



**AEROMOTIVE**  
**Part # 17151**  
**Generic EFI Fuel System**  
**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.

**This kit contains the following parts:**

1 ea fuel pump wiring kit	1 ea p/n 11101 Pump
1 ea 3ft length of 10 ga. Black wire	1 ea p/n 12304 Filter 100 Micron SS
1 ea 25ft length of 10 ga. Red wire	1 ea p/n 12301 Filter 10 Micron Paper
1 ea 30 amp circuit breaker	1 ea p/n 13101 Fuel Pressure Regulator
1 ea 30 amp automotive relay	1 ea AN-06 o-ring
2 ea blue female blade connector	8 ea AN-10 o-ring
2 ea yellow female blade connector	1 ea p/n 15606 AN-06 cutoff union
5 ea yellow #10 stud ring connector	3 ea p/n 15608 AN-10 cutoff union
1 ea yellow 3/8" stud ring connector	3 ea p/n 15610 AN-10 cutoff to AN-08 union
6 ea tie-wraps	1 ea p/n 15633 0-100 PSI Pressure Gauge

**Warning – The included Aeromotive fuel pump is not compatible with alcohol based fuels or fuel additives!**

This kit assumes you have a sumped fuel tank or fuel cell with accommodations for an AN-10 Supply line and an AN-06 return line. Undersized fuel tank pickups will not work properly with Aeromotive fuel systems and will be detrimental to your fuel systems life. If your fuel tank is not sumped, we recommend having your fuel tank sumped by a qualified professional.

The use of aftermarket fuel rails or an OEM fuel rail adapter is required. See Section 1 for typical OEM fuel rail adapter fittings. Contact Aeromotive for the availability of aftermarket fuel rails and other adapter options.

This kit does not include fuel lines, the use of appropriate high pressure rated fuel fittings and lines is required. Contact Aeromotive for you high pressure fuel line needs.

Maximum continuous operating pressure should not exceed 70 psi.

**The following steps are typical of most installations:**

Section 1 – OEM Fuel Rail adapter Fittings

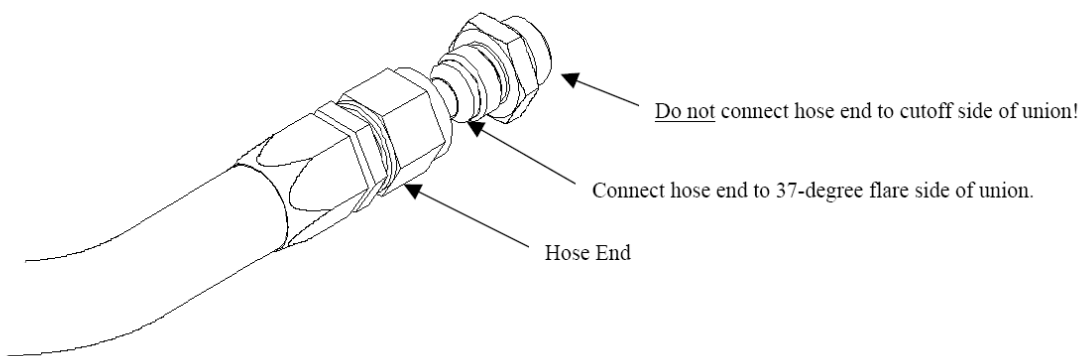
Section 2 - Fuel Pump Installation

Section 3 – Fuel Regulator Installation and Fuel Line Plumbing

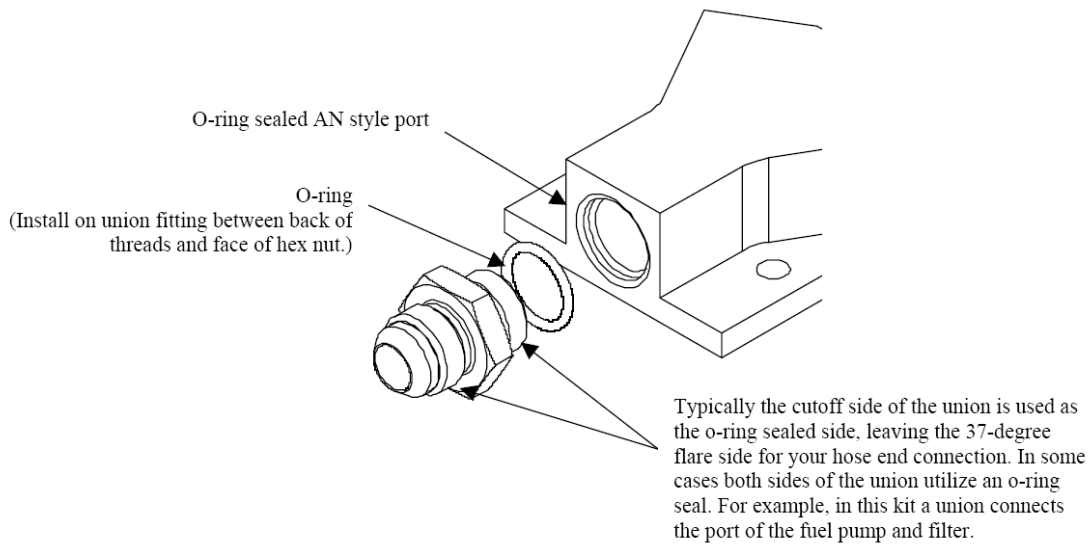
Section 4 – Electrical Installation

Section 5 – Final Checks and System Start-up

**Typical hose end to fitting connection:**

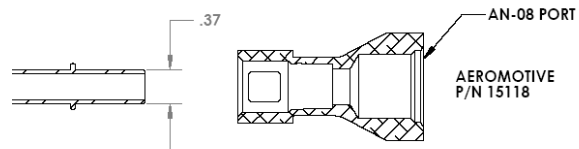
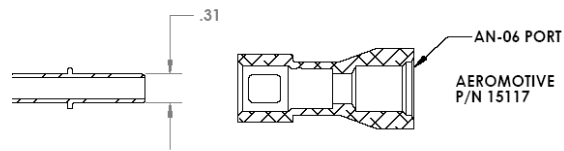
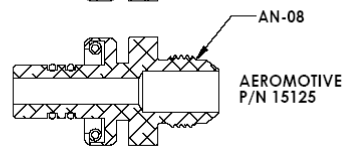
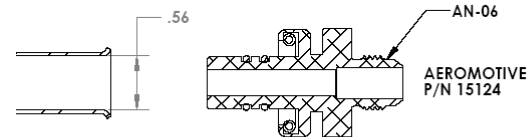
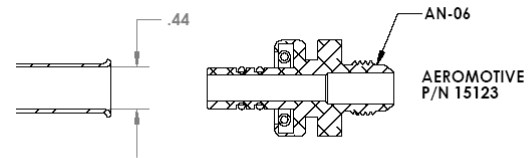


**Typical o-ring sealed port connection:**



## Section 1 – OEM Fuel Rail adapter fittings:

Typical OEM Fuel rail fittings are shown on the left with the typical adapter fitting shown to the right. Contact Aeromotive for any additional fitting options.



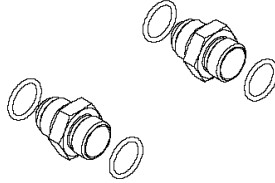
## Section 2 - Fuel Pump Installation:

2-1. Once the engine has been allowed to cool, disconnect the negative battery cable and relieve the fuel system pressure.

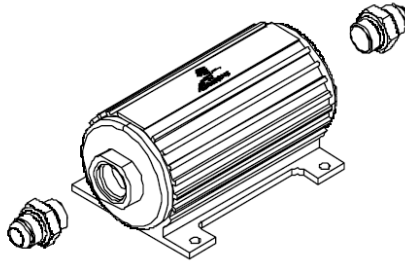
2-2. Raise the vehicle and support it with jack stands.

2-3. Referring to the appropriate vehicle service manual for instructions, drain, disconnect any electrical and fuel component connections.

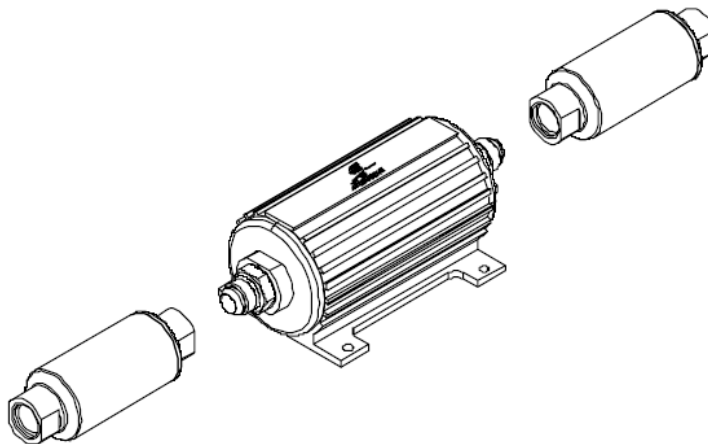
2-4. In the kit find two AN-10 cutoff union fittings and four AN-10 o-rings. Install each of the four o-rings on each end of the two AN-10 cutoff union fittings.



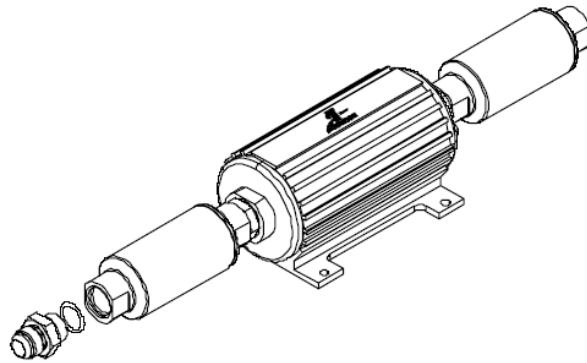
2-5. Install each of the two fittings into each end of the provided Aeromotive fuel pump.



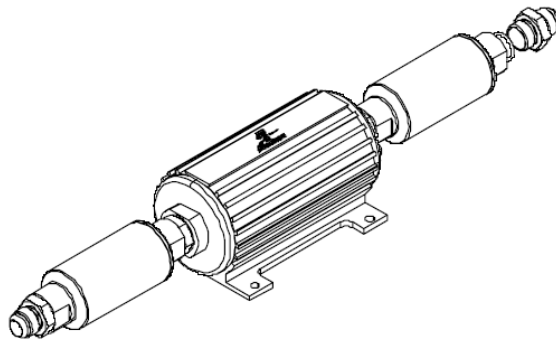
2-6. Noting the appropriate flow directions, install the provided fuel filter, Aeromotive p/n 12301, on the fuel pump outlet and the other fuel filter, Aeromotive p/n 12304, on the fuel pump inlet. If you get the two filters mixed-up, the 12304 filter will have a 100 micron stainless steel filter element inside, where as the 12301 will have a 10 micron paper filter element inside.



2-7. Install one of the supplied AN-10 o-rings on the cutoff side of the AN-10 cutoff union fitting and install on the inlet side of the pump / filter assembly.



2-8. Install one of the supplied AN-10 o-rings on the AN-10 cutoff side of the AN-10 to AN-08 reducer union fitting, and install the fitting on the outlet side of the pump / filter assembly.



2-9. Find a suitable mounting location for the above pump / filter assembly. Typical mounting locations include mounting the fuel pump to the fuel tank shield or mounting to the inside of the frame rail. The fuel pump should be mounted as close to the fuel tank as possible and as low as possible. Using the fuel pump mounting clamps as a guide, mark the four pump mounting holes. Ensure there are no obstructions behind the mounting surface and drill four  $\frac{1}{4}$ " mounting holes.

2-10. If you are using the plastic fuel tank shield for mounting your fuel pump, secure the fuel pump to the plastic fuel tank shield by installing four  $\frac{1}{4}$ " carriage bolts (not included) from the inside of the fuel tank shield, through the fuel tank shield and through the fuel pump mounting holes. Install four flat washers and nuts on the bolts and tighten. Inspect the inside of the plastic fuel tank shield for any sharp edges that could puncture the fuel tank. If any sharp edges are found, correct before proceeding.

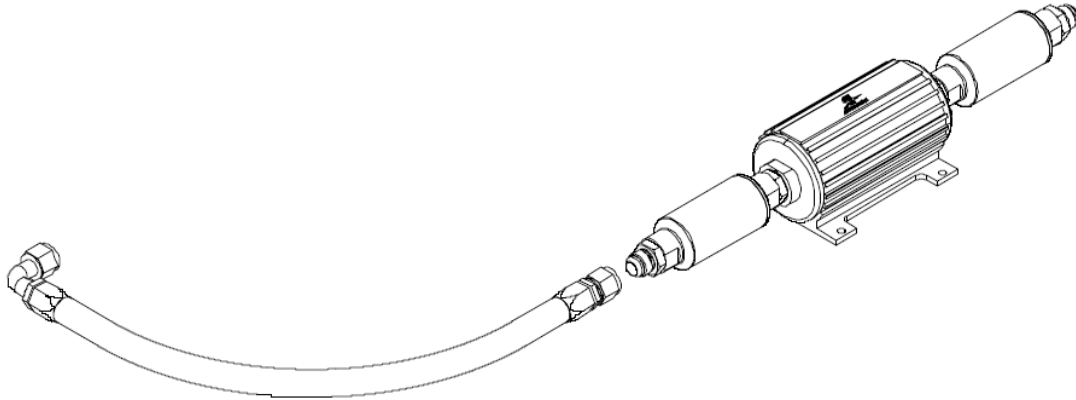
2-11. If you are mounting the fuel pump in some other fashion, secure the fuel pump to the mounting surface using four  $\frac{1}{4}$ " bolts, nuts, and lock washers (not provided).

2-12. Using the mounted pump assembly and the fuel cell / fuel tank as a guide, plumb the fuel pump inlet line using AN-10 steel braided fuel line (Not provided) or a suitable fuel line with a minimum of  $\frac{1}{2}$ " ID.

**Note: Be sure to route all fuel lines clear of any moving suspension or drivetrain components and any exhaust components! Protect fuel lines from abrasion and road obstructions or debris.**

2-13. Using the above steel braided hose assembly, connect one end to the outlet of the fuel tank sump and the other end to the fuel pump / filter assembly inlet and tighten.

**Note: It is recommended that a fuel shut off valve be installed between the fuel tank outlet and the fuel pump / filter assembly inlet, Aeromotive offers an inlet fuel filter with integral shutoff valve, p/n 12331 or standalone valves are available from most popular racing fitting manufactures; Peterson, Aeroquip, Earl's, Goodridge, Russell, etc.**



2-14. In vehicles engine compartment, locate a suitable mounting location for the supplied fuel pressure regulator

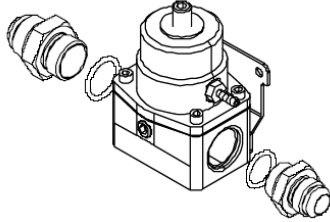
2-15. Starting from the determined regulator mounting location in the engine compartment, plan a route to run an AN-06 or 3/8" ID fuel return line back to the fuel tank or fuel cell return port.

2-16. Thread one end of the AN-06 return line onto the AN-06 return line accommodations of your fuel tank or fuel cell and tighten.

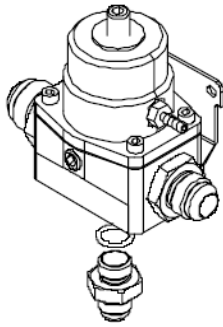
**Note: Be sure to route all fuel lines clear of any moving suspension or drivetrain components and any exhaust components! Protect fuel lines from abrasion and road obstructions or debris.**

## Section 3 – Fuel Regulator Installation and Fuel Line Plumbing

- 3-1. In the vehicle's engine compartment, mount the supplied fuel pressure regulator in the location established in step 2-14. Using the supplied mounting bracket as a template, mark the bracket mounting holes and drill to accept a #10 screw.
- 3-2. With the bracket attached to the regulator, mount the bracket and regulator to the vehicle using two #10 screws, nuts and lock washers (not provided).
- 3-3. Install two of the supplied AN-10 o-rings on the cutoff side of two AN-10 cutoff to AN-08 reducer union fittings and install in each of the AN-10 ports located on the sides of the supplied fuel pressure regulator. If you have a single fuel rail system, plug one of the ports using an AN-10 port plug (not provided) and o-ring.



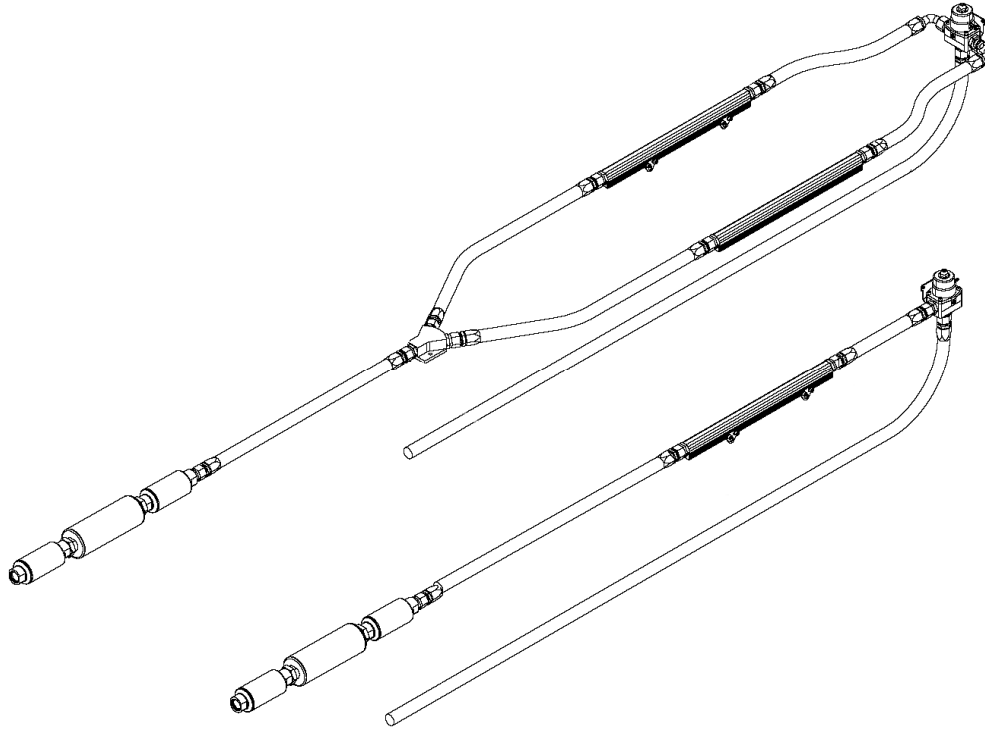
- 3-4. Install one of the supplied AN-06 o-rings on the cutoff side of the AN-06 cutoff union fitting and install in the AN-06 port located on the bottom of the supplied fuel pressure regulator.



- 3-5. If you are using the OEM fuel rails; Use the adapter fitting selected from section 1 and attached to the fuel rail. Run an AN-08 or equiv. high pressure fuel line from the adapter fitting to the fuel pressure regulator. Then another from the fuel pressure regulator back to the fuel pump assembly outlet. Skip down to step 3-7

**Note: Be sure to route all fuel lines clear of any moving suspension or drivetrain components and any exhaust components! Protect fuel lines from abrasion and road obstructions or debris.**

3-6. If you are using a set of aftermarket fuel rails; Starting from the fuel rails, plan a route to run an AN-08 or equiv. high pressure fuel line from each fuel rail to each side of the regulator. In the case of a single fuel rail system, only run one line from the fuel rail to the regulator. Then another from the fuel pressure regulator back to the fuel pump assembly outlet. See the diagram below for a typical system



3-7. Using the above steel braided hose assemblies, connect the system together as indicated and tighten.

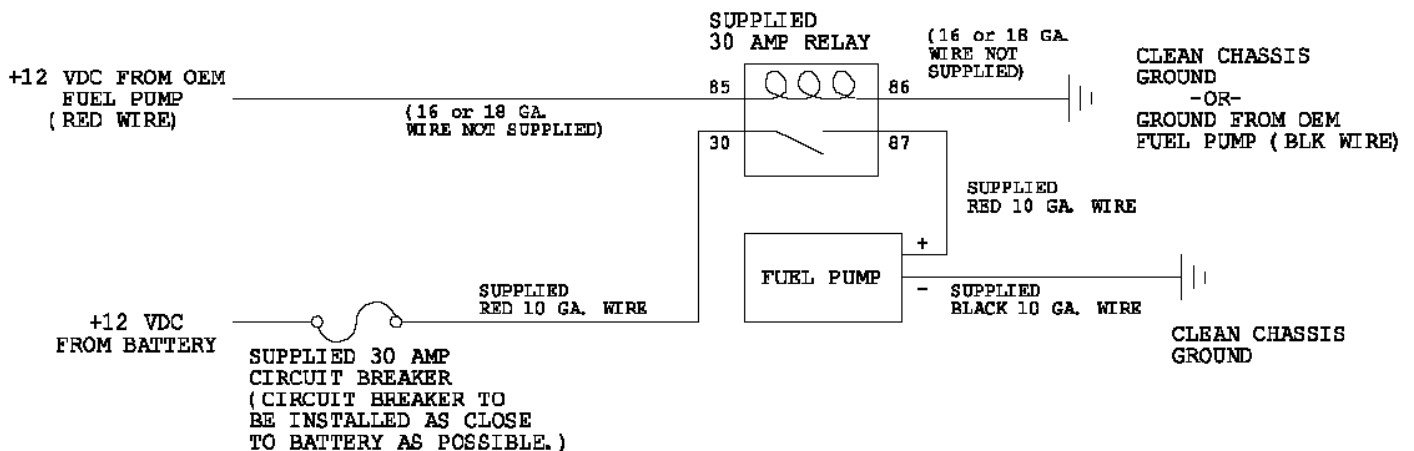
**Note: Be sure to route all fuel lines clear of any moving suspension or drivetrain components and any exhaust components! Protect fuel lines from abrasion and road obstructions or debris.**

3-8. Once the regulator is installed, attach the supplied fuel pressure gauge to the 1/8 NPT port on the fuel pressure regulator.



## Section 4 - Electrical Installation:

- 4-1. Find a suitable place to mount the supplied relay, the relay is typically mounted by the OEM fuel pump wiring connector (***Never mount the relay inside of the fuel tank or next to fuel tank vents!***). Ensure the relay and any associated parts are clear of the exhaust, any moving suspension or drivetrain components and any possible road obstructions or debris.
  - 4-2. Attach the OEM fuel pump wires (These typically are the red and black wires from the OEM wiring harness going to the fuel tank) to relay terminals 85 and 86 using two of the supplied blue female blade connectors (See Figure 4-1 Below).
- Note: Be sure to route all electrical wires clear of any moving suspension or drivetrain components, and any exhaust components! Protect wires from abrasion and road obstructions or debris.**
- 4-3. Find a suitable location for mounting the supplied circuit breaker. For optimal circuit protection, the circuit breaker needs to be mounted as close to the battery as possible.
  - 4-4. Connect terminal number 30 on the relay to the circuit breaker by using the supplied red 10 ga. wire, one of the yellow female blade connectors on the relay end of the wire and one of the yellow #10 ring connectors on the circuit breaker side of the wire.
  - 4-5. Connect terminal number 87 on the relay to the positive terminal on the fuel pump. This is accomplished by using the supplied red 10 ga wire, one of the yellow female blade connectors on the relay side of the wire and one of the yellow #10 ring connectors on the fuel pump side of the wire.
  - 4-6. Connect the negative terminal on the fuel pump to a clean chassis ground using the supplied black 10 ga wire and two yellow #10 ring connectors.
  - 4-7. Connect 12VDC to the circuit breaker using the supplied red wire and one of the yellow #10 ring connectors and the supplied yellow 3/8" ring connector.
  - 4-8. Ensure that electrical components and wires are connected properly and are clear of any moving suspension or drivetrain components and any exhaust components! Protect wires from abrasion and road obstructions or debris.



## Section 5 – Final Checks and System Start-up

5-1. **Ensure that any spilled gasoline and any gasoline soaked shop towels are cleaned up and removed from the vicinity of the vehicle!**

5-2. Carefully lower the car onto the ground.

5-3. Fill the fuel tank with gasoline and check for any leaks in the system, if any leaks are found repair immediately.

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

5-4. 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.

**5-5. With the fuel pressure gauge registering fuel system pressure, check for fuel leaks throughout the entire fuel system! If any fuel leaks are found, turn the ignition key to the OFF position, remove any spilled fuel and repair the leak before proceeding!**

5-6. 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. Turning the adjustment screw clockwise will increase fuel pressure. OEM regulators are typically set at approximately 43 psi, without the vacuum line attached. The fuel pressure adjustment range for this regulator is 35-75 psi.

5-7. Once the desired fuel pressure is achieved, tighten the regulator adjustment jam nut and attach the vacuum line.

**5-8. Test drive the car to ensure 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)!**



**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](http://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.