


**TORO**

MODEL NO. 51655 - 1000001 &amp; UP

**OPERATOR'S  
MANUAL****TC3110 GAS TRIMMER****SAFETY INSTRUCTIONS**

To ensure maximum safety, best performance, and to gain knowledge of the product, **it is essential that you or any other operator of the trimmer** read and understand the contents of this manual before the motor is ever started. Pay particular attention to the safety alert symbol  which means CAUTION, WARNING, OR DANGER — “personal safety instruction.” Read and understand the instruction because it has to do with safety. Failure to comply with instruction may result in personal injury.

**BEFORE OPERATING**

1. Operate the trimmer only after reading and understanding the contents of this manual. A replacement manual is available by sending complete model and serial numbers to: The Toro Company, 8111 Lyndale Avenue South, Minneapolis, Minnesota 55420.
2. Never allow children to operate trimmer. It is not a toy. Never allow adults to operate unit without first reading Operator's Manual.
3. Become familiar with the controls and know how to stop the engine quickly.
4. Always wear safety goggles or safety glasses while operating trimmer. The following articles of apparel are strongly recommended and are required by some local safety and insurance regulations:
  - A. Safety glasses/goggles - REQUIRED
  - B. Safety shoes
  - C. Long pants
  - D. A long-sleeved shirt
  - E. Ear plugs

Dress properly—Do not wear loose clothing or jewelry. They can be caught in moving parts.

5. Keep the area of operation clear of all persons, especially children and pets.
6. Never operate trimmer when you are fatigued.
7. Keep all shields, safety devices, and decals in place. If a shield, safety device or decal is damaged, repair or replace it before operating the trimmer.
8. Gasoline is highly flammable. The trimmer is fueled with a mixture of gasoline and oil. Indoor or outdoor heat, sunlight or engine heat may cause flammable gasoline vapors which pressurize trimmer fuel tank. Observe all the following precautions:

- A. Use an approved fuel container for storing the gasoline/oil mixture.
- B. Do not fill tank when engine is hot or running.
- C. Do not smoke while handling gasoline.
- D. Fill fuel tank outdoors and up to about one-half inch (13 mm) from the top of the tank, not into the filler neck.
- E. Wipe up any spilled gasoline before starting the engine.
- F. Before transporting trimmer in a vehicle, drain all gasoline from fuel tank.
- G. Store trimmer in a cool, ventilated place.
- H. Lay trimmer on a flat surface so fuel does not contact the gas cap when not operating.

**WHILE OPERATING**

9. Do not run the engine in a confined area without adequate ventilation. Exhaust fumes are hazardous and could be deadly.
10. Always be sure of your footing. Keep a firm hold of the handles with both hands and walk, never run, during operation. Shut the engine off before proceeding to the next area of operation.
11. The trimmer is intended to be used as a means of trimming grassy and weedy areas only. DO NOT use the trimmer for such things as tree pruning or hedge trimming. Do not use the trimmer for vertical edging. The grass shield is designed only for horizontal trimming.
12. When using a metal blade cutting attachment, the blade can be suddenly and uncontrollably thrust in any direction when blade strikes a solid object while rotating at high speed. Do not put hands or feet near or under rotating parts. Keep all people and animals far away while operating. Operator contact with rotating metal blade or debris thrown will cause severe injury.
13. If the trimmer should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.

# SAFETY INSTRUCTIONS

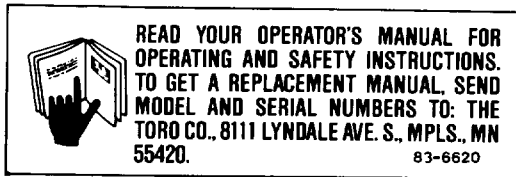
14. Avoid using the trimmer near rocks, gravel, stones or other debris which could be picked up and thrown or personal injury could result.
15. Use trimmer only in daylight or good artificial light.
16. Shut off engine and be certain all moving parts have completely stopped rotating before inverting trimmer.
17. Never use wire or metal reinforced string in place of monofilament cutting line.
18. Wear a long sleeve or other similar arm protection to avoid possible contact with hot engine surfaces.
19. When using a cutter blade on trimmer, a shoulder harness must be worn.

## MAINTENANCE

20. Before servicing or making adjustments to the machine, stop the engine and pull wire off spark plug to prevent accidental starting of the engine.
21. Ensure entire machine is in good condition. Keep all nuts, bolts and screws properly tightened.
22. Replace cracked or damaged parts before operating. If major repairs are ever needed or if assistance is desired, contact an Authorized Toro Service Dealer.
23. To reduce potential fire hazard, keep the engine area free of excessive oil, grass, leaves and accumulations of dirt.
24. If the engine must be running to perform a maintenance adjustment, keep hands, feet, clothing and any part of the body away from any moving parts. Keep everyone away.

# SAFETY DECALS AND INSTRUCTIONS

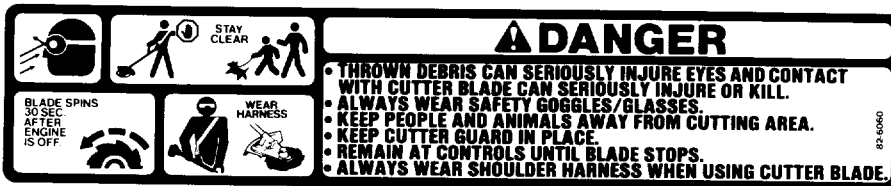
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.



ON DRIVE SHAFT TUBE  
(Part No. 83-6620)



ON ENGINE  
(Part No. 65-2690)



ON DRIVE SHAFT TUBE  
(Part No. 82-6060)

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# ASSEMBLY INSTRUCTIONS

## SECURE SUPPORT HANDLE (Fig. 1)

1. Rotate support handle upright and adjust to a comfortable operating position. Tighten handle knob securely.

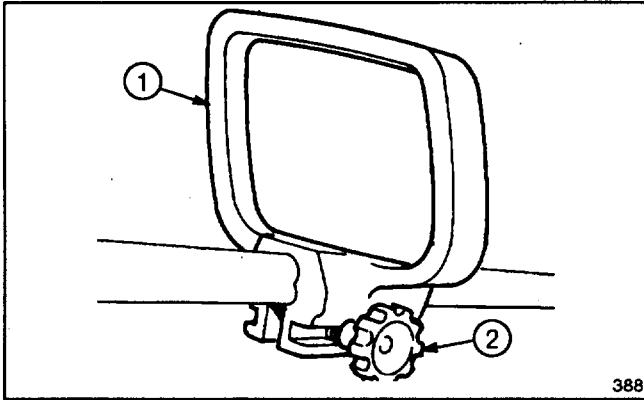


Figure 1

1. Support handle      2. Handle knob

## ATTACH HARNESS (Fig. 2)

1. Stand on left side of unit, hang belt over left shoulder with harness hook assembly located by right hip. The double strap loop of the shoulder harness should lie diagonally across chest with harness hook assembly at right hip.

2. Snap harness hook through ring in hanger ring.

3. Adjust harness to comfortable position for holding trimmer.

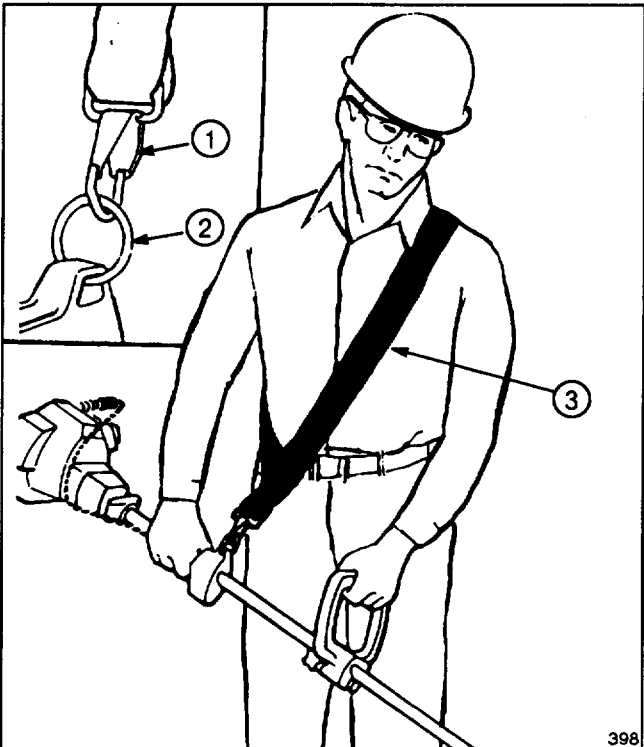


Figure 2

1. Harness hook      2. Ring      3. Double strap loop

## TO RELEASE HARNESS:

1. Unsnap harness hook from hanger ring.

## INSTALLING OPTIONAL CUTTER BLADE (Figs. 3 & 4)



### WARNING

Stop engine and wait for cutting head to stop. Disconnect wire from spark plug before inverting trimmer.

1. Remove cutting head assembly installed on trimmer. Refer to Cleaning Trimmer Head, page 11.

**Note:** Blade mounting plate has a cup shaped recess for nut.

2. Install blade (teeth pointing in clockwise direction when viewed from bottom), mounting plate, and nut onto shaft.

**Note:** Hole in blade fits over raised diameter of gearbox cap.

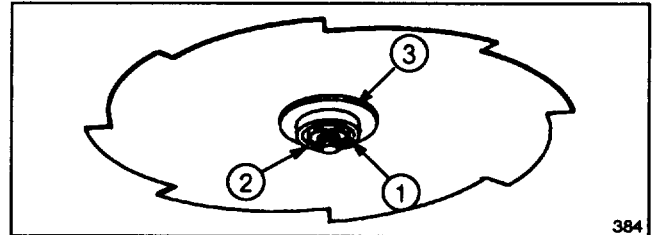


Figure 3

1. Cotter pin      2. Nut      3. Mounting plate

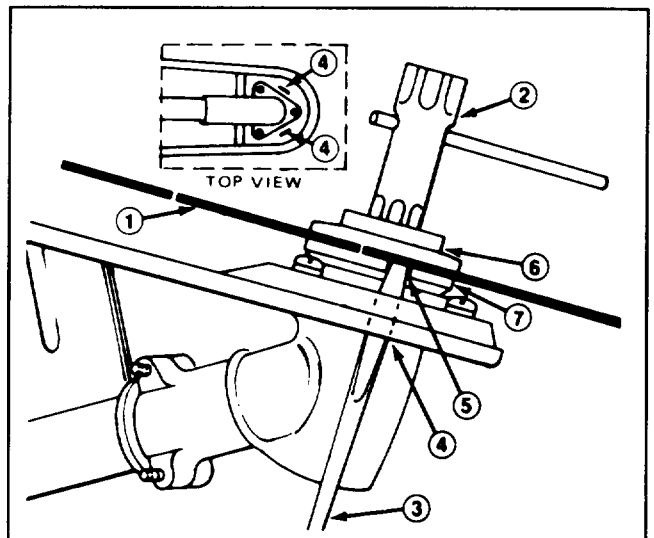


Figure 4

1. Blade      5. Notch in gearbox cap  
2. Wrench      6. Mounting plate  
3. Screwdriver      7. Gearbox cap  
4. Slot in shield

# ASSEMBLY INSTRUCTIONS

3. Rotate gearbox cap until notch in cap is aligned with slot in shield. Insert medium blade screwdriver through slot in shield and into notch in gearbox cap.
4. Keep shaft from rotating by holding screwdriver as shown and tightening nut securely with wrench (left hand thread) (Fig. 4).
5. Insert cotter pin through hole in shaft and wrap ends around shaft (Fig. 3).



## WARNING

To prevent blade from loosening and causing possible personal injury, insert a new cotter pin through hole in shaft and wrap ends around shaft (Fig. 3).



## WARNING

Inspect blade before each use and discard if cracked, nicked, bent or damaged in any way.

**Note:** If a blade needs sharpening, contact a reputable saw sharpening service.

## 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. Do not fill tank full. 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 MIXTURE**—For simplicity and best engine performance, mix the contents of one 3.2 ounce bottle of Toro "EASY MIX" Two-Cycle Oil with one gallon 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 one gallon of gasoline and 3.2 ounces of another high grade two-cycle oil that has the NMMA or BIA-TCW certification printed on the label.

**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, 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. ADDITIVES 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.

# BEFORE OPERATING

## 40:1 GAS/OIL Mixing Chart

U.S. GALLON	
Gasoline	Oil
1 gallon	3.2 oz.
1.5 gallons	4.8 oz.
2 gallons	6.4 oz.

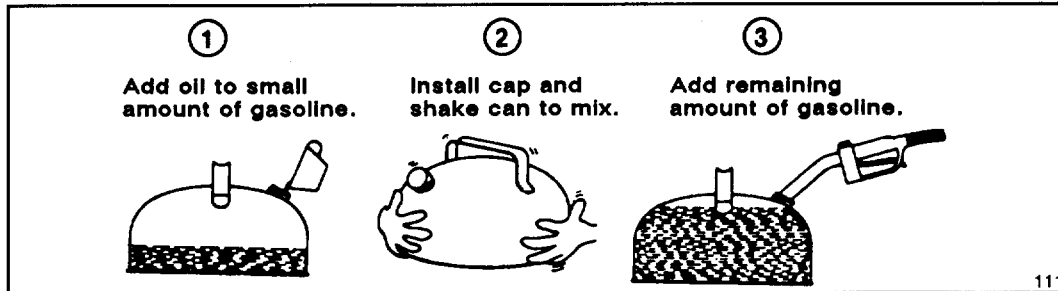


Figure 5

# OPERATING INSTRUCTIONS

## WARNING

The cutter head continues to rotate for a few seconds after the engine is shut off. Do not place any part of the body in the cutter head area until you are sure the cutter head has stopped.

## STARTING AND STOPPING (Figs. 6 & 7)

1. Lay trimmer on a flat surface with engine in upright position.
2. Move ignition switch to "ON" position.
3. Move choke lever to "CLOSED" position (to LEFT).
4. Push the carburetor primer bulb until fuel drains from the carburetor through fuel tube to the fuel tank.
5. Leave throttle trigger in idle position (do not squeeze).
6. Pull recoil starter handle out slowly until starter ratchets are engaged, then pull handle with short, sharp strokes until engine starts. Move choke lever to OPEN position (to RIGHT). If engine fails to start, repeat all steps above.

**Note:** Always pull starter rope straight up. Pulling rope at an angle will force it against the eyelet and cause it to fray and wear more quickly. Hold the starter handle when rope retracts. Never allow it to snap back from extended position. The rope can fray or snag, and the starter can be damaged.

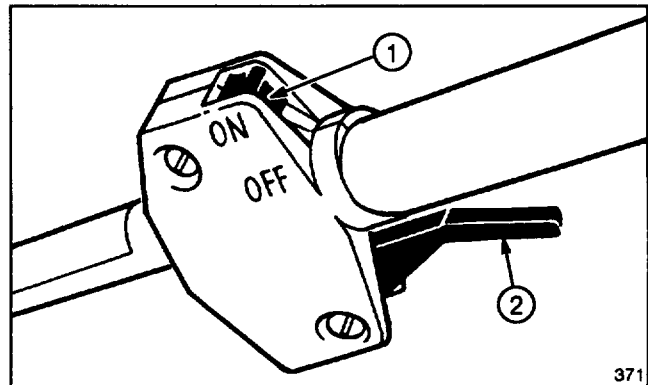


Figure 6

1. Ignition switch
2. Throttle trigger

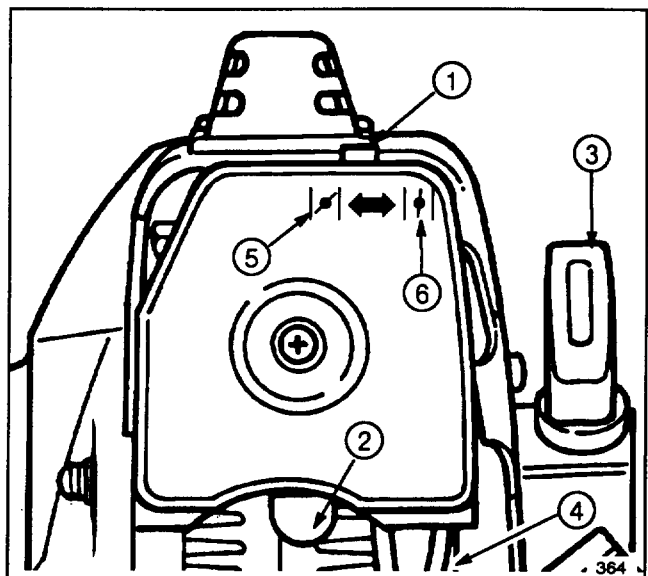


Figure 7

1. Choke lever
2. Primer bulb
3. Recoil starter
4. Fuel tube
5. CLOSED position
6. OPEN position

# OPERATING INSTRUCTIONS

## Warm Engine

1. Move ignition switch to "ON" position.
2. Move choke lever to OPEN position (to RIGHT).
3. Leave throttle trigger in idle position.
4. Pull recoil starter handle out slowly until starter ratchets are engaged, then pull handle with short, sharp strokes until engine starts. If engine fails to start, repeat all steps above.

**Note:** Use of the primer bulb is not required to start a warm engine. However, if a combination of a hot engine and warm outside temperatures induces a vapor lock condition, use the primer bulb. This will introduce cool fuel into the carburetor and break the vapor lock.

## To Stop Engine:

1. Release throttle trigger and move ignition switch to "OFF" position.

## CENTRIFUGAL CLUTCH

This machine is equipped with a centrifugal clutch which is designed to engage when engine speed reaches approximately 3600 – 4200 RPM. This is the point at which the cutter head begins to rotate. The clutch will slip to prevent possible engine damage should the cutter head be prevented from rotating. Should this situation occur, STOP ENGINE, remove obstruction, and resume operation.

## ENGINE OPERATION

1. Allow the engine to run at idle speed a few minutes to warm up before using.

**IMPORTANT:** The cutting head should not rotate at engine idle speed. If cutting head rotates at idle, decrease idle speed by adjusting idle speed screw. Refer to Adjusting Carburetor, page 9.

**Note:** DO NOT have engine under load during this warm up period.

2. By squeezing throttle lever, increase engine RPM to speed required for operation before placing trimmer under load.

**IMPORTANT:** Do not use trimmer at very low engine speeds (below 6000 RPM). Cutting efficiency will be poor and clutch damage could result.

3. ALWAYS reduce engine speed to idle when not trimming.
4. NEVER operate the engine at high RPM without line extended.

## OPERATING TIPS


1. The trimmer will cut grass, weeds, ivy, and other similar grasses, and can be used to cut areas around shrubs, foundation walls, along fences, sidewalks, and patios.

Be sure to inspect area to be trimmed for any wire, cord, or string-like matter which could become entangled in the rotating line.

## WARNING

Always wear safety goggles or other suitable eye protection and long pants and shoes while operating trimmer. Wear a long sleeve shirt or other similar arm protection to avoid possible contact with hot muffler surface. Ear protection must be worn when operating trimmer for prolonged periods of time (over 2-1/2 hours).

2. Do not force the unit. Remember, it is only the tip of the cutting line that does the job. Forcing the line against an object like a foundation wall or fence could cause the line to break.

3.  Get comfortable. Adjust the harness so it fits snugly and adjust the handle according to your height and the job you are doing. When trimming you should be standing in a natural position without having to bend over or stand on your toes.

## CAUTION

Always be sure of your footing when operating trimmer.

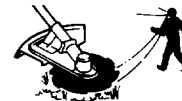
4. Slowly move trimmer in a side-to-side motion into the area being cut, while at the same time, holding the unit at the desired height of cut. Always tip the leading edge of the cutter slightly downward to gain maximum efficiency.

## DANGER

When using a metal blade cutting attachment, the blade can be suddenly and uncontrollably thrust in any direction when blade strikes a solid object while rotating at high speed. Contact of rotating blade with nearby persons or animals will cause severe injury or death.



Debris thrown by blade or nylon line cutting attachment can cause severe injury to nearby persons or animals.



KEEP ALL PEOPLE AND ANIMALS FAR AWAY FROM TRIMMER/BRUSHCUTTER WHILE OPERATING.



# OPERATING INSTRUCTIONS



## DANGER

DO NOT USE THE 8-TOOTH METAL BLADE CUTTING ATTACHMENT (TORO PART NO. 51-1240) TO CUT WOODY PLANTS MORE THAN 1/2" THICK. THE BLADE MAY FRACTURE, RESULTING IN PERSONAL INJURY.

DO NOT USE ANY METAL BLADE IF CRACKED, NICKED, DISTORTED OR DAMAGED IN ANY WAY.

5. The life of your cutting line is dependent upon following the above trimming techniques, as well as what is being cut, and where the cutting is done.

**EXAMPLE:** Line will wear faster when run against a foundation wall as compared to trimming around a tree. Some line breakage will occur from moving unit too fast, from entanglement with foreign matter, from normal line fatigue, and from attempting to cut thick, stalky weeds in excess of unit's capability.



## WARNING

DEBRIS THROWN BY CUTTING ATTACHMENT CAN CAUSE SEVERE INJURY TO OPERATOR'S EYES. ALWAYS WEAR SAFETY GOGGLES OR SAFETY GLASSES WHILE OPERATING TRIMMER/BRUSHCUTTER.



Safety goggles/glasses must comply with the latest ANSI Z 87.1 Standard to assure adequate eye protection. If you do not have appropriate safety goggles/glasses, you are expected to procure them before operating this product. Safety goggles/glasses can be purchased from a trimmer/brushcutter dealer, hardware stores and industrial supply companies.

## LENGTHENING CUTTING LINE (Fig. 8)

Your Toro trimmer is equipped with an automatic line feeding device so the line can be lengthened WITHOUT STOPPING THE ENGINE.

**Note:** Engine speed and noise will increase noticeably when lines wears down.

1. To lengthen lines, firmly tap spool on the ground with the engine running at half cutting RPM

(Fig. 8). The lines will be fed from the spool and cut off to the proper length by the cutting knife attached to the shield.

Just tap the trimmer on the ground; do not hold it on the ground.

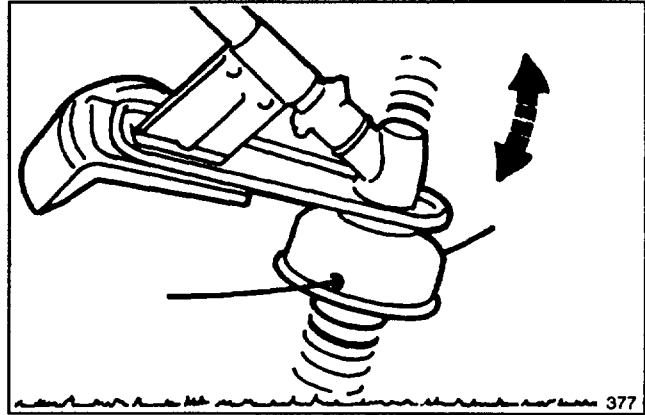


Figure 8

**Note:** The spool cap may wear during normal use of the line advance feature and may require occasional replacement.

Spools prewound with 38 feet of cutting line are available through your local Toro Dealer.



## CAUTION

Never continue to use a spool cap which has been worn through, cracked or has chips out of it.



## WARNING

OPERATOR CONTACT WITH ROTATING METAL BLADE WILL CAUSE SEVERE INJURY OR DEATH.

Metal blade spins for up to 30 seconds after shutting engine off. REMAIN AT CONTROLS UNTIL BLADE COMPLETELY STOPS.



DO NOT OPERATE TRIMMER/BRUSHCUTTER WITHOUT CUTTING HEAD GUARD IN PLACE.

ALWAYS USE SHOULDER HARNESS WHEN USING METAL BLADE CUTTING ATTACHMENT.



# MAINTENANCE

## REPLACING CUTTING LINE (Figs. 9-12)

1. To replace cutting line when your factory furnished supply runs out, you may purchase .080 dia. replacement line to rewind the empty spool or prewound replacement spools from your Toro retailer.



### WARNING

Shut off engine and be certain cutter head has completely stopped rotating before inverting trimmer.

2. To remove empty spool, insert medium blade screwdriver in one of two window slots on spool hub and twist screwdriver 1/4 turn (Fig. 9). Spool will snap off.

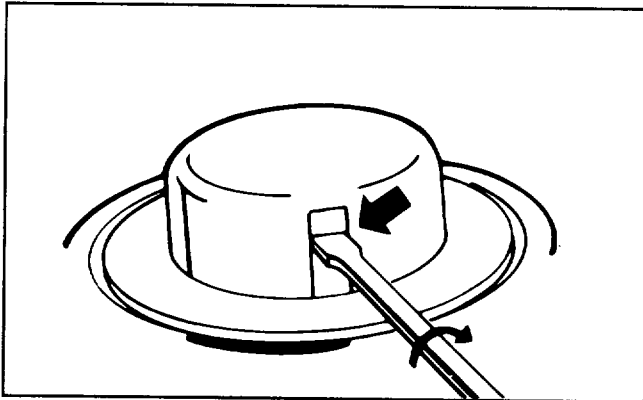


Figure 9

**Note:** Use as wide a screwdriver as will fit in slot so as not to mar cap when twisting.

3. To rewind empty spool, use the following steps:

A. Hook one end of each line into the keyhole slot on spool. Wind both lines together around spool in level rows between spool flanges in direction shown in Figure 10.

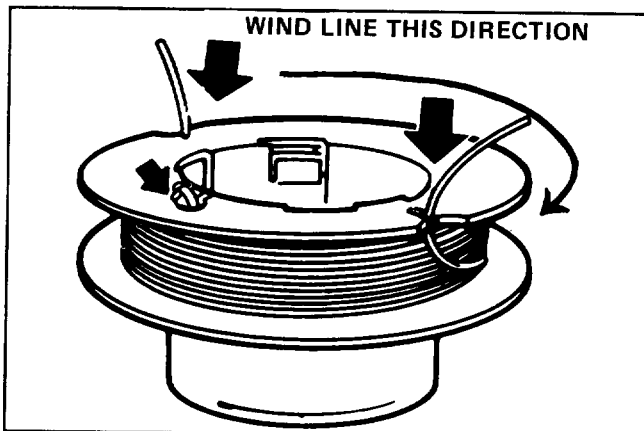


Figure 10

**Note:** Avoid crossover or crisscrossing of line to insure proper line advancing. Winding line in wrong direction will cause spool, cover and driver (Fig. 22) to detach from cutter head.

- B. Do not wind more than 38 feet of line onto spool (two strands of 19-feet ea.) or allow wound line to extend outside of spool. Only use line .080" dia.
- C. Keep line tight on spool by securing in spool notches, leaving about 4 inches of line extending beyond notch (Fig. 10).

**Note:** Before reassembly, be sure to thoroughly clean drum and power shaft area and visually inspect for any damaged or worn parts.

- D. The spool and core are keyed and **must** be properly aligned when putting spool back on. Push downward on spool core and rotate it until "key" feature on the core is aligned with the eyelets on the drum (Fig. 11). With lines still retained in spool notches, thread ends of lines through eyelets (Fig. 12). Place spool onto keyed spool core; the spool notches must be aligned with eyelets and spool core key (Fig. 12). Push spool inward until you hear it click. Pull lines outward while pushing spool inward to free lines from notches. Unwind no more than six inches of line from spool. To extend lines, pull lines out while pushing spool inward. To retract lines, rotate spool clockwise while pushing spool inward.

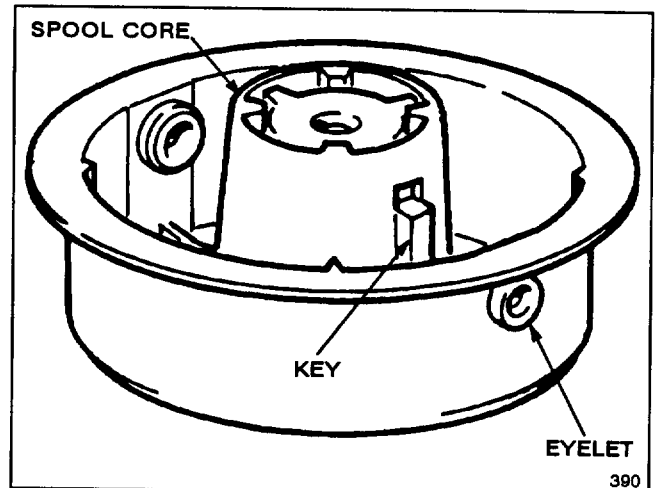


Figure 11



### WARNING

Do not use any type of wire or other string-like substance. Use only Toro approved replacement monofilament line of .080 inch diameter. Use of improper monofilament line could result in personal injury.

4. If lines should break at the eyelets, remove the spool completely, refeed the cutting lines through the eyelets and reassemble spool to trimmer following instructions in step D.

# MAINTENANCE

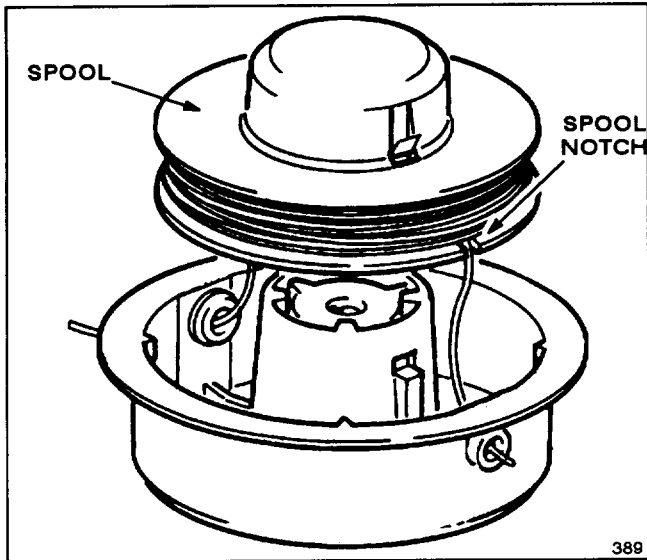


Figure 12

## ADJUSTING CARBURETOR (Fig. 13)

The carburetor air/fuel mixture ratio has been set at the factory. There are no external air/fuel mixture adjustments on the carburetor. If power and performance are marginal when operating trimmer in higher altitudes, bring trimmer to your Authorized Toro Service Dealer for air/fuel mixture adjustment.



### CAUTION

Engine must be running to adjust idle speed. To guard against possible personal injury, keep hands, feet, and face away from concealed, moving or rotating parts.

1. **ADJUSTING IDLE SPEED**—Start the engine and let it warm up for approximately 3–5 minutes. Do not adjust carburetor when engine is cold. Be sure to perform carburetor adjustment while at a temperature that will be the average outdoor temperature at which the trimmer will be used. Allow the engine to idle. If necessary, readjust the idle speed to keep the engine from stalling (2600–3200 RPM). Turning screw clockwise increases idle speed, counterclockwise decreases idle speed.

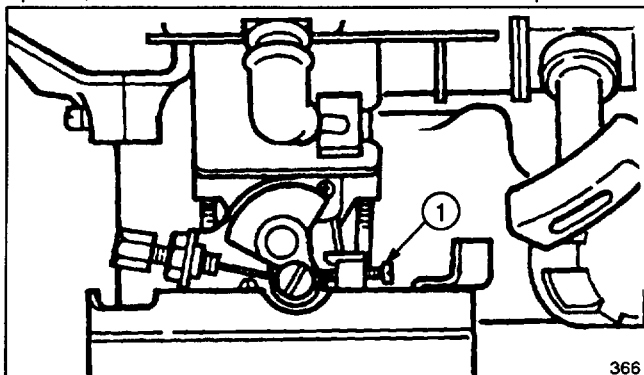


Figure 13

1. Idle speed screw

**Note:** When making adjustments turn adjustment screw 1/8 turn at a time and wait for engine to respond to change.

**IMPORTANT:** Cutter head should not rotate at idle speed.

## SERVICING MUFFLER (Figs. 14 & 15)

If engine speed or power decreases drastically, inspect and clean muffler and exhaust port of carbon deposits to relieve back pressure.

1. Remove two (2) screws securing muffler cover to trimmer (Fig. 14).

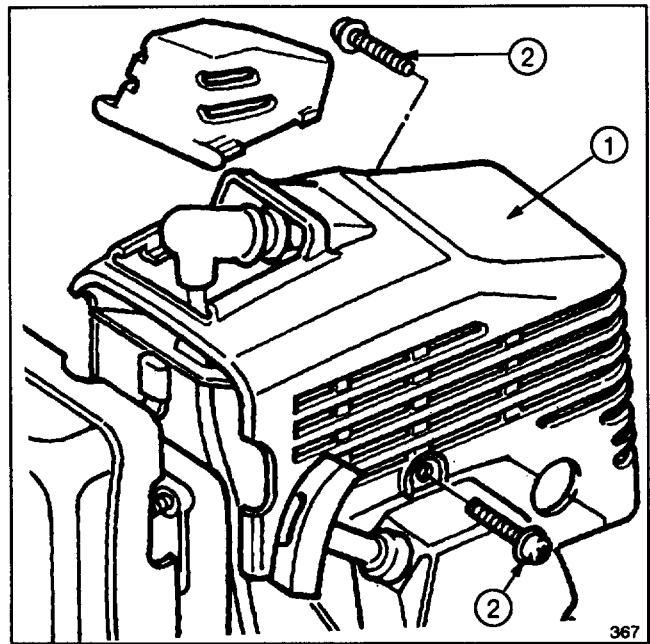


Figure 14

1. Engine cover

2. Screws (2)

2. Remove two (2) nuts and two (2) washers securing muffler to engine (Fig. 15). Remove muffler.

3. Clean any carbon build-up from muffler port (Fig. 15).

4. Pull recoil starter slowly to rotate the engine crankshaft until the piston totally covers the exhaust port (Fig. 15). Clean the exhaust port area by using a clean, flat piece of hard wood. Remove all loose particles.

**IMPORTANT:** Use extreme care when cleaning exhaust port. Stay clear of the piston so it will not be damaged. Piston damage can cause early engine failure.

# MAINTENANCE

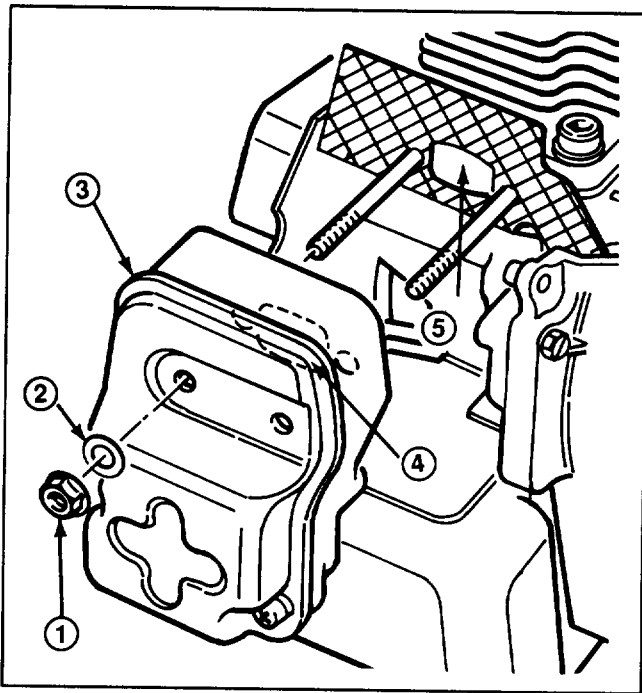


Figure 15

- |               |                 |
|---------------|-----------------|
| 1. Nut (2)    | 4. Muffler port |
| 2. Washer (2) | 5. Exhaust port |
| 3. Muffler    |                 |

- Reinstall muffler to engine. Tighten all fasteners securely.
- Reinstall engine cover and tighten all fasteners securely.

## REPLACING SPARK PLUG

Use a Champion CJ8 or RCJ8 spark plug or equivalent. Correct air gap is .024 - .028" (0.6 - 0.7 mm). Remove plug after every 25 operating hours and check its condition.

- Stop engine. Remove spark plug cover by squeezing sides and slide off engine cover (Fig. 16). Pull wire off spark plug.

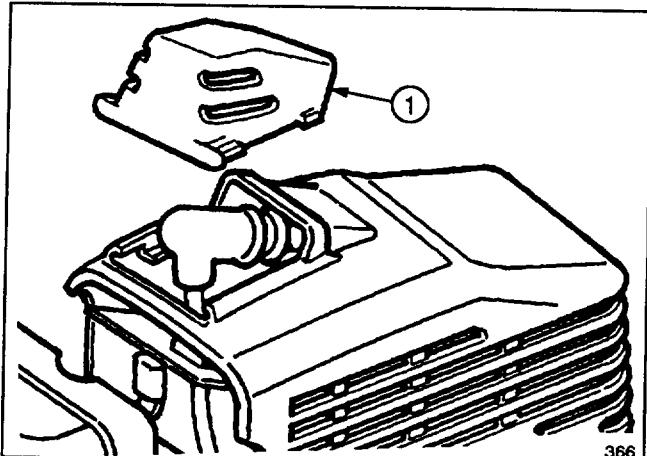


Figure 16

- Spark plug cover

- 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.

- Set air gap at .024 - .028" (0.6 - 0.7 mm) (Fig. 17). Install correctly gapped spark plug and gasket seal. Tighten plug firmly to 9 ft-lb (1.2 Kg-m).

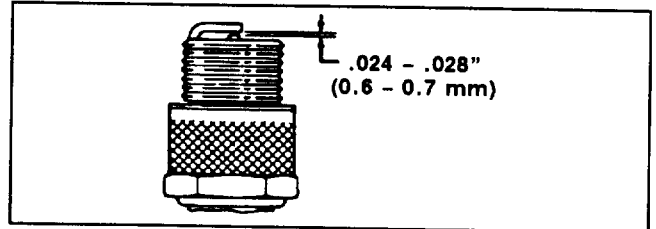


Figure 17

## COOLING SYSTEM SERVICE

To avoid overheating and possible engine damage, visually inspect the cooling air inlet for debris obstructing the air passages, muffler, and also the cooling fins around the cylinder after each use. Remove any contamination by using a flat piece of wood shaped so it will pass between the fins.

## SERVICING AIR CLEANER (Fig. 18)

After every 25 hours of operation, inspect and clean air cleaner.

- Remove one (1) screw securing air cleaner cover.

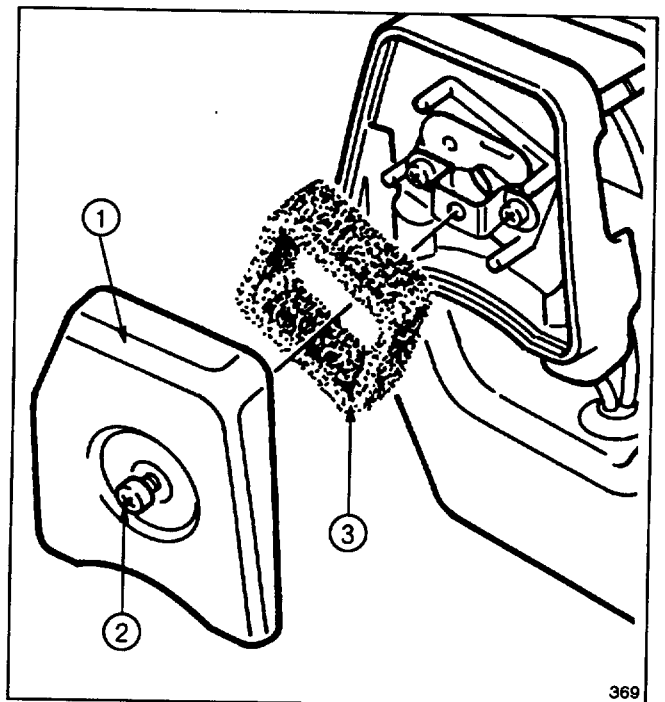


Figure 18

- Air cleaner cover
- Screw
- Foam filter

# MAINTENANCE

- Carefully remove foam filter.
- Wash foam filter in a soap and water solution. Rinse thoroughly with clear water. Dry filter thoroughly in a clean rag. If filter shows any sign of damage, replace it.
- Saturate the foam filter with one teaspoon (5 ml) of SAE 30 oil; then squeeze it to distribute oil evenly and to remove excess oil. A damp element is desirable.
- Reinstall air cleaner components as shown in Figure 18.

## REPLACING FUEL FILTER (Fig. 19)

After every 25 hours of operation, remove and replace fuel filter.

- Drain gasoline from fuel tank. Start engine and let it run at idle speed until it stops and all fuel is expended.

- Remove fuel tank cap. Invert trimmer and shake until end of suction hose is accessible or passes through fuel tank opening.

Alternate Method: Insert a clean wire with a hooked end into tank, hook suction hose above weight, and carefully pull hose out fuel tank opening.

- Replace fuel filter and reinstall suction hose into tank.

- Reinstall fuel tank cap.

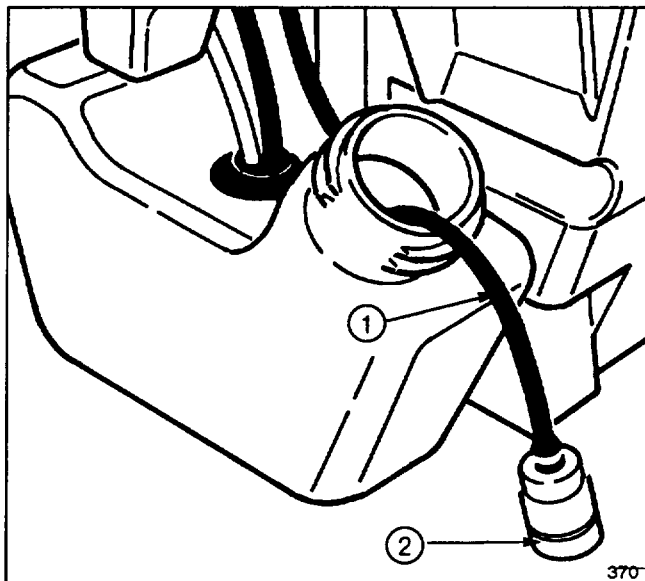


Figure 19

- Suction hose
- Fuel filter

## ADJUSTING THROTTLE CONTROL (Fig. 20)

- Squeeze throttle trigger and note travel of throttle shaft plate.
- When throttle trigger is in full throttle position (squeezed against rubber handgrip), throttle plate should make contact with stop.
- To adjust, loosen jam nut on fitting and rotate fitting. Tighten jam nut and recheck throttle operation.

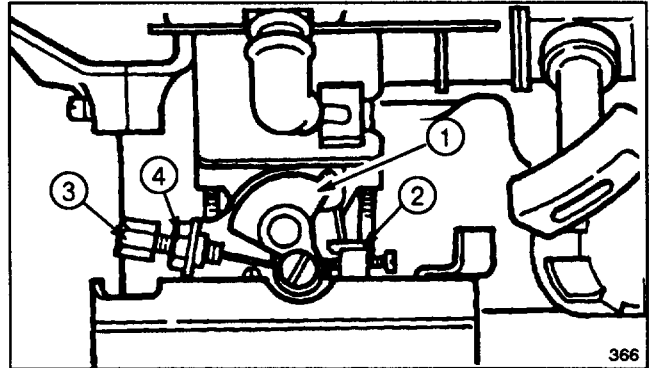


Figure 20

- Throttle shaft plate
- Stop
- Fitting
- Jam nut

## CLEANING TRIMMER HEAD (Figs. 21 & 22)

Stringy weeds or other debris may become wound around powershaft. Trimmer head assembly must be removed and cleaned periodically.

- Drain gasoline from fuel tank. Remove spark plug cover by squeezing sides together and slide off engine cover (Fig. 15). Pull wire off spark plug.

- Insert medium blade screwdriver in one of two windows slots on spool hub and twist screwdriver 1/4 turn (Fig. 22). Spool will snap off.

**Note:** Use as wide a screwdriver as will fit in slot so as not to damage cap when twisting.

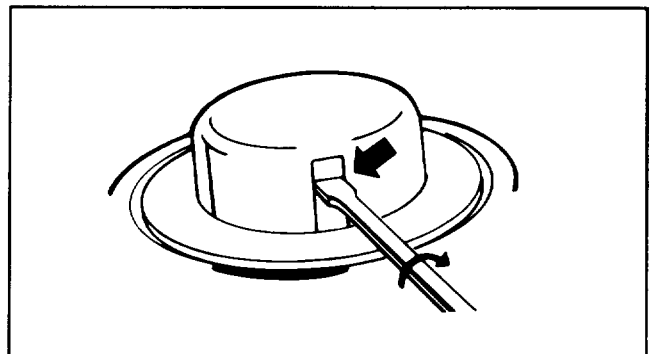


Figure 21

# MAINTENANCE

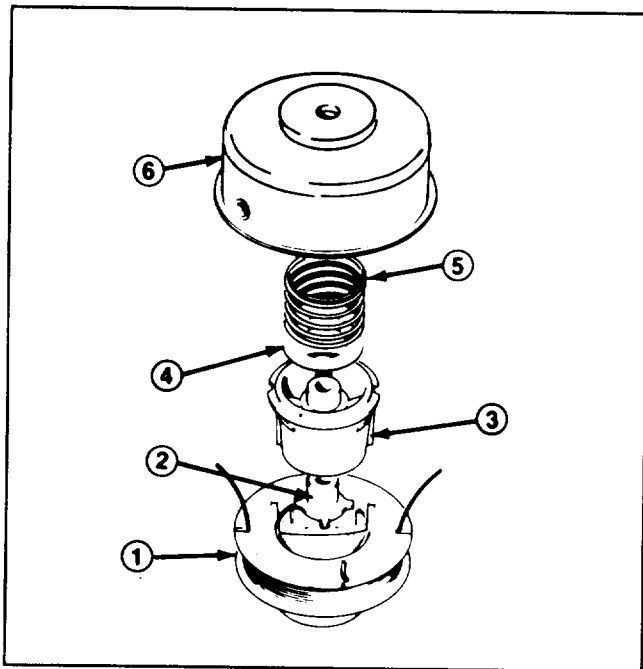


Figure 22

- |               |                       |
|---------------|-----------------------|
| 1. Spool hub  | 4. Washer             |
| 2. Driver     | 5. Compression spring |
| 3. Spool core | 6. Drum               |

3. Hold drum securely and unscrew spool core in CLOCKWISE direction. This will unscrew the driver.

4. Remove washer and compression spring, and unscrew drum from powershaft (left hand thread).

5. Clean debris from inside and outside of drum and any wrapped around powershaft.

6. Screw drum onto powershaft (left hand thread).

7. Install compression spring, washer, spoolcore, and driver (rotate counterclockwise).

8. The spool and spoolcore are keyed. Be sure they are properly aligned when putting spool back on. Thread ends of lines through eyelets, place spool on keyed core, and push in place until you hear it click (see Replacing Cutting Line).



## CAUTION

Stay clear of gear case after operating trimmer as it can get hot. Wait for it to cool before attempting any service procedures.

## LUBRICATE GEAR CASE (Fig. 23)

Every 40 hours of operation, lubricate the gear case.

1. Remove cutter head and gear case cap from gear case shaft. Refer to Cleaning Trimmer Head, page 11.

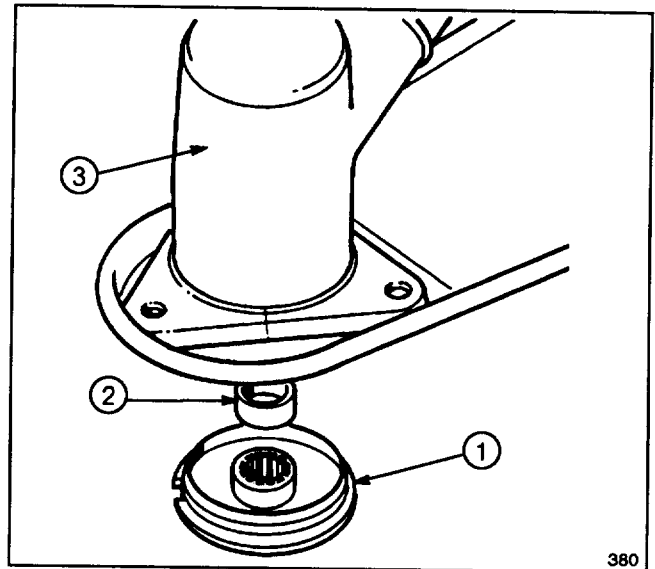


Figure 23

- |                  |                            |
|------------------|----------------------------|
| 1. Gear case cap | 3. Grease fitting location |
| 2. Spacer sleeve |                            |

2. Clean any debris under gear case cap.

3. Using pliers, remove spacer sleeve from gear case shaft.

**IMPORTANT:** Failure to remove this sleeve can result in over-packing the gear case with grease, which can cause gear case over-heating and subsequent damage to gear case and trimmer head.

4. Fill gear case with a good quality multi-purpose lithium base grease until grease comes out around gear case shaft.

5. Reinstall spacer sleeve, gear case cap, and cutter head. Tighten cutter head securely.

## PREPARING TRIMMER FOR STORAGE

1. For long term storage, either drain gasoline from fuel tank or add a fuel additive to the gasoline. After fuel is drained, start engine and let it idle until all fuel is consumed and engine stops. If gasoline is not drained and a fuel stabilizer is not added, 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 stabilizer, such as Toro's Stabilizer/Conditioner, is added to gasoline 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.

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

2. If trimmer is stored with fuel and a fuel additive in gas tank, lay trimmer on a flat surface so fuel does not contact gas cap.

# MAINTENANCE

3. Remove dirt and grime from external parts of trimmer housing. Also clean the cooling system: refer to Cooling System Service, page 10.

4. Pull wire off spark plug, clean area around plug so foreign matter cannot fall into cylinder when plug is removed. Remove plug from cylinder head and pour one teaspoon (5 ml) of two-cycle oil into spark plug hole. Pull recoil starter handle slowly to distribute oil on inside of cylinder. Reinstall spark plug and tighten it to 9 ft-lbs (1.2 Kg-m). If torque wrench is not used, tighten plug firmly. **DO NOT REINSTALL WIRE ON SPARK PLUG.**

5. Check condition of cutter head; replace line, if necessary; refer to Replacing Cutting Line, page 8.

6. Clean the air cleaner if necessary: refer to Servicing Air Cleaner, page 10.

7. Lubricate gear case, if necessary: refer to Lubricate Gear Case, page 12.

8. Check and tighten all screws, bolts, nuts and mating parts. If any part is damaged, repair or replace it.

9. Store trimmer in a clean, dry place. Cover trimmer to protect it and keep it clean.

## OPTIONAL SPARK ARRESTOR MUFFLER—PART #83-4810

If a spark arrestor muffler is required because of local, state or federal regulation, it may be purchased at your local Authorized TORO Service Dealer. If trimmer is operated on any California forest, brush or grass covered land without a properly operating spark arrestor muffler, the operator is violating state law, Section 4442 Public Resources Code.

## PRODUCT IDENTIFICATION

A model number and a serial number decal is located on the drive shaft tube. 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, and maintenance or troubleshooting—is ever needed, contact the local Authorized TORO Service Dealer or Distributor. Refer to the “Yellow Page” 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.

# ACCESSORIES

PART NO.	DESCRIPTION
46-2961	Deluxe Shoulder/Waist Harness
46-2810	Fixed Line Cutter Head (Aluminum)
51-2760	Fixed Line Cutter Head (Nylon)
57-5670	Manual Feed Dual Line Cutter Head (.105 dia. line)
83-4600	Single Line Bump-Feed Cutter Head (.095 dia. line)
41-4440	Metal Blade Adaptor Kit
51-1240	8" Blade (8 T.)
51-1230	8" Blade (80 T.)
83-4650	Prewound Spool (2-.080 Dia.)
83-4660	Prewound Spool (.095 Dia.)
43-5000	.080 Line (38 ft.)
46-2710	.080 Line (405 ft.)
41-6820	.095 Line (285 ft.)
47-2260	16" Line-.105 (100 pcs.)
46-2730	.105 Line (235 ft.)
52-5070	.105 Line (20 ft.)
42-0580	14" Line-.130 (100 pcs.)
46-2740	.130 Line (465 ft.)

# TROUBLESHOOTING CHART

This Troubleshooting Chart is intended as a guide to assist in correcting some of the common problems which may occur. Most of the "remedies" can be performed with common hand tools. The

chart is not intended as a guide for major overhaul procedures. For problems which are not covered in this Troubleshooting Chart or the Operator's Manual, consult your local Toro Dealer.

Problem	Possible Causes	Remedy
Engine won't start or hard starting	<ul style="list-style-type: none"> <li>A. No fuel</li> <li>B. Stale fuel</li> <li>C. Carburetor maladjusted</li> <li>D. Faulty spark plug</li> <li>E. Improper starting</li> <li>F. Clogged air cleaner</li> <li>G. Fuel filter plugged</li> <li>H. Carbon build-up in exhaust system</li> </ul>	<ul style="list-style-type: none"> <li>A. Fill fuel tank with gasoline/oil mix: refer to Before Operating.</li> <li>B. Drain fuel tank. Fill fuel tank with proper fuel.</li> <li>C. Adjust: refer to Adjusting Carburetor.</li> <li>D. Replace spark plug.</li> <li>E. Refer to Starting and Stopping Procedures.</li> <li>F. Refer to Air Cleaner Service.</li> <li>G. Replace fuel filter.</li> <li>H. Clean exhaust system, refer to Servicing Muffler.</li> </ul>
Engine RPM too slow	<ul style="list-style-type: none"> <li>A. Wrong fuel mix</li> <li>B. Clogged air cleaner</li> <li>C. Engine overheating</li> <li>D. Carbon build-up in exhaust system</li> <li>E. Trimmer head dirty</li> <li>F. Throttle cable maladjusted</li> </ul>	<ul style="list-style-type: none"> <li>A. Drain fuel tank. Fill with proper gasoline/oil mix. Refer to Before Operating.</li> <li>B. Refer to Air Cleaner Service.</li> <li>C. Refer to Cooling System Service.</li> <li>D. Clean exhaust system, refer to Servicing Muffler.</li> <li>E. Clean trimmer head; refer to Cleaning Trimmer Head.</li> <li>F. Refer to Adjusting Throttle Control.</li> </ul>
Engine runs erratically.	<ul style="list-style-type: none"> <li>A. Contaminated fuel</li> <li>B. Fuel filter plugged</li> </ul>	<ul style="list-style-type: none"> <li>A. Drain fuel tank. Fill fuel tank with fresh fuel mixture. Refer to Before Operating.</li> <li>B. Replace fuel filter.</li> </ul>
Engine stops running	<ul style="list-style-type: none"> <li>A. Out of fuel</li> <li>B. Fuel filter plugged</li> </ul>	<ul style="list-style-type: none"> <li>A. Fill fuel tank.</li> <li>B. Replace fuel filter.</li> </ul>
Trimmer vibrates abnormally	<ul style="list-style-type: none"> <li>A. Line wound incorrectly</li> <li>B. Trimmer head dirty</li> </ul>	<ul style="list-style-type: none"> <li>A. Rewind cutting line; refer to Replacing Cutting Line.</li> <li>B. Clean trimmer head; refer to Cleaning Trimmer Head</li> </ul>

**The Toro Promise**  
*A Two Year Limited Warranty  
On All  
Gasoline Powered Consumer Products*

*The Toro Company promises to repair these TORO Products if defective in materials or workmanship. The following time periods from the date of purchase apply:*

Residential Product .....	2 Years
Residential Products Used Commercially .....	45 Days
Straight Shaft Trimmers, 3 H.P. Edger, Back Pack Blowers, 5 H.P. Lawn Vac, 5 H.P. Blower Used Commercially .....	90 Days

*The cost of parts and labor are included, but the customer pays the transportation costs. Just return any residential product to an Authorized TORO Service Dealer or TORO Distributor.*

Should you feel your TORO Product is defective and wish to rely on The Toro Promise, the following procedure is recommended:

1. Contact any Authorized TORO Service Dealer, TORO Master Service Dealer, or TORO Distributor (the Yellow Pages of your telephone directory is a good reference source).
2. He will either instruct you to return the product to him or recommend another Authorized TORO Service outlet which might be more convenient.
3. Bring the product along with your original sales slip, or other evidence of purchase date, to the service dealer.
4. The servicing dealer will inspect the unit, advise you whether the product is defective and, if so, make all repairs necessary to correct the defect without extra charge to you.

If for any reason you are dissatisfied with the analysis of the defect or the service performed, you may contact us.

Write: TORO Customer Service Dept.  
8111 Lyndale Avenue South  
Minneapolis, MN 55420

The above remedy of product defects through repair by an Authorized TORO Service Dealer is the purchaser's sole remedy for any defect.

**THERE IS NO OTHER EXPRESS WARRANTY EXCEPT FOR THE TORO STARTING GUARANTEE ON GTS ENGINES. ALL IMPLIED**

**WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE DURATION OF THE EXPRESS WARRANTY.**

Some states do not allow limitations on how long implied warranty lasts, so the above limitation may not apply to you.

This Warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse, accidents, or lack of proper maintenance. Regular, routine maintenance of the unit to keep it in proper operating condition is the responsibility of the owner.

All warranty repairs reimbursable under The Toro Promise must be performed by an Authorized Toro Service Dealer using Toro approved replacement parts.

Repairs or attempted repairs by anyone other than an Authorized TORO Service Dealer are not reimbursable under the TORO Promise. In addition, these unauthorized repair attempts may result in additional malfunctions, the correction of which is not covered by warranty.

THE TORO COMPANY IS NOT LIABLE FOR INDIRECT OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE PRODUCT INCLUDING ANY COST OR EXPENSE OF PROVIDING SUBSTITUTE EQUIPMENT OR SERVICE DURING PERIODS OF MALFUNCTION OR NON-USE.

Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**COUNTRIES OTHER THAN THE UNITED STATES OR CANADA**

Customers who have purchased TORO products exported from the United States or Canada should contact their TORO Distributor (Dealer) to obtain guarantee policies for your country, province, or state. If for any reason you are dissatisfied with your Distributor's service or have difficulty obtaining guarantee information, contact the TORO Importer. If all other remedies fail, you may contact us at The Toro Company.