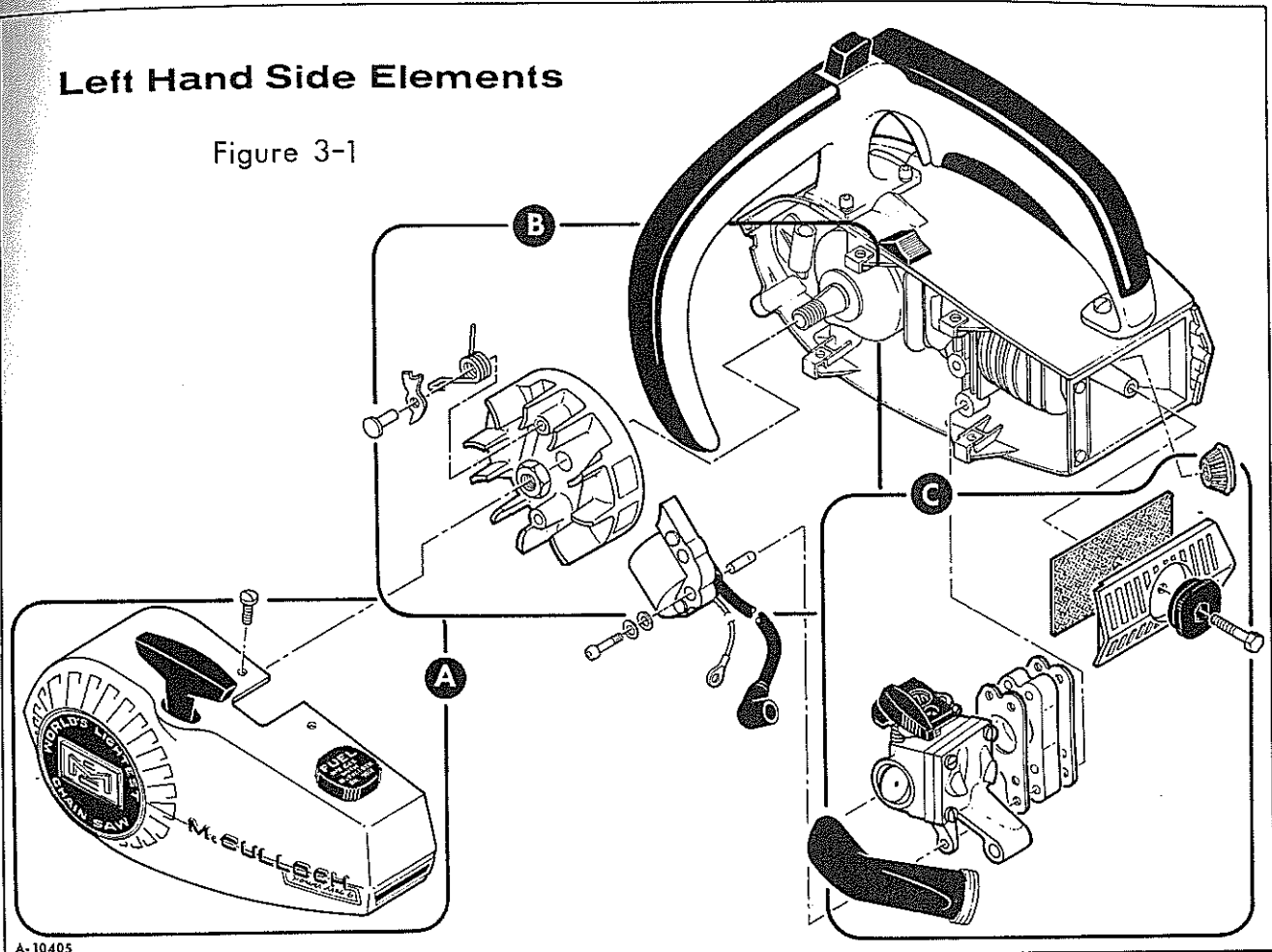


## Section Three - Left Hand Side Elements

### Left Hand Side Elements

Figure 3-1



This section covers service of (A, Figure 3-1) the fan housing including the starter and fuel tank, (B) the ignition system including the flywheel, coil and lamination, breaker points and condenser and (C) the air filter and carburetor.

### FAN HOUSING, STARTER & FUEL TANK

The fan housing contains the starter assembly and fuel tank. It is attached to the saw by six screws. On units equipped with an anti-sag handle strap, one of the six screws attaches the strap to the fan housing and bottom shroud. When reinstalling the fan housing, make sure the six nuts in the nut pockets of the top and bottom shroud are present and undamaged. Tighten the six screws securely before starting the engine.

**NOTE:** Before disassembling the starter assembly or working on the fuel tank, remove the fuel cap and drain the fuel tank. This will prevent fuel leakage through the black rubber fuel fitting.

### STARTER

A redesigned starter drum, spring and housing were installed beginning in August, 1969. For interchangeability and rework, see page 30.

#### DISASSEMBLY

1. Grasp the rope between the drum (3, Figure 3-2) and rope guide (9) in the housing with a needle nose pliers (Figure 3-3). Pull enough rope off the drum so that the drum turns enough for the rope to fit into the cutout in the drum. Hold the rope so as to clear the ratchet and let the drum turn counterclockwise under spring pressure until spring pressure is gone.
2. Remove the screw (1) and tang washer (2).
3. Carefully lift the drum off of the spring and out of the housing. Be careful that the spring does not come with the drum. The spring is still under tension even though the drum is slack.
4. To replace the starter rope, follow these instructions:

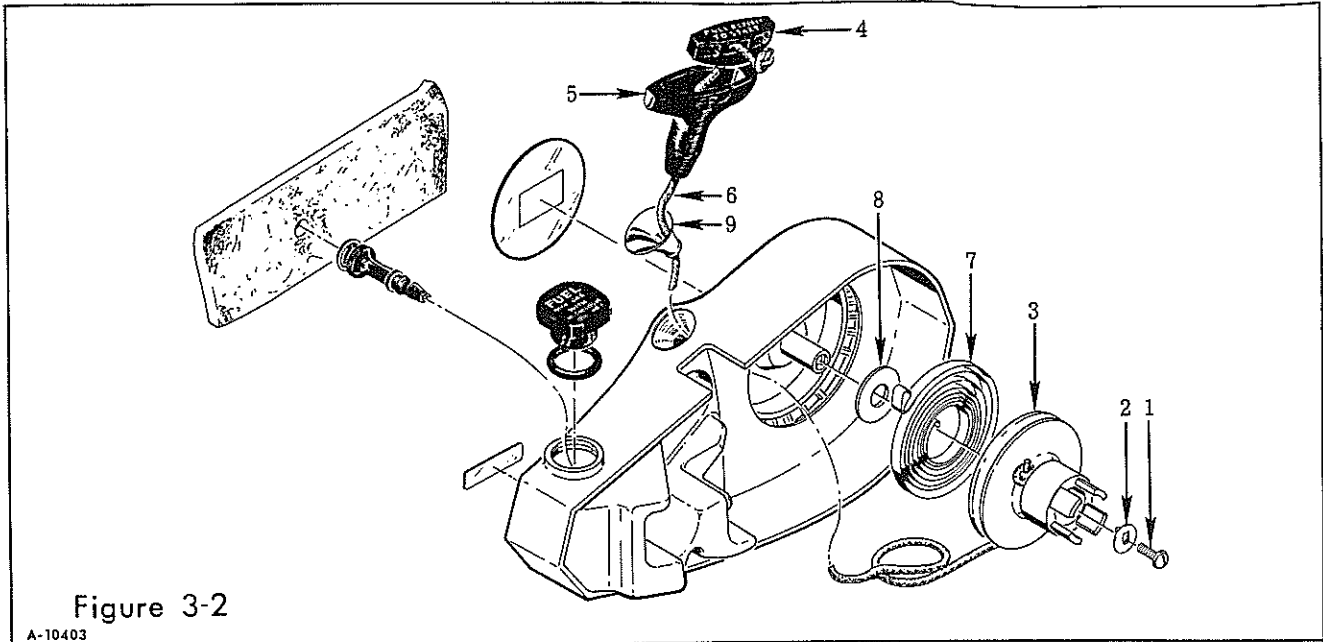


Figure 3-2

A-10403

- a. Pry the rope insert (4) out of the handle (5) with a screwdriver. Cut the old rope (6) below the handle and pull the cut end out through the handle and the insert. Unwind the rope from the drum and pull the other knotted end out through the side of the drum.
- b. Feed the new rope through the small hole on the ratchet side of the drum (Figure 3-4).
- c. Knot the end of the rope and coat it with a sealant (Pliobond or similar gasoline resistant sealant).
- d. Feed the other end of the rope out through the rope guide in the fan housing and through the handle and insert. Knot the end of the rope and coat it with sealant. Pull the knot back inside the insert and force the insert into the handle.

5. Carefully remove the spring (7). Do not let it fly free from the housing. The drum washer (8) can now be removed. If it is necessary to remove the rope guide (9), pry it out with a screwdriver.
6. Do not attempt to remove the shield which is riveted to the housing.

#### SERVICING THE STARTER

##### a. Starter Rope

The starter rope should be approximately 33-1/2 inches long. The rope will stretch a few inches with use. If the rope is less than 29-1/2 inches long, install a new rope. If it is more than 34 inches, cut off the excess rope.

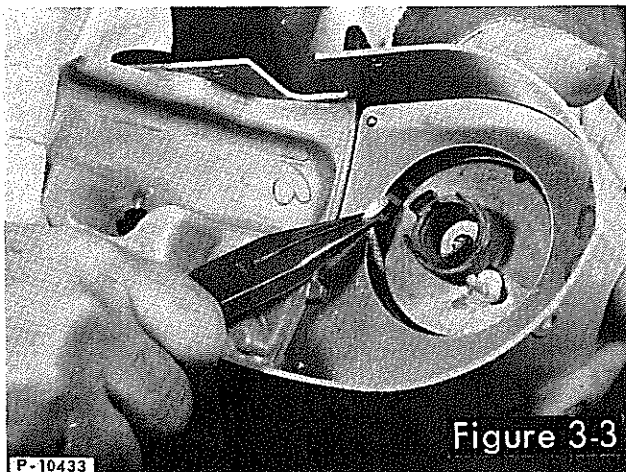


Figure 3-3

P-10433

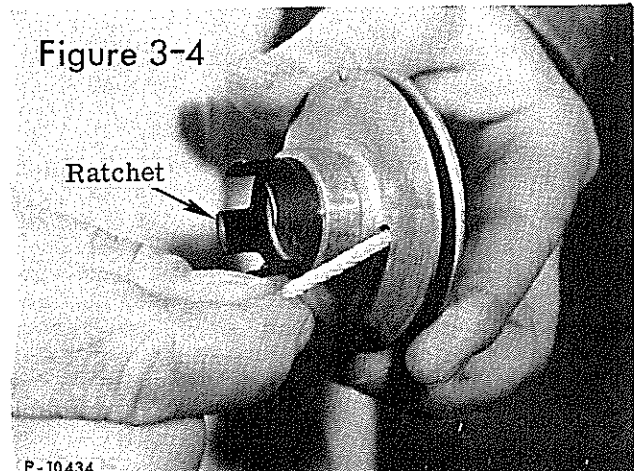


Figure 3-4

P-10434

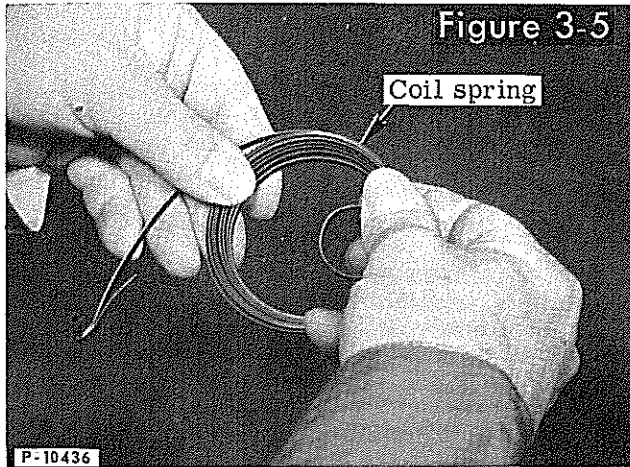
b. Starter Spring

If the spring is damaged, weak, kinked or has a sharp bend at any point except at the ends, install a new spring. Place the drum on the shaft and check its fit. If the fit is sloppy or if the drum is cracked or otherwise damaged, install a new drum.

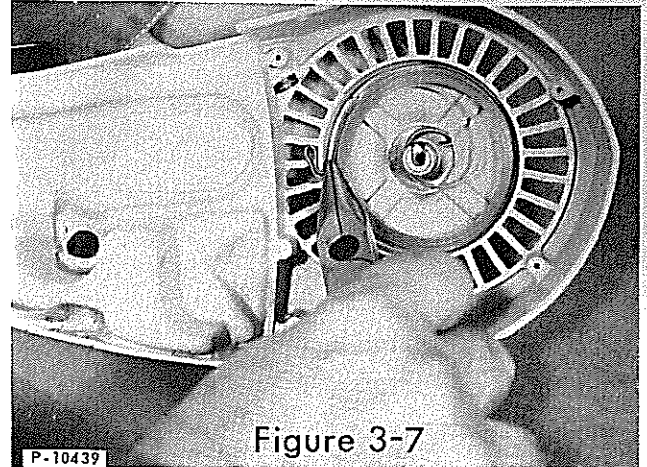
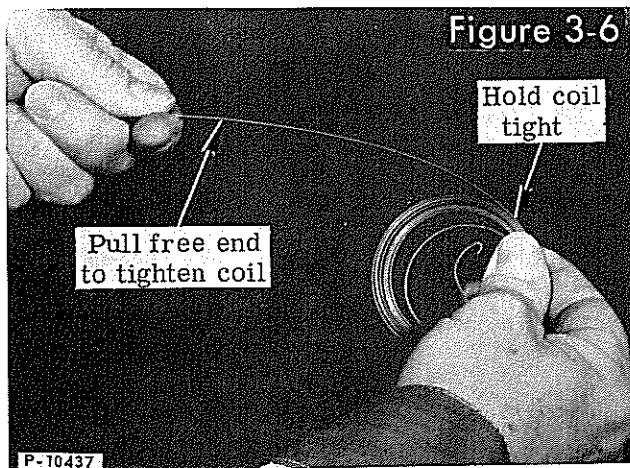
ASSEMBLY

1. Lightly tap the rope guide into the housing with a hammer.
2. Place the drum washer on the shaft inside the housing.

NOTE: If you are installing an old spring, follow paragraph 3. If you are installing a new spring, follow paragraph 4.



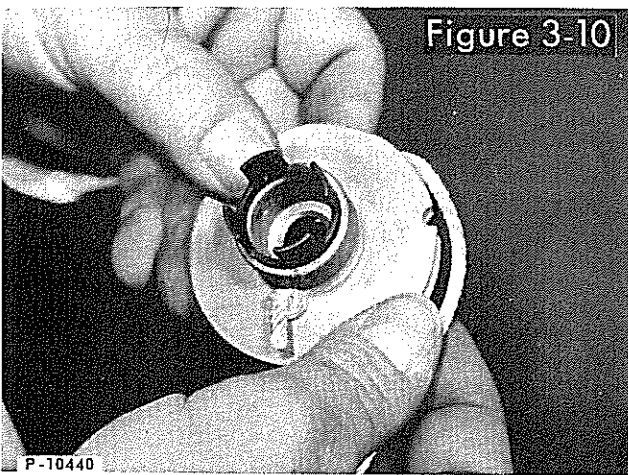
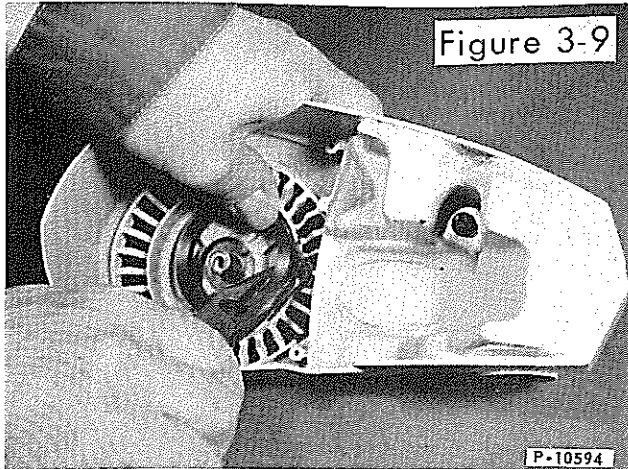
3. Coil the spring in your right hand (Figure 3-5). Grasp the free end and pull it out while holding the inner end so as to make the coil smaller (Figure 3-6). Rewind the spring onto the coil without letting the coil expand. Continue pulling and rewinding until the coiled spring is smaller than the housing opening. Grasp the coiled spring with a needle nose pliers



opposite the outer loop. Insert the coiled spring into the housing and press the loop into the slot in the housing. (This is shown in Figure 3-7 which shows the shield removed for clarity.) Carefully release the spring so that it remains coiled in the housing.

4. New springs come coiled in a keeper (Figure 3-8). Grasp the spring and keeper with a needle nose pliers near the outer loop of the spring. Insert the spring and keeper into the housing with the outer loop of the spring fitting over the slot in the housing (Figure 3-9 - the shield is removed for clarity). Allow the keeper to slip off the outer loop as you push the loop into the slot. Remove the rest of the keeper from the spring, keeping the spring coiled in the housing. If a new spring doesn't have a keeper or comes off the spring, follow the instructions in paragraph 3 above.
5. Adjust the inner loop of the spring so that it is about a quarter inch away from the shaft.
6. Hold the ratchet side of the drum toward you and wind the rope clockwise onto the drum (Figure 3-10). Put the drum on the shaft in the housing. It is not necessary to have the rope completely wound on the drum but try to have as much rope on the drum as possible. Turn the drum back and forth on the shaft





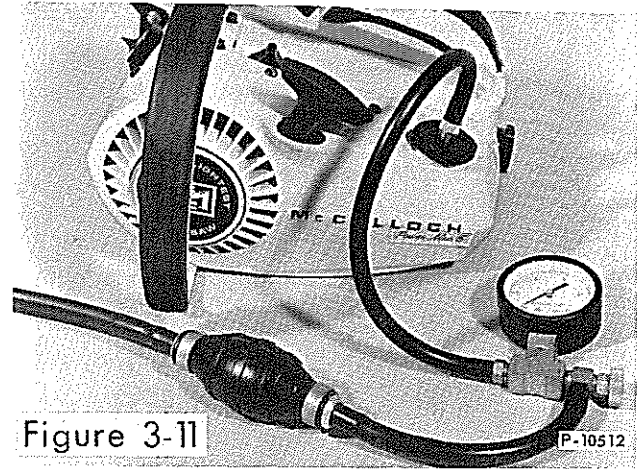
until the inner spring loop fits into the slot in the drum.

7. Install the tab washer with the tab down. Put a drop of Loctite on the screw and install the screw.
8. Pull up on the slack of the rope between the drum and rope guide with the needle nose pliers and catch the rope in the cutout in the drum. Pull the drum around clockwise one or two turns and release the rope. If the handle is not pulled into the rope guide by the spring, continue to turn the drum clockwise until, when the rope is released, the handle is pulled into the rope guide.

## FUEL SYSTEM PRESSURE TESTS

### a. If Fuel System Leaks

The fuel system can be pressure tested with the parts contained in the Pressure Test Tool Kit, P/N 68916 and Pressure Test Tool, P/N 62849. Follow the instructions which accompany the kit for assembling the parts of the kit.



### FUEL SYSTEM TO CARBURETOR INLET NEEDLE

This test is performed with the fan housing installed on the saw.

1. Remove the fuel cap. Take the "O" ring off the fuel cap and install it on the pressure test fuel cap. Install the test fuel cap and pressure tool as shown in Figure 3-11.
2. Pump up pressure until the gauge reads 5 PSI.
3. If the system will pressurize to 5 PSI, the system is tight to the carburetor inlet needle. If the system will not pressurize to 5 PSI, perform the following tests to locate the source of leakage.

### FUEL TANK & FUEL CAP TESTS

This test is performed with the fan housing removed from the saw.

1. Install the tubing connector over the black rubber fuel fitting and connect the pressure tool as shown in Figure 3-12.
2. Pump up pressure until the gauge reads between 1/2 and 3 PSI.

