

Polymak®

PETROL CHAIN SAW INSTRUCTION MANUAL



Caution	Before using our chain saws, please read this manual carefully to understand the proper use of your unit. Keep this manual handy.
WARNING	Read and follow all safety precautions in the instruction manual. Failure to follow instructions could result in serious personal injury.

Polymak®

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11. SPECIFICATIONS

1 Chain saw Model	PMCS-56-18DY2ZDY
2 Mass (without guide bar and chain)	5.50 (kg)
3 Dimensions (without guide bar and chain)	410x235x265 (mm)
4 Fuel	Mixtur (Gasoline 25:1 mix-ratio @ 1)
5 Fuel tank capacity	550(ml)
6 Chain oil	Motor oil SAE#10W-30
7 Oil tank capacity	260 (ml)
8 Engine displacement	58 (cm ³)
9 Maximum engine power	2.4kw/7500rpm
10 Maximum engine speed with cutting attachment	10000rpm
11 Maximum Engine speed at idling	2800rpm
12 Maximum cutting length	550mm
13 Sprocket	77x1x325
14 Saw chain pitch	0.325 (in)
15 Saw chain gauge	0.098 (in)
16 Guide bar type	Sprocket nose
17 Guide bar size	18/22 (in)
18 Oil feeding system	Automatic pump with adjuster

NOTICE: Specifications are subject to change without notice.

SAFETY FIRST

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

NOTES ON TYPES OF WARNINGS IN THE MANUAL

[WARNING] This mark indicates instructions which must be followed in order to prevent accidents which could lead to serious bodily injury or death.

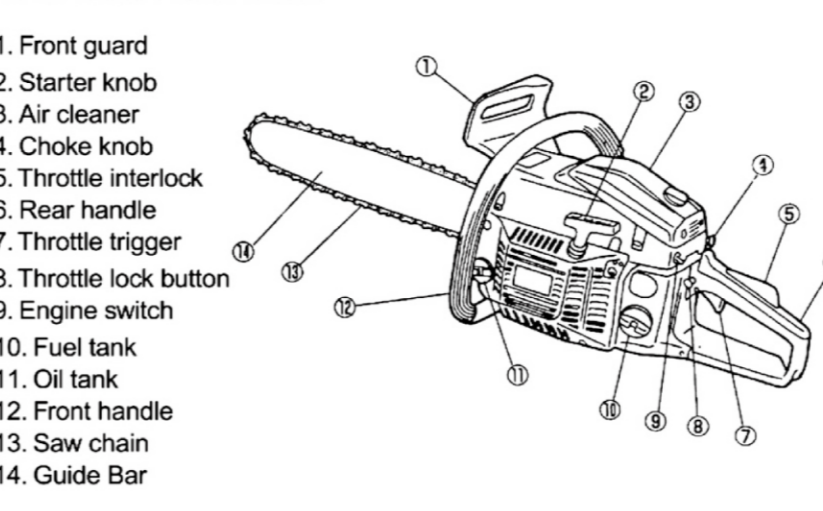
[IMPORTANT] This mark indicates instructions which must be followed, or it leads to mechanical failure, breakdown, or damage.

[NOTE] This mark indicates hints or directions useful in the use of the product.

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1. PARTS LOCATION



(1) Read owner's manual before operating this machine.

(2) Wear head, eye and ear protection.

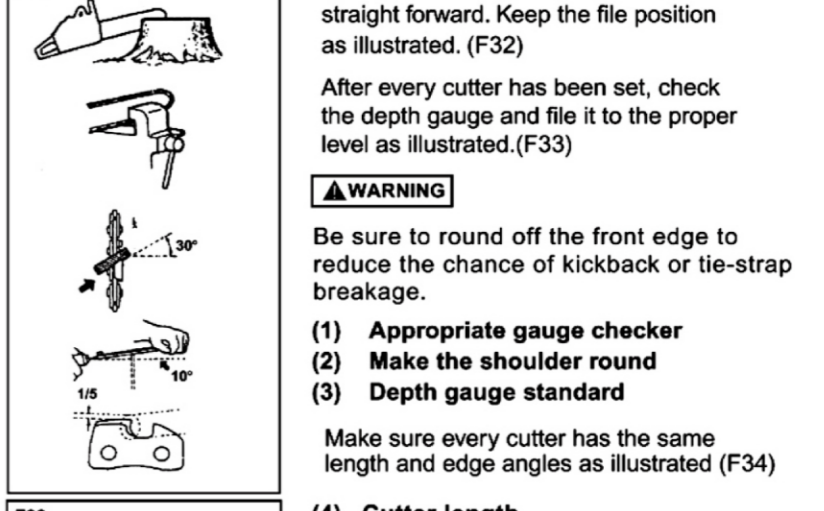
(3) Use the chain saw with two hands

(4) Warning! Kickback is danger

(5) Warning/Attention

If warning seals peel off or become soiled and impossible to read, you should contact the dealer from which you purchased the product to order new seals and affix the new seal(s) in the required location(s).

1. PARTS LOCATION



(1) Appropriate gauge checker
(2) Make the shoulder round
(3) Depth gauge stand-off

(4) Cutter length
(5) Filing angle
(6) Side plate angle
(7) Top plate cutting angle

GUIDE BAR
● Reverse the bar occasionally to prevent fatigue.
● The bar rail should always be a square. Check for wear of the bar rail. Apply a ruler to the bar and the outside of a cutter. If a gap is observed between them the rail is normal. Otherwise, the bar rail should be replaced or corrected or replaced. (F35)

(1) Ruler
(2) Gap
(3) Side plate angle
(4) Chain tilts

IMPORTANT
If warning seals peel off or become soiled and impossible to read, you should contact the dealer from which you purchased the product to order new seals and affix the new seal(s) in the required location(s).

- (2) Needle bearing
- (3) Clutch drum
- (4) Spacer
- (5) Clutch shoe

- 4. Fuel filter
Disassemble the filter and wash with gasoline, or replace with new one if needed.

- 5. Oil filter
Disassemble the filter and wash with gasoline, or replace with new one if needed.

- 6. Front and Rear dampers
Replace if a shifter part is peeling or crack is observed on the rubber part.

10. MAINTENANCE OF SAW CHAIN AND GUIDE BAR.

SAW CHAIN

[WARNING] It is very important for smooth and safe operation to keep the cutters always sharp.

Your cutters need to be sharpened when:
- Sawdust becomes powder-like.
- You need extra force to saw in.
- The cut way does not go straight.
- Vibration increases.
- Fuel consumption increases.

Cutter setting standards:
[WARNING] Be sure to wear safety goggles.

- Before filing:
- Make sure the saw chain is held accurately.
- Make sure the engine is stopped.
- Use a round file of proper size for your chain.
Chain type: 21VB
File size: 3/16 in (4.76mm)

SAFETY FIRST

[WARNING] Never remodel the product. We won't warrant the machine, if you use the remodeled product or you don't observe the proper usage written in the manual.

3. SYMBOLS ON THE MACHINE

For safe operation and maintenance, symbols are carved in relief on the machine. According to these indications, please be careful not to make a mistake.

(a). The port to refuel the "MIX GASOLINE"
Position: fuel tank cap

(b). The port to refuel the "CHAIN OIL"
Position: oil cap

(c). The indication regarding the switch. Flipping the engine switch to the "O" (STOP) direction, the engine stops.

(d). The indication regarding the choke.
Putting out the choke knob, the choke closes.
Position: rear-right of the unit

(e). The indication regarding the chain oil adjuster.
"MIN" direction the oil flow decrease
"MAX" direction the oil flow increase
Position: bottom of the clutch side

(f). The position of H-needle
The position of L-needle
The position of idle adjusting screw
Position: rear-left of the unit

4. SAFETY PRECAUTIONS

BEFORE USING THE MACHINE

- a. Read this owner's manual carefully to understand how to operate this unit properly.
- b. You should never use the product when under the influence of alcohol, when suffering from exhaustion or lack of sleep, when suffering from drowsiness as a result of having taken cold medicine, or at any other time when a possibility

- c. Avoid running the engine indoors. The exhaust gases contain carbon monoxide.
- d. Never use the product under circumstances like those described in item (b) above.

- 1. When the ground is slippery or when other conditions exist which might make it not possible to maintain a steady posture
- 2. At night, at times of heavy rain, or at any other time when your field of vision might be limited and it would be difficult to gain a clear view of the area.

- a. when using this product for the first time, before beginning actual work, learn to handle it from skilled worker.
- b. Lack of sleep, tiredness, or physical exhaustion results in lower attention spans, and this in turn leads to accidents and injury. Limit the amount of work by using the machine continuously to somewhere around 10 minutes per session, and take 10 - 20 minutes of rest between work sessions. Also try to keep the total amount of work performed in a single day under 2 hours or less.

- 2. Be sure to keep this manual handy so that you may refer to it later whenever any questions arise.

- 1. Always be sure to include this manual when selling, lending, or otherwise transferring the ownership of the product.
- 2. Never allow children or anyone unable to fully understand the directions given in this manual to use this product.

WORKING GEAR AND CLOTHING

- a. When using the product, you should wear proper clothing and protective equipments as follows.

- (1) Hard hat
- (2) Protection goggles or face Protector
- (3) Thick work gloves
- (4) Non-slip safety work boots
- (5) Ear protectors

- b. And you should carry with you:
1. Attached tools and file.
2. Properly reserved fuel and chain oil.

- 3. Guide bar
When the guide bar is dismounted, remove the saw dust in the bar groove and the cutter. If a gap is observed between them the rail is normal. Otherwise, the bar rail should be replaced or corrected or replaced. (F35)

- (1) Oiling port
(2) Grease port
(3) Sprocket

Check for fuel leakage and loose fastenings and damage to major parts, especially handle joints and guide bar mounting. If any defects are found, make sure to have them repaired before operating again.

PERIODICAL SERVICE POINTS

- 1. Cylinder fins
Dust clogging between the cylinder fins will cause overheating of the engine. Periodically check and clean the cylinder fins after removing the air cleaner and the cylinder cover. When installing the cylinder cover, make sure that switch wires and grounders are positioned correctly in place. (F25)

[NOTE]
Be sure to block the air intake hole.

- 2. Spark plug (F36)
Clean the electrodes with a wire brush and reset the gap to 0.60mm as necessary.

- 3. Sprocket (F37)
Check for cracks and for excessive wear interfering with the chain drive. If the wearing is found obviously, replace it with new one. Never fit a new chain on a worn sprocket, or a worn chain on a sprocket.

- (1) Sprocket

- the guide bar from being caught in the cut.

- A Log lying on the ground (F21)
Saw down halfway, then roll the log over and cut from the opposite side.

- A Log hanging off the ground(F22)
In area A, saw up from the bottom one-third and finish by sawing down from the top. In area B, saw down from the top one-third and finish by sawing up from the bottom.

- Cutting Limb of Fallen Tree(F23)
First check to which side the limb is bent. Then make the initial cut from the bent side and finish by sawing from the opposite side.

- Be alert to the springing back of a cut limb. Putting of Standing Tree(F24)
Cut up from the bottom, finish down from the top.

- Do not use an unstable foothold or ladder.
Do not overreach.
Do not cut cut above shoulder height.
Always use your both hands to grip the saw.

9. MAINTENANCE

- Before cleaning, inspecting, or repairing your unit, make sure that engine has stopped and is cool. Disconnect the spark plug to prevent starting.

- MAINTENANCE AFTER EACH USE
1. Air filter
Clean the cleaner surface can be removed by tapping a corner of the cleaner against a hard surface. To clean dirt in the meshes, split the cleaner in a halves and brush in gasoline. When using compressed air, blow from thinside. (F25)

- 2. Oiling port
Dismount the guide bar and check the

- 3. Things to notify your working area (Floor, warning signs)
- 4. Whistle (for collaboration or emergency)
- 5. Hatched or saw (for removal of obstacles)

- c. Never use the product when wearing pants with loose cuffs, when wearing sandals, or when barefoot.

BEFORE CONSIDERING HANDLING OF FUEL

- a. The engine of this product is designed to run on a mixed fuel which contains highly flammable gasoline. Never store cans of fuel or refill the fuel tank in any place where there is a boiler stove, wood fire, electrical sparks, welding sparks, or any other source of heat or fire which might ignite the fuel.

- b. Smoking while operating the product or refilling to fuel tank is extremely dangerous. Always be sure to keep it cigarettes away from the product at all times.

- c. When refilling the tank always turn the engine fast and take a careful look around to make sure that there are no sparks or open flames anywhere nearby before refueling.

- d. If any fuel spillage occurs during refueling, use a dry rag to wipe up spills before turning the engine back on again.

- e. After refueling, screw the fuel cap back tightly onto the fuel tank and then carry the product to a spot 3m or more away from where it was refueled before turning on the engine.

BEFORE STARTING ENGINE

- a. Check working place, the cutting object and cutting direction. If there is obstacle, remove it.
- b. Never start cutting until you have a clear work area, secure footing and a planned retreat path from the falling tree.
- c. Use caution and keep bystanders and animals out of the working area whose diameter is 2.5 times of the cutting object.

- d. Inspect the machine for worn, loose, or damaged parts. Never operate the machine that is damaged, improperly adjusted, or is not completely and securely assembled. Make sure that the saw chain stops moving when the throttle control trigger is released.

WHEN STARTING THE ENGINE

- a. Always hold the machine firmly with both hands when the engine is running. Use a firm grip with thumb and fingers encircling the handles.
- b. Keep all parts of your body away from the machine when the engine is running.

- for a few minutes -
- Put the switch to the "O" (STOP) position. (F18)

8. SAWING

- Before proceeding to your job, read "For Safe Operation" section. It is recommended to first practice sawing easy logs. This also helps you get accustomed to your unit.
- Always follow the safety regulations. The chain saw must only be used for cutting wood. It is forbidden to cut other types of material. Vibrations and kickback vary with different materials and the requirements of the safety regulations would not be respected. Do not use the chain saw as a lever for lifting, moving or splitting objects. Do not lock it over fixed stands. It is forbidden to hitch loads or applications to the P.T.O. that are not specified by the manufacturer.
- It is not necessary to force the saw into the cut. Apply only light pressure while running the engine at full throttle.
- When the saw chain is caught in the cut, do not attempt to pull it out by force, but use a wedge or a lever to open the way.

GUARD AGAINST KICKBACK (F19)

- This saw is equipped with a chain brake that will stop the chain in the event of kickback if operating properly. You must check the chain brake operation before each usage by rotating the saw at full throttle for 1-2 seconds and pushing the front hand guard forward. The chain should stop immediately with the engine at full speed. If the chain is slow to stop or does not stop, replace the brake band and clutch drum before use.

- (6) Do not overreach or cut above shoulder height.
- (7) Follow manufacturer's sharpening and maintenance instructions for saw chain.
- (8) Only use replacement bars and chains specified by the manufacturer or the equivalent.

MAINTENANCE

- In order to maintain your product in proper working order, perform the maintenance and checking operations described in the manual at regular intervals.
- Always be sure to turn off the engine before performing any maintenance or checking procedures.

THE METALLIC PARTS REACH HIGH TEMPERATURES IMMEDIATELY AFTER STOPPING THE ENGINE.

- Leave all maintenance other than the items listed in the Owner's Manual to your competent servicing dealer.

TRANSPORTATION

- Always carry the unit with the engine stopped, the guide bar covered with the protector to the rear, and muffler away from your body.

5. INSTALLING GUIDE BAR AND SAW CHAIN

A standard saw unit package contains the items as the items as illustrated (F1)

- (1) Power unit
- (2) Bar protector
- (3) Guide bar
- (4) Chainsaw
- (5) Plug wrench
- (6) Screwdriver for carburetor adjustment
- (7) Spike and mounting screws

Open the box and install the guide bar and the saw chain on the power unit as follows:

- Before starting the engine, make sure the saw chain is not contacting anything.

OPERATION

- Keep the handles dry clean and free of oil or fuel misture.
- Never touch the muffler, spark plug or other metallic parts of the engine while the engine is in operation or immediately after stopping the engine. Doing so might result in serious burns or electrical shock.
- Use extreme caution when cutting small size 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 that you won't be struck when the tension in the wood fibers is released.
- Check the tree for dead branches that could fall during the felling operation.
- Always shut off the engine before setting it down.

KICKBACK SAFETY PRECAUTIONS FOR CHAIN SAW USERS

- Kickback may occur when the nose or tip of the guide bar touches an object, or when the wood catches in and pinches the saw chain in the cut. TP contact in some cases may cause a lightning fast reverse rotation, locking the guide bar up and back towards the operator. Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back towards the operator. Either of these reactions may cause you to lose control of the saw which could result in serious personal injury.
- Do not rely exclusively on the chain tensioner built into your saw. As a chain saw user you should take several steps to keep cutting logs free from accident or injury.
- With a basic understanding of kickback you can reduce or eliminate the element of surprise. Sudden surprise contributes to accidents.
- Keep a good grip on the saw with both hands, the right hand on the front handle, and the left hand on the rear handle, when the engine is running. Use a firm grip with thumbs and fingers encircling the chain saw handles. A firm grip will help you reduce kickback and maintain control of the saw.
- Make certain that the area in which you are cutting is free from obstructions. Do not cut near the nose of the bar on a log, branch, or any other obstruction which could be hit while you are operating the saw.
- Cut at high engine speeds.

- It is extremely important that the chain brake be checked for proper operation before each use and that the chain be sharp in order to maintain the kickback safety level of this saw. Removal of the safety devices, inadequate maintenance, or incorrect replacement of the bar or chain may increase the risk of serious personal injury due to kickback.

FELLING A TREE(F20)

- 1. Decide the felling direction considering the wind, lean of the tree, location of heavy branches, ease of job after felling and other factors.
- 2. While circling the area around the tree, arrange a good foothold and retreat path.
- 3. Make a notch cut one-third of the way into the tree on the felling side.
- 4. Make a felling cut from the opposite side of the notch and at a level slightly higher than the bottom of the notch.

WHEN YOU FELL A TREE, BE SURE TO WORN YOUR NEIGHBORING NEAREST OF THE DANGER.

- (1) Notch cut
- (2) Felling cut
- (3) Felling direction

BUCKING AND LIMBING

- Always ensure your foothold. Do not stand on the top.
- Be alert to the rolling over of a cut log. Especially when working on a slope, stand on the uphill side of the log.
- Follow the instructions in "For safe Operation" to avoid kickback of the saw.

Before starting work, check the direction of bending force made the log to be cut. Always finish cutting from the opposite side of bending direction to prevent

- 5. Make a test cut and adjust the H needle for best cutting power, not for maximum speed.

- (1) L-needle
- (2) H-needle

ADJUSTING SCREW

CARBURETOR ANTI-FREEZE MECHANISM

Operating the chain saw in temperatures of 0-5°C at times of high humidity may result in fuel forming within the carburetor, and this in turn may cause the output power of the engine to be reduced or for the engine to fail to operate smoothly. This product has accordingly been designed with a ventilation hatch the back of the air cleaner cover to allow warm air to be supplied to the engine and to thereby prevent icing from occurring. Under normal circumstances the product should be used in normal operating mode, i.e., in the mode to which it is set at the time of shipment. However when the possibility exists that icing may occur, the unit should be set to operate in anti-freeze mode before use.(F15)

HOW TO SWITCH BETWEEN OPERATING MODES (F15)

- 1. Flip the engine switch to turn off the engine.
- 2. Remove the air cleaner cover from the cylinder cover.
- 3. Loosen a screw and remove the screen on the back of the air cleaner cover.
- 4. Reattach the screen right side left so as to the anti-icing plate is on the right. Reinstall the cover.

- (1) Air cleaner cover
- (2) Anti-icing plate
- (3) Screw
- (4) Normal operating mode
- (5) Anti-freeze mode
- (6) Screen

NOTE

A new chain will expand its length is the beginning of use. Check and readjust the tension frequently as a loose chain can easily derail or cause rapid wear of fuel and the guide bar.

6. FUEL AND CHAIN OIL

FUEL

Mix a regular gasoline (leaded or unleaded, alcohol-free) and a quality-proven motor oil for air cooled 2 cycle engines.

Recommended mixing ratio:
Condition Gasoline Oil
Up to 20 hours use 20:1
After 20 hours use 25:1

25:1 Mix Chart	
Gasoline liters	Oil
1	3
2	4
3	5
4	5
5	7
2-cycle oil ml.	40 80 120 160 200

CHAIN OIL

Use motor oil SAE# 10W - 30 all year round or SAE# 400 - 840 in summer and SAE#20 in winter.

[NOTE]
Do not use wasted or regenerated oil that can cause damage to the oil pump.

7. OPERATING ENGINE

STARTING ENGINE

- 1. Pull the guard towards the front handle to check that the chain brake is not on.
- 2. Loosen the nuts and remove the chain cover.
- 3. Install the attached spark to the power unit.
- 4. Gear the chain to the sprocket and, while fitting the saw chain around the guide bar, mount the guide bar to the power unit. Adjust the position of chain tensioner nut on the chain cover to the lower hole of guide bar (F2)

- (1) Chain oil
- (2) Fuel
- (3) Switch
- (4) Throttle lock button
- (5) Throttle lever
- (6) Throttle interlock
- (7) Choke knob

- 4. Pull out the choke knob to the closed position.(F10)

[NOTE]
When restarting immediately after stopping the engine, leave the choke knob at the open position.

- 5. While holding the saw unit securely on the ground, pull the starter rope vigorously. (F11)