



**AEROMOTIVE**  
**Part # 17156**  
**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.

Maximum continuous operating pressure should not exceed 70 psi.

**Special tools needed:**

Fuel supply line quick disconnect tool

**Supplies needed:**

Vehicle service manual  
Fuel injector replacement O-rings  
Light oil  
Solvent parts cleaner  
Clean shop towels

**This kit contains the following parts:**

1ea p/n 14141 Ford 5.4L DOHC Fuel Rails  
1ea p/n 13128 EFI Regulator  
1ea p/n 15115 Ford Adapter Fuel Pressure Sensor  
1ea p/n 15102 Supply Adapter Tee Fitting  
6ea p/n 15607 AN-08 To Cutoff AN-08 Union  
2ea p/n 15610 AN-08 To Cutoff AN-10 Union  
1ea p/n 15631 Fuel Sample Valve  
1ea p/n 15649 AN-06 Cutoff To AN-08 Union  
1ea p/n 15674 Y-Block 8-2x8

3ea p/n 17704 Triple AN-08 Hose Separator  
1ea Vacuum Tee  
4ea p/n 15653 -8 Straight Hose End  
2ea p/n 15654 -8 45-degree Hose End  
5ea p/n 15655 -8 90-Degree Hose End  
3ea p/n 15663 -8 180-Degree Hose End  
20ft -8 Black Nylon Braided Fuel Line  
3ft 5/32" Vacuum Line

The following steps are typical of most installations:

1. Once the engine has been allowed to cool, disconnect the negative battery cable and relieve fuel system pressure, referring to the appropriate vehicle service manual for the procedure on doing so.
2. Remove the air intake ducting from the throttle body.
3. Note the location of and remove any vacuum lines connected to the air intake and position them out of the way.
4. Unplug the TPS sensor and drive-by wire connector, which is typically located on top of the throttle body.
5. Remove the throttle body by removing 4 screws.
6. Now remove the blower inlet tube by removing the 4 bolts.
7. Check for any dirt or debris around the fuel injectors. If any is evident, wash it off with some solvent parts cleaner or wipe it off with a clean shop towel.
8. Disconnect the electrical connector at each injector, making note of the location of each. Also disconnect the fuel pressure sensor located on the passenger side fuel rail.
9. Disconnect the supply line from the OEM fuel rails. This line is attached by a special quick disconnect fitting which does not require a special tool for removal. Place clean shop towels around the open fuel line to catch any gasoline that may drip out and to prevent any dirt from entering the fuel lines.
10. Remove the 4 bolts that attach the fuel rail to the lower intake.
11. Place clean shop towels around the injectors to catch any gasoline that may be spilled during their removal. Remove the injectors from the manifold by gently pulling upward on the fuel rail / injector assembly. Keep all injectors connected to the fuel rails. If an injector does pull out of the fuel rail, it may spill a large amount of fuel.
12. Carefully remove the fuel injectors from the OEM fuel rail.
13. Remove the old o-rings from the fuel injectors, inspect the injectors for any dirt or debris and clean if needed. It is suggested that the old o-rings be replaced, contact your local Ford parts dept.
14. Coat the fuel injector o-rings with a light oil to ease installation.
15. Carefully install the fuel injector o-rings on the injectors.
16. Place a thin coat of light oil in the fuel rail fuel injector bores and in the lower intake manifold injector bores to help prevent cutting the o-rings during installation.
17. Carefully place the fuel injectors in the fuel rails. Position the electrical connector on each fuel injector on the opposite side of the mounting bracket.
18. Install both fuel rails, being careful not to cut any of the o-rings during installation.
19. Find suitable place in the vehicle's engine compartment to mount the Aeromotive regulator, typically on the passenger side inner fender or shock tower. Using the supplied mounting bracket as a template, mark the bracket mounting holes and drill to accept a #10 screw.

20. With the bracket attached to the regulator, mount the bracket and regulator to the vehicle using two #10 screws, nuts and lock washers.
21. Install one AN-10 o-ring on each of the two AN-10 to AN-08 union fittings (15610) and one AN-6 o-ring on the AN-6 to AN-08 fitting (15649).



22. Thread the side of the AN-10 cutoff's with the o-ring into each of the two AN-10 ports on the regulator. Also do the same for the AN-6 cutoff fitting in the return port on the bottom of the regulator.



23. Install one AN-08 o-ring on each of the four AN-08 union fittings (15607).
24. Thread the o-ring side of one of the AN-08 cutoff to AN-08 male flare into the front and rear of each rail.



25. Assemble a hose with a 180 degree hose end on one end and a 90 degree on the other. This hose will attach from the front of the drivers side rail to left hand port on the regulator.



26. Assemble the pressure sensor adapter (15115) with the two remaining AN-08 fittings (15607). Make sure the AN-08 fitting have o-rings installed on them, if not do that at this time.



27. Assemble a hose with a straight AN-08 hose end on one end with a 180 degree hose end on the other. Attach this hose to the front of the passenger side rail using the 180 degree end. Place the pressure sensor re-locator on the other end as pictured.



28. Make up another hose with a straight/180 degree hose end to complete the feeds to the regulator.
29. Assemble two identical hoses from the Y-Block (15674) using 45 degree fittings on one end and straights on the other.

**Make sure these lines are not resting against wires or hoses as they will chaff them over time.**



30. Finish the pressure side of the system by assembling a hose with 90 degree hose ends at both ends. This will make the connection between the feed bulk head and y-block.



31. Now connect the return side of the regulator (bottom port) to the return bulk head. This is done by using two 90 degree hose ends. This completes the engine bay fuel lines.



34. With the supplied vacuum tee, tee into the manifold vacuum/pressure port (located under the blower drive snout) and route vacuum line to the regulator.
35. Use the supplied hose clamps to position the hoses neatly where you would like them.
36. Remove the 1/8" port plug from the face of the regulator so the fuel sample valve can be placed there. Use thread sealant on the threads as they are NPT. Place a fuel pressure gauge on the fuel sample valve so pressure can be set.
37. Reverse steps 1-10 for reassembly.
38. **With the fuel pressure gauge registering fuel system pressure, check for fuel leaks from and around the Aeromotive regulator, fuel rails, all fuel lines and connections! If any fuel leaks are found, turn the ignition key to the OFF position, remove any spilled fuel and repair the leak before proceeding!**
39. 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. Refer to the shop manual for the proper fuel pressure setting.
40. Once the desired fuel pressure is achieved, tighten the regulator adjustment jam nut and attach the vacuum line.
41. Turn off the engine and allow it to cool. 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, using thread sealant.
42. Test drive the car to insure proper operation and re-check the fuel system for leaks. **If any leaks are found, immediately shutoff the engine and repair the leak(s)!**

## Hose and Fitting Assembly

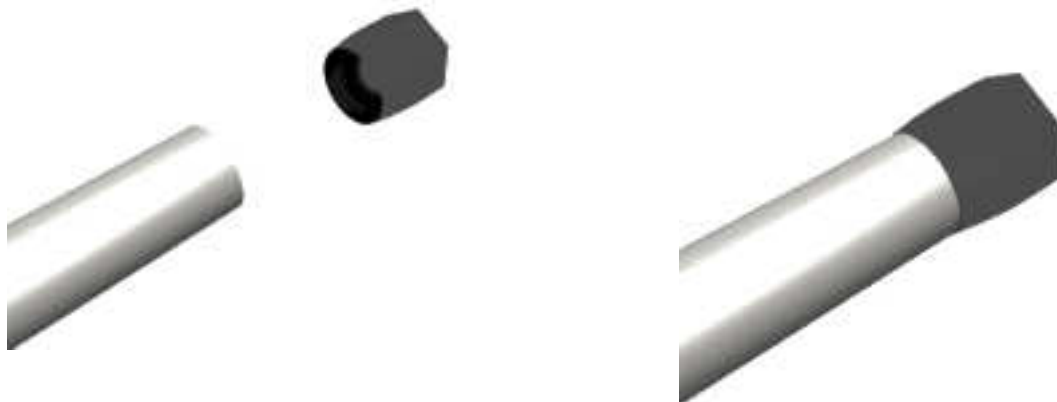
### **CAUTION:**

**When assembling this product, wear eye goggles and other safety apparel as needed to protect yourself from debris and sharp edges.**

- A. Wrap hose with masking tape at desired cutoff length. Cut hose through masking tape squarely to desired length using a cut-off machine or a fine tooth hacksaw. Remove the masking tape.
- B. Unthread the hose socket from the rest of the hose end fitting.



- C. Insert hose in the socket with a twisting and pushing motion until the hose is fully seated in the socket.
- D. Using a grease pencil, marker or tape, mark the location of the hose in relation to the hose socket which you just installed.
- E. Using a light oil lubricate the inside of the hose and the hose end mating parts.
- F. Carefully thread the hose end onto the hose socket, making sure that the hose does not push out of socket, by observing the mark you placed on the hose in step D.







- G. Using a properly sized wrench, complete threading the two components together (The maximum allowable gap between the two fitting components is .030 inches).



- H. Inspect the hose for push out by comparing the mark you made on the hose in step D to the hose end socket location.
- I. Clean all debris from exterior and interior of hose.
- J. All lines should be tested to twice their operation pressure prior to use.



**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.