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VF-609 INSTRUCTIONS

DESCRIPTION

The Velcon VF-609 filter housing is designed to operate with **Aquacon**[®] cartridges as well as OS Series coalescer/separator cartridges. The filter housing is shipped with **no cartridge** installed. **Cartridges must be ordered separately. See page 4 for cartridge selection table.**

Connections Size: 1-1/2" NPT
Housing Pressure Rating: 150 psi

NOTE: FOR LIQUID SERVICE ONLY. Do not use or leak test this filter vessel with compressed air or other gases.

IMPORTANT SAFETY PRECAUTIONS

- **To protect the fuel system, including the VF-609 and other components, BE SURE TO INSTALL PRESSURE RELIEF VALVE(S).**
- **MAKE CERTAIN FILTER HOUSING IS COMPLETELY VENTED BEFORE OPENING HOUSING.**
- To prevent electrical buildup and discharge - use a grounding wire to place a bonding loop from the drain valve to a point on the metal framework of the vehicle or skid. This provides a continuous bond. Before draining the vessel, electrically bond a metal container to the drain valve using a grounding wire. Then drain the fuel into the bonded metal container.

INSTALLATION PROCEDURES

Install the housing at a convenient point in the line. Note the arrow markings on the cast head which indicate direction of flow. **DO NOT** install the housing backwards.

NOTE: Fuel "weeping" from the inlet or outlet 1-1/2" NPT connections sometimes occurs when regular pipe dope is used when plumbing the vessel. To prevent "weeping", we recommend a product like Loctite No. 59231 "Pipe Sealant with Teflon[®]".

Install the 1/2" NPT petcock drain valve which is shipped loose in the shipping carton to the bottom of the vessel. An optional 1/2" NPT carbon steel ball valve, part number 554Y020, is available at extra cost.

Provide (about 10") room for the housing shell to clear the cartridge during change-out.

It is good practice to install a differential pressure gauge so that the differential pressure across the housing can be monitored. This allows accurate determination of when the cartridge should be changed. Part number 07-224 is a differential pressure gauge specifically designed to be used on VF-609.

For **Aquacon**[®] cartridges used in aviation fuel or diesel fuel service, **always** install a differential pressure gauge or other means of determining the differential pressure. For diesel fuel service, flow rate should be kept between 15 and 30 gpm.

On systems where pressures can exceed 75 psi, a pressure bypass around the pump should be installed to protect the cartridge and the system from a high pressure shock or sudden cartridge seal-off due to a slug of water in the product.

Valves ahead of and behind the housing may be required to isolate it during cartridge change-out.

CARTRIDGE CHANGE-OUT INFORMATION

For OS Series Fuel Service – NOTE: The OS Series coalescer cartridge has an O-ring at the bottom of the cartridge. This O-ring seals to the inside of the housing. The cartridge fits tightly into the bowl and will require fuel or oil pre-lubrication to insert into the bowl.

**** DRAIN SUMP AT EVERY FUELING. ****

Replace the cartridge when the differential pressure exceeds 15 psi, after 1 year of service, when the flow is significantly reduced, or if differential pressure has been steadily climbing and then begins to decrease – whichever occurs first. After changing cartridges circulate flow through vessel for at least 3 minutes, use millipores to check for fibers and also check hose end strainers.

For Aviation Fuel Service – Please refer to cartridge Operating Procedures that are supplied with each cartridge shipment.

For All Other Applications – Replace the cartridge when the differential pressure exceeds 25 psi, after 1 year of service, when the flow is significantly reduced, or if pressure has been steadily climbing and then begins to decrease – whichever occurs first.

CARTRIDGE CHANGE-OUT INSTRUCTIONS

REMINDER: Be sure equipment is properly bonded before and after cartridge change-out is performed.

1. Close isolation valves (if any) and open the vent valve at the top.

2. Place a bucket under the housing to contain any spilled liquid.
3. Drain all liquid from the housing through the bottom drain.
4. Unbolt the four bolts holding the vessel shell to the head, drop the housing shell, and remove the spent cartridge.
5. Wipe the inside of the shell clean of any contaminants.
6. Inspect the O-ring and replace if damaged. Lightly lubricate the O-ring with the fuel or oil it will be used in, and position it on the head.
7. Install a new element onto the nozzle of the filter head. Twist and push the cartridge until it bottoms against the step on the nozzle.
8. Position the shell in place and screw the four bolt assemblies (with lock washers and flat washers) through the head and into the shell lugs. Tighten to 22 ft. lbs. maximum.
9. Close the drain valve, and open isolation valves. Open the vent valve until the vessel is slowly bleeding air from the top vent. Close the vent when the housing has filled.
10. Check all fittings and the head/shell junction for leaks.

REPLACEMENT PARTS

The VF-609 is shipped with a Buna-N O-ring installed. Some fuels, especially unleaded gasoline, may cause excessive swelling of the O-ring. If this is a problem, a Viton O-ring should be used. When ordering replacement O-rings from Velcon, specify:

G-0565	for Buna-N
G-0565A	for Viton

Replacements can also be obtained from any commercial supplier of O-rings. Specify size 2-362 in the desired material.

WARNING: Absorbent-type monitor cartridges will not remove water from fuel containing alcohol-blending agents (commonly called gasohol). For removal of solids, please use Velcon particle removal filters specifically made for gasohol. Consult your Velcon representative.

CARTRIDGE SELECTION

TYPE	MODEL NUMBER	DEGREE OF FILTRATION	COLLAPSE STRENGTH	APPLICATION
Aquacon [®] Media (Dirt & Water Removal)	ACO-60901L	0.5 micron	75 psi	Jet Fuel & Avgas
	ACO-60905L	5 microns	75 psi	Avgas
	AD-60925	25 microns	75 psi	Diesel Fuel
Coalescer (Dirt & Water Removal)	OS-60988	0.5 microns	75 psi	Jet Fuel & Avgas
	OS-60986	5 microns	75 psi	Diesel

****CAUTION: DO NOT USE Aquacon[®] CARTRIDGES WITH PRE-MIXED JET FUEL CONTAINING ANTI-ICING ADDITIVES***