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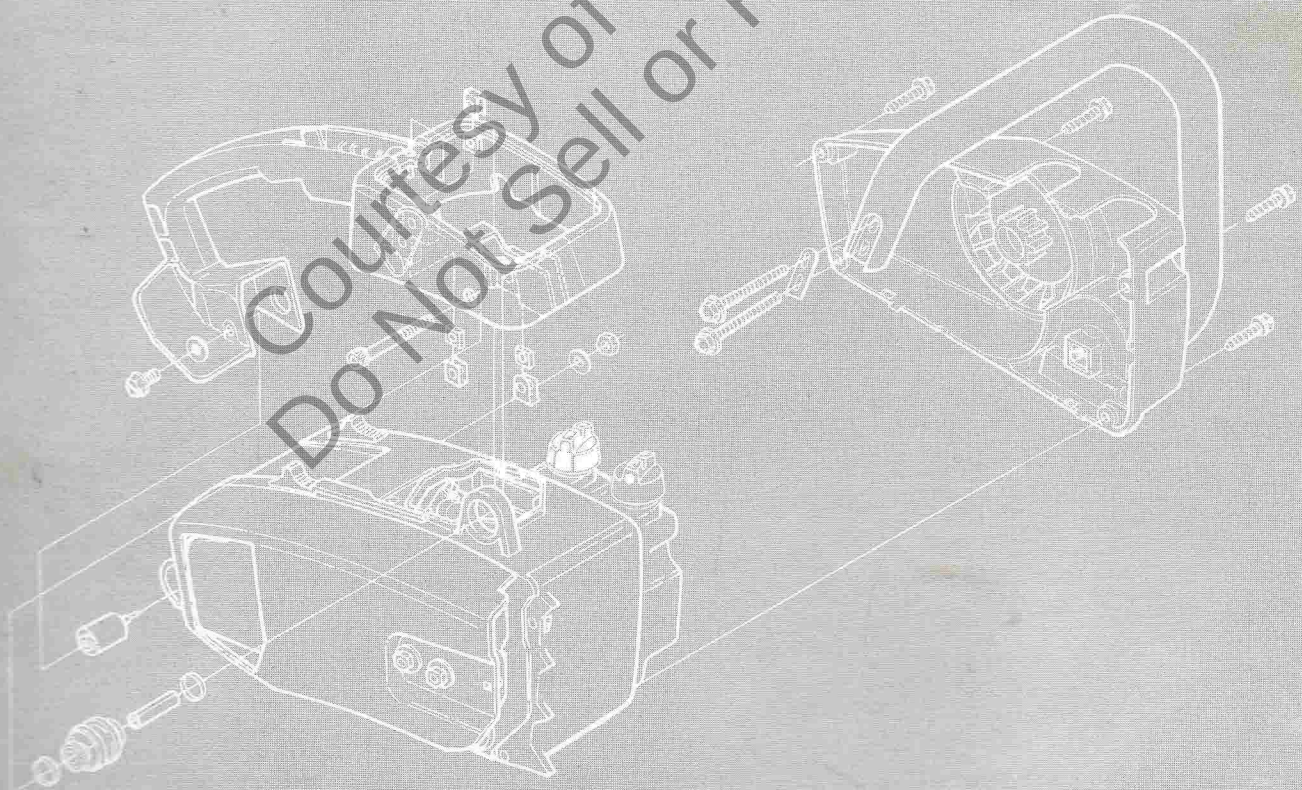
HOMELITE JACOBSEN

DEALER SERVICE GUIDE

240 & 245 CHAIN SAWS



HOMELITE TEXTRON

Homelite Division of Textron Inc.

PREFACE

This service guide contains detailed instructions for the disassembly and reassembly of the 240 and 245 chain saws. Read the guide thoroughly before beginning any repairs to the saw. The troubleshooting chart is provided as an aid in the diagnosing of troubles before actual disassembly and repair of the saw is begun. Note all safety precautions to be taken during repairs.

The SERVICE GUIDE is one of a series of publications providing servicing information on an "Authorized Homelite Servicing Dealer" level. However, Homelite assumes no responsibility or liability for injuries or damages of any nature arising from improper procedures, use of improper tools, installation of other than genuine Homelite® repair parts, or from the misinterpretation or misapplication of the information in the GUIDE in conjunction with the repair of a Homelite product.

Homelite also offers a SHOP SERVICE MANUAL #23855-5 that explains in depth such areas as carburetion, ignition, two-cycle engine theory, and bar and chain maintenance. The SHOP SERVICE MANUAL is available through your Homelite dealer or by sending a check for $7.50 to:

Homelite Division of Textron Inc.
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240 DISASSEMBLY

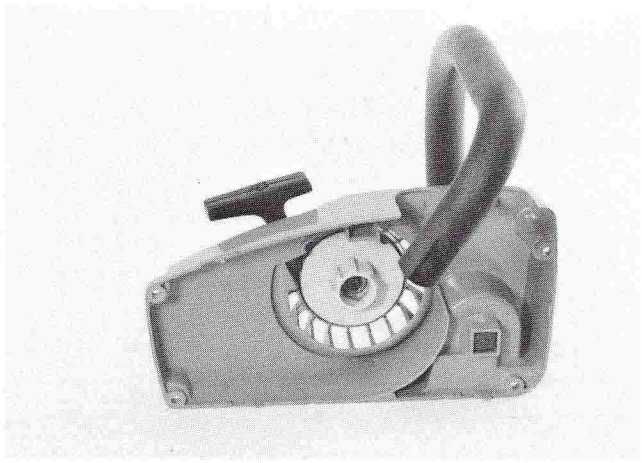


FIGURE 1

Remove the screw at the top of the handlebar, and the four screws which hold the starter housing to the engine housing. Lift the starter housing and the handlebar off the engine.

STARTER REPAIR

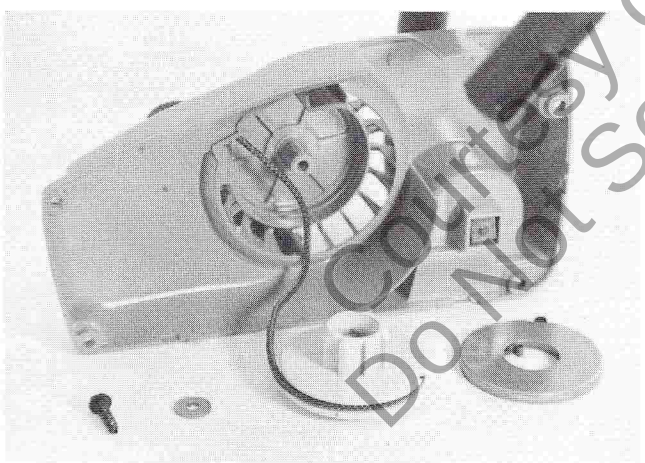


FIGURE 2

If the rope is to be replaced, cut the rope below the grip. This will immediately relieve the spring tension. Otherwise, the spring tension must be relieved by looping the rope as shown in Figure 3 and winding the pulley counterclockwise. Remove the screw which holds the pulley to the housing.

WARNING

Put on safety glasses and gloves before removing the pulley.

Grasp the toothed pulley hub and pull the pulley out about a half-inch or the width of your finger. Using a thin bladed screwdriver, insert it between the pulley and the housing to free the pulley from the spring. Push the spring coils into the housing.

CAUTION

If you lift the pulley too far out before detaching the spring, the coils may fly apart. They are difficult to rewind.

Replace the recoil spring if broken or bent. If the inner spring loop has been straightened so that it does not engage the pulley, bend the loop until it is curved enough to engage the pulley.

Replace the necessary parts and lightly grease the pulley post before reassembly. Refer to Figure 3 to properly tension the recoil spring.

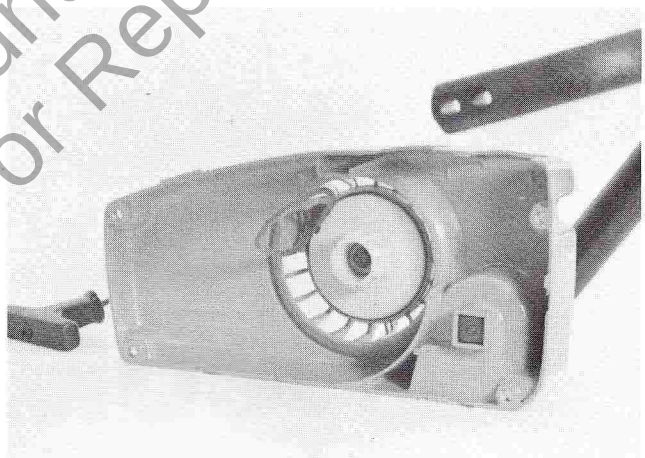


FIGURE 3

Note the rounded notch in the edge of the pulley. Pull out the grip about one foot and hold the pulley to keep it from rewinding. Turn the pulley to locate the notch at the rope entry hole in the housing. Hook a loop of rope between the housing and the pulley. Grasp the loop and wind two turns in a clockwise direction. Place a thumb on the pulley to keep it from turning. Pull the rope through the hole.

NOTE

When reassembling the starter to the engine housing, place the pulley against the rotor while pulling the starter rope a short distance until the pulley engages the pawls. Replace fastening screws securely.

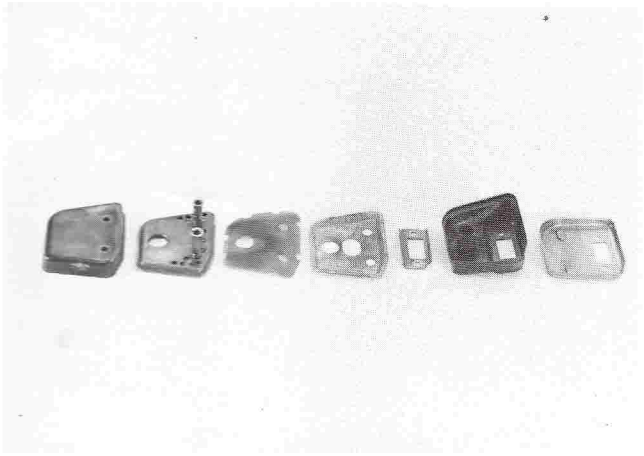


FIGURE 4

With a 5/16" socket, remove the two screws that secure the muffler to the cylinder.

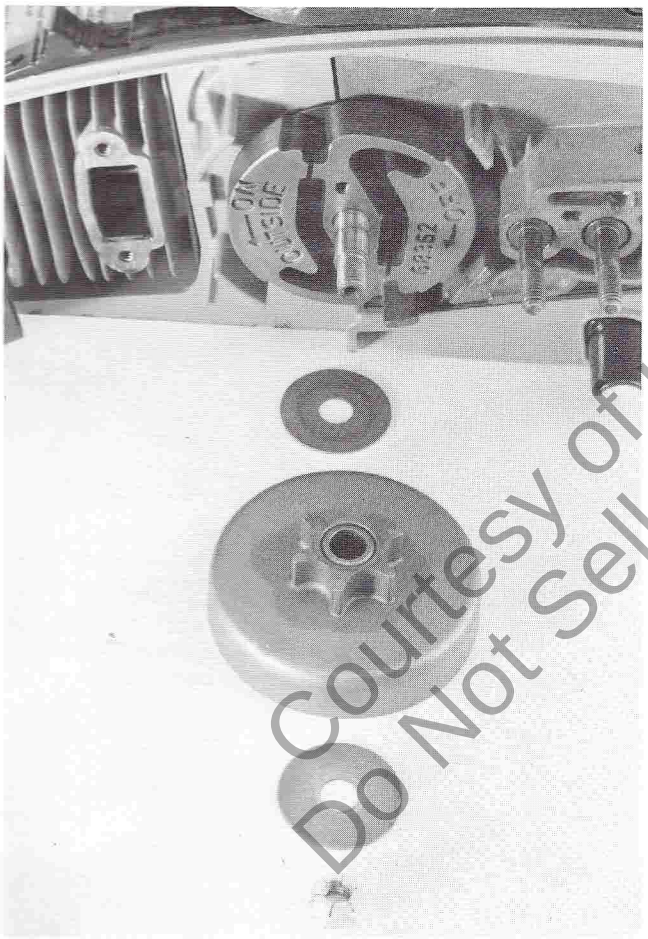


FIGURE 5

To remove the sprocket and drum, remove the crankshaft nut with a 1/2" socket. Now remove the spark plug.

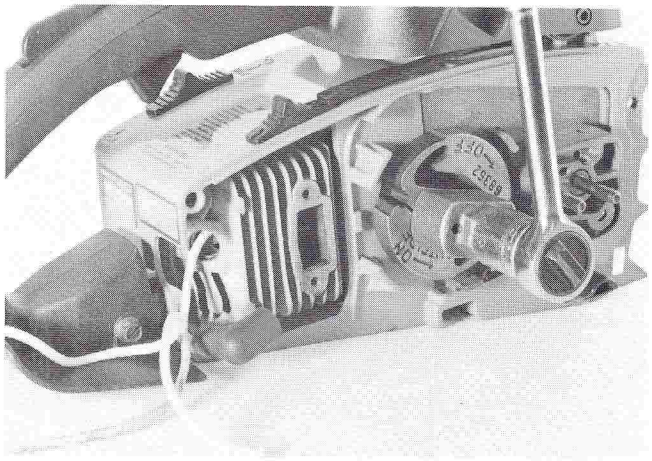


FIGURE 6

When removing the clutch, hold the crankshaft to keep it from turning. To do this, rotate the shaft unitl the piston reaches its lowest point of travel. Insert 2" - 3" of starter rope into the cylinder (as shown). Slowly turn the shaft until it locks. Using a spanner wrench (Homelite A-93791) and 13/16" socket, turn the clutch in the direction noted on the clutch.

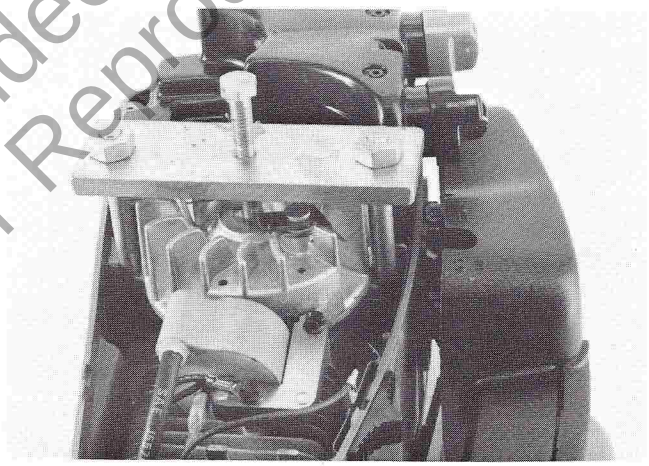


FIGURE 7

With the shaft locked, use a 5/8" socket to remove the rotor nut. Install rotor tool (Homelite No. 24747-A) as shown. Tighten the center screw until the rotor loosens. If the saw is to be completely disassembled, wait until the engine is out of the housing before removing the module. If the module is to be removed at this time, the cap must first be removed from the spark plug wire. It is not necessary to replace the entire rotor when replacing the starter pawls. A pawl replacement kit is available with instructions.

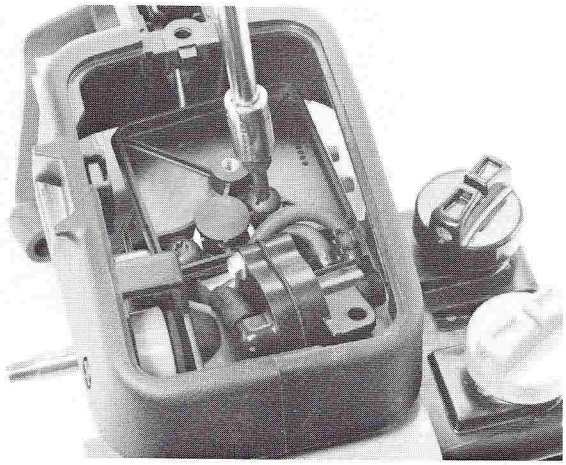


FIGURE 8

Remove the single screw that holds the hand guard to the throttle handle, and remove the guard. Remove the oil pump screw and the air filter. Using a Torx bit (Homelite No. 24982-01 or Torx No. TX25) and a 5/16" socket, remove the two screws in the air filter support. Remove the support. Do not remove the carburetor at this time.

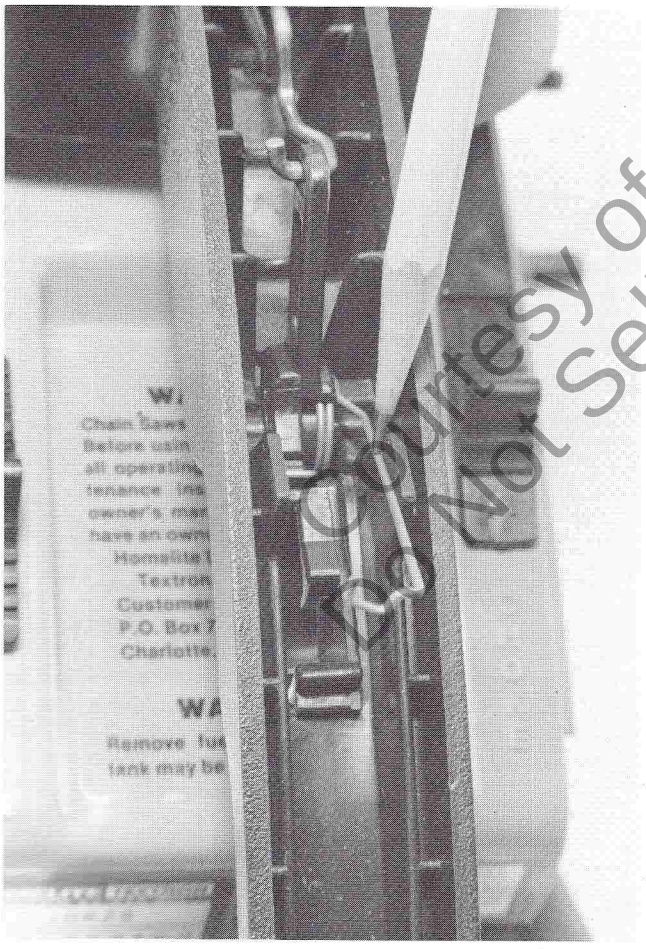


FIGURE 9

Remove the screw at the rear of the trigger cover. Grasp the throttle latch and remove the cover. Remove the trigger and spring.

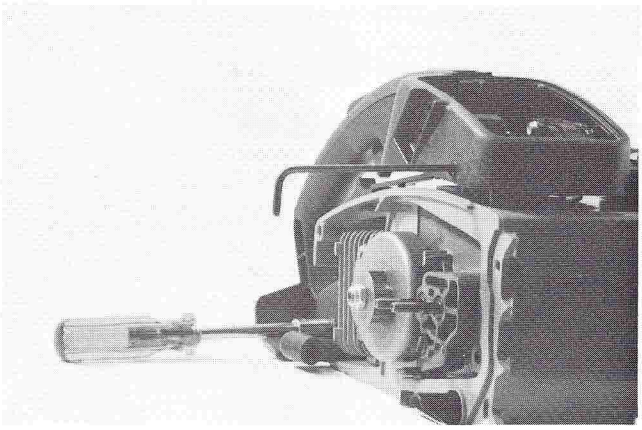


FIGURE 10

Remove the rear isolator screw. A 5/32" allen key is needed for removal of the front isolator screw. Remove the grommet on the opposite side of the rear isolator.

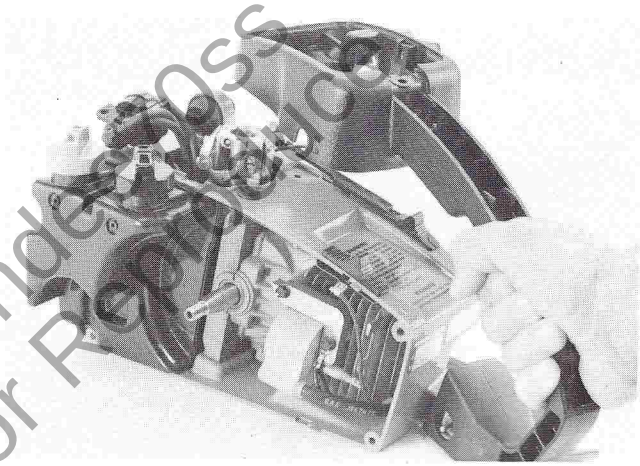


FIGURE 11

Lift the front of the throttle handle over the oil pump. After the pump is clear of the handle, rotate the front of the handle to the right so the rear of the handle will clear the rear isolator. Detach the rod from the carburetor.

FIGURE 12

Push the oil tubing off of the oil pump as shown. Do not use pliers to pull the tubing. Pull the choke lever out of the carburetor. Remove the carburetor.

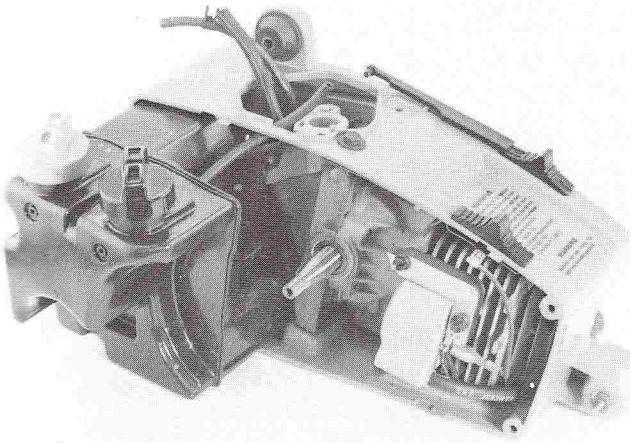


FIGURE 13

Remove the fuel tank from the engine housing.

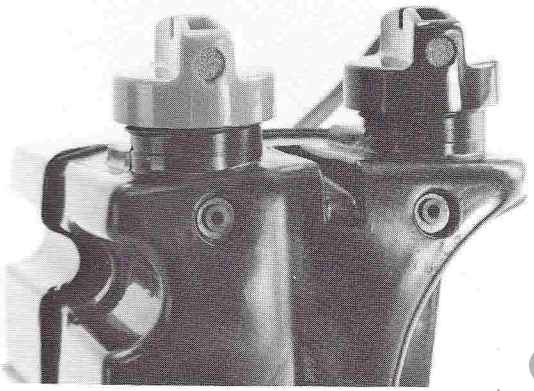


FIGURE 14

Note the location of the fuel and oil tank vents (duck bill valves). Early models used vented fuel tanks only. Later models will have only vented fuel caps.

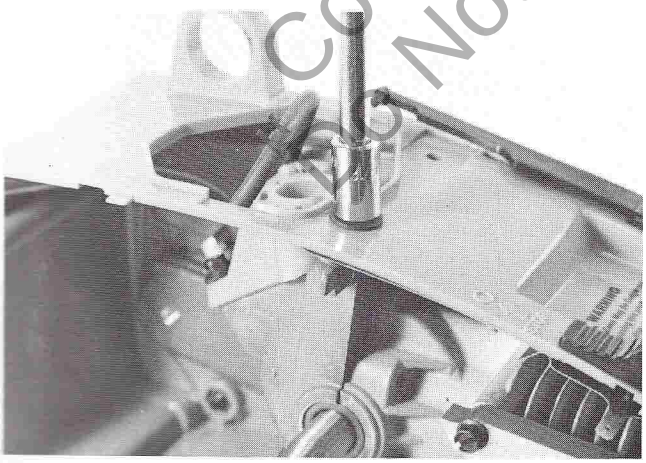


FIGURE 15

Remove the four engine housing screws (2 on top, 2 on bottom) to free the engine from the housing. Push the engine toward the starter side to remove it from the housing.

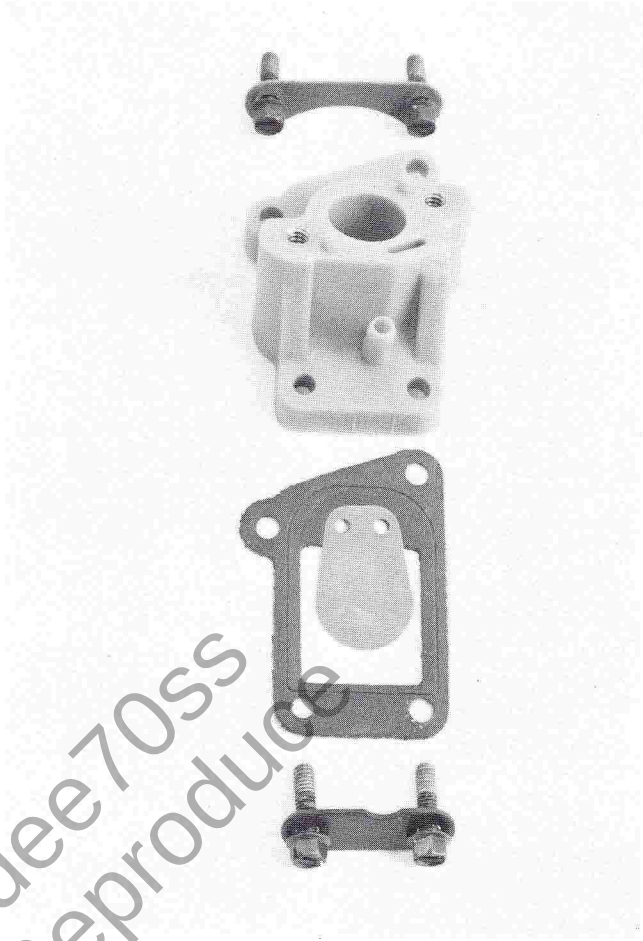


FIGURE 16

Remove the four manifold screws with a 1/4" socket. It may be necessary to tap the manifold with a plastic hammer to break the gasket seal. Do not tear the gasket.

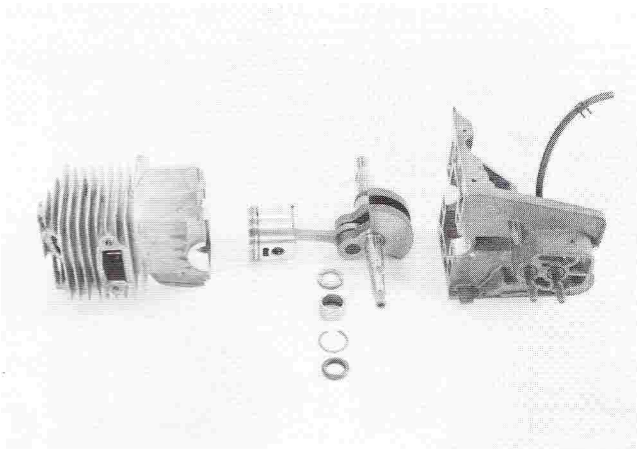


FIGURE 17

Remove the five screws which hold the crankcase to the cylinder. Tap the crankcase with a plastic hammer to break the Silastic seal between the mating surfaces. Once this is done, remove the crankshaft assembly.

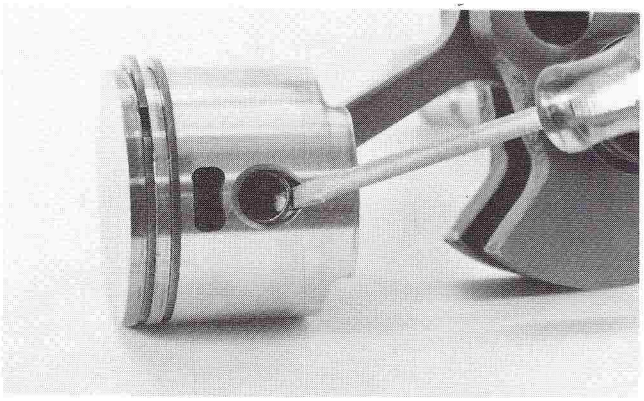


FIGURE 18

To remove piston from the connecting rod, place a small screwdriver or awl in the notch located on the rotor side of the piston. Pry out the piston pin retaining ring and push out the piston pin.

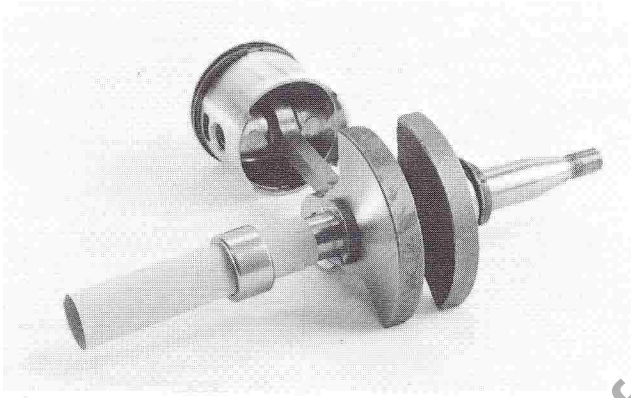


FIGURE 19

The crankshaft needle bearings are retained in their cage by grease. When the bearings are removed they may fall out of the cage. In order to prevent this, wrap a small piece of paper around the shaft and slide the bearing over the paper. Remove the paper and bearing together. This will hold the needles in place. The crankshaft, connecting rod and lower connecting rod bearings must be replaced as a complete assembly. However, the upper connecting rod bearing is replaceable and can be pressed in and out of the rod on an arbor press. Remove the rotor key before removing the seal and bearing.

ENGINE HOUSING

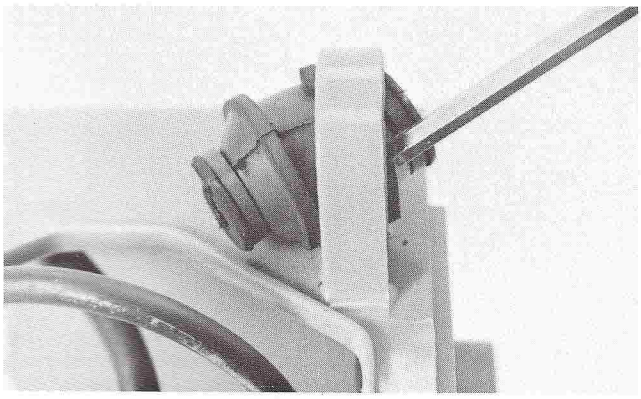


FIGURE 20

To remove the front isolator push the metal pin out of the center. Push the isolator out of the housing with an allen wrench. To install a new isolator, turn the isolator as it is being pushed into the housing. Remove the metal rings from the old isolator and install them onto the new one. Replace the rear isolator by removing the 3/8" nut located on the starter side.

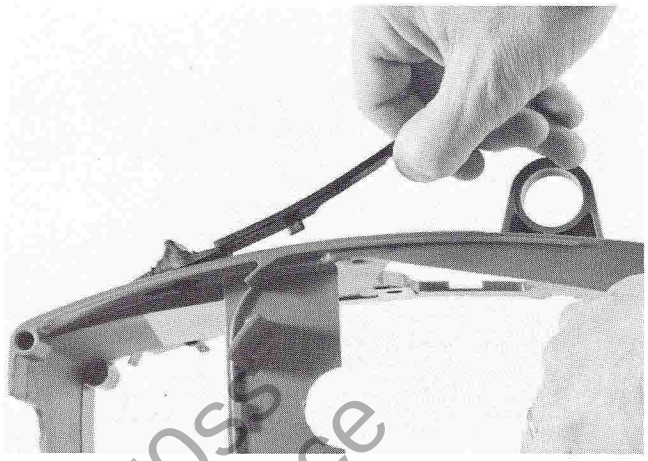


FIGURE 21

Remove the choke by lifting the stem and rotating it away from the housing.

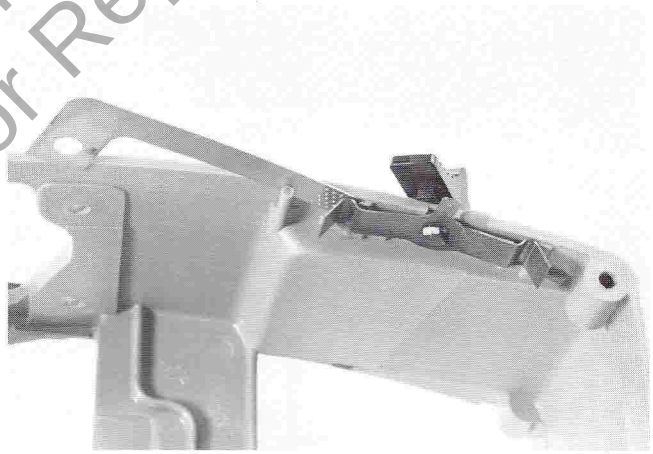


FIGURE 22

To remove the on-off switch, press the spring toward the housing as far as possible. Then rotate the plastic button to the left at a 90° angle to the housing. Lift the button out.

NOTE

When reassembling the switch make sure the ground strap is in position.

240 REASSEMBLY

Using the special instructions given below reverse the disassembly procedure to reassemble the saw.

CRANKCASE AND CYLINDER AREA

FIGURE 23

The piston must be assembled to the connecting rod so that the side shown in Figure 23 is opposite the exhaust port. The top piston ring gap must be opposite the exhaust port. The bottom piston ring gap must be at 90° angle from the top piston ring gap as shown.

1. Install the thrust bearings so that the flat side faces out.
2. Install the bearings with the lettered (or flat) side facing in.
3. Lubricate shaft seals with oil before installing them onto the shaft. After assembling the powerhead, the outer seal surface must be flush with the cylinder and crankcase.
4. Throughly clean the cylinder and crankcase mating surfaces.
5. Apply a film of oil to the cylinder bore before inserting the piston.
6. Apply a very light coat of Silastic sealant (Homelite #24823) to the cylinder and crankcase mating surfaces, including the bearing bore.
7. Assemble the cylinder to the crankcase. Secure but do not tighten the 5 crankcase screws. Gently tap each end of the crankshaft with a plastic hammer. This will establish "end play" in the shaft. The shaft will bind and the saw will not run without crankshaft end play. Tighten all 5 screws.
8. IMPORTANT: Refer to the "Torque Specification Section" before tightening each fastening part.

EXTERNAL ENGINE COMPONENTS

FIGURE 24

Apply grease to the reed valve posts on the manifold. Place the reed valve over the posts. This will hold the reed valve in place when the manifold is installed.

1. Fasten the module to the cylinder before installing the engine into the housing. The spark plug wire is routed under the first cylinder fin, not between the cylinder and engine housing. Install the engine into the housing.
2. The fuel tank must be installed after the engine is placed into the housing and before the rotor is fastened to the crankshaft. The fuel tank "snaps" into the housing. After installing the tank, make sure the fuel line is not pinched between the crankcase and the fuel tank.

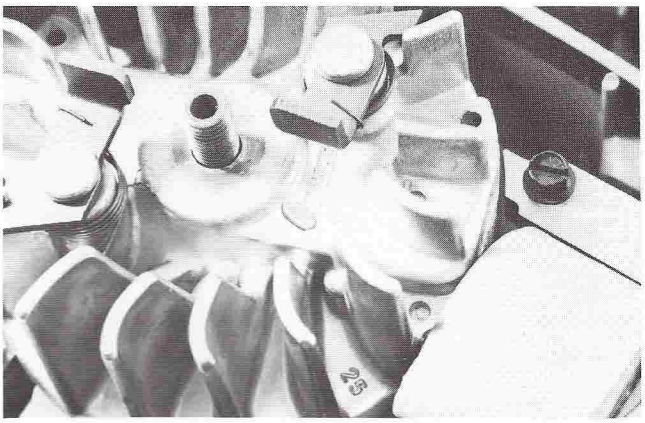


FIGURE 25

The rotor has a "blind keyway." Align the key in the crankshaft with the mark on the top side of the rotor (see Figure).

THROTTLE HANDLE AREA

1. Connect the fuel line to the carburetor and mount the carburetor and air filter support to the manifold with the two Torx head screws. Make sure the carburetor gasket is between the carburetor and manifold. Connect the throttle rod and choke lever to the carburetor.
2. Connect the automatic oil pump. The oil pump is marked "in" and "out" for the oil entrance and exit. The line with the clamp is the outlet line.
3. Place the rear of the throttle handle over the rear isolator. Feed the throttle rod through the throttle handle and the oil pump through the housing opening.
4. Tighten the rear isolator screw and then the top isolator screw. Secure the oil pump and install the filter.

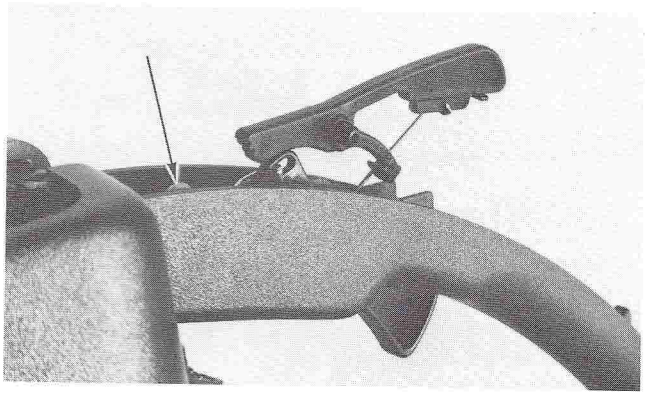


FIGURE 26

Locate the throttle spring on the trigger latch as shown above. When in a relaxed position, the throttle rod should be located at the front of the trigger slot as shown. If it is not as far forward as possible, use a pair of pliers to squeeze the throttle (arrow points to area) rod in order to change it's position.

245 DISASSEMBLY

The Homelite 245 chain saw differs from the 240 chain saw in two areas: the throttle handle and the clutch.

THROTTLE HANDLE DISASSEMBLY

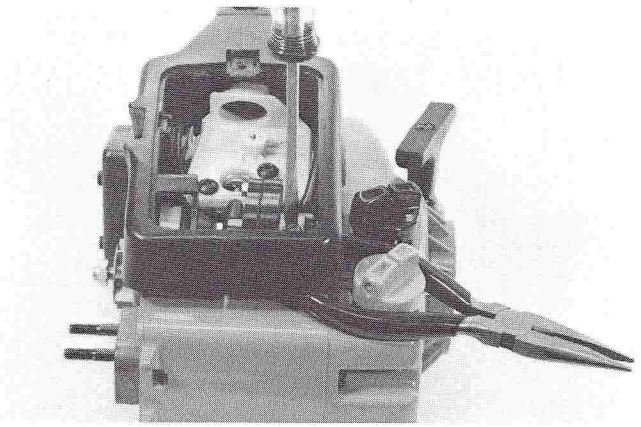


FIGURE 27

Remove the two screws from the top of the handlebar. Push the handle bar forward. Remove the hand guard, the air filter cover and the filter. Support the handle as shown and remove the screw securing the oil pump. Supporting the handle prevents the oil lines from being pinched as downward pressure is applied.

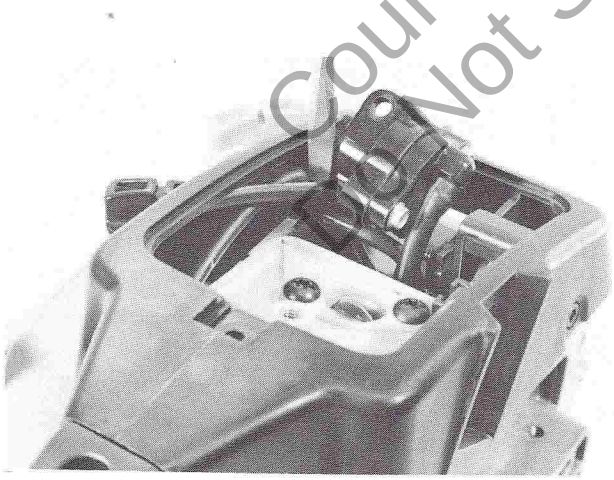


FIGURE 28

Five pieces of rubber tubing are connectd to the automatic oil pump. Only remove the two manual oil pump lines, unless the automatic oil pump is to be completely removed. Remove the lines using a screwdriver as shown.

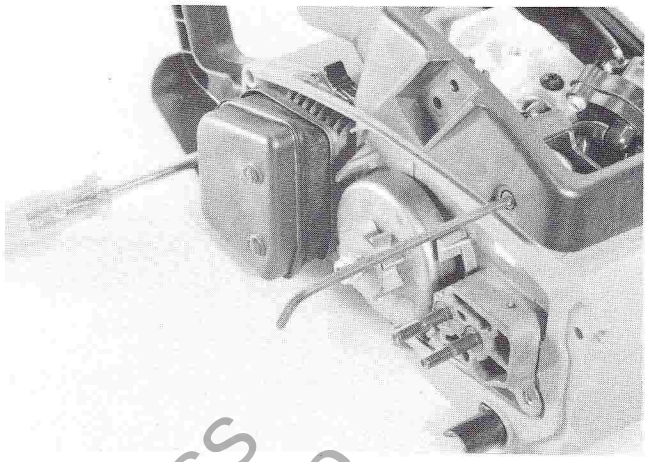


FIGURE 29

Remove the isolator screws using a 5/16" socket and a 5/32" allen wrench.

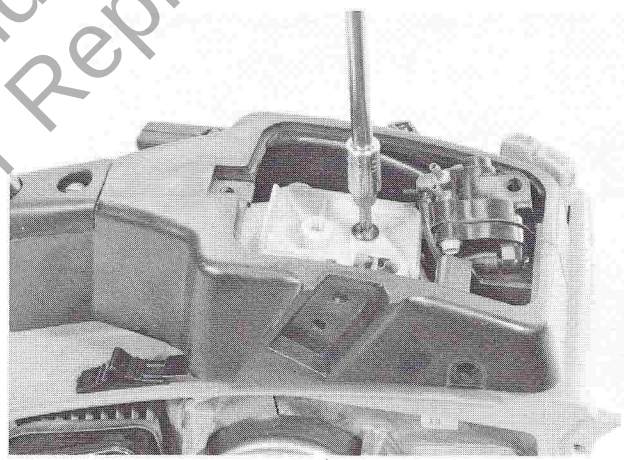


FIGURE 30

Using a Torx bit (Homelite No. 24982-01 or Torx No. TX25) and a 5/16" socket, remove the two screws in the air filter support. Remove the support.

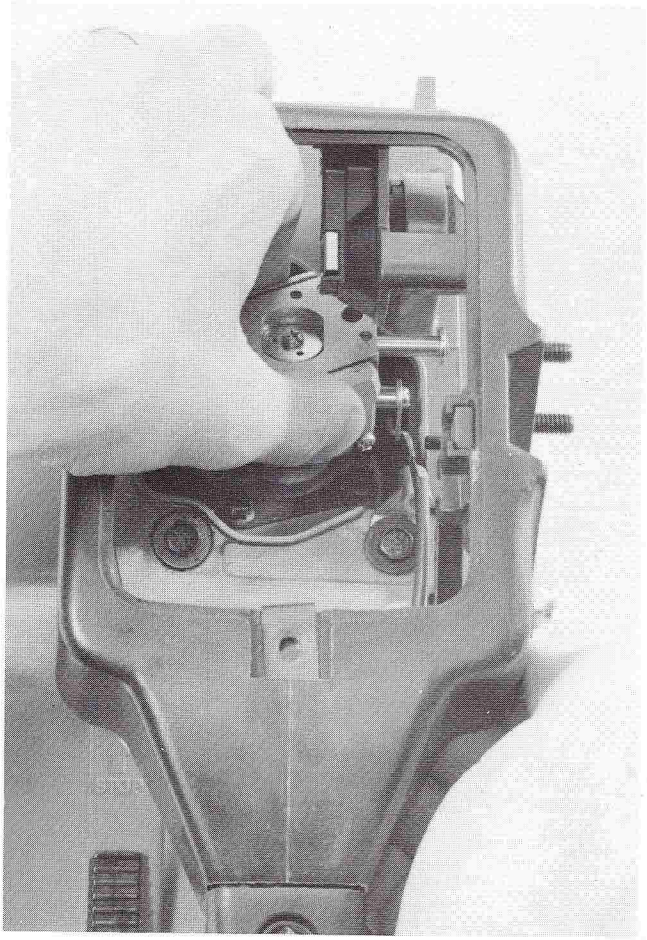


FIGURE 31

Grasp the carburetor with the left hand. From underneath the throttle handle, grasp the throttle cable cover with the right hand. Hold the carburetor tightly and pull the cover away from the carburetor. This should expose enough of the wire cable for removal from the bracket.

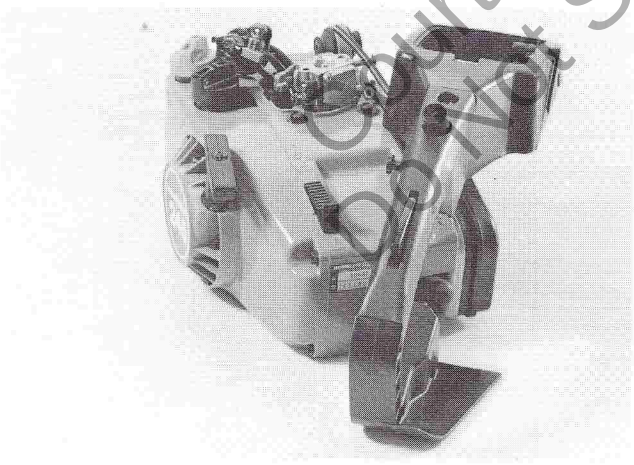


FIGURE 32

Lift the front of the throttle handle off the front isolator. Push the oil pump down through the handle. Grasp the choke and pull it from the carburetor. Remove the throttle cable from the carburetor. Rotate the front of the handle toward the muffler as shown. This will allow the rear of the handle to clear the rear isolator.

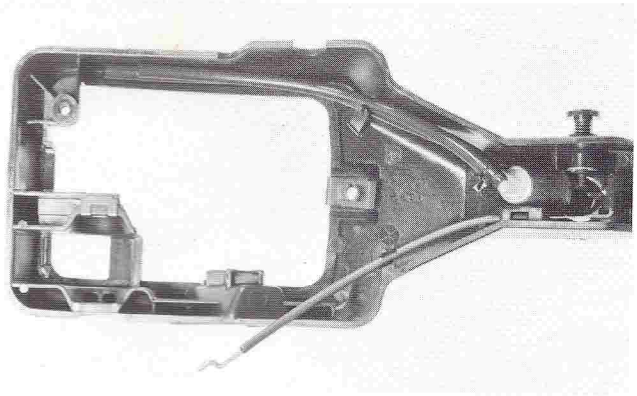


FIGURE 33

This picture shows the proper routing of the throttle cable and oil lines. Note that the cable and oil lines are routed between the handle and the locating posts.

FIGURE 34

To gain access to the throttle latch and the trigger, remove the single screw which holds the cover to the handle. The proper way to assemble the trigger latch and spring is shown here.

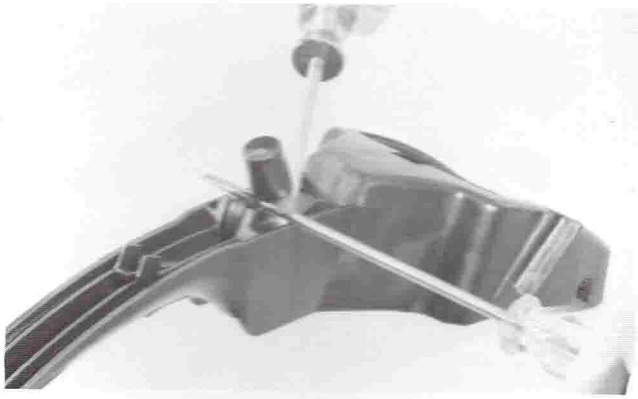


FIGURE 35

To remove the trigger or the oil pump, the oil pump button must first be removed using the method shown above. Remove the clip retaining the throttle lock lever (see Figure 35) and remove the lever. Lift the trigger out of it's cradle and drop it down to remove it from the housing. Disconnect the throttle cable. Remove the nut securing the oil pump and drop the pump down.

245 REASSEMBLY

THROTTLE HANDLE COMPONENTS

Using the special instructions given below reverse the disassembly procedure to reassemble the saw.

1. Thread the cable through the trigger and insert the trigger into the handle from below. Install the throttle lock and oil pump including the pump button.
2. Place the trigger latch and spring into the handle cover. Grasp the latch from the top side of the handle cover. Place the rear end of the cover into the throttle handle first. When placing the cover on the throttle handle a slight resistance will be felt. Snap the cover in place. Install the cover screw. Test all latches at this time.
3. When installing the handle make sure the oil lines and throttle cable are routed behind the locating posts. See Figure 33.
4. After installing the throttle cable and securing the carburetor, make sure that the throttle cable sleeve is pushed back toward the trigger as far as possible. This insures full throttle will be achieved when the trigger is completely depressed. View the carburetor from the starter side and completely depress the throttle trigger. The throttle lever should rotate up until it stops on the carburetor body directly behind the idle adjustment screw.
5. Support the throttle handle when installing the oil pump screw. See Figure 27 .

245 CLUTCH

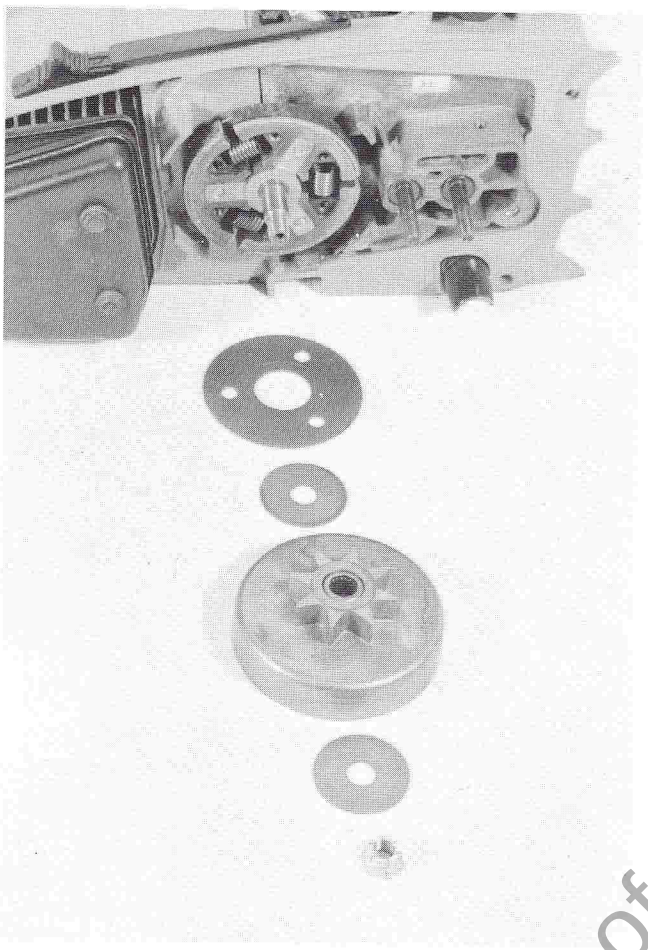


FIGURE 36

Remove the 1/2" nut securing the sprocket to the crankshaft. Pull the sprocket from the shaft.

FIGURE 37

When removing the clutch, hold the crankshaft to keep it from turning. Use the method shown in Figure 6 of the 240 disassembly section to hold the crankshaft. Use a clutch tool (Homelite #A-17770) and a 5/8" socket to remove the clutch as shown. The clutch spider has left hand threads. Turn clockwise to remove.

To replace a clutch shoe or shoes, first assemble the shoes and springs together. Lay the clutch spider flat on a work bench and start one shoe over a spider leg. Then start the remaining two shoes.

NOTE

The clutch spider bore is threaded only halfway through. The half that is not threaded is installed closest to the saw.

IGNITION

TROUBLESHOOTING CHART FOR IGNITION SYSTEM

SYMPTOM: NO SPARK AT THE SPARK PLUG

Possible Cause	Remedy
Spark plug fouled	Clean and regap spark plug.
Electrode gap incorrect	Regap spark plug.
Spark plug wire damaged	Inspect and replace.
Faulty switch	Disconnect switch wire and test for spark.
Rotor air gap incorrect	Regap to .015".

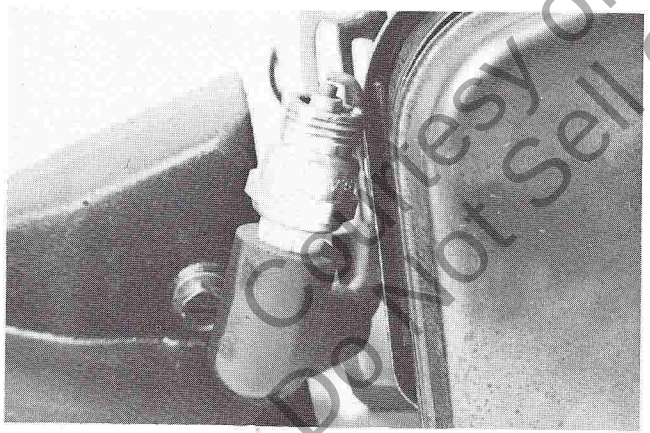


FIGURE 38

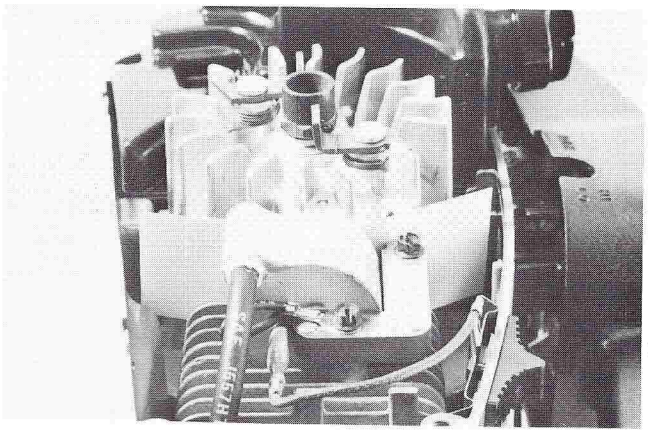


FIGURE 39

NOTE

A solid state module will not produce a spark unless the rotor is turned briskly by the starter assembly. Solid state modules produce an orange "pin-like" spark best seen in the dark.

To set the air gap between the rotor and module (or coil), loosen the two screws that fasten the module to the cylinder. Rotate the rotor magnets away from the module. Place a .015" shim (Homelite #22486) between the rotor and module core. Rotate the rotor so that the magnets are in line with the module core. Retighten the screws. Recheck gap. If a smaller shim (.008 - .012) (Homelite #24306) is used, firmly push the rotor toward the module then tighten the module screws.

To check for ignition spark, first remove the spark plug from the cylinder. Check that the electrode gap is set to .025". Connect the boot assembly to the spark plug terminal. Then lay the spark plug in contact with the muffler as shown. With the ignition switch on, pull the starter rope briskly. A spark should be seen at the spark plug electrode. If not, install a test spark plug and repeat the procedure. A test spark plug can be made by breaking off the side electrode from a new DJ-7J spark plug. If the ignition system can fire a spark across the 1/8" gap, it should fire under compression. If no spark is evident, disconnect the switch lead and repeat test.

EXHAUST SYSTEM

Cylinder fins and fan housing should be cleaned occasionally to prevent engine from running too hot.

The muffler should be kept clean and open, but the saw should never be run without the muffler. If local regulations require use of a spark arrestor screen, check condition periodically, and replace when clogged or deteriorated.

While the muffler is off, check the condition of the cylinder ports (and the piston and rings through the ports). If the ports are clogged, it will be necessary to first put the piston to top dead center, then remove carbon carefully with a wooden scraper. Do not scratch the piston or damage edges of the ports.

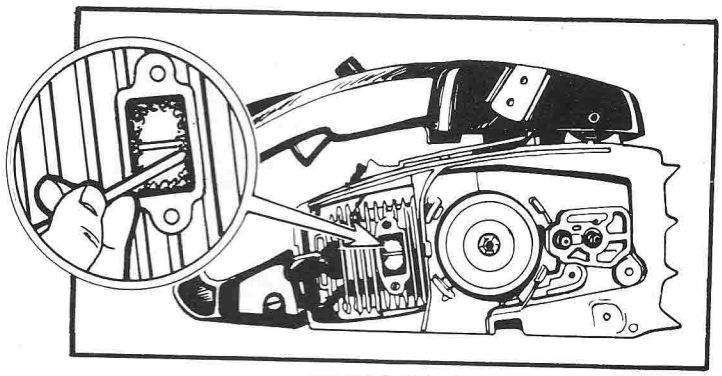


FIGURE 40

CHAIN OILER

MANUAL OIL PUMP TROUBLESHOOTING CHART

NO OIL OUTPUT

Possible Cause	Remedy
Oil filter plugged	Remove and clean
Hole in one of the oil pick up lines	Replace line
Blockage in oil suction or discharge lines	Flush complete system
Manual oil pump failure	Replace pump

DIAPHRAGM PUMP TROUBLESHOOTING CHART

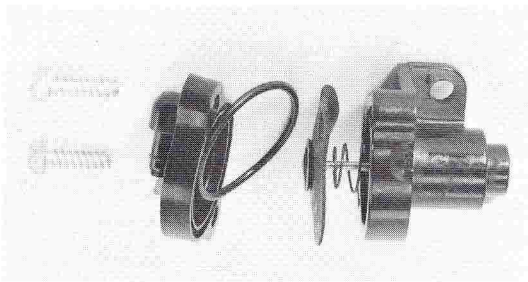


FIGURE 41

NO OIL OUTPUT

Possible Cause	Remedy
Oil weight too heavy	Replace with Homelite Bar and Chain Oil.
Atmospheric vent in oil pump plugged.	Remove and clean.
Diaphragm torn or deteriorated	Replace diaphragm.
Diaphragm loose on plunger	Replace diaphragm.
Exit hole at guide bar pad plugged	Remove bar and clean exit hole.
Oil hole in guide bar plugged	Remove bar, clean groove and oil hole.
Diaphragm plunger too short	Correct measurement is .620-.630 (.625=5/8") (15,7-16,0 mm).
No spring action in check valve (diaphragm does not spring back when depressed and released).	Replace oil pump.
Dirt in oil system	Flush with solvent.
Oil line not connected to tube fitting in crankcase	Reconnect.
Pulse line blocked, damaged or collapsed	Clean or replace.
Oil pump cover warped allowing a pulse leak	Replace cover.
Oil pump cover "O" ring damaged	Replace O-ring.
Duck bill check valve in oil tank or cap plugged.	Clean or replace valve

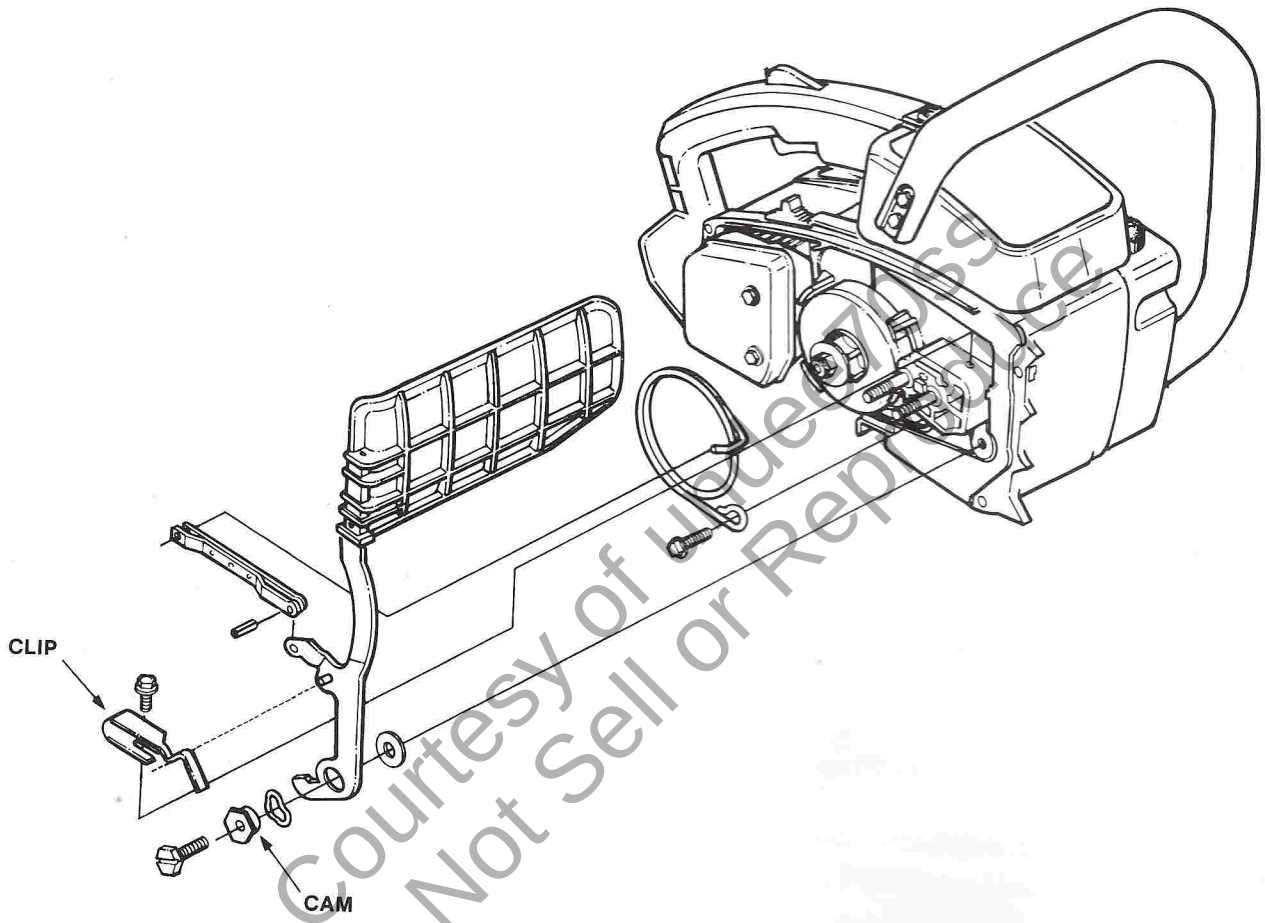
LOW OIL OUTPUT

Oil weight too heavy	Replace with Homelite Bar and Chain Oil.
Oil filter restricted	Remove, clean and reinstall.
Hole in oil pick up line	Replace line.
Diaphragm plunger too long (longer than .630") (16,0 mm)	Replace or shorten.

HIGH OIL OUTPUT

Oil weight too light	Replace with Homelite Bar and Chain Oil.

CHAIN BRAKE



CHAIN BRAKE MAINTENANCE

WARNING

The chain brake mechanism should be serviced only by an authorized Homelite servicing dealer or service center. The chain brake should be included in a 50-hour sevice check-up of the saw.

1. The brake mechanism and nearby surfaces should be cleaned. Then a careful inspection of the brake should be made before each period of use. Pay particular attention to the critical areas of wear. They are the pivot points, the clutch drum surface, and the brake bands. Any detectable wear should be brought to the attention of your authorized serviceman.
2. Before each period of use make this test of the brake's ability to stop chain rotation.
   a. Idle the engine. Then push the brake hand guard forward into the braked position.
   b. With the chain in the clear, accelerate the engine. The chain brake MUST be able to hold the chain from turning.

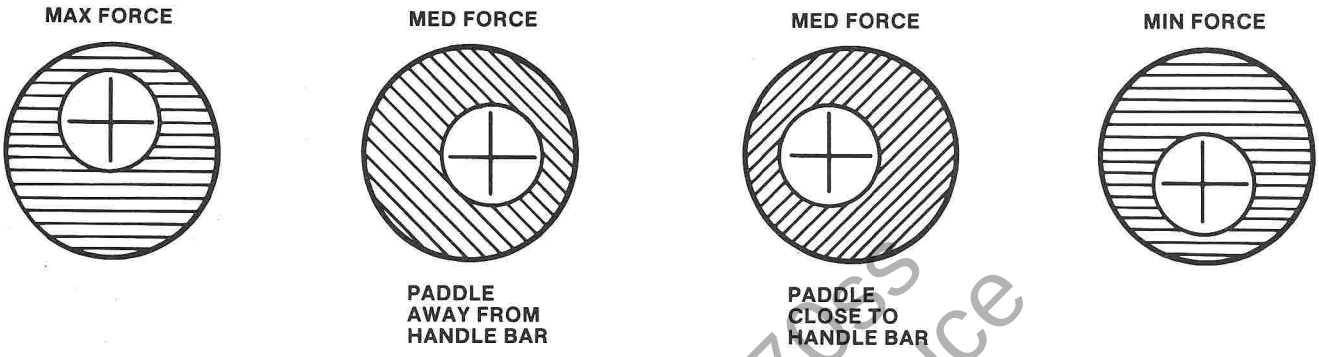
NOTICE

The above test merely indicates whether the chain can be stopped, not how long it takes to stop it. There is no test available to assure effectualness of a chain brake.

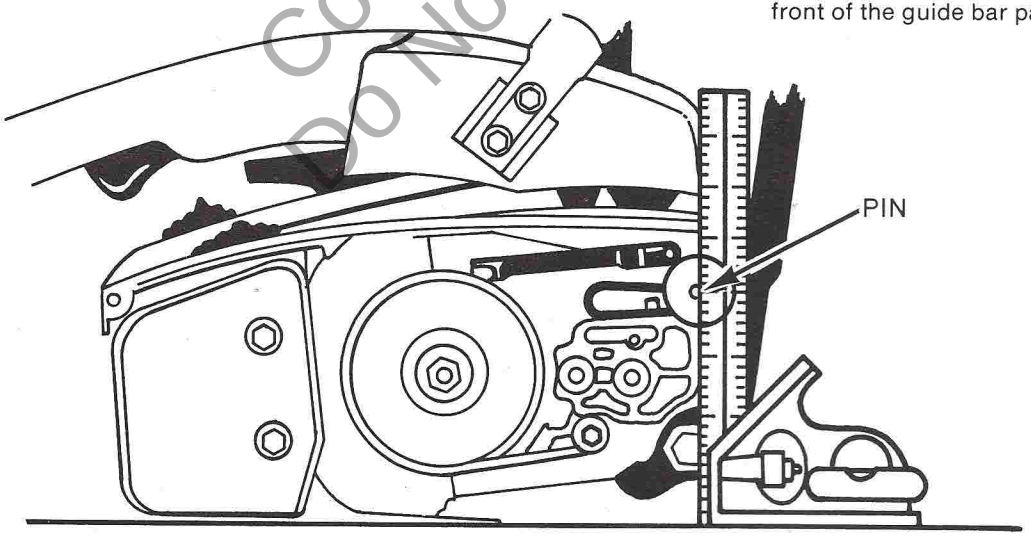
CHAIN BRAKE ADJUSTMENTS

The actuating force and the distance between the handle bar and the chain brake are adjustable. Adjustments are made by rotating the brake lever cam. the sketches below show the cam in four positions. Dimensions are somewhat exaggerated and the hexagon head is omitted to show the cam positions clearly.

At MAX FORCE and at MIN FORCE adjustments, the paddle-to-handle distance is identical. As shown by the two center sketches, intermediate actuation forces may be selected with the paddle moving away from, or toward the handle bar. To change paddle location, or to change actuating force, study the sketches and rotate the cam accordingly. Force adjustment range is about 1 1/2 pounds (0,7 kg). Distance adjustment range is approximately .22 inch (5,5 mm).



After cam adjustments have been made, it may be necessary to adjust the retaining clip. Sliding the clip forward toward the front of the engine decreases the brake band diameter. Accordingly, this adjustment also can be used to control clearance between the brake band and the clutch drum. Normal factory adjustment locates the lock pin of the brake lever arm on a vertical line, tangent to the front of the guide bar pad as shown below.



ENGINE TROUBLESHOOTING

TROUBLESHOOTING CHART

ENGINE FAILS TO START OR STARTS WITH DIFFICULTY

Possible Cause	Remedy
1. No fuel in tank	Fill with clean, fresh fuel mix.
2. Switch not on	Push to "RUN" position.
3. Stale fuel	Fill with clean, fresh fuel mix.
4. Flooded engine	Remove and clean spark plug.
5. No spark	Refer to ignition section for spark check.
6. Spark plug fouled	Clean and regap spark plug.
7. Crankcase seals leaking	Replace seals.
8. Low compression	Overhaul engine.
9. Exhaust port plugged	Clean exhaust ports.
10. Improper carburetor adjustment	Adjust carburetor (refer to owners manual).
11. No fuel on spark plug	Fuel not flowing through carburetor.

FUEL NOT FLOWING THROUGH CARBURETOR

Possible Cause	Remedy
1. Inlet needle stuck	Disassemble and clean carburetor. Oil needle before reassembly.
2. Pulse passage blocked	Clean pulse passage through manifold and carburetor. Check orientation of carburetor and manifold gasket.
3. Dirt in carburetor	Disassemble and clean.
4. Fuel filter plugged	Throughly clean or replace filter.
5. Fuel line kinked	Check routing of fuel line.
6. Torn fuel pump diaphragm	Replace diaphragm.
7. Leaking fuel fitting	Replace fitting.
8. Leaking fuel pump gasket	Replace gasket.
9. Atmospheric vent on fuel pump cover plugged	Clean cover.

Engine Troubleshooting continued on next page.

ENGINE MISSES UNDER LOAD

Possible Cause	Remedy
1. Spark plug fouled	Clean and regap spark plug.
2. Improper spark plug gap	Regap spark plug.
3. Too much fuel at high speed	Adjust carburetor.
4. Ignition system shorting out	Refer to repair manual (Homelite #23855-5) for troubleshooting.
5. Spark plug wire broken	Replace.
6. Incorrect rotor air gap	Adjust air gap.
7. Ignition failure	Refer to ignition section for spark check.

ENGINE LACKS POWER

Possible Cause	Remedy
1. Restricted air filter	Clean air filter.
2. Air leak in engine	Check crankshaft seals.
3. Restricted muffler, exhaust port or spark arrestor screen	Clean throughly.
4. Low compression	Overhaul engine.
5. Choke partially closed	Check lever position.
6. Carburetor needs adjusting	Adjust carburetor (refer to owners manual).
7. Too much oil in fuel mixture	Fill with clean, fresh fuel mix. Refer to owners manual.

ENGINE WILL NOT IDLE STEADY

Possible Cause	Remedy
1. Low idle speed	Re-adjust
2. Carburetor needs adjusting	Adjust carburetor (refer to owners manual).
3. Air leak in engine	Check for leaks, repair.
4. Spark plug fouled	Clean and regap spark plug.
5. Leaking inlet needle	Clean carburetor needle and seat.
6. Plugged exhaust system	Inspect and clean.
7. Dragging clutch	Inspect and replace as required.
8. Air leak in pulse system of the automatic oil pump	See Pump Troubleshooting.

ENGINE STARTS AND RUNS BUT DIES OUT WHILE CUTTING

Possible Cause	Remedy
1. Vent valve in fuel tank or cap restricted	Clean or replace.
2. Stale fuel causing vapor lock	Fill tank with clean, fresh fuel mix.
3. Air leak in engine	Check seals.
4. Fuel line too short inside tank	Fuel line must be routed properly. Proper length is 6 1/2". (2.43" outside tank)
5. Fuel filter hung up in tank	Filter must reach the tank bottom. Reposition.
6. Carburetor needs adjusting (too lean)	Adjust carburetor (refer to owners manual).
7. Ignition failure	Refer to ignition section for spark check.

ENGINE RUNS RICH OR FLOODS

Possible Cause	Remedy
1. Spark arrestor, muffler or exhaust port restricted	Clean throughly.
2. Restricted air filter	Clean or replace
3. Carburetor inlet needle stuck open	Clean needle and seat.
4. Inlet needle lever too high	Reset according to repair manual (Homelite #23855-5).
5. Choke partially closed	Check lever position.
6. Reed valve damaged or not aligned	Check reed condition and location.

ENGINE RUNS TOO HOT

Possible Cause	Remedy
1. Starter housing air inlets restricted	Remove and clean housing thoroughly.
2. Cylinder fins plugged with dirt	Clean fins throughly.
3. Stale fuel causing vapor lock	Fill tank with clean, fresh fuel mix.
4. Carburetor needs adjusting	Adjust carburetor (refer to owners manual).
5. Spark plug heat range incorrect	Install proper spark plug.
6. Air leak in engine	Check seals.
7. Improper amount of oil in fuel mixture	Fill tank with clean, fresh fuel mix, Check owners manual for proper ratio.

TORQUE SPECIFICATIONS

NOTE

Torque values are given in inch-pounds and Newton meters (Nm).

Size & Type	Length (mm)	Qty.	Application	Torque Limits in.-lbs.	Nm
*Guide bar bolts		2	to crankcase	100-130	11,3 - 14,7
*8-32 x 5/8"	16	4	carburetor adaptor to crankcase	20-30	2,3 - 3,4
10-24 x 1 1/8"	29	5	cylinder to crankcase	60-75	6,8 - 8,5
10-24 x 5/8"	16	1	chain stop to engine housing	20-30	2,3 - 3,4
10-24 Hex nut		1	isolator to engine housing	20-30	2,3 - 3,4
10-24 x 5/8"	16	4	engine housing to crankcase	45-60	5,1 - 6,8
Spark plug		1	to cylinder	120-180	13,6 - 20,3
5/16-24 Guide nut		1	rotor to crankshaft	100-150	11,3 - 16,9
8-32 x 7/8"	22	2	module to cylinder	30-40	3,4 - 4,5
#10 Plastite		1	pulley to starter housing	40-50	4,5 - 5,6
Sqare nut		1	handle bar & isolator to starter housing	40-50	4,5 - 5,6
#10 Plastite		4	starter housing to engine housing	40-50	4,5 - 5,6
Clutch		1	to crankshaft	100-150	11,3 - 16,9
5/16-24 Nut		1	sprocket to crankshaft	75-100	8,5 - 11,3
10-24 x 2"	51	2	muffler to cylinder	60-70	6,8 - 7,9
1/4-20 Hex nut		2	drivecase cover to crankcase	100-125	11,3 - 14,1
10-24 x 1 5/8"	41	2	carburetor to carburetor adapter	20-30	2,3 - 3,4
10-24 x 1 3/4"	44	1	front isolator to carburetor chamber	40-50	4,5 - 5,6
*10-32 x 3/8"	10	1	shear isolator to carburetor chamber	40-50	4,5 - 5,6
#10 Plastite		1	handle cover to carburetor chamber	40-50	4,5 - 5,6
#8 Plastite		2	oil pump cover to oil pump body	5-15	0,6 - 1,7
#10 Plastite		1	oil pump to carburetor chamber	20-30	2,3 - 3,4
Shoulder screw #10-24		1	Air filter to filter cup	15-25	1,7 - 2,8

Size & Type	Length (mm)	Qty.	Application	Torque Limits in.-lbs.	Nm
Shoulder screw #10-24		1	air filter cover to carburetor cover	20-30	2,3 - 3,4
10-24 x 1 1/8"	29	2	handle bar to carburetor chamber	40-50	4,5 - 5,6
*1/4-20 x 5/8	16	1	brake lever to crankcase	40-50	4,5 - 5,6
*10-24 x 5/8"	16	1	brake band to crankcase	30-40	3,4 - 4,5
*10-24 x 3/8"	10	1	retaining clip to crankcase	30-40	3,4 - 4,5
10-24 x 1/2	13	2	bumper spike to engine housing	25-35	2,8 - 4,0
			245 SAWS		
Nut		1	manual oil pump to carburetor chamber	15-25	1,7 - 2,8
#10 Plastite		1	handle cover to carburetor chamber	40-50	4,5 - 5,6
Shoulder screw #10-24		1	air filter to filter base	15-25	1,7 - 2,8
Shoulder screw #10-24		1	hand guard to carburetor chamber	5-10	0,6 - 1,1

*Require fastener compound, Homelite part number 23488-C.

ENGINE SPECIFICATIONS

Engine firing timing angle	25° BTDC (before top dead center), not adjustable.
Compression	Low 130 PSI (8,95 bars) high 160 PSI (11,0 bars) - Taken from a new HOT engine, below 90 PSI (6,2 bars) indicates a problem.*
Bore	1 9/16" (39, 70 mm)
Stroke	1 1/4" (31,75 mm)
Displacement	2.4 cu. in. (39.3 cm^3)
Speed	7500 rpm cutting, 2,500 - 3,000 rpm idle, 11,000 - 12,500 no load (approximate)
Spark plug	Champion DJ-7Y (Homelite #96169-S)
Rotor air gap	.015 (0,4 mm)
Spark plug gap	.025 (0,6 mm)
Crankshaft end play	.003 min., .042 max. (new engine) (0,1 - 1,0 mm)
Ring gap	.003 - .017 (0,1 - 0,5 mm)

*Compression pressures are to be taken on a hot engine with both the choke and the throttle wide open. Crank the engine until maximum pressure is observed on the compression gauge dial (until gauge needle resches its peak).

HOMELITE DIVISION OF TEXTRON INC.
P.O. Box 7047 14401 Carowinds Boulevard
Charlotte, North Carolina 28217

HOMELITE TEXTRON

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