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AEROFLOW PERFORMANCE

ELECTRIC OIL TRANSFER 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 oil 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.

Aeroflow Performance 12-volt electric oil pump is designed to handle the toughest automotive racing environments for gear oil fluid cooling and circulation or scavenge systems on your turbo drain return or transmission systems. The internals feature a hardened bronze spur gear & rotors so there are no diaphragms to fail during operation. **NOTE**: this gear pump will have a higher noise level due to the internal gear design.

The pump's small size and reduced weight make it ideal for any space or weight-limited application. The pump's integrated heat-sink mounting design permits infinite head assembly rotation, allowing optimal orientation of the in and out ports. The case features vibration-resistant rubber mounting bracket and feet.

APPLICATIONS

- Oil circulation in transmission, differential, and transfer case cooling systems
- Oil scavenging applications for turbocharging systems
- Provide oil to turbocharger
- Other oil / fluid circulation and scavenging applications

SPECIFICATIONS

- Flow Rate: 2.1 Gallons Per Minute / 8 Litres Per Minute.
- Pressure: Can generate up to 2BAR (30psi) depending on fluid type.
- Dimensions: Length - 155.5mm x Width - 119mm x Height - 103mm.
- Electrical: 12-volt systems only.
- Current Amp Draw: 6 Amp (Maximum 10 Amps).
- Body Material: Steel housing.
- Ports: Female 3/8" NPT (inlet/outlet)
- Pump Gears: Hardened bronze spur gear & rotors.
- Armature shaft: stainless steel.
- Motor: Permanent Magnet type.
- Self-Priming: 3.0 meters vertical lift.
- Weight: 2.68kg.

NOT recommended for pre-oiling unless the system includes a pressure bypass after the pump. This is a positive displacement pump and "dead-heading" the pump will cause the pump to fail.

DO NOT let this gear pump run dry. Lubrication is key.

This scavenge pump can be used with all lubricants, viscous liquids and diesel. **IT MUST NOT be used with petrol/alcohol fuels. IT MUST NOT** be used for any petrol, petroleum products or any products with a flash point below 37 degrees C.

NOT ALLOWED	**RELATED DANGER**
Gasoline (Petrol)	Fire - explosion
Inflammable liquids with PM < 55℃	Fire - explosion
Water	Oxidation of the pump
Liquid food products	Contamination of same
Corrosive Chemicals	Corrosion to the pump
Solvents	Fire – explosion & Damage to seals

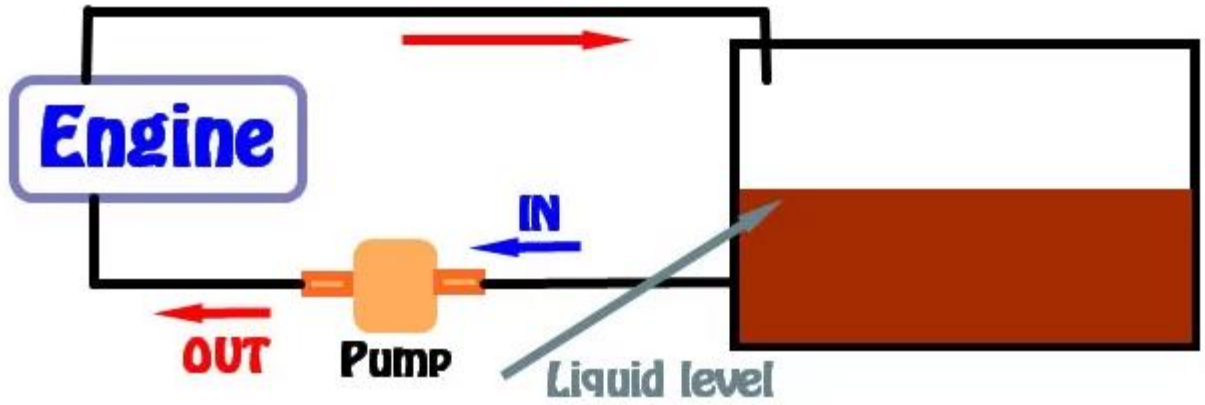
Installation Guidelines

This scavenge oil pump can be mounted in any position. It must be installed onto a flat surface. Ensure to use the provided rubber grommets to minimize the vibration and damaging the pump when in use. Do not over tighten screws as this can distort the case and the mounts on the gear pump. If this oil pump is installed in a vertical position ensure the motor is above the pump head.

When plumbing this scavenge oil pump ensure to use the correct type of hose. The use of spiral reinforced rubber hose with smooth internal bore or braided Teflon hose is recommended. The hose must not collapse under suction and maintain a rigid uniform structure. The hoses must be compatible with the liquid that is being used. All hoses should be kept as straight as possible to avoids kinks. Ensure to keep all hoses away from any heat sources, if necessary, heat sleeve or heat shield all hoses away from extreme heat sources.

It is recommended to install a check valve in order to resume the system operation quickly and easily even after the first priming. When using this pump in a turbo scavenge system, we recommend using a check valve on the oil feed line to the turbo to prevent the pump from pulling out the engine oil if pump is setup to run for a short time after the engine has been switches off.

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



Electrical Wiring Guidelines

This scavenge oil pump must be used with a 15 amp fuse. We recommend to run a relay to provide a full 12 volts to the oil pump. With the relay this can be hooked up to accessories power or via an aftermarket trigger via an ECU or external switch.

Make sure all electrical connections are in a dry location. Connections in humid environments should be sealed to prevent corrosion, for example a weathertight connector to used.

Connect the positive (+) red wire to a relay or circuit breaker. Connect the negative (-) black wire to the negative of the battery terminal or chassis ground.

Inadequate voltage at the oil pump terminals when the pump is running due to partially discharged batteries or insufficient cable size may result in blowing fuses, failure to start, poor pump performance and pump failure.

For more information or technical enquires

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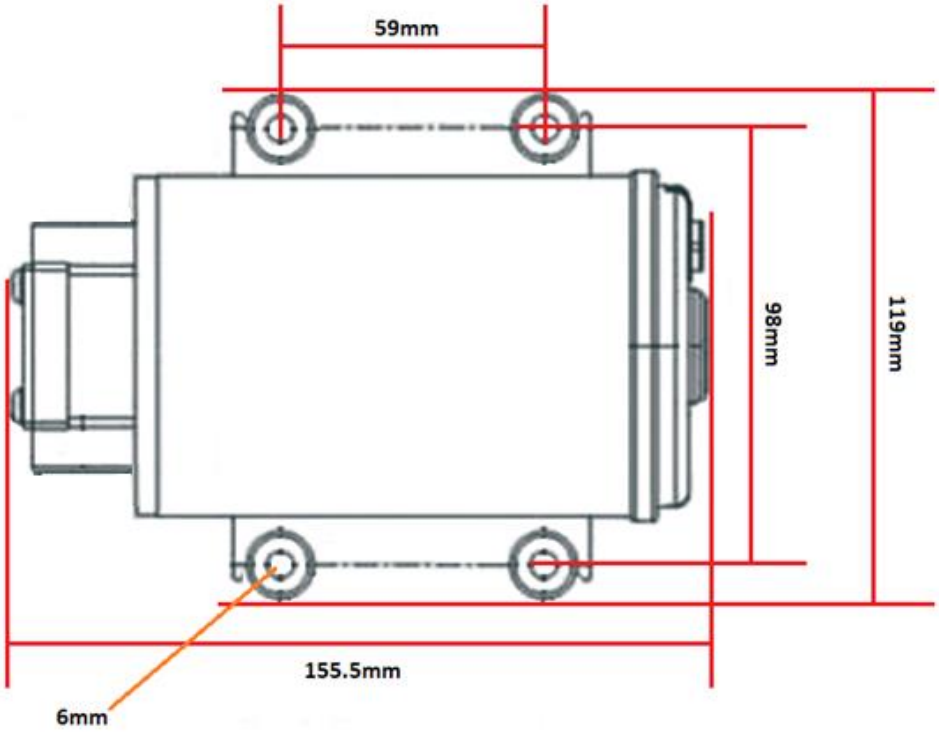

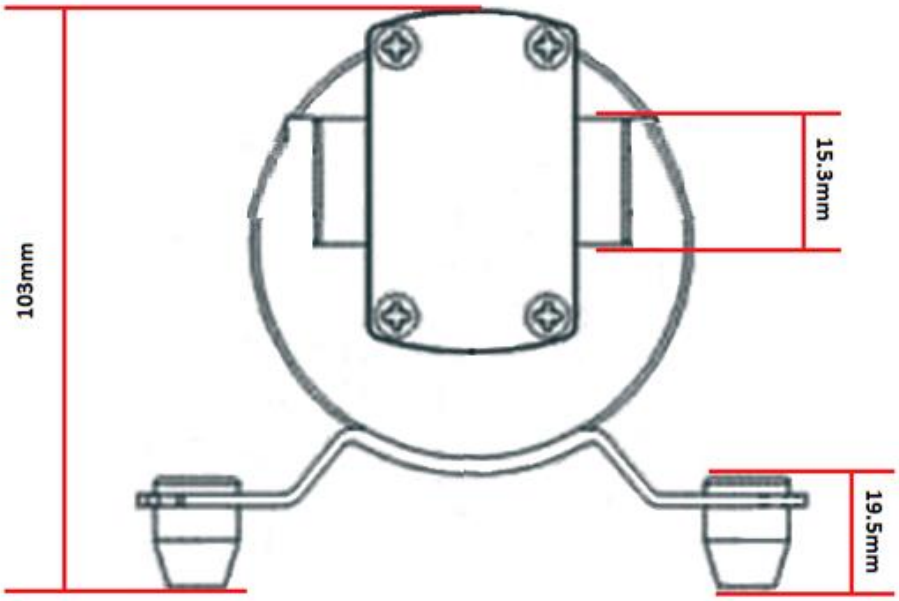

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PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Motor does not turn	Lack of electrical power	Check electrical connections and the safety systems
	Rotor Jammed	Check for possible damage or obstruction of the rotating components
	Motor problems	Contact the Aeroflow Performance
	Fuse burnt out	Replace the fuse
Motor turns slowly when starting	Low voltage from the electrical power supply	Adjust the voltage within anticipated limits
	Excessive oil viscosity	Verify oil temperature and warm it to reduce excessive viscosity
Little or No Flow	Low level in the suction tank	Fill in the tank
	Foot valve blocked	Clean and/or replace valve
	Excessive suction pressure	Lower the pump with respect to the level of the tank or increase the cross-section of the hose
	Air in the pump or suction hose	Check the seal of the connection
	Low rotation speed	Check the voltage at the pump. Adjust the voltage or use cables of greater cross-section
	Narrowing of the suction hose	Use a hose appropriate for working under suction pressure
	Excessive oil viscosity	Verify the oil temperature and warm it to reduce the excessive viscosity
Higher Pump Noise	Cavitations	Reduce the suction pressure
	Irregular by-pass functioning	Deliver until the air in the by-pass system is purged
	Presence of the air in the oil	Wait for the oil in the tank to settle
Leakage From The Pump Body	Damage to the mechanical seal	Check and replace the mechanical seal
High Absorption	The cover is screwed too tightly	Loosen the screws of the cover
	Excessive oil viscosity	Verify the oil temperature and warm it to reduce the excessive viscosity