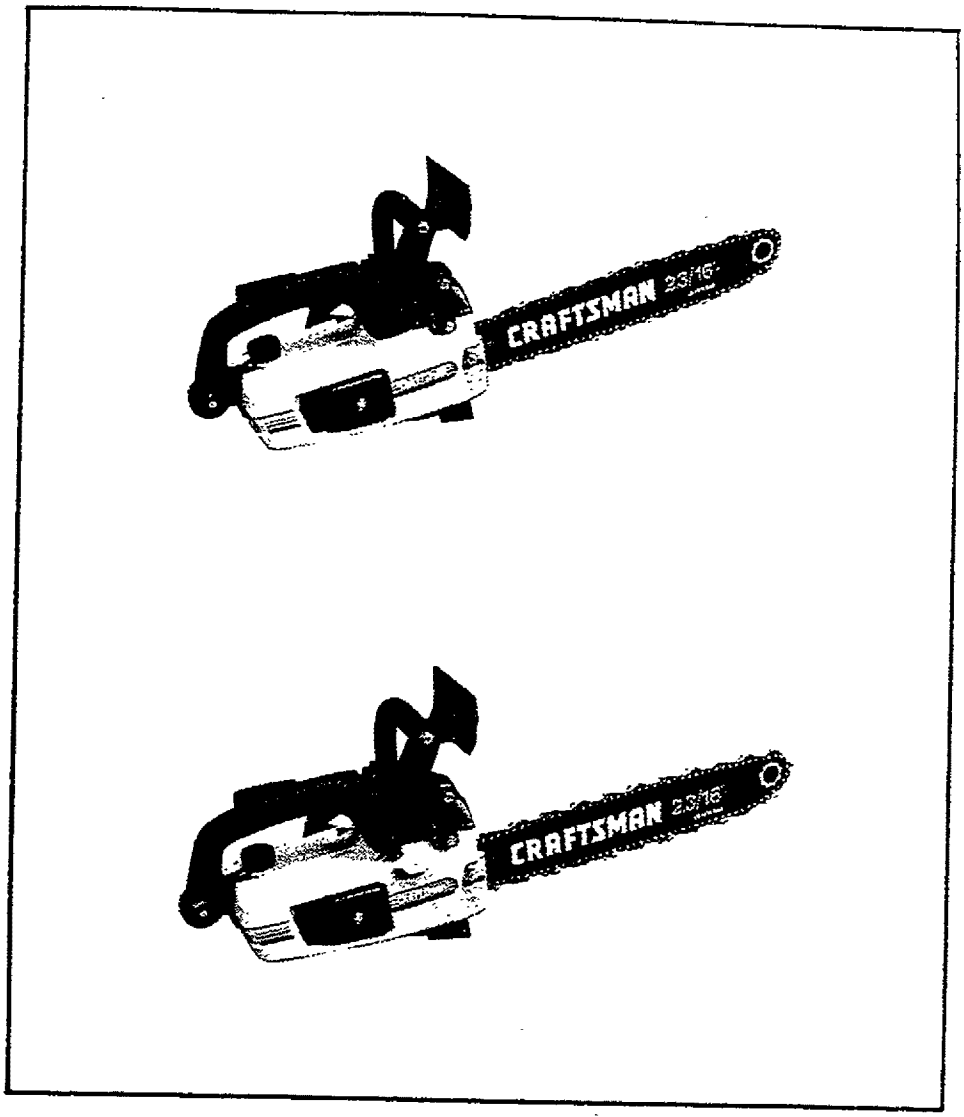
Sears

operator's manual

- Assembly
- Operation
- Maintenance
- Repair Parts

MODEL NO.
358.355060-
2.3/16" AV
358.355070
2.3/16" AV-PS



CRAFTSMAN

2.3/16" AV 2.3/16" PS. AV GASOLINE CHAIN SAWS

THIS CHAIN SAW IS FOR OCCASIONAL USE ONLY.

WARNING:
Carefully read and follow Safety Rules, Precautions and Operating Instructions. Failure to do so can result in serious personal injury.

Record in the space provided below the Model No. and Serial No. of your saw. These numbers are located on the starting instructions decal.

Model No. _____ Serial No. _____

Retain these numbers for future reference.

Sears, Roebuck and Co., Chicago, Ill. 60684 U.S.A.

66378-1-12084-2-17884

PRINTED IN U. S. A.

FULL ONE YEAR WARRANTY ON GASOLINE CHAIN SAW

(Excluding Bar, Chain, Spark Plug, Air Filter and Starter Rope)

For one year from date of purchase, when you maintain, lubricate, and tune up this chain saw according to the operating maintenance instructions in the operator's manual, Sears will repair defects in material or workmanship in this gasoline chain saw at no charge.

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 date of purchase.

WARRANTY SERVICE IS AVAILABLE BY RETURNING THE CHAIN SAW TO THE NEAREST SEARS SERVICE CENTER 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., Sears Tower, Dept. 698/731A, Chicago, IL 60684

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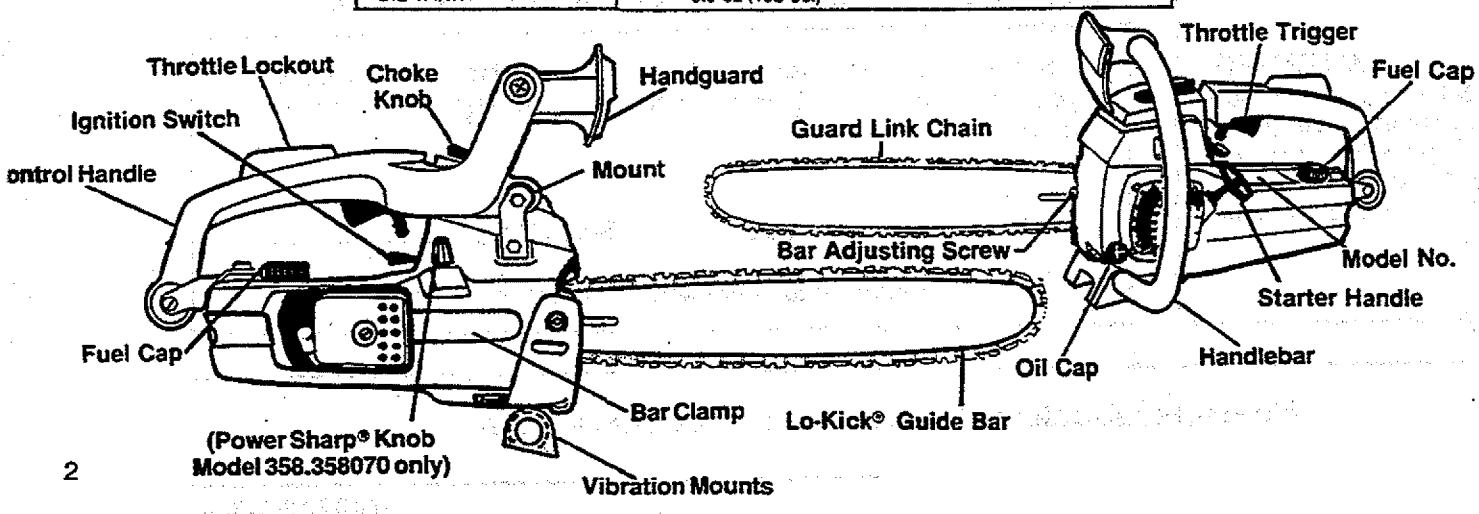
SPECIFICATIONS

MODEL	358.355060 (2.3/16")	358.355070 (2.3/16" P.S.)
CU. IN. DISPLACEMENT	2.3 cu. in.	
GUIDE BAR - LO-KICK®	16" Sprocket Nose	16" Sprocket Nose
CHAIN - OREGON® GUARD LINK	3/8 Pitch Low Profile Xtra Guard® Chrome Cutters 56 Drive Links	3/8 Pitch Low Profile Power Sharp® Chrome Cutters 56 Drive Links
SPARK PLUG	Champion CJ-8	
SPARK PLUG GAP	.025"	
IGNITION	Solid State	
MODULE AIR GAP	.010 - .014"	
FUEL MIX	Gasoline/Oil Mixture - 16:1	
MUFFLER	Spark Arresting	
OILER SYSTEM	Automatic	
FUEL TANK CAPACITY	11.6 oz. (343 cc.)	
OIL TANK	6.6 oz (195 cc.)	



SAFETY RULES AND PRECAUTIONS

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

A. KNOW YOUR SAW

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

B. PLAN AHEAD

1. 

Wear personal protective gear. Always use steel-toed safety footwear with non-slip soles; snug-fitting clothing with reinforced cutting resistant inserts; heavy-duty non-slip gloves; appropriate 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 may damage hearing.
2. **Keep children, bystanders, and pets out of the work area.** Do not allow other people 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 saw during bad weather conditions** such as strong wind, rain, snow, etc., or during darkness.
5. **Plan your sawing operations carefully in advance.** Do not start cutting until you have a clear work area, secure footing, and if you are felling trees, a planned retreat path.

C. GUARD AGAINST KICKBACK

Kickback can lead to dangerous loss of control of the saw and possibly cause serious personal injury. Kickback is the upward and backward motion of the guide bar that occurs when the moving chain contacts an object at the tip of the guide bar.

To reduce the hazard of kickback:

1. **Hold the saw firmly with both hands.** Left hand on front handle bar, right hand on rear handle *whether you are right-handed or left-handed.* Never use the saw with one hand.
2. **Do not overreach.**
3. **Do not let the tip of the guide bar contact the ground, another log, branch, or any other obstruction.**
4. **Begin and continue cutting at full throttle.**
5. **Cut one log at a time.**
6. **Use extreme caution when re-entering a previous cut.**
7. **Do not attempt plunge cuts.**
8. **Watch for shifting logs or other forces that could close a cut and pinch the chain.**
9. **Do not cut above shoulder height.**
10. **Follow manufacturer's chain sharpening and maintenance instructions.** Keep the chain properly tensioned. 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.
11. **Use the Guard Link Chain and Lo-Kick® Guide Bar** designed for your saw to reduce the hazard of kickback.

D. AVOID REACTIVE FORCES

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

To avoid Pushback:

1. **Be extremely aware of situations or obstructions** that may 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 the wood.**
2. **Use wedges made of plastic, wood, or light alloy (never of steel or iron)** to hold the cut open.

E. 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, pour and store fuel in a well-ventilated area, on bare ground, and in an approved, marked container.**
3. **Wipe up all spilled fuel before starting your saw.**
4. **Move at least 10 feet (3 meters) away from fuel and fueling site before starting the engine.**
5. **Do not smoke while handling fuel or while operating the saw.**
6. **Turn the engine off and let your saw cool before removing the fuel tank cap and refueling the unit.**
7. **Let the saw cool in a non-combustible area,** not on dry leaves, straw, paper, etc.

F. OPERATE YOUR SAW SAFELY

1. **Do not operate a chain saw that is damaged, improperly adjusted, or not completely and securely assembled.**
2. **Do not operate the saw from a ladder or in a tree.**
3. **Position all parts of your body away to the side of the saw chain** protruding to the left of cut when the engine is running.
4. **Cut wood only.** Do not use to pry or shove away limbs, roots or other objects.
5. **Make sure the chain will not make contact before starting the engine.** Never try to start the saw when the guide bar is in a cut or kerf.
6. **Use extreme caution when cutting small size brush and saplings.** Slender material may catch the saw chain and be whipped toward you or pull you off balance.
7. **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.
8. **Do not put pressure on the saw at the end of a cut.** This could cause you to lose control when the cut is completed.
9. **Stop the engine before setting the saw down.**

G. MAINTAIN YOUR SAW IN GOOD WORKING ORDER

1. **Have all chain saw service performed by your authorized service dealer center,** other than the items listed in the maintenance section of this manual.
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.** If it does not, refer to page 21 for correct carburetor idle adjustment instructions.
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 Sears.

H. CARRY AND STORE YOUR SAW SAFELY

1. **Hand carry the unit with the engine stopped, the Muffler away from your body,** and the Guide Bar and Chain to the rear covered preferably with a scabard.
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. **Drain oil and fuel tank before storing for more than 30 days.**
4. **Store in a dry area out of the reach of children and away from where fuel vapors can reach an open flame** from hot water heaters, furnaces, etc.

Exposure to vibrations through prolonged use of chain saws may produce Whitefinger disease (Raynaud's phenomenon). This phenomenon reduces the hand's ability to feel and regulate temperature, produces numbness and burning sensations and may cause nerve and circulation damage and tissue necrosis. An anti-vibration system designed to reduce engine vibration is available on many Sears models and is recommended for those using chain saws on a regular or sustained basis.

An anti-vibration system does not guarantee the avoidance of Whitefinger disease. Continual and regular users should monitor closely their use of chain saws and physical condition.

KNOW YOUR CHAIN SAW

A. INTRODUCTION

The information found in this manual will help you properly prepare your chain saw for use, understand how to operate your saw safely, and perform maintenance required to keep your unit in top working condition.

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

Spark Arrestor
Handguard
Counter-Vibe® Vibration System
Lo-Kick® Guide Bar
Guard Link Chain

The chain saw should never be operated unless these devices are properly installed on the unit. The Lo-Kick® Guide Bar and Guard Link Chain have been designed to help reduce the hazard of KICKBACK. You should thoroughly read and understand the section, "CONTROLLING KICKBACK" on page 11 before operating the saw.

B. STATE AND LOCAL ORDINANCE REQUIREMENTS

Your saw has been furnished with an approved Spark Arrestor Screen which is required in some areas by law. **You are legally responsible for seeing that the Spark Arrestor is properly maintained in these areas.** Failure to do so could subject you to liability or to a fine. See Spark Arrestor maintenance, page 19.

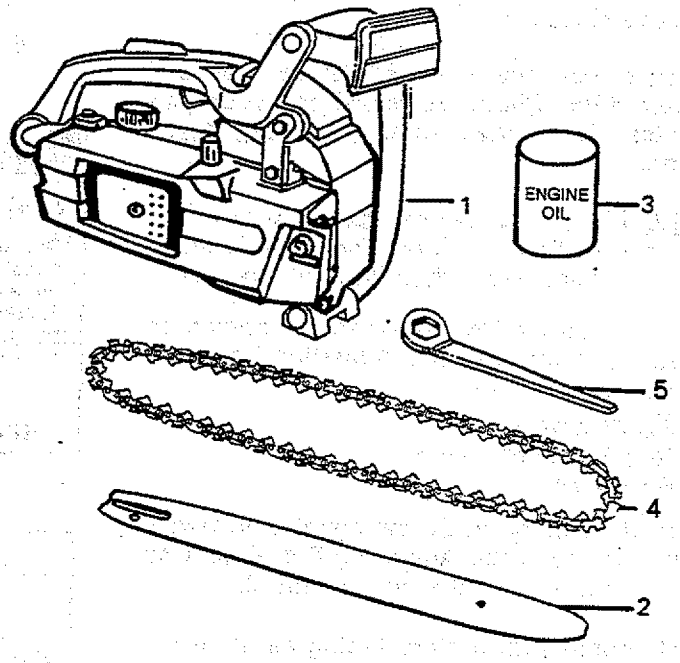
Check with your state conservation or forestry department about regulations concerning operating your saw on forest, brush, or grass covered areas. All U.S. forest land and the states of California, Maine, Washington and Oregon require many internal combustion engines to be equipped with a temperature limiting muffler by law. **Such laws require fitting your saw with an additional muffler heat shield.**

A shield which meets these requirements can be purchased at your Sears Service Center as an optional accessory kit. **Ask for Muffler Heat Shield Kit, Repair Part No. 69037.**

C. CARTON CONTENTS

After you unpack the carton:

1. Check the contents against the list below.
2. Examine the items for damage.
3. *Notify your Sears store immediately if a part is missing or damaged.*



CARTON CONTENTS

Key No.		Qty.
1	Powerhead	1
2	Guide Bar	1
3	8 oz. can 2-cycle Engine Oil	1
—	Loose parts Bag (Not Shown)	1

LOOSE PARTS BAG CONTENTS

—	Operator's Manual (Not Shown)	1
4	Chain	1
5	Bar Adjusting Tool	1

Figure 1

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.

2. HAVE THE FOLLOWING AVAILABLE:
   a. **Protective gloves**
   b. **Approved, marked fuel container**
   c. **One gallon regular gasoline**
   d. **One-half pint, 2-cycle, air-cooled engine oil** provided with your unit.
   e. **Bar and Chain Lubricant** (see page 9.)
   f. **Bar Adjusting Tool** provided with your unit. One end of the tool serves as a wrench; the other can be used as a screwdriver. No other tool is necessary for assembly.

B. ATTACHING THE BAR AND CHAIN

- **Your saw is equipped with a Lo-Kick® Guide Bar and a Guard Link Chain designed to help reduce kickback.**
- **Always use the Lo-Kick® Guide Bar and Guard Link Chain designed for your particular chain saw, when replacing these parts.**

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 as shown in Figure 2, using the Bar Adjusting Tool provided with the unit.
   a. Bar Clamp Nut.
   b. Rear Bar Clamp Screw.
   c. Bar Clamp.
2. Turn the Adjusting Screw counterclockwise ← to move the Adjusting Pin almost as far as it will go to the rear. Figure 2.
3. Hold chain with cutters facing as shown in Figure 3.
4. Place chain over and behind the clutch drum, onto the sprocket. Figure 3.
5. Place the Guide Bar on the saw by fitting the long slot in the Guide Bar over the Bar Stud. Figure 4.

   NOTE: Be sure the Guide Bar is positioned with the adjusting pin hole below the large slot.

WARNING!
Never install the bar upside down to avoid increasing the hazard of kickback.

6. Hold the Guide Bar at a 45 degree angle to the saw and fit the chain into the Guide Bar grooves — first, the top groove and then, the bottom groove.
7. Lower the Guide Bar; fit the adjusting pin into the round hole below the large slot; fit the large slot on the mounts on either side of the Bar Stud. Figure 3 and 5.
8. Hold the Guide Bar against the saw frame and install the Bar Clamp.

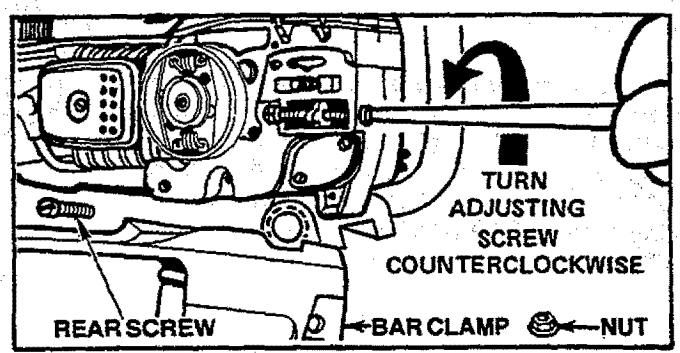


Figure 2

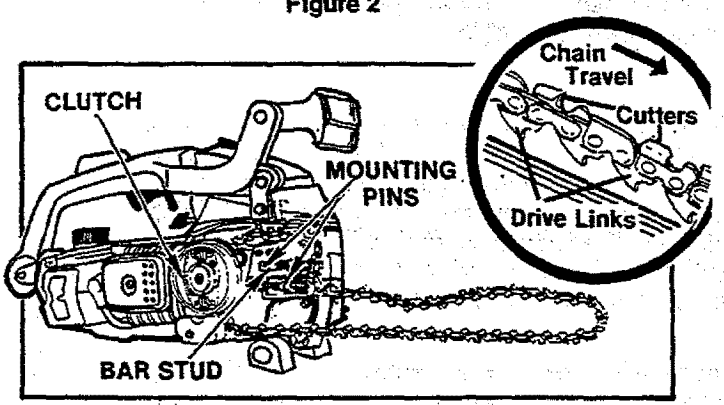


Figure 3

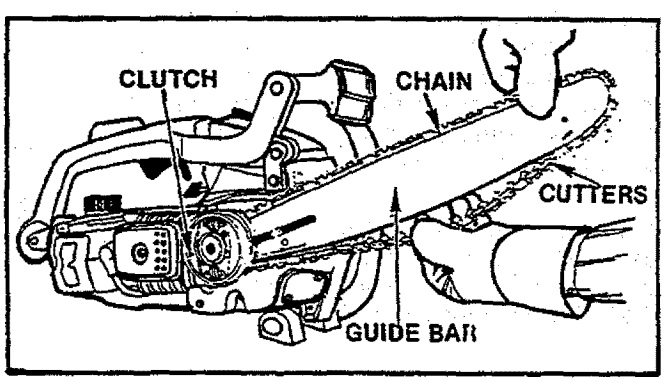


Figure 4

9. Secure the Bar Clamp with the Bar Clamp Nut, finger tight *only.*

   NOTE: The Bar Clamp Nut must be slightly loose for the chain to be tensioned properly. Securely tighten Bar Clamp Nut after chain is tensioned.

10. Replace the Rear Bar Clamp Screw and tighten.

11. Follow "Chain Tension" instructions below.

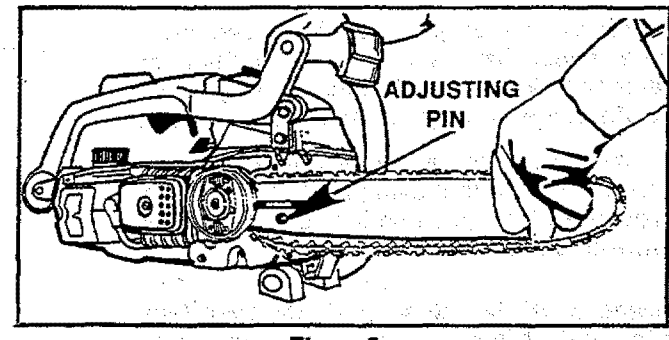


Figure 5

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 damage the saw and/or break.
- **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.**
- **The chain stretches during use, especially when new. Check tension:**
  - — each time the saw is used
  - — more frequently when the chain is new
  - — as the chain warms up to normal operating temperature
- **The Bar Clamp Nut must be slightly loose for the chain to be properly tensioned.**

1. Hold the tip of the Guide Bar up and turn the Adjusting Screw clockwise just until the chain does not sag beneath the Guide Bar. Figure 6.

2. Check the tension by lifting the chain from the Guide Bar at the center of the bar. Figure 7.

3. Continue adjusting the Adjusting Screw until the tension is correct.

4. Hold the tip of the Guide Bar up and tighten the Bar Clamp Nut with the Bar Adjusting Tool.

5. Check the Rear Bar Clamp Screw to be sure it is secure.

6. Recheck chain tension.

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

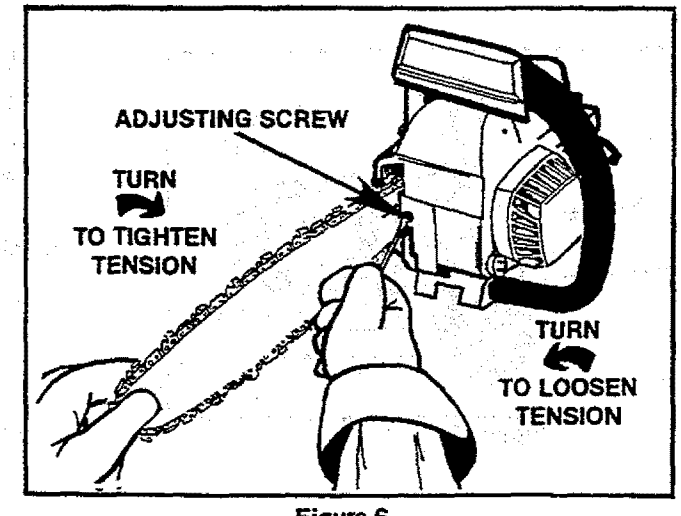


Figure 6

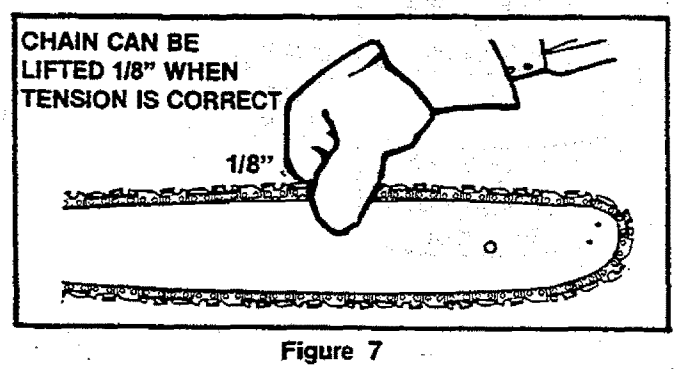


Figure 7

D. ENGINE FUEL MIXTURE

- **Your chain saw is powered by a two-cycle engine which requires a fuel mixture of regular 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 you use the recommended mixture of gasoline and oil.

- **Gasoline must be clean and not over two months old.** After a short period of time, gasoline begins to chemically break down and will form compounds that can 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.

  —Too little oil will cause the engine to overheat and freeze up.

- **Mix the fuel thoroughly in a separate container** since gasoline and oil do not readily combine.

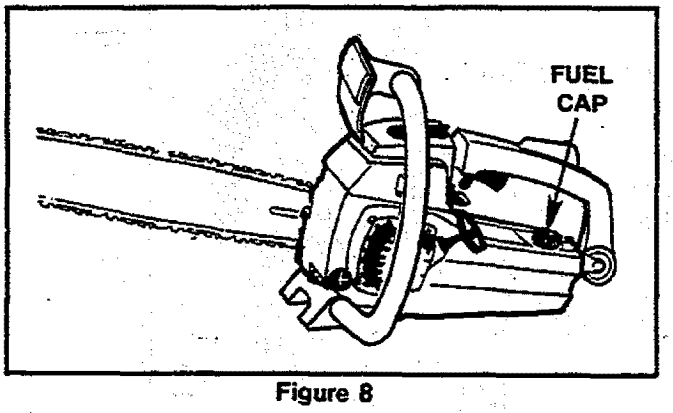
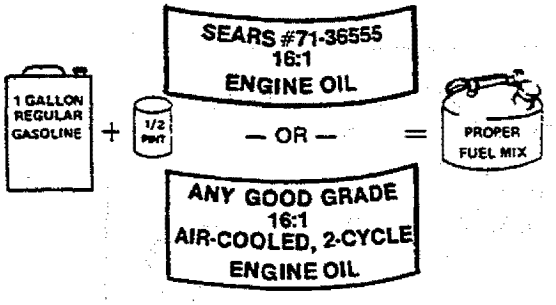


Figure 8

1. USE THE FOLLOWING FUEL MIXTURES:



2. DO NOT USE:

- **BIA Oil (Boating Institute of America)—**

  —Does not have proper additives for air-cooled, 2-cycle engines and could cause damage.

- **AUTOMOTIVE OIL—**

  —Does not have proper additives for 2-cycle engines and could cause damage.

- **GASOLINE CONTAINING ALCOHOL— (High Test, Premium or Gasohol)**

  —Stiffens critical carburetor fuel metering elements and causes engine damage from overheating.

  —Increases vaporlock.

  —Attracts water causing corrosion damage.

3. HOW TO MIX FUEL

a. Pour one-half of the gasoline into an approved marked container. *Do not try to mix fuel directly in the fuel tank.*

b. Add entire measure of 2-cycle Engine Oil.

c. Mix.

d. Add remainder of gasoline.

e. Mix thoroughly for one minute.

4. IMPORTANT POINTS

a. **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.

b. **Mix, pour and store fuel in an approved, marked container and in a well-ventilated area.** Gasoline vapors are harmful to your health and are a serious fire hazard. Use a funnel or spout when pouring fuel.

c. **Avoid over filling the fuel tank.** Allow 3/4 inch for expansion. Tighten Fuel Cap securely. Figure 8.

d. **Wipe up all fuel spills.** Wipe off fuel spilled on the saw before using.

e. **Move at least 10 feet (3 meters) away from fuel and fueling site before starting the engine.**

E. BAR AND CHAIN OIL

- **The guide bar and cutting chain require constant lubrication in order to remain in operating condition.** Lubrication is provided by the automatic oiler system when the oil tank is kept filled.

  —**Lack of oil will quickly ruin the bar and chain.**
  —**Too little oil will cause overheating** shown by smoke coming from the chain and/or discoloration of the guide bar rails.

- **Use Sears Bar and Chain Lubricant #71-36554 or clean SAE 30W oil.**

- **In freezing weather oil will thicken, making it necessary to thin bar and chain oil with a small amount of Diesel Fuel #1 or Kerosene.** Bar and chain oil must be free flowing for the oil system to pump enough oil for adequate lubrication.

1. USE THE FOLLOWING:

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

2. HOW TO FILL THE OIL TANK

a. Turn saw on its side with oil cap up. Figure 9.
b. Loosen cap slowly; wait for pressure in the tank to be released before removing the cap.
c. Fill the oil tank.
d. Replace the oil cap securely.

3. IMPORTANT POINTS

a. **Fill the oil tank each time you refill the fuel tank** to ensure there will be sufficient oil for the chain whenever you start and run the saw.

b. **It is normal for a small amount of oil to appear under the saw after the engine stops** due to oil draining from the bar and chain.

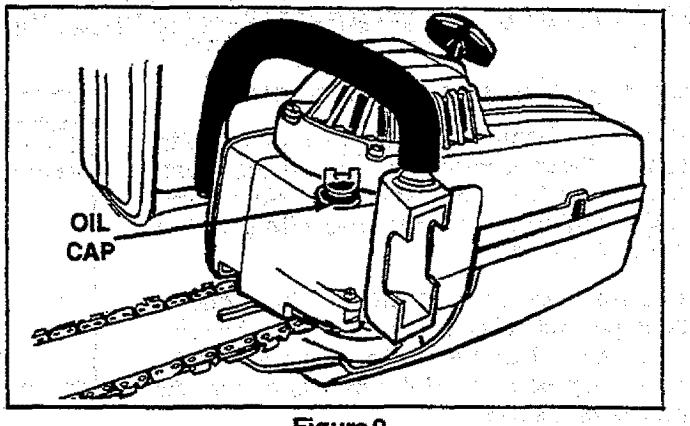


Figure 9

F. OPTIONAL MUFFLER HEAT SHIELD ASSEMBLY

The following instructions have been included to help you install the optional Muffler Heat Shield Kit, Repair Part No. 69037. This kit will provide your saw with a temperature limiting muffler which may be required by law in some states. See State and Local Ordinances, page 5 for further information.

1. Remove the screw located in the center of the muffler body. Figure 10.
2. Remove the muffler cover from the muffler body and discard.

   NOTE: Do not remove other muffler parts. If other parts are removed, see muffler assembly in Figure 43, page 19.
3. Install the temperature limiting muffler body. Figure 11.
4. Replace screw and tighten securely.

   CAUTION: Do not use an air wrench to tighten the screw to avoid overtightening parts and damage.

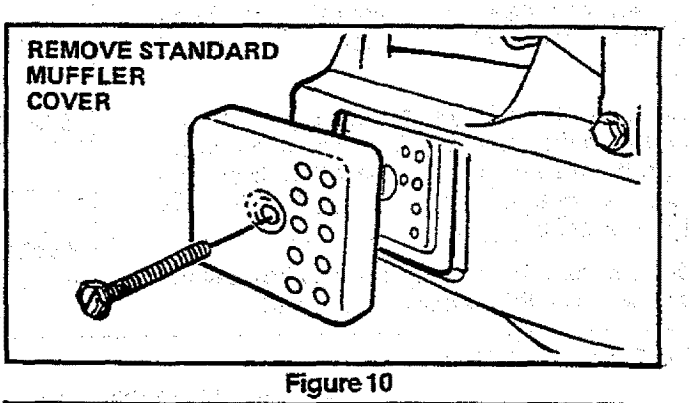


Figure 10

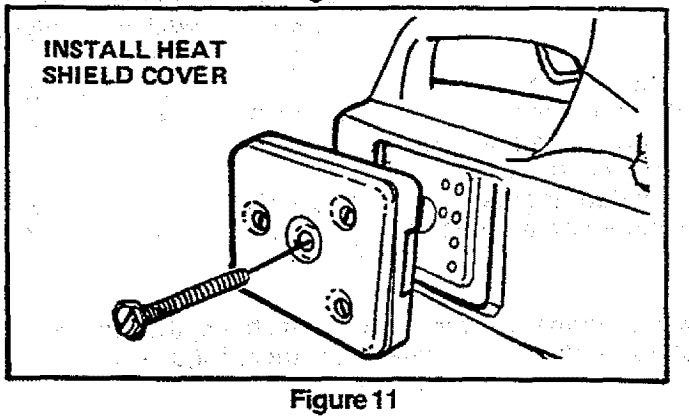


Figure 11

USING YOUR SAW

A. PRE-OPERATION CHECKS

Each time before operating your saw, always:

1. ✓**Check over safety rules and precautions in this manual.** Make certain you completely understand and can apply each one.
2. ✓**Check personal protective gear.** Always use appropriate 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.
4. ✓**Check the air filter.** Clean the filter before operating the unit.
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 pets a safe distance away from the work area when starting or operating the saw.

B. STARTING INSTRUCTIONS (Refer to "Specifications," page 2, for location of controls.)

1. IMPORTANT POINTS

a. **Hold saw firmly with the saw chain free to turn without contacting any object. Push saw away from you with your right hand while pulling the starter rope with your left hand.** Figure 12.

b. **Use no more than 15-18 inches of starter rope per pull.** Using the full length of the rope, may cause it to break. Do not let the starter rope snap back. Hold the handle and let the rope rewind slowly.

c. **Pull rope no more than 5-6 times** to avoid flooding the engine. 8-10 pulls may be required for a new unit, a saw that has been stored, a refueled unit which has run out of gas.

d. **Release the trigger after engine starts, allowing the engine to idle. *The chain must not move when the engine idles.*** If correction is required, refer to Carburetor Adjustments, page 21.

e. **Stop engine by moving the ignition switch to the "STOP" position** Figure 13.

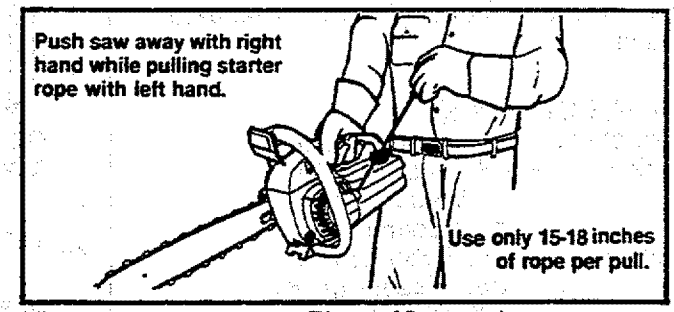


Figure 12

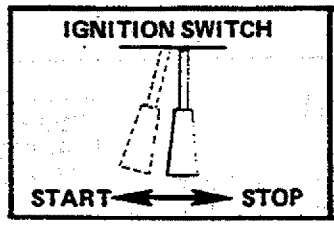


Figure 13

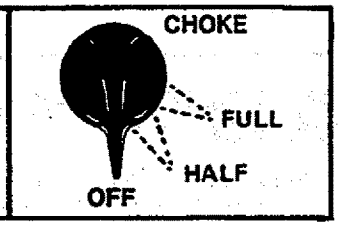


Figure 14

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

2. STARTING PROCEDURE

	Turn Choke to Full Choke	Move ignition switch to Start	Squeeze trigger	Pull starter rope until engine fires	Turn Choke off	Pull starter rope sharply until engine runs	Release trigger
a. Cold Engine	X	X	X	5-6 times	X	X	X
b. Warm Engine	Choke off)	X	X	—	—	1-2 times	X
c. Refueled Engine after running out of gas	X	X	X	8-10 tiimes	X	X	X
d. Flooded Engine	(choke off)	X	X	—	—	X	X
e. Cold Weather starting	X	X	X	5-6 times	half-choke* (out of cut)	X	X

* Allow engine to warm up on half-choke, then move choke to the "off" position. Do not cut with the choke at the "on" or "half" position. Figure 14.

C. CONTROLLING KICKBACK

Kickback is a dangerous reaction that can cause serious personal injury. Carefully study this manual before you make the first cut with your new saw. You must understand what causes kickback, how you can reduce the chance of kickback, and how you can remain in the best control of the saw if kickback does occur.

1. WHAT CAUSES KICKBACK

Kickback can occur when the moving chain contacts an object at the tip or nose of the guide bar. This contact causes the chain to dig into the object and stops the chain for an instant. The result is a lightning fast, reverse reaction which kicks the saw tip up and back toward the operator. The operator can lose control of the saw and the cutting chain can cause serious personal injury if it contacts any part of the body.

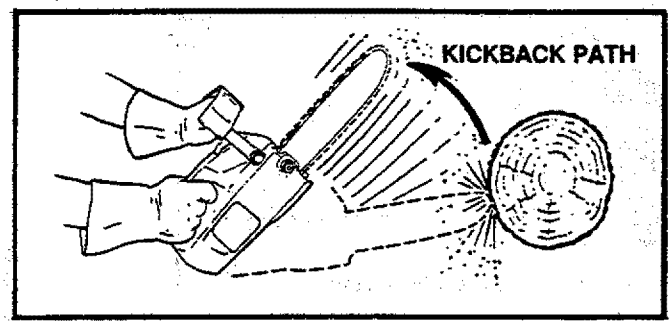


Figure 15

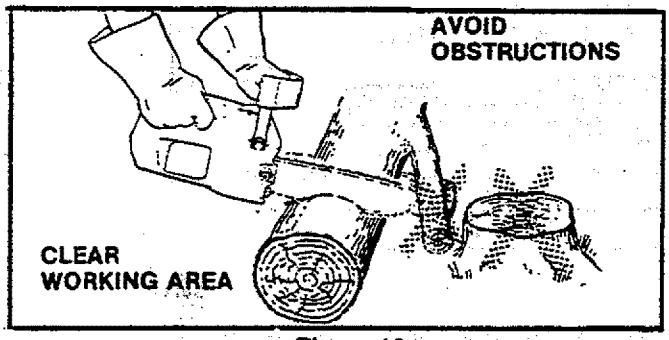


Figure 16

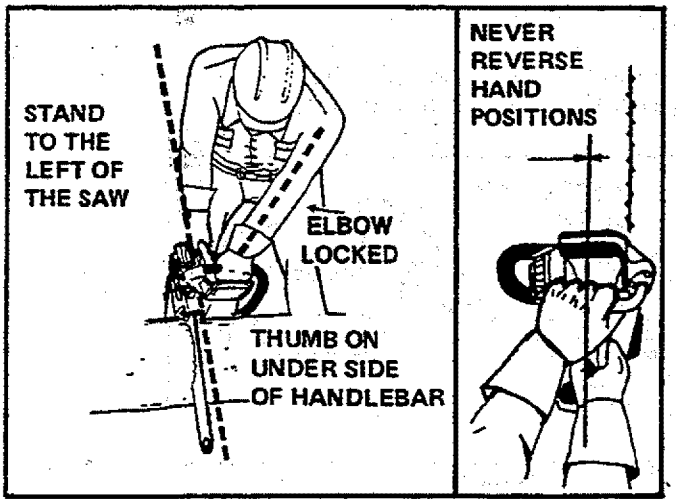


Figure 17

2. REDUCE THE CHANCE OF KICKBACK

a. **Recognize that kickback can happen.** By understanding and knowing about kickback, you are better equipped to deal with an occurrence.

b. **Never let the moving chain contact any object at the tip of the guide bar.** Figure 15

c. **Keep the working area free from obstructions such as other trees, branches, rocks, fences, stumps, etc.** Figure 16. Eliminate or avoid any obstruction that your saw chain could hit while you are cutting through a particular log or branch.

d. **Keep your saw chain sharp and properly tensioned.** A loose or dull chain can increase the chance of kickback.

e. **Begin and continue cutting at full throttle.** If the chain is moving at a slower speed, there is greater chance for kickback to occur.

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

g. **Use extreme caution when re-entering a previous cut.**

h. **Do not attempt plunge cuts.**

i. **Watch for shifting logs or other forces that could close a cut and pinch or fall into the chain.**

j. **Use the Lo-Kick® Guide Bar and Guard Link Chain specified for your particular saw.** These devices have been designed to reduce the hazard of kickback.

k. **Use extra caution if your saw is equipped with the Power Sharp® System.** The Power Sharp® saw is equipped with a Lo-Kick® Guide Bar and a Guard Link Chain. However, due to the chain requirements of the built-in sharpening mechanism, the kickback force from the Power Sharp® chain may be greater than that from other Guard Link chains.

3. MAINTAIN THE BEST CONTROL

a. **Keep a good firm grip on the saw with both hands.** Figure 17. A firm grip can neutralize kickback and help you maintain control of the saw. Keep the fingers of your left hand encircling and your left thumb under the front handlebar. Keep your right hand completely around the rear handle *whether you are right handed or left handed.* Keep your left arm straight with the elbow locked.

b. **Position your left hand on the front handlebar so it is in a straight line with your right hand on the rear handle.** Figure 17. Never reverse right and left hand positions.

c. **Stand with your weight evenly balanced on both feet.**

d. **Stand slightly to the left side of the saw, to keep your body from being in a direct line with the cutting chain.** Figure 17.

e. **Do not overreach.** You could be drawn or thrown off balance and lose control of the saw.

f. **Do not cut above shoulder height.** It is difficult to maintain control of the saw above shoulder height.

USING THE POWER SHARP® SYSTEM (MODEL 358.355070)

Model 358.355070 is equipped with a Power Sharp® System that will perform approximately 80% of the sharpening necessary for the saw chain. The Power Sharp® System utilizes a built-in grinding stone to sharpen the cutter top plates and set depth gauges. As the built-in sharpener is used, the cutter side plates gradually will be altered. About every 3rd to 5th time the Power Sharp® System is used, hand filing is required to correct the cutter side plates.

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

- **Replace the sharpening stone when a new Power Sharp® chain is installed.** See instructions, page 13.

- **Remove the sharpening stone if a standard or conventional chain is substituted for the Power Sharp® chain.** See instructions for removing the sharpening Stone and Carrier Assembly, page 13. Use replacement chain for Model 358.355060 (2.3/16"), Stock No. 71-3629. Follow conventional chain sharpening instructions on page 17.

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

A. AUTOMATIC SHARPENING

1. Stop the engine.
2. Place saw on a solid, flat surface; and ensure that the chain will not contact any object.
3. Adjust the chain with proper tension. Refer to Chain Tension, page 7.
4. Start engine and operate at half throttle.
5. Press the Power Sharp® Knob down until you feel the sharpening stone lightly contacting the chain. Figure 18.
6. Maintain constant, light pressure on the Power Sharp® Knob while moving the knob side to side for 5 seconds.
7. Release Power Sharp® Knob and stop engine.
8. Inspect chain cutters.
   NOTE: A properly sharpened cutter will show grinding marks across its entire width. Figure 19.

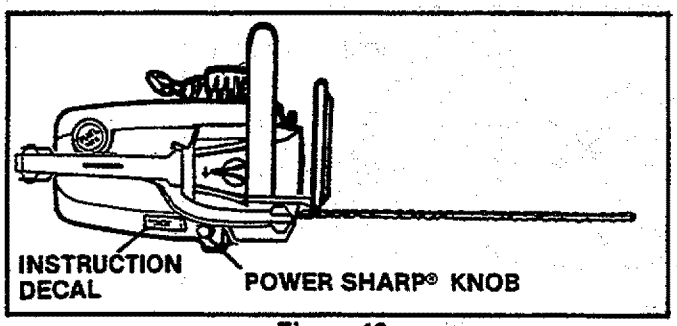


Figure 18

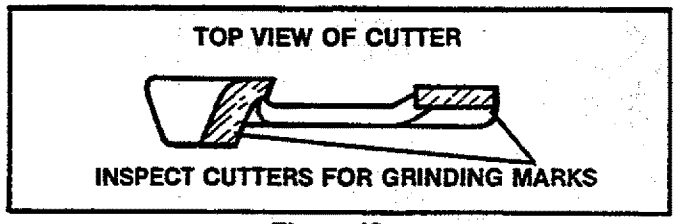


Figure 19

B. HAND FILING

Sharpen saw chain side plates by hand after every 3rd to 5th time the Power Sharp® system is used.

1. Stop the engine.
2. Adjust the chain for proper tension, page 7.
3. Support the square rod on the file holder (with 5/32" round file) on cutter top plate. Figure 20.

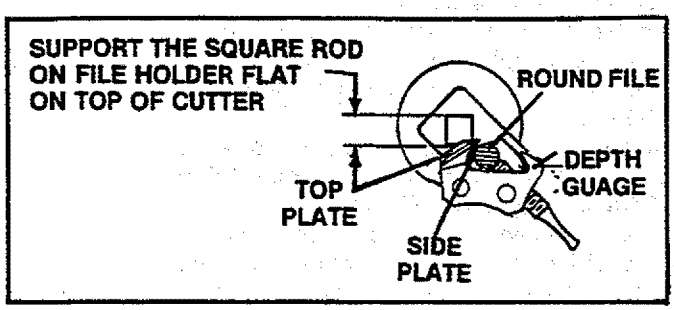


Figure 20

NOTE: Work at the midpoint of the bar, moving the chain forward with a screwdriver as each cutter is filed.

4. Hold the file holder level with the 22° guide mark parallel to guide bar. Figure 21.

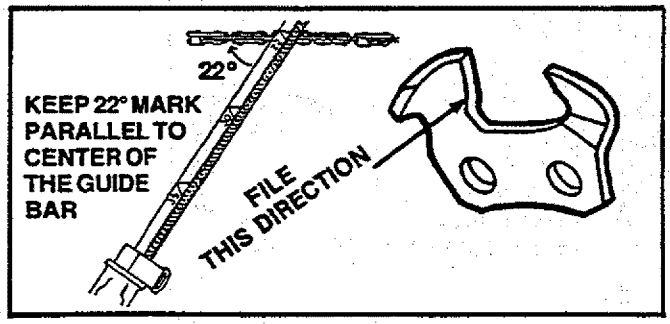


Figure 21

5. File from inside toward outside of cutter, straight across, in one direction only. Use 2 or 3 strokes per side plate edge. Figure 21.

   NOTE: Avoid hitting the top edge of the cutters when filing the side plate.

6. Maintain a 1/32" side plate projection. Figure 22.
7. File all side plates on one side of the chain, then move to the other side of bar and file remaining side plates.

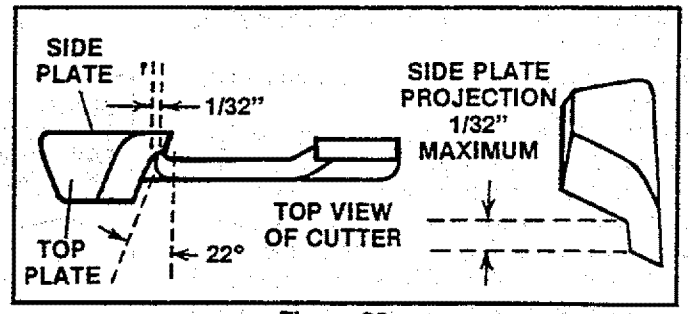


Figure 22

C. REPLACE OR REMOVE THE STONE AND CARRIER ASSEMBLY

1. Remove bar clamp.
2. Remove screw holding Stone and Carrier Assembly. Figure 23.
3. Discard old assembly.
4. Reverse procedure to install new assembly.
5. Tighten screw securely.

   NOTE: Be careful to not overtighten. (Torque to 20-25 inch pounds.)

6. Reassemble saw.

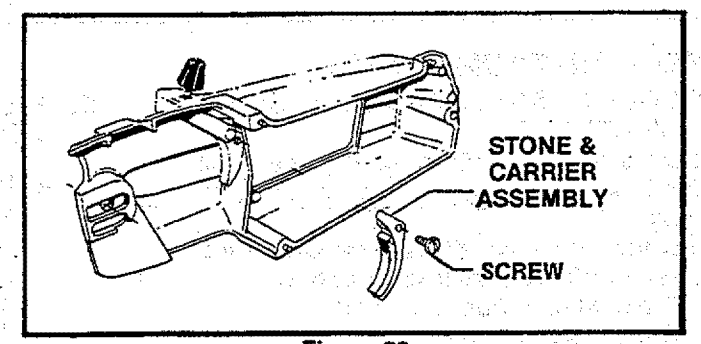


Figure 23

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 unit 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.

2. UNDERSTAND REACTIVE FORCES

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

- **Pushback:**
  - —occurs when the chain, on top of the bar, is suddenly stopped when the top of the bar is used for cutting.
  - —drives the saw straight back toward the operator, possibly causing loss of saw control.
- **To avoid Pushback:**
  a. **Be extremely aware of situations or obstructions** that may cause material to stop or pinch the top of the chain.
  b. **Do not cut more than one log at a time.**
  c. **Do not twist the saw** as the bar is withdrawn from an under-cut.
- **Pull-in:**
  - —occurs when the chain on the bottom of the bar is suddenly stopped.
  - —occurs when the spike or saw housing is not held securely against the tree or limb and/or when the cut is not begun at full throttle.
  - —pulls the saw forward, and could cause the operator to lose control.
- **To avoid Pull-in:**
  a. Always begin cutting with the engine at full throttle and the spike or saw housing against the wood.
  b. Use wedges made of plastic, wood, or light alloy (never of steel or iron) to hold the cut open.

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 the engine to fulll throttle just before entering the cut by squeezing the Throttle Trigger.

b. Begin cutting with the saw frame against the log. Figure 24.
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. Do not put pressure on the saw at the end of the cut to avoid losing control when the cut is complete.
g. Stop the engine before setting the saw down after cutting.

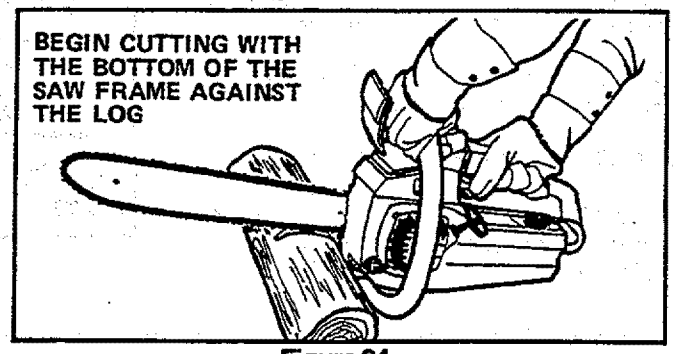


Figure 24

B. TREE FELLING TECHNIQUES

1. PLAN YOUR SAWING OPERATION CAREFULLY IN ADVANCE

a. **Clear the work area.** You need a clear area all around the 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
   3.) **WEIGHTED** with **BRANCHES** on one side
   4.) Surrounding **TREES** and **OBSTACLES**
c. **Look for decay and rot.** If the trunk is rotted, it could snap and fall toward the operator.
d. **Check for broken or dead branches** which could fall on you while cutting.
e. **Make sure there is enough room for the tree to fall.** Maintaining a distance of 2½ tree lengths from the nearest person or other objects. Engine noise may drown out 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.**
h. **Plan a clear retreat path to the rear and diagonal to the line of fall.** Figure 26.

WARNING!

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

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.

3. FELLING LARGE TREES — 6" DIAMETER OR MORE

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

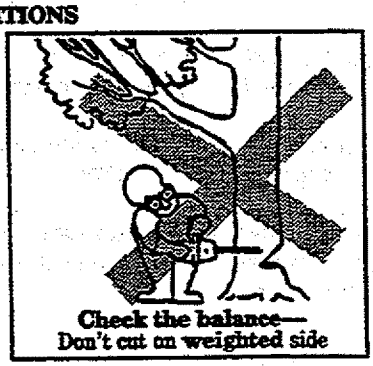
NOTE: If the tree has large buttress roots, remove before making the notch. Cut into the buttresses vertically, then horizontally. Figure 25

a. Make the notch cut. Figure 27.
   1.) Cut the bottom of the notch first, through 1/3 of the diameter of the tree.
   2.) Complete the notch by making the slant cut.
   3.) Remove the notch of wood.
b. Make the felling cut on the opposite side of the notch about 2" higher than the bottom of the notch.

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. Leave enough uncut wood between the felling cut and the notch to form a hinge. Figure 28.

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

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

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

e. Be alert for signs that the tree is ready to fall:
   1.) cracking sounds
   2.) widening of the felling cut
   3.) movement in the upper branches.

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

g. Be extremely cautious with partially fallen trees that may be poorly supported. When a tree doesn't fall completely, set the saw aside and pull down the tree with a cable winch, block and tackle or tractor. Do not cut it down with your saw to avoid injury.

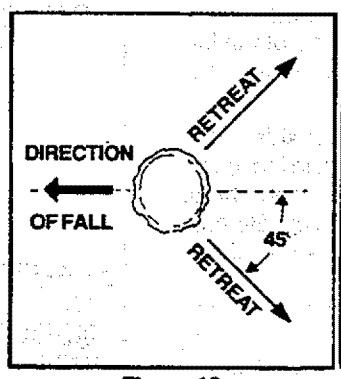


Figure 19


Figure 20

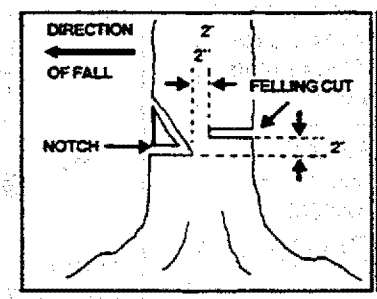


Figure 21

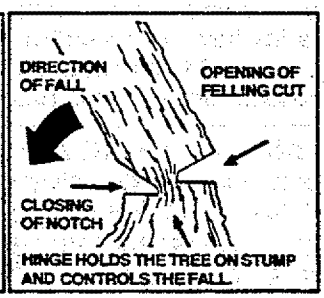


Figure 22

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. **Give special attention to logs under strain to prevent the saw from pinching.** Make the first cut on the compression side to relieve the stress on the log Figure 29.

e. **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.

f. **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.

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

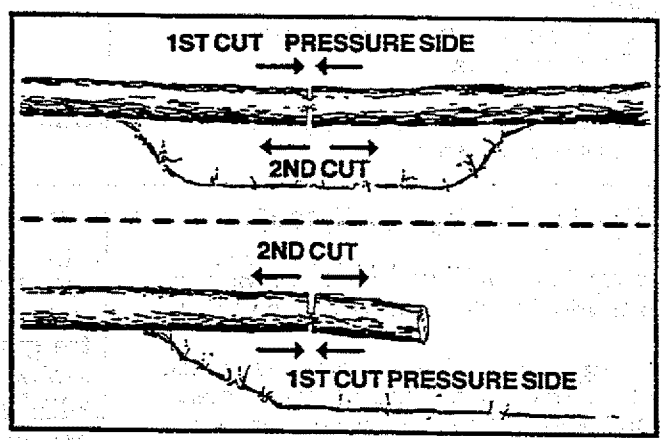


Figure 29

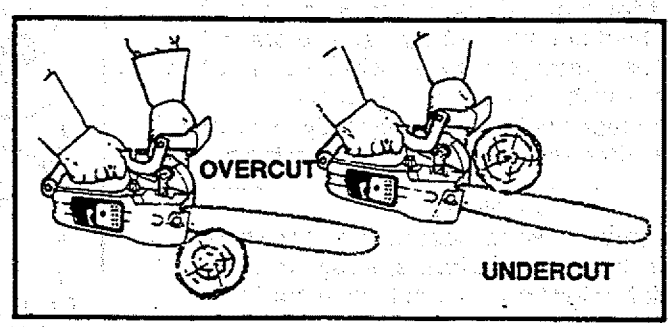


Figure 30

2. **TYPES OF CUTTING USED** Figure 30.
   — **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!
If saw becomes pinched or hung in a log, don't try to force it out. You could lose control of the saw resulting in personal injury and/or damage to the saw. Stop the saw and drive a wedge of plastic, wood or light alloy into the cut until saw can be removed easily. Figure 31. Do not use a steel or iron wedge to avoid kickback and chain damage.

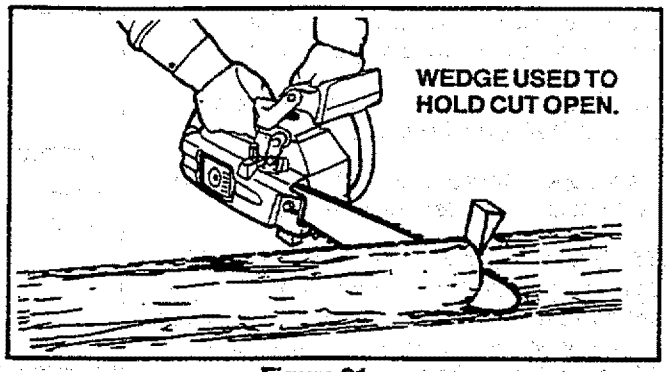


Figure 31

3. **BUCKING — WITHOUT A SUPPORT**
   a. Overcut with a 1/3 diameter cut.
   b. Roll log over and finish with an overcut.
4. **BUCKING — USING ANOTHER LOG AS A SUPPORT (Figure 32):**

WARNING!
Do not stand on the log being cut. The cut portion will roll down hill.

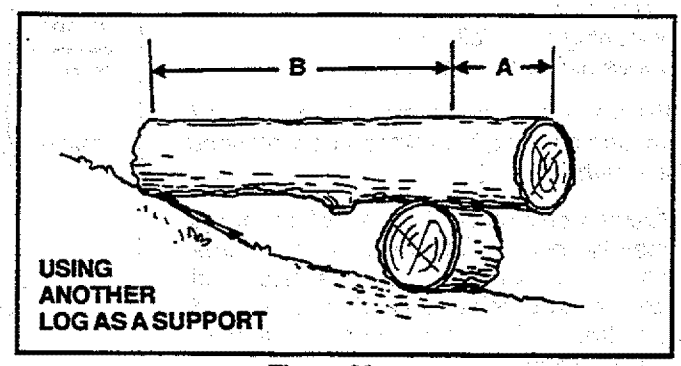


Figure 32

   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 33):**
   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.

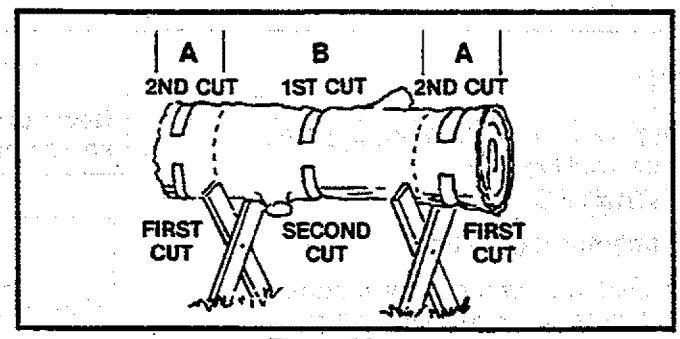


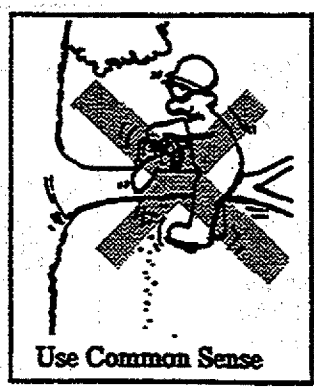
Figure 33

D. DEBRANCHING AND PRUNING

- **Work slowly, keeping both hands on the saw with a firm grip.** Maintain secure footing and balance.
- **Watch out for springpoles.** Use extreme caution when cutting small size limbs. Slender material 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 might cause you to lose control of the saw.

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 could result in serious personal injury.


Use Common Sense


Maintain Secure Footing

1. **DEBRANCHING**
   a. **Limit debranching to limbs shoulder height or below.** Always debranch a tree *after* it is cut down. Only then can debranching be done safely and properly.
   b. **Leave the larger lower limbs to support the tree as you work.**
   c. **Start at the base of the felled tree and work towards the top, cutting branches and limbs.** Remove small limbs with one cut. Figure 34.
   d. **Keep the tree between you and the chain.** Cut from the side of the tree opposite the branch you are cutting.
   e. **Remove larger, supporting branches with the 1/3, 2/3 cutting techniques described in the bucking section.**
      1.) Start with an overcut
      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.
      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.

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 35 for the pruning technique.**

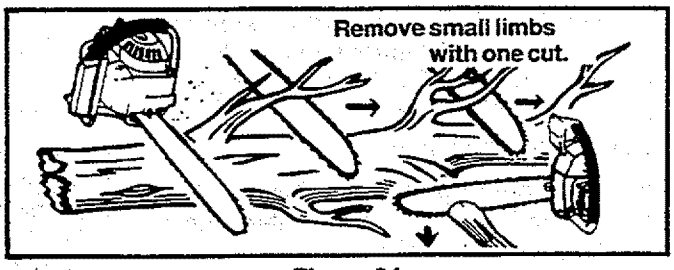


Figure 34

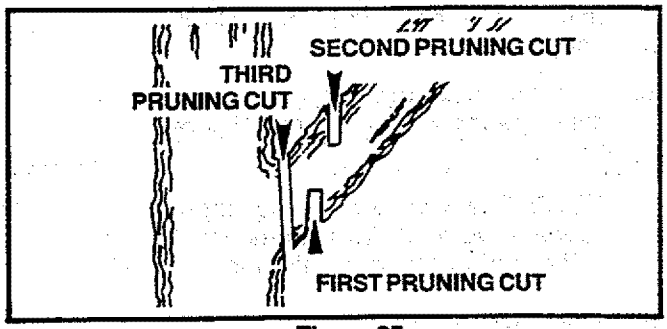


Figure 35

MAINTENANCE

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

- **Make all adjustments or repairs (except carburetor adjustments) with:**
  —spark plug wire disconnected
  —engine cool as opposed to a unit that has just been run.
- **Check the saw for loose bolts, screws, nuts and fittings regularly.** Loose fasteners can cause an unsafe condition as well as damage to your saw.

WARNING!
All repairs, adjustments and maintenance not described in the Operator's Manual should be performed by a qualified service dealer.

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 is sharp enough to cut you even though it is too dull to cut wood.

a. **SHARPENING INSTRUCTIONS — Model 358.355060 (For Power Sharp® Model 358.355070, see page 12-13.)**

Items required:

Gloves	Medium file
5/32" file	Depth Gauge Tool
6" file holder	

1.) **Stop engine.**
2.) **Adjust the chain for proper tension,** page 7.
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 with the square rod on the top plate of the cutter as shown in Figure 36.

b.) Hold the file holder level with the 30° guide mark parallel to the center line of the bar. Figure 37.

c.) File from inside toward outside of cutter, straight across in one direction only. Use 2 or 3 strokes per cutting edge. Figure 38.

5.) **Correct Depth Gauges.**

a.) Place depth gauge tool (Catalog No. 71-36557) over each cutter depth gauge. Figure 39.

b.) File level with the flat file if depth gauge is higher than the depth gauge tool.

c.) Maintain rounded front corner of depth gauge with a flat file. Figure 40.

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

b. CHAIN REPLACEMENT

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

2.) **See your Sears Service Center to replace and sharpen individual cutters to match your chain.**

3.) **Always replace the worn sprocket when installing a new chain to avoid excessive wear to the chain.**

2. GUIDE BAR MAINTENANCE

- **Conditions which can require guide bar maintenance:**
  —saw cuts to one side
  —saw has to be forced through a cut
  —inadequate supply of oil to bar and chain.

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

- **Replace the guide bar when:**
  —the inside groove of the guide bar rails is worn.
  —the guide bar is bent or cracked.

a. Remove the guide bar to service.

b. Clean oil holes at least once for each five hours of operation.

c. Remove sawdust from the guide bar groove periodically with a putty knife or a wire. Figure 41.

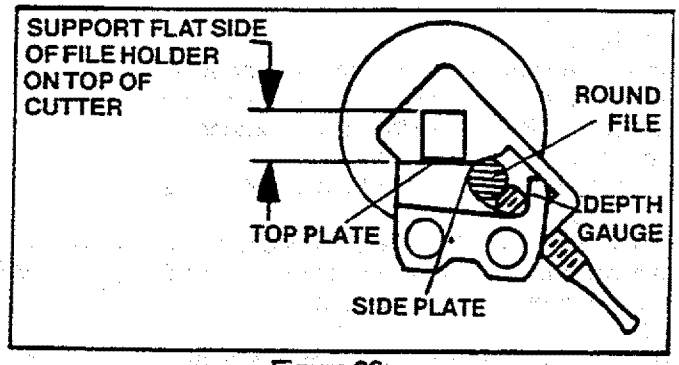


Figure 36

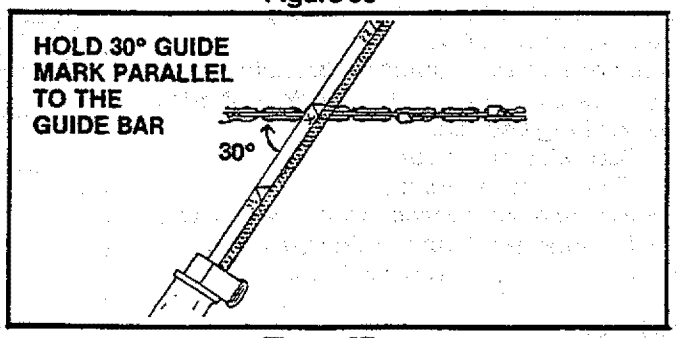


Figure 37

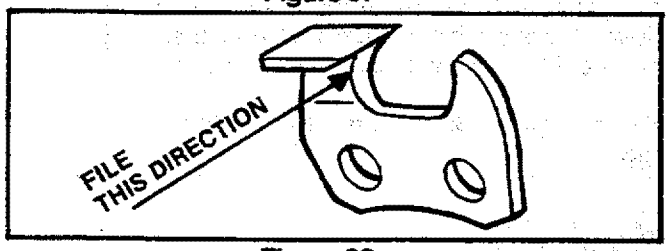


Figure 38

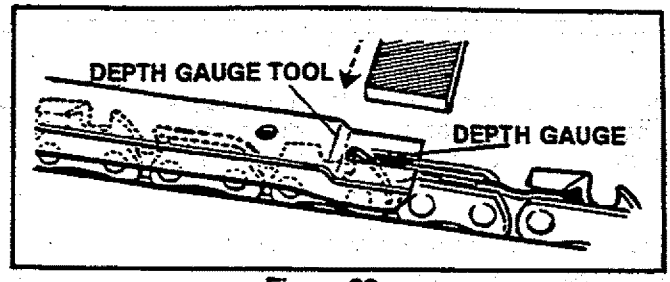


Figure 39

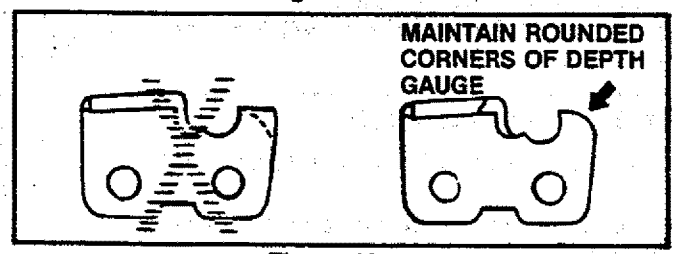


Figure 40

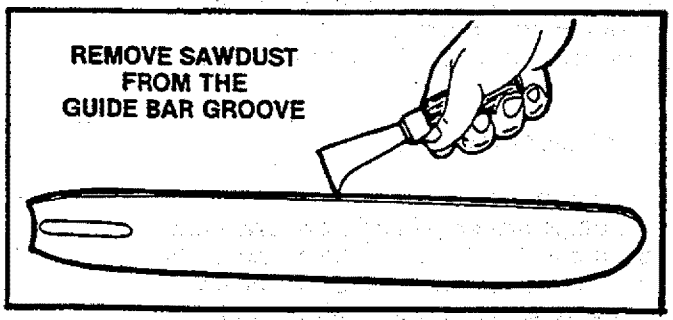


Figure 41

d. Remove burrs by filing the side edges of the guide bar grooves square with a flat file. Figure 42.

e. Restore square edges to an uneven rail top by filing with a flat file. Figure 42.

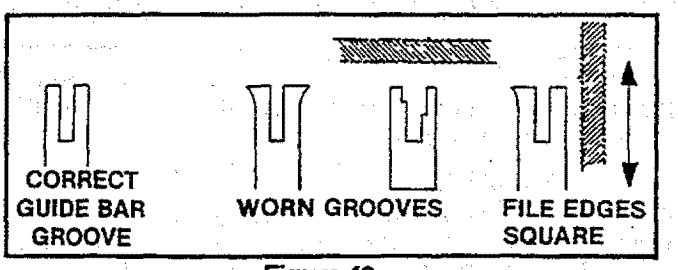


Figure 42

B. IGNITION, COOLING AND EXHAUST SYSTEMS

- **Carbon deposits will build up on exhaust ports, spark arrestor, muffler, and spark plug** as the saw is used. All of these parts should be cleaned at the same time to prevent engine damage, overheating, loss of power, and hard starting.
- **Clean parts:**

  —as required

  —at least once for each 25-30 hours of operation

1. EXHAUST SYSTEM

- **Carbon build-up on the exhaust system can cause the engine to loose power in a cut.**
- **Keep the spark arrestor clean at all times.**
- **Replace the spark arrestor when breaks in the screen are found.**

Items required:
Wire brush
3/8" wrench
Hardwood stick

a. Disconnect the spark plug.
b. Remove the muffler, baffles, and screen. Figure 43.
c. Pull the starter rope until the piston moves far enough to close the exhaust ports.
d. Scrape the carbon deposits from the exhaust ports and surrounding exhaust chamber using a hardwood stick. Figure 44.
e. Blow out loosened carbon with compressed air.
f. Clean the spark arrestor screen with a wire brush or replace if breaks in the screen are found.
g. Reassemble muffler parts.

2. SPARK PLUG

- **Keep the spark plug:**
  —clean
  —properly gapped (.025)
- **Maintenance is indicated when the engine is hard to start.**

Item required: Small brush, such as a tooth brush, or a pocket knife.

a. Pull the rubber connector from the spark plug and remove the spark plug from the cylinder.
b. Clean deposits from the electrodes of the spark plug with a small brush or a pocket knife.

NOTE: Be careful when removing, cleaning, gapping and replacing the spark plug. If it is damaged, it will not work properly and must be replaced.

c. Set the gap between the electrodes to .025 using a wire or flat gauge. Figure 45.
d. Replace the spark plug.

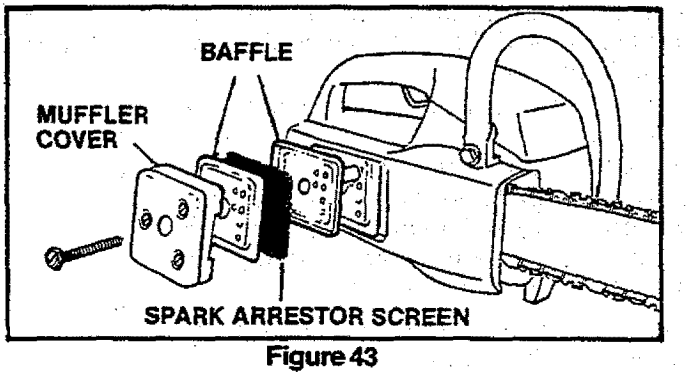


Figure 43

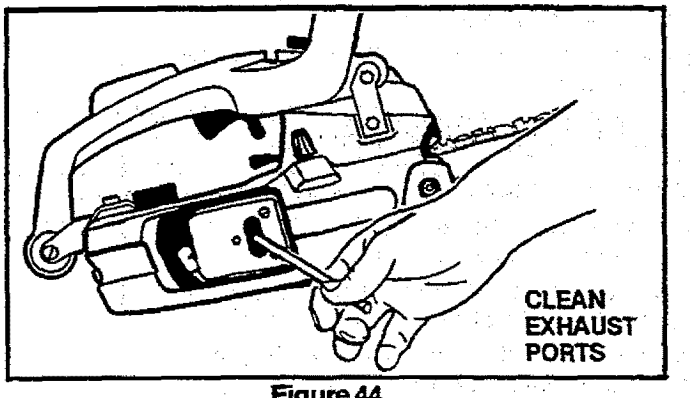


Figure 44

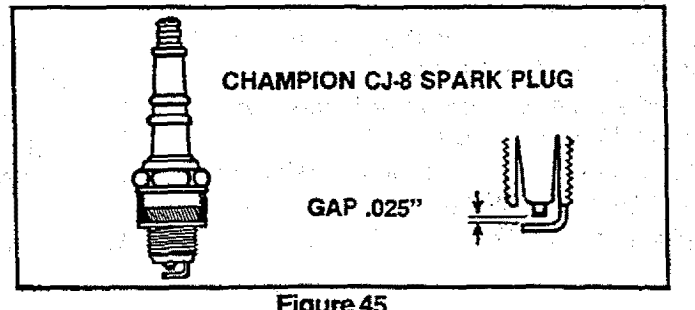


Figure 45

C. STARTER ROPE REPAIR AND REPLACEMENT

- A starter rope that breaks next to the pulley can be repaired.
- Replace a starter rope that breaks more than 2 or 3 inches from the pulley.

WARNING!

Always wear eye protection when servicing the starter rope. The recoil spring beneath the pulley is under tension. If the spring should pop out serious personal injury could result.

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 your Sears Service Center handle this repair. If you do try to repair the starter rope and the recoil spring pops out, take the unit to your dealer.

1. Drain the fuel tank.
2. Remove the fan housing screw on the bottom of the saw and the two screws on the side of the fan housing. Figure 46.
3. Remove the large screw at the rear of the control handle and the small screw directly below it. Figure 47.
4. Pull the gas line from the fitting going in the saw handle.
5. Separate the fan housing from the unit.
6. 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. Figure 48

   NOTE: The tension on the starter spring will be released if the rope has broken.
7. Turn the pulley counterclockwise until the spring tension is released.
8. Remove the pulley screw in the center of the pulley. Figure 49.
9. Lift the pulley *carefully* while gently twisting it counterclockwise ⟵ .
10. Remove the old rope.
11. Move away from the fuel tank and burn the end of the rope to be installed.
12. Pull the burnt end through a rag while the rope is still hot to obtain a smooth end.
13. Feed the rope through the housing and through the round starter hole. Figure 49.
14. Put the rope into the pulley groove and up through the hole.
15. Tie a knot in the end of the rope and pull it tightly against the pulley.
16. Rewind all the rope onto the pulley, turning counterclockwise ⟵ .
17. Set the pulley into the housing; push it down and engage the spring.
18. Replace and tighten the pulley screw.

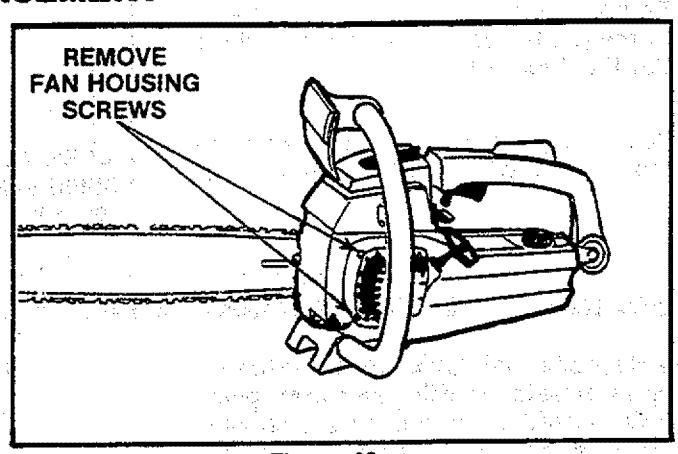


Figure 46

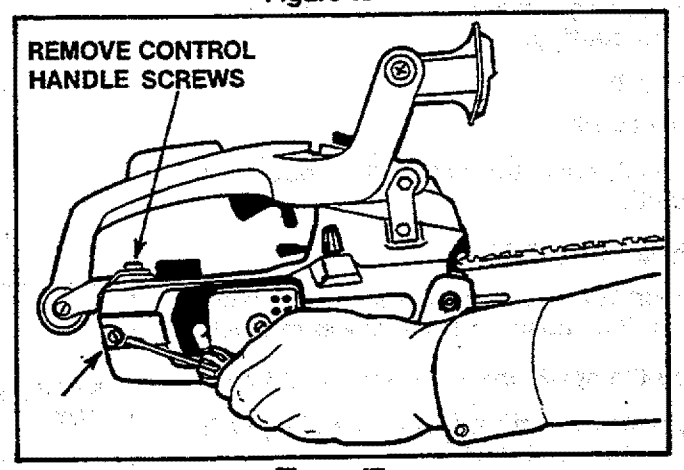


Figure 47

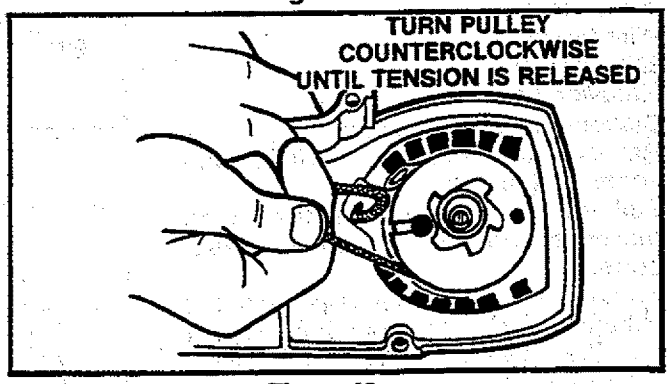


Figure 48

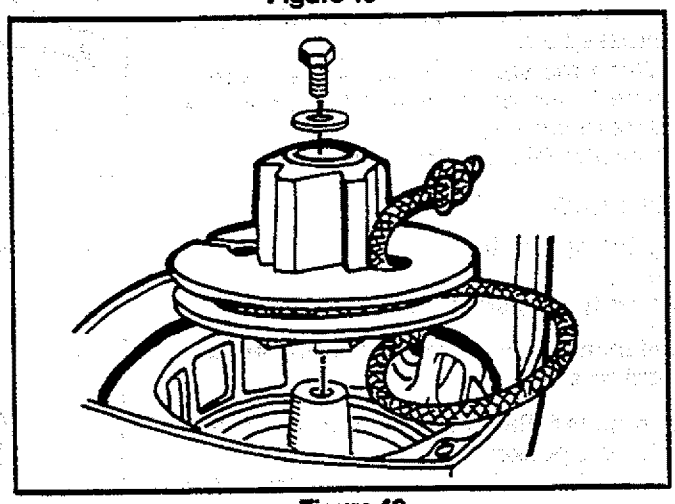


Figure 49

19. Pull out 10 inches of rope and set the rope in the notch in the pulley. Figure 50.
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 and let the rope rewind slowly.
22. Replace the fuel line in the slot in the fan housing. Be certain fuel line is not pinched.
23. Replace fan housing.

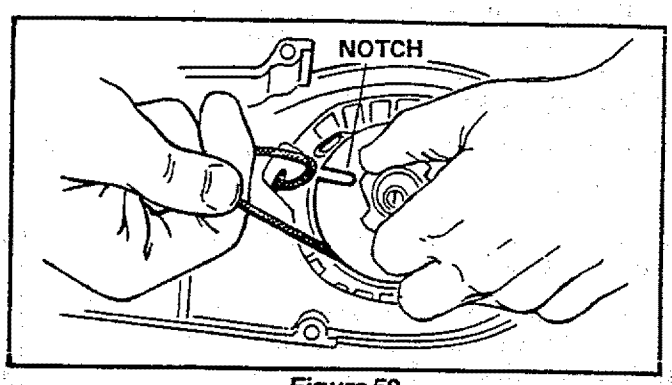


Figure 50

D. CARBURETOR ADJUSTMENTS

- The carburetor has been adjusted at the factory for sea level conditions. Adjustment may become necessary if the unit is used at significantly higher altitudes or if you notice any of the following conditions:

  —Chain moves with the engine at idle speed.
  —Loss of cutting power which is not corrected by air filter or muffler screen cleaning.
  —Engine dies or hesitates when it should accelerate.

- **Permanent damage will occur to the engine if incorrect carburetor adjustments are made.** To make the adjustment observe the following procedure very carefully.

WARNING!
The chain may be moving during this procedure. Wear your protective gear and observe all safety precautions.

1. PREPARATION

a. Stop 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. Dust off the carburetor cover and surrounding area to remove debris which might fall into the carburetor chamber.
e. Remove the carburetor cover screws and carburetor cover. Figure 52.
f. Find the three (3) carburetor adjusting screws. Figure 51.
g. Turn the **Low Speed Mixture Screw** and the **High Speed Mixture Screw** clockwise just until they stop. *Do not turn the screws until they are tight as you may damage the needle seats.*
h. Turn the **Low Speed Mixture Screw** and the **High Speed Mixture Screw** one full turn counterclockwise ←.

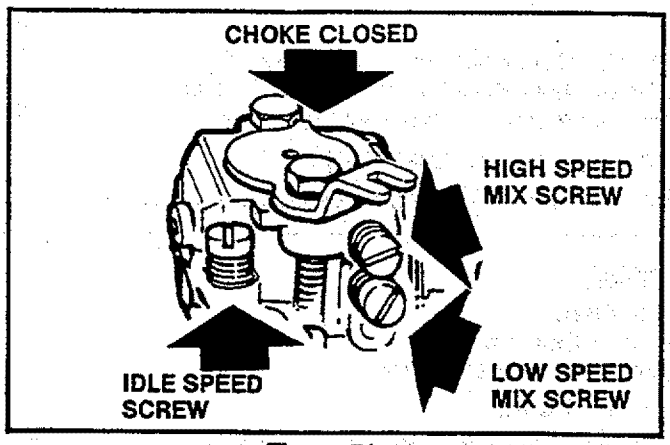


Figure 51

2. IDLE SPEED ADJUSTMENT—I

a. Start the engine.
b. Adjust if the engine stops (when the trigger is not squeezed) by turning the **Idle Speed Screw** 1/2 turn clockwise →.

NOTE: To increase idle speed, turn the Idle Speed Screw clockwise →. To decrease idle speed, turn the Idle Speed Screw counterclockwise ←.

c. Run the engine for a few minutes to bring it up to operating temperature.

NOTE: The engine must be at operating temperature for proper adjustments to be made.

3. LOW SPEED MIXTURE ADJUSTMENT

a. Turn the **Low Speed Mixture Screw** slowly clockwise → until the RPM starts to drop. Note the position.
b. Turn the **Low Speed Mixture Screw** counterclockwise ← until the RPM speeds up and starts to drop again. Note the position.
c. Position the **Low Speed Mixture Screw** at the mid-point between the two positions.

4. IDLE SPEED ADJUSTMENT—II

a. Allow engine to idle.
b. Adjust if the chain is turning by turning the **Idle Speed Screw** counterclockwise ←.
c. Squeeze the throttle trigger; the saw should accelerate without hesitating.

NOTE: It may be necessary to recheck the low speed mixture setting after the idle speed has been reduced by repeatingLow Speed Mixture Adjustment Steps.

5. HIGH SPEED MIXTURE ADJUSTMENT

a. Make a test cut.

NOTE: Take special care to keep chips and dirt out of the carburetor.

b. Adjust if the saw smokes or seems to have low power in the test cut by turning the **High Speed Mixture Screw** 1/16th turn clockwise ➡

c. Repeat test cut.

d. Repeat adjustment until the saw runs smoothly.

CAUTION: Never set the High Speed Mixture Screw less than 7/8 turn open. This is too lean a setting and will ruin your engine.

6. IDLE SPEED ADJUSTMENT—III

Recheck for proper idle mixture setting.

NOTE: It may be necessary to repeat according to instructions in Steps 2 and 3, Idle Speed Adjustment—I and Low Speed Mixture Adjustment.

7. CHECK ACCELERATION

Adjust if there is a slight hesitation by turning the **Low Speed Mixture Screw** 1/16 of a turn at a time counterclockwise ⬅ until you have smooth acceleration.

NOTE: Check to be sure the chain is not turning when engine is idling. If chain moves at idle speed, repeat Idle Speed Adjustment—II.

8. REASSEMBLE UNIT

a. Stop the engine.

b. Clean the mating surfaces of the carburetor housing and cover.

c. Be careful when replacing the carburetor cover to see that the choke knob operates properly. Refer to steps 9 and 10, for "Air Filter," this page.

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.**

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

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 52.
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.

5. Squeeze the filter dry.
6. Add a small amount of oil to coat the filter.

   NOTE: Avoid soaking the filter with oil.

7. Squeeze out excess oil.
8. Replace filter by tucking in edges and smoothing it flush with the carburetor housing.

NOTE: Be careful when replacing the carburetor cover as incorrect placement will prevent the choke from working properly.

9. Move the choke knob all the way to the right.
10. Check the choke shutter to be sure it is closed. Figure 52.
11. Reinstall the carburetor cover and tighten the carburetor cover screws.
12. Check the operation of the choke.

NOTE: If the choke knob sticks or will not move, remove the cover and repeat steps 11 and 12 above.

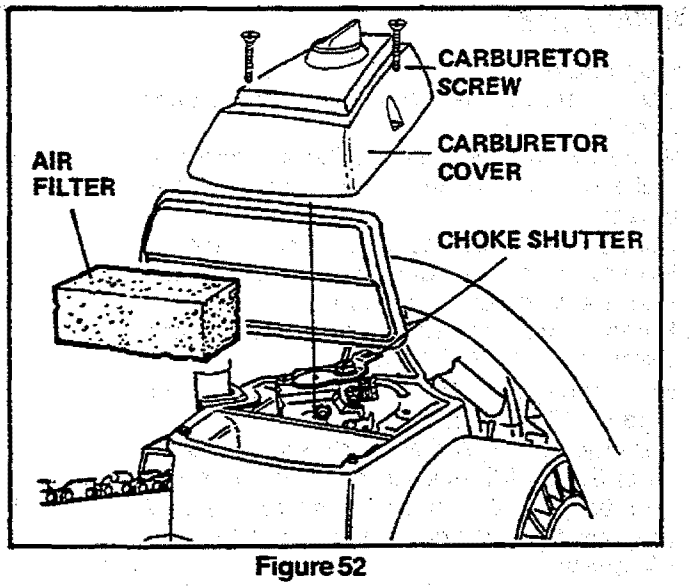


Figure 52

F. STORAGE

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

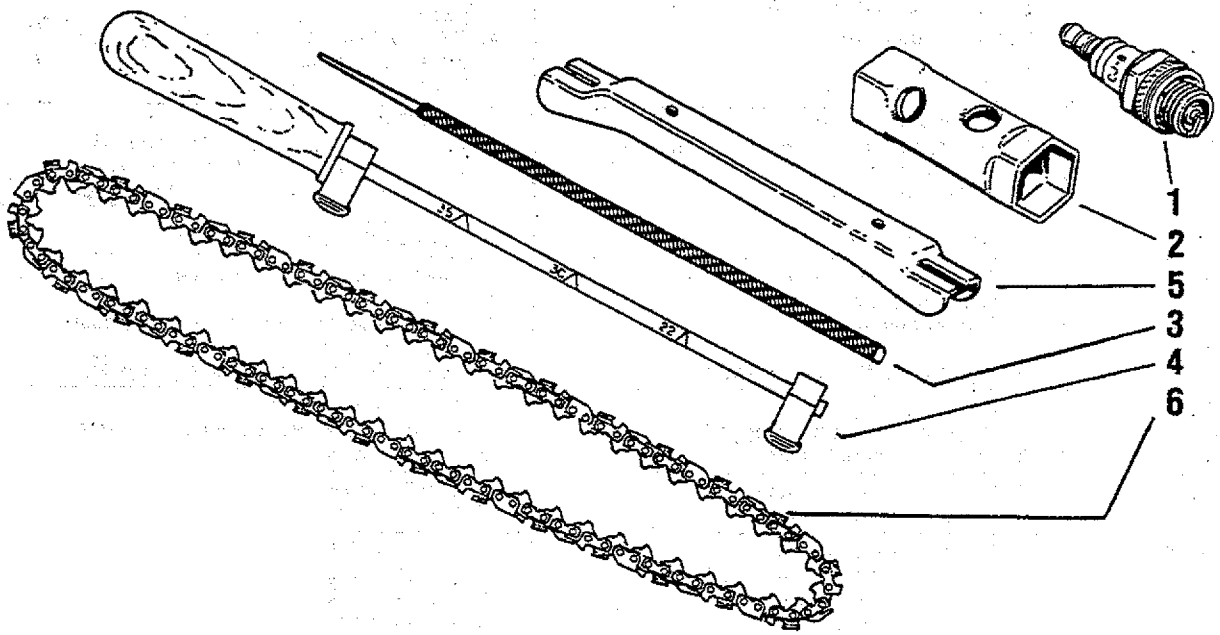
1. Drain fuel tank in a safe manner. (See "Important Points," page 8.)
2. Start engine and allow to run at an idle speed until the engine stops.

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

   CAUTION: Wear protective gloves when handling the chain. The chain is sharp and can cut you even when it is not moving.
3. Drain oil tank.
4. Remove, clean, and dry the bar and chain.
5. Store the chain in a container filled with oil to prevent rust.
6. Apply a coating of oil to the entire surface of the bar and wrap it in heavy paper, cloth or plastic.
7. Clean the outside surfaces of the engine.
8. Store the saw in a dry place, out of the reach of children, and away from where fuel vapors can reach open flames from hot water heater, furnaces, etc.

G. MAINTENANCE ACCESSORIES

Available from your nearest Sears Store, Catalog Sales Office, or Service Center, but not furnished with your saw.



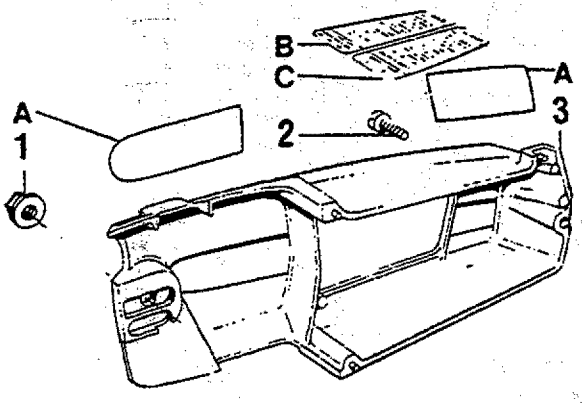
Key No.	Part No.	Catalog No.	Description
1	STD360946	71-36403	Spark Plug-Champion CJ-8
2	31059	—	Spark Plug Wrench
3	55004	71-36524	File (5/32" dia.) Twin Pack
4	55046	71-36565	File Guide
5	—	71-36557	Depth Gauge Tool
6	51242	71-3629	Xtra GUARD® Chain (358.355060–2.3/16")
	51234	71-3631	Power Sharp® Chain (358.355070–2.3/16"P.S.)– incl. Stone and Carrier Ass'y.
	69037	—	Muffler Heat Shield Kit
	—	71-36711	Replacement Recoil Cord
	30113	71-36621	Carrying Case
	—	71-36555	2-Cycle Engine Oil
	—	71-36554	Bar and Chain Lubricant
	44247	71-36366	Guide Bar–Lo-Kick® Replacement

H. TROUBLE SHOOTING CHART

TROUBLE	CAUSE	REMEDY
ENGINE WILL NOT START	1. Ignition Switch off. 2. Fuel tank empty. 3. Spark Plug not firing. 4. Fuel not reaching carburetor. 5. Engine flooded. 6. Compression low. 7. Air flow restricted	1. Move switch to "Start". 2. Fill tank with correct fuel mixture, page 8. 3. Install new plug, page 19. 4. Check for dirty fuel filter; clean. Check for kinked or split fuel line; repair or replace. 5. See Starting Instructions, page 10. 6. Contact Sears Service Center. 7. Check for dirty air filter: clean, page 22. Check for choke shutter working properly, page 22.
ENGINE WILL NOT IDLE PROPERLY	1. Idling speed set too low. 2. Idle speed set too high. 3. Low speed screw requires adjustment. 4. Crankshaft seals worn. 5. Compression low.	1. Adjust idle speed screw clockwise to increase speed, page 21. 2. Adjust idle speed screw counterclockwise to reduce speed, page 21. 3. See Carburetor Adjustments, page 21. 4. Replace seals or contact Sears Service Center. 5. Contact Sears Service Center.
ENGINE WILL NOT ACCELERATE, LACKS POWER OR DIES IN THE CUT	1. Carburetor requires adjustment. 2. Air filter dirty. 3. Spark Plug fouled. 4. Carbon build-up. 5. Low Compression.	1. See Carburetor Adjustments, page 21. 2. Clean or replace air filter, page 22. 3. Clean or replace Spark Plug and regap, page 19. 4. Clean exhaust system including spark arrestor, page 19. 5. Contact Sears Service Center.
ENGINE SMOKES EXCESSIVELY	1. Choke partially on. 2. High speed needle requires adjustment. 3. Air filter dirty. 4. Oil rich fuel mixture. 5. Crankcase leak.	1. Turn Choke off. 2. See Carburetor Adjustments, page 21. 3. Clean or replace air filter, page 22. 4. Empty fuel tank and refill with correct fuel mixture, page 8. 5. Contact Sears Service Center.
ENGINE RUNS HOT	1. Fuel Mixture Incorrect. 2. Spark Plug Incorrect. 3. Carbon build-up. 4. High Speed Mixture set too low.	1. See Engine Fuel Mixture, page 8. 2. Replace with correct plug, page 19. 3. Clean exhaust systems including spark arrestor, page 19. 4. See Carburetor Adjustments, page 21.
OIL INADEQUATE FOR BAR AND CHAIN LUBRICATION	1. Oil tank empty. 2. Oil pump or oil filter clogged. 3. Guide bar oil hole blocked.	1. Fill oil tank, page 9. 2. Contact Sears Service Center. 3. Remove bar and clean, page 18.
CHAIN MOVES AT IDLE SPEED	1. Carburetor requires adjustment. 2. Clutch requires repair.	1. See Carburetor Adjustments, page 21. 2. Contact Sears Service Center.
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, page 7. 2. See Carburetor Adjustments, page 21. 3. Repair or replace, page 6 & 18. 4. Contact Sears Service Center.
CHAIN CLATTERS OR CUTS ROUGHLY	1. Chain tension incorrect. 2. Cutters dull, improperly sharpened; depth gauges too high. 3. Sprocket worn. 4. Chain wear due to contact with dirt, sand or frozen wood. 5. Cutters damaged after striking foreign material.	1. See Chain Tension, page 7. 2. See Chain Sharpening Instructions, page 17 (page 12 for Power Sharp®) 3. Replace. 4. Resharpen or replace Chain, page 6 & 18 (page 12 for Power Sharp®). 5. Contact Sears Service Center.
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 Chain Sharpening instructions, page 16 (page 12 for Power Sharp®). 2. Repair or replace guide bar, page 18. 3. Contact Sears Service Center.
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, page 17 (page 12 for Power Sharp®). 2. Resharpen until all cutters have equal angles and lengths, page 17 (page 12 for Power Sharp®). 3. Replace guide bar, page 18.

SEARS CHAIN SAW REPAIR PARTS–MODEL NO. 358.355060–2.3/16"AV

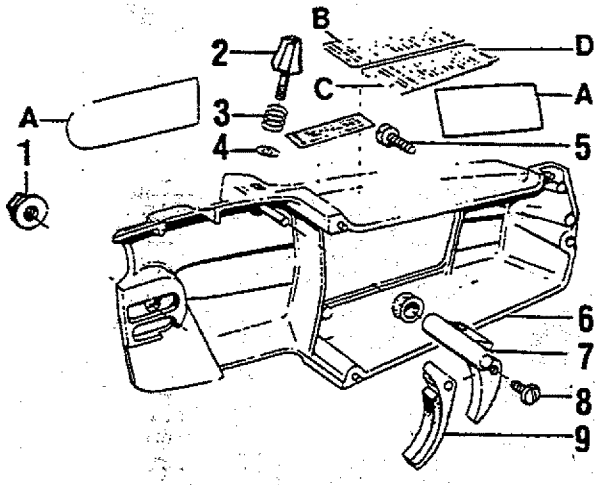
Figure 1A



Key No.	Part No.	Qty.	Description
1	STD541431	1	Nut - Bar Mounting - 5/16 - 18 Flange
2	STD511010	1	Screw - 10-24 x 7/8
3	12058	1	Bar Clamp
Decals			
A	26472	1	Decal - Bar Clamp
B	26224	1	Decal - Instructions (Left Half)
C	26477	1	Decal - Instructions (Right Half)

SEARS CHAIN SAW REPAIR PARTS–MODEL NO. 358.355070–2.3/16"AV PS

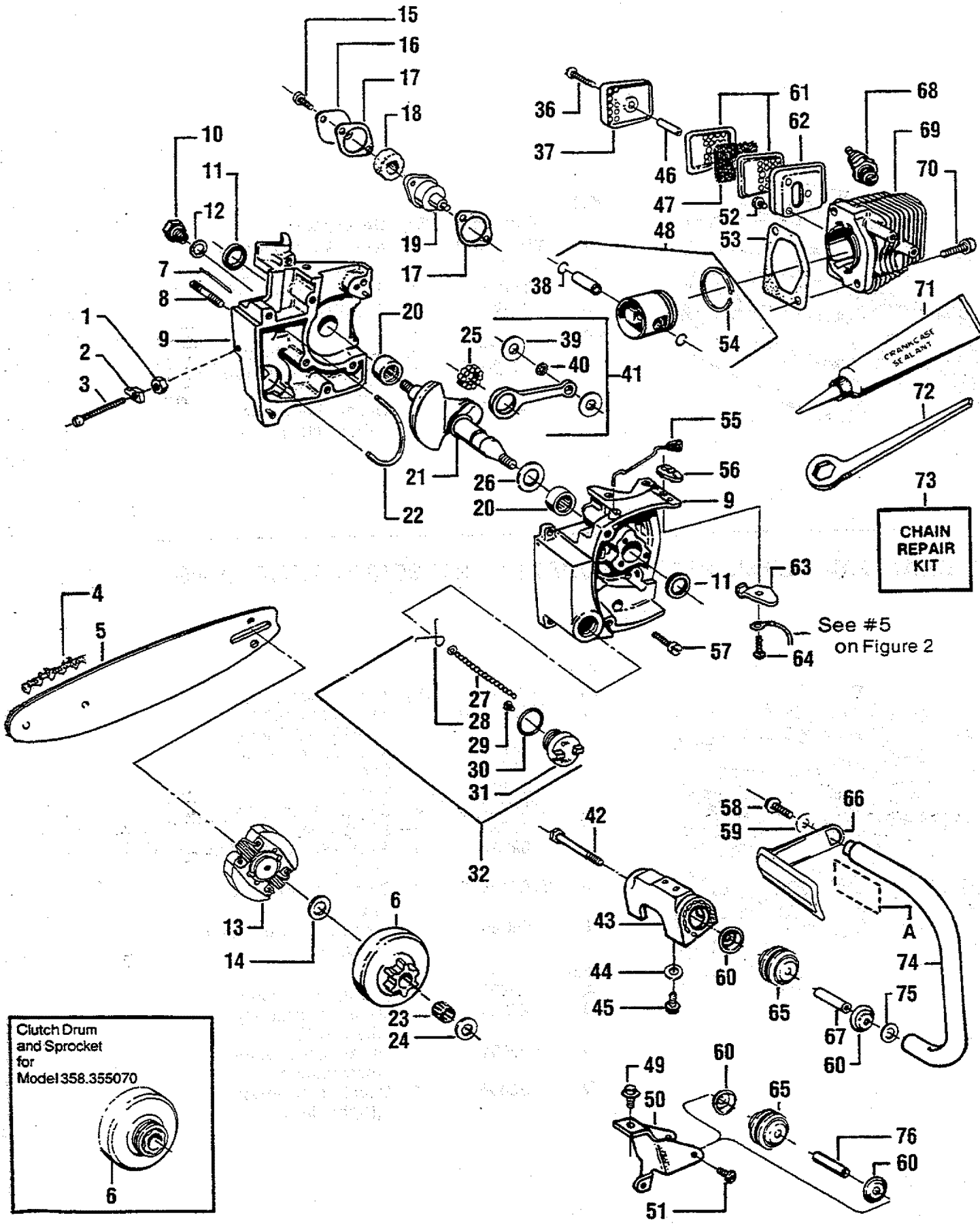
Figure 1B



Key No.	Part No.	Qty.	Description
1	STD541431	1	Nut - Bar Mounting -5/16 - 18 Flange
2	23759	1	Knob Sharpening
3	23762	1	Spring
4	23761	1	Washer
5	STD511010	1	Screw - 10-24 x 7/8
6	12061	1	Bar Clamp
7	69027	1	Ass'y.–Sharpening Stone Arm (incl. 9)
8	STD511002	1	Screw - 10-24 x 1/4 Pan Head
9	69026	1	Stone & Carrier Ass'y. (incl. 8)
Decals			
A	26472	1	Decal - Bar Clamp
B	26224	1	Decal - Instructions (Left Half)
C	25531	1	Decal - Sharpening Instructions
D	26486	1	Decal - Instructions (Right Half)

SEARS CHAIN SAW REPAIR PARTS–MODEL NO. 358.355060–2.3/16"AV
358.355070–2.3/16"AV PS

Figure 2



SEARS CHAIN SAW REPAIR PARTS–MODEL NO. 358.355060–2.3/16"AV
358.355070–2.3/16"AV PS

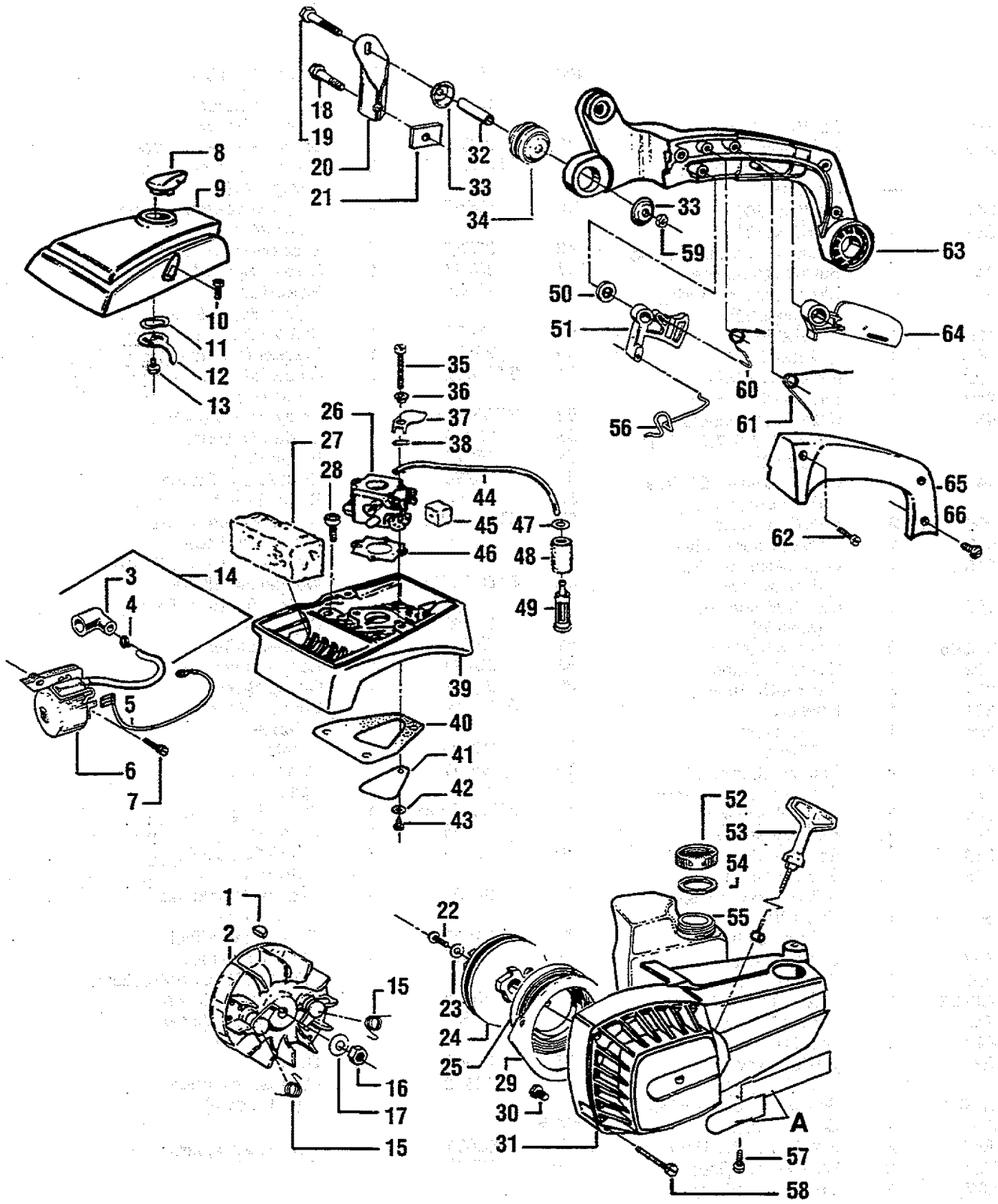
Figure 2

KEY NO.	PART NO.	QTY.	DESCRIPTION
1	STD541408	1	Lock Nut #8-32
2	23492	1	Pin-Bar Adjust.
3	15236	1	Screw-Bar Adjust. 8-32 × 1-5/8 Fil Hd.
4	—	—	Chain 16"
	51242	1	358.355060
	51234	1	358.355070 (incl. Stone & Carrier Ass'y.)
5	44247	1	Bar 16" S.N. Guide
6	—	—	Clutch Drum & Bearing Kit (incl. 23)
	69166	1	.355060
	69167	1	.355070
7	23792	1	Pin-Oil Tank Vent
8	15249	1	Stud-Bar Mounting
9	10469	1	Crankcase Assembly (incl. 1, 2, 3, 7, 8, 10, 11 12 & 20)
10	69142	1	Check Valve Kit-Oil Tank Pressure (incl. 12)
11	19059	2	Seal Crankshaft
12	19089	1	Gasket-Check Valve
13	69179	1	Clutch Assembly Kit (incl. washer)
14	69165	1	Clutch Washer Kit (outside)
15	STD510805	2	Screw #8-32 × 1/2
16	23802	1	Cover-Oil Pump
17	19091	2	Gasket-Oil Pump
18	23801	1	Filter Oil
19	10195	1	Body Assembly-Oil Pump
20	32058	2	Bearing-Crankshaft
21	22172	1	Crankshaft-Solid State
22	21026	1	Line-Oil Discharge
23	32079	1	Bearing-Clutch
24	23519	1	Spacer-Clutch(inside)
25	32065	1	Bearing-Roller (incl. 12 bearings)
26	23887	1	Thrust Washer-Crankshaft
27	23653	1	Chain-Oil Cap
28	23656	1	Retainer-Chain
29	STD600603	1	Screw-8-16 × 3/8
30	1949	1	O-Ring Oil Cap
31	23874	1	Cap-Oil
32	10221	1	Oil Cap Assy. (incl. 27-31)
36	STD511015	1	Screw #10-24 × 1 × 7/16
37	23795	1	Cover Muffler
38	23843	2	Retainer-Piston Ring
39	15486	2	Washer-Rod (Top)
40	32075	1	Bearing Rod (Top) (incl. 22 bearings)
41	10474	1	Kit—Connecting Rod (incl. 25, 39 & 40)
42	15551	1	Screw-Isolator (#1/4-20 × 2 3/16
43	25689	1	Bracket-Lower Isolator
44	STD551010	2	Washer Lower Bracket Mtg. (#10)
45	15557	2	Screw-Bracket Mounting (10-24 × 5/8)
46	23535	1	Spacer-Muffler Cover
47	23796	1	Screen-Spark Arrestor
48	10588	1	Piston Kit (incl. 38, 54 & pin)
49	15426	1	Bolt-1/4-#20 × 1/2
50	25677	1	Bracket-Rear Isolator
51	STD522505	2	Screw-#8-32 × 7/16 Pan Head
52	STD511005	2	Screw-#10-24 × 1/2
53	19088	1	Gasket-Cylinder
54	25876	1	Piston Ring
55	24236	1	Knob Ass'y.-Switch
56	23786	1	Ramp-Switch
57	STD511007	7	Screw #10-24 × 1 1/16
58	15499	1	Screw Handlebar Mtg.-Top (#1/4-10 × 1 3/4)
59	STD551025	1	Washer Handlebar Mtg.-Top (#1/4-Type B)
60	26163	4	Cup-Isolator
61	23797	2	Baffle-Muffler
62	23794	1	Body-Muffler
63	23787	1	Clamp-Switch
64	STD610805	1	Screw-#8 × 9/16 Tapping
65	24256	2	Isolator
66	25451	1	Handguard
67	15342	1	Spacer
68	STD360946	1	Spark Plug-CJ-8
69	12065	1	Cylinder
70	15239	2	Screw-1/4-20 × 3/4 Socket
71	30054	1	Sealant-Crankcase (Optional)
72	31063	1	Bar Adjusting Tool
73	52023	1	Chain Repair Kit (358.355060 only)-optional
74	25675	1	Handlebar w/Insert
75	15531	1	Washer-Handlebar Lower (1/4)
76	15343	1	Spacer
—	66378		Operator's Manual (not shown)
Decals			
A	25631	1	Decal-Handguard
—	26545	1	Decal - Warranty - (Guide Bar) (not shown)
—	26550	1	Decal - Chain Tensioning-Not Shown

Key Nos. Excluded: 33, 34, 35

SEARS CHAIN SAW REPAIR PARTS–MODEL NO. 358.355060–2.3/16"AV
358.355070–2.3/16"AV PS

Figure 3



SEARS CHAIN SAW REPAIR PARTS–MODEL NO. 358.355060–2.3/16" CVA
358.355070–2.3/16" CVA PS

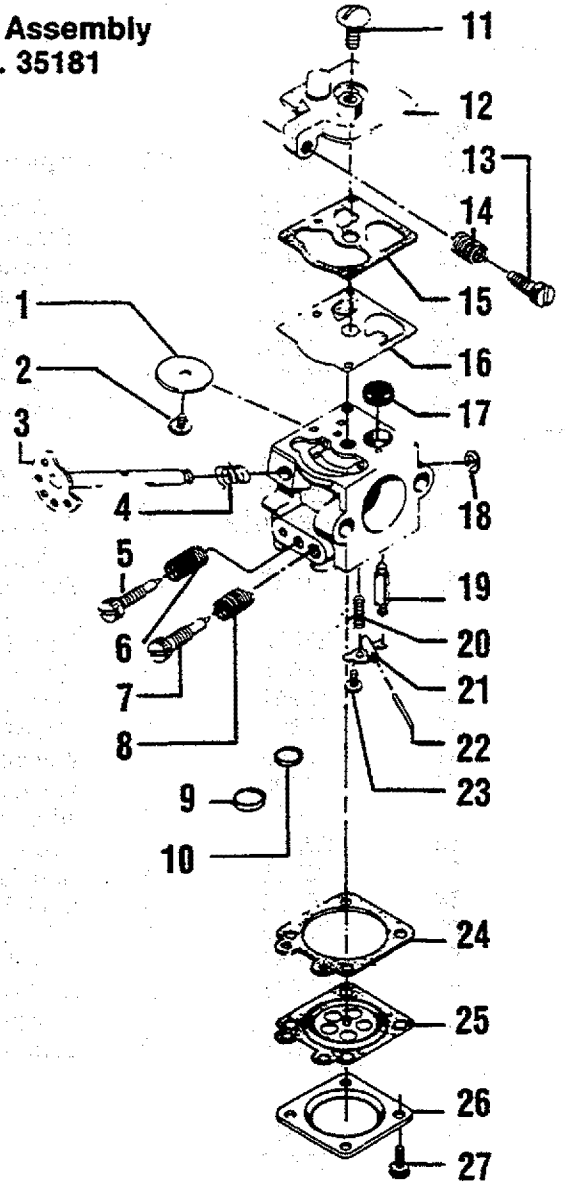
Figure 3

KEY NO.	PART NO.	QTY.	DESCRIPTION
1	15126	1	Key-Flywheel
2	39111	1	Flywheel Assembly (incl. 15)
3	3934	1	Boot-Spark Plug
4	3933	1	Connector-Spark Plug
5	24158	1	Lead-Switch
6	39087	1	Module-Ignition (incl. 14)
7	STD510807	2	Screw #8-32 × ¾ Sems
8	25691	1	Knob-Choke
9	25676	1	Cover-Carburetor
10	15168	2	Screw-#10-24 × ⅝
11	15147	1	Wave Washer
12	23806	1	Lever-Choke
13	STD600603	1	Screw-#8-16 × ⅜ Tapping
14	39082	1	Ass'y Lead Spark Plug (incl. #3 & 4)
15	23817	2	Spring-Starter Dog
16	STD541131	1	Nut-5/16-24
17	15127	1	Washer-Flywheel
18	1648	1	Screw-¼-20 × 1¼ Hex Head
19	15524	1	Screw-Isolator (#¼-20 × 1 11/16)
20	25679	1	Bracket-Upper Isolator
21	24317	1	Pad-Isolator
22	STD511005	1	Screw-#10 × 24 × ½
23	15428	1	Washer
24	10373	1	Pulley Starter (incl. 23)
25	42023	1	Spring-Starter
26	35181	1	Carburetor-WT-20
27	23791	1	Air Filter
28	STD512507	3	Screw-¼-20 × 1 1/16
29	25487	1	Baffle-Air Intake
30	STD600803	2	Screw-Baffle
31	12060	1	Fan Housing
32	15342	1	Spacer
33	26163	2	Cup-Isolator
34	24256	1	Isolator
35	15245	2	Screw-#10-24#1⅝
36	23865	1	Spacer-Choke Shutter
37	23805	1	Shutter-Choke
38	15254	1	Wave Washer
39	25978	1	Housing-Carburetor
40	19117	1	Gasket-Carburetor Housing
41	23366	1	Reed Valve
42	23367	1	Washer-Reed Valve
43	STD610603	1	Screw-#6 × 5/16 Tapping
44	21035	1	Fuel Line (Bulk no. 8133)
45	23373	1	Boot-Throttle Wire
46	19045	1	Gasket-Carburetor
47	15252	1	Washer-Fuel Pick-up
48	23364	1	Filter-Fuel
49	23363	1	Weight-Fuel Pick-up
50	15528	1	Washer-Trigger (nylon)
51	25683	1	Trigger-Throttle
52	23808	1	Fuel-Cap Ass'y.
53	23783	1	Rope & Handle Starter
54	19093	1	Seal-Fuel Tank Neck
55	25143	1	Fuel Tank
56	25685	1	Wire-Throttle
57	15406	1	Screw-#10-24 × ½ Slotted Pan Head
58	15229	2	Screw-#10-24 × ⅜
59	STD541425	1	Locknut-Handlebar Mtg. (#¼-20)
60	25686	1	Spring-Trigger
61	25687	1	Spring Throttle Lockout Lever
62	15533	1	Screw-Rear Handle-Front (#10-16 × 1⅛)
63	25682	1	Rear Handle-Right
64	25684	1	Lever-Throttle Lockout
65	25681	1	Rear Handle-Left
66	15495	2	Screw-Rear Handle (#10-16 × ¾)
Decals			
A	26473	1	Decal-Fan Housing

SEARS CHAIN SAW REPAIR PARTS–MODEL NO. 358.355060–2.3/16″AV
358.355070–2.3/16″AV PS

Figure 4

Carburetor Assembly
Part No. 35181

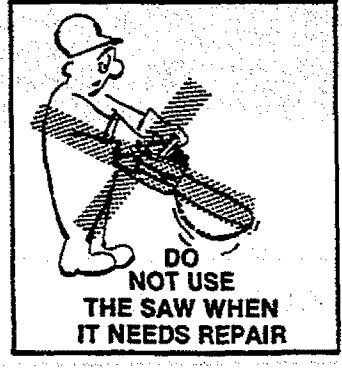


KEY NO.	PART NO.	DESCRIPTION
1	35006	Valve Throttle
2	35015	Screw–Throttle Valve
3	35034	Shaft Assembly–Throttle
4	35024	Spring–Throttle Return
5	35171	Needle–Low Speed Mixture
6	35023	Spring–Low Speed Mixture Needle
7	35169	Needle–High Speed Mixture
8	35167	Spring–High Speed Mixture Needle
9	35162	*Plug 5/16 Dia. Welch
10	35163	*Plug 1/4 Dia. Welch
11	35017	Screw–Pump Cover
12	35159	Cover–Fuel Pump
13	35035	Screw–Idle Speed Adjusting
14	35168	Spring–Idle Speed Adjusting Screw
15	35164	+*Gasket–Fuel Pump
16	35166	+*Diaphragm–Fuel Pump
17	35027	Screen–Fuel Inlet
18	35007	Ring–Throttle Retainer
19	35008	*Valve–Inlet Needle
20	35188	*Spring–Metering Lever
21	35031	*Lever–Metering
22	35028	*Pin–Metering Lever
23	35016	*Screw–Metering Lever Pin
24	35165	+*Gasket–Metering Diaphragm
25	35014	+*Diaphragm–Metering
26	35003	Cover–Metering Diaphragm
27	35021	Screw Assembly–Metering Cover
—	35161	Kit–Repair (includes parts marked*)
—	35173	Kit–Gasket/Diaphragm (includes parts marked +)

QUICK REFERENCE PAGE

Read and follow all Safety Rules, Precautions and Operating Instructions. Failure to do so can result in serious personal injury.

WATCH OUT FOR KICKBACK



DO NOT USE THE SAW WHEN IT NEEDS REPAIR

NEVER USE THE SAW WHEN TIRED

USE A FIRM GRIP WITH BOTH HANDS

Sears

MODEL NO.

358.355060-2.3/16"AV

358.355070 2.3/16"AV PS

How to Order Repair Parts

SEARS SERVICE

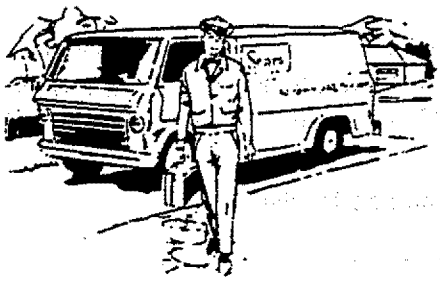
The Model Number will be found under the handle with the Serial Number. Always mention the Model Number when requesting service or repair parts for your Chain Saw.

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
   358.355060–2.3/16"AV
   358.355070–2.3/16"AV PS
3. The PART DESCRIPTION
4. The NAME OF ITEM — Chain Saw

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



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

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

TOTAL-TESTED for Quality and Dependability

Chain Saws bearing this label undergo our toughest testing program ever

- √ Parts are inspected to meet rigid quality control standards
- √ Each saw is started and tuned electronically before it's packed to insure dependability
- √ Another quality check: saws are randomly selected and re-inspected
- √ Professional woodcutters performance-test our saws under actual working conditions

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