



18670, 18671 INSTALLATION INSTRUCTIONS

WARNING!

The fuel system is under pressure. Do not open [the fuel system](#) until the pressure has been relieved. Refer to the appropriate vehicle service manual for the procedure and precautions for relieving the fuel system pressure.

This pump assembly is a high performance factory replacement unit. Key features:

- Drops directly into the factory fuel tank (NO CUTTING REQUIRED).
- Utilizes the factory jet siphon system so it operates just like GM intended.
- High flow pre-filter built into inlet of pump.
- Includes fuel level mounting bracket for factory leveling unit.

NOTE: The use of Teflon braided line with machine crimped hose ends is recommended. This eliminates the possibility of fuel vapors permeating through the fuel line.

CAUTION:

Installation of this product requires detailed knowledge of automotive systems and repair procedures. We recommend that this installation be carried out by a qualified automotive technician.

Installation of this product requires handling of gasoline. Ensure you are working in a well ventilated area with an approved fire extinguisher nearby. Extinguish all open flames, prohibit smoking and eliminate all sources of ignition in the area of the vehicle before proceeding with the installation.

Maximum continuous operating pressure should not exceed 70 psi.

The enclosed Aeromotive fuel pump utilizes AN-10 ORB (O-ring Boss Ports) style outlet port, AN-06 return port and optional AN-06 vent port (18670 only); these ports are **NOT PIPE THREAD** and utilize **NO THREAD SEALANT**.

NOTE: Due to tight clearance between the top of the fuel tank and body, Aeromotive includes the following fittings:

Outlet fitting: 15690

Return fitting: 15689

Compatible Fuels:

Pump Gas, Race Gas, E85, Alcohol/Ethanol

Aeromotive Related LS Components:

Fuel Filters:

12301 (pump/race gas)
12335 (race gas/E85)
12305 (filter bracket)

Fuel Pressure Regulators:

13101 (10AN ports)
13109 (6AN ports)

Electrical Components:

16301 (pump wiring kit)
16306 (pump speed controller)

Check Valves:

15106 (6AN)
15107 (10AN)

Fuel Pressure Gauge:

15633 (dry 0-100psi)

Fuel Rails:

14106 (LS1/LS6)
14114 (LS2)
14115 (LS3/L76)
14142 (LS7)
14147 (LS1, Edelbrock 29085)
14156 (Platinum LS1/LS6)

NOTE: If using the 18671 on the street, it's required to use the Aeromotive speed pump controller (16306). Failure to do this could result in vapor locking of the fuel pump which will damage the unit.

The following steps are typical of most installations:

1. Disconnect the negative battery cable and drain the fuel tanks.
2. Raise and support the vehicle.
3. Remove the right rear tire and wheelhouse panel.
4. Disconnect the fuel pump module harness connector.
5. Remove the crossover tube from the clamp located above the transmission. **FIGURE 1-1**

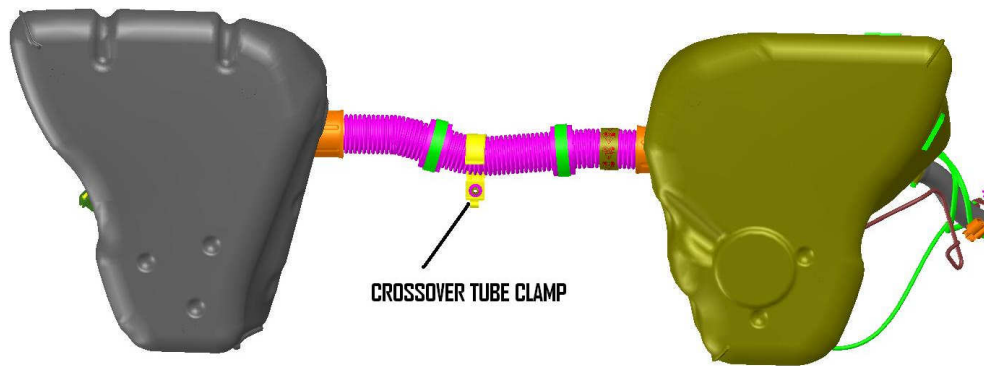


FIGURE 1-1

6. Removal of the driveline and exhaust may be necessary to remove the crossover tube. Once you have performed this procedure, you will gain enough knowledge of the components that you may be able to do the procedure in the future without lowering the driveline. You must slide the CPA ring aside so the collar can be turned counter clockwise. **FIGURE 1-2**

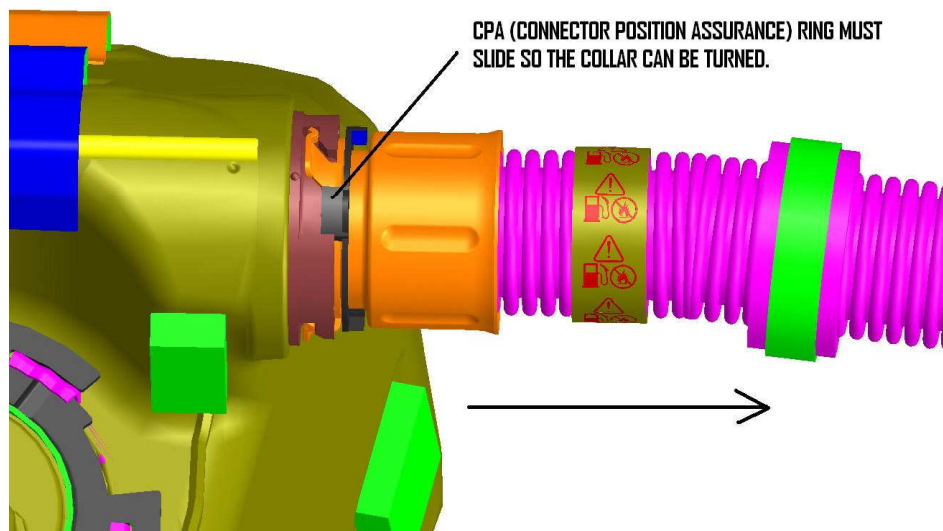


FIGURE 1-2

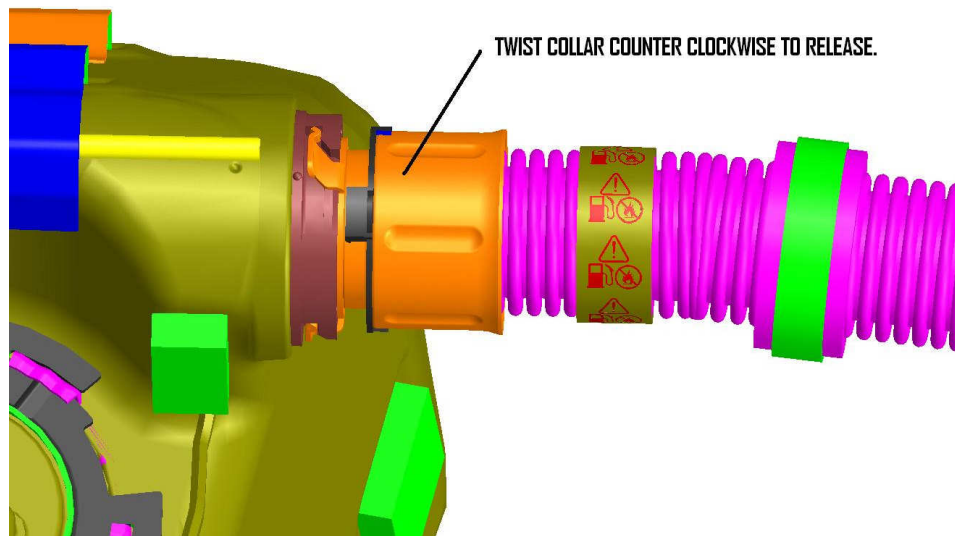


FIGURE 1-2

7. Once the collar has been released pull the cross over tube straight back, **DO NOT TWIST**. Twisting of the tube will damage the small transfer tubes inside.
8. Repeat steps 3-7 for the other side.
9. Disconnect the EVAP Crossover pipe quick connect fitting at the top of each tank right above the crossover tube connections and remove from vehicle.
10. Remove the fuel tank strap mounting bolts, tank straps and drop the tanks out of the car.
11. Remove the lock ring from the passenger side tank. The unit is spring loaded and will pop up once the ring is removed. **FIGURE 1-3**

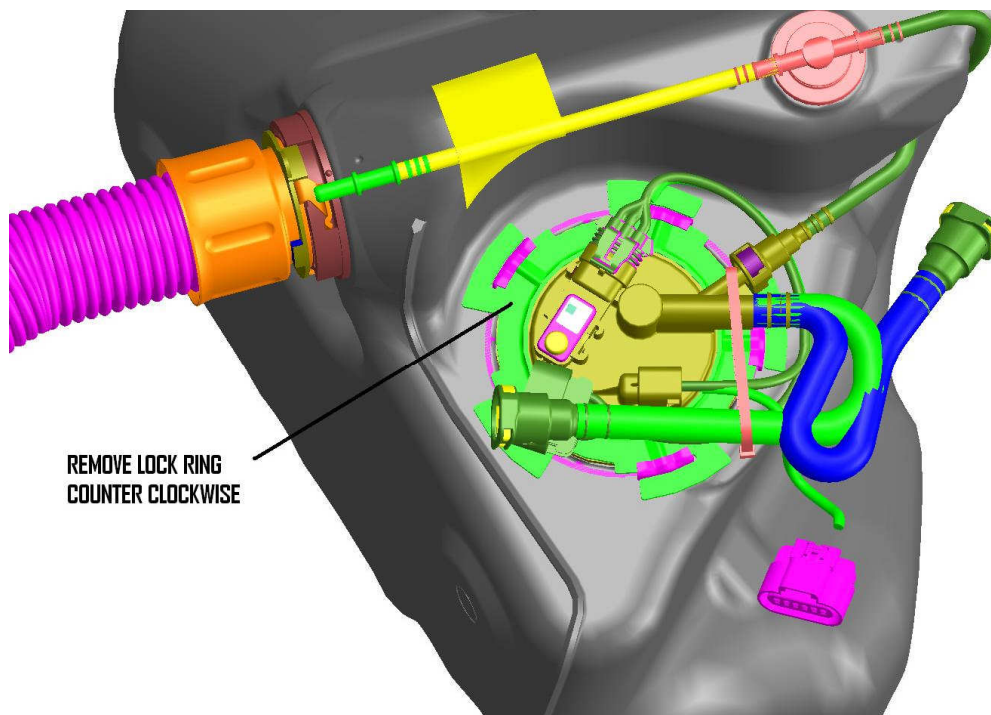


FIGURE 1-3

12. Carefully remove the float hanger as not to bend or damage the arm. There will be two fuel line connections towards the bottom of the hanger. These will be released by depressing the tabs. **FIGURE 1-4**

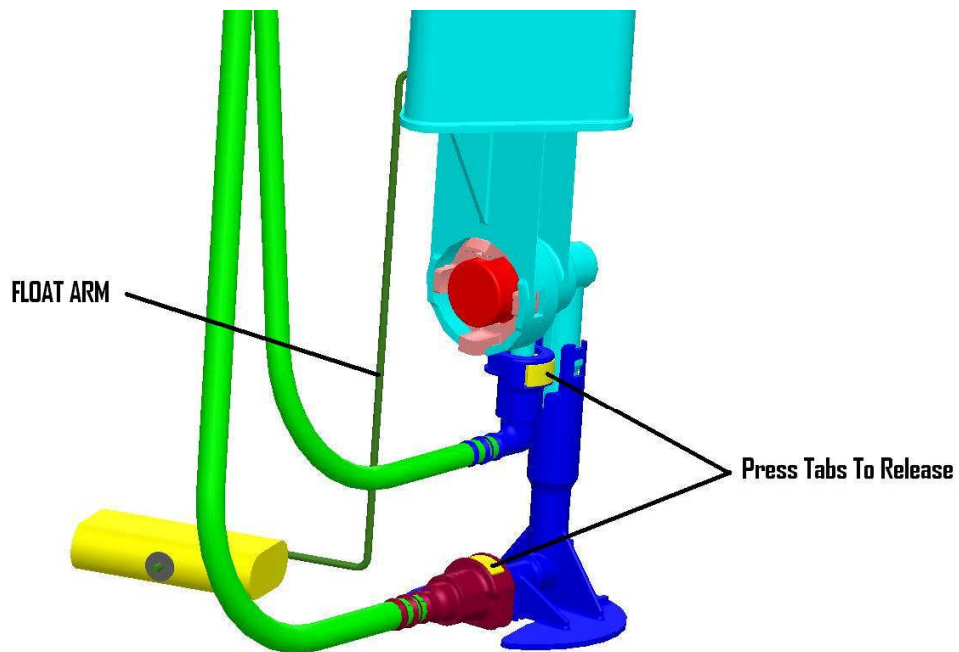


FIGURE 1-4

13. Once the lines are disconnected, remove the unit from the tank. Remove the regulator from the leveling unit and replace it with the regulator block-off plug provided. Use some light oil or O-ring lube on the block-off plug to ease installation. **FIGURE 1-5**

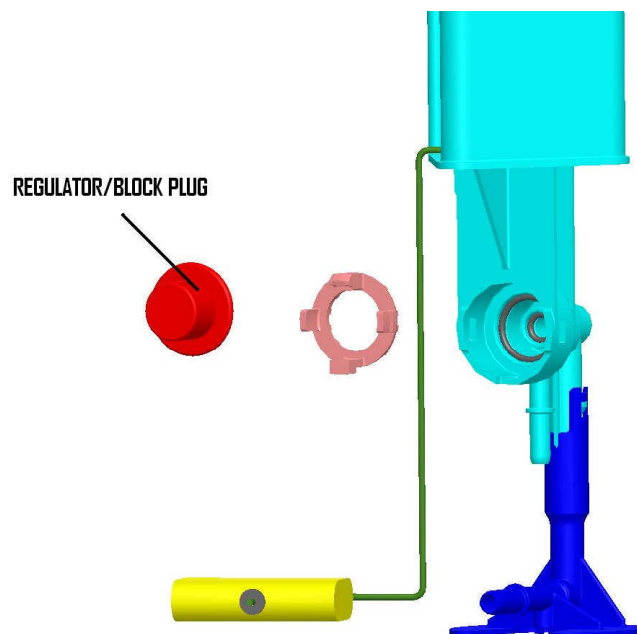


FIGURE 1-5

14. Now that the block-off plug is installed, the unit is ready to be placed back in the tank. Reverse steps 13-10. This is all that needs to be done to the passenger side tank.
15. Next you will start on the Driver Side tank. Remove the lock ring from the top of the tank. This unit is also spring loaded and will pop out of the tank once the lock ring is removed. **Note the orientation of the float arm. This must be duplicated when placing the Aeromotive unit in the tank. Figure 1-6**

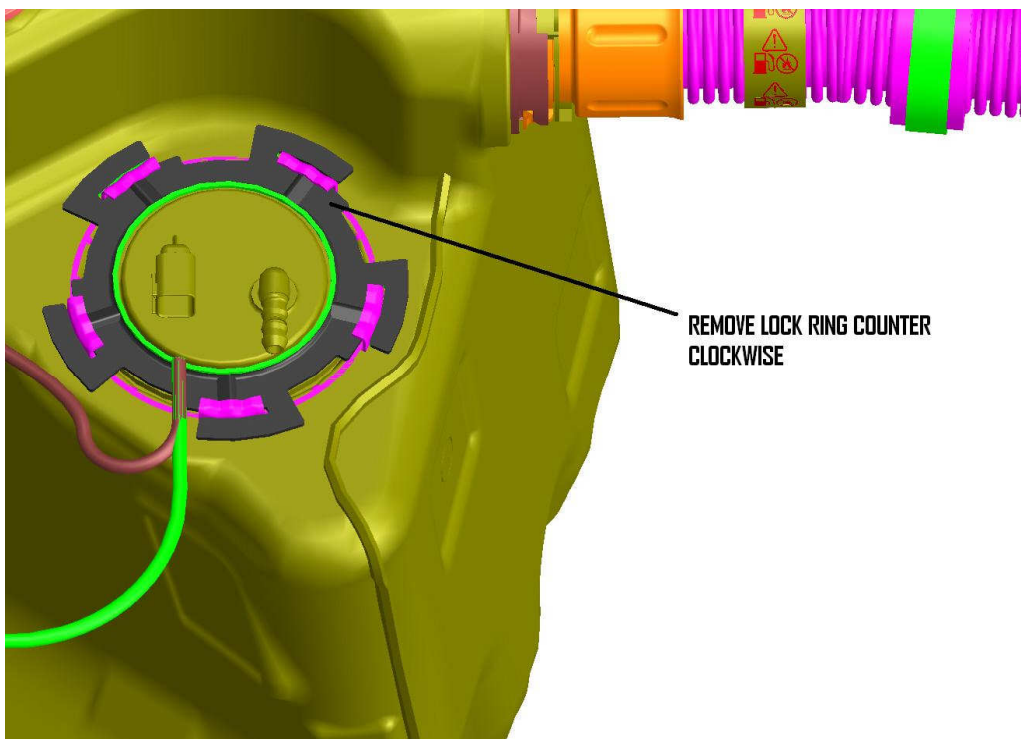


FIGURE 1-6

16. Remove the fuel pump assembly from the tank. Be careful not to damage the float level arm during removal. Release the fuel line from the fuel pump assembly by pressing the tab. **FIGURE 1-7**

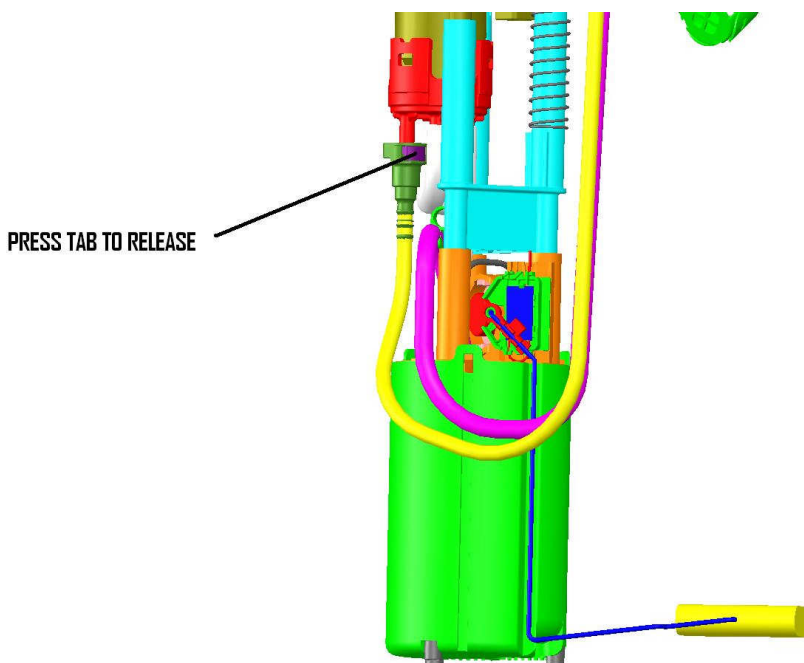


FIGURE 1-7

17. The only part to be reused off of the old fuel pump assembly will be the fuel level unit. Remove it from the assembly by pressing the tab and sliding the level upwards. **FIGURE 1-8**

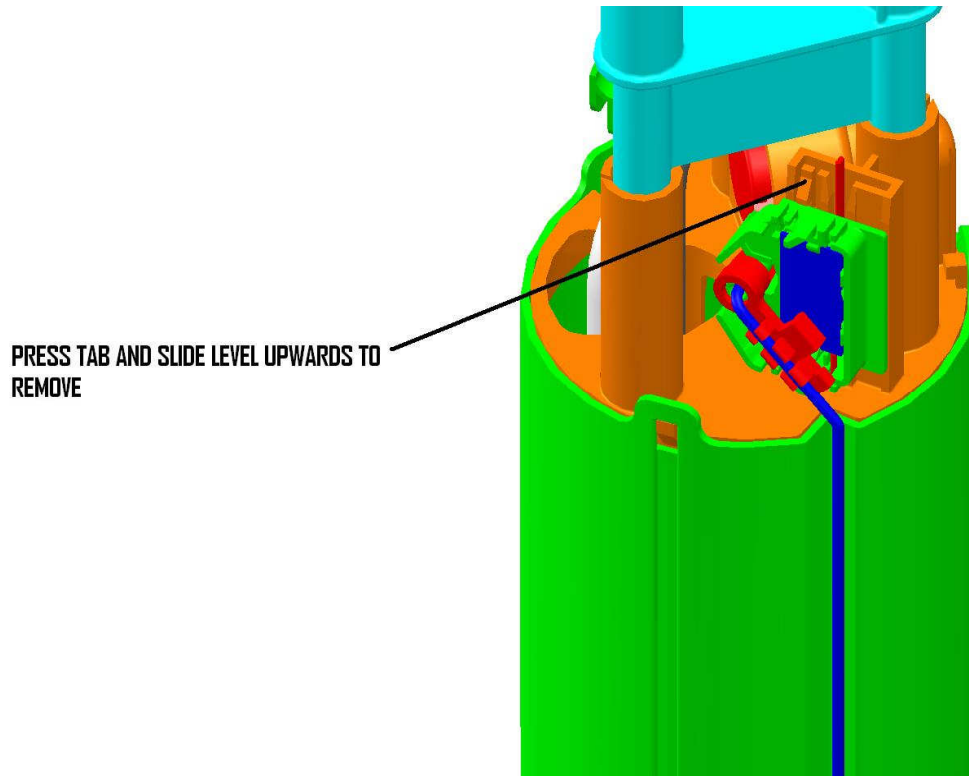


FIGURE 1-8

18. Take the fuel level sensor you just removed and place it in the bracket provided. **FIGURE 1-9**

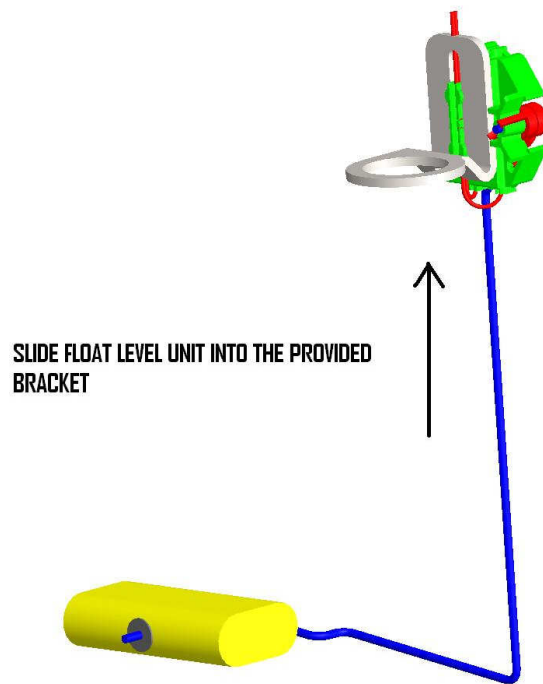


FIGURE 1-9

19. Now it's time to assemble your new Aeromotive Stealth fuel pump! Use the figure below as reference to assembly your fuel pump. **FIGURE 1-10**

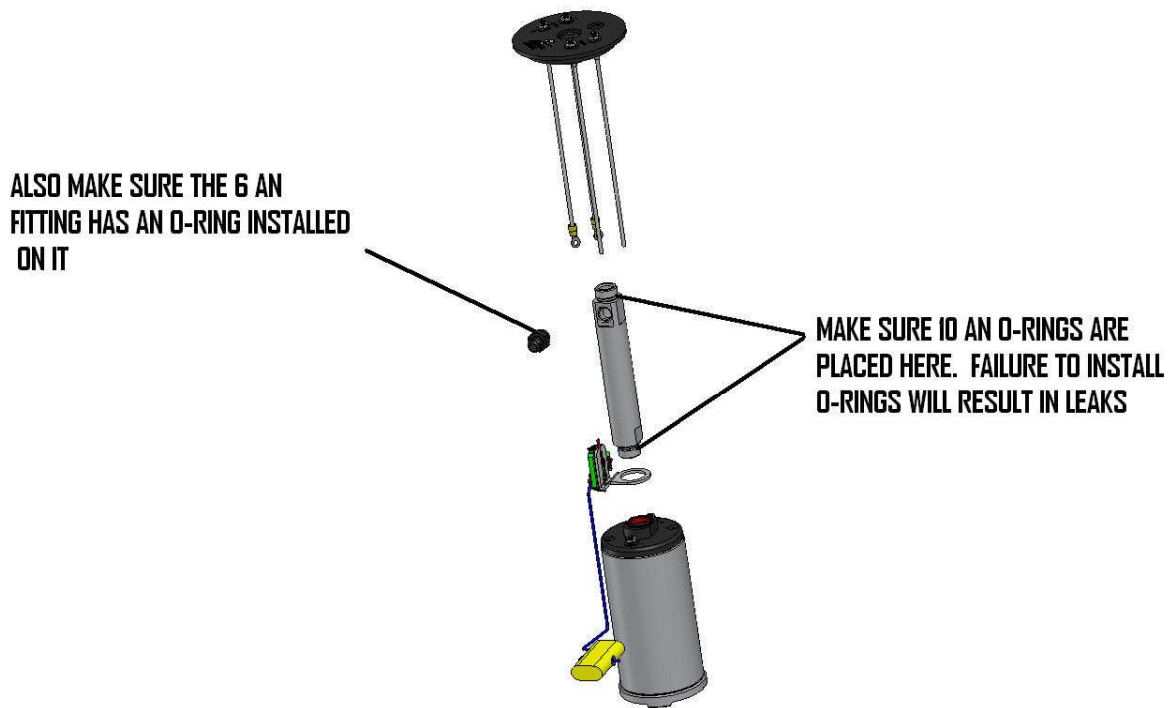


FIGURE 1-10

20. Connect the positive and negative pump wires from the top plate to the pump. Cut the wires closest to the connector on the leveling unit and attach the remaining wires to the ones provided on the Aeromotive top plate (it doesn't matter which wire goes where as it's just a resistance reading). Once the unit is assembled it will look like this. **FIGURE 1-11**

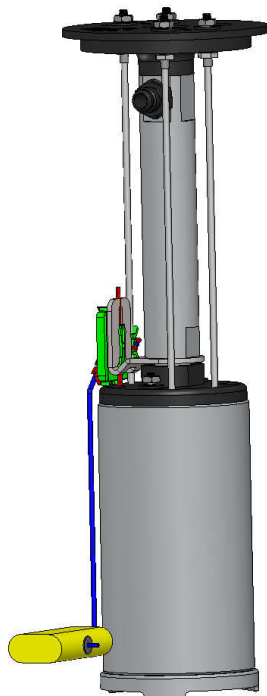


FIGURE 1-11

21. Now assemble the Siphon transfer hose. Use the figure below for reference. **FIGURE 1-12**



FIGURE 1-12

22. Tighten fitting 15103 into the straight hose end. Use some light oil on the 15103 to ease installation into the factory quick disconnect inside the gas tank. Take some automotive wire or string and tie it to the 90 degree fitting. Lower the complete hose assembly into the tank but leave the string/wire hanging out of the top of the tank. This will be used to fish the hose out when the fuel pump is lowered in (**due to tight tolerances, the unit and hose can not go in at the same time**). **FIGURE 1-13**



FIGURE 1-13

23. Lower the pump assembly into the tank. Once the pump has cleared the opening, use the string to pull the 90 degree hose end up and out of the tank. Attach the 90 degree end to the 6AN port on the pressure shaft. Noting the position of the float arm from step 15. Index the arm in the stock location by rotating the whole pump assembly. Failure to do so will result in a check engine light and require you to drop the tank again. **FIGURE 1-14**

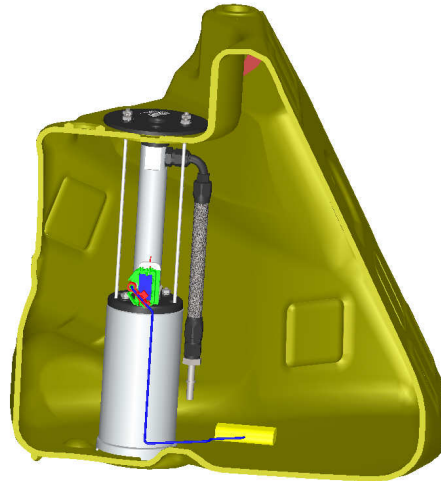
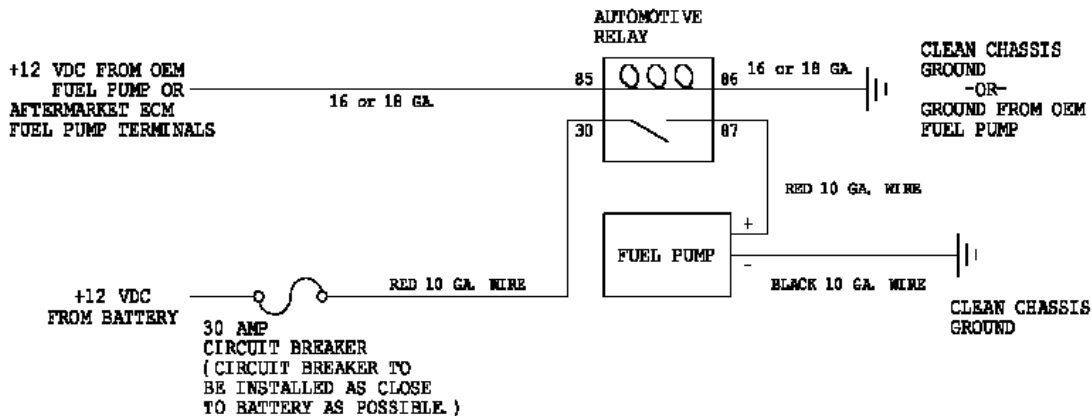


FIGURE 1-14

24. Replace the lock ring back on the top of the fuel pump assembly. Cut or slice the factory fuel level wires and attach them to the fuel level studs. Make sure you use stranded, insulated copper wire, with matching crimp-type connectors for all connections.
25. Locate the OEM fuel pump supply wires, located near the OEM fuel pump mounting location. Using that supply wire, connect the Aeromotive fuel pump as shown in the following diagram.

Hooking the factory wiring directly up the Aeromotive unit could result in wiring damage or pump failure.



26. Before placing the tank back in the car, connect your chosen feed/return line and optional tank vent (18670 only) to the pump top hat and route them out towards the drivers side. Now put the tank back in the car and reverse the steps of disassembly.

NOTE: When routing the feed/return lines in the vehicle, **DO NOT** route them through the torque tube tunnel. Route the lines through the driver side rocker panel. This will keep unwanted heat from transferring to the fuel system.