



A Program of ASTM International

Test Monitoring Center

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ISM Information Letter 20-1
Sequence No. 14
April 22, 2020

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: Update to ISM Crosshead Mass Loss Correction Factor for Batch G Crossheads and IAS Mass Loss Correction Factor

During the April 16, 2020 Surveillance Panel teleconference the panel agreed to update the crosshead mass loss correction factor applied to all tests using batch G crossheads. The new correction factor is +0.6 mg added to the original crosshead mass loss result. It was also decided that the injector adjusting screw correction factor would not be changed and as such the procedure would need to be updated to apply the injector adjusting screw correction factor to all new hardware batches.

While making the changes to the procedure it was noticed that the procedure updates for the a prior change to the injector adjusting screw correction factor, as shown in Information Letter 16-3, had not been incorporated into D7468.

The revised text of section 11.1.7 of D7468-19 is attached. Also, new section 11.2.5.3 has been added to show the correction factor as originally implemented in IL 16-3, as well as extend it to all new hardware batches.

These changes are effective immediately.

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Attachment

c: http://www.astmtmc.cmu.edu/ftp/docs/diesel/cummins/procedure_and_ils/ISM/il20-01_ISM.pdf

Distribution: Email

(Revises Test Method D7468-19)

Edit Section 11.1.7.1 (3), add new (4) and renumber original (4) to (5)

11.1.7.1 Apply the following crosshead mass loss correction factors as necessary:

- (1) For all tests that complete on or after June 28, 2007 and started on or before March 3, 2010, add a correction factor of +1.7 mg to the crosshead mass loss value calculated in 11.1.7.
- (2) For all tests that started on or after March 4, 2010 and started on or before April 29, 2011, add a correction factor of +1.3 mg to the crosshead mass loss value calculated in 11.1.7.
- (3) For all tests that start on or after April 30, 2011 **on crosshead batches prior to batch "G"** add a correction factor of +2.5 mg to the crosshead mass loss value calculated in 11.1.7.
- (4) **For all tests on batch "G" crossheads add a correction factor of +0.6 mg to the crosshead mass loss value calculated in 11.1.7.**
- (5) If after applying the appropriate correction factor from 11.1.7.1, the final crosshead mass loss value is less than 0, report the crosshead mass loss as 0 in 11.1.7.

Add section 11.2.5.3

11.2.5.3 For all tests that complete on hardware combinations consisting of Batch C injector push rods, Batch D injector adjusting screws and Batch F crossheads (central parts distributor hardware kits numbered 938 or higher) and all subsequent batches of hardware, take the natural log of the injector adjusting screw mass loss average value adjusted to 3.9 % soot calculated in 11.2.4 and reported on Form 12, apply a correction factor of +0.410 to that value to get the transformed corrected IAS mass loss value and report on Form 4. Finally, back transform this value using the inverse natural log to get the final injector adjusting screw mass loss value in milligrams. Report this value on Form 4 as the final result listed in Table A9.1.