

Service Bulletin

May 22, 2003

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Service Life for Monitor/Water Absorbing Cartridges

On May 1, 2003 members of the joint American Petroleum Institute-Institute of Petroleum (API/IP) Aviation Fuel Filtration Committee, aviation fuel filter manufacturers, and other interested parties met to discuss the water removal performance of aviation fuel filter monitors. At this meeting, results of testing on two-inch monitors removed from service were presented by the four filter manufacturers of API/IP-1583 Qualified Products and Shell and ExxonMobil (work undertaken by them under contract to Institute of Petroleum). Everyone at this meeting agreed that the problem of water removal performance is common to monitors from **all** filter manufacturers. Data was also presented that showed that the problem of water removal performance did not occur at every airport.

The following statement has recently been issued by the Institute of Petroleum.

14th May 2003

WARNING

Following a technical review of test data obtained through IP-sponsored independent research and data provided by Facet International, Faudi Aviation, Racor-Hydrocarbon and Velcon Filters Inc. the aviation fuel filtration industry concludes there to be a problem with the water removal performance of water absorbent monitors.

Users of filter monitors should not consider these devices to be fail-safe. It is emphasized that appropriate aviation fuel handling procedures for detection and removal of water be diligently applied. The cause of water removal performance degradation in filter monitors is not currently known. An industry working group has been established to urgently assess what further research is required to rectify this issue.

(For this statement on the IP web site go to: www.petroleum.co.uk. Then click on left side Publications ► Publications Database. On that page enter "1583" and click "Submit" at bottom.)

As a result of this statement, Velcon Filters, Inc. recommends the following for all water absorbing cartridges:

1. Reinforce quality control checks and diligently conduct water removal procedures at all locations in the fuel distribution system. This includes daily draining of all sumps, low points, and dead legs in the piping system.
2. Monitor differential pressure daily - if operating at reduced flow, record differential pressure and flow rate and calculate corrected differential pressure. *(See attached Service Bulletin – Vol. 1, No. 2).* **Change ACO, ACI, & CDF[®] cartridges when corrected differential pressure reaches 25 psid (15 psid in fuel containing anti-icing additive.) Replace all cartridges if the corrected differential pressure has dropped 5 psid below the previous reading.**
3. Sample fuel and check for free water content using the Velcon Hydrokit[®] or other chemical method in accordance with your company's fuel handling procedures. Replace cartridges if the water content exceeds your company guidelines.

SERVICE LIFE

- A. If the above procedures are followed service life for CDF (2" monitor cartridges) is two years.
- B. If you are unable to follow the above procedures for 2" monitor cartridges then we recommend a service life of one year.

Alternatively, it may be possible to extend the cartridge life beyond one year by performance evaluations at Velcon's laboratory. **Before returning any elements** please contact Velcon Filters, Inc. at vfsales@velcon.com or Fax 719-531-5690 for procedures concerning returning cartridges.

- C. Currently, there is no data to indicate that 5" and 6" ACO and ACI cartridges exhibit performance degradation to the same degree that the 2" monitor cartridges do and we continue to recommend a maximum service life not to exceed two years. Testing will continue to further define service life for all water absorbing cartridges.



Service Bulletin is published by the Marketing Services Department of Velcon Filters, Inc.

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