



Test Monitoring Center

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1R Information Letter No. 16-1
Sequence No. 8
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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: Caterpillar Mailing List

SUBJECT: 1. Changes to 1R Humidity Measurement Device Calibration
2. Test Fuel Sole Source Designation

During the June 8th CAT Surveillance Panel teleconference it was decided to update the specified humidity measurement device as well as the device calibration timing requirement. The device requirement has been updated to allow for chilled mirror equivalent devices to be used. The device must be calibrated during the test or within 48 hours before the start of the test. Section 10.11 has been updated accordingly.

The panel also unanimously agreed that the current fuel denoted in the test method is to be designated sole source. Section 7.13 has been updated accordingly.

Revised Sections 7.13 and 10.11 are attached. These changes to Test Method D6923 are effective immediately.

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Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/diesel/scote/procedure_and_ils/1r/il16-01_1r.pdf

Distribution: Email

7.13 Test Fuel—The specified test fuel is Chevron Phillips PC-9-HS Reference Diesel Fuel^{20,13}. The specification requirements are shown in Annex A7.

Add the following footnote and renumber footnotes accordingly.

²⁰ The sole source of supply of the apparatus known to the committee at this time is Chevron Phillips Chemical Company LP, 10001 Six Pines Drive, Suite 4036B, The Woodlands, TX 77387-4910, www.cpchem.com.

10.11 Humidity Calibration Requirements—The accuracy of the laboratory's primary humidity measurement system shall be within ± 0.6 g of the humidity measuring chilled mirror dew point hygrometer or equivalent. Calibrate the primary laboratory humidity measurement system within 48 h before the start of each stand calibration test or during the stand calibration test using a chilled mirror dew point hygrometer or equivalent with an accuracy of at least ± 0.55 °C at a dew point of 24 °C. The calibration consists of a series of paired comparison measurements between the primary system and the chilled mirror dew point hygrometer or equivalent. The comparison period lasts from 20 min to 2 h with measurements taken at 1 min to 6 min intervals, for a total of 20 paired measurements. The measurement interval should be appropriate for the time constant of the humidity measuring instruments. Ensure that the flow rate is within the equipment manufacturer's specification. Take all measurements made with the dew point hygrometer or equivalent at atmospheric pressure and correct them to standard pressure conditions (101.12 kPa). Compute the difference between each pair of measurements and calculate the mean and standard deviation of the differences. The absolute value of the mean difference shall not exceed 0.6 g and the standard deviation shall be less than or equal to 0.3 g. The primary humidity measurement system is deemed calibrated only if both of these requirements are met. If either of these requirements is not met, investigate the cause, make repairs, and recalibrate. Maintain the calibration data for a minimum of two years.