



AEROMOTIVE
Part # 18706
Phantom Fuel Siphon System
INSTALLATION INSTRUCTIONS
Patent Pending

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, failure to satisfy all safety considerations will result in fire, explosion, injury and/or loss of life to yourself and/or others.

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.

WARNING!



Strong magnetic fields can affect the operation of electronic medical implant (pacemakers) or other devices. People with these devices **SHOULD NOT** handle magnets. **KEEP AWAY FROM CHILDREN**. Strong magnets may cause injury due to pinching and damage electronics and credit cards. **ALL MAGNETS ARE FRAGILE** and may break into smaller pieces which are still magnetic.

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.

Parts Included:

1ea Fuel Jet Siphon Assembly	1ea Hose Clamp
1ea Fuel Siphon Pickup Assembly	12ea 10-24 Nylon Locking Stainless Steel Nut
1ea Anti Kink Spring	12ea #10 Nylon Washer
1ea Gasket, 1/2" Thick	1ea Additional mounting magnet

Tools Needed:

3/8" Socket and Ratchet	Scissor
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This product is intended to be installed and utilized for fuel jet siphon replacement or upgrade of existing Aeromotive Phantom pump hangers. If you are trying to install a fuel jet siphon into a non-Aeromotive or non-Phantom fuel system, please contact the Aeromotive Tech Department for assistance with installation.

The included fuel jet siphon is intended for **EFI applications only**. The jet siphon may be unable to sustain a siphoning flow at carbureted fuel pressures.

To ensure proper pump function and life, we strongly recommend the following:

- **A return style or bypass regulator must be used (Aeromotive p/n 13105, 13109 or 13129 for EFI) with the exception of applications running an ECU that supports a returnless systems where the ECU controls fuel pressure via PWM.**

Failure to follow the above recommendations may result in fuel leakage, bursting of the fuel lines, poor vehicle performance and/or decreased fuel pump life! Improper installation will void all warranties for this product!

Product Specifications:

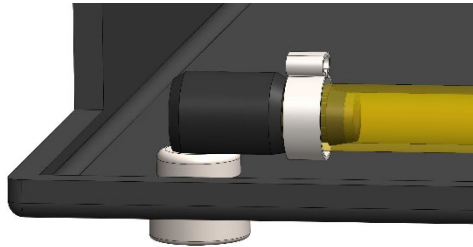
	Fuel Jet Siphon (#18706)
Outlet pressure/typical siphoned flow:	40 psi / 92 LPH 60 psi / 117 LPH
Continuous Operating Range:	30 psi – 65 psi
Max Internal Pressure:	90 psi

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

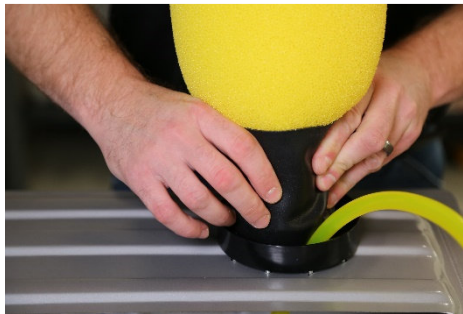
The following steps are typical of most installations:

1. Disconnect the power to the pump.
2. Disconnect the lines from the pump hanger outlet, return, and vent ports. No other lines need to be disconnected to complete the replacement.
3. Remove the ten #10-24 locking nuts retaining the pump hanger and remove the pump and hanger assembly. Discard the nuts, nylon washers, and flange gasket.
4. Remove the existing foam baffle and bladder/cup. Be careful not to rip/tear either of the components on any edges of the holes.

5. Determine where to mount the siphon pickup. The siphon pickup should be placed in a location where the most fuel will be expected to be found away from the basket. For example, if the tank includes a recess for the OEM pump but the Phantom pump basket was not able to be located there, place the siphon pickup in the recess. Alternatively, the siphon pickup may be placed near the rear and side walls where fuel will be found during forward and lateral acceleration.
6. The included fuel siphon pickup assembly includes an attached mounting magnet for use in a steel tank. Place the pickup in the tank in the desired location using the magnet to hold in place. The pickup assembly with magnet may be pushed to the desired location or dropped in place using a flexible gripping jaw retriever or other such tool. Place the free end of the siphon pickup tubing outside of the drilled hole.
7. For stainless steel, poly, or other non-magnetic tank applications a second mounting magnet is provided. Place the second magnet on the bottom of the tank in the same location as the pickup assembly magnet to hold the pickup in place. NOTE THE MAGNET POLARITY before assembly! Orient the second magnet such that it will attract the magnet on the pickup, not push it away. For best results, coating the magnet with an epoxy (not included) that will not damage the fuel tank is suggested both for corrosion protection for the magnet and for retaining the outer magnet in the desired location (friction will otherwise hold in place).

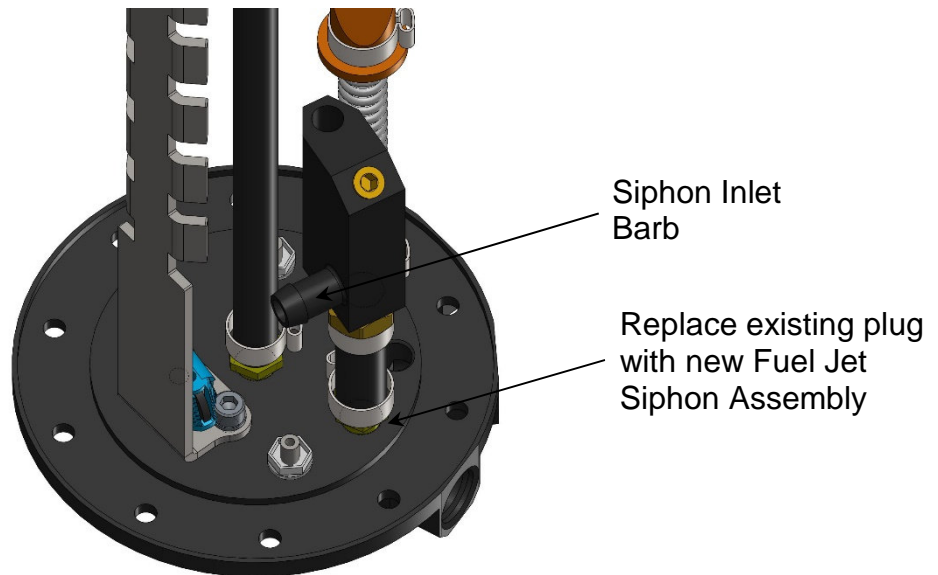


8. Place the previously used installation ring (not included) over the retaining ring studs and siphon pickup tubing that now protrude from the top of the tank. With the foam baffle fully inserted into the bladder/cup, compress the baffle assembly, and insert it through the installation ring and next to the siphon pickup tubing into the tank being careful not to cut the assembly or your hands on the tank edge. You may need to pull/hold the siphon tubing during the foam installation to keep the end from falling into the tank. Once the baffle assembly is in the tank, manipulate it until it's centered within the opening.



9. On the bottom of the Phantom pump hanger assembly, replace the 1/8 NPT plug in the outer outlet port (the pump is connected to the center port) with the new fuel jet siphon assembly. Note the approximate orientation of the siphon inlet barb in the following figure (this will aid in installation).

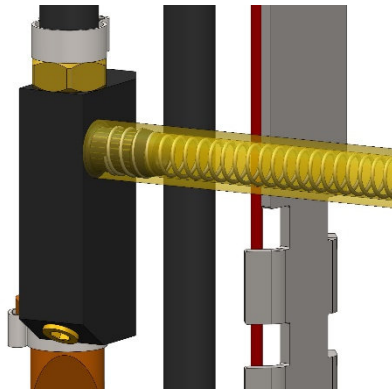
It may be necessary/helpful to disassemble the pump from the hanger in order to install the fuel jet siphon assembly.



10. Cut any largely excess siphon tubing making sure to leave enough slack to allow attachment to the siphon inlet on the hanger.
11. Insert the small end of the anti-kink spring into the siphon tubing while holding the tubing lightly and rotating the spring. Note: twist the spring clockwise looking from the open end to avoid puncturing the tubing with the end of the spring wire.



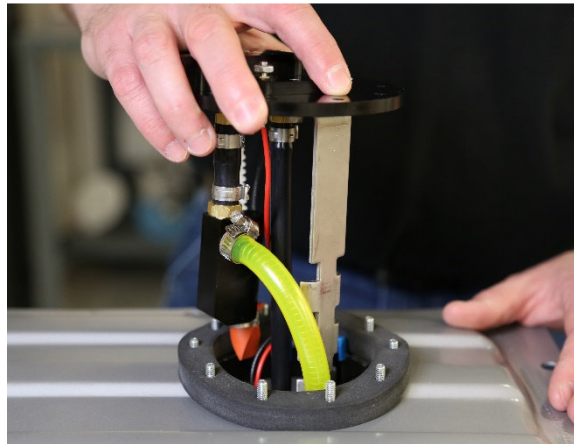
12. Remove the installation tool and install the provided gasket over the siphon tubing and onto the threaded studs on the fuel pump retaining ring.
13. If the top of the tank is corrugated or has ribs on the desired mounting surface, the included gasket will compress and form to the ribs up to 1/4" deep. In extreme cases where the ribs are deeper than 1/4", or oddly shaped, the use of a fuel resistant sealant such as, Dow Corning 730 fluorosilicone RTV, or additional fabrication may be necessary. **Do not use silicone gasket maker or sealant as it is not fuel resistant.**
14. Slide two to three coils of the large end of the anti-kink spring over the barb on the siphon body inlet, and attach the siphon inlet hose to the siphon body using the other small hose clamp.



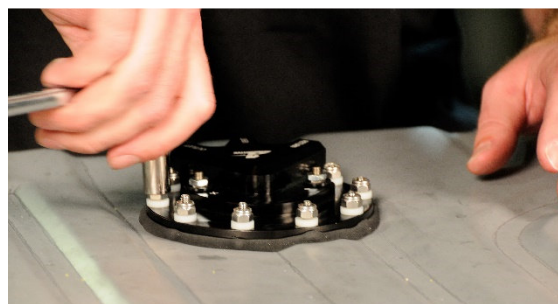
Hose clamp not shown for clarity

14. With the fuel pump hanger fully assembled now with fuel jet siphon and the gasket in place, ease the pump hanger assembly into the baffle assembly inside the fuel tank. Rotate the billet fuel pump hanger assembly to orient the fuel line and vent connections in the desired orientation and drop the hanger onto the retaining ring studs.

Caution: Take special care to ensure that the fuel pump wires are fully inside of the tank and will not be pinched in between the pump assembly and the fuel tank during assembly.



15. Press down firmly on the top of the pump assembly to compress the gasket. Start two of the 10-24 lock nuts on a pair of studs 180-degree apart. Tighten these two nuts until the remaining studs are approximately 1/4" exposed.
16. With the remaining 8 studs exposed approximately 1/4", place one of the #10 white nylon sealing washers on each of the studs followed by a 10-24 locking nut.
17. Remove the first two lock nuts used to help compress the gasket. Place one of the #10 white nylon sealing washers on each of these two studs, followed by reinstalling the 10-24 locking nut.
18. With all 10 studs now having a #10 white nylon sealing washer and a locking nut, slowly tighten using a crisscross pattern until the gasket forms to the tank surface.



19. Reconnect all of the feed, return, vent, and electrical lines.

Note: Tank vent must be at least 6" above the top of the tank if a roll-over valve is used (highly recommended).

20. Reinstall the fuel tank in the vehicle

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

21. Turn the fuel pump ON **without starting the engine**, allow the pump to run for several seconds and check the fuel pressure. If there is no pressure, turn the fuel pump OFF, wait one minute, then turn the fuel pump ON and recheck the pressure. Repeat this fuel pump OFF and ON procedure until the fuel pressure gauge registers pressure or you detect a fuel leak. It may be necessary to loosen the fuel line fitting at the pressure regulator to bleed off excessive air in the system. Tighten any fuel line fittings which were loosened and insure that any spilled fuel is cleaned up and removed from the vicinity of the vehicle. If no pressure is registered on the gauge after running the pump for several seconds and you have found no leaks, check all fuel and electrical connections to determine the cause.

22. Once the fuel pressure gauge registers pressure, start the engine. The gauge on the fuel pressure regulator should register between 35-60 psi for EFI. Now adjust the fuel pressure regulator to the desired setting.

Test drive the vehicle to insure 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

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.