



Edelbrock E-Street EFI
Universal Returnless Fuel System
Part #3603

INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before beginning this installation. This installation can be accomplished with common tools and procedures. However, a familiarity with working on automotive fuel systems is highly recommended. If you do not feel comfortable performing this installation or have never worked with automotive fuel systems before, it is highly recommended to have the installation completed by a Professional Mechanic. Proper installation is the responsibility of the installer. Improper installation will void the manufacturer's warranty and may result in poor performance and engine or vehicle damage. If you have any questions, please call our **Technical Hotline at: 1-800-416-8628**, Monday - Friday, 7:00 am - 5:00 pm, Pacific Standard Time.

WARNING!

Make sure to perform the installation in a well ventilated area away from any potential fire hazards. Gasoline fumes are toxic and highly flammable. Prior to starting the installation, make sure to eliminate all potential fire hazards as fuel leakage can occur when loosening the fuel system connections.

DESCRIPTION

P/N 3603 is a complete fuel system designed to be used exclusively with the Edelbrock E-Street EFI systems (#3600)only. This system does not require a fuel pressure regulator or a return line. The E-Street ECU controls the Fuel Pump and maintains a constant 50-60 PSI depending on setup configuration. All necessary components will be included in the kit to install the Edelbrock E-Street EFI kit to a compatible fuel tank or fuel cell. The fuel pump included in this kit is limited to approximately 500 horsepower and is recommended for normally aspirated applications. The use of the Return Type Fuel System and/or the Fuel Sump System is highly recommended for higher horsepower applications.

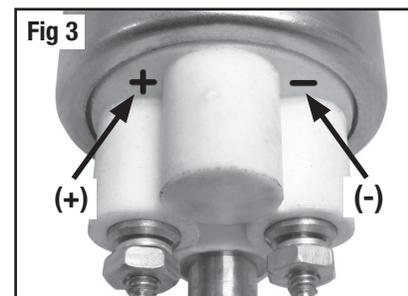
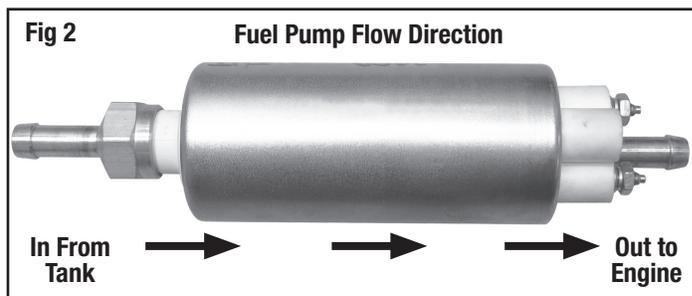
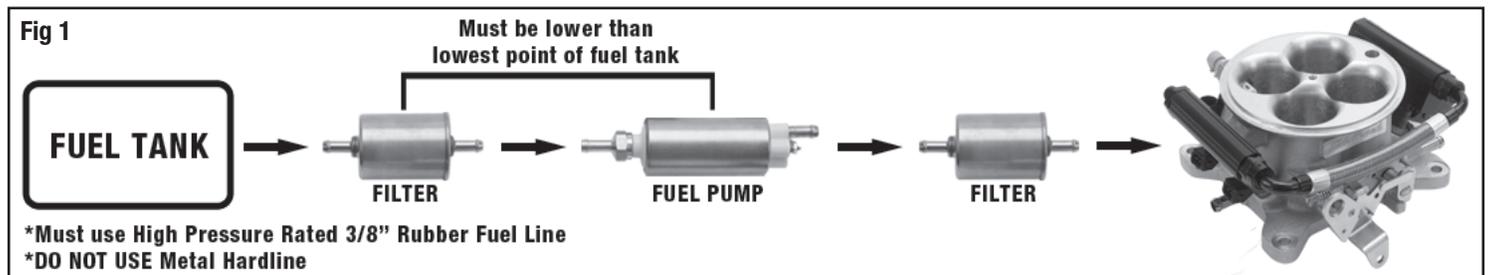
CAUTION: DO NOT USE METAL HARD FUEL LINE WITH THE 3603 FUEL SYSTEM KIT. Due to the high fuel pressure used by the E-Street EFI system, the supplied 3/8 inch high pressure rubber fuel line MUST be used as the primary fuel line. If supplying your own high pressure fuel line, a minimum of SAE J30R9 (100PSI) working pressure must be used. Appropriate fuel fittings will be required.

NOTE: THIS FUEL SYSTEM REQUIRES A MECHANICAL FUEL PUMP BLOCK-OFF PLATE, GASKET, AND BOLTS SPECIFIC FOR YOUR APPLICATION (NOT INCLUDED).

P/N 3603 Includes:

1. Fuel Pump with Fittings and Mounting Hardware
2. Fuel Filter w/ Mounting Clamps (2)
3. 3/8" High Pressure Twist-Lok Fuel Line (20')
4. Clamps - Fuel Hose (7)
5. Twist-Lok Fittings (1 - Straight, 1 - 45°)
6. Tie Wraps (10)

INSTALLATION DIAGRAM



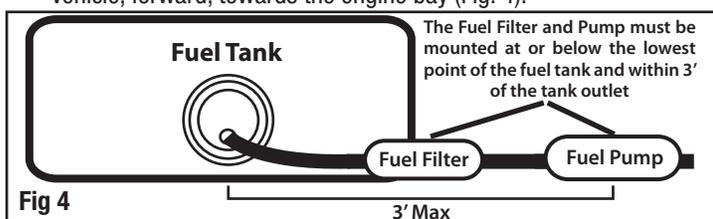
INSTALLATION TIPS AND PROCEDURES

This installation needs to be performed in conjunction with the E-Street EFI installation. Please refer to the E-Street EFI's installation manual for additional information.

1. Make sure to perform the installation in a well ventilated area away from any potential fire hazards. Gasoline fumes are toxic and highly flammable.
2. With the ignition off and the engine cool, disconnect the NEGATIVE (-) terminal on the battery.
3. Remove the gas cap to release any fuel pressure present in the fuel system.
4. Remove the fuel line from the factory mechanical fuel pump and unbolt the fuel pump from the block. Thoroughly clean the block's mating surface and install a fuel pump block-off plate (*required - not included*) specific for your application. Make sure to use the appropriate block-off plate gasket, bolts and RTV silicon for a proper seal.

NOTE: Vehicles using a low pressure Electric Fuel Pump need to remove and discard all fuel pump components. In most cases, a block-off plate may already be installed. If not, install a block-off plate at this time (*not included*).

5. Determine the ideal mounting location for the new fuel pump and primary fuel filter using the supplied mounting hardware. The primary fuel filter and the fuel pump must be mounted at or below the lowest point of the fuel tank. The fuel pump must also be mounted within 3 feet of the fuel tank as it is designed to push fuel from the rear of the vehicle, forward, towards the engine bay (Fig. 4).

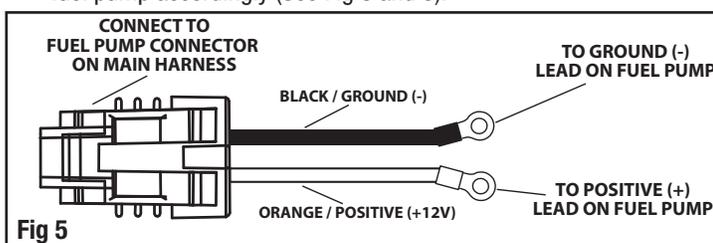


NOTE: Additional mounting brackets, *not included in this kit*, may be required to securely mount the fuel pump. Please note that the fuel pump is directional, the end with the power connectors will flow out towards the engine (See Figure 2).

6. Use the provided 3/8" fuel line to plumb the fuel system according to the diagram in Figure 1.

NOTE: The supplied 3/8" high pressure rubber fuel line must be used as the main fuel supply line. **DO NOT** use the factory metal hard line as it is not adequate for this fuel system. This system does not require a return line or a fuel pressure regulator as it is controlled by the ECU.

7. Using the fuel pump harness from kit #3600/3601, connect the ORANGE (Positive +12V) lead and the BLACK (Negative -) lead to the fuel pump accordingly (See Fig 3 and 5).



8. Route the fuel pump harness along with the fuel line towards the front of the vehicle into the engine bay.

NOTE: *DO NOT* route the fuel line or fuel pump harness around sharp objects or moving components. Make sure the fuel line and fuel pump harness do not hang below the chassis and are routed away from headers and exhaust system components. Secure the fuel line and fuel pump harness using the provided tie wraps, or equivalent, every 8-10 inches. Additional tie wraps may be required.

9. Install the secondary fuel filter anywhere between the fuel pump and the E-Street EFI system.

NOTE: The primary and secondary fuel filters must be used in conjunction to avoid contaminating the fuel pump and the E-Street EFI system. Any failures associated with contaminants will void the warranty of the fuel pump and the E-Street EFI system.

10. Connect the 3/8" fuel line to the front fuel rail on the E-Street EFI throttle body using the provided fuel fittings, a straight and 45° fitting are provided. The fuel line can be trimmed to length as needed.

11. Connect the fuel pump harness to the E2 connector on the E-Street EFI main harness (See Fig 5).

NOTE: The +12v Switch (PINK WIRE) on the E-Street EFI main harness must be connected to a +12v source when the key is "ON" and "CRANKING".

12. Reconnect the NEGATIVE (-) terminal on the battery.

NOTE: The following steps must be performed to properly prime the fuel system. The fuel system is completely dry and may not pull enough vacuum to start the vehicle. As a result, the following procedure along with a full tank of gas is recommended to properly prime the fuel system.

13. With the help from an assistant, remove the fuel line from the E-Street EFI fuel rail.

14. Using a fuel safe container, have an assistant place and hold the fuel line into the fuel safe container. With the fuel line secured, turn the key to the "ON" position and verify that fuel is flowing through the fuel system. Cycle the key "OFF" and "ON" 2-3 times to prime the fuel system.

NOTE: If fuel is not priming, verify the fuel pump connections and the pink +12v switch wire are properly installed.

15. Reinstall the fuel line once fuel system has been primed.

16. Turn the key to the "ON" position and check entire fuel system for leaks. **DO NOT** start the vehicle. If leaks are present, immediately turn the key "OFF". Repair all leaks and re-prime fuel system before continuing.

17. If leaks are not present, the installation of the Returnless Fuel System is complete. If you have not completed the E-Street EFI installation, please do so at this time. If installation is complete, please proceed to the Tablet Initial Setup procedure on the E-Street installation manual. **DO NOT start vehicle until prompt to do so.**