.

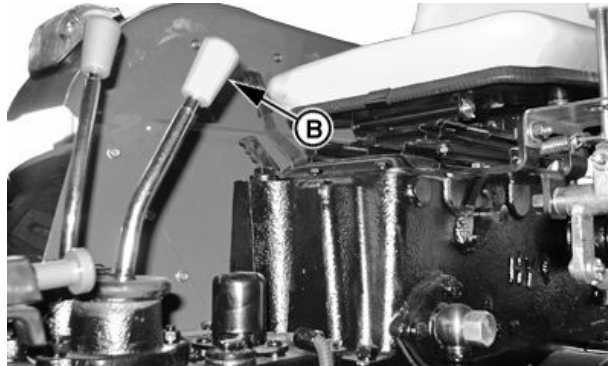
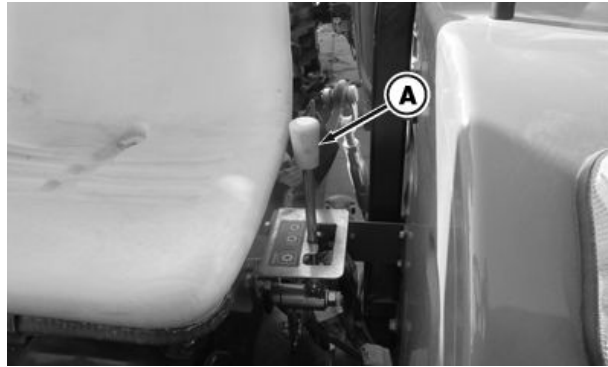
⚠ CAUTION: If starter starts the engine and one of the following happens, contact John Deere dealer to repair neutral start system.

If any of the following happens, turning keyswitch to start position cannot start the engine:

- Range shift lever is in gear (not at neutral).
- PTO lever is at engaged position.

A—PTO Lever

B—Range Shift Lever



N4A0003895 —UN—13NOV14

PUC5035 —UN—05OCT10

N400041,0002001 -19-11MAR15-1/1

Checking Seat Belt

Service interval — Once a year

Check seat belt and its fasteners at least once a year. If seat belt system has signs of cut, excessive or unusual wear, discolor, abrasion or damage on buckle or retractor, replace the entire seat belt immediately. For safety, replace seat belt system only with approved parts for the machine. Please contact John Deere dealer for that.

A—Seat Belt



PUC1831 —UN—08FEB09

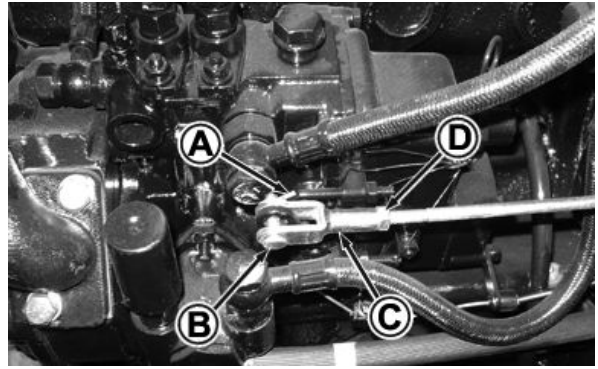
N400041,0002002 -19-11MAR15-1/1

Throttle Adjustment

1. Remove cotter pin (A) and pin (B).
2. Loosen lock nut (D).
3. Set throttle handle on fuel pump to desired position.
4. Turn and adjust fork (C) so that it matches with throttle handle. Install pin (B) and cotter pin (A).
5. Tighten lock nut (D).

A—Cotter Pin
B—Pin

C—Fork
D—Lock Nut



PUC5196 —UN—13/JAN11

N400041,0002003 -19-11MAR15-1/1

Checking Tires

Service interval — 50 operating hours

1. Daily check tires for damage or if tire pressure is significantly too low.
2. Repair cuts or breaks as soon as possible.
3. Protect tires from exposure to sunlight, petroleum products and chemicals.
4. Drive carefully. Avoid rocks and sharp objects.

IMPORTANT: Minimum pressure is used only for light loads and if tractor is without counterweight.

If counterweight or implement is mounted, or if heavy load is to be towed, then please increase the pressure.

5. Check tires with an accurate gauge having 10 kPa (0.1 bar) (1 psi) graduations. If tires have liquid counterweight, use a special air-water gauge and measure with valve stem at bottom.

Refer to "Tire Inflation Pressure Chart" in chapter "Wheels, Tires and Tread".

N400041,0002004 -19-11MAR15-1/1

Lubricating

Use proper lubricant

IMPORTANT: When servicing tractor, use lubricant that meets technical specifications stated in section "Fuel, lubricants and coolant".

N400041,0002005 -19-11MAR15-1/1

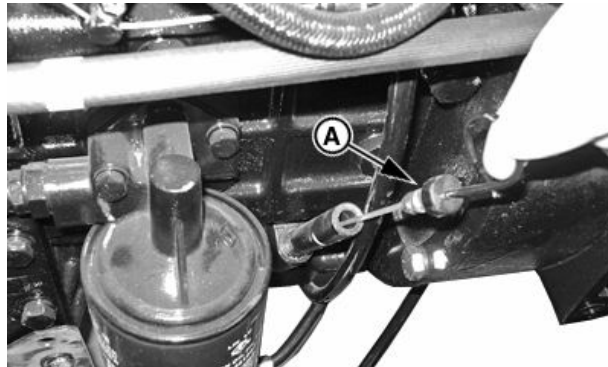
Check engine oil level

Service interval — Daily or every 10 operating hours

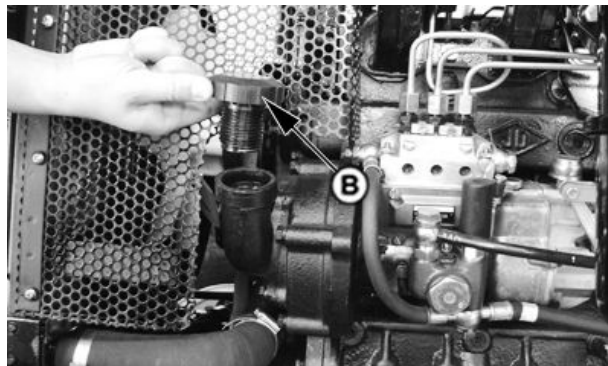
1. If engine does not run, start engine and run it at low idling speed for 2-3 minutes. Switch off engine and wait for 2-3 minutes. Let oil flows back to oil sump.
2. If engine is already running, reduce to low idling speed and run it for 2-3 minutes. Switch off engine and wait for 2-3 minutes.
3. Check engine oil level. Remove and wipe oil dipstick (A). Then, re-insert it completely. Remove it and mark oil level.
4. Safe operating range is between low level mark (C) and high level mark (D) on dipstick. Do not operate engine when oil level is below low level mark (C). Remove filler cap (B). Add engine oil of seasonal viscosity. (For technical specifications of engine oil, refer to section "Fuel, lubricants and coolant".)

A—Engine Oil Dipstick
B—Engine Oil Filler Cap

C—Low Level Mark
D—High Level Mark



PUC5053 —UN—07OCT10



PUC1884 —UN—13FEB09



PUC1885 —UN—13FEB09

N400041,0002006 -19-11MAR15-1/1

Changing Engine Oil and Filter

Service interval — 500 operating hours¹ Once, first 100 operating hours

1. Operate engine to warm up oil. Switch off engine.
2. Remove drain plug and drain oil into suitable container.
3. Replace engine oil filter (A) when changing oil. Coat a layer of oil on the new oil filter gasket. Install filter. Use hand to tighten plug for 1/2 turn.
4. Install and tighten drain plug (B).
5. Add oil of seasonal viscosity. (Refer to chapter "Fuel, lubricants and coolant".)

Specification

Engine oil—Capacity.....6 ~ 6.5 L (1.58 ~ 1.71 gal.)

¹When using any lubricant other than TorqGARD or PLUS 50, shorten service interval to 200 operating hours



A—Engine Oil Filter

PUC5197 —UN—13/JAN11

N400041,0002007 -19-11MAR15-1/1

Checking Transmission / Hydraulic System Oil Level

Service interval — Daily

IMPORTANT: Periodic checks help avoid downtime. Operator should record all leakage and failures, so as to aid preventive maintenance. Since gearbox operates in engine oil and by means of oil, it is very important to keep oil clean and at correct level at all times.

1. Park on level ground. Set shift lever at neutral position. Lock brake pedals and apply parking brake.
2. Make sure that rocker arm shaft faces down. (Refer to section "Rocker Arm Shaft Control" in chapter "Rocker Arm Shaft and 3-Point Hitch".)
3. Push hand throttle all the way forward. Allow engine to idle for 5 minutes. Switch off engine.
4. Wait for 5 minutes so that engine oil settles.
5. Check hydraulic oil level at dipstick (A) and transmission oil level at dipstick (B).
6. Remove dipstick (A or B) and wipe it clean. Insert oil dipstick completely. Check if oil level is between high level mark and low level mark on oil dipstick.
7. If oil level is too low, refill oil through filler. (Refer to section "Transmission oil and hydraulic oil" in chapter "Fuel, lubricants and coolant".)

A—Hydraulic Oil Level Dipstick B—Transmission Oil Level Dipstick



PUC1834 —UN—08FEB09

PUC1835 —UN—08FEB09

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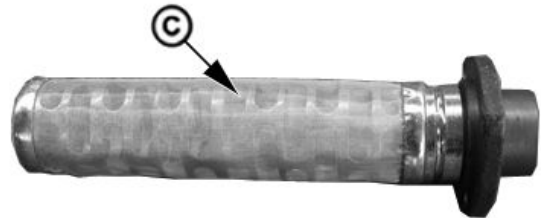
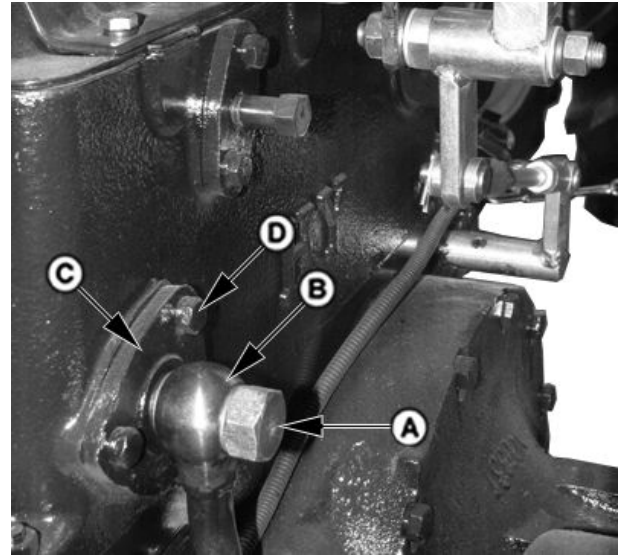
Servicing Hydraulic System Oil Filter / Strainer

Service interval — 500 operating hours Once, first 100 operating hours

1. Remove screws (A).
2. Disconnect hydraulic line (B). Close the openings with caps or plugs.
3. Remove cap screws (D) and filter (C). Repair or replace as needed.
4. Install filter (C) and cap screws (D). Tighten screws (D).
5. Connect hydraulic line (B) and install screws (A).
6. Add enough transmission and hydraulic oil to bring oil level up to the mark. (Refer to chapter "Fuel, Lubricants and Coolant".)
7. Run engine for 30 seconds and check oil level again.
8. Check again after operating for five minutes. Refill engine oil as needed.

A—Screw
B—Hydraulic Lines

C—Filter
D—Cap Screws (3 pieces)



PUC0045 —UN—03APR09

PUC1796 —UN—16JAN09

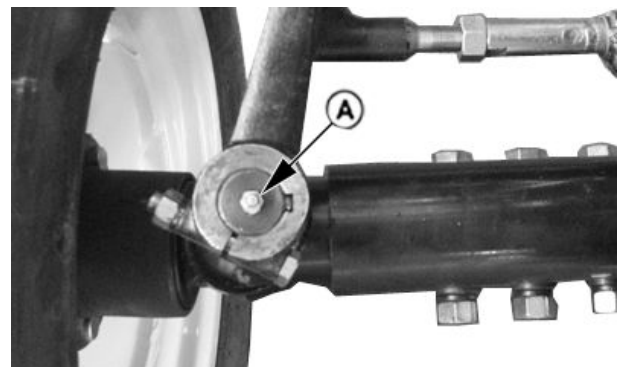
N400041,0002009 -19-11MAR15-1/1

Lubricating Steering Main Shaft (2WD)

Service interval — 50 operating hours In extremely wet or muddy conditions — 10 operating hours

Apply several pumps of grease to all steering main shaft grease fittings (A) on both left and right sides.

A—Steering Main Shaft Grease Fitting



PUC0022 —UN—24MAR09

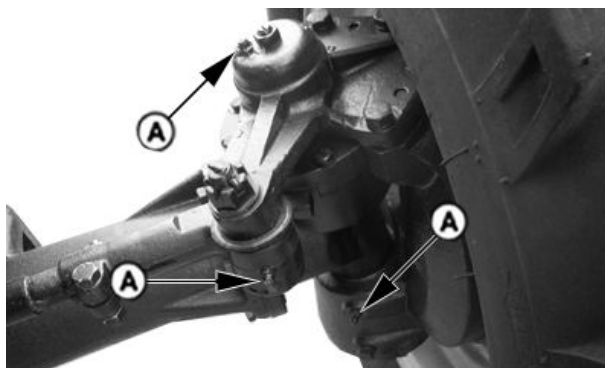
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Lubricating Steering Main Shaft (MFWD)

Service interval — 50 operating hours In extremely wet or muddy conditions — 10 operating hours

Apply several pumps of grease to all steering main shaft grease fittings (A) on both left and right sides.

A—Steering Main Shaft Grease Fitting



PUC1887 —UN—13FEB09

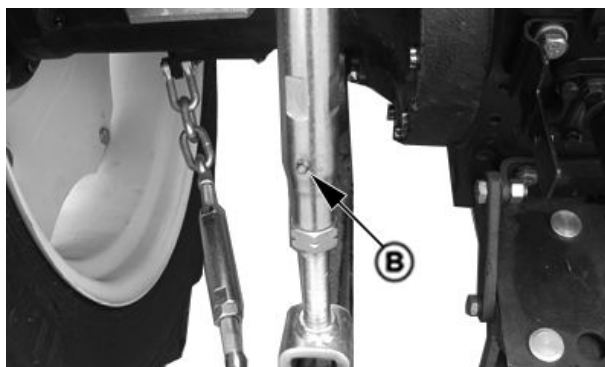
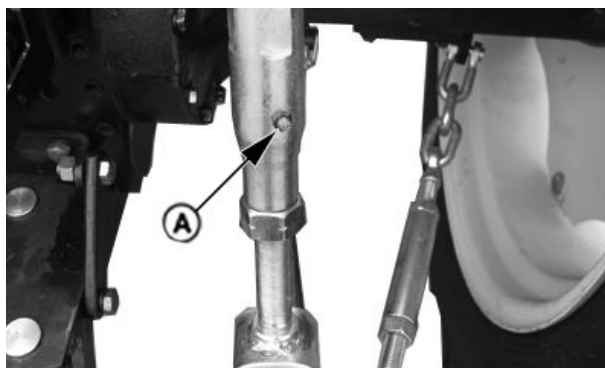
N400041,000200B -19-11MAR15-1/1

Lubricating 3-Point Hitch Oblique Lever

Service interval — 250 hours

Apply several pumps of grease to grease fittings (A) and (B) to lubricate oblique lever. (Refer to chapter "Fuel, Lubricants and Coolant".)

A—Right Oblique Lever Grease Fittings B—Left Oblique Lever Grease Fittings



PUC1888 —UN—13FEB09

PUC1889 —UN—13FEB09

N400041,000200C -19-11MAR15-1/1

Lubricate rear axle bearings

Service interval — 500 operating hours Extremely wet or muddy conditions — 50 operating hours

Lubricate both sides of rear axle grease fittings (A) with several pumps of lubricating grease. (Refer to chapter "Fuel, lubricants and coolant".)

A—Rear Axle Grease Fittings (2 pieces)



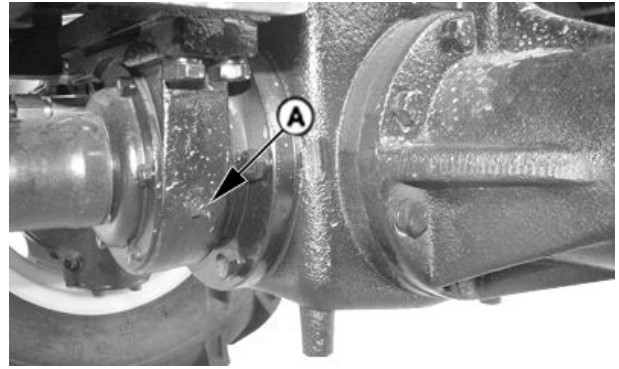
PUC5054 —UN—06OCT10

N400041,000200D -19-11MAR15-1/1

Lubricate MFWD front axle swing seat

Service interval — 50 hours

MFWD front axle has two separate swing seats. Apply appropriate amount of lubricating grease into grease fittings (A) of each swing seat. (Refer to chapter "Fuel, lubricants and coolant".)



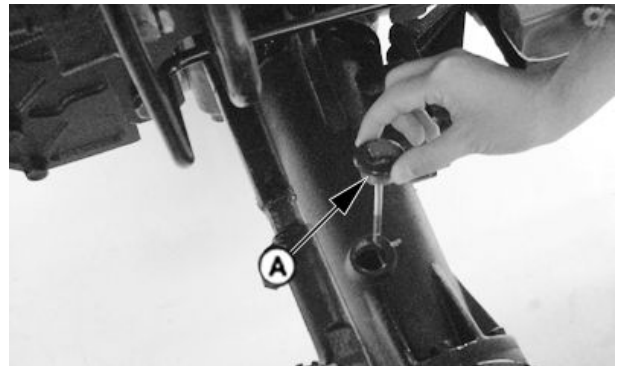
PUC1891 —UN—13FEB09

N400041,000200E -19-11MAR15-1/1

Check MFWD front axle housing oil level

Service interval — 250 hours

1. Park tractor on level surface.
2. Remove oil dipstick (A) to check front axle housing oil level. Make sure that oil level is even with bottom of hole.
3. If oil level is too low, refill oil. (Refer to chapter "Fuel, lubricants and coolant".)



PUC1892 —UN—13FEB09

N400041,000200F -19-11MAR15-1/1

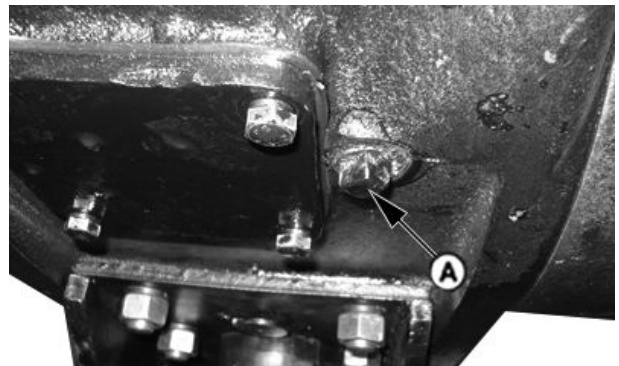
Changing Transmission / Hydraulic System Oil

Service interval — 1000 operating hours

1. Lower rocker arm shaft to drain trapped engine oil.
- NOTE: Always dispose of used oil in accordance with applicable laws and regulations.*

2. Remove drain plug (A) from gearbox housing and drain oil. Dispose of used oil properly.

A—Gearbox Housing Drain Plug



PUC1893 —UN—13FEB09

Continued on next page

N400041,0002010 -19-11MAR15-1/4

3. Remove drain plug (A) from MFWD gearbox and drain oil.

A—Drain Plug



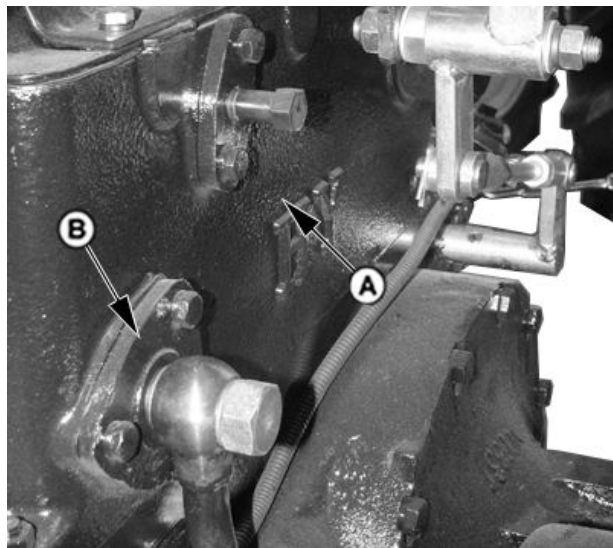
PUC1931 —UN—16FEB09

N400041,0002010 -19-11MAR15-2/4

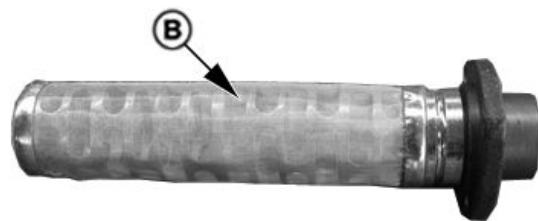
4. Remove filter and drain oil. Replace filter (B) while changing oil.
5. Filter is located inside the hydraulic oil reservoir (A). After changing the filter, tighten fasteners properly.

A—Hydraulic Oil Reservoir

B—Engine Oil Filter



PUC0039 —UN—03APR09



PUC1933 —UN—16FEB09

Continued on next page

N400041,0002010 -19-11MAR15-3/4

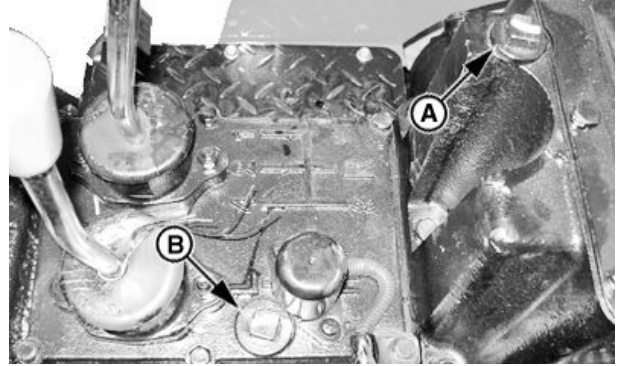
- Remove dipsticks (A and B). Fill system with transmission and hydraulic oil. (Refer to chapter "Fuel, Lubricants and Coolant".)

Specification

Transmission Oil
(MFWD)—Capacity..... 16.5 ~ 17.5 L (4.35 ~ 4.62 gal.)
Transmission Oil
(2WD)—Capacity..... 15 ~ 16 L (3.96 ~ 4.22 gal.)
Hydraulic oil—Capacity..... 7 ~ 8 L (1.84 ~ 2.11 gal.)

- Check oil level at dipstick (A or B) after filling. Check again after operating for 5 minutes.

A—Hydraulic Oil Level Dipstick B—Transmission Oil Level Dipstick



PUC5055 —UN—06OCT10

N400041,0002010 -19-11MAR15-4/4

Filling Transmission / Hydraulic Oil

Service interval — 1000 operating hours

IMPORTANT: Do not overfill gearbox. This will cause overheating and result in gearbox damage.

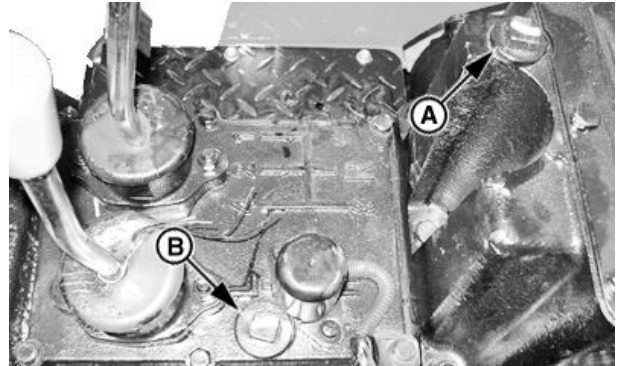
- Remove dipsticks (A and B). Fill system with transmission / hydraulic oil. (Refer to chapter "Fuel, lubricants and coolant".)

Specification

Transmission Oil
(MFWD)—Capacity..... 16.5 ~ 17.5 L (4.35 ~ 4.62 gal.)
Transmission Oil
(2WD)—Capacity..... 15 ~ 16 L (3.96 ~ 4.22 gal.)
Hydraulic oil—Capacity..... 7 ~ 8 L (1.84 ~ 2.11 gal.)

- Check oil level at dipstick (A or B) after filling. Make sure that level is up to full mark. Check again after operating for 5 minutes. Refill oil if needed.

A—Hydraulic Oil Level Dipstick B—Transmission Oil Level Dipstick



PUC5055 —UN—06OCT10

N400041,0002011 -19-11MAR15-1/1

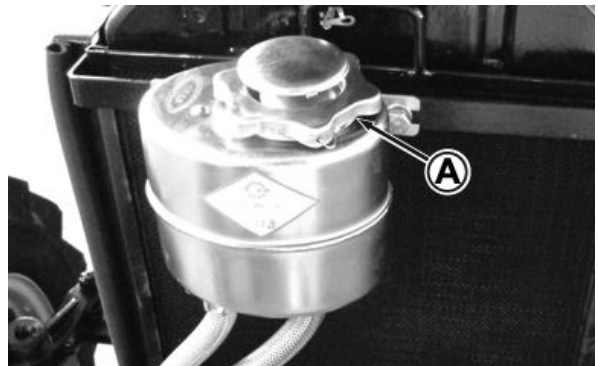
Checking Steering System Hydraulic Oil Level

- Remove filler cap (A).
- Check oil level in hydraulic oil reservoir.
- Fill in hydraulic oil if necessary.

Specification

Hydraulic steering
hydraulic oil -
304 and 2C-354
tractors—Capacity..... 1.8 L (1.90 qt.)
Mechanical steering
gear oil - 300 and B350
tractors—Capacity..... 0.9 L (0.95 qt.)

A—Fill Port Cap



PUC5198 —UN—13JAN11

N400041,0002012 -19-22FEB16-1/1

Changing Steering System Hydraulic Oil

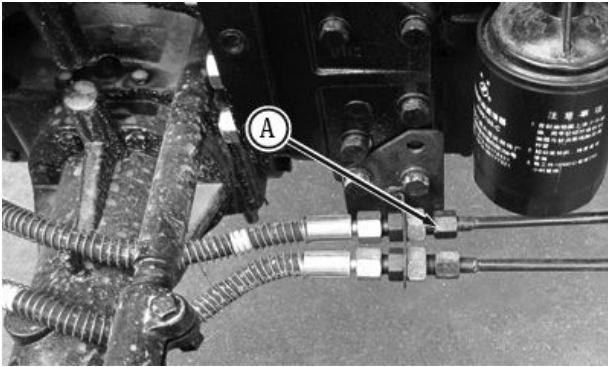
Service interval — 1000 hours

1. Drain steering system hydraulic oil. For MFWD model, oil can be drained through steering oil line connector (A) into a suitable container; For 2WD model, oil can be drained through steering oil line connector (B) into a suitable container.
2. Remove fill port cap (C) and fill in hydraulic oil.

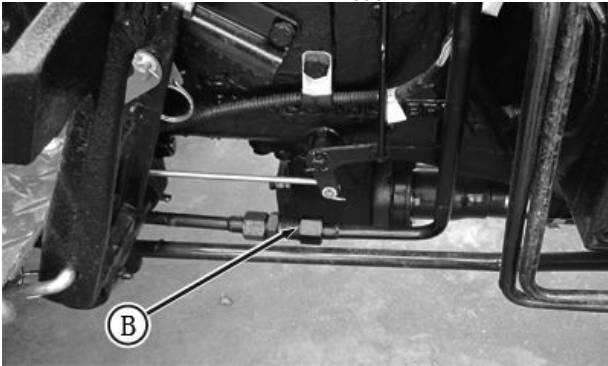
Specification

Steering System	
Hydraulic Oil—Capacity.....	1.8 L (1.90 qt.)
Mechanical Steering	
Gear Oil—Capacity.....	0.9 L (0.95 qt.)

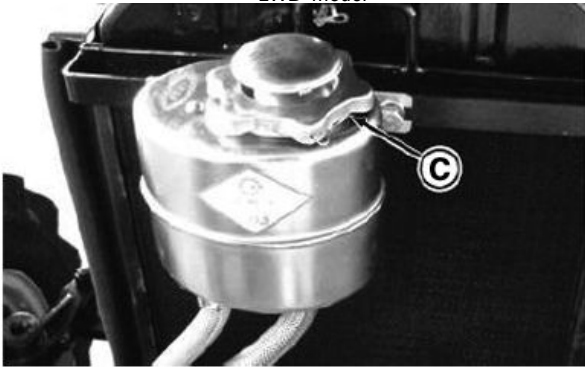
A—MFWD Steering Oil Line Connector	C—Steering System Hydraulic Oil Fill Port Cap
B—2WD Steering Oil Line Connector	



MFWD model



2WD model



N4A0000007 —UN—29MAR12

N4A0000008 —UN—29MAR12

N4A0003909 —UN—12FEB15

N400041,0002013 -19-22FEB16-1/1

Changing MFWD front axle housing oil

Service interval — 1000 operating hours Once, first 100 operating hours

1. Park tractor on level ground to assure correct oil level when filling.
2. Remove drain plugs (B) and (C). Drain oil.
3. Install drain plugs (B) and (C).
4. Remove oil dipstick (A). Fill differential housing with John Deere Hy-Gard™ gear lubricant. (Refer to chapter "Fuel, lubricants and coolant".)

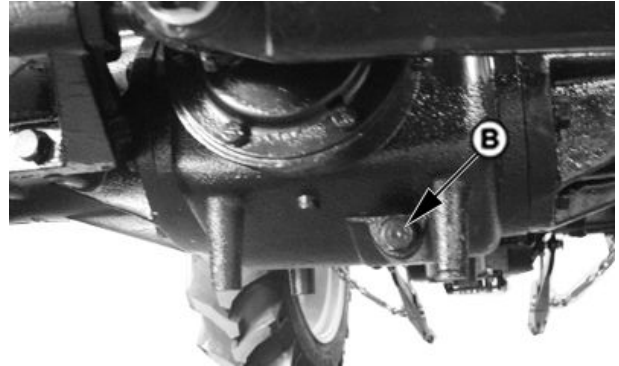
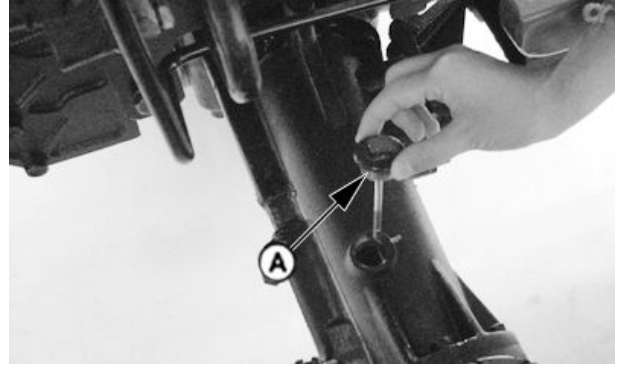
Specification

MFWD front axle housing oil (1200 tread)—Capacity.....	5.5 L (1.45 gal.)
MFWD front axle housing oil (1300 tread)—Capacity.....	6 L (1.58 gal.)

IMPORTANT: Check oil level after 30 minutes. Engine oil flows slowly through bearing and front axle housing. Refill oil as needed.

A—Oil dipstick
B—Drain plug

C—Drain plug



Hy-Gard is a trademark of Deere & Company.

N400041,0002014 -19-11MAR15-1/1

PUC1892 —UN—13FEB09

PUC1883 —UN—27FEB09

PUC1887 —UN—02MAR09

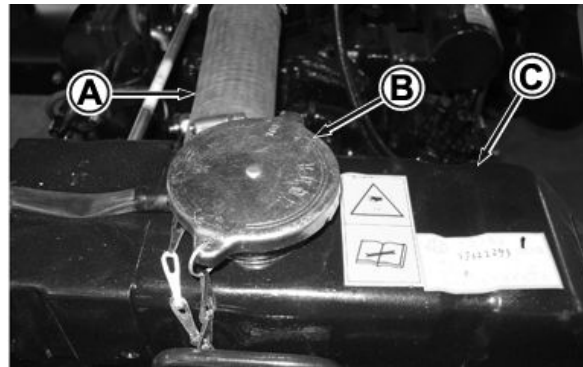
Maintenance — Cooling System

Engine cooling system components

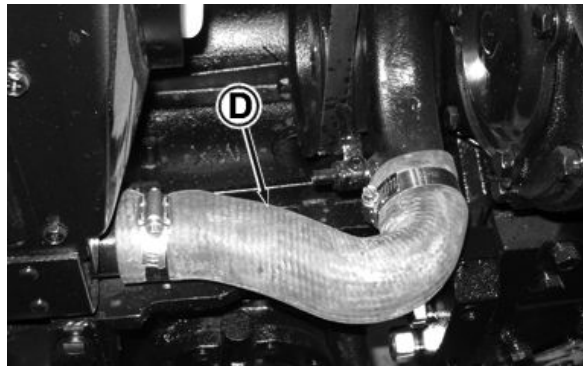
IMPORTANT: Never pour cold water into the cooling system of hot engine. Otherwise, cylinder block or head may crack. Never operate engine without coolant, not even for a few minutes.

If additional coolant is needed, add coolant into radiator assembly (C). (Refer to section "Check coolant level" in this chapter.)

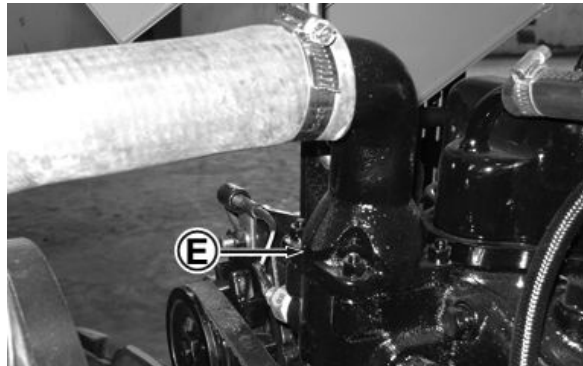
- | | |
|-----------------------------|------------------------------|
| A—Radiator water inlet hose | D—Radiator water outlet hose |
| B—Radiator cap | E—Thermostat housing |
| C—Radiator assembly | F—Radiator drain plug |



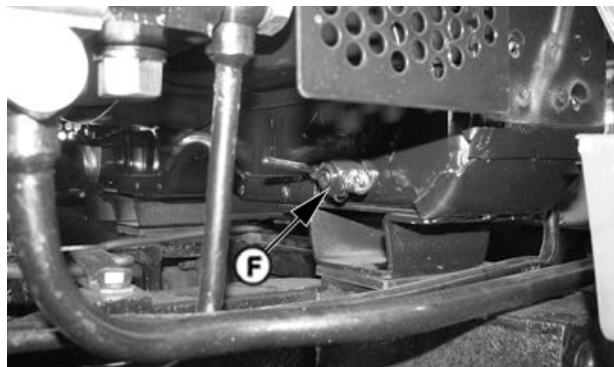
PUC5199 —UN—13JAN11



PUC5200 —UN—13JAN11



PUC5201 —UN—13JAN11



PUC1787 —UN—16JAN09

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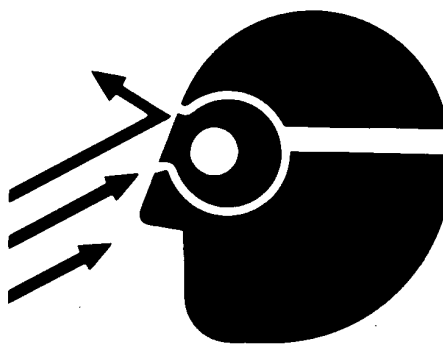
Clean front grille and radiator

1. Whenever trash builds up on front grille (A), stop engine and clean it with a brush.

CAUTION: Compressed air pressure should not exceed 210 kPa (2 bar) (30 psi) when used for cleaning. Bystanders should stay away. Guard against flying fragments and wear personal protective equipment, including protective eyewear.

2. Lift engine hood and check if trash has built up on radiator. If there is any trash, carefully remove it with a brush or compressed air.
3. To clean more thoroughly, use compressed air or water to clean from the rear of radiator. Straighten any bent fins.

A—Front grille



N400041,0002016 -19-11MAR15-1/1

T5266 —UN—23AUG88

PUC5056 —UN—06OCT10

Check coolant level

Service interval — 10 operating hours

CAUTION: Do not remove reservoir cap until coolant is cooled down. Always remove reservoir cap slowly to release excessive pressure.

Check that coolant is up to full level in radiator. If not, add coolant in radiator. (Refer to chapter "Fuel, lubricants and coolant".)

N400041,0002017 -19-11MAR15-1/1

Check cooling system for leakage

Service interval — 500 hours

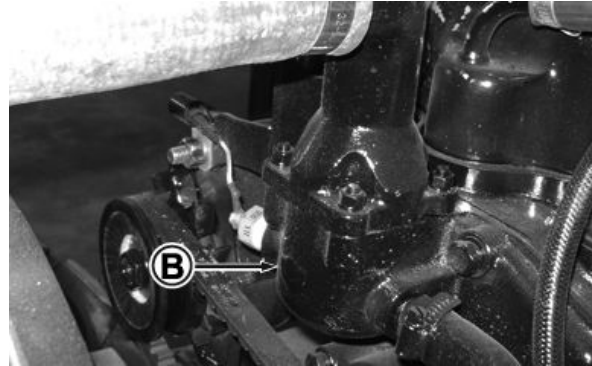
1. Check area around the base of radiator assembly (A) for holes or places where coolant may leak.
2. Inspect area around thermostat housing gasket (B) for any sign of coolant leakage.

A—Radiator assembly

B—Thermostat housing gasket



PUC5057 —UN—06OCT10



PUC5202 —UN—13JAN11

N400041,0002018 -19-11MAR15-1/1

Flushing Cooling System

Service interval — Every 2 years or every 2000 operating hours

For efficient machine operation, drain old coolant, flush the entire system, and fill in clean antifreeze solution at least once every 2 years.

CAUTION: Never remove radiator cap or drain coolant before coolant is cooled down. Slowly loosen radiator cap to release excessive pressure.

1. Drain coolant. Remove radiator cap (A). Open drain plug (B) on radiator and install a drain hose. Lead the hose into a container and drain coolant from radiator. Open drain plug (C) in order to drain coolant from engine block.

IMPORTANT: Thermostat must be removed to ensure thorough flushing.

2. Remove thermostat housing (D). Remove thermostat and install cover (without thermostat). Tighten cover bolts according to technical specifications.

Specification

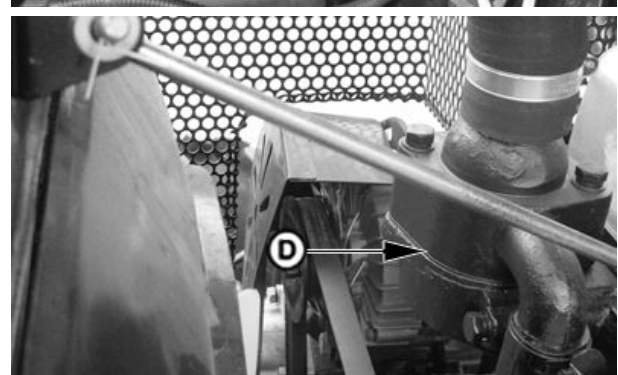
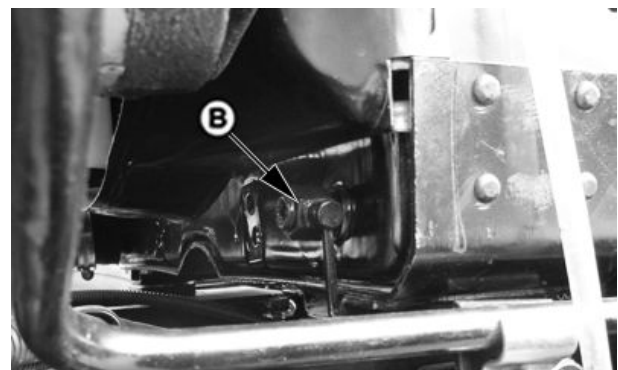
Thermostat housing
cover bolt—Torque..... 70 N.m (52 lb.-ft.)

3. Flush system with water — Close all drain valves/plugs and fill system with clean water. Run engine for about 10 minutes to stir up possible rust or sediment. Before rust and sediment settle, switch off engine and drain water from system.
4. Flush system with radiator cleaner — close all drain valve/plugs and fill cooling system with quality commercial radiator cleaner and water. Follow cleaner usage instructions. Switch off engine and immediately drain system.
5. Flush system with water — Close all drain valves/plugs and fill in clean water to flush the system. Run engine for about 10 minutes. Then, drain flushing water.
6. Remove thermostat cover and clean off the old gasket. Apply gasket sealant to new gasket. Install thermostat and cover. Tighten cover bolt according to technical specifications.

Specification

Thermostat housing
cover bolt—Torque..... 70 N.m (52 lb.-ft.)

7. Fill in new coolant — Close all drain valves/plugs and fill in a mixture of antifreeze, soft water and coolant conditioner as stated in chapter "Fuel, lubricants and coolant".
8. Check coolant level — Fill radiator up to filler neck top. Run the engine until it reaches operating temperature. Cool down engine (preferably overnight) and check coolant level again. Coolant level with a cold engine should be at the bottom of filler neck.



A—Radiator cap
B—Radiator drain plug

C—Engine block drain plug
D—Thermostat cover

Continued on next page

N400041,0002019 -19-11MAR15-1/2

PUC5068—UN—06OCT10

PUC1902—UN—13FEB09

PUC1984—UN—27FEB09

PUC1903—UN—13FEB09

9. When filling cooling system, several rounds of operating/cooling are needed to stabilize coolant level

in the system. Add additional coolant to radiator as needed, so that coolant is at the correct level.

N400041,0002019 -19-11MAR15-2/2

Maintenance in Winter

1. Use winter lubricant and fuel.
2. During storage, add antifreeze into cooling water.
Drain cooling water without antifreeze.

3. Follow winter start-up procedure.
4. Park tractor in windproof and warm shed.

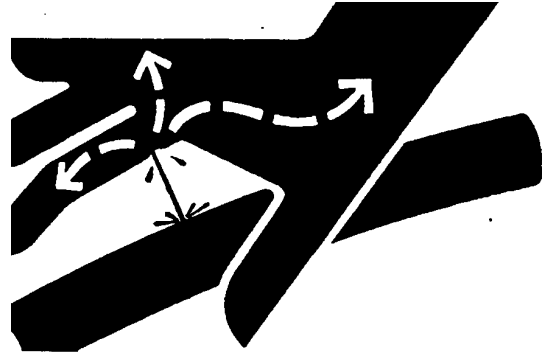
N400041,000201A -19-11MAR15-1/1

Maintenance — Fuel System

Bleed fuel system

CAUTION: Ejected fluid under pressure can penetrate the skin and cause serious injury. To avoid injury, release pressure from system before disconnecting hydraulic oil lines. Use cardboards to check for leaks. Protect hands and body from high pressure fluids.

If an accident occurs, seek medical attention immediately. Any fluid injected into skin must be removed surgically within a few hours or gangrene can result. Doctors who are unfamiliar with this type of injury should refer to relevant medical books. Such information is available from Deere and Company Medical Center in Moline, Illinois, USA.



Once the fuel system has been opened for service (disconnecting pipes or removing filters), bleed air from the system.

N400041,000201B -19-11MAR15-1/3

X9811—UN—23AUG88

To bleed the system at fine filter, carry out following steps:

1. Use hand to turn bleed screw (A) in fine filter for two rounds to open it.
2. Pump hand primer on fuel supply pump until a noticeable amount of fuel comes out of vent opening. Continue pressing. When fuel begins to flow out, tighten bleed screw.
3. Press hand pump several times until resistance is felt. Continue pressing and open bleed screw again.
4. Close bleed screw while still pressing hand pump. Continue pressing hand primer until resistance is felt again.



A—Bleed screw

N400041,000201B -19-11MAR15-2/3

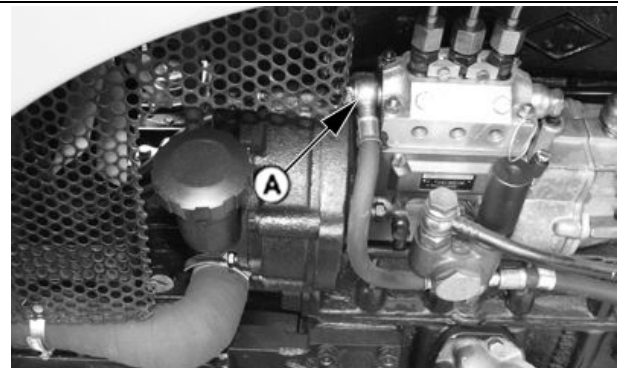
PUC5059—UN—07OCT10

To bleed fuel system at fuel injection pump, perform the following steps:

1. Loosen fuel inlet pipe (A) at fuel injection pump.
2. Loosen hand primer cap on fuel supply pump.
3. Operate hand primer on fuel supply pump.
4. As soon as fuel flow is free from air bubbles, tighten fuel return line to specification. Primer lever is spring loaded and will return to normal position automatically.

Specification

Oil inlet pipe—Torque..... 27 N.m (20 lb.-ft.)



A—Oil inlet pipe

N400041,000201B -19-11MAR15-3/3

PUC1905—UN—13FEB09

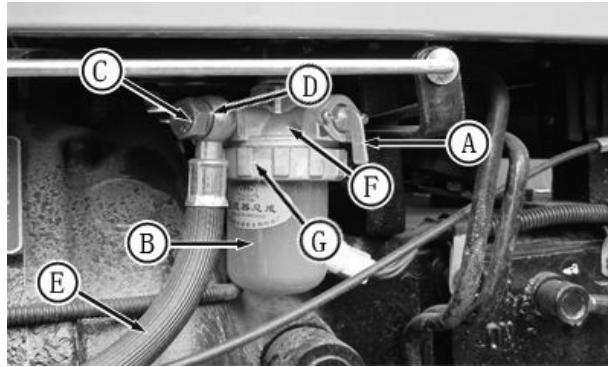
Checking Sediment Bowl

Service interval — Daily

Check sediment bowl. If water or sediment is found, follow below steps to clean:

1. Close sediment bowl switch (A). Status shown in diagram is OPEN.
2. Remove sediment bowl round nut (G).
3. Remove sediment bowl (B). Clean sediment bowl.
4. Install sediment bowl. Switch on the sediment bowl assembly switch.

- | | |
|---------------------------------|---|
| A—Sediment bowl assembly switch | E—Oil pipe from sediment bowl to fuel supply pump |
| B—Sediment bowl | F—Sediment bowl holder |
| C—Pipe screw | G—Sediment bowl round nut |
| D—Copper washers (2 pieces) | |



N4A0000074 —UN—23AUG12

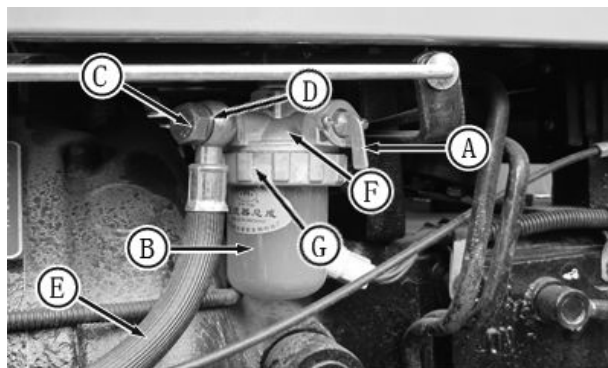
N400041,000201C -19-11MAR15-1/1

Replacing Sediment Bowl

1. Discharge diesel into an appropriate container.
2. Remove pipe screw (C) and copper washers (D).
3. Remove oil pipe from sediment bowl to fuel supply pump (E).
4. Remove sediment bowl holder (F).
5. Check all parts for wear or cracks. Replace them if necessary.

NOTE: When installing sediment bowl holder (F) into fuel tank assembly, 577 thread glue must be used.

6. To install sediment bowl holder, follow above steps in reverse order.
7. Fill fuel tank with correct fuel.
8. Bleed fuel system. (Refer to section "Bleed fuel system" in this chapter.)



- | | |
|---------------------------------|---|
| A—Sediment bowl assembly switch | E—Oil pipe from sediment bowl to fuel supply pump |
| B—Sediment bowl | F—Sediment bowl holder |
| C—Pipe screw | G—Sediment bowl round nut |
| D—Copper washers (2 pieces) | |

N4A0000074 —UN—23AUG12

N400041,000201D -19-11MAR15-1/1

Check and clean fuel tank vent filter

Service interval — 250 operating hours

CAUTION: Do not clean fuel tank vent filter before it is cooled down.

Check and clean fuel tank vent filter. Vent filter is located inside fuel tank filler port.

N400041,000201E -19-11MAR15-1/1

Draining Water and Sediment from Fuel Filter

Service interval — 250 hours

Place drain plug (A) on right side bottom of fuel tank. Place suitable container under drain plug and loosen plug. When fuel starts to run clear, tighten drain plug.

A—Drain plug



PUC1906 —UN—13FEB09

N400041,000201F -19-11MAR15-1/1

Changing Fuel Filter

Service interval — 500 hours¹

1. Thoroughly clean fuel filter assembly and its surrounding.
2. Remove fuel filter (B).
3. Check the cleanliness of filter mounting base. Clean it when needed.
4. Thoroughly check the seal ring of filter base (A). Replace it when needed.
5. While replacing a new fuel filter (B), fill clean fuel into fuel filter and add some lubricant on the seal ring of fuel filter. Remember to install the fuel filter within 15 minutes after adding lubricant.
6. Install new filter element onto mounting base. Then, tighten it for about 1/2-3/4 turn. Never over tighten lock ring, so as to avoid damage to threads and seal ring.

¹Service interval may vary according to operating conditions.



A—Filter base

B—Fuel filter

7. Bleed fuel system. (Refer to section "Bleed fuel system" in this chapter.)

PUC5060 —UN—07OCT10

N400041,0002020 -19-11MAR15-1/1

Never Modify Fuel System

IMPORTANT: 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. (Refer to warranty information on front cover.)

DO NOT attempt to service injection pump or fuel injectors yourself. Special training and special tools are required for such tasks. (Please contact John Deere dealer.)

N400041,0002021 -19-11MAR15-1/1

Maintenance — Electrical System

Observe service precautions of electrical system

CAUTION: Keep batteries away from sparks or flames as gas released by electrolyte is highly explosive. When using booster batteries, observe the instructions in section "Operation of the engine".

To avoid shocks and burns, disconnect negative (-) cable (B) before servicing any parts of the electrical system. Then, remove positive (+) cable (A) if battery is to be removed.

Keep all electrical shields in place.

A—Positive (+) battery cable B—Negative (-) battery cable



TS204—UN—15APR13

N4A0003897—UN—16NOV14

N400041,0002022 -19-11MAR15-1/1

Adjust Alternator / Fan Belt

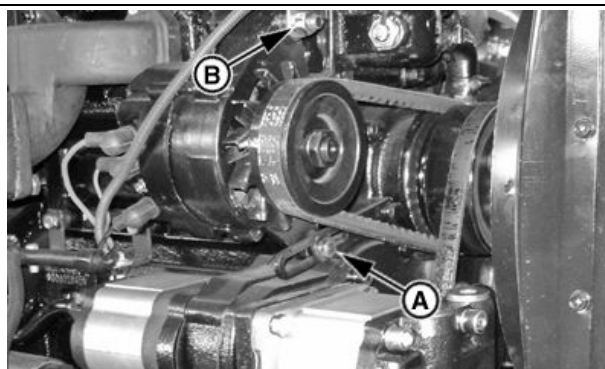
Service interval — 250 hours

Replace belt if worn or damaged. (Refer to "Change alternator / fan belt" in this section.)

NOTE: Run engine for 5 min. to warm a cold belt. Let the hot belt cool for 15 min. before adjustment.

Check belt tension by pressing belt midway between pulleys. Belt should deflect about 10-15 mm.

Adjust tension by loosening mounting nut (B) first, then adjusting cap screw (B). Apply force on alternator frame until tension is correct. Tighten adjusting cap screw (A) first, then alternator mounting nut (B).



A—Tension adjusting cap screw

B—Alternator mounting nut

PUC5170—UN—08NOV10

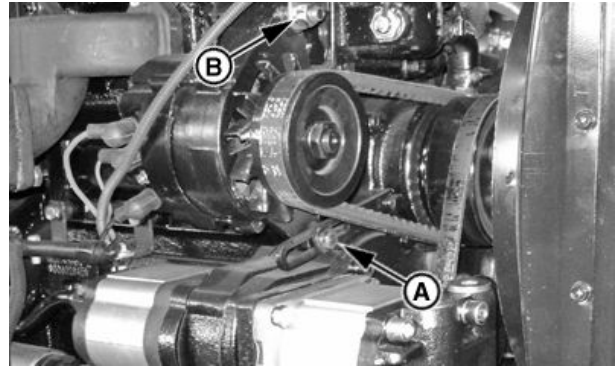
N400041,0002023 -19-11MAR15-1/1

Changing Alternator / Fan Belt

1. Loosen tension adjusting cap screw (A) and alternator mounting nut (B). Rotate alternator to loosen the belt.
2. Remove belt from drive pulley.
3. To remove belt, pull it out around the fan.
4. To install new belt, follow steps of removal in reverse order.
5. Adjust belt tension. (Refer to section "Adjusting alternator / fan belt" in this chapter.)

A—Tension adjusting cap screw

B—Alternator mounting nut



PUC5170 —UN—08NOV10

N400041,0002024 -19-11MAR15-1/1

Battery location

Battery is in front of radiator.

To gain access to the battery, lift engine hood.



N4A0003896 —UN—18NOV14

N400041,0002025 -19-11MAR15-1/1

Battery Charging

Keep battery fully charged, especially during cold weather.

! CAUTION: Gas released by battery can lead to explosion. Keep battery away from sparks and flames. Before connecting or disconnecting battery charger, switch off charger first. Make last connection and disconnection at a point away from battery.

1. Switch OFF the charger. Connect positive battery charger lead to positive (+) battery terminal. Fix negative charge lead to tractor frame, away from the battery.
2. Switch ON the charger to charge battery again. When using charger, follow the instructions of battery manufacturer. Check battery condition as described below.
3. Disconnect battery charger. Switch OFF charger. Remove negative charger lead first, then remove positive lead.

A—Positive (+) battery terminal B—Negative (-) battery terminal



N400041,0002026 -19-11MAR15-1/1

TS204 —UN—15APR13

N4A0003897 —UN—16NOV14

Clean the battery

Service interval — 50 operating hours

To use battery, refer to relevant procedures in this chapter.

Set shift lever at neutral position. Lock brake pedals and apply parking brake.

Push hand throttle all the way forward. Allow engine to idle for 1-2 minutes. Switch off engine.

Use a damp cloth to wipe battery. Clean and tighten connecting parts, if needed.



N400041,0002027 -19-11MAR15-1/1

N4A0003896 —UN—16NOV14

Check battery condition

Service interval — 50 operating hours

CAUTION: Gas released from battery may cause an explosion. Keep batteries away from sparks or flames. 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 to check.

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

1. Use battery hydrometer to check the electrolyte specific gravity of each unit. 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 the 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.



TS204 —UN—15APR13

N400041,0002028 -19-11MAR15-1/1

Remove battery

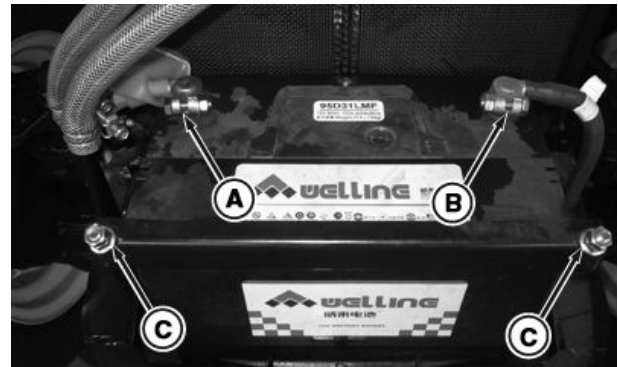
1. Lift engine hood.

CAUTION: To avoid sparks, disconnect negative (ground) cable first and connect it last.

2. Disconnect battery negative (-) cable, then disconnect positive (+) cable.
3. Remove nuts (C) and remove holding bracket.
4. Remove batteries from machine.

A—Battery positive (+) cable
B—Battery negative (-) cable

C—Battery mounting nuts (2 pieces)



N4A0003898 —UN—16NOV14

N400041,0002029 -19-11MAR15-1/1

Replace batteries according to required technical specifications

When replacing battery, please use John Deere battery or similar products. Please contact your John Deere dealer.

Specification

Battery—Voltage..... 12 volts
Cold cranking amps at
-18°C (0°F) 320 amp

N400041,000202A -19-11MAR15-1/1

Service battery

1. Use a damp cloth to wipe battery. Keep battery clean. 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 (grounding) cable first and connect it last.

2. Keep battery fully charged, especially during cold weather. If battery charger is connected, connect positive cable to 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 lubricating grease.



A—Positive (+) battery terminal B—Negative (-) battery terminal

N400041,000202B -19-11MAR15-1/1

N4A0003897 —UN—16NOV14

Adjust headlights

IMPORTANT: Before startup, apply penetrating spray lubricant to the threads of adjusting screws. Otherwise, it is difficult to turn adjusting screws in either direction.

1. Turn screw (A) counterclockwise and turn screws (B and C) clockwise to lower beam; Turn screw (A) clockwise and turn screws (B and C) counterclockwise to raise beam.
2. To adjust beam towards middle of tractor, turn screws (A and B) counterclockwise and turn screw (C) clockwise for a equal number of turns.
3. To adjust beam towards sides of tractor, turn screws (A and B) clockwise and turn screw (C) counterclockwise for a equal number of turns.



A—Headlight adjusting screws (2 pieces) C—Headlight adjusting screws (2 pieces)
B—Headlight adjusting screws (2 pieces)

N400041,000202C -19-11MAR15-1/1

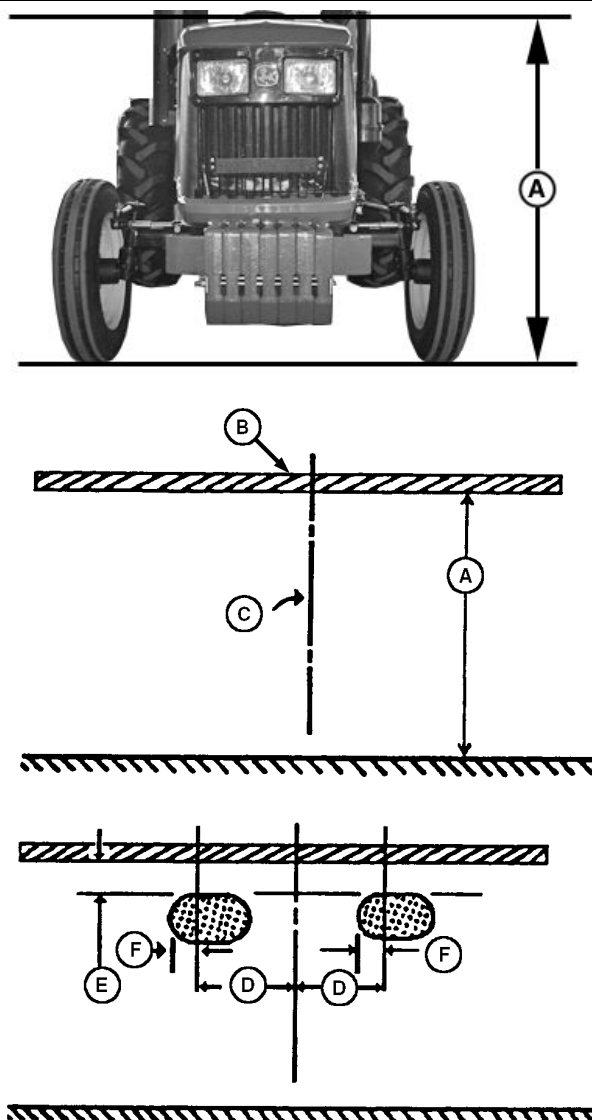
N4A0003903 —UN—24NOV14

Aiming Headlights

1. Park tractor on level ground, with lights 8 m (25 ft.) from the wall.
2. Measure the distance from engine hood top to the ground (A). Place a strip of tape (B) on the wall at the same height.
3. Place a piece of tape, folded in the middle, on the top front center of engine hood.
4. Using the engine hood tape as a guide, view across steering wheel and engine hood to locate tractor centerline. Mark tractor centerline (C) on the wall.
5. From tractor centerline (C), mark a point 130 mm (5 in.) out on each side (D). This mark locates a point directly in front of each headlight center.
6. Turn light switch to ROAD position. Then, set headlight dimmer switch to low beam.
7. Locate small zone of bright light projected by each light. Cover other lights if needed. 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 the marked light location (D).
8. To adjust headlights, refer to section "Adjust headlights" in this chapter.

A—Engine hood-to-ground distance
B—Masking tape
C—Tractor centerline

D—Headlight center
E—Top of zone
F—Left edge of zone



PUC5171 —UN—08NOV10

LV3020 —UN—10JUN99

N400041,000202D -19-11MAR15-1/1

Replace headlight bulbs

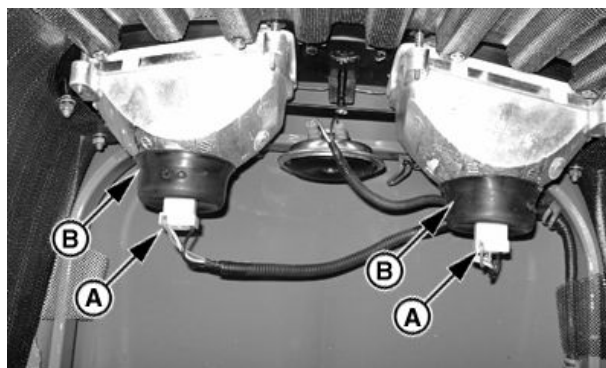
CAUTION: Halogen bulb is pressurized and may shatter. Protect bulb against abrasions and scratches.

To avoid personal injury, wear protective eyewear and clothing when handling bulbs. Turn off power before installing or removing bulbs. Handle bulbs with care.

Let bulb cool down before removal.

Read and follow the installation instructions of bulb manufacturer.

1. Lift engine hood.
2. Disconnect connectors (A).
3. Remove covers (B) and light assembly.
4. Replace bulb. Install light assembly and covers (B).



A—Connectors (2 pieces)

B—Covers (2 pieces)

5. Connect connectors (A).

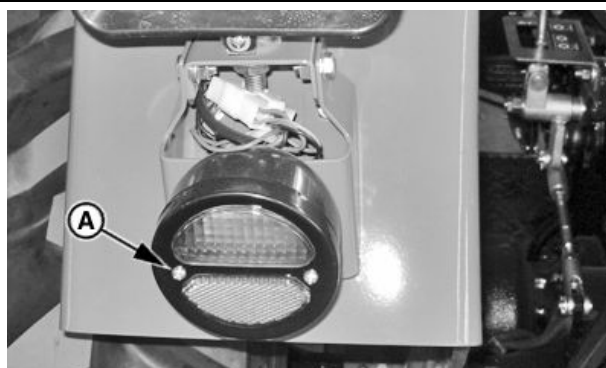
N400041,000202E -19-11MAR15-1/1

PUC5168 —UN—08NOV10

Replacing Taillight / Rear Turn Signal Light / Brake Light Bulbs

1. Remove screws (A) and lens.
2. Remove warning light bracket.
3. Remove taillight bracket.
4. Install new bulb.
5. Install lens and screws (A).

A—Screws (2 pieces)



N400041,000202F -19-11MAR15-1/1

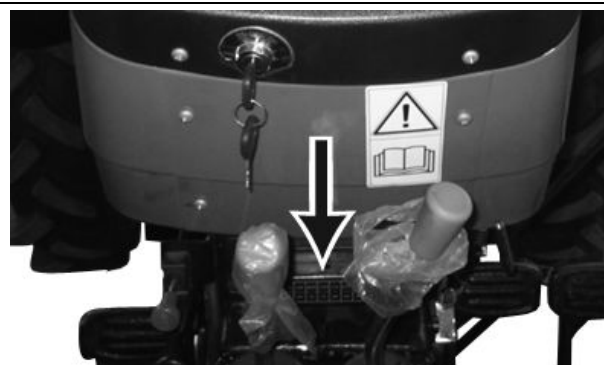
PUC5172 —UN—08NOV10

Locate fuses

All fuses are in fuse box. All electrical circuits have fuse protection. Each fuse has a rated current value sign and corresponding color code, to facilitate fuse replacement.

Fuse rating	Color
10 amp	Yellow/Red
20 amp	Red
30 amp	Red/Blue

IMPORTANT: DO NOT replace original fuse with higher rated fuse or machine damage may occur. If original fuse cannot carry electrical load and continues to blow, contact John Deere dealer to check the machine electrical system.



N400041,0002030 -19-11MAR15-1/1

N4A0003905 —UN—24NOV14

Fuse Specifications and Functions**Mechanical Pump Model**

A—10 Amp — Steering Fuse
B—10 Amp — Instrument Fuse

C—15 Amp — Brake Fuse
D—15 Amp — Worklight Fuse
E—20 Amp — Light fuse

F—15 Amp — Hazard Warning Fuse
G—10 Amp — Horn Fuse

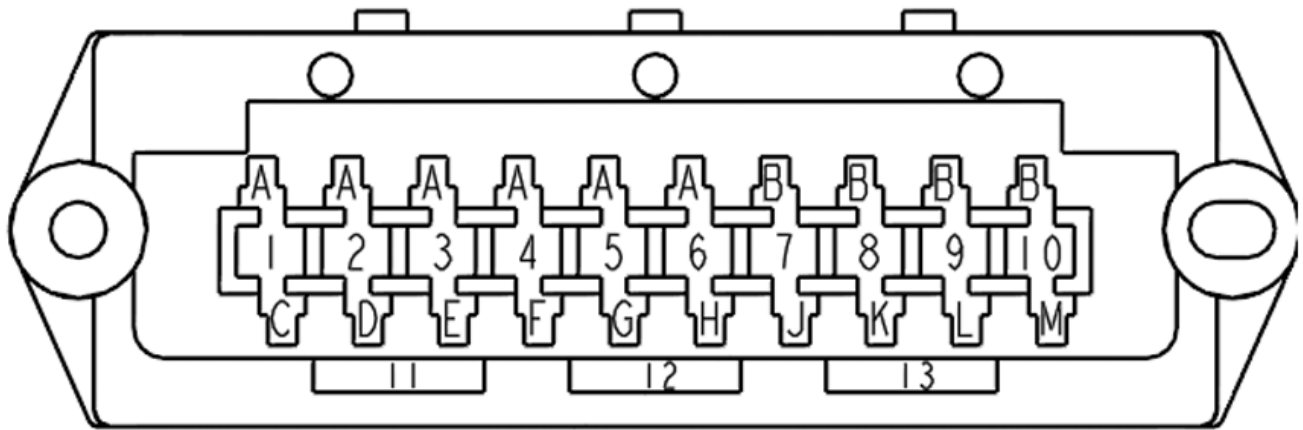
H—30 Amp — Main Power Fuse

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N400041,0002031 -19-25JAN16-1/2

N4A0003904 —UN—24NOV14

Electric Pump Model



- | | | | |
|---------------------------------|-----------------------------|---------------------------|--------------------|
| 1— 15 Amp — Hazard Warning Fuse | 4— 20 Amp — Light Fuse | 8— 10 Amp — Steering Fuse | 12— 15 Amp — Spare |
| 2— 5 Amp — Horn Fuse | 5— 20 Amp — Main Power Fuse | 9— 10 Amp — Brake Fuse | 13— 20 Amp — Spare |
| 3— 15 Amp — ECU Warning Fuse | 6— 15 Amp — Worklight Fuse | 10— 5 Amp — ECU Key Fuse | |
| | 7— 10 Amp — Instrument Fuse | 11— 10 Amp — Spare | |

N400041,0002031 -19-25JAN16-2/2

N4A0004351 —UN—25JAN16

Troubleshooting

Gearbox troubleshooting

Symptom	Problem	Solution
Transmission oil overheats	Oil supply is low	Refill correct oil
	Transmission oil filter clogged	Change filter
	Hydraulic system internal leak	Please contact John Deere dealer
	Engine oil cooler is dirty or blocked	Clean or flush engine oil cooler
Transmission oil pressure is low	Oil supply is low	Fill system with correct oil
	Transmission oil filter clogged	Change filter
	Pressure relief valve is defective	Check valve, replace if necessary
Gearbox is stuck at neutral position or difficult to shift gear	Shift fork is deformed	Change shift fork
	Shift fork lock spring is weak	Replace spring
	Gear or spline is worn	Replace parts
Clutch slips	Compression spring is weak	Replace spring
	Clutch pedal free stroke is short	Adjust free stroke
	Clutch fingers are not at same level	Adjust clutch fingers
Clutch has vibrating noise	Front clutch bearing is damaged	Replace bearing
	Parts are worn	Replace worn parts
PTO shaft stops when clutch is disengaged	Clearance between main clutch pressure plate and adjustment nut is too small	Adjust clearance to 1.5±0.05 cm
Oil leaks on clutch housing	Oil seal at engine flywheel end is damaged	Replace oil seal
Abnormal noise in gearbox	Worn or damaged gearbox bearing or roller bearing	Check and replace bearings
	Lubricant is insufficient	Add lubricant
	Gears are not properly meshed	Check parts and clearance. Please contact John Deere dealer

N400041,0002032 -19-11MAR15-1/1

Hydraulic system troubleshooting

Symptom	Problem	Solution
Entire hydraulic system does not function	Oil supply is low	Fill system with correct oil
	Hydraulic oil filter clogged	Change filter
	High-pressure system internal leak	Please contact John Deere dealer
	Hydraulic pump lines are connected improperly	Please contact John Deere dealer
Hydraulic oil overheats	Oil supply is low	Fill system with correct oil
	Transmission/Hydraulic oil filter is blocked	Change filter
	Hydraulic system internal leak	Please contact John Deere dealer
	Hitch feedback linkage device is adjusted improperly	Reset linkage device. Please contact John Deere dealer
	Engine oil cooler is dirty or clogged	Clean or flush oil cooler
Cannot lower implement	Rate-of-drop valve is clogged	Clean valve
Implement vibrates when being lifted	Oil hose connection is loose	Tighten hoses
	Air is in hydraulic system	Bleed hydraulic system

N400041,0002033 -19-11MAR15-1/1

Braking system troubleshooting

Symptom	Problem	Solution
Brake failure	Brake plates or friction disks are contaminated	Clean brake plates and friction disks
	Brake plates or friction disks are worn	Replace worn parts
	Free stroke is too much	Adjust free stroke
Tractor deflects upon braking	Free stroke of both pedals is uneven	Adjust free stroke
Cannot release brake completely	Brake assembly on one side is contaminated with oil	Clean brake assembly
	Return spring is weak	Replace spring
	Clearance between brake plates and friction disks is incorrect	Adjust clearance
	Free stroke is too less	Adjust free stroke
Pedals descend	Rear brake piston seal ring leaks	Please contact John Deere dealer
Pedal stroke is too much	Pedals are adjusted improperly	Please contact John Deere dealer
Brakes drag during transport	Brakes are adjusted improperly	Please contact John Deere dealer

N400041,0002034 -19-11MAR15-1/1

Lifter and 3-point hitch troubleshooting

Symptom	Problem	Solution
Transport ground clearance is not enough	Upper lever is too long	Adjust upper lever
	Oblique lever is too long	Adjust oblique lever
	Implement is not leveled	Level implement
	Implement is adjusted improperly	Refer to implement operator's manual
	Put front end of upper lever into upper hole	Move upper lever to lower hole
	Anti-sway chain is adjusted too short	Lengthen anti-sway chains
Hitch drops slowly	Lifter rate-of-drop is not properly set	Adjust descending speed control knob
Hitch cannot lift or lifts slowly	Load on hitch is too much	Reduce load
	Engine oil level is low	Fill system with correct oil
	Hydraulic oil is too cold	Warm up oil
	Transmission/Hydraulic oil filter is blocked	Change filter
Implement does not operate at required depth	Oblique lever is too short	Adjust oblique lever
	Digging depth is not enough	Refer to Implement operator's manual
	Stopper block is set improperly	Reset stopper block
	Draft control lever is not properly set	Refer to section "Lifter and 3-point hitch"
Cannot carry load or no response from hitch	Put front end attachment of upper lever into upper hole	Move upper lever attachment to lower bracket hole
	Traction control knob is at "Min" position	Pull up the knob
	Oblique lever is too short	Adjust oblique lever
	Digging depth is not enough	Refer to implement operator's manual
	Rate-of-drop is too slow	Adjust descending speed control knob
Hitch is too responsive	Front end attachment of upper lever is in lower bracket hole	Move upper lever attachment to upper bracket hole
	Traction sensor is not adjusted properly	Push knob down

Continued on next page

N400041,0002035 -19-11MAR15-1/2

Troubleshooting

Symptom	Problem	Solution
Hitch drops too fast	Descending speed is set too fast	Adjust descending speed control knob
Rocker arm shaft control lever drifts and lever is loose	Friction discs are loose	Adjust rocker shaft control lever friction. Refer to procedures in "Rocker arm shaft and 3-point hitch" or contact your John Deere dealer

N400041,0002035 -19-11MAR15-2/2

Electrical system troubleshooting

Symptom	Problem	Solution
Battery does not charge	Connection is loose or corroded	Clean and tighten connector
	Battery is sulfated or worn out	Check electrolyte level and specific gravity
Charging system indicator is on while engine is running	Alternator/Fan belt is loose or defective	Adjust belt tension or replace belt
	Engine speed is low	Increase speed
	Battery failure	Check electrolyte level and specific gravity
	Alternator failure	Please contact John Deere dealer
	Alternator/Fan belt slips	Adjust belt tension
Starter cannot work	Shift lever is in gear	Move shift lever to neutral
	PTO lever is at engaged position	Move PTO lever to neutral
	Battery output voltage is too low	Please contact John Deere dealer.
	Fuse blows	Replace fuse
Starter starts too slow	Battery output voltage is too low	Check electrolyte level and specific gravity
	Crankcase oil is too thick	Use engine oil of correct viscosity
	Connection is loose or corroded	Clean and tighten battery connection
Lighting system does not function; Rest of electrical system functions Entire electrical system does not work	Fuse blows	Replace fuse
	Fusible link blows	Please contact John Deere dealer
	Battery connection failure	Clean and tighten connector
	Battery is sulfated or worn out	Check electrolyte level and specific gravity
	Fuse blows	Replace fuse
Relay is stuck or malfunctions; Failure repeats Battery temperature is high	Diode failure	Please contact John Deere dealer
	Short circuit between battery terminals	Remove deposits. Change clamps
	Charging current is too large	Check and adjust alternator. Adjust electrolyte level
Alternator output current is not stable	Spring pressure is weak / Carbon brush is of bad contact	Repair or change alternator

Continued on next page

N400041,0002036 -19-11MAR15-1/2

Troubleshooting

Symptom	Problem	Solution
Alternator has abnormal noise	Terminals are loose	Tighten terminals
	Alternator bearing is damaged	Replace bearing
	Rotor touches stator or other materials	Adjust to correct position

N400041,0002036 -19-11MAR15-2/2

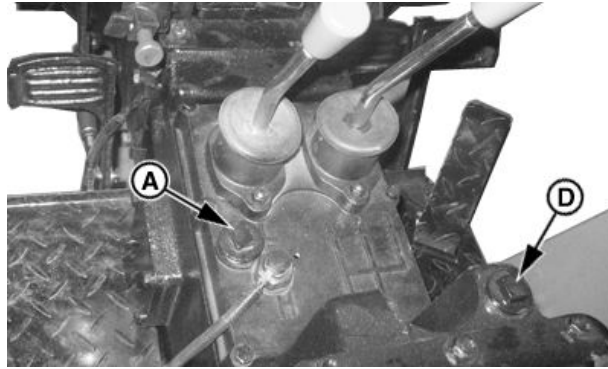
Storing

Tractor storage

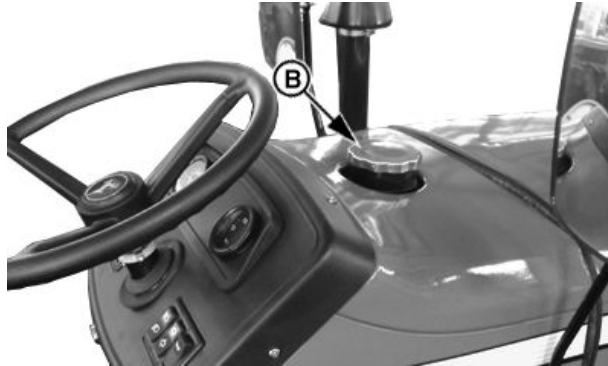
IMPORTANT: If tractor is not in use for several months, follow this procedure to minimize corrosion and deterioration.

1. Service air filter. (Refer to section "Service air filter" in chapter "General maintenance and inspection".)
2. If coolant has been in tractor for two years, flush cooling system. (Refer to section "Flush cooling system" in chapter "Maintenance — cooling system".) Add a mixture of antifreeze and water in ratio 1:1. Test coolant for adequate cold weather protection.
3. Check engine oil and engine oil filter. (Refer to section "Change engine oil and filter" in chapter "Lubrication".)
4. Drain fuel tank. Add back 4 L (1 gal.) of fuel. Then, add 0.4 L (12 oz.) of corrosion inhibitor.
5. Remove transmission oil dipstick (A) and hydraulic oil dipstick (D). Add 0.25 L (8.45 oz.) of corrosion inhibitor through the hole to transmission and hydraulic systems.
6. Press clutch and start engine. Run engine until it reaches operating temperature. Also, lift and lower rocker shaft for several times. Switch off engine.
7. Remove filler cap (B). Add 0.5 L (16 oz.) of corrosion inhibitor to fuel tank.
8. Remove filler cap (C). Add 0.5 L (16 oz.) of corrosion inhibitor to engine crankcase.
9. Remove air intake hose at manifold. Pour 0.1 L (3 oz.) of corrosion inhibitor into manifold. Replace hose. Push hand throttle forward to slow idling speed position. Turn engine crankshaft for a few turns.
10. After it is cooled down, loosen alternator / fan belt.
11. Remove and clean battery. Store it in a cool and dry place. Keep battery charged.¹
12. Use ties or block to secure clutch pedals in disengaged position.
13. If adjustable front axle extends, smear lubricating grease or corrosion inhibitor on exposed metal surfaces.
14. Use tape to seal exhaust pipe, crankcase filter / aspirator, fuel cap and transmission / hydraulic system filter / cap.
15. Cover dashboard with opaque material to prevent gauges from fading.
16. Raise tires off ground. Protect them from heat and sunlight.

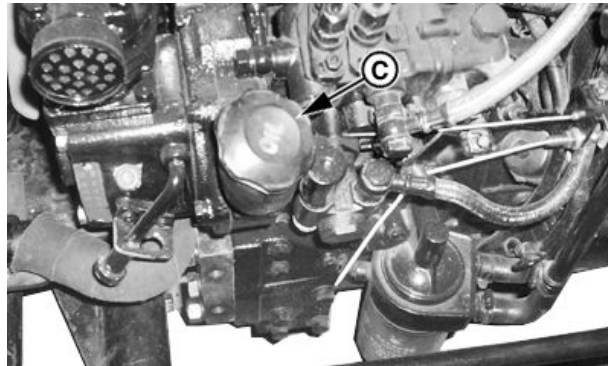
¹For short-term storage (20 to 90 days), disconnect battery ground cable connection.



PUC2878—UN—02MAR10



PUC5065—UN—07OCT10



PUC2879—UN—02MAR10

A—Transmission oil level dipstick
B—Fuel tank filler cap

C—Engine oil filler cap
D—Hydraulic oil level dipstick

17. Thoroughly clean tractor. Touch up any painted surfaces that are scratched or chipped.
18. If tractor must be stored outdoor, cover it with waterproof material.

N400041,0002037 -19-11MAR15-1/1

Start using tractor from storage

1. Check tire inflation pressure. (Refer to section "Wheels, tires and thread".) Lower tires onto ground.
2. Open sealed parts during storage. (Refer to section "Tractor storage" in this chapter.)
3. Install battery.
4. Remove ties or blocks used to fix clutch pedals.
5. Check engine oil level, transmission/hydraulic oil and engine coolant. Add fluids if needed.
6. Drain a small amount of fuel from fuel tank to remove any accumulated water condensation.
7. Fill fuel tank.
8. According to elapsed storage period, carry out all appropriate services listed in section "Maintenance and service intervals".
9. Turn keyswitch to RUN position. Check meters and indicators.

IMPORTANT: Never operate starter for over 20 seconds at a time. Before restart, wait for at least 2 minutes until it is cooled down.

10. Push hand throttle (A) forward. Press clutch pedals. Make sure that shift lever is at neutral position and PTO lever is at "disengaged" position.



A—Hand throttle

11. Start the engine. Run engine at low idling speed for several minutes. Before placing tractor under load, wait until engine reaches operating temperature. Check all systems.

N4A0003901 —UN—23NOV14

N400041,0002038 -19-11MAR15-1/1

Technical Specifications

Major Technical Parameters of Tractor

NOTE: Technical specifications and structural design are subject to change without notice.

Major technical parameters of tractor					
Parameters of whole machine					
Model		300		B350	
Type		2WD		304	
Dimensions (mm)	Length (including hitch)	3150 (124.01 in.)			
	Width	1500~1750 (59.05~68.89 in.)			1650~1750 (64.96~68.89 in.)
	Height (to top of exhaust pipe)	2030 (79.92 in.)		2050 (80.70 in.)	
	Height (to highest point of steering wheel)	1405 (55.31 in.)			
	Height (to highest point of protective structure)	2300 (90.55 in.)			
Tread Width (mm)	Front wheels (factory state)	(1200), 1300, 1400 [(47.24), 51.18, 55.11 in.]		Standard: 1200 (47.24 in.); Optional: 1300 (51.18 in.)	
	Rear Drive Wheel (factory status)	(1230), 1330,1430 [(48.42), 52.36, 56.29 in.]			(1330) , 1430 【 (52.36) , 56.29 】
Wheel Base (mm)		1570 (61.81 in.)		1627 (64.05 in.)	
Minimum Ground Clearance (mm)		345 (13.58 in.)		Standard: 250 (9.84 in.); Optional: 300 (11.81 in.) (front tank bottom)	
Mass (kg)	Structure Mass	1270 (50 in.)		1430 (56.29 in.)	
	Minimum Usage Mass	1410 (55.51 in.)		1580 (62.20 in.)	
Mass Distribution (%)	Front drive wheels	40		45	
	Rear drive wheels	60		55	
Counterweight Mass (kg)	Front Concrete Weight	Each piece 13 kg (28.66 lb) Standard: 0 piece; Optional: 7 or 8 pieces			
	Rear Concrete Weight	Each piece 40 kg (88.18 lb) Standard: 2 pieces; Optional: 0 or 4 or 6 pieces			
Tractor Theoretical Speed (km/h)					
Rear tire model		11.2-24 R-1			
Low Gear	I	1.6	1.7	1.6	1.7
	II	2.1	2.1	2.1	2.1
	III	3.4	3.4	3.4	3.4
	IV	6.5	6.7	6.5	6.7
High gear	V	7.6	7.7	7.6	7.7
	VI	9.5	9.8	9.5	9.8
	VII	15.5	15.9	15.5	15.9
	VIII	30.1	30.8	30.1	30.8
Reverse	I	1.5	1.6	1.5	1.6
	II	7.0	7.2	7.0	7.2
Note 1: Structure mass - not including oil, water, counterweight and 75 kg driver's mass; Minimum usage mass - structural mass + oil, water and 75 kg driver's mass.					
Note 2: Front concrete weight mass - each piece 13 kg; Rear concrete weight mass - each piece 40 kg.					
State 2 Engine					
Model		300		304	
Model no.		SL2108ABT-2		B350	
Type		304			
Air intake mode		B350			
Number of cylinders × cylinder diameter × stroke (mm)		2×108×117		2×110×117	
Displacement (L)		2.144		2.224	
12h Rated Power (kW)		22.1		25.7	
Rated Speed (r/min)		2200		2400	

Continued on next page

N400041,0002986 -19-03MAY16-1/4

Technical Specifications

Maximum Torque (N.m)		≥112.2		≥119.6	
Maximum Torque Speed (r/min)		1500 ~ 1680		1600 ~ 1800	
Minimum No-load Speed (r/min)		750±30			
Maximum No-load Speed (r/min)		≤2376		≤2592	
Calibrated conditions fuel consumption rate (g/kWh)		≤258 (as per GB 20891-2007)			
Drain		State 2 (as per GB 20891-2007)			
State 3 Engine					
Model		300	304	B350	2C-354
Model No.		SL2108DKT-1		SL2110DKT-3	
Type		Inline, water-cooled, four-stroke, direct injection combustion chamber			
Air intake mode		Natural intake			
Number of cylinders × cylinder diameter × stroke (mm)		2×108×117		2×110×117	
Displacement (L)		2.144		2.224	
12h Rated Power (kW)		22.1		25.7	
Rated Speed (r/min)		2200		2400	
Maximum torque (N.m)		≥112.3		≥120.2	
Maximum Torque Speed (r/min)		1400~1600		1500 ~ 1650	
Minimum No-load Speed (r/min)		750±30			
Maximum No-load Speed (r/min)		≤2376		≤2592	
Calibrated conditions fuel consumption rate (g/kWh)		≤250 (as per GB 20891-2014)			
Drain		State 3 (as per GB 20891-2014)			
Drive system					
Model		300	B350	304	2C-354
Engine and driveline connection mode		Direct drive			
Clutch		Dry type, constantly engaged, single disk, non-independent control, single-acting clutch			
Gearbox		Composition (4+1) ×2, 8 forward gears, 2 reverse gears, spur gears, sliding gear shifting			
Central Drive		Spiral bevel gears			
Differential		Closed type, two-planet straight bevel gear type			
Differential lock		Optional: Pin type, mechanical control			
Final drive		Built-in single stage outer mesh spur screw gear type			
Front drive axle					
Front drive transmission shaft		—		Middle-mounted type	
Front central drive		—		Spiral bevel gears	
Front differential		—		Closed type, two-planet straight bevel gear type	
Front final drive		—		Biconical gear type	
Drive transfer case		—		Spur screw gear type, with engage-disengage mechanism	
Ground driving, steering, braking systems					
Model		300	B350	304	2C-354
Ground driving system					
Frame		Without frame			
Front axle		Adjustable tread U-shaped retractable sleeve type		Fixed type	
Tire specifications	Front wheels	5.00-15 F-1		6.00-16 R-1 (optional 6.5-16 RP-1 paddy round)	
	Rear drive wheels	11.2-24 R-1 (Optional 9.5-24 PR-1 paddy round)		11.2-24 R-1 (optional 9.5-24 R-1) (optional 9.5-24 PR-1 paddy round) (optional 11.2-24 PR-1 paddy round)	
Tire Pressure (kPa)	Front wheels	165 ~ 220		120~160	
	Rear drive wheels	120 ~ 150			
Front Wheel Toe-In (mm)		3 ~ 11			
Steering system					

Continued on next page

N400041,0002986 -19-03MAY16-2/4

Technical Specifications

Steering gear type		Mechanical steering, hourglass worm roller type Optional: Full hydraulic steering, cycloid rotary valve, open and non-reaction type		Full hydraulic steering, cycloid rotary valve, open and non-reaction type	
Steering trapezium type		Front-mounted type		Rear-mounted type	
Steering Wheel Diameter (mm)		406			
Steering column inclination		60°		73.5°	
Front wheel maximum turning angle		45°			
Hydraulic steering gear	Model no.	BZZ1-E80C Full hydraulic steering gear			
	Nominal Displacement (ml)	80			
Steering oil pump	Model no.	CBT-E306HL062BR			
	Nominal Displacement (ml)	6			
	Constant Flow Rate (L/min)	6			
	Rated Pressure (MPa)	7.5±0.5			
	Safety Valve Set Pressure (MPa)	12.5±0.5			
Steering Cylinder Diameter (mm)		Optional: 40		40	
Steering Cylinder Travel (mm)		Optional: 172		146	
Braking system					
Service brake		Dry type, shoe brake, self-compensation wear clearance, mechanical control			
Parking brake		Lock pedal type			
Working device					
Model		300	304	B350	2C-354
Hydraulic suspension system					
Type		Open, semi-split type			
Tillage depth control mode		Force control, position control and float control			
Hydraulic pump model		CBN-L310 (left) or CBN-E310BLB (left)			
Hydraulic Pump Rated Flow Rate (Engine Speed) (L/min)		18 (2200 r/min)		19.6 (2400 r/min)	
Cylinder Diameter × Travel (mm)		80×101			
System Rated Pressure (MPa)		16			
Maximum Pressure (MPa)		17 ~ 18			
Maximum Hydraulic Output Power (kW)		Not less than 12% of engine calibrated power			
Suspension device		Rear-mounted, class 1			
PTO shaft					
Type		Rear-mounted, non-independent, glide gear shifting			
Speed (r/min) (transmission ratio)		Basic: 540 (13/48), 720 (16/45) Optional: 540, 1000 (21/42)			
Shaft Diameter (mm)		Basic type: 38, 8-tooth rectangular spline shaft Optional: 35, 6-tooth rectangular spline shaft			
Direction of Rotation		Clockwise (view from rear)			
Traction device					
Type		Swing rod type			
Draw Pin Diameter (mm)		33			
Trailer device					
Type		U-shaped hook			
Hook Pin Diameter (mm)		33			
Electrical and meter devices					
Model		300	304	B350	2C-354
Electrical system type		12V, negative ground			
Battery		12 V, 85 Ah			
Starter		12V, 3kw			
Alternator		14V, 350W			
Headlights		12V, 55W/60W, 2 pieces			

Continued on next page

N400041.0002986 -19-03MAY16-3

Continued on next page

N400041,0002986 -19-03MAY16-3/4

Technical Specifications

Front turn signal lights	12V, 21W, 2 pieces			
Front position lights	12V, 10W, 2 pieces			
Rear turn signal lights	12V, 21W, 2 pieces			
Rear Lights	12V, 5W, 2 pieces			
Brake Lights	12V, 21W, 2 pieces			
Reflectors	Red, 2 pieces			
Work light	12 V, 35 W, 1 or 2 pieces			
Horn	12V, 3.5A, 105dB (A), 1 piece			
Meters	Water temperature gauge, indicator gauge (including turn signal, engine oil low pressure alarm, headlights, battery charging and air brake low pressure alarm)			
Optional accessories				
Model	300	304	B350	2C-354
Protective Structure	Two-pillar folding type			
Trailer Braking Device				
Type	Air braking system, inflatable braking			
Air Reservoir Volume (L)	18			
Brake Valve Working Pressure (kPa)	≥400			
Safety Valve Opening Pressure (kPa)	700~800			

N400041,0002986 -19-03MAY16-4/4

Maximum control force

Control mechanism		Maximum control force N
Brake	Foot pedals	≤600
Single acting clutch		≤350
Mechanical steering		≤250
Hydraulic steering	Steering wheel	≤30
When hydraulic steering system fails		≤400
Hydraulic lifting system	Handle	≤70

N400041,0002987 -19-01DEC15-1/1

Minimum turning radius

Model	Item	
	Unilateral braking is not used m	Unilateral braking is used m
300	3.5	3.0
304	4.0	3.3
B350	3.5	3.0
2C-354	4.0	3.3

N400041,0002988 -19-22FEB16-1/1

PTO shaft properties

Item	Model			
	300	304	B350	2C-354
Maximum Output Power Under Engine Rated Speed kW	≥18.9	≥18.9	≥22.1	≥22.1
Variable load test average fuel consumption rate g/kW.h	≤350			
Weighted energy efficiency limits (kWh)/kg	≥3.09			
Torque reserve rate %	≥15			
Maximum torque speed to rated speed ratio %	≤75			

N400041,0002989 -19-22FEB16-1/1

Traction properties

Model	Item			
	Maximum traction force kN	Maximum traction power kW	Traction to fuel consumption ratio under maximum traction power condition g/(kW·h)	Front/Rear counterweight kg
300	≥9	≥16.5	≤340	104/240
304	≥11.25	≥16.5		
B350	≥9.75	≥19.3		
2C-354	≥12	≥19.3		

Note: Maximum draft is obtained under the front/rear counterweight status listed in the table.

N400041,000298A -19-22FEB16-1/1

Properties of hydraulic suspension system

Model	Item		
	Maximum lifting force (610 mm from lower hanging point) kN	Lifting stroke (at lower hanging point) mm	30 min static settlement value mm
300	≥5.79	≥610	≤ 4% of load point lifting stroke
304			
B350			
2C-354			

N400041,000298B -19-22FEB16-1/1

Pouring capacity (L)

Serial number	Pouring position	Season	Name or brand of oil	Pouring capacity
1	Fuel tank	Summer	No. 0 ordinary diesel GB 252-2011	40 (10.56 gal.)
		Winter	No. -10 Ordinary Diesel GB 252-2011	
2	Water tank	Four seasons	Clean Soft Water	8 (2.11 gal.)
3	Engine	Four seasons	CD 15W-40 Diesel Fuel GB 11122-2006 (State 2)	6~6.5 (1.58~1.71 gal.)
4	Oil-Bath Air Cleaner		CF-4 15W-40 Diesel Engine Oil GB 11122-2006 (State 3)	0.25 (0.06 gal.)
5	Mechanical steering gear	Four seasons	No. 26 or 80W/90 Gear Oil SH/T 0350-1992	0.9 (0.23 gal.)
6	Hydraulic steering gear	Four seasons	Hydraulic Oil L-HM 32 (First Grade) GB 11118.1	1.8 (0.47 gal.)
7	Front drive axle (1200 tread)	Four seasons	N100D Transmission and Hydraulic Dual-Purpose Oil	5.5 (1.45 gal.)
8	Front Drive Axle (1300 Tread)			6 (1.58 gal.)
9	Drive Gear Case			2WD: 15 ~ 16 (3.96 ~ 4.22 gal.) 4WD: 16.5 ~ 17.5 (4.35 ~ 4.62 gal.)
10	Rockshaft			7~8 (1.84 ~ 2.11 gal.)
11	Grease filling nozzles	Four seasons	No. 2 calcium-based lubricant oil GB/T 491-2008	Proper amount

Note: Main quality indicators of tractor transmission and hydraulic dual-purpose oil are in below table.

Pouring capacity

N400041,000298C -19-03MAY16-1/1

Tractor transmission and hydraulic dual-purpose oil main quality indicators

Items	Quality indicators
Kinematic viscosity mm ² /s 40°C 100°C	90 ~ 110
Viscosity index	Measured
Flash point (open) °C	≥90
Solidifying point °C	≥200
Copper corrosion, grade	≤-33
Rust resistance test (distilled water)	≤1
Water content % (m)	Without rust
Mechanical impurities % (m)	≤ 0.03 (trace)
Four-ball nonseizure load test (PB) kg	≤0.01
Four-ball sustained abrasion (30 kg, 50 min) mm	≥834(85)
Foaming (93±0.5°C) mL/mL	≤0.5
Carrying capacity, failure, grade	75/0
	≥10

N400041,000298D -19-01DEC15-1/1

Tightening torque of important component fasteners

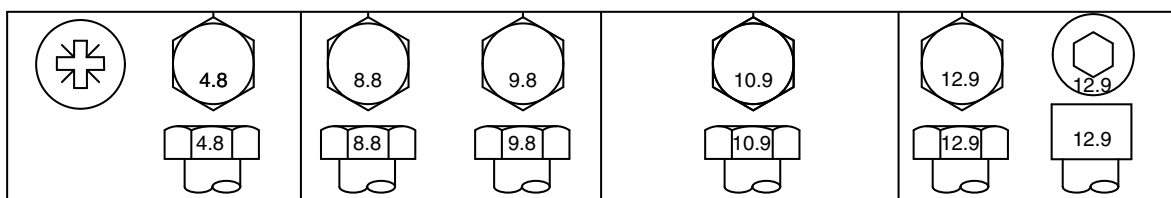
Serial number	Name and assembly parts	Thread size	Tightening torque	
			N.m	Kgf-m
1	Engine and clutch housing connecting bolt	M12×1.75	73 ~ 89	7.4 ~ 9.1
2	Engine and bracket connecting bolt	M16×2	144 ~ 160	14.7 ~ 16.3
3	Clutch housing and gearbox housing connecting nut	M14×1.5	100 ~ 120	10.2 ~ 12.2
4	Front shaft bushing and auxiliary bushing connecting nut	M14×1.5	100 ~ 120	10.2 ~ 12.2
5	Half shaft housing and front box front final transmission housing connecting bolt	M10×1.5	37 ~ 59	3.8 ~ 6
6	Drive wheel spoke and rim retaining nuts	M14×1.5	146 ~ 180	14.9 ~ 18.3
7	Drive wheel spoke and drive shaft retaining nuts	M14×1.5	199 ~ 235	20.3 ~ 24
8	Gearbox housing and final transmission housing connecting bolt	M10×1.5	37 ~ 59	3.8 ~ 6
9	Gearbox housing and lifter housing connecting bolt	M10×1.5	37 ~ 59	3.8 ~ 6
10	Steering gear housing and clutch housing connecting bolt	M10×1.5	14.3 ~ 24.7	1.5 ~ 2.5
11	Guide wheel spoke and wheel hub retaining nuts	M14×1.5	199 ~ 235	20.3 ~ 24

Note: Threaded fasteners of engine have been verified in factory.

N400041,000298E -19-01DEC15-1/1

Metric bolt and screw torque values

TS1670 —UN—01MAY03



Specifications of bolts or cap screws	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated ^a		Dry type ^b		Lubricated ^a		Dry type ^b		Lubricated ^a		Dry type ^b		Lubricated ^a		Dry type ^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	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N·m	lb.-ft.														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

Torque values listed in this chart, based on the strength of bolts or screws, are for general use only. For certain applications, if specified torque values or fastening methods are different, do not use the recommended values mentioned above. For stainless steel fasteners or nuts of U-shaped bolts, please refer to the fastening requirements specified for special applications. Follow the dry state torque values in the chart to fasten steel lock nuts which are with plastic pads or with wrinkles, unless fastening requirements are specified for special applications.

Safety bolts under the pre-designed load will become invalid. Replace them only with safety bolts which are of identical property category. Replace fasteners only with those of the same or higher attribute grade. If fasteners of higher attribute grade are used, tighten them to the required strength of the original fasteners. Make sure that the fastener thread is clean and the thread head can be combined with normally. When possible, lubricate ordinary or galvanized fasteners other than lock nuts, wheel bolts or nuts, unless different fastening requirements are specified for special applications.

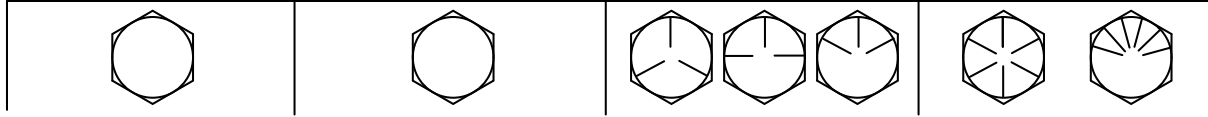
^a"Lubricated type" refers to coated with a layer of lubricant, such as engine oil, or fasteners coated with phosphate and oil film, or the M20 or above fasteners with JDM F13C, F13F or F13J galvanized coating.

^b"Dry type" refers to the ordinary or galvanized fasteners without lubrication, or the M6 - M18 fasteners with JDM F13B, F13E or F13H galvanized coating.

N400041,0002042 -19-11MAR15-1/1

Imperial bolt and screw torque values

TS1671 —UN—01MAY03



Specifications of bolts or cap screws	SAE Grade 1				SAE Grade 2 ^a				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Lubricated ^b		Dry type ^c		Lubricated ^b		Dry type ^c		Lubricated ^b		Dry type ^c		Lubricated ^b		Dry type ^c	
	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	3.7	33	4.7	42	6	53	7.5	66	9.5	84	12	106	13.5	120	17	150
													N·m	lb.-ft.	N·m	lb.-ft.
5/16	7.7	68	9.8	86	12	106	15.5	137	19.5	172	25	221	28	20.5	35	26
									N·m	lb.-ft.	N·m	lb.-ft.				
3/8	13.5	120	17.5	155	22	194	27	240	35	26	44	32.5	49	36	63	46
			N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.								
7/16	22	194	28	20.5	35	26	44	32.5	56	41	70	52	80	59	100	74
	N·m	lb.-ft.														
1/2	34	25	42	31	53	39	67	49	85	63	110	80	120	88	155	115
9/16	48	35.5	60	45	76	56	95	70	125	92	155	115	175	130	220	165
5/8	67	49	85	63	105	77	135	100	170	125	215	160	240	175	305	225
3/4	120	88	150	110	190	140	240	175	300	220	380	280	425	315	540	400
7/8	190	140	240	175	190	140	240	175	490	360	615	455	690	510	870	640
1	285	210	360	265	285	210	360	265	730	540	920	680	1030	760	1300	960
1-1/8	400	300	510	375	400	300	510	375	910	670	1150	850	1450	1075	1850	1350
1-1/4	570	420	725	535	570	420	725	535	1280	945	1630	1200	2050	1500	2600	1920
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2140	1580	2700	2000	3400	2500
1-1/2	990	730	1250	930	990	730	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

Torque values listed in this chart, based on the strength of bolts or screws, are for general use only. For certain applications, if specified torque values or fastening methods are different, do not use the recommended values mentioned above. For steel lock nuts which are with plastic pads or with wrinkles, stainless steel fasteners or nuts of U-shaped bolts, please refer to the fastening requirements specified for special applications. Safety bolts under the pre-designed load will become invalid. Replace safety bolts only with identical grade.

Replace fasteners only with those of the same or higher attribute grade. If fasteners of higher attribute grade are used, tighten them to the required strength of the original fasteners. Make sure that the fastener thread is clean and the thread head can be combined with normally. When possible, lubricate ordinary or galvanized fasteners other than lock nuts, wheel bolts or nuts, unless different fastening requirements are specified for special applications.

^aGrade 2 applies to hex head screws (not hex bolts) up to 6 inches (152 mm) long. Grade 1 applies to hex cap screws over 6 inches (152 mm) long, and all other types of bolts and screws of any length.

^b"Lubricated type" refers to coated with a layer of lubricant, such as engine oil, or fasteners coated with phosphate and oil film, or the 7/8 inch or more fasteners with JDM F13C, F13F or F13J galvanized coating.

^c"Dry type" refers to the ordinary or galvanized fasteners without lubrication, or the 1/4 to 3/4 inch fasteners with JDM F13B, F13E or F13H galvanized coating.

N400041,0002043 -19-11MAR15-1/1

Identification Number

Identification plate

Each tractor has the identification plates shown on these pages. The letters and numbers stamped on these 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. They are also needed for law enforcement to trace your tractor if it is stolen. Accurately record these characters in the space provided for following photographs.

N400041,0002044 -19-11MAR15-1/1

Record tractor serial number

NOTE: Tractor machine serial number is also printed on left end surface of drive shaft.

Serial number plate is located on the right side of transmission housing of the tractor.

Tractor serial number _____



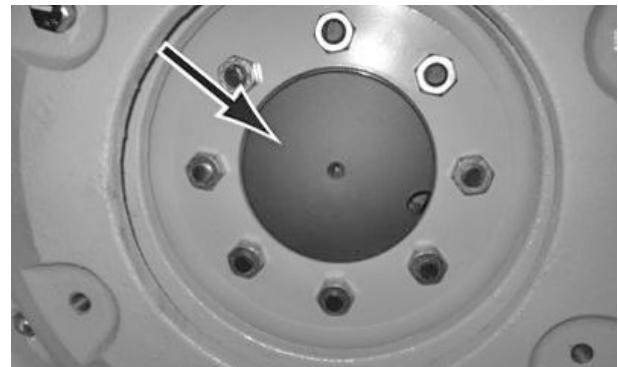
PUC0017 —UN—24MAR09

N400041,0002045 -19-11MAR15-1/1

Record chassis serial number

Chassis serial number is printed on the right drive shaft end face.

Chassis serial number _____



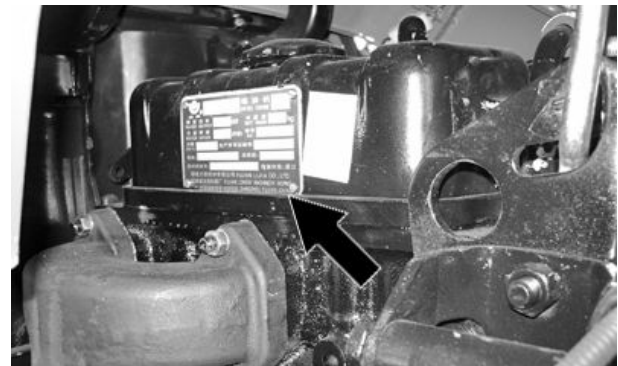
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N400041,0002046 -19-11MAR15-1/1

Record engine serial number

Serial number plate is located on rocker arm cover, near exhaust manifold.

Engine serial number _____



PUC5066 —UN—07OCT10

N400041,0002047 -19-11MAR15-1/1

Lubrication and Service Record Charts

50, 250 and 500 operating hours service charts

Every 50 hours

- Servicing air filter
- Check if fasteners are loose
- Clean and check battery
- Checking tires
- Lubricate MFWD front axle swing seat
- Lubricate steering main shaft

Every 250 hours

- Draining water and sediment from fuel tank
- Checking MFWD front axle housing oil level
- Adjusting alternator / fan belt
- Lubricating 3-point hitch lift rod
- Checking and cleaning fuel tank vent filter

- Checking neutral start system
- Adjust clutch pedal free stroke
- Adjust brake pedal free stroke
- Check and tighten ROPS fasteners (if equipped)

Every 500 hours

- Change engine oil and filter¹
- Change fuel filter
- Service hydraulic system oil filter / strainer
- Clean engine crankshaft vent pipe
- Check and tighten all hoses and hose clamps
- Check cooling system for leakage
- Lubricate rear axle bearing
- Check engine idling speed

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¹When using any lubricant other than TorqGARD or PLUS 50, shorten service interval to 200 operating hours

N400041,0002048 -19-11MAR15-1/1

1000 operating hours service chart

Every 1000 hours

- Changing hydraulic oil filter / strainer
- Changing hydraulic system oil

- Changing transmission system oil
- Changing steering system hydraulic oil
- Adjusting engine valve clearance
- Change MFWD front axle housing oil

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N400041,0002049 -19-11MAR15-1/1

Annual service chart

Every year

- Check seat belt

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N400041,000204A -19-11MAR15-1/1

2000 operating hours service chart

Every 2 years or 2000 hours (whichever comes first)

- Flush cooling system

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N400041,000204B -19-11MAR15-1/1

On a need basis service chart

Service on a need basis

- Throttle adjustment
- Change air filter elements
- Replace sediment bowl
- Clean front grille and radiator
- Bleed fuel system
- Battery charging
- Service battery
- Replace light bulbs: Work lights, headlights, taillights / warning lights
- Adjust headlights

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N400041,000204C -19-11MAR15-1/1

Packing List

Technical Documents

Serial number	Standard or diagram number	Name	Units	Quantity	Remarks
1		Product certificate	Copy	1	Provided with the machine
2		Warranty services certificate	Copy	1	
3		Operator's manual	Copy	1	
4		Parts catalog	Copy	1	
5		John Deere tractor delivery checklist	Copy	1	

N400041,00029A2 -19-15DEC15-1/1

Accompanying Tools

Serial number	Standard or diagram number	Name	Units	Quantity	Remarks
1	SU33913	Double headed wrench 8×10	Piece	1	
2	SU33914	Double headed wrench 13×16	Piece	1	
3	SU33915	Double headed wrench 16×18	Piece	1	
4	SU33916	Double headed wrench 21×24	Piece	1	
5	SU33921	Cross slot screwdriver 1 100P	Piece	1	
6	SU33917	Inner hex wrench S=6	Piece	1	
7	SU33918	Inner hex wrench S=8	Piece	1	
8	SU328286	S27 Sleeve	Piece	1	
9	SU33919	Lever type grease gun	Piece	1	
10	SU33920	Slip joint pliers 8"	Piece	1	
11	SU31833	Straight Tip Circlip Plier for Holes	Piece	1	
12	SU31836	Curved Tip Circlip Plier for Shaft	Piece	1	

N400041,00029A3 -19-15DEC15-1/1

Packing List

Supplied parts and accessories

Serial number	Standard or diagram number	Inside Diameter × Outside Diameter × Width	Units	Quantity	Remarks
1	SU328695	Framework oil seal SD45×65×10	Piece	2	For all Models
2	SU318574	Framework oil seal SD45×70×10	Piece	1	For 4WD Tractor
3	SU328871	Framework oil seal SG30×50×8	Piece	2	
4	SU328173	Framework oil seal SD65×90×12	Piece	2	
5	SU317898	O-shaped seal ring 20×2.4	Piece	2	For all Models
6	SU317851	O-shaped seal ring 110×5.7	Piece	2	For 4WD Tractor
7	SJ310461	Upper Lever Assembly	Piece	1	3-point hitch, for hanging implements
8	SU326236	Trailer coupling pin	Piece	1	Trailer mounting mechanism, for towing a trailer
9	SJ310464	Lock Pin Assembly	Piece	1	
10	SJ310464	Lock Pin Assembly	Piece	1	Swing towing device, for towing implements
11	SU314455	Pin shaft	Piece	1	Adjustable trailer mounting mechanism, for towing a trailer
12	SU315697	Pin shaft	Piece	1	
13	SJ310464	Lock Pin Assembly	Piece	1	
14	SU315539	Rim bolts	Piece	12	For mounting tires without rear counterweight (cancel this spare part when rear counterweight is not equipped)
15		Lifter spare parts	Sack	1	Provided by lifter manufacturer, placed in spare parts box
16		Diesel engine spare parts box	Sack	1	Provided with the machine, by diesel engine manufacturer

N400041,00029A4 -19-15DEC15-1/1

Ancillary Implements

Ancillary implements

Categories	Ancillary implements	Main technical parameters of implements	Implement manufacturer
Plow	1LX-322 Mounted 3-furrow plough	Tillage depth 18 cm, width 66 ~ 71 cm	Zhejiang Wuyi Tractor-drawn Plough Factory
	Zhejiang Wuyi Tractor-drawn Plough Factory	Tillage depth 18 cm, width 88 ~ 93 cm	Zhejiang Wuyi Tractor-drawn Plough Factory
	1L-230 Mounted 2-furrow plough	Tillage depth 18 ~ 22 cm, width 60 cm	Henan Shangqiu Tractor-drawn Implement Factory Hebei Baoding Agricultural Machinery Factory
	1L-325 Mounted 3-furrow plough	Tillage depth 18 ~ 22 cm, width 75 cm	Henan Shangqiu Tractor-drawn Implement Factory
	1LYQ-422 Driving disk plow		Nanchang Rotary Tiller Factory
	1LYQ-522 Driving disk plow		Nanchang Rotary Tiller Factory
Harrow	1BSQN-180 Driving paddy harrow	Tillage width 1.8 m	Nanchang Rotary Tiller Factory
	1BSQN-200 Driving paddy harrow	Tillage width 2 m	Nanchang Rotary Tiller Factory
	1BQX-1.5/1.8 Disk harrow	Tillage depth 14 ~ 16 cm, width 1.5 m	Shandong Yucheng Machinery Factory
Rotary tillage	1GN-140 Rotary tiller	Tillage depth 10 ~ 14 cm, width 1.4 m	Nanchang Rotary Tiller Factory Lianyungang Rotary Tiller Factory
	1GN-150 Rotary tiller	Tillage depth 10 ~ 14 cm, width 1.5 m	Nanchang Rotary Tiller Factory Lianyungang Rotary Tiller Factory, Tianjin Jixian Agricultural Machinery Factory
Row crop	1GG-140 Orchard row crop cultivator		Nanchang Rotary Tiller Factory
	1GG-150 Orchard row crop cultivator		
Compound operation	1GN-140BF (7) Rotary tillage, sowing and fertilizing machine		Nanchang Rotary Tiller Factory
	1GN-150BF (8) Rotary tillage, sowing and fertilizing machine		
	1G-140L Rotary tillage ridging machine		
	1G-150L Rotary tillage ridging machine		
	1GN-140L Rotary tillage ridging machine		
	1GN-150L Rotary tillage ridging machine		
	1GN-140(2)LM Rotary tillage, ridging and mulching machine		
	1GN-150(2)LM Rotary tillage, ridging and mulching machine		
	2BFX-14 Fertilizer drill	Sowing depth 3 ~ 9 cm, width 2.1 m	Xi'an Agricultural Machinery Factory
Stubble	1GF-150 Rotary inverted stubble cultivator		Nanchang Rotary Tiller Factory
	1DN-4 Stubble cultivator		
Straw returning	1JQ-100(C/D) Straw returning machine		Nanchang Rotary Tiller Factory
Planting and seeding	2BFD-14 Crop seeder	Sowing depth 2 ~ 7 cm, width 2.1 m	Shijiazhuang Agricultural Machinery Factory
Harvesting	4LD-1.2 Wheat combine harvester	Feed rate ≥ 1.2 kg/s, cutting width 1.78 m	China First Tractor Group Co., Ltd.
Ditching	1K-30-20 Ditcher		Nanchang Rotary Tiller Factory
Digging	1W-30 Digger		Nanchang Rotary Tiller Factory
Construction machinery	LW-6 Excavator	Bucket width: 300 mm, bucket capacity: 0.036 m ³	Guilin Forestry Machinery Factory

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Present John Deere Technical Information

Technical information

Technical information can be purchased from John Deere dealer. Some of this information is available in electronic media, such as CD-ROM disks, and in printed form. There are many ways to order. Contact your John Deere Dealer. Call **1-800-522-7448** to order using a credit card. Search in <http://www.JohnDeere.com>. Please provide model number, serial number, and name of the product.

Available information includes:

- "Parts Catalog" lists repair parts available for the machine, and is with component exploded views, which can help identify parts correctly. It is also useful in assembling and disassembling.
- Operator's manual provides safety, operating, maintenance and service information. These manuals and safety signs on your machine may also be available in other languages.
- Operator video tapes focus on safety instructions, operation, maintenance and repair information, etc. These tapes may be available in multiple languages and formats.
- "Technical manual" provides an overview of machine maintenance information. Technical specifications, illustrated assembly and disassembly procedures, hydraulic oil flow diagrams, and wiring diagrams are included. Some products have separate manuals for repair and diagnostic information. Some components, such as engines, have separate component technical manuals.
- "Fundamental manuals" provide detailed relevant fundamental information regardless of manufacturer:
 - "Agricultural Primer" series covers technology in farming and ranching, featuring subjects like computers, Internet, and precision farming, etc.
 - It mainly focuses on "real" problems and provides practical solutions in marketing, financial management, equipment selection and support facilities.
 - Fundamentals of services manuals show you how to repair and maintain off-road equipment.
 - "Basic principle of machine operation handbook" covers machine capabilities and adjustment, how to improve machine performance, and how to eliminate unnecessary off-road operations.



TS189 —UN—17JAN89



TS191 —UN—02DEC88



TS224 —UN—17JAN89



TS1663 —UN—10OCT97

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John Deere Service Keeps You On The Job

John Deere parts

We help minimize downtime by providing you with genuine John Deere parts promptly.

That is why we keep a huge inventory of various parts - to quickly satisfy your needs.



TS100 —UN—23AUG88

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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

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Well-trained technicians

John Deere service technicians regularly attend training.

Training classes are held regularly to ensure that our technicians know your equipment well and know how to service it.

Result?

Experience you can count on!



TS102 —UN—23AUG88

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John Deere Is At Your Service

CUSTOMER SATISFACTION is important to John Deere.

Our dealers strive to provide you with prompt and efficient parts supply service:

- Maintenance and service parts to support your equipment.
- Trained service technicians and the necessary diagnostic and repair tools to service your equipment.



TS201—UN—15APR13

Customer Satisfaction Problem Resolution Process

Your John Deere dealer is dedicated to supporting your equipment and resolving any problem you may experience.

1. When you contact your dealer, please prepare the following information:

- Machine model and product identification number
- Date of purchase
- Nature of problem

2. Discuss with dealer service manager how to solve the problem.

3. If the problem cannot be solved, reflect it to dealer manager and ask for assistance.

4. If dealer cannot solve the problem, ask your dealer to contact John Deere for assistance. Alternatively, you may call 1-866-99DEERE (866-993-3373) or e-mail to www.deere.com/en_US/ag/contactus/ to contact Customer Assistance Center

Company address: No. 1792, Ci Hai South Road, Luotuo Street, Zhenhai District, Ningbo, Zhejiang

Postal code: 315202; Fax: 86-574-86570858

Service hotline: 400-6576-555

Website: <http://www.johndeere.com.cn>

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