



Test Monitoring Center

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CBT INFORMATION LETTER 05-1

Sequence No. 9

November 14, 2005

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

TO: CBT Mailing List

SUBJECT: Evaporation Loss Measurement and Calculation
Precision Estimate

Evaporation Loss Measurement and Calculation

As approved by the Corrosion Bench Test Surveillance Panel, the measurement and calculation methodology for evaporation loss has been eliminated from D 5968. Section 10.1 has been deleted and subsequent sections have been renumbered accordingly. This change is effective October 31, 2005.

Precision Estimate

Section 12, Precision and Bias, has been updated to reflect current ASTM practice regarding precision statements. The revised Section 12 is attached.

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Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/bench/cbt/procedure_and_ils/cbt05-1.pdf

Distribution: Email

(Revises Test Method D 5968-04)

Delete Section 10.1

Renumber Sections 10.2, 10.3 and 10.3.1 as Sections 10.1, 10.2 and 10.2.1, respectively. Within 10.2.1, change 10.3 to 10.2 in two places.

Renumber Equations (2) through (4) as Equations (1) through (3), respectively.

Replace current Section 12 with the following:

Section 12 Precision and Bias

12.1 *Test Precision – Reference Oils:*

12.1.1 *Intermediate Precision* – 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 4 – Intermediate precision is the appropriate term for this test method rather than repeatability which defines more rigorous within-laboratory conditions.

12.1.1.1 *Intermediate Precision Limit (i.p.)* – The difference between two test results obtained under intermediate precision conditions that would, in the long run, in the normal and correct conduct of the test method, exceed the values shown in Table 1 in only one case in twenty. When only a single test result is available, the Intermediate Precision Limit can be used to calculate a range (test result \pm Intermediate Precision Limit) outside of which a second test result would be expected to fall about one time in twenty.

12.1.2 *Reproducibility Conditions* – Conditions where test results are obtained with the same test method using the same test oil in different laboratories with different operators using different equipment.

12.1.2.1 *Reproducibility Limit (R)* – The difference between two test results obtained under reproducibility conditions that would, in the long run, in the normal and correct conduct of the test method, exceed the values shown in Table 1 in only one case in twenty. When only a single test result is available, the Reproducibility Limit can be used to calculate a range (test result \pm Reproducibility Limit) outside of which a second test result would be expected to fall about one time in twenty.

12.2 *Bias* – No estimate of bias is available.

Table 1 Precision Estimates^A

Variable	Intermediate Precision		Reproducibility	
	S _{i.p.}	i.p.	S _R	R
Δ Copper, ppm	3.2	9.0	3.5	9.8
Δ Lead, ppm	29.0	81.2	29.6	82.9

Legend:

S _{i.p.}	= intermediate precision standard deviation
i.p.	= intermediate precision limit ^B
S _R	= reproducibility standard deviation
R	= reproducibility limit ^B

^AThese statistics are based on results obtained on Test Monitoring Center Reference Oils 40 and 43.^BThis value is obtained by multiplying the standard deviation by 2.8.