HPX615E Gator™ Utility Vehicles (Serial No. 060001-) (North America)

JOHN DEERE

OPERATOR'S MANUAL

HPX615E Gator™

OMUC36896 ISSUE A3 (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.

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.

MX00654,000020B-19-10MAY17

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 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 that 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.

MX00654,000020C-19-05JUN17

Special Messages

Your manual contains special messages to bring attention to potential safety concerns and 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.

MX00654,000020D-19-05JUN17

Attachments for Your Machine

There is 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, 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 is a John Deere attachment or kit to fill every need.

OUMX068,000051C-19-05JUN17

Service Literature

If you would like to purchase a copy of the Parts Catalog or Technical Manual for this machine, visit The John Deere Technical Information Store at:

https://techpubs.deere.com/

or call:

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

TH84124,0000199-19-29JUN22

Parts

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

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 **https://partscatalog.deere.com/jdrc/** for your Internet connection to parts ordering and information.

TC00531,00000E9-19-17MAY22

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

HPX615E

Contact an Authorized Service Center for information on servicing. Always provide the product model and identification numbers.

Locate the identification numbers for the product. Record the information in the spaces provided.

DATE OF PURCHASE:

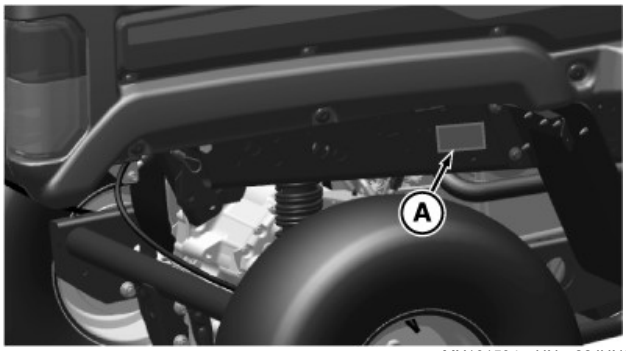
_____

DEALER NAME:

_____

DEALER PHONE:

_____



MX101594—UN—22JUN20

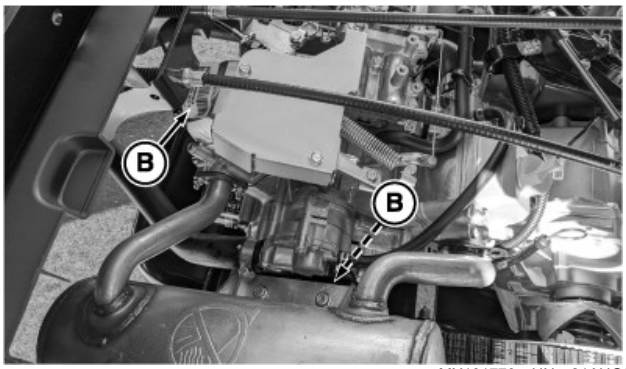
Right Side of Vehicle

PRODUCT IDENTIFICATION NUMBER (A):

_____

DATE OF MANUFACTURE (A):

_____



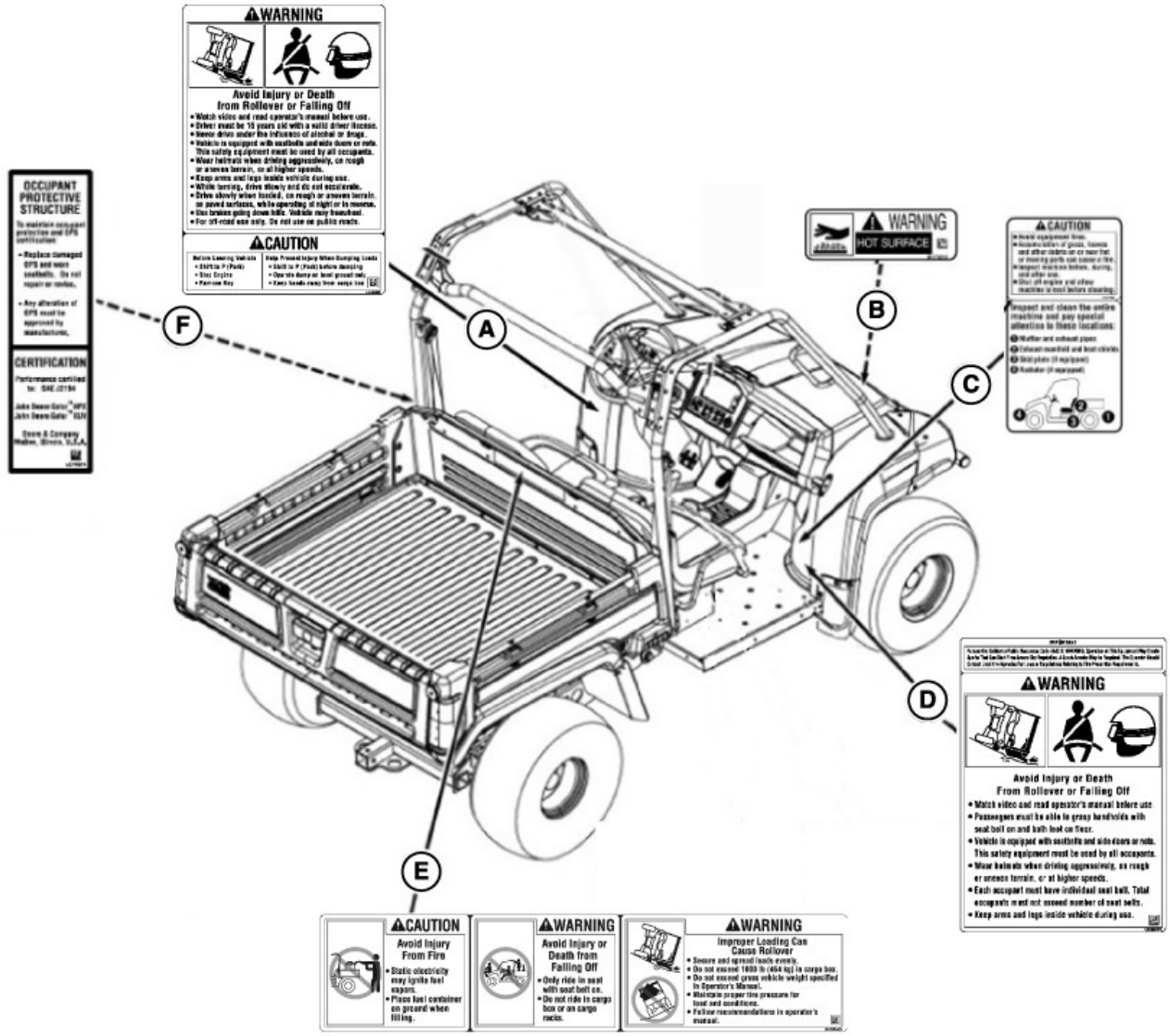
MX101770—UN—21AUG20

ENGINE SERIAL NUMBER (B):

_____

MX00654,0000389-19-01JUL22

Safety Label Location



MX101595—UN—17AUG20

Cab and other components may be removed for better viewing.

A—WARNING/CAUTION - UC26438
B—WARNING - M173253
C—CAUTION - M165798
D—WARNING - UC26474
E—CAUTION/WARNING/WARNING - UC29137
F—Protective Structure Certification - UC19029

MX00654,0000355-19-25JAN23

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. DANGER or WARNING safety labels are located near specific 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.

On your machine safety labels, the words DANGER,

WARNING, and CAUTION are used with this safety-alert symbol. DANGER identifies the most serious hazards:

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

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.

MP47322,00F4601-19-26OCT21

WARNING—CAUTION

MX101486—UN—30JAN23

WARNING

Avoid Injury or Death from Rollover or Falling Off

- Watch video and read operator's manual before use.
- Driver must be 16 years old with a valid driver license.
- Never drive under the influence of alcohol or drugs.
- Vehicle is equipped with seatbelts and side doors or nets. This safety equipment must be used by all occupants.
- Wear helmets when driving aggressively, on rough or uneven terrain, or at higher speeds.
- Keep arms and legs inside vehicle during use.
- While turning, drive slowly and do not accelerate.
- Drive slowly when loaded, on rough or uneven terrain, on paved surfaces, while operating at night or in reverse.
- Use brakes going down hills. Vehicle may freewheel.
- For off-road use only. Do not use on public roads.

CAUTION

Before Leaving Vehicle

- Shift to P (Park)
- Stop Engine
- Remove Key

Help Prevent Injury When Dumping Loads

- Shift to P (Park) before dumping
- Operate dump on level ground only
- Keep hands away from cargo box

MX00654,000031B-19-13MAY20

WARNING

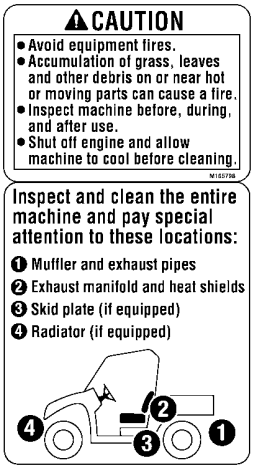
MXT014771—UN—19JUN15

Hot surface

OUMX068,0000C3E-19-19JUN15

Safety Labels with Text

CAUTION



MXAL47291—UN—16APR13

- 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)

OUO2005,000015F-19-31MAR21

WARNING

MX101490—UN—30JAN23

Important

Pursuant to California Public Resources Code 4442.6: WARNING: Operation of This Equipment May Create Sparks That Can Start Fires Around Dry Vegetation. A Spark Arrestor May be Required. The Operator Should Contact Local Fire Agencies For Laws or Regulations Relating to Fire Prevention Requirements.

Avoid Injury or Death From Rollover or Falling Off

- Watch video and read operator's manual before use.
- Passengers must be able to grasp handholds with seat belt on and both feet on floor.
- Vehicle is equipped with seatbelts and side doors or nets. This safety equipment must be used by all occupants.
- Wear helmets when driving aggressively, on rough or uneven terrain, or at higher speeds.
- Each occupant must have individual seat belt. Total occupants must not exceed number of seat belts..
- Keep arms and legs inside vehicle during use.

MX00654,0000318-19-07AUG20

CAUTION—WARNING

MX101708—UN—23JUN20

CAUTION

Avoid Injury From Fire

- Static electricity may ignite fuel vapors.
- Place fuel container on ground when filling.

WARNING

Avoid Injury or Death from Falling Off

- Only ride in seat with seat belt on.
- Do not ride in cargo box or on cargo racks.

WARNING

Improper Loading Can Cause Rollover

- Secure and spread loads evenly.
- Do not exceed 1000 lb (454 kg) in cargo box.
- Do not exceed gross vehicle weight specified in Operator's Manual.
- Maintain proper tire pressure for load and conditions.
- Follow recommendations in Operator's Manual.

MX00654,0000356-19-01DEC20

Protective Structure Safety and Certification Label

MX100720—UN—27APR19

One label is installed on your machine depending upon your region. Labels shown are for reference only.

OCCUPANT PROTECTIVE STRUCTURE

To maintain occupant protection and OPS certification:

- Replace damaged OPS and worn seat belts. Do not repair or revise.
- Any alteration of OPS must be approved by manufacturer.

CERTIFICATION

Performance certified to: SAE J2194

John Deere Gator™ HPX

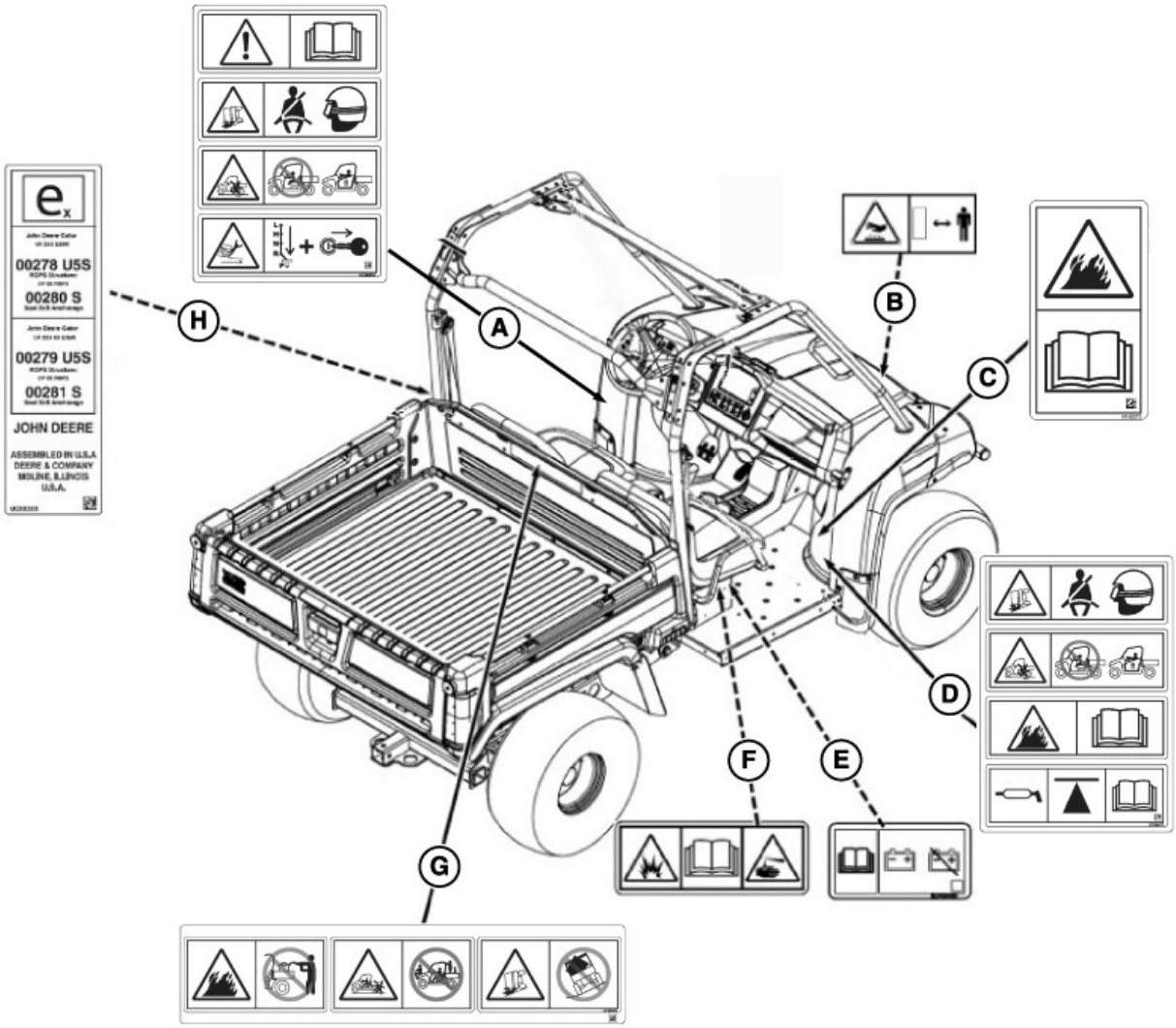
John Deere Gator™ XUV

Deere & Company Moline, Illinois, U.S.A.

SB31882,00000B3-19-01DEC20

Safety Labels without Text

Safety Label Location



MX101596—UN—17JUN22

Cab and other components may be removed for better viewing.

A—Avoid Injury or Death from Rollover or Falling Off - UC26442
B—Hot Surfaces - GX21121
C—Avoid Injury From Equipment Fires - M165273
D—Avoid Injury or Death from Rollover or Falling Off - UC26477
E—Read Operator's Manual, Service Battery - SU49461
F—Avoid Injury From Battery Gases and Acids - M133159
G—Avoid Injury From Explosion, Rollover or Falling Off - UC29138
H—Protective Structure Certification - UC22499

MX00654,0000357-19-25JAN23

Understanding the Machine Safety Labels without Text

TCT005498—UN—11SEP12

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.

MX00654,0000389-19-09JAN23

Avoid Injury or Death from Rollover or Falling Off

MX101565—UN—13MAY20

Avoid Injury or Death from Rollover or Falling Off

- Watch video and read operator's manual before use.
- Driver must be 16 years old with a valid driver license.
- Never drive under the influence of alcohol or drugs.
- Vehicle is equipped with seat belts and side doors or nets. This safety equipment must be used by all occupants.
- Wear helmets when driving aggressively, on rough or uneven terrain, or at higher speeds.
- Keep arms and legs inside vehicle during use.
- While turning, drive slowly and do not accelerate.
- Drive slowly when loaded, on rough or uneven terrain, on paved surfaces, while operating at night or in reverse.
- Use brakes going down hills. Vehicle may freewheel.
- For off-road use only. Do not use on public roads.

Before Leaving Vehicle:

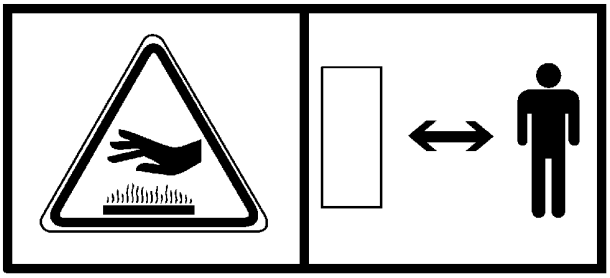
- Shift to P (Park)
- Stop engine
- Remove key

Help Prevent Injury When Dumping Loads

- Shift to P (Park) before dumping
- Operate dump on level ground only
- Keep hands away from cargo box

MX00654,0000336-19-29JUL20

Hot Surfaces



MXT008445—UN—27AUG13

Keep away from hot surfaces.

MX00654,00000D3-19-27AUG13

Avoid Injury From Equipment Fires

MX102238—UN—29MAR22

- Avoid equipment fires.
- Accumulation of grass, leaves and debris on or near hot or moving parts can cause a fire.
- Inspect and clean the entire machine before, during and after use.
- Shut off engine and allow machine to cool before cleaning.
- Carefully read Operator's Manual Machine Clean out section for details.

OUMX068,0000027-19-29MAR22

Avoid Injury or Death from Rollover or Falling Off

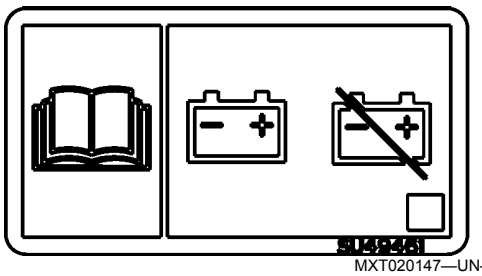
MX101562—UN—13MAY20

Avoid Injury or Death from Rollover or Falling Off

- Watch video and read operator's manual before use.
- Passengers must be able to grasp handholds with seat belt on and both feet on floor.
- Vehicle is equipped with seat belts and side doors or nets. This safety equipment must be used by all occupants.
- Wear helmets when driving aggressively, on rough or uneven terrain, or at higher speeds.
- Each occupant must have individual seat belt. Total occupants must not exceed number of seat belts.
- Keep arms and legs inside vehicle during use.

MX00654,0000332-19-10AUG20

Read Operator's Manual, Service Battery

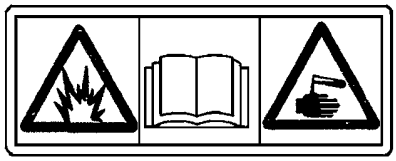


MXT020147—UN—16MAY17

- Read Operator's Manual
- Service Battery

OUMX068,0001296-19-16MAY17

Avoid Injury From Battery Gases and Acid



MXT007302—UN—23MAY13

- Shield eyes, explosive gases can cause blindness or injury.
- No sparks, flames, smoking.
- Sulfuric acid can cause blindness or severe burns.
- Keep out of the reach of children.
- Do not tip.
- Keep vent caps tight and level.
- Flush eyes immediately with water. Get medical help fast.

MX00654,0000394-19-21AUG14

Avoid Injury from Fire, Falling Off, or Improper Loading

MX101563—UN—13MAY20

Avoid Injury From Fire

- Static electricity may ignite fuel vapors.
- Place fuel container on ground when filling.

Avoid Injury or Death from Falling Off

- Only ride in seat with seat belt on.
- Do not ride in cargo box or on cargo racks.

Improper Loading Can Cause Rollover

- Secure and spread loads evenly.

- Do not exceed 1000 lb (454 kg) in cargo box.
- Do not exceed gross vehicle weight specified in Operator's Manual.
- Maintain proper tire pressure for load and conditions.
- Follow recommendations in operator's manual.

OUO2005,00007D1-19-01DEC20

Protective Structure Safety and Certification Label

MX100720—UN—27APR19

One label is installed on your machine depending upon your region. Labels shown are for reference only.

OCCUPANT PROTECTIVE STRUCTURE

To maintain occupant protection and OPS certification:

- Replace damaged OPS and worn seat belts. Do not repair or revise.
- Any alteration of OPS must be approved by manufacturer.

CERTIFICATION

Performance certified to: SAE J2194

John Deere Gator™ HPX

John Deere Gator™ XUV

Deere & Company Moline, Illinois, U.S.A.

SB31882,00000B3-19-01DEC20

Supervisor Safety Responsibilities

- Make sure all operators of this machine are thoroughly trained and are familiar with the operator's manual and understand the machine warning labels.
- Be sure to establish any special safety procedures for existing work conditions and train operators in those procedures.
- Supervisors, operators and mechanics should be familiar with and practice the safety standards that apply to this machine.

RH75544,0000159-19-08APR13

Operator Training Required

- Read the operator's manual and other training material. If the operator or mechanic cannot read English, it is the owner's responsibility to explain this material to them. This publication is available in other languages.
- Become familiar with the safe operation of the equipment, operator controls, and safety signs.
- All operators and mechanics should be trained. The owner of the machine is responsible for training the users.
- Never let children or untrained people operate or service the equipment. Local regulations may restrict the age of the operator.
- The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people, or property.
- Operate the machine in an open, unobstructed area under the direction of an experienced operator when training.

RH75544,000015A-19-03APR18

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, the weight of the towing vehicle (base vehicle + vehicle payload) should be at least 1.5 times the weight of the towed load (trailer + trailer payload).
- 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.

OUMX068,000094A-19-19APR21

Using a Spark Arrestor

The engine in this machine is equipped with a spark arrestor muffler. The California Public Resources Code, section 4442.5 provides as follows:

No person shall sell, offer for sale, lease, or rent to any person any internal combustion engine subject to Section 4442 or 4443, and not subject to Section 13005 of the Health and Safety Code, unless the person provides a written notice to the purchaser or bailee, at the time of sale or at the time of entering into the lease or rental contract, stating that it is a violation of Section 4442 or 4443 to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the engine is equipped with a spark arrestor, as defined in Section 4442, maintained in effective working order or the engine is constructed, equipped, and maintained for the prevention of fire pursuant to Section 4443. Cal. Pub. Res. Code 4442.5.

Other states or jurisdictions may have similar laws. A replacement spark arrestor for your machine is available from your authorized dealer. An installed spark arrestor must be maintained in good working order by the operator.

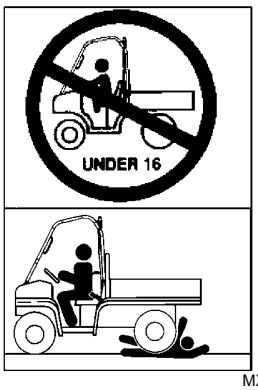
BB87125,0000D3A-19-19APR13

Parking Safely

1. Stop vehicle on a level surface, not on a slope. Be sure vehicle has come to a complete stop.
2. Shift to P (Park).
3. Fully lower the cargo box and any attachments on the machine that can be lowered.
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 before servicing the machine.

MX00654,000031C-19-06MAY20

Protect Children/Small Adults and Prevent Accidents

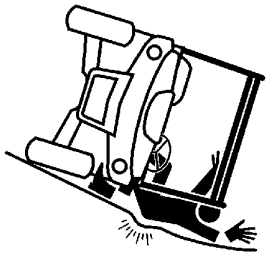


MXAL43278—UN—15MAR13

- 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.
- Do not allow children to ride as a passenger in this vehicle. 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, and both feet on the floor.
- Passenger should always use the handholds while the vehicle is moving.
- Seat belts installed on utility vehicles are not designed to restrain children.
- Never carry passengers, especially children, in the cargo box area. Do not tow children in a cart or trailer.
- Never assume that children 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.
- Misuse and reckless riding can lead to accidents, severe bodily injury, or death.

OUO2005,0000169-19-16AUG18

Avoid Excessive Speeds

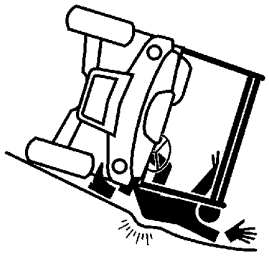


MXT008509—UN—10JAN17

- Always wear an approved helmet when operating the vehicle in an aggressive manner, on rough or uneven terrain, or at higher speeds.
- 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.

MX10673,0000023-19-20APR21

Avoid Tipping



MXT008509—UN—10JAN17

Accidents resulting in serious injury or death can occur from tipping the utility vehicle. Observe the following practices to help prevent accidents and always wear an approved helmet when operating the vehicle in an aggressive manner, on rough or uneven terrain, or at higher speeds.

- 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 service brakes to reduce speed and maintain control.
- Do not make unauthorized changes or modifications to the utility vehicle.
- This list of potential overturning hazards is not exhaustive.

MX10673,0000022-19-24AUG21

Use Seat Belts, Nets and Doors Properly

MXT008507—UN—10JAN17

- Use a seat belt and doors or nets, if equipped, to minimize chance of injury from an accident, such as an overturn.
- Do not operate machine with any portion of the operator safety system inoperative or removed.
- Inspect seat belts, nets and doors for proper operation before each machine use.
- Insert metal tab of net, if equipped, into buckle until it clicks, indicating it is latched. Pull back on net to confirm it is securely latched.
- Layers of heavy clothing can interfere with proper positioning of the seat belt and can reduce the effectiveness of the seat belt.
- Never modify, disassemble, or attempt to repair a seat belt, nets or doors.
- Inspect seat belts, nets and doors, if equipped, at least once a year. Look for signs of loose hardware or material damage, such as cuts, fraying, extreme or unusual wear, or abrasion. Replace only with John Deere approved replacement parts.
- Replace entire seat belt if mounting hardware, buckle, belt, or retractor show signs of damage.

OUMX068,00002E3-19-28FEB17

Keep Protective Structure Installed Properly

- Never operate the machine without the Protective Structure installed.
- If the Protective Structure is loosened or removed for any reason, make certain all parts of the Protective Structure are installed correctly. All Protective Structure hardware must be tightened to the proper torque per manufacturer recommendations.
- Any alteration of the Protective Structure must be approved by the manufacturer. The protection provided by the Protective Structure can be impaired if the Protective Structure is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting.
- Never attempt to repair a damaged or altered Protective Structure. It must be replaced to maintain the manufacturer certification of the structure.

MX00654,00000B6-19-06NOV15

Keep Riders Off Vehicle

MXT008506—UN—10JAN17

- Seating is provided for operator and one front seat passenger. Seating may also be provided for two rear seat passengers on some models. All passengers must be able to grasp handholds with seat belt on and both feet on the floor.
- 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.

MX10673,000003F-19-27JUL17

Operator Ability

- Machine owners must make sure that operators are responsible, trained, have read the operating instructions and warnings, and know how to operate the machine properly and safely.
- Age, physical ability, and mental capacity can be factors in machine-related injuries. Operators must be mentally and physically capable of accessing the operator station and/or controls, and operating the machine properly and safely.
- Never allow a child or an untrained person to operate the machine. Instruct all operators not to give children a ride on the machine or an attachment.
- Never operate machine when distracted, fatigued, or impaired. Proper machine operation requires the operator's full attention and awareness.

DX,ABILITY-19-07DEC18

Before Driving

1. Perform Daily Operating Checklist in Operating section.
2. 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.
3. Inspect utility vehicle for signs of wear or damage.
4. All safety equipment must be in good condition and fastened in place:
   - Lights
   - Shields
   - Safety start devices
5. Before moving, check around utility vehicle, be sure no one is near it.
6. 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.
7. Securely anchor all loads.

MX00654,00000B8-19-27APR18

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.

SP66632,0004712-19-19APR13

Using Front Attachments

Remove front attachments such as drawbar hitches, hitch mounted 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.

OUMX068,0000634-19-22SEP16

Towing Loads Safely With Utility Vehicle

- Do not tow a load that exceeds the maximum allowable towing load for this vehicle, as specified in this operator's manual. (See Determining Vehicle Load Capacity and Weights sections).
- 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.

OUMX068,000091B-19-25JUN20

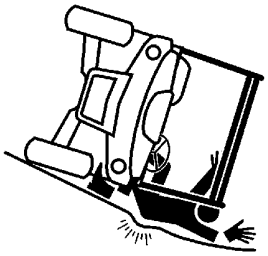
Driving On Rough Terrain

MXAL43282—UN—15MAR13

- Always wear an approved helmet when operating the vehicle in an aggressive manner, on rough or uneven terrain, or at higher speeds.
- 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.

MX10673,0000024-19-19JUL17

Climbing or Descending a Hill or Slope

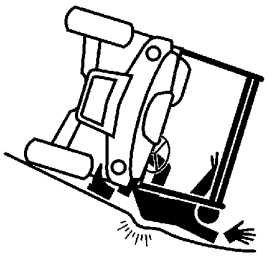


MXT008509—UN—10JAN17

- 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, apply service 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.
- Always descend hill or slope at slow speeds and in a controlled manner. When descending a hill, remove foot from accelerator pedal and apply brakes to reduce speed and maintain control.

MX00654,000036E-19-24AUG20

Driving Across Slopes



MXT008509—UN—10JAN17

- 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.

BB87125,0000D48-19-28FEB17

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.

SP66632,0004718-19-05JUL17

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.

RH75544,000016C-19-08APR13

Wear Appropriate Clothing

MXAL41935—UN—18FEB13

- Always wear an approved helmet when operating the vehicle in an aggressive manner, on rough or uneven terrain, or at higher speeds.
- Helmets should fit properly and be approved for motorcycle use on standard roadways by the appropriate governing organizations for the region in which the vehicle is being used.
- 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. Do not operate the equipment when barefoot or wearing open sandals.

MX00654,00000BD-19-05MAR19

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 machine is in the P (Park) position.

- 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.

MX00654,000031E-19-13MAY20

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's 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 the mower deck or cutting units 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 provides the greatest impact on fire prevention. Other areas requiring regular inspection and cleaning include behind wheel rims, wire harness, hose or line routing, mowing attachments, etc. Compressed air, leaf blowers, or water assists in 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 and fuel clean-up reduces 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.

OUO2005,0000221-19-27MAR19

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.

RH75544,0000170-19-08APR13

Tire Safety

TCAL25965—UN—24MAY12

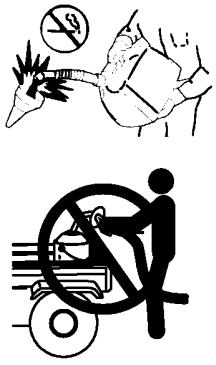
Explosive separation of a tire and rim parts can cause serious injury or death:

- 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.

OUO2005,0000222-19-10MAY17

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 an approved fuel container. Use only non-metal, portable fuel containers approved by the Underwriter's Laboratory (U.L.) or the American Society for Testing & Materials (ASTM). 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.

RH75544,0000172-19-16APR13

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.
- A Safety Data Sheet (SDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques. The seller of the chemical products used with your machine is responsible for providing the SDS for that product.

RH75544,0000173-19-19APR19

Use Electronic Display Properly

Electronic displays are secondary devices intended to aid the operator in performing field operations, increase comfort and provide entertainment. Displays offer a wide range of functionality, are used in many different machine system applications and can be used with other secondary devices such as handheld electronic devices.

A secondary device is any device that is not required to operate your machine for its primary use. The operator is always responsible for safe operation and control of the machine.

To prevent injury while operating the machine:

- Position the display according to the installation instructions. Ensure that the device is secured and does not obstruct the driver's view or interfere with the machine operating controls.
- Do not become distracted by the display. Stay alert. Pay attention to the machine and surrounding environment.
- Do not change settings or access any functions that require prolonged use of the display controls while machine is moving. Stop the machine in a safe location and place in park position before attempting such operations.

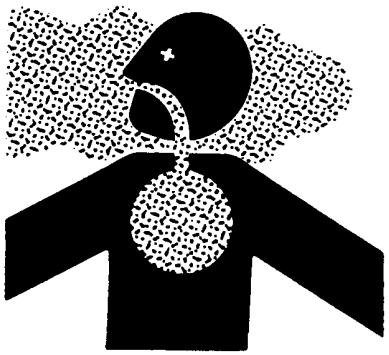
- Never set the volume so high that you cannot hear outside traffic and emergency vehicles.

To promote safe operation, certain functions of displays may be disabled unless the machine movement is restricted and/or has been placed in the park position. Overriding this safety feature may violate applicable law and can result in damage, serious injury, or death.

Only use available display functionality when conditions permit you to do so safely and in accordance with instructions provided. Always observe safe driving rules, state, or local laws and traffic regulations when using any secondary device.

DX,ELEC,DISPLAY-19-13JAN15

Avoid Contact with Agricultural Chemicals - Cab Category 1, 2, 3, and 4 According to EN 15695-1



TS220—UN—15APR13

TS272—UN—23AUG88

CAUTION: Read the information and be aware about the machine cab category stated on the label placed inside the cab.

Category 1 cabs do not provide a specified level of protection against hazardous substances.

Europe Only – tractors or other machines fitted with this cab shall not be used under conditions requiring protection against hazardous substances.

Category 2 cabs provide protection against dust.

Europe Only – tractors or other machines fitted with this cab shall not be used under conditions requiring protection against aerosols and vapors.

Category 3 cabs provide protection against dust and aerosols.

Europe Only – tractors or other machines fitted with this cab shall not be used under conditions requiring protection against vapors.

Category 4 cabs provide protection against dust, aerosols, and vapors.

If utilizing a cab with a rating less than Category 4 under conditions requiring protection, the operator must follow the chemical manufacturer label instructions to protect against dust, aerosols, and vapors when the cab does not provide protection.

Follow the product label provided by the chemical manufacturer for proper use of personal protective equipment.

Follow operational and service instructions for cab and recommended filter replacement intervals.

NOTE: EN 15695-1 is a European Union regulation that defines cab requirements. If this machine is used outside of the European Union, consult national, regional, and local regulations.

1. If the pesticide use instructions require respiratory protection and do not specify the cab category according to EN 15695-1, and the filter according to EN 15695-2, wear an appropriate respirator inside the cab.
2. When operating in an environment where pesticides are present, wear a long-sleeved shirt, long-legged pants, shoes, and socks.
3. Wear personal protective equipment as required by the pesticide use instructions when leaving the enclosed cab:
   - Into a treated area.
   - To work with contaminated application equipment, such as nozzles, which must be cleaned, changed or redirected.
   - To become involved with mixing and loading activities.
4. Before reentering the cab, remove protective equipment and store outside the cab. If the machine is equipped with a protective clothing locker, store protective equipment in the used side of the locker.
5. To prevent soil or other contaminated particles from

entering the cab, clean shoes or boots before entering.

6. Never store chemical containers inside the cab.
7. Always close the windows and doors during spraying to generate an overpressure inside the cab, preventing polluted air from entering the cab.

DX,CABS,ALL-19-15FEB21

General Cleaning Guidelines

Machine must be inspected periodically throughout the day. Buildup of debris must be removed to ensure proper machine function and to reduce the risk of fire. Frequency of these inspections and cleanings vary depending on a number of factors including operating conditions, machine configuration, operating speeds, and weather conditions. Inspections and cleanings may be required multiple times throughout the day particularly in dry, hot, and windy conditions.

IMPORTANT: Avoid fire! Regular and thorough cleaning of machine combined with other routine maintenance procedures listed in the Operator's Manual greatly reduce the risk of fire, downtime, and improve machine performance.

Besides proper maintenance the condition of the material being handled is the most significant factor contributing to fires. Dry, light, and fluffy materials that can create a dust cloud are the most likely to catch fire. Debris can accumulate in various areas especially on horizontal surfaces. Conditions such as wind speed and direction can change where the material accumulates. Be aware of these changing conditions and adjust your cleaning schedule and practices to ensure proper machine function and to reduce the risk of fire.

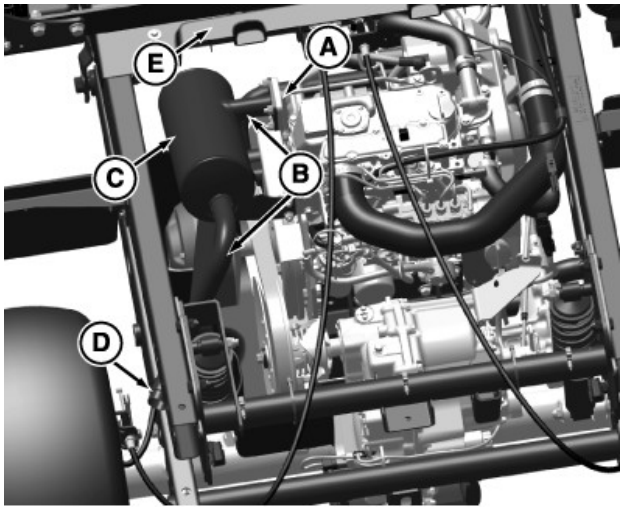
Always follow all safety procedures posted on the machine and in the Operator's Manual. Before carrying out any inspection or cleaning, always park machine safely. (See Parking Safely in the Safety Section).

The entire machine should be inspected, with extra attention given to the areas noted below.

OUMX068,0001043-19-03NOV21

Cleanout Areas

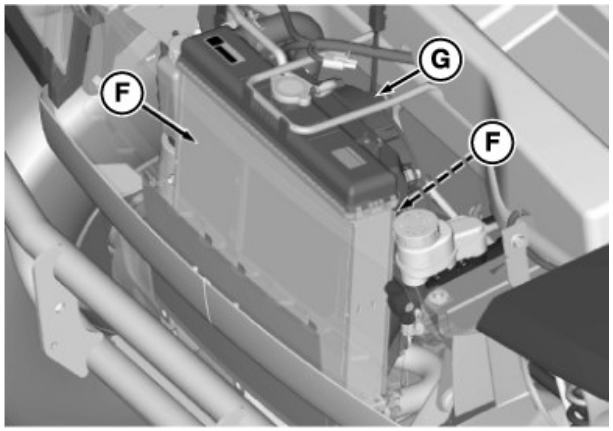
Primary areas that must be inspected and cleaned on the machine include (See Safety Label Section):



MX101766—UN—03FEB21

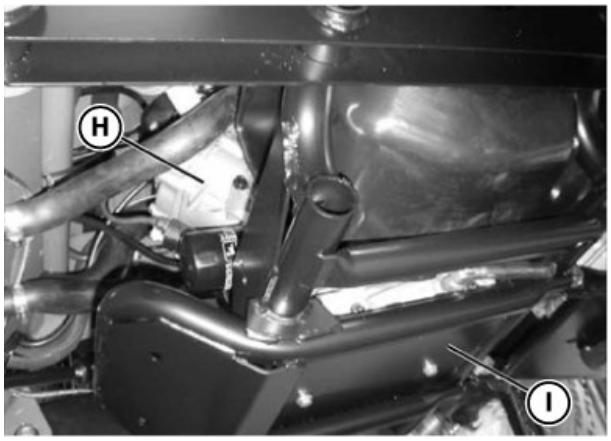
Model HPX815E Shown

1. Exhaust manifold (A), muffler pipes (B), muffler (C), spark arrestor (D), and closeout panel (E).



MX101888—UN—03FEB21

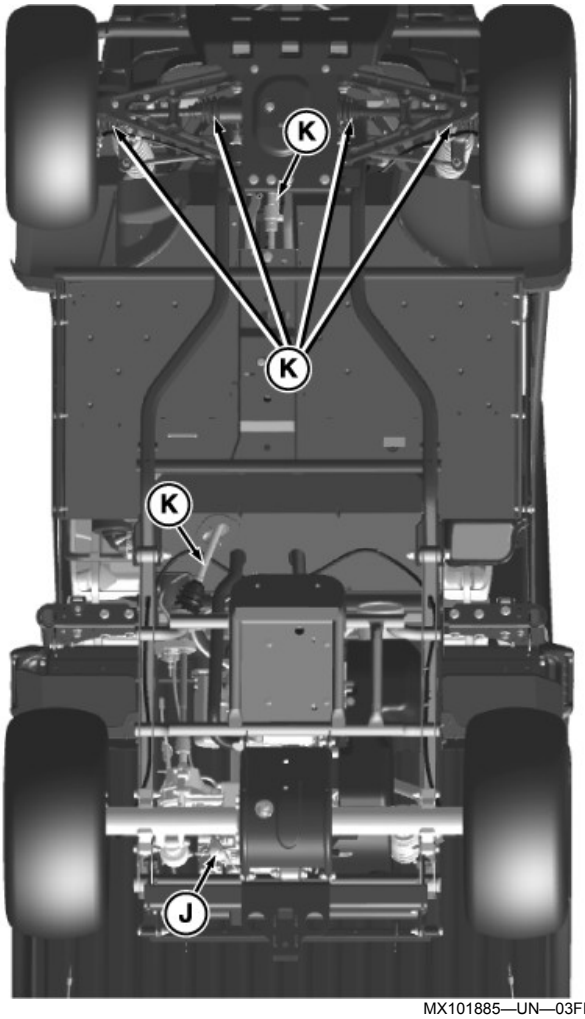
2. Radiator cooling fins (F) and radiator fan shroud (G).



MX101889—UN—03FEB21

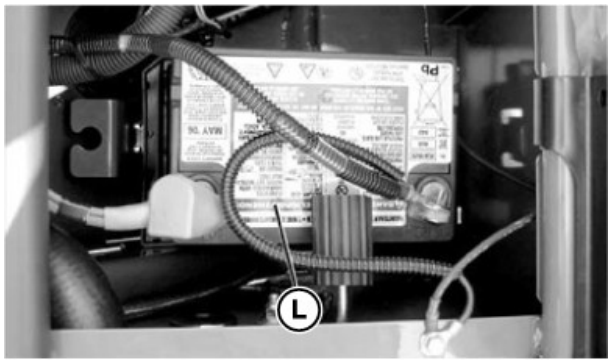
Model HPX615E Shown

3. Between engine (H) and skid plate (I).



MX101885—UN—03FEB21

4. On or near transmission (J) and driveline (K).



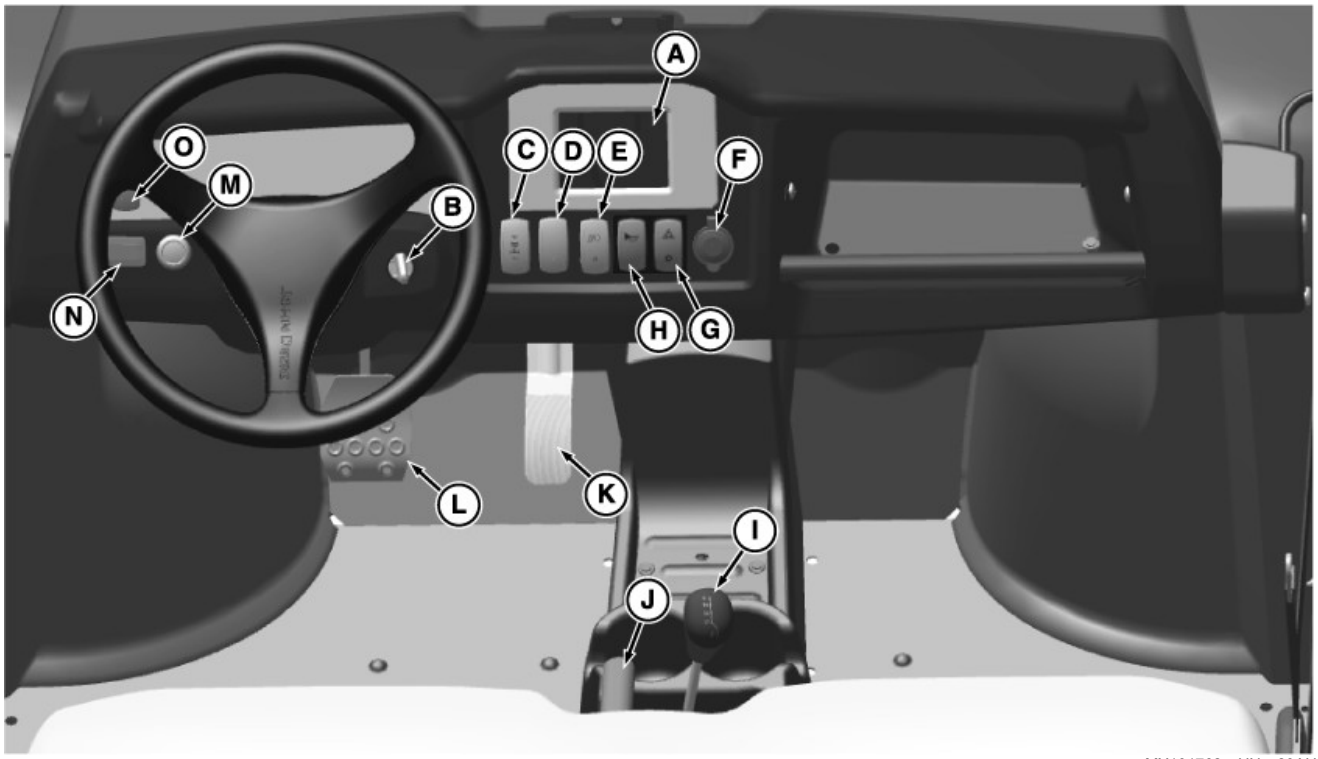
MX101890—UN—03FEB21

Model HPX615E Shown

5. Battery (L) and related wiring harnesses.

MX00654,0000370-19-03FEB21

Operator Station Controls



MX101762—UN—20AUG20

Some controls are optional and may not be installed on your machine.

A—Instrument Display
B—Ignition Key Switch
C—2WD / 4WD Switch
D—Rear Differential Lock Switch
E—Headlight Switch
F—12V DC Accessory Outlet
G—Hazard Lights Switch
H—Horn Switch
I—Transmission Shift Lever
J—Park Brake Lever
K—Accelerator Pedal
L—Service Brake Pedal
M—Choke Knob (Model HPX615E)
N—Turn Signal Switch
O—Cargo Box Power Lift Switch

MX00654,000038B-19-17JUN22

Daily Operating Checklist

- ☐ Test safety systems.
- ☐ Check tire pressure.
- ☐ Check fuel level.
- ☐ Check engine oil level.
- ☐ Remove grass and debris as outlined in the Machine Cleanout section before and after operating machine.
- ☐ Check area below the machine for leaks.
- ☐ Check service brake operation and park lock function.
- ☐ Check brake fluid level.
- ☐ Check park brake operation (if equipped).
- ☐ Check coolant level (if equipped).
- ☐ Check air filter restriction indicator (if equipped).
- ☐ Check seat belt function.
- ☐ Tighten any loose hardware.
- ☐ Inspect driveline CV boots for tears or punctures.
- ☐ Inspect steering tie rod boots for tears or punctures.
- ☐ Check nets or doors condition and function.

MX00654,0000359-19-13SEP21

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 brake fluid on machine components. Brake fluid may damage painted surfaces. Wipe up spilled brake fluid immediately.
- 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.

MX00654,00003C1-19-31AUG20

Using Nets

CAUTION: Avoid injury! A person can fall out or be crushed if vehicle tips.

- **Do not operate the vehicle with nets removed.**
- **All nets must remain closed while the vehicle is in use.**
- **Always park the vehicle safely before opening net to exit.**

Entering vehicle:

1. Move net rearward out of entry and exit area and enter vehicle.

MXT008444—UN—27AUG13

2. Move net forward and insert the metal tab of the net into buckle (A) until it latches. Be certain the net is securely latched before operating vehicle.

Exiting vehicle:

1. Park vehicle safely. (See Parking Safely in the Safety section).
2. Push button to release the metal tab from buckle (A).
3. Move net rearward out of entry and exit area and exit vehicle.

MX00654,0000383-19-17JUN22

Using Doors

CAUTION: Avoid Injury! A person can fall out or be crushed if vehicle tips:

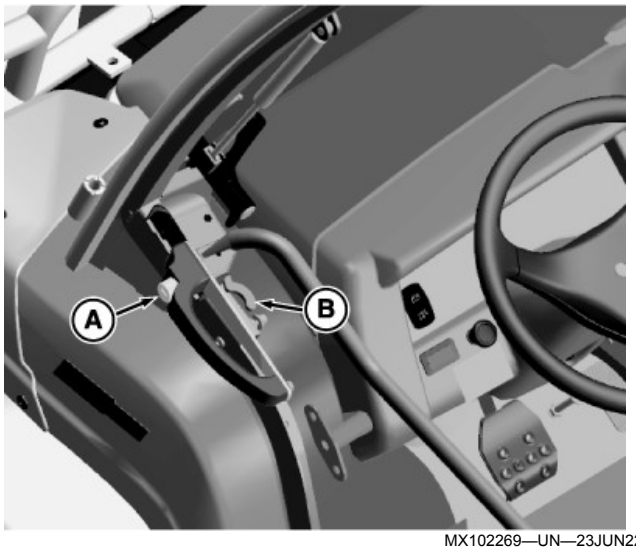
- **Do not operate the vehicle with doors removed.**
- **All doors must be closed while the vehicle is in use.**
- **Always park the vehicle safely before opening door to exit.**

NOTE: Not all doors are available on all models.

Using Full Doors

Entering:

NOTE: Full doors are equipped with a door lock. Use the ignition key to lock and unlock the door.



MX102269—UN—23JUN22

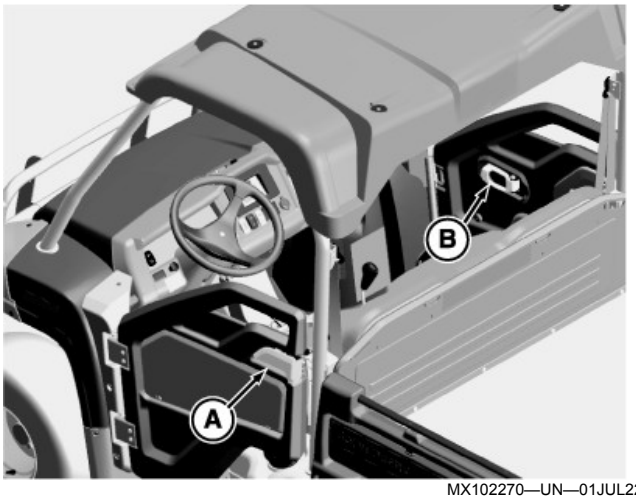
1. Press button (A) on the door handle and enter the vehicle.
2. Pull the door closed until it latches. Be certain the door is securely latched before operating vehicle.

Exiting:

1. Park vehicle safely. (See Parking Safely in the Safety section.)
2. Pull the handle (B) toward you to release the door latch. Swing door outward and exit vehicle.
3. Close the door and ensure that it is securely latched.

Using Half Doors

Entering:



MX102270—UN—01JUL22

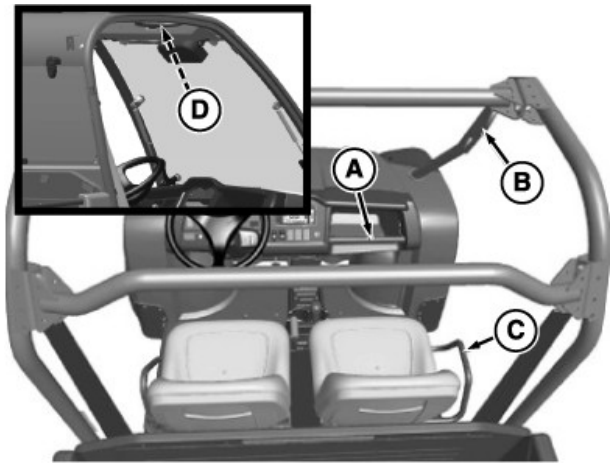
1. Pull handle (A) toward you to open door and enter vehicle.
2. Pull the door closed until it latches. Be certain the door is securely latched before operating vehicle.

Exiting:

1. Park vehicle safely. (See Parking Safely in the Safety section.)
2. Pull the handle (B) toward you to release the door latch. Swing door outward and exit vehicle.
3. Close the door and ensure that it is securely latched.

mx00654,1655999704164-19-08AUG22

Using Hand Holds



MX101819—UN—19OCT20

Hand holds are provided for passenger balance. Passenger must use one of the three hand holds at all times while machine is moving:

- Dash bar (A)
- Protective Structure handle (B) (Non-Cab models)
- Seat side rail (C)
- Protective Structure handle (D). (Cab models)

JG81906,00006F9-19-23OCT20

Using Cab Windshield and Rear Window (If Equipped)

CAUTION: Avoid injury! Never adjust the windshield while machine is moving. Stop machine before adjusting windshield to prevent loss of machine control.

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

Using Front Windshield

Open to the vent position:

MX101851—UN—22JAN21

Some parts removed for photo clarity.

1. Unlatch windshield by rotating both handles (A) inward.
2. Push windshield open to the vent position. Rotate handles outward securing second tab in slot (B).

Close from the vent position:

1. Unlatch windshield by rotating both handles (A) inward.
2. Pull windshield closed.
3. Rotate handles outward securing first tab in slot (B).

Open to the service position:

IMPORTANT: Avoid damage! Do not operate vehicle with the windshield in the service position.

1. Unlatch windshield by rotating both handles (A) inward.
2. Push windshield fully open.

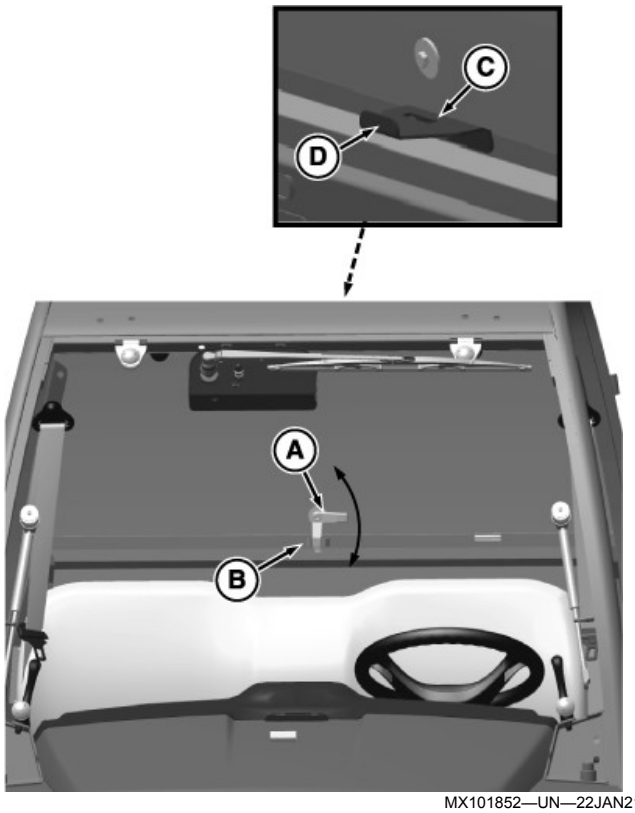
Close from the service position:

CAUTION: Avoid injury! Windshield can pinch fingers. Only use handles to close and secure the windshield.

1. Pull windshield closed.
2. Rotate handles outward securing first tab in slot (B).

Using Rear Window Vent

Open window:



MX101852—UN—22JAN21

1. Unlatch window by rotating handle (A) counterclockwise until the handle clears the latch (B).
2. Push window open until it rests against window stop (D).
3. Rotate handle clockwise and secure in slot (C).

Close window:

1. Rotate handle (A) counterclockwise until it clears slot (C).
2. Pull rear window closed.
3. Latch window by rotating handle (A) clockwise and centering it in latch (B).

MX00654,000046E-19-26MAR21

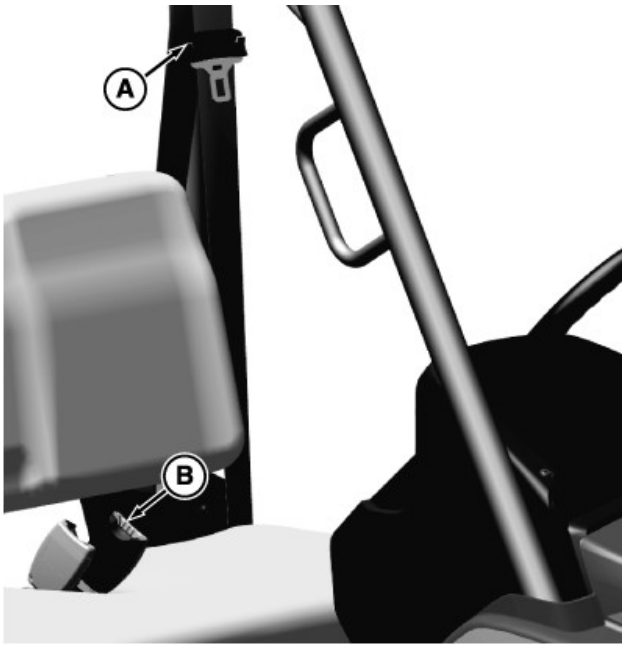
Using Seat Belt

NOTE: Seat belt is sensitive. An emergency lock device is built into the belt for your protection. Pull belt slowly. Attempting to pull it too fast or in a jerking motion engages the locking mechanism and the belt does not release.

All seat belts operate the same way.

Periodically inspect seat belts for wear or damage. (See

Inspecting Seat Belt in the Service Miscellaneous section.)



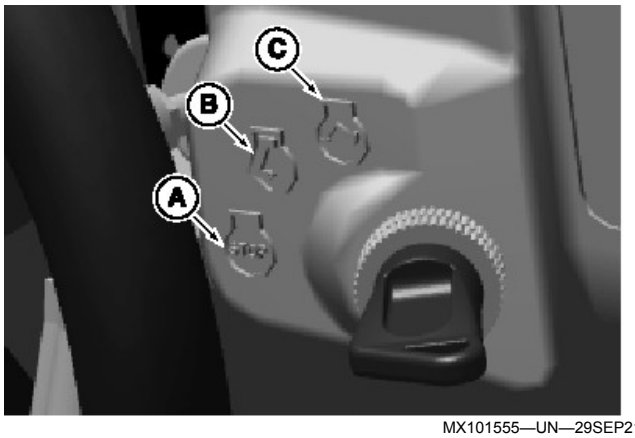
MX102266—UN—17JUN22

Bench Seat Model Shown

1. Grasp seat belt connector (A) from behind seat. Pull out and across body to the appropriate buckle (B).
2. Slide connector up or down along the belt for the best fit.
3. Snug the seat belt across the hips, on top of the thighs.
4. Push connector firmly into the appropriate buckle (B) until it clicks indicating it is locked.
5. Release seat belt by pressing the red button on the connector.

OUMX068,0000C48-19-17JUN22

Using Ignition Key Switch



MX101555—UN—29SEP21

A - STOP Position - Power is off. The engine does not run.

NOTE: If the ignition key switch is in the RUN position and the engine is not running, the battery will discharge if accessories are allowed to remain on for an extended period of time.

B - RUN Position - Power is on. The engine may or may not be running.

C - START Position - Engine starts. Key returns to the RUN position. The engine continues to run.

MX00654,0000327-19-29SEP21

Starting the Engine

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

- **Move the machine to an outside area before running the engine.**
- **Allow fresh outside air into the work area to clear out exhaust fumes.**

NOTE: The engine can start with the transmission in gear. The machine has a service brake pedal safety switch. The service brake pedal must be pushed down to start the engine, except in the P (Park) position.

1. Sit on the operator seat. Do not start engine at this time.
2. Check free movement of pedal assemblies by pushing down on the accelerator and service brake pedals. Release pedals.
3. Shift to P (Park) if vehicle is not already in P (Park).
4. Depress the service brake pedal.
5. Turn key switch to the RUN position.
6. Pull the choke knob out fully if engine is cold.

CAUTION: Avoid injury! Never start engine while standing on the ground to avoid unexpected vehicle movement. Only start engine from the operator seat.

IMPORTANT: Avoid damage! Starter can be damaged when operated continuously for extended periods of time. Allow starter to cool down after several starting attempts.

NOTE: If the starter is engaged for more than 15 seconds without the engine starting up, the starter is disabled and a fault occurs. If it happens again within a minute, the starter is disabled for 60 seconds (as shown on the display) before another start can be attempted.

7. Turn key to START position.
   - If engine does not start within five seconds, turn key to STOP position and wait ten seconds before trying to start again.
   - Attempt starting engine three times only, then wait 5 minutes before trying again. Allow time for starter to cool and prevent damage to starter.
8. Release key to the RUN position when engine starts.

IMPORTANT: Avoid damage! Close the choke by pushing the knob in to the off position as soon as possible to avoid plug fouling.

9. Push choke knob in once the engine is running smoothly.

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

10. Idle engine for 2 or 3 minutes to warm the engine.

Using Snap and Seal Choke

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 is not used. Push in fully to snap and seal the knob. Pull out to unseal the knob for normal operation.

MX00654,0000390-19-17JUN22

Stopping Engine

CAUTION: Avoid injury! Children or bystanders can attempt to move or operate an unattended machine.

Always shift to P (Park) and remove the key before leaving the machine unattended.

IMPORTANT: Avoid damage! Liquid cooled engines:

- **Do not stop a hot engine immediately after hard or extended operation.**
- **Allow the engine to run until the radiator fan turns off.**

1. Stop the machine.
2. Shift to P (Park).
3. Turn ignition key switch to STOP position.
4. Remove key.

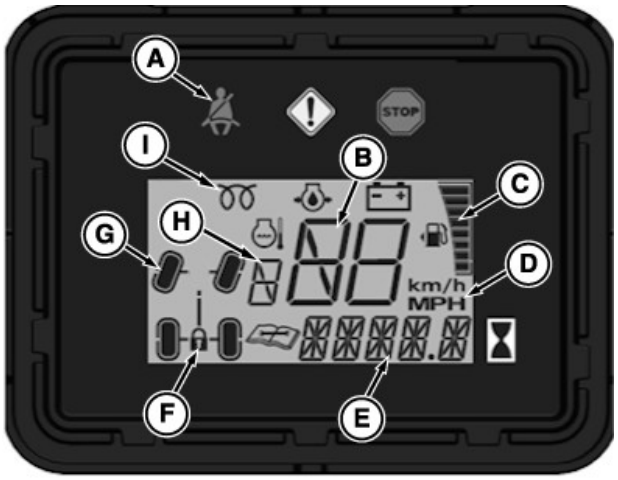
MX00654,0000311-19-15SEP21

Using Instrument Display

NOTE: Depending on the machine model, some functions are not available.

Informational Indicators

NOTE: Refer to the Index to locate additional information where applicable.



MX102272—UN—08AUG22

A - Seat Belt Indicator - Illuminates or flashes when the driver seat belt is not secured.

B - Speedometer - Displays the vehicle speed.

C - Fuel Gauge - Displays the fuel level in eight segments. If the fuel level is less than 1/8, no segments illuminate and the fuel pump symbol flashes.

D **- Display Units Indicator -** Indicates unit of measure displayed.

E **- Hour Meter -** Displays the accumulated number of operating hours the engine has run.

NOTE: Operating hours are accumulated whenever the engine is running and are intended to determine when the machine has reached the recommended service intervals.

F - Rear Differential Lock Indicator - Illuminates when the rear differential lock is engaged.

G **- 4WD Indicator -** Illuminates when four-wheel drive is engaged.

H - Gear Position Indicator - Displays the letter of the transmission gear position.

I **- Glow Plug Indicator (Diesel Models) -** Illuminates

when the key switch is placed in the RUN position and the engine/glow plugs are cold.

Setting Display Units

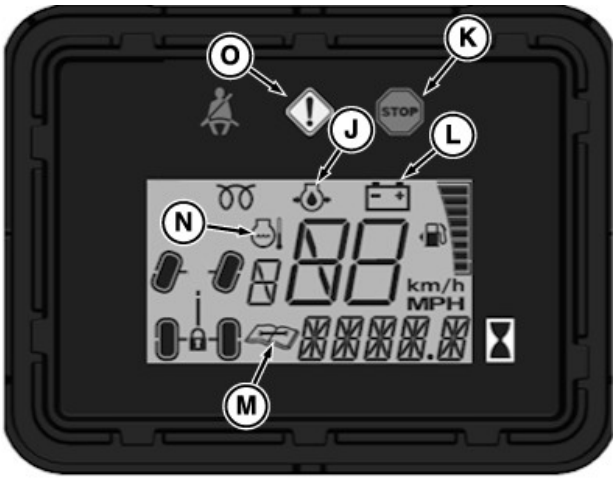
The speedometer can be set to display speed in either MPH or km/h as shown by the Display Units Indicator (H).

To set display units:

1. Turn key to RUN position.
2. Press service brake pedal. Vehicle can be in any gear.
3. Cycle the key from OFF to RUN three times consecutively finishing with the key in the RUN position. On the third time, the display units will change.

Troubleshooting Indicators

NOTE: Your dealer has special equipment to diagnose and troubleshoot your machine. See your Authorized John Deere Dealer for additional service if needed.



MX102273—UN—08AUG22

J - Low Engine Oil Pressure Indicator - Illuminates or flashes when the engine is running and the engine oil pressure is too low.

K **- Stop Indicator -** Illuminates or flashes alerting the operator to a condition that requires immediate attention. Stop machine use immediately.

L - Battery Indicator - Illuminates or flashes when a charging system malfunction has been detected.

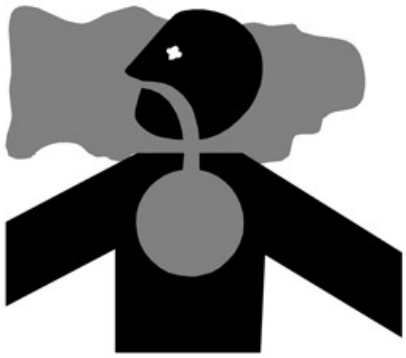
M - System Diagnostic Indicator - Illuminates or flashes for system malfunctions that do not have a specific indicator.

N - Engine Coolant Indicator - Illuminates when engine temp gets too high. (See Servicing Cooling System in the Service Engine section.)

O **- Operator Alert Indicator -** Illuminates when a fault has been detected that does not require the machine to be stopped immediately.

MX00654,0000367-19-08AUG22

Testing Safety Systems



MXAL42804—UN—09APR13

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

Do not run an engine in an enclosed area, such as a garage, even with doors or windows opened.

Move the machine to an outside area before running the engine.

The safety systems installed on your machine should be checked before each machine use. Be sure that you have read the machine operator manual and are 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.

MP47322,00F4637-19-07JUN22

Testing the Safety Start System

NOTE: The engine can start with the transmission in gear. The machine has a service brake pedal safety switch. The service brake pedal must be pushed down to start the engine, except in the P (Park) position.

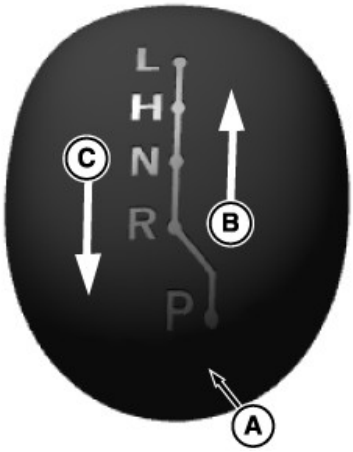
1. Sit on the operator seat with the vehicle on level ground.
2. Turn ignition key switch to RUN position.

3. Press service brake pedal and move transmission shift lever to N (Neutral). Remove foot from service brake pedal.
4. Turn ignition key switch to START position. Engine should not start. Turn ignition key switch to STOP position.
5. Push down on service brake pedal.
6. Turn ignition key switch to START position. Engine should start.
7. Turn ignition key switch to STOP position.
8. Move transmission shift lever to the P (Park) position.
9. Remove foot from the service brake pedal.
10. Turn ignition key switch to START position. Engine should start.
11. Turn ignition key switch to STOP position.

MX00654,000030A-19-17JUN22

Testing the Park Interlock System

1. Sit on the operator seat with the vehicle on level ground and the key in the RUN position.
2. With the transmission shift lever in P (Park), verify that P is illuminated on the instrument display.



MX101733—UN—26AUG20

A—P (Park) Area
B—Forward
C—Backward

3. With foot off the service brake pedal attempt to move transmission shift lever backward (C) past P (Park) area (A). Verify that transmission shift lever is locked and P remains illuminated on the instrument display.
4. With foot on the service brake pedal, move transmission shift lever forward (B) from P (Park) to another gear. Verify that park interlock disengages and instrument display indicates new gear position. Keep foot on the service brake pedal.
5. Return the transmission shift lever to P (Park) position. Release shift lever.
6. Release service brake pedal and try to move transmission shift lever forward out of P (Park). Lever must not move.
7. Turn ignition back to STOP position.

MX00654,000033A-19-24AUG21

Using Park Brake (If Equipped)

CAUTION: Avoid injury! Children or bystanders can attempt to move or operate an unattended machine.

Always put transmission shift lever in P (Park), lock the park brake and remove the key before leaving the machine unattended.

IMPORTANT: Avoid damage! Damage to park brake occurs when machine travels with park brake locked.

Unlock park brake before beginning machine travel.

NOTE: Park brake alarm sounds if the machine is in gear and you try to move in forward or reverse before unlocking the park brake.

Locking the Park Brake:

NOTE: On some models a light on the dash above the steering wheel illuminates when the park brake is engaged.

1. Push down on service brake pedal to hold machine in place.
2. Pull up on lever to engage park brake.

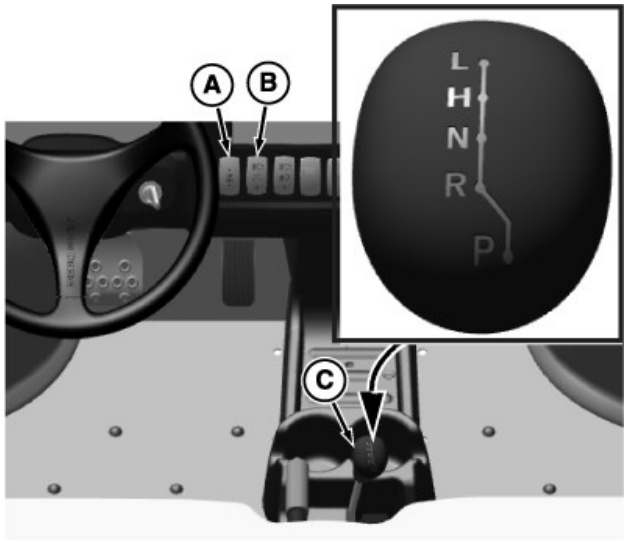
Unlocking the Park Brake:

1. Push down on service brake pedal to hold machine in place.
2. Pull up on lever.
3. Press center button on lever, and release lever down completely.

MX00654,000035A-19-17JUN22

Using Travel Controls

1. Start the engine (See Starting the Engine in this section).
2. Allow engine to come to a low idle speed.



MX101598—UN—23OCT20

3. Select 2WD or 4WD position using switch (A). (See Using Four Wheel Drive in this section.)
4. Select rear differential unlock or lock position using switch (B). (See Using Rear Differential Lock in this section.)

NOTE: Always shift into L (Low) range when:

- *Operating on wet, uneven, or steep terrain.*
- *Towing or pushing heavy loads.*

5. Depress service brake pedal and select a gear position:
   - Forward - Move transmission shift lever (C) to either H (High) or L (Low) range.
   - Reverse - Move transmission shift lever to R (Reverse) gear.

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

IMPORTANT: Avoid damage! Do not shift gears when vehicle is moving or with engine running higher than low idle speed. Push down service brake to stop vehicle motion.

6. Look in the direction of machine travel and push down on the accelerator slowly and smoothly to begin machine travel.
7. Release accelerator and apply the service brake pedal evenly and firmly to slow down or stop.
8. Move transmission shift lever to the P (Park) position.

MX00654,000035B-19-17JUN22

Emergency Stopping

1. Remove foot from accelerator.
2. Depress service brake pedal. Do not release service brake pedal until machine has stopped.
3. After machine has stopped, shift to P (Park).
4. Turn ignition key switch to STOP position.

MX00654,0000312-19-24AUG21

Using Rear Differential Lock

CAUTION: Avoid injury! Driving at high speeds with the rear differential lock engaged can result in loss of steering control. Do not turn machine with the rear differential lock engaged while operating machine at high speeds or on slopes.

Rear differential lock provides better traction when rear wheels start to slip. Engaging rear differential lock causes both rear wheels to turn together at equal speed.

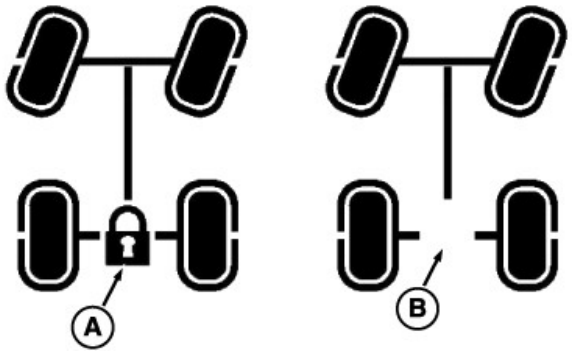
NOTE: Rear differential is always locked when machine is in the P (Park) position.

Engaging Rear Differential Lock:

IMPORTANT: Avoid damage! Do not engage rear differential lock when the rear wheels are slipping, internal gears can be damaged. Machine must be stopped or traveling at a slow steady speed, in a straight line, to engage rear differential lock.

1. Stop or reduce engine speed to 1/3 throttle or less.

NOTE: On some models, indicator flashes if switch is pushed when vehicle speed is above 13 km/h (8 mph) and rear differential lock does not engage. When vehicle speed drops below 13km/h (8 mph) the indicator becomes solid and differential lock automatically engages.



MX102016—UN—13MAY21

2. Push the top of the rear differential lock switch. The rear differential lock indicator on the instrument display shows a lock between the rear wheels indicating differential lock is engaged (A).

Disengaging Rear Differential Lock

NOTE: Torque on both axles must be equalized to ensure true disengagement of the rear differential lock.

1. Travel in a straight line.
2. Push the bottom of the rear differential lock switch.
3. Turn wheel right and left to equalize torque on both axles. The lock indicator on the instrument display disappears indicating differential lock is disengaged (B).

MX00654,000048E-19-25AUG21

Using Four Wheel Drive

The machine is equipped with an electronic four-wheel drive (4WD) system. This system allows the power train to drive the front wheels in addition to the rear wheels for improved traction on difficult ground conditions.

CAUTION: Avoid injury! 4WD greatly increases the traction and can make dangerously sloped terrain accessible, increasing possibility of a rollover.

Use extra caution when driving on slopes. Engage 4WD to increase traction.

Use 4WD when driving on icy, wet, or graveled surfaces; reduce speed to avoid skidding and loss of steering control.

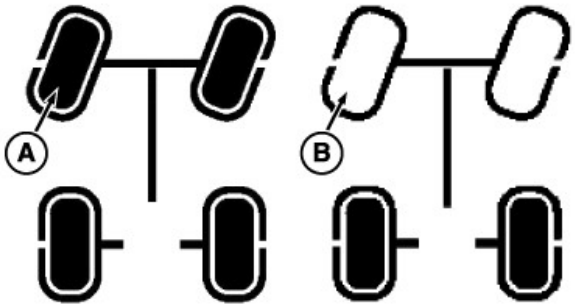
Front implements can cause decreased traction at the rear wheels resulting in the loss of control. Always operate the machine with 4WD engaged when front implements are attached.

IMPORTANT: Avoid damage! Do not engage 4WD when the rear wheels are slipping, internal gears can be damaged. The machine must be stopped or traveling at a slow steady speed, in a straight line, to engage 4WD.

NOTE: On some models, the indicator flashes if the switch is pushed when vehicle speed is above 13 km/h (8 mph) and 4WD does not engage. When vehicle speed drops below 13km/h (8 mph) the indicator becomes solid and 4WD automatically engages.

Selecting 2WD or 4WD position:

- Pushing the top of 2WD/4WD switch engages 4WD.
- Pushing the bottom of the 2WD/4WD switch disengages 4WD.



MX102015—UN—13MAY21

- All four tires (A) on the 4WD indicator on the instrument display are solid when 4WD is engaged. The front tires (B) are outline only when the vehicle is in 2WD.

Tips for Operating 4WD:

- Maintain recommended front and rear tire pressures to ensure optimum performance on all surface conditions.
- Disengage 4WD when driving machine on paved or hard packed surfaces to increase front tire life and reduce drivetrain wear.
- Drive the machine in reverse and then forward, or drive straight turning the wheel slightly left and then right to help verify engagement/disengagement of 4WD.

MX00654,000048F-19-25AUG21

Using Headlights and Taillights

NOTE: Taillights are optional on some models and turn on with the headlights.

The ignition key switch must be in the RUN position to operate the lights.

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

JG81906,0000701-19-01APR22

Using Turn Signals (If Equipped)

NOTE: Turn signals will continue to flash when the ignition key switch 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.

MP47322,00F4847-19-26MAR21

Using Hazard Lights (If Equipped)

NOTE: Hazard lights will continue to flash when the ignition key switch 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.

MP47322,00F4848-19-03APR13

Using Horn (If Equipped)

Press horn switch to activate. Release switch to deactivate.

OUO2005,00007D5-19-20AUG20

Using Windshield Wiper/Washer (Cab Models)

MX101961—UN—22MAR21

Push switch (A) to desired position:

- (B) Washer and wiper, when optional washer kit is installed.
- (C) Wiper only.
- (D) Off.

MX00654,000047E-19-26MAR21

Opening and Closing Hood

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

IMPORTANT: Avoid damage! On vehicles equipped with a cab and windshield, open the windshield before you open the hood. See Using Cab Windows (If Equipped).

On vehicles equipped with a brush guard, tilt it forward before opening the hood to avoid scratches.

Vehicles Equipped with a Brush Guard

MX101838—UN—15JAN21

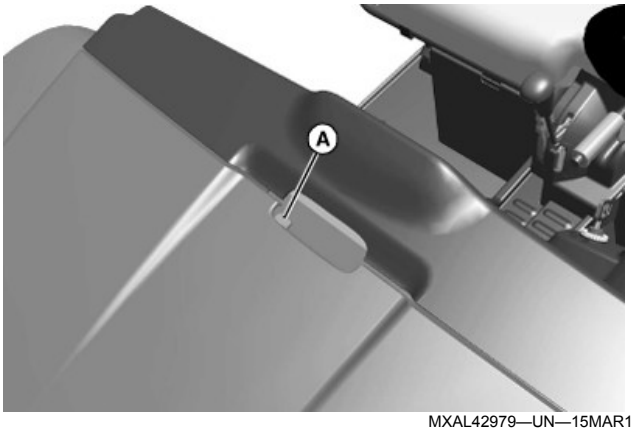
1. Remove pins (A).
2. Tilt brush guard forward.

IMPORTANT: Avoid damage! Be sure that brush guard is secured in upright position before operating vehicle.

3. Tilt brush guard backward and install pins after closing hood.

Opening and Closing Hood

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



MXAL42979—UN—15MAR13

1. Pull up on hood release handle (A) and unlock latch.
2. Pivot hood open.
3. Pivot hood downward to closed position.
4. Press down on hood and ensure that it is securely latched.

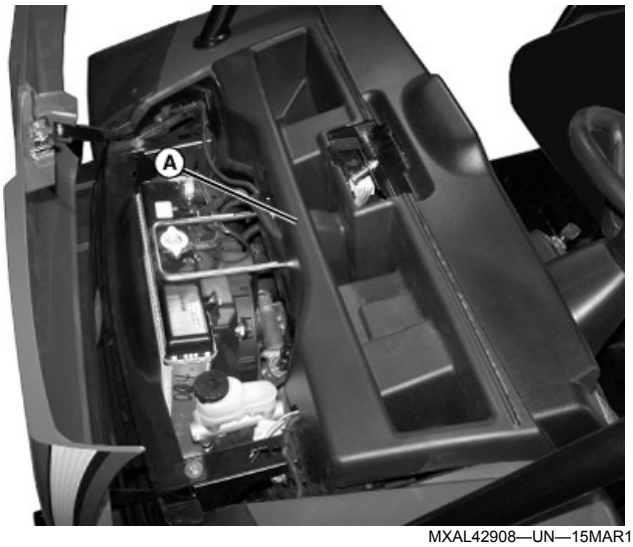
JG81906,000074F-19-26MAR21

Using Storage Areas

Under Hood

CAUTION: Avoid injury! Never store flammable, heavy, or loose objects in the storage tray. Always latch hood before operating machine.

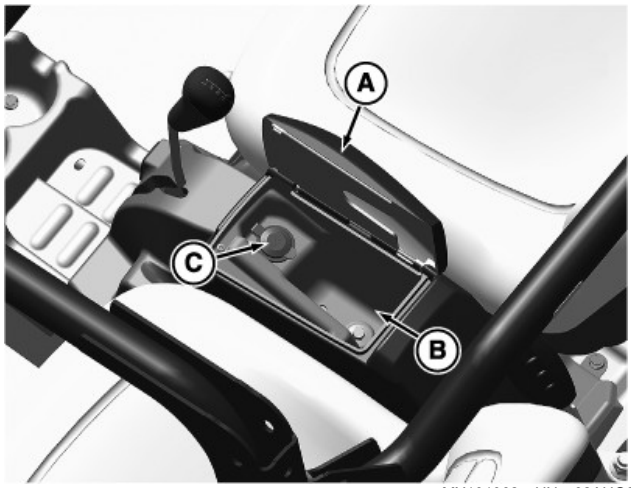
IMPORTANT: Avoid damage! Store items so that hood latch closes properly. Properly secure loose or sharp items. These items can damage the storage tray or other items within the tray.



MXAL42908—UN—15MAR13

1. Open hood to access the storage tray (A).
2. Secure all items in storage tray.
3. Close hood.

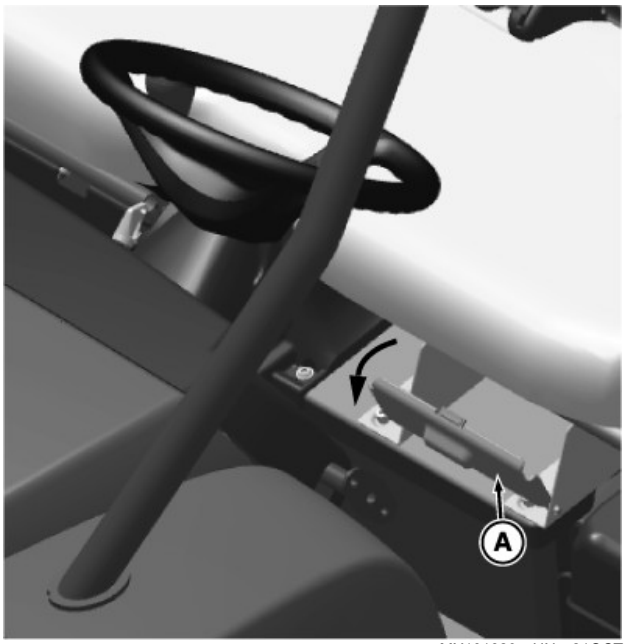
Center Console Storage (Bucket Seat Models)



MX101062—UN—02AUG20

1. Raise cover (A) to access the storage tray (B) and 12 V outlet (C).
2. Secure all items in storage tray.
3. Lower cover.

Under Driver's Seat (Bench Seat Models)



MX101829—UN—21OCT20

1. Pull down on door (A) to access storage area.
2. Secure all items in storage tray.
3. Close door.

OUO2005,00007DA-19-18APR21

Using Accessory Outlet

Up to three outlets may be installed depending upon your machine model and seat options:

- 10 amp outlet in center console
- 10 amp outlet on machine dashboard
- 10 amp outlet behind front passenger seat in front of rear bench seat

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

NOTE: Accessory must be rated at given amps for outlet 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.

1. Open 12-volt outlet cover and install accessory cord in outlet.
2. Close outlet cover after use.

MX00654,00003C2-19-18DEC20

Using Correct Tires and Inflation

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

See tire descriptions and inflation pressures for load conditions in Tires in the Specifications section.

Tires

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

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

JG81906,0000712-19-20SEP21

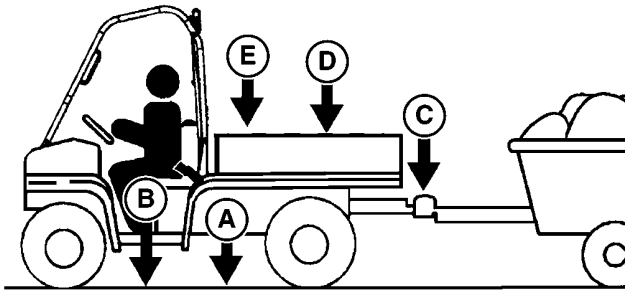
Determining Vehicle Load Capacity

Find weights and capacities for your machine model in the Specifications section.

CAUTION: Avoid injury! Overloading the vehicle or trailer causes loss of control, resulting in serious injury or death.

- **Do not allow the Gross Vehicle Weight (GVW) to exceed the Gross Vehicle Weight Rating (GVWR) of the vehicle.**
- **Remove excess weight before operating vehicle.**

NOTE: The picture shows a Protective Structure installed on a two-passenger machine. Some machines do not have a Protective Structure installed as some models are not designed to include it.



MXT022520—UN—14MAY18

Two-Passenger Machine Shown

Factors in Determining Vehicle Load Capacity

NOTE: Optional equipment, and attachments that are not standard equipment, reduce your cargo box capacity; so they must be included when determining gross vehicle weight.

- **Gross Vehicle Weight (GVW)** is the combination of the empty vehicle weight and payload.
- **Gross Vehicle Weight Rating (GVWR)** is the maximum permissible vehicle weight.
- **Payload** is the weight of all occupants, tongue weight, cargo, attachments, and options that were not standard equipment.

Payload = B+C+D+E

- **(A) Empty vehicle weight** is the weight of the vehicle (full fluids) without occupants or load or attachments.
- **(B) Occupant load** is the combined weight of the operator and passenger (or passengers).
- **(C) Trailer tongue weight** is the weight measured if the tongue of a loaded trailer was placed on a scale. The tongue weight must be approximately 10% of the total of the trailer weight and the weight of its load.
- **(D) Cargo load** is the weight of the cargo.
- **(E) Attachment and option weight** is the combined weight of all attachments and options that were not standard equipment. For help with this information, contact your John Deere dealer.
- **Vehicle load capacity** is the remaining amount of weight that the vehicle is able to haul.
- **Determine maximum vehicle load capacity:**
  a. Calculate GVW = A+B+C+D+E
  b. Subtract the Gross Vehicle Weight (GVW) from the Gross Vehicle Weight Rating (GVWR).
  c. The weight difference between the two numbers is the vehicle load capacity.
  Vehicle Load Capacity = GVWR-GVW
  d. The Gross Vehicle Weight must be less than or equal to the Gross Vehicle Weight Rating. If GVW exceeds GVWR, remove excess weight from the vehicle before operating.

Example:

The following is for a vehicle with 68 kg (150 lb) of cargo load, a 91 kg (200 lb) operator, 100 kg (220 lb) of attachments. Attachments include a heavy-duty brush guard, Protective Structure poly roof, cargo box power lift kit; towing a trailer with 23 kg (50 lb) of tongue weight.

Find the correct specifications for your machine model in the Specifications section in this manual. To determine your machine capacity, use those numbers.

Key	Description
(A) Empty Vehicle Weight:	553 kg (1220 lb)
(B) Operator Weight:	91 kg (200 lb)
(C) Trailer Tongue Weight:	23 kg (50 lb)
(D) Cargo Load:	68 kg (150 lb)
(E) Attachments and/or Options:	100 kg (220 lb)

GVW = 835 kg (1840 lb)

• 91 kg (200 lb) + 553 kg (1220 lb) + 23 kg (50 lb) + 68 kg (150 lb) + 100 kg (220 lb)

Vehicle Load Capacity = 81 kg (180 lb)

• GVWR 916 kg (2020 lb) less GVW 835 kg (1840 lb)

Utilize the remaining vehicle load capacity of 81 kg (180 lb) to haul an additional passenger (or passengers), cargo, trailer tongue, and attachment weight.

MX10673,000008A-19-11MAY20

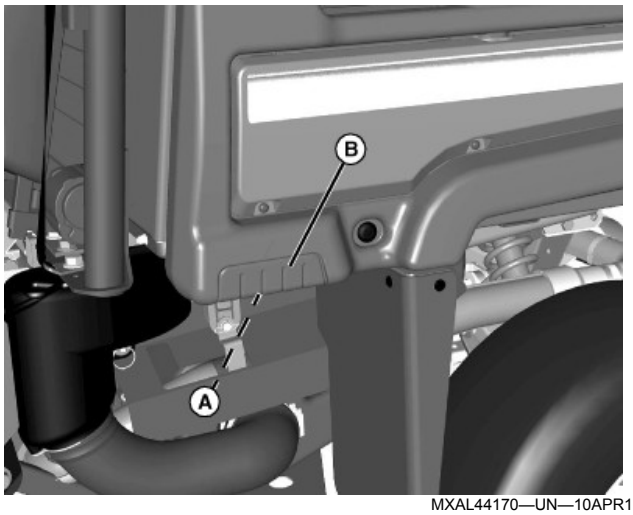
Using the Cargo Box

CAUTION: Avoid injury! Do not allow riders in the cargo box or on the tailgate. Extra riders can fall off and be seriously injured or killed.

Park vehicle safely (See Parking Safely in the Safety section) on a level surface before raising the cargo box.

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

Raising and Lowering with Manual Lift



MXAL44170—UN—10APR13

1. Release pressure against latch (A) by pushing down on the cargo box.
2. Release latch by pulling it towards grip (B) on the cargo box. Allow the lift cylinder to raise the cargo box.
3. Lock box in the raised position (See Locking Box in Raised Position with Manual Lift in this section) when performing any service work.
4. Slowly push the cargo box down until it latches.

Raising and Lowering with Power Lift (If Equipped)

IMPORTANT: Avoid damage! If you hear a "whine" or squealing sound, the power lift cannot apply any more force. The sound can occur when the cargo box is fully raised or lowered or when the box is heavily loaded. Keep this sound to a minimum to prevent the unnecessary wear or damage to power lift. Do not operate the power lift beyond full stroke or exceed the cargo box weight capacity.

1. Turn key to RUN position.
2. Raise the cargo box by pressing and holding the top of the power lift switch. Release switch when the box is at the desired dump height or when reaching maximum height.
3. Lock box in the raised position by removing the key before performing any service work.

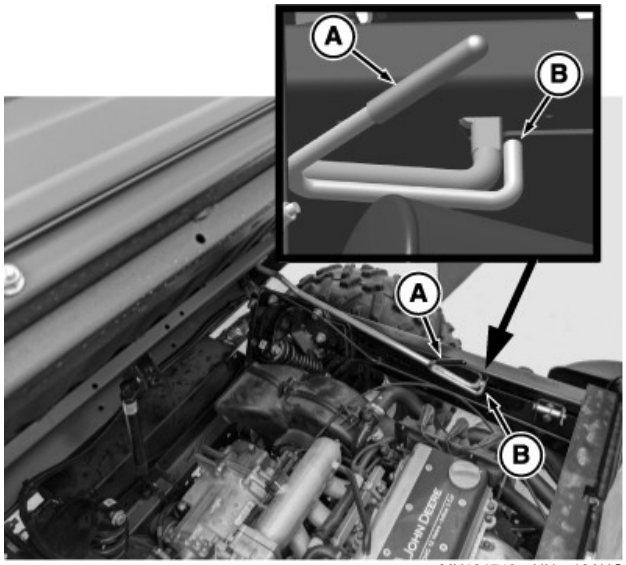
NOTE: Ensure that cargo box is fully lowered to avoid rattling caused by travel vibrations.

4. Lower cargo box by pressing and holding bottom of the power lift switch. Cargo box is fully lowered when power lift retracting sound changes. Release switch.
5. Turn key to STOP position.

Locking Box in Raised Position with Manual Lift

CAUTION: Avoid injury! If not secured properly, cargo box can fall. Lock support rod securely before doing any service under the raised cargo box.

1. Raise and secure the cargo box.



MX101743—UN—18AUG20

2. Pull down on the cargo box slightly and push the rod handle (A) in toward the center of the box until it is locked in slot (B).
3. Check to be sure that box is locked in the raised position.
4. When the service is complete, lift up on the box and allow the rod to slide back toward the closed position. Slowly push the cargo box downward until it latches.

Operating the Tailgate

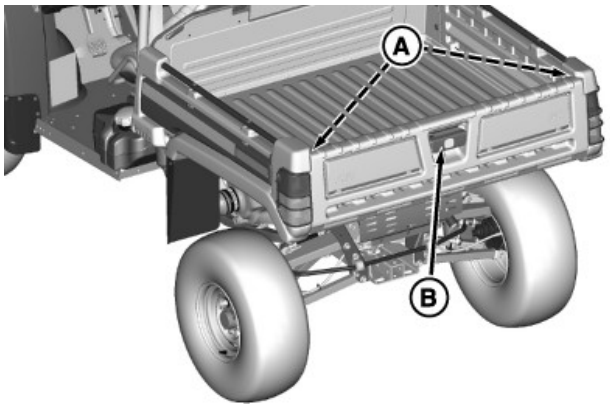
CAUTION: Avoid injury! Never operate the tailgate with one lanyard attached (always use both).

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

IMPORTANT: Avoid damage! Remove rear hitch before tilting or dumping the cargo box.

Do not attempt to tilt or dump the cargo box when lanyards are detached.

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



MXT011039—UN—09SEP14

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

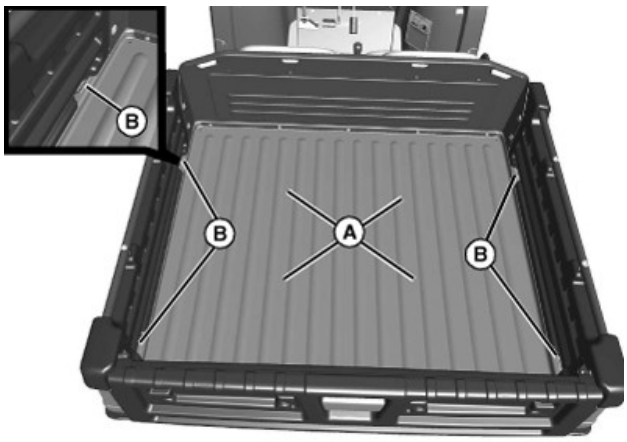
IMPORTANT: Avoid damage! Lower tailgate completely to unload the cargo box only. Never drive with the tailgate hanging down, damage to the tailgate pivot bushings can occur.

2. Pull back on handle (B) to unlock and lower tailgate.

IMPORTANT: Avoid damage! Before raising tailgate, check for stones and debris caught in the gap between the tailgate and cargo box floor.

3. Rotate the tailgate slightly to free debris if necessary.
4. Push tailgate upward to lock it into the closed position.
5. Check to be sure that tailgate is securely locked.

Using Cargo Box Tie Downs



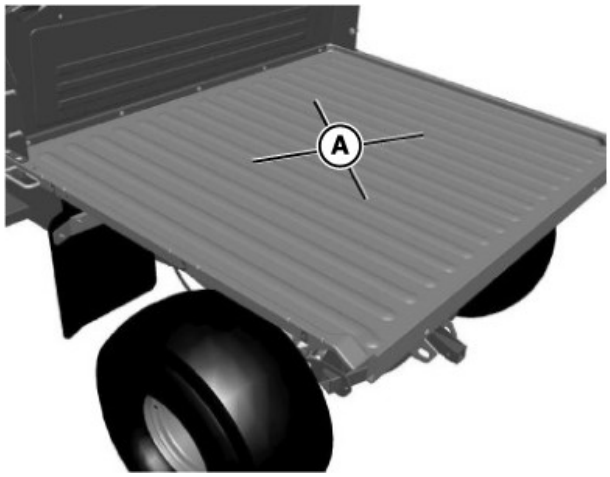
MXAL44173—UN—10APR13

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.

Operating in Flatbed Mode

CAUTION: Avoid injury! The load guard protects operator and passenger from shifting loads. Do not remove the load guard.

1. Convert the cargo box to a flatbed (See Converting the Cargo Box to a Flatbed in the Service Miscellaneous section.)



MX101753—UN—14AUG20

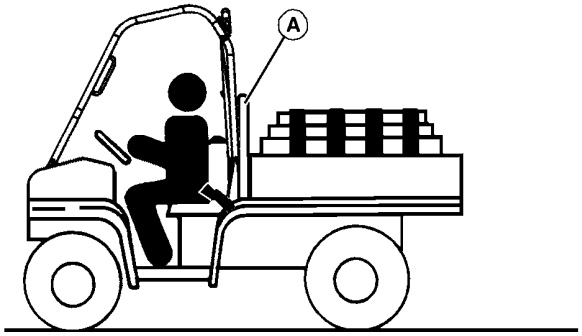
2. Arrange load so the weight is centered over the main cargo area (A).

OUMX068,0001326-19-09APR22

Loading the Cargo Box

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

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



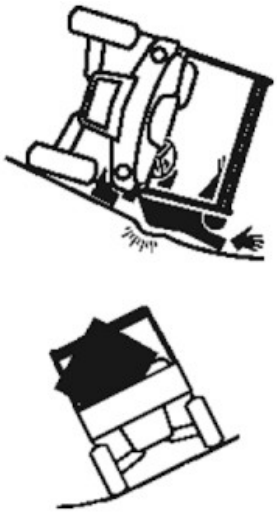
MXAL44182—UN—10APR13

Do not load above the load guard (A).

Securely anchor and evenly distribute loads in the cargo box. Shifting loads affect stability.

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

Use low range, reduce speed, and exercise extreme caution when operating over rough, hilly, or steep terrain.



MX102008—UN—19APR21

Prevent the vehicle from tipping over, avoid concentrated loads at the rear or side of the cargo box. Be sure that load is evenly distributed.

Materials can vary greatly in weight under different conditions; wet versus dry, or densely packed versus loosely packed. The only way of getting the true weight of the load you are carrying is by using a scale.

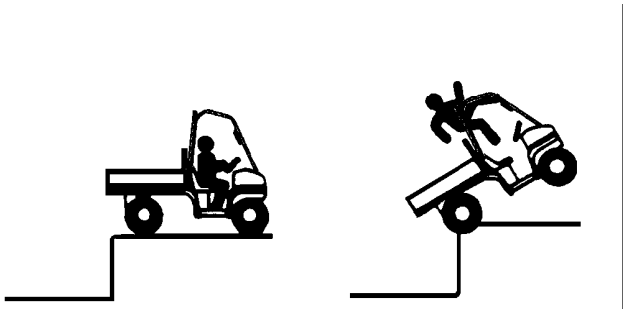
Printed weight is normally on bagged and other material.

See capacities in the Specifications section.

MX00654,00000D0-19-20SEP21

Emptying Cargo Box

CAUTION: Avoid injury! Keep vehicle a safe distance from the edge of ravine or drop-off. Raising a loaded cargo box changes the center of gravity.



MXAL42924—UN—15MAR13

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

CAUTION: Avoid injury! A cargo box containing material is heavy. Empty some or all material until cargo box can safely be raised manually.

IMPORTANT: Avoid damage! If equipped with a power lift and box does not raise, stop immediately. Lower cargo box completely and remove excess load by hand before dumping.

Do not drive vehicle with the cargo box in raised position.

4. Raise and secure cargo box to dump load.
5. Lower cargo box when empty.
6. Close tailgate.

JG81906,0000710-19-30MAR22

Using a Trailer

Follow all trailer manufacturers instructions for safe operation.

Follow all instructions in this operator's manual for attaching optional equipment and towing loads safely.

MP47322,00F4860-19-23JUN15

Towing Loads

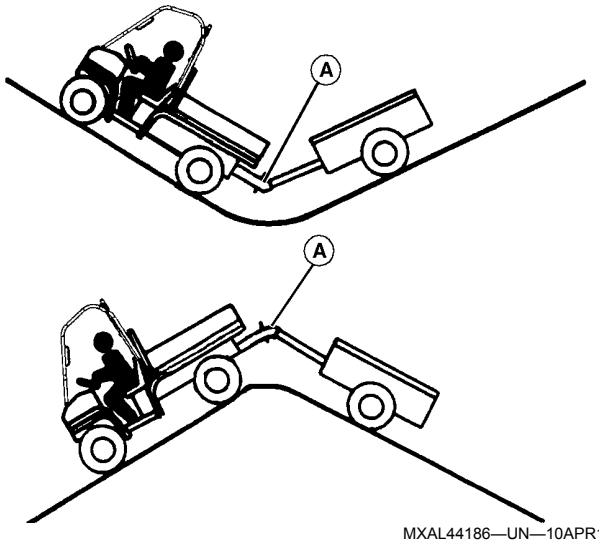
CAUTION: Avoid injury! Excessive towed load can cause loss of traction and loss of control on slopes. Stopping distance increases with speed and weight of towed load.

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, the weight of the towing vehicle (base vehicle + vehicle payload) should be at least 1.5 times the weight of the towed load (trailer + trailer payload).
- When operating over rough, hilly, or steep terrain, reduce cargo load to half of suggested load. Towed loads should also be reduced accordingly under these conditions.
- Use low range, reduce speed, and exercise extreme caution when operating over rough, hilly, or steep terrain.
- Do not tow a load that exceeds towing capacity listed in Specifications section.
- Do not exceed trailer tongue weight listed in Specifications section.
- 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.

SB31882,0000291-19-13MAY21

Tire Chains

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

Chains are available for all four wheels from your John Deere dealer.

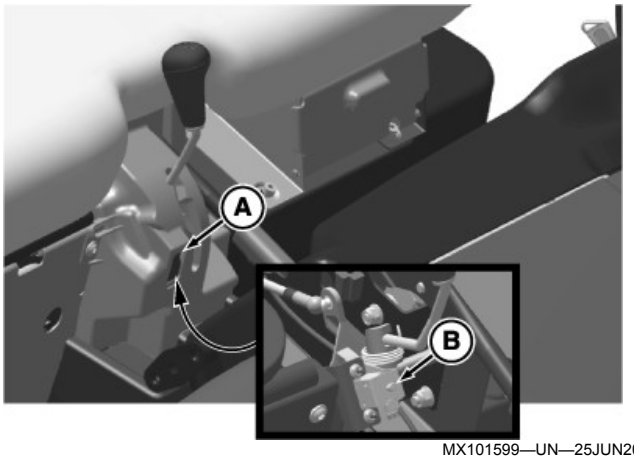
JG81906,0000713-19-14SEP20

Using Park Lock Override

CAUTION: Avoid injury! When the actuator plunger is disengaged, the machine has unrestricted motion. Be sure that machine is on a flat level surface before disengaging actuator.

NOTE: You can use your vehicle key as a tool to remove the cover and to pull up on the actuator plunger using the rubber end.

Use the following procedure to move your vehicle when your battery no longer has power:



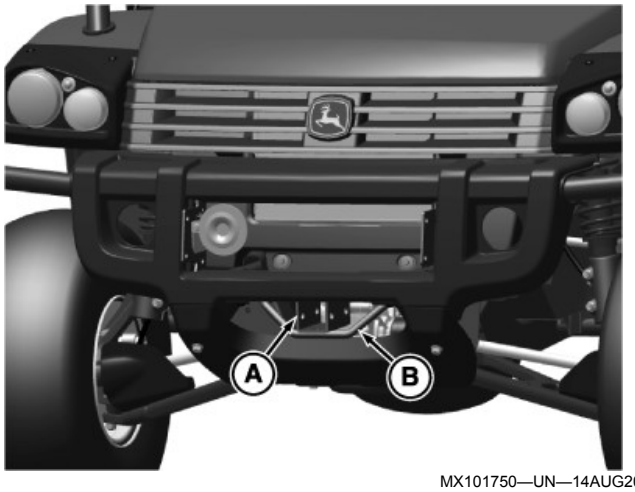
MX101599—UN—25JUN20

1. Locate access hole in the front console (A) and remove plastic plug.
2. Pull up on actuator plunger (B) while moving transmission shift lever to N (Neutral). Release plunger.
3. Push vehicle to desired location.
4. Move transmission shift lever to the P (Park) position.
5. Install plastic plug back into the access hole in the front console.

MX00654,000035C-19-26MAR21

Using Front Receiver Hitch

NOTE: Model shown may not match your machine exactly.



MX101750—UN—14AUG20

1. Mount front accessories into front receiver hitch (A).
2. Use bar (B) as needed.

MP47322,00F485F-19-17MAR21

Transporting Machine

Towing the Machine

IMPORTANT: Avoid damage! Never tow the vehicle above 40 km/h (25 mph); towing a vehicle at speeds above 40 km/h (25 mph) results in transmission damage.

Haul the vehicle in an enclosed trailer to avoid damage. If an open trailer must be used, haul on a heavy-duty trailer or on a full-size truck. Be cautious and travel at reduced speeds.

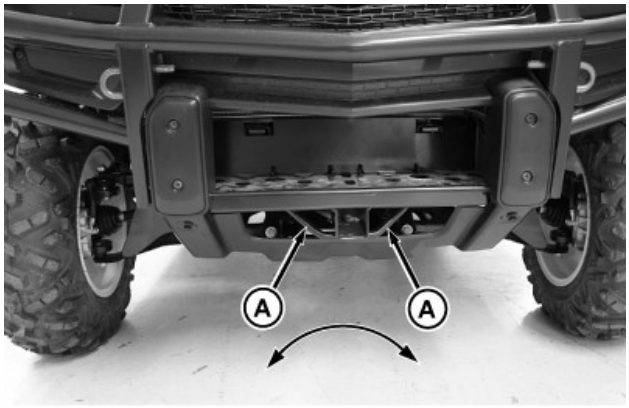
Remove optional accessories, such as a windshield, to avoid sudden unintentional separation from the vehicle.

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

1. Unlock the park brake (if equipped) and move the transmission shift lever to the neutral (N) position for towing.
2. Make sure that the 2WD/4WD switch is in the 2WD (two-wheel drive) position. Cycle the switch power to ensure that the 4WD actuator has released.
3. Check to be sure that the ignition key switch is in the STOP position.

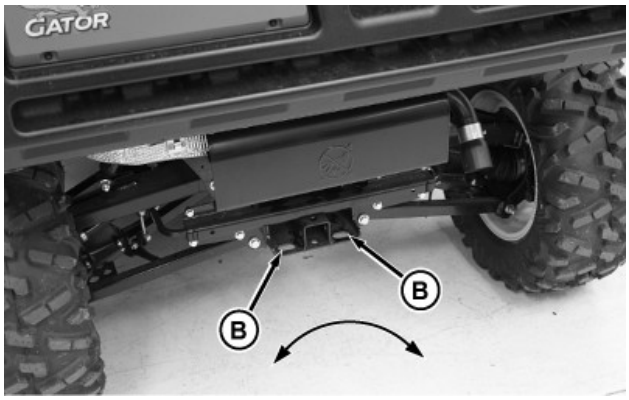
Machine Tie-Down Locations

NOTE: Models shown may not match your machine exactly.



MXT018981—UN—04JAN17

Fasten the front of the machine through tie-down points (A) on the front of the machine to the trailer with a heavy-duty strap, chain, or cable. Strap must be directed down and outward from machine.

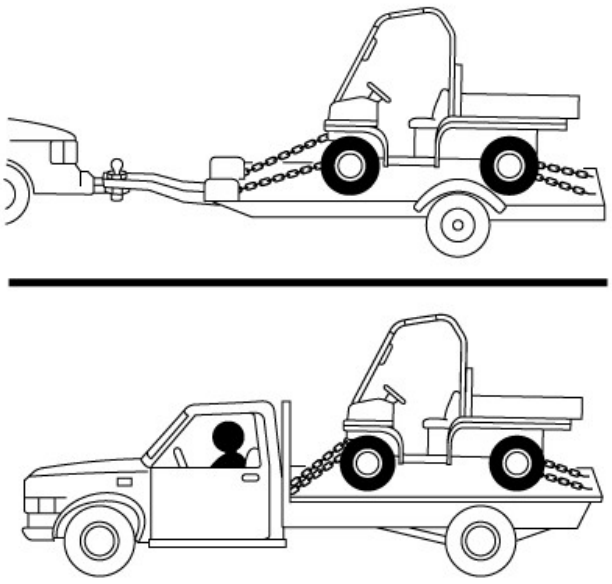


MXT018982—UN—04JAN17

Fasten the rear of the machine through tie-down points (B) on the rear of the machine to the trailer with a heavy-duty strap, chain, or cable. Strap must be directed down and outward from machine.

Hauling the Machine

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



MX100739—UN—14MAY19

1. Drive the machine onto the trailer or truck.
2. Park machine safely. (See Parking Safely in the Safety section.)
3. Fasten machine to trailer or truck with straps, chains, or cables.
4. Equip the trailer or truck with all the necessary lights and signs required by local, state, provincial, or federal laws.
5. Remove or secure optional attachments, if equipped.

MX00654,000035E-19-20SEP21

Servicing Your Machine

IMPORTANT: Avoid damage! High-pressure washing can damage machine components.

Operating in extreme conditions requires more frequent service intervals:

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

Use the following timetables to perform routine maintenance on your machine.

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

OUMX068,000052F-19-23NOV21

Severe Duty Service

More frequent engine maintenance is required when engine has been operated in severe conditions such as:

- Immersion in water: Results in water contaminating the oil. Inspect and/or change oil as required.
- Extended engine idling: Results in spark plug fouling. Inspect and/or clean plugs as required.
- Short trip cold-weather operation: Results in spark plug fouling. Inspect and/or clean plugs as required.

MX00654,00004DE-19-08NOV21

Service Intervals

Break In - After First 8 Hours:

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

Every 50 Hours or Annually (whichever comes first)

- Lubricate drive line.
- Grease cargo box tailgate strikers.
- Check 4WD front differential oil level.
- Check transmission oil level.
- Check brake fluid level, lines, and connections.
- Inspect driveline CV boots for tears and punctures.
- Inspect park brake for proper function (if equipped). (See your John Deere dealer for any adjustment needed.)
- Inspect transmission shift lever for proper function. (See your John Deere dealer for any adjustments needed.)

Every 100 Hours or Annually (whichever comes first)

- Change engine oil and filter.

Every 200 Hours

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

Every 200 Hours or Annually (whichever comes first)

- Change fuel filter.
- Change spark plugs.
- Check/clean spark arrestor.
- Check air cleaner dust unloading valve.
- Clean radiator.
- Check drive belt condition.
- Change engine air cleaner element.
- Check brake pad wear.
- Check driven clutch wear buttons.
- Clean primary drive clutch.
- Inspect battery. Clean if necessary.
- Check and tighten wheel bolts to correct torque.
- Check toe-in.
- Check and tighten all hardware.

Every 400 Hours or 24 Months (whichever comes first)

- Change engine coolant.
- Test or replace radiator cap. (See your John Deere dealer for this service.)
- Inspect suspension bushings for play. (See your John Deere dealer for this service.)
- Inspect wheel bearings for play. (See your John Deere dealer for this service.)

Every 800 Hours or 24 Months (whichever comes first)

- Change transmission oil.
- Change 4WD front differential oil.
- Replace drive belt.

Every 1000 Hours or 24 Months

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

mx00654,1655504154510-19-17JUN22

Grease

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

The following grease is recommended for service:

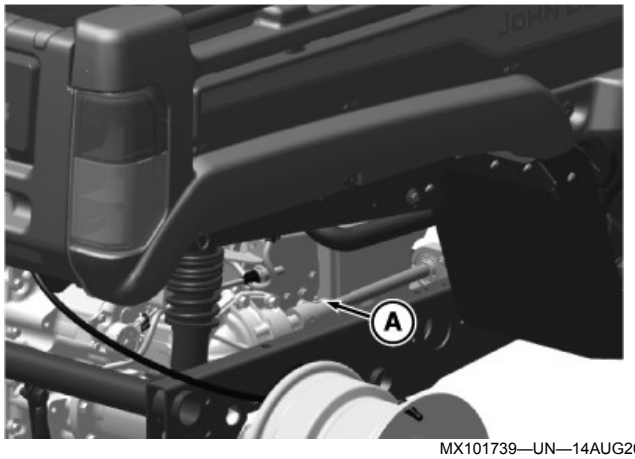
- John Deere Multi-Purpose HD Lithium Complex Grease
- Grease-Gard™ Premium Plus

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 before application. If not practical, grease twice as often until all old grease is purged from the system.

OUMX068,0000642-19-20APR21

Lubricating Drive Line

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



MX101739—UN—14AUG20

Right rear tire removed for photo clarity.

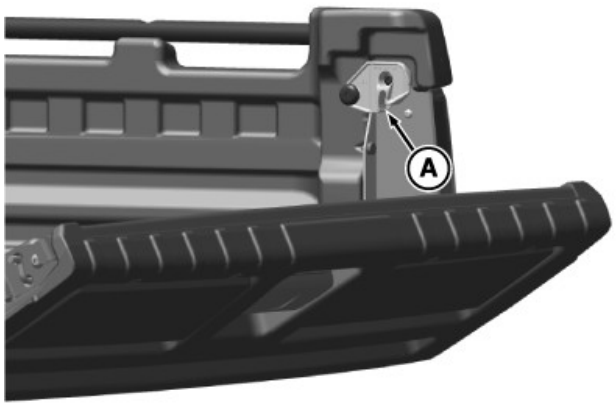
MX101738—UN—14AUG20

Front left tire shown.

2. Lubricate two grease fittings (A) on the drive line with one or two shots of grease.

MX10673,0000034-19-15AUG20

Lubricating Cargo Box Strikers



MX101894—UN—04FEB21

Lubricate striker slots (A) on both sides of the cargo box.

MX00654,0000470-19-31MAR21

Emissions Service Information

A qualified repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems with original or equivalent replacement parts. However, warranty, recall and all other services paid for by John Deere must be performed at an authorized John Deere service center.

Within the warranty period, John Deere will reimburse reasonable service costs incurred at service providers outside the John Deere authorized network only in an unsafe, emergency condition if an authorized John Deere dealer is not available and the failure does not arise from the owner's misuse or failure to perform required maintenance. An emergency situation exists under this section if, after 30 days, the authorized John Deere network is unable to perform the repairs or source replacement parts.

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.

Altitude Adjustment (Gasoline or Propane Converted Engines Only)

If your engine features a carburetor it is calibrated by the engine manufacturer and is not adjustable.

If your engine is operated at altitudes below 610 m (2,000 ft.), a high altitude carburetor jet kit is not required. If your engine is operated at altitudes above 610 m (2,000 ft.), a high altitude carburetor jet kit may be required for proper engine performance and emissions control. Operating the engine with the wrong carburetor configuration at a given altitude may increase the engine's emissions and decrease fuel efficiency and performance.

See a qualified service provider for details on jet kit requirements for your specific product.

TC00531,00000EC-19-28MAR16

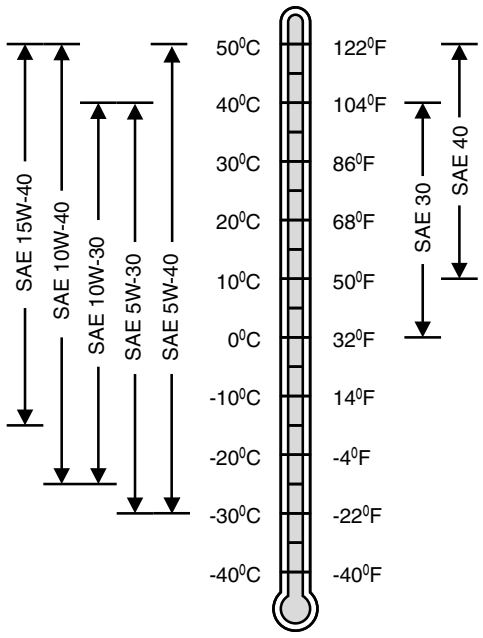
Avoid Fumes

CAUTION: Avoid injury! 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.**

JG81906,0000723-19-22APR20

Gasoline Engine Oil



TS1744—UN—25AUG20

Oil Viscosities for Air Temperature Ranges

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

Using single viscosity grade oils such as SAE 30 or SAE 40 can reduce oil consumption in air cooled engines.

The following oils are approved:

- John Deere Plus-50™ II
- John Deere Turf-Gard™

Other oils may be used if they meet one or more of the following:

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Turf-Gard is a trademark of Deere & Company

- ILSAC GF-6A
- API Service Category SP
- API Service Category SN
- API Service Category SM
- API Service Category SL
- API Service Category SJ
- ACEA Oil Sequence A3/B3
- ACEA Oil Sequence A3/B4
- ACEA Oil Sequence A5/B5
- ACEA Oil Sequence C5
- ACEA Oil Sequence C4
- ACEA Oil Sequence C3
- ACEA Oil Sequence C2
- ACEA Oil Sequence C1

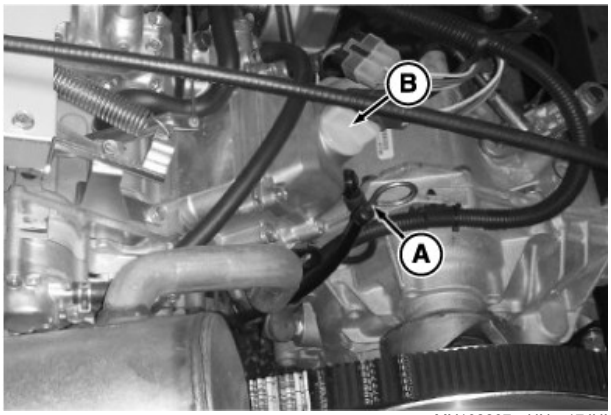
DX,ENOIL2-19-15JUL20

Checking Engine Oil Level

IMPORTANT: Avoid damage! Failure to check the oil level regularly could lead to serious engine problems when the 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.**
- **If oil appears dirty, change engine oil. (See Changing Engine Oil and Filter in this section.)**

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



MX102267—UN—17JUN22

3. Remove dipstick (A) and wipe it clean.
4. Install dipstick.
5. Remove dipstick.
6. Check oil level:
   - Oil level must be between fill marks on dipstick.
   - If oil level is low, remove oil filler cap (B) and add oil to bring oil level no higher than upper mark on dipstick.
   - If oil level is above the upper mark, drain to the proper level.
   - If oil appears dirty, change engine oil. (See Changing Engine Oil and Filter in this section.)
7. Install dipstick and oil fill cap.
8. Lower the cargo box.

MX10673,000001D-19-17JUN22

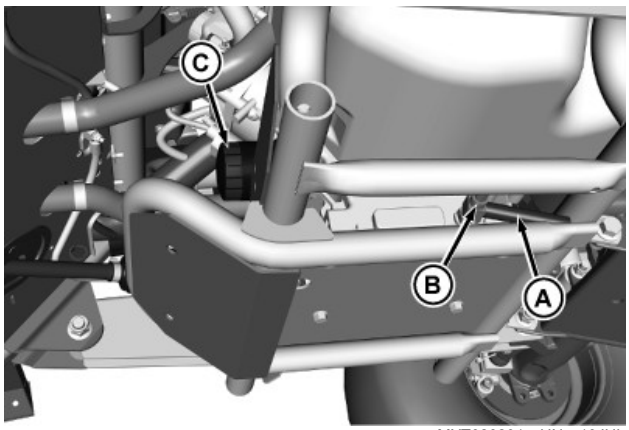
Changing Engine Oil and Filter

IMPORTANT: Avoid damage! Change the oil more often if the machine is used in extreme conditions:

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

NOTE: Refer to Capacities in the Specifications section.

1. Run engine to warm the oil.
2. Park the machine safely. (See Parking Safely in the Safety section.)
3. Raise and secure cargo box.
4. Clean any debris from the drain funnel under the oil filter.



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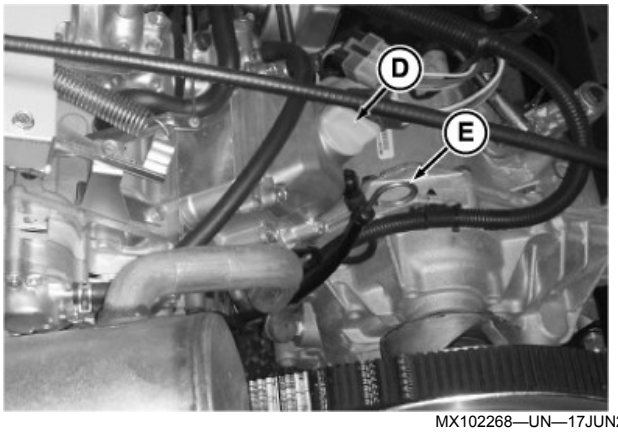


MX102268—UN—17JUN22

5. Route drain tube (A) below skid plate.
6. Place drain pan under the engine drain valve.
7. Remove oil fill cap (D) from filler opening.
8. Open drain valve (B) on the left side of engine. Allow oil to drain completely.
9. Remove and discard oil filter (C) on the front of the engine. Wipe off threads on engine.
10. Put a light coat of clean engine oil on gasket of the new oil filter.
11. Install new filter until rubber gasket contacts filter base. Tighten filter an additional one-half turn.
12. Close drain valve and route drain tube above skid plate.

IMPORTANT: Avoid damage! Do not overfill the crankcase with oil. Oil capacities given are with engine and crankcase dry. Some oil remains in engine after draining.

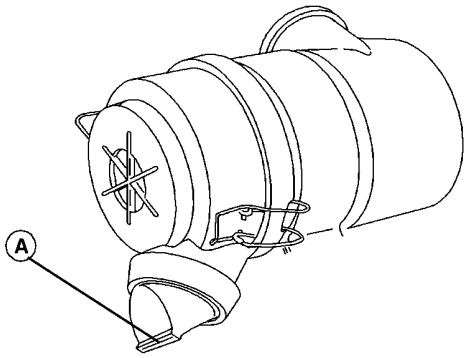
13. Add oil no higher than upper mark on dipstick (E). Do not overfill.
14. Install dipstick and oil fill cap.
15. Start and run engine at idle to check for leaks.
16. Stop engine. Fix any leaks before operating.
17. Check oil level; add oil if necessary.
18. Install dipstick and oil fill cap if necessary.
19. Lower the cargo box.

MX10673,000001A-19-01JUL22

Cleaning Dust Unloading Valve

IMPORTANT: Avoid damage! 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 and valve to cool.



MXAL42935—UN—15MAR13

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

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Servicing Air Cleaner Element

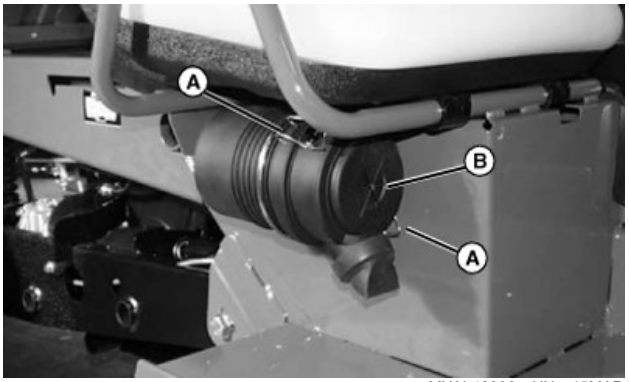
IMPORTANT: Avoid damage! Dirt and debris can enter engine when air cleaner canister is opened. Do not open canister except for scheduled service to minimize intake system contamination.

Check filter element frequently if operating in dusty conditions.

Do not use compressed air to clean the air filter. It can damage the filter which can cause engine damage.

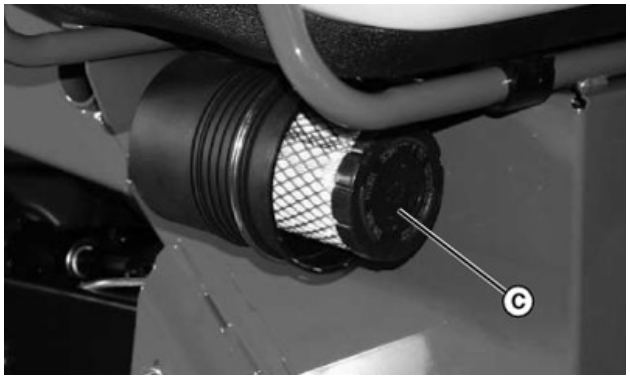
Do not operate the engine without the air cleaner element and rubber dust unloading valve installed.

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



MXAL42936—UN—15MAR13

3. Release latches (A) and remove air cleaner canister cover (B).



MXAL42937—UN—15MAR13

4. Remove and discard filter element (C). Replace with a new filter element.
5. Install air cleaner canister cover with rubber dust unloading valve pointing downward.
6. Hook the canister cover latches.

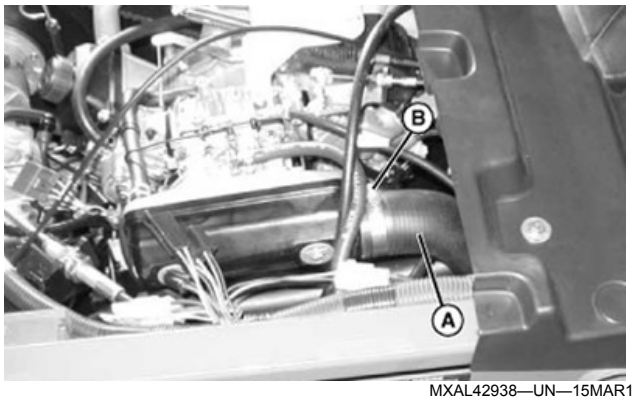
JG81906,0000728-19-17JUN22

Checking Air Intake, Hoses and Clamps

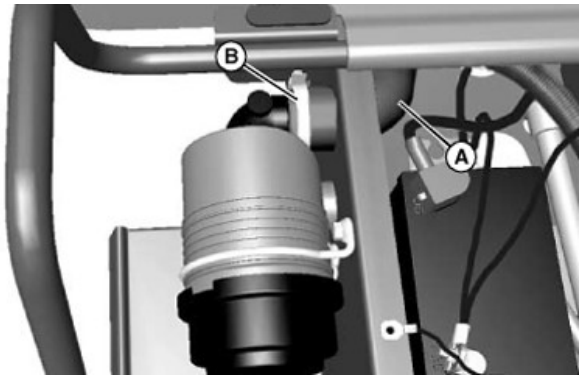
1. Park the machine safely. (See Parking Safely in the Safety section.)

NOTE: If equipped with bucket seats, just tip passenger seat forward.

2. Remove bench seat. (See Removing and Installing Seats in the Service Miscellaneous section.)
3. Raise and secure cargo box.



MXAL42938—UN—15MAR13



MXAL42939—UN—15MAR13

4. Check intake hose (A) for damage or cracking. Replace if necessary.
5. Check and tighten air intake hose clamps (B) as needed.
6. Lower the cargo box.
7. Replace or lower seat.

JG81906,0000729-19-20AUG20

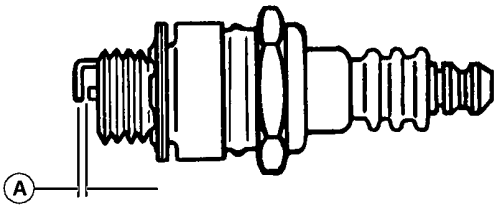
Checking Spark Plug

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. 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.



MXAL42940—UN—15MAR13

8. Check and adjust spark plug gap (A):
   - See Electrical System in the Specifications section for gap distance.
9. Install and tighten spark plug(s) to:

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

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

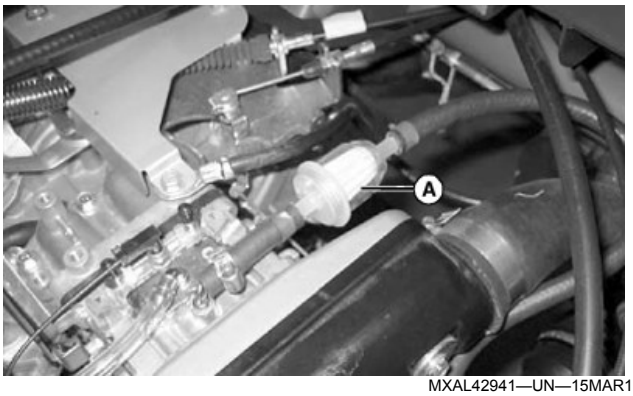
JG81906,000072A-19-31MAR21

Replacing Fuel Filter

CAUTION: Avoid injury! 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 the cargo box.



MXAL42941—UN—15MAR13

3. Locate the fuel filter (A) at the front of the engine compartment.
4. Check the element of the 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.

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

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

JG81906,000072B-19-03JUN21

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.

If after troubleshooting your engine is still not performing correctly, contact your John Deere dealer.

JG81906,000072C-19-20AUG20

Cleaning Engine Compartment

CAUTION: Avoid injury! Touching hot surfaces can burn skin. The engine, components, and fluids are 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.

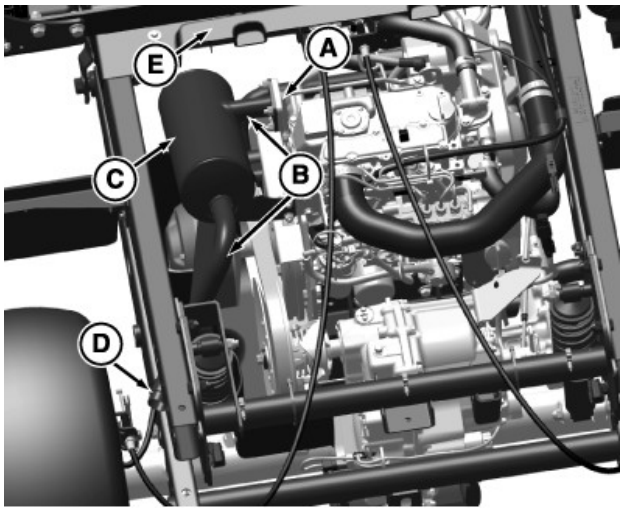
CAUTION: Avoid injury! Compressed air can cause debris to fly a long distance:

- **Clear work area of bystanders.**
- **Wear eye protection when using compressed air for cleaning purposes.**

IMPORTANT: Avoid damage! High-pressure water can damage seals, gaskets, and force water into electrical connectors. Use water from a hose or pressure washer with pressures less than:

Specification

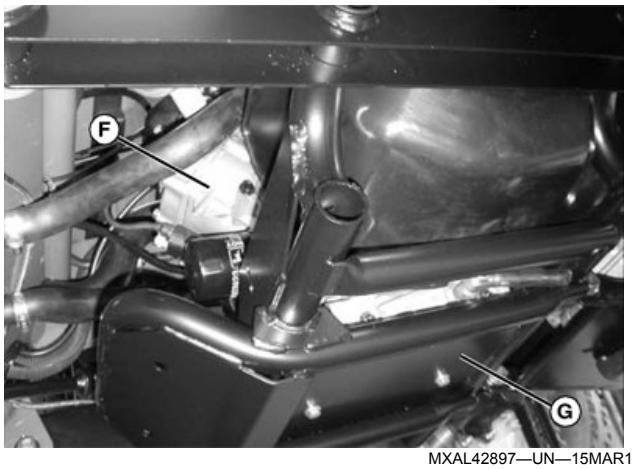
Water—Pressure. . . . . 420 kPa (60 psi)



MX101766—UN—03FEB21

HPX815E shown.

3. Remove any debris in engine compartment, especially around exhaust components:
   - Exhaust manifold (A).
   - Muffler pipes (B).
   - Muffler (C).
   - Spark arrestor (D).
   - Closeout panel (E).

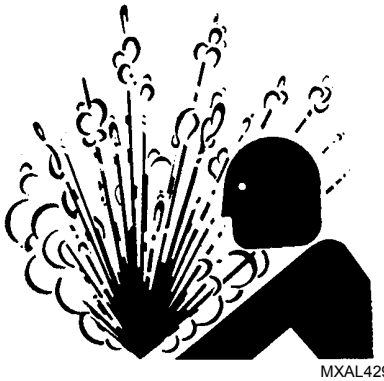


MXAL42897—UN—15MAR13

4. Remove any debris from between engine (F) and engine carrier (G).
5. Check and remove any obstructions around the control cables and linkages.

JG81906,000072D-19-03FEB21

Service Cooling System Safely



MXAL42944—UN—28MAR13

CAUTION: Avoid injury! The radiator will be hot and can burn skin. Built-up pressure may cause explosive release of coolant when the radiator cap is removed:

- **Shut off the engine and allow to cool.**
- **Do not remove the cap unless the radiator and the engine are cool enough to touch with bare hands.**
- **Slowly loosen the cap to the first stop to release all pressure. Then remove the cap.**

JG81906,0000731-19-31MAR21

Cleaning Radiator Cooling Fins

1. Park the vehicle safely. (See Parking Safely in the Safety section.)
2. Open hood.
3. Remove storage tray.

CAUTION: Avoid injury! Compressed air can cause debris to fly a long distance.

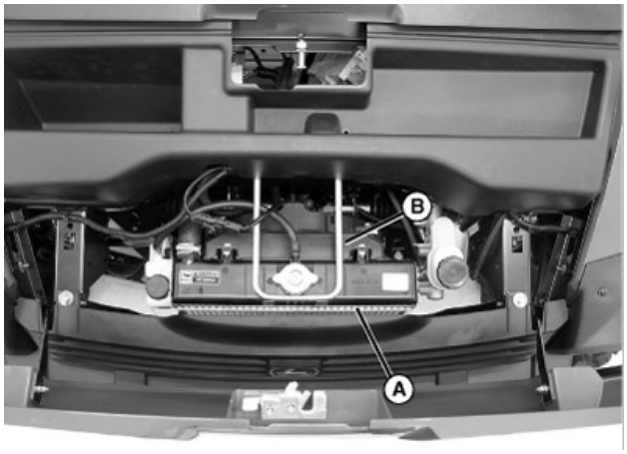
- **Clear work area of bystanders.**
- **Wear eye protection when using compressed air for cleaning purposes.**

IMPORTANT: Avoid damage! Cooling fins must be clean to prevent engine from overheating and to allow adequate air intake.

High-pressure water or air can damage cooling fins or other engine components. Use water from a hose or reduce compressed air pressure to:

Specification

Air—Pressure. . . . . 210 kPa (30 psi)



MXAL44223—UN—10APR13

4. Remove all dirt and debris from radiator fins (A) and fan shroud (B) using compressed air or water. Flow of compressed air or water must be from back to front.
5. Install storage tray and close hood.

MX00654,00003CE-19-01AUG22

Recommended Engine Coolant

IMPORTANT: Avoid damage! Using incorrect coolant mixture can cause overheating and damage to the radiator and engine:

- **Do not operate engine with plain water.**
- **Do not exceed a 50% mixture of coolant and water.**
- **Aluminum engine blocks and radiators require approved ethylene-glycol based coolant.**

The engine cooling system is filled to provide year-round protection against corrosion and cylinder liner pitting, and winter freeze protection to -37 degrees C (-34 degrees F). If protection at lower temperatures is required, consult your John Deere dealer for recommendations.

The following coolants are preferred:

- John Deere Cool-Gard™ II Premix
- John Deere Cool-Gard™ Premix
- John Deere Cool-Gard™ PG Premix

John Deere Cool-Gard™ II Premix and John Deere Cool-Gard™ Premix are available in a concentration of 50% propylene glycol.

John Deere Cool-Gard™ PG Premix is available in a concentration of 55% propylene glycol.

Additional recommended coolants:

- John Deere Cool-Gard™ II Concentrate in a 40% to 60% mixture of concentrate with water.
- John Deere Cool-Gard™ Concentrate in a 40% to 60% mixture of concentrate with water.

If the recommended coolants are unavailable, use an ethylene glycol or propylene glycol base coolant that meets the following specification:

- ASTM D3306 prediluted (50%) coolant.
- ASTM D3306 coolant concentrate in a 40% to 60% mixture of concentrate with water.

Check container label before using to be sure it has the appropriate specifications for your machine. Use coolant with conditioner or add conditioner to coolant before using.

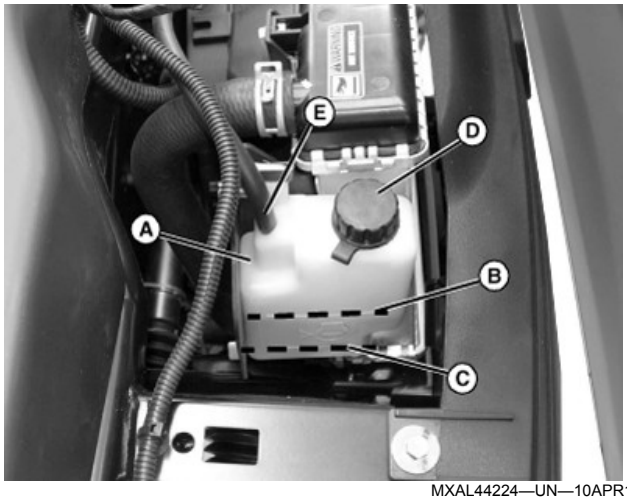
Water Quality

- Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended with ethylene glycol base engine coolant concentrate.

JG81906,0000733-19-10DEC20

Checking Coolant Level

1. Park the vehicle safely. (See Parking Safely in the Safety section.)
2. Allow engine to cool.
3. Open hood.



MXAL44224—UN—10APR13

4. Check recovery tank (A) coolant level:
   - If engine is warm, be sure that coolant level is between the FULL line (B) and the LOW line (C).
   - If engine is cold, be sure that coolant level is at the LOW line (C) on the recovery tank.

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5. Remove recovery tank cap (D) if necessary to add coolant.
6. Add coolant mixture to the recovery tank.

IMPORTANT: Avoid damage! Be sure the suction hose (E) is installed correctly to allow coolant into the coolant system. Do not allow the bottom of the hose to touch bottom of bottle or bend upwards out of coolant.

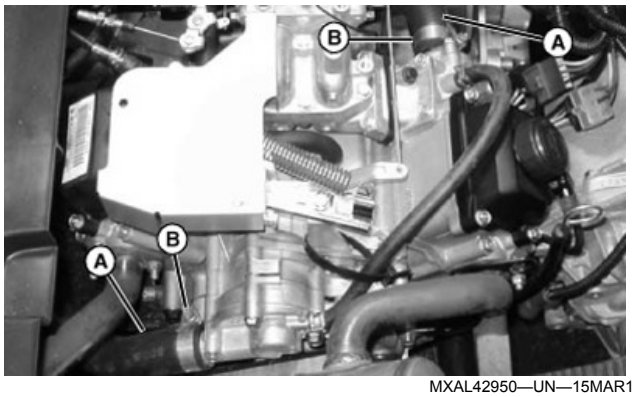
7. Install and tighten recovery tank cap.
8. Close hood.

JG81906,0000730-19-06SEP20

Checking Radiator Hoses and Clamps

1. Park the vehicle safely. (See Parking Safely in the Safety section.)
2. Raise cargo box.
3. Open hood.
4. Remove storage tray.

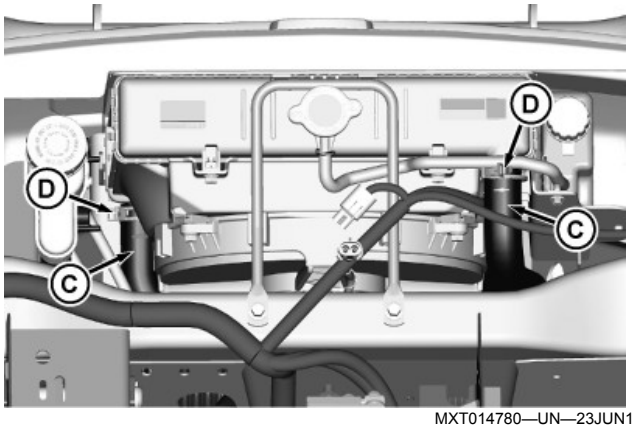
NOTE: Visually inspect hoses for cracks and wear. Squeeze hoses to check for deterioration. If any hoses or clamps need replacement, see Servicing Cooling System section.



MXAL42950—UN—15MAR13

MXAL42951—UN—15MAR13

5. Check radiator hoses (A) between intermediate tubes and engine for damage or cracking. Replace if necessary.
6. Check hose clamps (B) and tighten or replace as needed.



MXT014780—UN—23JUN15

7. Check radiator hose (C) between intermediate tubes and radiator for damage or cracking. Replace if necessary.
8. Check hose clamps (D) and tighten or replace as needed.
9. Install storage tray.
10. Close hood.
11. Lower cargo box.

OUMX068,0000C51-19-01FEB21

Servicing Cooling System

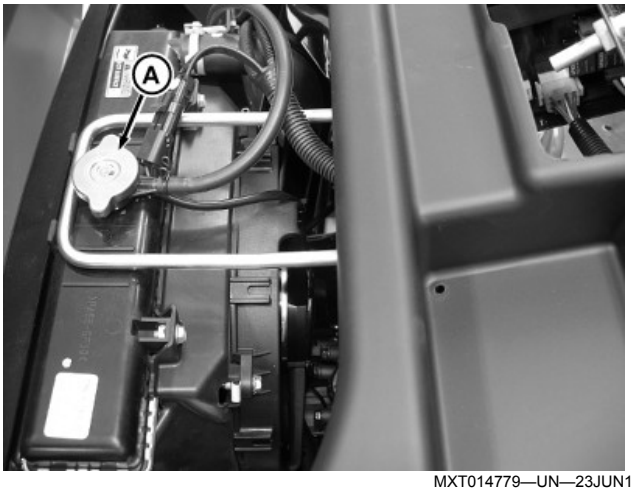
IMPORTANT: Avoid damage! Follow all service procedures exactly. If not equipped to perform this work, see your John Deere dealer for service.

Prepare Vehicle

1. Park the machine safely. (See Parking Safely in the Safety section.)
2. Raise cargo box.
3. Open hood.
4. Remove storage tray.
5. When the coolant system service is completed:
   - Install storage tray.
   - Close hood.
   - Lower cargo box.

Draining Cooling System

1. Make sure that engine has cooled completely.
2. Place a drain pan under the engine.



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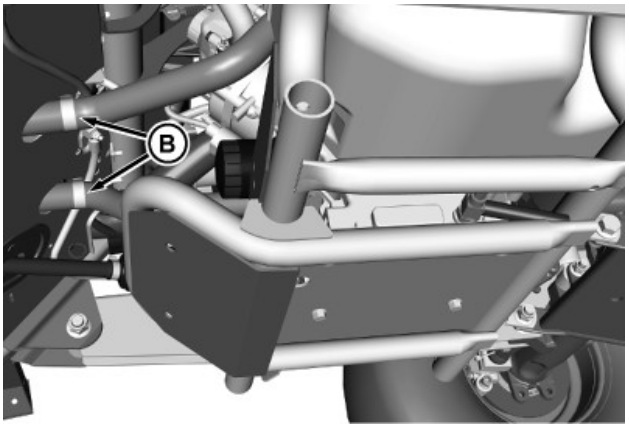
3. Slowly open radiator cap (A) to the first stop to release all pressure.
4. Remove cap after all pressure is released.



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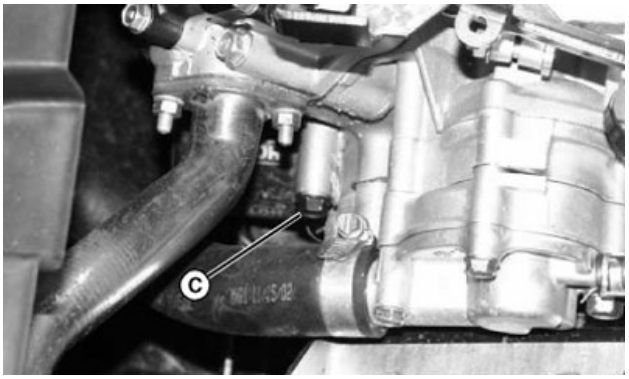
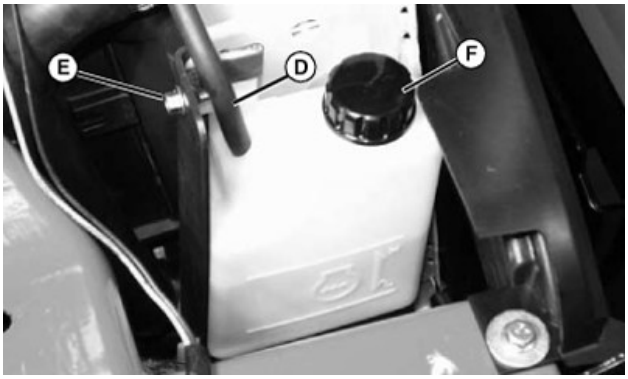
5. Disconnect radiator hoses (B) from intermediate tubes.
6. Route radiator hoses over the drain pan and allow coolant to drain.



MXAL42947—UN—15MAR13

7. Loosen engine block drain screw (C) on the left side of engine. Allow coolant to drain completely.
8. After all coolant has drained, connect radiator hoses and tighten the engine block drain screw.



MXAL42948—UN—15MAR13

9. Remove suction hose (D) from the recovery tank.
10. Remove the screw (E) and lift recovery tank out of machine.
11. Remove cap and empty recovery tank.
12. Check condition of all hoses. Replace as needed. Check all hose clamps and tighten as needed.
13. Install recovery tank in the machine and secure with screw (E).

IMPORTANT: Avoid damage! Install suction hose properly to ensure proper function of the cooling system. Position hose slightly above bottom of reservoir. Do not allow the hose to contact bottom of reservoir or bend upwards out of the coolant.

14. Install suction hose (D) and cap (F).
15. Fill and bleed cooling system.

Filling and Bleeding Cooling System

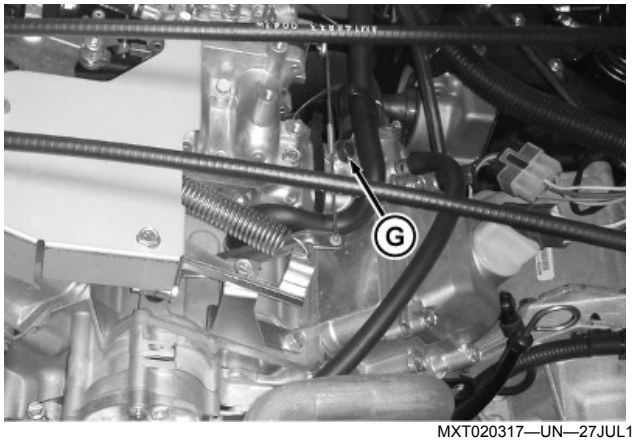
IMPORTANT: Avoid damage! Using incorrect coolant mixture can damage the radiator:

- **Do not operate engine without coolant or with plain water.**
- **Use antifreeze approved for use in aluminum engines.**
- **Do not exceed a 50% antifreeze mixture for the coolant.**
- **Do not pour coolant or water into radiator when engine is hot.**
- **Do not add Stop Leak or other additives.**

NOTE: John Deere Cool-Gard coolant is recommended when adding coolant to the cooling system. Follow the directions on the container for the correct mixture ratio.

Cooling system capacity can be found in Capacities in the Specifications section.

IMPORTANT: Avoid damage! Bleed screw uses a special aluminum seal washer. Do not lose or substitute with any other type of washer.



MXT020317—UN—27JUL17

1. Remove bleed screw and seal washer (G) located by carburetor.
2. Remove radiator cap and add recommended coolant mixture to radiator until coolant runs out of the bleed port.
3. Install and tighten the bleed screw with seal washer.
4. Add additional coolant mixture to radiator until coolant runs out of the overflow port and into the recovery tank.
5. Install radiator cap.

IMPORTANT: Avoid damage! Installing suction hose incorrectly does not allow coolant into the coolant system. Do not allow the bottom of the hose to touch the bottom of the recovery tank or bend upwards out of the coolant.

6. Remove recovery tank cap and add coolant mixture to the recovery tank until it is approximately half full.
7. Install recovery tank cap.

IMPORTANT: Avoid damage! If coolant temperature indicator comes on while engine is running, stop engine and add more coolant mixture to radiator.

8. Start and run engine at medium speed until cooling fan starts indicating thermostat has opened and coolant is circulating.
9. Allow engine to cool.
10. Loosen bleed screw and allow air to bubble out until air bubbles are no longer visible at the bleed port. Tighten bleed screw completely.
11. Remove radiator cap and add recommended coolant mixture to radiator until coolant runs out of the overflow port and into the recovery tank.
12. Install radiator cap.
13. Run engine until cooling fan starts, indicating the engine and coolant has reached operating temperature.
14. Stop engine and remove key.
15. Allow engine to cool and suction back any needed coolant from the overflow recovery tank. Fill the recovery tank to the lower line, if necessary.

Flushing Cooling System

1. Drain cooling system. (See Draining Cooling System in this section).
2. Prepare a cooling system flushing solution using clean water and John Deere Cooling System Cleaner, John Deere Cooling System Quick Flush, or an equivalent.
3. Fill radiator completely with flushing solution. Install and tighten radiator cap.
4. Start and run engine until it reaches operating temperature.
5. Stop engine.

CAUTION: Avoid injury! The radiator is hot and can burn skin. Use a thick rag or gloves to protect your skin.

Built-up pressure can cause an explosive release of coolant when the radiator cap is removed.

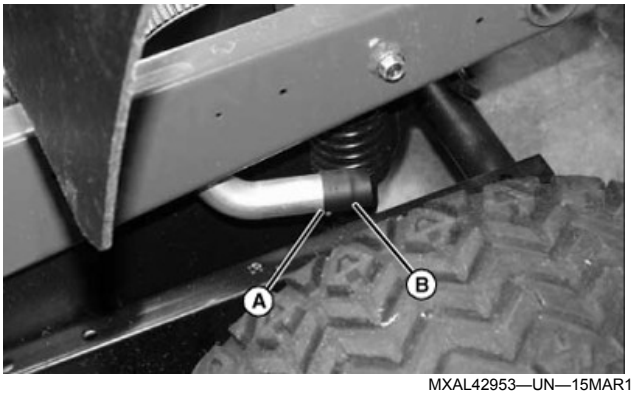
6. Turn radiator cap slowly to the first stop and release all pressure. Remove radiator cap.
7. Drain cooling system immediately into a container before rust and dirt settle:
   - Disconnect radiator hoses from the engine.
   - Loosen engine block drain screw.
8. After all solution has drained, connect radiator hoses and tighten engine block drain screw.
9. Remove and clean recovery tank.
10. Install the recovery tank.
11. Fill cooling system with recommended coolant mixture. (See Filling and Bleeding Cooling System in this section).

MX10673,000001C-19-26MAR21

Checking Spark Arrestor

CAUTION: Avoid injury! Touching hot surfaces can burn skin. The spark arrestor, muffler, and surrounding components 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 vehicle to cool completely.



MXAL42953—UN—15MAR13

3. Remove screw (A) securing spark arrestor (B) to muffler exhaust pipe. Retain the screw.
4. Remove spark arrestor.

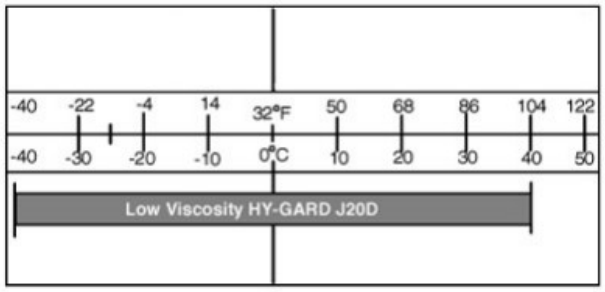
CAUTION: Avoid injury! Compressed air can cause debris to fly a long distance:

- **Clear work area of bystanders.**
- **Wear eye protection when using compressed air for cleaning purposes.**

5. Make sure deflector screen inside arrestor is not plugged or damaged:
   - If plugged, spray with carburetor/choke cleaner and blow dry with compressed air.
   - If damaged, replace spark arrestor.
6. Install spark arrestor with original hardware.

JG81906,0000735-19-11FEB21

Transmission and 4WD Front Differential Oil



MX101556—UN—12MAY20

Use the appropriate oil viscosity based on these air temperature ranges. Operating outside of these recommended oil and air temperature ranges can cause premature hydrostatic transmission or hydraulic system failures.

IMPORTANT: Avoid damage! DO NOT mix any other oils in this transmission. DO NOT use engine oil or "Type F" (Red) Automatic Transmission Fluid in this transmission.

John Deere J20D Low Viscosity Hy-Gard™ transmission and hydraulic oil is recommended.

Other oils can be used if recommended John Deere oils are not available, provided they meet the following specifications:

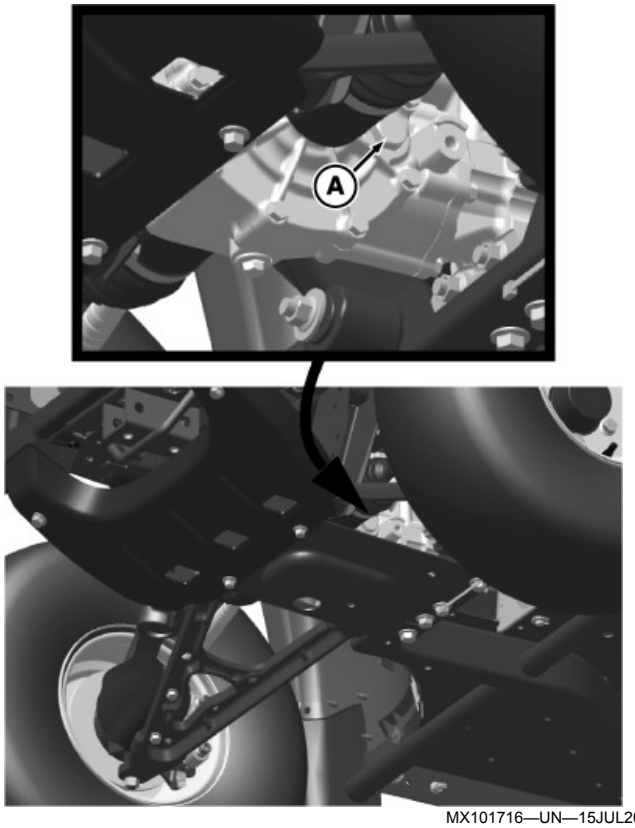
- John Deere Standard JDM J20C
- John Deere Standard JDM J20D

MX00654,0000329-19-29MAR21

Checking 4WD Front Differential Oil Level

1. Park machine safely. (See Parking Safely in the Safety section.)
2. Allow machine to cool down for at least 1 hour.

IMPORTANT: Avoid damage! Dirt and debris in the oil can damage the 4WD differential. Clean area around opening before removing. Change oil if it appears dirty.



MX101716—UN—15JUL20

3. Remove fill the plug (A) on the left side of the 4WD front differential.
4. Check oil:
   - Oil is level with the bottom of the fill port.
   - If oil level is low, add oil through the fill port until level is correct.
   - If oil appears dirty, change oil. (See Changing 4WD Front Differential Oil in this section.)
5. Install and tighten the fill plug to:

Specification	
Fill Plug—Torque	44—54 N·m (32—40 lb·ft)

MX00654,0000371-19-08AUG22

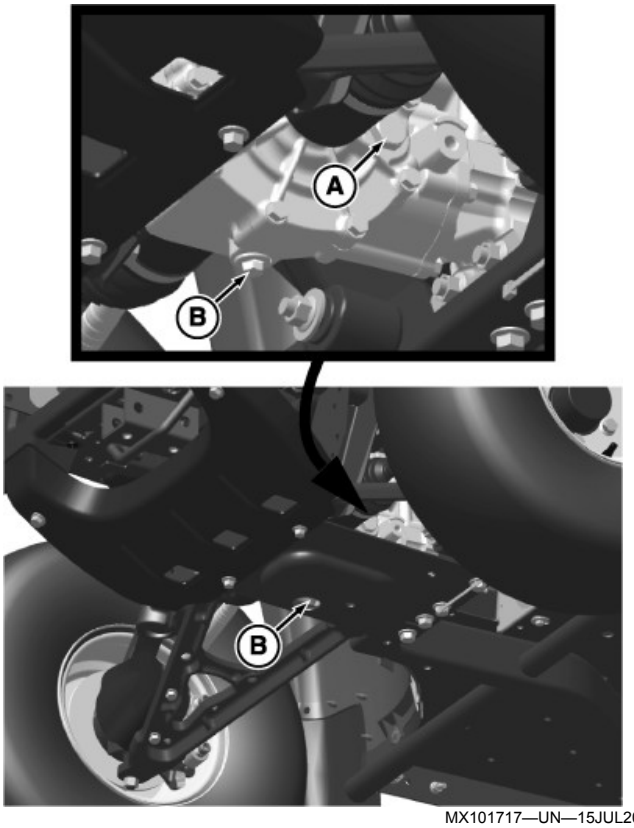
Changing 4WD Front Differential Oil

NOTE: See Capacities in the Specifications section.

1. Operate machine to warm front differential oil.
2. Park machine safely. (See Parking Safely in the Safety section.)

IMPORTANT: Avoid damage! Dirt and debris in oil may cause damage to the 4WD differential. Clean area around opening before removing plug.

Hy-Gard is a trademark of Deere & Company



MX101717—UN—15JUL20

Right front wheel removed for better view.

3. Position drain pan under the front differential drain plug (B) at bottom of housing.
4. Remove fill the plug (A) located on the left side of the front differential.
5. Remove front differential drain plug (B) and allow oil to drain through opening in frame.
6. Check washer on the drain plug. Replace if missing or in poor condition.
7. Install and tighten drain plug after all oil has drained. Tighten to:

Specification

Drain Plug—Torque. . . . . 30—35 N·m (22—26 lb·ft)

8. Add oil until the level is even with the bottom of the fill port.
9. Install and tighten the fill plug to:

Specification

Fill Plug—Torque. . . . . 44—54 N·m (32—40 lb·ft)

10. Check oil level again after the first several hours of operation.

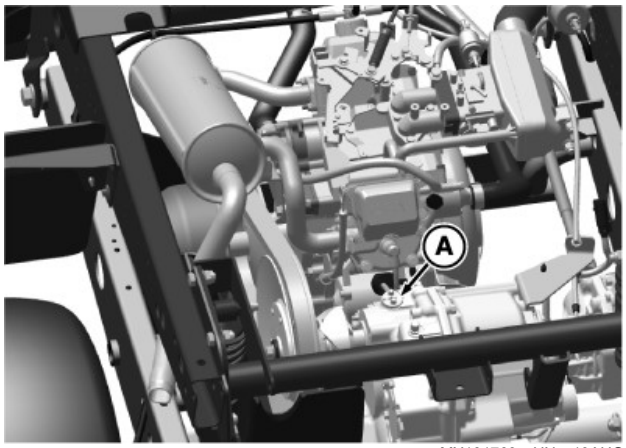
MX00654,0000372-19-01AUG22

Checking Transmission Oil Level

IMPORTANT: Avoid damage! Hot hydraulic oil expands and shows an incorrect level. Check the oil level when it is cold and the engine is not running.

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

IMPORTANT: Avoid damage! Dirt and debris in oil may cause damage to the transmission. Clean area around opening before removing dipstick. Change oil if it appears dirty.



MX101763—UN—19AUG20

3. Remove dipstick (A) located on the top of the transmission housing. Wipe dipstick clean.
4. Check oil:
   - Set dipstick on threads in the transmission case, then remove it and check the oil level. The oil should cover the notches on the dipstick but not go above them.
   - Add oil as needed through the dipstick fill hole.
   - If oil appears dirty, change oil. (See Changing Transmission Oil in this section
5. Install and tighten dipstick.
6. Lower the cargo box.

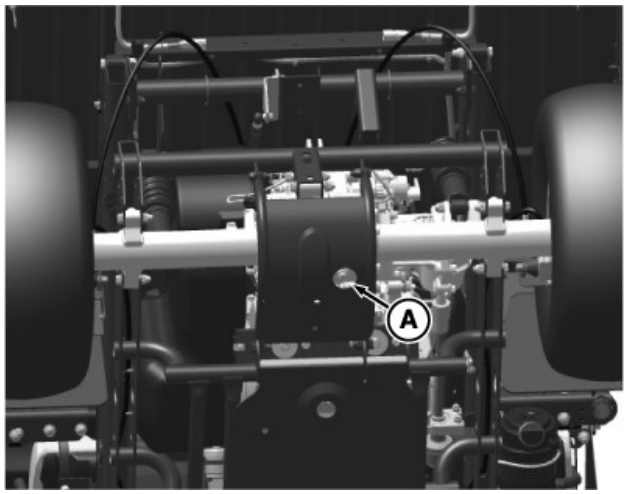
MX00654,000038C-19-17JUN22

Changing Transmission Oil

NOTE: See Capacities in the Specifications section.

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

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



MX101701—UN—22JUN20

3. Position drain pan under transmission 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:

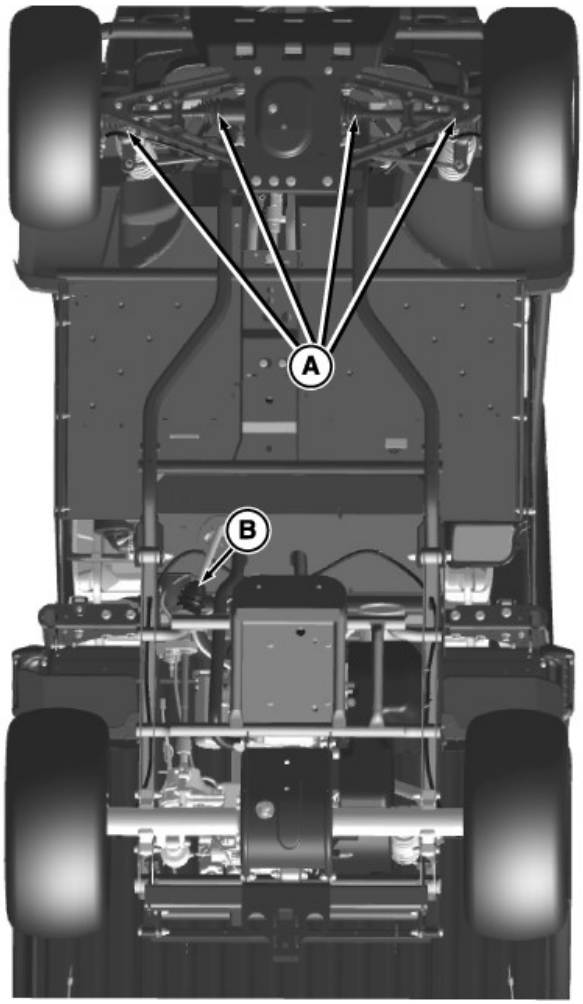
Specification	
Transmission Drain Plug—Torque	30 - 35 N·m (22 - 26 lb-ft)

7. Remove dipstick located on top of transmission housing. Wipe dipstick clean.
8. Add recommended oil.
9. Wait for two minutes, then check oil level. Check oil level by setting dipstick on threads in transmission case, then removing and checking oil level.
10. Add oil if necessary.
11. Install dipstick and tighten.
12. Lower the cargo box.

MX00654,0000362-19-17JUN22

Inspecting Driveline CV Boots

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



MX101830—UN—03FEB21

Viewed from under the machine.

2. Inspect four front CV boots (A) for tears or punctures.
3. Inspect rear drive shaft boot (B) for tears or punctures.
4. If replacement of a boot is necessary, see your John Deere dealer.

MX00654,0000402-19-23OCT20

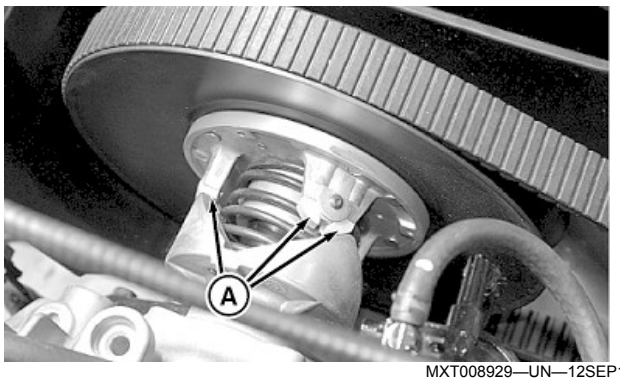
Servicing Clutches

Prepare Vehicle

CAUTION: Avoid injury! 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.

Checking Secondary Driven Clutch Buttons

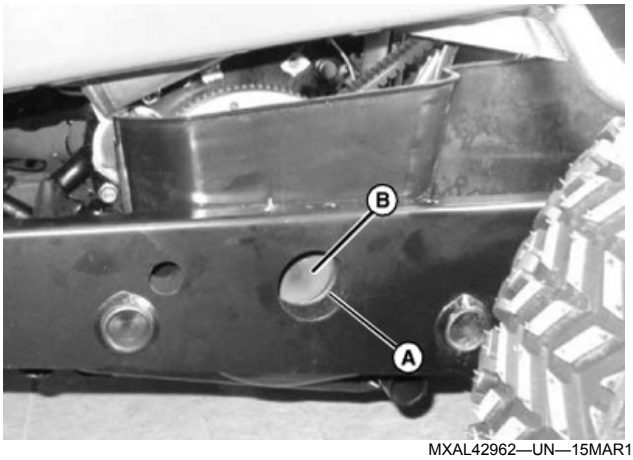


MXT008929—UN—12SEP13

1. Check for missing or worn clutch buttons (A).
   - There should not be any excessive wear, or metal-to-metal contact.
   - If replacement is necessary, see your John Deere dealer.
2. Lower the cargo box.

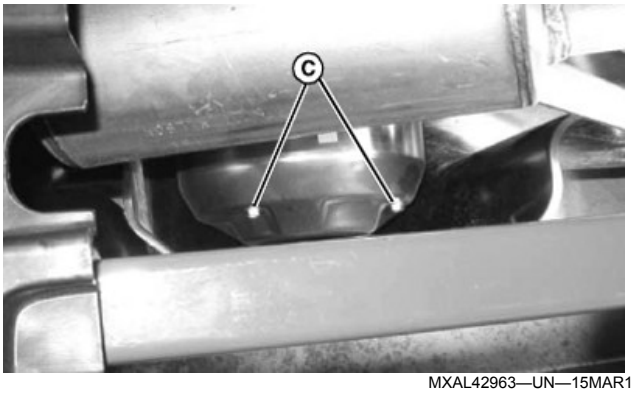
Cleaning Primary Drive Clutch

IMPORTANT: Avoid damage! Never lubricate any part of the primary drive clutch.



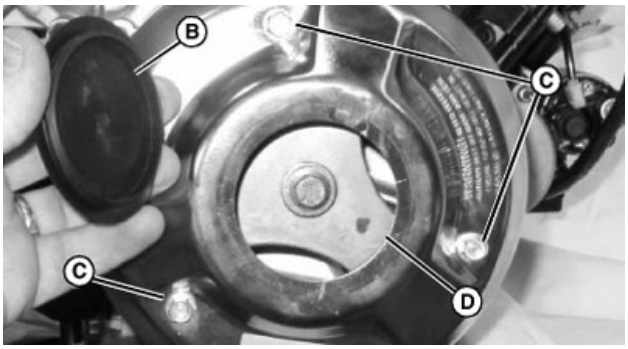
MXAL42962—UN—15MAR13

1. Through access hole (A), remove clutch cover plug (B).



MXAL42963—UN—15MAR13

2. Remove three screws (C) securing clutch cover. Pull cover away from clutch.



MXAL42964—UN—15MAR13

Engine removed for clarity. Engine does not need to be removed to clean clutch.

3. Through access hole (D), use compressed air to blow dust and debris out of clutch. Also blow dust and debris out from underneath the belt along the main shaft.
4. Install clutch cover and tighten screws.

Specification	
Screws—Torque	8 - 11 N·m 6 - 8 lb.-ft.

5. Install clutch cover plug (B).
6. Lower the cargo box.

MX00654,0000403-19-21OCT20

Servicing Drive Belt

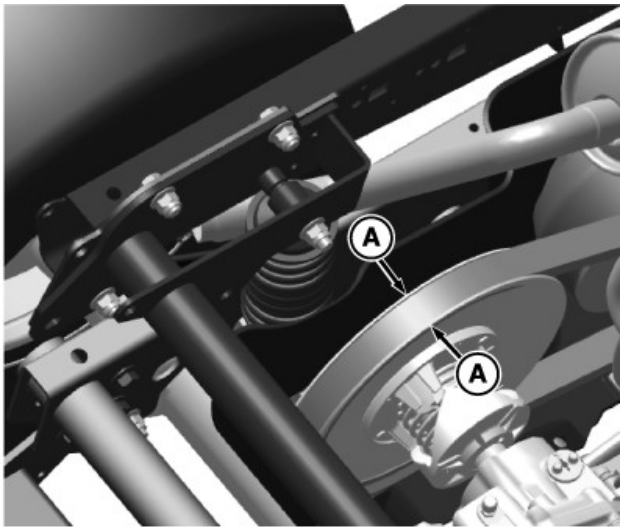
Prepare Vehicle

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

1. Park the vehicle safely. (See Parking Safely in the Safety section.)
2. Raise and secure cargo box. Lower cargo box when servicing is done.

Inspecting Drive Belt

1. Rotate and inspect belt for wear or damage.



MX101702—UN—20AUG20

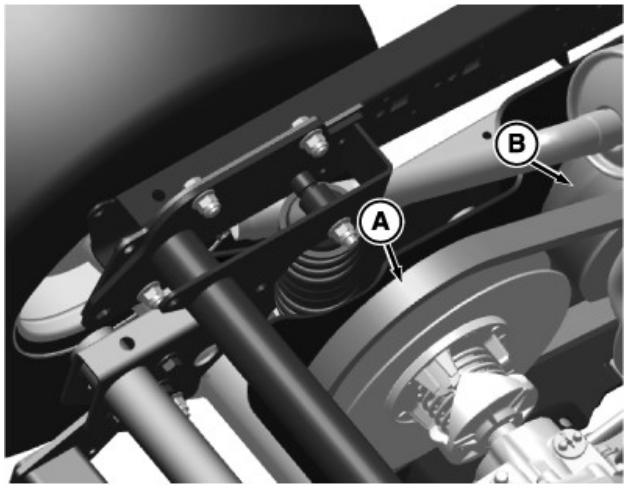
2. Measure the top surface of the belt width at (A). Replace belt if dimension is less than:

Specification	
Drive Belt Top Surface (min.)—Width.	29.5 mm (1.2 in)

3. Replace belt if worn beyond limit.

Replacing Drive Belt

IMPORTANT: Avoid damage! Make sure arrows on drive belt face towards the front of machine. Belt damage can occur.



MX101703—UN—20AUG20

1. Route the belt over pulley (A) of the driven clutch. Rotating the driven pulley aids in removing the belt.
2. Route belt over drive pulley (B) to remove.
3. Install new belt by routing over drive pulley and then over the driven clutch pulley.

MX00654,0000404-19-01AUG22

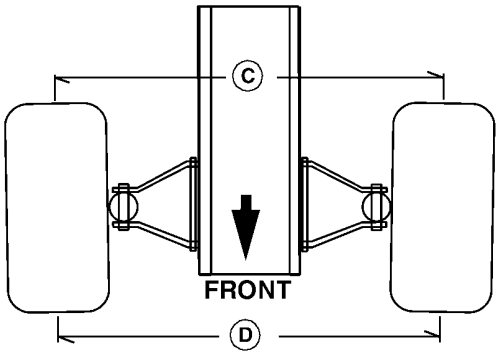
Checking and Adjusting Toe-In

NOTE: In order to accurately set front wheel toe-in, suspension and steering components must be in good condition. All fasteners must be tightened to specification.

1. Park machine safely. (See Parking Safely in the Safety section.)
2. Turn steering wheel so that front tires are in straight-ahead position.
3. Check tire pressure. Adjust to specification if needed. (See Tires in the Specifications section.)

MX200141—UN—14JUN19

4. Measure front wheel hub center height (A) from surface.
5. Mark tread center line (B) and hub center height at front and back of both front tires.



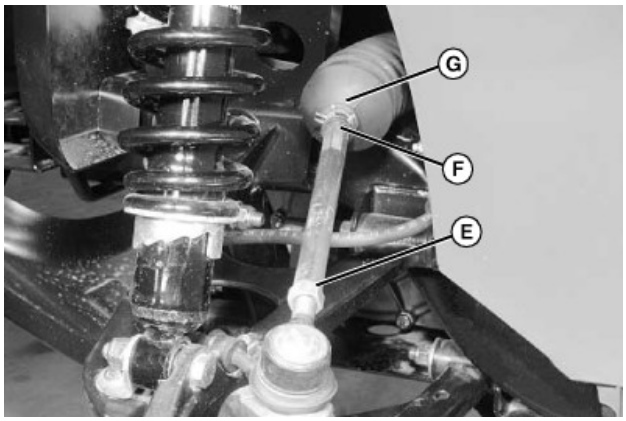
MXAL44297—UN—10APR13

6. Measure distance (C) between tread center lines at rear of tires at hub height.
7. Measure distance (D) between tread center lines at front of tires at hub height.
8. Subtract front measurement from rear measurement to determine toe-in.
9. Adjust toe-in if not within:

Specification

Tire Centerline—Distance. . . . . 4±3 mm (0.16±0.12 in.)

NOTE: If the tie rod boot clamp (G) is too tight, the steering rack boot may turn with the tie rod. If the boot rotates, loosen the boot clamp enough to allow the boot to remain stationary when the tie rod is turned.



MXAL44298—UN—10APR13

Left side shown.

a. Loosen nuts (E) on left and right tie rod.
b. Rotate tie rod by placing wrench on hex (F).
c. Loosen boot clamps (G) if boots rotate with tie rod adjustment.
d. Adjust left and right tie rods equally until toe-in is within specification.
e. Tighten jam nuts to:

Specification

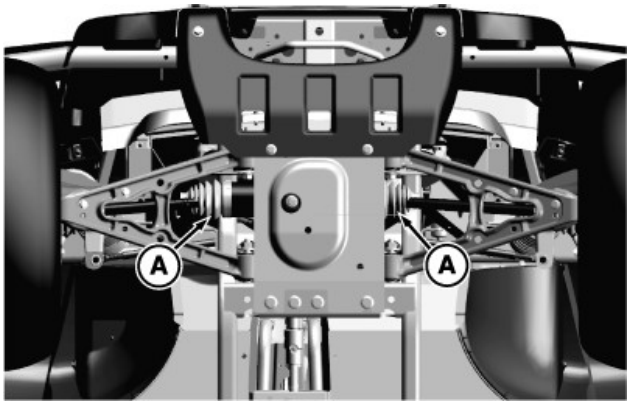
Nuts—Torque. . . . . 41—60 N·m (30—44 lb·ft)

f. Check that front tires do not contact suspension when turned fully left or right.

MP47322,00F48A3-19-01JUL22

Inspecting Steering Tie Rod Boots

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



MX102271—UN—23JUN22

View From Under Machine

2. Inspect two front steering tie rod boots (A) for tears or punctures.
3. If replacement of a boot is necessary, see your John Deere dealer.

mx00654,1656000340466-19-23JUN22

Brake Fluid

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

- Brake Fluid - 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.

JG81906,0000740-19-01APR13

Prepare Vehicle

Service Brake System Safely

Park machine safely. (See Parking Safely in the Safety section.) Allow machine to cool.

Prevent Damage

IMPORTANT: Avoid damage! Avoid contamination of the brake fluid, thoroughly clean area around the reservoir cap before removing. Only open the reservoir cap when necessary.

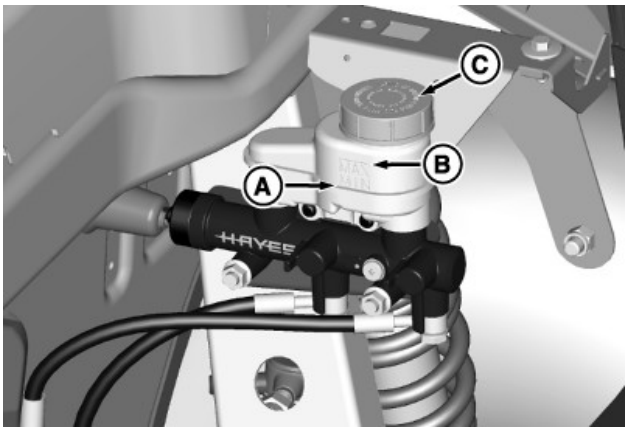
Use only brake fluid from a sealed container.

Fluid spilled or sprayed on painted surfaces causes damage. Use extreme care to cover painted surfaces when servicing brake system.

MX00654,0000468-19-30MAR22

Checking Brake Fluid Level

1. Open hood.



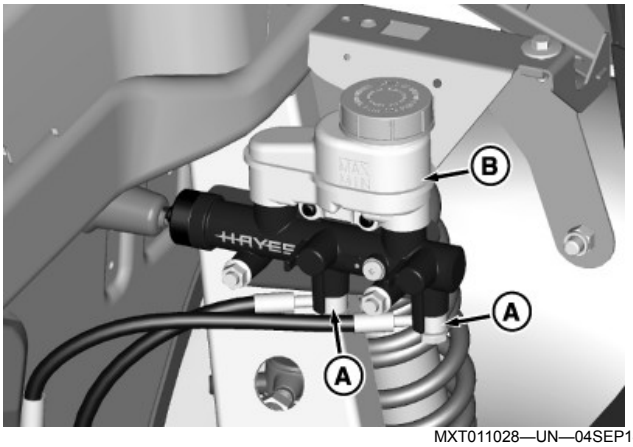
MXT011025—UN—04SEP14

2. 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 the reservoir cap (C).
   - Remove reservoir cap and add fluid to the “MAX” mark. Do not overfill the reservoir.
3. Install reservoir cap.
4. Close hood.

OUMX068,0000985-19-18DEC20

Checking Brake Lines

1. Open hood.

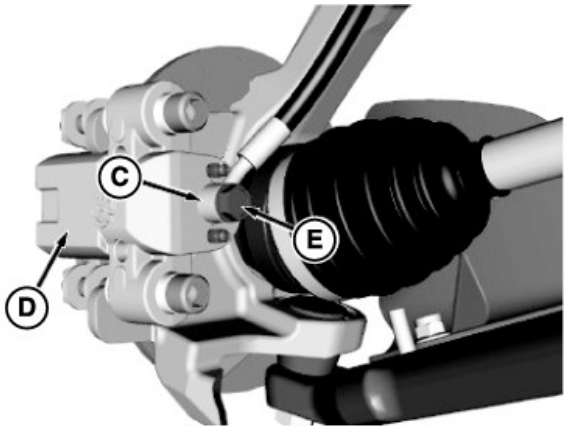


MXT011028—UN—04SEP14

2. Check brake line fittings (A) at bottom of reservoir (B) for leaks.
3. Tighten banjo bolts to:

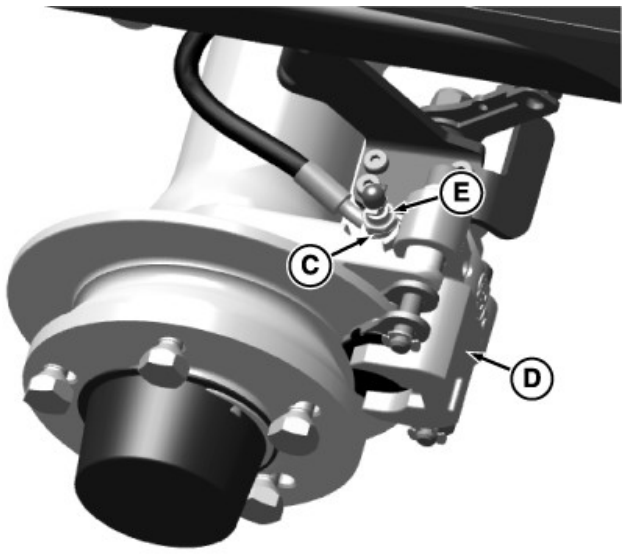
Specification	
Banjo Bolt—Torque	27 N·m (20 lb·ft)

4. Remove wheels for easier access to brake calipers. (See Removing and Installing Wheel Assembly in the Service Miscellaneous section).



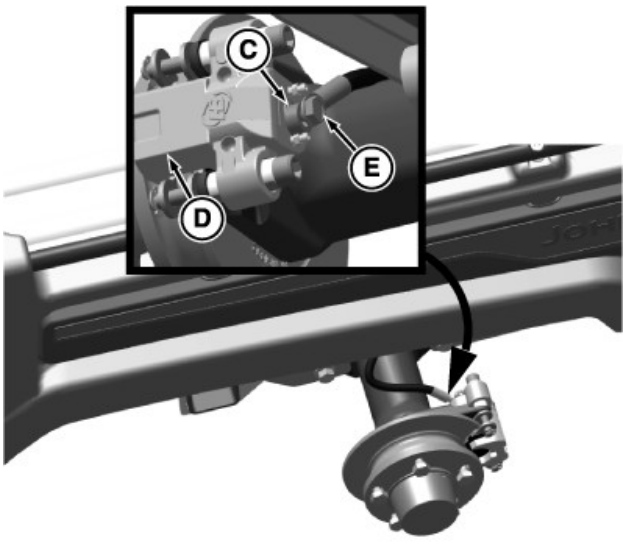
MX101835—UN—16DEC20

Front



MX101735—UN—16DEC20

Rear with Park Brake



MX101833—UN—16DEC20

Rear without Park Brake

5. Inspect lower brake line fitting (C) on each brake caliper (D) for leaks. Tighten banjo bolt (E) to:

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

6. Press service brake pedal and verify that it has a firm feel and does not "sink" toward the floor when constant pressure is applied.

   If the brake does not feel firm, bleed brakes (See Bleeding Brake System in this section.) If leaks are still found, see your John Deere Dealer for service.

7. Lower hood.
8. Install wheels.

OUMX068,0000987-19-17JUN22

Bleeding Brake System

CAUTION: Avoid injury! Wear eye protection when bleeding brakes to avoid eye injury from escaping fluid.

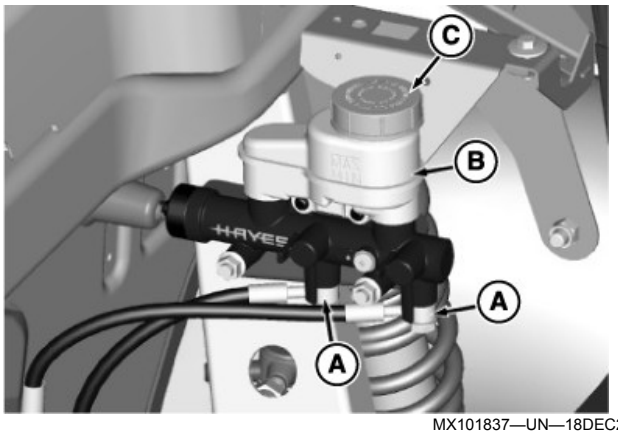
NOTE: The brake system must be bled any time a new component is installed or the system has run out of fluid. If only one component has been repaired or replaced it might only be necessary to bleed that component. If bleeding entire brake system, start with the master cylinder then the wheels in the following order:

- *Right rear*
- *Left rear*
- *Right front*
- *Left front*

Procedures require the assistance of another person.

Bleed Master Cylinder

1. Open hood.



MX101837—UN—18DEC20

2. Remove reservoir cap (C) and check the fluid level in the master cylinder reservoir (B). Brake fluid level

must be between “MIN” and “MAX” marks. Top off if necessary.

3. Depress and keep constant pressure on service brake pedal while loosening brake line fittings (A). Observe fitting connections for air bubbles.
4. Tighten banjo bolts when either bubbles have stopped or pedal has bottomed out. Release pedal after tightening banjo bolts.
5. Repeat steps, starting with checking the fluid level, until air bubbles no longer appear. Tighten bolts to:

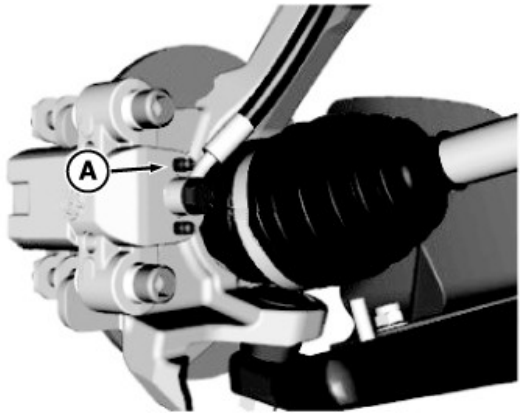
Specification	
Brake Line to Master Cylinder—Torque	27 N·m (20 lb·ft)

6. Check fluid level and top off if necessary.
7. Close hood.
8. Bleed brake lines.

Bleed Brake Lines

1. Remove wheels for easier access to brake calipers. (See Removing and Installing Wheel Assembly in the Service Miscellaneous section).

NOTE: Each caliper has two bleeder screws. Use only top screw. Some machines equipped with a park brake only have one bleeder screw on the rear brake calipers.



MX101836—UN—18DEC20

2. Attach one end of a clear piece of tubing to the top bleeder screw (A). Put the other end into a clear container with approximately 13 mm (1/2 in) of fresh brake fluid.
3. Check the fluid level in the master cylinder, topping off as required.

NOTE: Be sure that the bleeder screw is closed before building pressure in the system.

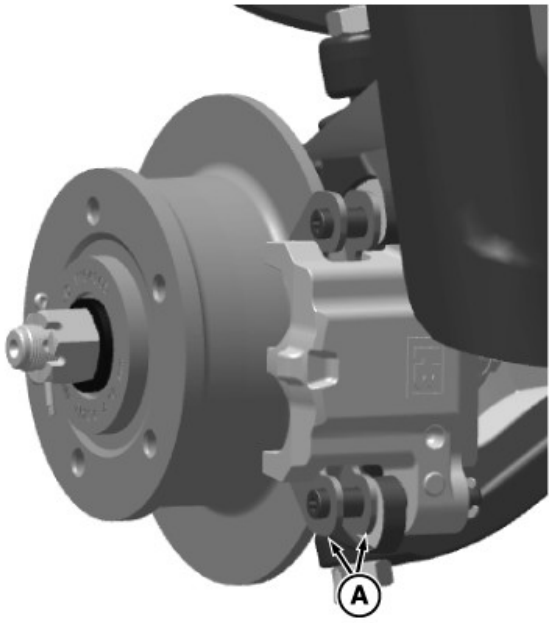
4. Pump the service brake pedal slowly several times to build pressure in the system.
5. Stop pumping and keep constant pressure on the service brake pedal.
6. Open the top bleeder screw, allowing brake fluid and air to escape.
   - Check the fluid entering the container for air bubbles. The fluid must be clear.
7. Close bleeder screw when either bubbles have stopped or pedal has bottomed out. Release service brake pedal.
8. Repeat steps, starting with checking the fluid level, until the fluid running into the container is clear, and there are no air bubbles.
9. Repeat entire procedure for each of the four wheels if bleeding entire brake system.
10. Press service brake pedal and verify that it has a firm feel and does not "sink" toward the floor when constant pressure is applied.

    If the brake does not feel firm or if leaks are found, see your John Deere Dealer for service.
11. Ensure that all bleeder screws are tight and the master cylinder fluid level is correct.
12. Install the wheels.

MX00654,0000467-19-17JUN22

Checking Brake Pads

1. Remove the wheel assembly. (See Removing and Installing Wheel Assembly in the Service Miscellaneous section.)



MX101940—UN—11MAR21

Front Left Wheel

2. Inspect brake pads (A) friction material for wear or damage. Check pads friction material thickness. Material must not be less than minimum specification. If below specification or pad is damaged, see your John Deere dealer for replacement service.

Specification	
Pad Friction Material—Thickness	1 mm (3/64 in)

3. Install wheel assembly. (See Removing and Installing Wheel Assembly in the Service Miscellaneous section.)
4. Repeat procedure for remaining three wheels.

OUMX068,0000986-19-31MAR21

Adjusting Park Brake (If Equipped)

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

MX00654,0000373-19-15JUL20

Electrical

WARNING: Avoid injury! 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.**

MP47322,00F466E-19-12JAN23

Service the Battery Safely

MXAL41890—UN—18FEB13

CAUTION: Avoid Injury! Battery electrolyte contains sulfuric acid. It is poisonous and can cause serious burns:

- **Wear eye protection and gloves.**
- **Keep skin protected.**
- **If electrolyte is swallowed, get medical attention immediately.**
- **If electrolyte is splashed into eyes, flush immediately with water for 15-30 minutes and get medical attention.**
- **If electrolyte is splashed onto skin, flush immediately with water and get medical attention if necessary.**

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

- **Do not smoke 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.**

OUO1023,000009A-19-26MAY15

Checking the Battery (Sealed Batteries)

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

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

- Keep battery and terminals clean.
- Keep battery bolts tight.
- Keep small vent holes open.
- Recharge, if necessary, at 6-10 amperes for 1 hour.

JG81906,0000744-19-08APR13

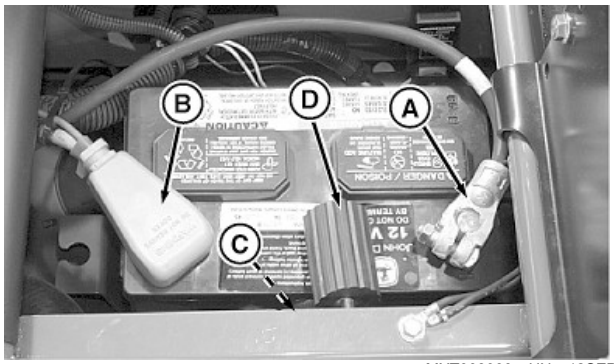
Removing and Installing Battery

Removing

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

NOTE: If equipped with bucket seats, just tip passenger seat forward.

2. Remove bench seat. (See Removing and Installing Seats in the Service Miscellaneous section.)



MXT008930—UN—12SEP13

Your battery may appear different from battery shown but procedure will be similar.

3. Disconnect all black negative cables (A) from battery first.
4. Slide back rubber protective cover (B) and disconnect all red positive cables.
5. Loosen hardware (C) that secures battery hold-down (D) and pivot hold-down away from battery.
6. Lift battery from the vehicle.

Installing

1. Install battery into the vehicle with negative (-) terminal positioned toward the front of vehicle and the battery seated properly in the battery tray.
2. Pivot battery hold-down firmly against battery and tighten retaining hardware to secure.
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. Replace or lower seat.

OUO2005,00001C7-19-21OCT20

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.

JG81906,0000746-19-01APR13

Using Booster Battery

CAUTION: Avoid injury! The battery produces a flammable and explosive gas.

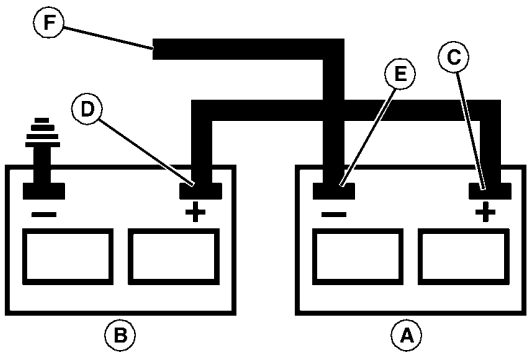
To prevent the battery from exploding:

- **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:**

Specification

Battery—Temperature. . . . . 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.**



MXAL42872—UN—09APR13

A—Booster Battery
B—Disabled Vehicle Battery
C—Positive (+) Post
D—Positive (+) Post
E—Negative (-) Post
F—Negative (-) Booster Cable End

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: Avoid damage! Electric charges from the booster battery damages 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.

MP47322,00F4672-19-03NOV21

Replacing Headlight Bulbs

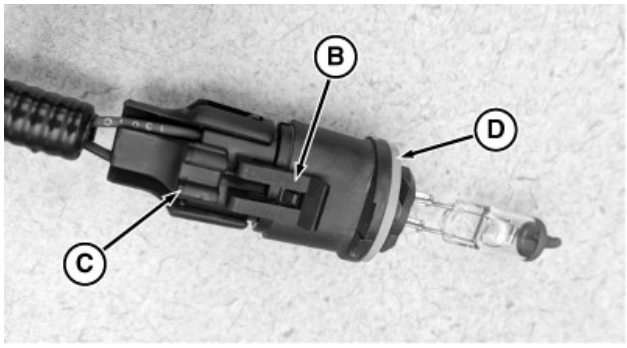
1. Park the vehicle safely. (See Parking Safely in the Safety section.)
2. Locate headlight housing under the front fender.

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

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

MXT008459—UN—02SEP13

3. Rotate bulb socket (A) 1/8 of a turn counterclockwise and remove the socket from the housing.



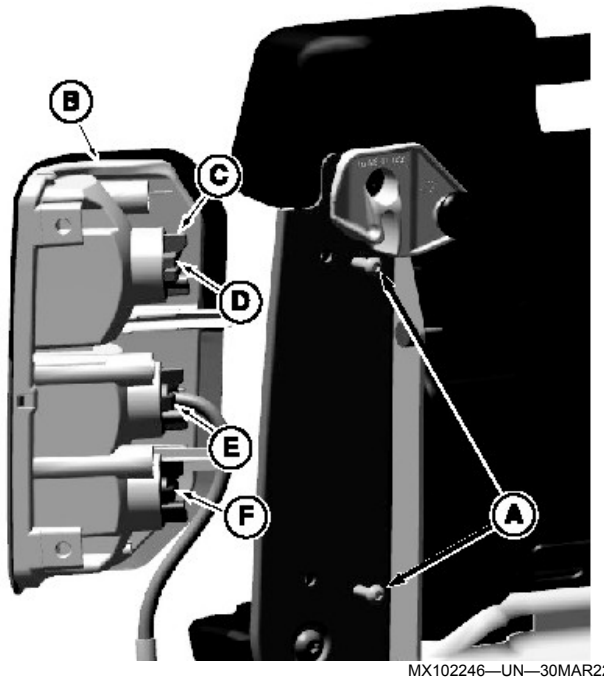
MXT023329—UN—11JUL18

4. Pull outward on tab (B), and disconnect wire connector (C) from socket (D). 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 headlight function.

SB31882,0000257-19-26MAR21

Replacing Rear Light Bulbs (If Equipped)

1. Park the machine safely. (See Parking Safely in Safety)
2. Open tailgate.



MX102246—UN—30MAR22

3. Remove two screws (A) and gently pull out tail light assembly (B).
4. Use tabs (C) to turn appropriate socket 1/4 turn counterclockwise to remove it:
   - (D) Brake/Running Light
   - (E) Turn Signal
   - (F) Reverse Light

NOTE: All bulbs are 13.5V/21W type except (D) which is a dual filament at 21W/5W.

5. Replace bulb and install socket turning it 1/4 turn clockwise.
6. Install light assembly and secure with two screws.
7. Close tailgate.

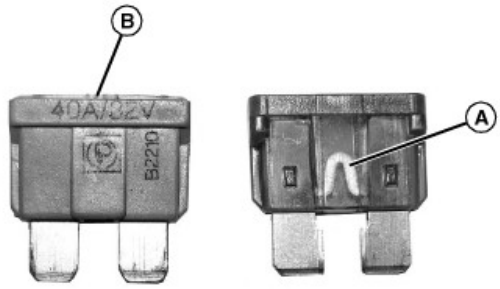
MX00654,0000381-19-30MAR22

Checking and Replacing Fuses

IMPORTANT: Avoid damage! If incorrect replacement fuses are used, the electrical system can be damaged. Replace the bad fuse with a fuse of the same amperage rating.

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

Checking Fuse Filaments

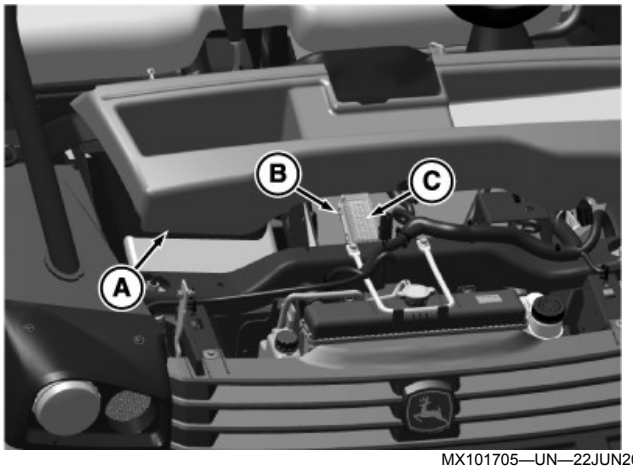


MXAL44294—UN—10APR13

Check visually for broken filament:

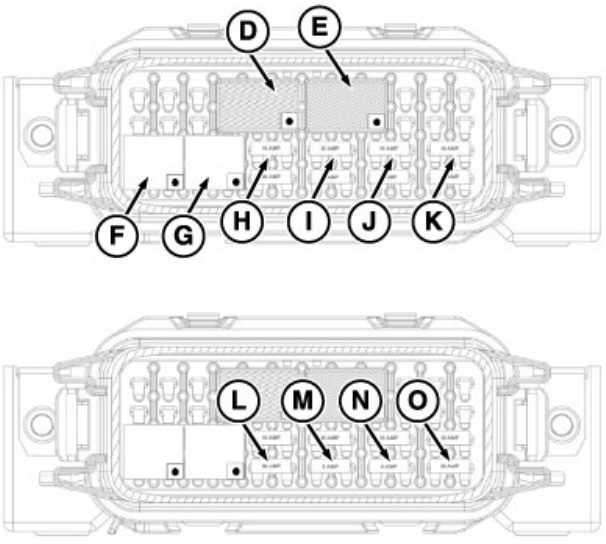
- For the clear housing fuses, check filament (A).
- For all other fuses, check filament (B) in top of the fuse housing.

Primary Fuse Block



MX101705—UN—22JUN20

1. Raise hood and remove storage tray (A).
2. Press clips (B) and remove fuse box cover (C).



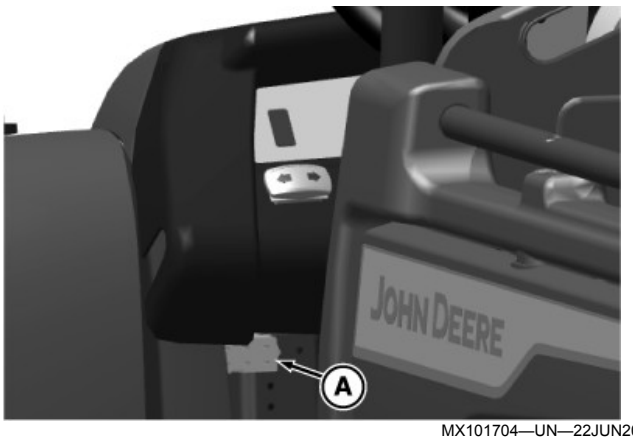
MX101769—UN—20AUG20

3. Identify fuses:

Position	Circuit	Fuse Size
RELAYS		
(D)	Engine Fan	5 Pin
(E)	Four Wheel Drive	5Pin
(F)	Start	4 Pin
(G)	Back-Up	4 Pin
MINI FUSES		
(H)	Key Switch Power	15A
(I)	Dash Power Port	10A
(J)	Center Power Port	10A
(K)	MFWD	10A
(L)	Starter	20A
(M)	Diagnostic Power	5A
(N)	Reverse Lights	5A
(O)	Instrument Display	20A

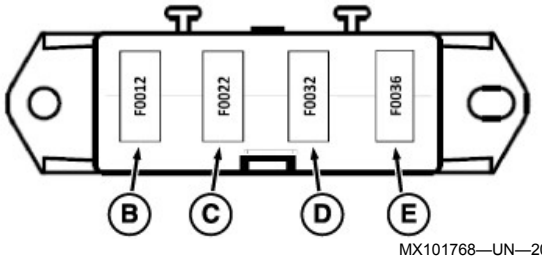
4. Pull fuse from the fuse block.
5. Check visually for broken filament. (See Checking Fuse Filaments).
6. Push new fuse of the correct amperage rating into proper position in the fuse block.
7. Install fuse block cover, install storage tray and lower hood.

Secondary Fuse Block



MX101704—UN—22JUN20

Locate secondary fuse block (A) under the left side of dash.



MX101768—UN—20AUG20

2. Identify fuses:

Position	Circuit	Fuse Size
ATO FUSES		
(B)	Engine Fan	30A
(C)	Rear Attachment Power	40A
(D)	Front Attachment Power	40A
(E)	Voltage Regulator Power	40A

3. Pull fuse from the fuse block.
4. Check visually for broken filament. (See Checking Fuse Filaments).
5. Push new fuse of the correct amperage rating into proper position in the fuse block.

MX00654,0000354-19-21JUN22

Gasoline Fuel for 4-Cycle Engines

Use unleaded gasoline with a minimum octane rating of 87 AKI (anti-knock index) or 90 RON (research octane number). Gasoline fuels specified to EN 228 or ASTM D4814 are recommended.

Fuel blends of unleaded gasoline with a maximum 10% ethanol or 15% MTBE (methyl tertiary-butyl ether) are also acceptable.

CAUTION: Reduce the risk of fire. Handle fuel carefully. DO NOT fill the fuel tank when the engine is running or hot. Stop engine and allow it to cool for several minutes before filling fuel tank. Fill fuel tank only to the bottom of the filler neck.

Refuel outdoors. DO NOT smoke while you fill the fuel tank or service the fuel system.

Store fuel in properly identified polyethylene containers.

When storing fuel, add John Deere Gasoline Conditioner and Stabilizer (or equivalent) at the specified concentration.

IMPORTANT: DO NOT use methanol or fuel blends that contain methanol.

Avoid spilling fuel. Gasoline can damage plastic and painted surfaces.

DO NOT mix oil with gasoline.

DX,FUEL2-19-15MAY13

Filling Fuel Tank

CAUTION: Avoid injury! 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 ventilated area.**
- **Clean up spilled fuel immediately.**
- **Prevent static electric discharge by using a clean, approved, non metal container.**

IMPORTANT: Avoid damage! Dirt and water in fuel causes engine damage:

- **Clean dirt and debris from the fuel tank opening.**
- **Use clean, fresh, stabilized fuel.**
- **Fill the fuel tank at the end of operation each day to prevent condensation and freezing during cold weather.**
- **If using a funnel, make sure it is plastic and has no screen or filter.**

1. Park machine safely. (See Parking Safely in the Safety section.)
2. Allow engine to cool.
3. Remove any debris 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.

NOTE: On some models, the fuel tank cap will click when it is tight.

6. Install fuel tank cap and turn cap until it is tight.

MP47322,00F4675-19-24AUG21

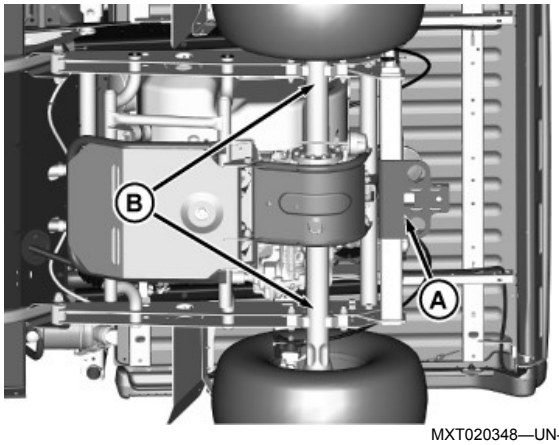
Lifting Machine

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

CAUTION: Avoid injury! 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.**
- **Be certain to include any bolt heads or embossed areas inside the jack cup to prevent slipping.**
- **Remove all attachments before lifting machine.**

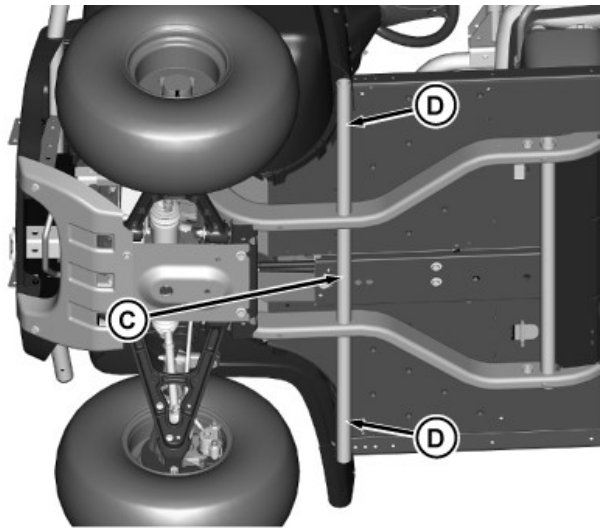
IMPORTANT: Avoid damage! Place jack stands under frame, not under transmission or engine, when raising or supporting machine.



MXT020348—UN—07AUG17

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

2. Safely lift rear of the machine at frame point (A).
3. Place jack stands or other stable supports under locations (B).
4. If only lifting rear of machine, block front wheels.



MXT020709—UN—07AUG17

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

5. Safely lift front of the machine at frame point (C) or locations (D). Place jack stands or other stable supports under two machine frame locations (D)
6. If only lifting front of machine, block rear wheels.
7. Remove jack stands or supports and lower machine when the service is complete.

MX10673,0000060-19-21JUN22

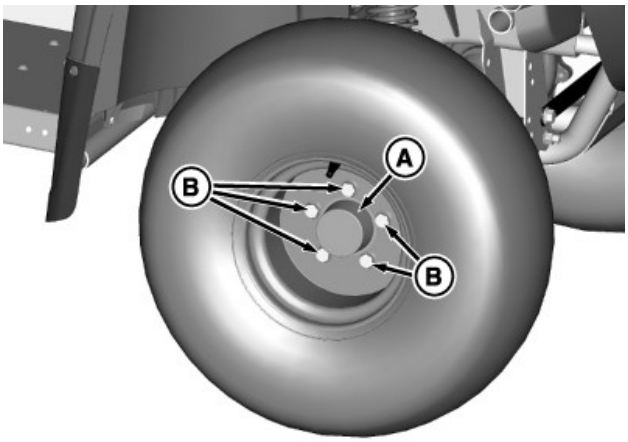
Removing and Installing Wheel Assembly

Removing

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

CAUTION: Avoid injury! The machine can fall or slip from an unsafe lifting device or supports. (See Lifting Machine in this section).

2. Raise machine with a safe lifting device. (See Lifting Machine in this section).
3.



MXT011026—UN—04SEP14

Remove the wheel bolts (B).

4. Remove the wheel assembly.
5. Remove wheel cap (A).

CAUTION: Avoid injury! 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 cap.
2. Install wheel assembly with the valve stem to the outside.
3. Tighten wheel bolts evenly by alternating the sequence until snug.
4. Lower machine completely to the ground.

IMPORTANT: Avoid damage! Tighten wheel bolts again after 8 hours of vehicle use.

5. Tighten wheel bolts to:

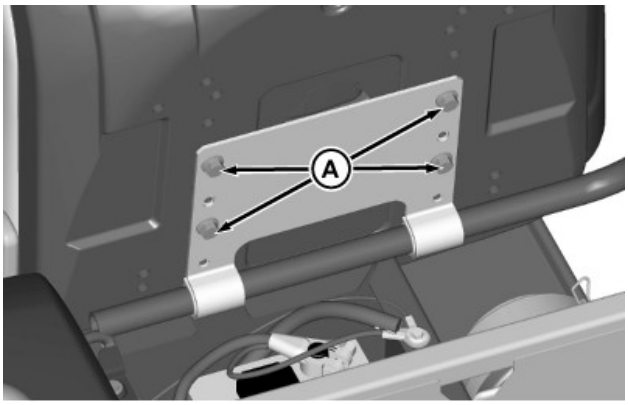
	Specification
Wheel Bolt—Torque	108 N·m (80 lb·ft)

SB31882,00000C0-19-01JUL22

Removing and Installing Front Seats

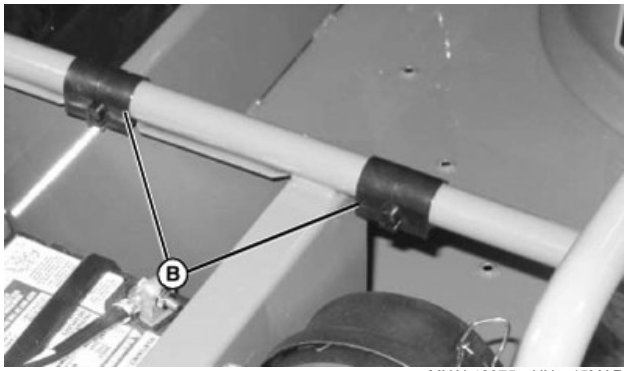
Removing and Installing Bucket Seat

1. Park the machine safely. (See Parking Safely in the Safety section.).
2. Tip seat forward.



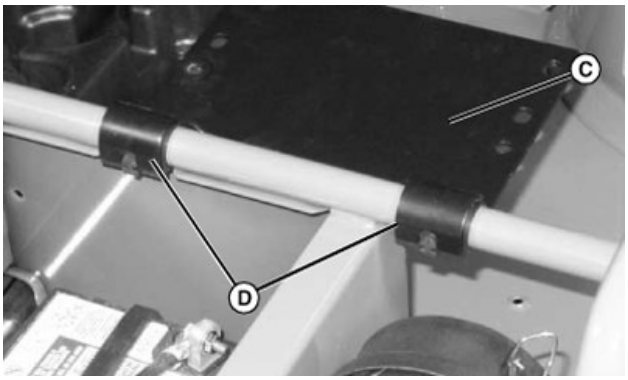
MXT014783—UN—23JUN15

3. Hold onto seat and remove screws (A).
4. Remove seat and seat bracket from the support rail.



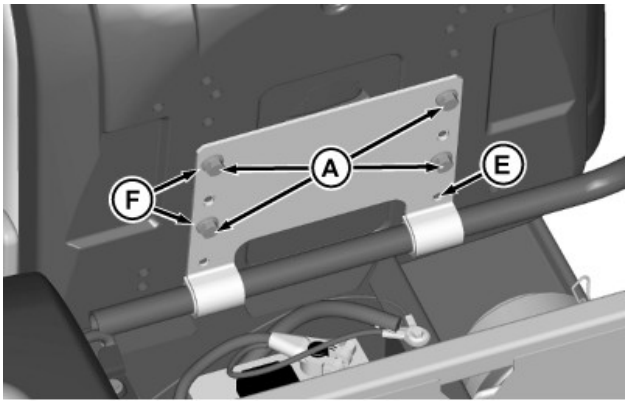
MXAL42975—UN—15MAR13

5. To install seat, position seat bushings (B) on the support rail so tabs face toward rear of vehicle.



MXAL42976—UN—15MAR13

6. Position seat bracket (C) onto the support rail so hinges (D) fit around rubber bushing tabs.



MXT014784—UN—23JUN15

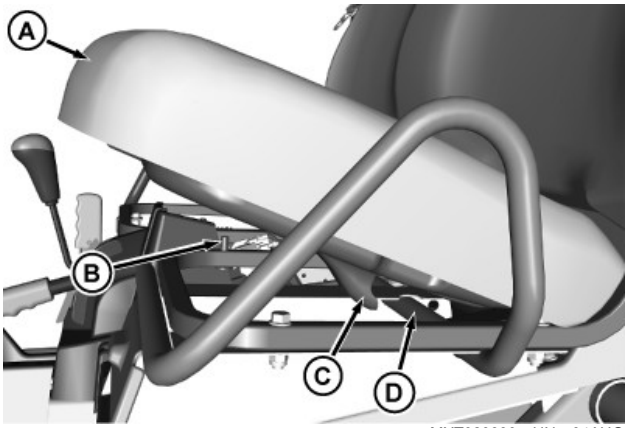
Rear position shown.

7. Rotate seat bracket upward. Position bottom of seat against bracket and align correct holes with holes in seat.
8. Slide seat to the forward (E) or rearward (F) position.
9. Install original screws (A) to secure the seat.
10. Tighten seat bracket hardware to:

Specification

Seat Bracket Screws—Torque. . . . . 10 N·m (7.4 lb·ft)

Removing and Installing Bench Seat



MXT020339—UN—04AUG17

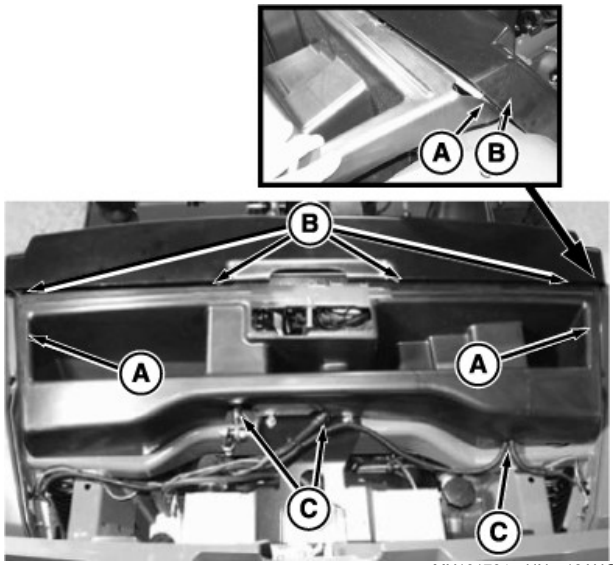
1. Pull up on the front of the seat (A) and remove seat from both studs (B) on the seat frame.
2. Pull seat forward to remove both seat ears (C) from the rear support rail (D) on both sides of the seat base.
3. To install seat, install ears (C) onto the rear support rail (D) on both sides of the seat base. Push down on the front of seat, securing seat onto studs (B).

OUMX068,0000C4E-19-21JUN22

Removing and Installing Storage Tray

Removing

1. Park the vehicle safely. (See Parking Safely in the Safety section.)
2. Open hood.
3. Remove all contents from storage tray.



MX101764—UN—18AUG20

4. Grasp outer edges of the storage tray (A).
5. Flex storage tray to fit past dash panel (B) while lifting the storage tray out of machine.

Installing

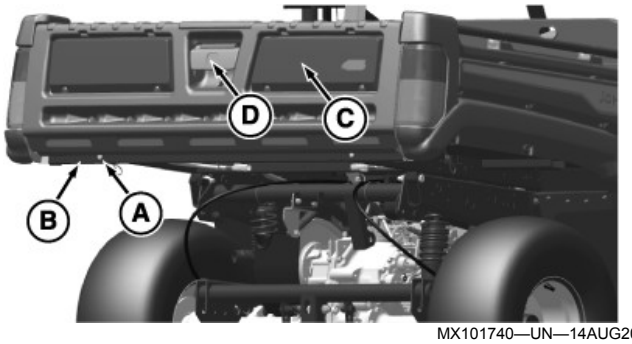
1. Position storage tray over frame.
2. Flex storage tray (A) to fit under dash panel (B) while lowering storage tray into position.
3. Check alignment of cables and harnesses with routing notches (C).
4. Secure all items to prevent damage from movement while operating the machine.
5. Close hood.

JG81906,0000750-19-17AUG20

Removing and Installing Tailgate

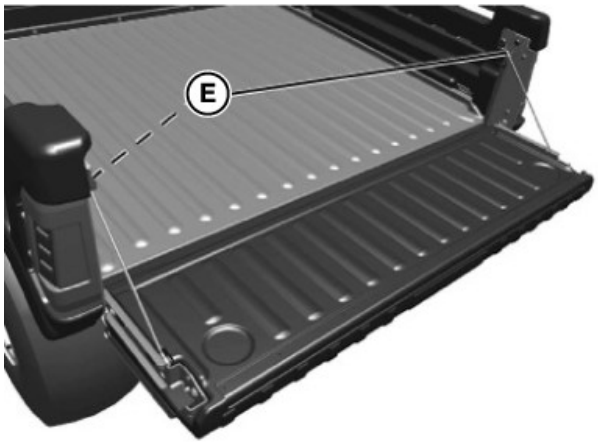
NOTE: Your machine model may not be shown, but procedure is the same.

Removing the Tailgate



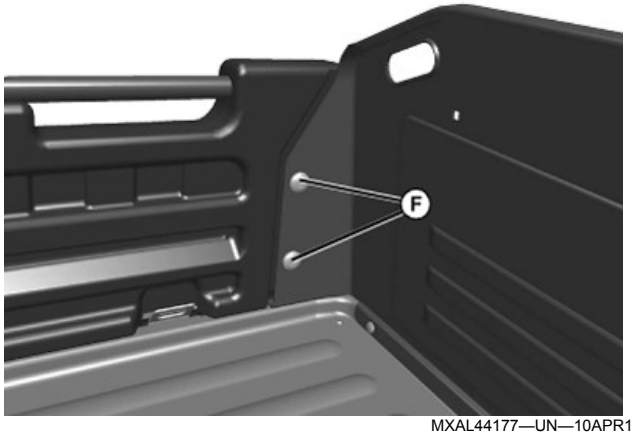
MX101740—UN—14AUG20

1. Loosen bolt (A) on the rear floor panel (B).
2. Pull back on handle (D), unlock and lower tailgate (C).



MX101741—UN—14AUG20

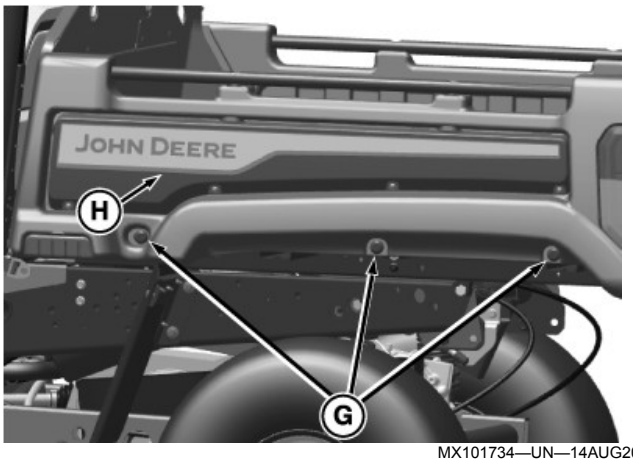
3. Loosen loop (E) on top of each lanyard, disconnect from studs on the cargo box side, and lower tailgate fully downward.



MXAL44177—UN—10APR13

4. Remove two bolts (F) inside the cargo box.

NOTE: Only remove bolts from the box clip nuts, keep tie-down, and push nut assembled to panel.



MX101734—UN—14AUG20

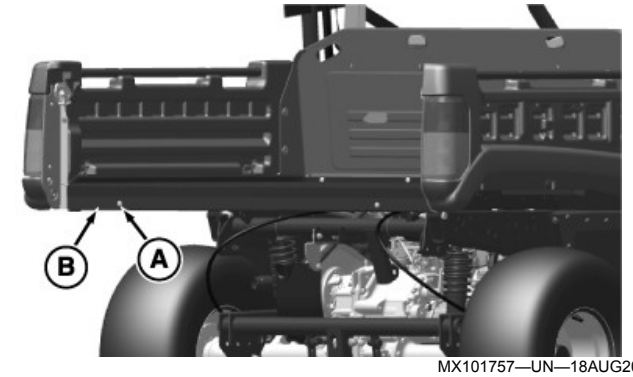
5. Remove three bolts (G) in the left side panel (H) from clip nuts.

IMPORTANT: Avoid damage! Support the tailgate or bushing damage can occur.

6. Move side panel slightly outward and remove tailgate.

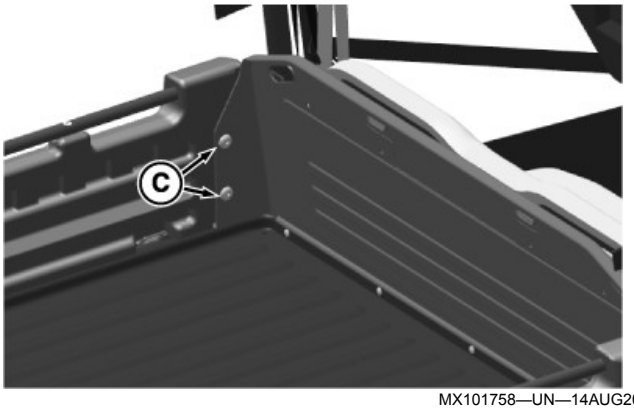
NOTE: If machine is used without the tailgate, be sure to reinstall and tighten all loose hardware for the left side panel before operating.

Installing the Tailgate



MX101757—UN—18AUG20

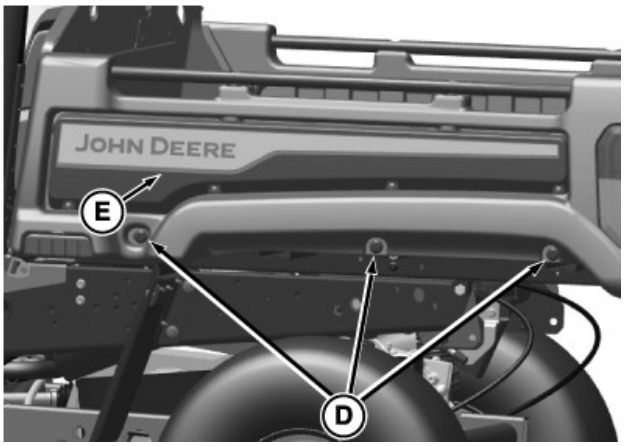
1. Loosen bolt (A) on the rear floor panel (B).



MX101758—UN—14AUG20

2. Remove two bolts (C) inside the cargo box.

NOTE: Only remove bolts from the box clip nuts, keep tie-down, and push nut assembled to panel.

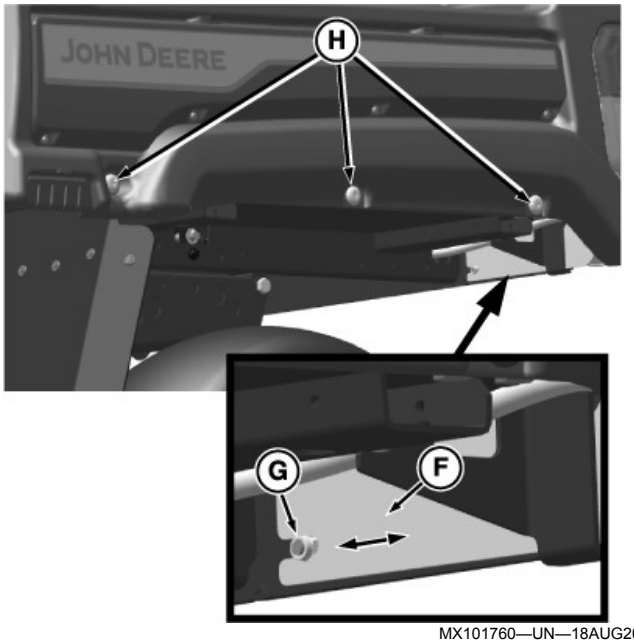


MX101759—UN—14AUG20

3. Remove three bolts (D) in the left side panel (E) from clip nuts.

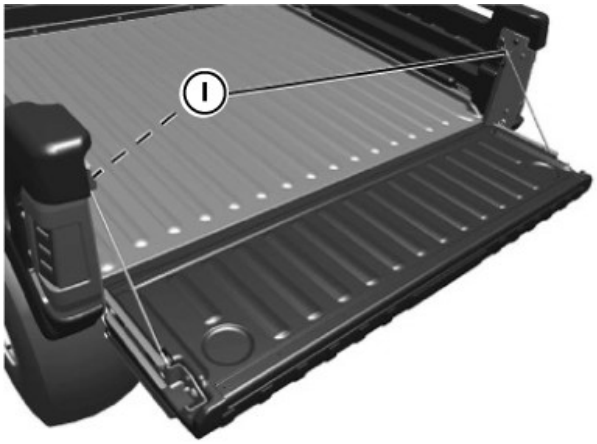
IMPORTANT: Avoid damage! Support the tailgate or bushing damage can occur.

4. Move side panel slightly outward and install tailgate.



MX101760—UN—18AUG20

5. Move side panel back inward. Be sure bracket (F) is under nut (G).



MX101761—UN—18AUG20

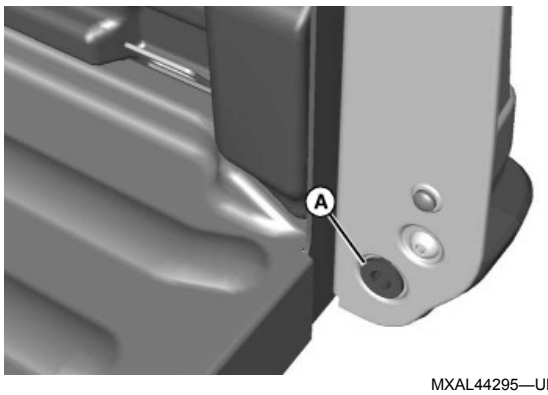
6. Install loop (I) on top of each lanyard onto studs on the cargo box sides.
7. Attempt to close and latch the tailgate. If necessary, adjust side panel inward or outward until tailgate latches.
8. Install and tighten three panel bolts (H).

MX101758—UN—14AUG20

9. Install two bolts (C) inside the cargo box.
10. Tighten nut (G).

MX00654,0000386-19-16APR21

Replacing Cargo Box Tailgate Bushings



MXAL44295—UN—10APR13

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

MX00654,000038A-19-18AUG20

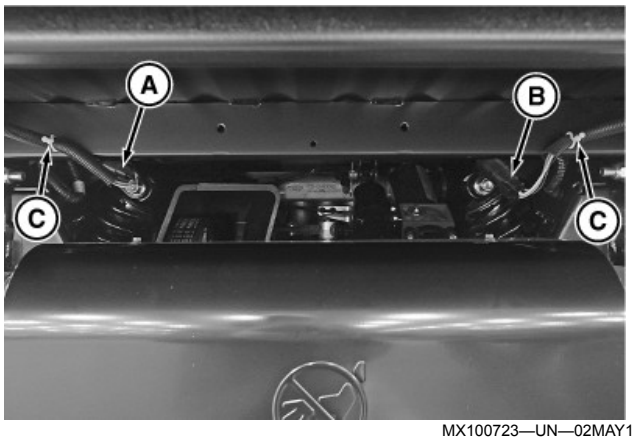
Converting Cargo Box to Flatbed

Cargo Box to a Flatbed

NOTE: The machine shown can differ slightly from your machine, but conversion is similar.

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

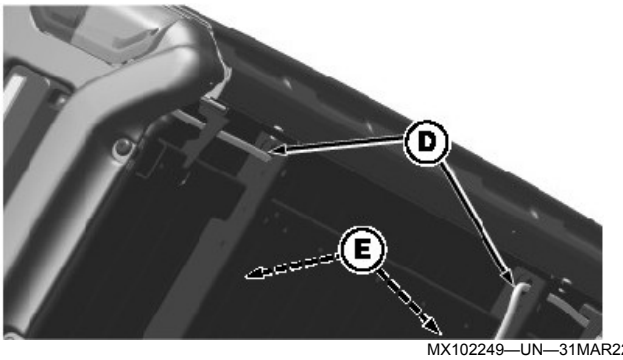
NOTE: Perform steps 2-4 on units equipped with taillights.



MX100723—UN—02MAY19

2. Disconnect the left taillight harness (A) and the right taillight harness (B). Remove both harnesses from clips (C).

NOTE: Some clamps may be secured with a screw.



MX102249—UN—31MAR22

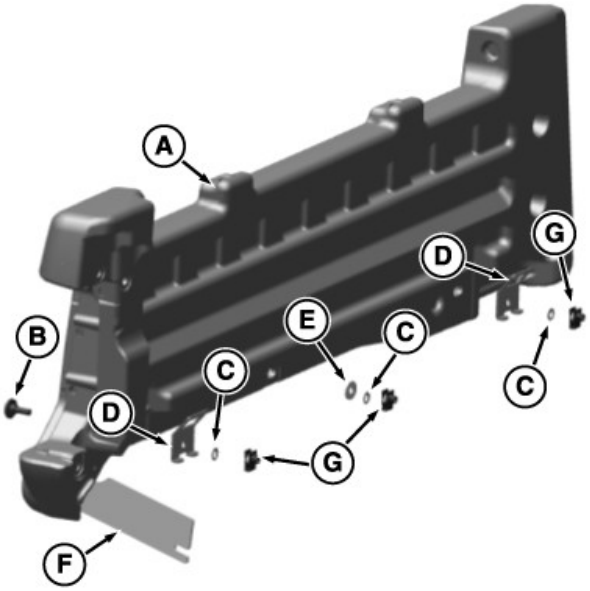
3. Remove clamps (E) holding harness to the frame rail.
4. Pull the loose wire harness (D) out, routing it through the frame openings as required.
5. Remove the tailgate. (See Removing and Installing Tailgate in the Service Miscellaneous section.)
6. Remove the left side panel and store in a safe place.

7. Repeat appropriate steps and remove the right side panel.

Flatbed to a Cargo Box

NOTE: The machine shown can differ slightly from your machine, but conversion is similar.

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

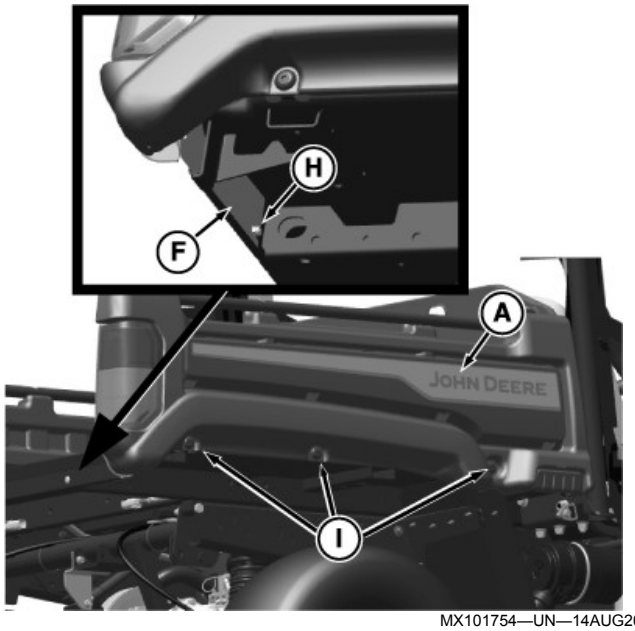


MX101745—UN—18AUG20

Left Side Panel Shown

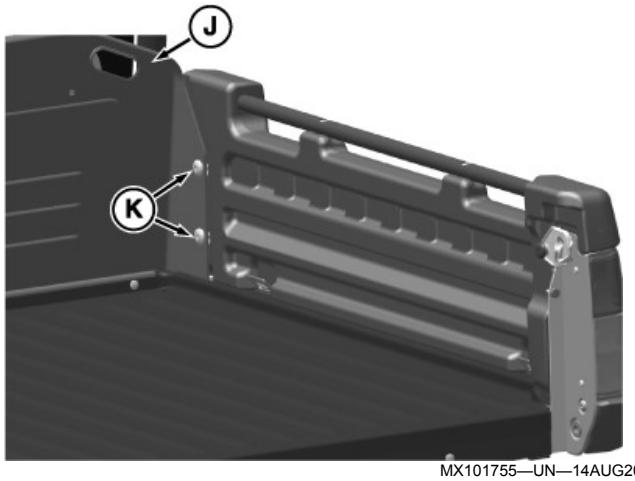
A—Side Panel
B—Screw, Socket Head (Qty 3 per panel)
C—Push Nut (Qty 3 per panel)
D—Anchor Bracket (Qty 2 per panel)
E—Spacer, 2 mm thick (Qty 1 per panel)
F—Support Bracket
G—Box Bed Clip nuts (if removed) (Qty 3 per side)

2. Verify that each side panel (A) has the correct hardware installed before installation.



MX101754—UN—14AUG20

3. Loosen the nut (H).
4. Insert slot in the support bracket (F) into the frame channel and behind nut (H).
5. Secure side panel (A) with three bolts (I).



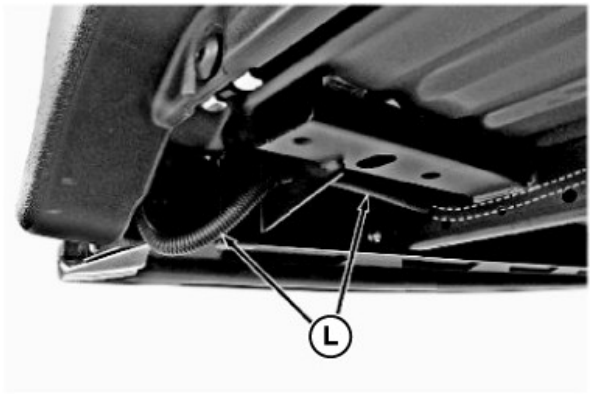
MX101755—UN—14AUG20

6. Secure side panel to the load guard (J) with two bolts (K).
7. Tighten the nut (H).

NOTE: When installing the tailgate, only repeat necessary steps as the side panel is already removed.

8. Install the tailgate. (See Removing and Installing Tailgate in the Service Miscellaneous section.)

NOTE: Perform the following steps on units equipped with taillights.

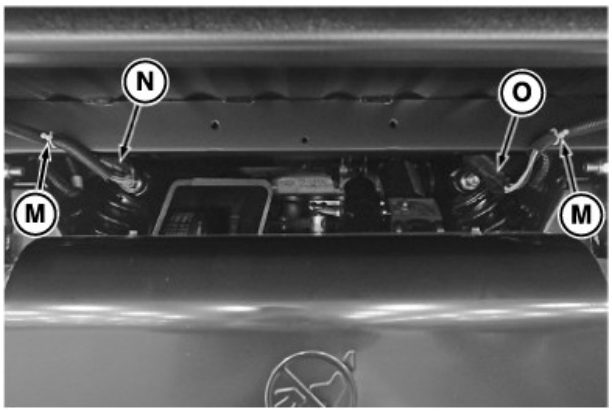


MX101742—UN—18AUG20

9. Route the loose wire harness (L) through the frame openings as required.

NOTE: Some clamps may be secured with a screw.

10. Run harness along frame rails and secure with clamps removed earlier.



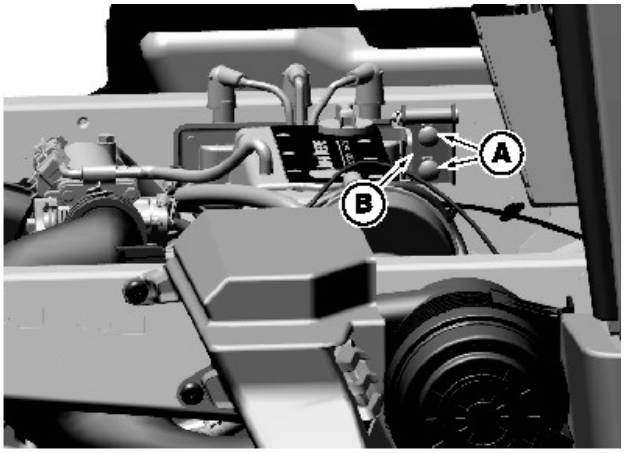
MX101756—UN—18AUG20

11. Connect the left taillight harness (N) and the right taillight harness (O). Secure each wire harness with clamps (M).

MX00654,0000387-19-01APR22

Adjusting Cargo Box Latch Bracket (Manual Lift Models)

1. Park the machine safely. (See Parking Safely in the Safety section.)
2. Raise and secure the cargo box with support.



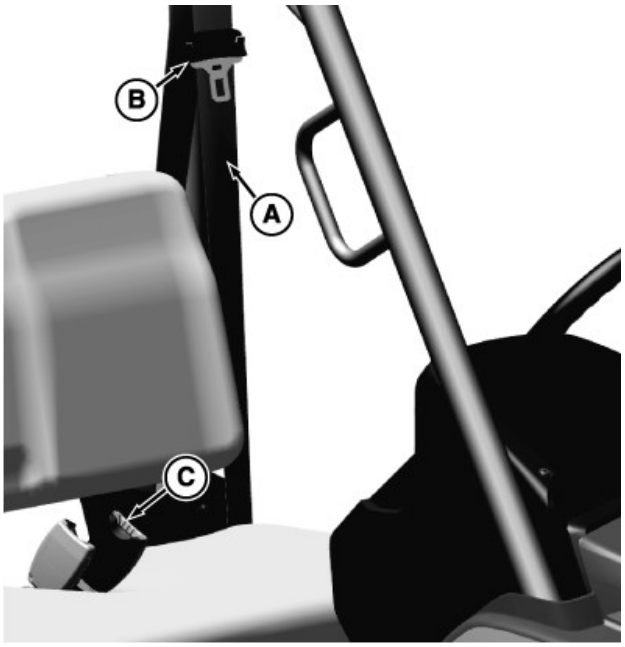
MX102186—UN—29SEP21

Model shown may be different but procedure is the same.

3. Loosen nuts on bracket bolts (A).
4. Slide bracket (B) down or up as needed and tighten nuts.
5. Lower cargo box.

MX00654,00004D3-19-21JUN22

Inspecting and Cleaning Seat Belts



MX102081—UN—08JUN21

Bench Seat Model Shown

IMPORTANT: Avoid damage! Do not bleach or dye webbing. Webbing can become severely weakened by this process. Do not use a pressure washer or other automatic washing machine to clean belt or connectors.

- Hand wash webbing (A) with a garden hose and mild soap. Rinse thoroughly and air dry.
- Inspect the outer seat belt connector (B) and inner connector (C) for damage or wear. If assembly does not operate properly or if the webbing is torn or frayed, the seat belt must be replaced.

OUMX068,0000E54-19-23JUN22

Inspecting and Cleaning Nets or Doors

Inspect Nets or Doors

- Check for loose hardware.
- Look for material damage, such as cuts, fraying, extreme or unusual wear, or abrasion.
- Replace only with John Deere approved replacement parts.

Cleaning Nets or Doors

- Keep nets, doors, and supporting components clean.
- If needed hand wash with garden hose and mild soap.
- Latch and unlatch the metal tab of the net from buckle during washing for a better cleaning. Allow to dry before use.
- Extended machine operation under harsh conditions can require more frequent inspection and cleaning.

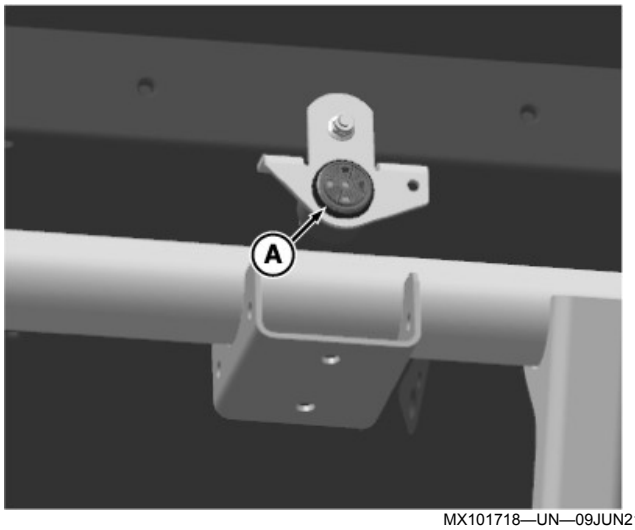
OUMX068,00002E5-19-19APR21

Cleaning Back-Up Alarm (If Equipped)

Buildup of debris must be removed to ensure proper alarm function. Frequency of these inspections and cleaning varies depending on a number of factors including operating conditions, machine configuration, operating speeds, and weather conditions.

Always park the machine safely, before carrying out any inspection or cleaning.

NOTE: Back-up alarm can be found on the back of your vehicle. Vehicle shown could be different, but back-up alarm appearance and function are the same on all vehicles.



MX101718—UN—09JUN21

Be sure to keep the back-up alarm (A) and surrounding area clean and free of debris and mud.

MX00654,0000375-19-28JUN21

Cleaning Vehicle Surfaces

Cleaning:

Keeping your vehicle clean maintains its appearance and can also extend the life of various components. Immediately after your vehicle has been exposed to salt water or operated on muddy trails, rough terrain, or in dusty conditions, wash your vehicle. With some precautions, your vehicle can be cleaned much like a sport utility vehicle.

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

- **Do not wipe plastic surfaces when they are dry. Dry wiping results in minor surface scratches.**
- **Use a soft, clean cloth (microfiber towel or automotive wash mitt).**
- **Do not use abrasive materials, such as polishing compounds, on plastic surfaces.**
- **Apply only a liquid automotive wax to gloss plastic surfaces of the vehicle. Do not apply wax of any type to any other plastic surfaces of the vehicle. The wax leaves a residue on the surface that is difficult to remove.**

Washing Vehicle:

The recommended and safest way to clean your vehicle is with a garden hose and a mild automotive soap. Use a soft clean cloth. Clean the upper body first and the lower parts last. To prevent water spotting, avoid washing the vehicle in direct sunlight and dry the vehicle using a soft, clean cloth.

1. Rinse the entire machine with clean water to remove dirt and dust from the vehicle.

IMPORTANT: Avoid damage! High-pressure water spray may damage vehicle components. It is recommended to wash your vehicle by hand using a garden hose and mild automotive soap.

Avoid spraying water with any great force near or into the following places:

- **Air outlet on clutch enclosure**
- **Air intake**
- **Electrical connections (including battery compartment)**
- **CV boots**
- **Wheel bearings**
- **Master cylinder**
- **Pillow block bearings**
- **Radiator**
- **Warning labels**
- **Decals**
- **Ignition switch**
- **Operator station control panel**
- **Instrument display**
- **Breather/tube vents**

2. Using a soft clean cloth apply soap onto wet surface making sure to rinse the cloth often during the washing process.

   If dirt is embedded into the textured plastic surfaces of doors, roof or cargo box, a soft bristle brush can be used to help clean the surface.

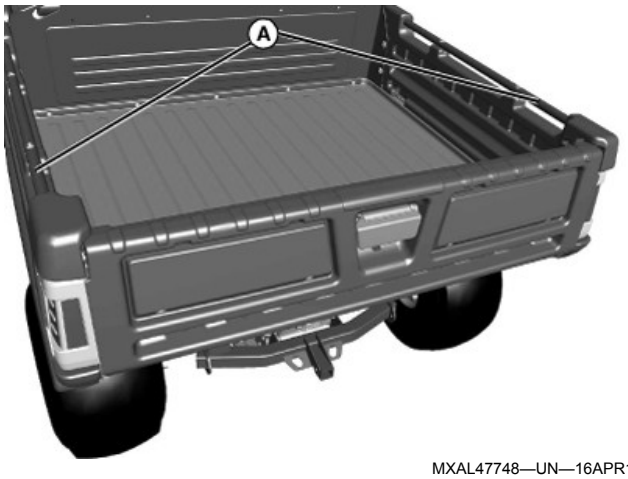
3. Rinse the surface with water to remove the soap residue.

4. Dry the surface with a soft clean cloth.

OUO2005,0000708-19-13AUG20

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.

OUO1023,0000ABE-19-19APR13

Cleaning Gloss Plastic Surfaces

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

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

1. Rinse with clean water to remove dirt and dust from surface.
2. Using a soft clean cloth apply soap and water onto wet surface. Make sure to rinse out the cloth often during the washing process.
3. Rinse surface with water to remove soap residue.
4. Dry the surface with a clean microfiber cloth to reduce water spotting.
5. If desired apply liquid automotive wax to the hood and front fenders of the vehicle.

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

IMPORTANT: Avoid damage! Do not use a power buffer to remove wax.

6. Remove applied wax by hand using a soft clean cloth.

OUO2005,0000709-19-24AUG21

Cleaning and Repairing Metal Surfaces

Cleaning:

Follow automotive practices to care for your vehicle's 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: Avoid damage! 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):

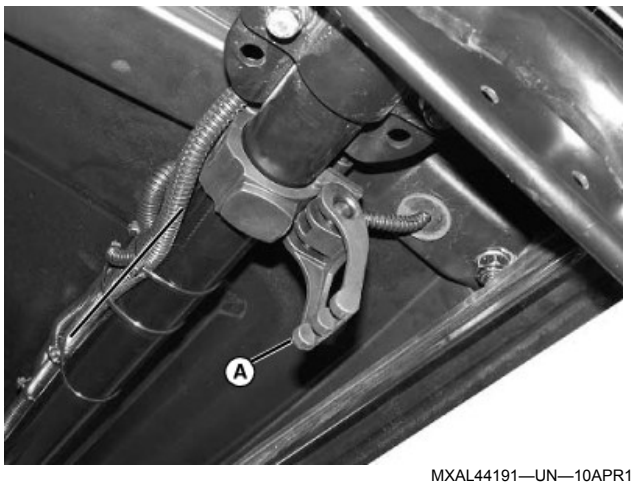
1. Clean area to be repaired with rubbing alcohol or mineral spirits.
2. Use paint stick with factory-matched colors available from your authorized dealer to fill scratches. Follow directions included on paint stick for use and for drying.
3. Smooth out surface using an automotive polishing compound.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

MP47322,00F467A-19-20SEP21

Using Quick Clamps

Most optional attachments and kits use quick clamps to attach to the machine.

Tightening Clamps



MXAL44191—UN—10APR13

1. Open clamp arm lever (A).
2. Increase tension by turning lever one full turn clockwise. Repeat as needed.
3. Lock clamps.

Loosening Clamps

1. Open clamp arm lever (A).
2. Decrease tension by turning lever one full turn counter-clockwise. Repeat as needed.
3. Lock all clamps.

MP47322,00F485A-19-21JUN22

Using Troubleshooting Chart

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

MP47322,00F467B-19-13NOV18

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.
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	Faulty spark plug(s). Stale or dirty fuel. Plugged fuel filter. Air inlet restrictor missing. Faulty coil or wire.
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. Air inlet restrictor missing. 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. Bleed cooling system. Check cooling fan switch. Check thermostat. Check water pump. Clean radiator screens. Check coolant level.
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.

JG81906,0000755-19-05APR13

Electrical

IF	CHECK
Starter does not work	Loose or corroded connections. 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. 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. 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.)
Park brake (if equipped) indicator light does not come on	Faulty wiring. Faulty switch or sensor. Faulty bulb.
Battery will not take a charge	Dead cell in battery. Loose or corroded connections. Sulfated or worn out battery. Electrolyte level low. Low engine speed or excessive idling. Faulty charging system.
Cannot shift out of park	Dead battery. Defective solenoid.

JG81906,0000756-19-16AUG20

Brakes

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

JG81906,0000757-19-10AUG20

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.

MP47322,00F48AE-19-11APR13

Storing Safety

CAUTION: Avoid injury! Fuel vapors are explosive and flammable.

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

- **Run the engine only long enough to move the machine to or from storage.**
- **If a machine is stored before allowing it to cool, machine fires and structure fires can occur. Fires can occur if debris is not removed from around the engine and muffler, or if stored near combustible materials.**
- **Do not store vehicle with fuel in the tank inside a building where fumes reach an open flame or spark.**
- **Allow the engine to cool before storing the machine in any enclosure.**

MP47322,00F4680-19-06MAY15

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.

MX00654,00000C8-19-24AUG13

Preparing Fuel and Engine For Storage

Fuel:

If you have been using “Stabilized Fuel,” add stabilized fuel to the 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 an ignition key switch, turn the ignition key switch to the OFF position.

IMPORTANT: Avoid damage! 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 a 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 the fuel system.

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 the engine air intake screen.
4. On gas engines:
   - Remove spark plugs. Put 30 mL (1 oz) of clean engine oil in cylinders.
   - Install spark plugs, but do not connect spark plug wires.
   - Crank the engine 5 or 6 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 shutoff 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: Avoid damage! 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.

MP47322,00F4682-19-20APR21

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 as necessary.
4. Install battery.
5. On gas engines: Check spark plug 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. Run the engine for 5 minutes to allow oil to be distributed throughout engine.
9. Be sure all shields and guards or deflectors are in place.

SB31882,0000290-19-09AUG18

Specifications

Engine

Manufacturer	Kawasaki
Model	FD620
Power Rating Information	http://www.kawasaki-criticalpower.com
Type	Gasoline
Displacement	0.617 L (37.65 cu. in.)
Bore	76 mm (2.99 in.)
Stroke	68 mm (2.68 in.)
Intake and Exhaust Valve Clearance	0.25 mm (0.01 in.)
Cylinders	2
Strokes/Cycle	4
Oil Filter	Spin On Filter
Air Cleaner	Replaceable, Paper Elements
Cooling	Liquid

OUMX068,0000BEF-19-01JUN15

Drivetrain and Travel Speeds

Type	Continuously Variable Transmission (CVT) with Clutch Enclosure
Gear Ranges	Forward High and Low - Neutral - Reverse - Park
Travel Speeds:	
Forward H (High)	35 km/h (22 mph)
Forward L (Low)	18 km/h (11 mph)
Reverse	21 km/h (13 mph)

NOTE: Speed may vary based on operating conditions and vehicle configuration.

MX00654,000038D-19-21AUG20

Electrical System

Type	12 Volt
Battery Size	340 CCA (cold cranking amps)
Alternator	20 Amp
Spark Plug Gap	0.75 mm (0.029 in.)

JG81906,000075E-19-05APR13

Fuel System

Fuel Filter	Replaceable Element
Fuel	See Gasoline Fuel for 4-Cycle Engines in the Service Miscellaneous section.

JG81906,000075F-19-01APR13

Steering and Brakes

Steering	Rack and Pinion
Brakes	Hydraulic Disc

OUMX068,000099C-19-09SEP14

Tires

Turf Trac RS and AT489

Front	240/75-10 (24x9.50-10)
Rear	305/60-10 (24x12.0-10)

ALL Trail II

Front	240/75-10 (24x9.50-10)
Rear	290/65-10 (24x10.50-10)

Inflation Pressure

Front	97 kPa (0.97 bar) (14 psi)
Rear	97 kPa (0.97 bar) (14 psi)

MX52301,000036F-19-30APR19

Capacities

Fuel Tank	27.6 L (7.3 gal)
Crankcase (with filter)	1.3 L (1.37 qt.)
4WD Front Differential	0.5 L (16.9 oz)
Transmission	4.3 L (4.5 qt)
Cooling System (including recovery tank)	5.0 L (5.2 qt.)
Brake Fluid	0.235 L (8 oz.)

MX10673,000005E-19-19AUG20

Dimensions

Width (overall)	1.52 m (60.0 in.)
Length (with bumper)	2.87 m (113.0 in.)
Height (with Protective Structure)	1.87 m (73.5 in.)
Ground Clearance	15.2 cm (6.0 in.)

JG81906,0000764-19-12JUL19

Weights

Weight (empty vehicle with full fluids)	710 kg (1566 lb)
Gross Vehicle Weight Rating (GVWR)	1383 kg (3050 lb)
Maximum Vehicle Payload	673 kg (1483 lb)
Cargo Box Capacity (not to exceed GVW)	454 kg (1000 lb)
Towing Capacity (not to exceed GVW)	590 kg (1300 lb)
Maximum Trailer Tongue Weight	59 kg (130 lb)
Maximum Front Axle Load	450 kg (992 lb)

Maximum Rear Axle Load . . . . . 935 kg (2061 lb)

MX00654,0000393-19-21AUG20

Recommended Lubricants

Engine Oil . . . . . John Deere PLUS-4™
. . . . . John Deere TURF-GARD™
Grease . . . . . John Deere Multi-Purpose HD Lithium Complex Grease
. . . . . Grease-Gard™ Premium Plus
Brake Fluid DOT4
Transmission Oil and 4WD Front Differential Oil. . . . . John Deere Low Viscosity HY-GARD™ (JDM J20D)
(Specifications and design subject to change without notice.)
Grease-Gard is a trademark of Deere & Company

OUMX068,0000991-19-01FEB21

Sound Measurements

Tested per Australian Standard AS 2012.2-1990
Measured noise level at operator position . . . . . ≤ 85.6 dB(A)

SB31882,00000B6-19-10JUN19

Product Warranty

John Deere offers a standard warranty on new John Deere products. For a copy of the product warranty statement or for details on the warranty terms and conditions for products purchased in the United States and Canada, please contact your local John Deere Dealer or utilize the following resources:

United States

Website:

http://www.deere.com/en_US/services_and_support/warranty/warranty.page

Toll Free: 1-800-537-8233

Dealer Locator:

http://dealerlocator.deere.com/servlet/country=US

Canada

Website (English):

http://www.deere.ca/en_CA/services_and_support/service_plans_warranties/service_plans_warranties.page

Website (French):

http://fr.deere.ca/en_CA/services_and_support/service_plans_warranties/service_plans_warranties.page

Toll Free: 1-800-537-8233

Dealer Locator:

http://dealerlocator.deere.com/servlet/country=CA

Emission-related warranties are included in this Operator's Manual, and applicable if required by law or regulation.

For products purchased in a country other than the United States or Canada, please contact your local John Deere dealer for assistance.

MP47322,00F4690-19-01JUN22

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 2023 or 2024 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 leading to the failure of the evaporative emissions system.

Your emissions control system may include parts such as: carburetors or fuel-injection system, ignition system, catalytic converters, fuel tanks, valves, filters, clamps, connectors, fuel lines (for liquid fuel and fuel vapors) 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 for models S100, S110, S120, S130, S140, S150, S160, S170, S180, S220, X330, Z315E, Z325E, Z515E, Z545R, Z735E, Z735M, 1220, and three years for all other models referenced in this operator's manual. 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 coverage 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 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 shall be completed in a reasonable amount of time, not to exceed 30 days. If you have a question about your emissions warranty coverage, how to make an emissions warranty claim or how to make arrangements for emissions-related authorized repairs, you should contact your John Deere Turf and Utility retailer, or the John Deere Customer Contact Center at 1-800-537-8233, or email John Deere from https://www.deere.com/en/our-company/contact-us/.

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 to the ultimate purchaser 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 the Emissions Control System Warranty period provided herein.
- For owners located more than 100 miles from a John Deere authorized service center, John Deere will pay either for shipping costs to and from an authorized service center, provide for a service technician to come to the owner to make the warranty repair, or pay for the repair to be made at a local non-authorized service center. These provisions do not apply to Alaska, Hawaii, Arizona, Colorado, Idaho, Montana, Nebraska, Nevada, New Mexico, Oregon, Texas, Utah, and Wyoming.

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 as provided herein. 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 as provided herein. 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 or an authorized John Deere service provider.
- 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 includes, but is not limited 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
- Gaskets

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. Except as otherwise expressly provided herein, 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.

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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.)

MX00654,0000314-19-21AUG14

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

OUMX068,0000504-19-10MAY17

John Deere Quality Statement

John Deere Quality

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, visit the following website:

http://www.deere.com/globalhome/ deerecom/ global_home.page?CC=true

Select your country and then click on the Contact Us link.

SP66632,00043A7-19-28AUG15

Transport Canada

To report a safety defect to Transport Canada, you may either fill out an online defect complaint form at their website:
English: *http://www.tc.gc.ca/recalls*
French: *http://www.tc.gc.ca/rappels*
Or contact their Defect Investigations and Recalls Division by calling toll-free 1-800-333-0510 (Canada) or 819-994-3328 (Ottawa-Gatineau area / International).

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Record Service Dates

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

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