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T-11 INFORMATION LETTER 06-1
Sequence No. 2
February 14, 2006

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

TO: Mack Mailing List

SUBJECT: Addition of Abbreviated Length Test: T-11A
New T-11 Test Parameters

Abbreviated Length Test: T-11A

On the January 23, 2006 conference call, the Mack Test Surveillance Panel approved the incorporation of the abbreviated length T-11A test into Test Method D 7156. Accordingly, Section 1.1.1 and Annex A8 have been added to the test method to itemize the T-11A requirements that differ from the T-11 requirements. These sections are attached.

New Test Parameters

On the January 23, 2006 conference call, the Mack Test Surveillance Panel approved the incorporation of two new test result parameters, Soot Content at 4 cSt Viscosity Increase (%) and Soot Content at 15 cSt Viscosity Increase (%). Accordingly, Sections 11.6, 11.8, and Table 4 of Test Method D 7156 have been modified and are attached.

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Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/procedure_and_ils/t11/il06-1.pdf

Distribution: Email

(Revises D 7156-05 as amended by Information Letter 05-01)

1.1.1 This test method also provides the procedure for running an abbreviated length test which is commonly referred to as the T-11A. The procedures for the T-11A are identical to the T-11 with the exception of the items specifically listed in Annex A8. Additionally, the procedure modifications listed in Annex A8 refer to the corresponding section of the T-11 procedure.

11.6 *Test Results* – The test results are Soot Content at 4 cSt Viscosity Increase (%), Soot Content at 12 cSt Viscosity Increase (%), Soot Content at 15 cSt Viscosity Increase (%), and MRV Viscosity (cP).

11.8 *Non-Reference Oil Test Result Severity Adjustments* – This test method incorporates the use of a Severity Adjustment (SA) for non-reference oil test results. A control chart technique, described in the LTMS, has been selected for identifying when a bias becomes significant for any of the following test results: Soot Content at 4 cSt Viscosity Increase (%), Soot Content at 12 cSt Viscosity Increase (%), Soot Content at 15 cSt Viscosity Increase (%), and MRV Viscosity (cP). When calibration test results identify a significant bias, determine a SA according to LTMS. Report the SA value on the appropriate form. Add this SA value to non-reference oil test results, and enter the adjusted result in the appropriate space. The SA remains in effect until a new SA is determined from subsequent calibration test results, or the test results indicate the bias is no longer significant. Calculate and apply SA's on a laboratory basis.

TABLE 4 Test Precision

Measured Units				
Test Result	Intermediate Precision (i.p.)		Reproducibility (R)	
	$S_{i.p.}$ [A]	i.p. [B]	S_R [A]	R [B]
Soot at 4 cSt viscosity increase (%)	0.23	0.63	0.23	0.63
Soot at 12 cSt viscosity increase (%)	0.21	0.59	0.21	0.59
Soot at 15 cSt viscosity increase (%)	0.26	0.73	0.26	0.73
MRV viscosity (cP)	1082.86	3032	1117.14	3128

[A] S = standard deviation
[B] This value is obtained by multiplying the standard deviation by 2.8.

A8. T-11A ABBREVIATED LENGTH TEST REQUIREMENTS

A8.1 *Procedure*

A8.1.1 *Test Cycle (refer to Section 9.4)* – With the exception of test length, conduct the test according to Table 2. Non-reference oil test length is 180 h minimum.

A8.2 *Calibration Test Acceptance (refer to Sections 11.4 and 11.5)*

A8.2.1 Calibration status for the T-11A is determined by successfully calibrating a test stand according to the T-11 requirements listed in Sections 11.4 and 11.5. In other words, a stand that is calibrated for T-11 testing is automatically calibrated for T-11A testing.

A8.3 *Test Results (refer to Section 11.6)* – The test result is MRV Viscosity (cP).

A8.4 *Non-reference Oil Test Requirements (refer to Section 11.7)*

A8.4.1 All operationally valid tests with a test length of less than 192 h shall produce a TGA soot level of 5.16 ± 0.33 at 180 h.

A8.4.2 All operationally valid tests with a test length greater than or equal to 192 h shall produce a TGA soot level of 5.50 ± 0.35 at 192 h.

A8.4.3 All operationally valid tests shall not exceed an oil consumption of 65.0 g/h.