



Test Monitoring Center

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Sequence VG Information Letter 04-1
Sequence No. 18

March 10, 2004

ASTM consensus has not been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.

TO: Sequence VG Mailing List

SUBJECT: 1. Change in Time Period for Non-Reference Oil Starts
2. Editorial Changes Relating to Precision Statements

1. As a result of an electronic ballot, the Sequence VG Surveillance Panel agreed to increase the length of time in which non-reference oil tests can be started and considered to be within the calibration period for that stand. Section 11.1.1 has been revised, increasing the length of time from within 171 days of the reference oil completion date to 180 days. This change is effective January 9, 2004.
2. Several editorial changes were recommended as an outcome of Section D0.02.B0.9 and D0.02.B0.10 meetings in December, 2003 regarding precision statements in ASTM test methods. Section 16.1.1 has been revised to remove the phrase (formerly called repeatability) and add a note referencing intermediate precision as the appropriate term for this method. Also, a footnote has been added to Table 8 to clarify the process of comparing two test results for Oil Screen Clogging, a log transformed parameter. These changes are effective with the issuance of this letter.

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Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/gas/sequencevg/procedure_and_ils/vgil04-1-18.pdf

Distribution: Email

(Revises Test Method D6593-02, as amended by Information Letters 02-1, 02-2, 02-3, 02-4, 02-5, 03-1, 03-2 and 03-3)

11.1.1 Verify the calibration of test stands with reference oils supplied by the TMC. Stand calibration tests are normally conducted upon expiration of the 180-day calibration time period or after completing 15 non-reference oil tests, or both. However, calibration time periods may be adjusted by the TMC. Any non-reference oil test started within 180 days of the previous calibration test is considered within the calibration period, providing not more than 14 non-reference oil tests have been completed since the previous calibration test in the stand.

16.1.1 Intermediate Precision Conditions—Conditions where test results are obtained with the same test method using the same test oil, with changing conditions such as operators, measuring equipment, test stands, test engines, and time.

Note 7—Intermediate precision is the appropriate term for this test method rather than repeatability, which defines more rigorous within-laboratory conditions.

TABLE 8 Reference Oil Statistics^A

Variable, Merits	Intermediate Precision		Reproducibility	
	S _{i.p.}	i.p. ^B	S _R	R ^B
Average engine sludge	0.59	1.65	0.60	1.68
Rocker cover sludge	0.40	1.15	0.40	1.12
Average engine varnish	0.14	0.39	0.15	0.42
Oil screen clogging, sludge ^C	1.095	3.066	1.128	3.158
Average piston varnish	0.25	0.70	0.26	0.73

^A These statistics are based on results obtained on Test Monitoring Center Reference Oils 925-3, 1006, 1006-2, 1007, 1008 and 1009 over the period from September 16, 1998 through December 31, 2003.

^B This value is obtained by multiplying the standard deviation by 2.8

^C This parameter is transformed using $\ln(\text{result}+1)$. When comparing two test results on this parameter, first apply this transformation to each test result. Compare the absolute difference between the transformed results with the appropriate (intermediate precision or reproducibility) precision limit.