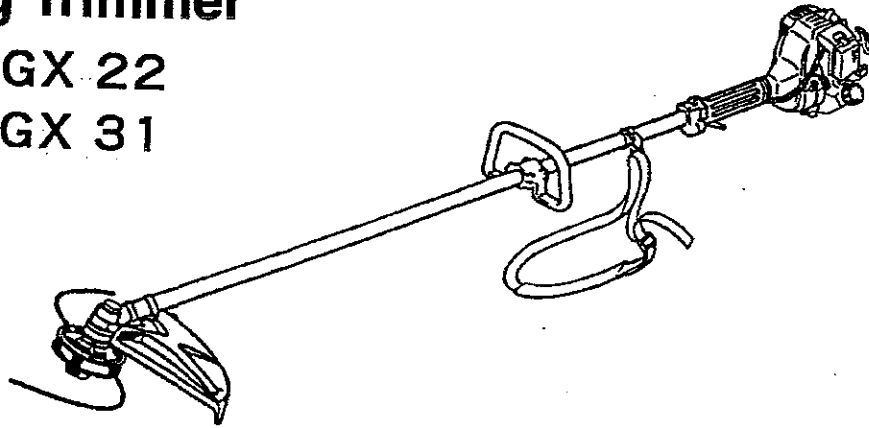




## String Trimmer

BCGX 22

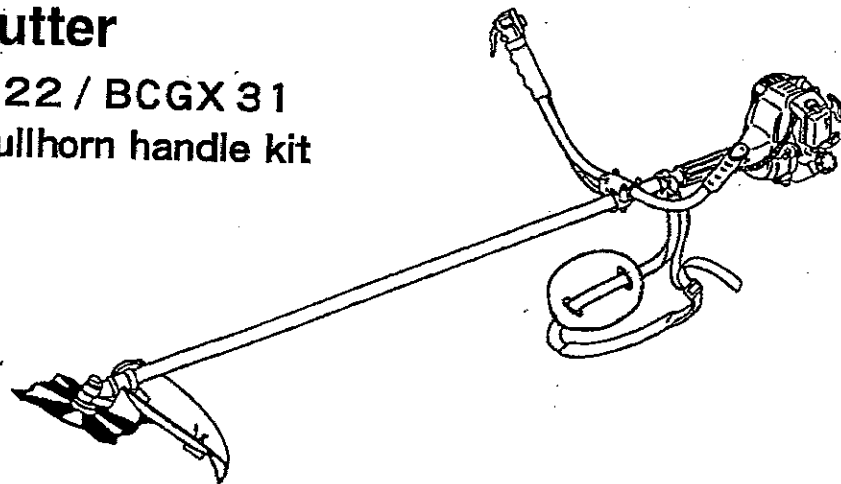
BCGX 31



## Brushcutter

BCGX 22 / BCGX 31

with Bullhorn handle kit



# 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. **Engine, refer to engine manufacturer's warranty statement. Maruyama engines are covered by this limited warranty statement.**

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 1 253-735-7368

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

Effective March 1, 1997

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# Introduction

Thank you for purchasing a Maruyama product.

Maruyama, its distributors, and dealers want you to be completely satisfied with your new product. Please feel free to contact your local Authorized Service Dealer for help with service, genuine Maruyama parts, or other information you may require.

Whenever you contact your Authorized Service Dealer or the factory, always know the serial number of your product. This number will help the Service Dealer or Service Representative provide exact information about your specific product. You will find the model and serial number located in a unique place on the product (Product Description on page 6).

For your convenience, write the product model name and serial number in the space below.

<p><b>Model Name</b> _____</p> <p><b>Serial No.</b> _____</p>
---

Read this manual carefully to learn how to operate and maintain your product correctly. Reading this manual will help you and others avoid personal injury and damage to the product.

Although Maruyama designs, produces and markets safe, state-of-the-art products, you are responsible for using the product properly and safely. You are also responsible for training persons who you allow to use the product about safe operation.

The Maruyama warning system in this manual identifies potential hazards and has special safety messages that help you and others avoid personal injury, even death. DANGER, WARNING and CAUTION are signal words used to identify the level of hazard. However, regardless of the hazard, be extremely careful.

**DANGER** signals an extreme hazard that will cause serious injury or death if the recommended precautions are not followed.

**WARNING** signals a hazard that may cause serious injury or death if the recommended precautions are not followed.

**CAUTION** signals a hazard that may cause minor or moderate injury if the recommended precautions are not followed. Two other words are also used to highlight information. "Important" calls attention to special mechanical information and "Note" emphasizes general information worthy of special attention.

## Safety

### Operator Safety

1. Read and understand this Operator's Manual before using this product. Be thoroughly familiar with the proper use of this product.
2. Never allow children to operate the Trimmer/Brushcutter. It is not a toy. Never allow adults to operate the unit without first reading the Operator's Manual.
3. Always wear eye protection that complies with ANSI (American National Standards Institute) Z87-1.



4. Always wear hearing protection.



5. Always wear heavy, long pants, a long sleeved shirt, boots and gloves. Do not wear loose clothing, jewelry, short pants, sandals, or go barefoot. Secure hair so it is above shoulder length.
6. Never operate this Trimmer/Brushcutter when you are tired, ill, or under the influence of alcohol, drugs or medication.
7. Never start or run the engine inside a closed room or building. Breathing exhaust fumes can cause death.

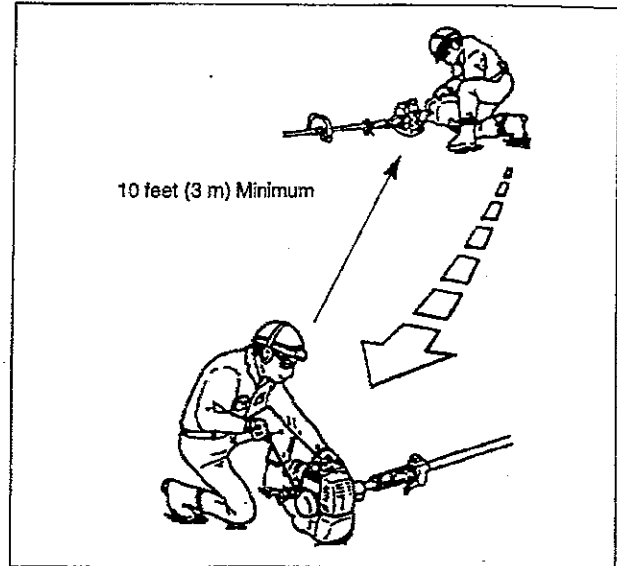


8. Keep handles clean of oil, fuel and dirt.

### Trimmer/Brushcutter Safety

1. Make sure the Trimmer/Brushcutter is assembled correctly and that the Cutting Attachment is correctly installed and securely fastened as instructed in the Assembly 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 beginning on page 19.
3. Make sure the cutting head does not rotate at engine idle speed. Refer to Idle Speed Adjustment, page 14.
4. Inspect the cutting head and replace any parts that are cracked, chipped or damaged before using the Trimmer/Brushcutter.

5. Make sure the cutting head shield is installed and positioned correctly before using the Trimmer/Brushcutter.
6. Never use a cutting head or replacement parts that are not approved by Maruyama.
7. Maintain the Trimmer/Brushcutter according to the recommended maintenance intervals and procedures in the Maintenance section on page 19.
8. Shut off the engine and be certain the cutting head has completely stopped rotating before inverting the Trimmer/Brushcutter, performing maintenance on or working on the machine.
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

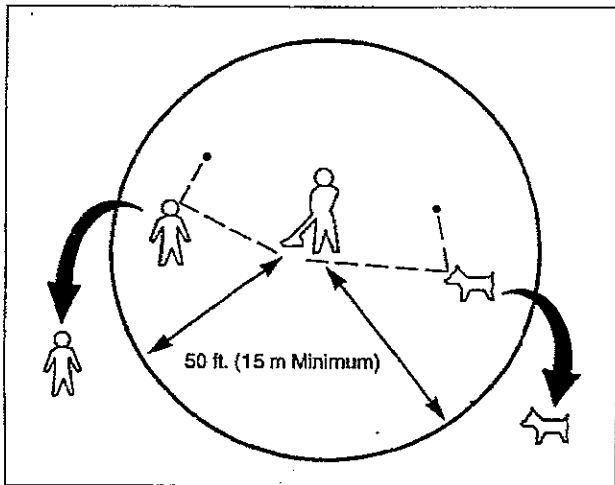
1. Gasoline is highly flammable and must be handled and stored carefully. Use a container approved for fuel for storing gasoline.
2. Pour fuel outdoors and where there are no sparks or flames.
3. Do not smoke near fuel or Trimmer/Brushcutter, or while using the Trimmer/Brushcutter.
4. Do not overfill the fuel tank. Stop filling 1/4-1/2 inch (6 mm-13 mm) from the top of the tank.  
(See HONDA ENGINES Owner's Manual Page 22 REFUELING.)
5. Wipe up any spilled fuel before starting the engine.

7. Do not remove the fuel tank cap while the engine is running, or right after stopping the engine.
8. Allow the engine to cool before refueling.
9. Drain the tank and run the engine dry before storing the unit.
10. 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

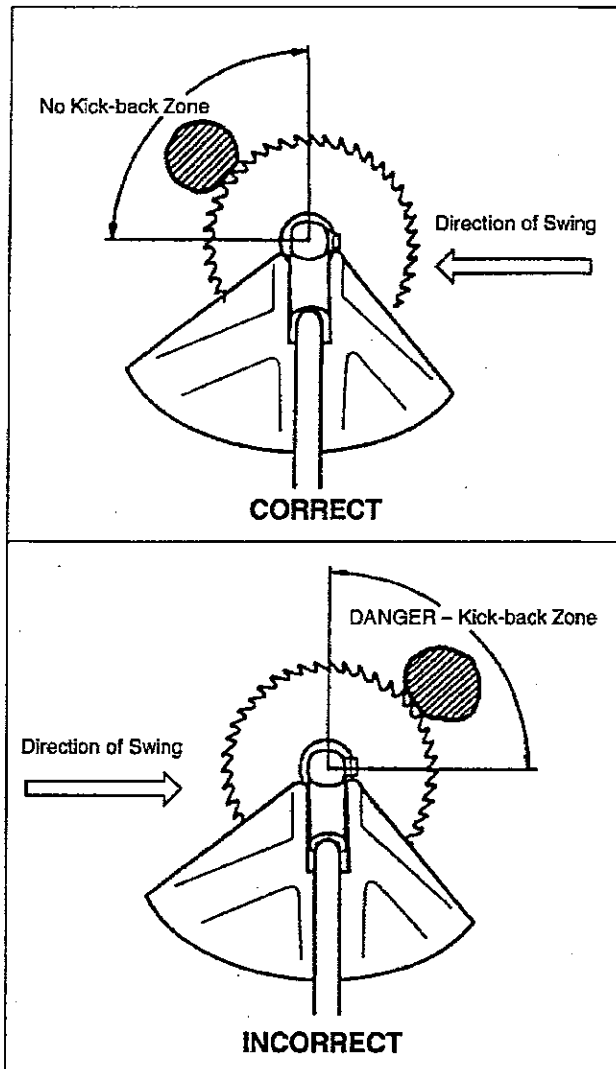
1. THIS TRIMMER BRUSHCUTTER CAN CAUSE SERIOUS INJURIES. Read the instructions carefully. Be familiar with all controls and the proper use of the Trimmer/Brushcutter.
2. Make sure the 3 mm hex wrench has been removed from the gearcase and boss adapter before you start the engine.

3. Avoid using the Brushcutter near rocks, gravel, stones and similar material which can become dangerous projectiles.
4. 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/Brushcutter. Remove string, rope or similar materials which can become entangled in the cutting head.
5. Keep children, bystanders and animals outside a 50 ft. (15 m) radius from the operator and Trimmer/Brushcutter.



6. If you are approached while operating the Trimmer/Brushcutter, stop the engine and cutting head rotation.
7. Never allow children to operate the Trimmer/Brushcutter.
8. Use the Trimmer/Brushcutter only in daylight or good artificial light.
9. Never operate the Trimmer/Brushcutter without proper guards or other protective safety devices in place.
10. Always keep the Trimmer/Brushcutter on the right side of your body.
11. Do not raise the cutting head above waist level.

12. Do not put hands or feet near or under any rotating parts. Keep clear at all times. Keep all parts of your body away from the rotating cutting attachment and hot surfaces such as the muffler.
13. When cutting heavy brush or small trees, always swing the Brushcutter from right to left to prevent kick-back.

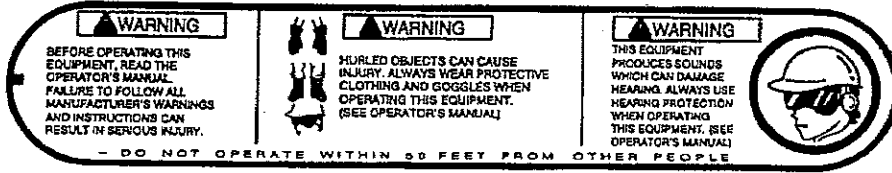


14. Keep firm footing and balance. Do not overreach.
15. Use the right tool for the job. Do not use the Trimmer/Brushcutter for any job that is not recommended by Maruyama.

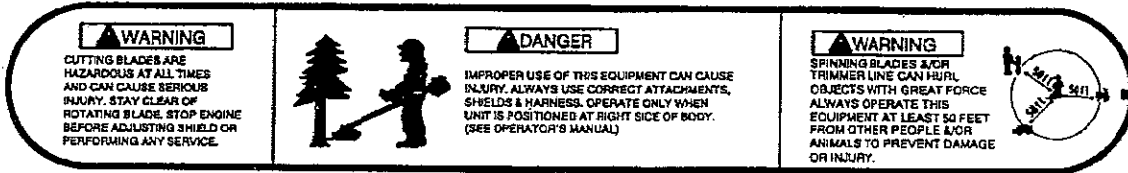
## Safety and Instruction Decals



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.



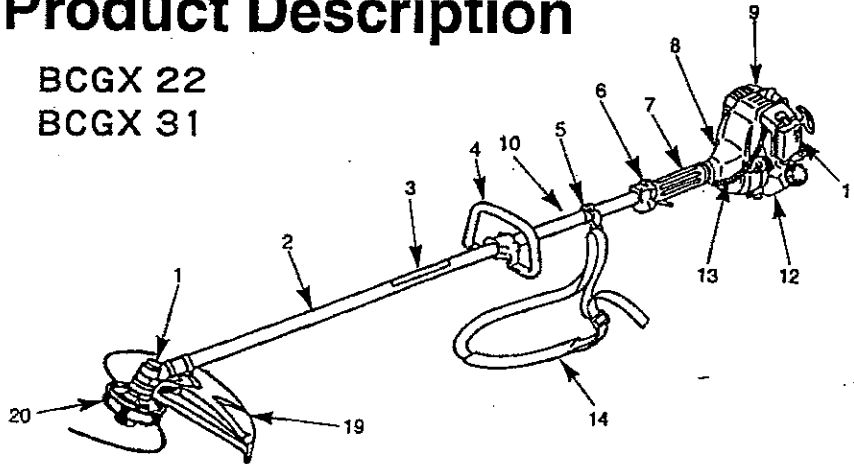
ON SHAFT  
(Part No.221501)



ON SHAFT  
(Part No.221502)

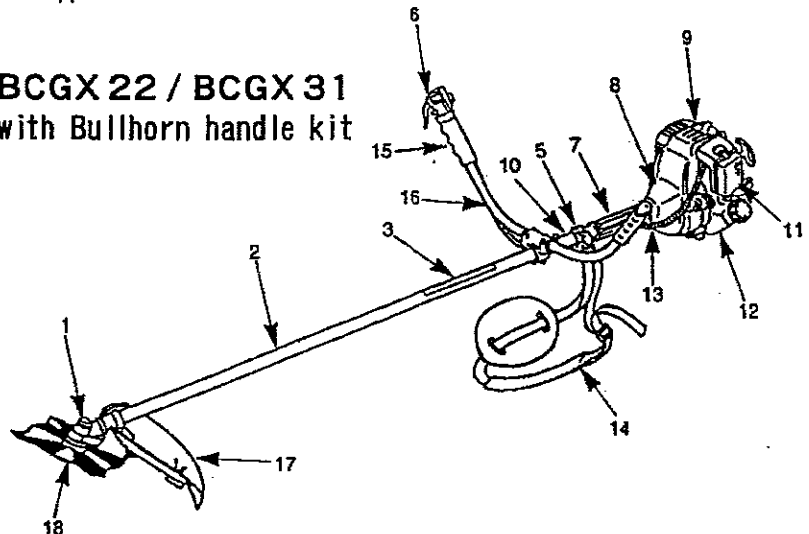
## Product Description

BCGX 22  
BCGX 31



- |   |  |
|---|--|
| 1. Gearcase                             | 11. Air Filter                           |
| 2. Shaft Assembly                       | 12. Fuel Tank                            |
| 3. Model Name                           | 13. Throttle Cable and Stop Switch Wires |
| 4. Loop handle                          | 14. Shoulder Hanging Strap               |
| 5. Attachment Ring for Shoulder Harness | 15. Handle Grip                          |
| 6. Throttle Trigger and Stop Switch     | 16. Bullhorn Handle                      |
| 7. Shaft Grip                           | 17. Blade Shield                         |
| 8. Clutch Drum Housing                  | 18. Brushcutter Blade                    |
| 9. Engine                               | 19. Trimmer head Shield                  |
| 10. Serial Number                       | 20. Trimmer head                         |

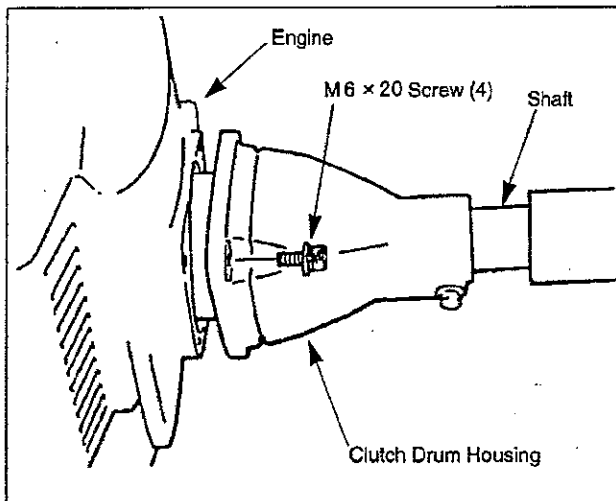
BCGX 22 / BCGX 31  
with Bullhorn handle kit



# Assembly

## Assembling Engine and Drive Shaft Assembly

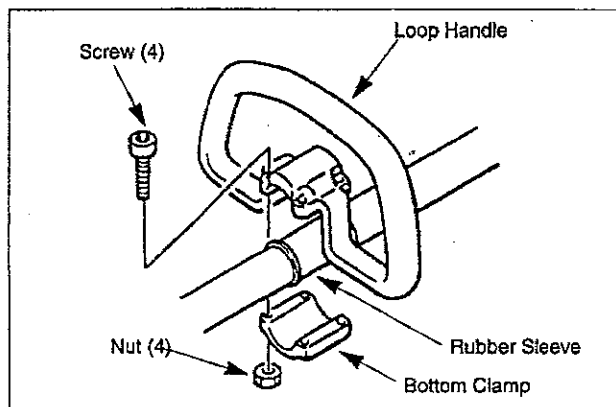
The drive shaft, clutch drum housing and gearcase are assembled. Attach the clutch drum housing to the engine using the four M6 × 20 screws supplied with the unit.



1. Slip the rubber sleeve around the shaft approximately 9 inches (22.8 cm) from the end of the stop switch/throttle trigger assembly for an initial handle position.
2. Rotate the rubber sleeve so the split is to one side.
3. Place the loop handle and the bottom clamp over the rubber sleeve.
4. Install the four screws and nuts. Leave the screws finger-tight.
5. Reposition the loop handle up or down the drive shaft to the most comfortable position, but no closer than 9 inches (22.8 cm) from the end of the stop switch.
6. Tighten the screws and nuts.

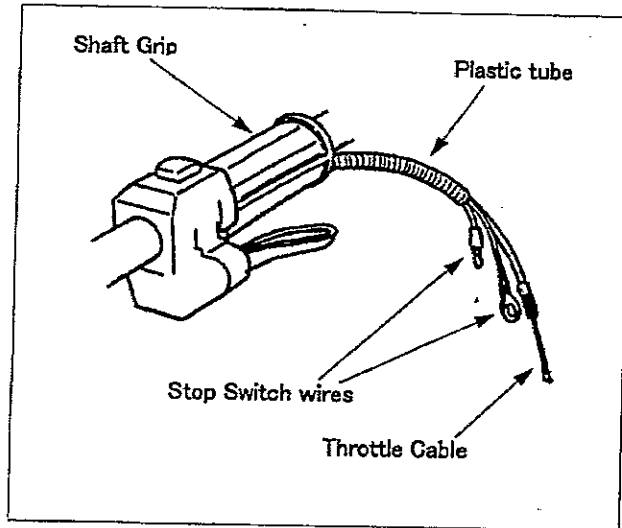
## Loop Handle Installation

The loop handle kit contains a package of four screws and nuts, a rubber sleeve and the bottom clamp for the loop handle.

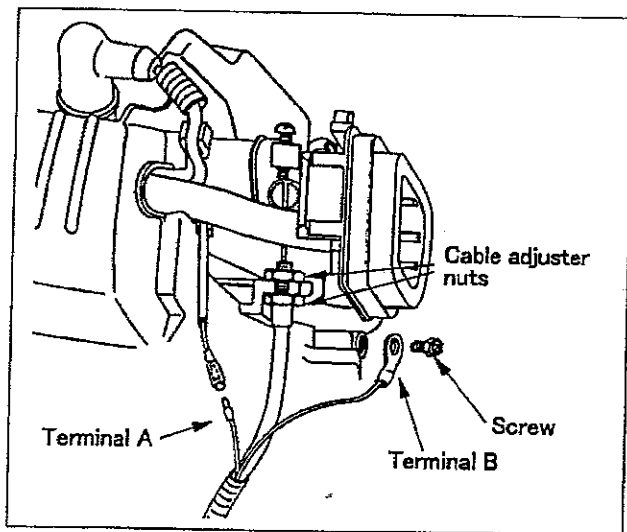




## Connecting Stop Switch Wires

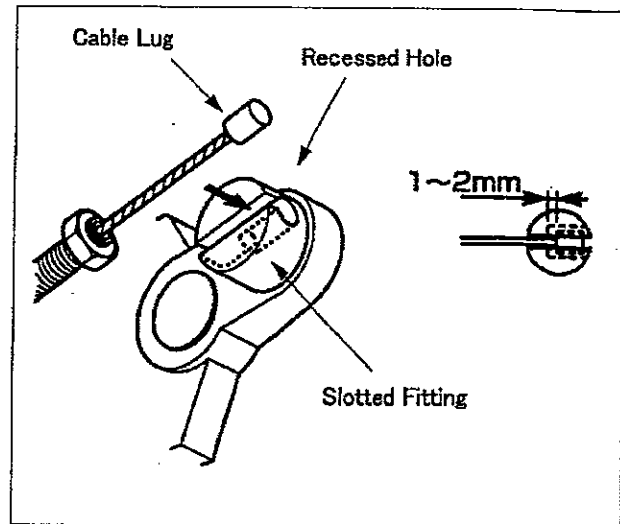


1. Install the plastic tube (packed with Engine Box) around the throttle cable and stop switch wires.
2. Plug the stop switch terminal A into the matching connector from the engine. Fix the stop switch terminal B to the engine body with the screw (packed with Engine Box).



## Connecting Throttle Cable

1. With air cleaner cover removed, put two cable adjuster nuts (packed with Engine Box) on the end of throttle cable. Slip the throttle cable through the slot in the slotted fitting, making sure the cable lug drops into the recessed hole. (See sketch)



2. Position the throttle cable in the throttle cable bracket. Fix it by tightening the two cable adjuster nuts. Adjust the cable position to keep 1-2mm play between cable lug and slotted fittings. (See sketch)
3. Operate the throttle trigger a few times to make sure that it works correctly. Check the stop on the carburetor throttle cam just contacts the throttle stop when the throttle trigger is fully depressed.
4. When the throttle cable is adjusted correctly, tighten two adjuster nuts.

## Installing Trimmer Head Shield

### ⚠ CAUTION

#### POTENTIAL HAZARD

- The cutoff blade is sharp.

#### WHAT CAN HAPPEN

- Contact with cutoff blade could cause serious cuts or personal injury.

#### HOW TO AVOID THE HAZARD

- Keep hands, feet and clothing away from cutoff blade.

### ⚠ WARNING

#### POTENTIAL HAZARD

- Foreign objects can be thrown by Trimmer.

#### WHAT CAN HAPPEN

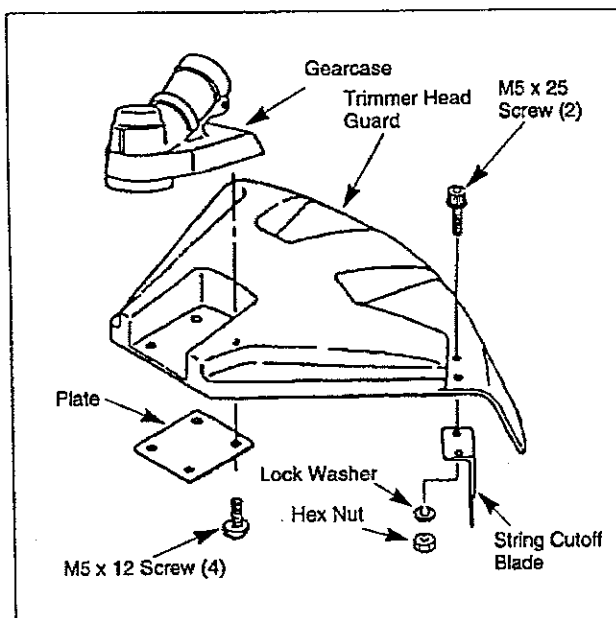
- Contact with thrown objects can cause personal injury.

#### HOW TO AVOID THE HAZARD

- Never operate the Trimmer without the trimmer head shield in place.

1. Fasten the string cutoff blade to the trimmer head shield with two M5 x 25 screws, lock washers and hex nuts as shown.

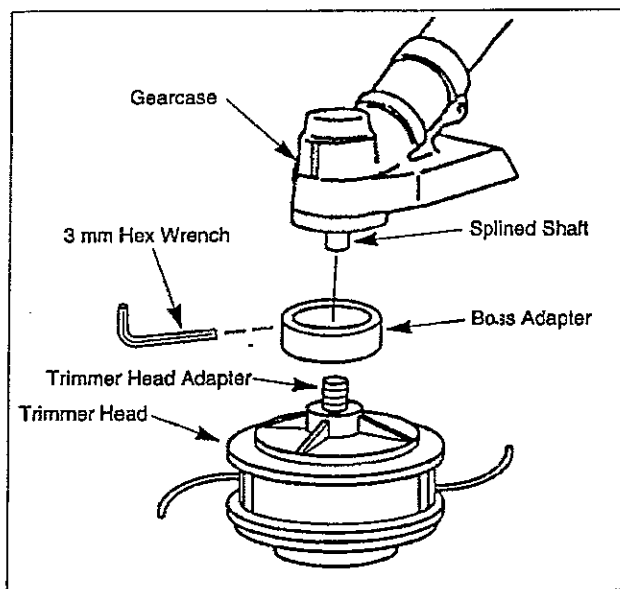
2. Attach the trimmer head shield to the gearcase with the four M5 x 12 screws and plate as shown.



## Installing Trimmer Head

**IMPORTANT:** Make sure the trimmer head is for **LEFT-HAND ROTATION** (counterclockwise) as viewed from the operator's position, and that the trimmer head adapter is a male, M8 x 1.25 left-hand thread.

**IMPORTANT:** The boss adapter must be installed on the splined shaft between the gearcase and the trimmer head as shown.



1. Install the boss adapter onto the splined shaft out of the gearcase.
2. Align the hole in the boss adapter with the hole in the gearcase.
3. Insert the 3 mm hex wrench into the holes in the boss adapter and gearcase to lock the splined shaft.
4. Thread the trimmer head adapter into the splined shaft, then tighten the trimmer head firmly by hand.

## ⚠ CAUTION

### POTENTIAL HAZARD

- If the trimmer head is not adequately tightened, it can come loose from the Trimmer during use.

### WHAT CAN HAPPEN

- This may cause damage to property or personal injury.

### HOW TO AVOID THE HAZARD

- Make sure the trimmer head is securely fastened to the splined shaft in the gearcase.

## Attaching Strap

## ⚠ WARNING

### POTENTIAL HAZARD

- Without the strap installed on the Brushcutter, the blade can produce side thrust which can expose the operator and bystanders to blade contact.

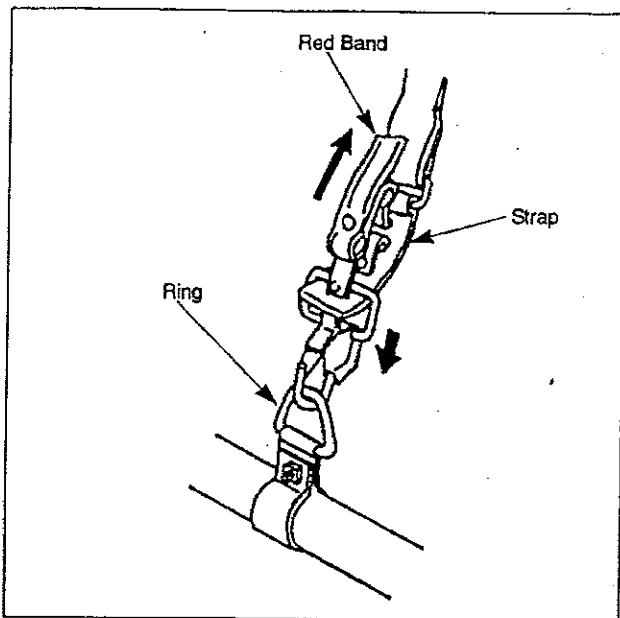
### WHAT CAN HAPPEN

- Contact with the Brushcutter blade can cause severer personal injury.

### HOW TO AVOID THE HAZARD

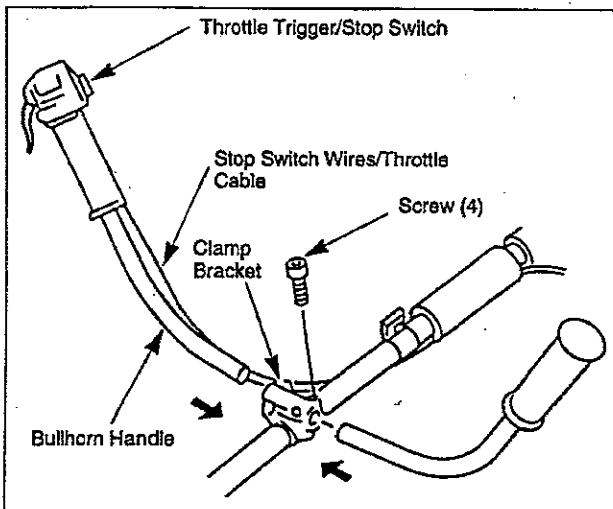
- Never operate the Brushcutter without installing and using the strap.

Snap the strap hook into the ring on the drive shaft. To detach the strap quickly from the Brushcutter, pull upward on the red band.



## Optional Bullhorn handle kit installation

**IMPORTANT:** Be careful not to damage the throttle cable and stop switch wires when you remove the bullhorn handles from the shipping carton.



1. Loosen the four screws on the top of the clamp bracket.

2. Insert the left and right bullhorn handles into the clamp bracket. Note that the bullhorn handle with the throttle trigger and stop switch goes on the right-hand side of the Brushcutter.
3. Adjust the bullhorn handles to the desired position, then tighten the four screws.

## Installing Blade Shield

### **⚠ WARNING**

#### POTENTIAL HAZARD

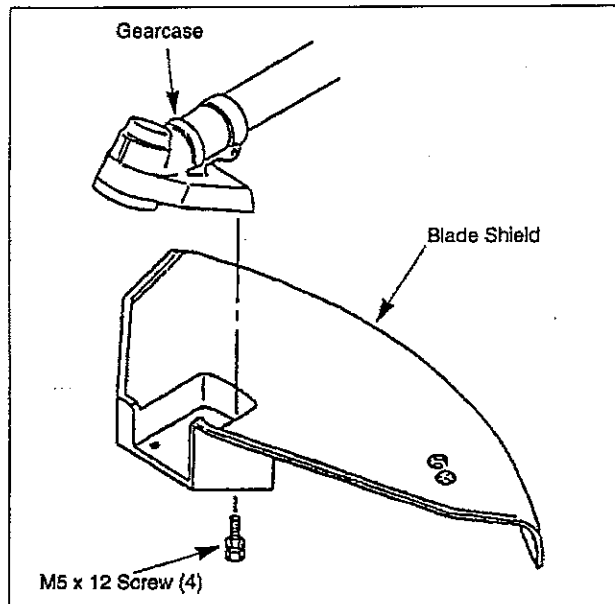
- Foreign objects can be thrown by Brushcutter.

#### WHAT CAN HAPPEN

- Contact with thrown objects can cause personal injury.

#### HOW TO AVOID THE HAZARD

- Never operate the Brushcutter without the blade shield in place.



1. Install the blade shield onto the gearcase.
2. Install and tighten the four M5 x 12 screws.

## Installing Brushcutter Blade

### ⚠ CAUTION

#### POTENTIAL HAZARD

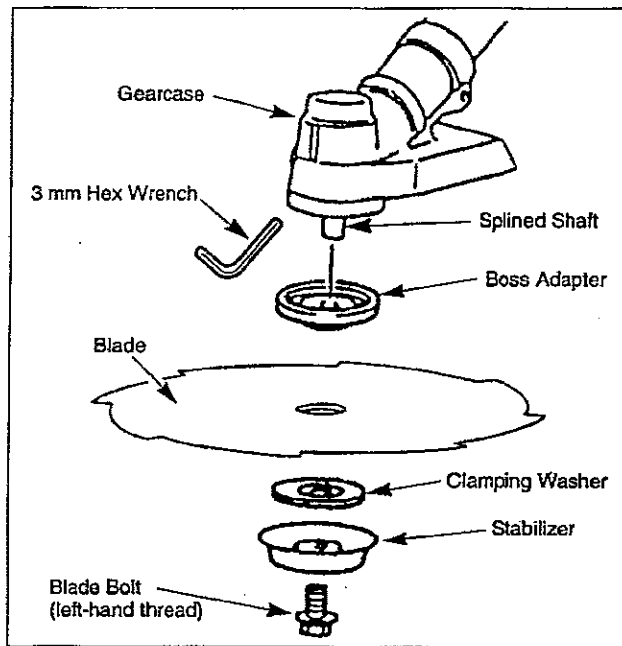
- If the Brushcutter blade is not adequately tightened, it can come loose from the Brushcutter during use.

#### WHAT CAN HAPPEN

- This may cause damage to property or personal injury.

#### HOW TO AVOID THE HAZARD

- Make sure the Brushcutter blade is securely fastened to the splined shaft in the gearcase.



1. Remove the blade bolt, stabilizer and clamping washer from the splined shaft out of the gearcase.

**Note:** The blade bolt has left-hand threads.

### ⚠ WARNING

#### POTENTIAL HAZARD

- Brushcutter blade is sharp.

#### WHAT CAN HAPPEN

- Contact with sharp blade can cause serious personal injury.

#### HOW TO AVOID THE HAZARD

- Wear gloves when you handle the blade.

2. Install the brushcutter blade onto the boss adapter, then reinstall the clamping washer, stabilizer and blade bolt.
3. Align the hole in the boss adapter with the hole in the gearcase.
4. Insert a 3 mm hex wrench or other suitable tool into the holes in the boss adapter and gearcase to lock the splined shaft.
5. Tighten the blade bolt to 100 in.-lbs. (11.3 N•M).
6. Remove the 3 mm hex wrench from the boss adapter and gearcase.

# Before Operation

## Oil and Fuel

### **⚠ DANGER**

#### POTENTIAL HAZARD

- In certain conditions gasoline is extremely flammable and highly explosive.

#### WHAT CAN HAPPEN

- A fire or explosion from gasoline can burn you, others, and cause property damage.

#### HOW TO AVOID THE HAZARD

- Use a funnel and fill the fuel tank outdoors, in an open area, when the engine is cold. Wipe up any gasoline that spills.
- Do not fill the fuel tank completely full. Add gasoline to the fuel tank until the level is 1/4" to 1/2" (6 mm to 13 mm) below the bottom of the filler neck. This empty space in the tank allows gasoline to expand.
- Never smoke when handling gasoline, and stay away from an open flame or where gasoline fumes may be ignited by a spark.
- Store gasoline in an approved container and keep it out of the reach of children.
- Never buy more than a 30-day supply of gasoline.

Please see HONDA ENGINES Owner's Manual.

## Starting And Stopping

### Before Starting The Engine

1. Move the Trimmer/Brushcutter at least 10 feet (3 m) away from the fueling location and fuel storage container before starting the engine.
2. Rest the Trimmer Brushcutter on the ground.
3. Make sure the cutting attachment is clear of any broken glass, nails, wire, rocks or other debris.
4. Keep all bystanders, children and animals away from the working area.

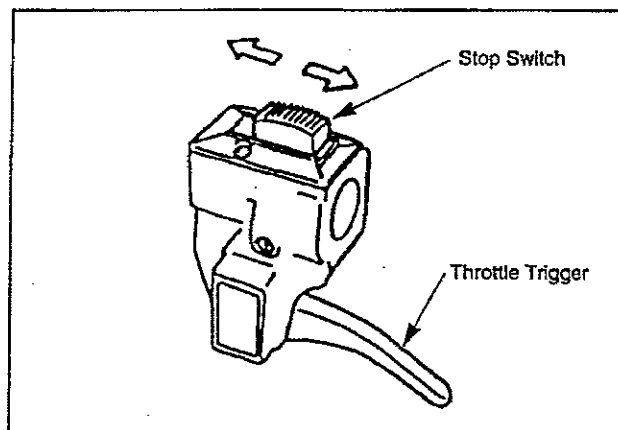
## Starting And Stopping

Please see HONDA ENGINES Owner's Manual.

If the engine fails to start after you follow the procedures, contact an authorized Maruyama dealer.

### To Stop The Engine:

1. Release the throttle trigger.
2. Slide the stop switch to the "STOP" position.



## Idle Speed Adjustment

This Trimmer/Brushcutter is equipped with non-adjustable fuel mixture carburetor. The engine idle speed is the only adjustment for the operator.

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

- Engine must be running to make some carburetor adjustments.
- When engine is running, cutting head is rotating and other parts are moving.

#### **WHAT CAN HAPPEN**

- Contact with rotating cutting head or other moving parts could cause serious personal injury or death.

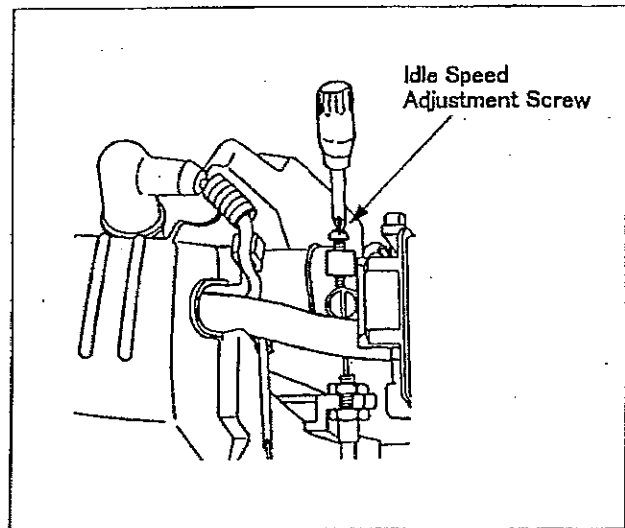
#### **HOW TO AVOID THE HAZARD**

- Keep hands, feet and clothing away from cutting head and other moving parts.
- Keep all bystanders and pets away from unit while making carburetor adjustments.

The cutting head may be rotating during idle speed adjustment. Wear the recommended personal protective equipment and observe all safety instructions. Keep hands and body away from the cutting head.

When the throttle trigger is released, the engine should return to an idle speed between 2900 and 3300 RPM, or just below the clutch engagement speed. The cutting head must not rotate and the engine should not stall (stop running) at engine idle speed.

To adjust the engine idle speed, rotate the idle speed adjustment screw on the carburetor.



- Turn the idle speed screw in (clockwise) to increase the engine idle speed.
- Turn the screw out (counterclockwise) to decrease the engine idle speed.

If idle speed adjustment is necessary, and after adjustment the cutting head rotates or the engine stalls, stop using the Trimmer/ Brushcutter immediately!

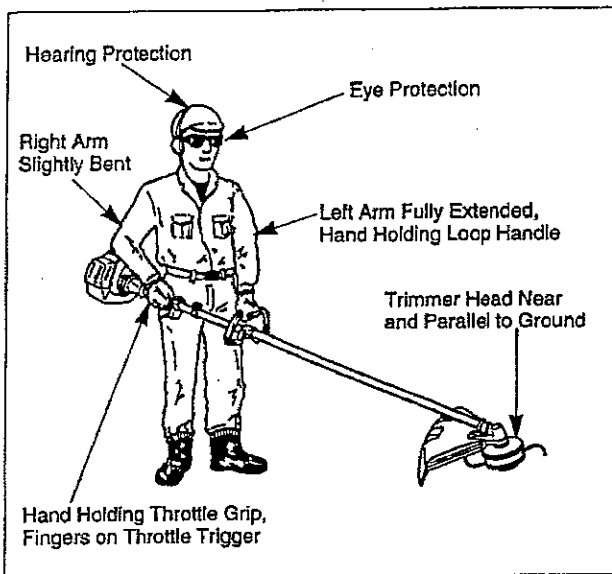
Contact your local authorized Maruyama Dealer for assistance and servicing.

## Trimmer Operation

### ⚠ CAUTION

- Read the Safety instructions on page 3 concerning proper use of the String Trimmer.

## Trimmer Operating Position



Before using the Trimmer, check the following:

1. The Trimmer should be on the operator's right side.
2. The operator's right hand should be holding the shaft grip, with his or her fingers on the throttle trigger. The right arm should be slightly bent.
3. The left hand should be holding the loop handle with the fingers and thumb fully enclosed around the grip. The left arm should be extended. Reposition the loop handle up or down the drive-shaft if necessary for a comfortable position.
4. The Trimmer weight should be evenly distributed between the arms. The trimmer head should be near and parallel to the ground.

5. Accelerate and hold the engine at cutting speed before entering the material to be cut.
6. Always release the throttle trigger and allow the engine to return to idle speed when not cutting.
7. Stop the Trimmer engine when moving between work sites.

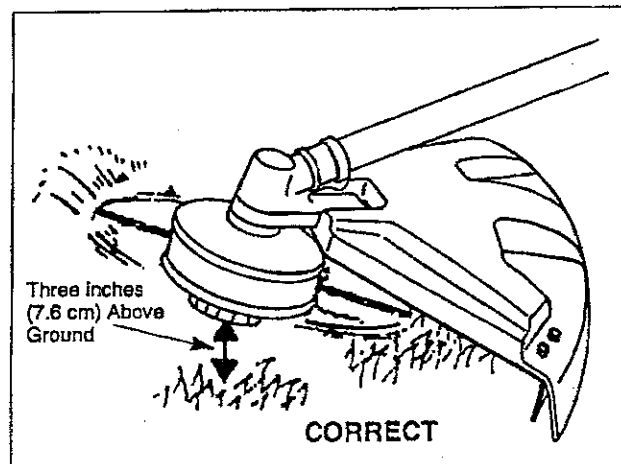
### ⚠ CAUTION

- Always wear gloves and protective clothing when operating the String Trimmer.

- If the trimmer head becomes jammed, stop the engine immediately.
- Make certain all moving parts have stopped and disconnect the spark plug before inspecting the equipment for damage.
- Never use a String Trimmer that has chipped, cracked or broken trimmer head.

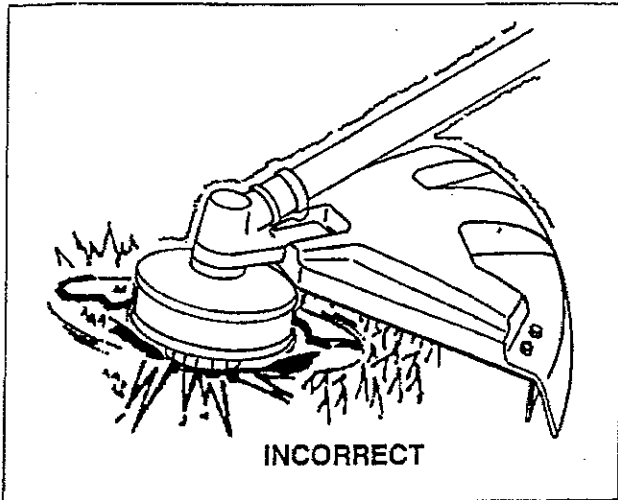
## Cutting with Nylon Trimmer Line

- The tip of the line does the cutting. The line should stay extended while cutting.



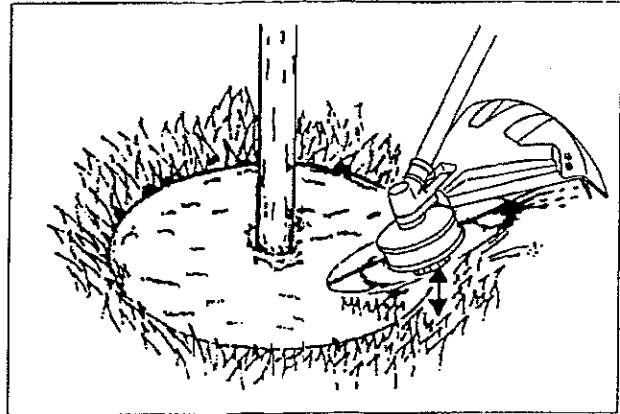


- Do not force the line into the material. Forcing the line will cause it to slap against the material, increasing line usage and causing poor cutting results.



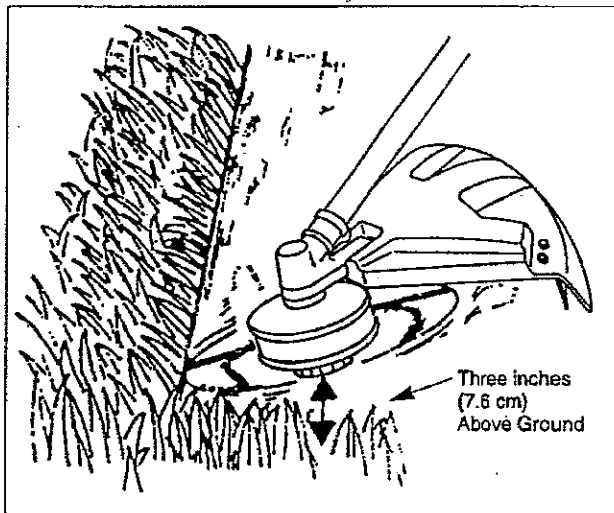
### Scalping

To remove unwanted vegetation, hold the trimmer head about 3 in. (7.6 cm) above the ground and at an angle. Allow the tip of the line to strike the ground cutting the vegetation off at the surface.



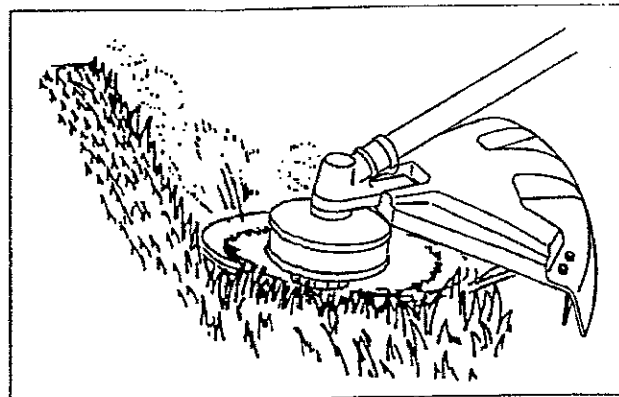
### Trimming

Hold the bottom of the trimmer head about 3 in. (7.6 cm) above the ground and at an angle. Allow only the tip of the line to make contact.



### Mowing

Keep the line parallel to the ground and use a gentle side-to-side motion.



## Brushcutter Operation

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

- Foreign objects can be thrown by Brushcutter.

#### **WHAT CAN HAPPEN**

- Contact with thrown objects can cause personal injury.

#### **HOW TO AVOID THE HAZARD**

- Never operate the Brushcutter without the blade shield in place.

### **⚠ CAUTION**

- Read the Safety instructions on page 3 concerning proper use of the Brushcutter.

## Brushcutter Operating Position

Before using the Brushcutter, check the following:

1. Make sure the 3 mm hex wrench has been removed from the gearcase and boss adapter before you start the engine.

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

- Without the strap installed, the Brushcutter blade can produce side thrust which can expose the operator and bystanders to blade contact.
- If the Brushcutter is not correctly positioned on the operator's right side, the blade can produce side thrust which can expose the operator and bystanders to blade contact.

#### **WHAT CAN HAPPEN**

- Contact with the Brushcutter blade can cause severe personal injury.

#### **HOW TO AVOID THE HAZARD**

- Never operate the Brushcutter without installing and using the strap.
- Always operate the Brushcutter with the unit on your right side.

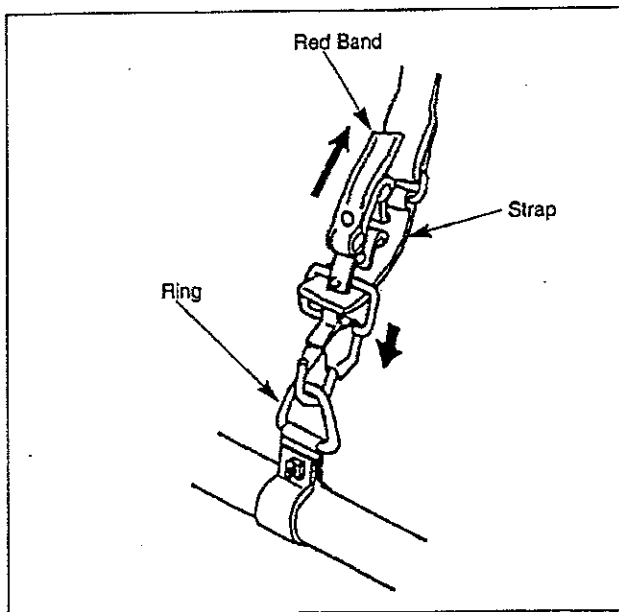
2. The operator must be wearing the strap attached to the Brushcutter, and the Brushcutter must be on the operator's right side.
3. The operator's right hand should be holding the right-hand bullhorn grip, with his or her fingers on the throttle trigger.
4. The left hand should be holding the left-hand bullhorn grip with the fingers and thumb fully enclosed around the grip.
5. Always release the throttle trigger and allow the engine to return to idle speed when not cutting.
6. Stop the Brushcutter engine when moving between work sites.

## ⚠ CAUTION

- Always wear gloves and protective clothing when operating the Brushcutter.

- If the Brushcutter blade becomes jammed, stop the engine immediately.
- Make certain all moving parts have stopped and disconnect the spark plug before inspecting the equipment for damage.
- Never use a Brushcutter that has chipped, cracked or broken cutting attachment or shield.

**IMPORTANT:** To detach the strap quickly from the Brushcutter, pull upward on the red band.



## Cutting Direction

## ⚠ WARNING

### POTENTIAL HAZARD

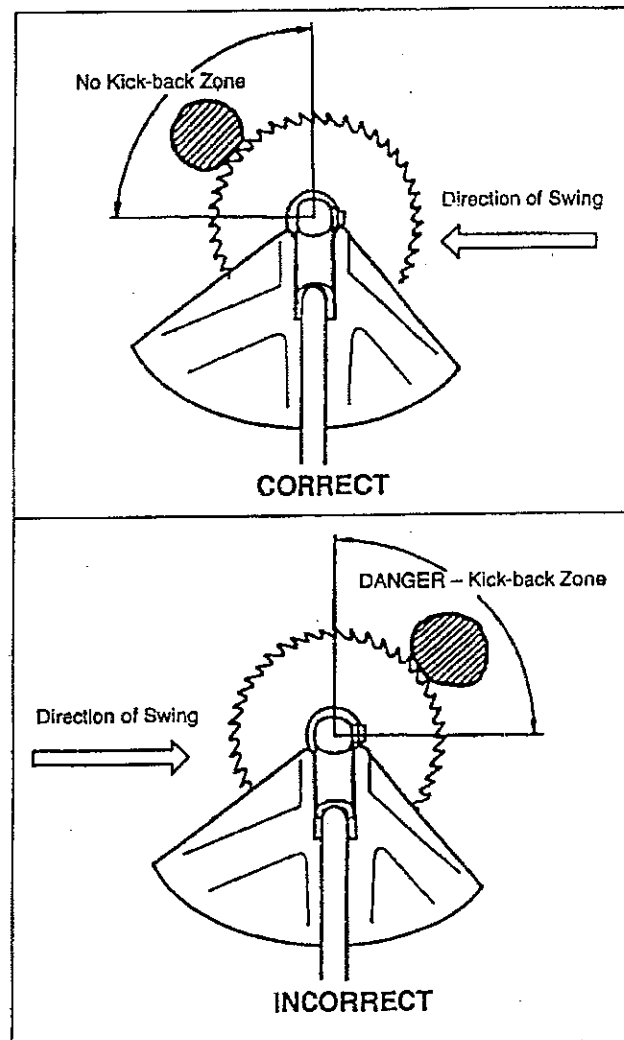
- Cutting heavy brush or small trees from the wrong direction can cause the Brushcutter blade to kick back.

### WHAT CAN HAPPEN

- Contact with the Brushcutter blade can cause severe personal injury.

### HOW TO AVOID THE HAZARD

- Always swing the Brushcutter from right to left when cutting heavy brush or small trees as shown.



When cutting heavy brush or small trees, always swing the Brushcutter from right to left. Swinging the Brushcutter from left to right can cause the blade to kick back.

## Cutting Blades

1. Use only the correct blade (Maruyama genuine part) approved for the application and model Brushcutter.
2. Carefully check the condition of the blades before and after operation.
3. Sharpen dull blades. Replace any blade that is worn, cracked or damaged.
4. If a blade produces eccentric rotation or vibration, replace the blade and the boss adapter with genuine Maruyama parts.

# Maintenance

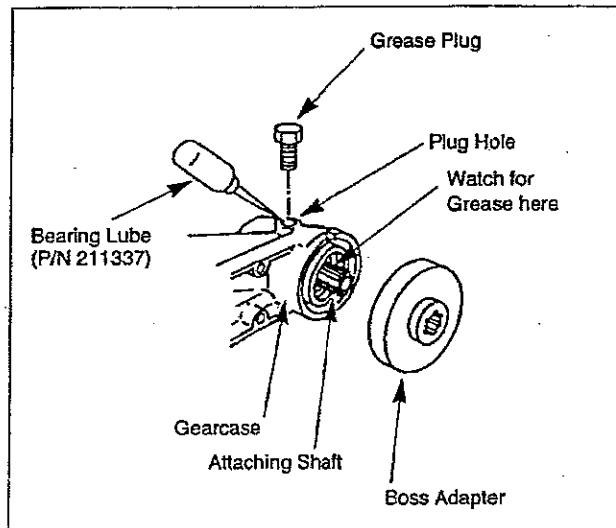
Please see HONDA ENGINES Owner's Manual.

## Gearcase

### Maintenance Interval

The gearcase should be checked for lubrication after each 30 hours of use.

### Gearcase Lubrication



Remove the cutting attachment and the boss adapter. Clean any dirt and debris from the area between the boss adapter and the gearcase. Remove the grease plug from the side of the gearcase.

While rotating the attaching shaft, inject lithium-base bearing lube (P/N 211337) through the plug hole until the gearcase is full. Reinstall the boss adapter and grease plug.

## General Cleaning and Tightening

### **⚠ WARNING**

#### **POTENTIAL HAZARD**

- When engine is running, cutting head is rotating and other parts are moving.

#### **WHAT CAN HAPPEN**

- Contact with rotating cutting head or other moving parts could cause serious personal injury or death.

#### **HOW TO AVOID THE HAZARD**

- Always turn off your Trimmer/Brushcutter before you clean or perform any maintenance on it.

The Manyama 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 the entire machine.

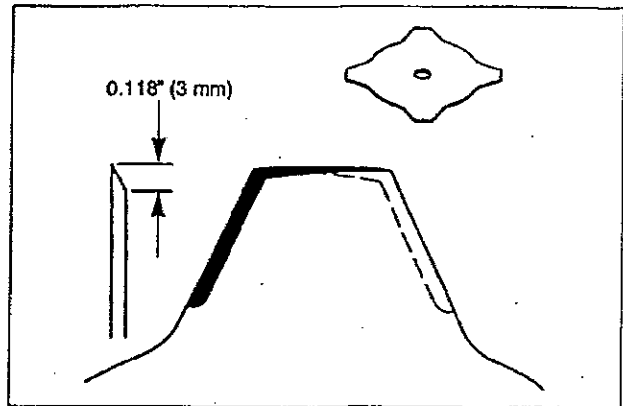
## Blade Sharpening

**IMPORTANT:** Replace any blade that is worn, cracked or damaged.

**IMPORTANT:** Sharpen every tooth evenly so the blade rotates smoothly. If you sharpen a blade with a grinder, do not overheat the blade, and do not quench a hot blade in water to cool it.

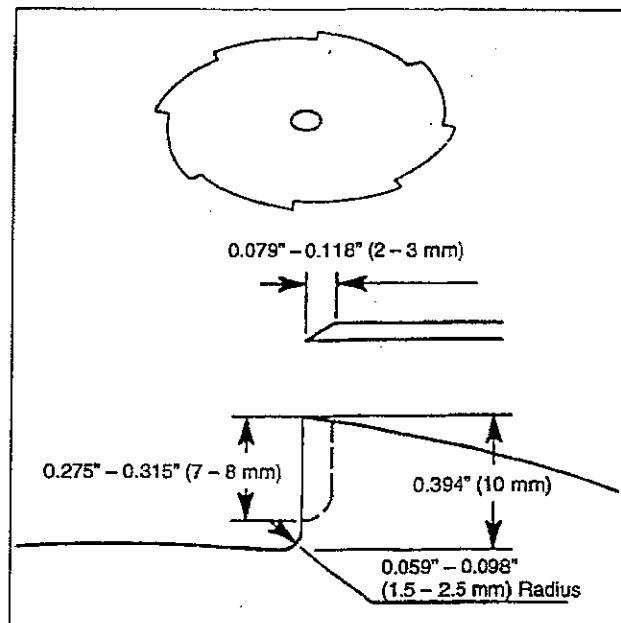
## Four-tooth Blade

Sharpen with a single-cut flat file.



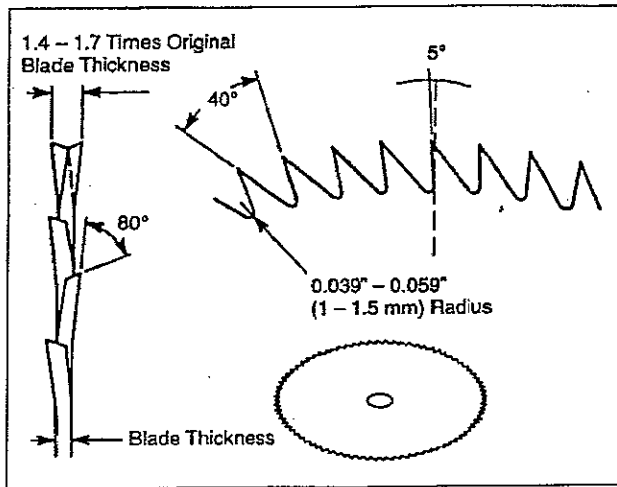
## Eight-tooth Blade

Sharpen with a single-cut flat file and a round file.



## 80-tooth Blade

Sharpen with a single-cut flat file and a round file.



## Storage

For long term storage of the Trimmer/Brushcutter:

1. Remove the fuel tank cap and drain the fuel into an approved gasoline container by tipping the engine toward the fuel filler neck.
2. Press the priming bulb several times until there is no more fuel in the fuel return tube.
3. Tip the engine toward the fuel filler neck again to drain the fuel.
4. After all fuel has drained, reinstall the fuel tank cap securely.
5. Perform all regular maintenance procedures and any needed repairs.
6. Store the Trimmer/Brushcutter in a dry place away from excessive heat, sparks or open flame.

Please see HONDA ENGINES Owner's Manual  
Page39~43.

# Troubleshooting

Please see HONDA ENGINES Owner's Manual.

If further assistance is required, contact your local authorized Maruyama service dealer.

## Specifications

	BCGX22	BCGX31
Weight ※1.	13.0 lbs.	13.7 lbs.
Engine Displacement	22cc	31cc
Anti Vibration	Dual Isolation – grip and engine mount	
Carburetor	Walbro Diaphragm Type	
Ignition System	Solid State	
Fuel Tank Capacity	0.43 qts.	0.62 qts.
Oil	4-stroke automotive detergent oil	
Spark Plug	NGK C5HSB	
Spark Plug Gap	.024-.028in(0.6-0.7mm)	

※1.Dry weight without Cutting head and Shoulder hanging strap.