



MODEL NO. 22041 - 1000001 & UP

OPERATOR'S MANUAL

**21" (0.53 M) HP LANDSCAPER SIDE DISCHARGE
FINGERTIP START**



SAFETY INSTRUCTIONS

This mower "meets or exceeds CPSC blade safety requirements for walk behind rotary mowers" and the B71.1-1986 specifications of the American National Standards Institute. However, improper use or maintenance by the operator or owner can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety alert symbol . Failure to comply with these instructions may result in personal injury.

ENGLISH

BEFORE OPERATING

1. Read this manual carefully before operating the mower. Become familiar with the controls and proper use of the mower. Never allow children to operate the mower or adults to operate it without proper instructions.
2. Keep everyone, especially children and pets, away from area of operation. Thoroughly inspect area where mower will be used and remove sticks, stones, wire, and debris.
3. Wear long pants and substantial shoes. Do not operate mower while wearing open sandals or when barefoot.
4. Always wear safety glasses or eye shields during operation to protect eyes from foreign objects that may be thrown from the machine.
5. Check fuel level before starting engine. Do not fill fuel tank indoors, when the engine is running, or until engine cools for several minutes after running. Wipe up spilled gasoline before starting engine.
6. Keep all guards, shields, and safety devices in place. Repair or replace defective or damaged parts.
7. The blade and engine are designed to stop when the control bar is released. Assure control bar functions properly before each use of mower.

WHILE OPERATING

8. Do not run engine indoors.
9. Always maintain secure footing. Keep a firm grip on the handle and walk; never run. Never operate mower in wet grass. Mow only in daylight or in good artificial light.
10. Mow across the face of slopes; never up and down. Use extreme caution when changing direction on slopes. Do not mow excessively steep slopes.

11. Keep face, hands, and feet away from the mower housing and cutter blade when the engine is running. Stay behind the handle until the engine stops and keep clear of discharge opening at all times.

12. When mulching, remove grass bag and ensure discharge door is closed completely and locked. When bagging grass, stop engine and assure chute door is closed before the bag is removed and emptied.

13. Shut engine off and wait for all moving parts to stop before unclogging chute. Use a stick, not your hand, to unclog chute.

14. Since the blade rotates for a few seconds after the blade control is released, stay behind the handle until all moving parts stop.

15. After striking a foreign object or if mower vibrates abnormally, stop engine and remove wire from spark plug. Check mower for damage and make all repairs before using mower again.

16. Shut off engine and wait for all moving parts to stop before adjusting the height-of-cut.

17. Stop the blade when crossing a gravel driveway, road or sidewalk.

18. Stop engine before leaving the operator's position—behind the handle. Disconnect wire from spark plug if mower will be unattended.

19. Do not touch engine while it is running or shortly after it is stopped because engine will be hot enough to cause a burn.

MAINTENANCE

20. Perform only those maintenance instructions described in this manual. If major repairs are ever needed or if assistance is desired, contact your local Authorized TORO Service Dealer.

21. Before mower is cleaned, inspected, serviced, or adjusted, stop engine and disconnect wire from spark plug. Keep wire away from plug to prevent accidental starting.

SAFETY INSTRUCTIONS

22. To ensure the mower is in safe operating condition, frequently check and keep all nuts, bolts, and screws tight. Ensure blade nuts are tightened to 50 ft-lb (68 N·m).

23. To reduce fire hazard, keep engine free of excessive grease, grass, leaves, and accumulation of dirt.

24. Check grass catcher bag frequently for wear or deterioration. Replace with a new bag for your protection.

25. Allow engine to cool before storing mower in any enclosure. Do not store mower near any open

flame or where gasoline fumes may be ignited by a spark.

26. Do not overspeed the engine by changing governor settings.

27. At the time of manufacture, the mower conformed to the safety standards in effect for rotary mowers. To assure optimum performance and continued safety certification of the mower, use genuine TORO replacement parts and accessories. Replacement parts and accessories made by other manufacturers may result in non-conformance with the safety standards, and that could be dangerous.

SAFETY SYMBOL GLOSSARY

Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.



Safety alert



Choke on



Slow



Fast



Engine speed
(Throttle)



Keep hands away
from rotating blade



Read and understand
operator's manual



50:1 ratio unleaded gasoline
to 2-cycle oil

TABLE OF CONTENTS

	Page		Page
Set-Up Instructions	3	Inspecting/Removing/Sharpening Blade	8
Before Operating	4	Adjusting Blade Brake	9
Operating Instructions	5	Servicing Wheels	9
Maintenance	6	Cleaning Mower Housing	9
Servicing Air Cleaner	6	Preparing Mower For Storage	9
Replacing Spark Plug	6	Maintenance Interval Chart	10
Draining Gasoline	7	Optional Equipment	10
Cleaning Cooling System	7	Toro Service Support	10
Cleaning Muffler And Exhaust Port	7	Product Identification	10
Adjusting Throttle	7		

SET-UP INSTRUCTIONS

INSTALL HANDLES

1. LOWER HANDLE (Fig. 1)—Mount lower handle against inside of deck with 5/16 - 18 x 2" lg. capscrews, spacers, and locknuts. Spacer fits between handle and mower housing.
2. Align center hole in handle latch with hole in handle and secure in place with 5/16 - 18 x 1-1/2" lg. capscrews and locknuts.

Note: Handle can be set in any of three positions, depending on operator height. Simply move capscrew into different hole in handle latch.

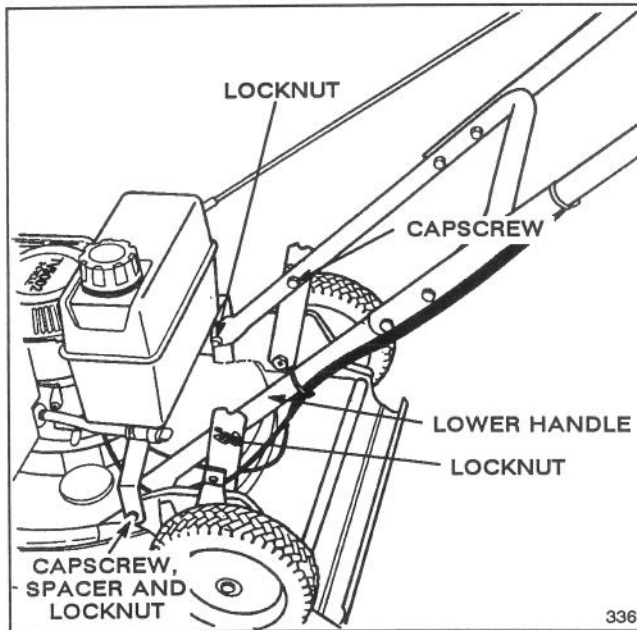


Figure 1

3. UPPER HANDLE (Fig. 2)—Secure upper and lower handles in place with handle bolts and nuts. Secure control cables in position with cable tie.

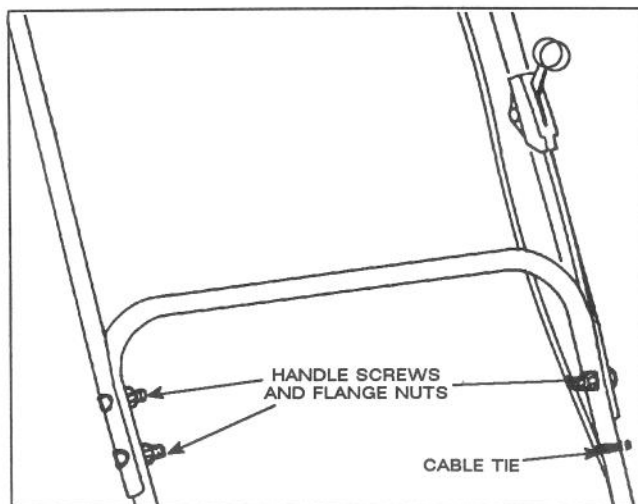


Figure 2

INSTALL GAS TANK

1. Hook the plastic clips on the rear of the gas tank onto the gas tank bracket (Fig. 3).
2. Secure gas tank to tank base with (2) self-tapping screws (Fig. 3). Do not overtighten screws.

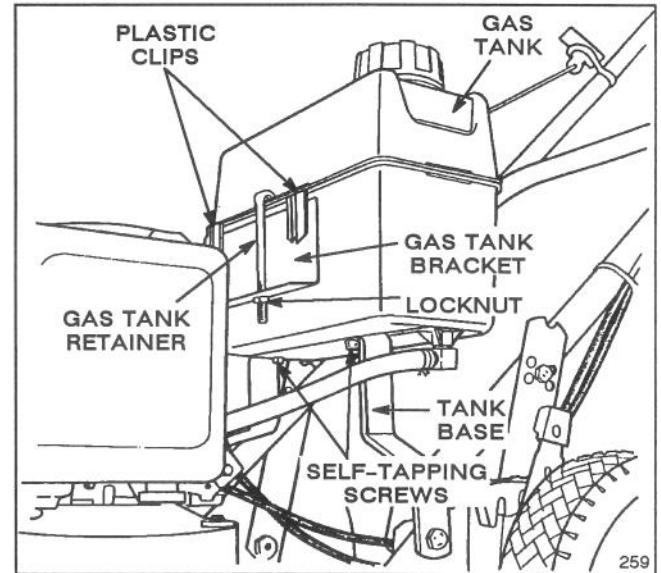


Figure 3

3. 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. 3). Do not overtighten.
4. Slide end of fuel line onto fuel shut-off valve fitting. Secure in place with fuel line clamp (Fig. 4).

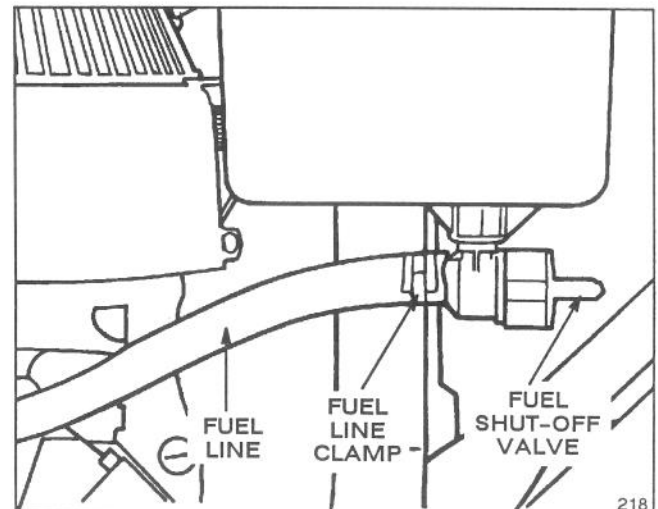


Figure 4

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 1/4" to 1/2" (6 to 13 mm) 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 (Fig. 5)

1. **APPROVED OIL**—For simplicity and best engine performance, mix the contents of one bottle of Toro 50:1 Two-Cycle Oil with 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 two gallons of gasoline and 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.

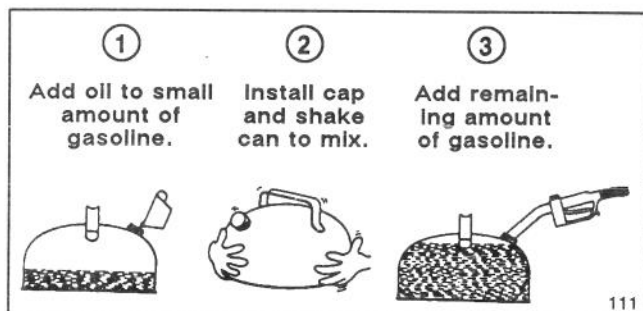


Figure 5

IMPORTANT: YOU CAN ALSO USE TORO "EASY-MIX" TWO-CYCLE OIL (3.2 OUNCE BOTTLE MIXED ONE PER GALLON OF GASOLINE) IN THIS TORO TWO-CYCLE ENGINE.

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.

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.

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

IMPORTANT: NEVER USE METHANOL, GASOLINE CONTAINING METHANOL, GASOLINE 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.

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.

3. Turn fuel shut-off valve to ON position (Fig. 6).

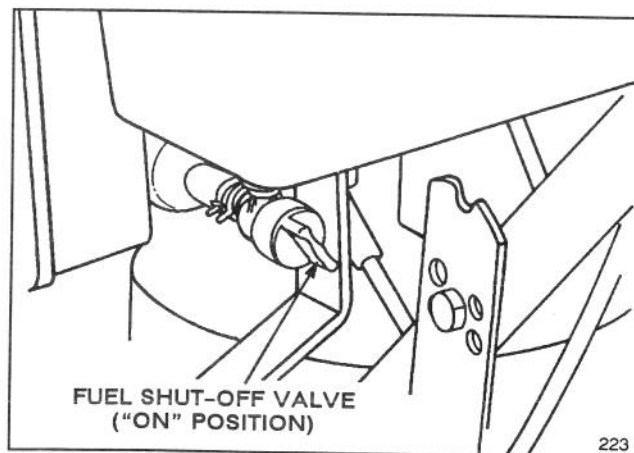


Figure 6

OPERATING INSTRUCTIONS

OPERATING TIPS

1. **BEFORE OPERATING**—Assure engine brake and control bar function properly. When control bar is released, blade is designed to stop.
2. **CUTTING AND BAGGING**—To improve quality of cut, discharge clippings toward previously cut area. Best results are achieved when engine is running at maximum speed and only about 1/3 of the grass blade is cut. If long grass must be cut, use highest height-of-cut setting for first mowing. Then recut the grass at a more normal setting. If too long of grass is cut, mower may plug and cause engine to stall.



CAUTION

Except when side discharge attachment is used, never open chute door on mower when engine is running because grass clippings and other debris discharges with enough force to cause injury.

The grass bag material will catch and contain the majority of foreign objects such as small stones and other similar debris. The bag material, however, is subject to normal wear and deterioration. So check the bag frequently, and if it is defective, install a new genuine TORO replacement bag that has this or similar warning.

3. **SHARP BLADE**—Begin each cutting season with a sharp blade. Periodically file down nicks.

STARTING AND STOPPING

1. **CONTROLS** (Fig. 7)—Throttle/choke, blade control bar, and fingertip starter are on upper handle.

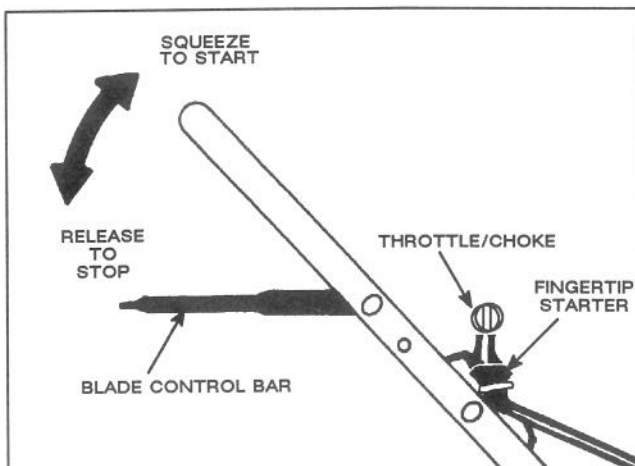


Figure 7

2. **STARTING**—Push spark plug wire onto spark plug (Fig. 10). Move throttle control (Fig. 7) to CHOKE. Cover hole in center of primer with thumb and push once (Fig. 10). Hold control bar against handle. Pull fingertip starter (Fig. 7) out until positive engagement results; then pull vigorously to start the engine. Regulate throttle as desired when engine starts.

CAUTION: Be careful not to over-prime as engine could become flooded with gasoline.

NOTE: CHOKE and PRIMER may not be required when warm engine is being started.

3. **STOPPING** (Fig. 7)—Release control bar to stop blade. Move throttle control to STOP and wait for engine to stop. Pull wire off spark plug if mower will be unattended or not used.

ADJUSTING HEIGHT-OF-CUT

Five notches cast into the housing represent each graduated increment (Fig. 8).

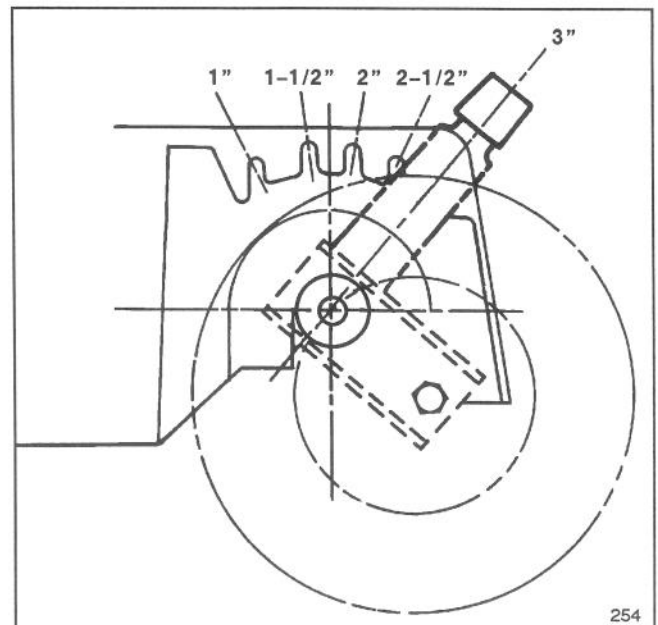


Figure 8

1. Stop the engine and pull the wire off the spark plug (Fig. 10).
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. 9) and move it to the desired setting. Assure pin on adjusting lever engages notch in housing. Adjust all wheels to the same setting.

OPERATING INSTRUCTIONS

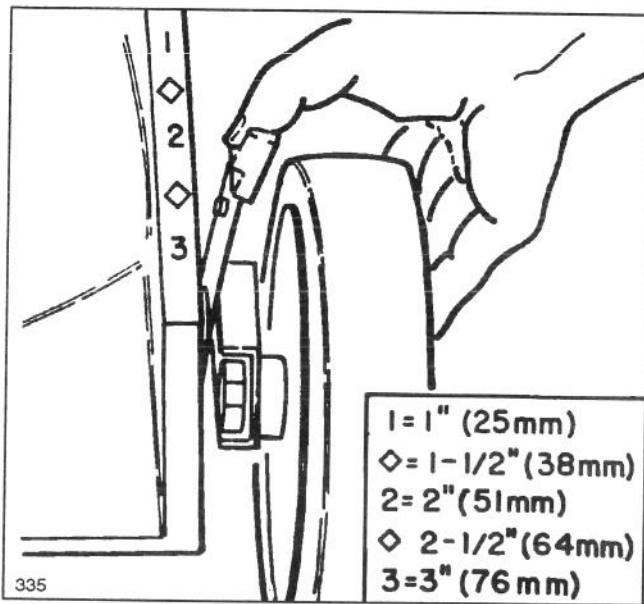


Figure 9

MAINTENANCE



CAUTION

Pull wire off spark plug before performing adjustments or maintenance.

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. 10).
2. Lift tabs at top of air cleaner cover and pivot cover down. Clean cover thoroughly (Fig. 10).
3. If outside of foam element is dirty, remove it from air cleaner body (Fig. 10). 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 5 teaspoons (25 ml) of SAE 30 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.

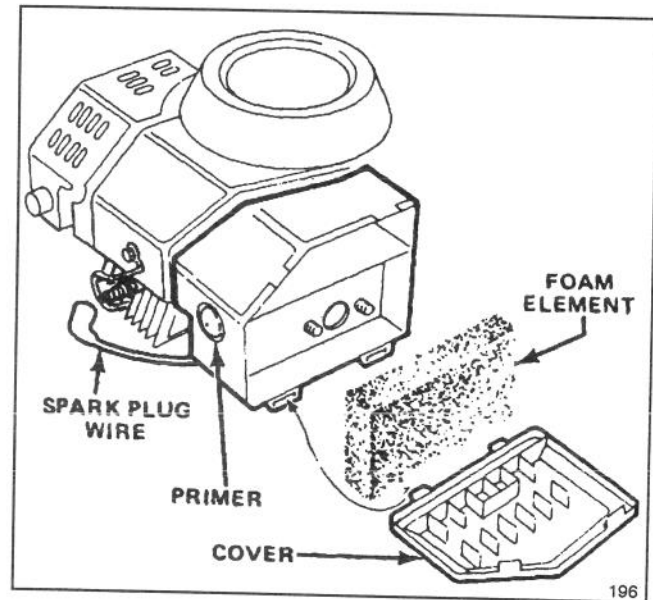


Figure 10

REPLACING SPARK PLUG

Use an NGK BPMR4A spark plug or equivalent. Correct air gap is 0.032" (0.81 mm). Remove plug after every 25 operating hours and check its condition.

1. Stop engine and pull wire off spark plug (Fig. 10).
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.

MAINTENANCE

3. Set air gap at 0.032" (0.81 mm) (Fig. 11). Install correctly gapped spark plug and gasket seal. Tighten plug firmly to 10 ft-lb (13.6 N-m).

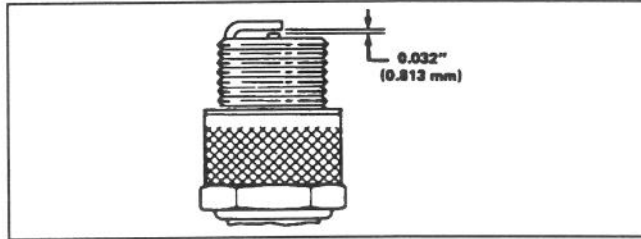


Figure 11

DRAINING GASOLINE

1. Stop engine and pull wire off spark plug (Fig. 10).
2. Turn fuel shut-off valve to OFF position (Fig. 12).
3. 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.

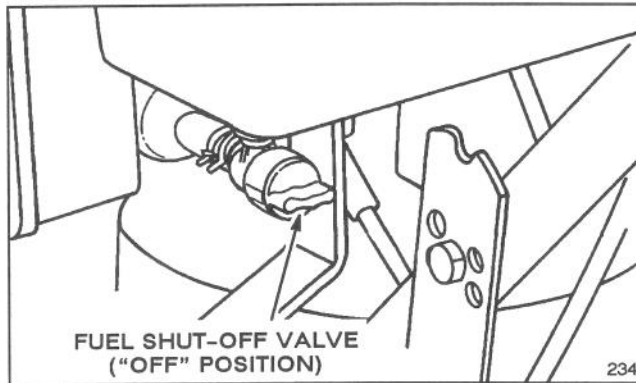


Figure 12

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 assure proper cooling and best engine performance.

CLEANING MUFFLER AND EXHAUST PORT

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



CAUTION

Clean muffler and exhaust port only after engine and muffler are cool. A hot engine and muffler can cause burns.

1. Use hard wood scraper and remove carbon from end of muffler pipe (Fig. 13).

2. Remove screw, two nuts, and lockwashers (Fig. 13). Slide muffler off mounting pins.
3. Pull wire off spark plug. Slowly pull recoil starter so piston covers exhaust port (Fig. 14).
4. Clean carbon from exhaust port (Fig. 14) with flat, hard wood scraper.

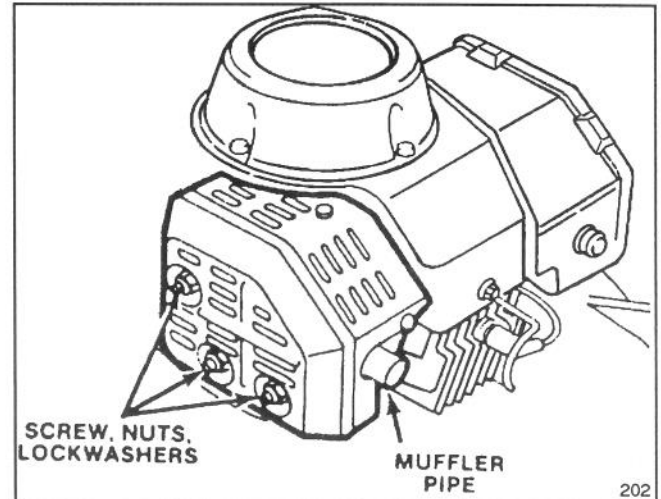


Figure 13

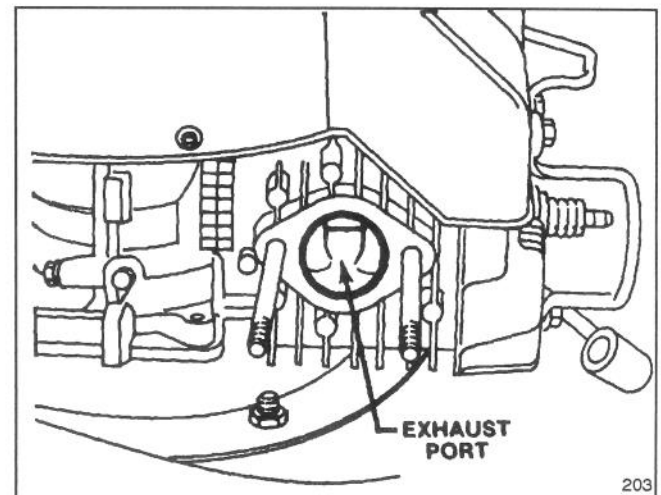


Figure 14

ADJUSTING THROTTLE (Fig. 15)

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

1. Stop engine and pull wire off spark plug (Fig. 10).
2. Move throttle control to FAST.
3. Loosen cable clamp screw until throttle cable slides. 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 screw. Remove pin if used.

MAINTENANCE

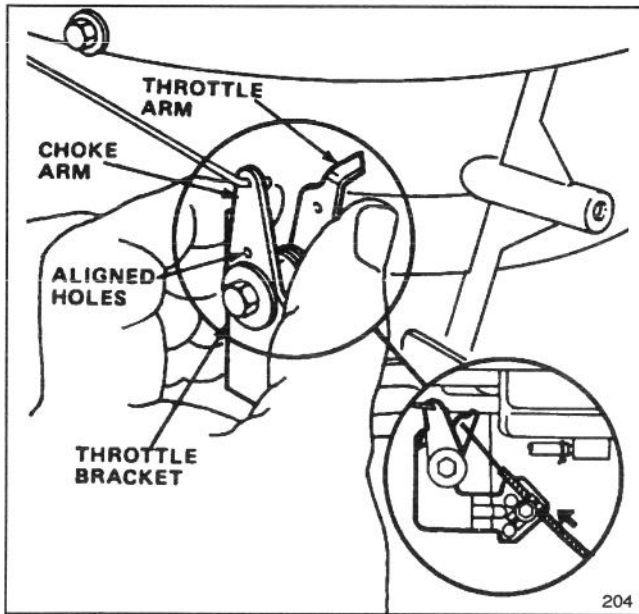


Figure 15

INSPECTING/REMOVING/SHARPENING BLADE

1. Stop engine and pull wire off spark plug (Fig. 10).



WARNING

Do not attempt to inspect, remove or replace blade without first removing the spark plug wire from spark plug and fastening it away from accidental contact with spark plug.

2. Drain gasoline from fuel tank; refer to Draining Gasoline, page 7.
3. Tip mower on its left side (Fig. 16).

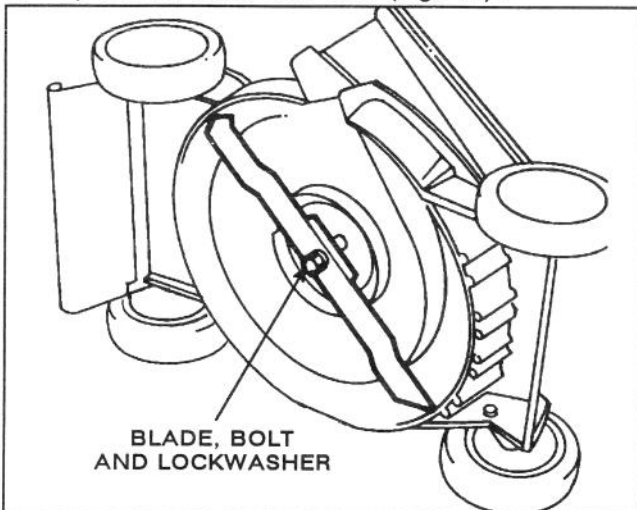


Figure 16

4. INSPECTING BLADE—Carefully examine blade for sharpness and wear, especially where flat and curved parts meet (Fig. 17A). 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. 17B & 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.



WARNING

If blade is allowed to wear, a slot may form near the sail. Eventually a piece of blade may break off resulting in serious injury to yourself or a bystander.

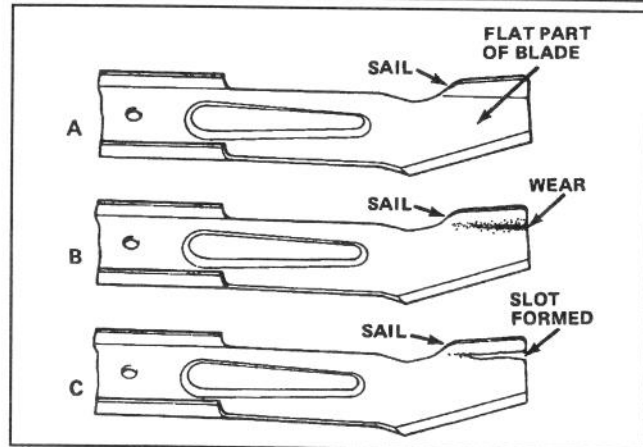


Figure 17

5. REMOVING BLADE—Grasp end of blade using a rag or thickly padded glove. Remove blade bolt, lockwasher, and blade (Fig. 16).

6. SHARPENING BLADE—Using a file, sharpen top side of blade and maintain original cutting angle (Fig. 18). The blade will remain balanced if same amount of material is removed from both cutting edges.

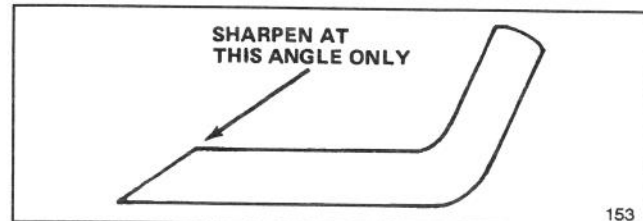


Figure 18

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.

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

MAINTENANCE

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. 10).
2. CHECK ADJUSTMENT (Fig. 19)—Move control bar toward handle until slack in wire is removed. Gap between brake lever and handle must be $1/8''-3/16''$. See step 3 for adjustment.

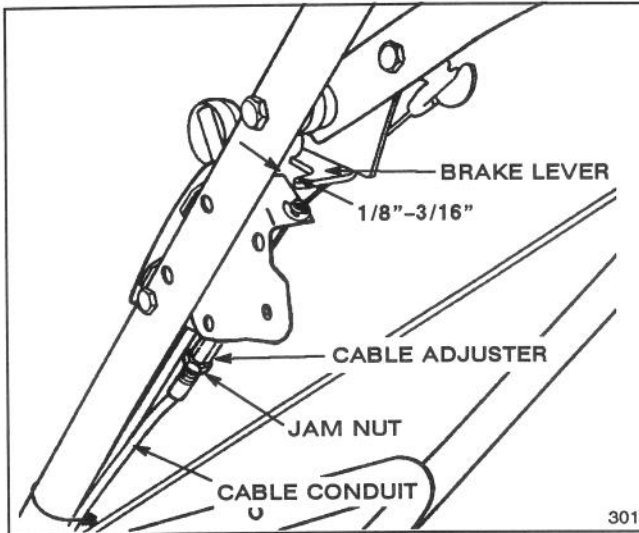


Figure 19

3. ADJUST CABLE CONDUIT—Loosen jam nut on cable adjuster (Fig. 19). Insert $1/8''-3/16''$ object between brake lever and handle. Adjust cable conduit until slack is removed. Then tighten jam nut.

SERVICING WHEELS

Removal

1. Stop engine and remove capscrew, wheel spacer, and locknut mounting wheel to pivot arm (Fig. 20).

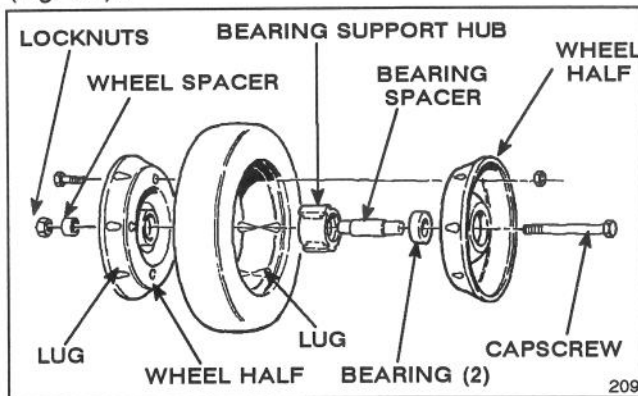


Figure 20

2. Separate wheel halves from tire by removing (4) flange capscrews and locknuts (Fig. 20).

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. 20).
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) $1/4''-20 \times 1.50''$ lg. fully threaded screws or bolts and non-locking nuts, loosely secure wheel halves together. Mount screws or bolts in opposing holes.
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) flange capscrews and locknuts, previously removed, in remaining holes in wheel halves and tighten. Remove (2) long screws or bolts and replace with (2) flange capscrews and locknuts.
7. Reinstall wheel to pivot arm with capscrew, spacer, and locknut. Make sure spacer is positioned between wheel hub and pivot arm.

CLEANING MOWER HOUSING

To ensure best performance, keep underside of mower housing and inside of discharge area clean.

1. Stop engine. Pull wire off spark plug (Fig. 10).
2. Drain gasoline from fuel tank: refer to Draining Gasoline, page 7.
3. Tip mower on its left side. Avoid rotating blade because starting problems may result.
4. Remove dirt and grass clippings that stick to housing by spraying it with a garden hose. Scrape out remaining debris with hardwood scraper. Avoid burrs and sharp edges.

PREPARING MOWER FOR STORAGE

1. For long term storage, either drain gasoline from fuel tank or use a fuel additive before storing. To drain gasoline, refer to Draining Gasoline, page 7. After fuel is drained, start engine and let it idle until all fuel is consumed and engine stops. Repeat the starting procedure two more times to assure all gas is removed from the engine. If gasoline is not drained, gum-like varnish deposits will form and cause poor engine operation, even starting problems.

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

MAINTENANCE

Under normal conditions, all fuel additives 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 10 ft-lb (13.6 N·m). **DO NOT INSTALL WIRE ON SPARK PLUG.**

3. Clean underside of housing: refer to Cleaning Mower Housing, page 9.

4. Check condition of blade: refer to Inspecting/Removing/Sharpening Blade, page 8.

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, page 6.

8. Touch up all rusted or chipped paint surfaces. Toro Re-Kote paint is available from an Authorized TORO Service Dealer.

9. Store mower in a clean, dry place, out of the reach of children. Cover mower to keep it clean and protected.

MAINTENANCE INTERVAL CHART

	Every 5 Hours	Every 25 Hours	Every 50 Hours	Every 75 Hours
Check Blade	X	X		
Check and Gap Spark Plug		X		
Service Air Cleaner*			X	
Clean Cooling System				X
Clean Muffler & Exhaust Port				X

*Service more frequently when conditions are dusty or sandy.

OPTIONAL EQUIPMENT

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

1. **Side Bag Kit (Part No. 47-6510)**—Side bag kit (Fig. 21) lets you bag lush grass in spring. In the fall, bag leaves while you mow to eliminate the hand-blistering raking job.

2. **Optional Spark Arrestor (Part No. 81-0200)**—If a spark arrestor is required because of local, state, or federal regulations, it may be purchased at your local Authorized TORO Service Dealer. Clean screen after every 75 hours of operation. 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.

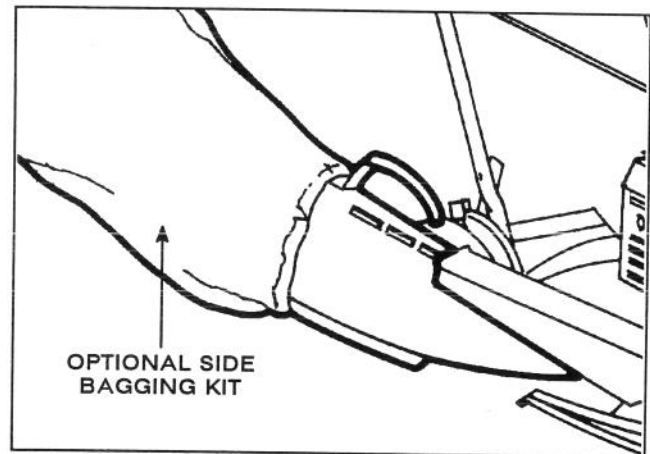


Figure 21

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.

PRODUCT IDENTIFICATION

The 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.