



Test Monitoring Center

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MEMORANDUM: 03-072

DATE: July 21, 2003

TO: D02.B07 (D6082) High Temperature Foam Mailing List

FROM: Tom Schofield

SUBJECT: D6082 Monitoring Changes: Discrimination Oil 66

At the June ASTM D02.B0.07 meeting, the High Temperature Foam Surveillance Panel requested that a severe performing discrimination oil, TMC 66, be introduced to the TMC's D6082 calibration monitoring program. The panel directed that each participating lab run the discrimination oil every six months, in addition to the normal quarterly calibrations, to demonstrate that the labs can distinguish (discriminate) a GF-3 failing oil from the GF-3 passing TMC reference oil 1007. The precision of oils that perform above 100 ml Foam Tendency Immediately Before Air Disconnect (FTIB) has proven to be too poor for establishing accurate oil performance targets and acceptance bands, but the panel agreed that there is a need to include a severe performing discrimination oil in the monitoring program. Two round-robins on TMC 66 (TMC memos 02-069 and 03-058) showed all participating labs reporting results above the present API SL Category D6082 limit of 100 ml FTIB and all labs reported 0 (zero) ml Foam Stability One Minute After Air Disconnect (FS1M).

The TMC plans to introduce the discrimination oil as follows:

1. Individual 525 ml "blind" calibration samples are being shipped to all participating labs to be included with the supply of reference oil maintained at each testing site. The cost of the oil is \$25.00 US per sample (the same cost as the quarterly TMC calibration samples).
2. When a lab requests an oil assignment for their next quarterly calibration, the TMC will assign two samples, one of oil 1007 and one of oil 66. The two samples are to be processed and tested concurrently using the D6082 test method with the blending option A (Note 10 & Section 10.2.1 of the test method).
3. Each test result is to be reported individually (separately) to the TMC using the ETRTM (flatfile) protocol.
4. The TMC will evaluate BOTH reported results. The quarterly calibration result (TMC 1007) will be evaluated against the current, established acceptance bands for that oil, and monitored statistically against the current target performance (mean and precision) for that oil. The discrimination result (TMC 66) will be checked to ensure that the FTIB is **greater than** 100 ml and the FS1M is 0 (zero) ml. Because no accurate performance targets have been established for oil 66, the TMC will not statistically monitor the discrimination runs, other than reporting the number and status of the tests.

5. If both reported tests pass the calibration criteria, a 90-day calibration will be issued on the quarterly calibration and an acknowledgement of the passing status of the discrimination test result will be issued to the lab. The discrimination acknowledgement will indicate when the next discrimination run is due. As with quarterly calibrations, it will be the responsibility of each lab to ensure they run a discrimination test before the date indicated; the TMC will not be sending additional reminders to the labs. The labs will be assessed the usual TMC test review fee for EACH test (currently \$400.00 US per test; \$800.00 US total for the quarterly calibration and the discrimination test).
6. If one or both tests fail to pass the calibration criteria, the lab will be informed of the failing status and the lab will be required to rerun ONLY the failing test(s) using another assigned reference sample (new CMIR). Calibration status for the instrument will be withheld until the testing lab achieves two passing results (one on oil 1007 and one on oil 66). The lab will not be required to rerun any passing tests except in the case of repeated unsuccessful calibration/discrimination runs; the lab may then be requested to rerun both calibration and discrimination oils after a thorough internal operational review is completed. The TMC does not presently charge a test fee for the review and monitoring of failing D6082 calibration tests.
7. The subsequent quarterly calibration will not require a concurrent discrimination run, but the third quarterly calibration will require the additional discrimination run, and so on (the discrimination oil is to be run every six months, concurrent with a quarterly calibration). The panel has clarified that each lab is required to run only one successful discrimination every six months, regardless of the number of calibrated instruments that are at each lab. For those labs that calibrate more than one instrument with the TMC, it is our recommendation that the discrimination oil tests be alternated between the instruments. A failing discrimination on one instrument does not disqualify any current calibrated status on other instruments, or automatically disqualify the lab. However, it is intended that a failing discrimination test will be rerun immediately (or within a relatively short period of time) so that the pending instrument calibration status can be quickly resolved. Delay in achieving a successful discrimination result could affect future D6082 instrument calibration status at the lab.

The discrimination oils will be assigned at the next quarterly calibration assignment request from each lab after they have received the discrimination oils. The TMC expects to ship the new samples within the next two weeks.

Please direct any inquiries to my attention.

TMS/tms

c: <ftp://ftp.astmtmc.cmu.edu/docs/bench/d6082/memos/mem03-072.pdf>

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