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## AEROFLOW PERFORMANCE

### RED FUEL PUMP

### WARNING!

THIS PRODUCT REQUIRES DETAILED KNOWLEDGE OF AUTOMOTIVE SYSTEMS. WE RECOMMEND THAT THIS INSTALLATION BE CARRIED OUT BY A QUALIFIED AUTOMOTIVE TECHNICIAN.

#### INTRODUCTION

Congratulations on your purchase of the Aeroflow Performance red fuel pump. Aeroflow Performance products cannot and will not be responsible for any damage, or other conditions resulting from misapplication of the parts described herein. However, it is our intention to provide the best possible products for our customer, products that perform properly and satisfy your expectations. Should you have any questions? Please call technical support at +61 2 8825 1900 and have the product part number on hand when calling.

The Aeroflow Performance Red, Blue and Black fuel pumps are a proven rotor / vane design that is known to get the job done in an affordable package for your carburettor fuel system.

The RED fuel pump is a low-pressure fuel pump which operates at a free flow 97GPH at a set pressure of 7PSI (0.48BAR) and does not require the use of any fuel regulators. This meets the flow requirements of most carburettor vehicles. This motor draws 2 amps current and an 8amp fuse is recommended.

These fuel pumps MUST be located below and as close to the tank as possible. This is necessary to allow for an adequate fuel supply. The pump is designed to push fuel and NOT designed to suck fuel out of the tank. It needs to be gravity-fed or if it is pulling from the top of the tank, it needs to have a siphon feed to the pump. The pump should be mounted on the chassis, in a vertical position with the pump motor on top. Avoid exposure of the pump and fuel lines to moving parts and any extreme heat areas, such as the exhaust or any sources of water. The pump should not be mounted in a closed area, such as the vehicles trunk. They can be serviced from the pump end with repair kits that are readily available.

All fuel pumps feature two female 3/8 NPT ports on either side.

Overall Length = 93mm (3-21/32")

Overall Width = 79mm (3-7/64")

Overall Height = 140mm (5-33/64")

Centre to Centre of mounting tabs on bracket = 60mm (2-23/64")

*This fuel pump is only suited for regular unleaded petrol. It will not suit alcohol, E85, methanol or diesel fuels due to the corrosion nature of these fuels. If using any of these fuels we recommend the Aeroflow Black Fuel Pump AF49-1010.*

The factory fuel pump wiring may not be sufficient to handle the current draw of this fuel pump. Please update all wiring if necessary and add in a relay to ensure pump works correctly. If using the existing electrical plugs and wiring in vehicle ensure correct polarity is used on the new pump. If necessary, re-pin the existing one or use the included plug.

This fuel pump is only one component of your vehicles complete fuel system. Please ensure the vehicles complete fuel system is up to the task of supplying the right amount of fuel to your engine. Failure to do so may result in severe engine damage and damage to other related components.

*For more information or technical enquires*

*Contact: Aeroflow Performance on*

*Phone: (02) 8825 1979 Website: [www.aeroflowperformance.com](http://www.aeroflowperformance.com)*

Always install a good quality fuel filter on the inlet side of the fuel pump. This will stop any debris from entering and damaging the fuel pump. Failure to do so will void warranty.

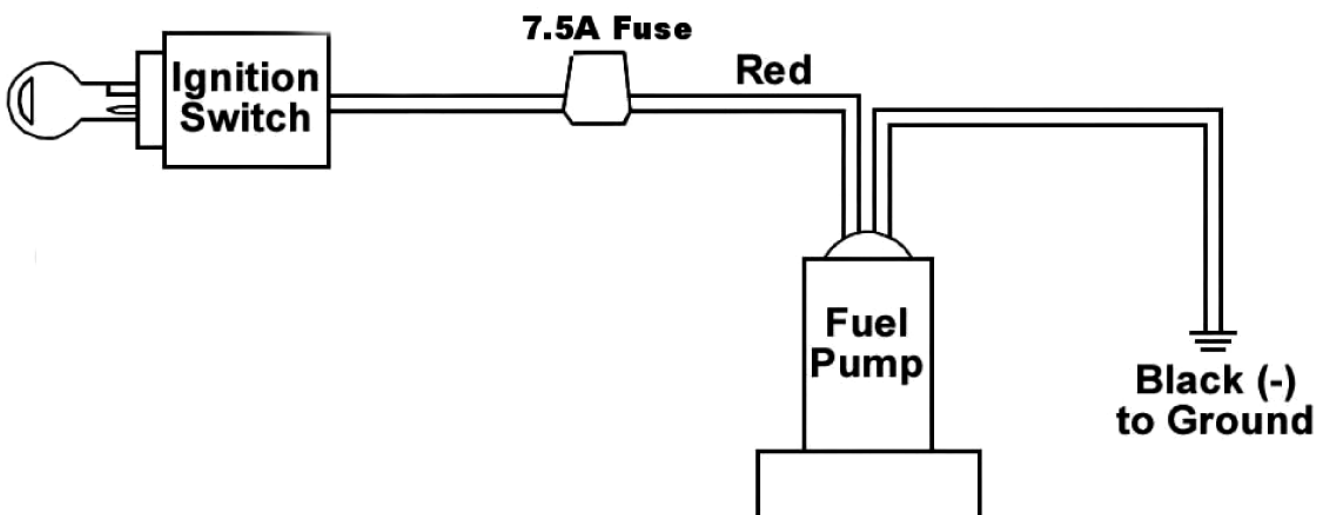
Failure to follow any of the above may result in fuel leakage, bursting of fuel lines, poor vehicle performance and/or decreased fuel pump life.

## **Installation Guideline**

*Always diagnose the cause of failure before replacing any electric fuel pump*

*Ensure fuel tank, fuel lines and fuel filters are cleaned from debris such as dirt and dust as this may cause the pump to fail.*

1. Disconnect the negative battery
2. Disconnect the old fuel lines from the fuel pump.
3. Select the best location to mount the fuel pump. Ensure it is away from extreme heat sources. Mount as close to the fuel tank as possible. Ensure to use the mounting bracket that is included.
4. Using the mounting bracket as a template drill two 5/16" (8mm) holes to attach the bracket.
5. Place rubber gasket (supplied) between the mounting bracket and motor housing and mount the pump in a vertical position (motor on top) using two 8mm / 5/16" bolts.
6. Install the fuel pump and mounting bracket to the desired location.
7. Connect the fuel line from the tank to the filter and the filter to the inlet port of the pump. Connect the carburettor delivery line to the outlet port of the pump or regulator. Use the same size flexible hose as original equipment. Avoid unnecessary restrictions such as sharp bends and undersize fuel -filters, fittings and hoses. Avoid routing fuel lines in areas that would cause chafing. All fuel line connections MUST be leak proof.
  - I. **WARNING! Do not over tighten the fittings on the fuel pump. Installation torque should not exceed 40 ft./lbs. This can be achieved by hand tightening the fitting, followed by wrench tightening an additional 3/4 of a turn. Over tightening of the fittings can cause parts to crack as they are a tapered thread! Allowing fuel to leak. A fuel leak can cause a -re and/or death. THE USE OF A THREAD SEALANT WITH PTFE (Teflon) IS HIGHLY RECOMMENDED (prevents Galling). DO NOT USE A SILICONE-BASED SEALANT OR PTFE (Teflon) TAPE.**
  - II. **For performance vehicles, 3/8" or 1/2" I.D hose is recommended. We strongly suggest the use of an Aeroflow fuel-filter before and after the pump.**
  - III. **If removing a mechanical fuel pump and replacing with this electric fuel pump ensure to purchase a Aeroflow fuel pump block off plate.**
8. To wire this fuel pump follow the guideline step below:
  - a) Disconnect the ground cable from the battery.
  - b) Connect the fuel pump (orange wire) to a 12V ignition source. In this line, add an in-line fuse holder and 7.5-amp fuse.
  - c) Connect the ground (black wire) to a good ground connection or battery negative.



9. Start vehicle and check for all leaks and ensure the fuel pump has 12 volts at the source using a multimeter.

## MAINTENANCE AND CLEANING INSTRUCTIONS

Due to the current poor quality pump fuel that's available, it is recommended that periodically a bottle of mentholated spirits can be used to absorb the water out of the fuel system. The fuel filter element should be blown clean every 10,000kms and replaced every 20,000kms to assure maximum protection of your fuel system.

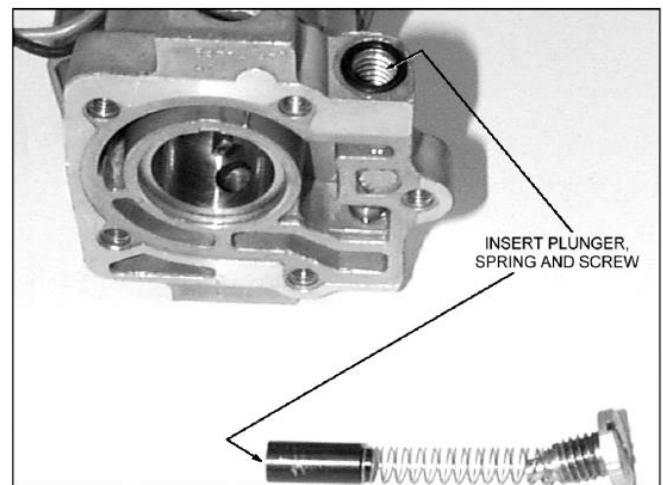
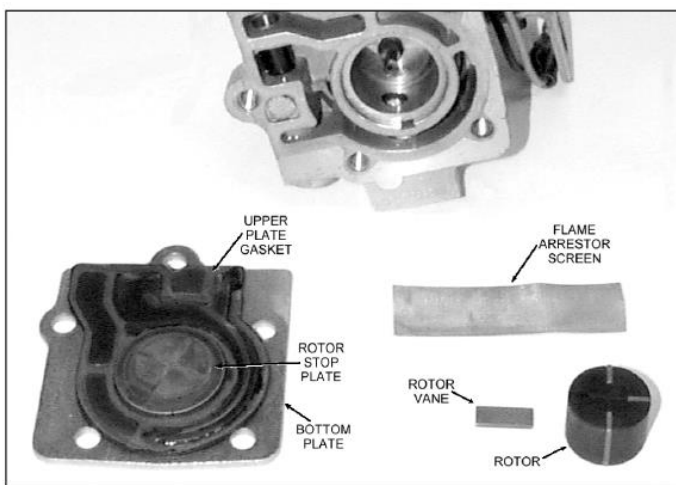
If your fuel pump fails to pump or fails to maintain adequate pressure, check the following:

1. Check the voltage at the pump to ensure 12v supply and check for a good ground connection.
2. Check the fuel line (especially the fuel filter) for any obstruction. Use compressed air to blow the line free.
3. If this doesn't solve the problem, turn the pump on and listen for a hum from the top of the pump. If there is no hum, the pumps electrical system should be checked by a competent repairman. If the pump hums, it probably only needs to be cleaned.

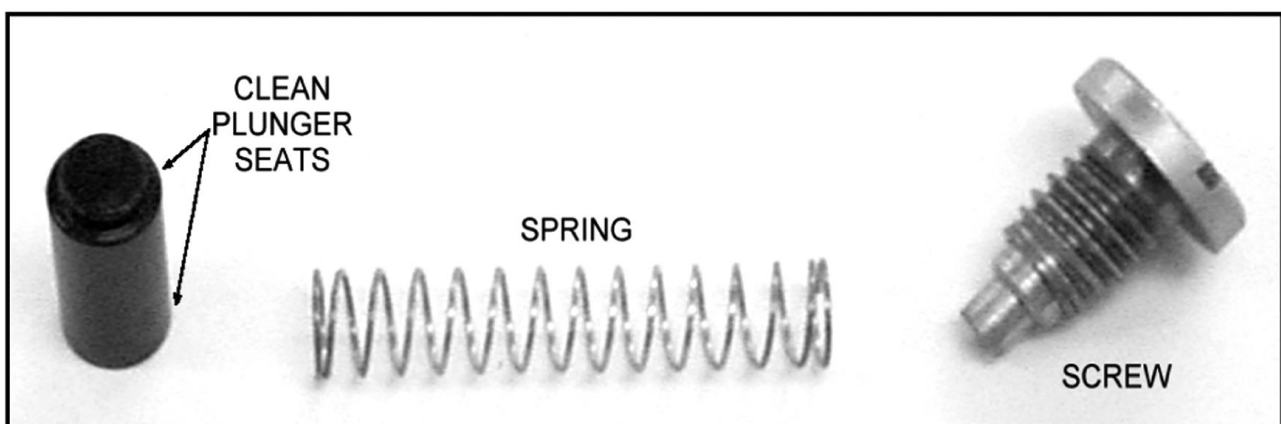
## CLEANING THE PUMP

The following is a step-by-step cleaning of the Aeroflow Red fuel pump. Do all disassembling on a dust free clean bench. Read all instructions thoroughly and completely before starting.

1. Disconnect Battery.
2. Clamp fuel line coming out of tank.
3. Remove the pump from the car.
4. Remove the bolts from the bottom of the pump.
5. Holding the pump in position, remove the bottom plate. Remove the upper plate gasket and rotor stop plate. Note the position of the rotor, rotor vanes, flame arrestor (screen), and relief valve arrangement for re-installation.
6. Remove the flame arrestor (note the position of the screen). Remove the rotor vanes and rotor by inverting the pump. Lay all pieces on a flat clean surface.



7. Remove the pressure relief screw. The screw is spring loaded. Remove the spring and relief plunger.
8. Clean the base housing with any good quality carburettor cleaner (aerosol spray type only).
9. Blow the base dry with compressed air. Clean any loose thread sealant from the inlets and outlets.
  1. WARNING! DO NOT SUBMERSE THE ENTIRE UNIT IN ANY LIQUID. SUBMERSION COULD DAMAGE THE ELECTRICAL CIRCUITRY, RESULTING IN A PUMP MALFUNCTION. A PUMP MALFUNCTION COULD RESULT IN A FIRE WHICH MAY RESULT IN PROPERTY DAMAGE, SERIOUS INJURY AND / OR DEATH.
10. If the relief plunger is rusty, clean it with emery paper. Check the plunger, spring and O-ring screw.



11. Check the plunger is free in the slide.
12. Clean the rotor vanes with emery paper. The vanes must slide freely in rotor slot. Replace the rotor stop plate. Install the flame arrestor making sure the screen is behind the screen stop. Replace the upper plate gasket and upper plate. Fasten with screws, do not over tighten.
13. Reinstall the pump in to vehicle.
14. Reconnect battery, turn on pump and check / rectify any fuel leaks