McCULLOCH

# SERVICE BULLETIN #1123

SUBJECT **ELIMINATING IGNITION TROUBLE**

MODEL **1-71, 1-81, 1-81HD** DATE **2/15/61**

Reports have been received regarding hard starting and erratic ignition systems on Model 1-71, 1-81 and 1-81 HD engines. Tests and analysis show that these troubles can be traced to one or more of the following (listed in order of importance):

1. Dirt or oil on the breaker points.
2. Incorrect breaker point gap.
3. Dirt causing high resistance in electrical connections.
4. Breaker points or primary wire shorting.

The following steps will reduce or eliminate these troubles:

1. Remove the breaker points, felt wiper and the breaker terminal insulator.
2. Drill a 0.125-inch (0.318 CM) diameter hole in the side of the breaker box. Locate the hole as shown in figure 1.

   NOTE: Do not damage the interior of the breaker box and the crankshaft oil seal when drilling.

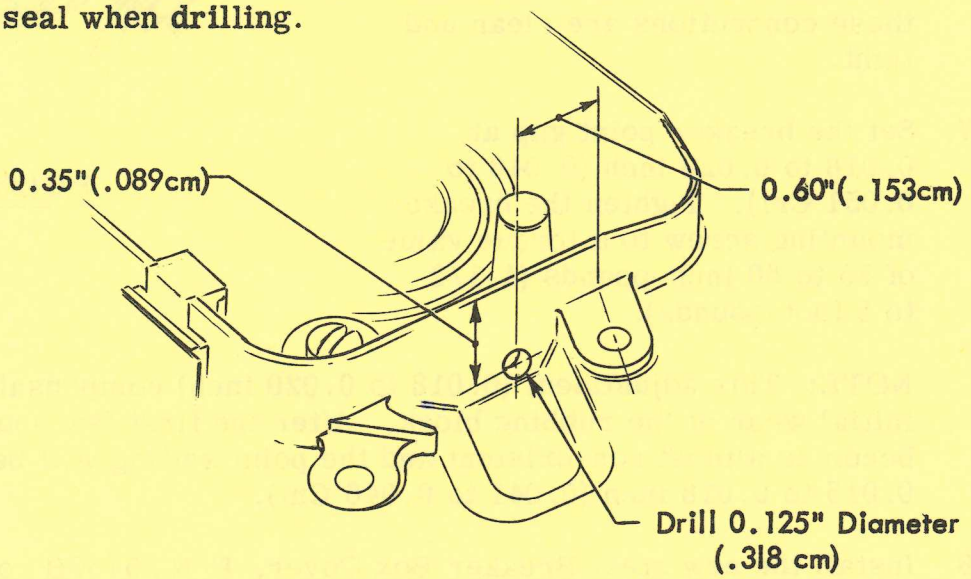



FIGURE 1

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3. Blow out the drill chips and use gasoline or thinner to wash all the dirt and oil from the breaker box.

4. Install a new Felt Washer, P/N 54184.

CAUTION

Do not oil the wiper felt as the excess oil can cause fouling of the breaker points.

5. Install the new Breaker Assembly, P/N 55768, with an oval shaped Lock Washer, P/N 57767, between breaker mounting screw and t he breaker assembly base (see figure 2).

CAUTION

The new breaker assembly has the rubbing block made of brown phenolic. Do not use a breaker assembly with a black rubbing block as this material wears rapidly and bits can get on the points and short them out.

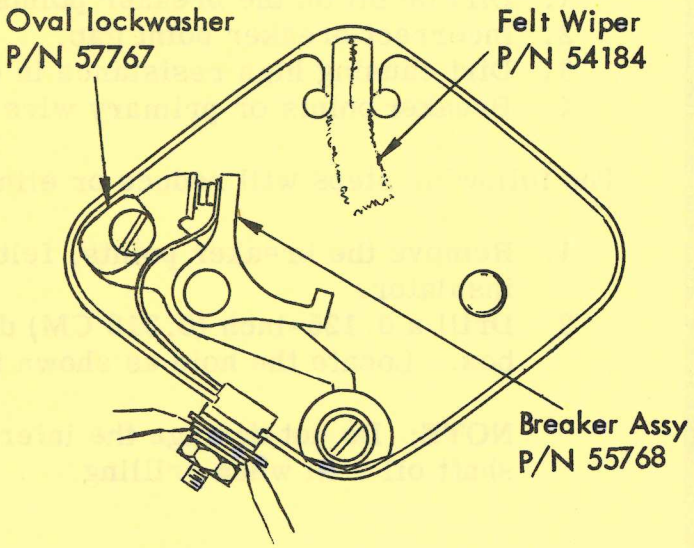



FIGURE 2

6. Place a new Insulator, P/N 55782, on the breaker assembly terminal and attach the coil and condenser leads. Be sure that these connections are clean and tight.

7. Set the breaker point gap at 0.018 to 0.020 inch (0.046 to 0.051 Cm). Tighten the breaker mounting screw to a torque value of 55 to 60 inch-pounds (4-1/2 to 5 foot-pounds).

NOTE: This adjustment (0.018 to 0.020 inch) compensates for the initial wear of the rubbing block. After the first few hours t he wear becomes almost non-existent and the point setting will be approximately 0.016 to 0.018 inch (0.041 to 0.046 Cm).

8. Install the new steel Breaker Box Cover, P/N 55766B, on the breaker box using two Cover Retaining Clips, P/N 55977, and three of the four cover attaching screws. The screw to the right of the hole drilled in Step 2 is not installed at this time.

NOTE: If the saw was equipped with plastic breaker box cover, P/N 55766, the new steel cover should be used in place of it and it should be installed with two cover clips, P/N 55977. The clamps which attached the plastic cover, can be discarded. Use Lockplate, P/N 36388, under the upper center attaching screw.

9. Place the Breather Felt, P/N 50664, against the hole drilled in the side of the breaker box. Install the Felt Retainer, P/N 57815, on top of the felt with two cover attaching screws (see figure 3).

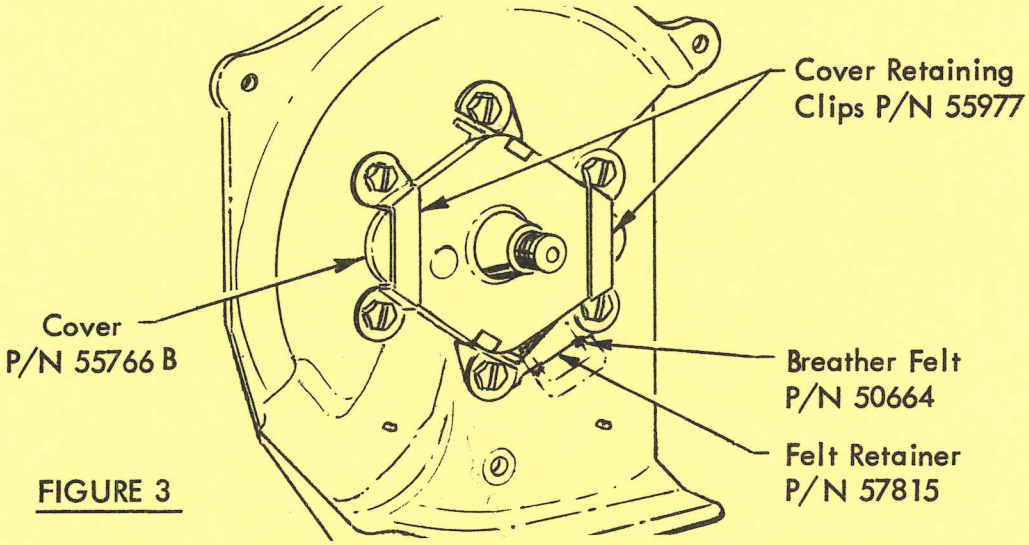



FIGURE 3

10. Tighten the cover attaching screws to a torque value of 60 to 65 inch-pounds (5 to 5-1/2 foot-pounds).

11. Remove the screw holding the condenser to the end cover. Clean the contact surfaces of both the end cover and the condenser tab. Re-install the condenser with star lock washer, P/N 101194, inserted between the end cover and the condenser tab (see figure 4). Tighten the screw to a torque value of 30 to 35 inch-pounds (2-1/2 to 3 foot-pounds).

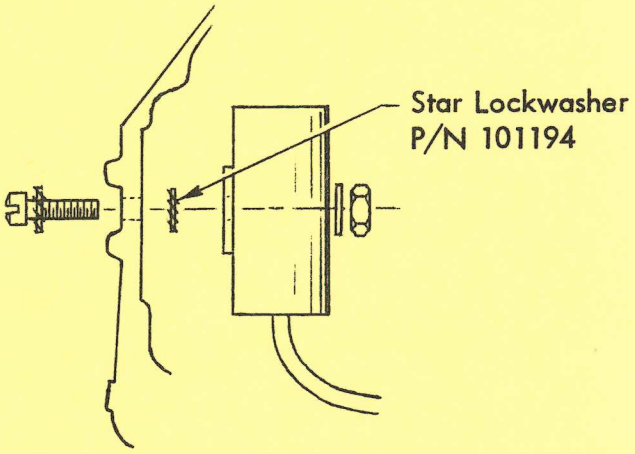



FIGURE 4

12. Make sure all leads have clean tight connections. Spray the condenser lead, coil lead, coil connections, and the breaker terminal connection with water-proofing material. Do not spray the breather felt.