Test Monitoring Center

ASTM

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L-42 Information Letter No. 05-2
Sequence No. 21
April 26, 2005

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

TO: L-42 Mailing List

SUBJECT: 1. Updated Test Precision
             2. Rounding Test Results Using ASTM E 29

1.   At the April 6, 2005 L-42 Surveillance Panel meeting, the panel approved a motion to update the reference oil test precision data. Section 8.1 of the L-42 procedure (STP 512A) has been revised. New Sections 8.1.1 through 8.1.3.1, a new Table 1, and a new Note 5 have been added.

2.   At the April 6, 2005 L-42 Surveillance Panel meeting, the panel approved a motion to use ASTM E 29 for all test result rounding. A new Section 7.5 has been added to the L-42 procedure.

These changes are effective the date of this information letter.

The updated version of the L-42 test procedure is available in its entirety from the TMC web site (ftp://ftp.astmtmc.cmu.edu/docs/gear/l42/procedure_and_ils) or by contacting the TMC for a hard copy. The new sections of the L-42 test procedure are attached.

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Chairman
L-42 Surveillance Panel

John L. Zalar
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Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/gear/l42/procedure_and_ils/il05-2.pdf

Distribution: Email

7.5   Round test results according to Practice E 29.

8.1   *Test Precision-Reference Oils:*

8.1.1   Test precision is established on the basis of operationally valid reference oil test results monitored by the TMC. The data are reviewed annually by the L-42 Surveillance Panel. Contact the ASTM TMC for current industry data.

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

Note 5-Intermediate precision is the appropriate term for this test method rather than repeatability, which defines more rigorous within-laboratory conditions.

8.1.2.1   *Intermediate Precision Limit (i.p.)*—The difference between two 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 ± Intermediate Precision Limit) outside of which a second test result would be expected to fall about one time in twenty.

8.1.3   *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.

8.1.3.1   *Reproducibility Limit (R)*—The difference between two 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 ± Reproducibility Limit) outside of which a second test result would be expected to fall about one time in twenty.

Table 1 Reference Oil Statistics [A]

Variable, Merits	Intermediate Precision		Reproducibility	
	$S_{i.p.}$ [B]	i.p. [C]	S_R [B]	R [C]
Scoring	9.16	25.65	9.48	26.54

[A] These statistics are based on results obtained on TMC Reference Oils 115 over the period   August 23, 2001 through March 3, 2005

[B] S = standard deviation

[C] This value is obtained by multiplying the standard deviation by 2.8