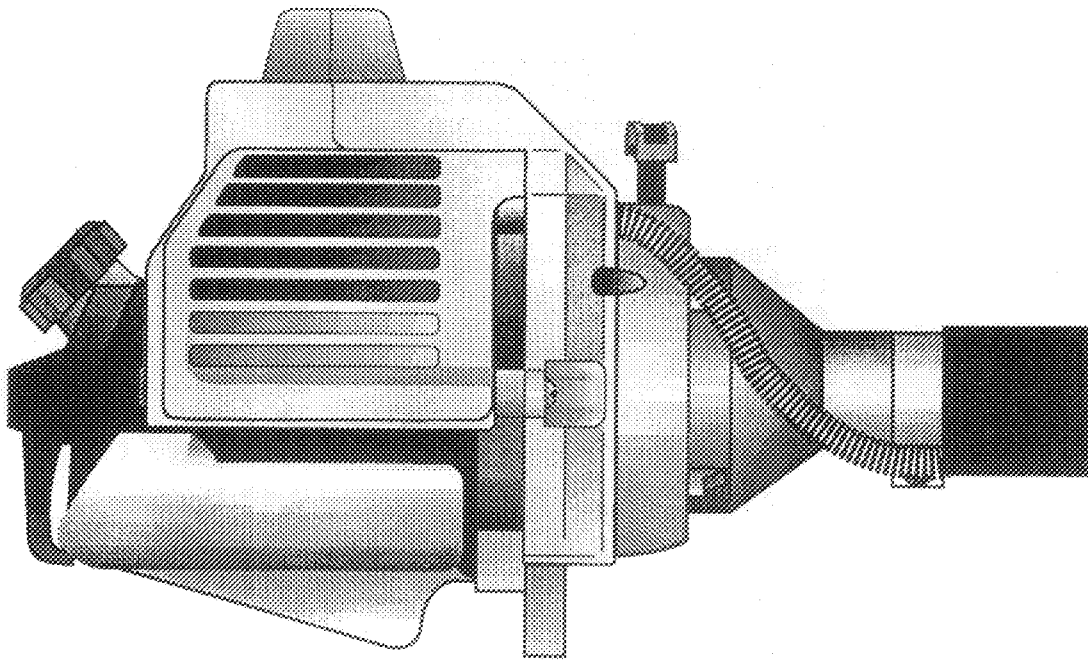




# Gas Trimmer

Model 51653 - 3900001 & Up

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## OPERATOR'S MANUAL

**IMPORTANT:** Read this manual carefully. It contains information about your personal safety. Also become familiar with the controls and their proper use before operating the trimmer.


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**For service, contact your local authorized  
Toro servicing dealer.**

**NOTE:** For users on U. S. Forest Land and in the states of California, Maine, Oregon and Washington. All U.S. Forest Land and the state of California (Public Resources Codes 4442 and 4443), Oregon and Washington require, by law that certain internal combustion engines operated on forest brush and/or grass-covered areas be equipped with a spark arrestor, maintained in effective working order, or the engine be constructed, equipped and maintained for the prevention of fire. Check with your state or local authorities for regulations pertaining to these requirements. Failure to follow these requirements could subject you to liability or a fine. **This unit is not factory equipped with a spark arrestor.** If these items are required in your area, ask your dealer to install the **Optional Accessory Part #92-3270 Spark Arrestor Kit.**

## 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 engine 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.

## 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 no. to: The Toro Company, 8111 Lyndale Avenue South, Bloomington, Minnesota 55420-1196.
2. Never allow children to operate the trimmer. It is not a toy. Never allow adults to operate unit without first reading the 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 the 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 protection

Dress properly. Do not wear loose clothing or jewelry. They can be caught in moving parts. Also make sure long hair does not get caught in moving parts.
5. Keep the area of operation clear of all persons, especially children and pets.
6. Never operate the 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 the trimmer fuel tank. Observe the following precautions:
  - A. Remove the trimmer fuel tank cap slowly.
  - 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 the filler neck.
  - E. Wipe up any spilled gasoline before starting the engine.
  - F. Before transporting trimmer in a vehicle, drain all gasoline from the fuel tank.
  - G. Store the trimmer in a cool, ventilated place.
  - H. Lay the trimmer on a flat surface so fuel does not contact the gas cap when not operating.
  - I. Use an approved fuel container for storing the gasoline/oil mixture.

## 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. 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.
12. Do not put hands or feet near or under rotating parts. Keep all people and animals far away while operating. Operator contact with thrown debris may cause severe injury.



## SAFETY INSTRUCTIONS

### WHILE OPERATING

13. Do not touch a hot muffler or cylinder. You may get burned. These parts get extremely hot from operation and remain hot for a short time after the equipment is turned off.
14. If the trimmer starts to vibrate abnormally, stop the engine and check immediately for the cause. Repair before resuming operation.
15. Avoid using the trimmer near rocks, gravel, stones or other debris which could be picked up and thrown or personal injury could result.
16. Use trimmer only in daylight or good artificial light.
17. Shut off the engine and be certain all moving parts have completely stopped rotating before inverting trimmer.
18. Never use wire or metal reinforced string in place of monofilament cutting line.
19. Wear a long sleeve shirt or other similar arm protection to avoid possible contact with hot engine surfaces.
20. When using a cutter blade on trimmer, a shoulder harness must be worn.
21. Do not extend the trimming line beyond the length specified in this manual.

### MAINTENANCE

22. Before servicing or making adjustments to the machine, stop the engine and pull the wire off the spark plug to prevent accidental starting of the engine.
23. Ensure entire machine is in good condition. Keep all nuts, bolts and screws properly tightened.
24. Replace cracked or damaged parts before operating. If major repairs are ever needed or if assistance is desired, contact an Authorized Service Dealer.
25. To reduce a potential fire hazard, keep the engine area free of excessive oil, grass, leaves and accumulations of dirt.
26. 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 WARNINGS FOR THE OPTIONAL BRUSH BLADE

#### DURING USE

27. Read the safety instructions on pages 3-5.
28. Always use the shoulder strap when using the optional brush blade accessory.
29. Do not under any conditions cut with the blade located over 30 inches (76.2 cm) or more above the ground level.
30. Scything should be done with extreme care and caution.
31. For operation with the standard 4-tooth blade, do not cut anything thicker than 1/2 inch or a violent kickback could occur.
32. Do not attempt to touch or stop the blade when it is rotating.
33. Do not run the unit at high speed when not cutting.
34. If you strike or become entangled with a foreign object, stop the engine immediately and check for damage. Have any damage repaired before further operation is attempted. Do not operate unit with a bent, cracked or dull blade.
35. Keep the unit clean of vegetation and other materials. They may become lodged between the blade and guard.
36. Stop the engine IMMEDIATELY if you feel excessive vibration. Vibration is a sign of trouble. Inspect thoroughly for loose nuts, bolts or damage before continuing. Repair or replace affected parts as necessary.

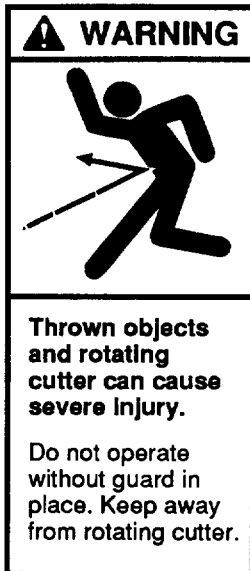
#### AFTER USE

37. Clean blades with a household cleaner to remove any gum buildup. Then oil the blades with machine oil to prevent rust.
38. Store the unit in an appropriate area to protect the blade from unauthorized use or damage.

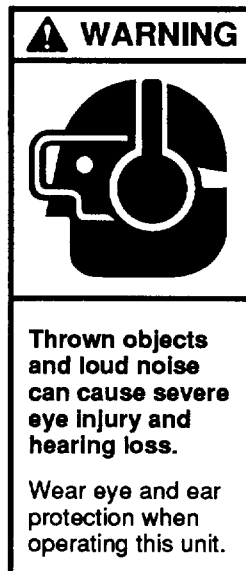


## SAFETY DECALS AND INSTRUCTIONS

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.



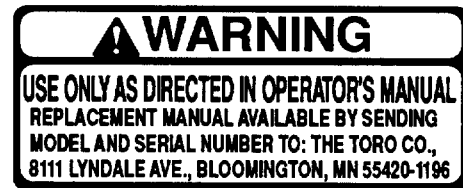
**ON DRIVE SHAFT TUBE**  
(Part No. 92-3282)



**ON DRIVE SHAFT TUBE**  
(Part No. 92-3283)



**ON ENGINE**  
(Part No.92-3284)



**ON DRIVE SHAFT TUBE**  
(Part No. 92-3285)

# ASSEMBLY INSTRUCTIONS

## INSTALLING THE J-HANDLE

1. Install the J-handle mounting assembly (Fig. 1).
2. After adjusting the J-handle to the desired position, tighten the mounting screws (Fig. 1).

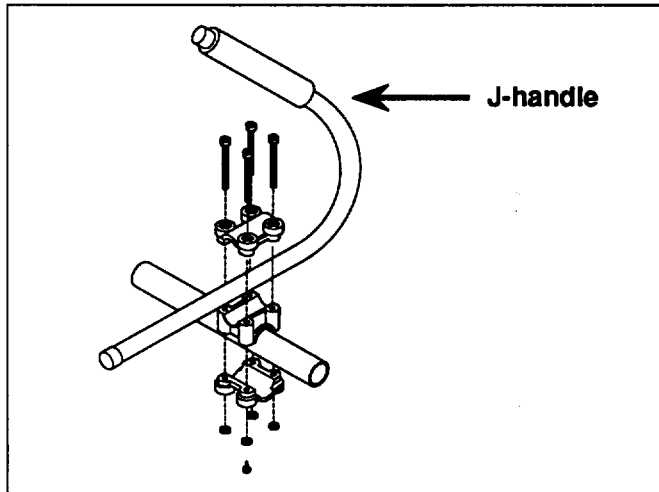


Fig. 1

3. Hook the snap at the end of the shoulder strap onto the wire connector (Fig. 3). Adjust the length of the strap.

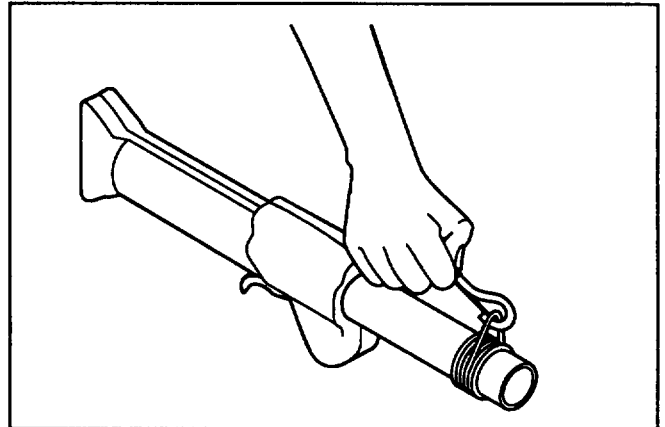


Fig. 3

## INSTALLING SHOULDER STRAP

1. Push the end of the shoulder strap without the buckle through the ring on the snap.
2. Loop the strap through the buckle (Fig. 2).

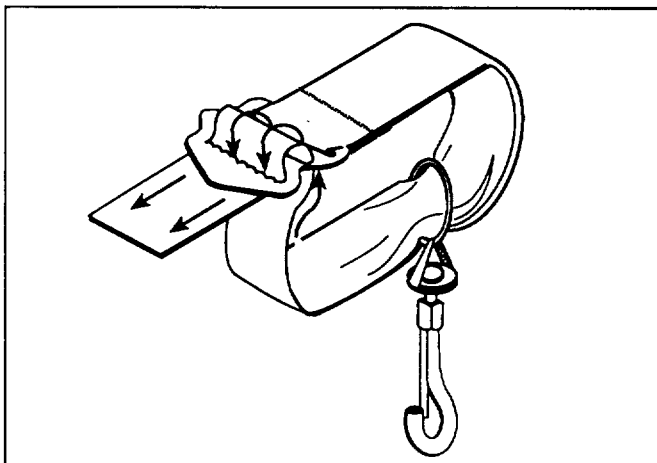


Fig. 2

# ASSEMBLY INSTRUCTIONS

## INSTALLING THE OPTIONAL BRUSH BLADE

1. Remove the line guard.
2. Insert the locking rod into the locking rod slot. Rotate the Bump Head line spool **clockwise**. Remove the Bump Head line spool and washer assembly (Fig. 4).

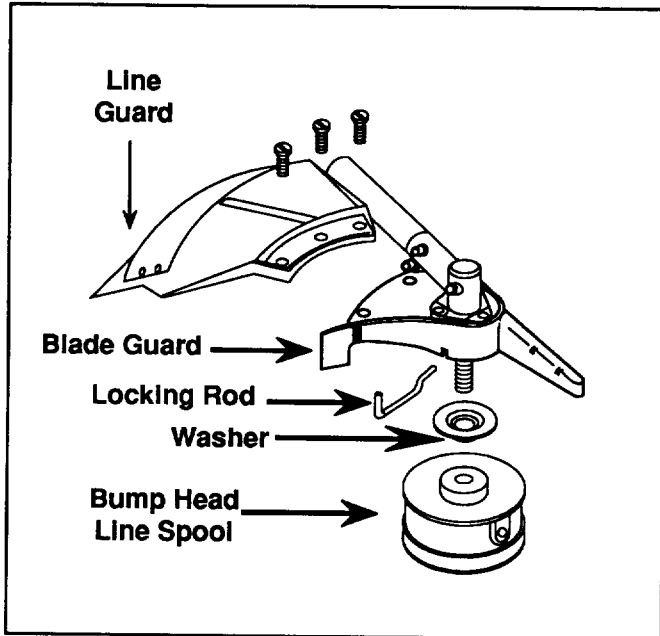


Fig. 4

3. Make sure you have all of the parts necessary to install the optional brush blade (Fig. 5).

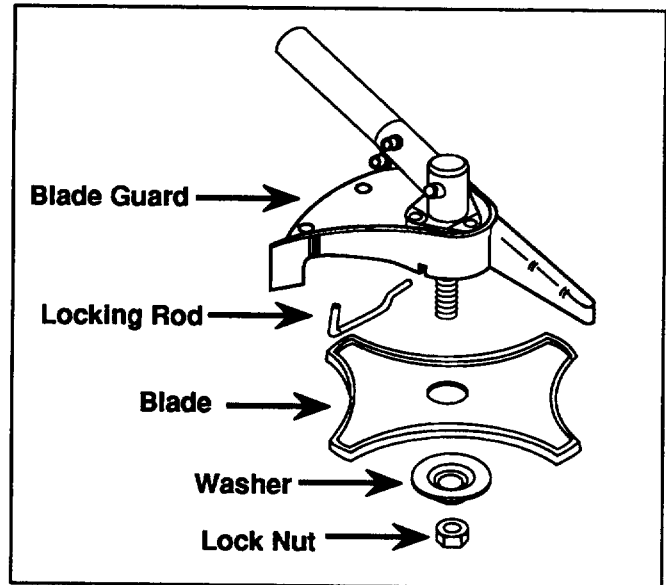


Fig. 5



### DANGER

- Metal blade has sharp edges.
- Contact with metal blade can cause injury.
- Do not remove the blade tooth cover from the metal blade when installing or removing it. Always wear gloves while handling or installing the metal blade.

# ASSEMBLY INSTRUCTIONS

## INSTALLING THE OPTIONAL BRUSH BLADE (Continued)

4. Install the blade, washer, and lock nut. Insert the locking rod into the locking rod slot (Fig. 5). Make sure that the blade stays flat against the washer while tightening the lock nut **counterclockwise** until it is finger-tight.
5. Tighten the lock nut while you hold the locking rod in the locking rod slot (Fig. 5).
6. When properly assembled, the edge of the metal brush blade must line up with the blade locating mark on the casting and should be within a blade thickness of the mark (Fig. 6). If the blade isn't lined up correctly, refer to Fig. 5 for reassembly.
7. Remove the blade tooth cover.

## INSTALLING THE LINE SPOOL

1. Install the blade tooth cover over the metal brush blade. Insert the locking rod into the locking rod slot. Loosen the lock nut by turning it **clockwise** (Fig. 5).
2. Remove the lock nut, retaining washer and brush blade (Fig. 6).
3. Make sure that you have all of the necessary parts to install the Bump Head line spool (Fig. 4).
4. Insert the locking rod tool into the locking rod slot (Fig. 4). Install the washer and the Bump Head line spool **counterclockwise** onto the shaft.
5. Install the line guard using all of the screws (Fig. 4). Tighten the screws.

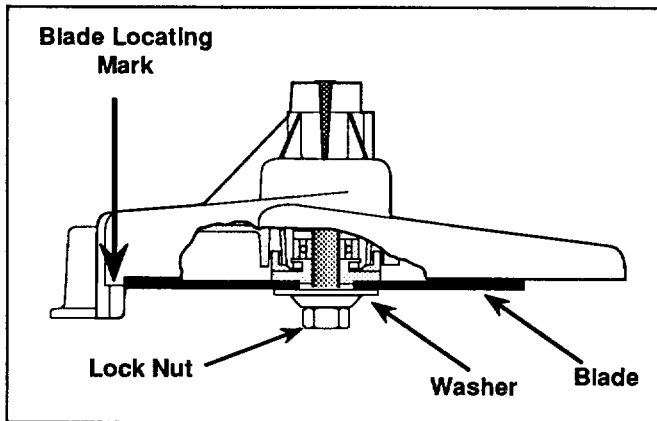


Fig. 6



### DANGER

- Personal Injury could occur if blade is off-center.
- Blade may fly off and could cause serious injury or death to the operator or bystanders.
- Make sure the blade is flat against the washer after the lock nut is tightened.



# BEFORE OPERATING



## WARNING

**DANGER:** Gasoline is extremely flammable, explosive and under certain conditions can cause personal injury or property damage. 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 the 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 to the filler neck. This space is for expansion of fuel. Use funnel or spout to prevent spilling. Wipe up any spilled gas.

## PROPER GAS/OIL MIX RATIO

1. **APPROVED MIXTURE** - The correct gas/oil mix ratio is 32:1. For simplicity and best engine performance, mix 4 oz. of 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 4 oz. of another high grade two-cycle oil that has NMMA or BIA-TCW certification printed on the label.

**NEVER USE AUTOMOTIVE OIL** (i.e. SAE 30, 10W30 etc.), 2-CYCLE OIL THAT IS NOT CERTIFIED OR THE WRONG MIX RATIO BECAUSE THE ENGINE CAN BE DAMAGED, AND IT WOULD NOT BE COVERED BY THE TORO WARRANTY.

## MIX GASOLINE AND OIL

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

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

**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 OR METHANOL. STABILIZERS SHOULD NOT BE USED TO TRY TO ENHANCE THE POWER OR PERFORMANCE OF MACHINE.**

Toro also recommends that Toro Stabilizer/Conditioner be used regularly during operation and storage. Toro Stabilizer/Conditioner cleans the engine during operation and prevents gum-like varnish deposits from forming in the engine during storage.

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

# OPERATING INSTRUCTIONS

## STARTING/STOPPING INSTRUCTIONS

1. **FILL FUEL TANK WITH GAS/OIL MIXTURE** (refer to Mix Gasoline and Oil, page 9).
2. **MOVE THE IGNITION SWITCH "ON"!** (Fig. 7).

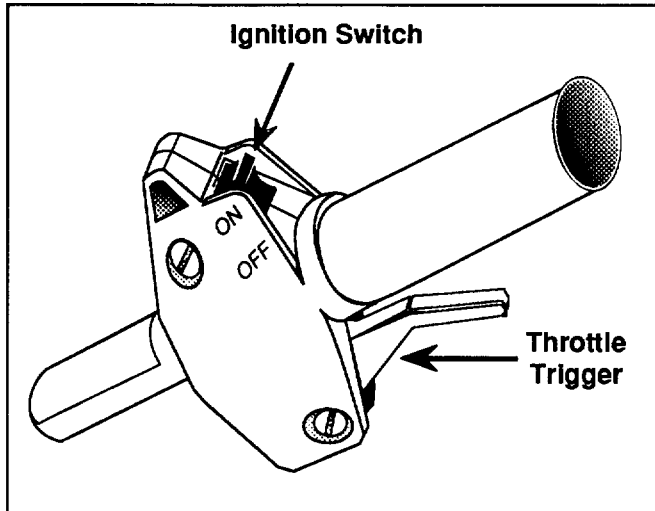


Fig. 7

3. **FULLY PRESS AND RELEASE THE PRIMER BULB 5 TO 7 TIMES** (Fig. 8).

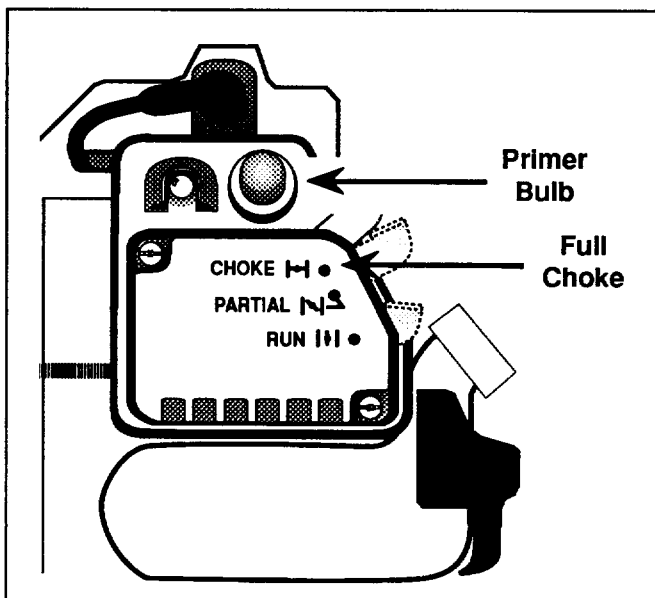


Fig. 8

4. **MOVE THE CHOKE LEVER TO THE "FULL CHOKE" POSITION** (Fig. 8).

5. **HOLD THE UNIT IN THE STARTING POSITION WITH THE CUTTING HEAD AWAY FROM YOU** (Fig. 9-A).

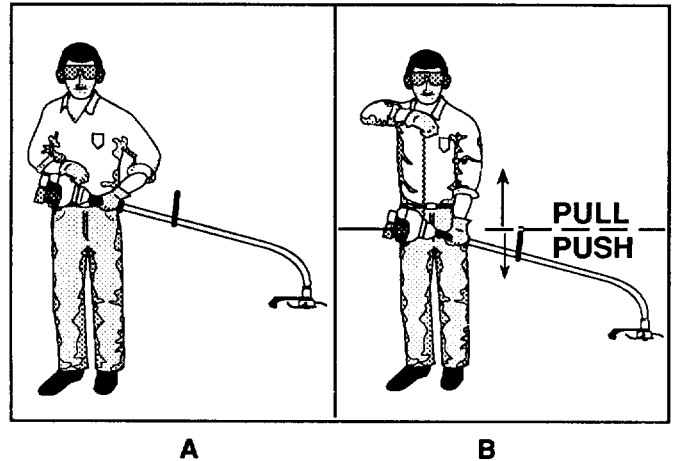


Fig. 9

6. **SQUEEZE THE THROTTLE TRIGGER** (Fig. 7) **TO FULL THROTTLE**. Hold the trigger against the hand grip.
7. **PULL THE STARTER ROPE BRISKLY** (Fig. 9-B) until the engine sounds like it wants to run (normally 2 to 5 pulls).
8. **MOVE THE CHOKE LEVER TO THE "PARTIAL" POSITION** (Fig. 8). Pull the starter rope briskly 1 to 3 times to start the engine (Fig. 9-B).
9. If the engine does not start, repeat steps 2 to 8.
10. After the engine warms up for 5 to 10 seconds, **MOVE THE CHOKE LEVER TO THE "RUN" POSITION** (Fig. 8).
11. **TO STOP THE ENGINE**, move the **IGNITION SWITCH** to the "OFF" position (Fig. 7).

**NOTE:** To prevent vapor lock, avoid setting the unit in the sun.



### DANGER

- The cutting head or metal blade continues to rotate for a few seconds after the engine is shut off.
- Contact with rotating cutting head or metal blade will cause serious personal injury or death.
- Shut engine off and do not place any part of the body near the cutting head or metal blade until you are sure that all parts have stopped rotating.

# OPERATING INSTRUCTIONS

## TIPS FOR BEST TRIMMING

1. Hold the cutting head parallel to the ground.

**NOTE:** Do not rest or drag the Bump Head on the ground because it may be damaged.

2. **DO NOT FORCE THE UNIT.** Allow the tip of the line to do the cutting (especially along walls). Cutting with more than the tip will reduce cutting efficiency and may overload the engine.
3. Grass over eight (8) inches (200 mm) should be cut by working from top to the bottom in small increments to avoid premature line wear and overloading the engine.
4. Whenever possible, cut to your left, because the unit's cutting efficiency is improved slightly. Also, the clippings are thrown away from the operator.
5. Slowly move the trimmer into and out of the area being cut, maintaining the trimmer at the desired cutting height. This can be either a forward-backward or side-to-side motion. Maintain maximum engine speed (full throttle) for best cutting.
6. Trim only when grass and weeds are dry.
7. The life of your cutting line depends upon following the previously stated trimming techniques, as well as what is being cut, and where the cutting is being done. For example, the line will wear faster when trimming against a foundation wall as opposed to trimming around a tree. Some line breakage will occur from:
  - Entanglement with foreign matter
  - Normal line fatigue
  - Attempting to cut thick, stalky weeds in excess of the unit's capability
  - Forcing the line into objects such as walls or fenceposts

# OPERATING INSTRUCTIONS



## CAUTION

- Muffler and cylinder surfaces become hot when trimmer is in operation and remain hot for some time after the engine is shut off.
- Contact with hot muffler or cylinder surfaces could cause a burn.
- Wear a long sleeve shirt or other similar protection to avoid possible contact with hot muffler or cylinder surfaces.



## WARNING

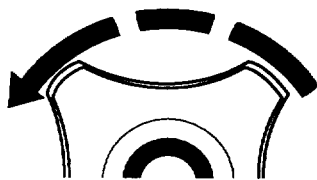
- Operating noise of trimmer is loud.
- Exposure to trimmer operating noise could cause hearing damage.
- Ear protection must be worn when operating trimmer.



## DANGER

- Metal blade spins for up to 30 seconds after shutting engine off.

**BLADE SPINS  
30 SEC.  
AFTER  
ENGINE IS  
OFF**

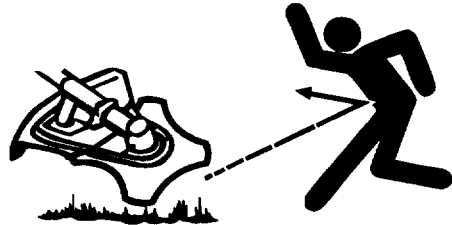


- Contact with rotating metal blade will cause severe personal injury or death.
- REMAIN AT CONTROLS UNTIL BLADE COMPLETELY STOPS.
- DO NOT OPERATE TRIMMER/BRUSHCUTTER IF CUTTING HEAD GUARD IS NOT IN PLACE.

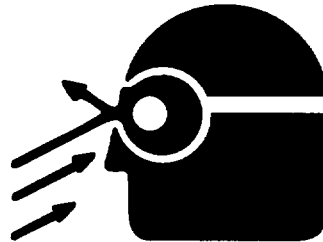


## DANGER

- When trimmer is in operation, objects could be thrown in operator's or bystander's direction.



- Thrown objects could cause serious personal injury or death to the operator, bystanders or animals.
- Always wear safety goggles or other suitable eye protection, long pants, and shoes while operating trimmer/brushcutter.



- 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 get them before operating this product. Safety goggles/glasses can be purchased from a trimmer/brushcutter dealer, hardware store and industrial supply company.

# OPERATING INSTRUCTIONS



## DANGER

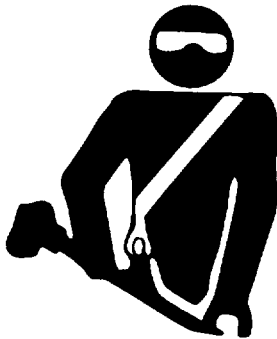
- The metal blade can be suddenly and uncontrollably thrust in any direction when the blade strikes a solid object while rotating at high speed.



- Contact with rotating blade by the operator, bystanders or animals will cause severe personal injury or death.
- Always be sure of your footing when operating trimmer. KEEP ALL PEOPLE AND ANIMALS FAR AWAY FROM TRIMMER/ BRUSHCUTTER WHILE OPERATING.



- ALWAYS USE SHOULDER HARNESS WHEN USING METAL BLADE CUTTING ATTACHMENT.



## DANGER

- THE 4-TOOTH METAL BLADE MAY CRACK IF USED TO CUT PLANTS THAT ARE TOO THICK. A PIECE OF BLADE COULD BREAK OFF AND BE THROWN AT THE OPERATOR OR TOWARD BYSTANDERS .
- A THROWN PIECE OF BLADE COULD CAUSE SEVERE PERSONAL INJURY OR DEATH.
- DO NOT USE METAL BLADE TO CUT WOODY PLANTS MORE THAN 1/2 INCH THICK.
- DO NOT USE ANY METAL BLADE IF CRACKED, NICKED, DISTORTED OR DAMAGED IN ANY WAY.

# OPERATING INSTRUCTIONS

## ADJUSTING THE TRIMMING LINE LENGTH

The trimmer is equipped with a Bump Head line spool that allows you to release more trimming line without stopping the engine. To release additional line, lightly tap the Bump Head on the ground (Fig. 10) while operating the trimmer at **high speed**.

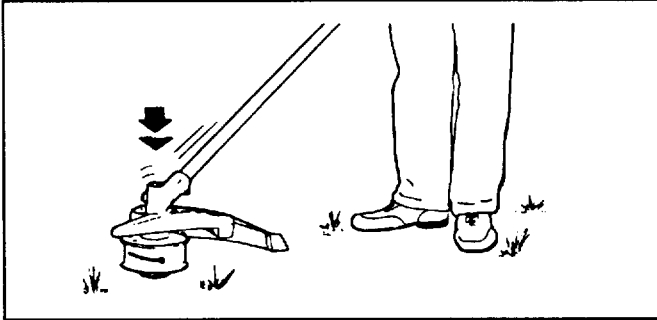


Fig. 10

**NOTE:** Always keep the trimming line as long as possible. Line release becomes more difficult as cutting line becomes shorter.

Each time the Bump Head is tapped slightly, about 1 in. (25.4 mm) of trimming line is released. A blade in the line guard will cut the line to the proper length if excess line is released.

For best results, tap the Bump Head on bare ground or hard soil. If line release is attempted in tall grass, the engine may stall.

## DECORATIVE TRIMMING

To do decorative trimming – removing all vegetation around trees, posts, fences, etc. – use a 30-degree angle (Fig. 11). Never use the trimmer for vertical edging.

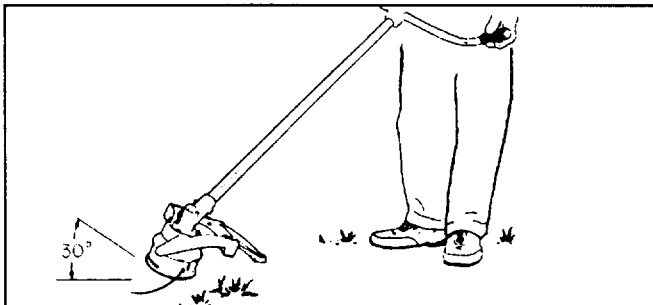


Fig. 11



### DANGER

- When trimmer is used for decorative trimming, objects may be thrown in operator's or bystander's direction.
- Thrown objects could cause serious personal injury or death to the operator, bystanders or animals.
- Always wear safety goggles or other suitable eye protection, long pants, and shoes while operating trimmer.
- Keep all people and animals far away from trimmer while operating.

# OPERATING INSTRUCTIONS

## USING THE METAL BRUSH BLADE

1. Always maintain the proper stance when using the metal brush blade (Fig. 12).



### WARNING

- Sharpening the blade can cause the blade tip to break off while in use.
- If blade tip breaks off, severe personal injury or death may occur.
- Do not sharpen the metal brush blade. If a crack is noticed or the blade becomes dull, install a new blade available from your authorized service dealer.

The metal brush blade is designed with a second set of teeth, which can be used by removing the blade, turning it upside down, and reinstalling it.



Fig. 12

# MAINTENANCE

## LINE INSTALLATION

The trimming line may be replaced by two different methods.

- Installing a prewound reel
- Rewinding an existing reel

### Rewinding the Existing Reel

To rewind the existing reel you must:

1. Check for the correct line size.
2. Remove the existing reel.
3. Wind the existing reel with the new line in the direction indicated.
4. Reinstall the existing reel.

### The Correct Line to Use

**IMPORTANT:** It is very important to use .095 in. (2.41 mm) diameter line. The engine may overheat and fail if you use larger diameter line.



#### DANGER

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

## Removing the Existing Reel

1. Shut the engine off.



#### DANGER

- The cutting head or metal blade continues to rotate for 30 seconds after the engine is shut off.
- Contact with rotating cutting head or metal blade may cause serious personal injury or death.
- Shut engine off and do not place any part of the body near the cutting head or metal blade until you are sure that all parts have stopped rotating.



#### WARNING

- The gear housing above the line spool gets very warm when you operate the trimmer.
- Contact with gear housing could cause burns.
- Do not touch housing until it has cooled.

2. Hold the outer spool with one hand and unscrew the bolt **clockwise** (Fig. 13). Remove the bolt and knob. Make sure the bolt inside the Bump Knob moves freely. Replace the Bump Knob if it is damaged.
3. Remove the inner reel (Fig. 13).
4. Use a clean cloth to clean the inner surface of the outer spool (Fig. 13).

**NOTE:** Always clean the the inner reel, outer spool, and shaft before reassembling the Bump Head line spool.



# MAINTENANCE

5. Check the indexing teeth on the inner reel and outer spool for wear (Fig. 13).

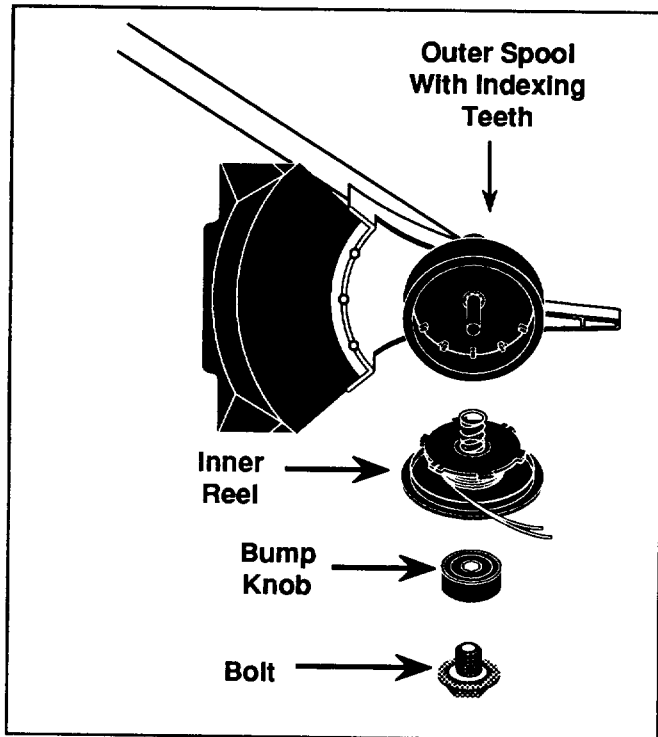


Fig. 13

2. Wind the two lines onto the reel in even and tight parallel layers (Fig. 15). Wind the line counterclockwise as indicated by the arrow on the inner reel (Fig. 16). Be sure not to overlap (cross) the lines because the Bump Head line feed will not operate correctly.

**IMPORTANT:** Failure to wind the line in the direction indicated will cause the Bump Head to operate incorrectly.

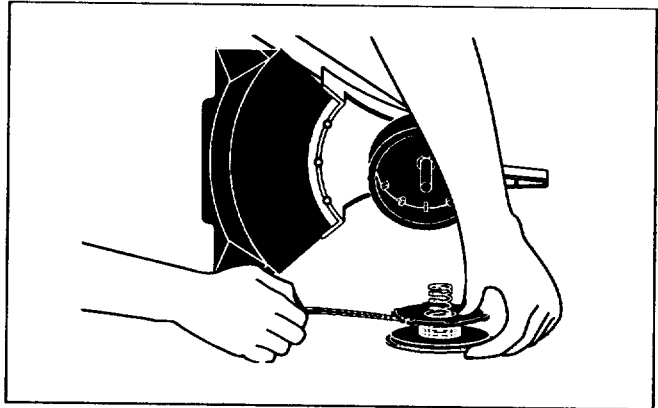


Fig. 15

## Winding the Existing Reel

1. Loop approximately 50 ft (15.3 m) of new trimming line into two equal lengths. Insert each end of the line through one of the two holes in the inner reel (Fig. 14). Pull the line so the loop is as small as possible.

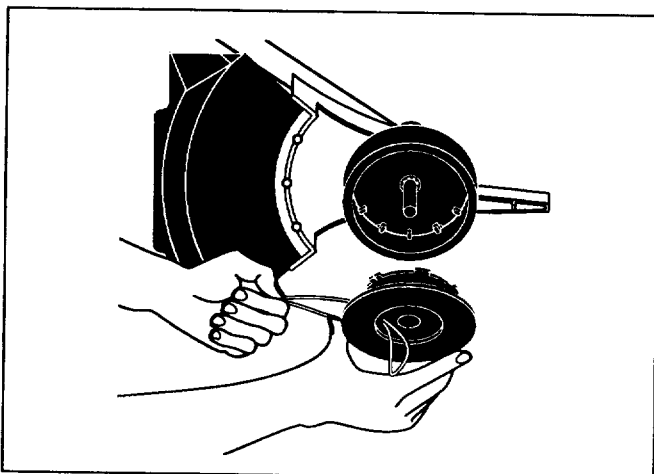


Fig. 14

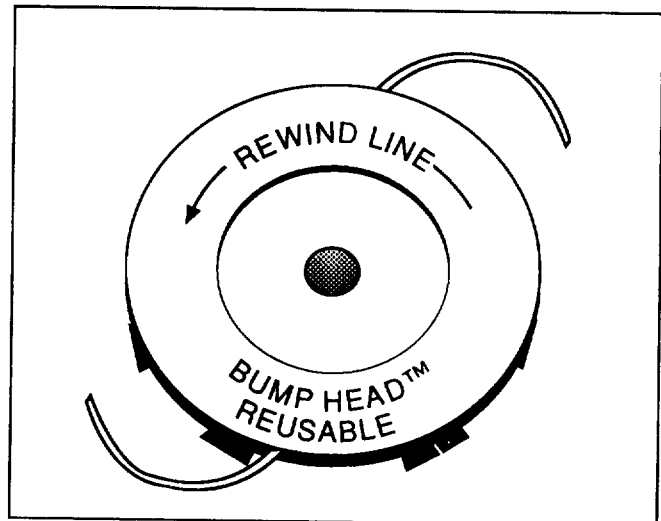


Fig. 16

# MAINTENANCE

3. Insert the ends of the line into the two holding slots (Fig. 17).

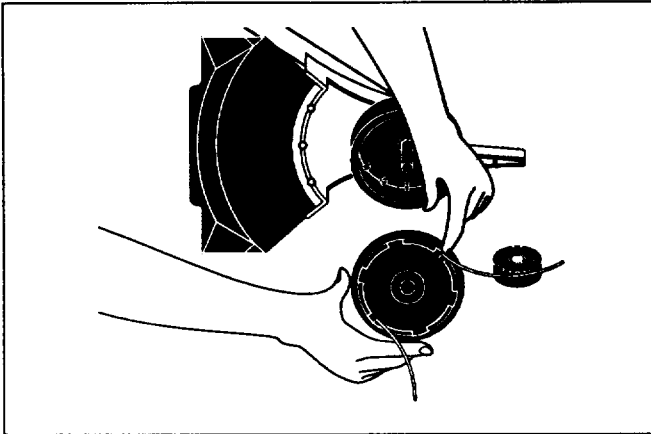


Fig. 17

## Reinstalling the Reel

1. Insert the ends of the line through the eyelets in the outer spool (Fig. 18). While holding the spool inside the reel, pull firmly on both lines to release them from the holding slots in the spool. Continue holding the reel inside the spool.

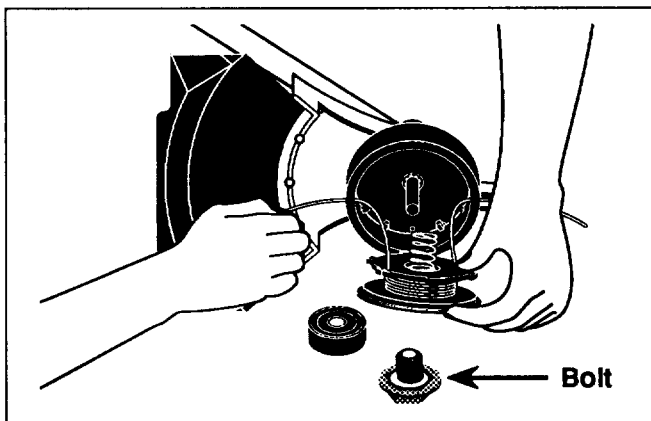


Fig. 18

2. Secure the line spool and Bump knob in place with the bolt. Tighten the bolt **counterclockwise** (Fig. 13).

## INSTALLING A PREWOUND REEL

1. Follow the instructions in **THE CORRECT LINE TO USE** on page 16.
2. Follow the instructions in **REMOVING THE EXISTING REEL** on page 16.
3. Follow the instructions in **REINSTALLING THE REEL** on page 18.

## GEAR HOUSING SERVICE

1. Check the gear housing for lubricant after every 50 hours of operation.
2. To check the lubricant level, place the trimmer in the normal operating position and remove the fill plug (Fig. 19). The lubricant should be up to the bottom edge of the check hole. If it is low, add a good quality, lithium-based, #2, multi-purpose grease.
3. Reinstall the fill plug and tighten securely to prevent leakage.

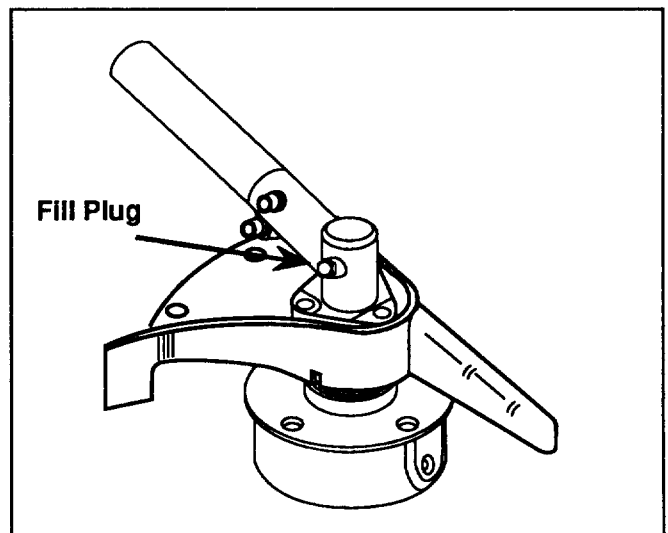


Fig. 19

# MAINTENANCE

## AIR FILTER MAINTENANCE

**NOTE: CLEAN AND RE-OIL THE AIR FILTER AFTER EVERY 10 HOURS OF OPERATION.** The air filter is one of the most important areas to maintain. If it is not maintained, you will void the warranty. Before cleaning, make sure the engine is shut off.

1. Move the choke lever to the "FULL CHOKE" position before removing and installing the air filter cover.
2. Remove the screws on each side of the carburetor/air filter cover assembly. Remove the air filter cover (Fig. 20).

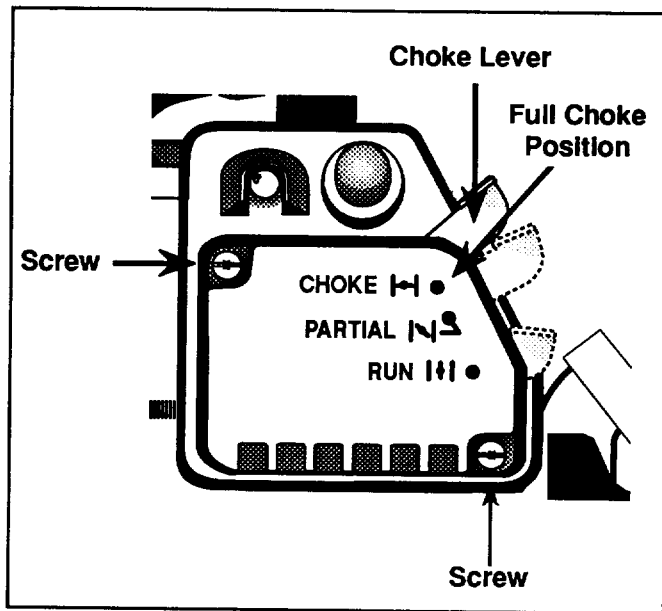


Fig. 20

3. Remove the air filter (Fig. 21).

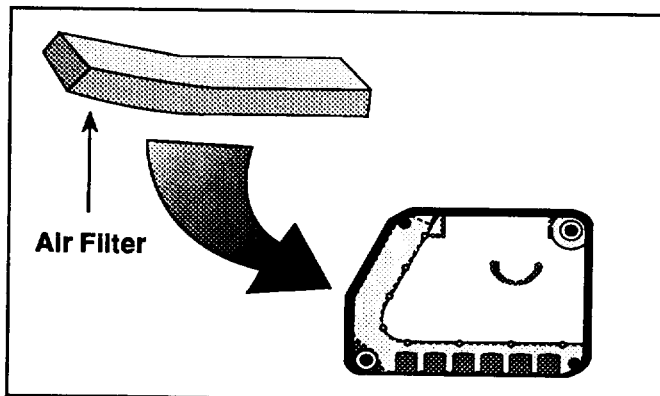


Fig. 21

4. Wash the filter in liquid detergent and water (Fig. 22). Rinse the filter thoroughly and carefully squeeze out excess water. Allow the filter to dry.

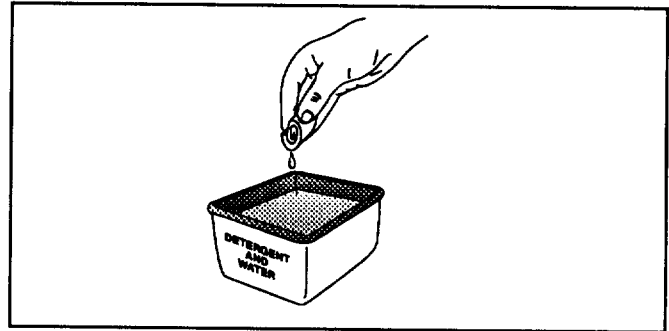


Fig. 22

5. Apply enough clean SAE 30 oil to saturate the filter (Fig. 23).

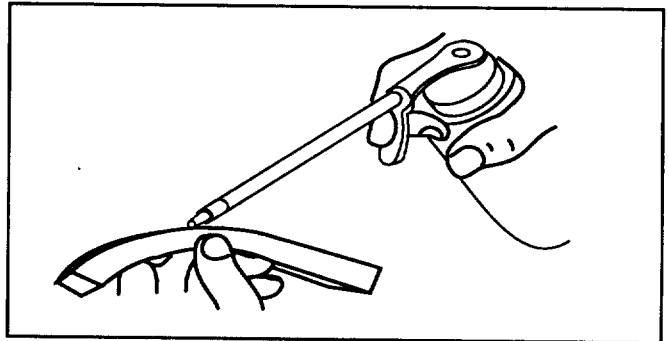


Fig. 23

6. Squeeze the filter to spread the oil (Fig. 24).

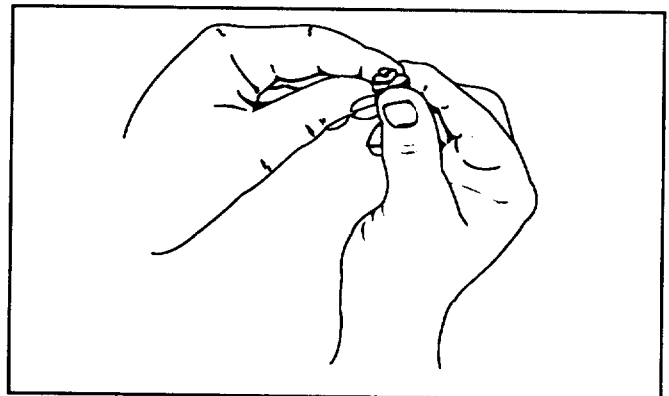


Fig. 24

7. Reinstall the filter (Fig. 21), air filter cover and screws (Fig. 20).

**IMPORTANT:** If the unit is operated without the air filter and cover assembly installed, you will void the warranty.

# MAINTENANCE

## CARBURETOR ADJUSTMENT

**IMPORTANT:** Line must be extended from trimmer head to its full cutting length before adjusting carburetor.



### DANGER

- When engine is running, the cutting head or metal brush blade is rotating and other parts are moving.
- Contact with rotating cutting head, metal brush blade or other moving parts could cause serious personal injury or death.
- Use extreme caution when an adjustment or maintenance procedure must be performed while the engine is running.
- Pull wire off spark plug if engine does not have to be running while performing adjustment or maintenance procedures.

The carburetor may need to be adjusted if you notice any of these conditions:

- The engine will not idle.
- The engine hesitates or stalls when throttle trigger is squeezed.
- The engine loses power and the air filter is clean.
- The engine operates erratically (usually indicated by excessive exhaust smoke from the muffler).

The carburetor has three adjustments:

- Idle speed
- Idle mixture
- High speed mixture

**IMPORTANT:** An improperly adjusted carburetor can void your warranty.

### Adjusting the Carburetor

1. Clean the air filter if it is dirty. Refer to Air Filter Maintenance, page 19.
2. **Initial Idle Speed Setting:** Turn the idle speed screw **counterclockwise** (Fig. 25) until it *does not* contact the carburetor throttle lever. Now turn the screw **clockwise** until it *begins to move* the throttle lever; then continue turning 2 full turns.
3. **Initial High Speed and Idle Mixture Settings:** Turn both the high and idle mixture screws **clockwise** (Fig. 25) until they are *lightly* seated. Then turn the screws **counterclockwise** 1-1/4 turns.

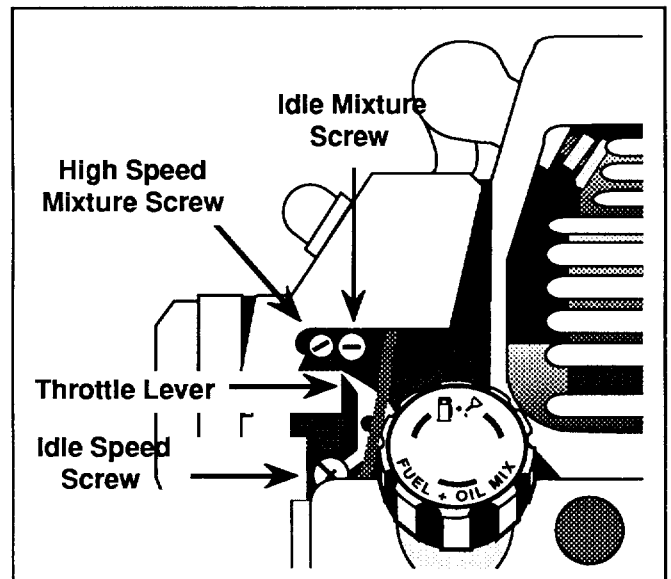


Fig. 25

**IMPORTANT:** Turn the high speed and idle mixture screws **finger-tight**. Forcing the mixture screws with a screwdriver will damage the screw tip and the seat in the carburetor body.

# MAINTENANCE

## CARBURETOR ADJUSTMENT (Continued)



### DANGER

- **Be extremely careful because the engine must be running to perform final adjustment of carburetor.**
- **When engine is running, cutting head or metal blade is rotating and other parts are moving.**
- **Contact with rotating cutting head, metal blade or other moving parts could cause severe personal injury or death.**
- **Keep hands, feet, and face away from concealed, moving or rotating parts.**

4. Start the engine and let it run for a minute.
5. Release the throttle trigger and let the engine idle. If the engine stops, turn the idle speed screw (Fig. 25) **clockwise 1/8 turn** at a time (as required) until the engine idles.
6. **Final Idle Speed And Mixture Settings:** Adjust the idle speed and mixture for smoothest engine idle.
  - a. Turn the idle mixture screw (Fig. 25) clockwise until you hear the fastest idle; then turn the screw **counterclockwise 1/8 turn**.
  - b. Squeeze the throttle trigger. If the engine falters or hesitates as it accelerates, turn the idle mixture screw (Fig. 25) **counterclockwise 1/16 turn** at a time until the engine accelerates rapidly.
  - c. If the idle speed changes significantly because of steps a and b, readjust the idle speed screw (refer to Step 2).

**NOTE:** The Bump Head line spool should not rotate when the engine idles.

### 7. High Speed Mixture Screw Adjustment:

- a. High speed mixture screw adjustment is not recommended without a precision high speed tachometer.
- b. The factory presets the high speed mixture screw at 1-1/4 turns out from the closed position. Your unit should perform well at this setting. If additional adjustment of the high speed mixture is required, contact your local authorized service dealer.

## REPLACING THE SPARK PLUG

Use a Champion RDJ7Y spark plug or equivalent. Correct air gap is .018 – .023 in. (0.45 – 0.58 mm). Remove plug after every 25 operating hours and check its condition.

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

**IMPORTANT:** Replace a cracked, fouled or dirty spark plug. Do not sand blast, scrape or clean electrodes because engine could be damaged by grit entering cylinder.

3. Set air gap at .018 – .023 in. (0.45 – 0.58 mm) (Fig. 26). Install correctly gapped spark plug and gasket seal. Tighten plug firmly to 110-120 in.lb (12.4-13.6 Nm).

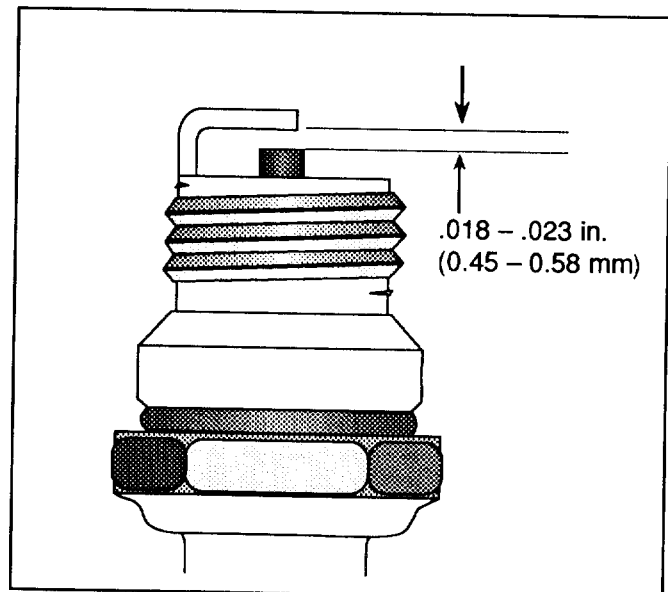


Fig. 26

# MAINTENANCE

## CLEANING AND STORAGE

### Cleaning

Use a small brush and/or a damp cloth to clean the outside of the trimmer. Do not use strong detergents on plastic housing or handle. They can be damaged by household cleaners that contain aromatic oils such as pine and lemon, and by solvents such as kerosene. Wipe off any moisture with a soft cloth. Do not spray the trimmer with water or submerge in water.

### Storage

If the trimmer will be stored for an extended time, use the following storage procedure.

1. Drain all fuel from the fuel tank into a container with the same 2-cycle fuel mixture. You may keep the drained fuel if it will be used within 60 days, otherwise, dispose of the old fuel/oil mix in a safe manner. Use a fresh mix the next time you operate the trimmer.
  2. Start the engine and allow it to run until it stops. This ensures that there is no fuel in the carburetor.
  3. Allow the engine to cool. Remove the spark plug and put approximately one ounce of any high quality motor oil or 2-cycle oil into the cylinder. Pull the starter rope slowly to distribute the oil. Reinstall the spark plug, but do not connect the wire to the spark plug.
- NOTE:** Remove the spark plug and drain all of the oil from the cylinder before starting the trimmer after storage.
4. Thoroughly clean the unit and inspect for any loose or damaged parts. Repair or replace damaged parts and tighten loose screws, nuts or bolts.
  5. Store the trimmer in a dry, well-ventilated area.



### WARNING

- Be extremely careful because the engine must be running to use up fuel in the carburetor.
- When the engine is running, cutting head or metal blade is rotating and other parts are moving.
- Contact with rotating cutting head, metal blade or other moving parts could cause personal injury or death.
- Keep hands, feet and face away from concealed, moving or rotating parts.

# TROUBLESHOOTING

PROBLEM	CAUSE	ACTION
<b>Engine Will Not Start</b>	Ignition switch is "OFF"	Turn switch to "ON".
	Empty fuel tank	Fill fuel tank.
	Primer bulb wasn't pushed enough	Press primer bulb fully and slowly 5-7 times.
	Engine flooded	Use starting procedure WITHOUT USING CHOKE.
<b>Engine Will Not Idle</b>	Cutting head bound with grass	Stop engine and clean cutting head.
	Carburetor Misadjusted	Adjust carburetor.
<b>Engine Will Not Accelerate</b>	Carburetor Misadjusted	Adjust carburetor.
<b>Engine Lacks Power or Stalls When Cutting</b>	Dirty air filter	Clean or replace air filter.
	No Oil in Fuel	Add oil to fuel.
<b>Cutting Head Will Not Advance Line</b>	Head Out of Line	Refill with new cutting line.
	Inner Reel Bound Up	Replace inner reel.
	Head Dirty	Clean reel and spool.
	Indexing Teeth Worn or Burred	Replace reel and spool.
	Line Welded (melted together)	Disassemble, remove the welded section and rewind the line.
	Line Twisted When Refilled	Disassemble and rewind reel.
	Not Enough Line Is Exposed	Push the Bump Knob and pull out 4 in. (102 mm) of line until the line is outside of the cutting head.
If further assistance is required, contact your local authorized service dealer.		



Consumer  
Products

## 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 workmanship 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). ProLine riding products, wide area walk behind mowers 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         |
|--|-------------------------|
| • Garden Tractors  |                         |
| Chassis .....  | 1 year limited warranty |
| Engine .....   | 2 year limited warranty |
| • 21" Commercial Duty Walk Mower<br>with blade stop controls ....  | 1 year limited warranty |
| • Lawn Tractors, Yard Tractors, Rear Engine Riders,<br>3.0 and 3.5 HP Edgers<br>Straight Shaft Trimmers,<br>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  
Bloomington, MN 55420-1196  
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.