TX Gator™ Utility Vehicle

JOHN DEERE

OPERATOR'S MANUAL

TX Gator™ Utility Vehicle

OMM174358 ISSUE I4 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

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

If this product contains a gasoline engine:

⚠ WARNING

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

The State of California requires the above two warnings.
Additional Proposition 65 Warnings can be found in this manual.

John Deere Horicon Works

North American Edition
Printed in U.S.A.

Thank You for Purchasing a John Deere Product

We appreciate having you as a customer and wish you many years of safe and satisfied use of your machine.

Using Your Operator's Manual

This manual is an important part of your machine and should remain with the machine when you sell it.

Reading your operator's manual will help you and others avoid personal injury or damage to the machine. Information given in this manual will provide the operator with the safest and most effective use of the machine. Knowing how to operate this machine safely and correctly will allow you to train others who may operate this machine.

If you have an attachment, use the safety and operating information in the attachment operator's manual along with the machine operator's manual to operate the attachment safely and correctly.

This manual and safety signs on your machine may also be available in other languages (see your authorized dealer to order).

Sections in your operator's manual are placed in a specific order to help you understand all the safety messages and learn the controls so you can operate this machine safely. You can also use this manual to answer any specific operating or servicing questions. A convenient index located at the end of this book will help you to find needed information quickly.

The machine shown in this manual may differ slightly from your machine, but will be similar enough to help you understand our instructions.

RIGHT-HAND and LEFT-HAND sides are determined by facing in the direction the machine will travel when going forward. When you see a broken line (------), the item referred to is hidden from view.

Before delivering this machine, your dealer performed a predelivery inspection to ensure best performance.

Special Messages

Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.

CAUTION: Avoid injury! This symbol and text highlight potential hazards or death to the operator or bystanders that may occur if the hazards or procedures are ignored.

IMPORTANT: Avoid damage! This text is used to tell the operator of actions or conditions that might result in damage to the machine.

NOTE: General information is given throughout the manual that may help the operator in the operation or service of the machine.

Attachments for Your Machine

There's a John Deere attachment or kit to make your new machine perform more tasks or be more versatile, whether your machine is a lawn tractor or compact utility tractor or a utility vehicle.

You can check out the entire line of attachments for your machine at JohnDeere.com or ask your John Deere dealer. From aerators to electric lift kits to tillers, there's a John Deere attachment or kit to fill every need.

Contents

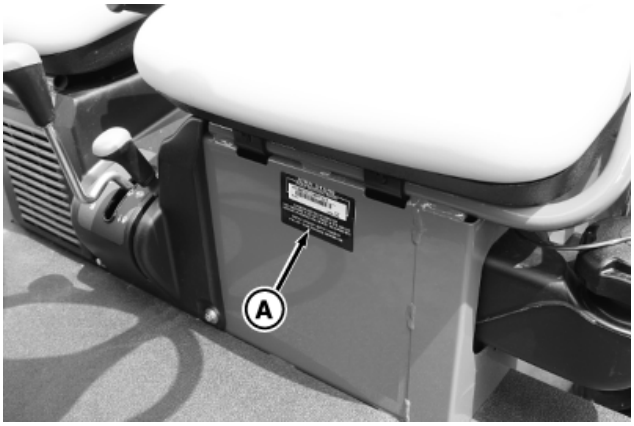
Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

Record Identification Numbers

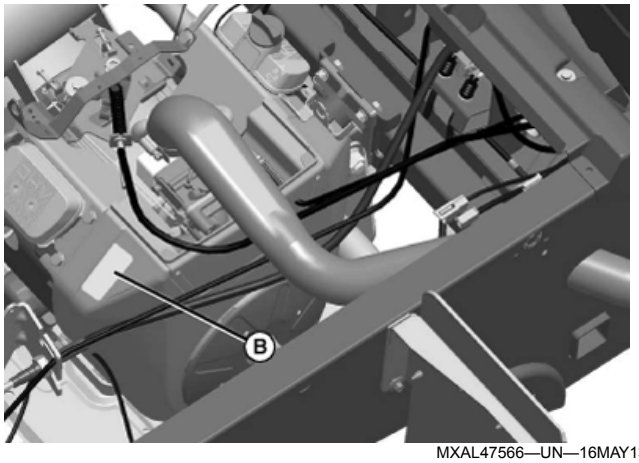
TX - PIN (100001-)

If you need to contact an Authorized Service Center for information on servicing, always provide the product model and identification numbers.

You will need to locate the identification numbers for the product. Record the information in the spaces provided below.



MXT010580—UN—22JUL14



MXAL47566—UN—16MAY13

DATE OF PURCHASE:

_____

DEALER NAME:

_____

DEALER PHONE:

_____

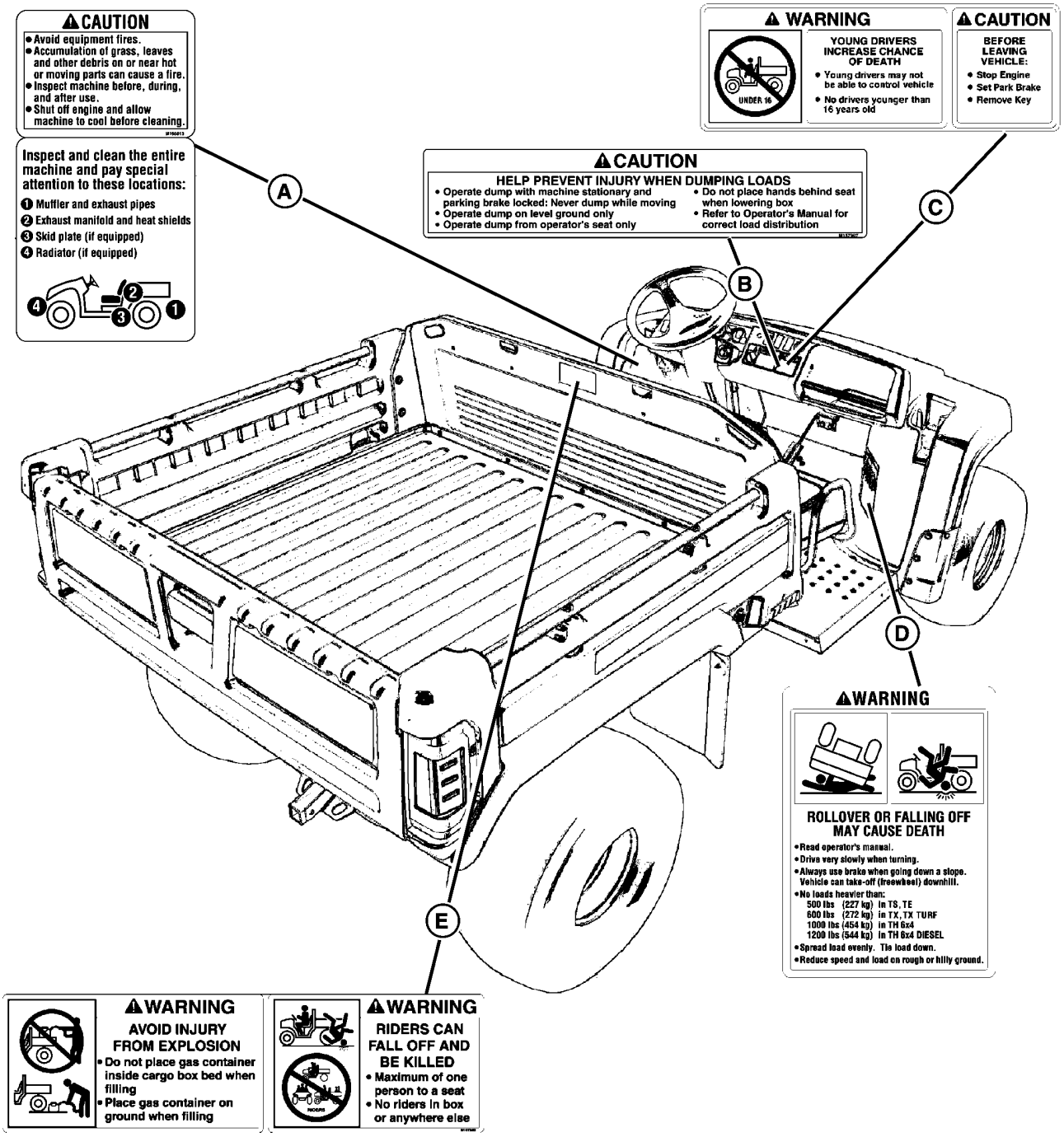
PRODUCT IDENTIFICATION NUMBER (A):

_____

ENGINE SERIAL NUMBER (B):

_____

Safety Label Location



MXT010581—UN—22JUL14

A —CAUTION M165913
B —CAUTION M157907
C —WARNING M150928
D —WARNING M154111
E —WARNING M157240 (2 used)

Understanding The Machine Safety Labels

MXAL42363—UN—22MAY13

The machine safety labels shown in this section are placed in important areas on your machine to draw attention to potential safety hazards.

On your machine safety labels, the words DANGER, WARNING, and CAUTION are used with this safety-alert symbol. DANGER identifies the most serious hazards.

The operator's manual also explains any potential safety hazards whenever necessary in special safety messages that are identified with the word, CAUTION, and the safety-alert symbol.

Replace missing or damaged safety labels. Use this operator's manual for correct safety label placement.

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

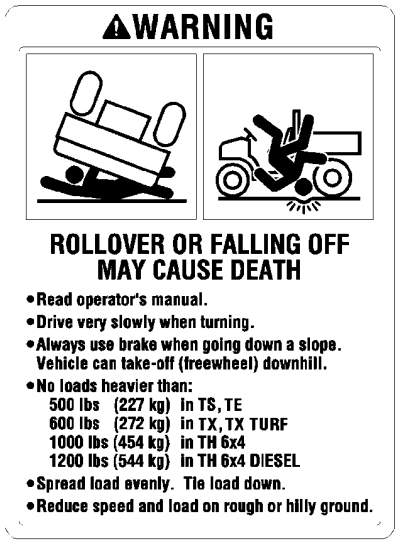
French or Spanish Safety Labels and Operator's Manual

Operator's manuals and safety labels with content in French or Spanish are available for this machine through authorized John Deere dealers. See your John Deere dealer.

NOTE: Both text and no-text labels are shown. Your machine is only equipped with one of these types of labels.

WARNING

ROLLOVER OR FALLING OFF MAY CAUSE DEATH



MXT007810—UN—02JUL13

- Read operator's manual.
- Drive very slowly when turning.
- Always use brake going down a slope. Vehicle can takeoff (freewheel) downhill.
- No loads heavier than:
  - 500 lb. (227 kg) in TS, TE
  - 600 lb. (272 kg) in TX, TX TURF
  - 1000 lb. (454 kg) in TH 6x4
  - 1200 lb. (544 kg) in TH 6x4 DIESEL
- Spread load evenly. Tie load down.
- Reduce speed and load on rough or hilly ground.

CAUTION

BEFORE LEAVING VEHICLE:

MXT007811—UN—02JUL13

- Stop engine
- Set park brake

- Remove key

WARNING

YOUNG DRIVERS INCREASE CHANCE OF DEATH

MXT007812—UN—02JUL13

- Young drivers may not be able to control vehicle.
- No drivers younger than 16 years old.

WARNING

AVOID INJURY FROM EXPLOSION

MXT007813—UN—02JUL13

- Do not place gas container inside cargo box bed when filling.
- Place gas container on ground when filling.

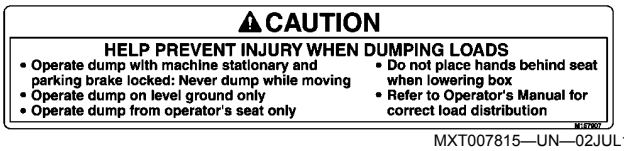
RIDERS CAN FALL OFF AND BE KILLED

MXT007814—UN—02JUL13

- Maximum of one person to a seat
- No riders in box or anywhere else

CAUTION

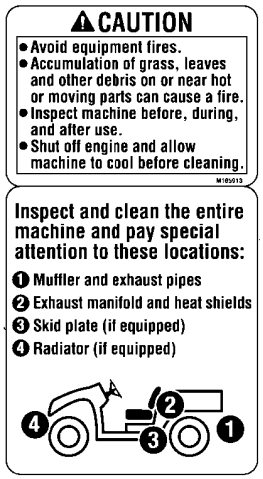
HELP PREVENT INJURY WHEN DUMPING LOADS



MXT007815—UN—02JUL13

- Operate dump with machine stationary and parking brake locked: Never dump while moving
- Operate dump on level ground only
- Operate dump from operator's seat only
- Do not place hands behind seat when lowering box
- Refer to Operator's Manual for correct load distribution

CAUTION



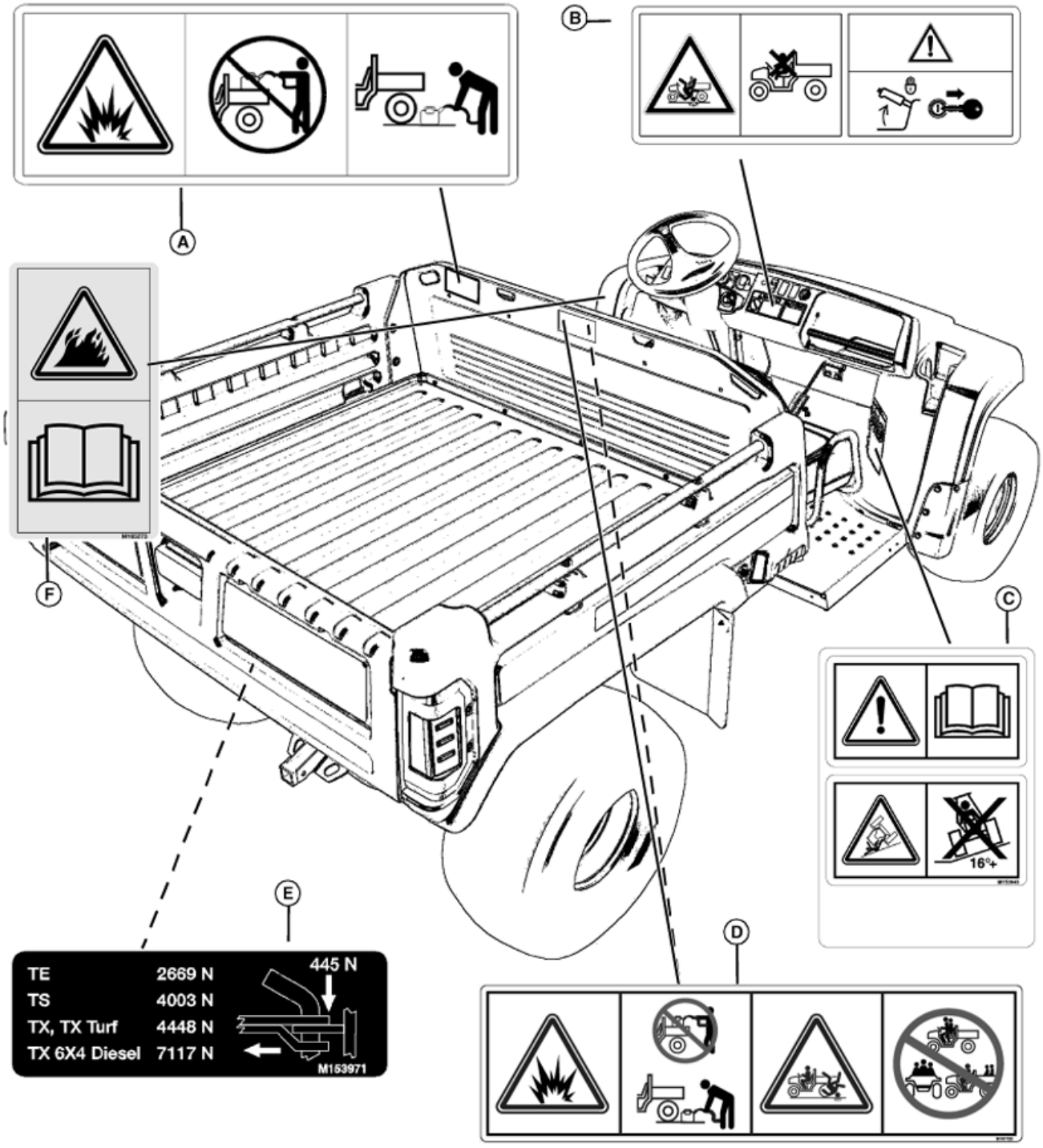
MXAL44069—UN—27MAR13

- Avoid equipment fires.
- Accumulation of grass, leaves and other debris on or near hot or moving parts can cause a fire.
- Inspect machine before, during and after use.
- Shut off engine and allow machine to cool before cleaning.

Inspect and clean the entire machine and pay special attention to these locations:

1. Muffler and exhaust pipes
2. Exhaust manifold and heat shields
3. Skid plate (if equipped)
4. Radiator (if equipped)

Safety Label Location



MXAL47567—UN—16MAY13

A —AVOID INJURY FROM EXPLOSION M151630
B —YOUNG DRIVERS INCREASE CHANCE OF DEATH M153941
C —ROLLOVER OR FALLING OFF MAY CAUSE DEATH M153943
D —AVOID INJURY FROM EXPLOSION OR RIDERS FALLING OFF M161725
E —DRAWBAR LOAD M153971
F —PREVENT EQUIPMENT FIRES M165273

Understanding The No-Text Machine Safety Labels

TCT005498—UN—11SEP12

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

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

Avoid Injury From Explosion or Riders Falling Off

MXAL47568—UN—16MAY13

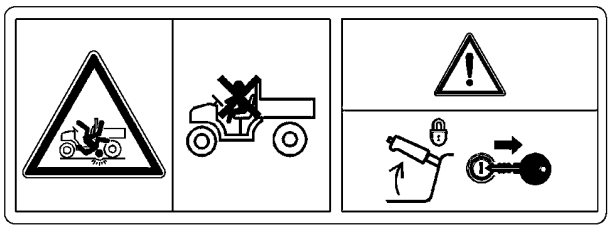
AVOID INJURY FROM EXPLOSION

- Do not place gas container inside cargo bed when filling
- Place gas container on ground when filling

RIDERS CAN FALL OFF AND BE KILLED

- Maximum of one person to a seat
- No riders in box or anywhere else

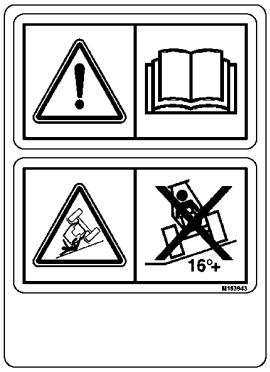
Young Drivers Increase Chance of Death



MXAL47569—UN—16MAY13

- Young drivers may not be able to control vehicle.
- No drivers younger than 16 years old.
- Before Leaving Vehicle:
  - Stop engine.
  - Set park brake.
  - Remove key.

Rollover or Falling Off May Cause Death



MXAL47570—UN—16MAY13

- Read operator's manual.
- Drive very slowly when turning.
- Always use brake when going down a slope. Vehicle can take-off (freewheel) downhill.
- No loads heavier than:
  - 500 lbs (227 kg) in TS
  - 600 lbs (272 kg) in TX, TX TURF
  - 1000 lbs (454 kg) in TH 6x4
  - 1200 lbs (544 kg) in TH 6x4 Diesel
- Spread load evenly. Tie loads down.
- Reduce speed and load on rough or hilly ground.

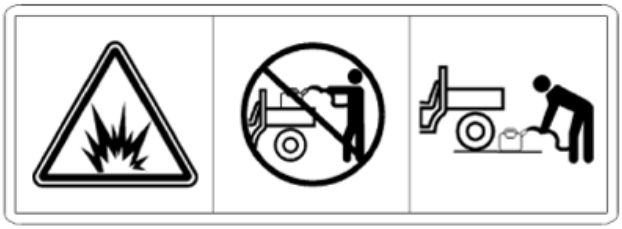
Drawbar Load

MXAL47571—UN—16MAY13

Do not exceed recommended drawbar loads stated on label.

- Horizontal
  - TE: 2669 N (600 lb-force)
  - TS: 4003 N (900 lb-force)
  - TX, TX Turf: 4448 N (1000 lb-force)
  - TX 6x4 Diesel: 7117 N (1600 lb-force)
- Vertical
  - 445 N (100 lb-force)

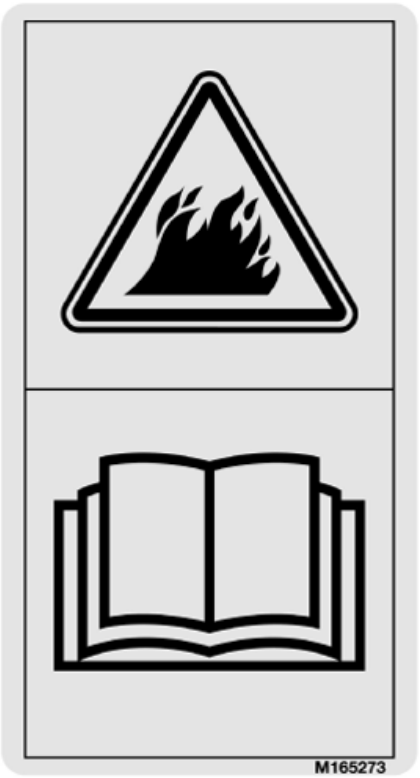
Avoid Injury From Explosion



MXAL47572—UN—16MAY13

- Do not place gas container inside cargo box bed when filling.
- Place gas container on ground when filling.

Prevent Equipment Fires



MXAL41788—UN—18FEB13

- Clean and inspect the entire machine.
- Carefully read Operator's Manual Machine Cleanout section for details.

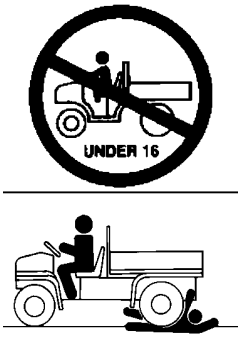
Operating Safely

- Read, understand and follow all instructions in the operator's manual, on the machine and on the safety video before starting.
- Misuse can lead to accidents, severe bodily injury or death.
- The utility vehicle's tires are designed for off-road use only. Paved surfaces may seriously affect handling and control of the vehicle. If you must operate on a paved surface, travel slowly and do not make sudden turns or stops.
- Do not operate this vehicle on a frozen body of water. The vehicle could break through the ice, causing injury or even death.
- Go slowly and be extra careful when riding on snow-covered or ice-covered terrain.
- Slow down and be careful of traffic when operating near or crossing roadways. Use care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
- The operator should always make sure that the passenger is aware of correct safety procedures while riding in the utility vehicle.
- Use the correct flags, lights, signs and reflectors on the vehicle to warn other drivers when operating near roadways. Make sure these features are clean and visible for 152 m (500 ft.).
- The passenger should always use the hand holds.
- On machines with seat belts, to avoid serious injury, always ensure that occupants have safely secured their seat belts prior to starting this vehicle.
- Horseplay can lead to accidents, severe bodily injury or death. Do not attempt stunts, jumps, or quick acceleration to raise front wheels off the ground. These actions can result in accidents or vehicle overturns.
- Sit on the center of the seat and keep both feet within the foot platform perimeter. Clean foot platform if dirty, and remove any debris from around foot controls.
- Check for debris in engine compartment, especially around exhaust system components.
- Always use both hands for steering.
- Know location of controls and how and what they operate.
- Never operate utility vehicle while standing.
- Never operate utility vehicle with the cargo box raised.
- Check brake action before beginning vehicle operation. Adjust or service the brakes as necessary.
- To provide adequate braking ability and traction, do not tow any attachment or loaded trailer unless the cargo box is fully loaded.
- Do not allow the Gross Vehicle Weight (GVW) to exceed the Gross Vehicle Weight Rating (GVWR) of the vehicle.
- Before shifting into reverse, always check for obstacles or people behind the machine.
- Always back slowly.
- Inspect vehicle before operating. Be sure hardware is tight. Repair or replace damaged, badly worn, or missing parts. Be sure guards and shields are in good condition and fastened in place. Make any necessary adjustments before operating.
- Do not leave vehicle unattended when it is running.
- Operate during daylight or with good artificial light and if you drive at night, use the lights.
- Do not operate vehicle if under the influence of alcohol or other drugs.
- Avoid sudden starts, stops, or turns.
- Always use a level turn-around area.
- Do not wear radio or music headphones. Safe service and operation require your full attention.

Parking Safely

1. Stop vehicle on a level surface, not on a slope.
2. Fully lower the cargo box and any attachments on the machine that can be lowered.
3. Lock park brake.
4. Stop engine.
5. Remove key.
6. Before you leave the operator's seat, wait for engine and all moving parts to stop.
7. Disconnect the negative battery cable or remove the spark plug wires (for gasoline engines) before servicing the machine.

Protect Children/Small Adults and Prevent Accidents

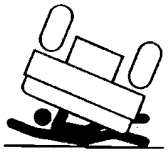


MXAL46804—UN—10APR13

- This utility vehicle should not be operated by anyone under the age of 16 years.
- This utility vehicle should not be operated by anyone without a valid driver license.

- Young drivers may not be physically able to control the machine or may not be mature enough to make safe driving decisions.
- Children may not be able to sit safely in the passenger seat and use handholds properly. Passengers must be able to grasp handholds with their back against the seat, seat belt on if installed, and both feet on the floor.
- Passenger should always use the handholds while the vehicle is moving.
- The seat belt installed on utility vehicles with a Roll-Over Protective Structure (ROPS) is not designed to restrain a child.
- Never carry passengers, especially children, in the cargo box area. Do not tow children in a cart or trailer.
- Never assume that children will remain where you last saw them. Stay alert to the presence of children.
- Before backing or turning, look behind and around the utility vehicle for children.
- Be alert at all times, drive forward and in reverse carefully. People, especially children, can move quickly into an area of operation.
- Use extra care when coming to blind corners, shrubs, trees, or other objects that may block vision.

Avoid Excessive Speeds



MXAL43283—UN—19MAR13

- Always travel at a speed that is safe and proper for the terrain, visibility and operating conditions, and your experience operating the machine.
- Use caution when operating the machine in reverse. Use a slow speed and do not make sharp turns. Always look behind before backing.
- Never travel at excessive speeds on slopes, either going up or down. Use a slow speed and do not make sharp turns. Become experienced driving the machine on small slopes before driving on larger hills.

Vibration

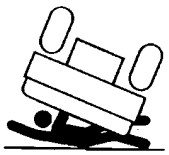
All operator's seats approved by John Deere are component type-approved in accordance with 78/764/EEC, being allocated an average of the vibration acceleration actually measured at the seat, a_{ws} equivalent to </= 1.25 m/s^2.

This value must NOT be used to calculate vibration stress as per 2002/44/EC! Local John Deere dealers can provide assistance in assessing vibration stress.

Measures to reduce vibration may include:

- Appropriate style of driving, e.g. not too fast
- Correctly adjusted operator's seat
- Correct tire pressure

Avoid Tipping



MXAL43283—UN—19MAR13

Accidents resulting in serious injury or death can occur from tipping the utility vehicle. Observe the following practices to help prevent accidents.

- Drive very slowly when turning. Sharp turns could cause the utility vehicle to tip over.
- Reduce speed and exercise extreme caution on slopes or on rough ground.
- Do not overload vehicle and avoid shifting loads. Reduce load when operating over rough or hilly terrain.
- Do not stop or start suddenly when going uphill or downhill. Be especially cautious when changing direction on slopes.
- Stay alert for holes, rocks, and other hidden hazards in the terrain.
- Keep away from drop-offs, ditches, embankments, as well as ponds and other bodies of water. The machine could suddenly roll over if a wheel goes over the edge of a cliff or ditch or if the edge caves in.
- Keep front wheels straight at crest of hill or going over bumps.
- When descending a hill, remove foot from accelerator pedal and apply brakes to reduce speed and maintain control.
- Do not make changes or modifications to the utility vehicle.
- This list of potential overturning hazards is not exhaustive.

Keep Riders Off Vehicle

MXAL46805—UN—10APR13

- Seating is provided for operator and one adult passenger.
- Never allow riders in the cargo box or other areas where seats are not provided.

- Riders on vehicle are subject to injury such as being struck by foreign objects or being thrown off of the vehicle and severely injured or killed.
- Riders affect the operator's ability to control the vehicle as well as its center of gravity. Also, riders could obstruct the operator's view resulting in the vehicle being operated in an unsafe manner.

Using Front Attachments

- Remove front attachments such as drawbar hitches, hitchmounted winches, or blades when operating on rough or uneven terrain. Front attachments may contact the ground when operating on rough or uneven terrain which may cause loss of control or rollover.

Transport Loads Safely

- Be sure load is evenly distributed in cargo box.
- Do not load above load guard.
- Securely anchor all loads in cargo box.
- Reduce cargo box load when operating on rough or hilly terrain.

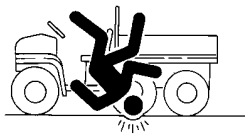
Towing Loads Safely With Utility Vehicle

- To provide adequate braking ability and traction, weight of towed load (trailer plus cargo) must never exceed the vehicle payload (operator plus passenger plus cargo box load).
- Do not tow a load that exceeds the maximum allowable towing load for this vehicle, as specified in this operator's manual.
- Stopping distance increases with speed and weight of towed load. Travel slowly and allow extra time and distance to stop.
- Tow load at a speed slow enough to maintain control.
- Excessive towed load can cause loss of traction and loss of control on slopes. Reduce towed weight when operating on slopes.
- Never allow children or others in or on towed equipment.
- Use only approved hitches. Tow only with a machine that has a hitch designed for towing. Do not attach towed equipment except at the approved hitch point.
- Follow the manufacturer's recommendations for weight limits for towed equipment and towing on slopes.
- If you cannot back up a slope with a towed load, the slope is too steep to operate on with the towed load. Reduce the towed load or do not operate.
- Do not turn sharply. Use additional caution when turning or operating under adverse surface conditions. Use care when reversing.
- Do not shift to neutral and coast downhill.
- Secure towed loads before transporting.

Before Driving

1. Clean foot platform if dirty, and remove any debris from around foot controls. Sit on the center of seat and keep both feet inside foot platform perimeter.
2. Inspect utility vehicle for signs of wear or damage.
3. All safety equipment must be in good condition and fastened in place:
   - Lights.
   - Shields.
   - Safety start devices.
4. Before moving, check around utility vehicle, be sure no one is near it.
5. Inspect mechanical condition of your vehicle before each use to minimize chance of injury or being stranded. Remember, you can ride farther in an hour than you can walk in a day.
   Be sure to check condition of tires and wheels, wheel hardware torque, and maintain proper tire pressure.
6. Securely anchor all loads.

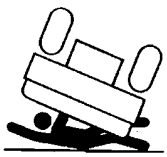
Driving On Rough Terrain



MXAL43284—UN—19MAR13

- Use existing trails. Avoid terrain such as dangerous slopes and impassable swamps. Watch carefully for bumps, holes, ruts, loose terrain, or other obstacles.
- Look ahead at terrain. Know what is coming and be prepared to react. Be alert for hazards.
- Keep front wheels straight at crest of hill or going over bumps.
- Reduce speed according to trail, terrain, and visibility conditions.
- The passenger should always use the hand holds.

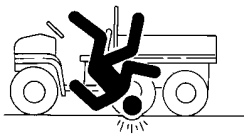
Climbing Or Descending A Hill



MXAL43283—UN—19MAR13

- Always use the brakes when going down slopes, the utility vehicle can speed up (freewheel) going down a slope. Engine or clutch braking effect is minimal.
- Balance loads evenly and secure them. Braking could shift the load and affect vehicle stability.
- Sit on center of seat and keep both feet within foot platform.
- Never drive past the limit of visibility. Slow down near crest of hill until getting a clear view of the other side. Never go over the top of any hill at a high speed. An obstacle, sharp drop, another vehicle or person, could be on the other side of the hill.
- Keep front wheels straight at crest of hill or going over bumps.
- Do not stop or start suddenly when going uphill or downhill. Be especially cautious when changing direction on slopes.
- If vehicle stops or loses power going up a hill, lock park brake to hold vehicle on slope. Maintain direction of travel and release brake slowly. Back straight down hill slowly while maintaining control. Do not turn vehicle sideways. Vehicle is more stable in a straight forward or rearward position.
- When descending a hill, remove foot from accelerator and apply brakes to reduce speed and maintain control.

Driving Across Slopes



MXAL43284—UN—19MAR13

- Reduce speed and use caution on slopes and in sharp turns.
- Stay alert for holes, rocks and other hidden hazards in the terrain.
- When riding on soft terrain, turn front wheels slightly uphill to keep utility vehicle on a straight line across the hill.
- If utility vehicle begins to tip, turn front wheel downhill to gain control before proceeding.

Riding Through Water

- Avoid water whenever possible. If drive belt becomes wet, slippage will occur and vehicle will lose power.
- Never cross any body of water where depth may be unknown to the operator. As an operational guideline, deep water is considered anything in excess of 152 mm (6 in.) in depth. Tires may float, making it difficult to maintain control.
- Choose a course within the waterway where both banks have a gradual incline. Cross at a point known to be safe.
- Proceed at a slow steady speed to avoid submerged obstacles and slippery rocks.
- Avoid water crossings where the operation of a utility vehicle may cause damage to waterway beds or erode waterway shoreline.
- Never operate this vehicle in fast-moving water.
- Stopping ability of vehicles with external disk brakes may be affected after driving through water. If necessary, apply brakes several times to dry them out.

Checking Wheel Hardware

- A serious accident could occur causing serious injury if wheel hardware is not tight.
- Check wheel hardware tightness often during the first 100 hours of operation.
- Wheel hardware must be tightened to specified torque using the proper procedure anytime it is loosened.

Wear Appropriate Clothing

MXAL41935—UN—18FEB13

- Wear close fitting clothing and safety equipment appropriate for the job.
- Certain operating conditions may dictate that the operator and any passenger wear appropriate safety equipment while operating the vehicle. Be prepared for any existing and potential conditions before operating machine.
- Local safety or insurance regulations may require additional safety equipment such as eye protection or a hard hat.
- Always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.

Practice Safe Maintenance

MXAL41933—UN—18FEB13

- Only qualified, trained adults should service this machine.
- Understand service procedure before doing work. Keep area clean and dry.
- Never lubricate, service, or adjust machine while it is moving. Keep safety devices in place and in working condition.
- Keep hands, feet, clothing, jewelry, and long hair away from any moving parts, to prevent them from getting caught.
- Disconnect battery(ies) or remove spark plug wires (for gasoline engines) before making any repairs.
- Keep all nuts and bolts tightened.
- Securely support any machine elements that must be raised for service work. Lock service latches before working on machine with raised attachments.
- Never run engine unless park brake is locked.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Replace all worn or damaged safety and instruction decals.
- To prevent fires, remove any buildup of grease, oil, or debris from the machine, especially the engine.
- Do not modify machine or safety devices. Unauthorized modifications may impair its function and safety.
- Do not wear radio or music headphones while servicing the machine. Safe service requires your full attention.
- Disconnect battery ground cable(s) (-) on the machine or remove attachment from machine before welding on the machine.

Prevent Fires

- Please review these recommendations with all operators. See your John Deere dealer with questions.
- Always follow all safety procedures posted on the machine and in this operator manual. Before carrying out any inspection or cleaning always shut off engine, set parking brake and remove ignition key.
- Besides routine maintenance, one of the best ways to keep your John Deere equipment running efficiently and to reduce fire risk is to regularly remove debris buildup from the machine.
- After operating, allow machine to cool in an open area before cleaning or storing. Do not park machine near flammable materials such as wood, cloth or chemicals, or near an open flame or other sources of ignition, such as a water heater or furnace.
- Completely remove any combustible materials from equipment before storing, by emptying any grass catcher bags, containers and cargo boxes.
- Debris can accumulate anywhere on the machine, especially on horizontal surfaces. Remove grass and debris completely from engine compartment, muffler area, and from on top of the mower deck both before and after operating machine. Additional cleaning may be necessary when mowing or mulching in dry conditions.
- In addition to cleaning machine before using and storing, keeping engine area clean with provide the greatest impact on fire prevention. Other areas requiring regular inspection and cleaning include behind wheel rims, wire harness, hose/line routings, mowing attachments, etc. Compressed air, leaf blowers or high pressured water can assist keeping these areas clean.
- Frequency of these inspections and cleaning will vary depending on a number of factors including operating conditions, machine configuration, operating speeds and weather conditions particularly dry, hot and windy conditions. When you are operating in these conditions, inspect and clean these areas frequently throughout the day.
- Excess lubrication or fuel/oil leaks or spills on the machine can also serve as collection sites for debris. Prompt machine repair and oil/fuel clean-up will reduce the potential for debris collection.
- Bearing failures or overheating can result in a fire. To reduce this risk, always follow the instructions in the machine operator's manual regarding lubrication intervals and locations. Contact your local dealer if you have any questions about the lubrication intervals or location and if any unusual noises are coming from areas where bearings might be located. Washing the machine while warm may also reduce bearing life and increase potential for premature bearing failure.
- Always shut off fuel when storing or transporting machine, if the machine has a fuel shutoff.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.

Do Not Modify Machine

Do not make any unauthorized modifications to the machine in any way.

Modifications can result in making the machine unstable, increasing the possibility of rollover causing severe bodily injury or death.

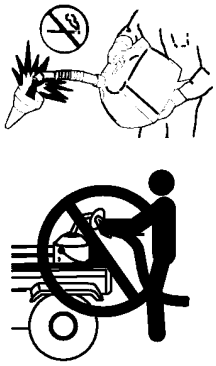
Tire Safety

MXAL41937—UN—18FEB13

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

- Do not attempt to mount a tire without the proper equipment and experience to perform the job.
- Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.
- When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly.
- Check tires for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.

Handling Fuel Safely



MXAL41938—UN—18FEB13

To avoid personal injury or property damage, use extreme care in handling fuel. Fuel is extremely flammable and fuel vapors are explosive:

- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- Use only approved non-metal, portable fuel containers. If using a funnel, make sure it is plastic and has no screen or filter.
- Never remove the fuel tank cap or add fuel with the engine running. Allow engine to cool before refueling.
- Never add fuel to or drain fuel from the machine indoors. Move machine outdoors and provide adequate ventilation.
- Clean up spilled fuel immediately. If fuel is spilled on clothing, change clothing immediately. If fuel is spilled near machine, do not attempt to start the engine but move the machine away from the area of spillage. Avoid creating any source of ignition until fuel vapors have dissipated.
- Never store the machine or fuel container where there is an open flame, spark. or pilot light such as on a water heater or other appliance.
- Prevent fire and explosion caused by static electric discharge. Static electric discharge can ignite fuel vapors in an ungrounded fuel container.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before fueling.
- Remove fuel-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a fuel dispenser nozzle.
- Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until the fueling is complete. Do not use a nozzle lock-open device.
- Never overfill fuel tank. Replace fuel tank cap and tighten securely.
- Replace all fuel container caps securely after use.
- For gasoline engines, do not use gas with methanol. Methanol is harmful to your health and to the environment.

Handle Agricultural Chemical Safely

When using cab, if equipped, cab does not protect against inhaling vapor, aerosol or dust.

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

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

Reduce risk of exposure and injury:

- Wear appropriate personal protective equipment as recommended by the manufacturer. In the absence of manufacturer's instructions, follow these general guidelines:
  a. Chemicals labeled 'Danger': Most toxic. Generally require use of goggles, respirator, gloves, and skin protection.
  b. Chemicals labeled 'Warning': Less toxic. Generally require use of goggles, gloves, and skin protections.
  c. Chemicals labeled 'Caution': Least toxic. Generally require use of gloves and skin protection.
- Avoid inhaling spray or dusts.
- Always have soap, water, and towel available when working with chemicals. If chemical contacts skin, hands, or face, wash immediately with soap and

water. If chemical gets into eyes, flush immediately with water.

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

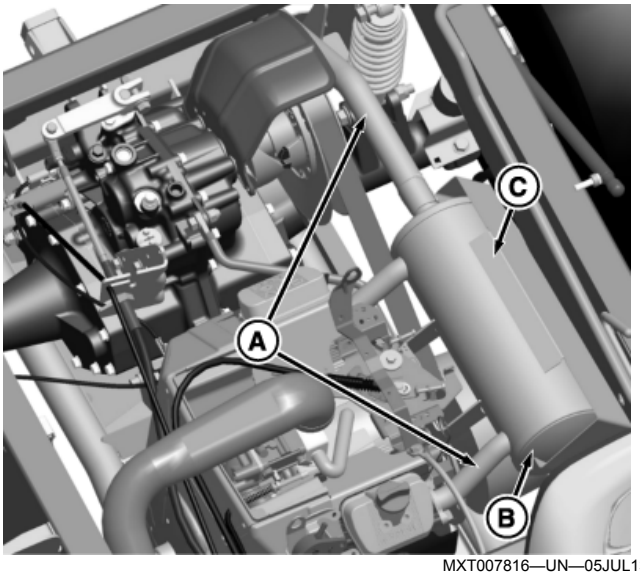
Handling Waste Product and Chemicals

Waste products, such as, used oil, fuel, coolant, brake fluid, and batteries, can harm the environment and people:

- Do not use beverage containers for waste fluids - someone may drink from them.
- See your local Recycling Center or authorized dealer to learn how to recycle or get rid of waste products.
- See your local Recycling Center or authorized dealer to learn how to put your machine out of service at the end of the machine’s service life.

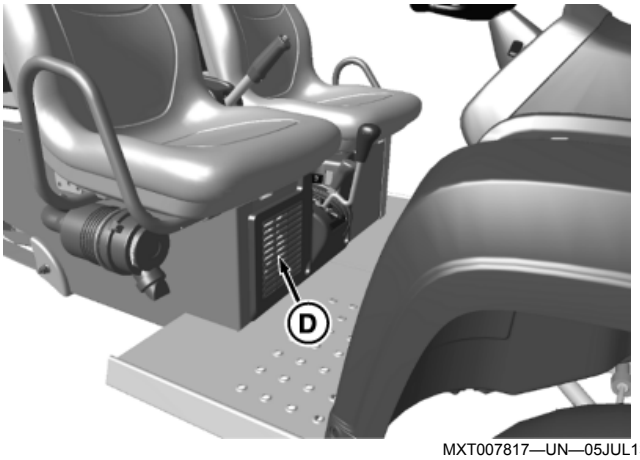
Prevent Fires

- Besides routine maintenance, one of the best ways to keep your John Deere equipment running efficiently and to reduce fire risk is to regularly remove debris buildup from the machine.
- Please review these recommendations with all operators. See your John Deere dealer with questions.
- Always follow all safety procedures posted on the machine and in this operator manual. Before carrying out any inspection or cleaning, always shut off engine, lock parking brake and remove ignition key.
- After operating, allow machine to cool in an open area before cleaning or storing. Do not park machine near flammable materials such as wood, cloth or chemicals.
- Empty cargo box completely before storing.
- Frequency of these inspections and cleaning will vary depending on a number of factors including operating conditions, machine configuration, operating speeds and weather conditions particularly dry, hot and windy conditions. When you are operating in these conditions, inspect and clean these areas frequently throughout the day.
- Check engine bay frequently if the cargo box has being loaded with any material that could have spilled over the sides.
- Wind direction, terrain type and moisture content of surrounding vegetation can effect where and how much debris accumulates.
- Debris can accumulate anywhere on the machine, especially on horizontal surfaces.
- Keeping engine area clean will provide the greatest impact on fire prevention. Other areas requiring regular inspection and cleaning include under skid plates (if equipped), behind wheel rims, wire harness, hose/line routings, etc. Compressed air, leaf blowers or high pressured water can assist keeping these areas clean.
- Adding a windshield, canopy or other attachments can change air flow around the vehicle. Always check for debris buildup after adding attachments.
- Primary areas that must be inspected and cleaned on the machine include (See Safety Label Section):

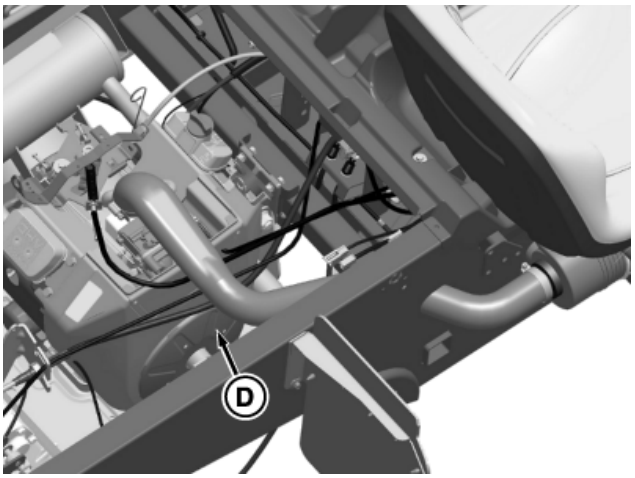


MXT007816—UN—05JUL13

a. Muffler pipes (A), muffler (B), and muffler shield (C).

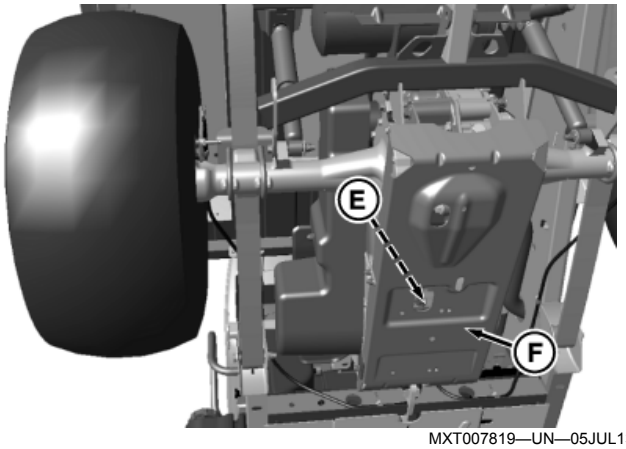


MXT007817—UN—05JUL13



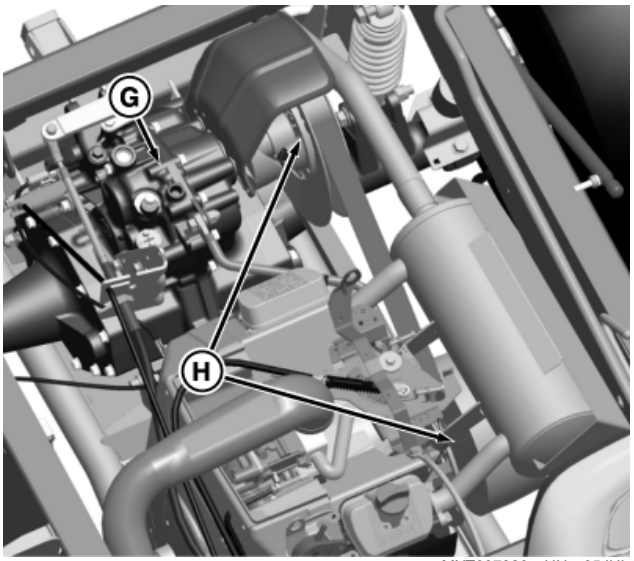
MXT007818—UN—05JUL13

b. Engine intake screens (D).



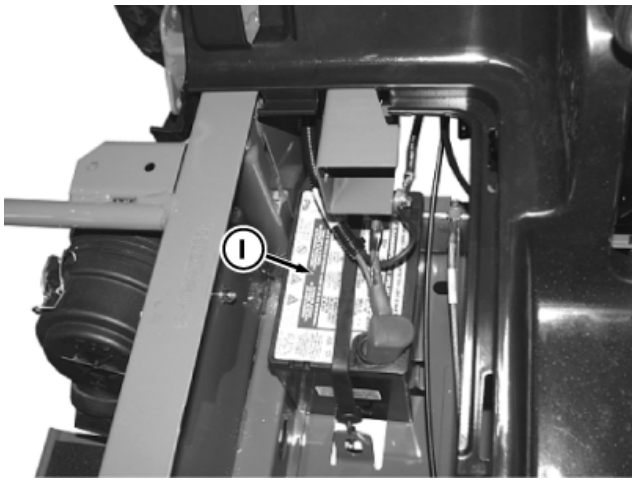
MXT007819—UN—05JUL13

c. Between engine (E) and skid plates (F) (if equipped).



MXT007820—UN—05JUL13

d. On or near transmission (G) and driveline (H).

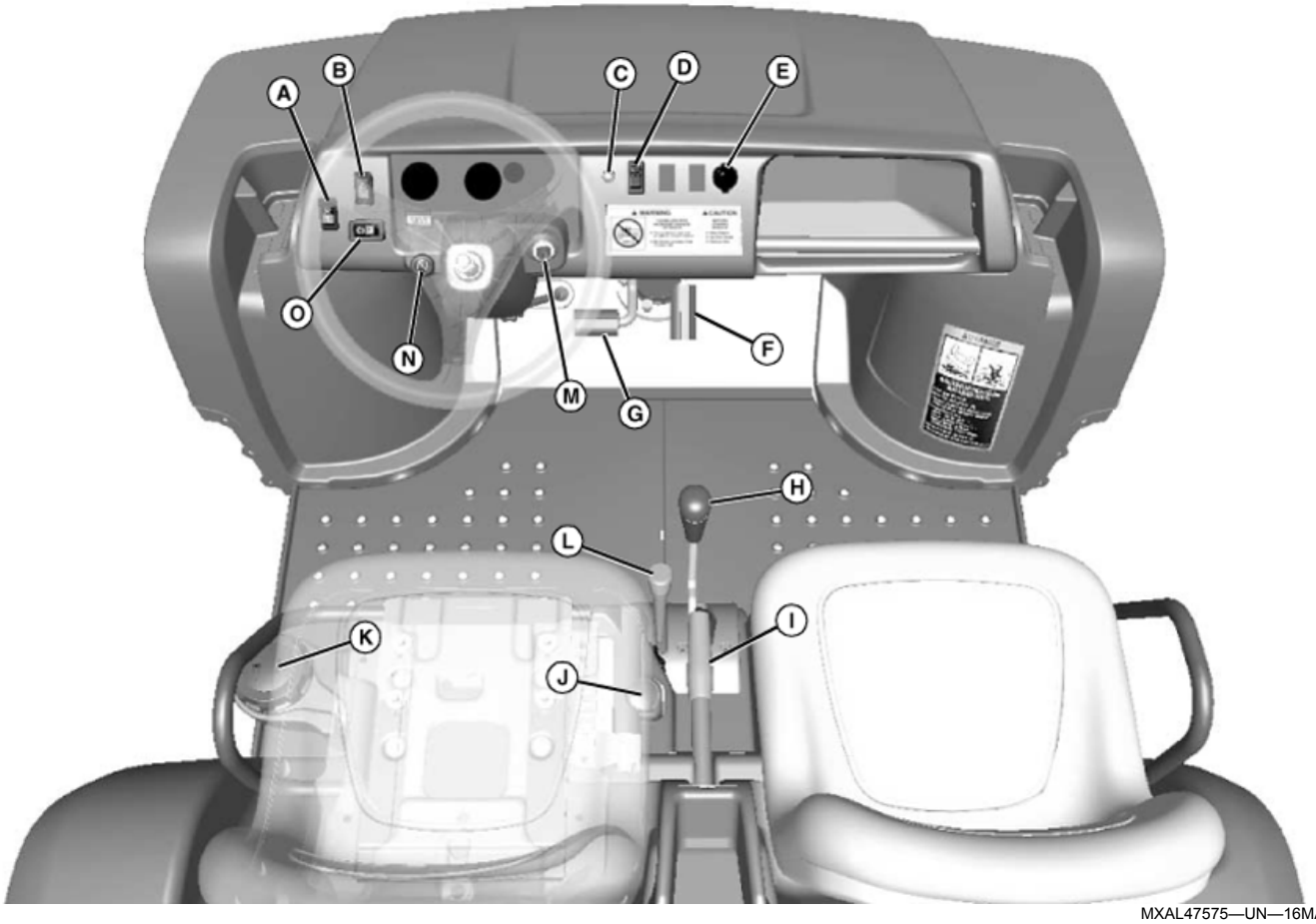


MXT007821—UN—05JUL13

e. Battery (I) and related wiring harnesses.

- Excess lubrication or fuel/oil leaks or spills on the machine can also serve as collection sites for debris. Prompt machine repair and oil/fuel cleanup will minimize the potential for debris collection and reduced cooling throughout machine life.
- Bearing failures or overheating can result in a fire. To reduce this risk, always follow the instructions in the machine operator's manual regarding lubrication intervals and locations. Washing the machine while warm may also reduce bearing life and increase potential for premature bearing failure.
- Always shut off fuel when storing or transporting machine, if the machine has a fuel shutoff.

Operator Station Controls



MXAL47575—UN—16MAY13

A —Cargo Box Power Lift Switch*
B —Hazard Light Switch*
C —Horn Switch*
D —Headlight Switch
E —12 VDC Accessory Outlet
F —Accelerator Pedal
G —Brake Pedal
H —Gear Shift Lever
I —Park Brake Lever
J —Fuel Gauge
K —Fuel Tank Cap
L —Traction Assis (Differential Lock) Lever
M —Key Switch
N —Choke Knob
O —Turn Signal Switch*

*Optional Equipment

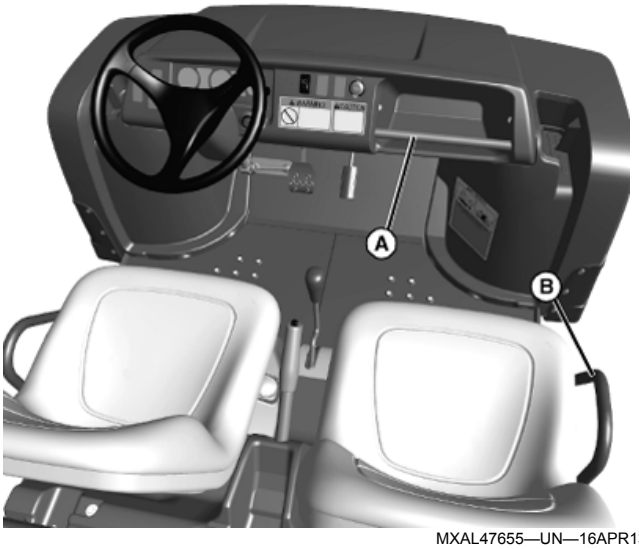
Daily Operating Checklist

- ❑ Test safety systems.
- ❑ Check tire pressure.
- ❑ Check fuel level.
- ❑ Check engine oil level.
- ❑ Tighten loose hardware.
- ❑ Remove debris from engine compartment, especially around brake linkage on each side of the transaxle.
- ❑ Check to make sure air intake is clean.
- ❑ Check area below machine for leaks.
- ❑ Check brakes and park brake operation.

Avoid Damage to Plastic and Painted Surfaces

- Do not wipe plastic parts unless rinsed first. Using a dry cloth may cause scratches.
- Insect repellent spray may damage plastic and painted surfaces. Do not spray insect repellent near machine.
- Be careful not to spill fuel on machine. Fuel may damage surface. Wipe up spilled fuel immediately.
- Prolonged exposure to sunlight will damage hood surfaces.

Using Hand Holds



MXAL47655—UN—16APR13

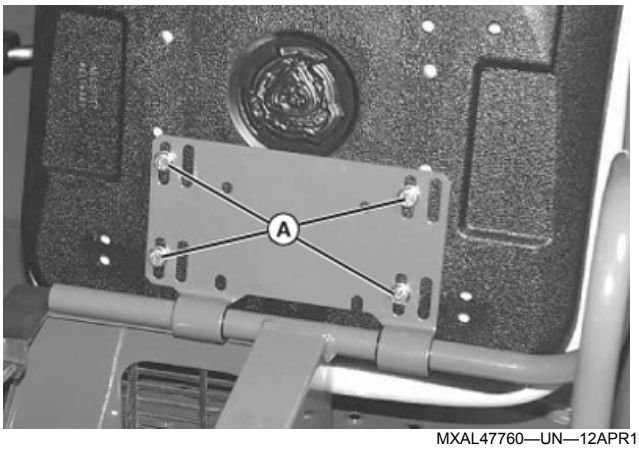
The dash bar (A) and side rail (B) hand holds are provided for passenger balance.

- Use hand holds when entering and exiting the machine.
- When a passenger is present, the passenger must use at least one hand hold at all times while the machine is moving.

Adjusting Standard Seat

1. Tip seat forward.

NOTE: If seat is removed, install seat hardware in the correct slots in the bracket. Always use set of slots closest to center of vehicle when installing seat.



MXAL47760—UN—12APR13

Passenger seat shown.

2. Hold onto seat and loosen cap screws (A).
3. Slide seat forward or rearward for desired position.
4. Tighten seat cap screws to specifications.

Specification

Seat Cap Screws — Torque . . . . . 12.2 N·m (9 lb-ft)

Adjusting Driver Seat With Optional Lever System

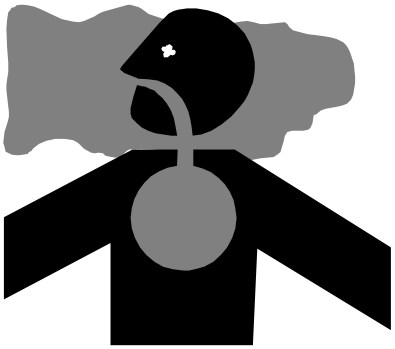
CAUTION: Never adjust seat while machine is moving. Stop machine before adjusting seat to prevent loss of machine control.

1. Stop machine and move transaxle shift lever to the neutral position.
2. Lock park brake.

MXAL47657—UN—16APR13

3. Pull up on lever (A), and slide seat forward or rearward until seat locks in place.
4. Release lever.

Testing Safety Systems



MXAL41828—UN—18FEB13

CAUTION: Engine exhaust fumes contain carbon monoxide and can cause serious illness or death.

- **Move the machine to an outside area before running the engine.**
- **Do not run an engine in an enclosed area without adequate ventilation.**
- **Connect a pipe extension to the engine exhaust pipe to direct the exhaust fumes out of the area.**
- **Allow fresh outside air into the work area to clear the exhaust fumes out.**

The safety systems installed on your machine should be checked before each machine use. Be sure you have read the machine operator manual and are completely familiar with the operation of the machine before performing these safety system checks.

Use the following checkout procedures to check for normal operation of machine.

If there is a malfunction during one of these procedures, do not operate machine. See your **authorized dealer for service**.

Perform these tests in a clear open area. Keep bystanders away.

Testing the Safety Start System

1. Sit on the operator's seat.
2. Put key in STOP position.
3. Lock park brake.
4. Move gear shift lever to forward position.
5. Move key to start position. Engine should not crank. Turn key off.
6. Move gear shift lever to reverse position.
7. Move key to start position. Engine should not crank. Turn key off.

Using Park Brake

Locking the Park Brake:

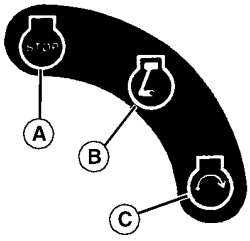
MXAL47659—UN—16APR13

1. Push down on brake pedal to hold machine in place.
2. Pull up on lever (A) and lock lever into position engaging park brake.

Unlocking the Park Brake:

1. Push down on brake pedal to hold machine in place.
2. Pull up on lever (A).
3. Depress button (B).
4. Release lever down completely.

Using Key Switch



MXAL44082—UN—27MAR13

A - STOP Position - With key in STOP position, all switched power is off, and engine should not run.

B - ON Position - Turn key from STOP to ON position and all switched power circuits will be energized, and machine is ready for use.

C - START Position - Used only for starting machine in neutral.

Using Headlights

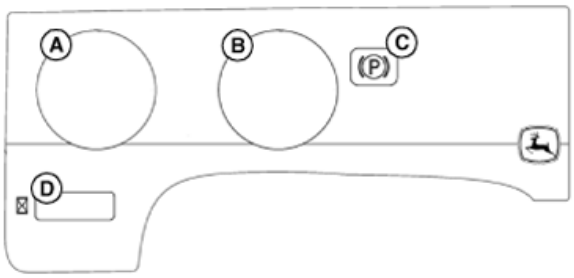
Ignition switch/Key must be in the run position to operate the lights. If the Ignition switch/key is in the run position and the engine is not running, the battery will discharge if the lights are allowed to remain on for an extended period of time.

- Press top of light switch to turn headlights on.

NOTE: Be sure to turn lights off and turn the ignition switch/key to STOP position, or lights will discharge battery.

- Press bottom of light switch to turn headlights off.

Using Instrument Panel



MXAL47582—UN—16MAY13

A - **Optional Voltmeter** - This gauge indicates system voltage. Indicator should be near center position while engine is running. If indicator is in either low or high (red) positions, stop engine and go through diagnostic procedures to repair problem.

B - **Optional Speedometer** - The speedometer indicates machine speed in Km/hr (mph).

C - **Park Brake Light** - This light will turn on when the key switch is in the on position, engine is running, and park brake lever is locked.

D - **Hour Meter** - The hour meter operates and displays when the engine is running. The hour meter shows the accumulated number of hours the engine has run. The hour meter is intended to provide a means of monitoring machine usage for maintenance purposes. Use the hour meter to determine when your machine has reached the recommended service intervals.

Using Accessory Outlet

CAUTION: Safe operation requires your full attention. Do not wear radio or music headphones while operating machine.

NOTE: Accessory must be rated at 10 amps or less.

The accessory plug does not turn off with the key switch. Items connected to the accessory plug will continue to draw power, discharging the battery.

- Remove 12-volt outlet cover and install accessory cord in outlet.
- Install cover in outlet after use.

Using Optional Turn Signal Switch

NOTE: Turn signals will continue to flash when the ignition switch/key is in the STOP position, discharging the battery.

- Press at left end of turn signal switch to signal a left turn.
- Press at right end of turn signal switch to signal a right turn.
- Press at opposite end of turn signal switch until switch is centered to turn signal light off.

Using Optional Hazard Lights

NOTE: Hazard lights will continue to flash when the ignition switch/key is in the STOP position, discharging the battery.

- Press at top of hazard light switch to turn hazard lights on.
- Press at bottom of hazard light switch to turn hazard lights off.

Starting the Engine

CAUTION: Engine exhaust fumes contain carbon monoxide and can cause serious illness or death.

- **Move the machine to an outside area before running the engine.**
- **Do not run an engine in an enclosed area without adequate ventilation.**
- **Connect a pipe extension to the engine exhaust pipe to direct the exhaust fumes out of the area.**
- **Allow fresh outside air into the work area to clear the exhaust fumes out.**

1. Sit on operator seat. Do not start engine at this time.
2. Push down on accelerator pedal to check free movement of pedal assembly. Release pedal.

NOTE: The machine has a neutral start safety switch. The engine will not crank unless the gear shift lever is in N (Neutral) position.

3. Verify that transaxle shift lever is in N (Neutral) position.
4. Verify that park brake is locked.

CAUTION: Do not start engine by shorting across starter terminals. Bypassing normal circuitry will allow vehicle to start in gear.

Never start engine while standing on ground. Start engine only from operator's seat.

5. Turn key switch to the ON position.

IMPORTANT: Open the choke by pushing the knob in to its full off position as soon as possible. Running the engine with the choke on beyond the warm up period may lead to plug fouling.

NOTE: The choke is designed with a snap and seal option and can be utilized for maximum weather protection such as pressure washing or inclement weather. Under normal use this feature does not necessarily need to be used. Push in fully to snap and seal the knob. Pull out to unseal the knob for normal operation.

6. Pull the choke knob out fully if engine is cold.
7. Turn key to start position.
8. Push choke in as needed to obtain a stable engine idle and push knob all the way in once the engine is running smoothly.

IMPORTANT: Starter may be damaged if starter is operated for more than 20 seconds at a time:

- **Wait two minutes before trying again if engine does not start.**

9. Release key to the ON position when engine starts.
   - If engine does not start within five seconds, turn key to off and wait ten seconds before trying to start again.
   - In very cold conditions, attempt starting engine three times only, then wait 5 minutes before trying again. This will allow time for starter to cool and prevent damage to starter.
10. Push in on the choke.

IMPORTANT: Do not operate the engine at full throttle or under load until engine has warmed up, or engine damage could occur.

11. Run engine at half speed for 2 or 3 minutes to warm the engine.

Stopping Engine

CAUTION: Children or bystanders may attempt to move or operate an unattended machine.

Always lock the park brake and remove the key before leaving the machine unattended.

IMPORTANT: Do not stop engine immediately after hard or extended operation. Keep engine running at low idle for about 2 minutes to prevent heat build-up.

1. Release accelerator pedal and apply brake pedal to stop machine.
2. Move transaxle shift lever to N (Neutral) position.
3. Lock park brake.
4. Turn key switch to STOP position.
5. Remove key.

Emergency Stopping

1. Remove foot from travel pedal or accelerator pedal.
2. Depress brake pedal. Do not release brake pedal until machine has stopped.
3. After machine has stopped, lock the park brake.
4. Turn ignition key switch to STOP position.

Using Travel Controls

1. Push down brake to stop vehicle.
2. Allow engine to come to a low idle speed.

IMPORTANT: Do not shift gears when vehicle is moving or with engine running above low idle speed. Push down brake to stop vehicle motion and engage shift lever with a firm positive action.

Gears may grind when shifting if engine idle speed is set higher than factory specification.

3. Select a gear position:
   - Forward - Push shift lever forward to forward gear.
   - Neutral - Push shift lever to center (neutral) position.
   - Reverse - Push shift lever rearward to reverse gear.
4. Use the traction assist as needed.
5. Look in the direction the vehicle will travel.

CAUTION: Reduce speed before braking or turning, when hauling loads, and while operating around obstacles or on hazardous off-road conditions.

6. Push down accelerator pedal slowly and smoothly to begin vehicle travel.
7. Release accelerator and apply brake pedal evenly and firmly to slow down or stop.

Using the Cargo Box

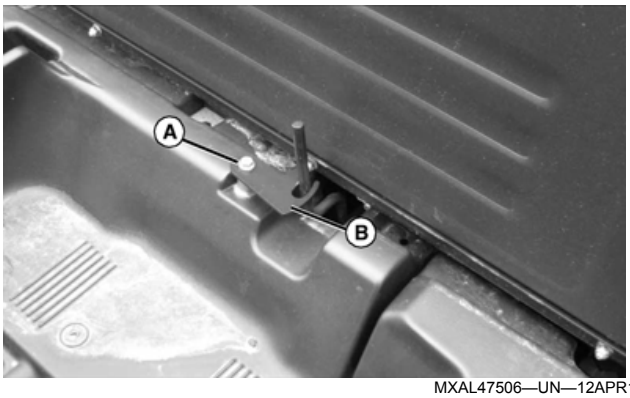
CAUTION: Seating is provided for the operator and one passenger. Do not allow riders in the cargo box or on the tailgate. Extra riders can fall off and be seriously injured or killed.

Raising and Lowering with Manual Lift (Machines Without Cabs)

CAUTION: Park machine on a level surface and lock park brake before manually raising and securing cargo box in raised position.

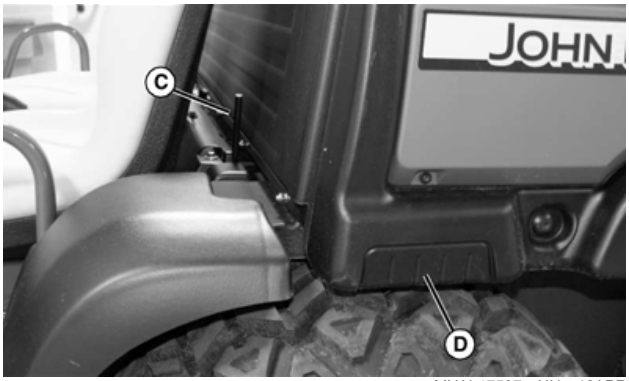
A cargo box containing material can be heavy. Empty some or all material until cargo box can safely be raised manually.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Empty cargo box by hand.



MXAL47506—UN—12APR13

3. Loosen bolt (A) and disengage cargo box lock (B).



MXAL47507—UN—12APR13

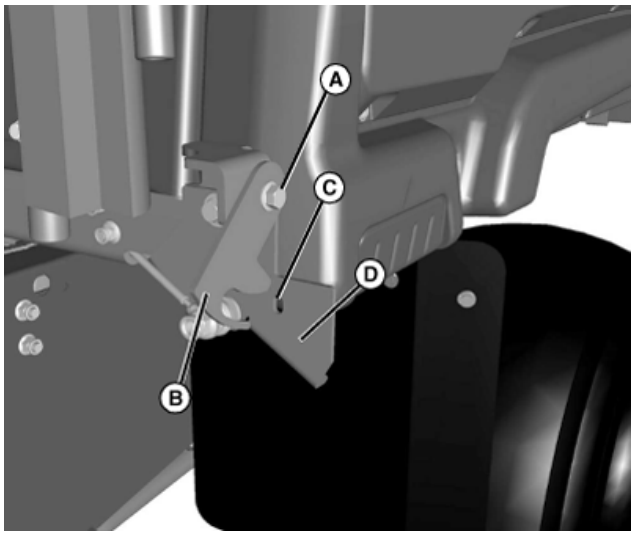
4. Release latch (C) by pulling latch towards handle (D) on cargo box. Allow lift cylinder to raise cargo box.
5. Engage lock and tighten bolt after fully lowering cargo box. Tighten bolt.

Raising and Lowering with Manual Lift (Machines with Cab)

CAUTION: Park machine on a level surface and lock park brake before manually raising and securing cargo box in raised position.

A cargo box containing material can be heavy. Empty some or all material until cargo box can safely be raised manually.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Empty cargo box by hand.



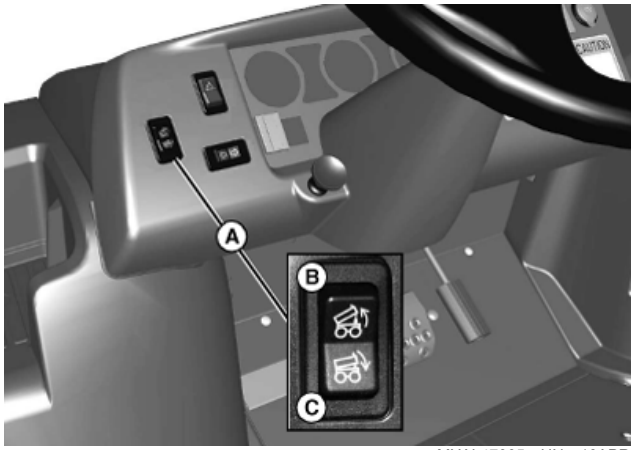
MXAL47664—UN—16APR13

3. Loosen bolt (A) and rotate locking plate (B) out of slot (C) on handle (D). Pull up on handle to release the latch. Allow lift cylinder to raise cargo box.
4. Rotate locking plate into slot on handle after fully lowering the cargo box. Tighten bolt.

Raising and Lowering with Power Lift

IMPORTANT: A "clicking" or "ratcheting" sound when cargo box is fully raised or lowered or when box is heavily loaded indicates actuator clutch slippage. To prevent unnecessary wear or damage, keep clutch slippage to a minimum. Do not operate the Power Lift actuator beyond full stroke or exceed the cargo box weight capacity.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Disengage cargo box lock if installed.
3. Turn key to on position.



MXAL47665—UN—16APR13

4. The cargo box switch (A) is located on the left side of the instrument panel.
5. Raise cargo box by pressing and holding top of rocker switch (B). Release switch when box is at desired dump height or when reaching maximum height.

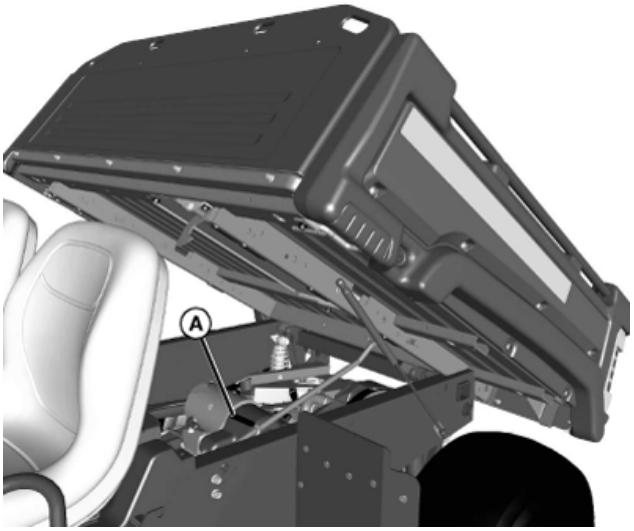
NOTE: Allowing the Power Lift actuator clutch to slip briefly (click or ratchet) after cargo box is fully lowered will help keep cargo box secure and reduce rattling caused by travel vibrations.

6. Completely lower cargo box by pressing and holding bottom of rocker switch (C).
7. Turn key to OFF position.

Locking Box in Raised Position

CAUTION: Cargo box can fall if not secured properly. Remove key from ignition and lock support rod securely before doing any service under raised cargo box.

1. Raise the cargo box.



MXAL47666—UN—16APR13

2. Pull down on the cargo box slightly and push rod (A) in toward center of box to locked position.
3. Check to be sure box is locked in raised position.
4. To lower cargo box, lift rod up and slowly push cargo box downward until it latches in fully lowered position.

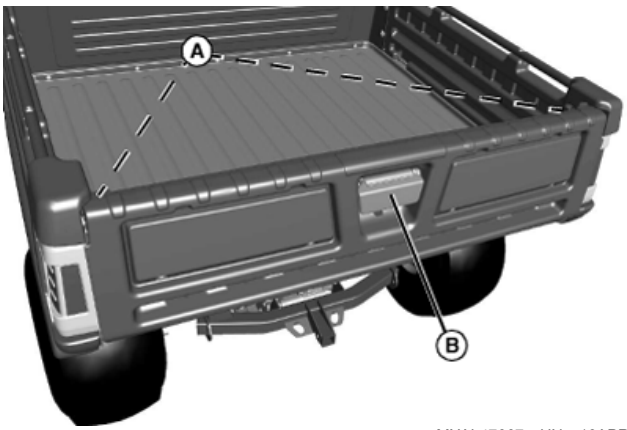
Operating the Tailgate

CAUTION: Never operate tailgate with one lanyard attached (always use both).

Check condition of lanyards for wear or damage. Replace if cable is kinked or frayed.

IMPORTANT: Do not attempt to tilt or dump cargo box when lanyards are detached. Tailgate damage from contact with hitch may result.

Keep lanyards attached when loading and unloading loose materials to avoid jamming material in the gap between the cargo box bed and tailgate.



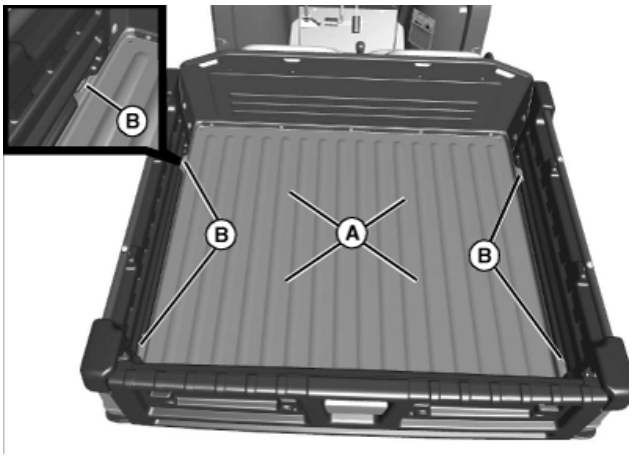
MXAL47667—UN—16APR13

1. Check to be sure lanyards (A) are in place to support lowered tailgate.
2. Disconnect lanyards if you want to lower tailgate more than 90 degrees.

IMPORTANT: Lower tailgate completely to unload cargo box only. Never drive with the tailgate hanging down. Tailgate can contact tires and cause damage.

3. Pull back on handle (B) to unlock and lower tailgate.
4. Before raising tailgate, check for stones and debris caught in the gap between the tailgate and cargo box floor. To remove debris:
   a. Lock the cargo box in raised position.
   b. Rotate the tailgate slightly to free debris, and brush out the gap.
   c. Lower the cargo box.
5. To raise tailgate, slowly push tailgate upward and lock into closed position.
6. Check to be sure tailgate is securely locked.

Using Cargo Box Tie Downs



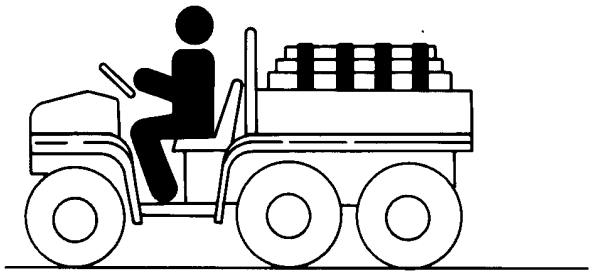
MXAL47668—UN—16APR13

1. Arrange load so the weight is centered over the main cargo area (A).
2. Secure loads to the tie downs (B) in a safe and secure manner.

Loading the Cargo Box

CAUTION: The utility vehicle may become unstable if the cargo box is loaded incorrectly. Avoid loose and shifting loads or uneven loading of material.

- **Do not load above height of load guard.**
- **Securely anchor all loads in cargo box.**
- **Do not load beyond maximum capacity.**



MXAL47669—UN—16APR13

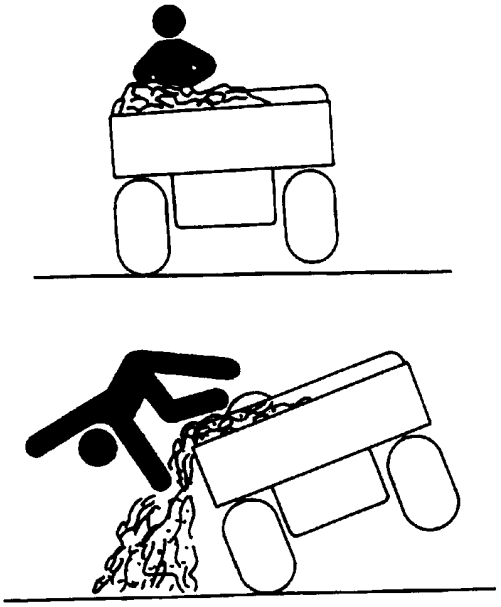
Maximum payload capacity on level terrain for the cargo box is 272 kg (600 lb).

Reduce load by half when operating over rough, hilly, or steep terrain. Do not overload vehicle. Limit loads to those that can be safely controlled.

Reduce speed and exercise extreme caution when operating over rough, hilly, or steep terrain.

Securely anchor and evenly distribute loads in cargo box, when loading objects into vehicle. Shifting loads will affect stability.

Do not load above load guard.



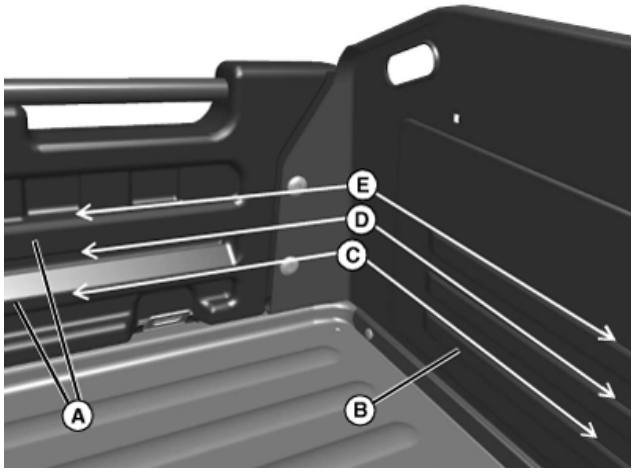
MXAL47670—UN—16APR13

Avoid concentrated loads at rear or side of cargo box to prevent vehicle from tipping over. Be sure load is evenly distributed.

Because there is a big difference in weight between dry and wet sand, the only way of getting true weight of the load you are carrying is by using a scale.

Printed weight is normally on bagged and other material.

Box Volume Capacity



MXAL47671—UN—16APR13

Use rub rails (A) in left and right side panels, and form beads (B) in cargo box front panel to determine cargo box volume.

- 10.1 cm (4 in.) load height (C) = 150 L (5.3 cu ft).
- 15.2 cm (6 in.) load height (D) = 226 L (8 cu ft).
- 20.3 cm (8 in.) load height (E) = 303 L (10.7 cu ft).

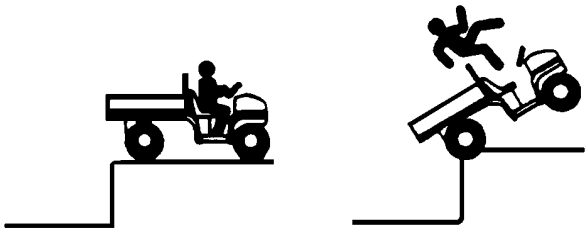
NOTE: Use table below to determine height of common cargo box materials.

Material	Weight (lb/ft^3)	Capacity Height
Asphalt	45	10
Brick	120	4
Cement (Dry)	94	4
Sand (Dry)	100	4
Sand (Damp)	120	4
Sandstone (Broken)	94	4
Concrete (Set/Mix)	135	3
Soil (Dry/Loose)	78	5
Soil (Wet/Packed)	100	4
Clay (Dry/Lump)	67	6
Clay (Wet/Lump)	100	4
Fertilizer	60	7
Gravel (1/4 - 2 in.)	105	4
Turf/Sod	35	12

Emptying Cargo Box

CAUTION: Raising a loaded cargo box changes the center of gravity. Keep vehicle a safe distance from the edge of ravine or drop-off when raising cargo box to empty.

A loaded cargo box can be very heavy. Do not attempt to manually raise a loaded cargo box. Unload cargo box before raising it by hand.



MXAL44093—UN—27MAR13

1. Back up vehicle to dump site.
2. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
3. Open tailgate.

IMPORTANT: Stop emptying immediately if actuator clutch slippage occurs. Lower cargo box completely and remove excess load by hand before dumping.

4. Raise cargo box to dump load.
5. Lower cargo box when empty.
6. Close tailgate. Do not drive vehicle with cargo box in raised position.

Using Traction Assist (Differential Lock)

Traction assist is a differential lock system which provides better traction to the rear wheels when needed. Engaging the traction assist will cause both rear wheels to turn together at equal speed.

CAUTION: Driving at high speed with the traction assist engaged may result in loss of steering control. Do not engage traction assist while operating vehicle at speeds in excess of 16 km/h (10 mph).

Turning with the traction assist engaged increases the turning radius of the machine. Do not turn with the traction assist engaged while operating vehicle at speeds in excess of 16 km/h (10 mph).

Engaging the Traction Assist:

IMPORTANT: Using the traction assist function improperly can damage the transaxle:

- **Reduce speed and allow drive wheels to rotate at same speed before engaging or disengaging traction assist.**
- **Disengage traction assist when driving on dry asphalt or concrete.**
- **Use traction assist only when necessary for improved ground engagement.**

1. Stop or reduce engine speed to 1/3 throttle or less.
2. Push traction assist lever forward to locked position.
   - Traction assist will remain engaged as long as lever is forward.

Disengaging the Traction Assist

1. Pull lever rearward to unlocked position.
2. Drive the vehicle straight ahead at a constant speed.
3. Reduce engine speed to 1/3 throttle or less.

Towing Loads

CAUTION: Avoid injury! Excessive towed load can cause loss of traction and loss of control on slopes. Stopping distance increases with speed and weight of towed load.

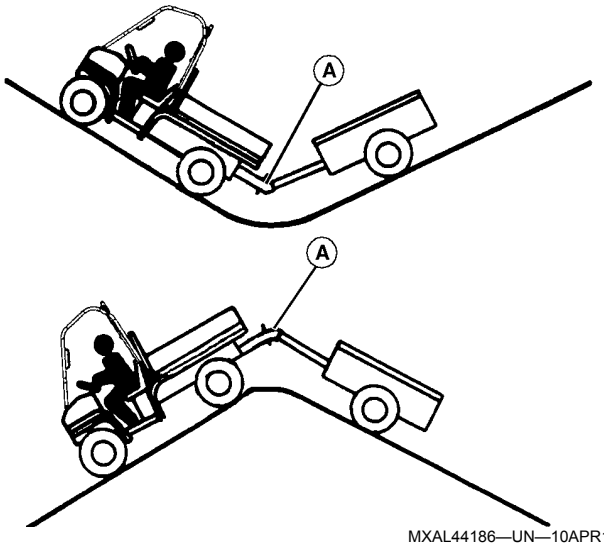
Do not tow a load that exceeds the maximum allowable towing load for this vehicle, as specified in this operator's manual.

Secure towed loads before transporting.

- To provide adequate braking ability and traction, weight of towed load (trailer plus cargo) must never exceed the vehicle payload (operator plus passenger plus cargo box load).

- When operating over rough, hilly, or steep terrain and reducing cargo load by half, any towed load should also be reduced accordingly.
- Do not tow a load that exceeds towing capacity listed in SPECIFICATIONS.
- Do not exceed trailer tongue weight listed in SPECIFICATIONS. (The tongue load of a trailer should be approximately 10% of the total trailer weight.)
- Tow load at a speed slow enough to maintain control.

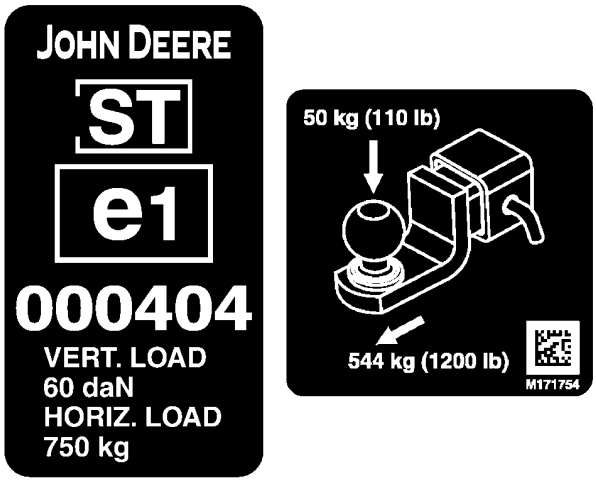
IMPORTANT: Avoid damage! When operating on terrain with extreme angles, use a ball type hitch (A).



MXAL44186—UN—10APR13

- Always use approved hitch and hitch point provided for the utility vehicle. Do NOT modify the hitch or hitch point in any way.

Capacity Label



MXT007935—UN—18JUL13

Labels shown are for reference only. Confirm capacities on labels on your machine.

Your machine may have a hitch capacity label installed near the hitch area. The label indicates vertical and horizontal load capacities.

The vertical load capacity is the maximum down force which can be applied for safe operation. The horizontal load capacity is the total weight of what is being towed which must not be exceeded for safe operation.

Using Correct Tires and Inflation

See tire descriptions and inflation pressures in SPECIFICATIONS.

Tires

CAUTION: Help prevent severe bodily injury or death, failure to observe these recommendations may result in loss of stability and operator control.

Use of John Deere approved original equipment or optional equipment is recommended. To ensure maximum machine performance and ride quality, do not mix size, type, or placement of tires. Failure to place tires per the guidelines could result in reduced machine performance, diminished traction and poor handling.

Inflation

CAUTION: Explosive separation of tire and rim parts is possible when they are serviced incorrectly:

- **Do not attempt to mount a tire without the proper equipment and experience to perform the job.**
- **Do not inflate the tires above the recommended pressure.**
- **Do not weld or heat a wheel and tire assembly. Heat can cause an increase in air pressure resulting in an explosion. Welding can structurally weaken or deform the wheel.**
- **Do not stand in front or over the tire assembly when inflating. Use a clip-on chuck and extension hose long enough to allow you to stand to one side.**

IMPORTANT: Over inflation may damage tires and diminish ride quality. Under inflation could cause wheel damage when riding over rough terrain.

An accurate low pressure gauge is available at your John Deere dealer.

Using Tire Chains

IMPORTANT: Loose tire chains can cause machine damage. Periodically check chain tightness and adjust as necessary.

Chains are available for two rear wheels only from your John Deere dealer.

Transporting Machine

Towing the Vehicle

IMPORTANT: Towing is not recommended. If towing is necessary, tow in the neutral position, and never tow the vehicle above 25 km/h (15.5 mph). Towing a vehicle at speeds above 25 km/h (15.5 mph) will result in transaxle damage. To avoid damage, haul the vehicle on a heavy-duty trailer or on a full-size truck.

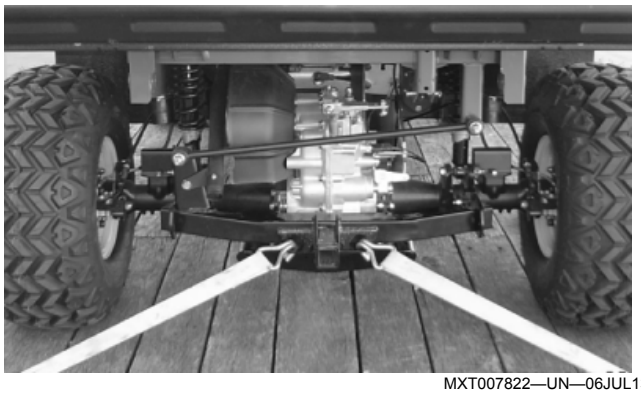
Never use a car type dolly with the front wheels on the dolly.

1. Check to be sure that the ignition key switch is in the STOP position.
2. Unlock the park brake and move the transaxle shift lever to the neutral (N) position for towing.
3. Move the four wheel drive control to Disengaged/Off position.

Vehicle Tie Down Locations

MXAL47674—UN—16APR13

On the front of the machine, route straps or chains over the arms and under the frame as shown.

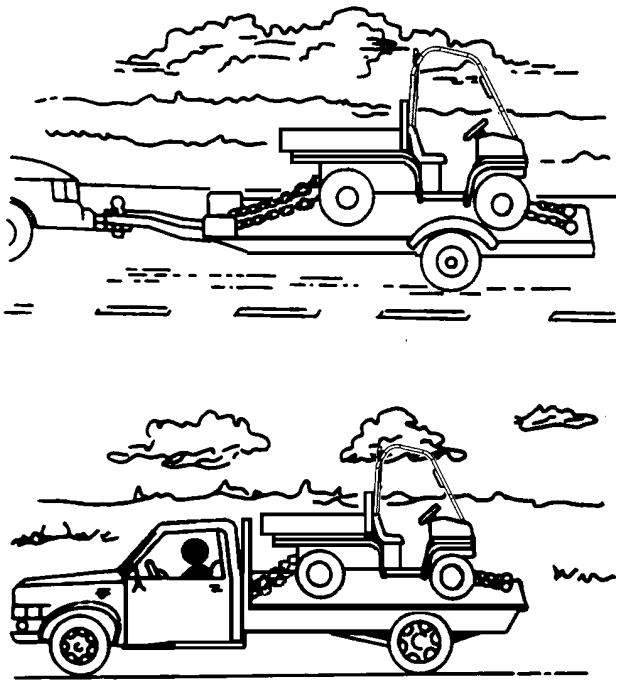


MXT007822—UN—06JUL13

On the rear of the machine, attach straps or cables to the hitch as shown.

Hauling the Vehicle

NOTE: Space limitations may vary from one truck manufacturer to another. Short bed trucks do not have the necessary length requirement to accommodate the machine.



MXAL44529—UN—28MAR13

1. Back utility vehicle onto the trailer or truck.
2. Leave transaxle shift lever in forward or reverse gear.
3. Park vehicle safely. (See Parking Safely in the SAFETY section.)
4. Fasten vehicle to trailer or truck with straps, chains, or cables.
5. Equip the trailer or truck with all the necessary lights and signs required by local, state, provincial, or federal laws.
6. Remove or secure optional attachments, if equipped.

Service Literature

If you would like a copy of the Parts Catalog or Technical Manual for this machine call:

- **U.S. & Canada:** 1-800-522-7448.
- **All Other Regions:** Your John Deere dealer.

Parts

We recommend John Deere quality parts and lubricants, available at your John Deere dealer.

Part numbers may change, use part numbers listed below when you order. If a number changes, your dealer will have the latest number.

When you order parts, your John Deere dealer needs the serial number or product identification number (PIN) for your machine or attachment. These are the numbers that you recorded in the Product Identification section of this manual.

Order Service Parts Online

Visit **http://JDParts.deere.com** for your Internet connection to parts ordering and information.

Part Numbers

ITEM	PART NUMBER
Engine Oil Filter	AM107423
Air Filter Element	M113621
Fuel Filter	AM116304
Spark Plug	M138938
Drive Belt	M150046
Fuses: 10 Amp 15 Amp 20 Amp 25 Amp 30 Amp 40 Amp	 57M7121 99M7065 57M7120 99M7069 57M7146 99M7104
Battery	TY25221
Head Lamp Assembly Head Lamp Bulbs Instrument Panel Lamps Backup Light Bulb Brake/Taillight Bulb Turn Signal Light Bulb	VGA10008 AM118013 AR62407 R133301 R133302 57M10180

(Part numbers are subject to change without notice. Part Numbers may be different outside the U.S.A.)

Servicing Your Machine

IMPORTANT: Operating in extreme conditions may require more frequent service intervals:

- **Engine components may become dirty or plugged when operating in extreme heat, dust or other severe conditions.**
- **Engine oil can degrade if machine is operated constantly at slow or low engine speeds or for frequent short periods of time.**

Please use the following timetables to perform routine maintenance on your machine.

Park the vehicle safely. See Park Safely in the SAFETY Section.

Break In

After First 8 Hours:

- Check and tighten wheel bolts to correct torque.
- Change engine oil and filter.
- Check brake fluid level.

Every 50 Hours

- Grease fittings (front spindles).
- Grease cargo box tailgate strikers.
- Check brake fluid level.
- Inspect park brake for proper function. (See your John Deere dealer for any adjustment needed.)

Every 100 Hours or Annually (whichever comes first)

- Change engine oil and filter.
- Check transaxle oil level.

Every 200 Hours

- Adjust engine valve clearance (see your John Deere dealer for service).

Every 200 Hours or Annually (whichever comes first)

- Change spark plug.
- Change air cleaner element.
- Check air cleaner dust unloading valve.
- Change fuel filter.
- Check spark arrestor.
- Check drive belt condition.
- Check driven clutch wear buttons.
- Inspect and replace battery hold-down strap, if necessary.
- Inspect battery; clean if necessary.
- Check and tighten wheel bolts to correct torque.
- Check and tighten hardware.
- Check brake pad wear.
- Inspect cargo box tailgate lanyards. Replace if kinked or frayed.

Every 800 Hours or 24 Months

- Change transaxle oil.
- Replace drive belt.

Every 1000 Hours or 24 Months (whichever comes first)

- Flush and refill brake fluid. (See your John Deere dealer for this service.)

Grease

IMPORTANT: Avoid Damage! Use recommended John Deere greases to avoid component failure and premature wear.

The following grease is recommended for service:

- John Deere Multi-Purpose HD Lithium Complex Grease
- Grease-Gard™ Premium Plus

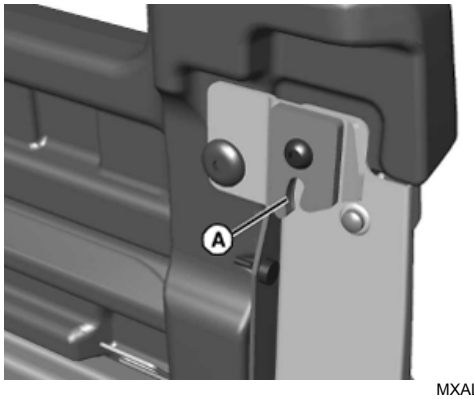
Not all grease types are compatible; John Deere does not recommend mixing greases. If using any product other than the recommended grease in service, purge any remaining grease from the system prior to application. If this is not practical, grease twice as often until all old grease is purged from the system.

Lubricating Front Spindles

MXAL47598—UN—16MAY13

Lubricate one grease fitting (A) on each king pin bushing with one or two shots of grease.

Lubricating Cargo Box Tailgate Strikers



MXAL47599—UN—16MAY13

1. Open the tailgate.
2. Apply recommended grease to the inside surface of the strikers (A) on both sides of the cargo box.

Engine Warranty Maintenance Statement

Maintenance, repair, or replacement of the emission control devices and systems on this engine, which are being done at the customer's expense, may be performed by any non-road engine repair establishment or individual. Warranty repairs must be performed by an authorized John Deere dealer.

Emission Control System Certification Label

NOTE: Tampering with emission controls and components by unauthorized personnel may result in severe fines or penalties. Emission controls and components can only be adjusted by EPA and/or CARB authorized service centers. Contact your John Deere Retailer concerning emission controls and component questions.

The presence of an emissions label signifies that the engine has been certified with the United States Environmental Protection Agency (EPA) and/or California Air Resources Board (CARB).

The emissions warranty applies only to those engines marketed by John Deere that have been certified by the EPA and/or CARB; and used in the United States and Canada in off-road mobile equipment.

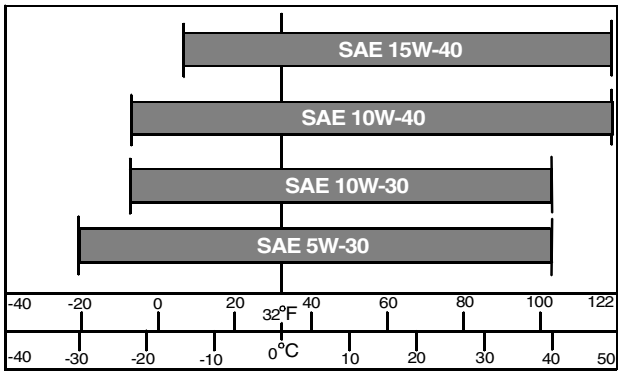
Avoid Fumes

CAUTION: Engine exhaust fumes contain carbon monoxide and can cause serious illness or death.

- **Move the machine to an outside area before running the engine.**
- **Do not run an engine in an enclosed area without adequate ventilation.**
- **Connect a pipe extension to the engine exhaust pipe to direct the exhaust fumes out of the area.**
- **Allow fresh outside air into the work area to clear the exhaust fumes out.**

Engine Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.



MXAL47600—UN—16MAY13

The following John Deere oils are preferred:

- TURF-GARD™
- Plus-4™
- Plus-50™ II II

Other oils may be used if above John Deere oils are not available, provided they meet the following specification:

- API Service Classification SJ or higher

Checking Engine Oil Level

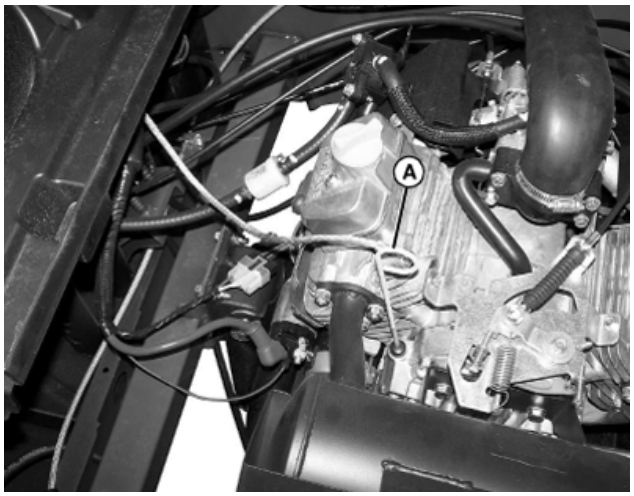
IMPORTANT: Failure to check the oil level regularly could lead to serious engine problems if oil level is out of the operating range:

- **Check oil level before operating.**
- **Check oil level when the engine is cold and not running.**
- **Keep oil level between the dipstick marks.**
- **Shut off engine before adding oil.**

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.

IMPORTANT: Dirt and contamination can enter engine when checking oil level. Clean area around dipstick before loosening or removing.

™TURF-GARD is a trademark of Deere & Company
™Plus-4 is a trademark of Deere & Company
™Plus-50 is a trademark of Deere & Company



MXAL47601—UN—16MAY13

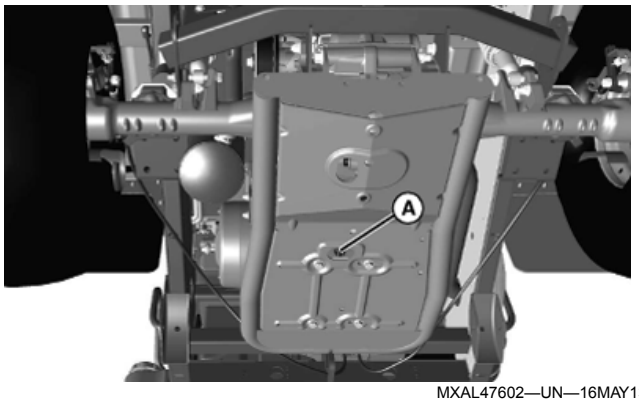
3. Remove dipstick (A) and wipe it clean.
4. Install dipstick.
5. Remove dipstick.
6. Checking oil level:
   - Oil level must be between upper and lower fill marks on dipstick.
   - If oil level is below lower mark on dipstick, add oil to bring oil level no higher than upper mark on dipstick.
   - If oil level is above upper mark, drain to proper level. Determine cause of this condition and correct.
7. Install dipstick.
8. Lower the cargo box.

Changing Engine Oil and Filter

IMPORTANT: Change the oil more often if the vehicle is used in extreme conditions:

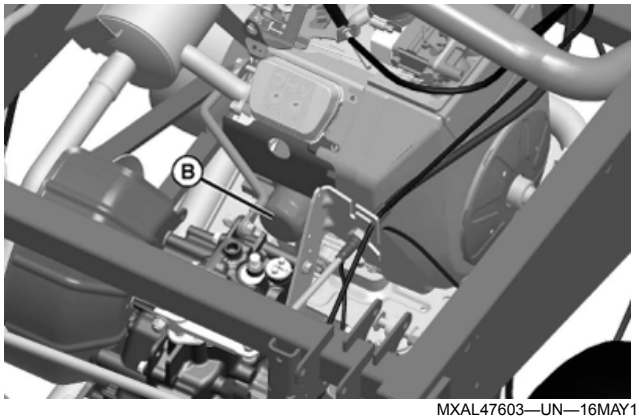
- **Extremely dusty conditions.**
- **Frequent slow or low-speed operation.**
- **Frequent short trips.**

1. Run engine to warm the oil.
2. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
3. Raise and secure cargo box.
4. Clean any debris around drain plug.
5. Place drain pan under engine drain plug.



MXAL47602—UN—16MAY13

6. Remove drain plug (A) on the rear side of engine and drain oil into oil drain pan. Allow oil to drain completely.

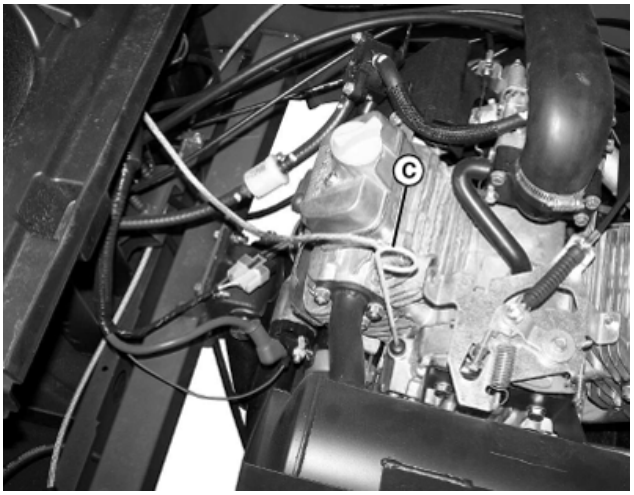


MXAL47603—UN—16MAY13

7. Remove and discard oil filter (B) on rear of engine. Wipe off filter base on engine.
8. Put a light coat of clean engine oil on gasket of new oil filter.
9. Install new filter until rubber gasket contacts filter base. Tighten filter an additional one-half turn.
10. Install drain plug, and tighten to specifications.

Specification

Engine Oil Drain Plug — Torque . . . . . 6.9 N·m (61 lb-in.)



MXAL47604—UN—16MAY13

11. Remove dipstick (C) from filler tube, and add engine oil.

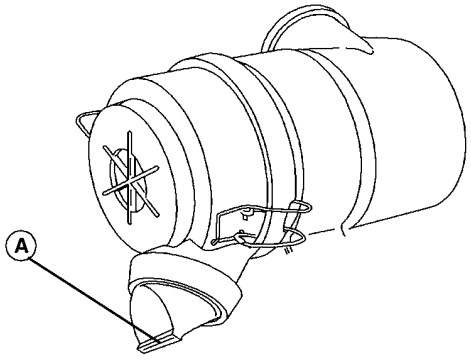
IMPORTANT: Do not overfill crankcase with oil. Oil capacities given are with engine and crankcase completely dry. Some oil will remain in engine after draining.

12. Add recommended oil no higher than upper mark on dipstick. Do not overfill.
13. Install dipstick.
14. Start and run engine at idle to check for leaks. Stop engine. Fix any leaks before operating.
15. Check oil level, add oil if necessary.
16. Lower the cargo box.

Cleaning Dust Unloading Valve

IMPORTANT: Do not operate engine without air cleaner element and rubber dust unloading valve installed.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Allow engine to cool.
3. Access the engine compartment.



MXAL44550—UN—28MAR13

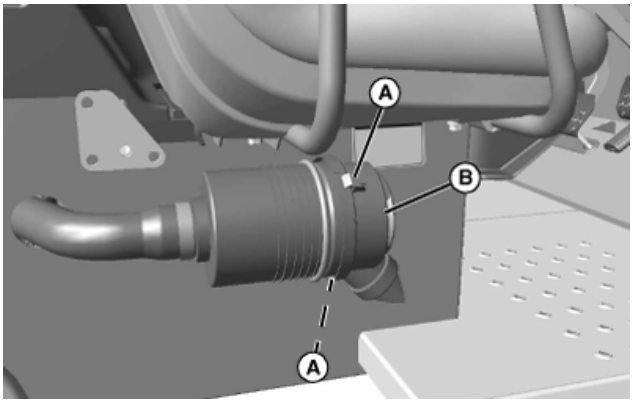
4. Squeeze dust unloading valve (A) to clean. Remove and replace if damaged.

Servicing Air Cleaner Element

IMPORTANT: Dirt and debris can enter engine when air cleaner canister is opened. Do not open canister unless required for scheduled service. This will keep contamination of the intake system to a minimum.

Check filter element more frequently if operating in dusty conditions.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Allow engine to cool.

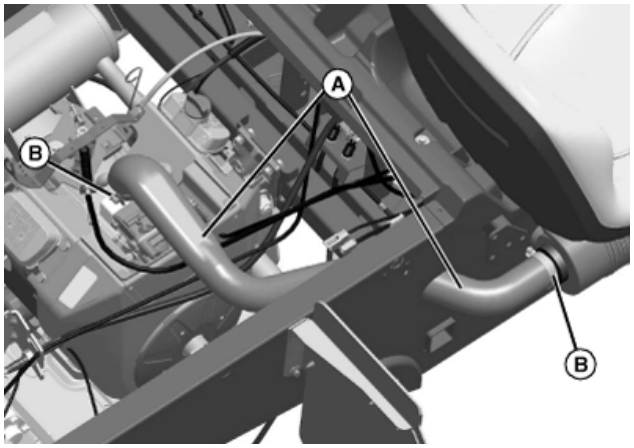


MXAL47606—UN—16MAY13

3. Release latches (A) and remove air cleaner canister cover (B).
4. Remove and discard filter element. Replace with a new filter element.
5. Install air cleaner canister cover with rubber dust unloading valve pointing downward. Check direction molded into canister cover for proper installation.
6. Hook the canister cover latches.

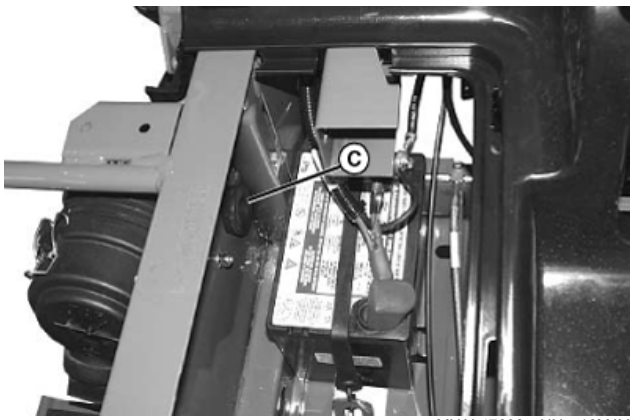
Checking Air Intake, Hoses and Clamps

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.



MXAL47607—UN—16MAY13

3. Check intake hose (A) for damage or cracking. Replace if necessary.
4. Check and tighten air intake hose clamps (B) as needed.
5. Raise passenger seat, and remove service access panel.



MXAL47608—UN—16MAY13

6. Check to make sure air intake restrictor (C) is clear of obstructions and secured in position.
7. Lower the cargo box, install service access panel, and lower passenger seat.

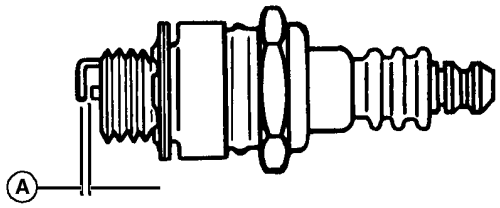
Checking Spark Plug

CAUTION: Touching hot surfaces can burn skin. The engine, components, and fluids will be hot if the engine has been running. Allow the engine to cool before servicing or working near the engine and components.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.
3. Disconnect spark plug wire(s).
4. Remove spark plug(s) using appropriate spark plug socket.
5. Inspect spark plug(s) for:
   - Cracked porcelain.
   - Pitted or damaged electrodes.
   - Other wear or damage.
6. Clean spark plug(s) carefully with a wire brush.

NOTE: In Canada, replace with resistor spark plug only.

7. Replace spark plug(s) if necessary.



MXAL47609—UN—16MAY13

8. Check and adjust spark plug gap (A). Gap must be within specifications.

Specification	
Spark Plug — Gap	0.80 mm (0.031 in.)

9. Install and tighten spark plug(s). Tighten to specifications.

Specification	
Spark Plug — Torque	25 N·m (18 lb-ft)

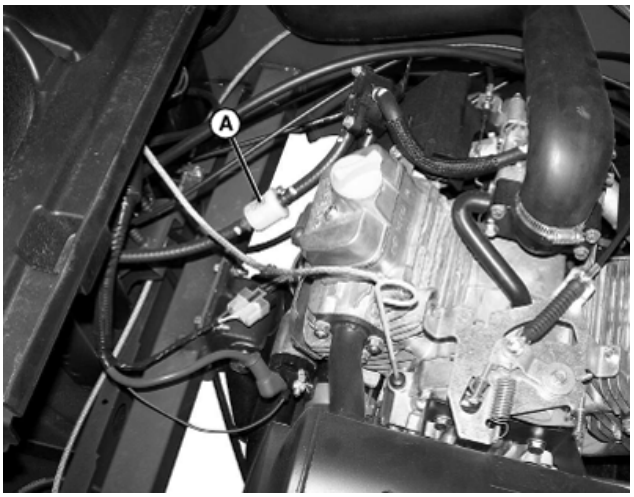
10. Install spark plug wire(s).
11. Lower the cargo box.

Replacing Fuel Filter

CAUTION: Fuel vapors are explosive and flammable:

- **Do not smoke while handling fuel.**
- **Keep fuel away from flames or sparks.**
- **Shut off engine before servicing.**
- **Cool engine before servicing.**
- **Work in a well-ventilated area.**
- **Clean up spilled fuel immediately.**

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.



MXAL47610—UN—16MAY13

3. Locate the fuel filter (A).
4. Check element of fuel filter for debris. Replace if dirt or sediment is visible on element.
5. Slide hose clamps away from the fuel filter.
6. Place a drain pan or cloth under hoses to catch any fuel left in hoses.
7. Disconnect hoses from the filter.

NOTE: Install fuel filter with arrow pointing in direction of fuel flow towards the engine.

8. Install new filter.
9. Connect hoses to new filter.
10. Install clamps.
11. Lower the cargo box.

Adjusting Carburetor

NOTE: The carburetor is calibrated by the engine manufacturer and should not require any adjustments.

If engine is operated at altitudes above 1829 m (6,000 ft.), some carburetors may require a special high altitude main jet. See your John Deere dealer.

If engine is hard to start or runs rough, check the TROUBLESHOOTING section of this manual.

After performing the checks in the troubleshooting section and your engine is still not performing correctly, contact your John Deere dealer.

Cleaning Engine Compartment

CAUTION: Touching hot surfaces can burn skin. The engine, components, and fluids will be hot if the engine has been running. Allow the engine to cool before servicing or working near the engine and components.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.

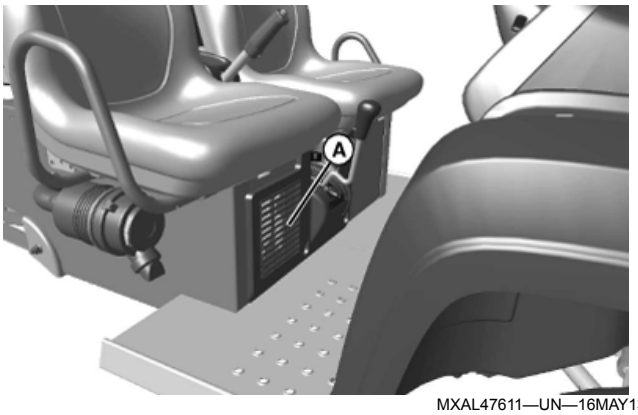
IMPORTANT: Do not spray water on a hot engine or transaxle. Damage may occur to cast aluminum parts. Allow engine to cool before servicing.

3. Remove any debris in engine compartment.
4. Check and remove any obstructions around the control cables and linkages.

Cleaning Frame Screen

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)

IMPORTANT: An obstructed air intake screen can cause engine damage due to overheating. Keep air intake screen and other external surfaces of the engine, including cooling fins, clean at all times to allow adequate air intake.



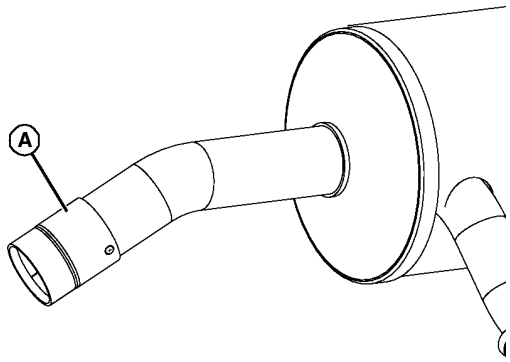
MXAL47611—UN—16MAY13

2. Check screen (A) for dirt, grass clippings and debris.
3. Clean screen by washing or with a brush or cloth.

Checking Spark Arrestor

CAUTION: Avoid injury! Touching hot surfaces can burn skin. The engine, components, and fluids will be hot if the engine has been running. Allow the engine to cool before servicing or working near the engine and components.

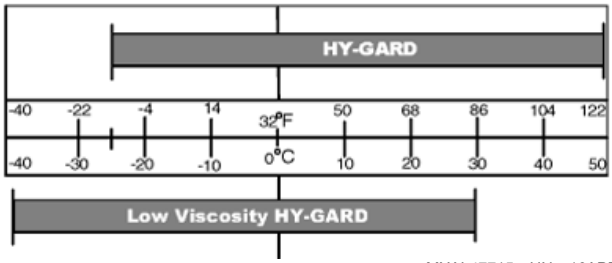
1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Allow engine to cool completely.
3. Raise and secure cargo box.



MXAL47612—UN—16MAY13

4. Remove screw securing spark arrestor (A) to muffler exhaust pipe. Retain the screw.
5. Remove spark arrestor.
6. Make sure deflector screen inside arrestor is not plugged or damaged:
   - If plugged, spray with carburetor/choke cleaner and blow dry with low pressure compressed air.
   - If damaged, replace spark arrestor.
7. Install spark arrestor with original hardware.

Transaxle Oil



MXAL47715—UN—16APR13

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere HY-GARD™ transmission and hydraulic oil is recommended for most normal operating temperatures.

NOTE: For temperatures below -13° C (0° F) John Deere low viscosity HY-GARD™ may be used.

Other oils may be used if they meet John Deere standards JDM J20C and JDM J20D.

Checking Transaxle Oil Level

IMPORTANT: Hot hydraulic oil will expand and show incorrect oil level. Check oil level:

- **When oil is cold.**
- **With engine not running.**

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.

IMPORTANT: Dirt and debris in oil may cause damage to the transaxle. Clean area around opening before removing dipstick.

MXAL47614—UN—16MAY13

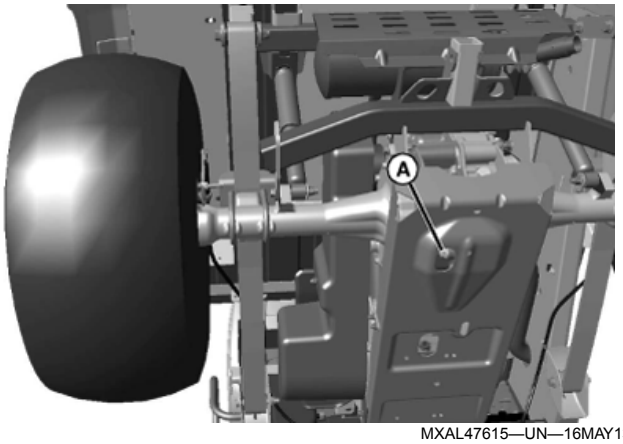
3. Remove dipstick (A) located on the top of the transaxle housing. Wipe dipstick clean.
4. Check oil level by setting dipstick on threads in transaxle case, then removing and checking oil level.
5. Add oil as needed through the dipstick fill hole.
6. Install and tighten dipstick.
7. Lower the cargo box.

Changing Transaxle Oil

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.

IMPORTANT: Dirt and debris in oil may cause damage to the transaxle. Clean area around opening before removing plug or dipstick.

Be sure dipstick is installed before removing drain plug. Slowly remove dipstick after plug is removed to control rate of oil flow draining into drain pan.



MXAL47615—UN—16MAY13

3. Position drain pan under transaxle drain plug (A).
4. Remove plug and drain oil.
5. Check washer on drain plug. Replace if missing or in poor condition.
6. Install and tighten drain plug to specifications.

Specification	
Transaxle Drain Plug — Torque	30-35 N·m (22-26 lb-ft)

7. Remove dipstick located on top of transaxle housing. Wipe dipstick clean.
8. Add oil: Start by adding approximately 4.7 L (5.0 qt).
9. Check oil level by setting dipstick on threads in transaxle case, then removing and checking oil level.
10. Wait for two minutes then check oil level. Add oil if necessary.

11. Install dipstick and tighten.
12. Lower the cargo box.

Replacing Drive Belt

CAUTION: Rotating parts can catch fingers, loose clothing, or long hair. Wait for engine and all moving parts to stop before leaving operator's station to adjust or service machine.

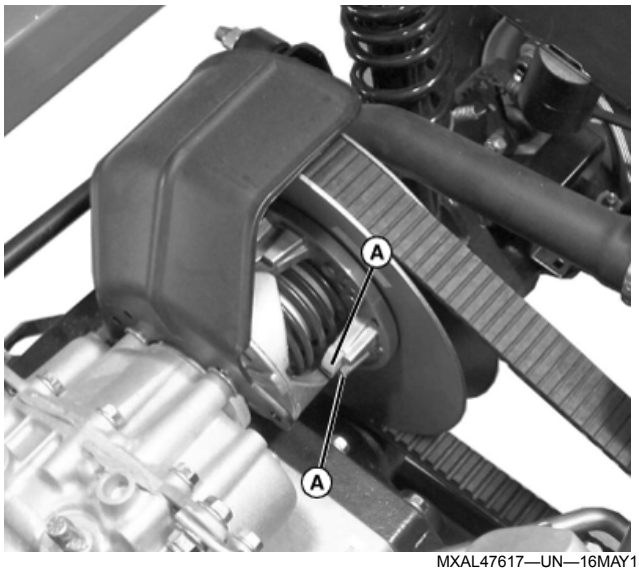
1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.

MXAL47616—UN—16MAY13

3. Route the belt over pulley (A) of the driven clutch. Rotating the driven pulley will aid in removing the belt.
4. Route belt over drive pulley (B) to remove.
5. Install new belt by routing over drive pulley and then over the driven clutch pulley.
6. Lower the cargo box.

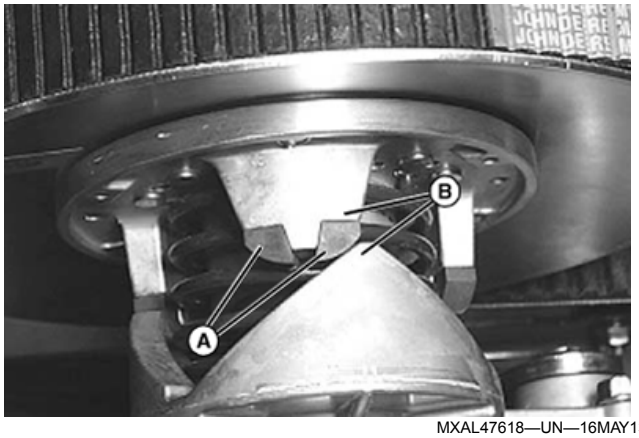
Checking Secondary Driven Clutch Buttons

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.



MXAL47617—UN—16MAY13

3. Check for missing or worn clutch buttons (A).



MXAL47618—UN—16MAY13

Good Clutch Buttons

- There should not be any excessive wear on clutch buttons (A).
- Replace buttons before there is metal-to-metal (B) contact.
- If replacement is necessary, see your authorized dealer.

4. Lower the cargo box.

Brake Fluid

The following heavy duty brake fluid is PREFERRED for all drum and disc brakes:

- Brake Fluid - Super-Duty DOT4
- Other brake fluids may be used if they provide the following:
- Conforms to Motor Vehicle Safety Standard No. 116.
- Minimum wet boiling point 155°C (311°F).
- Minimum dry boiling point 230°C (446°F) to prevent vapor lock.

Check Brake Fluid Level

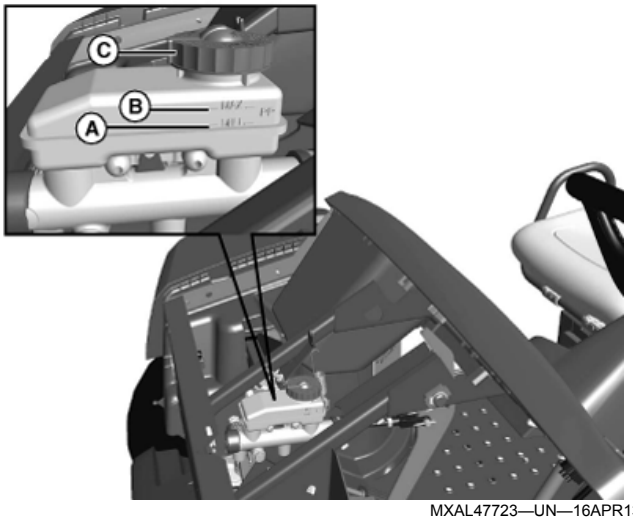
IMPORTANT: Avoid contamination of the brake fluid. Thoroughly clean area around the filler cap before removing. Do not open the brake fluid reservoir cap unless absolutely necessary.

Use extreme care when filling the reservoir. Fluid spilled on painted surfaces can cause damage.

Use only brake fluid from a sealed container.

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Remove hood.

NOTE: Do not overfill reservoir. If you do overfill, leakage can occur.



MXAL47723—UN—16APR13

3. Visually check brake fluid reservoir. Brake fluid level must be between MIN (A) and MAX (B) marks. If fluid is low:
   - Carefully clean area around reservoir cap (C).
   - Remove reservoir cap and add fluid to the MAX mark.
4. Install reservoir cap.
5. Close hood.

Checking Brake Pads

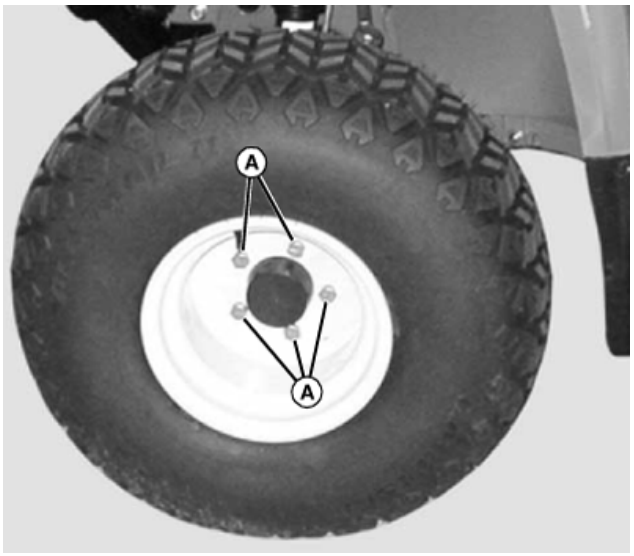
1. Park machine safely. (See Parking Safely in the Safety section.)

CAUTION: The machine can fall or slip from an unsafe lifting device or supports.

- **Use a safe lifting device rated for the load to be lifted.**
- **Lower machine onto jack stands or other stable supports and block wheels before servicing.**

IMPORTANT: Place jack stands under frame, not under transmission or engine, when raising or supporting machine.

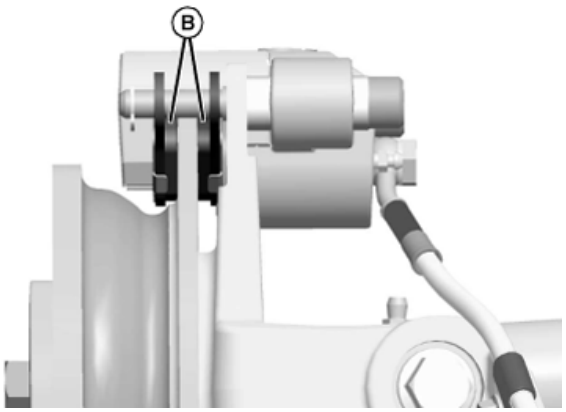
2. Raise machine with a safe lifting device and lower machine onto jack stands or other stable supports. Block wheels remaining on the ground to prevent machine movement.



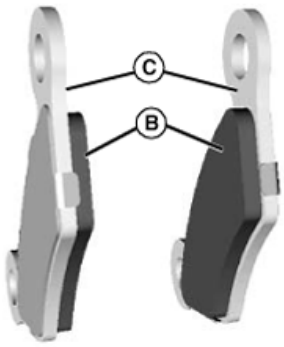
MXAL47724—UN—16APR13

Wheel may or may not have a cap to remove when removing the wheel.

3. Remove the wheel bolts (A).
4. Remove the wheel assembly.



MXAL47725—UN—16APR13



MXAL47726—UN—16APR13

5. Inspect brake pad's friction material (B) for wear or damage. Check each pad's friction material thickness: Measure between the inside edge (C) of the backing plate and the wear surface of the pad. If below specification or brake pad friction material is damaged, see your John Deere dealer for replacement service.

Specification

Breake Pad Friction Material (min.)
— Thickness . . . . . 1 mm (3/64 in.)

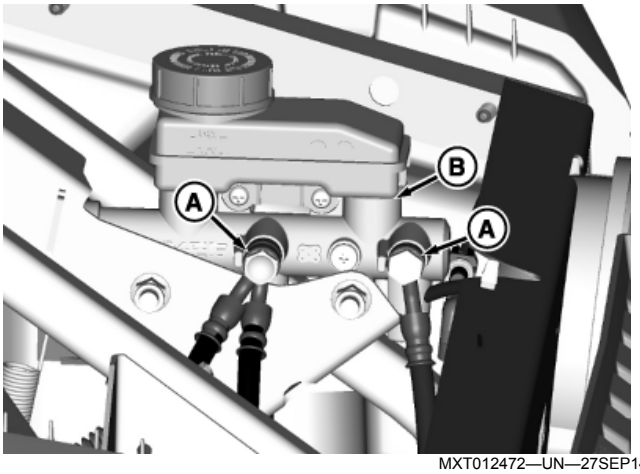
6. Install wheel assembly with valve stem to the outside.
7. Tighten wheel bolts evenly in alternating sequence until snug.
8. Repeat procedure for remaining three wheels.
9. Lower machine completely to the ground.
10. Tighten wheel bolts to specifications.

Specification

Wheel Bolt — Torque. . . . . .88 N·m (65 lb-ft)

Checking Brake Lines

1. Park machine safely. (See Parking Safely in the SAFETY section.)
2. Protect any painted surfaces from expelled brake fluid and wipe any areas of excess brake fluid.
3. Open hood.



MXT012472—UN—27SEP14

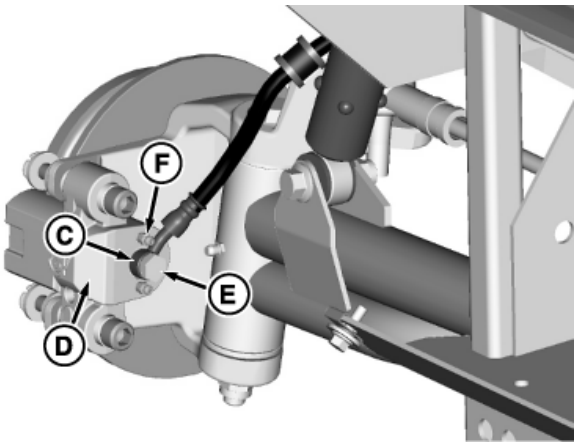
4. Check brake line fittings (A) at reservoir (B) for leaks.
5. Tighten brake line fitting banjo bolts, as needed, to specification.

Specification

Banjo Bolts — Torque . . . . . .27 N·m (20 lb.-ft.)

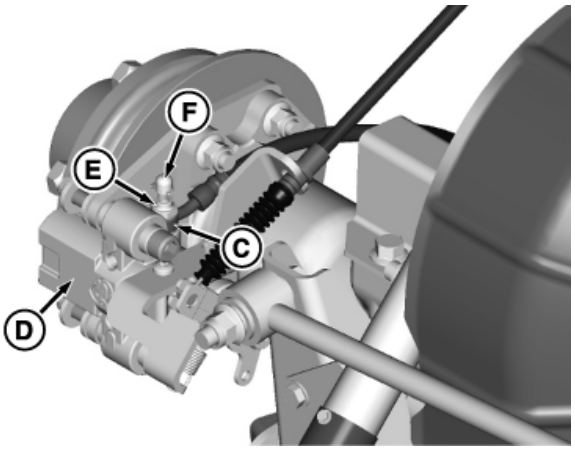
6. Rotate wheels to provide access to brake calipers.

NOTE: Each caliper has two bleeder screws. If bleeding brakes is necessary, use only the upper screw (F) to bleed brake calipers.



MXT012473—UN—27SEP14

Picture Note: Front shown.



MXT012474—UN—27SEP14

Picture Note: Rear shown.

7. Inspect brake line fitting (C) on each brake caliper (D) for leaks. Tighten brake line fitting banjo bolt (E), as needed, to specification.

   Specification

   Banjo Bolt — Torque . . . . . .27 N·m (20 lb.-ft.)

8. Lower hood.
9. Start vehicle and press brake pedal. If leaks are still found, see your John Deere Dealer for service.

Adjusting Park Brake

For proper adjustment of the park brake system, see your John Deere Dealer.

Electrical

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

Service the Battery Safely

MXAL44610—UN—28MAR13

CAUTION: The battery produces a flammable and explosive gas. The battery may explode:

- **Do not smoke or have open flame near battery.**
- **Wear eye protection and gloves.**
- **Do not allow direct metal contact across battery posts.**
- **Remove negative cable first when disconnecting.**
- **Install negative cable last when connecting.**

Checking the Battery (Sealed Batteries)

NOTE: Do not attempt to open, add fluid or service battery. Any attempt to do so will void warranty.

- Keep battery and terminals clean.
- Keep battery bolts tight.
- Keep small vent holes open.

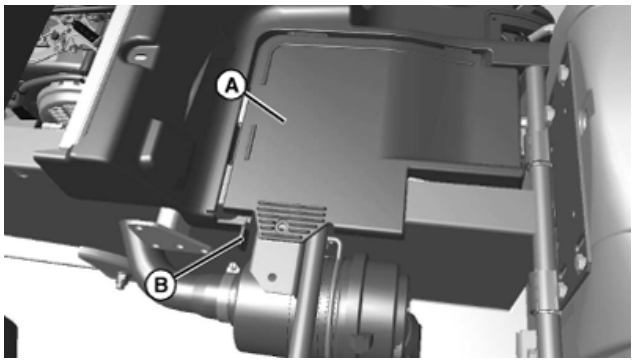
IMPORTANT: This battery comes fully charged. If the machine is not used by the service expiration date indicated on the battery, charge the battery.

- Recharge, if necessary, at 6-10 amperes for 1 hour.

Removing and Installing Battery

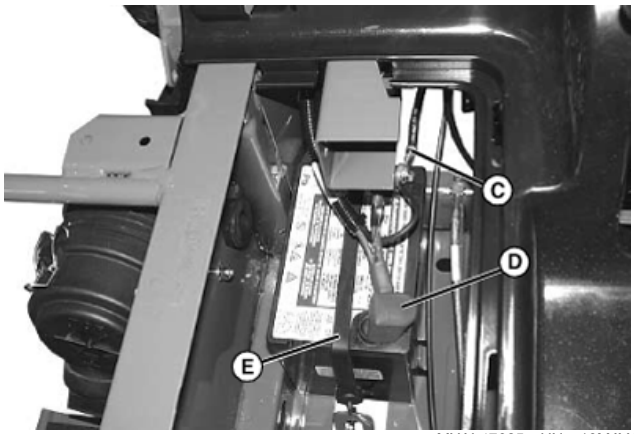
Removing

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)



MXAL47624—UN—16MAY13

2. Locate service access panel (A) under passenger seat. Pull back on latch (B), and remove panel.



MXAL47625—UN—16MAY13

3. Disconnect all black negative cables (C) from battery first.
4. Slide back rubber protective cover and disconnect all red positive cables (D).
5. Disconnect rubber hold-down strap (E).
6. Lift battery from vehicle.

Installing

1. Install battery into vehicle with negative (-) terminal positioned toward rear of vehicle.
2. Install battery hold-down strap.
3. Connect all red positive cables to positive (+) battery terminal first. Tighten the connections.
4. Connect all black negative cables to negative (-) battery terminal. Tighten the connections.
5. Apply spray lubricant to battery terminals to help prevent corrosion.

6. Slide protective cover down the battery positive cable and seat it over the positive (+) terminal.
7. Install battery cover and fastener, and lower passenger seat.

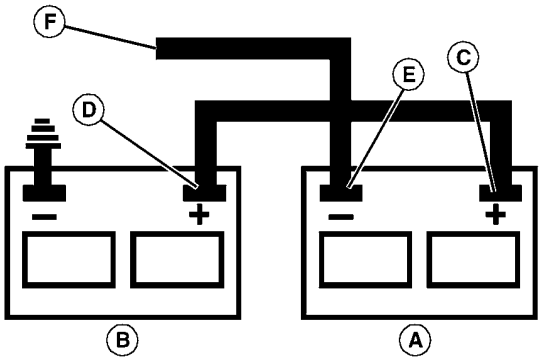
Cleaning Battery and Terminals

1. Park machine safely. (See Parking Safely in the SAFETY section.)
2. Disconnect and remove battery.
3. Wash battery with solution of four tablespoons of baking soda to one gallon of water. Be careful not to get the soda solution into the cells.
4. Rinse the battery with plain water and dry.
5. Clean terminals and battery cable ends with wire brush until bright.
6. Install battery.
7. Attach cables to battery terminals, beginning with the positive cable, using washers and nuts.
8. Apply spray lubricant to terminal to prevent corrosion.

Using Booster Battery

CAUTION: The battery produces a flammable and explosive gas. The battery may explode:

- **Do not smoke or have open flame near battery.**
- **Wear eye protection and gloves.**
- **Do not jump start or charge a frozen battery. Warm battery to 16°C (60°F).**
- **Do not connect the negative (-) booster cable to the negative (-) terminal of the discharged battery. Connect at a good ground location away from the discharged battery.**



MXAL44612—UN—28MAR13

A —Booster Battery
B —Disabled Vehicle Battery

1. Connect positive (+) booster cable to booster battery (A) positive (+) post (C).
2. Connect the other end of positive (+) booster cable to the disabled vehicle battery (B) positive (+) post (D).
3. Connect negative (–) booster cable to booster battery negative (–) post (E).

IMPORTANT: Electric charge from booster battery can damage machine components. Do not install negative booster cable to machine frame. Install only to the engine block.

Install negative booster cable away from moving parts in the engine compartment, such as belts and fan blades.

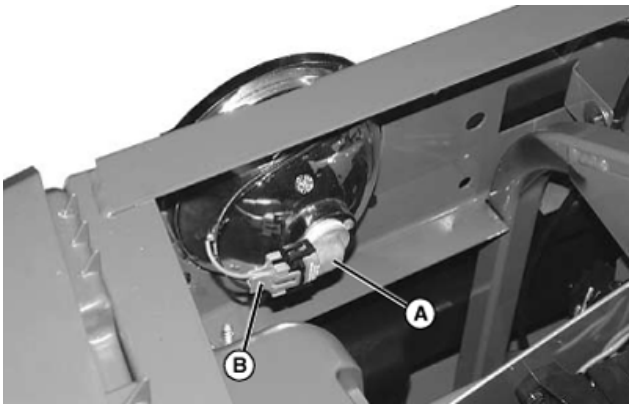
4. Connect the other end (F) of negative (–) booster cable to a metal part of the disabled machine engine block away from battery.
5. Start the engine of the disabled machine and run machine for several minutes.
6. Carefully disconnect the booster cables in the exact reverse order: negative cable first and then the positive cable.

Replacing Headlight Bulb

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Remove hood, and locate headlight housing in the front frame.

CAUTION: Halogen light bulb contains gas under pressure. The bulb may shatter if the glass is scratched or dropped. Wear eye protection and handle bulb with care when replacing.

IMPORTANT: Do not touch glass portion of new bulb with bare skin. Contact with oils or dirt will reduce bulb life. Handle bulb by the base or with a clean cloth or gloves.

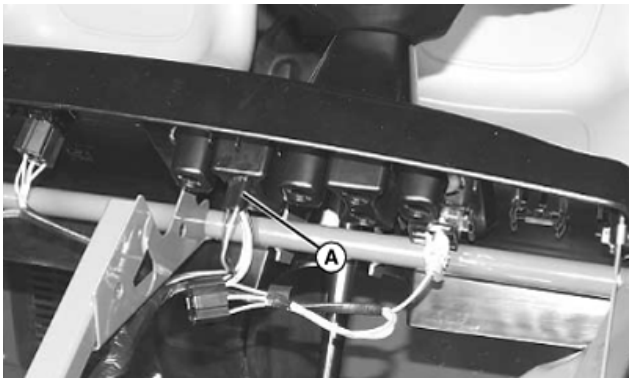


MXAL47733—UN—16APR13

3. Rotate bulb socket (A) 1/8 of a turn counterclockwise and remove socket from housing.
4. Disconnect wire connector (B) from socket. Discard the bulb/socket assembly.
5. Connect wiring connector to new bulb/socket assembly. Install the assembly into housing and rotate 1/8 turn to lock in place.
6. Test head lamp function.
7. Install hood.

Replacing Instrument Panel Bulbs

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Remove hood.

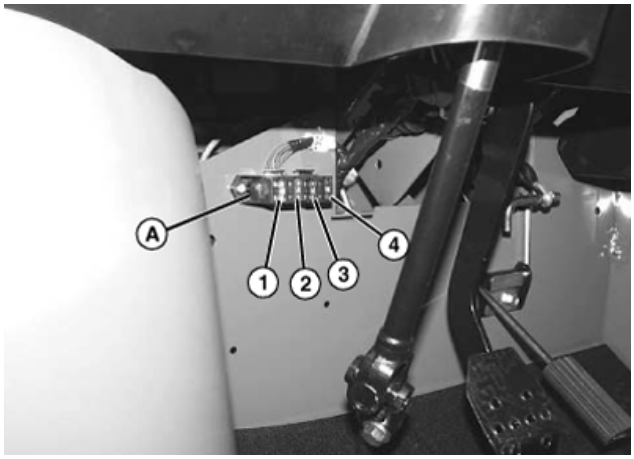


MXAL47734—UN—16APR13

3. Reach under instrument panel and remove appropriate bulb socket (A) from plastic housing.
   - Rotate bulb socket 1/8 turn.
   - Pull socket straight outward.
4. Remove bulb from socket. Discard bulb.
5. Install new bulb in socket.
6. Align and insert bulb socket into plastic housing. Turn socket 1/8 turn to lock in place.
7. Install hood.

Checking and Replacing Fuses

1. Park vehicle safely. (See Parking Safely in the SAFETY section.)



MXAL47629—UN—16MAY13

2. Fuse identification:

Position	Circuit	Fuse Size
1	Charging Circuit	20 amp
2	Front and Rear Attachment Circuit	40 amp
3	Ignition Switch ON Circuit	15 amp
4	Accessory Power Plug	10 amp

3. Pull fuse from fuse block (A) (next to foot pedal linkage).
4. Check visually for broken filament in fuse.

IMPORTANT: The electrical system may be damaged if incorrect replacement fuses are used. Replace the bad fuse with a fuse of the same amp rating.

5. Push new fuse of correct amp rating into proper position in fuse block.

High Capacity Alternator Recommendations

NOTE: See your authorized dealer for purchase of a High Capacity Alternator Kit.

If your vehicle is equipped with accessories that place a higher demand on the charging system, the vehicle's charging system may be supplemented with the use of a High Capacity Alternator Kit.

Using Proper Fuel and Stabilizer

IMPORTANT: Using stale, contaminated or improper fuel can result in engine and fuel system damage. Repairs caused by stale, contaminated or improper fuel are not covered by warranty.

Use regular grade unleaded fuel with an octane rating of 87 octane or higher. Fuel blends containing up to 10% ethanol or up to 15% MTBE reformulated fuel are acceptable. Do not use fuel or additives containing methanol as engine damage can occur.

Always use fresh, clean fuel that is purchased in a quantity that can be used within approximately 30 days. Fuel stabilizer should always be added to the fuel each time fuel is purchased. Add stabilizer before filling the fuel container to insure proper mixing. Such practice helps prevent engine performance problems and allows fuel storage in the machine all year without draining.

Store fuel in plastic containers to reduce condensation. Make sure the cap on the fuel container is tight to reduce fuel contamination and evaporation. For best fuel storage life, use a self-sealing gas can.

Fuel is blended to give best seasonal performance. To avoid engine performance problems such as hard starting or vapor lock, use in-season fuel. Use fuel during warm weather that was purchased during that season, and use fuel during cold weather that was purchased during that season.

Fuel can become stale in machines with engines that are used seasonally or infrequently during a season. Stale fuel can produce varnish and plug carburetor or EFI components which can affect engine performance.

Keep fuel storage container tightly covered and in a cool area out of direct sunlight. Fuel can break down and degrade if not sealed properly or exposed to sun and heat.

Condensation may collect in the fuel tank because of a variety of operating or environmental conditions and, over time, may affect your machine's operation. Fill machine fuel tank at the end of the day.

Filling Fuel Tank

CAUTION: Fuel vapors are explosive and flammable:

- **Shut engine off before filling fuel tank.**
- **Allow engine to cool before refueling.**
- **Do not smoke while handling fuel.**
- **Keep fuel away from flames or sparks.**
- **Fill fuel tank outdoors or in well ventilated area.**
- **Clean up spilled fuel immediately.**
- **Use clean approved non-metal container to prevent static electric discharge.**

IMPORTANT: Dirt and water in fuel can cause engine damage:

- **Clean dirt and debris from the fuel tank opening.**
- **Use clean, fresh, stabilized fuel.**
- **Fill the fuel tank at the end of each day's operation to keep condensation out of the fuel tank.**
- **Use a non-metallic funnel with a plastic mesh strainer when filling the fuel tank or container.**

Fill fuel tank at the end of each day's operation to prevent condensation and freezing during cold weather.

1. Park machine safely. (See Parking Safely in the SAFETY section.)
2. Allow engine to cool.
3. Remove any trash from area around fuel tank cap.
4. Remove fuel tank cap slowly to allow any pressure built up in tank to escape.
5. Fill fuel tank only to bottom of filler neck. Do not overfill.
6. Install fuel tank cap.
   - Gas models: Turn cap until clicks.

Lifting Machine

CAUTION: The machine can fall or slip from an unsafe lifting device or supports.

- **Use a safe lifting device rated for the load to be lifted.**
- **Lower machine onto jack stands or other stable supports and block wheels before servicing.**

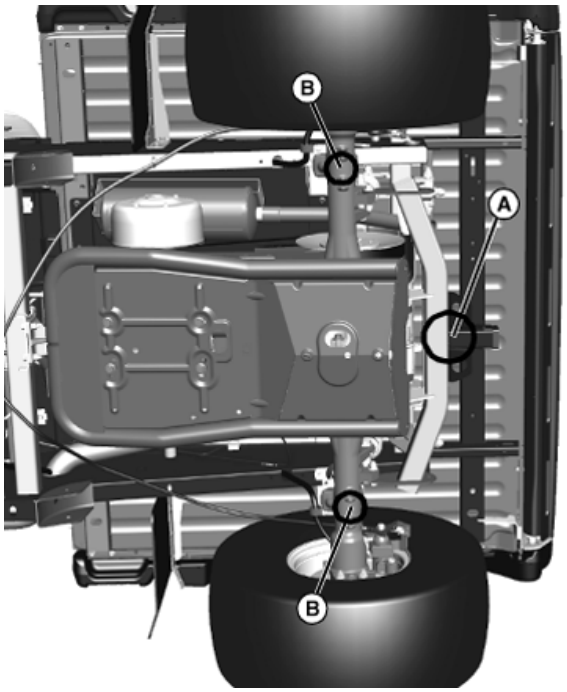
IMPORTANT: Be certain to include any bolt heads or embossed areas inside jack cup to prevent slipping.

NOTE: Remove all attachments prior to lifting machine.

Lifting Rear

1. Park machine safely. (See Parking Safely in the SAFETY section.)
2. If only lifting rear of machine, block front wheels remaining on ground to avoid movement of machine.

NOTE: Rear of machine may be raised using one of any of the three points shown (A) or points (B). Be certain to always use jack stands close to raise point of jack to support machine before servicing.



MXAL47630—UN—16MAY13

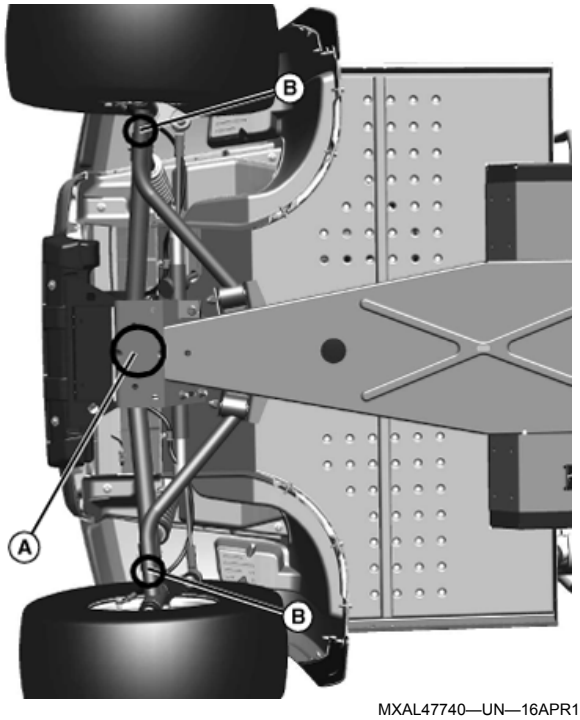
Your machine model may not be shown, but jack locations are as shown.

3. Safely lift rear of machine frame point (A) or locations (B).
4. If raising entire rear of machine, place jack stands or other stable supports under two frame locations (B).
5. To lower machine, lift rear of machine, and remove jack stands or supports. Lower machine.

Lifting Front

1. Park machine safely. (See Parking Safely in the SAFETY section.)
2. If only lifting front of machine, block rear wheels remaining on ground to avoid movement of machine.

NOTE: Front of machine may be raised using one of any of the three points shown (A) or points (B). Be certain to always use jack stands close to raise point of jack to support machine before servicing.



MXAL47740—UN—16APR13

Your machine model may not be shown, but jack locations are as shown.

3. Safely lift front of machine at machine frame point (A) or locations (B).
4. If raising entire front of machine, place jack stands or other stable supports under two machine frame locations (B).
5. To lower machine, lift front of machine, and remove jack stands or supports. Lower machine.

Removing and Installing Wheel

Removing

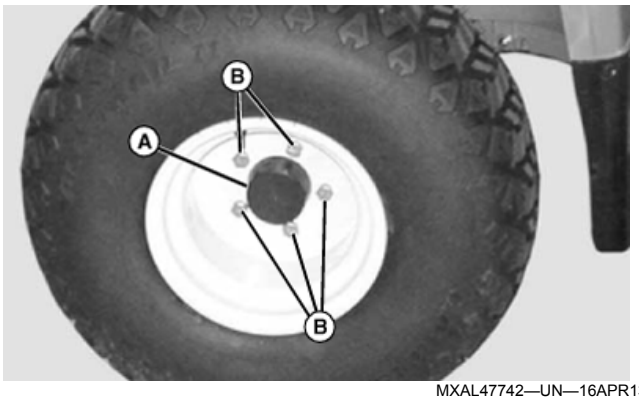
1. Park machine safely. (See Parking Safely in the Safety section.)

CAUTION: The machine can fall or slip from an unsafe lifting device or supports.

- **Use a safe lifting device rated for the load to be lifted.**
- **Lower machine onto jack stands or other stable supports and block wheels before servicing.**

IMPORTANT: Place jack stands under frame, not under transmission or engine, when raising or supporting machine.

2. Raise machine with a safe lifting device and lower machine onto jack stands or other stable supports. Block wheels remaining on the ground to prevent machine movement.



MXAL47742—UN—16APR13

Wheel may or may not have a cap (A) to remove when removing the wheel.

3. Remove the wheel bolts (B).
4. Remove the wheel assembly.
5. Tap on backside of wheel rim with a soft-faced mallet to remove wheel assembly.

CAUTION: Explosive separation of tire and rim parts is possible when they are serviced incorrectly:

- **Do not attempt to mount a tire without the proper equipment and experience to perform the job.**

6. Take wheel assembly to an authorized service dealer for repairs.

Installing

1. Install wheel assembly with valve stem to the outside.
2. Tighten wheel bolts evenly in alternating sequence until snug.
3. Lower machine completely to the ground.
4. Tighten wheel bolts to specifications.

Specification	
Wheel Bolts — Torque	88 N·m (65 lb-ft)

Removing and Installing Hood

CAUTION: Prevent injury from moving parts. Stop engine and remove key before adjusting or servicing the machine.

Removing Hood

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)

MXAL47743—UN—16APR13

2. Stand in front of vehicle, and grasp hood near arrow marks (A). Pull out firmly.

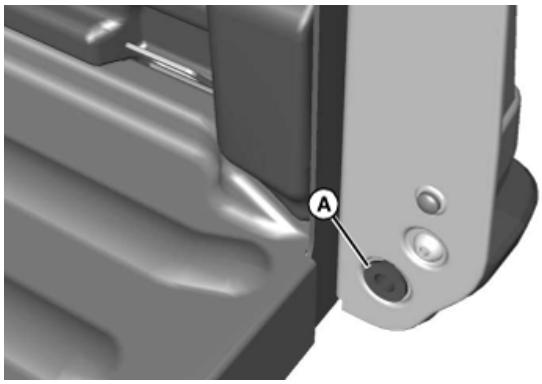
IMPORTANT: When removing hood (B), set hood in an upright position and not on top side of hood.

3. Pull forward on hood (B) and remove hood from under dash panel (C).

Installing Hood

1. Install hood (B) under dash panel (C).
2. Pivot hood downward, pushing near arrows (A) to secure rubber retainers on hood tabs onto molded retainers on front fenders.

Replacing Cargo Box Tailgate Bushings



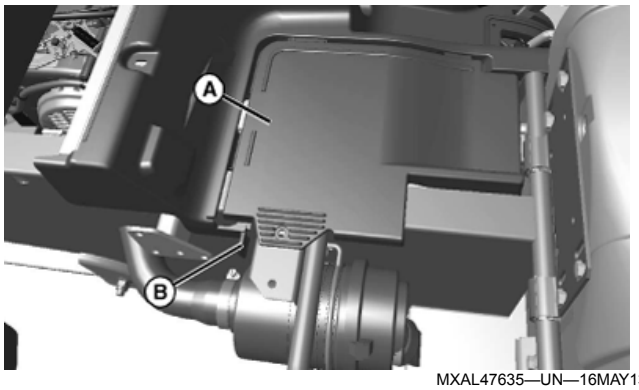
MXAL47744—UN—16APR13

1. Remove the cargo box tailgate (See Removing the Tailgate in OPERATING).
2. Remove snapfit bushing (A) from both sides of cargo box.
3. Replace bushings and reinstall the tailgate.

Opening and Closing Service Access Panel

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)

IMPORTANT: For proper vehicle operation, always operate with panel (A) installed.

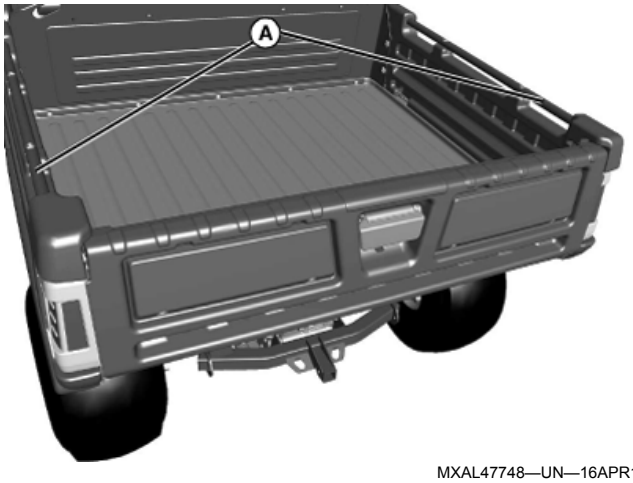


MXAL47635—UN—16MAY13

2. Locate service access panel (A) under passenger seat. Pull back on latch (B), and remove panel.

Cleaning and Repairing Cargo Box

Repairing Accessory Tubes



MXAL47748—UN—16APR13

Use 3M®Scotch-Brite® pad to polish and smooth nicks, scrapes or scratches in the vinyl surface of the tubes (A).

Cargo Box Floor

A rejuvinating product is available for cargo boxes with the optional spray-in liner. See your John Deere dealer.

Cleaning Plastic Hood and Body Panel Surfaces

IMPORTANT: Improper care of machine plastic surfaces can damage that surface:

- **Do not wipe plastic surfaces when they are dry. Dry wiping will result in minor surface scratches.**
- **Use a soft, clean cloth (bath towel, diaper, automotive mitt).**
- **Do not use abrasive materials, such as polishing compounds, on plastic surfaces.**

1. Rinse with clean water to remove dirt and dust.
2. Dry thoroughly to avoid water spots.
3. Spray PLEDGE® onto hood and surfaces and leave on for 30 to 60 seconds.
4. Wipe off with cheesecloth to bring out lustre.

®3M is a trademark of 3M Co.
®Scotch-Brite is a trademark of 3M Co.

Cleaning and Repairing Metal Surfaces

Cleaning:

Follow automotive practices to care for your vehicle painted metal surfaces. Use a high-quality automotive wax regularly to maintain the factory look of your vehicle's painted surfaces.

Repairing Minor Scratches (surface scratch):

1. Clean area to be repaired thoroughly.

IMPORTANT: Do not use rubbing compound on painted surfaces.

2. Use automotive polishing compound to remove surface scratches.
3. Apply wax to entire surface.

Repairing Deep Scratches (bare metal or primer showing):

1. Clean area to be repaired with rubbing alcohol or mineral spirits.
2. Use paint stick with factory-matched colors available from your authorized dealer to fill scratches. Follow directions included on paint stick for use and for drying.
3. Smooth out surface using an automotive polishing compound. Do not use power buffer.
4. Apply wax to surface.

Using Troubleshooting Chart

If you are experiencing a problem that is not listed in this chart, see your authorized dealer for service.

When you have checked all the possible causes listed and you are still experiencing the problem, see your authorized dealer.

Engine

IF	CHECK
Engine will not start	Battery has low voltage. Loose or corroded battery connections. Blown fuse(s). Spark plug wire(s) is loose or disconnected. Faulty spark plug(s) or coil. No fuel or improper fuel. Plugged fuel filter. Defective starter solenoid. Open-circuit in wiring. Park brake not locked (when attempting to run engine in neutral).
Engine is hard to start	Engine is cold. Plugged fuel filter. Engine oil viscosity too heavy. Spark plug(s) is fouled. Faulty spark plug(s) or wire(s). Loose or corroded electrical connections. Stale or improper fuel. Choke not being used or adjusted incorrectly.
Engine misses under load	Stale or dirty fuel. Plugged fuel filter. Faulty coil or wire. Faulty spark plug(s).
Engine vapor locks	Poor quality fuel or methanol. Very hot weather conditions and very high loading condition. Fuel tank vent plugged. Dirt in fuel filter.
Engine runs unevenly	Loose electrical connections. Choke or throttle cable sticking. Fuel line or fuel filter plugged. Stale or dirty fuel. Improper fuel. Air cleaner element plugged. Spark plug(s) is fouled.
Engine overheats	Air cleaner element missing or plugged. Carburetor air intake tube plugged. Engine oil low. Engine operated too long at slow engine speed.
Engine loses power	Engine overheating. Too much oil in engine. Faulty spark plug(s). Fuel supply being restricted. Fuel filter plugged Fuel line pinched or kinked. Improper fuel. Air cleaner element plugged.
Engine knocks	Low engine speed. Stale or low octane fuel. Engine overloaded.

Electrical

IF	CHECK
Starter does not work	Check to make sure vehicle is in neutral position and/or function of neutral switch. Loose or corroded connections. Blown fuse. Low battery output. Sulfated or worn out battery. Faulty starter.
Starter cranks slowly	Low battery output. Sulfated or worn out battery. Engine oil too heavy. Loose or corroded connections.
Entire electrical system does not work	Blown fuse. Blown fusible link. Loose or corroded connections. Sulfated or worn out battery.
Dead battery	Shorted starter solenoid. Key switch not turned to “OFF” position. Component connected to accessory outlet left ON with engine off. Turn signal and/or hazard lights left ON with engine off. Sulfated or worn out battery. Low engine speed or excessive idling. Battery cables and terminals are dirty. Dead cell in the battery. Blown fuse. Faulty charging system. Current draw higher than charging system output. (If several attachments are added and used frequently at the same time with the standard charging system. Especially at low engine speeds.)
Correct indicator light(s) do not come on when checking instrument panel.	Faulty bulb. Faulty wiring. Faulty switch or sensor.
Battery will not take a charge	Dead cell in battery. Loose or corroded connections. Sulfated or worn out battery. Low engine speed or excessive idling. Faulty charging system.

Brakes

IF	CHECK
Brakes not working correctly	Brake fluid level low - check fluid level. Air in brake system - system not bled properly. (See your John Deere dealer.) Replace worn brake pads. (See your John Deere dealer.)
Park brake not working correctly	Parking brake not adjusted correctly (See your John Deere dealer.)

Cargo Box

IF	CHECK
Tailgate doesn’t latch properly	Bushings worn/damaged - inspect bushings. Strikers not connecting - inspect and lubricate strikers.
Power lift doesn’t operate	No power - check all power connections. Actuator motor overheated - allow actuator to cool.
Power lift actuator rachets/clicks/squeals when operating	Too much weight in box - remove weight or move it rearward in box.

Storing Safety

CAUTION: Fuel vapors are explosive and flammable. Engine exhaust fumes contain carbon monoxide and can cause serious illness or death:

- **Run the engine only long enough to move the machine to or from storage.**
- **Do not store vehicle with fuel in the tank inside a building where fumes may reach an open flame or spark.**
- **Allow the engine to cool before storing the machine in any enclosure.**

Preparing Machine for Storage

1. Repair any worn or damaged parts. Replace parts if necessary. Tighten loose hardware.
2. Repair scratched or chipped metal surfaces to prevent rust.
3. Remove grass and debris from machine.
4. Wash the machine with low pressure water and apply wax to metal and plastic surfaces.
5. Run machine for five minutes to dry belts and pulleys.
6. Apply light coat of engine oil to pivot and wear points to prevent rust.
7. Lubricate grease points.
8. Check tire pressure.

Preparing Fuel and Engine For Storage

Fuel:

If you have been using “Stabilized Fuel,” add stabilized fuel to tank until the tank is full.

NOTE: Filling the fuel tank reduces the amount of air in the fuel tank and helps reduce deterioration of fuel.

If you are not using “Stabilized Fuel:”

1. Park machine safely in a well-ventilated area. (See Parking Safely in the SAFETY section.)

NOTE: Try to anticipate the last time the machine will be used for the season so very little fuel is left in the fuel tank.

2. Turn on engine and allow to run until it runs out of fuel.
3. For machines equipped with key switch, turn key to off position.

IMPORTANT: Stale fuel can produce varnish and plug carburetor or injector components and affect engine performance.

- **Add fuel conditioner or stabilizer to fresh fuel before filling tank.**

4. Mix fresh fuel and fuel stabilizer in separate container. Follow stabilizer instructions for mixing.
5. Fill fuel tank with stabilized fuel.
6. Run engine for a few minutes to allow fuel mixture to circulate through carburetor on gas engine or fuel injectors on diesel engine.

Engine:

Engine storage procedure should be used when vehicle is not to be used for longer than 60 days.

1. Change engine oil and filter while engine is warm.
2. Service air filter if necessary.
3. Clean debris from engine air intake screen.
4. On gas engines:
   - Remove spark plugs. Put 30 mL (1 oz) of clean engine oil in cylinder(s).
   - Install spark plugs, but do not connect spark plug wires.
   - Crank the engine five or six times to allow oil to be distributed.
5. Clean the engine and engine compartment.
6. Remove battery.
7. Clean the battery and battery posts. Check the electrolyte level, if your battery is not maintenance free.
8. Close fuel shut-off valve, if your machine is equipped.
9. Store the battery in a cool, dry place where it will not freeze.

NOTE: The stored battery should be recharged every 90 days.

10. Charge the battery.

IMPORTANT: Prolonged exposure to sunlight could damage the hood surface. Store machine inside or use a cover if stored outside.

11. Store the vehicle in a dry, protected place. If vehicle is stored outside, put a waterproof cover over it.

Removing Machine From Storage

1. Check tire pressure.
2. Check engine oil level.
3. Check battery electrolyte level, if your battery is not maintenance free. Charge battery if necessary.
4. Install battery.
5. On gas engines: Check spark gap. Install and tighten plugs to specified torque.
6. Lubricate all grease points.
7. Open fuel shut-off valve, if your machine is equipped.
8. Be sure all shields and guards or deflectors are in place.

Specifications

Engine Specifications

Manufacturer	Kawasaki
Model	FH601
Power Rating Information	http://www.kawasaki-criticalpower.com
Type	Gasoline
Cylinders	2
Strokes/Cycles	4
Bore	75 mm (2.953 in.)
Stroke	76 mm (2.992 in.)
Displacement	675 cm^3 (41.2 cu in.)
Armature Air Gap	0.2 - 0.4 mm (0.008 - 0.016 in.)
Intake and Exhaust Valve Clearance (Cold)	0.075 - 0.125 mm (0.003 - 0.005 in.)
Oil Filter	Spin On Filter
Air Cleaner	Replaceable, Paper Element
Cooling	Air

Drive Train

Type	Continuously Variable Transmission (CVT), With Gear-Driven Transaxle
Gear Ranges	Forward - Neutral - Reverse
Travel Speed (Forward)	0 - 32 km/h (0 - 20 mph)
Travel Speed (Reverse)	0 - 31.2 km/h (0 - 19.4 mph)
Traction Assist	Mechanically Activated Differential Lock

Electrical System

Type	12 Volt
Battery Size	340 Cold Cranking Amps @ -18°C (0°F)
Alternator	16.6 Amp @ 3700 rpm (regulated)
Headlights	(Two) 37.5 watt halogen
Spark Plug Gap	0.80 mm (0.031 in.)
Spark Plug Torque	25 N•m (18 lb-ft)

Fuel System

Fuel Filter	Replacement Element
Fuel	Gasoline

Fluid Capacities

Fuel Tank	19 L (5 gal)
Crankcase (with filter)	1.7 L (1.8 qt)
Transaxle (approximate - see Changing Transaxle Oil)	5.6 L (5.92 qt)

Steering and Brakes

Steering	Rack and Pinion
Brakes	Hydraulic Disk

Tires

NOTE: All tire load conditions are not to exceed Gross Vehicle Weight Rating (GVWR).

All tires can carry permissible loads.

Turf	
Front	22x9.5-10
Rear	24x12-10
All Terrain	
Front	22x9.5-10
Rear	24x10.50-10
Extreme Terrain	
Front	22x9.5-10
Rear	24x12-10
Run-Flat	
Front	22x11-10
Rear	25x11-10
Inflation Pressure	
Front	55 kPa (8 psi)
Rear	69 kPa (10 psi)
Front and Rear (Run-Flat)	28 - 34 kPa (4 - 5 psi)

Dimensions

Width (overall)	1.52 m (60.0 in.)
Length (with bumper)	2.75 m (108.1 in.)
Height (overall)	1.11 m (43.6 in.)
Ground Clearance (under transaxle)	14.5 cm (5.7 in.)
Ground Clearance (under foot platform)	27 cm (10.6 in.)

Weights and Capacities

Weight (includes fuel/fluids)	501 kg (1105 lb)
Gross Vehicle Weight Rating (GVWR)	998 kg (2200 lb)
Cargo Box Capacity	272 kg (600 lb)
Cargo Box Volume Capacity	0.46 cubic m (16.4 cubic ft)
Towing Capacity	454 kg (1000 lb)
Maximum Front Axle Load	583 kg (1286 lb)
Maximum Rear Axle Load	735 kg (1620 lb)

Recommended Fluids and Lubricants

Engine Oil	TURF-GARD™ or PLUS-4™
Grease	John Deere Multi-Purpose HD Lithium Complex Grease Grease-Gard™ Premium Plus
Transmission Oil	John Deere HY-GARD™ (JDM J20 C)
Brake Fluid	Super-Duty DOT4

(Specifications and design subject to change without notice.)

Warranty

Product Warranty

Product warranty is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual.

Engine related warranties stated in this manual refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately as the "Limited Warranty for New John Deere Equipment".

California and U.S. EPA Emissions Control System Warranty Statement (Off-Road Gas Engines)

Your Warranty Rights and Obligations

The California Air Resources Board, John Deere, and the United States Environmental Protection Agency are pleased to explain the emissions control system's warranty on your model year 2015 or 2016 spark ignited off-road engine equipment. In California, new equipment that uses small or large (less than 1 liter) spark ignited off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emissions control system on your spark ignited off-road engine equipment for the period listed below provided there has been no abuse, neglect or improper maintenance of your equipment.

Your emissions control system may include parts such as: carburetors or fuel-injection system, ignition system, catalytic converters, fuel tanks, valves, filters, clamps, connectors, and other associated components. Also included may be hoses, belts, sensors and other emission-related assemblies.

Where a warrantable condition exists, John Deere will repair your spark ignited off-road engine equipment at no cost to you including diagnosis, parts and labor.

Manufacturer's Warranty Coverage

This emissions control system is warranted for two years. If any emissions related part on your equipment is defective, the part will be repaired or replaced by John Deere.

Owner's Warranty Responsibilities

- As the spark ignited off-road engine equipment owner, you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that you retain all receipts covering maintenance on your spark ignited off-road engine equipment, but John Deere cannot deny warranty solely for lack of receipts or for your failure to ensure the performance of all scheduled maintenance.
- As the spark ignited off-road engine equipment owner, you should however be aware that John Deere may deny you warranty coverage if your spark ignited off-road engine equipment or a part has failed due to abuse, neglect, or improper maintenance or unapproved modifications.
- You are responsible for presenting your spark ignited off-road engine equipment to a John Deere Turf and Utility distribution center or service center as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have a question regarding your warranty coverage, you should contact your John Deere Turf and Utility retailer, or the John Deere Customer Contact Center at 1- 800-537-8233, or e-mail John Deere from www.Deere.com.

General Emissions Warranty Coverage

The warranty period begins on the date the equipment is delivered to an ultimate purchaser. John Deere warrants to the ultimate purchaser and each subsequent purchaser that the spark ignited off-road engine equipment is:

- Designed, built and equipped so as to conform to all applicable regulations adopted by the California Air Resources Board;
- Designed, built and equipped so as to conform at the time of sale with applicable U.S. Environmental Protection Agency regulations under 40 CFR Parts 1054 and 1060: and,
- Free from defects in materials and workmanship which cause such engine to fail to conform with applicable regulations for a period of two years of engine use from the date of sale to the ultimate purchaser.

Emissions Warranty Interpretation

- Any warranted part that is not scheduled for replacement as required by the maintenance instructions in the Operator's Manual is warranted for two years. If any such part fails during the period of warranty coverage it will be repaired or replaced by John Deere. Any such part repaired or replaced under warranty is warranted for the remaining warranty period.
- Any warranted part that is scheduled only for regular inspection in the maintenance instructions in the Operator's Manual is warranted for two years. A statement in the Operator's Manual to the effect of "repair or replace as necessary" does not reduce the period of warranty coverage. Any such part repaired or replaced under warranty is warranted for the remaining warranty period.
- Any warranted part that is scheduled for replacement as required maintenance in the Operator's Manual is warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part will be repaired or replaced by John Deere. Any such

part repaired or replaced under warranty is warranted for the remainder of the period prior to the first scheduled replacement point for the part.

- Repair or replacement of any warranted part under the warranty will be performed at no charge to the owner at any authorized John Deere Turf and Utility retailer.
- The owner will not be charged for diagnostic labor which leads to the determination that a warranted part is defective, provided such work is performed by John Deere.
- John Deere will repair damages to other engine components proximately caused by a failure under warranty of any emissions-related warranted part.
- Add-on or modified parts that are not exempted by the California Air Resources Board may not be used. The use of any non-exempted add-on or modified parts will be grounds for disallowing a warranty claim. John Deere will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

Emission Warranty Parts List

Coverage under this warranty extends only to the parts listed below (the emissions control system parts) to the extent these parts were on the engine and equipment purchased.

Fuel Metering System:

- Carburetor and internal parts (or fuel injection system)
- Air/fuel ratio feedback and control system
- Cold start enrichment system

Evaporative System:

- Fuel tank, fuel cap and tether
- Fuel hose, line, fittings, clamps
- Fuel pump, fuel shut-off valve
- Fuel vapor hoses, fittings
- Carbon canister
- Rollover/slant valve for fuel vapor control
- Purge and vent line

Air Induction System:

- Air cleaner
- Intake manifold

Ignition System:

- Spark plugs
- Magneto or electronic ignition system
- Spark advance/retard system

Exhaust System:

- Exhaust manifold
- Catalyst muffler

Miscellaneous Items Used in Above Systems

- Valves and Switches: vacuum, temperature, position, check, time-sensitive
- Electronic controls
- Hoses, belts, connectors and assemblies

Limited Liability

a) The liability of John Deere under this Emissions Control System Warranty is limited solely to the remedying of defects in materials or workmanship. This warranty does not cover inconvenience or loss of use of the non-road equipment or engine or transportation of the equipment or engine to or from the John Deere Turf and Utility retailer. John Deere shall not be liable for any other expense, loss, or damage, whether direct, incidental, consequential (except as listed above under “coverage”) or exemplary arising in connection with the sale or use of or inability to use the non-road equipment or engine for any other purpose.

b) No express emissions control system warranty is given by John Deere with respect to the equipment or engine except as specifically set forth in this document. Any emissions control system warranty implied by law, including any warranty of merchantability or fitness for a particular purpose, is expressly limited to the emissions control system warranty terms set forth in this document.

c) No dealer is authorized to modify this Federal, California and John Deere Emissions Control System Warranty.

Tire Warranty

John Deere warranty applies for tires available through the John Deere parts system. For tires not available through the John Deere parts system, the tire manufacturer’s warranty applicable to your machine may not apply outside the U.S. (See your John Deere dealer for specific information.)

Limited Battery Warranty For Factory Installed Batteries

NOTE: Applicable in North America only. For complete machine warranty, reference a copy of the John Deere warranty statement. Contact your John Deere dealer to obtain a copy.

TO SECURE WARRANTY SERVICE

The purchaser must request warranty service from a John Deere dealer authorized to sell John Deere batteries, and present the battery to the dealer with the top cover plate codes intact.

FREE REPLACEMENT PERIOD

Any new battery which becomes unserviceable (not merely discharged) due to defects in material or

workmanship within the FREE REPLACEMENT PERIOD will be replaced free of charge. Installation costs will be covered by warranty if the unserviceable battery was installed by a John Deere factory or dealer and the replacement battery is installed by a John Deere dealer.

PRO RATA ADJUSTMENT (batteries with letter code identification only)

Any new battery which becomes unserviceable (not merely discharged) due to defects in material or workmanship within the Pro Rata Warranty Period will be replaced upon payment of the battery's current list price less a pro rata credit for unused months of service. The applicable adjustment period is determined from the Warranty Code printed at the top of the battery and table below. Installation costs are not covered after the battery warranty period has ended.

THIS WARRANTY DOES NOT COVER

A. Breakage of the container, cover, or terminals.

B. Depreciation or damage caused by lack of reasonable and necessary maintenance or by improper maintenance.

C. Transportation, mailing, or service call charges for warranty service.

D. Batteries that are merely discharged.

LIMITATION OF IMPLIED WARRANTIES AND PURCHASER'S REMEDIES

To the extent permitted by law, neither John Deere nor any company affiliated with it makes any warranties, representations, or promises as to the quality, performance or freedom from defect of the products covered by this warranty. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TO THE EXTENT APPLICABLE, SHALL BE LIMITED IN DURATION TO THE APPLICABLE ADJUSTMENT PERIOD SET FORTH HERE. THE PURCHASER'S ONLY REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON JOHN DEERE BATTERIES ARE THOSE SET FORTH HERE. IN NO EVENT WILL THE DEALER, JOHN DEERE OR ANY COMPANY AFFILIATED WITH JOHN DEERE BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. (Note: Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages. So these limitations and exclusions may not apply to you.) This warranty gives you specific legal rights, and you may also have some rights which vary from state to state.

NO DEALER WARRANTY

The selling dealer makes no warranty of its own and the dealer has no authority to make any representation or promise on behalf of John Deere, or to modify the terms or limitations of this warranty in any way.

WARRANTY TERMS TABLE

NOTE: If your battery is not labeled with a warranty code, it is a warranty code 6.

Warranty Code	Free Replacement Period	Pro Rata Warranty Period
A	90 Days	40 Months
B	90 Days	36 Months
C	90 Days	24 Months
D	12 Months	48 Months
E	90 Days	12 Months
F	90 Days	60 Months
G	12 Months	60 Months
H	12 Months	60 Months
6	6 Months	0 Months
12	12 Months	0 Months
18	18 Months	0 Months

The RSX850i original equipment battery will carry a 100% Full Replacement for the duration of the complete machine warranty.

John Deere Quality Statement

John Deere Quality

TCAL41258—UN—18JAN13

John Deere equipment is more than just a purchase, it's an investment in quality. That quality goes beyond our equipment to your John Deere dealer's parts and service support. This support is needed to keep you a satisfied customer.

That's why John Deere has initiated a process to handle your questions or problems, should they arise. The following three steps will help guide you through the process.

Step 1

Refer to your operator's manual

A. It has many illustrations and detailed information on the safe and proper operation of your equipment.

B. It gives troubleshooting procedures, and specification information.

C. It gives ordering information for parts catalogs, service and technical manuals.

D. If your questions are not answered in the operator's manual, then go to Step 2.

Step 2

Contact your dealer

A. Your John Deere dealer has the responsibility, authority, and ability to answer questions, resolve problems, and fulfill your parts and service needs.

B. First, discuss your questions or problems with your dealer's trained parts and service staff.

C. If the parts and service people are unable to resolve your problem, see the dealership manager or owner.

D. If your questions or problems are not resolved by the dealer, then go to Step 3.

Step 3

Contact John Deere

A. Your John Deere dealer is the most efficient source in addressing any concern, but if you are not able to resolve your problem after checking your operator's manual and contacting your dealer, contact John Deere for assistance

B. For prompt, effective service, please have the following ready before you call:

The name of the dealer with whom you've been working.
Your equipment model number.
Number of hours on machine (if applicable).
Your serial number which you recorded on the inside front cover of this manual.
If the problem is with an attachment, your attachment identification number.

C. Then call 1-800-537-8233 (United States and Canada) and our advisor will work with your dealer to investigate your concern. If you are outside the United States and Canada, contact us at the following website: www.deere.com/wps/dcom/en_US/regional_home.page.

Record Service Dates

Oil Change	Oil Filter Change	Lubricate Machine	Air Cleaner Element Check/Clean	Fuel Filter Change

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