

Operating and Installation Instructions

CAUTION!

This product is to be installed only by persons knowledgeable in the repair and modification of vehicle fuel systems and general vehicle systems modification. Only a qualified technician or mechanic who is aware of applicable safety procedures and fabrication skills should perform the installation of this product.

This fuel pump utilizes an electronic DC motor system that is not typical of conventional fuel pumps, and therefore extra precautions must be adhered to as contained in instructions herein.

GASOLINE AND OTHER FUELS ARE FLAMMABLE AND CAN BE EXPLOSIVE!

Perform the installation in a well ventilated location only to minimize the build up of fuel vapors. **NO** open flames, smoking or other sources of ignition are to be present during installation, to prevent fire or explosion that can cause serious injury or death. Grinding, cutting, and drilling must be performed with care to prevent ignition. Draining and removal of all fuel and ventilation of vapors in vehicle and fuel system is recommended when performing such procedures. Proper eye and personal protection is required at all times during installation.

WARNING!

The Vehicle's fuel system may be under pressure! Do not loosen any fuel connections until relieving all fuel system pressure. Consult an applicable service manual for instructions to relieve fuel system pressure safely.

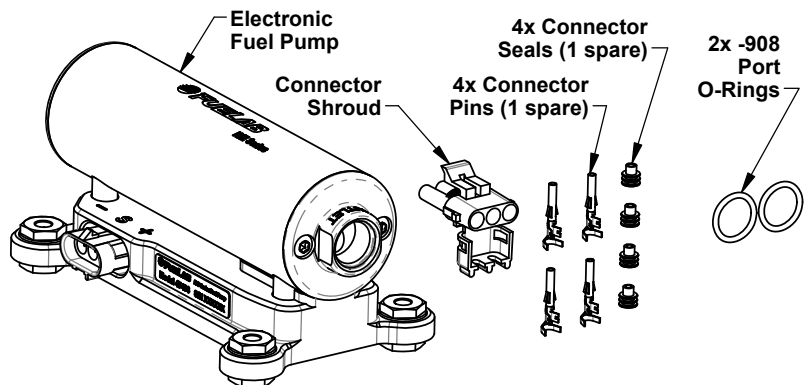
This product is intended for racing, off-road, or marine use only. This fuel system component may not be legal for sale or use on emission controlled motor vehicles; consult local, state and national laws.

Product Contents:

Check the diagram and list of components (right) to ensure that no components are missing from box. Contact your Fuelab distributor immediately for replacement.

47403 Features and Performance Ratings:

Inlet and Outlet Port Sizes	-8AN Military Port
Rated Flow Rate	132 GPH @ 45 PSI, 13.5V (500 LPH @ 3 Bar)
Maximum Pressure	125 PSI (8.5 Bar)
Operating Voltage	8-18 Volts



WARNING! Power Supply Voltage must be constant as specified in above specification. Only install fuel pump on vehicles using 12 Volt (6 cell lead acid battery) with a normal operating alternator charging system or vehicles using 16 Volt (8 cell lead acid battery) with no charging system. Pulse-Width Modulation or other means of reducing input power voltage may result in erratic or non-operational condition. Electronic Power Supplies have not shown to be a problem with normal operation; however, testing has not been performed on all systems.

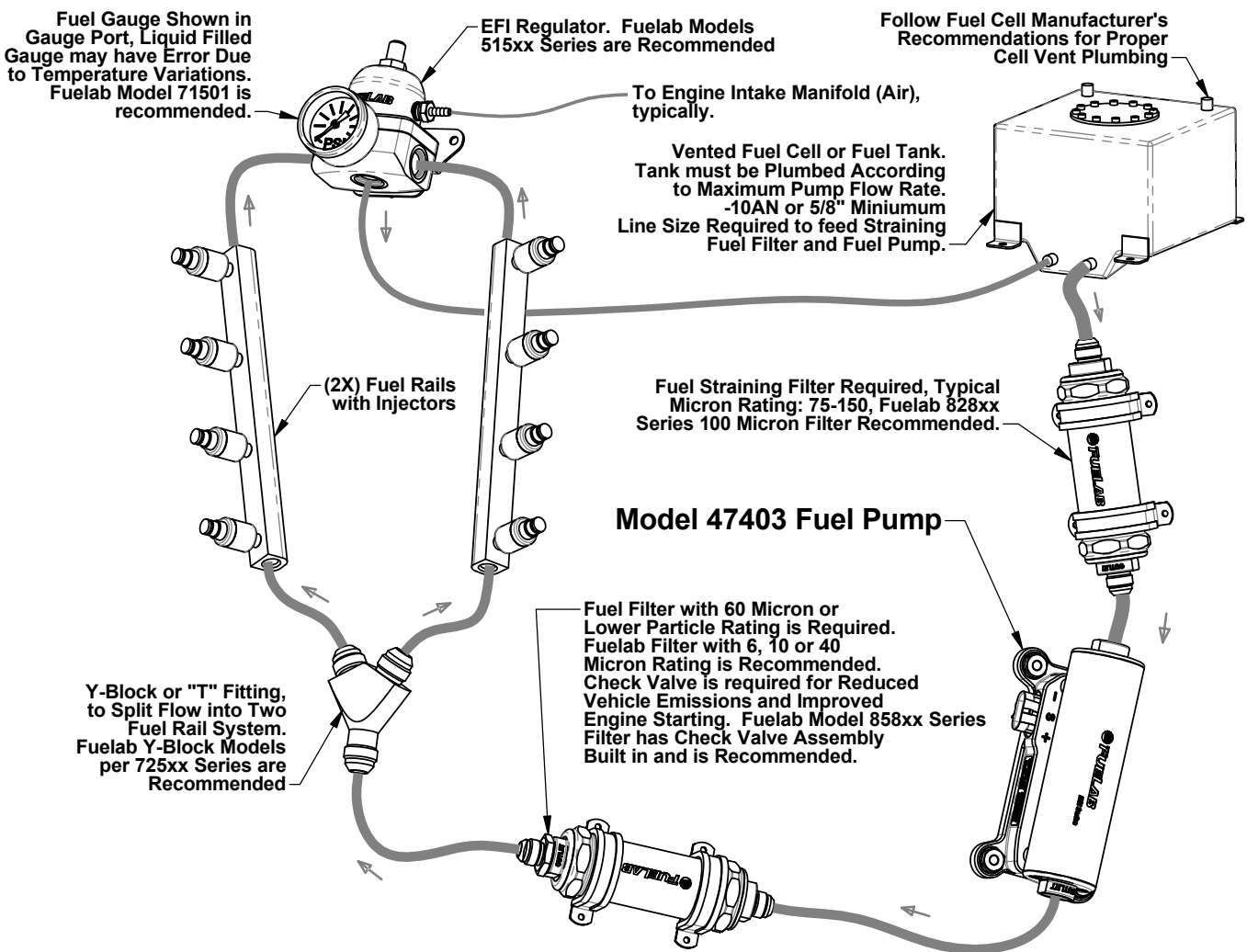
Before Installation, Plan Entire Fuel System:

A complete design plan of entire fuel system must be created for the specific application. These instructions are a guide to help design this plan with respects to integrating this model of fuel pump only. Consult other sources of information and manufacturers instructions for the various components of the fuel system. These instructions are limited to general topics of fuel pump installation and may not include specific information pertaining to your specific application. These instructions are written assuming the use of Multi-Point Electronic Fuel Injection using a standard return (bypass) style fuel pressure regulator. This fuel pump may be integrated in some general carbureted systems using a bypass system. Visit our company website (www.fuelab.com) for specific details pertaining to example fuel systems and other solution ideas. Additional information including advanced troubleshooting, any special alerts and FAQ's pertaining to this and other products is also available. A good design plan for the fuel system must contain consideration for: Pressure and flow rate through various components, quality of components, operating environment (temperature, vibration, shock, general exposure to elements) and local area laws. Begin installation of fuel pump only after a complete plan is established to help avoid fuel system component failure, costly rework, and excessive installation time.

Plumbing Planning Notes:

This fuel pump is for external mounting only! Submersion in fuel or other liquids can cause damage to fuel pump. Other in-tank solutions are available from Fuelab. Adequate structural mounting and support is the responsibility of the fabricator / installer. Mount the fuel pump as low as possible without it being vulnerable to road hazards or debris. Minimize the length of the fuel line feeding fuel pump. Do not use "cross drilled" style 90° elbow fittings, check valves or other restrictions (other than high flow fuel filter or shut-off valve) before fuel pump. Minimize plumbing restrictions between fuel tank and fuel pump and regulator for peak performance, use -8AN (1/2") to -12AN (3/4") line for feeding the fuel pump. Typically -6AN (3/8") to -8AN (1/2") line is required for the rest of the fuel system. Note regulator manufacturer's line size recommendations for the rest of the fuel system. Use of a strainer filter upstream of fuel pump is required to protect fuel pump from damage. All fuel line used must handle high pressure. The use of fuel line such as stainless steel braided line and "AN" style fitting connections is recommended. The fuel ports (one -8AN Inlet Port and one -8AN Outlet Port) use "AN" or "military" style fittings. This plumbing standard is commonly used with racing and high performance applications. Port style fitting use is recommended but not required. See Step 4 on Sheet 3, for additional information on this port standard. A fuel filter with a 60 micron or finer particle rating is required to be used upstream of regulator and downstream from fuel pump to protect it and the fuel injectors from foreign object damage. Reference the Schematic Diagram below for filter locations. Fuel tank must have a modification of an additional sump or use aftermarket fuel cell as indicated. Use of a "pick-up" tube system for feeding fuel to pump is not recommended. If a "pick-up" tube system is employed, use **ONLY** -10AN (5/8") sized line or larger! Use of a liquid filled gauge exposed to engine compartment heat is not recommended as the liquid inside the gauge may exert measurement errors. **DO NOT** plumb to any gauge mounted inside the vehicle or in passenger compartment. A line burst can spill fuel inside passenger compartment and on occupants, possibly causing serious injury or death. An electric gauge or pressure transducer system is recommended for readings in a passenger compartment.

Typical EFI V-8 Fuel System Plumbing Schematic Diagram:



Special Note: Use in carbureted systems require a bypass return or relief valve.
Do not "Dead Head" Fuel Pump.