

HOMELITE

MODEL



DIRECT DRIVE CHAIN SAW



OPERATOR'S MANUAL

HOMELITE MODEL 900 D CHAIN SAW

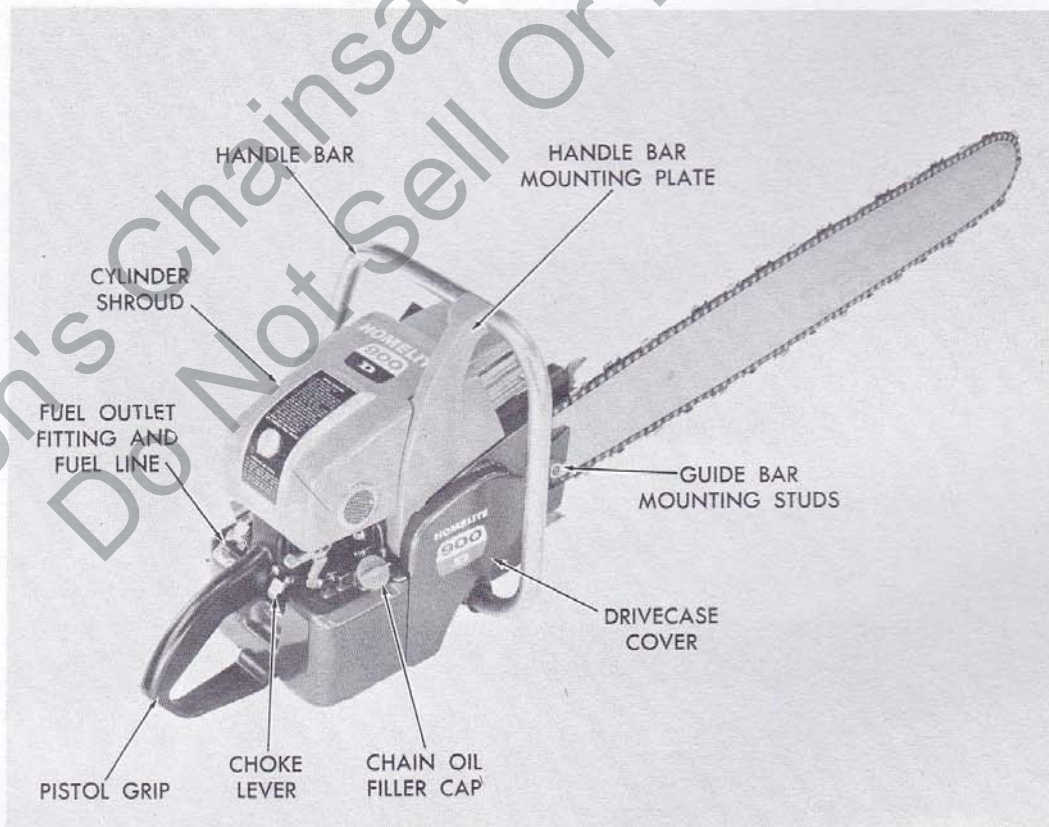
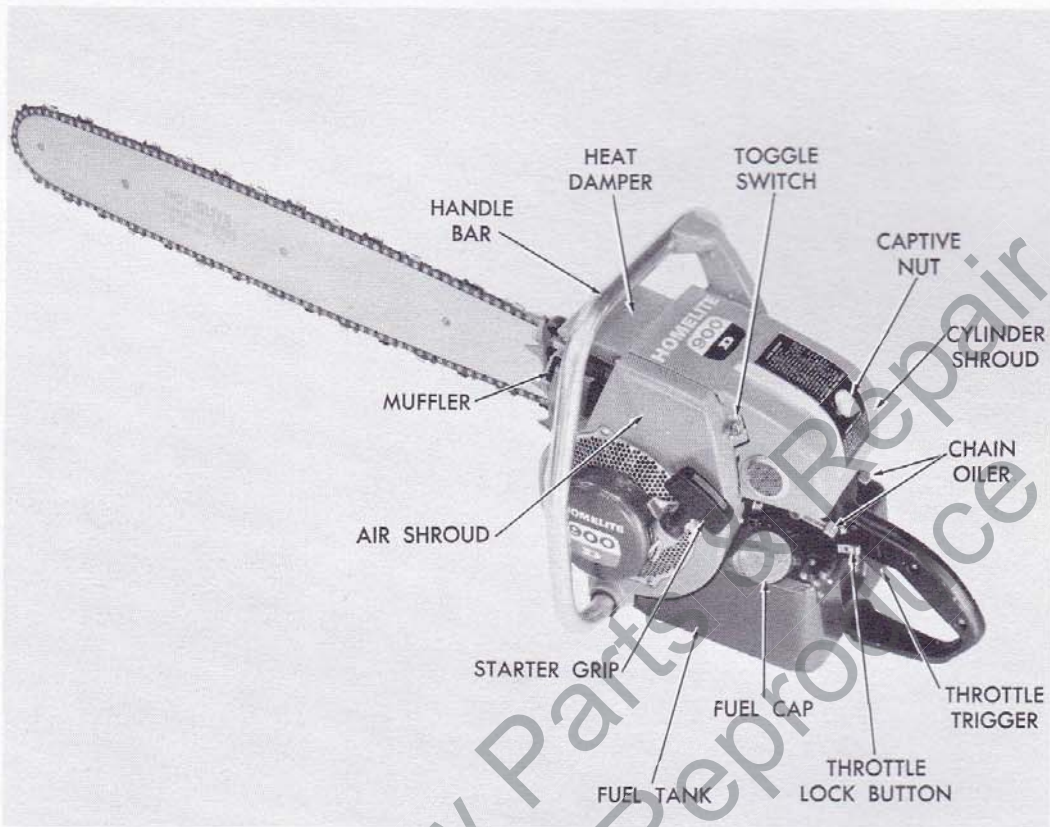
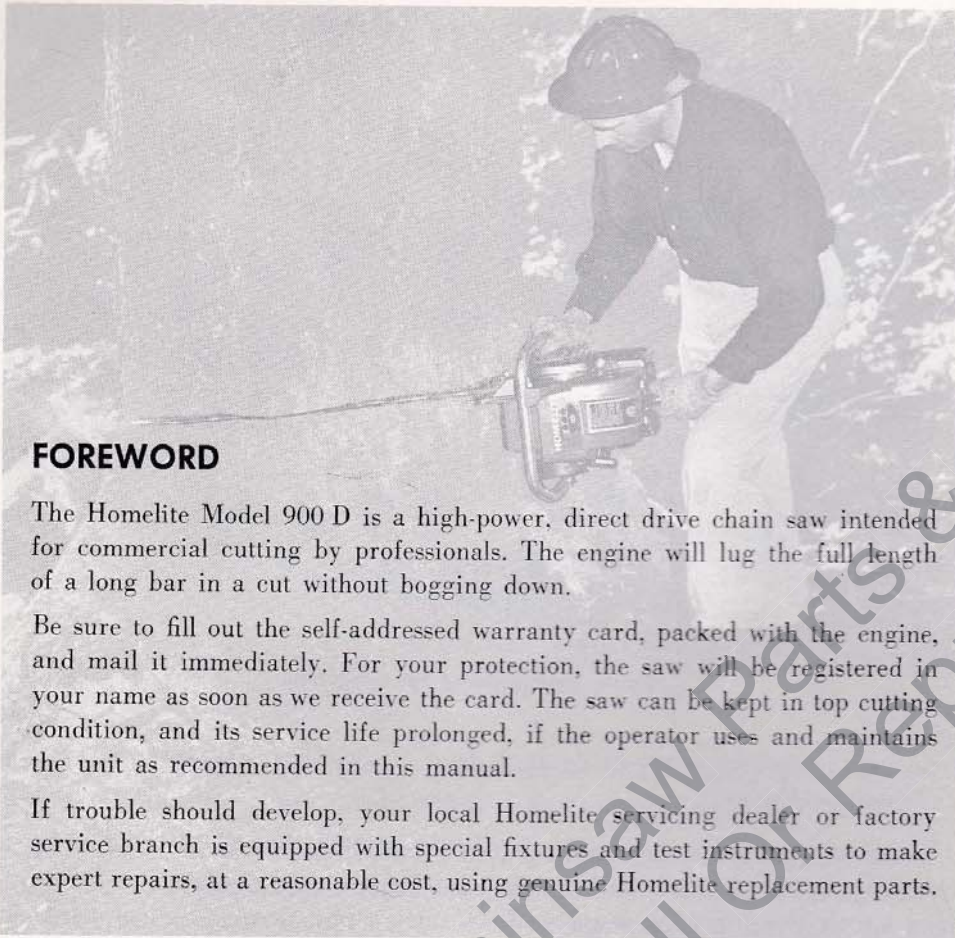


Figure 1—The Homelite Model 900 D Chain Saw



FOREWORD

The Homelite Model 900 D is a high-power, direct drive chain saw intended for commercial cutting by professionals. The engine will lug the full length of a long bar in a cut without bogging down.

Be sure to fill out the self-addressed warranty card, packed with the engine, and mail it immediately. For your protection, the saw will be registered in your name as soon as we receive the card. The saw can be kept in top cutting condition, and its service life prolonged, if the operator uses and maintains the unit as recommended in this manual.

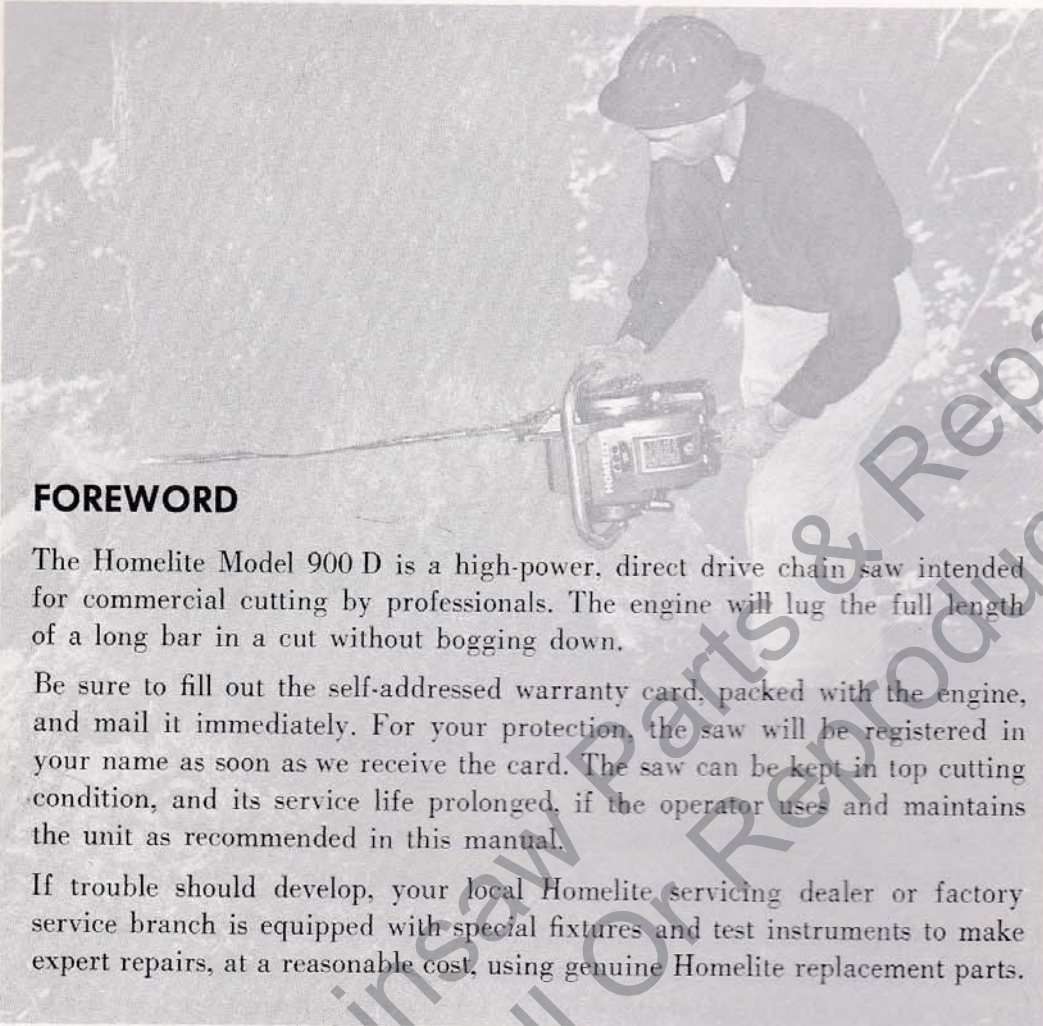
If trouble should develop, your local Homelite servicing dealer or factory service branch is equipped with special fixtures and test instruments to make expert repairs, at a reasonable cost, using genuine Homelite replacement parts.

Section I OPERATION

1. PREPARING FOR USE

a. Assembling Bar And Chain (See Figure 2)

- (1) The engine carton contains a combination tool with which to assemble bar and chain and adjust the chain tension.
- (2) Remove the two stud nuts and lock washers and lift the drive case cover off the mounting studs. Remove outer guide bar shim but leave inner shim on the studs.
- (3) Before assembling, be sure that the chain drive sprocket and chain are of equal pitch.
- (4) Be sure the inner guide bar shim is on the mounting studs, then put the guide bar on the studs, over the shim. The chain must be assembled on the



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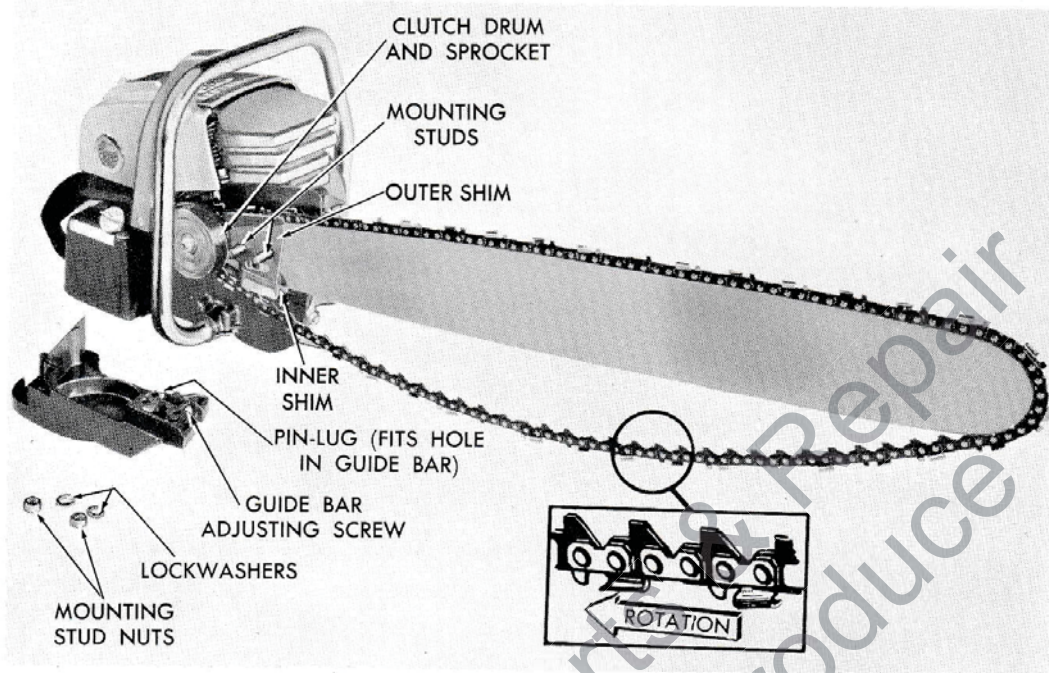


Figure 2—Assembling Bar and Chain

saw so the cutting edges of its teeth face in the direction of chain rotation, as shown in Figure 2.

(5) Slip the chain over the clutch drum and onto the drive sprocket. Then, starting at the back of the bar, feed the tangs of the chain drive links into the bar groove. Because of the stiffness of new chain, some difficulty may be experienced in getting the chain on around the nose portion of the bar. Once chain is run, however, this operation will be easy.

(6) Put the outer guide bar shim on the studs, over the guide bar. Put drive case cover on studs, then turn the chain tension adjusting screw to line up the pin lug with the hole in the guide bar. Slide bar back and forth until pin lug drops into hole and drive case cover snaps into place flush against the drive case. Then put lock washers and nuts back *fingertight* on studs . . . Do not tighten completely until the chain tension has been set.

b. Tensioning Chain

(1) Hold up the tip of the guide bar to take up the play between the studs and mounting slot. The guide bar must be held in this position until the chain tension has been set and the stud nuts tightened. Otherwise, the assembly will shift on the first cut, changing the tension. Improper tension increases wear.

(2) Turn the chain tension adjusting screw *clockwise* until the drive tangs *just* enter the guide bar groove at point shown in figure 3. At the same point, grasp chain between thumb and forefinger—pull it downward—then release. Once again adjust tension so drive tangs *just* enter guide groove as shown

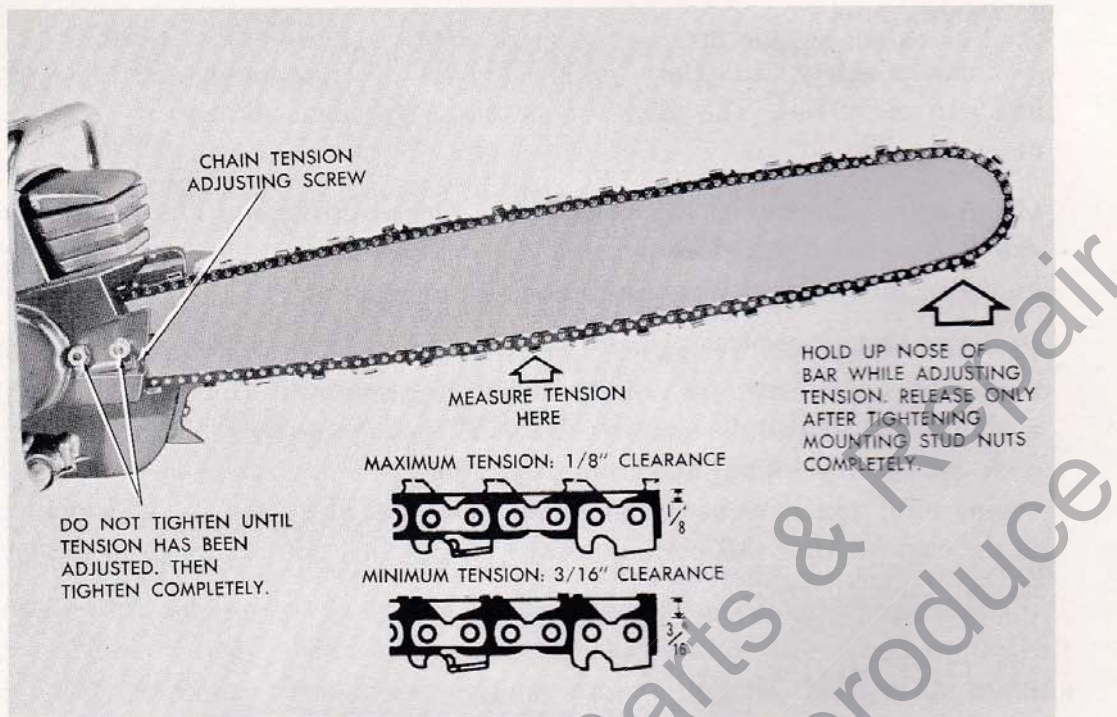


Figure 3—Adjusting Chain Tension

in figure 3. Now tighten the stud nuts completely to lock tension device at this setting. The proper amount of chain slack is illustrated in figure 3.

(3) **BEFORE STARTING SAW:** be sure that oil squirts into the guide bar groove when chain oiler is operated—always soak chain and bar groove with oil by operating oiler and pulling chain around the bar by hand, as recommended in Chain Oil Section (below). Keep the new chain generously lubricated while breaking it in on the bar.

(4) New chains are stiff, and always stretch during the first half hour of use. Shut engine off, every few cuts, to check the chain tension. Correct tension during the first half hour is important for best chain life. Always stop to adjust tension whenever necessary.

c. Chain Oil

(1) The chain oil filler cap is located just to the rear of the drive case cover. (See figure 1.) Fill the oil reservoir with SAE-30 engine oil in the summer, and SAE-10 oil in the winter. In temperatures below 0° F., fill the reservoir with a mixture of four parts SAE-10 oil to one part kerosene.

(2) Before cutting, operate the oil pump lever to force oil from the reservoir into the guide bar groove. Be sure oil flows into groove when pumped.

(3) Pull new chain or dry chain around the bar by hand and operate the oil pump until chain and bar groove are loaded with oil.

(4) When cutting, operate oil pump at regular intervals—while chain is *slowly* rotating, not during high speed operation.

d. Mixing Fuel

A Homelite safety can (Part No. AA-71472) provides a convenient way to mix and carry fuel. The filler cap of the 2½ gallon can, serves as an oil measuring cup.

(1) Always measure out the exact proportions required and mix the oil and gasoline thoroughly, before pouring the mixture into the fuel tank. Always use clean mixing equipment and clean, fresh gasoline.

(2) **BREAKING IN THE SAW:** Start operating with a mixture of ¾ pint HOMELITE CHAIN SAW OIL to each gallon of gasoline. If Homelite oil is not available use a break-in mixture of 1 pint good grade SAE-30 engine oil to each gallon of gasoline. Make only light cuts with the saw—do not lug the engine until you have used about four gallons of this break-in fuel mixture in the engine. After this period, use the regular fuel mixture given in the fuel mixing table (below).

(3) FUEL MIXING TABLE

Proportions For Regular Fuel Mixture

	FOR BEST RESULTS	IF HOMELITE OIL IS NOT USED
1 gal. gasoline:	½ pint Homelite Oil	¾ pt. of ordinary SAE 30 oil
2 gal. gasoline:	1 pint Homelite Oil	1½ pt. of ordinary SAE 30 oil
3 gal. gasoline:	1½ pints Homelite Oil	2¼ pt. of ordinary SAE 30 oil
4 gal. gasoline:	1 qt. Homelite Oil	3 pt. ordinary SAE 30 oil

(4) **FLUSH-OUT FUEL CONTAINER OCCASIONALLY:** Moisture and sediment accumulated in the fuel container can clog the fuel filters and carburetor. Avoid contamination by flushing fuel can, every so often, with solvent or clean gasoline. (Not fuel mix.)

2. STARTING AND STOPPING

a. Set Controls For "Cold" Starting

- (1) Push toggle switch to "ON" position.
- (2) Flip choke lever up (right side of pistol grip.)
- (3) Depress throttle trigger—lock throttle open by pulling back throttle lock on left side of grip. Since the chain will rotate when engine starts, operate chain oiler a few times to be sure chain and bar will be lubricated right from the start.

CAUTION

Before pulling starter, see that the chain is clear of all obstruction because it will rotate with throttle locked open.

b. Crank Engine

(1) Pull the starter cord slowly, a short distance, to engage the drive balls. Then pull rapidly to crank the engine.

NOTE

Do Not Let Starter Cord Snap Back After Cranking

c. When Engine Fires Or Starts

The engine should either fire or start after 1 to 5 spins, depending on temperature. As soon as it fires, depress choke lever to half open position—leave it half open and crank again until engine starts—then push lever down gradually to open position as engine warms up. Depress throttle trigger to release throttle lock.

d. To Start A Hot Engine

If the engine has recently been run and is hot, it is usually unnecessary to choke it. A hot engine can usually be started in idle position. When the engine idles, the automatic clutch disengages the chain drive. Idle speed control is set to prevent the chain from rotating. This setting has been made at the factory and assures steady idling of the engine.

e. To Stop Engine

Flip toggle switch to "OFF" position. This grounds the magneto contact points and prevents the engine from firing.

f. Off-Season Storage

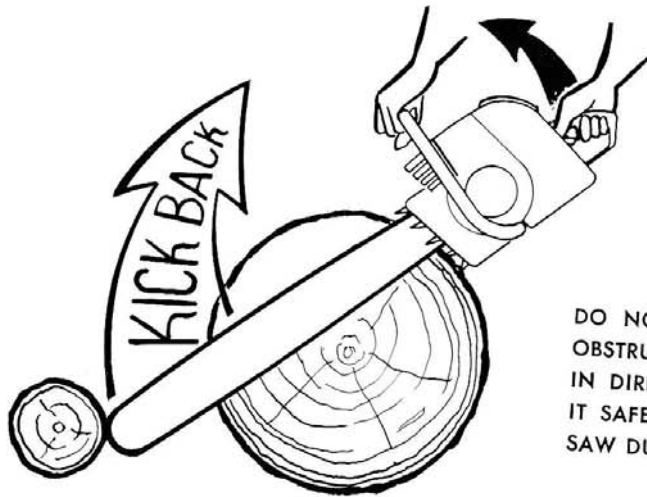
This engine should never be stored with fuel in it for more than a month. To prevent formation of gum and varnish deposits in the fuel system, either start and run the engine for a few minutes every two or three weeks, or drain the fuel system, as follows:

- (1) Empty contents of fuel tank into an approved safety container, for subsequent safe disposal of the flammable material.
- (2) Start the engine and let it run dry. This uses up all fuel in the carburetor, fuel pump and fuel lines—eliminates danger of gum and varnish formation.
- (3) Remove spark plug and pour about a tablespoonful of engine oil through the spark plug hole. Crank engine a half dozen times to deposit a film of oil over the internal engine surfaces to prevent rust and deterioration.
- (4) Remove bar and chain from the engine. Clean them thoroughly, then apply engine oil or rust inhibitor, and wrap for storage.

3. TIPS ON SAFETY AND CONSERVATION

The professional logger should protect his means of earning a livelihood by practicing the following rules of personal safety and tree conservation.

- (1) NO OPERATOR SHOULD WORK ALONE IN THE WOODS.
- (2) SHUT ENGINE OFF BEFORE WORKING ON SAW.

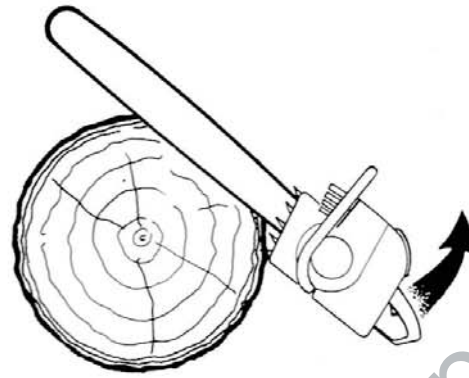
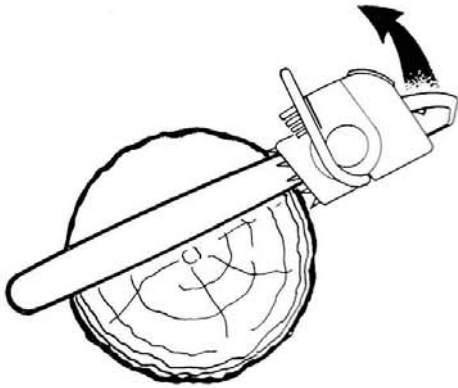


DO NOT LET END OF BLADE HIT ANY OBSTRUCTION OR SAW MAY KICK BACK IN DIRECTION OF LARGE ARROW. PLAY IT SAFE—KEEP BOTH HANDS FIRMLY ON SAW DURING OPERATION.

Figure 4—Safe Cutting Instructions

- (3) KEEP ALL EQUIPMENT IN GOOD OPERATING CONDITION. Poor equipment invites accidents. Keep your chain saw in top shape—chain sharp and properly tensioned. Working with dull chain, tires the operator and makes him less aware of woods hazards.
- (4) HANDLE FUEL SAFELY. Use approved fuel safety containers. When refueling find or clear a bare spot of ground before pouring. If fuel is spilled on saw, wipe it down immediately. Move at least ten feet away from refueling spot before starting engine.
- (5) WEAR PROTECTIVE CLOTHING. Always wear trim-fitting garments of a type least likely to catch in the saw chain. Always wear your safety helmet in the woods. Footwear should be sturdy, with non-slip soles.
- (6) BRUSH OUT SUFFICIENTLY. Always clear all obstructions and debris from the working site as well as from the path of safe retreat. Remove all dead material from the immediate cutting area to minimize fire hazards.
- (7) KEEP YOUR BALANCE AT ALL TIMES. Always keep both hands firmly on your chain saw when cutting. Stand clear of the work, with your weight on both feet. Avoid hitting branches or other objects with the blade. (See figure 3.)
- (8) STAND ON THE UPHILL SIDE WHEN BUCKING. Watch for and eliminate hazards such as trapped saplings, springpoles, and logs which might spring, roll, or shift suddenly when the log is bucked through.
- (9) STOP ENGINE BETWEEN CUTS. Play it safe—never carry a running saw from tree to tree. Always carry the saw with blade to the rear so it will not become snagged in the underbrush.
- (10) BE WARY OF HAZARDS. Learn to recognize and look for “windowmakers”, “sidewinders”, leaners, snags and over-ripe, punky or hollow-bottom trees.

PLACE THE SPIKES OF THE SAW AGAINST THE WOOD. OPEN ENGINE THROTTLE. WHEN CHAIN REACHES FULL SPEED PIVOT SAW ON ITS SPIKES BY PULLING ON PISTOL GRIP UNTIL THE CHAIN ENGAGES WOOD.



KEEP PULLING ON PISTOL GRIP TO PIVOT BLADE THROUGH THE WOOD. IF SAW JAMS IN CUT, RELEASE THROTTLE, PULL SAW FREE, AND REENGAGE IN CUT.

STOP PIVOTING BEFORE TIP OF BLADE HITS GROUND—OR WHEN YOU CAN NO LONGER PULL ON GRIP AND CUT WOOD. KEEP CHAIN RUNNING IN CUT, BUT PULL SPIKES FROM WOOD. PUSH DOWN ENGINE END TO REACH NEW PIVOT POINT. REENGAGE SPIKES AND CONTINUE TO CUT USING PIVOT ACTION.

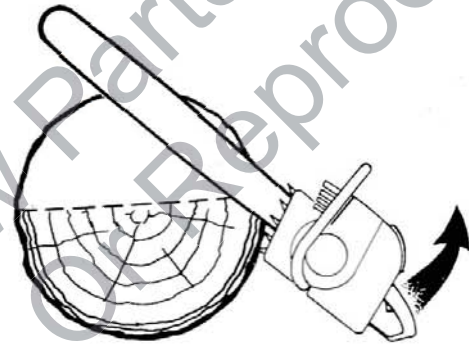


Figure 5—Pivot Action

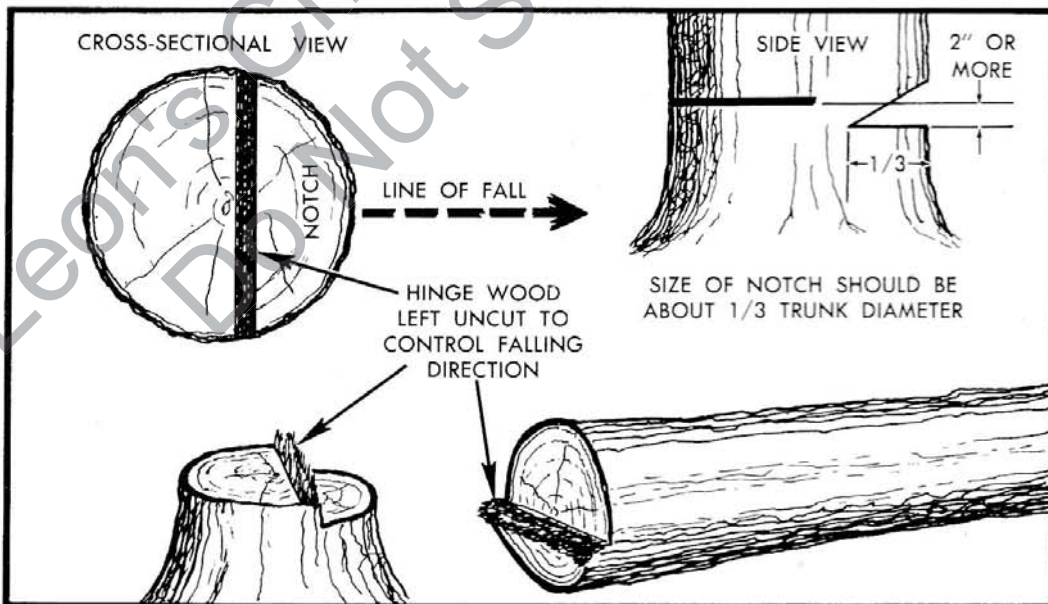


Figure 6—Controlling Direction of Fall

Section II

MAINTENANCE AND ADJUSTMENT

4. MAINTENANCE SCHEDULE

a. Daily Maintenance

- (1) Clean chain bar and sprocket; inspect for wear and damage. Keep chain sharp, properly tensioned, lubricated. (See paragraph 5, b.)
- (2) Keep saw clean. Wipe the outside of the saw as clean as possible. Check for loose screws, nuts and bolts; tighten before parts are lost or trouble results.
- (3) Check air filter daily, or as often as necessary to maintain engine power.

b. Weekly and Occasional Maintenance

- (1) Remove and clean spark plug. Check condition of porcelain and electrodes. Regap electrodes to .025" whenever necessary, or install new spark plug. (See paragraph 6, c.)
- (2) Check filter in fuel tank at least once or twice a month, sooner if engine runs lean. Change filter if it feels hard to the touch. (See paragraph 6, d.)
- (3) Clean sawdust, pitch and leaves from muffler and cylinder cooling fins whenever necessary. (See paragraph 6, b.)
- (4) Remove plug from clean-out hole in air shroud and brush or scrape sawdust and pitch from governor vane. Keep linkage between air governor and carburetor clean. Occasionally brush or flush outside of carburetor clean. Do not use high pressure air hose to clean carburetor.
- (5) Run saw only with standard muffler, with clean air and fuel filters in place, and with air governor operating at optimum speed range as set by our factory or authorized service representatives.
- (6) Flush out fuel tank and fuel mixing equipment, occasionally, to remove accumulated moisture and sediment.

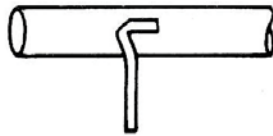
5. CHAIN, BAR AND SPROCKET MAINTENANCE

a. Sprocket

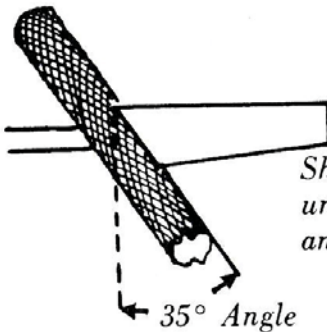
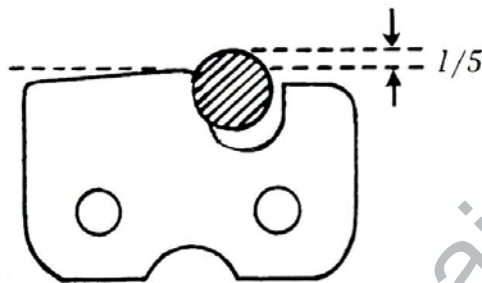
The chain drive sprocket should be inspected from time to time. Sprocket and chain must be of equal pitch. (For instance $\frac{1}{2}$ " pitch sprocket must be used with $\frac{1}{2}$ " pitch chain.)

- (1) Because wear has the effect of changing the pitch of the sprocket, it is recommended that the sprocket be replaced whenever a new chain is installed unless the old sprocket is in excellent condition.

Hold file in a horizontal, level position



Approximately 1/5 of file diameter should extend above cutter



Sharpen all cutters uniformly with top plate angle of approximately 35°

35° Angle

The side plate angle should be vertical on all cutters.

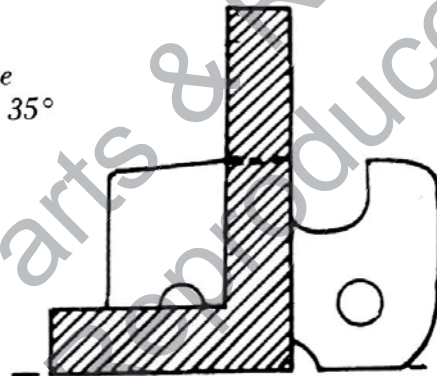


Figure 7—Chain Filing Hints

b. Chain

Because only slight pressure is required to make it cut wood, a sharp chain keeps wear and shock on the entire saw to an absolute minimum. You should, therefore, stop to sharpen your chain as soon as cutting becomes noticeably difficult. Always keep the chain properly lubricated and tensioned.

1) SHARPENING CHAIN (USE FILE HOLDER FOR UNIFORMITY)

Use of a file holder with the correct size round file for your chain will help you file accurately. Uniform sharpening of cutters is essential for fast cutting. Each tooth should have a top plate angle of 35°, a side angle of 90° and the cutting edge, itself, should have a 60° bevel. These angles are shown in figure 7.

a) *The 35° top plate angle will be obtained automatically if you follow the guide lines on the file holder. File carefully . . . sharper angles cause quick dulling of the side plate; not enough angle requires too much feed pressure; unequal angles cause chain to curve or drift to one side.*

b) **HOLD THE FILE LEVEL:** The 90° side plate angle, which permits smooth feeding into the cut, and the 60° edge bevel are obtained by holding the file holder at a 35° angle (specified above) and keeping it approximately level. The holder keeps the file at proper height when held as specified.

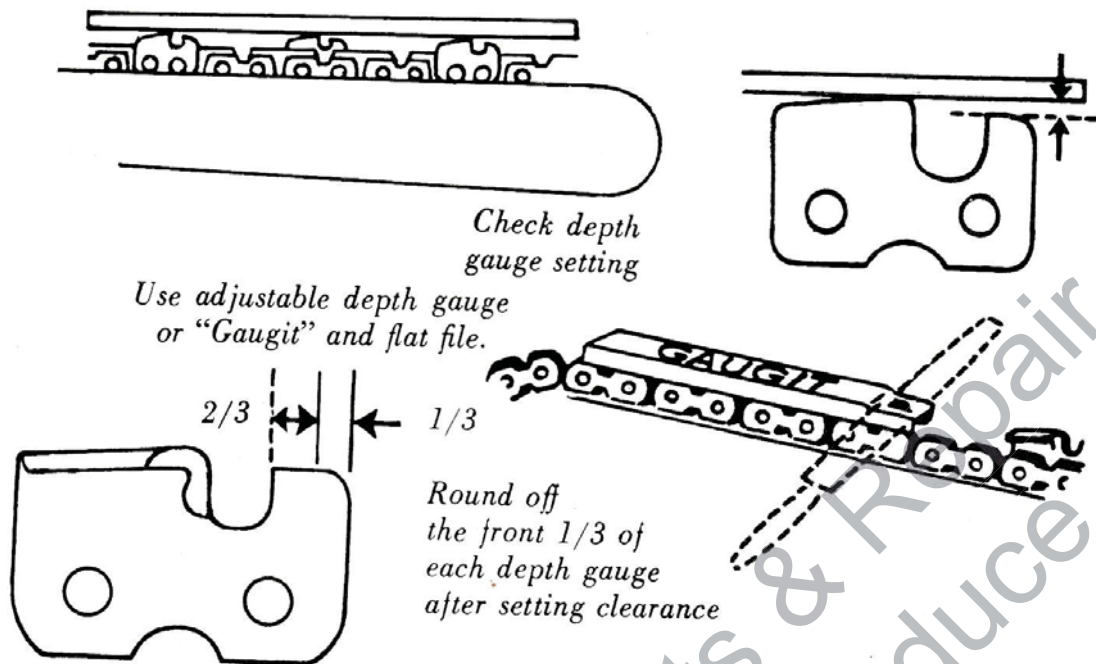


Figure 8—Filing Depth Gauges

(2) **FILING DEPTH GAUGES** (See Figure 8.)

(a) The depth gauges or "stops" control the size chip the teeth can cut. The gauges should be lowered after every third or fourth sharpening of the cutters. If the gauges are too high, the chain cannot get enough bite for capacity cutting. If gauges are too low, the chain will grab and jerk.

(b) The chain manufacturer sets the depth gauge clearance of each chain for average conditions of cutting. The amount of clearance depends on the pitch of the chain. Recommended settings for the chain you use can be found in the "Filing Instructions" pamphlet, prepared by the manufacturer and supplied with every new chain. Because of the extra power of this Homelite saw, however, you may find the ideal depth settings for your cutting conditions to be somewhat lower than the manufacturer has suggested.

(c) After filing gauges (See figure 8) be sure to round off the front corners uniformly and smoothly again, so they will glide over the wood instead of thumping into it.

(3) **REPAIRING CHAIN:** With each new chain you receive a repair kit containing a quantity of drive links, connecting links and connecting link and rivet assemblies. These can be used to repair a broken chain, or one with a tight joint. The pamphlet supplied (in the chain carton) by the chain manufacturer will tell you how to make chain repairs correctly. Chain repair parts and tools can be purchased from all Homelite branches and servicing dealers.

c. Guide Bar

(1) The guide bar rails wear faster along the side where the cutting is being done. The life of the bar may be greatly extended, therefore, by reversing it, top for bottom, every so often to distribute the wear on both sides.

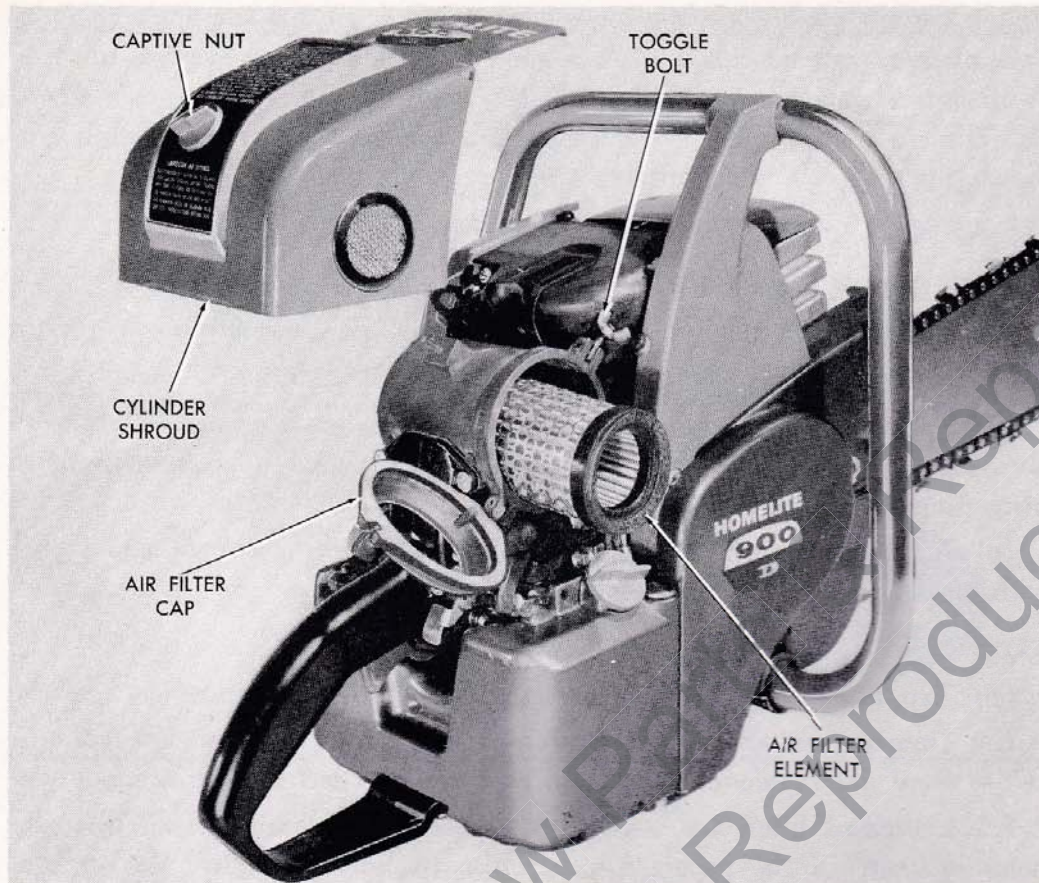


Figure 9—Changing Air Filter

(2) Check the bar rails for uneven wear. If one rail is higher than the other, restore rails to an even height by grinding. However, if both rails are worn so low that the chain drags bottom in the groove, either replace the bar or repair by grinding the grooves deeper. Chain bottom clearance should be a minimum of $1/16''$ all the way around the bar.

(3) After grinding, remove all burrs from the guide bar, and clean it thoroughly to remove abrasives.

(4) If the guide bar groove has been pinched so that the chain drags, open the groove. If the bar has been bent, and has a permanent set, have it straightened. Do not ruin your chain on a damaged bar.

6. ENGINE MAINTENANCE

a. Air Filter (See figure 9)

The air filter prevents dirt and grit from entering the engine. A filter which does this job effectively will clog up in use. The air filter must be checked daily and cleaned whenever the engine loses power. Under severe dusty conditions, such as when cutting cedar, several changes a day may be necessary.

Under average conditions, the large capacity filter in this saw may go for a week or more without clogging. A clogged air filter causes the saw to run rich (with normal carburetor adjustment) because the engine is being starved for air. This, in turn, results in excessive carbon, loss of power and inability of the engine to accelerate properly.

(1) NEVER OPERATE THIS SAW WITHOUT AN AIR FILTER.

(2) TO CHANGE AIR FILTER. (See Figure 9.)

(a) Remove cylinder shroud by turning captive nut in top of shroud *counterclockwise*.

(b) Loosen the wing nuts on the toggle bolts which hold air filter cap to air filter case; slide bolt out of slot and swing cap out of position. Remove dirty filter element.

(c) Install clean filter element. Position cap over filter case and secure with toggle bolts and wing nuts. Put cylinder shroud back on engine.

(3) TO CLEAN AIR FILTER:

(a) Tap filter gently to dislodge as much dirt and sawdust as possible.

(b) Immerse and slosh the filter around in solvent or gasoline, *not fuel mix.* (*Obey local fire regulations for the use of gasoline and volatile agents.*)

(c) Let clean filter dry completely before use. Examine clean filter for holes or tears in the paper element; discard filter if faulty. Be sure the ends of the filter element are in good condition to prevent unclean air from bypassing the filter.

b. Muffler and Cylinder

This saw has a large muffler containing a curved baffle plate, eliminating the need for additional screening. The muffler exterior is completely finned for best cooling.

(1) NEVER OPERATE THIS SAW WITHOUT A MUFFLER. A certain amount of back-pressure supplied by the muffler is necessary for efficient operation of this engine. Operation without a muffler may cause lean operation at idle position, and may also be a fire hazard.

(2) Occasionally remove the muffler shield for muffler inspection, and scrape muffler fins clean if they are clogged.

(3) The cylinder exhaust ports can be inspected for carbon, provided the muffler is removed. Removing the muffler adapter (held to cylinder by four screws) will expose the exhaust ports completely for cleaning.

(4) When exhaust ports become badly clogged, turn engine so piston completely covers exhaust ports; then use a soft instrument such as a wooden stick to prevent chipping the ports while removing carbon carefully. Do not use a screwdriver or hard instrument to scrape carbon.

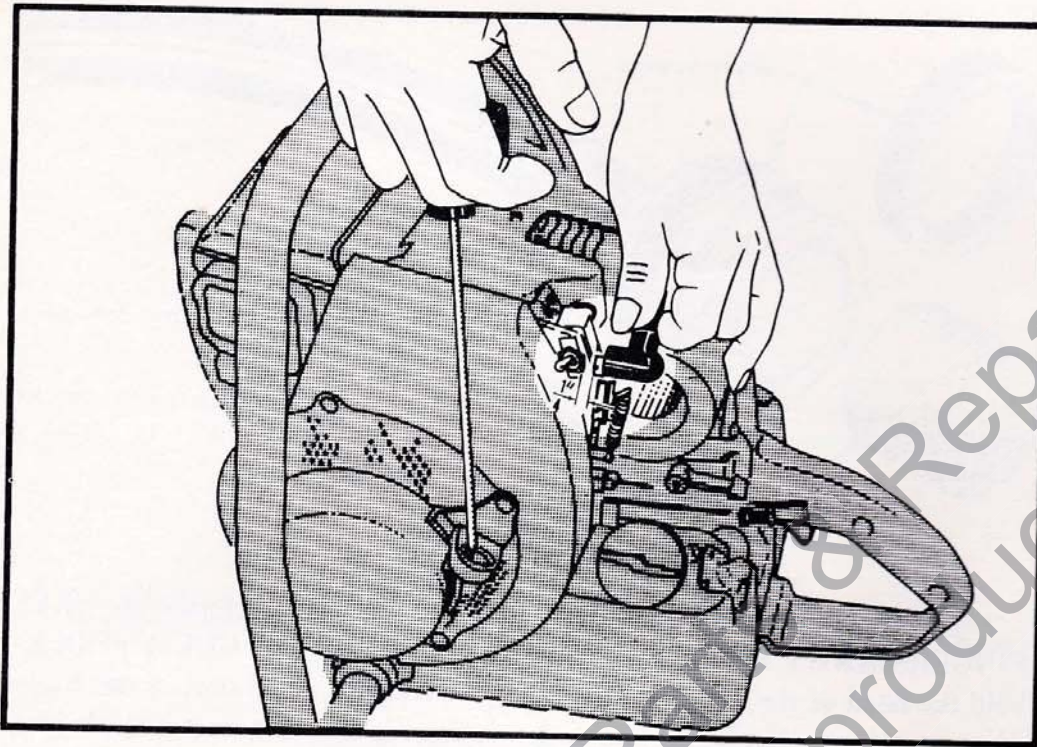


Figure 10—Testing For Spark

c. Spark Plug and Ignition

- (1) Spark plugs are made in wide ranges to suit different engines. This saw uses the Champion HO-3 (Homelite Part No. 72858-2S) spark plug.
- (2) **TO REMOVE THE SPARK PLUG:** First remove the cylinder shroud. Then twist the spark plug cover counterclockwise and pull it off the spark plug terminal. Free one end of the synthetic rubber spark plug shield and pull it off the spark plug. Then use the combination wrench (supplied with saw) to remove spark plug and gasket.
- (3) Clean both the porcelain and the electrodes and adjust the electrode gap to .025". If the points are badly burned or porcelain is cracked, replace with a new Champion HO-3 spark plug and gasket.
- (4) If the spark plug is wet, it indicates excess fuel in the cylinder. If the spark plug is oily, there is either too much oil in the fuel or the engine is running rich for some reason. (First thing to suspect in this case is a clogged air filter.)
- (5) While the spark plug is removed from the cylinder, it is easy to test ignition spark. (See figure 10.)
 - (a) Be sure the toggle switch is in "ON" position.
 - (b) Push a $\frac{1}{4}$ " diameter screw into the spark plug cover to contact the metal spring connector on the end of the high-tension lead.

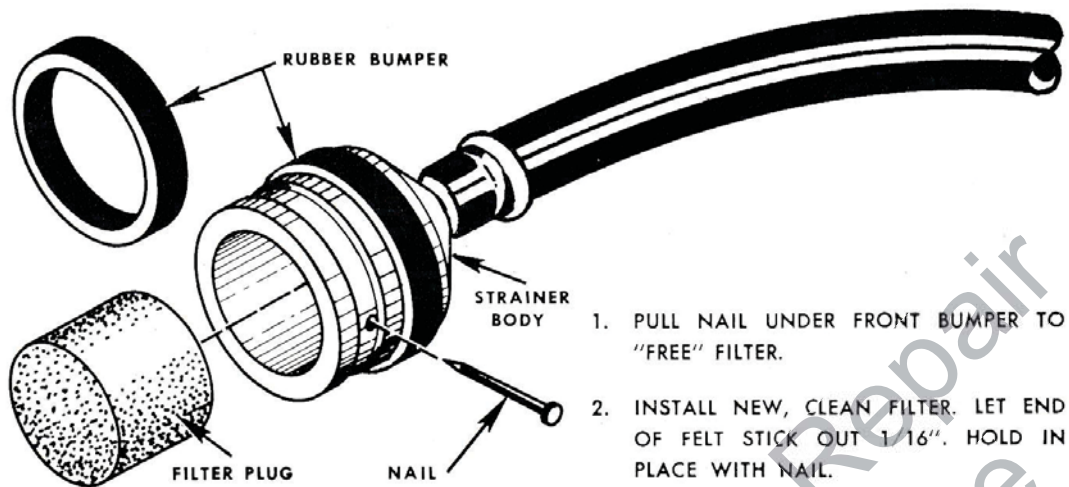


Figure 11—Changing Fuel Filter

(c) Now—grasp “SPARKY” between your thumb and forefinger—KEEP FINGERS AWAY FROM THE SCREW OR YOU WILL GET A SHOCK—hold the head of the screw $\frac{1}{4}$ " from any convenient metal part of the engine. (Not over spark plug hole.) Crank the engine rapidly. If a strong spark jumps the $\frac{1}{4}$ " gap between the head of the screw and the engine, the ignition system is working properly. If the test shows weak spark, intermittent spark, or no spark, your Homelite Branch Office or Servicing Dealer is equipped to check the complete ignition system for you.

(6) Reinstall spark plug, with gasket, in cylinder and tighten completely, since an air leak will cause the engine to run very lean and hot. Fasten spark plug shield down over spark plug and push the connector back onto the terminal with a slight twist to the left. Put cylinder shroud back on engine.

d. Felt Fuel Filter and Pick-Up Tube

(1) NEVER RUN THIS CHAIN SAW WITHOUT A FUEL FILTER IN THE TANK. This filter is absolutely necessary to keep moisture and foreign solids from getting into the carburetor and engine. It works efficiently until its storage capacity is used up, whereupon the filter clogs and will not pass even fuel. When this happens, the engine will suddenly begin to run *lean* without any previous warning.

(2) To check condition of fuel filter, fish the pick-up assembly out of the fuel tank filler hole, as shown in figure 11. Remove filter plug from strainer body and compress filter between the fingers. If it feels hard to the touch, it is loaded up and should be changed.

(3) FLEXIBLE FUEL PICK-UP TUBE: Deterioration of this tube may cause *lean* operation whenever the saw is placed in a cutting position where the cracked or porous part of the tube will be above the fuel level. If the leak is below the fuel level, air cannot be sucked through the break into the system,

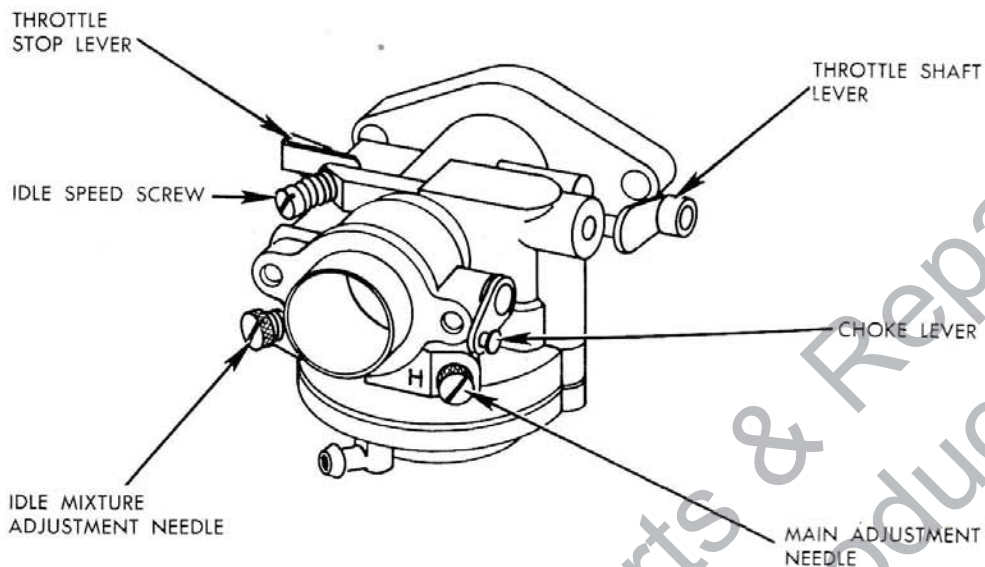


Figure 12—Carburetor Adjustments

and normal operation will result *unless* the weakened tube is collapsing under suction. In this case, the fuel-starved engine may either die out, in certain cutting positions, or may refuse to run.

(a) To remove pick-up tube assembly for inspection, remove four screws holding outlet fitting and gasket to the fuel tank. Next, remove fuel cap, pull fuel strainer assembly partially out through filler hole; then remove fuel strainer, outlet fitting, gasket and flexible tube assembly from fuel tank.

(b) Change the flexible tube if it is porous, cracked or weakened.

e. Fuel Cap

The fuel cap assembly includes a two-way pressure-relief valve of "Hycar" material. This assembly normally need not be checked, except when troubleshooting for the cause of lean operation. If the carburetor is not getting fuel, try operating with fuel cap removed for a few seconds—if improvement is the result, install a new relief valve.

f. Carburetor Adjustment (See Figure 12)

(1) Adjust carburetor only after checking air filter, fuel filter, muffler and relief valve in fuel cap. Carburetor adjustment cannot satisfactorily overcome restrictions of fuel or air occurring elsewhere in the system.

(2) Always begin carburetor adjustment by making the following approximate settings:

Adjustment	Control and Approximate Setting
Idle Speed Adjustment	IDLE STOP SCREW — turn in until screw just touches stop lever, then go $\frac{3}{4}$ turn more.
Idle Mixture Adjustment	IDLE MIXTURE (LO-SPEED) ADJUSTMENT NEEDLE — g-e-n-t-l-y turn in until screw bears against orifice. Then back screw out $\frac{3}{4}$ turn.
Main Mixture Adjustment	MAIN ADJUSTMENT (HI-SPEED) NEEDLE — g-e-n-t-l-y turn in until screw bears against orifice. Then back out $\frac{3}{4}$ turn.

(3) FINE ADJUSTMENT OF CARBURETOR.

(a) After making approximate settings, start engine and let it warm up. Open choke and release throttle to let engine idle. If engine stops, turn in on IDLE STOP SCREW $\frac{1}{8}$ turn.

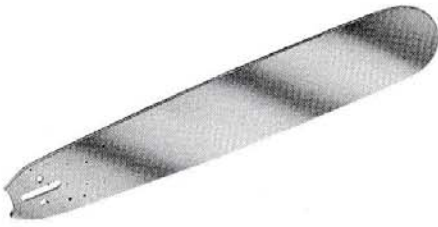
(b) Now set for smooth acceleration: Depress throttle. If this causes engine to falter, open IDLE MIXTURE ADJUSTMENT NEEDLE, $\frac{1}{8}$ turn at a time, until best acceleration is obtained. Do not open any further than necessary for smooth acceleration. NOTE: Any change of IDLE MIXTURE may require re-adjustment of IDLE SPEED SCREW.

(c) Now adjust for maximum power: This adjustment must be made with the engine "under load". Cut wood and pull up on the handle until you are applying a full load (or stalling chain in cut.) Set MAIN ADJUSTMENT NEEDLE so engine neither slows down, nor smokes excessively, but runs at highest speed obtainable. *Stall chain only long enough to adjust carburetor.*

7. TROUBLE SHOOTING

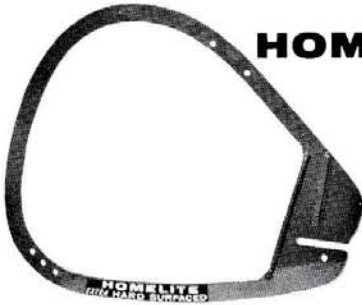
Trouble	Cause	Remedy
Won't start	No fuel	Fill tank with clean fuel mixture.
	Switch "OFF"	Flip switch "ON".
	No spark	Test. (See paragraph 6c.)
	Fouled spark plug	Clean or replace. Use Homelite #72858-2S (Champion HO-3).
Lack of power	Dull chain	Sharpen. See paragraph 5b. Adjust chain tension; check chain lubrication.
	Dirty air filter	Clean or replace filter.
	Carburetor out of adjustment	First be sure air filter is clean, then adjust carburetor. Read paragraph 6.—parts a, d, e and f.
Engine races	Dirty governor	Clean pitch from governor.
	Lean-running engine	Check relief valve in fuel cap and fuel filters in tank and carburetor. Then make carburetor adjustment. See paragraph 6.—parts a, d, e and f.

HOMELITE GUIDE BAR **Hard Track plus Extra Hard Tip**



Longest wearing saw bar ever developed. Electronically tempered Hard Track reduces rail wear . . . Homalloy-welded EXTRA HARD TIP provides extra protection where heat and load build-up are greatest. For your protection, an individually stamped serial number registers bar against defective material or workmanship for full 60-day period.

HOMELITE PLUNGE CUT BOW GUIDE **Extra Hard Surface**



New 16" size means higher production, less stooping, less fatigue. Homalloy-welded EXTRA Hard Surface around entire chain track provides all-around protection against heat and friction. Most dependable bow ever offered . . . backed by full 60-day warranty.

Ask your Dealer for these HOMELITE Quality Products

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Special high-viscosity index, 2-cycle engine oil . . . mildly detergent for cleaner engine operation. Developed for and thoroughly field-tested in Homelite Chain Saws. Affords maximum protection with least deposit. In quart cans and gallon (4 qt.) cases. Also 12 oz. ($\frac{3}{4}$ pint) cans available singly or in handy six-packs.

HOMELITE GEAR OIL



For gear saw transmissions. SAE-90, special formula gear oil gives greatest clutch protection and maximum bearing and gear lubrication. For proper all-weather performance. Available in pint screw-top cans.

HOMELITE FELT FUEL FILTER PLUG



For all Homelite Chain Saw fuel pick-up assemblies. Filters water, dirt and solids from fuel. Inexpensive replacement. Change felt plug when it feels hard to the touch and maintain free flow of filtered fuel. Sold singly, or in sleeves of ten.

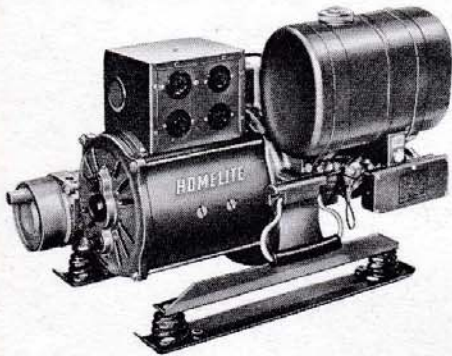
HOMELITE FUEL CONTAINER



Homelite's 2½ gallon safety fuel-mixing can has safety air vent, fuel strainer and oil-measuring cup. Features swivel-spout with safety non-spill pouring feature . . . pours only when cross bars of spout are pressed against sides of filler hole. Other models and sizes also available.

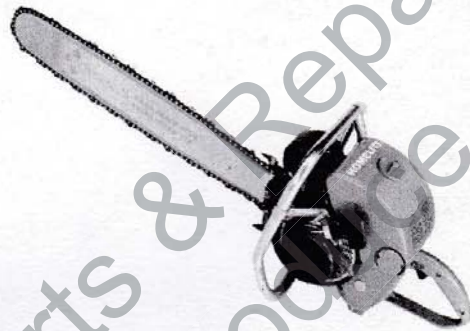
HOMELITE *Carryable* PRODUCTS

GENERATORS



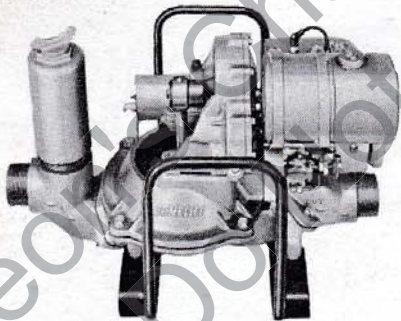
Alternating or Direct Current
Gasoline-Engine-Driven
Sizes: 1,000 to 5,000 watts
Voltages: 6 to 230 volts
Frequencies: 50 to 400 cycles

CHAIN SAWS



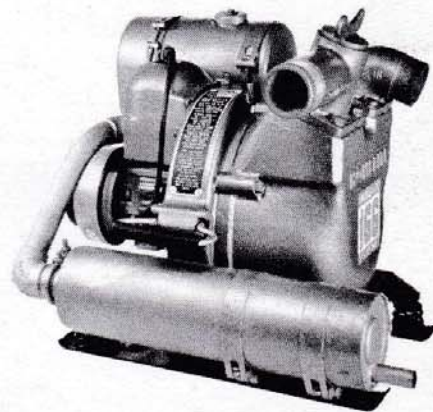
Gasoline-Engine-Driven
A Complete Range of Sizes
Straight Blade and Bows
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Clearing Attachments

3" DIAPHRAGM PUMP



For all heavy duty pumping
Gasoline-Engine-Driven
Capacity: 5,000 g.p.h.
Weight: 120 pounds

CENTRIFUGAL PUMPS



Automatic Self-Priming
Gasoline-Engine-Driven
Sizes: 1½", 2", 3"
Capacities: 5,500 to 18,000 g.p.h.

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