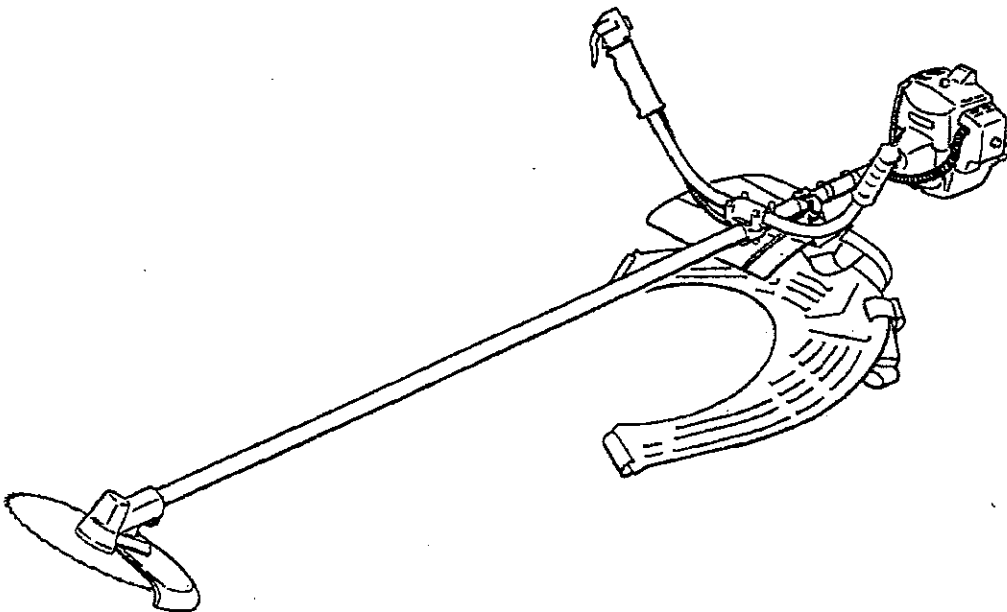




**BC4200H**



# Owner's/Operator's Manual

Completely read and understand this manual before using this product.



## Limited Warranty Statement

All Maruyama products are warranted to the original purchaser to be free from defects in material and workmanship **from the date of purchase** for the time periods listed as follows:

**Lifetime** for inner drive shafts on trimmers and brushcutters and all ignition modules. **3 years** for residential, non-institutional, non-income producing use. **1 year** for industrial, commercial, institutional, rental and income producing use.

Any part of a Maruyama product found to be defective within the applicable warranty period shall, at Maruyama's option, be repaired or replaced without charge. Warranty consideration is obtained by delivering any Maruyama product believed to be defective to an Authorized Maruyama Servicing Dealer within the applicable warranty period.

The purchaser shall not be charged for diagnostic labor that leads to the determination that a warranted part is defective, if the diagnostic work is performed at a Maruyama Dealer.

Any warranted part which is not scheduled for replacement as required maintenance, or which is scheduled only for regular inspection to the effect of "repair or replace as necessary" shall be warranted for the warranty period. Any warranted part which is scheduled for replacement as required maintenance shall be warranted for the period of time up to the first scheduled replacement point for that part. Maruyama Mfg. Co., Inc. is liable for damages to other engine components caused by the failure of warranted part still under warranty.

The purchaser is responsible for the performance of the required maintenance, as defined by Maruyama Mfg. Co., Inc. in the Owner's/Operator's Manual.

**EMISSION-RELATED PARTS WARRANTY:** In addition to the above warranty coverage, Maruyama Mfg. Co., Inc. will repair or replace, free of charge, for the original purchaser and each subsequent purchaser any emission-related part or parts found to be defective in material and workmanship for two (2) years from original retail delivery date. **Emission-related parts are the carburetor assembly, the ignition coil assembly, the ignition rotor and the spark plug.** Any replacement part that is equivalent in performance and durability may be used in non-warranty maintenance or repairs, and shall not reduce the warranty obligations of Maruyama Mfg. Co., Inc.

**This warranty does not cover the following:**

1. Maintenance items (excluding defects in materials and workmanship) including hoses, spark plugs, starter rope, air and fuel filters, clutch shoes, vibration isolators, throttle cables and all cutting attachments, etc.
2. Extra expenses including shipping and handling, travel, payment for lost time or pay and for any inconvenience and storage.
3. Alterations or modifications including aftermarket parts not authorized by Maruyama U.S., Inc.
4. Wear, accident, abuse, neglect, misuse, negligence, improper fuels, lubricants, fuel mixtures (when applicable), or failure to operate or maintain the product in accordance with instructions approved by Maruyama.

Repair or replacement as provided under this warranty is the exclusive remedy of the consumer. Maruyama shall not be liable for any incidental or consequential damages for breach of any express or implied warranty on these products except to the extent prohibited by applicable law. Any implied warranty of merchantability or fitness for a particular purpose on these products is limited in duration to the warranty period as defined in the limited warranty statement. Maruyama reserves the right to change or improve the design of the product without notice and does not assume obligation to update previously manufactured products.

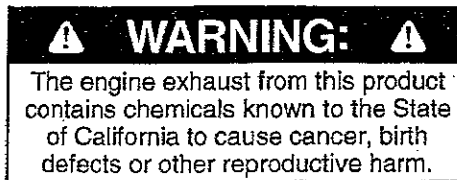
This warranty provides you with specific legal rights which may vary from state to state.

It is the Owner's and Dealer's responsibility to make sure the Warranty Registration Card is properly filled out and mailed to Maruyama U.S., Inc. Proof of purchase and registration will be required in order to obtain warranty service.

To locate an Authorized Maruyama Servicing Dealer nearest you, contact Maruyama U.S., Inc. at 1-425-885-0811.

**Maruyama U.S., Inc.**  
**PO Box 309**  
**Auburn, WA 98071-0309**

Effective March 1, 1997



## REVISED

### FEDERAL EMISSION CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

The U.S. Environmental Protection Agency (EPA) and Maruyama Manufacturing Company, Inc. are pleased to explain the emission control system warranty on your small nonroad engine. New 1997 and later model year small nonroad engines must be designed, built and equipped, at the time of sale, to meet the U.S. EPA regulations for small nonroad engines. The equipment engine must be free from defects in materials and workmanship which cause it to fail to conform with U.S. EPA standards for the first two years of engine use from the date of sale to the ultimate purchaser. Maruyama Manufacturing Company, Inc. must warrant the emission control system on your small nonroad engine for the period of time listed above provided there has been no abuse, neglect or improper maintenance of your small nonroad engine.

Your emission control system may include parts such as the carburetor or fuel injection system, the ignition system, and catalytic converter. Also included may be hoses, belts, and connectors and other emission related assemblies.

Where a warrantable condition exists, Maruyama Manufacturing Company, Inc. will repair your small nonroad engine at no cost to you, including diagnosis (if the diagnostic work is performed at an authorized dealer), parts, and labor.

#### **MANUFACTURER'S WARRANTY COVERAGE:**

1997 and later model year small nonroad engines are warranted for two years. If any emission-related part on your engine is defective, the part will be repaired or replaced by Maruyama Manufacturing Company, Inc. free of charge.

#### **OWNER'S WARRANTY RESPONSIBILITIES:**

- (a) As the small nonroad engine owner, you are responsible for the performance of the **required maintenance listed in your owner's manual.**

Maruyama Manufacturing Company, Inc. recommends that you retain all receipts covering maintenance on your small nonroad engine, but Maruyama Manufacturing Company, Inc. cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance. Any replacement part or service that is equivalent in performance and durability may be used in non-warranty maintenance or repairs, and shall not reduce the warranty obligations of the engine manufacturer.

- (b) As the small nonroad engine owner, you should be aware, however, that Maruyama Manufacturing Company may deny you warranty coverage if your small nonroad engine or a part

has failed due to abuse, neglect, improper maintenance or unapproved modifications.

- (c) You are responsible for presenting your small nonroad engine to a Maruyama Manufacturing Company, Inc. service center as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed **30 days**.

If you have any questions regarding your warranty rights and responsibilities, you should contact Maruyama U.S., Inc. at **1 253-735-7368**

## **COVERAGE**

Maruyama Manufacturing Company, Inc. warrants to the ultimate purchaser and each subsequent purchaser that your small nonroad engine will be designed, built and equipped, at the time of sale, to meet all applicable regulations. Maruyama Manufacturing Company, Inc. also warrants to the initial purchaser and each subsequent purchaser that your small nonroad engine is free from defects in materials and workmanship which cause the engine to fail to conform with applicable regulations for a period of two years.

1997 and later model years, EPA requires manufacturers to small nonroad engines for two years. These warranty periods will begin on the date the small nonroad engine is purchased by the initial purchaser. If any emission-related part on your engine is defective, the part will be replaced by Maruyama Manufacturing Company, Inc. at no cost to the owner.

Maruyama Manufacturing Company, Inc. shall remedy warranty defects at any authorized Maruyama Manufacturing Company, Inc. engine dealer or warranty station. Any authorized work done at an authorized dealer or warranty station shall be free of charge to the owner if such work determines that a warranted part is defective. Any manufacturer-approved or equivalent replacement part may be used for any warranty maintenance or repairs on emission-related parts, and must be provided free of charge to the owner if the part is still under warranty, Maruyama Manufacturing Company, Inc. is liable for damages to other engine components caused by the failure of a warranted part still under warranty.

EPA's regulations do not include a parts list, but EPA considers emission-related warranted parts to include all the parts listed below. These warranted parts are: **the carburetor assembly, the ignition coil assembly, the ignition rotor and the spark plug.**

## **MAINTENANCE REQUIREMENTS**

The owner is responsible for the performance of the required maintenance as defined by the Maruyama Manufacturing Company, Inc. in the owner's manual.

## **LIMITATIONS**

This Emission Control System Warranty shall not cover any of the following:

- (a) repair or replacement required because of misuse or neglect, lack of required maintenance, repairs improperly performed or replacements not conforming to Maruyama Manufacturing Company, Inc. specifications that adversely affect performance and/or durability, and alterations or modifications not recommended or approved in writing by Maruyama Manufacturing Company, Inc., and
- (b) replacement of parts and other services and adjustments necessary for required maintenance at and after the first scheduled replacement point.

# FOREWORD

This Owner's/Operator's Manual is designed to familiarize the operator with the various features and component parts of the equipment and to assist you with the assembly, operation and maintenance of your new Trimmer/Brushcutter.

**It is essential that any operator of this Trimmer/Brushcutter product reads and understands the contents of this manual before using the Trimmer/Brushcutter.**

Important safety instructions will be identified by the following safety symbol:



Failure to comply with the instructions in this manual may result in serious injury or death. For additional assistance, contact any local authorized Maruyama dealer or Maruyama U.S., Inc., 301 – 30<sup>th</sup> St. NE, Suite 118, Auburn, WA 98002.

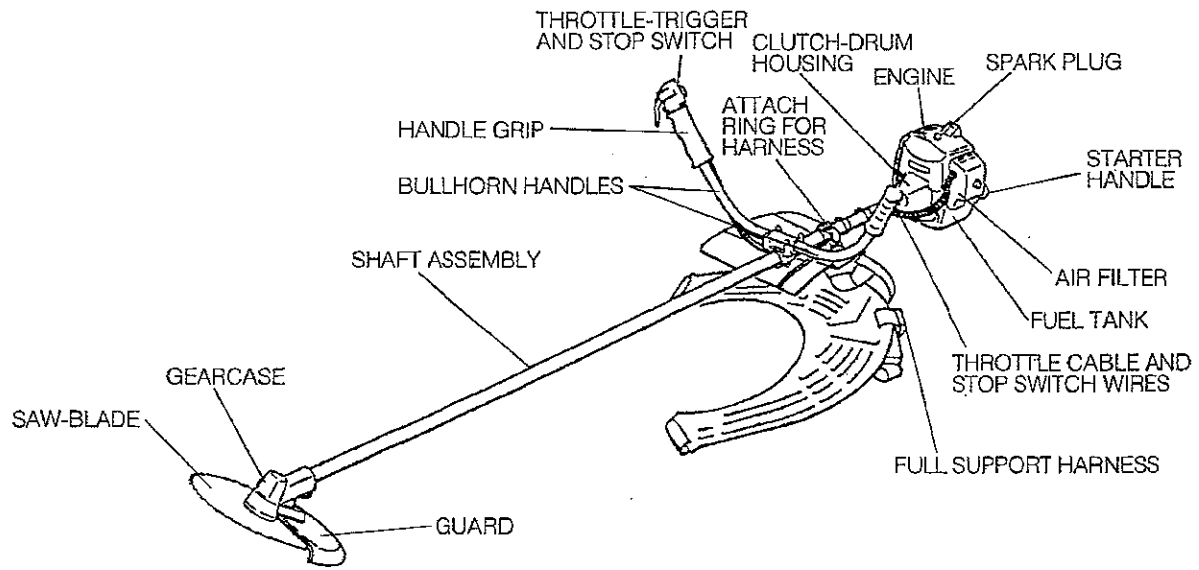
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## SPECIFICATIONS

<b>Model</b>	<b>BC4200H</b>
Dry Weight	8.6 kg (19.0 lbs.)
Handle Configuration	Bullhorn
Engine Displacement	41.5 cc
Fuel Tank Capacity	1.0 ℓ (1.06 qts.)
Carburetor	Walbro Diaphragm Type
Ignition System	Solid State
Spark Plug:	
Make	NGK
Type	BPM6Y
Electrode Gap	0.6 ~ 0.7 mm (0.024 ~ 0.028 in.)
<b>Fuel Mixture:</b>	
Using Maruyama 50:1 2-Cycle Engine Oil or any quality two-cycle engine oil designed for use in air-cooled, high performance two-cycle engines.	50:1

# PRODUCT DESCRIPTION



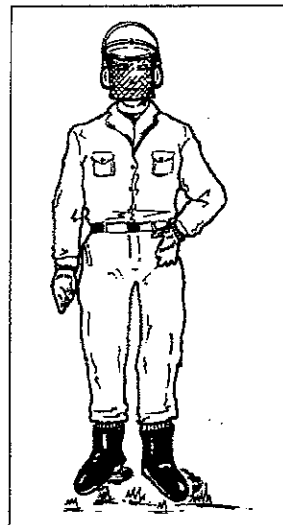


## WARNING

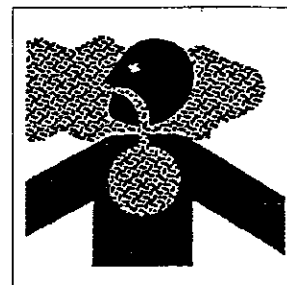


### Operator safety

1. Read and understand this Owner's/Operator's Manual before using this product. Be thoroughly familiar with the proper use of this product.
2. Always wear eye protection that complies with ANSI (American National Standards Institute) Z87-1.
3. Wear hearing protection.
4. Always wear heavy, long pants, boots and gloves. Do not wear loose clothing, jewelry, short pants, sandals or go barefoot. Secure hair so it is above shoulder length.



5. Never operate this trimmer/brushcutter when you are tired, ill or under the influence of alcohol, drugs or medication.
6. Never start or run the engine inside a closed room or building. Breathing exhaust fumes can cause death.



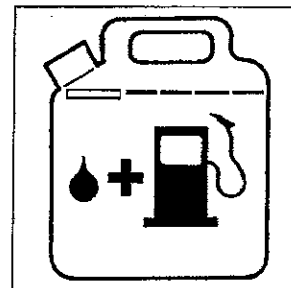
7. Keep handles clean of oil, fuel and dirt.

### Trimmer/Brushcutter safety

1. Make sure the trimmer/brushcutter is properly assembled and that the trimmer/brushcutter cutting attachment is properly installed and securely fastened as instructed in the ASSEMBLY INSTRUCTIONS section.
2. Inspect the trimmer/brushcutter before each use. Replace damaged parts. Check for fuel leaks. Make sure all fasteners are in place and tightened securely. Follow the maintenance instructions provided on page 15 to 18 of this manual.
3. Inspect the trimmer/brushcutter monofilament line head or blade (cutting attachment) and replace any parts that are cracked, chipped, or damaged before using the trimmer/brushcutter.
4. Use flexible, non-metallic, monofilament cutting line of the correct diameter. Never use wire, rope, string, etc.
5. Never use a trimmer/brushcutter monofilament line head or blade (cutting attachment) that is not approved by Maruyama U.S., Inc.
6. Install the required cutting attachment shield before using the trimmer/brushcutter.
7. Make sure the trimmer/brushcutter cutting attachment does not rotate at engine idle speed. Refer to section CARBURETOR ADJUSTMENT, page 13.
8. Maintain the trimmer/brushcutter in accordance with the recommended maintenance intervals and procedures in the maintenance section, pages 15 to 18.
9. If running problems or excessive vibration occur, stop immediately and inspect the unit for the cause. If the cause cannot be determined or is beyond your ability to correct, return the trimmer/brushcutter to your servicing dealer for repair.

### Fuel safety

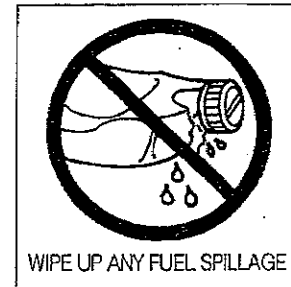
1. Gasoline is highly flammable and must be handled and stored carefully. Use a container approved for storing gasoline and/or fuel/oil mixture.



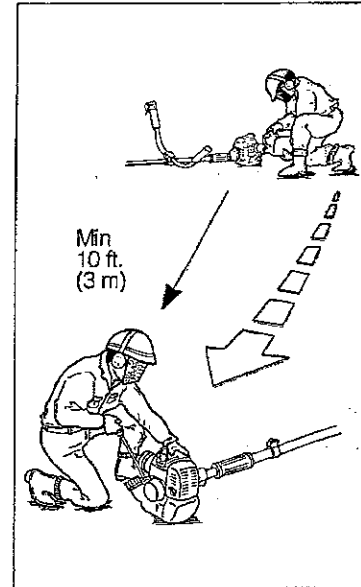
2. Mix and pour fuel outdoors and where there are no sparks or flames.
3. Do not smoke near fuel or the trimmer/brushcutter or while using the trimmer/brushcutter.
4. Do not overfill the fuel tank. Stop filling 1/4-1/2 inch from the top of the tank.



- Wipe up any spilled fuel before starting the engine.

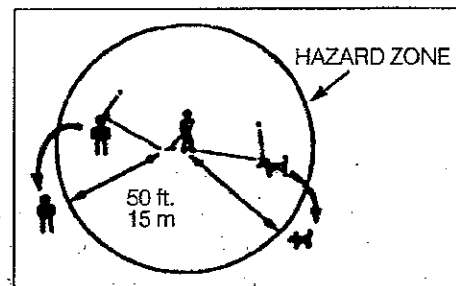


- Move the trimmer/brushcutter at least 10 feet (3 m) away from the fueling location before starting the engine.
- Do not remove the trimmer/brushcutter fuel tank cap while the engine is running or right after stopping the engine.
- Allow the engine to cool before refueling.
- Empty the fuel tank before storing the trimmer/brushcutter. Fuel should be emptied after each use. Fuel left in the tank during storage may leak.
- Store fuel and trimmer/brushcutter away from open flame, sparks and excessive heat. Make sure fuel vapors cannot reach sparks or open flames from water heaters, furnaces, electric motors, etc.



### Trimmer/Brushcutter operating safety

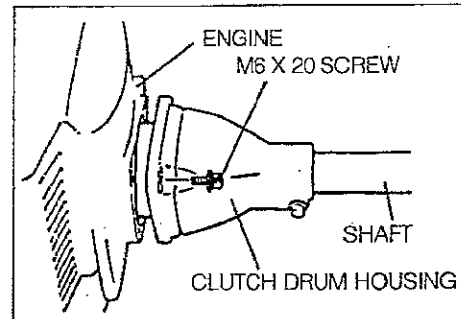
- Inspect your work area before you begin. Remove objects such as broken glass, nails, wire and rocks which can become dangerous projectiles if thrown by the trimmer. Remove string, rope or similar materials which can become entangled in the trimmer head.
- This trimmer/brushcutter will throw objects and cut. Keep children, bystanders and animals outside a 50 ft. (15 m) radius from the operator and trimmer/brushcutter. Beyond the 50 ft. (15 m) there still may be a risk of injury to bystanders from thrown objects. It is recommended that bystanders wear eye protection. A thrown object can ricochet.
- If the operator is approached, stop the engine and cutting attachment rotation.
- Keep firm footing and balance. Do not over-reach.
- Do not raise the trimmer/brushcutter cutting attachment above waist level.
- Keep all parts of your body away from the rotating trimmer/brushcutter cutting attachment and hot surfaces such as the muffler.



# ASSEMBLY INSTRUCTIONS

## ENGINE AND DRIVESHAFT ASSEMBLY

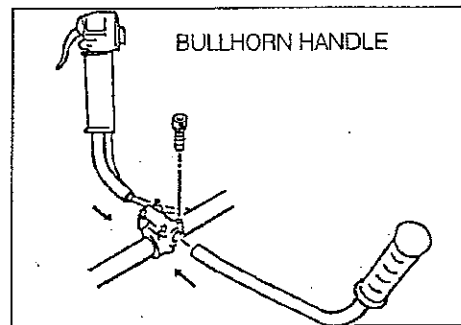
The driveshaft, clutch drum housing and gearhead are preassembled. Attach the powerhead to the driveshaft assembly using the four M6 x 20 screws supplied with the powerhead.



## BULLHORN HANDLE INSTALLATION

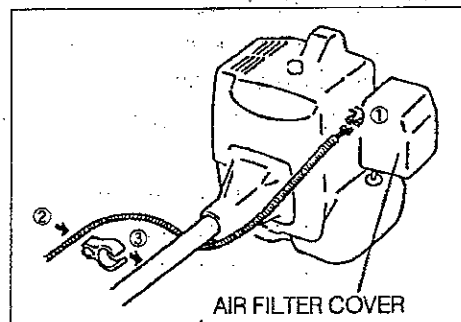
### **BULLHORN HANDLE:**

Use caution when removing the handles from the carton to avoid damage to the cables. The right handle, with the throttle-trigger and cable attached, and left handle are installed by loosening four screws on top of the clamp bracket attached to the shaft. Insert the handles as shown and tighten the four screws.

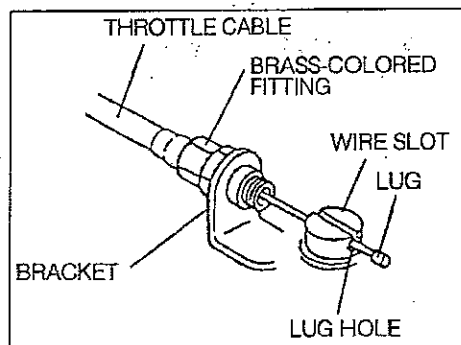


## THROTTLE CABLE AND WIRING

- ① Remove the air filter cover and connect the stop-switch wires.  
(Connections are near the carburetor.)
- ② Fit the throttle cable in the cable clip.
- ③ Attach the cable to the shaft using the clip.

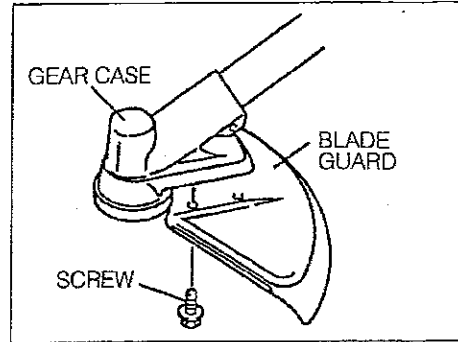


Insert the throttle cable through the bracket on the carburetor. Make sure that the end of the cable housing fits into the sleeve on the adjuster fitting. Position the slotted fitting on the carburetor so that the recessed hole for the cable lug is away from the cable adjuster fitting. Rotate the throttle barrel by hand to bring the cable fitting closer to the cable then slip the throttle cable through the slot on the fitting. Make sure that the cable lug drops into the recessed hole.



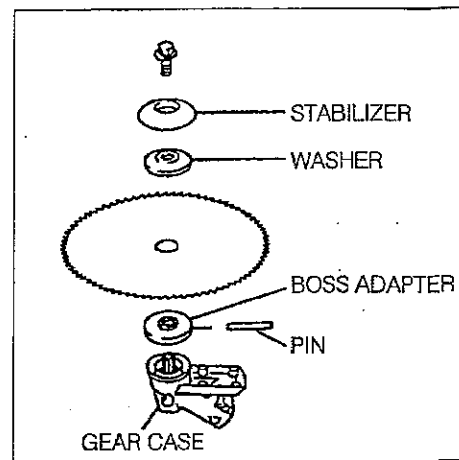
## **BLADE GUARD**

Attach the blade guard to the shaft with four bolts, as illustrated.




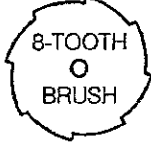
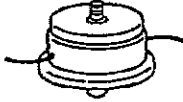
## **BRUSH-BLADE**

Brush-blades must be installed for LEFT-HAND (counter-clockwise) rotation (as viewed from the operator's position), and to correctly position all blade-holding parts (see sketch).



**CAUTION:** If the trimmer/brushcutter cutting attachment is not adequately tightened, it can come loose from the trimmer/brushcutter during use and may cause damage to property or personal injury.

## **OPTION**

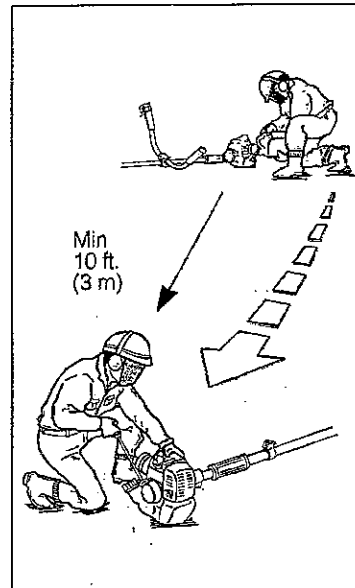
		
<p>P/N 054751 (10 inch)</p>	<p>P/N 913147 (10 inch)</p>	<p>P/N 264075 (MARU-MATIC TAP HEAD 6)</p>

# BEFORE OPERATION

## FUELING

**WARNING!** The following precautions will lessen the risk of fire.

1. Do not smoke near fuel.
2. Mix and pour fuel outdoors and where there are no sparks or flames.
3. Always shut off the engine before refueling. Never remove the trimmer/brushcutter fuel tank cap while the engine is running or right after just stopping the engine.
4. Always open the fuel tank cap slowly to release any possible overpressure inside the tank.
5. Do not overfill the fuel tank. Stop filling 1/4–1/2 inch from the top of the tank.
6. Tighten the tank fuel cap carefully but firmly after refilling.
7. Wipe up any spilled fuel before starting the engine.
8. Move the trimmer/brushcutter at least 10 feet away from the fueling location and fuel storage container before starting the engine.



## FUEL: MIXING GASOLINE AND OIL

**CAUTION!** The engine used on this trimmer/brushcutter is of a 2-cycle design. The internal moving parts of the engine; i.e., crankshaft bearings, piston pin bearings and piston to cylinder wall contact surfaces, require oil mixed with the gasoline for lubrication. Failure to add oil to the gasoline or failure to mix oil with the gasoline at the appropriate ratio will cause major engine damage which will void your warranty. For your fuel premix, only use Maruyama 50:1 2-Cycle Oil or a quality oil designed for 2-cycle air cooled engines.

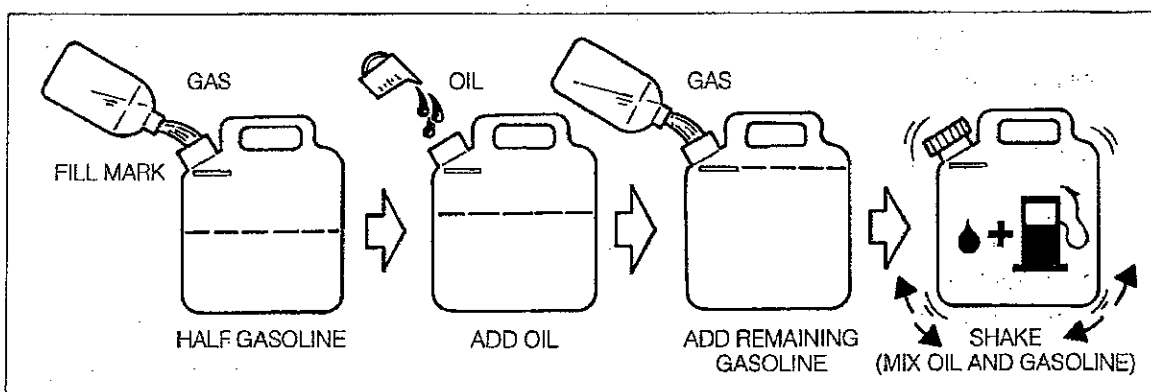
**FUEL MIXTURE:** When using genuine Maruyama 50:1 2-Cycle Oil, or a quality oil designed for 2-cycle air-cooled engines, oil ratio is 50 parts gasoline to 1 part oil or 50:1.

**CAUTION:** If Maruyama oil is not used, never use a mixing ratio less than 50:1 regardless of the oil package mixing instructions. Ratios less the 50:1, (for example, 60:1, 80:1, 100:1), reduce the amount of lubrication to the internal moving parts of the engine and can cause damage.

### **FUEL MIXTURE CHART:**

Gasoline	Maruyama 50:1 2-Cycle Oil
1 gallon	2.6 oz.
2 1/2 gallons	6.4 oz.
5 gallons	12.8 oz.

**MIXING INSTRUCTIONS:** Always mix fuel and oil in a clean container approved for gasoline. Mark the container to identify it as fuel mix for the trimmer/brushcutter. Use regular unleaded gasoline and fill the container with half the required amount of gasoline. Pour the correct amount of oil into the container then add the remaining amount of gasoline. Close the container tightly and shake it momentarily to evenly mix the oil and the gasoline before filling the fuel tank on the trimmer/brushcutter.



When refilling the trimmer/brushcutter fuel tank, clean around the fuel tank cap to prevent dirt and debris for entering the tank during cap removal. Always shake the premix fuel container momentarily before filling the fuel tank.

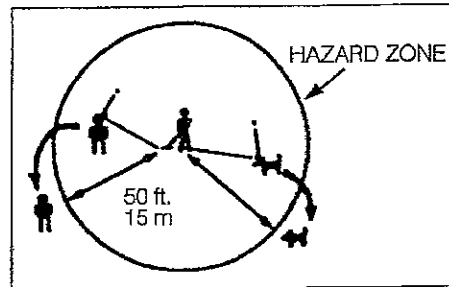
Always use a spout or funnel when fueling to reduce fuel spillage. Only fill the tank to within 1/4–1/2 inch from the top of the tank. Avoid filling to the top of the tank filler neck.

### **NOTE:**

1. Never mix gasoline and oil directly in the trimmer/brushcutter fuel tank.
2. Do not use National Marine Manufacturer's Association (NMMA) or BIA certified oils. This type of 2-cycle engine oil does not have the proper additives for air-cooled, 2-cycle engines and can cause engine damage.
3. Do not use automotive motor oil. This type of oil does not have the proper additives for air-cooled, 2-cycle engines and can cause engine damage.

# STARTING AND STOPPING PROCEDURE

**Before Starting The Engine:** Fill the fuel tank as instructed in the BEFORE OPERATION section of this manual. Rest the trimmer/brushcutter on the ground. Make sure that the trimmer/brushcutter head is clear of branches, shrubs, debris, etc., and can turn freely. Keep all bystanders, children and animals at least 50 ft. (15 m) away from the working area.



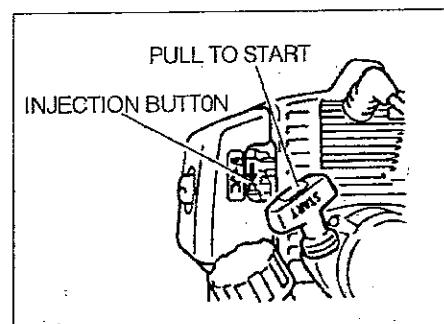
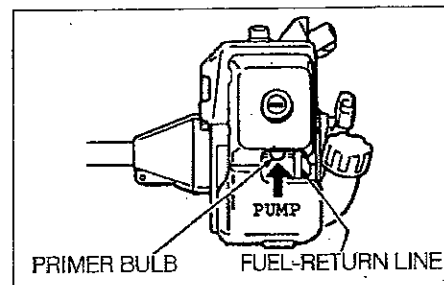
## Maruyama Trimmer/Brushcutter Idle Start System:

This Maruyama trimmer/brushcutter is equipped with a fuel primer and idle start system. The fuel primer and idle start systems make the Maruyama extremely easy to start regardless of the engine and/or ambient temperature.

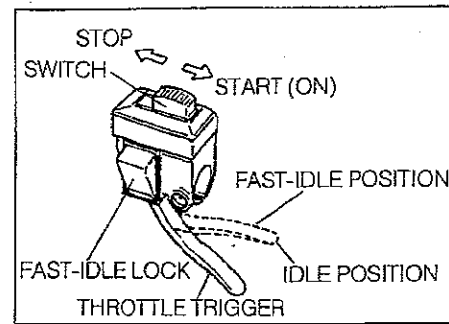
The fuel primer draws fuel from the tank up to and through the carburetor where it initially primes (fills) all of the fuel passages while forcing out air. The air and excess fuel is returned to the fuel tank through the fuel return hose. **The fuel priming system does not allow fuel to flow into the engine** so it is not possible to over prime and flood the engine with fuel regardless of the number of times the fuel primer-bulb is depressed.

## To Start A Cold Engine:

1. Pump the primer-bulb at the bottom of the carburetor until fuel can be seen flowing through the fuel-return line to the fuel tank. (Flowing fuel should be clear, not foamy or full of bubbles.)
2. Fully depress and hold down the black injection button for approximately 4 seconds, then release.



3. With the stop switch "ON", and the throttle trigger positioned at IDLE, pull the starter cord. The engine should start at IDLE within 5 to 6 pulls.



### To Start A Warm Engine:

For starting an engine that is already warmed-up (hot restart), or if the ambient temperature exceeds 70°F (20°C), the injection button should not be used. Follow steps 1 and 3 only.

If the engine fails to start at the IDLE position, set the throttle trigger at the FAST-IDLE position (see sketch).

Then repeat the starting procedure (prime, injection, and pull).

(If a MARUYAMA engine fails to start after following the above procedures, contact an authorized MARUYAMA dealer.)

### To Stop The Engine:

Always run the engine at idle speed for a few minutes to allow cooling before stopping. To stop the engine, move the stop-switch to the STOP position.



If the stop-switch fails to stop the engine, pump the primer-bulb at the bottom of the carburetor a few times, then depress the black injection button.

(Repair the stop-switch.)

## CARBURETOR ADJUSTMENT

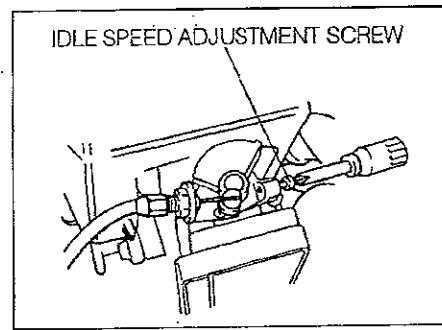
This trimmer/brushcutter is equipped with non-adjustable fuel mixture carburetor. The engine idle speed is the only adjustment to the Operator.

**CAUTION:** The trimmer/brushcutter cutting attachment may be spinning during idle speed adjustment. Wear the recommended personal protective equipment and observe all safety instructions.

### Engine Idle Speed:

When the throttle trigger is released the engine should return to an idle speed which is 2400—2800 rpm or just below clutch engagement speed. The trimmer/brushcutter cutting attachment must not move and the engine should not stall (stop running) at engine idle speed.

The engine idle speed is adjusted by rotating the idle speed screw on the carburetor. Turning the idle speed screw in (clockwise) increases engine speed while turning the screw out decreases engine speed.



If idle speed adjustment is necessary and after adjustment the trimmer/brushcutter cutting attachment rotates or the engine stalls, **stop using the Trimmer/Brushcutter immediately!** Contact your local authorized Maruyama Dealer for assistance and servicing.

## OPERATING THE TRIMMER/BRUSHCUTTER



**CAUTION**—Read the WARNING INSTRUCTIONS on page (5) concerning the proper use of the trimmer/brushcutter.

All MARUYAMA trimmers and brushcutters are designed and tested to cut nearly all grasses, thick weeds and brush. As you continue to use the equipment, many tasks will become easier.

By properly adjusting the handles and the full support harness MARUYAMA trimmers and brush cutters can and should be operated while standing in a natural position. (See the ASSEMBLY INSTRUCTIONS for handles on page 8).



**CAUTION**—Remove any holding tools before operating the equipment!

### USING METAL CUTTING BLADES

#### ALL MODELS:



**CAUTION**—Read the WARNING INSTRUCTIONS concerning proper use of the brushcutter on page (5).



**CAUTION**—Observe all warnings that appear on the brushcutter.



**CAUTION**—Use only the correct blade approved for the task and the machine. See the Blade Chart and Instructions on page (9).



**CAUTION**—Always use the Full Support Harness when operating a brushcutter with a metal blade. The brushcutter must be positioned to the right side of the operator when used with a metal blade.



**CAUTION**—Always make certain the blade is installed to rotate in the proper direction and that all holding and fastening parts are correctly secured.





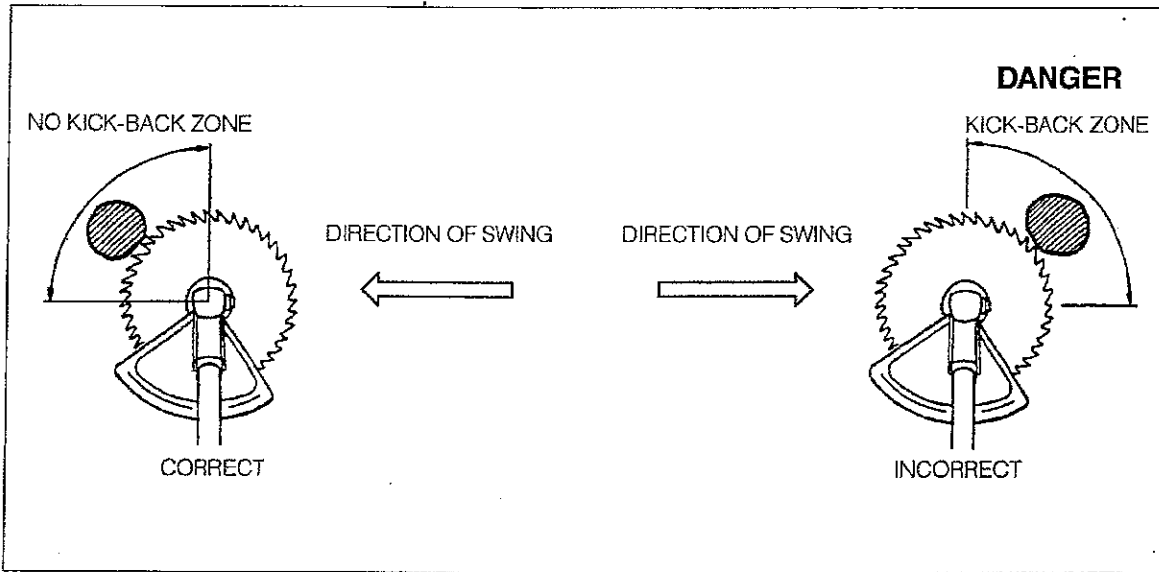
**CAUTION**—Remove any holding tools before operating the equipment!



**CAUTION**—Do not continue to use a blade that is dull, damaged, or that vibrates during use. Whenever a cutting blade becomes clogged with debris, immediately stop the engine and wait until the blade completely stops rotating and clean the blade.



**CAUTION**—When cutting heavy brush or small trees, use the proper method to avoid dangerous “KICK-BACK” (see sketch).

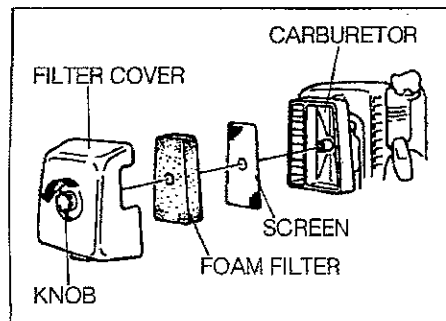


## REGULAR MAINTENANCE

### AIR FILTER

**Maintenance Interval:** The air filter should be cleaned daily or more often when working in extremely dusty conditions and replaced after every 100 hours of operation.

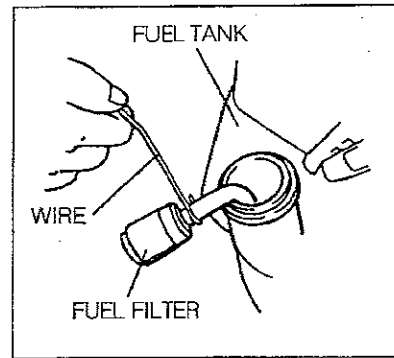
**Maintenance:** Remove the air filter cover by unscrewing the single knob (see sketch). Remove the foam filter. Clean the filter with warm, soapy water. Let the filter completely dry. Lightly apply SAE 30 motor oil to the foam filter and squeeze out all excess oil. Reassemble the filter and filter cover.



## **FUEL FILTER**

**Maintenance Interval:** The fuel filter should be replaced after every 100 hours of operation.

**Maintenance:** The fuel filter is attached to the end of the fuel pick-up hose inside the fuel tank. To replace the fuel filter, first make sure the fuel tank is empty. Remove the fuel cap. Using a wire hook, gently pull the fuel filter out through the fuel filter opening. Grasp the fuel hose next to the fuel filter fitting and remove the filter **but do not release the hose**. While still holding on to the fuel hose, attach the new fuel filter. Drop the fuel filter back into the fuel tank. Make sure that the fuel filter is not stuck in a corner of the tank and that the fuel hose is not doubled over (kinked) before refueling.

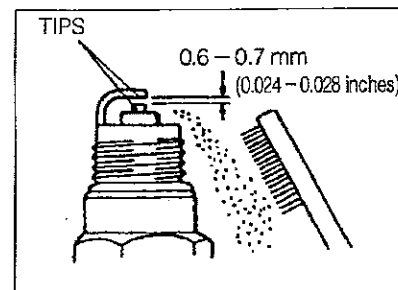


## **SPARK PLUG**

**Maintenance Interval:** The spark plug should be removed from the engine and checked after each 25 hours of operation and replaced after every 100 hours of operation.

**Maintenance:** Loosen the engine cover screw and lift off the engine cover. (Refer to the illustration shown in the following **CYLINDER COOLING FINS** section.) Twist the high tension lead boot on the spark plug back and forth a couple of times to loosen boot then pull the boot off of the spark plug. Remove the spark plug. The electrodes can be cleaned with a stiff brush. Adjust the electrode air gap to 0.6–0.7 mm (0.024–0.028 in.). Replace the spark plug if it is oil-fouled, damaged or if the electrodes are worn down. **Do not overtighten the spark plug**

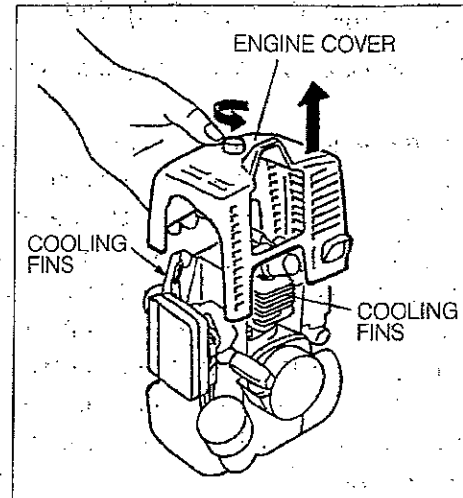
**when installing.** The tightening torque is 10.7–16.6 Nm (95–148 in. lbs.). Reinstall the engine covers.



## **CYLINDER COOLING FINS**

**Maintenance Interval:** The cylinder cooling fins should be cleaned after every 25 hours of operation or once a week whichever ever comes first. Air must flow freely around and through the cylinder cooling fins to prevent engine overheating. Leaves, grass, dirt and debris buildup on the fins will increase the operating temperature of the engine which can reduce engine performance and shorten engine life.

**Maintenance:** With the engine at ambient (room) temperature, loosen the engine cover screw and lift off the engine cover. Clean all dirt and debris from the cooling fins and from around the cylinder base. Reinstall the engine cover.

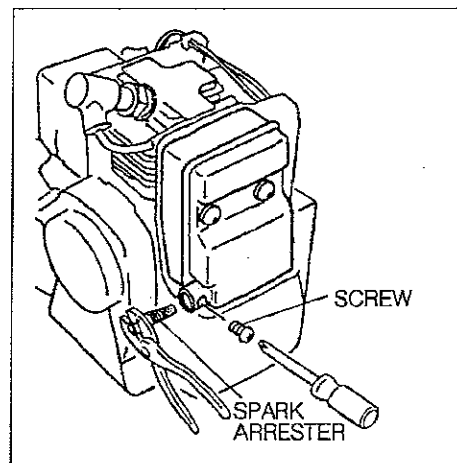


## **SPARK ARRESTER**

**Maintenance Interval:** The spark arrester should be inspected and cleaned after every 25 hours of use. Replace the screen if it cannot be thoroughly cleaned or if it is damaged.

**Maintenance:** The spark arrester is installed inside the exhaust outlet of the muffler. One screw located on the side of the exhaust outlet holds the spark arrester in place. Remove spark arrester retaining screw, then using a suitable pair of pliers, withdraw the spark arrester. Do not crush or distort the spark arrester flange during removal.

The screen can be cleaned using a non-flammable solvent and a stiff wire brush. To install insert the spark arrester into the exhaust outlet while aligning the holes in the arrester flange and outlet for the retaining screw. Install the screw.



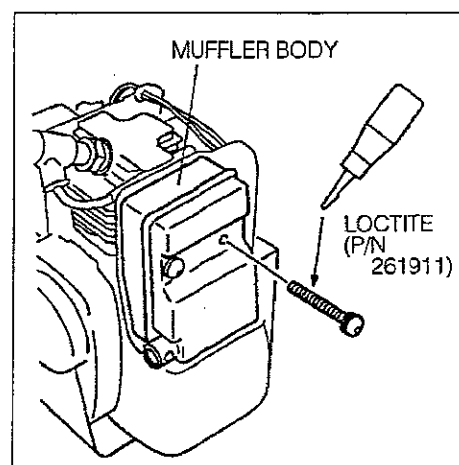
## **EXHAUST MUFFLER**

**Maintenance Interval:** The muffler should be inspected and cleaned after each 100 hours of use.

**Maintenance:** The engine cover must be removed for access to the muffler. Remove three screws and detach the muffler from cylinder so as to clean exhaust port of cylinder, exhaust outlet of muffler and spark arrester.

Put Loctite P/N 261911 on the two bolts which are used to attach the muffler to cylinder.

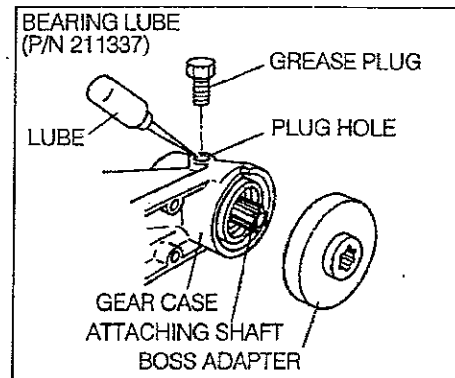
Secure the spark arrester into place with the fastening screw.



## GEARCASE LUBRICATION

**Maintenance Interval:** The gearcase lubricant should be checked after every 30 hours of operation.

**Maintenance:** Remove the trimmer/brushcutter cutting attachment. Slide the boss adapter from the arbor shaft. Wipe off any dirt or debris from the adapter and the surface of seal and gearcase where the boss adapter mounts. Remove the grease filler plug from the side of the gearcase. Fill the gearcase with lithium type grease through the filler opening until grease can be seen coming through the arbor shaft bearing which is visible between the adapter seal and the arbor shaft. Reinstall the grease plug, boss adapter and trimmer/brushcutter cutting attachment.



## GENERAL CLEANING AND TIGHTENING

The MARUYAMA trimmer/brushcutter will provide maximum performance for many, many hours if it is maintained properly. Good maintenance includes regular checking of all fasteners for correct tightness, and cleaning of the entire machine.

## **STORAGE**

For long-term storage of the trimmer/brushcutter, empty the fuel tank into a suitable fuel storage container. Pump the primer bulb on the carburetor until all fuel is discharged through the clear fuel return hose. Run the engine to remove any fuel that may remain in the carburetor. Perform all regular maintenance procedures and any needed repairs. Remove the spark plug and squirt a very small amount of oil into the cylinder. Pull the starter cord once.

**CAUTION:** Oil may squirt out of the spark plug opening while pulling the starter cord. Protect your eyes and keep your face away from the spark plug opening. Slowly pull the starter cord to bring the piston to the top of the cylinder (TDC). Reinstall the spark plug. Store the trimmer/brushcutter in a dry place away from excessive heat, sparks or open flame.

