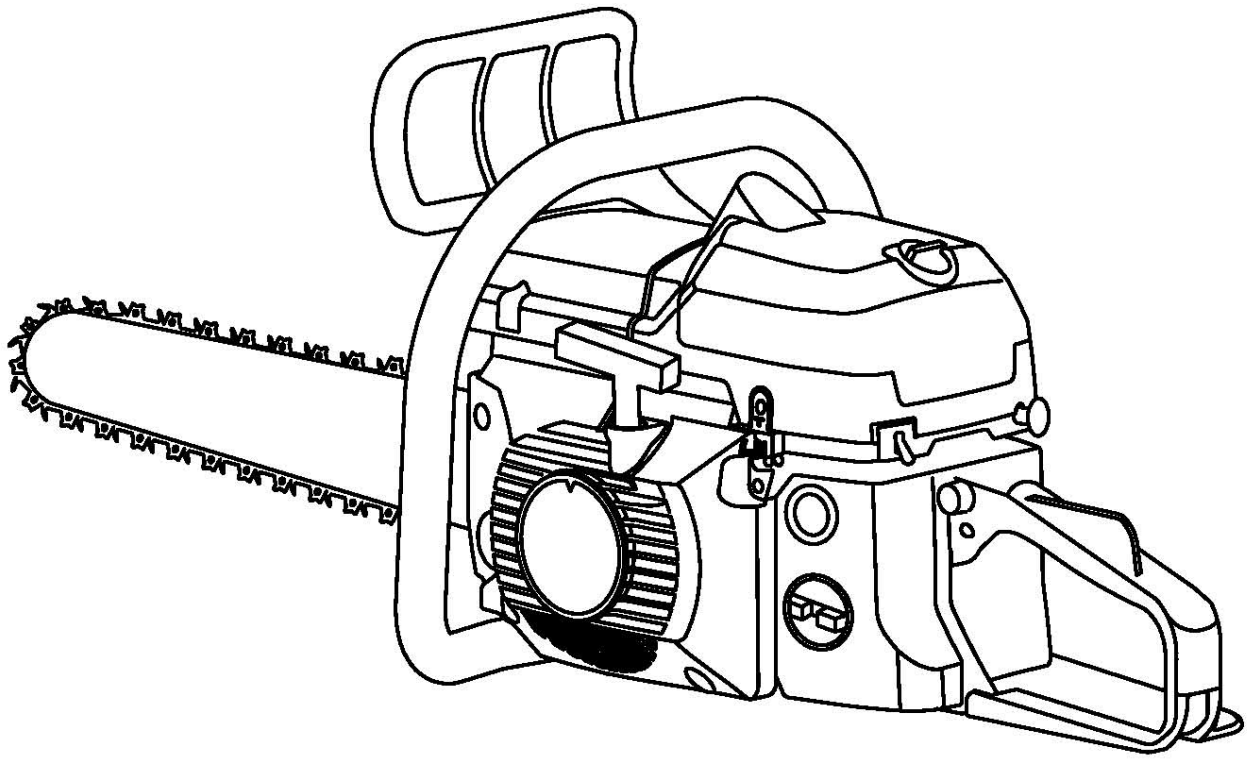
Model: PTG14202

2-STROKE 20” CHAIN SAW

OPERATOR'S MANUAL



Caution:

- Before using your chain saws, please read this manual carefully to understand the proper use of your unit
- Keep this manual handy

Warning: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

STOP

DO NOT RETURN TO STORE!

HAVE QUESTIONS OR NEED SERVICE?

866-591-8921 **support@pulsar-products.com**

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Introduction

Thank you for choosing **Pulsar Products!**
This manual provides instruction on how to operate and use your chain saw safely and correctly; be sure to read and understand this manual before using your chain saw. If you have **ANY questions,** please phone **866.591.8921 M-F or support@pulsar-products.com BEFORE** using your chain saw.

All details and images in this User's Manual are believed to be accurate at the time of publication.

Pulsar Products reserves the right to make updates to this manual at any time.

Please contact **Pulsar Support** at **866.591.8921 or support@pulsar-products.com** for the latest updates.

This manual is a permanent part of the chain saw set. If the chain saw is resold, kindly include this manual with the chain saw.

Safety Warnings and Notices

WARNING: Save This Manual for Future Reference

This manual contains important information regarding the safety, operation, maintenance, and storage of this product. Before use, read are fully and understand all cautions, warnings, instructions, and product labels. Failure to do so could result in serious personal injury and/or property damage

Safety Definitions

This manual contains important information regarding the safety, operation, maintenance, and storage of this product. Before use, read are fully and understand all cautions, warnings, instructions, and product labels. Failure to do so could result in serious personal injury and/or property damage.

⚠ This safety alert symbol appears with most safety statements. It means to pay attention and be alert, your safety is involved! Please read and abide by the message that follows the safety alerts symbol.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

Failure to follow the instruction may result in the damage to your chain saw and other property.

Safety Instructions

Safety Symbols

Follow all safety information contained in this manual and on the chain saw.

Before operating your chain saw, you must read and understand the manual and familiarize yourself with the safe operation practices.

SYMBOL	DESCRIPTION
	Read owner's manual before operating this machine
	Wear head, eye and ear protection
	Use the chain saw with two hands
	Warning! Kickback is dangerous
	Warning/Attention

Safety Precautions

POISONOUS GAS HAZARD: Engine exhaust contains carbon monoxide, a poisonous gas that could kill you in minutes. You **CAN NOT** smell it, see it, or taste it. Even if you do not smell exhaust fumes, you could still be exposed to carbon monoxide gas.

Operate this product ONLY outside far away from windows, doors and vents to reduce the risk of carbon monoxide gas from accumulating and potentially being drawn towards occupied spaces.

DO NOT run this 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 exists that your judgment might be impaired or that you might not be able to operate the machine properly and in a safe manner.

Never use the product under circumstances like those described below:

1. When the ground is slippery or when other conditions exist which might make it not possible to maintain a steady posture.

2. At night, at times of heavy fog, or at any other times when your field of vision might be limited, and it would be difficult to gain a clear view of the area.

3. During rainstorms, during lighting storms, at times of strong or gale-force winds, or at any other times when weather conditions might make it unsafe to use this product.

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 time of 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.

Working Equipment and Clothing

When using the product, you should wear proper clothing and protective equipment as follows:

- Helmet
- Protection goggles or face protector
- Thick work gloves
- Non-slip-sole work boots
- Ear protectors

And you should carry with you:

- Maintenance tools and files
- Properly blended fuel and chain oil
- Area Denial (Rope, warning signs)
- Whistle (for help or emergency)
- Hatchet or hand saw

⚠ WARNING

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.

Smoking while operating the product or refilling its fuel tank is extremely dangerous. Never smoke or vape anything while working with your chain saw.

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

If any fuel spillage occurs during refueling, use a dry rag to wipe up spills before restarting the engine.

After refueling, screw the fuel cap back tightly onto the fuel tank and then carry the product to a spot 3m (10 feet) or more away from where it was refueled before restarting the engine.

⚠ WARNING



Fuel and its vapors are extremely flammable and explosive which could cause burns, fire, or explosion resulting in death or serious injury and/or property damage.

When Adding or Draining Gasoline

Turn the chain saw engine OFF and let it cool for at least 2 minutes before removing the fuel cap. Loosen the cap slowly to relieve pressure in the tank.

- Fill or drain fuel tank outdoors.
- DO NOT overfill the tank. Allow space for fuel expansion.
- If fuel spills, wipe it up and let the area dry before starting the engine.
- Keep fuel away from sparks, open flames, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks; replace them if necessary.
- DO NOT smoke or vape anything.

Before Starting the Engine

Check working place, the object to be cut and cutting direction. If there is obstacle, remove it.

Never start cutting unit you have a clear work area, secure footing and a planned retreat path from the falling tree.

Use caution and keep bystanders and animals out of the working area with a diameter of 2.5 times the cutting object.

Inspect the chain saw for worn, loose, or damaged parts. Never operate the chain saw 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

Always hold the chain saw firmly with both hands when the engine is running. Use a firm grip with thumb and fingers encircling the handles.

Keep all parts of your body away from the chain saw when the engine is running.

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

Symbols on the Machine

For safe operation and maintenance, symbols are molded in relief on the machine. Follow these indications prevent an accident.

SYMBOL	DESCRIPTION
	The port to refuel the “GASOLINE MIX”
	The port to refuel the “CHAIN OIL”
	Flipping the engine switch to the “I” (stop) direction, stops the engine.
	Pulling out the choke knob, closes the choke.
	“MIN direction”—decreases oil flow. “MAX direction”—increases oil flow
H L T	The position of H-needle The position of L-needle The position of idle adjustment

Before Operating Equipment

Before operating your chain saw, you must read and understand the manual and familiarize yourself with the safe operation practices.

Improper treatment of the chain saw could damage it and shorten its life.

Keep the handles dry, clean and free of oil or fuel mixture.

Never touch the muffler, spark plug or other metal parts of the engine while the engine is running or immediately after stopping the engine. Doing so could 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 so that you will not 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 of the engine before setting it down.

⚠ WARNING

Kickback may occur when the nose or tip of the guide bar touches an object, or when the wood closes in and pinches the saw chain in the cut.

Tip contact in some cases may cause a very fast reverse reaction, kicking the guide bar up and back towards the operator. Either of these reactions may cause you to lose control of saw which could result in serious personal injury.

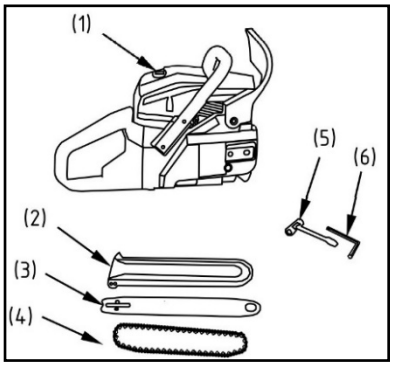
⚠ WARNING

Do not rely exclusively on the safety devices built into your saw. As a chain saw user you should take several steps to keep cutting jobs 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 rear handle, and the left hand on the front 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. Don not let the nose of the guide bar contact a log, branch, or any other obstructions which could be hit while you are operating the saw.
- Cut at high engine speeds.
- Do not overreach or cut above shoulder height.

INSTALLING GUIDE BAR AND SAW CHAIN

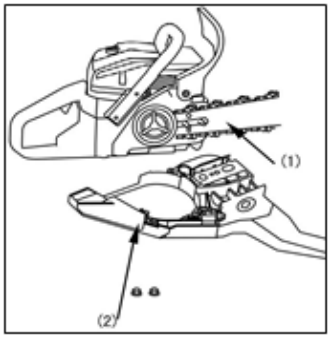
A standard saw unit package contains the items as illustrated:



(1) Power Unit
(2) Bar Protector
(3) Guide Bar
(4) Saw Chain
(5) Plug Wrench
(6) Hexagon Wrench

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

- Loosen two clamping nuts and remove the chain cover.
- 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.

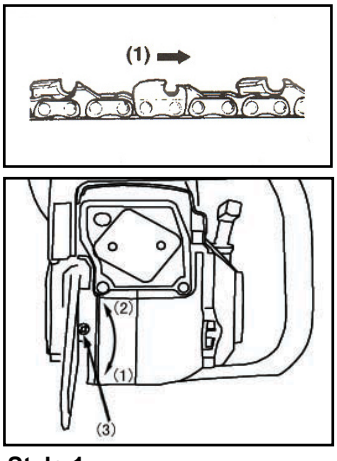


(1) Tensioner Nut
(2) Chain Cover

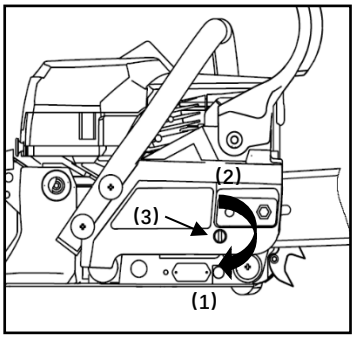
NOTICE

Pay attention to the correct direction of the saw chain:

- Mount the bar to the studs of the power unit, and fit the saw chain around the guide bar, Adjust the position of chain tensioner nut on the chain.
- Tighten the tensioner screw. (Style 1 or Style 2)



Style 1



Style 2

(1) Tighten
(2) Loosen
(3) Tensioner Screw

NOTICE

A new chain will stretch a bit. Check and readjust the tension frequently as a loose chain can easily derail or cause rapid wear of the chain and guide bar.

Fuel

⚠ WARNING

Gasoline is very flammable. Never smoke or vape anything near fuel. You must stop the engine and allow it cool before refueling. Select outdoor bare ground for fueling and move at least 3m (10 ft) away from the fueling point before starting the engine.

You MUST mix fresh gasoline with 2-stroke oil at a 50:1 ratio (2.6 fl. oz per gallon).

Emission controls are set at the factory, never attempt to adjust any part of the emission control system.

- These engines are certified to operate on unleaded gasoline.
- Use regular 87 octane gasoline for best results.
- Poor quality gasoline or oils may damage piston rings, fuel lines, or the fuel tank.

How to Mix Fuel

⚠ CAUTION

- Measure out the 2-stroke oil, 2.6 fl oz per gallon of gasoline. (50:1 ratio)
- Add the oil to an empty container, then fill it from a gasoline pump, the mixture will be automatically agitated.
- If the gasoline can is already full of fresh gasoline, you may add the correct amount of 2-stroke oil to the gasoline, replace the cap tightly, then twist the gasoline can back and forth a few times to mix well the oil into the gasoline.

Fueling the Chain Saw

Remove the fuel cap and set it in a clean place.

Add fuel to the fuel tank not more than 80% full.

Replace the fuel cap securely and wipe up any fuel spills.

⚠ CAUTION

NEVER USE

- FUEL WITH NO OIL (RAW GASOLINE)-It will cause severe damage to the internal engine parts very quickly.
- GASOHOL – It can cause deterioration of rubber and/or plastic parts and disruption of engine lubrication.
- REGULAR ENGINE OIL –It will cause spark plug fouling, exhaust port blocking, or stuck piston rings.

Chain Oil

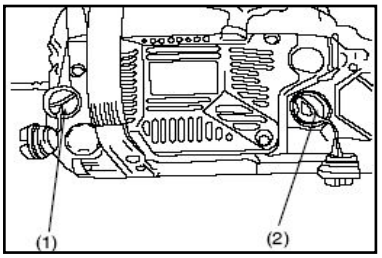
Use engine oil 10w-30 or
10w-40 (hot weather), SAE 20 (cold weather).

Starting Engine

Fill fuel and chain oil tanks respectively, and tighten the caps securely.

Put the switch to “ON” position.

Pull out the choke knob to the second position. The choke will close, and the throttle lever will then be set in the starting position.



(1) Chain Oil

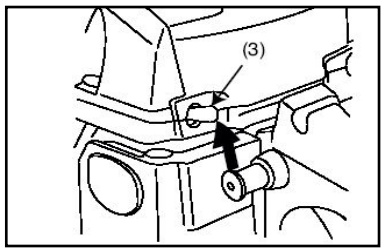
(2) Fuel

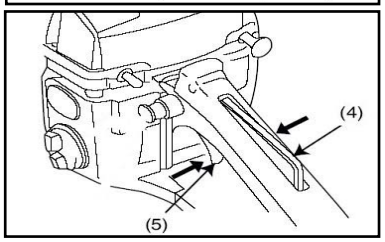
(3) Switch

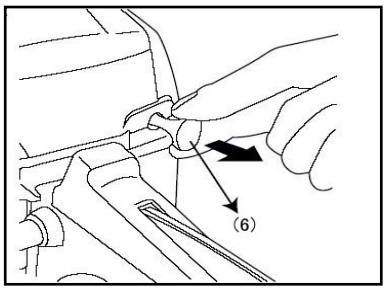
(4) Throttle Interlock

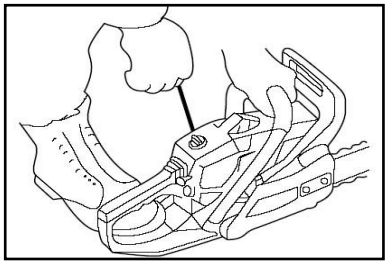
(5) Throttle Lever

(6) Choke Knob









NOTICE

While holding the saw unit securely on the ground, pull the starter rope swiftly until the engine starts.

⚠ WARNING

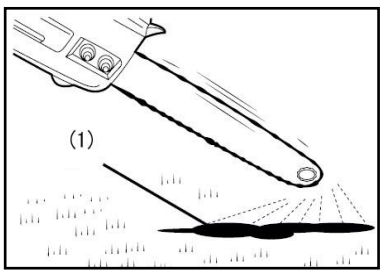
NEVER start the engine while holding it with one hand. The saw chain may touch your body. It’s very dangerous.

- Upon engine start, push in the choke knob gradually.
- Allow the engine to warm up with the throttle lever pulled slightly.

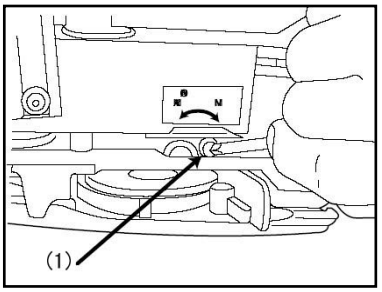
Keep clear of the saw chain as it will start rotating upon engine start.

Checking Chain Oil Feed

After starting the engine, run the chain at medium speed and see if chain oil is scattered off as shown in the figure.



(1) Chain Oil



Adjusting Carburetor

The carburetor on your chain saw has been adjusted by the factory but may require fine turning due to a change in operating conditions.

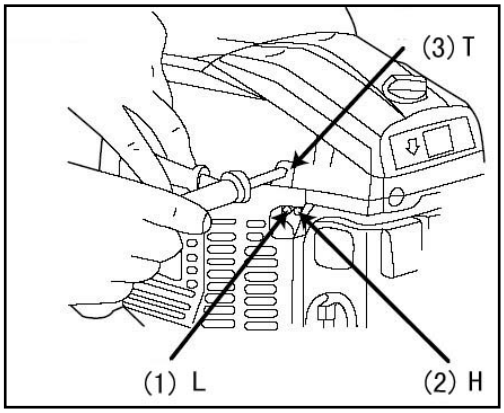
Before adjusting the carburetor, make sure air and fuel filters are clean and the fuel tank has fresh, properly mixed fuel.

When adjusting, take the following steps:

- Stop engine and screw in both H and L needles until they stop. Never use force. Then set them back the initial number of turns as show below.

  H needle: 1 ± ⅜ turns
  L needle: 1¼ ± ¼ turns

- Start the engine and allow it to warm up at half-throttle.
- Turn L needle slowly clockwise to maximum idle speed, then set the needle back a 1/4 turn counterclockwise.
- Turn idle adjusting screw (T) counterclockwise so that the saw chain does not turn. If idle speed is too slow, turn the screw clockwise.
- Make a test cut and adjust the H needle for best cutting power, not for maximum speed.



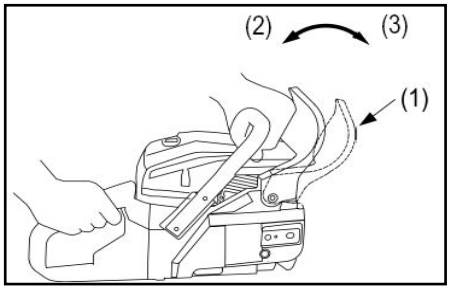
(1) L Needle

(2) H Needle

(3) Idle Adjusting Screw

Chain Brake

To release brake, pull up the front guard toward the front handle until it clicks.



(1) Brake

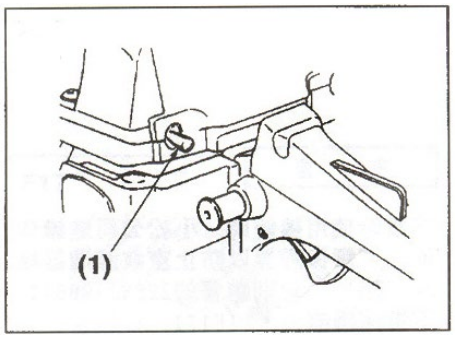
(2) Released

(3) Operating

Stopping the Engine

Release the throttle lever and allow the engine to idle for a few minutes.

Put the switch to the “0” (stop) position.



(1) Switch



TO PREVENT SERIOUS INJURY FROM FIRE:
Fill the gasoline tank in a well-ventilated area away from ignition sources. If the engine is hot from use, shut the engine off and wait for it to cool before adding gasoline. Do not smoke.

Sawing

⚠ WARNING

Never 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 jammed material.

During operation, the muffler and exhaust will become hot. If there is inadequate cooling space or if the chain saw is blocked or enclosed, temperatures can rise quickly and may lead to a fire.

Preventing Kickback

This chain saw is equipped with a chain brake that will stop the chain in the event of kickback. You must check the chain brake operation before each use by running the saw at full the 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.

It is extremely important that the chain brake is checked for proper operation before each use and that the chain is sharp to prevent kickback. 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

Decide the felling direction considering the wind, lean of the tree, location of heavy branches, ease of job after falling and other factors.

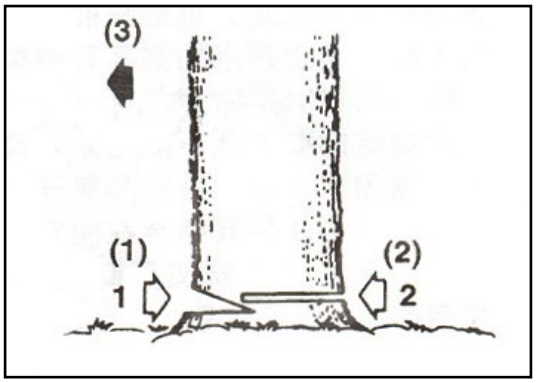
While cleaning the area around the tree, arrange a good foothold and retreat path.

Make a notch cut one-third of the way into the wood on the felling side.

Make a felling cut from the opposite side of the notch and at a level slightly higher than the bottom of the notch.

⚠ WARNING

Before felling a tree, you must secure the area from any bystanders and pets. Always warn nearby workers of the danger.



(1) Notch Cut

(2) Felling Cut

(3) Felling Direction

Bucking and Limbing

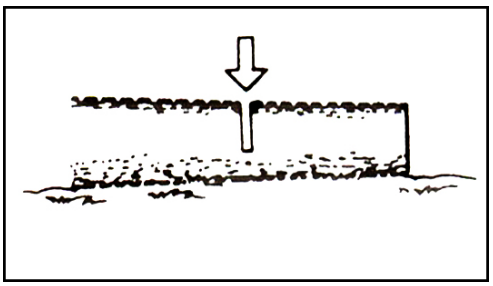
⚠ WARNING

Always ensure your foothold. Never stand on a log.

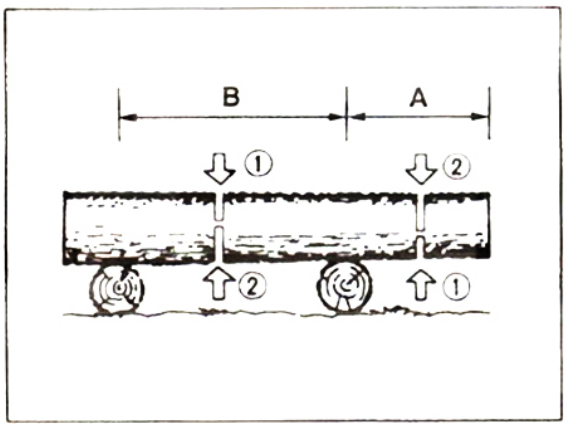
Be alert to the rolling over of a cut log. Especially when working on a slope, stand on the uphill side of the log.

Follow the instructions in “For Safe Operation” to avoid kickback of the saw.

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



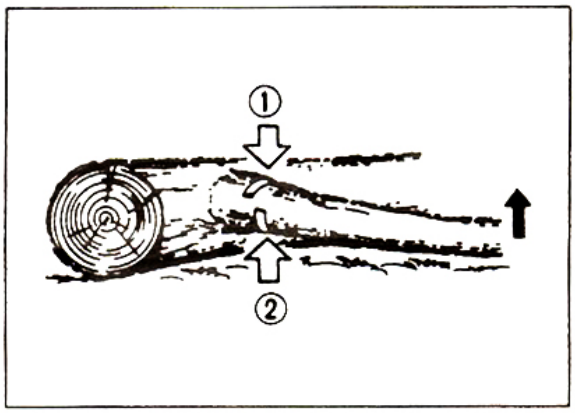
- **A Log off the ground**
  In area A, saw up from the bottom one-third and finish by sawing down from the top. In area B, saw down from the top third and finish by sawing up from the bottom.



(1) Notch Cut

(2) Felling Cut

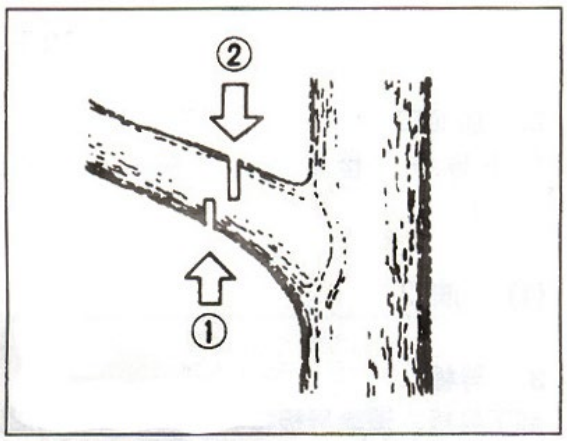
- **Cutting limb of Fallen Tree**
  First check to which side the limbs bent. Then make the initial cut from the bent side and finish by sawing from the opposite side.



(1) Notch Cut

(2) Felling Cut

- **Pruning of Standing Tree**
  Cut up from the bottom, finish down from the top.



(1) Notch Cut

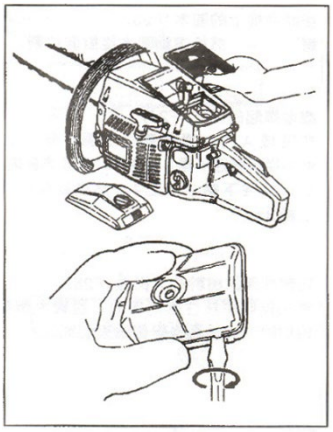
(2) Felling Cut

⚠ WARNING

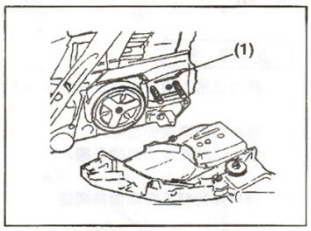
Before cleaning, inspecting or repairing your chain saw, make sure that engine has stopped and is cool. Disconnect the spark plug to prevent accidental starting.

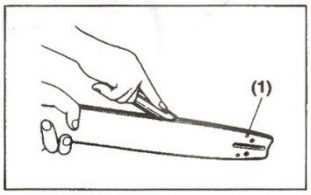
Maintenance After Each Use

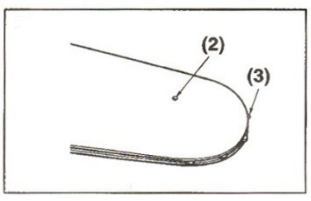
- **Air Filter**
  To clean dirt from the meshes, split the cleaner into halves and wash in hot, soapy water. When using compressed air, blow from the inside.



- **Oiling Port**
  Dismount the guide bar and check the oiling port for clogging.







(1) Oiling Port

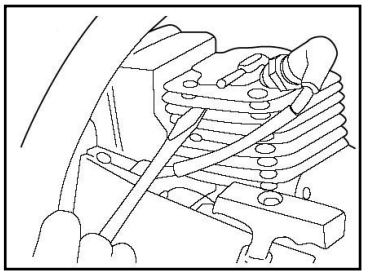
(2) Grease Port

(3) Sprocket

- **Guide Bar**
  When the guide bar is dismounted, remove sawdust in the bar groove and the oiling port. Grease the nose sprocket from the feeding port on the tip of the bar.

Periodic Service Points

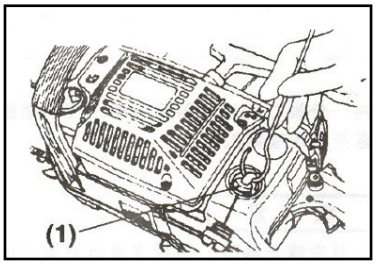
- **Cylinder Fins**
  Dust clogging between the cylinder fins will cause overheating of the engine. Periodically check and clean the cylinder fins after removing the air cleaner and the cylinder cover.



NOTICE

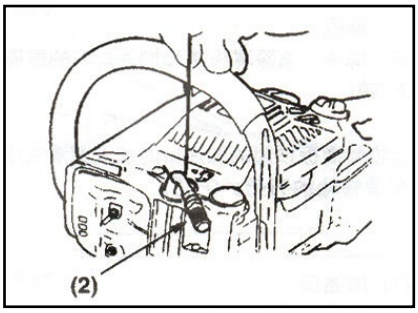
Be sure to block the air intake hole.

- **Fuel Filter**
  Using a wire hook, remove the filter from the filler port. Disassemble the filter and wash with carburetor cleaner.



(1) Fuel Filter

- **Oil Tank**
  With a wire hook, take out the oil filter through the filler port and clean with carburetor cleaner. When putting the filter back into the tank, make sure that it comes to the front right corner. Also clean off dirt in the tank.

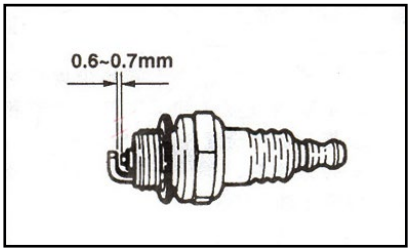


(2) Oil Filter

- **Spark Plug**
  Disconnect Spark Plug Boot from the end of plug. Clean out debris from around Spark Plug.

  Using the Spark Plug Wrench, remove the Spark Plug.

  Clean the electrodes with a wire brush and reset the gap to 0.6~0.7mm as necessary.



- **Sprocket**
  Check for cracks and for excessive wear interfering with the chain drive. If excess wear is found, replace with new parts. Never fit a new chain on a worn sprocket, or a worn chain on a new sprocket.

Maintenance of Saw Chain and Guide Bar

⚠ CAUTION

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

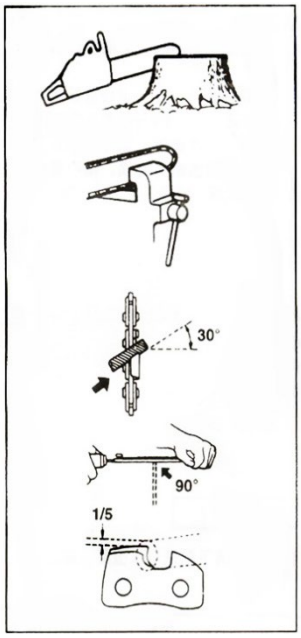
Your cutters need to be sharpened when:

- Sawdust appears powdery.
- Cuts require extra force.
- Cuts are not straight.
- Vibration increases.
- Fuel consumption increases.

Cutter setting standards:

- Make sure the saw chain is held securely.
- Make sure the engine is stopped.
- Use a round file of proper size for your chain.

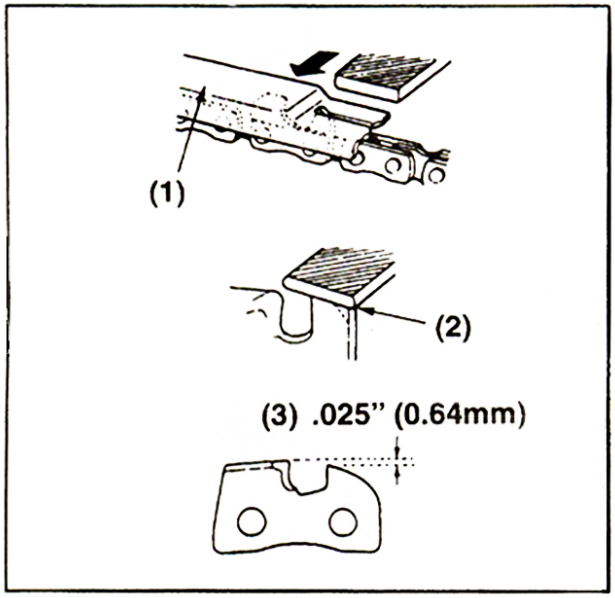
Place your file on the cutter and push straight forward. Keep the file position as illustrated. After every cutter has been set, check the depth gauge and file it to the proper level as illustrated.

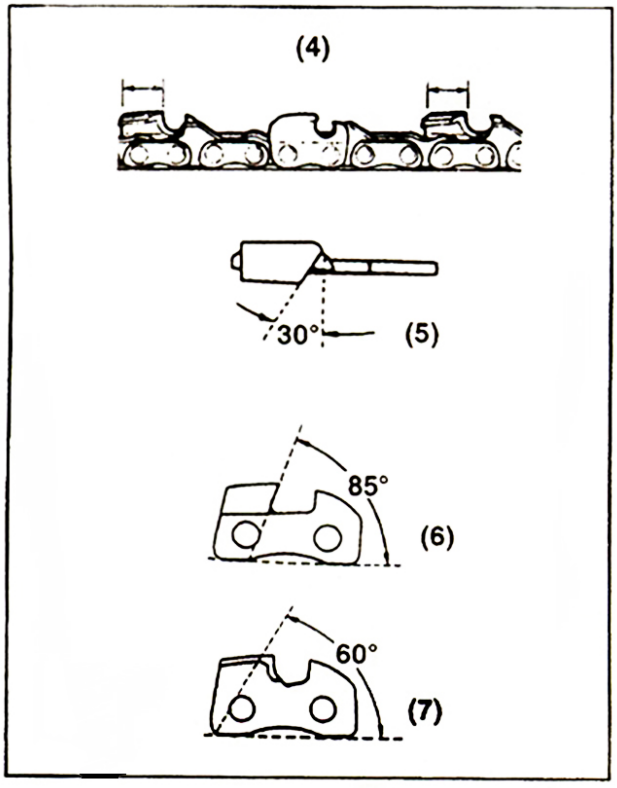


⚠ WARNING

Using a flat file, deburr the front edge to reduce the chance of kickback or chain breakage.

Make sure every cutter has the same length and edge angles as illustrated.





(1) Appropriate Gauge Checker, Bar Protector

(2) Round off the Shoulder

(3) Depth Gauge Standard

(4) Cutter Length

(5) Filing Angle

(6) Side Plate Angle

(7) Top Plate Cutting Angle

Reverse the guide bar occasionally for even wear.

Specifications

Product Description	2-Stroke 20-in Chain Saw
Engine Type	2-Stroke, Single Cylinder, Air Cooled
Maximum Power	2.0kW/8500RPM
Displacement (cc)	52
Idle Speed	3200 RPM
Wide open throttle Speed	13500 RPM
Fuel to oil mixture ratio	50:1
Fuel Tank Capacity	17.9 oz
Starting Mode	Recoil
Handle	D-Handle W/Safety Guard
Spark Plug	RCJ6Y
Sprocket	7*0.325
Chain Pitch	0.325
Chain Guage	0.058
Guide Bar Type	Sprocket Nose
Guide Bar Size	20 in
Oil Feed System	Adjustable Automatic Pump
Oil Volume	0.23 qtrs.
Pack dimensions (in)	21 x 6.1 x 12
Gross weight(lbs.)	12.1
Warranty	1 Year

Troubleshooting Guide

Problem	Possible Causes	Probable Solutions
THE ENGINE WILL NOT START	Check fuel for water or substandard mixture.	Replace with proper fuel.
	Check for engine flooding.	Remove and dry the spark plug. Then Pull the starter again with no choke.
	Check the spark.	Replace with a new plug.
LACK OF POWER/POOR ACCELERATION/ROUGH IDLING	Check fuel for water or substandard mixture.	Replace with proper fuel.
	Check air filter and fuel filter for clogging.	Clean
	Check carburetor for inadequate adjustment.	Readjust speed needles

Troubleshooting Guide

Problem	Possible Causes	Probable Solutions
CHAIN OIL DOES NOT COME OUT	Check oil for substandard quality.	Replace
	Check oil passage and ports for clogging.	Clean