

JOHN DEERE
WORLDWIDE COMMERCIAL & CONSUMER
EQUIPMENT DIVISION

Lawn and Garden Tractor
X595

OMM149448 L2

OPERATOR'S MANUAL



JOHN DEERE

⚠ 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.

California Proposition 65 Warning

North American Version
Litho in U.S.A.

INTRODUCTION

Thank You for Purchasing a John Deere Product

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

Using Your Operator's Manual

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

Reading your operator's manual will help you and others avoid personal injury or damage to the machine.

Information given in this manual will provide the operator with the safest and most effective use of the machine.

Knowing how to operate this machine safely and correctly will allow you to train others who may operate this machine.

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

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

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

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

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

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

Special Messages

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



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

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

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

PRODUCT IDENTIFICATION

Record Identification Numbers

Lawn and Garden Tractors

X595 PIN (020225-)

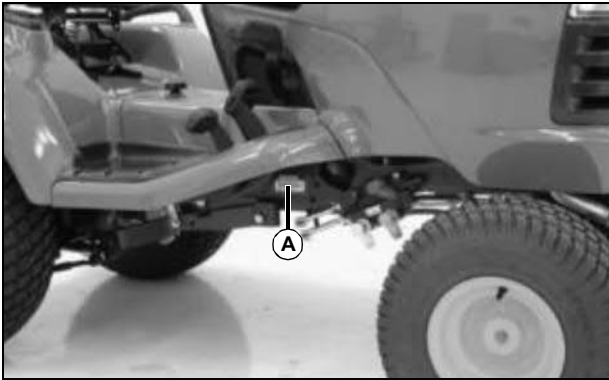
If you need to contact an Authorized Service Center for information on servicing, always provide the product model and serial number.

You will need to locate the model and serial number for the machine and for the engine of your machine and record the information in the spaces provided below.

DATE OF PURCHASE:

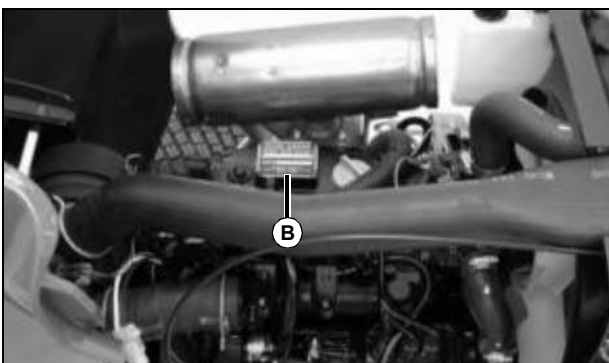
DEALER NAME:

DEALER PHONE:



MX13553

PRODUCT IDENTIFICATION NUMBER (A):



MX13561

ENGINE SERIAL NUMBER (B):

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>

TABLE OF CONTENTS

Safety	1
Operating	10
Replacement Parts	28
Service Intervals	29
Service Lubrication	31
Service Engine	32
Service Transmission	43
Service Electrical	46
Service Miscellaneous	50
Troubleshooting	54
Storage	57
Assembly	59
Specifications	61
Warranty	64
Index	68

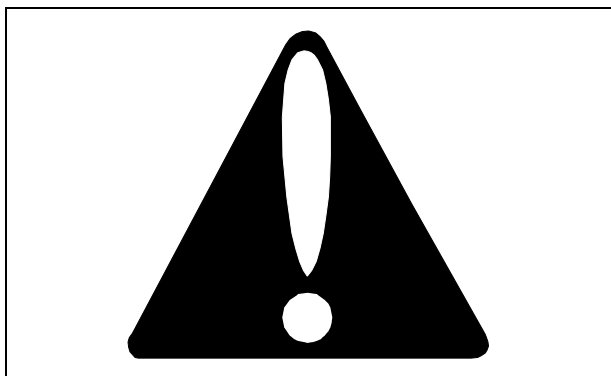
All information, illustrations and specifications in this manual are based on the latest information at the time of publication. The right is reserved to make changes at any time without notice.

COPYRIGHT© 2003
Deere & Co.
John Deere Worldwide Commercial and
Consumer Equipment Division
All rights reserved
Previous Editions
COPYRIGHT© 2002

OMM149448 L2 - English

SAFETY

Understanding The Machine Safety Labels



Safety-Alert Symbol

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

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

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

WARNING: AVOID SERIOUS INJURY OR DEATH



MX13555, M142231b

- Read operator's manual.
- Drive up and down slopes, not across.
- Avoid sudden turns.
- Add proper ballast for operating conditions and machine configuration - See operator's manual.
- If machine stops going uphill, stop blade and back down slowly.
- Keep safety devices (guards, shields, and switches) in place and working.

- Remove objects that can be thrown by blade.
- When leaving machine: Stop engine, Set park brake, Remove key.

DANGER: ROTATING BLADES CUT OFF ARMS AND LEGS



MX13555, M142231a

- Do not mow when children or others are around.
- Do not mow in reverse.
- Look down and behind before and while backing.
- Never carry children even with blades off.

WARNING: AVOID INJURY from PTO

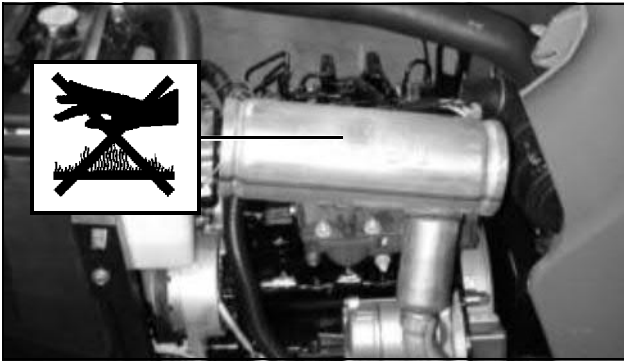


MX13615, M146727

- Keep all shields in place.
- Keep hands, feet and clothing away.
- Operate only with 540 RPM.

SAFETY

CAUTION: HOT SURFACE

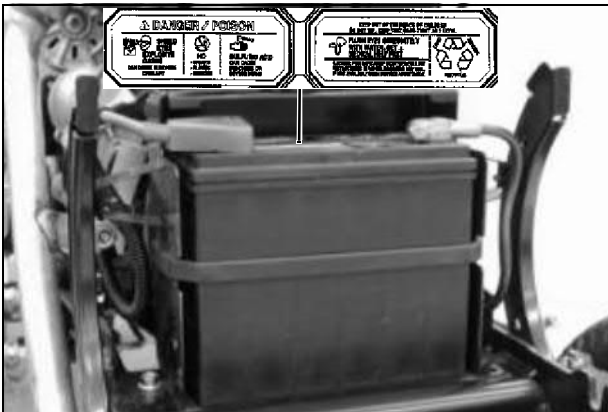


MX13572

Picture Note: No-text warning molded into muffler.

Do not touch engine muffler, it may be hot.


DANGER: POISON



MX13578, MX13545

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

Emission Control System Certification Label

IMPORTANT ENGINE INFORMATION	
THIS ENGINE CONFORMS TO <input type="checkbox"/> MODEL YEAR U. S. EPA REGULATIONS NONROAD COMPRESSION IGNITION ENGINES.	
THIS ENGINE IS CERTIFIED TO OPERATE ON "US-20" FUEL	
ENGINE FAMILY : <input type="text"/>	DISPLACEMENT : <input type="text"/> LITERS
ENGINE MODEL : <input type="text"/>	EMISSION CONTROL SYSTEM : EM
FUEL RATE : <input type="text"/> L/MIN/STROKE @ <input type="text"/> RPM	
REFER OWNER'S MANUAL FOR MAINTENANCE SPECIFICATIONS AND ADJUSTMENTS	
YANMAR DIESEL ENGINE	
Co., Ltd.	



CAUTION: Avoid injury! Statutes providing severe penalties for tampering with emissions controls may apply at the user's location.

The emissions warranty described in the warranty section applies only to those engines marketed by John Deere that have been certified by the United States Environmental Protection Agency (EPA) and/or California Air Resources Board (CARB); and used in the United States in non-road mobile (self-propelled or portable/transportable¹) equipment. The presence of an emissions label like the one shown signifies that the engine has been certified with the EPA and/or CARB. The EPA and CARB warranties only apply to new engines having the certification label affixed to the engine and sold as stated above in the geographic areas governed by the regulating agencies.

NOTE: The hp/kW rating on the engine emissions certification label specifies the gross engine hp/kW, which is flywheel power without fan. In most applications this will not be the same rating as the advertised vehicle hp/kW rating.

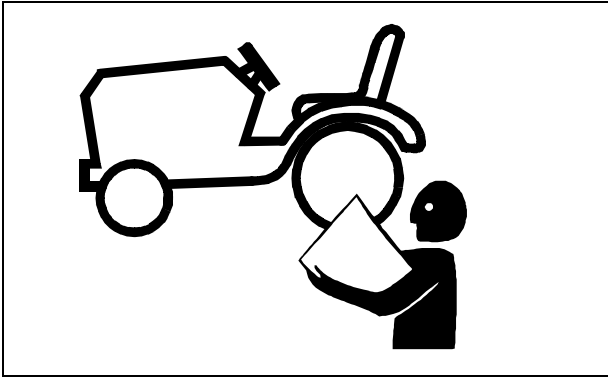
Certification

Your mower has been certified by an independent laboratory for compliance with American National Standard B-71.1, "Safety Specifications" for Power Lawn Mowers, Lawn and Garden Tractors, and Lawn Tractors.

¹ Equipment moved at least once every 12 months.

SAFETY

Operating Safely



- Read, understand and follow all instructions in the manual, on the machine and on the safety video before starting.
- Only allow responsible adults, who are familiar with the instructions to operate the machine. Local restrictions may restrict the age of the operator.
- Be thoroughly familiar with the controls and the proper use of the machine before starting.
- Inspect machine before you operate. Be sure hardware is tight. Repair or replace damaged, badly worn, or missing parts. Replace faulty silencers. Be sure guards and shields are in good condition and fastened in place. Make any necessary adjustments before you operate.
- Before using, always visually inspect to see that the blades, blade bolts and the mower assembly are not worn and damaged. Replace worn and damaged blades and bolts in sets to preserve balance.
- Be sure all drives are in neutral and parking brake is locked before starting engine. Only start engine from the operator's position.
- Do not change the engine governor settings or overspeed the engine. Operating the engine at excessive speed can increase the hazard of personal injury.
- Do not operate mower without discharge chute or entire grass catcher in place. Never operate with the discharge deflector raised, removed, or altered, unless using a grass catcher.
- Check brake action before you operate. Adjust or service brakes as necessary.
- Stop machine if anyone enters the area.
- If you hit an object or if abnormal vibration occurs, stop the machine and inspect it. Make repairs before you operate. Keep machine and attachments properly maintained and in good working order.
- Be aware of the mower discharge direction and make sure that no one is in the path of the discharge direction.

- Do not leave machine unattended when it is running.
- Only operate during daylight or with good artificial light.
- Slow down and be careful of traffic when operating near or crossing roadways. Stop blades before crossing roads or sidewalks. Use care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
- Do not operate machine if you are under the influence of drugs or alcohol.
- Use only accessories and attachments approved by the manufacturer of the machine. Keep safety labels visible when installing accessories and attachments.
- Older adults are involved in a large percentage of riding mower accidents involving injury. These operators should evaluate their ability to operate a mower safely enough to protect the operator and others from serious injury.
- Do not wear radio or music headphones. Safe service and operation requires your full attention.
- Disengage drive to attachments when transporting or not in use.
- Reduce the throttle setting during engine run-out and, if the engine is provided with a fuel shut-off valve, turn the fuel off at the conclusion of mowing.
- When machine is left unattended, stored, or parked, lower the mower deck unless a positive mechanical lock is used.

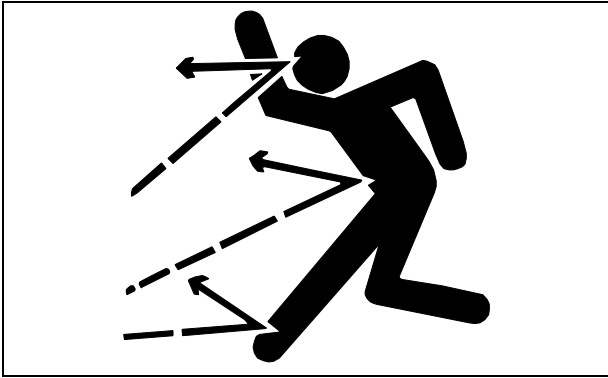
Using a Spark Arrestor

The engine in this machine is not equipped with a spark arrestor muffler. It is a violation of California Public Resource Code Section 4442 to use or operate this engine on or near any forest-covered, brush-covered or grass-covered land unless the exhaust system is equipped with a spark arrestor meeting any applicable local or state laws. Other states or federal areas may have similar laws.

A spark arrestor for your machine may be available from your authorized dealer. An installed spark arrestor must be maintained in good working order by the operator.

SAFETY

Checking Mowing Area



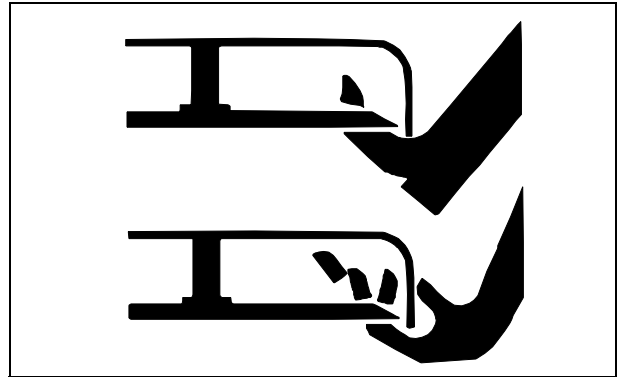
- Clear mowing area of objects that might be thrown. Keep people and pets out of mowing area.
- Low-hanging branches and similar obstacles can injure the operator or interfere with mowing operation. Before mowing, identify potential obstacles such as low-hanging branches, and trim or remove those obstacles.
- Study mowing area. Set up a safe mowing pattern. Do not mow where traction or stability is doubtful.
- Test drive area with mower lowered but not running. Slow down when you travel over rough ground.

Parking Safely

1. Stop machine on a level surface, not on a slope.
2. Disengage mower blades or any other attachments.
3. Lower attachments to the ground.
4. Lock the park brake.
5. Stop the engine.
6. Remove the key.
7. Wait for engine and all moving parts to stop before you leave the operator's seat.
8. Close fuel shut-off valve, if your machine is equipped.
9. Disconnect the negative battery cable or remove the spark plug wire (for gasoline engines) before servicing the machine.

Rotating Blades are Dangerous

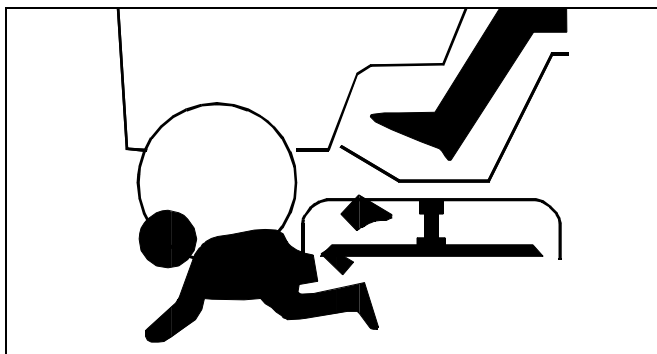
HELP PREVENT SERIOUS OR FATAL ACCIDENTS:



- Rotating blades can cut off arms and legs, and throw objects. Failure to observe safety instructions could result in serious injury or death.
- Keep hands, feet and clothing away from mower deck when engine is running.
- Be alert at all times, drive forward carefully. People, especially children can move quickly into the mowing area before you know it.
- Before backing up, stop mower blades or attachments and look down and behind the machine carefully, especially for children.
- Do not mow in reverse.
- Shut off blades when you are not mowing.
- Park machine safely before leaving the operator's station for any reason including emptying the catchers or unplugging the chute.
- The mower blades should stop in approximately five seconds when the mower is disengaged. If you believe that your blades may not be stopping in that period of time, take your machine to your authorized dealer where they can safely check and service your machine.

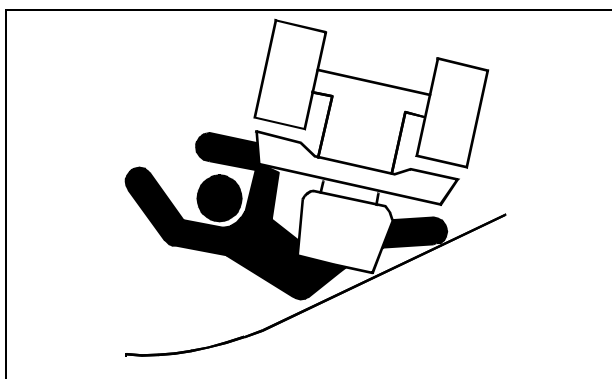
SAFETY

PROTECT CHILDREN:



- Tragic accidents can occur if the operator is not alert to the presence of children. Keep children out of the mowing area and under the watchful care of another responsible adult.
- Never assume that children will remain where you last saw them. Children are attracted to mowing activity, stay alert to the presence of children.
- Keep children indoors when you are mowing. Turn the machine off if a child enters the mowing area.
- Do not let children or an untrained person operate the machine.
- Do not carry or let children ride on any attachment or machine even with the blades off. Do not tow children in a cart or trailer.

Avoid Tipping



- Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.
- Drive up and down a hill - not across.
- Do not mow or operate on slopes you cannot back up.
- Keep all movement on slopes slow and gradual. Do not

make sudden changes in speed or direction.

- Use a slow speed when operating on a slope. Choose a low gear or speed so that you will not have to stop or shift while on the slope.
- Tires may lose traction on slopes even though the brakes are functioning properly.
- Do not turn on slopes unless necessary. Turn slowly and turn downhill. Do not shift to neutral and coast downhill.
- Stay alert for holes and other hidden hazards in the terrain. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Keep away from drop-offs, ditches and embankments. The machine could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- Use extra care with grass catchers or other attachments. These can change the stability of the machine. Do not use grass catcher on steep slopes.
- Follow the manufacturer's recommendations for wheel weights or counterweights for added stability when operating on slopes or using front or rear mounted attachments. Remove weights when not required.
- Do not stop when going up hill or down hill. If machine stops going up hill or tires lose traction, disengage mower blades and back down slowly.
- Operating machine when grass is wet can cause reduced traction and sliding.
- Do not try to stabilize the machine by putting your foot on the ground.

Keep Riders Off



MIF

- Only allow the operator on the machine. Keep riders off.
- Riders on the machine or attachment may be struck by foreign objects or thrown off the machine causing serious injury.
- Riders obstruct the operator's view resulting in the

SAFETY

machine being operated in an unsafe manner.

Stay Clear of Rotating Drivelines



Entanglement in rotating driveline can cause serious injury or death.

- Wear close fitting clothing.
- Stop the engine and be sure PTO driveline is stopped before getting near it.

Checking Wheel Bolts

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

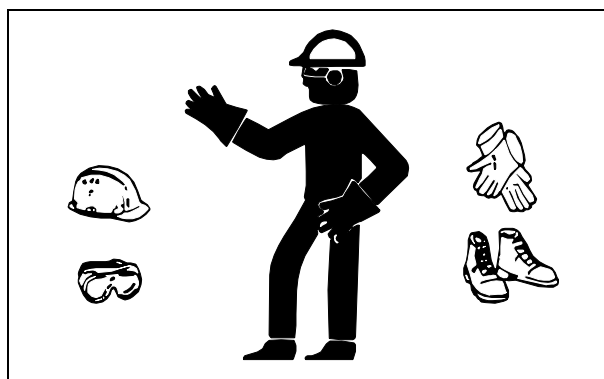
Towing Loads Safely

- Stopping distance increases with speed and weight of towed load. Travel slowly and allow extra time to stop.
- Total towed weight must not exceed combined weight of pulling machine, ballast and operator. Use counterweights or wheel weights as described in the attachment or pulling machine operator manual.
- Excessive towed load can cause loss of traction and loss of control on slopes. Reduce towed weight when operating on slopes.
- Never allow children or others in or on towed equipment.
- Use only approved hitches. Tow only with a machine that has a hitch designed for towing. Do not attach towed equipment except at the approved hitch point.
- Follow the manufacturer's recommendations for weight

limits for towed equipment and towing on slopes.

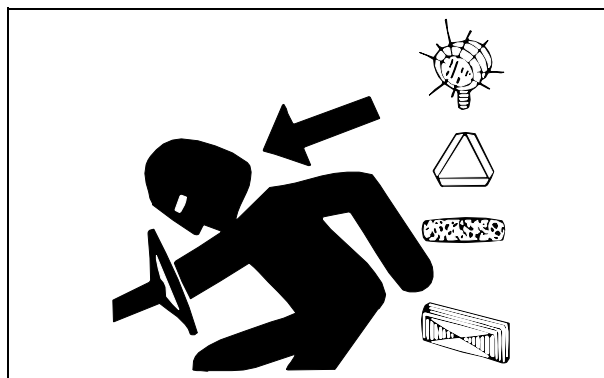
- If you cannot back up a slope with a towed load, the slope is too steep to operate on with the towed load. Reduce the towed load or do not operate.
- Do not turn sharply. Use additional caution when turning or operating under adverse surface conditions. Use care when reversing.
- Do not shift to neutral and coast downhill.

Wear Appropriate Clothing



- Always wear safety goggles or safety glasses with side shields when operating the machine.
- Wear close fitting clothing and safety equipment appropriate for the job.
- While mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
- Wear a suitable protective device such as earplugs. Loud noise can cause impairment or loss of hearing.

Driving Safely on Public Roads



Avoid personal injury or death resulting from a collision with

SAFETY

another vehicle on public roads:

- Use safety lights and devices. Slow moving machines when driven on public roads are hard to see, especially at night.
- Whenever driving on public roads, use flashing warning lights and turn signals according to local regulations. Extra flashing warning lights may need to be installed.

Practice Safe Maintenance



MIF

- Only qualified, trained adults should service this machine.
- Understand service procedure before doing work. Keep area clean and dry.
- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
- Never lubricate, service, or adjust machine while it is moving. Wait for all movement to stop on machine before adjusting, cleaning or repairing.
- Keep safety devices in place and in working condition. Keep hardware tight.
- On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.
- Keep hands, feet, clothing, jewelry, and long hair away from any moving parts, to prevent them from getting caught.
- Lower attachments to the ground before cleaning or servicing machine. Disengage all power and stop the engine. Lock park brake and remove the key. Let machine cool.
- Disconnect battery or remove spark plug wire (for gasoline engines) before making any repairs.
- Before servicing machine, carefully release pressure from any components with stored energy, such as hydraulic components.
- Keep all nuts and bolts tightened, especially blade

attachment bolts.

- Securely support any machine elements that must be raised for service work. Use jack stands or lock service latches to support components when needed.
- Never run engine unless park brake is locked.
- Use care when checking blades. Wrap blades or wear gloves and use caution when servicing them. Only replace blades. Never straighten or weld them.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Replace all worn or damaged safety and instruction decals.
- Grass catcher components are subject to wear, damage, and deterioration which could expose moving parts or allow objects to be thrown. Check components frequently and replace with manufacturer's recommended parts when necessary.
- Charge batteries in an open, well-ventilated area, away from sparks. Unplug battery charger before connecting or disconnecting from the battery. Wear protective clothing and use insulated tools.
- Do not modify machine or safety devices. Unauthorized modifications may impair its function and safety.
- Check brake operation frequently. Adjust and service as needed.

Avoid High Pressure Fluids



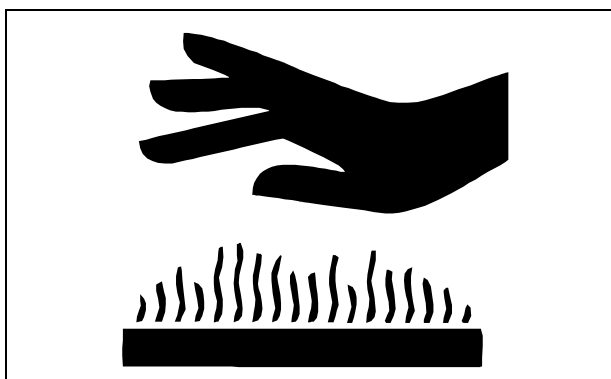
MIF

- Hydraulic hoses and lines can fail due to physical damage, kinks, age, and exposure. Check hoses and lines regularly. Replace damaged hoses and lines.
- Hydraulic fluid connections can loosen due to physical damage and vibration. Check connections regularly. Tighten loose connections.
- 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.

SAFETY

- Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.
- If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A. Information may be obtained in the United States and Canada only by calling 1-800-822-8262.

Prevent Fires



- Remove grass and debris from engine compartment and muffler area, before and after operating machine, especially after mowing or mulching in dry conditions.
- To reduce fire hazard, keep engine and engine compartment free of grass, leaves, or excessive grease.
- Allow engine to cool before storing in any enclosure.
- Never remove fuel cap, or add fuel with engine running or hot. Allow engine to cool for several minutes.
- Never store equipment with fuel in the tank inside a building where fumes may reach an open flame or spark.

Tire Safety



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

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

Handling Fuel Safely

Fuel and fuel vapors are highly flammable:



- Do not refuel machine while you smoke, when machine is near an open flame or sparks, or when engine is running. Stop engine and allow to cool before filling.
- Never remove the fuel cap or add fuel with the engine

SAFETY

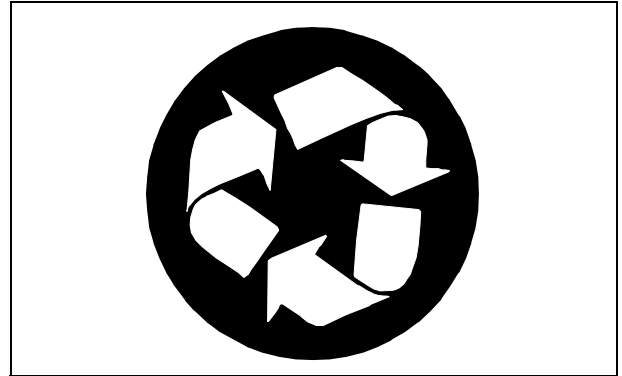
running.

- Never fill fuel tank or drain fuel from a machine in an enclosed area. Fill fuel tank outdoors.
- Prevent fires. Clean up spilled fuel immediately. If fuel is spilled on clothing, change clothing immediately.
- Do not store fuel in container or machine with fuel in tank in a building where fumes may reach an open flame or spark.
- Prevent fire and explosion caused by static electric discharge. Use only non-metal, portable fuel containers approved by the Underwriter's Laboratory (U.L.) or the American Society for Testing & Materials (ASTM). If using a funnel, make sure it is plastic and has no screen or filter.



- Static electric discharge can ignite gasoline vapors in an ungrounded fuel container. Remove the fuel container from the bed of a vehicle or the trunk of a car and place on the ground away from the vehicle before filling. Keep nozzle in contact with container opening while filling. Do not use a nozzle lock-open device.
- When practical, remove equipment from trailers or truck beds and refuel them on the ground. If this is not possible, use a portable, plastic fuel container to refuel equipment on a truck bed or trailer.
- For gasoline engines, do not use gas with methanol. Methanol is harmful to your health and to the environment.

Handling Waste Product and Chemicals



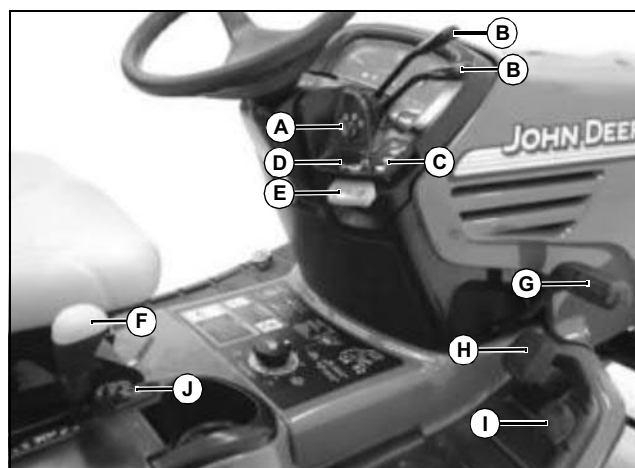
Waste products, such as, used oil, fuel, coolant, brake fluid, and batteries, can harm the environment and people:

- Do not use beverage containers for waste fluids - someone may drink from them.
- See your local Recycling Center or authorized dealer to learn how to recycle or get rid of waste products.
- A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques. The seller of the chemical products used with your machine is responsible for providing the MSDS for that product.

OPERATING

Daily Operating Checklist

- Test safety systems.
- Check tire pressure.
- Check fuel level.
- Check engine oil level.
- Check transmission oil level.
- Check coolant level on liquid cooled engine.
- Remove grass and debris from engine compartment and muffler area, before and after operating machine.
- Clean air intake screens.
- Check area below machine for leaks.
- Check operation of backup lights.



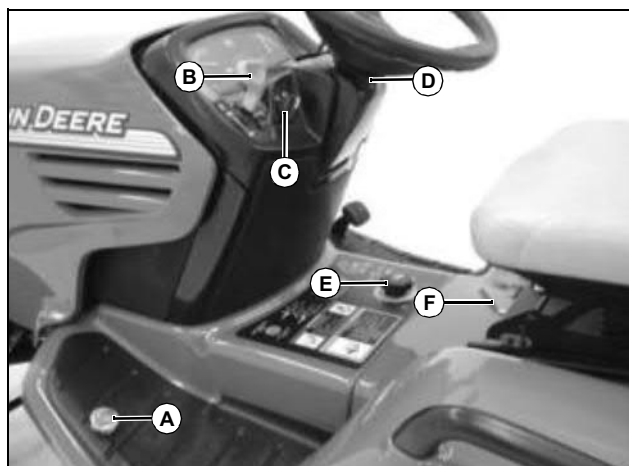
MX13563

- A - Key Switch**
- B - Hydraulic Control Levers**
- C - Power-Take-Off (PTO) / Reverse Implement Option (RIO) Switch**
- D - Cruise Control Latch**
- E - Park Brake Latch**
- F - 2WD/4WD Lever**
- G - Brake Pedal**
- H - Forward Travel Pedal**
- I - Reverse Travel Pedal**
- J - 12-Volt Outlet Switch**

Avoid Damage to Plastic and Painted Surfaces

- Do not wipe plastic parts unless rinsed first.
- Insect repellent spray may damage plastic and painted surfaces. Do not spray insect repellent near machine.
- Be careful not to spill fuel on machine. Fuel may damage surface. Wipe up spilled fuel immediately.

Operator Station Controls



MX13555

- A - Differential Lock Pedal**
- B - Throttle Lever**
- C - Light Switch**
- D - Tilt Steering Lever**
- E - Mower Height Control Knob**
- F - Seat Adjustment Lever**

Miscellaneous Controls



MX13565

- A - Free-Wheeling Lever**



Suggest:

If the above button click is invalid.

Please download this document

first, and then click the above link

to download the complete manual.

Thank you so much for reading

OPERATING

Adjusting Tilt Steering Wheel



MX13558

1. Move tilt steering lever (A) rearward.
2. Push or pull steering wheel to a comfortable operating position.
3. Release lever.
4. Check to be sure steering wheel is locked in position.

Adjusting Seat

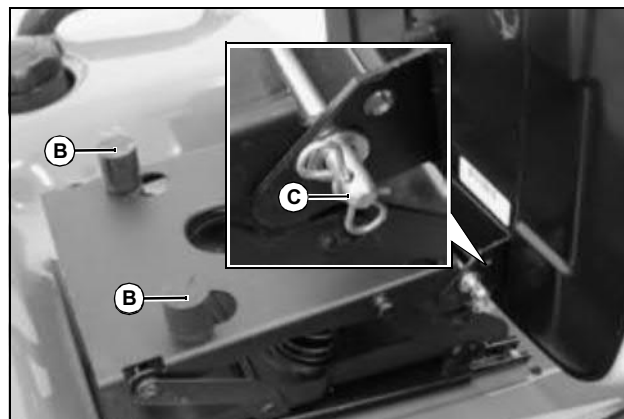
Adjusting Seat Position



MX13568

1. Move seat adjustment lever (A) to the left.
2. Slide seat forward or backward to desired position.
3. Release lever.
4. Check to be sure seat is locked in position.

Adjusting Seat Height



MX13550, MX13549

Rubber stops (B) may be flipped to position at two different heights.

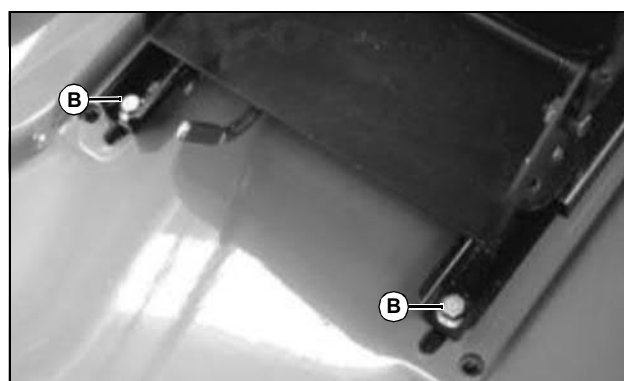
Seat rod (C) may be positioned at three different heights.

Positioning Slide Rails



MX15410

1. Remove two bolts (A) in rear of slide rail.



MX15411

2. Loosen two bolts (B) in front of slide rail.

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>