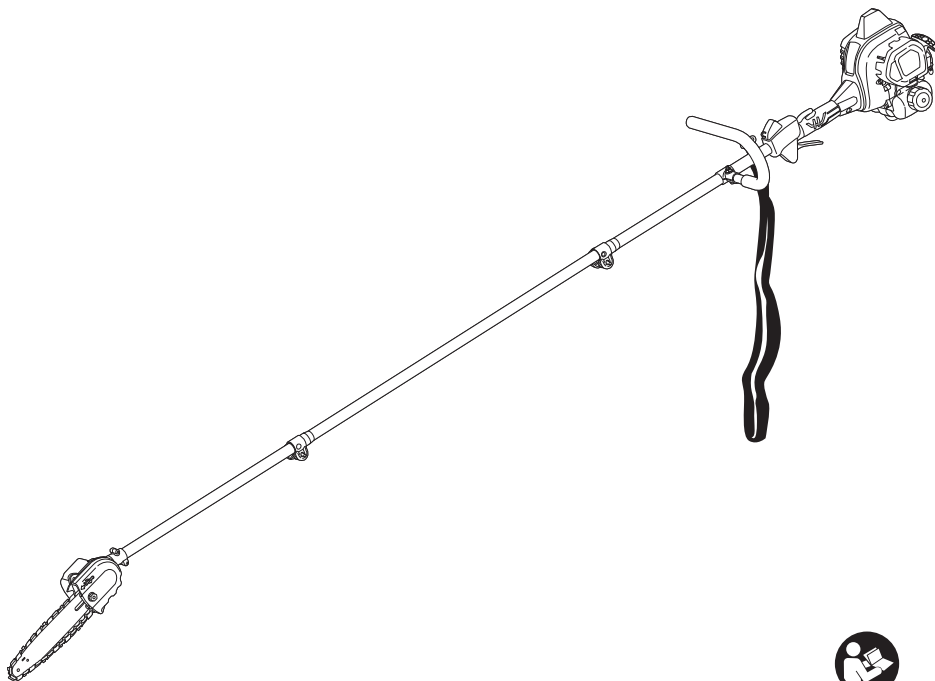


RYOBI®

RPP254FEJSO

25.4cc POLE PRUNER

OPERATOR'S MANUAL (Original Instructions)



Important!

It is essential that you read the instructions in this manual before assembling, operating, and maintaining the product.

Subject to technical modifications.

Safety, performance, and dependability have been given top priority in the design of your petrol pole pruner.

INTENDED USE

The petrol pole pruner is only intended for use outdoors. For safety reasons, the product must be adequately controlled by using two-handed operation.

The product is designed for cutting and pruning of small limbs and branches whose diameter is less than or equal to the bar length, and are located high in the tree while the operator maintains a steady footing on the ground. The product is designed to be extended to a maximum length of 2.7 m. Do not exceed this working length.

It is not intended to be used while climbing or as a conventional chainsaw for close quarter limbing and pruning of material at ground level.

Do not use the product for any other purpose.

GENERAL SAFETY WARNINGS

WARNING

For safe operation, read and understand all instructions before using the product. Follow all safety instructions, information on correct working posture, the need for rest periods, and changing working positions. Failure to follow all safety instructions listed below, can result in serious personal injury.

READ ALL INSTRUCTIONS

- Do not allow children or untrained individuals to use the product.
- Never let anyone use the product who has not received adequate instructions in the product's proper use. This applies to rentals as well as privately owned products and also to the power head it is attached to.
- Always wear safety glasses with side shields. Everyday glasses have only impact resistant lenses. They are NOT safety glasses. Following this rule will reduce the risk of eye injury.
- Product users in some states, must comply with fire prevention regulations. The product is equipped with a spark arrestor; however, other user requirements may apply. Check with your federal, state, or local authorities.
- Wear eye, hearing, and head protection when operating the product. Hearing protection may restrict the operator's ability to hear warning sounds, pay particular attention to potential hazards around and inside the working area.
- Wear heavy-long pants, boots, and gloves. Do not wear loose fitting clothing, short pants, or go barefoot. Do not wear jewellery of any kind.
- Heavy protective clothing may increase operator fatigue, which could lead to heat stroke. During weather that is hot and humid, heavy work should be scheduled for early morning or late afternoon hours when temperatures are cooler.
- Never operate the product on the operator's left side.
- Secure long hair above shoulder level to prevent entanglement in moving parts.
- Keep all bystanders, children, and pets at least 15 m away. Bystanders should be encouraged to wear eye protection. If you are approached, stop the engine and cutting attachment. In the case of bladed units, there is the added risk of injury to bystanders from being struck with the moving blade in the event of a blade thrust or other unexpected reaction of the saw.
- Do not operate the product when you are tired, ill, or under the influence of alcohol, drugs, or medication.
- Do not operate in poor lighting. The operator needs clear unrestricted vision to identify potential hazards.
- Keep firm footing and balance. Do not overreach. Overreaching can result in loss of balance or exposure to hot surfaces.
- Keep all parts of your body away from any moving part.
- To avoid hot surfaces, never operate the product with the bottom of the engine above waist level.
- Do not touch area around the muffler or cylinder of the product. These parts get hot from operation. Failure to heed this warning could result in possible serious personal injury.
- Carry the pruner with the engine stopped, the guide bar and saw chain to the rear, scabbard on the guide bar and saw chain, and the muffler away from your body.
- Always stop the engine before making any adjustments.
- Inspect the product before each use for loose fasteners, fuel leaks, etc. Replace any damaged parts before use.
- Mix and store fuel in a container approved for petrol.
- Mix fuel outdoors where there are no sparks or flames. Wipe up any fuel spillage. Move 9 m away from refueling site before starting engine.
- Stop the engine and allow to cool down before refueling or storing the product.
- Allow the engine to cool, empty the fuel tank, and secure the product from moving before transporting in a vehicle.
- Stop the engine. Make sure all moving parts have come to a complete stop:
 - before servicing
 - before leaving the product unattended

- before clearing a blockage
- before checking, cleaning, and working on the product
- before changing accessories
- after striking a foreign object
- whenever performing maintenance
- whenever the product starts to vibrate abnormally

PRUNER SAFETY WARNINGS

- Do not use the product when there is a possibility of thunderstorm or lightning. Store the product safely indoors.
- Ensure all guards, handles are properly fitted and are in good condition.
- Do not start using the product until you have a clear work area, secure footing, and a planned retreat path away from the falling branches or limbs.
- Beware of the emission of lubricant mist and saw dust. Wear mask or respirator if required.
- During operation, hold the product with both hands. Use one hand to firmly grasp the front hand grip. Use the other hand to grasp the rear handle and operate the trigger release and engine switch.
- Cut only when visibility and light are adequate for you to see clearly.
- Do not use on a ladder or unstable support. Always cut with both feet on solid ground to prevent being pulled off balance.
- To protect yourself from electrocution, do not operate within 10 m of overhead electrical lines.
- Before starting the engine, make sure the chain is not contacting any object.
- Always cut with the engine running at full speed. Fully squeeze the throttle trigger and maintain a steady cutting speed.
- Do not force tool. Use the correct tool for your application.
- To protect yourself from falling branches, do not stand directly under the branch or limb being cut. The product should not be held at an angle over 60° from ground level.
- Keep the handles dry, clean, and free of lubricant or fuel mixture.
- Shut off the engine and make sure the cutting attachment has stopped before setting the product down.
- To prevent electrical shock or serious personal injury, do not use this product with any AC (electric) power head.
- Your product comes with a shoulder strap. You must use it while operating the product. It will assist you to control the drop of the product after the cut is

completed. It will also help support the weight of the product during use and while moving between pruning positions.

- Identify the quick release mechanism and practice using it before you start using the product. Its correct use may prevent serious injury in case of an emergency. Never wear additional clothing over the shoulder strap or otherwise restrict access to the quick release mechanism.
- Use only the replacement guide bars and low kickback chains specified for the product.
- Operate pruner in well-ventilated areas.
- Do not operate the pruner with one hand. Serious injury to the operator, helpers, bystanders, or any combination of these persons may result from one hand operation. The product is intended for two-handed use.
- Use extreme caution when cutting small-sized brush and saplings because slender material may catch the saw chain and be whipped toward you or pull you off balance.
- When cutting a limb that is under tension, be alert for spring back so that you will not be struck when the tension in the wood fibers is released.
- If the cutting performance deteriorates over time, check if the chain teeth are sharp and clean. If necessary, replace the original chain (and bar) as recommended by the manufacturer.
- If the chain and bar become pinched or trapped in branches too high to reach, seek advice from a professional tree service specialist about safe removal of the cutting means.
- Kickback is a dangerous reaction that can lead to serious injury. Kickback may occur when the moving chain contacts an object at the upper portion of the tip of the guide bar or when the wood closes in and pinches the chain in the cut. Contact at the upper portion of the tip of the guide bar can cause the chain to dig into the object and stop the chain for an instant. The result is a lightning-fast, reverse reaction which kicks the guide bar up and back toward the operator. If the chain is pinched along the top of the guide bar, the guide bar can be driven rapidly back toward the operator, which can cause loss of control and may result in serious injury. Do not rely exclusively upon the safety devices built into the product. With a basic understanding of kickback, you can reduce or eliminate the element of surprise. Sudden surprise contributes to accidents.

REFUELING

- **FUEL IS HIGHLY FLAMMABLE.** Take precautions when using to reduce the chance of serious personal injury.

- Store fuel in a cool, well-ventilated area, safely away from spark and/or flame-producing equipment.
- Store fuel in containers specifically designed for this purpose.
- Only refuel outdoors and do not smoke while refueling.
- Add fuel before starting the engine. Never remove the cap of the fuel tank or add fuel while the engine is running or when the engine is hot.
- If fuel 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 fuel vapors have dissipated.
- Replace all fuel tank and container caps securely.
- If the fuel tank has to be drained, do this outdoors and only drain fuel into container specifically designed for fuel storage.

RESIDUAL RISKS

Even when the product is used as prescribed, it is still impossible to completely eliminate certain residual risk factors. The following hazards may arise in use and the operator should pay special attention to avoid the following:

- Injury caused by vibration
 - Hold the product by designated handles and restrict working time and exposure.
- Injury caused by exposure to noise
 - Wear hearing protection and limit exposure.
- Injury caused by flying debris.
 - Wear eye protection at all times.

RISK REDUCTION

It has been reported that vibrations from handheld tools may contribute to a condition called Raynaud's Syndrome. Symptoms may include tingling, numbness and blanching of the fingers, usually apparent upon exposure to cold. Hereditary factors, exposure to cold and dampness, diet, smoking and work practices are all thought to contribute to the development of these symptoms. There are measures that can be taken by the operator to possibly reduce the effects of vibration:














- Keep your body warm in cold weather. When operating the product, wear gloves to keep the hands and wrists warm. It is reported that cold weather is a major factor contributing to Raynaud's Syndrome.
- After each period of operation, exercise to increase blood circulation.

- Take frequent work breaks. Limit the amount of exposure per day.

If you experience any of the symptoms of this condition, immediately discontinue use and see your physician.

SYMBOLS

The following symbols are located on labels on the product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

	Safety alert
	DANGER! Risk of electrocution! Do not operate within 10 m of overhead electrical lines.
	Keep all bystanders at least 15 m away.
	To reduce the risk of injury, user must read and understand the operator's manual before using the product.
	Wear non-slip, heavy-duty protective gloves when handling the pole pruner attachment and the saw chain.
	Wear non-slip safety footwear when using the product.
	Wear eye, hearing, and head protection when operating the product.
	This product is not intended for use with a toothed saw type blade.
	To reduce the risk of injury or damage, avoid contact with any hot surface.
	Use unleaded petrol intended for motor vehicle use with an octane rating of 91 [(R + M)/2] or higher. The product is powered by a 2-stroke engine and requires pre-mixing petrol and 2-stroke lubricant.
	Use 2-stroke lubricant for air cooled engines.
	Mix the fuel thoroughly and also each time before refueling.
	Regulatory Compliance Mark (RCM). This product meets applicable regulatory requirements.

	Guaranteed sound pressure and sound power level.
	Full choke position
	Half choke position
	Run position
	Pull the starter rope.
	Squeeze the throttle lock and throttle trigger to run.
	Waiting time - 10 seconds
	Push primer bulb

The following signal words and meanings are intended to explain the levels of risk associated with this product.

Symbol	Meaning
	DANGER: Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	WARNING: Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	CAUTION: Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	CAUTION: (Without Safety Alert Symbol) Indicates a situation that may result in property damage.

SERVICE

Servicing requires extreme care and knowledge and should be performed only by a qualified service technician. For service, we suggest you bring the product to the nearest service centre for repair. When servicing, use only identical replacement parts.

⚠ WARNING

To avoid serious personal injury, do not attempt to use the product until you read thoroughly and understand completely the operator's manual. If you do not understand the warnings and instructions in the operator's manual, do not use the product. Call RYOBI customer service for assistance.

⚠ WARNING

The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and, when needed, a full face shield. We recommend WIDE VISION SAFETY MASK for use over eyeglasses or standard safety glasses with side shields.

DESCRIPTION

See figure 1

1. Bar
2. Chain
3. Pruner attachment
4. Chain oiler tank cap
5. Coupler
6. Extension shaft
7. "J" handle
8. Engine switch
9. Starter grip
10. Primer bulb
11. Throttle trigger
12. Shoulder strap
13. Knob
14. Scabbard
15. Combination wrench
16. Clamp
17. Long bolt
18. Flat washer
19. Lock nut
20. Latch
21. Bolt
22. Strap hanger
23. Button
24. Guide recess
25. Positioning hole
26. Pruner attachment
27. Load
28. First cut ¼ in. diameter
29. Second cut
30. Final cut
31. Spiked bumper
32. Trigger lock
33. Spark plug
34. Choke lever
35. Spark arrestor
36. Fuel cap
37. Flats
38. Approximately 1.3 mm (0.050 in.) and 4 mm (0.16 in.)
39. Bar nut
40. Drivecase cover
41. Bar stud

42. Sprocket
43. Bar stud slot
44. Chain tensioning pin hole
45. Chain rotation
46. Chain tensioning screw
47. Idle speed screw
48. Chain bar oil reservoir
49. Remove cap
50. Replace cap
51. Top plate
52. Rivet hole
53. Heel
54. Gullet
55. Toe
56. Depth gauge
57. Side plate
58. Cutting corner
59. Left hand cutters
60. Right hand cutters
61. Foam air filter
62. Air filter cover
63. Spark plug boot

FEATURES

PRODUCT SPECIFICATIONS

Engine displacement	25.4 cc
Weight	6.8 kg
Pruner reach without extension	1850 mm (73 in)
Pruner reach with extension	2745 mm (108 in)
Fuel tank volume	620 cm ³
Maximum cutting capacity	254 mm
Maximum engine performance (in accordance with ISO 8893)	0.9 kW
Engine speed (rotational frequency) at recommended maximum spindle rotational frequency	12000 min ⁻¹
Engine speed (rotational frequency) at idle	2600-3200 min ⁻¹
Fuel consumption (in accordance with ISO 8893) at maximum engine performance	0.54 kg/h
Specific fuel consumption (in accordance with ISO 8893) at maximum engine performance	0.50 kg/h
Vibration (in accordance with ISO 22867)	
Front handle	

- Idle	8.4 m/s ²
- Racing	6.7 m/s ²
- Equivalent vibration total value	7.5 m/s ²
Read handle	
- Idle	4.5 m/s ²
- Racing	9.0 m/s ²
- Equivalent vibration total value	6.9 m/s ²
Uncertainty	1.5 m/s ²
Noise emission (in accordance with ISO 22868)	
A-weight emission sound pressure level at the operator's position	
- Idle	71.5 dB (A)
- Racing	96.6 dB (A)
- Equivalent	93.6 dB (A)
A-weight emission sound power level	
- Idle	86.04 dB (A)
- Racing	110.03 dB (A)
- Equivalent	107.04 dB (A)
Uncertainty	2.5 dB (A)

REPLACEMENT PART

Part	Model number
POWERFIT chainsaw chain	PWFPCA1001

CHAIN SPECIFICATIONS

Chain pitch	3/8" (9.5 mm) LP
Chain gauge	0.043" (1.1 mm)
Chain drive links	40
Chain profile	Low profile
Chain file size	5/32 (4 mm)
Bar length	254 mm (10 in)

Chain bar oil tank capacity	230 cm ³
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The specifications of spare parts:

- When possible, use matching brands of bar and chain for optimum performance.
- Alternative bar and chain specification as below:

Parts	Manufacturer	Type
Chain	TRILINK	CL143040XPB
Guide bar	TRILINK	M1431040-1041HL

KNOW YOUR PRUNER

See figure 1.

Before attempting to use the product, familiarize yourself with all operating features and safety rules.

ENGINE SWITCH

The engine switch controls the ignition system. The switch must be in the ON (I) position for the engine to start and run.

PRIMER BULB

The priming bulb pumps fuel from the fuel tank to the carburettor. This is necessary only when starting a cold engine or after refueling an engine that has run out of fuel.

SHOULDER STRAP

The shoulder strap helps support the weight of the pruner during use.

CHOKE LEVER

The choke restricts the air supply through the carburettor to enrich the mixture and enable easier starting when the engine is cold.

STARTER GRIP

The starter grip is used for starting the engine.

THROTTLE TRIGGER

The throttle trigger is used for starting the pruner, and also for controlling the speed of chain rotation.

ASSEMBLY

UNPACKING

The product requires assembly.

- Carefully remove the product and any accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the product carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the product.

PACKING LIST

- Power head assembly
- Pruner attachment
- Extension shaft
- Scabbard
- Combination wrench (5/8 in. X 3/4 in.)
- 230 ml bar and chain lubricant
- 76 ml bottle of 2-stroke lubricant
- Shoulder strap hanger (with mounting hardware)
- Shoulder strap
- "J" handle assembly (with mounting hardware)
- Hanger cap
- Operator's manual

⚠ WARNING

If any parts are damaged or missing, do not operate the product until the parts are replaced. Failure to heed this warning could result in serious personal injury.

⚠ WARNING

Do not attempt to modify the product or create accessories not recommended for use with the product. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

ATTACHING THE "J" HANDLE

See figure 2.

- Place the bottom J-handle clamp on the drive shaft as shown. Insert the tab on the top J-handle clamp into the slot on the bottom J-handle clamp.
- Insert the end of the J-handle between the clamps so that holes align and handle will be located to the operator's left.
- Push the bolt through the clamp and handle.
- Install flat washer and lock nut to hold the assembly in place.
- Adjust the position of the handle to the area indicated by the label on the drive shaft housing.
- Tighten the nut securely.

INSTALLING THE SHOULDER STRAP, HANGER AND ATTACHMENT

See figures 2 - 4.

When operating the product, you must wear a shoulder strap to support the product.

To install the shoulder strap hanger:

- Remove the lock nut, flat washer, and bolt from the shoulder strap hanger.
- Pull apart the ends of the hanger to expand slightly.

Position the hanger along the shaft to a location providing optimum balance and control of the product.

NOTE: Make sure that the hanger does not cover the WARNING label on the shaft.

- Squeeze hanger ends together to retighten.
- Reinstall the bolt, flat washer, and locking nut to secure.
- Connect the latch on the shoulder harness to the strap hanger.

The pruner attachment connects to the power head, or for extra reach to an extension shaft, by means of a coupler device.

To install the pruner attachment:

- Loosen the knob on the coupler of the power head and remove the end cap from the pruner attachment.
- Push in the button located on the shaft of the pruner attachment. Align the button with the guide recess on the power head shaft coupler and slide the two shafts together. Rotate pruner attachment shaft until button locks into the positioning hole.

NOTE: The attachment should only be operated with the blade in a vertical position.

- Tighten the knob securely.
- Repeat previous steps to attach extension shaft to power head.

NOTE: If the button does not release completely in the positioning hole, the shaft is not locked into place. Slightly rotate from side to side until the button is locked into place.

WARNING

Be certain the knob is fully tightened and button is locked into place in the positioning hole before operating the product. Check it periodically for tightness during use to avoid serious injury.

To remove:

- Loosen the knob.
- Push in the button and twist the shafts to remove and separate ends.

AUTOMATIC BAR AND CHAIN LUBRICATION

Add bar and chain lubricant in the bar lube reservoir before starting the engine of the power head. Refer to **Automatic bar and chain lubrication** in the Maintenance section of this manual.

OPERATION

WARNING

Do not allow familiarity with this product to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

WARNING

Always wear safety goggles or safety glasses with side shields, a hard hat, and safety shoes when operating the product. Failure to do so could result in objects being thrown into your eyes, resulting in possible serious injury.

WARNING

Do not use any attachments or accessories not recommended by the manufacturer of the product. The use of attachments or accessories not recommended can result in serious personal injury.

WARNING

To avoid kickback, binding of the saw bar, and possible injury, never cut limbs that the pruner does not reach when supported by the shoulder strap.

APPLICATIONS

You may use the product for the purposes listed below:

- Limbing
- Pruning

FUEL AND REFUELING

HANDLING THE FUEL SAFELY

Always handle fuel with care, it is highly flammable.

- Always refuel outdoors where there are no sparks and flames. Do not inhale fuel vapors.
- Do not let petrol or oil come in contact with your skin.
- Keep petrol and oil away from the eyes. If petrol or oil comes in contact with the eyes, wash them immediately with clean water. If irritation is still present, see a doctor immediately.
- Clean up spilled petrol immediately.

MIXING THE FUEL

- The product is powered by a 2-stroke engine and requires pre-mixing petrol and 2-stroke oil. Pre-mix unleaded petrol and 2-stroke engine oil in a clean container approved for petrol.

IMPORTANT! Failure to use two stroke oil will result in the engine seizing. Such damage will not be covered under warranty.

- This engine is certified to operate on unleaded petrol intended for automotive use with an octane rating of 91 ((R + M) / 2) or higher.
- Do not use any type of pre-mixed petrol / oil from fuel service stations, this includes the pre-mixed petrol / oil intended for use in mopeds, motorcycles, etc.
- Avoid the use of Ethanol fuels or fuels containing Ethanol. The use of Ethanol fuels may result in damage to your engine.
- Use synthetic 2-stroke oil only. Do not use automotive oil or 2-stroke outboard oil.
- Mix 2% synthetic 2-stroke oil into the petrol. This is a 50:1 ratio.
- Mix the fuel thoroughly and also each time before fueling.
- Mix in small quantities. Do not mix quantities larger than usable in a 30 day period. Synthetic 2-stroke oil containing a fuel stabilizer is recommended.



FILLING THE TANK

- Clean surface around fuel cap to prevent contamination.
- Loosen fuel cap slowly to release pressure and to keep fuel from escaping around the cap.
- Carefully pour fuel mixture into the tank. Avoid spillage.
- Prior to replacing the fuel cap, clean and inspect the gasket.
- Immediately replace fuel cap and hand tighten. Wipe up any fuel spillage. Move 9 m away from refueling site before starting engine.

NOTE: It is normal for smoke to be emitted from a new engine during and after first use.

⚠ WARNING

Always shut off the engine before fueling. Never add fuel to a machine with a running or hot engine. Move at least 9 m from refueling site before starting engine. Do not smoke!



50:1 Petrol to Oil Mixing Chart

1 litre	+	20 ml	=	} 50: 1 (2%)
2 litres	+	40 ml	=	
3 litres	+	60 ml	=	
4 litres	+	80 ml	=	
5 litres	+	100 ml	=	

⚠ WARNING

The product may throw objects during operation, causing injury to the operator or to bystanders. Always wear suitable eye protection, heavy-long pants and boots while operating the product.

PREPARATION FOR CUTTING

- Wear non-slip gloves for maximum grip and protection.
- Maintain a proper grip on the product whenever the engine is running. Use your right hand to firmly grip the rear handle while your left hand has a firm grip on the front handle, so your body is to the left of the chain line. Never use a left-handed (cross-handed) grip, or any stance that places your body or arm across the chain line.
- Never stand directly under the limb you are cutting.
- Always wear shoulder strap for increased safety and to support the pruner.
- Be certain the power head coupling knob and extension shaft knobs are fully tightened and buttons are locked into place in positioning holes before operating the product. Check it periodically for tightness during use to avoid serious injury.
- Make sure to check that the pruner attachment stops turning when the engine idles before cutting. If the attachment keeps on turning when the engine is in idle mode, contact the service centre.

POSITION FOR STARTING

See figure 9.




Lay the pruner on the ground and ensure that no objects or obstructions are in the immediate vicinity. Make sure nothing can come in contact with the bar and chain. Ensure that the bar and chain is not touching the ground.

STARTING AND STOPPING

Starting the product differs depending on whether the engine is cold or warm. Refer to the label on the air filter cover.


To start a cold engine

NOTE: Lay the product on the ground. Ensure the cutting means will not contact anything when it starts to rotate.

1. Press the primer bulb 10 times.
NOTE: After the 7th press, the fuel should be visible in the primer bulb. If not, continue pressing until the fuel is visible.
2. Set the choke lever to  choke position.
3. Hold down the throttle lock and then squeeze the throttle trigger completely and pull the starter grip until the engine attempts to start. Do not pull the starter grip more than 4 times. Keep the throttle trigger squeezed completely through steps 3 to 7.
4. Set the choke lever to  choke position.
5. Pull the starter grip until the engine starts. Do not pull the starter grip more than 6 times.
NOTE: If the engine does not start, repeat the procedure from step 2.
6. Allow the engine to run for 10 seconds.
7. Set the choke lever to  position.

To start a warm engine

NOTE: Lay the product on the ground. Ensure the cutting means will not contact anything when it starts to rotate.

1. Press the primer bulb 10 times.
2. Set the choke lever to  position.
3. Hold down the throttle lock and then squeeze the throttle trigger completely and pull the starter grip until the engine starts. Do not pull the starter grip more than 6 times.

STARTING THE ENGINE USING AN ELECTRICAL STARTER (OPTIONAL):

WARNING

Only use the Ryobi OES18 electrical starter. Use of any other starter may damage the engine and cause serious personal injury.




WARNING

Before using the electrical starter to start the product, please read and understand completely the operation manual of the OES18 electrical starter to avoid improper operation and serious personal injury.


TO START A COLD ENGINE BY ELECTRICAL STARTER

1. Install the starter bit into the electrical starter with the pentagon bit facing outside.
2. Push the F/R button to the left until the pentagon symbol shows on the F/R button.
3. Lay the product on the ground and make sure that the cutting means does not come in contact with anything.
4. Press the primer bulb 10 times.
NOTE: After the 7th press, the fuel should be visible in the primer bulb. If not, continue pressing until the

fuel is visible.

5. Set the choke lever to  choke position.
6. Hold down the throttle lock and then squeeze the throttle trigger completely with your left hand and keep the throttle trigger squeezed completely through steps 6 to 12.
7. Use your right hand to put the starter bit shaft to the shaft hole on the engine. Make sure the starter bit is properly engaged.
NOTE: The electrical starter is equipped with a safety interlock. Do not press and hold on the switch button when putting the electrical starter shaft into the shaft hole on the engine, otherwise the starter will not turn. The starter will not turn if the electrical starter is not properly engaged.
8. Press and hold the electrical starter switch button until the engine attempts to start. Do not press the electrical starter for more than 4 seconds.
9. Set the choke lever to  choke position.
10. Press and hold the electrical starter switch button until the engine starts.
NOTE: If the engine does not start, repeat the procedure from step 5. Do not repeat the procedure more than 1 time.
11. Allow the engine to run for 10 seconds.
12. Set the lever to  position.

TO START A WARM ENGINE BY ELECTRICAL STARTER

1. Install the starter bit into the electrical starter with the pentagon bit facing outside.
2. Push the F/R button to the left until the pentagon symbol shows on the F/R button.
3. Lay the product on the ground and make sure that the cutting means does not come in contact with anything.
4. Press the primer bulb 10 times.
5. Set the choke lever to  position.
6. Hold down the throttle lock and then squeeze the throttle trigger completely with your left hand and keep the throttle trigger squeezed completely. Use the right hand to put the electrical starter shaft into the shaft hole on the engine. Make sure the starter is properly engaged.
7. Press and hold the electrical starter switch button until the engine starts.
NOTE: If the engine does not start, repeat the procedure from step 5. Do not repeat the procedure more than 1 time. If the engine does not start after the second attempt, see the solution instruction for the "Flooded engine" in the "Troubleshooting" section of this manual.

Stopping the product

- Release the throttle trigger.
- Push the On/Off switch to the 'O' (off) position.

BASIC CUTTING PROCEDURE

See figures 5 - 6.

Follow the steps below to prevent damage to tree or shrub bark. Do not use a back-and-forth sawing motion.

- Accelerate the engine to full throttle just before entering the cut by squeezing the throttle trigger. Keep the engine at full throttle the entire time you are cutting.
- Make a shallow first cut (item 28, 1/4 of limb diameter) on the underside of the limb close to the main limb or trunk.
- Make a second cut from the top side of the limb outboard from the first cut (item 29).
- Make a final cut close to trunk (item 30).

NOTE: For second and final cuts (from top of limb or branch), hold front cutting guide against the limb being cut. This will help steady the limb and make it easier to cut. Allow chain to cut for you; exert only light downward pressure. If you force the cut, damage to the bar, chain, or engine can result.

- Release the trigger as soon as the cut is completed, allowing the engine to idle. If you run the pruner at full throttle without a cutting load, unnecessary wear or damage can occur to the chain, bar, and engine.

Failure to follow proper cutting procedures will result in the bar and chain binding and becoming pinched or trapped in the limb. If this should happen:

- Stop the engine.
- Loosen the knob on the coupler.
- Depress the button on the shaft; twist and pull the shafts to separate the pruner from the power head.
- If the limb can be reached from the ground, lift the limb while holding the attachment. This should release the "pinch" and free the pruner.
- If the pruner is still trapped, call a professional for assistance.

LIMBING AND PRUNING

See figures 7 - 8.

The product is designed for trimming small branches and limbing up to 150 mm in diameter. For best results, observe the following precautions:

- Plan the cut carefully. Be aware of the direction in which the branch will fall.
- Branches may fall in unexpected directions. Do not stand directly under the branch being cut.
- The most typical cutting application is to position the product at an angle of 60° or less, depending on the specific situation, as shown. As the angle of the pruner shaft to ground increases, the difficulty of making the first cut (from the underside of limb) increases.

- Remove long branches in several stages.
- Cut lower branches first to allow the top branches more room to fall.
- Work slowly, keeping both hands on the pruner with a firm grip. Maintain secure footing and balance.
- Keep the tree between you and the chain while limbing. Cut from side of tree opposite to the branch you are cutting.
- Do not cut from a ladder; this is extremely dangerous. Leave this operation for professionals.
- Do not make the flush cut next to the main limb or trunk until you have cut off the limb further out to reduce the weight. Following proper cutting procedures will prevent stripping the bark from the main member.
- Do not use the pruner for felling or bucking.
- To prevent electrocution, do not operate within 10 m of overhead electrical lines.
- Keep bystanders at least 15 m away.

MAINTENANCE

⚠ WARNING

When servicing, use only original manufacturer's replacement parts. Use of any other parts may create a hazard or cause product damage.

⚠ WARNING

Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

⚠ WARNING

Before inspecting, cleaning or servicing the product (except for choke adjustments), shut off the engine, wait for all moving parts to stop, and disconnect the spark plug wire and move it away from spark plug. Failure to follow these instructions can result in serious personal injury or property damage.

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloth to remove dirt, dust, lubricant, grease, etc.

⚠ WARNING

Do not at any time let brake fluids, petrol, petroleum based products, penetrating lubricant, etc., come in contact with plastic parts. Chemicals can damage, weaken, or destroy plastic, which may result in serious personal injury

All pruner service, other than the items listed in the instruction manual maintenance instructions, should be carried out by a service centre.

CHAIN TENSION

See figures 10 - 11.

WARNING

To avoid possible serious injury, never touch or adjust the chain while the engine is running. The saw chain is very sharp; always wear protective gloves when performing maintenance to the chain.

- Stop the engine before setting the chain tension. Make sure the guide bar nut is loose to finger tight, turn the chain tensioning screw clockwise to tension the chain. Refer to **Replacing the Bar and Chain** for additional information.
NOTE: A cold chain is correctly tensioned when there is no slack on the underside of the guide bar. The cold chain is snug and will hang approximately 4.0 mm (0.160 in) out of the bar groove, as shown in figure 11 (item 38), but it can be turned by hand without binding.
- Chain must be re-tensioned whenever the flats (item 37) on the drive links hang out of the bar groove as shown in figure 10.
- The chain tension is correct when the gap is about 3 -4 mm. Since the chain will stretch when it heats up, then it is recommended that the chain tension must be checked regularly.
- During normal operation, the temperature of the chain will increase. The drive links of a correctly tensioned warm chain will hang approximately 1.30 mm (.050 in) out of the bar groove, as shown in figure 11 (item 38).

NOTE: New chain tends to stretch; check chain tension frequently and tension as required.

CAUTION

Chain tensioned while warm, may be too tight upon cooling. Check the "cold tension" before next use.

REPLACING THE BAR AND CHAIN

See figures 12-15.

WARNING

To avoid possible serious injury, stop engine before replacing the bar, chain, or performing any maintenance operation.

- Remove the bar nut (item 39) and drivecase cover (item 40).

- The bar contains a bar stud slot (item 43) that fits over the bar stud (item 41). The bar also contains a chain tensioning pin hole (item 44) which fits over the chain tensioning pin.
- Place the bar onto the bar stud so that the chain tensioning pin fits into the chain tensioning pin hole.
- Fit the chain over the sprocket and into the bar groove. The cutters on the top of the bar should face toward the bar tip, in the direction of the chain rotation.
- Replace the drivecase cover and install the bar nut. Tighten the bar nut finger tight only. The bar must be free to move for tension adjustment.
- Remove all slack from chain by turning the chain tensioning screw (item 46) clockwise, assuring that the chain seats into the bar groove during tensioning.
- Lift the tip of the bar up to check for sag. Release the tip of the bar, and turn the chain tensioning screw 1/2 turn clockwise. Repeat this process until sag does not exist.
- Hold the tip of the bar up and tighten the bar nut (item 39) securely.
- The chain tension is correct when the gap is about 3 -4 mm. Since the chain will stretch when it heats up, then it is recommended that the chain tension must be checked regularly.

NOTE: If chain is too tight, it will not rotate. Loosen the bar nut slightly and turn adjusting screw 1/4 turn counterclockwise. Lift the tip of the bar up and retighten bar nut.

ADJUSTING THE IDLE SPEED

See figure 18.

If the chain turns at idle, the idle speed screw (item 47) needs adjusting on the engine. Turn the idle speed screw counterclockwise to reduce the idle RPM and stop the chain movement. If the saw chain still moves at idle speed, contact a service dealer for adjustment and discontinue use until the repair is made.

AUTOMATIC BAR AND CHAIN LUBRICATION

See figure 19.

- Use a premium blend of Bar and Chain Lubricant. It is designed for chains and chain oilers and is formulated to perform over a wide temperature range with no dilution required.
- Remove the cap and carefully pour approximately 230 ml of bar and chain lubricant into the bar lube reservoir.
- Replace the cap and tighten securely.
- Check and refill the bar lube reservoir every time the engine is fuelled.

NOTE: Do not use dirty, used or otherwise contaminated lubricant. Damage may occur to the oil pump, bar, or chain.

NOTE: Use chain and bar oil only. Other oils will not stick to the chain properly and will result in damage to the chain and bar.

MAINTAINING THE CHAIN

See figure 20.

For smooth and fast cutting, the chain needs to be maintained properly. The following conditions indicate that the chain requires sharpening or replacing:

- Wood chips are small and powdery
- Chain must be forced through the wood during cutting
- Chain cuts to one side

During maintenance of the chain, consider the following:

- Improper filing angle of the side plate can increase the risk of a severe kickback.
- Depth gauge (or raker clearance) setting determines the height the cutter enters the wood and the size of the wood chip that is removed. Too much clearance increases the potential for kickback. Too little clearance decreases the size of the wood chip thus decreasing the chain's cutting ability.
- If cutter teeth have hit hard objects such as nails and stones, or have been abraded by mud or sand on the wood, have a service agent sharpen the chain.

SHARPENING THE CUTTERS

See figures 21 - 24.

Be careful to file all cutters to the specified angles and to the same length, as fast cutting can be obtained only when all cutters are uniform.

- Tighten the chain tension enough that the chain does not wobble. Do all of your filing at the mid-point of the bar. Wear gloves for protection.
- Use a 5/32 in. diameter round file and holder.
- Keep the file level with the top plate of the tooth. Do not let the file dip or rock.
- Using light but firm pressure, stroke towards the front corner of the tooth. Lift file away from the steel on each return stroke.
- Put a few firm strokes on every tooth. File all left hand cutters in one direction. Then move to the other side and file the right hand cutters in the opposite direction. Occasionally remove filings from the file with a wire brush.

⚠ CAUTION

Dull or improperly sharpened chain can cause excessive engine speed during cutting which may result in severe engine damage.

⚠ WARNING

Improper chain sharpening increases the potential of kickback. Failure to replace or repair damaged chain can cause serious injury.

CLEANING THE SPARK ARRESTOR

See Fig. 28

It is recommended to clean or replace the spark arrestor every 25 hours to ensure proper performance of your product.

- Locate the spark arrestor through the hole on the muffler exit hole.
- Remove the spark arrestor using needle-nosed pliers.
- Clean the spark arrestor with a small wire brush.
- Replace the spark arrestor.

CLEANING THE AIR FILTER

See Fig. 25

For proper performance and longer life, keep the air filter clean.

- Ensure the product is in the off position
- Remove the air filter cover.
- Remove the air filter and clean it with warm soapy water.
- Rinse, and let the air filter dry completely.
- Work two drops of lubricant into the air filter.
- Replace the air filter (fits only one way).
- Replace the air filter cover.

NOTE: The air filter should be replaced annually for the best performance.

CHECKING THE FUEL CAP

⚠ WARNING

A leaking fuel cap is a fire hazard and must be replaced immediately.

The fuel cap contains a non-serviceable filter and a check valve. A clogged fuel filter will cause poor engine performance. If performance improves when the fuel cap is loosened, check valve may be faulty or filter clogged. Replace fuel cap if required.

REPLACING THE SPARK PLUG

See Fig. 27

WARNING

The material of the spark plug is metal. It becomes very hot after you stop the engine. Wait the engine to cool down before you disassemble the metal spark plug boot to avoid personal injury.

NOTE: The engine uses a Champion RCJ6Y spark plug or equivalent with 0.63 mm electrode gap. Use an exact replacement and replace the spark plug annually.

1. Stop the engine.
2. Hold the front portion of the rubber protect boot and pull it away from the housing.
3. Pull the rubber protect boot upward to release the hook.
4. Twist the metal spark plug boot and pull it away from the spark plug.

Using a combination wrench, loosen the spark plug by turning it in a counterclockwise direction. Remove the old spark plug and replace with a new one. Tighten it in a clockwise direction using the combination wrench, recommended torque is 23.5 Nm. Assemble back the metal spark plug boot and the rubber protect boot.

CAUTION

Be careful not to cross-thread the spark plug. Cross-threading will seriously damage the engine.

TRANSPORTATION AND STORAGE

- Stop the engine and allow it to cool down before storing or transporting.
- Clean all foreign materials from the product.
- Drain all fuel from tank into a container approved for petrol. Remember to properly replace and tighten the fuel cap.
- Run the engine until it stops, this will remove all fuel that could become stale and leave varnish and gum in the fuel system.
- Store the product in a cool, dry, and well-ventilated place that is inaccessible to children. Keep away from corrosive agents, such as garden chemicals and de-icing salts. Do not store outdoors.
- When transporting the product in a vehicle, secure it against movement or falling to prevent injury to persons or damage to the product.
- Never carry or transport the product while the engine is running.
- Abide all government and local regulations for the safety storage and handling of petrol.

- Always place the scabbard on the saw bar when transporting or storing the pruner. The scabbard is a snug fit and must be attached very carefully due to the sharp teeth on the saw chain. This is best done by grasping the scabbard at one end, in the center portion of the scabbard, and carefully sliding it over the chain as shown. Use caution to avoid the sharp teeth of the chain.



NOTE: The saw chain is very sharp. Always wear protective gloves when handling the chain.

- To use the hanger cap, push in the shaft locator button and place the hanger cap over end of the attachment shaft. Slightly rotate the cap from side to side until the button locks into place.

SHORT TERM

- Stop the engine, and allow it to cool down before storing.
- Clean all foreign material from the product.
- Store the product in a cool, dry, and well-ventilated place that is inaccessible to children.
- Keep away from corrosive agents such as garden chemicals and de-icing salts.
- Do not store outdoors.

TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Engine will not start.	<p>Switch set to the O (OFF) position.</p> <p>No spark</p> <p>No fuel</p> <p>Flooded engine</p> <p>Starter cord is hard to pull</p>	<p>Set switch to the I (ON) position.</p> <p>Remove the spark plug. Reattach the spark plug cap and lay the spark plug on the metal cylinder. Pull the starter cord and watch for a spark at the spark plug tip. If there is no spark, repeat the test with a new spark plug.</p> <p>Push primer bulb until the bulb is full of fuel. If the bulb does not fill, the primary fuel delivery system is blocked. If the primer bulb fills, the engine may be flooded. (See next item.)</p> <p>Ensure on/off switch is set to the off position. Remove the spark plug from the engine and the spark plug boot. Turn the product so that the spark plug hole is aimed at the ground. Make sure the choke lever is set to  and pull the starter cord 10 to 14 times. This clears excess fuel from the engine. Clean and reinstall the spark plug. With the throttle trigger fully depressed, pull the starter cord 3 times. If the engine does not start, set the choke lever to  and follow normal starting instructions. If the engine still fails to start, repeat the procedure with a new spark plug.</p> <p>Contact a service centre.</p>
Engine does not reach full speed and emits excessive smoke.	<p>Fuel mixture is incorrect</p> <p>Air filter is dirty.</p> <p>Spark arrestor screen is dirty.</p>	<p>Use fresh fuel and the correct 2-stroke oil mix.</p> <p>Clean the air filter according to the instructions in the Maintenance section.</p> <p>Contact a service dealer.</p>
Oil drips from muffler.	<p>Operating the product at part throttle.</p> <p>Fuel mixture is incorrect</p> <p>Air filter is dirty.</p>	<p>Operate the product at full throttle.</p> <p>Use fresh fuel and the correct 2-stroke oil mix.</p> <p>Clean the air filter according to the instructions in the Maintenance section.</p>
Bar and chain running hot and smoking.	<p>Chain tension for overtightened condition.</p> <p>Chain oil tank is empty.</p>	<p>Tension chain. Refer to chain tension earlier in this manual.</p> <p>Check oil tank.</p>
Motor runs, but chain is not rotating.	<p>Chain tension is too tight.</p> <p>Check guide bar and chain assembly.</p> <p>Check guide bar and chain for damage.</p>	<p>Retention chain. Refer to chain tension earlier in this manual.</p> <p>Refer to replacing the bar and chain earlier in this manual.</p> <p>Inspect guide bar and chain for damage.</p>



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