

JOHN DEERE
WORLDWIDE COMMERCIAL & CONSUMER
EQUIPMENT DIVISION

Walk-Behind Rotary Mower
JA62

OMGX22070 B5

OPERATOR'S MANUAL



JOHN DEERE

North American Version
Litho in U.S.A.



SELF



OMGX22070

⚠ WARNING: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

California Proposition 65 Warning

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John Deere Worldwide Commercial and Consumer Equipment Division

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Previous Editions

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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.

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.

CALIFORNIA Proposition 65 Warning



Warning: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

PRODUCT IDENTIFICATION

Product Identification

Record Identification Numbers

21-Inch Walk-Behind Rotary Mowers

JA62 PIN (200001-)

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:

PRODUCT IDENTIFICATION NUMBER:

ENGINE SERIAL NUMBER:

Safety Labels

Understanding The Machine Safety Labels



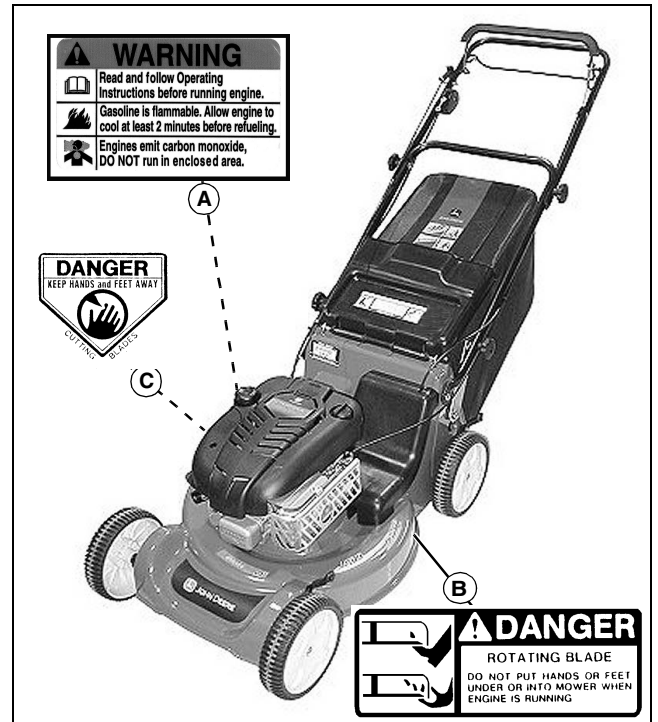
Safety-Alert Symbol

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.

Machine Safety Labels



MX31684, MX4878, M73170, M73171

(A) WARNING

- Read and follow Operating Instructions before running engine.
- Gasoline is flammable. Allow engine to cool at least 2 minutes before refueling.
- Engines emit carbon monoxide, DO NOT run in enclosed area.

(B) DANGER

- ROTATING BLADE
- DO NOT PUT HANDS OR FEET UNDER OR INTO MOWER WHEN ENGINE IS RUNNING

(C) DANGER

- KEEP HANDS and FEET AWAY
- CUTTING BLADES

SAFETY



MX31684, M73171

(A) DANGER

- ROTATING BLADE
 - Stop engine before lifting door and clearing discharge
- THROWN OBJECTS
 - Do not lift or block door open with blade engaged
 - Do not mow without grass bag, side discharge chute or mulch plug in place

(B) CAUTION

- BAG IS SUBJECT TO WEAR AND DETERIORATION.
- CHECK BAG FREQUENTLY. REPLACE WHEN NECESSARY.
- USE JOHN DEERE BAG OR EQUIVALENT TO COMPLY WITH SAFETY SPECIFICATIONS.

(C) WARNING

- Avoid serious injury or death.
 - Read the Owner's Manual.
 - Go across slopes, not up and down.
 - Do not mow when children or others are around.
 - Look down and behind before and while mowing backwards.
 - Remove objects that could be thrown by the blade.
 - Keep safety devices in place and working.

Emission Control System Certification Label

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

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

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

Emission Compliance Period

If your engine has the emission compliance category listed on the emission control system certification or air index label, this indicates the number of operating hours for which the engine has been certified to meet EPA and/or CARB emission requirements. The following table provides the engine compliance period in hours associated with the category found on the certification label.

Agency	Category	Hours
EPA	C	125
EPA	B	250
EPA	A	500
CARB	Moderate	125
CARB	Intermediate	250
CARB	Extended	500

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.

Safety

Operating Safely

- This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.
- Read, understand and follow all instructions on the machine and in the manual before starting. Be thoroughly familiar with the controls and the proper use of the machine before starting.
- Do not put hands or feet near or under the machine. Keep clear of the discharge opening at all times.
- Only allow responsible adults, who are familiar with the instructions, to operate this machine. Local regulations may restrict the age of the operator.
- Clear the area of objects such as rocks, toys, wire, and similar items which could be thrown by the blade. Stay behind the handle when the engine is running.
- Be sure the area is clear of bystanders before operating. Stop machine if anyone enters the area.
- Do not operate the mower barefooted or while wearing sandals. Always wear substantial footwear.
- Do not pull machine backward unless absolutely necessary. Always look down and behind before and while moving backward.
- Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward

SAFETY

the operator. Stop the blade when crossing gravel surfaces.

- Do not operate machine without the entire grasscatcher, discharge guard, rear guard, or other safety protective devices in place and working. Never operate with the discharge deflector raised, removed, or altered, unless using a grasscatcher.
- Never leave a running machine unattended.
- Stop the engine and wait until the blade comes to complete stop before cleaning the machine, removing grasscatcher, or unclogging the discharge guard.
- Operate machine only in daylight or good artificial light.
- Do not operate the mower while under the influence of alcohol or drugs.
- Never operate mower in wet grass. Always be sure of your footing. Walk; never run.
- Disengage the drive system, if so equipped, before starting the engine.
- If the machine should start to vibrate abnormally, stop the engine and check for the cause immediately. Vibration is generally a warning of trouble.
- Always wear safety goggles or safety glasses with side shields when operating mower.
- See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by the manufacturer.
- Inspect machine before you operate. Be sure hardware is tight. Repair or replace damaged, badly worn, or missing parts. 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 as needed.
- Make sure spark plug, muffler, fuel cap and air cleaner are in place before starting the engine.
- Keep safety labels visible when installing accessories and attachments.

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.

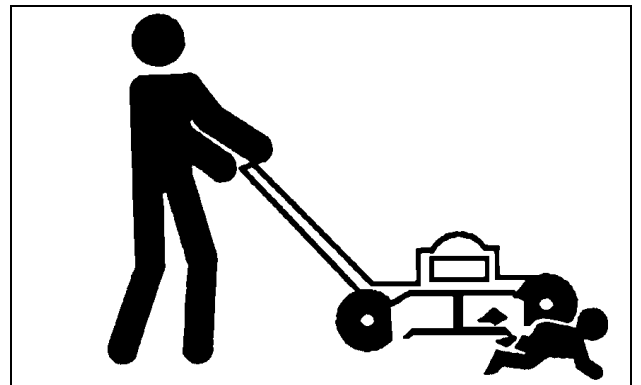
Checking Mowing Area



MIF

- 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.

Rotating Blades are Dangerous - Protect Children and Prevent Accidents



M61473

Protect Children:

- Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to lawn-mowing machines and mowing activity. Stay alert to the presence of children. Never assume that children will remain where you last saw them.
- 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.
- Be alert and turn mower off if a child enters the work area. They don't understand the dangers of rotating blades or the fact that the operator is unaware of their presence.
- Never allow a child or an untrained person operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.

Operating Safely on Slopes

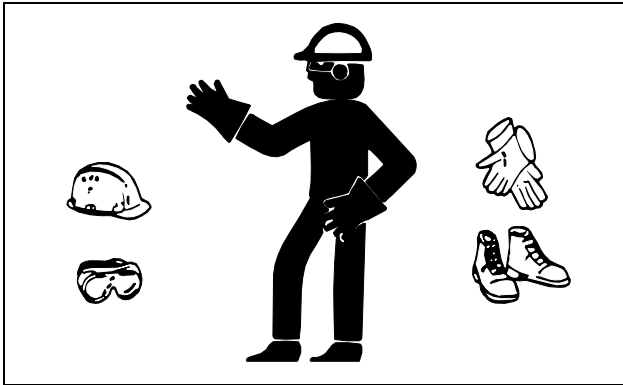
- Slopes are a major factor related to slip and fall accidents which can

SAFETY

result in severe injury. Operation on all slopes requires extra caution. If you feel uneasy on a slope, do not mow it.

- Mow across the face of slopes, never up and down. Use extreme caution when changing direction on slopes.
- Watch for holes, ruts, bumps, rocks or other hidden objects. Uneven terrain could cause a slip and fall accident. Tall grass can hide obstacles.
- Do not mow on wet grass or excessively steep slopes. Poor footing could cause a slip and fall accident.
- Do not mow near drop offs, ditches, or embankments. The operator could lose footing or balance.
- Use extra care with grasscatchers. These can change the stability of the machine. Do not use grasscatcher on steep slopes.

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.

Practice Safe Maintenance

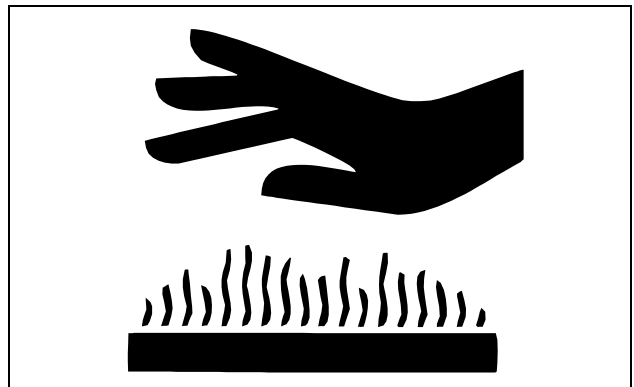


MIF

- Only qualified, trained adults should service this machine. Understand service procedure before doing work.
- Never operate machine in a closed area where dangerous carbon monoxide fumes can collect.
- Keep all nuts and bolts tight, especially blade attachment bolts, to be sure the equipment is in safe working condition.

- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves or other debris build-up. Clean up oil or fuel spillage and remove any fuel-soaked debris. Allow the machine to cool before storing.
- If you strike a foreign object, stop and inspect the machine. Repair, if necessary, before restarting.
- Never make adjustments or repairs with the engine running. Wait for all movement to stop before adjusting, cleaning or repairing. Disconnect the spark plug wire, and ground against the engine to prevent accidental starting.
- Check grasscatcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary. Grasscatcher components are subject to wear, damage, and deterioration which could expose moving parts or allow objects to be thrown.
- Mower blades are sharp. Wrap the blade or wear gloves, and use extra care when servicing them. Only replace blades. Never straighten or weld them.
- Do not change the governor setting or overspeed the engine.
- Maintain or replace safety and instruction labels, as necessary.
- Keep hands, feet, clothing, jewelry, and long hair away from any moving parts, to prevent them from getting caught.
- Never attempt to make wheel height adjustments while the engine is running.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts.
- Do not strike the flywheel with a hammer or hard object because the flywheel may later shatter during operation.

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.
- Empty the grasscatcher completely before storing.
- Always shut off fuel when storing or transporting machine, if the machine has a fuel shutoff.
- Do not store machine near an open flame or source of ignition, such as a water heater or furnace.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.

OPERATING

Handling Fuel Safely

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



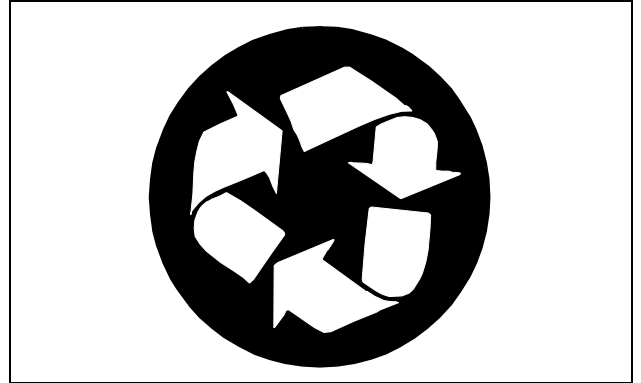
- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- Use only an approved fuel container. Use only non-metal, portable fuel containers approved by the Underwriter's Laboratory (U.L.) or the American Society for Testing & Materials (ASTM). If using a funnel, make sure it is plastic and has no screen or filter.
- Never remove the fuel tank cap or add fuel with the engine running. Allow engine to cool before refueling.
- Never add fuel to or drain fuel from the machine indoors. Move machine outdoors and provide adequate ventilation.
- Clean up spilled fuel immediately. If fuel is spilled on clothing, change clothing immediately. If fuel is spilled near machine, do not attempt to start the engine but move the machine away from the area of spillage. Avoid creating any source of ignition until fuel vapors have dissipated.
- Never store the machine or fuel container where there is an open flame, spark, or pilot light such as on a water heater or other appliance.



- Prevent fire and explosion caused by static electric discharge. Static electric discharge can ignite fuel vapors in an ungrounded fuel container.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before fueling.
- Remove fuel-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a fuel dispenser nozzle.

- Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until the fueling is complete. Do not use a nozzle lock-open device.
- Never overfill fuel tank. Replace fuel tank cap and tighten securely.
- Replace all fuel container caps securely after use.
- For gasoline engines, do not use gas with methanol. Methanol is harmful to your health and to the environment.

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 fuel level.
- ☐ Check engine oil level.
- ☐ Check that handle knobs are tight.
- ☐ Remove grass and debris from machine.
- ☐ Check area below machine for leaks.

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.

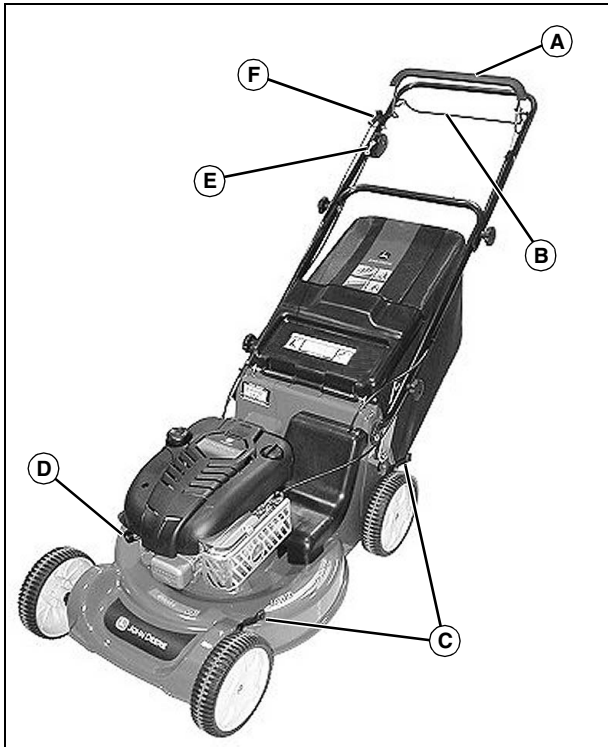
Avoid Damage to Aluminum Mower Deck

- Clean under mower deck to remove harmful buildup of lawn chemicals.

OPERATING

- Use regular water pressure to clean under deck. Do not use high pressure spray. High pressure spray may damage clutch and transmission parts.

Handle and Cutting Height Controls



MX31684

- A- Blade/Engine Control Lever
- B- Traction Clutch Lever
- C- Cutting Height Levers
- D- Primer Bulb
- E- Gear Shift Lever
- F- Starter Handle

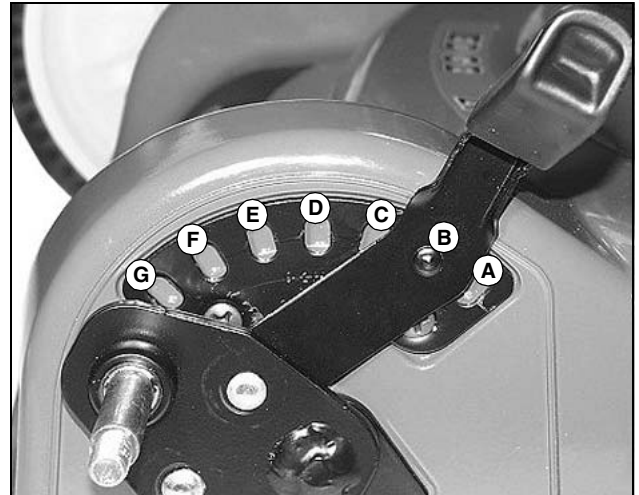
Adjusting Cutting Height



CAUTION: Avoid injury! Before you adjust cutting height:
•Stop engine.

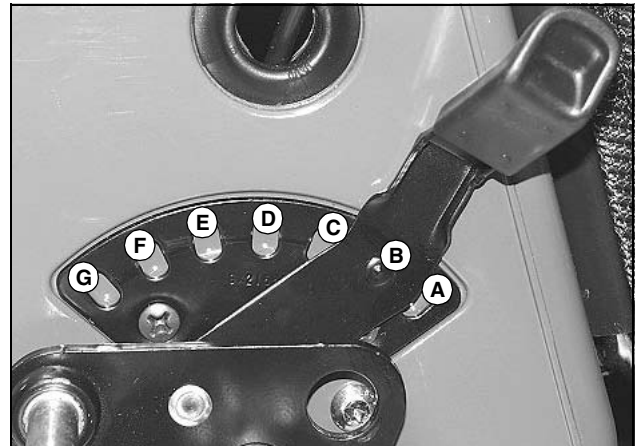
NOTE: Adjust both levers to same height except for lowest cutting height. This adjustment improves bagging and mulching performance at lowest cutting height:

- Put front wheel levers in the first rear notch: 25 mm (1 in.).
- Put rear wheel levers in the second rear notch: 38 mm (1-1/2 in.).



MX31692

Picture Note: Left front shown above



MX31693

Picture Note: Left rear shown above

Key	Cutting Height Adjustments In mm (Inches)
(A)	25 mm (1 in.)
(B)	38 mm (1-1/2 in.)
(C)	50 mm (2 in.)
(D)	64 mm (2-1/2 in.)
(E)	75 mm (3 in.)
(F)	90 mm (3-1/2 in.)
(G)	102 mm (4 in.)

OPERATING

Moving wheel levers:

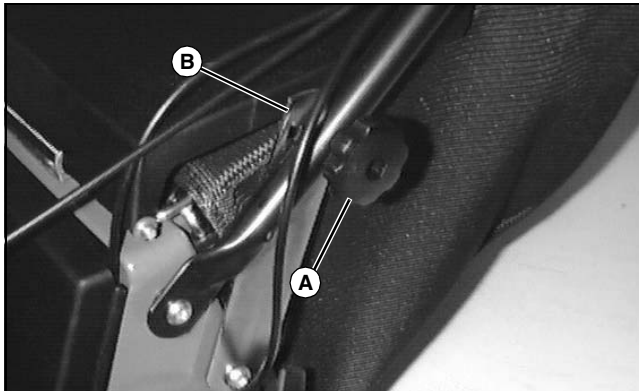


MX31694

1. Rear wheels have lift assist springs and can be adjusted with one hand. Use left hand and pull lever (H) outward, as shown, move lever to desired position, and release lever to lock in notch.

2. For front wheels, push down slightly on handlebar to take some weight off front wheels. Move lever with left hand, the same way as with rear wheels, and move lever to desired position.

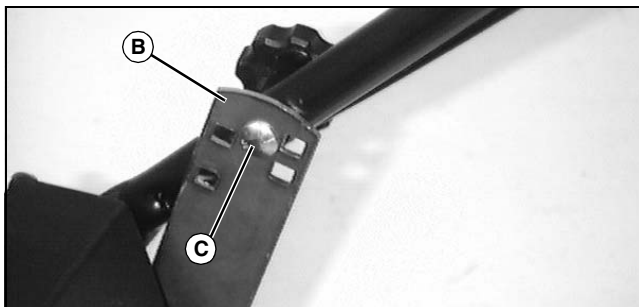
Adjusting Handle Height



M88841

1. Remove knob (A) and bolt from each side.

2. Move handle to desired height.



M87080

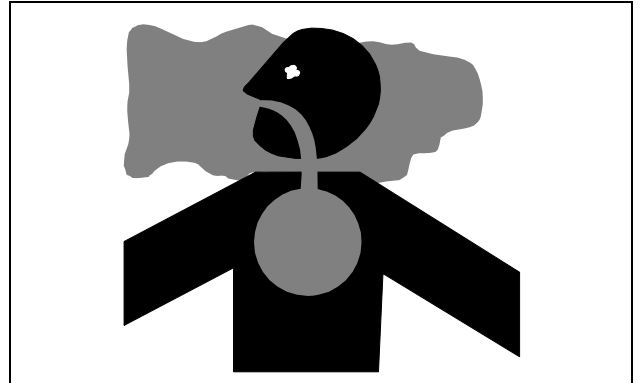
Picture Note: Rear grass bag removed for clarity.

3. Line up square hole in bracket (B) with hole in handle.

4. Install carriage bolt (C) through holes. Install knob.

5. Repeat Steps 2 - 4 on other side.

Testing Safety Systems



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

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

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

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

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

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

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

Testing Blade/Engine Control Lever

1. Start engine.

2. Release blade/engine control lever.



CAUTION: Avoid injury! Rotating blades are dangerous. Do not look under mower or put hands under mower to view blade rotation. Listen for blade to stop.

3. Listen for blade and engine to stop.

Result: Blade and engine should stop within three seconds. If blade and engine do not stop in the correct time, there is a problem with your machine safety system.

Starting and Stopping Engine



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

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

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

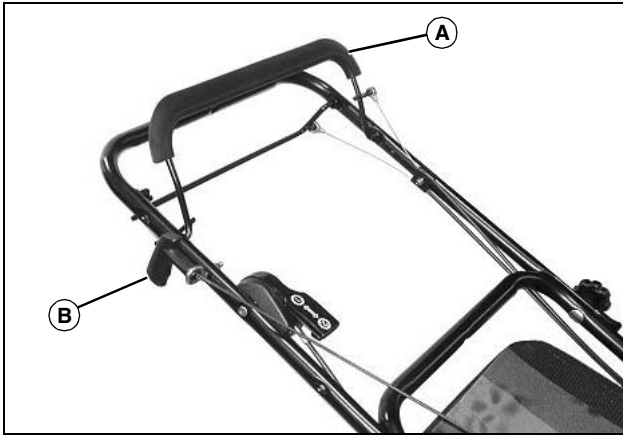
OPERATING

IMPORTANT: Avoid damage! To help prevent damage to starter and band brake, do not attempt to start the engine when blade is under load, such as in heavy grass or when operator presence control is released.

Starting Engine

1. Prime engine by pressing primer bulb.

- Cold engine - 3 times
- Warm engine 1 or 2 times



MX31685

2. Hold blade/engine control lever (A) against handle.

3. Pull starter handle (B) until you feel resistance, then pull fast and steady.

4. When engine starts, return rope slowly until handle is in bracket.

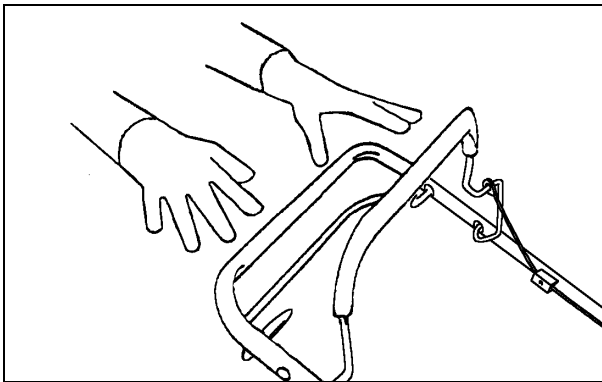
Stopping Engine

Release blade/engine control lever.

Emergency Stopping



CAUTION: Avoid injury! Releasing the operator presence control must stop mower blade. After releasing the operator presence control, mower blade should stop in approximately three seconds or less. If not, see your John Deere dealer.



M73293

Release handle and levers:

- Mower will stop.
- Blade will stop.

Forward Travel

To Travel Forward:



MX31685

Pull and hold traction clutch lever (A) against handle (B).

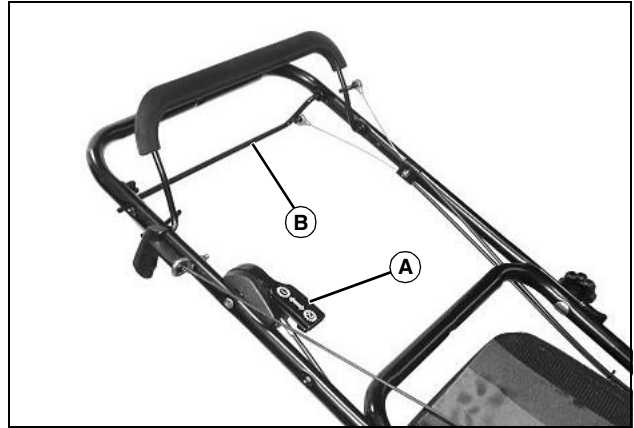
To Stop Forward Travel:

Release lever (A). Release lever before you turn.

NOTE: Rear wheels will make a clicking noise when you push mower forward. This means drivetrain is operating correctly.

Travel Speeds

To change travel speed:



MX31685

1. Move gear lever (A) to desired position.

2. Engage traction clutch lever (B).

Gear	Travel Speed km/h (mph)
1	3.2 (2)
2	5.0 (3)

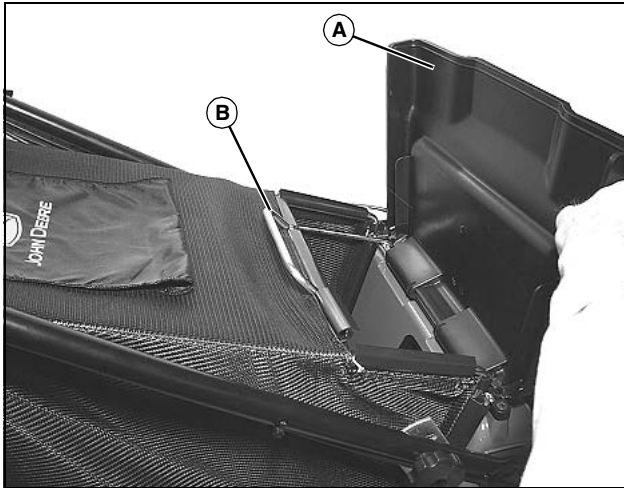
OPERATING

Using Grass Bag



CAUTION: Avoid injury! To avoid injury from cutting blades:

- Stop engine before removing or installing discharge chute, grass catcher, or mulch plug or guard in place.
- Do not mow without discharge chute, grass catcher, or mulch plug or guard in place.
- Bag is subject to wear and deterioration. Check bag frequently, replace when necessary. Use John Deere bag or equivalent to comply with safety specifications.



MX31695

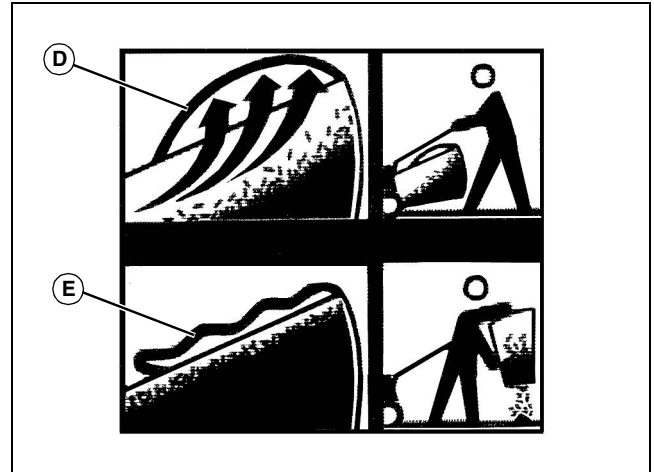
1. Stop mower and wait for all moving parts to stop.
2. Lift and hold door (A) in a vertical position.
3. Grasp handle (B). Lift bag on or off mower.
4. Gently lower door.

Using Grass Bag Fill Indicator



MX31719

- Grass bag has a bag fill indicator (C).



MX31761

- Indicator will be in arched position (D) when functioning correctly in operation. When bag is full, indicator will start to wave (E), bag should then be emptied.

Using Mower Blade

High Lift Blade

Mower was delivered from factory with standard high lift blade installed. For best bagging performance use a high lift blade when using the bagger.

Using Discharge Chute

See your John Deere dealer for optional discharge chute.



CAUTION: Avoid injury! To avoid injury from cutting blades:

- Stop engine before removing or installing discharge chute, grass catcher or mulch plug or guard.
- Do not mow without discharge chute, grass catcher or mulch plug or guard in place.



MX31695

1. Stop mower and wait for all moving parts to stop.
2. Lift and hold door (A) in a vertical position.
3. Remove grass bag (B).
4. With door (A) raised, install discharge chute. Lower door to hold chute in place.

REPLACEMENT PARTS

place.

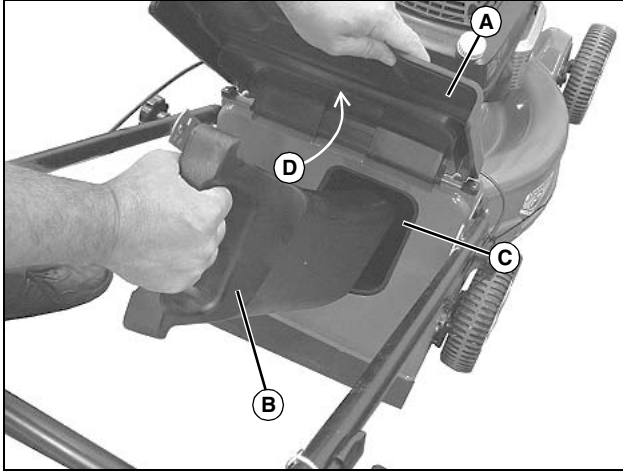
Using Mulch Plug

See your John Deere dealer for optional mulching kit.



CAUTION: Avoid injury! To avoid injury from cutting blades:

- Stop engine before removing or installing discharge chute, grass catcher or mulch plug or guard.
- Do not mow without discharge chute, grass catcher or mulch plug or guard in place.



MX31720

1. Stop mower and wait for all moving parts to stop.
2. Lift and hold door (A) up.
3. Install plug (B) in opening (C), with curve in plug facing left (D).
4. Lower door.

Replacement Parts

Service Literature

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

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

Parts

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

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

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

Order Service Parts Online

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

Part Numbers

Item	Part Number
Air Cleaner:	
• Foam Pre-cleaner	• M143275
• Paper Element	• M143278
Traction Drive Belt	See your John Deere dealer for service
High Lift Mower Blade (Standard)	GX21702
Spark Plug	M78543
HMK (Home Maintenance Kit)	LG236

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

Service Intervals

Servicing Your Machine

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

- Engine components may become dirty or plugged when operating in extreme heat, dust or other severe conditions.
- Engine oil and spark plugs may lose efficiency if machine is operated constantly at slow or low engine speeds or run for short periods of time.

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

After Each Use

- Clean top of mower.
- Clean under mower if mowing wet grass.

Break In - After First 5 Hours of Operation

- Change engine oil.

Every 8 Hours or Daily

- Check engine oil level.
- Clean debris from around muffler and engine cooling fins.

Every 25 Hours or Seasonal

- Change engine oil.
- Clean air cleaner foam element.
- Tighten blade bolt.
- Clean and gap spark plug.
- Clean belt and transmission area.

Every 50 Hours or Seasonal

- Adjust traction clutch cable.
- Change engine oil.
- Clean and inspect spark arrestor, if installed.

SERVICE

Every 100 Hours or Seasonal

- Replace air cleaner paper element.
- Replace spark plug.

Service

Engine Warranty Maintenance Statement

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

Adjusting Carburetor

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

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

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

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

Avoid Fumes



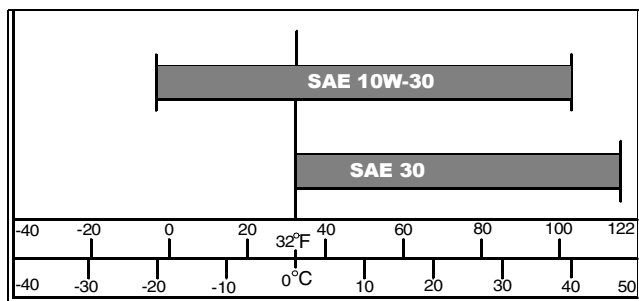
CAUTION: Avoid injury! Engine exhaust fumes contain carbon monoxide and can cause serious illness or death.

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

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

Engine Oil

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



The following John Deere oils are preferred:

- TORQ-GARD SUPREME™ (SAE30)

The following John Deere oils are also recommended, based on their specified temperature range:

- TURF-GARD™
- PLUS- 4™

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

- API Service Classification SG or higher

Checking Engine Oil



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

IMPORTANT: Avoid damage! Change oil after first 5 hours of operation.

1. Park mower on level surface and stop engine.



MX7423

2. Turn oil dipstick (A) 1/4 turn counterclockwise and remove from the filler tube.
3. Wipe dipstick off with a clean cloth.
4. Install dipstick. Turn oil dipstick (A) 1/4 turn clockwise and tighten.

IMPORTANT: Avoid damage! If oil level is below ADD mark, do not run engine.

5. Remove dipstick. Check oil level. Oil should be between ADD and FULL marks shown on dipstick, not above FULL mark.
6. Add oil if necessary.
7. Install and tighten dipstick.

Changing Engine Oil

NOTE: Be sure the fuel tank is at least half empty before changing the oil. Change oil after mowing or run the engine briefly to lower the fuel in the tank to the appropriate level.

1. Run engine for at least five minutes to warm up oil.



CAUTION: Avoid injury! Touching hot surfaces can burn skin. The engine, components, and fluids will be hot if the engine has been running. Keep hands and body away from hot surfaces when servicing or working near the engine and components.

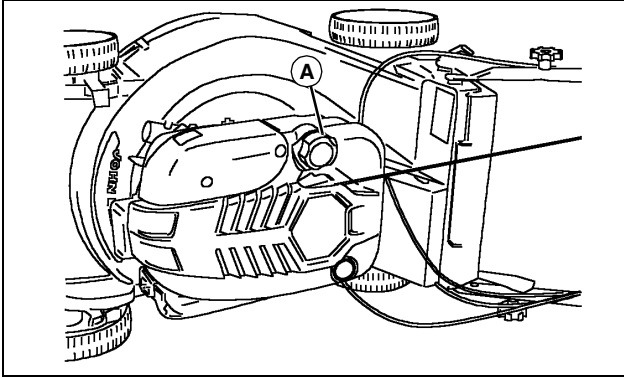
2. Stop engine and disconnect spark plug wire.
3. Remove dipstick.

SERVICE

IMPORTANT: Avoid damage! To help prevent air cleaner damage and hard starting:

- Turn mower on its left side.

4. Place a drain pan on the left side of the mower.



MX7432

5. Turn mower onto its left side so the fuel tank opening (A) is at the highest point.

6. Drain engine oil from the dipstick filler tube location into the drain pan.

7. After oil has drained, return mower to an upright position and clean around dipstick filler tube.

IMPORTANT: Avoid damage! Do not overfill. Overfilling can cause smoking, hard starting, fouling of spark plug, and oil saturation of air filter.

8. Add oil through dipstick filler tube. Check oil level and continue to add oil to FULL mark on dipstick.

9. Install dipstick and connect spark plug wire.

Checking and Cleaning Air Cleaner Element

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

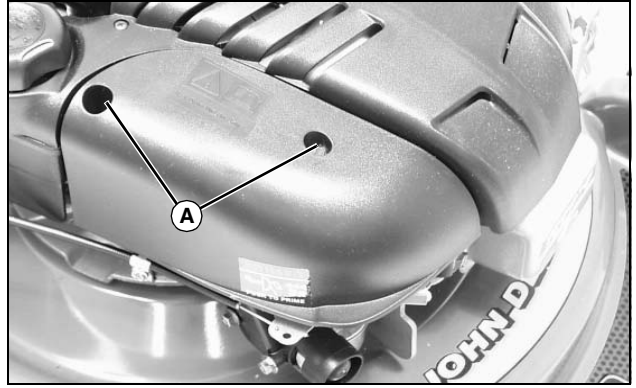


CAUTION: Avoid injury! Touching hot surfaces can burn skin. The engine, components, and fluids will be hot if the engine has been running. Allow the engine to cool before servicing or working near the engine and components.

2. Let engine cool.

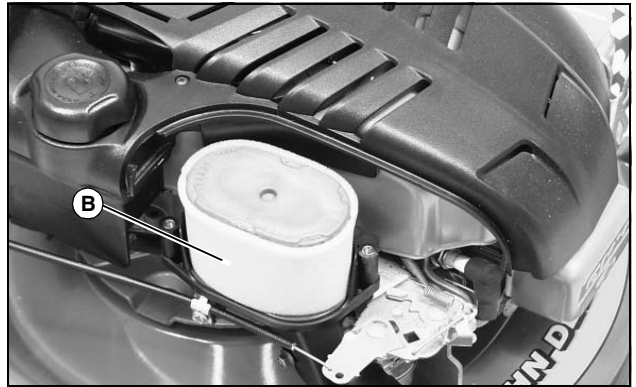
3. Disconnect spark plug wire.

4. Clean dirt and debris from the air cleaner cover.



MX7424

5. Loosen screws (A), and remove cover.



MX7425

6. Inspect the foam precleaner (B) without removing it. If the foam precleaner is dirty:

- a. Remove it from the filter carefully, leaving the paper element in the air cleaner housing.
- b. Wash precleaner in a solution of warm water and liquid detergent.
- c. Rinse precleaner thoroughly. Squeeze out excess water in a dry cloth until precleaner is completely dry.

IMPORTANT: Avoid damage! Dirt and debris can enter the engine through a damaged filter element.

- Do not wash paper element.
- Do not attempt to clean paper element by tapping against another object.
- Do not use pressurized air to clean element.
- Replace element only if it is very dirty, damaged or the seal is cracked.

7. Inspect the paper element without removing it. If the paper element is damaged or dirty, remove and replace it with a new element.

8. Clean air cleaner base carefully, preventing any dirt from falling into carburetor.

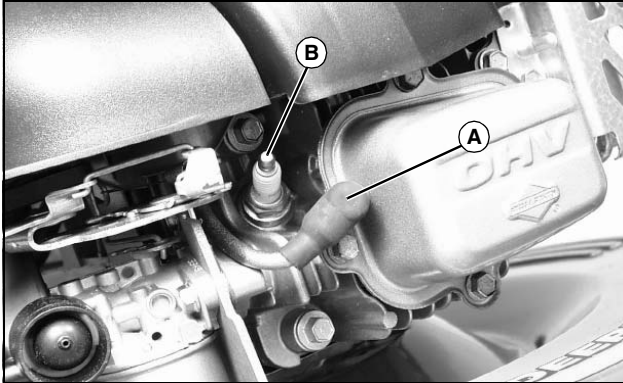
9. Install foam precleaner onto paper element and install into air cleaner base.

10. Close cover and tighten screws. Do not overtighten.

SERVICE

Cleaning and Gapping Spark Plug

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



MX7426

1. Disconnect spark plug wire (A). Remove spark plug (B).
2. Carefully wire brush carbon from plug. Do not clean it with abrasives in a machine.
3. Inspect plug for damage. Replace damaged plug.
4. Adjust gap: 0.51 mm (0.02 in.).
5. Install and tighten plug to 20 N•m (15 lb-ft).
6. Connect wire.

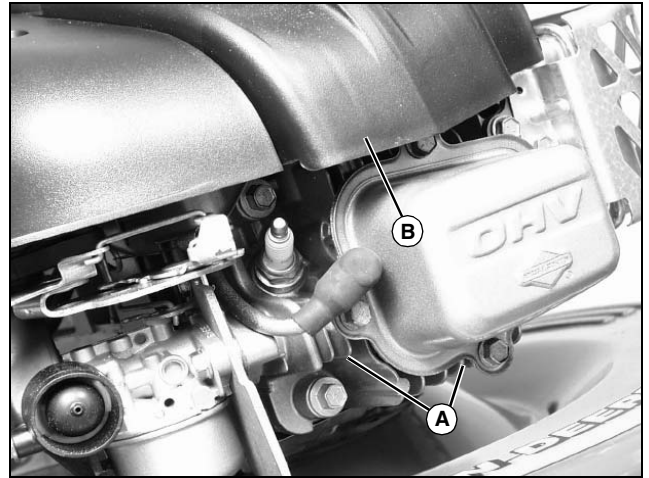
Cleaning Engine Cooling Fins

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

- Clear work area of bystanders.
- Wear eye protection when using compressed air for cleaning purposes.
- Reduce compressed air pressure to 210 kPa (30 psi).

IMPORTANT: Avoid damage! Keep fins clean or engine may overheat.

1. Park mower on level surface and stop engine.
2. Let engine cool.
3. Disconnect spark plug wire.



MX7426

4. Clean fins (A) with brush, rag, or compressed air.
5. Blow compressed air under shroud (B).

Adjusting Traction Clutch Cable

CAUTION: Avoid injury! Do not operate mower without belt shield. Before you adjust clutch: •STOP engine. Let it cool.

- Keep people and pets away from mower.
- Keep hands and tools away from belt area when engine is running.

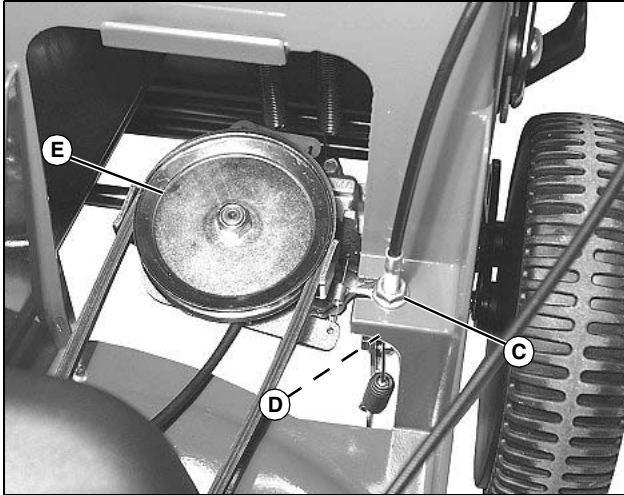
NOTE: Adjust clutch cable before 50 hours if mower slows as it goes uphill.



MX31696

1. Unscrew and remove nut (A).
2. Remove shield (B).

SERVICE



MX31697

3. Loosen nut (C). Turn nut (D) down 1/8 in. (3 mm).
4. Tighten nut (C).
5. Start engine.
6. Engage traction clutch lever to check clutch action.
7. If clutch needs more tension, stop engine and repeat Steps 4 and 5.

NOTE: Pulley (E) should not turn when engine is running and clutch lever is disengaged. If pulley turns when engine is running, traction clutch cable is adjusted too tight.

8. Stop engine.
9. Install shield and nut.

Grease

IMPORTANT: Avoid damage! The recommended grease is effective within an average air temperature range of -29 to 135 degrees C (-20 to 275 degrees F).

If operating outside that temperature range, contact your servicing dealer for a special-use grease.

Use a general all-purpose grease with an NLGI grade No.2 rating. Wet or high speed conditions may require use of a special-use grease. Contact your Servicing dealer for information.

Cleaning Mower



CAUTION: Avoid injury! Before you clean mower:

- Stop engine. Let engine cool.
- Disconnect spark plug wire.
- Turn mower onto its left side to clean under the deck.

1. Clean engine and top of the deck.
2. Check and clean cooling fins, if necessary.
3. Grass clippings can build up in belt and transmission area. If necessary, remove belt shield and clean this area. Do not spray the transmission with water. (See Clean Belt and Transmission Area in this section.)
4. If you operate the mower in dusty conditions, clean air cleaner foam element.
5. Remove mulch plug. Spray under the deck with water under pressure to

remove corrosive lawn chemicals and grass buildup. Do not spray the transmission with water.

6. Remove and shake bag to remove clippings.
7. If bag is caked with grass on the inside, use water under pressure to clean bag. Direct water from outside to inside of bag.
8. Clean grass clippings that may build up between the wheels and the mower deck.

Cleaning Belt and Transmission Area



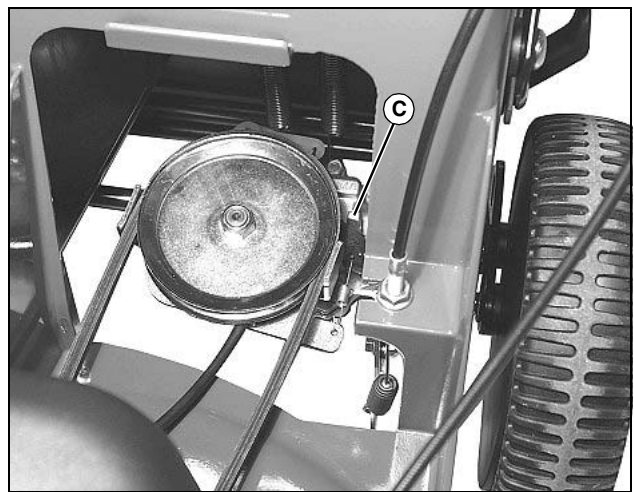
CAUTION: Avoid injury! Help prevent serious personal injury. Do not operate the mower without the belt shields installed.

IMPORTANT: Avoid damage! DO NOT use water to remove clippings.



MX31696

1. Unscrew and remove nut (A).
2. Remove shield (B).



MX31697

3. Remove clippings or debris from belt area and top of the transmission (C) using a brush or compressed air.
4. Install shield and nut.

SERVICE

Servicing Mower Blade



CAUTION: Avoid injury! Rotating blades are dangerous. Before adjusting or servicing mower:

- Disconnect spark plug wire(s) or battery negative (-) cable to prevent engine from starting accidentally.
- Always wear gloves when handling mower blades or working near blades.

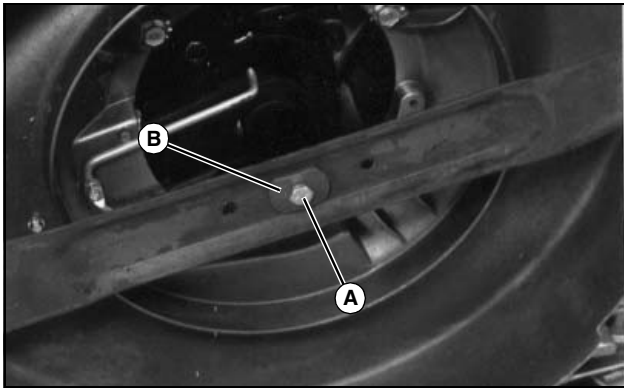
IMPORTANT: Avoid damage! To help prevent air cleaner damage and hard starting:

- Turn mower on its left side.

NOTE: Be sure the fuel tank is at least half empty.

Removing Mower Blade

1. Turn mower on its left side.



M73275

2. Remove bolt (A), washer (B), and blade.
3. Inspect blade; sharpen, balance or replace blade as necessary.

Installing Mower Blade

NOTE: Sharpened edges on blade tips must face upward and washer cup must be against blade when installing blade.

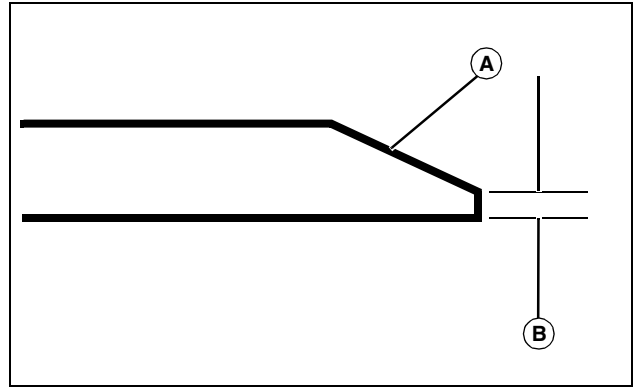
1. Lubricate bolt threads lightly with a general purpose grease or oil to prevent rusting and seizing.
2. Install blade, washer and bolt.
3. Tighten bolt (A) to 75 N•m (55 lb-ft).

Sharpening Blades



CAUTION: Avoid injury! Mower blades are dangerous!

- Always wear gloves while working on blades.
 - Always wear safety eye protection when grinding.
- Sharpen blades with grinder, hand file, or electric blade sharpener.



MIF

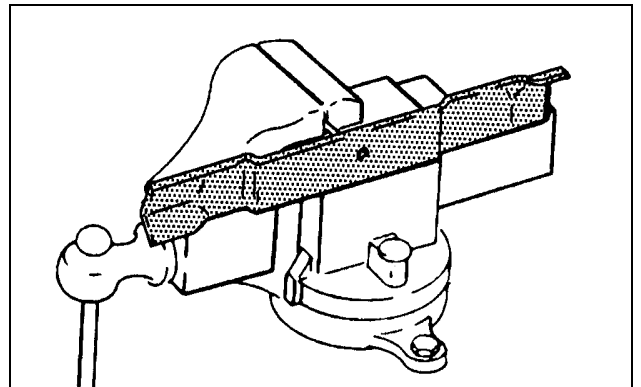
- Keep original bevel (A) when grinding.
- Blade should have 0.40 mm (1/64 in.) cutting edge (B) or less.
- Balance blades before installing.

Balancing Blades



CAUTION: Avoid injury! Mower blades are sharp. Always wear gloves when handling mower blades or working near blades.

1. Clean blade.



M61524

2. Put blade on nail in a vise. Turn blade to horizontal position.
3. Check balance. If blade is not balanced, heavy end of blade will drop.
4. Grind bevel of heavy end. Do not change blade bevel.

Using Proper Fuel

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

Always use fresh, clean fuel that is purchased in a quantity that can be used within approximately 30 days, or add fuel stabilizer.

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

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

TROUBLESHOOTING

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

Condensation may collect in the fuel tank because of a variety of operating or environmental conditions and, over time, may affect your machine's operation. Fill fuel tank at the end of daily use and store fuel in plastic containers to reduce condensation.

For best year-round performance and fuel-handling, add stabilizer to fuel immediately after fuel purchase. Such practice helps prevent engine performance problems and allows fuel storage in the machine all year without draining.

Filling Fuel Tank



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

- Shut engine off before filling fuel tank.
- Do not smoke while handling fuel.
- Keep fuel away from flames or sparks.
- Fill fuel tank outdoors or in well ventilated area.
- Clean up spilled fuel immediately.
- Use clean approved non-metal container to prevent static electric discharge.
- Use clean approved plastic funnel without screen or filter to prevent static electric discharge.

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

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

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

1. Park machine safely. (See Parking Safely in the SAFETY section.)
2. Allow engine to cool.
3. Remove any trash from area around fuel tank cap.
4. Remove fuel tank cap slowly to allow any pressure built up in tank to escape.
5. Fill fuel tank only to bottom of filler neck.
6. Install fuel tank cap.

JA62

IF	CHECK
Engine Will Not Start	Engine not primed 3 times. Fuel tank is empty. Stale or dirty fuel. Disconnected or dirty spark plug.
Engine Starts Hard Or Loses Power	Stale or dirty fuel. Dirty air cleaner element. Disconnected or dirty spark plug.
Engine Runs Rough	Disconnected or dirty spark plug. Dirty cooling fins. Dirty air cleaner paper or foam element.
Engine Overheats	Dirty blower housing and cooling fins.
Engine Stalls	Cold engine. Cutting height too low. Mowing too fast.
Engine Vibrates Too Much	Loose blade bolt. Blade dull or not balanced.
Mower Mows Unevenly	Mowing pattern not changed. Wheel levers not adjusted in the same position. Blade dull or not balanced.
Discharge Chute Plugs	Grass not dry. Cutting height not raised high enough. Dirty or full grass bag. Mowing too fast.
Mower Jerks Or Will Not Self-Propel	Traction belt broken. Traction clutch not adjusted. Dirty transmission. Shift lever not in gear.
Mulched Grass Appearance Is Poor: Clumps, Excessive Clippings, Rough Cut, Etc.	Grass not dry. Mowing too fast. Blade dull or not balanced. Cutting height set too low.
Bag Fill Indicator Not Working Properly	Too windy - wind will affect indicator. Bag is dirty.

Troubleshooting

Using Troubleshooting Chart

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

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

STORAGE

Storage

Storing Safety



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

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

Preparing Machine for Storage

1. Repair any worn or damaged parts. Replace parts if necessary. Tighten loose hardware.
2. Remove belt shield. Clean belt and transmission area. Do not use water to clean this area. Install shield.

IMPORTANT: Avoid damage! Do not use high pressure spray when cleaning under the deck. High pressure spray may cause damage to clutch and transmission parts.

3. Clean under the deck.
4. Sharpen mower blade.
5. Paint scratched or chipped metal surfaces to prevent rust.
6. Apply light coat of engine oil to pivot and wear points to prevent rust.

Preparing Fuel and Engine For Storage

Fuel:

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

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

If you are not using "Stabilized Fuel.":

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

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

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

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

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

4. Mix fresh fuel and fuel stabilizer in separate container. Follow stabilizer instructions for mixing.
5. Fill fuel tank with stabilized fuel and run engine for a few minutes to allow fuel mixture to circulate through carburetor.

Engine:

Engine storage procedure should be used when vehicle is not to be used

for longer than 60 days.

1. Change engine oil and filter while engine is warm.
2. Service air filter if necessary.
3. Clean debris from engine air intake screen.
4. On gas engines:
 - Remove spark plugs. Put 30 mL (1 oz.) of clean engine oil in cylinders.
 - Install spark plugs, but do not connect spark plug wires.
 - Crank the engine five or six times to allow oil to be distributed.
5. Clean the engine and engine compartment.
6. Close fuel shut-off valve, if your machine is equipped.
7. Store the machine in a dry, protected place. If machine is stored outside, put a waterproof cover over it.

Folding Handles

IMPORTANT: Avoid damage! Avoid damage to mower control cables:

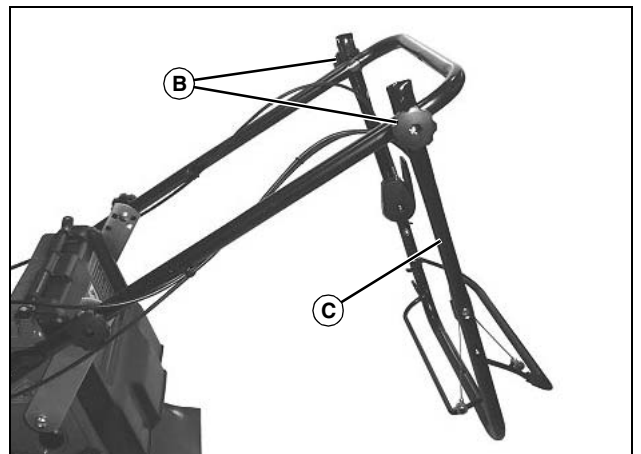
- Do not crimp cables when folding handle bars.
- Do not attempt to fold upper mower handle upward.

1. Remove grass bag.



MX31685

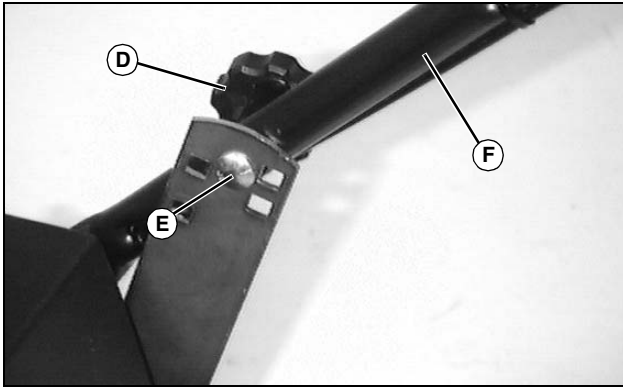
2. Remove starter handle (A) from bracket.



MX31698

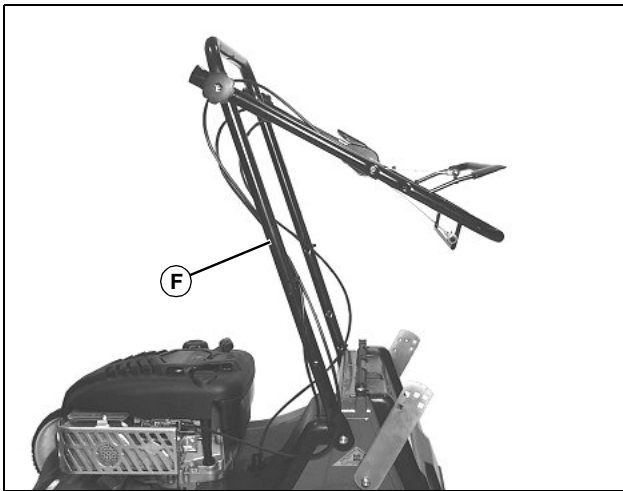
3. Loosen knob (B) 25 mm (1 in.) on each side. Carefully pivot upper handle (C) down.

ASSEMBLY



M87080

4. Remove knob (D) and carriage bolt (E) from each side of lower handle (F).



MX31699

5. Carefully fold lower handle (F) forward. Guide cables inside lower handle. Do not crimp cables.

6. Install carriage bolts and knobs in handle.

Removing Mower From Storage

1. Unfold handle (see Unfold Handle in Assembly section). Tighten knobs. Do not crimp cables.
2. Check engine oil level.
3. Connect wire to spark plug.
4. Inspect shields, safety devices and hardware.
5. Push primer bulb three times to prime engine.

Assembly

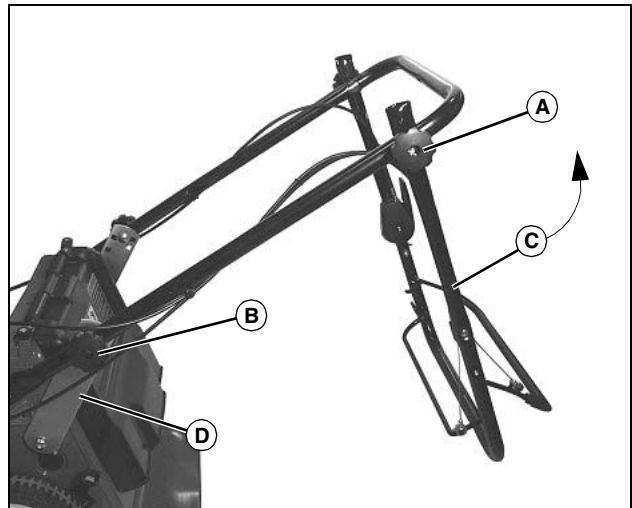
Unfold Handle

IMPORTANT: Avoid damage! Do not crimp or damage control cables.



MX31703

1. Loosen knob (A) on each side.
2. Remove knob (B) and bolt from each side.



MX31698

3. Carefully unfold handlebar assembly.
4. Pivot upper handle (C) to a straight position.
5. Tighten knob (A) on each side.
6. Hold handle and install bolt through square hole of bracket (D) and handle. Install knob (B) on outside of handle.

Install Starter Handle In Bracket

NOTE: Don't pull starter handle without blade control lever engaged. When you pull starter handle, blade also turns and engine may start.

SPECIFICATIONS



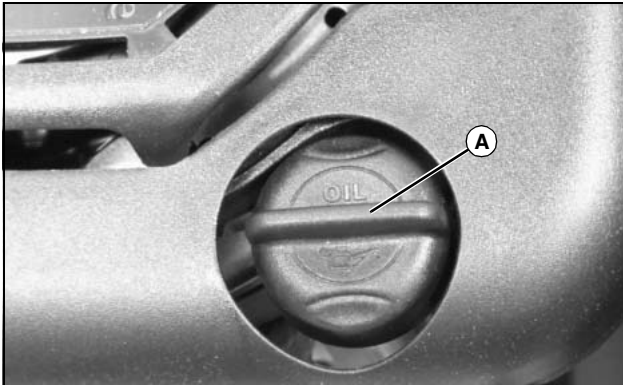
MX31685

1. Pull starter handle (A) to rear and install rope in bracket (B).

Add Engine Oil

IMPORTANT: Avoid damage! Engine is shipped without oil. You must add oil before running the engine. See Service section for correct oil application.

1. Park mower on a level surface.



MX7423

2. Turn oil dipstick (A) 1/4 turn to the left and remove.
3. Add 0.5 L (16 oz) oil into dipstick tube.
4. Install dipstick. Turn dipstick 1/4 turn to the right and tighten.
5. Remove dipstick.
6. Check oil level. Oil should be between ADD and FULL marks on dipstick. If not, add oil.
7. Install and tighten dipstick.
8. Remove "No Oil" tag from top of engine.

Install Grass Bag

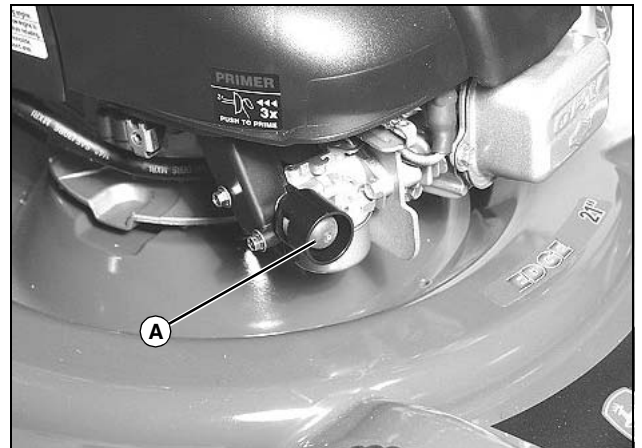


MX31695

1. Lift and hold door (A) up in a vertical position.
2. Grasp handle (B). Install bag.
3. Lower door to hold bag in place.

Test Mower Operation

1. Put enough fuel in tank to test mower operation.



MX31686

2. Press primer bulb (A) three times to prime engine.
3. Start engine and check mower operation. (See Operating section).

Specifications

Engine

Manufacturer	Briggs & Stratton
Model Series	121602
Cycle	4
Valve Type	Over Head Valve (OHV)
Choke	Primer Bulb
Displacement	189 cc (11.53 cu in.)
Bore	68 mm (2.64 in.)
Stroke	52 mm (2.04 in.)

WARRANTY

Armature Air Gap	0.25-0.36 mm (0.010-0.014 in.)
Intake Valve Clearance	0.10-0.20 mm (0.004-0.008 in.)
Exhaust Valve Clearance	0.10-0.20 mm (0.004-0.008 in.)
Operating Range	3100 - 3300 rpm
Spark Plug	John Deere M78543, Champion RC12YC
Spark Plug Gap	0.51 mm (0.020 in.)
Spark Plug Torque	20 N•m (15 lb-ft)
Starter	Recoil
Air Cleaner	Paper Element with Foam Pre-Cleaner

Capacities

Fuel Tank	1.5 L (1.6 qt)
Engine Oil	0.47 L (16 oz)
Rear Grass Bag	74 L (2.5 bu)

Drive System

Manufacturer	Kanzaki
Type	Gear Transmission
Number of Speeds	2

Travel Speeds:

First Gear	3.2 kph (2 mph)
Second Gear	5.0 kph (3 mph)

Machine Specifications

Deck Material	Cast Aluminum
Adjustable Handle	Standard
Blade Hardware Torque	75 N•m (55 lb-ft)
Rear Grass Bag	Standard
Side Discharge Chute	Optional
Mulching Plug	Optional
Cutting Height Range	25 - 102 mm (1 - 4 in.)
Number of Cutting Heights in 1/2 in. (13 mm) Steps	7
Wheel Diameter	222 mm (8.75 in.)
Cutting Width	53.3 cm (21 in.)
Safety System	Zone Start
Number of Travel Speeds	2
Weight	43 kg (95 lb)

Recommended Lubricants

Fuel	See Filling Fuel Tank in the Service section
Engine Oil	TORQ-GARD SUPREME® (SAE 30 or SAE 10W-30)
Grease	John Deere MOLY HIGH TEMPERATURE EP GREASE John Deere HIGH TEMPERATURE EP GREASE John Deere GREASE GARD™

(Specifications and design subject to change without notice)

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

John Deere, Federal and California Emission Control System Warranty (Small Off-Road Gas Engines)

Your Warranty Rights and Obligations

The United States Environmental Protection Agency (EPA), the California Air Resources Board (CARB) and John Deere are pleased to explain the emission control system warranty on your 1995 or later small off-road equipment engine. In California, 1995 and later small off-road equipment engines must be designed, built and equipped to meet the State's stringent anti-smog standards. In other states, 1997 and later model year equipment engines must be designed, built and equipped to meet the U.S. EPA regulations for small non-road, spark ignition engines. John Deere must warrant the emission control system on your small off-road equipment engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your small off-road equipment engine.

Your emission control system may include parts such as the carburetor, fuel-injection system and ignition system. Also included may be connectors and other emission related assemblies.

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

John Deere Emission Control System Warranty Coverage

In California, 1995 and later small off-road equipment engines are warranted relative to emission control parts for two years. In other states, 1997 and later model year equipment engines are warranted relative to emission control parts for two years. If any emission related part on your engine is defective, the part will be repaired or replaced by John Deere.

Owner's Warranty Responsibilities

As the small off-road equipment engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. John Deere recommends that you retain all receipts covering maintenance on your small off-road equipment engine, but John Deere cannot deny warranty solely for lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the small off-road equipment engine owner, you should however be aware that John Deere may deny you warranty coverage if your small off-road equipment engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your small off-road equipment engine to an authorized John Deere Commercial and Consumer Equipment Retailer as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact your John Deere Commercial and Consumer Equipment Retailer, or the John Deere Customer Communications Center at 1-800-537-8233.

Length Of Warranty Coverage

John Deere warrants to the initial owner and each subsequent purchaser that the small off-road equipment engine is:

- Designed, built and equipped so as to conform with all applicable regulations adopted by the California Air Resources Board (CARB) for 1995 and later equipment engines, and all applicable regulations of the United States Environmental Protection Agency (EPA) for 1997 and later equipment engines; and
- Free from defects in materials and workmanship which can cause the failure of an emission warranted part for a period of two years after the

Warranty

Product Warranty

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

JOHN DEERE QUALITY STATEMENT

engine is delivered to the initial retail purchaser. John Deere is liable for damages to other engine components caused by the failure of a warranted part during the warranty period. If any emission related part on your engine is defective, the part will be repaired or replaced by John Deere.

Warranted Parts

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

Fuel Metering System:

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

Air Induction System:

- Air Cleaner
- Intake manifold.

Ignition System:

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

Catalyst System:

- Exhaust manifold.

Miscellaneous Items Used in Above Systems

- Vacuum and temperature switches.
- Electronic controls.
- Hoses, belts, connectors and assemblies.

Since emission related parts may vary slightly from model to model, certain models may not contain all of these parts and certain models may contain functionally equivalent parts.

Warranty Service And Charges

Warranty service shall be provided during customary business hours at any authorized John Deere Commercial and Consumer Equipment Retailer. Repair or replacement of any warranted part will be performed at no charge to the owner, including diagnostic labor which leads to the determination that a warranted part is defective, if the diagnostic work is performed at an authorized John Deere Commercial and Consumer Equipment Retailer. Any parts replaced under this warranty shall become the property of John Deere.

Maintenance Warranty Coverage

a) Any warranted part that is not scheduled for replacement as required maintenance must be warranted as to defects for the warranty period. Any such part repaired or replaced under the warranty must be warranted for the remaining warranty period.

b) Any warranted part that is scheduled only for regular inspection to the effect of "repair or replace as necessary" must be warranted as to defects for the warranty period. Any such part repaired or replaced under the warranty must be warranted for the remaining warranty period.

c) Any warranted part which is scheduled for replacement as required maintenance must be warranted as to defects only for the period of time up to the first scheduled replacement for that part. Any such part repaired or replaced under the warranty must be warranted for the remainder of the period prior to the first scheduled replacement point for that part.

d) Normal maintenance, replacement or repair of emission control devices and systems, which are being done at the customers expense, may be performed by any repair establishment or individual; however, warranty repairs must be performed by an authorized John Deere Commercial and

Consumer Equipment Retailer.

e) Any replacement part that is equivalent in performance and durability may be used in the performance of any non-warranty maintenance or repairs, and shall not reduce the warranty obligations of John Deere.

Consequential Warranty Coverage

Warranty coverage shall extend to the failure of any engine components caused by the failure of any warranted part still under warranty.

Limitations

This Emission Control System Warranty shall NOT cover any of the following:

a) Repair or replacement required as a result of (i) misuse or neglect, (ii) improper maintenance or unapproved modifications, (iii) repairs improperly performed or replacements improperly installed, (iv) use of replacement parts or accessories not conforming to John Deere specifications which adversely affect performance and/or durability, (v) alterations or modifications not recommended or approved in writing by John Deere.

b) Replacement parts, other services and adjustments necessary for normal maintenance.

c) Transportation to and from the John Deere Commercial and Consumer Equipment Retailer, or service calls made by the Retailer.

Limited Liability

a) The liability of John Deere under this Emission Control System Warranty is limited solely to the remedying of defects in materials or workmanship. This warranty does not cover inconvenience or loss of use of the small off-road equipment engine or transportation of the engine to or from the John Deere Commercial And Consumer Equipment Retailer. JOHN DEERE SHALL NOT BE LIABLE FOR ANY OTHER EXPENSE, LOSS, OR DAMAGE, WHETHER DIRECT, INCIDENTAL, CONSEQUENTIAL (EXCEPT AS LISTED ABOVE UNDER "COVERAGE") OR EXEMPLARY ARISING IN CONNECTION WITH THE SALE OR USE OF OR INABILITY TO USE THE SMALL OFF-ROAD EQUIPMENT ENGINE FOR ANY OTHER PURPOSE.

b) NO EXPRESS EMISSION CONTROL SYSTEM WARRANTY IS GIVEN BY JOHN DEERE WITH RESPECT TO THE ENGINE EXCEPT AS SPECIFICALLY SET FORTH IN THIS DOCUMENT. ANY EMISSION CONTROL SYSTEM WARRANTY IMPLIED BY LAW, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS EXPRESSLY LIMITED TO THE EMISSION CONTROL SYSTEM WARRANTY TERMS SET FORTH IN THIS DOCUMENT.

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

John Deere Quality Statement

John Deere Quality



John Deere equipment is more than just a purchase, it's an investment in

JOHN DEERE QUALITY STATEMENT

quality. That quality goes beyond our equipment to your John Deere dealer's parts and service support. This support is needed to keep you a satisfied customer.

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

Step 1 Refer to your operator's manual

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| A. It has many illustrations and detailed information on the safe and proper operation of your equipment. | C. It gives ordering information for parts catalogs, service and technical manuals. |
| B. It gives troubleshooting procedures, and specification information. | D. If your questions are not answered in the operator's manual, then go to Step 2. |

Step 2 Contact your dealer

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|---|---|
| A. Your John Deere dealer has the responsibility, authority, and ability to answer questions, resolve problems, and fulfill your parts and service needs. | C. If the parts and service people are unable to resolve your problem, see the dealership manager or owner. |
| B. First, discuss your questions or problems with your dealer's trained parts and service staff. | D. If your questions or problems are not resolved by the dealer, then go to Step 3. |

Step 3 Call the John Deere Customer Communications Center

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

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

- | | |
|---|--|
| The name of the dealer with whom you've been working. | Your 13-digit serial number which you recorded on the inside front cover of this manual. |
| Your equipment model number. | |
| Number of hours on machine (if applicable). | If the problem is with an attachment, your attachment identification number. |

C. Then call 1-800-537-8233 and our advisor will work with your dealer to investigate your concern.