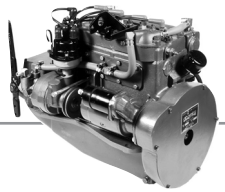


PLUMBING CONNECTIONS

1. Remove mechanical fuel pump, retaining all fittings and the two retaining bolts. **Remove the sliding plunger from the brass bushing in the block.**

2. Remove the 1/8" pipe plug directly above the oil pressure regulating valve. A small hand-held impact driver is very useful in removing screwdriver-slotted plugs.

3. Using the fittings included, install the oil pressure safety switch in the 1/8" pipe threaded hole after removing the brass plug. Orient the switch so that the two electrical terminals point up.

   NOTE: In cases where it is not possible to remove the 1/8” pipe plug referenced in step (2) above, a 1/8” X 1-1/2” nipple and “T” fitting is included in the kit to be used to plumb the oil safety switch, together with the oil sending unit, immediately behind the flywheel housing. It is preferable to remove the old nipple from the block, and install the new nipple, using the “T” fitting to position the heavier sending unit closest to the block.

4. Install the electric fuel pump mounting bracket using the two original retaining bolts. Use the new gasket provided in the kit and use sealer on both sides of the gasket.

5. Install the electric pump on the bracket using the two 1/4" bolts provided in kit. The outlet of the pump should be up, and the inlet in the down position.

6. Install the 1/8" NPT (female) by 5/16" hose barb fitting on the 1/8" NPT (male) threaded fitting originally installed in the inlet of the mechanical fuel pump. The other end of this original fitting remains connected to the fuel line coming from the tank.

7. Install a 90 degree hose-barb fitting in the lower port of the fuel pump and connect it to the female fitting previously installed on the end of the original fuel line from the fuel tank using a piece of the 5/16" fuel line provided in kit.

8. Install the two 90 degree hose-barb fittings. One of the fittings goes in the outlet of the fuel pump (the one on top) and the other in the inlet of the carburetor. Both fittings should be installed so that they are pointing downward and slightly away from the carburetor side. Do not over-tighten these fittings. The 1/8" male thread on the carburetor fitting can quite easily crack the aluminum material of late model carburetors.

9. Install the 5/16" fuel hose and in-line filter between the pump and carburetor. The hose (and filter) should usually loop down and around the inlet fitting of the pump. This configuration seems to give maximum clearance to the throttle and choke connections of the carburetor. In some cases, depending primarily on the routing of the throttle linkage, it may be easier to loop the hose in an upward direction.

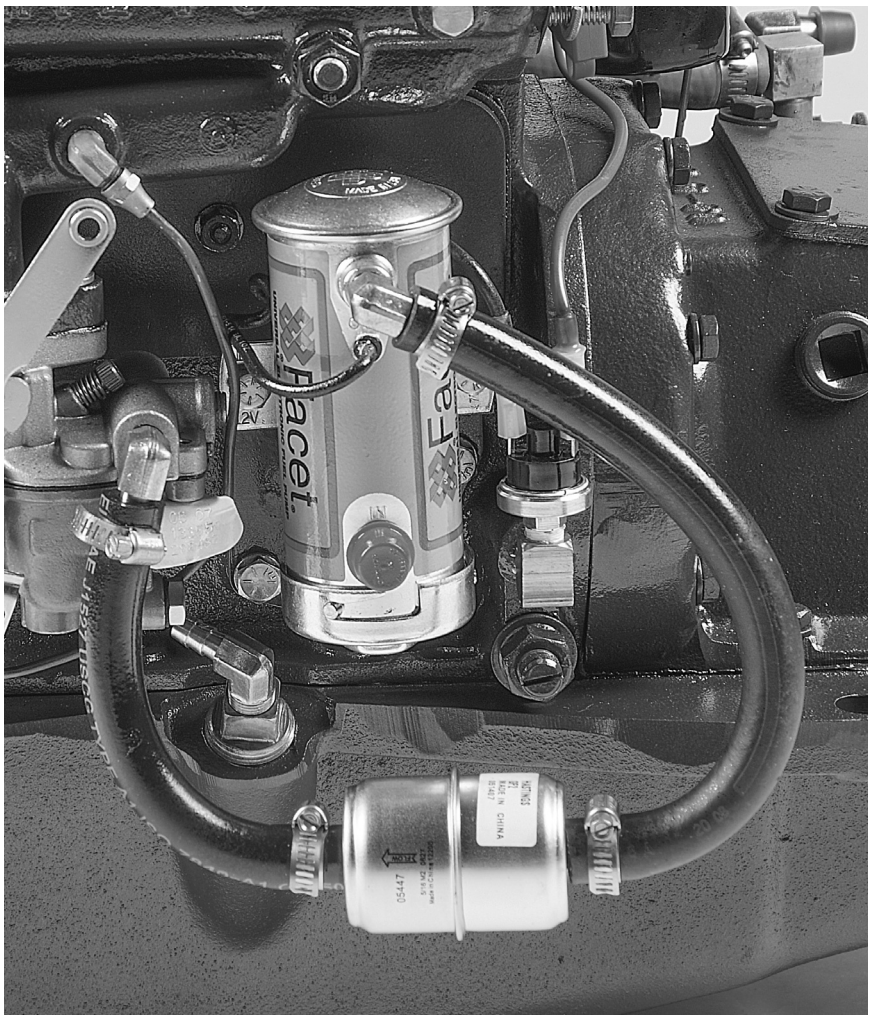
ELECTRICAL CONNECTIONS

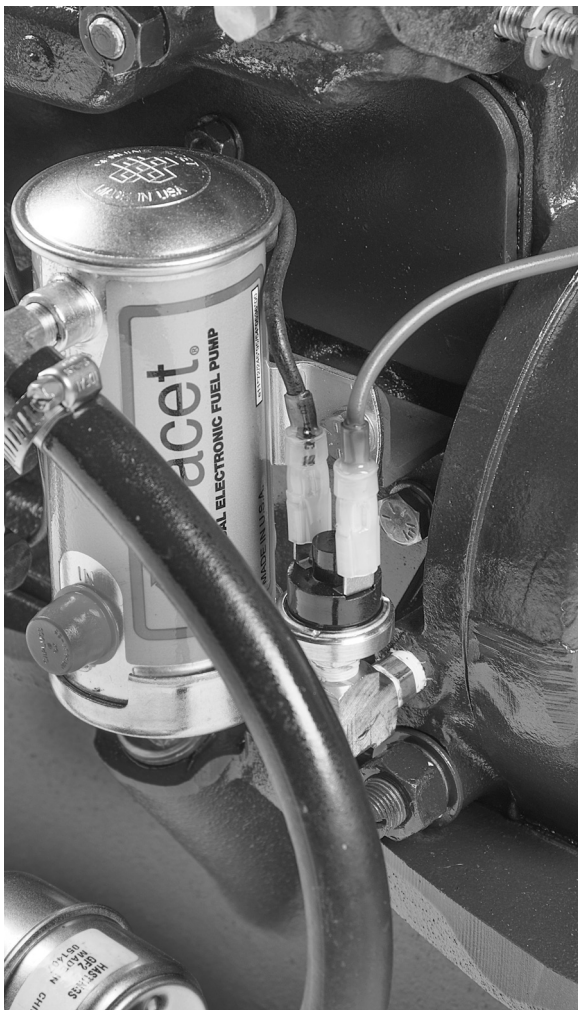
1. Connect the fuel pump lead to one of the terminals on the oil pressure switch. It doesn't matter which terminal you select.

2. Connect the in-line fuse holder between the (+) terminal of the coil and the oil safety switch. If the fuse holder is not long enough to reach on it's own , use the black wire and butt splice provided in the kit. It is usually most convenient to connect one of the leads of the fuse holder to the coil terminal and if needed connect the black wire to reach the pressure switch.

NOTE: Universal was in the habit of installing a lead from the "R" terminal on the Delco starter solenoid to provide power to the fuel pump during the time the starter was cranking, and before oil pressure rose to 10 psi to close the oil safety switch. We believe that inductive feed back from the coil in the starter solenoid occasionally travels back through the "R" terminal, through the fuel pump circuit at the instant the starter switch is released, and causes occasional nuisance tripping of the inline fuse between the ignition coil and the oil safety switch. We have accordingly discontinued providing this lead in our kits.

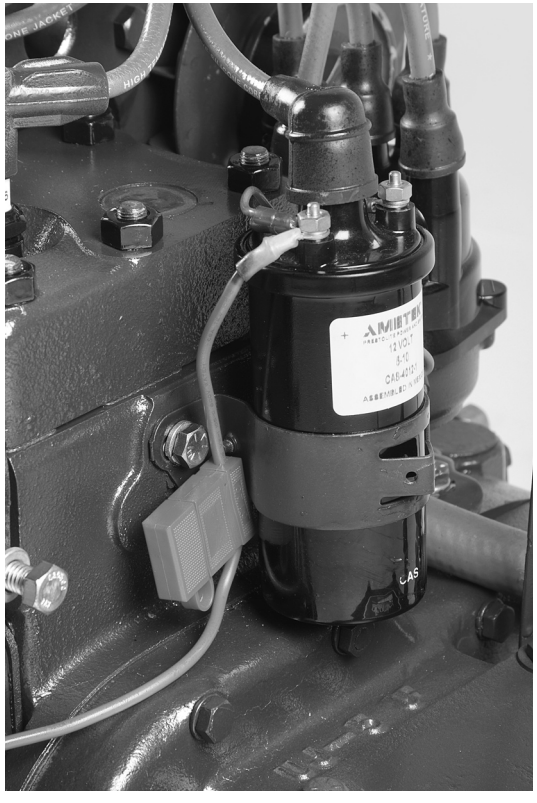
3. A manual "by-pass" switch can be connected between the terminals of the safety switch (either lead to either terminal of the switch). The switch (a simple toggle switch will suffice) can be mounted in any convenient location. This switch can be turned on to by-pass the safety switch any time that you have any concern over its functioning, or are operating in a threatening condition (clawing around rocky lee shores, etc.) where a malfunctioning safety switch would be worse than the consequences of low oil pressure.





Typical installation of kit

Engine mounted electric fuel pump kit



Typical installation of kit