

2900, 3300, 3300 GD, 3300 MD, and 3600 MD Sprayers, and MAF 5000 Nutrient Applicators



JOHN DEERE

OPERATOR'S MANUAL

2900, 3300, 3300 GD, 3300 MD, and 3600 MD
Sprayers, and MAF 5000 Nutrient Applicators

OM45307 ISSUE D3 (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.

PLA Argentina
PRINTED IN U.S.A.

Introduction

Foreword

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your machine may also be available in other languages. (See your John Deere dealer to order.)

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction of forward travel.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I. N.) in the Specification or Identification Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place off the machine.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate or statement which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

THE TIRE MANUFACTURER'S warranty supplied with your machine may not apply outside the U.S.

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

DX,IFC1-19-03APR09

Introduction and Additional Information

PLA BY JOHN DEERE is grateful for the trust placed in our manufactured machines and renew its compromise with improvements at service and safety operation of the machines.

This Operator's Manual contains precise and essential information about the complete machine, accessories, and different configurations. For this purpose, keep in mind that not all components shown here could be available at your machine.

Some images and schematics may show different details than the ones available at your machine. This fact, however, does not affect the correct understanding of the given instructions.

To facilitate your comprehension, some images in this Operator's Manual show the machine without shields or protections. However, never operate the machine without any shield or protection originally installed.

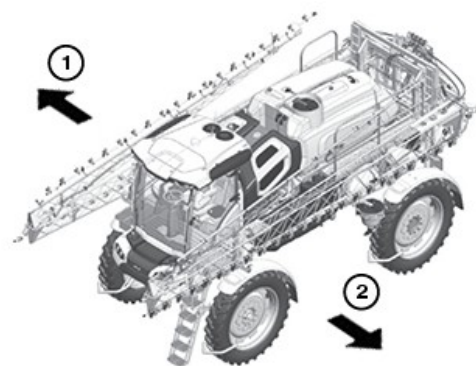
This Operator's Manual is an addition of the explanations given by the dealer during the delivery of the machine. For suggestions or any additional information needed, don't hesitate to contact your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

Considering the continuous improvement policy our company has, PLA BY JOHN DEERE reserves the right of introducing modifications, without having any obligation about machines previously manufactured. For this reason, the content available in this Manual is valid for the version shown at cover, and may suffer modifications without notice for future versions.

jtlsx7f,1661891054381-19-31OCT22

Convention

On lots of procedures in this manual, you are going to see the expressions "left-hand side" and "right-hand side". To understand and correctly interpret which side the procedure is referring to, see the following image:



YE000151—UN—22SEP22

Convention for Left-Hand Side and Right-Hand Side

1—Right-Hand Side
2—Left-Hand Side

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Emissions Performance and Tampering

Operation and Maintenance

The engine, including the emissions control system, shall be operated, used, and maintained in accordance with the instructions provided in this manual to maintain the emissions performance of the engine within the requirements applicable to the engine's category/certification.

Tampering

No deliberate tampering with or misuse of the engine emissions control system shall take place; in particular with regard to deactivating or not maintaining an exhaust gas recirculation (EGR) or a DEF dosing system. Tampering with an engine's emissions control system voids the European Union (EU) or other country's applicable type approval, certification, and emissions-related warranties.

DX,EMISSIONS,PERFORM-19-23DEC21

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CUIT: 30-68307415-9

jtl1sx7f,1661891130147-19-01SEP22

Company Info



YE000150—UN—22SEP22

Trademarks

Trademarks	
AutoTrac™	AutoTrac is a trademark of Deere & Company
Break-In Plus™	Break-In Plus is a trademark of Deere & Company
Break-In™	Break-In is a trademark of Deere & Company
COOL-GARD™	COOL-GARD is a trademark of Deere & Company
COOL-GARD™ II	COOL-GARD is a trademark of Deere & Company
CoolScan™	CoolScan is a trademark of Deere & Company
Grease-Gard™	Grease-Gard is a trademark of Deere & Company
Hy-Gard™	Hy-Gard is a trademark of Deere & Company
Oilscan™	Oilscan is a trademark of Deere & Company
Plus-50™	Plus-50 is a trademark of Deere & Company
Plus-50™ II	Plus-50 is a trademark of Deere & Company
PowerTech™	PowerTech is a trademark of Deere & Company
SERVICEGARD™	SERVICEGARD is a trademark of Deere & Company
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Torq-Gard™	Torq-Gard is a trademark of Deere & Company

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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.

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General View

General View



Self-Propelled Sprayers Equipped with Central Engine

YE000396—UN—10NOV22



Self-Propelled Sprayers Equipped with Front Engine

YE010034—UN—07NOV22

General View



Nutrient Applicator

YE010060—UN—01DEC22

jtlsx7f,1667843717450-19-05DEC22

Safety

Recognize Safety Information



T81389—UN—28JUN13

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

Follow recommended precautions and safe operating practices.

DX,ALERT-19-03OCT22

Understand Signal Words



▲ WARNING

▲ CAUTION

TS187—19—30SEP88

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

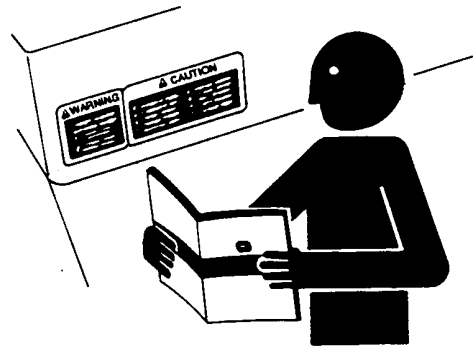
WARNING; The signal word WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

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

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

DX,SIGNAL-19-05OCT16

Follow Safety Instructions



TS201—UN—15APR13

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

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

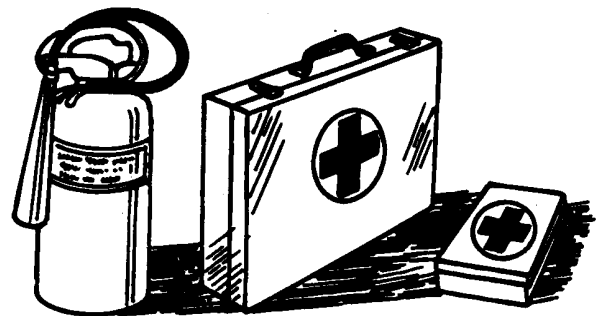
Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

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

DX,READ-19-01AUG22

Prepare for Emergencies



TS291—UN—15APR13

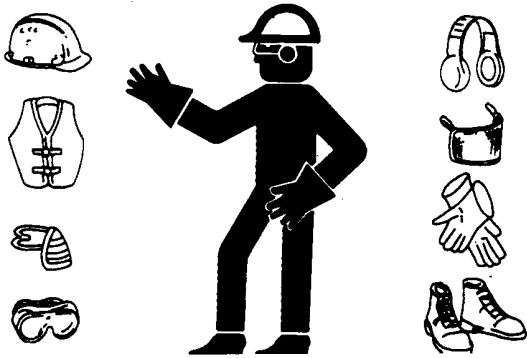
Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

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

DX,FIRE2-19-03MAR93

Wear Protective Clothing



TS206—UN—15APR13

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

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

DX,WEAR2-19-03MAR93

Protect Against Noise



TS207—UN—23AUG88

There are many variables that affect the sound level range, including machine configuration, condition and maintenance level of the machine, ground surface, operating environmental, duty cycles, ambient noise, and attachments.

Exposure to loud noise can cause impairment or loss of hearing.

Always wear hearing protection. Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

DX,NOISE-19-03OCT17

Handle Fuel Safely—Avoid Fires



TS202—UN—23AUG88

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

Use only an approved fuel container for transporting flammable liquids.

Never fill fuel container in pickup truck with plastic bed liner. Always place fuel container on ground before refueling. Touch fuel container with fuel dispenser nozzle before removing can lid. Keep fuel dispenser nozzle in contact with fuel container inlet when filling.

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

DX,FIRE1-19-12OCT11

Handle Starting Fluid Safely



TS1356—UN—18MAR92

Starting fluid is highly flammable.

Keep all sparks and flame away when using it. Keep starting fluid away from batteries and cables.

To prevent accidental discharge when storing the pressurized can, keep the cap on the container, and store in a cool, protected location.

Do not incinerate or puncture a starting fluid container.
Do not use starting fluid on an engine equipped with glow plugs or an air intake heater.

DX,FIRE3-19-14MAR14

In Case of Fire



TS227—UN—15APR13



CAUTION: Avoid personal injury.

Stop machine immediately at the first sign of fire. Fire may be identified by the smell of smoke or sight of flames. Because fire grows and spreads rapidly, get off the machine immediately and move safely away from the fire. Do not return to the machine! The number one priority is safety.

Call the fire department. A portable fire extinguisher can put out a small fire or contain it until the fire department arrives; but portable extinguishers have limitations. Always put the safety of the operator and bystanders first. If attempting to extinguish a fire, keep your back to the wind with an unobstructed escape path so you can move away quickly if the fire cannot be extinguished.

Read the fire extinguisher instructions and become familiar with their location, parts, and operation before a fire starts. Local fire departments or fire equipment distributors may offer fire extinguisher training and recommendations.

If your extinguisher does not have instructions, follow these general guidelines:

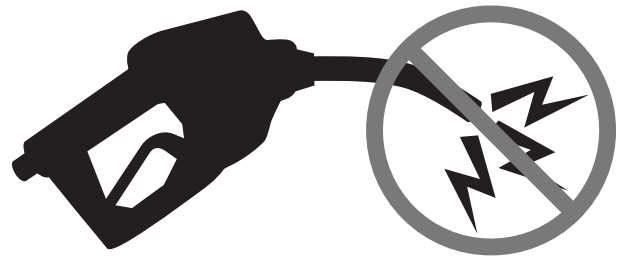
1. Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
2. Aim low. Point the extinguisher at the base of the fire.
3. Squeeze the lever slowly and evenly.
4. Sweep the nozzle from side-to-side.

DX,FIRE4-19-22AUG13

Avoid Static Electricity Risk When Refueling



RG22142—UN—17MAR14



RG21992—UN—21AUG13

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

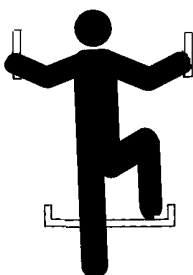
Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

Static charges can build up in ULSD fuel while it is flowing through fuel delivery systems. Static electricity discharge when combustible vapors are present could result in a fire or explosion.

Therefore, it is important to ensure that the entire system used to refuel your machine (fuel supply tank, transfer pump, transfer hose, nozzle, and others) is properly grounded and bonded. Consult with your fuel or fuel system supplier to ensure that the delivery system is in compliance with fueling standards for proper grounding and bonding practices.

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

Use Steps and Handholds Correctly



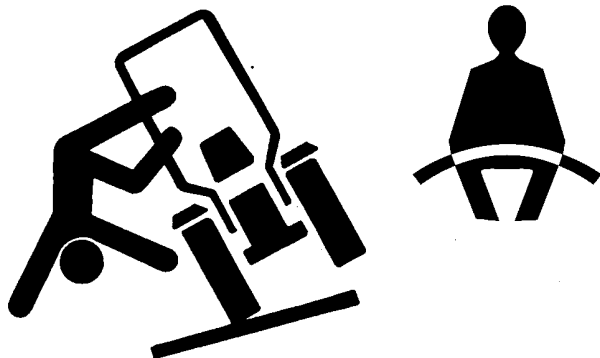
T133468—UN—15APR13

Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.

DX,WW,MOUNT-19-12OCT11

Use Seat Belt Properly



TS1729—UN—24MAY13

Avoid crushing injury or death during rollover.

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

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

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

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

DX,ROPS1-19-22AUG13

Avoid Backover Accidents



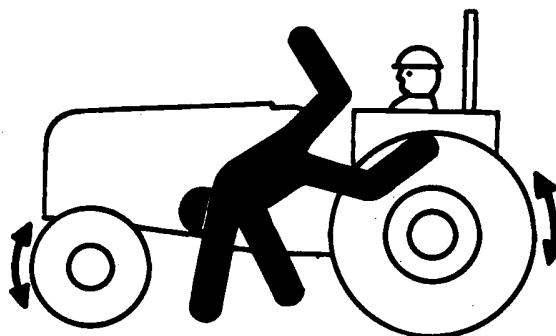
PC10857XW—UN—15APR13

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

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

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

Keep Riders Off Machine



TS290—UN—23AUG88

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

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

DX,RIDER-19-03MAR93

Instructional Seat

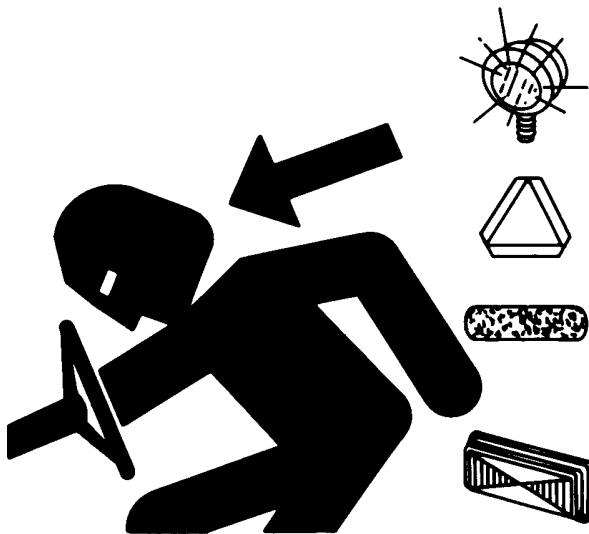


TS1730—UN—24MAY13

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

DX,SEAT,NA-19-22AUG13

Use Safety Lights and Devices



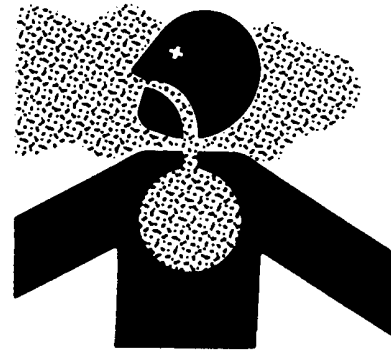
TS951—UN—12APR90

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

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

DX,FLASH-19-07JUL99

Avoid Contact with Agricultural Chemicals



TS220—UN—15APR13



TS272—UN—23AUG88

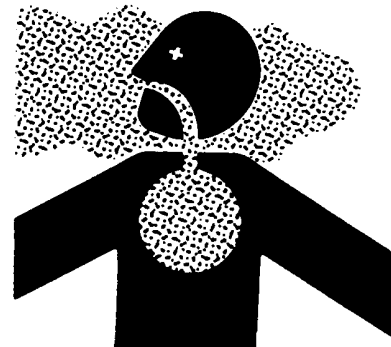
This enclosed cab does not protect against inhaling vapor, aerosol or dust. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

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

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

DX,CABS-19-25MAR09

Handle Agricultural Chemicals Safely



TS220—UN—15APR13



A34471

A34471—UN—11OCT88

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

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

Reduce risk of exposure and injury:

- Wear appropriate personal protective equipment as recommended by the manufacturer. In the absence of manufacturer's instructions, follow these general guidelines:
 - Chemicals labeled **'Danger'**: Most toxic. Generally require use of goggles, respirator, gloves, and skin protection.
 - Chemicals labeled **'Warning'**: Less toxic. Generally require use of goggles, gloves, and skin protections.
 - Chemicals labeled **'Caution'**: Least toxic. Generally require use of gloves and skin protection.
- Avoid inhaling vapor, aerosol or dust.
- Always have soap, water, and towel available when working with chemicals. If chemical contacts skin, hands, or face, wash immediately with soap and water. If chemical gets into eyes, flush immediately with water.
- Wash hands and face after using chemicals and before eating, drinking, smoking, or urination.
- Do not smoke or eat while applying chemicals.
- After handling chemicals, always bathe or shower and change clothes. Wash clothing before wearing again.
- Seek medical attention immediately if illness occurs during or shortly after use of chemicals.
- Keep chemicals in original containers. Do not transfer chemicals to unmarked containers or to containers used for food or drink.
- Store chemicals in a secure, locked area away from human or livestock food. Keep children away.
- Always dispose of containers properly. Triple rinse

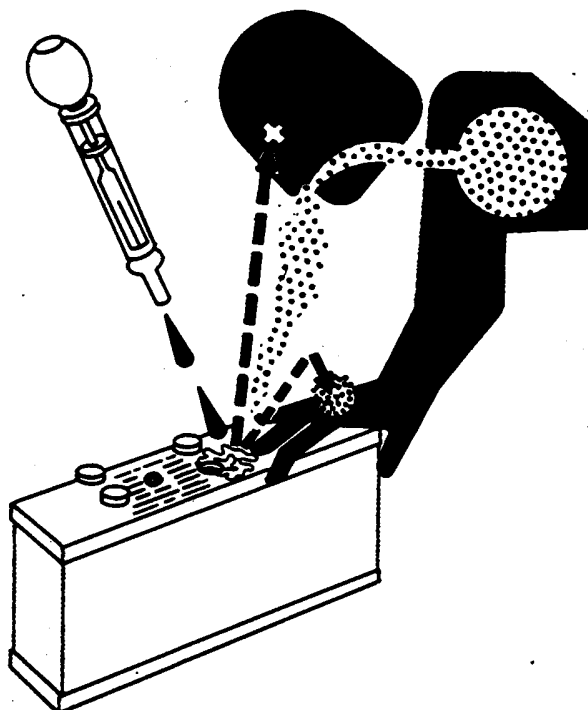
empty containers and puncture or crush containers and dispose of properly.

DX,WW,CHEM01-19-24AUG10

Handling Batteries Safely



TS204—UN—15APR13



TS203—UN—23AUG88

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

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

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

Sulfuric acid in battery electrolyte is poisonous and

strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid hazards by:

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

If acid is spilled on skin or in eyes:

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

If acid is swallowed:

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

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

DX,WW,BATTERIES-19-02DEC10

Avoid Heating Near Pressurized Fluid Lines



TS953—UN—15MAY90

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

DX,TORCH-19-10DEC04

Remove Paint Before Welding or Heating



TS220—UN—15APR13

Avoid potentially toxic fumes and dust.

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

Remove paint before heating:

- Remove paint a minimum of 100 mm (4 in.) from area to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

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

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

Dispose of paint and solvent properly.

DX,PAINT-19-24JUL02

Handle Electronic Components and Brackets Safely



TS249—UN—23AUG88

Falling while installing or removing electronic

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

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

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

DX,WW,RECEIVER-19-24AUG10

Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

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

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

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

DX,SERV-19-28FEB17

Practice Safe Maintenance



TS218—UN—23AUG88

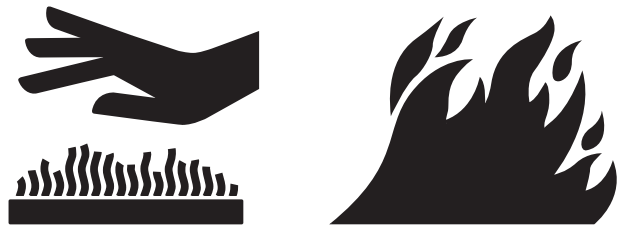
Understand service procedure before doing work. Keep area clean and dry.

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

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

Keep all parts in good condition and properly installed.

Avoid Hot Exhaust



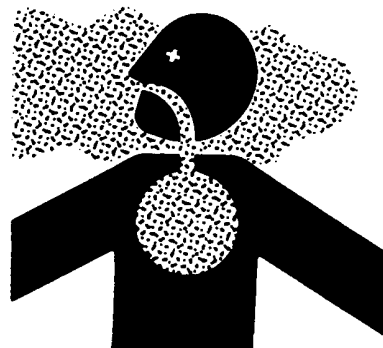
RG17488—UN—21AUG09

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

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

DX,EXHAUST-19-20AUG09

Work In Ventilated Area



TS220—UN—15APR13

Engine exhaust fumes can cause sickness or death. If it

is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

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

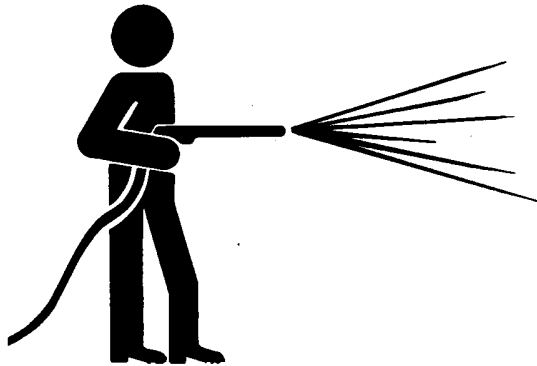
DX,AIR-19-17FEB99

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

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

DX,LOWER-19-24FEB00

Work in Clean Area



T6642EJ—UN—18OCT88

Before starting a job:

- Clean work area and machine.
- Make sure you have all necessary tools to do your job.
- Have the right parts on hand.
- Read all instructions thoroughly; do not attempt shortcuts.

DX,CLEAN-19-04JUN90

Prevent Machine Runaway



TS177—UN—11JAN89

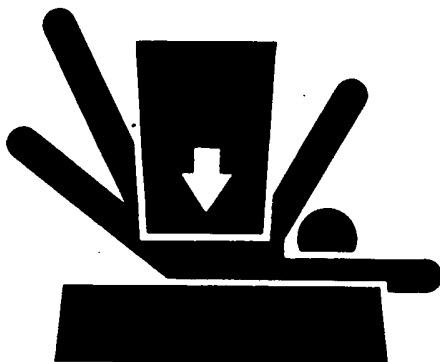
Avoid possible injury or death from machinery runaway.

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

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

DX,BYPAS1-19-29SEP98

Support Machine Properly

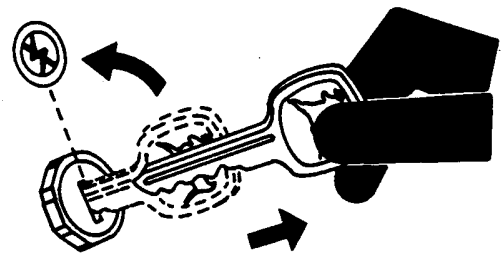


TS229—UN—23AUG88

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

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

Park Machine Safely



TS230—UN—24MAY89

Before working on the machine:

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

DX,PARK-19-04JUN90

Service Cooling System Safely



TS281—UN—15APR13

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

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

DX,WW,COOLING-19-19AUG09

Service Accumulator Systems Safely



TS281—UN—15APR13

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

Relieve pressure from the pressurized system before removing accumulator.

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

Accumulators cannot be repaired.

DX,WW,ACCLA2-19-22AUG03

Service Tires Safely



RXA0103438—UN—11JUN09

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

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

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

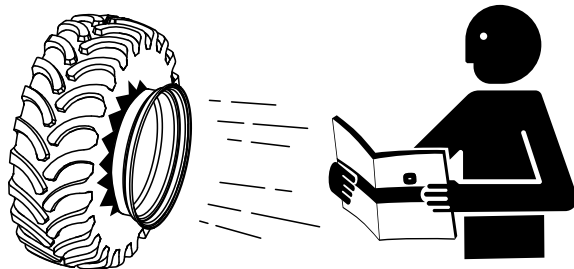
When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

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

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

DX,WW,RIMS-19-28FEB17

Follow Tire Recommendations



H111235—UN—13MAY14

Keep your machine in proper working order.

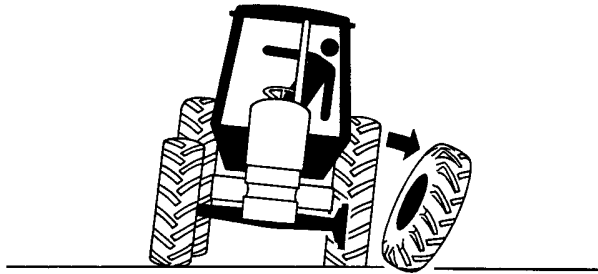
Use only prescribed tire sizes with correct ratings and inflate to the pressure specified in this manual.

Use of other than prescribed tires may decrease

stability, affect steering, result in premature tire failure, or cause other durability or safety issues.

DX,TIRE,INFO-19-19MAY14

Tightening Wheel Retaining Bolts/Nuts



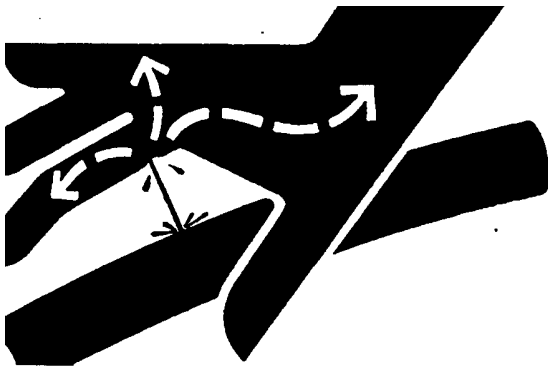
L124 516

L124516—UN—03JAN95

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

DX,WW,WHEEL-19-12OCT11

Avoid High-Pressure Fluids



X9811—UN—23AUG88

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

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

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

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

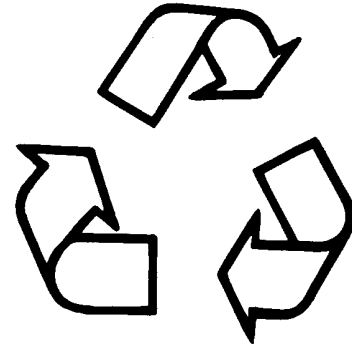
Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed

within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

DX,FLUID-19-12OCT11

Decommissioning — Proper Recycling and Disposal of Fluids and Components



TS1133—UN—15APR13

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

- Use appropriate tools and personal protective equipment such as clothing, gloves, face shields or glasses, during the removal or handling of objects and materials.
- Follow instructions for specialized components.
- Release stored energy by lowering suspended machine elements, relaxing springs, disconnecting the battery or other electrical power, and releasing pressure in hydraulic components, accumulators, and other similar systems.
- Minimize exposure to components which may have residue from agricultural chemicals, such as fertilizers and pesticides. Handle and dispose of these components appropriately.
- Carefully drain engines, fuel tanks, radiators, hydraulic cylinders, reservoirs, and lines before recycling components. Use leak-proof containers when draining fluids. Do not use food or beverage containers.
- Do not pour waste fluids onto the ground, down a drain, or into any water source.
- Observe all national, state, and local laws, regulations, or ordinances governing the handling or disposal of waste fluids (example: oil, fuel, coolant, brake fluid); filters; batteries; and, other substances or parts. Burning of flammable fluids or components in other than specially designed incinerators may be

prohibited by law and could result in exposure to harmful fumes or ashes.

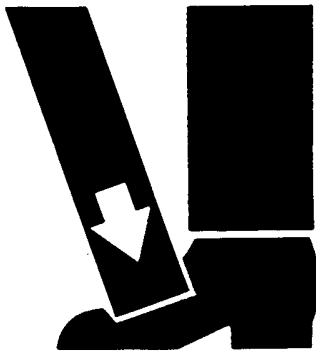
- Service and dispose of air conditioning systems appropriately. Government regulations may require a certified service center to recover and recycle air conditioning refrigerants which could damage the atmosphere if allowed to escape.
- Evaluate recycling options for tires, metal, plastic, glass, rubber, and electronic components which may be recyclable, in part or completely.
- Contact your local environmental or recycling center, or your John Deere dealer for information on the proper way to recycle or dispose of waste.

DX,DRAIN-19-01JUN15

high pressure spray injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.

DX,SPRAY-19-16APR92

Use Proper Lifting Equipment



TS226—UN—23AUG88

Lifting heavy components incorrectly can cause severe injury or machine damage.

Follow recommended procedure for removal and installation of components in the manual.

DX,LIFT-19-04JUN90

Use Proper Tools



TS779—UN—08NOV89

Use tools appropriate to the work. Makeshift tools and procedures can create safety hazards.

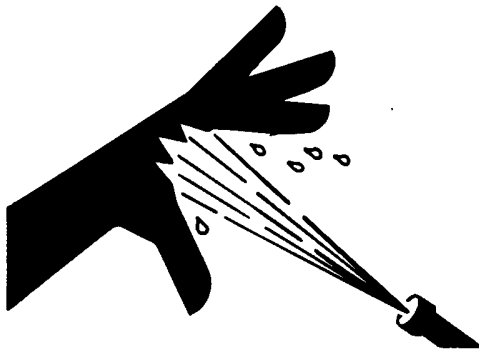
Use power tools only to loosen threaded parts and fasteners.

For loosening and tightening hardware, use the correct size tools. DO NOT use U.S. measurement tools on metric fasteners. Avoid bodily injury caused by slipping wrenches.

Use only service parts meeting John Deere specifications.

DX,REPAIR-19-17FEB99

Protect Against High Pressure Spray

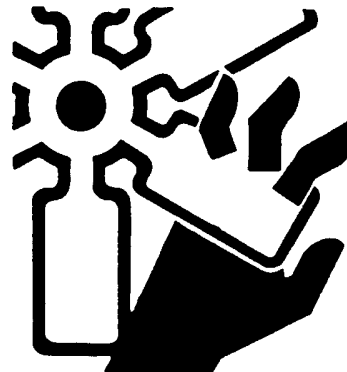


TS1343—UN—18MAR92

Spray from high pressure nozzles can penetrate the skin and cause serious injury. Keep spray from contacting hands or body.

If an accident occurs, see a doctor immediately. Any

Install All Guards



TS677—UN—21SEP89

Rotating cooling system fans, belts, pulleys, and drives can cause serious injury.

Keep all guards in place at all times during engine operation.

Wear close-fitting clothes. Stop the engine and be sure fans, belts, pulleys, and drives are stopped before making adjustments, connections, or cleaning near fans and their drive components.

DX, GUARDS-19-18AUG09

Prevent Battery Explosions



TS204—UN—15APR13

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

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

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).

DX, SPARKS-19-03MAR93

Service Spray Equipment Safely

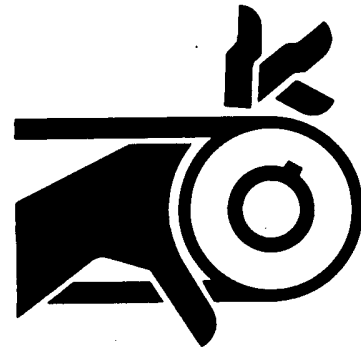
CAUTION: Spray solutions or vapors may be extremely dangerous. Treat all spray chemicals, solutions, or solution residues with great caution. DO NOT take chances. When in doubt, proceed as though contamination is present.

Before performing any service activity:

- Wear appropriate personal protective equipment. (See Handle Agricultural Chemicals Safely in Safety section.)
- Clean vehicle. (See Clean Vehicle of Hazardous Chemicals, Including Pesticides in Machine Storage section.)
- Drain solution tank. (See Solution System section.)
- Rinse solution system. (See Solution System section.)

jtlx7f, 1664193239971-19-26SEP22

Service Drive Belts Safely



TS285—UN—23AUG88

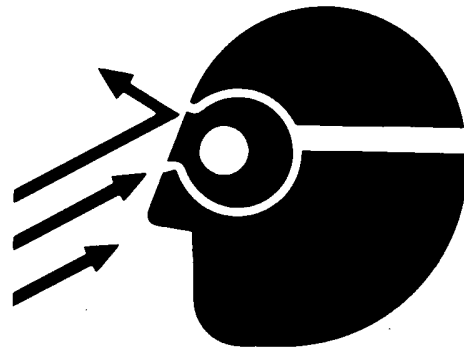
When servicing drive belts always observe these precautions:

- Avoid serious injury from hand or arm entanglement. Never attempt to clean, check or adjust belts while the machine is running. Always shut off the engine, set the parking brake and remove the key.
- Do not attempt to clean belts with flammable cleaning solvents.

OOU6043,00015E3-19-24MAY04

Using Compressed Air For Cleaning

CAUTION: Reduce compressed air to 210 kPa (2 bar) (30 psi) or less when using for cleaning purposes. Clear area of bystanders, guard against flying debris, and wear personnel protective equipment, including eye protection.



TS266—UN—23AUG88
AG, OOU6043, 83-19-28JUL99

Operate Safely

Always check general operating safety of the machine before using.

Before operating machine always check immediate vicinity of machine for people and obstructions. Ensure adequate visibility.

Operate vehicle only when all guards are fitted and in their correct position.

DO NOT start engine with multifunction control handle engaged.

DO NOT operate close to a ditch or creek.

DO NOT fold or unfold boom near overhead wires.

Always come to a complete stop before reversing directions.

Drive slowly over rough ground.

Slow down when turning.

Always shut off engine when leaving machine. Remove key when leaving machine unattended. Park brake will engage when engine is turned off regardless of multifunction control handle position.

Keep hands, feet and clothing away from moving parts.

Wear relatively tight and belted clothing to prevent from being caught on some part of the machine.

OUC6092,0000360-19-30APR10

Working Area

The working area is defined and required as follows:

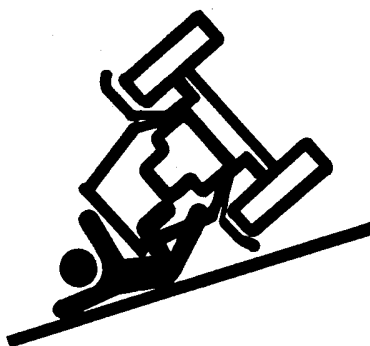
- an area of 1 meter around the machine for preparation of the spraying liquid (filling work) and cleaning of the spraying apparatus
- the seat on the machine from where the crop protection work is carried out

Danger zones are taken to mean:

- the working area of the operator in which preparation of the spraying liquid and cleaning of the sprayer takes place
- the “manoeuvring zone” of the components of the sprayer, and in particular a 1 meter zone around the machine as a whole and the area required to fold out the spray booms

OUC6092,0000362-19-03MAY10

Use Caution On Hillsides



RW13093—UN—07DEC88

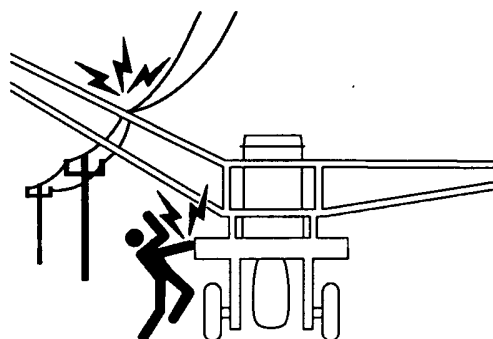
Avoid holes, ditches, and obstructions which may cause sprayer roll-over, especially on hillsides. Avoid sharp turns on hills.

Never drive near the edge of a gully or steep embankment.

Stay off slopes that are too steep for operation.

OUC6092,0000F99-19-28JUN07

Transport and Operate Safely



N44191—UN—27APR92

CAUTION: Keep away from overhead power lines. Serious injury or death to you or others can result if machine contact electrical wires. Know the machine transport height, spray/application boom operating height, and spray/application boom folding height of your machine.

- To decide the best working method and boom folding/unfolding operations, perform a complete assessment of the field before performing any spraying operation.
- Before moving the machine, alert surrounding people and make sure that the ladder is up.
- Stop slowly to avoid “nose diving”.
- Reduce speeds for icy, wet, graveled, or soft roadway surfaces.
- Carefully operate the machine at low speeds on

uneven terrain. Before going on a steep hill, make sure to select a gear that allows a safe operation.

- Do not operate the machine down a slope with the transmission in neutral.
- Before driving on public roadways, check and follow local regulations for transport speed, equipment size and weight, lighting and marking.
- During the machine transport to the operation local, maintain all the spray systems off.
- Before leaving the machine, always put the transmission in neutral, activate the park brake, turn the ignition key to OFF position, and remove the ignition key.

jtlssx7f,1664193649248-19-05DEC22

Non-Permissible Use

Pay attention to the following applications for which the machine is **NOT SUITABLE**:

- Spraying or atomization of substances other than crop protection chemicals and/or liquid fertilizers.
- Use of the tank as a storage medium for substances not intended for crop protection or fertilization purposes.

 **CAUTION: Working on an uncleaned machine poses unnecessary danger and is therefore forbidden.**

jtlssx7f,1664193675688-19-26SEP22

Additional Safety Information

Spray System

- To avoid solution leakage, keep hoses, connections, clamps, and other components in good conditions.
- All nozzles must have antri-drip systems.
- Replace nozzles that vary more than 10% the application flow specified for the nozzle type.

Agricultural Chemicals

- In case of intoxication, call 0800-888-8694 (24 hours service).
- Use protection equipment that meets the IRAM standards for chemical product manipulation.
- Prepare the most exact amount of solution for application, avoiding this way solution leftovers after spraying.
- Do not rely only on the machine cab or filters as a full protection against chemical exposure. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab. (See Safety Equipment in Solution System section.)

- Drain solution in an area where people, animals, vegetation, and water supply cannot be contaminated.
- Chemical containers must not be used for any other purpose.
- Never use containers, funnels, and hoses from other applications to manipulate chemicals, even in small tasks.
- Chemical product leftovers must be kept in the original containers, well closed.
- To drain chemicals, always use suitable containers.
- Chemical containers must be transported to recycling centers. For information on the nearest authorized recycling center, see: www.casafe.org
- Make sure that the non-return valve of the solution system is correctly functioning each time the solution tank is loaded with water from an external source. This valve allows water to flow only in one direction to the solution tank, avoiding this way contaminated liquid return to the external source.

Crop Protection

- Avoid wind drift out of the specified application zone.
- Always select the nozzle type that best fits the particular crop treatment related to the application moment conditions.

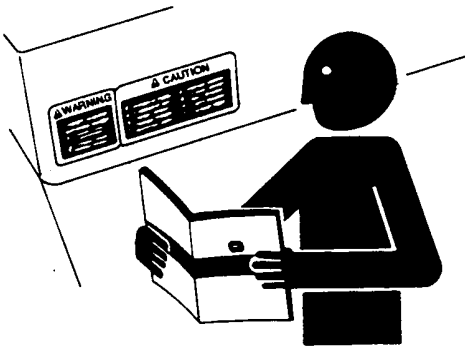
Nutrient Application System (If Applicable)

- Before filling the nutrient applicator box, put the handrails in work position.
- To reduce the height of the machine, put the handrails in transport position before transport.
- Safely position all moving and retractable parts of the machine for transport.
- Transporting the machine with loaded reservoirs can cause personal injury or premature failure by wear.
- Avoid serious injury or death by the loss of control or by an accident due to machine overload during transport.
- Maintain hands, feet, head, hair, and clothes away from moving parts. Use tight clothes to avoid them from getting caught in any part of the machine.

jtlssx7f,1664193761229-19-05DEC22

Safety Signs

Replace Safety Signs



TS201—UN—15APR13

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

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

DX,SIGNS-19-18AUG09

Safety Signs Location

The safety signs present on machine and its accessories are strategically positioned, warning about potential risks to the Operator. The risk causes may be due:

Mechanical Action

- Machine Movement
- Spray/Application Boom Movement
- Falls
- Slips
- Crashes
- Others

Chemical Action

- Dangerous Contact with Agriculture Chemicals
- Acid Solution Burns
- Pressurized Liquids
- Hot Liquids
- Others

CAUTION: Replace the safety signs whenever they are not legible or deteriorated. Every time they are replaced, position them in the same place they were before, cleaning the surface of installation before positioning the safety signs.

Keep Away from Overhead Power Lines



YE000624—UN—21MAR23

Avoid Accidents Due to Boom Movements



YE000625—UN—21MAR23

Do Not Stand on Platforms During Spray Boom Closure (Self-Propelled Sprayers Only)



YE000626—UN—07MAR23

Do Not Stand on Platforms or Ladders During Machine Movement (Self-Propelled Sprayers Only)



YE000628—UN—07MAR23

Pressurized Fluid Risks (Self-Propelled Sprayers Only)



YE000309—UN—28OCT22

Special Care When Working with Chemical Products (Self-Propelled Sprayers Only)



YE000627—UN—07MAR23

Personal Protection Equipment and Care When Working with Chemicals (Self-Propelled Sprayers Only)



YE000316—UN—28OCT22

Avoid Contact with Agricultural Chemicals (Self-Propelled Sprayers Only)



YE000304—UN—28OCT22

Battery Cut-Off Switch



YE000312—UN—28OCT22

Machines Equipped with Central Engine



YE000314—UN—28OCT22

Machines Equipped with Front Engine

Avoid Accidents with Pressurized Air – Do Not Disengage



YE000318—UN—28OCT22

Read Operator's Manual (Nutrient Applicator Only)



YE000274—UN—28OCT22

CAUTION: Read the Operator's Manual before operating the machine.

Electrical Risk (Nutrient Applicator Only)



YE000275—UN—28OCT22

CAUTION: Operate the machine at a safe distance from overhead powerlines.

Open and close the application boom in a safe zone.

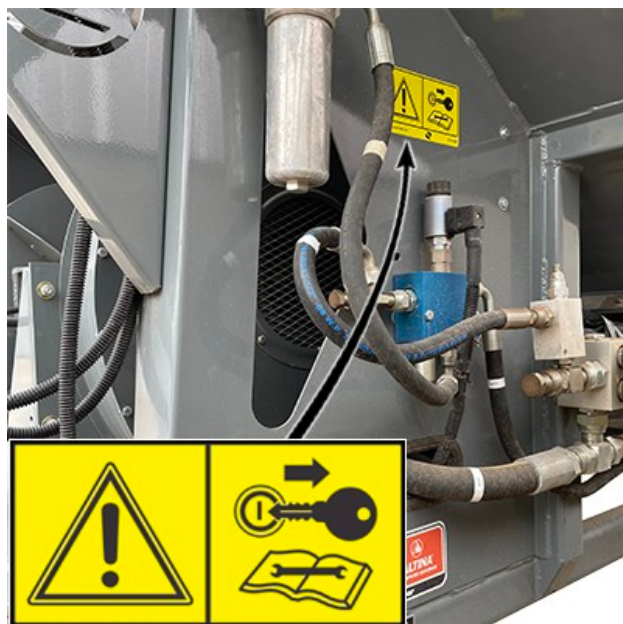
Fall Risks at Platforms, Ladders, and Access Points (Nutrient Applicator Only)



YE000276—UN—28OCT22

⚠ CAUTION: Do not stand on platforms, ladders, nor access points during machine movement. Do not allow riders over the machine.

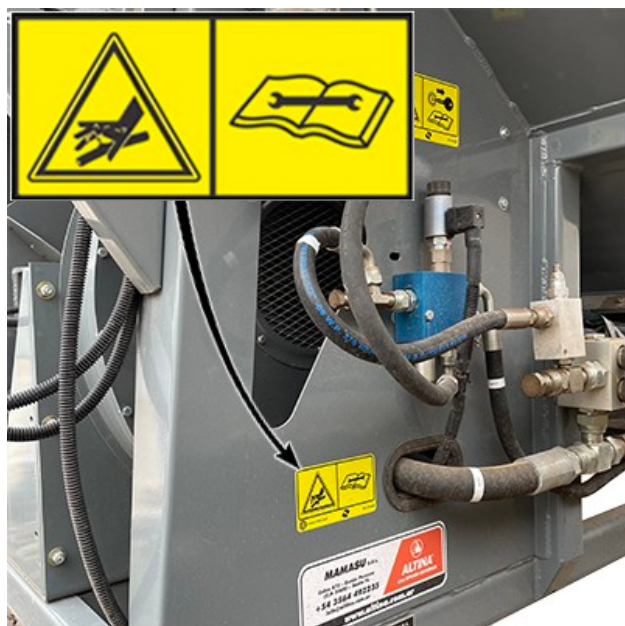
Remove the Ignition Key (Nutrient Applicator Only)



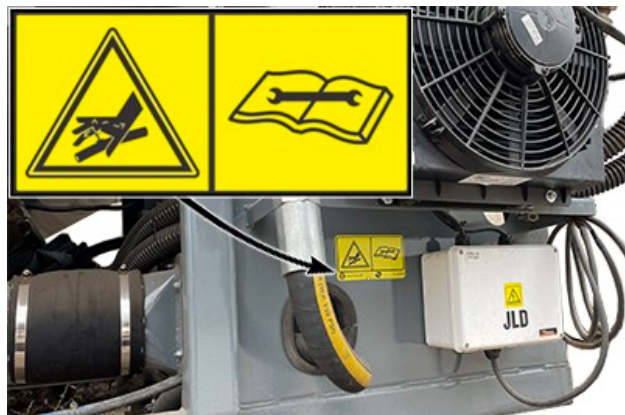
YE000278—UN—28OCT22

⚠ CAUTION: Shut off the engine and remove the ignition key when leaving the machine. Any adjust, service, or maintenance must be done with the machine stopped.

Risks of High-Pressurized Fluid Injection (Nutrient Applicator Only)



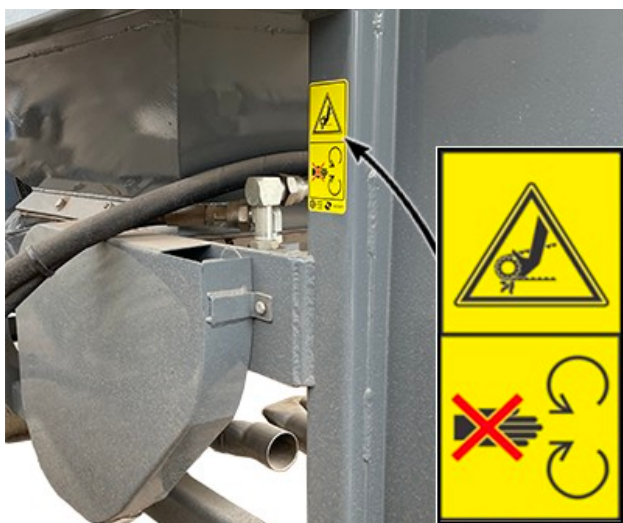
YE000279—UN—28OCT22



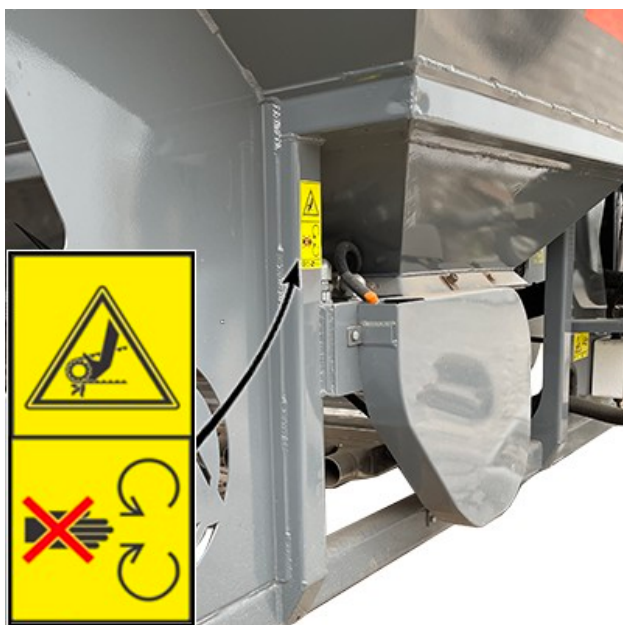
YE000288—UN—28OCT22

⚠ CAUTION: Respect the maintenance procedures. Release the system pressure before performing any service.

Cutting Risks on Chain Drives (Nutrient Applicator Only)



YE000280—UN—28OCT22



YE000286—UN—28OCT22

⚠ CAUTION: Do not position the hands close to the chains or gears when they are rotating.
Check the correct installation of all machine side shields of before the operation.

Avoid Risks of Getting Stuck in Rotating Parts (Nutrient Applicator Only)



YE000281—UN—28OCT22

⚠ CAUTION: Do not enter in the nutrient applicator box for any reason with the machine on.
Respect the safety procedures indicated in this manual for adjusts and maintenances.

Nutrient Applicator Box Fall Risks (Nutrient Applicator Only)



YE000282—UN—28OCT22



YE000290—UN—28OCT22

CAUTION: Do not step or walk over the nutrient applicator roof, covers, or hand knobs.
A fall from this height may lead to serious injury or death.

Risks of Intoxication by Toxic Gases (Nutrient Applicator Only)



YE000283—UN—28OCT22

CAUTION: Use respiratory protection during the product load.
Position the machine against the wind so the toxic gases from the nutrient applicator box will not be directed to people.

Risks of Falling Inside the Nutrient Applicator Box (Nutrient Applicator Only)



YE000284—UN—28OCT22

CAUTION: Do not stand over the sieves, and anti-clog sieves.
Never load material in the nutrient applicator box without the sieves.

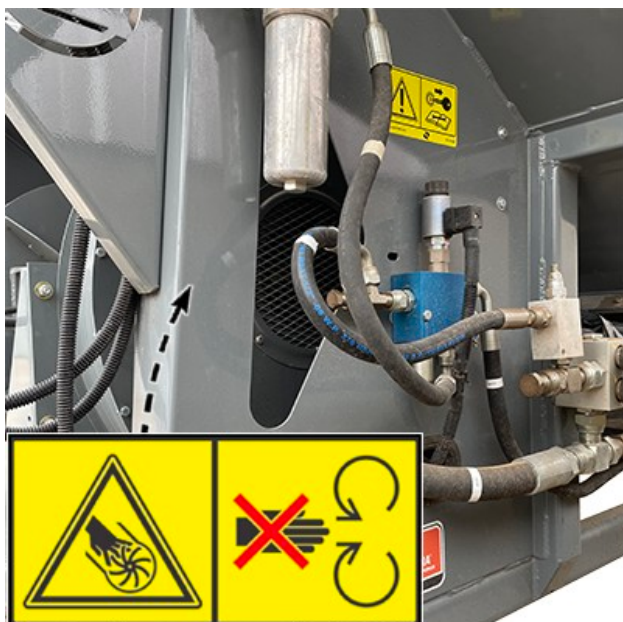
Crushing Risks on Load Covers (Nutrient Applicator Only)



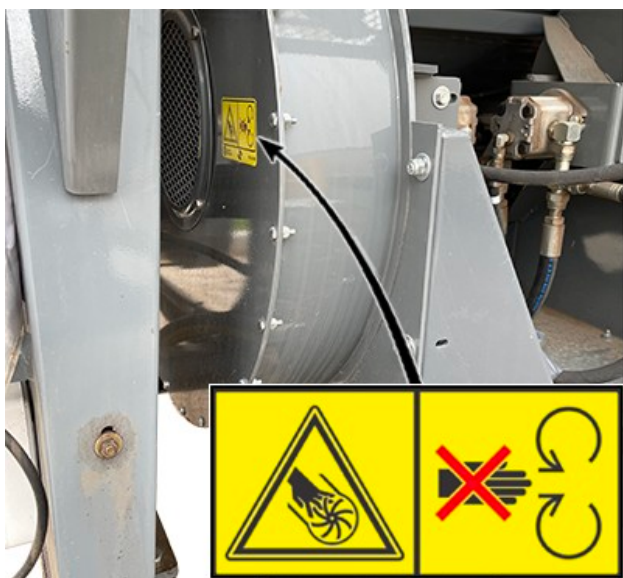
YE000285—UN—28OCT22

CAUTION: Open and close the load covers through the hand knobs.
Do not keep the hands near the closure/opening points of the load covers.

Turbine Cutting Risks (Nutrient Applicator Only)



YE000287—UN—28OCT22

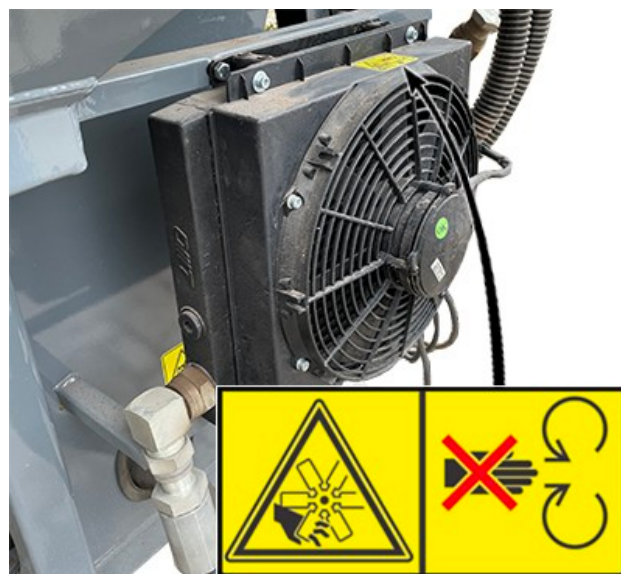


YE000289—UN—28OCT22

CAUTION: Do not move your hands close to the turbine when the machine is on.

Check the correct installation the turbine inlet shield before the operation.

Ventilation System Cutting Risks (Nutrient Applicator Only)

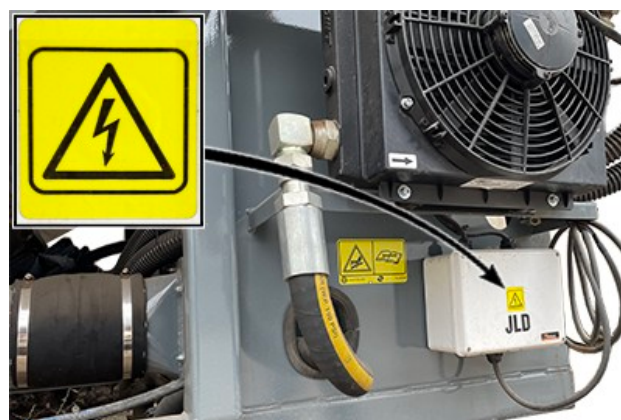


YE000291—UN—28OCT22

CAUTION: Do not move your hands close to the electric fan when the machine is on.

Check the correct installation the fan shield before the operation.

Electrical Risks (Nutrient Applicator Only)



YE000292—UN—28OCT22

Personal Protection Equipment (Nutrient Applicator Only)



⚠ CAUTION: The use of the indicated personal protective equipment is mandatory.

jtlx7f,1662030730962-19-07MAR23

Information Signs

Information Signs Location

Safety and Information Signals Care (Nutrient Applicator Only)



YE000295—UN—28OCT22

Brake System Checks



YE000299—UN—28OCT22

Functions of Multi-Function Lever Buttons



YE000398—UN—10NOV22

Machines Equipped with Central Engine



YE000399—UN—10NOV22

Machines Equipped with Front Engine

Trailer Hitch Capacity



YE000300—UN—28OCT22

Greasing Points Control



YE000305—UN—28OCT22

Filling Limit Indication (Self-Propelled Sprayers Only)

NOTE: The information sign shown is for illustrative purposes only. This information sign varies according to each machine model.

Indication for Solution System Valves Operation (Self-Propelled Sprayers Only)



YE000308—UN—28OCT22

Functions of the Spray Panel Valves (Self-Propelled Sprayers Only)



YE000306—UN—28OCT22

Tie-Point Indication



YE000310—UN—28OCT22

Battery Control Indication



YE000307—UN—28OCT22



YE000311—UN—28OCT22

Machines Equipped with Central Engine



YE000313—UN—28OCT22

Machines Equipped with Front Engine



YE000294—UN—28OCT22

Nutrient Applicator Hopper Pressure (Nutrient Applicator Only)

Component Wash Decal



YE000315—UN—17NOV22

Machines Equipped with Central Engine



YE000317—UN—17NOV22

Machines Equipped with Front Engine

Information Regarding Air Leaks (Nutrient Applicator Only)



YE000296—UN—17NOV22

Nutrient Applicator Box Load Capacity (Nutrient Applicator Only)



YE000411—UN—23NOV22

Greasing Point (Nutrient Applicator Only)



YE000293—UN—28OCT22

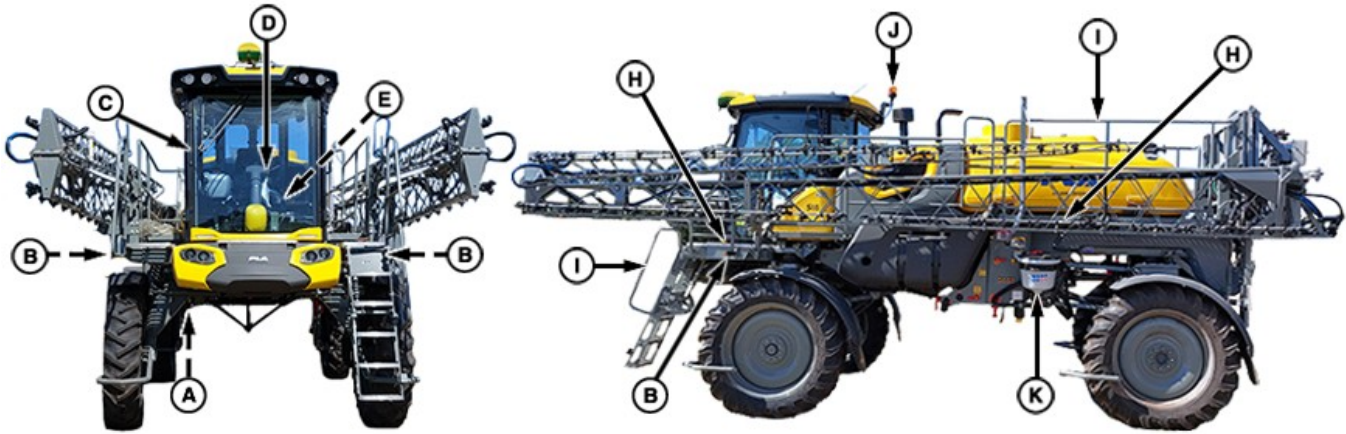
Indication of each greasing point of the machine.

jtlsx7f,1666979329066-19-05DEC22

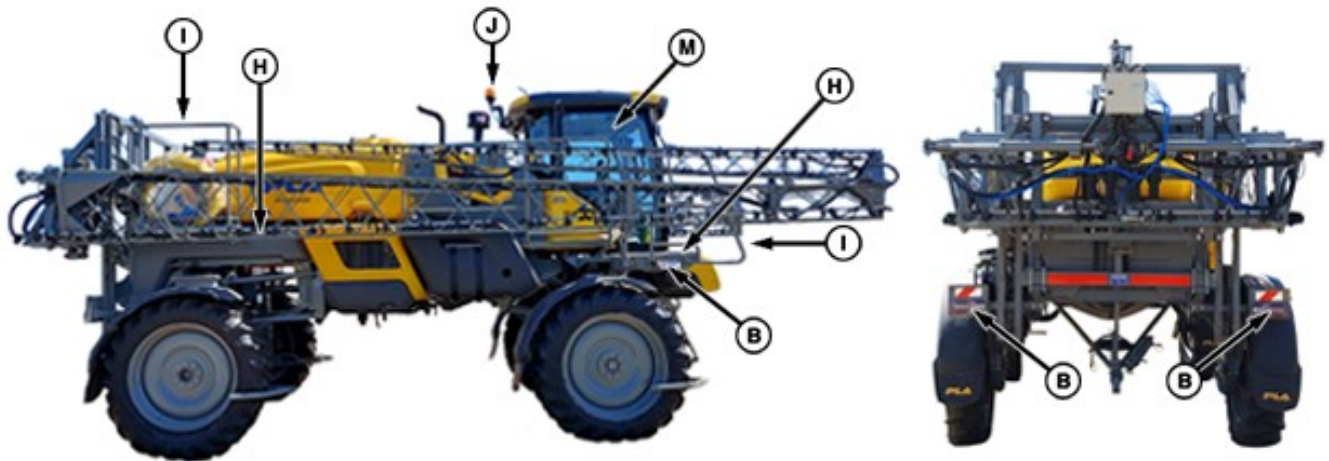
Safety Features

Safety Features—Self-Propelled Sprayers

NOTE: The image is for illustrative purposes only. The design and location of components vary according to machine model.

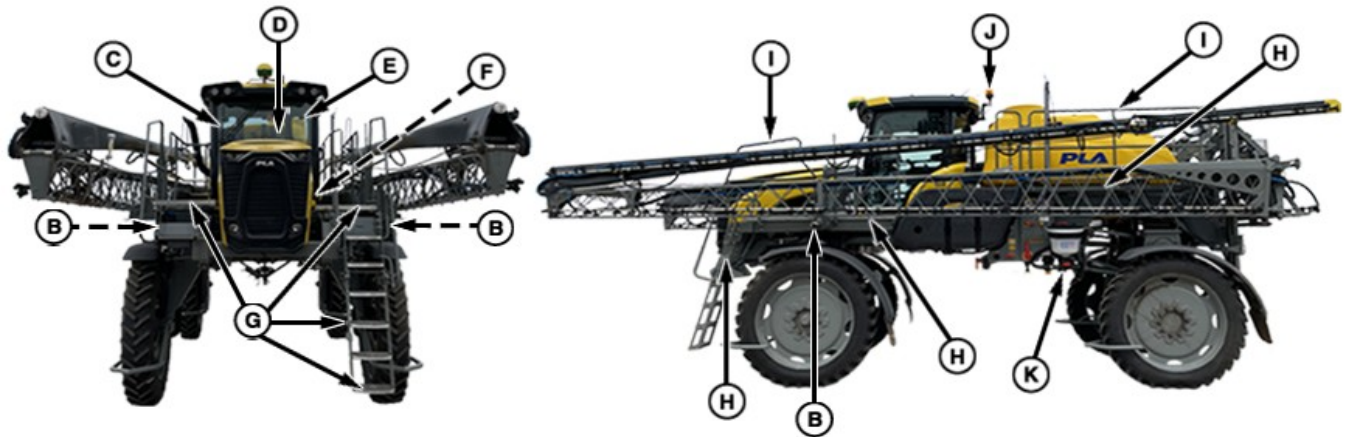


YE010011—UN—28DEC22

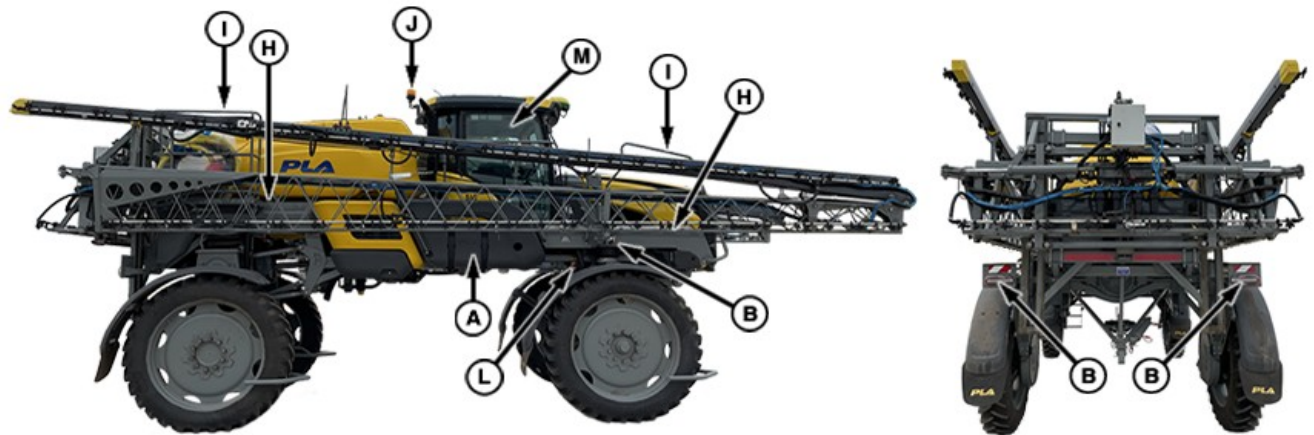


YE010012—UN—28DEC22

Self-Propelled Sprayers Equipped with Central Engine



YE010008—UN—16NOV22



YE010009—UN—28DEC22

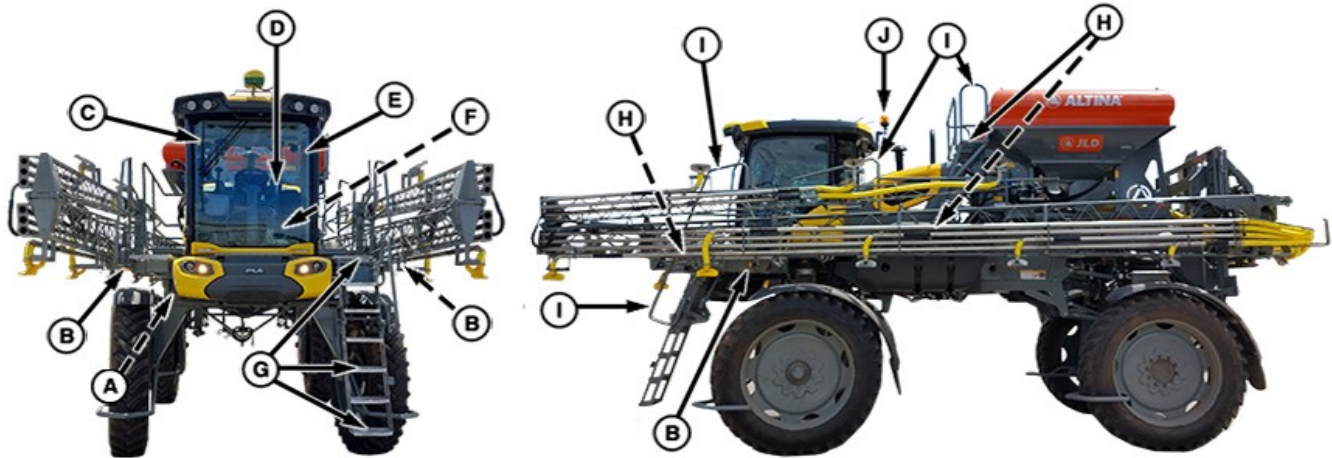
Self-Propelled Sprayers Equipped with Front Engine

A—Clean Water Tank
 B—Front and Rear Hazard Warning Lights and Reflector
 C—Windshield Wiper
 D—Seat Belt
 E—Emergency Hammer
 F—General-Purpose Fire Extinguisher
 G—Access Steps and Platforms

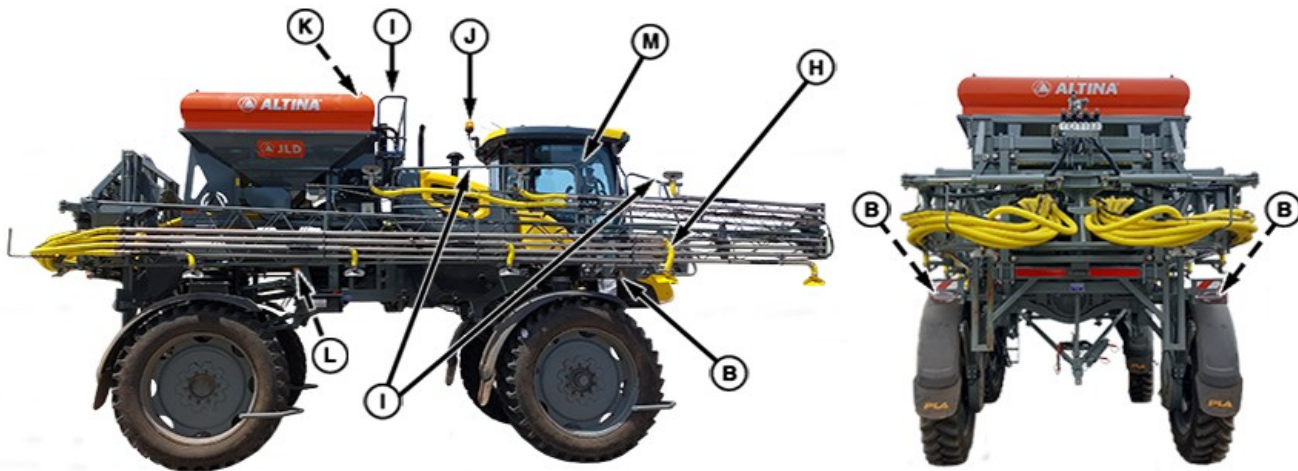
H—Slip Resistant Surfaces
 I—Handrails
 J—Beacon Light
 K—Eductor
 L—Battery Cut-Off Switch
 M—Operator's Cab

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Safety Features—Nutrient Applicator



YE010065—UN—06DEC22



YE010067—UN—06DEC22

Nutrient Applicator

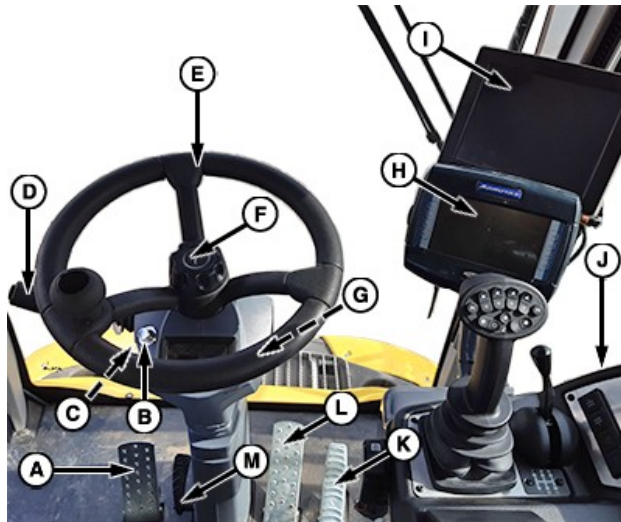
A—Clean Water Tank
B—Front and Rear Hazard Warning Lights and Reflector
C—Windshield Wiper
D—Seat Belt
E—Emergency Hammer
F—General-Purpose Fire Extinguisher
G—Access Steps and Platforms

H—Slip Resistant Surfaces
I—Handrails
J—Beacon Light
K—Safety Load Cover Opening System
L—Battery Cut-Off Switch
M—Operator's Cab

jttsx7f,1668684264950-19-06DEC22

Operator Controls

Machine Controls



YE000109—UN—22SEP22

- A—Clutch Pedal (manual machines only)
- B—Steering Column Adjust Button
- C—Hazard Warning Light Switch
- D—Turn-Signal/High/Low-Beam Lights/Horn Lever
- E—Steering Wheel
- F—Height Adjustment Knob of Steering Column
- G—Ignition Key Switch
- H—Agrotax Display (nutrient applicators only)
- I—Generation 4 Universal Display 4640
- J—Right-Hand Side Console (varies according to machine transmission)
- K—Speed Control Pedal
- L—Service Brake Pedal
- M—Steering Column Adjust Lever

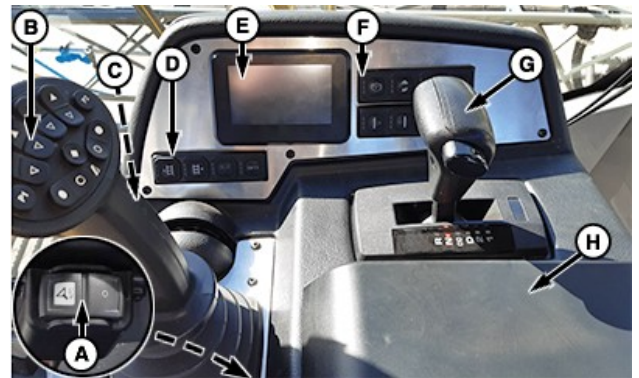
NOTE: The steering wheel (E) has a maneuvering knob that facilitates its turning.

edw8krp,1672146823175-19-03APR23

- E—Display of the Right-Hand Side Console
- F—Set of Buttons 2
- G—Dosifier Switch (nutrient applicators only)
- H—Armrest

edw8krp,1672147230607-19-27MAR23

Right-Hand Side Console—Machines Equipped with Allison Automatic Transmission

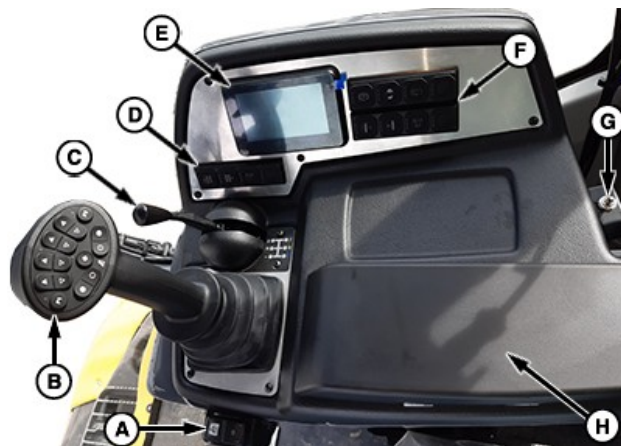


YE000125—UN—22SEP22

- A—AutoTrac ON/OFF Buttons
- B—Multi-Function Lever
- C—Speed Control Lever
- D—Set of Buttons 1
- E—Display of the Right-Hand Side Console
- F—Set of Buttons 2
- G—Gearshift Lever
- H—Armrest

edw8krp,1672147842178-19-27DEC22

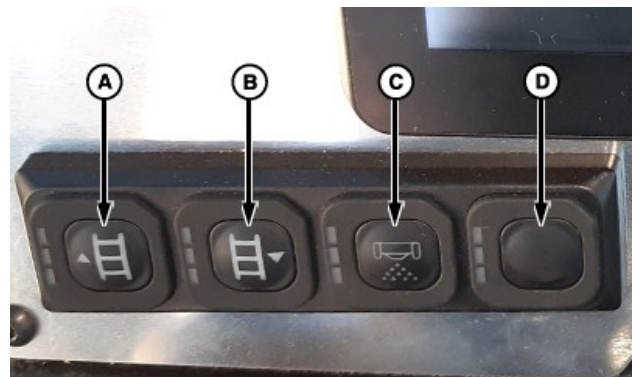
Right-Hand Side Console—Machines Equipped with Eaton Manual Transmission



YE000115—UN—22SEP22

- A—AutoTrac ON/OFF Buttons
- B—Multi-Function Lever/Gearshift Lever
- C—Speed Control Lever
- D—Set of Buttons 1

Right-Hand Console Buttons Set of Buttons 1



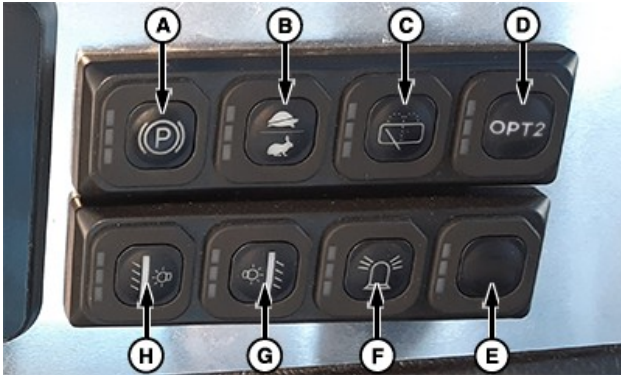
YE000116—UN—22SEP22

- A—Ladder Up Button
- B—Ladder Down Button
- C—Solution Pump Button (self-propelled sprayers only) / Turbine Button (nutrient applicators only)
- D—Not Used

- **Ladder Up (A) Button:** to raise the ladder, press and hold button (A) until the ladder fully raises.

- **Ladder Down (B) Button:** to lower the ladder, press and hold button (B) until the ladder fully lowers.
- **Solution Pump Button (self-propelled sprayers only)/Turbine Button (nutrient applicators only) (C):** to operate the solution pump/turbine, press button (C). To turn it off, press it again.

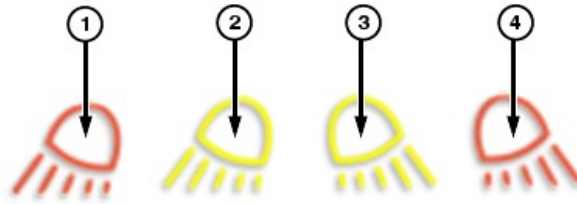
Set of Buttons 2



YE000126—UN—22SEP22

- A—Park Brake Button
- B—Differential High/Low Button
- C—Windshield Wiper Button (two speeds)
- D—ECO/Work Mode Button (automatic machines only)
- E—Not Used
- F—Beacon Light Button
- G—Rear Worklights Button
- H—Front Worklights Button

- **Park Brake Button (A):** hold on button (A) for 1.5 seconds to enable or disable park brake. When parking is enabled, the ladder lowers. When parking is disabled, the ladder raises.
- **Differential High/Low Button (B):** to operate at high idle, press button (B) for 1.5 seconds. To operate at low idle, press it again for the same period of time.
- **Windshield Wiper Button (two speeds) (C):** to operate the windshield wiper, press button (C).
 - To operate at low speed, press button (C) once.
 - To operate at maximum speed, press button (C) twice.
 - To stop it, press button (C) three times.
- **ECO/Work Mode Button (automatic machines only) (D):** press button (D) to enable/disable ECO/work mode.
- **Beacon Light Button (F):** press button (F) to enable/disable beacon light.



YE010475—UN—29MAR23

- 1—Roof Upper Outer Worklights
- 2—Roof Upper Inner Worklights
- 3—Roof Rear Worklights
- 4—Boom Worklights

- **Rear Worklights Button (G):** to operate the rear worklights, press button (G).
 - Pressing it once:** the two lights on the upper rear portion of the roof are illuminated. A yellow light symbol (3) is shown on the right-hand side display.
 - Pressing it a second time:** the two boom worklights are illuminated. A red light symbol (4) is shown on right-hand side display. The four lights remain on.
 - Pressing it a third time:** shuts off all lights.
- **Front Worklights Button (H):** to operate the front worklights, press button (H).
 - Pressing it once:** the two roof upper outer worklights are illuminated. A red light (1) is shown on the right-hand side display.
 - Pressing it a second time:** the two roof upper inner worklights are also illuminated. A yellow light symbol (2) is shown on right-hand side display. The four lights remain on.
 - Pressing it a third time:** shuts off all lights.

edw8krp,1672148065612-19-03APR23

Engine Speed Control Lever



YE000110—UN—22SEP22

IMPORTANT: Avoid machine damage. The speed control lever (A) must not be used for machine transport operations.

The speed control lever (A) allows to maintain the engine speed constant for operations outside the cab that need an specific engine speed, such as chemical product load.

Moving the speed control lever (A) rearward, the engine speed is increased. Moving the lever forward, the engine speed is decreased.

edw8krp,1672148365937-19-03APR23

Park Brake



YE000112—UN—22SEP22

To activate the park brake, hold on the park brake switch (A) for 1.5 seconds. This switch is located on the the right-hand side console.

When park brake is enabled, the ladder lowers. When park brake is disabled, the ladder raises.

edw8krp,1672148492707-19-03APR23

Multi-Function Lever



YE000114—UN—22SEP22

There is a multi-function lever (A) on the right-hand side console. By combining the two buttons P1 and P2 of the lever, various functions related to hydraulic and solution systems can be performed.

To see details of the available functions of the multi-function lever (A), see Spray/Application Boom Controls in Spray/Application Boom section of this manual.

Besides the standard features of the multi-function lever (A), additional functions are available according to machine model:

- **Machines Equipped with Eaton Manual Transmission:** used to change gears.

NOTE: See Multi-Function Lever—Machines Equipped with Eaton Manual Transmission in Operator Controls section for details.

- **Machines Equipped with Allison Automatic Transmission:** this lever is fixed, without any additional function.

jtlisx7f,1663079688411-19-27DEC22

Multi-Function Lever—Machines Equipped with Eaton Manual Transmission



YE000123—UN—22SEP22

NOTE: Use the diagram (B) to understand the available gears and their positions.

To select gears, perform the following procedure:

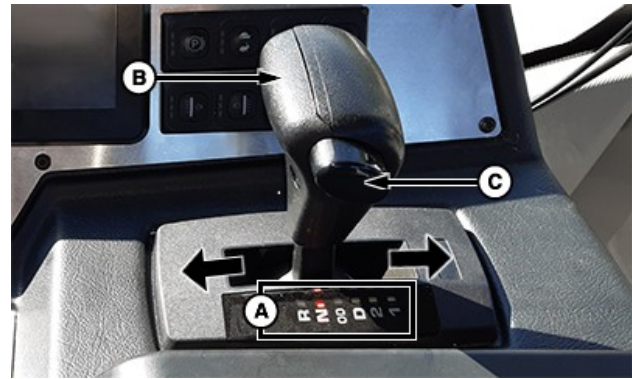
1. Release the park brake.
2. Press the clutch pedal until the end of course and select the desired gear using the multi-function lever (A).
3. Slowly and progressively release the clutch pedal to start moving the machine.

edw8krp,1672148688650-19-27DEC22

Gearshift Lever—Machines Equipped with Allison Automatic Transmission

NOTE: When engine speed is above 1200 rpm, the transmission does not allow the gear shift. An error symbol is shown.

1. With engine running at no more than 1000 rpm, press the brake pedal to allow the transmission gear shift.



YE000119—UN—22SEP22

2. Press button (C) and move the gearshift lever (B) to one of the positions (A):

R - Reverse

N - Neutral

OD - Overdrive (4 gears)

D - Direct (3 gears)

2 - 2 Gears Only

1 - First Gear Only

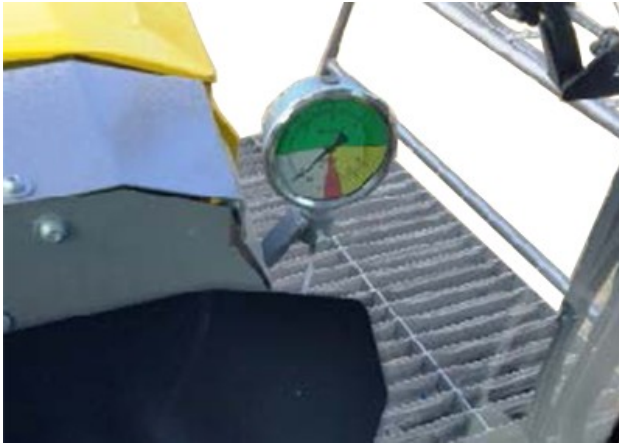
edw8krp,1672148877716-19-27DEC22

Pressure Control of the Spray System (Self-Propelled Sprayers Only)



YE000127—UN—22SEP22

Manometer—Machines Equipped with Central Engine



YE000128—UN—22SEP22

Manometer—Machines Equipped with Front Engine

On the external side of the cab, there is a manometer that informs the spray circuit pressure.

jtlisx7f,1661285425376-19-25NOV22

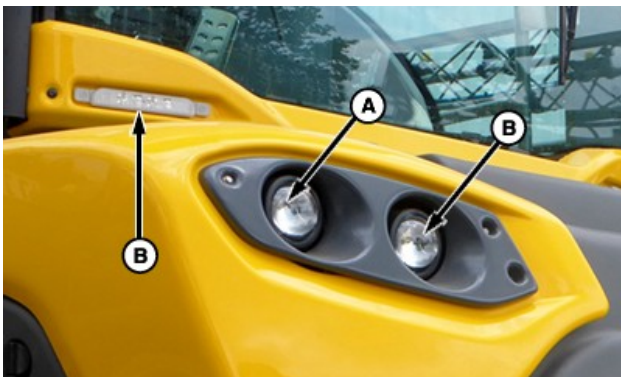
Lights

Overview



YE010406—UN—07MAR23

Headlights and Position Lights—Machines Equipped with Front Engine



YE000002—UN—16NOV22

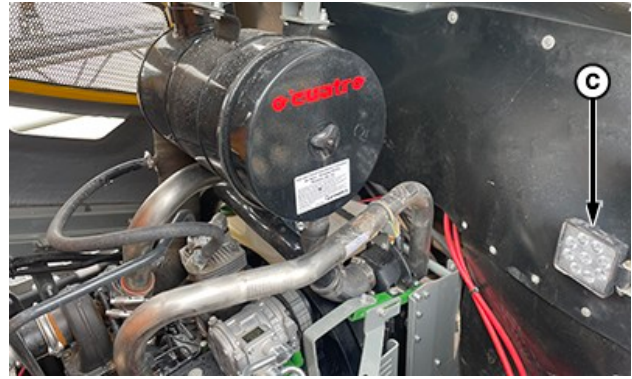
Headlights and Position Lights—Machines Equipped with Central Engine

The machine main lighting is provided by headlights (A) and position lights (B).



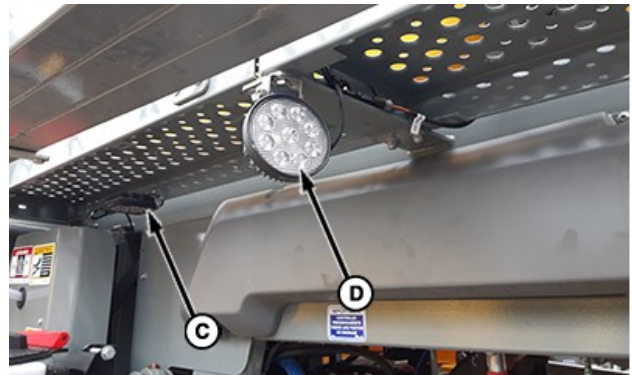
YE000269—UN—11NOV22

Square Worklights—Under the Machine



YE000405—UN—17NOV22

Square Worklights—Engine (machines equipped with central engine only)



YE000270—UN—11NOV22

Square Worklights—Spray Panel/Left Round Worklights—Spray/Application Boom



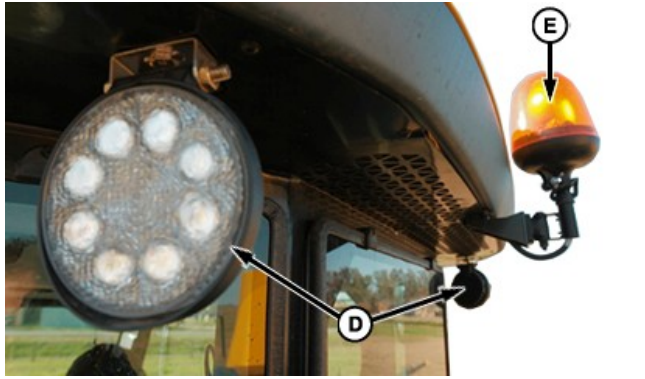
YE000271—UN—11NOV22

Right Round Worklights—Spray/Application Boom



YE000003—UN—17NOV22

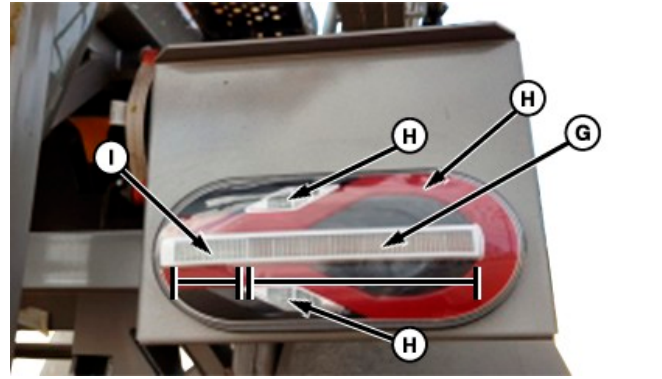
Front Round Worklights—Cab



YE000004—UN—11NOV22
Rear Round Worklights—Cab/Beacon Light

Lighting for work is provided by square worklights (C) and round worklights (D).

The beacon light (E) alert people around of the machine presence.



YE010477—UN—03APR23
Rear Turn-Signal Lights

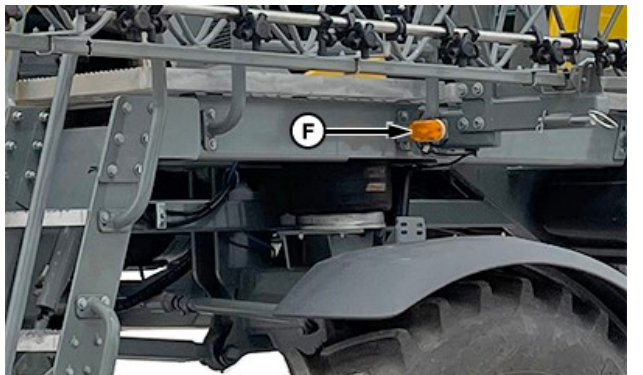
There are front (F) and rear (G) turn-signal lights, used to indicate machine turns.

Brake lights (H) and reverse gear lights (I) are also available.

edw8krp,1679936373392-19-31MAR23



YE000403—UN—11NOV22
Front Turn-Signal Lights—Machines Equipped with Central Engine



YE000402—UN—11NOV22
Front Turn-Signal Lights—Machines Equipped with Front Engine

Cab Inside Lights

The controls of the cab inside lights are on the center of the cab roof.



YE000008—UN—22SEP22
Cab Inside Lights

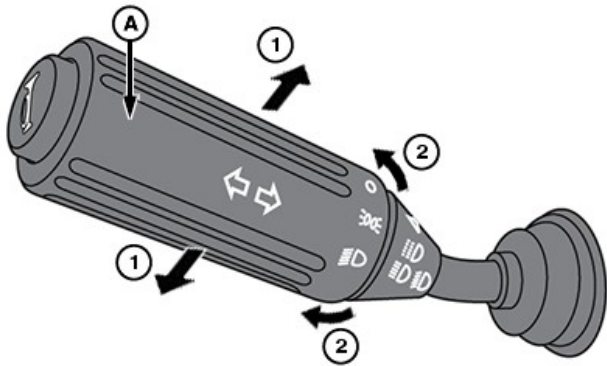
Two independent lights are available. To turn them on, use the light switches (A).

jtlx7f,1658401507309-19-21JUL22

Turn-Signal and High/Low-Beam Lights Lever

To activate the warning lights, press the button (A) on the steering column.

jtlsx7f,1658401659981-19-21JUL22



YE000009—UN—22SEP22

Turn-Signal and High/Low-Beam Lights Lever

The lever (A) is on the left-hand side of the steering column.

With this lever, it is possible to control the following lights:

- **Turn-Signal Lights (1):** push the lever (A) up for a right turn, or pull down for a left turn. Return the lever to center position after completing turn.

CAUTION: Avoid injury or death caused by a collision with another vehicle. Always obey the traffic laws when driving on public roads. Use the headlights on low-beam mode for oncoming vehicles.

- **High/Low Beam Lights (2):** rotate the lever (A) to alternate between high and low-beam mode for the headlights.

jtlsx7f,1658401536685-19-11AUG22

Hazard Warning Light Switch

The warning lights are intermittent and are on the front and rear of the machine.



YE000010—UN—22SEP22

Hazard Warning Light Switch

Operator's Station

Cab



YE000169—UN—22SEP22

The cab of the machine provides wide visibility, the space needed for the operator and an eventual additional person, and all of the controls needed for the correct operation of the machine.

NOTE: The image is for illustration purposes only. Your machine may have little differences.

edw8krp,1672150212094-19-27MAR23

Operator's Seat

The operator's seat is equipped with headrest, safety belt, adjustable pneumatic suspension according to the operator's weight, and multiple position adjusts or features:

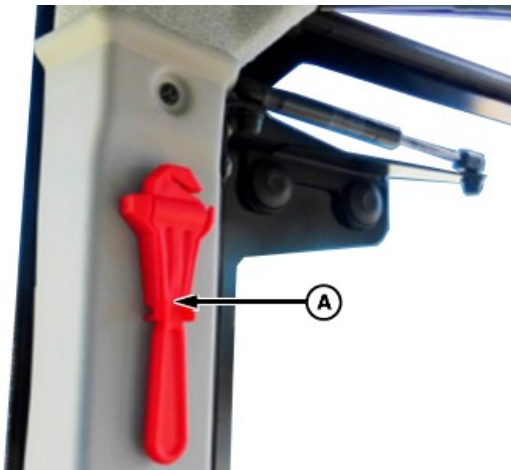


YE010496—UN—03APR23

- A—Drawer for Objects
- B—Seat Height Adjust
- C—Seat Weight/Height Adjust
- D—Headrest Height Adjust
- E—Seat Fore/Aft Movement
- F—Armrest Adjust
- G—Backrest Adjust
- H—Retractable Bottle/Cup Support

jtlx7f,1658411321918-19-03APR23

Emergency Exit Hammer



YE000011—UN—22SEP22

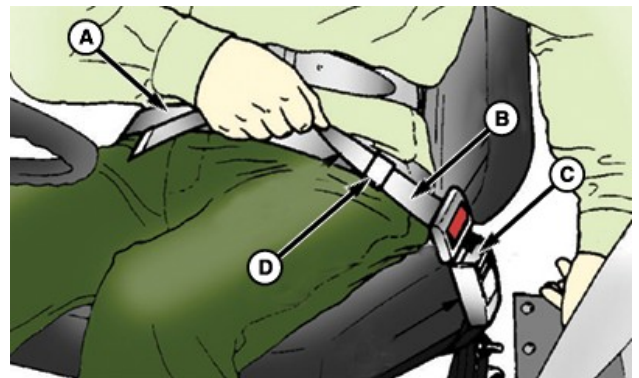
Safety Hammer

CAUTION: Cover eyes, face, and uncovered skin from jagged or broken glass when using the hammer (A) to break a window.

In case of rollover or any kind of accident impossibilitating the normal machine exit, use the hammer (A) to break a window.

jtlx7f,1658411317446-19-21NOV22

Seat Belt



YE000013—UN—22SEP22

Seat Belt

The operator's seat is equipped with a safety seat belt (A).

CAUTION: Avoid accidents. Always adjust seat and seat belt (A) BEFORE operating the machine.

CAUTION: Avoid injury or death. Always wear the seat belt (A) when operating the machine.

To lock and adjust the seat belt (A), push the buckle (B) until the seat belt (A) activates the lock. A click and an upward movement of the unlock button (C) indicate that the seat belt (A) is correctly fastened.

To release the seat belt (A), press the unlock button (C).

To adjust the tension of the seat belt (A), pull the seat belt (A) end through the tension adjust mechanism (D).

jtlx7f,1658411319499-19-21JUL22

Instructional Seat



YE000014—UN—22SEP22

Instructional Seat

The machine is equipped with an instructional seat (A) for training operators or diagnosing machine problems.

CAUTION: The instructional seat (A) is only for training operators or for diagnosing machine problems. Keep off all other riders from the machine during operation. Always wear the seat belt.

The instructional seat (A) is foldable and can be raised to allow more cab internal space.

To lower the instructional seat (A), remove the lock (B).

jtlx7f,1658411331264-19-21JUL22

Pull-Down Sunshade



YE000168—UN—22SEP22

To reduce glare when operating in bright sunlight, the operator can regulate the pull-down sunshade (A) height as needed.

This component allows the operator flexibility in the amount of window coverage.

jtlx7f,1658411327308-19-02SEP22

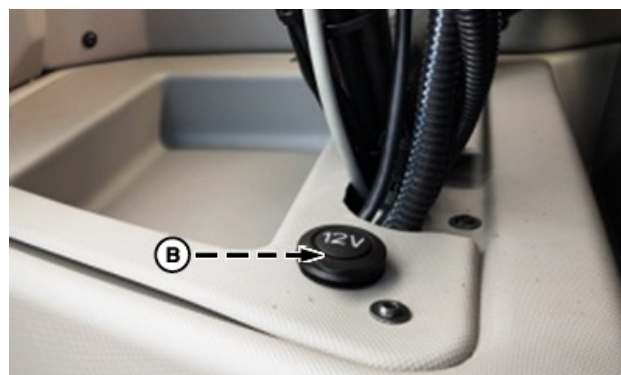
Comfort Features



YE000015—UN—22SEP22

USB Port

The machine is equipped with a USB port (A) under the right-hand side window.



YE000016—UN—22SEP22

Auxiliary Outlet



YE010494—UN—03APR23

Operator's Manual Storage

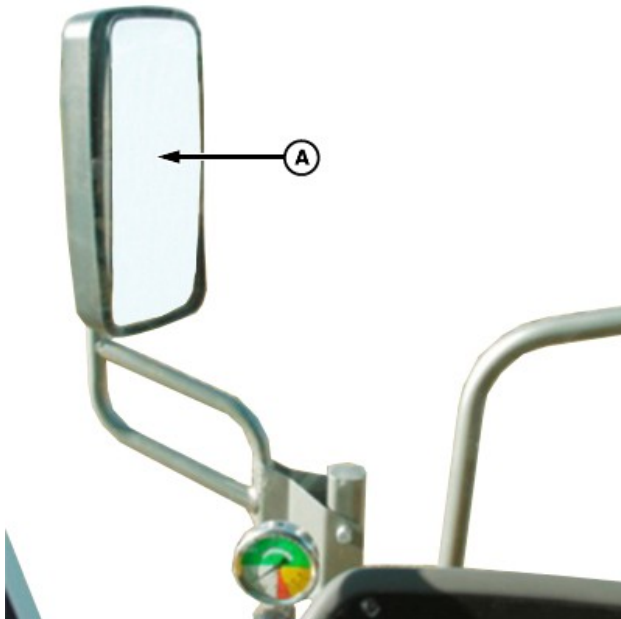
There is also an auxiliary outlet (B) close to the object holder and an Operator's Manual storage (C) behind the operator's seat.

Specification

Auxiliary Outlet—Tension. 12 V

edw8krp,1680484980050-19-02APR23

Mirrors



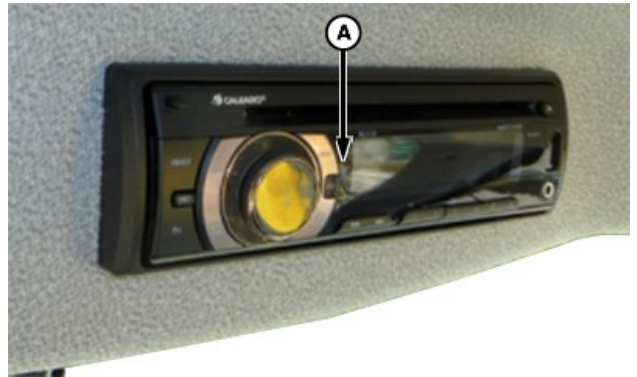
YE000017—UN—22SEP22

Mirrors

The machine is equipped with mirrors (A) on both sides. The mirrors (A) are adjustable and provide wide visibility.

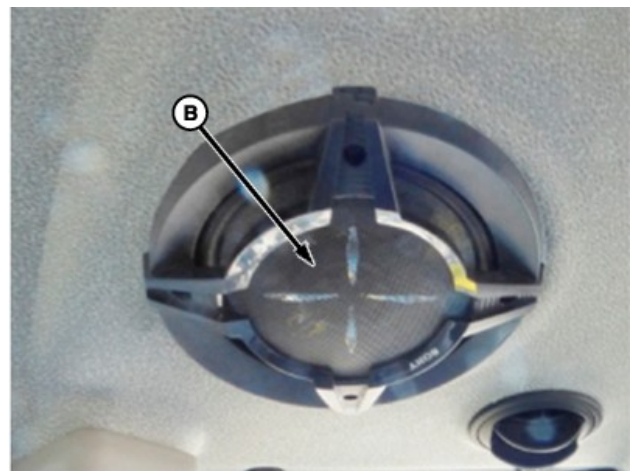
jtlx7f,1658411336699-19-22JUL22

Audio System



YE000019—UN—22SEP22

Radio



YE000018—UN—22SEP22

Speakers

The audio system is a stereo radio AM/FM (A) with digital signal, MP3 reproducer, USB port, and speakers (B) on both sides of the operator's station.

jtlx7f,1658411340387-19-22JUL22

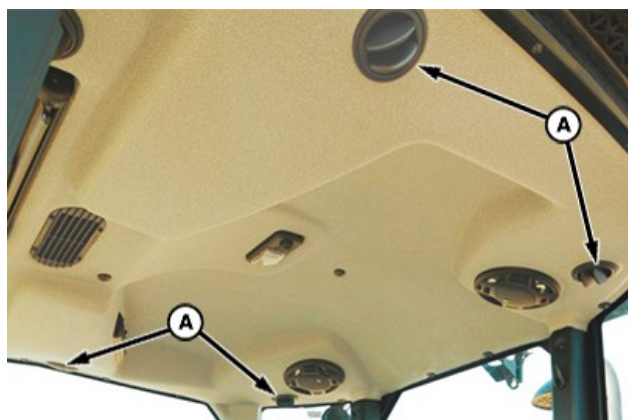
Heater/Ventilation/Air-Conditioning System (HVAC) Operation

CAUTION: Exposure to chemicals, including pesticides, can cause injury or death.

Avoid contact with chemical product. Always use the protection equipment indicated by the chemical manufacturer.

Do not rely only on this cab, cab pressure indicator, or cab air filters to protect against chemical exposure.

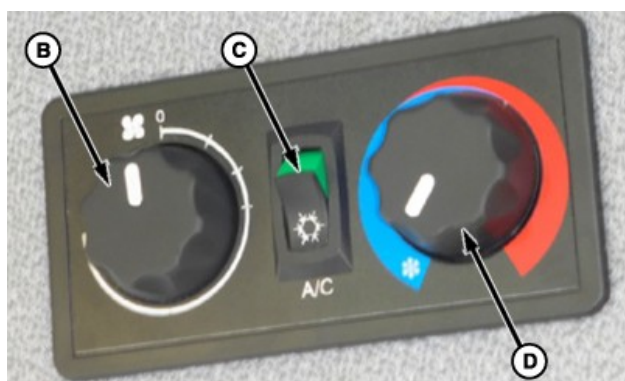
The air filtration of the cab air is made by four carbon activated air filters.



Cab Roof

YE000020—UN—22SEP22

There are adjustable air louvers (A) on the four corners of cab inside roof. To adjust them, rotate and orientate their openings as desired.



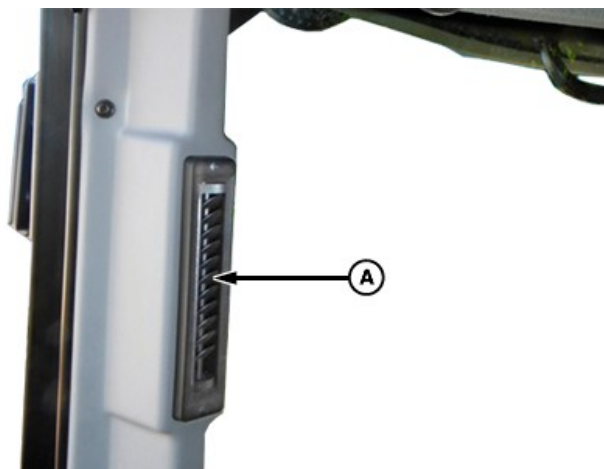
Air Conditioner Switch

YE000021—UN—22SEP22

- To activate the cooling, rotate the temperature set point potentiometer (D) to the blue area according to the desired temperature and press the air conditioner switch (C).
- To activate the heating, rotate the temperature set point potentiometer (D) to the red area according to the desired temperature.¹
- To control the fan speed, rotate the fan speed set point potentiometer (B) to the right-hand side as desired.

¹ Only for machines equipped with John Deere engines.

Defogging



Defogging Air Louver

YE000022—UN—22SEP22

The cab has adjustable defogging air louvers (A) that can be oriented to the viewing areas as desired by the operator.

jtlx7f,1658412116243-19-02SEP22

Using the Air-Conditioning System

CAUTION: Avoid thermal shocks. Do not direct the air flow directly over the head.

CAUTION: The cab air recirculation filter is carbon activated. Do not use paper filters.

The cab air recirculation filter is not designed to filter out harmful chemicals. Follow the instructions from this manual and the instructions given by the chemical manufacturer when using agricultural chemicals. If respiratory protection is required for the use of pesticides, wear an appropriated mask inside the cab.

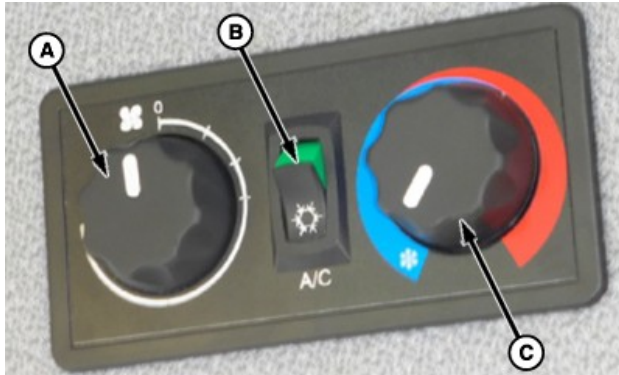
IMPORTANT: Avoid evaporator freezing:

Do not operate with the temperature set at maximum cold. Use this position only at beginning of operation to faster achieve the desired temperature at cab. During this time, in order to not freeze the evaporator, do not let the fan set at minimum speed.

IMPORTANT: Avoid damage to the compressor:

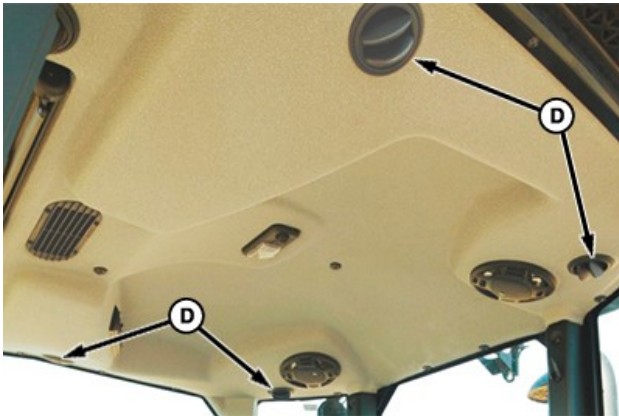
- Do not let the air conditioner without working for more than one week.
- At winter season, turn on the air-conditioning system at least 15 minuter per week. This avoids the drying of the

compressor internal retainers and maintains the system lubrication.



YE000033—UN—22SEP22

1. To activate the air conditioning system, first rotate the fan speed set point potentiometer (A) to the desired position.
2. To activate the compressor, press the air conditioner switch (B) and rotate the temperature set point potentiometer (C) counterclockwise to the maximum position in the blue area (end of course).
3. To obtain the desired temperature, return the temperature set point potentiometer (C) to the desired temperature position.
4. Adjust the fan speed through the fan speed set point potentiometer (A) as desired.



YE000034—UN—22SEP22

5. Adjust the air flow direction through the air louvers (D).
6. Before turning off the system, press the air conditioner switch (B) to turn the compressor off and return the fan speed set point potentiometer (A) to the 0 position.

In case of the cab is too hot after the machine is parked during some time under intense sun:

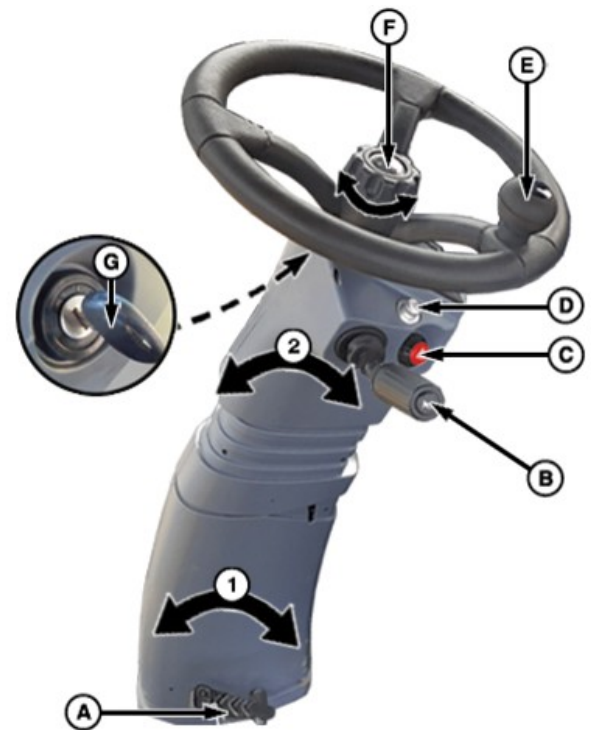
1. Turn on the air-conditioning system through the air conditioner switch (B).
2. Position the temperature set point potentiometer (C) at maximum cold.

3. Position the fan speed set point potentiometer (A) at maximum speed.
4. Open the cab door.
5. Let the system working this way for 3—5 minutes.
6. This process allows the hot air to get out of the cab in a faster way, cooling faster the cab, and minimizing the system effort. Once the excessive heat is eliminated, return the controls to their normal position, as desired.

jtlisx7f,1669144714849-19-22NOV22

Steering Column

The steering wheel tilt can be adjusted in two axes:



YE000023—UN—22SEP22

Steering Column

- **First Tilt Adjust (1):** possible in three positions by releasing the tilt adjust pedal (A) in the steering column base.
- **Second Tilt Adjust (2):** fine and gradual adjust by pressing the tilt adjust button (D).

It is also possible to adjust the steering column height. This adjustment is gradual and can be performed by rotating the height adjustment knob (F) counterclockwise, raising the steering wheel, and positioning it to the desired height. After the steering wheel is adjusted, rotate the height adjustment knob (F) clockwise to lock the position.

The steering knob (E) facilitates the wheel steering movement.

The turn-signal lever (B) is used to indicate turns, control the headlights, and sound the horn.

The key switch (G) is on the right-hand side of the steering column.

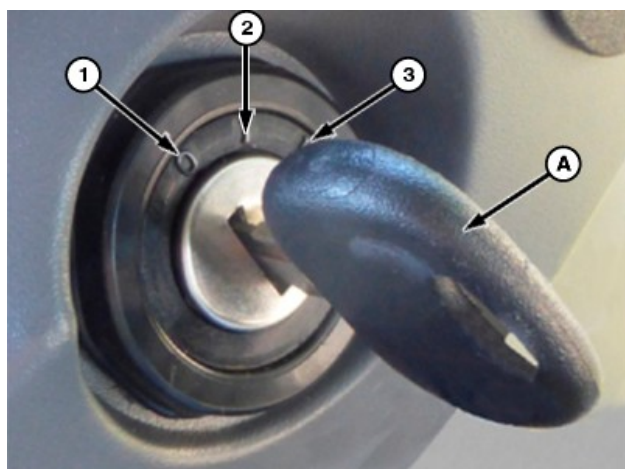
NOTE: For information regarding the key switch (G) positions, see *Key Switch* in *Operator's Station* section.

The hazard warning light switch (C) is used to alert people from the machine presence.

CAUTION: To prevent possible personal injury, always operate the hazard warning lights when traveling on a highway or on public roads, except where prohibited by law.

edw8krp,1672150522226-19-27MAR23

Key Switch



Key Switch

YE000024—UN—22SEP22

The key switch (A) on the right-hand side of the steering column and has three positions:

1. OFF
2. Preheating
3. Machine Start

jtlx7f,1658412159215-19-26JUL22

Right-Hand Side Console

The right-hand side console has all the necessary controls for the operation:

- Engine Speed Control Lever
- Multi-Function Lever

- Speed Range (high/low) Selection
- Control Display
- Control Switches and Buttons

NOTE: The available controls and functions vary according to the machine model and configuration.

NOTE: For details regarding the functions available for each console model, see *Operator Controls* section.

Machines Equipped with Eaton Manual Transmission



YE000025—UN—22SEP22

Machines Equipped with Allison Automatic Transmission



YE000026—UN—22SEP22

edw8krp,1672150610907-19-27MAR23

Windshield Wiper and Washer System



YE010458—UN—28MAR23

Machines Equipped with Eaton Manual Transmission

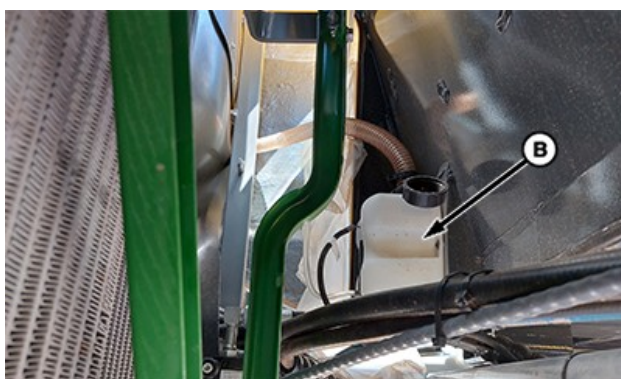


YE010459—UN—28MAR23

Machines Equipped with Allison Automatic Transmission

The windshield wiper and washer switch (A) is on the right-hand side console.

The functioning of the system and of the switch varies according to the machine model and configuration.



YE010186—UN—25NOV22

Machines Equipped with Central Engine



YE010184—UN—25NOV22

Machines Equipped with Central Engine



YE000030—UN—22SEP22

Machines Equipped with Front Engine

For machines equipped with central engine, the windshield washer reservoir (B) is behind the cab, under the engine hood, near to the brake fluid reservoir.

For machines equipped with front engine, the windshield washer reservoir (B) is behind the cab, near to the brake fluid reservoir.

Keep the windshield washer reservoir (B) full of water and some detergent drops. To Fill it, use the the filling cap (C).

edw8krp,1672151521751-19-27MAR23

Electronic System

Instruments

NOTE: The images are for illustrative purposes only. Your machine may have little differences according to model and configuration.



YE000129—UN—22SEP22

The machine is equipped with a Generation 4 Universal Display 4640 (A). This display can be used to view various information, such as:

- Spray Data
- Mapping Data

NOTE: See the Generation 4 Universal Display 4640 Operator's Manual for details.

Nutrient applicators are equipped with an Agrotax AG Fusion display (B) that contains information related to the nutrient application system. (See details in Operating the Nutrient Applicator section.)



YE000130—UN—22SEP22

Another display (C) is available on the right-hand side console. This display allows to navigate between different menus and access additional machine information, such as engine status.

NOTE: To see the available features in the right-hand side console display, see Display of the Right-Hand Side Console in Electronic System section.

The images are for illustration purposes only. Your machine may have little differences according to model and configuration.



YE010207—UN—28DEC22

Self-propelled sprayers with carbon fiber spray booms are equipped with a Niser display (D) that contains information related to solution tank level.



YE010208—UN—28DEC22

Nutrient Applicators are also equipped with a Hook display (E) that contains information related to the nutrient applicator box scales. (See details in Nutrient Application System section.)

edw8krp,1672160444465-19-27MAR23

Display of the Right-Hand Side Console—Overview

The machine is equipped with a 4-in display that allows to navigate between different menus and access various information, such as fundamental engine variables.

- A—Air Pressure
- B—Engine Temperature
- C—Engine Speed Indicator (rpm indicator)
- D—Gear Indicator (only machines equipped with allison transmission)
- E—Engine Oil Pressure
- F—Exit
- G—Fuel Level

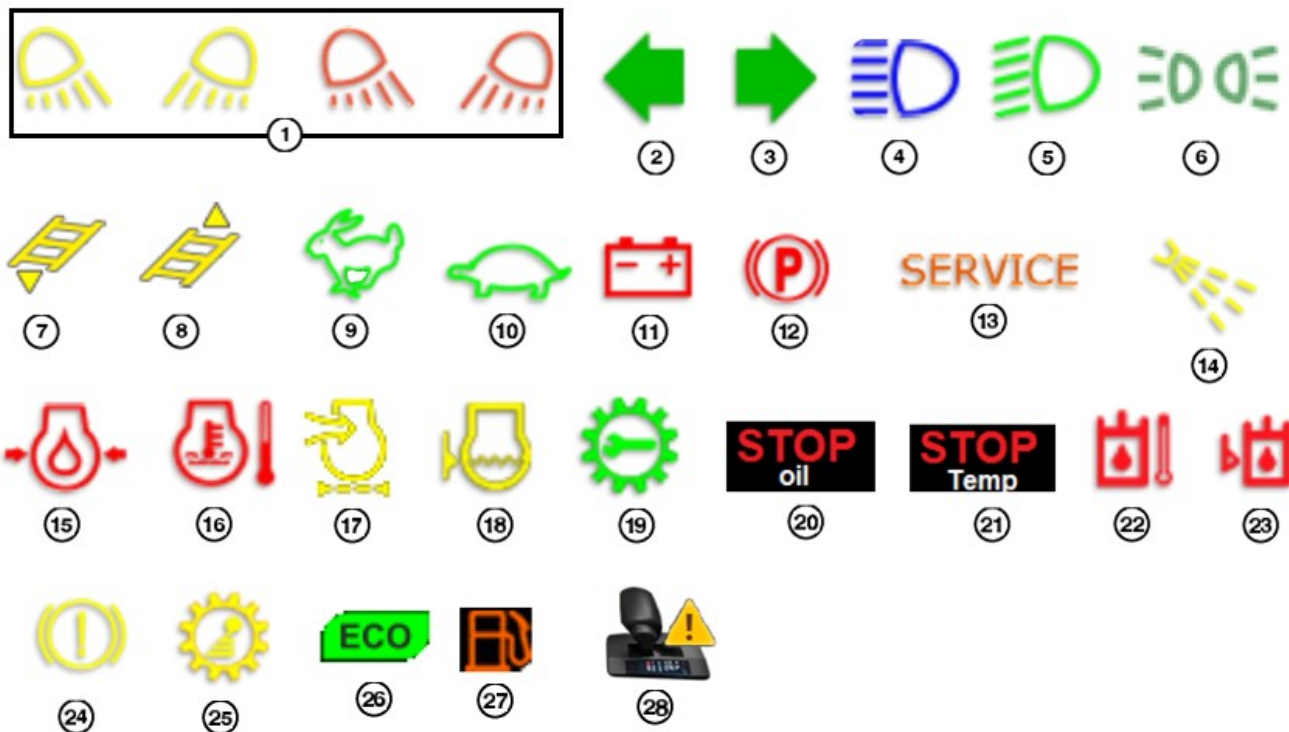
Main Page



YE000131—UN—22SEP22

Indicators

The following indicators are available in the display:



- 1—Roof Worklights
- 2—Left Turn-Sinal Light
- 3—Right Turn-Signal Light
- 4—High-Beam Headlight
- 5—Low-Beam Headlight

- 6—Position Lights
- 7—Ladder Down
- 8—Ladder Up
- 9—Transmission High
- 10—Transmission Low

YE000213—UN—22SEP22

- 11—Battery Warning Light
- 12—Park Brake Activated
- 13—Service Warning Light
- 14—Spraying
- 15—Warning Light of the Engine Oil Pressure
- 16—Engine Temperature Warning Light
- 17—Air Cleaner
- 18—Coolant Level
- 19—Transmission Service
- 20—Low Oil Pressure Shutdown
- 21—Engine Temperature Shutdown

edw8krp,1672167797680-19-27MAR23

Display of the Right-Hand Side Console— Functions



YE010481—UN—31MAR23

The functions of the display can be accessed through the PLA button (A).

The following functions are available:



YE000134—UN—22SEP22

- **Hydraulic Movements (B):** see Hydraulic Movements in this procedure for details.
- **Diagnostic Display (C):** see Diagnostic Display in this procedure for details.
- **Next/Return (D):** proceed to next page or return to previous page (varies according to selected page).
- **Battery Voltage (E):** shows the machine battery voltage.

- 22—Hydraulic Oil Temperature
- 23—Hydraulic Oil Level
- 24—Low Air Pressure
- 25—Allison Inhibited Range (only machines equipped with allison transmission)
- 26—ECO Mode (only machines equipped with allison transmission)
- 27—Fuel Reserve Level
- 28—Allison not Detected (only machines equipped with allison transmission)

- **Hours Until Service (F):** timer for performing the next service.
- **Work Hours (G):** counter that shows the machine work time.
- **General Configurations (H):** see General Configurations in this procedure of rdetails.

Hydraulic Movements



YE000135—UN—22SEP22

Shows the movement being performed by the multi-function lever, as well as the engine speed.



YE000136—UN—22SEP22

To return to main page, press the return button (A).

Diagnostic Display



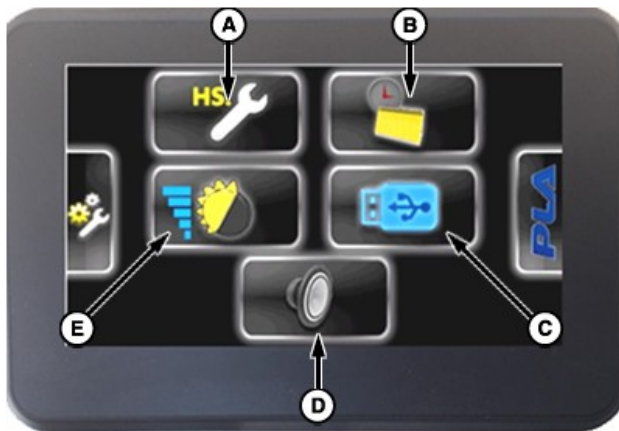
YE000138—UN—22SEP22

Shows the status of the CANBUS connections from the following components:

- Multi-Function Lever
- Buttons/Switches
- Display
- Control Units

This information must be controlled by a dealer technician with the proper knowledge about the machine.

General Configurations



YE000137—UN—22SEP22

A—Warning Configuration for the Next Service

B—Date and Hour Configuration

C—USB for the Display Firmware Update (the USB terminal is under the side console)

D—Silencer

E—Brightness Configuration

edw8krp,1672167803574-19-31MAR23

Operating the Engine and the Transmission

Start Only From Operator's Seat



T133715—UN—15APR13

Avoid unexpected machine movement. Start engine only while sitting in operator's seat. Ensure all controls and working tools are in proper position for a parked machine.

Never attempt to start engine from the ground. Do not attempt to start engine by shorting across the starter solenoid terminals.

TX03679,0001799-19-01NOV05

Engine Fuel System

IMPORTANT: Modification or alteration to injection pump, injection pump timing, or fuel injectors will terminate warranty to purchaser.

Do not attempt to service the injection pump or fuel injectors. Special training and special tools are required. See your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

jtlsx7f,1661190529646-19-09NOV22

Engines with Turbocharger

Not following the correct procedure when starting and shutting off the engine is the main cause of damage to turbochargers. After starting up the engine and before shutting it off, let the engine running for at least 30 seconds without load.

IMPORTANT: If the engine stalls during operation, restart it **IMMEDIATELY**. Doing so prevents the turbocharger from overheating.

K2F379Y,0000500-19-13DEC21

General Recommendations

It is important to know the safety rules and to incorporate them as a routine, avoiding risks and eliminating all cause of possible accidents.

Carefully read this manual before operating the machine, understanding its characteristics and operating limitations. Keep the manual close and consult it whenever in doubt.

Before operating the machine, make sure the equipment is ready to perform the desired task.

jtlsx7f,1661189936424-19-22AUG22

Before Starting Up the Machine

Check the following items before starting the engine:

- Engine oil level.
- Headlights, turn-signal lights, and electrical components are operational.
- Mirrors' position (allowing a good visibility on all angles, without blind spots).

CAUTION: Avoid accidents. Do not forget about the adequate relation between safety and comfort on driving the machine.

- Operator's seat and steering column position.
- Ladder position (it must be raised through its elevation system actuated by switch on side console).

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4x2 Mechanical Transmission

Eaton FS 4205 Transmission-Manual Machines



YE000104—UN—22SEP22

Eaton FS 4205 Transmission-Manual Mechanical Machines

For manual mechanical machines, the transmission system is composed of an Eaton FS 4205 transmission

housing with a cable-actuated gearshift lever, five forward gears plus reverse, and a hydraulic-actuated clutch.

Allison Transmission-Automatic Machines



YE000105—UN—22SEP22

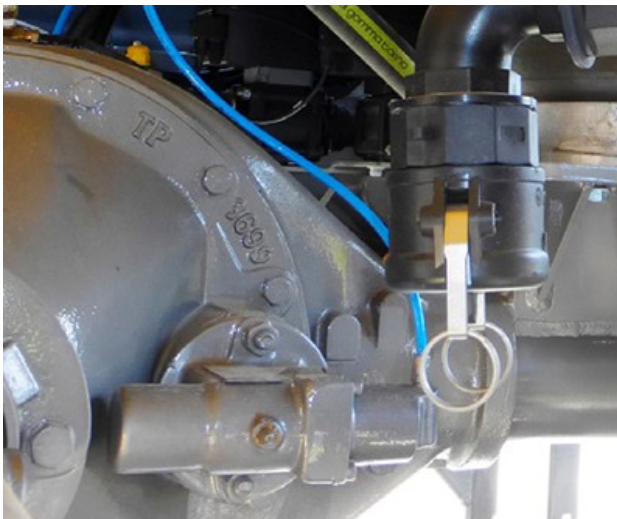
Allison Transmission-Automatic Mechanical Machines

For automatic mechanical machines, the transmission system is composed of an Allison transmission housing of 1, 2D, and OD with ECO mode for saving fuel.

The Allison transmission is driven by a torque converter.

Electronically controlled, it is an automatic transmission (five speed ranges with one over gear).

Differential



YE000106—UN—22SEP22

Eaton 19050 Differential

The machine is equipped with an Eaton 19050

differential. The high/low change is pneumatically actuated.

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Machine Start-Up

1. Engage the park brake.
2. Move the gearshift lever to neutral position.
3. To alert people around machine, sound the horn two or three times
4. Turn the ignition key to start position, releasing it when the engine is started.
5. After 1—2 minutes at low idle, increase the engine speed to 1300—1500 rpm to reach work temperature.

IMPORTANT: Avoid machine damage to hydraulic system:

- If the hydraulic fluid is cold, let the engine running at low idle during 5 minutes. Only increase the engine to high idle after this.

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Machine Indicators and Alerts

Alert lights and indicators monitor the functioning of various important machine features and are essential for safety. In case of malfunction, they alert the operator to stop operation at the current conditions, avoiding irreversible damage to machine.

Restriction Indicator of the Engine Air Cleaner

When the alert indicator light turns on during operation, it indicates that the air filter element is restricted.

Fuel Level Indicator

The fuel level indicator varies from empty (below) to full (above).

Avoid fuel from reaching the reserve level (an alert indicator turns on). Also, do not let the machine becoming out of fuel during operation. This will lead to the necessity of removing air from the system.

IMPORTANT: Damage to the injection pump may occur if it works with air.

When fuel level is low, immediately stop operation and fill the fuel tank to avoid becoming out of fuel at any situation.

Engine Oil Pressure Indicator

When the engine oil pressure reaches a value between 40—75 kPa (0.40—0.75 bar) (5.80—10.88 psi), the engine oil is at low pressure. An alert light turns on

indicating that the engine must be stopped and the issue cause eliminated.

Engine Temperature Indicator

During operation, the temperature must be between 60—120°C. In case of overheating, an alert light turns on.

When this occurs, stop the machine and let the machine in low idle for some minutes until the temperature reaches the specified range.

As soon the engine is stopped, eliminate the overheating cause. Turbine issues or obstructions in the system are some of the possible causes.

Charge Voltage Indicator

The charge voltage of the alternator must be between 12—14 V.

In case of charge system failure, an alert light turns on. At this situation, to avoid damage to electrical system and at microprocessors of the spray control, stop the engine and check the issue cause.

jtlisx7f,1668101915821-19-29NOV22

Movement and Stop of the Machine-If Equipped with Eaton Transmission

To start machine movement, perform the following procedure:

1. Release the park brake (the pneumatic system pressure must be 6 kg/cm²).
2. Press the clutch pedal until end of course and select the desired gear at gearshift lever.
3. Slowly and progressively release the clutch pedal to start moving the machine.
4. To move the machine during transport, use the speed control pedal.
5. Set high/low in differential as necessary.

To stop machine movement, perform the following procedure:

1. Reduce speed and brake the machine.
2. Put the gearshift lever in neutral position and engage park brake.

To stop the engine, perform the following procedure:

IMPORTANT: Avoid damage to the turbocharger (if equipped). Let the engine running at low idle before turning it off.

1. Let the engine running at low idle for at least 1 minute.
2. Turn the ignition key to OFF position and remove it.

3. Disconnect any electrical accessory connected (lights, radio, etc).

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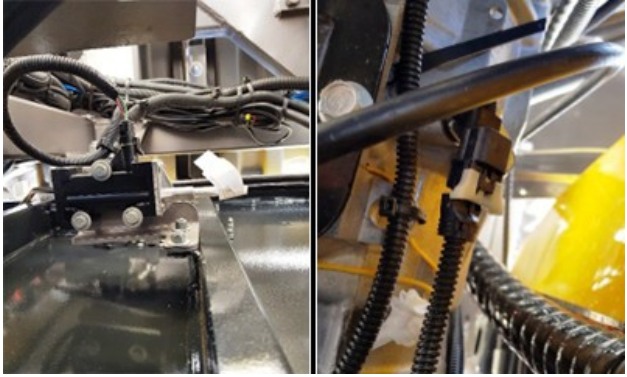
Special Information for the Allison Transmission

IMPORTANT: Avoid transmission damage by following the special instructions listed here:

- Before selecting a gear, make sure the engine is running.
- Keep the brake pedal pressed each time a forward or rearward gear is selected.
- For selecting high/low at differential, the machine must be stopped and the gearshift lever at position N (neutral).
- To move the gearshift lever to position N (neutral), the machine must be completely stopped.
- If it is necessary to weld over the chassis, disconnect the 80-pin transmission connector and turn off the battery cut-off switch.
- After the machine is stopped and the engine turned off, wait for at least 30 seconds before cutting off the power with the battery cut-off switch.
- When the park brake is activated, the gearshift lever must be in position N (neutral).



YE000205—UN—22SEP22



YE000206—UN—22SEP22



YE000207—UN—22SEP22

- When washing the machine, avoid directing pressurized water to transmission system. This may lead to electrical accidents and damage, as well as water entrance in system breathers.

jtlisx7f,1662470935331-19-12SEP22

Movement and Stop of the Machine-If Equipped with Allison Transmission

IMPORTANT: When turning on the engine, a transmission check light turns on at the instrument panel. This light must turn off at normal situation.

If a trouble code is active, the light remains on and can disable the gear change system. At this situation, check the transmission system.

To start machine movement, perform the following procedure:

1. Release the park brake (the pneumatic system pressure must be 6 kg/cm²).
2. With the gearshift lever in neutral (N) position, keep the service brake pedal pressed and select the desired gear. Slowly release the service brake. The machine starts moving at a low speed.
3. To move the machine during transport, use the speed control pedal.

4. Set high/low in differential as necessary.

In a situation where the machine needs to be parked for less than 5 minutes, perform the following procedure:

1. Only let the service brake engaged.
2. To start moving, slowly release the service brake. The machine starts moving at a low speed.
3. Press the accelerator pedal to reach the desired speed.

IMPORTANT: Avoid transmission damage. If the machine is parked for more than 5 minutes, the gearshift lever must be in neutral (N) position.

To stop machine, perform the following procedure:

1. Press the service brake pedal progressively until the machine is stopped (0 km/h [0 mph]).
2. Put the gearshift lever in neutral (N) position.
3. Engage the park brake.

To stop the engine, perform the following procedure:

IMPORTANT: Avoid damage to the turbocharger (if equipped). Let the engine running at low idle before turning it off.

1. Let the engine running at low idle for at least 1 minute.
2. Turn the ignition key to OFF position and remove it.
3. Disconnect any electrical accessory connected (lights, radio, etc).

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Operator Controls and Features

Steering

Attention. The hydraulic steering allows the control of the machine when the engine is stopped, but the required strength is greater at this situation. Proceed carefully.

When reaching the end of the course, do not maintain the steering wheel at this position. Return it a little bit to avoid over pressure on the system.

Clutch Pedal

Do not maintain the foot over the clutch pedal, unless when necessary to change the gear. The use of the clutch pedal as a foot rest leads to premature wear on the clutch assembly.

Park Brake

Whenever leaving the cab with engine running or not, always engage the park brake.

An alert light shows up on instrument panel to indicate

that the park brake is engaged, this way avoiding the machine forward movement with the park brake engaged.

Speed Control Pedal

If the speed control pedal is combined with the engine speed control lever adjusted to low idle, the actuation of the speed control pedal starts when it reaches the point the engine speed control lever is set.

Gearshift Lever and Transmission High/Low Selection

The manual transmission housing (Eaton) has five forward gears and one reverse.

The automatic transmission housing (Allison) has four forward gears and one reverse.

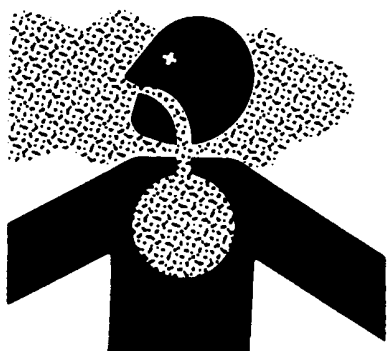
The differential has a high/low mechanism that allows two speed ranges:

- **Low:** used for spray operations.
- **High:** used for machine general movement on field or routes.

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Operating the Sprayer

Avoid Contact with Agricultural Chemicals



TS220—UN—15APR13



TS272—UN—23AUG88

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

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

DX,CABS1-19-25MAR09

Service and Operate Chemical Sprayers Safely



TS272—UN—23AUG88



TS220—UN—15APR13

Chemicals used in agricultural sprayers can be harmful to your health or the environment if not used carefully.

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

Reduce risk of exposure and injury:

- Wear appropriate personal protective equipment as recommended by the manufacturer. (See 'Handle agricultural chemicals safely' found in the Safety Section.)
- Fill, flush, calibrate, and decontaminate sprayer in an area where runoff will not reach ponds, lakes or streams, livestock areas, or gardens, or near other people.
- Keep children away from the chemicals, chemical solutions, and rinsates.
- If spray or chemical concentrate contacts skin, hands, or face, wash immediately with soap and water.

If spray or chemical concentrate gets into eyes, flush immediately with water.
- If nozzle clogs or system malfunctions, stop engine and relieve spray pressure from system.
- Do not place nozzle tips or other components to the mouth to clear obstructions. Keep spare tips on hand for replacement.
- Minimize risk of spray drift.
 - Use large nozzle tips operated at lower pressures

- Do not operate solution delivery system at pressures exceeding 345kPa (3.5 bar) (50 psi).
- Do not spray when winds exceed 16 km/h (10 mph).
- Do not spray when wind is blowing towards a nearby sensitive crop, garden, or populated area.
- Properly dispose of unused chemicals, flushing solution, and empty chemical containers.
- Decontaminate equipment used in mixing, transferring, and applying chemicals after use.

DX,WW,CHEM02-19-05APR04

General Recommendations

The application of herbicides and phytosanitary products is becoming increasingly common throughout agriculture. On majority of the cases, too much attention is given to the product to be used and too little on the machine that applies the product.

The design of the self-propelled sprayers provides different solutions for a good balance between the area covered, the exact dosage of product applied, uniformity in application over the crop, and maximum work autonomy.

PLA BY JOHN DEERE, with its different machine models and various configurations, provides the suitable tool for every situation.

The machine can be described as having two main systems that completes each other: self-propelling and spraying.

The self-propelling system consists of: engine, transmission, differential, brakes, steering system, and all the auxiliary systems related.

The spraying system consists of: eductor, water loading system, solution tank, solution pump, spray boom, nozzles, solution lines, valves, and regulation features used to achieve the goal of the machine.

Together with the descriptions above, the hydraulic system provides the necessary strength for the spray boom movements and any other feature used for facilitating the operation of the machine.

The automation available on PLA BY JOHN DEERE machines varies according to model and configuration chosen, from basic to more automatized and complete versions.

PLA BY JOHN DEERE uses modern technologies on its manufacturing process and incorporates the most advanced control systems of dosage and spraying on the machines, providing the ideal tool for an excellent result.

In all cases, the achieved results depend on various factors. To understand all the important factors to be

considered in the product application, see the remaining procedures available in this section.

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Product Efficiency

Before spraying, make sure to choose the right product. The type and quality must be adequate for the crop care.

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Right Moment for the Application

The right moment for the application varies according to crop and weather conditions, as well as other factors.

Due to the complexity of variables involved in defining the right moment, it is recommended to consult an agronomist.

jtlisx7f,1658858212067-19-26JUL22

Dosage Precision and Uniformity in Application

To achieve precision and uniformity in application, it is essential to have the machine correctly calibrated and the following components in perfect conditions: nozzles, nozzle bodies, pumps, filters, solution lines, regulation systems, and valves.

Nozzles have the function of applying product over the crop and are chosen according to type of application to be performed.

IMPORTANT: Nozzles wear out during usage, affecting the quality of distribution. It is necessary to frequently check their condition to ensure that none of the nozzles varies in more or less than 10% the application average.

The pumps are responsible for transforming the machine mechanical energy in hydraulic energy that transports the solution from the solution tank to the lines, filters, and nozzles, making the solution to come in an adequate pressure to the right application of the product.

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Prepare for Work

The PLA BY JOHN DEERE machines have all the technology needed for an adequate product application, however, in the moment of the operation, the following factors are user responsibility:

1. Make sure that the chosen product is available.

2. Define the field and tracks for application.
3. Analyze the weather conditions.
4. To determine the opportunity of crop care, follow the recommendations of the chemical manufacturer according to crop conditions.
5. Calculate the correct amount of chemical product to be used in order to not remain product in the tank when finalizing the application.

Wind Drift



YE000031—UN—22SEP22

Wind drift refers to every drop that does not reach the target. The reasons may vary: wind, evaporation, rise, or jets.

To minimize the wind drift, pay attention to the following factors:

1. Look for a drop size not excessively big to jet and not excessively little to be carried out by wind, evaporate, or rise.

NOTE: The ideal drop size varies according to weather conditions, crop, and target.

2. Work with the spray boom the lowest as possible without affecting the spray overlap of the nozzles.
3. Use of anti-drifting or wind-assisted nozzles.
4. Avoid working at situations major than 12 km/h (7.46 mph) wind speed, 55% relative humidity, and 36° C temperatures if no technique is used to deal with the adverse conditions.
5. Work with the manufacturer recommended pressures.
6. Use of adjuvants, if necessary.
7. Use of wind tunnel.

Temperature and Humidity Conditions

The success or failure of an application depends mostly of the application weather conditions and the conditions after this process.

It must not rain for at least one hour before or after the application.

Spraying in low relative humidity conditions and in temperatures major than 36° C is not recommended considering that these factors increase the drop evaporation.

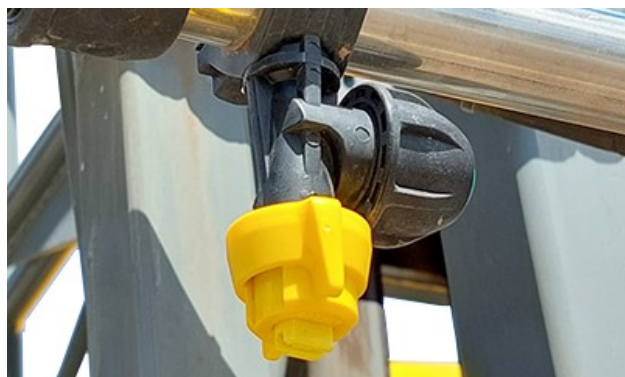
Spray Boom Height Regulation

The spray boom height is an essential factor to achieve an homogeneous application and adequate dosage. This height depends on the nozzle type used and crop being treated.

A great overlap is obtained with a greater height, however, the application is more exposed to wind drift.

See the manual of nozzles and determine the height according to the spray angle and to the spacing between nozzles.

Spray Nozzles



YE010427—UN—16MAR23

Simple Nozzle Body



YE010426—UN—16MAR23

5-Position Nozzle Body

The nozzles are basic elements for a correct uniformity in the product distribution.

Today, nozzles from various types are available in the

market: conventional flat fan, anti-drift and extended range with different work angles, double fan, hollow and full cone, mirror and air assisted, etc.

The type and liquid volume sprayed, the drop size, and the distribution over the ground surface, influence the results in the application against pests and weeds, as well as benefits crop nutrition through liquid fertilizers. These are the reasons why the correct choice of the nozzle type is important.

In order to correctly choose the adequate nozzle type, see the available tables provided by the manufacturers.

IMPORTANT: It is recommended to periodically control the condition of nozzles to make sure that they are correctly achieving their characteristics.

Any obstruction in the nozzle changes the expected dosage.

Machine Maintenance and Care

For a better operation and a higher machine durability, follow machine maintenance and care and instructions, periodicities, and the use of the recommended lubricants and greases.

IMPORTANT: Avoid machine damage:

- Do not operate the machine with inadequate levels of oil, hydraulic fluid, or coolant.
- Do not operate the machine with temperature or pressure out of the specified limits.
- Dirt is dangerous for the hydraulic systems. Due to this reason, only use containers, cleaning cloths, funnels, and hoses that are clean and free of other fluids.

After the daily work, clean the machine as recommended.

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Pneumatic System



YE000039—UN—22SEP22

John Deere Engines

The machine is equipped with a high-yield compressor (A) and a high-capacity air tank on the chassis. This system provides compressed air to the the brakes and to the air suspension system.



YE000040—UN—22SEP22

The combination of the air bags with a regulation valve (B) provides an efficient and smooth suspension system.

The regulation valve (B) limits the pressure of air provided by the compressor (A).

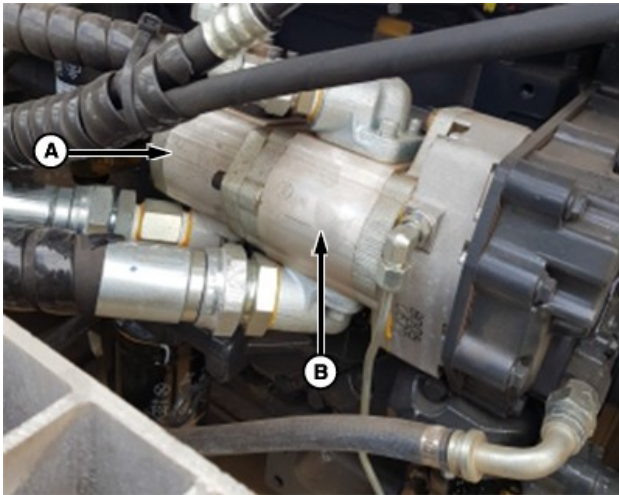
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Hydraulic System

The self-propelled sprayers have a 140 L (37.0 gal) hydraulic reservoir equipped with a sight glass, visual temperature indicator, and low fluid level sensor.

The hydraulic functions of the machine are controlled by electro-hydraulic valves, switches, and buttons on the right-hand console or on the multi-function lever. The hydraulic jack is controlled by a remote control that also actuates an electro-hydraulic valve.

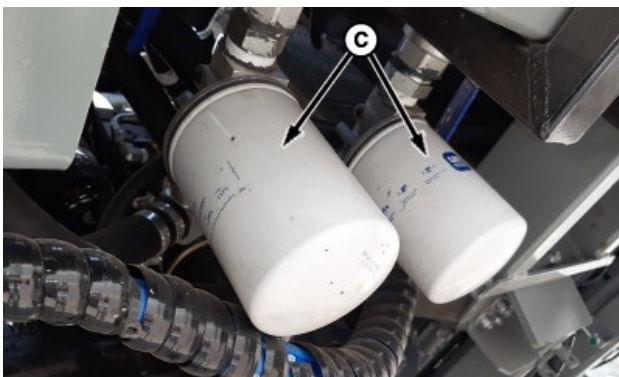
The components of the hydraulic circuit are protected by two relief valves (one for the movement circuit and the other one for the solution pump circuit).



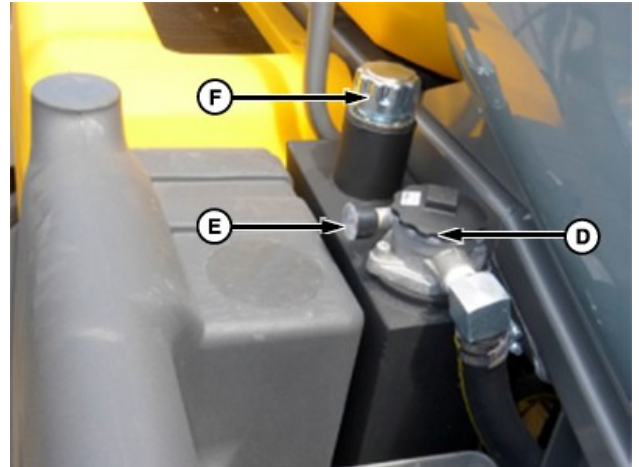
YE000047—UN—22SEP22

The hydraulic requirements for all those movements, as well as the actuation of the charge pump, are provided by a 38 L/min (10 gal/min) pump (A).

At machine models that have hydraulic control of the solution pump, the machine is also equipped with another pump of 52 L/min (13.7 gal/min) (B).

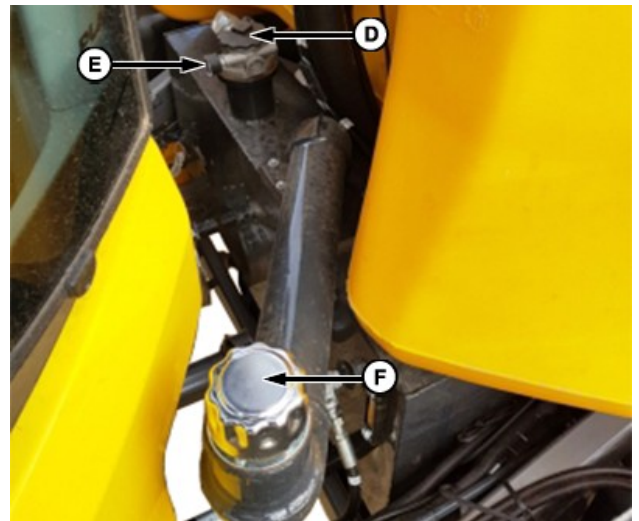


YE000048—UN—22SEP22



YE000041—UN—22SEP22

Machines Equipped with Central Engine



YE000042—UN—22SEP22

Machines Equipped with Front Engine

The cleaning of the hydraulic oil is obtained through two suction filters (C) of 125 µm and one return filter (D) of 10 µm with a restriction indicator (E) near to the filling cap (F).

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Product Application

Carefully read the information contained in this section to determine the parameters of application. Also check the information available in the Safety section of this manual to understand the safety instructions regarding the usage of chemical products.

Apply all products in conformity of:

- Chemical Manufacturer Recommendations
- Recommendations of Agronomists
- Current Legislation
- Instructions Available in this Operator's Manual

Consult your agronomist and use only the recommended: product dosage, nozzles, and pressure.

Respect the intervals between applications, as well as the preharvest interval.

jtlisx7f,1658858762224-19-01AUG22

Before Operating in the Field

- Make sure that enough chemical product is available.
- Precisely determine the area where the machine is going to work on.
- **Humidity and Ambient Temperature:** avoid the application in low relative humidity conditions (less than 55%) or in ambient temperatures major than 36° C, considering that these factors increase the drop evaporation.
- **Wind Speed:** see the Wind Drift information in Prepare for Work procedure, at Operating the Sprayer section.

Weather Conditions: check the weather conditions for the next hours or days. It must not rain for at least one hour before or after the application to not influence the effectiveness of the application.

NOTE: This interval can be greater according to type o chemical product used.

NOTE: The rain before the application is a serious inconvenient considering that soil compaction will be increased due to the high humidity condition.

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Preparing the Equipment

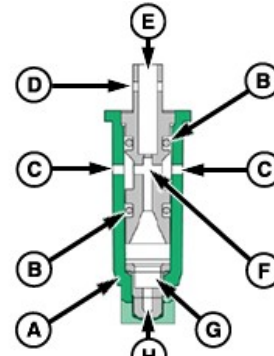
See the chemical product and nozzles manufacturer tables. There are international standards that regulate and catalog the selection criteria.

A wide variety of nozzles are available in the market: flat fan, non-uniform fan, hollow cone, full cone, and other varieties.

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Identifying the Spray Nozzles

Nozzle Parts

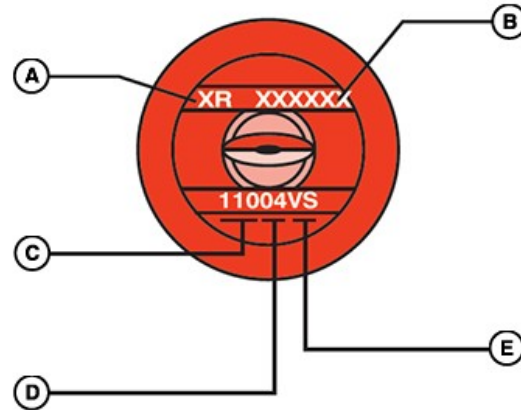


YE000050—UN—22SEP22

- A—Nozzle Tip
- B—O-Rings
- C—Air
- D—Pre-Orifice
- E—Liquid
- F—Injector
- G—Mixing Chamber
- H—Nozzle

Nozzle Codes and Information

CAUTION: Carefully read the safety information available in Safety section regarding the care when dealing with chemical products.



YE000051—UN—22SEP22

Nozzle Frontal Part

- A—Nozzle Type
- B—Brand
- C—Spray Angle
- D—Nominal Nozzle Capacity (0.4 gal/min at 3 bar)
- E—Material

The nozzle has information codes on its frontal part. These codes identify the nozzle characteristics.

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Selecting Nozzles

The suitable nozzle type for each application depends

on crop type and the desired target. This selection is defined by international standards.

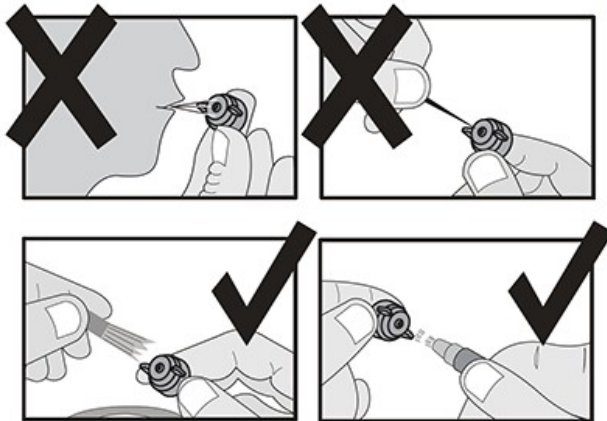
Nozzles have color codes according to flow rate that they achieve. There are nozzles blue, red, green, yellow, and so on.

Other characteristics related to nozzles are: fan type, fan angle, drop size, and others.

On the selection of the most suitable nozzle for each situation, it is recommended to contact an agronomist or the chemical product manufacturer.

Both Arag and TeeJet provide 5-position nozzle bodies. On this cases, the installation of the nozzles is quick and simple. Once the most suitable group of nozzles is chosen according to work to be done, rotate the assemblies in a way that the selected nozzles are positioned down. This way, the flow in the other four outlets will be locked.

CAUTION: Avoid chemical contamination. Never clean a nozzle without suitable precautions and NEVER by blowing it with your mouth.



YE000053—UN—22SEP22

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1. Make sure the solution line filters are clean before performing this procedure. (See Drain and Clean the Solution Line Filters in Service-Solution System section.)
2. Level the spray boom.
3. Check the solution flow rate at each one of the nozzles for the same period of time.
4. Sum the results and calculate an average for the flow rate.

NOTE: The general recommendation is to replace nozzles that are 10% or more above the calculated flow rate average.

5. Replace the nozzles, if needed.

NOTE: For details, see an agronomist and the nozzle manufacturer tables.

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Control Nozzle Conditions

The solution flow rate control must be performed at the recommended pressure by the nozzle manufacturer.

CAUTION: Avoid exposure to hazardous materials that can be poisonous, causing injury. Always use water to perform this procedure.

NOTE: The supplied kit of items contains a graduated container that can be used for this procedure purpose.

The simplest method consists on using graduated containers:

Table of Nozzle Characteristics

The following table is a guide for choosing the most suitable nozzle.

A C O L O R	B N O Z Z L E		C P R E S S U R E	D F L O W	E L/h a				F
	80°	100°	bar	L/min	6.0 Km/h	7.0 Km/h	8.0 Km/h	10.0 Km/h	
G	H AO 8001 100	AO 11001 100	2.0	0.32	63	54	48	38	E
			2.5	0.36	71	61	53	43	
			3.0	0.39	78	67	59	47	
			3.5	0.42	84	72	63	51	
			4.0	0.45	90	77	68	54	
			4.5	0.48	96	82	72	58	
I	AO 80015 100	AO 110015 100	2.0	0.48	95	82	71	58	M
			2.5	0.53	107	92	80	64	
			3.0	0.59	117	100	88	71	
			3.5	0.63	127	109	95	76	
			4.0	0.68	138	116	102	82	
			4.5	0.72	144	123	108	88	

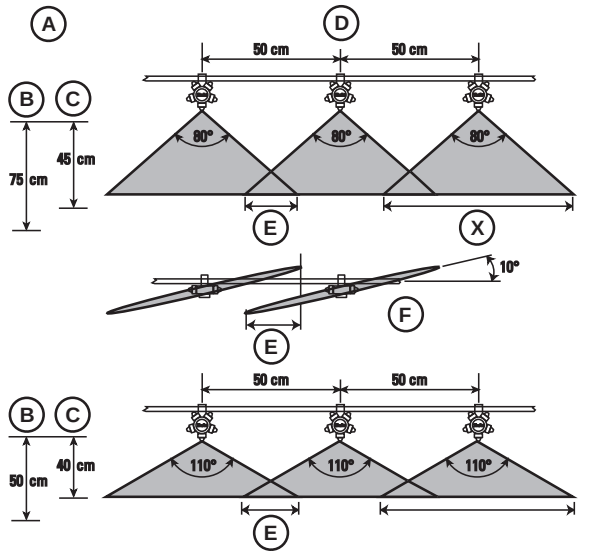
A—Color
B—Nozzle
C—Pressure
D—Flow
E—Recommended Nozzle Spacing by Manufacturer
F—Machine Speed
G—ISO Color Code (indicates the flow)
H—Brand or Model (arbitrary)

I—Number Code of Nozzle Characteristics: first two digits (80) represent the fan angle. Last digits (015) represent the flow in gal/min at 3 bar pressure.
J—Nozzle Filter Mesh Size
K—Work Pressure
L—Nozzle Flow According to Work Pressure
M—Applied Product per Hectare (L/ha) According to Speed and Flow

jtlsx7f,1658858861274-19-19NOV22

Spray Boom Height

Before applying product and define the spray boom operating height, make sure to consider the wind drift conditions and the configuration of the spray lines.



YE000238—UN—28SEP22

Spray Boom Operating Height

- A—Spray Height
- B—Optimized Height
- C—Minimum Height
- D—Nozzle Distance
- E—Recommended Overlap (30% of X)
- F—Top View
- X—Jet Width

The image shows the recommended height for positioning the spray boom according to the nozzle spray angle and a suitable overlap.

NOTE: The image is a reference only. To obtain detailed information and the most suitable configuration for the machine, see an agronomist.

jtlx7f,1658858935637-19-28SEP22

Engine Revolution Counter

The proper and constant functioning of the engine is an important factor for maintaining the correct dosage of the product being applied.



YE010482—UN—31MAR23

This information can be monitored on the engine revolution counter (A) available in the display of the steering column. (For details regarding the display indicators, see the Electronic System section.)

edw8krp,1678468032956-19-31MAR23

Formulas for Calculating Application

$$\text{Solution Flow (L/ha)} = \frac{600 \times \text{Nozzle Flow (L/h)}}{\text{Nozzle Distance (m)} \times \text{Forward Speed (km/h)}}$$

$$\text{Nozzle Flow (L/h)} = \frac{\text{Solution Flow (L/ha)} \times \text{Forward Speed (km/h)} \times \text{Nozzle Distance (m)}}{600}$$

$$\text{Forward Speed (km/h)} = \frac{3.6 \times \text{Distance Traveled (m)}}{\text{Time (s)}}$$

$$\text{Forward Speed (km/h)} = \frac{600 \times \text{Nozzle Flow (L/h)}}{\text{Nozzle Distance (m)} \times \text{Solution Flow (L/ha)}}$$

$$\text{Work Width (m)} = \text{Nozzle Distance (m)} \times \text{Number of Nozzles}$$

$$\text{Effective Work Capacity (h/ha)} = \text{Work Width (m)} \times \text{Forward Speed (km/h)} \times \text{Coefficient of Effective Time}$$

Coefficient of Effective Time for Self-Propelled
Sprayers: 0.50—0.75

Forward Speed for Self-Propelled Sprayers: 5—10 km/h

$$\text{Operating Time (h/ha)} = \frac{10}{\text{Work Width (m)} \times \text{Forward Speed (km/h)} \times \text{Coefficient of Effective Time}}$$

$$\text{Product Quantity (kg/L)} = \frac{\text{Product Dosage (L/ha or kg/ha)} \times \text{Tank Capacity (L)}}{\text{Solution Flow (L/ha)}}$$

$$\text{Machine Autonomy (ha)} = \frac{\text{Tank Capacity (L)}}{\text{Solution Flow (L/ha)}}$$

jtlsx7f,1658858945096-19-07MAR23

Operating the Nutrient Applicator

General Information

This machine is designed for the application of dry solid products (fertilizers or seeds) granulated or powdered. Products with different specific weights and qualities can be used, and at low, medium, or high dosage.

IMPORTANT: Avoid machine damage. The machine MUST NOT be used for:

- Application of liquid or wet products.
- Storage of any kind of product.
- Towing other machines or equipment.
- Transporting people.

NOTE: To achieve greater effectiveness, it is recommended to consult an agronomist. This professional can select the type and the quality of the product to be applied, as well as determine the correct dosage and the correct moment for the product application.

jtlsx7f,1667226114806-19-10NOV22

Performance

The machine provides an homogeneous distribution, regardless the weather conditions at the application moment.

Due to machine height, it is possible to work in advanced stages of crop growth, even on crops with higher heights, such as corn, sunflower, etc, without damaging the crop.

It is possible to perform interseeding or cover seeding before harvesting the last crop, without damaging it.

jtlsx7f,1667226160291-19-10NOV22

Fertilization Functions

- Application of amendments for soil correction.
- Application of powdered fertilizers or full coverage granules:
 - a. During the period of soil preparation for the crop.
 - b. Crops in advanced stage of growth, without damaging crop.
 - c. Splitted over different stages of crop growth, without damaging crop.

jtlsx7f,1667227482301-19-31OCT22

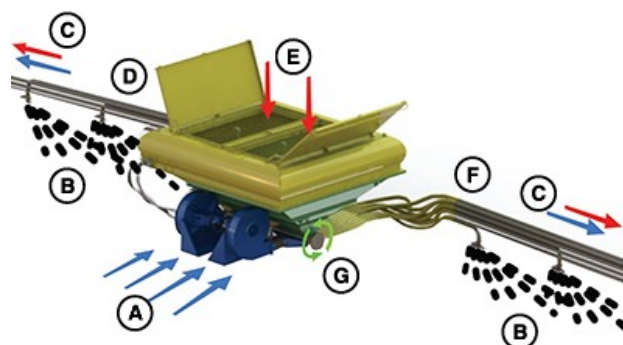
Seeding Functions

- Pasture seeding, cover seeding on stubble, or seeding on an existing crop before harvesting it.
- Interseeding.

- Pasture renovation.
- Grain cultivation.

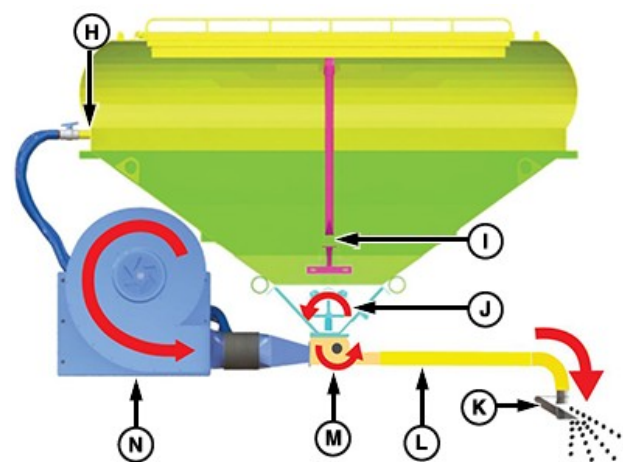
jtlsx7f,1668108924224-19-10NOV22

Pneumatic System of Dosage



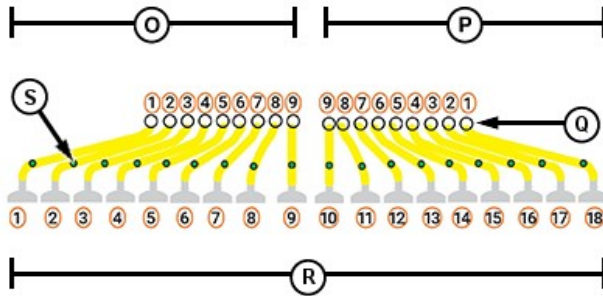
YE000319—UN—28NOV22

- A—High-Flow Air
B—Seed or Fertilizer
C—Air and Product Flow
D—Right-Hand Side
E—Product
F—Left-Hand Side
G—Dosifier



YE000320—UN—28NOV22

- H—Nutrient Applicator Box Pressurization
I—Cover
J—Remover
K—Nutrient Applicator Nozzle
L—Tube
M—Dosifier
N—Turbine



YE000321—UN—28NOV22

- O—Left-Hand Side Dosifier
- P—Right-Hand Side Dosifier
- Q—Outlet Tubes
- R—Nutrient Applicator Nozzles
- S—Sensors

The machine is equipped with a high-flow turbine (N) that pressurizes the nutrient applicator box and generates an air current that passes through the dosifier (M). According to the type of wheel equipped and its turning speed, the dosifier (M) delivers a specific dosage at each outlet tube (Q) that is driven by air till the nutrient applicator nozzles (R).

The nutrient applicator nozzles (R) have a specific shape that allows to obtain an uniform distribution through all the work width of the machine.

jtlx7f,1667227499027-19-05DEC22

Precision Agriculture

This machine allows to work with variable dosage according to the environment.

Through the Agrotax AG Fusion display, it is possible to determine the product dosage to be applied in a manual way, or through multivariable georeferenced prescription map. The dosifier is calibrated and then the system adjusts the turning speed of the dosifier according to the dosage to be applied at each environment and according to the machine forward speed.

The display Agrotax AGFusion also generates an application map that can be used for future analysis of information.

jtlx7f,1667227501151-19-01NOV22

Machine Components

The main nutrient applicator components are shown in the following images:



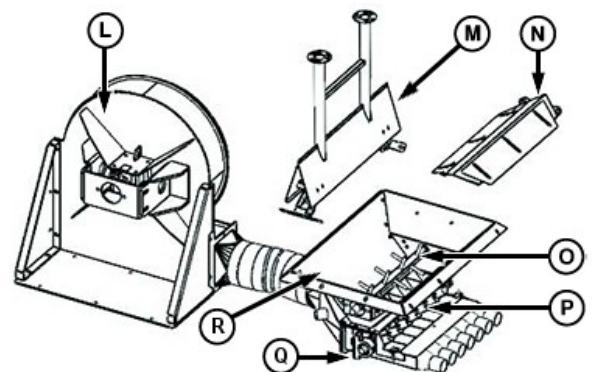
YE000322—UN—28NOV22

- A—Ladder
- B—Manual Compartment
- C—Folding Handrail
- D—Load Cover
- E—Nutrient Applicator Box Cover
- F—Nutrient Applicator Box
- G—Slip Resistant Platform



YE000323—UN—02NOV22

- H—Hoses
- I—Monitoring Sensors
- J—Tubes
- K—Nutrient Applicator Nozzles



YE000324—UN—02NOV22

- L—Turbine
- M—Fixed Cover
- N—Adjustable Cover
- O—Remover
- P—Package of Wheels
- Q—Dosifier
- R—Nutrient Applicator Box Internal Walls

jtlx7f,1667227484165-19-05DEC22

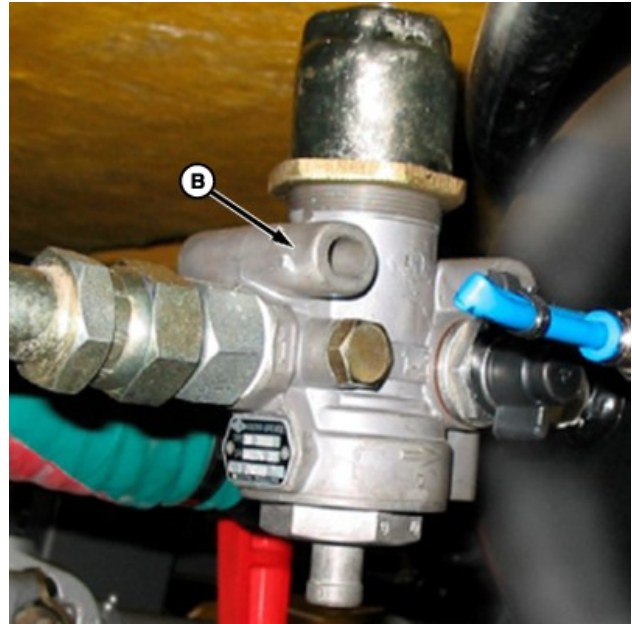
Agrotax AG Fusion Display



YE010408—UN—07MAR23

The agrotax AG Fusion display (A) allows to adjust, control, and register the dosage.

edw8krp,1678212822829-19-23MAR23



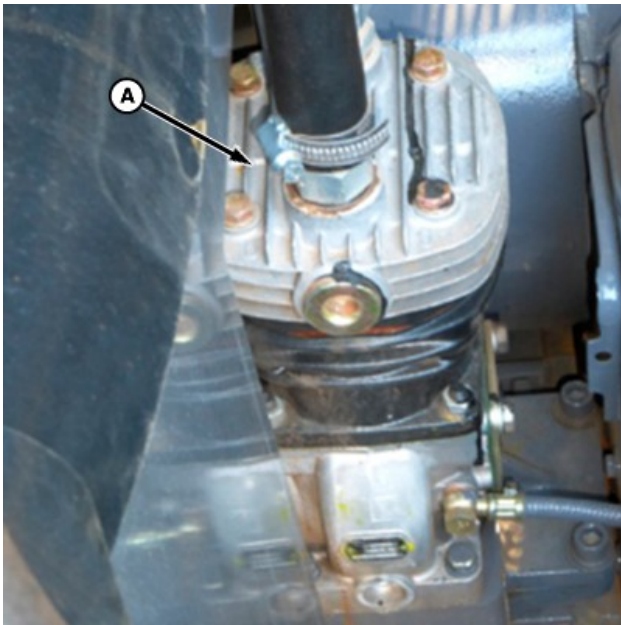
YE000040—UN—22SEP22

The combination of the air bags with a regulation valve (B) provides an efficient and smooth suspension system.

The regulation valve (B) limits the pressure of air provided by the compressor (A).

jtlisx7f,1669148049121-19-28NOV22

Pneumatic System



YE000038—UN—22SEP22

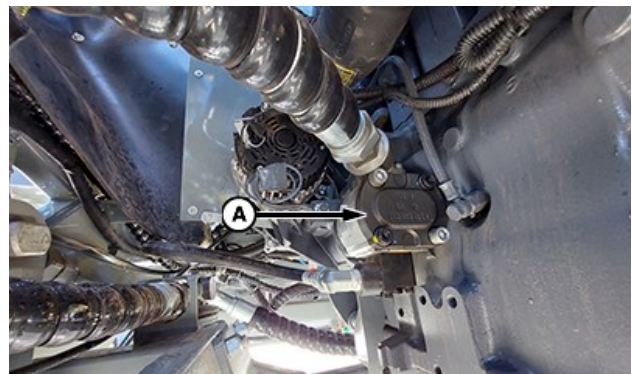
Deutz Engines

The machine is equipped with a high-yield compressor (A) and a high-capacity air tank on the chassis. This system provides compressed air to the the brakes and to the air suspension system.

Hydraulic System

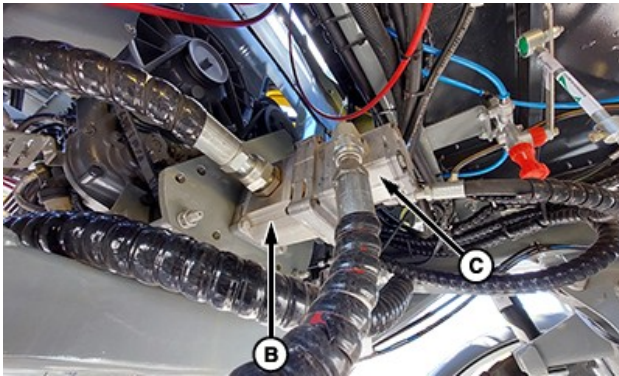
The nutrient applicator have a 160 L (42.3 gal) hydraulic reservoir equipped with a sight glass and low fluid level sensor.

The hydraulic functions of the machine are controlled by electro-hydraulic valves, switches, and buttons on the right-hand console or on the multi-function lever. The hydraulic jack is controlled by a remote control that also actuates an electro-hydraulic valve.



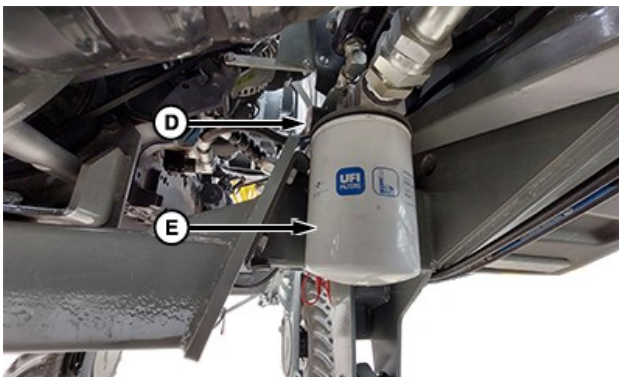
YE000629—UN—07MAR23

The hydraulic requirements for the application boom movements are provided by a 38 L/min (10 gal/min) pump (A). This pump is also responsible for controlling the ladder, the steering system, and hydraulic jack.



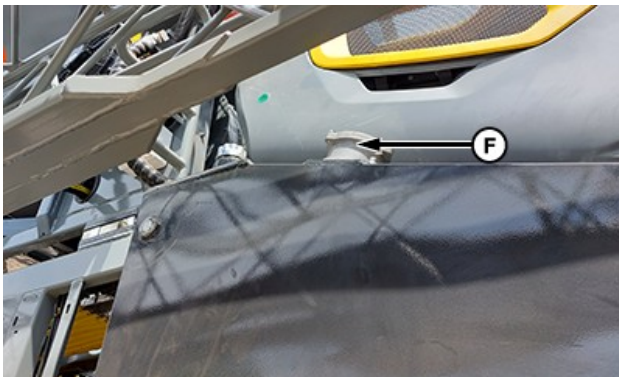
YE000630—UN—07MAR23

Two other pumps (B) and (C) are responsible for controlling the turbines and the dosifier, respectively.

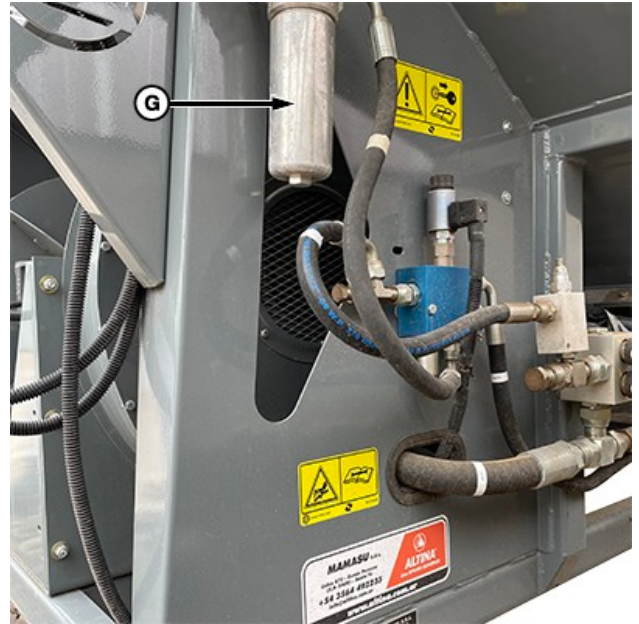


YE000631—UN—07MAR23

The cleaning of the hydraulic oil is obtained through a suction filter (E) with restriction indicator (D).



YE000632—UN—07MAR23

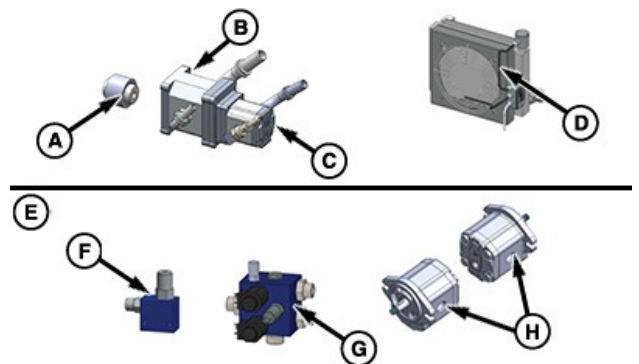


YE000633—UN—07MAR23

A return filter (F) is also present on machine hydraulic system, as well as a pressure filter (G) for the nutrient application system, available on the side of the nutrient applicator box.

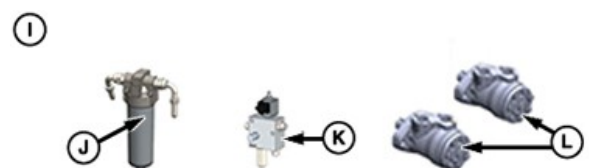
Hydraulic Components—Nutrient Application System

The main hydraulic components of the nutrient application system are shown in the following images:



YE000326—UN—19NOV22

- A—Joint
- B—Turbine Pump
- C—Dosifier Pump
- D—Radiator with Thermostatic Valve and Electric Fan
- E—Turbines
- F—Pressure Limiter
- G—Turbine Lock (ON/OFF and rpm adjust)
- H—Motors



YE000327—UN—19NOV22

I—Dosage
J—Pressure Filter
K—PWM Valve
L—Motors

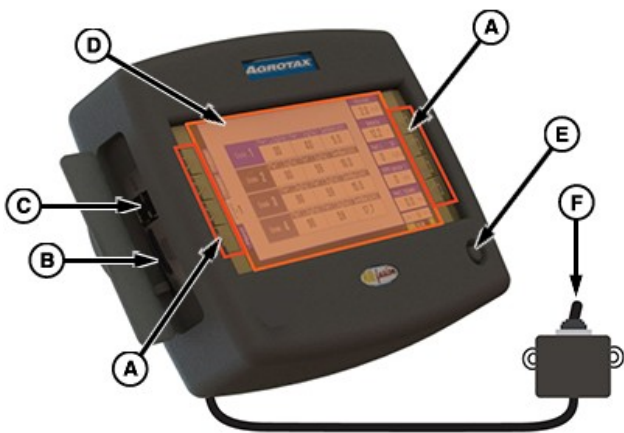
jtlisx7f,1667227488925-19-07MAR23

Turn On and Set the Agrotax AG Fusion Display

IMPORTANT: Avoid machine damage. To correctly operate the system, read the Operator's Manual of the Agrotax AG Fusion display.

IMPORTANT: Avoid machine damage. Turn on and off the machine with the display OFF.

IMPORTANT: Avoid electronic system damage. The memory card or the pen drive must have the FAT format and must be inserted before turning on the Agrotax AG Fusion display. Do not remove them with the display ON.



YE000328—UN—03NOV22

A—Option Selection
B—SD Card
C—USB Port
D—Display
E—Display ON/OFF Button
F—Dosage ON/OFF Button

To turn on the Agrotax AG Fusion display, press the display ON button (E). To turn it off, maintain the same button pressed for some seconds.

jtlisx7f,1667227490391-19-19NOV22

Work Display

The following information is available on display:



YE000329—UN—03NOV22

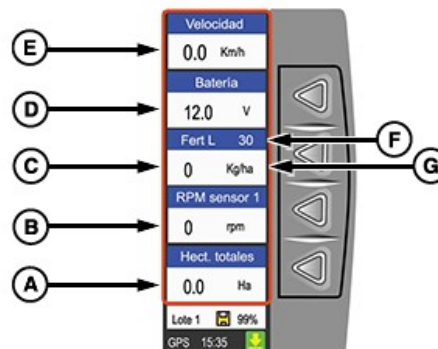
A—Tab Selection
B—Viewing of the Selected Tab
C—Numerical Information
D—Dosifier Status
E—Turbine Speed (rpm)
F—Sensor and Message Information
G—Main Menu

jtlisx7f,1667227491974-19-01NOV22

Numerical Information

This part of the display shows real time information. The boxes can be set to show different information by pressing repeatedly the right-hand side selection buttons related.

It is recommended to set the boxes with the information available in the following image:



YE000330—UN—03NOV22

A—Total Worked Surface
B—Turbine Speed (rpm)
C—Fertilizers/Seeds Dosage
D—Battery Voltage
E—Machine Forward Speed
F—Preset Dosage
G—Real Time Dosage

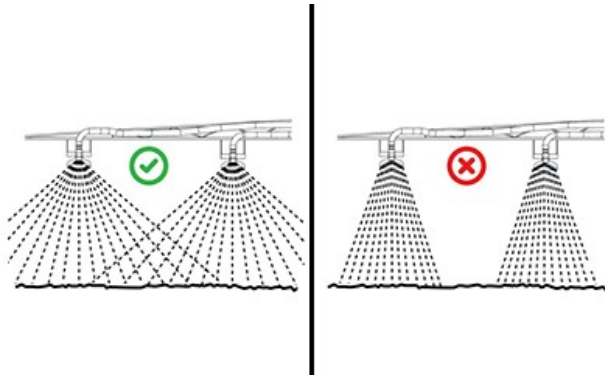
jtlisx7f,1667227493701-19-01NOV22

Adjust the Turbine Speed

The turning speed (rpm) of the turbine determines the air flow that this component will deliver to the dosifier. Higher the rpm, higher the air flow and vice versa.

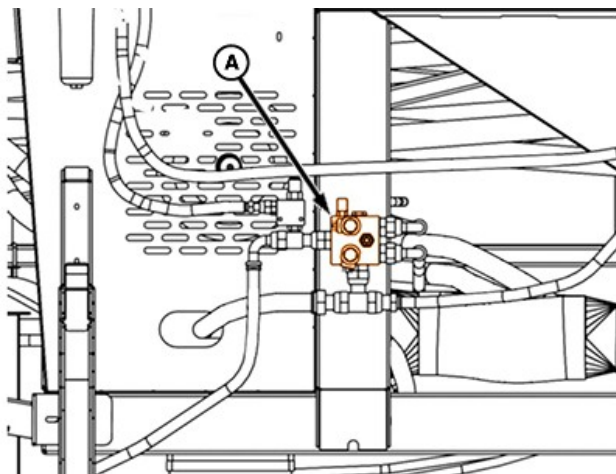
The turbine is factory adjusted at 3200—3300 rpm,

which is an adequate turning speed for most of the fertilizers and thick seeds. For thin seeds, it is recommended to lower the turning speed.



YE000331—UN—03NOV22
Correct/Incorrect Superposition

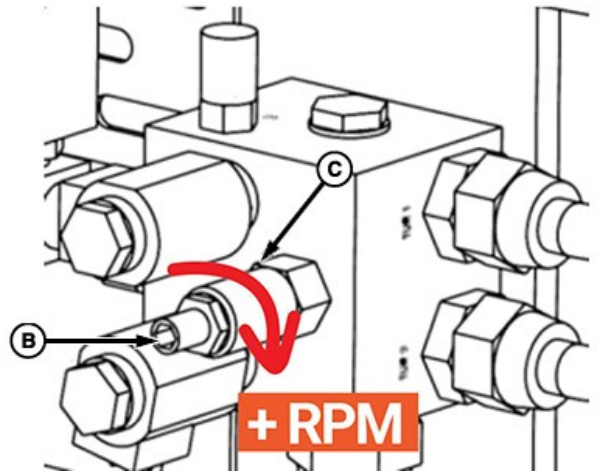
NOTE: If the air flow is too much lowered, some areas may come out of cover. A product superposition must be achieved as the images show.



YE000332—UN—03NOV22

The turning speed of the turbine is adjusted through the hydraulic flow control valve (A).

CAUTION: Avoid serious injury or death. NEVER adjust the turbine speed at more than 3500 rpm. Adjusting the turbine speed for more than 3500 rpm can break the rotor and metallic parts can be thrown at high speeds.



YE000333—UN—03NOV22

The hydraulic flow control valve (A) has a screw (B) to adjust the flow and a nut (C) to lock the screw position once the desired flow is achieved. The turning speed of the turbine is indicated in the Agrotax AG Fusion display.

The following tools are required:

- 19 mm (0.75 in) open-end wrench
- 6 mm (0.24 in) hex socket wrench

To adjust the turbine speed, perform the following procedure:

1. Turn on the machine.
2. Turn on the turbine.
3. Change the machine speed to work speed.
4. Check the turbine speed at the Agrotax AG Fusion display.
5. Release the nut (C) by turning it counterclockwise.
6. Adjust the turbine speed through the screw (B):
 - 1 screw (B) turn is equal to 200 rpm.
 - Rotating the screw (B) counterclockwise increase the turbine speed.
 - Rotating the screw (B) clockwise decrease the turbine speed.
7. Lock the screw (B) position by turning the nut (C) clockwise.
8. Check again the turbine speed at the display. Adjust again, if necessary.

jtIsx7f,1667227602093-19-19NOV22

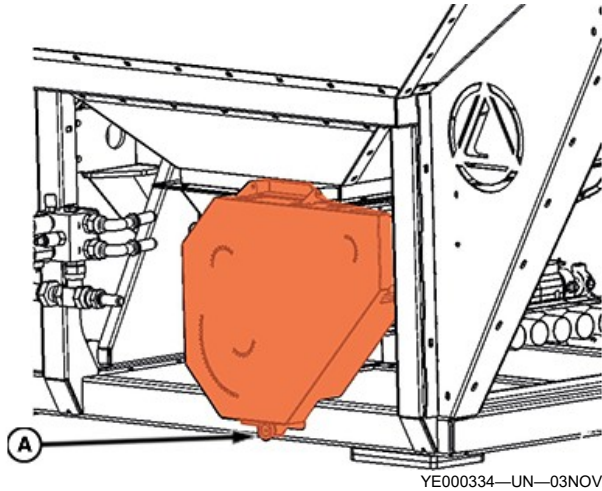
Change the Wheels of the Dosifier

CAUTION: Avoid accidents. Before changing the wheels of the dosifier, stop the machine and remove the ignition key.

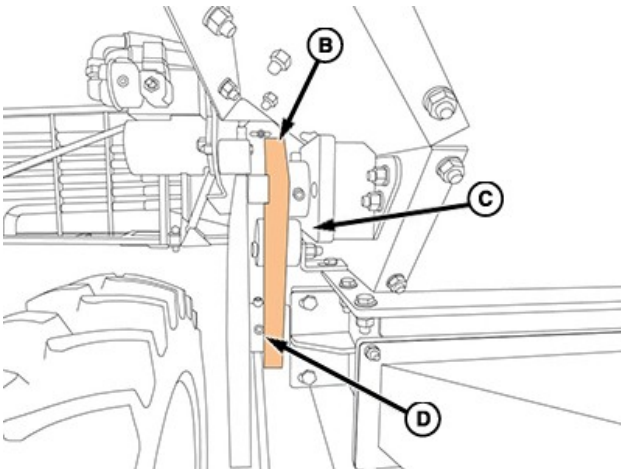
There are different types of wheels for the dosifier, suitable for different material types, qualities, and dosage.

NOTE: The dosifier is standard delivered with a package of helicoidal wheels, another package of 4-blade wheels and a package of thin seed wheels.

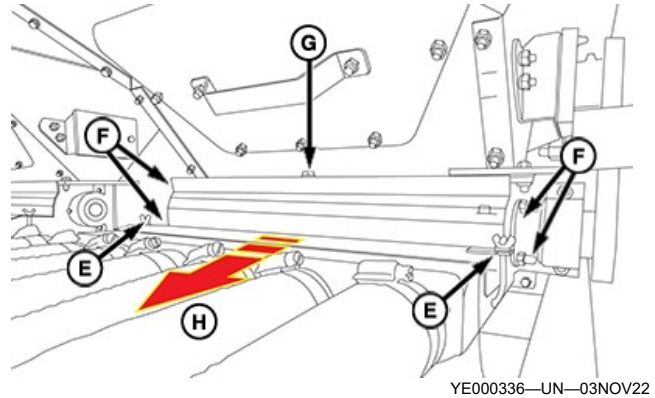
To change the wheels of the dosifier, perform the following procedure:



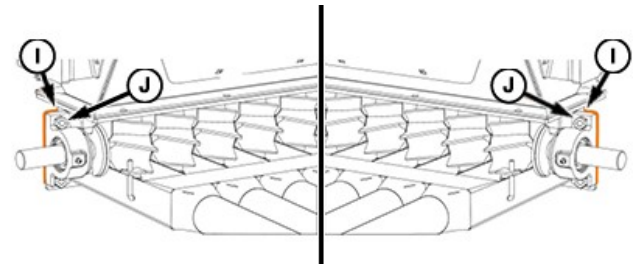
1. Open the side shield by removing the knob (A) that fix the shield on the machine.



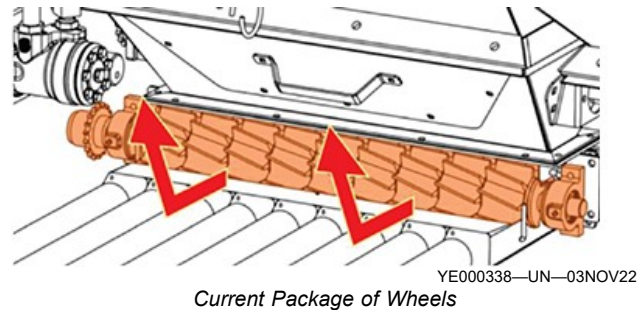
2. Loosen the chain tensioner (C).
3. Remove the chain (B).
4. Remove the sprocket from the dosifier shaft (D).



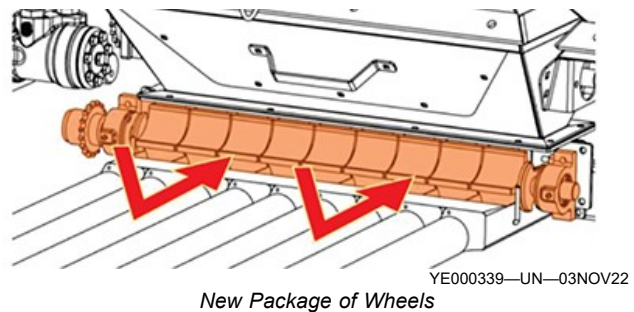
5. Loosen the nuts from the dosifier side covers (F).
6. Remove the wing nuts (E) from the frontal cover.
7. Remove the central nut (G).
8. Remove the frontal cover of the dosifier (H).



9. Remove the nuts of the quills (J) and the spacer (I).



10. Remove the current package of wheels.



11. Install the new package of wheels.
12. Position the spacer (I), install, and adjust the nuts of the quills (J).

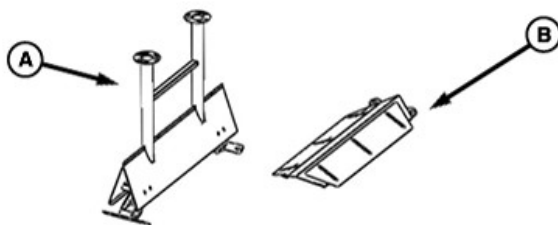
13. Install and adjust the frontal cover (H), as well as the dosifier side covers (F).
14. Install the sprocket of the dosifier shaft (D). Install the chain (B) and adjust the tensioner (C).
15. Close and adjust the side shield of the transmission with the knob (A).

jtlsx7f,1667227611745-19-28NOV22

Change the Remover Cover

CAUTION: Avoid accidents. Before changing the remover cover, stop the machine and remove the ignition key.

The remover and its cover have the function of avoiding product compaction at the dosifier inlet, generating a smooth, gradual, and uniform entry of material at each one of the wheels.



YE000340—UN—03NOV22

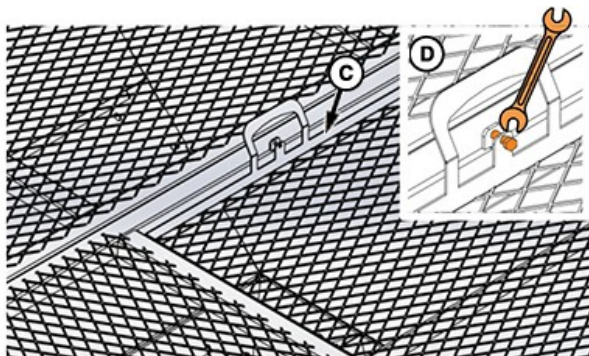
A—Fixed Cover
B—Adjustable Cover

It is possible to choose between two types of covers (A—B) according to the material to be applied.

The adjustable cover (B) is used for the application of powder product.

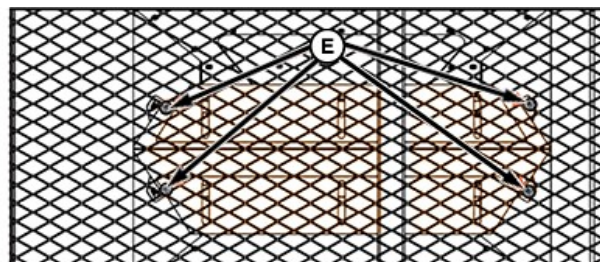
The fixed cover (A) with conditioner is used for the application of granulated, phosphorous, or physical mixtures of specific weight equal to or greater than 1 kg/L.

To change the remover cover, perform the following procedure:



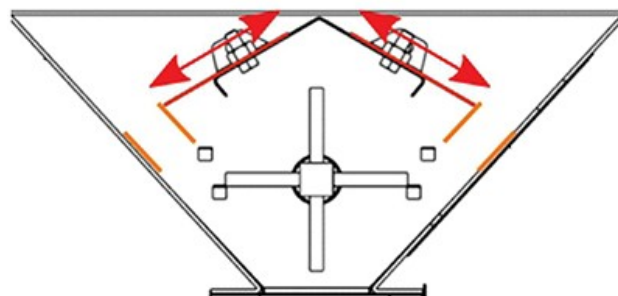
YE000341—UN—03NOV22

1. Using a wrench (D), unlock and remove the screen (C).



YE000342—UN—03NOV22

2. Remove the nuts (E) that holds the cover fixed on the nutrient applicator box.
3. Change the cover.
4. Reinstall and adjust the nuts (E).



YE000343—UN—03NOV22

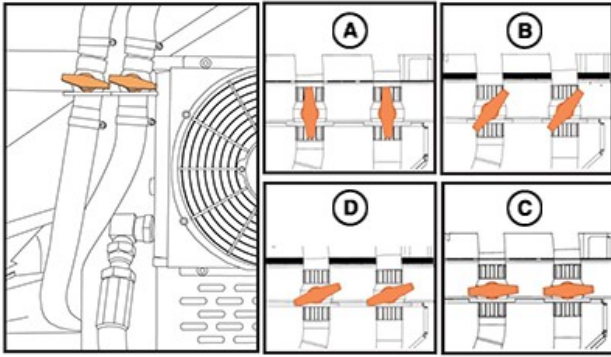
NOTE: When using the adjustable cover (B), its guillotines must be adjusted, providing an opening according to the information available in Machine Adjusts According to Product and Dosage to be Applied in Nutrient Application System section.

5. Reinstall the screen (C) and lock it using a wrench (D).

jtlsx7f,1667227620437-19-05DEC22

Adjust the Nutrient Applicator Box Pressure

Adjust the valves of the pressure hoses according to the indications available in Machine Adjusts According to Product and Dosage to be Applied in Nutrient Application System section.



A—Fully Opened
B—3/4 Opened
C—Fully Closed
D—3/4 Closed

YE000344—UN—03NOV22

Use the image to understand the opening levels (A—D) of the valves according to their positions.

jtlsx7f,1667227628076-19-05DEC22

Machine Start-Up and Operation

CAUTION: Avoid accidents. Before starting the machine, make sure that all shields are correctly installed and that no person is near the machine or in the work field.

1. Start the machine engine.
2. Turn on the display. (See Turn On and Set the Agrotax AG Fusion Display in Operating the Nutrient Applicator section.)
3. Open the application boom. (See instructions in Spray/Application Boom section.)

IMPORTANT: Avoid nutrient application system damage. The turbine must be **ALWAYS** the first component to be turned on and the last one to be turned off.



YE010483—UN—02APR23

4. Turn on the turbine using the control switch (A) available in the side console.

CAUTION: Avoid serious injury or death. **NEVER** adjust the turbine speed at more than 3500 rpm. Adjusting the turbine speed for more than 3500 rpm can break the rotor and metallic parts can be thrown at high speeds.

6. Increase the engine speed until achieve the work speed and check the turbine speed in the display. The turbine speed must be suitable for the product and dosage to be distributed. (See Adjust the Turbine Speed in Operating the Nutrient Applicator section, if needed.)
7. Dry moisture from nutrient applicator box and pipes: let the turbines working for 10 min so the pressurized air will dry the moisture from the nutrient applicator box, dosifier, and conduction pipes.

NOTE: The moisture is common in metal components due to ambient temperature change overnight.

8. Check the dosage system.

CAUTION: Avoid serious injury or death. Danger of particle projections. Make sure that no person is near the rear of the machine.

IMPORTANT: Always check the dosage system before loading the nutrient applicator box. This way, in case of system blockage or malfunction, it will not be needed to manually empty the nutrient applicator box.

9. At the display, perform the following steps:
 - a. Go to the main menu.
 - b. Select dosifier.
 - c. Select dosage calibration.
 - d. Select fertilizer calibration in line.



YE000346—UN—04NOV22

- e. Automatically the dosifier will be turned on and perform ten turns. If no error message is shown at the display, press the Accept button.

NOTE: In case of faults, a message will be shown in the lower portion of the display. See Nutrient Application System Troubleshooting in Nutrient Application System section.



YE000347—UN—04NOV22

B—Dry
C—Hardened
D—Damp

NOTE: To check the product conditions, take a handful of product, tighten it firmly with the hand and then release it. If the product flows freely, it means that it is dry and ready for use. If the product clusters, it means that it is damp and unusable.

10. Stop the machine and the turbine.

CAUTION: Avoid accidents. Always turn off the turbine before loading the nutrient applicator box.

IMPORTANT: Avoid machine damage. The nutrient applicator box must only be loaded in the working field, in the place where the product will be applied. When the machine is not dosifying, it must not be driven from one place to another with the nutrient applicator box loaded due to product compactation that may occur inside the dosifier and generate malfunction when restarting the operation.

11. Check the product conditions: the product must be dry, without moisture, nor hardened. The product must also be free of impurities.

CAUTION: Avoid serious injury or death. Slippage and falling out danger at height. Always keep a 3-point contact when accessing the load zone of the nutrient applicator box. **DO NOT** stand over the screens, nutrient applicator box roof or accessing covers. Always stand over the loading platforms only.

CAUTION: Avoid serious injury or death. Do not climb the machine platforms carrying the product load with you. The machine is designed to be loaded using suitable equipment (bag winch, without strap or lifting belt).

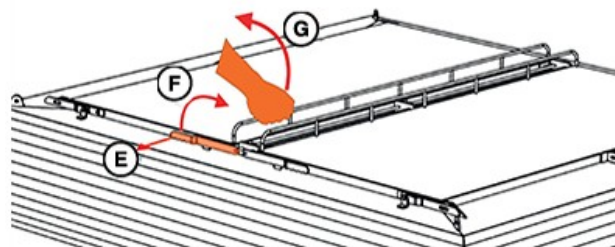
CAUTION: There are fertilizer products, like urea, that in a damp state may become sticky and increase the slippage danger. Always keep the machine in perfect cleanliness conditions, specially the nutrient applicator box loading zone, as well as the accessing ways like platforms and handrails.

CAUTION: The application products may contain chemical substances that are health harmful. Always use protection gloves and personal equipment suitable for chemical products contact. Protective goggles and respiratory protection must also be used.

During the product load, toxic gases and vapors may be released from the loading material. These particles are health harmful. Make sure to position the machine against the wind direction so the working people around the machine will not be exposed to contaminants.

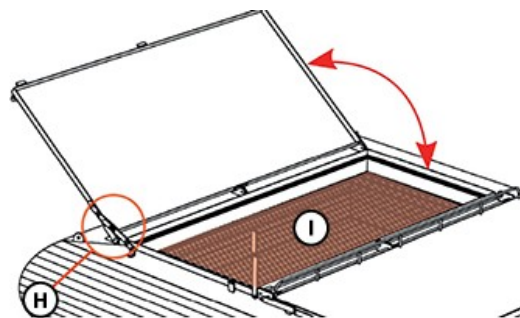
12. Load the nutrient applicator box.

13. Open the cover of the nutrient applicator box:



YE000348—UN—04NOV22

a. Unlock the lever by moving it outward (E) the nutrient applicator box and rotating it clockwise (F).



YE000349—UN—04NOV22

b. Hold the cover knob and open the cover to outside the nutrient applicator box (G) until the cover rests over the rubber supports (H).

IMPORTANT: Avoid nutrient application system damage. The product must pass through the anti-clog screen (I) before entering in the nutrient applicator box. Check that all screens (I) are correctly positioned before starting the load.

IMPORTANT: Avoid nutrient application system damage. Do not exceed the maximum load capacity of the machine. (See Fertilization System in Specifications-MAF 5000 Nutrient Applicator section.)

14. Load the nutrient applicator box with the product to be applied.
15. Once the loading is ended, clean the cover seals, close, and lock the covers properly so air leaks will not occur.
16. Calibrate the dosifier. (See Dosifier Calibration in Operating the Nutrient Applicator section.)
17. Set the dosage to be applied. (See Set the Dosage to be Applied (Manual Way) or Set the Dosage to be Applied (Automatic Way) in Operating the Nutrient Applicator section.)
18. Activate the dosifier. (See Activate the Dosifier in Operating the Nutrient Applicator section.)
19. Start moving the machine.

⚠ CAUTION: Avoid serious injury or death. Machine rollover risks. Reduce the speed when turning the machine. Pay special attention on uneven or sloping terrain.

⚠ CAUTION: Avoid serious injury or death. Before start moving the machine, check that no person is over the machine, near the machine, or on the working field.

NOTE: The working speed may vary from 4—20 km/h (2.5—12.4 mph) according to the product to be applied and the desired dosage.

NOTE: See Operate Correctly at Headlands in Operating the Nutrient Applicator section for instructions at this kind of operation.

20. Check the status of the flow sensors. (See Check the Status of the Flow Sensors in Operating the Nutrient Applicator section.)
21. Control the dosage during operation. (See Control the Dosage During Operation in Operating the Nutrient Applicator section.)
22. Once the application of the product is ended, perform the following procedure:

⚠ CAUTION: Avoid serious injury or death. Risks of crash and crush. Make sure that no person is near the machine.

- a. Turn off the dosifier.
- b. Stop the machine and keep the engine running.
- c. Turn off the turbine.
- d. Turn off the Agrotax AG Fusion display.
- e. Close the application boom.
- f. Turn off the machine.

23. Pay attention to the special care instructions at the end of the daily work. (See Special Care at the End of the Daily Work in Operating the Nutrient Applicator section.)

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Dosifier Calibration

The dosage to be applied (kg/ha) is controlled through the Agrotax AG Fusion display. This control unit is responsible for adjusting the turning speed of the dosifier.

The calibration of the dosifier consists on indicating in the display the specific weight of product that a nutrient applicator nozzle delivers at a certain quantity of dosifier turns.

NOTE: The dosifier delivers a determined volume per turn and the machine is calibrated with the weight of this product. The relation weight/volume is the specific weight of the product. It is very important to calibrate the machine each time the specific weight is changed, like when the product batch is changed or when the ambient humidity varies.

To calibrate the dosifier, the following is required:

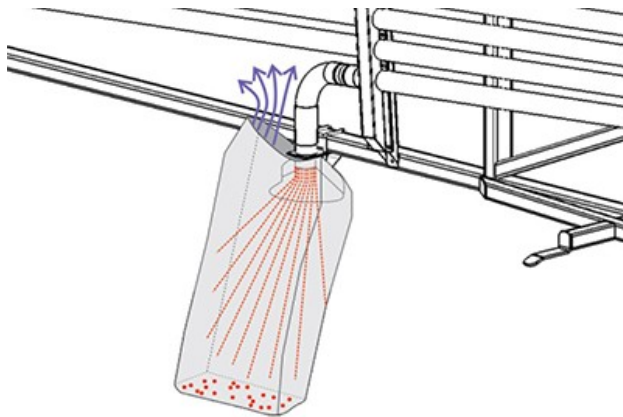
- Precision Scale (max 3 kg/d = 1g)
- Empty Bags (seed bags, for instance)
- Suitable Container for Measuring the Product Weight

To calibrate the dosifier, perform the following procedure:

1. Turn on the turbines and let the machine engine running at working speed.
2. Check the turbine speed in the display. (See Machine Adjusts According to Product and Dosage in Nutrient Application System section for turbine speed information.)
3. Go to the main menu.
4. Select dosifier.

5. Select dosage calibration.
6. Select fertilizer calibration in line.
7. The dosifier is activated and performs ten turns distributing the product through the nutrient applicator nozzles.
8. Press the accept button (A).

NOTE: This first delivery of products from the dosifier is not collected for weighing, considering that the first load may not be completely uniform and may generate a calibration inaccurate.



YE000351—UN—04NOV22

9. Position the empty bags distributed on the nutrient applicator nozzles, leaving a space for air leaks as indicated in the image.
10. On display, return to the fertilizer calibration in line.
11. Remove the bags from the nutrient applicator nozzles.
12. Tare the empty container.
13. Insert the collected product from each bag inside the container.
14. Measure the weight of the container with the product.
15. Divide the weight per the quantity of bags used.
16. Insert the specific weight of the product (in grams) in the display:



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- a. Insert the weight (in grams) in the box (B) by using the buttons (C) to insert the desired value.

- b. Press the accept button (A).

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Set the Dosage to be Applied (Manual Way)

1. On display, go to the main menu.
2. Select dosifier.



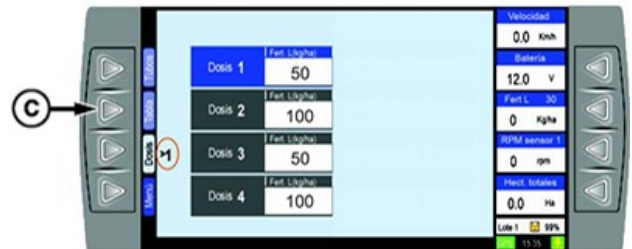
YE000353—UN—04NOV22

Manual Dosage Page

3. Select manual dosage.
4. Insert the values for the dosis to be applied in kg/ha in the boxes (A).

NOTE: Up to four different dosage values can be set.

5. Make sure to consider the minimum and the maximum values to be applied in the box (B). This value is automatically shown according to the calibration of the dosifier.



YE000354—UN—04NOV22

6. In the dosis page it is possible to select one of the dosages to be applied by pressing the button (C) repeatedly.

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Set the Dosage to be Applied (Automatic Way)

1. On display, go to the main menu.
2. Select dosifier.



YE000355—UN—04NOV22

3. Select automatic dosage. A list of all existing valid prescriptions in the SD memory is shown.



YE000356—UN—04NOV22

Dosage Map

4. Select a prescription and then the dosis tab will shown the zone that belongs to each batch section and the dosis that must be applied to each one of them.

NOTE: To correctly set and operate the system, read the Operator's Manual of the Agrotax AG Fusion display.

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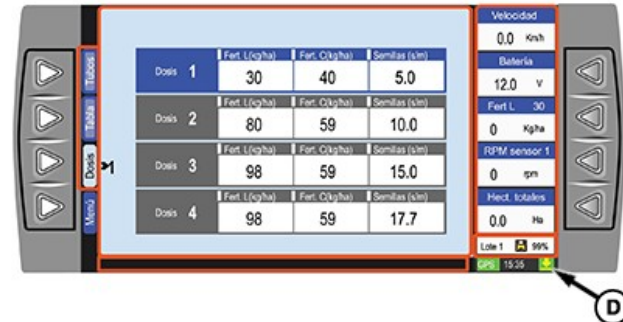
Activate the Dosifier



YE010409—UN—10MAR23



YE000357—UN—09NOV22



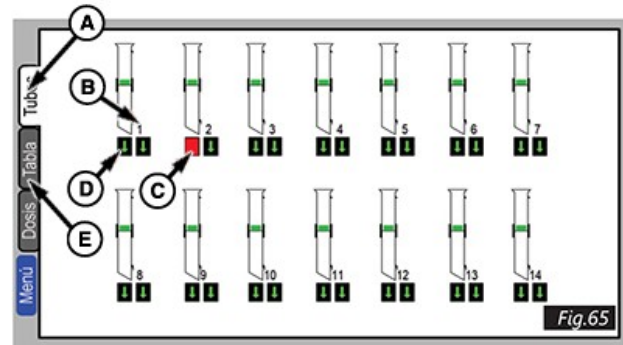
YE000358—UN—09NOV22

- A—Control Button
- B—ON
- C—OFF
- D—Dosifier Working
- E—Dosifier Stopped

1. Turn on the dosifier using the control switch (A).
2. On display, check for the dosifier working (D) symbol.

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Check the Status of the Flow Sensors



Tubes Tab

YE000361—UN—07NOV22

At the tubes tab (A), the status of each one of the sensors is shown. The number of the nutrient applicator nozzle (B) is indicated, as well as the flow sensor status. If the symbol (D) is shown, there is fertilizer flow. If the symbol (C) is shown, an error is occurring.

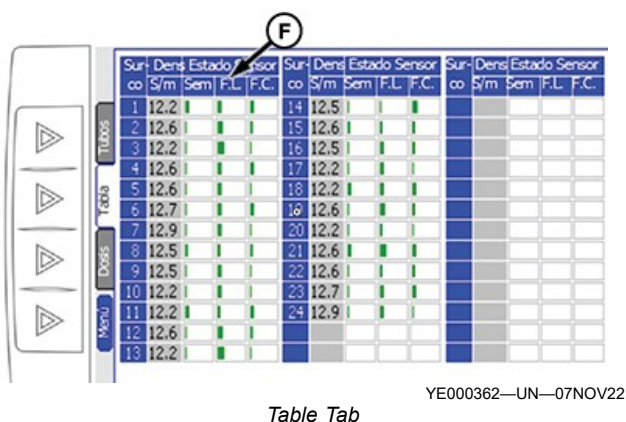
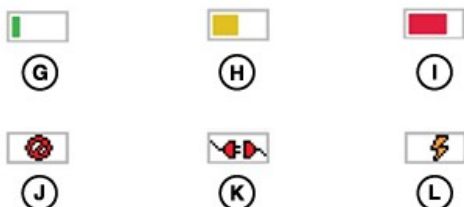


Table Tab

YE000362—UN—07NOV22

At the table tab (E), more details of the sensors are shown at the F.L. column (F).



G—Sensor OK with Low Level of Dust
H—Sensor OK with Medium Level of Dust
I—Sensor OK with High Level of Dust
J—Sensor Disabled
K—Sensor Disconnected
L—Sensor with Cable Shorted

YE000363—UN—07NOV22

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Operate Correctly at Headlands

IMPORTANT: Avoid nutrient Application System damage. Do not turn off the turbine at headlands. This may lead to damage in the system due to pressure peaks.

To avoid overapplication, turn off the dosifier when reaching a headland. When leaving the headland, turn on the dosifier again.

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Control the Dosage During Operation

1. Perform the dosifier calibration each time the product to be applied is changed, the product batch is changed, or when the ambient temperature has a large variation. (See Dosifier Calibration in Operating the Nutrient Applicator section.)
2. If none of the situations above occur, perform the dosifier calibration at least twice a day.

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Moving the Machine to Another Field

CAUTION: Avoid serious injury or death. Travelling with the nutrient applicator box loaded besides damaging the system, increases rollover risks due to the change on the machine gravity center.

IMPORTANT: Avoid nutrient application system damage. The machine must not be driven from a field to another with the nutrient applicator box loaded due to product compaction that may occur inside the dosifier and generate malfunction when restarting operation.

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Special Care at the End of the Daily Work

CAUTION: Avoid health injury or death. Besides causing machine damage, leftovers in dosage system may generate health harmful vapors.

IMPORTANT: Avoid machine damage. At the end of the daily work, leftovers must not remain in the dosage system. The products used in the system absorb moisture, group, and compact, generating system malfunction or components breakage when the machine returns to operate.

If leftovers remain in the nutrient applicator box at the end of the daily work, the dosifiers must be turned on with the machine stopped so the bottom of the nutrient applicator box is cleaned according to the following procedure:

1. Turn on the turbine and let it running in the work speed.
2. Turn on the dosifier.
3. On display:
 - a. Select main menu.
 - b. Select installation options.



YE000364—UN—09NOV22

Speed Configuration Page

- c. Select speed configuration (A).

4. Select speed selection (B).



YE000365—UN—09NOV22

5. Set the manual speed box using the buttons (D).
6. Select manual speed insert (C).



YE000366—UN—09NOV22

7. Set the speed box to 10 km/h (6.2 mph) using the buttons (E). Let the system working for some minutes until the nutrient applicator box and the dosifier system are empty. After this, return to 0 km/h (0 mph) and press the return button.
8. Select speed selection (B) again.



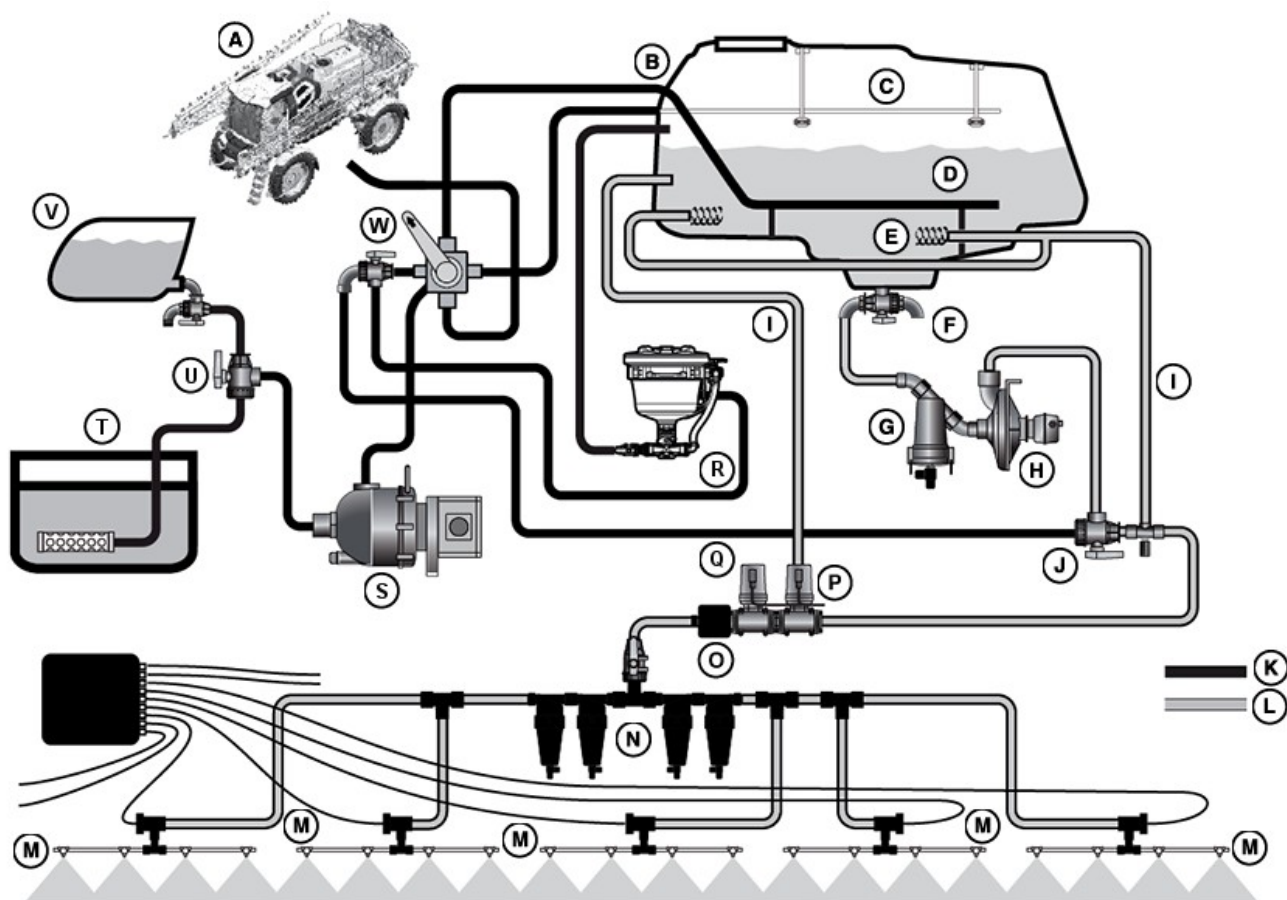
YE000367—UN—09NOV22

9. Using the buttons (F), set the box to GPS option.
10. Press the return button.
11. Turn off the dosifier.
12. Turn off the Agrotax AG Fusion display.
13. Turn off the turbine.

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Solution System

Overview



Solution System

YE000061—UN—22SEP22

- A—Machine Wash
- B—Water Load of Solution Tank
- C—Tank Rinse Nozzles
- D—Solution Deposit
- E—Solution Agitation
- F—Solution Tank Drain
- G—Primary Filter
- H—Solution Pump
- I—Return
- J—3-Way Valve
- K—Load System
- L—Spray System

- M—Section Shutoff Valves
- N—Solution Line Filters
- O—Flowmeter
- P—Shutoff Valve
- Q—Regulation Valve
- R—Eductor
- S—Load Pump
- T—Water Inlet with Lower Filter
- U—3-Way Valve
- V—Rinse Tank
- W—5-Way Valve

The schematic represents the solution system of the self-propelled sprayers.

The machine is equipped with 5-position or simple nozzle bodies.

The load pump (S) and the solution pump (H) are actuated by hydraulic motors.

There are spray section control valves of five, nine, or 13 sections. The mixed spray lines (for all models) that allow to work at 35 cm (13.78 in), 52.5 cm (20.67 in), and 70 cm (27.56 in) nozzle spacing, are made of stainless steel pipes of 19.05 mm (0.75 in).

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Safety Equipment

⚠ CAUTION: Exposure to chemicals, including pesticides, can cause injury or death.

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

Use protective equipment in accordance to the instructions given by chemical's manufacturer and follow the Safety recommendations available in the Safety section of this manual.



YE000063—UN—22SEP22

The safety and hygiene kit contain all the necessary equipment to perform any task that involves contact with chemical products for agriculture, providing safety and protection to the operator's health.

This equipment must be used to avoid exposure to chemical products.

Carefully wash any exposed part of your body after work, specially before eating, drinking, smoke, and using the bathroom.

For additional information on the handling and use of pesticides, see www.casafe.org.

The safety and hygiene kit contains:

- Mask with activated carbon filter for organic vapors.
- Waterproof fabric equipment with visual protection.
- Nitrile gloves.

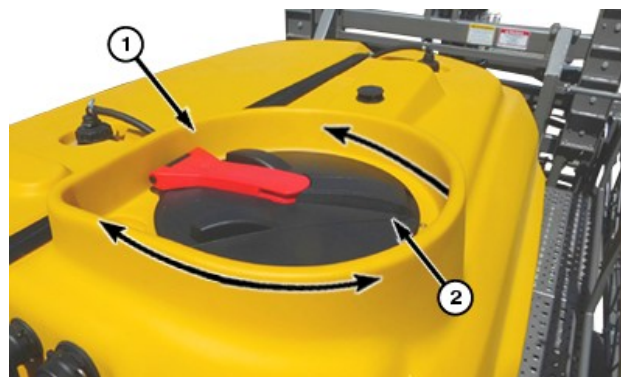
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Solution Tank

The solution tank is made of rotational molded polyethylene. Its inner surfaces allows a correct wash, avoiding this way incrustations of chemical product leftover. An external connection for washing completes an efficient rinse.

The solution tank is equipped with a level indicator and high- and low-level sensors that avoid solution pump to run dry and to be damaged.

The tank is fixed to the machine structure in three points and isolated from the chassis torsion movements with rubber.



YE000062—UN—22SEP22

It is equipped with quick opening lid (2) with airtight closure and an anti-spill protection edge (1) with return drain. To open the lid (2), rotate it.

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Solution Tank Level Control

Once the quantity of solution to be load is set on the machine display, the measurement and shutoff of the load is carried out by an electronic device (if equipped) over the spray panel.



YE000064—UN—22SEP22

The tank level is controlled through software or through a level indicator ruler on the left-hand side of the machine. The ruler contains a safety zone marked for foaming during product filling.

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Rinse Tank



YE000069—UN—22SEP22

Rinse Tank - Machines with Central Engine



YE000068—UN—22SEP22

Rinse Tank - Machines with Front Engine

The rinse tank is made of rotational molded polyethylene and has the capacity of 250 L (66.04 gal) for the machines equipped with central engine, and 400 L (105.67 gal) for the machines equipped with front engine.

This tank is used for external and internal washing of the machine, as well as for the triple washing of chemical product containers.

There is a visual indicator to control the quantity of water available in the tank.

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Clean Water Tank



YE000065—UN—22SEP22

Clean Water Tank - Machines with Central Engine



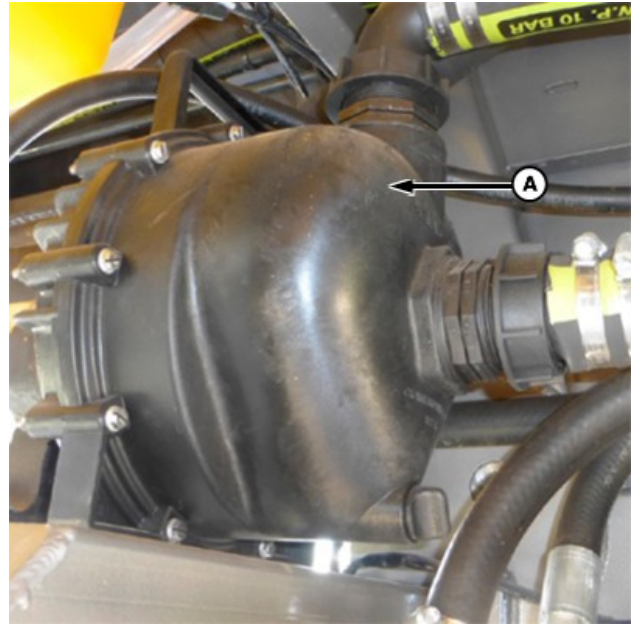
YE000067—UN—22SEP22

Clean Water Tank - Machines with Front Engine

The machine contains an independent 15 L (3.96 gal) clean water tank with register, as well as a compartment that allows to carry soap and a towel.

The clean water tank is on the right-hand side of the machine.

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YE000070—UN—22SEP22

All sprayer models are equipped with a centrifugal pump (A) for water load and washing the machine.

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Solution Pump



YE000071—UN—22SEP22

The solution pump (A) is centrifugal and made of stainless steel.

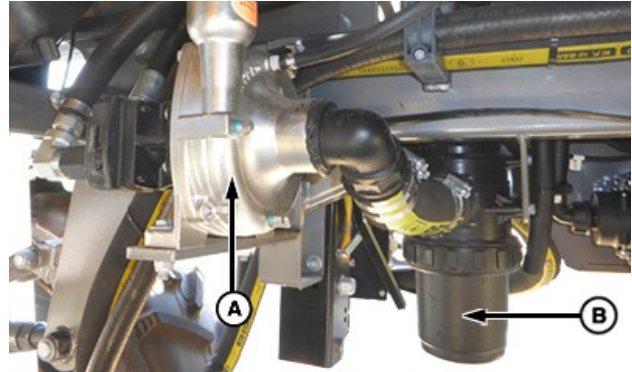
The solution pump flow capacity for the 2900 Sprayer is 390 L/min (103.03 gal/min). For other sprayer models, the solution pump flow capacity is 540 or 810 L/min (142.65 or 213.98 gal/min).

IMPORTANT: For details, see **Solution System in Specifications** section according to the sprayer model.

All solution pump (A) models are hydraulic controlled.

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Solution Filters



YE000072—UN—22SEP22

Primary Filter

All sprayer models have a primary filter (B) before the solution pump (A).

Load Pump



Line Filters

YE000073—UN—22SEP22

The machine also has line filters (C) on the spray boom, after the solution pump (A).

All filters have valves that interrupt the water flow, making possible to disassemble and clean the components.

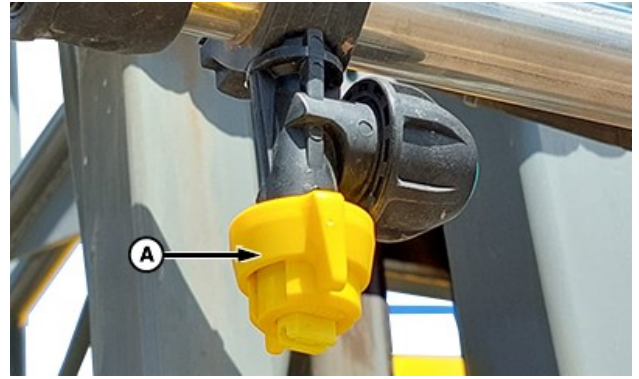
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Spray Lines and Nozzle Bodies

All sprayer models have a mixed spray line that allows to work at 35 cm (13.78 in), 52.5 cm (20.67 in), or 70 cm (27.56 in) nozzle spacing. The spray line is made of 19.05 mm (0.75 in) stainless steel pipes.

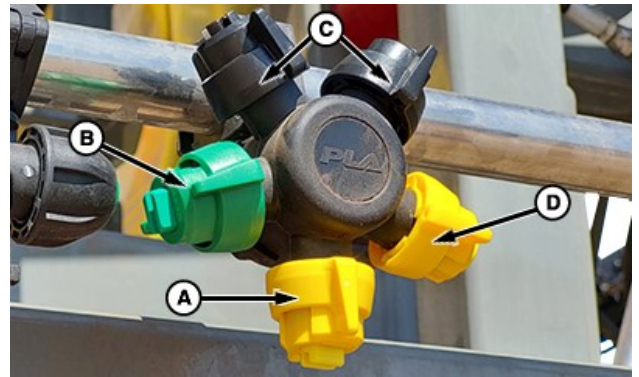
The nozzle bodies are simple or 5-position and have manual opening/closure. As standard, the nozzle bodies are equipped with the following nozzles:

- Hollow Cone: Yellow HCX12.
- Flat Fan: Yellow 11002 and Green 110015.



Simple Nozzle Body

YE010484—UN—01APR23



5-Position Nozzle Body

YE010485—UN—01APR23

A—Yellow 11002
B—Green 110015
C—Not Used
D—Yellow HCX12

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Spraying Panel and Valves

Spray Controls



Spray Lines

YE000075—UN—22SEP22

closure. They can be controlled in a manual mode or in an automatic way by the control unit.

The machine is equipped with a turbine flowmeter of 10 —100 L/min (2.64—26.42 gal/min). Electrical or pneumatic (according to machine model) section shutoff valves are also available, one per each nozzle section.

The machine spray section numbers can be of nine or 13 according to machine model.

All sprayer models have shutoff and regulation controls performed by spherical valves of electrical opening/

Manual Solution Controls

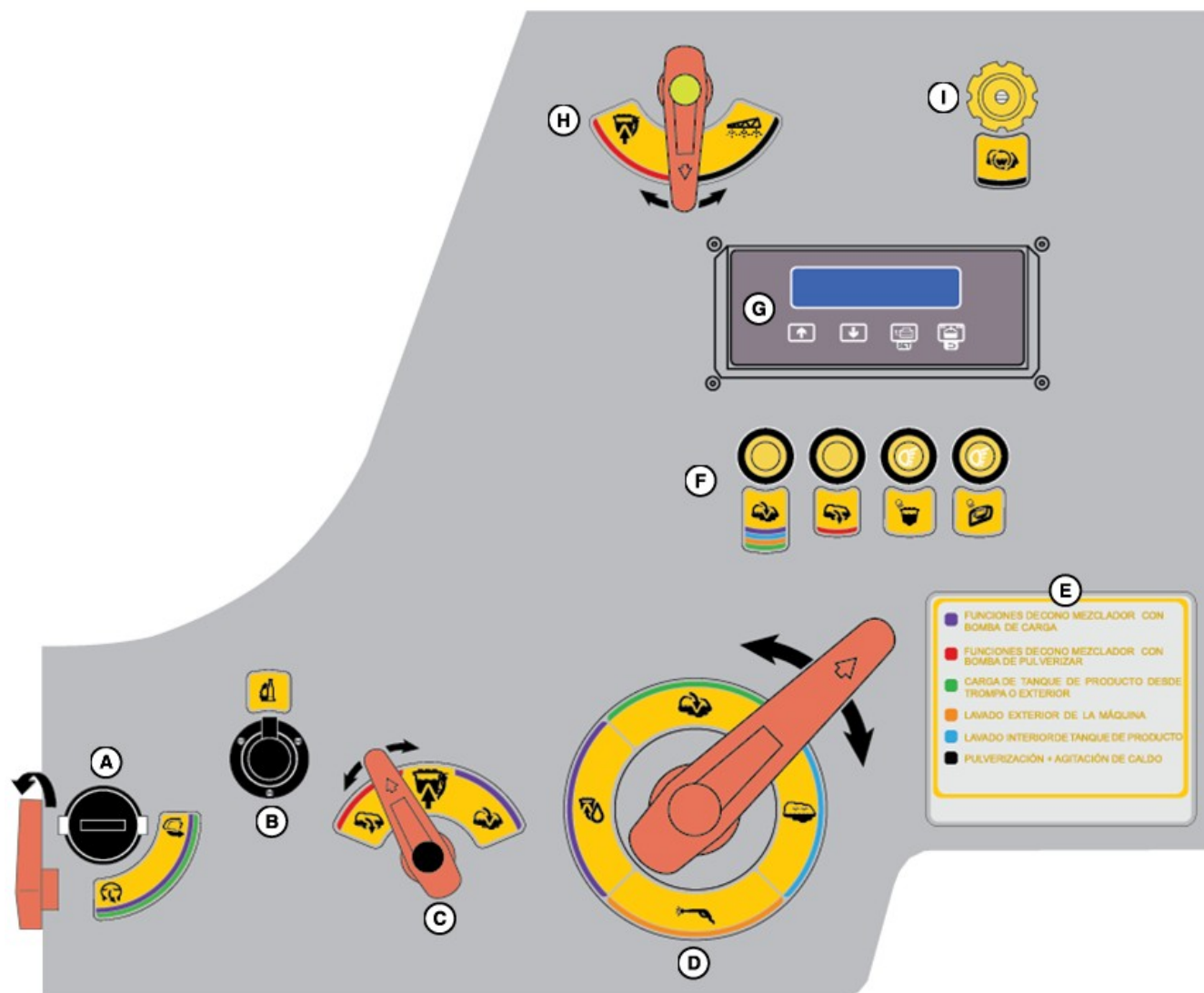


Spray Panel

YE000076—UN—22SEP22

The sprayers have a side panel on machine left-hand side that provides all the manual controls for the tasks that need to be done with the machine parked (load and unload, washing, chemical product incorporation, agitation control, and others).

Manual Solution Controls - Functions



Manual Solution Control Valves

YE000077—UN—22SEP22

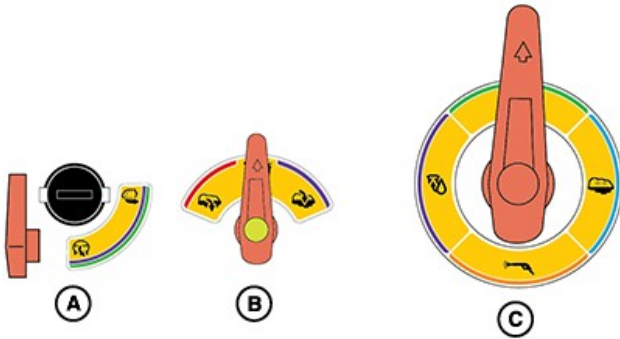
- **(A):** Load pump suction from rinse tank or from a water reservoir.
- **(B):** Connection for the hydraulic jack remote control.
- **(C):** Suction to eductor from load pump or from spray pump.
- **(D):** Flow distribution from load pump.
- **(E):** Function color guide.
- **(F):** Activation of pumps and lights of eductor and engine.
- **(G):** Solution tank load control.
- **(H):** Flow distribution to eductor or to spray boom.
- **(I):** Agitation control of the solution inside the solution tank.

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Valve Positions for Different Operations in Solution System

The following images describe the position of the valves to perform different tasks.

Solution Tank Load with Water from a Reservoir or Rinse Tank Using the Load Pump



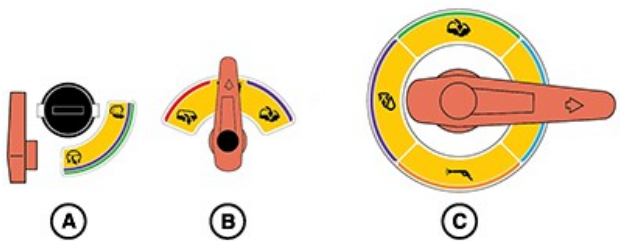
YE000078—UN—22SEP22



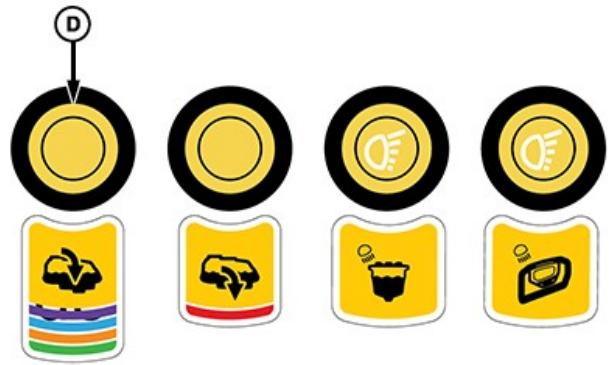
YE000083—UN—22SEP22

- A**—Suction Valve: positioned according to chosen suction source.
B—Eductor Suction Valve: positioned straight up (closed).
C—Pressure Valve: positioned straight up (solution tank).
D—Load Pump Switch (activated).

Solution Tank Internal Washing with Water from a Reservoir or Rinse Tank Using the Load Pump



YE000079—UN—22SEP22



YE000083—UN—22SEP22

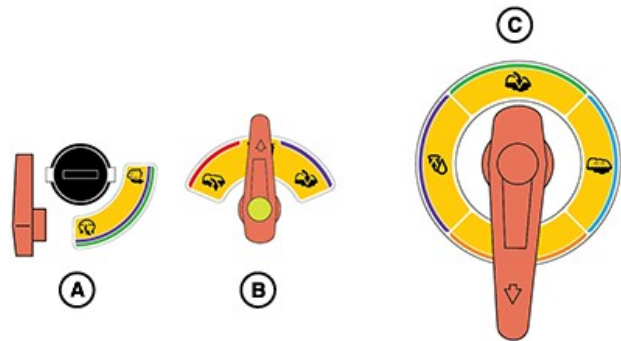
- A**—Suction Valve: positioned according to chosen suction source.

- B**—Eductor Suction Valve: positioned straight up (closed).

- C**—Pressure Valve: positioned to right-hand side (solution tank rinse nozzles).

- D**—Load Pump Switch: activated.

Machine External Washing with Water from a Reservoir or Rinse Tank Using the Load Pump



YE000080—UN—22SEP22



YE000083—UN—22SEP22

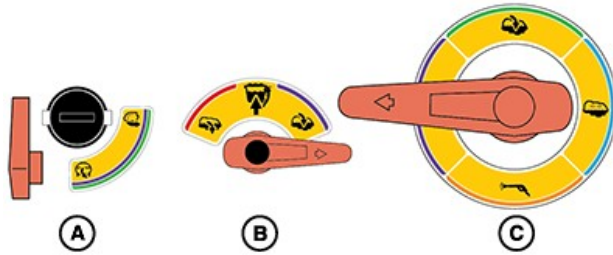
- A**—Suction Valve: positioned according to chosen suction source.

- B**—Eductor Suction Valve: positioned straight up (closed).

- C**—Pressure Valve: positioned straight down (external washing).

- D**—Load Pump Switch: activated.

Eductor Usage with Water from a Reservoir or Rinse Tank (Load, Triple Wash, Product Load, and/or Eductor Washing) Using the Load Pump



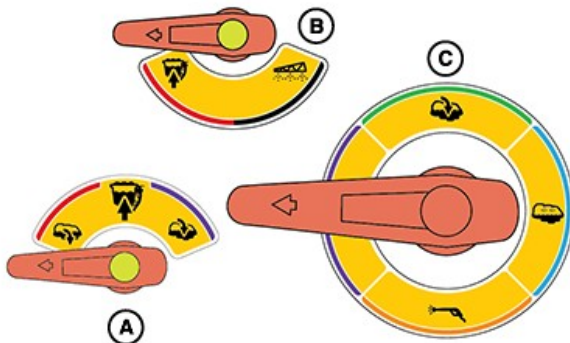
YE000081—UN—22SEP22



YE000083—UN—22SEP22

- A—Suction Valve: positioned according to chosen suction source.
- B—Eductor Suction Valve: positioned to right-hand side (load pump).
- C—Pressure Valve: positioned to left-hand side (eductor).
- D—Load Pump Switch: activated.

Eductor Usage with Water from Solution Tank (Product Load Only) Using the Solution Pump



YE000082—UN—22SEP22



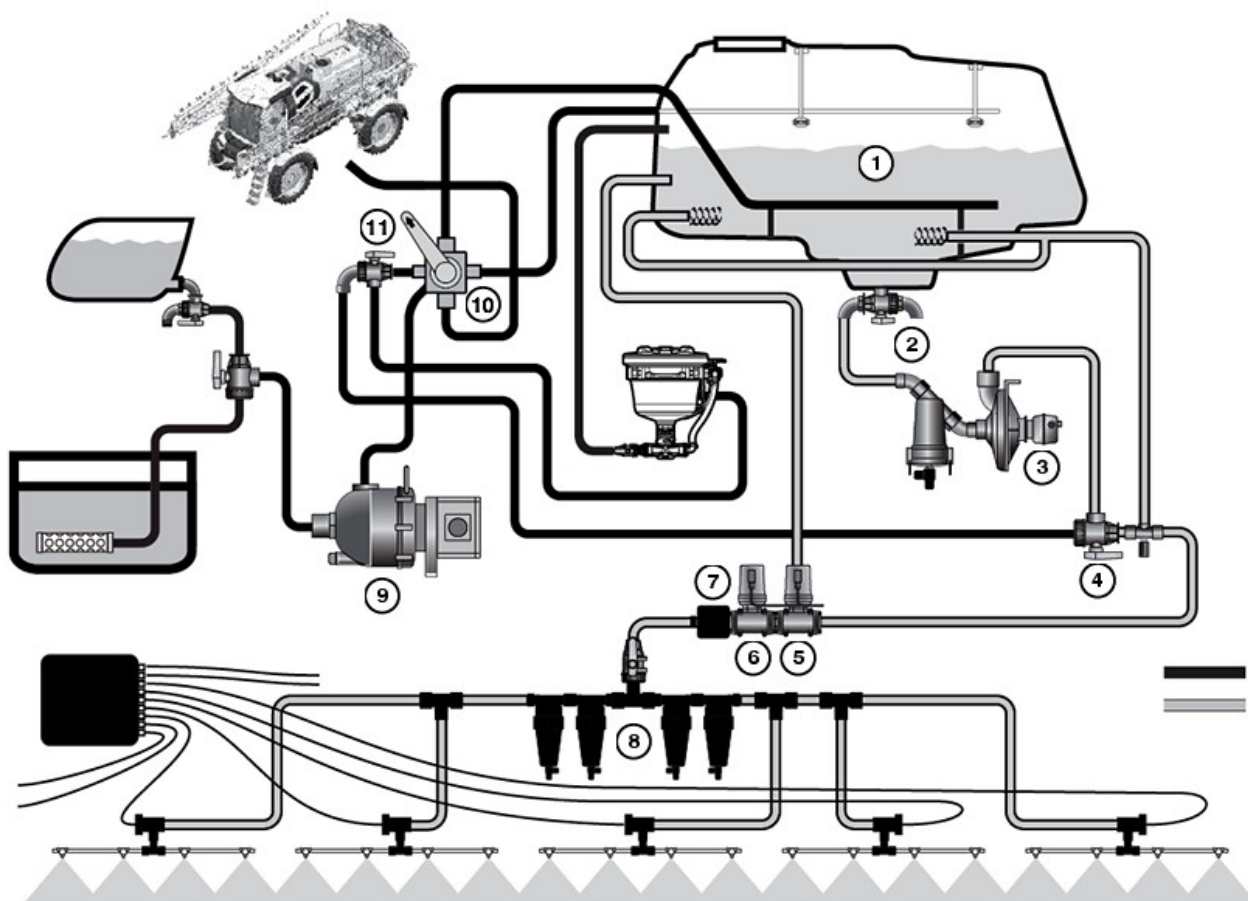
YE000084—UN—22SEP22

- A—Eductor Suction Valve: positioned to left-hand side (solution pump).
- B—Flow Direction Valve: positioned to left-hand side (eductor).
- C—Pressure Valve: positioned to left-hand side (eductor).
- D—Solution Pump Switch: activated.

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Rinse the Solution System Completely Using Water from a Reservoir or from the Rinse Tank

CAUTION: Carefully read and follow the safety recommendations for working with chemical products.

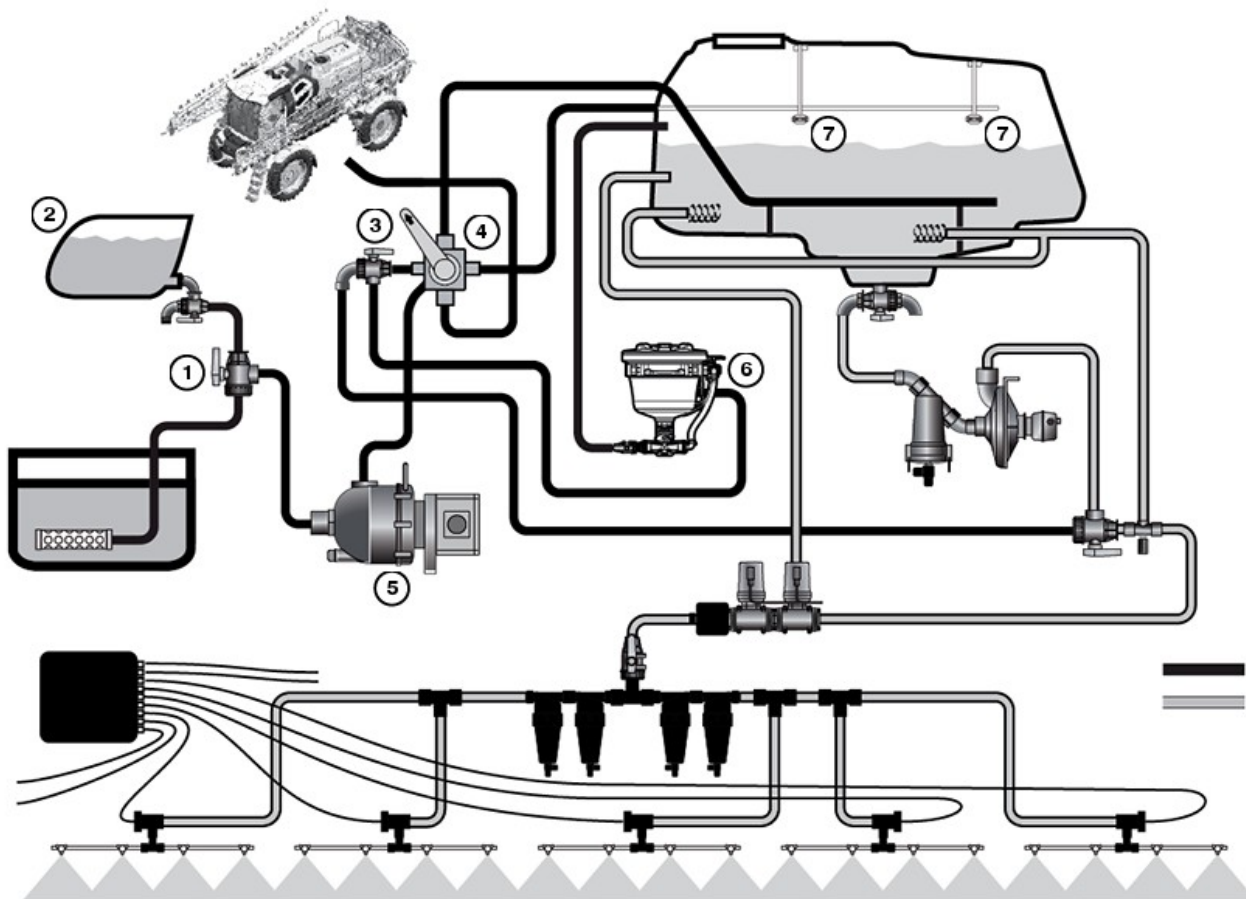


YE000089—UN—22SEP22

1. Fill the solution tank (1) with clean water.
2. Rotate the 3-way valve (4), directing the solution pump pressure to the spray system.
3. Activate the solution pump (3) and start to spray. Perform the rinse operation through the filters (8) and the spray commands (5—7).
4. Stop the solution pump (3).
 - a. Rotate the 3-way valve (4), directing the solution pump pressure to the spray system.
 - b. Activate the solution pump (3) and start to spray. Perform the rinse operation through the filters (8) and the spray commands (5—7).
 - c. After the rinsing is done, stop the solution pump (3) and close the lever (11).
5. Load the solution tank (1) with the load pump (9) using the 5-way valve (10). Use an external water source or water from the rinse tank. During this process, to ensure the rinsing of the internal walls of the solution tank (1), rotate the 5-way valve (10) to the internal tank washing system.
6. Stop the load pump (9).
7. To eliminate chemical product leftovers, perform the following procedure:
 8. It is recommended to totally drain the solution tank (1) rotating the lever (2) to the drain port.

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Transfer Water from the Rinse Tank to the Solution Tank Using the Eductor



YE000090—UN—22SEP22

1. Rotate the 3-way valve (1) straight up to the rinse tank (2).
2. Rotate the 3-way valve (3) to the 5-way valve (4) (eductor control).
3. Rotate the 5-way valve (4) to the 3-way valve (3), opening the spherical valve in direction to the 3-way valve (3).
4. Activate the load pump (5).
5. Position the 3-way valve (3) for the product load with the eductor (6). As an alternative way, the 3-way valve (3) can be closed and the 5-way valve (4) can be directed in a position that allows the water to be transferred through the rinse nozzles (7) inside the solution tank.
6. After the transfer is finished, close valves and stop the load pump (5).

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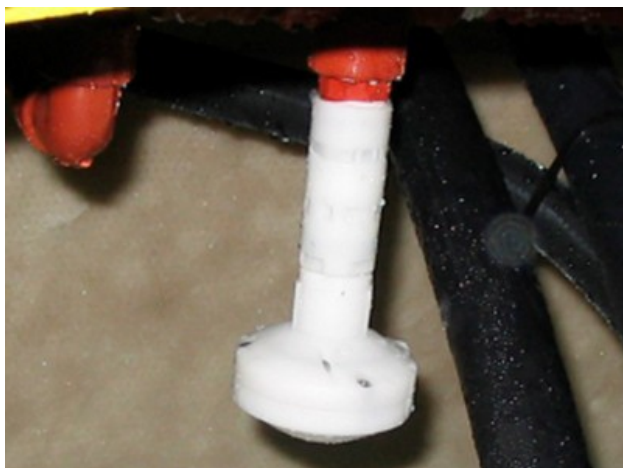
Wash the Solution Tank

Besides the chemical container rinsing, the rinse water circuit is also used to wash the solution tank inside.

This procedure is important for:

- Conservation of the spray system components.
- Elimination of toxic fluid odor.
- Prevention of chemicals from drying out in the solution tank, causing clogs.

In case of changing the chemical product to be applied, it is important to completely eliminate the previous chemical product to avoid mixtures that can negatively affect the desired application goal.



Rinse Nozzle

YE000091—UN—22SEP22

The internal washing of the solution tank is performed by rinse nozzles that provide 360° high-pressure jets.

jtlsx7f,1660657238232-19-17AUG22

Wash the Chemical Containers

There are two ways to wash the chemical containers after the chemical products are used.

CAUTION: Always read and follow the safety recommendations during the machine operation.

CAUTION: Avoid contamination. After usage and cleaning, regardless the cleaning process, the chemical container must be made unusable by puncturing its bottom.

Do not damage the container label as it contains necessary information for its subsequent recycling.

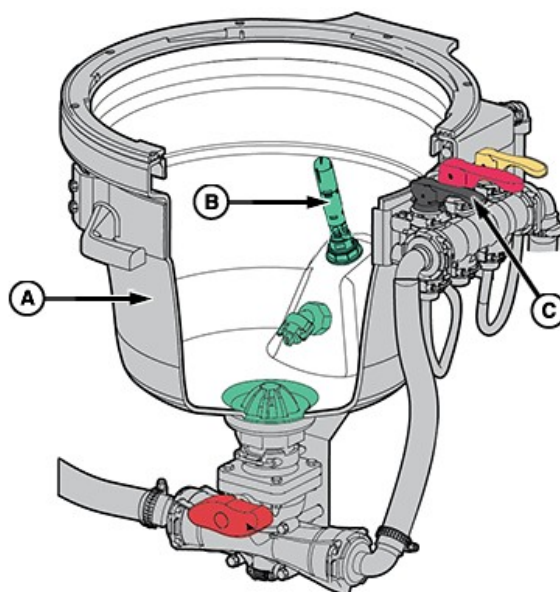
CAUTION: Avoid contamination. It is important to prepare the most exact amount of solution for application, avoiding this way solution leftovers after spraying.

Triple Wash

CAUTION: Avoid contamination. Always use tap water for the triple wash. Never immerse the containers in ditches, water courses, or ponds. This action will contaminate the water source.

1. Completely drain the empty containers. Let it draining for at least 30 seconds.
2. Fill 1/4 of the empty container with clean water.
3. Close the container with its cap and agitate it several times.
4. Pour the water from this cleaning inside the sprayer solution tank.
5. Repeat this process for at least two more times.

Manual Washing of Containers



YE000092—UN—10NOV22

There is a rinse nozzle (B) inside the eductor (A) for cleaning chemical containers.

To clean the container, position it over the rinse nozzle (B) (the nozzle must be positioned inside the container) and use the black lever (C) for 10 seconds. A high-pressure jet cleans the container inside.

A quick and effective cleaning is obtained. The results are similar to the triple washing process.

The water from the container is recirculated automatically to the sprayer solution tank.

NOTE: This washing can be done with water from the rinse tank or from an external source of clean water.

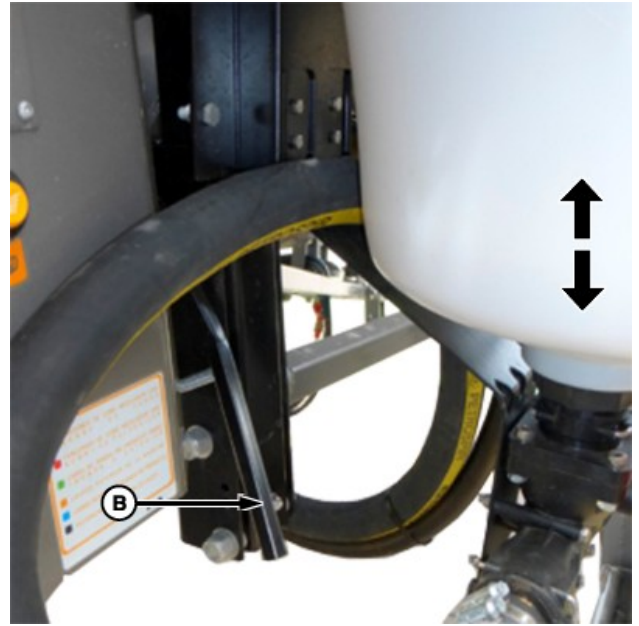
jtlisx7f,1660657314674-19-16AUG22

Eductor



YE000085—UN—22SEP22

All models are equipped with an eductor (A) of 35 L (9.25 gal) for the incorporation of agriculture chemicals to the solution tank.

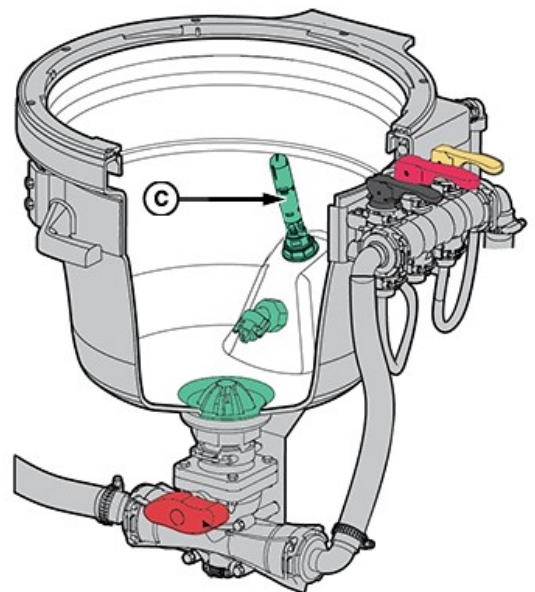


YE000087—UN—22SEP22

To use the eductor (A) for incorporating agriculture chemicals, stop the machine and lower the eductor (A) to ground level using the lever (B).

When the machine is in operation, the eductor must be raised and locked using its elevation mechanism.

To use the elevation mechanism, use the lever (B).



YE000086—UN—10NOV22



YE000088—UN—22SEP22

There is a rinse nozzle (C) inside the eductor (A) for cleaning chemical containers. To clean the container, position it over the rinse nozzle (C) (the nozzle must be positioned inside the container) and use the black lever (D). A high-pressure jet cleans the container inside.

NOTE: This procedure is an alternative for the triple wash system.

By using the red lever (E), the internal part of the eductor (A) is washed.

NOTE: These washings can be done with water from the rinse tank or from an external source of clean water.

By using the yellow lever (F), the flow is directed for the dissolution of solid chemical products.

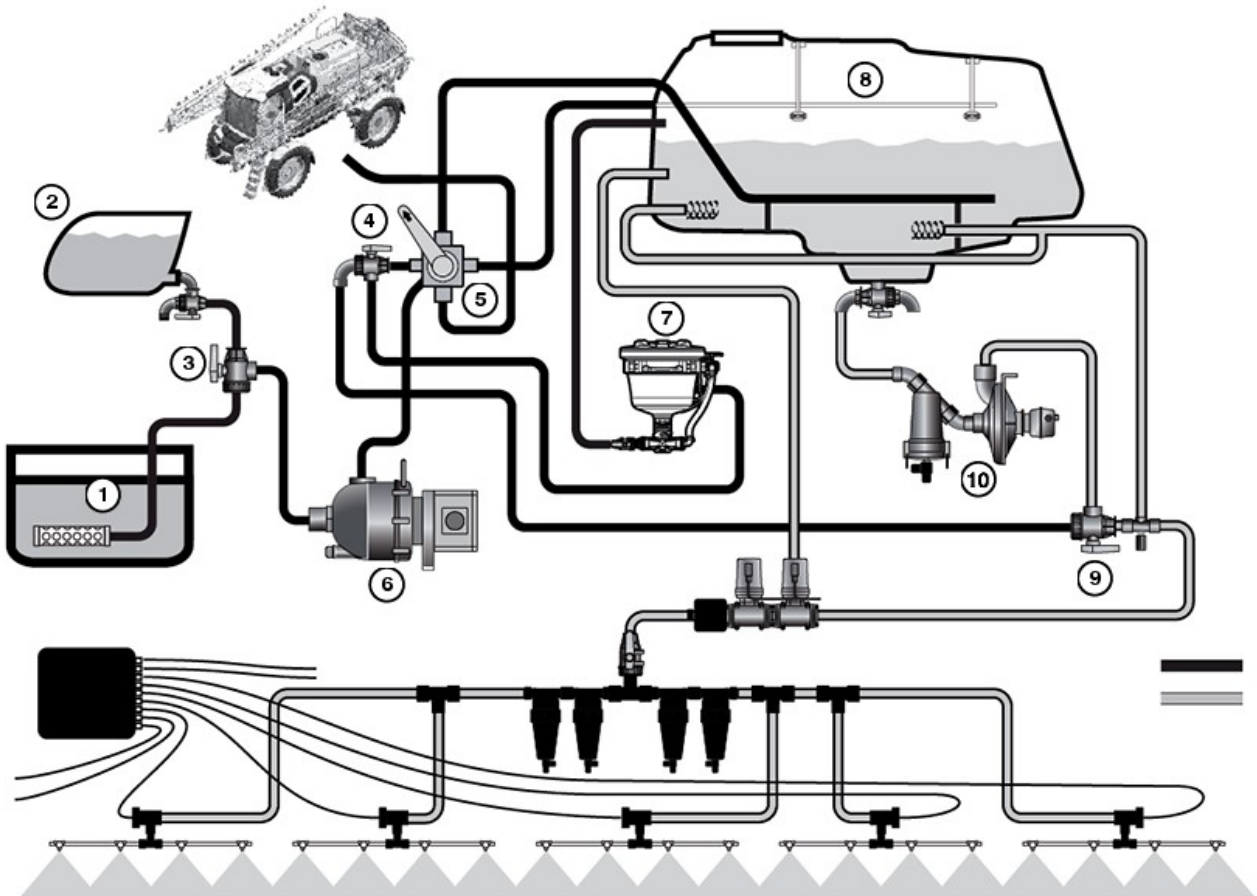
jtlisx7f,1660594470751-19-16AUG22

Using the Eductor with Water from Solution Tank or from the Rinse Tank

CAUTION: Avoid contamination.

Each time water is loaded from an external source, always ensure that the draining hose has a non-return valve and that the registers are closed before removing the hose.

After usage, immediately remove the hose to avoid possible returns and contamination to the water source due to any kind of fail from the non-return system.



YE000095—UN—22SEP22

Using the Load Pump

1. Select if the suction will be done from the rinse tank (2) or from an external water source (1) using the 3-way valve (3).
2. Rotate the 3-way valve (4) to the 5-way valve (5).
3. Rotate the 5-way valve (5) to the 3-way valve (4).
4. Activate the load pump (6) and insert the chemical product inside the eductor (7) so the product is going to be directed to the solution tank (8).
5. After the chemical product load is finished, stop the load pump (6).
6. To finish the solution tank load with the water, if necessary, rotate the 5-way valve (5) to solution tank position (straight up).

Using the Solution Pump

1. After making sure that the solution tank is at least 1/4 full of water, rotate the 3-way valve (9) towards the eductor (7).
2. Rotate the 3-way valve (4) in opposite direction of the 5-way valve (5).
3. Activate the solution pump (10) and insert the chemical product inside the eductor (7) so the product is going to be directed to the solution tank (8). At this situation, the chemical product will be directed to the solution tank (8) using water from the solution tank itself, ensuring re-circulation and a better mixture during the load.
4. After the chemical product load is finished, stop the solution pump (10).

5. To let the system ready for spraying operation, rotate the 3-way valve (9) towards the spray system.
6. To finish the solution tank load with the water, if necessary, rotate the 5-way valve (5) to solution tank position (straight up).
7. Rotate the 3-way valve (3) to rinse tank (2) or to an external source of water (1), as desired.
8. Activate the load pump (6) to fill the solution tank (8).
9. Deactivate the load pump (6) when finished.

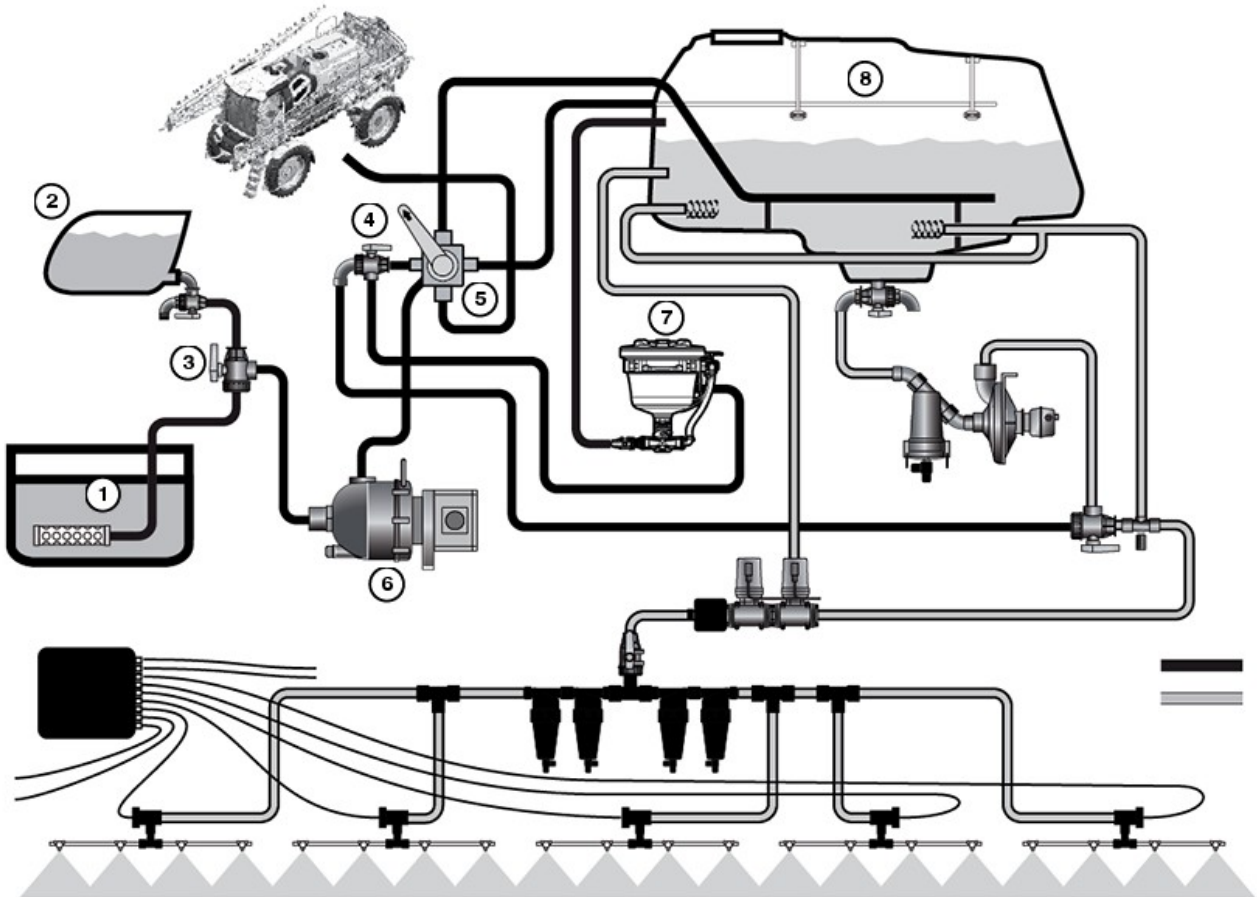
jtlsx7f,1660657062168-19-17AUG22

Rinse Chemical Containers Using Water from the Rinse Tank or from an External Water Source

Using the Load Pump

This procedure is recommend after the chemical

product load to ensure that all the content from the container is completely used.



1. Select if the suction will be done from the rinse tank (2) or from an external water source (1) using the 3-way valve (3).
2. Rotate the 3-way valve (4) to the 5-way valve (5).
3. Rotate the 5-way valve (5) to the 3-way valve (4).
4. Activate the load pump (6) and insert the chemical container over the eductor (7) rinse nozzle.
5. After the chemical container cleaning is finished, stop the load pump (6).
6. Use the black lever at eductor (7) and rinse the container from 5—10 seconds to ensure that all leftovers are drained to the solution tank (8).

product residues from the re-circulation of the container washing system).

YE000096—UN—22SEP22

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Using the Solution Pump

This operation is not recommended because the water from the solution tank is not clean (contains chemical

Water Load

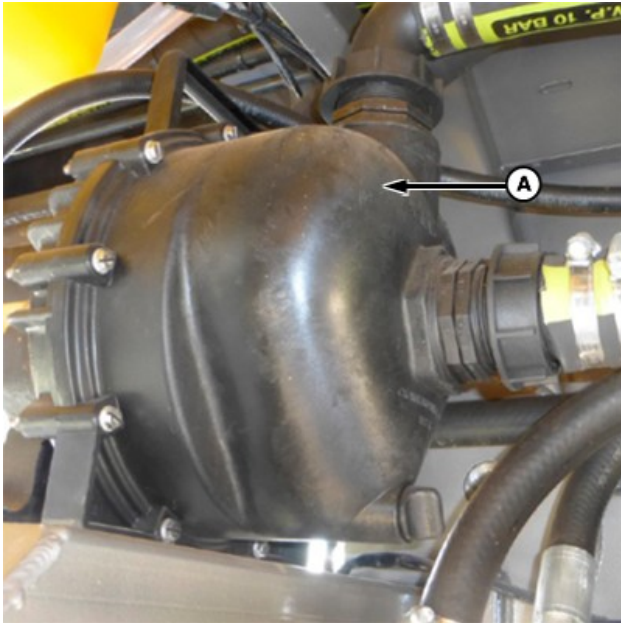
CAUTION: Avoid contamination.

Each time water is loaded from an external source, always ensure that the draining hose has a non-return valve and that the registers are closed before removing the hose.

After usage, immediately remove the hose to avoid possible returns and contamination to the water source due to any kind of fail from the non-return system.

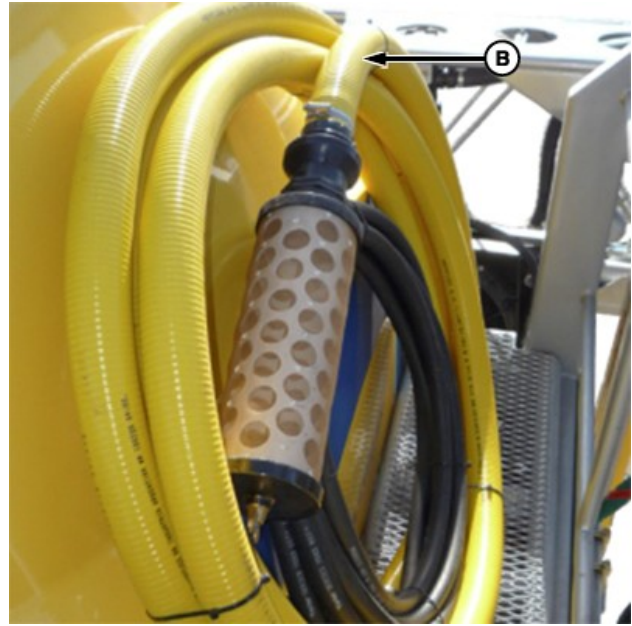
IMPORTANT: Avoid transmission system damage:

- Before using centrifugal pump (A) to load water in the solution tank, the gearshift lever must be in **NEUTRAL** position and the park brake engaged.
- **NEVER** engage the park brake when machine is in gear. Doing so leads to serious damage on the transmission system.



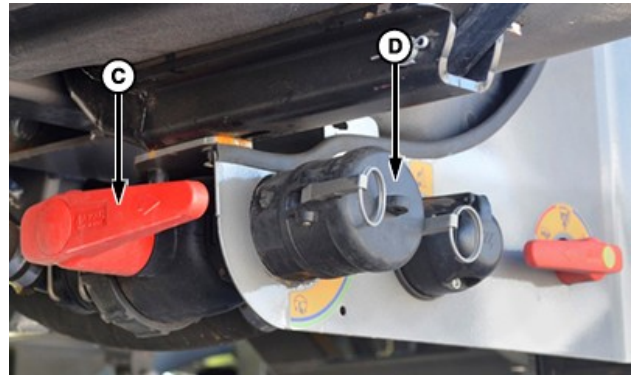
YE000070—UN—22SEP22

The self-propelled sprayer is equipped with a high-flow centrifugal pump (A) with hydraulic command.



YE000093—UN—22SEP22

The water is pumped from an external water reservoir through a hose (B) that has a filter with a non-return valve.



YE000094—UN—22SEP22

Using the pump (A) and the hose (B) installed on the connection (D), the system suctions water from an external water reservoir.

To obtain water from an external reservoir, the valve (C) must be pointed to the connection (D). Rotating the valve (C) to opposite direction, water from the rinse tank is provided.

After the operation is complete, close the 5-way valve to avoid liquid return.

JtlIsx7f,1660657182273-19-03APR23

Electronic Control of the Solution Tank Level

IMPORTANT: Avoid load pump damage. Make sure that the valves are correctly positioned for filling the solution tank and that the supply hose is full of liquid to avoid load pump running dry.



YE000103—UN—22SEP22

John Deere NISER Control

- A—Up Arrow
- B—Down Arrow
- C—SET Button
- D—ON and OFF Button/Return Button

User Mode

Modification of the shutoff levels.

To modify the shutoff levels (shutoff 1 and shutoff 2), perform the following procedure:

1. With the display ON, press the SET button (C) and maintain it pressed during some seconds until a line of dots is shown and the message of shutoff liters modification for the load appears. Release the SET button (C) when this occurs.
2. Modify the values using the arrows (A) and (B).
3. Confirm using the SET button (C).

NOTE: First, modify the shutoff 1 and 2 for the tank A, then proceed for modifying the shutoff 1 and 2 for the tank B.

Hydraulic Load Pump or Motor Pump Control

NOTE: For this selection, see Relay Programming Mode in this procedure.

It is possible to turn on and off the load pump using the ON or OFF button (D) at any time, always when the load liters are below the shutoff level 2. When this level is reached, the pump cannot be turned on to avoid overflow.

When reaching the shutoff level 1, the load pump is stopped. To continue the filling process and reach the

shutoff level 2, it is necessary to activate the load pump manually.

When the hydraulic pump is turned on, the display is illuminated, indicating a black square. This square disappears when the pump is stopped.

Sensor Check Mode

With the display OFF, while the down arrow (B) is pressed, turn on the display and maintain this button pressed for some seconds. A dashed line is shown, as well as a message indicating the voltage levels of the sensor channels. Release the button when this info appears.

The value of each channel is modified as the sensor float is moved. This screen is used for verifying if the sensor is working well.

NOTE: It is necessary to slowly move the sensor float to view the value changes in 10 mm (0.40 in) steps for each channel. This means that for each 10 mm (0.40 in), a change is produced at each channel value.

To get out of sensor check mode and access the user mode, press the return button (D).

Relay Programming Mode

With the display OFF, while the button (D) is pressed, turn on the display and maintain this button pressed for some seconds. A line of asterisks is shown, as well as the following message: choose the way to activate the relay. After some seconds, it'll be asked to use the arrows (A) and (B) to select the desired option.

If the up arrow (A) is pressed, the hydraulic pump is selected.

If the down arrow (B) is pressed, the motor pump is selected.

After this action, the display will return automatically to user mode.

Sensor Calibration Mode

With the display OFF, while the SET button (C) is pressed, turn on the display and maintain this button pressed for some seconds. A dashed line is shown, as well as the following message: sensor calibration. Release the button when this info appears.

Select the desired tank to be configured, A or B.

For programming another tank, it is necessary to get out of the current programming and repeat the process from the beginning.

Once the desired tank is selected, perform the following procedure:

1. Fill the tank (3000 L [792.52 gal], for instance).
2. Enter in the sensor calibration mode.

3. At reference 1, with the arrows (A) and (B), select the reference number that initiates at value 1 as standard.
 4. Confirm with the SET button (C) to pass to the second line and modify the liters in the tank.
 5. At liters, with the arrows (A) and (B), indicate the liquid volume in the tank (3000 L [792.52 gal], for instance).
 6. Confirm with the SET button (C). The control will save this value in memory.
 7. At display, the sensor float height will be shown in mm, so the value can be noted.
 8. To get out of this screen, return to the previous page, and continue the calibration process, press the SET button (C).
 9. Now the screen indicates reference 1 again. If it is necessary to redo it, press the SET button (C) again and perform the same steps previously explained. If no change is necessary, proceed to the next step.
 10. With the arrows (A) and (B), select the reference 2 and press the SET button (C).
 11. Unload a liquid quantity (200 L (52.83 gal), for instance).
 12. Insert the quantity of liters in the tank (2800 L [739.68 gal], for instance) with the arrows (A) and (B).
 13. Confirm by pressing the SET button (C).
 14. Perform successive unloads, indicate the liters, and confirm with SET button (C).
- NOTE: The maximum quantity of references is 28. It is not necessary to use all. Use the quantity of references as necessary, according to the tank geometry.*
15. Once the last step is calibrated (0 L [0 gal]), press the return button (D) to enter in the user mode. The tank is now calibrated.

jtlsx7f,1660657194505-19-18AUG22

Control of the Solution Tank Level

IMPORTANT: Avoid load pump damage. Make sure that the valves are correctly positioned for filling the solution tank and that the supply hose is full of liquid to avoid load pump running dry.



YE000101—UN—07OCT22

Spray Panel

1. At the spray panel, press the load pump button (A). The loading process is started.



YE000064—UN—22SEP22

Solution Tank Level Indicator

2. To stop at the desired tank level, press the load pump button (A) again. The loading process is stopped.

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Nutrient Application System

Machine Adjusts According to Product and Dosage

Product		Dosis	Maximum Speed	Turbine Speed	Dosifier Wheels	Remover Cover	Nutrient Applicator Box Pressurization
		kg/ha	km/h (mph)	rpm			
Fertilization	Granulated Urea	20	20 (12.4)	3300	Helicoidal	Fixed	3/4 Opened
	720—820 (g/L)	300	15 (9.3)				
	Potassium Chloride	20	20 (12.4)	3300	Helicoidal	Adjustable, 4 cm (1.6 in) Opening	3/4 Opened
	1070—1200 (g/L)	300	10 (6.2)				
	Triple Superphosphate	100	20 (12.4)	3300	4-Blade	Adjustable, 4 cm (1.6 in) Opening	3/4 Opened
	950—1200 (g/L)	400	10 (6.2)				
	Simple Superphosphate	50	20 (12.4)	3300	Helicoidal	Adjustable, 4 cm (1.6 in) Opening	3/4 Opened
	870—1100 (g/L)	300	10 (6.2)				
	Gypsum Powder	150	20 (12.4)	3300	4-Blade	Adjustable, 4 cm (1.6 in) Opening	3/4 Opened
	1200—1600 (g/L)	500	8 (5)				
Seeding	Oats, Rye, Wheat, Vetch	15	20 (12.4)	2800	Helicoidal	Fixed	3/4 Closed
	500—700 (g/L)	150	20 (12.4)	3000			
	Alfafa, Clover, Canola	5	20 (12.4)	2500	Thin Seed	Adjustable, 2 cm (0.8 in) Opening	3/4 Closed
	(Pe) According to Product	15	20 (12.4)	2800			

NOTE: This table must be used only as a reference according to theoretical specific weight of each product. For a better adjust of the machine, the real specific weight for each product batch must be measured and the dosifier calibrated considering this information. The specific weight of each product batch may vary according to humidity and other factors.

jtlsx7f,1658344910439-19-05DEC22

How to Obtain the Specific Weight

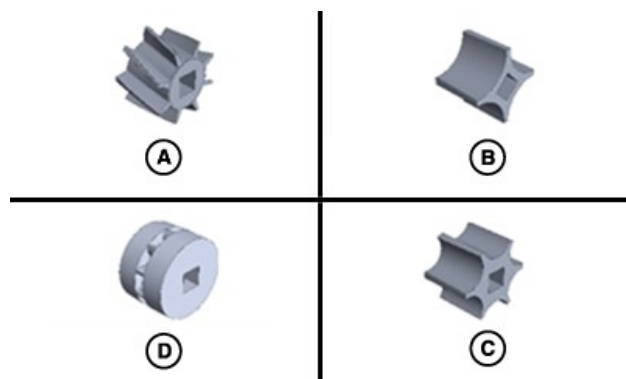
To obtain the specific weight of a product, the following items are necessary:

- Precision Scale (max 3 kg/d = 1g)
- Jug or a 1 L Container

1. Tare the empty container.
2. Fill the container with product until the 1 L mark.
3. Measure the weight of the filled container. The weight indicated in the scale is the specific weight of the product (Pe), expressed in g/L.

jtlsx7f,1667936187632-19-08NOV22

Types of Dosifier Wheels



YE000388—UN—09NOV22

Helicoidal (A)

- **Fertilization:** urea, phosphorus.
- **Seeding:** wheat, oats, rye, ryegrass, etc.

4-Blade (B)

- **Fertilization:** powder.
- **Seeding:** seeds with low specific weight.
- Materials with low quality or with impurities.

6-Blade (optional) (C)

- Same products recommended for the 4-blade wheels, for lower dosage ranges (80—150 kg/ha).

- **Seeding:** thin seeds or low dosage (grasses such as alfalfa, red clover, canola, etc.).

jtlisx7f,1667936240319-19-17NOV22

Thin Seed (D)**Apparent Density of Some Fertilizers (Not Compacted)**

Fertilizers	Pe (g/L)
Ammonium Nitrate (pearly, high-density)	850—975
Sodium Nitrate (pearly solid saltpeter)	1220
Potassium Sodium Nitrate (pearly potassium saltpeter)	1290
Granular Potassium Nitrate	1300
Granular Urea	720—820
Triple Superphosphate (granular)	950—1200
Mono-ammonium Phosphate (granular)	900—1100
Diammonium Phosphate (granular)	875—1100
Phosphoric Rock (powder)	1200—1600
Potassium Chloride (crystallized)	1075—1200
Ammonium Sulfate (granular)	785—1040
Ammonium Sulfate (crystallized)	1000—1100
Potassium Sulfate (granular)	1150—1360
Potassium and Magnesium Sulfate (sulpomag)	1520—1570
Phosphorite (natural calcium phosphate)	1700

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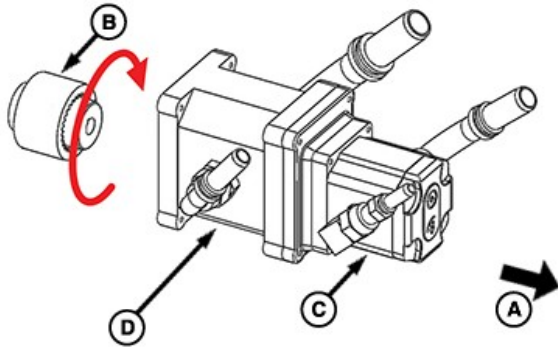
Nutrient Application System Troubleshooting

⚠ CAUTION: Avoid serious injury or death. Stop the machine and remove the ignition key before trying to solve any problem.

Problem	Possible Cause	Possible Solution
Deficient Product Coverage	Turbine with Low rpm	Adjust the turbine speed.
	Inadequate Wheels	Change the package of wheels.
	Broken or Worn Wheels	Replace the worn or broken wheels.
	Position and Condition of Nozzles	Check that all nutrient applicator nozzles are correctly aligned and in good conditions.
	Work Height	Check that the height of all nutrient applicator nozzles is at least 1.4 m (4.6 ft).
Nutrient Application System Lockups	Excessive Forward Speed	Respect the maximum speeds according to product and dosage to be applied. (See Machine Adjusts According to Product and Dosage in Nutrient Application System section.)
	Impurities Entering the Dosifier	Empty the nutrient applicator box and clean the dosifier. Load the nutrient applicator box using the anti-clog screens.
	Compacted Product Before Entering the Dosifier	Empty machine before transport. Check if remover is working. Use the correct remover cover. (See Machine Adjusts According to Product and Dosage in Nutrient Application System section.)
	Inadequate Wheels	Change the package of wheels.
Turbine Not Working	Electrical Circuit Faults	Check fuse. Completely check the turbine electrical installation.
	Cut Hydraulic Pump Shaft	Repair or replace the hydraulic pump.
	Damaged Driven Joints	Replace the joints (three parts).
	Broken or Locked Electrovalves	Clean, repair, or replace the electrovalves.
Turbine rpm Not Being Shown on Display	Turbine rpm Sensor Not Working	Check that the sensor light is turning on and marking the rpms on display when passing a saw blade on sensor lens. If it is not working, replace the sensor. Check for a gap of 1 mm (0.04 in) (thickness of a saw blade) between the sensor lens and the joint screw.
Dosifier Turns Not Being Shown on Calibration Page at Display	Dosifier Sensor of Turns Not Working	Check that the sensor light is turning on and marking turns on dosage calibration page when passing a saw blade on sensor lens. If it is not working, replace the sensor. Check for a gap of 1 mm (0.04 in) (thickness of a saw blade) between the sensor lens and the gear.
	Dosifier Locked	Dry the dosifier chain and manually turn the gear to the correct direction of movement (same as the machine wheels). If the gear is not turning, check the dosifier inside for obstructions.
	Dosifier Motor Not Working	See your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.
Nutrient Applicator Nozzle Alarm on Display	Worn Monitoring Sensor	Replace the monitoring sensor.
Cable Shorted (n) Message	Shorted Cable on Monitoring Sensor (n)	Disconnect the sensor and replace it.
Dosage Not Reached Message	Dirt PWM Valve	Remove the PWM valve and clean it with diesel.
	Stuck Material on Dosifier Wheels	Remove the dosifier cover and check that the wheels are completely clean and turning smooth. If stuck material is found, clean each one of the dosifier wheels.
Weight Differences in Scale	Scale Out of Calibration	See your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

Transmission Schematics

Hydraulic Pump Connection

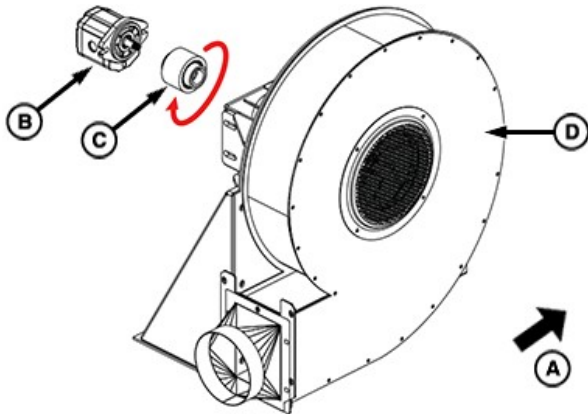


- A—Direction of Forward Movement
B—Joint
C—Dosifier Pump
D—Turbine Pump

YE000389—UN—28NOV22

Turbines

NOTE: Only the right-hand side turbine is shown in the image.



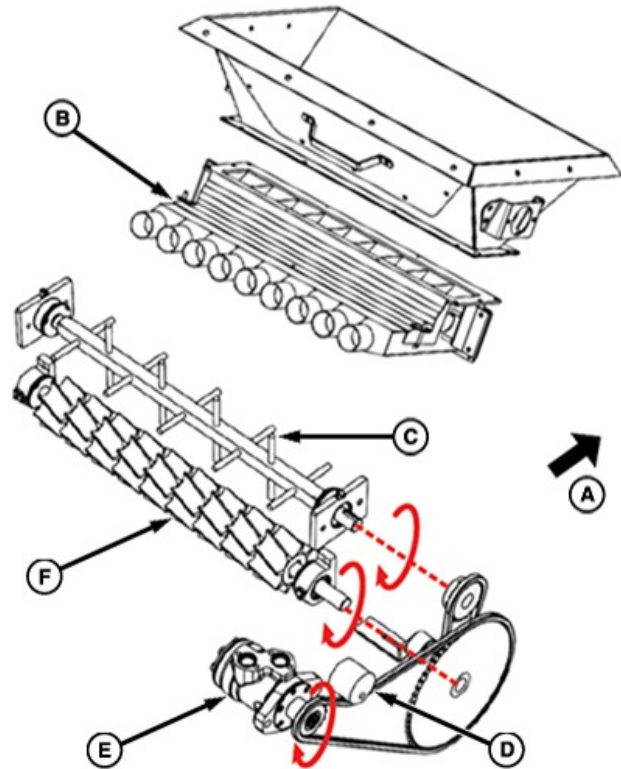
- A—Direction of Forward Movement
B—Hydraulic Motor

YE000390—UN—09NOV22

- C—Joint
D—Right-Hand Side Turbine

Dosifiers

NOTE: Only the right-hand side dosifier is shown in the image.

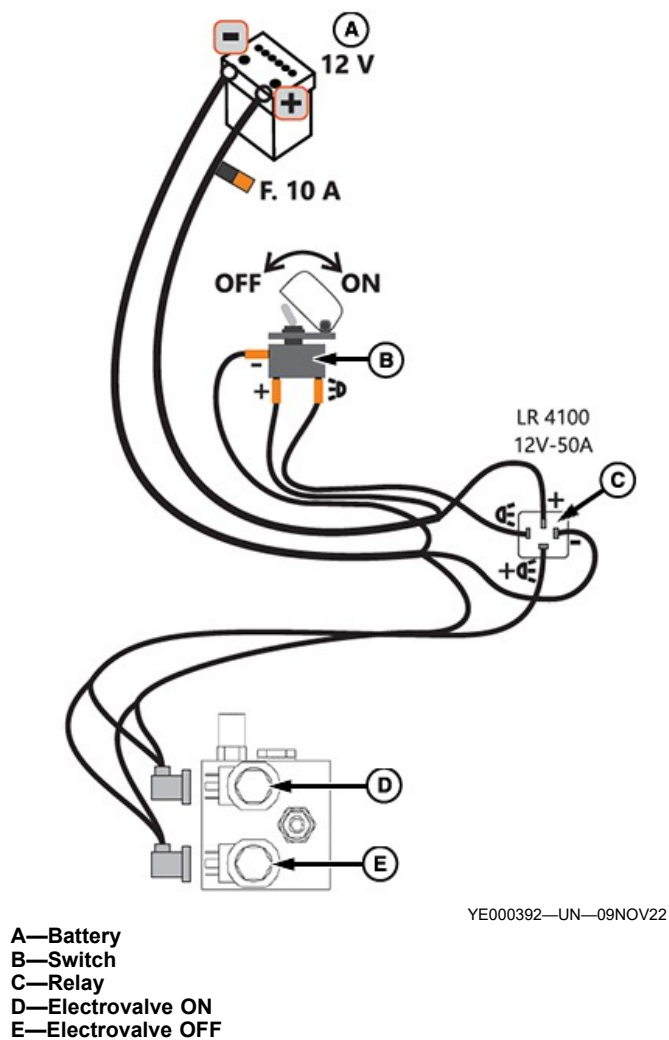


- A—Direction of Forward Movement
B—Right-Hand Side Dosifier
C—Remover
D—Chain Tensioner
E—Hydraulic Motor
F—Package of Wheels

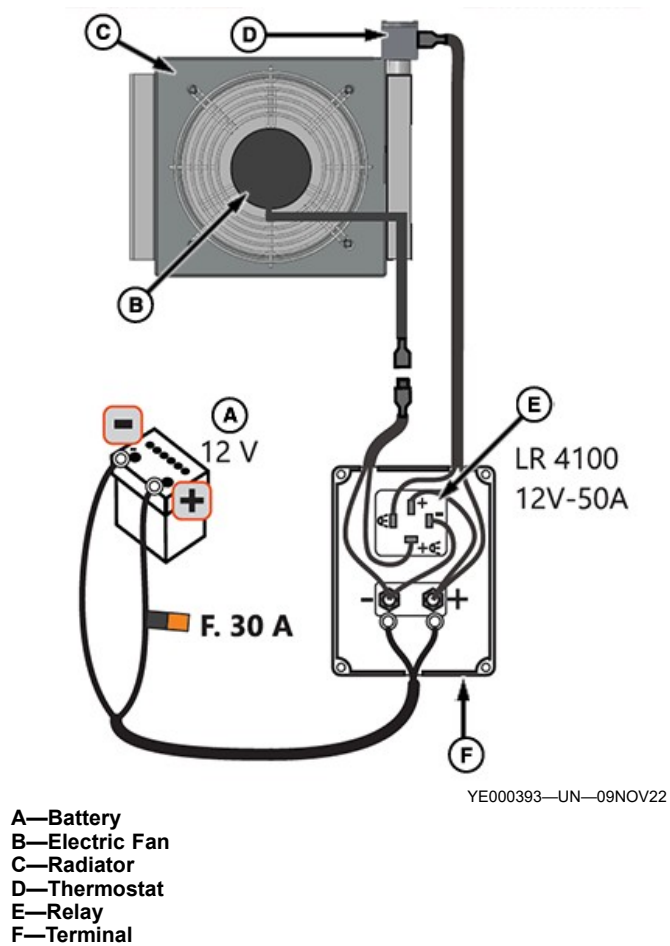
YE000391—UN—13DEC22

Electrical Connections Diagram

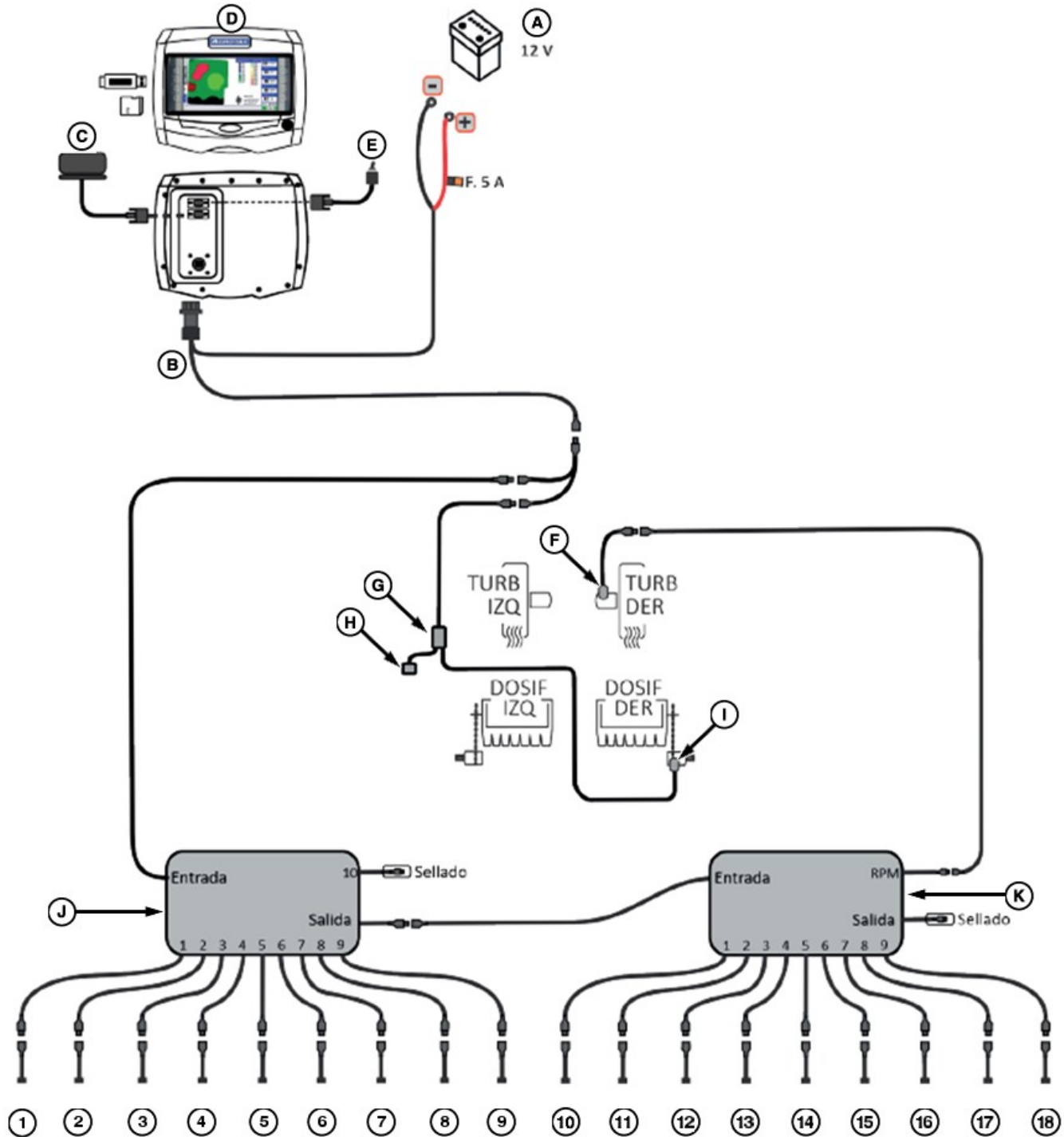
Turbine Drive



Electric Fan



Agrotax AG Fusion—Control and Monitoring Connections

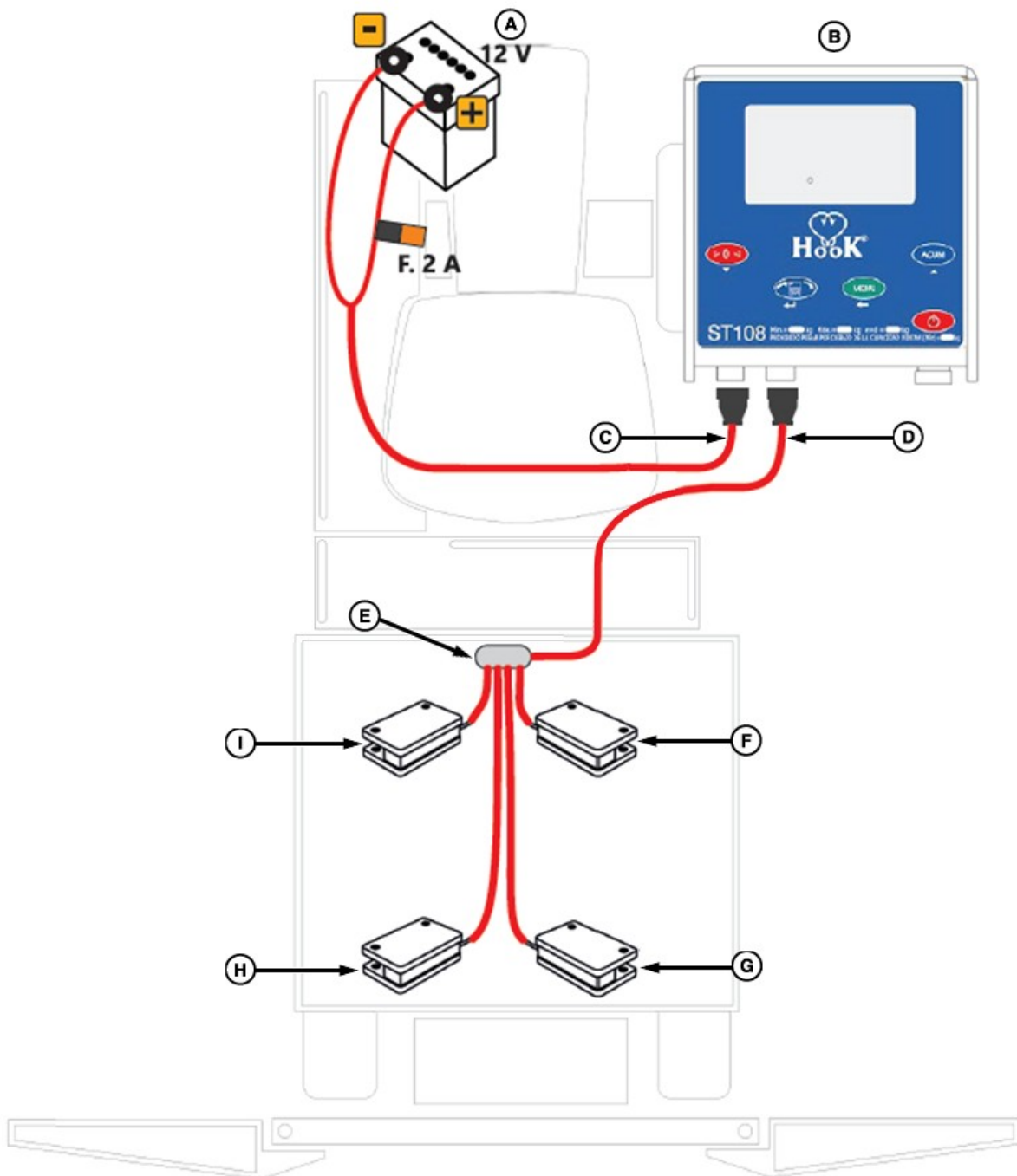


YE000394—UN—09NOV22

A—Battery
B—Power Cable and CAN Network
C—GPS Receiver
D—AG Fusion Display
E—Dosifier Switch
F—Turbine Speed Sensor

G—Dosifier Node
H—PWM Valve
I—Sensor of Turns from the Dosifier
J—Monitoring Node 1
K—Monitoring Node 2
1 Up to 18—Sensors of Nutrient Applicator Nozzles 1—18

Scale Connections



A—Battery
B—Hook Display
C—12 V
D—Data
E—Central Scale

F—Short Cable Load Cell from the Right-Hand Side
G—Long Cable Load Cell from the Right-Hand Side
H—Long Cable Load Cell from the Left-Hand Side
I—Short Cable Load Cell from the Left-Hand Side

YE000395—UN—09NOV22

jtlx7f,1667936305235-19-05DEC22

Spray/Application Boom

Spray/Application Boom Controls



YE000118—UN—22SEP22

Multi-Function Lever

- 1—Shift Button (situation P0 and situation P1)
- 2—Shift Button (situation P0 and situation P2)
- A—Tilt Movement (left side)
- B (situation P0 and P1)—Raise and Lower the Spray/Application Boom
- B (situation P2)—Open and Close the Left Outer Spray/ Application Boom
- C (situation P0 and P2)—Open and Close the Left Inner Spray/ Application Boom
- C (situation P1)—Open and Close the Left Outer Spray/ Application Boom
- D (situation P0 and P2)—Open and Close the Right Inner Spray/ Application Boom
- D (situation P1)—Open and Close the Right Outer Spray/ Application Boom
- E (situation P0)—Unlock the Side Spray/Application Boom
- E (situation P1)—Unlock the Center Frame
- E (situation P2)—Open and Close the Right Outer Spray/ Application Boom
- F—Tilt Movement (right side)
- G—System Master Button

The multi-function lever has six double-action buttons (A—F) and two side buttons (1) and (2) that change the functions of the four upper double-action buttons (B—E).

Another central button (G) is also available. This button is used to turn on and off the application system.

Button Functions

NOTE: Use the images to identify the functions performed by the buttons according to each situation (P0—P2).



YE000273—UN—28OCT22

The information decal available in the cab window identifies the situations P0—P2, as well as the functions of the buttons according to each one of these situations.

The functions of the four upper double-action buttons change as the side buttons (P1) or (P2) are activated.



Situation P0

YE000146—UN—10OCT22

Situation P0: When the LED lights over the side buttons (P1) or (P2) are OFF, it means that the four upper double-action buttons have their primary functions active.

P 1



Situation P1

YE000147—UN—10OCT22

Situation P1: When the LED light over the left-hand side button (P1) is ON, it is set as P0. The right-hand side button remains as P2. The four upper double-action buttons have their functions changed.

P 2



Situation P2

YE000148—UN—10OCT22

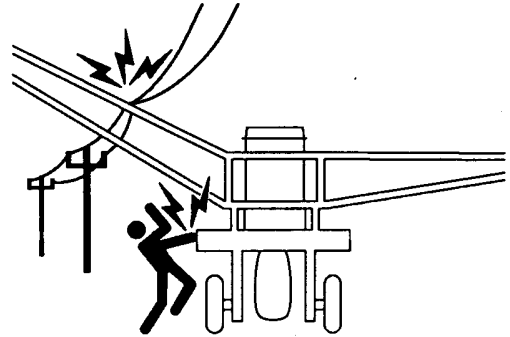
Situation P2: When the LED light over the right-hand side button is ON, it is set as P0. The left-hand side button remains as P1. The four upper double-action buttons have their functions changed.

For instance, at a situation P1, the two upper central buttons unfold and fold the outer spray/application booms (according to selected button).

At all situations (P0—P2), the two lower double-action buttons correspond to the 45° tilting movement of the spray/application booms.

jtlisx7f,1661799383149-19-05DEC22

Unfold the Spray/Application Boom (for Application)



N44191—UN—27APR92

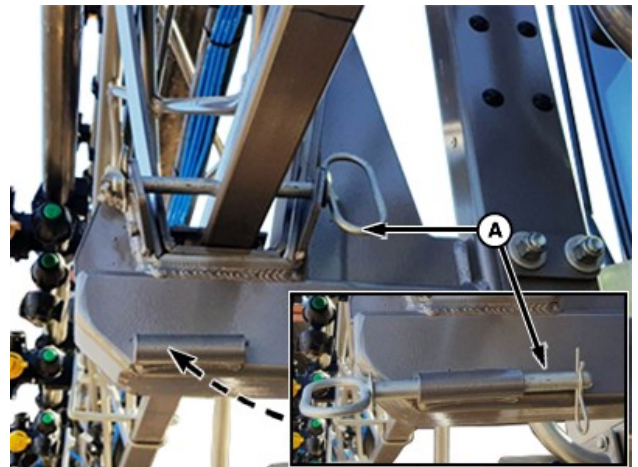
CAUTION: Keep away from overhead power lines. Serious injury or death to you or others can result due machine contact with electrical wires. Know the operating height and unfolding height of your machine.

CAUTION: Avoid injury or death to others. Make sure no one is close to the spray/application boom when unfolding it.

IMPORTANT: Avoid spray/application boom system damage. Before opening the spray/application boom, make sure that the oscillation movement of the spray/application boom is locked.

IMPORTANT: Avoid damage to the machine structure. Perform this procedure with the engine running at medium speed (1700—1800 rpm). This way, the spray/application boom movements will be smooth and progressive, without sudden movements that can damage the machine structure.

1. With the machine stopped, set the engine to 1700—1800 rpm.



YE000139—UN—22SEP22

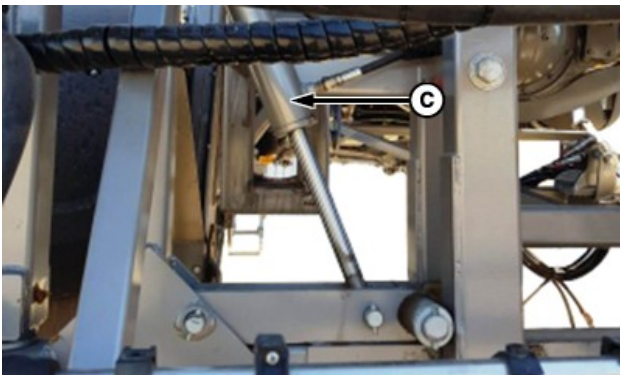
Transport Lock—Machine Side

2. Remove the transport locks (A) (if equipped) from machine side and store them in their supports. For machines equipped with carbon fiber spray booms, these locks are hydraulic-actuated, so they need to be unlocked through the corresponding buttons on the right-hand side console.
3. Release the spray/application booms from their supports, raising them.
4. Completely unfold the left- and right-hand side inner spray/application booms using the corresponding commands.



Transport Lock—Center Frame

5. Remove the transport lock (B) from center frame and store it in its support.
6. Lower the spray/application boom to the lowest height.
7. Completely unfold the left- and right-hand side outer spray/application booms simultaneously.



Locking Cylinder—Extended (locked position)



Locking Cylinder—Retracted (unlocked position)

8. Unlock the oscillation movement of the spray/application boom by retracting the locking cylinder (C).
9. Adjust the height of the spray/application boom with the tilt movement.

With the spray/application boom released and completely unfolded, the equipment is ready to start application.

IMPORTANT: Avoid machine damage. To drive machine to the working location, it is recommended to maintain the spray/application booms in transport position. See *Fold the Spray/Application Boom (for Transport)* in *Spray/Application Boom* section.

jtlsx7f,1661799305859-19-05DEC22

Tilt Movement

The spray/application booms have a 45° tilting movement that allows to dodge obstacles.

jtlsx7f,1661799340385-19-05DEC22

Fold the Spray/Application Boom (for Transport)

CAUTION: Keep away from overhead power lines. Serious injury or death to you or others can result due machine contact with electrical wires. Know the transport height and folding height of your machine.

CAUTION: Avoid injury or death to others. Make sure no one is close to the spray/application boom when folding it.

IMPORTANT: Avoid spray/application boom system damage. Before closing the spray/application boom, make sure that the oscillation movement of the spray/application boom is locked.

IMPORTANT: Avoid damage to the machine structure. Perform this procedure with the engine running at medium speed (1700—1800 rpm). This way, the spray/application boom movements will be smooth and progressive, without sudden movements that can damage the machine structure.

NOTE: This procedure may vary according to machine model or configuration.

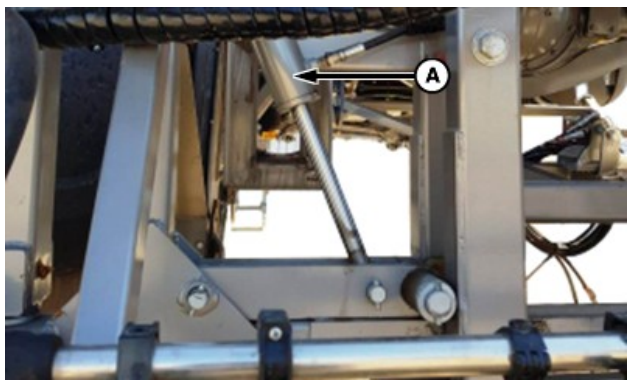
For transport or driving the machine, the spray/application boom must be folded in machine supports. After folding, all existing locks must be installed.

For folding the spray/application boom, perform the following procedure:

1. With the machine stopped, set the engine to 1700—1800 rpm.

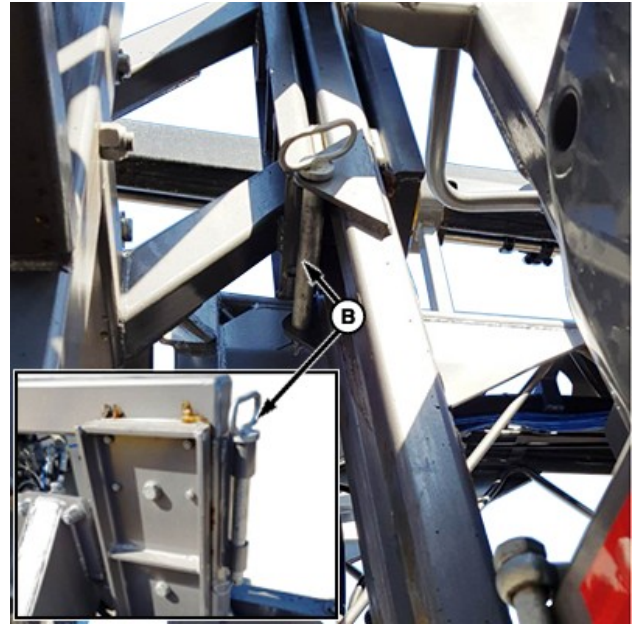


Locking Cylinder—Retracted (unlocked position)



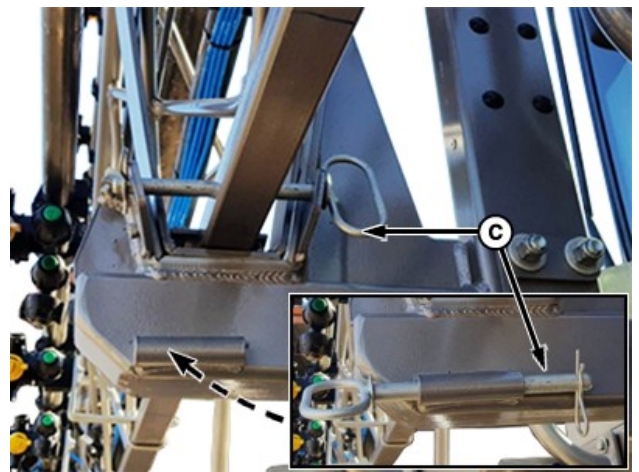
Locking Cylinder—Extended (locked position)

2. Lock the oscillation movement of the spray/application boom by extending the locking cylinder (A).
3. Completely fold the left- and right-hand side outer spray/application booms simultaneously, using the corresponding commands.



Transport Lock—Center Frame

4. Raise the spray/application boom until upper position and lock its vertical movement with the transport lock (B) from center frame.
5. Raise the spray/application booms using the 45° tilting movement to allow them to fit the supports.
6. Carefully fold the left- and right-hand side inner spray/application booms using the corresponding commands until the spray/application booms are close to their machine side supports.
7. Complete the folding process of the left- and right-hand side inner spray/application booms.
8. Lower the spray/application booms over the supports until they are well fit. To unload the nitrogen accumulator, keep the button pressed for 5 seconds.



Transport Lock—Machine Side

9. Install the transport locks (C) (if equipped). For

machines equipped with carbon fiber spray booms, these locks are hydraulic-actuated, so they need to be locked through the corresponding buttons on the right-hand side console.

jtlssx7f,1661799347458-19-05DEC22

Section Control Instruction



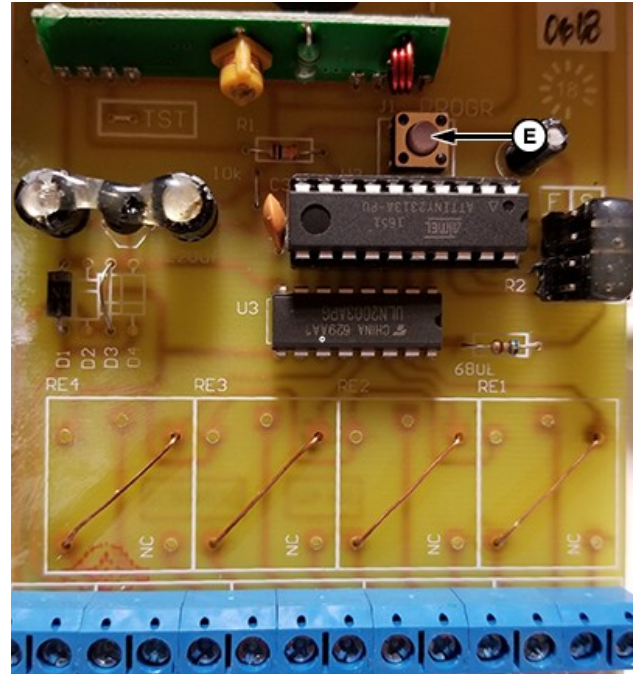
YE000267—UN—10OCT22

Wireless Module (outside)



YE000268—UN—10OCT22

Remote Control



YE000266—UN—10OCT22

Wireless Module (inside)

Code Insertion

To insert a new remote control to the system, perform the following procedure:

1. Remove the wireless module cover.
2. Press the **PROGR** button (E) in the lower board. The LED indicator starts flashing to indicate that the programming mode is active. It will remain this way for 10 seconds.
3. Activate the remote control by pressing the button (A). The LED indicator turns off during some time when the code is accepted and flashes two times, going out of the programming mode.
4. Repeat the previous steps as many remaining remote controls are necessary to include.

Code Clearing

To clear the codes already inserted, perform the following procedure:

1. Press the **PROGR** button (E) and maintain it pressed for 10 seconds. All programmed codes will be cleared. The LED light remaining on evidences this situation (receiver without codes).

NOTE: Each remote control has four buttons (A—D). The upper (A and B) use one code, and the lower (C and D) use another one. This way, two codes must be programmed per remote control.

2. Proceed to the code insertion and press the button (A). Repeat the code insertion and press the button

(C). This way, all four buttons (A—D) are programmed.

jtlisx7f,1665412977386-19-17NOV22

Steel Spray Boom

Adjust the Outer Spray Boom Section Position



YE000684—UN—05APR23

1. Fold the outer spray boom section in a 90° angle in relation to the inner spray boom section as the image shows.



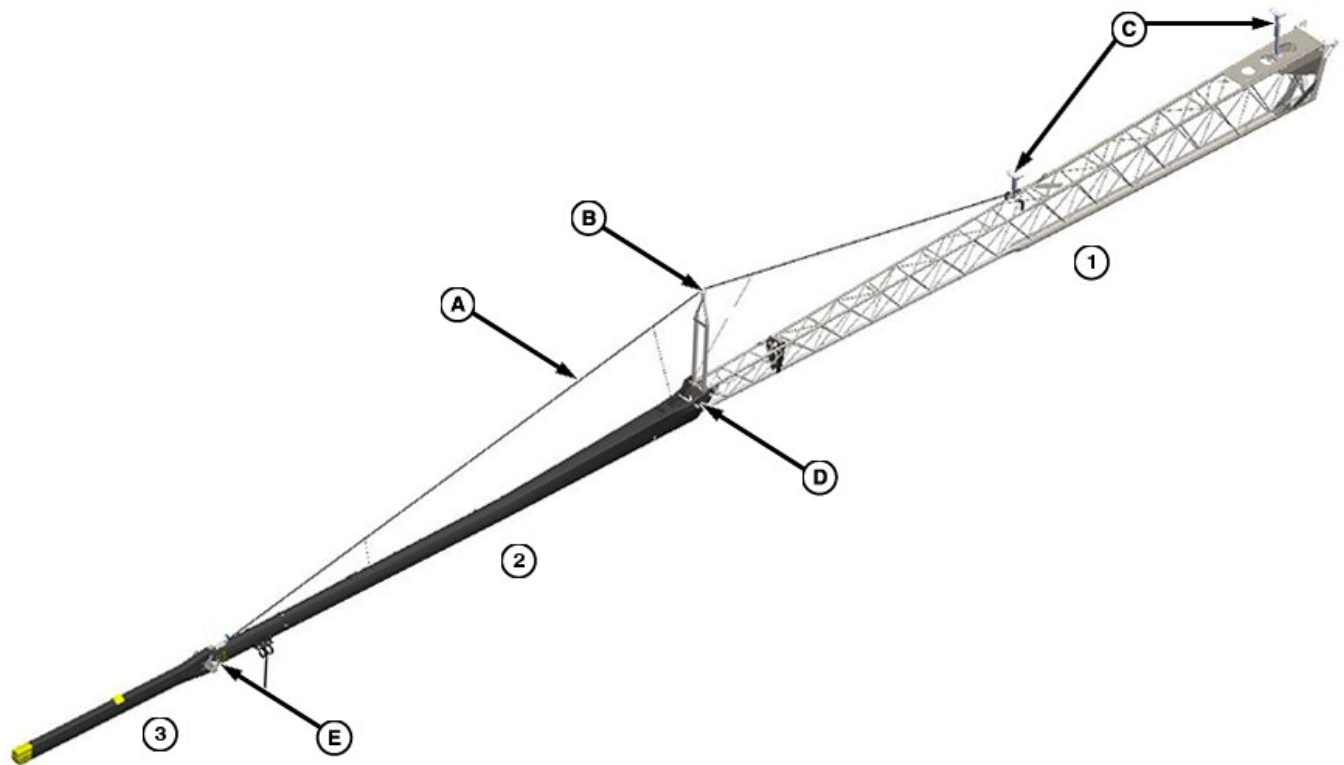
YE000685—UN—05APR23

2. Loosen locknut (A) on rod with a wrench (B).
3. Unscrew the rod one turn.
4. Tighten locknut (A).
5. Check again for the presence of a gap between inner spray boom section and outer spray boom section.
6. Repeat the adjust as many times as necessary to remove the gap.

edw8krp,1680035315364-19-06APR23

Hybrid Spray Boom

Main Components of the Hybrid Spray Boom



- 1—Inner Spray Boom Section
- 2—Outer Spray Boom Section
- 3—Breakaway Section
- A—Tensioner 6 and 7 (T6/7)

- B—Support
- C—Transport Supports
- D—Folding System
- E—Breakaway System

YE000506—UN—24NOV22

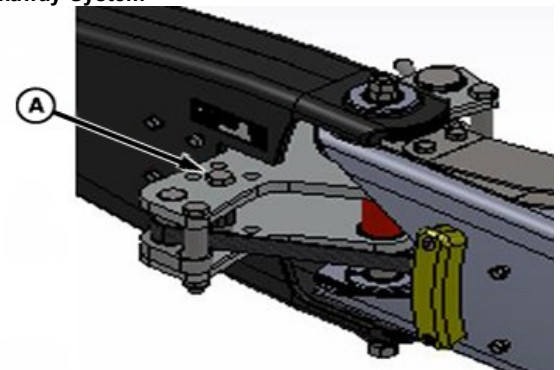
jtlx7f,1668800875777-19-26NOV22

Adjust the Breakaway System

1. Park the machine on level ground.
2. Unfold the spray boom completely.

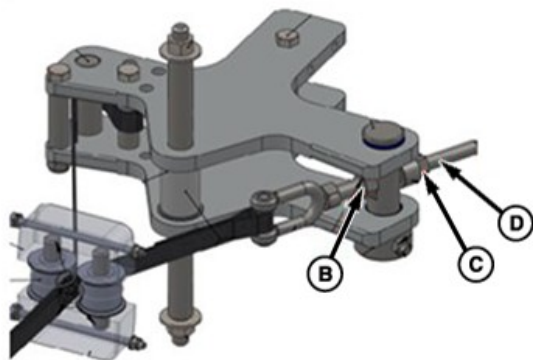


YE000522—UN—24NOV22



YE000523—UN—24NOV22

3. Push the end of the breakaway to the side of the adjusting screw (A) until the strap of the breakaway system is without tension.
4. Keeping the strap without tension, replace the adjusting screw (A) to the desired position according to the result to be achieved. To increase the tension, install the adjusting screw (A) in a position closer to the spray boom. To decrease the tension, install the the adjusting screw (A) in a position farther the spray boom.



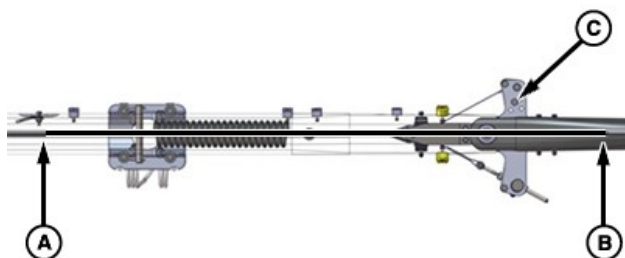
YE000524—UN—10MAR23

IMPORTANT: Adjust the tensioner (D) lock nut (B) and nut (C) making sure that the shackle remains in vertical position.

- Once the adjusting screw (A) point is set, push the breakaway to the opposite side, up to its natural position.

jtlsx7f,1668800475478-19-28NOV22

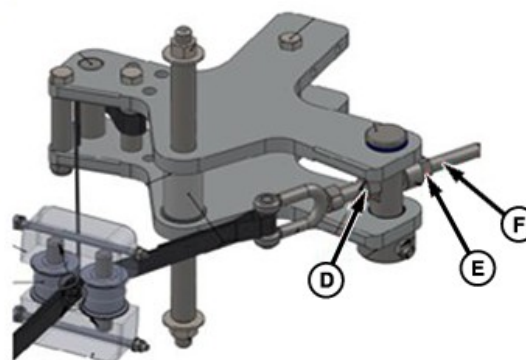
Adjust the Alignment of the Breakaway Section



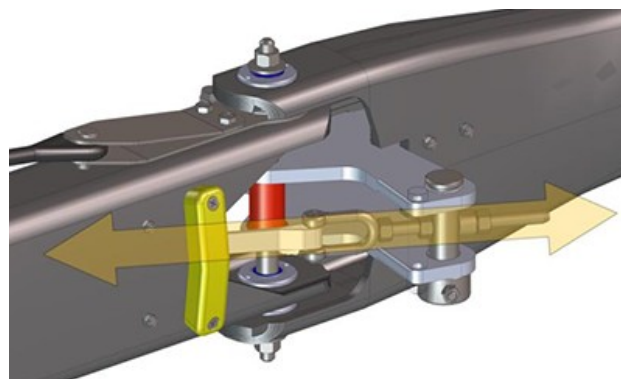
YE000525—UN—26NOV22

The breakaway section (B) must be aligned with the outer spray boom section (A).

- Park the machine on level ground.
- Unfold completely the spray boom.
- Push the end of the breakaway section (B).
- Push the end of the breakaway section (B) to the side of the adjusting screw (C) until the strap of the breakaway system is without tension.



YE000526—UN—26NOV22



YE000527—UN—26NOV22

Tensioner

- Keeping the strap without tension, loosen the nut (E) and the lock nut (D) of the tensioner (F). Move the tensioner and tighten the nuts.
- Activate the breakaway system from one end to the other one for three or four times.
- Once the alignment between the breakaway section (B) and the outer spray boom section (A) is reached, tighten the nut (E) and the lock nut (D).

jtlsx7f,1668800485360-19-28NOV22

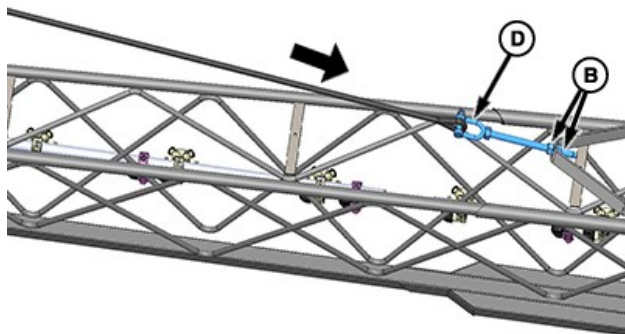
Adjust the T6/T7 Tensioner (Hybrid Spray Booms Only)

- Park the machine on level ground.
- Unfold the spray boom completely.



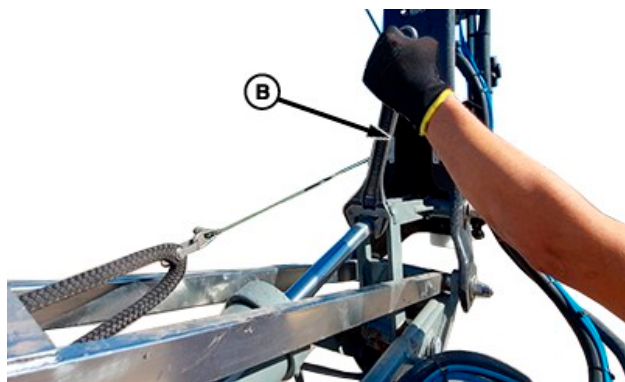
YE000544—UN—28NOV22

- Slightly raise the spray boom to release the tension at the rope.



4. Loosen the nuts (B).
5. To increase the tension on the rope, move the fork (D) in the direction indicated by the arrow. To decrease tension, move the fork (D) to the opposite side.
6. Tighten the nuts (B).
7. Check the tension of the T6/T7 tensioner. (See Check the T6/T7 Tensioner in Service-Chassis and Spray/Application Boom section.)

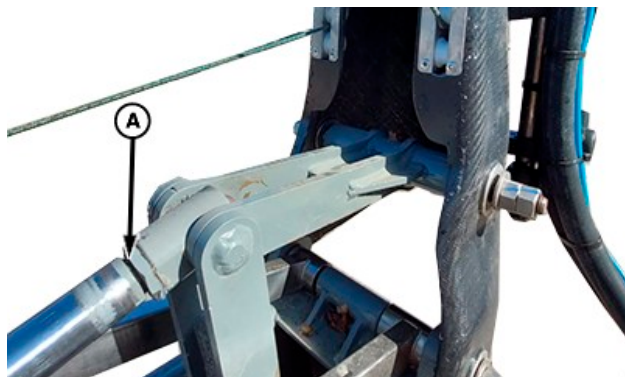
jtlstx7f,1668800412864-19-12DEC22



2. Loosen locknut (A) on rod with a wrench (B).
3. Unscrew the rod one turn.
4. Tighten locknut (A).
5. Check again for the presence of a gap between inner spray boom section and outer spray boom section.
6. Repeat the adjust as many times as necessary to remove the gap.

edw8krp,1680620308563-19-06APR23

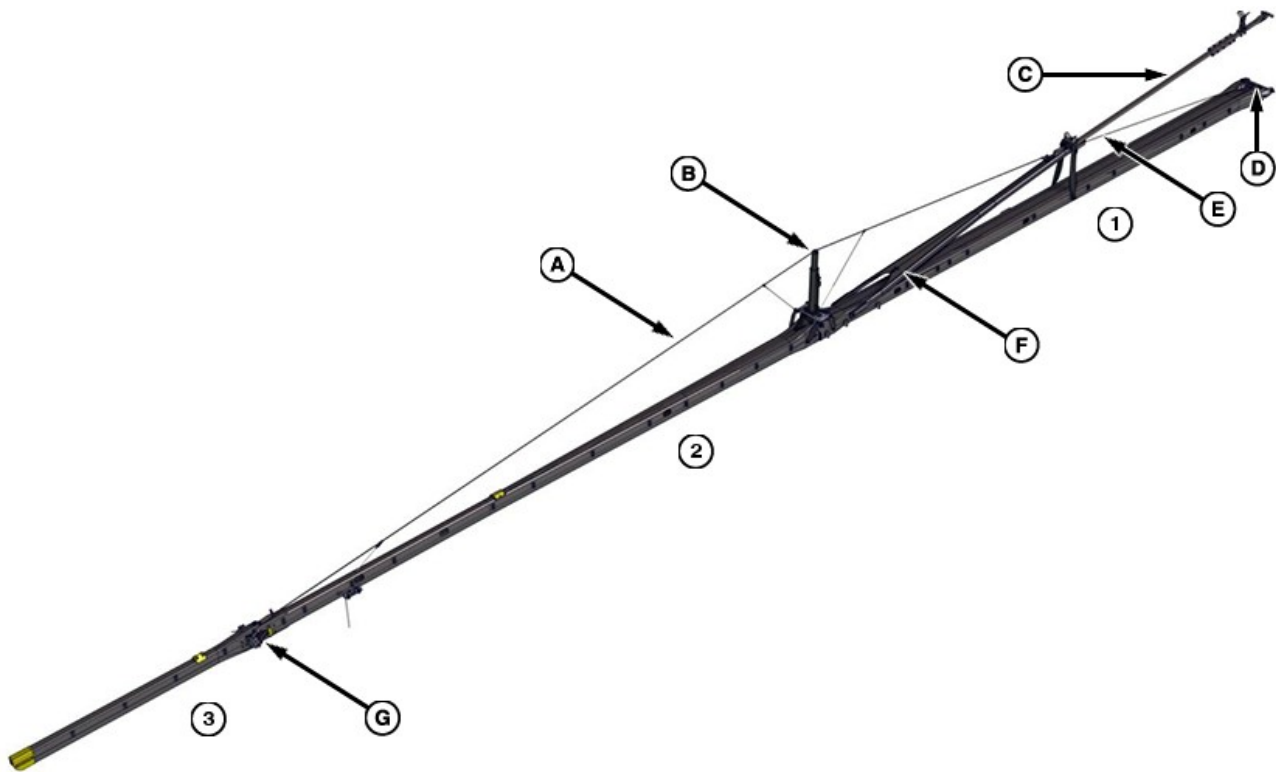
Adjust the Outer Spray Boom Section Position



1. Fold the outer spray boom section in a 90° angle in relation to the inner spray boom section as the image shows.

Carbon Fiber Spray Boom

Main Components of the Carbon Fiber Spray Boom



1—Inner Spray Boom Section
2—Outer Spray Boom Section
3—Breakaway Section
A—Tensioner 3 (T3)
B—Folding System

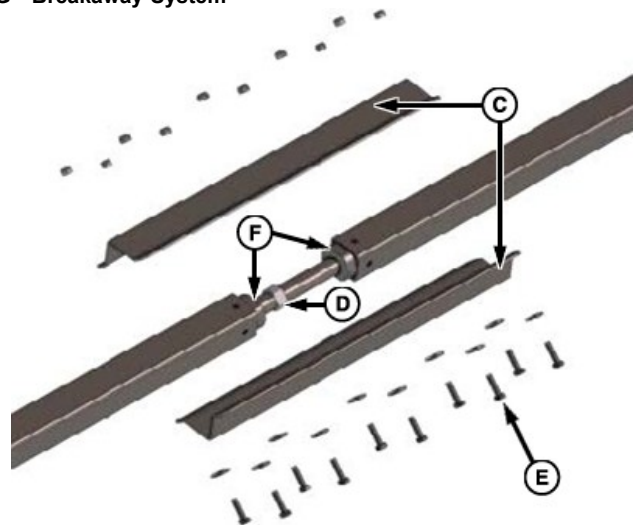
C—Tensioner 1 (T1)
D—Fuse Box
E—Tensioner 3 (T3)
F—Tensioner 2 (T2)
G—Breakaway System

YE000505—UN—24NOV22

jtlsx7f,1669484614126-19-26NOV22

Adjust the Inner Spray Boom Section (Carbon Fiber Spray Booms Only)

1. Park the machine on level ground.
2. Unfold the spray boom.



YE000518—UN—24NOV22



YE010423—UN—16MAR23

3. Grease and remove the screws (E) and the plates (C) to allow reaching the adjusting screw (D).
4. Raise the center frame.
5. Actuate the tilt cylinder up to the mechanical stop.
6. Loosen the nuts (F) of the adjusting screw (D).
7. Rotate the adjusting screw (D) to reach the specified angle.

Specification

Inner Spray Boom

Section—Angle. Between -4° and -5°

8. Once the correct angle of the inner spray boom section is reached, tighten the nuts (F).
9. Reinstall the plates (C) and the corresponding screws (E).

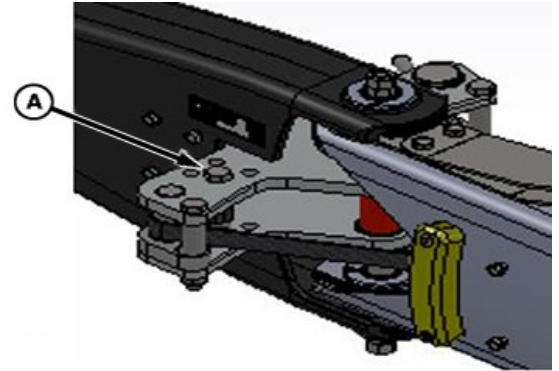
jtlisx7f,1668801001111-19-15MAR23

Adjust the Breakaway System

1. Park the machine on level ground.
2. Unfold the spray boom completely.

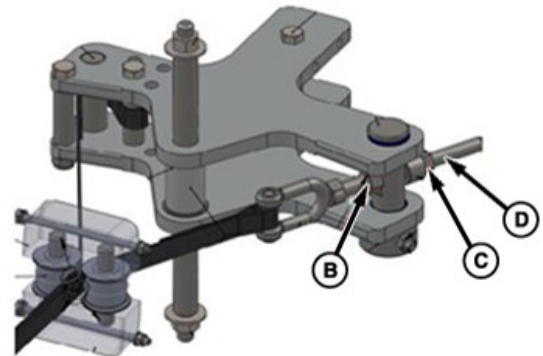


YE000522—UN—24NOV22



YE000523—UN—24NOV22

3. Push the end of the breakaway to the side of the adjusting screw (A) until the strap of the breakaway system is without tension.
4. Keeping the strap without tension, replace the adjusting screw (A) to the desired position according to the result to be achieved. To increase the tension, install the adjusting screw (A) in a position closer to the spray boom. To decrease the tension, install the the adjusting screw (A) in a position farther the spray boom.



YE000524—UN—10MAR23

IMPORTANT: Adjust the tensioner (D) lock nut (B) and nut (C) making sure that the shackle remains in vertical position.

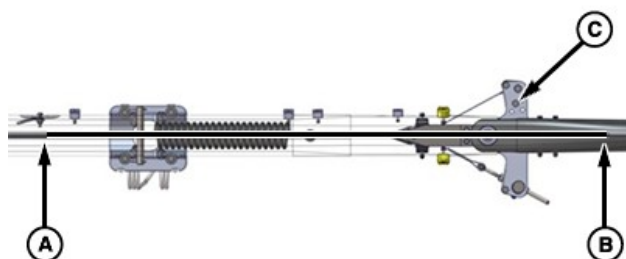
5. Once the adjusting screw (A) point is set, push the breakaway to the opposite side, up to its natural position.

jtlisx7f,1668800475478-19-28NOV22

Adjust the Alignment of the Breakaway Section

(B) and the outer spray boom section (A) is reached, tighten the nut (E) and the lock nut (D).

jtlisx7f,1668800485360-19-28NOV22



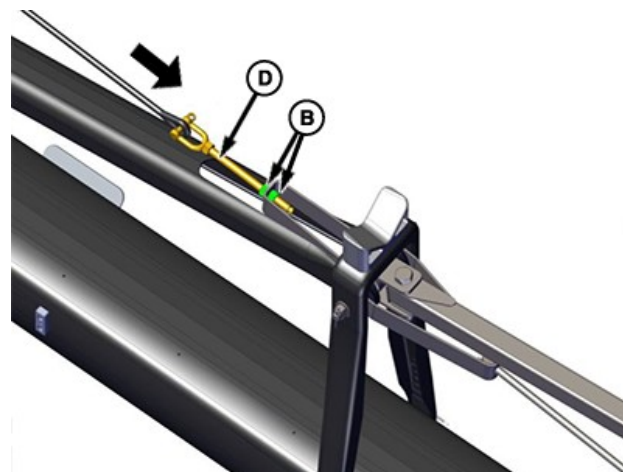
Adjust the T6/T7 Tensioner (Carbon Fiber Spray Booms Only)

1. Park the machine on level ground.
2. Unfold the spray boom completely.



YE000519—UN—24NOV22

3. Slightly raise the spray boom to release the tension at the rope.



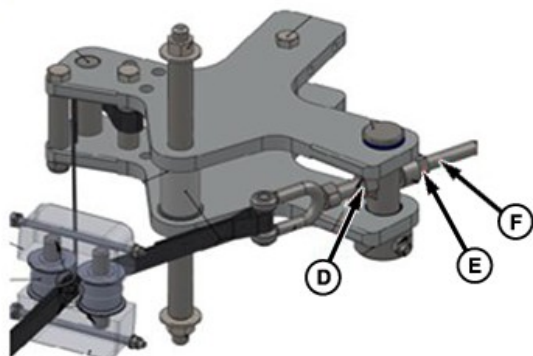
YE000520—UN—24NOV22

4. Loosen the nuts (B).
5. To increase the tension on the rope, move the fork (D) in the direction indicated by the arrow. To decrease tension, move the fork (D) to the opposite side.
6. Tighten the nuts (B).
7. Check the tension of the T6/T7 tensioner. (See Check the T6/T7 Tensioner in Service-Chassis and Spray/Application Boom section.)

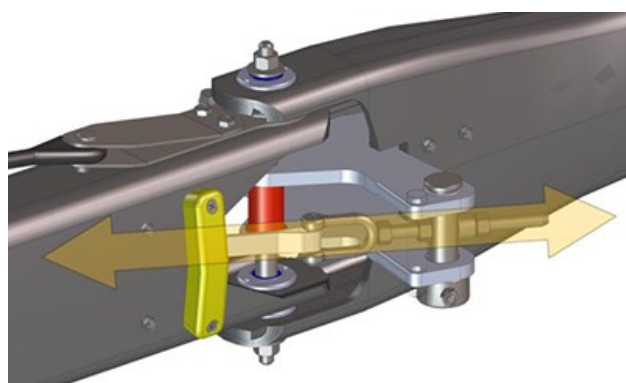
jtlisx7f,1668801016810-19-12DEC22

YE000525—UN—26NOV22
The breakaway section (B) must be aligned with the outer spray boom section (A).

1. Park the machine on level ground.
2. Unfold completely the spray boom.
3. Push the end of the breakaway section (B).
4. Push the end of the breakaway section (B) to the side of the adjusting screw (C) until the strap of the breakaway system is without tension.



YE000526—UN—26NOV22



YE000527—UN—26NOV22

Tensioner

5. Keeping the strap without tension, loosen the nut (E) and the lock nut (D) of the tensioner (F). Move the tensioner and tighten the nuts.
6. Activate the breakaway system from one end to the other one for three or four times.
7. Once the alignment between the breakaway section

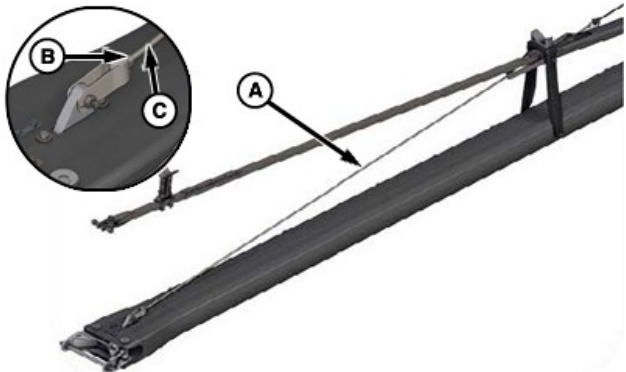
Adjust the T3 Tensioner (Carbon Fiber Spray Booms Only)

Perform this service every season.

IMPORTANT: Do not use the spray boom with the tensioner T3 (A) out of specified tightening. If the tension of the tensioner T3 (A) is not correct, the risk of breaks is increased.

In case of being necessary to increase or decrease the T3 rope tension, perform the following procedure:

- 1. Park the machine on level ground.
- 2. Unfold the spray boom and make sure it is leveled.



YE000521—UN—24NOV22

- 3. Loosen the lock nut (B).
- 4. Adjust the bar (C) using a torchimeter to reach the tension specification. (See Check the T3 Tensioner (Carbon Fiber Spray Booms Only) in Service-Chassis and Spray/Application Boom section.)
- 5. Tighten the lock nut (B) to specification:

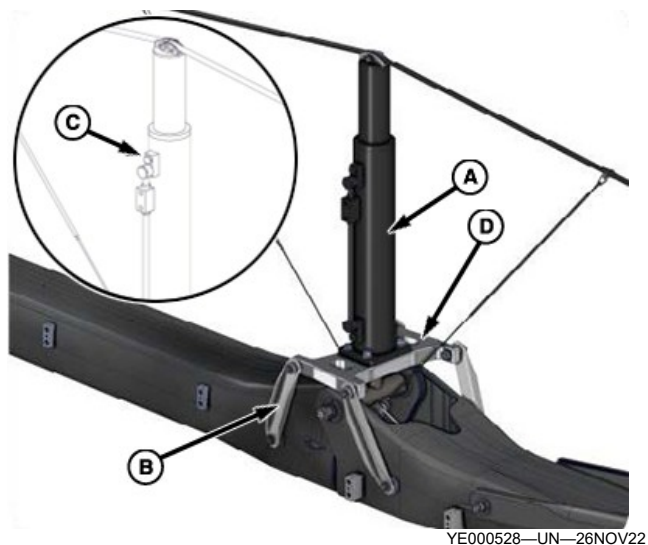
Specification

Tensioner T3 Lock Nut—Torque. 78.5 N·m
(57.9 lb·ft)

jtlx7f,1668801010662-19-12DEC22

Adjust the Outer Fold Cylinder (Carbon Fiber Spray Booms Only)

Overview



The outer fold cylinder (A) is composed of a hydraulic cylinder that actuates a mechanism of four rods (B) connected to a base (D). The hydraulic actuation moves the assembly to perform the folding and unfolding of the spray boom.

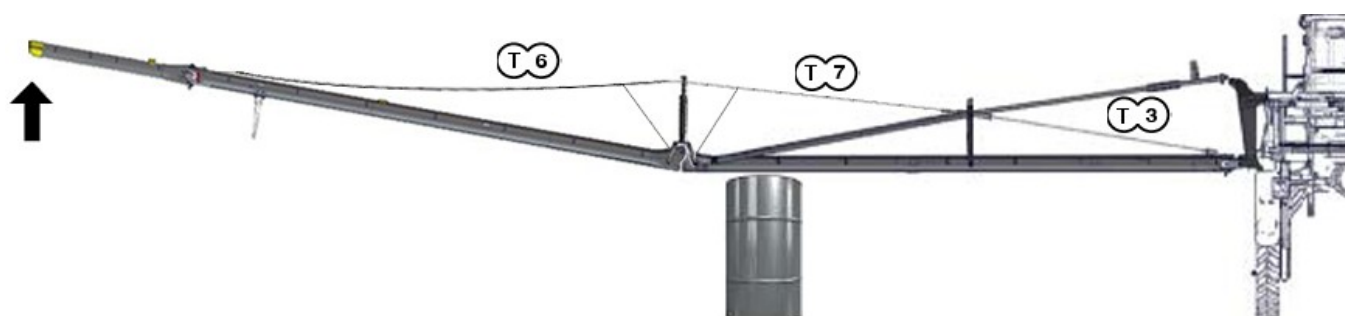
The outer fold cylinder (A) has two chambers at its extremities. These chambers, through the calibrated stop (C), act like a brake at the cylinder ends of course.

Before adjusting the cylinder due to any malfunction in system that is noticed, make sure that the calibrated stop (C) is not obstructed by any dirt at the hydraulic oil.

If the malfunction persists, perform the adjust of the outer fold cylinder (A).

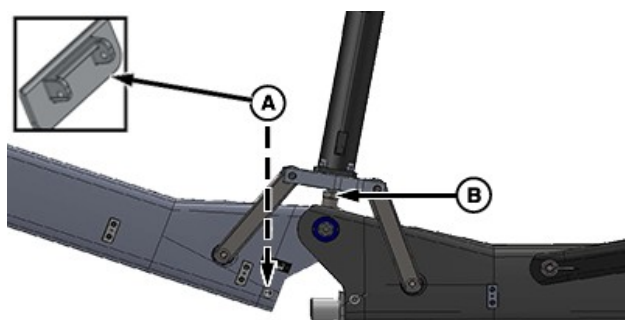
Adjust the Outer Fold Cylinder (Carbon Fiber Spray Booms Only)

1. Park the machine on level ground.
2. Unfold the spray boom completely.

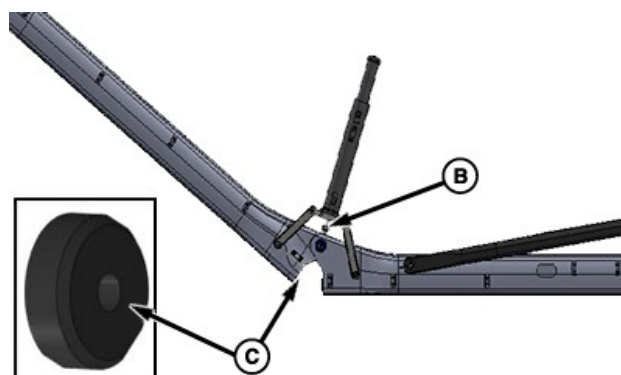


3. Position a support as shown in the image.
4. Carefully lower the spray boom with the tilt cylinder until it is supported.
5. To release tension at the T6/T7 rope, slightly fold the outer spray boom.

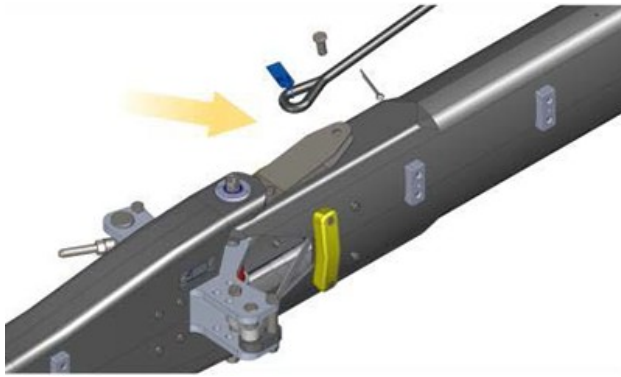
outer spray boom section and loosen the lock nut (B) of the outer fold cylinder .



6. **For machines equipped with 36 m (118.11 ft) spray booms:** remove the cradle plate (A) of the



7. **For machines equipped with 40 m (131.23 ft) spray booms:** remove the two stops (C) of the outer spray boom section and loosen the lock nut (B) of the outer fold cylinder .



Tensioner T6

YE000532—UN—28NOV22

8. Disconnect the tensioner T6 as show in the image.



YE000533—UN—28NOV22

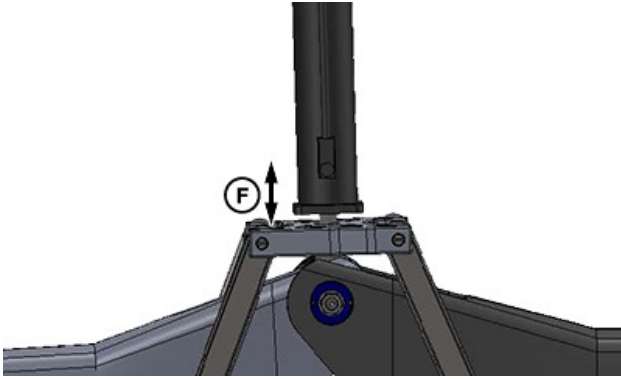
9. Position other support as shown in the image.
10. Unfold the spray boom until it is in horizontal position, supporting the outer spray boom to release efforts at the cylinder.

11. Disconnect the terminals of the hydraulic hoses.
12. Remove the screws (1) that fix the flange (2).



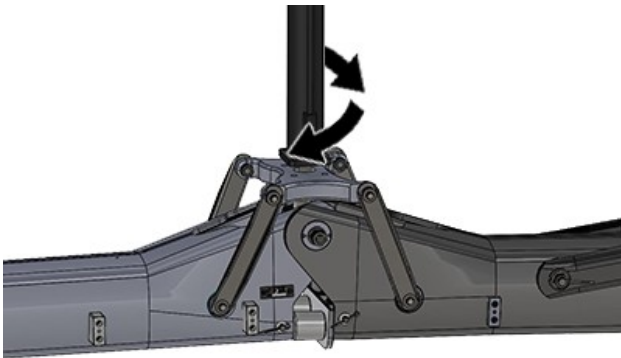
YE000535—UN—28NOV22

13. Manually unfold the outer spray boom section, removing the support previously used, until reaching the mechanical stop (E) with the inner spray boom section. Take a negative angle of approximately -5° (D) in relation to its original position.



YE000536—UN—28NOV22

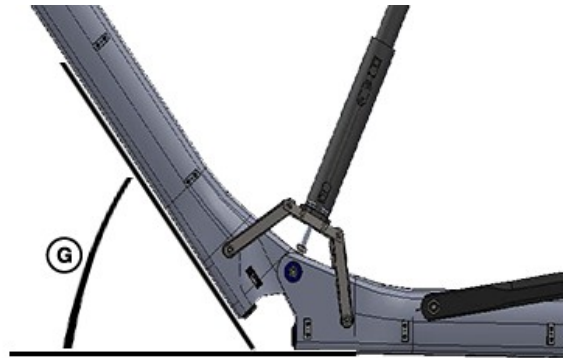
14. When the angle informed after is reached, the outer fold cylinder is going to move away from its base approximately 25 mm (1 in) (F).



YE000537—UN—28NOV22

15. Rotate clockwise the cylinder until its flange is near to the cylinder base, making the bores on flange to match the bores on base so it will be possible to fix the assembly using the screws previously removed. This adjust will make possible the cylinder to have its course corrected.

16. Reinstall the four removed screws, applying thread lock.
17. Reconnect the hydraulic hoses.



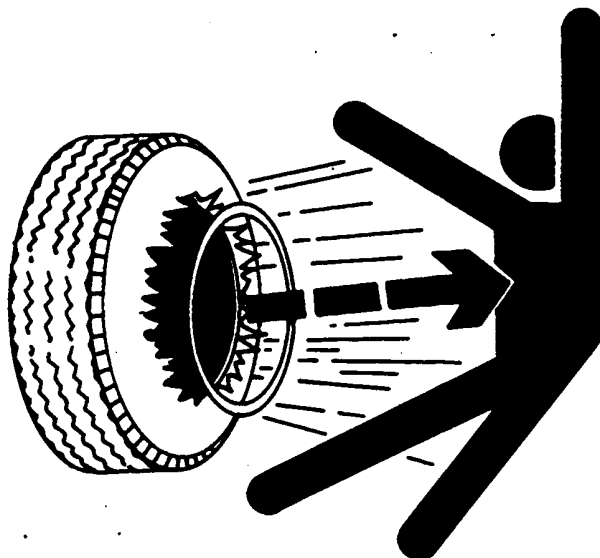
YE000538—UN—28NOV22

18. Raise the spray boom enough (do not overcome an 80° angle (G)) to be able to reinstall the folding stops (C) or the cradle plate (A) previously removed. Reinstall them.
19. Resinstall the T6/T7 tensioner and adjust the lock nut (B).
20. Before completely folding the outer spray boom, perform at least two fold movements of approximately 80° angle (G).
21. Check the tension of the tensioner T6/T7. (See Check the T6/T7 Tensioner in Service-Chassis and Spray/Application Boom section.)
22. If necessary, adjust the tension of the tensioner T6/T7. (See Adjust the T6/T7 Tensioner (Carbon Fiber Spray Booms Only) in Carbon Fiber Spray Boom section.)

jtlisx7f,1668801437039-19-12DEC22

Wheels, Tires, and Tread

Service Tires Safely



TS211—UN—15APR13

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

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

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure.

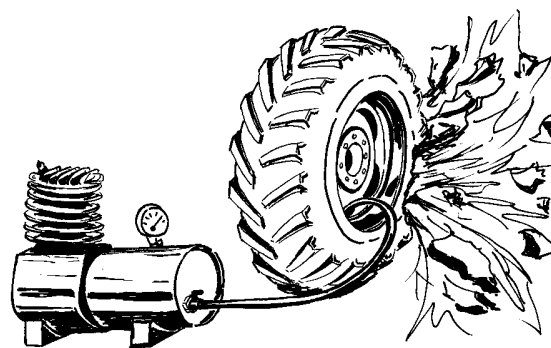
Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

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

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

DX,RIM1-19-27OCT08

Safely Mounting Tires



Z 20924

Z20924—UN—15AUG94

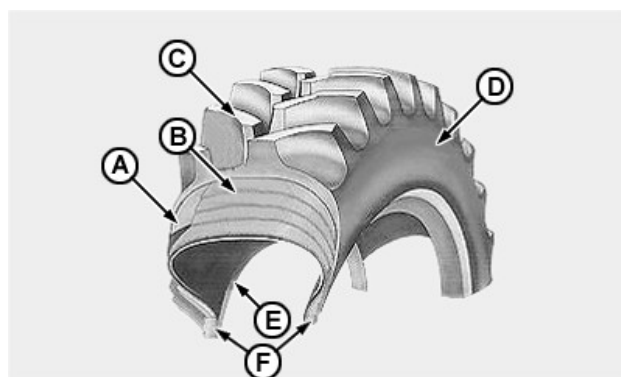
Failure to follow appropriate procedure when mounting a tire on a wheel or rim can cause an explosion, which may result in serious injury or death. **DO NOT** attempt to mount a tire unless you possess the equipment and experience to safely carry out the task. It is safer to leave this task to your John Deere dealer or a professional tire shop.

When mounting the bead of the tire in the rim never exceed the maximum adjustment pressure as specified by the tire manufacturer. Inflating a tire to a pressure above the maximum level may cause the bead to tear or even the rim, with dangerous explosive force. If, at the recommended pressure, there is leakage of air from the bead of the tire set on the rim deflate tire, lubricate the bead and reinflate it.

Detailed agricultural tire mounting instructions, including necessary safety precautions, are available from the local office of your tire manufacturer. This information is also available in the manuals of tire manufacturers.

LX,OSPU 000242-19-06APR05

Tire Parts



CQ281142—UN—08AUG12

- A—Carcass
- B—Plies
- C—Tread
- D—Sidewall
- E—Liner
- F—Steel bead

NOTE: For more detailed information, see tire manufacturer's manual or contact your dealership.

OU90500,0000131-19-30AUG12

Tire Denomination

Diagonal tire

16.9 - 28 10PR R1
 (A) (B) (C) (D) (E)

CQ294129—UN—30AUG12

The diagonal tire is identified by conventional nomenclature.

- A**—Width of the tread of the tire in inches.
- B**—Indicates the tire is diagonal.
- C**—Indicates the size of the rim in inches.
- D**—Ply Rating, indicates the strength of the carcass and not the number of plies.
- E**—Type and size of lug tire.

Radial tire

① 16.9 R 28 R1W
 (A) (B) (C) (D)

② 600 /65 R 28 R1 155 A8
 (A) (B) (C) (D) (E) (F) (G)

CQ294130—UN—30AUG12

The radial tire can be identified by conventional nomenclature or international system.

1 - Conventional nomenclature

- A**—Width of the tread of the tire in inches.
- B**—Indicates the tire is radial.
- C**—Indicates the size of the rim in inches.
- D**—Type and size of lug tire.

2 - International system

- A**—Indicates the width of the tire in millimeters.

- B**—Indicates the height of the tire (side) as a percentage of the width.
- C**—Indicates the tire is radial.
- D**—Indicates the size of the rim in inches.
- E**—Type and size of lug tire.
- F**—Indicates the index of the tire load capacity.
- G**—Indicates the maximum speed that the tire is indicated.

High flotation tire

850 /60 - 38 R1
 (A) (B) (C) (D) (E)

CQ294131—UN—30AUG12

The high flotation tires are identified by a mixed nomenclature.

- A**—Indicates the width of the tire in millimeters.
- B**—Indicates the height of the tire (side) as a percentage of the width.
- C**—Indicates the tire is diagonal.
- D**—Indicates the size of the rim in inches.
- E**—Type and size of lug tire.

OU90500,0000132-19-30AUG12

Tire Tread Types



CQ294132—UN—30AUG12

There are five types of tread and these are the most used on agricultural application.

- A**—R1 tire. Are most common in agricultural application and suitable for most soil conditions.
- B**—R1W tire. The lugs are 20% higher than the R1 tire, providing greater durability when used to run on roads.

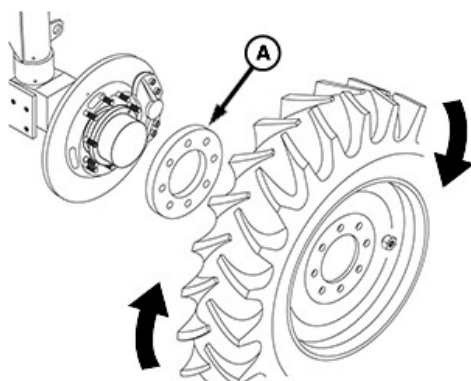
- C**—R2 tire. Used in land with muddy, wet and with little support. For example, in irrigated rice field.
- D**—R3 tire. Has small lugs and is recommended for use on surfaces that require minimal movement. For example, in golf field, airports, etc.
- E**—R4 tire. Tyre for industrial application and lightweight constructions.

OU90500,0000133-19-30AUG12

Tires may be used for stream bank stabilization. Contact the DNR for guidance.

AG,OUO1011,911-19-01MAR06

Tread Adjust (If Equipped with Reversible Wheels)



YE000149—UN—22SEP22

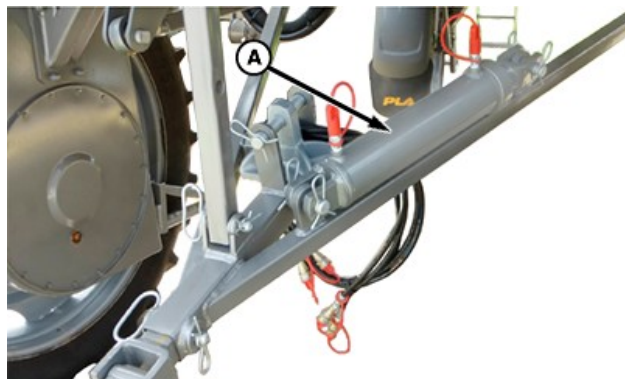
To be adapted for for different crops, the machine can have its tread set to 2.62 m (8.60 ft) or to 2.80 m (9.19 ft) according to orientation of the wheel and the addition of the spacer (A).

To adjust the tread, perform the following procedure:

1. Park the machine on a firm, dry, and level ground.
2. Install wheel chocks.
3. Install the hydraulic jack on the machine and raise one wheel. (See Hydraulic Jack in Wheels, Tires, and Tread section.)
4. Remove the wheel and reverse it, so the internal side of the wheel is positioned outward (as indicated in the image). The spacer (A) must be installed between the wheel and the hub.
5. Repeat the process on the remaining wheels.

jtlisx7f,1661886738540-19-22NOV22

Hydraulic Jack



YE000049—UN—22SEP22

The machines are equipped with a hydraulic jack (A) and a support that allows the elevation of the machine when needed.

The storage position of the hydraulic jack (A) is over the tow bar.

Once the hydraulic jack (A) is on the position to be used, it is connected to the machine hydraulic system and actuated using the hydraulic system commands.

jtlisx7f,1669148546486-19-23NOV22

Discarded Tires

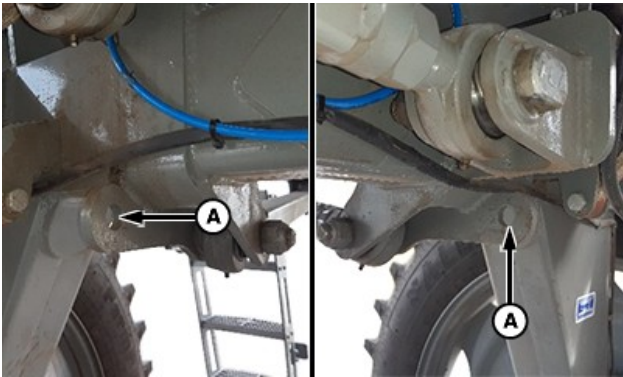
It is illegal to burn discarded tires. Tires cannot be used to start piles of trees and buildings on fire. Tires can not be used to fill ravines, washes, streams, etc.

Discarded tires can be disposed of in a permitted landfill. These tires must first be processed (shredded or quartered) before being taken to a landfill. Call your landfill for requirements.

Discarded tires also may be recycled if a recycling plant is nearby.

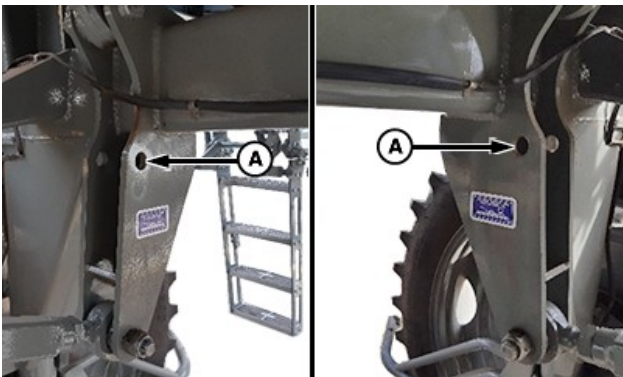
Transporting the Machine

Towing the Machine



Front Engine

YE000252—UN—10OCT22



Central Engine

YE000253—UN—10OCT22

The machine has two tie-points (A) near the tensioners, one at each machine side as the images show. These tie-points (A) must be used for tying tow straps and tow the machine.

General Procedure

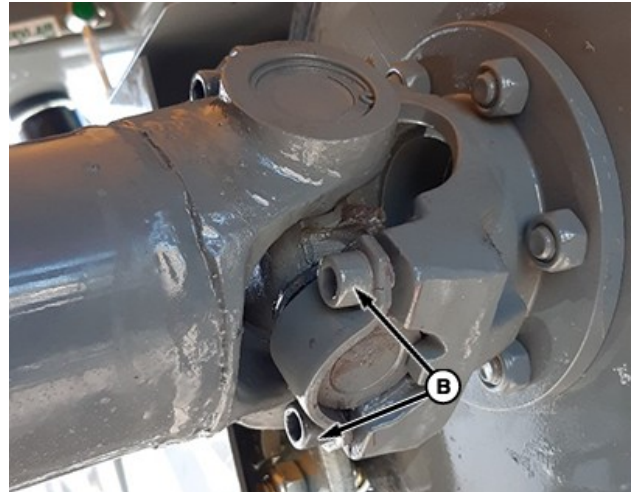
For machines equipped with an Eaton manual transmission:

1. Install tow straps on the indicated tie-points (A).
2. Put the transmission in neutral position.
3. Release the park brake. (If the engine does not start, see the instructions at the end of this procedure.)
4. Tow the machine.

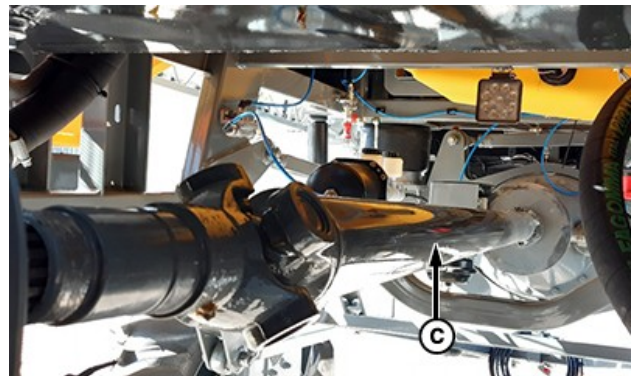
For machines equipped with an Allison automatic transmission:

IMPORTANT: Take care when removing the driveshaft. It is recommended to fix the universal joint in order to not loose the bearings of the assembly.

NOTE: To perform the towing procedure on automatic transmission machines, it is necessary to remove the driveshaft using a wrench.

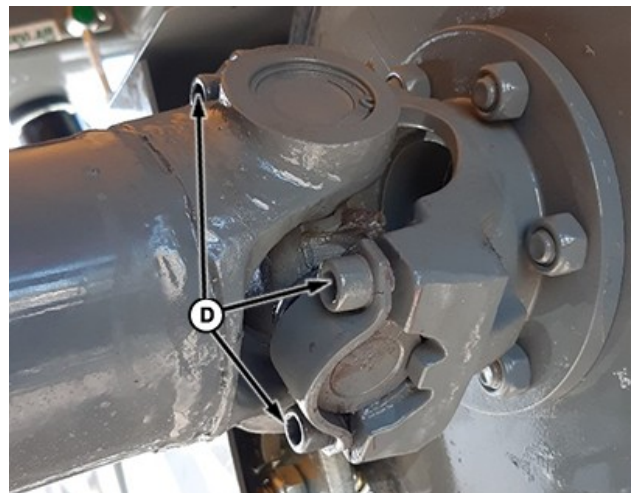


YE000255—UN—10OCT22



YE000254—UN—10OCT22

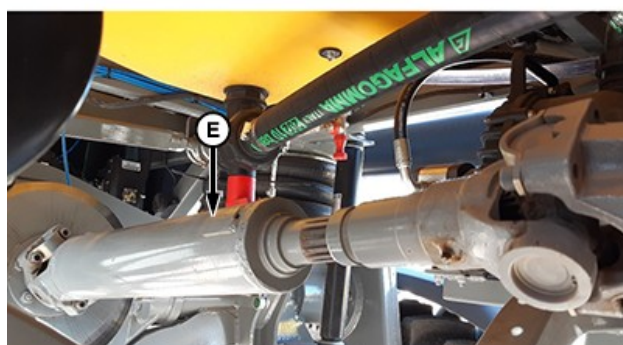
1. If the machine has a front engine, remove the four screws (B) from the differential side of the driveshaft and remove the second section of the driveshaft (C).



YE000257—UN—10OCT22



YE000258—UN—10OCT22



YE000256—UN—10OCT22

2. If the machine has a central engine, remove the eight screws (D) from both sides of the driveshaft (E).
3. Start the engine, let the pneumatic circuit to load air, and release the park brake. (If the engine does not start, see the instructions at the end of this procedure.)
4. Install tow straps on the indicated tie-points (A).
5. Tow the machine.
6. After the towing procedure is done, reinstall and tighten the previously removed screws to specification:

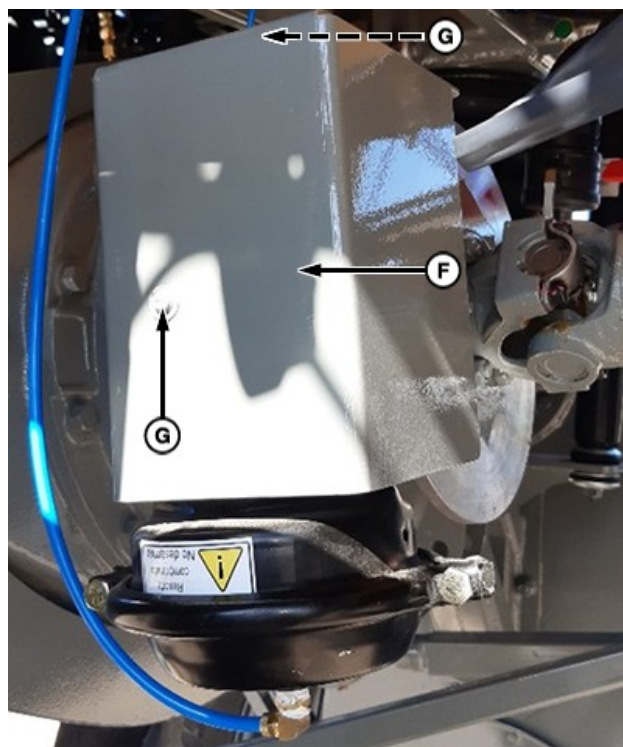
Specification

Driveshaft Screws—Torque. 35 N·m
(25.82 lb·ft)

If the Engine Does Not Start

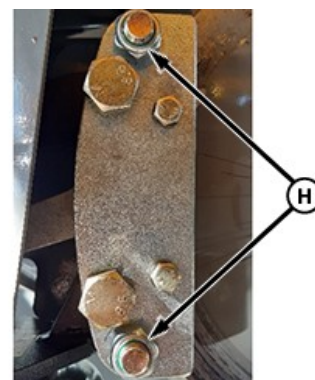
If a portable compressor is available, use it to charge the pneumatic system and release the park brake.

If a portable compressor is not available:



YE000259—UN—10OCT22

1. Remove the two screws (G) and remove shield park brake assembly (F) that is located at the right-hand side of the differential.



YE000260—UN—10OCT22

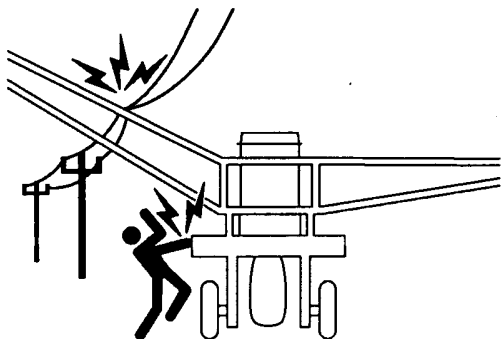
2. Release the brake pad registers from the disc brake using a hex socket wrench M22 on the nuts (H).
3. Install tow straps on the indicated tie-points (A).
4. Tow the machine.

jtlsx7f,1664458951522-19-29MAR23

Transport Procedure

Check and follow local regulations for equipment size, lighting, and marking before driving on public roadways.

Check the maximum transport height for the road the machine is going to pass. Make sure to consider the machine height plus the truck height.



N44191—UN—27APR92

CAUTION: Keep away from overhead power lines. Serious injury or death to you or others can result due to machine contact with electrical wires. Know the transport height of the machine.

Only allow companies specialized in this type of transport to perform this operation.

CAUTION: Avoid accidents and serious injury or death:

- Do not transport the machine with people over it.
- Make sure to reduce speed and take extra caution during turns or braking operation.

Only use trucks with compatible dimensions to the machine size. Observe the maximum height and width allowed.



YE000171—UN—22SEP22

Machine Transport

- The machine must be positioned and fixed in a safely manner on the truck.
- The spray/application booms must be completely folded and the transport locks must be installed. (See Fold the Spray/Application Boom (for Transport) in Spray/Application Boom section.)

- To avoid an accidentally engine or machine systems activation, turn off the battery disconnect switch.
- The tires must be in good conditions and calibrated according their correct pressure.

jtlsx7f,1662379353162-19-05DEC22

Special Transporting Instructions for Nutrient Applicators

- To reduce the height of the machine, remove the upper handrails.
- Safely position all moving and retractable parts of the machine for transport.
- Only transport the machine with the nutrient applicator box empty.
- Transporting the machine with loaded reservoirs can cause personal injury or premature failure by wear.
- Avoid serious injury or death by the lost of control or by an accident due to machine overload during transport.

jtlsx7f,1665685617698-19-05DEC22

Driving the Machine on Public Roads

Driving the machine on public roads, besides a dangerous practice, it is not recommended under certain conditions and locals.

IMPORTANT: Comply with all local governmental regulations before driving the machine on a public road.

The regulation of the country/region is primarily what determines the possibility of driving on roads.

Even when permitted, pay attention to the follow instructions:

- The driver must be aware of all law driving requirements and follow all applicable regulations.



YE000236—UN—04OCT22



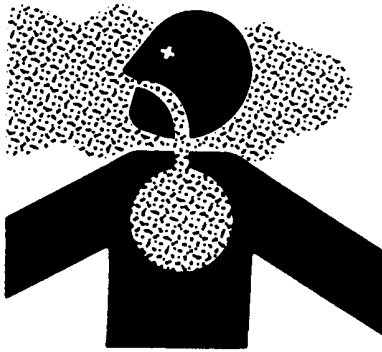
YE000237—UN—04OCT22

- All required reflectors must be in proper conditions and mandatory circulation lights must be ON.
- The spray/application booms must be completely folded, positioned over the supports, and the locks installed.
- Brakes and lights must be revised and working well.
- Reflectors and signs must be in good conditions.
- Always drive the machine in an appropriate speed range that allows safe control to be maintained. Do not exceed 35 km/h (22 mph) or follow local regulation for driving speed, if more restricted.
- When driving at night, pay even more attention to this kind of operation.
- Let the lights ON even during a day drive, including the beacon light.
- Always use low-beam headlights when passing through another vehicle.
- Always use the turn-signal lever whenever turning left or right. Do not forget to return the turn-signal lever to center position after completing the turn.

jtlisx7f,1669148314976-19-05DEC22

Machine Storage

Avoid Exposure to Chemicals



TS220—UN—15APR13



TS272—UN—23AUG88

⚠ CAUTION: Exposure to chemicals, including pesticides, can cause injury or death.

DO NOT RELY ONLY ON THIS CAB, CAB PRESSURE INDICATOR, OR CAB AIR FILTERS TO PROTECT AGAINST CHEMICAL EXPOSURE.

To reduce risk of chemical exposure:

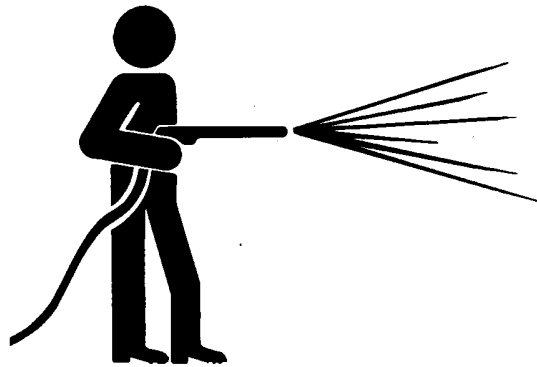
- Wear PERSONAL PROTECTIVE EQUIPMENT in accordance with chemical manufacturer's label.
- Allow only trained, certified applicators to apply chemicals.
- Always close the windows and doors during spraying.
- Verify that John Deere activated carbon filters, or appropriate substitutes, are installed at all times.
- Keep chemicals out of the cab.
- Clean or remove contaminated shoes or clothing before entering the cab.
- Keep cab interior clean.
- Read and follow all instructions in:
 - Manufacturer's label for each chemical applied.
 - U.S. Environmental Protection Agency (EPA) Worker Protection Standard for Agricultural Pesticides.
 - State or regional guidelines for worker safety and health.

- Operator's Manual for this machine.

- Numerous requirements must be met, including but not limited to EPA regulations.
- Even while inside cab, always wear long sleeves, long pants, shoes, and socks when applying chemicals, including pesticides.
- If necessary to leave cab when chemicals, including pesticides, are present, always use personal protective equipment recommended by chemical manufacturer.
- Before reentering cab, remove personal protective equipment used to handle chemicals, including pesticides, and store equipment in accordance with EPA guidelines to prevent contaminating cab.

jtlsx7f,1662384219085-19-05SEP22

Clean Vehicle of Hazardous Chemicals, Including Pesticides



T6642EJ—UN—18OCT88

⚠ CAUTION: During application of hazardous chemicals, including pesticides, residue can build up on the inside or outside of the vehicle. Clean vehicle according to use instructions of hazardous chemical.

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

1. Sweep or vacuum the floor of cab.
2. Clean headliners and inside cowlings of cab.

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.

3. Wash entire exterior of vehicle.
4. Dispose of any wash water with hazardous

concentrations of active or non-active ingredients according to published regulations or directives.

OUO6092,000081B-19-18JAN21

Recommended Cleaners and Coatings

IMPORTANT: As with any chemical product, always read and follow the corresponding instructions.

Use John Deere SprayMaster™ cleaning agents, equipment coating, and winterizer fluid. Use equivalent products, if necessary. Check the availability and product specifications at your John Deere dealer.

- Spray Tank Cleaner
- Winterizer Fluid
- Equipment Coating

CR84017,0000472-19-12OCT20

Clean the Sprayer



YE010427—UN—16MAR23

Simple Nozzle Body



YE010426—UN—16MAR23

5-Position Nozzle Body

The cleaning of machines that work with chemicals must be performed at the end of each work or at each recharge of a new chemical.

SprayMaster is a trademark of Deere & Company

This practice, besides preserving the environment, prolongs the equipment life and avoid application issues in the future, like obstructions at nozzles, filters, or flowmeter.

For cleaning the machine, observe the following instructions:

1. Wear the recommended safety equipment. (See Safety Equipment in Solution System section.)
2. Daily, after the work:
 - a. Refill the rinse tank.
 - b. Refill the clean water tank.
 - c. Remove the nozzles.

⚠ CAUTION: Spray system contain hazardous material that can cause serious injury or death to you or others. Drain solution in an area where people, animals, vegetation, and water supply cannot be contaminated.

- d. Drain all remaining solution in the system on an appropriated area.
3. Check that the solution tank and system are completely empty.
 4. Position the machine over biobeds.
 5. Wash all filters, nozzles, tanks, and covers with suitable sponges and brushes.

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause machine malfunction. Reduce pressure, and spray at a 45 to 90 degree angles.

6. Wash the external surfaces of the machine using suitable cleaning products, such as detergent.
7. Repeat the washing processes at least two times.
8. Check that pumps, hoses, connections, registers, and nozzles were cleaned.
9. Regulate the work pressure as desired using water to do so.
10. At preparation of solution, use only clean water without any other material, especially sand.

NOTE: The minimum engine speed for pumping applications is 1600 rpm.

jtIsx7f,1662383268251-19-06APR23

Clean the Nutrient Applicator

⚠ CAUTION: Avoid serious injury or death. Perform the cleaning with the machine stopped.

IMPORTANT: Avoid machine damage. The cleaning of the nutrient applicator must be performed daily or every 10 hours with pressurized air only.

The cleaning with water must be performed only every 3 days. **DO NOT** clean the nutrient applicator with water daily.

IMPORTANT: Avoid damaging machine components. When washing the machine, do not use high-pressure jets. Prefer to perform the washing with water at low pressure. Be careful, specially with bearings and seals in order to not damage them and create air leaks.

IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause machine malfunction. Reduce pressure, and spray at 45 to 90 degree angles.

1. Wear the recommended safety equipment. (See Safety section for details.)
2. Position the machine over biobeds.
3. Daily perform the cleaning of the machine with pressurized air.
4. At every 3 days, perform the following procedure:
 - a. Carefully clean all the machine from product leftovers that may remain over machine components.

IMPORTANT: If the machine was used with urea or other products that may become sticky (like super triple phosphate), it is recommended to use great quantities of water in order to correctly clean components, avoiding this way the blocking of movements on mechanical transmissions.

If the machine was used with limestones or seeds, it is recommended to sweep and apply pressurized air.

- b. Wash the external surfaces of the machine using suitable cleaning products, such as detergent.
- c. Repeat the washing processes at least two times.
- d. Check that pumps, hoses, connections, registers, and nozzles were cleaned.

Dry the Machine

After the machine is cleaned, make the turbines to work for 5 minutes in order to dry the machine inside and the

tubes. (See Special Care at the End of the Daily Work in Operating the Nutrient Applicator section for details.)

IMPORTANT: Avoid machine damage. When the system is not being used and it is dirty, wear on components may occur, damaging machine systems.

jttsx7f,1667589216484-19-05DEC22

Nutrient Applicator Storage

Before Storing the Machine

At the end of each season, the machine must be stored in a dry, clean, and covered place.

Before storing the machine, perform the following procedure:

1. Completely empty the application box and clean the machine. (See Special Care at the End of the Daily Work in Operating the Nutrient Applicator section.)
2. Spray a mixture of diesel and vegetable oil over the dosage wheels, nutrient application system chains, dosifier gears, and removers.
3. Paint the parts where the original painting is worn. Take special care to not paint over the signs of the machine.
4. Check for worn or broken parts that may need to be replaced.
5. Check for damaged safety signs. Replace them, if needed.
6. Apply grease on all grease fittings.

Machine Storage

IMPORTANT: Avoid machine damage. Take care when storing the machine outdoor. It must be clean, without fertilizer leftovers. Letting fertilizer leftovers over the machine may generate corrosive compounds that will damage the machine.

The exposition to sun generates premature aging on components, especially hoses, tires, and belts.

Store the machine in a level, firm, and dry surface. Preferably in a covered place.

Before Starting a New Season

Perform the following procedure:

1. Make sure that all shields for the moving components are in good conditions and correctly installed, specially the driveshaft.
2. Check all machine levels.
3. Check conditions of hydraulic hoses.

4. Check for leaks on hydraulic system. Also check if the hydraulic system is correctly working.
5. Check if the turbines and the dosifiers are correctly working.
6. Set all the configuration of the nutrient application system. (See Nutrient Application System section information.)
7. Check for the correct functioning of the driveshaft and application boom.
8. Inflate the tires with the recommended pressure. (See Tire Inflation Pressure in Specifications—General Information section.)

jtlssx7f,1669730370759-19-05DEC22

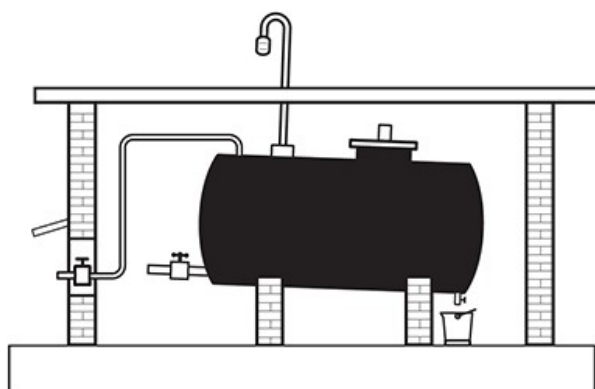
Fuel Storage

CAUTION: Avoid accidents and serious injury or death.

- Do not smoke nor install any electrical component that could produce sparks near the fuel tanks.
- Never let the engine running during the fuel filling.

The purity and cleanliness of the fuel are fundamentals for the proper work of the engine and of the injection system.

To obtain the correct functioning of the system:

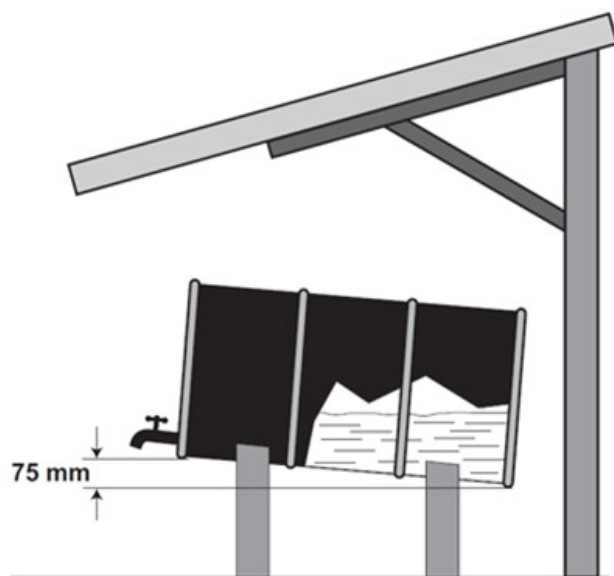


YE000037—UN—22SEP22

- Use storage tanks equipped with two registers, one at each end.

IMPORTANT: Avoid zinc tanks as they contaminate the fuel.

- Prefer plastic tanks. In case of metallic tanks, use the ones of inoxidable steel or with suitable internal covering.



YE000035—UN—22SEP22

- The storage tanks must be protected from sun, rain, or dust, and must be positioned in horizontal position, over supports, with an angulation that provides the out side to be 7.5 cm (3 in) higher than the opposite side of the tank. This way, water and impurities are going to be deposited in the bottom of the tank on the other side and can be easily eliminated using the drain register.
- The tanks must have ventilation at highest end. The ventilation must be waterproof.
- Before refilling the tank, drain the remaining fuel together with water and impurities.

NOTE: This remaining fuel can be used for other purposes such as washing parts and tools.

- Always use funnels, containers, and pumps completely clean for the filling. If possible, use fine mesh filters to clean the fuel.

IMPORTANT: Avoid fuel system contamination. Never use cloths and cotton waste.

- It is recommended to build an exclusive place for the fuel tanks in a location away from sheds, houses, or stables.
- Maintain a clean swath of ground around, in a way that in case of fire, there is no flammable material that could increase the fire.



YE000036—UN—22SEP22

Safety Sign

- Put visible safety signs near the fuel tanks with the indicated legends.

IMPORTANT: Avoid serious damage to the injection system. Always fill the fuel tank after work to avoid the production of water condensation inside the empty fuel tank. Not doing this can lead water from condensation to contaminate the fuel.

- Fill the machine fuel tank after work.

jtlisx7f,1669144990612-19-22NOV22

Access to Service Points

Ladders

NOTE: The machine ladders meet the IRAM 8076/6 standard.



YE000172—UN—22SEP22

Machines Equipped with Central Engine

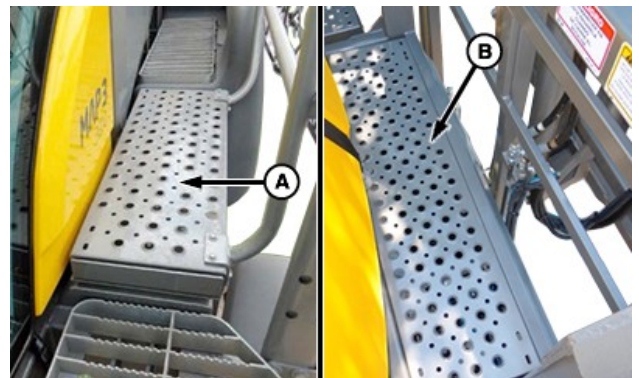
The cab access ladder (A) is located on the left-hand side of the machine front and has steps with slip resistant surfaces. This ladder is hydraulic controlled through a switch in the cab.

For machines equipped with front engine, a platform ladder (B) is also available on the right-hand side of the machine.

To use the platform ladder (B), pull it out from its storage position. When not used, let it on its storage position.

jtlisx7f,1662387965293-19-25NOV22

Platforms

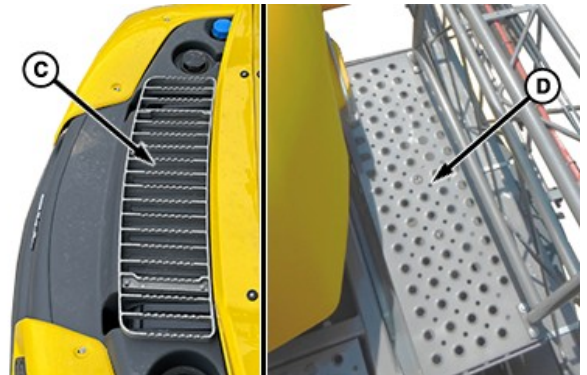


YE000174—UN—22SEP22



YE000173—UN—22SEP22

Machines Equipped with Front Engine



YE000175—UN—11NOV22

The machine is equipped with a main platform (A) along the left-hand side of the machine. This main platform (A) provides access to the platform on the rear of the machine (B), as well as to the platform on the rear right-hand side of the machine (D).

For machines with central engine, it is possible to access the frontal right-hand side platform using the access over the rinse tank (C).



YE000176—UN—22SEP22

For machines equipped with front engine, the platform ladder (E) is used to access the frontal right-hand side platform.

The platforms have slip resistant surfaces and handrails, meeting the IRAM 8076-6 standard.

jtlx7f,1662387981214-19-25NOV22

Access to the Cab

To access the cab, use the left-hand side ladder and the main platform. (See Ladder and Platforms in Access to Service Points section.)



YE000177—UN—22SEP22

The cab has a door handle (A) with key lock. To enter in the cab, unlock the door using the key and press the button on the door handle (A).

⚠ CAUTION: Exposure to chemicals, including pesticides, can cause injury or death.

Always keep the door closed during the machine operation.

⚠ CAUTION: Do not rely only on the machine cab as a full protection against chemical exposure. Wear personal protective equipment in accordance with the chemical manufacturer label. (See Safety Equipment in Solution System section.)

jtlx7f,1662387992080-19-05SEP22

Fuels, Lubricants, and Coolant—General Information

Storing Fuel

If there is a very slow turnover of fuel in the fuel tank or supply tank, it may be necessary to add a fuel conditioner to prevent water condensation. Contact your John Deere dealer for proper service or maintenance recommendations.

DX,FUEL-19-03MAR93

Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590, ASTM D975, or EN 15940 is acceptable for use at all percentage mixture levels.

Required Fuel Properties

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

Cetane number of 40 minimum. Cetane number greater than 47 is preferred, especially for temperatures below -20°C (-4°F) or elevations above 1675 m (5500 ft.).

Cloud Point should be below the expected lowest ambient temperature or **Cold Filter Plugging Point** (CFPP) should be a maximum 10°C (18°F) below the fuel cloud point.

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

Diesel fuel quality and sulfur content must comply with all existing emissions regulations for the area in which the engine operates. DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

Materials such as copper, lead, zinc, tin, brass and bronze should be avoided in fuel handling, distribution and storage equipment as these metals can catalyze fuel oxidation reactions which can lead to fuel system deposits and plugged fuel filters.

E-Diesel fuel

DO NOT use E-Diesel (Diesel fuel and ethanol blend). Use of E-Diesel fuel in any John Deere machine may void the machine warranty.

 **CAUTION: Avoid severe injury or death due to the fire and explosion risk from using E-Diesel fuel.**

Sulfur Content for Interim Tier 4, Final Tier 4, Stage III B, Stage IV, and Stage V Engines Above 560 kW

- Use ONLY diesel fuel with a maximum of 500 mg/kg (500 ppm) sulfur content.

Sulfur Content for Interim Tier 4, Final Tier 4, Stage III B, Stage IV Engines, and Stage V Engines

- Use ONLY ultra low sulfur diesel (ULSD) fuel with a maximum of 15 mg/kg (15 ppm) sulfur content.

Sulfur Content for Tier 3 and Stage III A Engines

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 1000—2000 mg/kg (1000—2000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 2000 mg/kg (2000 ppm), contact your John Deere dealer.

Sulfur Content for Tier 2 and Stage II Engines

- Use of diesel fuel with sulfur content less than 2000 mg/kg (2000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 2000—5000 mg/kg (2000—5000 ppm) REDUCES the oil and filter change interval.¹
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

Sulfur Content for Other Engines

- Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) REDUCES the oil and filter change interval.

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

DX,FUEL1-19-01NOV22

Lubricity of Diesel Fuel

Most diesel fuels manufactured in the United States, Canada, and the European Union have adequate lubricity to ensure proper operation and durability of fuel injection system components. However, diesel fuels manufactured in some areas of the world may lack the necessary lubricity.

¹ See DX,ENOIL12,OEM, DX,ENOIL12,T2,STD, or DX,ENOIL12,T2,EXT for more information on Engine Oil and Filter Service Intervals.

IMPORTANT: Make sure the diesel fuel used in your machine demonstrates good lubricity characteristics.

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

If fuel of low or unknown lubricity is used, add John Deere Fuel-Protect Diesel Fuel Conditioner (or equivalent) at the specified concentration.

Lubricity of BioDiesel Fuel

Fuel lubricity can improve significantly with BioDiesel blends up to B20 (20% BioDiesel). Further increase in lubricity is limited for BioDiesel blends greater than B20.

DX,FUEL5-19-07FEB14

Handling and Storing Diesel Fuel

CAUTION: Reduce the risk of fire. Handle fuel carefully. DO NOT fill the fuel tank when engine is running. DO NOT smoke while you fill the fuel tank or service the fuel system.

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

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

Ensure that all fuel tank caps and covers are installed properly to prevent moisture from entering. Monitor water content of the fuel regularly.

When using biodiesel fuel, the fuel filter may require more frequent replacement due to premature plugging.

Check engine oil level daily prior to starting engine. A rising oil level may indicate fuel dilution of the engine oil.

IMPORTANT: The fuel tank is vented through the filler cap. If a new filler cap is required, always replace it with an original vented cap.

When fuel is stored for an extended period or if there is a slow turnover of fuel, add a fuel conditioner to stabilize the fuel. Keeping the free water drained and treating the bulk fuel storage tank quarterly with a maintenance dose of a biocide will prevent microbial growth. Contact your fuel supplier or John Deere dealer for recommendations.

DX,FUEL4-19-13JAN18

Supplemental Diesel Fuel Additives

Diesel fuel can be the source of performance or other operational problems for many reasons. Some causes

include poor lubricity, contaminants, low cetane number, and a variety of properties that cause fuel system deposits. These and others are referenced in other sections of this Operator's Manual.

To optimize engine performance and reliability, closely follow recommendations on fuel quality, storage, and handling, which are found elsewhere in this Operator's Manual.

To further aid in maintaining performance and reliability of the engine's fuel system, John Deere has developed a family of fuel additive products for most global markets. The primary products include Fuel-Protect Diesel Fuel Conditioner (full feature conditioner in winter and summer formulas) and Fuel-Protect Keep Clean (fuel injector deposit removal and prevention). Availability of these and other products varies by market. See your local John Deere dealer for availability and additional information about fuel additives that might be right for your needs.

DX,FUEL13-19-07FEB14

Testing Diesel Fuel

A fuel analysis program can help to monitor the quality of diesel fuel. The fuel analysis can provide critical data such as calculated cetane index, fuel type, sulfur content, water content, appearance, suitability for cold weather operations, bacteria, cloud point, acid number, particulate contamination, and whether the fuel meets ASTM D975 or equivalent specification.

Contact your John Deere dealer for more information on diesel fuel analysis.

DX,FUEL6-19-13JAN18

Complete Up Fuel Tank



TS202—UN—23AUG88

CAUTION: Handle fuel with caution due to its flammability. **DO NOT FILL UP** machine's tank near any flame, people smoking or at any location where there are sparks, cinders etc. **Always stop engine before refueling machine. Refuel outdoors whenever possible. Prevent fires by keeping machine clean of accumulated debris. Always clean up fuel spilled over machine.**

Fill the fuel tank at the end of each day's operation to prevent condensation of water in the tank.

Fuel tank:

See fuel tank capacity in the Specifications section.

IMPORTANT: Fuel tank has a sealed cover. If a new cap is necessary, always replace it with a sealed cap. Use Genuine John Deere Parts.

LR35023,000012E-19-10DEC18

Fuel Filters

The importance of fuel filtration cannot be overemphasized with modern fuel systems. The combination of increasingly restrictive emission regulations and more efficient engines requires fuel system to operate at much higher pressures. Higher pressures can only be achieved using fuel injection components with very close tolerances. These close manufacturing tolerances have significantly reduced capacities for debris and water.

John Deere brand fuel filters have been designed and produced specifically for John Deere engines.

To protect the engine from debris and water, always change engine fuel filters as specified in this manual.

DX,FILT2-19-14APR11

Mixing of Lubricants

In general, avoid mixing different brands or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance requirements.

Mixing different oils can interfere with the proper functioning of these additives and degrade lubricant performance.

Consult your John Deere dealer to obtain specific information and recommendations.

DX,LUBMIX-19-18MAR96

Oil Filters

Filtration of oils is critically important for proper operation and lubrication. John Deere brand oil filters

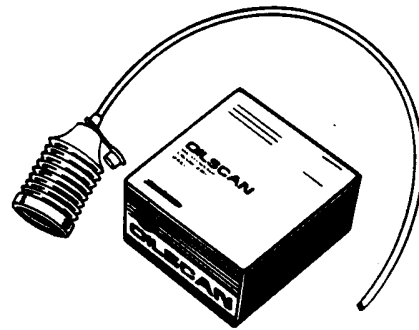
have been designed and produced specifically for John Deere applications.

John Deere filters adhere to engineering specifications for quality of the filter media, filter efficiency rating, strength of the bond between the filter media and the element end cap, fatigue life of the canister (if applicable), and pressure capability of the filter seal. Non-John Deere branded oil filters might not meet these key John Deere specifications.

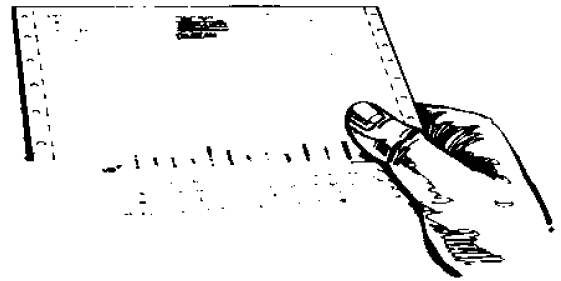
Always change oil filters regularly as specified in this manual.

DX,FILT1-19-11APR11

Oilscan and CoolScan



T6828AB—UN—15JUN89



T6829AB—UN—26AUG11

Oilscan and CoolScan are John Deere sampling programs to help you monitor machine performance and identify potential problems before they cause serious damage.

Oil and coolant samples should be taken from each system before its recommended change interval.

Check with your John Deere dealer for the availability of Oilscan and CoolScan kits.

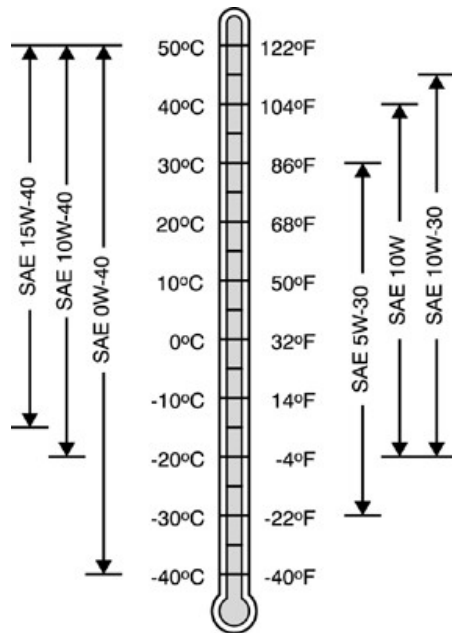
DX,OILSCAN(T)-19-06APR22

Transmission Oil (Manual Machines)

IMPORTANT: Before filling, make sure of fluid specification present in the system to not to mix different fluids.

NOTE: Use an oil viscosity based on the expected air temperature range during the period between oil changed.

Eaton Transmission Housing



TS1679—UN—31OCT03

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

The following oils are preferred:

- John Deere Plus-50 II
- John Deere Plus-50

The following oil is also recommended:

- John Deere Torq-Gard

Other oils may be used if they meet the following:

- API Service Category CK-4
- API Service Category CJ-4
- API Service Category CI-4 PLUS
- API Service Category CI-4
- API Service Category CH-4
- API Service Category CG-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E7
- ACEA Oil Sequence E6
- ACEA Oil Sequence E5

- ACEA Oil Sequence E4

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Transmission Oil (Automatic Machines)

IMPORTANT: Before filling, make sure of fluid specification present in the system to not to mix different fluids.

NOTE: Use an oil viscosity based on the expected air temperature range during the period between oil changed.

Allison Transmission Housing

Recommended Oils for Allison Transmission		
Application	Type	Recommended
Allison Transmission Housing	Synthetic (TES295 or TES668 Standard)	Spirax S6 ATF A295 Spirax S6 ATF A668 (preferred)

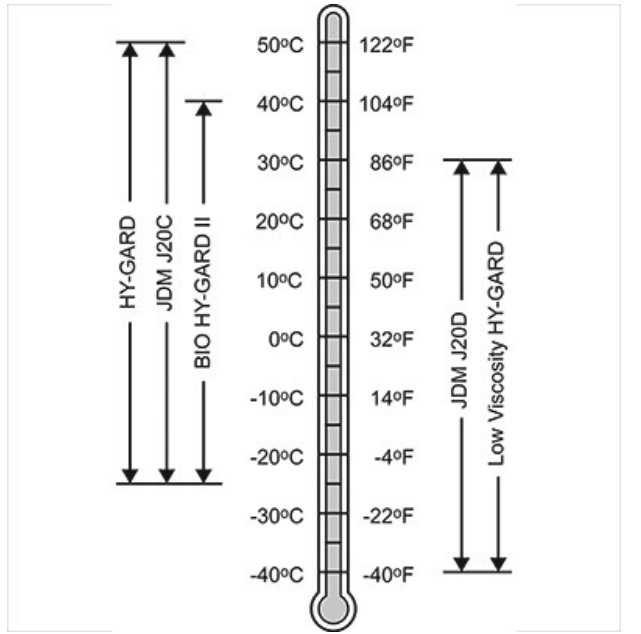
NOTE: The usage of oils matching the TES668 standard is preferred.

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Hydraulic System Oil

IMPORTANT: Before filling, make sure of fluid specification present in the system to not to mix different fluids.

NOTE: Use an oil viscosity based on the expected air temperature range during the period between oil changed.



Oils for Air Temperature Ranges

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

The following oils are preferred:

- John Deere Hy-Gard
- John Deere Low Viscosity Hy-Gard

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

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

Use John Deere Bio Hy-Gard II oil when a biodegradable fluid is required.²

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Rear Axle Knee Oil

IMPORTANT: Before filling, make sure of fluid specification present in the system to not to mix different fluids.

NOTE: Use an oil viscosity based on the expected air temperature range during the period between oil changed.

Recommended Oils for the Rear Axle Knees		
Application	Type	Recommended

² Bio Hy-Gard II meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC L-33-T-82 test method. Bio Hy-Gard II should not be mixed with mineral oils because it reduces the biodegradability and makes proper oil recycling impossible.

Rear Axle Knees	SAE 250	SAE 250
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Differential Oil

IMPORTANT: Before filling, make sure of fluid specification present in the system to not to mix different fluids.

NOTE: Use an oil viscosity based on the expected air temperature range during the period between oil changed.

Recommended Oils for the Differential		
Application	Type	Recommended
Differential Housing	SAE 90	Spirax S1 G 90

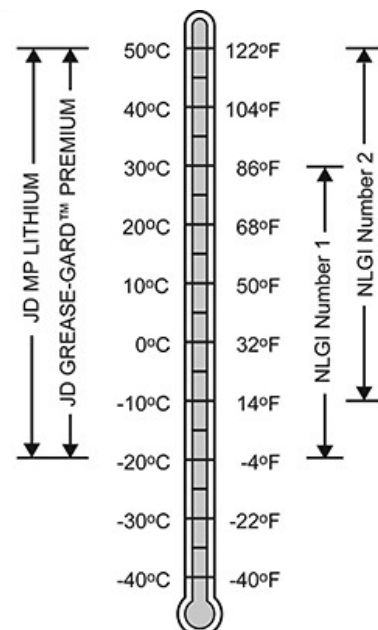
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Lubricants Only for Nutrient Applicator

Recommended Lubricants for the Nutrient Applicator	
Application	Type
Grease for Nutrient Applicator Box Shafts	62 EP Grease
Lubrication of Chains	Hydraulic Oil Diluted in Diesel

jtlisx7f,1668096433446-19-05DEC22

Multipurpose Grease



Greases for Air Temperature Ranges

IMPORTANT: For automated lubrication systems, different ambient air temperatures must be considered.

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

The following greases are preferred:

- John Deere MP Lithium Grease
- John Deere Grease-Gard Premium

The following greases are also recommended:

- John Deere HD Lithium Complex Grease
- John Deere Grease-Gard Premium Plus
- John Deere SD Polyurea Grease

Other greases may be used if they meet the following:

- NLGI Performance Classification GC-LB
- ISO-L-X-BCEB 2 or DIN K 2 K-10 Lithium, Non-Synthetic Base Oil (100 to 220 mm²/s @ 40°C)

IMPORTANT: Some types of thickeners, base oils, and additives used in greases are not compatible with others. Mixing greases should be avoided. Consult your grease supplier before mixing different types of grease.

DX,GREA5(T)-19-18APR22

Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your John Deere dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to John Deere branded fluids or fluids that have been tested and/or approved for use in John Deere equipment.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER-19-13JAN18

Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

DX,LUBST-19-11APR11

Water Quality for Mixing with Coolant Concentrate

Engine coolants are a combination of three chemical components: ethylene glycol (EG) or propylene glycol (PG) antifreeze, inhibiting coolant additives, and quality water.

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

All water used in the cooling system should meet the following minimum specifications for quality:

Chlorides	<40 mg/L
Sulfates	<100 mg/L
Total solids	<340 mg/L
Total dissolved I hardness	<170 mg/L
pH	5.5—9.0

IMPORTANT: Do not use bottled drinking water because it often contains higher concentrations of total dissolved solids.

Freeze Protection

The relative concentrations of glycol and water in the engine coolant determine its freeze protection limit.

Ethylene Glycol	Freeze Protection Limit
40%	-24°C (-12°F)
50%	-37°C (-34°F)
60%	-52°C (-62°F)
Propylene Glycol	Freeze Protection Limit
40%	-21°C (-6°F)
50%	-33°C (-27°F)
60%	-49°C (-56°F)

DO NOT use a coolant-water mixture greater than 60% ethylene glycol or 60% propylene glycol.

DX.COOL19-19-13JAN18

Testing Coolant Freeze Point

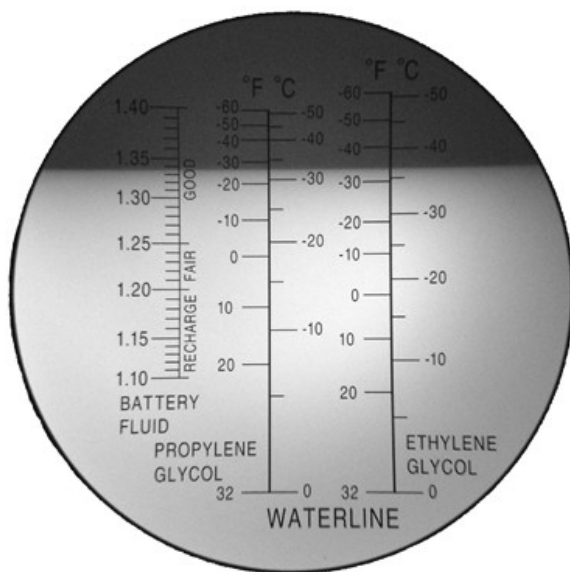


TS1732—UN—04SEP13

SERVICEGARD Part Number 75240

1. Allow cooling system to cool to ambient temperatures.
2. Open radiator cap to expose coolant.
3. With the included dropper, collect a small coolant sample.
4. Open the lid of the refractometer, place one drop of coolant on the window, and close the lid.
5. Look through the eyepiece and focus as necessary.
6. Record the listed freeze point for the type of coolant (ethylene glycol coolant or propylene glycol) being tested.

DX.COOL.TEST(T)-19-04APR22



TS1733—UN—04SEP13

Image with a Drop of 50/50 Coolant Placed on the Refractometer Window

The use of a handheld coolant refractometer is the quickest, easiest, and most accurate method to determine the coolant freeze point. This method is more accurate than a test strip or a float-type hydrometer, which can produce poor results.

A coolant refractometer is available through your John Deere dealer under the SERVICEGARD tool program. Part number 75240 provides an economical solution for accurate freeze point determination in the field.

To use this tool:

Fuels, Lubricants, and Coolant—John Deere Engines Only

Biodiesel Fuel

Biodiesel fuel is comprised of monoalkyl esters of long chain fatty acids derived from vegetable oils or animal fats. Biodiesel blends are biodiesel mixed with petroleum diesel fuel on a volume basis.

Before using fuel containing biodiesel, review the Biodiesel Use Requirements and Recommendations in this Operator's Manual.

Environmental laws and regulations can encourage or prohibit the use of biofuels. Operators should consult with appropriate governmental authorities prior to using biofuels.

John Deere Stage V Engines Operating in the European Union

Where the engine is to be operated within the Union on diesel or non-road gas-oil, a fuel with a FAME content not greater than 8% volume/volume (B8) shall be used.

John Deere Engines with Exhaust Filter Except Stage V Engines Operating in the European Union

Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

Biodiesel concentrations above B20 can harm the engine's emission control systems and should not be used. Risks include, but are not limited to, more frequent stationary regeneration, soot accumulation, and increased intervals for ash removal.

John Deere Fuel conditioners or equivalent, which contain detergent and dispersant additives, are required when using biodiesel blends from B10 to B20, and are recommended when using lower biodiesel blends.

John Deere Engines Without Exhaust Filter

Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

These John Deere engines can operate on biodiesel blends above B20 (up to 100% biodiesel). Operate at levels above B20 ONLY if the biodiesel is permitted by law and meets the EN 14214 specification (primarily available in Europe). Engines operating on biodiesel blends above B20 might not fully comply with or be permitted by all applicable emissions regulations. Expect up to a 12% reduction in power and an 18% reduction in fuel economy when using 100% biodiesel.

John Deere fuel conditioners or equivalent, which contain detergent and dispersant additives, are required when using biodiesel blends from B10 to B100, and are recommended when using lower biodiesel blends.

Biodiesel Use Requirements and Recommendations

The petroleum diesel portion of all biodiesel blends must meet the requirements of ASTM D975 (US) or EN 590 (EU) commercial standard.

Biodiesel users in the U.S. are strongly encouraged to purchase biodiesel blends from a BQ-9000 Certified Marketer and sourced from a BQ-9000 Accredited Producer (as certified by the National biodiesel Board). Certified Marketers and Accredited Producers can be found at the following website: <http://www.bq9000.org>.

Biodiesel contains residual ash. Ash levels exceeding the maximums allowed in either ASTM D6751 or EN14214 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present).

The fuel filter can require more frequent replacement when using biodiesel fuel, particularly if switching from diesel. Check engine oil level daily prior to starting engine. A rising oil level can indicate fuel dilution of the engine oil. Biodiesel blends up to B20 must be used within 90 days of the date of biodiesel manufacture. Biodiesel blends above B20 must be used within 45 days from the date of biodiesel manufacture.

When using biodiesel blends up to B20, the following must be considered:

- Cold-weather flow degradation
- Stability and storage issues (moisture absorption, microbial growth)
- Possible filter restriction and plugging (usually a problem when first switching to biodiesel on used engines)
- Possible fuel leakage through seals and hoses (primarily an issue with older engines)
- Possible reduction of service life of engine components

Request a certificate of analysis from your fuel distributor to ensure that the fuel is compliant with the specifications provided in this Operator's Manual.

Consult your John Deere dealer for John Deere fuel products to improve storage and performance with biodiesel fuels.

The following must also be considered if using biodiesel blends above B20:

- Possible coking or blocked injector nozzles, resulting in power loss and engine misfire if John Deere fuel additives and conditioners or equivalent containing detergent/dispersants are not used
- Possible crankcase oil dilution (requiring more frequent oil changes)
- Possible lacquering or seizure of internal components
- Possible formation of sludge and sediments

- Possible thermal oxidation of fuel at elevated temperatures
- Possible compatibility issues with other materials (including copper, lead, zinc, tin, brass, and bronze) used in fuel handling, distribution, and storage equipment
- Possible reduction in water separator efficiency
- Possible damage to paint if exposed to biodiesel
- Possible corrosion of fuel injection equipment
- Possible elastomeric seal and gasket material degradation (primarily an issue with older engines)
- Possible high acid levels within fuel system
- Because biodiesel blends above B20 contain more ash, using blends above B20 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present)

IMPORTANT: Raw pressed vegetable oils are NOT acceptable for use as fuel in any concentration in John Deere engines. Their use could cause engine failure.

DX,FUEL7-19-13JAN18

Minimizing the Effect of Cold Weather on Diesel Engines

John Deere diesel engines are designed to operate effectively in cold weather.

However, for effective starting and cold-weather operation, a little extra care is necessary. The following information outlines steps that can minimize the effect that cold weather may have on starting and operation of your engine. See your John Deere dealer for additional information and local availability of cold-weather aids.

Use Winter Grade Fuel

When temperatures fall below 0°C (32°F), winter grade fuel (No. 1-D in North America) is best suited for cold-weather operation. Winter grade fuel has a lower cloud point and a lower pour point.

Cloud point is the temperature at which wax begins to form in the fuel. This wax causes fuel filters to plug.

Pour point is the lowest temperature at which movement of the fuel is observed.

NOTE: On average, winter grade diesel fuel has a lower Btu (heat content) rating. Using winter grade fuel may reduce power and fuel efficiency, but should not cause any other engine performance effects. Check the grade of fuel being used before troubleshooting for low-power complaints in cold-weather operation.

Air Intake Heater

An air intake heater is an available option for some engines to aid cold weather starting.

Ether

An ether port on the intake is available to aid cold weather starting.

 **CAUTION: Ether is highly flammable. Do not use ether when starting an engine equipped with glow plugs or an air intake heater.**

Coolant Heater

An engine block heater (coolant heater) is an available option to aid cold weather starting.

Seasonal Viscosity Oil and Proper Coolant Concentration

Use seasonal grade viscosity engine oil based on the expected air temperature range between oil changes and a proper concentration of low silicate antifreeze as recommended. (See DIESEL ENGINE OIL and ENGINE COOLANT requirements in this section.)

Diesel Fuel Cold Flow Additive

Use John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula), which contains anti-gel chemistry, or equivalent fuel conditioner to treat non-winter grade fuel (No. 2-D in North America) during the cold-weather season. This generally extends operability to about 10° C (18°F) below the fuel cloud point. For operability at even lower temperatures, use winter grade fuel.

IMPORTANT: Treat fuel when outside temperature drops below 0°C (32°F). For best results, use with untreated fuel. Follow all recommended instructions on label.

Biodiesel

When operating with biodiesel blends, wax formation can occur at warmer temperatures. Begin using John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula) or equivalent at 5°C (41°F) to treat biodiesel fuels during the cold-weather season. Use B5 or lower blends at temperatures below 0°C (32°F). Use only winter grade petroleum diesel fuel at temperatures below -10°C (14°F).

Winterfronts

Use of fabric, cardboard, or solid winterfronts is not recommended with any John Deere engine. Their use can result in excessive engine coolant, oil, and charge air temperatures. This can lead to reduced engine life, loss of power and poor fuel economy. Winterfronts may also put abnormal stress on fan and fan drive components potentially causing premature failures.

If winterfronts are used, they should never totally close off the grill frontal area. Approximately 25% area in the

center of the grill should remain open at all times. At no time should the air blockage device be applied directly to the radiator core.

Radiator Shutters

If equipped with a thermostatically controlled radiator shutter system, this system should be regulated in such a way that the shutters are completely open by the time the coolant reaches 93°C (200°F) to prevent excessive intake manifold temperatures. Manually controlled systems are not recommended.

If air-to-air aftercooling is used, the shutters must be completely open by the time the intake manifold air temperature reaches the maximum allowable temperature out of the charge air cooler.

For more information, see your John Deere dealer.

DX,FUEL10-19-13JAN18

Diesel Engine Break-In Oil — Non-Emissions Certified and Certified Tier 1, Tier 2, Tier 3, Stage I, Stage II, and Stage III

New engines are filled at the factory with either John Deere Break-In or John Deere Break-In Plus Engine Oil. During the break-in period, add John Deere Break-In or Break-In Plus Engine Oil, respectively, as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

If John Deere Break-In Engine Oil is used during the initial operation of a new or rebuilt engine, change the oil and filter at a maximum of 100 hours.

If John Deere Break-In Plus Engine Oil is used, change the oil and filter at a minimum of 100 hours and a maximum equal to the interval specified for John Deere Plus-50 II or Plus-50 oil.

After an engine overhaul, fill the engine with either John Deere Break-In or Break-In Plus Engine Oil.

If John Deere Break-In or Break-In Plus Engine Oil is not available, use an SAE 10W-30 viscosity grade diesel engine oil meeting one of the following and change the oil and filter at a maximum of 100 hours of operation:

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

IMPORTANT: Do not use Plus-50 II, Plus-50, or engine oils meeting any of the following for the initial break-in of a new or rebuilt engine:

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

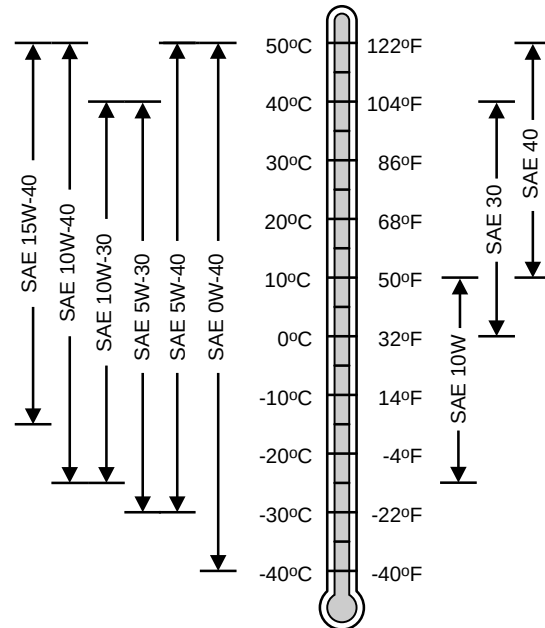
These oils do not allow the engine to break in properly.

John Deere Break-In Plus Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

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

DX,ENOIL4(T)-19-04APR22

Diesel Engine Oil — Non-Emissions Certified and Certified Tier 1 and Stage I



TS1743—UN—25APR19

Oil Viscosities for Air Temperature Ranges

Failure to follow applicable oil standards and drain intervals can result in severe engine damage that might not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere oils, parts, or service.

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

John Deere Plus-50 II oil is preferred.

John Deere Plus-50 is also recommended.

John Deere Torq-Gard is also allowed.

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

- API Service Category CK-4
- API Service Category CJ-4
- API Service Category CI-4 PLUS
- API Service Category CI-4
- API Service Category CH-4
- API Service Category CG-4
- API Service Category CF-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E7
- ACEA Oil Sequence E6
- ACEA Oil Sequence E5
- ACEA Oil Sequence E4
- ACEA Oil Sequence E3
- ACEA Oil Sequence E2

If oils meeting API CG-4, API CF-4, or ACEA E2 are used, reduce the service interval by 50%.

Multi-viscosity diesel engine oils are preferred.

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

If diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) is used, reduce the service interval by 50%.

IMPORTANT: DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

DX,ENOIL(T)-19-04APR22

Extended Diesel Engine Oil Service Intervals — Non-Emissions Certified and Certified Tier 1 and Stage I

When John Deere Plus-50 II or John Deere Plus-50 is used with the specified John Deere filter, the service interval for engine oil and filter changes may be increased by 50% but not to exceed a maximum of 500 hours.

Use oil analysis to evaluate the condition of the oil and to aid in the selection of the proper oil and filter service interval. Contact your John Deere dealer or other qualified service provider for more information on an engine oil analysis.

Change the oil and oil filter at least once every 12 months even if the hours of operation are fewer than the otherwise recommended service interval.

When ACEA E9, ACEA E7, ACEA E6, ACEA E5, or ACEA E4 oils are used with a specified John Deere filter, use engine oil analysis to determine if the service interval for engine oil and filter changes may be increased by a maximum of 50%, but not to exceed 500 hours. Oil analysis means taking a series of oil samples at 50 hour increments beyond the normal service interval until either the data indicates the end of useful oil life or the maximum service interval is reached.

If John Deere Plus-50 II or John Deere Plus-50, ACEA E9, ACEA E7, ACEA E6, ACEA E5, or ACEA E4 oils are used with other than the specified John Deere filter, change the engine oil and filter at the normal service interval.

If John Deere Torq-Gard, API CK-4, API CJ-4, API CI-4 PLUS, API CI-4, API CH-4, or ACEA E3 oils are used, change the engine oil and filter at the normal service interval.

If API CG-4, API CF-4, or ACEA E2 oils are used, change the engine oil and filter at 50% of the normal service interval.

IMPORTANT: To avoid engine damage:

- Reduce oil and filter service intervals by 50% when using biodiesel blends greater than B20
- Oil analysis may allow longer service intervals
- Use only approved oil types

DX,ENOIL6(T)-19-04APR22

Diesel Engine Coolant (Engine with Wet Sleeve Cylinder Liners)

Failure to follow applicable coolant standards and drain intervals can result in severe engine damage that may not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere coolants, parts, or service.

Preferred Coolants

The following pre-mix engine coolants are preferred:

- John Deere Cool-Gard II
- John Deere Cool-Gard II PG

Cool-Gard II pre-mix coolant is available in several concentrations with different freeze protection limits as shown in the following table.

Cool-Gard II Pre-Mix	Freeze Protection Limit
Cool-Gard II 20/80	-9°C (16°F)
Cool-Gard II 30/70	-16°C (3°F)
Cool-Gard II 50/50	-37°C (-34°F)
Cool-Gard II 55/45	-45°C (-49°F)

Cool-Gard II Pre-Mix	Freeze Protection Limit
Cool-Gard II PG 60/40	-49°C (-56°F)
Cool-Gard II 60/40	-52°C (-62°F)

Not all Cool-Gard II pre-mix products are available in all countries.

Use Cool-Gard II PG when a non-toxic coolant formulation is required.

Additional Recommended Coolants

The following engine coolant is also recommended:

- John Deere Cool-Gard II Concentrate in a 40—60% mixture of concentrate with quality water

IMPORTANT: When mixing coolant concentrate with water, do not use less than 40% or greater than 60% concentration of coolant. Less than 40% gives inadequate additives for corrosion protection. Greater than 60% can result in coolant gelation and cooling system problems.

Other Coolants

Other ethylene glycol or propylene glycol base coolants may be used if they meet the following specification:

- Pre-mix coolant meeting ASTM D6210 requirements
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Coolant concentrate meeting ASTM D6210 requirements in a 40—60% mixture of concentrate with quality water

If coolant meeting one of these specifications is unavailable, use coolant concentrate or pre-mix coolant that has a minimum of the following chemical and physical properties:

- Provides cylinder liner cavitation protection according to either the John Deere Cavitation Test Method or a fleet study run at or above 60% load capacity
- Is formulated with a nitrite-free additive package
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

Water Quality

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

Coolant Drain Intervals

Drain and flush the cooling system and refill with fresh

coolant at the indicated interval, which varies with the coolant used.

When Cool-Gard II or Cool-Gard II PG is used, the drain interval is 6 years or 6000 hours of operation.

If a coolant other than Cool-Gard II or Cool-Gard II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.¹

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

Do not mix ethylene glycol and propylene glycol base coolants.

Do not use coolants that contain nitrites.

DX,COOL3(T)-19-04APR22

Operating in Warm Temperature Climates

John Deere engines are designed to operate using recommended engine coolants.

Always use a recommended engine coolant, even when operating in geographical areas where freeze protection is not required.

IMPORTANT: Water may be used as coolant in emergency situations only.

Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation occur when water is used as the coolant, even when coolant conditioners are added.

Drain cooling system and refill with recommended engine coolant as soon as possible.

DX,COOL6-19-17FEB20

¹ Coolant analysis may extend the service interval of other "Coolants" to a maximum not to exceed the interval of Cool-Gard II coolants. Coolant analysis means taking a series of coolant samples at 1000 hour increments beyond the normal service interval until either the data indicate the end of useful coolant life or the maximum service interval of Cool-Gard II is reached.

Fuels, Lubricants, and Coolant—Deutz Engines Only

Other Brand Engine Information

For machines equipped with Deutz engines, during the warranty period, use oils as indicated in the Deutz engine manual.

Out of the warranty period, the oil can be used as specified in the following table:

Recommended Engine Oils for Deutz Engines		
Application	Type	Recommended
Deutz Engine	15W40 Extra Turbo	Torq-Gard/Plus-50 II

Services and special information related to Deutz engines should be consulted in Deutz engine manual.

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Maintenance and Service Intervals

Required Emission-Related Information

Service Provider

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.

DX,EMISSIONS,REQINFO-19-12JUN15

Clean Vehicle of Hazardous Pesticides

CAUTION: During application of hazardous pesticides, pesticide residue can build up on the inside or outside of the vehicle. Clean vehicle according to use instructions of hazardous pesticides.

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

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

DX,CABS2-19-24JUL01

Prevent Hydraulic System Contamination

IMPORTANT: Cleanliness is very important when working on the hydraulic system. Prevent contamination by assembling the cylinders, hoses, couplers, and valves in a clean area of the shop.

When charging the system, use a source that contains clean oil, free of abrasive materials. Abrasive particles, like sand or metal fragments, can damage seals, barrels and pistons, causing internal leakage.

KK69021,0000321-19-13JUL18

Important Considerations

The specified service intervals in this manual considered the use of the machine in normal operation.

When operating in severe or adverse conditions, such as those mentioned, perform the services in the reduced intervals, or more often.

Examples of operation under severe or adverse conditions:

- Work in wet or muddy conditions require most frequent lubrication at the grease fittings.
- High concentration of dust: Engine air cleaner obstructs with more frequency, as well as dry matter accumulates in different parts of the machine.

TS95756,000034C-19-02SEP16

Welding Near Electronic Control Units



TS953—UN—15MAY90

IMPORTANT: Do not jump-start engines with arc welding equipment. Currents and voltages are too high and may cause permanent damage.

1. Disconnect the negative (-) battery cable(s).
2. Disconnect the positive (+) battery cable(s).
3. Connect the positive and negative cables together. Do not attach to vehicle frame.
4. Clear or move any wiring harness sections away from welding area.
5. Connect welder ground close to welding point and away from control units.
6. After welding, reverse Steps 1—5.

DX,WW,ECU02-19-14AUG09

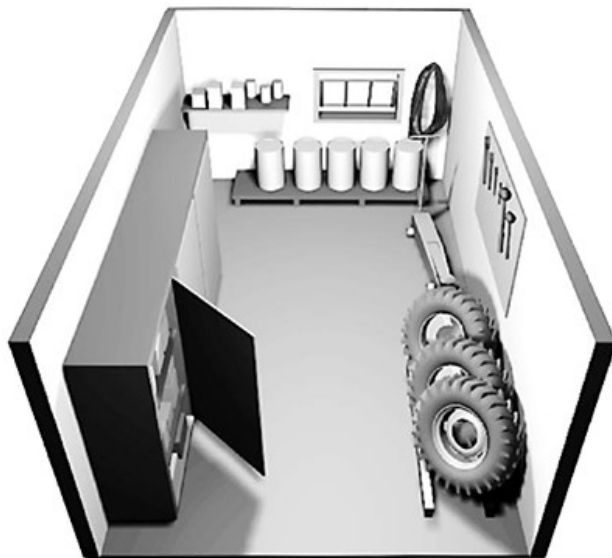
Keep Electronic Control Unit Connectors Clean

IMPORTANT: Do not open control unit and do not clean with a high-pressure spray. Moisture, dirt, and other contaminants may cause permanent damage.

1. Keep terminals clean and free of foreign debris. Moisture, dirt, and other contaminants may cause the terminals to erode over time and not make a good electrical connection.
2. If a connector is not in use, put on the proper dust cap or an appropriate seal to protect it from foreign debris and moisture.
3. Control units are not repairable.
4. Since control units are the components LEAST likely to fail, isolate failure before replacing by completing a diagnostic procedure. (See your John Deere dealer.)
5. The wiring harness terminals and connectors for electronic control units are repairable.

DX,WW,ECU04-19-11JUN09

Storage Parts and Lubricants



YE000235—UN—28SEP22

Always keep a stock of spare parts such as filters, belts, fuses, diodes, relays, lights, screws, and lubricants. This practice avoids wasting time and allows preventive maintenances according to the correct periodicity.

The products must be stored in places without dust, ventilated, clean, and away from acid and corrosive products stored.

Make sure the storage place is insect free. The inside of the filters is a favorable environment for some kind of insects, so they can penetrate in the filters and destroy parts.

All products must be kept in their original packages until usage.

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Tool Box



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There is a tool box on the right-hand side of the machine. Use this box to store tools and other elements needed.

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Service Intervals Chart

Service	System	Periodicity									
		Start of Season	First 50 Hours	First 100 Hours	First 250 Hours	First 500 Hours	Daily or Every 10 Hours	Every 50 Hours or Weekly	Every 125 Hours	Every 250 Hours	Every 400 Hours
Check and tighten nutrient application system screws (nutrient applicators).	Nutrient Application System	X									
Change hydraulic oil return filter (nutrient applicators).	Hydraulics		X								
Change hydraulic oil pressure filter (nutrient applicators).			X								
Change the oil of the Eaton transmission housing.	Drivetrain		X								
Change differential oil.			X								
Adjust the axle ends.	Steering and Brakes			X							
Adjust the chain tension and upper and lower shafts.	Wheels and Hardware				X						
Change engine oil (if Break-In Plus Engine Oil is used).	Engine					X					
Replace engine oil filter (if Break-In Plus Engine Oil is used).						X					
Adjust the chain tension and upper and lower shafts	Wheels and Hardware					X					
Check engine oil level.	Engine						X				
Check coolant level.	Fuel, Air Intake, Exhaust, and Cooling						X				
Drain water from the fuel filters.							X				
Bleed the brake system.	Steering and Brakes						X				
Drain water from the pneumatic system.	Suspension System						X				
Clean the machine.	Solution System or Nutrient Application System						X				
Clean the solution system filters (self-propelled sprayers).	Solution System						X				
Lubricate the chains (nutrient applicators).	Nutrient Application System						X				
Check level of the fluid of brakes.	Steering and Brakes							X			
Control the general functioning of the service brake system.								X			
Check hydraulic oil level.	Hydraulics							X			
Check tire inflation pressures.	Wheels and Hardware							X			

Maintenance and Service Intervals

Service	System	Periodicity									
		Start of Season	First 50 Hours	First 100 Hours	First 250 Hours	First 500 Hours	Daily or Every 10 Hours	Every 50 Hours or Weekly	Every 125 Hours	Every 250 Hours	Every 400 Hours
General greasing of the machine.	Chassis and Spray/ Application Boom							X			
Check the fuse box (carbon fiber spray booms only).								X			
Check the T3 tensioner (carbon fiber spray booms only).								X			
Tighten wheel nuts.	Wheels and Hardware							X			
Lubricate the shafts (nutrient applicators).	Nutrient Application System							X			
Check the condition of the dosifier wheels (nutrient applicators).								X			
Change engine oil. ^{ab}	Engine								X		
Replace engine oil filter. ^{ab}									X		
Change engine oil. ^{cd}	Engine									X	
Replace engine oil filter. ^{cd}										X	
Check engine mounts.										X	
Check the oil level of the Eaton transmission housing.	Drivetrain									X	
Check differential oil level.										X	
Check the driveshaft.										X	
Check the oil level of the Allison transmission housing.										X	
Check level of the fluid of clutch (manual machines only).										X	
Check the steering ends, ball joints, and bushings.	Steering and Brakes									X	
Check condition of the brake assemblies.										X	
Check and adjust park brake.										X	
Check the oil level of the rear axle knees.	Wheels and Hardware									X	
Check pneumatic lines.	Suspension System									X	
Check the oscillation structure of the spray/ application boom.	Chassis and Spray/ Application Boom									X	
Check alignment of front and rear axles.										X	
Replace the activated carbon filter.	Operator's Station									X	
Change hydraulic oil return filter (nutrient applicators).	Hydraulics										X

Maintenance and Service Intervals

Service	System	Periodicity									
		Start of Season	First 50 Hours	First 100 Hours	First 250 Hours	First 500 Hours	Daily or Every 10 Hours	Every 50 Hours or Weekly	Every 125 Hours	Every 250 Hours	Every 400 Hours
Change hydraulic oil pressure filter (nutrient applicators).											X

^aIf using other oils than Plus-50 II.

^bIf using fuel with 5000-10 000 mg/kg (5000-10 000 ppm) sulfur.

^cIf using other oils than Plus-50 II and fuel with less than 5000 mg/kg (5000 ppm) sulfur.

^dIf using Plus 50-II oil and fuel with 5000-10 000 mg/kg (5000-10 000 ppm) sulfur.

Service	System	Periodicity							
		Every 500 Hours or Every Year	Every 1000 Hours	Every 1500 Hours or 2 Years	Every 2000 Hours or 2 Years	Every 3000 Hours or 4 Years	Every 4500 Hours or 5 Years	Every 6000 Hours or 6 Years	As Required
Check engine speeds.	Engine	X							
Clean engine vent tube.		X							
Change engine oil. ^{ab}		X							
Replace engine oil filter. ^{ab}		X							
Test coolant.	Fuel, Air Intake, Exhaust, and Cooling	X							
Check cooling system.		X							
Pressure testing cooling system.		X							
Replace fuel filters.		X							
Check air intake system.	Steering and Brakes	X							
Check torque of brake caliper components.		X							
Change hydraulic oil suction filters.	Hydraulics	X							
Change hydraulic oil return filter (self-propelled sprayers).		X							
Check axle end hub.	Wheels and Hardware	X							
Check the position of the inner spray boom section (carbon fiber spray booms only).	Chassis and Spray/ Application Boom	X							
Check the position of the breakaway section support (carbon fiber or hybrid spray booms only).		X							
Check the breakaway system (carbon fiber or hybrid spray booms only).		X							
Check the T6/T7 tensioner (carbon fiber or hybrid spray booms only).		X							
Check the folding system (carbon fiber spray booms only).		X							
Check engine electrical ground connections.	Electrical	X							
Check and tighten turbine screws (nutrient applicators).	Nutrient Application System	X							
Replace the machine bearings (nutrient applicators).		X							

Maintenance and Service Intervals

Service	System	Periodicity							
		Every 500 Hours or Every Year	Every 1000 Hours	Every 1500 Hours or 2 Years	Every 2000 Hours or 2 Years	Every 3000 Hours or 4 Years	Every 4500 Hours or 5 Years	Every 6000 Hours or 6 Years	As Required
Check the joints of the turbine drives (nutrient applicators).		X							
Change the oil of the Eaton transmission housing.	Drivetrain		X						
Change differential oil.			X						
Adjust the axle ends.	Steering and Brakes		X						
Change the hydraulic oil.	Hydraulics		X						
Check the hydraulic system pressure.			X						
Change the oil of the rear axle knees.	Wheels and Hardware		X						
Adjust the chain tension and upper and lower shafts.			X						
Rotate the tires.			X						
Check and adjust the suspension assemblies.	Suspension System		X						
Check the bushings (carbon fiber or hybrid spray booms only).	Chassis and Spray/ Application Boom		X						
Replace engine air cleaners (machines equipped with front engine).	Fuel, Air Intake, Exhaust, and Cooling			X					
Replace the oil filter of the Allison transmission housing.	Drivetrain			X					
Adjust the engine valve clearance.	Engine				X				
Check thermostatic opening temperature.					X				
Replace the engine thermostats (if Cool-Gard II or Cool-Gard II PG is not used).					X				
Check engine torsion damper (6-cylinder engines only).					X				
Change the engine coolant (if Cool-Gard II or Cool-Gard II PG is not used).	Fuel, Air Intake, Exhaust, and Cooling				X				
Change the oil of the Allison transmission housing.	Drivetrain					X			
Replace engine torsion damper (6-cylinder engines only).	Engine						X		
Replace the engine thermostats (if Cool-Gard II or Cool-Gard II PG is used).	Engine							X	
Change the engine coolant (if Cool-Gard II or Cool-Gard II PG is used).	Fuel, Air Intake, Exhaust, and Cooling							X	
Check air compressor.	Engine								X
Replace the engine belt.									X

Maintenance and Service Intervals

Service	System	Periodicity							
		Every 500 Hours or Every Year	Every 1000 Hours	Every 1500 Hours or 2 Years	Every 2000 Hours or 2 Years	Every 3000 Hours or 4 Years	Every 4500 Hours or 5 Years	Every 6000 Hours or 6 Years	As Required
Replace engine air cleaners.	Fuel, Air Intake, Exhaust, and Cooling								X
Clean primary engine air cleaner.									X
Bleed fuel system.									X
Replace the fuses.	Electrical								X
Replace the lights.									X
Bleed the brake system.	Steering and Brakes								X
Adjust front axle toe-in.									X
Replace the hydraulic suction filters.	Hydraulics								X
Replace hydraulic oil return filter (self-propelled sprayers).									X
Hydraulic jack usage.	Wheels and Hardware								X
Replace tires.									X
Clean the solution system filters (self-propelled sprayers).	Solution System								X
Clean the flowmeter (self-propelled sprayers).									X
Control the jet of nozzles (self-propelled sprayers).									X
Check the outer spray boom section position (steel or hybrid spray booms only).	Chassis and Spray/ Application Boom								X
Replace the windshield wiper blade.	Operator's Station								X
Check the level of the windshield washer reservoir.									X

^aIf using Plus-50 II Engine Oil.

^bIf using fuel with less than 5000 mg/kg (5000 ppm) sulfur.

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Fluid Specifications by System

The information regarding fluid specifications by system is available at Fuels, Lubricants, and Coolant sections. To understand all the systems available in the machine,

as well as each specific procedure that contains the fluid information for the desired system, check the following table:

System	Where to Find the Specification of the Fluid
Transmission	See Transmission Oil (Manual Machines) or Transmission Oil (Automatic Machines) in Fuels, Lubricants, and Coolant—General Information section.
Hydraulic System	See Hydraulic System Oil in Fuels, Lubricants, and Coolant—General Information section.
Rear Axle Knees	See Rear Axle Knee Oil in Fuels, Lubricants, and Coolant—General Information section.
Differential	See Differential Oil in Fuels, Lubricants, and Coolant—General Information section.
Chain Lubrication and Nutrient Applicator Box Shaft Grease (Nutrient Applicators Only)	See Lubricants Only for Nutrient Applicators in Fuels, Lubricants, and Coolant—General Information section.
General Greasing of the Machine	See Multipurpose Grease in Fuels, Lubricants, and Coolant—General Information section.

Maintenance and Service Intervals

System	Where to Find the Specification of the Fluid
John Deere Engine Crankcase	See Diesel Engine Oil — Non-Emissions Certified and Certified Tier 1 and Stage I in Fuels, Lubricants, and Coolant—John Deere Engines Only section.
John Deere Engine Cooling System	See Diesel Engine Coolant (Engine with Wet Sleeve Cylinder Liners) in Fuels, Lubricants, and Coolant—John Deere Engines Only section.
Fluid of Brakes	See Brakes in Specifications—General Information section.
Fluid of Clutch	See Transmission System in the Specifications section of your machine model.
Deutz Engine Crankcase	See Other Brand Engine Information in Fuels, Lubricants, and Coolant—Deutz Engines Only section.

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Break-in Period

Perform Break-In Checks

IMPORTANT: The initial service interval to change the oil and filter of the engine can vary according to the type of break-in oil being used (John Deere Break-In or Break-In Plus). Identify the break-in oil type being used and then see Diesel Engine Break-In Oil — Non-Emissions Certified and Certified Tier 1, Tier 2, Tier 3, Stage I, Stage II, and Stage III in Fuels, Lubricants, and Coolant—John Deere Engines Only section and check the corresponding service interval.

IMPORTANT: Initial break-in service interval must last at least 100 hours and applies to all new or reconditioned engines. If John Deere Break-In Plus Engine Oil is used, change the oil and filter at a minimum of 100 hours and a maximum equal to the interval specified for John Deere Plus-50 II or Plus-50 oil.

The Initial break-in service interval for engines with Break-In Plus oil is 500 hours to guarantee coupling between the ring surfaces and engine liners.

IMPORTANT: Besides the indicated services to be performed during the break-in interval, make sure to perform all the other services from the standard service intervals, according to the working hours reached by the machine. See the Service Intervals Chart in Maintenance and Service Intervals section.

When reaching the first 10 hours, perform the following services:

First 10 Hours	
Procedure	Operator's Manual Section
Check the engine oil level.	Service—Engine
Check the coolant level at the coolant reservoir.	Service—Fuel, Air Intake, Exhaust, and Cooling
Drain water from the fuel filters.	Service—Fuel, Air Intake, Exhaust, and Cooling
Check the hydraulic oil level.	Service—Hydraulics
Check condition of tires.	Service—Wheels and Hardware
Check and adjust suspension assemblies.	Service—Suspension System

When reaching the first 500 hours, perform the following services:

First 500 Hours	
Procedure	Operator's Manual Section
Change the engine oil. ^a	Service—Engine
Replace the engine oil filter. ^a	Service—Engine

^aIf John Deere Break-In Plus oil is used.

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Service—Engine

Engine Service Information

For machines equipped with John Deere engines, follow the engine services available in this Operator's Manual.

For machines equipped with Deutz engines, follow the engine services available in Deutz engine manual.

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Check Engine Oil Level

Perform this service daily or every 10 hours.

IMPORTANT: Never operate the engine if the oil level is above the maximum mark (C) or below the minimum ADD mark (B) on the oil dipstick (A).

NOTE: Check oil level with the engine cold, preferably in the morning before starting the engine.

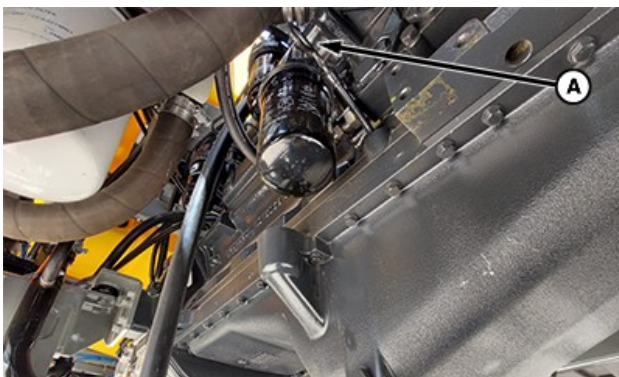
NOTE: See Fuels, Lubricants, and Coolant—John Deere Engines Only section

1. Park the machine on level ground.
2. Shut off the engine.
3. Wait 45 minutes.



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Machines Equipped with 4-Cylinder Engines



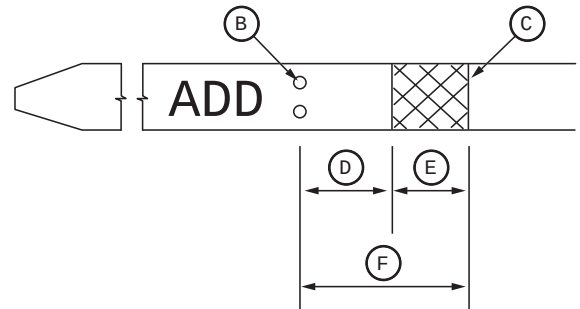
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Machines Equipped with 6-Cylinder Engines

4. Remove oil dipstick (A).
5. Clean the oil dipstick (A) with a clean cloth.
6. Insert the oil dipstick (A) into the engine and remove it again.

NOTE: Make sure to insert the oil dipstick (A) all the way in.

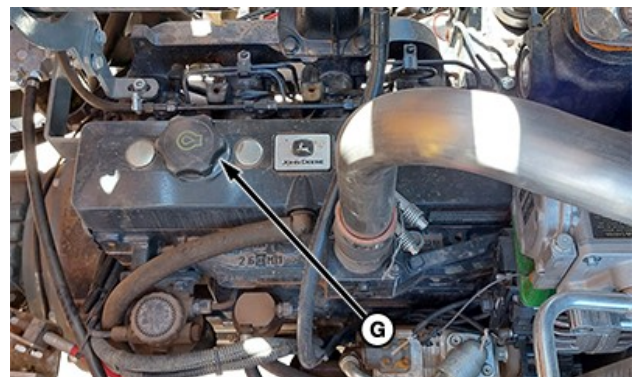
7. Hold the oil dipstick (A) horizontally.



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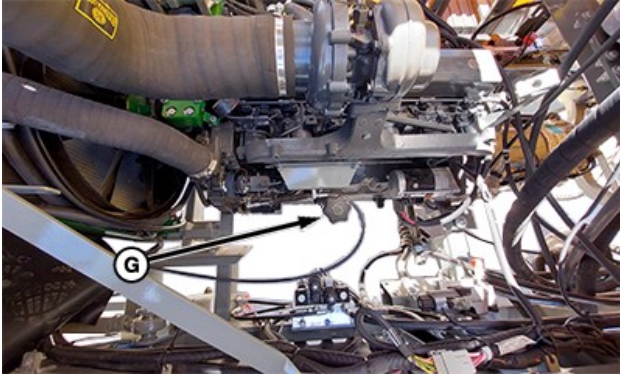
Oil Dipstick

8. Check the oil level according to the following:
 - The oil level should be in range (F), between the minimum ADD mark (B) and the maximum mark (C).
 - The oil level should be preferably in range (D).
 - If the oil level is on the crosshatch area (E), it indicates that the engine crankcase is full.



YE000438—UN—18NOV22

Machines Equipped with 4-Cylinder Engines



YE000439—UN—28NOV22

Machines Equipped with 6-Cylinder Engines

- If the oil level is below the minimum ADD mark (B), add the specified engine oil via filler neck (G).

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Change Engine Oil

During the break-in interval, perform this service after first 500 hours when John Deere Break-In Plus Engine Oil was used.

IMPORTANT: The initial service interval to change the oil and filter of the engine can vary according to the type of break-in oil being used (John Deere Break-In or Break-In Plus). Identify the break-in oil type being used and then see Diesel Engine Break-In Oil — Non-Emissions Certified and Certified Tier 1, Tier 2, Tier 3, Stage I, Stage II, and Stage III in Fuels, Lubricants, and Coolant—John Deere Engines Only section and check the corresponding service interval.

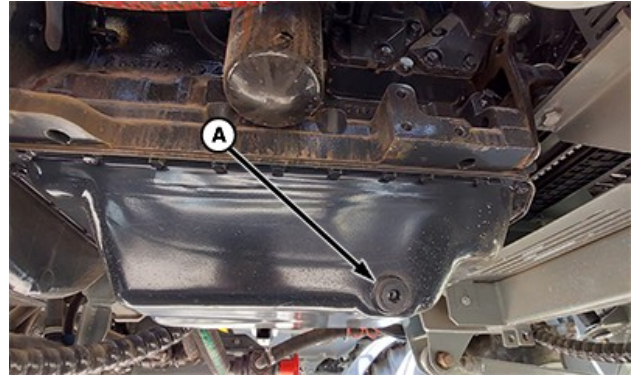
For the standard engine oil and filter service intervals, consult the chart in this procedure. The periodicity varies according to the engine oil and to the sulfur content of the fuel used. For additional details, see Fuels, Lubricants, and Coolant—John Deere Engines Only section.

Besides the service intervals shown at the chart below, also perform this maintenance at every year if the recommended service interval is not reached.

Engine Oil and Filter Service Intervals for Machines with Non-Emissions Certified Engines	
Fuel Sulfur	Less than 5000 mg/kg (5000 ppm)
If using Plus-50 II Oil	500 hours
If using other oils	250 hours
Fuel Sulfur	5000—10 000 mg/kg (5000—10 000 ppm)
If using Plus-50 II Oil	250 hours
If using other oils	125 hours

NOTE: A better draining of oil and debris is obtained when the oil is warm.

1. Start the engine and let it running for 5 minutes.
2. Shut off the engine.
3. Park the machine on level ground.



YE000418—UN—17NOV22

Machines Equipped with 4-Cylinder Engines



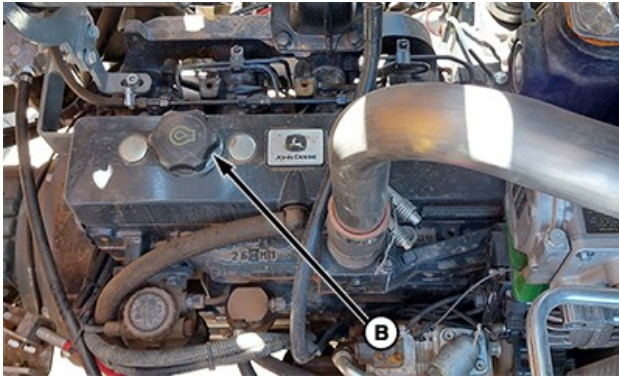
YE000419—UN—17NOV22

Machines Equipped with 6-Cylinder Engines

4. Remove any protections under the crankcase drain plug (A), if equipped.
5. Place a suitable container under the crankcase drain plug (A).
6. Remove the crankcase drain plug (A).
7. Drain the engine oil.
8. Reinstall the crankcase drain plug (A).
9. Open and raise the hood.
10. Replace the engine oil filter. (See Replace Engine Oil Filter in Service—Engine section.)

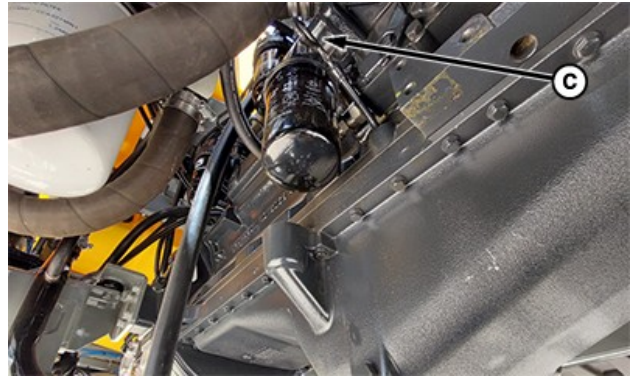
NOTE:

- Check the engine oil capacity in Specifications section.
- Use John Deere oil as specified in Fuels, Lubricants, and Coolant—John Deere Engines Only section.



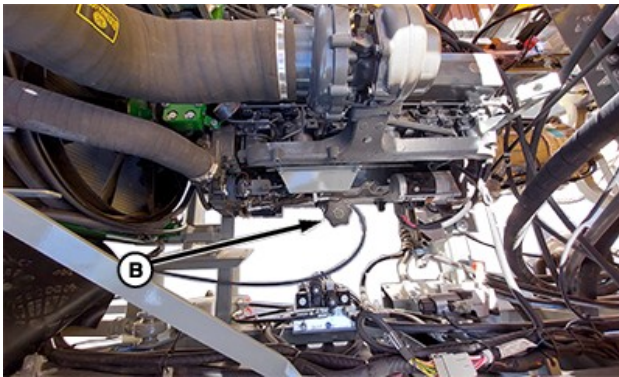
YE000421—UN—17NOV22

Machines Equipped with 4-Cylinder Engines



YE000423—UN—17NOV22

Machines Equipped with 6-Cylinder



YE000420—UN—28NOV22

Machines Equipped with 6-Cylinder Engines

11. Add the specified oil via filler neck (B).
12. Start the engine and check the machine for oil leaks.
13. Shut off the engine.



YE000422—UN—17NOV22

Machines Equipped with 4-Cylinder

14. Wait 5 minutes and check the engine oil level with the oil dipstick (C). Add oil, if necessary.
15. Reinstall any previously removed protections.

edw8krp,1667827964704-19-28NOV22

Replace Engine Oil Filter

During the break-in interval, perform this service after first 500 hours when John Deere Break-In Plus Engine Oil was used.

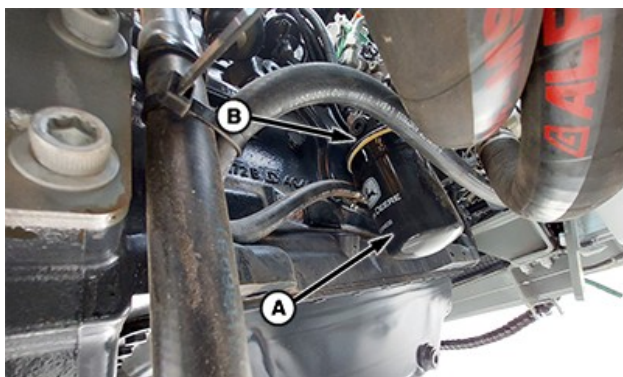
IMPORTANT: The initial service interval to change the oil and filter of the engine can vary according to the type of break-in oil being used (John Deere Break-In or Break-In Plus). Identify the break-in oil type being used and then see Diesel Engine Break-In Oil — Non-Emissions Certified and Certified Tier 1, Tier 2, Tier 3, Stage I, Stage II, and Stage III in Fuels, Lubricants, and Coolant—John Deere Engines Only section and check the corresponding service interval.

For the standard engine oil and filter service intervals, consult the chart in this procedure. The periodicity varies according to the engine oil and to the sulfur content of the fuel used. For additional details, see Fuels, Lubricants, and Coolant—John Deere Engines Only section.

Besides the service intervals shown at the chart below, also perform this maintenance at every year if the recommended service interval is not reached.

Engine Oil and Filter Service Intervals for Machines with Non-Emissions Certified Engines	
Fuel Sulfur	Less than 5000 mg/kg (5000 ppm)
If using Plus-50 II Oil	500 hours
If using other oils	250 hours
Fuel Sulfur	5000—10 000 mg/kg (5000—10 000 ppm)
If using Plus-50 II Oil	250 hours
If using other oils	125 hours

1. Open and raise the hood.



YE010200—UN—29NOV22

Machines Equipped with 4-Cylinder

5. Clean the engine oil filter (A) and the filter housing (B).

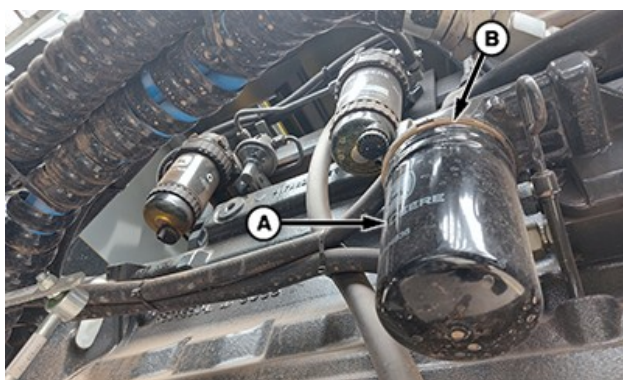
edw8krp,1667848237453-19-29NOV22

Check Engine Mounts

Perform this service every 250 hours.

1. Check the engine mounting bracket, vibration isolators, and mounting screws on support frame and engine block for tightness. Tighten as necessary.
2. Inspect overall condition of vibration isolators. Replace isolators if rubber has deteriorated or mounts have collapsed, as necessary. (See your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.)

edw8krp,1666982591209-19-05DEC22



YE010071—UN—16NOV22

Machines Equipped with 6-Cylinder

2. Remove the engine oil filter (A).



YE010072—UN—17NOV22

3. Coat the sealing rings (C) of the new engine oil filter (A) with clean engine oil.

IMPORTANT: Do not overtighten the engine oil filter (A). Doing so damages the sealing rings (C).

4. Tighten the engine oil filter (A) by hand until the sealing rings (C) touch the housing surface. Tighten 1/2 turn more by hand.

Check Engine Speeds

Perform this service every 500 hours or every year.

Check the engine speeds at the armrest display while running the engine.

The engine speeds must be as specified in Engine at the Specifications section.

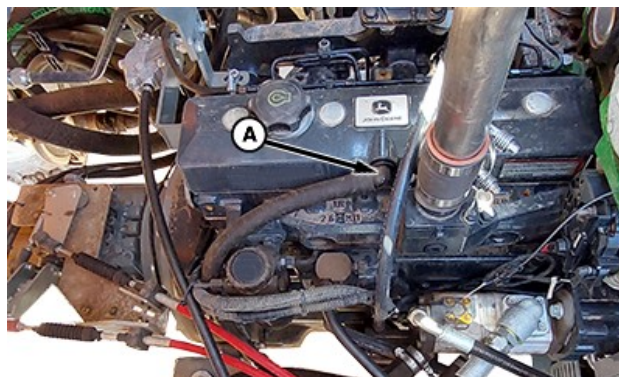
If engine speeds need adjustment, see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

edw8krp,1666883301781-19-25MAR23

Clean Engine Vent Tube

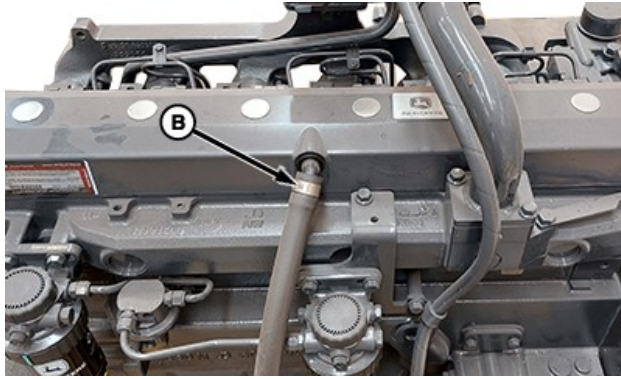
Perform this service every 500 hours or every year.

IMPORTANT: Avoid machine damage. If the engine is operated in dusty conditions, clean the vent tube at shorter intervals.



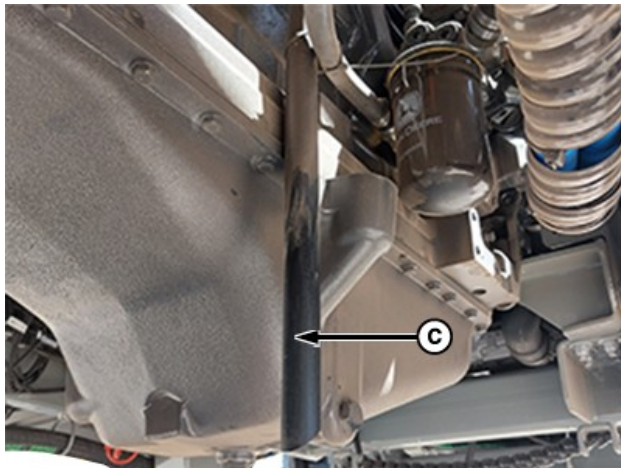
YE010421—UN—16MAR23

Machines Equipped with 4-Cylinder Engines



YE010420—UN—16MAR23

Machines Equipped with 6-Cylinder Engines



YE010422—UN—16MAR23

Crankcase Vent Tube

1. For machines equipped with 4-Cylinder engine, press and pull tube end (A). For machines equipped with 6 cylinders engine, loosen the hose clamp (B).
2. Remove the crankcase vent tube (C).
3. Clean dirt and trash from the crankcase vent tube (C).
4. Reinstall the crankcase vent tube (C). Make sure the O-ring fits correctly.
5. Tighten the crankcase vent tube (C) clamp.

edw8krp,1666887063333-19-22MAR23

Adjust the Engine Valve Clearance

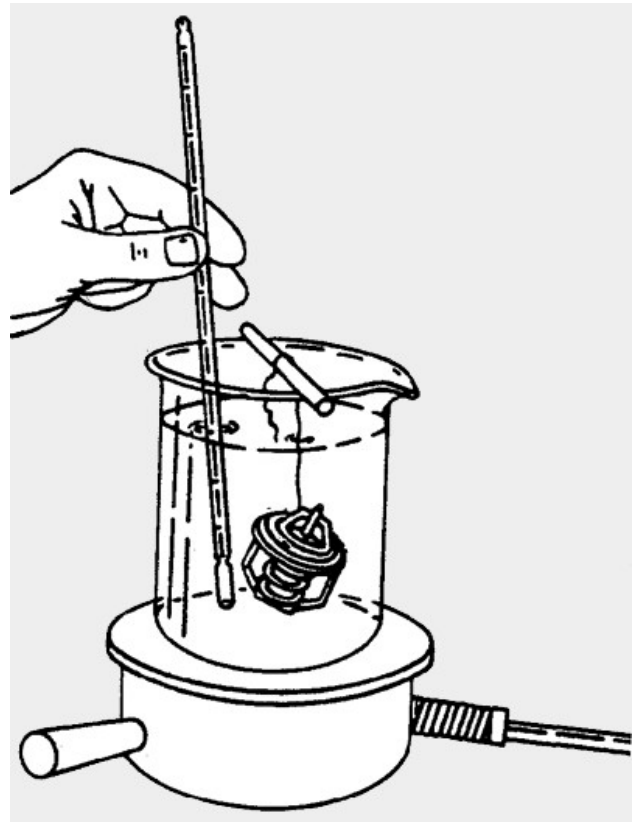
Perform this service every 2000 hours or 2 years.

To adjust the engine valve clearance, see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

edw8krp,1666889085739-19-01DEC22

Check Thermovalve Opening Temperature

Perform this service every 2000 hours or 2 years.



CQ294097—UN—06AUG12

1. Remove the engine thermovalves. (See Replace the Engine Thermovalves in Service—Engine section.)
2. Visually inspect the thermovalves for corrosion or damage.

CAUTION: Avoid accidents. **DO NOT** allow thermovalves or thermometer to rest against the side or bottom of the container when heating water. They may rupture if overheated.

3. Suspend the thermovalve and a thermometer in a container of water.
4. Stir the water as it heats. Observe the opening action of the thermovalve and compare the temperatures with the specification given in chart below.

NOTE: Due to varying tolerances of different suppliers, initial opening and fully open temperatures may vary slightly from the specified temperatures.

Rating	Initial Opening (Range)	Full Open (Nominal)
°C (°F)	°C (°F)	°C (°F)
71 (160)	69—72 (156—162)	84 (182)
77 (170)	74—78 (166—172)	89 (192)
82 (180)	80—84 (175—182)	94 (202)
89 (192)	86—90 (187—194)	101 (214)
90 (195)	89—93 (192—199)	103 (218)

92 (197)	89—93 (193—200)	105 (221)
96 (205)	94—97 (201—207)	100 (213)
99 (210)	96—100 (205—212)	111 (232)

- Remove thermostatic valve from container and observe its closing action as the thermostatic valve cools.

Thermostatic valve should close completely in ambient air. Closing action should be smooth and slow.

- Replace the thermostatic valve if defective.
- Install the thermostatic valves. (See the procedure in Replace the Engine Thermostatic Valves at Service—Engine section.)

edw8krp,1667224337064-19-01DEC22

Replace the Engine Thermostatic Valves

Perform this service every 2000 hours or 2 years if Cool-Gard II or Cool-Gard II PG is not used. Perform this service every 6000 hours or 6 years if Cool-Gard II or Cool-Gard II PG is used.



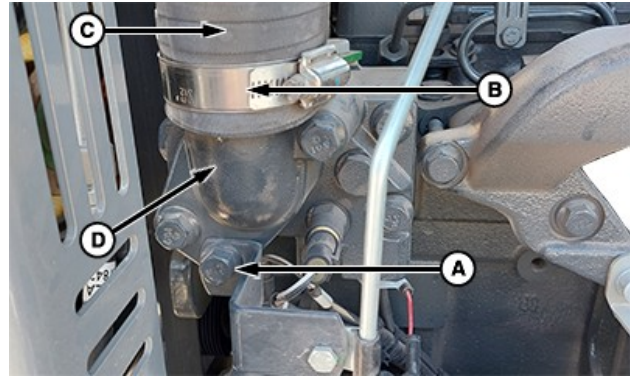
T6642EK—UN—01NOV88

CAUTION: Avoid injury. Shut off the engine and only remove the coolant reservoir cap when cool enough to touch it with bare hands. To relieve the pressure, slowly loosen the coolant reservoir cap to the first stop before removing it completely.

IMPORTANT: Replace the thermostatic valves and the coolant reservoir cap whenever the coolant is changed.

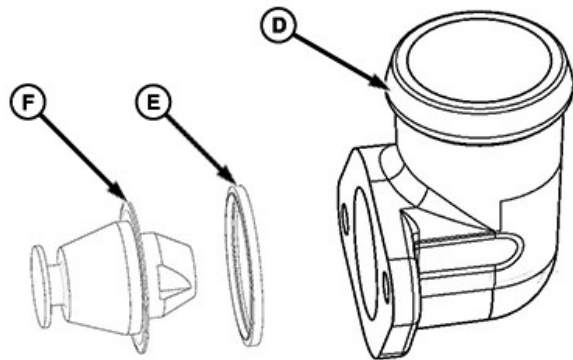
NOTE: The images shown in this procedure are for illustrative purposes only. The engine thermostatic valve components may vary according to machine and engine models.

- Open and raise the hood.
- Replace the coolant reservoir cap.



YE010027—UN—02NOV22

- Loosen the hose clamp (B).
- Pull the hose (C) off the thermostatic valve cover (D).
- Remove the screws (A) and the thermostatic valve cover (D).



BM011233—UN—24NOV16

Thermostatic Valve Assembly

- Remove the thermostatic valve (F) and the seal (E).
- Clean the contact surfaces.
- Apply silicone sealant on the new gasket.
- Install a new thermostatic valve (F) and seal (E).
- Reinstall the thermostatic valve cover (D) and screws (A).
- Tighten the screws (A) to specification:

Specification

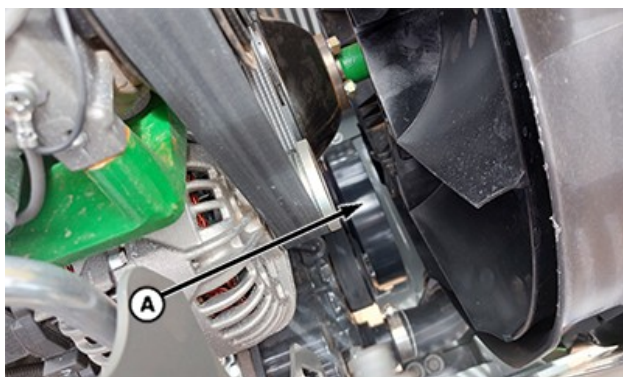
Thermostatic Valve Cover
Screws—Torque. 70 N·m
(52 lb·ft)

- Connect the hose (C) with the hose clamp (B) on the thermostatic valve cover (D).
- Tighten the hose clamp (B).

edw8krp,1667244569777-19-01DEC22

Check Engine Torsion Damper (6-Cylinder Engines Only)

Perform this service every 2000 hours or 2 years.



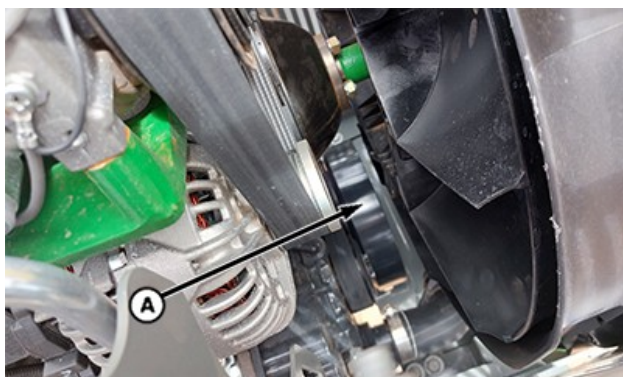
YE010045—UN—09NOV22

To check the engine torsion damper (A) conditions, see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

edw8krp,1667934117294-19-01DEC22

Replace Engine Torsion Damper (6-Cylinder Engines Only)

Perform this service every 4500 hours or 5 years.



YE010045—UN—09NOV22

To replace the engine torsion damper (A), see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

edw8krp,1667935691419-19-01DEC22

Check Air Compressor

Perform this service as required.



YE000039—UN—22SEP22

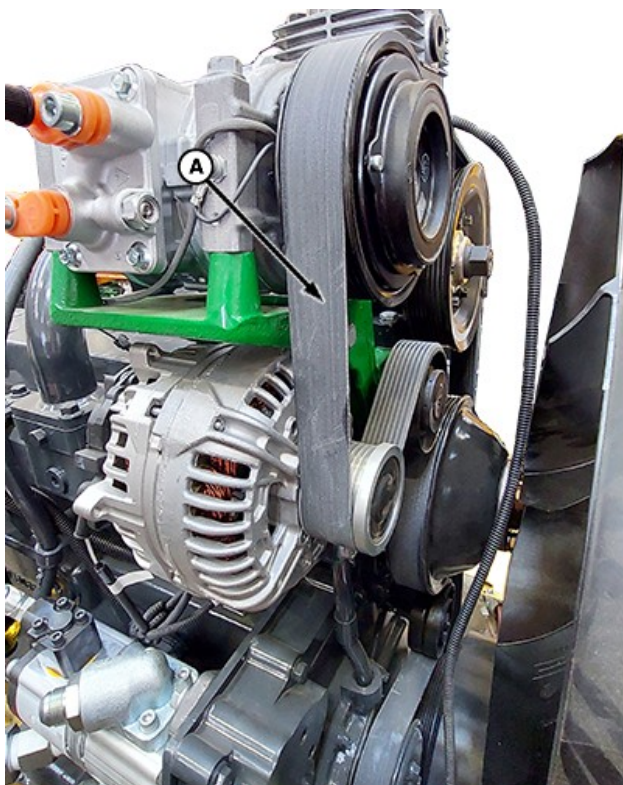
NOTE: The image is for illustrative purposes only. The compressor (A) surrounding components may vary according to machine and engine models.

In case of issues being noticed at compressor (A), see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer for diagnostic and troubleshooting.

edw8krp,1667232363072-19-17NOV22

Replace the Engine Belt

Perform this service as required.



YE000417—UN—17NOV22

To replace the engine belt (A), see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

edw8krp,1667301159240-19-18NOV22

Service—Fuel, Air Intake, Exhaust, and Cooling

Check Coolant Level

Perform this service daily or every 10 hours.



TS281—UN—15APR13

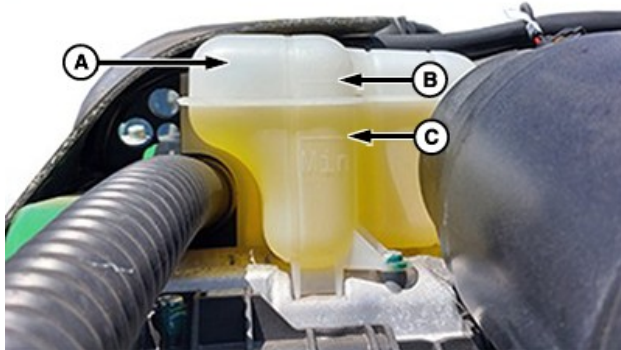
High-Pressure Fluids

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

Shut off engine. Only remove the coolant reservoir (A) cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing it completely.

NOTE: The images are for illustrative purposes only. The location and surrounding components of the coolant reservoir (A) may vary according to machine and engine model.

1. Park the machine on level ground.



YE000424—UN—17NOV22

2. Check the coolant level at coolant reservoir (A). Coolant level should be above the minimum mark (C) when the engine is cold.

IMPORTANT: Avoid machine damage. Always keep the coolant level between the minimum (C) and maximum (B) marks.

3. If coolant level is low:
 - a. Open and raise hood.

- b. Check for any signs of leakage.

NOTE: If coolant level is low but there is no external signs of leakage, see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

- c. Wait until the engine cools down.

CAUTION: Only remove the coolant reservoir cap (D) when cool enough to touch with bare hands. To relieve pressure, slowly loosen the coolant reservoir cap (D) before removing it completely.



YE000425—UN—17NOV22

- d. Remove the coolant reservoir cap (D).
- e. Add coolant until it reaches a level above the minimum mark (C).

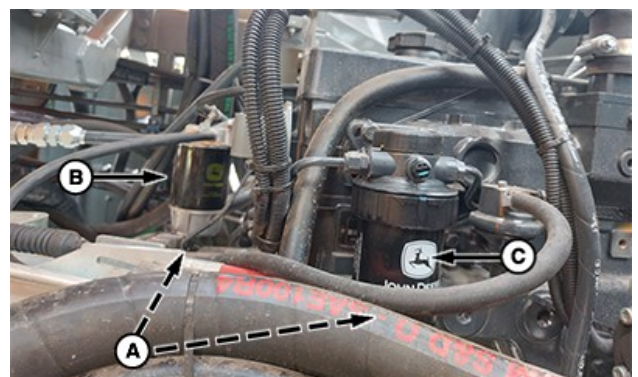
NOTE: See the correct coolant in Fuels, Lubricants, and Coolant section.

- f. Install the coolant reservoir cap (D).

edw8krp,1667222501982-19-29NOV22

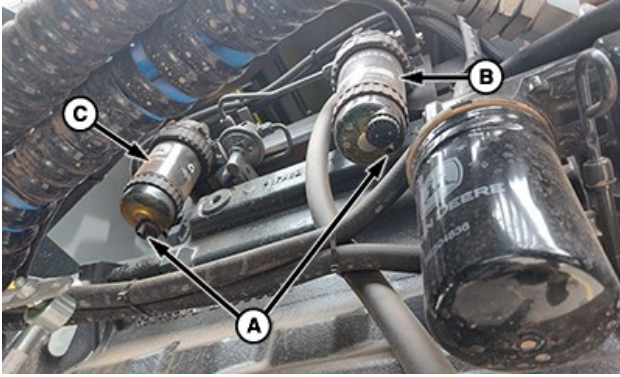
Drain Water from the Fuel Filters

Perform this service daily or every 10 hours.



YE000431—UN—18NOV22

Machines Equipped with 4-Cylinder Engines



YE000432—UN—18NOV22

Machines Equipped with 6-Cylinder Engines

1. Loosen drain plugs (A) of the primary (B) and secondary (C) fuel filters. Retighten when clean fuel starts to come out.
2. Bleed the fuel system. (See Bleed Fuel System in the Service—Fuel, Air Intake, Exhaust, and Cooling section.)

edw8krp,1667914638159-19-18NOV22

Test Coolant

Perform this service every 500 hours or every year.

To test coolant, see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

edw8krp,1666878190182-19-17NOV22

Check Cooling System

Perform this service every 500 hours or every year.



High-Pressure Fluids

TS281—UN—15APR13

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

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

1. Visually check entire cooling system for leaks. Tighten all clamps securely.
2. Thoroughly inspect all cooling system hoses for hard, flimsy, or cracked condition. Replace hoses if any of the above conditions are found.

edw8krp,1667227371801-19-17NOV22

Pressure Testing Cooling System

Perform this service every 500 hours or every year.

To test pressure on cooling system, see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

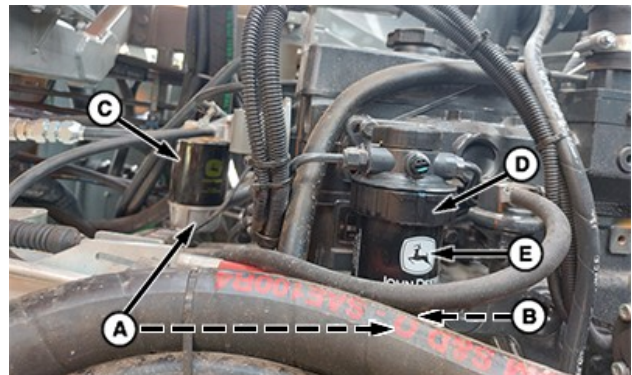
edw8krp,1667412514992-19-17NOV22

Replace Fuel Filters

Perform this service every 500 hours or every year.

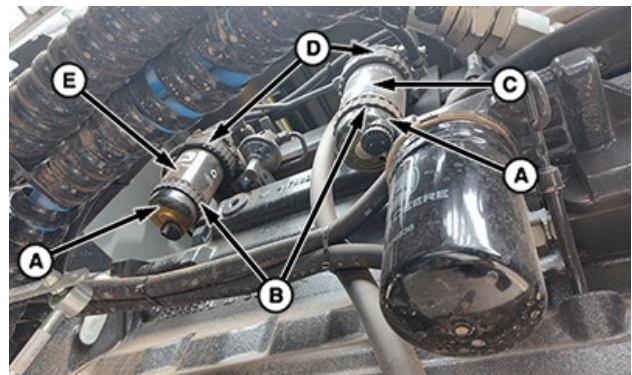
CAUTION: Always shut off the engine and remove the ignition key from key switch before servicing the fuel filters.

1. Open and raise hood.



YE000433—UN—18NOV22

Machines Equipped with 4-Cylinder Engines



YE000434—UN—18NOV22

Machines Equipped with 6-Cylinder Engines

2. Clean the primary fuel filter (C) and secondary fuel filter (E).

3. Drain fuel filters. (See Drain Water from the Fuel Filters in Service—Fuel, Air Intake, Exhaust, and Cooling section.)
4. Loosen retaining ring (B), if equipped.

IMPORTANT: Always replace both fuel filters at the same time.

5. Remove the water separator bowls (A).
6. Loosen the retaining rings (D) of each fuel filter, if equipped
7. Remove the primary fuel filter (C) and the secondary fuel filter (E).
8. Install the water separator bowl (A), if applicable, on the new fuel filters.
9. Tighten retaining rings (B), if equipped.
10. Coat the sealing rings of the fuel filters with clean engine oil.
11. Install the new fuel filters. Align the marks on the filters with the marks on the housing.
12. Tighten retaining rings (D), if equipped.
13. Bleed fuel system. (See Bleed Fuel System in Service—Fuel, Air Intake, Exhaust, and Cooling section.)

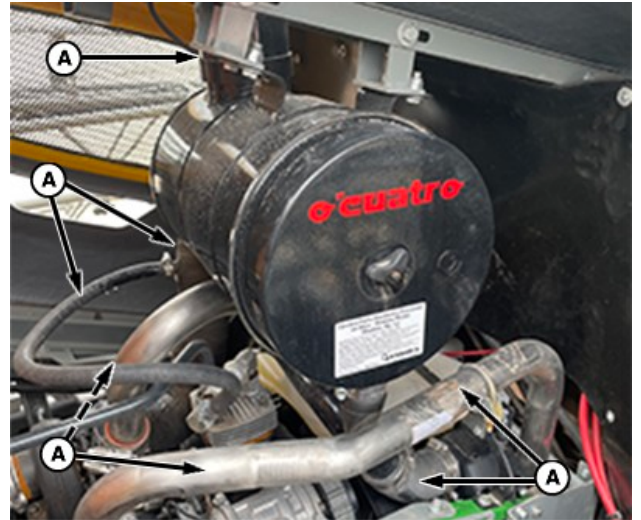
edw8krp,1667915277206-19-29NOV22

Check Air Intake System

Perform this service every 500 hours or every year.

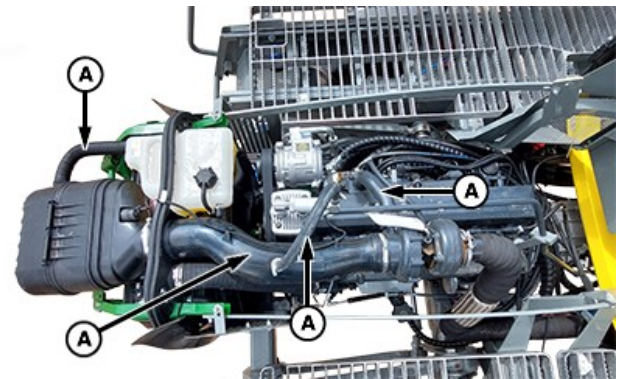
IMPORTANT: The air intake system must not leak. Any leak, no matter how small, may result in internal engine damage due to abrasive dirt and dust entering the intake system.

1. Open and raise hood.



YE000436—UN—18NOV22

Machines Equipped with Central Engine



YE000435—UN—18NOV22

Machines Equipped with Front Engine

2. Check all air intake system hoses and pipes (A) for cracks or any signs of damage. Replace them as necessary.
3. Check for loosening clamps or connections on the air system hoses and pipes (A). Tighten clamps as necessary.
4. Close the hood.

edw8krp,1667916244826-19-25NOV22

Replace Engine Air Cleaners

For machines equipped with central engine:

- Perform this service as required after cleaning the engine primary air cleaner 2 times. Replace both primary and secondary air cleaners at the same time.

For machines equipped with front engine:

- Perform this service every 1500 hours or 2 years, or as required.

- Perform this service also on the primary engine air cleaner after cleaning it 5 times.
- Perform this service also on the secondary engine air cleaner at every fifth change of the primary engine air cleaner.

IMPORTANT: NEVER run the engine without the primary and secondary engine air cleaner correctly installed.

Primary Engine Air Cleaner

IMPORTANT: Replace the primary engine air cleaner after cleaning it five times or after 2 years of operation, whichever occurs first.

IMPORTANT: If the primary air cleaner is being replaced due to damage, replace the secondary air cleaner at the same occasion regardless of its condition.

1. Park the machine and stop the engine.



YE000443—UN—19NOV22

Machines Equipped with Central Engine



YE000442—UN—19NOV22

Machines Equipped with Front Engine

2. Open and raise the hood (A).



YE010021—UN—09JAN23

Machines Equipped with Central Engine



YE010016—UN—09JAN23

Machines Equipped with Front Engine

3. Release the lock (B).



YE010022—UN—09JAN23

Machines Equipped with Central Engine



YE010017—UN—09JAN23

Machines Equipped with Front Engine



YE000430—UN—18NOV22

Machines Equipped with Front Engine

4. Remove the cover (C).



YE010023—UN—09JAN23

Machines Equipped with Central Engine



YE010018—UN—09JAN23

Machines Equipped with Front Engine

5. Carefully pull out the primary engine air cleaner (D) from the engine air cleaner housing.
6. Clean out all the dirt and debris from inside the engine air cleaner housing.
7. Install a new primary engine air cleaner (D) into the housing.

NOTE: For machines equipped with front engine, insert the primary engine air cleaner (D) with the arrows on the decal (E) pointing to the housing.

8. Install cover (C) and secure it in place with lock (B).

Secondary Engine Air Cleaner



YE000427—UN—17NOV22

Machines Equipped with Central Engine



YE000426—UN—17NOV22

Machines Equipped with Front Engine

IMPORTANT:

- Do not attempt to clean the secondary engine air cleaner (A).
- To avoid contamination of the air intake system, install a new secondary engine air

cleaner (A) immediately after removing the old filter.

To access the secondary engine air cleaner (A), remove the primary engine air cleaner first according to the procedure shown here.

edw8krp,1667242072304-19-07DEC22

Change the Engine Coolant

Perform this service every 2000 hours or 2 years if Cool-Gard II or Cool-Gard II PG is not used.

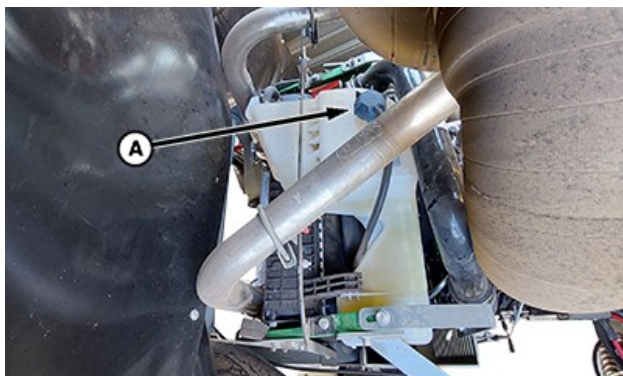
Perform this service every 6000 hours or 6 years if Cool-Gard II or Cool-Gard II PG is used.



TS281—UN—15APR13

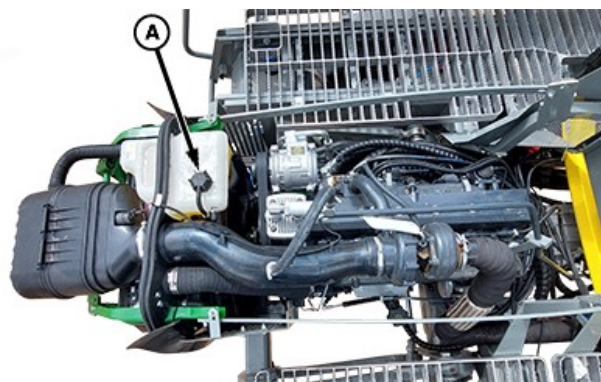


T6642EK—UN—01NOV88



YE010172—UN—28NOV22

Machines Equipped with Central Engine



YE010046—UN—09NOV22

Machines Equipped with Front Engine

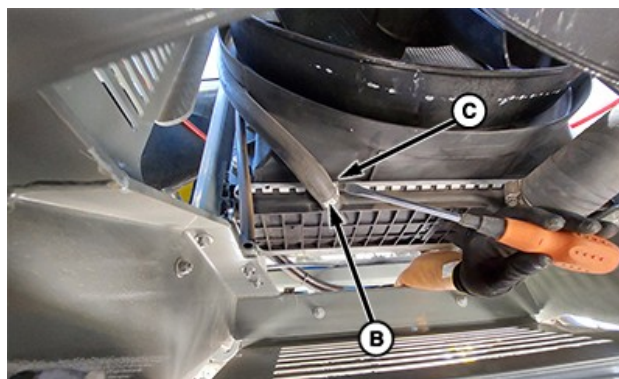
1. Carefully loosen the coolant reservoir cap (A) and remove it.

CAUTION: Avoid injury. Shut off the engine and only remove the coolant reservoir cap when cool enough to touch with bare hands. To relieve the pressure, slowly loosen the coolant reservoir cap (A) to the first stop before removing it completely.

IMPORTANT: Follow specifications and coolant change interval according to instructions in Diesel Engine Coolant (engine with wet sleeve cylinder liners). Refer to Fuels, Lubricants, and Coolant section in this manual.

IMPORTANT: Replace the thermostats and the coolant reservoir cap (A) whenever the coolant is changed.

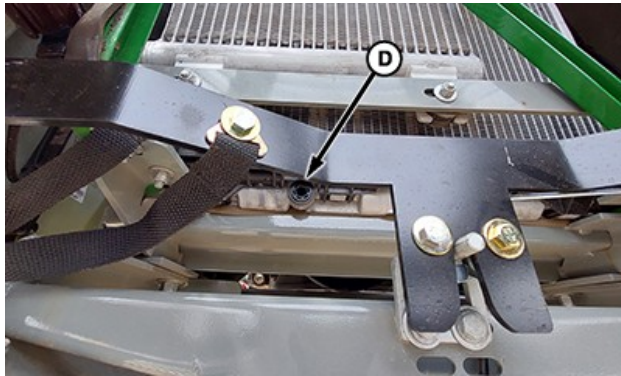
2. For machines equipped with 4-cylinder engines:



YE010174—UN—28NOV22

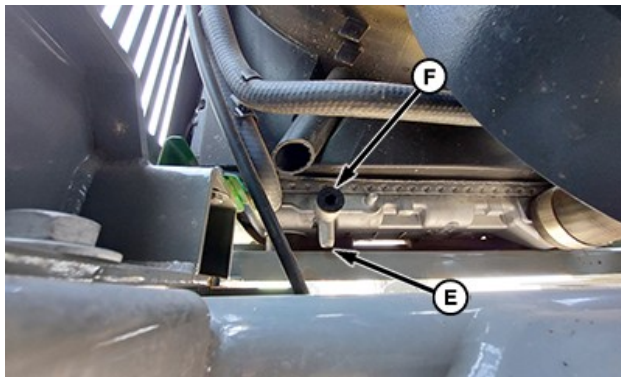
- a. Place a suitable container under drain line.
- b. Loosen the screw (C).
- c. Untighten clamp (B).
- d. Drain all coolant.
- e. Tighten clamp (B).
- f. Tighten the screw (C).

3. For machines equipped with 6-cylinder engines:



YE010084—UN—28NOV22

- a. Turn the connect/disconnect control (D) counterclockwise as far as it goes.



YE010082—UN—28NOV22

- b. Place a suitable container under drain line (E).
 - c. Open drain valve (F).
 - d. Drain all coolant.
 - e. Close drain valve (F).
4. Replace the engine thermostats. (See Replace the Engine Thermostats in Service—Engine section.)
5. To flush the cooling system, observe the following instructions:
- a. Remove the coolant reservoir cap (A).
 - b. Fill the cooling system with clean water through the coolant reservoir.

IMPORTANT: Never fill the system when the engine is hot. Wait until engine cools down.

- c. Install the coolant reservoir cap (A).



YE010413—UN—10MAR23

- d. Start the engine and press the low idle button (G).
 - e. Drain all coolant.
 - f. Turn off the engine.
6. To fill the cooling system, observe the following instructions:
- a. Remove the coolant reservoir cap (A).
 - b. Fill the cooling system with the specified coolant through the coolant reservoir. Add coolant up to the maximum level mark.
- NOTE: Check the specified coolant in Fuel, Lubricants, and Coolant section.*
- c. Install the coolant reservoir cap (A).
 - d. Start the engine and press the low idle button (G).

edw8krp,1678473000769-19-23MAR23

Clean Primary Engine Air Cleaner

Perform this service as required when the air cleaner restriction indicator turns on at the steering column display.

Machines with front engine can have its primary engine air cleaner cleaned for a maximum of 5 times.

Machines with central engine can have its primary engine air cleaner cleaned for a maximum of 2 times.



YE000429—UN—18NOV22

Primary Engine Air Cleaner—Machines Equipped with Central Engine



YE010176—UN—25NOV22

Machines Equipped with 4-Cylinder Engines



YE000428—UN—17NOV22

Primary Engine Air Cleaner—Machines Equipped with Front Engine



YE010178—UN—25NOV22

Machines Equipped with 6-Cylinder Engines

When the primary engine air cleaner (A) must keep working in the field, tap it on the palm of your hand as a temporary way to clean it.

IMPORTANT: The guide ring, if equipped, must not be damaged or deformed.

IMPORTANT: Avoid engine primary air cleaner damage. Do not blow pressurized air if the air cleaner is wet.

If tapping the primary engine air cleaner (A) does not remove dust, blow out dust with compressed air by inserting nozzle inside the element and blowing from the inside of the filter to the outside, not exceeding:

- 600 kPa (6.00 bar) (90.00 psi) for machines equipped with front engine.
- 392 kPa (3.92 bar) (56.85 psi) for machines equipped with central engine.

edw8krp,1667240878559-19-07DEC22

2. Open bleed screw (A)



YE010180—UN—28NOV22

Machines Equipped with 4-Cylinder Engines

Bleed Fuel System

Perform this service as required.

1. Open and raise hood.



YE010182—UN—28NOV22

Machines Equipped with 6-Cylinder Engines

3. Pump fuel using the lever on the mechanical fuel transfer pump (B) until resistance is felt.
4. Close bleed screw (A).
5. Start the engine and let it run for a few minutes.

edw8krp,1669652006552-19-29NOV22

Service—Electrical

Safety in Electrical System Services

⚠ CAUTION:

- Avoid possible injury or death due to machine movement. Never attempt to start engine by shorting across the starter solenoid terminals.
- Disconnect the battery terminals before repairing or servicing any electrical component.
- Do not use the electrical compartment to store anything. This can generate shorts and cause explosions.
- Lead acid batteries generate flammable and explosive gas. Keep weld, sparks, and flames away from the battery.
- Always use battery chargers with adjustable voltage. High voltage may damage the battery and cause explosions.

jtlisx7f,1662468450258-19-16SEP22

Electrical System Problems

In the event of power cut-off, always check the electrical system fuses first.

jtlisx7f,1662468475522-19-16SEP22

Battery Recommendations

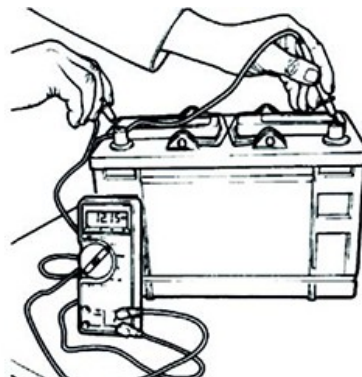
IMPORTANT:

- The machine is equipped with service-free units.
- Check if terminals are clean and adjusted. To avoid sulfation, cover them with grease.
- Never invert the battery cables or irreversible damage of alternator diodes and electronic control components occurs.
- Never check the battery causing a short circuit.
- Before welding the machine, stop the engine, remove the ignition key, and turn off the battery cut-off switch located next to the battery. Also, identify and disconnect the alternator harnesses.
- At long periods of inactivity, also disconnect the battery cut-off switch.
- Remove the sulfate from battery and cables with a solution of baking soda.
- Maintain the cleanliness and the correct adjust of the connections.

jtlisx7f,1662468492490-19-16SEP22

Battery Charge

The battery charge is controlled by measuring the voltage between its terminals using a multimeter:



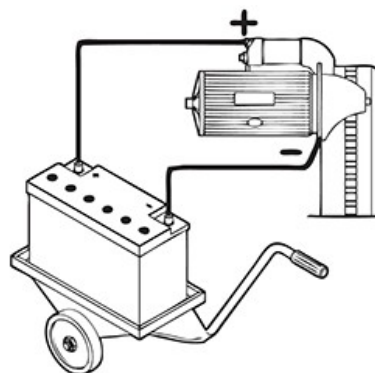
YE000225—UN—22SEP22

- 12.7 V at 100% charge.
- 12.4 V at 50% charged.
- 12.0 V or less, discharged.

jtlisx7f,1662468502103-19-16SEP22

Auxiliary Battery

⚠ CAUTION: Do not use auxiliary batteries of 24 V. In case of auxiliary battery usage, do not connect its cables on the terminals of the old battery. This may cause an explosion at the old battery due to excessive current flow.

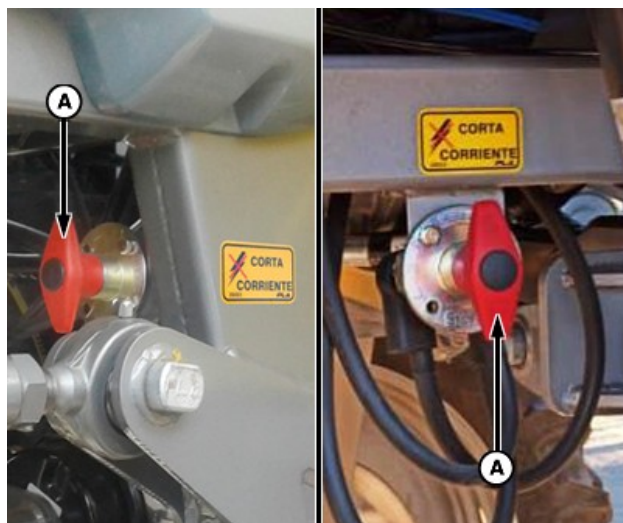


YE000226—UN—22SEP22

Connect the positive cable (+) directly on the positive terminal (+) of the starter motor, and the negative cable (-) on the motor housing.

jtlisx7f,1662468510464-19-16SEP22

Battery Cut-Off Switch



YE000227—UN—22SEP22

Machines with Central Engine / Machines with Front Engine

CAUTION: Prevent injury or death. Always turn the battery cut-off switch (A) to OFF position when servicing or repairing the machine.

IMPORTANT: Never turn off the electrical system while the engine is running. This can result in serious damage to machine electrical components.

The battery cut-off switch (A) is used to electrically disconnect batteries from the machine electrical and electronic systems.

To electrically disconnect batteries from the machine electrical and electronic systems, turn the battery cut-off switch (A) to OFF position. Moving this switch to ON position reconnects batteries to the system.

jtlsx7f,1662468521259-19-28NOV22

Check Engine Electrical Ground Connections

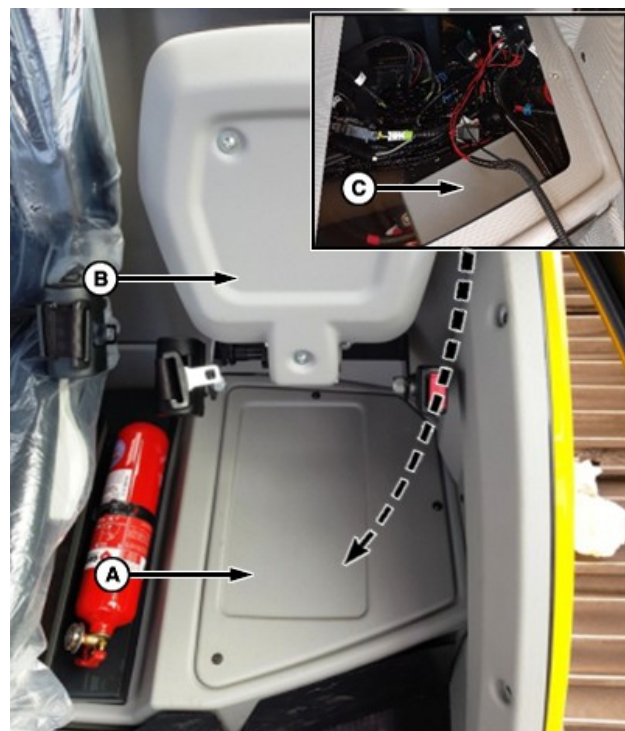
Perform this service every 500 hours or every year.

To check the conditions of the electrical ground connections, see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

jtlsx7f,1668799874376-19-18NOV22

Replace the Fuses

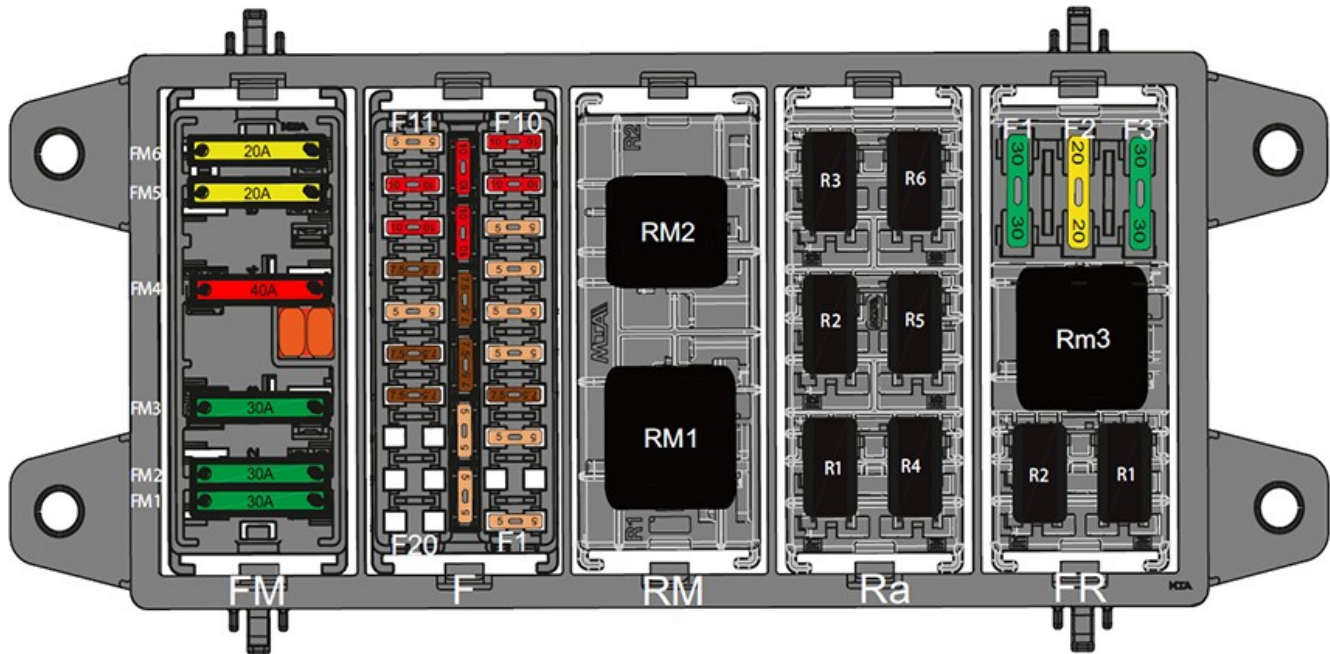
Perform this service as required.



YE000228—UN—22SEP22

The component protection fuses and activation relays are located inside the cab, under the instructional seat (B).

To access the fuses and relays box (C), remove the three hex-socket screws and the cover (A).



YE010418—UN—16MAR23

Decal—Location of Fuses and Relays

FM Fusibles Maxival				
Fusibles		Valor/Color		
FM 1	F051	+30 RCU IPWR 17	30 A	
FM 2	F052	+30 RCU LE70 A	30 A	
FM 3	F053	+30 RCU LE70 B	30 A	
FM 4	F054	+30 Reles (30)	40 A	
FM 5	F055	Rele de contacto	20 A	
FM 6	F056	Rele ISG	20 A	

F Fusibles Minival				
Fusibles		Valor/Color		
F 1	F 001	+ 15 Estereo; panel A/C; Relé ventilación	5 A	
F 2				
F 3	F 003	+15 Gato; nivel L/O/H; teclas; sw temp/nivel; aceite hidro; camara	5 A	
F 4	F 004	+15 Codera	7.5 A	
F 5	F 005	+15 RCU LE70A; RCU LE70B; RCU IPWR	5 A	
F 6	F 006	+15 Allison	5 A	
F 7	F 007	+15 Sw retroceso; sw nivel hidro; sw filtro aire; sw filtro aceite hidro; stop	5 A	
F 8	F 008	+15 Guíñes	5 A	
F 9	F 009	+15 Tanque control; Altina	10 A	
F 10	F 010	Retención	10 A	
F 11	F 011	+30 Stereo; plafon	5 A	
F 12	F 012	+30 Allison	10 A	
F 13	F 013	+30 Toma 12V; USB	10 A	
F 14	F 014	+30 Butaca	7.5 A	
F 15	F 015	+30 Devio; baliza	5 A	
F 16	F 016	+30 Key	7.5 A	
F 17	F 017	+30 Rele Altina	7.5 A	
F 18		Sin uso		
F 19		Sin uso		
F 20		Sin uso		

RM Reles Maxi		
Relé	Función	
RM 1	K051	Contacto (F1 al F10)
RM 2	K052	Destellador

Ra Reles Micro		
Relé	Función	
R 1	K001	Modo transporte
R 2	K002	Altina
R 3	K003	Retención
R 4	K004	Auxiliar Joystick
R 5	K005	Compresor
R 6	K006	Allison (101)

FR Reles Micro maxi Fusibles M8compac				
Fusibles				
F 1	F031	Alim R Ventilador	30 A	
F 2	F032	Alim R Compresor	20 A	
F 3	F033	Alim R Forzador AC	30 A	

Relé	Función	
R 1	K021	Ventola 1
R 2	K022	Ventola 2
Rm 3	K023	Forzador A/C

Fusibles repuesto Minival		
F	-	5 A
F	-	5 A
F	-	7.5 A
F	-	7.5 A
F	-	10 A
F	-	10 A

YE010419—UN—16MAR23

Decal—Function of Fuses and Relays

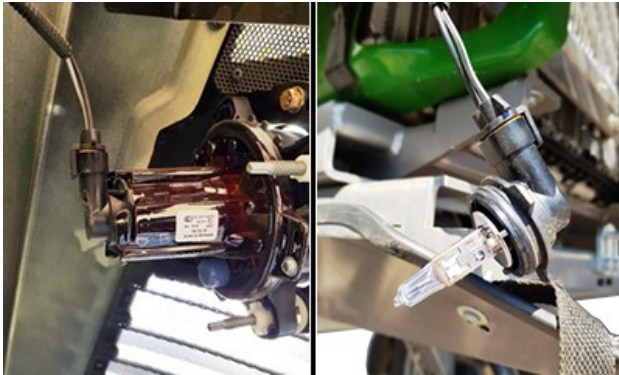
There are information decals on the internal side of the

cover (A). These decals contains the location and the function of each fuse and relay.

edw8krp,1678905255516-19-23MAR23

Replace the Lights

Perform this service as required.



YE000233—UN—22SEP22

Check that the lights are working well. Keep the connections tight and clean.

IMPORTANT: When replacing a halogen light, do not touch the bulb with your fingers. The greasiness of fingers reduces the life of halogen lights.

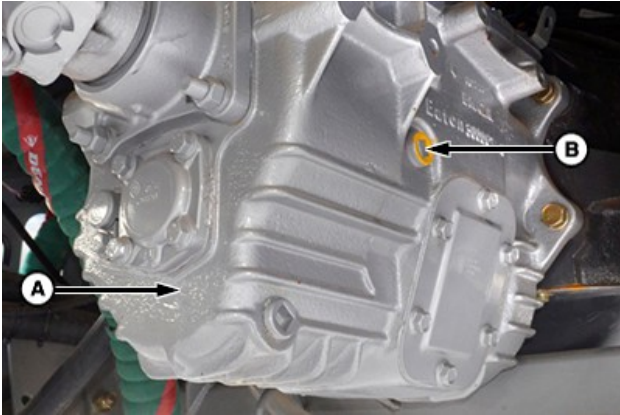
IMPORTANT: Avoid electrical system overcharge. Do not change the illumination system. Always use lights with electrical consumption equal or less than the original ones.

jtlisx7f,1662470575860-19-21SEP22

Service—Drivetrain

Check the Oil Level—Eaton Transmission Housing

Perform this service every 250 hours.



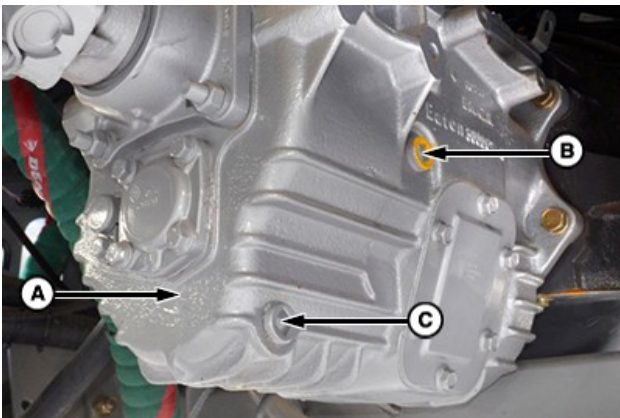
YE000200—UN—22SEP22

Remove the oil level plug (B) and check the oil level of the transmission housing (A). The oil level must be at the orifice level.

jtlisx7f,1662470750273-19-30NOV22

Change the Oil—Eaton Transmission Housing

Perform this service at first 50 hours, and then, every 1000 hours.



YE000201—UN—22SEP22

To change the transmission housing (A) oil, perform the following procedure.

1. Park the machine on a firm, dry, and level ground.
2. Remove the oil level plug (B).
3. Position a suitable container under the drain plug (C).
4. Remove the drain plug (C) and completely drain the transmission housing (A) oil.
5. Before filling with new oil, clean the transmission housing (A) and reinstall the drain plug (C).

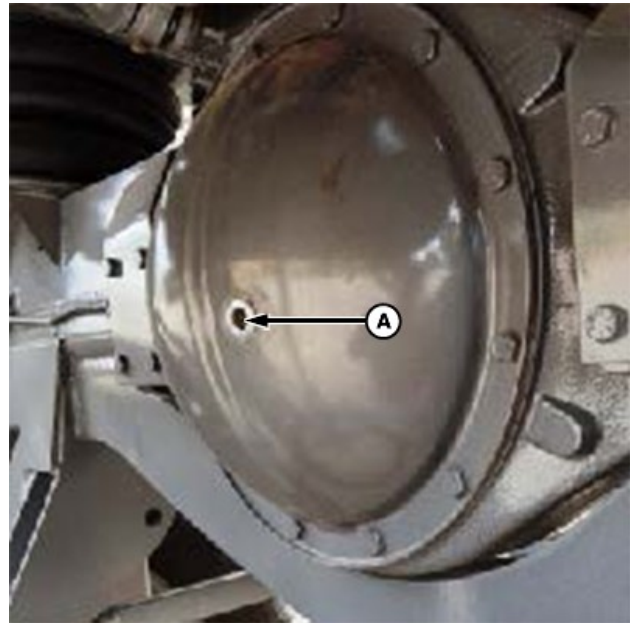
6. Fill the transmission housing (A) through the orifice of the oil level plug (B). The oil level must be at the orifice level. (See Fluid Specification by System in Maintenance and Service Intervals section.)

7. After the correct oil level is reached, reinstall the oil level plug (B).

jtlisx7f,1662470780067-19-06DEC22

Check Differential Oil Level

Perform this service every 250 hours.



YE000212—UN—22SEP22

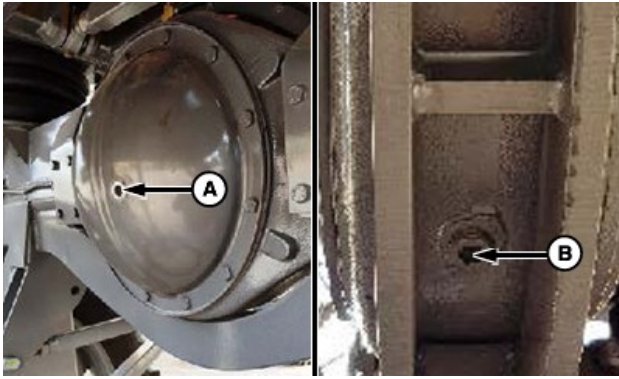
Remove the oil level plug (A) and check the level. The oil must be at orifice level.

jtlisx7f,1662471034650-19-30NOV22

Change Differential Oil

Perform this service at first 50 hours, and then, every 1000 hours.

With the differential oil at working temperature to allow a complete oil drainage, perform the following procedure:



YE000211—UN—22SEP22

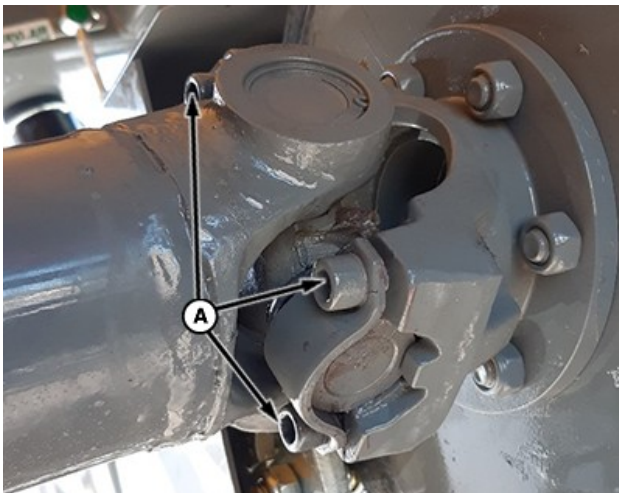
1. Position a suitable container under the drain plug (B).
2. Remove the oil level plug (A) and the drain plug (B).
3. Carefully clean the drain plug (B). It contains a magnetic part that attracts metallic particles provided by the standard wear of the system.
4. Reinstall the drain plug (B).
5. Fill the differential oil with the recommended oil. (See Fluid Specification by System in Maintenance and Service Intervals section.)
6. Reinstall the oil level plug (A).

jtlssx7f,1662471054714-19-06DEC22

Check the Driveshaft

Perform this service every 250 hours.

1. Park the machine on a firm, dry, and level terrain.
2. Turn off the machine and remove the ignition key.
3. Go under the machine.

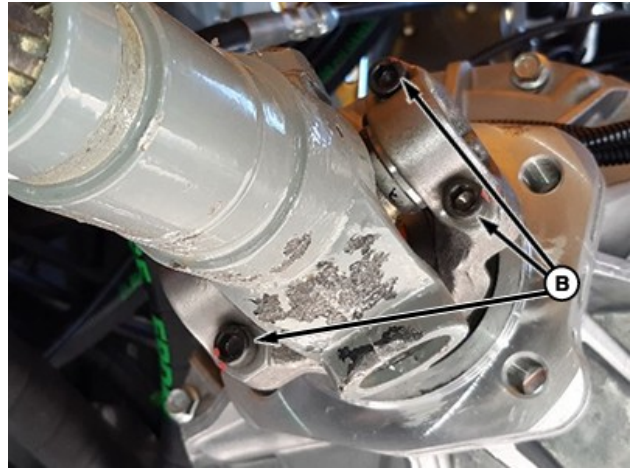


YE000468—UN—22NOV22

4. Check that the tightening of the four driveshaft screws (A) in the joint with the differential is at specification.

Specification

Driveshaft Screws (Differential End)—Torque. 35 N·m
(25.82 lb·ft)



YE000469—UN—22NOV22

5. Check that the tightening of the four driveshaft screws (B) in the joint with transmission housing is at specification.

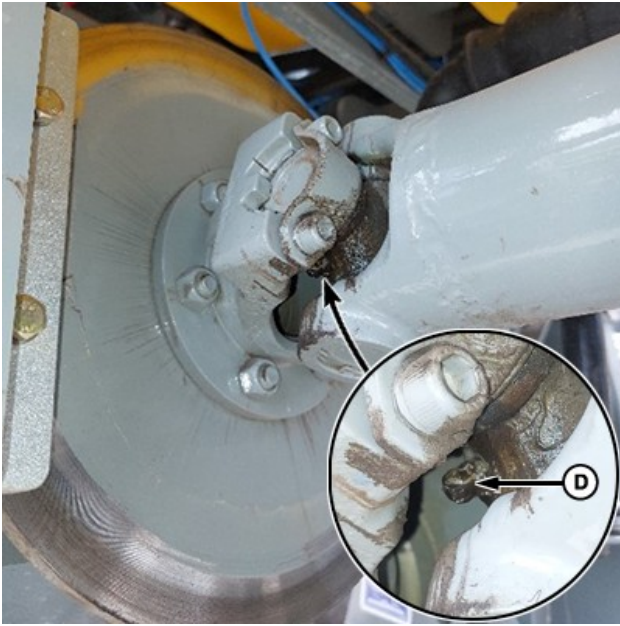
Specification

Driveshaft Screws (Transmission Housing End)—Torque. 35 N·m
(25.82 lb·ft)

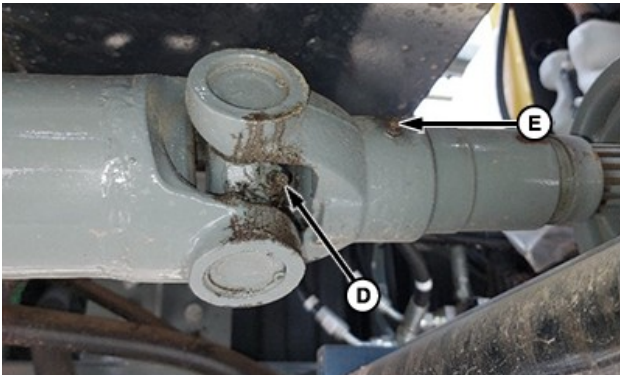


YE000470—UN—22NOV22

6. If the machine is equipped with front engine, visually check that the union joint between the two sections of the driveshaft has no play (C), as well as the cross coupler.



YE000471—UN—22NOV22



YE000472—UN—22NOV22

7. Grease the two grease fittings (D) of the cross coupler (if equipped with central engine), or the three grease fittings of the cross coupler (if equipped with front engine). Also perform the grease of the splined shaft joint grease fitting (E).

jtltsx7f,1668799085265-19-30NOV22

Check the Oil Level—Allison Transmission Housing

Perform this service every 250 hours.

There are two ways to check the oil level of the Allison transmission housing: with cold or warm oil.



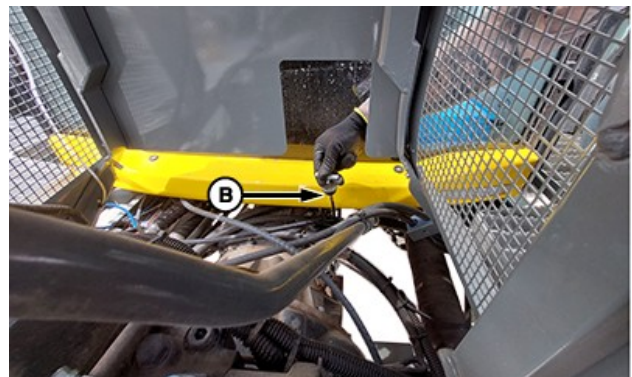
YE010414—UN—10MAR23

On both ways the gearshift lever (A) must be in position **N** (neutral).

Oil Level Check with Cold Oil (Recommended)

Perform this procedure with the engine cold, at the first start of the machine, according to the following instructions:

1. With the machine on a firm, dry, and level ground, position the gearshift lever (A) to **N**.
2. With the park brake pressed, start the engine.
3. Let the engine running at 1000—1500 rpm for 1 minute.
4. Press the park brake and move the gearshift lever (A) to position **OD**, after that, to **N**, then to **R**, and finally, back to **N**.
5. Decrease engine speed to low idle.



YE000488—UN—22NOV22

6. Remove the oil dipstick (B).
7. Clean the oil dipstick (B) with a clean cloth.
8. Insert the oil dipstick (B) into the transmission housing, all the way in.



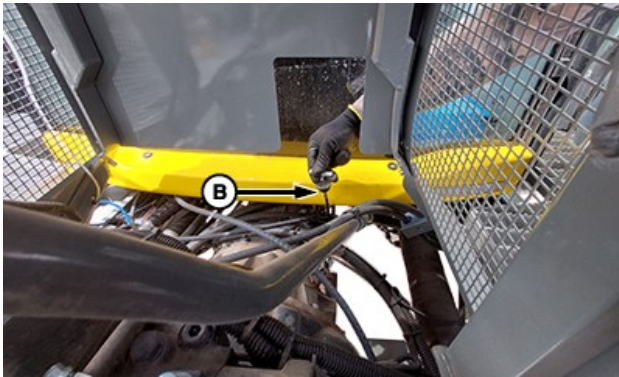
Oil Dipstick

YE000489—UN—22NOV22

9. Remove the oil dipstick (B) again and check the oil level shown. The oil level must be at the range indicated with the letter **C** (C).
10. Repeat the cleaning process of the oil dipstick (B) and check oil level once again.
11. If the oil level is out of the specified range, fill or drain oil as necessary. (See Fluid Specification by System in Maintenance and Service Intervals section.)

Oil Level Check with Warm Oil

1. Stop the machine on a firm, dry, and level ground, and position the gearshift lever (A) to **N**.



YE000488—UN—22NOV22

2. With the engine running at low idle, remove the oil dipstick (B).
3. Clean the oil dipstick (B) with a clean cloth.
4. Insert the oil dipstick (B) into the transmission housing, all the way in.



Oil Dipstick

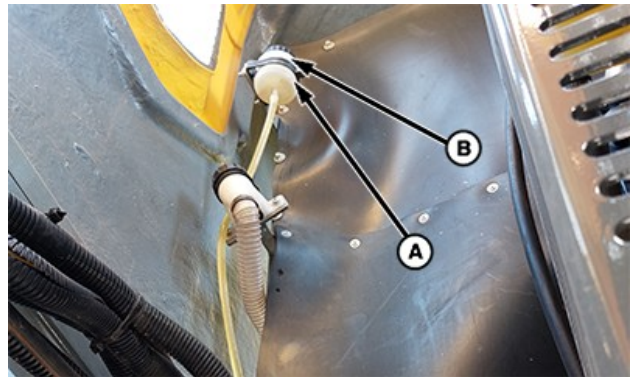
YE000490—UN—22NOV22

5. Remove the oil dipstick (B) again and check the oil level shown. The oil level must be at the range indicated with the letter **H** (H).
6. Repeat the cleaning process of the oil dipstick (B) and check oil level once again.
7. If the oil level is out of the specified range, fill or drain oil as necessary. (See Fluid Specification by System in Maintenance and Service Intervals section.)

edw8krp,1678473444762-19-23MAR23

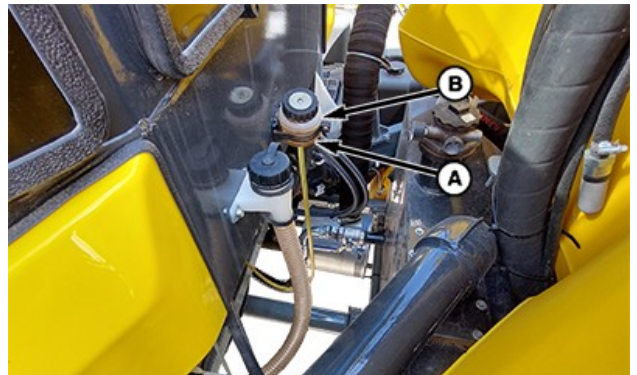
Check Level of the Fluid of Clutch (Manual Machines Only)

Perform this service every 250 hours.



YE010192—UN—25NOV22

Machines Equipped with Central Engine



YE010190—UN—25NOV22

Machines Equipped with Front Engine

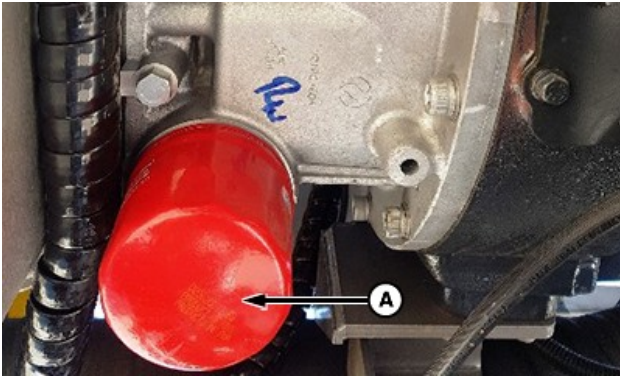
Regularly check level of the fluid of clutch.

The level must be between the minimum (A) and maximum (B) reference marks.

edw8krp,1669388440225-19-29NOV22

Replace the Oil Filter—Allison Transmission Housing

Perform this service every 1500 hours or 2 years.



YE000204—UN—22SEP22

Replace the oil filter (A) regularly according to the indicated service interval.

When removing the element used, the magnet must also be removed, cleaned, and installed together with the new filter.

jtlisx7f,1662987545533-19-30NOV22

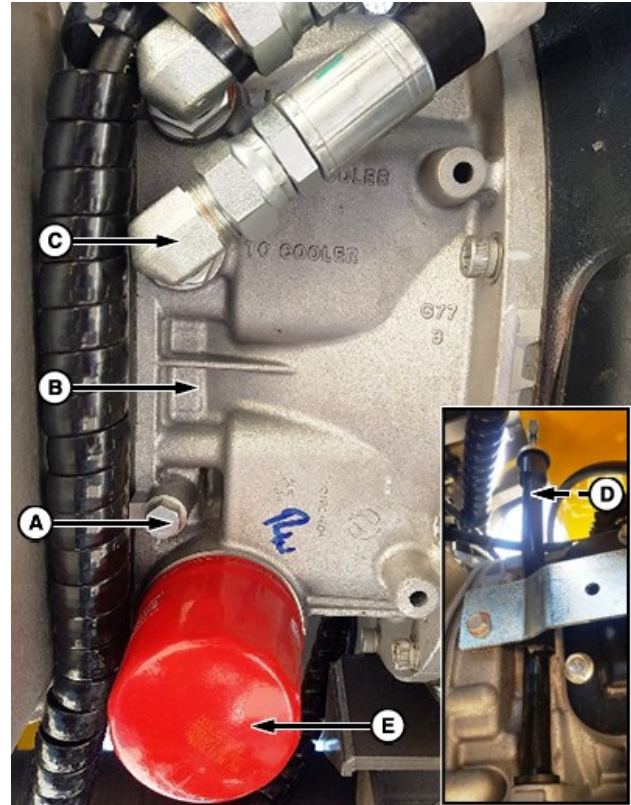
Change the Oil—Allison Transmission Housing

Perform this service every 3000 hours or 4 years.

IMPORTANT: Avoid machine damage. Use only oils as recommended at Fluid Specification by System in Maintenance and Service Intervals section.

For the oil change, perform the following procedure:

1. Park the machine on a firm, dry, and level surface.



YE000203—UN—22SEP22

2. Position a suitable container under the drain plug (A).
3. Remove the drain plug (A) and completely drain the transmission housing (B) oil.
4. Disconnect the hose (C) attached to transmission at port "TO COOLER" (see image for reference).
5. To let air entering in the system and complete the drainage, remove the oil dipstick (D). The transmission housing (B) and the oil cooler must be drained.
6. If the filter (E) is being replaced at the time the oil is being changed, see special instructions at Replace the Oil Filter—Allison Transmission Housing in Service—Drivetrain section.
7. Reinstall the drain plug (A).
8. Reconnect the hose (C).
9. Fill the transmission housing (B) with the suitable oil. (See the oil capacity at Capacities in the Specifications section related to the machine model.)
10. Let the engine running at 1500 rpm for 1 minute.
11. Check the transmission oil level and complete, if necessary. (See Check the Oil Level—Allison Transmission Housing in Service—Drivetrain section.)
12. Let the engine running for 1 minute with the brakes active and the gearshift lever in position **OD**.
13. Once again, check the transmission oil level and complete, if necessary. (See Check the Oil Level—

Allison Transmission Housing in Service—
Drivetrain section.)

jtlisx7f,1662470873336-19-13MAR23

Service—Steering and Brakes

Bleed the Brake System

Perform this service daily or every 10 hours, or as required.

IMPORTANT: Avoid brake system damage. Before bleeding the system, complete the brake fluid reservoirs to the correct level and make sure to not run out of liquid during the operation.

In case of being necessary, bleed the brake system.

The machine contains a mechanical air regulation filter for the pressure control of the brake system.



YE000189—UN—22SEP22

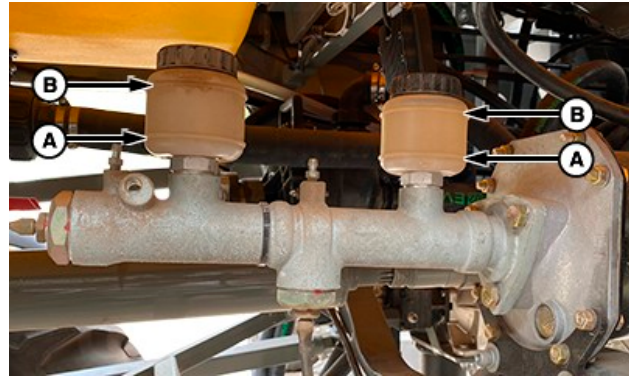
This filter can be bled in a manual way, by rotating counterclockwise the blue knob (A) under the filter assembly. This way, the system is emptied.

The mechanical air regulation filter is also automatically bled. Each time air is lost in circuit, the valve is opened, letting liquid to get out of the system. When the unity is turned on again, this valve releases air for 3—5 seconds and then closes.

jtlisx7f,1662471208972-19-29NOV22

Check Level of the Fluid of Brakes

Perform this service every 50 hours or weekly.



YE010497—UN—03APR23

Regularly check the level of the brake fluid reservoirs. The level must be between the minimum (A) and maximum (B) reference marks.

jtlisx7f,1662471158354-19-03APR23

Control the General Functioning of the Service Brake System

Perform this service every 50 hours or weekly.

Regularly check the general functioning of the service brake system and its efficiency.

jtlisx7f,1662471226319-19-30MAR23

Check Condition of the Brake Assemblies

Perform this service every 250 hours.

Check the brake pads for wear and the brake disks for cracks. Replace them, if needed.

jtlisx7f,1662471177397-19-12DEC22

Check and Adjust Park Brake

Perform this service every 250 hours.

Check Park Brake Operation

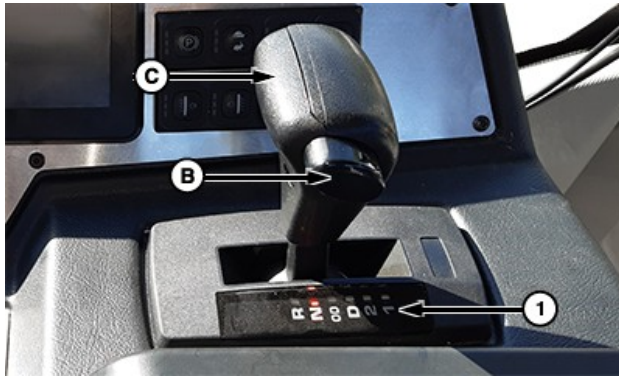
1. Turn on the machine.



YE000112—UN—22SEP22

2. Engage park brake switch (A).

3. Perform the following procedure:



YE000680—UN—30MAR23

- a. **For machines equipped with automatic transmission:** press button (B) and move the gearshift lever (C) to the first gear position (1).

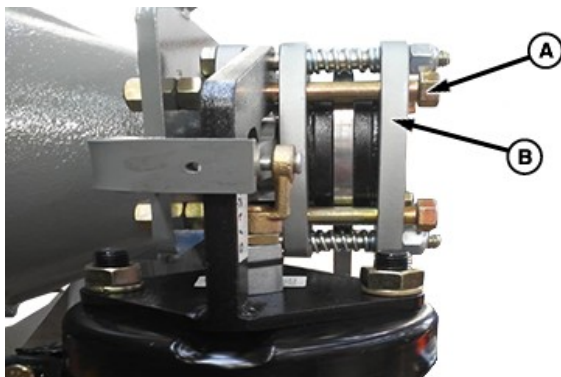


YE000682—UN—30MAR23

- b. **For machines equipped with manual transmission:** engage clutch pedal and move the multi-function lever (D) to the first gear position (1).

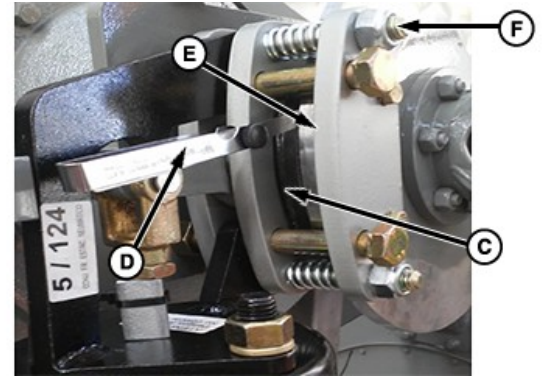
4. Start moving forward the machine. If it moves easily, it is necessary to regulate the park brake.
5. If park brake needs adjustment, see Adjust Park Brake in this procedure.

Adjust Park Brake



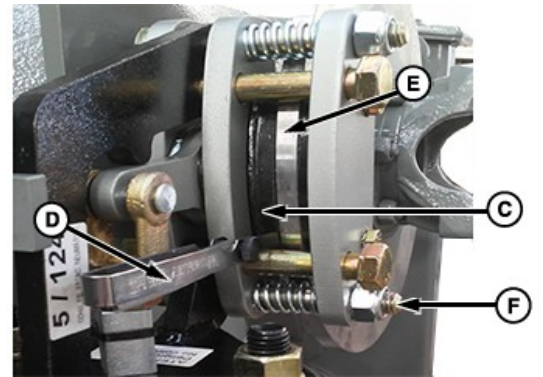
YE010465—UN—03APR23

1. Check that the head of the pins (A) are approximately 5.0 mm (0.200 in) ± 1.0 mm (0.039 in) away from the pivoting plate (B).



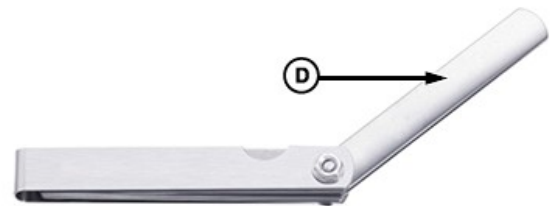
YE010463—UN—29MAR23

Park Brake Assembly—Top View



YE010464—UN—03APR23

Park Brake Assembly—Bottom View



YE010466—UN—30MAR23

Feeler Gauge

2. Position a feeler gauge tool (D) with 0.3 mm (0.012 in) thickness at top of the park brake assembly, between the brake pad (E) and the brake disk (C). Use the image as a reference.
3. Tighten the adjusting nuts (F) until friction is felt when removing the feeler gauge tool (D).
4. Repeat the operation at the bottom of the assembly.
5. If the adjust cannot be made due to not having the feeler gauge tool (D), see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

edw8krp,1679777728721-19-30MAR23

Check the Steering Ends, Ball Joints, and Bushings

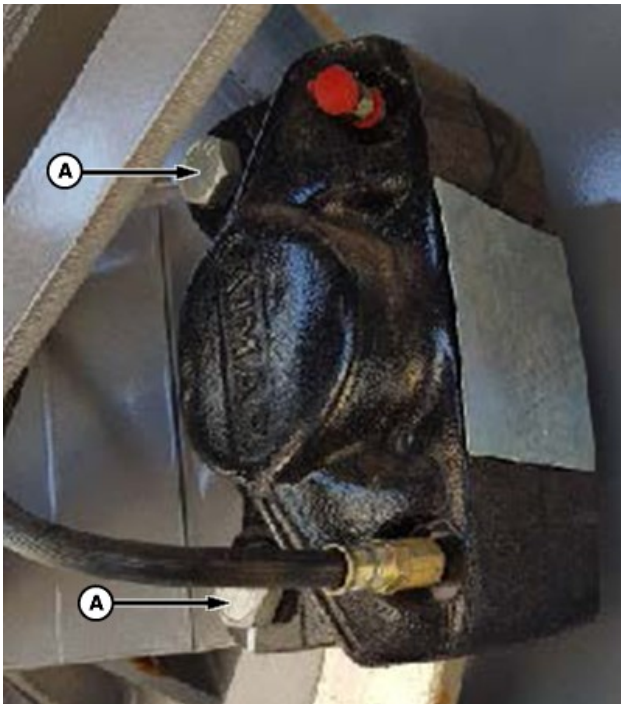
Perform this service every 250 hours.

Adjust these components as necessary and replace them in case of excessive wear.

jtlisx7f,1662471374182-19-30NOV22

Check Torque of Brake Caliper Components

Perform this service every 500 hours or every year.



YE000188—UN—22SEP22

For the correct functioning of the brake system, the brake calipers must be correctly adjusted. Tighten the plugs (A) according to specification:

Specification

Brake Caliper Plugs—Torque. 200 N·m
(148 lb·ft)

jtlisx7f,1662471195420-19-05DEC22

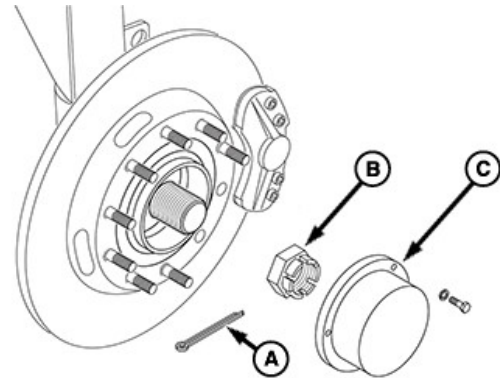
Adjust the Axle Ends

Perform this service at first 100 hours, and then, every 1000 hours.

Check the clearance of the axle ends:

1. Park the machine on a firm, dry, and level ground.
2. Raise the machine front wheel using the hydraulic jack. (See Hydraulic Jack Usage in Service—Wheels and Hardware section.)

3. With the front wheel off the ground, move the wheel and observe its movement.



YE000191—UN—22SEP22

4. If clearance is noticed, remove the cover (C) and the cotter pin (A).
5. Adjust the castle nut (B) to the maximum, and then return one notch of the castle nut (B).
6. Apply grease on the cover (C) reinstall the removed components.

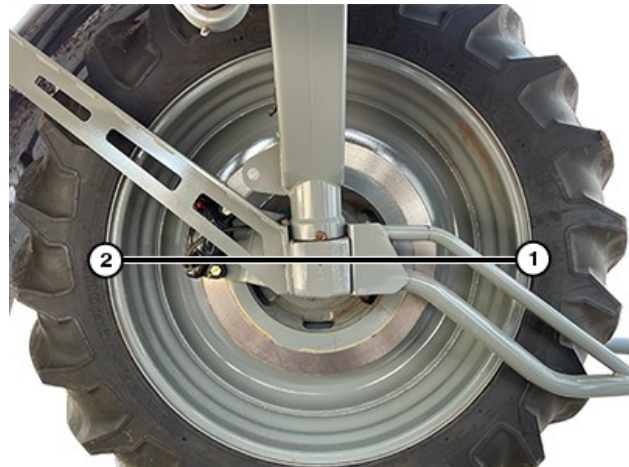
jtlisx7f,1662472210002-19-06DEC22

Adjust Front Axle Toe-In

Perform this service as required.

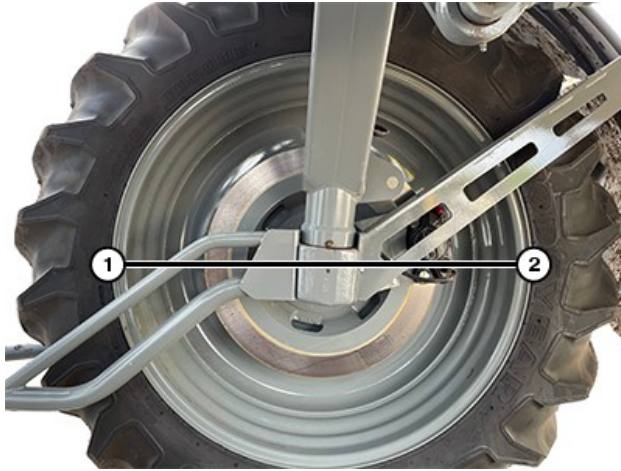
To perform this check, machine must be parked on a firm, dry, and level ground.

NOTE: The toe-in distance must be measured with the steering wheel at central position.



YE000445—UN—19NOV22

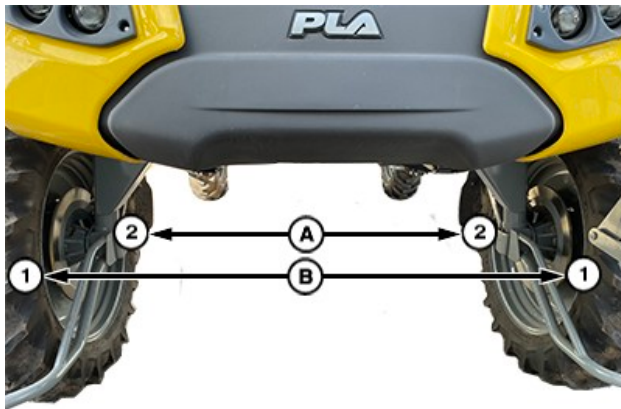
Left-Hand Side Front Wheel



YE000444—UN—19NOV22

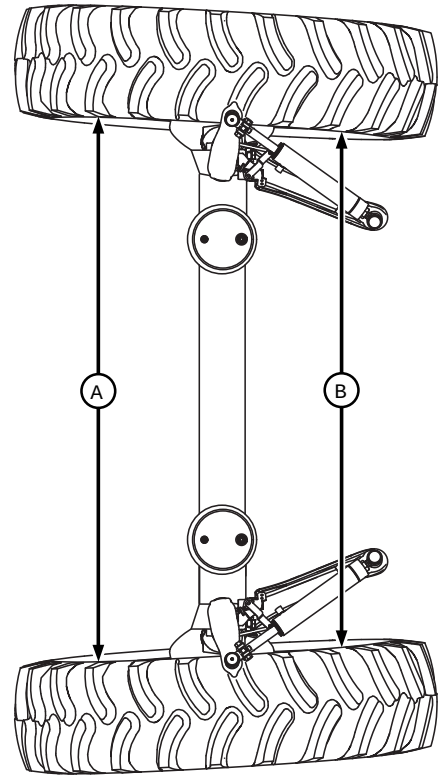
Right-Hand Side Front Wheel

1. Taking as a reference the center of the front wheels, mark the point (1) at front and the point (2) at rear of front wheels. Make marks on the both left- and right-hand side front wheels.



YE000446—UN—19NOV22

2. Measure the distance (A) between the rear points (2) of the front wheels.
3. Measure the distance (B) between the front points (1) of the front wheels.



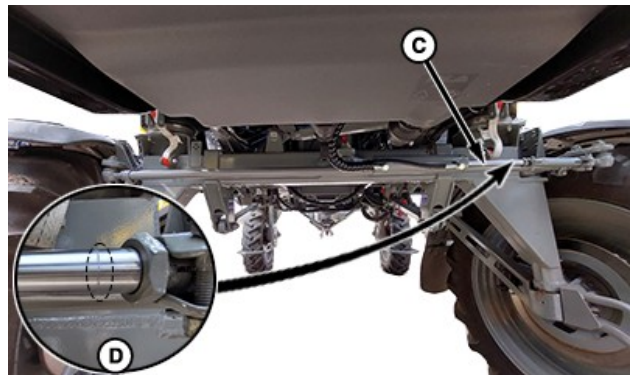
YE000190—UN—22SEP22

4. The distance (B) between the front points (1) must be 10 mm (3/8 in) less than the distance (A) between the rear points (2).

Specification

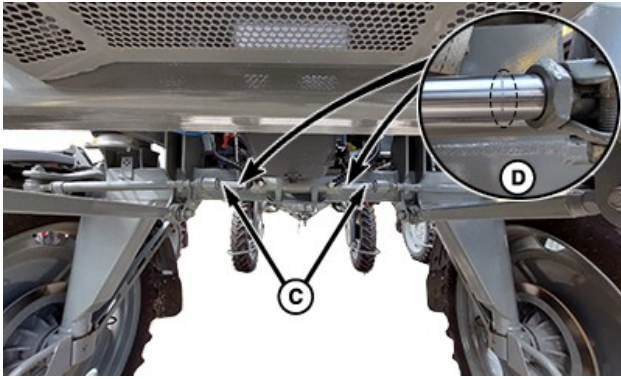
Wheels—Toe-In. 10 mm
(3/8 in)

5. If the toe-in is out of the specification, adjust the left- and right-hand side tires position evenly to reach the correct toe-in:
 - a. Turn on the engine.



YE010487—UN—02APR23

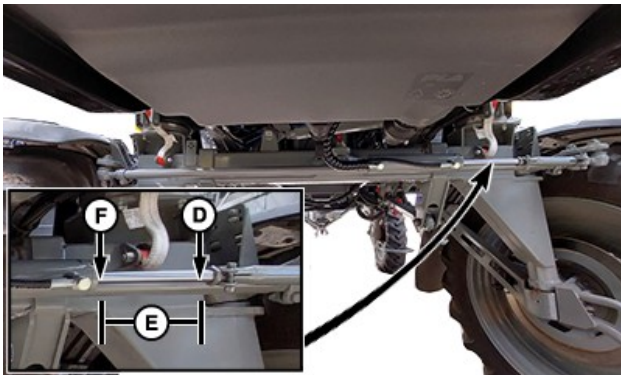
Single Rod Cylinder



YE010488—UN—02APR23

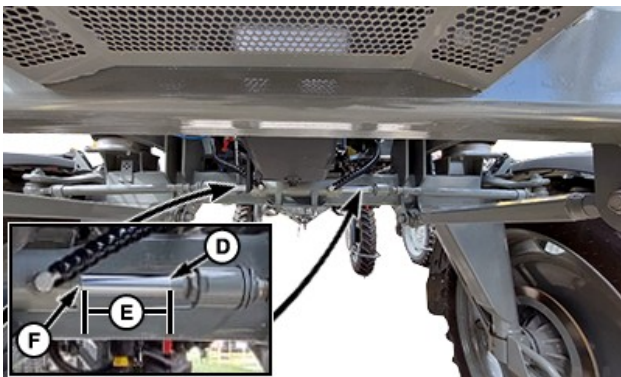
Double Rod Cylinder

- Turn the steering wheel to the left- and to the right-hand side, to load the cylinder (C). Locate the mark (D) created when loading the cylinder.
- Turn off the engine.
- Centralize the front wheels.



YE010489—UN—02APR23

Single Rod Cylinder



YE010490—UN—02APR23

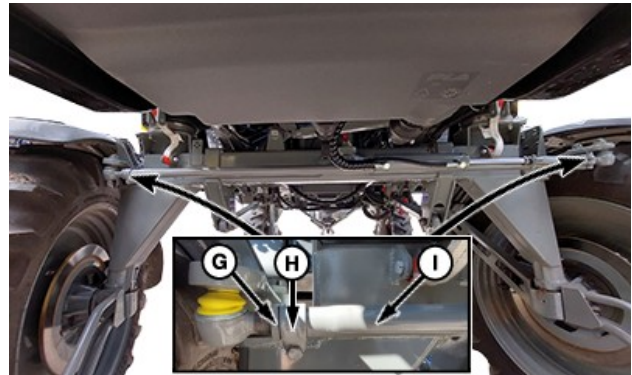
Double Rod Cylinder

- Single rod cylinder: measure the distance (E) between the mark (D) and the visible cylinder end (F). The distance (E) must be 1250 mm (49.21 in).

Specification

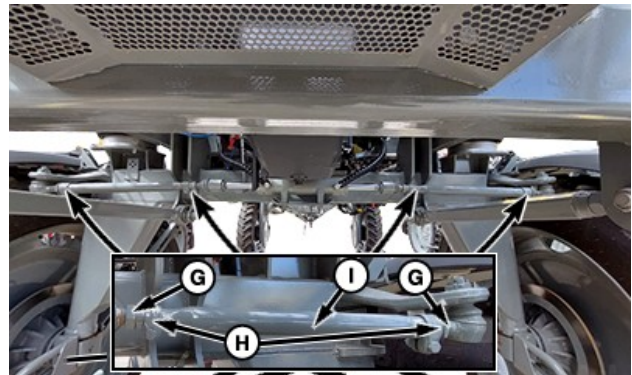
Rod Adjust—Distance. 1250 mm
(49.21 in)

- Double rod cylinder: measure distances (E) between marks (D) and visible cylinder ends (F). Distances (E) must be the same.



YE010491—UN—02APR23

Single Rod Cylinder



YE010492—UN—02APR23

Double Rod Cylinder

- Unscrew the steering end lock nuts (G) on both sides (if applicable).
- Loosen clamps (H).
- Unscrew or screw tie rod (I) as required.
- Measure front axle toe-in.
- If toe-in is within specification, tighten the steering end lock nuts (G) and the clamps (H). If not, repeat the adjust.

jtllsx7f,1662471243917-19-03APR23

Service—Hydraulics

Special Information for Hydraulic Services

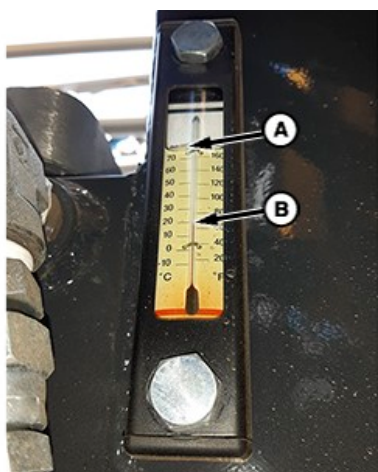
IMPORTANT: Avoid hydraulic system damage:

- Never mix different types or brands of oils.
- Do not add additives.
- Always clean the work local before removing filters or plugs.
- When a hose or terminal is damaged, replace it.
- When installing pumps or hydraulic motors, fill their housings with oil before the installation.
- Always drain the oil at standard working temperature.
- To check the oil levels, the machine must be leveled.
- Observe the correct installation position for the cylinders. Install them with their rod retracted, unless other instruction is given.
- Never run the engine with the hydraulic reservoir empty.
- Do not use cotton waste for the cleaning of the system.
- In case of problems, see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

jtlisx7f,1663101889383-19-09NOV22

Check Hydraulic Oil Level (Self-Propelled Sprayers Only)

Perform this service every 50 hours or weekly.



YE000547—UN—29NOV22

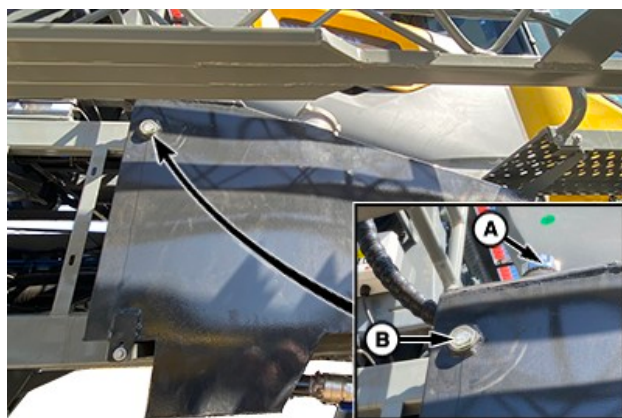
With the spray booms completely opened and lowered, check for the correct hydraulic oil level at the sight glass (A). It must be between minimum and maximum level marks.

It is also possible to check the hydraulic oil temperature at the thermometer (B).

jtlisx7f,1662472305708-19-20MAR23

Check Hydraulic Oil Level (Nutrient Applicators Only)

Perform this service every 50 hours or weekly.



YE000447—UN—21NOV22

With the application booms completely opened and lowered, check for the correct hydraulic oil level at the sight glass (B). The level must be at middle of the sight glass (B).

If necessary, fill the reservoir through the filler neck (A).

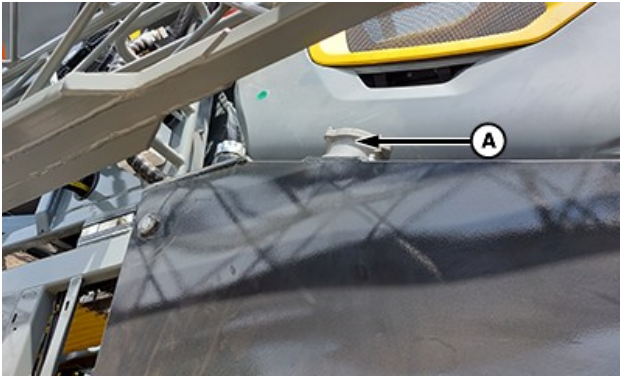
jtlisx7f,1668889251419-19-20MAR23

Change Hydraulic Oil Return Filter (Nutrient Applicators Only)

Perform this service at first 50 hours and then every 400 hours.

CAUTION: Avoid serious injury. Stop the machine engine and make sure that there are no components at a high-temperature before performing this procedure.

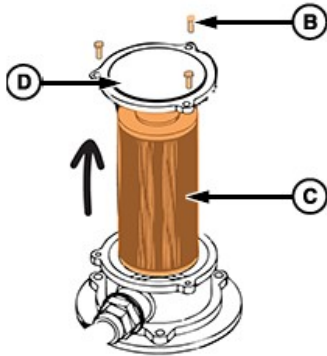
IMPORTANT: Avoid machine damage. Do not use the machine without the filter elements correctly installed.



YE000448—UN—21NOV22

The return filter (A) is on the upper portion of the hydraulic oil reservoir.

To replace the return filter (A) element, perform the following procedure:



YE000377—UN—08NOV22

1. Unscrew the screws of the filter cover (B).
2. Remove the filter cover (D).
3. Remove the filter element (C).
4. Install the new filter element (C).
5. Install the filter cover (D).
6. Screw the screws of the filter cover (B).

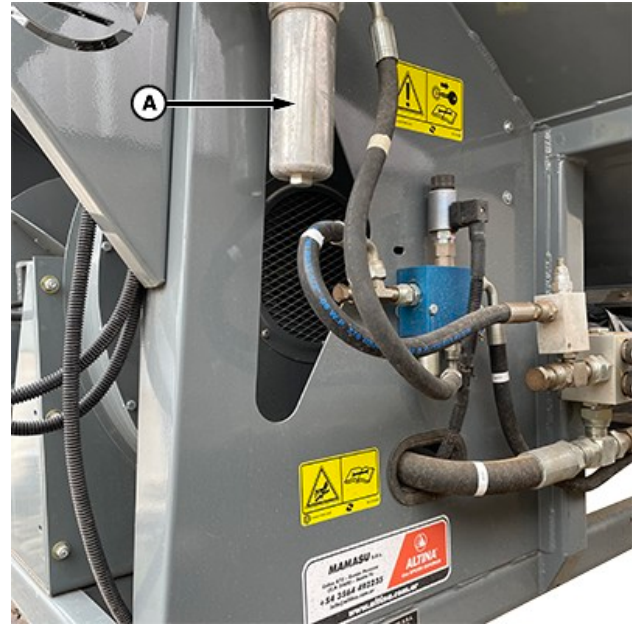
jtlisx7f,1668892272624-19-20MAR23

Change Hydraulic Oil Pressure Filter (Nutrient Applicators Only)

Perform this service at first 50 hours and then every 400 hours.

CAUTION: Avoid serious injury. Stop the machine engine and make sure that are no components at a high-temperature before performing this procedure.

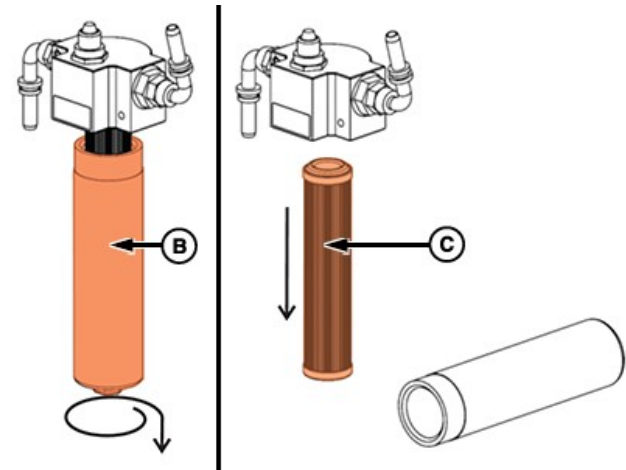
IMPORTANT: Avoid machine damage. Do not use the machine without the filter elements correctly installed.



YE000485—UN—22NOV22

The pressure filter (A) is on the left-hand side of the machine.

To replace the pressure filter (A) element, perform the following procedure:



YE000375—UN—08NOV22

1. Unscrew the filter cover (B).
2. Remove the filter element (C).
3. Install the new filter element (C).
4. Screw the filter cover (B).

jtlisx7f,1668892996618-19-20MAR23

Change Hydraulic Oil Return Filter (Self-Propelled Sprayers Only)

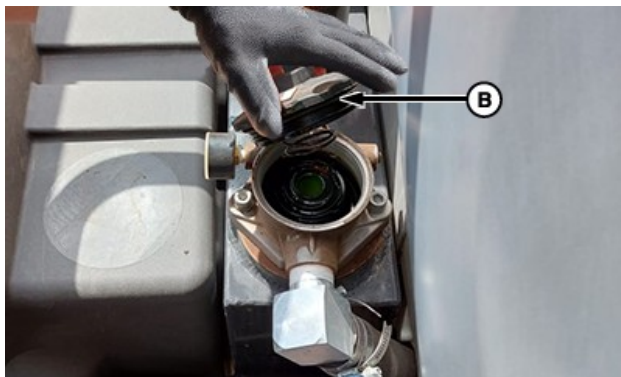
Perform this service every 500 hours or every year, or as required when a restriction is shown at the manometer (A).



YE010438—UN—21MAR23

NOTE: The manometer (A) indicates a possible restriction at the return filter. When the manometer (A) reaches 1.5 bar, the return filter must be replaced regardless the service hours.

1. Warm the system to working temperature.
2. Park the machine on a firm, dry, and level ground.



YE010439—UN—21MAR23

3. Unscrew the black cap (B) and pull it up.



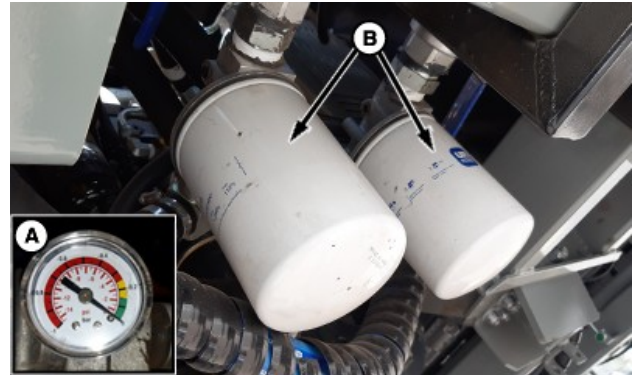
YE010440—UN—03APR23

4. Remove the return filter (C) and replace with a new one.
5. Screw in the black cap (B).

edw8krp,1678906752580-19-27MAR23

Change Hydraulic Oil Suction Filters (Self-Propelled Sprayers Only)

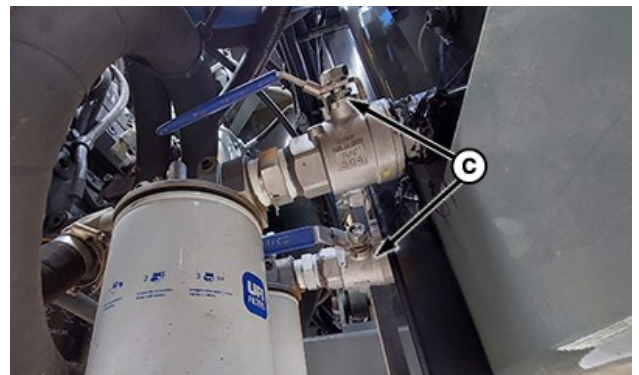
Perform this service every 500 hours or every year, or as required when a restriction is shown at vacuumeters (A).



YE010441—UN—21MAR23

NOTE: If the vacuumeters (A) indicators enter in the yellow zone, filters (B) must be replaced regardless the service hours.

1. Warm the system to working temperature.
2. Park the machine on a firm, dry, and level ground.



YE010437—UN—21MAR23

3. Close the spherical valves (C).
4. Position a suitable container under the suction filters and allow oil to drain.

IMPORTANT: Before changing the suction filters (B), take care to fill them with oil to prevent air from entering.

5. Unscrew the suction filters (B) from their base, enough to drain the oil.
6. Replace the suction filters (B).
7. Open the spherical valves (C).

edw8krp,1679334153173-19-27MAR23

Change Hydraulic Oil Suction Filter (Nutrient Applicators Only)

Replace the suction filter every 500 hours or every year, or as required when a restriction is shown at the vacuumeter (B).

CAUTION: Avoid serious injury. Stop the machine engine and make sure that are no components at a high-temperature before performing this procedure.

IMPORTANT: Avoid machine damage. Do not use the machine without the filter elements correctly installed.

NOTE: If the vacuumeter (B) indicator enters in the yellow zone, the filter (C) must be replaced, regardless the service hours.

1. Warm the system to working temperature.
2. Park the machine on a firm, dry, and level ground.



YE010454—UN—23MAR23

3. Close the spherical valves (A).
4. Position a suitable container under the suction filter and allow oil to drain.

IMPORTANT: Before changing the suction filter (C), take care to fill it with oil to prevent air from entering.



YE010455—UN—23MAR23

5. Unscrew the suction filter (C) from its base, enough to drain the oil.
6. Replace the suction filter (C).
7. Open the spherical valves (A).

jtlisx7f,1668889254332-19-30MAR23

Check the Hydraulic System Pressure Perform this service every 1000 hours.

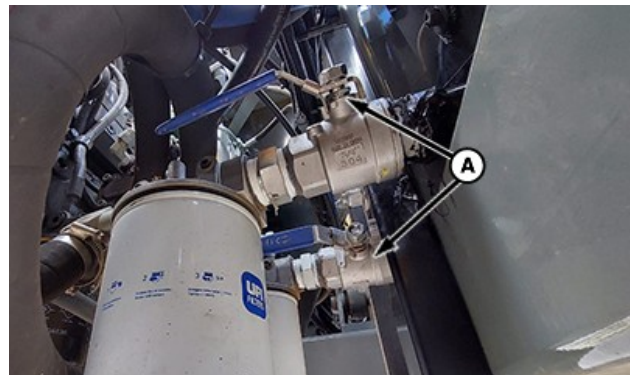
To check the pressure of the machine hydraulic system, see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer.

jtlisx7f,1668798935402-19-12DEC22

Change Hydraulic Oil (Self-Propelled Sprayers Only)

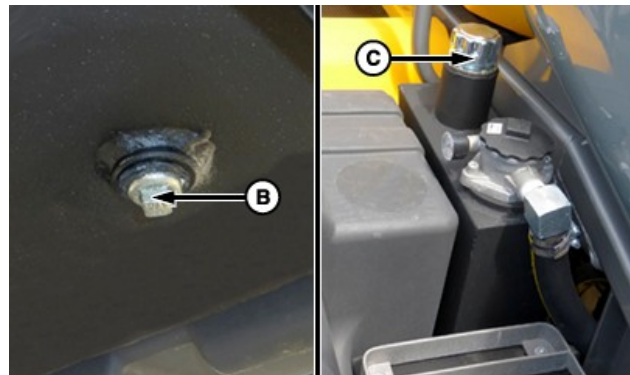
Change the oil every 1000 hours.

1. Warm the system to working temperature.
2. Park the machine on a firm, dry, and level ground.



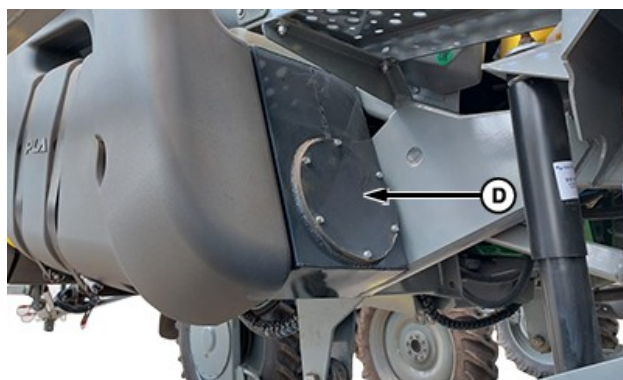
YE010443—UN—21MAR23

3. Close the spherical valves (A).



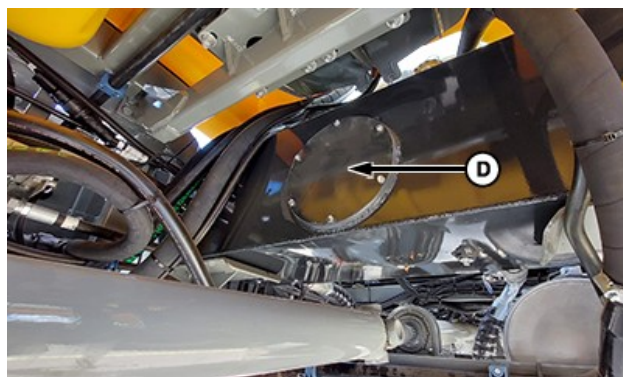
YE010444—UN—21MAR23

4. Position a suitable container under the drain plug (B).
5. Remove the drain plug (B) and drain the oil.



YE010436—UN—21MAR23

Machines Equipped with Central Engine



YE010435—UN—21MAR23

Machines Equipped with Front Engine

6. Remove the screws of the oil reservoir cover cap (D).
7. Remove the oil reservoir cover (D) and clean the inside with a cloth or magnet.
8. Replace the hydraulic oil filters. (See Change Hydraulic Suction Oil Filters (Self-Propelled Sprayers Only) and Change Hydraulic Return Oil Filter (Self-Propelled Sprayers Only), in Service—Hydraulics section.)
9. Reinstall the drain plug (B).
10. Fill the hydraulic oil reservoir through the filler neck (D) with the correct oil, up to middle of the sight glass (C). (See Fluid Specification by System in Maintenance and Service Intervals section.)

NOTE: See the oil capacity in Capacities procedure at Specifications of all the Self-Propelled Sprayers.

11. Open the spherical valves (C).

jtlisx7f,1662472331798-19-27MAR23

Change Hydraulic Oil (Nutrient Applicators Only)

Change the oil every 1000 hours.

CAUTION: Avoid serious injury. Stop the machine engine and make sure that there are no components at a high-temperature before performing this procedure.

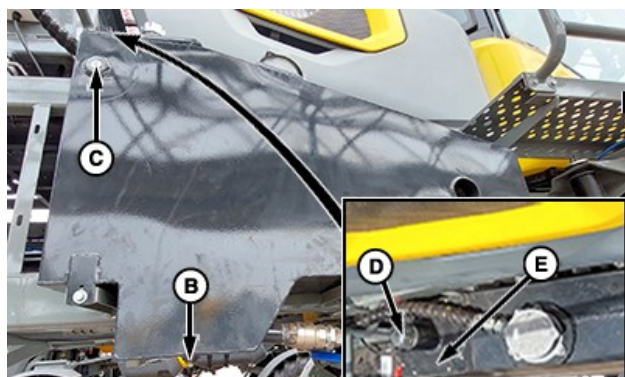
IMPORTANT: Avoid machine damage. Do not use the machine without the filter elements correctly installed.

1. Warm the system to working temperature.
2. Park the machine on a firm, dry, and level ground.



YE010454—UN—23MAR23

3. Close the spherical valves (A).



YE010456—UN—23MAR23

4. Position a suitable container under the drain plug (B).
5. Remove the drain plug (B) and drain the oil.
6. Remove the screws of the oil reservoir cover cap (E).
7. Remove the oil reservoir cover (E) and clean the inside with a cloth or magnet.
8. Replace the hydraulic oil filters. (See Change Hydraulic Suction Oil Filters (Self-Propelled Sprayers Only) and Change Hydraulic Return Oil Filter (Self-Propelled Sprayers Only), in Service—Hydraulics section.)
9. Reinstall the drain plug (B).
10. Fill the hydraulic oil reservoir through the filler neck (D) with the correct oil, up to middle of the sight

glass (C). (See Fluid Specification by System in Maintenance and Service Intervals section.)

NOTE: See the oil capacity in Capacities procedure at Specifications—MAF 5000 Nutrient Applicators.

11. Open the spherical valves (A).

edw8krp,1678994467618-19-27MAR23

Service—Wheels and Hardware

Check Tire Inflation Pressures

Perform this service every 50 hours or weekly.

The proper tire pressure is essential for the life of the tires and the correct functioning of the machine.

Regularly check the tire pressures. (See Tire Inflation Pressures in Specifications—General Information section.)

jtlsx7f,1662472479473-19-05DEC22

Tighten Wheel Nuts

Perform this service every 50 hours or weekly.

IMPORTANT: If the correct wheel nut torque is not maintained, damage to the final drive and wheel occurs. Tighten the wheel nuts in a crosswise pattern to specification.



YE000186—UN—22SEP22

Check the torque specification of the wheel nuts:

For R46 wheels, tighten the nuts to the following specification:

Specification

Wheel Nuts for R46
Wheels—Torque (Wet with Oil). 550 N·m
(406 lb·ft)

For R36 and R38 wheels, tighten the nuts to the following specification:

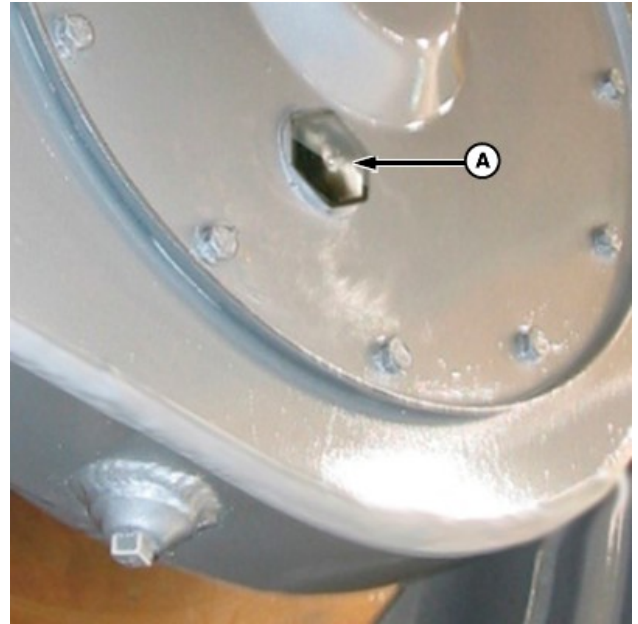
Specification

Wheel Conical Nuts for R36 and
R38 Wheels—Torque (Wet with
Oil). 200 N·m
(148 lb·ft)

jtlsx7f,1662472442075-19-06DEC22

Check the Oil Level of the Rear Axle Knees

Perform this service every 250 hours.



YE000193—UN—22SEP22

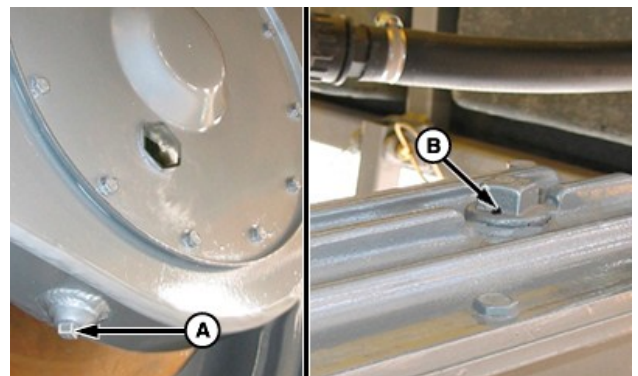
Check the oil level of the rear axle knees through the sight glass (A). The oil level must be at middle of the sight glass (A).

If necessary, refill it with the correct oil. (See Fluid Specification by System in Maintenance and Service Intervals section.)

jtlsx7f,1662472580294-19-30NOV22

Change the Oil of the Rear Axle Knees

Perform this service every 1000 hours.



YE000194—UN—22SEP22

1. Drain the oil of the rear axle knees:
 - a. Remove the filling plug (B).
 - b. Check that the breather is free of obstructions.
 - c. Remove drain plug (A) and drain the oil into a suitable container.
2. Clean the reservoir.
3. Reinstall the drain plug (A).
4. Fill the rear axle knees with the correct oil. (See Fluid Specification by System in Maintenance and Service Intervals section.)

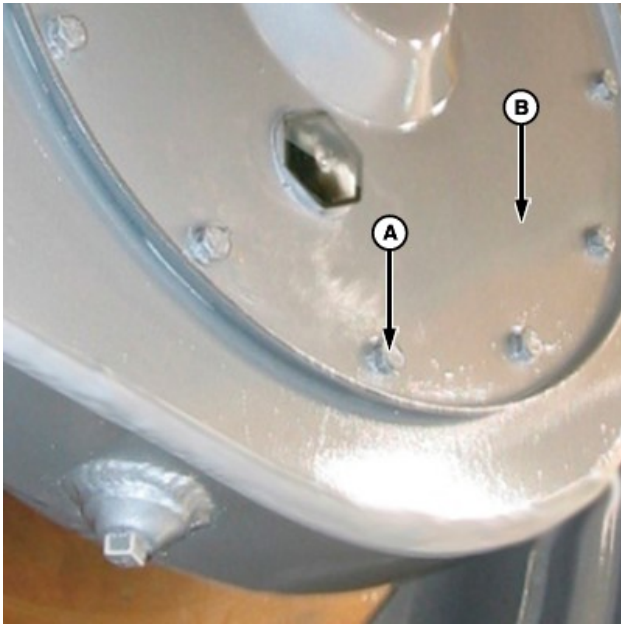
5. Reinstall the filling plug (B).

jtlisx7f,1662472602933-19-06DEC22

Adjust the Chain Tension and Upper and Lower Shafts

Perform this service at first 250 hours, at first 500 hours, and then, every 1000 hours.

Check the chain free play on rear axle knees and the adjust of the upper and lower shafts.



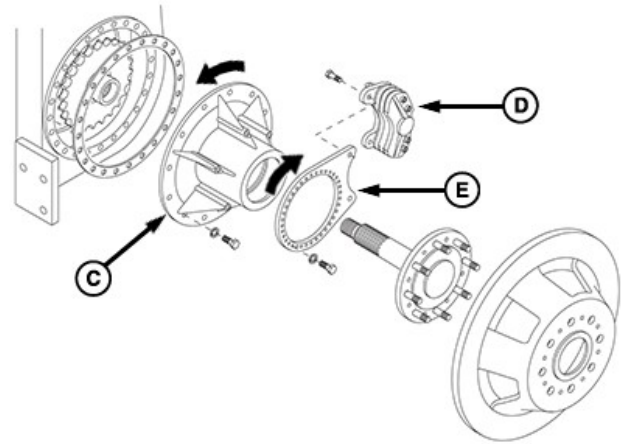
YE000197—UN—22SEP22

To check the tension of the chains, remove the screws (A) and the lower cover (B) of the rear axle knees. Rotate the control rod of the differential to make sure that the free play is not more than 1/4 of a turn.

Chain Tension Adjust

If the chain play is more than 1/4 of a turn, proceed to the chain tension adjust:

1. Park the machine on a firm, dry, and level ground.
2. To avoid any machine movement, install wheel chocks on wheels that are not being worked on.
3. Raise the desired rear axle knee using the hydraulic jack. (See Hydraulic Jack Usage in Service—Wheels and Hardware section.)
4. Remove the wheel and the crop divider.



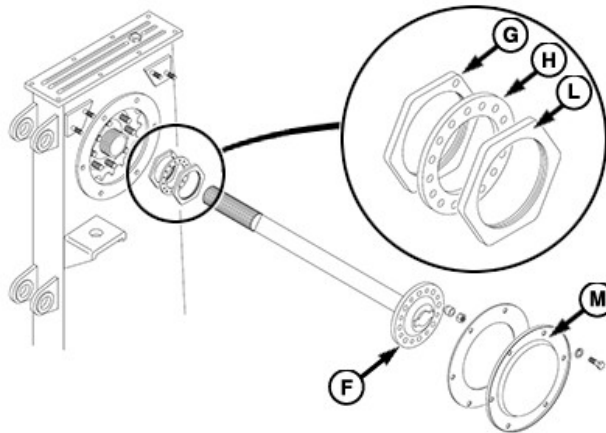
YE000195—UN—22SEP22

5. Remove the brake caliper (D) by removing the two plugs that keeps the caliper support (E) attached to the brake caliper (D).

NOTE: The shield is removed for clarity purposes.

6. Remove the screws of the wheel support (C).
7. Rotate the wheel support (C) towards the machine forward movement until the bore taken as a reference meets the next bore at rear axle knee structure.
8. If the chain is overtensioned, it must be returned to the initial position.
9. Check the clearance of the lower shaft by moving it in position. In case of excessive play is found on lower shaft:
 - a. Remove the inspection cover on the internal side of the rear axle knee.
 - b. Remove the cotter pin.
 - c. Adjust the castle nut at maximum and return one notch of the castle nut, installing the cotter pin on this position.
 - d. Reinstall the inspection cover.
10. Once the the wheel support (C) is adjusted and the screws reinstalled, reinstall the caliper support (E) and the brake caliper (D), ensuring the assembly is on its original position.
11. Proceed to the upper shaft adjust.

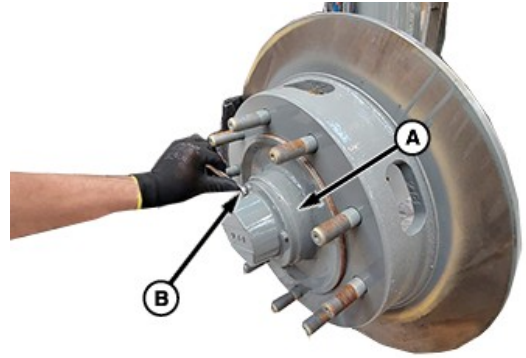
Adjust the Upper Shaft



YE000196—UN—22SEP22

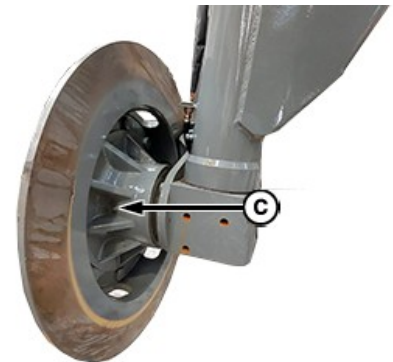
1. Remove the upper cover (M).
2. Move the upper shaft in position. In case of excessive play being noticed, proceed to the adjustment.
3. Remove the screws that hold the shaft (F) in place and remove the shaft (F).
4. Loosen the nut (L), move the support (H), and adjust the nut (G) to reach the correct play. Once the correct play is reached, the nut (L) must be tightened.
5. Reinstall the shaft (F). Use a hammer to let the shaft (F) at correct installation position.
6. Reinstall the removed screws of the shaft (F).
7. Reinstall the upper cover (M).
8. Reinstall the wheel and any other removed component.
9. Lower the machine, remove the hydraulic jack, and let it on storage position.

jtlsx7f,1662472630848-19-06DEC22



YE010472—UN—03APR23

5. Remove the cover (A) from the assembly by removing the screws (B).



YE010474—UN—03APR23

6. Lubricate grease fitting (C).
7. Clean the cover (A) and reinstall it.
8. Reinstall the wheel.
9. Remove the hydraulic jack.

edw8krp,1680036031777-19-30MAR23

Check Axle End Hub

Perform this service every 500 hours or every year, or as required.

1. Turn on the engine.
2. Position machine on a firm, dry, and level ground.
3. Install the hydraulic jack. (See Hydraulic Jack Usage in Service—Wheels and Hardware section.)

CAUTION: Avoid serious injury or death. Position a suitable support under the wheel before removing it.

4. Remove wheel.

Rotate the Tires

Perform this service every 1000 hours.

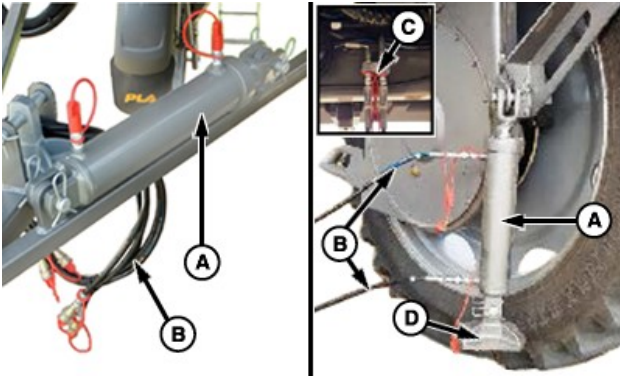
To ensure proper and equal wear on all tires, rotate them regularly at the indicated service period.

jtlsx7f,1662472468279-19-01DEC22

Hydraulic Jack Usage

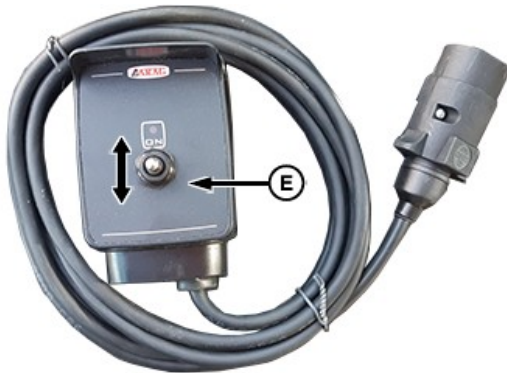
Perform this service as required.

1. Fold the spray/application booms. (See Fold the Spray/Application Boom (for Transport) in Spray/Application Boom section.)



YE000184—UN—22SEP22

2. Remove the hydraulic jack (A) from its storage position.
3. Install the base (D) on the hydraulic jack (A) as shown.
4. Position the hydraulic jack (A) on the wheel that needs to be raised for service. The hydraulic jack (A) upper ball joint must be installed on the axle knee using pin and cotter pins, as shown in the image.
5. Connect the provided hydraulic hoses (B) on the hydraulic jack (A) and on the quick-couplers (C) of the machine left-hand side.



YE000183—UN—29NOV22



YE000185—UN—22SEP22

6. Connect the remote control (E) of the hydraulic jack (A) on the connector (F) at the spray panel.
7. To raise the wheel, use the switch of the remote control (E).

8. After usage:

- a. Lower the wheel.
- b. Disconnect the remote control (E) from the connector (F).
- c. Disconnect the hydraulic hoses (B) and put them back to their storage position.
- d. Disassemble the base (D).
- e. Remove the hydraulic jack (A) and put it back to its storage position.

jtlsx7f,1662472429151-19-05DEC22

Replace Tires

Perform this service as required.

In case of being necessary to replace a machine tire, perform the procedure observing the following safety instructions:

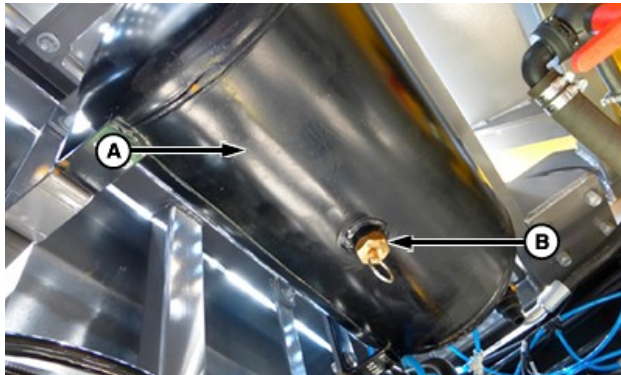
1. Park the machine on a firm, dry, and level ground.
2. To avoid any machine movement, install wheel chocks.
3. Raise the machine using the hydraulic jack. (See Hydraulic Jack Usage in Service—Wheels and Hardware section.)
4. Replace the desired machine tire.

jtlsx7f,1662472454711-19-08SEP22

Service—Suspension System

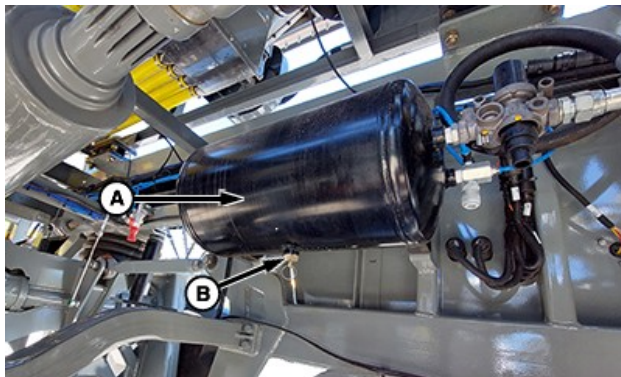
Drain Water from the Pneumatic System

Perform this service daily or every 10 hours, before starting the work.



YE000199—UN—22SEP22

Self-Propelled Sprayers



YE000456—UN—22NOV22

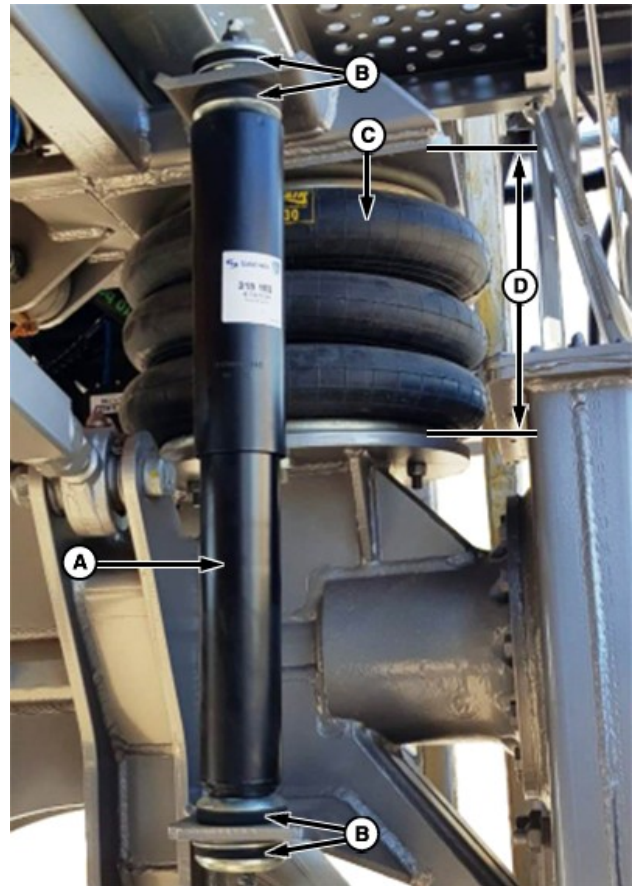
Nutrient Applicators

Drain accumulated water from the air tank (A). To do so, press the valve (B) located under the air tank (A).

jtlisx7f,1662472806728-19-05DEC22

Check and Adjust the Suspension Assemblies

Perform this service every 1000 hours.



YE000198—UN—22SEP22

NOTE: The distance (D) is measured in relation to the bases of the air bag (C).

It is necessary to regularly check for air losts at the suspension system, keeping the machine work height correctly adjusted.

To align the machine to the correct work height, the distance (D) must be at specification:

Specification

Air Bag Height—Distance. 240 mm
(9.45 in)

Also check the conditions of the shock absorbers (A) and rubber bushings (B) and make sure they are functioning well.

jtlisx7f,1662472789631-19-06DEC22

Check Pneumatic Lines

Perform this service every 250 hours.

1. Turn on the machine.
2. Set the engine speed to 1600 rpm.
3. Wait until the pneumatic system is loaded with air.

NOTE: The system is loaded when the indicators show that the tank is full.

4. Park the machine on a firm, dry, and level terrain.
5. Shut off the machine engine.
6. Remove the ignition key.
7. Go under the machine and check for sounds of air loosing. Start from the outlet of the tank and pass through all the connections.
8. If any noise is found, check for air leaks with a solution of water and detergent.
9. With a sponge, wet the connections and check for bubbles. In case of bubbles being noticed, there is an air leak.
10. In the place where the air leak is found, replace the corresponding components.

jtlisx7f,1668798319738-19-21NOV22

Service—Solution System

Clean the Machine

Perform this service daily or every 10 hours.

See Clean the Sprayer in Machine Storage section for the cleaning instructions.

jtlisx7f,1662472956306-19-29NOV22

Clean the Solution System Filters

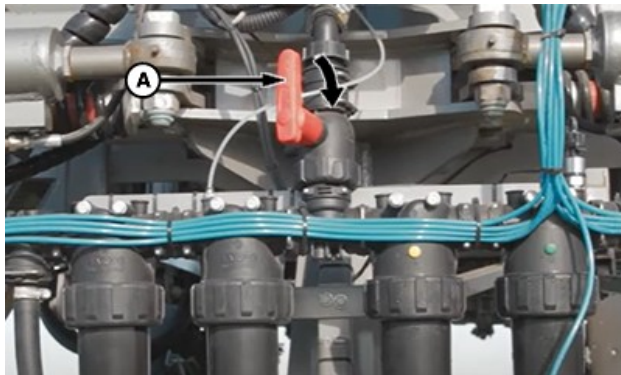
Perform this service daily or every 10 hours or as required according to the chemical product being used.

CAUTION: Exposure to chemicals, including pesticides, can cause injury or death. When working with chemicals, always use the recommended safety equipment. See Safety Equipment in Solution System section.

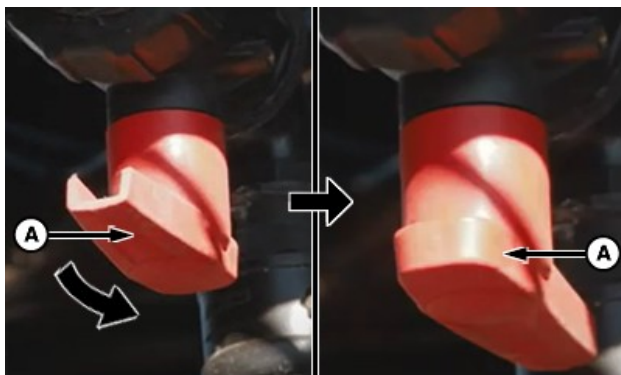
NOTE: The cleaning periodicity varies according to the chemical product being used.

To drain and clean the solution system filters, perform the following procedure:

1. Wear the recommended safety equipment. (See Safety Equipment in Solution System section.)
2. Turn off the solution pump and unload all the spray lines activating the spray system master button. Select and perform the spray section test with the machine stopped.



YE000243—UN—10OCT22



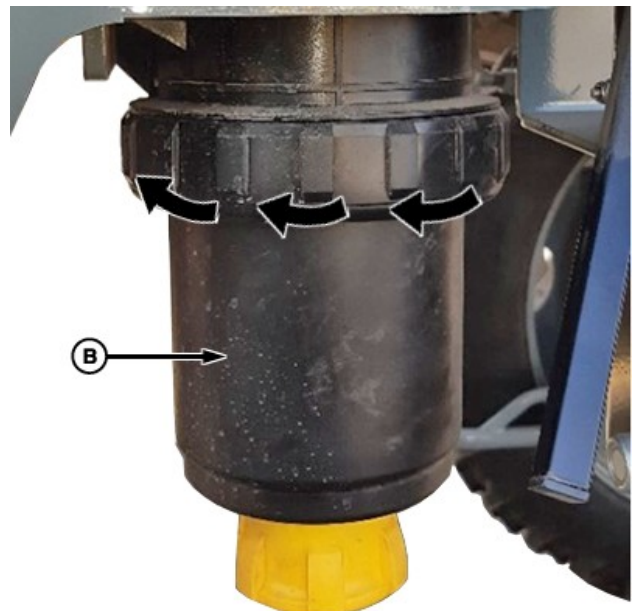
YE000242—UN—10OCT22

3. Close all the solution system valves (A).

CAUTION: Spray system contains hazardous material that can cause serious injury or death to you or others. Drain solution in an area where people, animals, vegetation, and water supply cannot be contaminated.



YE000244—UN—10OCT22

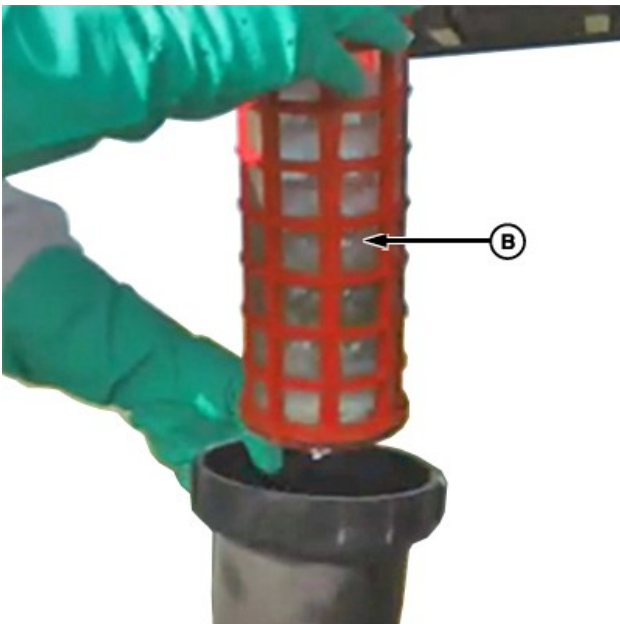


YE000245—UN—10OCT22



YE000246—UN—10OCT22

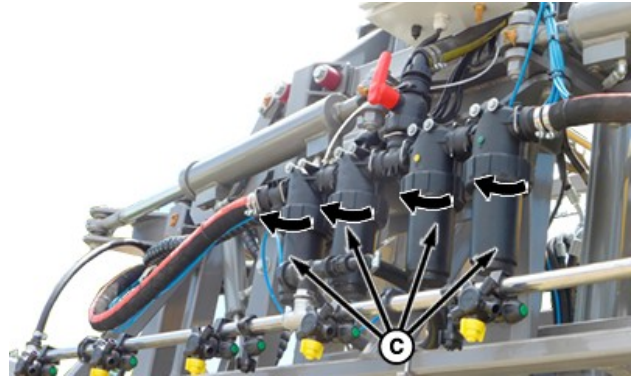
4. Remove the cover of the primary filter (B), draining any remaining liquid in the assembly.
5. Check that the primary filter (B) (50 micron mesh) is clean and free of obstructions. Clean it with clean water, if needed.



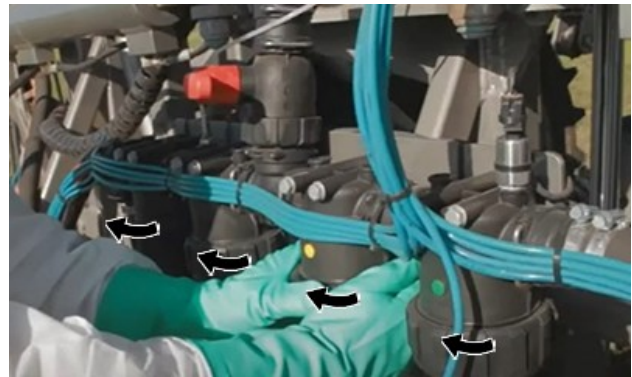
YE000247—UN—10OCT22

6. Reinstall the primary filter (B).

CAUTION: Spray system contains hazardous material that can cause serious injury or death to you or others. Drain solution in an area where people, animals, vegetation, and water supply cannot be contaminated.



YE000248—UN—10OCT22



YE000249—UN—10OCT22

7. Remove the covers of all the solution line filters (C), draining any remaining liquid in the assemblies.
8. Clean filters by emerging them in clean water and drying the filters before reinstalling them in the machine.

IMPORTANT: Avoid system malfunction. Make sure to not invert the colors of the filters, considering that the filtration capacity goes from thickest to thinnest. The yellow filter has an 80-micron mesh and the green one has a 100-mesh filter.

9. Reinstall the solution line filters (C) paying attention to the color of the filters installed.
10. Open all the solution system valves (A) previously closed.

jtlsx7f,1662472984512-19-05OCT22

Control the Jet of Nozzles

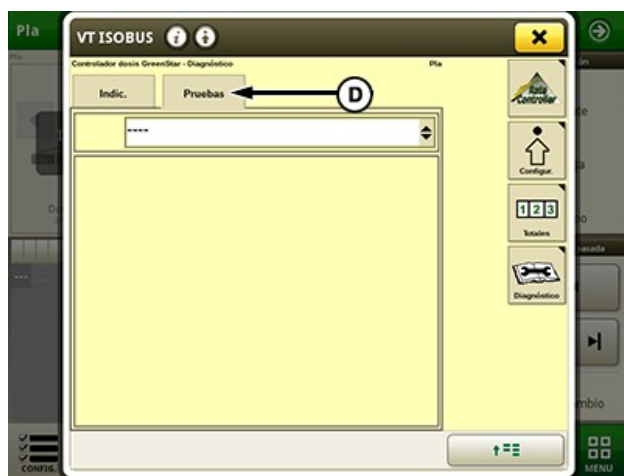
Perform this service as required.

1. Turn on the machine engine.
2. Fill the solution tank with clean water up to middle capacity.
3. Clean the five solution line filters.
4. Set the engine speed to 1600 rpm.



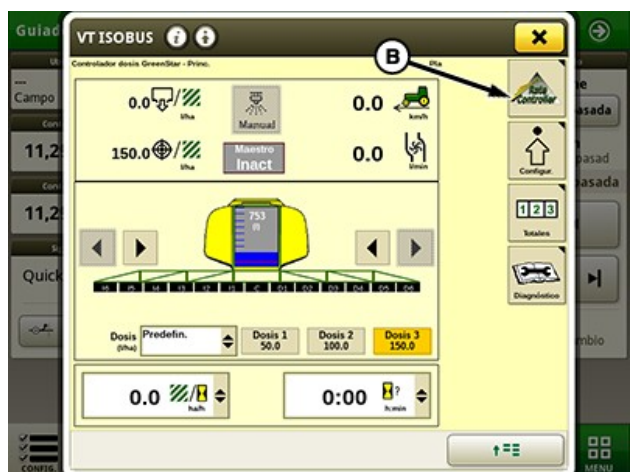
YE010267—UN—30JAN23

5. Press the ISOBUS softkey (A) in machine display.



YE010416—UN—14MAR23

8. Press Tests (D).



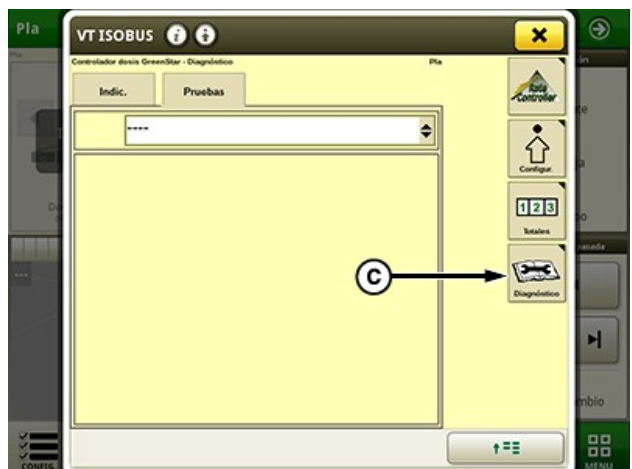
YE010268—UN—30JAN23

6. Press Rate Controller (B).



YE010417—UN—14MAR23

9. Press Test of Sections (E).



YE010415—UN—14MAR23

7. Press Diagnostic (C).



YE010460—UN—28MAR23

Machines Equipped with Eaton Manual Transmission



YE010461—UN—28MAR23

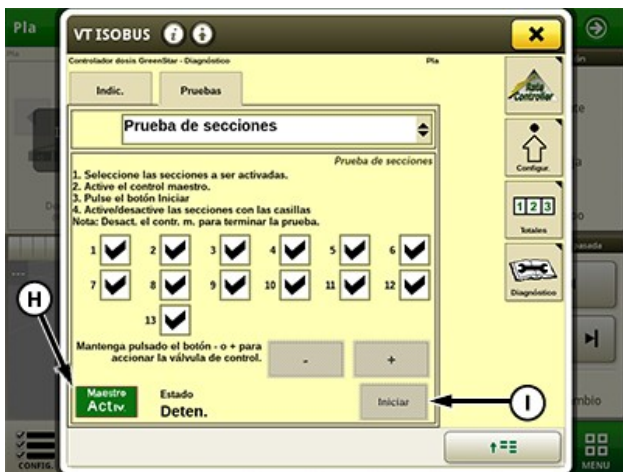
Machines Equipped with Allison Automatic Transmission

10. Turn on the solution pump switch (F).



YE000464—UN—22NOV22

11. Press the spray system master button (G).



YE010271—UN—30JAN23

NOTE: An indication (H) that the spray system master button (G) is on appears on display.

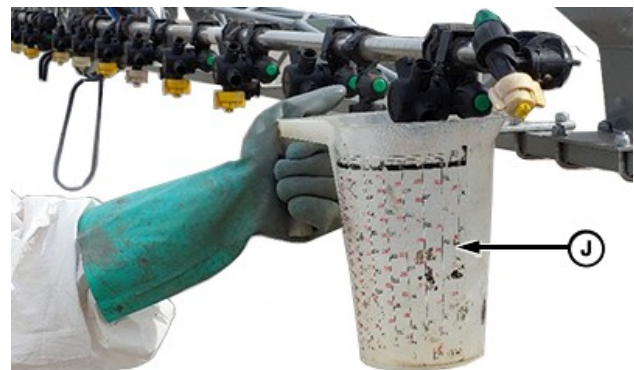
Press Start (I).



YE000481—UN—22NOV22

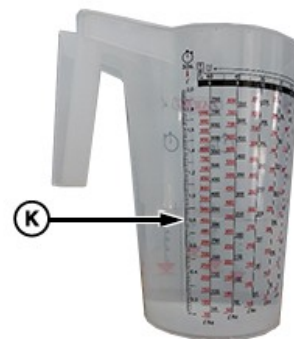
13. With plus (+) and minus (-) buttons, set the pressure to 3 bar on the manometer.

14. Get down the machine.



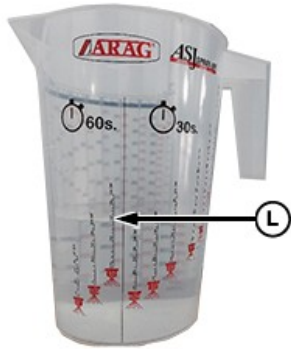
YE010462—UN—28MAR23

15. Position the graduated container (J) provided with the machine under one of the spray nozzles. Let the graduated container (J) to be filled for 1 minute.



YE000483—UN—22NOV22

16. If the nozzle is in good conditions, the measure of 0.8 (K) must be reached at the indicated scale.



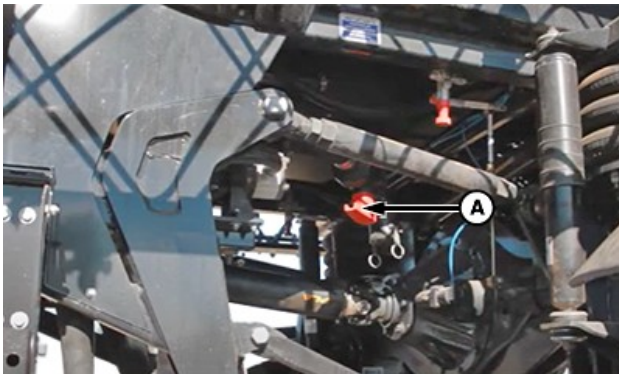
YE000484—UN—22NOV22

17. If the nozzle is in good conditions, the 3 bar mark (L) must be reached for a 02 nozzle (yellow), like the one used in this example.
18. Repeat the measuring with one nozzle per section.
19. If a nozzle is 10% more or less out of the average of the values measured, it must be replaced. (Replace all the nozzles from the section.)
20. Get up the machine and enter the cab.
21. Turn off the solution pump.
22. Shut off the engine.

edw8krp,1678810949014-19-27MAR23

Clean the Flowmeter

Perform this service as required according to the chemical product being used.



YE000261—UN—10OCT22

1. Close the main lever (A) under the solution tank.



YE000262—UN—10OCT22

2. Direct the flow from the solution pump to the eductor using the lever (B).
3. To avoid returns, close the agitation using the agitation control (C) and close the return to the general shutoff valve.

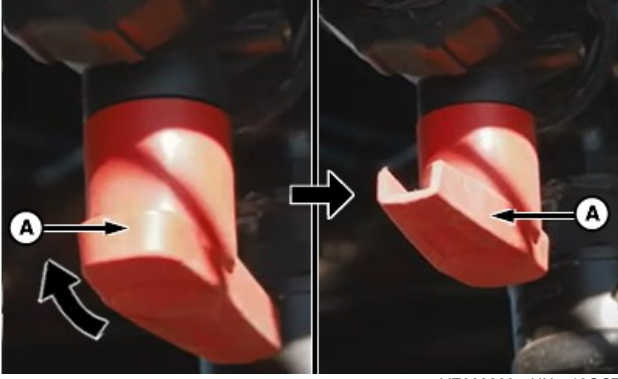


YE000265—UN—10OCT22

4. Remove the turbine of the flowmeter (D).
5. Clean the turbine with clean water.
6. Reinstall the turbine in the flowmeter (D).



YE000264—UN—10OCT22



YE000263—UN—10OCT22

7. Position all controls and levers to spray position.

jtlx7f,1665405891600-19-10OCT22

Service—Nutrient Application System

General Service Information

⚠ CAUTION: Avoid serious injury and death. Any service described in this section must be performed with the machine stopped and the engine OFF.

IMPORTANT: Avoid machine damage. Before performing any service on the machine, make sure to have all the necessary tools and parts.

jtlsx7f,1667829127730-19-08NOV22

Clean the Machine

Perform this service daily or every 10 hours.

IMPORTANT: Avoid machine damage. The cleaning of the nutrient applicator must be performed daily or every 10 hours with pressurized air only.

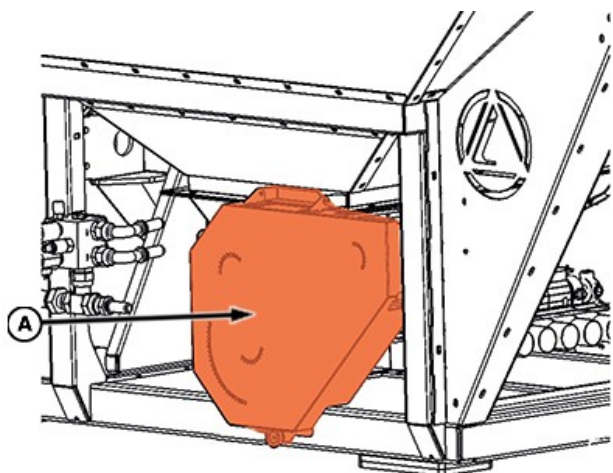
The cleaning with water must be performed only every 3 days. **DO NOT** clean the nutrient applicator with water daily.

See Clean the Nutrient Applicator in Machine Storage section for the cleaning instructions.

jtlsx7f,1669727508981-19-05DEC22

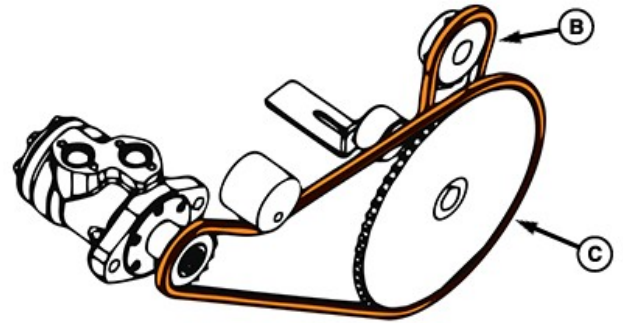
Lubricate the Chains

Perform this service daily or every 10 hours.



YE000368—UN—08NOV22

1. Open the side shield (A).
2. Completely lubricate the chains of the transmission:



YE000369—UN—08NOV22

- Remover Chain (B)
- Dosifier Chain (C)

jtlsx7f,1667830668389-19-08NOV22

Lubricate the Shafts

Perform this service every 50 hours or weekly.

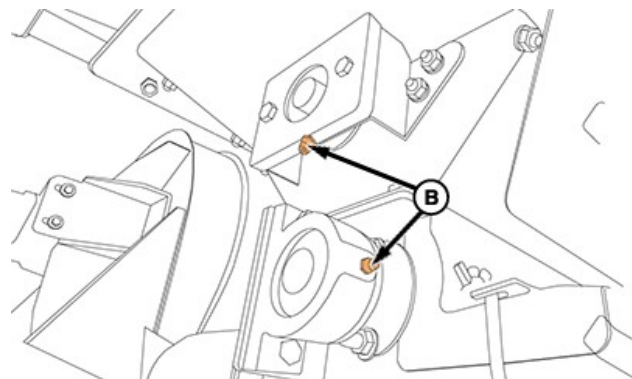
NOTE: For the grease specification, see Fluid Specification by System in Maintenance and Service Intervals section.



YE000370—UN—08NOV22

Grease Fittings—Shaft of the Turbines

Lubricate the shaft of the turbines through the two grease fittings (A).



YE000371—UN—08NOV22

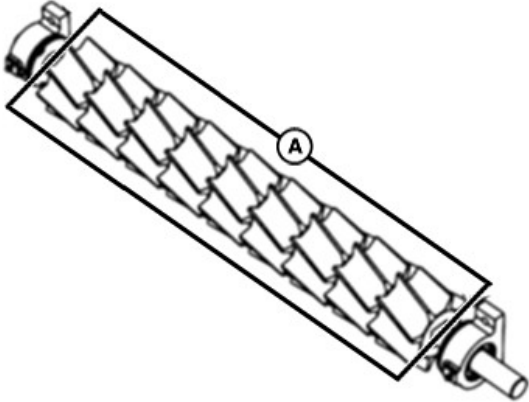
Grease Fittings—Shafts of Dosifiers and Removers

Lubricate the shafts of the dosifiers and removers through the eight grease fittings (B). Two at each side.

jtlisx7f,1667830746400-19-05DEC22

Check the Condition of the Dosifier Wheels

Perform this service every 50 hours or weekly.



YE000387—UN—09NOV22

Check the condition of the dosifier wheels (A). Replace them if worn or damaged. (See details in Operating the Nutrient Applicator section.)

jtlisx7f,1667830779015-19-05DEC22

Check and Tighten Nutrient Application System Screws

Perform this service at first day of work of each season.



YE000385—UN—09NOV22

Check and retighten the screws of the following assemblies: turbine, dosifier, remover shaft, application boom, and nutrient application system structure.

jtlisx7f,1667830169227-19-05DEC22

Check and Tighten Turbine Screws

Perform this service every 500 hours or every year, between seasons.

Check and retighten the screws at bases and shafts of turbines.

jtlisx7f,1669899594053-19-05DEC22

Replace the Machine Bearings

Perform this service every 500 hours or every year, between seasons.

CAUTION: Avoid serious injury or death. When working under the machine, there is danger in various situations:

- Crushing risks of heavy parts falling out of the machine over the body.
- Cutting and crushing risks on hands, fingers, and foot on sharp machine components and components with little space for service.
- Hitting the head and other body parts on machine components.

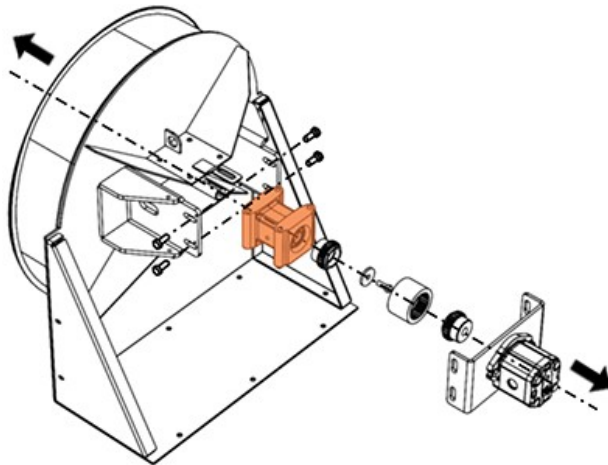
Always use personal protective equipment suitable for the service to be performed. See the Safety section of this manual for additional details.

Pay special attention when disassembling components under the machine.

Before performing the service, always position the machine on a firm, dry, and level terrain, with the the park brake engaged. Remove the ignition key and keep it with you during the services.

IMPORTANT: Avoid damaging machine systems. Always clean up the bearing housings before installing new bearings.

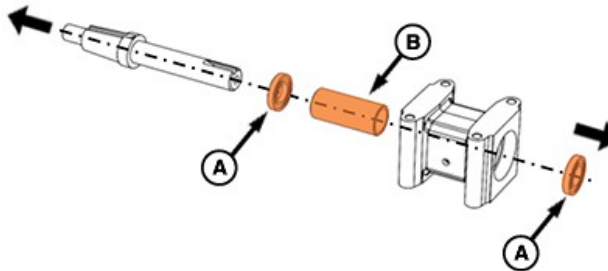
Turbine Bearings



YE000378—UN—08NOV22

Support of the Bearings

1. Disassemble the support of the bearings.
2. Remove the existing bearings (A).



YE000379—UN—08NOV22

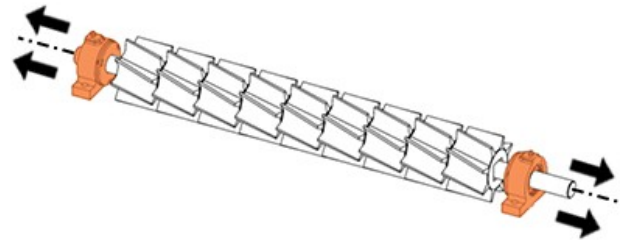
3. Install the bearing separator (B) and the new bearings (A).

IMPORTANT: Make sure to install the bearing separator (B) before assembling the support of the bearings.

4. Reassemble the support of the bearings.

Dosifier Bearings

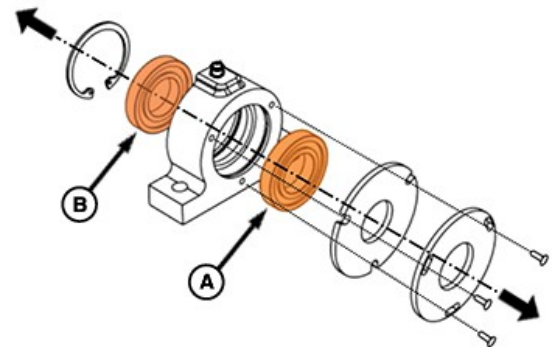
1. Remove the package of wheels from the dosifier. (See details in Operating the Nutrient Applicator section.)



YE000380—UN—08NOV22

Bearing Housings of the Dosifier Shaft

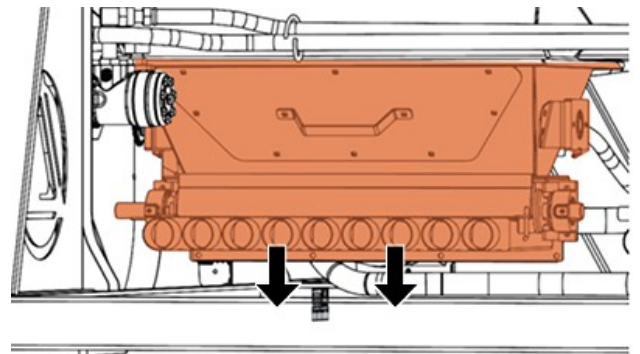
2. Disassemble the bearing housings of the dosifier shaft.



YE000381—UN—08NOV22

3. Remove the bearings (A) and the retainers (B).
4. Install the new bearings (A) and retainers (B).
5. Reassemble the bearing housings of the dosifier shaft.
6. Reinstall the package of wheels from the dosifier. (See details in Operating the Nutrient Applicator section.)

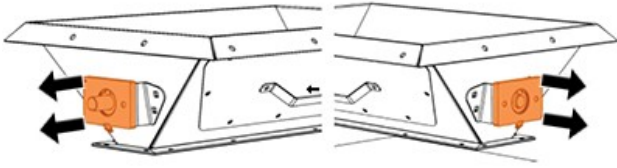
Remover Bearings



YE000382—UN—09NOV22

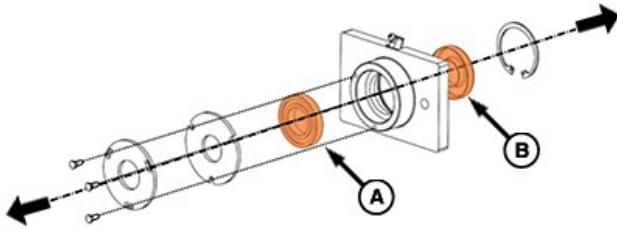
Dosifier Assembly

1. Disassemble the indicated dosifier assembly.



YE000383—UN—09NOV22

2. Remove the bearing housings.



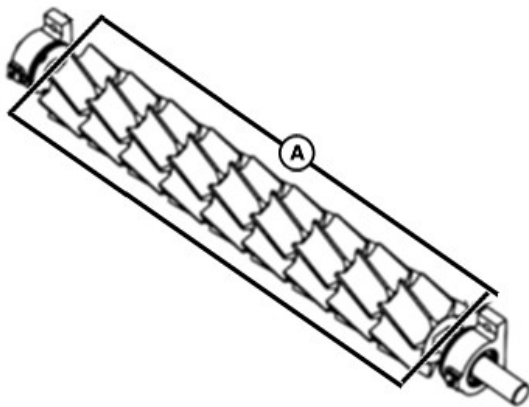
YE000384—UN—09NOV22

3. Disassemble and remove the existing bearings (A) and retainers (B).
4. Assembly and install the new bearings (A) and retainers (B).
5. Reinstall the bearing housings.
6. Reassemble the indicated dosifier assembly.

jtlisx7f,1667831116134-19-05DEC22

Check the Joints of the Turbine Drives

Perform this service every 500 hours or every year, between seasons.



YE000386—UN—09NOV22

Check the condition of the joints (A) of the turbine drives. Replace them, if needed.

jtlisx7f,1667930402754-19-05DEC22

Service—Chassis and Spray/Application Boom

General Greasing of the Machine

Perform this service every 50 hours or weekly.

Check the conditions of the grease fittings located on several locations of the machine. Replace them, if needed.

Before applying new grease, remove the old one, cleaning the components carefully.

Lubricate the greasing points using the grease specified at Fluid Specification by System in Maintenance and Service section. The following components must be lubricated:

Chassis and Front Axle



YE000650—UN—30MAR23

Tensioner Ball Joints (20 greasing points, 2 per tensioner)



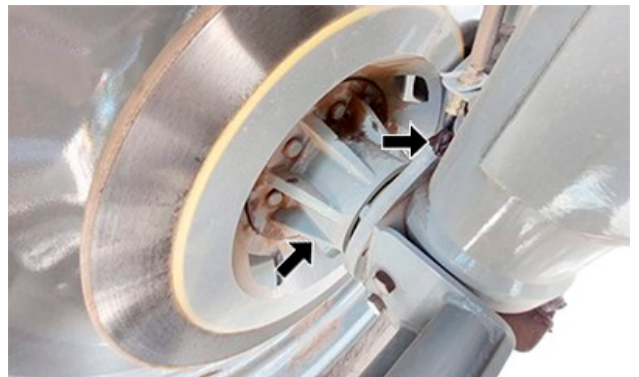
YE000651—UN—30MAR23

Front Axle Upper Ends—Outer Side (2 greasing points, 1 each side)



YE000652—UN—30MAR23

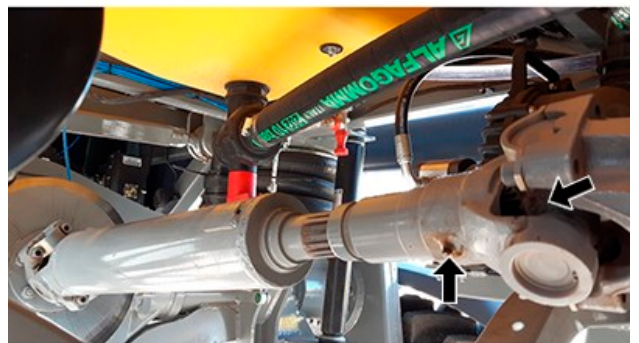
Front Axle Lower Ends—Inner Side (2 greasing points, 1 each side)



YE000653—UN—30MAR23

Front Axle Lower Ends—Outer Side (4 greasing points, 2 each side)

Driveshaft and Differential

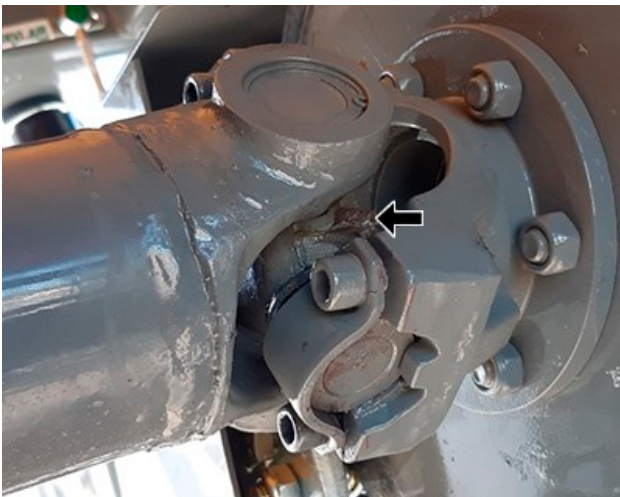


YE000654—UN—30MAR23

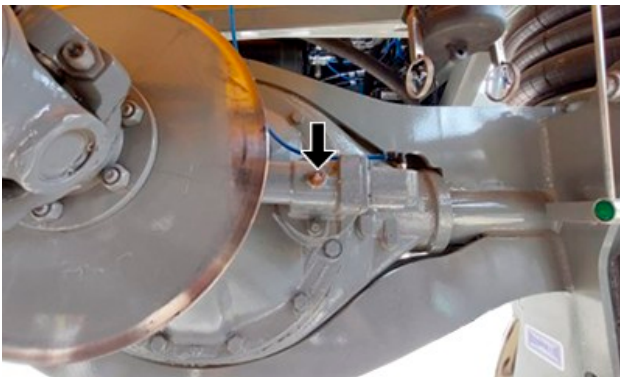
*Driveshaft End and Splined Rod (2 greasing points)—
Machines Equipped with Central Engine*



YE000683—UN—30MAR23
Driveshaft End and Splined Rod (2 greasing points)—
Machines Equipped with Front Engine



YE000655—UN—30MAR23
Differential Cross Coupling (1 greasing point)

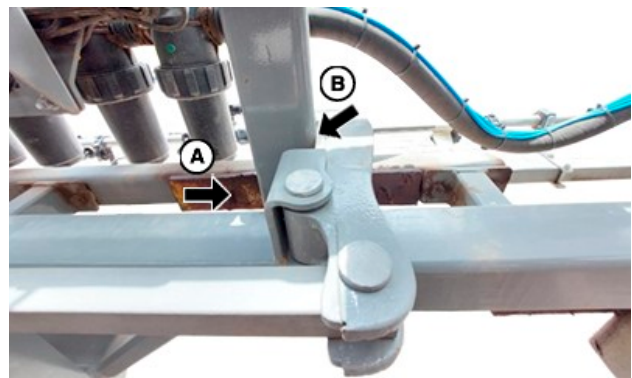


YE000672—UN—30MAR23
Differential High/Low Motor (1 greasing point)

Center Frame and Oscillation Structure

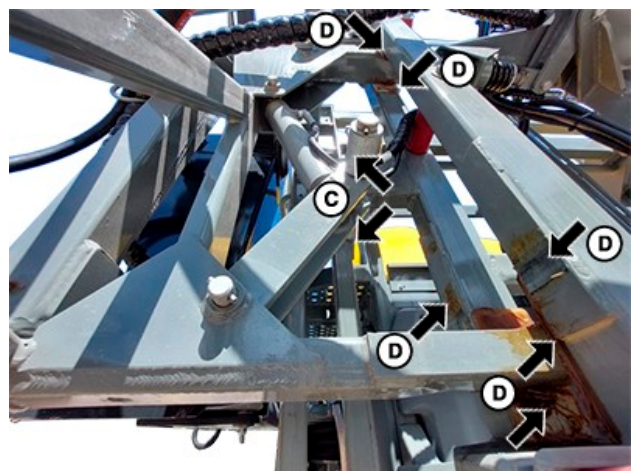


YE000656—UN—30MAR23
Center Frame Structure (4 greasing points, 2 each side)



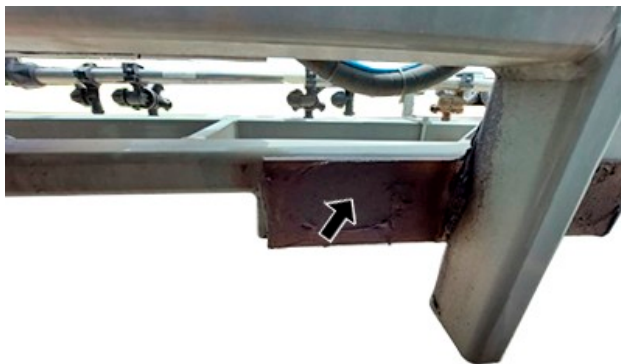
YE000657—UN—30MAR23
Middle Position Plates of the Oscillation Structure/
Oscillation Structure Lock of 2900 Sprayers

- A—Greasing Points of Middle Position Plates (2 greasing points, 1 each side, all machine models)
- B—Oscillation Structure Lock of 2900 Sprayers (2 greasing points, 1 each side)



YE000673—UN—30MAR23
Oscillation Structure Lock of Other Machine Models/
Oscillation System Plates

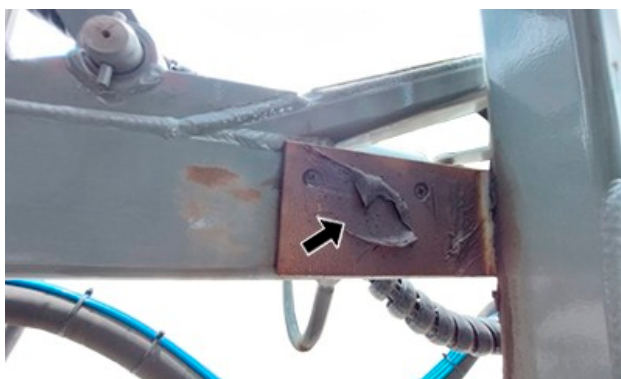
- C—Oscillation Structure Lock of Other Machine Models (4 greasing points, 2 each side)
- D—Oscillation System Plates (12 greasing points, 6 each side, all machine models)



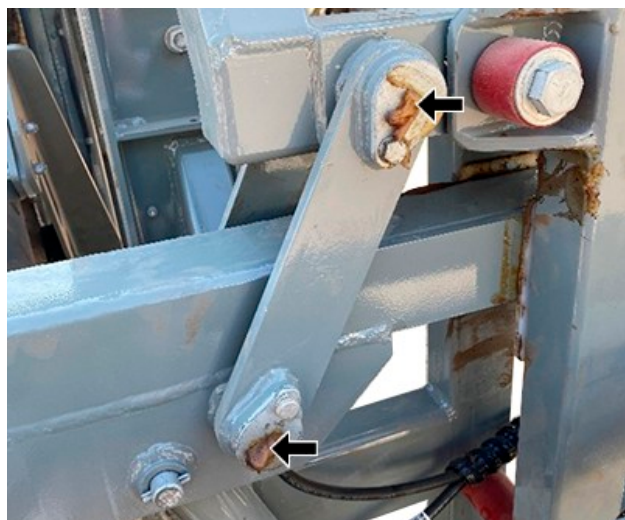
YE000658—UN—30MAR23
Lower Position Plates of the Oscillation Structure (2 greasing points, 1 each side)



YE000661—UN—30MAR23
Oscillation Rod—2900 Self-Propelled Sprayer (4 greasing points, 2 each rod)



YE000659—UN—30MAR23
Upper Position Plates of the Oscillation Structure (2 greasing points, 1 each side)—2900 Self-Propelled Sprayers Only



YE000674—UN—30MAR23
Oscillation Rod—Other Machine Models (4 greasing points, 2 each rod)



YE000660—UN—30MAR23

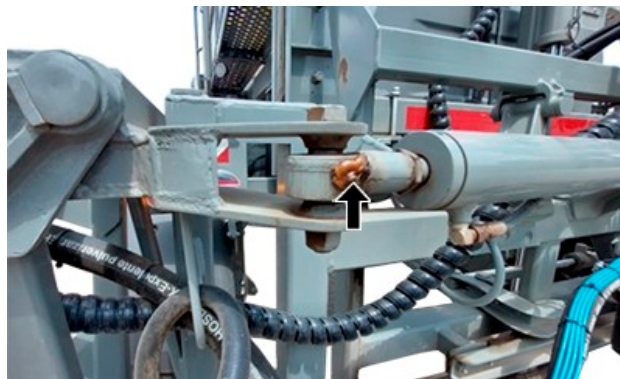


YE000662—UN—30MAR23
Center Frame Upper Hinge Structure (2 greasing points, 1 each side)



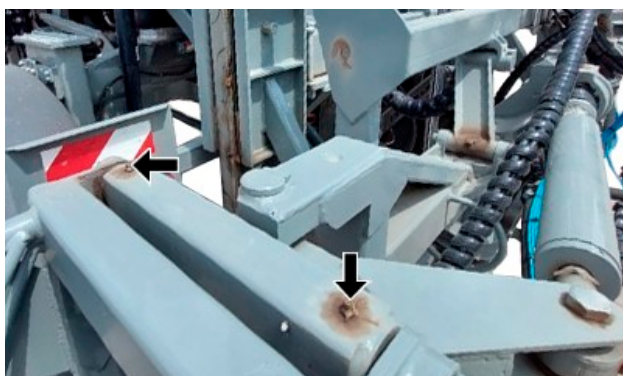
YE000663—UN—30MAR23

Center Frame Lower Hinge Structure (2 greasing points, 1 each side)



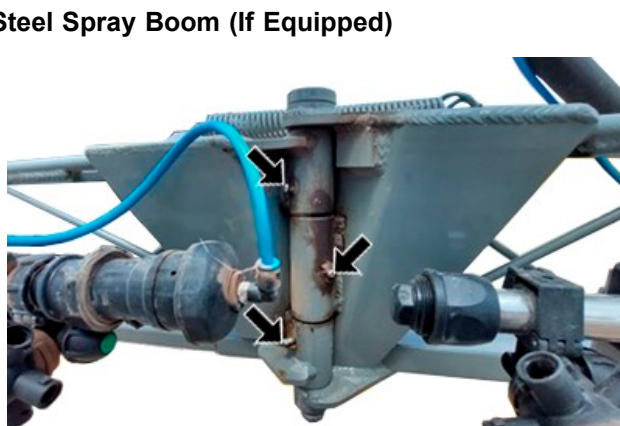
YE000666—UN—30MAR23

Folding Cylinder Ends of the Inner Spray Boom Section (4 grease fittings, 2 at each cylinder)



YE000664—UN—30MAR23

Upper Hinge of the Inner Spray Boom Section (4 greasing points, 2 each side)



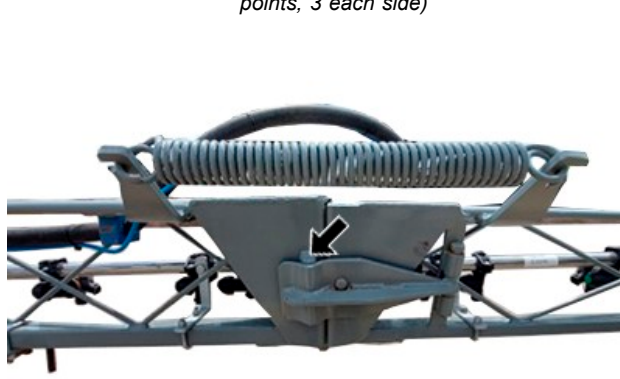
YE000670—UN—30MAR23

Breakaway Section Cylinder Hinge Structure (6 greasing points, 3 each side)



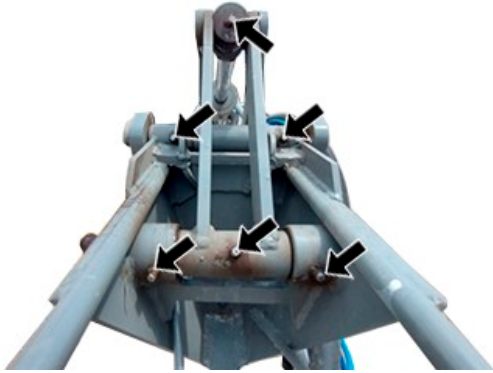
YE000665—UN—30MAR23

Oscillation Lock Cylinder (1 grease fitting)—2900 Self-Propelled Sprayers Only



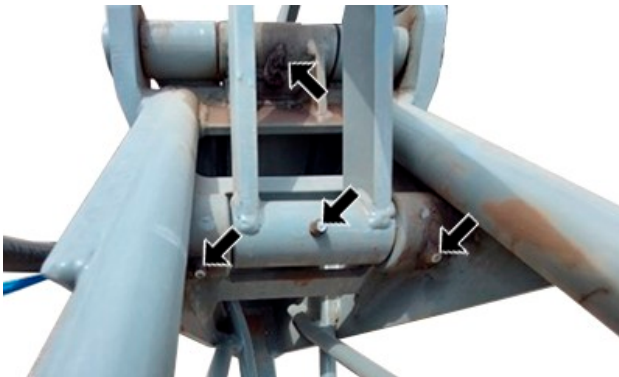
YE000671—UN—30MAR23

Spray Boom Safety Lock (2 greasing points, 1 each side)



YE000669—UN—30MAR23

Outer Spray Boom Section Hinge—Outer Side (12 greasing points, 6 each side)



YE000668—UN—30MAR23

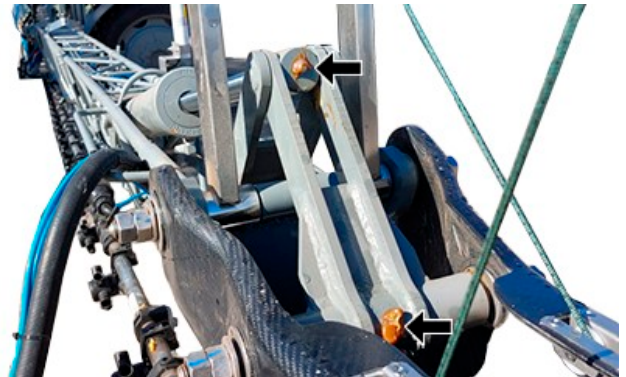
Outer Spray Boom Section Hinge—Inner Side (8 greasing points, 4 each side)



YE000667—UN—30MAR23

Outer Spray Boom Section Hinge—Cylinder Base Side (6 greasing points, 3 each side)

Hybrid Spray Booms (If Equipped)



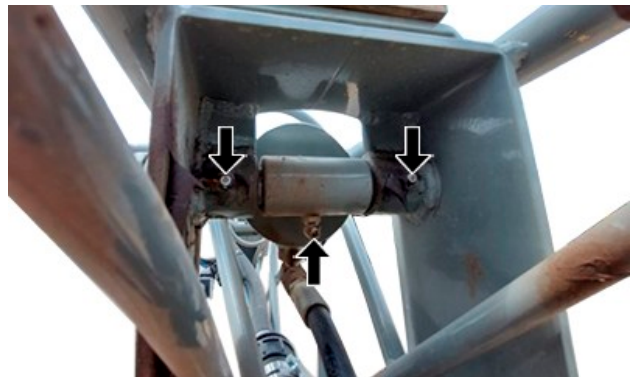
YE010498—UN—04APR23

Outer Spray Boom Section Hinge—Outer Side (4 greasing points, 2 each side)



YE010499—UN—04APR23

Outer Spray Boom Section Hinge—Inner Side (8 greasing points, 4 each side)



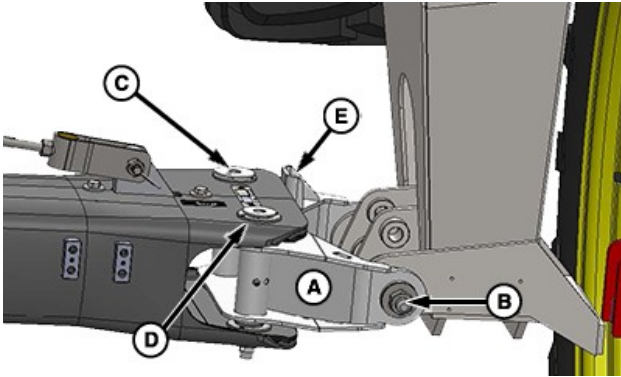
YE000667—UN—30MAR23

Outer Spray Boom Section Hinge—Cylinder Base Side (6 greasing points, 3 each side)

jtlsx7f,1680097027971-19-04APR23

Check the Fuse Box (Carbon Fiber Spray Booms Only)

Perform this service every 50 hours or weekly.



YE000675—UN—30MAR23

The fuse box (A) connects the spray boom to the machine center frame through the initial screw (B) and the spray boom screws (C) and (D).

The spray boom screw (C), with a high-diameter head, has a notch and work as a fuse. When hitting the spray boom against an obstacle, the spray boom screw (C) is cut, allowing the spray boom to rotate over the spray boom screw (D) that does not has a notch, absorbing this way the major portion of the impact energy.

The fuse box (A) has a stop (E) to avoid the impact of the spray boom with the machine due to spray boom inertia.

IMPORTANT: The spray boom screw (C) that has a notch must be always positioned in forward direction.

The stop (E) must be ahead, parallel to the spray boom screw (C) up or down.

jtlisx7f,1668800993577-19-29MAR23



YE000516—UN—24NOV22

With the spray boom opened and none support under it, the tensioner T3 (A) must be adjusted to an specified tightening.

1. Open the spray boom.
2. With no support under the spray boom, check the tightening of the tensioner T3 (A). It must be as specified:

Specification

Tensioner T3 (36 m (118.11 ft)
spray booms)—Torque. 44 N·m
(32.45 lb·ft)

Tensioner T3 (40 m (131.23 ft)
spray booms)—Torque. 54 N·m
(39.83 lb·ft)

3. If the tightening of the tensioner T3 (A) is out of specification, see Adjust the T3 Tensioner (Carbon Fiber Spray Booms Only) in Carbon Fiber Spray Boom section.)

jtlisx7f,1668801006556-19-05DEC22

Check the T3 Tensioner (Carbon Fiber Spray Booms Only)

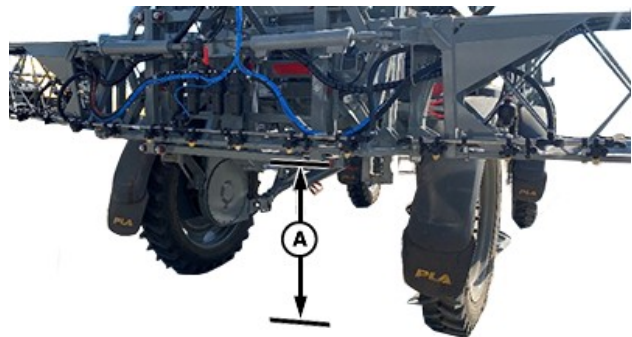
Perform this service every 50 hours or weekly.

IMPORTANT: Do not use the spray boom with the tensioner T3 (A) out of specicated tightening. If the tension of the tensioner T3 (A) is not correct, the risk os breaks is increased.

Check the Oscillation Structure of the Spray/Application Boom

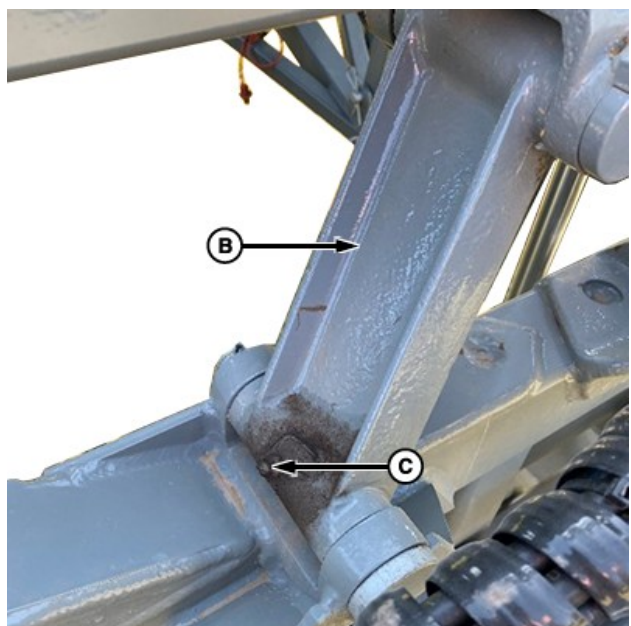
Perform this service every 250 hours.

1. Turn on the machine.
2. Park the machine on a firm, dry, and level surface.
3. Open and unlock the spray/application boom.

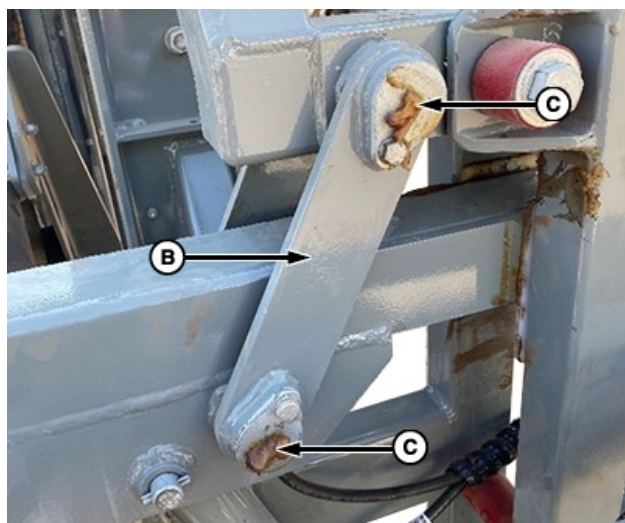


YE000473—UN—06DEC22

4. Position the spray boom at 1.5 m (4.92 ft) height (A).

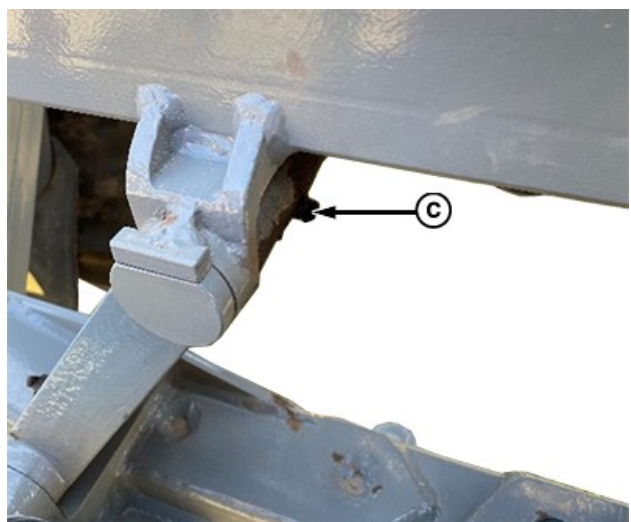


2900 Self-Propelled Sprayer



Other Machine Models

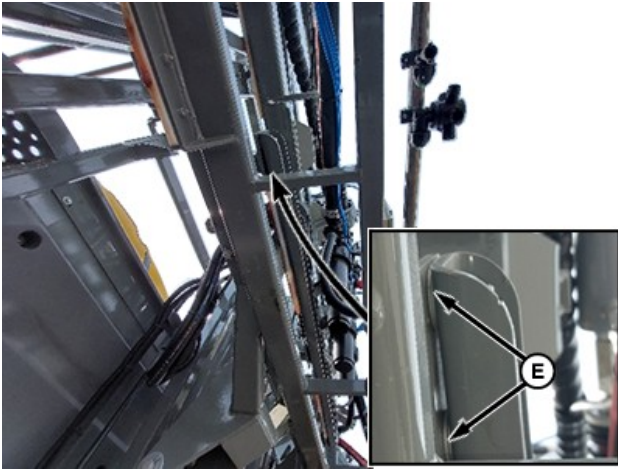
5. Check that the connecting rods (B) of the oscillating structure of the spray/application boom are greased at grease fittings (C).



2900 Self-Propelled Sprayer

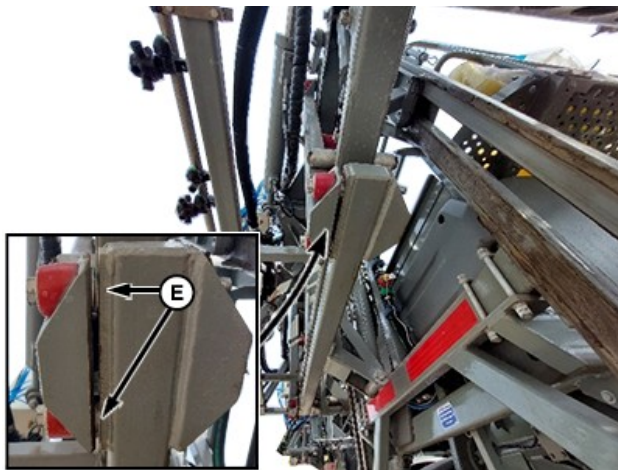


6. Go to the end of the spray/application boom (D) and apply down force as the image shows so the connecting rods (B) of the oscillating structure will go to the end of its movement course.
7. Release the spray/application boom. The assembly must perform only one oscillation, otherwise, it does not have the tightness enough and an adjust is needed.



YE000479—UN—22NOV22

2900 Self-Propelled Sprayer



YE000478—UN—22NOV22

Other Machine Models

8. Remove the shim washers (E) so the assembly is tightened, or add so the assembly is loosen.
9. Once the adjust is done, if needed, close the spray/application boom.
10. Turn off the machine.

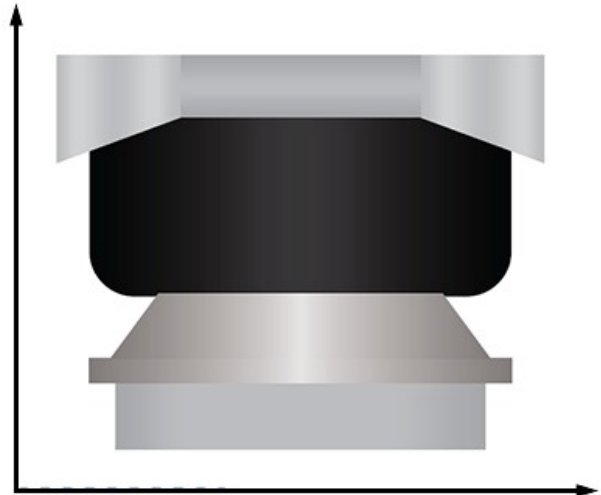
jtlsx7f,1668799293492-19-05DEC22

Check Alignment of Front and Rear Axles

Perform this service every 250 hours.

1. Park the machine on level ground.
2. Shut off the engine.
3. Check the longitudinal and transverse alignment of the machine in relation to rear and front axles.

NOTE: To perform this procedure correctly, the four air springs from suspension assemblies must be in the correct height specification. (See *Check and Adjust the Suspension Assemblies in Service—Suspension System* section.)



YE000549—UN—07DEC22

Air Spring

NOTE: The suspension air spring is used as a reference to check the machine alignment. The check is visually done. A level tool can also be used.

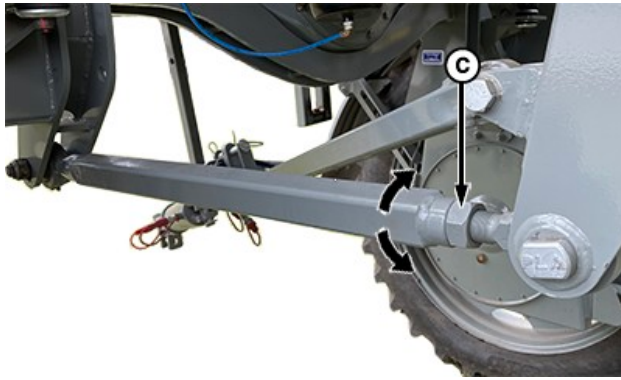


YE010404—UN—27FEB23

IMPORTANT: Avoid machine chassis damage. The ball joints (A) must be aligned in order to have the machine suspension system working correctly.

4. Check that ball joints (A) on both extremities are aligned.
5. Perform the vertical and horizontal alignment of the axles:
 - a. Stand at the side of a machine wheel (facing it), in a way that the air spring can be visualized.
 - b. Check the vertical alignment of the air spring.
 - c. Check the horizontal alignment using the inclination of the air spring base as a reference.

6. Perform the longitudinal alignment of the axle:
 - a. Stand in front of the machine, in a way that the air springs can be visualized.
 - b. Check the alignment of the base of the air springs.
7. Repeat the procedures on all four wheels.
8. In case of deviations being noticed, the axles can be aligned by adjusting the corresponding tensioners:



YE010405—UN—27FEB23

- a. Loosen the tensioner locknut (C).
- b. Rotate the tensioner until the correct alignment is reached.
- c. Tighten the tensioner locknut (C) to specification:

Specification

Tensioner Nut—Torque. 975 N·m
(719 lb·ft)

- d. For the adjust of the tensioner ball joint nuts (B), tighten these nuts to specification:

Specification

Tensioner Ball Joint
Nuts—Torque. 975 N·m
(719 lb·ft)

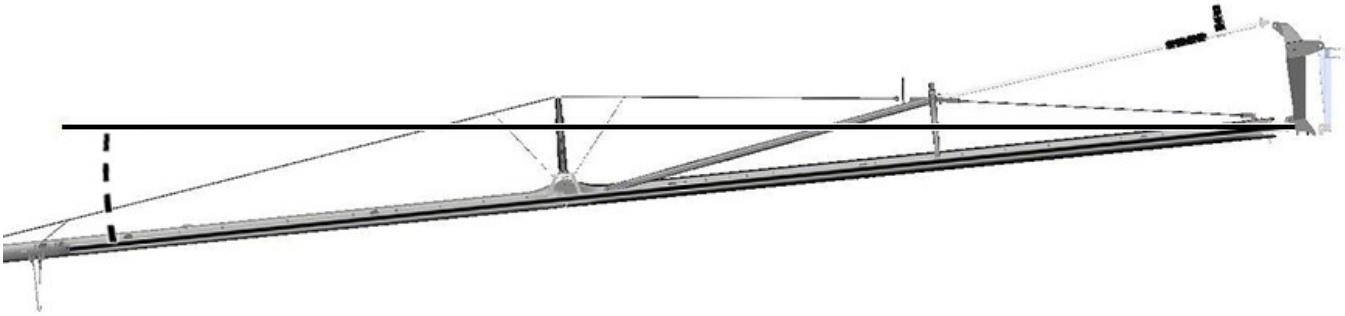
jtlisx7f,1662471261040-19-27MAR23

Check the Position of the Inner Spray Boom Section (Carbon Fiber Spray Booms Only)

Perform this service every 500 hours or every year.

NOTE: The procedure is the same for both left- and right-hand side spray booms.

1. Park the machine on level ground.
2. Unfold both sides of the spray boom.
3. Raise the center spray boom.



Carbon Fiber Spray Boom

YE000508—UN—24NOV22

4. Tilt down the spray boom up to the mechanical stop (A).
5. Using a level, measure the inner spray boom section angle (B) in relation to an horizontal line, as shown in the image. The angle must be as specified:

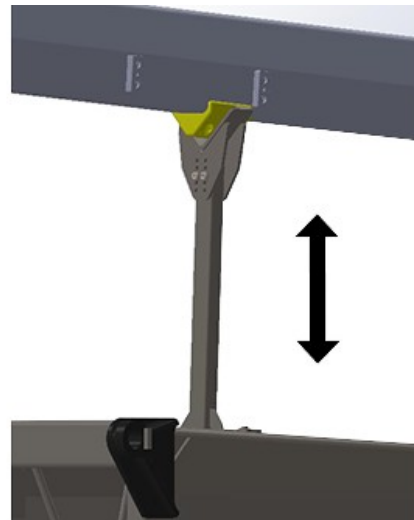
Specification

Inner Spray Boom Section

Angle—Angle. Between -4° and -5°

6. If the angle is out of specification, the inner spray boom section must be adjusted. See Adjust the Inner Spray Boom Section (Carbon Fiber Spray Booms Only) in Carbon Fiber Spray Boom section.

NOTE: With the spray boom at horizontal position, the mechanical stop (A) must have at least 40 mm (1.57 in) gap.



Hybrid Spray Boom

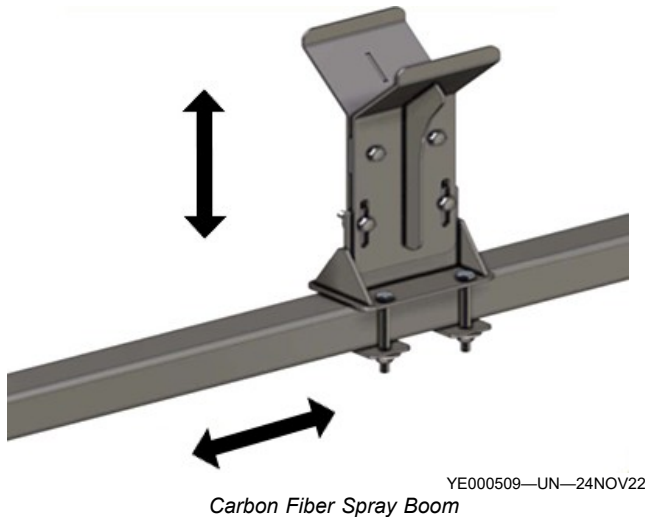
YE000540—UN—28NOV22

jtlsx7f,1669634352239-19-05APR23

Check the Position of the Breakaway Section Support (Carbon Fiber or Hybrid Spray Booms Only)

Perform this service every 500 hours or every year.

NOTE: The procedure is the same for both left- and right-hand side spray boom.



The spray boom is equipped with a V-support that is responsible to support the breakaway section during transport. Its height must be adjusted to reach a little gap of contact.

The complete support of the spray boom sections must be performed through the supports of the outer spray boom section.

IMPORTANT: The breakaway section must be smoothly supported by its support during transport.

jtlisx7f,1669634810368-19-05APR23

Check the Breakaway System (Carbon Fiber or Hybrid Spray Booms Only)

Perform this service every 500 hours or every year.

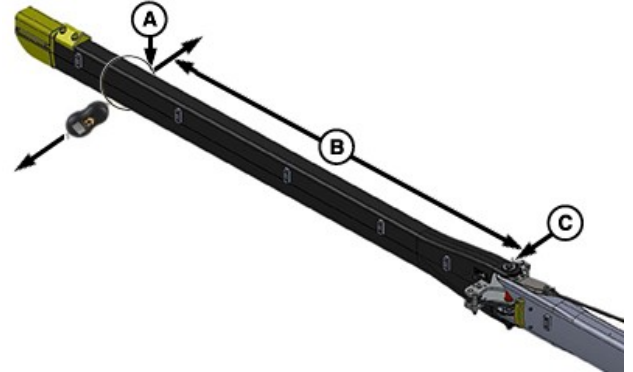


The breakaway system offers a certain resistance (maximum load) that when it is overcome, allows the breakaway section to rotate between the assembly screw, maintaining the integrity of the spray boom when maneuvering errors occur.

Check the Tension of the Breakaway System

NOTE: The procedure is the same for both left- and right-hand side spray booms.

1. Unfold the spray boom completely.



2. With the breakaway aligned, make a mark (A) at 2 m (6.56 ft) distance (B) since the screw of the breakaway assembly (C).
3. Install a loop with a dynamometer at the mark (A).
4. Generate a perpendicular force to the breakaway until the system force is overcome, registering the maximum load at the dynamometer. For a correct working of the system, this maximum load must be as specified:

Specification

Breakaway—Force. 12.5—16 kg
(27.56—35.27 lbs)

5. If the force measure is out of specification, adjust the tension of the breakaway system:
 - a. If equipped with hybrid spray boom, see Adjust the Breakaway System in Hybrid Spray Boom section.
 - b. If equipped with carbon fiber spray boom, see Adjust the Breakaway System in Carbon Fiber Spray Boom section.

jtlisx7f,1669635376530-19-05APR23

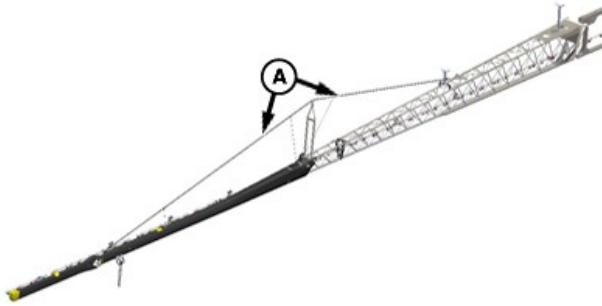
Check the T6/T7 Tensioner (Carbon Fiber or Hybrid Spray Booms Only)

Perform this service every 500 hours or every year.

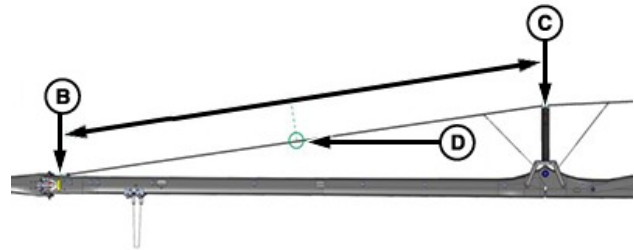
IMPORTANT: Keep the rope T6/7 (A) properly tightened to avoid damages at spray boom.

NOTE: The procedure is the same for both left- and right-hand side spray booms.

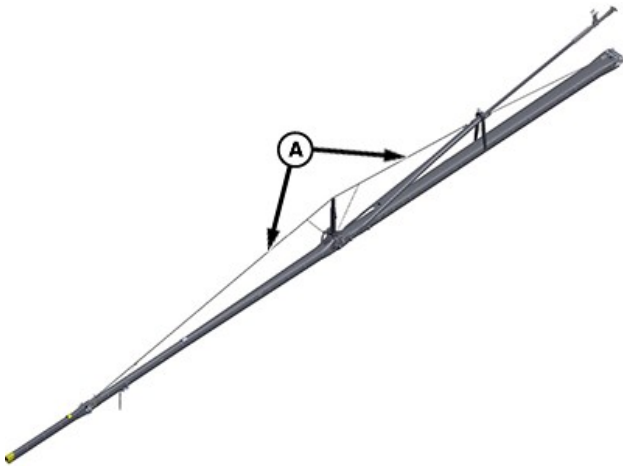
1. Completely unfold the spray boom.



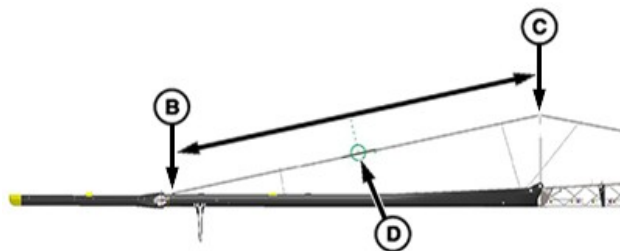
Hybrid Spray Boom
YE000542—UN—28NOV22



Carbon Fiber Spray Boom
YE000512—UN—24NOV22

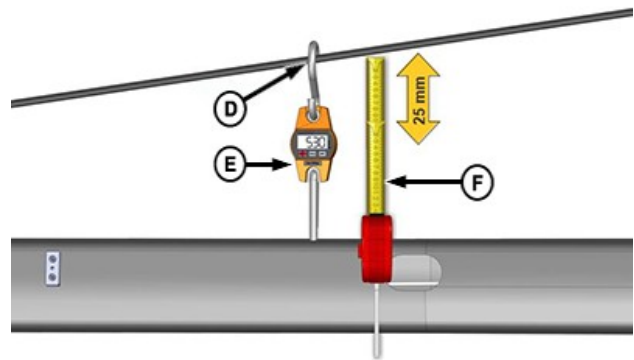


Carbon Fiber Spray Boom
YE000511—UN—24NOV22



Hybrid Spray Boom
YE000546—UN—28NOV22

2. Measure the distance of the rope T6/7 (A) between the support point of the rope (B) and the center of the cylinder (C). Mark the middle point (D) as shown in the image.



YE000513—UN—24NOV22

3. Position a measuring tape (F) at the middle point (D) to measure flexion.
4. Use a scale (E) to flex the middle point (D) of the rope, as shown in the image. Measure the necessary force to flex the rope approximately 25 mm (1 in). The force measured must be as specified:

Specification

T6/T7 Rope Flexion (36 m (118.11 ft) hybrid spray booms)—Force. 5.5—7.5 kg (12.13—16.53 lbs)

Specification

T6/T7 Rope Flexion (40 m (131.23 ft) hybrid spray booms)—Force. 7.0—9.0 kg (15.43—19.84 lbs)

Specification

T6/T7 Rope Flexion (carbon fiber spray booms)—Force. 7—10 kg (15.43—22.05 lbs)

5. If the measured force is out of specification, perform the adjust of the tensioner:
 - a. If the machine is equipped with hybrid spray

boom, see Adjust the T6/T7 Tensioner (Hybrid Spray Booms Only) in Hybrid Spray Boom section.

- b. If the machine is equipped with carbon fiber spray boom, see Adjust the T6/T7 Tensioner (Carbon Fiber Spray Booms Only) in Carbon Fiber Spray Boom section.

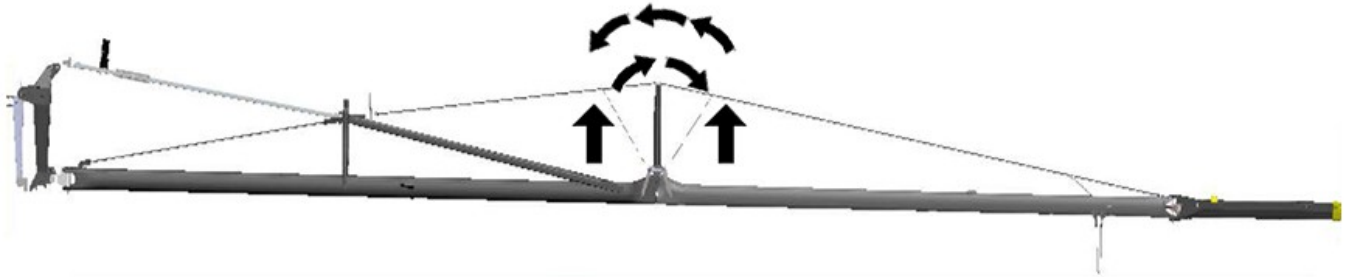
jtlisx7f,1669636174116-19-05APR23

Check the Folding System (Carbon Fiber Spray Booms Only)

Perform this service every 500 hours or every year.

NOTE: The procedure is the same for both left- and right-hand side spray booms.

The outer fold cylinder is equipped with hydraulic brakes to avoid impacts at the end of its courses.



Carbon Fiber Spray Boom

YE000510—UN—24NOV22

To check the braking speed, it is necessary to unfold and fold both sides of the cylinder, checking that the pressure and return speed of the cylinder decrease before ending each movement (pressure or return), allowing this way to smooth the movements over the supports and over the folding stops.

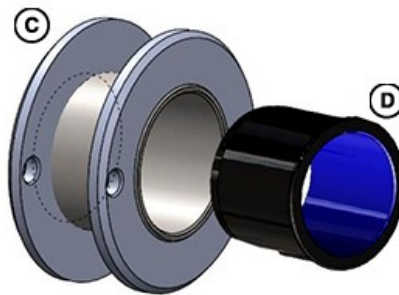
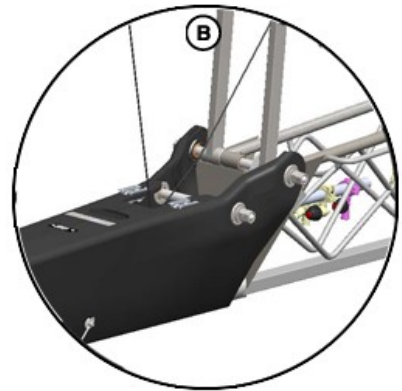
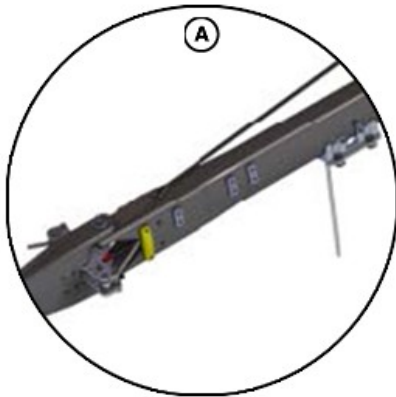
If the pressure and return speed of the cylinder is not as explained, see Adjust the Outer Fold Cylinder (Carbon Fiber Spray Booms Only) in Carbon Fiber Spray Boom section.

IMPORTANT: Damages can occur at the spray boom if the hydraulic system does not slows the outer fold cylinder speeds during its movements.

jtlisx7f,1669639709331-19-05APR23

Check the Bushings (Carbon Fiber or Hybrid Spray Booms Only)

Perform this service every 1000 hours.



Hybrid Spray Boom

YE000543—UN—28NOV22



Carbon Fiber Spray Boom

YE000517—UN—24NOV22

- A—Breakaway Joint
- B—Inner and Outer Joint
- C—Steel Bushing

The spray boom contains two system of joints that connect the sections of the spray boom through screws and bushings. These systems allow the folding/unfolding of the spray boom, as well as the breakaway system to work.

The bushings are composed of steel and vesconite. The steel bushing must be attached to the carbon fiber of the spray boom, and in its inside, there is other bushing of vesconite.

Visually check the bushings periodically to avoid damages on the spray boom. Search for:

- Cracked bushings.
- Worn bushings.
- Bushings out of position.
- Significant bushing movement or gap between the screw and the bushings.

If one or more bushings are in the previously described conditions, see your PLA BY JOHN DEERE/JOHN DEERE authorized dealer to replace them.

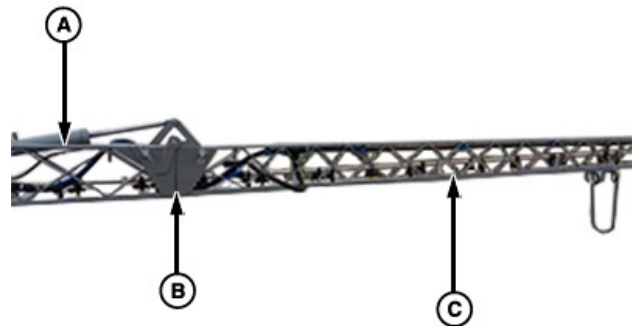
jtlisx7f,1669640463591-19-05APR23

- D—Vesconite Bushing
- E—Initial Joint (carbon fiber spray booms only)

Check the Outer Spray Boom Section Position (Steel or Hybrid Spray Booms Only)

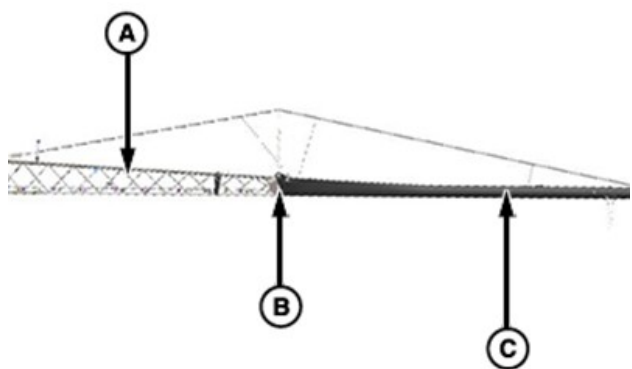
Perform this service as required.

1. Turn on the machine.
2. Park the machine on a level ground.
3. Fully open spray booms.



Steel Spray Boom

YE010478—UN—03APR23



YE010500—UN—04APR23

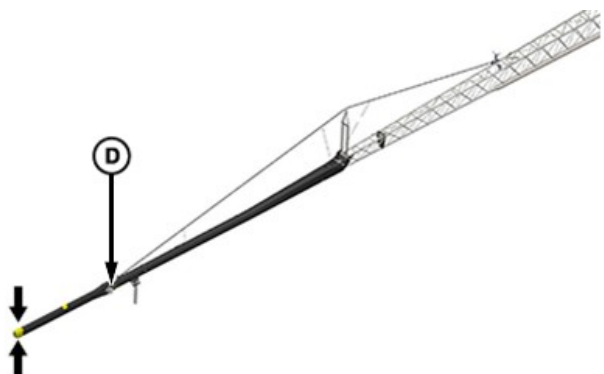
Hybrid Spray Boom

4. Check if the inner spray boom section (A) and the outer spray boom section (C) touch each other at joint (B).



YE000678—UN—30MAR23

Steel Spray Boom



YE010502—UN—04APR23

Hybrid Spray Boom

5. Push and pull the breakaway section (D) and observe the joint (B). If no gap is observed, no adjust is needed.
6. If any gap is observed, see Adjust the Outer Spray Boom Section Position in Hybrid Spray Boom section or Steel Spray Boom section, according to the spray boom model equipped on the machine.

jtllsx7f,1680696493253-19-05APR23

Service—Operator's Station

Replace the Activated Carbon Filter

Perform this service every 250 hours.

Also replace it in case of odors start to be noticed.

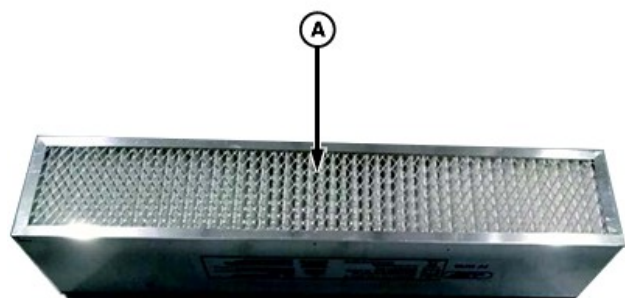
CAUTION: Avoid injury. The service interval of the activated carbon filters varies according to the chemical product used.

CAUTION: Do not wash or use compressed air to clean the activated carbon filter. This filter meets the ISO 15695/2 with an efficiency of 99%. It must be changed every 250 hours.

When replacing the activated carbon filter, return it to its original packing and discard according to safety instructions and environmental regulations. Contact your local environmental or recycling center or your **PLA BY JOHN DEERE/JOHN DEERE** authorized dealer.

CAUTION: Avoid contact with chemical products. Do not rely only on the machine cab or filters as a full protection against chemical exposure. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab. (See Safety Equipment in Solution System section.)

IMPORTANT: Activated carbon filters cannot be cleaned. Replace this filter at the correct service interval.



YE000179—UN—22SEP22

The cab has activated carbon filters (A) for helping in the protection from chemicals used during spraying operation.



YE000181—UN—22SEP22

To access the activated carbon filters (A), remove the upper side covers (B) at cab roof.

Check the state of the gaskets that ensure the airtightness of the cab. In case of excessive drying or breakage, they must be replaced as well.

jtlstx7f,1662473176795-19-01DEC22

Replace the Windshield Wiper Blade

Perform this service as required.



YE000182—UN—22SEP22

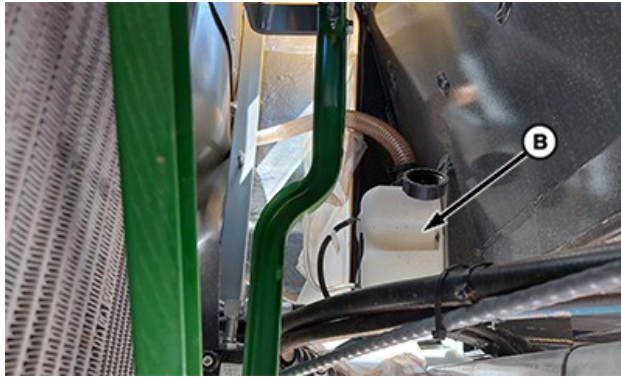
Regularly check the windshield wiper blade (A). Replace it if dry or damaged.

NOTE: The image is for illustrative purposes only. Your machine may have differences.

jtlstx7f,1662147997539-19-06SEP22

Check the Level of the Windshield Washer Reservoir

Perform this service as required.



YE010186—UN—25NOV22

Machines Equipped with Central Engine

Refill the windshield wiper reservoir (B) through the filling neck (A) using water and some detergent drops.

jtlisx7f,1662473317477-19-27MAR23



YE010201—UN—29NOV22

Machines Equipped with Central Engine



YE000180—UN—22SEP22

Machines Equipped with Front Engine

Regularly check the level of the windshield washer reservoir (B).

For machines equipped with central engine, the windshield washer reservoir (B) is behind the cab, under the engine hood, near to the brake fluid reservoir.

For machines equipped with front engine, the windshield washer reservoir (B) is behind the cab, near to the brake fluid reservoir.

Specifications-General Information

Introduction to Specifications

NOTE: Specifications and design subject to change without notice.

RP46668,00002A0-19-27MAR23

Machine Design Life

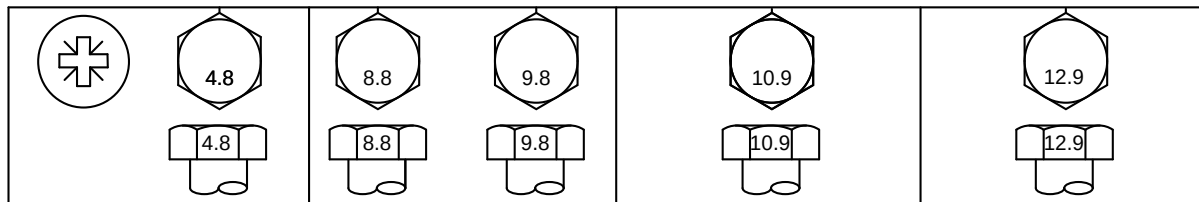
This machine is designed and manufactured to provide a long life of productive operation, however actual attainable life depends on a number of factors including the severity of working conditions and completion of recommended maintenance. (See the Service section of this manual.)

Periodically inspect and review the machine in conjunction with your John Deere dealer. The review may result in recommendations for service, component repair, remanufacture or replacement, or, if at the end of life, that the machine be removed from operation. (See separate decommissioning section of this manual for information on disposal and recycling of machine components.)

No machine should be operated if safety-related components are missing or in need of service. All missing or damaged safety-related components, including safety signs, should be repaired or replaced before operating.

DX,MACH,DESIGN,LIFE-19-14SEP15

Metric Bolt and Screw Torque Values



TS1742—UN—31MAY18

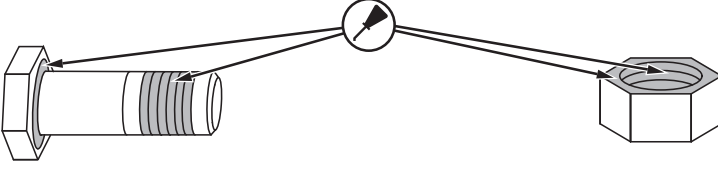
Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Hex Head ^a		Flange Head ^b		Hex Head ^a		Flange Head ^b		Hex Head ^a		Flange Head ^b		Hex Head ^a		Flange Head ^b	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
M6	3.6	31.9	3.9	34.5	6.7	59.3	7.3	64.6	9.8	86.7	10.8	95.6	11.5	102	12.6	112
									N·m	lb·ft	N·m	lb·ft	N·m	lb·ft	N·m	lb·ft
M8	8.6	76.1	9.4	83.2	16.2	143	17.6	156	23.8	17.6	25.9	19.1	27.8	20.5	30.3	22.3
			N·m	lb·ft	N·m	lb·ft	N·m	lb·ft								
M10	16.9	150	18.4	13.6	31.9	23.5	34.7	25.6	46.8	34.5	51	37.6	55	40.6	60	44.3
	N·m	lb·ft														
M12	—	—	—	—	55	40.6	61	45	81	59.7	89	65.6	95	70.1	105	77.4
M14	—	—	—	—	87	64.2	96	70.8	128	94.4	141	104	150	111	165	122
M16	—	—	—	—	135	99.6	149	110	198	146	219	162	232	171	257	190
M18	—	—	—	—	193	142	214	158	275	203	304	224	322	245	356	263
M20	—	—	—	—	272	201	301	222	387	285	428	316	453	334	501	370
M22	—	—	—	—	365	263	405	299	520	384	576	425	608	448	674	497
M24	—	—	—	—	468	345	518	382	666	491	738	544	780	575	864	637
M27	—	—	—	—	683	504	758	559	973	718	1080	797	1139	840	1263	932
M30	—	—	—	—	932	687	1029	759	1327	979	1466	1081	1553	1145	1715	1265
M33	—	—	—	—	1258	928	1398	1031	1788	1319	1986	1465	2092	1543	2324	1714
M36	—	—	—	—	1617	1193	1789	1319	2303	1699	2548	1879	2695	1988	2982	2199

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.

Specifications-General Information

Bolt or Screw Size	Class 4.8		Class 8.8 or 9.8		Class 10.9		Class 12.9	
	Hex Head ^a	Flange Head ^b	Hex Head ^a	Flange Head ^b	Hex Head ^a	Flange Head ^b	Hex Head ^a	Flange Head ^b
Properly start thread engagement.								
								

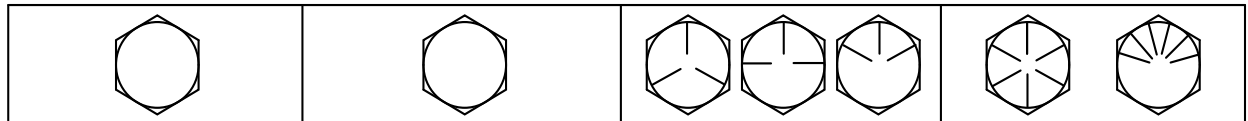
TS1741—UN—22MAY18

^aHex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.

^bHex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ2(T)-19-09MAY22

Unified Inch Bolt and Screw Torque Values



TS1671—UN—01MAY03

Bolt or Screw Size	SAE Grade 1 ^a				SAE Grade 2 ^b				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Hex Head ^c		Flange Head ^d		Hex Head ^c		Flange Head ^d		Hex Head ^c		Flange Head ^d		Hex Head ^c		Flange Head ^d	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
1/4	3.1	27.3	3.2	28.4	5.1	45.5	5.3	47.3	7.9	70.2	8.3	73.1	11.2	99.2	11.6	103
													N·m	lb·ft	N·m	lb·ft
5/16	6.1	54.1	6.5	57.7	10.2	90.2	10.9	96.2	15.7	139	16.8	149	22.2	16.4	23.7	17.5
									N·m	lb·ft	N·m	lb·ft				
3/8	10.5	93.6	11.5	102	17.6	156	19.2	170	27.3	20.1	29.7	21.9	38.5	28.4	41.9	30.9
					N·m	lb·ft	N·m	lb·ft								
7/16	16.7	148	18.4	163	27.8	20.5	30.6	22.6	43	31.7	47.3	34.9	60.6	44.7	66.8	49.3
	N·m	lb·ft	N·m	lb·ft												
1/2	25.9	19.1	28.2	20.8	43.1	31.8	47	34.7	66.6	49.1	72.8	53.7	94	69.3	103	75.8
9/16	36.7	27.1	40.5	29.9	61.1	45.1	67.5	49.8	94.6	69.8	104	77	134	98.5	148	109
5/8	51	37.6	55.9	41.2	85	62.7	93.1	68.7	131	96.9	144	106	186	137	203	150
3/4	89.5	66	98	72.3	149	110	164	121	230	170	252	186	325	240	357	263
7/8	144	106	157	116	144	106	157	116	370	273	405	299	522	385	572	422
1	216	159	236	174	216	159	236	174	556	410	609	449	785	579	860	634
1-1/8	305	225	335	247	305	225	335	247	685	505	751	554	1110	819	1218	898
1-1/4	427	315	469	346	427	315	469	346	957	706	1051	775	1552	1145	1703	1256
1-3/8	564	416	618	456	564	416	618	456	1264	932	1386	1022	2050	1512	2248	1658
1-1/2	743	548	815	601	743	548	815	601	1665	1228	1826	1347	2699	1991	2962	2185

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

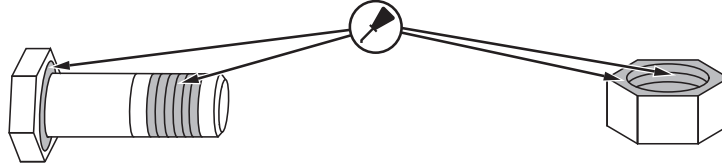
Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.

Specifications-General Information

Bolt or Screw Size	SAE Grade 1 ^a		SAE Grade 2 ^b		SAE Grade 5, 5.1 or 5.2		SAE Grade 8 or 8.2	
	Hex Head ^c	Flange Head ^d	Hex Head ^c	Flange Head ^d	Hex Head ^c	Flange Head ^d	Hex Head ^c	Flange Head ^d

- Properly start thread engagement.



TS1741—UN—22MAY18

^aGrade 1 applies for hex cap screws over 6 in (152 mm) long, and for all other types of bolts and screws of any length.

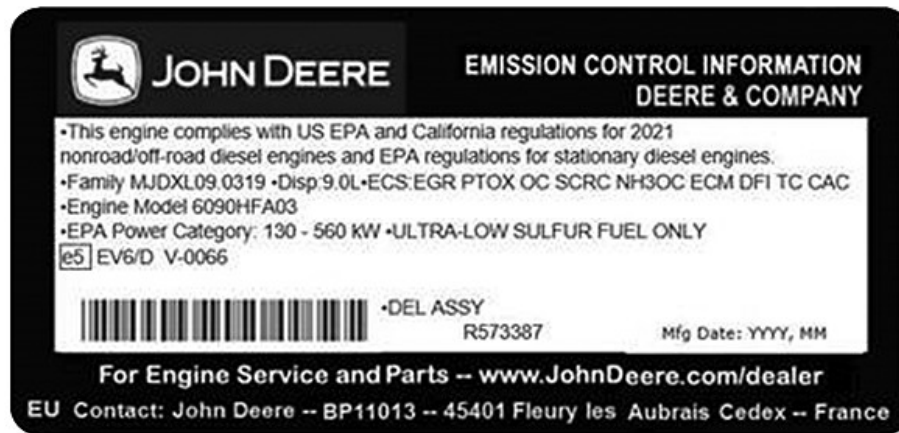
^bGrade 2 applies for hex cap screws (not hex bolts) up to 6 in (152 mm) long.

^cHex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.

^dHex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ1(T)-19-09MAY22

Carbon Dioxide Emissions (CO₂)



SAMPLE - Engine Emissions Label

RG33429—UN—04FEB21

To identify the carbon dioxide (CO₂) output, locate the engine emissions label. Find the appropriate family on the emissions label and reference the chart.

NOTE: The first letter of the family number is not utilized for family identification on the chart.

Emissions Label Family	CO ₂ Result
_JDXL02.9323	952 g/kW-hr
_JDXL02.9327	784 g/kW-hr
_JDXL04.5337	819 g/kW-hr
_JDXL04.5338	682 g/kW-hr
_JDXL04.5304	1004 g/kW-hr
_JDXN04.5174	792 g/kW-hr
_JDXL06.8324	720 g/kW-hr
_JDXL06.8328	683 g/kW-hr
_JDXL06.8336	701 g/kW-hr
_JDXN06.8175	771 g/kW-hr

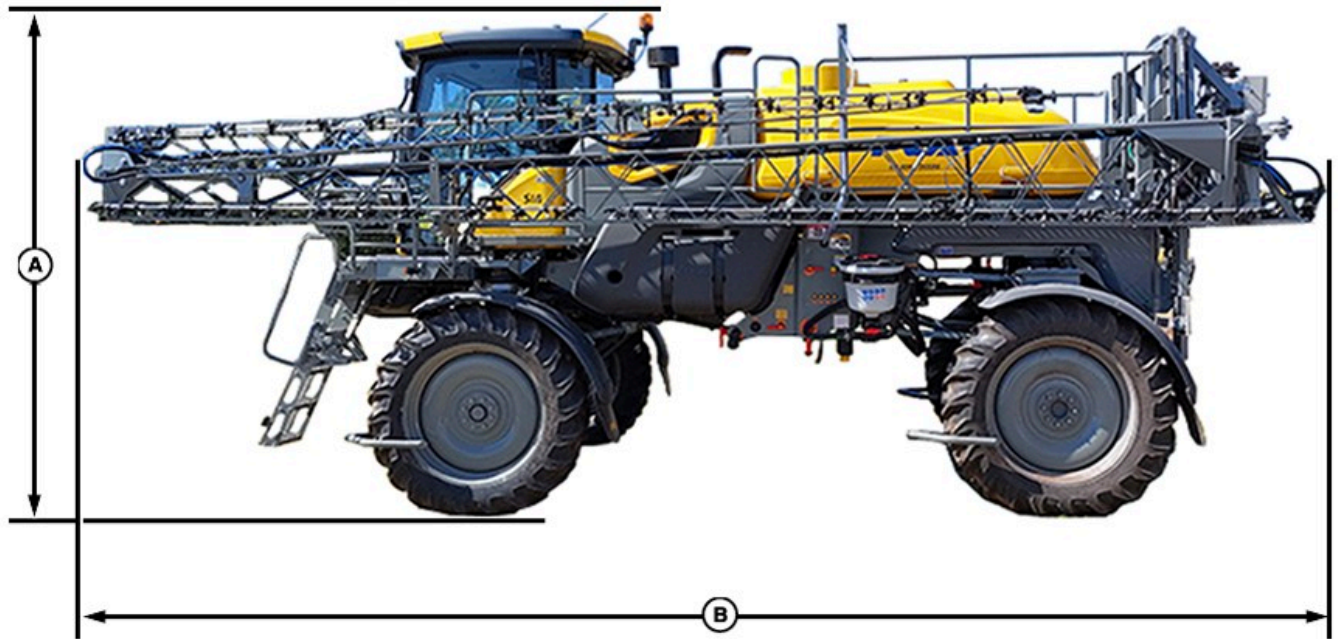
Emissions Label Family	CO ₂ Result
_JDXL09.0319	646 g/kW-hr
_JDXL09.0325	695 g/kW-hr
_JDXL09.0329	657 g/kW-hr
_JDXL09.0333	650 g/kW-hr
_JDXL13.5326	684 g/kW-hr
_JDXL13.6320	651 g/kW-hr
_JDXL13.5340	632 g/kW-hr
_JDXL18.0341	683 g/kW-hr
F28	870 g/kW-hr
F32	710 g/kW-hr
F33	677 g/kW-hr

This CO₂ measurement results from testing over a fixed test cycle under laboratory conditions a(n) (parent) engine representative of the engine type (engine family)

and shall not imply or express any guarantee of the performance of a particular engine.

DX,EMISSIONS,CO2-19-20JUL21

Dimensions



Left-Hand Side View—Self-Propelled Sprayers with Central Engine

YE000407—UN—28NOV22



Left-Hand Side View—Self-Propelled Sprayers with Front Engine

YE000406—UN—16NOV22



Rear View—Self-Propelled Sprayers with Central Engine

YE000409—UN—16NOV22



Rear View—Self-Propelled Sprayers with Front Engine

YE000408—UN—16NOV22

Model	Sprayers with Central Engine	Sprayers with Front Engine
	m (ft)	m (ft)
A - Minimum Height ^a	3.67 (12.04)	3.86 (12.66)
A - Maximum Height ^a	4.04 (13.25)	4.07 (13.35)
B - Minimum Length ^a	7.79 (25.56)	8.58 (28.15)
B - Maximum Length ^a	9.85 (32.32)	9.85 m (32.32)
C - Minimum Width ^a	3.50 (11.48)	3.50 (11.48)
C - Maximum Width ^a	4.15 (13.62)	4.15 (13.62)

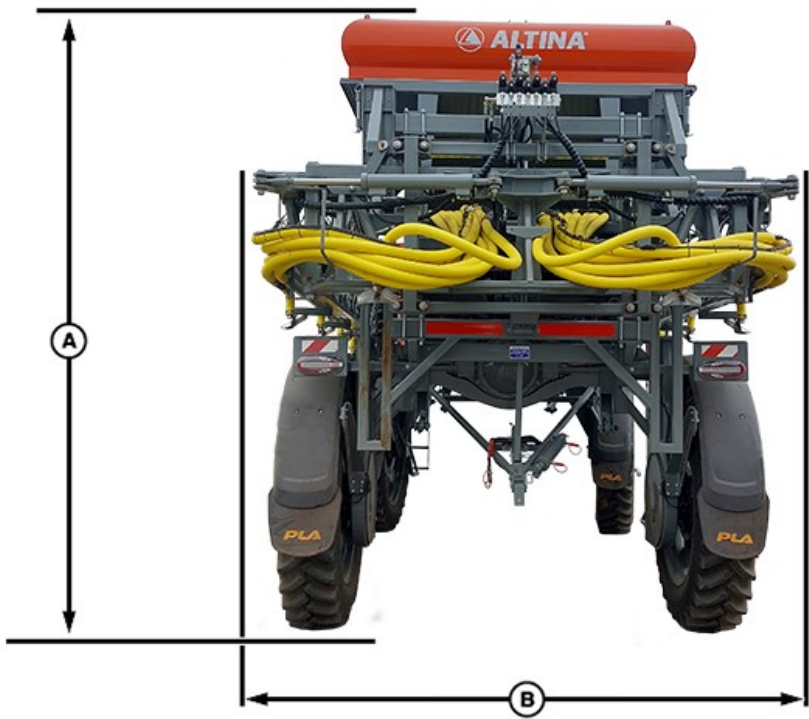
^aSpray boom closed.

Clearance Specification for Self-Propelled Sprayers		
Machine Model	Tires	Clearance
		m (ft)
2900	R38	1.35 (3.28)
3300	R38	1.35 (3.28)
3300 MD	R38	1.49 (4.89)
3300 GD	R46	1.63 (5.35)
3600 MD	R46	1.63 (5.35)



Left-Hand Side View—Nutrient Applicators

YE010063—UN—15NOV22



Rear View—Nutrient Applicators

YE010062—UN—15NOV22

Specifications-General Information

Dimension	Nutrient Applicators
	m (ft)
A - Height ^a	4.38 (14.40)
B - Length ^a	8.90 (29.20)
C - Width ^a	3.82 (12.53)

^aApplication boom closed.

Clearance Specification for Nutrient Applicators		
Machine Model	Tires	Clearance
		m (ft)
MAF 5000	R46	1.63 (5.35)

jtlisx7f,1659462421762-19-05DEC22

Weights

Nutrient Applicators		
Model	Machines with Central Engine	Machines with Front Engine
Measure and Condition	kg (lbs)	kg (lbs)
Minimum Weight (Empty)	8130 (17 924)	9325 (20 558)
Maximum Weight (Empty)	9935 (21 903)	10 400 (22 928)
Minimum Weight (Full)	11 380 (25 089)	12 605 (27 789)
Maximum Weight (Full)	13 415 (29 575)	14 250 (31 416)

Nutrient Applicators	
Measure and Condition	kg (lbs)
Weight (Empty)	10 440 (23 016)
Weight (Full)	13 440 (29 630)

jtlisx7f,1668605445155-19-05DEC22

Tire Inflation Pressures

Machine Model	Tread	Tire	Pressure
			KPa (bar) (psi)
2900	2100	12.4-36 12 PR R1	331 (3.31) (48.0)
	2625	13.6-38 14 PR R1	345 (3.45) (50.0)
3300	2625	13.6-38 14 PR R1	345 (3.45) (50.0)
3300 MD	2625	13.6-38 14 PR R1	345 (3.45) (50.0)
3300 GD	2625	320/90 R46 R1W 151 A8	360 (3.60) (52.2)
		380/90 R46 R1W 159 A8	400 (4.00) (58.0)
3600 MD	2625	320/90 R46 R1W 151 A8	360 (3.60) (52.2)
		380/90 R46 R1W 159 A8	400 (4.00) (58.0)
MAF 5000	2625	380/90 R46 R1W 159 A8	400 (4.00) (58.0)

jtlisx7f,1659462433128-19-22NOV22

Electrical System

Battery Voltage 12 V - 160 Ah
Alternator 150 A

jtltx7f,1659527663819-19-04AUG22

Air Conditioning System

Refrigerant Fluid R-134a

 **CAUTION: Avoid serious injury or death. The charge of the air conditioning system must be performed by technicians only and with adequate tools. Never disconnect hoses that contain refrigerant fluid.**

jtltx7f,1668629571470-19-17NOV22

Brakes

Service Brake

Type Disk brake in all four wheels, hydraulic air-assisted
Actuation Controlled by pedal

Park Brake

Type Air brake
Type Controlled by switch

Fluid of Brakes

Type DOT 3

jtltx7f,1663088278252-19-25NOV22

Steering System

Type Hydraulic with load sense

jtltx7f,1659642556453-19-19AUG22

Maximum Speeds

NOTE: For the following tables, consider that A = high range, B = low range.

NOTE: The maximum speeds shown at table are for reference only. The machine real speeds may vary according to various factors.

Maximum Speeds for Sprayers Equipped with Eaton Manual Transmission			
Tires	R36	R38	R38
Machine Model	2900	2900	3300 and 3300 MD
Gear and Range	km/h (mph)	km/h (mph)	km/h (mph)
1B	4.4 (2.73)	5.3 (3.29)	5.3 (3.29)
1A	6.1 (3.79)	7.3 (4.54)	7.3 (4.54)
2B	8.1 (5.03)	9.8 (6.09)	9.8 (6.09)
2A	9.8 (6.09)	13.6 (8.45)	13.6 (8.45)
3B	14.4 (8.95)	17.4 (10.81)	17.4 (10.81)
3A	20.0 (12.43)	24.1 (14.98)	24.1 (14.98)
4B	23.9 (14.85)	28.7 (17.83)	28.7 (17.83)
4A	33.2 (20.63)	39.9 (24.79)	39.9 (24.79)
5B	35.3 (21.93)	42.5 (26.41)	42.5 (26.41)
5A	49.1 (30.51)	59.1 (36.72)	59.1 (36.72)

Maximum Speeds for Sprayers Equipped with Alisson Automatic Transmission		
Tire Size	R38	R46
Machine Model	3300 and 3300 MD	3600 MD and 3300 GD
Gear and Range	km/h (mph)	km/h (mph)
1B	12.1 (7.52)	10.3 (6.40)
1A	16.8 (10.44)	14.3 (8.89)
2B	22.4 (13.92)	19.1 (11.87)
2A	31.1 (19.32)	26.5 (16.47)
3B	29.5 (18.33)	25.2 (15.66)
3A	41.1 (25.54)	35.0 (21.75)
4B	42.5 (26.41)	36.2 (22.49)
4A	59.1 (36.72)	50.4 (31.32)

Maximum Speeds for Nutrient Applicators	
Tires	R46
Machine Model	MAF 5000
Gear and Range	km/h (mph)
1B	4.5 (2.80)
1A	6.3 (3.91)
2B	8.3 (5.16)
2A	11.6 (7.21)
3B	14.8 (9.20)
3A	20.6 (12.80)
4B	24.5 (15.22)
4A	34.0 (21.13)
5B	36.2 (22.49)
5A	50.4 (31.32)

Specifications-2900 Self-Propelled Sprayers

Introduction to Specifications

NOTE: Specifications and design subject to change without notice.

RP46668,00002A0-19-27MAR23

Engine

Engine John Deere PowerTech
Model 4045 HYE01
Type Inline Diesel Engine, 2 valves
Nominal Power 93 kW (125 hp)
Nominal Speed 2300 rpm
Low Idle Speed 850 +/- 50 rpm
High Idle Speed 2450 +/- 50 rpm
Injection System Conventional
Number of Cylinders 4
Displacement 4.5 L
Aspiration Turbocharged and aftercooled, air-to-air
Cooling System Coolant

edw8krp,1679775332500-19-25MAR23

Fuel System

Injection Pump Delphi DP100 rotary pump (mechanical)
Transfer Pump Mechanical fuel pump
Filtering System Two-stage with water separator fuel filter system

jtlisx7f,1659462614659-19-10NOV22

Transmission System

Traction Mechanical 4X2
Primary Transmission Eaton FS 4205
Number of Speed Ranges 5 + reverse
Secondary Transmission Differential Ratio (2100 Tread)
(7.17:1)
Secondary Transmission Differential Ratio (2625 Tread)
(5.57:1) or (7.17:1)
Number of Speed Ranges 2 (high and low)
Clutch Control Hydraulic
Clutch Reservoir Fluid DOT 3

jtlisx7f,1659702328345-19-23MAR23

Hydraulic System

Hydraulic Commands Multi-function lever
Actuation of Hydraulic Motors Hydraulic pump

jtlisx7f,1659462668519-19-07OCT22

Tires, Tread, and Suspension

Tires (BT 2100)

Type 12.4-36 12 PR R1

Tires (BT 2625)

Type 13.6-38 14 PR R1

Tread Option 1 (BT 2100)

Distance 2.10 m (6.89 ft)
Adjust Not applicable
Distance Between Axles 3.71 m (12.17 ft)

Tread Option 2 (BT 2625)

Distance 2.62 or 2.80 m (8.60 or 9.19 ft)
Adjust Manual wheel rotation
Distance Between Axles 3.71 m (12.17 ft)

Suspension

Type Pneumatic

jtlisx7f,1659462678123-19-21NOV22

Solution System

Solution Pump

Model Hypro 9303
Material Stainless steel
Type Centrifugal
Actuation Hydraulic motor
Maximum Nominal Capacity 540 l/min (142.65 gal/min)
Safety Automatic Shutoff Empty tank electric shutoff (with safety reserve)

Load Pump

Brand Banjo
Material Polypropylene
Type Centrifugal
Actuation Hydraulic motor
Maximum Nominal Capacity 738 l/min (195.00 gal/min)
Safety Automatic Shutoff Full tank electric shutoff

Solution Tank

Capacity 2900 L (766.10 gal)
Material Rotational molded high-density polyethylene
Agitation Hydro injectors
Tank Level Level indicator ruler

Specifications-2900 Self-Propelled Sprayers

Spray Boom

Location	Machine rear
Actuation	Electro-hydraulic valves
Type	Steel
Working Width	27 m (88.60 ft)

Solution Lines

Material	Stainless steel
Dimension	19.05 mm (0.75 in)
Sections	9 (pneumatic valves)
Type	Mixed

Nozzles

Distance Between Nozzles (5-position nozzle bodies)	35.0 cm (13.78 in)
Distance Between Nozzles (simple nozzle bodies)	52.5 cm (20.69 in)
Nozzle Bodies	5-position or simple with anti-drip system

jtlstx7f,1659462690811-19-28NOV22

Technology

Display	Generation 4 universal display 4640
JDLINK	Ready (optional as a field kit)
Satellite Guidance	StarFire 6000 (SF1)
PLA Application (standard)	SIA standard tracking (renewal from 5° year on)
PLA Application (optional)	SIA sustainability license (renewal from 5° year on)
Automatic Pilot	AutoTrac ATC 300
DAT (high-voltage detector)	Yes
Remote Control for the Section Shutoff	Only if equipped with SIA sustainability optional

jtlstx7f,1659462699864-19-19AUG22

Comfort Features

Internal Features

Cab	MAP 3
Cab Suspension	Rubber dampers
Pressurization	Yes
Carbon Activated Filter	Yes
Air Conditioning System	Yes
Heating System	Yes
Steering Column	Three movements
Pull-Down Sunshade	Retractable curtain
Operator's Seat	Pneumatic suspension
Radio	AM/FM + USB + Bluetooth
Fire Extinguisher	Yes

External Features

Rinse Tank	Yes
Clean Water Tank	Yes

Headlights	Six adjustable LED headlights
Night Kit	Yes
Hydraulic Jack	Yes
Eductor	Yes
Ladder Actuation	Electro-hydraulic

jtlstx7f,1659462710110-19-19AUG22

Weights

Total (empty tank)	8130 kg (17 924 lb)
Total (full tank)	11 380 kg (25 089 lb)

jtlstx7f,1659462722656-19-10AUG22

Dimensions

Width (transport position)	3.60 m (11.80 ft)
Length (transport position)	7.77 m (25.49 ft)
Height	3.67 m (12.04 ft)
Clearance	1.35 m (4.43 ft)

jtlstx7f,1660150308583-19-10AUG22

Capacities

Fuel Tank	250 L (66.04 gal)
Engine Crankcase	12.5 L (3.30 gal)
Hydraulic Reservoir	140.0 L (36.98 gal)
Hydraulic System	240.0 L (63.40 gal)
Eaton Transmission Housing	5.0 L (1.32 gal)
Differential Housing	9.5 L (2.51 gal)
Rear Knees (each)	6.5 L (1.72 gal)
Solution Tank	2900.0 L (766.10 gal)
Rinse Tank	250.0 L (66.04 gal)
Clean Water Tank	15.0 L (3.96 gal)

jtlstx7f,1659462730851-19-01DEC22

Specifications-3300 Self-Propelled Sprayers

Introduction to Specifications

NOTE: Specifications and design subject to change without notice.

RP46668,00002A0-19-27MAR23

Engine

Engine John Deere PowerTech
Model 6068 TYE02
Type Inline Diesel Engine, 2 valves
Nominal Power 120 kW (160 hp)
Nominal Speed 2300 rpm
Low Idle Speed 850 +/- 50 rpm
High Idle Speed 2450 +/- 50 rpm
Injection System Conventional
Number of Cylinders 6
Displacement 6.8 L
Aspiration Turbocharged
Cooling System Coolant

edw8krp,1679775558018-19-25MAR23

Fuel System

Injection Pump Stanadyne DB4 rotary pump (mechanical)
Transfer Pump Mechanical fuel pump
Filtering System . . Two-stage with water separator fuel filter system

jtlsx7f,1668076875152-19-10NOV22

Transmission System

Traction Mechanical 4X2
Configuration 1 - Eaton FS 4205 Primary Transmission
Number of Speed Ranges 5 + reverse
Clutch Control Hydraulic
Clutch Reservoir Fluid DOT 3
Configuration 2 - Allison 2500 Primary Transmission
Number of Speed Ranges 4 + reverse
Secondary Transmission Differential Ratio (5.57:1)
Number of Speed Ranges 2 (high and low)

jtlsx7f,1659705531961-19-23MAR23

Hydraulic System

Hydraulic Commands Multi-function lever
Actuation of Hydraulic Motors Hydraulic pump

jtlsx7f,1659527760194-19-07OCT22

Tires, Tread, and Suspension

Tires

Type 13.6-38 14 PR R1

Tread

Distance 2.62 or 2.80 m (8.60 or 9.19 ft)
Adjust Manual wheel rotation
Distance Between Axles 4.12 m (13.52 ft)

Suspension

Type Pneumatic

jtlsx7f,1659527770200-19-21NOV22

Solution System

Solution Pump

Model Hypro 9306
Material Stainless steel
Type Centrifugal
Actuation Hydraulic motor
Maximum Nominal Capacity 810 l/min (214.00 gal/min)
Safety Automatic Shutoff . . Empty tank electric shutoff (with safety reserve)

Load Pump

Brand Banjo
Material Polypropylene
Type Centrifugal
Actuation Hydraulic motor
Maximum Nominal Capacity 738 l/min (195.00 gal/min)
Safety Automatic Shutoff . . Full tank electric shutoff

Solution Tank

Capacity 3300 L (871.77 gal)
Material Rotational molded high-density polyethylene
Agitation Hydro injectors
Tank Level . . . Level indicator ruler (standard) and electronic level indicator for machines equipped with SIA sustainability and carbon fiber spray boom

Spray Boom

Location Machine rear
Actuation Electro-hydraulic valves
Type (option 1) Steel
Working Width (option 1) 32 m (105.00 ft)
Type (option 2) Hybrid

Specifications-3300 Self-Propelled Sprayers

Working Width (option 2) 36 m (118.11 ft)
Type (option 3) Carbon Fiber
Working Width (option 3) 36 m (118.11 ft)

Solution Lines

Material Stainless steel
Dimension 19.05 mm (0.75 in)
Sections (for 32 m (105.00 ft) spray booms) . 9 (pneumatic valves)
Sections (for 36 m (118.11 ft) spray booms) . 13 (pneumatic valves)
Type Mixed

Nozzles

Distance Between Nozzles (5-position nozzle bodies) . . . 35.0 cm
(13.78 in)
Distance Between Nozzles (simple nozzle bodies) . 52.5 cm (20.69
in)
Nozzle Bodies 5-position or simple with anti-drip system

jtlisx7f,1660053128373-19-28NOV22

Technology

Display Generation 4 universal display 4640
JDLINK Ready (optional as a field kit)
Satellite Guidance StarFire 6000 (SF1)
PLA Application (standard) . SIA standard tracking (renewal from 5°
year on)
PLA Application (optional) .SIA sustainability license (renewal from
5° year on)
Automatic Pilot AutoTrac ATC 300
DAT (high-voltage detector) Yes
Remote Control for the Section Shutoff . . Only if equipped with SIA
sustainability optional

jtlisx7f,1659462699864-19-19AUG22

Comfort Features

Internal Features

Cab MAP 3
Cab Suspension Rubber dampers
Pressurization Yes
Carbon Activated Filter Yes
Air Conditioning System Yes
Heating System Yes
Steering Column Three movements
Pull-Down Sunshade Retractable curtain
Operator's Seat Pneumatic suspension
Radio AM/FM + USB + Bluetooth
Fire Extinguisher Yes

External Features

Rinse Tank Yes
Clean Water Tank Yes
Headlights Six adjustable LED headlights

Night Kit Yes
Hydraulic Jack Yes
Eductor Yes
Ladder Actuation Electro-hydraulic

jtlisx7f,1659462710110-19-19AUG22

Capacities

Fuel Tank 400.0 L (105.67 gal)
Engine Crankcase 19.0 L (5.02 gal)
Hydraulic Reservoir 140.0 L (36.98 gal)
Hydraulic System 240.0 L (63.40 gal)
Eaton Transmission Housing 5.0 L (1.32 gal)
Allison Transmission Housing 14.0 L (3.70 gal)
Differential Housing 9.5 L (2.51 gal)
Rear Knees (each) 6.5 L (1.72 gal)
Solution Tank 3300.0 L (871.77 gal)
Rinse Tank 250.0 L (66.04 gal)
Clean Water Tank 15.0 L (3.96 gal)

jtlisx7f,1659527885767-19-01DEC22

Specifications-3300 GD Self-Propelled Sprayers

Introduction to Specifications

NOTE: Specifications and design subject to change without notice.

RP46668,00002A0-19-27MAR23

Engine

Engine John Deere PowerTech
Model 6068 TYE01
Type Inline Diesel Engine, 2 valves
Nominal Power 134 kW (180 hp)
Nominal Speed 2300 rpm
Low Idle Speed 850 +/- 50 rpm
High Idle Speed 2450 +/- 50 rpm
Injection System Conventional
Number of Cylinders 6
Displacement 6.8 L
Aspiration Turbocharged
Cooling System Coolant

edw8krp,1679775640245-19-25MAR23

Fuel System

Injection Pump Stanadyne DB4 rotary pump (mechanical)
Transfer Pump Mechanical fuel pump
Filtering System . . Two-stage with water separator fuel filter system

jtlisx7f,1668076875152-19-10NOV22

Transmission System

Traction Mechanical 4X2
Primary Transmission Allison 2500
Number of Speed Ranges 4 + reverse
Secondary Transmission Differential Ratio (4.88:1)
Number of Speed Ranges 2 (high and low)

jtlisx7f,1659707161095-19-23MAR23

Hydraulic System

Hydraulic Commands Multi-function lever
Actuation of Hydraulic Motors Hydraulic pump

jtlisx7f,1659527760194-19-07OCT22

Tires, Tread, and Suspension

Tires

Type (option 1) 320/90 R46 R1W 151 A8
Type (option 2) 380/90 R46 R1W 159 A8

Tread

Distance 2.62 or 2.80 m (8.60 or 9.19 ft)
Adjust Manual wheel rotation
Distance Between Axles 4.04 m (13.25 ft)

Suspension

Type Pneumatic

jtlisx7f,1659528217139-19-21NOV22

Solution System

Solution Pump

Model Hypro 9306
Material Stainless steel
Type Centrifugal
Actuation Hydraulic motor
Maximum Nominal Capacity 810 l/min (214.00 gal/min)
Safety Automatic Shutoff . . Empty tank electric shutoff (with safety reserve)

Load Pump

Brand Banjo
Material Polypropylene
Type Centrifugal
Actuation Hydraulic motor
Maximum Nominal Capacity 738 l/min (195.00 gal/min)
Safety Automatic Shutoff Full tank electric shutoff

Solution Tank

Capacity 3300 L (871.77 gal)
Material Rotational molded high-density polyethylene
Agitation Hydro injectors
Tank Level . . . Level indicator ruler (standard) and electronic level indicator for machines equipped with SIA sustainability and carbon fiber spray boom

Spray Boom

Location Machine rear
Actuation Electro-hydraulic valves
Type (option 1) Steel
Working Width (option 1) 32 m (105.00 ft)
Type (option 2) Hybrid
Working Width (option 2) 36 m (118.11 ft)
Type (option 3) Carbon Fiber
Working Width (option 3) 36 m (118.11 ft)
Type (option 4) Hybrid
Working Width (option 4) 40 m (131.23 ft)
Type (option 5) Carbon Fiber
Working Width (option 5) 40 m (131.23 ft)

Solution Lines

Material Stainless steel
 Dimension 19.05 mm (0.75 in)
 Sections (for 32 m (105.00 ft) spray booms) . 9 (pneumatic valves)
 Sections (for 36 m (118.11 ft) and 40 m (131.23 ft) spray booms) . 13 (pneumatic valves)
 Type Mixed

Nozzles

Distance Between Nozzles (5-position nozzle bodies) . . . 35.0 cm (13.78 in)
 Distance Between Nozzles (simple nozzle bodies) . 52.5 cm (20.69 in)
 Nozzle Bodies 5-position or simple with anti-drip system

jtlstx7f,1669037919233-19-28NOV22

Technology

Display Generation 4 universal display 4640
 JDLINK Ready (optional as a field kit)
 Satellite Guidance StarFire 6000 (SF1)
 PLA Application (standard) . SIA standard tracking (renewal from 5° year on)
 PLA Application (optional) . SIA sustainability license (renewal from 5° year on)
 Automatic Pilot AutoTrac ATC 300
 DAT (high-voltage detector) Yes
 Remote Control for the Section Shutoff . . Only if equipped with SIA sustainability optional

jtlstx7f,1659462699864-19-19AUG22

Comfort Features

Internal Features

Cab MAP 3
 Cab Suspension Rubber dampers
 Pressurization Yes
 Carbon Activated Filter Yes
 Air Conditioning System Yes
 Heating System Yes
 Steering Column Three movements
 Pull-Down Sunshade Retractable curtain
 Operator's Seat Pneumatic suspension
 Radio AM/FM + USB + Bluetooth
 Fire Extinguisher Yes

External Features

Rinse Tank Yes
 Clean Water Tank Yes
 Headlights Six adjustable LED headlights
 Night Kit Yes
 Hydraulic Jack Yes

Eductor Yes
 Ladder Actuation Electro-hydraulic

jtlstx7f,1659462710110-19-19AUG22

Capacities

Fuel Tank 400.0 L (105.67 gal)
 Engine Crankcase 19.0 L (5.02 gal)
 Hydraulic Reservoir 140.0 L (36.98 gal)
 Hydraulic System 240.0 L (63.40 gal)
 Allison Transmission Housing 14.0 L (3.70 gal)
 Differential Housing 9.5 L (2.51 gal)
 Rear Knees (each) 9.5 L (2.51 gal)
 Solution Tank 3300.0 L (871.77 gal)
 Rinse Tank 250.0 L (66.04 gal)
 Clean Water Tank 15.0 L (3.96 gal)

jtlstx7f,1659528339199-19-01DEC22

Specifications-3300 MD Self-Propelled Sprayers

Introduction to Specifications

NOTE: Specifications and design subject to change without notice.

RP46668,00002A0-19-27MAR23

Engine

Engine John Deere PowerTech
Model 6068 TYE02
Type Inline Diesel Engine, 2 valves
Nominal Power 120 kW (160 hp)
Nominal Speed 2300 rpm
Low Idle Speed 850 +/- 50 rpm
High Idle Speed 2450 +/- 50 rpm
Injection System Conventional
Number of Cylinders 6
Displacement 6.8 L
Aspiration Turbocharged
Cooling System Coolant

edw8krp,1679496480720-19-27MAR23

Fuel System

Injection Pump Stanadyne DB4 rotary pump (mechanical)
Transfer Pump Mechanical fuel pump
Filtering System . . Two-stage with water separator fuel filter system

jtlsx7f,1668076875152-19-10NOV22

Transmission System

Traction Mechanical 4X2
Configuration 1 - Eaton FS 4205 Primary Transmission
Number of Speed Ranges 5 + reverse
Clutch Control Hydraulic
Clutch Reservoir Fluid DOT 3
Configuration 2 - Allison 2500 Primary Transmission
Number of Speed Ranges 4 + reverse
Secondary Transmission Differential Ratio (4.88:1)
Number of Speed Ranges 2 (high and low)

jtlsx7f,1659710018023-19-23MAR23

Hydraulic System

Hydraulic Commands Multi-function lever
Actuation of Hydraulic Motors Hydraulic pump

jtlsx7f,1659527760194-19-07OCT22

Tires, Tread, and Suspension

Tires

Type 13.6-38 14 PR R1

Tread

Distance 2.62 or 2.80 m (8.60 or 9.19 ft)
Adjust Manual wheel rotation
Distance Between Axles 4.50 m (14.76 ft)

Suspension

Type Pneumatic

edw8krp,1679497259044-19-27MAR23

Solution System

Solution Pump

Model Hypro 9306
Material Stainless steel
Type Centrifugal
Actuation Hydraulic motor
Maximum Nominal Capacity 810 l/min (214.00 gal/min)
Safety Automatic Shutoff . . Empty tank electric shutoff (with safety reserve)

Load Pump

Brand Banjo
Material Polypropylene
Type Centrifugal
Actuation Hydraulic motor
Maximum Nominal Capacity 738 l/min (195.00 gal/min)
Safety Automatic Shutoff Full tank electric shutoff

Solution Tank

Capacity (3300 Sprayers) 3300 L (871.77 gal)
Material Rotational molded high-density polyethylene
Agitation Hydro injectors
Tank Level . . . Level indicator ruler (standard) and electronic level indicator for machines equipped with SIA sustainability and carbon fiber spray boom

Spray Boom

Location Machine rear
Actuation Electro-hydraulic valves
Type (option 1) Steel
Working Width (option 1) 32 m (105.00 ft)
Type (option 2) Hybrid

Specifications-3300 MD Self-Propelled Sprayers

Working Width (option 2)	36 m (118.11 ft)
Type (option 3)	Carbon Fiber
Working Width (option 3)	36 m (118.11 ft)
Type (option 4)	Carbon Fiber
Working Width (option 4)	40 m (131.23 ft)

Solution Lines

Material	Stainless steel
Dimension	19.05 mm (0.75 in)
Sections (for 32 m (105.00 ft) spray booms) .	9 (pneumatic valves)
Sections (for 36 m (118.11 ft) and 40 m (131.23 ft) spray booms) .	13 (pneumatic valves)
Type	Mixed

Nozzles

Distance Between Nozzles (5-position nozzle bodies) . . .	35.0 cm (13.78 in)
Distance Between Nozzles (simple nozzle bodies) .	52.5 cm (20.69 in)
Nozzle Bodies	5-position or simple with anti-drip system

edw8krp,1679497488207-19-22MAR23

Technology

Display	Generation 4 universal display 4640
JDLINK	Ready (optional as a field kit)
Satellite Guidance	StarFire 6000 (SF1)
PLA Application (standard) .	SIA standard tracking (renewal from 5° year on)
PLA Application (optional) .	SIA sustainability license (renewal from 5° year on)
Automatic Pilot	AutoTrac ATC 300
DAT (high-voltage detector)	Yes
Remote Control for the Section Shutoff . .	Only if equipped with SIA sustainability optional

jtlsx7f,1659462699864-19-19AUG22

Comfort Features

Internal Features

Cab	MAP 3
Cab Suspension	Rubber dampers
Pressurization	Yes
Carbon Activated Filter	Yes
Air Conditioning System	Yes
Heating System	Yes
Steering Column	Three movements
Pull-Down Sunshade	Retractable curtain
Operator's Seat	Pneumatic suspension
Radio	AM/FM + USB + Bluetooth
Fire Extinguisher	Yes

External Features

Rinse Tank	Yes
Clean Water Tank	Yes
Headlights	Six adjustable LED headlights
Night Kit	Yes
Hydraulic Jack	Yes
Eductor	Yes
Ladder Actuation	Electro-hydraulic

jtlsx7f,1659462710110-19-19AUG22

Capacities

Fuel Tank	400.0 L (105.67 gal)
Engine Crankcase	19.0 L (5.02 gal)
Hydraulic Reservoir	140.0 L (36.98 gal)
Hydraulic System	240.0 L (63.40 gal)
Eaton Transmission Housing	5.0 L (1.32 gal)
Allison Transmission Housing	14.0 L (3.70 gal)
Differential Housing	9.5 L (2.51 gal)
Rear Knees (each)	6.5 L (1.72 gal) for R38
Solution Tank	3300.0 L (871.77 gal)
Rinse Tank	400.0 L (105.67 gal)
Clean Water Tank	15.0 L (3.96 gal)

jtlsx7f,1659532288251-19-27MAR23

Specifications-3600 MD Self-Propelled Sprayers

Introduction to Specifications

NOTE: Specifications and design subject to change without notice.

RP46668,00002A0-19-27MAR23

Engine

Engine John Deere PowerTech
Model 6068 TYE01
Type Inline Diesel Engine, 2 valves
Nominal Power 134 kW (180 hp)
Nominal Speed 2300 rpm
Low Idle Speed 850 +/- 50 rpm
High Idle Speed 2450 +/- 50 rpm
Injection System Conventional
Number of Cylinders 6
Displacement 6.8 L
Aspiration Turbocharged
Cooling System Coolant

edw8krp,1679514172487-19-27MAR23

Fuel System

Injection Pump Stanadyne DB4 rotary pump (mechanical)
Transfer Pump Mechanical fuel pump
Filtering System . . Two-stage with water separator fuel filter system

jtlsx7f,1668076875152-19-10NOV22

Transmission System

Traction Mechanical 4X2
Configuration 1 - Eaton FS 4205 Primary Transmission
Number of Speed Ranges 5 + reverse
Clutch Control Hydraulic
Clutch Reservoir Fluid DOT 3
Configuration 2 - Allison 2500 Primary Transmission
Number of Speed Ranges 4 + reverse
Secondary Transmission Differential Ratio (4.88:1)
Number of Speed Ranges 2 (high and low)

jtlsx7f,1659710018023-19-23MAR23

Hydraulic System

Hydraulic Commands Multi-function lever
Actuation of Hydraulic Motors Hydraulic pump

jtlsx7f,1659527760194-19-07OCT22

Tires, Tread, and Suspension

Tires

Type (option 1) 320/90 R46 R1W 151 A8
Type (option 2) 380/90 R46 R1W 159 A8

Tread

Distance 2.62 or 2.80 m (8.60 or 9.19 ft)
Adjust Manual wheel rotation
Distance Between Axles 4.50 m (14.76 ft)

Suspension

Type Pneumatic

edw8krp,1679514505754-19-22MAR23

Solution System

Solution Pump

Model Hypro 9306
Material Stainless steel
Type Centrifugal
Actuation Hydraulic motor
Maximum Nominal Capacity 810 l/min (214.00 gal/min)
Safety Automatic Shutoff . . Empty tank electric shutoff (with safety reserve)

Load Pump

Brand Banjo
Material Polypropylene
Type Centrifugal
Actuation Hydraulic motor
Maximum Nominal Capacity 738 l/min (195.00 gal/min)
Safety Automatic Shutoff Full tank electric shutoff

Solution Tank

Capacity 3600 L (951.02 gal)
Material Rotational molded high-density polyethylene
Agitation Hydro injectors
Tank Level . . . Level indicator ruler (standard) and electronic level indicator for machines equipped with SIA sustainability and carbon fiber spray boom

Spray Boom

Location Machine rear
Actuation Electro-hydraulic valves
Type (option 1) Steel
Working Width (option 1) 32 m (105.00 ft)

Specifications-3600 MD Self-Propelled Sprayers

Type (option 2)	Hybrid
Working Width (option 2)	36 m (118.11 ft)
Type (option 3)	Carbon Fiber
Working Width (option 3)	36 m (118.11 ft)
Type (option 4)	Carbon Fiber
Working Width (option 4)	40 m (131.23 ft)
Type (option 5)	Hybrid
Working Width (option 5)	40 m (131.23 ft)

Solution Lines

Material	Stainless steel
Dimension	19.05 mm (0.75 in)
Sections (for 32 m (105.00 ft) spray booms)	9 (pneumatic valves)
Sections (for 36 m (118.11 ft) and 40 m (131.23 ft) spray booms)	13 (pneumatic valves)
Type	Mixed

Nozzles

Distance Between Nozzles (5-position nozzle bodies)	35.0 cm (13.78 in)
Distance Between Nozzles (simple nozzle bodies)	52.5 cm (20.69 in)
Nozzle Bodies	5-position or simple with anti-drip system

edw8krp,1679514567326-19-22MAR23

Technology

Display	Generation 4 universal display 4640
JDLINK	Ready (optional as a field kit)
Satellite Guidance	StarFire 6000 (SF1)
PLA Application (standard)	SIA standard tracking (renewal from 5° year on)
PLA Application (optional)	SIA sustainability license (renewal from 5° year on)
Automatic Pilot	AutoTrac ATC 300
DAT (high-voltage detector)	Yes
Remote Control for the Section Shutoff	Only if equipped with SIA sustainability optional

jtlisx7f,1659462699864-19-19AUG22

Comfort Features

Internal Features

Cab	MAP 3
Cab Suspension	Rubber dampers
Pressurization	Yes
Carbon Activated Filter	Yes
Air Conditioning System	Yes
Heating System	Yes
Steering Column	Three movements
Pull-Down Sunshade	Retractable curtain
Operator's Seat	Pneumatic suspension
Radio	AM/FM + USB + Bluetooth

Fire Extinguisher	Yes
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External Features

Rinse Tank	Yes
Clean Water Tank	Yes
Headlights	Six adjustable LED headlights
Night Kit	Yes
Hydraulic Jack	Yes
Eductor	Yes
Ladder Actuation	Electro-hydraulic

jtlisx7f,1659462710110-19-19AUG22

Capacities

Fuel Tank	400.0 L (105.67 gal)
Engine Crankcase	19.0 L (5.02 gal)
Hydraulic Reservoir	140.0 L (36.98 gal)
Hydraulic System	240.0 L (63.40 gal)
Eaton Transmission Housing	5.0 L (1.32 gal)
Allison Transmission Housing	14.0 L (3.70 gal)
Differential Housing	9.5 L (2.51 gal)
Rear Knees (each)	9.5 L (2.51 gal) for R46
Solution Tank	3600.0 L (951.02 gal)
Rinse Tank	400.0 L (105.67 gal)
Clean Water Tank	15.0 L (3.96 gal)

edw8krp,1679948151345-19-27MAR23

Specifications-MAF 5000 Nutrient Applicators

Introduction to Specifications

NOTE: Specifications and design subject to change without notice.

RP46668,00002A0-19-27MAR23

Engine

Engine Deutz 914
Nominal Power 125 kW (168 hp)
Nominal Speed 2300 rpm
Injection System Conventional
Number of Cylinders 6
Displacement 6.5 L
Aspiration Turbocharged and aftercooled
Cooling System Air

edw8krp,1679775807940-19-03APR23

Fuel System

Injection Pump Delphi DP100 rotary pump (mechanical)
Transfer Pump Mechanical fuel pump
Filtering System Two-stage with water separator fuel filter system

jtlsx7f,1659462614659-19-10NOV22

Transmission System

Traction Mechanical 4X2
Primary Transmission **Eaton FS 4205**
Number of Speed Ranges 5 + reverse
Clutch Control Hydraulic
Clutch Reservoir Fluid DOT 3
Secondary Transmission **Differential Ratio (4.88:1)**
Number of Speed Ranges 2 (high and low)

jtlsx7f,1659708880167-19-23MAR23

Hydraulic System

Hydraulic Commands Multi-function lever
Actuation of Hydraulic Motors Hydraulic pump

jtlsx7f,1659462668519-19-07OCT22

Tires, Tread, and Suspension

Tires

Type 380/90 R46 R1W 159 A8

Tread

Distance 2.62 or 2.80 m (8.60 or 9.19 ft)
Adjust Manual adjust
Distance Between Axles 4.04 m (13.25 ft)

Suspension

Type Pneumatic

jtlsx7f,1659979126907-19-21NOV22

Fertilization System

Nutrient Applicator Box

Pressurized with remover. Scale included.

Capacity 4 200 L (4.2 m³)

Maximum Load Capacity 3600 kg (7937 lbs)

Dosifier

ALTINA HP 9X2 with hydraulic control and three package of wheels for different seeds and fertilizers. Variable dosage/mapping.

Turbines

Type Pneumatic

Two ALTINA HP 3200-A turbines with Sauer Danfoss hydraulic motors. Danfoss hydraulic pump.

Others

Air and fertilizers/seeds transporting pipes.

Stainless steel nutrient applicator nozzles with sensors.

Application Boom

Type Steel

Working Width 30 m (98.43 ft)

Location Machine rear

jtlsx7f,1659532816340-19-05DEC22

Technology

General Information

Display Generation 4 universal display 4640

Satellite Guidance StarFire 6000 (SF1)

Automatic Pilot AutoTrac ATC 300

DAT (high-voltage detector) Yes

Fertilizer Control System

Brand Agrotax

Model Agfusion

Crop Monitoring Yes

jtlstx7f,1659532830578-19-05OCT22

Comfort Features

Internal Features

Cab MAF 3
Cab Suspension Rubber dampers
Pressurization Yes
Carbon Activated Filter Yes
Air Conditioning System Yes
Steering Column Three movements
Pull-Down Sunshade Retractable curtain
Operator's Seat Pneumatic suspension
Radio AM/FM + USB

External Features

Clean Water Tank Yes
Headlights Six adjustable LED headlights
Night Kit Yes
Hydraulic Jack Yes
Ladder Actuation Electro-hydraulic
Fire Extinguisher Yes

jtlstx7f,1660141972458-19-19AUG22

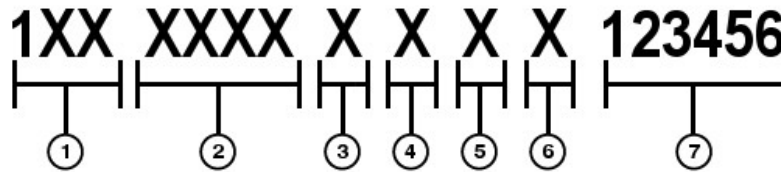
Capacities

Fuel Tank 400.0 L (105.67 gal)
First Oil Filling (without filter) 14.5 L (3.83 gal)
First Oil Filling (with filter) 16.0 L (4.23 gal)
Hydraulic Oil Reservoir 160.0 L (42.27 gal)
Hydraulic System 240.0 L (63.40 gal)
Differential Housing 9.5 L (2.51 gal)
Rear Knees (each) 9.5 L (2.51 gal)
Nutrient Applicator Box 4200.0 L (4.2 m³)
Maximum Load Capacity for the Nutrient Applicator Box . . 3600 kg
(7937 lbs)
Clean Water Tank 15.0 L (3.96 gal)

jtlstx7f,1659532861047-19-05DEC22

Serial Numbers

Interpreting Machine Serial Number



H105725—UN—22AUG12

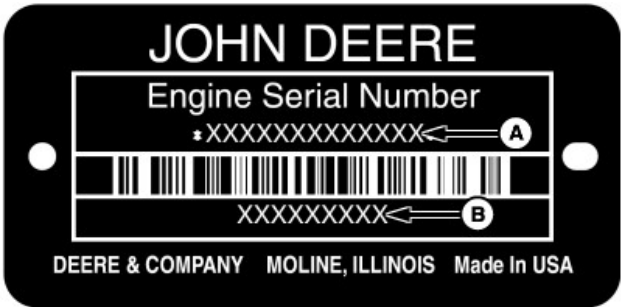
1	Manufacturer Code	AX - John Deere Seeding Group BM - John Deere Montenegro CC - John Deere Arc-les-Gray CD - John Deere Usine De Saran CE - John Deere Iberica Getafe CJ - John Deere Nigel CP - John Deere Tianjin Works CQ - John Deere Horizontina DM - John Deere Roberine Enschede DW - John Deere Davenport Works DX - Deere & Company EK - John Deere Orenburg EX - John Deere Ottumwa Works FD - DCEO-Mannheim FX - DCEO-Mannheim GX - John Deere Power Products H0 - John Deere Harvester Works J0 - Industrias John Deere Argentina S.A. JZ - John Deere Domodedovo KM - Kemper KV - Knoxville LG - Mannheim 5x20 LV - John Deere Augusta Works L0 - John Deere Werke Mannheim MC - DCEO Parts Marketing MX - John Deere Horicon Works MY - John Deere Sirhind Works N4 - John Deere Ningbo Works	NF - John Deere Tianjin Tractor Co.,Ltd NW - John Deere Catalão NX - John Deere Des Moines Works PC - John Deere Intelligent Solutions Group P0 - Industrias John Deere S.A. de C.V. PY - John Deere India Pvt. Ltd RG - John Deere Power Systems RW - John Deere Waterloo Works SA - SABO Gummersbach T8 - John Deere Thibodaux TC - John Deere Turf Care TX - Worldwide Construction And Forestry Division TY - John Deere Merchandise Division WX - John Deere Welland Works WZ - John Deere Fabrik Horst B.V. XJ - Ashok Leyland John Deere Construction Equipment Company, Pvt. Ltd. XU - Xuzhou XCG John Deere Machinery Manufacturing Co., Ltd. YC - John Deere Jiamusi Agricultural Machinery YE - PLA Argentina Las Rosas YF - PLA Brazil Canoas YH - John Deere Harbin Works YN - John Deere Tianjin Construction Works YZ - John Deere Coffeyville Works ZT - JDI GmbH-ISB Z0 - John Deere Werke Zweibrucken 9Q - John Deere Water
2	Machine Model Identifier		
3	Model Identifier Suffix Machine Configuration Code Additional Machine Information		Example: N, T, W, etc.
4	Check Letter		Example: A, B, C, D, etc.
5	Calendar Year of Manufacture		Refer to Year of Manufacture Code table
6	Additional Information		
7	Manufacturing Serial Number		Example: 000001, 000127, etc.

Year of Manufacture Code							
Year	Code	Year	Code	Year	Code	Year	Code
2008	8	2018	J	2028	W	2038	8
2009	9	2019	K	2029	X	2039	9
2010	A	2020	L	2030	Y	2040	A
2011	B	2021	M	2031	1	2041	B
2012	C	2022	N	2032	2	2042	C
2013	D	2023	P	2033	3	2043	D
2014	E	2024	R	2034	4	2044	E
2015	F	2025	S	2035	5	2045	F
2016	G	2026	T	2036	6	2046	G
2017	H	2027	V	2037	7	2047	H

Interpreting Engine Serial Number

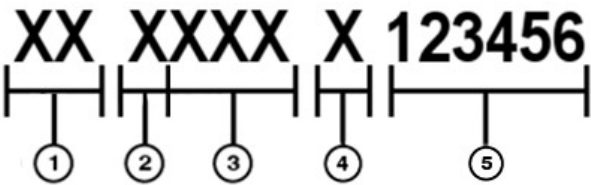
NOTE: The information shown here refers only to John Deere engines. For information related to Deutz engines, see the Deutz engine manual.

Each engine has a 13-digit John Deere engine serial number identifying the producing factory, engine model designation, and a 6-digit sequential number.



H112201—UN—06NOV14
Sample Engine Serial Number Plate

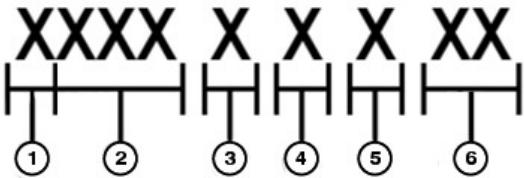
Engine Serial Number (A)



BM010811—UN—17MAR16
Engine Serial Number

1	Factory Code	J0 Industrias John Deere Argentina S.A RG John Deere Power Systems PY John Deere India Pvt. Ltd
2	Number of Cylinders	
3	Total Displacement	Example: 029 2.9 L 045 4.5 L 068 6.8 L 090 9.0 L 135 13.5 L
4	Emission Certification	B Non-Emissions Certified C Tier 1-Stage I D Tier 2-Stage II L Tier 3-Stage III A R Interim Tier 4-Stage III B U or V Final Tier 4-Stage IV
5	Engine Serial Number	Example: 000001, 000123, and so on.

Engine Model Number (B)



BM010812—UN—17MAR16
Engine Model Number

Serial Numbers

1	Number of Cylinders	
2	Total Displacement	Example: 029 2.9 L 045 4.5 L 068 6.8 L 090 9.0 L 135 13.5 L
3	Engine Aspiration	D Naturally aspirated T Turbocharged A Turbocharged and aftercooled, air-to-coolant H Turbocharged and aftercooled, air-to-air S Turbocharged and aftercooled, air-to-sea water
4	User Type	F OEM (John Deere Power Systems) XX Other letters are used to identify John Deere Equipment manufacturing locations
5	Industrial	C Industrial G Gen-Set
6	Engine Configuration	09 PSS (Turbochargers, DOC/DPF, and SCR Series) 94 PVX (Single VGT Turbocharger) 95 PSX (Turbochargers and Aftertreatment Series)

jtlisx7f,1660236758147-19-16NOV22

Identification Numbers

The machine and main components have identification serial number plates.

It is important to record these serial numbers in the following pages. This helps when requesting technical assistance or requesting service parts.

This information identifies the specific configuration of the equipment, making possible to request correct parts for the machine and to have fast and precise technical assistance.

Product Identification Number

NOTE: See details of the product identification number at Interpreting Machine Serial Number in Serial Numbers section.



YE010452—UN—23MAR23

Self-Propelled Sprayers Equipped with Central Engine



YE010451—UN—23MAR23

Self-Propelled Sprayers Equipped with Front Engine



YE010450—UN—23MAR23

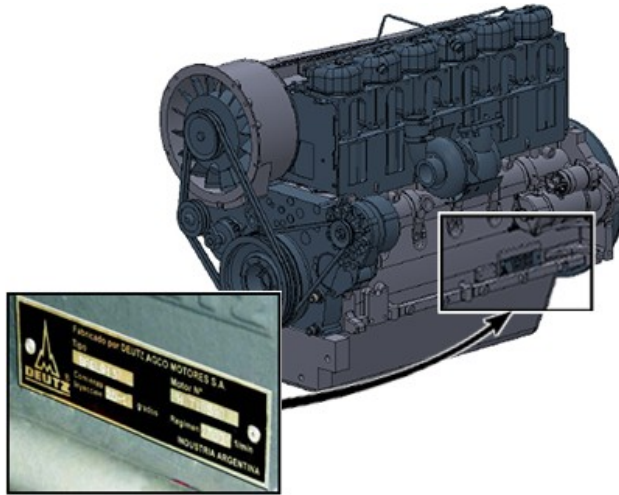
Nutrient Applicator

The product identification number is on machine front right-hand side.

Write here the product identification number:

Engine Identification Number

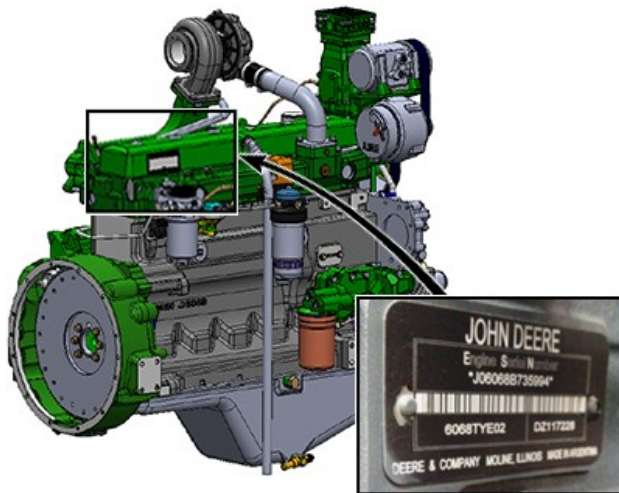
The engine identification number includes the brand, type, serial number, and other important information.



Deutz Engine

YE000100—UN—22SEP22

For Deutz engines, the engine identification number is under the starter motor.



John Deere Engine

YE000099—UN—22SEP22

For John Deere engines, the engine identification number is behind a filter on the engine right-hand side.

NOTE: See details of the engine identification number at Interpreting Engine Serial Number in Serial Numbers section.

Write here the engine serial number:

Transmission Identification Number



Nutrient Applicator Box Identification Number (Nutrient Applicators Only)



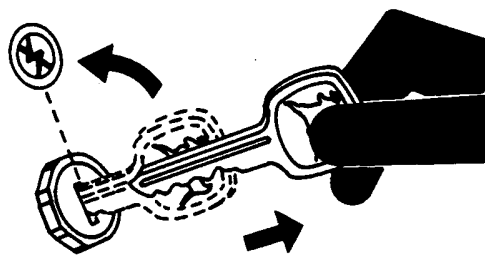
YE000397—UN—09NOV22

The nutrient applicator box has an identification number that identifies the brand, manufacturer, model, and serial number.

Write here the nutrient applicator box serial number:

jtlsx7f,1660236769912-19-22MAR23

Keep Machines Secure



TS230—UN—24MAY89

1. Install vandal-proof devices.
2. When machine is in storage:
 - Lower equipment to the ground
 - Set wheels to widest position to make loading more difficult
 - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.

DX,SECURE2-19-18NOV03

Keep Proof of Ownership



TS1680—UN—09DEC03

1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
 - Mark your machine with your own numbering system
 - Take color photographs from several angles of each machine

DX,SECURE1-19-18NOV03

Lubrication and Service Records

How to Use the Service Records

NOTE: For specific and detailed service and maintenance information, refer to the appropriate system service section in this Operator's Manual.

In this section, you find a summary of all the machine services, divided by their respective intervals.

For each service interval, a chart is provided for recording maintenance and service information. Use a pen to record it in the following fields every time a service interval is reached:

- **Date:** Fill in the date the service is performed.

- **Machine Hours:** Fill in the current working hours of the machine.
- **Signature:** Field intended for signature of the responsible service technician or dealer.

Always keep all charts updated to create a historical record of all service and maintenance done on your machine. Such information can help dealers with better troubleshooting, and even add more value to your machine in a sale.

K2F379Y,0000307-19-28JUL21

Start of Season Service Record (Nutrient Applicators Only)

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Check and tighten nutrient application system screws.

edw8krp,1669922155534-19-05DEC22

First 50 Hours Service Record

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Replace the return filter (nutrient applicators only).
- Replace the pressure filter (nutrient applicators only).
- Change differential oil.
- Change the oil of Eaton transmission housing.

edw8krp,1669923139108-19-06DEC22

First 100 Hours Service Record

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Adjust the axle ends.

edw8krp,1670353172152-19-06DEC22

First 250 Hours Service Record

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Adjust the chain tension and upper and lower shafts.

edw8krp,1670349022525-19-06DEC22

First 500 Hours Service Record

[illegible]

- Change engine oil.¹
- Replace engine oil filter.¹
- Adjust the chain tension and upper and lower shafts.

edw8krp,1669923781868-19-06DEC22

Daily or Every 10 Hours Service Record

[illegible]

¹ If Break-In Plus Engine Oil is used.

[illegible]

[illegible]

[illegible]

[illegible]

Lubrication and Service Records

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Check engine oil level.
- Check coolant level.
- Drain water from the fuel filters.
- Bleed the brake system.
- Clean the machine.

- Clean the solution system filters (nutrient applicators).
- Lubricate the chains (nutrient applicators).
- Drain water from the pneumatic system.

jtlx7f,1669048622110-19-05DEC22

Every 50 Hours or Weekly Service Record

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

[illegible]

- Check level of the fluid of brakes.
- Control the general functioning of the service brake system.
- Check hydraulic oil level.
- Check tire inflation pressures.
- General greasing of the machine.
- Check the fuse box (carbon fiber spray booms only).
- Check the T3 tensioner (carbon fiber spray booms only).
- Tighten wheel nuts.
- Lubricate the shafts (nutrient applicators).

- Check the condition of the dosifier wheels (nutrient applicators).

jtlsx7f,1669048691109-19-30MAR23

NOTE: Comply with all the instructions described in the Fuels, Lubricants, and Coolant—John Deere Engines Only section.

IMPORTANT: The engine oil and filter service intervals vary according to the engine oil and to the sulfur content of the fuel used.

[illegible]

- Change engine oil.^{2 3}
- Replace engine oil filter.^{2 3}

jtlisx7f,1669048862234-19-05DEC22

² If using other oils than Plus-50 II.

³ If using fuel with 5000-10 000 mg/kg (5000-10 000 ppm) sulfur.

Every 250 Hours Service Record

IMPORTANT: The engine oil and filter service intervals vary according to the engine oil and to the sulfur content of the fuel used.

NOTE: Comply with all the instructions described in the Fuels, Lubricants, and Coolant—John Deere Engines Only section.

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Check the oil level of the Eaton transmission housing.
- Check differential oil level.
- Check the driveshaft.
- Check the oil level of the Allison transmission housing.
- Check level of the fluid of clutch (manual machines only).
- Lubricate the clutch system ball (manual machines only).
- Check the oil level of the rear axle knees.
- Check the oscillation structure of the spray/application boom.

- Change engine oil.^{4 5}
- Replace engine oil filter.^{4 5}
- Check pneumatic lines.
- Check machine electrical connections.
- Check alignment of front and rear axles.
- Check the steering ends, ball joints, and bushings.
- Check condition of the brake assemblies.
- Check and adjust park brake.
- Replace the activated carbon filter.
- Check engine mounts.

jtlisx7f,1680178273110-19-30MAR23

Every 400 Hours Service Record (Nutrient Applicators Only)

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

⁴ If using other oils than Plus-50 II and fuel with less than 5000 mg/kg (5000 ppm) sulfur.

⁵ If using Plus 50-II oil and fuel with 5000-10 000 mg/kg (5000-10 000 ppm) sulfur.

Lubrication and Service Records

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Replace the return filter.
- Replace the pressure filter.

jtlisx7f,1669049422599-19-05DEC22

Every 500 Hours or Every Year Service Record

IMPORTANT: The engine oil and filter service intervals vary according to the engine oil and to the sulfur content of the fuel used.

NOTE: Comply with all the instructions described in the Fuels, Lubricants, and Coolant—John Deere Engines Only section.

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

Lubrication and Service Records

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Replace hydraulic oil return filter (self-propelled sprayers).
- Replace the hydraulic suction filters.
- Check axle end hub.
- Check torque of brake caliper components.
- Check the position of the inner spray boom section.⁶
- Check position of the breakaway section support.⁷
- Check the breakaway system.⁷
- Check the T6/T7 tensioner.⁷
- Check the folding system.⁶
- Check engine electrical ground connections.
- Check engine speeds.
- Clean engine vent tube.

- Change engine oil.^{8 9}
- Replace engine oil filter.^{8 9}
- Test coolant.
- Check cooling system.
- Pressure testing cooling system.
- Replace fuel filters.
- Check air intake system.
- Check and tighten turbine screws (nutrient applicators).
- Replace the machine bearings (nutrient applicators).
- Check the joints of the turbine drives (nutrient applicators).

jtlisx7f,1680179097613-19-05APR23

Every 1000 Hours Service Record

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Check the hydraulic system pressure.
- Change the oil of the Eaton transmission housing.
- Change differential oil.
- Change the hydraulic oil.

- Change the oil of the rear axle knees.
- Adjust the chain tension and upper and lower shafts.
- Rotate the tires.
- Check the bushings (if equipped with carbon fiber or hybrid spray booms).
- Check and adjust the suspension assemblies.

⁶ If equipped with carbon fiber spray booms.

⁷ If equipped with carbon fiber or hybrid spray booms.

⁸ If using Plus-50 II Engine Oil.

⁹ If using fuel with less than 5000 mg/kg (5000 ppm) sulfur.

- Adjust the axle ends.

jtlstx7f,1669050104055-19-06DEC22

Every 1500 Hours or 2 Years Service Record

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Adjust chain tension and upper and lower shafts (if equipped with Allison automatic transmission).
- Replace the oil filter of the Allison transmission housing.
- Replace engine air cleaners (machines equipped with front engine).

jtlstx7f,1669050372208-19-05DEC22

Every 2000 Hours or 2 Years Service Record

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

Lubrication and Service Records

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Adjust the engine valve clearance.
- Check thermovalve opening temperature.
- Replace the engine thermovalves.¹⁰
- Check engine torsion damper (6-cylinder engines only).

- Change the Engine Coolant.¹⁰

jtlisx7f,1669050377872-19-05DEC22

Every 3000 Hours or 4 Years Service Record

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Change the oil of the Allison transmission housing.

jtlisx7f,1669050380473-19-02DEC22

Every 4500 Hours or 5 Years Service Record

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

¹⁰ If Cool-Gard II or Cool-Gard II PG is not used.

Lubrication and Service Records

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Replace engine torsion damper (6-cylinder engines only).

jtlisx7f,1669050907892-19-02DEC22

Every 6000 Hours or 6 Years Service Record

Date	Hours	Signature	Date	Hours	Signature	Date	Hours	Signature

- Replace the engine thermostats.¹¹
- Change the engine coolant.¹¹

jtlisx7f,1669050954561-19-07DEC22

¹¹ If Cool-Gard II or Cool-Gard II PG is used.

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John Deere Service Literature Available

Technical Information

Technical information can be purchased from John Deere. Publications are available in print or CD-ROM format.

Orders can be made using one of the following:

- John Deere Technical Information Store: **www.JohnDeere.com/TechInfoStore**
- Call 1-800-522-7448
- Contact your John Deere dealer

Available information includes:



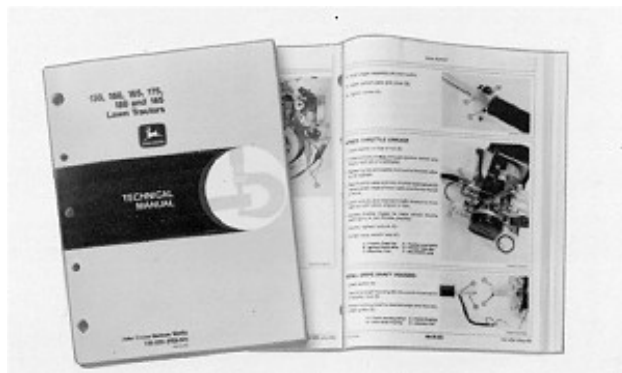
TS189—UN—17JAN89

PARTS CATALOGS list service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.



TS191—UN—02DEC88

OPERATOR'S MANUALS providing safety, operating, maintenance, and service information.



TS224—UN—17JAN89

TECHNICAL MANUALS outlining service information for your machine. Included are specifications, illustrated assembly and disassembly procedures, hydraulic oil flow diagrams, and wiring diagrams. Some products have separate manuals for repair and diagnostic information. Some components, such as engines, are available in a separate component technical manual.



TS1663—UN—10OCT97

EDUCATIONAL CURRICULUM including five comprehensive series of books detailing basic information regardless of manufacturer:

- Agricultural Primer series covers technology in farming and ranching.
- Farm Business Management series examines “real-world” problems and offers practical solutions in the areas of marketing, financing, equipment selection, and compliance.
- Fundamentals of Services manuals show you how to repair and maintain off-road equipment.
- Fundamentals of Machine Operation manuals explain machine capacities and adjustments, how to improve machine performance, and how to eliminate unnecessary field operations.
- Fundamentals of Compact Equipment manuals provide instruction in servicing and maintaining equipment up to 40 PTO horsepower.

DX,SERV LIT-19-07DEC16

John Deere—Keeps You On The Job

John Deere Parts



TS100—UN—23AUG88

We help minimize downtime by putting genuine John Deere parts in your hands in a hurry.

That's why we maintain a large and varied inventory—to stay a jump ahead of your needs.

DX,IBC,A-19-04JUN90

School is never out for John Deere service technicians.

Training schools are held regularly to be sure our personnel know your equipment and how to maintain it.

Result?

Experience you can count on!

DX,IBC,C-19-04JUN90

Prompt Service



TS103—UN—23AUG88

Our goal is to provide prompt, efficient care when you want it and where you want it.

We can make repairs at your place or at ours, depending on the circumstances: see us, depend on us.

JOHN DEERE SERVICE SUPERIORITY: We'll be around when you need us.

DX,IBC,D-19-04JUN90

The Right Tools



TS101—UN—23AUG88

Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly . . . to save you time and money.

DX,IBC,B-19-04JUN90

Well-Trained Technicians



TS102—UN—23AUG88

