



AEROMOTIVE
Part # 18702/18703
Phantom Fuel Bypass Valve Kit
INSTALLATION INSTRUCTIONS

This product is not legal for sale or use on emission-controlled vehicles except when used as a direct replacement part matching OEM specification.

WARNING!



Always be aware of flammable situations. Drilling and grinding can be potential ignition sources. Extinguish all open flames, prohibit smoking and eliminate all sources of ignition in the area of the vehicle and workspace before proceeding with the installation. Ensure you are working in a well ventilated area with an approved fire extinguisher nearby.

WARNING!



etc.

Installation of this product requires modification to a fuel tank/ the fuel system, failure to satisfy all safety considerations will result in fire, explosion, injury and/or loss of life to yourself and/or others. All fuel system components **MUST** be located as far from heat sources as possible, like exhaust, engine block,

WARNING!



Mechanical and hydraulic lifting devices can tip over or lower accidentally due to incorrect maneuvering or technical errors. A falling object can cause injury and/or loss of life to yourself and/or others. When working under the vehicle, always use stands, and ensure that the ground or floor is stable and level. Never crawl under a vehicle which is only supported by a jack.

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.

CAUTION!



When installing this product always wear safety glasses and other appropriate safety apparel. A drilling operation will cause flying metal chips. Flying metal chips can cause eye injury.

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. Careless installation of this product can result in damage to the product, injury or loss of life to yourself and/or others.

Compatible Fuels:

Pump Gas
Race Gas
E85
Alcohol/Ethanol

Parts Included:

1ea Fuel Pressure Relief (Bypass) Valve, 15 psi (18702)
1ea Label, 15 psi Internally Regulated (18702)

-OR-

1ea Fuel Pressure Relief (Bypass) Valve, 60 psi (18703)
1ea Label, 60 psi Internally Regulated (18703)

COMMON

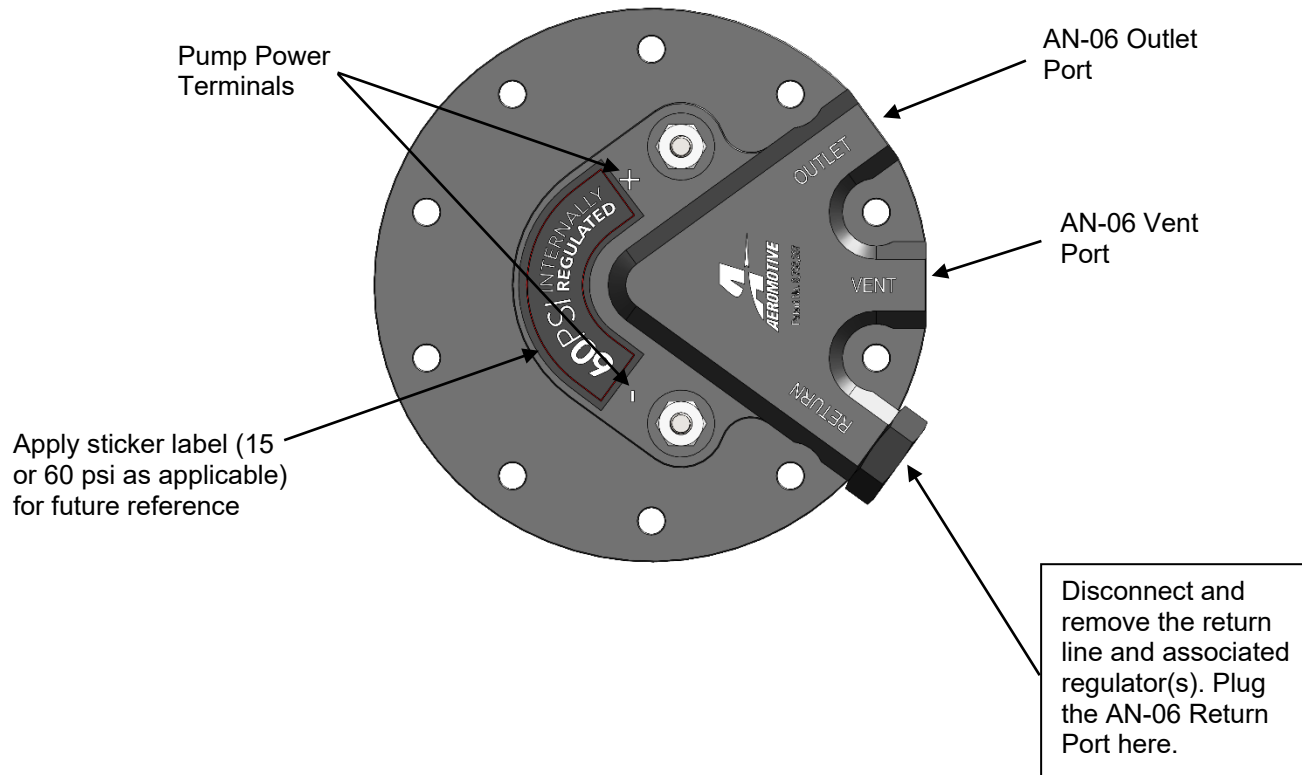
1ea Gasket, 1/2" Thick
10ea 10-24 Nylon Locking Stainless Steel Nut
10ea #10 Nylon Washer
1ea Plug, ORB-06
1ea O-Ring, Nitrile, 3-906 for AN-06 Port

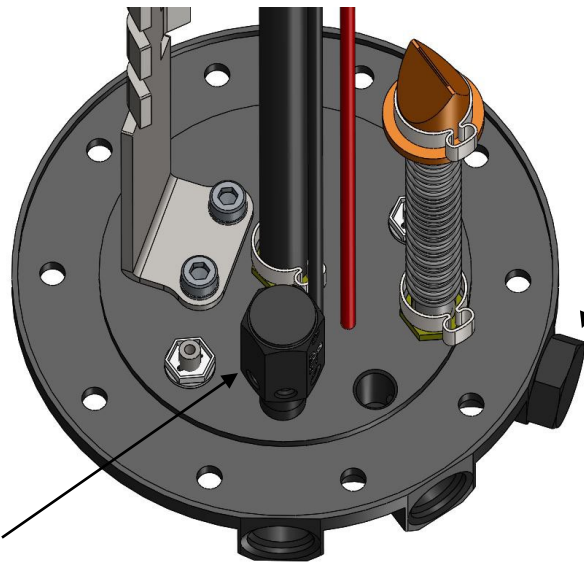
Parts Included:

5/8" Straight Wrench or Adjustable Wrench
3/4" Straight Wrench or Adjustable Wrench
3/8" Socket and Ratchet

PTFE tape or thread sealant
O-Ring lubricant

QUICK START REFERENCE GUIDE





Disconnect and remove the return line and associated regulator(s). Plug the AN-06 Return Port here.

Remove the brass pipe plug and Install the new Pressure Relief (Bypass) Valve here

If this has not been done already, we strongly recommend installing a remote-mount rollover valve. It must be mounted in a vertical position and mounted as high or higher than your filler tube.

Failure to follow the above recommendations may result in fuel leakage! Improper installation will void all warranties for this product!

Relief (Bypass) Valve Specifications:

18702	Relief (Bypass) Valve Full Bypass (Supply Line) Pressure:	15 psi @ 340 LPH
18703	Relief (Bypass) Valve Full Bypass (Supply Line) Pressure:	60 psi @ 340 LPH

Aeromotive Commonly Used Fittings

- 15606 AN-06 ORB to AN-06 Flare (Inlet/outlet/vent fitting) For AN-06 fuel lines
- 15649 AN-06 ORB to AN-08 Flare (Inlet/outlet/vent fitting) For AN-08 fuel lines
- 15609 AN-10 ORB to AN-06 Flare (fuel filter fitting) For AN-06 fuel lines
- 15610 AN-10 ORB to AN-08 Flare (fuel filter fitting) For AN-08 fuel lines

Aeromotive AN Y-Block P/N's

- 15672 AN-06 to 2x AN-06
- 15673 AN-08 to 2x AN-06
- 15674 AN-08 to 2x AN-08
- 15675 AN-10 to 2x AN-08

Aeromotive system components are not legal for sale or use on emission-controlled motor vehicles.

This product is intended to be installed and utilized for pump pressure regulation internal to the tank eliminating the need for downstream pressure regulation. If downstream pressure regulation and/or a return line are planned to be used, please contact the Aeromotive Tech Department for assistance with installation.

The following steps are typical of most installations:

1. Once the engine has been allowed to cool, disconnect the negative battery cable and relieve the fuel system pressure, referring to the appropriate vehicle service manual for the procedure and precautions for doing so.
2. Raise the vehicle on stable level ground and support it with jack stands.
3. Mark/note, drain, and disconnect electrical and fuel system connections and remove the fuel tank as needed to gain access to the pump assembly. It is not required to disconnect any lines (other than the return line being abandoned) in order to complete the installation. The removal of the vehicles exhaust system may be necessary for fuel tank removal.

4. Disconnect and remove the return line and associated regulator(s). Plug the return connection(s) at the engine as applicable.
5. Mark/note the orientation of the fuel pump assembly and remove. Remove the gasket for replacement later.
6. Remove the brass pipe plug installed in the supply line on the bottom (tank) side of the pump assembly end cap and install the provided new relief (bypass) valve. **This valve uses a pipe thread and requires PTFE or thread sealant to seal.** Install the provided sticker label onto the pump assembly end cap for future reference (see above for example).
7. Apply o-ring lubricant to the provided o-ring and install on the plug (this may have been done at the factory). Install the plug into the return port.
8. Install the provided new gasket onto the threaded studs on the fuel pump retaining ring.
9. If the top of the tank is corrugated or has ribs on the desired mounting surface, the included gasket will compress and form to the ribs up to 1/4" deep. In extreme cases where the ribs are deeper than 1/4", or oddly shaped, the use of a fuel resistant sealant, such as Dow Corning 730 fluorosilicone RTV, or additional fabrication may be necessary.

Do not use silicone gasket maker or sealant as it is not fuel resistant. With the fuel pump assembly fully assembled and the gasket in place, ease the pump assembly into the baffle assembly inside the fuel tank. Rotate the billet fuel pump hanger assembly to orient the fuel line and vent connections to the original orientation and drop the hanger onto the retaining ring studs.

Caution: Take special care to ensure that the fuel pump wires are fully inside of the tank and will not be pinched in between the pump assembly and the fuel tank during assembly.

10. Press down firmly on the top of the pump assembly to compress the gasket. Start two of the provided, new 10-24 lock nuts on a pair of studs 180 degree apart. Tighten these two nuts until the remaining studs are approximately 1/4" exposed.
11. With the remaining eight studs exposed approximately 1/4", place one of the provided, new #10 white nylon sealing washers on each of the studs followed by a new 10-24 locking nut.
12. Remove the first two lock nuts used to help compress the gasket. Place one of the new #10 white nylon sealing washers on each of these two studs, followed by reinstalling the 10-24 locking nuts.
13. With all 10 studs now having a #10 white nylon sealing washer and a locking nut, slowly tighten using a crisscross pattern until the gasket forms to the tank surface.
14. Reconnect any disconnected feed, vent, and electrical lines before placing tank in vehicle. In most cases, once the tank is placed in the vehicle these connections will not be accessible.

Note: Tank vent must be at least 6" above the top of the tank if a roll-over valve is used (highly recommended).

15. Reinstall the fuel tank in the vehicle.

CAUTION: While performing the following steps, if any fuel leaks are detected, immediately turn the fuel pump OFF, remove any spilled fuel and repair the leak(s) before proceeding!

16. Turn the fuel pump ON **without starting the engine**, allow the pump to run for several seconds, and check the fuel pressure. If there is no pressure, turn the fuel pump OFF, wait one minute, then turn the fuel pump ON and recheck the pressure. Repeat this fuel pump OFF and ON procedure until the fuel pressure gauge registers pressure or you detect a fuel leak. It may be necessary to loosen the fuel line fitting at the engine to bleed off excessive air in the system. Tighten any fuel line fittings which were loosened and ensure that any spilled fuel is cleaned up and removed from the vicinity of the vehicle. If no pressure is registered on the gauge after running the pump for several seconds and you have found no leaks, check all fuel and electrical connections to determine the cause.

17. Once the fuel pressure gauge registers pressure, start the engine. The gauge on the fuel supply line should register approximately 15 psi for carbureted applications (18702) or 60 psi for EFI applications (18703) depending on where the gauge is installed relative to the pump assembly (now internally regulated).

Test drive the vehicle to insure proper operation and re-check the fuel system for leaks. **If any leaks are found, immediately discontinue use of the vehicle and repair the leak(s)!**

Contact Us

RGA NUMBER REQUIRED FOR ALL RETURNS TO AEROMOTIVE.

To obtain an RGA number, please call (913) 647-7300 and ask for the Returns and Repairs department or complete the online form under the "Rebuilds" section at www.aeromotiveinc.com.

- **Shipping & Returns**

Aeromotive Inc.
10955 Mill Creek Road
Lenexa, KS 66219

General Inquiries and Tech Line: (913) 647-7300

General Email: info@aeromotiveinc.com

Tech Email: tech@aeromotiveinc.com

The Aeromotive Tech Lines are open Monday through Friday from 9:30AM to 5:00PM Central Standard Time.



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.