IMPORTANT MANUAL **Do Not Throw Away**

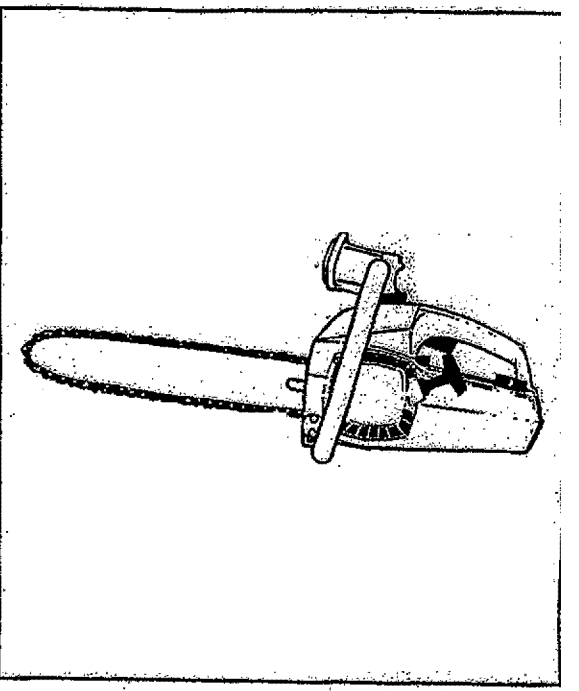
SEARS

Operator's Manual

Model No.
358.35514

⚠ WARNING:

Read the Operator's Manual and Follow All Warnings and Safety Instructions. Failure To Do So Can Result in Serious Injury.



Always Wear Eye Protection

SEARS/CRAFTSMAN

GASOLINE CHAIN SAW

- Assembly
- Operation
- Maintenance
- Repair Parts

Sold by Sears, Roebuck and Co., Hoffman Estates, IL 60179 USA

530-068510-5-01/10/94

ONE YEAR LIMITED WARRANTY ON CRAFTSMAN GASOLINE CHAIN SAW
(Excluding Bar, Chain, Spark Plug, Air Filter, and Starter Rope)

For One Year from date of purchase, when this chain saw is maintained, lubricated, and tuned up according to the operating and maintenance instructions in the operator's manual, Sears will repair free of charge any defect in material or workmanship. This warranty excludes the bar, chain, spark plug, air filter, and starter rope which are expendable parts and become worn during normal use.

If this Chain Saw is used for commercial or rental purposes, this warranty applies for only 30 days from the date of purchase.

WARRANTY SERVICE IS AVAILABLE BY CONTACTING THE NEAREST SEARS SERVICE CENTER/DEPARTMENT IN THE UNITED STATES. This warranty applies only while this product is in use in the United States.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

SEARS, ROEBUCK AND CO./DEPT. D/817WA, HOFFMAN ESTATES, IL 60179

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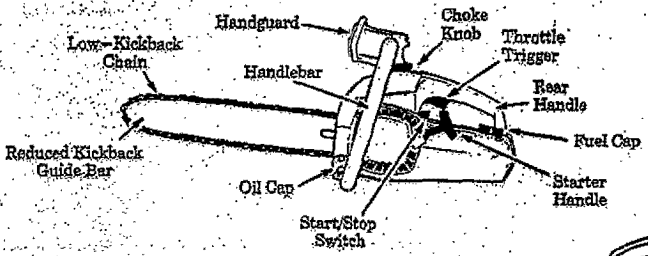
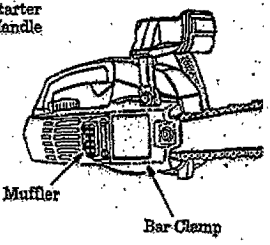


SPECIFICATION CHART	
MODEL:	358.356141 – 2.0/14"
DISPLACEMENT:	2.0 Cu. In.
GUIDE BAR:	14" Reduced Kickback P/N 71–36365
CHAIN:	3/8" Pitch Chrome Cutters P/N 71–3617
FUEL MIX:	Gasoline/Oil Mixture – 40:1 (see "Fueling Your Engine")
SPARK PLUG:	Champion (CJ–8)
SPARK PLUG GAP:	.025"
IGNITION:	Solid State
MODULE AIR GAP:	.010" to .014"
OILER:	Automatic
MUFFLER:	Temperature Limiting/Spark Arresting



THIS SAW IS FOR OCCASIONAL USE ONLY

READ WARNINGS & SAFETY INSTRUCTIONS FREQUENTLY

WARNINGS AND SAFETY 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.

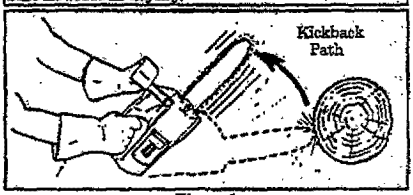


Figure 1

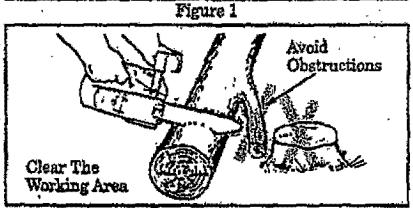


Figure 2

Figure 3

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 at the tip of the guide bar contact any object.** 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 to occur. 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.
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 one log at a time.**
7. **Use extreme caution when re-entering a previous 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 chain.**
10. **Use the Reduced-Kickback Guide Bar and Low-Kickback Chain specified for your saw.**

MAINTAIN 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 you 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 and head 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 saw above shoulder height.

WARNINGS AND SAFETY INSTRUCTIONS (continued)

⚠ 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.

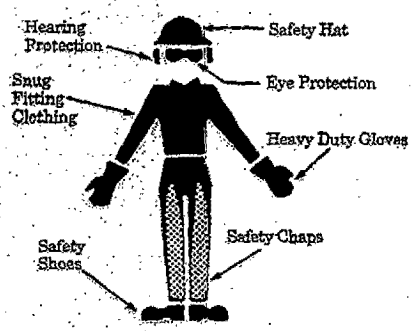


Figure 4

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 adult users** 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; 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 a minimum of 30 feet (10 Meters) away from the work area.** 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, 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.

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 engine at full throttle and the saw housing against 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 all fuel purposes.
3. **Wipe up all fuel spills before starting saw.**
4. **Move at least 10 feet (3 meters) from the 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 fuel cap and refuel unit.
7. **Store the unit and fuel in an area where fuel vapors** cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.

If situations occur which are not covered in this manual, use care and good judgment. Contact your SEARS Service Center/Department if you need assistance.

WARNINGS AND SAFETY INSTRUCTIONS (continued)

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 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 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.** Applying pressure 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, broken, or is otherwise removed.**

CARRY AND STORE YOUR SAW SAFELY

1. **Hand carry 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 the fuel left in the carburetor and fuel lines by starting the engine and letting it run until it stops.
4. **Store unit and fuel in a dry area out of the reach of children.** Do not store where fuel vapors can reach sparks or an open flame from hot water heaters, electric motors or switches, furnaces, etc.

THIS CHAIN SAW IS FOR OCCASIONAL USE ONLY.

NOTE: Exposure to vibrations through prolonged use of gasoline powered hand tools could cause blood vessel or nerve damage in the fingers, hands, and wrists 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 wrists, 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.

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 03.1-1978; and relevant state safety codes when using a chain saw for logging purposes.

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 ANSI B175.1 - 1985 (American National Standards Institute, Inc., Standard B175.1 - 1985).
- **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 ANSI B175.1 (Safety Requirements for Gasoline-Powered Chain Saws) when tested on a representative sample of chain saws below 3.8 cubic inch displacement specified in ANSI B175.1.
- **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

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.

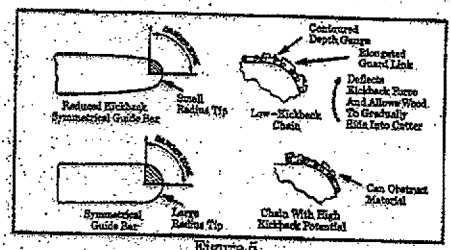


Figure 5

STATE AND LOCAL REQUIREMENTS

For users on all U.S. Forest Lands and in some states, including California (Public Resources Codes 4442 and 4443), Idaho, Maine, Minnesota, New Jersey, Oregon, and Washington: Certain internal combustion engines operated on forest, brush, and/or grass-covered lands in the above areas must be equipped with a spark arrestor maintained in effective working order, or the engine must be constructed, equipped, and maintained for the prevention of fire. Check with your state or local authorities for regulations pertaining to these requirements. Failure to follow these requirements is a violation of the law. **This unit is factory-equipped with a temperature limiting muffler and a spark arrestor. If a spark arrestor is required in your area, you are legally responsible for maintaining the operating condition of these parts. If a spark arrestor is required in your area, contact your Authorized Service Dealer for the correct kit.**

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 (Control Tip®)
- Low-Kickback Chain (Guard Link)
- Handguard
- Spark Arrestor
- Temperature Limiting Muffler

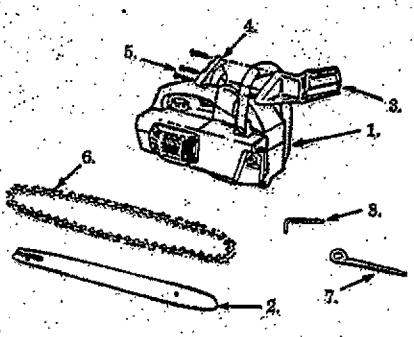
B. CARTON CONTENTS

KEY NO.		QTY
1.	Engine	1
2.	Guide Bar	1
–	Operator's Manual (not shown)	1
–	Loose Parts Bag (not shown)	1
	LOOSE PARTS BAG CONTENTS:	
3.	Handguard	1
4.	Handguard Cap	1
5.	Handguard Screw	3
6.	Chain	1
7.	Bar Wrench	1
8.	Hex Wrench	1

C. UNPACKING INSTRUCTIONS

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 SEARS store immediately if a part is missing or damaged.*

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



PREPARING YOUR SAW FOR USE

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 begin assembly or attempt operation. Your SEARS Service Center/Department is available to show you how to operate your saw. Be sure to ask for assistance.

2. **HAVE THE FOLLOWING AVAILABLE:**
   a. Protective gloves.
   b. Approved, marked fuel container.
   c. One gallon regular unleaded gasoline.
   d. 8 oz. (1/2 pt.) 2 cycle, air-cooled engine oil (See the "Fueling Your Engine" section).
   e. Bar and Chain Oil (See the "Bar and Chain Oil" section).
   f. Bar Wrench.
   g. Standard Screwdriver.
   h. Phillips Screwdriver.

B. ATTACHING THE HANDGUARD

The Handguard is a protective device designed to reduce the chance of your left hand contacting the chain if your hand slips off the front handlebar.

⚠ WARNING
Do not use the saw without the handguard in place. Always replace the handguard immediately if it becomes damaged, broken, or is otherwise removed.

- **Lift and carry the chain saw by the handlebar or rear handle, *not* by the handguard.**
- **Keep the handguard securely fastened at all times.** Check the handguard screws each time the saw is used.

To install:

1. Align the handguard and handguard cap around the handlebar as shown in Figure 6.
2. Fit the mounting pin on the handguard into the pin hole in the handlebar. Figure 6 (inset).
3. Insert the 3 mounting screws into the 3 holes on the handguard cap.
4. Turn each screw a little at a time clockwise, with a Phillips screwdriver until the handguard cap and handguard meet and there is no gap between the two parts.

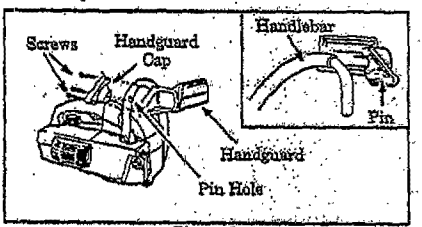


Figure 6

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

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

1. Remove the following parts (Figure 7) using a 1/2 inch wrench and a standard screwdriver.
   a. Bar clamp nut.
   b. Bar clamp screw.
   c. Bar clamp.
   d. Plastic shipping spacer (between the bar clamp and the engine). Discard plastic shipping spacer.
2. Turn the adjusting screw counterclockwise to move the adjusting pin almost as far as it will go to the rear. Figure 7.

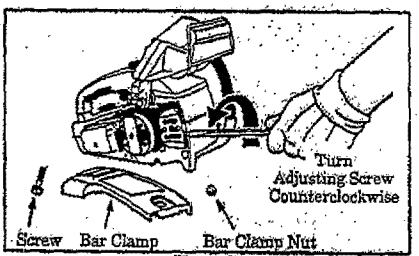


Figure 7

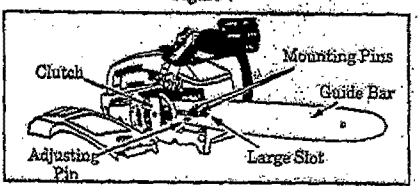


Figure 8

3. Mount the guide bar with the large slot over the bar stud and the small adjusting pin through the small hole in the bar. Figures 8 & 9.
4. Hold the chain with the cutters facing as shown in Figure 9 (inset).
5. Place the chain over and behind the clutch drum and onto the sprocket.
6. Slide the guide bar toward the rear of the saw as far as possible.
7. Fit the bottom of the drive links between the teeth in the sprocket.
8. Start at the top of the bar and fit chain drive links into the groove around the guide bar. Figure 9.
9. Pull the guide bar forward until the chain is snug in the guide bar groove.
10. Hold the guide bar against the saw frame and install the bar clamp.
11. Replace the bar mounting nut and tighten finger tight *only*. Tighten bar clamp nut after chain is tensioned.
12. Replace the bar clamp screw at the rear of the bar clamp. Tighten securely.
13. Follow the "Chain Tension" instructions below.

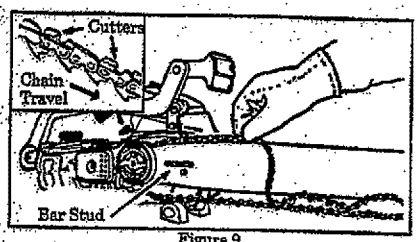


Figure 9

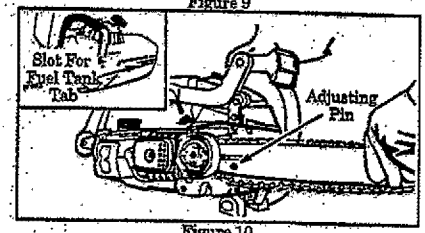


Figure 10

D. 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.
- **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.

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

NOTE: The bar clamp nut must be slightly loose when tensioning the chain.

- **Chain tensioning procedure:**

1. Lift up the tip of the guide bar and turn the adjusting screw clockwise until the chain does not sag beneath the guide bar. Figure 11.
2. Check the tension by lifting the chain from the guide bar at the center of the bar. Figure 12.
3. Continue adjusting the adjusting screw until the tension is correct.
4. Lift up the tip of the guide bar and tighten the bar mounting screw with the bar wrench.
5. Recheck chain tension.

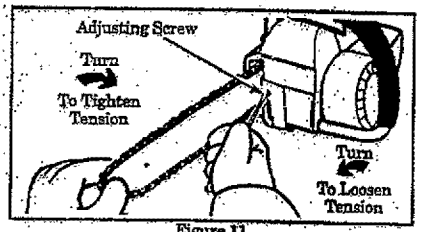


Figure 11

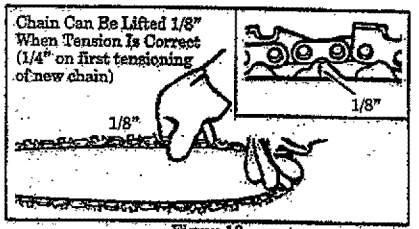


Figure 12

FUELING YOUR ENGINE

A. FUEL SAFETY

- **Use only recommended fuel mixtures.**
- **Mix and pour fuel outdoors and where there are no sparks or flames.**
- **Use a container approved for fuel.**
- **Do not smoke or allow smoking** near fuel or the unit or while using the unit.
- **Wipe up all fuel spills before starting the engine.**
- **Move at least 10 feet (3 meters) away from the fueling site before starting engine.**
- **Stop engine before removing fuel cap.**
- **Before storing the unit,** use up fuel left in the fuel lines and carburetor by starting the engine and letting it run until it stops.
- **Store the unit and fuel in an area where fuel vapors cannot reach sparks or open flames** from water heaters, electric motors or switches, furnaces, etc.

B. FUEL MIXTURE

- **Your unit is powered by a 2-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 recommended mixture of gasoline and oil is used.
- **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 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.*

C. USE THE FOLLOWING:

SEARS CRAFTSMAN 2-cycle engine oil mixed at 40:1 is strongly recommended. Consult the instructions on the oil container for proper mixing.

1 PART OIL TO 40 PARTS GASOLINE =
3.2 fl. oz. oil to 1 gallon gasoline
8.0 fl. oz. oil to 2.5 gallon gasoline

Not all air cooled 2-cycle engine oils have the same qualities. If SEARS CRAFTSMAN 2-cycle engine oil is not available, use a good quality 2-cycle engine oil recommended for air-cooled engines. Mix at a ratio of 40:1 (3.2 oz. oil to 1 gallon gasoline). A 40:1 fuel mixture with these oils will assure adequate lubrication for your engine.

D. DO NOT USE:

1. **AUTOMOTIVE OIL**
2. **NMMA OIL for boat engines**

These oils do not have proper additives for 2-cycle, air-cooled engines and can cause engine damage.

⚠ CAUTION

Experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, do not leave fuel in the unit when storing for 30 days or longer. Start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. See the "Storage" section for additional information. Never use engine or carburetor cleaner products in the fuel tank or permanent damage can occur.

E. HOW TO MIX FUEL AND FILL TANK

NOTE: *Do not mix gasoline and oil directly in the fuel tank.*

- Pour the proper measure of engine oil into an approved, marked fuel container. Then, fill the container with regular unleaded gasoline.

NOTE: If fuel is already in container, add the proper measure of 2-cycle engine oil. Then, close the container tightly and shake it momentarily.

- Loosen the fuel caps on the container and the unit slowly; wait for pressure to be released before removing the caps.
- Using a spout or funnel, fill the fuel tank with fuel mix.
- Reinstall the fuel caps securely.

NOTES

BAR AND CHAIN OIL

- **The Guide Bar and Cutting Chain require continuous lubrication 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 SEARS Bar and Chain Oil is recommended** to protect your unit against excessive wear from heat and friction. SEARS oil resists high temperature thinning. If SEARS 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 Diesel Fuel #1 or kerosene.** Bar and chain oil must be free flowing for the oil system to pump enough oil for adequate lubrication.

USE THE FOLLOWING:

30° or above — — 100% 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.

HOW TO FILL THE OIL TANK

- Stop the engine.
- Turn saw on its side with oil cap up. Figure 13.
- 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.

IMPORTANT POINTS TO REMEMBER

- **Fill oil tank each time you refill fuel tank** to ensure that there will be sufficient oil for the chain whenever you start and run the saw.
- **The saw will normally use about 1/2 tank of chain oil for each tank of fuel mixture. If** less oil is used, check for a plugged oil hole in the guide bar.
- **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 excess oil draining from the bar and chain when the saw is not in use.

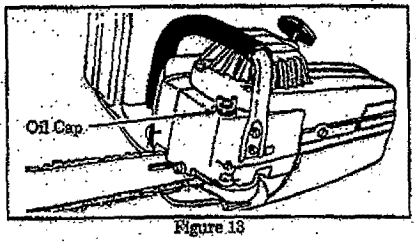


Figure 13

NOTES

STARTING YOUR ENGINE

A. 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 saw for loose bolts, nuts, or fittings.** Tighten, repair, or replace parts as necessary. Tools required are listed in "Getting Ready" section.
4. ✓**Check the air filter.** Clean the filter before starting the engine. For location, see the "Air Filter" section.
5. ✓**Check the saw chain.** The chain should be sharp and at the correct tension.
6. ✓**Check the fuel tank and oil tank.** Both tanks should be filled.
7. ✓**Check the handles.** Handles should be dry and free of fuel mixture and oil.
8. ✓**Check weather conditions.** Do not use your saw at night or during bad conditions such as strong wind, rain, snow, etc.
9. ✓**Check the work area.** Keep children, bystanders, and animals a minimum of 30 feet (10 meters) away from the work area when starting or operating the saw.

B. STARTING INSTRUCTIONS (Refer to the "Specifications" section for location of controls.)

1. BASIC PROCEDURE

a. Hold saw firmly with the saw chain free to turn without contacting any object.

b. Move Start/Stop switch to the "Start" position. Figure 14.

c. Adjust the choke according to "Starting Procedure For Varying Conditions."

d. Squeeze trigger with your right hand while pushing saw away from you and pulling the starter rope with your left hand. Figure 16.

e. Release the trigger after the engine starts, allowing the engine to idle.

⚠ WARNING

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

f. Stop the engine by moving the Start/Stop Switch to the "Stop" position. Figure 14.

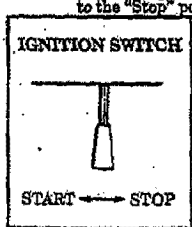


Figure 14

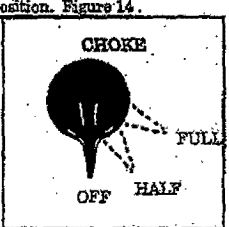


Figure 15

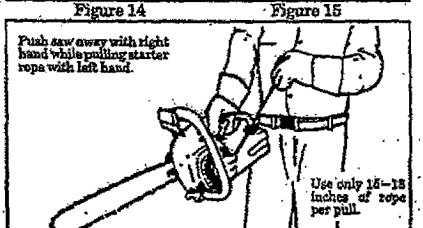


Figure 16

⚠ WARNING

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

2. STARTING PROCEDURE FOR VARYING CONDITIONS

NOTE: Be sure to follow "1. BASIC PROCEDURE" as describe in the preceding section.

a. **COLD ENGINE:**

1.) Turn the choke knob to "Full". Figure 15.
2.) Pull starter rope until engine attempts to run.
3.) Turn the choke knob to "Half". Figure 15.
4.) Pull the starter rope until the engine runs.
5.) After a 5 second warm up, turn the choke knob to the "Off" position.

⚠ 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 15.
2.) Pull the starter rope until the engine runs.

c. **REFUELED WARM ENGINE AFTER RUNNING OUT OF FUEL**

1.) Turn the choke knob to "Full". Figure 15.
2.) Pull starter rope until engine attempts to run.
3.) Turn the choke knob to "OFF". Figure 15.
4.) Pull the starter rope until the 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 the engine floods, let the unit sit for a few minutes, then repeat starting procedure using the half-choke position.

c. For cold weather starting, allow the engine to warm up (1-2 min.) at the half-choke position, then move choke to the "Full" or "Half" position.

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.

A 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.***

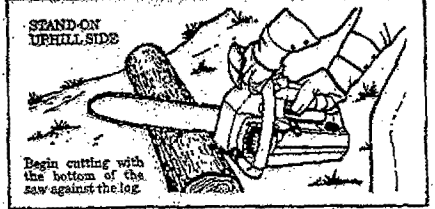


Figure 17

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**
     - --occurs when the chain on top of the bar is suddenly stopped.
     - --*rapidly drives the saw straight back toward the operator.*
   - **Pull-In**
     - --occurs when the chain on the bottom of the bar is suddenly stopped.
     - --*pulls the saw rapidly forward.*

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. **Accelerate engine to full throttle before entering cut by squeezing the throttle trigger.**
   b. **Begin cutting with the saw frame against the log.** Figure 17.
   c. **Keep the engine at full throttle the entire time you are cutting.**
   d. **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.
   e. **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.
   f. To avoid losing control when cut is complete, **do not put pressure on saw at end of cut.**
   g. **Stop the engine** before setting the saw down after cutting.

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. Engine 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. **Figure 18.**
   h. **Plan a clear retreat path to the rear and diagonal to the line of fall. Figure 19.**

Figure 18

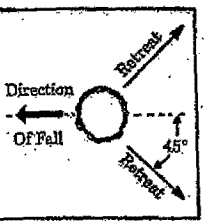


Figure 19

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 -- 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 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 them before making the notch. Cut into the buttresses vertically, then horizontally. Figure 20.

a. Make the notch cut. Figure 20.

CUT 6. Cut the bottom of the notch first, through 1/3 of the diameter of the tree.

CUT 7. Complete the notch by making the slant cut. Remove the notch of wood.

CUT 8. 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.

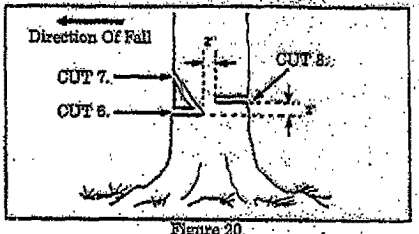


Figure 20

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 19.

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 the tree starts to fall, *stop the 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--
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 the 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 tangle 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.

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

a. Overcut with a 1/3 diameter cut.

b. Roll log over and finish with an overcut.

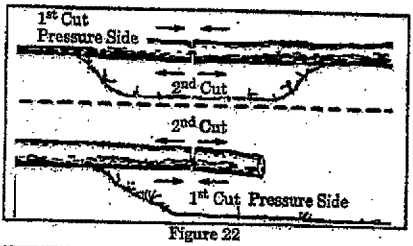


Figure 22

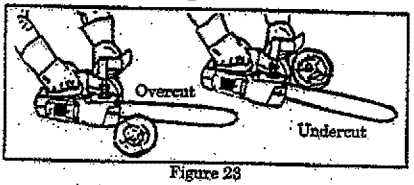


Figure 23

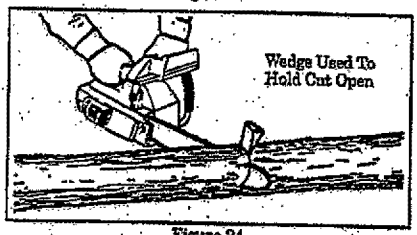


Figure 24

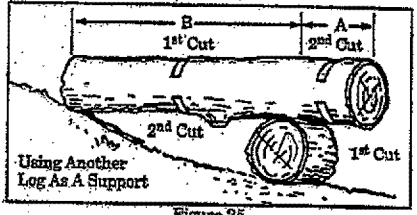


Figure 25

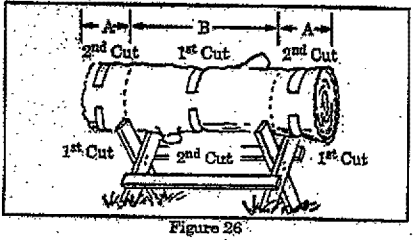


Figure 26

4. **BUCKING USING ANOTHER LOG AS A SUPPORT**

   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**

   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. DEBRANCHING 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 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 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**

   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.**
      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 27

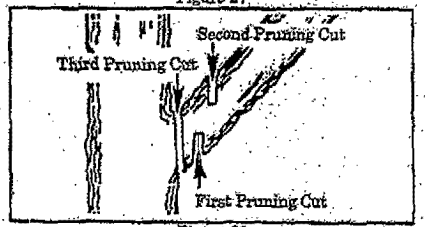


Figure 28

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.

- **Make all adjustments or repairs (except carburetor adjustments) with:**
  - spark plug wire disconnected.
  - engine cool as opposed to a saw 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.

⚠ WARNING
Have all chain saw service performed by a qualified service dealer other than 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, page 7.
- Proper lubrication, page 9.
- 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 is too dull to cut wood.

a. SHARPENING INSTRUCTIONS

Items required:

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

1.) **Stop Engine.**

2.) Adjust the chain for proper tension. Page 7.

3.) Work at midpoint of bar, moving the chain forward by hand as each cutter is filed.

4.) Sharpen Cutters.

a.) Position the file holder level at a 10° angle on the top plate of the cutter and depth gauge. Figure 29.

b.) Align the 25° file holder marks with the bar and parallel to the center of the chain. Figures 30 & 32.

NOTE: If your file holder has a 30° mark, disregard this mark and file at a 25° 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 31.

d.) Keep all cutters the same length. Figure 31.

e.) File enough to remove any damage to the cutting edges (side plate and top plate) of the cutter. Figure 31.

f.) File chain to meet specifications shown in Figure 32.

⚠ 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 32 & 34.

5.) **Correct Depth Gauges**

a.) Place depth gauge tool over each cutter depth gauge. Figure 33.

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

c.) Maintain rounded front corner of depth gauge with a flat file. Figures 33 & 34.

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 and sharpen individual cutters for matching 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.**

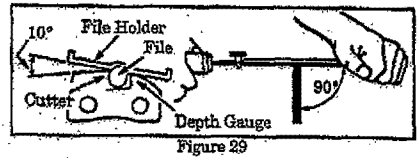


Figure 29

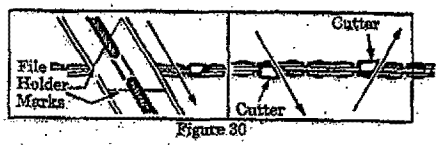


Figure 30

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 guide bar rails is worn.
  - the guide bar is bent or cracked.
- **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 the guide bar groove periodically with a putty knife or a wire. Figure 35 .

d. Remove burrs by filing the side edges of the guide bar grooves square with a flat file. Figure 36 .

e. Restore square edges to an uneven rail top be filing with a flat file. Figure 36 .

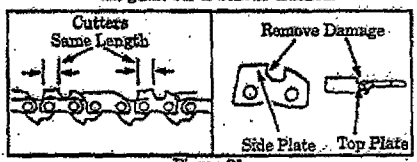


Figure 31

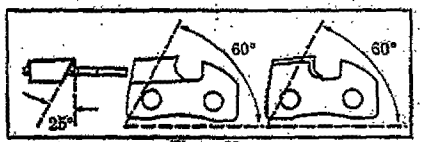


Figure 32

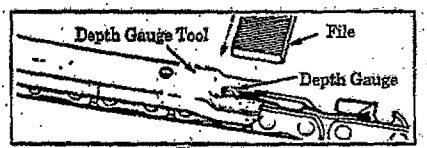


Figure 33

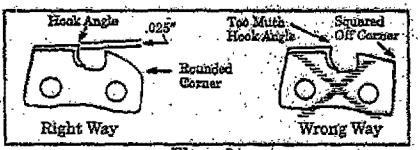


Figure 34

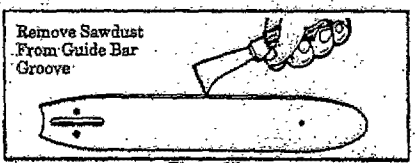


Figure 35

Figure 36

B. 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 operation.

Items required: wire brush, 3/8" wrench

1. Disconnect the spark plug wire.
2. Remove the Bar Clamp.
3. Remove the Muffler Cover. Figure 37 .
4. Remove the Screen from the baffle.
5. Clean the screen with a wire brush or replace if breaks are found.
6. Reassemble parts.

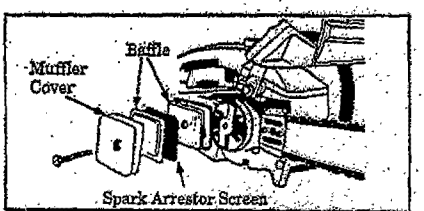


Figure 37

READ SPECIAL SAFETY SECTION FREQUENTLY

C. STARTER ROPE

* Replace a broken starter or a rope that is badly frayed.

NOTE: A recoil spring lies beneath the pulley and is under tension. If the recoil spring is disturbed, considerable time and effort will be required to reinstall. For this reason you may want to let a qualified service dealer handle this repair. If you try to repair the starter rope and the recoil spring pops out, take the unit to your dealer.

⚠ 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.

1. Drain the fuel tank.
2. Remove the three screws on the side of the fan housing. Figure 38.
3. Remove two screws on rear of unit. Figure 39.
4. Separate the fan housing from the unit. Disconnect the fuel line if necessary.
5. If the starter rope is not broken, release the spring tension by pulling about 10 inches of rope from the pulley and catch the rope in the notch as shown in Figure 40.
6. Turn the pulley counterclockwise until the spring tension is released.
7. Remove the pulley screw in the center of the pulley. Figure 41.
8. Lift the pulley *carefully* while gently twisting it counterclockwise.
9. Remove the rope retainer screw and remove any remaining rope. Figure 41.
10. Move away from the fuel tank and melt the end of the rope to be installed.
11. 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.
12. Feed the rope through the round starter rope hole in the fan housing. Figure 41.
13. Guide the rope inside the pulley, then up through the pulley ratchet side of the pulley hole to the outside by pushing the rope through from the hole on the spring cam side with a small Phillips screwdriver. Figure 41 (inset).
14. Wrap rope counterclockwise around the pulley ratchet and tuck loose end back under rope leaving a 1 inch tail between the retainer rib and screw post. Figure 41. Pull rope tightly.
15. Install the rope retainer screw and tighten until snug. DO NOT OVERTIGHTEN.
16. Rewind all the rope onto the pulley in a counterclockwise direction.
17. Set the pulley into the housing; push it down and engage the spring.
18. Replace and tighten the pulley screw.
19. Pull out 10 inches of rope and set the rope in the notch in the pulley. Figure 42.
20. Turn the pulley 2 complete turns clockwise, winding up the spring.
21. Hold the pulley and pull the starter rope to the full extent of length. Let rope rewind slowly.
22. Reconnect fuel line if disconnected (Step 4.). Replace fan housing. Tighten screws securely.

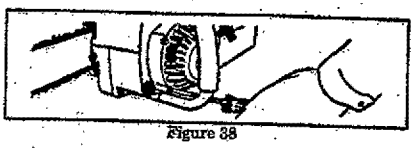


Figure 38

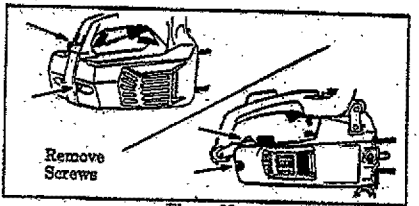


Figure 39

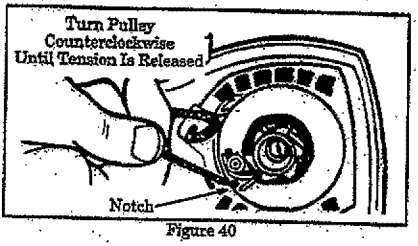


Figure 40

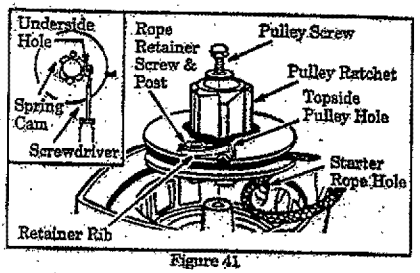


Figure 41

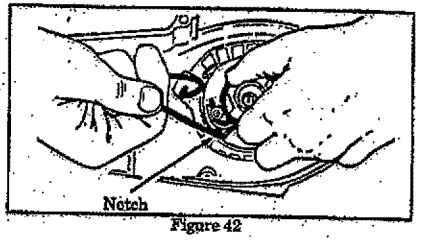


Figure 42

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 the "Trouble Shooting Chart" before proceeding with carburetor adjustments.**
- **For best results, SEARS recommends that you have a qualified service dealer make all carburetor adjustments.** Your dealer has the training, experience, and tools necessary to properly adjust you 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 saw 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 saw 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

a. Stop the engine.
b. Use a fresh fuel mixture with proper gasoline/oil ratio.
c. Place the saw on a solid, flat surface and make sure the chain will not contact any object.
d. Locate the three (3) carburetor adjusting screw openings to the right of the air filter cover. Figure 43.
e. Start the engine and allow engine to idle three (3) minutes to warm up. *The engine must be at operating temperature for proper adjustments to be made.*

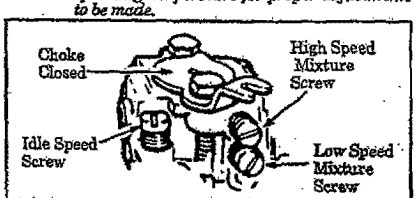


Figure 43

2. IDLE SPEED ADJUSTMENT

a. Allow the engine to idle.
b. Adjust the Idle Speed Screw until the 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.*
c. **No further adjustments are necessary if the chain does not move at idle speed and if performance is satisfactory.**

⚠ WARNING

In "2. Low Speed Mixture Adjustment," recheck idle speed after each adjustment. The chain must not move at idle speed and if performance is satisfactory.

3. LOW SPEED MIXTURE ADJUSTMENT

a. Allow engine to idle.
b. Turn the Low Speed Mixture Screw slowly clockwise until the RPM starts to drop. Note the position.
c. Turn the Low Speed Mixture Screw slowly counterclockwise until the RPM speeds up and starts to drop again. Note the position.
d. Set the Low Speed Mixture Screw at the midpoint between the two positions.

4. ACCELERATION ADJUSTMENT

If the 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.

a. Make a test cut.
b. 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.
c. Repeat test cut.
d. 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 saw to a qualified service dealer.

E. AIR FILTER

- A dirty air filter:
  - reduces cutting power.
  - increases fuel consumption.
- Clean the air filter:
  - frequently, especially under very dusty conditions.
  - always after 10 tanks of fuel mixture or 5 hours of operation, whichever is less

1. Clean off the carburetor cover and the area around it to keep dirt and sawdust from falling into the carburetor chamber when the cover is removed.
2. Remove the carburetor cover screws and carburetor cover. Figure 44.
3. Pull out the air filter.
4. Wash the filter in soap and water.

CAUTION: **Do not use gasoline or other flammable liquid to clean the filter to avoid creating a fire hazard.**

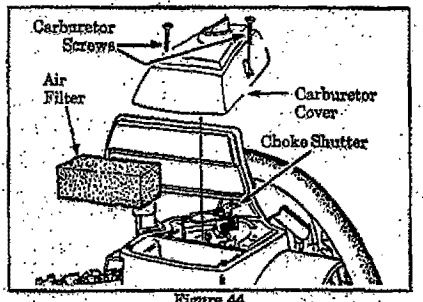


Figure 44

CAUTION: **To avoid damage to the engine, do not operate the unit without the air filter in place.**

F. 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—Fuel Safety."
2. Start engine and allow to run at idle speed until the engine stops.

   NOTE: Running the engine until it stops will remove most of the fuel from the fuel system.

   NOTE: It is important to prevent gum deposits from forming in essential fuel systems parts such as the carburetor, fuel filter, fuel hose, or tank during storage. Alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage.
3. 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.**

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 open flames from hot water heaters, furnaces, etc.

NOTES

B.TROUBLE SHOOTING CHART

SYMPTOM	CAUSE	REMEDY
Engine will not start or will run only for a few seconds after starting.	1. Fuel tank empty. 2. Engine flooded. 3. Spark plug not firing. 4. Fuel not reaching carburetor. 5. Carburetor requires adjustment. 6. Ignition Switch Off. 7. None of the above.	1. Fill tank with correct fuel mixture. 2. See "Starting Instructions." 3. Install new plug/check ignition system. 4. Clean fuel filter; inspect fuel line. 5. See "Carburetor Adjustments." 6. Move switch to the "START" position. 7. Contact your SEARS Service Center/Dept.
Engine will not idle properly.	1. Idle speed set too fast or too slow. 2. Low speed mixture requires adjustment. 3. Crankshaft seals worn. 4. Compression low. 5. None of the above.	1. See "Carburetor Adjustments." 2. See "Carburetor Adjustments." 3. Contact your SEARS Service Center/Dept. 4. Contact your SEARS Service Center/Dept. 5. Contact your SEARS Service Center/Dept.
Engine will not accelerate, lacks power, or dies under a load.	1. Air filter dirty. 2. Spark plug fouled. 3. Carburetor requires adjustment. 4. Exhaust ports or muffler outlets plugged. 5. Compression low. 6. None of the above.	1. Clean or replace air filter. 2. Clean or replace spark plug and re-gap. 3. See "Carburetor Adjustments." 4. Contact your SEARS Service Center/Dept. 5. Contact your SEARS Service Center/Dept. 6. Contact your SEARS Service Center/Dept.
Engine smokes excessively.	1. Air filter dirty. 2. Fuel mixture incorrect. 3. High speed mixture requires adjustment. 4. Choke partially on. 5. Crankcase leak.	1. Clean or replace air filter. 2. Refuel with correct fuel mixture. 3. See "Carburetor Adjustments." 4. Push Choke knob in. 5. Contact your SEARS Service Center/Dept.
Engine runs hot.	1. Fuel mixture incorrect. 2. High speed mixture set too low (Lean). 3. Spark plug incorrect. 4. Exhaust ports or muffler outlets plugged. 5. Carbon build-up on muffler outlet screen. 6. Fan housing/cylinder fins dirty. 7. None of the above.	1. See "Fueling Your Unit." 2. See "Carburetor Adjustments." 3. Replace with correct plug. 4. Contact your SEARS Service Center/Dept. 5. Clean spark arrestor screen. 6. Clean area. 7. Contact your SEARS Service Center/Dept.
Oil inadequate for bar and chain lubrication.	1. Oil tank empty. 2. Improperly adjusted oiler (if so equipped). 3. Oil pump or oil filter clogged. 4. Guide bar oil hole blocked.	1. Fill oil tank. 2. Adjust oiler. 3. Contact your SEARS Service Center/Dept. 4. Remove bar and clean.
Chain moves at Idle Speed.	1. Idle speed requires adjustment. 2. Clutch requires repair.	1. See "Carburetor Adjustments." 2. Contact your SEARS Service Center/Dept.
Chain does not move when engine is accelerated.	1. Chain tension too tight. 2. Carburetor requires adjustment. 3. Guide bar rails pinched. 4. Clutch slipping.	1. See "Chain Tension." 2. See "Carburetor Adjustments." 3. Repair or replace. 4. Contact your SEARS Service Center/Dept.
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. Contact your SEARS Service Center/Dept. 3. Resharpen or replace chain. 4. See the chain sharpening instructions. 5. Contact your SEARS Service Center/Dept.
Chain stops within the cut.	1. Chain cutter tops not filed flat. 2. Guide bar burred or bent; rails uneven. 3. Clutch slipping.	1. See the chain sharpening instructions. 2. Repair or replace guide bar. 3. Contact your SEARS Service Center/Dept.
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. 2. Resharpen until all cutters have equal angles and lengths. 3. Replace guide bar.

C. MAINTENANCE CHART

		before starting work	after finishing work or daily	after each refueling stop	weekly	monthly	annually
Complete machine.	Visual inspection (condition, leaks)	✓					
	Clean		✓				
Throttle trigger; safety throttle lock; stop switch.	Check operation	✓	✓				
Filter in fuel tank.	Replace pick-up — when clogged or dirty.						
Fuel tank.	Inspect	✓					
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						
Air filter.	Clean				✓		
	Replace — when worn or damaged						
Cylinder fins.	Clean	✓					
Carburetor	Check idle adjustment — chain must not turn at idle	✓					
	Readjust idle — when engine runs poorly						
Spark plug.	Replace — when fouled or damaged						
All accessible screws and nuts (not adjusting screws).	Retighten	✓					
Vibration mounts (if applicable).	Inspect — for broken or disconnected springs	✓					
	Replace — when broken						
Spark arrestor screen.	Clean — when clogged or dirty						
	Replace — when worn or damaged						

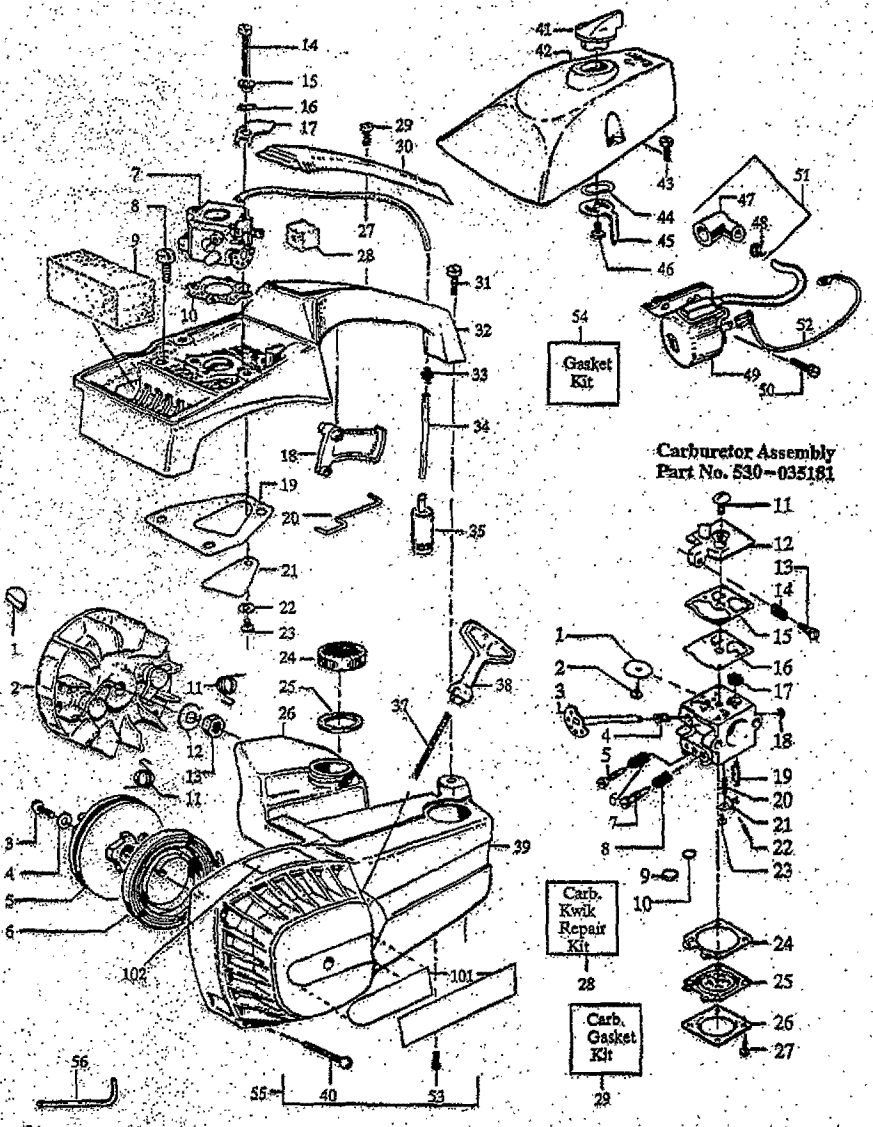
ACCESSORIES

See your SEARS Service Center/Department for accessories and parts.

Safety Glasses	71–85707
File – round – 5/32"	71–36524
Depth Gauge	71–36557
Spark Plug	71–36403
Reduced Kickback Guide Bar	71–36385
Low–Kickback Chain	71–3617
2–cycle Engine Oil	71–36551
Bar & Chain Lubricant	
1 qt.	71–36554
1 gal.	71–36556
Carrying Case	71–36528
Scratch	530–031135
Operator's Manual	530–068510

NOTES

SEARS CHAIN SAW REPAIR PARTS LIST – MODEL NO. 358.355141–2.0/14"



SEARS CHAIN SAW REPAIR PARTS LIST – MODEL NO. 358.355141–2.0/14"

Key No.	Part No.	Description
1	530–015126	Flywheel Key
2	530–039111	Flywheel Ass'y. (Incl. #11)
3	STD511005	Screw
4	530–015123	Washer
5	530–069288	Starter Pulley Kit (Incl. #4,37 & 38)
6	530–042023	Starter Spring
7	530–035181	Carburetor (Walbro WT–20)
8	STD512507	Screw
9	530–023791	Air Filter
10	†530–019045	Carburetor Gasket
11	530–023817	Starter Dog Spring
12	530–015127	Washer
13	STD541131	Nut
14	530–015245	Screw
15	530–023865	Spacer
16	530–015254	Wave Washer
17	530–023805	Choke Shutter
18	530–029826	Throttle Trigger
19	†530–019118	Gasket
20	530–026606	Throttle Wire
21	530–023366	Reed Valve
22	530–023367	Washer
23	STD610603	Screw
24	530–014347	Fuel Cap Ass'y. (Incl. O–Ring)
25	†530–019093	Fuel Tank Neck Seal
26	530–010775	Fuel Tank Ass'y. (Incl.#24,25,33 &35)
27	530–021025	Fuel Line Carburetor
28	†530–023373	Throttle Wire Boot
29	STD610807	Screw
30	530–024967	Handle Cover
31	STD512507	Screw
32	530–036950	Handle & Carb. Hsg.
33	530–023877	Fuel Line Fitting
34	530–069216	Line Kit
35	530–014362	Fuel Pick–Up Ass'y.
37	530–069232	Rope Kit
38	530–026735	Starter Handle
39	530–069281	Fan Hsg.
40	530–015812	Screw
41	530–023807	Choke Knob
42	530–024965	Carb. Cover
43	530–015168	Screw
44	530–015147	Wave Washer
45	530–023806	Choke Lever
46	STD600803	Screw
47	530–003934	Spark Plug Boot
48	530–003933	Spark Plug Connector
49	530–069202	Ignition Module Kit (Incl. #51 &52)
50	530–015816	Screw
51	530–039082	Spark Plug Lead (Incl. #47 & 48)
52	530–039116	Switch Lead
53	530–015650	Screw
54	530–069022	Gasket Kit (* Indicates Contents of Kit)–Optional
55	530–069286	Fan Hsg. Screws Kit (Incl. #40 & 53 from this page and #13 from page 27)
56	530–031111	Hex Wrench – 5/32"
Decal		
101	530–037101	Fan Hsg. Decal
102	530–026878	Replacement Bar & Chain Decal

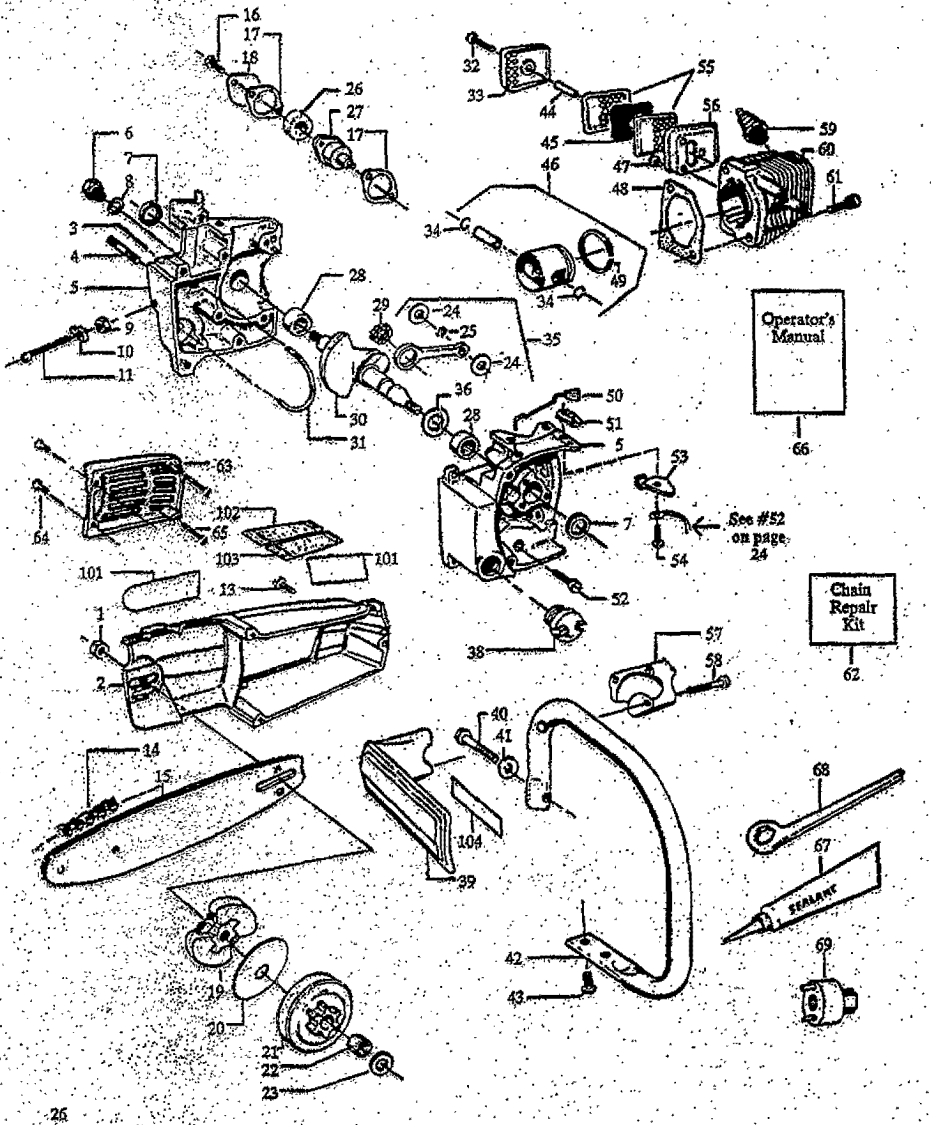
†Indicates Engine Gasket Kit Contents

Carburetor Assembly
Part No. 530–035181

Key No.	Part No.	Description
1	530–035006	Throttle Valve
2	530–035015	Screw
3	530–035034	Throttle Shaft Ass'y.
4	530–035024	Throttle Return Spring
5	530–035171	Low Speed Mixture Needle
6	530–035023	Low Speed Mixture Needle Spring
7	530–035169	High Speed Mixture Needle
8	530–035167	High Speed Mixture Needle Spring
9	*530–035162	Plug – 5/16 Dia. Welch
10	*530–035163	Plug – 1/4 Dia. Welch
11	530–035017	Pump Cover Screw
12	530–035159	Fuel Pump Cover
13	530–035035	Idle Speed Adjusting Screw
14	530–035168	Idle Speed Adjusting Screw Spring
15	+*530–035164	Fuel Pump Gasket
16	+*530–035166	Fuel Pump Diaphragm
17	*530–035027	Fuel Inlet Screen
18	530–035007	Throttle Retainer Ring
19	*530–035106	Inlet Needle Valve
20	*530–035188	Metering Lever Spring
21	*530–035031	Metering Lever
22	*530–035028	Metering Lever Pin
23	*530–035016	Metering Lever Pin Screw
24	+*530–035165	Metering Diaphragm Gasket
25	+*530–035014	Metering Diaphragm
26	530–035003	Metering Diaphragm Cover
27	530–035021	Metering Cover Screw Ass'y.
28	530–035161	Carb. Kwik Repair Kit (Includes parts marked*)
29	530–035173	Carb. Gasket/Diaphragm Kit (Includes parts marked +)

*Indicates Contents in Carb. Kwik Repair Kit
+Indicates Contents in Carb. Gasket/Diaphragm Kit

SEARS CHAIN SAW REPAIR PARTS LIST – MODEL NO. 358.355141–2.0/14"



SEARS CHAIN SAW REPAIR PARTS LIST – MODEL NO. 358.355141–2.0/14"

Key No.	Part No.	Description
1	STD541431	Nut
2	530–037103	Clutch Cover
3	530–036450	Oil Tank Vent Pin
4	530–015642	Bar Mounting Stud
5	530–014742	Crankcase Ass'y. (Incl. #3,4,6,7,8,9,10,11 & 28)
6	530–069142	Check Valve Kit – Oil Tank Pressure (Incl. #8)
7	†530–019059	Crankshaft Seal
8	†530–019089	Check Valve Gasket
9	STD541408	Lock Nut
10	530–023492	Bar Adjust Pin
11	530–015236	Screw
13	530–015623	Screw
14	71–3617	Chain – 14"
15	71–36363	Bar – 14"
16	STD510805	Screw
17	†530–019091	Metering Body Gasket
18	530–023802	Metering Body Cover
19	530–069193	Clutch Ass'y. Kit (Includes Washer)
20	530–069197	Clutch Washer Kit (Outside)
21	530–069166	Clutch Drum & Bearing Kit (Incl. #22)
22	530–032079	Clutch Bearing
23	530–023519	Clutch Spacer (Inside)
24	530–015486	Washer
25	530–032075	Top Rod Bearing (Incl. 22 bearings
26	†530–023801	Oil Filter
27	530–010195	Metering Body Ass'y.
28	530–032029	Crankshaft Bearing
29	530–032065	Roller Bearing (Incl. 13 bearings)
30	530–022172	Crankshaft (Solid State)
31	530–021026	Oil Discharge Line
32	STD511015	Screw
33	530–023795	Muffler Cover
34	530–023843	Piston Ring Retainer
35	530–010474	Connecting Rod Ass'y.
36	530–023887	Thrust Washer
38	530–010444	Oil Cap Ass'y. (Incl. O–Ring w/Retainer)
39	530–024091	Handguard
40	STD522512	Screw
41	STD551025	Washer
42	530–022283	Handlebar
43	STD511005	Screw
44	530–023535	Spacer
45	530–023796	Spark Arrestor Screen
46	530–010587	Piston Kit (Incl. #34 & 49)
47	STD511005	Screw
48	†530–019139	Cylinder Gasket
49	530–025875	Piston Ring
50	530–023788	Switch Knob Ass'y.
51	530–023786	Ramp Switch
52	STD511007	Screw
53	530–023787	Clamp Switch
54	STD610805	Screw
55	530–023797	Muffler Baffle
56	530–023794	Muffler Body
57	530–024049	Handguard Cap
58	530–015509	Screw
59	STD85850	Spark Plug – RCJ–8
60	530–012140	Cylinder
61	530–015239	Screw
62	530–052073	Chain Repair Kit – Optional (Incl. 1 Drive Link, 2 Preset Tie Straps, 2 Plain Tie Straps, 1 Guard Drive Link)
63	530–025259	Muffler Shield
64	530–015474	Screw
65	530–015463	Screw
66	530–068510	Operator's Manual
67	530–030054	Crankcase Sealant
68	530–031063	Bar Adjusting Tool
69	530–031112	Clutch Tool – Optional
101	530–037102	Bar Clamp Hsg. Decal
102	530–037098	Instructions Decal (Right Hall)
103	530–037095	Instructions Decal (Left Hall)
104	530–026849	Handguard Decal

Not Shown

530–026550	Chain Tensioning Decal
530–014783	Ass'y Parts Bag
530–061612	Carton
530–036181	Scabbard

†Indicates Contents of Gasket Kit, Key No. 54 on page 25.

SEARS

Operator's Manual

Model No.
358.355141

How to Order Repair Parts

SEARS SERVICE
IS AT YOUR SERVICE

The Model Number will be found below the top handle with the Serial Number. Always mention the Model Number when requesting service or repair parts for your unit.

All parts listed herein may be ordered from any Sears Service Center and most Sears Stores.

WHEN ORDERING REPAIR PARTS ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER
2. The MODEL NUMBER
   358.355141
3. The PART DESCRIPTION
4. The NAME OF ITEM --
   Gasoline Chain Saw

If the parts you need are not stocked locally, your order will be transmitted to a Sears Repair Parts Distribution Center for handling.

When you buy merchandise from Sears you get an extra value that nobody else can offer -- Sears Service.

Across town or across the country, Sears Service is always near, providing trustworthy, competent service technicians using only Sears specified factory parts.

Your Sears Merchandise takes on added value when you discover that Sears has Service Units throughout the country. Each is staffed by Sears-Trained, professional technicians using Sears approved methods.

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