



Test Monitoring Center

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CORRECTION

ISB Information Letter 17-2
Sequence No. 12
December 21, 2017

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: Adoption of a Stand Based LTMS with Severity Adjustments to Test Results-Corrected

On November 29, 2017, via teleconference, the Cummins Surveillance panel approved adopting a change to the LTMS used for the ISB test. As part of that change the LTMS will transition from a lab based system to a stand based system which incorporates the use of severity adjustments. Sections 9.2, 11.2.6.3 and 11.3.6 have been revised accordingly and are attached. Sections 9.9.5, 11.2.6.4, and 11.3.7 have been added and are also attached.

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Attachment

c: http://www.astmtmc.cmu.edu/ftp/docs/diesel/cummins/procedure_and_ils/ISB/il17-2_ISB.pdf

Distribution: Email

(Revises Test Method D7484-16 as amended by IL 17-1)

9.2 *New Test Stand*—A new test stand is defined as a stand that has never been successfully calibrated before. Perform a calibration as described in 9.1 to introduce a new test stand into the system.

9.9.5 *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 average camshaft wear and average tappet mass loss. When calibration test results identify a significant bias, determine a SA in accordance with LTMS. Report the SA value on the appropriate form, Test Results Summary, in the space for SA. 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. Calculate and apply SA's on a stand basis.

11.2.6.3 Apply the following Average Tappet-mass Loss correction factors as necessary:

(1) For all tests using Batch B tappets and Batch E, F, or G camshafts that start on or after April 21, 2011 multiply the average tappet mass loss from 11.2.6.2 by 0.637 to get the corrected average tappet mass loss result.

(2) For all tests using Batch C tappets and Batch H camshafts, that start on or after December 11, 2011 and end on or before November 12, 2012, multiply the average tappet-mass loss from 11.2.6.2 by 0.637 to get the corrected average tappet mass loss result.

(3) For all tests using Batch C tappets and Batch H camshafts, that start on or after November 13, 2012 and all tests on Batch C tappets and Batch J camshafts, multiply the average tappet mass loss from 11.2.6.2 by 0.711 to get the corrected average tappet mass loss result.

(4) For all tests on Batch D tappets and Batch K camshafts that complete before October 19th, 2017, multiply the average tappet mass loss from 11.2.6.2 by 1 to get the final average tappet mass loss result.

(5) For all tests on Batch D tappets, Batch K camshafts and Batch E crossheads that complete on or after October 19th, 2017 multiply the average tappet mass loss from 11.2.6.2 by 0.785 to get the corrected average tappet mass loss result.

11.2.6.4 For reference oil tests report the corrected average tappet mass loss result as the final average tappet mass loss result. For non-reference oil tests apply the appropriate severity adjustment value to the corrected average tappet mass loss result to obtain the final average tappet mass loss result. If the final average tappet mass loss value is less than 0, report the final average tappet mass loss as 0. Report the average tappet mass loss result on the appropriate form.

11.3.6 Apply the following Average Camshaft Wear correction factors as necessary:

(1) For all tests using Batch B tappets and Batch E, F, or G camshafts, that start on or after April 21, 2011, adjust average camshaft wear from 11.3.5 by subtracting 9.5 to get the corrected average camshaft wear result.

(2) For all tests using Batch C tappets and Batch H camshafts, that start on or after December 11, 2011 and end on or before November 12, 2012, adjust average camshaft wear from 11.3.5 by subtracting 9.5 to get the corrected average camshaft wear result.

(3) For all tests using Batch C tappets and Batch H camshafts, that start on or after November 13, 2012 and all tests on Batch C tappets and Batch J camshafts, adjust average camshaft wear from 11.3.5 by subtracting 5.6 to get the corrected average camshaft wear result.

(4) For all tests using Batch D tappets and Batch K camshafts that complete before October 19th, 2017 adjust average camshaft wear from 11.3.5 by subtracting 11.3 to get the corrected average camshaft wear result.

(5) For all tests on Batch D tappets, Batch K camshafts and Batch E crossheads that complete on or after October 19th, 2017 adjust average camshaft wear from 11.3.5 by subtracting 18.5 to get the corrected average camshaft wear result.

11.3.7 For reference oil tests report the corrected average camshaft wear result as the final average camshaft wear result. For non-reference oil tests apply the appropriate severity adjustment value to the corrected average camshaft wear result to obtain the final average camshaft wear result. If the final average camshaft wear value is less than 0, report the final average camshaft wear as 0. Report the final average camshaft wear result on the appropriate form.