



AEROMOTIVE

Part # 13304

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.

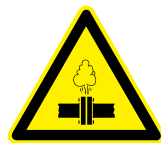
Installation of this product requires modification to a fuel tank/ the fuel system, failure to satisfy all safety considerations will result in fire, explosion, injury and/or loss of life to yourself and/or others. All fuel system components **MUST** be located as far from heat sources as possible, like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

The Aeromotive X1 Regulator, Part #13304, utilizes two o-ring sealed ORB-08 inlet/outlet ports and one o-ring sealed ORB-08 style bypass or return port. Aeromotive offers port adapters fittings suitable for adapting these ports to AN-06, AN-08 and AN-10 line (see instructions for part #s).

ORB ports are **NOT PIPE THREAD** and utilize **NO THREAD SEALANT**. You must install ORB port fittings with o-rings, high pressure fuel lines and/or fuel injector rails to use this regulator. Each regulator has one 1/8" NPT gauge port which does requires thread sealant to seal.

This regulator features a 1/16" NPT vacuum/boost reference port which, when connected to carb hat pressure will raise fuel pressure with boost. It works on a ratio of 1:1 with PSI. If unused, please do not plug, leave the nipple open to atmosphere. If necessary, a bronze filter adapter fitting is available for extreme environments under P/N 15662.

Base Adjustment Range: 3-20 PSI

Boost reference range: Limited only by pump capability.

Max Fuel Flow Range: Up to 250 GPH (1550lb/hr or 950 LPH)

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

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.
2. Place shop towels around the existing regulator to catch any gasoline that is spilled during this step of the installation. Remove any regulator mounting hardware and connecting fuel lines, then carefully remove the existing regulator.
3. Find a suitable place in the vehicle's engine compartment to mount the Aeromotive regulator. Using the supplied mounting bracket as a template, mark the bracket mounting holes and drill to accept a #10 screw.
4. With the bracket attached to the regulator, mount the bracket and regulator to the vehicle using two #10 screws, nuts and lock washers.

Suggested Inlet/Outlet Port Fittings:

ORB-08 to AN-06 – P/N 15605
ORB-08 to AN-08 – P/N 15607
ORB-08 to AN-10 – P/N 15641
ORB-08 Port Plug – P/N 15618
ORB-08 Port Plug with
1/8" NPT gauge port – P/N 15637

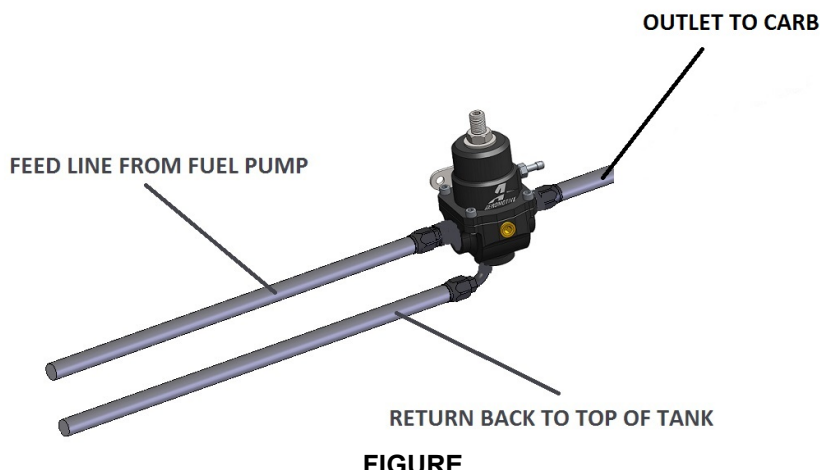
Gauge Port
Type/Size: 1/8" NPT

Return Port
Type/Size: ORB-08

Inlet Ports/Outlet Ports
Type/Size: ORB-08



5. Attach the fuel return line to the regulator return port located on the **bottom** of the regulator, using an AN-08 style fitting and o-ring. Tighten all connections.
6. Attach the fuel supply line to the AN-08 inlet port located on either side of the regulator using a cutoff AN-08 style fitting and o-rings. Which ever AN-08 port is left, it is the outlet to the carb. **FIGURE 1-1**



If using with a fuel log, refer to **FIGURE 1-2**.



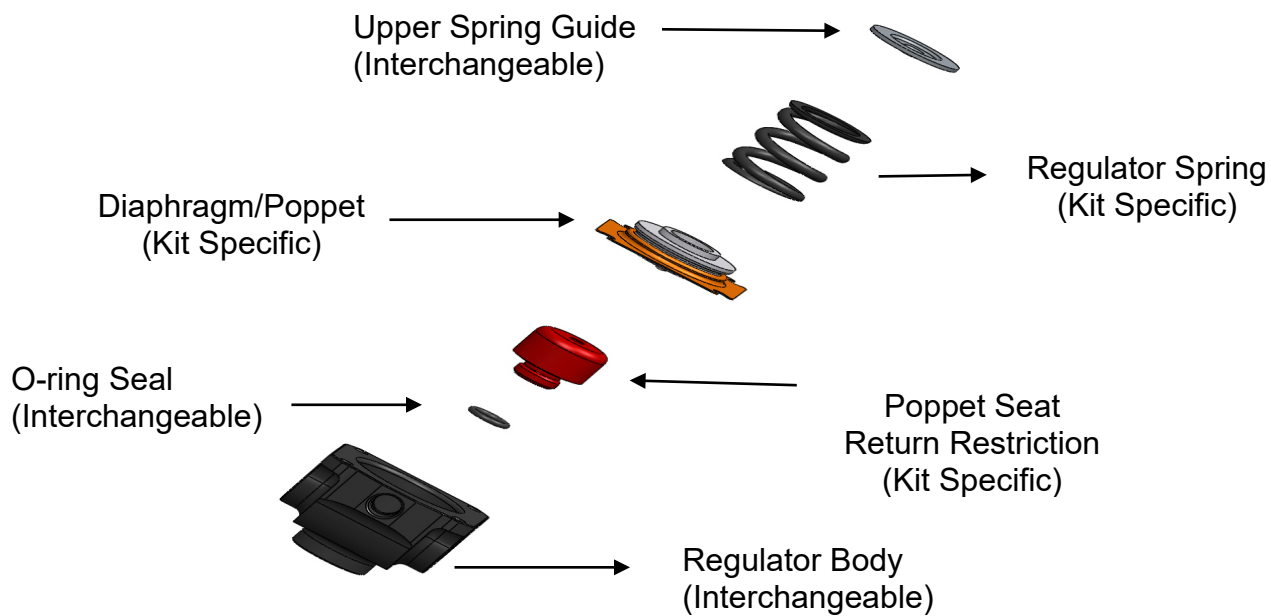
FIGURE 1-

10. Once the regulator is installed, attach a suitable fuel pressure gauge to the 1/8 NPT port on the fuel pressure regulator (0-15psi 1.5" fuel pressure gauge, part # 15632). Requires thread sealant.
11. **Ensure that any spilled gasoline and any gasoline soaked shop towels are cleaned up and removed from the vicinity of the vehicle!**
12. Reconnect the battery and turn the ignition to the ON position **WITHOUT** starting the car. After several seconds, check the fuel pressure. If there is no fuel pressure, turn the ignition key to the OFF position, wait one minute, return the ignition to the ON position, and recheck the fuel pressure. Repeat this ignition OFF and ON procedure until the fuel pressure gauge registers fuel pressure.
13. **With the fuel pressure gauge registering fuel system pressure, check for fuel leaks from and around the Aeromotive regulator. If any fuel leaks are found, turn the ignition key to the OFF position, remove any spilled fuel and repair the leak before proceeding!**
14. Once the fuel pressure gauge registers fuel system pressure and there are no fuel leaks, disconnect the vacuum/boost line (if being used), start the engine and adjust the regulator to the desired fuel pressure. Turning the adjustment screw clockwise will increase fuel pressure.
15. Once the desired fuel pressure is achieved, tighten the regulator adjustment jam nut and attach the vacuum line if one is being used. If the vehicle is not equipped with a vacuum line, leave vacuum port open to atmosphere. Blocking the vacuum port will yield poor regulator performance. If vacuum port fitting becomes lost or broken replacement fittings can be purchased (part # 15630).
16. If you do not want to keep the fuel pressure gauge on the vehicle, relieve the fuel system pressure as instructed in the appropriate vehicle service manual and remove the fuel pressure gauge.
17. Test drive the car to insure proper operation and re-check the fuel system for leaks. **If any leaks are found, immediately shut off the engine and repair the leak(s)!**

Special Features of the X1 Regulator P/N 13304

The 13304 is engineered for flexibility, featuring an interchangeable Poppet Seat, Diaphragm/Poppet and Spring assembly. Installing any of the optional kits allows the X1 Regulator to be re-configured for a wide array of pressure ranges and fuel pump flow capacities. Figure 1-4 is an exploded view of the regulator to aid in identifying the various components. The following part #'s are the interchange kits available:

- 13013 - .188" Poppet Seat (RED) with 35-75psi: Up to 150 GPH return flow
13014 - .313" Poppet Seat (BLACK) with 3-20psi Up to 250 GPH return flow
13015 - .313" Poppet Seat (BLACK) with 35-75psi Up to 300 GPH return flow



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.

- **Shipping Address**

Aeromotive Inc.
7805 Barton St.
Lenexa, KS 66214

- **Sales & Returns**

Aeromotive Inc.
11414 W 79th Street.
Lenexa, KS 66214

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.