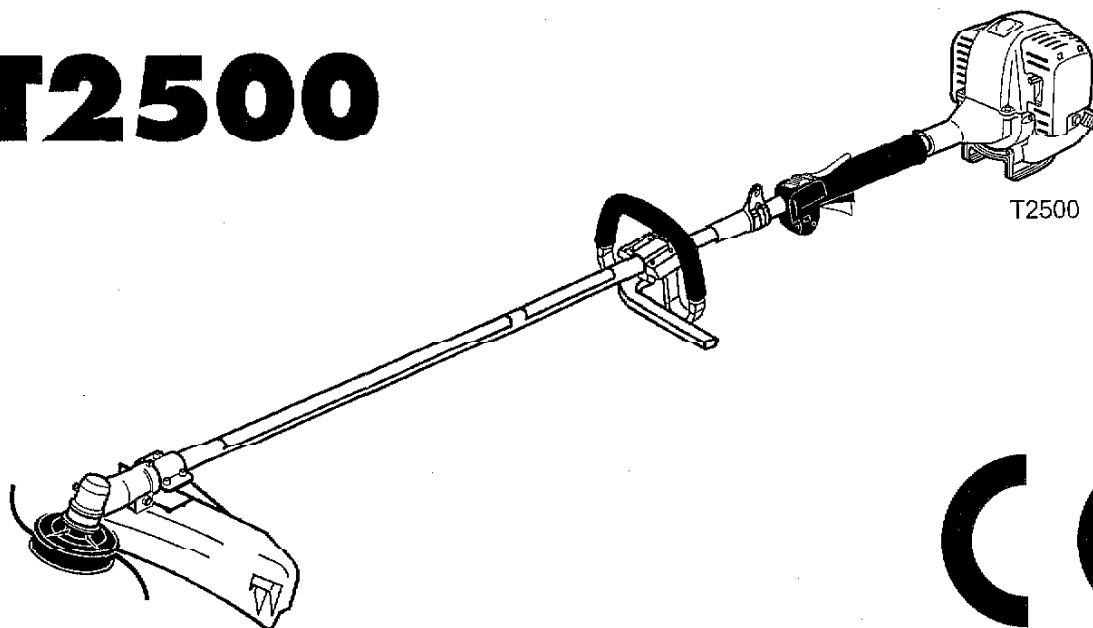


**ISO 9001**  
CERTIFIED

# shindaiwa

## INSTRUCTION MANUAL

# T2500



### **WARNING!**

- ◆ Read this manual and familiarize yourself with its contents.
- ◆ This machine is designed for cutting grass, weed and bushes. Do not use this machine for other purposes.
- ◆ Minimize the risk of injury to yourself and others.
- ◆ Do not operate or service this machine unless you clearly understand this manual.
- ◆ Keep this manual at a particular place so that you can reread it whenever you have a question about its use.

## Introduction

The Shindaiwa T2500 Brushcutter has been designed and built to deliver superior performance and reliability without compromise to quality, comfort, or durability.

Shindaiwa high performance engines represent the leading edge of 4-cycle engine technology, delivering exceptionally high power from remarkably low displacement and weight. As an owner/operator, you'll soon discover for yourself why Shindaiwa is simply in a class by itself!

### IMPORTANT!

The information contained in this manual describes machines available at the time of publication. While every attempt has been made to give you the very latest information about your Shindaiwa product, there may be some differences between your machine and the machine described in this manual. Shindaiwa reserves the right to make changes to products without prior notification, and without obligation to make alterations to machines previously manufactured.



#### WARNING!

The engine exhaust from this product contains chemicals which may cause cancer, birth defects or other reproductive harm.

## Contents

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## Attention Statements



#### WARNING!

A statement preceded by a triangular Attention Symbol and the word **WARNING!** contains information that should be acted upon to prevent bodily injury.

#### CAUTION!

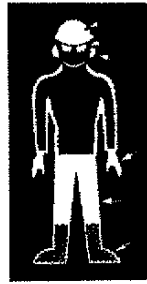
A statement preceded by the word **CAUTION!** contains information that should be acted upon to avoid damaging the machine.

## IMPORTANT!

A statement preceded by the word "IMPORTANT!" is one that possesses special significance.

## IMPORTANT!

The operational procedures described in this manual are intended to help you get the most from your machine, and to protect you and others from harm. These procedures are guidelines for safe operation under most conditions, and are not intended to replace any safety rules and/or laws that may be in force in your area. If you have questions regarding your T2500 brushcutter, or if you do not understand something in this manual, your Shindaiwa dealer will be glad to assist you. You may also contact Shindaiwa at the address printed on the back of this manual.



Wear non-slip gloves, long trousers and non-skid boots during the operation of this machine.



Make sure no one is within 15 meters (50 feet) of an operating attachment.



Beware Of Thrown objects.



**MAX**

**9800 min<sup>-1</sup>**

The Maximum speed of the cutting attachment shaft in *min<sup>-1</sup>*

## Warning Labels

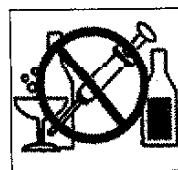
Warning labels stuck to the machine mean as follows.



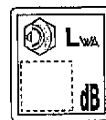
Read and follow the operator's manual. Failure to do so could result in serious injury.



Wear head, eye and hearing protection during the operation of this machine.

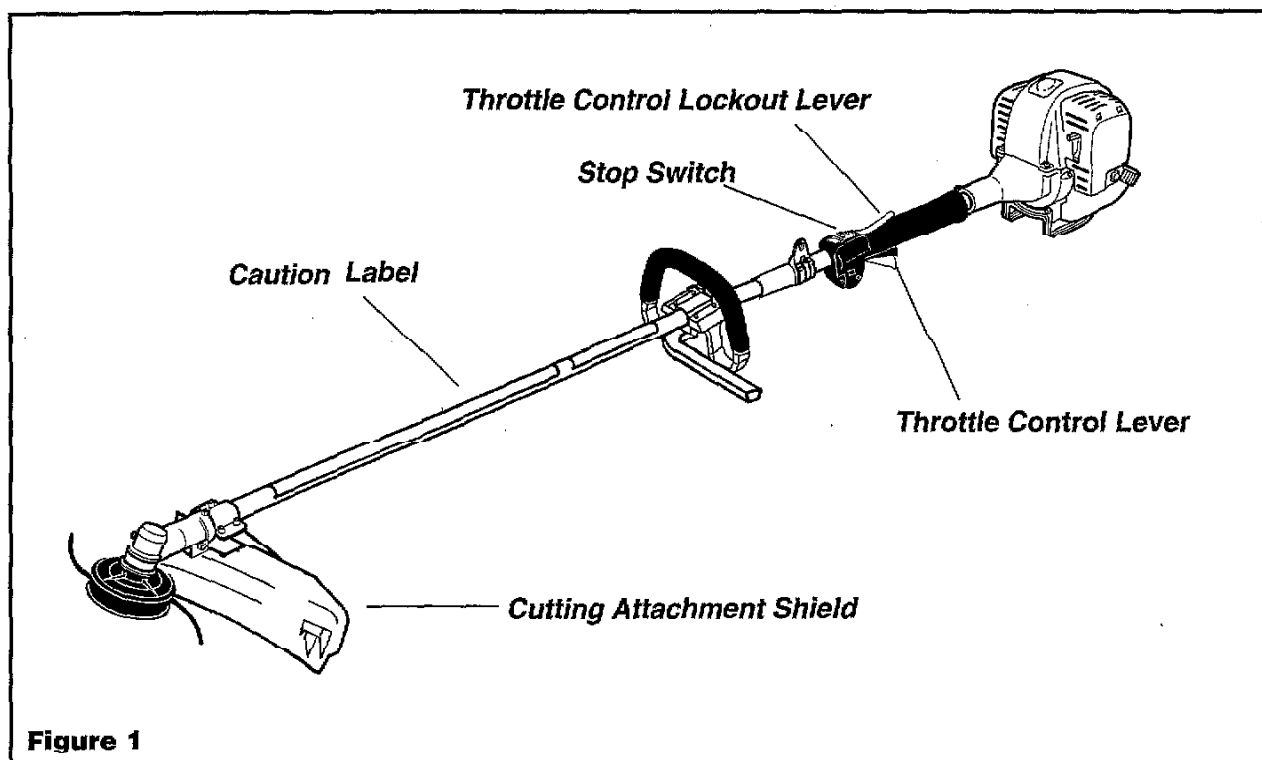


Never operate this tool or any other power equipment if you are tired, ill, or under the influence of alcohol, drugs, or any substance that could affect your ability or judgement.



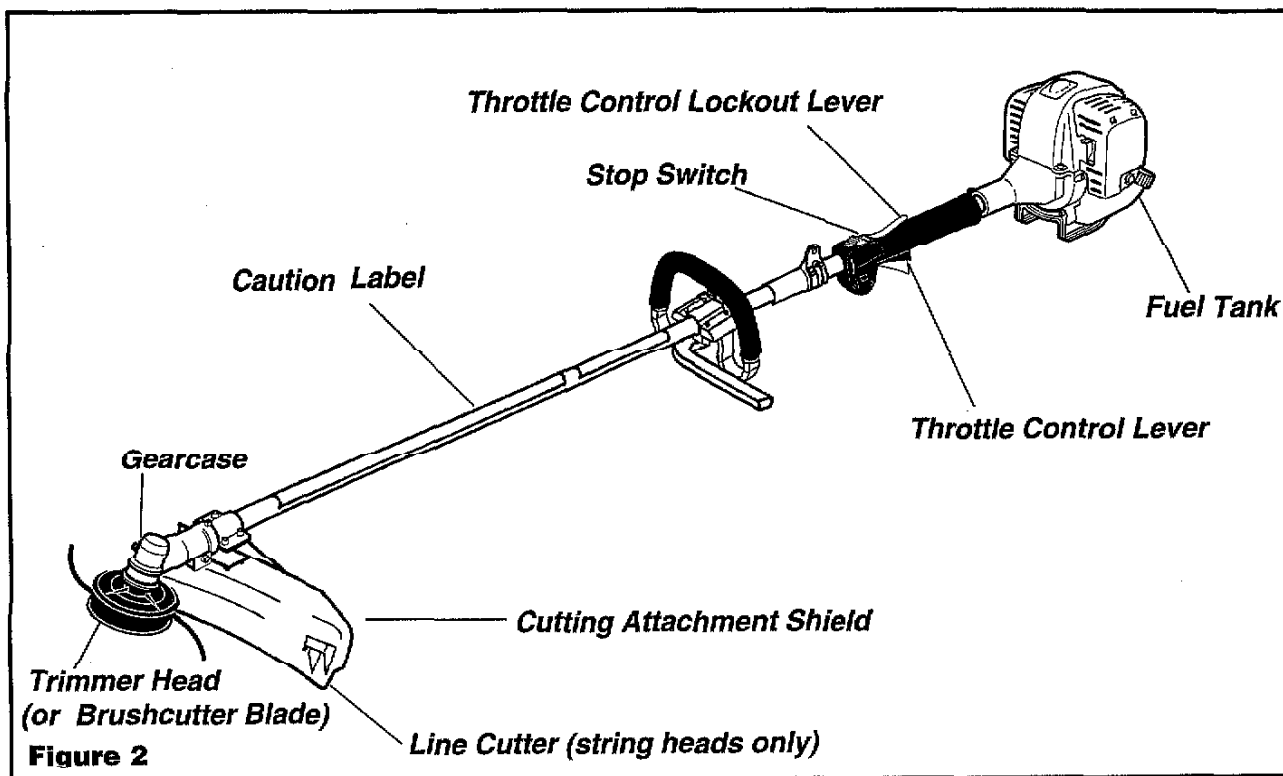
Sound Power Level  
(measured in accordance with 2000/14/EC)

## Safety Equipment and Labels



Caution, Danger, Warning, and Operation Information Labels:  
Make sure all information labels are undamaged and readable.  
Immediately replace damaged or missing information labels.  
New labels are available from your local authorized Shindaiwa dealer.

## Product Description



### WARNING!

Do not make unauthorized modifications or alterations to this machine or any of its components. Shindaiwa must authorize alterations and modifications, in writing. Unauthorized modifications or alterations may alter the machine operation and could jeopardize personal safety during operation.

### IMPORTANT!

Use only factory authorized Shindaiwa parts and accessories with your Shindaiwa machine.

Using figure 2 as a guide, familiarize yourself with your machine and its various components. *Understanding* your machine helps ensure top performance, longer service life, and safer operation.

## Technical Specifications

Model Name	T2500		
Engine Model	SF2500E		
Engine Type	4-cycle, vertical-cylinder, air-cooled		
Displacement	24.5 cm <sup>3</sup>		
Bore × Stroke	34 × 27 mm		
Maximum speed at the cutting attachment shaft	9,800 min <sup>-1</sup>		
Engine Speed at Idling	3,000 min <sup>-1</sup>		
Maximum Engine Speed	12,400 min <sup>-1</sup>		
Engine Speed at Max Power Output	7,500 min <sup>-1</sup>		
Maximum Power Output	0.8 kw		
Ignition	One-piece electronic, transistor-controlled		
Spark Plug	NGK CMR6H		
Starting Method	Recoil Starter		
Stopping Method	Slide switch		
Air Cleaner Type	Non-reversible flocked filter element		
Fuel/Oil Ratio	50 : 1		
Fuel Tank Capacity	590 cm <sup>3</sup>		
Carburetor Type	Walbro WYL -169		
Dry Weight without cutting attachment and guard	5.1 kg		
Dimensions	1,724 × 314 × 243 mm		
Sound Pressure Level*	95 dB (A)	note.1	
Sound Power Level*	105 dB (A)	note.1	
Vibration Level*	Idling [Front/Rear]	1.8 / 1.3 m/s <sup>2</sup>	note.2
	Racing [Front/Rear]	5.7 / 8.9 m/s <sup>2</sup>	note.2
Handle Type	Loop Handle		

\* Sound Pressure Level: in a accordance with EN ISO 11806 and EN 27917

\* Sound Power Level: in a accordance with EN ISO 11806 and ISO 10884

\* Vibration Level: in a accordance with EN ISO 11806 and ISO 7916

note.1 : Measured by Shindaiwa with trimmer head equipped.

note.2 : Measured by Shindaiwa with trimmer head equipped.

Vibration level on 4-tooth blade use are as follows.

( Idling (Front/rear) : 3.6 / 1.5 m/s<sup>2</sup>  
 Racing (Front/rear) : 7.2 / 10.8 m/s<sup>2</sup> )

## Prior to Assembly

Before assembling this product, make sure you have all the components required for a complete unit.

- Engine assembly (powerhead)
- Outer tube assembly
- Handle
- Barrier
- Cutting attachment shield
- Shoulder strap
- Blade protector
  
- Tool kit, which includes 3mm, and 4mm "L" type hexagonal wrenches, 8mm/10mm open-end wrench,

combination spark plug/ tool holder wrench,

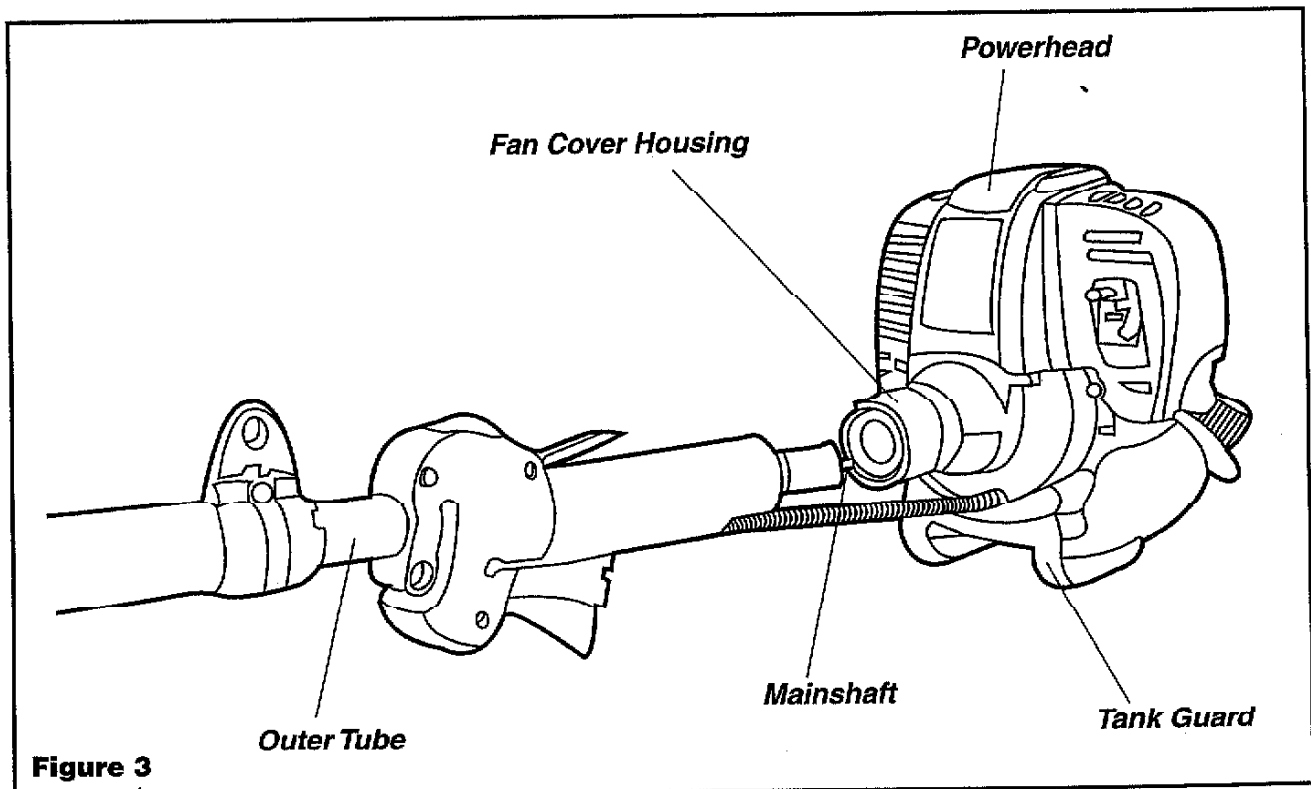
Carefully inspect all components for damage.

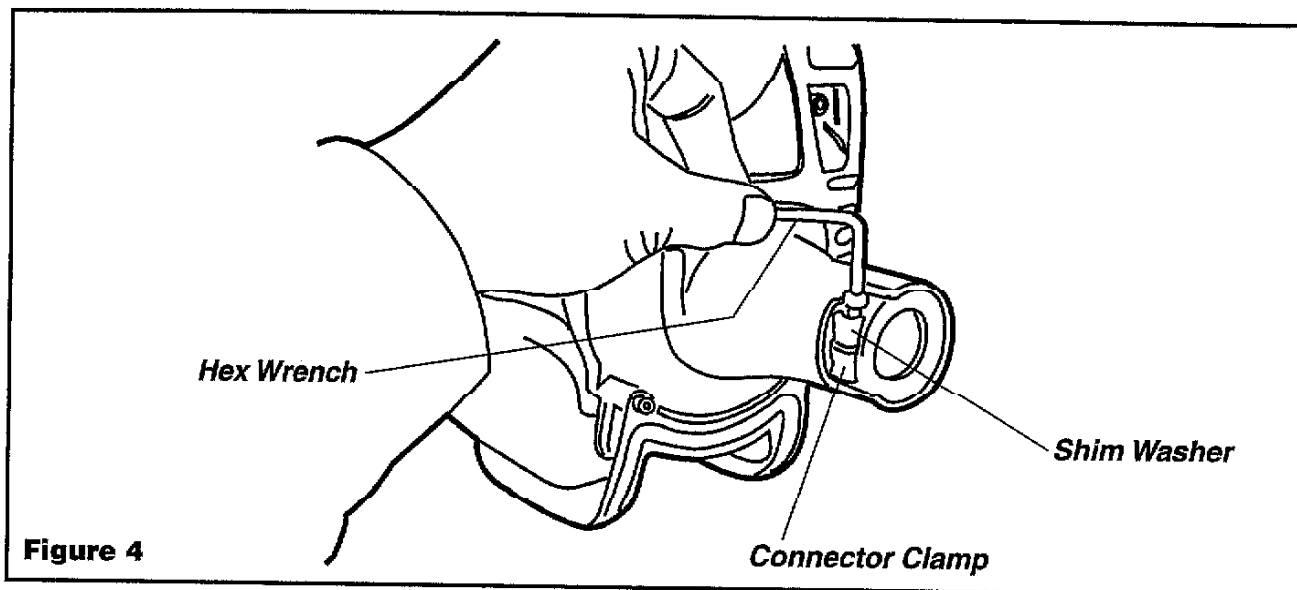
Included Accessories: Cutting attachment shield, shoulder strap, handle, barrier and tool kit.

### **IMPORTANT!**

The terms "left," "left-hand," and "LH"; "right," "right-hand," and "RH"; "front" and "rear" refer to directions as viewed by the operator during normal operation of this product.

## Powerhead Assembly Instructions





### Install Mainshaft and Outer Tube. See figure 3.

1. Place the powerhead on a flat surface, resting on its stand.
2. Loosen the 5mm socket head cap screw on the powerhead union clamp. Verify that the D-shaped shim washer is positioned as shown in Figure 4.
3. Slip the outer pipe into the throttle grip up to the hanger.
4. Insert the shaft tube assembly into the powerhead connector clamp until you feel the mainshaft splines engage the powerhead. See Figure 3.
5. If necessary, rotate the outer tube assembly until the gearcase output shaft is pointing down, opposite to the spark plug.
6. Tighten the union clamp screw securely.

#### CAUTION!

Do not remove the D-shaped shim washer! The shim washer prevents damage from overtightening the tube clamp screw.

#### CAUTION!

Do not force the outer tube into the powerhead! Forcing the outer tube into the powerhead may damage the splines on the mainshaft and/or clutch drum shaft. If installation proves difficult, rotate the powerhead or mainshaft until you feel the mainshaft splines slide into the clutch drum shaft.



# Assembly and Adjustments

## Cutting Attachment Shield

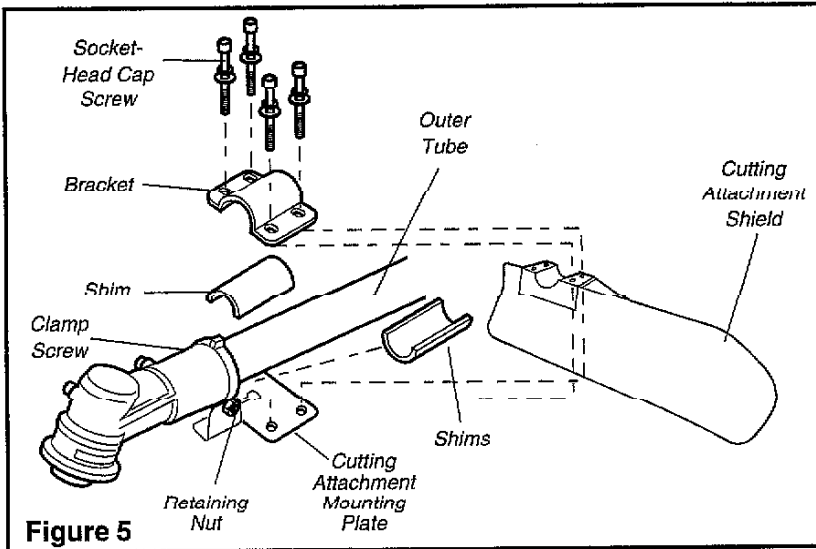


Figure 5

### Install the Cutting Attachment Shield.

1. Insert the cutting attachment shield between the outer tube and the cutting attachment mounting plate. See Figure 5.
2. Fit the two shims and the bracket over the outer tube and loosely install the four socket-head screws. See Figure 5.

**NOTE:**

It may be necessary to loosen the retaining nut and clamp screw to adjust cutting attachment shield mounting plate.

**CAUTION!**

Make sure the clamp screw and retaining nut is securely tightened before tightening the four socket head cap screws.

**WARNING!**

NEVER operate the T2500 without the cutting attachment shield installed and tightly secured!

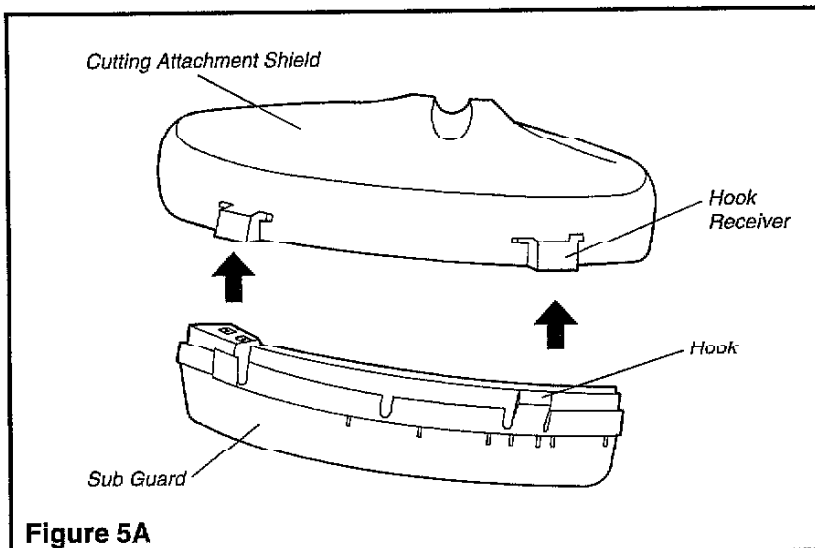


Figure 5A

### Install Sub Guard

1. Install the sub guard. See Figure 5A.

**NOTE:**

Make sure the edge of cutting attachment shield is aligned with the groove of the sub guard.

**CAUTION!**

Make sure the sub guard is completely hooked at the hook receiver.

**WARNING!**

NEVER use this machine without sub guard when using a trimmer head

## Assembly Handle

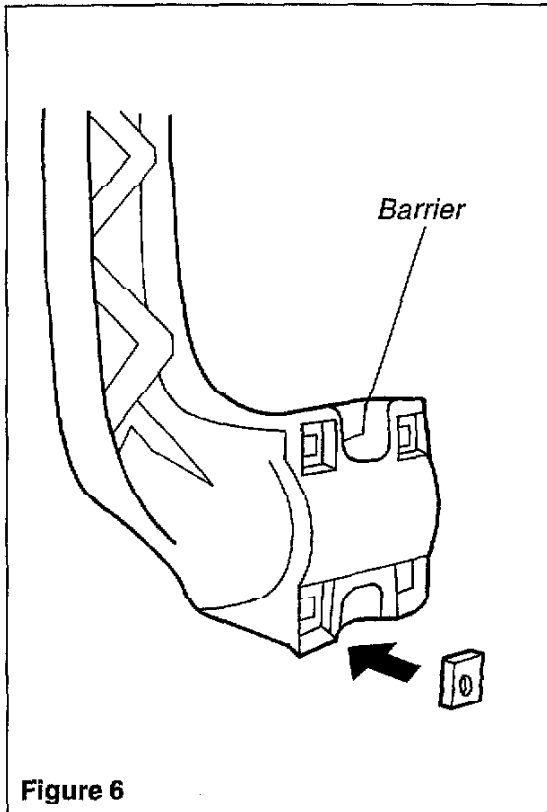


Figure 6

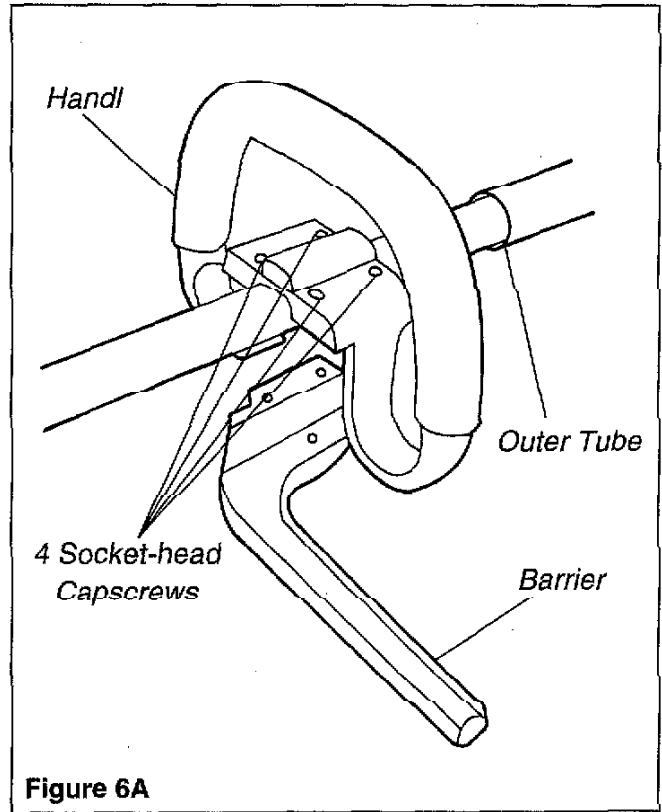


Figure 6A

### Handle.

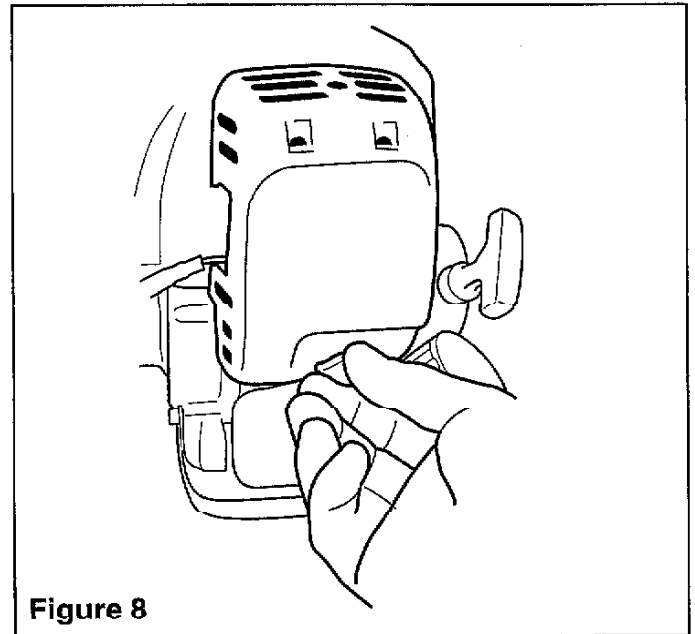
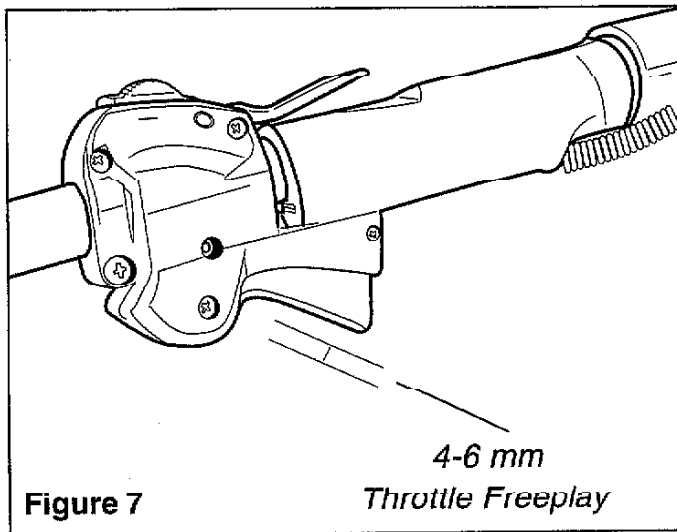
1. Put the 4 square nuts in the frame of barrier.  
See Figure 6.
2. Fit the handle and barrier over the outer tube and tighten the socket-head cap screws.
3. Position the handle forward of the Handle Positioning Label at the best position for operator comfort (usually about 250mm ahead of the throttle housing).
4. Secure the handle by alternately tightening the four socket-head screws in a diagonal or "criss-cross" fashion.

## Assembly and Adjustments

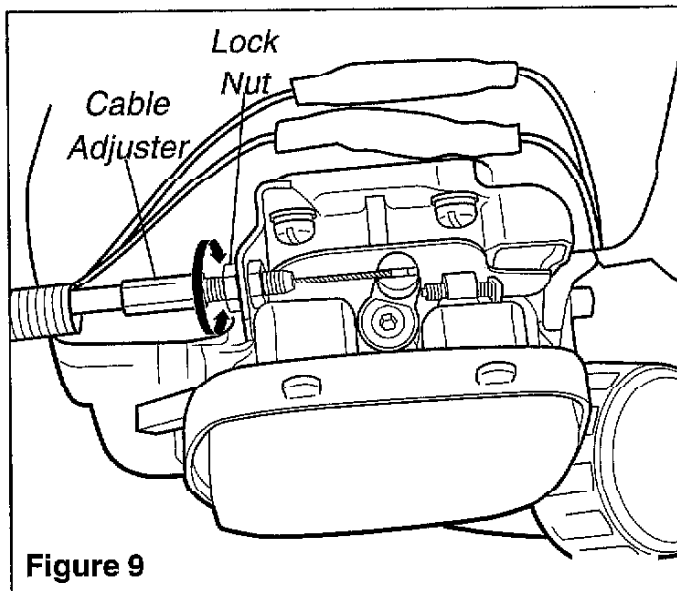
### Adjust Throttle Lever Free Play

The throttle lever free play should be approximately 4-6 mm.

See Figure 7. Make sure that the throttle lever operates smoothly without binding. If it becomes necessary to adjust the lever freeplay, follow the procedures and illustrations that follow.



1. Loosen the air cleaner cover knob and remove the air cleaner cover. See figure 8.
2. Loosen the lock nut on the cable adjuster. See Figure 9.
3. Turn the cable adjuster in or out as required to obtain proper free play 4-6 mm. See Figure 7.
4. Tighten the locknut.
5. Reinstall the air cleaner cover.



## Saw Blade

1. Make sure the switch is off and the engine is stopped.
2. Wear gloves to protect your hands.
3. Turn the unit over so that the saw holder flange extending from the gear case is facing up.
4. Using the small end of the plug wrench, loosen the bolt (turn clockwise) and remove the bolt, bolt guard and holder.
5. Slide the safety clip as the illustration shows.

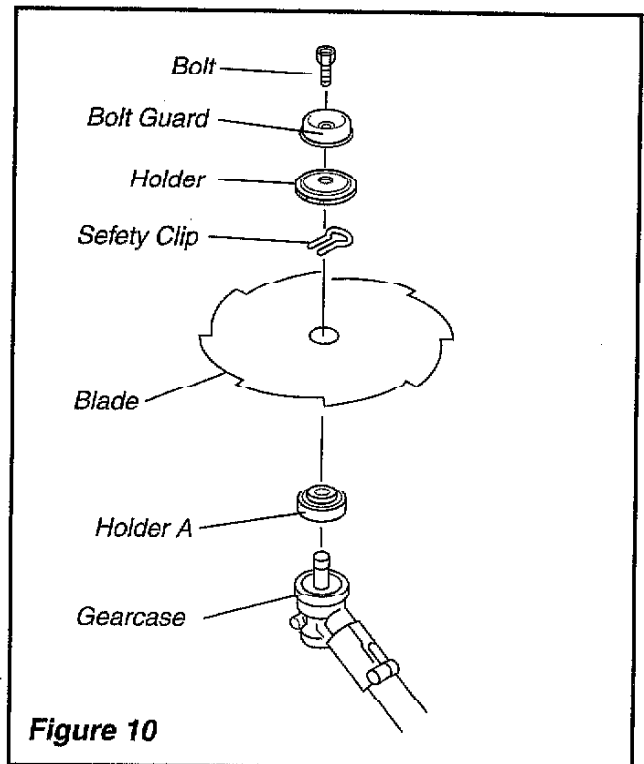


Figure 10



**WARNING!**

Never operate this machine without the safety clip in place.



**WARNING!**

Before operating, make sure the blade is securely mounted. Turn the blade with your hand slightly and make sure the blade turns smoothly without wobbling.

- 6. Fit the blade over the safty clip and onto the holder A. Then, slide the safety clip back to the original position.



**WARNING!**

The blade must fit flat against the holder A. The blade's mounting hole must be centered over the raised boss of the holder A.



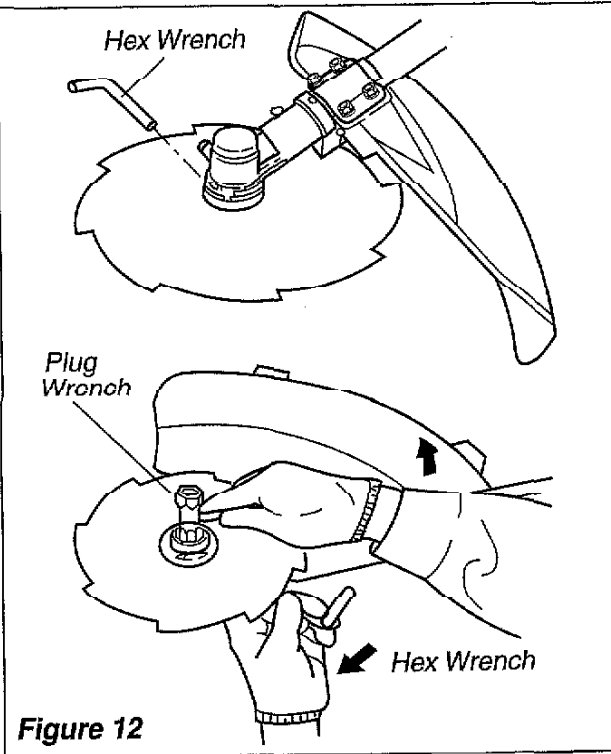
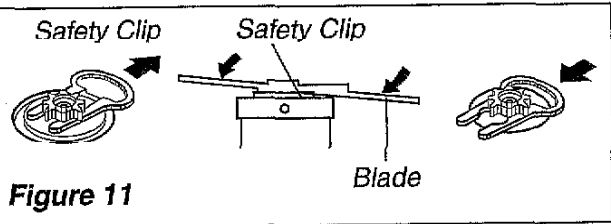
**WARNING!**

Make sure the direction of the arrow indicated on the blade corresponds with the arrow indicated on the safety guard.

- 7. Put the holder and bolt guard back and tighten the bolt fingertight only at this time.

Make sure is flat against the blade the blade and the recess in the holder must face the blade and completely cover the safety clip.

- 8. Rotate the holder A until the hole in its skirt aligns with the hole in the gearcase. Insert the hex wrench through both holes (to prevent the shaft from turning).
- 9. Holding the hex wrench and the blade with one hand, tighten the bolt (turn counter-clockwise) securely using the small end of the plug wrench.
- 10. Remove the hex wrench.



## Trimmer Head

1. Make sure the switch is turned off and the engine is stopped.
2. Turn the unit over so the shaft from the gearcase is faces up.
3. Remove the shaft bolt, bolt guard, holder and the retainer clip(s) from the output shaft.

### IMPORTANT!

The shaft bolt, bolt guard, and retainer clips are not used with a trimmer head cutting attachment. Save these parts for future blade installation.

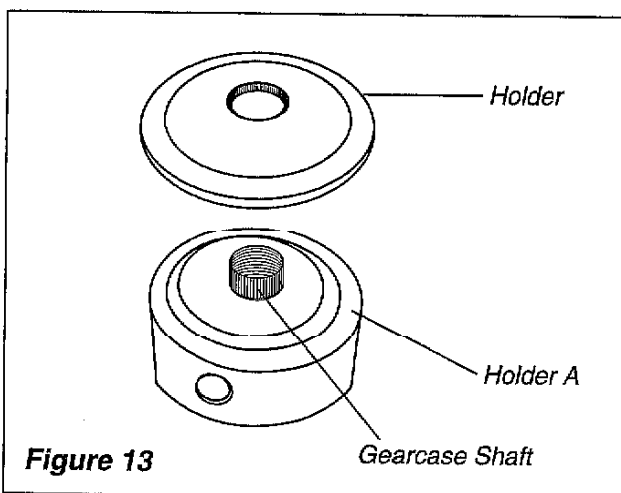


Figure 13

4. Rotate the holder until the hole in the holder aligns with the notch on the gearcase flange. Using the hex wrench, lock the gearcase as shown.

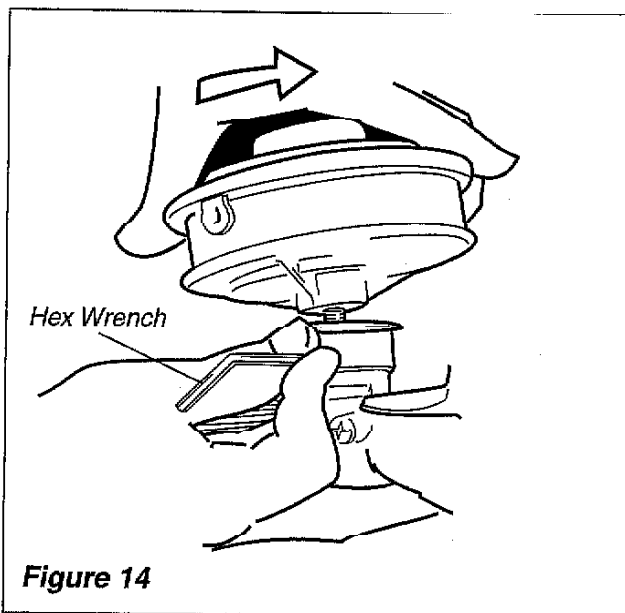


Figure 14

5. While holding the holder with the hex wrench, thread the trimmer head onto the gear-shaft and install securely using hand pressure. Turn counter clockwise to install.
6. Remove the hex wrench.

### CAUTION!

Never use this machine without sub guard when using a trimmer head.

## Fuel

### CAUTION!

Some types of gasoline contain alcohol as an oxygenate. Oxygenated gasoline may cause increased operating temperatures. Under certain conditions, alcohol-based gasoline may also reduce the lubricating qualities of some 2-cycle mixing oil. Never use any type of gasoline containing more than 10% alcohol by volume! Generic oils and some outboard oils may not be intended for use in high-performance 2-cycle engines, and should never be used in your Shindaiwa engine.

### IMPORTANT!

This engine is certified to operate on a 50:1 mixture consisting of unleaded gasoline and 2-cycle mixing oil only. Mix only enough fuel for your immediate needs! If fuel must be stored longer than 30 days, it should first be treated with a stabilizer such as StaBi™.

- Mix fuel by combining unleaded gasoline with Shindaiwa 2-cycle Mixing Oil at a ratio of 50:1 (1000 cm<sup>3</sup> of gasoline mixed with 20 cm<sup>3</sup> of 2-cycle mixing oil).
- Use only fresh, clean, unleaded gasoline with an octane rating of 87 or higher.

## Filling the Fuel Tank



### WARNING!

Minimize the risk of fire!

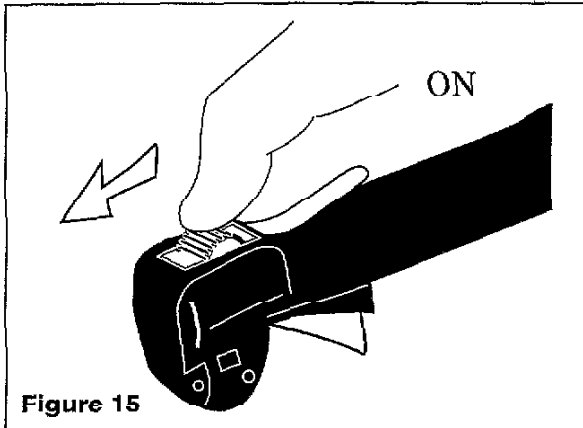
- Stop the engine before refueling!
- Always allow the engine to cool before refueling!
- Wipe all spilled fuel and move the brushcutter at least 3 meters from the fueling point and source before restarting!
- Never smoke or light any fires near the brushcutter or fuel source!
- Never place any flammable material near the engine muffler!
- Never operate the engine without the muffler in good working condition.
- Make sure of no fuel leaking from Fuel tank, Fuel pipe and Carburetor and other parts which fuel may leak. Repair the machine if fuel leaking, make sure no leaking again.

1. Place the brushcutter on a flat, level surface.
2. Clear any dirt or other debris from around the fuel filler cap.
3. Remove the fuel cap, and fill the tank with clean, fresh fuel.
4. Reinstall the fuel filler cap and tighten firmly.

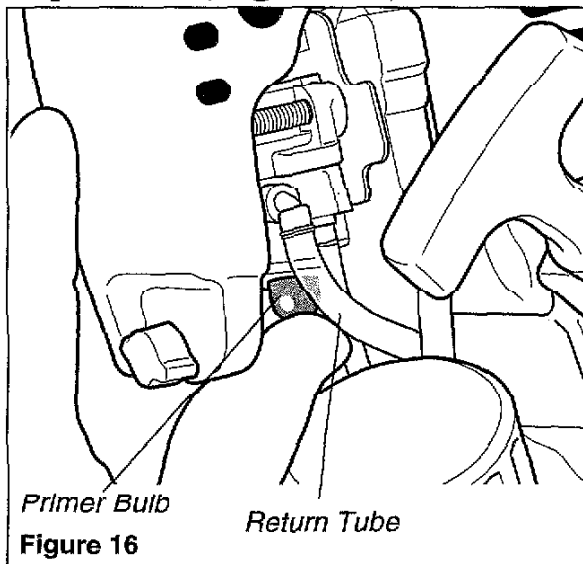
# Starting the Engine

## IMPORTANT!

Engine ignition is controlled by a two position switch mounted on the throttle housing labeled, "I" for ON or START and "O" for OFF or STOP.



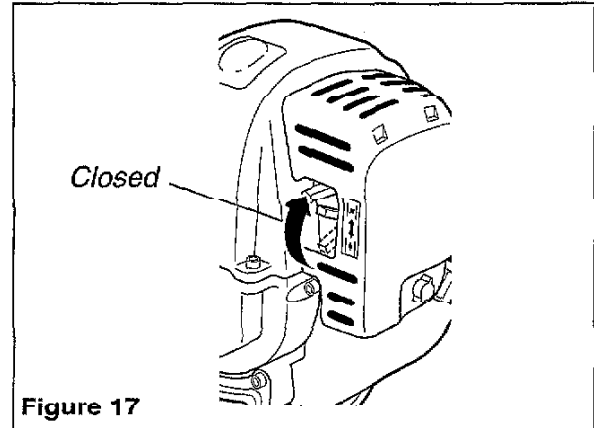
1. Slide the ignition switch to the "I" position (engine ON).



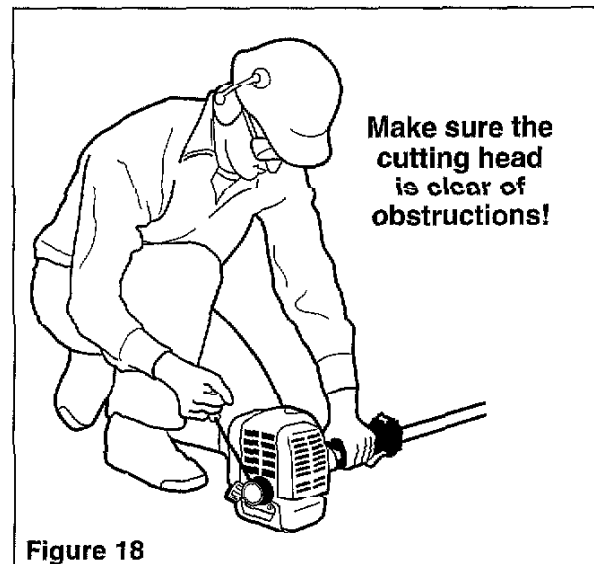
2. Press the primer bulb until fuel can be seen flowing in the transparent return tube.

## IMPORTANT!

The primer system only pushes fuel through the carburetor. Repeatedly pressing the primer bulb will not flood the engine with fuel.



3. Set the choke lever to the CLOSED position if engine is cold.



4. While holding the outer tube firmly with one hand, slowly pull the recoil starter handle until resistance is felt, then pull quickly to start the engine.

## CAUTION!

Do not pull the recoil starter to the end of the rope travel. Pulling the recoil starter to the end of the rope travel can damage the starter.



## Starting the Engine (continued)



### WARNING!

The cutting attachment may rotate when the engine is started!

5. When the engine starts, slowly move the choke lever to the "OPEN" position. See Figure 19. (If the engine stops after the initial start, close the choke and restart.)

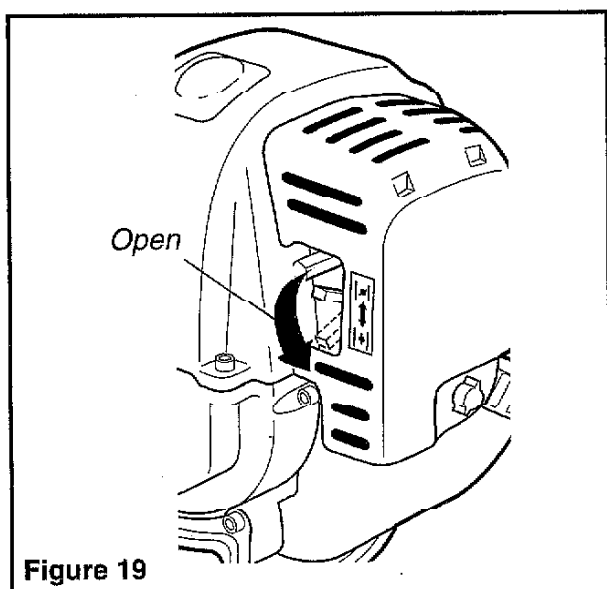


Figure 19



### WARNING!

Never start the engine from the operating position.

### IMPORTANT!

If the engine fails to start after several attempts with the choke in the closed position, the engine may be flooded with fuel. If flooding is suspected, move the choke lever to the open position and repeatedly pull the recoil starter to remove excess fuel and start the engine. If the engine still fails to start, refer to the troubleshooting section of this manual.

### When the Engine Starts...

- After the engine starts, allow the engine to warm up at idle 2 or 3 minutes before operating the unit.
- After the engine is warm, pick up the unit and clip on the strap if so equipped. See page 18.
- Advancing the throttle makes the cutting attachment turn faster; releasing the throttle permits the attachment to stop turning. If the cutting attachment continues to rotate when the engine returns to idle, carburetor idle speed should be adjusted (see "Adjusting Engine Idle" below).

## Stopping the Engine

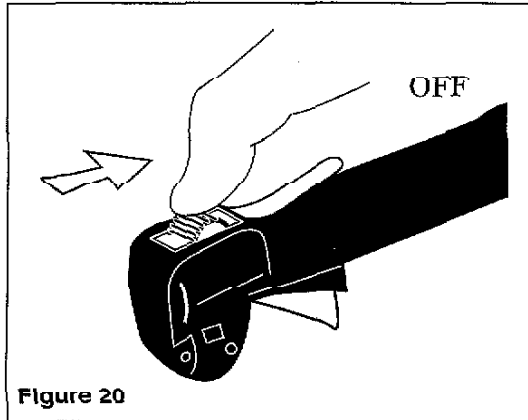


Figure 20

Idle the engine briefly before stopping (about 2 minutes), then slide the ignition switch to the "O" (Engine OFF) position. See Figure 20

## Adjusting Engine Idle

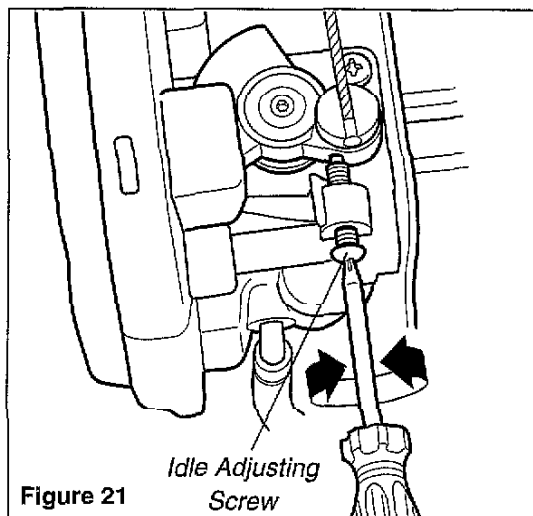


Figure 21

The engine must return to idle speed whenever the throttle lever is released. Idle speed is adjustable, and must be set low enough to permit the engine clutch to disengage the cutting attachment.

### Idle Speed Adjustment



#### **WARNING!**

The cutting attachment must NEVER rotate at engine idle! If the idle speed cannot be adjusted by the procedure described here, return the trimmer to your Shindaiwa dealer for inspection.

1. Place the trimmer on the ground, then start the engine, and then allow it to idle 2-3 minutes until warm.
2. If the attachment rotates when the engine is at idle, reduce the idle speed by turning the idle adjustment screw counter-clockwise. See Figure 21.
3. If a tachometer is available, the engine idle speed should be final adjusted to 3,000 ( $\pm 200$ )rpm( $\text{min}^{-1}$ ).
4. Carburetor fuel mixture adjustments are preset at factory and cannot be serviced in the field.

## Shoulder Strap

### NOTE:

A shoulder strap accessory must be required for use with T2500 Multipurpose Engine. A shoulder strap can increase operator comfort during extended periods of operation.

See Figure 22.

A Shoulder strap must used with the T2500 and varios tools being used.



Figure 22

## To Wear the Strap

1. Hook the strap hook to the hanger on the outer pipe.
2. Hook the strap so that hook stays at your right hand side.
3. Adjust the length of the strap so that you can hold and operate the machine comfortably.

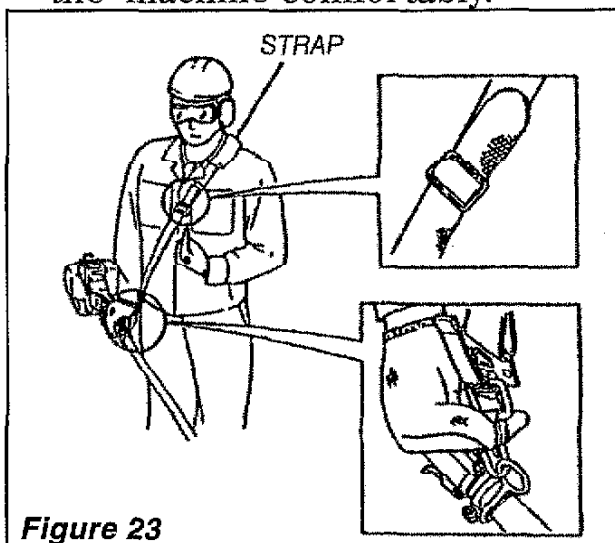


Figure 23

## Emergency Release

In case of emergency, strongly pull the white tab at the hook. The machine will be released from the strap.

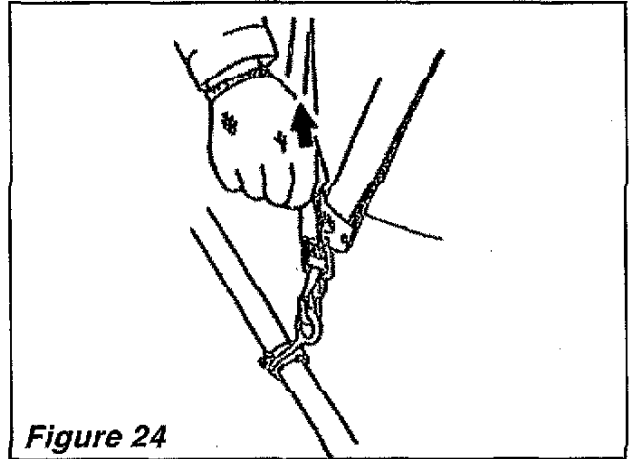


Figure 24



## **WARNING!**

**NEVER** operate the unit with the cutting attachment shield and/or other protection devices removed!

**ALWAYS** make sure the cutting attachment is properly installed and firmly tightened before operation.

**NEVER** use a cracked or warped cutting attachment.

**ALWAYS** make sure the cutting attachment fits properly into the appropriate cutter holder. If a properly installed attachment vibrates, replace the attachment with a new one and re-check.

**ALWAYS** stop the engine immediately and check for damage if you strike a foreign object or if the cutting attachment becomes entangled.

**NEVER** cut with dull blades. Use a blade that is sharp and in good condition.

**NEVER** operate a machine with loose, worn, damaged, or missing fasteners or cutting attachment holders.

Improper maintenance, use of nonconforming replacement components, or the removal of safety devices could result in serious injury.

When transporting, make sure the engine is not running and the blade is covered with the blade cover.

**NEVER** run the engine indoors make sure there is always good ventilation. Fumes from engine exhaust can cause serious injury or death.

**NEVER** allow the engine to run at high speeds without a load. Over-revving without a load could damage the engine.

## The Properly Equipped Operator



### WARNING!

**ALWAYS GUARD AGAINST FLYING DEBRIS!** Protective devices and the cutting attachment shield do not guarantee protection against flying objects.

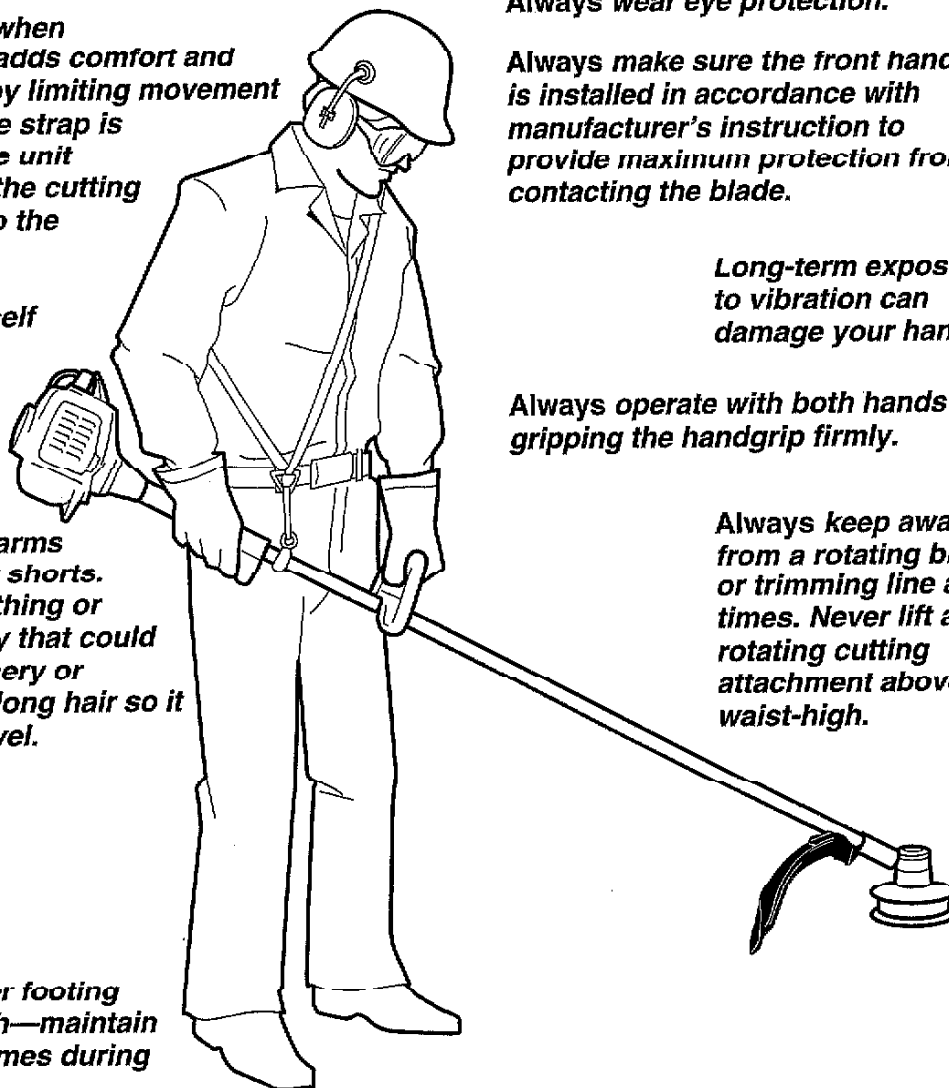
*Do not operate this tool if you are tired, ill or under the influence of alcohol, drugs, or medication.*

*Always wear hearing protection and a broad-brimmed hat or helmet. A helmet is required when using a blade-equipped brushcutter to clear small trees.*

*Prolonged exposure to excessive noise is fatiguing and could lead to impaired hearing.*

*Always wear a strap when operating the unit. It adds comfort and helps ensure safety by limiting movement fore and aft. When the strap is adjusted properly, the unit should balance with the cutting attachment parallel to the ground.*

*Always protect yourself from hazards such as thorny brush and flying debris by wearing gloves and close fitting clothing that covers arms and legs. Never wear shorts. Don't wear loose clothing or items such as jewelry that could get caught in machinery or underbrush. Secure long hair so it is above shoulder level.*



*Always wear eye protection.*

*Always make sure the front handle is installed in accordance with manufacturer's instruction to provide maximum protection from contacting the blade.*

*Long-term exposure to vibration can damage your hands.*

*Always operate with both hands gripping the handgrip firmly.*

*Always keep away from a rotating blade or trimming line at all times. Never lift a rotating cutting attachment above waist-high.*

*Always keep a proper footing and do not overreach—maintain your balance at all times during operation.*

*Always wear appropriate footwear such as non-skid boots or shoes. Never work barefooted or wear open-toed shoes or sandals!*

*Always make sure the cutting attachment shield is securely fastened to the brushcutter. Do not operate the unit if the cutting attachment shield is missing, loose, or broken.*

**Figure 25**

## Be Aware of the Working Environment

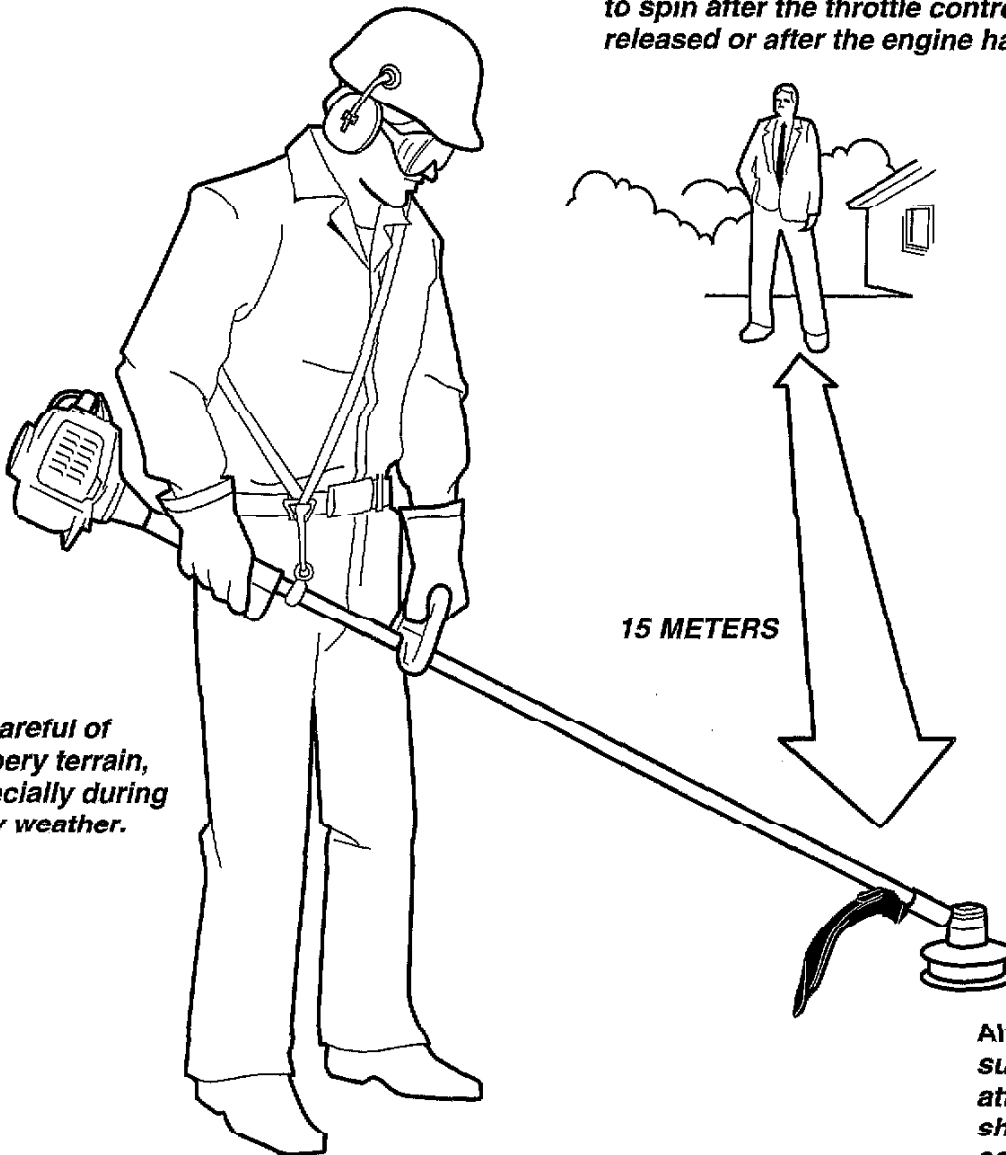
*Always avoid long-term operation in very hot or very cold weather.*

*Always inspect the cutting site thoroughly and remove all objects that could be thrown or get entangled in the cutting attachment. Note the location of large rocks, stumps, and other fixed objects to avoid hitting them.*

*Always keep children, bystanders, and pets outside a 15 meters. This will reduce the risk of being struck by flying debris. Bystanders should be encouraged to wear eye protection. Stop immediately if a child, person or pet comes within a 15 meters radius.*

*Always beware of a coasting blade. A coasting blade can injure while it continues to spin after the throttle control lever is released or after the engine has stopped.*

*Be careful of slippery terrain, especially during rainy weather.*



*Always make sure the cutting attachment shield is installed correctly.*

*Always be alert for objects and debris that could be thrown from the rotating cutting attachment or bounced from a hard surface.*

*If contact is made with a hard object, stop the engine and inspect the cutting attachment for damage immediately.*

**Figure 26**

## Using a Brushcutter Equipped with a Blade

A blade-equipped brushcutter is a professional tool that demands the utmost attention. Observing the following important guidelines will help ensure safe and effective performance from your brushcutter.



### **WARNING!**

- Your brushcutter is equipped with a barrier-type front handle, shoulder strap, and a cutting attachment shield. These items must be installed and adjusted according to the instructions in this manual before using the unit with a blade or a trimmer head cutting attachment.
- A unit equipped with a blade can throw or get entangled in loose objects. Before operating, inspect the area thoroughly. Remove all objects, such as rocks, broken glass, nails, wire, or string. Note the location of large rocks, stumps, and other fixed objects to avoid hitting them.
- Make sure children, bystanders, and pets are at least outside a 15 meters radius. If a child, person, or pet comes into the 15 meters radius, stop the engine immediately.
- Beware of the dangers of blade thrust! Blade thrust can occur when the top or right cutting zone of the blade strikes a fixed object. Blade thrust can be violent enough to cause the unit and/or operator to be propelled in any direction, and possibly lose control of the unit. A violent blade thrust poses an extreme risk to anyone and anything nearby.
- Do not overreach! Do not raise the cutting attachment above waist level. Assume a safe and comfortable position before starting, and maintain your balance at all times.
- STOP the machine immediately if it suddenly begins to vibrate or shake. Inspect it for loose, broken, missing, or improperly installed parts or attachments.

### **Barrier Type Front Handle**

The barrier type front handle helps prevent the operator from moving forward or the cutting attachment from moving rearward to prevent inadvertent bodily contact with the blade. The front handle must be installed in accordance with the instruction provided in this manual.

Always keep the front handle securely in place on the unit!



## WARNING!

- When cutting small trees with a blade, feed the blade slowly—never strike or “slam” the spinning blade against the tree trunk.
  - **DO NOT** use 2-tooth (lawnmower type) cutting blades. Use only Shindaiwa approved blades with your Shindaiwa brushcutter.
  - Using a blade not authorized by Shindaiwa may result in serious injury.
- Avoid blade thrust by keeping the blade in view during operation. Watch your cut at all times. Cut **ONLY** small trees and/or branches with the left side of the blade between the 8 o'clock and 10 o'clock positions as shown in Figure 27. Avoid cutting with any other part of the blade. When cutting brush, sweep the blade from right to left, always keeping the blade well in front. It is recommended that the blade be tilted down slightly to help keep debris from accumulating on the edge of the blade.
  - Blade thrust will occur without warning if the blade snags, stalls, or binds in the cut. A dull blade is more likely to thrust than a sharp one because a sharp blade tends to bite into the cut while a dull blade tends to bounce away.
  - When using a blade, stay away from fences and buildings. Watch for stakes, wires, and other objects that can cause kick-out or that can wrap around the blade.
  - **DO NOT** overreach. Move to a comfortable position before starting a cut, and maintain your balance at all times.
  - Keep the engine at maximum throttle during the cut. Apply just enough feed pressure to maintain engine speed without wasting fuel or causing unnecessary wear. Avoid extended operation at low speeds to prevent clutch slippage. Excessive clutch slippage will cause premature wear of clutch components.
  - If the blade strikes a solid object or if abnormal vibration develops, stop cutting immediately, stop the engine, and inspect the blade. If the blade is bent, warped, cracked, broken or damaged in any way, replace it with a sharp blade.
  - Small trees usually can be felled with a single cut. Use the 8 o'clock-to- 10 o'clock cutting zones of the blade to avoid blade thrust. The fall of the tree can be directed by sloping the cut. The tree will usually fall towards the high side of the stump. Cutting down larger trees may require several cuts.
  - If the blade snags or binds in a cut, **STOP** the engine before proceeding to clear the blade from the cut.



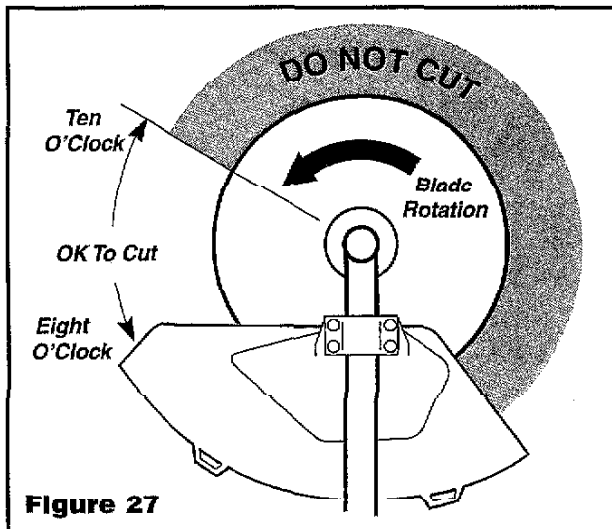


Figure 27

### Engine Operating Speeds

Operate the machine at full throttle while cutting. Best results are obtained by releasing the throttle when swinging back after completing a cut.

- To prevent possible engine damage, do not allow the brushcutter to run at high speeds without a load.
- Avoid operating the engine below the recommended operational speed range. Doing so can lead to rapid clutch wear. In addition, slow-speed operation may cause grass and debris to wrap around the cutting attachment.

### Trimming/Mowing Grass Using A Trimmer Head

#### CAUTION!

Do not push the rotating trimmer line into trees, wire fences or any material that could entangle or break line.

Your Shindaiwa T2500 brushcutter can be equipped with the recommended Shindaiwa trimmer head.

#### CAUTION!

Operation at low speed may cause premature clutch failure.

For best cutting performance and extending trimmer line life, follow these recommended procedures when using a string-type cutting head. See Figure 28.

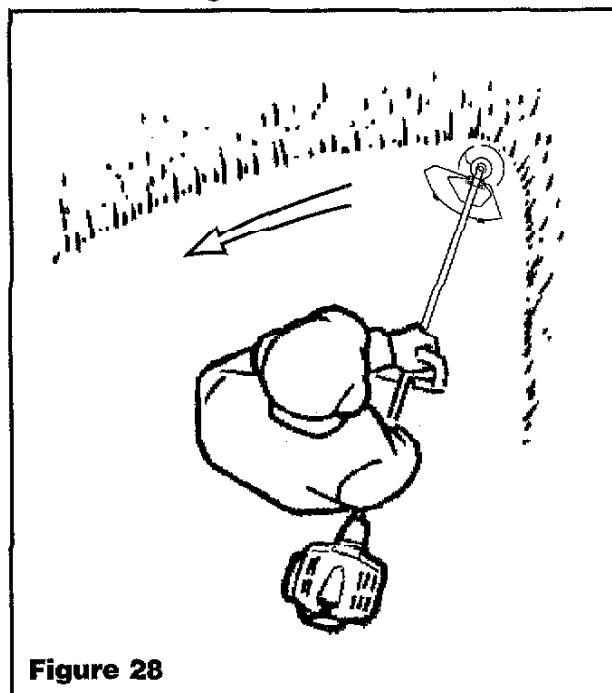


Figure 28

- Cut from right to left, with the trimmer head angled slightly towards the cut.
- Use full throttle when cutting, then release the throttle momentarily before beginning the next cut.
- Cut only with the tip of the trimmer line.

## Periodic Maintenance



### WARNING!

Before performing any service and maintenance or repair work on the machine, make sure that the switch button is in the STOP position and the engine and the cutting attachment are completely stopped. Always disconnect the spark plug lead.

## Blades



### WARNING!

- Never repair a damaged blade by welding, straightening, or by modifying its shape. An altered blade may break during operation, resulting in serious personal injury.
- DO NOT use 2-tooth (lawnmower type) cutting blades. Use only blades approved by Shindaiwa for use with your brushcutter.
- Operating the machine with a blade or attachment not authorized for use for this unit can result in serious injury to the operator and/or bystanders.
- Keep blades sharp and check blade condition frequently. If cutting performance changes suddenly, stop the engine and check the blade for cracks or other damage. Replace the damaged blade immediately!

## General Maintenance

### IMPORTANT!

Maintenance, replacement or repair of emission control devices and systems may be performed by any repair establishment or individual; However, warranty repairs must be performed by a dealer or service center authorized by shindaiwa kogyo co., ltd. The use of parts that are not equivalent in performance and durability to authorized parts may impair the effectiveness of the emission control system and may have a bearing on the outcome of a warranty claim.



### WARNING!

Before performing any maintenance, repair or cleaning work on the unit, make sure the engine and cutting attachment are completely stopped. Disconnect the spark plug wire before performing service or maintenance work.



### WARNING!

Non-standard parts may not operate properly with your unit and may cause damage and lead to personal injury.

### NOTE

Using non-standard replacement parts could invalidate your Shindaiwa warranty.

#### Muffler

This unit must never be operated with a faulty or missing muffler. Make sure the muffler is well secured and in good condition. A worn or damaged muffler is a fire hazard and may also cause hearing loss.

#### Spark Plug

Keep the spark plug and wire connections tight and clean.

#### Fasteners

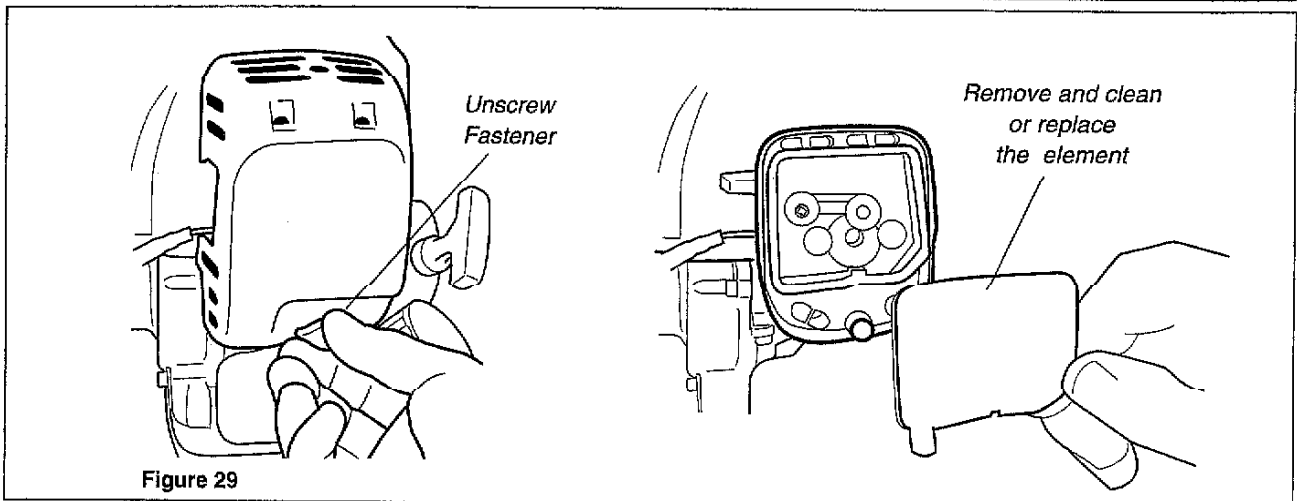
Make sure nuts, bolts, and screws (except carburetor adjusting screws) are tight.

## Daily Maintenance

Prior to each work day, perform the following:

- Remove dirt or debris from the engine, check the cooling fins and air cleaner for clogging and clean them as necessary.
- Carefully remove any accumulation of dirt or debris from the muffler or the fuel tank. Dirt build-up in these areas could cause the engine overheating, induce premature wear, or create a fire hazard.
- Check for loose or missing screws or components. Make sure the cutting attachment is securely fastened.
- Check the entire unit for leaking fuel or grease.

## 10-Hour Maintenance

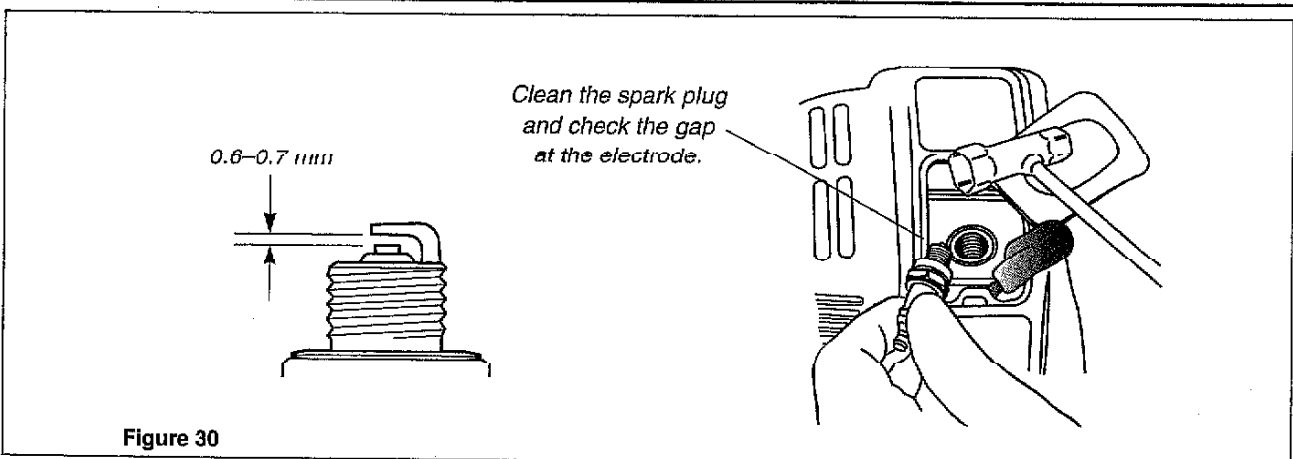


**Every 10 hours of operation** (more frequently in dusty or dirty conditions): Remove the air cleaner element. See figure 29. Clean or replace as necessary. To clean element: Wash it thoroughly in soap and water. Let it dry before reinstalling the element.

### CAUTION!

Do not operate the unit if the air cleaner or element is damaged, or if the element is wet or watersoaked.

## 10/15-Hour Maintenance



**Every 10 to 15 hours of operation:** Remove and clean the spark plug. Adjust the spark plug electrode gap to 0.6-0.7 mm. If the spark plug must be replaced, use only an NGK CMR6H or equivalent resistor type spark plug of the correct heat range. See Figure 30.

### CAUTION!

Before removing the spark plug, clean the area around the plug to prevent dirt and debris from getting into the engine's internal parts.

### NOTE:

The NGK CMR6H also meets the requirements for electro magnetic compliance (EMC).

## 50-hour Maintenance

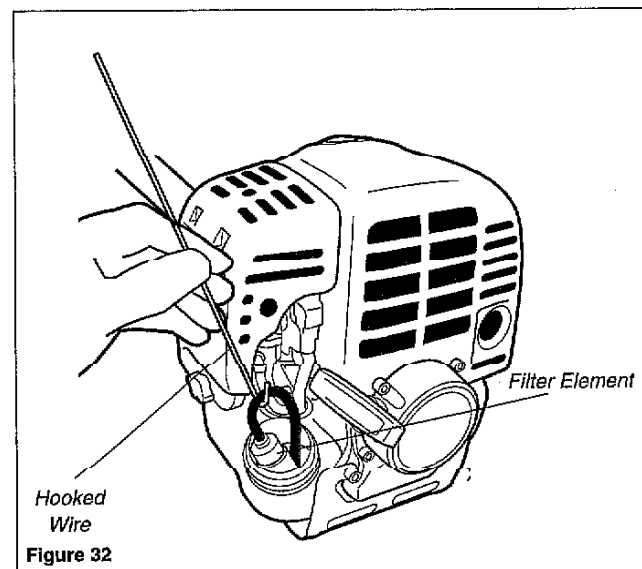
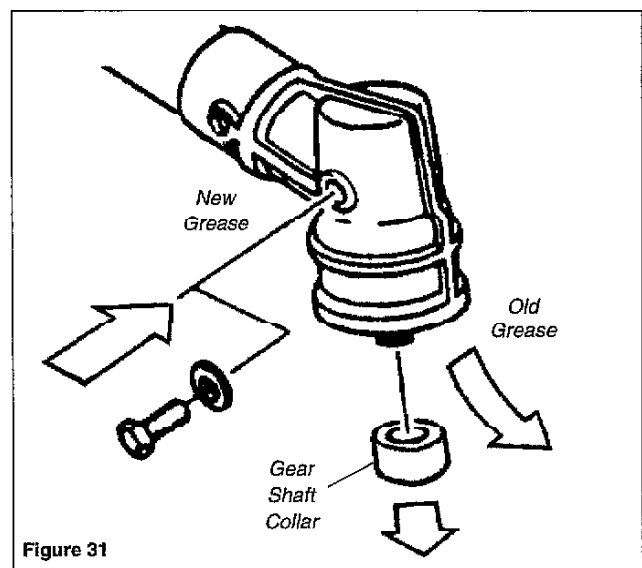
**Every 50 hours of operation**  
(more frequently in dusty or dirty conditions):

- Remove and clean the cylinder cover and clean grass and dirt from the cylinder fins.
- Remove the cutting attachment, cutting attachment holder and gear shaft collar. Remove the filler plug from the side of the gearcase and press new grease into the gearcase until grease is pushed out. Use only lithium-base grease such as Shindaiwa Gear Case Lubricant or equivalent. See figure 31.
- Use a hooked wire to extract the fuel filter from inside the fuel tank. See figure 32.

### **CAUTION!**

Make sure you do not pierce the fuel line with the end of the hooked wire. The line is delicate and can be damaged easily.

Remove and replace the filter element. Before reinstalling the new filter element, inspect the condition of all the fuel system components (fuel pick-up line, fuel return line, tank vent line, tank vent, fuel cap and fuel tank). If damage, splitting or deterioration is noted, the unit should be removed from service until it can be inspected or repaired by a Shindaiwa-trained service technician.



## Storage

### Short Term Storage

(Less than 30 days)

- Clean the air filter.
- Clean cylinder fins, flywheel fins, and muffler surfaces.
- Clean cooling air intake grill.
- Clean debris from gearcase and outer tube exterior surfaces.
- Lubricate gearcase as outlined in page 28 of this manual.
- Drain fuel tank.
- Cover engine and store unit in a clean, dry place.

### Long Term Storage

(More than 30 days)

#### **CAUTION!**

Never store this unit for more than 30 days with fuel remaining in the tank, fuel lines or carburetor! Storing with fuel remaining in the fuel tank, fuel lines and carburetor may cause gum deposits in the fuel system.

#### **IMPORTANT!**

All units to be stored, for 30 days or longer, with fuel remaining in the fuel tank, hose, and carburetor and fuel system should be conditioned with a fuel stabilizer such as STA-BIL™.

Whenever the machine is going to be stored for 30 days and longer, prepare the unit for storage as follows:

- Drain all fuel from fuel tank and allow unit to run until all the fuel in the carburetor is spent.
- Remove the spark plug and pour about 7g of oil into the cylinder through the spark plug hole. Crank the engine over slowly two or three times so oil will coat the cylinder wall and piston rings.
- Reinstall the spark plug.
- Repair damaged or faulty components as necessary.
- Service air filter as outlined in page 27.
- Clean all external parts thoroughly and apply a light coating of oil to all metal surfaces.
- Cover the engine and store the brushcutter in a clean, dry place.
- Cover the blade with the blade cover.

## Recommended Blades

Make sure to use the following recommended Shindaiwa blades with this machine.

PART NUMBER

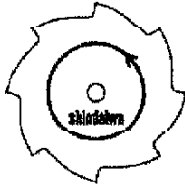
60903-98310

8-TOOTH BLADE

INNER BORE: 25.4 mm

DIAMETER: 255.0 mm

THICKNESS: 2.0 mm



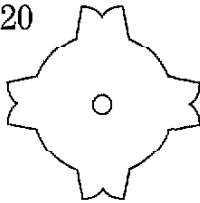
PART NUMBER: 60903-98320

4-TOOTH BLADE

INNER BORE: 25.4 mm

DIAMETER: 255.0 mm

THICKNESS: 2.0 mm



### WARNING!

Never use the machine with unrecommended blade installed to prevent injury by loosening machine ballance.

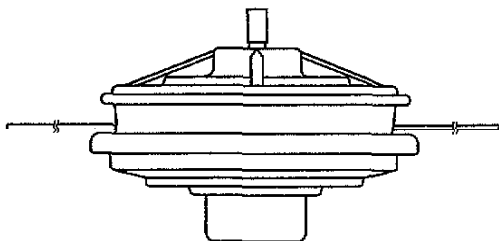
## Recommended Trimmer Head

PART NUMBER 67000-65010

TYPE: AUTOMATIC

CUTTING LINE: NYLON

LINE DIAMETER: 2.0 mm



## BLADE Sharpening

With a file or a grinder, file a blade as follows.

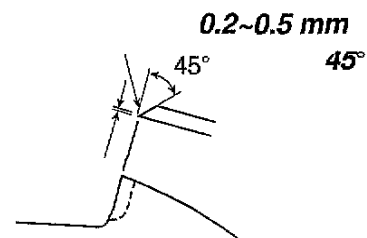


### WARNING!

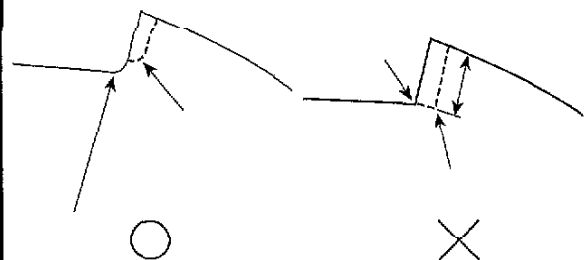
Sharpen only the cutting teeth of a blade. DO NOT alter the contour of the blade in any way. In order to keep the blade in balance, all cutting edges must be sharpened equally. DO NOT file the tips of the teeth too sharp.

**The sharpening angle should be 45° approx.**

**Do not file the tips of the blade too sharp. Leave 0.2~0.5 mm unsharpened.**



**The bottom of each tooth must remain unsharpened.**



# Troubleshooting Guide

## ENGINE DOES NOT START

What To Check	Possible Cause	Remedy
Does the engine crank?	<b>NO</b> → Faulty recoil starter. Fluid in the crankcase. Internal damage.	Consult with an authorized servicing dealer. Consult with an authorized servicing dealer. Consult with an authorized servicing dealer.
<b>YES</b> ↓		
Good compression?	<b>NO</b> → Loose spark plug. Excess wear on cylinder, piston, rings. Valves not seating.	Tighten and re-test. Consult with an authorized servicing dealer. Consult with an authorized servicing dealer.
<b>YES</b> ↓		
Does the tank contain fresh fuel of the proper grade?	<b>NO</b> → Fuel incorrect, stale, or contaminated; mixture incorrect.	Refill with fresh, clean unleaded gasoline with a pump octane of 87 or higher mixed with a 2-cycle air cooled mixing oil that meets or exceeds ISO-L-EGD and/or JASO FC classified oils at 50:1 gasoline/oil ratio.
<b>YES</b> ↓		
Is fuel visible and moving in the return line when priming?	<b>NO</b> → Check for clogged fuel filter and/or vent. Priming pump not functioning properly.	Clean as required; restart. Consult with an authorized servicing dealer.
<b>YES</b> ↓		
Is there spark at the spark plug wire terminal?	<b>NO</b> → The ignition switch is in "O" (OFF) position. Shorted ignition ground. Faulty ignition unit.	Move switch to "T" (ON) position and restart. Consult with an authorized servicing dealer. Consult with an authorized servicing dealer.
<b>YES</b> ↓		
Check the spark plug.	If the plug is wet, excess fuel may be in the cylinder. The plug is fouled or improperly gapped. The plug is damaged internally or of the wrong size.	Crank the engine with the plug removed, reinstall the plug, and restart. Clean and regap the plug to 0.6 - 0.7 mm. Restart. Replace the plug with an NGK CMR6H or equivalent resistor type spark plug of the correct heat range. Set spark plug electrode gap to 0.6-0.7 mm.



**LOW POWER OUTPUT**

What To Check	Possible Cause	Remedy
<div style="border: 1px solid black; padding: 5px; width: fit-content;">Is the engine overheating?</div>	<ul style="list-style-type: none"> <li>Operator is overworking the machine.</li> <li>Carburetor mixture is too lean.</li> <li>Improper fuel ratio.</li> <li>Fan, fan cover, cylinder fins dirty or damaged.</li> <li>Carbon deposits on the piston or in the muffler.</li> </ul>	<ul style="list-style-type: none"> <li>Shorten trimmer line. Cut at a slower rate.</li> <li>Consult with an authorized servicing dealer.</li> <li>Refill with fresh, clean unleaded gasoline with a pump octane of 87 or higher mixed with a 2-cycle air cooled mixing oil that meets or exceeds ISO-L-EGD and/or JASO FC classified oils at 50:1 gasoline/oil ratio.</li> <li>Clean, repair or replace as necessary.</li> <li>Consult with an authorized servicing dealer.</li> </ul>
<div style="border: 1px solid black; padding: 5px; width: fit-content;">Engine is rough at all speeds. May also have black smoke and/or unburned fuel at the exhaust.</div>	<ul style="list-style-type: none"> <li>Clogged air cleaner element.</li> <li>Loose or damaged spark plug.</li> <li>Air leakage or clogged fuel line.</li> <li>Water in the fuel.</li> <li>Piston seizure.</li> <li>Faulty carburetor and/or diaphragm.</li> <li>Valve clearance set incorrectly.</li> </ul>	<ul style="list-style-type: none"> <li>Service the air cleaner element.</li> <li>Tighten or replace.</li> <li>Repair or replace filter and/or fuel line.</li> <li>Replace the fuel.</li> <li>Consult with an authorized servicing dealer.</li> <li>Consult with an authorized servicing dealer.</li> <li>Consult with an authorized servicing dealer.</li> </ul>
<div style="border: 1px solid black; padding: 5px; width: fit-content;">Engine is knocking.</div>	<ul style="list-style-type: none"> <li>Overheating condition.</li> <li>Improper fuel.</li> <li>Carbon deposits in the combustion chamber.</li> <li>Valve clearance set incorrectly.</li> </ul>	<ul style="list-style-type: none"> <li>See above.</li> <li>Check fuel octane rating; check for presence of alcohol in the fuel (pg. 14). Refuel as necessary.</li> <li>Consult with an authorized servicing dealer.</li> <li>Consult with an authorized servicing dealer.</li> </ul>

## Troubleshooting Guide (continued)

### ADDITIONAL PROBLEMS

Symptom	Possible Cause	Remedy
Poor acceleration.	<ul style="list-style-type: none"> <li>Clogged air filter.</li> <li>Clogged fuel filter.</li> <li>Lean fuel/air mixture.</li> <li>Idle speed set too low.</li> </ul>	<ul style="list-style-type: none"> <li>Clean the air filter.</li> <li>Replace the fuel filter.</li> <li>Consult with an authorized servicing dealer.</li> <li>Adjust: 3,000 (<math>\pm 200</math>) rpm (<math>\text{min}^{-1}</math>)</li> </ul>
Engine stops abruptly.	<ul style="list-style-type: none"> <li>Switch turned off.</li> <li>Fuel tank empty.</li> <li>Clogged fuel filter.</li> <li>Water in the fuel.</li> <li>Shorted spark plug or loose terminal.</li> <li>Ignition failure.</li> <li>Piston seizure.</li> </ul>	<ul style="list-style-type: none"> <li>Reset the switch and restart.</li> <li>Refuel.</li> <li>Replace fuel filter.</li> <li>Drain; replace with clean fuel.</li> <li>Clean and replace spark plug, tighten the terminal.</li> <li>Replace the ignition unit.</li> <li>Consult with an authorized servicing dealer.</li> </ul>
Engine difficult to shut off.	<ul style="list-style-type: none"> <li>Ground (stop) wire is disconnected, or switch is defective.</li> <li>Overheating due to incorrect spark plug.</li> <li>Overheated engine.</li> </ul>	<ul style="list-style-type: none"> <li>Test and replace as required.</li> <li>Idle engine until cool. Clean and regap the plug to 0.6 - 0.7 mm. Correct plug: NGK CMR6H or equivalent resistor type spark plug of the approved range.</li> <li>Idle engine until cool.</li> </ul>
Top of engine is getting dirty and oily	<ul style="list-style-type: none"> <li>Valve cover is leaking.</li> </ul>	<ul style="list-style-type: none"> <li>Consult with an authorized servicing dealer.</li> </ul>
Cutting attachment rotates at engine idle.	<ul style="list-style-type: none"> <li>Engine idle too high.</li> <li>Broken clutch spring or worn clutch spring boss.</li> <li>Loose attachment holder.</li> </ul>	<ul style="list-style-type: none"> <li>Set idle: 3,000 (<math>\pm 200</math>) rpm (<math>\text{min}^{-1}</math>)</li> <li>Replace spring/shoes as required, check idle speed.</li> <li>Inspect and re-tighten holders securely.</li> </ul>
Engine will not idle down.	<ul style="list-style-type: none"> <li>Engine idle set too high.</li> <li>Engine has an air leak.</li> </ul>	<ul style="list-style-type: none"> <li>Set idle: 3,000 (<math>\pm 200</math>) rpm (<math>\text{min}^{-1}</math>)</li> <li>Consult with an authorized servicing dealer.</li> </ul>

**ADDITIONAL PROBLEMS**

<b>Symptom</b>	<b>Possible Cause</b>	<b>R emedy</b>
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Excessive vibration.</div>	Warped or damaged cutting attachment. Loose gearcase. Bent main shaft/worn or damaged bushings. Trimmer line not wound properly on spool.	Inspect and replace attachment as required. Tighten gearcase securely. Inspect and replace as necessary. Rewind trimmer line.
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Cutter will not rotate.</div>	Shaft not installed in powerhead or gearcase. Broken shaft. Damaged gearcase.	Inspect and reinstall as required. Consult with an authorized servicing dealer. Consult with an authorized servicing dealer.

## European Distributors List

Ref No.	Country	Name	Address	Tel No.	Fax No.
1	France	Yvan Beal	21, avenue De l'Agriculture, B.P.16-Zone Industrielle du Brezet, 63014 Clermont- Ferrand Cedex 1	(33) 04 73 91 93 51	(33) 04 73 90 23 11
2	Italy	Fercad S.P.A.	Via Retrone, 49, 36077- Altavilla Vicentia, Vicenza	(39) 0444 220811	(39) 0444 348986
3	Germany	Iseki Maschinen GmbH	Rudolf-Diesel-Str. 4, 40670 Meerbusch	(49) 02159 5205 0	(49) 02159 520512
4	England	PLM Power Products Ltd.	Unit 5-6, The Shires Industrial Estate, Essington Close, Birmingham Road, Lichfield, Staffs, WS14 9AZ	(44) 01543 414477	(44) 01543 414541
5	Ireland	Danfay Ltd.	61D Sallynoggin Road, Dun Laoghaire, Co. Dublin	(353) 1 2859177	(353) 1 2858810
6	Holland	Matracom Int.B.V	Hogelandseweg 51, 6545 AB Nijmegen	(31) 024 373 1990	(31) 024 373 1765
7	Belgium	Intergarden Import N.V.	Brechtsebaan 284-B 2900 Schoten	(32) 03 652 02 61	(32) 03 652 02 40
8	Switzerland	Solo Motorgeraete AG	Seuzachstrasse 26, CH- 8413 Neftenbach	(41) 52 315 1221	(41) 52 315 1004
9	Portugal	Joaquim Verdasca Junior Heads Lda	Apartado 11-2490, Ourem	(351) 249 544540	(351) 249 544361
10	Greece	Technellas S.A.	92, Athinon Avenue, 104 42 Athens	(30) 1 5193 110	(30) 1 5193 114
11	Finland	Tuonti Jarvela KY	Itkonniemenkatu 11, PB1234 70501 Kuopio	(358) 17 2652 845	(358) 17 2652 801
12	Turkey	Taral Tarim Makina VeAletleri Sanayi A.S.	Gumussuyu Caddesi Hastane Yolu No.1 34020 Topkapi-Maltepe, Istanbul	(90) 212 567 95 50	(90) 212 674 06 79

# DECLARATION OF CONFORMITY (ENGLISH)

## DECLARATION OF CONFORMITY

We hereby declare the Shindaiwa Engine Brushcutter,  
Model T2500 (T2500/CE)

meets the following respective requirements.

Council Directives:

89/336/EEC as amended

98/37/EC as amended

2000/14/EC as amended

Standard taken:

EN 292 parts 1&2

ISO 11806

CISPR 12

Measured sound power level: 105dB(A)

Guaranteed sound power level: 107dB(A)

Technical documentation is kept by:

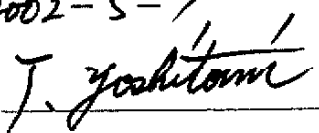
K. Maeda DIV. Manager

Engineering Research and Development DIV.

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**Shindaiwa Kogyo Co.,Ltd.**