

MODEL NO. 51637 - 1000001 THRU 2000001 & UP

# OPERATOR'S MANUAL

## TC2010 GAS TRIMMER

## A

## 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.

WARNING: Engine exhaust contains carbon monoxide which is an odorless, deadly poison. Carbon monoxide is also known to the State of California to cause birth defects. Do not run engine indoors or in an enclosed area.

- 1. Operate the machine 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. 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. Always wear substantial footwear and long pants.

- 5. Keep the area of operation clear of all persons, particularly 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 machine.
- **8.** Gasoline is highly flammable. 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 onequarter to one-half inch (6 to 13 mm) from the top of the tank, not 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.
- 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. Do not put hands or feet near or under rotating parts. Keep clear at all times.
- 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.
- 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. Before servicing or making adjustments to the machine, stop the engine and pull wire off spark plug to prevent accidental starting of the engine.
- 20. Ensure entire machine is in good condition. Keep all nuts, bolts, and screws properly tightened.
- 21. If major repairs are ever needed or if assistance is desired, contact an Authorized Toro Service Dealer.

- 22. To reduce potential fire hazard, keep the engine area free of excessive oil, grass, leaves and accumulations of dirt.
- 23. 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.
- 24. Never store trimmer in house (living area) or basement because gasoline and fumes are highly flammable, explosive and dangerous if inhaled. Never store trimmer with fuel in fuel tank inside a building where ignition sources such as an open flame, sparks, hot water and space heaters and clothes dryers are present. Allow engine to cool before storing.



## SAFETY DECALS

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.



READ YOUR OPERATOR'S MANUAL FOR OPERATING AND SAFETY INSTRUCTIONS. TO GET A REPLACEMENT MANUAL, SEND MODEL AND SERIAL NUMBERS TO: THE TORO CO., 8111 LYNDALE AVE. S., MPLS., MN **55420**.

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



ON ENGINE HOUSING (Part No. 65-2690)



THROWN DEBRIS CAN SERIOUSLY INJURE EYES AND CONTACT WITH CUTTER CAN SERIOUSLY INJURE.

ALWAYS WEAR SAFETY GOGGLES/GLASSES.

KEEP PEOPLE AND ANIMALS AWAY FROM CUTTING AREA.

KEEP CUTTER GUARD IN PLACE.

REMAIN AT CONTROLS UNTIL CUTTER STOPS.

ON DRIVE SHAFT TUBE (Part No. 82-6210)

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## **ASSEMBLY INSTRUCTIONS**

#### **MOUNT CUTTER HEAD (Fig. 1)**

1. Remove plastic shipping cap from end of drive shaft tube to expose flexible shaft.

**Note:** Hold flexible shaft in drive shaft tube as it may slide out of tube when cap is removed.

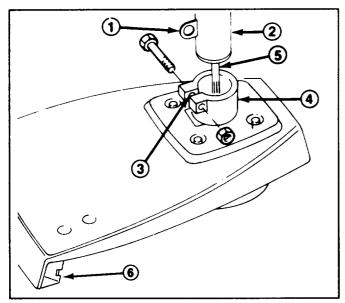


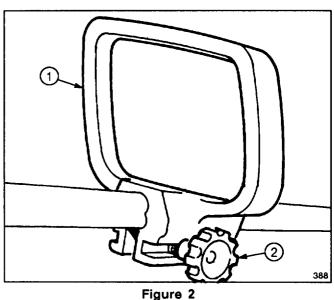
Figure 1

- 1. Retaining clips
- 2. Drive shaft tube
- 3. Slotted area
- 4. Bearing housing
- 5. Flexible shaft
- 6. Line cut-off knife
- 2. Insert flexible shaft into square hole in bearing housing.
- 3. Align retaining clips on drive shaft tube with slotted area in bearing housing.
- **4.** Insert drive shaft tube and flexible shaft into bearing housing. Tube should slide into bearing housing until holes in retaining clips line up with mounting holes in bearing housing.
- 5. Secure tube and retaining clips to bearing housing with capscrew and locknut.

6. Remove the protective tape from line cut-off knife.

#### SECURE SUPPORT HANDLE (Fig. 2)

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



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1. Support handle

2. Handle knob

Note: Do not remove tape from cutting line before initial start up.

#### THROTTLE CONTROL

The throttle control has been factory adjusted to obtain maximum throttle when the throttle trigger is fully squeezed. However, readjustment will be necessary during the first few hours of operation due to slight stretching of the throttle cable. Refer to Adjusting Throttle Control, page 11.

## **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 — 40:1 RATIO

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 BE-CAUSE THE ENGINE CAN BE DAMAGED, AND IT WOULD NOT BE COVERED BY THE TORO WAR-RANTY.

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 de-

posits 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 <u>METHANOL</u>, GASOLINE CONTAINING <u>METHANOL</u>, 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 CONDITIONER/STABILIZER. 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.

#### 40:1 GAS/OIL Mixing Chart

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



Figure 3

## **OPERATING INSTRUCTIONS**

#### STARTING AND STOPPING (Figs. 4 & 5)

#### Cold Engine

- 1. Lay trimmer on a flat surface with engine in upright position.
- 2. Move ignition switch to ON position.

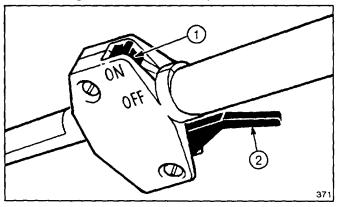


Figure 4

- 1. Ignition switch
- 2. Throttle trigger
- **3.** Move choke lever to the CLOSED position (to LEFT).

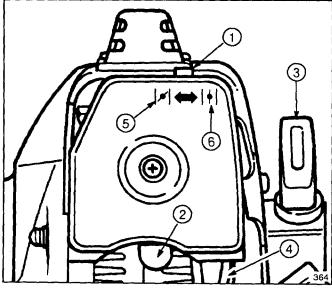


Figure 5

- 1. Choke lever
- 2. Primer bulb
- 3. Recoil starter
- 4. Fuel tube
- 5. CLOSED position6. OPEN position
- 4. Push the carburetor primer bulb repeatedly until fuel completely fills the clear fuel tube. Keep pushing primer bulb until bubbles in the fuel tube disappear.

**Note:** Repeated pushing of primer bulb will not cause over-priming; all excess fuel goes back into 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. Slowly 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.

#### 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, follow Cold Engine starting procedure.

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.



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.

#### 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 stop screw. Refer to Adjusting Carburetor, page 8.

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

## **OPERATING INSTRUCTIONS**

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. 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 (Figs. 6 & 7)



#### WARNING

Always wear safety goggles or other suitable eve 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).



WARNING

DEBRIS THROWN BY CUTTING ATTACHMENT CAN CAUSE SEVERE INJURY TO OPERATOR'S EYES. ALWAYS WEAR SAFETY GOGGLES OR SAFETY GLASSES WHILE OPERATING TRIM-MER.

DO NOT OPERATE TRIMMER WITHOUT CUT-TING HEAD GUARD IN PLACE.



Safety goggles/glasses must comply with the latest ANSI Z 87.1 Standard to ensure 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.



#### WARNING

ALWAYS WEAR A SHOULDER HARNESS WHEN USING OPTIONAL NYLON FLEX BLADE AT-TACHMENT.

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

Thrown debris and contact with cutting attachment can cause severe injury to nearby persons or animals.



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



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 (Fig. 6).

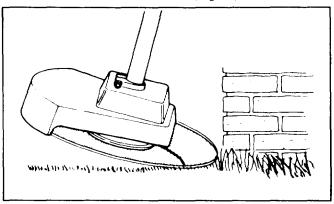


Figure 6

3. A Get comfortable. Make sure support handle adjusting knob is tightened securely before operating trimmer. 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 cutting efficiency (Fig. 7).

## **OPERATING INSTRUCTIONS**

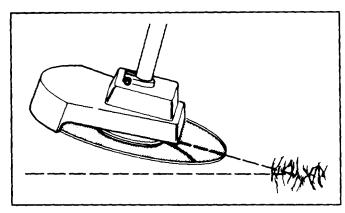


Figure 7

5. The life of your cutting line is dependent upon following the previous 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.

#### **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 line wears down.

1. To lengthen line, firmly tap spool on the ground while the engine continues to run at normal cutting RPM (Fig. 8). The line will be fed from the spool

and cut off to the proper length by the cutting knife attached to the shield.

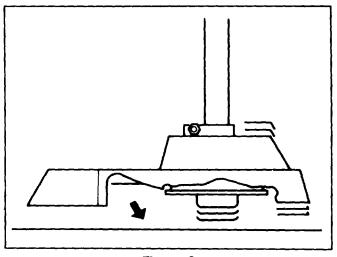


Figure 8

Remember to keep the engine speed up while lengthening the line. Just tap the trimmer on the ground; do not hold it on the ground.

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.



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

## **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, disconnect wire from spark plug, 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. Spool will snap off

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

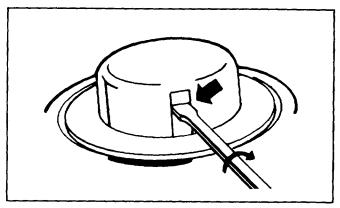


Figure 9

- 3. To rewind empty spool, use the following steps:
- A. Hook end of line into the keyhole slot on spool. Wind line around spool in level rows between spool flanges in the direction shown in Figure 10.

**Note:** Avoid crossover or crisscrossing of line to insure proper line advancing. Winding line in wrong direction will cause spool, core and driver (Fig. 20) to detach from cutter head.

- B. Do not wind more than 38 feet of line onto spool or allow wound line to extend outside of spool. Only use line .080" dia.
- C. Keep line tight on spool by securing in remaining spool notch (Fig. 10). Leave about 4 inches of line extended beyond the notch.

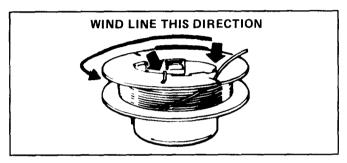


Figure 10



#### 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.

**Note:** Before reassembly, be sure to thoroughly clean drum and powershaft 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 eyelet on the drum (Fig. 11). With line still retained in spool notch, thread end of line through eyelet (Fig. 12). Place spool onto keyed spool core; the spool notch must be aligned with eyelet and spool core key (Fig. 12). Push spool inward until you hear it click. Pull line outward while pushing spool inward to free line from notch. Unwind no more than six inches of line from spool. To extend line, pull line out while pushing spool inward. To retract line, rotate spool counterclockwise while pushing spool inward.

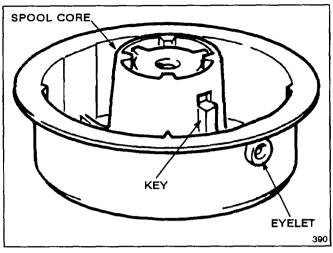


Figure 11

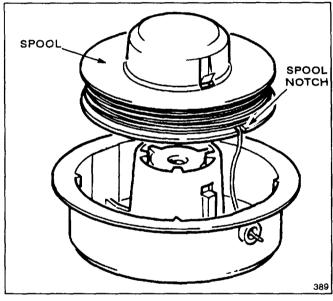


Figure 12

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

#### 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 in higher altitude areas, bring trimmer to your Authorized TORO Service Dealer for 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). Turn screw clockwise to increase idle speed, counterclockwise to decrease idle speed.

**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.

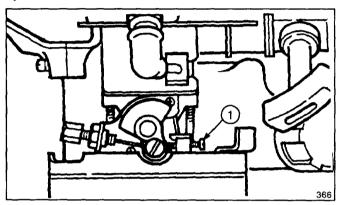


Figure 13
1. Idle speed screw

#### SERVICING MUFFLER (Fig. 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 engine cover to trimmer (Fig. 14).
- 2. Remove two (2) nuts 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.

- 5. Reinstall muffler to engine.
- **6.** Reinstall engine cover and tighten all fasteners securely.

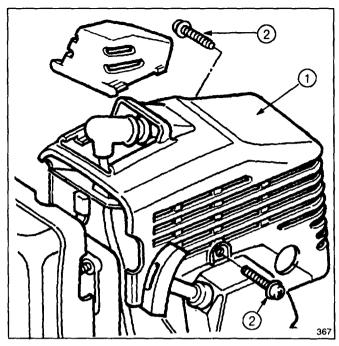


Figure 14

- 1. Engine cover
- 2. Screws (2)

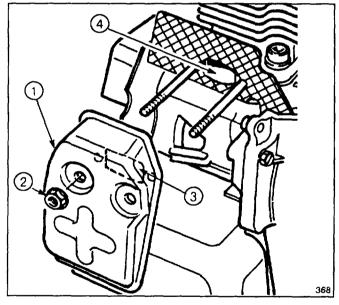


Figure 15

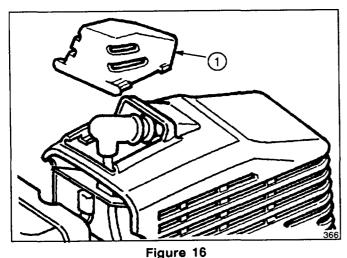
- Muffler
   Nuts
- Muffler port
   Exhaust port

#### REPLACING SPARK PLUG (Fig. 16)

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.

- 1. Stop engine. Remove spark plug cover by squeezing sides and sliding off engine cover (Fig. 16). 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.



1. Spark plug cover

3. 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).

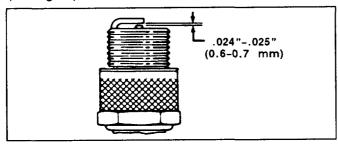


Figure 17

#### 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.

- 1. Remove one (1) screw securing air cleaner cover.
- 2. Carefully remove foam filter.
- 3. Wash foam filter in a soap and water solution and thoroughly dry. If filter shows any sign of damage, replace it.

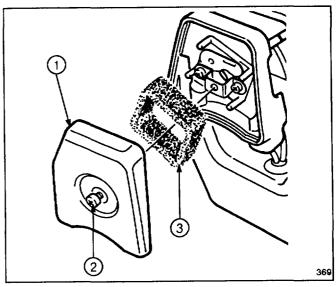


Figure 18

- 1. Air cleaner cover
- 2. Screw
- 3. Foam filter
- **4.** Saturate the foam filter with one teaspoon (5 ml) of SAE 30 oil. Squeeze filter to distribute oil evenly and to remove excess oil. A damp element is desirable.
- 5. Reinstall air cleaner components as shown in Figure 18.

#### CLEANING TRIMMER HEAD (Figs. 19 & 20)

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

- 1. Drain gasoline from fuel tank. Remove spark plug cover by squeezing sides and sliding off engine cover (Fig. 16). Pull wire off spark plug.
- 2. Insert medium blade screwdriver in one of two window slots on spool hub and twist screwdriver 1/4 turn. Spool will snap off.

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

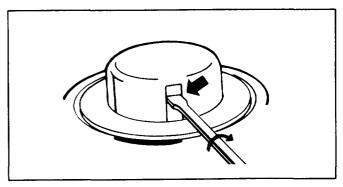


Figure 19

3. Hold drum securely and unscrew spool core counter-clockwise. This will unscrew the driver.

- 4. Remove washer and compression spring, and slide drum off powershaft.
- 5. Clean debris from inside and outside of drum and any wrapped around powershaft.
- 6. Slide drum onto powershaft, ensuring roll pin fits into slot on top of drum.
- 7. Install compression spring, washer, spool core, and driver onto powershaft.
- 8. The spool and spool core are keyed. Be sure they are properly aligned when putting spool back on. Thread end of line through eyelet, place spool on keyed core, and push in place until you hear it click; refer to Replacing Cutting Line, page 7.

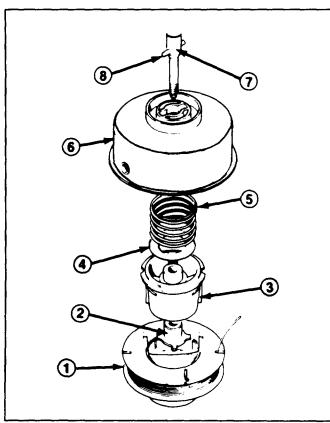


Figure 20

- 1. Spool hub
- 2. Driver
- Spool core
- Washer

- 5. Compression spring
- Power shaft assembly
- 8. Roll pin

#### **REPLACING FUEL FILTER (Fig. 21)**

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

- 1. Drain gasoline from fuel tank. Start engine and let it run at idle speed until it stops and all fuel is expended.
- 2. Remove fuel tank cap. Invert trimmer and shake until end of suction hose is accessible or passes through fuel tank opening.

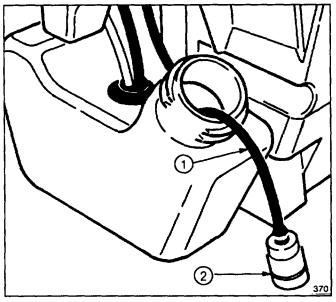


Figure 21

1. Suction hose

2. Fuel filter

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

- 3. Replace fuel filter and reinstall suction hose into tank.
- 4. Reinstall fuel tank cap.

#### ADJUSTING THROTTLE CONTROL (Fig. 22)

The throttle control will need to be adjusted periodically to compensate for slight stretching of the throttle cable. Initially, check throttle control adjustment every few hours of operation, and every 25 hours thereafter.

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

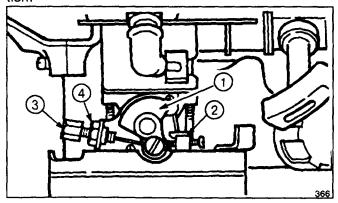


Figure 22

- 1. Throttle shaft plate
- 3. Fitting

2. Stop

4. Jam nut

#### LUBRICATE FLEXIBLE SHAFT

The flexible drive shaft has been evenly greased at the factory. After approximately 40 hours of operation, the flexible drive shaft should be removed from the drive shaft housing and all surfaces of it should be evenly greased with No. 2 general purpose lithium base grease. To remove flexible drive shaft from drive shaft housing, first remove cutter head assembly by reversing assembling instructions in Cleaning Trimmer Head, page 10. Then pull flexible drive shaft from drive shaft housing.

#### PREPARING TRIMMER FOR STORAGE

1. For long term storage, either drain gasoline from fuel tank or add a fuel stabilizer to the gasoline. 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 ensure 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.

Under normal conditions, all fuel additives 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.

DANGER: Never store trimmer in house (living area) or basement because gasoline and fumes are highly flammable, explosive and dangerous if inhaled. Never store trimmmer with fuel in fuel tank inside a building where ignition sources such as an open flame, sparks, hot water and space heaters and clothes dryers are present. Allow engine to cool before storing.

- 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 2 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 INSTALL WIRE ON SPARK PLUG.
- 5. Check condition of cutter head; replace line, if necessary; refer to Replacing Cutting Line, page 7.
- **6.** Clean the air cleaner if necessary: refer to Servicing Air Cleaner, page 10.
- 7. Check and tighten all screws, bolts, nuts and mating parts. If any part is damaged, repair or replace it.
- 8. Store trimmer in a clean, dry place. Cover trimmer to protect it and keep it clean.

## 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 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.

## **ACCESSORIES**

PART NO.	DESCRIPTION
46-2951	Shoulder Harness
83-4640	Prewound Spool
43-5000	38' Coil — .080" Cutting Line
46-2710	1 lb. — .080" Cutting Line (400 ft.)
83-4390	Accessory Kit (Flex Blade and Harness)
46-2961	Deluxe Harness
46-2691	Clamp and Ring Kit
83-4620	Single Line Bump-Feed Head Assembly

## 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	A. No fuel	A. Fill fuel tank with gasoline/oil mix: refer to     Before Operating.
	B. Stale fuel	B. Drain fuel tank. Fill fuel tank with proper fuel.
	C. Carburetor maladjusted	C. Adjust: refer to Adjusting Carburetor.
	D. Faulty spark plug	D. Replace spark plug.
	E. Improper starting	E. Refer to Starting and Stopping Procedures.
	F. Clogged air cleaner	F. Refer to Air Cleaner Service.
	G. Fuel filter plugged	G. Replace fuel filter.
	H. Carbon build-up in exhaust system	H. Clean exhaust system, refer to Servicing Muffler.
Engine RPM too slow	A. Wrong fuel mix	A. Drain fuel tank. Fill with proper gasoline/oil mix. Refer to Before Operating.
	B. Clogged air cleaner	B. Refer to Air Cleaner Service.
	C. Engine overheating	C. Refer to Cooling System Service.
	D. Carbon build-up in exhaust system	D. Clean exhaust system, refer to Servicing Muffler.
	E. Trimmer head dirty	E. Clean trimmer head; refer to Cleaning Trimmer Head.
	F. Throttle cable maladjusted	F. Refer to Adjusting Throttle Control.
	G. High-altitude operation	<ul> <li>G. See Authorized Toro Service Dealer for installation of high-altitude jet in carburetor.</li> </ul>
Engine runs erratically	A. Contaminated fuel	A. Drain fuel tank. Fill fuel tank with fresh fuel mixture. Refer to Before Operating.
	B. Fuel filter plugged	B. Replace fuel filter.
Engine stops run- ning	A. Out of fuel	A. Fill fuel tank.
	B. Fuel filter plugged	B. Replace fuel filter.
Trimmer vibrates abnormally	A. Line wound incorrectly	A. Rewind cutting line; refer to Replacing Cutting Line.
	B. Trimmer head dirty	B. Clean trimmer head; refer to Cleaning Trimmer Head.





## THE TORO TOTAL COVERAGE GUARANTEE

A Full Two-Year Warranty (Limited Warranty for Commercial Use)

#### What Is Covered By This Express Warranty?

The Toro Company promises to repair any TORO Product used for residential purposes if defective in materials or work-manship for a period of two years from the date of purchase. The cost of parts and labor are included, but the customer pays the transportation costs.

Transportation within a 15 mile radius of the servicing dealer is covered under this warranty for two-stage snowthrowers, walk behind debris equipment and all TORO Wheel Horse riding products. Walk power mowers, single stage snowthrowers, and other products not specifically covered, are excluded from the transportation coverage provided by this warranty.

#### What Products Are Covered By This Warranty?

This warranty applies to all gasoline powered Consumer Products (including TORO Wheel Horse riding products). Wide area walk behind mowers, ProLine 118, and 21" Commercial mowers without blade stop controls are covered by separate warranty statements.

#### **How About Commercial Use?**

TORO Consumer Products used for commercial, institutional or rental use are covered by a limited warranty for the following time periods from the date of purchase:

**Products** 

Warranty Period

- 300 through 700 Series Tractors (except 612-Z) and 1600 HMR
  - Chassis . . . . . 1 year limited warranty Engine . . . . . 2 year limited warranty
- 21" Commercial Duty Walk Mower with blade stop controls .... 1 year limited warranty
- 200 Series Tractors, Rear Engine Riders,
   612-Z, 1200 HMR
   3.0 and 3.5 HP Edgers
   Straight Shaft Trimmers,
   and Backpack Blowers . . . . . 90 day limited warranty
- All Others . . . . . . . . . . . . 45 day limited warranty

#### **How Do You Get Warranty Service?**

Should you feel your TORO product contains a defect in material or workmanship, contact the dealer who sold you the product or any Authorized TORO Service Dealer or TORO Master Service Dealer. The Yellow Pages of your telephone directory is a good reference source. The dealer will either arrange service at his/her dealership or recommend another Authorized Service Dealer who may be more convenient. You may need proof of purchase (copy of registration card, sales receipt, etc.) for warranty validation.

If for any reason you are dissatisfied with the Service Dealer's analysis of the defect in materials or workmanship or if you need a referral to a TORO Service Dealer, please feel free to contact us at the following address:

Toro Customer Service Department 8111 Lyndale Avenue South Minneapolis, MN 55420 612-888-8801

#### What Must You Do To Keep The Warranty In Effect?

You must maintain your TORO Product by following the maintenance procedures described in the operator's manual. Such routine maintenance, whether performed by a dealer or by you, is at your expense.

# What Does This Warranty Not Cover? and How Does Your State Law Relate To This Warranty?

There is no other express warranty except the TORO Starting Guarantee on GTS Engines. This express warranty does not cover:

- Cost of regular maintenance service or parts, such as filters, fuel, lubricants, tune-up parts, blade sharpening, brake and clutch adjustments.
- Any product or part which has been altered or misused or required replacement or repair due to normal wear, accidents, or lack of proper maintenance.
- Repairs necessary due to improper fuel, contaminants in the fuel system, or failure to properly prepare the fuel system prior to any period of non-use over three months.
- Pickup and delivery charges for distances beyond a 15 mile radius from an Authorized TORO Service Dealer (covered products only).

All repairs covered by this warranty must be performed by an Authorized TORO Service Dealer using Toro approved replacement parts.

Repair by an Authorized TORO Service Dealer is your sole remedy under this warranty.

The Toro Company is not liable for indirect, incidental or consequential damages in connection with the use of the TORO Products covered by this warranty, including any cost or expense of providing substitute equipment or service during reasonable periods of malfunction or non-use pending completion of repairs under this warranty. Some states do not allow exclusions 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.