



AEROMOTIVE
Part # 17204
A2000 Fuel Pump / 4 Port Regulator System
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:

1 ea p/n 11202 Pump	6 ea AN-06 O-rings
1 ea p/n 12304 Filter	20 ft AN-10 stainless steel braided line
1ea p/n 13203 Regulator	4 ft AN-08 stainless steel braided line
4 ea p/n 15201 Dual feed Carburetor Adapter	8 ft AN-06 stainless steel braided line
4 ea p/n 15606 AN-06 cutoff	2 ea AN-06 straight hose end
1 ea p/n 15607 AN-08 cutoff union	6 ea AN-06 90-degree hose end
5 ea p/n 15608 AN-10 cutoff union	1 ea AN-08 straight hose end
1 ea p/n 15617 AN-10 Plug	1 ea AN-08 90-degree hose end
2 ea p/n 15626 AN-06 Plug	4 ea AN-10 straight hose end
1 ea p/n 16301 fuel pump wiring kit	2 ea AN-10 90-degree hose end
6 ea AN-10 O-rings	12 ea tie-wraps
1 ea AN-08 O-rings	

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

This fuel pump is for race only applications and should not be used for street use!

This fuel pump must be used with a racing style fuel cell.

If you choose not to use a racing style fuel cell, you must install a reservoir style sump in the bottom-rear of your fuel tank. Exercise extreme caution and follow all manufacturer's recommendations when installing a reservoir style sump.

The following steps are typical of most installations:

Section 1 - Fuel pump installation

Section 2 – Fuel Pressure Regulator installation

Section 3 – Fuel line hose end installation

Section 4 – Electrical Installation

Section 5 – Final checks and system start-up

Section 1 - Fuel pump installation:

DO NOT RUN THE PUMP DRY! Excessive wear will result if the pump runs dry.

DO NOT DISASSEMBLE THE PUMP! Disassembly will throw the pump out of calibration and void all warranties on this product.

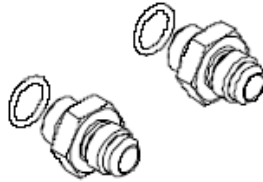
1-1. Once the engine has been allowed to cool, disconnect the negative battery cable and relieve the fuel system pressure.

1-2. Raise the vehicle and support it with jack stands.

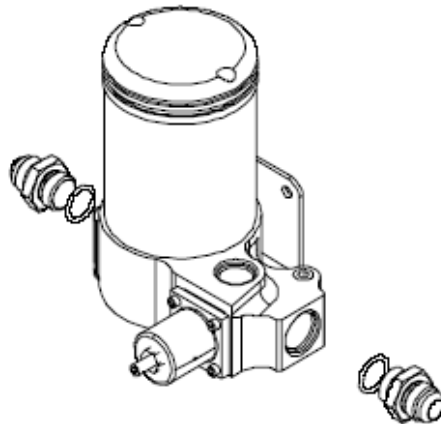
1-3. Referring to the appropriate vehicle service manual for instructions, drain, disconnect any electrical and fuel component connections, plug the open fuel line ends and remove the existing pump.

1-4. Find a suitable place on the vehicle chassis to mount the Aeromotive fuel pump. Make sure the location will accommodate the pump mounting bolts, will position the pump lower than the fuel tank, is clear of the exhaust, is clear of any moving suspension or drivetrain components and will keep the pump clear of road obstructions or debris.

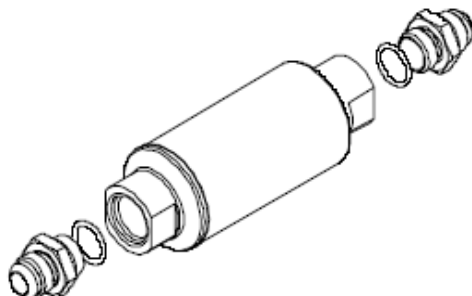
1-5. Place one of the supplied AN-10 o-rings on the cutoff side of each of the four AN-10 cutoff unions.



1-6. Thread an AN-10 fitting with o-ring into each of the two sides of the fuel pump.



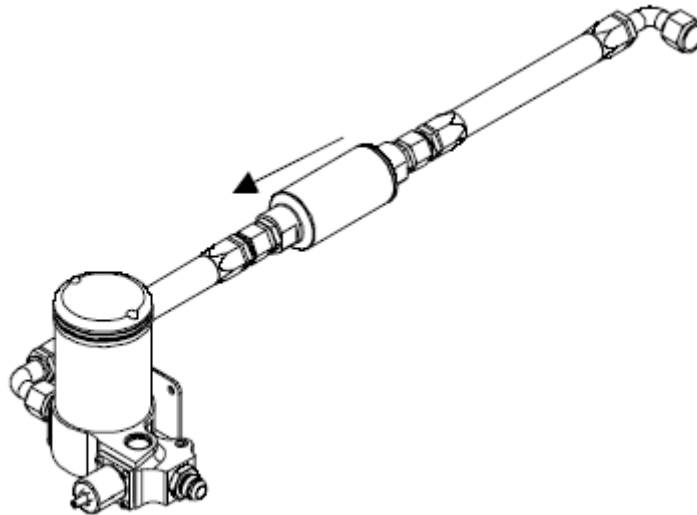
1-7. Thread an AN-10 fitting with o-ring into each side of the fuel filter.



1-8. Making sure to mount the pump in the upright position and using the pump mounting bracket as a template, mark and drill two mounting holes to accept 1/4" bolts (not provided). Mount the pump bracket using two 1/4" bolts, nuts and lock washers (Not provided).

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.

1-9. Using the system diagram below, determine the approximate location of the fuel filter in the system.



1-10. Using one of the supplied 90-degree AN-10 hose ends and one of the supplied AN-10 straight hose ends as a guide, measure the length of AN-10 steel braided line needed to connect the fuel tank or fuel cell outlet to the fuel filter inlet. This section of fuel line should be as short as possible to reduce the tendencies for vapor lock, cavitation, and premature wear of your Aeromotive fuel pump.

1-11. Cut and assemble the steel braided hose and hose ends as shown in Section 3.

1-12. Using the above steel braided line assembly, connect the hose ends to their appropriate locations and tighten.

1-13. Repeat steps 1-10 thru 1-12 for the AN-10 steel braided line between the fuel filter outlet and fuel pump inlet.

1-14. In the vehicles engine compartment determine where the fuel pressure regulator will be mounted.

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.

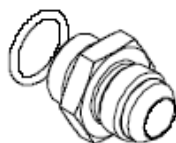
1-15. Using the remaining two AN-10 straight hose ends as a guide, measure the length of AN-10 steel braided line needed to connect the fuel pump outlet to your fuel pressure regulator.

1-16. Cut and assemble the steel braided hose and hose ends as shown in Section 3.

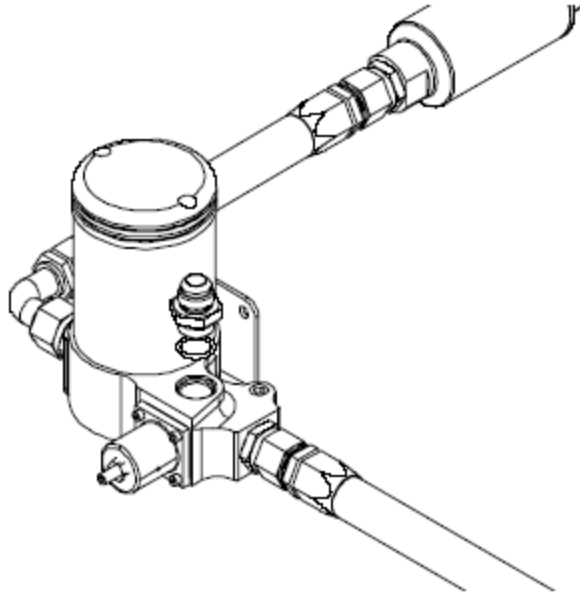
1-17. Using the above steel braided hose assembly, connect the hose ends to their appropriate locations and tighten.

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.

1-18. Place the supplied AN-08 o-ring on the cutoff side of the AN-08 cutoff union.



1-19. Thread the AN-08 fitting with o-ring into the by-pass port located on top of the fuel pump.



1-20. Using the supplied 90-degree AN-08 hose end and the supplied AN-08 straight hose end as a guide, measure the length of AN-08 steel braided line needed to connect the fuel pump by-pass port to the top of the fuel cell.

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.

1-21. Cut and assemble the steel braided hose and hose ends as shown in Section 3.

1-22. Using the above steel braided hose assembly, connect the hose ends to their appropriate locations and tighten.

Section 2 - Fuel Pressure Regulator Installation:

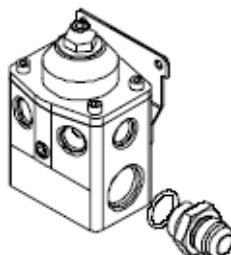
2-1. Find a suitable place in the vehicle's engine compartment to mount the Aeromotive regulator. Using the supplied mounting bracket as a template, mark the bracket mounting holes and drill to accept a #10 screw.

2-2. With the bracket attached to the regulator, mount the bracket and regulator to the vehicle using two #10 screws, nuts and lock washers.

2-3. Place one of the supplied AN-10 o-rings on the cutoff side of the AN-10 union.



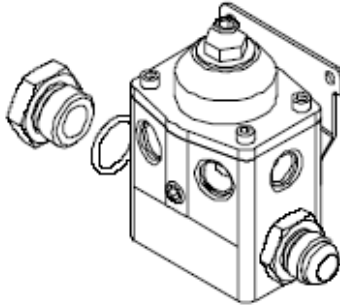
2-4. Thread the cutoff side of the AN-10 union into the base of the fuel pressure regulator. Depending on the regulator mounting, either one of the two AN-10 ports can be utilized.



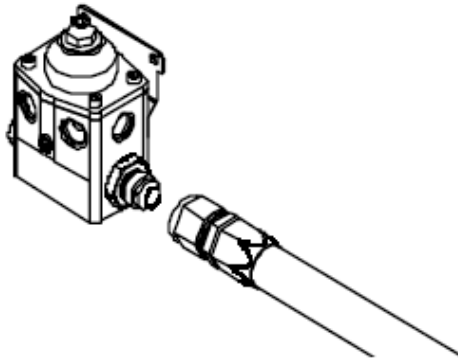
2-5. Place one of the supplied AN-10 o-rings on the AN-10 port plug.



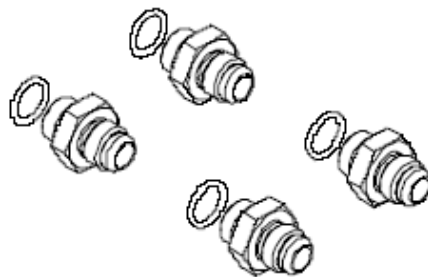
2-6. Thread the AN-10 port plug into the remaining AN-10 port.



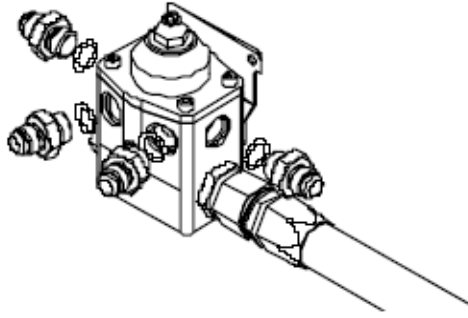
2-7. Attach the AN-10 fuel supply line to the regulator inlet (located at the base of the regulator).



2-8. Place one of the supplied AN-06 o-rings on the cutoff side of each of the four AN-06 unions.



2-9. Thread the four AN-06 fittings with the o-rings into the sides of the fuel pressure regulator. In the event your installation is using utilizing only two supply lines from the regulator, Included in the kit are two AN-06 port plugs and o-ring to be installed in the unused supply ports.



2-10. Place the crush rings on the Dual feed carburetor to AN-06 adapter fittings. Thread each of the four fittings into



each of the carburetor float bowls and tighten.

2-11. For the two AN-06 outlet fittings on the face of the regulator use one of the supplied 90-degree AN-06 hose ends and one of the supplied AN-06 straight hose ends as a guide, measure the length of AN-06 steel braided line needed to connect the regulator to the carburetor.

2-12. For the two AN-06 outlet fittings on the sides of the regulator use two of the supplied AN-06 90 degree hose ends as a guide, measure the length of AN-06 steel braided line needed to connect the regulator to the carburetor.

2-13. Cut and assemble the four steel braided hoses and hose ends as shown in Section 3

2-14. Attach the fuel supply lines to the carburetor and tighten.

2-15. Once the regulator is installed, attach a suitable fuel pressure gauge to the 1/8 NPT port on the fuel pressure regulator.

2-16. **Ensure that any spilled gasoline and any gasoline soaked shop towels are cleaned up and removed from the vicinity of the vehicle!**

Section 3 - Fuel Line Hose End Installation:

CAUTION:

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

3-1. 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.

3-2. Unthread the hose socket from the rest of the hose end fitting.

3-3. Insert hose in the socket with a twisting and pushing motion until the hose is fully seated in the socket.



3-4. Using a grease pencil, marker or tape, mark the location of the hose in relation to the hose socket that you just installed.

3-5. Using a light oil, lubricate the inside of the hose and hose end mating parts.

3-6. 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 3-4.

3-7. Using a properly sized wrench, complete threading the two components together (The maximum allowable gap between the two fitting components is .030 inches).



3-8. Inspect the hose for push out by comparing the mark you made on the hose in step D to the hose end socket location.

3-9. Clean all debris from exterior and interior of hose.

3-10. All lines should be tested to twice their operation pressure prior to use.

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.

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.

- 4-5. 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 butt connectors (or appropriate connector for the installation) 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 one yellow #10 ring connector and one yellow butt connector.
- 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 (See Figure 4-1) and are clear of any moving suspension or drivetrain components and any exhaust components! Protect wires from abrasion and road obstructions or debris.

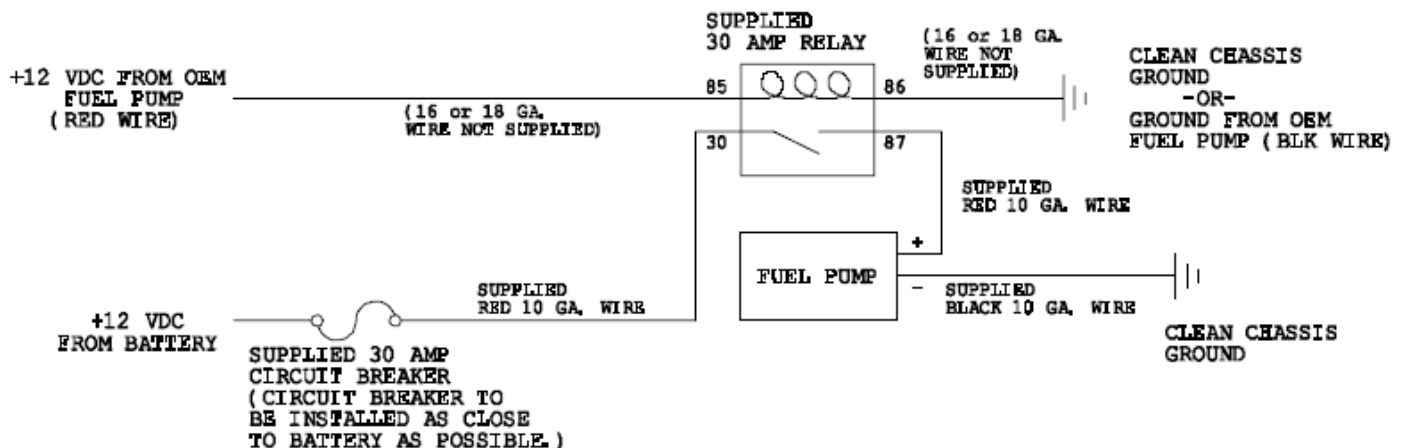


Figure 4-1

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 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 fuel pump 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 and fuel pump OFF, 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.

5-7. 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)!

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.