

MARUNAKA

POLE HEDGE TRIMMER

MODEL

PHT1560 TU26PFD

PHT1560 TJ27DX

PHT1560 GX25

PHT1560 EH025

OPERATING MANUAL



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CODE: 800203122

UK/BC 0612

INTRODUCTION

	Read this manual carefully to understand all safety precautions, controls, proper operation and maintenance of your MARUNAKA Pole hedge trimmer. Failure to do so could result in serious injury.
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Safety first

Instructions contained in warnings within this manual and warning seals marked with a  symbol on the pole hedge trimmer concern critical points which must be taken into consideration to prevent possible serious bodily injury, and for this reason you are requested to read all such instructions carefully and follow them without fail.

Note that there may be times when warning seals peel off or become soiled and impossible to read. If this happens, you should contact the dealer from which you purchased the product to order new seals and affix the new seal(s) in the required location(s).

Notes on types of warnings

WARNING

Instructions labeled as shown at left, concern critical steps or procedures, which must be followed in order to prevent accidents, which could lead to serious bodily injury or death. This mark is used to indicate instructions, which must be followed without exception.

IMPORTANT

Instructions labeled as shown at left concern steps or procedures, which if not followed correctly, could lead to mechanical failure, breakdown, or damage.

NOTE

Used to label supplementary instructions designed to provide hints or directions useful in the use of the product.

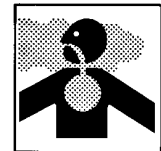
CONTENTS

[1] SAFETY PRECAUTIONS	1
[2] TECHNICAL DATA	4
[3] GENERAL DESCRIPTION	5
[4] FUEL MIX	5
[5] ENGINE ASSEMBLY	6
[6] TRIMMER ASSEMBLY	6
[7] STARTING AND STOPPING THE ENGINE	7
[8] WORK METHOD	8
[9] PRECAUTIONS DURING WORKING	8
[10] MAINTENANCE, INSPECTION AND SERVICING	8
[11] STORAGE AFTER OPERATION	9
[12] FAULT FINDING TABLE	9

[1] SAFETY PRECAUTIONS

In order to ensure proper and safe operation of your trimmer

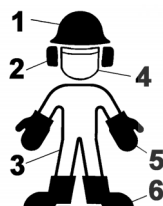
- Read this pole hedge trimmer operating manual carefully. Be sure you understand how to operate this unit properly before you use it. Failure to do so could result in serious injury.
- Be sure to keep this manual handy so that you may refer to it later whenever any questions arise. Also note that you are requested to contact the dealer from whom you purchased the product for assistance in the event that you have any questions, which cannot be answered herein.
- Always be sure to include this manual when selling, lending, or otherwise transferring the ownership of this product.
- This product has been designed for use in trimming leaves and branches from trees and hedges, and it should never be used for any other purpose since doing so could result in unforeseen accidents and injuries occurring.
- This product is equipped with extremely sharp blades, and when used improperly these blades can be extremely dangerous. For this reason, you should never use this trimmer when under the influence of alcohol, when suffering from exhaustion or lack of sleep, when suffering from drowsiness as a result of having taken cold medicine, or at any other time when a possibility exists that your judgment might be impaired or that you might not be able to operate the trimmer properly and in a safe manner. Also be sure never to allow children or anyone unable to fully understand the directions given in this manual to use this trimmer.
- Avoid running the engine indoors.
- The exhaust gases contain harmful carbon monoxide.
- Never use your trimmer under circumstances like those described below:
 1. When the ground is slippery or when other conditions exist which might make it not possible to maintain a steady posture while using the trimmer.
 2. At night, at times of heavy fog, or at any other times when your field of vision might be limited and it would be difficult to gain a clear view of the area where the trimmer is to be used to ensure safety.
 3. During rain storms, during lightning storms, at times of strong or gale-force winds, or at any other times when weather conditions might make it unsafe to use this product.
- When using this product for the first time, before beginning actual work, take the trimmer to a wide, clear, open space, turn on the power, and practice handling the trimmer until you are sure that you will be able to handle it properly in actual operation.
- Lack of sleep, tiredness, or physical exhaustion results in lower attention spans, and this in turn leads to accidents and injury. When planning your work schedule, allow plenty of time to perform the work of trimming and allow plenty of time for rest. Limit the amount of time over which the trimmer is to be used continuously to somewhere around 30~40 minutes per session, and take 10~20minutes of rest between work sessions. Also try to keep the total amount of work performed in a single day under 2 hours of less.



Work gear and clothing

- When using your trimmer, always be sure to wear strong, durable, work clothing; shirts should be long-sleeved shirts and pants should be full-length pants reaching down to the ankles.
- always be sure to wear and helmet and face protector when using your trimmer.
- When using your trimmer, always be sure to wear thick work gloves to protect your hands and non-slip-sole work boots prevent you from slipping. Never use your trimmer when wearing pants with loose cuffs, when wearing sandals, or when barefoot.
- When using your trimmer for an extended period of time, you should wear ear protectors to protect yourself from loss of hearing from overexposure to high levels of sound.

- (1) Helmet
- (2) Ear protectors
- (3) Work clothing
- (4) Face protector
- (5) Work gloves
- (6) Work boots



Warnings considering handling of fuel

- The engine of the MARUNAKA trimmer is designed to run on a mixed fuel which contains highly flammable gasoline.
- This fuel is highly flammable and you should never store cans of fuel or refill the tank of the trimmer in any place where there is a boiler, stove, wood fire, electrical source of heat or fire which might ignite the fuel.
- Smoking while operating the trimmer or refilling its fuel tank is extremely dangerous. Always be sure to keep lit cigarettes away from the trimmer at all times.
- When refilling the tank always turn off the engine first and take a careful look around to make sure that there are no sparks open flames anywhere nearby before refueling.
- If any fuel spillage occurs during refueling, always be sure to use a dry rag to wipe any fuel which has been spilled onto the trimmer before turning the engine back on again.
- After refueling, screw the fuel cap back tightly onto the fuel tank and then carry the trimmer to a spot 10 feet or more away from where it was refueled before turning on the engine.



Things to check before using your trimmer

- Before beginning work, look around carefully to get a feel for the shape of land, the trees, hedges, or bushes to be trimmed, and whether or not there are any obstacles which can be cleared away before beginning work.
- The area within a perimeter of 45 feet of the person using the trimmer should be considered a hazardous area into which no one should enter while the trimmer is in use, and when necessary yellow warning rope, warnings signs, or some other form of warnings should be placed around the perimeter of the area. When work is to be performed simultaneously by two or more persons, care should also be taken to constantly look around or otherwise check for the presence and locations of other people using trimmers within the work area so as to maintain a distance between each person sufficient to ensure safety.
- Before beginning work, each component of the trimmer should be checked to make sure that it is in proper working order and to make sure that there are no loose screws or bolts, fuel leaks, ruptures, dents, or any other problems which might interfere with safe operation. Be especially careful at this time to check that there is nothing wrong with the blades or with the joints by which the blades are attached to the trimmer.
- Check to make sure that the handle grip and the protective cover have not come loose before using the trimmer.

Things to check before starting up the engine

- Take a careful look around to make sure that no objects exist within a perimeter of 15 feet or less around the trimmer before starting the engine.
- The trimmer is equipped with a centrifugal clutch mechanism which causes the cutting blades to begin to rotate as soon as the engine is started by putting the throttle into the start position. When starting the engine, place the body of the trimmer onto the ground in a flat clear area and hold it firmly in place so as to ensure that neither the blades nor the throttle come into contact with any obstacles when the engine starts up.
- Never place the throttle into the high speed position when starting the engine.
- After starting up the engine, check to make sure that the blades stop rotating when the throttle is moved fully back to its original position. If the blades continue to rotate even after the throttle has been moved fully back, turn off the engine and take the unit to your authorized MARUNAKA servicing dealer for repair.

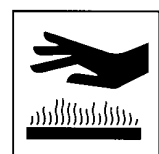
Avoid noise problem

- Check and follow the local regulations as to sound level and hours of operations for trimmer.
- In general, operate trimmers between 8a.m. and 5p.m. on week days and 9a.m. to 5p.m. weekends. Avoid using trimmer late at night and/or early in the morning.

Things to be careful about when using your trimmer

- When using your trimmer, grip the handles of the trimmer firmly with both hands, place your feet slightly apart (slightly further apart than the width of your shoulders) so that your weight is distributed evenly across both legs, and always be sure to maintain a steady, even posture while working.
- Maintain the speed of the engine at the level required to perform trimming work, and never raise the speed of the engine above the level necessary.

- Always be sure never to allow other persons to come within the work area while trimming, as doing so might expose them to the danger of being hit by falling branches as they are cut.
- Be especially careful not to slip if it is raining or if rain has just stopped, as the ground is likely to be slippery at such times.
- If a branch or other object gets caught in the blades during operation, always be sure to turn off the engine before removing the object.
- To protect yourself against injury from falling branch, always be sure to wear the required safety equipment, and be careful when working to match to see in which direction branches are moving and falling so as to avoid being hit by falling branches.
- If someone calls out or otherwise interrupts you while working, always be sure to turn off the engine before turning around.
- Keep operation area clear of all persons, particularly small children and pets. Injury may result from flying debris.
- Never touch the spark plug or plug cord while the engine is in operation.
- Doing so may result in being subjected to an electrical shock.
- Never touch the muffler, spark plug, or other metallic parts of the engine while the engine is in operation or immediately after shutting down the engine.
- These metallic parts reach high temperatures during operation and doing so could result in serious burns.
- When you finish trimming in one location and wish to continue work in another spot, turn off the engine, place the protective cover over the blades, and turn the trimmer so that the blades face away from your body before carrying it to the new location.
- Never transport the trimmer over rough roads over long distances without first removing all the fuel from the fuel tank, as during so might cause fuel to leak from the tank as a result of shocks absorbed during transport.



Notes on care and maintenance of your trimmer

- In order to maintain your trimmer in proper working order, perform the maintenance and checking operations described in this manual at regular intervals. In the event that any parts must be replaced or any maintenance or repair work not described in this manual must be performed, please contact a representative from the store nearest MARUNAKA authorized servicing dealer for assistance.
- Under no circumstances should you ever take apart the trimmer or alter it in any way. Doing so might result in the trimmer becoming damaged during operation or the trimmer becoming unable to operate properly.
- Always be sure to turn off the engine before performing any maintenance or checking procedures.
- When sharpening, removing, or reattaching the blades, be sure to wear thick, sturdy gloves and use only proper tools and equipment to prevent injury.
- When replacing blades or any other parts or when replacing the oil or any lubricants, always be sure to use only MARUNAKA products or products which have been certified by MARUNAKA for use with the MARUNAKA trimmer.

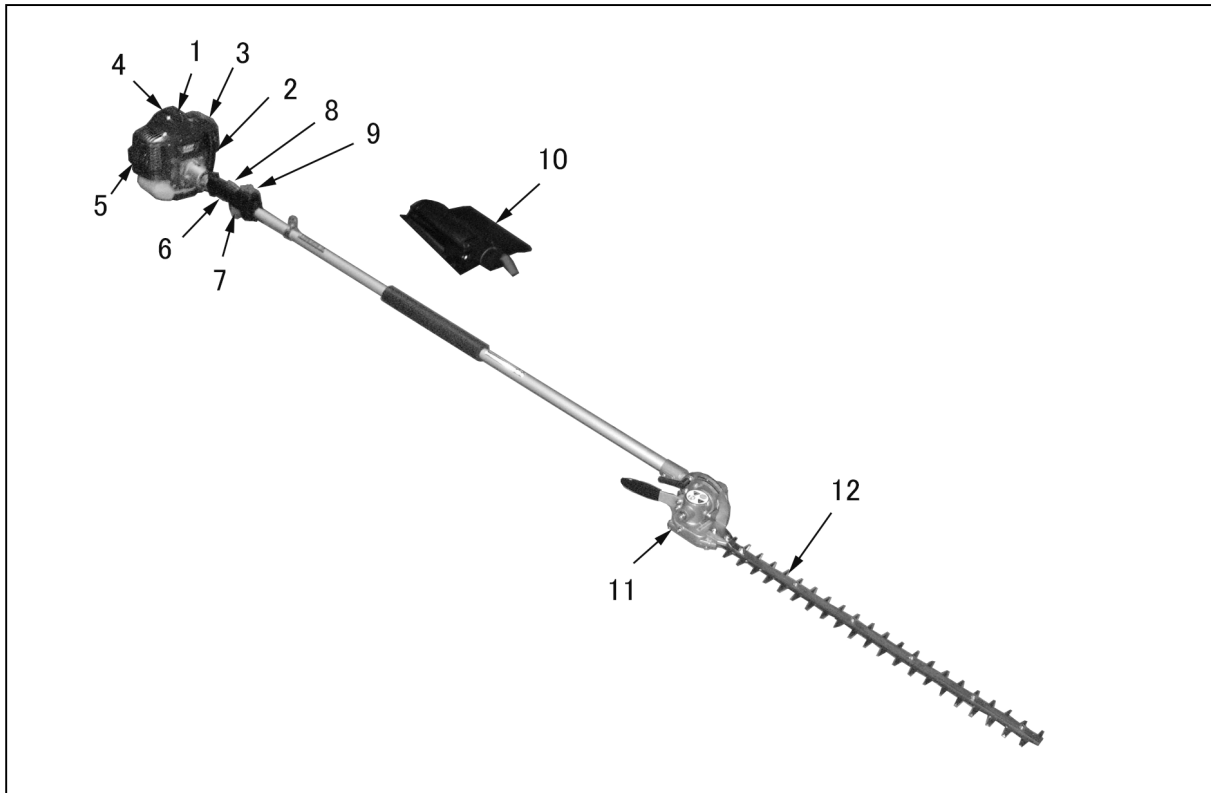
Handling of warning labels

	Handling this machine improperly could result in accidents causing serious injury or death. Read this manual carefully and practice using the trimmer until you are fully acquainted with all operations and have learned to use it correctly.
	Carefully read operating manual.
	Always be careful to wear a face protector and helmet when using your trimmer.
	Keep hands away from cutting blades

[2] TECHNICAL DATA

Model		PHT1560					
Engine Model		TU26PFD	TJ27DX	GX25	EH025		
Overall size	Length	mm	2546	2552	2585	2557	
	Width	mm	219	217	221	213	
	Height	mm	225	231	230	225	
Dry Weight		kg	6.8	6.5	7.0	7.0	
Transmission		Centrifugal clutch, spiral bevel gear, cam clank					
Cutting head	Type	Reciprocating double blade					
	Tooth	teeth	42				
	Tooth pitch	mm	30				
	Effective cut width	mm	615				
	Angle adjust range	135° (+90°, -45° from cutting head position aligned shaft)					
Reduction ratio		4:1					
Engine displacement		cm ³	25.6	26.3	25	24.5	
Maximum shaft brake power, measured in accordance with ISO 8893		KW	1.04	1.2	0.81	0.81	
Rotational speeds	Engine speed at maximum power	rpm	7500	7500	7000	7000	
	Recommended maximum engine speed	rpm	8000	8000	8000	8000	
	Output shaft speed	rpm	7000	7000	7000	7000	
	Recommended engine idling speed	rpm	3000	3000	3100	3000	
	Engine speed at beginning of clutch engagement	rpm	4000	4000	4100	4000	
Sound pressure levels	Idling (L _{p1})	dB	78	78	77	77	
	Racing (L _{pR})	dB	91	92	90	89	
Sound power levels	Idling (L _{w1})	dB	88	87	84	86	
	Racing (L _{wR})	dB	105	105	103	103	
Guaranteed sound power level (L _{WA})		dB	106	106	106	106	
Vibration levels	Idling	m/s ²	L4.9 R3.6	L4.7 R3.3	L4.4 R3.3	L4.5 R3.2	
	Racing	m/s ²	L9.8 R10.3	L9.4 R9.8	L7.8 R6.8	L8.0 R6.7	

[3] GENERAL DESCRIPTION



- | | | |
|---------------------|-------------------|---------------|
| 1. Engine | 6. Control handle | 11. Gear case |
| 2. Fuel tank cap | 7. Trigger | 12. Blades |
| 3. Air filter cover | 8. Safety grip | |
| 4. Spark plug | 9. STOP switch | |
| 5. Muffler | 10. Harness | |

[4] FUEL MIX (TJ27DX,TU26PFD)

- This product is fitted with a 2-stroke engine and therefore requires a 2-stroke fuel and oil mix.
- Use a high quality 2-stroke engine oil using 2%(50:1)oil. (TJ27DX)
- Use a high quality 2-stroke engine oil using 4%(25:1)oil. (TU26PFD)
- In order to obtain a good fuel mix, put the oil into the container before the petrol.

PETROL

- This engine can use leaded (4 star) or unleaded petrol with a minimum octane rating of 90.
- When using unleaded petrol, mix it with 2%(50:1) of high quality synthetic oil specifically made for 2-stroke engines.

IMPORTANT

- Always shake this fuel mix vigorously each time you use it.
- Fuel mix properties deteriorate with time. We, therefore, recommend that you only make the quantity of fuel mix you will need for each usage. Do not use fuel mix more than a week old, as this could damage the engine.

⚠WARNING

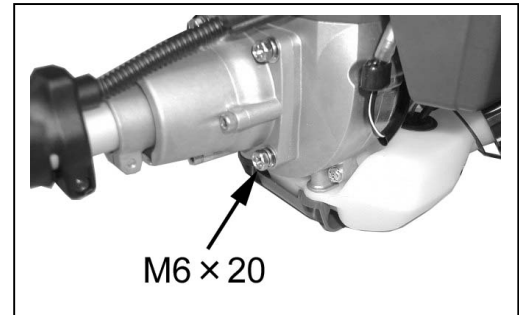
- Do not smoke when re-fueling.
- Always open the fuel cap slowly.
- Re-fuel in open spaces only, keeping away from naked flames or sparks.
- Always store fuel in an approved container.

[5] ENGINE ASSEMBLY

Assemble the engine onto the shaft housing.
Make sure that the shaft housing is fully and correctly up to the shank, then tighten the four screws.
Our standard tightening torque of bolt, screw and nut is As follows;

Size	M4	M5	M6	M8	M10
Torque(daN.m)	1.6	3.1	5.1	12.2	24.5

Please be careful not to tighten them to tightly.

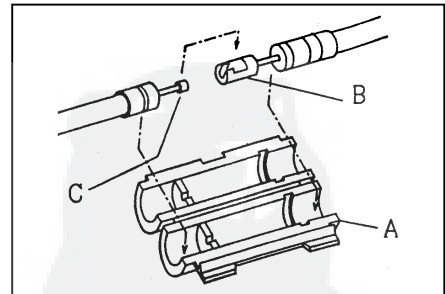
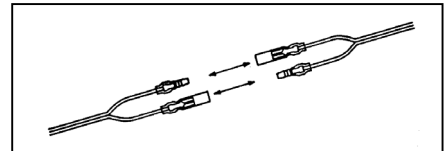
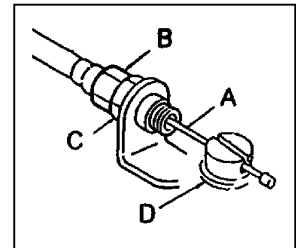


DANGER

Do not run engine without the shaft housing attached, as clutch could fly off.

Connection of the throttle wire

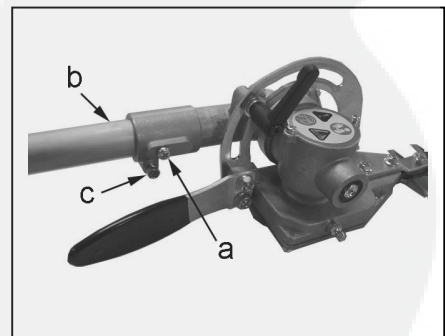
- Thread wire (A) through the hole in cable adjust screw (B) of the carburetor and slide the end of the wire into the hole at the bottom of the slit in the throttle valve (D).
- To adjust play in the throttle wire, loosen the cable adjust nut (C) on the carburetor, adjust slack with the cable adjust screw (B), and retightening the cable adjust nut.
- Adjusting play in the throttle wire should be carried out after setting wire (A) and throttle wire on lever side.
- Connect the control handle/engine cord assy.
- Open the engine side throttle wire joint cover (A).
- Insert the control handle side wire end (C) in the engine side throttle wire end (B).
- Match the end with the joint cover groove position ally as it is, and close the joint cover.



[6] TRIMMER ASSEMBLY

1. Mounting the attachment

- (1) Loosen the rotation stopper screw (a) until the pipe can be inserted.
- (2) While aligning the spline of the drive shaft, completely push the attachment in the pipe (b) to the end.
- (3) Insert the rotation stoppers screw (a) into the come-off stopper hole (b) in the pipe, and make sure that the pipe does not come off.
- (4) Securely tighten the rotation stopper screw (b).
- (5) Securely tighten the tightening screw (c) so that the pipe does not off.



2. Adjusting the blade angle

DANGER

- make sure to stop the engine when adjusting the blade angle.
- make sure to press the support handle (b) when adjusting the blade angle.
- Never press the blade with your hand.

NOTE

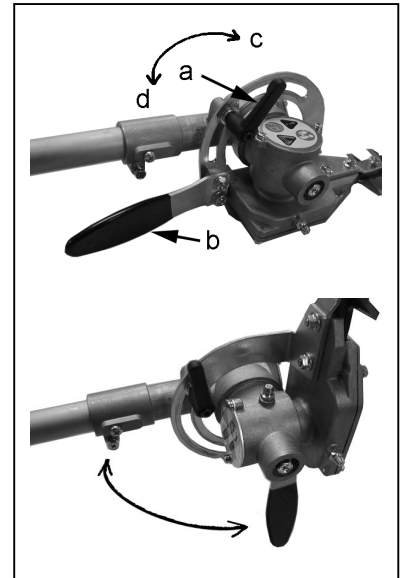
- The clamp handle (a) has the ratchet structure in which a spring is assembled.
- Securely engage the clamp lever in a proper position, then turn the clamp handle (a) in the lateral direction.

(1) Stop the trimmer engine.

(2) Turn the clamp handle (a), then turn it counterclockwise to loosen it.

At that time, press the support handle (b). Do not touch the blade. Because the blade has sharp edge, you may be injured.

(3) Adjust the angle of blades to the desired angle, and then fix the clamp handle (a) firmly back to place.



- a) Clamp handle
- b) Support handle
- c) Tighten
- d) Loosen

NOTE

- When adjustment of the blade angle is finished, pull the clamp handle and push it down on the gear case so that the clamp handle is not damaged by hitting standing trees, etc. during the work or that the blade does not become loose inadvertently.

[7] STARTING AND STOPPING THE ENGINE

STARTING THE ENGINE

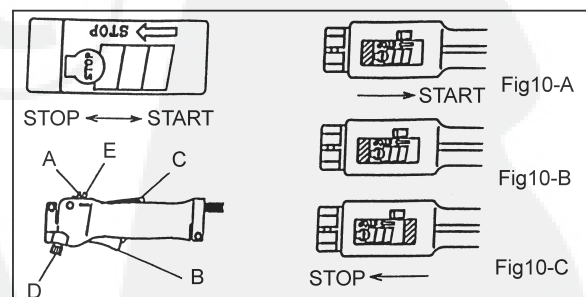
- Press lever (C) and hold lever (B).
- Release levers (C) and (B) while keeping knob (E) pressed.
- The throttle lever (B) is now in its partial acceleration position, in order to let the engine start more quickly and easily.
- Start the engine according to its operation and maintenance manual.
- After starting the engine, pull throttle lever (B) once again and release it right away in order to unlock it from the partial acceleration position and to let the engine idle when lever (B) is released (Fig.10-B).

STOPPING THE ENGINE

- In order to stop the engine, press button (A) into its STOP position (Fig.10-C).

WARNING

- When the engine is switched off, the rotating part, blade, will keep on rotating for a few seconds.
- Hold the machine until all parts come to a standstill.



NOTE

- The ring nut (D) located on the control handle is for adjusting the engine.
- By turning ring nut (D) clockwise, the engine rpm is reduced during the subsequent use of throttle lever (B).
- Conversely, turning ring nut (D) counterclockwise raises the engine rpm.
- Therefore, adjust ring nut (D) according to the conditions.

[8] WORK METHOD

- When using the pole hedge trimmer, make sure to securely hold it with both hands. Never hold it with only one hand; it is extremely dangerous.
- When moving or storing the pole hedge trimmer with the blade mounted, attach the blade cover.

1. Before starting the work

- do not use the pole hedge trimmer in such improper way that the rotation is considerably reduced.
- (1) Wear cloths and protective gears (such as helmet, protective goggles, protective gloves and safety shoes) proper to the work.
 - (2) Assure safety around the work place.
 - (3) Sufficiently check for looseness in bolts and damages in parts.
 - (4) Before starting the actual work, sufficiently practice the pole hedge trimmer by cutting twigs, etc.
 - (5) Do not stand just below a branch you are cutting.

2. Trimming the hedge

- (1) Consider the hedge shape and the ambient situation, and predict the direction in which branches will drop.
- (2) Remove obstructions around the hedge. Determine a safe refugee.
- (3) In the trimming work, rotate the engine at high speed.
- (4) When trimming a long twig or deeply trimming the hedge, trim it in several times.
- (5) When cutting a branch, lightly press the pole hedge trimmer against the branch. Just before cutting it off, release the force and hold the pole hedge trimmer.

[9] PRECAUTIONS DURING WORKING

1. If the blades have stopped on account of a branch caught during the trimming, first be sure to stop the engine and eliminate the branch. Refrain from cutting too hard or too thick a branch (over 7 mm in diameter).
2. When the machine is running, never touch the blade. Never direct the blades to person.
3. Absolutely avoid handing the machine with a single hand because it might cause jerking, drop of the hedge trimmer, and so on.
4. The engine speed must not be excessive but just enough to cut the damage. Run the hedge trimmer at a rated speed (5500-8000 rpm) whenever possible.
5. To avoid a bum, do not touch the engine during the operation or immediately after stopping the engine. Handle the engine after it is completely cooled.
6. During the operation, the stance must be firm. And, do not work in an unstable condition. Refrain from working in an unnatural posture or by a risky method.
7. Do not use the pole hedge trimmer continuously for a long time. It is normal to take a break of 10 to 20 minutes after every 50-minute operation.
8. In every 50 hours, inject a proper amount of grease in the crank case of the hedge trimmer.
9. Stop the engine before lubricating the blades during the operation.
10. Stop the engine before leaving the pole hedge trimmer.

[10] MAINTENANCE, INSPECTION AND SERVICING

For repair, make sure to use specified genuine parts.

1. Gear case

NOTE

Though the gear case is equipped with the grease outflow prevention mechanism, the grease may flow out a little from the blade sliding area. It does not mean failure.

- (1) At every 50 operating hours, supply grease.
- (2) Inject grease from the grease injection port in the gear case.

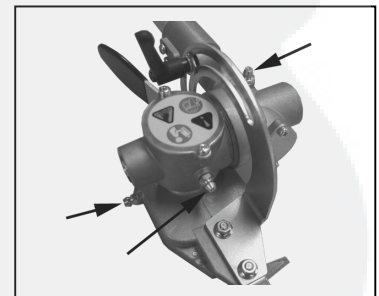
2. Adjusting the blade

The blade is attached to the blade guide with four bolts.

These bolts are tightened while securing proper clearance so that the blade can move smoothly.

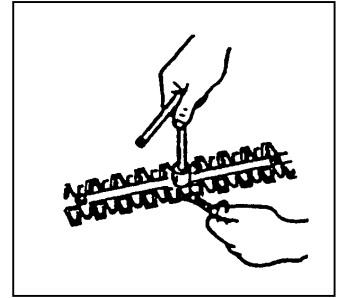
If the clearance is too narrow, the blade does not move smoothly, and the sliding area may be seized.

If the clearance is too wide, the blade does not cut well.



3. Adjust the clearance of the blade using the following procedure.

- (1) Loosen the blade coupling nuts.
- (2) Completely tighten the blade coupling bolts, and then loosen them by a half turn.
- (3) With each bolt fixed in the position in which it is loosened by a half turn from the completely tightened position, tighten the blade coupling nuts.

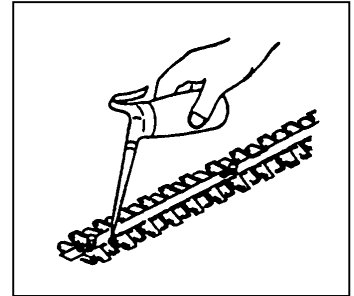


NOTE

Supply a proper amount of machine oil to the blade sliding area.

[11] STORAGE AFTER OPERATION

1. Clean every part, repair sections, and apply a thin coat of oil on metallic parts to prevent rust.
2. If the pole hedge trimmer is to be stored for long periods, drain the fuel from the tank then start the engine and keep the engine running until it stops to consume all the fuel left in the carburetor.
3. Store the pole hedge trimmer in a place free from excessive humidity so as to prevent the dust from soiling the machine.
4. Remove the spark plug; inject a small amount of engine oil through the spark plug hole. Then pull the recoil starter a few times to put a thin coat of oil on the cylinder. Install the spark plug again when the piston has stopped at a top dead point.



[12] FAULT FINDING TABLE

	Engine will not start	Engine will not start or runs badly	The pole hedge trimmer dose not cut well	Engine runs fast but loses power when cutting
Check STOP switch in the position I	●	●		
Control fuel level min. 25% tank capacity.	●	●		
Check air filter is clean		●		
Remove spark plug, dry it, clean it and adjust it, and replace it, if necessary.	●	●		
Control and adjust the carburetor screws if necessary.		●	●	●
Change fuel filter. Contact your dealer.				●
Carefully follow the blade assembly instructions.			●	
Check blade is sharp. Otherwise, contact your dealer.			●	

DECLARATION OF CONFORMITY

We are **MARUNAKA CO.,LTD.**

11,MUKAIDANISHIMACHI,KISSHOIN,MINAMI-KU,KYOTO,JAPAN 601-8307

Person in charge of keeping technical documentation : Yuichiro Manabe

Address : 86,HOSYOJITYO,OKAZAKI,SAKYO-KU,KYOTO,JAPAN 606-8333

Type	Pole Hedge Trimmer						
Model	Bar	PHT1560					
	Engine	TU26PFD	TJ27DX	GX25	EH025		
Unit with specified cutting attachment,full tank:kg	6.8	6.5	7.0	7.0			
Serial number	???????						
Maximum output power:KW/rpm	1.04/7500	1.2/7500	0.81/7000	0.81/7000			
Directive	2000/14/EC Article13 Annex 5						
Measured sound power level:dB(A)	105	105	103	103			
Guaranteed sound power level(LWA):dB(A)	106						

Declare under our sole responsibility that the product,

PHT1560 TU26PFD, PHT1560 TJ27DX,
PHT1560 GX25, PHT1560 EH025,

to which this declaration relates is in conformity with the following the provisions
of the following Directive.

89/336/EEC
EN774
98/37/EC
2000/14/EC Article13 Annex5

30.December.2006 KYOTO,JAPAN

MARUNAKA CO.,LTD.

Yuichiro Manabe

Yuichiro Manabe