



17170 & 17171 Installation Instructions

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.

When installing this product, wear eye goggles and other safety apparel as needed to protect yourself from debris and sprayed gasoline.

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.

Aeromotive system components are not legal for sale or use on emission controlled motor vehicles. Phantom Systems are designed for use with gasoline based fuels only, up to 15% ethanol mix maximum.

This kit contains the following parts:

1ea p/n 18688 Phantom 340 or 18689 Phantom 200	2 ea p/n 15606 AN-06 ORB to AN-06 flare
1ea p/n 12321 Filter 10 micron Paper	2 ea p/n 15609 AN-10 ORB to AN-06 flare
1ea p/n 12305 Filter Bracket	1ea p/n 15626 AN-06 Port Plug

The enclosed Aeromotive Fuel System Kit is designed to give the end user a basic fuel system, less the AN fuel lines and hose-ends, for an true "Returnless EFI" application, where the ECU controls the system fuel pressure through PWM (Pulse Width Modulation) control of the speed of the fuel pump, thereby controlling the fuel pressure in the fuel system.

True returnless fuel systems require a dedicated, returnless ECU with integrated fuel pressure transducer/sensor and a fuel pump driver module capable of driving fuel pump speed via ECU input. **Do NOT attempt returnless EFI fuel system plumbing, without a bypass regulator and return line, unless the ECU is equipped with a pressure sensor and fuel pump driver module capable of pulse modulating pump speed to create and control system pressure.**

This installation instruction provides a diagram that outlines the overall layout of the fuel system intended with the enclosed components. The system diagram illustrates the components used, their locations relative to each other and in relation to fuel flow, including general fuel line routing and the AN fuel line sizes required. This is a system overview. Please refer to each individual component's installation instructions for detailed installation help with that particular component. Please contact Aeromotive for any recommendations on fuel line or additional fitting requirements.

Failure to follow the above recommendations may result in fuel leakage, bursting of the fuel lines, poor vehicle performance and/or decreased fuel pump life! Improper installation will void all warranties for this product!

Aeromotive Commonly Used Port Fittings:

15605 - AN-08 ORB to AN-06 Flare
15606 - AN-06 ORB to AN-06 Flare
15609 - AN-10 ORB to AN-06 Flare
15615 - 3/8-NPT to AN-06 Flare

Aeromotive Commonly Used Hose-Ends:

15650 - AN-06 Straight Hose End
15651 - AN-06 45-Deg. Hose End
15652 - AN-06 90-Deg. Hose End

Aeromotive Commonly Used SS Braided Fuel Line:

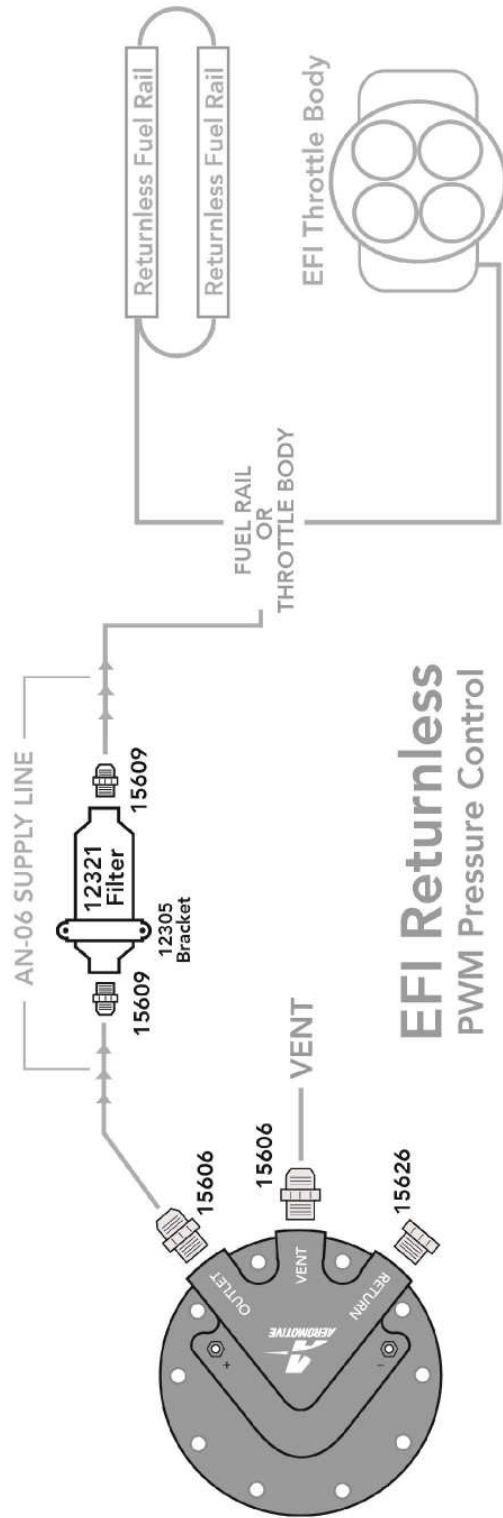
15701 - AN-06 4' Length
15702 - AN-06 8' Length
15703 - AN-06 12' Length

Aeromotive Replacement Element Part Numbers:

12601 – 10-M Fabric Element (For all ORB-10 Filters)
12635 – 40-M SS Element (For all ORB-10 Filters)
12604 – 100-m SS Element (For all ORB-10 Filters)
12001 – Filter O-Ring, 10-Pack (For all ORB-10 Filters)

General Installation Cautions and Guidelines:

- **CAUTION:** Insure all components are mounted, and fuel lines are routed through the chassis per the diagram, and in a manner to clear any exhaust system components, especially exhaust headers, turbo charger down-pipes, mufflers and tail-pipes, etc.
- **CAUTION:** Insure all components are mounted, and fuel lines are routed through the chassis per the diagram, and in a manner to safely clear any suspension components in the vehicle.
- **CAUTION:** Insure all components are mounted, and fuel lines are routed through the chassis per the diagram, and in a manner to safely clear any transmission, bell-housing and or drive-line components.
- **CAUTION:** Pressurize the fuel system and thoroughly check for fuel leaks, repairing any leaks found first, before cranking and/or starting the engine. Once the engine is running, again carefully check for fuel leaks, shutting down the vehicle immediately if necessary to perform any required repairs.
- **GUIDELINE:** Mount the Phantom Fuel Pump in the deepest part of the fuel tank.
- **GUIDELINE:** Mount the fuel pressure regulator in the engine bay, as close to the fuel rail/carb as possible.
- **GUIDELINE:** Acquire and install quality AN style hose and hose-ends. Teflon or PTFE based fuel line, though more costly, offers both long service life and resistance to permeation or vapor walk (where fuel vapors can “walk” through the line and contribute fuel smell to the area around where the car is stored).



EFI Returnless PWM Pressure Control

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WARNING: This product can expose you to chemicals, including chromium, which is known to the State of California to cause cancer or birth defects or other reproductive harm. For more information, visit: www.p65Warnings.ca.gov

AEROMOTIVE, INC. LIMITED WARRANTY

This Aeromotive Product, with proof of purchase dated on or after January 1, 2003, is warranted to be free from defects in materials and workmanship for a period of one year from the original date of purchase. No warranty claim will be valid without authentic, dated proof of purchase.

This warranty is to the original retail purchaser and none other and is available directly from Aeromotive and not through any point of distribution or purchase.

If a defect is suspected, the retail purchaser must contact Aeromotive directly to discuss the problem, possible solutions and obtain a Return Goods Authorization (RGA), if deemed necessary by the company. Please call 913-647-7300 and dial option 3 for the technical service dept. All returns must be shipped freight pre-paid to the company and with valid RGA before they will be processed.

Aeromotive will examine any product returned with the proper authorization to determine if the failure resulted from a defect or from abuse, improper installation, misapplication or alteration. Aeromotive will then, at it's sole discretion, return, repair or replace the product.

If any Aeromotive product is determined defective, buyer's exclusive remedy is limited in value to the sale price of the good. In no event shall Aeromotive be liable for incidental or consequential damages.

Aeromotive expressly retains the right to make changes and improvements in any product it manufactures and sells at any time. These changes and improvements may be made without notice at any time and without any obligation to change the catalogs or printed materials.

Aeromotive expressly retains the right to discontinue at any time and without notice any Aeromotive product that it manufactures or sells.

This warranty is limited and expressly limits any implied warranty to one year from the date of the original retail purchase on all Aeromotive products.

No person, party or corporate entity other than Aeromotive shall have the right to: determine whether or not this Limited Warranty is applicable to any Aeromotive product, authorize any action whatsoever under the terms and conditions of this Limited Warranty, assume any obligation or liability of any nature whatsoever on behalf of Aeromotive under the terms and conditions of this Limited Warranty.

This Limited Warranty covers only the product itself and not the cost of installation or removal.

This Limited Warranty is in lieu of and expressly excludes any and all other warranties, expressed or implied. This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.