

JA65 21-Inch Walk-Behind Rotary Mower (Serial No. 010001–)



JOHN DEERE

OPERATORS MANUAL

**JA65 21-Inch Walk-Behind Rotary
Mower (Serial No. 010001–)**

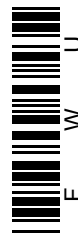
OMGC00256 K7 English

**John Deere
Worldwide Commercial and
Consumer Equipment Division**

OMGC00256 K7

Export Version

**LITHO IN U.S.A.
ENGLISH**



INTRODUCTION

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

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

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

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

BEFORE DELIVERING THIS MACHINE, your dealer performed a predelivery inspection to ensure best performance.

THIS WALK-BEHIND MOWER IS DESIGNED SOLELY for use in customary lawn mowing or similar operation. Use in any other way is considered as contrary to the intended use.

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.

INTRODUCTION

THIS WALK-BEHIND MOWER 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.

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

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

Date of Purchase:

Dealer Name:

Phone:

Machine Serial Number:

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Engine Serial Number:

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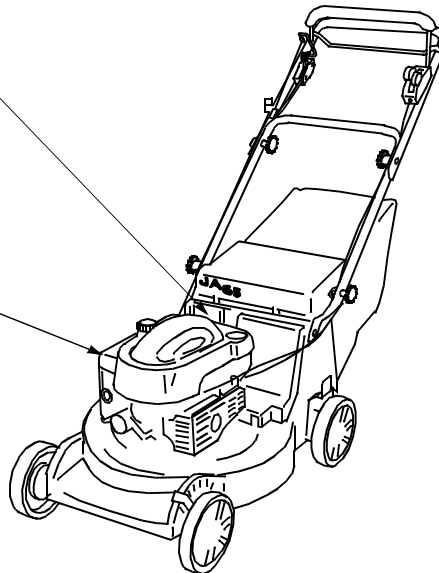


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All information, illustrations and specifications in this manual are based on the latest information at the time of publication. The right is reserved to make changes at any time without notice.

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NOTES

NOTES

SAFETY SIGNS

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 Signs section.



Avoid Injury From Cutting Blades

Keep hands and feet away from cutting blades while engine is running.



Avoid Injury From Rotating Blades

DO NOT put hands or feet under or into mower when engine is running.



SAFETY SIGNS

Check Grass Bag

Grass bag is subject to wear and deterioration.

Check bag frequently. Replace when necessary.

Use John Deere bag or equivalent to comply with safety specifications.

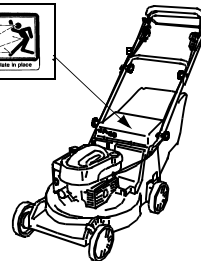


Avoid Injury From Rotating Blades and Thrown Objects

DO NOT operate mower without discharge chute, mulch plug or grass bag in place.

Stop engine before lifting door and clearing discharge.

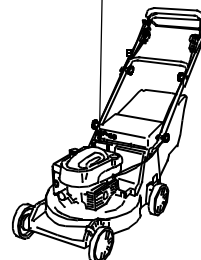
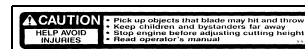
DO NOT lift or block door open with blade engaged.



Avoid Injury When Adjusting Cutting Height

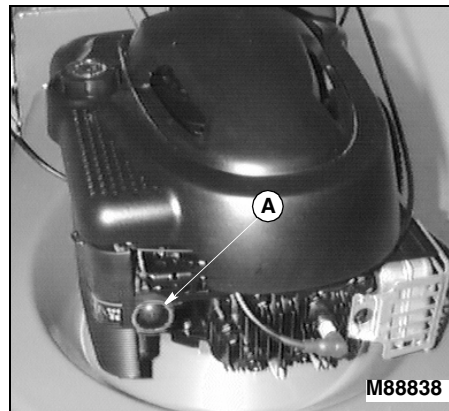
Read operator's manual.

STOP engine before adjusting cutting height.



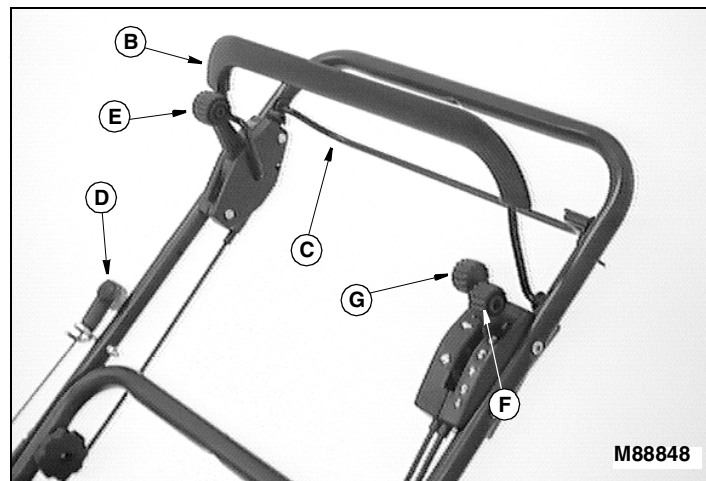
CONTROLS

Engine Controls



A - Primer Bulb Prime to start engine

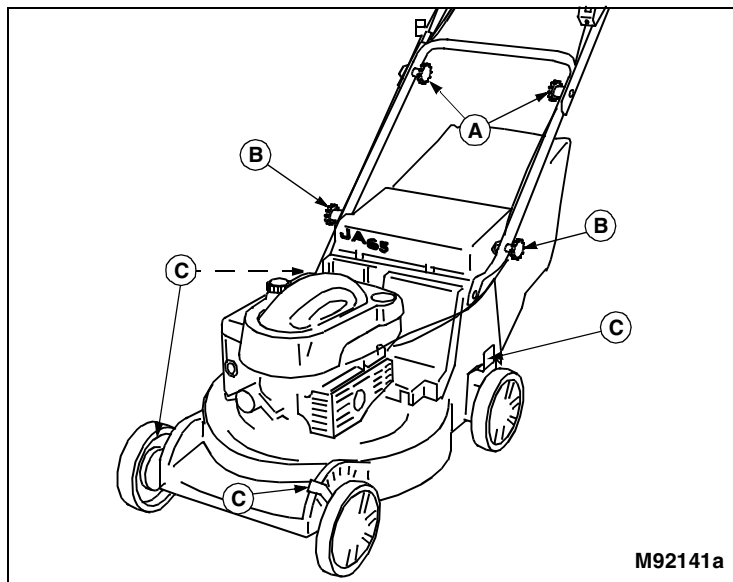
Handle Controls



B - Blade Lockout and Stop Lever Stops blades
C - Traction Clutch Lever Engages traction
D - Starter Handle Starts engine
E - Blade Engagement Lever Starts blades
F - Gear Shift Lever Changes gears
G - Throttle Lever Controls engine speed

CONTROLS

Handle and Cutting Height Controls



- A - Fold Handle Knobs Folds handle**
- B - Handle Height Knob..... Adjusts handle height**
- C - Cutting Height Levers.....Adjusts cutting height**

OPERATING

SAFETY

Operate Safely



- Inspect machine before you operate. Be sure hardware is tight. Repair or replace damaged, badly worn, or missing parts. Be sure proper guards, plates, grass catcher, or other safety protective devices are in good condition and fastened in place. Make any necessary adjustments before you operate.
- Clear work area of objects that might be thrown. Keep people and pets out of the work area. Stop machine if anyone enters the area.
- If you hit an object, stop the machine and inspect it. Make repairs before you operate. Keep machine properly maintained and in good working order.
- DO NOT leave machine unattended when it is running.
- Only operate during daylight or with good artificial light.
- Be sure of footing. Be especially careful when you pull machine backwards with the engine running.
- Mow across a hill - not up and down. Be careful when you change direction on a slope. Do Not mow excessively steep slopes.
- DO NOT mow wet grass. Reduced traction could cause you to slip.
- Keep a firm hold on the machine handle.
- DO NOT wear radio or music headphones while operating the machine. Safe operation requires your full attention.
- DO NOT operate mower if you are under the influence of drugs or alcohol.

OPERATING

Rotating Blades are Dangerous - Protect Children and Prevent Accidents



PROTECT CHILDREN:

- Never assume that children will remain where you last saw them. Children are attracted to mowing activity, stay alert to the presence of children.
- Keep children in the house when you are operating the machine.
- Turn machine off if a child enters the area.
- Use extra care when you come to blind corners, shrubs, trees, or other objects that may block your vision.
- DO NOT let children or an untrained person operate the machine.

HELP PREVENT SERIOUS OR FATAL ACCIDENTS:

- Be alert at all times, people especially children can move quickly into the area before you know it.
- Stop the blade when crossing gravel drives, walks, or roads.
- Shut off blades when you are not mowing.
- Keep hands, feet, and clothing away from rotating blades.

Wear Appropriate Clothing



- Wear close fitting clothing and safety equipment appropriate for the job.
- Do Not operate the equipment when barefoot or wearing open sandals. Always wear substantial footwear.
- Loud noise can cause impairment or loss of hearing, wear a suitable protective device such as earplugs.

OPERATING

ADJUSTMENTS

Adjusting Cutting Height



CAUTION: Help prevent personal injury. Before adjusting mower cutting height:
• STOP ENGINE.

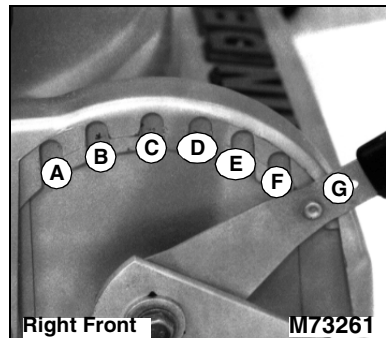
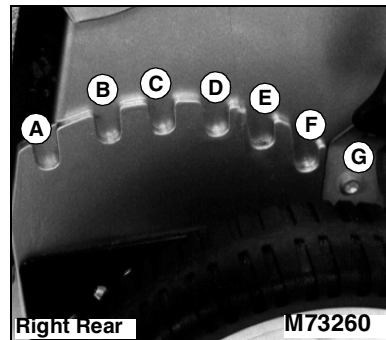
IMPORTANT: Adjust all levers to same height except for **LOWEST** cutting height (A):

- Put front wheel levers in 13 mm (1/2-in.) notch: First rear notch.
- Put rear wheel levers in 25 mm (1-in.) notch: Second rear notch.

To help move rear wheel levers:

1. Lift lower handlebar slightly with one hand to take some weight off wheel.
2. Move height adjustment lever to desired position with other hand.

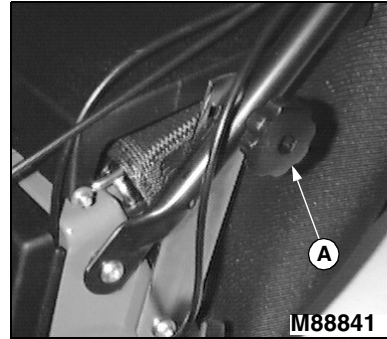
Key	Cutting Height Adjustments In mm (Inches)
(A)	13 mm (1/2-in.)
(B)	25 mm (1-in.)
(C)	38 mm (1-1/2-in.)
(D)	50 mm (2-in.)
(E)	64 mm (2-1/2-in.)
(F)	75 mm (3-in.)
(G)	90 mm (3-1/2-in.)



OPERATING

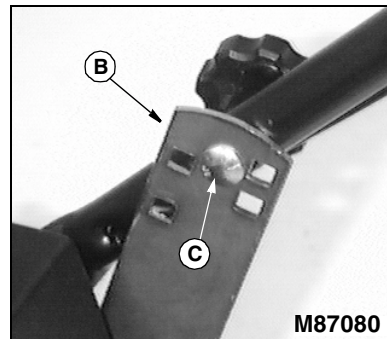
Adjusting Handle Height

1. Remove knob (A) and bolt from each side.
2. Move handle to desired height.



NOTE: Rear grass bag removed to illustrate photo clarity.

3. Move bracket (B) so a square hole in the bracket lines up with a handle hole.
4. Install carriage bolt (C) through same square hole on each side.
5. Install and tighten knobs.



OPERATING

Starting Engine



CAUTION:

To avoid injury:



Keep hands, feet and clothing away from blade.

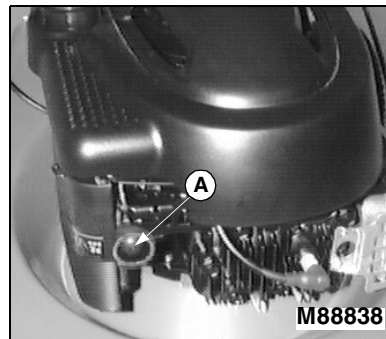


Engine exhaust fumes can cause sickness or death.

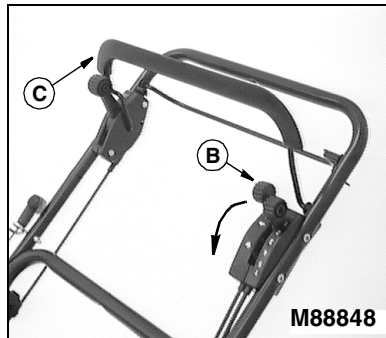
Run engine only in a ventilated area.

IMPORTANT: To help prevent damage to recoil starter and/or blade brake clutch, do not start engine when blade is under load, such as, in heavy grass.

1. Prime engine by pressing primer bulb (A) three times.

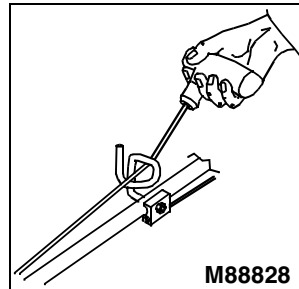


2. Move throttle lever (B) to the FAST  position.
3. Hold blade lockout and stop lever (C) against handle.



OPERATING

4. Pull starter handle until you feel resistance. Then pull fast and steady.
5. When engine starts, return rope slowly.
6. Mow with throttle lever in the FAST  position.



Blade Operation



CAUTION:

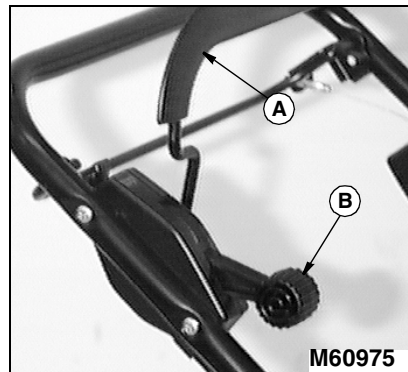


Keep hands, feet and clothing away from blade when engine is running. If blade does not stop within 3 seconds after you release blade stop lever, see your John Deere dealer.

DO NOT ENGAGE blade in heavy grass or engine may STOP.

To ENGAGE blade:

- Stand behind the mower.
- Pull and hold lever (A) against handle.
- Push lever (B) forward until it latches.



To DISENGAGE blade:

- Release lever (A).



CAUTION:

If lever (B) does not latch, do not tape it or hold it in the LATCH position. See your John Deere dealer.
DO NOT tape lever (A) to handle.

OPERATING

Forward Travel

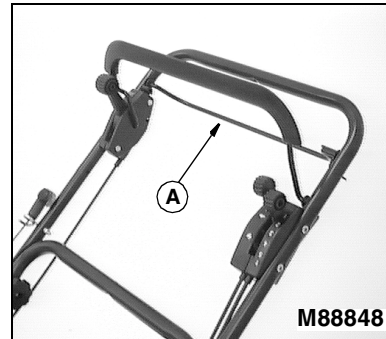
To Travel Forward:

- Pull lever (A) to handle and hold it there.

To Stop Forward Travel:

- Release lever (A).

NOTE: Rear wheels should make a clicking noise when you push mower forward. This means drive train is operating correctly.

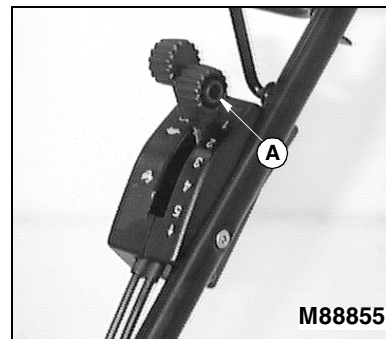


Travel Speeds

To change travel speed:

- Stop.
- Move gear lever (A) to desired position.
- ENGAGE traction clutch lever.

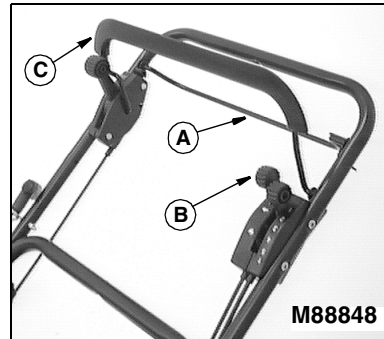
Gear	Travel Speed km/h (mph)
1	1.9 (1.2)
2	2.9 (1.8)
3	3.9 (2.4)
4	4.8 (3.0)
5	6.6 (4.1)



OPERATING

Stopping Engine

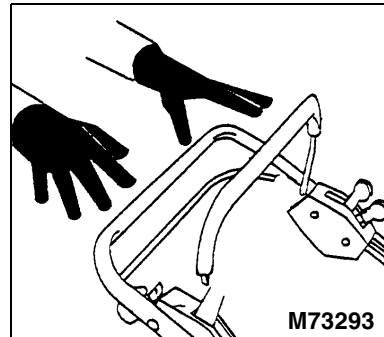
1. Release traction clutch lever (A).
2. Pull throttle lever (B) back to the SLOW (🐢) position.
3. Release blade lockout and stop lever (C).



Emergency Stopping

Release handle and levers:

- Mower will stop.
- Blade will stop.



IMPORTANT: If mower blade does not stop within 3 seconds after you release blade stop lever, see your John Deere dealer

OPERATING

Using Discharge Chute (Optional)



CAUTION: Do not operate mower unless grass bag, chute (optional), or mulch plug (optional) is held in place by door.

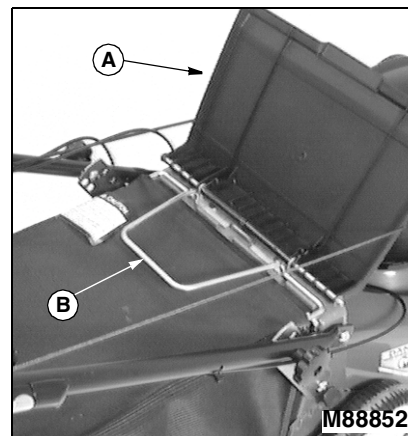
1. Stop engine. Lift and hold door.
2. Remove grass bag.
3. Install chute. Lower door to hold chute in place.



Using Grass Bag

1. Lift and hold door (A).
2. Grasp handle (B). Lift bag on or off mower.
3. Gently lower door.

NOTE: Bag may wear and deteriorate. Check condition of bag often. Use a John Deere bag or equivalent to comply with safety specifications.



OPERATING

Using Mulch Blade (Optional)

See your John Deere dealer for Mulch Plug Kit. The kit includes plug, blade, decal, and instructions.

Mulch blade works equally well with mulch plug, chute, or bag. There is no need to change blade when you change attachment.

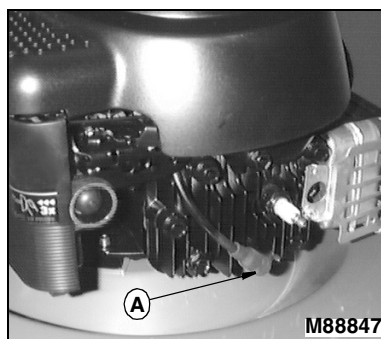


CAUTION: Service mower safely:

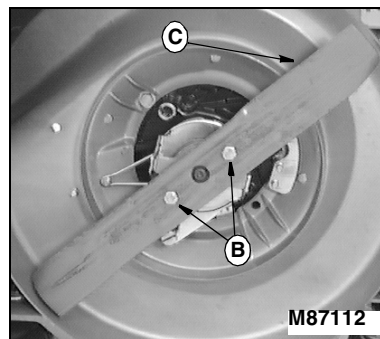
- If you remove blade, be sure fuel tank is almost empty.
- STOP engine. Let it cool.
- Disconnect spark plug wire.
- Wear gloves or wrap blade with rag.

IMPORTANT: To help prevent air cleaner damage and hard starting, turn mower on its LEFT SIDE.

1. Disconnect spark plug wire (A).
2. Turn mower on its LEFT SIDE.



3. Remove bolts (B) and blade (C).
4. Install mulch blade with wings pointing upward.
5. Tighten bolts to 73 N•m (55 lb-ft).
6. Lower mower to the floor.



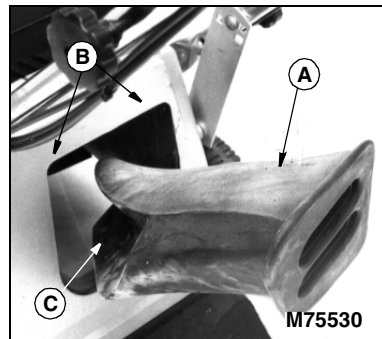
OPERATING

Using Mulch Plug (Optional)



CAUTION: Do not operate mower unless grass bag, chute, or plug is held in place by door. Before you unplug mower or remove mulch plug, STOP engine.

1. Lift and hold door.
2. Install plug (A) in opening (B) with (C) facing left.
3. Push and turn plug counterclockwise until it is seated.
4. Lower door.



LAWN CARE

Mowing Tips

Before beginning to mow, be sure deck is level and proper cutting height is selected.

When you mow an area for the first time, travel SLOW and cut HIGH so you can:

- Learn the terrain.
- Learn the best mowing pattern.
- Help prevent hitting objects hidden in the grass.

Try to mow grass only when it is dry: Wet grass may plug mower and leave a trail of grass clumps.

Use a travel speed that fits the conditions:

- Travel SLOW when you mow thick, tall grass.
- FAST travel or sharp turns may produce stripes or uneven cut. Slow down. Short, fast turns may scuff ground and pull grass out by the roots.
- Travel at MODERATE speed when you mow a thin stand of grass.

Mow often enough so you cut only 1/3 of grass blade in one mowing. Cutting grass too short may kill grass and let weeds grow easily.

Aerate lawn to help stimulate soil organisms and root growth.

LAWN CARE

To Avoid Scalping

- Pay attention to the way you mow: scalping can be eliminated.
- If mower scalps easily, cutting height may be too low for ground conditions—especially on lawns with many small mounds and ridges.
- Mow over ridges and through shallow ditches straight-on, not at an angle.

Keep blade sharp: A dull blade will tear grass; tips of grass will then turn brown.

Check lawn regularly for uneven cut. If cut is uneven:

- Mower may not be level. Adjust cutting height levers.

Bagging Tips

For best performance, bagger needs good airflow. To help increase airflow:

- Keep underside of deck and chute clean.
- Cut grass high.
- Clean bag often with water from garden hose, from outside to inside of bag. Let bag dry before use.

IMPORTANT: DO NOT leave clippings in bag: • Moisture may damage bag. • Damp clippings are a fire hazard.
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When bag is full:

- Mower may leave a trail of clippings.
- Clippings may blow out from under deck.
- Top of bag will deflate.

LAWN CARE

Bagging and Composting

Many communities will no longer haul lawn clippings and leaves to landfills. Bagging and composting clippings and leaves is one way to solve this problem.

Clippings from grass bag may also be used as mulch, or sheet compost, between garden rows and around trees and shrubs.

This mulch will:

- Keep weeds from growing.
- Help soil keep moisture.
- Add nutrients to soil as it decays.
- Help keep soil temperature down during hot weather.

You may compost clippings and leaves in various ways. See garden magazines or clubs for information, or go to your local library for help.

Finished compost is crumbly. It is rich in soil nutrients, and can be spread on your lawn. Compost may also be worked into soil. It adds humus to soil and improves soil texture, making soil looser and easier to work.

LAWN CARE

Mulching Tips

Advantages:

- You do not have to rake or bag grass or leaves.
- Lawn holds moisture better during dry weather.
- Soil temperatures stay down during hot weather.
- Mulch adds nutrients to soil, and reduces need for fertilizer.

Mulching does not make thatch. Frequent shallow watering and fertilizer application produce thatch from roots that grow close to surface.

Be careful when you mulch leaves in Fall. Grass needs sunlight in Fall to help store food for Winter. A thick layer of mulched leaves can prevent sunlight from getting to grass and smother it. You may have to mow with grass bag to remove this layer.

Mulch leaves only when they are dry.

Mulching wet or damp grass or leaves may cause problems:

- Clippings and leaves may build up on the underside of the mower deck.
- Cut grass and leaves may form clumps.
- Leaves may not be cut into small bits.
- Engine will work harder and use more fuel.
- Clean underside of mower deck after mulching wet or damp grass.

If possible cut only top 1/3 of grass at a time.

Use a different mowing pattern each time you mow. Overlap mowing paths 50–100 mm (2–4 in.).

Slow down. Mulching takes more power.

Keep blade sharp. Check it often.

Keep underside of deck clean.

If clippings are not dispersed evenly, raise cutting height one or more positions.

LAWN CARE

After Mowing

- STOP engine. Let it cool. This will help prevent starting a fire when you store the mower.
- Remove and shake bag to remove all clippings. This will help to prevent deterioration of bag and starting a fire.
- Clean top of deck, engine, and chute with brush or compressed air, if possible. This will help to prevent buildup and starting a fire.

IMPORTANT: To help extend clutch life, wait at least 30 minutes after mowing before cleaning under the deck with water. After cleaning with water, start the engine and engage the blade for about 15 seconds to “spin dry” the clutch. If you need to clean under the deck immediately after mowing use a scraper, NOT water.

- Spray under deck with water under pressure to remove corrosive lawn chemicals and buildup. DO NOT spray the transmission with water. (See IMPORTANT information above.)
- Install bag. Put mower in safe storage.

REPLACEMENT 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 your machine serial number. This is the number you have recorded in the **INTRODUCTION** section in the front of this manual.

ITEM	PART NUMBER
Air Cleaner Paper Element	LG491588
Traction Drive Belt	See your John Deere dealer for service
Standard Mower Blade (High Lift)	M77178
Mulch Blade	M125413
Spark Plug	TY6129

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

SERVICE MACHINE SAFELY

Practice Safe Maintenance



- Understand service procedure before doing work. Keep area clean and dry.
- Never lubricate, service, or adjust machine while it is moving. Keep safety devices in place and in working condition. Keep hardware tight.
- To prevent them from getting caught, keep hands, feet, clothing, jewelry, and long hair away from any moving parts.
- Before servicing machine, disengage all power and stop the engine. Let engine cool.
- Securely support any machine elements that must be raised for service work.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.
- Unauthorized modifications to the machine may impair its function and safety.

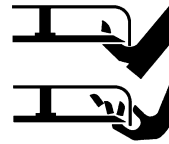
Wear Appropriate Clothing



- Wear close fitting clothing and safety equipment appropriate for the job.
- Loud noise can cause impairment or loss of hearing, wear a suitable protective device such as earplugs.
- Do not wear radio or music headphones while servicing the machine. Safe service requires your full attention.

SERVICE MACHINE SAFELY

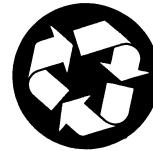
Avoid Injury from Contacting Blades



Before you unplug or adjust machine:

- STOP the engine.
- Wait for blades to STOP.
- Keep hands, feet and clothing away from blades when engine is running.

Handling Waste Products



- Waste products, such as, used oil, fuel, 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 John Deere 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. See your John Deere dealer for the MSDS on chemical products used with your machine.

SERVICE

Service Intervals

BEFORE EACH USE	• Check oil level.
AFTER EACH USE	• Clean the mower.
FIRST 5 HOURS	• Change oil.
25 HOURS	• Clean air cleaner paper element • Tighten blade bolts. • Lubricate rear axle bearings. • Clean and gap spark plug. • Clean belt and transmission area. • Change engine oil, (minimum once a season).
100 HOURS	• Adjust blade brake clutch cable. • Replace air cleaner paper element.

Service Record

DATE	SERVICE PERFORMED

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 nonroad 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.

Possible engine surging will occur at high rpm when the transmission and the blades are disengaged. This is a normal condition due to the emission control system.

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.

SERVICE

Avoid Fumes



CAUTION: Engine exhaust fumes can cause sickness or death:



- If it is necessary to run an engine in an enclosed area, use an exhaust pipe extension to remove the fumes.
- Always try to work in a well ventilated area.

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:

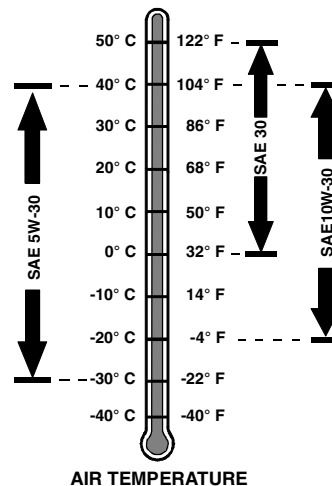
- TORQ-GARD SUPREME® (SAE 30)
- TORQ-GARD SUPREME® (SAE 5W-30)

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

- TURF-GARD® (SAE 10W-30)
- PLUS-4® (SAE 10W-30)

Other oils may be used if above John Deere oil is not available, provided they meet one of the following specifications:

- SAE 5W-30—API Service Classification SG or higher
- SAE 10W-30—API Service Classification SG or higher
- SAE 30—API Service Classification SC or higher



SERVICE

Checking Engine Oil Level

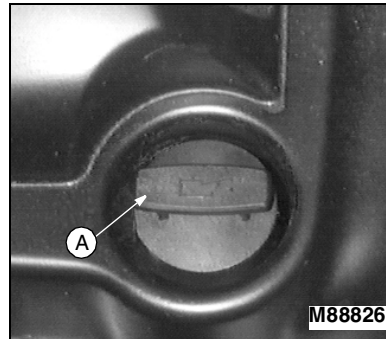


CAUTION: Before you check or add oil, STOP engine. Let it cool.

IMPORTANT: Change oil after first 5 hours of operation.

1. Stop engine. Put mower on a level surface.

2. Turn oil dipstick (A) 1/4 turn counterclockwise. Remove dipstick and wipe it with a clean cloth.

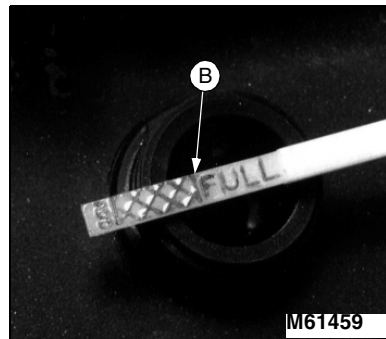


3. Install dipstick.

IMPORTANT: If oil level is below the ADD mark, DO NOT run the engine.

4. Remove dipstick. Check oil level. Oil level MUST BE between ADD and FULL marks. If not, pour oil into dipstick fill tube to bring level to FULL mark (B).

5. Install and tighten dipstick.



SERVICE

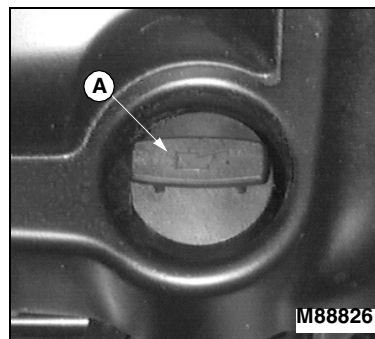
Changing Engine Oil



- CAUTION:**
- Used oil may harm environment and people if it is dumped on the ground or into a drain or a body of water. Call your local Recycling Center or John Deere dealer to learn how to recycle used oil.
 - Fuel is highly flammable. To prevent fuel spillage from occurring, drain fuel from tank before tipping mower to drain oil.

- IMPORTANT:**
- Change oil after first 5 hours of operation.
 - Change oil while engine is warm.
 - If mower is not operated 25 hours during the mowing season, change oil before storing mower.
 - Help prevent air cleaner damage and hard starting, turn mower onto the **LEFT** side when servicing.

1. Park mower on a level surface. Drain fuel from tank or run engine until fuel tank is empty or near empty.
2. Stop engine and disconnect spark plug wire.
3. Turn oil dipstick (A) 1/4 turn counterclockwise and remove from the filler tube.



SERVICE

4. Insert plastic drain tube (B) firmly inside filler tube opening. Place a drain pan on the left side of the mower.

5. Turn mower onto its LEFT SIDE.

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

7. After oil has drained, return mower to an upright position.

8. Remove plastic drain tube. Clean area around filler tube.

9. Add 0.6 L (20 oz) oil through dipstick filler tube.

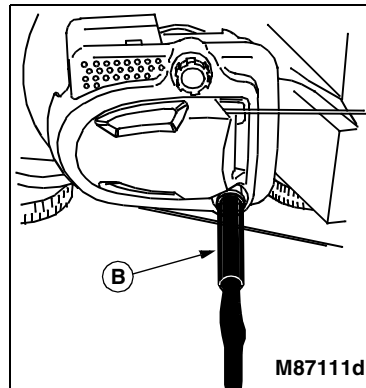
10. Install dipstick.

11. Check oil level:

- Remove dipstick.
- Add oil to FULL mark if necessary.

12. Install and tighten dipstick.

13. Connect spark plug wire.



SERVICE

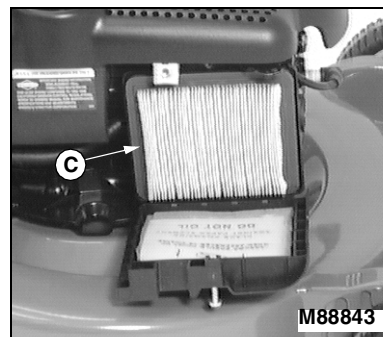
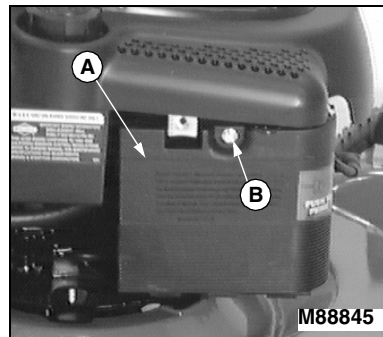
Cleaning and Replacing Air Cleaner Element



CAUTION: Before you work on engine:
• STOP engine. Let it cool.

- IMPORTANT:**
- If operation of the mower is done in very dusty conditions, clean element often.
 - Replace paper element when engine starts hard, begins to lose power, or runs rough.
 - DO NOT use a damaged element. Replace when necessary.
 - DO NOT run engine without element.

1. Stop engine and disconnect spark plug wire.
2. Clean area around cover (A).
3. Loosen screw (B). Tilt cover (A) down.
4. Remove paper air cleaner element (C).
5. Tap element gently to remove dust.
6. Replace an element:
 - That is oily or sooty.
 - With a break, hole, or damaged seal.
 - If engine performance is poor.
7. Install air cleaner element.
8. Rotate cover to a closed position.
9. Tighten screw.



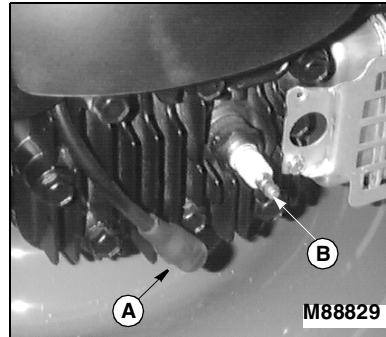
SERVICE

Cleaning and Gapping Spark Plug



CAUTION: Before you remove spark plug:
• STOP engine. Let engine cool.

1. Disconnect spark plug wire (A). Remove 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 to 0.76 mm (0.030 in.).
5. Install and tighten plug to 20 N•m (15 lb-ft).
6. Connect spark plug wire.



Cleaning Cooling Fins

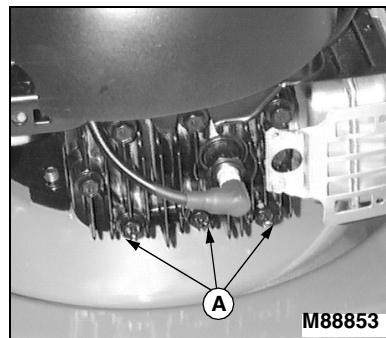


CAUTION: Prevent personal injury. Wear eye protection to guard against flying debris.

IMPORTANT: Keep fins clean or engine may overheat.

Clean fins (A) with a brush, rag, or compressed air.

Also, blow compressed air under the shroud.



SERVICE

Adjusting Traction Cable

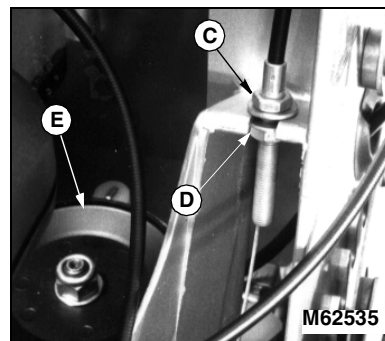
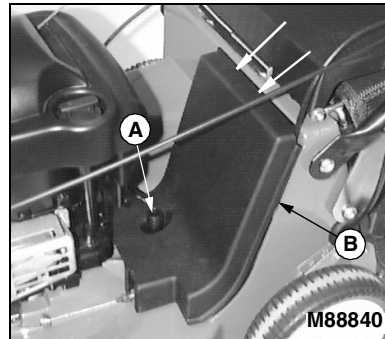
NOTE: Adjust clutch before 50 hours if mower slows as it goes uphill.



CAUTION: 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.

1. Unscrew and remove knob (A).
2. Apply slight pressure to the top of protective shield (B) to release tabs securing shield to the mower deck.
3. Remove shield.
4. Locate and loosen nut (C).
5. Turn nut (D) down 6 mm (1/4 in.).
6. Tighten nut (C).
7. Start engine.
8. ENGAGE traction clutch lever to check clutch action.
9. If clutch needs more tension, repeat Steps 2 and 3.
10. Make sure pulley (E) does not turn when engine is running and clutch lever is DISENGAGED. If pulley turns when engine is running, the traction clutch cable is adjusted too tight.
11. STOP engine.
12. Install shield and knob.



SERVICE

Adjusting Blade Brake Clutch



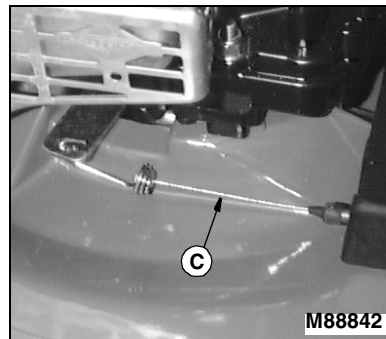
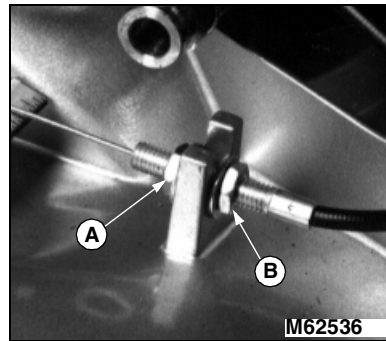
CAUTION: DO NOT operate mower unless belt shield is in place.

NOTE: Blade should stop within 3 seconds after you release blade stop lever. If not, adjust clutch.

1. Put blade engagement lever on handlebar all the way to the rear.

2. To adjust cable:

- Remove knob and protective belt shield.
- Loosen nut (A).
- Pull threaded fitting to rear to remove all cable slack.
- Turn nut (B) against deck fork.
- Tighten nut (A).
- Make sure there is tension on cable (C), but that it is not too loose or too tight. This will give maximum blade brake clutch engagement.
- Install shield and knob.



SERVICE

Grease

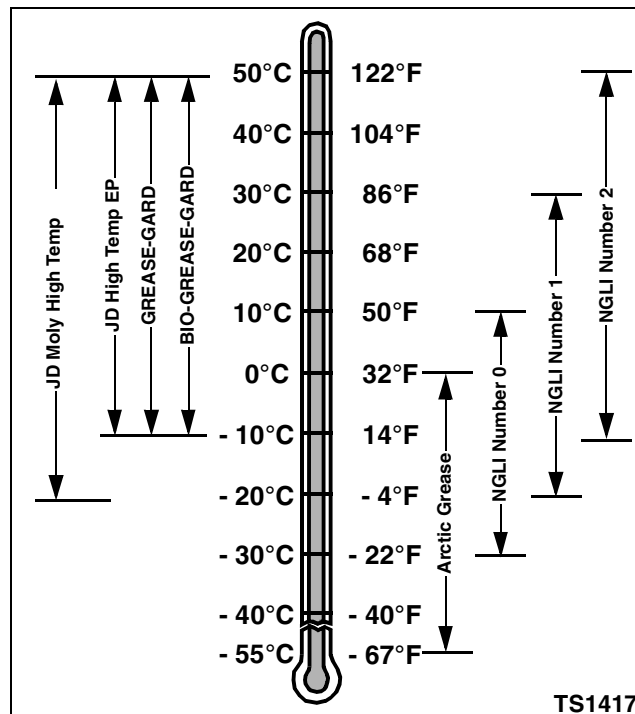
Use grease based on the expected air temperature range during the service interval.

The following greases are preferred:

- John Deere Moly High Temperature EP Grease.
- John Deere High Temperature EP Grease.
- John Deere GREASE-GARD™.

Other greases may be used are:

- SAE Multipurpose EP Grease with 3 to 5 percent molybdenum disulfide.
- SAE Multipurpose EP Grease.
- Greases meeting Military Specification MIL-G-10924C may be used as arctic grease.

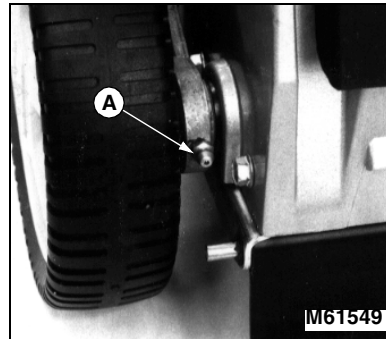


SERVICE

Lubricate Rear Axle Bearings

NOTE: Adjust mower height indicator until zerk is easy to get grease gun on.

1. Wipe grease fittings clean.
2. Lubricate bearing (A) on each side with one shot of grease. (See **Grease** in this section for the proper application.)



Cleaning Mower



CAUTION: Before you clean mower:

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

IMPORTANT: To help extend clutch life, wait at least 30 minutes after mowing before cleaning under the deck with water. After cleaning with water, start the engine and engage the blade for about 15 seconds to “spin dry” the clutch. If you need to clean under the deck immediately after mowing use a scraper, NOT water.

- Clean engine and top of the deck.
- Check and clean cooling fins, if necessary.
- Grass clippings can build up in belt and transmission area. If necessary, remove belt shield and clean this area. DO NOT use water. (See Clean Belt and Transmission Area in this section.)
- If operating the mower in dusty conditions, clean air cleaner foam element often.

SERVICE

- Clean grass clippings that may build up between the wheels and the mower deck.
- 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. (See IMPORTANT information.)
- Remove and shake bag to remove clippings.
- If bag is caked with grass on the inside, use water under pressure to clean bag. Direct water from outside to inside of bag.

Cleaning Fuel Cap Vents

1. Remove fuel cap.
2. Check two vents (A) under metal ring and vent in top, center of cap.
3. Clean cap and vent in an nonflammable solvent.
4. Install vent and cap.



SERVICE

Cleaning Belt and Transmission Area

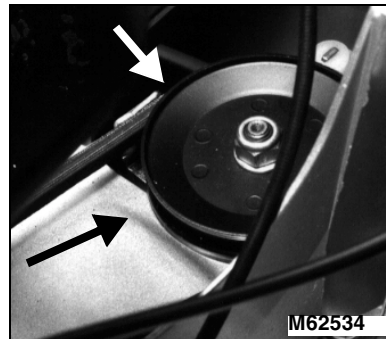
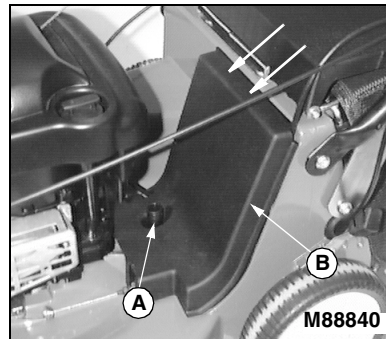


CAUTION: Before you remove shield:

- STOP engine. Let it cool.
- DO NOT operate mower without belt shield.

IMPORTANT: DO NOT use water when cleaning the belt and transmission areas.

1. Unscrew and remove knob (A).
2. Apply slight pressure to the top of protective shield (B) to release tabs securing shield to the mower deck.
3. Remove shield.
4. Remove grass clippings from belt area and top of the transmission.
5. Install shield and knob.



SERVICE

Check Blade



CAUTION: Service blade safely:

- STOP engine. Let it cool.
- Disconnect spark plug wire.
- Wear gloves or wrap blade with a rag.

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

- Turn mower on its LEFT SIDE.

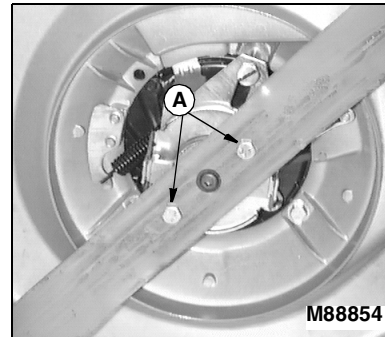
NOTE: Wing on blade tip **MUST** point up.

CHECK BLADE:

- Replace damaged blade.
- Tighten Bolts (A) to 73 N•m (55 lb-ft).
- Sharpen dull blade. (See Sharpening Blade in this section.)

TO REMOVE BLADE:

- Remove bolts (A) and blade.



SERVICE

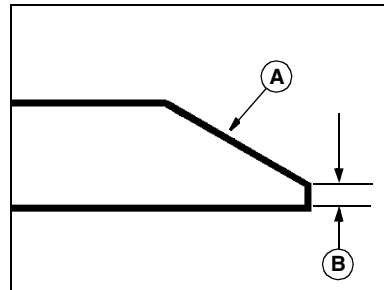
Sharpening Blade



CAUTION: Wear gloves and goggles when sharpening, balancing or installing blade.

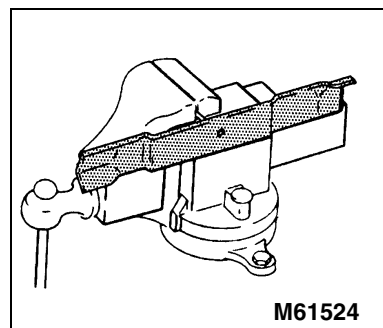
IMPORTANT: Balance blade after you sharpen it. An unbalanced blade may cause excessive vibration.

1. Sharpen blade with grinder, hand file or electric blade sharpener.
2. Keep original bevel (A) when you grind.
3. Blade should have 0.40 mm (1/64 in.) cutting edge (B).



Balance and Install Blade

1. Clean blade. Put it on a nail in vise or on a wall. Heavy end of blade will drop. Grind bevel of heavy end. Do not change bevel.
2. Install blade, washers (cup-side against blade), and bolts.
3. Tighten bolts to 73 N•m (55 lb-ft).



SERVICE

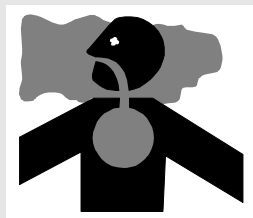
Handle Fuel Safely



CAUTION: Handle fuel with care, it is highly flammable:



- **DO NOT** refuel machine while you smoke, when machine is near an open flame or sparks, or when engine is running. **STOP** engine.
- Fill fuel tank outdoors.
- Prevent fires: clean oil, grease and dirt from machine. Clean up spilled fuel immediately.
- Do not store machine with fuel in tank in a building where fumes may reach an open flame or spark.
- To prevent fire and explosion caused by static electric discharge, while you fill tank, use a non-metal fuel container. If you use a funnel, **MAKE SURE** it is **PLASTIC**. Avoid using a funnel which has a metal screen or filter.
- Use only clean oil and fuel and clean approved containers and funnels.
- Store oil and fuel in an area protected from dust, moisture and other contamination.
- **DO NOT** use **METHANOL** gasolines. **METHANOL** is harmful to the environment and to your health.



SERVICE

Filling Fuel Tank

IMPORTANT: Avoid spilling fuel. Fuel can damage plastic and painted surfaces.
DO NOT mix oil with gasoline. Unleaded gasoline with an octane rating of 87 or higher is recommended.
Fuel tank capacity is 1.5L (1.6 qt).

- Use only clean, fresh, unleaded regular grade gasoline.
- Remove any trash from top of fuel tank drain area.
- Never use fuel that is stale or has been stored for a long period of time:

Warm Weather: Maximum 60 days.

Cold Weather: Maximum of 90 days.

- Fill fuel tank at the end of each day's operation. This helps to keep condensation out of fuel tank.

Oxygenated Fuel

Oxygenates (either ethanol or MTBE) are added to the gasoline. If you use the oxygenated fuel be sure it is unleaded and meets the minimum octane rating requirement.

The following are the EPA approved percentages of fuel oxygenates:

ETHANOL (Ethyl or Grain Alcohol): You may use gasoline containing up to 10 percent ethanol by volume.

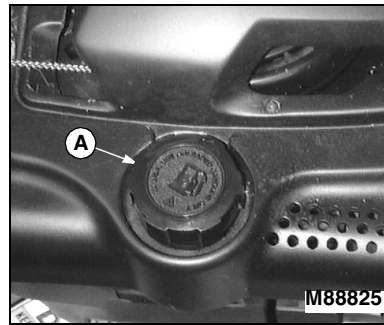
MTBE (Methyl Tertiary Butyl Ether): You may use gasoline containing up to 15 percent MTBE by volume.

SERVICE

Filling Fuel Tank (Continued)

NOTE: Fuel tank capacity is 1.5L (1.6 qt)

1. STOP engine. If engine is hot let it cool several minutes before adding fuel.
2. Remove fuel cap (A).
3. DO NOT fill tank to top; fuel can expand.
4. Install fuel cap.
5. Wipe off any spilled fuel.



TROUBLESHOOTING

Using Troubleshooting Chart

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

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

IF	CHECK
Engine Will Not Start	Failure to prime engine if the engine is cold.
	Fuel tank is empty.
	Stale or dirty fuel.
	Disconnected or dirty spark plug.
Engine Starts Hard Or Loses Power	Dirty fuel tank cap vents.
	Stale or dirty fuel.
	Dirty air cleaner element.
	Disconnected or dirty spark plug.
	Failure to prime engine if the engine is cold.
Engine Runs Rough	Carburetor needs to be cleaned.
	Disconnected or dirty spark plug.
	Throttle lever not in fast position.
	Dirty paper air cleaner element.
Engine Overheats	Dirty blower housing and cooling fins.
	Oil level too low.

TROUBLESHOOTING

IF	CHECK
Engine Vibrates Too Much	Loose blade bolt.
	Blade dull or not balanced.
Mower Pushes Or Pulls Hard	Rear axle not lubricated.
	Traction clutch needs adjustment.
Mower Mows Unevenly	Pushing mower too fast.
	Mowing too fast around corners and 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.
	Engine not in full throttle position.
Mower Jerks Or Will Not Self-propel	Traction belt broken.
	Traction clutch not adjusted.
	Dirty transmission.
	Gear shift lever not in gear.

TROUBLESHOOTING

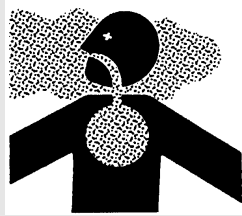
IF	CHECK
Mulched Grass Appearance Is Poor: Clumps, Excessive Clippings, Rough Cut, Etc.	Grass not dry.
	Mowing too fast.
	Engine not in full throttle position.
	Blade dull or not balanced.
	Cutting height set too low.

STORING MACHINE

Store Mower Safely



CAUTION: Engine exhaust fumes can cause sickness or death.



- If it is necessary to run an engine in an enclosed area, use an exhaust pipe extension to remove the fumes. Always try to work in a well ventilated area.
- DO NOT store mower with fuel in the tank inside a building where fumes may reach an open flame or spark.
- Allow engine to cool before storing in any enclosure.

Storing Mower

IMPORTANT: Use gasoline stabilizer: It helps prevent varnishing and plugging of carburetor jets. Either of these could cause engine to run lean, and result in piston seizure and engine failure.

Follow directions on stabilizer can.

1. Clean engine and top of deck.
2. Remove belt shield.
3. Clean belt and transmission area. DO NOT use water to clean this area. Install shield.
4. Disconnect spark plug wire. Turn mower onto its LEFT SIDE.

STORING MACHINE

IMPORTANT: To help extend clutch life, wait at least 30 minutes after mowing before cleaning under the deck with water. After cleaning with water, start the engine and engage the blade for about 15 seconds to “spin dry” the clutch. If you need to clean under the deck immediately after mowing use a scraper, NOT water.

5. Remove mulch plug. Clean underside of deck with water pressure to remove grass buildup, lawn chemicals, and fertilizer. (See IMPORTANT information above.)
6. Lower mower to the ground.
7. Use John Deere Gasoline Storage Stabilizer or an equivalent. Follow directions on can.
8. Lubricate rear axle bushings.
9. Fold handlebar assembly if desirable. DO NOT crimp or pinch cables. (See Fold Handles in this section.)
10. Do not store mower with fuel in tank in a building where fumes may reach an open flame or spark.

Remove Mower from Storage

1. Unfold handles. Tighten knobs. Do not crimp cables.
2. Fill fuel tank with fresh gasoline.
3. Check engine oil level.
4. Connect wire to spark plug.
5. Inspect shields, safety devices and hardware.
6. Lubricate rear axle bushings.
7. Run engine at the HALF-THROTTLE position briefly.

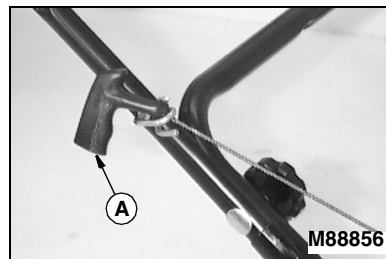
STORING MACHINE

Fold Handles

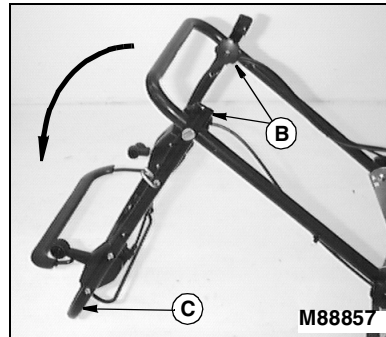
IMPORTANT: Avoid damage to mower control cables:

- **DO NOT** crimp cables when folding handle bars.
- **DO NOT** attempt to fold upper mower handle upward.

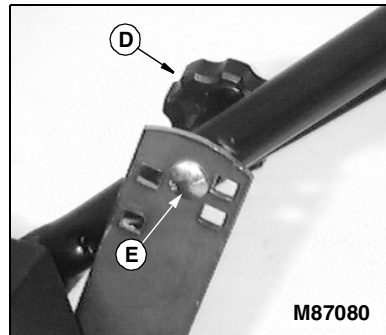
1. Remove grass bag.
2. Remove starter handle (A) from rope guide.



3. Loosen knob (B) 25 mm (1 in.) on each side. CAREFULLY pivot upper handle (C) down. Leave bolt heads against handle.



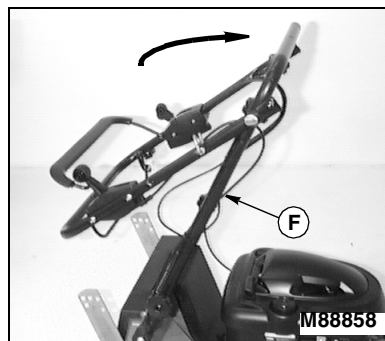
4. Remove knob (D) and carriage bolt (E) from each side.



STORING MACHINE

5. CAREFULLY fold lower handle (F) forward. Guide cables inside lower handle. DO NOT CRIMP CABLES.

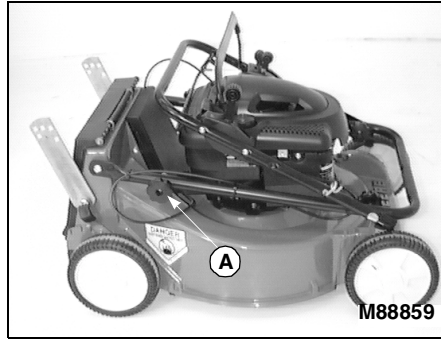
6. Install carriage bolts and knobs in handle.



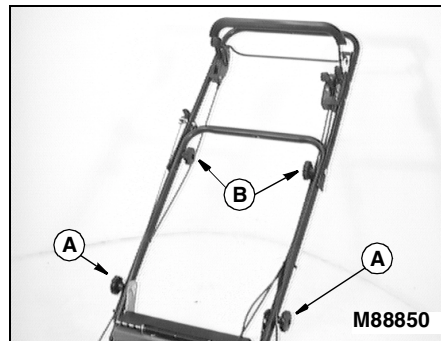
ASSEMBLY

Unfold Handles

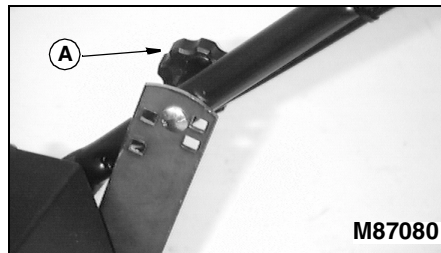
1. Remove knob (A) and bolt from each side.
2. Carefully unfold handlebar assembly. DO NOT crimp or damage control cables.



3. Straighten upper handle and tighten knob (B) on each side.



4. Line up lower handle hole with square hole in bracket. Install bolt and tighten knobs (A) on each side.



5. Slowly pull starter handle (C) and install into rope guide.
6. Check cables for kinks or damage.

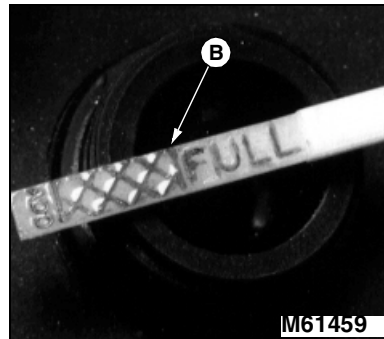
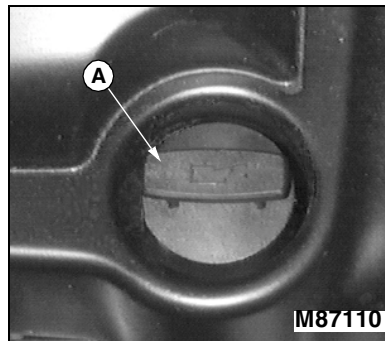


ASSEMBLY

Add Engine Oil

IMPORTANT: 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 and clean area around oil dipstick.
2. Turn oil dipstick (A) 1/4 turn counterclockwise. Remove dipstick.
3. Pour 0.6 L (20 oz) oil into dipstick tube.
4. Install oil dipstick.
5. Remove dipstick to check oil level.
 - Oil should be to the FULL mark (B). If not, add oil.
6. Install and tighten dipstick.
7. Remove "NO OIL" tag from top of engine.



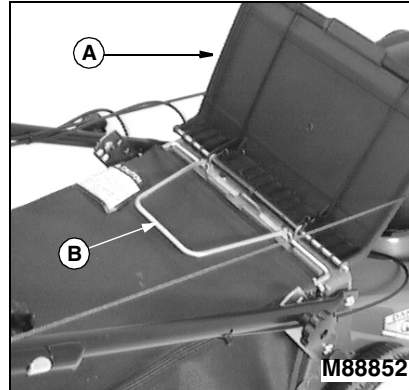
ASSEMBLY

Install Grass Bag



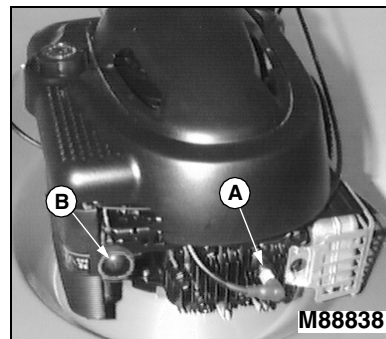
CAUTION: DO NOT operate mower unless grass bag, chute, or mulch plug is in place.

1. Lift and hold door (A) up.
2. Grasp handle (B).
3. Install bag.
4. Lower door (A).

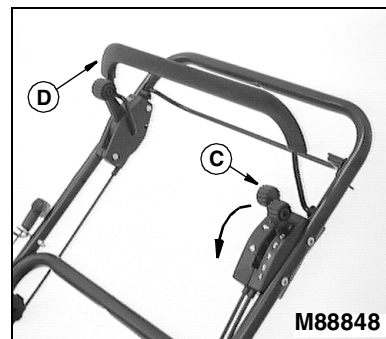


Test Mower

1. Connect spark plug wire (A) to spark plug.
2. Put enough fuel in fuel tank to test mower operation.
3. Press primer bulb (B) three times to start engine.



4. Move throttle lever (C) to the FAST position.
5. Hold blade lockout and stop lever (D) against handle.



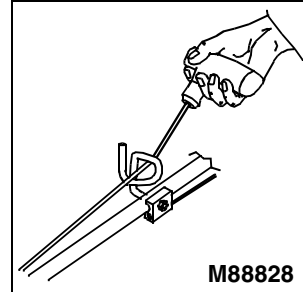
ASSEMBLY

6. Pull starter handle until you feel resistance. Then pull fast and steady.

7. When engine starts, return rope slowly.

8. Pull throttle lever back to the HALF-THROTTLE position.

9. Mow with throttle lever in the FAST  position.



SPECIFICATIONS

Engine

Manufacturer	Briggs & Stratton
Model Series	12J802
Horsepower	4.5 kW (6.0 hp)
Cycle	4
Valve Type	Side
Displacement	11.6 cu. in. (190 cc)
Choke	Primer Bulb
Starter	Recoil
Throttle Control	Remote
Lubrication	Splash
CARB/EPA	Yes
Spark Plug	Champion RJ19LM
Spark Plug Gap	0.76 mm (0.030 in.)
Spark Plug Torque	20 N•m (15 lb-ft)

Capacities

Fuel Tank	1.5L (1.6 qt)
Engine Oil	0.6 L (20 oz)
Rear Grass Bag	74 L (2.5 bu)

SPECIFICATIONS

Drive System

Manufacturer	Kansaki
Type	Gear Transmission
Number of Travel Speeds	5

Travel Speed Range

First Gear	1.9 km/h (1.2 mph)
Second Gear	2.9 km/h (1.8 mph)
Third Gear	3.9 km/h (2.4 mph)
Fourth Gear	4.8 km/h (3.0 mph)
Fifth Gear	6.6 km/h (4.1 mph)

Machine Specifications

Deck Material	Cast Aluminum
Adjustable Handle	Standard
Rear Grass Bag	Standard
Side Discharge Chute	Optional
Mulching	Plug Optional
Wheel Size	8.0 x 2.0
Cutting Height Range	13-90mm (1/2-31/2 in.)
Cutting Width	53.3 cm (21 in.)
Blade Hardware Torque	73 N•m (55 lb-ft)
Safety System	BBC
Weight (Approximate)	43 kg (95 lb)

SPECIFICATIONS

Recommended Lubricants

Fuel	See Filling Fuel Tank in the Service section.
Engine Oil	TORQ-GARD SUPREME® (SAE 30 or SAE 5W-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)

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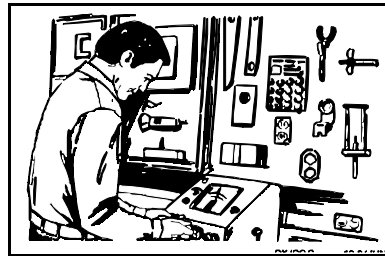
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That's why we maintain a large and varied inventory - to stay a jump ahead of your needs.



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Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly ... to save you time and money.

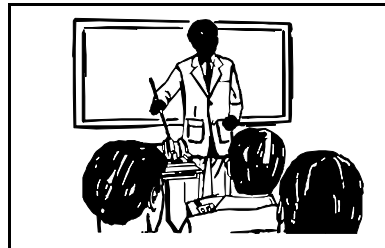


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