



## POLLAK FUEL SELECTOR VALVE INSTALLATION SHEET FOR TWO TANK HOOK-UP

POLLAK MOTORIZED FUEL SELECTOR VALVE INSTALLATION SHEET IS-36 REV.C

This instruction sheet sets forth the guidelines required to install a motorized fuel selector valve for use in an automotive three fuel tank system, applicable to part numbers 42-159, 42-151, 42-300, 42-302 and 42-308. In applications where return fuel lines are not required, disregard instruction on routing return fuel lines. The valve is provided with caps to block off the unused return ports.

**THOROUGHLY READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION. IMPROPER USE OR INSTALLATION WILL VOID WARRANTY. FOR TECHNICAL SUPPORT, CALL (781) 830-0340.**

### I. General Information

The **Motorized Fuel Selector Valve** is intended to operate in a dual fuel tank system with the following characteristics:

- Vehicles with one main and one or two auxiliary fuel tanks
- Vehicles with or without fuel return lines
- 12 VDC electrical systems
- Either electrical in-tank fuel pumps or mechanical on-engine fuel pumps
- Gasoline or diesel engines
- Ambient temperatures between -40°F and +180°F
- Fuel systems not capable of fuel pressure in excess of 65psi
- Systems that will not remain inactive for over 6 months
- NOT FOR USE IN MARINE OR AERONAUTICAL APPLICATIONS

**WARNING:** Before beginning installation, disconnect battery. Do not smoke, use electrical tools or employ any device that may cause sparks near or around fuel tanks. Work in a well ventilated area. Always wear safety goggles.

### II. Installation Instructions

Refer to attached schematic for electrical wire routing and fuel line connections.

*Valve Mounting:* Choose a secure and well-protected area near the original fuel lines in which to mount the valve. Be sure to stay away from any hanging chassis components, suspension, and exhaust pipes. Make sure the area the valve is mounted is free of any rust or heavy corrosion. While valve does not need clean metal to mount to, as it is internally grounded, the mounting bracket should be flat against its mounting surface. Securely mount the valve to the chassis or other solid component using proper length 5/16-18 bolts (not provided). It is recommended that the valve be oriented in such a way that the side of the valve with the two ports points towards the engine.

*Fuel Lines:* **NOTE:** If installing new auxiliary tanks and valves, drain the fuel from the original tank. If installing valve as a replacement, drain fuel from all tanks. Store fuel in approved containers. Care must be taken to avoid spilling fuel. Source fuel lines are 3/8" ID. Return fuel lines are 5/16". Route the main and auxiliary tanks' source and return lines to the valve. Install fuel filters on the source lines between the tanks and the valves. Use "worm" style hose clamps and fuel-approved flexible fuel hose to connect fuel lines to the proper points on the valve as shown in the provided diagram. The fuel line routing should minimize the number of bends and have the largest possible radii to minimize the flow restriction. Properly tighten clamps after all hoses are installed.

*Electrical:* All wires should be 18 AWG or heavier. Choose a position on the dash and mount the reversing DPDT toggle switches and faceplate, such as the 34-592 and 42-201. Cut the original wire from the fuel tank sending unit to the fuel gage and connect both ends to the 42-203 connector as shown. Connect the auxiliary tank's sending unit to the connector. Install the toggle switches as shown, connecting one pair of terminals to ground and the other pair of terminals to +12 VDC through a 10 Amp fuse. Connect the middle terminals on the switch to the connector as shown. All electrical connections must be secure and the splices to the 42-203 connector should be electrically insulated and sealed to prevent corrosion of the splices. Insure that the 42-203 connector locking-tab is fully engaged with the mating end of the connector on the valve for proper connection and moisture sealing.

*General:* Double check the system to be sure all electrical and fuel line connections have been installed correctly. Place a small amount of fuel back in each fuel tank to check the system for leaks. If there are any leaks, they must be fixed before the system can be safely operated. After it has been determined that there are no leaks, start the vehicle engine and switch the tanks to determine if the valve is functioning properly and fuel lines are connected properly. Check the gas gage when transferring between tanks for proper fuel level indication. After it has been determined that everything is functioning correctly, the fuel tanks may be refilled.

### III. Valve Operation

With +12 VDC to terminal E and ground to terminal D, the fuel will flow from the main fuel tank through the filter, through the valve, to the engine, and return back through the valve to the main fuel tank. Reversing the polarity to terminals E and D will cause the fuel to flow from the auxiliary fuel tank through the filter, through the valve, to the engine, and return back through the valve to the auxiliary fuel tank.

NOTE: T1=MAIN, T2=AUX

CONNECTIONS TO FUEL TANKS

CONNECTIONS TO ENGINE

