

## AEROMOTIVE Part # 13224 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!



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 enclosed Aeromotive regulator utilizes one o-ring sealed AN-10 style inlet port, four o-ring sealed AN-06 style outlet ports and one o-ring sealed AN-08 style bypass port (Both the inlet and bypass ports require cutoff AN style fittings, Aeromotive P/N's 15608 and 15607 or equiv.); these regulator ports are <u>NOT PIPE THREAD</u> and utilize <u>NO THREAD SEALANT</u>.

The enclosed Aeromotive regulator was designed to be used with fuel pumps up to 250 gph, similar to Aeromotive P/N 11101 or 11104. Performance may be degraded if a similar pump is not used.

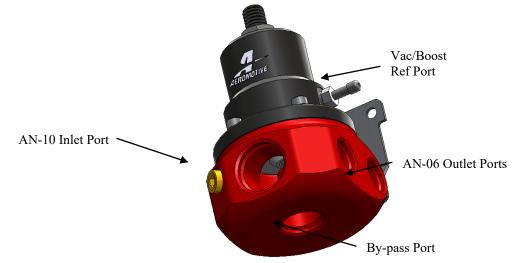
The Vacuum / Boost reference port is provided for fuel pressure compensation at a 1:1 rate, this is primarily used in blow-thru centrifugal supercharged applications or factory EFI vacuum referenced regulators. In most cases this port is left open to reference atmospheric pressure.

Performance Specifications: Model 13224 Outlet Fuel Pressure, adjustable 3-15 psi Max Pump Flow Rate 250 GPH

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 any 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.



5. Attach the fuel supply line to the AN-10 inlet port located in the front of the regulator using a cutoff AN-10 style fitting (Aeromotive P/N 15608 or equivalent) and o-ring.

6. Measure the length of the required bypass line. Using the chart below, determine the minimum required return line ID based this length. Attach the fuel return line to the AN-08 bypass port located at the bottom of the regulator using the appropriately sized fitting, Aeromotive p/n 15605 for an AN-06 line, p/n 15607 for a AN-08 line, p/n 15641 for a AN-10 line.

	Minimum Return Fuel Line ID Chart				
	Fuel Pump Free Flow Rating (GPH)				
Return Line	1 to 60	60 to 120	120 to 180	180 to 250	
Length (ft.)	GPH	GPH	GPH	GPH	
0-5 feet	3/8"	3/8"	1/2"	1/2"	
5-10 feet	3/8"	1/2"	1/2"	5/8"	
10-15 feet	3/8"	1/2"	5/8"	3/4"	
15-20 feet	1/2"	1/2"	5/8	3/4"	

#### Minimum Detum Fuel Line ID Chart

#### Note: An undersized return line will prevent the fuel pressure regulator from functioning properly.

- 7. Attach the carburetor supply lines to the regulator using AN-06 style fittings and o-rings (Aeromotive p/n 15606). Install AN-06 style plugs and o-rings into the outlet ports not used.
- 8. The Vacuum / Boost reference port is provided for fuel pressure compensation at a 1:1 rate, this is primarily used in blow-thru centrifugal supercharged applications. In most cases this port is left open to reference atmospheric pressure.
- 9. Tighten all connections.
- 10. Once the regulator is installed, attach a suitable fuel pressure gauge to the 1/8 NPT port on the fuel pressure regulator (Aeromotive p/n 15632).
- 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 fuel pump ON WITHOUT starting the car. After several seconds, check the fuel pressure. If there is no fuel pressure, turn the fuel pump OFF, wait one minute, turn the fuel pump ON, and recheck the fuel pressure. Repeat this 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 and all fuel lines and connections near the regulator! If any fuel leaks are found, turn the fuel pump OFF, 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, start the engine and adjust the regulator to the desired fuel pressure (Regulator is adjustable from 3-15 psi). Turning the adjustment screw clockwise will increase fuel pressure.
- 15. Once the desired fuel pressure is achieved, tighten the regulator adjustment jam nut.
- 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. Remove the fuel pressure gauge and reinstall the 1/8 NPT pipe plug into the regulator gauge port, using thread sealant.
- 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)!

# **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 & Returns
Aeromotive Inc.
10955 Mill Creek Road
Lenexa, KS 66214

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

General Email: <u>info@aeromotiveinc.com</u> Tech Email: <u>tech@aeromotiveinc.com</u>

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: <u>www.p65Warnings.ca.gov</u>

#### 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.