

Subject
Oil out the Air Filter of Hydraulic Driven Systems

System or Parts affected

- All VMAC Hydraulic Driven Air Compressor Systems (HDAC)

Overview

There are four causes for oil “Burping” out of the inlet or saturating the VMAC air filter:

1. Improper Shut Down.
2. Hydraulic motor and compressor stalling due to a lack of hydraulic flow.
3. Insufficient electrical power for the control box to operate properly
4. The inlet valve is unable to seal and/or remains open when it should be closed (will usually over-pressurise if this is the case)

Resolution

Proper Shut down

Ensure that the HDAC is being shut down correctly:

1. Ensure that no tools are currently using air.
2. Ensure that the HDAC has achieved the maximum air pressure it is set up to build (150 psi as set up at the factory) and the HDAC has entered “Unload” mode.
3. Turn off compressor.

Hydraulics



Information in the HDAC Installation Manual is based on a “Fixed Displacement” PTO hydraulic pump. VMAC developed the “Closed Center Manifold” (P/N# A700190 and A700191) for use with “Variable Displacement” non-load-sensing PTO Pumps.

One of the most common causes for oil “burping” from the air filter is insufficient hydraulic flow and/or pressure.

- Hook up a hydraulic flow meter and hydraulic pressure gauge as near to the HDAC hydraulic manifold as possible.
- Confirm that HDAC has adequate GPM and hydraulic oil pressure. The values below should be observed when the compressor is building air.

Hydraulic Driven 40cfm	Hydraulic Driven 60cfm	Hydraulic Driven 60cfm HHP
9–14 GPM @ 2,400 PSI	14 – 21 GPM @ 2,400 PSI	12 – 18 GPM @ 3,200 PSI

Electrical

Confirm the HDAC electrical system meets the minimum requirements:

- The HDAC requires a steady 20 Amps @ 12 V DC (VMAC recommends a 30 Amp fuse or circuit breaker).



Selecting the correct wire size is vital for proper operation. If the wire size is too small, voltage drop will be excessive and the compressor will operate erratically and can cause the compressor to stall.

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Measure the length required for both the power wire and the ground wire, add them together and select the correct wire size from the table.

Total length of Power wire PLUS Ground wire	Recommended Wire Gauge
Less than 5 ft.	12 AWG
5 ft. – 8 ft.	10 AWG
More than 8 ft.	8 AWG

Mechanical

Confirm that the poppet valve and O-ring have not become dislodged.

- Remove the air filter cover from the inlet.
- Look through the opening in the air filter plate at the poppet valve & seat, to see if the poppet valve O-ring has become dislodged.
- Confirm that the poppet plate screw has not become dislodged or loosened off. (Figure 1)
 - If the screw holding the poppet in place has become loose or dislodged, replacement of the inlet is necessary.

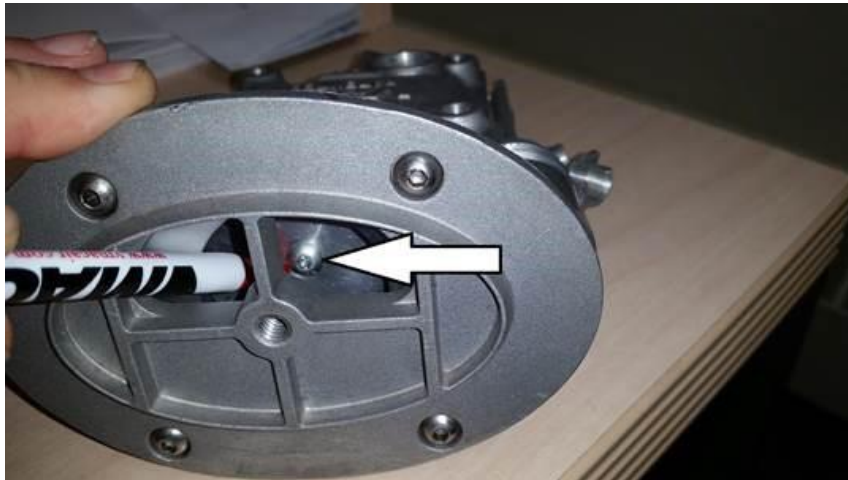


Figure 1



The poppet valve on the HDAC is normally open. When the system reaches 150 PSI the pressure sensor on the air/oil separator tank signals the air solenoid to open allowing system pressure to apply force on the back of the poppet valve piston, closing the inlet.

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