

SHINDAIWA OWNER'S/OPERTOR'S MANUAL

B530 BRUSHCUTTER



WARNING!

Read this manual and familiarize yourself with its contents.
This machine is designed for cutting grass, weed, and brush.
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.

shindaiwa

Introduction

Shindaiwa B530 hand held power equipment has been designed and built to deliver superior performance and reliability without compromise to quality, comfort, safety or durability.

Shindaiwa's high-performance engines represent the leading edge of 2-cycle engine technology, delivering exceptionally high power with 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 owner's/operator's manual describes units 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 Inc. reserves the right to make changes to products without prior notice, and without obligation to make alterations to units previously manufactured.

Contents

	Page
Attention Statements	2
General Safety Instructions	3
Safety Labels.....	5
Checking Unit Condition	5
Unit Description.....	6
Specifications.....	6
Assembly Procedure.....	7
Mixing Fuel	12
Starting the Engine.....	12
Stopping the Engine	14
Engine Idle Adjustment.....	14
Double Shoulder Harness.....	14
Operation	15
Using a Brush Cutter	
With a Trimmer Head	16
Maintenance	16
Long Term Storage.....	18
Blade Sharpening.....	18
Troubleshooting Guide	19
Declaration of Conformity.....	22

Attention Statements

Throughout this manual are special attention statements.



WARNING!

A statement preceded by the triangular attention symbol and the word "WARNING" contains information that should be acted upon to prevent serious bodily injury.

CAUTION!

A statement preceded by the word "CAUTION" contains information that should be acted upon to prevent mechanical damage.

IMPORTANT!

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

NOTE:

A statement preceded by the word "NOTE" contains information that is handy to know and may make your job easier.

IMPORTANT!

The operational procedures described in this manual are intended to help you get the most from your unit as well as 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 Shindaiwa power tool, or if you do not understand something in this manual, your Shindaiwa dealer will be glad to assist you. You may also contact Shindaiwa, Inc. at the address printed on the back of this manual.

Warning Labels

Warning labels placed on this unit mean the following:



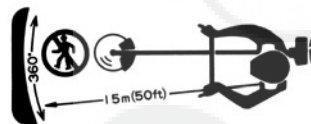
Read and follow this operators manual. Failure to do so could result in serious injury.



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



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



Make sure no one is within 15 meters of an operating machine.



Beware of thrown objects.



MAX
8500min⁻¹

The maximum speed of the cutting attachment shaft in min⁻¹.



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

General Safety Instructions

Work Safely

Trimmers and brushcutters operate at very high speeds and can do serious damage or injury if they are misused or abused. *Never allow a person without training or instruction to operate this unit!*



WARNING!

Never make unauthorized attachment installations.



WARNING!

Use Good Judgment

NEVER run the engine when transporting the unit.

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

ALWAYS use the proper cutting tool for the job.

ALWAYS stop the unit immediately if it suddenly begins to vibrate or shake. Inspect for broken, missing or improperly installed parts or attachments.

NEVER extend trimming line beyond the length specified for your unit.

ALWAYS keep the unit as clean as practical. Keep it free of loose vegetation, mud, etc.

ALWAYS hold the unit firmly with both hands when cutting or trimming, and maintain control at all times.

ALWAYS keep the handles clean.

ALWAYS disconnect the spark plug wire before performing any maintenance work.

ALWAYS, if a saw blade should bind fast in a cut, shut off the engine immediately. Push the branch or tree to ease the bind and free the blade.

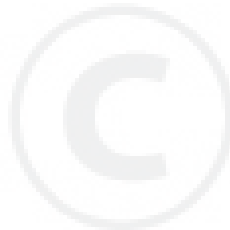
Stay Alert

You must be physically and mentally fit to operate this unit safely.



WARNING!

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



The Properly Equipped Operator

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

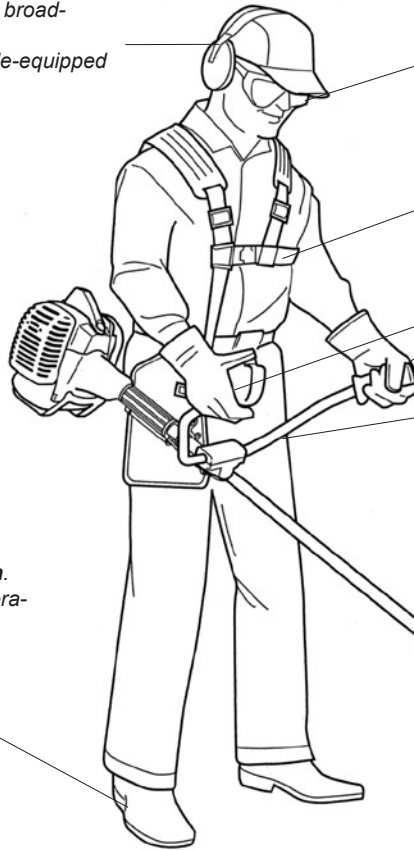
Prolonged exposure to excessive noise is fatiguing and could lead to impaired hearing.

Wear close-fitting clothing to protect legs and arms. Gloves offer added protection and are strongly recommended. Do not wear clothing or jewelry that could get caught in machinery or underbrush. Secure long hair so that it is above shoulder level. NEVER wear shorts!

Long-term exposure to vibration can damage your hands.

Keep a proper footing and **do not overreach**. Maintain your balance at all times during operation.

Wear appropriate footwear (non-skid boots or shoes): do not wear open-toed shoes or sandals. **Never work barefooted!**



Always wear eye protection such as goggles or safety glasses to shield against thrown objects.

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

Always operate with both hands firmly gripping the unit.

When operating with a blade, make sure the handle is positioned to provide you with maximum protection from contacting the blade. Always make sure the handlebar is installed in accordance with the manufacturers instructions.

Always make sure the appropriate cutting attachment shield is correctly installed and in good condition. Do not operate the unit if the cutting attachment shield is missing, loose, or broken.

Keep away from the rotating trimmer line or blade at all times, and never lift a moving attachment above waist-high.

Be Aware of the Working Environment

Avoid long-term operation in very hot or very cold weather.



Make sure bystanders or observers outside the 15 meter "danger zone" wear eye protection.

15 METERS

Reduce the risk of bystanders being struck by flying debris. Make sure no one is within 15 meters — that's about 16 paces — of an operating attachment. Stop immediately if a child, pet, or person comes within a 15 meter radius.

Do not operate the unit if the cutting attachment shield is missing, loose, or broken.

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

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

Beware of a coasting blade when brushcutting or edging. A coasting blade can injure while it continues to spin after the throttle trigger is released or after the engine is stopped.

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

ALWAYS clear your work area of trash or hidden debris that could be thrown back at you or toward a bystander. When operating in rocky terrain or near electric wires or fences, use extreme caution to avoid contacting such items with the cutting attachment.

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

Safety Labels



IMPORTANT!

Safety 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.



Checking Unit Condition



WARNING!

A cutting attachment shield or other protective device is no guarantee of protection against ricochet. **YOU MUST ALWAYS GUARD AGAINST FLYING DEBRIS!**

Use only authorized Shindaiwa parts and accessories with your Shindaiwa trimmer or brushcutter. Do not make modifications to this unit without the written approval of Shindaiwa, Inc.

NEVER operate the unit with the cutting attachment shield or other protective devices (harness, ignition switch, blade retention clip, etc.) removed!

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

NEVER use a cracked or warped cutting attachment: 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 unit becomes tangled. Do not operate with broken or damaged equipment.

NEVER allow the engine to run at high RPM without a load. Doing so could damage the engine.

NEVER operate a unit with worn or damaged fasteners or attachment holders.

NEVER cut with a dull blade. Doing so will increase the risk of blade thrust and may also cause equipment damage.

Assembly Procedure

Prior to Assembly

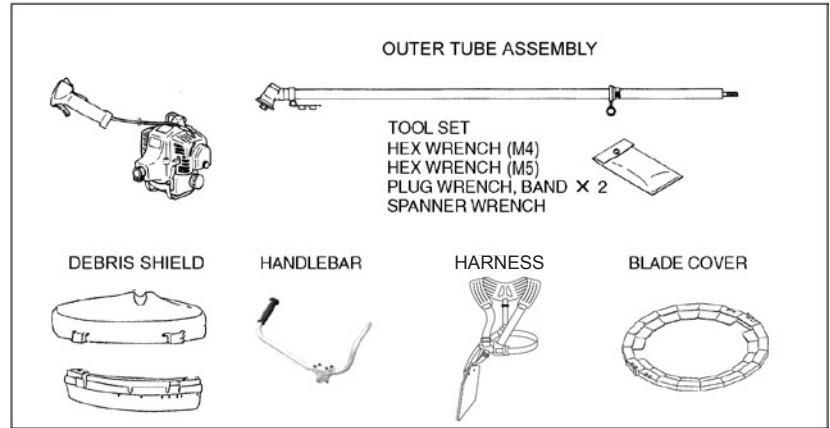
Before assembling, make sure you have all the components required for a complete unit:

- Engine assembly
- Outer tube assembly
- Debris shield
- Double shoulder harness
- Cutting attachment
- Handlebar
- Blade cover
- Tool kit, which includes 3mm, 4mm, and 5mm "L" type hexagonal wrenches, 8mm/10mm open-end wrench and combination spark plug.
Tool kits vary by model.
- Components required for assembly (cable ties, throttle cable connector, and throttle cable sleeve).

Carefully inspect all components for damage.

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.



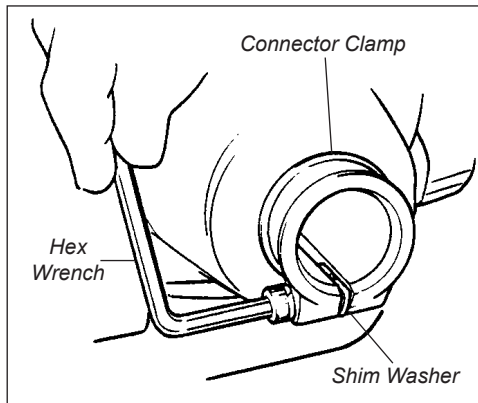
Powerhead Assembly

Install Mainshaft and Outer Tube

CAUTION!

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

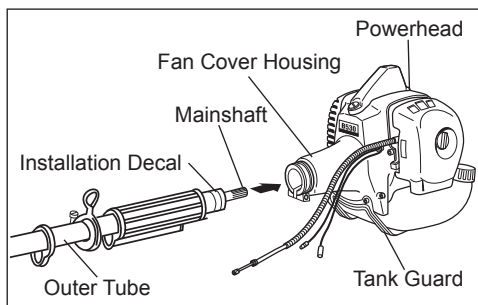
1. Place the powerhead on a flat surface, resting on its stand.
2. Lubricate the mainshaft splines with molybdenum disulfide (moly) type grease.
3. Loosen the 6mm socket head cap screw on the powerhead connector clamp. Verify that the D-shaped shim washer is positioned as shown below.



CAUTION!

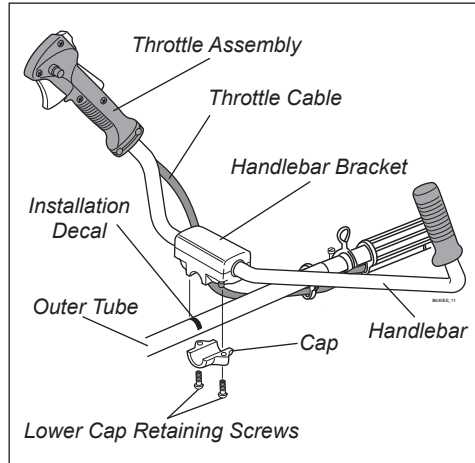
Do not force the outer tube into the powerhead! Forcing the outer tube into the powerhead may damage the splines on the mainshaft and/or clutch drum shaft. If installation proves difficult, rotate the powerhead or mainshaft until you feel the mainshaft splines slide into the clutch drum shaft.

4. Insert the shaft tube assembly into the powerhead connector clamp. Make sure the powerhead connector clamp aligns with the outer tube "Insert up to here" decal.
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.



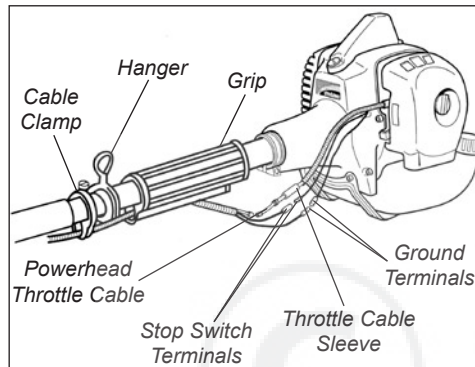
Handlebar Installation

1. Remove the 4mm retaining screws and lower cap from the handlebar bracket.
2. Mount the handlebar on the outer tube and align it with the "Attach Handle On This Line" decal.
3. Reinstall the lower cap and retaining bolts. Tighten the retaining screws evenly.



Throttle Cable Installation

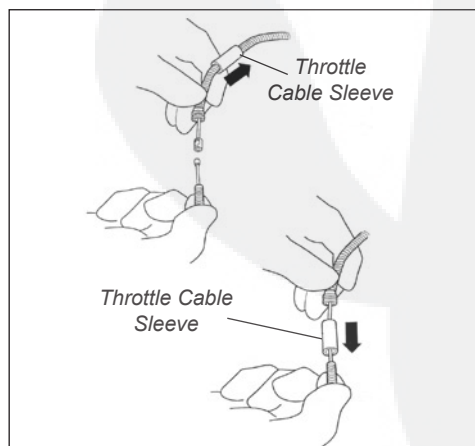
1. Slide throttle cable and terminal wires through the cable clamp and grip.
2. Install the throttle cable sleeve on the powerhead throttle cable.



3. Connect the powerhead and the throttle cable ends.

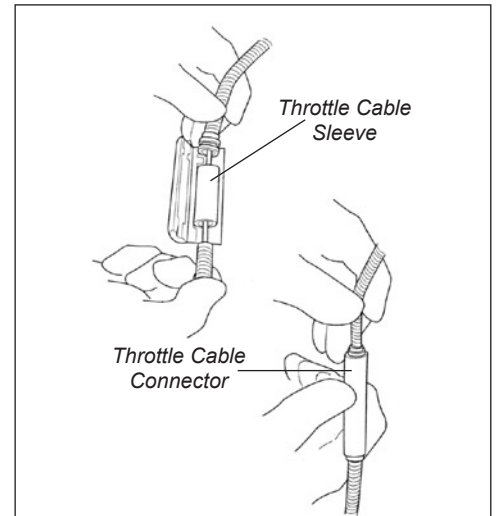
IMPORTANT!

Make sure the end of the powerhead throttle cable jacket fits in the grooved end of the cable connector.

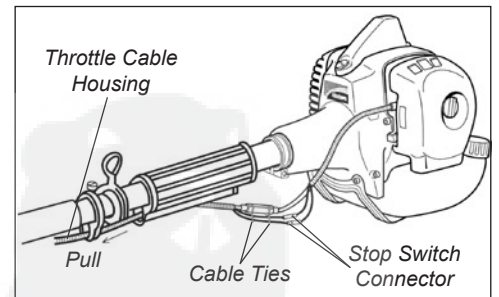


Throttle Cable Installation (Continued)

- (a) Center the throttle cable sleeve over the connected cable ends and place the assembly in the throttle cable connector.
- (b) Using hand pressure, close the throttle cable connector.

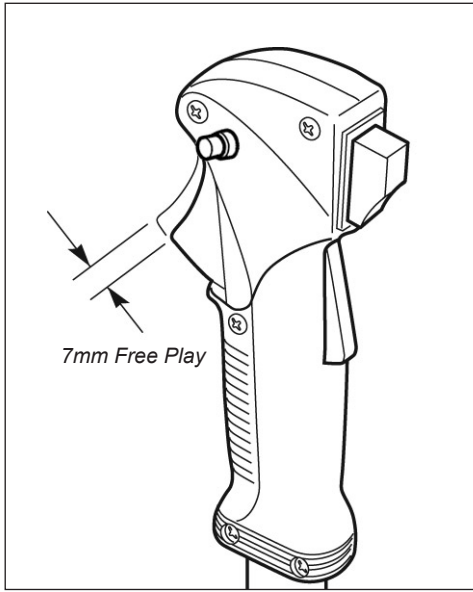


- (c) Secure each end of the throttle connector with a cable tie.
4. Connect the powerhead and stop switch wire terminals.
 5. Connect the stop switch ground wire and the powerhead ground wire terminals.
 6. Slide throttle cable and connect terminal wires into grip by gently pulling on the throttle cable housing.

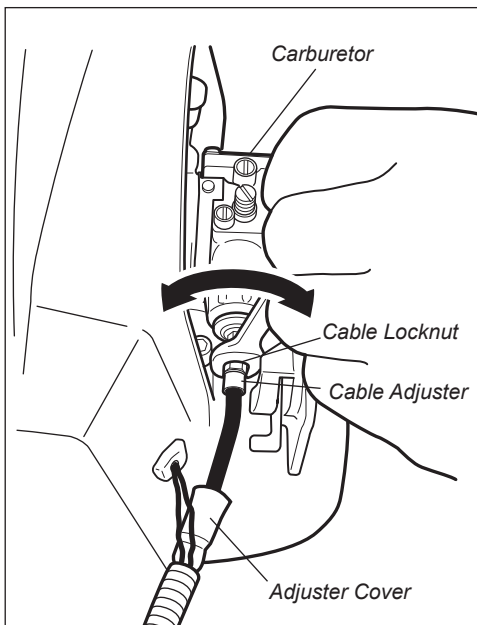


Throttle Cable Adjustment

1. Test throttle control for smooth operation. If stiffness or binding are noted, the cause must be identified and corrected before the brushcutter can be placed in service.



2. Check the throttle control lever "free play" clearance. "Free play" should be approximately 7 mm in the idle position. If necessary, the "free play" clearance can be adjusted as follows:
 - a. Slide the adjuster cover forward to expose the cable adjuster.
 - b. Loosen the cable lock nut.
 - c. Thread or unthread the cable adjuster until the throttle control lever has approximately 7 mm of "free play" clearance.
 - d. Tighten the cable lock nut.
 - e. Slide the adjuster cover over the cable adjuster.



Cutting Attachment Shield Assembly



WARNING!

NEVER operate this machine without the cutting attachment shield. Operating without the cutting attachment shield may result in serious injury.

1. Insert the cutting attachment shield between the outer tube and the lower clamp.

NOTE:

It may be necessary to loosen the lower clamp bolt so that the shield will fit between the tube and clamp.

2. Fit the upper clamp over the outer pipe and install four bolts finger tight.
3. Tighten the lower clamp bolt and nut securely.
4. Securely tighten four upper clamp bolts in a crisscross fashion.

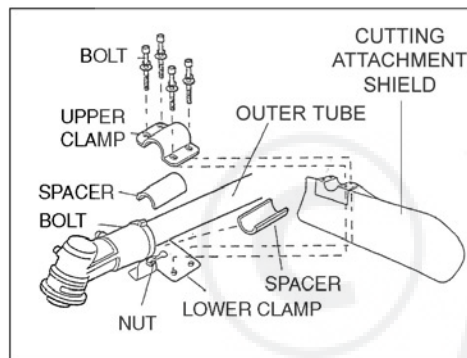


WARNING!

Carefully inspect the gearcase and cutting attachment shield assembly to make sure they are tightened securely and do not wobble.

CAUTION!

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



Sub-Shield

(when trimmer head is in use)

1. Attach the shield extension to the cutting attachment shield.



WARNING!

NEVER use this machine without sub-shield when using a trimmer head.

CAUTION!

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

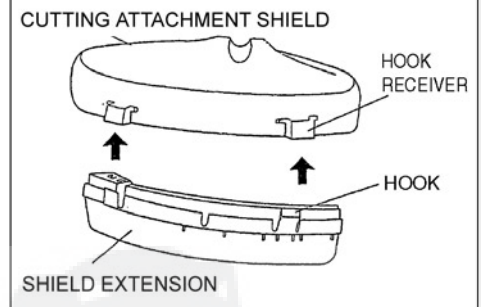
CAUTION!

The line cutter is attached to the shield extension and must be used when operating with a trimmer head.



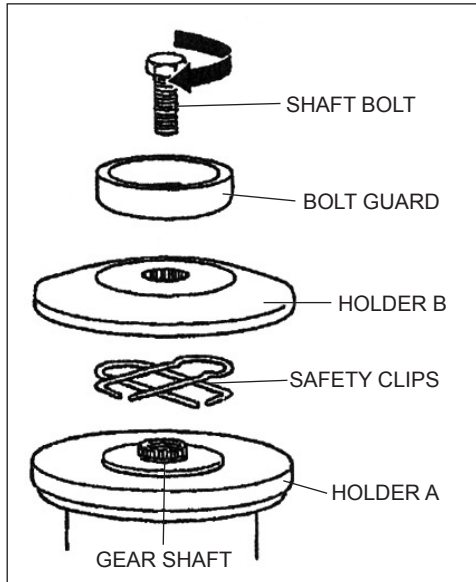
WARNING!

The line cutter is very sharp. When handling, wear gloves to protect your hands.

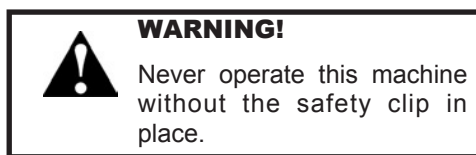
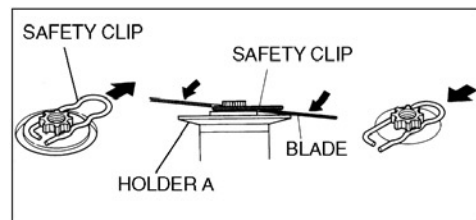


Installing a Blade

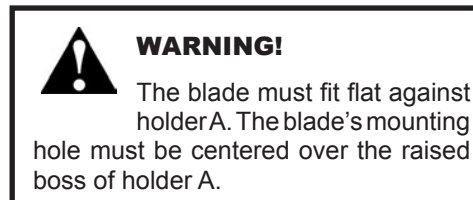
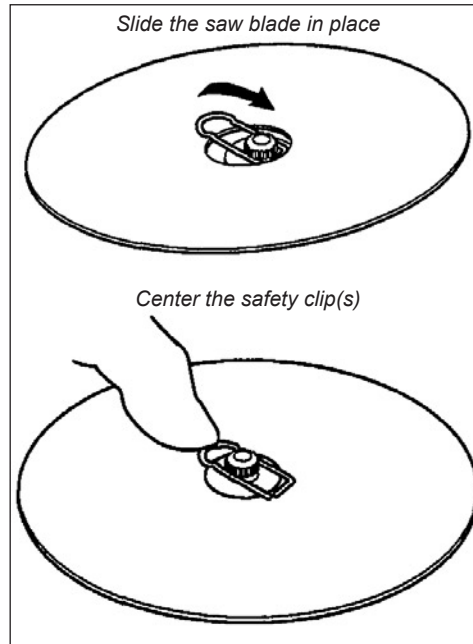
1. Make sure the switch is off and the engine is stopped.
2. Wear gloves to protect your hands.
3. Turn the unit over so the saw holder flange extending from the gear case is facing up.
4. Using the small end of the plug wrench, loosen the bolt (turn clockwise) and remove the bolt, bolt guard, and holder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



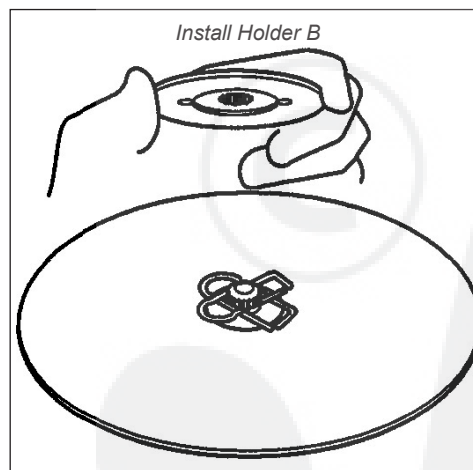
5. Slide the safety clip as shown in the illustration.



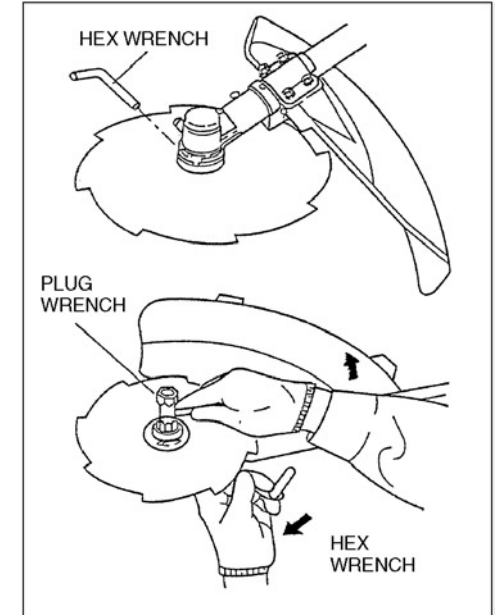
6. Fit the blade over the safety clip onto holder A. Then, slide the safety clip back to its original position.



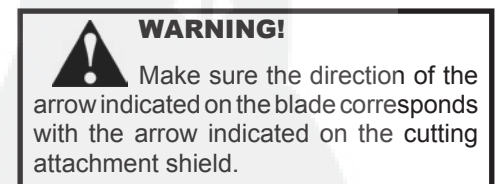
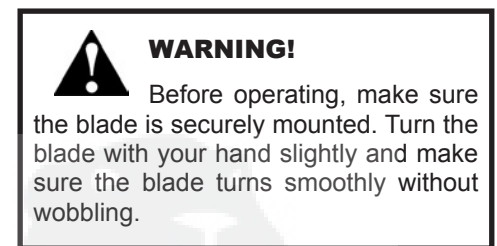
7. Put holder B and bolt guard back and at this time only finger tighten the bolt. Make sure holder B is flat against the blade. The recess in holder B must face the blade and completely cover the safety clip.



8. Rotate holder A until the hole in its skirt aligns with the hole in the gear case. Insert the hex wrench through both holes (to prevent the shaft from turning).
9. Holding the hex wrench and blade with one hand, tighten the bolt (turn counterclockwise) securely using the hex socket end of the plug wrench.



10. Remove the hex wrench.



IMPORTANT!

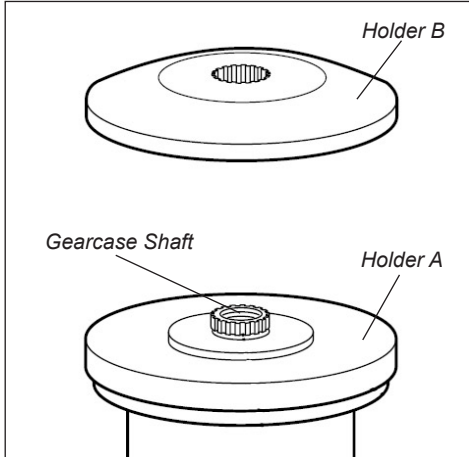
This brushcutter is equipped to handle 2~4mm thick blades. For 2mm thick blades, two (2) safety retainer clips must be used. For 4mm thick blades, one (1) safety retainer clip must be used. Holder A, blade retainer clip(s), Holder B, shaft bolt, and bolt guard must be installed. The shaft bolt has left-handed threads and is removed by turning clockwise as shown above.

The brushcutter should be fully assembled.

Installing Trimmer Head

To install a trimmer head

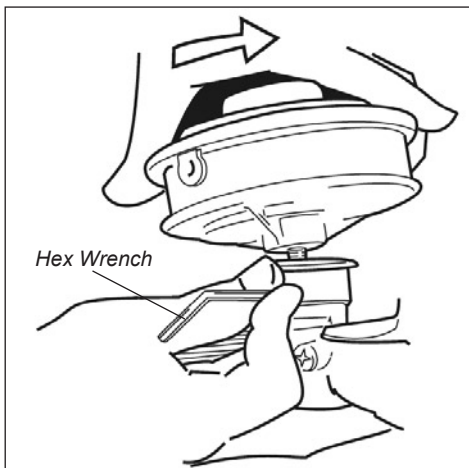
1. Position the brushcutter with the head of the shaft bolt facing up.
2. Remove the shaft bolt, bolt guard, Holder B and the retainer clip(s) from the output shaft.



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.

3. Re-install Holder B on the output shaft.
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.
5. While holding the holder with the hex wrench, thread the trimmer head onto the gear-shaft and install securely using hand pressure. Turn counterclockwise to install.
6. Remove the hex wrench.



The brushcutter can now be used as a grass trimmer

Installing the Stabilizer

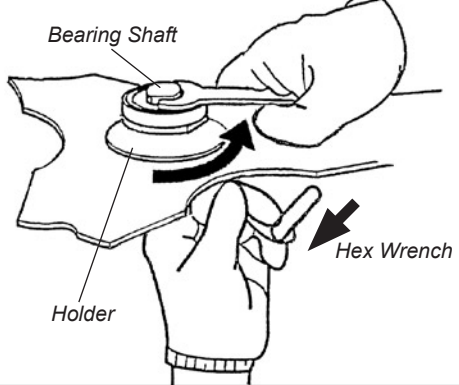
IMPORTANT!

The shaft bolt and bolt guard are not used with a stabilizer. Save these parts for future use without a stabilizer.

To install a stabilizer

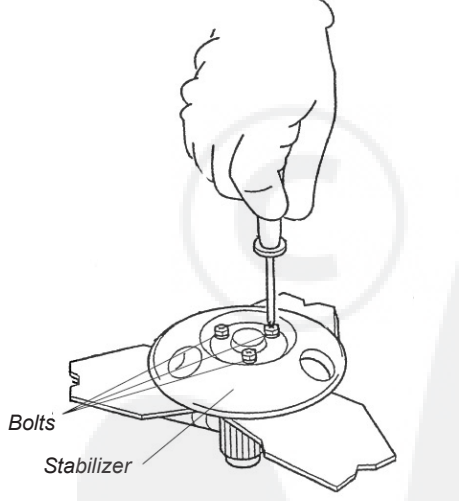
1. Position the brushcutter with the head of the shaft bolt facing up.
2. Remove the shaft bolt and bolt guard from the output shaft.

Tighten the Bearing Shaft



3. Lock Holder A with the hex wrench and thread the bearing shaft on the output shaft hand tight turning counterclockwise. Then, tighten the bearing shaft with the open end wrench securely.
4. Remove the hex wrench and the open end wrench.
5. Install the stabilizer to the holder with the 3 bolts securely.

Tighten the Bolts evenly



Mixing Fuel



WARNING!

Minimize the risk of fire, burns, and personal injury!

- **STOP** engine before refueling.
- **ALWAYS** allow the engine to cool before refueling
- **ALWAYS** open the fuel cap slowly to allow any pressure build-up in the tank to release fuel vapor slowly.
- **ALWAYS** transport and store fuels in an approved container.
- Avoid overfilling and wipe-up all spilled fuel. Move the engine at least 3 meters from the fueling point, storage area, and other readily flammable materials before restarting.
- **ALWAYS** inspect the unit for fuel leaks before each use. During each refill, make sure there are no fuel leaks around the fuel cap and/or tank. If a fuel leak is evident, stop using the unit immediately. Fuel leaks must be repaired before using the unit.
- **NEVER** smoke or light any fires near the engine or fuel source.
- **NEVER** place any flammable material near the engine or muffler.
- **NEVER** operate the engine without the muffler in good working condition.
- **ALWAYS** move the unit to a place well away from a fuel storage area or other readily flammable materials before starting the engine.

CAUTION!

This engine is designed to operate on a 50:1 mixture consisting of unleaded gasoline and a premium 2-cycle mixing oil only. Use of Non-approved mixing oils can lead to excessive maintenance costs and/or engine damage.

CAUTION!

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

Filling The Fuel Tank

IMPORTANT!

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 StaBil™ or equivalent product!

- Use only fresh, clean unleaded gasoline with a pump octane rating of 87 or higher.
- Mixing fuel with a Premium 2-cycle mixing oil designed for use with high-performance 2-cycle air-cooled engines.
- Refer to the following examples of 50:1 fuel to oil mix quantities:

Gasoline liters	2-cycle mixing oil milliliters
2.5 l	50 ml
5 l	100 ml
10 l	200 ml
20 l	400 ml

CAUTION!

Never attempt to mix fuel in the unit's fuel tank. Always mix all fuels in a clean approved container.

1. Place the unit on a flat, level surface, and wipe any debris from around the fuel cap.
2. Remove the fuel cap.
3. Fill the tank with clean, fresh fuel.
4. Replace the cap, and wipe away any spilled fuel before starting the engine.

Starting the Engine



WARNING!

Before starting the engine, make sure children, bystanders, and pets and/or any other objects are well clear of the cutting attachment! The cutting attachment will rotate when the engine is started with the throttle control set in the "fast idle" position.



WARNING!

MAKE SURE THE BLADE IS WELL CLEAR OF ANY INTERFERENCE. Before starting the engine, place unit on clear, level surface. Make sure you have good secure footing and always keep a firm grip on the machine. **THE CUTTING ATTACHMENT MAY ROTATE WHEN THE ENGINE STARTS.**



WARNING!

Move at least three meters away from the fuel site before starting the engine.



WARNING!

Never operate the engine without the cutting attachment installed.



WARNING!

Never start the engine from the operating position.

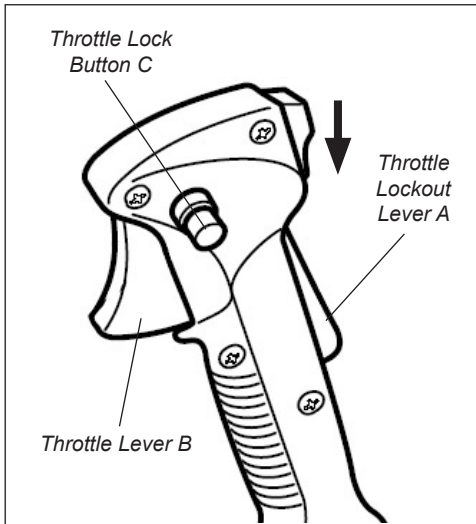
Starting a Cold Engine and/or Restarting After Refueling.

IMPORTANT!

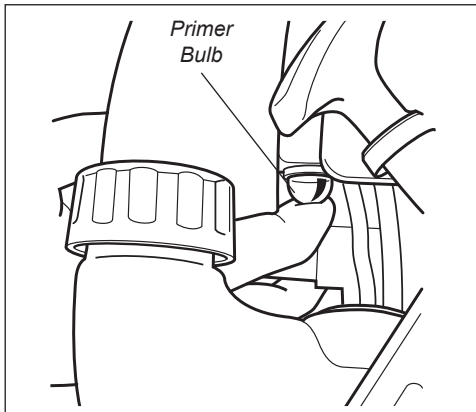
A two-position ignition switch mounted on the throttle control body controls the engine ignition system. This slide switch is embossed "START" and "STOP" and has arrows pointing towards the START and the STOP positions. The letter "I" (ON) and "O" (OFF) are embossed on the left side of the throttle handle, near the switch bottom.

Starting the Engine (Continued)

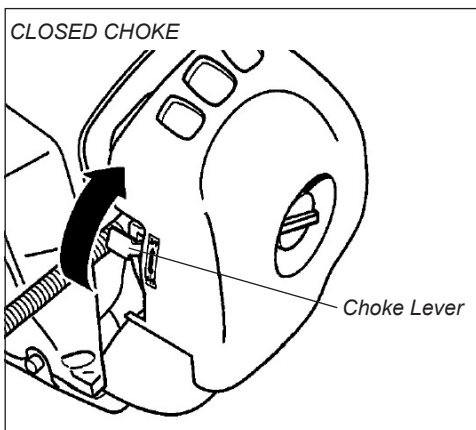
- Slide the ON-OFF switch to the "I" position



- Purge the air from the carburetor fuel system by repeatedly depressing the carburetor primer bulb until resistance is felt and fuel flows back to the tank through the return tube.



- Move the choke lever to the "close choke" position.



Set the throttle lever to "fast idle".

- Depressing the lock lever, pull the throttle lever fully and depress the throttle lock button. While depressing the throttle lock button, release the throttle lever and the lock lever. Now the throttle stays at high idle (starting speed).

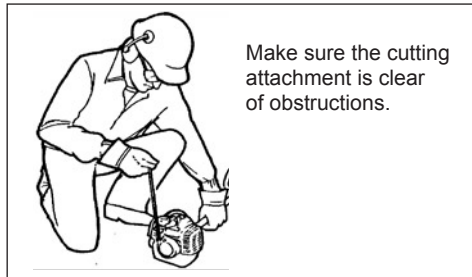
WARNING!

The cutting attachment will rotate when the machine is started and will rotate faster as engine speed is increased.

IMPORTANT!

The recoil starter can provide longlasting trouble free operation by following these recommendations:

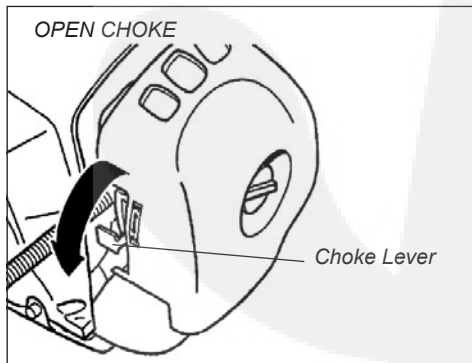
- Always engage the starter before attempting to start the engine.
 - Never pull the cord to its maximum limit.
 - Always allow the cord to rewind slowly into the starter.
- While firmly holding the outer tube with one hand, pull the recoil starter handle upward with your other hand. Pull slowly at first until you feel the starter engage, then pull quickly to start the engine. Do not pull the starter rope to the end of its travel.



IMPORTANT!

Repeated cranking of the engine with the choke CLOSED ("I") will lead to engine flooding. If the engine fails to start after several attempts, move the choke lever to the OPEN position and continue cranking.

- When the engine first fires, gradually return the choke to OPEN ("II") position if you have not already done so.
 - If the engine stops before the choke is fully open, restart with the choke closed.
 - If the engine stops after the initial firing, restart with choke closed.



- When the engine starts and is running, set the engine to idle by tapping the throttle lever to release the throttle lock.

Starting a Warm Engine

Starting a warm engine involves all of the steps of starting a cold engine, EXCEPT:

- The choke should be in the OPEN position.

If the engine does not start, follow the cold engine starting procedure.

When the Engine Starts

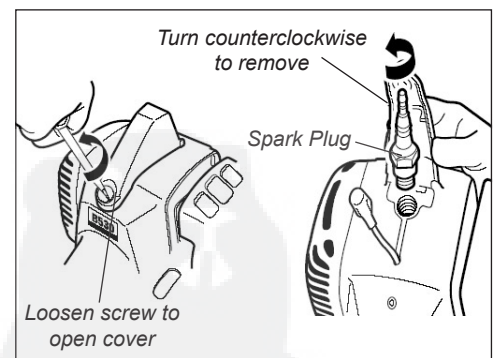
- After the engine starts, disengage the throttle lock and allow the engine to warm-up at idle for 2 or 3 minutes before operating the machine.
- After the engine is warm, pick-up the machine and clip-on the harness.
- Advancing the throttle makes the cutting attachment rotate faster; releasing the throttle makes the attachment stop running. If the cutting attachment continues to rotate refer to page 14 for engine idle adjustment procedures.

Starting a Flooded Engine

- Slide the ignition switch button to the STOP position.
- Disconnect the spark plug wire, and remove the spark plug.

CAUTION!

Incorrect spark plug installation may cause serious engine damage!



- If the spark plug electrodes and ceramic insulator are fouled or soaked with fuel, clean or replace the plug. For spark plug specifications and gapping procedure, refer to page 17.
- Open the choke.
- Hold the throttle control lever depressed and crank the engine several times to clear excess fuel from the combustion chamber.
- Reinstall the spark plug finger tight and tighten it firmly with the spark plug wrench provided in the tool kit. If a torque wrench is available, torque the spark plug to 16.7-18.6 N•m.
- Repeat the "warm engine" starting procedure.
- If the engine fails to start, consult the troubleshooting guide provided.

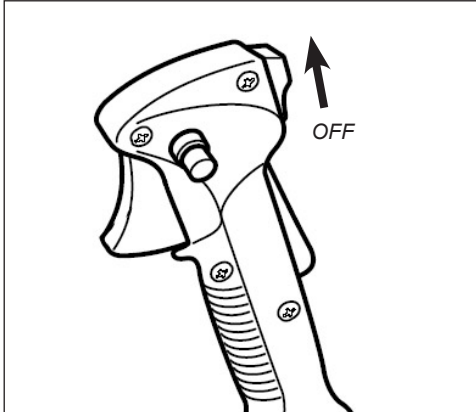
Stopping the Engine

Idle the engine briefly before stopping, then slide the ON-OFF switch to the "O" (for STOP) position.



WARNING!

The cutting attachment continues rotating for a while after the switch is turned off.



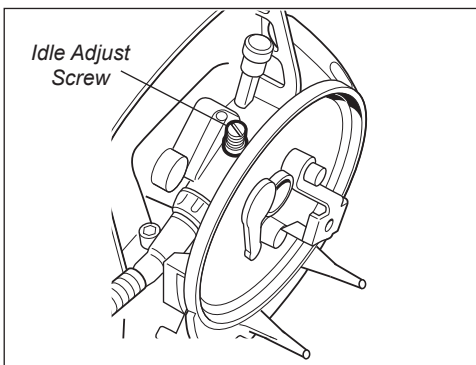
Engine Idle Adjustment

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 when the throttle is released.



WARNING!

The cutting attachment must NEVER rotate at engine idle! If the idle speed can not be adjusted by the procedure described here, have the unit inspected at an authorized Shindaiwa dealer.



1. Place the unit on the ground, then start the engine and allow it to idle for 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 counterclockwise.

3. If a tachometer is available, the engine idle speed should be adjusted to 2,500 min⁻¹ (rpm)

NOTE:

Carburetor fuel mixture adjustments are preset at the factory on units with emission control systems and cannot be serviced in the field.

Double Shoulder Harness

IMPORTANT!

Adjust the shoulder strap so the shoulder pad rests comfortably on the off-side shoulder and the cutting path of the cutting attachments is parallel to the ground. Make sure all hooks and adjustment devices are secure.



WARNING!

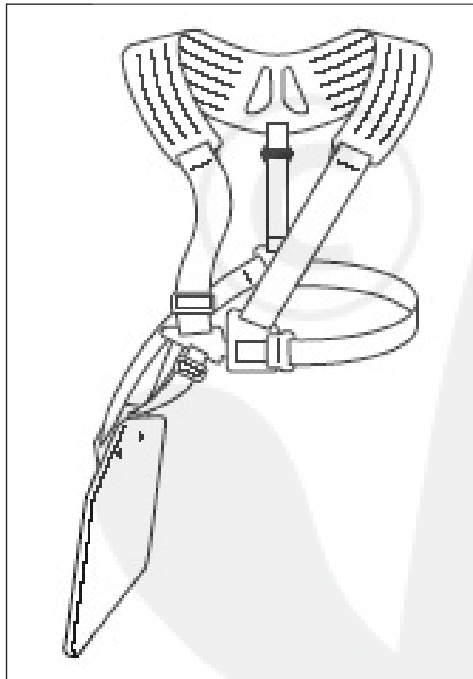
Always wear a harness when operating this unit.

NOTE:

Using a harness with a brushcutter allows you to maintain proper control of the unit and reduces fatigue during extended operation.

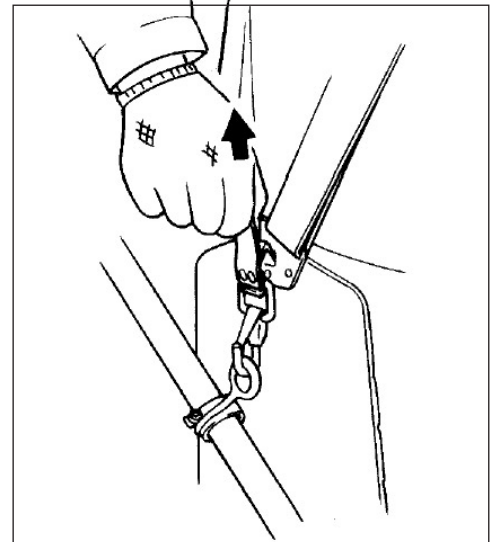
Double Shoulder Harness

Adjust the double shoulder harness straps so the shoulder pads rest comfortably on the offside of the shoulder and the cutting path of the blade is parallel to the ground. Make sure all hooks and adjusting devices are secure.



Emergency Release

In case of emergency, firmly pull the white tab at the hook. The machine will release from the strap.



Operation

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 handlebar, a double shoulder harness, and a cutting attachment debris 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 area thoroughly. Remove all objects, such as rocks, broken glass, nails, wire, or string. Note 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 meter radius. If a child, person, or pet comes into the 15 meter radius, stop the engine immediately
- Beware of the dangers of blade thrust! Blade thrust can occur when the top 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 Handlebar

The barrier type handlebar helps prevent the operator from moving forward or the cutting attachment from moving rearward to prevent inadvertent bodily contact with the blade. The handlebar must be installed in accordance with the instruction provided in this manual. Always keep the handlebar securely in place on the unit.

Double Shoulder Harness

The double shoulder harness provided with the unit affords additional protection against blade thrust. Additionally, a double shoulder harness provides support and comfort to help ensure safe and efficient operation. Before operating the brushcutter, make sure the harness is adjusted correctly to the operator. The double shoulder harness is equipped with a quick release mechanism to assure that the unit can be released quickly from the operator in the event of emergency.



WARNING!

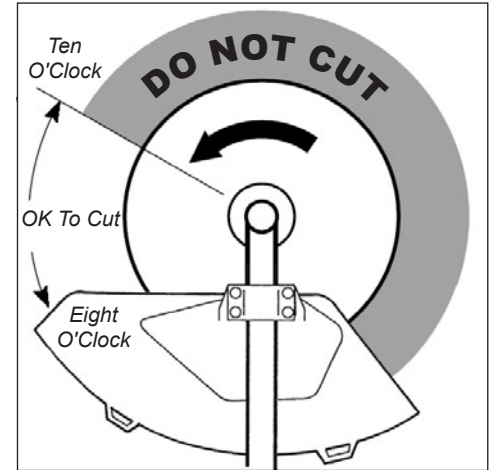
- When cutting small trees with a blade, feed the blade slowly, never strike or "slam" the spinning blade against the tree trunk.
- DO NOT use 2-tooth (lawnmower type) cutting blades. Use only Shindaiwa approved blades with your Shindaiwa brushcutter.
- Using a blade not authorized by Shindaiwa may result in serious injury.
- 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.
- 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!



WARNING!

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

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 below. 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.



Engine Operating Speeds



WARNING!

Position the blade so cuts are made between blade's 8 o'clock and 10 o'clock positions (as viewed from above). DO NOT cut between the 11 o'clock and 5 o'clock positions.



WARNING!

"BLADE THRUST" is a sudden sideways or backward motion of the machine. Such motion may occur when the blade jams or catches on an object such as a sapling tree or tree stump. BE CONSTANTLY ALERT FOR BLADE THRUST AND GUARD AGAINST ITS EFFECTS.

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.

Using a Brushcutter With a Trimmer Head

You may install one of several types of Shindaiwa cutting attachments on your B530 trimmer or brushcutter, each with features for specific applications and/or operational requirements.

For proper operation, always refer to the instructions accompanying the trimmer head being used. Available trimmer head styles include:

- **Semi-automatic.** Trimmer line is indexed when the operator taps the trimmer head on the ground during operation.
- **Manual.** The operator indexes line manually with the grass trimmer stopped.
- **Fixed.** The operator must stop the unit and add new lengths of trimmer line manually.
- **Flail.** This device, designed for clearing weeds and light brush, features three nylon blades attached to the head by pivots.

CAUTION!

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

Engine Operating Speeds

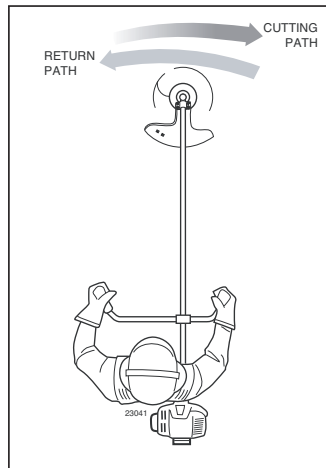
Operate at full throttle while cutting grass.

CAUTION!

Operation at low rpm can lead to premature clutch failure.

Trimming and Mowing Grass

Hold the grass trimmer so the trimmer head is angled slightly into the area to be cut. To ensure maximum trimmer-line service life, cut only with the tip of the trimmer line. Cut grass by swinging the unit's trimmer head from left to right. Keep the trimmer head horizontal.



Edging

Tilt the handle about 100° to the left (from horizontal) and move forward, holding the trimmer or brushcutter vertically as shown.



Maintenance



WARNING!

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

Muffler



WARNING!

Never operate this machine with a damaged or missing muffler! Operating with missing or damaged exhaust components is a fire hazard, and may also damage your hearing.

Daily Maintenance

Prior to each work day, perform the following:

- Remove the dirt and debris from the engine, check the cooling fins and air cleaner for clogging, and clean them as necessary.
- Carefully remove any accumulations of dirt or debris from the muffler and fuel tank. Dirt buildup in these areas can lead to engine overheating, fire, or premature wear.
- Check for loose or missing screws or components. Make sure the cutting attachment is securely fastened.
- Check the machine for leaking fuel or grease.

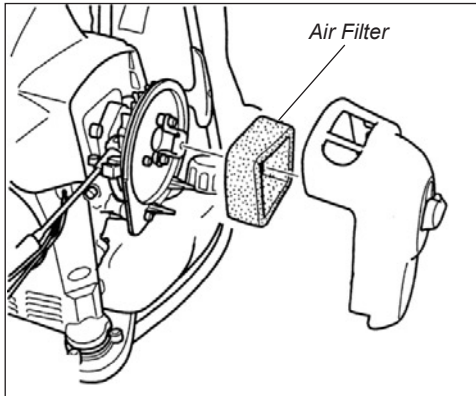
10 Hour Maintenance

Perform more frequently in dusty or dirty conditions.

- Remove and clean the cylinder cover and clean grass and dirt from the cylinder fins.

CAUTION!

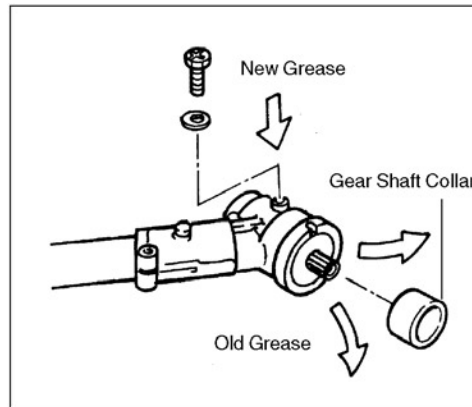
Do not operate the machine if the air cleaner or element is damaged, or if the element is water-soaked.



50 Hour Maintenance

Perform more frequently in dusty or dirty conditions.

- Remove the cutting attachment and the gear shaft collar, and press new grease into the gear case until the old grease has been pushed out. Use only lithium base grease (such as Shindaiwa Gear Case Lubricant).



Fuel Filter Maintenance

Use a hooked wire to extract the fuel filter from inside the fuel tank. Remove and replace the filter element. Before reinstalling the filter, inspect the condition of the fuel line. If damage or deterioration are noted, the unit should be removed from service until you can consult with an authorized servicing dealer.

CAUTION!

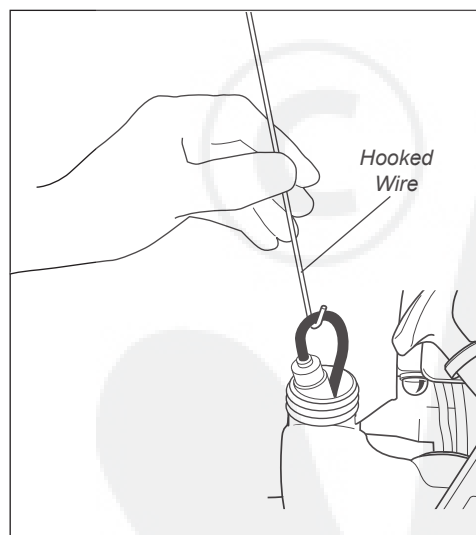
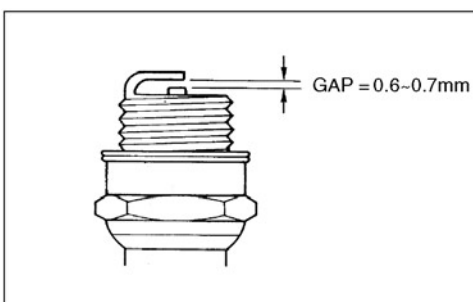
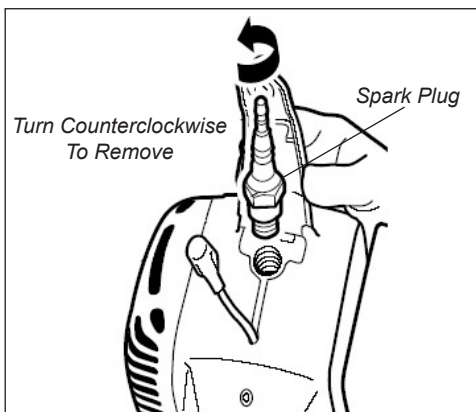
Make sure you do not pierce the fuel line with the end of the hooked wire. The line is delicate and can be damaged easily.

10/15 Hour Maintenance

- Remove and clean the spark plug. Adjust the spark plug electrode gap to 0.6 - 0.7mm. If the plug must be replaced, use only NGK BMR6A.
- Keep the spark plug wire connections tight and clean.

CAUTION!

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



Long Term Storage

Whenever the unit will not be used for 30 days or longer, use the following procedures to prepare it for storage:

- Clean external parts thoroughly and apply a light coating of oil to all metal surfaces.
- Drain all the fuel from the fuel tank.

IMPORTANT!

All stored fuels should be stabilized with a fuel stabilizer such as Sta-Bil™.

To remove the remaining fuel from the fuel lines and carburetor and with the fuel drained from the fuel tank.

1. Prime the primer bulb until no more fuel is passing through.
2. Start and run the engine until it stops running.
3. Repeat steps 1 and 2 until the engine will no longer start.

CAUTION!

Gasoline stored in the carburetor for extended periods can cause hard starting, and could also lead to increased service and maintenance costs.

- Remove the spark plug and pour about 7 grams of 2-cycle mixing oil into the cylinder through the spark plug hole. Slowly pull the recoil starter 2 or 3 times so oil will evenly coat the interior of the engine. Reinstall the spark plug.
- Before storing the unit, repair or replace any worn or damaged parts.
- Remove the air cleaner element from the carburetor and clean it thoroughly with soap and water. Let dry and reassemble the element.
- Store the unit in a clean, dust-free area.

Blade Sharpening

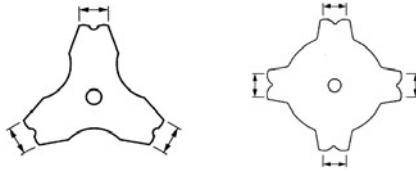
With the file or a grinder, file a blade as follows.



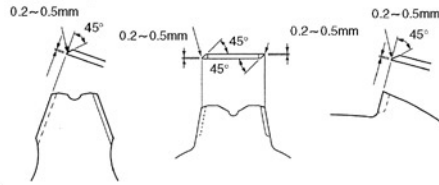
WARNING!

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.

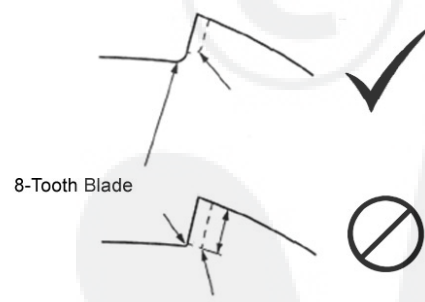
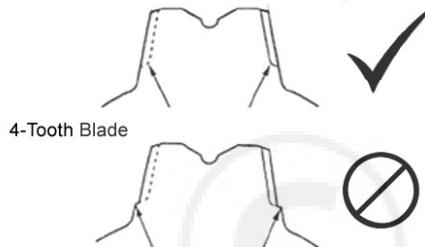
Make sure the width of the 3 sides/4 sides is all the same.



The sharpening angle should be 45° approx. Do not file the tips of the blade too sharp. Leave 0.2–0.5mm unsharpened.



The bottom of each tooth must remain unsharpened. (Blade as viewed from bottom.)



Troubleshooting Guide

Engine Does Not Start

What To Check	Possible Cause	Remedy
Does the engine crank?	NO → Faulty recoil starter. Fluid in the crankcase. Internal damage.	Consult with an authorized servicing dealer.
YES ↓		
Good compression?	NO → Loose spark plug. Excess wear on cylinder, piston, rings.	Tighten and re-test. Consult with an authorized servicing dealer.
YES ↓		
Does the tank contain fresh fuel of the proper grade?	NO → Fuel incorrect, stale, or contaminated; mixture incorrect.	Refill with clean fresh unleaded gasoline with a pump octane of 87 or higher, mixed with Premium 2-cycle mixing oil at a 50:1 gasoline/oil ratio.
YES ↓		
Is fuel visible and moving in the return line when priming?	NO → Check for clogged fuel filter and/or vent.	Replace fuel filter or vent as required. Restart.
YES ↓		
Is there spark at the spark plug wire terminal?	NO → The ignition switch is in "O" (OFF) position. Shorted ignition ground. Faulty ignition unit.	Move switch to "I" (ON) position and re-start. Consult with an authorized servicing dealer.
YES ↓		
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, replace the plug, and re-start. Clean and re-gap the plug to 0.6 ~ 0.7 mm. Re-start. Replace the plug with a NGK BMR6A. Re-start.

Troubleshooting Guide (Continued)

Low Power Output

What To Check	Possible Cause	Remedy
Is the engine overheating?	Operator is overworking the unit.	Cut at a slower rate.
	Carburetor mixture is too lean.	Consult with an authorized servicing dealer.
	Improper fuel ratio.	Refill with clean fresh unleaded gasoline with a pump octane of 87 or higher, mixed with Premium 2-cycle mixing oil at a 50:1 gasoline/oil ratio.
	Fan, fan cover, cylinder fins dirty or damaged.	Clean, repair or replace as necessary.
Carbon deposits on the piston or in the muffler.	Consult with an authorized servicing dealer.	
Engine is rough at all speeds. May also have black smoke and/or unburned fuel at the exhaust.	Clogged air cleaner element.	Clean or replace the air filter.
	Loose or damaged spark plug.	Tighten or replace the plug with a NGK BMR6A. Re-start.
	Air leakage or clogged fuel line.	Repair or replace fuel filter and/or fuel line.
	Water in the fuel.	Refill with fresh fuel/oil mixture.
	Piston seizure.	Consult with an authorized servicing dealer.
	Faulty carburetor and/or diaphragm.	Consult with an authorized servicing dealer.
Engine is knocking.	Overheating condition.	See above.
	Improper fuel.	Check fuel octane rating; check for presence of alcohol in the fuel. Refuel as necessary.
	Carbon deposits in the combustion chamber.	Consult with an authorized servicing dealer.

Troubleshooting Guide (Continued)

Additional Problems

Symptom	Possible Cause	Remedy
Poor acceleration.	Clogged air filter.	Clean or replace the air filter.
	Clogged fuel filter.	Replace the fuel filter.
	Lean fuel/air mixture.	Consult with an authorized servicing dealer.
	Idle speed set too low.	Adjust: 2,750 min ⁻¹
Engine stops abruptly.	Switch turned off.	Reset the switch and re-start.
	Fuel tank empty.	Refuel. See page 11.
	Clogged fuel filter.	Replace fuel filter.
	Water in the fuel.	Drain; replace with clean fuel. See page 11.
	Shorted spark plug or loose terminal.	Clean or replace spark plug with a NGK BMR6A. Tighten the terminal.
	Ignition failure.	Replace the ignition unit.
Engine difficult to shut off.	Piston seizure.	Consult with an authorized servicing dealer.
	Ground (stop) wire is disconnected, or switch is defective.	Test and replace as required.
	Overheating due to incorrect spark plug.	Replace spark plug with a NGK BMR6A.
Engine overheated.	Overheated engine.	Idle engine until cool.
	Engine idle too high.	Set idle: 2,750 min ⁻¹
	Broken clutch spring or worn clutch spring boss.	Replace spring/shoes as required, check idle speed.
Cutting attachment moves at engine idle.	Loose attachment holder.	Inspect and re-tighten holders securely.
	Warped or damaged attachment.	Inspect and replace attachment as required.
Excessive vibration	Loose gearcase.	Tighten gearcase securely.
	Bent main shaft/worn or damaged bushings.	Inspect and replace as necessary.
	Shaft not installed in powerhead or gearcase.	Inspect and reinstall as required.
Attachment will not rotate	Broken shaft.	Consult with an authorized servicing dealer.
	Damaged gearcase.	Consult with an authorized servicing dealer.

DECLARATION OF CONFORMITY

We hereby declare the Shindaiwa Engine Brushcutter,
Model RM530 (T530/EC1, B530/EC1).

meets the following respective requirements.

Council Directives:

89/336/EEC as amended
98/37/EC as amended
2000/14/EC as amended
2004/26/EC as amended

Standard taken:

EN 292 parts 1&2
ISO 11806
CISPR 12

Measured sound power level: 112dB(A)

Guaranteed sound power level: 113dB(A)

Technical documentation is kept by:

K. Maeda DIV. Manager
Engineering Research and Development DIV.

Shindaiwa Kogyo Co.,Ltd.

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16 February, 2005



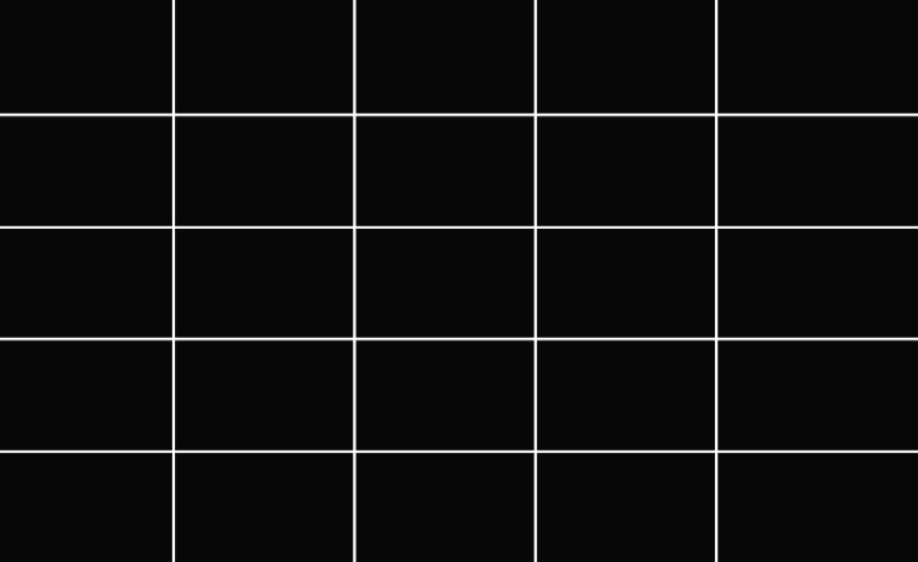
T. Yoshitomi
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