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ISB INFORMATION LETTER 07-1
Sequence No. 2
February 2, 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: Cummins Mailing List

SUBJECT: 1. Temperature, Pressure, and Flow Rate Measurement Reference Document Change
2. Average Tappet Mass Loss Calculation - Soot Adjustment Change
3. Substitute Fuel Sulfur Measurement Dropped

The Cummins Surveillance Panel approved the following changes to the ISB test procedure:

1. The Data Acquisition and Control Automation II Task Force Report (DACA II) has replaced RR:D02-1218 for specifying the accuracy and resolution of temperature, pressure, and flow rate measurement systems. Sections 8.3.3.1, 8.3.4.1, and 8.3.5.1 have been modified accordingly.

2. Section 11.2.5 has been modified to reflect a change in the Average Tappet Mass Loss Calculation method. This change takes effect for all tests starting on or after January 25, 2007.

3. Test Method D 129 has been removed from the list of substitute fuel sulfur measurement methods. Section 11.5.1.2 has been modified accordingly.

The modified sections of the procedure are attached. The updated version of the test procedure, designated as "ISB Procedure Jan 29 2007", is available in its entirety from the TMC web site (www.astmtmc.cmu.edu/docs/diesel/cummins/procedure_and_ils/ISB) or by contacting the TMC for a hardcopy.

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Attachment

c: ftp://astmtmc.cmu.edu/docs/diesel/cummins/procedure_and_ils/ISB/il07-1.pdf

Distribution: Email

Remove from Section 2.1:

D 129 Standard Test Method for Sulfur in Petroleum Products[4]

8.3.3.1 Measurement Location – The temperature measurement locations are specified in this section. The measurement equipment is not specified. Install the sensors such that the tip is located midstream of the flow unless otherwise indicated. Follow the guidelines detailed in the Data Acquisition and Control Automation II Task Force Report[12] for the accuracy and resolution of the temperature measurement sensors and the complete measurement system.

8.3.4.1 Measurement Location and Equipment – The pressure measurement locations are specified in this section. The measurement equipment is not specified. Follow the guidelines detailed in the Data Acquisition and Control Automation II Task Force Report[12] for the accuracy and resolution of the pressure measurement sensors and the complete measurement system.

8.3.5.1 Flow Rate Location and Measurement Equipment — The flow rate measurement locations are specified in this section. The equipment for the blow-by rate and the fuel rate are not specified. Follow the guidelines detailed in the Data Acquisition and Control Automation II Task Force Report[12] for the accuracy and resolution of the flow rate measurement system.

11.2.5 Calculate and report the Average Tappet Mass Loss (Soot Adjusted) as follows:

11.2.5.1 For all tests starting on or before January 24, 2007:

ATWL = TWL – 76 (TGAAVG – 3.50)

Where:

ATWL = Average Tappet Mass Loss (Soot Adjusted)

TWL = outlier screened average tappet mass loss

TGAAVG = mathematical average of the nine soot measurements from 25 to 350 h

11.2.5.2 For all tests starting on or after January 25, 2007:

ATWL = TWL – 39 (TGAAVG – 3.48)

Where:

ATWL = Average Tappet Mass Loss (Soot Adjusted)

TWL = outlier screened average tappet mass loss

TGAAVG = the mathematical average of the nine soot measurements from 25 to 350 h provide that the average falls in the range 2.92 to 4.04. If the average is less than 2.92, then use 2.92. If the average is greater than 4.04, then use 4.04.

11.5.1.2 Total Sulfur, % wt., Test Method D5453 (D 2622, or D 4294 can be substituted)