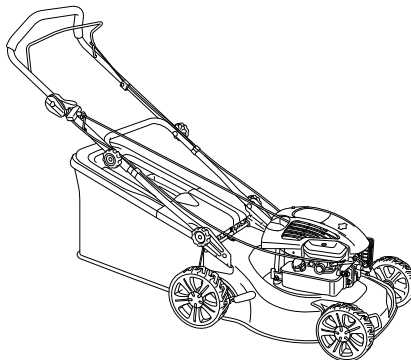


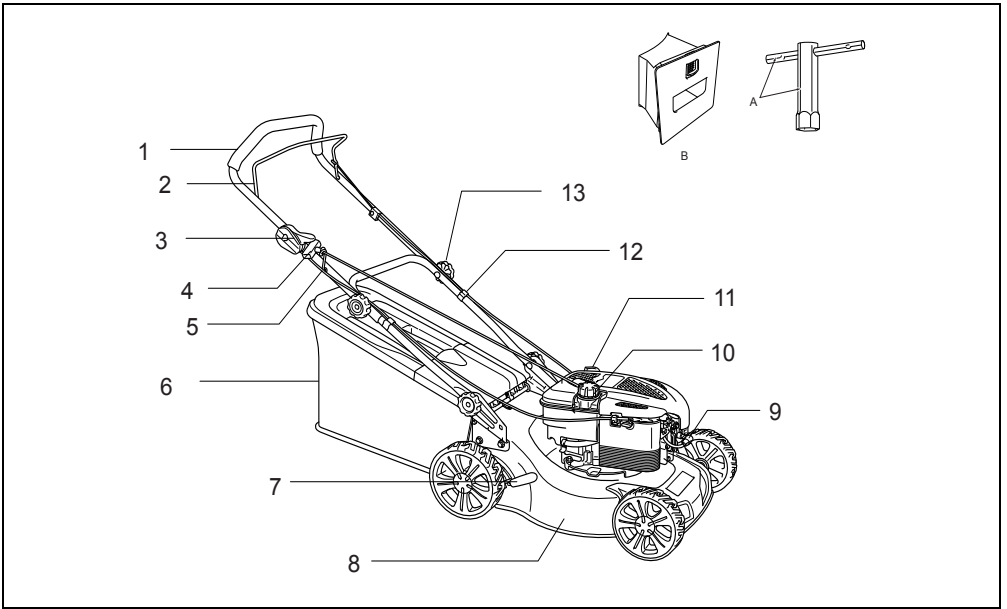


GB Petrol Lawn Mower

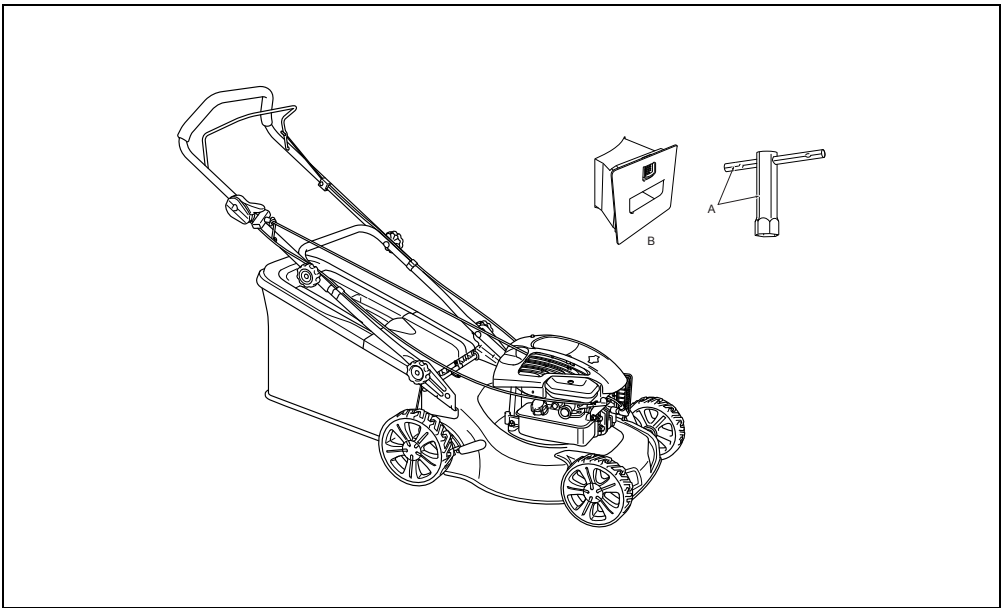
Original Instruction manual

PLM4110
PLM4610

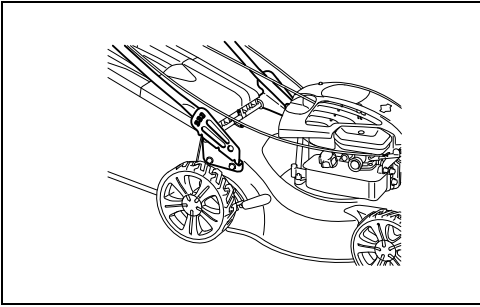




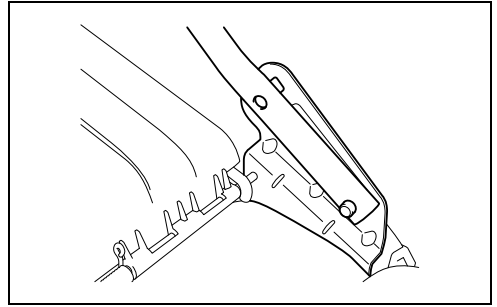
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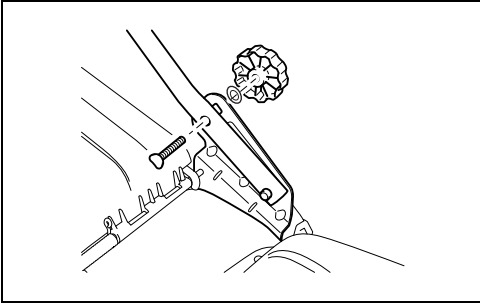
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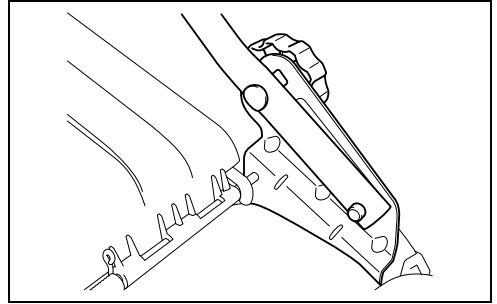
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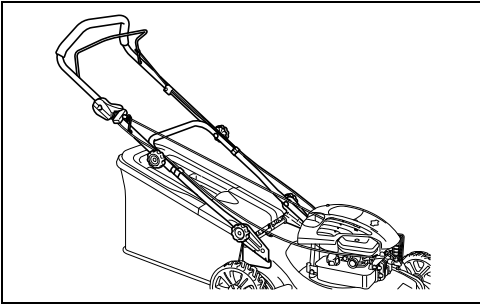
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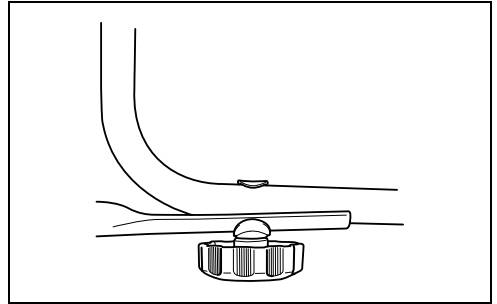
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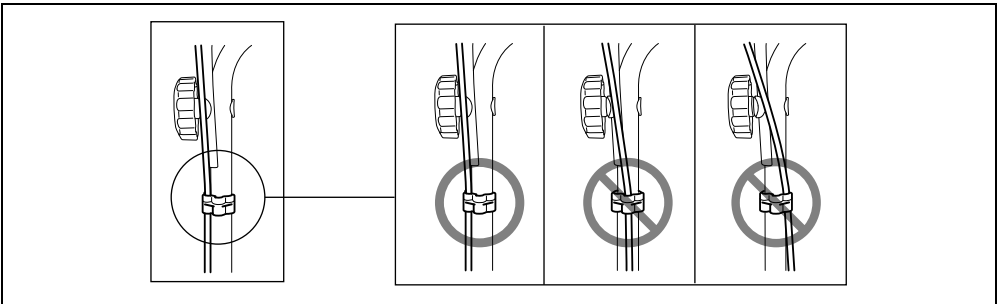
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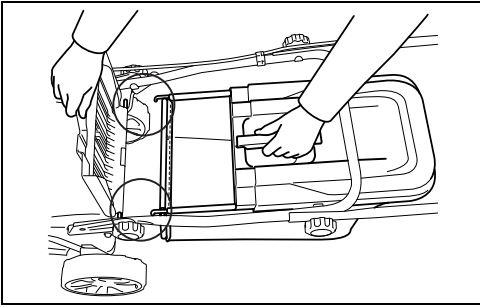
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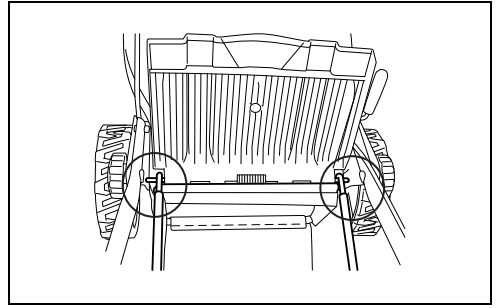
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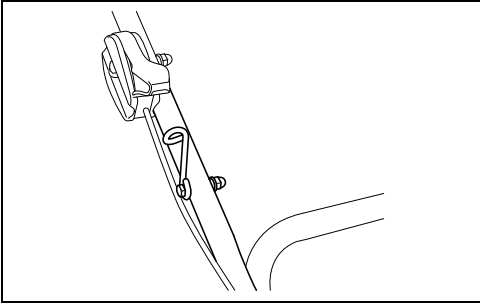
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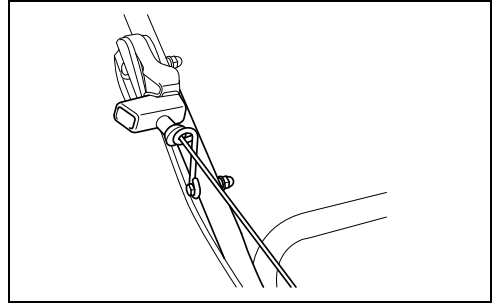
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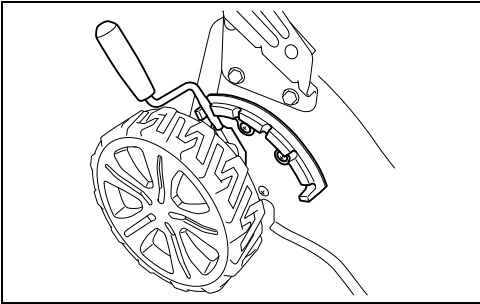
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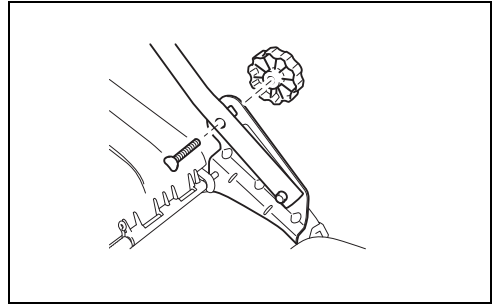
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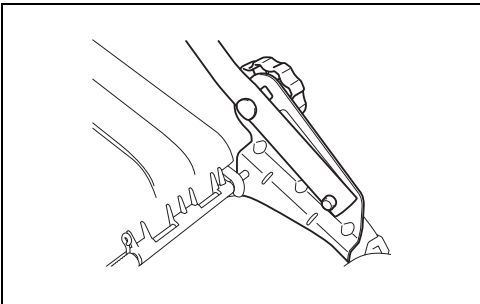
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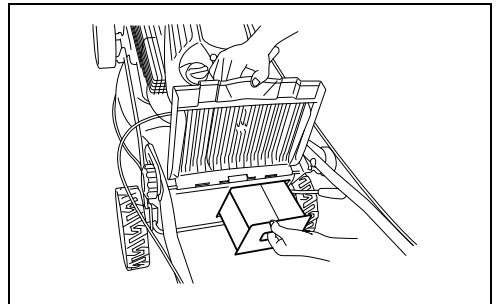
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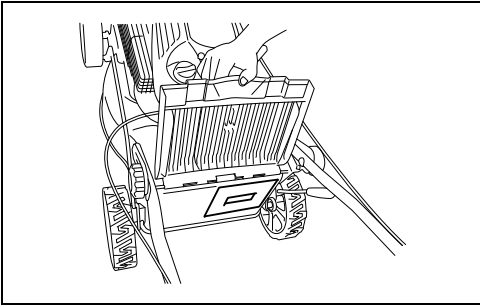
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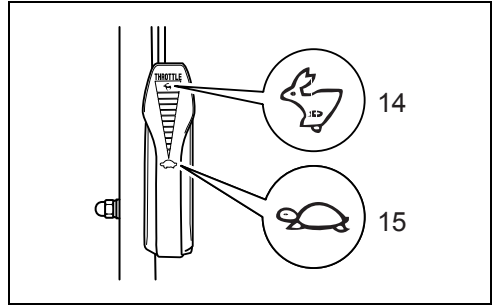
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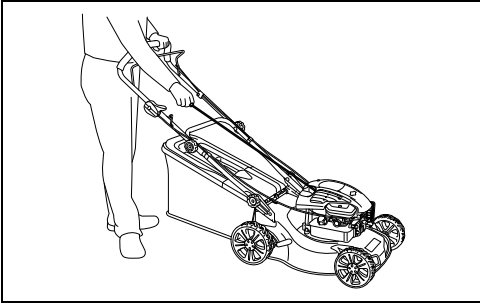
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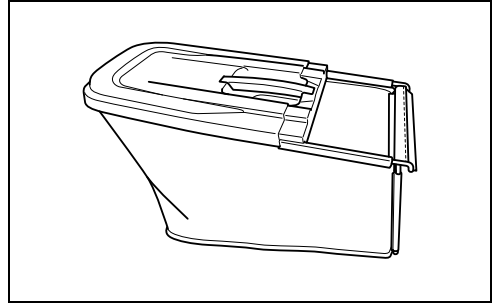
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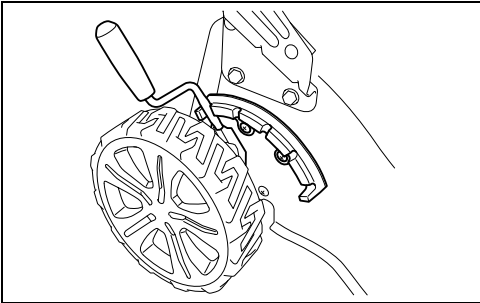
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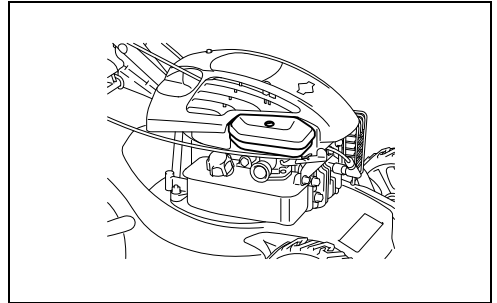
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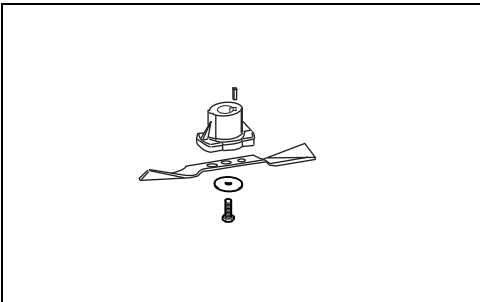
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Explanation of general view

- | | | |
|------------------------|---------------------------|------------------|
| 1. Upper handle | 6. Grass sack | 11. Oil cap |
| 2. Stop control handle | 7. Height adjusting lever | 12. Cable clamp |
| 3. Engine speed lever | 8. Deck | 13. Locking knob |
| 4. Starter handle | 9. Spark Plug | 14. Fast speed |
| 5. Rope guide | 10. Fuel cap | 15. Slow speed |



WARNING

For your own safety please read this manual before attempting to operate your new unit. Failure to follow instructions can result in serious personal injury. Spend a few moments to familiarize yourself with your mower before each use.

1. SYMBOLS MARKED ON THE PRODUCT



Read operator's manual.



Keep bystanders away.



Pay more attention to the operator's hands and feet to avoid injured.



Fuel is flammable, keep fire away. Do not add fuel with running machine.



Toxic fumes; Don't operate inside house.



When mowing, please wear the glasses and ear plugs to defend the operator himself.



When repairing, please pick up the spark plug, then repair it according to the operational manual.



Caution: Engine hot.



Release stop handle to stop the motor.

2. GENERAL SAFETY RULES



WARNING: When using petrol tools, basic safety precautions, including the following, should always be followed to reduce the risk of serious personal injury and/ or damage to the unit.

Read all these instructions before operating this product and retain these instructions for future reference.

Training

- Read the instructions carefully. Be familiar with the controls and the proper use of the equipment.
- Never allow children or people unfamiliar with these instructions to use the lawn mower. Local regulations can restrict the age of the operator.
- Never mow while people, especially children, or pets are nearby.
- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

Preparation

- While mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
- Thoroughly inspect the area where the equipment is to be used and remove all objects which can be thrown by the machine.
- **WARNING-** Petrol is highly flammable.
 - store fuel in containers specifically designed for this purpose;
 - refuel outdoors only and do not smoke while refueling;
 - add fuel before starting the engine. Never remove the cap of the fuel tank or add petrol while the engine is running or when the engine is hot;
 - if petrol is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapors have dissipated;
 - replace all fuel tank and container caps securely.
- Replace faulty silencers.

- Before using, always visually inspect to see that the blades, blade bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts in sets to preserve balance.

Operation

- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
- Mow only in daylight or in good artificial light.
- Avoid operating the equipment in wet grass, where feasible.
- Always be sure of your footing on slopes.
- Walk, never run.
- For wheeled rotary machines, mow across the face of slopes, never up and down.
- Exercise extreme caution when changing direction on slopes.
- Do not mow excessively steep slopes.
- Use extreme caution when reversing or pulling the lawn mower towards you.
- Stop the blade(s) if the lawn mower has to be tilted for transportation when crossing surfaces other than grass, and when transporting the lawn mower to and from the area to be mowed.
- Never operate the lawn mower with defective guards, or without safety devices, for example deflectors and/or grass catchers, in place.
- Do not change the engine governor settings or overspend the engine.
- Disengage all blade and drive clutches before starting the engine.
- Start the engine carefully according to instructions and with feet well away from the blade(s).
- Do not tilt the lawn mower when starting the engine.
- Do not start the engine when standing in front of the discharge chute.
- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- Never pick up or carry a lawn mower while the engine is running.
- Stop the engine and disconnect the spark plug wire, make sure that all moving parts have come to a complete stop and, where a key is fitted remove the key:
 - before clearing blockages or unclogging chute;
 - before checking, cleaning or working on the lawn mower;
 - after striking a foreign object. Inspect the lawn mower for damage and make repairs before restarting and operating the lawn mower;

- if lawn mower starts to vibrate abnormally (check immediately).
- Stop the engine and disconnect the spark plug wire, make sure that all moving parts have come to a complete stop and, where a key is fitted remove the key:
 - whenever you leave the lawn mower;
 - before refueling.
- Reduce the throttle setting during engine shut down and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of mowing.
- Only use the lawn mower for the purpose for which it is designed, for cutting and collecting grass. Any other use can be hazardous, causing damage to the machine.

Maintenance and storage

- Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- Never store the equipment with petrol in the tank inside a building where fumes can reach an open flame or spark.
- Allow the engine to cool before storing in any enclosure.
- To reduce the fire hazard, keep the engine, silencer, battery compartment and petrol storage area free of grass, leaves, or excessive grease.
- Check the grass catcher frequently for wear or deterioration.
- Replace worn or damaged parts for safety.
- If the fuel tank has to be drained, this should be done outdoors.



WARNING: Do not touch rotating blade.



WARNING: Refuel in a well ventilated area with the engine stopped.

3. PARTS DESCRIPTION (Fig. 1 & 2)

Including

- A: Spark plug wrench
- B: Mulching wedge

4. TECHNICAL DATA

Model	PLM4110	PLM4610
Engine type	B&S 500 series, 10T5, Family 8BSXS.1581VG	B&S 625 series, 122T, Family 8BSXS.1901VG
Self Propel	No	No
Engine Displacement	158 cc	190 cc
Blade Width	410 mm	460 mm
Idle Speed	2,800/min	2,800/min
Fuel Tank Capacity	0.8L	1.0L
Oil tank capacity	0.6L	0.6L

Model	PLM4110	PLM4610
Grass catch bag capacity	50L	60L
Net Weight	27.5 kg	31.1 kg
Height adjustment	20-75 mm, 5 adjustment	20-75 mm, 5 adjustment
Noise according to EN836		
Sound pressure level (L_{pA}):	82 dB (A)	83.5 dB (A)
Sound power level (L_{wA}):	93.3 dB (A)	93.6 dB (A)
Uncertainty (K):	2.41 dB (A)	2.47 dB (A)
Vibration according to EN836		
Vibration emission (a_h):	4.7 m/s ²	5.7 m/s ²
Uncertainty (K):	1.5 m/s ²	1.5 m/s ²

5. ASSEMBLY

5-1 ASSEMBLY THE FOLDING HANDLE

- Fix the lower handlebars into the unit body with locking knobs as shown. (**Fig. 3, Fig. 4, Fig. 5, Fig. 6**)
- Release the upper handlebars for folding. Connect the upper handle and the lower handle with the locking knob. (**Fig. 7, Fig. 8**)
- Position all cables over the handle shafts. Clamp them around the middle of lower handles by the cable clamps so that the cables are fixed on the outside of the machine. Otherwise the cables may be pinched by opening/closing the rear cover or forced by folding the upper handle. (**Fig. 9**)

5-2 ASSEMBLY THE GRASS CATCHER

- To fit: Lift the rear cover and hang the grass catcher on the shaft of rear of mower. (**Fig. 10, Fig. 11**)
- To remove: Grasp and lift the rear cover, remove grass catcher.

5-3 STARTER HANDLE

Move the starter handle from the engine to the rope guide. (**Fig. 12, Fig. 13**)

5-4 HEIGHT OF CUT

Apply outward pressure to disengage lever from rack. Move lever forward or back to adjust height. (**Fig. 14 and see clause 7-9**)

6. ADJUSTMENT FOR AN APPROPRIATE HEIGHT

- Back out the locking knob which fixed the lower handle, refer to **Fig. 15**.
- Refer to **Fig. 16**, move the lower handle up and down, adjust it to the proper height.
There is 3 adjusting height to be choose on this type lawn mower; at 1 height, lower handle to the ground is highest., 3 height is the lowest.
- Adjusting to the proper height, then fix the lower handle by the locking knobs.



WARNING: The left side and right side of lower handle must adjust to the same height.

7. MULCHING MOWER

What is mulching?

When mulching, the grass is cut in one working step, then finely chopped and returned to the grass strip as natural fertilizer.

Hints for mulch-mowing:

- Regular cut-back by max. 2 cm from 6 cm to 4 cm grass height.
- Use a sharp cutting knife.
- Do not mow wet grass.
- Set max. Motor speed.
- Only move at working pace.
- Regularly clean mulching wedge, housing inner side and mowing blade.



WARNING: Only with a stopped motor and standstill cutter.

- Raise the rear cover and remove the grass catcher;
- Push the mulching wedge into the deck. Lock the mulching wedge with the button into the opening on the deck. (**Fig. 17, Fig. 18**)
- Lower the rear cover again.

8. OPERATING INSTRUCTIONS

8-1 BEFORE STARTING

Service the engine with gasoline and oil as instructed in the separate engine manual packed in your mower. Read instructions carefully.



WARNING: Petrol is highly flammable.

Store fuel in containers specifically designed for this purpose.

Refuel outdoors only, before starting the engine and do not smoke while refueling or handling fuel.

Never remove the cap of the fuel tank or add petrol while the engine is running or when the engine is hot.

If petrol is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapors have dissipated.

Replace all fuel tanks and container caps securely.

Before tipping the lawn mower to maintain the blade or drain oil, remove fuel from tank.



WARNING: Never fill fuel tank indoors, with engine running or until the engine has been allowed to cool for at least 15 minutes after running.

8-2 TO START ENGINE AND ENGAGE BLADE

1. The unit is equipped with a rubber boot over the end of the spark plug, make certain the metal loop on the end of the spark plug wire (inside the rubber boot) is fastened securely over the metal tip on the spark plug.
2. When starting cool engine, turn engine speed lever to “☁” position. When starting warm engine and Operating, turn engine speed lever to “☁☁” position. (Fig. 19)
3. Standing behind the unit, grasp the stop control handle and hold it against the upper handle as shown in Fig. 20.
4. Grasp the starter handle as shown Fig. 20 and pull it up rapidly. Return it slowly to the rope guide bolt after engine starts. Release the stop control handle to stop the engine and blade.



Start the engine carefully according to instructions and with feet well away from the blade.



Do not tilt the lawn mower when starting the engine. Start the mower on a level surface, free of high grass or obstacles.



Keep hands and feet away from the rotating parts. Do not start the engine when standing in front of the discharge opening.

8-3 OPERATION PROCEDURES

During operation, tightly hold the stop control handle with both hands.



Note: During operation, when the stop control handle is released, the engine will stop and thus stopping the lawn mower from operating.

8-4 TO STOP ENGINE



CAUTION: The blade continues to rotate for a few seconds after the engine is shut off.

1. Release the stop control handle to stop the engine and blade.
2. Disconnect and ground the spark plug wire as instructed in the separate engine manual to prevent accidental starting while equipment is unattended.

8-5 FOR THE BEST RESULTS WHEN MULCHING

Clear lawn of debris. Be sure that the lawn is clear of stones, sticks, wire or other foreign objects which could be accidentally thrown out by the mower in any direction and cause serious personal injury to the operator and others as well as damage to property and surrounding objects. Do not cut wet grass. For effective mulching do not cut

wet grass because it tends to stick to the underside of the deck preventing proper mulching of the grass clippings. Cut no more than 1/3 the length of the grass.

The recommended cut for mulching is 1/3 the length of the grass. Ground speed will need to be adjusted so the clippings can be dispersed evenly into the lawn. For especially heavy cutting in thick grass it may be necessary to use one of the slowest speeds in order to get a clean well mulched cut. When mulching long grass you may have to cut the lawn in two passes, lowering the blade another 1/3 of the length for the second cut and perhaps cutting in a different pattern than was used the first time.

Overlapping the cut a little on each pass will also help to clean up any stray clippings left on the lawn. The mower should always be operated at full throttle to get the best cut and allow it to do the most effective job of mulching. Clean underside of deck.

Be certain to clean the underside of the cutting deck after each use to avoid a build-up of grass, which would prevent proper mulching. Mulching leaves. The mulching of leaves can also be beneficial to your lawn. When mulching leaves make sure they are dry and are not laying too thick on the lawn. Do not wait for all the leaves to be off the trees before you mulch.



WARNING: If you strike a foreign object, stop the engine. Remove wire from spark plug, thoroughly inspect the mower for any damage and repair the damage before restarting and operating the mower. Extensive vibration of the mower during operation is an indication of damage. The unit should be promptly inspected and repaired.

8-6 GRASS CATCHER

Empty and clean the bag, make sure it is clean and ensure its meshwork is ventilated. (Fig. 21)

8-7 DECK

The underside of the mower deck should be cleaned after each use to prevent a buildup of grass clippings, leaves, dirt or other matter. If this debris is allowed to accumulate, it will invite rust and corrosion, and may prevent proper mulching. The deck may be cleaned by tilting the mower and scraping clean with a suitable tool (make certain the spark plug wire is disconnected).

8-8 HEIGHT ADJUSTMENT INSTRUCTIONS



CAUTION: Do not at any time make any adjustment to lawnmower without first stopping the engine and disconnecting the spark plug wire.



CAUTION: Before changing mowing height, stop mower and disconnect spark plug cable. Your mower is equipped with a central height adjustment lever offering 5 height positions.

1. Stop mower and disconnect spark plug cable before changing mower cutting height.
2. The central height adjustment lever offers you 5 different height positions.


- To change the height of cut, squeeze adjuster lever toward the wheel, moving up or down to selected height (Fig. 22). All wheels will be in the same height of cut.

9. MAINTENANCE INSTRUCTIONS

SPARK PLUG


Use only original replacement spark plug. For best results, replace the spark plug every 100 hours of use. (refer to ENGINE OWNER'S MANUAL)

10. LUBRICATION INSTRUCTIONS

 **CAUTION:** DISCONNECT SPARK PLUG BEFORE SERVICING.


- WHEELS**-Lubricate the ball bearings in each wheel at least once a season with a light oil.
- ENGINE**-Follow engine manual for lubrication instructions.
- BLADE CONTROL**-Lubricate the pivot points on the blade control handle and the brake cable at least once a season with light oil. The blade control must operate freely in both directions.

11. CLEANING

 **CAUTION:** Do not hose engine. Water can damage engine or contaminate the fuel system.

- Wipe deck with dry cloth.
- Hose under deck by tilting the mower so that the spark plug is up.


11-1 ENGINE AIR CLEANER

 **CAUTION:** Do not allow dirt or dust to clog the air filter foam element.


The engine air cleaner element must be serviced (cleaned) after 25 hours normal mowing. The foam element must be serviced regularly if the mower is used in dry dusty conditions. (refer to ENGINE OWNER'S MANUAL)


To CLEAN AIR FILTER

- Remove screw.
- Remove cover.
- Wash filter element in soap water. **DO NOT USE GASOLINE!**
- Air dry filter element.
- Place a few drops of SAE30 oil on the foam filter and squeeze tightly to remove any excess oil.
- Reinstall filter.

 **NOTE:** Replace filter if frayed, torn, damaged or unable to be cleaned. (Fig. 23 for PLM4110)

11-2 CUTTING BLADE


 **CAUTION:** Be sure to disconnect and ground the spark plug wire before working on the cutting blade to prevent accidental engine starting. Protect hands by using heavy gloves or a rag to grasp the cutting blades. Tip mower as specified in separate engine manual. Remove the hex bolt and washer which hold the blade and blade adapter to the engine crankshaft. Remove the blade and adapter from the crankshaft.

 **WARNING:** Periodically inspect the blade adapter for cracks, especially if you strike a foreign object. Replace when necessary.

For best results your blade should be sharp. The blade may be resharpened by removing it and either grinding or filing the cutting edge keeping as close to the original bevel as possible. It is extremely important that each cutting edge receives an equal amount of grinding to prevent an unbalanced blade. Improper blade balance will result in excessive vibration causing eventual damage to the engine and mower. Be sure to carefully balance blade after sharpening. The blade can be tested for balance by balancing it on a round shaft screwdriver. Remove metal from the heavy side until it balances evenly. (Fig. 24) Before reassembling the blade and the blade adapter to the unit, lubricate the engine crankshaft and the inner surface of the blade adapter with light oil. Install the blade adapter on the crankshaft with the "star" away from the engine. Refer to Fig. 24. Place the blade with the part number facing away from the adapter. Align the washer over the blade and insert the hex bolt. Tighten the hex bolt to the torque listed below.

11-3 BLADE MOUNTING TORQUE

Center Bolt must be tightened to 35 - 45 Nm torque. To insure safe operation of your unit. ALL nuts and bolts must be checked periodically for correct tightness. After prolonged use, especially in sandy soil conditions, the blade will become worn and lose some of the original shape. Cutting efficiently will be reduced and the blade should be replaced. Replace with an approved factory replacement blade only. Possible damage resulting from blade unbalance condition is not the responsibility of the manufacturer. When you change the blade, must use the original type marked on the blade (MAKITA 263001433 for PLM4110; MAKITA 263001451 for PLM4610) (for order the blade, pls. contact your local dealer or call our company)

 **WARNING:** Do not touch rotating blade.

11-4 ENGINE

Refer to the separate engine manual for engine maintenance instructions. Maintain engine oil as instructed in the separate engine manual packed with your unit. Read and follow instructions carefully. Service air cleaner as per separate engine manual under normal conditions. Clean every few hours under extremely dusty conditions. Poor engine performance and

flooding usually indicates that the air cleaner should be serviced.

To service the air cleaner, refer to the separate engine manual packed with your unit.

The spark plug should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each mowing season; check engine manual for correct plug type and gap specifications.

Clean the engine regularly with a cloth or brush. Keep the cooling system (blower housing area) clean to permit proper air circulation which is essential to engine performance and life. Be certain to remove all grass, dirt and combustible debris from muffler area.

12. STORAGE INSTRUCTIONS (OFF SEASON)

The following steps should be taken to prepare lawn mower for storage.

1. Following the final cut of the season allow the fuel tank to run dry.
2. Clean and lubricate mower thoroughly as described in the lubrication instructions.
3. Refer to engine manual for correct engine storage instructions.
4. Lightly coat mower's cutting blade with chassis grease to prevent rusting.
5. Store mower in a dry, clean area.



NOTE:

- When storing any type of power equipment in an unventilated or material storage shed;
- Care should be taken to rust-proof the equipment. Using a light oil or silicone, coat the equipment, especially cables and all moving parts.
- Be careful not to bend or kink cables.
- If the starter rope becomes disconnected from rope guide on handle, disconnect and ground the spark plug wire, Depress the blade control handle and pull the starter rope out from engine slowly. Slip the starter rope into the rope guide bolt on handle.

13. TROUBLE SHOOTING

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Engine does not start.	Throttle choke not in the correct position for the prevailing conditions.	Move throttle choke to correct position.
	Fuel tank is empty.	Fill tank with fuel: refer to ENGINE OWNERS MANUAL.
	Air cleaner element is dirty.	Clean air cleaner element: refer to ENGINE OWNERS MANUAL.
	Spark plug loose.	Tighten spark plug to 25 - 30 Nm.
	Spark plug wire loose or disconnected from plug.	Install spark plug wire on spark plug.
	Spark plug gap is incorrect.	Set gap between electrodes at 0.7 to 0.8 mm.
	Spark plug is defective.	Install new, correctly gapped plug: refer to ENGINE OWNERS MANUAL.
	Carburetor is flooded with fuel.	Remove air cleaner element and pull starter rope continuously until carburetor clears itself and install air cleaner element.
Engine difficult to start or loses power.	Faulty ignition module.	Contact Makita authorised service centre.
	Dirt, water, or stale fuel tank.	Drain fuel and clean tank. Fill tank with clean, fresh fuel.
	Vent hole in fuel tank cap is plugged.	Clean or replace fuel tank cap.
Engine operates erratically.	Air cleaner element is dirty.	Clean air cleaner element.
	Spark plug is defective.	Install new, correctly gapped plug: refer to ENGINE OWNERS MANUAL.
	Spark plug gap is incorrect.	Set gap between electrodes at 0.7 to 0.8 mm.
Engine idles poorly.	Air cleaner element is dirty.	Clean air cleaner element: refer to ENGINE OWNERS MANUAL.
	Air slots in engine shroud are blocked.	Remove debris from slots.
	Cooling fins and air passages under engine blower housing are blocked.	Remove debris from cooling fins and air passages.
Engine skips at high speed.	Gap between electrodes of spark plug is too close.	Set gap between electrodes at 0.7 to 0.8 mm.
Engine overheats.	Cooling air flow is restricted.	Remove any debris from slots in shroud, blower housing, air passages.
	Incorrect spark plug.	Install RJ19LM spark plug and cooling fins on engine.
Mower vibrates abnormally.	Cutting assembly is loose.	Tighten blade.
	Cutting assembly is unbalanced.	Balance blade.

14. ENVIRONMENT

Should your machine need replacement after extended use, do not put it in the domestic waste but dispose of it in an environmentally safe way.

For European countries only
EC Declaration of Conformity
We Makita Corporation as the responsible manufacturer declare that the following Makita machine(s):

Designation of Machine: Petrol Lawn Mower
 Model No./ Type: PLM4110, PLM4610
 Specifications: See "4. Technical Data"
 are of series production and

Conforms to the following European Directives:

2006/42/EC, 2004/108/EC, 2000/14/EC

And are manufactured in accordance with the following standards or standardised documents:

EN836/A3, EN ISO14982

The technical documentation is kept by our authorised representative in Europe who is:

Makita International Europe Ltd.,
 Michigan, Drive, Tongwell,
 Milton Keynes, MK15 8JD, England

The conformity assessment procedure required by Directive 2000/14/EC was in Accordance with annex VI.

Notified Body:

TÜV SÜD Industrie Service GmbH
 Westendstraße 199, D-80686 München
 Identification number: 0036

Model PLM4110

Measured Sound Power Level: 93.3 dB

Guaranteed Sound Power Level: 96 dB

Model PLM4610

Measured Sound Power Level: 93.6 dB

Guaranteed Sound Power Level: 96 dB

25th November 2009



Tomoyasu Kato
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PLM4610-25L-0812

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