

Installing an electronic fuel pump on a GL1000

If you choose to follow any of my methods, you must do so at your own risk. I am not an expert fuel pump installer or an engineer. I hope my research and this article helps you overcome some of the challenges with this task.

The first challenge I had was selecting the best suited fuel pump. I won't bore you with the details here, but my first choice is the K&N 810400 because it only applies about 1 to 2 PSI of pressure on the float valves. I also wanted a pump that had a built-in regulator, check valve and an anti-siphon feature. I have tested this pump on the GL1000 with excellent results.

The second challenge was deciding where to mount the pump. I did not want to significantly change the appearance of the engine area so I left the existing mechanical pump in place. I actually removed the internals of a faulty pump and swapped out my good mechanical pump with this dummy pump. Removing the internals of the pump will gain you the benefit of taking pressure off of the end of the camshaft which may have a positive effect on your timing. I mounted the pump under the tank at the exit point of the fuel filter and it looks great in this location. I made the mounting bracket for the fuel pump out of a piece of tailpipe.

The next challenge was deciding on how to automatically turn the pump off in case of an accident. The mechanical pump only pumps when the engine is running so I decided to do the same with the electronic fuel pump. This is controlled via an oil pressure switch. If there is no oil pressure, the pump does not run. I replaced the original oil pressure switch with an AirTex 1S6554 (PS132) to accommodate this feature. Note: I did install a bypass button that you can press to force the pump to operate. This is useful if the bike has been parked for a week or so and you want to fill up the bowls prior to starting the bike. The button is mounted near the fuel pump.

The below steps and pictures will help show the process. This is not difficult but it does take a few hours.

Parts list:

- 1ea K&N 810400 fuel pump
- 1ea PS132 Oil Pressure switch (AirTex 1S6554)
- 1ea A Momentary Press Switch (12mm Waterproof momentary ON/OFF Push button Mini Round)
- 1ea 1 new original type GL1000 fuel filter
- 2ea 1/8" NPT X 1/4" Hose Barb Brass Straight Fitting
- 1ea 2 feet of high quality 5.5mm fuel hose. Get cloth stranded if possible.
- 1ea 6 feet of 16 gauge stranded wire
- 3ea Insulated Female Push-On Wire Terminal Connector 90 Degree
- 1ea Quick Wire Splice Connector
- 1ea Bracket material. Metal for a bracket, a bolt and a nut

Steps:

1. Remove existing fuel filter and hoses.
2. Remove rear engine mount and loosen the breather bolt a few turns. The bracket you make will slip under this bolt. See picture below:



3. Replace oil pressure switch with PS132 type.

4. Make a bracket for the electronic fuel pump. The bracket will be mounted to the breather bolt. See pictures below for details:









Notice in the picture above that the black wire goes to ground. The red wire will be connected to one side of the oil pressure switch.

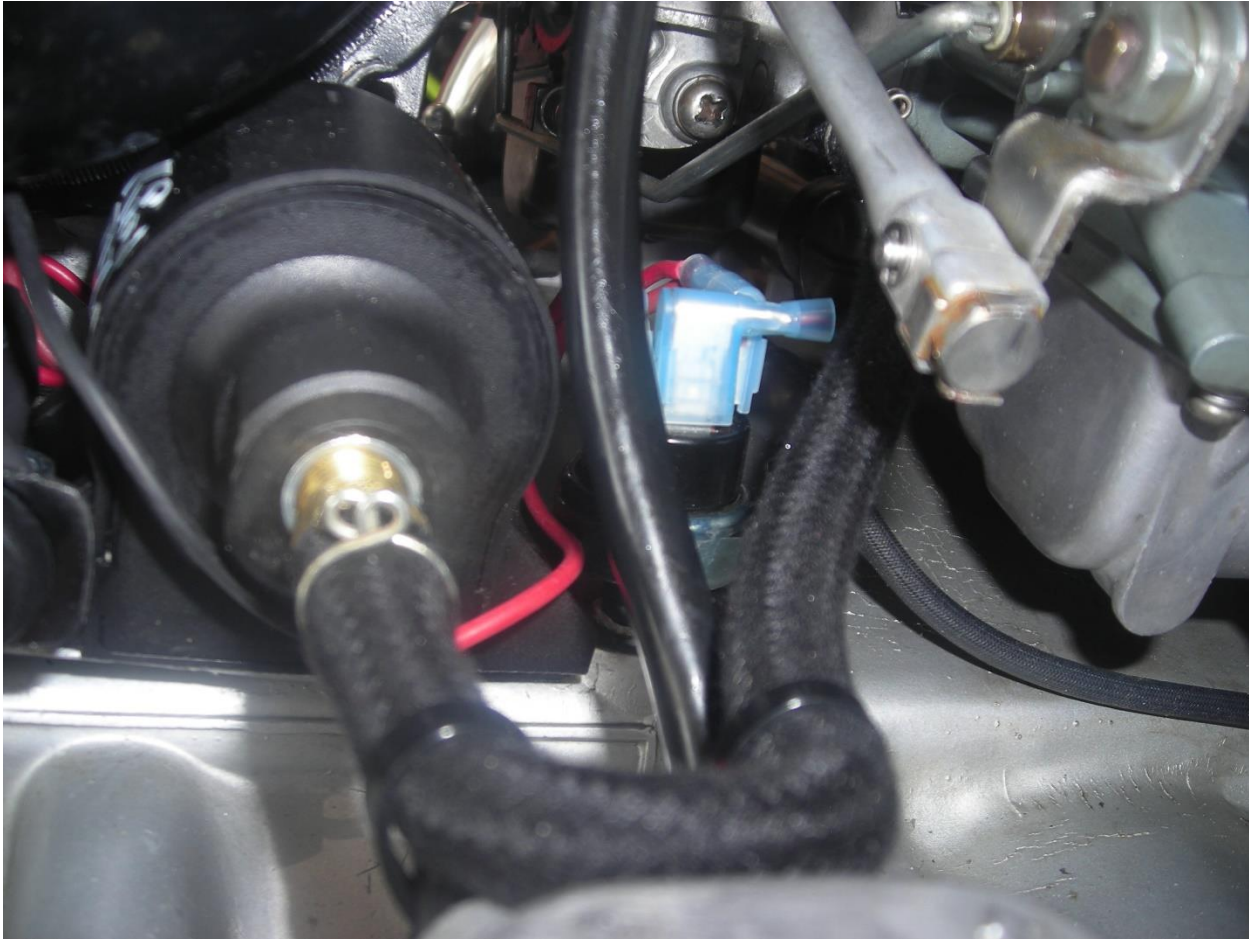
5. Mount the fuel pump on the bracket and then mount the bracket to the engine as shown below:



6. Connect the ¼" barbs to the fuel pump.



7. Connect the hoses. Route the hoses across the old fuel pump fuel connections to make it look like the original configuration.





8. Make a bracket for the switch. A good place to mount the switch is on the large frame bolt. Use a waterproof, momentary on pushbutton switch. Connect two wires to the switch that are long enough to reach the oil pressure switch. See pictures below.

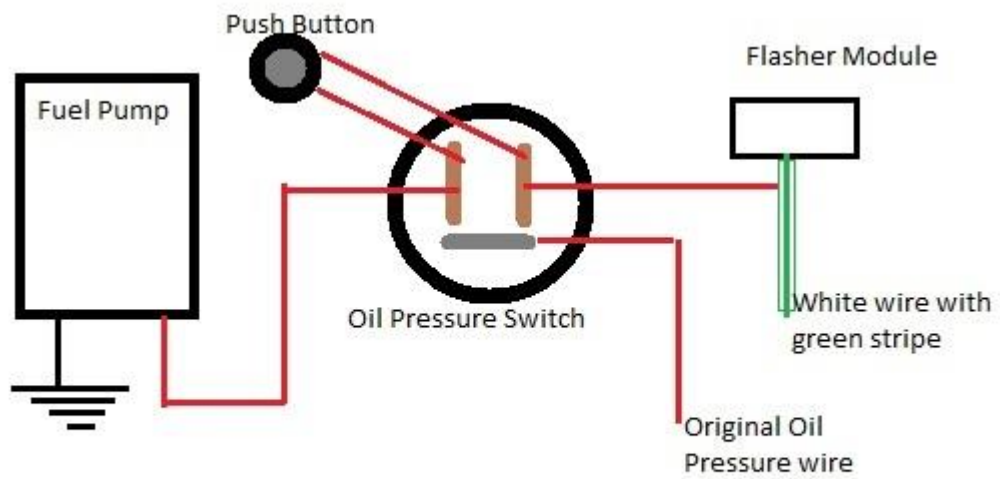




9. Now for the wiring. Look at the oil pressure picture below. The silver connector is for the original wire that went to the old pressure switch. Clip the end off and attach a new connector (Insulated Female Push-On Wire Terminal Connector 90 Degree). The other two are for the electric fuel pump. When there is oil pressure, there is continuity between these two gold connectors. The two wires from the pushbutton switch attach to the two gold connectors. This allows you to short across the oil pressure switch when the engine is not running to fill up the carb bowls. The red wire from the fuel pump goes to one of the gold connectors and the other gold connector connects to the blinker module (the white wire with a green strip). You can use the Quick Wire Splice Connector to accomplish this task.



Wiring diagram:



10. Here is the final result:

