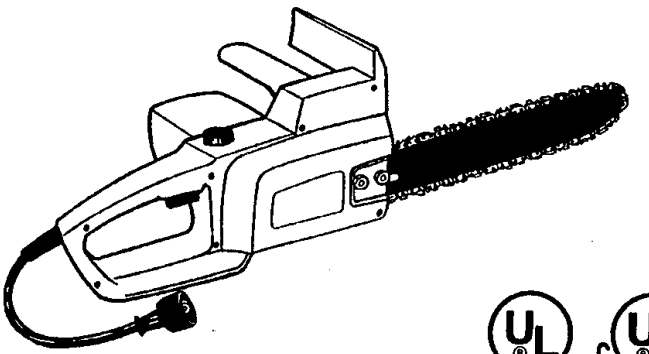
IMPORTANT MANUAL Do Not Throw Away

Poulan®



OPERATOR'S MANUAL

MODELS:
1420–14"
1425–14"
1625–16"
EL-14 PATRIOT
EL-16 PATRIOT
ELECTRIC CHAIN SAW

Always Wear Eye Protection

⚠ WARNING:
Carefully read the Operator's Manual and follow all Warnings and Safety Instructions. Failure to do so can result in serious injury.

CUSTOMER ASSISTANCE
1–800–554–6723
SEE BACK COVER FOR DETAILS!

POULAN/WEED EATER
DIVISION WCI OUTDOOR PRODUCTS, INC.
Shreveport, Louisiana 71129

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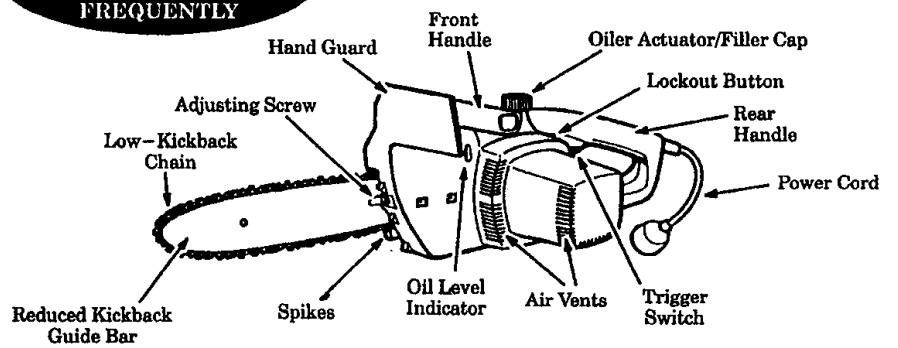
READ
WARNINGS & SAFETY
INSTRUCTIONS
FREQUENTLY



SPECIFICATIONS

MODEL:	1420-14"	1425-14"/EL-14 PATRIOT	1625-16"/EL-16 PATRIOT
POWER SUPPLY:	110-120 Volts AC, 50-60 Hz		
SPROCKET/DRIVE:	Gear Drive		
OILER:	Manual		
RATED CURRENT:	10.5 Amps	12.0 Amps	
MAXIMUM MOTOR OUTPUT:	2.0 Horsepower	2.5 Horsepower	
CHAIN:	3/8" Pitch, Low Profile Non Chrome Cutters Part No. 952-051209		3/8" Pitch, Low Profile Chrome Cutters Part No. 952-051211
GUIDE BAR	14" Guide Bar Part No. 952-044368		16" Guide Bar Part No. 952-044370

Manufactured under U.S. patent D325,330.

LOOK FOR THIS SYMBOL TO POINT OUT IMPORTANT SAFETY PRECAUTIONS. IT MEANS "ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED."

WARNINGS AND SAFETY INSTRUCTIONS

WARNING: When using an electric chain saw, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons. Read all instructions. See Additional Safety Instructions throughout this Manual.

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, which stops 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.

⚠ 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.
The Computed Kickback Angle (CKA) listed on your saw and listed in the following CKA Table represents the angle of kickback your bar and chain combinations will have when tested in accordance with CSA and ANSI standards. Computed angles represented in the CKA column indicate total energy and angle associated without a chain brake. When purchasing replacements, considerations should be given to the lower CKA values. In all cases, lower CKA values represent a safer operating environment for the user.

- **Tip contact in some cases may cause a lightening fast reverse REACTION, kicking the guide bar up and back toward the operator.**
- **Pinching the saw chain along the tip of the guide bar may push the guide bar rapidly back towards the operator.**
- **Either of these reactions may cause you to lose control of the saw which could result in serious injury.**

Do not rely exclusively upon the safety devices built into your saw.

The following guide bar and chain combinations meet kickback requirements of CSA Z62.1, Z62.3, & ANSI B175.1 when used on saws listed in this manual. Use of bar and chain combinations other than those listed is not recommended and may not meet the CKA requirements per standard.

CKA TABLE

MODEL	BAR		CHAIN P/N	CKA
	P/N	Length		
1420	952-044368	14"	952-051209	16°
1425/EL-14	952-044368	14"	952-051209	16.8°
1625/EL-16	952-044370	16"	952-051211	20°

Computed Kickback Angle (C.K.A.) for the guide bar and saw chain combinations are measured without chain brake. Other guide bar, saw chain, and saw combinations may not reflect the same C.K.A.

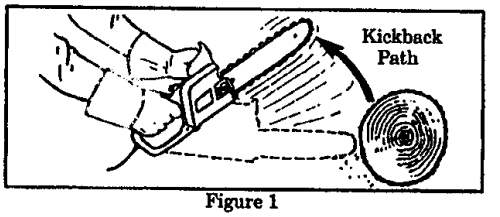


Figure 1

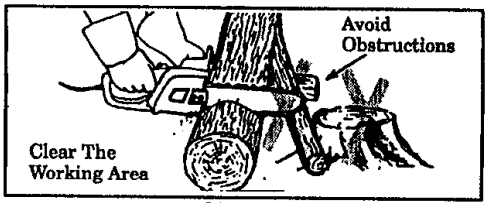


Figure 2

REDUCE THE CHANCE OF 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.** A loose or dull chain can increase the chance of kickback. Follow manufacturer's chain sharpening and maintenance instructions. Check tension at regular intervals with the motor stopped, never with the motor running. Make sure the bar clamp nuts are securely tightened after tensioning the chain.
5. **Begin and continue cutting only with the chain moving at full speed.** If the chain is moving at a slower speed, there is greater chance for kickback to occur.
6. **Cut one log at a time.**
7. **Use extreme caution when re-entering a previous cut.**
8. **Do not attempt plunge cuts or bore cuts.**
9. **Watch for shifting logs** or other forces that could close a cut and pinch or fall into chain.
10. **Use the Reduced-Kickback Guide Bar and Low-Kickback Chain** specified for your saw.

WARNINGS AND SAFETY INSTRUCTIONS (cont.)

MAINTAIN CONTROL

1. **Keep a good, firm grip on the saw with both hands when the motor 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 your 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 and places the chain dangerously close to your upper body.

KNOW YOUR SAW

1. **Read your operator's manual carefully** until you completely understand and can follow all safety rules, precautions, and operating instructions before attempting to operate the unit.
2. **Restrict the use of your saw to adults** who understand and can follow safety rules, precautions, and operating instructions found in this manual.

PLAN AHEAD

1. **Wear protective gear.** Figure 4 . Always use steel-toed safety footwear with non-slip soles; snug-fitting clothing; heavy-duty, non-slip gloves; safety glasses or similar 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. Do not wear loose clothing or jewelry; they can get caught in moving parts. Wear protective hair covering to contain long hair. Regular users should have hearing checked regularly as chain saw noise can damage hearing.
2. **Keep children, bystanders, and animals a minimum of 30 ft (10 m) away from work area.** Do not allow other people or animals to be near the chain saw or extension cord when starting or operating the chain saw.
3. **Do not handle or operate 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. Stay alert. Watch what you are doing; use common sense.
4. **Do not attempt to use your chain saw during bad weather** conditions such as strong wind, electrical storms, rain, snow, ice, etc., or at night.
5. **Carefully plan your sawing operation 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. Cluttered areas invite injuries.
6. **Inspect unit and cord before each use.** Do not use a unit with a damaged cord. Take unit to your Authorized Service Dealer for repairs.

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 sudden stopping of the chain results in a reversal of the chain force used to cut wood and causes the saw to move in the opposite direction of the 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 possibly 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 unit at full speed and the saw housing against the wood.**
2. **Use wedges made of plastic or wood, (never of metal)** to hold the cut open.

Refer to the "Types of Cutting" section for further information on avoiding Pinch–Kickback and Pull–In.

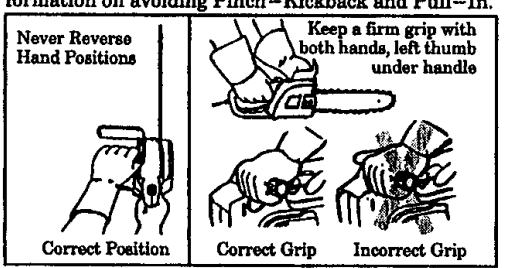


Figure 3

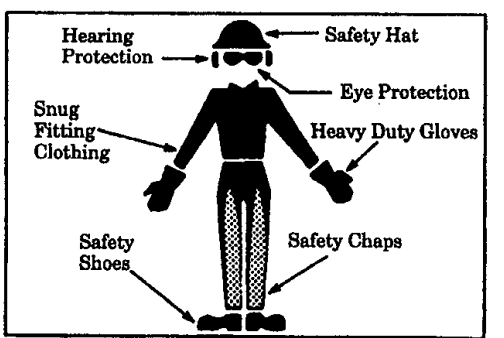


Figure 4

WARNINGS AND SAFETY INSTRUCTIONS (cont.)

OPERATE YOUR SAW SAFELY

1. **Connect chain saw to correct voltage supply** as specified on the nameplate of the unit.
2. **Do not operate a chain saw that is damaged, improperly adjusted, or not completely and securely assembled.**
3. **Do not use the saw if the trigger switch does not turn the unit on and off properly.** Repairs to the trigger switch must be made by your Authorized Service Dealer.
4. **Do not operate saw from a ladder or in a tree.**
5. **Position all parts of your body** to the left of cut and away from saw chain when motor is running.
6. **Cut wood only.** Do not use the saw for purposes for which it is not intended. Do not cut metal, plastics, masonry, non–wood building materials, etc. Inspect material to be cut; remove any foreign materials such as nails, wire, etc. Do not use the saw to pry or shove away limbs, roots, or other objects.
7. **Make sure chain will not make contact with any object before starting the motor.** Never try to start saw when the guide bar is in a cut.
8. **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.
9. **Be alert for springback** when cutting a limb that is under tension so you will not be struck by the limb or saw when tension in wood fibers is released.
10. **Do not force the saw through a cut.** It will do the job better and safer at the rate for which it was intended. Use light pressure only. Applying pressure can cause you to lose control when cut is completed.
11. **Avoid bodily contact with chain** anytime saw is plugged into a power source; the chain will continue to move for a short time after trigger is released.
12. **Avoid dangerous situations.** Do not expose the unit to rain or use in damp, wet, gaseous, or explosive locations.
13. **Unplug power cord when saw is not in use.**
14. **Allow the motor to stop and the chain to stop turning before setting the saw down.**
15. **Guard against electric shock.** Avoid body contact with any grounded conductor, such as metal pipes and wire fences.
16. **Avoid entanglement.** Keep cords clear of operator, saw chain, and branches at all times.
17. **Do not abuse cords.** Never carry saw by the power cord or yank it to disconnect. Keep tool cord and extension cord away from heat, oil, and sharp edges.
18. **Use only extension cords marked as suitable for outdoor use.**

MAINTAIN YOUR SAW IN GOOD WORKING ORDER

1. Unplug saw before servicing or changing accessories.
2. Your chain saw is double insulated to help protect against electrical shock. **Have all service** (other than the service described in the maintenance section of this manual) **performed by your Authorized Service Dealer.** Use only identical replacement parts when servicing your unit.
3. Keep the chain and guide bar clean and properly lubricated. Use the instructions in this manual when lubricating parts and changing accessories.
4. Keep the oil cap, screws, and fasteners tight.
5. Keep handles dry, clean, and free of oil and grease.
6. Stop the saw if the chain strikes a foreign object. Check for alignment, binding, breakage, and mounting of moving parts and any other condition that might affect the operation of the unit. Check guards and all other parts to see if each will operate properly and perform its intended function. Any part that is damaged should be properly repaired or replaced by using the instructions in this manual or by seeing your Authorized Service Dealer.
7. Be certain the chain stops moving when the trigger switch is released.
8. Make certain all hand tools are removed from the saw before connecting the saw to the power source.
9. **Never modify your saw in any way.** Use only attachments supplied or specifically recommended by the manufacturer. Use of any other attachments or accessories may cause severe injury.
10. Always replace the left motor housing immediately if the handguard or handle becomes damaged, broken, or is other wise removed.
11. Inspect extension cords periodically and replace if damaged.

CARRY AND STORE YOUR SAW SAFELY

1. **Carry the unit unplugged,** by the front handle, fingers away from the trigger switch, and with the guide bar and chain to the rear, covered preferably with a scabbard/plastic cover provided.
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 or damage.
3. **Drain the oil tank before storing your saw for 30 or more days.**
4. Store saw unplugged in a dry area out of the reach of children. Use the scabbard/plastic cover provided.

KICKBACK SAFETY FEATURES

⚠ 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.

- **Reduced–Kickback Guide Bar,** designed with a small radius tip which reduces the size of the kickback danger zone on 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 safety requirements for electric chain saws as set by CSA Z62.1 & Z62.3.
- **Low–Kickback Chain,** designed with a contoured depth gauge and guard link which deflect kickback force and allow wood to gradually ride into the cutter. Figure 5 . Low–Kickback Chain is chain which has met kickback performance requirements of CSA Z62.1 & Z62.3, & ANSI B175.1.

WARNINGS AND SAFETY INSTRUCTIONS (cont.)

- **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 which provides better control, balance, and resistance if kickback occurs.

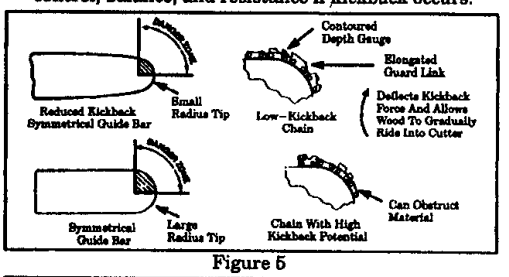


Figure 5

⚠ 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 CSA Z62.1, Z62.3, and ANSI B175.1. Failure to follow these instructions can result in serious injury.

⚠ WARNING

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

If situations occur which are not covered in this manual, use care and good judgment. If you need assistance, contact your Authorized Service Dealer or the CUSTOMER ASSISTANCE HOTLINE at 1-800-554-6723.

SAFETY NOTICE

Exposure to vibrations through prolonged use of hand tools could cause blood vessel or nerve damage in the fingers, hands, and joints of people prone to circulation disorders or abnormal swellings. Prolonged use in cold weather has been linked to blood vessel damage in otherwise healthy people. If symptoms occur such as numbness, pain, loss of strength, change in skin color or texture, or loss of feeling in the fingers, hands, or joints, discontinue the use of this tool and seek medical attention. An anti-vibration system does not guarantee the avoidance of these problems. Users who operate power tools on a continual and regular basis must monitor closely their physical condition and the condition of this tool.

SAVE THESE INSTRUCTIONS

KNOW YOUR UNIT

A. INTRODUCTION

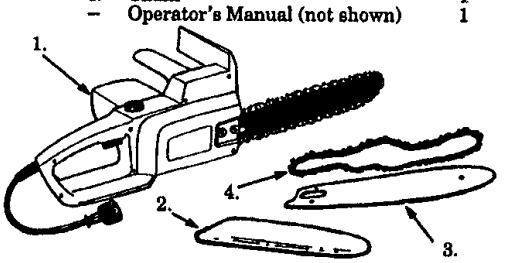
Your saw has been designed with safety in mind and includes the following safety features as standard equipment:

- Reduced-Kickback Guide Bar
- Low-Kickback Chain
- Handguard
- Double Insulated

B. CARTON CONTENTS

1. After removing the contents from the carton, check parts against the Carton Contents list.
2. Examine the parts for damage. Do not use damaged parts.
3. *Notify your dealer immediately if a part is missing or damaged.*

KEY NO.		QTY
1.	Saw	1
2.	Scabbard	1
3.	Bar	1
4.	Chain	1
–	Operator's Manual (not shown)	1



C. DOUBLE INSULATION CONSTRUCTION

This unit is Double Insulated to help protect against electric shock. Double insulation construction consists of two separate "layers" of electrical insulation instead of grounding.

Tools and appliances built with a double insulation system are not intended to be grounded. No grounding means is provided on this unit, nor should a means of grounding be added to this unit. As a result, the extension cord used with your unit can be plugged into any standard 120 volt electrical outlet.

Safety precautions must be observed when operating any electrical tool. The double insulation system only provides added protection against injury resulting from an internal electrical insulation failure.

⚠ WARNING

All electrical repairs to this unit, including housing, switch, motor, etc., must be diagnosed and repaired by qualified service personnel. Replacement parts for a double insulated appliance must be identical to the parts they replace. A double insulated appliance is marked with the words "DOUBLE INSULATION" or "DOUBLE INSULATED." The symbol (square within a square) ⧈ may also be marked on the appliance. Failure to have the unit repaired by qualified service personnel can cause the double insulation construction to become ineffective and result in serious injury.

PREPARATION

A. GETTING READY

1. **READ YOUR OPERATOR'S MANUAL CAREFULLY**
   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 attempt operation. If you have any questions or need further assistance, call our CUSTOMER ASSISTANCE HOTLINE at 1-800-554-6723.
2. **HAVE THE FOLLOWING AVAILABLE:**
   a. Protective gloves.
   b. Bar and Chain Oil (See the "Bar and Chain Oil" section).
   c. 1/2 inch wrench or equivalent
   d. Standard Screwdriver.

B. INSTALLING THE BAR AND CHAIN

- **Your saw is equipped with a Reduced-Kickback Bar and a Low-Kickback Chain.**
- **Always use the Reduced-Kickback Guide Bar and Low-Kickback Chain specified for your chain saw model when replacing these parts. See the "Specifications" section.**

⚠ WARNING
Avoid accidental starting. Always unplug the saw from the power source before installing a bar and/or chain.

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

1. Turn the unit upside down on a flat surface. Straighten out chain, then lay it on a flat surface.
2. Remove bar mounting nuts and bar clamp plate.
3. Turn the adjusting screw (Figure 6) counterclockwise to move the adjusting pin almost as far as it will go to the rear. Do not remove the adjusting screw from the unit.
4. Mount the guide bar by placing the slotted end over the mounting studs. Figure 7 .
5. Hold chain with cutters facing as shown in Figure 8 .
6. Slide the chain between the right housing and the sprocket. Figure 9 (inset). Place chain around the sprocket and fit the drive links into the guide bar grooves -- first the bottom groove and then the top groove, and then around guide bar nose. Figure 9 .
7. Slide guide bar forward and fit the adjusting pin into the round hole in the guide bar. Figure 10 .
8. Hold the guide bar against the saw frame and install the bar clamp plate. Be sure tab on the bar clamp plate is toward the rear of bar. Figure 10 .
9. Secure the guide bar and bar clamp plate with the bar nuts; tighten finger tight *only.*
10. Proceed to the "Chain Tension" section.

CAUTION: **If the saw chain is installed backwards, the saw will vibrate excessively and will not cut wood.**

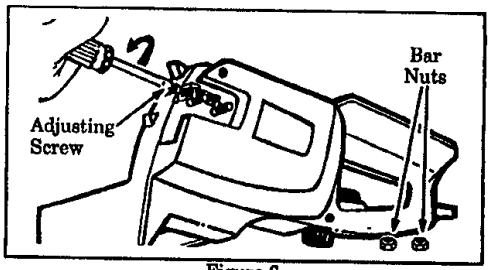


Figure 6

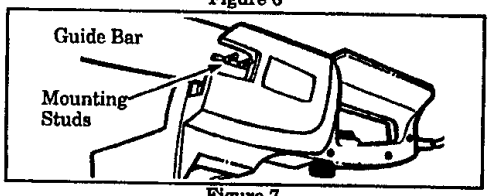


Figure 7

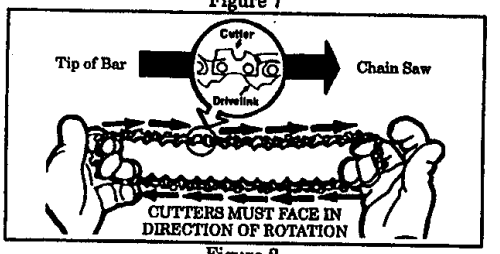


Figure 8

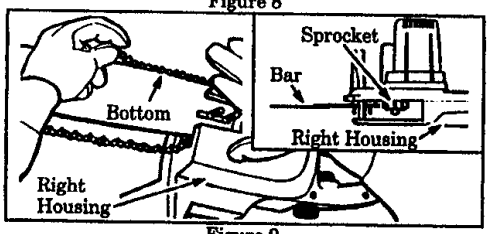


Figure 9

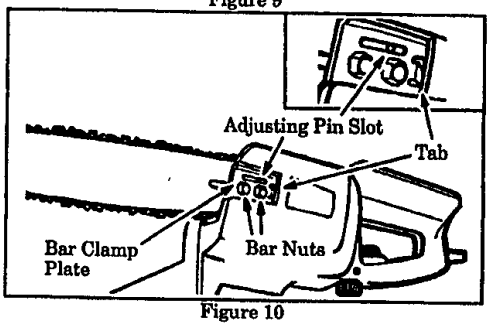


Figure 10

C. CHAIN TENSION

- **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 break or damage the saw and/or bar.
- **The chain stretches during use,** especially when new. Check tension periodically as follows:
  - each time the saw is used;
  - more frequently when the chain is new;
  - as the chain warms up to normal operating temperature.

⚠ WARNING
Avoid accidental starting. Always unplug the saw from the power source before chain tensioning or before installing a bar or chain.

⚠ WARNING
Always wear gloves when handling the chain. The chain is sharp and can cut you even when it is not moving!

- **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.

With your unit unplugged, check your chain to make sure it is properly tensioned.

- **When your chain needs tensioning, use the following procedure:**

NOTE: It is recommended that the saw be turned upside down for chain tensioning.

1. Unplug the unit from the power source.
2. Loosen bar nuts until they are only finger tight.
3. Turn the adjusting screw clockwise until the drive links on the chain enter the guide bar groove. Figure 11 (inset).

NOTE: To tighten the chain, turn the adjusting screw clockwise; to loosen the chain, turn the adjusting screw counterclockwise. Figure 11 .

4. Check the tension by lifting the chain from the guide bar. Remove some of the stiffness in the chain by pulling down and letting go of the chain several times. Figure 12 .
5. Continue turning the adjusting screw until the tension is correct. Figure 12 (inset).
6. Tighten bar mounting nuts with a wrench.
7. Recheck chain tension.

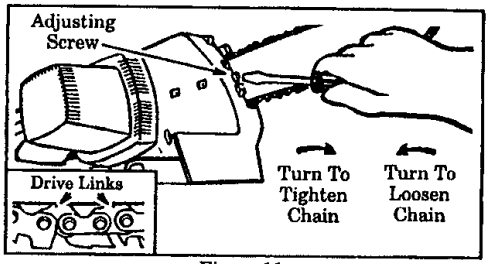


Figure 11

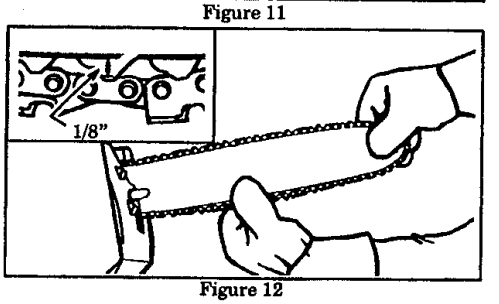


Figure 12

D. EXTENSION CORD ATTACHMENT

1. **Use only an A.C. voltage supply** identical to that shown on the nameplate of this unit.
2. **The extension cord used to reach the power source must be:**
   a. **Polarized and specifically marked as suitable for outdoor use.** *The cord must be marked with the suffix "W-A" ("W" in Canada).*
   b. **Heavy enough to carry the current from the power source the full length of the extension cord to the unit.** Otherwise, loss of power and overheating can occur causing damage to the unit. Refer to Figure 14 for minimum wire gauge recommendations. *The cord must be marked with the proper wire gauge.* (Appropriate extension cords are available.)
   c. **In good condition.** Cord insulation must be intact with no cracks or deterioration. Plug connectors must be undamaged. If cord or plugs are damaged, replace before using the unit.
3. **Secure extension cord to the power cord** as shown in Figure 13 to prevent disconnection.
4. Insert the extension cord socket into the plug on the unit. Figure 13 .

To reduce the risk of electric shock, this unit has a polarized plug (one blade is wider than the other). This plug will fit in a polarized extension cord only one way. If the plug does not fit fully into the extension cord, reverse the cord. If it still does not fit, make sure you have a polarized extension cord. If the extension cord does not fit into the outlet, reverse the cord. If it still does not fit into the outlet, contact a qualified electrician to install the proper outlet. Do not change the plug or socket of the unit or extension cord in any way.

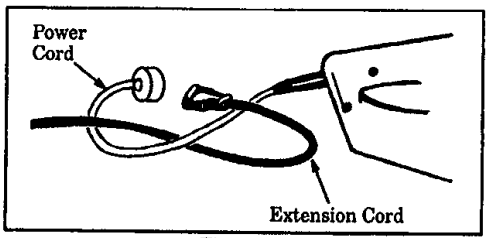


Figure 13

MINIMUM WIRE GAUGE RECOMMENDATIONS (120V)		
25 ft (7.5 m)	50 ft (15 m)	100 ft (30 m)
16 A.W.G.*	16 A.W.G.*	14 A.W.G.*

*American Wire Gauge

Figure 14

E. BAR AND CHAIN OIL

- **The Guide Bar and Cutting Chain require continuous lubrication to remain in operating condition.**
  - **--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 from heat and friction.** POULAN oil 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 bar and chain lubrication.
- **In freezing weather oil will thicken,** making it necessary to thin bar and chain oil with a small amount of #1 Diesel Fuel 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° or above -- 100% lubricant -- undiluted.
30°-0°F -- 95% lubricant to 5% #1 Diesel Fuel or kerosene.
Below 0°F -- 90% lubricant to 10% #1 Diesel Fuel or kerosene.

2. HOW TO FILL THE OIL TANK

a. Stop the motor and disconnect power source.
b. Loosen cap slowly.
c. Fill the oil tank.
d. Replace the oil cap securely.

3. USING THE MANUAL OILER

Your saw is equipped with an oiler actuator/filler cap which manually supplies oil to the bar and chain. Figure 15 . **The oiler actuator/filler cap must be used regularly and often enough to maintain a thin film of oil on the bar and chain while saw is cutting. It is recommended that the oiler actuator/filler cap be operated six (6) times per minute and held for approximately three (3) seconds each time it is pressed.**

a. Operate the oiler by pressing down on the oiler actuator/filler cap with your right thumb. Figure 15 .
b. Be sure that you continue to grip handles firmly while using the oiler actuator/filler cap.

4. IMPORTANT POINTS TO REMEMBER

a. **Fill the oil tank each time you begin a sawing operation;** recheck the oil level after every 15 minutes of use.
b. **Wipe off surfaces before filling with oil** to keep saw dust or debris from accidentally falling into the tank and causing damage.
c. **Use a funnel to fill the tank.** Pour oil slowly to allow air in the tank to escape. Wipe up all spills. Do not use the saw until it is wiped clean and is completely dry from spilled oil.
d. **Replace the oil cap securely** to ensure proper operation of the oiler.
e. **Check the oil level indicator frequently during use.** Locate the indicator in the saw frame just below and behind the front handle. Figure 15 . If oil is not visible in the slot when saw is upright on a level surface, the tank requires filling.
f. **Let the saw stand unplugged for 15 minutes before storing.** It is normal for a small amount of oil to appear under the saw when the saw is not in use. The excess oil should be wiped from the saw before storing.

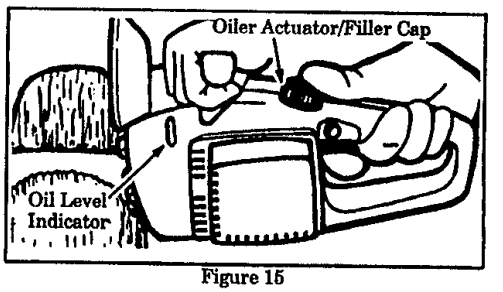


Figure 15

NOTES

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 16 .

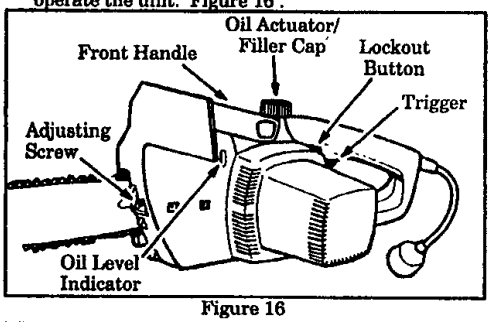


Figure 16

1. The **Trigger Switch** starts or stops the motor and is located in the rear handle. The trigger switch is designed to be used with the lockout button.
2. The **Lockout Button** is a control feature designed to prevent the motor from being accidently started. When the rear handle is gripped in a normal cutting position, the lockout button can be pushed in by the thumb, permitting the index finger to squeeze the trigger. It is not necessary to maintain pressure on the lockout button once the trigger has been engaged.
3. The **Front and Rear Handles** are the supports which allow you to grip the saw in the normal cutting position. Your grip on the handles is most important because proper grip gives you maximum ability to control the saw for safe operation. See Figure 3 for the proper grip.

B. PRE–OPERATION CHECKS

Each time before operating your saw, always:

1. ✓ **Check over the safety rules and precautions in this manual.** Make certain you completely understand and can apply each one.
2. ✓ **Check protective gear.** Always use eye, hearing, and head protection devices; safety footwear; protective gloves; and snug fitting clothing.
3. ✓ **Check the work area.** Keep children, bystanders, and animals a safe distance away from the work area when starting or operating the saw––a minimum of 30 feet (10 meters).
4. ✓ **Check weather conditions.** Do not use your saw at night or during bad conditions such as strong wind, electrical storms, rain, snow, etc.
5. ✓ **Check saw for loose bolts, nuts, or fittings.** Tighten, repair, or replace parts as necessary.
6. ✓ **Check tool cord and extension cord.** Inspect all wire insulation with care. Do not operate with cracked or deteriorated insulation. Take the saw to your Authorized Service Center for all electrical repairs.
7. ✓ **Check the saw chain.** The chain should be sharp and at the correct tension.
8. ✓ **Check the oil tank.** The tank should be filled each time the saw is used.
9. ✓ **Check the handles.** Handles should be dry and free of oil.

C. STARTING AND STOPPING THE SAW

1. Connect the saw to a proper electric power source.
2. Start the saw by pushing the lockout button with your right thumb and squeezing the trigger switch with your right index finger.

NOTE: Push in the lockout button BEFORE squeezing the trigger. Any pressure on the trigger before the lockout button is pressed will make the lockout button hard to move. It is not necessary to continue pressing the lockout button once the trigger switch has been engaged.

3. Stop the saw by releasing the trigger switch.
4. Unplug the connection to the power source.

CAUTION: **Damage to the trigger switch can occur if the switch is turned on and off while the saw is cutting. Operate the trigger with firm and decisive action. The saw must be running at full speed *before* starting the cut and turned off only *after* leaving the material to avoid damage.**

NOTES

TYPES OF CUTTING

A. BASIC CUTTING TECHNIQUE

1. **IMPORTANT POINTS**
   a. **Cut wood only.** Do not cut metal; plastics; masonry; non–wood building materials; etc.
   b. **Stop the saw if the chain strikes a foreign object.** Inspect the saw and repair or replace parts as necessary.
   c. **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.

> **⚠ 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. **UNDERSTANDING 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 stopping of the chain 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 1) occurs when the chain on top of the bar is suddenly stopped; 2) *rapidly drives the saw straight back toward the operator.*
   Pull–In 1) occurs when the chain on the bottom of the bar is suddenly stopped; 2) *pulls the saw rapidly forward.*

NOTE: Do not stall the chain in the cut. Stalling the chain in the cut will overheat the motor and cause damage.

3. **PROCEDURE**
   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.
   a. **Assume the proper cutting stance described in the "Warnings and Safety Instructions"––firm grip on both handles, weight evenly balanced on both feet, and body slightly to the left of the saw.**
   b. **Make sure the extension cord is completely away from the saw and your body so the cord cannot be cut or become wrapped around your feet or legs.**
   c. **Allow the chain to reach full speed before entering the cut.**
   d. **Begin cutting with the saw frame against the log.** Figure 17.
   e. **Allow the chain to cut for you;** exert only light downward pressure. If you force the cut, damage to the unit or loss of control can occur.
   f. **Release the trigger switch as soon as the cut is completed.**
   g. **To avoid losing control when the cut is complete, do not put pressure on the saw at the end of the cut.**
   h. **Allow the chain to stop turning** *before* setting the saw down after cutting.
   i. **Unplug saw after each cutting operation.**

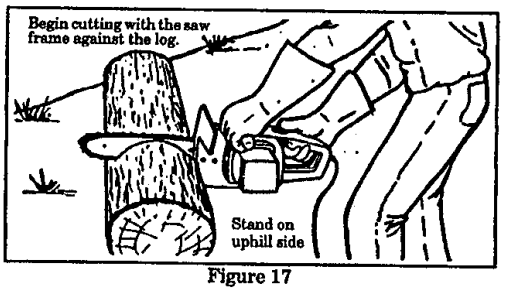


Figure 17

B. TREE FELLING TECHNIQUES

1. **CAREFULLY PLAN YOUR SAWING OPERATION IN ADVANCE**
   a. **Clear the work area.** You need a clear area all around tree where you can have secure footing.
   b. **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. The lean of a tree might not be apparent due to uneven or sloping terrain. Use a plumb or level to determine the direction of tree lean.
      3.) **WEIGHTED** and **BRANCHES** on one side.
      4.) Surrounding **TREES** and **OBSTACLES.**
   c. **Look for decay and rot.** If the trunk is rotted, it can snap and fall toward the operator.
   d. **Check for broken or dead branches** which can fall on you while cutting.
   e. **Make sure there is enough room for the tree to fall.** Maintain a distance of 2 1/2 tree lengths from the nearest person or other objects. Motor noise can drown out a warning call.
   f. **Remove dirt, stones, loose bark, nails, staples, and wire from the tree where cuts are to be made.**
   g. **Plan to stand on the up–hill side when cutting on a slope.** Figures 17 & 18.
   h. **Plan a clear retreat path to the rear and diagonal to the line of fall.** Figure 19.

Figure 18

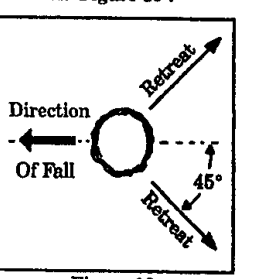


Figure 19

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.

⚠ 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 -- rain, snow, strong wind, etc.

3. FELLING LARGE TREES-- 6" IN DIAMETER OR MORE

The notch method is used to fell 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 them before making the notch. Cut into the buttresses vertically, then horizontally. Figure 20 .

a. Make the notch cut. Refer to Figure 20 .
   CUT 1: Cut the top of the notch first, through 1/3 of the diameter of the tree.
   CUT 2: Complete the notch by making the second cut. Remove the notch of wood.
   CUT 3: Make the felling cut on the opposite side of the notch about 2" higher than the bottom of the notch.

b. Leave enough uncut wood between the felling cut and the notch to form a hinge. Figure 21 .

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

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

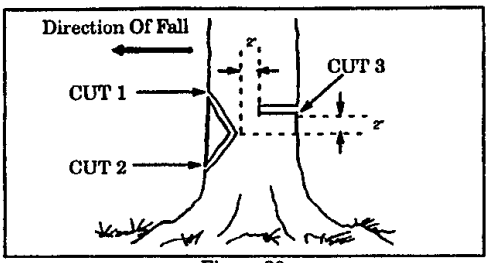


Figure 20

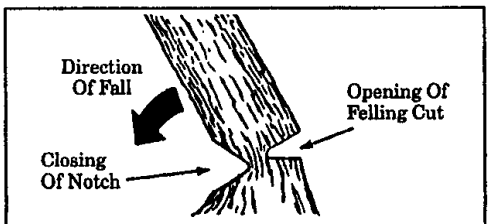


Figure 21

⚠ WARNING

Stay on the uphill side of the terrain to avoid injury from the tree rolling or sliding downhill after it is felled. Figure 18 .

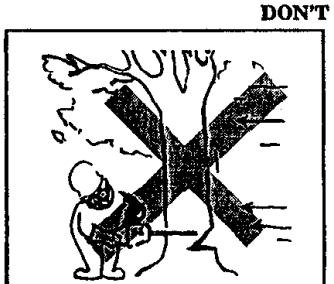
NOTE: Before the felling cut is complete, use wedges to open the cut when necessary to control the direction of fall. Use wood or plastic wedges, but *never* steel or iron, to avoid kickback and chain damage.

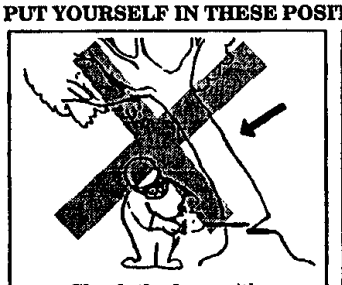
d. Be alert to signs that the tree is ready to fall:
   1.) Cracking sounds.
   2.) Widening of the Felling Cut.
   3.) Movement in the upper branches.

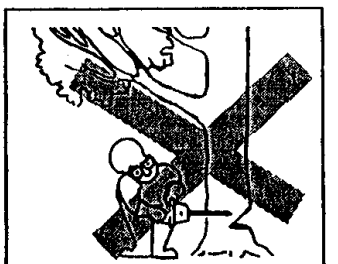
e. As tree starts to fall, *stop saw, put it down, and get away quickly on your planned retreat path.*

f. 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


Check the wind--
Don't cut down wind


Check the lean with a plumb or level--
Don't cut on **lean** side


Check the balance--
Don't cut on **weighted** side

C. BUCKING

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

1. IMPORTANT POINTS

a. **Cut only one log at a time.**

b. **Cut shattered wood very carefully.** Sharp pieces of wood could be flung toward operator.

c. **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.

d. **Do not cut in an area where logs, limbs, and roots are tangled such as in a blown down area.** Drag the logs into a clear area before cutting by pulling out exposed and cleared logs first.

e. **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 of the log.

f. **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 22 .

g. When bucking on a slope, always stand on the uphill side of the log.

h. To maintain complete control when "cutting through," release cutting pressure near the end of the cut without relaxing your grip on the chain saw handles. Do not let the chain contact the ground. After completing the cut, wait for the chain saw to stop before you move the chain saw. Always stop the motor before moving from tree to tree.

2. TYPES OF CUTTING USED (Figure 23)

--**Overcutting** -- begin on the top side of the log with the bottom of the saw against the log; exert light pressure downward.

--**Undercutting** -- begin on the under side of the log with the top of the saw 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.

⚠ 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 24 . 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.

3. BUCKING WITHOUT A SUPPORT (Figure 24)

a. Overcut with a 1/3 diameter cut.

b. Roll log over and finish with an overcut.

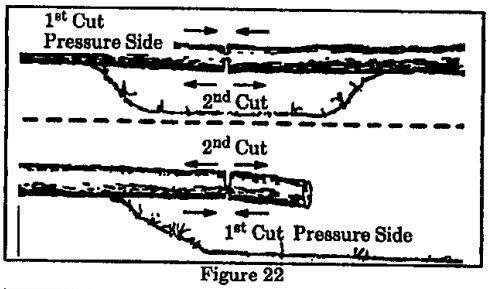


Figure 22

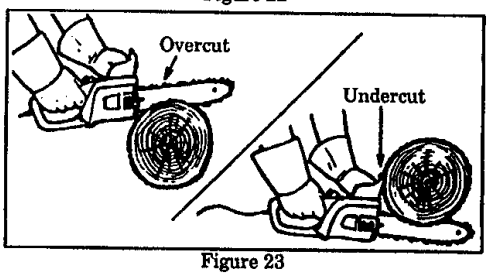


Figure 23

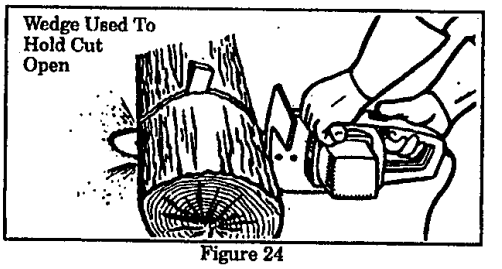


Figure 24

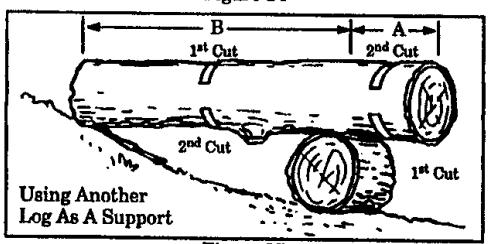


Figure 25

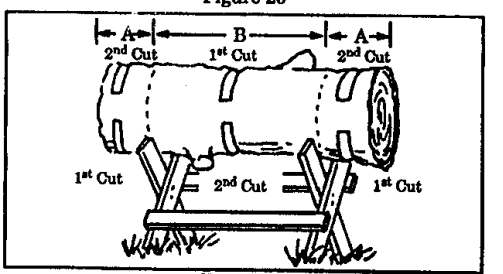
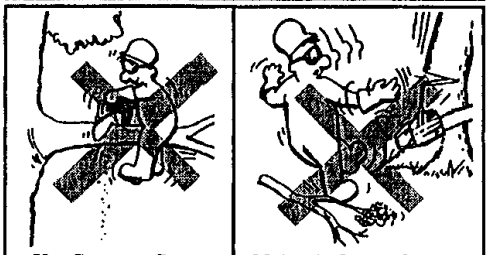


Figure 26

4. **BUCKING USING ANOTHER LOG AS A SUPPORT** (Figure 25)
   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 26)
   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.

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



Use Common Sense | Maintain Secure Footing

D. LIMBING AND PRUNING

- **Work slowly, keeping both hands firmly gripped on the saw.** Maintain secure footing and balance.
- **Watch out for springpoles.** Use extreme caution when cutting small size limbs. Slender material may 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 limb 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. **LIMBING** – Figure 27
   a. **Always limb a tree after it is cut down.** Only then can limbing be done safely and properly.
   b. **Leave the larger limbs underneath the felled tree to support the tree as you work.**
   c. **Start at the base of the felled tree and work toward the top,** cutting branches and limbs. Remove small limbs with one cut. Figure 27 .
   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.) Undercut 1/3 of the way through the log.
      2.) Finish with an overcut.
   f. **Always use an overcut to cut small and freely hanging limbs.** Undercutting could cause limbs to fall and pinch the saw.

2. **PRUNING** – Figure 28
   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 28 for the pruning technique.**
      Cut 1 Undercut 1/3 of the way through the limb near the trunk of the tree.
      Cut 2 Finish with an overcut farther out from the trunk. Keep out of the way of the falling limb.
      Cut 3 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 limbing or pruning. Allowing such contact can result in serious injury.

Figure 27

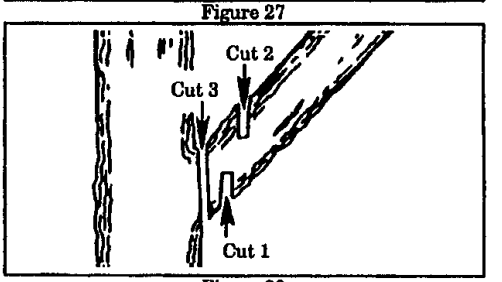


Figure 28

GENERAL 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.

⚠ WARNING
All electrical repairs to this saw, including housing, switch, motor, etc., must be diagnosed and serviced by your Authorized Service Dealer. Failure to do so can cause the double insulation construction to become ineffective and result in serious injury.

- **Inspect all wire insulation carefully before each use.** Do not operate or try to repair the saw if wire insulation is cracked or deteriorated. Take the unit to your Authorized Service Dealer.
- **Check the saw for loose bolts, screws, nuts, and fittings daily when the saw is in use.** Loose fasteners can cause an unsafe condition as well as damage to your saw. Tighten, repair, or replace as necessary.

⚠ WARNING
Avoid accidental starting. Always unplug the saw from the power source before cleaning or performing any maintenance to the saw, or when the saw is not in use.

A. CLEANING THE SAW

Clean and inspect saw after each day of use.

1. Remove the bar and chain from the saw.

NOTE: *Always clean the guide bar and chain when the chain is sharpened.*

2. Use a small brush or the air discharge of a vacuum cleaner to clean debris and sawdust from the air inlet and exhaust slots on the housing. Figure 29 .
3. Wipe the saw clean with rags. Make sure there is no oil film on the handles or saw housing.

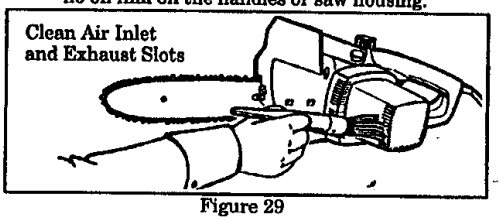


Figure 29

CAUTION: Do not use water, gasoline, kerosene, or any type of cleaning fluid to clean the housing. Moisture can cause short circuits. Hydrocarbons will attack and deteriorate the housing.

4. Remove all sawdust and oil from the drive sprocket and bar–mounting pad area of the saw. Figure 30 .

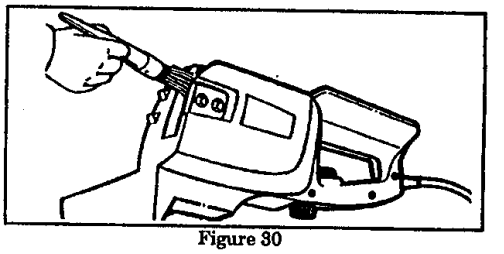


Figure 30

B. 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.
- –Proper lubrication.
- –Regular maintenance as described in this section.
- –Remove guide bar from saw for all maintenance.

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

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.**
- **Clean tree sap from the chain before it is sharpened.**
  - –Soak the chain in a petroleum based solvent or a detergent and water solution.
  - –Dry chain thoroughly.
  - –Immerse the clean chain in light oil until oil seeps into the rivet holes.

a. SHARPENING INSTRUCTIONS

Items required:

Gloves	Flat File
5/32" Diameter File	Depth Gauge
6" File Holder	

1.) **Disconnect the unit from the power source.**
2.) Adjust the chain for proper tension. Page 8.
3.) Work at the midpoint of the bar, moving the chain forward by hand as each cutter is filed.
4.) Sharpen Cutters.
   a.) Position the file holder level as shown in Figure 31 .

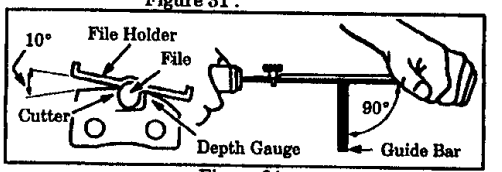


Figure 31

b.) Align the 30° file holder marks with the bar and parallel to the center of the chain. Figures 32 & 34 .

NOTE: If your file holder has a 25° mark, disregard this mark and file at a 30° angle.

c.) File from inside toward outside of cutter, straight across on forward stroke in one direction only. Use 2 or 3 strokes per cutting edge. Figure 33 .

d.) Keep cutter length the same. Figure 33 .

e.) File enough to remove any damage to the cutting edges (side plate and top plate) of the cutter. Figure 33 .

f.) File chain to meet the specifications shown in Figure 34 .

⚠ WARNING

Maintain the proper hook angle according to the manufacturer's specification for the chain you are using. Too much hook angle will increase the chance of kickback which can result in serious injury. Figures 34 & 36 .

5.) **Correct Depth Gauges** (every third or fourth sharpening)

a.) Place depth gauge tool over each cutter depth gauge. Figure 35 .

b.) File depth gauge with a flat file until it is level with the top of the depth gauge tool. Figure 35 .

c.) Maintain rounded front corner of depth gauge with a flat file. Figures 35 & 36 .

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

⚠ WARNING

The 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

1.) **Use only the Low-Kickback replacement chain specified for your saw in the "Specifications" section.**

2.) **Replace the chain when cutters or links break.**

3.) **See a qualified service dealer to replace or sharpen your chain.**

4.) **Always have a worn sprocket replaced by a qualified service dealer when installing a new chain to avoid excessive wear to the chain.**

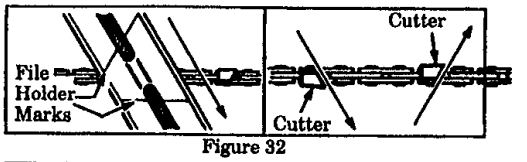


Figure 32

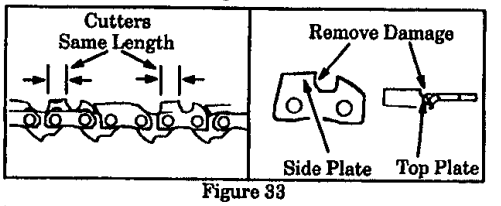


Figure 33

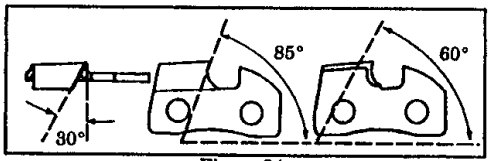


Figure 34

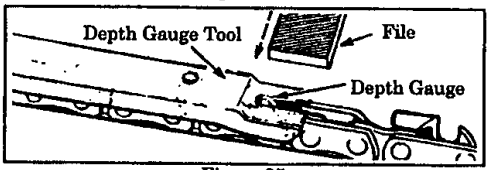


Figure 35

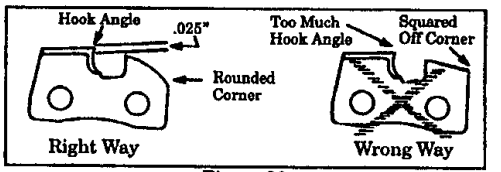


Figure 36

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. Reverse bar after every cleaning.
- **Replace the guide bar when:**
  - --the inside groove of guide bar rails is worn.
  - --guide bar is bent or cracked. Figure 37 .
- **Use only the replacement Reduced-Kickback Guide Bar specified for your saw in the "Specification" section.**

a. Remove the guide bar to service.

b. Clean the oil holes at least once after every five hours of operation.

c. Remove sawdust from guide bar groove periodically with putty knife or wire. Figure 38 .

d. Remove burrs by filing side edges of guide bar grooves square with flat file. Figure 37 .

e. Restore square edges to an uneven rail top by filing with a flat file. Figure 37 .

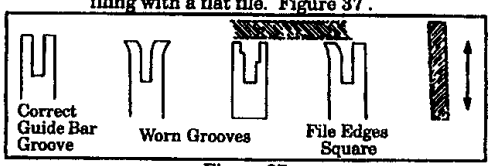


Figure 37

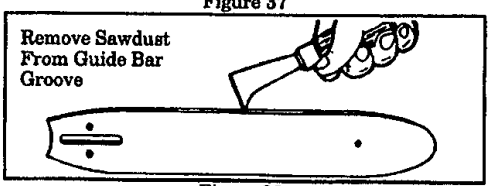


Figure 38

C. STORAGE

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

1. Drain oil from oil tank.

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

2. Remove, clean, and dry the bar and chain.
3. Store the chain in a container filled with oil to prevent rust.
4. Apply a coating of oil to the entire surface of the bar and wrap it in heavy paper, cloth, or plastic.
5. Clean the outside surfaces of the unit.
6. Store the saw unplugged in a dry place out of the reach of children.

D. SPROCKET/GEAR ASSEMBLY

- **Clean the sprocket and surrounding area daily** during heavy use of the saw.
- **Inspect the sprocket regularly for wear.** A worn sprocket will cause the chain to run erratically and will shorten the life of the bar and chain. Figure 39 .
- **If sprocket is worn (Figure 39), have the sprocket replaced by your Authorized Service Dealer.** User sprocket replacement can cause the double insulation system to become ineffective and can increase the risk of electric shock.

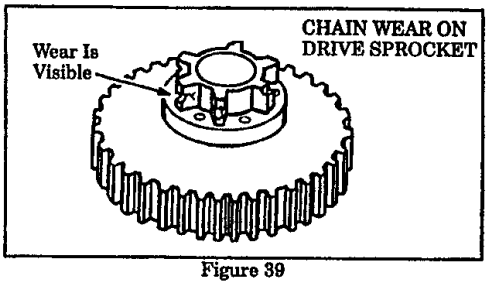


Figure 39

E.TROUBLE SHOOTING CHART

Read and follow all Warning and Safety Instructions before servicing your unit.

SYMPTOM	CAUSE	REMEDY
Oil inadequate for bar and chain lubrication.	1. Oil tank empty. 2. Oil outlet clogged. 3. Guide bar oil hole blocked.	1. Fill oil tank. 2. Contact your Authorized Service Dealer. 3. Remove bar and clean.
Chain does not move when trigger switch is engaged.	1. Chain tension too tight. 2. Guide bar rails pinched. 3. Trigger Switch failure. 4. Circuit breaker tripped/fuse blown.	1. See "Chain Tension." 2. Repair or replace. 3. Contact your Authorized Service Dealer. 4. Reset circuit breaker/replace fuse.
Chain clatters or cuts roughly.	1. Chain tension incorrect. 2. Cutters damaged. 3. Chain worn. 4. Cutters dull, improperly sharpened, or depth gauges too high. 5. Sprocket worn.	1. See "Chain Tension." 2. Resharpen or replace chain. 3. Resharpen or replace chain. 4. See the chain sharpening instructions. 5. Contact your Authorized Service Dealer.
Chain stops within the cut.	1. Chain cutter tops not filed flat. 2. Guide bar burred or bent; rails uneven.	1. See the chain sharpening instructions. 2. Repair or replace guide bar.
Chain cuts at an angle.	1. Cutters damaged on one side. 2. Chain dull on one side. 3. Guide bar bent or worn.	1. Resharpen until all cutters have equal angles and lengths or replace chain. 2. Resharpen until all cutters have equal angles and lengths or replace chain. 3. Replace guide bar.

NOTES

F. MAINTENANCE CHART

		before starting work	after finishing work or daily	after every 15 minutes of operation	weekly	monthly	annually
Complete machine.	Visual inspection (condition, leaks)	✓					
	Clean		✓				
Trigger switch.	Check operation	✓	✓				
Chain oil tank.	Clean						✓
Chain lubrication.	Fill			✓			
Saw chain.	Inspect (sharpness, wear, damage)	✓		✓			
	Check chain tension	✓		✓			
	Sharpen – – when dull						
Guide bar.	Inspect (wear, damage)	✓		✓			
	Clean				✓		
	Deburr					✓	
	Replace – – when worn or damaged						
Chain sprocket.	Check – – when replacing chain						
All accessible screws and nuts (not adjusting screws).	Retighten	✓					

ACCESSORIES

File – round – 5/32" (2 pack) 952–055085
Xtra GUARD® Chain – 14" 952–051209
Xtra GUARD® Chain – 16" 952–051211
Lo–Kick® Guide Bar – 14" 952–044368
Lo–Kick® Bar – 16" 952–044370
Bar & Chain Lubricant
1 qt. 952–030129
1 gal. 952–030130

NOTES

COMMON CHAIN SAW TERMS

Front Handle – The support handle located at or toward the front of the chain saw.

Rear Handle – The support handle located at or toward the rear of the chain saw.

Trigger Switch – A device that when operated will complete or interrupt an electrical power circuit to the motor of the chain saw which starts or stops the motor.

Lockout Button – A moveable stop that prevents the unintentional operation of the trigger switch until manually actuated.

Oiler Actuator/Filler Cap – A system for oiling the guide bar and chain.

Guide Bar – A solid, railed structure that supports and guides the chain.

Saw Chain – A loop of chain having cutting teeth (that cut the wood) that is driven by the motor and supported by the guide bar.

Sprocket – The toothed part that drives the saw chain.

Hand Guard – The flat, shielding surface between the front handle and the nose of the guide bar.

Spiked Bumper (Spike) – The pointed tooth or teeth for use when felling or bucking to pivot the saw and maintain position while sawing.

Kickback – The backward and/or upward motion of the guide bar occurring when the saw chain near the nose of the top area of the guide bar contacts any object such a another log or branch, or when the wood closes in and pinches the saw chain in the cut.

Normal Cutting Position – The position assumed in performing the bucking and felling cuts.

Felling – The process of cutting down a tree.

Notch Cut – A notch cut in a tree that directs the fall of the tree.

Felling Cut – The final cut in a tree felling operation made on the opposite side of the tree from the notch cut.

Bucking – The process of cross-cutting a felled tree or log into lengths.

Plunge Cuts/Bore Cuts – The process involved in cutting with the saw chain at the nose (tip) of the guide bar, in order to make a hole. ⚠ **WARNING: The manufacturer does not recommend performing plunge cuts or bore cuts due to the dangers of kickback.**

Adjusting Pin/Adjusting Screw – A screw and pin system which moves the guide bar forward and backward; used for chain tensioning.

Powerhead – The part of the saw including the motor, handle, and hand guard.

NOTES