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FORD

WALK BEHIND MOWERS

MODELS: 09GN-2001/2002

REPAIR MANUAL

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19" WALK BEHIND MOWER (Model 09GN-2001/2004)

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IMPORTANT: The replacement of any part on this product by other than the manufacturers' authorized replacement part may adversely affect the performance, durability or safety of this product.

The manufacturer reserves the right to make changes on and to add improvements upon its products at any time without notice or obligation. The manufacturer also reserves the right to discontinue manufacture of any product at its discretion at any time.

Notice to Serviceman in the State of California — The engine on this unit is NOT equipped with a spark arresting muffler.

IMPORTANT: USE OR OPERATION OF THIS ENGINE ON ANY FOREST COVERED, BRUSH COVERED, OR GRASS COVERED LAND WITHOUT A STATE APPROVED SPARK ARRESTOR IN EFFECTIVE WORKING ORDER CONSTITUTES A VIOLATION OF THE LAW OF THE STATE OF CALIFORNIA.

19"

INTRODUCTION

This manual contains service and maintenance instructions for a 19" rotary mower. It has been prepared to provide the information the service man needs to correctly service and maintain a rotary mower. All sections of this manual should be carefully studied by the serviceman before beginning to work on the mower.

All WARNINGS used throughout this manual should be heeded and followed very closely. Failure to obey these rules could result in personal injury or death to yourself or others.

All references made to the left side, right side, front and rear are given from the operator's position.

SAFETY



Safety is No accident Be Alert!

This symbol is used to attract your attention to the safety precautions that should be understood by the servicemen to avoid accidents.

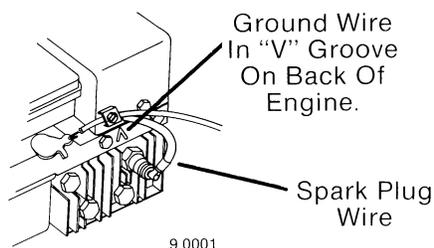
Please read and follow these instructions on safety procedures before servicing the mower.

PERSONAL CONSIDERATIONS

1. Never let shop rags, used for cleaning, lay around to become fire hazards.
2. Always use safety glasses when servicing or inspecting the mower.

EQUIPMENT CONSIDERATIONS

1. Always disconnect spark plug wire and ground the wire in "V" groove provided on rear of engine. This should be used to prevent accidental starting when setting up, adjusting or making repairs to the mower.



2. Always store gasoline or flammable solvents used for cleaning in closed containers specifically designed for that purpose.
3. Before cleaning, servicing or inspecting mower, make certain blade and all moving parts have stopped and engine and exhaust assemblies have cooled down.
4. Never operate mower without proper guards, plates or other safety protective devices in place.
5. Check blade and the engine mounting bolts at frequent intervals for proper tightness.

6. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.

OPERATIONAL CONSIDERATIONS

1. Do not start or run the engine indoors. Fumes from engine exhaust can kill.
2. Stop engine before making any repairs or inspections.
3. To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease.
4. If the equipment should start to vibrate abnormally, stop engine and check immediately for the cause. Vibration is generally a warning of trouble.
5. If test running is required, make sure you are thoroughly familiar with the complete operation of mower. Know how to stop mower.
6. Be sure all parts are securely fastened before starting mower.
7. Be sure all tools and cleaning materials are removed before starting mower.

IDENTIFICATION PLATE LOCATION

The mower model and serial number identification plate is located on the top-rear section of mower deck facing the operator (See Fig. 1).

Refer to engine manufacturer's service literature for location of engine model and serial numbers.

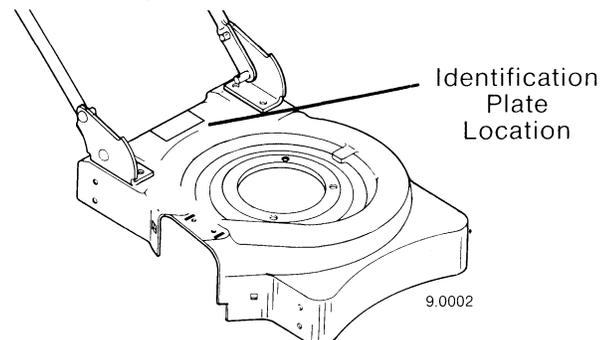


FIG. 1

Whenever you see this symbol  it means:
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

SET-UP INSTRUCTIONS

HANDLE FOLDING: (Model 09GN2001 only)

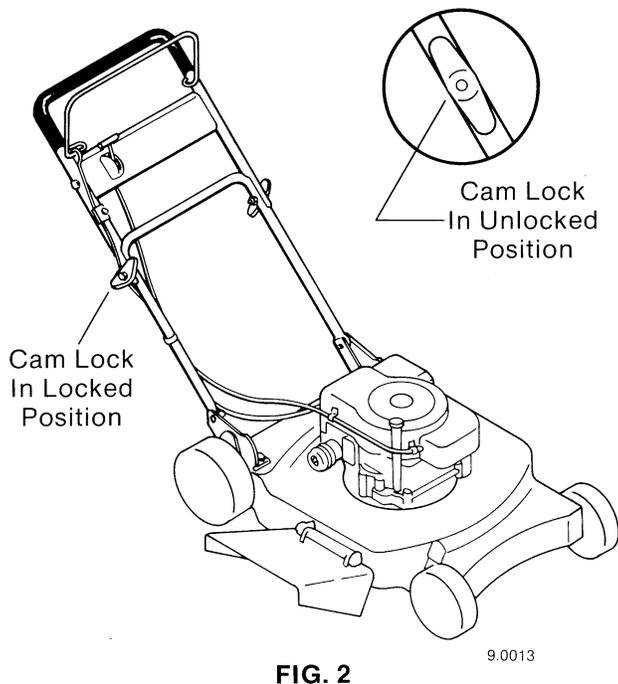
LOWERING HANDLE — The handle may be lowered over the engine for transportation or storage as follows:

IMPORTANT: Be careful not to kink or damage cables when folding or unfolding handle.

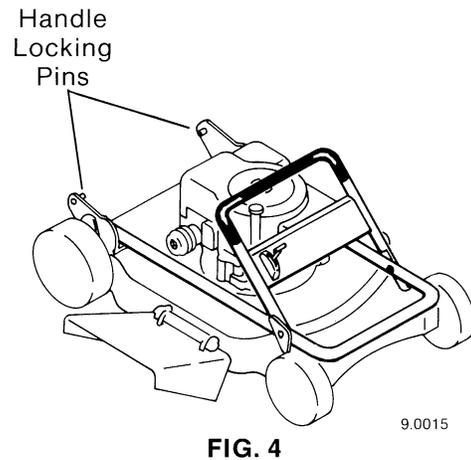
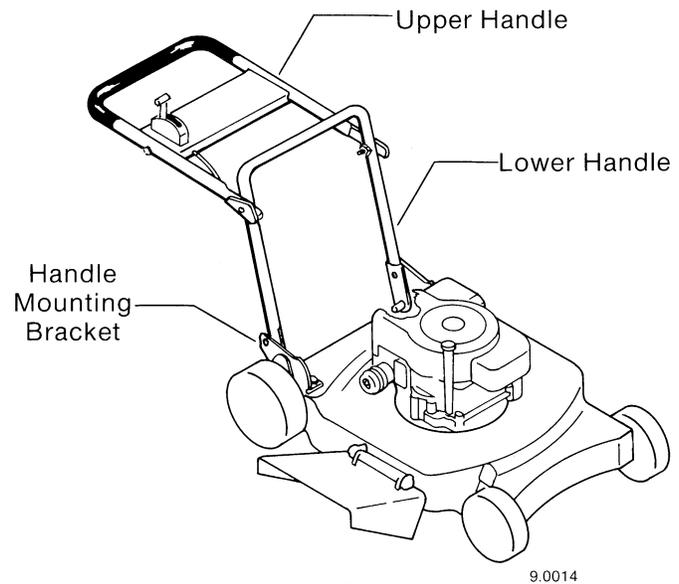
1. Turn each cam lock to the unlocked position (Fig. 2) and fold upper handle backward, as shown in (Fig. 3). **NOTE:** This releases tension on the cables.
2. Squeeze lower handle releasing the handle from the handle locking pins. Then fold handle forward over engine (Fig. 4).

RAISING HANDLE — Before raising handle again, use extreme care to avoid “pinching or kinking” of cables. Then proceed as follows:

1. Swing lower handle up and rearward as shown in (Fig. 3). Do not fully raise upper handle, at this time. Squeeze ends of lower handle inward enough so that holes on each side of handles can slide onto handle locking pins.
2. Carefully swing upper handle into the operating position (Fig. 2). While raising handle, be sure that none of the cables are caught or twisted.
3. Lock upper handle in the operating position by turning each cam lock crosswise to handle as shown in (Fig. 2). **Note:** Cam will turn in only one direction.



AVOID DAMAGE TO CABLES
Fold Handle **Back** First (See Below)
Then Forward



HI/LOW HANDLE SET-UP

As shipped, the lower handle was assembled in the “High” position. If desired, you may reinstall the lower handle in the “Low” position as follows: (Fig. 5)

NOTE: The upper holes on both ends of the lower handle are off-center (see Fig. 6). When the handle is attached to the pins with the offset holes toward the bottom, the handle will be in the high position. When the offset holes are toward the top, the handle will be in the low position.

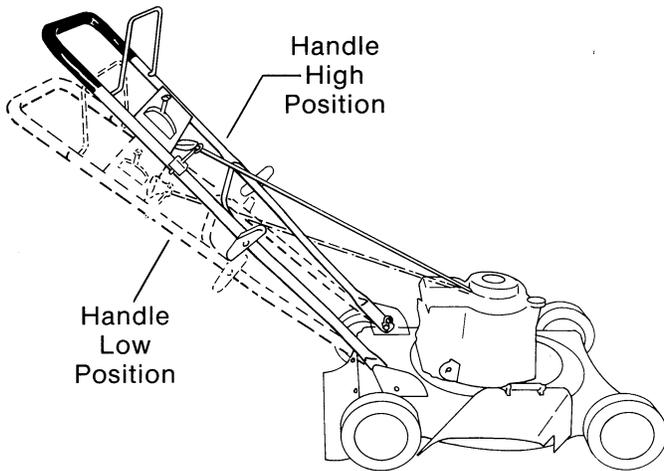


FIG. 5

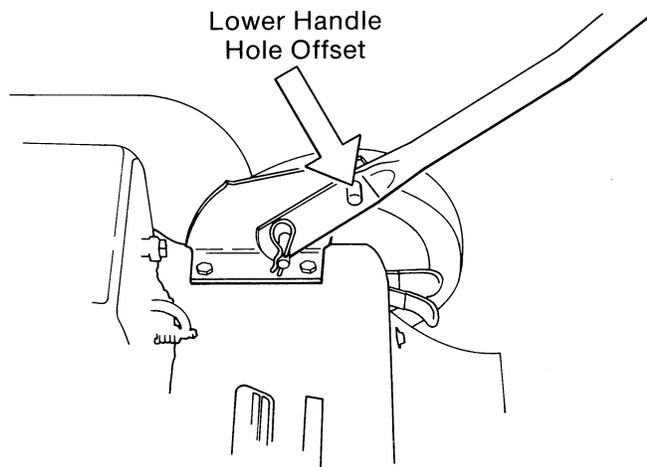


FIG. 6

1. First note the routing of control cables. If correct routing is not maintained the cables will be damaged beyond repair when the handles are lowered into their "folded" position. Remove the cable clip from the right handle leg of the lower handle and allow the two cables to hang free. Remove upper handle assembly by loosening two cam lock levers and remove hex locknut from each cam lock lever. Withdraw cam lock levers from lower handle, being careful to support upper handle.
2. Remove spring clips from mounting pins of handle support brackets at lower end of lower handle (Fig. 7). Press the ends of lower handle inward just enough to clear ends of mounting pins. Turn the lower handle over and reinstall on the mounting pins by pressing lower ends together and position handles so that all four pins are through holes in handle ends. Replace the spring clips through lower mounting pins on each handle support bracket.

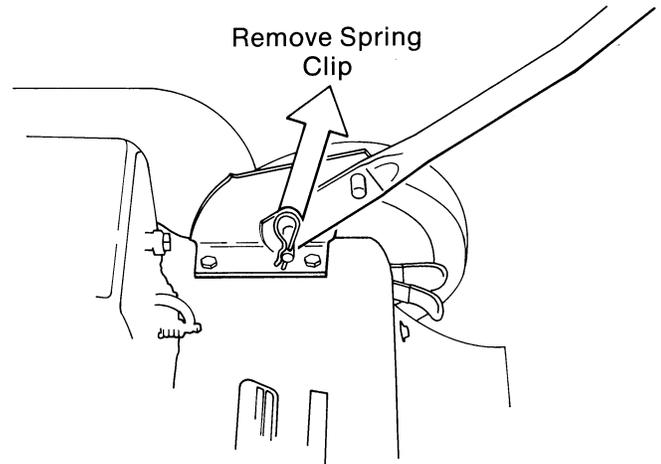


FIG. 7

3. Position cables correctly, then reattach upper handle to lower handle using cam lock levers, capscrews and lock nuts previously removed. With cam locks in locked position, tighten hex locknuts until there is no "free play" between handles. Turn cam locks 90° to unlocked position. Upper handle must fold rearward but NOT forward. Raise upper handle and lock into operating position.

GRASS CATCHER BAG SET-UP: (OPTIONAL EQUIPMENT ONLY)

1. Assemble grass catcher bag and frame, as follows:
 - A. Position grass catcher frame as shown in Fig. 8.
 - B. Slide small opening of bag over the curved tube AND the straight tube (but not over the guard support).
 - C. Turn bag until the grommet lines up with the SIDE retainer on the frame.
 - D. Slide grommet onto side retainer, hook top edge of bag over top retainer, and stretch bottom edge of bag over the looped bottom retainer.
 - E. Open zippered end of bag so that the straight and curved tubes can stick out as shown in Fig. 9A.
 - F. Slide the LARGE support rod (with connector) into the STRAIGHT tube (Fig. 9A) and the smaller support rod into the curved tube.
 - G. Pull both rods apart until ends line up as shown in Fig. 9B, then release rods so that the connector slides over end of small rod, Fig. 9C.
 - H. Now slide bag up support rods until corners of bag fit over corners of rods, Fig. 9D. Zip the bag closed.

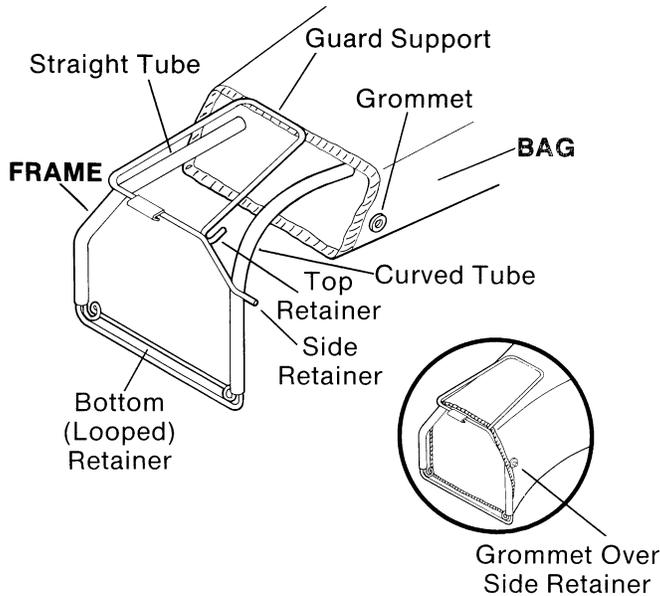


FIG. 8

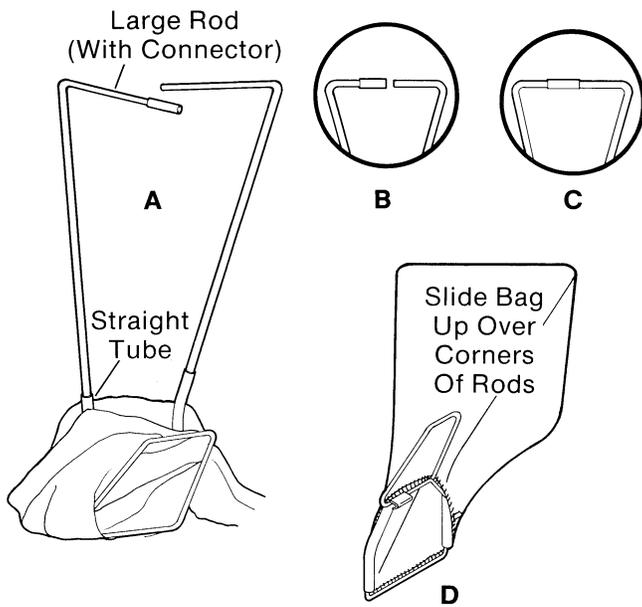


FIG. 9

2. Attach hanger clip to your mower as follows:



WARNING: Be sure mower engine is off and all movement has stopped. Always stop engine and disconnect and ground spark plug wire to engine before attaching, removing or emptying the grass catcher.

A. Remove the nut and lockwasher from each of the two screws under the discharge guard spring. (Fig. 10)

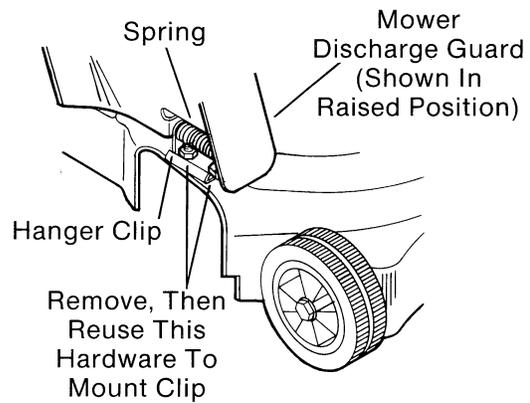


FIG. 10

B. Place the hanger clip over the two screws and reassemble a lockwasher and nut onto each screw. NOTE: Bent edge of clip must be up and toward outside of mower, as shown.

3. Attach grass catcher to mower as follows:

A. Raise discharge guard (Fig. 11) and hook clip on grass catcher frame onto the hanger clip.

B. Be sure bag opening is centered around discharge opening on mower, then lower the discharge guard onto the guard support.

NOTE: When removing catcher bag from catcher frame, be sure to unzip bag, disconnect ends of support rods, remove support rods, then remove bag.

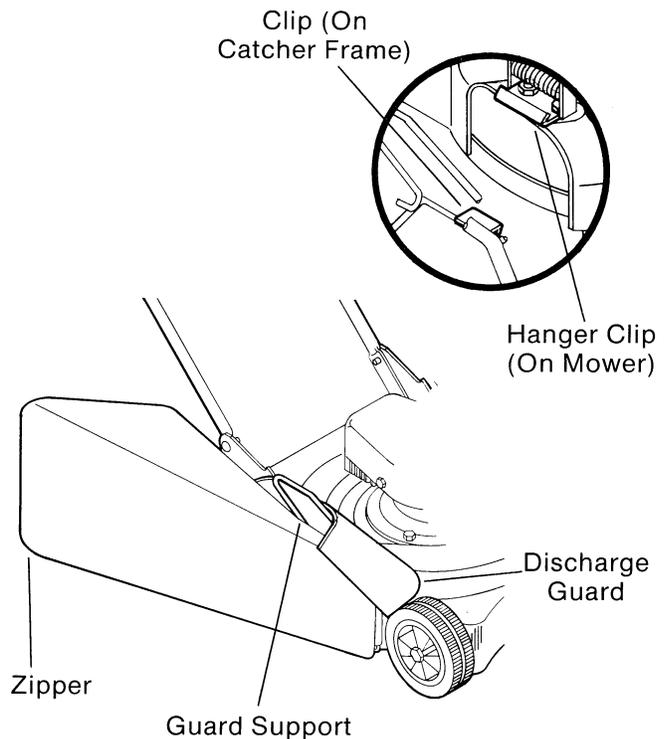


FIG. 11

ENGINE OIL LEVEL CHECK

The engine oil level must be checked periodically to insure proper oil level is maintained. See engine manufacturer's maintenance instructions for the proper type and quantity of oil to use.

IMPORTANT: If engine is run without oil, engine damage will result.

BLADE TIGHTNESS CHECK:

 **WARNING:** Use care when handling sharp edges of blade.

 **WARNING:** To avoid accidental starting, disconnect spark plug wire and ground to engine.

- A. Check tightness of two outer Grade 5 capscrews through blade hub (Fig. 17). Torque should be 18-22 ft./lbs.
- B. Check tightness of the center Grade 8 capscrew (Fig. 17). Torque should be 38-42 ft./lbs.



HEAD MARKINGS ON
GRADE 8 CAPSCREW

 **WARNING:** The capscrews used to secure blades to spindles are heat treated. Other types of capscrews must not be used as replacements.

LUBRICATION AND MAINTENANCE:

 **WARNING:** Turn off engine, wait for all movement to stop, disconnect spark plug wire from spark plug before servicing or adjusting mower. Secure spark plug wire away from spark plug to prevent accidental starting.

1. ENGINE-Refer to your Engine Manual for all lubrication and fuel requirements.
2. WHEELS-Lubricate the wheels periodically using SAE 30 oil.
3. CABLES-Check condition of operating cables.

IMPORTANT: Damaged cables must be replaced.

NOTE: Do not lubricate cables.

 **WARNING:** If engine does not come to immediate stop upon release of safety control handle, contact an Authorized Engine Service Dealer.

4. GRASS CATCHER BAG-After each day's use, empty grass bag completely and allow to dry.

UNDER NORMAL USAGE THE BAG MATERIAL IS SUBJECT TO WEAR AND DETERIORATION AND IT SHOULD BE CHECKED FOR REPLACEMENT. BE SURE THAT ANY REPLACEMENT BAG COMPLIES WITH THE ORIGINAL MANUFACTURER'S SPECIFICATIONS.

5. GENERAL MAINTENANCE:

- A. Check the blade and engine mounting bolts at frequent intervals for proper tightness.
- B. Keep all nuts, bolts and screws tight to be sure equipment is in safe working condition.
- C. Check blade condition, clean top, and under-side of mower after each use.



WARNING: To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease.

- D. Use only replacement parts made or recommended by original manufacturer.

ADJUSTMENT AND SERVICING:



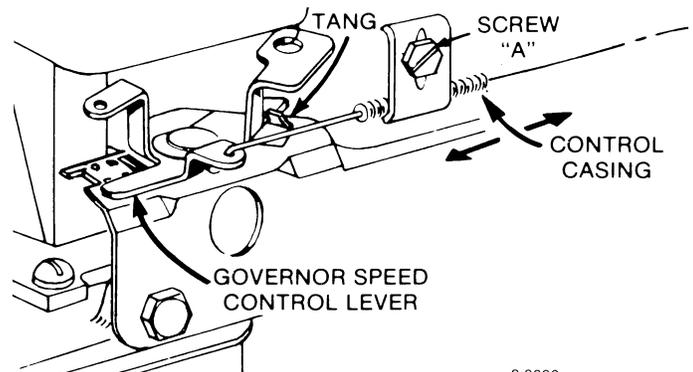
WARNING: Never attempt to make adjustments on the mower while it is in operation. Always turn engine off and wait for all movement to stop before attempting to make any adjustment.

ENGINE:

1. See Engine Manufacturer's Instruction Manual for all adjustments and servicing information. For information regarding engine band brake follow procedures in Briggs and Stratton repair Instruction Supplement Manual. (Manual No., Form MS-8088) to service brake.
2. Maximum engine RPM high speed operating setting range is, 3000 RPM to 3200 RPM.
3. **Throttle control assembly —**

The throttle control assembly is a complete assembly and should be serviced as a complete assembly only. To replace throttle control assembly, proceed as follows:

- A. Loosen throttle cable clamp screw on engine until throttle cable can be removed. (See Fig. 12). Remove end of throttle cable from governor speed control lever. (Fig. 12)



9.0006

FIG. 12

B. (For Models 09GN2001 **only**).

- a. Pry off cable clip on lower handle , to release throttle cable. Then with a screwdriver pry locking tabs forward on throttle control. The throttle control can then be pushed thru the mounting hole on handle panel (See Fig. 13). Remove old throttle control assembly.

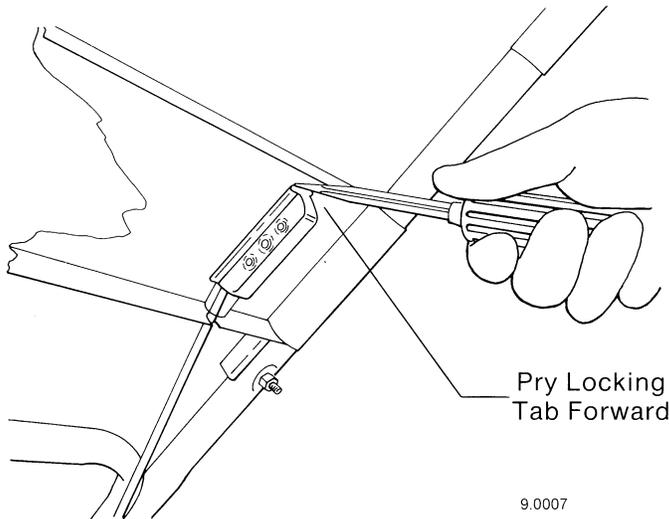


FIG. 13

- b. To install new throttle control assembly, feed throttle cable thru hole on handle panel. Then push throttle control into hole on handle panel until locking tabs snap into place to secure throttle control.

C. (For Models 09GN2004 **only**).

- a. Remove capscrew and locknut securing throttle control assembly to right side of upper handle.
 - b. Pry off cable clip on lower handle to release throttle cable.
- D. Replace cable clip on lower handle, making sure that both the throttle cable and safety control handle cable are secured by cable clip.
- E. Move throttle control forward to the FAST position. Attach end of throttle cable to governor speed control lever. Move throttle cable until governor speed control lever just touches tang as shown (See Fig. 12). Then retighten throttle cable clamp screw.

4. **Engine Removal And Replacement —**



WARNING: To avoid accidental starting, disconnect spark plug wire and ground to engine.

- A. Drain gas and oil from engine.
- B. Remove blade, blade hub and woodruff key from engine shaft by removing blade bolts.
- C. Disconnect engine brake control cable at engine by removing clamps, front and right side, attaching brake cable to engine. Then disconnect brake cable end from engine connection. (Fig. 14)

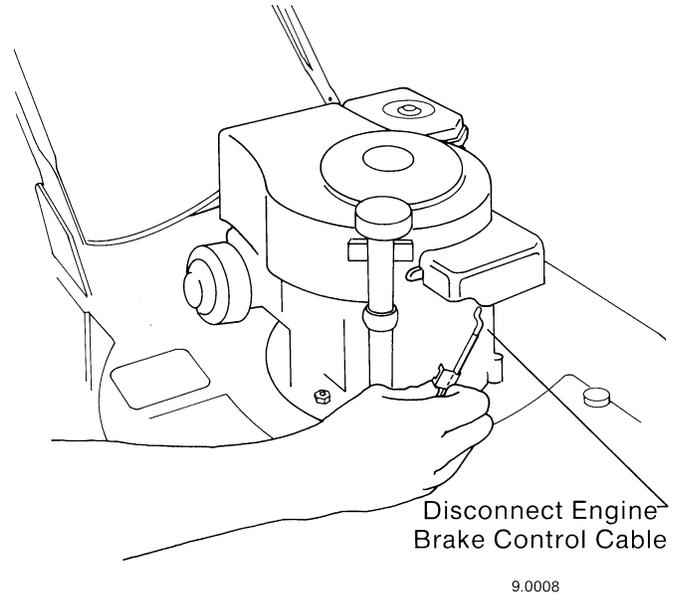


FIG. 14

- D. Loosen throttle cable clamp screw, on engine, until throttle cable can be removed (Fig. 12). Remove end of throttle cable from governor speed control lever.
- E. Unwind starter rope from starter rope anchor assembly.
- F. To remove engine mounting hardware, lay mower on its left side and brace or block engine as shown (Fig. 15).
- G. Remove three engine mounting nuts, washers and lockwashers. Start with the bottom two nuts first. Remove the top nut last (Fig. 16).
- H. Engine is now loose and can be removed from mower deck.
- I. To replace engine, reverse procedure above until you reach the point of connecting the throttle control cable. Then follow this adjustment procedure: Move throttle control forward to the FAST position. Attach end of throttle cable to governor speed control lever. Move throttle cable until governor speed control lever just touches tang as shown (Fig. 12). Then retighten throttle cable clamp screw.

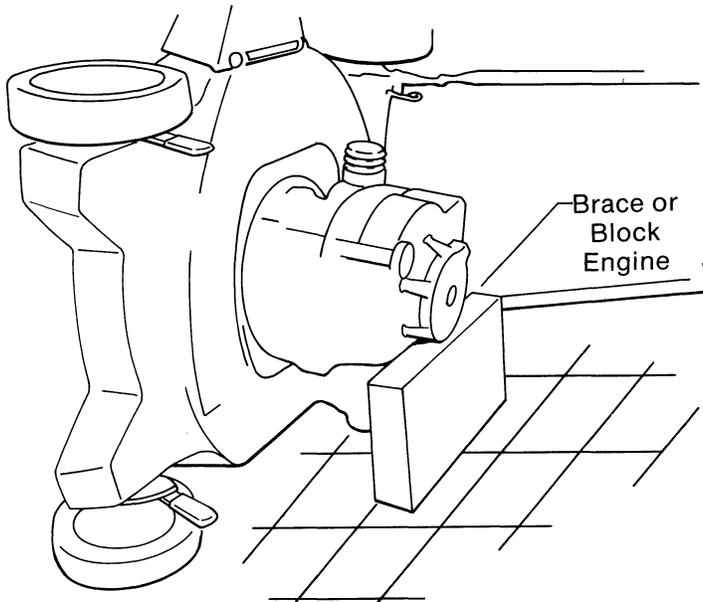


FIG. 15

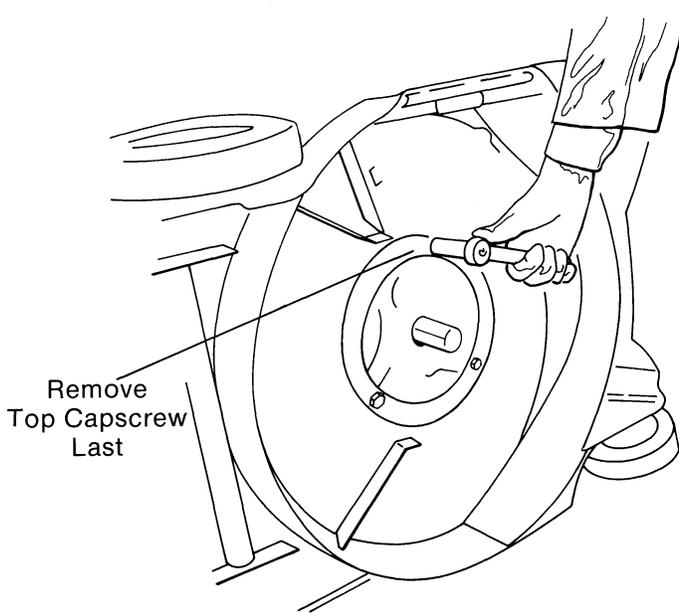


FIG. 16

J. Follow BLADE TIGHTNESS CHECK to properly secure blade to engine crankshaft.

IMPORTANT — Before starting a new engine, add engine oil and consult engine manual before operating the mower.

5. Blade Removal, Sharpening And Remounting —



WARNING: Use care when handling sharp edges of blade.



WARNING: To avoid accidental starting, disconnect spark plug wire and ground to engine.

To remove blade for sharpening and balancing (or replacement) remove the two outer capscrews and the center capscrew holding blade to engine crankshaft Fig. 17. NOTE: It is not necessary to remove key and hub from engine crankshaft to remove blade.

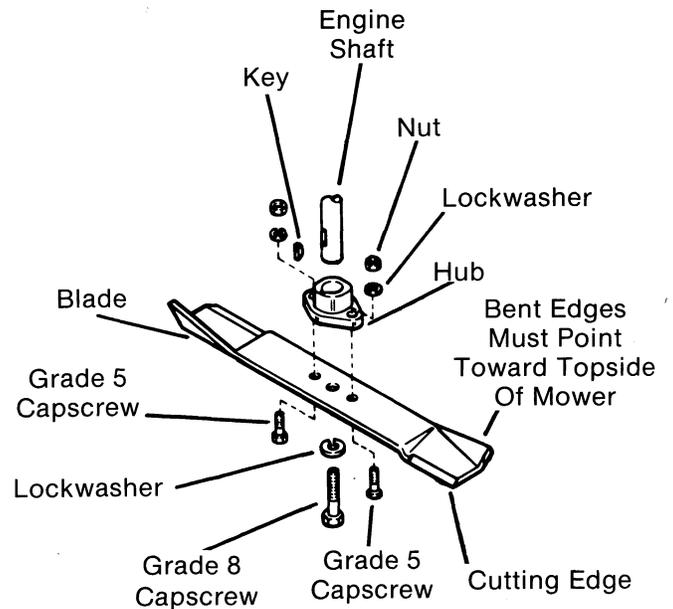


FIG. 17

When (re)installing blade, check the following:

1. Key must be in engine shaft (Fig. 17).
2. Slot in hub must be over key and hub must be as far as possible on engine shaft.
3. Reattach the blade using the hardware as shown in Fig. 17. DO NOT TIGHTEN UNTIL ALL HARDWARE IS IN PLACE. Be sure bent corners of blade point toward topside of mower. Tighten the two outer Grade 5 capscrews using 18-22 ft./lbs. torque. Tighten the center Grade 8 capscrew using 38-42 ft./lbs. torque.



HEAD MARKINGS ON GRADE 8 CAPSCREW



WARNING: The capscrews used to secure blades to spindles are heat treated. Other types of capscrews must not be used as replacements.

BLADE SHARPENING:

For best cutting results the mower blade must be kept sharp. Ragged cut indicates the blade may be dull.

While sharpening be sure to follow the original blade cutting edge contours. Refer to (Fig. 18) for correct blade sharpening dimensions and instructions.

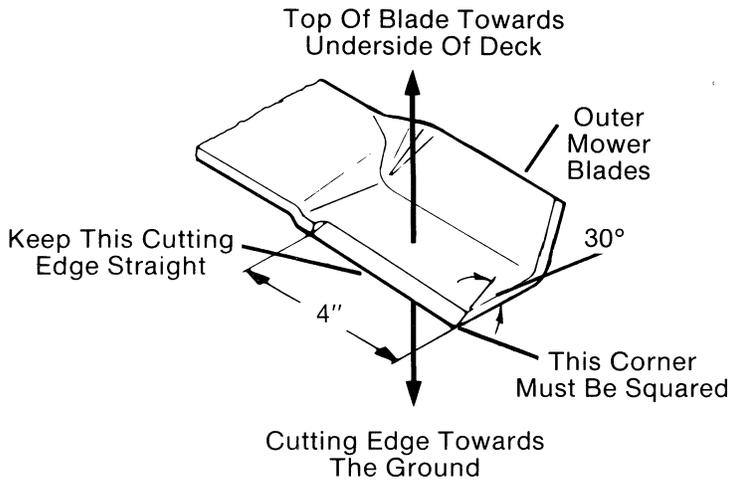


FIG. 18

BLADE BALANCING:

After sharpening check blade for balance by supporting blade as shown in (Fig. 19) using the center hole as a guide. File or grind metal from heavy end of blade until the blade balances.

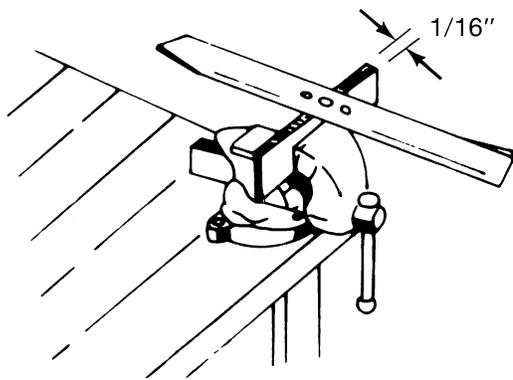


FIG. 19

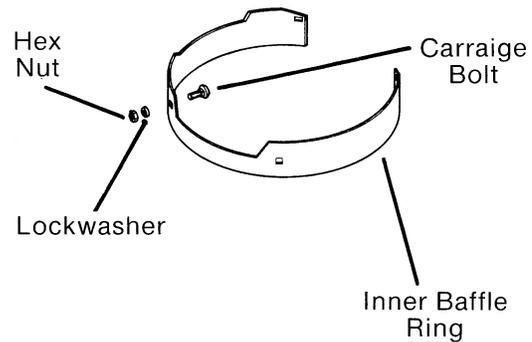
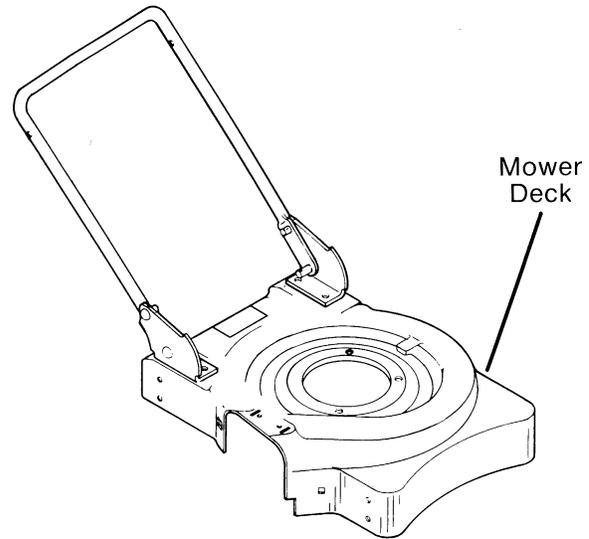


FIG. 20

If blade becomes badly worn or damaged, replace with new blade. For your convenience keep a spare blade on hand.

After balancing, reinstall blade. (See "Blade Removal And Remounting" Instructions.)

6. Inner Baffle Ring Adjustment —

WARNING: To avoid accidental starting, disconnect spark plug wire and ground to engine.

If at such time that baffle has loosened and blade starts to hit baffle or carriage bolt heads, readjust baffle as follows:

- A. Lay mower on its left side.
- B. Loosen (do not remove) four hex nuts securing inner baffle plate to mower deck. (Fig. 20)

- C. Slowly rotate blade by hand checking blade clearance between baffle and end of blade.
- D. If blade hits baffle readjust baffle until the blade does not hit and tighten hex nuts in this position.
- E. Lower mower back to the ground.

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