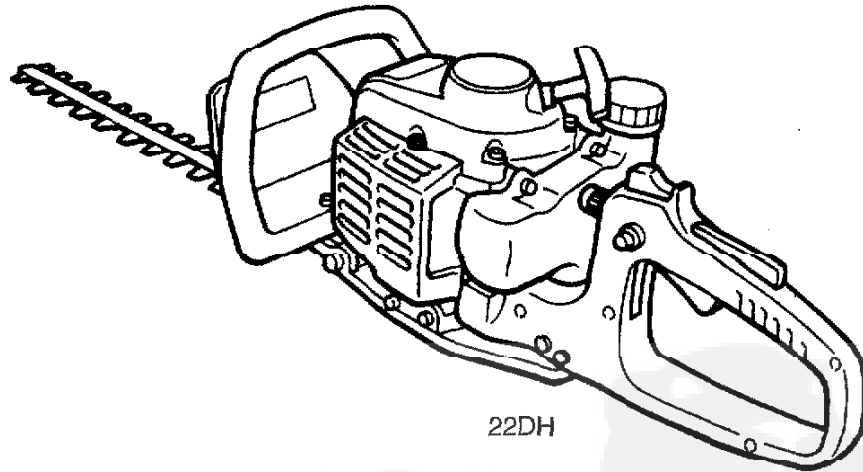


ISO 9001
CERTIFIED

shindaiwa

INSTRUCTION MANUAL 22HT/22DH HEDGE TRIMMER



CE



WARNING!

Read this manual and familiarize yourself with its contents.

This machine is designed for trimming hedge.

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.

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Attention Statements

Throughout this manual are special attention statements.

 **WARNING!**

A statement preceded by the triangular attention symbol and the word “WARNING” indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

CAUTION!

A statement preceded by the word “CAUTION” contains information that should be acted upon to avoid damage to the machine.

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.

Introduction

The Shindaiwa 22HT/22DH series of hand power tools 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 2-cycle engine technology, delivering exceptionally high power at remarkable 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 what is described here. 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 substances which are harmful to your health.

Safety Precautions



WARNING!

THE HEDGE TRIMMER IS NOT INSULATED AGAINST ELECTRICAL SHOCK!

Approaching or contacting an electric fence, power line or other electrified object could cause death or serious injury. Keep the hedge trimmer at least 10 meters (33 feet) away from electrified objects or branches that contact them.

IMPORTANT!

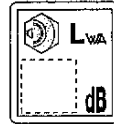
The operational procedures described in this manual are intended to help you get the most from your machine, and to protect you and others from harm. These procedures are guidelines for safe operation under most conditions, and are not intended to replace any safety rules and/or laws that may be in force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



Read and follow this manual and make sure anyone using the hedge trimmer does likewise. Failure to do so could result in serious injury or machine failure. Keep this manual for future reference.



Always wear eye and hearing protection during the operation of this hedge trimmer. A hard hat will provide additional security against falling debris.



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



WARNING!

- Do not operate the hedge trimmer if you are tired, ill, or under the influence of alcohol, drugs, or medication.
- Keep bystanders at least 5 meters (15 feet) away from the working area during operation to reduce their risk of being cut by the cutters or struck by thrown debris. Stop working immediately if a person, especially a small child or animal comes within the 5 meters zone.
- The blades are sharp-handle them with care! Wearing heavy-duty gloves will go a long way toward protecting your hands.
- Keep your hands clear of the cutter blades when starting the engine, and anytime the engine is running.
- **THIS MACHINE CAN CAUSE SERIOUS INJURIES.** Read the instructions carefully for the correct handling, preparation, maintenance, starting and stopping of the machine. Be familiar with all controls and the proper use of the machine.

Operational Precautions

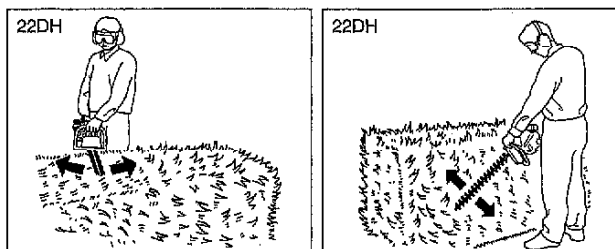
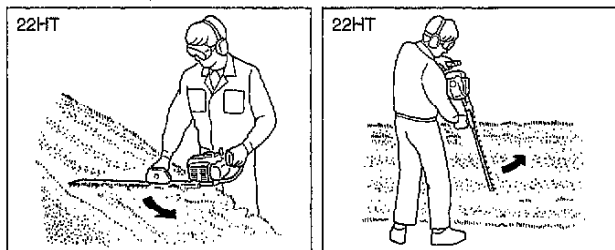


WARNING!

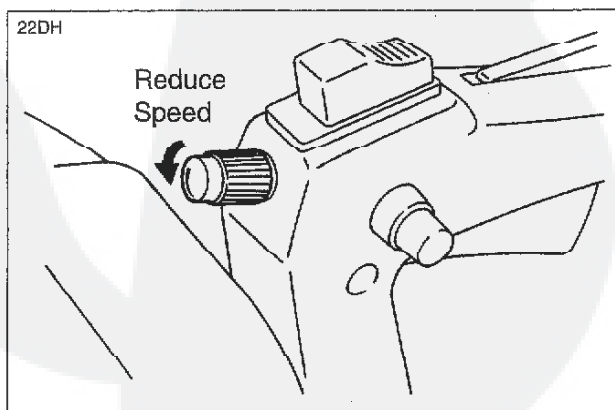
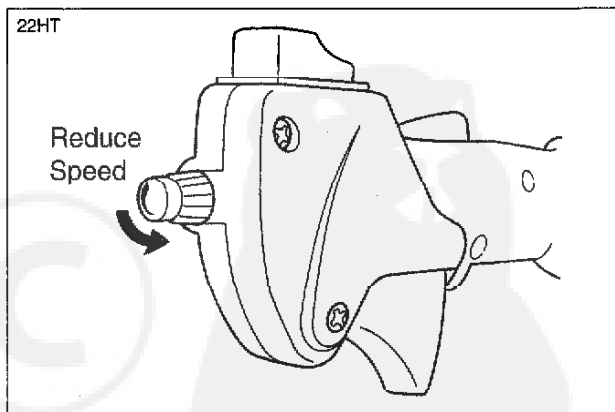
- Never allow any person to operate this hedge trimmer who has not been properly trained or instructed.
- Never smoke or light fires near the hedge trimmer. Keep the hedge trimmer away from excessive heat. Engine fuel is very flammable!
- Before starting the engine move 3 meters (10 feet) away from the fuel storage area or other readily flammable materials.
- Do not put flammable materials close to the muffler.
- Never run the engine indoors. Make sure there is always good ventilation when running the engine. Engine exhaust contains deadly poisonous carbon monoxide gas.
- Always stop the engine before refueling, and let the engine cool before refueling.
- Do not overfill the fuel tank. Wipe off any spilled fuel immediately.
- After refueling, inspect the fuel tank to make sure its cap is threaded on properly. Make sure there are no fuel leaks.
- Stop the engine immediately if the hedge trimmer suddenly begins to vibrate or shake. Inspect for broken, missing, or improperly installed parts or components. Correct the problem before returning the hedge trimmer to service.
- Always disconnect the spark plug wire before performing any maintenance work.
- Always maintain the hedge trimmer according to this owner's manual and follow the recommended maintenance schedule.
- Never modify or disable any of the hedge trimmer's safety devices.
- Always use genuine Shindaiwa parts and accessories when repairing or maintaining this hedge trimmer. These components have been manufactured specifically for use on this unit and meet the specifications for performance and safety.
- Make sure the cutters are correctly adjusted before operating the hedge trimmer.
- Never attempt to adjust the cutter with the engine running.
- Never use a cracked or broken cutter or cutter bar; replace it with a new or serviceable one.
- Make sure the powerhead is clean and that the engine cooling fins and muffler are unobstructed and free of debris and loose vegetation.
- Do not operate the hedge trimmer with the muffler removed.
- When transporting or storing the hedge trimmer, make sure the blade cover is attached to the cutter.
- Always ensure all handles and guards are fitted when using the machine.

Operating the Hedge Trimmer

- Squeezing the throttle increases engine speed, causing the clutch to engage and operate the cutters.
- Releasing the throttle decreases engine speed, causing the cutters to slow, and then stop altogether as the clutch disengages.
- Use a sweeping motion when cutting, and vary throttle settings often.
- Trim the hedge swinging the blade as the illustration shows. At vertical cutting the Hedge Trimmer is used with circular pendulation, swinging up and down close the hedge.
- Avoid cutting material larger than 1.2 cm (1/2 inch) in diameter. Do not cut metal objects or wire.



- **Speed Adjustment Dial**
Turning the maximum speed adjustment dial anti-clockwise decreases the engine speed when the throttle is fully squeezed. Adjust the maximum engine speed to suit your work. (The maximum speed adjustment dial is preset on its maximum speed position at the factory.)



General Safety Instructions

Note the locations of fence posts and other fixed objects and avoid cutting them.

Always wear hearing protection such as earmuffs or earplugs.

Secure long hair so it is above shoulder level.

Do not wear jewelry or loose clothing that could get caught in machinery or brush.

Make sure handgrips are free of foreign substances such as lubricant and pitch.

Wear appropriate clothing. It should fit snugly to minimize snagging yet permit free movement. Never wear shorts when operating the hedge trimmer.

Inspect the cutting site thoroughly prior to operation. Remove objects that could get entangled by the cutter blade.

Always wear eye protection such as goggles or safety glasses.

Non-skid gloves provide a firm grip, added protection to your hands, and are strongly recommended.

Always operate with both hands firmly gripping the handgrips of the machine.

Do not allow cutters to contact buildings or other hard objects during operation.

Never operate this machine if any safety guards are missing or damaged.

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

If a cutter should bind fast in a cut, stop the engine immediately. Remove the cause of the bind before proceeding.

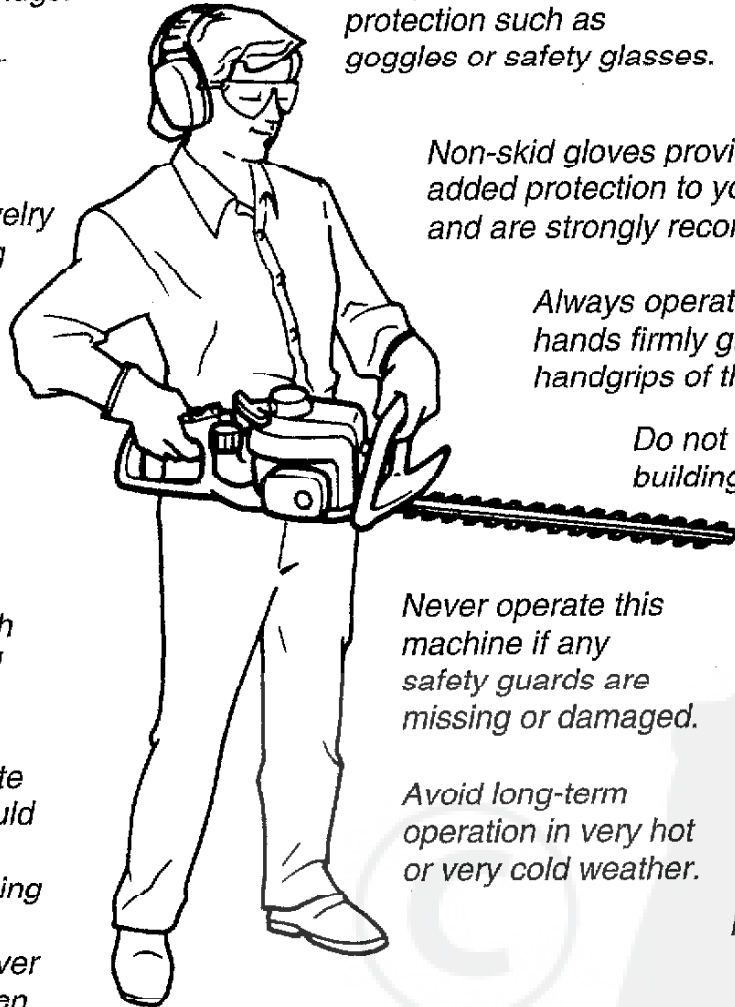
Never cut metal objects or wire with the blade.

Always keep proper footing and do not overreach. Maintain your balance at all times during operation especially when using steps or a ladder.

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

Always be aware of your surroundings and stay alert for possible hazards that you may not hear due to the noise of the machine.

Never allow children to use the machine. Avoid operating near bystanders.



Specifications

Model Name	22HT	22DH	
Engine Model	SDH220		
Engine Type	2-cycle, horizontal-cylinder, air-cooled		
Engine Displacement	21.1 cm ³		
Bore × Stroke	31 mm × 28 mm		
Engine Speed at Idle	2,950 ± 250 min ⁻¹		
Maximum Engine Speed	11,000 min ⁻¹		
Engine Speed at Maximum Power Output	7,500 min ⁻¹		
Maximum Engine Power	0.6 kW		
Maximum Blade Speed	1,800 min ⁻¹		
Ignition	Fully electronic, transistor-controlled		
Spark Plug	NGK, BMR6A		
Starting Method	Recoil		
Stopping Method	Slide switch		
Air Cleaner Type	Semi-wet		
Fuel/Oil Ratio	25 : 1		
Fuel Tank Capacity	400 cm ³		
Carburetor Type	Walbro, WYL		
Dry mass	4.3 kg	4.7 kg	
Dimensions (L × W × H)	930 mm × 270 mm × 210 mm	980 mm × 240 mm × 210 mm	
Sound Pressure Level*	93 dB (A)		
Sound Power Level*	103 dB (A)		
Vibration Level*	Idling [left/right]	4.40/2.44 (m/s ²)	5.65/5.00 (m/s ²)
	Racing [left/right]	6.65/5.91 (m/s ²)	6.88/12.58 (m/s ²)

* Sound Pressure Level: in accordance with ISO 11201

* Sound Power Level: in accordance with ISO 3744

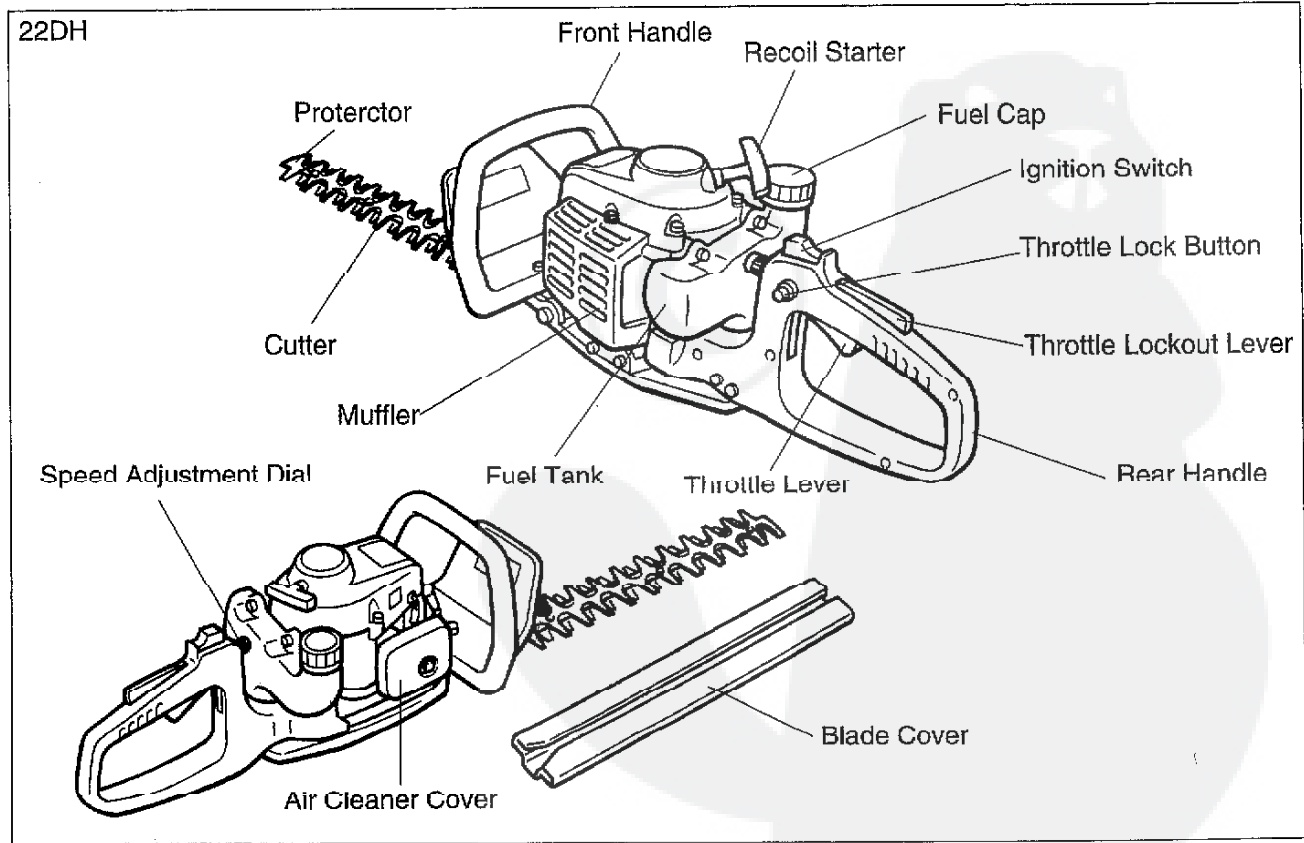
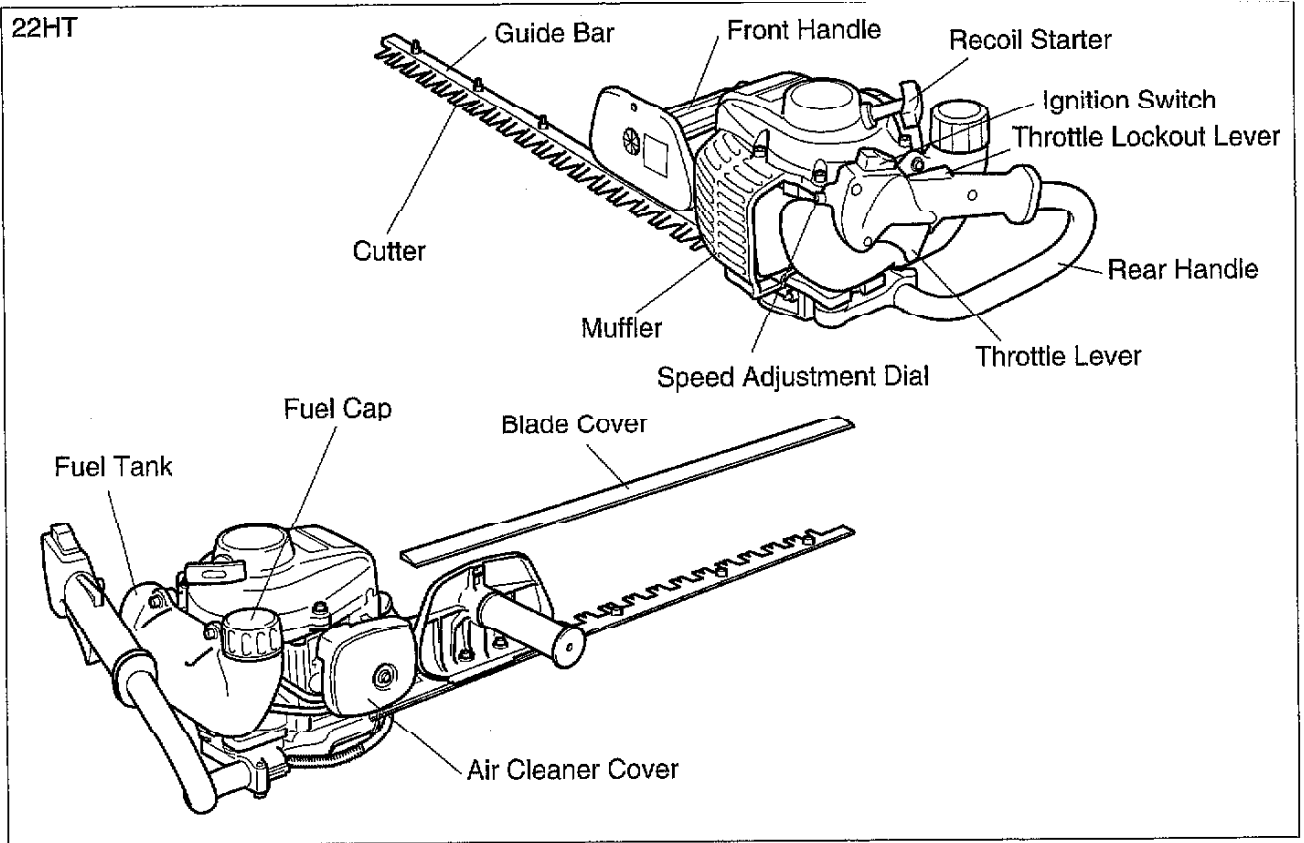
* Vibration Level: in accordance with EN 28662-1

Standard Equipment.....Rear handle with integral controls, front and rear handle anti-vibe mountings. Front handle with guard. Tool set which includes combination spark plug/13mm wrench, and blade cover.

Optional Equipment.....Deflector

Specifications subject to change without notice.

Product Description



This hedge trimmer is supplied fully assembled. Before proceeding, inspect the unit to make sure components are in place and that fasteners are tight. Inspect for broken, damaged or missing parts or components.

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.

Familiarize yourself with your machine and its various components. Understanding your machine helps ensure top performance, long service life, and safer operation.



WARNING!

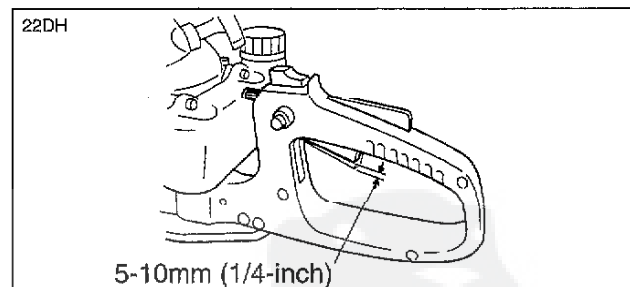
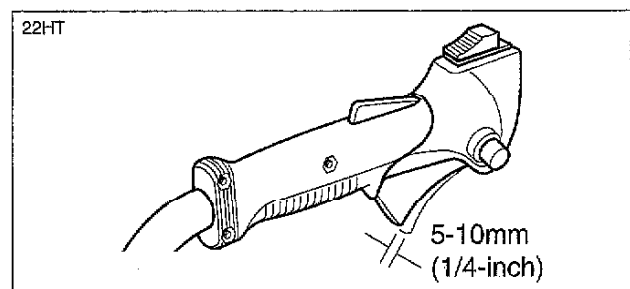
Do not make unauthorized modifications or alterations to this machine or to any of its components or accessories.

Throttle Cable Adjustment

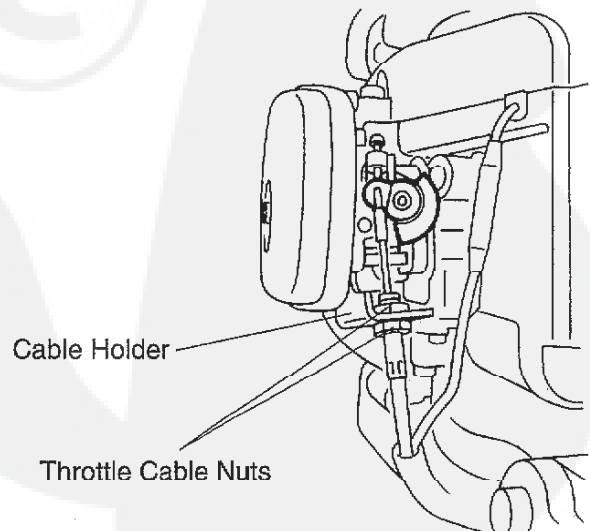
1. This hedge trimmer is supplied fully assembled. To make sure the unit operates correctly, check the throttle lever:

—the throttle lever should operate smoothly without binding.

— the throttle lever should have about 5-10mm (1/4-inch) free play when the engine is not running.

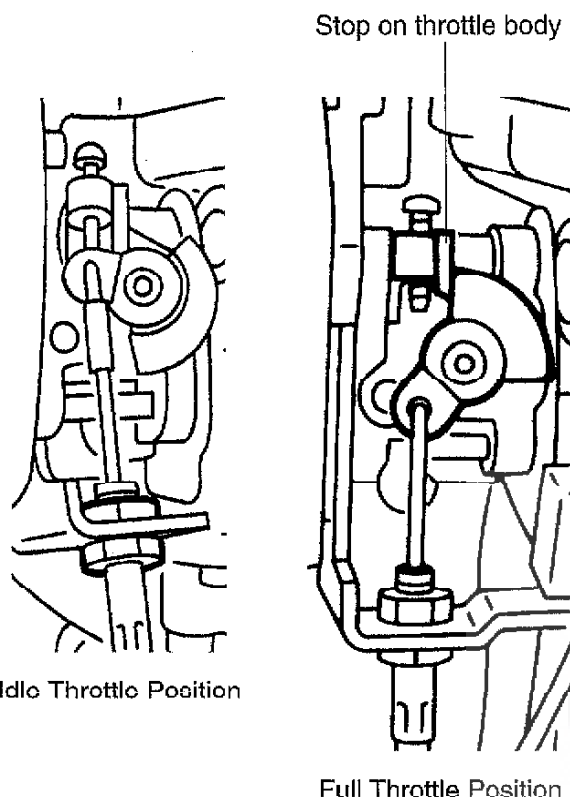


2. If free play adjustment is required, loosen the two 10mm throttle cable nuts at the Cable Holder.



Mixing Fuel

3. Adjust the throttle cable nuts until you achieve correct throttle free play, then tighten the jam nuts securely.
4. When 5-10mm (1/4-inch) free play is achieved, tighten the two 10mm throttle cable nuts. When the throttle cable is correctly adjusted, and the throttle trigger is fully depressed (full throttle position), the throttle will contact the stop on the throttle body.



CAUTION!

This engine is certified to operate on a 25:1 mixture consisting of unleaded gasoline and 2-cycle mixing oil only.

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! When an oxygenated fuel must be used, a fuel containing MTBE is to be preferred over an alcohol based fuel.

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!

- Mix all fuel with 2-cycle Engine Oil and gasoline at a gasoline/mixing oil ratio of 25:1.
- Use only fresh, clean unleaded gasoline with an octane rating of 87 or above.

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™.

Filling the Fuel Tank



WARNING!

Minimize the risk of fire!

- Handle fuel with extreme care since it is highly flammable!
- Always allow the engine to cool before refueling!
- Wipe all spilled fuel and move the machine at least 10 feet (3 meters) from the fueling point before restarting!
- Never smoke or light any fires near the unit or fuels!
- Never place any flammable material near the engine muffler!
- Never operate the unit without the muffler in place and properly functioning!
- Never operate the unit if fuel system components are damaged or are leaking.



WARNING!

Do not inhale fuel fumes as they are toxic!

1. Place the unit on the ground or on a flat surface.
2. Clear any dirt or other debris from around the fuel filler cap.
3. Remove the fuel cap slowly, and fill the fuel tank with clean, fresh fuel mixture.
4. Replace and firmly tighten the fuel cap.
5. Wipe up any spilled fuel from the powerhead before starting the engine.

Starting Procedure



WARNING!

KEEP CLEAR OF THE CUTTING ATTACHMENT DURING STARTING OPERATIONS! THE CUTTERS MAY MOVE WHEN THE ENGINE IS STARTED!

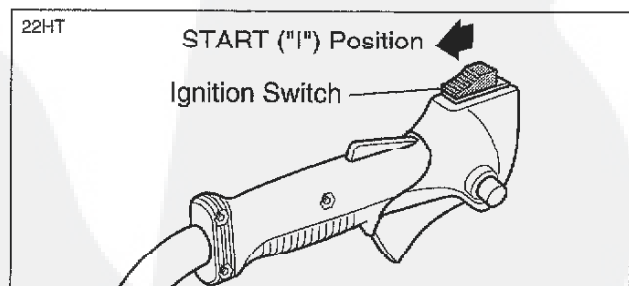
- Place the trimmer on the ground during all starting operations.
- Make sure you have a secure footing, and keep a firm grip on the machine as well.
- Keep all bystanders and pets well clear of the trimmer during starting operations.

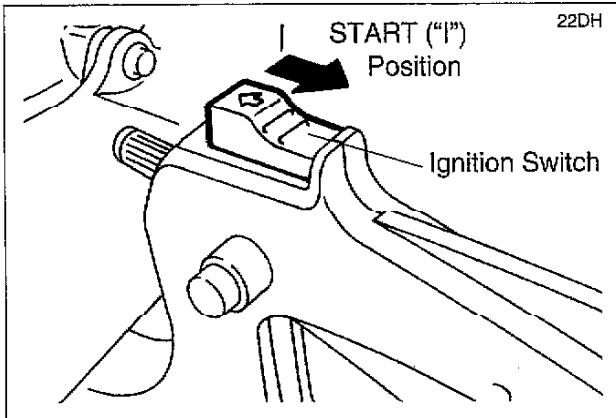
IMPORTANT!

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

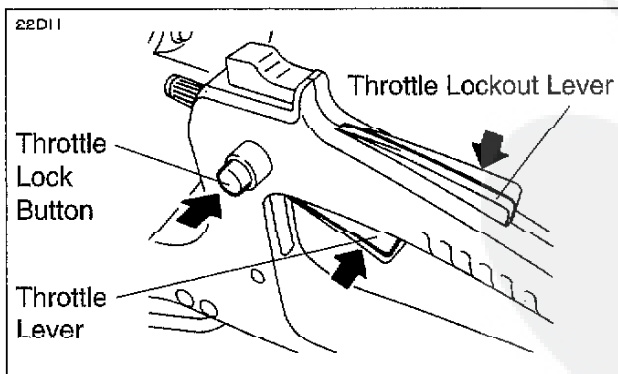
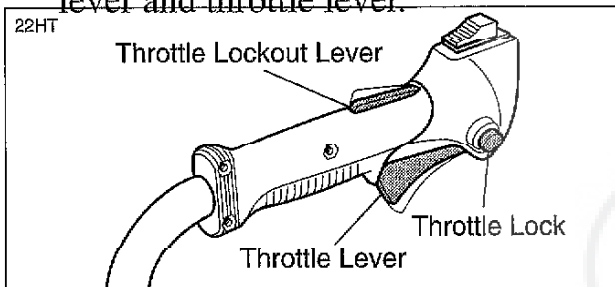
Control Positions (Cold Engine)

1. Move the ignition switch rearward to the "I" or START position.

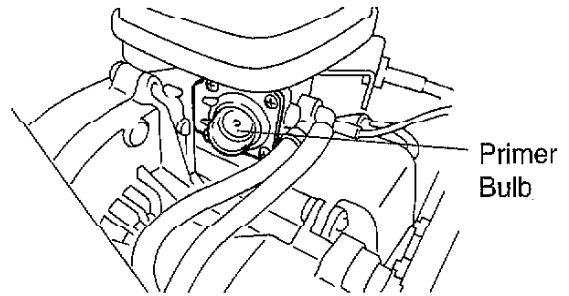




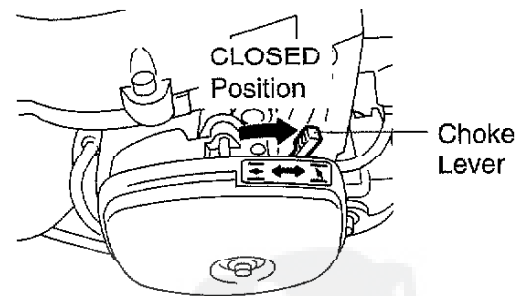
2. Set the throttle lever to the “fast idle” position by performing the following.
 - a. Depress and hold the throttle lockout lever, then squeeze the throttle lever.
 - b. Depress and hold the throttle lock button.
 - c. While depressing the throttle lock button, release the throttle lockout lever and throttle lever.



3. Prime the carburetor by depressing the carburetor primer bulb 4 or 5 times until you see clear fuel flowing through the transparent primer bulb.

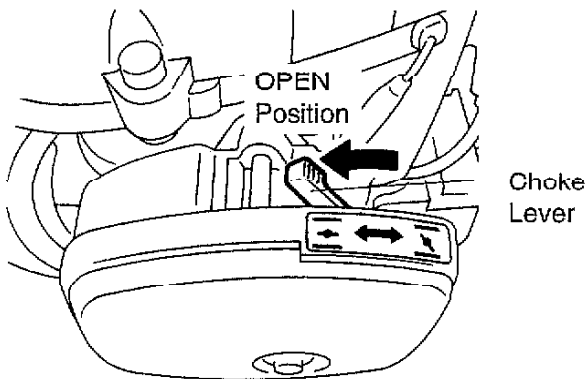


4. Move the choke lever *forward* to the “closed” position to choke the engine.

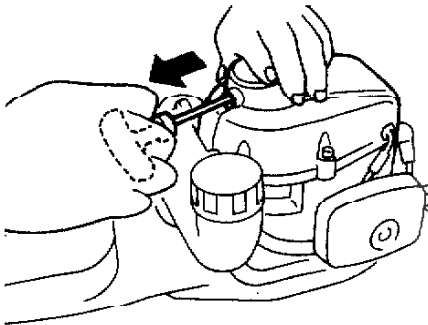


Control Positions (Warm Engine)

1. Move the ignition stop switch rearward to the "I" or START position.
2. Set the throttle lever to the fast idle position as in Step 2, previous page.
3. Move the choke lever *back* (rearward) to the "open" position.



Starting the Engine



CAUTION!

The recoil starter can be easily damaged by abuse!

- Always engage the starter before attempting to crank the engine.
- Never pull the starter cord to its full length.
- Always rewind the starter cord slowly.

1. Place the machine on the ground. Grip the engine cover with your left hand and the starter handle with your right hand.
2. Pull the starter handle slowly toward you until you feel the starter mechanism engage.
3. Start the trimmer by pulling the starting handle rapidly outward.

When the engine starts or fires—



WARNING!

The cutting attachment will move when the engine accelerates!

1. Open the choke by moving the choke lever *backward* (toward the fuel tank).
2. If the engine does not continue to run, repeat the appropriate starting procedures for a cold or warm engine.
3. When the engine starts, clear excess fuel from the combustion chamber by accelerating the engine several times with the throttle lever.
4. Operating the throttle will automatically disengage the fast idle setting.

If the engine does not start—

- Repeat the appropriate starting procedure for a cold or warm engine.
- If the engine still fails to start, use the procedures for "Starting a Flooded Engine."

Starting a Flooded Engine



WARNING!

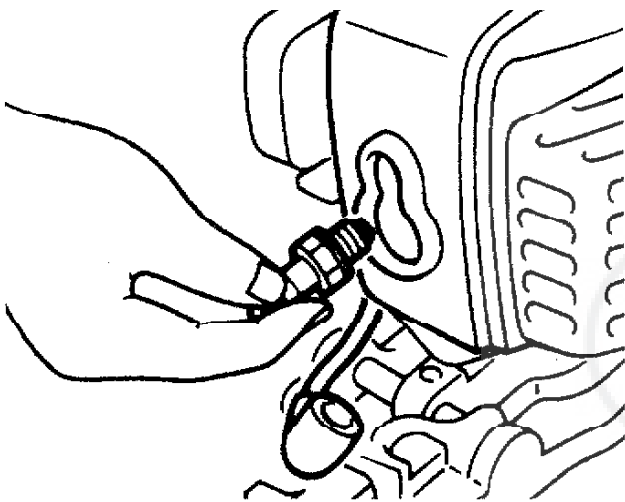
Move the ignition switch forward to the "O" or STOP position.



WARNING!

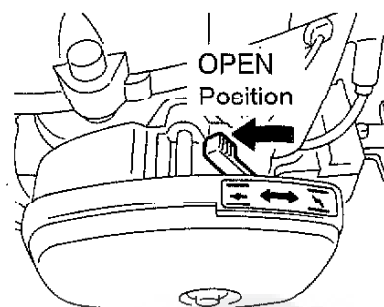
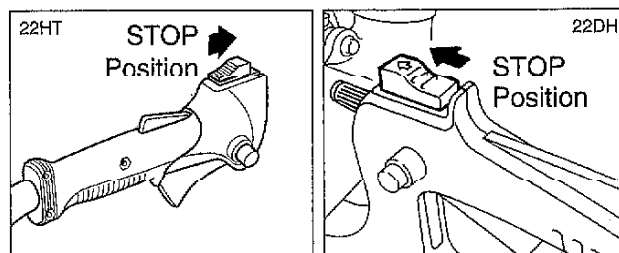
Burn danger from hot engine!
Allow engine to cool before removing spark plug.

1. Disconnect the spark plug lead, then use the spark plug wrench to remove the spark plug (counterclockwise to remove).



2. If the spark plug is fouled or is soaked with fuel, clean or replace the plug as necessary. For spark plug specifications and gapping procedure. See Page 17.

3. Set the ignition switch to the "O" or STOP position and open the choke. Fully depress the throttle lever with your left hand and pull the starter handle rapidly with your right hand several times to clear excess fuel from the engine combustion chamber.



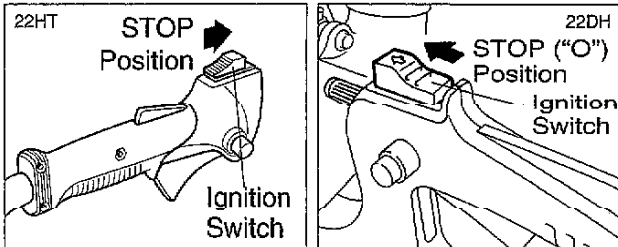
CAUTION!

Incorrect spark plug installation can result in serious engine damage!

4. Replace the spark plug and tighten it firmly with the spark plug wrench. If a torque wrench is available, torque the spark plug to 16.7-18.6 N·m (170-190 kg·cm).
5. Repeat the starting procedures for a warm engine.
6. If the engine still fails to start or fire, refer to the troubleshooting chart at the end of this manual.

Stopping the Engine

1. Cool the engine by allowing it to idle for 2-3 minutes.
2. Move the ignition switch forward to the "O" or STOP position.



WARNING!

The cutters can continue oscillating after the engine is switched off.



WARNING!

Know how to stop the machine quickly in an emergency.

Adjusting Engine Idle

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 cutters.

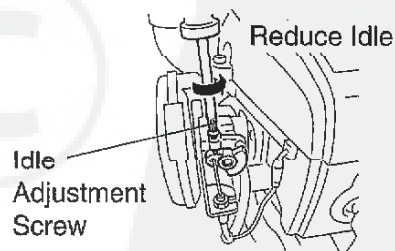
Idle Speed Adjustment



WARNING!

The cutters must NEVER engage at engine idle speeds! If the idle speed cannot be adjusted by the procedure described here, return the trimmer to your dealer for inspection

1. Place the unit on the ground, then start the engine, and then allow it to idle 2-3 minutes until warm.
2. If the cutters move when the engine is at idle, reduce idle speed by turning the idle adjustment screw counterclockwise.



3. If a tachometer is available, the engine idle speed should be Adjusted to $2950 \pm 250 \text{ min}^{-1}$.
4. Carburetor fuel mixture adjustments are preset at the factory and cannot be serviced in the field.
5. Clean up any fuel that may have leaked.

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

CAUTION!

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

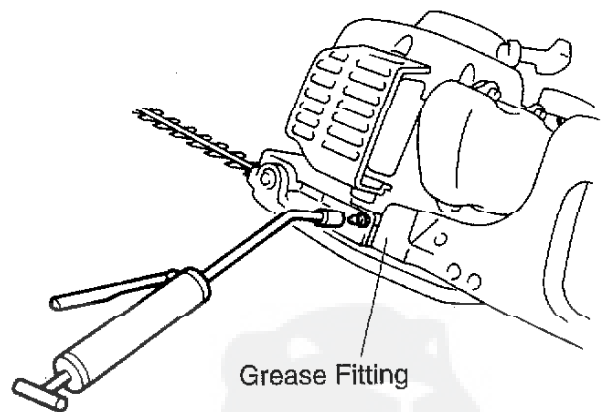
Gearcase Lubrication Schedule

CAUTION!

Over-lubricating may cause the gearcase to run slower than normal, and may also cause leakage from excess grease.

Every 20 Hours

Top off gearcase grease level by using a lever-type grease gun to force 1-2 strokes of high quality lithium-based grease through the gearcase grease fitting. **DO NOT OVERFILL THE GEARCASE!**



Maintenance and Inspection



WARNING!

Accidental start-ups can cause severe injury! Before performing any maintenance on this machine or cleaning or checking this machine, stop the engine and disconnect the spark plug!

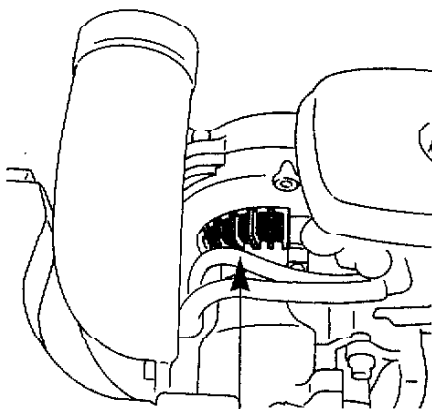
Prior to each work day, perform the following:



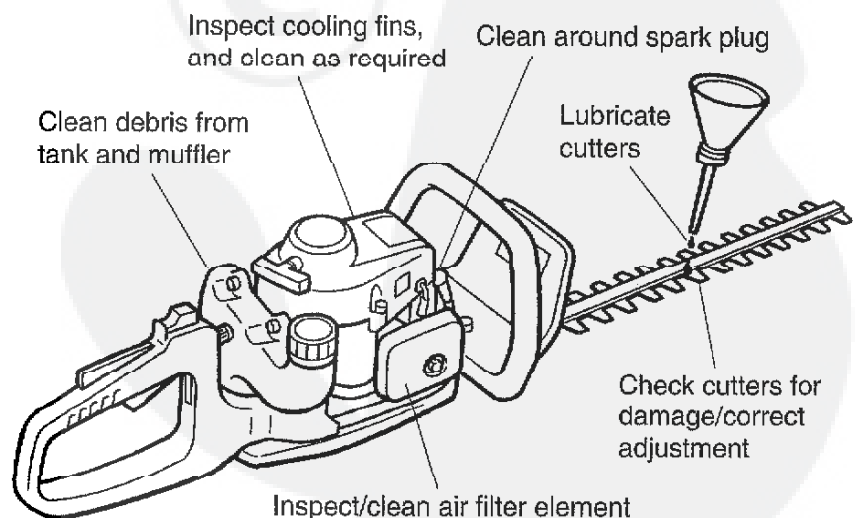
WARNING!

To reduce fire hazard, keep the engine and muffler free of debris, leaves, or excessive grease.

- Remove all dirt and debris from the engine, check the cooling fins and air filter for clogging, and clean as necessary.



Keep Intake Clean



- Clean beneath the cylinder cover and around the spark plug.
- Lubricate the cutters with oil before use, and after refueling.
- Check the cutters for damage or improper adjustment, and adjust or replace as necessary.
- Carefully remove any accumulations of dirt or debris from the muffler and fuel tank. Dirt build-up in these areas can lead to engine overheating, fire, or premature wear.
- Clean any debris or dirt from the hedge trimmer cutter blades.
- Check for loose or missing screws or components. Make sure the cutter attachment is securely fastened.
- Check the entire machine for leaking fuel or grease.
- Make sure nuts, bolts, and screws (except carburetor adjusting screws) are tight.

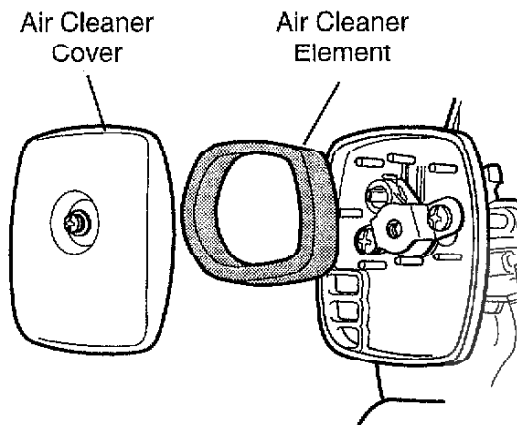
10-Hour Maintenance

CAUTION!

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

Every 10 hours of operation, (more frequently in dusty or dirty conditions):

Remove the air cleaner element from the air cleaner housing and clean it thoroughly with soap and water. Rinse and dry thoroughly. Add a few drops of oil and work it in, then reassemble.



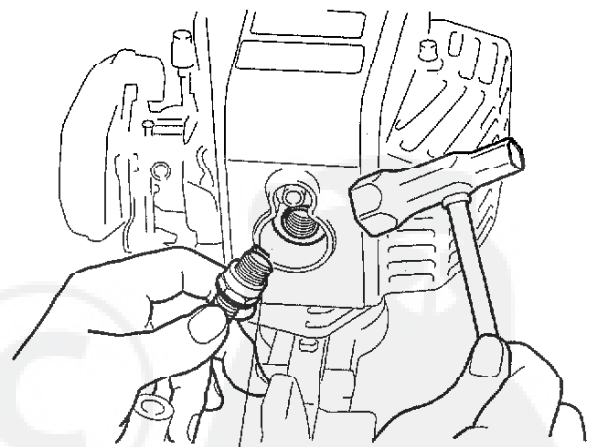
10/15-Hour Maintenance

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.

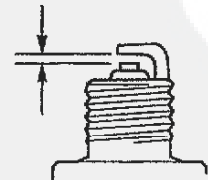
Every 10 to 15 hours of operation:

- Remove and inspect the spark plug. Replace any damaged or worn spark plug with a new NGK BMR6A or equivalent. Adjust spark plug gap to 0.6mm (0.024 inch) and reinstall. If a torque wrench is available, torque the plug to 16.7-18.6N·m (170-190 kg·cm).



Clean the spark plug and check the gap at the electrode.

0.6 mm
(0.024 inch)



Cutter Blade Adjustment



WARNING!

The cutter blades are very sharp!
Always wear gloves when working
around the cutter assembly!



WARNING!

Do not operate the trimmer with a
damaged or excessively worn cutting
device. Faulty blades can increase
the risk of accidents.

CAUTION!

Operating the trimmer with worn or
improperly adjusted cutters will
reduce cutter performance and may
also damage your machine.

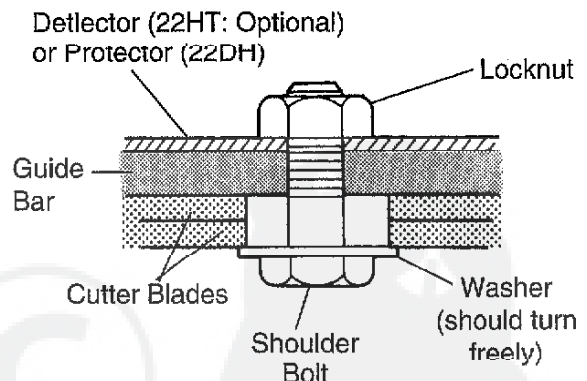
Cutter performance of your machine depends
in great measure on cutter blade clearance.
Properly adjusted blades will oscillate freely
yet help prevent binding of cut material
between blades. Adjust blades as follows

1. Loosen all blade locknuts at least one
full turn.
2. Tighten each blade shoulder bolt firmly,
and then loosen the shoulder bolts 1/4 to
1/2 turn.
3. Working from the gearcase end, lock
each bolt in place by firmly tightening its
locknut while preventing the shoulder
bolt from turning.

When shoulder bolt adjustment is correct,
there should be a gap of 0.25-0.50 mm
between the cutter blades and the flat
washers, and the flat washer beneath each
bolt head should turn freely.

How to Attach Deflector (Optional):

Remove the front handle and locknuts. Place
the deflector on the guide bar and replace the
front handle and then retighten the locknuts
as mentioned above.



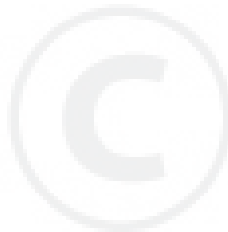
Long Term Storage

30 days or longer

CAUTION!

Never store this machine with any fuel remaining in the tank, fuel lines or carburetor!

- Thoroughly clean the exterior of the machine.
- Remove all clippings and other debris from the cylinder fins and other components (as previously described under Daily Maintenance).
- Drain all unused fuel from the fuel tank, and then clear the carburetor and fuel lines by running the trimmer until it stops from lack of fuel.
- Remove the spark plug, and pour about 3cm³ of oil into the cylinder through the spark plug hole. Before reinstalling the spark plug, slowly pull the recoil starter 2-3 times to distribute the oil over the cylinder wall.
- Service the air cleaner element as previously described under Daily Maintenance.
- Repair or replace any damaged components as required, and then store the machine in a clean, dry, and dust-free area.
- When storing, make sure the blade cover is installed.



Troubleshooting Guide



WARNING!

Do not attempt to repair the machine unless you are qualified to do so.

ENGINE DOES NOT START

What To Check	Possible Cause	Remedy
Does the engine crank? YES ↓	Faulty recoil starter. Fluid in the crankcase. Internal damage.	Return trimmer to the dealer.
Good compression? YES ↓	Loose spark plug. Excess wear on cylinder, piston, rings.	Tighten and re-test. Return trimmer to the dealer.
Does the tank contain fresh fuel of the proper grade? YES ↓	Re-fill with fresh fuel of the correct mixture Gasoline and 2-cycle Engine Oil, 25:1 ratio	Re-start.
Is fuel visible and moving in the return line when priming? YES ↓	Check for clogged fuel filter and/or vent. Clean as required.	Re-start.
Is there spark at the spark plug wire terminal? YES ↓	The ignition switch is STOP ("O"). Faulty ignition ground. Faulty ignition unit.	Move switch to START ("I"); re-start. Return trimmer to the dealer.
Check the spark plug...	If the plug is wet, excess fuel may be in the cylinder. The plug may be fouled or improperly gapped. The plug may be damaged internally or is the wrong size.	Crank the engine with the plug removed, replace the plug, and re-start. Clean and re-gap the plug to 0.6mm (0.024 inch). Re-start, Replace the plug with: NGK BMR6A Re-start.

Troubleshooting Guide

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>	Operator is overworking the machine.	Cut at a slower rate.
	Carburetor mixture is too lean.	Return trimmer to the dealer.
	Improper fuel ratio.	Re-fill with fresh fuel of the correct mixture (Gasoline and 2-cycle Engine Oil-25:1 ratio)
	Fan, fan cover, cylinder fins dirty or damaged.	Clean, repair, or replace as necessary.
	Carbon deposits on the piston or in the muffler.	Return trimmer to the dealer for service.
<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>	Clogged air cleaner.	Service the air cleaner
	Loose or damaged spark plug.	Tighten or replace.
	Air leakage or clogged fuel line.	Repair or replace filter and/or fuel line.
	Water in the fuel.	Replace the fuel.
	Piston seizure.	Return trimmer to the dealer.
Faulty carburetor and/or diaphragm.	Return trimmer to the dealer.	
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Engine is knocking. </div>	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.	Return trimmer to the dealer for service.

Troubleshooting Guide

ADDITIONAL PROBLEMS

Symptom	Possible Cause	Remedy
Poor acceleration.	<p>Clogged air cleaner. Clogged fuel filter.</p> <p>Carburetor mixture too lean.</p> <p>Idle speed set too low.</p>	<p>Clean the air cleaner. Replace the fuel filter.</p> <p>Return trimmer to the dealer.</p> <p>Adjust: $2950 \pm 250 \text{ min}^{-1}$</p>
Engine stops abruptly.	<p>Switch turned off.</p> <p>Fuel tank empty.</p> <p>Clogged fuel filter.</p> <p>Water in the fuel.</p> <p>Shorted spark plug or loose terminal.</p> <p>Ignition failure.</p> <p>Piston seizure.</p>	<p>Reset the switch and re-start.</p> <p>Refuel.</p> <p>Replace filter</p> <p>Drain; replace with clean fuel.</p> <p>Clean and replace spark plug, tighten the terminal.</p> <p>Replace the ignition unit.</p> <p>Return unit to the dealer.</p>
Engine difficult to shut off.	<p>Ground (stop) wire is disconnected, or switch is defective.</p> <p>Overheating due to incorrect spark plug.</p> <p>Overheated engine.</p>	<p>Test and replace as required.</p> <p>Clean and regap to 0.6mm (0.024"). Correct plug: NGK BMR6A Idle engine until cool.</p>
Cutters move at engine idle.	<p>Engine idle too high.</p> <p>Broken clutch spring or worn clutch spring boss.</p>	<p>Set idle: $2950 \pm 250 \text{ min}^{-1}$</p> <p>Replace spring/shoes as required, check idle speed.</p>
Excessive vibration.	<p>Warped or damaged guide bar or cutters.</p> <p>Damaged gearcase or cam case.</p> <p>Shoulder bolts/cutters worn or out of adjustment.</p>	<p>Inspect and replace as required.</p> <p>Return trimmer to the dealer.</p> <p>Adjust or replace as required.</p>

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 Vicentina, 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

DECLARATION OF CONFORMITY

We hereby declare the Shindaiwa Hedge Trimmer,
Model HT220 (DH220/22DH-CE,DH220/TYB212,HT220/22HT-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

EN 774

CISPR 12

Measured sound power level: 106dB(A)

Guaranteed sound power level: 107dB(A)

Technical documentaiton is kept by:

K. Maeda DIV. Manager

Engineering Research and Development DIV.

Shindaiwa Kogyo Co.,Ltd.

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2002-5-27

T. Yoshitomi

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DIV. Manager

Quality Assurance DIV.

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