

shindaiwa

ENGLISH
GB (Original instructions)

OPERATOR'S MANUAL

GRASS-TRIMMER/BRUSHCUTTER

CL590

WARNING



READ THE INSTRUCTIONS CAREFULLY AND FOLLOW THE
RULES FOR SAFE OPERATION.
FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY.

Important information

Please ensure that you read the operator's manual before using your product.

○ Intended use of this product

- ◆ Shindaiwa Grass Trimmers/Brushcutters are lightweight, high-performance, petrol engined units designed for weed control, grass trimming and brush cutting in areas difficult to control by any other means.
- ◆ Do not use this unit for any purpose other than aforementioned.

○ Users of the product

- ◆ You should not use this product until you have read the operator's manual carefully and fully absorbed its content.
- ◆ This product should not be used by anyone who has failed to read the operator's manual properly, is suffering from a cold, tiredness or otherwise in poor physical condition, or children.
- ◆ Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

○ About your operator's manual

- ◆ This manual contains necessary information about the assembly, operation, and maintenance of your product. Please read it carefully and absorb its contents.
- ◆ Always keep your manual in a place where it is readily accessible.
- ◆ If you have lost your manual or it is damaged and no longer readable, please purchase a new one from your shindaiwa dealer.
- ◆ The units used in this manual are SI units (International System of Units). Figures in parentheses are reference values, and there may be a slight conversion error in some cases.

○ Loaning or assigning your product

- ◆ When loaning the product described in this manual to another party, ensure that the person borrowing and working with the product receives the operator's manual along with the product. If you assign your product to another party, please enclose the operator's manual with the product when handing it over.

○ Enquiries

- ◆ Please contact your shindaiwa dealer for requests regarding information about your product, the purchase of consumables, repairs, and other such enquiries.

○ Notices

- ◆ The content of this manual may be changed without notice for the purpose of upgrades to the product. Some of the illustrations used may differ from the product itself in order to make the explanations clearer.
- ◆ This product requires the assembly of some parts.
- ◆ Please consult your shindaiwa dealer if anything is unclear or of concern.

Manufacturer:

YAMABIKO CORPORATION

7-2 SUEHIROCHO 1-CHOME, OHME, TOKYO 198-8760, JAPAN

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For safe use of your product

Be careful to read this section before using your product.

○ The precautions described in this section contain important safety information. Please observe them carefully.

○ You must also read the precautions that appear in the body of the manual itself.

Text following a [diamond mark] mark describes the potential consequences of failing to observe the precaution.

Warning notices

Situations where there is a risk of physical injury to the operator and other people are indicated in this manual and on the product itself by the following warning notices. Always read and observe them carefully in order to ensure safe operation.

 DANGER	 WARNING	 CAUTION
This symbol accompanied by the word " DANGER " calls attentions to an act or a condition which will lead to serious personal injury or death of operators and bystanders.	This symbol accompanied by the word " WARNING " calls attentions to an act or a condition which can lead to serious personal injury or death of operators and bystanders.	" CAUTION " indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

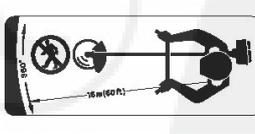
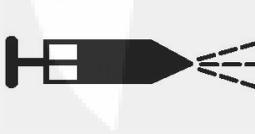
Other indicators

As well as warning notices, this manual uses the following explanatory symbols:

	Circle and slash symbol means whatever is shown is prohibited.	NOTE	IMPORTANT
		This enclosed message provides tips for use, care and maintenance of the product.	Framed text featuring the word " IMPORTANT " contains important information about the use, checking, maintenance and storage of the product described in this manual.

Symbols

In this manual and on the product itself, a series of explanatory symbols is used. Please make sure that you fully understand what each symbol means.

Symbol form/shape	Symbol description/application	Symbol form/shape	Symbol description/application
	Carefully read the operator's manual		The maximum speed of the cutting attachment shaft in r/min
	Wear eyes, ears and head protection		Keep bystanders away 15 m
	Wear foot protection and gloves		Petrol and oil mixture
	Emergency stop		Purge bulb (Primer)
	Warning! Thrown objects!		Carburettor adjustment - Low speed mixture

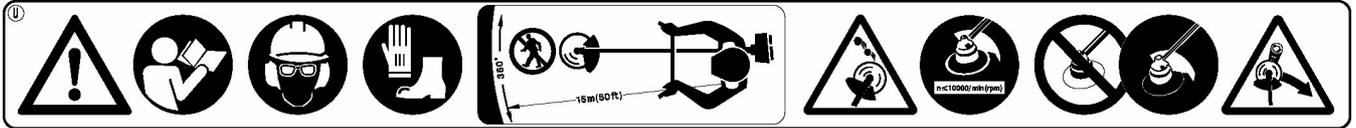
For safe use of your product

Symbol form/shape	Symbol description/applica- tion	Symbol form/shape	Symbol description/applica- tion
	Warning, side thrust	H	Carburettor adjustment - High speed mixture
	Usage without shield not per- mitted	T	Carburettor adjustment - Idle speed
	Usage of metal blades not permitted		U-handle
	Usage of nylon line cutting head not permitted		Loop handle
	Do not use the product in plac- es with poor ventilation		Beware of high-temperature areas
	Beware of fire		Guaranteed sound power lev- el
	Choke Control "Cold Start" Position (Choke Closed)		Choke Control "Run" Position (Choke Open)
	Beware of electric shocks		Engine start

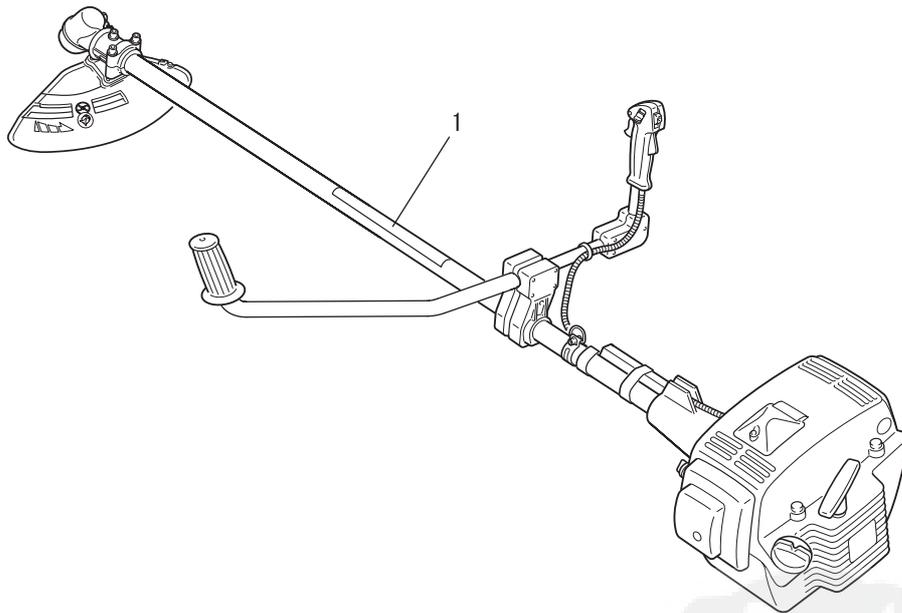
For safe use of your product

Location in which a safety decal is attached

- The safety decal shown below has been attached to the products described in this manual. Ensure that you understand what the decal means before using your product.
- If the decal becomes unreadable due to wear and tear or damage, or peels off and is lost, please purchase a replacement decal from your dealer and attach it in the location shown in the illustrations below. Ensure that the decal is readable at all times.



1. Safety decal (Part number 890617-43130)



Handling fuel

DANGER

Always keep well away from fire when refuelling

Fuel is highly inflammable and leads to a risk of fire if mishandled. Use extreme care when mixing, storing or handling or serious personal injury may result. Be careful to observe the following instructions.

- Do not smoke or hold a flame near when refuelling.
- Do not fuel up while the engine is hot or in operation.
- ◆ If you do so, the fuel could ignite and cause fire, leading to burns.



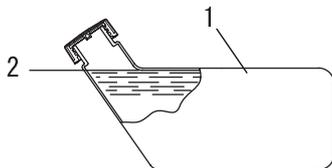
About the container and refuelling place

- Use an approved fuel container.
- Fuel tanks/cans may be under pressure.
Always loosen fuel caps slowly allowing pressure to equalize.
- DO NOT fill fuel tanks indoors.
ALWAYS fill fuel tanks outdoors over bare ground.

Fuel spills can cause fire

Observe the following precautions when refuelling:

- Do not add so much fuel that it reaches the mouth of the fuel tank. Keep the fuel within the prescribed level (up to the shoulder level of the fuel tank).
- Mop up any fuel that overflows or spills out due to over-filling.
- Tighten the fuel tank cap securely after refuelling.
- ◆ Fuel spills can cause fire and burns when ignited.

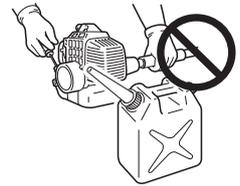


- 1. Fuel tank
- 2. Shoulder level

Do not start the engine in the area where you refueled

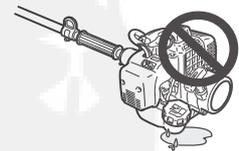
- You must not start the engine in the place where you carried out the refuelling. Move at least 3m from the place where you refueled before starting the engine.

- ◆ Fuel leaks that occur while refuelling can cause fire if ignited.



Fuel leaks cause fire

- After refuelling, always check that there are no leaks or discharges of fuel from the fuel pipe, fuel system grommets, or around the fuel tank cap.
- If you do find fuel leaks or discharges, stop using the product immediately and contact your dealer to have it repaired.
- ◆ Any fuel leaks could cause fire.



For safe use of your product

Handling the engine

WARNING

Starting the engine

Be particularly careful to observe the following precautions when starting the engine:

- Check that none of the nuts and bolts are loose
- Check that there are no fuel leaks
- Place the product in a flat, well ventilated place
- Leave plenty of space around the product and do not allow people or animals near it
- Start the engine with the throttle trigger in the idle speed position
- Hold the product firmly to the ground when starting the engine
- ◆ Failure to observe the precautions could cause an accident or injury, or even lead to a fatality.

Once the engine has started, check for abnormal vibrations and sounds

- Check that there are no abnormal vibrations or sounds once the engine starts. Do not use the product if there are abnormal vibrations or sounds. Contact your dealer to have it repaired.
- ◆ Accidents involving parts that fall or shatter off can cause wounds or serious injury.

Do not touch high temperature or high voltage components while the product is running

Do not touch the following high temperature or high voltage components while the product is running or for some time after it stops.

- Silencer, spark plug, angle transmission, and other high temperature components
- ◆ You could burn yourself if you touch a high temperature component.
- Spark plug, spark plug wire, and other high voltage components
- ◆ You could receive an electric shock if you touch a high voltage component while the product is running.



Put safety first in the case of fire or smoke

- If fire comes from the engine or smoke appears from any area other than the exhaust vent, first distance yourself from the product to ensure your physical safety.
- Use a shovel to throw sand or other such material on the fire to prevent it from spreading, or put it out with a fire extinguisher.
- ◆ A panicked reaction could result in the fire and other damage becoming more extensive.



Exhaust fumes are toxic

- The exhaust fumes from the engine contain toxic gases. Do not operate the product indoors or in other ill ventilated places.
- ◆ The exhaust fumes could cause poisoning.



Turn off the engine when checking or maintaining the product

Observe the following precautions when checking and maintaining your product after use:

- Turn the engine off and do not attempt to check or maintain the product until the engine has cooled
- ◆ You could burn yourself.
- Remove the spark plug cap before performing checks and maintenance
- ◆ An accident could occur if the product starts unexpectedly.

Checking the spark plug

Observe the following precautions when checking the spark plug.

- If the electrodes or terminals are worn, or if there are cracks in the ceramics, replace them with new parts.
- The spark test (for checking whether the spark plug is sparking) must be carried out by your dealer.
- The spark test must not be carried out in proximity of the spark plug hole.
- The spark test must not be performed in places where there are fuel spills or inflammable gases
- You must not touch the metal parts of the spark plug
- ◆ The spark plug could ignite a fire or give you an electric shock.



For safe use of your product

Handling the product General precautions

WARNING

Operator's manual

- Be careful to read the operator's manual properly before using your product in order to ensure correct operation.
- ◆ Failure to do so could lead to an accident or serious injury.



Do not use the product for anything other than its intended purpose

- You must not use the product for any purpose other than those described in the operator's manual.
- ◆ To do so could lead to an accident or serious injury.

Do not modify the product

- You must not modify the product.
- ◆ To do so could lead to an accident or serious injury. Any malfunction resulting from a modification to the product will not be covered by the manufacturer's warranty.

Do not use the product unless it has been checked and maintained

- You must not use the product unless it has been checked and maintained. Always ensure that the product is checked and maintained on a regular basis.
- ◆ Failure to do so could lead to an accident or serious injury.

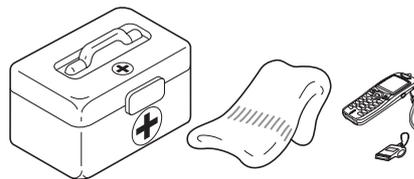
Loaning or assigning your product

- When loaning your product to another party, ensure that the person borrowing the product receives the operator's manual along with it.
- If you assign your product to another party, please enclose the operator's manual with the product when handing it over.
- ◆ Failure to do so could lead to an accident or serious injury.

Being prepared in case of an injury

In the unlikely event of an accident or injury, please ensure that you are prepared.

- First aid kit
- Towels and wipes (to stop any bleeding)
- Whistle or mobile phone (for calling outside help)
- ◆ If you are unable to perform first aid or call for outside help, the injury could worsen.



Precautions for use

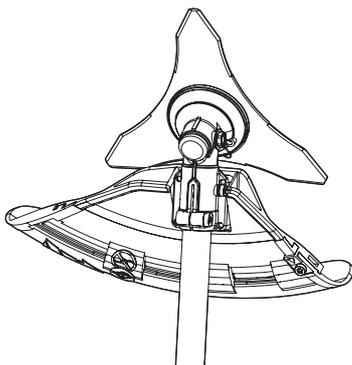
DANGER

Do not use the product when the trimmer blade is turning at idle speed

- You must not use the product while the trimmer blade is turning if the Grass Trimmer is running with the throttle trigger in the idle speed position.
- ◆ To do so could lead to an accident or serious injury.

Do not remove the shield

- Do not operate the product without the shield in place.
- ◆ Any objects that ricochet off the trimmer blade could cause an accident or serious injury.



The area within a 15 m radius is a danger zone

The area within a 15 m radius of the product is a danger zone. Be careful to observe the following precautions while working with the product.

- Do not allow children and other people or pets to enter the danger zone.
- If another person enters the danger zone, turn off the engine to stop the blade from rotating
- When approaching the operator, signal to him by, for example, throwing twigs from outside the danger zone, and then check that engine has been switched off and the blade has stopped turning
- If more than one person is working with the product, identify the way in which you will signal to each other and work at least 15 m apart
- ◆ Any objects that ricochet off the trimmer blade, and any contact with the trimmer blade, could cause blindness or a fatal accident.



For safe use of your product

WARNING

Users of the product

The product should not be used by:

- people who are tired
- people who have taken alcohol
- people who are on medication
- people who are pregnant
- people who are in poor physical condition
- people who have not read the operator's manual
- children

◆ Failure to observe these instructions could lead to an accident.



Environment of use and operation

- Do not use the product in places where there is no sure foothold, such as on steep slopes or after rainfall, as such places are slippery and dangerous.
- Do not operate the product at night or in dark places with poor visibility.
- When using the product on a gentle slope, work in a level, contour-like motion.
- ◆ A serious injury could result if you fall or slip, or fail to operate the product correctly.
- For your own health and your safe and comfortable work, operate the machine within the air temperature range of -5°C to 40°C .
- ◆ Failure to observe these instructions could result in damage to your health.

Turn off the engine when moving around

When moving around in the situations described below, turn off the engine and ensure that the trimmer blade has stopped rotating, then fit the trimmer blade cover and position the silencer away from yourself.

- Moving to the place where you are working
- Moving to another area while you are working
- Leaving the place where you have been working
- ◆ Failure to observe these precautions could cause burns or serious injury.
- When transporting the product by car, empty the fuel tank, fit the trimmer blade cover, and secure the product firmly in place to prevent it from moving around.
- ◆ Travelling by car with fuel in the trimmer tank could lead to a fire.

Vibration and cold

It is believed that a condition called Raynaud's Phenomenon which affects the fingers of certain individuals may be brought about by exposure to vibration and cold. Exposure to vibration and cold may cause tingling and burning, followed by loss of colour and numbness in the fingers. The following precautions are strongly recommended because the minimum exposure which might trigger the ailment is unknown.

- Keep your body warm, especially the head and neck, feet and ankles, and hands and wrists.
- Maintain good blood circulation by performing vigorous arm exercises during frequent work breaks, and also by not smoking.
- Limit the number of hours of operation. Try to fill each day with jobs where operating the trimmer or other hand-held power equipment is not required.
- If you experience discomfort redness and swelling of the fingers, followed by whitening and loss of feeling, consult your physician before exposing yourself further to cold and vibration.
- ◆ Failure to observe these instructions could result in damage to your health.

Repetitive stress injuries

It is believed that over-using the muscles and tendons of the fingers, hands, arms and shoulders may cause soreness, swelling, numbness, weakness and extreme pain to the areas just mentioned. Certain repetitive hand activities may put you at a high risk for developing a repetitive stress injury (RSI).

To reduce the risk of RSI, do the following:

- Avoid using your wrist in a bent, extended or twisted position.
- Take periodic breaks to minimize repetition and rest your hands. Reduce the speed and force in which you do the repetitive movement.
- Do exercises to strengthen hand and arm muscles.
- See a doctor if you feel tingling, numbness or pain in your fingers, hands, wrists or arms. The sooner RSI is diagnosed, the more likely permanent nerve and muscle damage can be prevented.
- ◆ Failure to observe these instructions could result in damage to your health.

Proper training

Do not permit operation without proper training and protective equipment.

Be thoroughly familiar with the controls and proper use of unit.

Know how to stop the unit and shut off the engine.

Know how to unhook a harnessed unit quickly.

Never allow anyone to use the unit without proper instruction.

For safe use of your product

⚠ WARNING

Remove foreign objects and obstructions before working with the product

- Before starting work, check the area where you will be working and remove any small stones and empty cans likely to ricochet off the cutting attachment, as well as any pieces of string or wire that might become twisted around the cutting attachment.
- ◆ An accident or serious injury can occur if foreign objects ricochet off the cutting attachment or wire and other materials twisted round the product spring off it.



Do not hold the cutting attachment up when working with the product

- Do not hold the cutting attachment up while you work. You must not work with the cutting attachments raised above knee level.
- ◆ Raising the cutting attachment above knee level brings the plane of rotation closer to the face, and any objects that fly off the cutting attachments could cause an accident or serious injury.

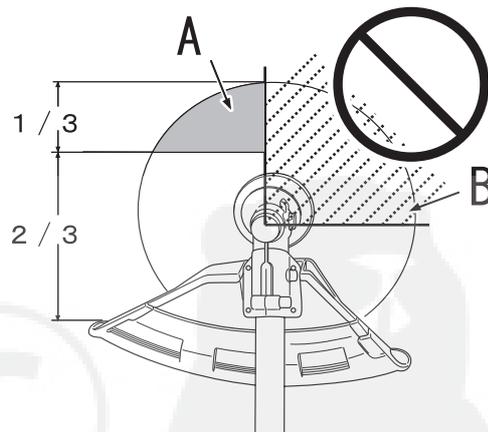
Turn off the engine immediately if anything goes wrong

In the following situations, turn off the engine immediately and ensure that the cutting attachments have stopped before checking each area of the product. Replace any damaged parts.

- If the cutting attachment hits a rock, tree, post, or other such obstruction while you work.
- If the product suddenly starts to vibrate abnormally.
- ◆ Continuing to use parts when they are damaged could lead to an accident or serious injury.

Kickback

- The phenomenon that occurs if the trimmer blade comes into contact with a tree, post, rock or other hard object while rotating at high speed and reacts by recoiling powerfully and instantaneously is known as kickback.
- Causing kickback can result in a loss of control over the product and is highly dangerous.
- In particular, if the front-right quadrant of the trimmer blade (B) strikes a shrub or other such object, the trimmer blade will cause the product to recoil sharply backwards to the right.
- To prevent kickback, do not trim from left to right. Be careful to ensure that the trimmer blade does not strike any hard objects.
- When trimming, ensure that the object you are cutting meets the portion of the blade $1/3$ in from the front edge on the left-hand side (A).
- ◆ Failure to do so could cause an injury or fatal accident.



For safe use of your product

Precautions concerning the cutting attachment

DANGER

Always stop the engine when a cutting attachment jam occurs. Do not attempt to remove an object causing a jam if the engine is running. Severe injury can occur if a jam is removed and the cutting attachment suddenly starts.

1. With metal blade

WARNING

Use correct blades

- Always use metal blade with U-handle machine with suitable protection.
- Serious injury may result from the improper use of blades. Read and comply with all safety instructions listed in this manual.
- The 3 cutter blade is designed especially to cut weeds and grass. To avoid injury due to kickback or blade fracture, do not use the 3 cutter blade to cut brush or trees.
- Use only cutting attachments recommended by YAMABIKO CORPORATION.
- ◆ Damaged or shattered blades can cause accidents and serious injury.

Inspect blade before use

Pieces from a cracked metal blade can fly off during operation. Inspect metal blades for cracks before each use. Discard cracked blades no matter how small the crack. Cracked blades can be the result of the misuse or improper sharpening.

- ◆ Damaged or shattered blades can cause accidents and serious injury.

Reaction forces

Be sure you understand the reaction forces of push and pull, and kickback described in this manual, and how these forces may affect your balance in the operation of a unit.

- ◆ Failure to do so could cause an injury or fatal accident.

2. With nylon line cutting head

WARNING

Use correct cutting attachment

- Serious injury may result from the improper use of cutting attachment. Read and comply with all safety instructions listed in this manual.
- Use only cutting attachments recommended by YAMABIKO CORPORATION.
- Use only nylon line cutting head. Do not use any type of metal blade.
- ◆ Failure to do so could lead to an accident or serious injury.
- Excessive nylon line beyond cut off knife could fly off when the nylon line cutting head starts rotating after adjustment of nylon line length.
- ◆ Failure to do so could lead to an accident or injury.

Do not trim near cars or pedestrians

Use extreme caution when operating over bare spots and gravel, because the line can throw small rock particles at high speeds. The shield on the unit cannot stop objects which bounce or ricochet off hard surfaces.

- ◆ Failure to do so could lead to an accident or serious injury.

Avoid wire

Do not trim in any area where there are broken strands of fencing wire. Remove the broken pieces of wire, or give the area wide berth. Wear proper safety protection. Do not cut where you cannot see what the cutting device is cutting.

- ◆ Failure to do so could lead to an accident or serious injury.

CAUTION

Use only flexible, non-metallic line recommended by YAMABIKO CORPORATION.

Protective gear

WARNING

Wear protective gear

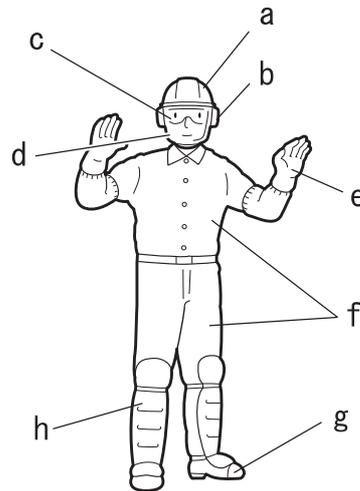
Always wear the following protective gear when working with the trimmer.

- a **Head protection (helmet):** Protects the head
- b **Ear muffs or ear plugs:** Protect the hearing
- c **Safety goggles:** Protect the eyes
- d **Face shield:** Protects the face
- e **Safety gloves:** Protect the hands from cold and vibration
- f **Work clothes that fit (long sleeves, long trousers):** Protect the body
- g **Heavy duty, non-slip protective boots (with toecaps) or non-slip work shoes (with toecaps):** Protect the feet
- h **Shin guards:** Protect the legs

◆ Failure to observe these precautions could result in damage to your sight or hearing, or lead to a serious injury.

When necessary, please use the protective gear below.

- **Dust mask:** Protects the breathing apparatus
- **Bee net:** To deal with attacks by bees



Wear proper clothing.

Do not wear ties, jewellery, or loose, dangling clothing which could be caught in the unit. Do not wear open toed footwear, or go bare-foot or barelegged. In certain situations, total face and head protection may be required. For heavy brush cutting with metal blade, logger's trousers or leg chaps with protective inserts are added considerations.

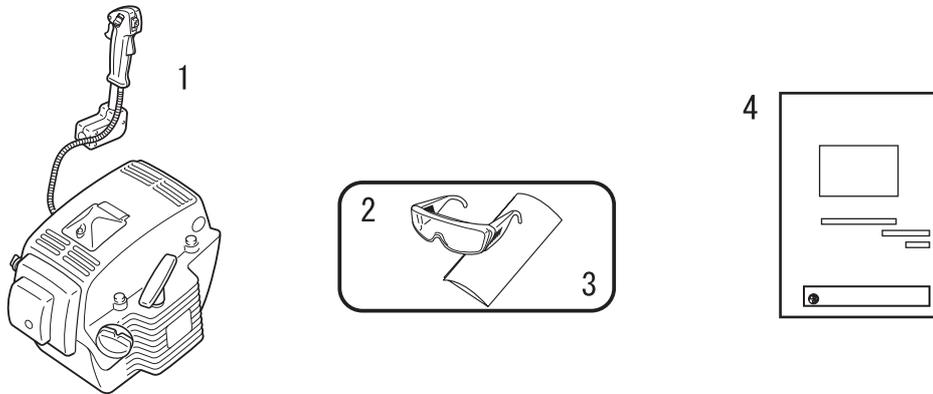
◆ Failure to observe these precautions could result in damage to your sight or hearing, or lead to a serious injury.



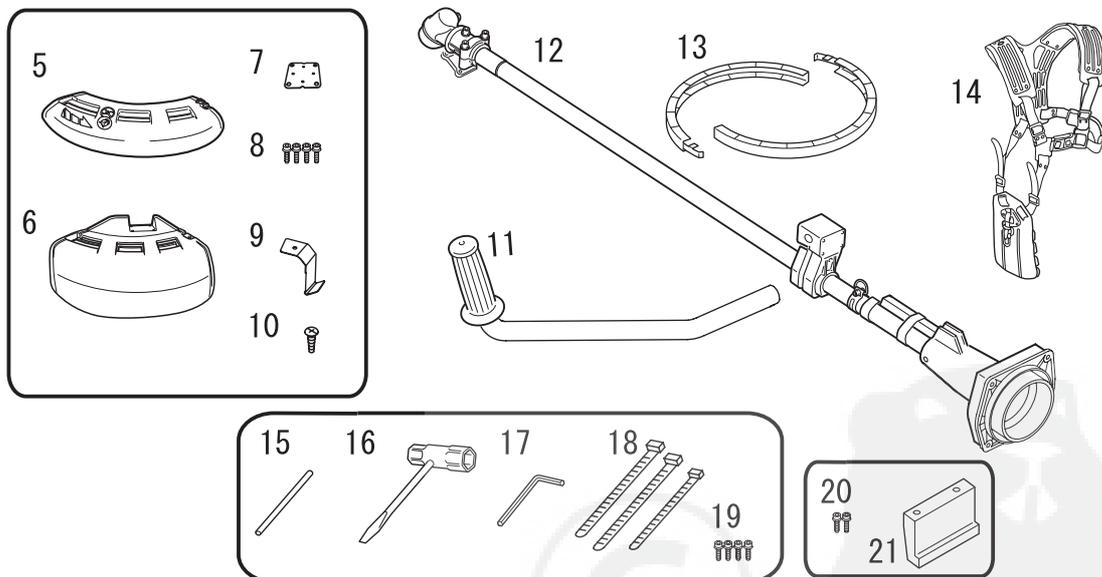
Packing list

- ♦ The following parts are packed separately in the packing box.
- ♦ When you have unpacked the box, please check the parts that it contains.
- ♦ Contact your dealer if anything is missing or broken.

Engine



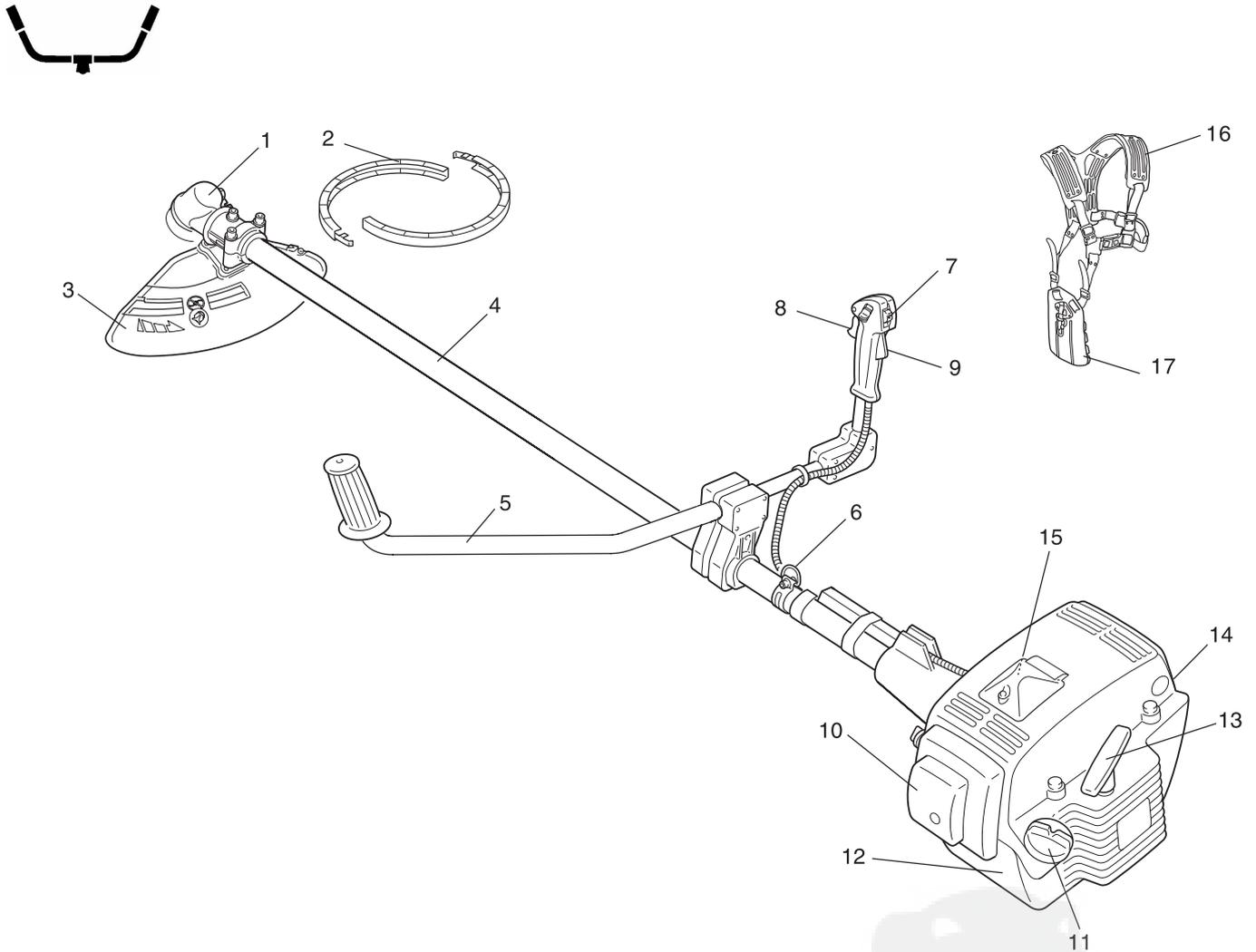
Operation Shaft



1. Engine and right handle
2. Safety goggles (ANSI Z 87.1 compliant)
3. Caution tag
4. Operator's manual
5. Shield (for metal blade)
6. Shield (for nylon line cutting head)
7. Convex of fitting plate
8. Bolt M5×25
9. Cut off knife
10. Screw 5×12
11. Left handle

12. Operation Shaft
13. Blade cover
14. Shoulder harness
15. Locking tool
16. Socket wrench
17. Hexagonal wrench
18. Band
19. Bolt M5×25
20. Bolt M5×20
21. Stand

Description



- 1. Angle transmission** Having two gears to change to angle of rotating axis.
- 2. Blade cover** When transporting the unit, use the appropriate metal blade cover.
- 3. Shield** Device to protect the operator from accidental contact with the cutting head and thrown objects.
- 4. Shaft tube** Part of the unit that provides a casing for power transmission shaft.
- 5. U-handle** Having the configuration of a bicycle handle bar to reduce working effort compared to a loop-handle.
- 6. Suspension point** Device on which the harness can be hooked.
- 7. Ignition switch** "Slide switch" mounted on top of the throttle trigger housing, move switch upward to RUN, downward to STOP position.
- 8. Throttle trigger** Activated by the operator's finger for controlling the engine speed.
- 9. Throttle trigger lockout** Locks throttle trigger in the idling position until you have a proper grip with your right hand around the handle.
- 10. Air cleaner cover** Covers air filter.
- 11. Fuel tank cap** For closing the fuel tank.
- 12. Fuel tank** Contains fuel and fuel filter.
- 13. Starter handle** Pull handle to start the engine.
- 14. Silencer cover** Cover the silencer not to make operator touch to hot surface of silencer.
- 15. Spark plug**
- 16. Shoulder harness** An adjustable straps to suspend unit.
- 17. Hip pad** To protect hip/leg and clothing.

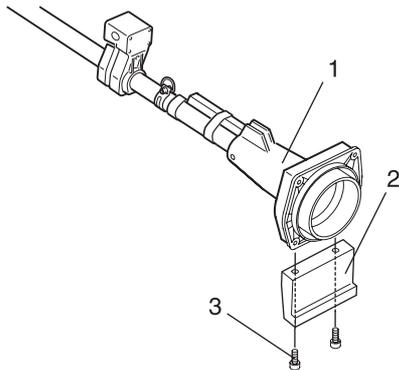
Before you start

Assembly

WARNING

Read the operator's manual carefully to ensure that you assemble the product correctly.

- ◆ Using a product that has been incorrectly assembled could lead to an accident or serious injury.

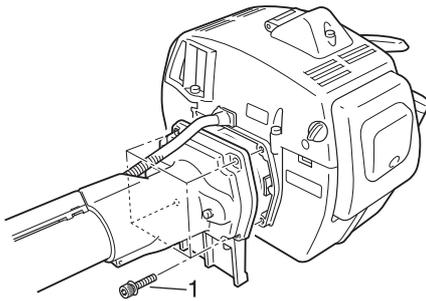


- 1. Operation shaft
- 2. Stand

- 3. Bolt M5×20

Stand assembly

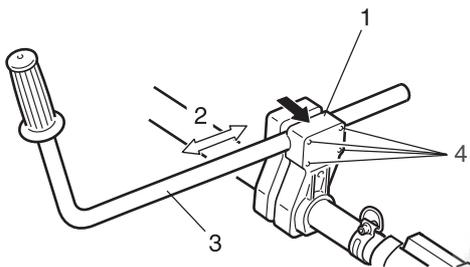
- ◆ Fasten the stand to the operation shaft.



- 1. Bolt M5×25

Operation shaft assembly

- ◆ Stand the engine upright on a level surface.
- ◆ Fit the operation shaft ensuring that it is correctly engaged.
- ◆ Tighten bolts (M5×25) to fasten the operation shaft.



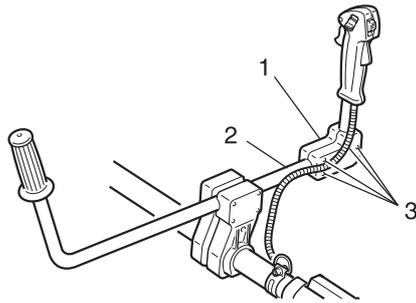
- 1. Handle support
- 2. Adjustable

- 3. Left handle
- 4. Bolt M5×35

U-handle assembly

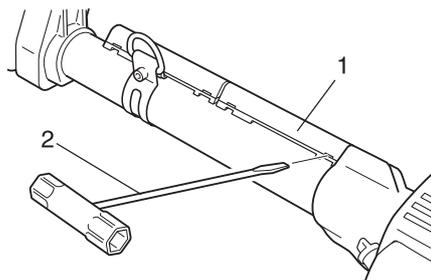
- ◆ Install the left handle in the handle support and fix it by lightly tightening bolts (M5×35).
- ◆ Adjust inclination of handle to adequate position (easy to operate) and firmly tighten bolts (M5×35).

Before you start



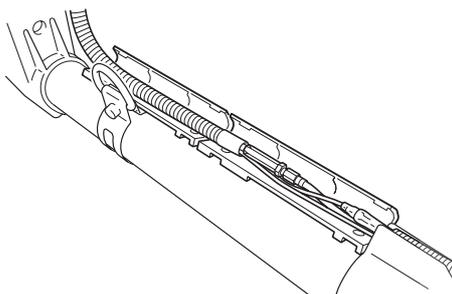
- 1. Bracket
- 2. Right handle
- 3. Bolt M5×25

- ♦ Install the right handle in the bracket.
- ♦ Position the handle in comfortable operating position and tighten bolts (M5×25).

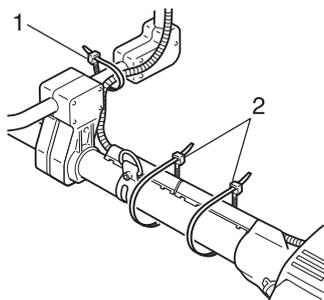


- 1. Cable guide
- 2. Socket wrench

- ♦ Using a socket wrench, open the cable guide cover.



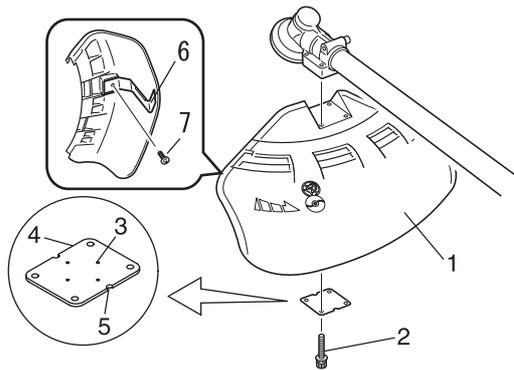
- ♦ Place the throttle cable inside the cable guide.
- ♦ Close the cover paying attention not to pinch the lead wire.



- 1. Band (short)
- 2. Band (long)

- ♦ Fix the throttle cable to the right handle with the band (short).
- ♦ Hold the cable guide with the bands (long) to prevent it from opening.

Before you start



- 1. Bracket
- 2. Bolt M5×25
- 3. Convex of fitting plate
- 4. Fitting plate
- 5. Notch of fitting plate
- 6. Cut off knife
- 7. Screw 5×12

Installation of bracket

Fit bracket to mounting portion of angle transmission and fix the bracket by holding fitting plate pressed from beneath and tighten 4 bolts (M5×25) lightly.

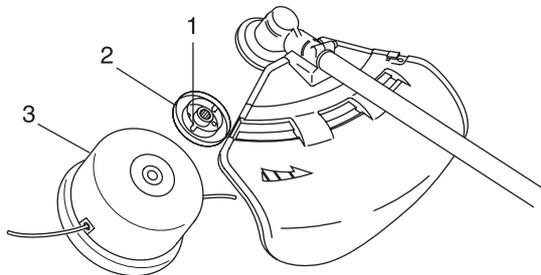
Get notches and convexes of fitting plate to face corresponding convexes and concaves of bracket, and fix bracket tightening 4 bolts (M5×25) securely.

Fit cut off knife to the shield for nylon line cutting head using screw (5×12).

Installing nylon line cutting head

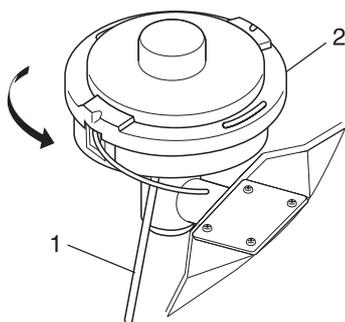
CAUTION

- Use only flexible, non-metallic line recommended by YAMABIKO CORPORATION.
- Fasten output shaft using locking tool securely in order to avoid the possibility of output shaft rotating when mounting nylon line cutting head.



- 1. Blade retainer fixing slot
- 2. Blade retainer
- 3. Nylon line cutting head

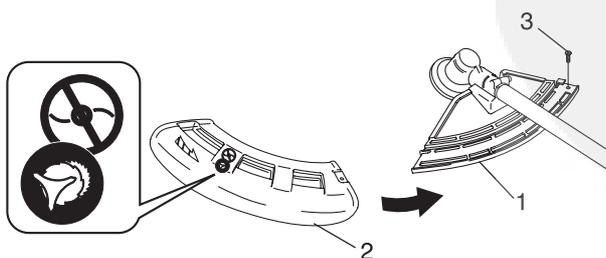
Insert locking tool into a hole located on the right side of angle transmission while forcing retainer spring to the left side. Insert locking tool further into blade retainer fixing slot to fix output shaft.



- 1. Locking tool
- 2. Nylon line cutting head

Thread nylon line cutting head onto shaft (anticlockwise) until it is tight.

Remove locking tool.



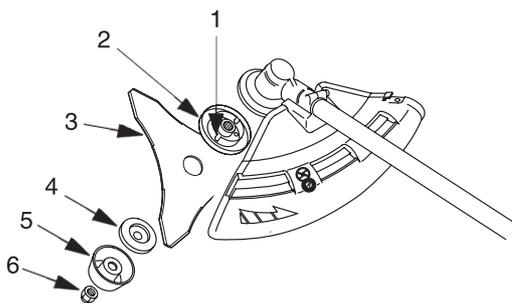
- 1. Bracket
- 2. Shield (for metal blade)
- 3. Bolt M5×18

Method to change shield (Consult your dealer.)

There are two types of shields: namely one used exclusively for nylon line cutting head and another one used exclusively for metal blade. When metal blade is used, use the shield for metal blade.

Remove bolt (M5×18) on the right side of the shield and slide the shield to the left and remove it. Put shield of another type into groove and slide it to the right until it stops and be sure to fasten with the removed bolt (M5×18).

Before you start



- 1. Blade retainer fixing slot
- 2. Blade retainer
- 3. Blade
- 4. Lower blade retainer
- 5. Cup
- 6. Nut

Installing blade

Inspect blades before installation. Check for sharpness. Dull blades increase the risk of blade kickback reactions. Small cracks can develop into fractures resulting in a piece of blade flying off during operation.

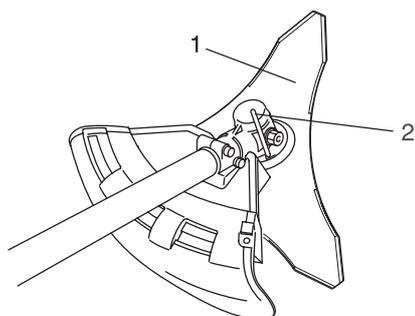
Discard cracked blades no matter how small the crack. Blade retainer, blade, lower blade retainer, cup and nut finger tight.

⚠ DANGER

If worn nut and cup for blade are used, there is a danger of blade getting loose. Replace them with new one.

⚠ WARNING

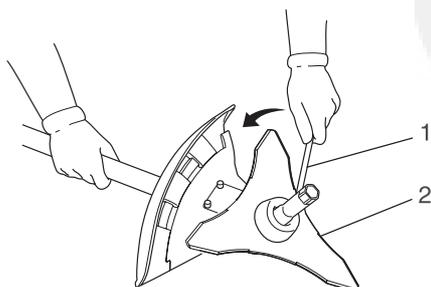
- Do not attempt to fit the trimmer blade with one hand or without using the socket spanner. Fit the trimmer blade accurately using the supplied socket spanner and tighten firmly in position.
- The trimmer must not be used if the blade vibrates or is loose.
- Wear heavy duty gloves when working with the trimmer blade. When replacing the trimmer blade during a trimming task, ensure that the engine is switched off and that the blades have stopped.
- Do not use any tools other than the proved socket spanner to tighten the blade, a pneumatic or electric tool may tighten the blade more than necessary and cause the nut or the output shaft to break.
- When turning the product over to replace the trimmer blade, ensure that the fuel tank cap is securely in place.
- ◆ Failure to do so could lead to an injury or serious accident, or cause a fire.



- 1. Blade
- 2. Locking tool

⚠ CAUTION

Fasten output shaft using locking tool securely in order to avoid the possibility of output shaft rotating when mounting cutting blade which will prevent the cutting blade fastening nut from being tightened sufficiently.



- 1. Socket wrench
- 2. Blade

Tighten the nut (turn anticlockwise) using a socket wrench. Never fasten while applying your weight. Otherwise the thread of nut could be broken.

Replace nut and cup with new ones no matter how small the wear is.

Before you start

Adjusting the balance Adjusting the shoulder harness

WARNING

This product is designed to fit a wide variety of body sizes, but may not be adjustable for extremely tall persons. Do not use the unit if your feet can reach the cutting attachment when the unit is attached to the harness.

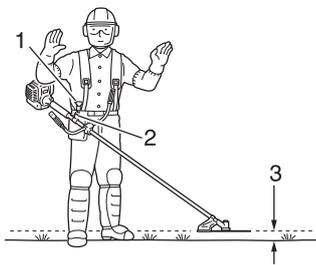
IMPORTANT

A person's size can affect the balancing adjustment. Also the balancing procedure may not work with some units on some persons. If the shoulder harness does not fit you or cannot be adjusted well, please ask your dealer for assistance.

The accompanying shoulder harness is suitable for people of standard adult physique, who are 150 cm - 195 cm in height and 60 cm - 140 cm in waist size.

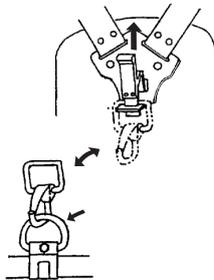
Use a shoulder harness when provided or when recommended in this manual. Adjust both harness and the suspension point on the unit so the unit hangs with the cutting attachment a few centimetres above ground level.

The cutting attachment and shield should be level in all directions. Harness the unit on the right side as shown.



Balance tool for a level plane of cutting head rotation

1. Harness quick-release pin
2. Suspension point
3. Ground level



a) Slide suspension point up and down the tube to find the right balance. Rotate the clamp to level the cutting attachment and shield. Lock in position. If the suspension point is a free-spinning type, the unit may tend to roll over sideways, however, you should still level the attachment and shield on the front-to-rear axis.

b) Balancing and levelling, as above, may require relocation of the clamp and readjustment of the harness straps. Also, each type of cutting attachment and shield mounted on the unit may require balancing.

Before you start

Preparing the fuel

DANGER

- Fuel is highly inflammable and there is a risk of fire if it is handled incorrectly. Carefully read and observe the precautions in the section of this manual titled "For safe use of your product".
- Once the refuelling is complete, securely tighten the fuel tank cap and do not forget to check that there are no leaks or discharges of fuel from the fuel pipe, fuel system grommets, or around the fuel tank cap. If you do find fuel leaks or discharges, stop using the product immediately and contact your dealer to have it repaired.
- ◆ If the fuel ignites, it could cause burns and fire.



CAUTION

- There is difference in pressure between the fuel tank and the outside air. When refuelling, loosen the fuel tank cap slightly to eliminate the difference in pressure.
- ◆ Otherwise, fuel may get spewed.

NOTE

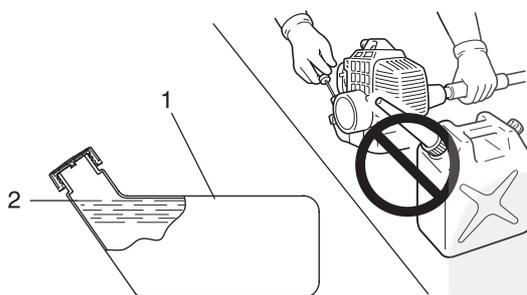
Stored fuel ages. Do not mix more fuel than you expect use in thirty (30) days. Do not mix directly in fuel tank.

Fuel



- ◆ Fuel is a mixture of regular grade petrol and an air-cooled 2-stroke engine oil of reputable brand name. Minimum 89 Octane unleaded petrol is recommended. Do not use fuel containing methyl alcohol or more than 10 % of ethyl alcohol.
- ◆ Recommended mixture ratio; 50 : 1 (2 %) for ISO-L-EGD Standard (ISO/CD 13738), JASO FC,FD grade and shindaiwa 50 : 1 oil.
 - Do not mix directly in engine fuel tank.
 - Avoid spilling petrol or oil. Spilled fuel should always be wiped up.
 - Handle petrol with care, it is highly inflammable.
 - Always store fuel in approved container.

Fuel supply



1. Fuel tank

2. Shoulder level

- ◆ Always refuel in a well ventilated location. Do not pour fuel indoors.
- ◆ Place the product and the refuelling tank on the ground when performing the refuelling operation. Do not refuel the product on the loading platform of a truck, or in other such places.
- ◆ Always ensure that the fuel level remains below the shoulder level of the fuel tank when refuelling.
- ◆ There is a difference in pressure between the fuel tank and the outside air. When refuelling, loosen the fuel tank cap slightly to eliminate the difference in pressure.
- ◆ Always wipe up any fuel spills.
- ◆ Move at least 3m away from where you refueled before you start the engine.
- ◆ Keep the refuelling tank in a shaded area away from fire.

Engine operation

Starting the engine

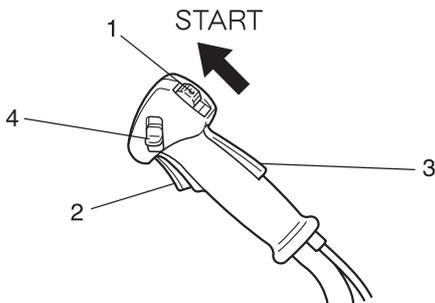
WARNING

- When starting the engine, observe the precautions described from Page 4 in the section "For safe use of your product" to ensure that you operate the product correctly.
- If the cutting attachment rotates even though the throttle trigger is in the idle speed position when the engine is started, adjust the carburettor before using the product.
- ◆ Failure to observe the precautions could cause an accident or injury, or even lead to a fatality.
- When starting engine using throttle latch, cutting attachment rotates. After engine starts, pull throttle trigger slightly to release throttle latch immediately. Never use throttle latch for operation.
- ◆ The rotating blade can cause injury.

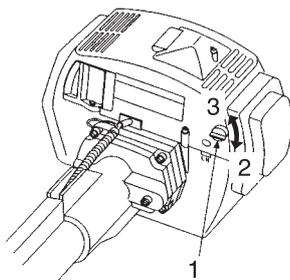
NOTE

- ◆ Pull out the starter grip gently at first, and then more rapidly. Do not pull the starter rope out to more than 2/3 of its length.
- ◆ Do not let go of the starter grip as it returns.

Starting a cold engine



- 1. Ignition switch
- 2. Throttle trigger
- 3. Throttle trigger lockout
- 4. Throttle latch



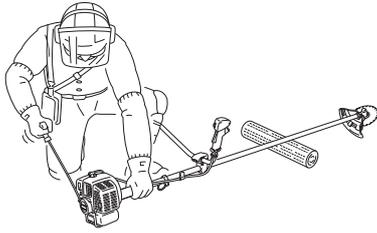
- 1. Choke knob
- 2. Cold Start (CLOSE)
- 3. Run (OPEN)

(Connect the spark plug cap if the product has been in storage for a long period of time)

The starting procedure depends on whether the engine is cold or warm. A cold engine is started as follows.

1. Remove the blade cover and check the blade. If anything is wrong, replace it with a new one.
2. Placing the product on level ground, check to ensure that the blade does not come into contact with the surface of the ground or any other impediment using a beam or other such implement.
3. Check that there are no fuel leaks.
4. Move the ignition switch to the Start position.
5. Make sure that the throttle trigger is at the idle speed position.
6. Move the choke knob to the Closed position.

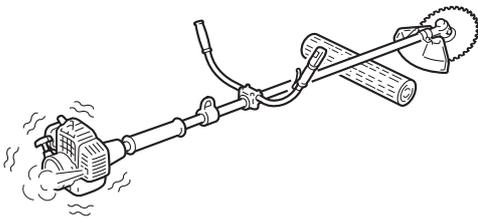
Engine operation



7. Checking that the area around you is safe, hold the position closest to the engine firmly as shown in the illustration, pulling several times on the starter grip.
8. If you hear an explosion-like sound and the engine stops immediately, move the choke knob to the Open position and continue pulling on the starter grip to start the engine.
9. If the engine starts immediately when you carry out the instructions in step 7, above, return the choke knob gently to the Open position.
10. Leave the engine to warm up at idle speed for a while.

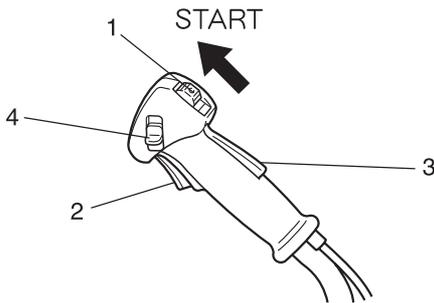
* When engine is hard to start, use throttle latch. (Pull throttle trigger fully and lower throttle latch while pressing throttle trigger lockout and release throttle trigger to activate throttle latch. After engine starts, pull throttle trigger slightly to release throttle latch immediately.)

Engine warm-up



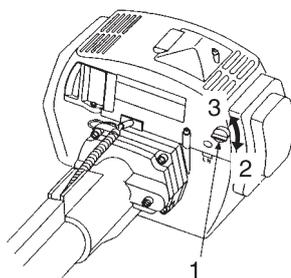
1. Once the engine starts, allow it to warm up for 2 to 3 minutes at idling (i.e. low speed).
2. Warming the engine helps to lubricate its internal workings more smoothly. Allow the engine to warm up fully, especially when it is cold.
3. Never run the engine without the cutting attachment fitted.

Starting a warm engine



1. Ignition switch
2. Throttle trigger
3. Throttle trigger lockout
4. Throttle latch

1. Move the ignition switch to the Start position.
2. Make sure that the throttle trigger is at the idle speed position.
3. Check that the choke knob is in the Open position.

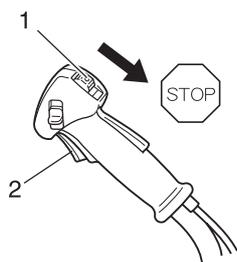


1. Choke knob
2. Cold Start (CLOSE)
3. Run (OPEN)

4. Checking that the area around you is safe, hold the position closest to the engine firmly, and pull on the starter grip to start the engine.
5. If engine does not start after 4 pulls, use Cold Starting Procedure.

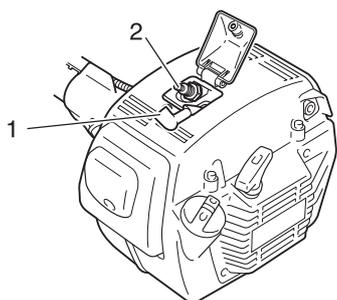
Engine operation

Stopping the engine



1. Ignition switch

2. Throttle trigger



1. Spark plug wire

2. Spark plug

1. Move the throttle trigger to the idle speed position and set the engine to idling (i.e. low speed).
 2. Move the ignition switch to the Stop position.
 3. In the event of an emergency, stop the engine immediately using the ignition switch.
 4. If the engine fails to stop, move the choke knob to the "Cold Start" position. The engine will stall and come to a halt (an emergency stop).
- * If the engine fails to stop when the ignition switch is used, have the ignition switch checked and repaired by your dealer before you use the product again.

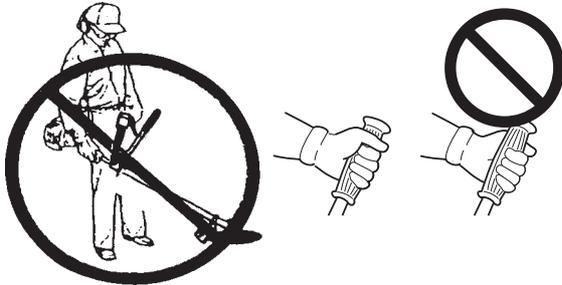
Always disconnect the spark plug wire from the spark plug to ensure the engine cannot be started before you work on the unit or leave it unattended.



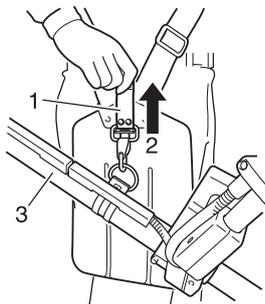
Trimming operation

DANGER

Always stop the engine when a cutting attachment jam occurs. Do not attempt to remove an object causing a jam if the engine is running. Severe injury can occur if a jam is removed and the cutting attachment suddenly starts.



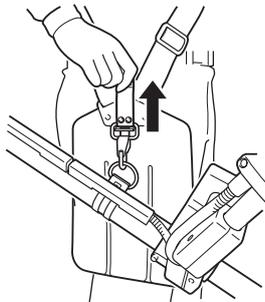
- ◆ Never attempt to operate the product with one hand.
- ◆ Ensure that you hook your thumbs around the grips, wrapping them in your thumb and remaining fingers.



1. Quick release pin
2. Pull out
3. Shaft tube

- ◆ Always mount the trimmer correctly using the shoulder harness.
- ◆ The shoulder harness is fitted with an emergency release function. In the event of a fire or other emergency, pull the quick release pin up to release the product from your body.

Basic trimming operation with nylon line cutting head Using shoulder harness



Place shoulder harness over left shoulder and adjust straps so the quick release pin rests just below the waist.

Buckle waist belt. Belt should be snug.

Attach product to harness.

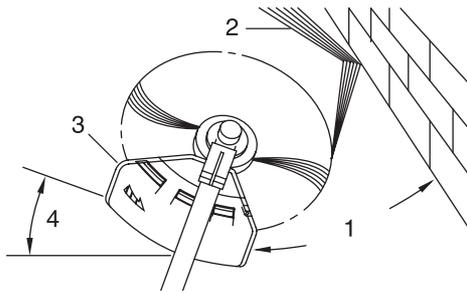
Check for correct adjustment by moving cutting attachment along ground.

Re-adjust position of suspension point if necessary.

The basic cutting actions

The basic cutting actions pictured are:
Trimming, scything, scalping and lawn edging.
These actions are as follows:

Trimming operation



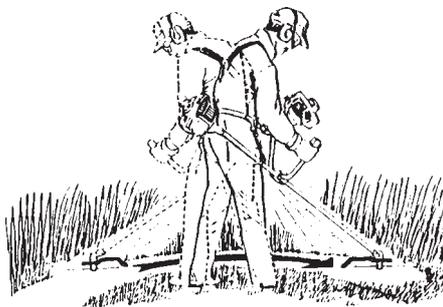
- 1. Angle to wall
- 2. Debris
- 3. Knife side raised
- 4. Angle to ground

Trimming

This is feeding the trimmer carefully into the material you wish to cut. Tilt the head slightly to direct the debris away from you. If cutting up to a barrier such as a fence, wall or tree, approach from an angle where any debris ricocheting off the barrier will fly away from you.

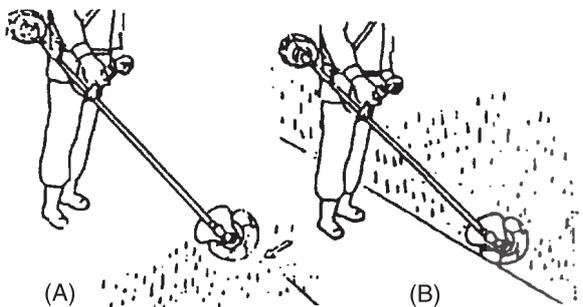
Move the nylon line cutting head slowly until the grass is cut right up to the barrier, but do not jam (overfeed) the line into the barrier. If trimming up wire mesh or chain link fencing, be careful to feed only up to the wire. If you go too far, the line will snap off around the wire.

Trimming can be done to cut through weed stems one at a time. Place the nylon line cutting head near the bottom of the weed never high up, which could cause the weed to chatter and catch the line. Rather than cut the weed right through, just use the very end of the line to wear through the stem slowly.



Scything

This is the cutting or mowing of large grassy areas by sweeping or swinging the trimmer in a level arc. Use a smooth, easy motion. Do not try to hack or chop down the grass. Tilt the nylon line cutting head to direct the debris away from you on the scything stroke. Then return without cutting grass for another stroke. If you are well protected and do not care whether some debris is thrown in your direction, you may scythe in both directions.



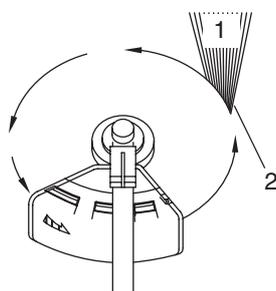
A: Scalping

B: Edging

Scalping and edging

Both of these are done with the nylon line cutting head tilted at a steep angle. Scalping is removing top growth, leaving the earth bare. Edging is trimming the grass back where it has spread over a pavement or driveway. During both edging and scalping, hold the unit at a steep angle in a position where the debris, and any dislodged dirt and stone, will not come back towards you even if it ricochets off the hard surface.

Although the pictures show how to edge and scalp, every operator must find for himself the angles which suit his body size and cutting situation.



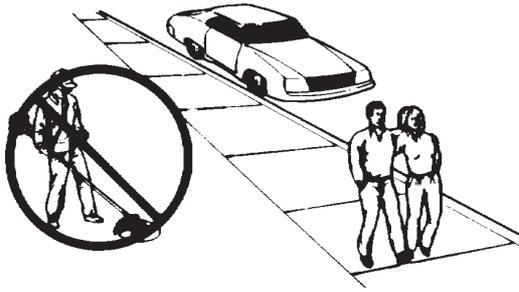
Nylon line cutting head rotates anticlockwise. The knife will be on the left side of the shield.

- 1. Debris
- 2. Cut on this side

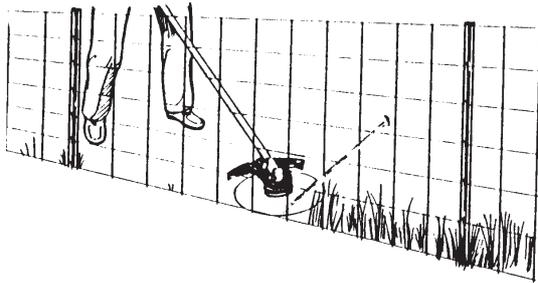
For nearly all cutting, it is good to tilt the nylon line cutting head so that contact is made on the part of line circle where the line is moving away from you and the shield (See appropriate picture). This results in the debris being thrown away from you.

Tilting the head to the wrong side will shoot the debris toward you. If the nylon line cutting head is held flat to the ground so that cutting occurs on the whole line circle, debris will be thrown at you, drag will slow the engine, and you will use up a lot of line.

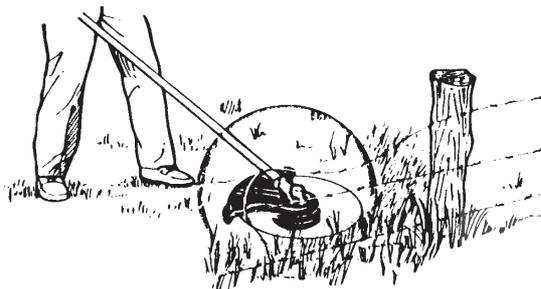
Trimming operation



Do not trim near cars or pedestrians.



Line pushed into wire fencing will snap off.



Avoid wire

Always wear proper eye protection against thrown objects. Objects can bounce up at you from the ground under the shield, or ricochet off any nearby hard surface.

Do not trim at high speed near roadways when there is traffic, or in places where there are pedestrians. If you must trim where people are in the zone of risk use a much lower or reduced speed, by using a partial trigger setting. Do not use full throttle.

Do not push the line into tough weeds, trees, or wire fences. Pushing the line into chicken wire, chain link fencing or thick brush can result in snapped-off line ends being hurled back at the operator. The proper way is to cut right up to a barrier, such as any of those mentioned, but never run the line into or through the obstruction. Do not cut closely to obstruction or barrier.

Avoid nylon line contact with broken wire fencing. Pieces of wire broken off by the trimmer can be hurled at high speeds.

Basic trimming operation with metal blade

WARNING

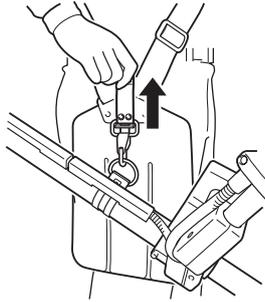
Please observe the following instructions when trimming.

- Ensure that the trimmer blade does not come into contact with hard obstructions such as stone, metal, or concrete.
- If the blade hits an obstruction, turn off the engine immediately and ensure that the blade has stopped before checking the blade and shield for damage.
- Never use cracked blades, as they could fly off while you are working.
- Check to ensure that the trimmer blade has been tightened securely in place.
- Replace the shield if it is damaged or cracked.
- Replace the trimmer blade nut when it becomes worn.
- ◆ Failure to do so could lead to an accident or serious injury.



Trimming operation

Using shoulder harness



Place shoulder harness over both shoulders and adjust straps so the connecting point latch as shown.

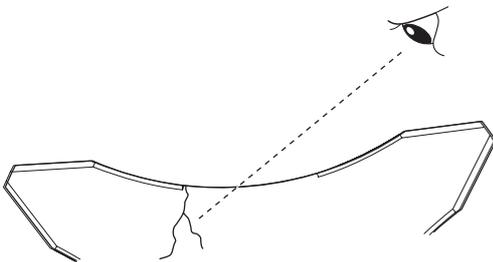
Buckle waist belt. Belt should be snug.

Attach product to harness.

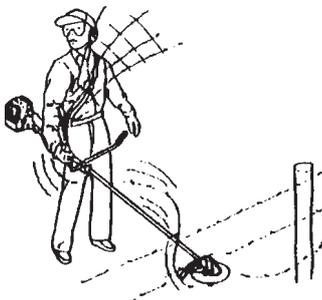
Check for correct adjustment by moving cutting attachment along ground.

Re-adjust position of suspension point if necessary.

Use correct blade

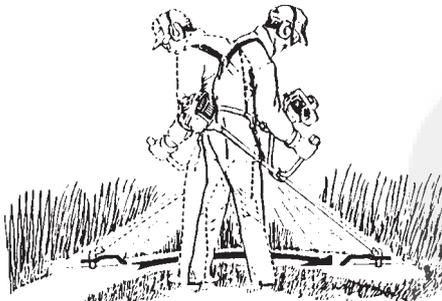


Inspect blades before use



Wires can catch and flap around

Scything weeds



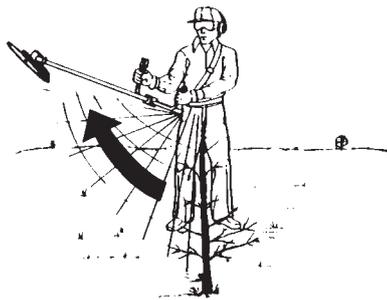
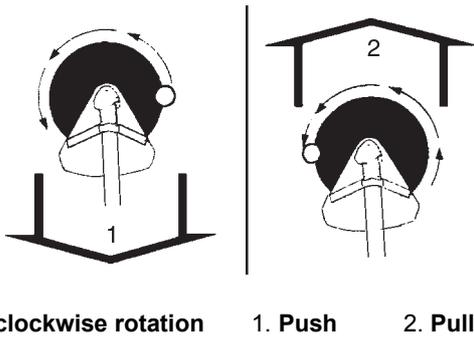
- ♦ Always use the blade suited for the job.
- ♦ Do not allow the trimmer blade to come into contact with hard obstructions such as stone, concrete or metal.
- ♦ Do not cut into the ground with the blade.
- ♦ If the blade hits an obstruction, turn the engine off immediately and ensure that the trimmer blade has stopped rotating before checking the blade and shield for damage.
- ♦ Do not operate with a dull, bent, fractured or discoloured blade and worn or damaged nut.
- ♦ Never use a cracked trimmer blade as it could shatter off while you are working.
- ♦ Do not run engine at full throttle without a load.
- ♦ Remove all foreign objects from work area.
- ♦ Do not operate brushcutter without shoulder harness and shield.

This is cutting by swinging the cutting attachment in a level arc. It can quickly clear areas of field grass and weeds. Scything should not be used to cut large, tough weeds or woody growths. If a sapling or shrub binds the cutting attachment, do not use the cutting attachment as a lever to free the bind, because this will cause cutting attachment failure. Instead, shut off the engine and push the sapling or shrub to free the blades.

Do not use a cracked or damaged blade.

Trimming operation

Reaction forces



Kickback

Precautions to observe when working



Push.

The operator may feel the unit push toward him when he tries to cut the object on right. If he cannot hold the blade in the cut, a kickback may occur when the blade is pushed out to where the teeth at the outside furthest point from the operator are cutting. The blade will "kickback" sideways.

Pull.

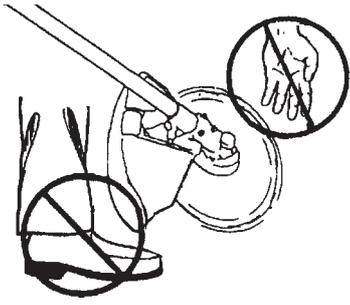
The opposite of push. When object on left, the operator may feel the unit pull away. Although this pull type of cutting may cause sawdust to be thrown back at the operator, it is recommended for sawing off heavy brush because the cutting is smoother and more stable than when the unit pushes.

Kickback.

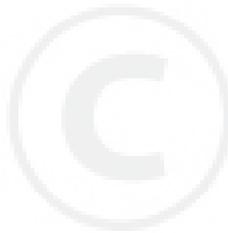
If you hit a hard object with the front-right of the trimmer blade, such as when trimming in both directions, the blade will kick sharply back to the right. This is a phenomenon known as "kick back", and can cause a serious accident due to the operator losing control over the product. Take particular care to ensure that you do not strike any hard object with the front-right of the trimmer blade.

- ♦ The area within a radius of 15m of the product is a danger zone. Make sure that there are no children, onlookers, or pets in this zone. If anyone comes within 15m, turn off the engine immediately to stop the blade from rotating.
- ♦ If someone is helping you with the work or you are working together, identify the way in which you will signal to each other and work at least 15m apart. You are advised to carry a whistle in case you need to communicate.
- ♦ Turn off the engine immediately if the product suddenly starts to vibrate abnormally. Sudden vibration may be caused by a problem with a component such as the flywheel, clutch, or trimmer blade, or by a loose screw or other such factor. Do not use the product until you have identified the cause of the problem and the repair has been completed.
- ♦ The trimmer blade could fly off unless tightened securely. Ensure that it is fitted securely in place.
- ♦ Replace the shield if it is damaged or cracked.
- ♦ If you work with the angle transmission in contact with the surface of the ground, the trimmer blade nut and cup can easily become worn. Replace them with new parts if this happens.

Trimming operation



- ♦ When you turn off the engine, check to ensure that the trimmer blade has stopped rotating before you lower the product to the ground. Even if the engine has been turned off, the blade can still cause an injury while free-wheeling.
- ♦ The silencer will remain hot for some time after the engine has been turned off. Carry the product with the silencer away from you to avoid touching it with your body.
- ♦ When carrying the product, always turn the engine off and fit the trimmer blade cover over the trimmer blade.



Maintenance and care

Servicing guidelines

Area	Maintenance	Page	Before use	Monthly
Air filter	Clean/Replace	31	•	
Fuel filter	Inspect/Clean/Replace	32	•	
Spark plug	Inspect/Clean/Adjust/Replace	34		•
Carburettor	Adjust/Replace and adjust	32		•
Cooling system	Inspect/Clean	33	•	
Silencer	Inspect/Tighten/Clean	33	•	
Drive shaft	Grease	34		•**
Angle transmission	Grease	34		•*
Starter	Inspect	-	•	
Cut off knife	Inspect/Clean	-	•	
Fuel system	Inspect	33	•	
Screws, bolts and nuts	Inspect, Tighten/Replace	-	•	

IMPORTANT

Time intervals are maximum. Actual use and your experience will determine the frequency of required maintenance.

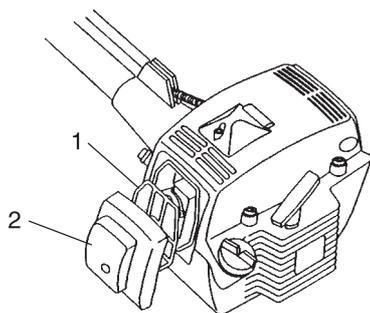
* Or 50 hours, whichever occurs first.

** Or 100 hours, whichever occurs first.

Maintenance and care

If you have any questions or problems, please contact your dealer.

Cleaning air filter



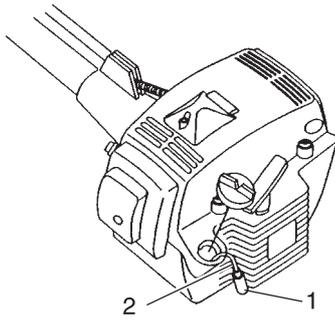
1. Air filter

2. Air cleaner cover

- ♦ Close choke. Loosen screw and remove air cleaner cover.
- ♦ Remove air filter (air filter is located inside air cleaner cover).
- ♦ Brush dirt from filter or clean with compressed air.
- ♦ Reinstall filter.
- ♦ Reinstall cover and tighten screw.

Maintenance and care

Replacing fuel filter



1. Fuel filter

2. Fuel line

- ♦ Use a piece of metal wire or the like to pick up fuel filter through fuel tank opening.
- ♦ Pull old filter from fuel line.
- ♦ Install new fuel filter.

NOTE

If filter is excessive dirty or no longer fits properly, replace it.

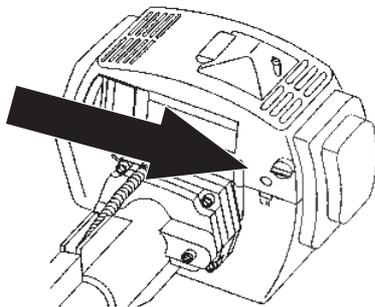
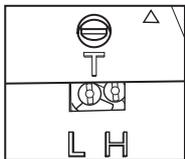
Carburettor adjustment

⚠ WARNING

When the carburettor is being adjusted, the cutting attachment may move. Be careful not to get injured.

⚠ CAUTION

When starting, idle speed adjustment screw (T) should be adjusted not to rotate the cutting attachment. When there is some trouble with the carburettor, contact your dealer.



H: High speed mixture adjuster
L: Low speed mixture adjuster
T: Idle speed adjustment screw

Every unit is run at the factory and the carburettor is set in compliance with Emission Regulations. In addition, the carburettor is equipped with "H" (High Speed Needle) and "L" (Low Speed Needle) needle adjustment limiters that prevent settings outside acceptable limits.

1. Before adjusting carburettor clean or replace air filter and muffler.
2. Start engine and run several minutes to bring to operating temperature. Flash choke twice during warm-up to clear any air from the fuel system.
3. Stop engine. Turn "H" speed needle anticlockwise to stop. Turn "L" speed needle midway between full clockwise stop and anticlockwise stop.
4. Idle Speed Adjustment: . Start engine, turn "Idle" speed adjustment knob clockwise until the wheel begins to turn, then turn knob out anticlockwise until the wheel stops turning. Turn knob out, anticlockwise, an additional 1/4 turn.
5. Accelerate to full throttle for 2 - 3 seconds to clear any excess fuel in the engine, then return to idle. Accelerate engine to full throttle to check for smooth transition from idle to high speed. If engine hesitates turn "L" needle anticlockwise 1/8 turn and repeat acceleration. Continue adjustment until smooth acceleration results.
6. Check idle speed and reset if necessary as described in item 4. If a tachometer is available idle speed should be set as specified in the Operator's Manual.

Cooling system maintenance

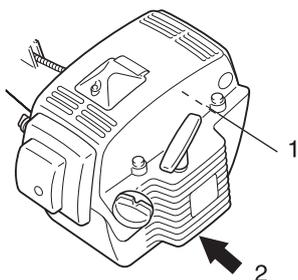
IMPORTANT

To maintain proper engine operating temperature, cooling air must pass freely through the cylinder fin area. This flow of air carries combustion heat away from the engine.

Overheating and engine seizure can occur when:

- ♦ Air intakes are blocked, preventing cooling air from reaching the cylinder,
- or
- ♦ Dust and grass build up on the out side of the cylinder. This build-up insulates the engine and prevents the heat from leaving.

Removal of cooling passage blockages or cleaning of cylinder fins is considered "Normal Maintenance". Any resultant failure attributed to lack of maintenance is not warranted.

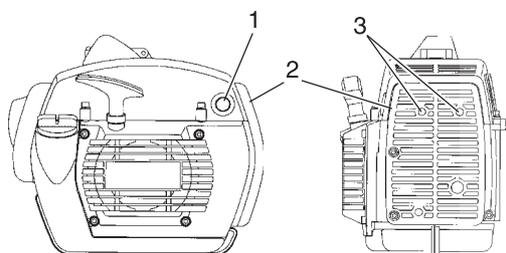


1. Cylinder fins

2. Air intake

- ♦ Remove dust and dirt from between fins.
- ♦ Before each use, remove accumulated debris from bottom engine intake grille located between the fuel tank and starter.

Cleaning silencer



1. Silencer

2. Silencer cover

3. Two bolts

Clean deposits from silencer and tighten two bolts.

IMPORTANT

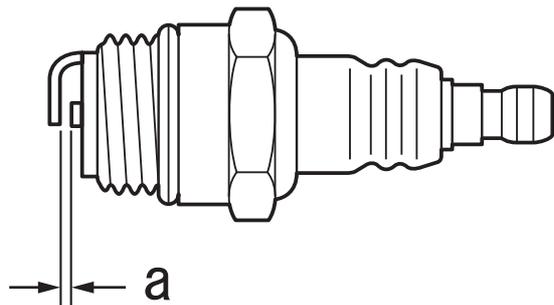
Do not remove the silencer cover. If necessary, Please consult your dealer.

Check fuel system

- ♦ Check before every use.
- ♦ After refuelling, make sure fuel does not leak or exude from around fuel pipe, fuel grommet or fuel tank cap.
- ♦ In case of fuel leakage or exudation there is a danger of fire. Stop using the machine immediately and request your dealer to inspect or replace.

Maintenance and care

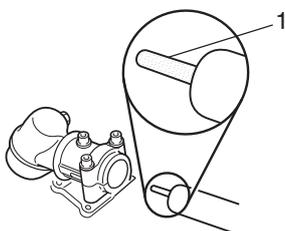
Check spark plug



a: 0.6 - 0.7 mm

- ♦ Check plug gap. Correct gap is 0.6 mm to 0.7 mm.
- ♦ Inspect electrode for wear.
- ♦ Inspect insulator for oil or other deposits.
- ♦ Replace plug if needed and tighten to 15 N·m - 17 N·m (150 kgf·cm to 170 kgf·cm).

Lubricating drive shaft



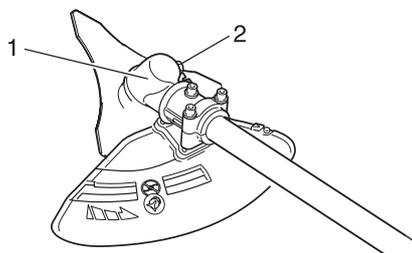
1. Drive shaft

Inspect the drive shaft every 100 hours of use and replenish grease if it is insufficient.

NOTE

Use good quality lithium multi grease.

Angle transmission



1. Angle transmission

2. Plug (Bolt)

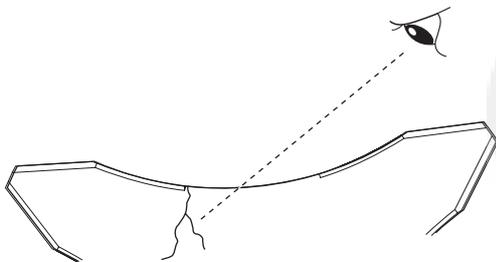
- ♦ Remove plug from angle transmission.
- ♦ Add grease, if necessary, using low pressure pump.

NOTE

Use good quality lithium multi grease.
Do not overfill housing.

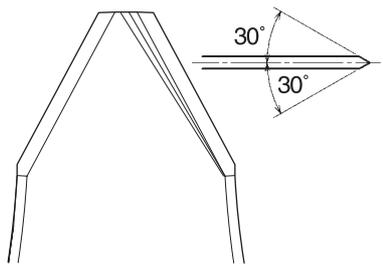
- ♦ Reinstall plug.

Checking the blade



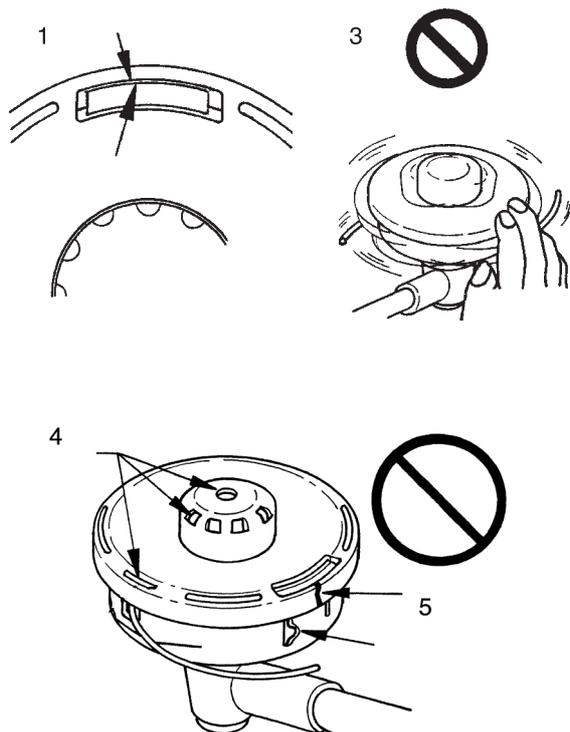
- ♦ Use only blade designated for this model by the manufacturer.
- ♦ When a crack is noticed on the blade, do not use it but replace with a new one.
- ♦ Ensure that the blade is correctly fitted in accordance with the instructions.

Maintenance and care



- ♦ When the cutting blade becomes dull due to wear reverse it for further use.
- ♦ When chip or bend occurs on the blade, vibration will increase. Replace with new one.
- ♦ When filing the blade file 3 cutting edges evenly using a flat file as shown in the illustration. Otherwise, the balance will be lost and vibration will increase.

Checking the nylon line cutting head



1. Make sure each periphery of the 2 retaining pawls of housing spreads almost fully up to the outer periphery of the respective cover window.
2. Check mount of cutting head on trimmer and tighten if it is loose.
3. Check the cutter head for deflection or abnormal noise rotating it by hand. Deflection or abnormal noise can cause abnormal vibration to occur or mount to trimmer to loosen during rotation which is dangerous.
4. Inspect cover and tap knob for wear. When slot appears on bottom of the tap knob or when slot appears on cover bottom close to outlet for nylon line, replace them with new parts without fail.
5. Check the cutting head for crack or chip. Replace parts that show any crack or chip with new ones without fail.

Maintenance and care

Troubleshooting table

Problem	Diagnosis	Cause	Solution
The engine does not start		<ol style="list-style-type: none"> 1. There is no fuel in the fuel tank 2. The stop switch is in the Stop position 3. Excess fuel suction 4. Electrical fault 5. Carburettor malfunction or internal sticking 6. Internal engine malfunction 	<ol style="list-style-type: none"> 1. Fuel supply 2. Move to the Start position 3. Start the engine after servicing 4. Consult your dealer 5. Consult your dealer 6. Consult your dealer
Engine is difficult to start, fluctuating rotation	Fuel is entering the overflow pipe	<ol style="list-style-type: none"> 1. Fuel degradation 2. Carburettor problem 	<ol style="list-style-type: none"> 1. Replace with new fuel 2. Consult your dealer
	No fuel is entering the overflow pipe	<ol style="list-style-type: none"> 1. Fuel filter is clogged 2. Fuel system is clogged 3. Internal carburettor parts sticking 	<ol style="list-style-type: none"> 1. Clean or replace 2. Consult your dealer 3. Consult your dealer
	The spark plug is dirty or damp	<ol style="list-style-type: none"> 1. Fuel degradation 2. Incorrect electrode gap 3. Carbon deposits 4. Electrical fault 	<ol style="list-style-type: none"> 1. Replace 2. Replace 3. Replace 4. Consult your dealer
Engine starts but no acceleration is possible		<ol style="list-style-type: none"> 1. Dirty air filter 2. Dirty fuel filter 3. Blocked fuel passage 4. Carburettor adjustment problem 5. Blocked exhaust vent or silencer vent 	<ol style="list-style-type: none"> 1. Clean or replace 2. Clean or replace 3. Consult your dealer 4. Adjust 5. Clean
The engine stops		<ol style="list-style-type: none"> 1. Carburettor adjustment problem 2. Electrical fault 	<ol style="list-style-type: none"> 1. Adjust 2. Consult your dealer
The engine fails to stop		<ol style="list-style-type: none"> 1. Stop switch malfunction 	<ol style="list-style-type: none"> 1. Perform an emergency stop and consult your dealer
Cutting attachment rotates when the engine is idling		<ol style="list-style-type: none"> 1. Carburettor adjustment problem 2. Damaged clutch spring 	<ol style="list-style-type: none"> 1. Adjust 2. Consult your dealer

- Checking and maintenance requires specialist knowledge. If you are unable to check and maintain the product or deal with a fault yourself, consult your dealer. Do not attempt to dismantle the product.
- Consult your dealer in the event of a problem that is not covered in the table above, or other such concerns.
- For spare parts and consumables, please use only genuine parts and designated products and components. Using parts from other manufacturers or non-designated components may result in a malfunction.

Long-term storage (30 days or more)

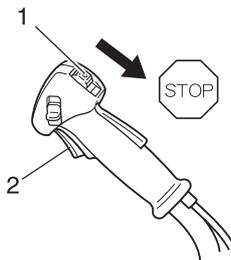
WARNING

Do not store in sealed locations filled with fuel gas, or close to naked flames or sparks.

◆ You could cause a fire.

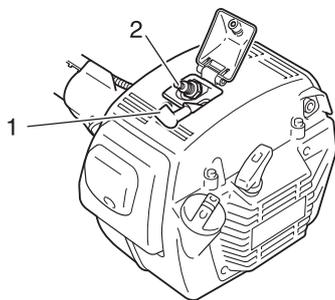


When storing the product for long periods of time (30 days or more), ensure that the following preparations for storage are carried out.



1. Ignition switch

2. Throttle trigger



1. Spark plug wire

2. Spark plug

1. Empty the fuel tank completely.
 - A. Remove any fuel from the fuel tank.
 - B. Alternately press and release the purge bulb a number of times to remove the fuel from the purge bulb.
 - C. Start the engine and run it at idle speed until it comes to a natural stop.
2. Move the ignition switch to the Stop position.
3. Once the product is sufficiently cool, wipe clean any grease, oil, dust, dirt and other materials on the outside of the trimmer.
4. Perform the periodic checks prescribed in this manual.
5. Check that the screws and nuts are tightened. Tighten up any that are loose.
6. Remove the spark plug and add the appropriate quantity (around 10 mL) of clean, new 2-stroke engine oil to the cylinder via the installation socket.
 - A. Place a piece of clean cloth over the spark plug installation socket.
 - B. Pull 2 or 3 times on the starter grip to distribute the engine oil into the cylinder.
 - C. Observe the piston location through the spark plug hole. Pull the recoil starter handle slowly until the piston reaches the top of its travel and leave it there.
7. Fit the spark plug. (Do not connect the spark plug cap.)
8. Fit the blade cover onto the trimmer blade and wrap the engine section in a plastic bag or other covering, and store in a dry, dust-free location out of reach of children.

Please contact your dealer in order to dispose of the product or its parts in compliance with national laws.

Specifications

		CL590
External dimensions: Length × Width × Height	mm	1840 × 600 × 546
Mass: Unit without cutting attachment, empty tank Unit with specified cutting attachment, empty tank Unit without cutting attachment, full tank	kg kg kg	10.6 - -
Volume: Fuel tank	L	0.75
Cutting attachment: Thread Usable cutting depth of specified cutting attachment Specified blade diameter Specified blade thickness Number of cutting teeth Blade centre hole diameter Blade rotational speed at maximum allowable engine speed	- mm mm mm - mm r/min	Left-handed M12×1.75 - - - - 25.4 10000
Gear ratio: Gear ratio and lubrication		1.4 reduction and good quality lithium grease
Rotational direction of output shaft viewed from above:		Anticlockwise
Engine: Type Engine displacement Maximum shaft brake power, measured in accordance with ISO 8893 Engine speed at maximum engine power Recommended maximum engine speed (With specified attachment installed) Recommended engine idling speed Carburettor Ignition Spark plug Starter Clutch	mL (cm ³) kW r/min r/min r/min	Air cooled 2-stroke single cylinder 58.2 2.42 8500 11000 2500 Diaphragm type Flywheel magneto - CDI system NGK BPMR8Y Recoil starter Automatic centrifugal clutch
Fuel: Oil Ratio Fuel consumption at maximum engine power Specific fuel consumption at maximum engine power	L/h g/(kW•h)	Regular grade petrol. Minimum 89 Octane unleaded petrol is recommended. Do not use fuel containing methyl alcohol or more than 10 % of ethyl alcohol. Two stroke, air-cooled engine oil. ISO-L-EGD Standard (ISO/CD 13738), JASO FC,FD grade and shindaiwa 50 : 1 oil. 50 : 1 (2%) 1.77 404
Vibration levels: (ISO 22867) $a_{hv,eq}$	m/s ² m/s ²	Left handle 2.8 Right handle 3.0
Sound pressure level: (ISO 22868) L_{pAeq}	dB(A)	100.6
Guaranteed sound power level: (ISO 22868) L_{WA}	dB(A)	118

These specifications are subject to change without notice.

Declaration of conformity

The undersigned manufacturer:

YAMABIKO CORPORATION
7-2 SUEHIROCHO 1-CHOME
OHME; TOKYO 198-8760
JAPAN

declares that the hereunder specified new unit:

GRASS-TRIMMER/BRUSHCUTTER

Brand: shindaiwa
Type: CL590

complies with:

- * the requirements of Directive **98/37/EC (1998)** and **2006/42/EC**: from 29th December 2009 (use of harmonized standard **ISO 11806 (EN 31806)**)
- * the requirements of Directive **2004/108/EC** (use of harmonized standard **EN ISO 14982**)
- * the requirements of Directive **2002/88/EC**
- * the requirements of Directive **2000/14/EC**

Conformity assessment procedure followed **ANNEX V**

Measured sound power level	dB(A)	115
Guaranteed sound power level	dB(A)	118

Serial Number 36001001 and up

Tokyo, October 1st 2009

YAMABIKO CORPORATION

Kazushige Oyuri

K. OYURI
General Manager

The authorized representative in Europe who is authorized to compile the technical file.

Company: Atlantic Bridge Limited
Address: Atlantic House, PO Box 4800, Earley, Reading
RG5 4GB, UK

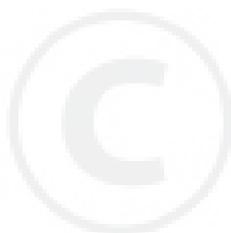
Mr. Philip Wicks

YAMABIKO CORPORATION

7-2 SUEHIROCHO 1-CHOME, OHME, TOKYO 198-8760, JAPAN

PHONE: 81-428-32-6118. FAX: 81-428-32-6145.

shindaiwa



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X750 226-470 2