

JOHN DEERE
AG & TURF DIVISION

John Deere Select Series™ Tractor
X740, X748, X749
Ultimate™ Series
OMM164415 F1
OPERATOR'S MANUAL



JOHN DEERE

Export Version
Printed 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 (-----), the item referred to is hidden from view.

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

Machine Use

This machine is designed solely for use in customary lawn mowing operations, for park and amenity area maintenance and for winter work. Use in any other way is considered as contrary to the intended use.

This machine is not intended for use in forestry operations. The operator station does not provide adequate protection to the occupants in that environment.

The cab available from the manufacturer is not designed to

provide adequate protection from hazardous substances. The operator must wear appropriate personal protection equipment.

The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the intended use.

This machine should be operated, serviced and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (accident prevention). The accident prevention regulations, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times.

Setting fuel delivery beyond published factory specifications or otherwise overpowering will result in loss of warranty protection for this machine.

Any arbitrary modifications carried out on this machine will relieve the manufacturer of all liability for any resulting damage or injury.

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

Ultimate™ Series Tractors

X740, X748, X749 PIN (070001-)

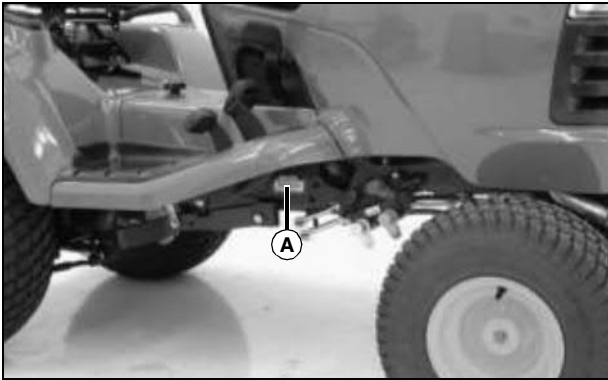
If you need to contact an Authorized Service Center for information on servicing, always provide the product model and serial number.

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:

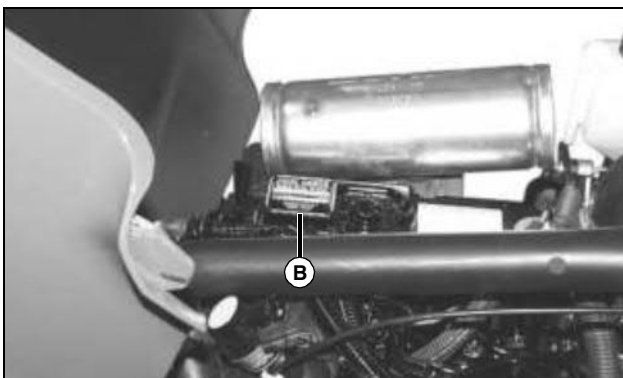
DEALER NAME:

DEALER PHONE:



MX13553

PRODUCT IDENTIFICATION NUMBER (A):



MX21823

ENGINE SERIAL NUMBER (B):

Table of Contents

Safety Labels	5
Safety	8
Machine Cleanout.....	16
Operating - Controls	18
Operating.....	19
Replacement Parts	39
Service Intervals	40
Service Lubrication.....	41
Service Engine	43
Service Transmission.....	53
Service Electrical.....	56
Service Miscellaneous.....	60
Troubleshooting	66
Storage	69
Assembly	71
Specifications	74
Declaration of Conformity	79
Declaration of Conformity	81
Declaration of Conformity	83
Index.....	85

Original Instruction

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© 2011

Deere & Co.

John Deere Ag & Turf Division

All rights reserved

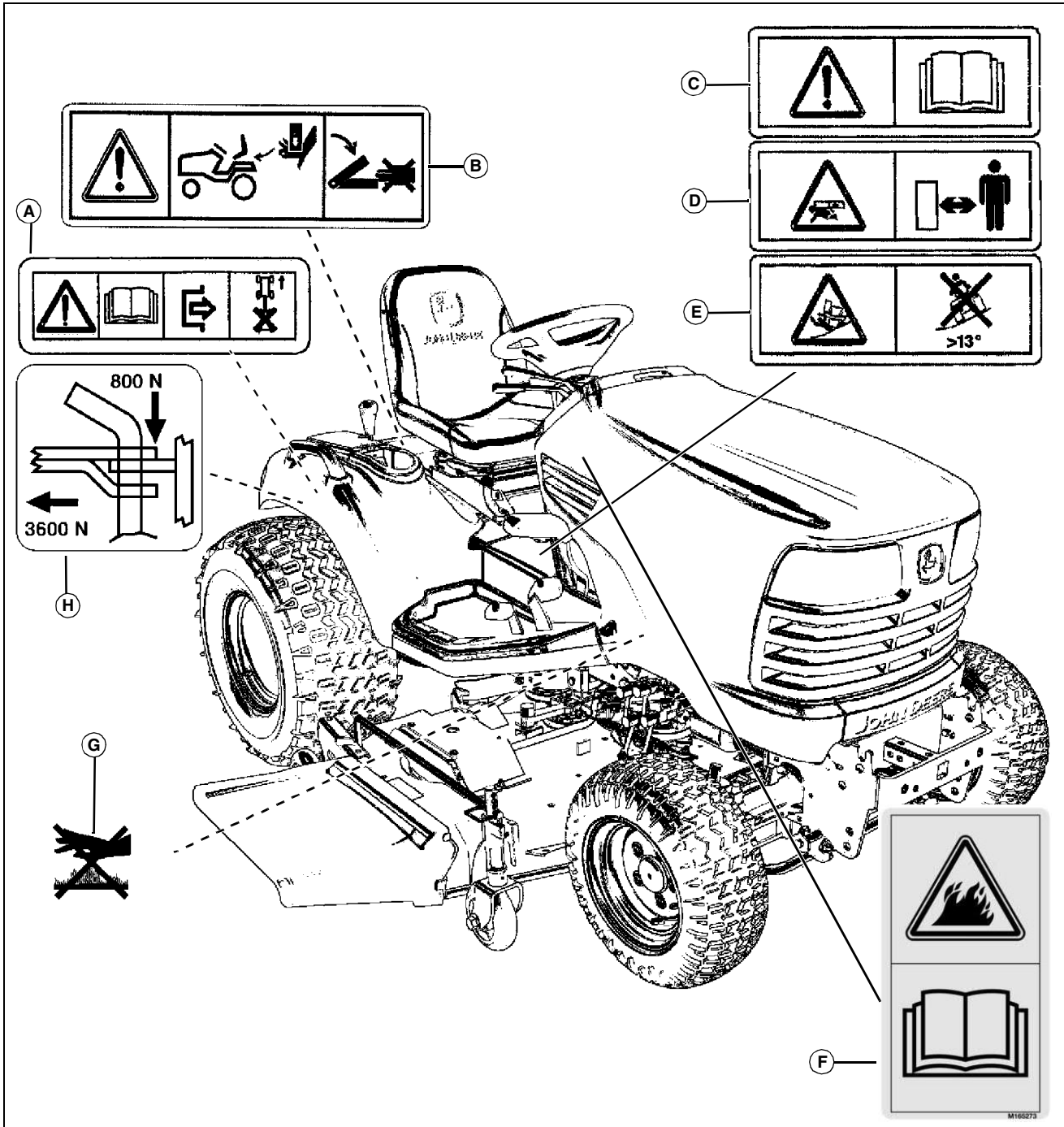
Previous Editions

COPYRIGHT© 2009, 2010

OMM164415 F1 - English

Safety Labels

Safety Label Location



MX41156

Picture Note: Use label number listed in table below to locate complete text of safety label message following this illustration.

- A - BYPASS VALVE LABEL M123057
- B - AVOID INJURY FROM PINCH POINTS M148474
- C - READ OPERATOR'S MANUAL M148314
- D - KEEP CHILDREN AWAY FROM MOWER M148314

- E - AVOID INJURY FROM TIPPING M148314
- F - CAUTION M165273
- G - CAUTION HOT SURFACE (MOLDED INTO MUFFLER)
- H - DRAWBAR LOAD M163664

Safety Labels

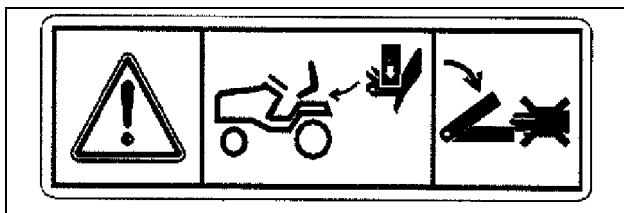


Pictorial Safety Signs

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

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

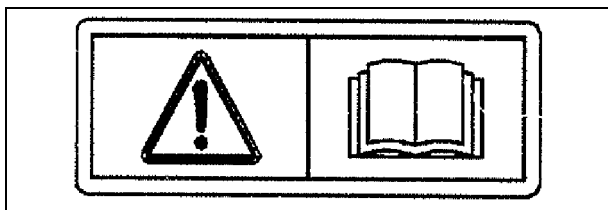
Avoid Injury From Pinch Points



M148474

- Keep fingers and hands away from pinch points.

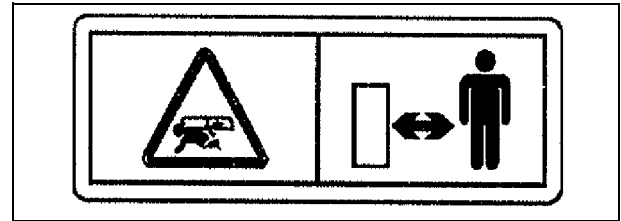
Read Operator's Manual



M148314a

- This operator's manual contains important information necessary for safe machine operation.
- Carefully read operator's manual before operating machine.
- Observe all safety rules to avoid accidents.

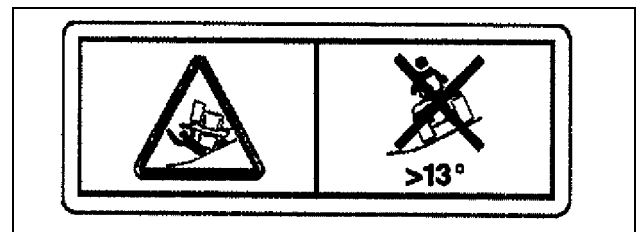
Keep Children Away From Mower



M148314b

- Mower can cause dismemberment or death.
- Stay a safe distance from the machine.
- Make sure children stay clear of mower at all times when engine is running.

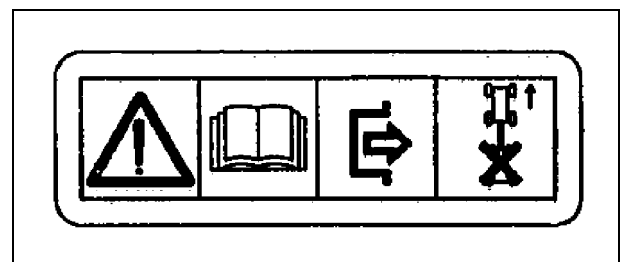
Avoid Injury from Tipping



M148314c

- Do not drive where tractor could slip, tip, or rollover.
- Do not drive on a slope with more than a 13° (23%) incline.

Bypass Valve Label

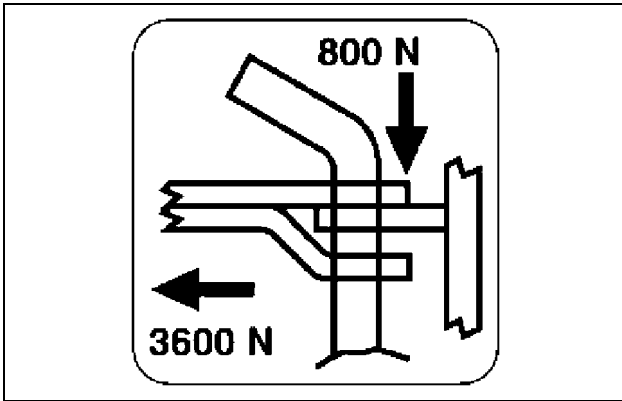


M123057

Read operator's manual before operating the bypass valve. Prevent hydrostatic damage. Push or pull machine by hand only. Do not use another vehicle to push or pull the machine.

Safety Labels

Drawbar Load

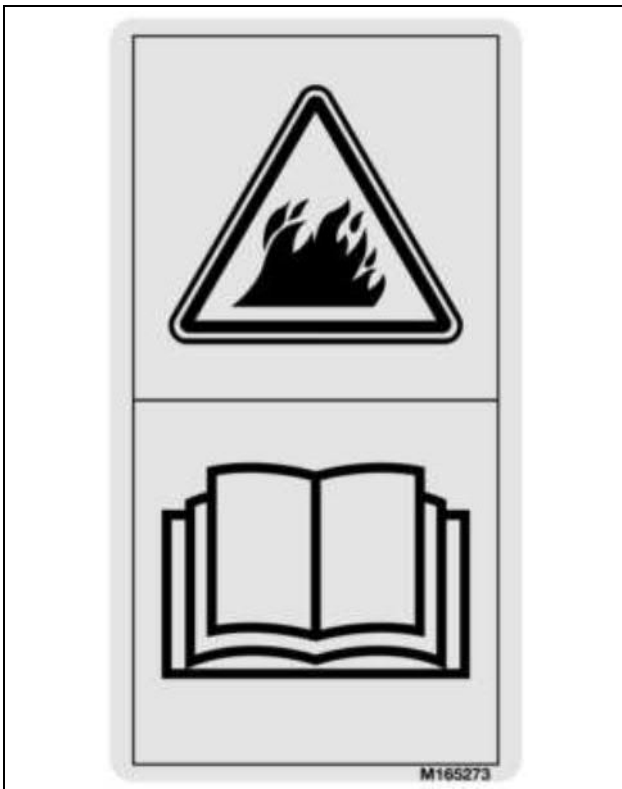


M163664

Do not exceed recommended drawbar loads stated on label.

- Horizontal 3600 N (809 lb)
- Vertical 800 N (180 lb)

PREVENT MACHINE FIRES



M165273

M165273

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

CAUTION - HOT SURFACE

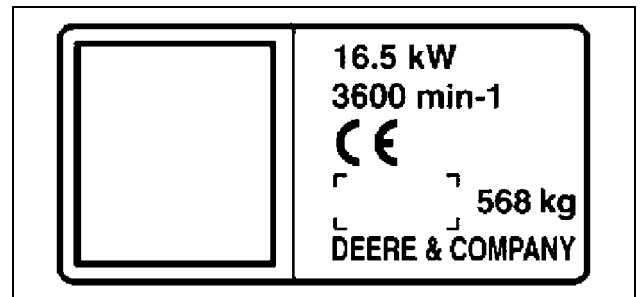


MX13572

Picture Note: No-text warning molded into muffler.

Do not touch engine muffler, it may be hot.

CE Certification Label



M163252

This label on your machine indicates nominal power, engine speed, and mass. This information is provided on your machine to indicate the machine is certified and in compliance with European Directive Standards: 98/37/EC (before December 29, 2009) or 2006/42/EC (89/392/EEC).

Safety

Training

- Read the instructions carefully. Be familiar with the controls and the proper use of the equipment.
- Never allow children or people unfamiliar with these instructions to use the lawnmower. Local regulations can restrict the age of the operator.
- Never mow while people, especially children, or pets are nearby.
- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.
- Do not carry passengers.
- All drivers should seek and obtain professional and practical instruction. Such instruction should emphasize:
 - the need for care and concentration when working with ride-on machines.
 - control of a ride-on machine sliding on a slope will not be regained by the application of the brake.
- The main reasons for loss of control are:
 - insufficient wheel grip;
 - being driven too fast;
 - inadequate braking;
 - the type of machine is unsuitable for its task;
 - lack of awareness of the effect of ground conditions, especially slopes;
 - incorrect hitching and load distribution.

Preparation

- While mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
- Thoroughly inspect the area where the equipment is to be used and remove all objects which can be thrown by the machine.
- **WARNING-Fuel is highly flammable.**
 - store fuel in containers specifically designed for this purpose.
 - refuel outdoors only and do not smoke while refueling.
 - add fuel before starting the engine. Never remove the cap of the fuel tank or add fuel while the engine is running or when the engine is hot.
 - if fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and

avoid creating any source of ignition until fuel vapors have dissipated.

- replace all fuel tank and container caps securely.
- Replace faulty silencers.
- Before using, always visually inspect to see that the blades, blade bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts in sets to preserve balance.
- On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.

Operation

- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
- Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps and handrails. Never use machine controls as handholds.
- 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.
- Mow only in daylight or in good artificial light.
- Before attempting to start the engine, disengage all blade attachment clutches and shift into neutral.
- Do not use on slopes of degrees more than recommended by the manufacturer.
- Remember there is no such thing as a safe slope. Travel on grass slopes requires particular care. To guard against overturning:
 - do not stop or start suddenly when going up or downhill;
 - engage clutch slowly, always keep machine in gear, especially when traveling downhill;
 - machine speeds should be kept low on slopes and during tight turns;
 - stay alert for humps and hollows and other hidden hazards;
 - never mow across the face of a slope, unless the machine is designed for this purpose.
- Use care when pulling loads or using heavy equipment:
 - use only approved drawbar hitch points;
 - limit loads to those you can safely control;
 - do not turn sharply. Use care when reversing;
 - use counterweights or wheel weights when suggested in the operator's manual.

Safety

- Watch out for traffic when crossing or near roadways.
- Stop the blades from rotating before crossing surfaces other than grass.
- Never direct discharge of material toward bystanders nor allow anyone near the machine while in operation.
- Never operate the machine with defective guards, or without safety protective devices in place.
- Do not change the engine governor settings or overspeed the engine. Operating the engine at excessive speed can increase the hazard of personal injury.
- Before leaving the operator's position:
 - disengage the drive to any attachments and lower them;
 - change into neutral and lock the parking brake;
 - stop the engine and remove the key.
- Disengage drive to attachments, stop the engine, disconnect the spark plug wires and remove the ignition key:
 - before clearing blockages or unclogging chute;
 - before checking, cleaning, or working on the machine;
 - after striking a foreign object. Inspect the machine for damage and make repairs before restarting and operating the equipment;
 - if the machine starts to vibrate abnormally (check immediately).
- Disengage drive to attachments when transporting or not in use.
- Stop the engine and disengage drive to attachment:
 - before refueling;
 - before removing the grass catcher;
 - before making height adjustment unless adjustment can be made from the operator's position.
- Reduce the throttle setting during run-out and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of mowing.
- Read, understand and follow all instructions in the manual and on the machine before starting.
- Inspect machine before you operate. Repair or replace damaged, badly worn, or missing parts. Make any necessary adjustments before you operate.
- 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 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.

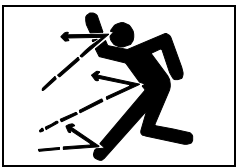
- Check brake action before you operate. Adjust or service brakes as necessary.
- Stop machine if anyone enters the area.
- Do not leave machine unattended when it is running.
- Use care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
- Use only accessories and attachments approved by the manufacturer of the machine. Keep safety labels visible when installing accessories and attachments.
- Do not operate machine if you are under the influence of drugs or alcohol.
- Data indicates operators 60 years and above are involved in a large percentage of riding mower-related injuries. These operators should evaluate their ability to operate the riding mower safely enough to protect themselves and others from serious injury.
- Do not wear radio or music headphones. Safe service and operation requires your full attention.

Maintenance and Storage

- Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- Never store the equipment with fuel in the tank inside a building where fumes can reach an open flame or spark.
- Allow the engine to cool before storing in any enclosure.
- To reduce the fire hazard, keep the engine, silencer, battery compartment and fuel storage area free of grass, leaves, or excessive grease.
- Check the grass catcher frequently for wear or deterioration.
- Replace worn or damaged parts for safety.
- If the fuel tank has to be drained, this should be done outdoors.
- On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.
- When machine is to be parked, stored or left unattended, lower the cutting means unless a positive mechanical lock is used.
- Use jack stands or lock service latches to support components when required. Securely support any machine elements that must be raised for service work.
- Before servicing machine or attachment, carefully release pressure from any components with stored energy, such as hydraulic components or springs.

Safety

- Release hydraulic pressure by lowering attachment or cutting units to the ground or to a mechanical stop and move hydraulic control levers back and forth.
- Disconnect battery or remove spark plug (for gas engines) before making any repairs. Disconnect the negative terminal first and the positive last. Reconnect positive first and negative last.
- Use care when checking blades. Wrap the blades or wear gloves, and use caution when servicing them. Only replace blades. Never straighten or weld them.
- Keep hands, feet, clothing, jewelry and long hair away from moving parts. If possible, do not make adjustments with the engine running.
- Charge batteries in an open well ventilated area, away from spark and flames. Unplug charger before connecting or disconnecting from battery. Wear protective clothing and use insulated tools.

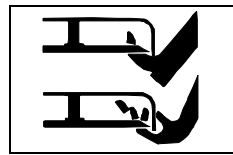


Checking Mowing Area

- 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

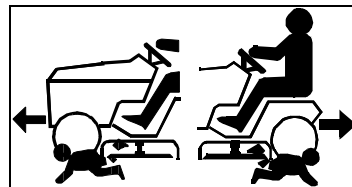
1. Stop machine on a level surface, not on a slope.
2. Disengage mower blades or any other attachments.
3. Lower attachments to the ground.
4. Lock the park brake.
5. Stop the engine.
6. Remove the key.
7. Wait for engine and all moving parts to stop before you leave the operator's seat.
8. Close fuel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



Protect Children

- Death or serious injury can occur when young children associate having fun with a lawn mowing machine simply because someone has given them a ride on a machine.
- Children are attracted to lawn mowing machines and mowing activities. They don't understand the dangers of rotating blades or the fact that the operator is unaware of their presence.
- Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine.
- Tragic accidents with children can occur if the operator is not alert to the presence of children, especially when a child approaches a machine from behind. Before and while backing up, stop mower blades and look down and behind the machine carefully, especially for children.
- Never carry children on a machine or attachment, even with the blades off. Do not tow children in a cart or trailer.

Safety

They can fall off and be seriously injured or interfere with safe machine operation.

- Never use the machine as a recreational vehicle or to entertain children.
- Never allow children or an untrained person operate the machine. Instruct all operators not to give children a ride on the machine or in an attachment.
- Keep children indoors, out of the mowing area, and in the watchful eye of a responsible adult, other than the operator, when a mower is being operated.
- Stay alert to the presence of children. Never assume that children will remain where you last saw them. Turn the machine off if a child enters the work area.
- Use extreme care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.



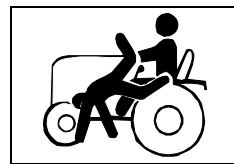
Avoid Tipping

- Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. Operation on all slopes

requires extra caution.

- Regardless of the features on your machine, if you feel uneasy on a slope, do not mow it. Some slopes are simply too steep to mow.
- Be aware that a machine that allows all four wheels to drive can provide access to dangerously sloped terrain, thereby increasing the possibility of a tipover.
- The operation of a machine that is equipped with full time four wheel drive and four wheel steer is different. Before using the machine, become familiar with how the machine operates and responds. Be extremely careful and always use common sense and good judgement when operating the machine.
- Check for Slope - Two Wheel Drive (2WD) Machines:
 - Do not operate on a slope if the machine cannot backup the slope with only rear wheel drive engaged, or if you feel uneasy on it.
- Check for Slope - Four Wheel Drive (4WD) Machines:
 - Never mow on any slope that is more than 13 degrees, or a slope that rises more than 4 1/2 feet within a distance of 20 feet of distance.
 - Exceeding the maximum recommended slope angle of 13 degrees increases the risk of rollover accidents that can result in serious injury or death
- With four wheel drive machines, rollover can occur before tires lose traction.

- Sharp turns could cause the machine to tip over. Keep all movement on slopes slow and gradual. Do not make sudden changes in speed or direction.
- Avoid starting, stopping or turning on a slope. If the tires lose traction, disengage the blades and proceed slowly, straight down the slope.
- Mow up and down slopes, not across.
- Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Choose a low ground speed so you will not have to stop or shift while on a slope.
- Do not mow or operate machine on wet grass. Tires may lose traction. Tires may lose traction on slopes even though the brakes are functioning properly.
- Always keep the machine in gear when going down slopes. Do not shift to neutral and coast downhill.
- Use extra care while operating machine with grasscatchers or other attachments, they can affect stability of the machine. Do not use on steep slopes.
- Do not try to stabilize the machine by putting your foot on the ground.
- Leave at least the width of the machine as a safety area between the machine and any safety hazard. Mow those areas with a hand-held trimmer or walk-behind mower.
- Do not mow near drop-offs, ditches, embankments, or bodies of water. The machine could suddenly roll over if a wheel goes over the edge or the edge caves in.
- Follow the manufacturer's recommendations for wheel weights or counterweights for added stability when operating or using front or rear mounted attachments. Remove weights when not required.



Keep Riders Off

- 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 machine being operated in an unsafe manner.

**Thank you very much
for your reading.**

**Please click here and go
back to the website.**

**Then, you can
download the complete
manual instantly.**

No waiting.