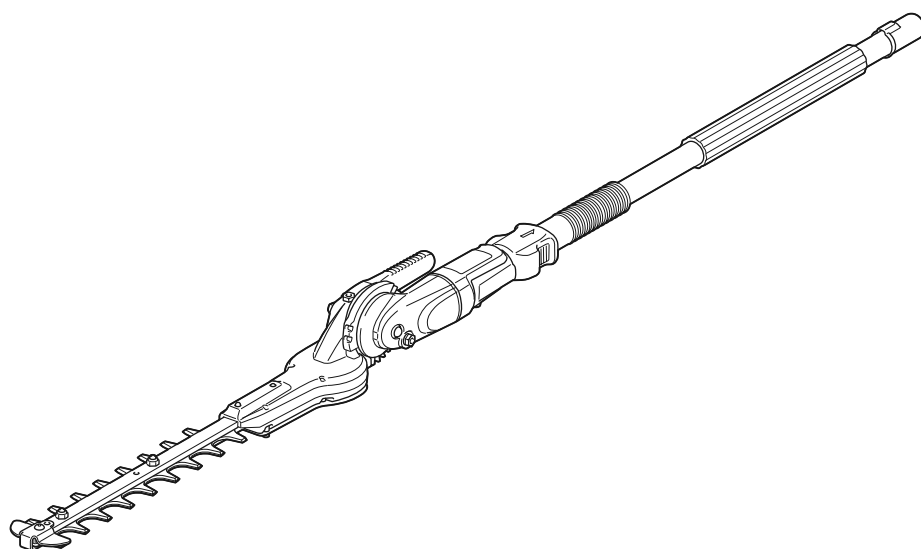




EN	Ground Trimmer Attachment	INSTRUCTION MANUAL	5
FR	Tête Faucheuse	MANUEL D'INSTRUCTIONS	9
DE	Aufsatz Gestrüppschneider	BETRIEBSANLEITUNG	14
IT	Accessorio tagliasiepi da terra	ISTRUZIONI PER L'USO	19
NL	Grondheggenschaarhulpstuk	GEBRUIKSAANWIJZING	24
ES	Accesorio de Corte a Ras de Piso	MANUAL DE INSTRUCCIONES	29
PT	Implemento Aparador de Grama	MANUAL DE INSTRUÇÕES	34
DA	Tilbehør til buskrydder	BRUGSANVISNING	39
EL	Προσάρτημα κλαδευτηριού εδάφους	ΕΓΧΕΙΡΙΔΙΟ ΟΔΗΓΙΩΝ	43
TR	Çim Budama Ek Parçası	KULLANMA KILAVUZU	48

EN420MP



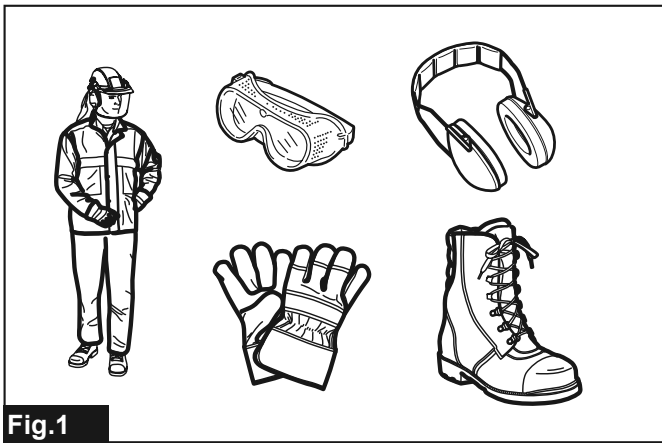


Fig.1

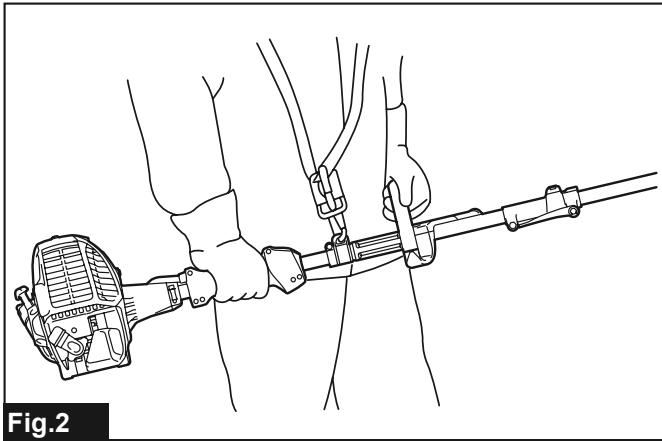


Fig.2

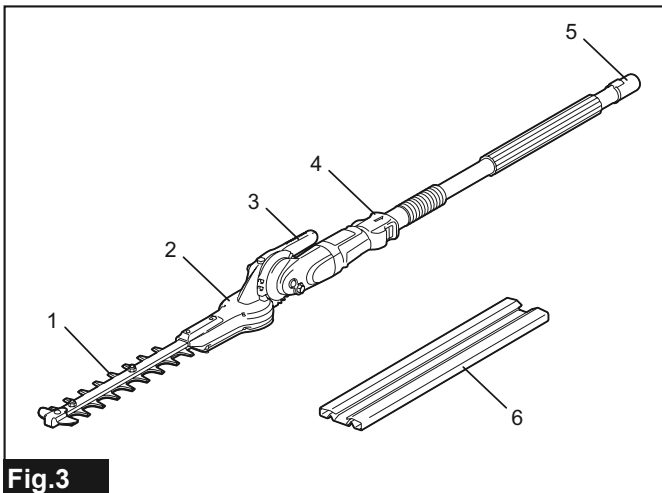


Fig.3

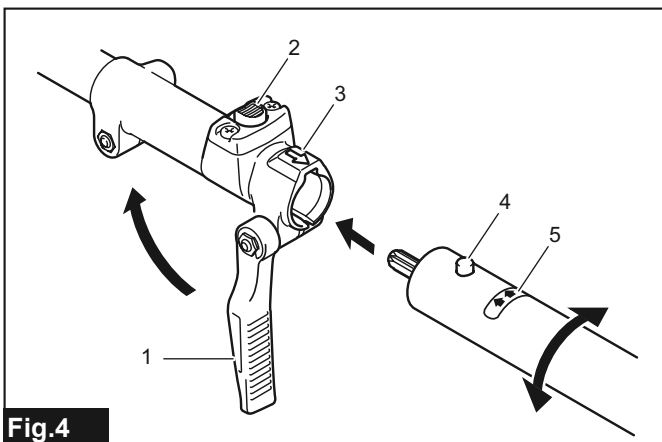


Fig.4

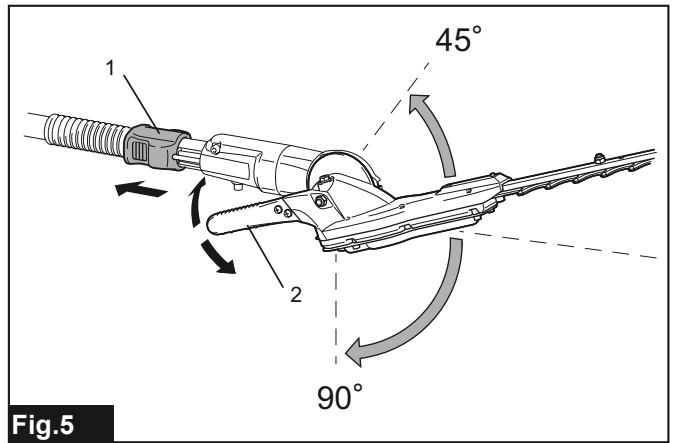


Fig.5

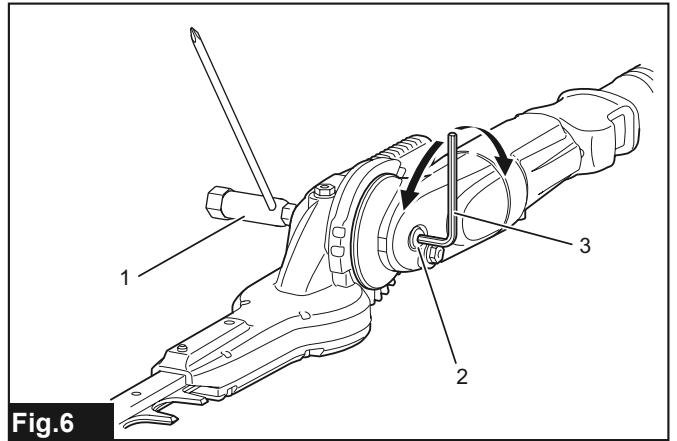


Fig.6

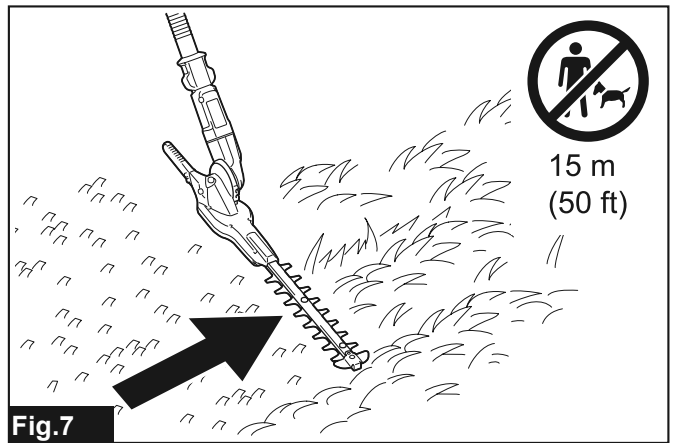


Fig.7

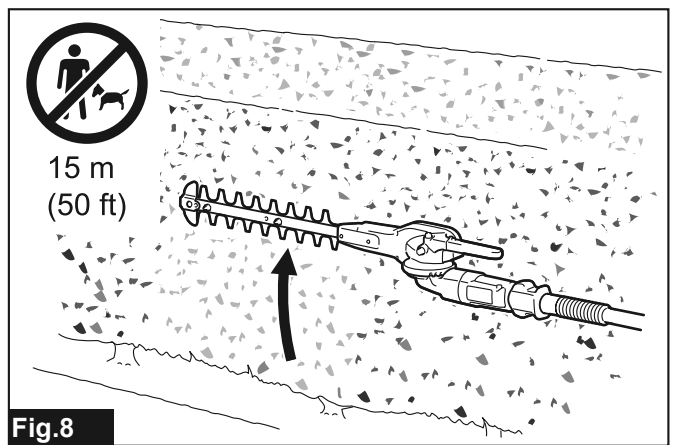


Fig.8

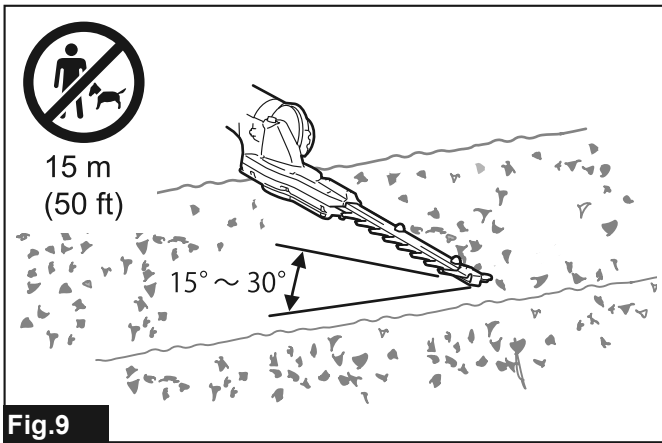


Fig.9

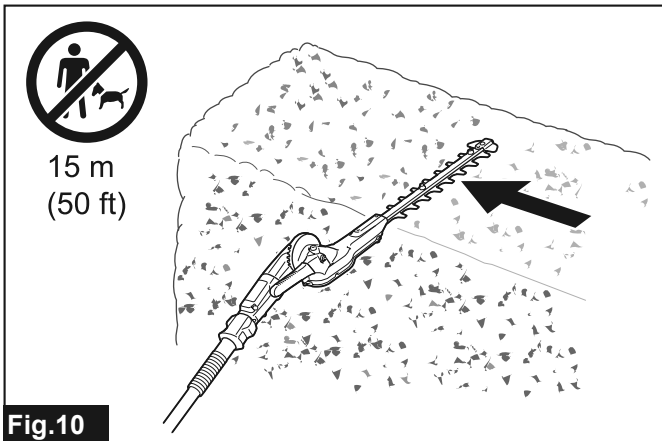


Fig.10

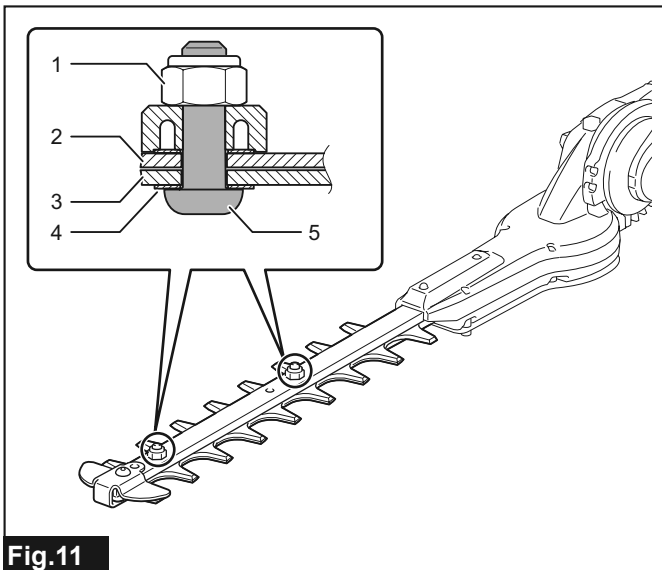


Fig.11

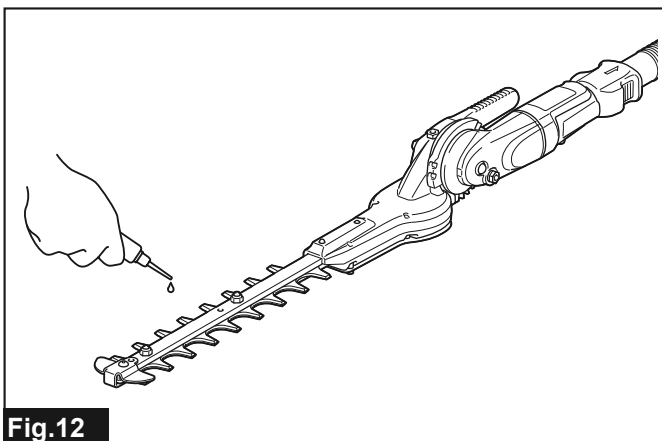


Fig.12

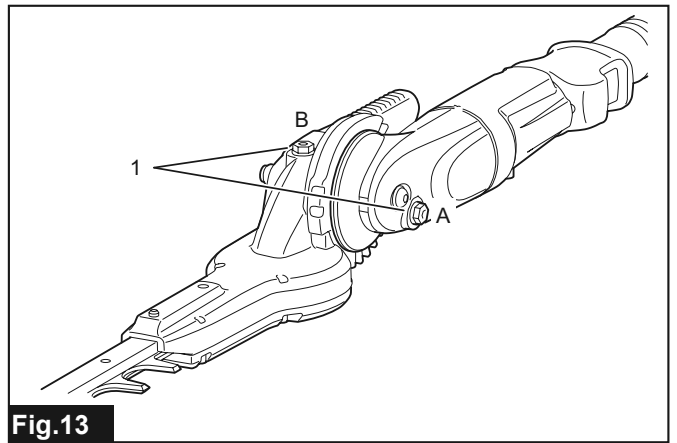


Fig.13

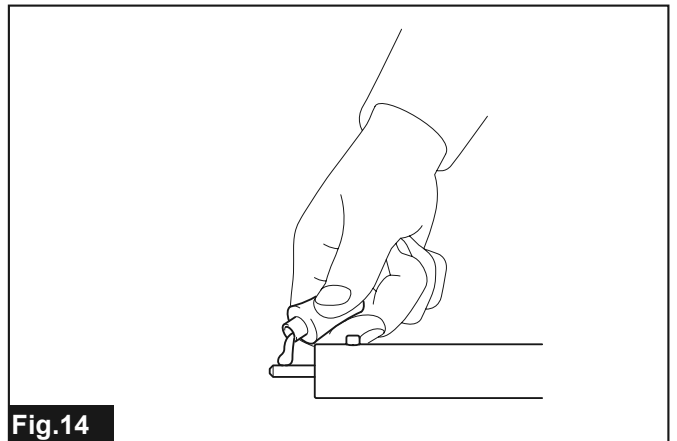


Fig.14

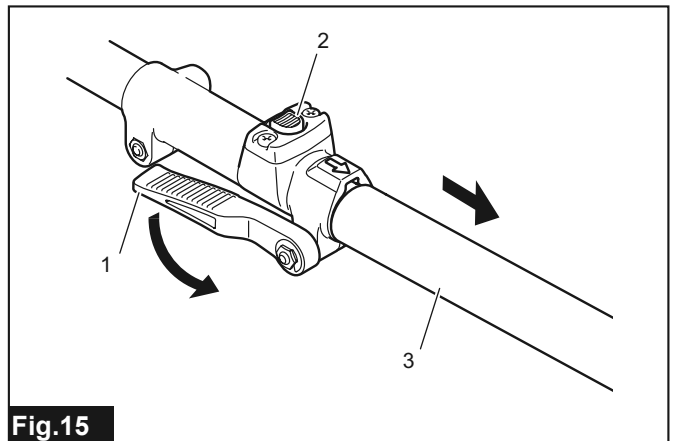


Fig.15

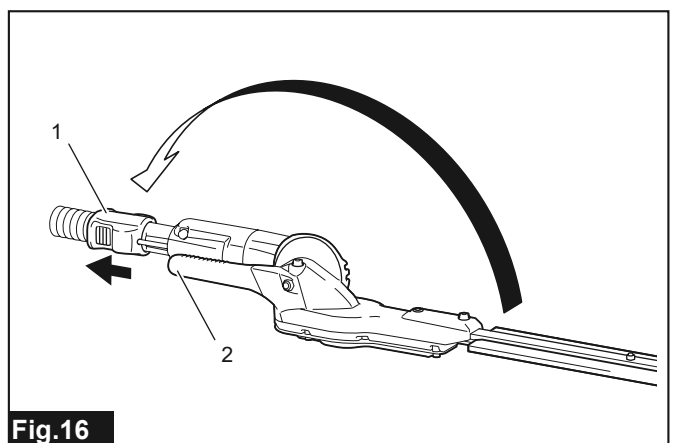


Fig.16

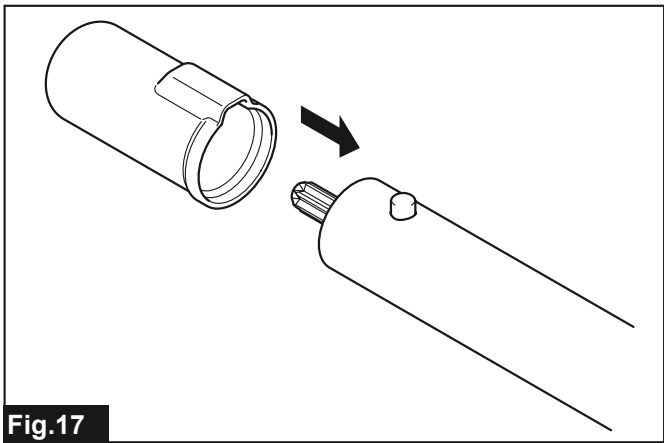


Fig.17

SPECIFICATIONS

Model:	EN420MP
Dimensions (L x W x H)	1,324 mm x 104 mm x 103 mm (52" x 4-1/8" x 4-1/16")
Net weight	2.6 kg (5.93 lbs)
Effective cutting length	250 mm (9-7/8")
Gear ratio	1 : 4.78

- Due to our continuing program of research and development, the specifications herein are subject to change without notice.
- Specifications may differ from country to country.

Approved power unit




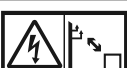





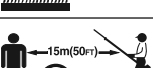

⚠WARNING: Never use the attachment with non-approved power unit. Non-approved combination may cause serious injury.

This attachment is approved to use only with the following power unit(s):

- (Multi Function Power Head)
EX2650LH
- (Cordless Multi Function Power Head)
BUX360, BUX361, BUX362, UX360D, UX361D, UX362D, DUX60

Symbols

The following show the symbols used for the equipment. Be sure that you understand their meaning before use.

	Read and follow the instruction manual.
	Take particular care and attention!
	Forbidden!
	Beware of electrical lines. Risk of electrical shock.
	Beware of pinching.
	Wear protective gloves.
	Wear protective helmet, eye and ear protection.
	Wear sturdy boots with non-slip soles.
	Hot surfaces - Burns to fingers or hands.
	Keep bystanders and animals at least 15 m (50 ft) away from the power tool.
	Keep the area of operation clear of all persons and pets.
	First aid

Intended use

This attachment is designed for only the purpose of trimming shrubs, hedges, and grasses on the ground in conjunction with an approved power unit. Never use the attachment for the other purpose. Abusing the attachment may cause serious injury.

EC Declaration of Conformity

For European countries only

The EC declaration of conformity is included as Annex A to this instruction manual.

IMPORTANT SAFETY INSTRUCTIONS

⚠WARNING: Read all safety warnings and all instructions in this booklet and the instruction manual of the power unit. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

⚠WARNING: Save all warnings and instructions for future reference.

The term "ground trimmer" and "equipment" in the warnings and precautions refer to the combination of the attachment and the power unit.

The term "motor" in the warnings and precautions refers to the engine or electric motor of the power unit.

General precautions

1. Before starting the ground trimmer, read this booklet and the instruction manual of the power unit to become familiar with the handling of the ground trimmer.
2. Do not lend the attachment to a person with insufficient experience or knowledge regarding handling of ground trimmers.
3. When lending the attachment, always attach this instruction manual.
4. Do not allow children or young persons under 18 years old to use the ground trimmer. Keep them away from the ground trimmer.
5. Handle the ground trimmer with the utmost care and attention.
6. Never use the ground trimmer after consuming alcohol or drugs, or if feeling tired or ill.
7. Never attempt to modify the attachment.
8. Follow the regulations about handling of ground trimmers in your country.

Personal protective equipment

► Fig.1

1. Wear safety helmet, protective goggles and protective gloves to protect yourself from flying debris or falling objects.
2. Wear ear protection such as ear muffs to prevent hearing loss.
3. Wear proper clothing and shoes for safe operation, such as a work overall and sturdy, non-slip shoes. Do not wear loose clothing or jewelry. Loose clothes, jewelry or long hair can be caught in moving parts.
4. When touching blades or adjusting the blade angle, wear protective gloves. Blades can cut bare hands severely.

Work area safety

⚠WARNING: Keep the ground trimmer away from electric lines and communication cables. Touching or approaching high-voltage lines with ground trimmer can result in death or serious injury. Watch power lines and electrical fences around the work area before starting operation.

⚠WARNING: Use of this product can create dust containing chemicals which may cause respiratory or other illnesses. Some examples of these chemicals are compounds found in pesticides, insecticides, fertilizers and herbicides. Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

1. Operate the ground trimmer under good visibility and daylight conditions only. Do not operate the ground trimmer in darkness or fog.
2. Start and operate the engine only outdoors in a well ventilated area. Operation in a confined or poorly ventilated area can result in death due to suffocation or carbon monoxide poisoning.

3. During operation, never stand on an unstable or slippery surface or a steep slope. During the cold season, beware of ice and snow and always ensure secure footing.
4. During operation, keep bystanders or animals at least 15 m away from the ground trimmer. Stop the motor as soon as someone approaches.
5. Before operation, examine the work area for wire fences, stones, or other solid objects. They can damage the blades.

Putting into operation

1. Before assembling or adjusting the equipment, switch off the motor and remove the spark plug cap or the battery cartridge.
2. Before assembling the blades or adjusting the cutting angle, wear protective gloves.
3. Before starting the motor, inspect the equipment for damages, loose screws/nuts or improper assembly. Replace if the blades are cracked, bent, or damaged. Check all control levers and switches for easy action. Clean and dry the handles.
4. Never attempt to start the motor if the equipment is damaged or not fully assembled. Otherwise serious injury may result.
5. Before starting the motor, carefully check that the blade is not touching the ground, your body, and other objects. Starting the motor with the blade contacting with foreign object can cause serious accident.
6. Adjust the shoulder harness and hand grip to suit the operator's body size.

Operation

1. In the event of an emergency, switch off the motor immediately.
2. If you feel any unusual condition (e.g. noise, vibration) during operation, switch off the motor. Do not use the ground trimmer until the cause is recognized and solved.
3. The blades continue to move for a short period after releasing the throttle trigger or switch off the motor. Don't rush to contact the blades.
4. With the engine running only at idle, attach the shoulder harness.
5. During operation, use the shoulder harness. Keep the ground trimmer on your right side firmly.

► Fig.2

6. Hold the front handle with the left hand and the rear grip with the right hand, no matter you are right-hander or left-hander. Wrap your fingers and thumbs around the handles.
7. Never attempt to operate the equipment with one hand. Loss of control may result in serious or fatal injury. To reduce the risk of cut injuries, keep your hands and feet away from the blades.
8. Do not overreach. Keep proper footing and balance at all times. Watch for hidden obstacles such as tree stumps, roots and ditches to avoid stumbling. Clear fallen branches and other objects away.
9. Never work on a ladder or tree to avoid loss of control.
10. Do not hold the machine above shoulder height.
11. During operation, never hit the blades against hard obstacles such stones and metals. Take particular care when cutting hedges next to or against wire fences. When working close to the ground, make sure that no sand, grit or stones get between the blades.
12. If the blades come into contact with stones or other solid objects, stop the motor immediately and check the blades for damage after removing the spark plug or the battery cartridge. Replace the blades if damaged.
13. If thick branches get jammed in the blades, immediately switch off the motor, put the ground trimmer down and then remove the obstruction after removing the spark plug or the battery cartridge. Check the blades for damage before using the equipment again.
14. Never touch or approach the blades while they are moving. Blades can cut your finger easily. When handling the blades or adjusting the blade angle, stop the motor and remove the spark plug cap or the battery cartridge.
15. Accelerating the motor with the blades blocked increases the load and will damage the motor and/or clutch.
16. Check the cutting blades frequently during operation for cracks or blunt edges. Before the inspection, switch off the motor and wait until the blades stop completely. Replace damaged or dull blades immediately, even if they have only superficial cracks.
17. If the equipment gets heavy impact or fall, check the condition before continuing work. Check the fuel system for fuel leakage and the controls and safety devices for malfunction. If there is any damage or doubt, ask our authorized service center for the inspection and repair.
18. Do not touch the gear case. The gear case becomes hot during operation.
19. Take a rest to prevent loss of control caused by fatigue. We recommend to take a 10 to 20-minute rest every hour.

20. When you leave the equipment, even if it is a short time, always switch off the engine or remove the battery cartridge. The equipment unattended with the engine running may be used by unauthorized person and cause serious accident.
21. Before cutting, pull the throttle lever fully to achieve the maximum speed.
22. Follow the instruction manual of the power unit for proper use of the control lever and switch.
23. During or after operation, do not put the hot equipment onto dry grass or combustible materials.

Transport

1. Before transporting the equipment, switch off the motor and remove the spark plug cap or battery cartridge. Always fit the blade cover during transportation.
2. When carrying the equipment, carry it in a horizontal position by holding the shaft. Keep the hot muffler away from your body.
3. When transporting the equipment in a vehicle, properly secure it to avoid turnover. Otherwise fuel spillage and damage to the equipment and other baggage may result.

Maintenance

1. Before doing any maintenance or repair work or cleaning the equipment, always switch off the motor and remove the spark plug cap or the battery cartridge. Wait until the motor gets cold.
2. To reduce the risk of fire, never service the equipment in the vicinity of fire.
3. Always wear protective gloves when handling the blades.
4. Always clean dust and dirt off the equipment. Never use gasoline, benzine, thinner, alcohol or the like for the purpose. Discoloration, deformation or cracks of the plastic components may result.
5. After each use, tighten all screws and nuts, except for the carburetor adjustment screws.
6. Keep the cutting tool sharp. If the cutting blades have become blunt and cutting performance is poor, ask our authorized service center to sharpen the blades.
7. Never repair bent or broken blades by straightening or welding. It may cause parts of the blades to come off and result in serious injury. Contact our authorized service center for Makita genuine blades to replace them.
8. Do not attempt any maintenance or repair not described in this booklet or the instruction manual of the power unit. Ask our authorized service center for such work.
9. Always use Makita genuine spare parts and accessories only. Using parts or accessories supplied by a third party may result in the equipment breakdown, property damage and/or serious injury.
10. Request our authorized service center to inspect and maintain the ground trimmer at regular interval.

Storage

1. Before storing the equipment, perform full cleaning and maintenance. Fit the blade cover.
2. Store the equipment in a dry and high or locked location out of reach of children.
3. Do not prop the equipment against something, such as a wall. Otherwise the ground trimmer may fall suddenly and cause an injury.

First aid

1. Always have a first-aid kit close by. Immediately replace any item taken from the first aid kit.
2. **When asking for help, give the following information:**
 - **Place of the accident**
 - **What happened**
 - **Number of injured persons**
 - **Nature of the injury**
 - **Your name**

PARTS DESCRIPTION

- Fig.3: 1. Blade 2. Gear case 3. Cutter unit handle 4. Angle lock 5. Cap 6. Blade cover

ASSEMBLY

⚠WARNING: Before assembling or adjusting the equipment, switch off the motor and remove the spark plug cap or the battery cartridge. Otherwise blades or other parts may move and result in serious injury.

⚠WARNING: Before handling or working around blades, wear protective gloves and put the blade cover onto blades. Otherwise the blades can cut bare hands severely.

⚠WARNING: When assembling or adjusting the equipment, always put it down. Assembling or adjusting the equipment in an upright position may result in serious injury.

⚠WARNING: Follow the warnings and precautions in the chapter "Safety precautions" and the instruction manual of the power unit.

Mounting the attachment to a power unit

To mount the attachment to a power unit, follow the steps below.

1. Make sure that the lock lever is not tightened.
2. Align the pin with the arrow mark.
3. Insert the shaft into the drive shaft of the power unit until the position line and the release button pops up.
4. Tighten the lock lever firmly as shown.

► **Fig.4:** 1. Lock lever 2. Release button 3. Arrow mark 4. Pin
5. Position line

To remove the attachment, loosen the lock lever by turning the lock lever opposite direction, and press the lock button and withdraw the shaft.

NOTICE: Do not tighten the lock lever without the shaft of the equipment inserted. Otherwise the lock lever may tighten the entrance of the drive shaft too much and damage it.

Cutting angle adjustment

⚠CAUTION: When adjusting the cutting angle, always switch off the motor and remove the battery cartridge then lay the ground trimmer flat on the ground.

⚠CAUTION: Do not adjust the cutting angle when the ground trimmer is in an upright position.

⚠CAUTION: Always secure the blades with the blade cover provided before adjusting cutting angle.

⚠CAUTION: Always use the cutter unit handle when adjusting the cutting angle. Grabbing the blade may result in a personal injury.

Hold the cutter unit handle and move the blade to your desired angle while pulling the angle lock. The cutting angle can be adjusted in the range as illustrated in the figure.

► **Fig.5:** 1. Angle lock 2. Cutter unit handle

NOTE: The cutter unit is fastened only with certain angles alongside the groove on the unit. Make sure the cutter unit sits properly. If the angle is not appropriate, the clutch is cut and the tool does not operate.

In case the cutter unit is loose, the bolt (the axis of angle adjustment) needs to be tightened.

Set the socket wrench and the hex wrench on the bolt. Adjust the tightness of the cutter unit by turning hex wrench and then fasten the bolt by turning the socket wrench.

► **Fig.6:** 1. Socket wrench 2. Bolt 3. Hex wrench

NOTE: Do not fasten the cutter unit too tight. The angle of the cutter unit can not be changed if it is too tight.

OPERATION

⚠WARNING: If the blades move at idle, adjust the idle speed of the engine down. Otherwise you cannot stop the blades with throttle off and it may cause serious injury.

⚠WARNING: Follow the warnings and precautions in the chapter "IMPORTANT SAFETY INSTRUCTIONS" and the instruction manual of the power unit.

Grass shearing

When shearing grasses, follow the steps below.

1. Pull the throttle lever fully.
 2. Apply the blades to the grass parallel to the ground.
 3. Shear the grass with a right to left swinging movement.
- **Fig.7**

Hedge trimming

When trimming hedges vertically, follow the steps below.

1. Pull the throttle lever fully.
2. Apply the blades to the hedge parallel to each other.
3. Trim the hedge from the bottom upwards with a swinging movement.

► **Fig.8**

When trimming hedges horizontally, follow the steps below.

1. Pull the throttle lever fully.
2. Apply the blades to the hedge with an angle of 15° to 30°.
3. Trim the hedge with a right to left swinging movement.

► **Fig.10**

MAINTENANCE

⚠WARNING: Before inspecting or maintaining the equipment, switch off the motor and remove the spark plug cap or the battery cartridge. Otherwise blades or other parts may move and result in serious injury.

⚠WARNING: Before handling or working around blades, wear protective gloves and put the blade cover onto blades. During the assembly or adjustment, your fingers may contact with blades and it may cause serious injury.

⚠WARNING: When inspecting or maintaining the equipment, always put the equipment down. Assembling or adjusting the equipment in an upright position may result in serious injury.

⚠WARNING: Follow the warnings and precautions in the chapter "IMPORTANT SAFETY INSTRUCTIONS" and the instruction manual of the power unit.

Inspecting blades

Check the blades daily for damage, crack and dull edge. Ask our authorized service center to replace damaged blades or sharpen dull blades.

Adjusting the blade clearance

The upper/lower blades wear out gradually after operations. If you cannot get a clean cut though the blades are sharp enough, adjust the clearance as follows.

The tightness of the hex bolt decides the clearance of the blades. The nut holds the hex bolt with certain tightness. Too loose clearance causes blunt cut, but too tight clearance causes unnecessary heat and sooner worn-out of the blades.

1. Loosen the nuts with a wrench.
2. Tighten the hex bolts lightly till they stop. And then, screw them back a quarter to half turn each to gain necessary clearance.
3. Hold the hex bolts and tighten the nuts.
4. Apply light oil on the friction surface of the blades.
5. Start the motor and operate the throttle on and off for a minute.
6. Measure the time necessary for the blades to stop after releasing the throttle. If it is two seconds or longer, switch off the motor and repeat the step 1 to 6.
7. Switch off the motor and touch the blade surface. If they are not too hot to touch, you have made a proper adjustment. If they are too hot to touch, turn the hex bolts back a little and repeat the step 5 to 7.

► **Fig.11:** 1. Nut 2. Upper blade 3. Lower blade 4. Plate 5. Hex bolt

Lubricating moving parts

NOTICE: Follow the instruction of the frequency and amount of grease supplied. Otherwise insufficient lubrication may damage moving parts.

► Fig.12

Gear case:

⚠CAUTION: Do not apply grease when the gear case is hot. Hot gear case can cause burn injury.

Apply grease every 25 working hours.

1. The grease hole locates under the bolt. Remove the bolt to lubricate.
2. Add approx. 3 g (4 cc) of lubricant to the point A of the gearbox and 5 g (7 cc) of the lubricant to the point B respectively via the grease hole.
3. Return the bolt after lubrication.

► Fig.13: 1. Grease hole

NOTE: After filling correct amount of grease, grease will come out a bit from the base of the blade during the first operation.

Drive axle:

Apply grease every 25 working hours.

► Fig.14

Overall inspection

- Tighten loose bolts, nuts and screws.
- Check for damaged parts and blades. Ask our authorized service center to replace them if necessary.

Storage

⚠WARNING: Follow the warnings and precautions in the chapter "IMPORTANT SAFETY INSTRUCTIONS" and the instruction manual of the power unit.

When storing the attachment, always remove it from the power unit.

1. Turn the lock lever to the direction in the figure and pull out the attachment while pressing the release button.

► Fig.15: 1. Lock lever 2. Release button 3. Attachment

2. Attach the blade cover. Hold the cutter unit handle and fold the blade as shown while pulling the angle lock.

► Fig.16: 1. Angle lock 2. Cutter unit handle

3. Attach the cap onto the end of the shaft.

► Fig.17

MAINTENANCE INTERVAL

		Before operation	Daily (10h)	25 h	If required
Whole unit	Visually inspect for damaged parts	○	-	-	-
All fixing screws and nuts	Tighten	○	-	-	-
Blades	Inspect for damage, crack and dull edge	-	○	-	-
	Adjust the clearance	-	-	-	○
Gear case	Supply grease	-	-	○	-
Drive axle	Supply grease	-	-	○	-
Power unit	Refer to the instruction manual of the power unit				

TROUBLE SHOOTING

State of abnormality	Probable cause (malfunction)	Remedy
The motor does not start.	Refer to the instruction manual of the power unit.	Refer to the instruction manual of the power unit.
The motor stops soon after its start.	Refer to the instruction manual of the power unit.	Refer to the instruction manual of the power unit.
The maximum speed is limited.	Refer to the instruction manual of the power unit.	Refer to the instruction manual of the power unit.
The blades do not move. ⇒ Stop the motor immediately!	Inappropriate angle of cutter unit.	Make sure the angle lock engages properly.
The blades do not move. ⇒ Stop the motor immediately!	A twig is caught by the blades.	Remove the foreign matter.
The blades do not move. ⇒ Stop the motor immediately!	The drive system does not work properly.	Ask our authorized service center to inspect and repair it.
The unit vibrates abnormally. ⇒ Stop the motor immediately!	The drive system does not work properly.	Ask our authorized service center to inspect and repair it.
The blades do not stop. ⇒ Stop the motor immediately!	The power unit does not work properly.	Refer to the instruction manual of the power unit.

OPTIONAL ACCESSORIES

⚠CAUTION: These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita Service Center.

- Blade set
- Grease set

NOTE: Some items in the list may be included in the tool package as standard accessories. They may differ from country to country.