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T-11 INFORMATION LETTER 07-1
Sequence No. 6
February 1, 2007

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: Fuel Sulfur Measurement Test Method Change
Updated Valve Guide Reaming Procedure
Correction to New Lab and New Stand Time Limits
Clarification of Soot at Viscosity Increase Calculation Methods

At their January 23, 2007 meeting, the Mack Test Surveillance Panel approved the following changes to the T-11 test procedure, ASTM Test Method D 7156:

Fuel Sulfur Measurement Test Method Change

The specified method for measuring fuel sulfur was changed from Test Method D 129 to Test Method D 5453, with Test Methods D 2622 and D 4294 being acceptable substitutes. Appropriate changes to Section 2.1 and Section 10.2 have been made and are attached.

Updated Valve Guide Reaming Procedure

The valve guide reaming procedure has been updated. Section 8.2.2 has been modified accordingly.

Correction to New Lab and New Stand Time Limits

The amount of time that may pass before a new lab or stand is considered new has been corrected to be one year since the expiration of the last calibration period. The previous time limit of one year from the last calibration test was in error. Sections 11.4.1 and 11.4.2 have been modified and are attached.

Clarification of Soot at Viscosity Increase Calculation Methods

Section 11.6 has been reworded to clarify that linear interpolation is used to calculate Soot Content at 4, 12, and 15 cSt. New Section 11.6.1 is attached.

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Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/procedure_and_ils/T-11/il07-1.pdf

Distribution: Email

(Revises D 7156-05 as amended by Information Letters 05-1, 06-1, 06-2, 06-3, and 06-4)

Remove from Section 2.1:

D 129 Test Method for Sulfur in Petroleum Products (General Bomb Method)

Add to Section 2.1:

D 4294 Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry

D 5453 Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence

8.2.2 Use oil when reaming guides. Hone finish if desired. Valve stem-to-guide clearance shall be 0.0038 – 0.0089 cm (0.0015 – 0.0035 in.) for intake and 0.0064 – 0.0114 cm (0.0025 – 0.0045 in.) for exhaust.

10.2 *Fuel Inspections*—Use fuel purchase inspection records to insure conformance to the specifications listed in Table 1 for the last batch of fuel used during the test. In addition, perform the following inspections on new (0-h) and EOT (252-h) fuel samples: API Gravity at 15.6°C (60°F), Test Method D 287 or D 4052; Total Sulfur, % Weight, Test Method D 5453 (D 2622 or D 4294 can be substituted). Use one 1-L (1-qt) sample for inspections.

11.4.1 A new laboratory is any laboratory that has never previously calibrated a test stand under this test method, or has not calibrated a test stand within one year from the expiration of the last calibration period at that laboratory. All stands at a new laboratory are considered new stands.

11.4.2 A new stand is a test cell and support hardware that has never previously been calibrated under this test method, or has not been calibrated within a year from the expiration of the last calibration period on that stand.

11.6.1 Use linear interpolation for calculating soot contents (at a given viscosity increase), using new oil 90-pass DIN shear viscosity result as the minimum viscosity (sections 10.1.1 and 10.1.5)

Renumber existing sections 11.6.1 (and appropriate subsections) as new sections 11.6.2 (and appropriate subsections).