



MODEL NO. 22038 – 7900001 & UP

**OPERATOR'S
MANUAL****PROLINE 21"**
Recycler® Mower
SAFETY INSTRUCTIONS
TRAINING

1. Read the instructions carefully. Be familiar with the controls and the proper use of the equipment.
2. Never allow children or people unfamiliar with these instructions to use the lawnmower. Local regulations may restrict the age of the operator.
3. Never mow while people, especially children, or pets are nearby.
4. Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

PREPARATION

1. While mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
2. Always wear safety glasses or eye shields during operation to protect eyes from foreign objects that may be thrown from the machine. Wearing of hearing protection, protective gloves and a safety helmet is advisable.
3. Thoroughly inspect the area where the equipment is to be used and remove all objects which may be thrown by the machine.
4. **WARNING** – Petrol is highly flammable.
 - Store fuel in containers specifically designed for this purpose.
 - Refuel outdoors only and do not smoke while refuelling.
 - Add fuel before starting the engine. Never remove the cap of the fuel tank or add petrol while the engine is running or when the engine is hot.
 - If petrol is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapors have dissipated.
 - Replace all fuel tanks and container caps securely.
5. Replace faulty silencers.
6. Before using, always visually inspect to see that the blades, blade bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts in sets to preserve balance.

7. On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.

OPERATION

1. Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
2. Mow only in daylight or in good artificial light.
3. Avoid operating the equipment in wet grass, where feasible.
4. Always be sure of your footing on slopes.
5. Walk, never run.
6. For wheeled rotary machines, mow across the face of slopes, never up and down.
7. Exercise extreme caution when changing direction on slopes.
8. Do not mow excessively steep slopes.
9. Use extreme caution when reversing or pulling the lawnmower towards you.
10. Stop the blade(s) if the lawnmower has to be tilted for transportation when crossing surfaces other than grass, and when transporting the lawnmower to and from the area to be mowed.
11. Never operate the lawnmower with defective guards or shields, or without safety devices, for example deflectors and/or grass catchers, in place.
12. Do not change the engine governor settings or overspeed the engine.
13. Disengage all blade and drive clutches before starting the engine.
14. Start the engine or switch on the motor carefully according to instructions and with feet well away from the blade(s).
15. Do not tilt the lawnmower when starting the engine or switching on the motor, except if the lawnmower has to be tilted for starting. In this case, do not tilt it more than absolutely necessary and lift only the part which is away from the operator.
16. Do not start the engine when standing in front of the discharge chute.
17. Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.

SAFETY INSTRUCTIONS

18. Never pick up or carry a lawnmower while the engine is running.

19. Stop the engine and disconnect the spark plug wire.

- before clearing blockages or unclogging chute;
- before checking, cleaning or working on the lawnmower;
- after striking a foreign object. Inspect the lawnmower for damage and make repairs before restarting and operating the lawnmower;
- if lawnmower starts to vibrate abnormally (check immediately).

20. Stop the engine

- whenever you leave the lawnmower;
- before refuelling.

21. Reduce the throttle setting during engine shut down and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of mowing.

22. Go slow when using a trailing seat.

MAINTENANCE AND STORAGE

1. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
2. Never store the equipment with petrol in the tank inside a building where fumes may reach an open flame or spark.
3. Allow the engine to cool before storing in any enclosure.
4. To reduce the fire hazard, keep the engine, silencer, battery compartment and petrol storage area free of grass, leaves, or excessive grease.
5. Check the grass catcher frequently for wear or deterioration.
6. Replace worn or damaged parts for safety.
7. If the fuel tank has to be drained, this should be done outdoors.

SOUND PRESSURE LEVEL

This unit has an equivalent continuous A-weighted sound pressure at the operator ear of: 83.5 dB(A), based on measurements of identical machines per ANSI B71.5-1984 procedures.

SOUND POWER LEVEL

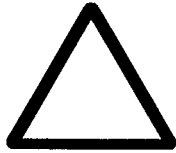
This unit has a sound power level of: 100 dB(A)/1 pW, based on measurements of identical machines per Directive 84/538/EEC and amendments.

VIBRATION LEVEL

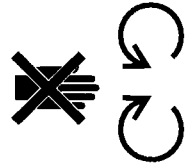
This unit has a maximum hand-arm vibration level of 3.6 m/s², based on measurement of identical machines per ISO 5349 procedures.

SYMBOL GLOSSARY

Safety alert triangle—
symbol within triangle
indicates a hazard



Do not open or
remove safety shields
while engine is running



Safety alert symbol



Rotating blade can cut off
toes or fingers. Stay clear of
mower blade as long as
engine is running.



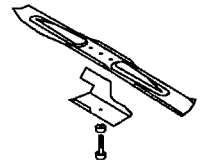
Read operator's manual



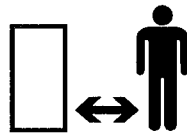
Consult technical
manual for proper
service procedures



To avoid blade failure when
mulching, use blade stiffener
when mower is equipped
with mulching plug



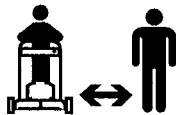
Stay a safe distance
from the machine



Transmission



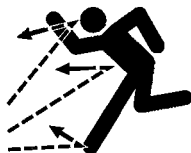
Stay a safe distance
from the mower



Oil



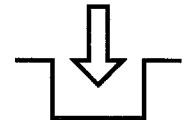
Thrown or flying objects—
Whole body exposure



On/Run



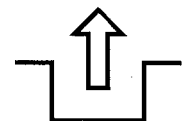
Engage



Thrown or flying objects—
Rotary side-mounted mower.
Keep deflector shield in
place.



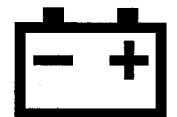
Disengage



Stop engine before
leaving operator
position

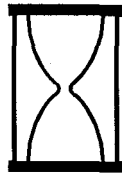


Battery charging
condition



SYMBOL GLOSSARY

Hourmeter/elapsed
operating hours



Fast



Slow



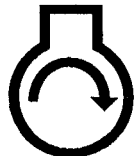
Decreasing/increasing



Grease lubrication
point



Engine start



Engine stop



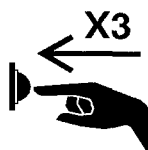
Choke



Primer (start aid)



Push primer
three times



Fuel



Neutral

N

First gear

1

Second gear

2

Third gear

3

Cutting element—
basic symbol



Cutting element—
Height adjustment



Pull rope



Wheel



Wheel traction



SYMBOL GLOSSARY

Properly dispose
of batteries



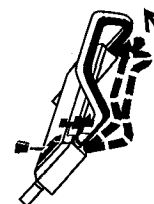
Lower control bar



Insert key into
ignition switch



Raise control bar



Turn key in ignition
switch



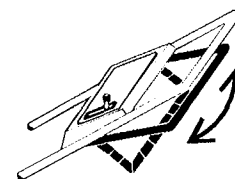
Raise/lower control bar



Move control



Raise/lower control bar



Raise control bar



Raise control bar



Lower control bar



TABLE OF CONTENTS

	Page
Set—Up Instructions	6
Before Operating	8
Recycler® Mower Tips	9
Operating Instructions	10
Maintenance	13
Servicing Air Cleaner	13
Replacing Spark Plug	14
Draining Gasoline	14
Adjusting Throttle	14
Cleaning Cooling System	14
Cleaning Muffler and Exhaust Port	15
Adjusting Wheel Drive	15
Inspecting/Removing/Sharpening Blade	17
Lubrication	17
Lubricating Gear Case	17
Servicing Wheels	17

	Page
Cleaning Mower Housing, Discharge Tunnel, Belt Cover and Plug	18
Adjusting Blade Brake	19
Preparing Mower For Storage	19
Optional Equipment	20
Product Identification	20
Toro Service Support	20

SET-UP INSTRUCTIONS

INSTALL HANDLES

1. Mount handle to outside of mower housing, using bottom hole, with (2) 5/16–18 x 1–1/4" lg. capscrews, washers, and thin nylon insert locknuts.

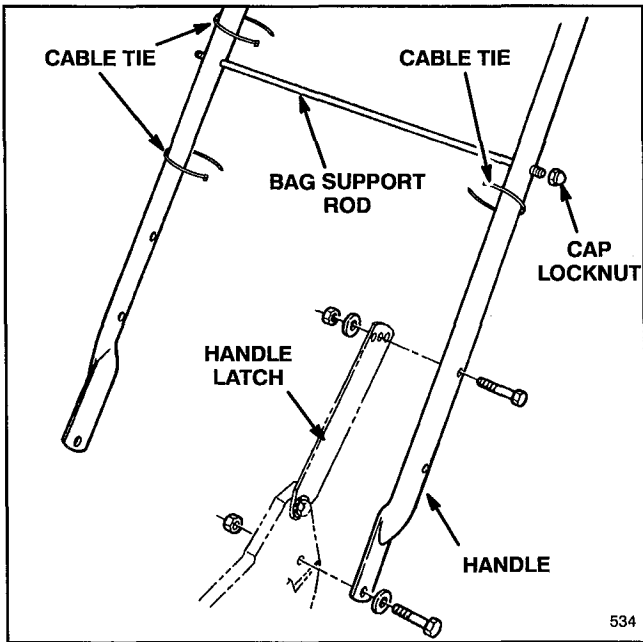


Figure 1

2. Secure handle latches to handle with (2) 5/16–18 x 1–1/2" lg. capscrews, washers and nylon insert locknuts. Position locknuts and washers on inside of handle.

Note: Handle height is adjustable for operator comfort. Stand behind mower handle to gauge height. To adjust handle height, reposition capscrews and locknuts securing handle latches to handle into other mounting holes in latches.

3. Slide bag support rod thru **top** mounting holes in handle and secure each end with a cap locknut (Fig. 1).

4. Secure control cables in position with cable ties.

INSTALL GAS TANK AND FUEL LINE

1. Start self-tapping screws into bottom of gas tank and then remove screws.
2. Hook the plastic clips on the rear of the gas tank onto gas tank bracket (Fig. 2).

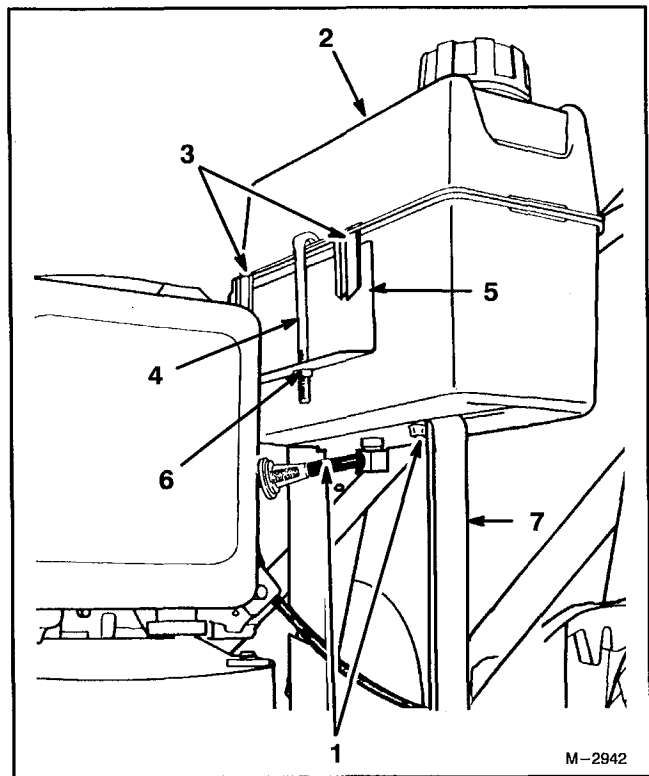


Figure 2

- | | |
|------------------------|---------------------|
| 1. Self-tapping screws | 5. Gas tank bracket |
| 2. Gas tank | 6. Locknut |
| 3. Plastic clips | 7. Tank base |
| 4. Gas tank retainer | |

3. Secure gas tank to tank base with the (2) self-tapping screws (Fig. 2). Do not overtighten screws.

4. Hook gas tank retainer onto gas tank and slide end of retainer into hole in tank bracket. Secure retainer to tank bracket with locknut (Fig. 2). Do not overtighten.

5. Slide end of fuel line onto elbow fitting. Secure in place with fuel line clamp (Fig. 3).

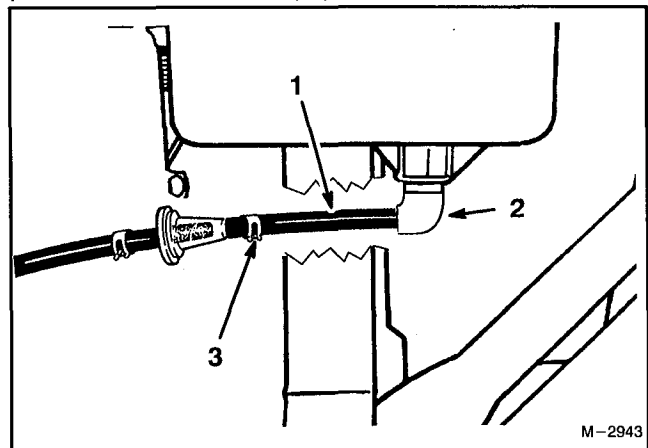


Figure 3

- | | |
|------------------|--------------------|
| 1. Fuel line | 3. Fuel line clamp |
| 2. Elbow fitting | |

SET-UP INSTRUCTIONS

INSTALL STARTER ROPE

1. Pull the starter rope through the rope guide on the handle (Fig. 4). To make the rope easier to loop, squeeze the control bar on the handle to release the blade brake.

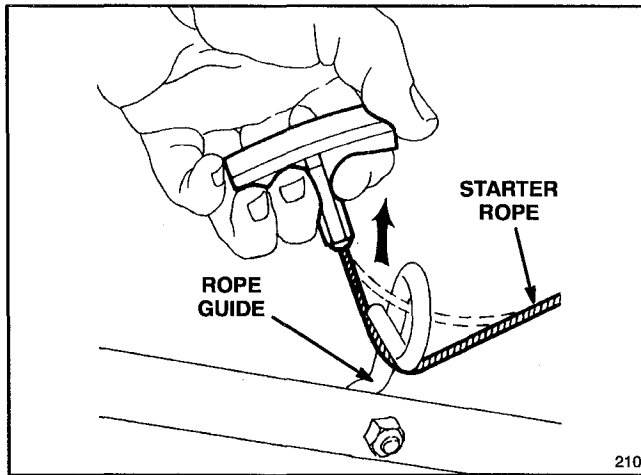


Figure 4

INSTALL AIR CLEANER COVER (Fig. 5)

1. Insert bottom tabs of air cleaner cover into slots. Rotate cover upwards and snap into place.

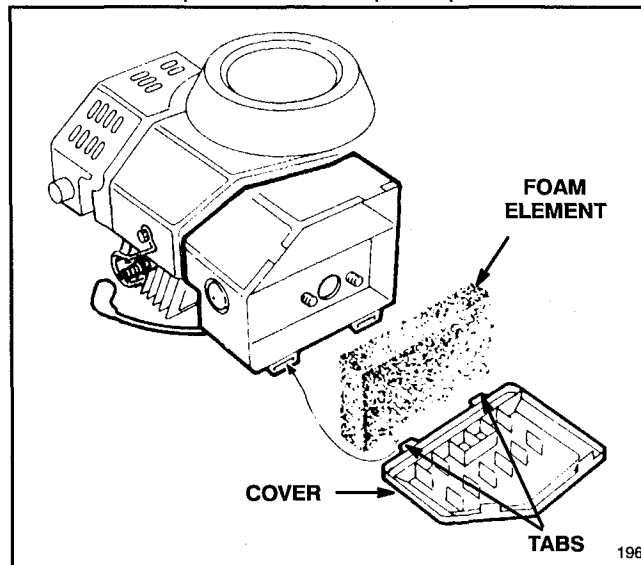


Figure 5

INSTALL DISCHARGE TUNNEL PLUG

1. Open the discharge door by pulling forward on the handle and moving it rearwards (Fig. 6). Hold the discharge door handle to prevent the spring-loaded door from closing while inserting the plug.

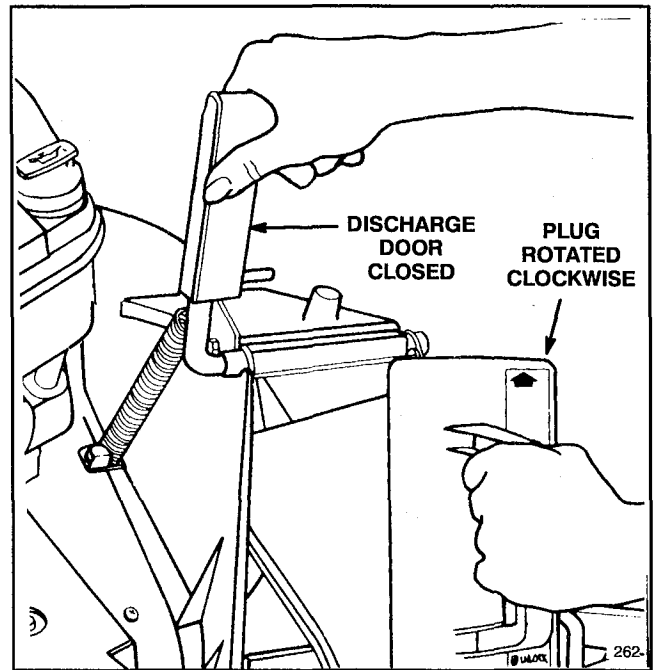


Figure 6

2. Since the plug is slightly wider than the discharge tunnel opening, rotate the plug clockwise slightly while inserting it (Fig. 6). Make sure the arrow on the plug decal is pointing upwards.

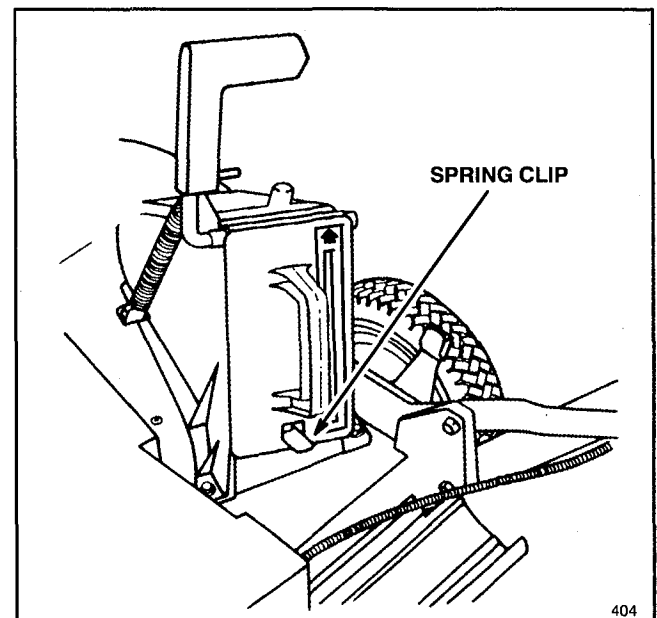


Figure 7

3. Push the plug all the way in until the spring clip on the bottom of the plug clicks into place, locking the plug securely into the discharge tunnel (Fig. 7). Release discharge door handle to lock top of plug.

BEFORE OPERATING



WARNING

DANGER: Gasoline is extremely flammable and explosive under certain conditions. Do not smoke when handling fuel and keep fuel far away from open flames and sparks. Never buy more than a 30 day supply of gasoline. Store it in an approved container. Keep gasoline out of reach of children.

Refuel outdoors and only when engine is cold. Fill tank to within 6 to 13 mm (1/4" to 1/2") from top of tank, not into filler neck. This space is for expansion of fuel. Use funnel or spout to prevent spilling. Wipe up any spilled gas.

MIX GASOLINE AND OIL—50:1 RATIO

1. **APPROVED OIL**—For simplicity and best engine performance, mix the contents of one bottle of Toro 50:1 Two-Cycle Oil with 7.6 liters (two gallons) of fresh, unleaded regular gasoline. Leaded regular gasoline may be used if unleaded regular is not available.

Toro Two-Cycle Oil is specially formulated to provide superior lubrication, make starting easy, and prolong engine life. If Toro Two-Cycle Oil is not available, mix 7.6 liters (two gallons) of gasoline and 154 ml (5.2 ounces) of another high grade two-cycle oil that has the NMMA or BIA-TCW certification printed on the label.

50:1 GAS/OIL Mixing Chart

U.S. GALLON	
Gasoline	Oil
1 gallon	2.6 oz.
2 gallons	5.2 oz.

Toro also recommends that Toro Stabilizer/Conditioner be used regularly in all Toro gasoline powered products during operation and storage seasons. Toro Stabilizer/Conditioner cleans the engine during operation and prevents gum-like varnish deposits from forming in the engine during periods of storage.

IMPORTANT: NEVER USE AUTOMOTIVE OIL (i.e. SAE 30, 10W30 etc.), TWO-CYCLE OIL THAT IS NOT

CERTIFIED NMMA/BIA-TCW, OR THE WRONG MIX RATIO BECAUSE THE ENGINE CAN BE DAMAGED, AND IT WOULD NOT BE COVERED BY THE TORO WARRANTY.

2. **Mixing Gasoline and Oil**—Pour correct amount of gasoline into an approved gasoline container and add the correct amount of two-cycle oil. Install cap on gasoline container and shake the container to mix oil and gas thoroughly. Remove cap and add remaining amount of gasoline.

NOTE: Do not mix gasoline and oil in the product fuel tank. Oil that is at room temperature mixes easier and more thoroughly than cold oil.

IMPORTANT: NEVER USE METHANOL, GASOLINE CONTAINING METHANOL, GASOHOL CONTAINING MORE THAN 10% ETHANOL, PREMIUM GASOLINE, OR WHITE GAS BECAUSE ENGINE FUEL SYSTEM DAMAGE COULD RESULT.

DO NOT USE FUEL ADDITIVES OTHER THAN THOSE MANUFACTURED FOR FUEL STABILIZATION DURING STORAGE SUCH AS TORO'S STABILIZER/CONDITIONER OR A SIMILAR PRODUCT. TORO'S STABILIZER/CONDITIONER IS A PETROLEUM DISTILLATE BASED STABILIZER/CONDITIONER. TORO DOES NOT RECOMMEND STABILIZERS WITH AN ALCOHOL BASE SUCH AS ETHANOL, METHANOL OR ISOPROPYL. STABILIZERS SHOULD NOT BE USED TO TRY TO ENHANCE THE POWER OR PERFORMANCE OF MACHINE.

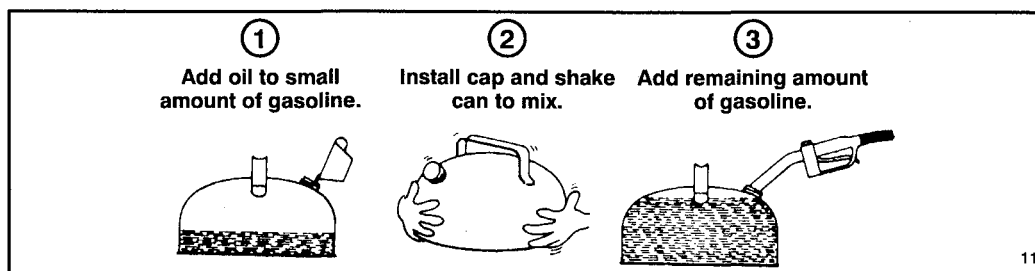


Figure 8

111

RECYCLER[®] MOWER TIPS

RECYCLER[®] MOWER FEATURES

The Toro Recycler[®] mower has a new and completely different cutting concept that leaves your lawn with a bagged look without bagging clippings.

Your Recycler[®] mower is equipped with special parts which increase your mower's ability to cut and recut grass clippings, leaves, and other yard debris into tiny particles and inject them down into the grass. These parts are:

- A. A special blade and blade stiffener
- B. Three special "kicker plates" positioned on the underside of the mower deck in strategic positions (Fig. 9)

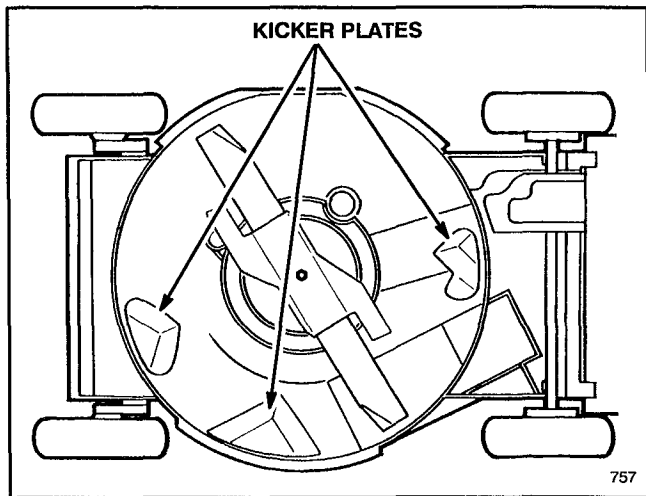


Figure 9

- C. A special plug which locks into the mower's discharge tunnel (a fourth kicker is on the plug) (Fig. 10)

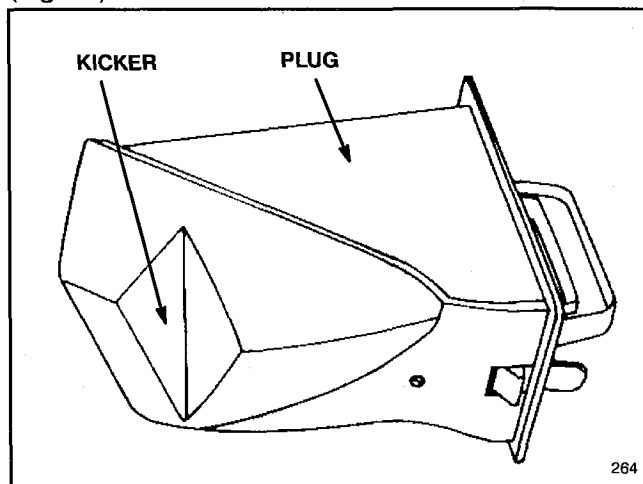


Figure 10

The blade and three kicker plates are permanent parts of your mower. The blade should be removed only for sharpening or replacement. The kickers should never be removed, unless they need to be replaced. They do not interfere with the normal

bagging or optional side discharge operations of the mower.



WARNING

- Operating mower without stiffener in place could cause blade to flex, bend or break.
- A broken blade could cause serious injury or death to operator or bystanders.
- Do not operate mower without stiffener.

The plug, however, is a removable part, just as the grass bag and optional side discharge chute are removable parts. You cannot use the plug in combination with either the grass bag or the side discharge chute.

It is possible to mow without using the plug by closing the discharge tunnel door. However, your lawn appearance will be much more satisfactory if you use the plug as it has an additional kicker (Fig. 10) that helps drive the clippings down into the grass.



WARNING

Grass clippings and other debris can be thrown from an open discharge tunnel with enough force to cause personal injury. Never start or operate the mower unless one of the following is true:

1. The discharge tunnel plug is locked securely in discharge tunnel.
2. The grass bag is locked in place.
3. The optional side discharge chute is locked in place.
4. The discharge tunnel door is locked closed.



WARNING

Wet grass can cause you to slip and contact blade. Blade contact can seriously injure you. Mow only in dry conditions.

CUTTING GRASS

- Grass grows at different rates at different times of the year. In the heat of the summer, it is generally best to cut grass at the 44 mm (1-3/4"), 57 mm (2-1/4") or 70 mm (2-3/4") height-of-cut settings (Fig. 11). Only about 1/3 of the grass blade should be cut off. Cutting below the 44 mm (1-3/4") setting is not recommended unless grass is sparse or it is late fall when grass growth begins to slow down.

RECYCLER[®] MOWER TIPS

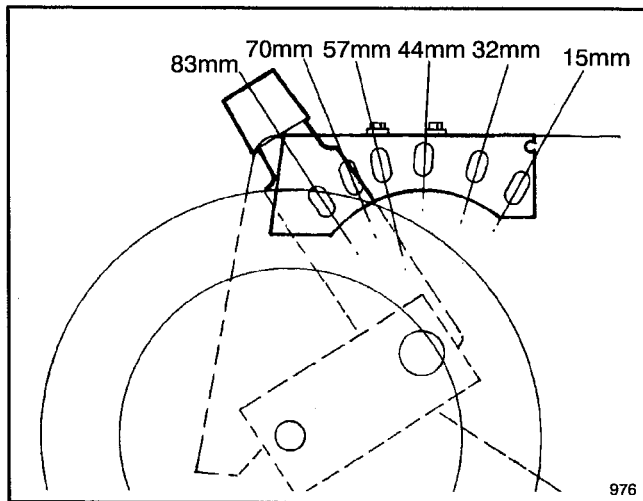


Figure 11

- When cutting grass over 15 cm (six inches) tall, you may want to first mow using the highest height-of-cut setting and a slower walking speed; then mow again at a lower setting for best lawn appearance. If grass is too long and leaves clumps on top of lawn, mower may plug and cause engine to stall.
 - Alternate mowing direction. This helps disperse clippings over lawn for even fertilization.
- If the finished cut lawn appearance is unsatisfactory, try one or more of the following:
- Sharpen the blade.
 - Walk at a slower pace while mowing.
 - Raise the height-of-cut setting on your mower.
 - Cut grass more frequently.
 - Overlap cutting swaths instead of cutting a full swath with each pass.

- Mow across the marginal areas a second time.
- Set height-of-cut on front wheels one notch lower than rear wheels. (example: set front wheels at 44 mm (1-3/4") setting and rear wheels at 57 mm (2-1/4") setting)

TIPS FOR CUTTING LEAVES

You can cut up leaves in the fall instead of bagging. If you decide to bag, the Recycler[®] mower reduces the number of leaf bags you will need by finely chopping up the leaves before they are bagged. Some leaf particles will be injected back down into the soil. When spring arrives, the leaf particles will have decomposed and returned valuable nutrients to the soil.

- Ensure leaves are dry.
- When cutting is complete, always be sure that 50% of the lawn shows through the cut leaf cover. This may require one or more passes over the leaves.
- For light leaf coverage, position all wheels at the same height-of-cut setting.
- If there are more than 5" of leaves on lawn, set the front wheels one or two notches higher than the rear wheels. This makes it easier to feed leaves under mower deck.
- Walk at a slower mowing speed if leaves are not being cut up finely enough to be hidden down in the grass.
- If you cut up a lot of oak leaves, you might want to add lime to your grass in the spring. Lime reduces the acidity of oak leaves.

OPERATING INSTRUCTIONS

STARTING, STOPPING, AND SELF-PROPELLING

1. CONTROLS—Throttle, blade control bar, self-propel control bar and fingertip starter are on upper handle (Fig. 12). Ground speed control is located at rear of belt cover (Fig. 13).

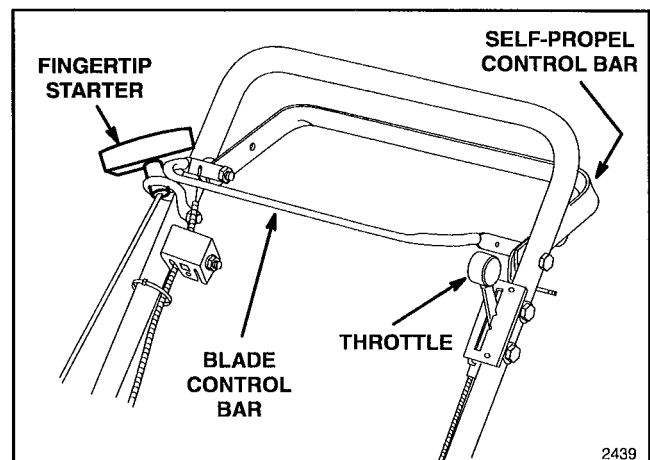




Figure 12

2. Push wire onto spark plug.

OPERATING INSTRUCTIONS

3. STARTING—Move ground speed control to neutral and throttle to  (CHOKE). Cover hole in center of primer with thumb and push once. Squeeze blade control bar against handle. Pull fingertip starter out until positive engagement results; then pull vigorously to start the engine. Regulate throttle as desired when engine starts.

NOTE: When starting a warm engine,  CHOKE may not be necessary.

4. Move ground speed control to desired speed selection (Fig. 13).

5. TRACTION OPERATION—Squeeze self-propel control bar against handle to drive. Ground speed varies, depending on space between control bar and handle (Fig. 12).

6. STOPPING—To stop the self-propel drive, release the self-propel control bar. To stop engine, release blade control bar. Pull wire off spark plug if mower will be unattended or not used.

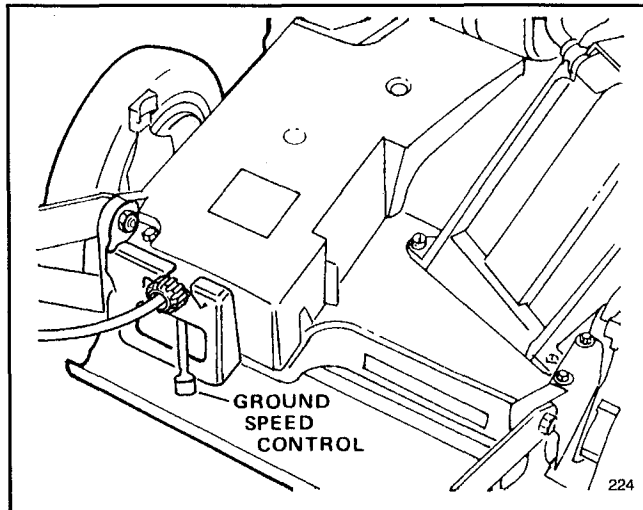


Figure 13

USING DISCHARGE TUNNEL PLUG

1. Make sure engine is off. Open the discharge door by pulling forward on the handle and moving it rearwards (Fig. 14). Hold the discharge door handle to prevent the spring-loaded door from closing while inserting the plug.

2. Since the plug is slightly wider than the discharge tunnel opening, you must rotate the plug clockwise slightly while inserting it (Fig. 14). Make sure the arrow on the plug decal is pointing upwards.

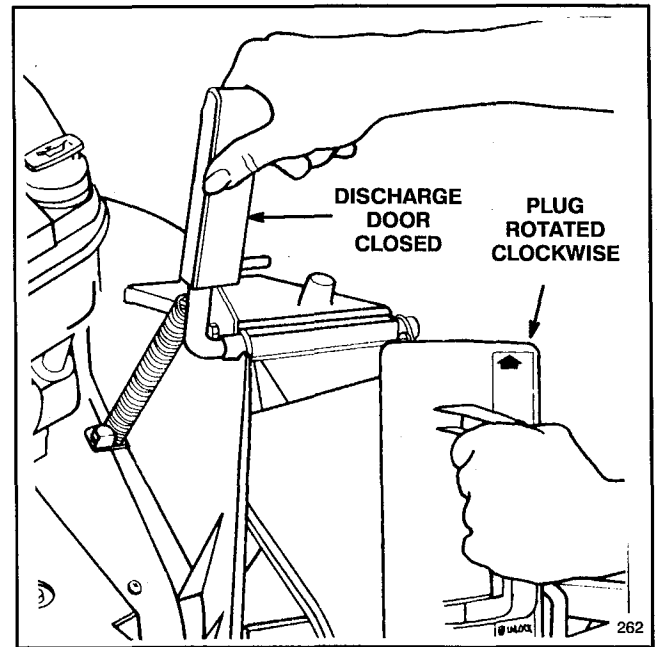


Figure 14

3. Push the plug all the way in until the spring clip on the bottom of the plug clicks into place, locking the plug securely into the discharge tunnel (Fig. 15). Release the discharge door handle to lock the top of the plug.

4. To remove the plug, move the discharge door handle rearwards while at the same time lift up the spring clip on the bottom of the plug. When the plug is unlocked, pull it out of the discharge tunnel.

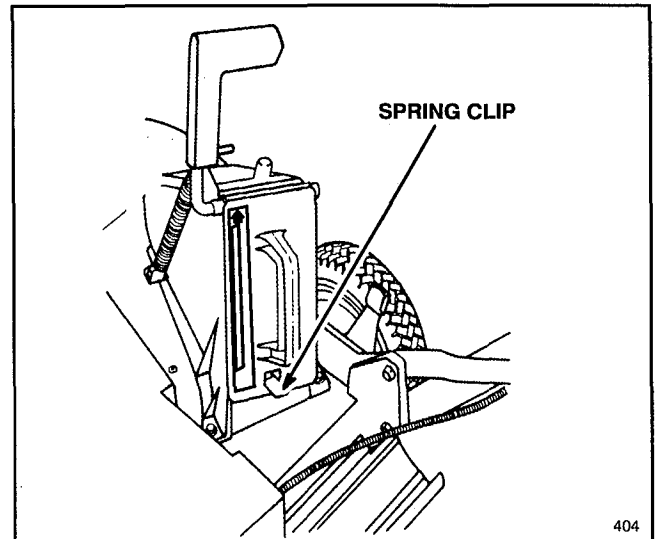


Figure 15

OPERATING INSTRUCTIONS

USING GRASS BAG

Occasionally you may wish to use the grass bag for bagging extra long grass, lush grass or leaves.

1. Stop engine and wait for all moving parts to stop.
2. Ensure discharge door handle is fully forward and pin is engaged in catch (Fig. 16).

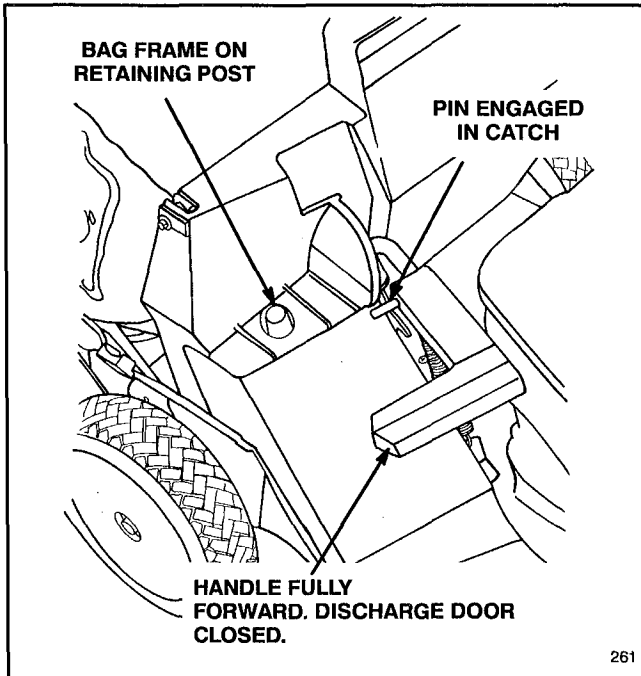


Figure 16

3. INSTALLING BAG—Slide hole in bag frame onto retaining post on discharge tunnel (Fig. 16). Set rear of bag frame onto lower handle.



DANGER

- Grass clippings and other objects can be thrown from an open discharge tunnel.
- Objects thrown with enough force could cause serious personal injury or death to operator or bystander.
- Never open door on discharge tunnel when engine is running unless the grass bag, optional side discharge attachment or discharge tunnel plug is securely installed.



DANGER

- A worn grass bag could allow small stones and other similar debris to be thrown in operator's or bystander's direction.
- Thrown objects can cause serious personal injury or death to operator or bystanders.
- Check the grass bag frequently. If it is damaged, install a new genuine TORO replacement bag.

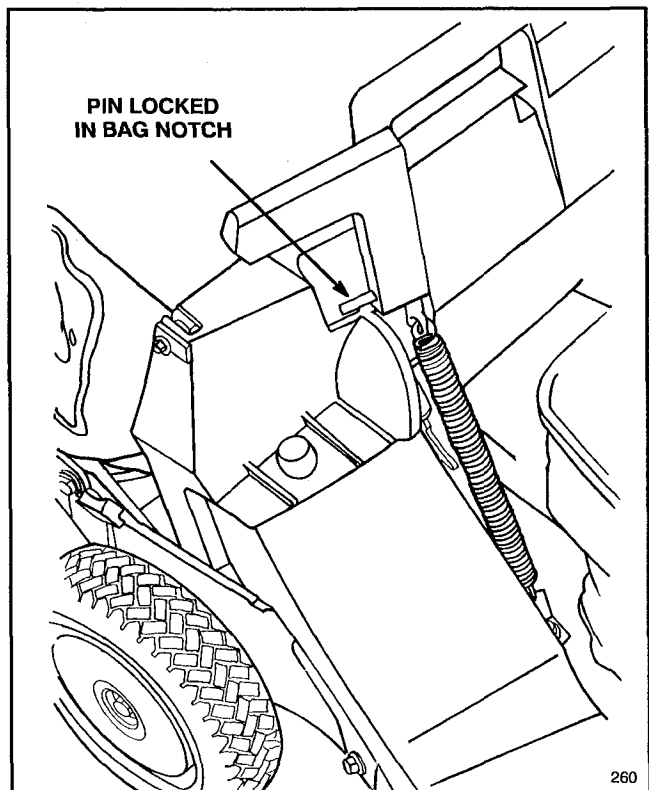


Figure 17

4. Pull discharge door handle forward until pin clears catch and move handle rearward until pin locks in bag notch (Fig. 17). Discharge door in mower housing is now open.

OPERATING INSTRUCTIONS



DANGER

- Thrown objects may result if discharge door does not close completely.
- Thrown objects can cause serious personal injury or death.
- If discharge door cannot be closed because grass clippings clog discharge area, stop engine and gently move discharge door handle back and forth until door can be closed completely. If door still cannot be closed, remove obstruction with a stick, not your hand.

5. **EMPTYING BAG**—Stop engine and wait for all moving parts to stop. Raise discharge door handle and move it forward to engage the locking pin with catch (Fig. 16). Grasp handles at front and rear of bag and lift bag off mower. Gradually tip bag forward to empty clippings.

6. To reinstall bag, repeat steps 3-4.

ADJUSTING HEIGHT-OF-CUT

The height-of-cut is adjustable from approximately 19 mm to 83 mm (3/4 to 3-1/4 inches), in 12.7 mm (1/2 inch) increments. Moving height-of-cut adjuster forward raises height-of-cut.

1. Stop the engine.



DANGER

- Adjusting height-of-cut levers could bring hands into contact with moving blade.
- Contact with blade could cause serious personal injury.
- Stop engine and wait for all moving parts to stop before changing height-of-cut.
- Do not put fingers under housing to lift mower when adjusting height-of-cut levers.

2. For easier adjustment, lift housing up so wheel is off ground. **Do not place hands under deck to lift housing.** Squeeze adjusting lever toward wheel (Fig. 18) and move it to the desired setting. Ensure pin on adjusting lever engages notch in mower housing wear plate. Adjust all wheels to the same setting.

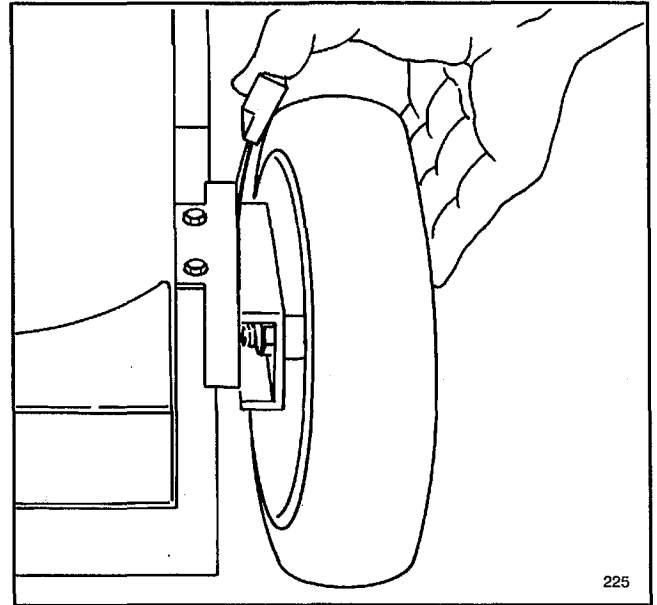


Figure 18

MAINTENANCE



CAUTION

- Engine could start accidentally.
- Accidental starting of engine could cause serious injury to operator or bystanders.
- Pull wire off spark plug before performing any maintenance or adjustments.

SERVICING AIR CLEANER

Normally, clean air cleaner after every 25 operating hours. More frequent cleaning is required when mower is operated in dusty or dirty conditions.

1. Stop engine and pull wire off spark plug (Fig. 19).

2. Lift tabs at top of air cleaner cover and pivot cover down. Clean cover thoroughly (Fig. 19).

MAINTENANCE

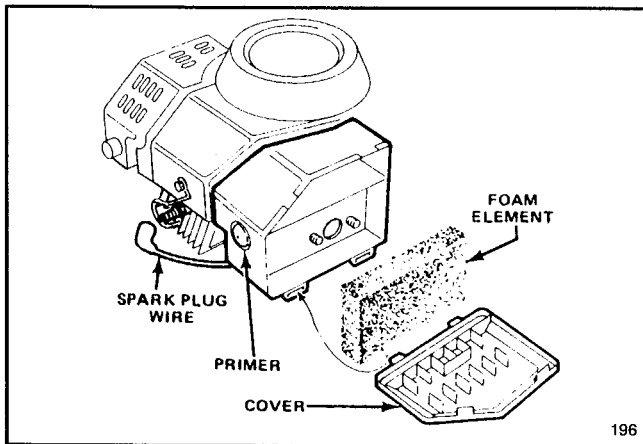


Figure 19

3. If outside of foam element is dirty, remove it from air cleaner body (Fig. 19). Clean thoroughly.
- A. WASH foam element in a solution of liquid soap and warm water. Squeeze to remove dirt, but do not twist because foam may tear. Rinse thoroughly in clear water.
- B. DRY by wrapping in a clean rag. Squeeze rag and foam element to dry.
- C. SATURATE element with engine oil. Squeeze element to remove excess oil and to distribute oil thoroughly. A damp element is desirable.
4. Reinstall foam element and air cleaner cover.

IMPORTANT: Do not operate engine without air cleaner element because extreme engine wear and damage will likely result.

REPLACING SPARK PLUG

Use an NGK BP4R4 spark plug or equivalent. Correct air gap is 0.81 mm (0.032"). Remove plug after every 25 operating hours and check its condition.

1. Stop engine and pull wire off spark plug.
2. Clean around spark plug and remove plug from cylinder head.

IMPORTANT: Replace a cracked, fouled, or dirty spark plug. Do not sand blast, scrape, or clean electrodes because engine damage could result from grit entering cylinder.

3. Set air gap at 0.81 mm (0.032") (Fig. 20). Install correctly gapped spark plug and gasket seal. Tighten plug firmly to 13.6 N·m (10 ft-lb).

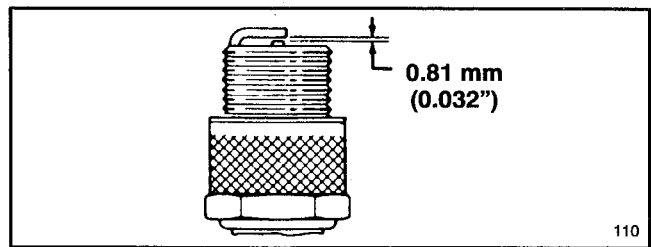


Figure 20

DRAINING GASOLINE

1. Stop engine. Pull wire off spark plug.


Note: Drain gasoline from a cold engine only.

2. Remove cap from fuel tank and use pump-type syphon to drain fuel into clean gas can.

Note: This is the only procedure recommended for draining fuel.

ADJUSTING THROTTLE

Throttle control adjustment may be required if engine does not start. Whenever a new throttle control cable is installed, throttle must be adjusted.

1. Stop engine and pull wire off spark plug.
2. Move throttle control to  (FAST).
3. Loosen cable clamp screw until throttle cable slides (Fig. 21). Align holes in choke arm and throttle bracket. A small dia. pin may be inserted into aligned holes to hold adjustment. Push throttle cable until throttle arm makes contact with choke arm. Tighten cable clamp. Remove pin if used.

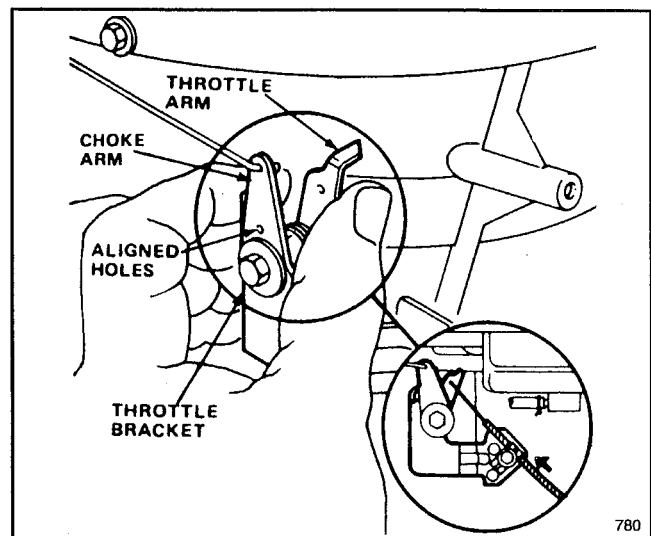


Figure 21

CLEANING COOLING SYSTEM

After every 75 operating hours, clean dirt and chaff from cylinder, cylinder head fins and from around carburetor and linkage. Also remove debris from air intake slots on recoil housing. This will ensure proper cooling and best engine performance.

MAINTENANCE

CLEANING MUFFLER AND EXHAUST PORT

Clean end of muffler pipe and exhaust port after every 75 hours of operation.



CAUTION

- Muffler and engine surface become hot when mower is in operation.
- Contact with hot muffler surface could cause a burn.
- Clean muffler and exhaust port only after engine and muffler are cool.

1. Use hard wood scraper and remove carbon from end of muffler pipe (Fig. 22).

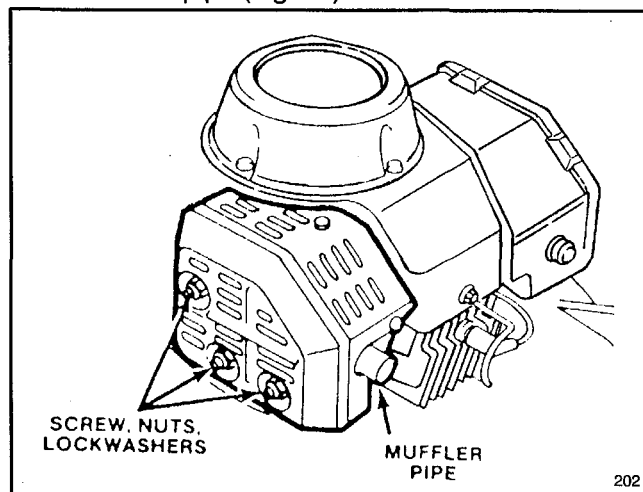


Figure 22

2. Remove screw, two nuts, and lockwashers (Fig. 22). Slide muffler off mounting pins.
3. Pull wire off spark plug. Slowly pull recoil starter so piston covers exhaust port (Fig. 23).
4. Clean carbon from exhaust port (Fig. 23) with flat, hard wood scraper.

IMPORTANT: Do not use a metal scraper or similar object to clean exhaust port because accidental damage to the piston or cylinder could easily occur.

5. Reinstall muffler with screw, (2) nuts and lockwashers (Fig. 22). After cleaning exhaust port, make sure muffler gasket is still usable.

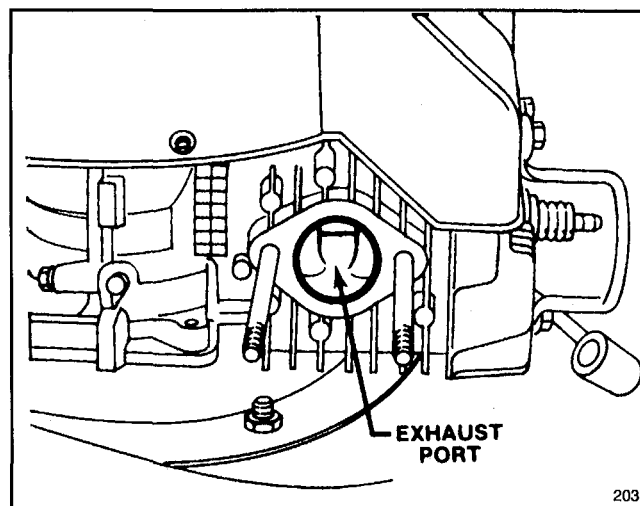


Figure 23

ADJUSTING WHEEL DRIVE

If mower does not self-propel or has a tendency to creep forward when drive is not engaged, adjust wheel drive control knob on rear of gear box.

1. If necessary, remove grass bag.
2. ADJUSTMENT (Fig. 24)—Rotate control knob clockwise 1/2 turn if mower does not self-propel. If mower creeps forward, rotate knob 1/2 turn counterclockwise to loosen belt.

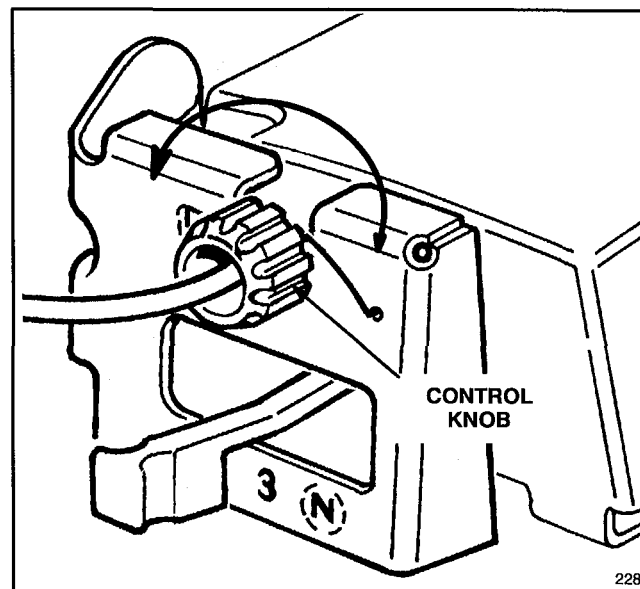


Figure 24

3. CHECK ADJUSTMENT—Slowly pull mower backward while self-propel control bar is gradually moved toward handle. Adjustment is correct when rear wheels stop turning and self-propel control bar is about 25 m (1 inch) from handle (Fig. 25).

MAINTENANCE

4. Repeat steps 2 and 3 until properly adjusted.

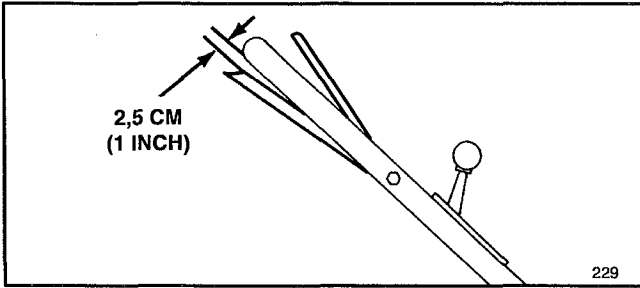


Figure 25

INSPECTING/REMOVING/SHARPENING BLADE

1. Stop engine and pull wire off spark plug.
2. Drain gasoline from fuel tank; refer to Draining Gasoline, page 14.
3. Tip mower on its right side (Fig. 26). Avoid rotating blade. Starting problems may result.

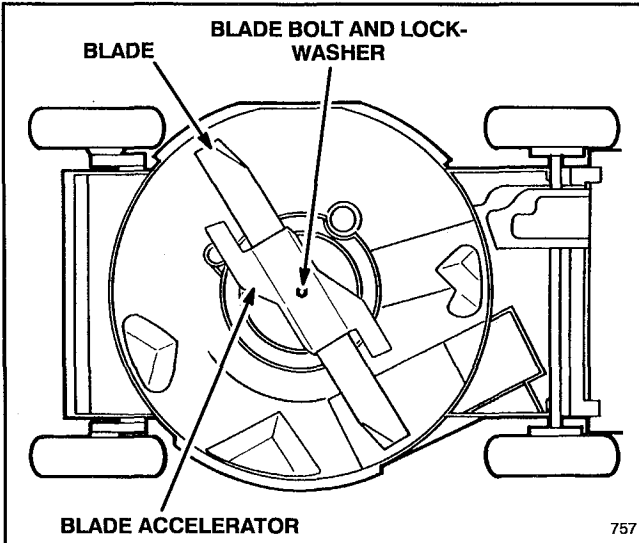


Figure 26

4. **INSPECTING BLADE**—Carefully examine blade for sharpness and wear, especially where flat and curved parts meet (Fig. 27A). Since sand and abrasive material can wear away the metal that connects the flat and curved parts of the blade, check blade before using the mower. If a slot or wear is noticed, (Fig. 27B & C), replace blade. Refer to step 5.

Note: For best performance, install new blade before cutting season begins. During the year, file down small nicks to maintain the cutting edge.

DANGER

- A worn or damaged blade could break and a piece of blade could be thrown into operator's or bystander's area.
- A thrown piece of blade could cause serious personal injury or death to operator or bystanders.
- Inspect blade periodically for wear or damage.
- Replace a worn or damaged blade.

5. **REMOVING BLADE**—Grasp end of blade using a rag or thickly padded glove. Remove blade bolt, lockwasher, blade accelerator and blade (Fig. 26).

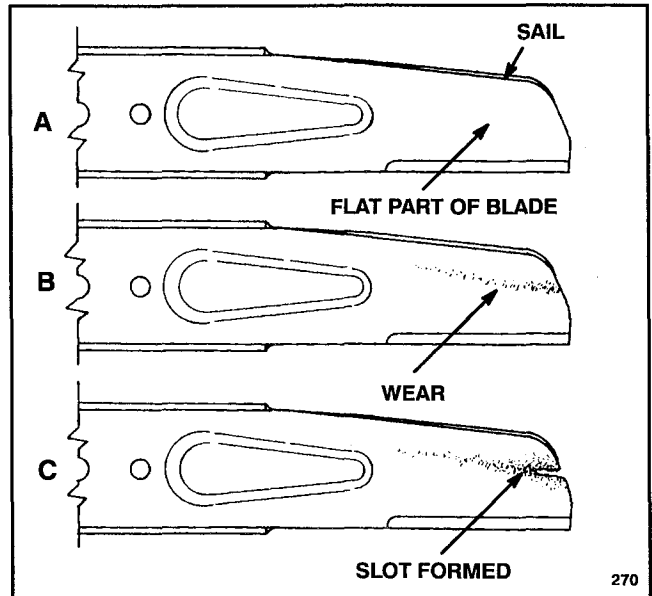


Figure 27

6. **SHARPENING BLADE**—Using a file, sharpen top side of blade and maintain original cutting angle (Fig. 28). The blade will remain balanced if same amount of material is removed from both cutting edges.

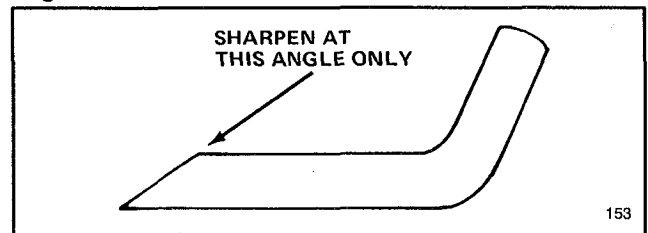


Figure 28

IMPORTANT: Check balance of blade by putting it on a blade balancer. An inexpensive balancer can be purchased at a hardware store. A balanced blade stays in a horizontal position and an unbalanced blade settles to the heavy side. If blade is not balanced, file more metal off cutting edge on heavy end of blade.

MAINTENANCE

7. Install sharp, balanced blade, blade accelerator, lockwasher and blade bolt. Sail part of blade must point toward top of mower housing to ensure correct installation. Tighten blade bolt to 68 N·m (50 ft·lb).



WARNING

- Operating mower without accelerator in place could cause blade to flex, bend or break.
- A broken blade could cause serious injury or death to operator or bystanders.
- Do not operate mower without accelerator.

LUBRICATION

After every 25 operating hours or when season ends, pivot arms must be lubricated.

1. Move rear wheel height-of-cut levers to center setting. Wipe grease fittings with clean rag (Fig. 29). Install grease gun onto fitting and gently apply 2 or 3 pumps of #2 Multi-Purpose Lithium Base Grease. Excessive pressure may damage seals.

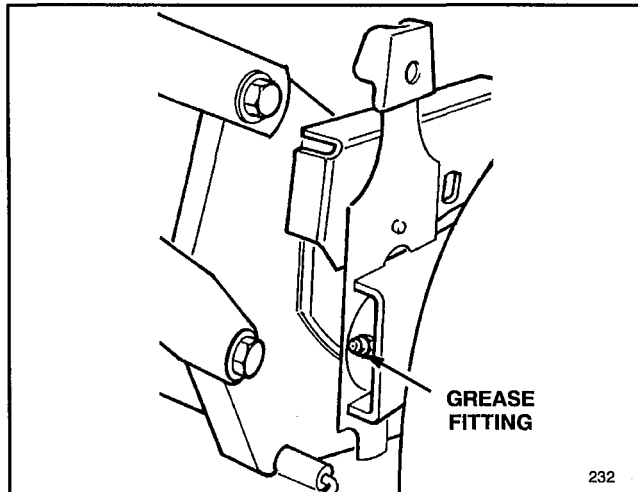


Figure 29

LUBRICATING GEAR CASE

After every 100 operating hours, grease the gear case with #2 Multi-Purpose Lithium Base Grease.

1. Install grease gun onto fitting thru belt cover opening (Fig. 30). Gently apply 1–2 pumps of grease.

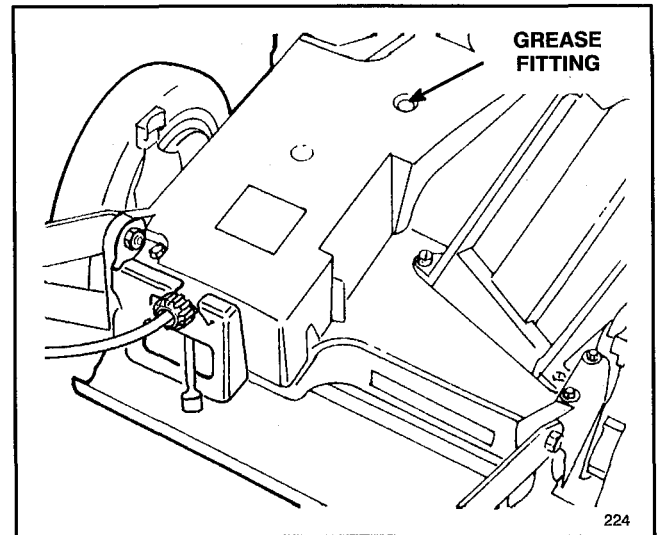


Figure 30

SERVICING WHEELS (Fig. 31)

Removal

1. Remove capscrew, wheel spacer, and locknut mounting wheel to pivot arm (Fig. 31).

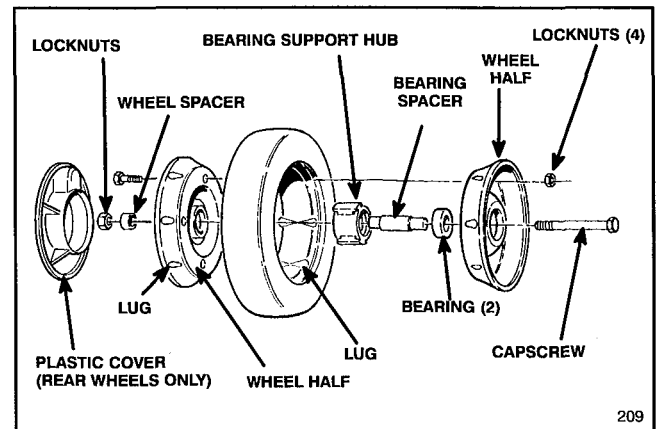


Figure 31

2. Separate wheel halves from tire by removing (4) capscrews and locknuts (Fig. 31).

Note: If bearings are to be removed from bearing support hub, remove by pressing on bearing spacer.

Assembly

1. Position tire onto (1) wheel half, aligning lugs on each (Fig. 31).
2. Place bearing support hub into center hole of wheel half. Make sure legs of hub are positioned over flange of hole.
3. Place other wheel half onto bearing support hub, aligning wheel and tire lugs and mounting holes.
4. Using (2) 1/4–20 x 1.50" lg. fully threaded screws or bolts and non-locking nuts, loosely secure wheel halves together. Mount screws or bolts in opposing holes.

MAINTENANCE

5. Check alignment of all parts and tighten screws, alternating from side to side for a uniform fit, until wheel halves are drawn together.
6. Install (2) capscrews and locknuts, previously removed, in remaining holes in wheel halves and tighten. Remove (2) long screws or bolts and replace them with (2) flange capscrews and locknuts.
7. Reinstall wheel to pivot arm with capscrews, spacer, and locknut. Make sure spacer is positioned between wheel hub and pivot arm.

CLEANING

Plug And Discharge Tunnel

To ensure best performance, the discharge tunnel plug must be cleaned after each use. When grass is thick and lush, clippings may collect on and around the plug; this may make plug removal difficult. After each use, remove plug from discharge tunnel and clean off all debris.

Always be sure that discharge tunnel door locks closed when handle is released. If debris prevents discharge door from locking closed, clean inside of discharge tunnel and door thoroughly.

Underside of Mower Housing

Keep underside of mower housing clean. Be especially careful to keep kickers free of debris (Fig. 32).

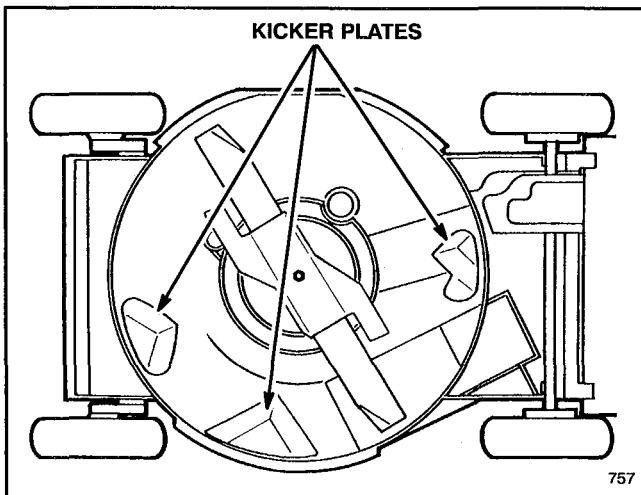


Figure 32

Washing Method

1. Position mower on a flat surface near a garden hose.
2. Attach a quick disconnect coupling (sold separately) to the end of the garden hose. Attach coupling to mower washout fitting and turn water on high (Fig. 33).
3. Start the engine.
4. Let mower run for two minutes.
5. Stop the engine.

6. Turn the water off and remove coupling from the washout fitting.
7. Restart mower and let it run for one minute to dry out moisture on the mower and its components.
8. If underside of mower deck has excessive grass build-up or packing, reconnect the hose to the washout fitting, turn the water on high and run the mower for two minutes. Stop the mower and turn off the water. Let the mower soak for 30 minutes. Then turn the water on high again and run the mower for another two minutes.

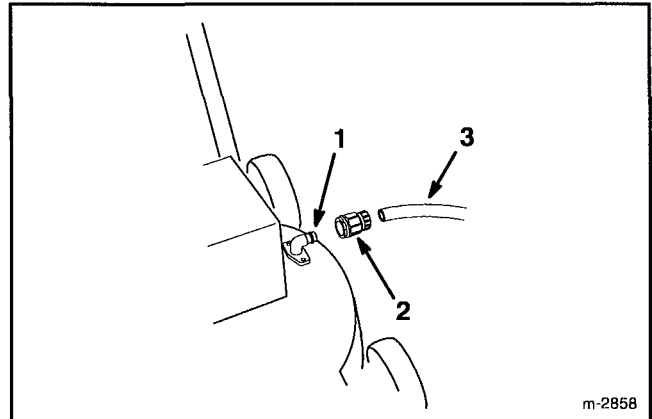


Figure 33

1. Washout fitting
2. Quick disconnect coupling
3. Hose

WARNING

POTENTIAL HAZARD

- A broken or missing washout fitting could expose you and others to thrown objects or blade contact.

WHAT CAN HAPPEN

- Contact with thrown debris or blade contact will cause injury or death.

HOW TO AVOID THE HAZARD

- Replace broken or missing washout fitting immediately before using mower again.
- Plug any hole(s) in mower with bolts and lock nuts.
- Never put your hands or feet under the mower or through openings in the mower.

Scraping Method

If washing does not remove all debris from under deck, tip mower and scrape it clean.

1. Stop engine and pull wire off spark plug (Fig. 19).

MAINTENANCE

2. Drain gasoline; refer to Draining Gasoline, page 14.



WARNING

- Gasoline is extremely flammable, highly explosive and under certain conditions can cause personal injury or property damage.
- Tipping mower over may cause fuel leakage from carburetor or fuel tank.
- Avoid fuel spills by running engine dry or remove gas with hand pump, never siphon.

3. If grass bag is installed on mower, close door in mower housing and remove grass bag.
4. Tip mower on its right side (Fig. 32). Avoid rotating blade because starting problems may result.
5. Remove dirt and grass clippings with a hardwood scraper. Avoid burrs and sharp edges.
6. Turn mower upright.
7. Refill gas tank.
8. Reconnect spark plug wire.

Belt Cover

Keep area under belt cover free of debris.

1. With engine turned off, remove screws securing belt cover to mower housing (Fig. 34). Lift off cover and brush out all debris from belt area. Reinstall belt cover.

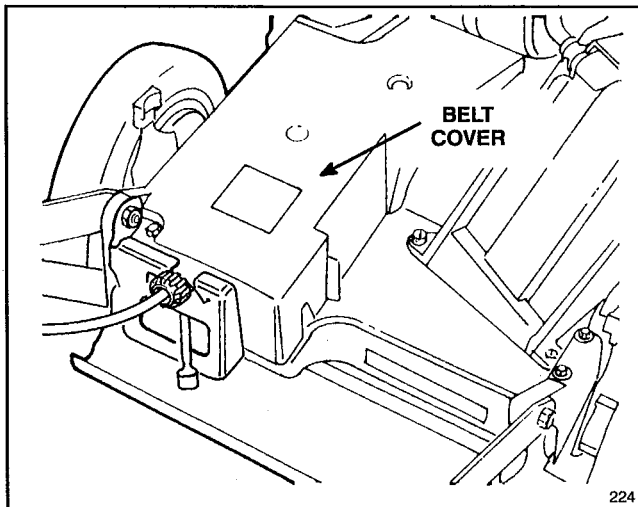


Figure 34

ADJUSTING BLADE BRAKE

Whenever a new blade brake cable assembly is installed, an adjustment is required.

1. Stop engine and pull wire off spark plug (Fig. 19).
2. CHECK ADJUSTMENT (Fig. 35)—Move control bar toward handle until slack in wire is removed. Gap between brake lever and handle must be

3.2–4.8 mm (1/8"–3/16"). See step 3 for adjustment.

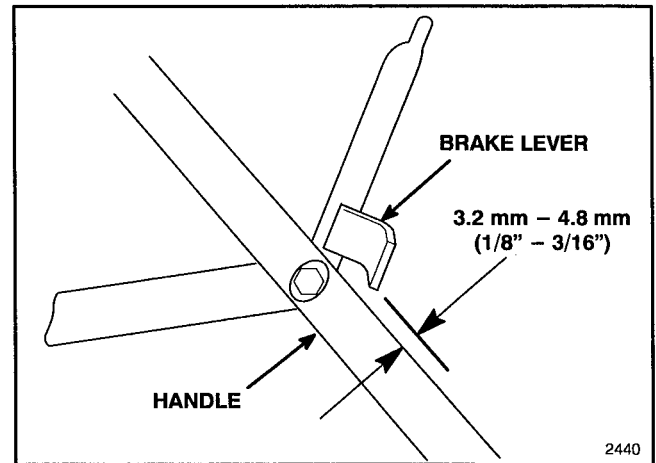


Figure 35

3. ADJUST CABLE CONDUIT (Fig. 36)—Loosen nut on cable bracket. Insert 3.2–4.8 mm (1/8"–3/16") object between brake lever and handle. Pull down on cable conduit until all slack is removed from wire. Then tighten nut.

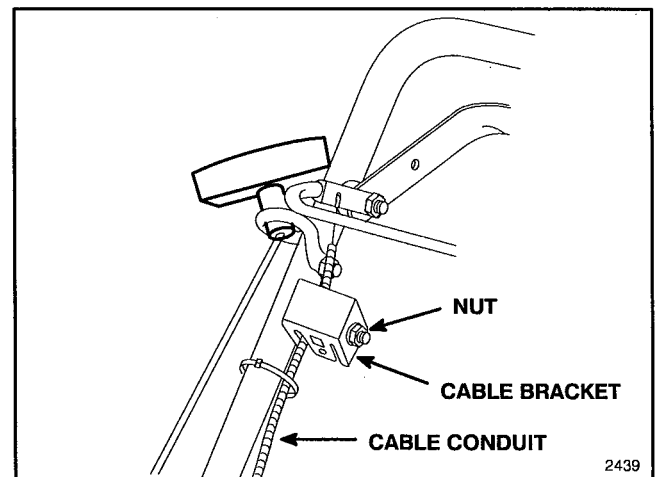


Figure 36

PREPARING MOWER FOR STORAGE

1. For long term storage, either drain gasoline from fuel tank or add a fuel additive to the gasoline. To drain gasoline, refer to Draining Gasoline. After fuel is drained, start engine and let it idle until all fuel is consumed and engine stops. If gasoline is not drained, gum-like varnish deposits will form and cause poor engine operation, even starting problems.

MAINTENANCE

Fuel can be left in gas tank only if a fuel stabilizer, such as Toro's Stabilizer/Conditioner, is added to gasoline before storing. Toro's Stabilizer/Conditioner is a petroleum distillate based stabilizer/conditioner. Toro does not recommend stabilizers with an alcohol base, such as ethanol, methanol or isopropyl. Use fuel stabilizer in recommended quantities as specified on container.

Under normal conditions, fuel stabilizers remain effective in fuel for 6–8 months.

2. Remove spark plug and pour 2 teaspoons of Toro Two–Cycle Oil into hole in cylinder. Pull starter rope slowly to coat inside of cylinder. Install spark plug and tighten to 13.6 N·m (10 ft–lb). **DO NOT REINSTALL WIRE ON SPARK PLUG.**

3. Clean underside of housing: refer to Cleaning Mower Housing, Discharge Tunnel, Belt Cover and Plug.

4. Check condition of blade: refer to Inspecting/Removing/Sharpening Blade.
5. Tighten all nuts, bolts, and screws.
6. Clean dirt and chaff from cylinder, cylinder head fins, and blower housing. Also remove grass clippings, dirt, and grime from external parts of the engine, shrouding, and top of mower housing.
7. Clean air cleaner: refer to Servicing Air Cleaner.
8. Lubricate the pivot arms: refer to Lubrication.
9. Touch up all rusted or chipped paint surfaces. Toro Re–Kote paint is available from an Authorized TORO Service Dealer.
10. Store mower in a clean, dry place, out of the reach of children. Cover mower to keep it clean and protected.

OPTIONAL EQUIPMENT

For special conditions the following accessories may be purchased at your local authorized TORO Service Dealer.

1. **Spark Arrestor, Part No. 81–0200**—If a spark arrestor is required because of local, state, or federal regulations, it may be purchased from an Authorized Toro Service Dealer. If mower is operated on any California forest, brush, or grass covered land without a properly operating spark arrestor, the operator is violating state law, Section 4442 Public Resources Code.

2. **Side Discharge Kit, Model No. 59113**—Installs in seconds. Rear mounted in place of the grass bag. Disperses clippings while trimming on both sides (Fig. 37).

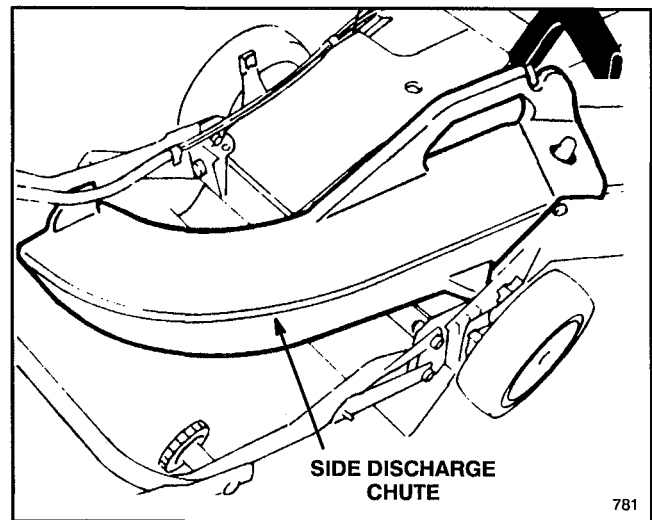


Figure 37

PRODUCT IDENTIFICATION

A model and serial number decal is located at rear of mower housing, near the discharge door. Always refer to specific numbers on this decal in correspondence or when replacement parts are needed.

TORO SERVICE SUPPORT

If help – concerning safety, set–up, operation, maintenance, or troubleshooting – is ever needed, contact the local Authorized TORO Service Dealer or Distributor. Refer to the “Yellow Pages” for assistance. In addition to skilled service technicians, the dealer and distributor have factory approved accessories and replacement parts. Keep your Toro all TORO. Buy genuine TORO replacement parts and accessories.