



Test Monitoring Center

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MEMORANDUM: 18-036
DATE: October 22, 2018
TO: Sequence V Surveillance Panel
FROM: Richard E. Grundza
SUBJECT: Inverted Rating Technique for Oil Screen Sludge

During the October 9, 2018 conference call, the Sequence V Surveillance Panel agreed to continue gathering oil screen clogging results for fuel batch GI0321NX10 using the inverted method. The attached briefly describes how the oil screen is to be oriented for draining purposes and an illustration is provided to show the proper drain orientation. The oil screen clogging values using the inverted method are to be reported in the comments section of the test report.

REG/reg/mem18-036.reg.doc

cc: Frank Farber

Jeff Clark

Don Lind, ACC-MA

<http://www.astmtmc.cmu.edu/docs/gas/sequencev/memos/mem18-036.reg.pdf>

Distribution: email

Inverted Method

Position the oil screen and pickup tube in the inverted orientation relative to how they are installed in the engine. The oil screen should be pointing upwards and the pickup tube open-end pointing downwards. This is to facilitate easier drain out of any residual oil held up in the pickup tube and inside of the oil screen. A fixture may be necessary to support the oil screen and pickup tube.



Use the following procedure to determine the percentage of the oil screen clogged by sludge:

- (1) Use a device to blow air across the screen to remove any retained oil on the screen. A suitable device can be obtained from the supplier listed in the test procedure section X2.1.21.
- (2)
- (2) Regulate the air pressure to $130 \text{ kPa} \pm 10 \text{ kPa}$.
- (3) Connect the device to the screen.
- (4) Allow air to flow for 5 s to 10 s.
- (5) Remove the device and rate.

Flexible, transparent rating aids can be made for different surface areas so that when compared to the test screen's surface, a more accurate determination of surface clogging is possible.

Alternately, visual area calculating software 'Sketch and Calc' can be used to measure the percentage of sludge covered area.