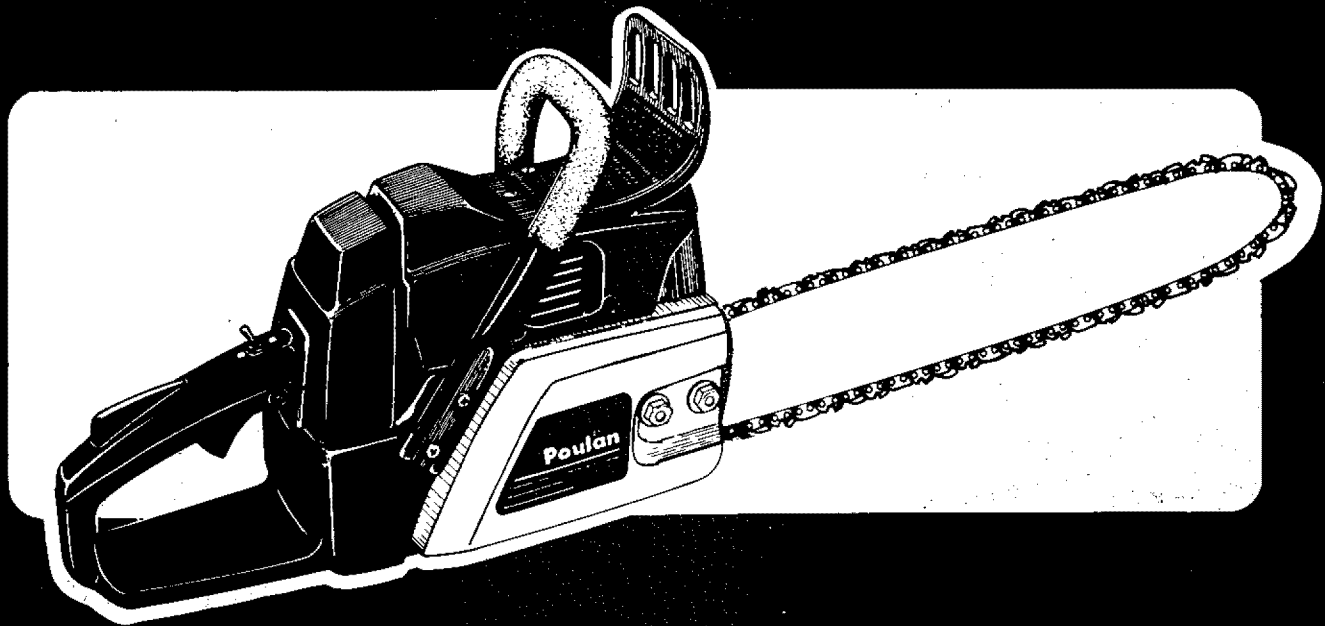


IMPORTANT MANUAL

Do Not Throw Away



Poulan[®]
3300 Counter-Vibe[®]
CHAIN SAW
OPERATOR'S MANUAL

⚠ WARNING:
Carefully read and follow
Safety Rules, Precautions
and Operating Instruc-
tions. Failure to do so can
result in serious injury.

POULAN/WEED EATER

DIVISION WHITE CONSOLIDATED INDUSTRIES, INC.

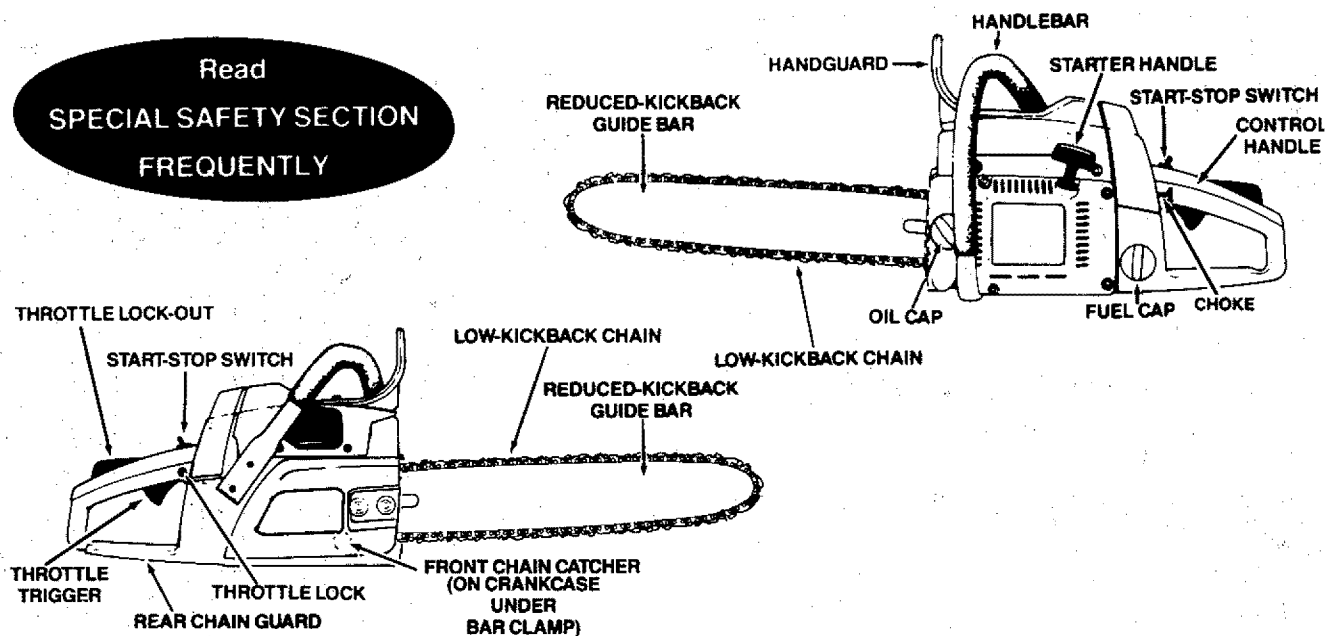
Shreveport, Louisiana 71139-9329



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**Read
SPECIAL SAFETY SECTION
FREQUENTLY**



SPECIFICATIONS

MODEL	3300		
CU. IN. DISPLACEMENT	33 in. ³ (54 cu. cm.)		
REDUCED-KICKBACK GUIDE BAR	16" Sprocket Nose Control Tip® Part No. 952-044324	18" Replaceable Sprocket Nose-Control Tip® Part No. 952-044325	20" Replaceable Sprocket Nose-Control Tip® Part No. 952-044326
LOW-KICKBACK CHAIN	.325 Pitch, .050 Gauge Chrome Cutters - P33S - 66 Drive Links - Part No. 952-051301	.325 Pitch, .050 Gauge Chrome Cutters - P33S - 72 Drive Links - Part No. 952-051313	.325 Pitch, .050 Gauge Chrome Cutters - P33S - 78 Drive Links - Part No. 952-051310
SPARK PLUG	Champion CJ-4		
SPARK PLUG GAG	.025"		
IGNITION	Solid State		
MODULE AIR GAP	.008" to .014"		
FUEL MIX	Gasoline/Oil Mixture (See "Fueling Your Engine")		
MUFFLER	Spark Arresting/USDA Approved		
OILER SYSTEM	Adjustable Automatic		
FUEL TANK CAPACITY	20 oz.		
OIL TANK CAPACITY	10 oz.		

SPECIAL SAFETY SECTION

GUARD AGAINST KICKBACK

Kickback is a dangerous reaction that can lead to serious injury. Do not rely only on the safety devices provided with your saw. As a chain saw user, you must take special safety precautions to help keep your cutting jobs free from accident or injury.

⚠ KICKBACK WARNING

Kickback can 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 saw 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 saw chain is pinched along the top of the guide bar, the guide bar can be driven rapidly back toward the operator. Either of these reactions can cause loss of saw control which can result in serious injury.**

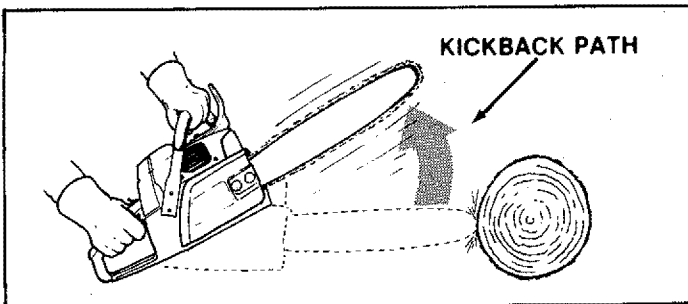


Figure 1

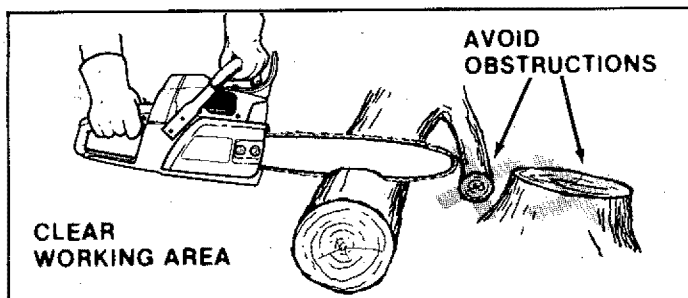


Figure 2

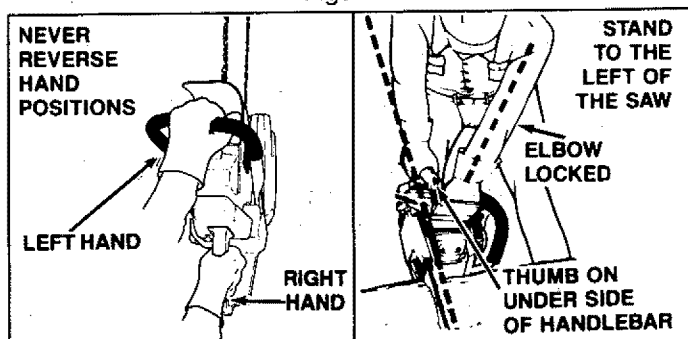


Figure 3

REDUCING KICKBACK

1. Recognize that kickback can happen. With a basic understanding of kickback, you can reduce the element of surprise which contributes to accidents.
2. Never let the moving chain contact any object at the tip of the guide bar. Figure 1.
3. Keep the working area free from obstructions such as other trees, branches, rocks, fences, stumps, etc. Figure 2. Eliminate or avoid any obstruction that your saw chain could hit while you are cutting through a particular log or branch.
4. Keep your saw chain sharp and properly tensioned. Follow manufacturer's chain sharpening and maintenance instructions. Check tension at regular intervals with the engine stopped, never with the engine running. Make sure the bar clamp nuts are securely tightened after tensioning the chain. A loose or dull chain can increase the chance of kickback.
5. Begin and continue cutting at full throttle. If the chain is moving at a slower speed, there is greater chance for kickback to occur.
6. Cut only one log at a time.
7. Use extreme caution when re-entering a cut.
8. Do not attempt plunge cuts.
9. Watch for shifting logs or other forces that could close a cut and pinch or fall into the chain.
10. Use only the Reduced-Kickback Guide Bar and Low-Kickback Chain specified for your saw.

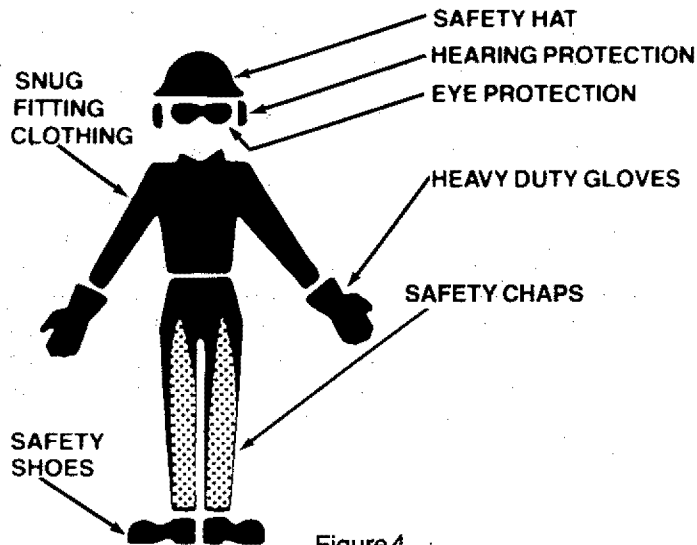
MAINTAINING CONTROL

1. Keep a good firm grip on the saw with both hands when the engine is running and don't let go. Figure 3. A firm grip can neutralize kickback and help you maintain control of the saw. Keep the fingers of your left hand encircling and your left thumb under the front handlebar. Keep your right hand completely around the rear handle *whether you are right handed or left handed*. Keep your left arm straight with the elbow locked.
2. Position your left hand on the front handlebar so it is in a straight line with your right hand on the rear handle when making bucking cuts. Figure 3. Never reverse right and left hand positions for any type of cutting.
3. Stand with your weight evenly balanced on both feet.
4. Stand slightly to the left side of the saw, to keep your body from being in a direct line with the cutting chain. Figure 3.
5. Do not overreach. You could be drawn or thrown off balance and lose control of the saw.
6. Do not cut above shoulder height. It is difficult to maintain control of the saw above shoulder height.

SPECIAL SAFETY SECTION (continued)

⚠ WARNING

Because a chain saw is a high-speed wood-cutting tool, special safety precautions must be observed to reduce the risk of personal accidents. Careless or improper use can cause serious injury.



KNOW YOUR SAW

1. **Read your Operator's Manual carefully** until you completely understand and follow all safety rules and operating instructions before attempting to operate the saw.
2. **Restrict the use of your saw** to adult users who understand and follow the safety rules, precautions, and operating instructions in this manual.

PLAN AHEAD

1. **Wear personal protective gear. Figure 4.** Always use steel-toed safety footwear with non-slip soles; snug-fitting clothing; heavy-duty non-slip gloves; eye protection such as non-fogging, vented goggles or face screen; an approved safety hard hat, and sound barriers — ear plugs or mufflers to protect your hearing. Regular users should have hearing checked regularly as chain saw noise can damage hearing.
2. **Keep children, bystanders, and animals out of the work area — a minimum of 30 feet (10 meters).** Do not allow other people or animals to be near the chain saw when starting or operating the chain saw.
3. **Do not handle or operate a chain saw when you are fatigued, ill, or upset; or if you have taken alcohol, drugs or medication.** You must be in good physical condition and mentally alert. Chain saw work is strenuous. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating a chain saw.

4. **Do not attempt to use your chain saw during bad weather conditions** such as strong wind, rain, snow, etc., or at night.
5. **Plan your sawing operation carefully in advance.** Do not start cutting until you have a clear work area, secure footing, and if you are felling trees, a planned retreat path.

AVOID REACTIVE FORCES

Pinch-Kickback and Pull-in occur when the chain is suddenly stopped by being pinched, caught, or by contacting a foreign object in the wood. This results in a reversal of the chain force used to cut wood and causes the saw to move in the opposite direction of chain rotation. **Pinch-Kickback** drives the saw straight back toward the operator. **Pull-in** pulls the saw away from the operator. Either reaction can result in loss of control and possible serious injury.

To avoid Pinch-Kickback:

1. **Be extremely aware of situations or obstructions** that can cause material to pinch the top of or otherwise stop the chain.
2. **Do not cut more than one log at a time.**
3. **Do not twist the saw** as the bar is withdrawn from an under-cut when bucking.

To avoid Pull-in:

1. **Always begin cutting with the engine at full throttle and the saw frame or spur against the wood.**
2. **Use wedges made of plastic or wood, (never of metal)** to hold the cut open.

HANDLE FUEL WITH CAUTION

1. **Eliminate all sources of sparks or flame in the areas where fuel is mixed, poured, or stored.** There should be no smoking, open flames, or work that could cause sparks.
2. **Mix and pour fuel in an outdoor area, on bare ground; store fuel in a cool, dry, well-ventilated place; and use an approved, marked container for fuel.**
3. **Wipe up all spilled fuel before starting your saw.**
4. **Move at least 10 feet (3 meters) away from fuel and fueling site before starting the engine.**
5. **Do not smoke while handling fuel or while operating the saw.**
6. **Turn the engine off and let your saw cool in a non-combustible area, not on dry leaves, straw, paper, etc.** Slowly remove the fuel tank cap and refuel the unit.
7. **Store tool and fuel in an area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.**

OPERATE YOUR SAW SAFELY

1. **Do not operate a chain saw that is damaged, improperly adjusted, or not completely and securely assembled.**
2. **Operate the chain saw only in outdoor areas.**
3. **Do not operate the saw from a ladder or in a tree.**
4. **Position all parts of your body to the left of cut and away from the saw chain when the engine is running.**
5. **Cut wood only.** Do not cut metal, plastics, masonry, non-wood building materials, etc. Do not use your saw to pry or shove away limbs, roots or other objects.
6. **Make sure the chain will not make contact with any object while starting the engine.** Never try to start the saw when the guide bar is in a cut or kerf.
7. **Use extreme caution when cutting small size brush and saplings.** Slender material can catch the saw chain and be whipped toward you or pull you off balance.
8. **Be alert for springback** when cutting a limb that is under tension so you will not be struck by the limb or saw when the tension in the wood fibers is released.
9. **Do not put pressure on the saw at the end of a cut.** This can cause you to lose control when the cut is completed.
10. **Stop the engine before setting the saw down.**

MAINTAIN YOUR SAW IN GOOD WORKING ORDER

1. **Have all chain saw service performed by a qualified service dealer** with the exception of the items listed in the maintenance section of this manual. For example, if improper tools are used to remove or hold the flywheel when servicing the clutch, structural damage to the flywheel can occur and cause the flywheel to burst.
2. **Keep fuel and oil caps, screws and fasteners securely tightened.**
3. **Keep the handles dry, clean, and free of oil or fuel mixture.**
4. **Make certain the saw chain stops moving when the throttle trigger is released.** For correction, refer to "Carburetor Adjustments."
5. **Stop the saw if the chain strikes a foreign object.** Inspect the unit and repair or replace parts as necessary.
6. **Disconnect the spark plug before performing any maintenance** except for carburetor adjustments.
7. **Never modify your saw in any way.** Use only attachments supplied or specifically recommended by the manufacturer.
8. **Always replace the handguard immediately if it becomes damaged, or broken or is otherwise removed.**

9. **Keep the vibration isolators in good condition.** Periodically inspect isolators for tears, rips or separation of the rubber portion from the metal mountings. Have a qualified service dealer replace the isolators if worn or damaged, if vibration increases or if mounts develop an out of round or swollen shape from exposure to gasoline and/or oil. It is recommended that all isolators be replaced when a failure to one occurs.

CARRY AND STORE YOUR SAW SAFELY

1. **Hand carry the saw with the engine stopped, the muffler away from your body,** and the guide bar and chain to the rear covered preferably with a scabbard.
2. **Before transporting in any vehicle or storing in any enclosure,** allow your saw to cool completely, cover the bar and chain and properly secure to avoid turnover, fuel spillage or damage.
3. **Empty the fuel tank before storing the tool. Use up fuel left in the carburetor by starting the engine and letting the engine run until it stops.**
4. **Store in a dry area out of the reach of children and away from where fuel vapors can reach sparks or an open flame** from hot water heaters, electric motors or switches, furnaces, etc.

SAVE THESE INSTRUCTIONS

NOTE: Exposure to vibrations through prolonged use of chain saws may produce Whitefinger disease (Raynaud's phenomenon). This phenomenon reduces the hand's ability to feel and regulate temperature, produces numbness and burning sensations and can cause nerve and circulation damage and tissue necrosis.

An anti-vibration system designed to reduce engine vibration is recommended for those using chain saws on a regular or sustained basis and is provided on this saw. However, an antivibration system does not guarantee the avoidance of Whitefinger disease. Continual and regular users must monitor closely their use of chain saws and physical condition.

Notice: Refer to the Code of Federal Regulations, Section 1910.266(5); 2.5.1 of American National Standard Safety Requirements for Pulpwood Logging, ANSI O3.1-1978; and relevant state safety codes when using a chain saw for logging purposes.

KNOW YOUR CHAIN SAW

A. INTRODUCTION

Your saw has been designed with safety in mind and includes the following features as standard equipment:

- Reduced-Kickback Guide Bar (Control Tip®)
- Low-Kickback Chain (Elongated Guard Link)
- Spark Arrestor
- Temperature Limiting Muffler
- Handguards
- Counter-Vibe® Anti-Vibration System

⚠ WARNING

The following features are included on your saw to help reduce the hazard of kickback, however, such features will not totally eliminate this dangerous reaction. As a chain saw user, do not rely only on safety devices. You must follow all safety precautions, instructions and maintenance in this manual to help avoid kickback and other forces which can result in serious injury.

B. KICKBACK SAFETY FEATURES

- **Reduced-Kickback Guide Bar**, designed with a small radius tip which reduces the size of the kickback danger zone on the bar tip. Figure 5. A Reduced Kickback Guide Bar is one which has been demonstrated to significantly reduce the number and seriousness of kickbacks when tested in accordance with the safety requirements for gasoline powered chain saws as set by the American National Standards Institute, Inc., Standard B175.1 - 1985.
- **Low-Kickback Chain**, designed with a contoured depth gauge and guard link which deflect the kickback force and allow wood to gradually ride into the cutter. Figure 5. Low Kickback Saw Chain is a chain which has met the kickback performance requirements of ANSI B175.1 when tested on a representative sample of chain saws below 3.8 cubic inch displacement specified in ANSI B175.1-1985. (American National Standard for Power Tools - Gasoline Powered Chain Saws - Safety Requirements).
- **Handguard**, designed to reduce the chance of your left hand contacting the chain if your hand slips off the front handlebar.
- **Position of front and rear handlebars**, designed with distance between handles and "in line" with each other. The spread and "in line" position of the hands provided by this design work together to give balance and resistance in controlling the pivot of the saw back toward the operator if kickback occurs.

⚠ WARNING

Do not operate the chain saw unless the safety devices or their specified replacements are properly installed and maintained according to the instructions in this manual. Do not use any other guide bar and chain combination that is not equivalent to the original equipment or not certified to comply with ANSI B175.1-1985. Failure to follow these instructions can result in serious injury.

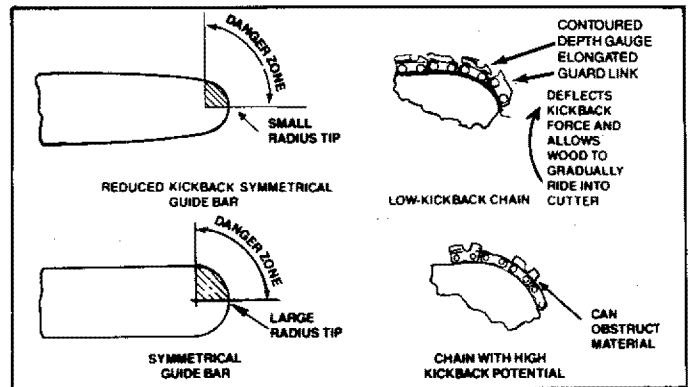


Figure 5

C. STATE AND LOCAL REQUIREMENTS.

Your saw is equipped with a temperature limiting muffler and spark arresting screen which meets the requirements of California Codes 4442 and 4443. All U.S. forest land and the states of California, Maine, Washington and Oregon require many internal combustion engines to be equipped with a spark arrestor screen by law. Other states are enacting similar laws.

If you operate a chain saw in a state or locale where such regulations exist, you are legally responsible for maintaining the operating condition of these parts. Failure to do so is a violation of a law. See "Spark Arrestor" Section for maintenance.

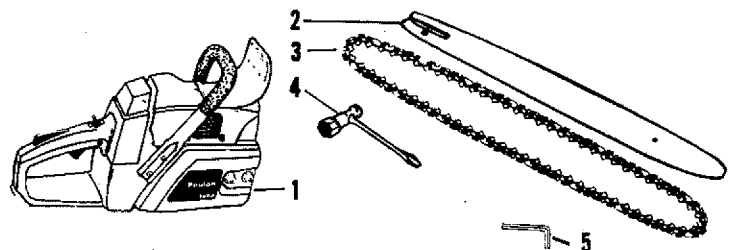
D. CARTON CONTENTS

After you unpack the carton:

1. Check the contents against the list below.
2. Examine the items for damage. Do not use damaged parts.
3. *Notify your dealer immediately if a part is missing or damaged. It is normal to hear a fuel filter rattle in an empty fuel tank.*

NOTE: It is normal to hear the fuel filter rattle in an empty fuel tank.

KEY NO.	CARTON CONTENTS:	QTY.
1	Power Head	1
2	Guide Bar	1
—	Loose Parts Bag (not shown)	1
—	Oil - 8 oz. can (not shown)	1
LOOSE PARTS BAG CONTENTS:		
3	Chain	1
4	Scrench	1
5	Allen Wrench - 5/32"	1
—	Operator's Manual (not shown)	1



PREPARING YOUR SAW FOR USE

A. GETTING READY

1. READ YOUR OPERATOR'S MANUAL

Your Operator's Manual has been developed to help you prepare your saw for use and to understand its safe operation. It is important that you read your manual completely to become familiar with the unit *before* you begin assembly or attempt operation. Your Poulan® Dealer is available to show you how to operate your saw. Be sure to ask for his assistance.

2. HAVE THE FOLLOWING AVAILABLE:

- Protective gloves
- Approved, marked, fuel container.
- Regular gasoline, leaded or unleaded.
- Two-cycle engine oil. See "Fueling Your Engine."
- Bar and Chain Oil. See "Bar and Chain Lubricant."
- Scrench** — provided with your saw. Use the long end of the tool as a slotted screwdriver, the small pipe end as a socket wrench, and the larger pipe end to remove the spark plug.
- Hex Wrench** — provided with your saw for the fan housing screws.

B. ATTACHING THE SPUR (OPTIONAL)

The spur is a special piece of equipment designed to assist the cutting operation. When assembled to the saw, the spur will dig into the tree or log and:

- relieve contact pressure adding ease to the sawing operation.
- allow the saw to be more easily rotated or pivoted into the cut.

To Install:

- Remove bar clamp nuts and bar clamp.
- Align the spur over the two holes on the bar clamp side of the saw. Figure 6.
- Insert the two screws and tighten evenly and securely.

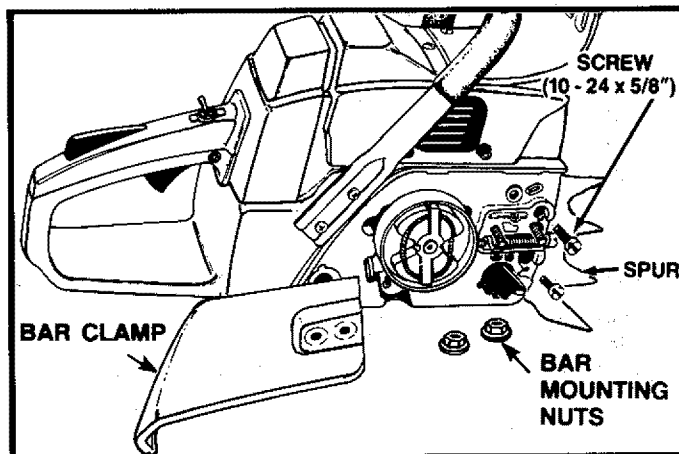


Figure 6

C. ATTACHING THE BAR AND CHAIN

CAUTION: Wear protective gloves when handling or operating your saw. The chain is sharp and can cut you even when it is not moving!

- Your saw is equipped with a Reduced-Kickback Guide Bar and a Low-Kickback Chain.


- Use only the Reduced-Kickback Guide Bar and Low-Kickback Chain specified for your chain saw model, when replacing these parts. See "Specifications."

⚠ WARNING

Do not start engine without guide bar and chain completely assembled. Otherwise, the clutch can come off and serious injury can result.

1. Remove the bar clamp nuts and bar clamp if you have not done so. Figure 6.

NOTE: Be sure to remove the cardboard packing over the bar studs and between the bar clamp housing and the crankcase.

2. Turn the adjusting screw counterclockwise  to move the adjusting pin almost as far as it will go to the rear. Figure 9.

3. Mount the guide bar. Mount the slotted end of the guide bar over the bar studs and the hole under the slot on the adjusting pin. Figure 7.
4. Hold chain with cutters facing as shown in Figure 8.
5. Place chain over and behind the clutch drum onto the sprocket and fit the bottom of the drive links between the teeth in the sprocket.
6. Start at the top of the bar and fit the chain drive links into the groove around the guide bar. Figure 8.

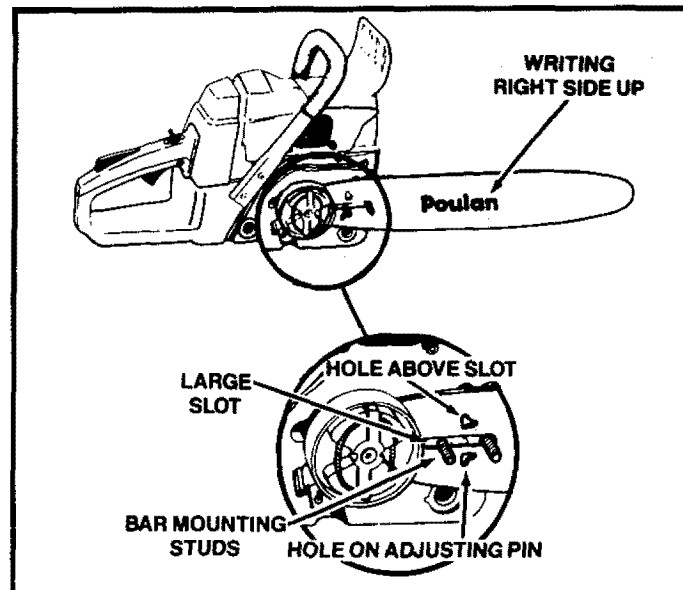


Figure 7

7. Turn the adjusting screw clockwise until the chain is snug in the guide bar groove. Figure 9.
8. Install the bar clamp, replace the bar mounting nuts, then tighten the nuts finger tight *only*.
9. Follow "Chain Tension" instructions below.

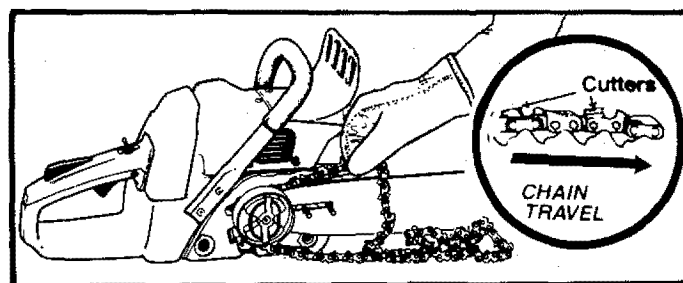


Figure 8

D. CHAIN TENSION

- **Correct chain tension is very important:**
 - a loose chain will wear the bar and itself.
 - a loose chain can jump off the bar while you are cutting.
 - a tight chain can damage the saw and/or break.
- **The chain stretches during use, especially when new. Check tension:**
 - each time the saw is used
 - more frequently when the chain is new
 - as the chain warms up to normal operating temperature
- **Chain tension is correct when the chain:**
 - can be lifted about 1/8" from the guide bar at a point near the middle of the bar, and
 - will move freely around the bar.

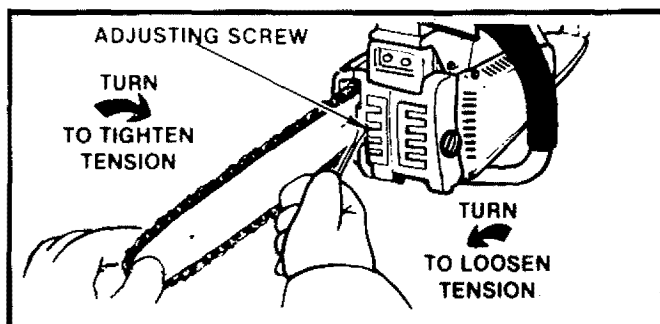


Figure 9

● Chain tensioning procedure:

NOTE: The bar clamp nuts must be no more than finger tight to tension the chain correctly.

1. Hold the tip of the guide bar up and turn the adjusting screw just until the chain does not sag beneath the guide bar. Figure 11.

NOTE: Turn screw clockwise to tighten tension. Turn screw counterclockwise to loosen tension.

2. Check the tension by lifting the chain from the guide bar at the center of the bar. Figure 12.
3. Continue turning the adjusting screw until the tension is correct.
4. Hold the tip of the guide bar up and securely tighten the bar clamp nuts with the screwdriver.
5. Recheck tension. See Figure 10.

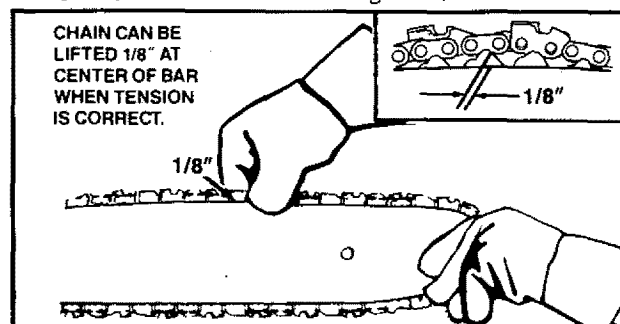


Figure 10

E. FUELING YOUR ENGINE

1. FUEL SAFETY

- a. Use only recommended fuel mixtures.
- b. Mix and pour fuel outdoors and where there are no sparks or flames.
- c. Use a container approved for fuel.
- d. Do not smoke or allow smoking near fuel or the tool or while using the tool.
- e. Wipe up all fuel spills before starting engine.
- f. Move at least 10 feet away from fueling site before starting engine.
- g. Stop engine before removing fuel cap.
- h. Empty the fuel tank before storing the tool. Use up fuel left in the carburetor by starting the engine and letting the engine run until it stops.
- i. Store tool and fuel in an area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.

2. FUEL MIXTURE

- Your tool is powered by a two-cycle engine which requires a fuel mixture of regular unleaded gasoline and a high quality engine oil specially made for 2-cycle, air cooled engines. The internal design of the 2-cycle engine requires lubrication of moving parts. Lubrication is provided when the recommended mixture of gasoline and oil is used.
- **Genuine POULAN®/WEED EATER® 2-cycle Engine Oil is strongly recommended for the protection of your unit.** Extensive engineering tests have proven that Poulan®/Weed Eater® oil resists break-down at operating temperatures common to 2-cycle engines, resulting in dependable performance and longer engine life.
- **Gasoline must be clean and fresh.** After a short period of time, gasoline will chemically break-down and form compounds that cause hard starting and damage in 2-cycle engines.
- **The correct measure of gasoline to oil is very important.** Too much oil in the mixture will foul the spark plug.

CAUTION: Too little oil or incorrect oil will cause the engine to overheat and seize.

- **Always mix the fuel thoroughly in a container** since gasoline and oil do not readily combine. *Do not mix gasoline and oil directly in the fuel tank.*

3. USE THE FOLLOWING ONLY:

Poulan Pro™ 40:1 Engine Oil is strongly recommended. Available in the following convenient container sizes, Poulan Pro™ 40:1 Engine Oil should be mixed as follows:

3.2 oz. Container...Mix with 1 gallon gasoline.

8 oz. Container...Mix with 2-1/2 gallons gasoline.

16 oz. Container...Mix with 5 gallons gasoline.

If Poulan Pro oil is not available use other "Poulan/Weed Eater" branded oils at their recommended mixture as listed on the container.

If none of the above oils are available, use a good quality, two-cycle, air cooled engine oil mixed at a ratio of 16:1 (8 oz. oil to 1 gallon gasoline).

4. DO NOT USE:

- **BIA OIL (Boating Institute of America) —**
— Does not have proper additives for air-cooled 2-cycle engines and can cause engine damage.
- **AUTOMOTIVE OIL —**
— Does not have proper additives for 2-cycle engines and can cause damage.

5. HOW TO MIX FUEL AND FILL TANK

- a. Pour 1/2 gallon regular unleaded gasoline into an approved, marked container. *Do not mix gasoline and oil directly in the fuel tank.*
- b. Add entire measure of engine oil.
- c. Cover container tightly and shake for one minute.
- d. Slowly remove fuel container cover.
- e. Add remainder of gasoline.
- f. Cover container tightly and shake again.
- g. Slowly remove fuel container cover.
- h. Slowly remove fuel cap. See "Specifications," for location.
- i. Fill the tank using a spout or funnel.
- j. Reinstall the fuel cap securely.

F. BAR AND CHAIN LUBRICANT

- The Guide Bar and Cutting Chain require continuous lubrication in order to remain in operating condition. Lubrication is provided by the automatic oiler system when the oil tank is kept filled.
 - Lack of oil will quickly ruin the bar and chain.
 - Too little oil will cause overheating shown by smoke coming from the chain and/or discoloration of the guide bar rails.
- Genuine Poulan® Bar and Chain Oil is recommended to protect your unit against excessive wear due to heat and friction. Poulan® lubricant resists high temperature thinning. If Poulan® bar and chain oil is not available, use a good grade SAE 30 oil. Never use waste oil for this purpose.
- In freezing weather oil will thicken, making it necessary to thin bar and chain oil with a small amount of Diesel Fuel #1 or Kerosene. Bar and chain oil must be free flowing for the oil system to pump enough oil for adequate lubrication.

1. USE THE FOLLOWING:

- 30 F or above — lubricant — undiluted.
- 30 -0 F — 95% lubricant to 5% Diesel Fuel #1 or Kerosene.
- Below 0 F — 90% lubricant to 10% Diesel Fuel #1 or Kerosene.

2. HOW TO FILL THE OIL TANK

- Stop the engine.
- Turn saw on its side with oil cap up. Figure 11.
- Loosen cap slowly and wait for pressure in the tank to be released before removing the cap.
- Fill the oil tank.
- Replace the oil cap securely.

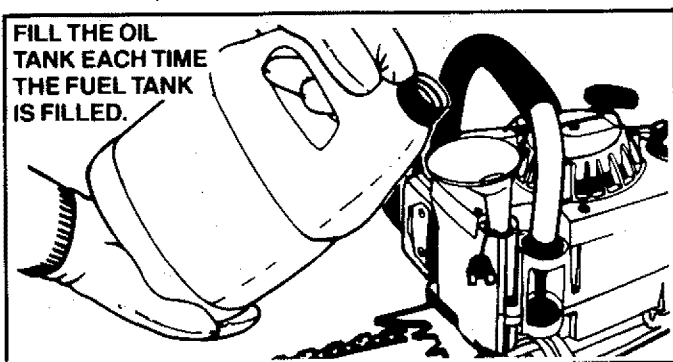


Figure 11

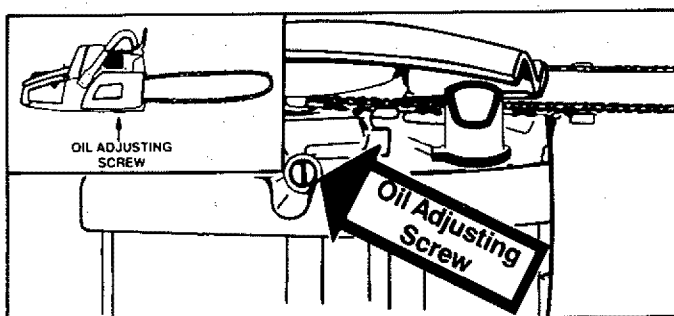


Figure 12

3. ADJUSTING THE AUTOMATIC OILER

- The adjustable automatic oiler is set for maximum output at the factory. Some types of cutting will require adjusting the oiler.
 - less oil is required for soft or freshly cut wood.
 - maximum oil is required for hardwood or wood that has been cut for a period of time.
- The adjusting screw is located at the bottom of the saw on the crankcase next to the bar clamp housing and can be adjusted with the screwdriver end of the srench provided with your saw. Figure 13.
 - To increase the oil flow, turn the adjusting screw counterclockwise ←
 - To decrease the oil flow, turn the adjusting screw clockwise →
- If the oiler is adjusted to decrease the oil flow, be sure to readjust the oiler before returning to types of cutting that require greater lubrication.
- When the saw is run at high RPM's for long periods of time during certain types of cutting, such as pruning or debranching, more oil can be delivered than is required. To avoid running out of chain oil before running out of fuel, check the oil tank periodically.

4. IMPORTANT POINTS TO REMEMBER

- Fill the oil tank each time you refill the fuel tank to ensure there will be sufficient oil for the chain whenever you start and run the saw.
- Keep sawdust and debris cleaned from the oil holes in the guide bar to allow an adequate oil flow to the bar and chain.
- Keep spilled and spattered oil wiped from the unit to avoid sawdust and debris build-up. Pay particular attention to oil on the fan housing and starter assembly to avoid overheating the engine.
- It is normal for a small amount of oil to appear under the saw after the engine stops. This is due to oil draining from the bar and chain when not in use.

Read
SPECIAL SAFETY SECTION
FREQUENTLY

USING YOUR SAW

A. CONTROL DEVICES

Understanding the control devices on your saw is an important part of learning how to properly and safely operate the unit. Figure 13.

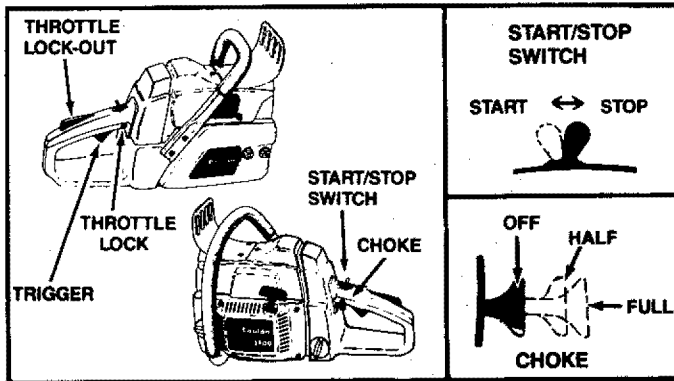


Figure 13

1. The **Start/Stop** is moved upward for the "Start" position and downward for the "Stop" position.
2. The three-position **Choke** helps to start the saw by controlling the air flow to the fuel system.
3. The **Throttle Trigger** accelerates and controls the speed of the engine and is designed to be used with the throttle lock-out.
4. The **Throttle Lock-out** prevents the trigger from becoming accidentally engaged. The throttle lock-out must be pressed before the trigger can be activated.
5. The **Throttle Lock** holds the throttle lock-out and trigger in position while the engine is being started. Release the throttle lock after the engine is started by lightly squeezing the trigger.

B. STARTING INSTRUCTIONS

⚠ WARNING

Always wear gloves; safety footwear; snug-fitting clothing; and eye, hearing, and head protection devices when operating a chain saw.

1. BASIC PROCEDURE

- a. Set the saw on flat ground making certain the saw chain is free to turn without contacting any object. Figure 14.
- b. Move start/stop switch to the "Start" position.
- c. Push down on the throttle lock-out, squeeze the trigger, press and hold down the throttle lock, then slowly release the trigger.
- d. Adjust choke according to "Starting Procedure for Varying Conditions", this page.
- e. Hold front handlebar with left hand & place right foot through rear handle to stabilize saw. Figure 14.
- f. Pull starter rope quickly with your right hand.
- g. Squeeze throttle trigger to release the throttle lock allowing engine to idle.

⚠ WARNING

The chain must not move when the engine runs at idle speed. Refer to "Carburetor Adjustments" for correction.

- h. Stop engine by moving the start/stop switch to the "STOP" position (Figure 13).

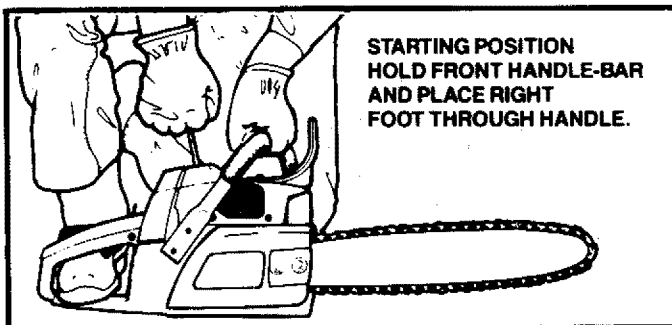


Figure 14

2. STARTING PROCEDURE FOR VARYING CONDITIONS

NOTE: Be sure to follow "1. Basic Procedure," as described on this page.

a. COLD ENGINE

- 1.) Pull choke to full choke position. Figure 13.
- 2.) Pull starter rope until engine attempts to run.
- 3.) Push choke until half position is felt. Figure 13.
- 4.) Pull starter rope until engine runs.
- 5.) After 5 second warm up, push choke to the off position. Figure 13.

⚠ WARNING

Avoid bodily contact with the muffler when starting or using a warm engine to avoid serious burns.

b. WARM ENGINE

- 1.) Leave choke at the off position. Figure 13.
- 2.) Pull starter rope until engine runs.

c. REFUELED WARM ENGINE AFTER RUNNING OUT OF FUEL

- 1.) Pull choke to full choke position. Figure 13.
- 2.) Pull starter rope until engine attempts to run.
- 3.) Push choke to the off position. Figure 13.
- 4.) Pull starter rope until engine runs.

3. IMPORTANT POINTS TO REMEMBER

- a. **When pulling the starter rope**, do not use the full extent of the rope as this can cause the rope to break. Do not let the starter rope snap back. Hold the handle and let the rope rewind slowly.
- b. **If engine floods**, let the unit set for a few minutes, then repeat starting procedure using half-choke.
- c. **For cold weather starting**, allow engine to warm up (1-2 min.) at half-choke then close choke. Do not cut with the choke at the "full" or "half" position.

TYPES OF CUTTING

A. BASIC CUTTING TECHNIQUE

1. IMPORTANT POINTS.

- Cut wood only.** Do not cut metal, plastics, masonry, non-wood building materials, etc. Do not use your saw to pry or shove away limbs, roots or other objects.
- Stop the saw if the chain strikes a foreign object.** Inspect the unit and repair or replace parts as necessary.
- Keep the chain out of dirt and sand.** Even a small amount of dirt will quickly dull a chain and thus, increase the possibility of kickback.

▲ KICKBACK WARNING

Kickback can 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 saw 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 saw chain is pinched along the top of the guide bar, the guide bar can be driven rapidly back toward the operator. Either of these reactions can cause loss of saw control which can result in serious injury.*

2. UNDERSTAND REACTIVE FORCES

Pinch-Kickback and Pull-In occur when the chain is suddenly stopped by being pinched, caught, or by contacting a foreign object in the wood. This results in a reversal of the chain force used to cut wood and causes the saw to move in the opposite direction of chain rotation. Either reaction can result in loss of control and possible serious injury.

● Pinch-Kickback

- occurs when the chain, on top of the bar is suddenly stopped when the top of the bar is used for cutting.
- *rapidly drives the saw straight back toward the operator.*

● Pull-In —

- can occur when the chain on the bottom of the bar is suddenly stopped.
- *pulls the saw rapidly forward.*

3. PROCEDURE

- Accelerate the engine to full throttle just before entering the cut by squeezing the throttle trigger.**
- Begin cutting with the saw frame or spur against the wood.** Figure 15.
- Keep the engine at full throttle the entire time you are cutting.**
- Allow the 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 throttle trigger as soon as the cut is completed,** allowing the engine to idle. If you run the saw at full throttle without a cutting load, unnecessary wear can occur to the chain, bar, and engine.
- Do not put pressure on the saw at the end of the cut** to avoid losing control when the cut is complete.
- Stop the engine before setting the saw down after cutting.**

Practice cutting a few small logs using the following technique to get the "feel" of using your saw before you begin a major sawing operation.

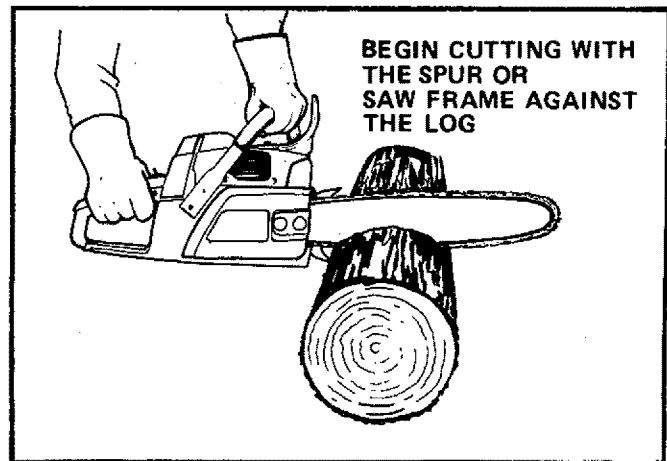


Figure 15

B. TREE FELLING TECHNIQUES

1. PLAN YOUR SAWING OPERATION CAREFULLY IN ADVANCE

- Clear the work area.** You need a clear area all around the tree where you can have secure footing.
- Study the natural conditions that can cause the tree to fall in a particular direction:**
 - 1.) The **WIND** direction and speed.
 - 2.) The **LEAN** of the tree.
 - 3.) **WEIGHTED** with **BRANCHES** on one side.
 - 4.) Surrounding **TREES** and **OBSTACLES**.
- Look for decay and rot.** If the trunk is rotted, it could snap and fall toward the operator.

- Check for broken or dead branches** which could fall on you while cutting.
- Makesure there is enough room for the tree to fall.** Maintain a distance of 2½ tree lengths from the nearest person or other objects. Engine noise can drown out a warning call.
- Remove dirt, stones, loose bark, nails, staples, and wire from the tree where cuts are to be made.**
- Plan to stand on the up-hill side when cutting on a slope.**
- Plan a clear retreat path to the rear and diagonal to the line of fall.** Figure 17.

2. FELLING SMALL TREES — LESS THAN 6" IN DIAMETER

- a. If you know the direction of fall:
 - 1.) Make a single felling cut on the side away from the direction of fall.
 - 2.) Cut all the way through.
 - 3.) Stop the saw, put it down, and get away quickly on your planned retreat path.
- b. If you are not sure which way the tree will fall, use the notch method described for felling large trees.

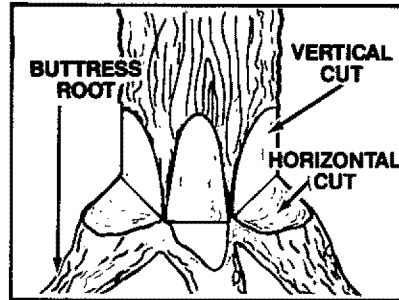


Figure 16

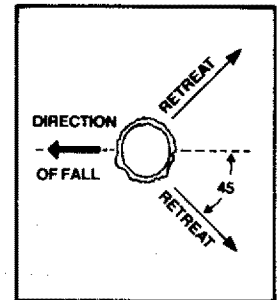


Figure 17

⚠️ WARNING

DO NOT CUT:

- near electrical wires or buildings.
- if you do not know the direction of tree fall.
- at night since you will not be able to see well.
- during bad weather — strong wind, snow, rain, etc.

3. FELLING LARGE TREES — 6" DIAMETER OR MORE

The notch method is used to cut large trees. A notch is cut on the side of the tree in the desired direction of fall. After a felling cut is made on the opposite side of the tree, the tree will tend to fall into the notch.

NOTE: If the tree has large buttress roots, remove before making the notch. Cut into the buttresses vertically, then horizontally. Figure 16.

- a. Make the notch cut. Figure 18.
 - 1.) Cut the bottom of the notch first, through 1/3 of the diameter of the tree.
 - 2.) Complete the notch by making the slant cut.
 - 3.) Remove the notch of wood.
- b. Make the felling cut on the opposite side of the notch about 2" higher than the bottom of the notch.
- c. Leave enough uncut wood between the felling cut and the notch to form a hinge. Figure 19.

NOTE: The hinge helps to keep the tree from twisting and falling in the wrong direction.

- d. Use a wedge if there is any chance that the tree will not fall in the desired direction.

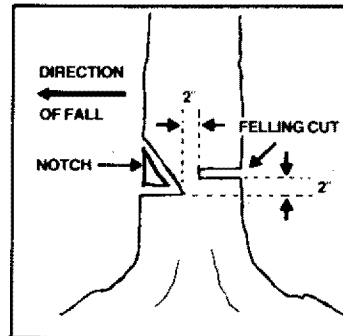


Figure 18

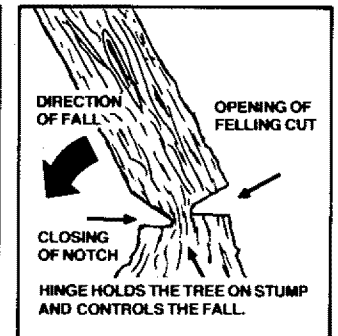


Figure 19

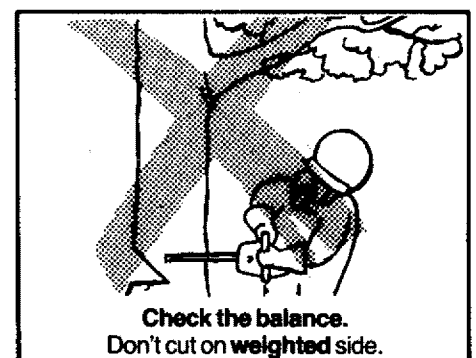
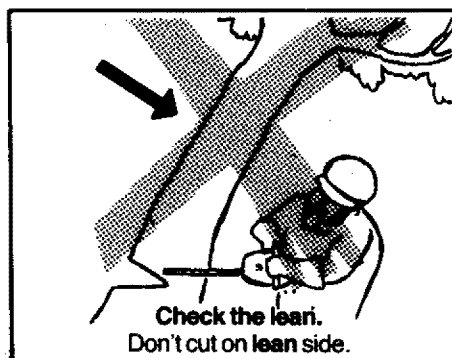
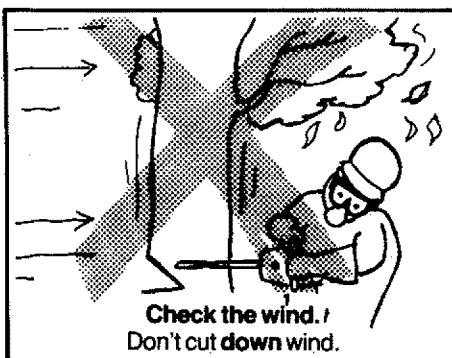
⚠️ WARNING

Stay on the uphill side of the tree to avoid the tree rolling or sliding downhill into you.

NOTE: Before the felling cut is complete, drive wedges to open up the cut when necessary to control the direction of fall. Use wood or plastic wedges but *never* metal, to avoid kickback and chain damage.

- e. Be alert for signs that the tree is ready to fall:
 - 1.) cracking sounds
 - 2.) widening of the felling cut
 - 3.) movement in the upper branches.
- f. As the tree starts to fall, *stop the saw; put it down, and get away quickly on your planned retreat path.*
- g. Be extremely cautious with partially fallen trees that may be poorly supported. When a tree doesn't fall completely, set the saw aside and pull down the tree with a cable winch, block and tackle or tractor. To avoid injury, do not cut down a partially fallen tree with your saw.

DON'T PUT YOURSELF IN THESE POSITIONS



C. BUCKING

Bucking is the term used for cutting a fallen tree to the desired log size.

1. IMPORTANT POINTS

- Cut only one log at a time.
- Cut shattered wood very carefully. Sharp pieces of wood could be flung toward the operator.
- Use a sawhorse to cut small logs. Never allow another person to hold the log while cutting and never hold the log with your leg or foot.
- Give special attention to logs under strain to prevent the saw from pinching. Make the first cut on the pressure side to relieve the stress on the log. Figure 20.
- Do not cut in an area where logs, limbs and roots are tangled such as in a blown down area. Pull out exposed and cleared logs first. Drag the logs into a clear area before cutting.
- Make the first bucking cut 1/3 of the way through the log and finish with a 2/3 cut on the opposite side. As the log is being cut, it will tend to bend. The saw can become pinched or hung in the log if you make the first cut deeper than 1/3 of the diameter for the log.

2. TYPES OF CUTTING USED Figure 21.

- Overcutting** – begin on the top side of the log with the spur against the log; exert light pressure downward.
- Undercutting** - begin on the underside of the log with the spur against the log; exert light pressure upward. During undercutting, the saw will tend to push back at you. Be prepared for this reaction and hold the saw firmly to maintain control.

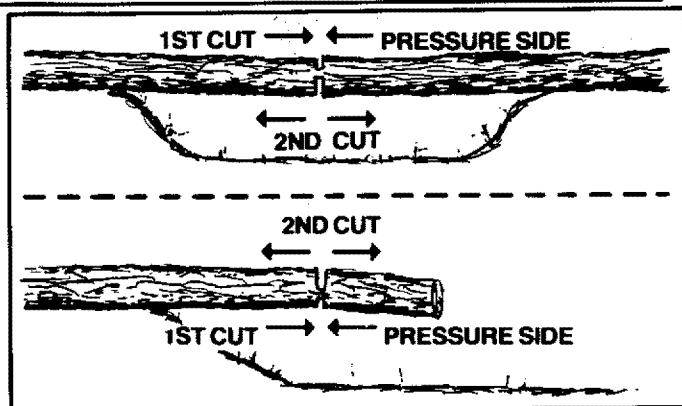


Figure 20

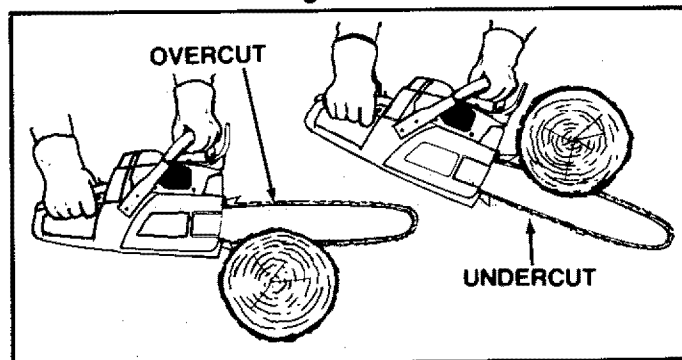


Figure 21

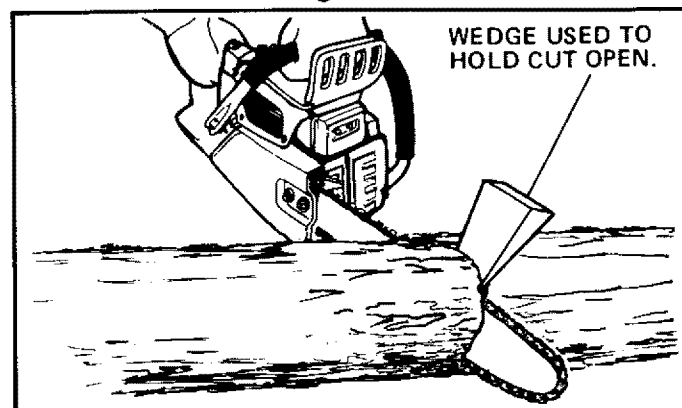


Figure 22

⚠ WARNING
Never turn the saw upside down to undercut. The saw cannot be controlled in this position.

⚠ WARNING
If saw becomes pinched or hung in a log, don't try to force it out. You can lose control of the saw resulting in injury and/or damage to the saw. Stop the saw, drive a wedge of plastic or wood into the cut until the saw can be removed easily. Figure 23. Restart the saw and carefully reenter the cut. To avoid kickback and chain damage, do not use a metal wedge. Do not attempt to restart your saw when it is pinched or hung in a log.

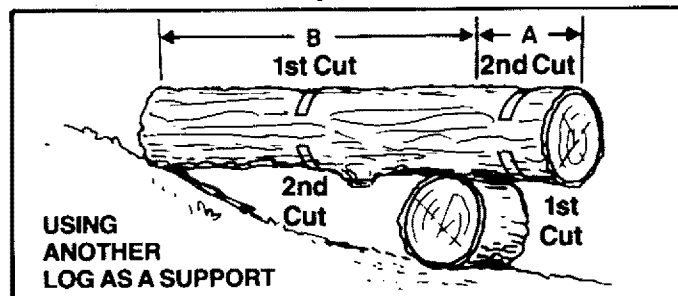


Figure 23

3. BUCKING — WITHOUT A SUPPORT

- Overcut with a 1/3 diameter cut.
- Roll log over and finish with an overcut.

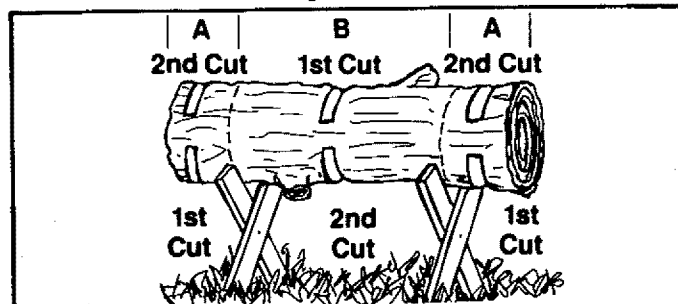


Figure 24

4. BUCKING — USING ANOTHER LOG AS A SUPPORT (Figure 23):

⚠ WARNING

Do not stand on the log being cut. Any portion can roll causing loss of footing and control.

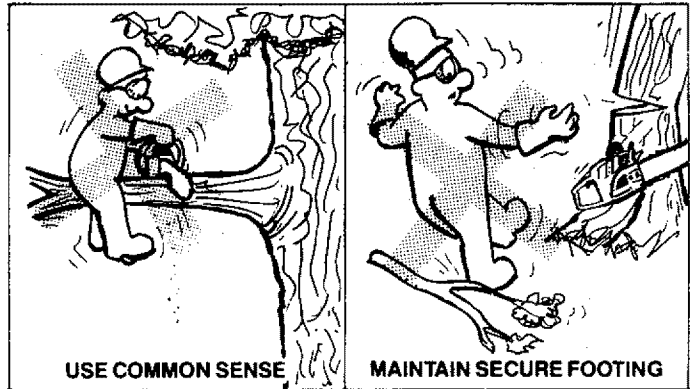
- a. In area A:
 - 1.) Undercut 1/3 of the way through the log.
 - 2.) Finish with an overcut.
- b. In area B:
 - 1.) Overcut, 1/3 of the way through the log.
 - 2.) Finish with an undercut.

5. BUCKING — USING A STAND (Figure 24):

- a. In area A:
 - 1.) Undercut 1/3 of the way through the log.
 - 2.) Finish with an overcut.

b. In area B:

- 1.) Over cut 1/3 of the way through the log.
- 2.) Finish with an undercut.



D. DEBRANCHING AND PRUNING

- **Work slowly, keeping both hands on the saw with a firm grip.** Maintain secure footing and balance.
- **Watch out for springpoles.** Use extreme caution when cutting small size limbs. Slender material can catch the saw chain and be whipped toward you or pull you off balance.
- **Be alert for springback.** Watch out for branches that are bent or under pressure as you are cutting to avoid being struck by the branch or the saw when the tension in the wood fibers is released.
- **Keep a clear work area.** Frequently, clear branches out of the way to avoid tripping over them.

⚠ WARNING

Never climb into a tree to debranch or prune. Do not stand on ladders, platforms, a log or in any position which can cause you to lose your balance or control of the saw.

1. DEBRANCHING

- a. **Always debranch a tree after it is cut down.** Only then can debranching be done safely and properly.
- b. **Leave the larger lower limbs to support the tree as you work.**
- c. **Start at the base of the felled tree and work towards the top, cutting branches and limbs.** Remove small limbs with one cut. Figure 25.
- d. **Keep the tree between you and the chain.** Cut from the side of the tree opposite the branch you are cutting.
- e. **Remove larger, supporting branches with the 1/3, 2/3 cutting techniques described in the bucking section.**
 - 1.) Start with an undercut.
 - 2.) Finish with an overcut.
- f. **Always use an overcut to cut small and freely hanging limbs.** Undercutting can cause limbs to fall and pinch the saw.

2. PRUNING

- a. **Limit pruning to limbs shoulder height or below.** Do not cut if branches are higher than your shoulder. Get a professional to do the job.
- b. **Refer to Figure 26 for the pruning technique.**
 - 1.) Undercut 1/3 of the way through the limb near the trunk of the tree.
 - 2.) Finish with an overcut farther out from the trunk.
 - 3.) Keep out of the way of the falling limb.
 - 4.) Cut the stump flush near the trunk of the tree.

⚠ WARNING

Be alert for and guard against kickback. Do not allow the moving chain to contact any other branches or objects at the nose of the guide bar when debranching or pruning. Allowing such contact can result in serious injury.

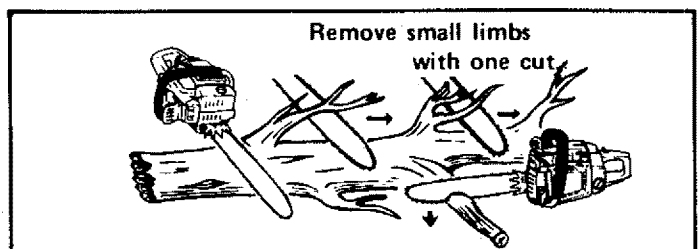


Figure 25

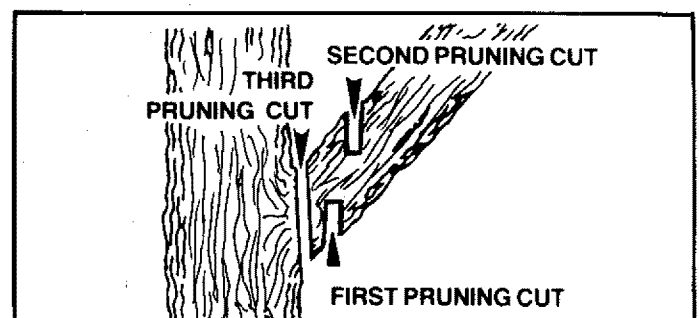


Figure 26

MAINTENANCE

A good maintenance program of regular inspection and care will increase the service life and help to maintain the safety and performance of your saw.

- Make all adjustments or repairs (except carburetor adjustments) with:
 - spark plug wire disconnected
 - engine cool as opposed to a unit that has just been run.

- Check the saw for loose bolts, screws, nuts and fittings regularly. Loose fasteners can cause an unsafe condition as well as damage to your saw. Tools required are described in "Preparing Your Saw For Use."

⚠ WARNING

Have all chain saw service performed by a qualified service dealer with the exception of the items listed in the maintenance section of this manual.

A. GUIDE BAR AND CHAIN

Increase the service life of your Guide Bar and Chain by:

- Using the saw properly and as recommended in this manual.
- Maintaining correct chain tension. See "Chain Tension."
- Proper lubrication. See "Bar and Chain Lubricant."
- Regular maintenance as described in this section.

1. CHAIN MAINTENANCE

- Sharpen the chain when:
 - Wood chips are small and powdery. Wood chips made by the saw chain should be about the size of the teeth of the chain.
 - Saw has to be forced through the cut.
 - Saw cuts to one side.

CAUTION: Always wear gloves when handling the chain. The chain can be sharp enough to cut you even though it may be too dull to cut wood.

a. SHARPENING INSTRUCTIONS

Items required:

Gloves	Medium Flat File
4.5mm dia. File	Depth Gauge Tool
6" File Holder	Vise

- 1.) Stop engine and disconnect spark plug.
- 2.) Adjust the chain for proper tension. See "Chain Tension."
- 3.) Work at the midpoint of the bar, moving the chain forward by hand as each cutter is filed.
- 4.) Sharpen cutters.
 - a.) Position file holder on the top plate of the cutter and depth gauge as shown in Figure 27.
 - b.) Hold the file holder level with the 30° guide mark parallel to the center of the chain and lower file handle 10°. Figure 27.
 - c.) File from inside toward outside of cutter, straight across, on forward stroke only. Use 2 or 3 strokes per cutting edge. Figure 28.
 - d.) Keep all cutters the same length. Figure 29.
 - e.) File enough to remove any damage to cutting edge (side & top plate) of cutter. Figure 29.
 - f.) File P33S chain to meet specifications shown in Figure 30.

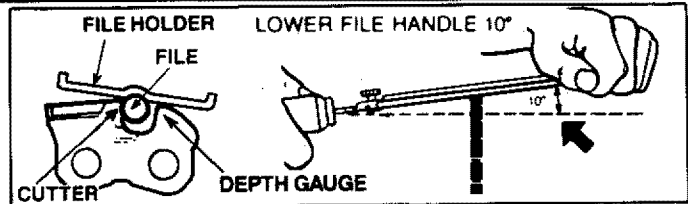


Figure 27

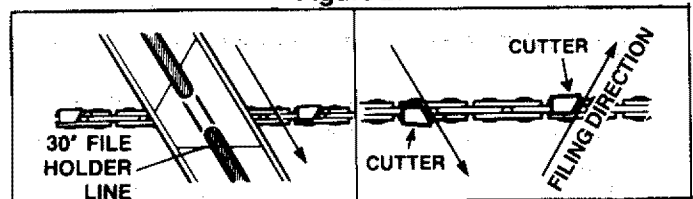


Figure 28

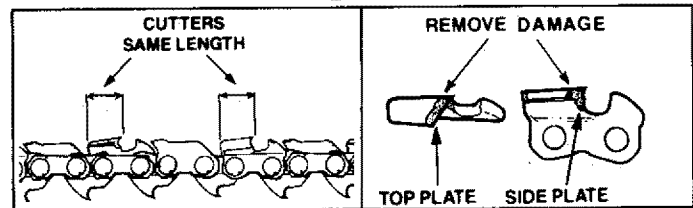


Figure 29

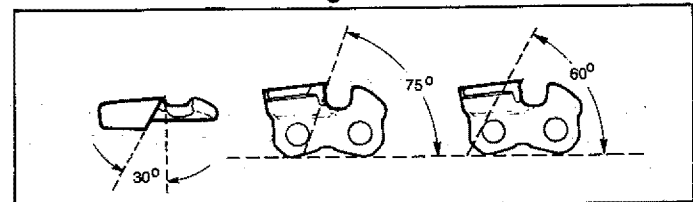


Figure 30

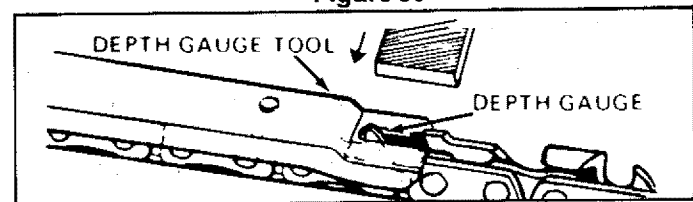


Figure 31

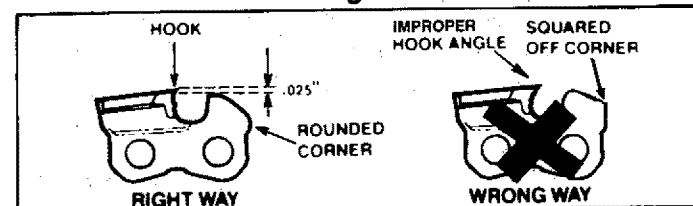


Figure 32

⚠ WARNING

Maintain the proper hook angle according to the manufacturer's specification for the chain you are using. Improper hook angle will increase the chance of kickback which can result in serious injury. Figure 30 & 32.

5.) Correct Depth Gauges

- Place depth gauge tool over each cutter depth gauge. Figure 31.
- File level with the flat file if depth gauge is higher than the depth gauge tool.
- Maintain rounded front corner of depth gauge with a flat file. Figure 31 & 32.

NOTE: The very top of the depth gauge should be flat with the front half rounded off with a flat file.

⚠ WARNING

Depth gauge tool is required to insure proper depth gauge. Filing the depth gauge too deep will increase the chance of kickback which can result in serious injury.

b. CHAIN REPLACEMENT

- Use only the Low-Kick Chain specified for your saw in "Specifications," for replacement chain.
- Replace the chain when cutters or links break.
- See a qualified service dealer to replace and sharpen individual cutters for matching your chain.
- Always have a worn sprocket replaced by a qualified service dealer when installing a new chain to avoid excessive wear to the chain.

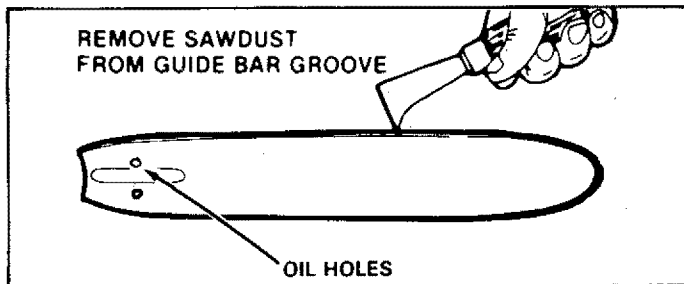


Figure 33

2. GUIDE BAR MAINTENANCE

● Conditions which can require guide bar maintenance:

- saw cuts to one side
- saw has to be forced through a cut
- inadequate supply of oil to bar and chain.

● Check the condition of the guide bar each time the chain is sharpened. A worn guide bar will damage the chain and make cutting more difficult.

● Replace the guide bar when:

- the inside groove of the guide bar rails is worn.
- the guide bar is bent or cracked.

● Use only the Reduced-Kickback Guide Bar specified for your saw in "Specifications," for replacement.

- Remove the guide bar to service.
- Clean oil holes at least once for each five hours of operation. Figure 33.
- Remove sawdust from the guide bar groove periodically with a putty knife or a wire. Figure 33.
- Remove burrs by filing the side edges of the guide bar grooves square with a flat file. Figure 34.
- Restore square edges to an uneven rail top by filing with a flat file. Figure 34.

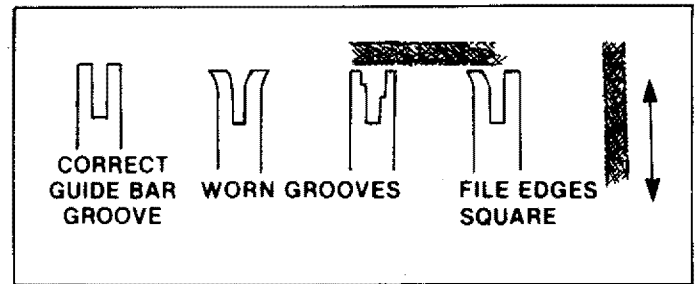


Figure 34

B. SPARK ARRESTOR AND SPARK PLUG

1. SPARK ARRESTOR

- Carbon deposits build up on the spark arrestor, as the saw is used and must be removed to avoid creating a fire hazard or causing engine damage.
- Replace the spark arrestor if breaks occur.
- Keep the spark arrestor clean at all times. Clean.
 - as required
 - at least once for each 25-30 hours of operationItems required:
 - wire brush,
 - 3/8" wrench
 - Disconnect the spark plug wire.
 - Remove the heat shield. Figure 35.
 - Remove the screen from the diffuser.
 - Clean the screen with a wire brush or replace if breaks are found.
 - Reassemble parts.

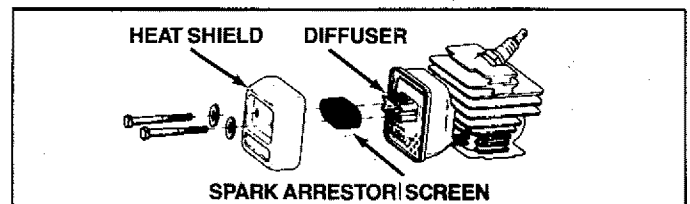


Figure 35

2. SPARK PLUG

- Replace the spark plug when necessary:
- If you perform this maintenance yourself, note the "Caution" below.

CAUTION: Do not mix chrome-colored fan housing screws with the black-colored cylinder shroud screws. Other than color, these screws are similar in appearance; but if interchanged, they can strip out and/or cause permanent engine damage.

C. STARTER ROPE

- A starter rope that breaks next to the pulley can be repaired.
- Replace the starter rope if the rope breaks more than 2-3 inches away from the pulley as the rope will be too short to repair properly.

⚠ WARNING

Always wear eye protection when servicing the starter rope. The recoil spring beneath the pulley is under tension. If the spring pops out, serious injury can result.

NOTE: The recoil spring, located beneath the pulley, is under tension. If the spring pops out, it will require considerable time and effort to reinstall. For this reason, you may want to let a qualified service dealer handle this repair. If you do try to repair the starter rope and the recoil spring pops out, take the unit to a qualified service dealer.

1. Remove the four screws on the side of the fan housing. Figure 36.

CAUTION: Do not mix chrome-colored fan housing screws with the black-colored cylinder shroud screws. Other than color, these screws are similar in appearance; but if interchanged, they can strip out and/or cause permanent engine damage.

2. Remove the fan housing.
3. If the starter rope is broken, proceed to step "4." If the starter rope is not broken, release the tension on the spring as follows:
 - a. Pull about 12 inches of rope from the pulley and catch the rope in the notch as shown in Figure 37.
 - b. Turn the pulley counterclockwise ← until the spring tension is released.
4. Unthread the pulley screw in the center of the pulley with a 5/32" allen wrench until the pulley assembly can be removed from the fan housing.
5. Lift the pulley *carefully* while gently twisting the pulley counterclockwise ←. Remove the old rope.

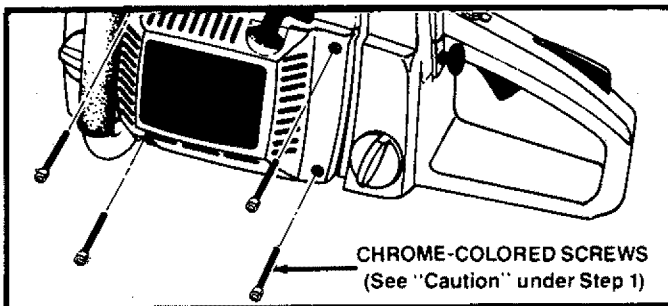


Figure 36

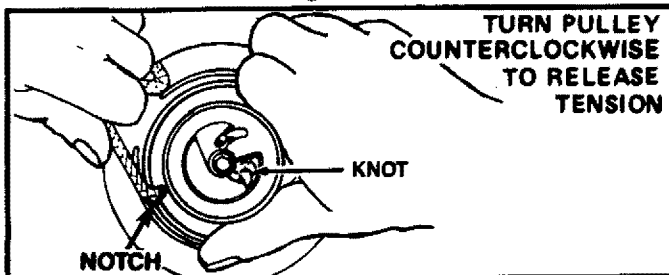


Figure 37

6. Move away from the fuel tank and melt the end of the new rope to go into the pulley.
7. Allow the melted end to drip once; then while the rope is still hot, pull the melted end through a rag to obtain a smooth, pointed end.
8. Feed the rope through the round starter hole in the the fan housing. Figure 38.
9. Guide rope inside pulley, then through topside pulley hole by pushing the rope from the underside hole with a small round object, such as a Phillips screwdriver. See inset. Figure 38.
10. Tie a knot in the end of the rope leaving no more than a 3/8 to 1/4 inch tail and pull the knot snugly into the corner of the groove in the pulley. Figure 37.
11. Tuck the tail on the rope knot into the inner curved section to avoid interference with the flywheel. Figure 37 & 39.
12. Set the pulley assembly in the housing; push it down and engage the spring.
13. Tighten the pulley screw.

NOTE: If you remove the pulley screw from the pulley make sure the starter dog, retainer, cam and wave washer are positioned and installed properly as shown in Figure 38.

14. Make sure the cam is installed on the starter dog in the direction shown in Figure 38. Also make sure the wave washer is seated around the top outer edge of the retainer and not caught between the top of the retainer and the pulley screw.
15. Catch the rope in the notch in the pulley. Figure 39.
16. Turn the pulley clockwise → to wind up the spring until it will turn no more without forcing. *Do not let go of the pulley.* Let the pulley unwind one full turn and release the rope from the slot. Continue to hold pulley.
17. Hold the pulley, pull the starter rope to the full extent of length then let the rope rewind slowly.
18. Reinstall fan housing and the four chrome-colored screws. Tighten screws securely.

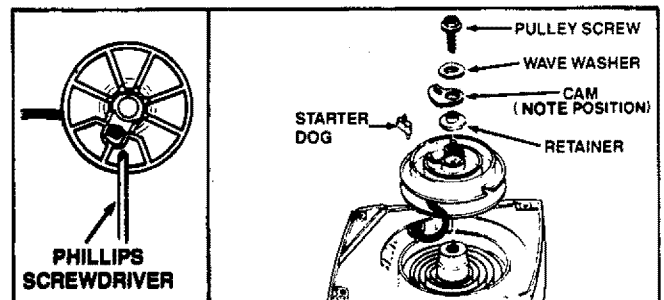


Figure 38

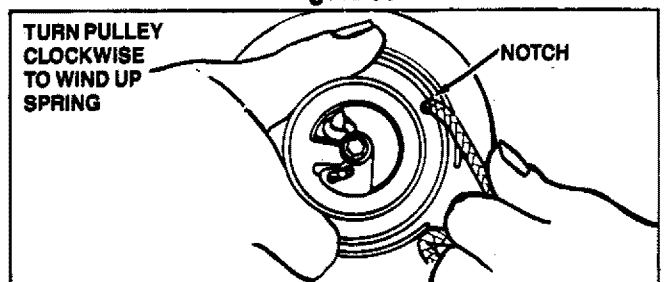


Figure 39

D. CARBURETOR ADJUSTMENTS

- Poor engine performance can be a result of other causes such as dirty air filter, carbon build-up on muffler outlets, etc. See "Trouble Shooting Chart" before proceeding with carburetor adjustments.
- For the best results, Beard-Poulan recommends that you have a qualified service dealer make all carburetor adjustments. Your dealer has the training, experience and tools necessary to properly adjust your saw to meet our factory performance specifications. *This service is not covered by warranty.* If it becomes necessary for you to make carburetor adjustments yourself, follow the described procedures very carefully.
- The carburetor has been adjusted at the factory for sea level conditions. Adjustments may become necessary if the unit is used at significantly higher altitudes or if you notice any of the following conditions:
NOTE: Be sure to properly prepare the saw as described in "1. Preparation" below, before making any adjustments.
 - Chain moves when the engine runs at idle speed. See "2. Idle Speed Adjustment."
 - Saw will not idle. See "2. Idle Speed Adjustment" and "3. Low Speed Mixture Adjustment."
 - Engine dies or hesitates when it should accelerate. See "4. Acceleration Adjustment."
 - Loss of cutting power which is not corrected by air filter cleaning. See "5. High Speed Mixture Adjustment."

CAUTION: Permanent damage will occur to any 2-cycle engine if incorrect carburetor adjustments are made.

- If the unit will not operate properly after making these adjustments, take the unit to a qualified service dealer.

⚠ WARNING

The chain will be moving during most of this procedure. Wear your protective gear and observe all safety precautions.

1. PREPARATION

- Stop engine.
- Use a fresh fuel mixture with proper gasoline/oil ratio.
- Place the saw on a solid, flat surface and make sure the chain will not contact any object.
- Locate the three (3) carburetor adjusting screw openings to the right of the air filter cover. Figure 40.
- Start the engine and allow engine to idle 3 minutes to warm up. *The engine must be at operating temperature for proper adjustments to be made.*

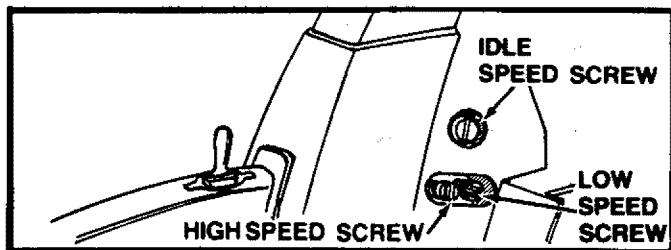


Figure 40

2. IDLE SPEED ADJUSTMENT

- Allow engine to idle.
- Adjust **Idle Speed Screw** until engine continues to run without stalling and without the chain moving.
 - Turn screw clockwise ➡ to increase engine speed if engine stalls or dies.
 - Turn screw counterclockwise ⬅ to slow engine down and/or to keep the chain from turning.
- No further adjustments are necessary if the chain does not move at idle speed and if performance is satisfactory.

⚠ WARNING

Recheck idle speed after each adjustment below. The chain must not move at idle speed to avoid serious injury.

3. LOW SPEED MIXTURE ADJUSTMENT

- Allow engine to idle.
- Turn the **Low Speed Mixture Screw** slowly clockwise ➡ until the RPM starts to drop. Note the position.
- Turn the **Low Speed Mixture Screw** counterclockwise ⬅ until the RPM speeds up and starts to drop again. Note the position.
- Set the **Low Speed Mixture Screw** at the midpoint between the two positions.

4. ACCELERATION ADJUSTMENT

If engine dies or hesitates instead of accelerating, turn the **Low Speed Mixture Screw** 1/16 of a turn at a time counterclockwise ⬅ until you have smooth acceleration.

5. HIGH SPEED MIXTURE ADJUSTMENT

CAUTION: Adjustments as small as 1/16 of a turn can affect engine performance. It is important to turn the screw only 1/16 of a turn per adjustment and test the performance of the saw before making further adjustments.

- Make a test cut.
- Adjust the High Speed Mixture Screw 1/16 of a turn as follows:
 - Clockwise ➡ if saw smokes or loses power.
 - Counterclockwise ⬅ if the saw has speed out of the cut but lacks power in the cut.
- Repeat test cut.
- Continue 1/16 of a turn adjustments until the saw runs smoothly in cut.

CAUTION: A too lean high speed setting (clockwise ➡ adjustment) will cause engine damage to any 2-cycle engine from overheating and lack of lubrication. Never set the high speed mixture screw so far clockwise ➡ that you have high speed but lack power while cutting. An effective approach follows:

- Turn screw counterclockwise ⬅ until engine loses power while cutting.
- Then, turn screw clockwise ➡ in 1/16 of a turn increments *only until* the engine has power while cutting.

NOTE: If the unit will not operate properly after making these adjustments, take the unit to a qualified service dealer.

E. CLUTCH AND DRUM/SPROCKET

⚠ WARNING

Do not start engine without Guide Bar, Chain, and Bar Clamp Housing completely assembled. The clutch can come off without the guide bar and chain completely assembled and serious injury can result. The clutch shoes and drum can separate causing the clutch to violently fly apart and serious injury can result.

- Take the saw to a qualified service dealer for full clutch inspection and service after each 100 hours of operation. *It is recommended that you do not try to service the clutch or drum/sprocket yourself unless you are a competent small engine mechanic and have the proper clutch service tools.* Proper disassembly and repair of the clutch is extremely important to the life of the engine and the safety of the operator.
- Clutch maintenance is required when:
 - the chain continues to turn while engine idles after the idle speed screw has been adjusted.
 - slippage occurs during a cut.
 - a chattering noise occurs during cutting.
- Clean the clutch, drum, sprocket and surrounding area daily during heavy use of the saw. Check to see that the clutch drum turns freely and smoothly.
- Inspect the sprocket regularly for wear. A worn sprocket will make the chain run erratically and will shorten the life of the bar and chain. Figure 41.
- Always have a worn sprocket replaced by a qualified service dealer whenever a new chain is installed in order to gain the full life expectancy of the chain.

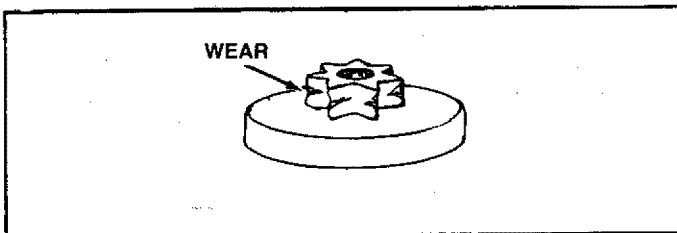


Figure 41

F. AIR FILTER

- A dirty air filter:
 - reduces cutting power
 - increases fuel consumption
- Clean the air filter:
 - frequently, especially in very dusty conditions.
 - always after 10 tanks of fuel mixture or 5 hours of operation, whichever is less.
- Replace the air filter if any damage occurs to it.

CAUTION: Never operate the unit without the air filter in place to avoid damage to the engine.

Items Required: soft bristled brush, such as a paint brush.

1. Clean off the carburetor cover and the area around it.
 2. Pull choke to the full position (Figure 13) to prevent dirt from entering the carburetor.
 3. Remove the carburetor cover.
 4. Remove the air filter carefully, Figure 42.
 5. Remove single top screw and separate the two halves.
 6. Brush away all dust and debris from the filter
- CAUTION:** Do not use gasoline or other flammable liquid to clean the filter to avoid creating a fire hazard.
7. Soak filter in soap and water.
 8. Allow filter to dry.
 9. Reassemble filter.
 10. Brush away all debris from surfaces on which the filter is to be placed.
 11. Replace the filter and carburetor cover.

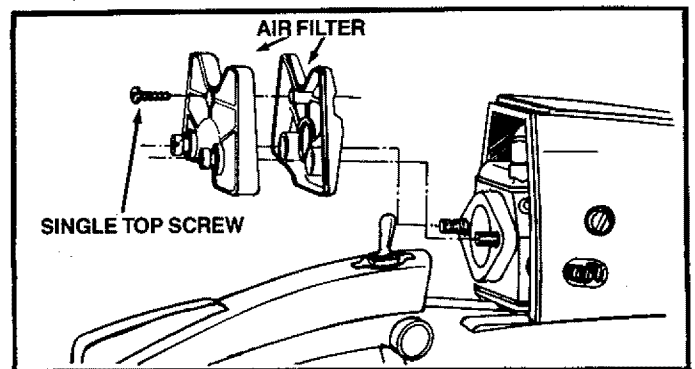


Figure 42

G. STORAGE

When your saw is to be stored for over 30 days always:

1. Drain fuel tank in a safe manner. See "Fueling Your Engine."
2. Start engine and allow to run at idle speed until the engine stops.

NOTE: This will remove most of the fuel from the fuel system.

CAUTION: Wear protective gloves when handling the chain. The chain is sharp and can cut you even when it is not moving.

3. Drain oil tank.
4. Remove, clean, and dry the bar and chain.
5. Store the chain in a container filled with oil to prevent rust.
6. Apply a coating of oil to the entire surface of the bar and wrap it in heavy paper, cloth or plastic.
7. Clean the outside surfaces of the engine.
8. Store the saw in a dry place out of the reach of children and away from where fuel vapors can reach sparks or open flames from hot water heaters, furnaces, etc.

H. TROUBLE SHOOTING CHART

TROUBLE	CAUSE	REMEDY
ENGINE WILL NOT START	<ol style="list-style-type: none"> 1. Ignition Switch off. 2. Fuel tank empty. 3. Spark Plug not firing. 4. Engine flooded. 5. Fuel not reaching carburetor. 6. Compression low. 	<ol style="list-style-type: none"> 1. Move switch to "Start." 2. Fill tank with correct fuel mixture. 3. Install new plug and/or check ignition system. 4. See Starting Instructions. 5. Check for dirty fuel filter; clean. Check for kinked or split fuel line; repair or replace. 6. Contact a qualified service dealer.
ENGINE WILL NOT IDLE PROPERLY	<ol style="list-style-type: none"> 1. Idle speed set too low. 2. Idle speed set too high. 3. Low speed screw requires adjustment. 4. Crankshaft seals worn. 5. Compression low. 	<ol style="list-style-type: none"> 1. Adjust idle speed screw clockwise to increase speed. 2. Adjust idle speed screw counterclockwise to reduce speed. 3. See Carburetor Adjustments. 4. Contact a qualified service dealer. 5. Contact a qualified service dealer.
ENGINE WILL NOT ACCELERATE, LACKS POWER OR DIES IN THE CUT	<ol style="list-style-type: none"> 1. Air filter is dirty. 2. Spark plug fouled. 3. Carbon build-up on exhaust ports. 4. Carburetor requires adjustment. 5. Low Compression. 	<ol style="list-style-type: none"> 1. Clean or replace air filter. 2. Clean or replace Spark Plug and regap. 3. Contact a qualified service dealer. 4. See Carburetor Adjustments. 5. Contact a qualified service dealer.
ENGINE SMOKES EXCESSIVELY	<ol style="list-style-type: none"> 1. Choke partially on. 2. Air filter dirty. 3. Oil rich fuel mixture. 4. High speed needle requires adjustment. 5. Crankcase leak. 	<ol style="list-style-type: none"> 1. Push Choke Knob in. 2. Clean or replace air filter. 3. Empty fuel tank and refill with correct fuel mixture. 4. See Carburetor Adjustments. 5. Contact a qualified service dealer.
ENGINE RUNS HOT	<ol style="list-style-type: none"> 1. Fan Housing dirty. 2. Fuel Mixture incorrect. 3. Spark Plug incorrect. 4. High Speed Mixture set too low. 5. Carbon build-up on spark arrestor screen. 6. Carbon build-up on exhaust ports. 	<ol style="list-style-type: none"> 1. Clean fan housing. 2. See Engine Fuel Mixture. 3. Replace with correct plug. 4. See Carburetor Adjustments. 5. Clean spark arrestor screen. 6. Contact a qualified service dealer.
OIL INADEQUATE FOR BAR AND CHAIN LUBRICATION	<ol style="list-style-type: none"> 1. Oil tank empty. 2. Improperly adjusted oiler. (If so equipped.) 3. Oil pump or oil filter clogged. 4. Guide bar oil hole blocked. 	<ol style="list-style-type: none"> 1. Fill oil tank. 2. Adjust oiler. 3. Contact a qualified service dealer. 4. Remove bar and clean.
CHAIN MOVES AT IDLE SPEED	<ol style="list-style-type: none"> 1. Idle speed requires adjustment. 2. Clutch requires repair. 	<ol style="list-style-type: none"> 1. See Carburetor Adjustments. 2. Contact a qualified service dealer.
CHAIN DOES NOT MOVE WHEN ENGINE IS ACCELERATED	<ol style="list-style-type: none"> 1. Chain tension too tight. 2. Carburetor requires adjustment. 3. Guide bar rails pinched. 4. Clutch slipping. 	<ol style="list-style-type: none"> 1. See Chain Tension. 2. See Carburetor Adjustments. 3. Repair or replace. 4. Contact a qualified service dealer.
CHAIN CLATTERS OR CUTS ROUGHLY	<ol style="list-style-type: none"> 1. Chain tension incorrect. 2. Cutters damaged after striking foreign material. 3. Chain wear due to contact with dirt, sand or frozen wood. 4. Cutters dull, improperly sharpened; depth gauges too high. 5. Sprocket worn. 	<ol style="list-style-type: none"> 1. See Chain Tension. 2. Contact a qualified service dealer. 3. Resharpener or replace chain. 4. See Chain Sharpening Instructions. 5. Contact a qualified service dealer.
CHAIN STOPS WITHIN THE CUT	<ol style="list-style-type: none"> 1. Chain cutter tops not filed flat. 2. Guide bar burred or bent; rails uneven. 3. Clutch slipping. 	<ol style="list-style-type: none"> 1. See Chain Sharpening Instructions. 2. Repair or replace Guide Bar. 3. Contact a qualified service dealer.
CHAIN CUTS AT AN ANGLE	<ol style="list-style-type: none"> 1. Cutters damaged on one side. 2. Chain dull on one side. 3. Guide bar bent, or worn. 	<ol style="list-style-type: none"> 1. Resharpener until all cutters have equal angles and lengths. 2. Resharpener until all cutters have equal angles and lengths. 3. Replace guide bar.

I. MAINTENANCE CHART

		before starting work	after finishing work or daily	after each refueling stop	weekly	monthly
Complete machine	Visual inspection (condition, leaks)	x		x		
	Clean		x			
Throttle trigger, safety throttle lock, stop switch	Check operation	x		x		
Filter in fuel tank	Clean Felt					x
	Replace pick-up — when clogged or dirty					
Fuel tank	Clean					x
Chain oil tank	Clean					x
Chain lubrication	Check	x				
Saw chain	Inspect (sharpness, wear, damage)	x		x		
	Check chain tension	x		x		
	Sharpen — when dull					
Guide bar	Inspect (wear, damage)	x				
	Clean				x	
	Lubricate sprocket nose		x			
	Deburr				x	
	Replace — when worn or damaged					
Chain sprocket	Check				x	
Air filter	Clean	x				
	Replace — when worn or damaged					
Exhaust ports	Clean		x			
Cylinder fins	Clean					x
Carburetor	Check idle adjustment — chain must not turn	x		x		
	Readjust idle — when chain turns at idle					
Spark plug	Replace — when fouled or damaged					
All accessible screws and nuts (not adjusting screws)	Retighten	x				
Vibration mounts	Inspect (tears, rips, separation, out-of-round)				x	
	Replace - when necessary					
Spark arrestor screen	Clean — when clogged or dirty	x				
	Replace — when worn or damaged					

POULAN® ACCESSORIES

See your Poulan® dealer for accessories and parts.

Safety Goggles	952-062003	Bar & Chain Lubricant	
Safety Face Shield	952-701601	32 oz.	952-030129
Electric Sharpener (with all stones)	952-800516	1 gal.	952-030130
Replacement Stones	952-093094	Chain Brake Kit	952-069201
File - Flat - 6"	952-055027	Handguard	952-027181
File - Round - 4.5mm	952-055068	Reduced Kickback Guide Bar	
File & Holder	952-055069	16"	952-044324
Depth Gauge	952-050028	18"	952-044325
Bar Wrench	952-041096	20"	952-044326
Carry Case	952-030111	Replaceable Sprocket Nose Kit	952-055072
Safety Helmet	952-030013	Low-Kickback Chain	
Sound Suppressor	952-006315	16" - 66 drive links	952-051301
Spark Plug	952-030120	18" - 72 drive links	952-051313
Air Filter	952-010892	20" - 78 drive links	952-051310
Fuel & Oil Caps	952-010859	Sprocket	952-048086
2-cycle Engine Oil		Illustrated Parts List	530-067185
3.2 oz. -40:1	952-030133	Operator's Manual	530-067184
8 oz. -40:1	952-030128		

NOTES

PARTS AND SERVICE

Your Poulan® /Weed Eater® product has been expertly engineered and carefully manufactured to rigid quality standards. As with all mechanical products, some adjustments or part replacement may be necessary during the life of your tool.

FOR SERVICE OR REPLACEMENT PARTS:

1. Consult the yellow pages of your phone directory for the name of the nearest Poulan/Weed Eater Master Service Dealer (under "saws" for Chain Saws or under "lawnmowers" for Trimmers, Brushcutters and Blowers) or Skil Service Center (under "tools-electric").
2. For replacement parts, have available the following information:
 - a. Description of the unit.
 - b. Model number.
 - c. Part Number or description of part.

NOTE: Poulan/Weed Eater Division provides parts and service through its authorized distributors and dealers; therefore, all requests for parts and service should be directed to your local dealer(s). The philosophy of Poulan/Weed Eater Division is to continually improve all of its products. Written notices of changes and improvements are sent to authorized Poulan/Weed Eater Dealers. If the operating characteristics or the appearance of your product differs from those described in this Operator's Manual, please contact your local Poulan/Weed Eater Dealer for updated information and assistance. Always update your tool when improvements are made available, especially those related to safety. Parts and repair service are not available directly from Poulan/Weed Eater Division White Consolidated Industries, Inc.

POULAN/WEED EATER

DIVISION WHITE CONSOLIDATED INDUSTRIES, INC.
Shreveport, Louisiana 71139-9329

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