A Program of ASTM International

Test Monitoring Center

@ Carnegie Mellon University
6555 Penn Avenue, Pittsburgh, PA 15206, USA

http://astmtmc.cmu.edu
412-365-1000

1K/1N Information Letter No. 15-2
Sequence No. 36
April 6, 2015

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 Surveillance Panel Mailing List

SUBJECT: Changes to 1N Top Groove Fill and Top Land Heavy Carbon Reporting

During the March 31, 2015 conference call the Caterpillar surveillance panel approved a motion to change the correction factor for 1N Top Groove Fill and Top Land Heavy Carbon. This information letter replaces information letter 15-1.

Sections 13.1.3-13.1.5 and Table 2 have been updated and are attached. These changes to Test Method D6750 are effective immediately.

Hind Abi-Akar

Hind Abi-Akar
Project Engineer
Caterpillar, Inc.

Frank M. Farber
Director
ASTM Test Monitoring Center

Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/diesel/CAT/procedure_and_ils/1k-1n/il15-02.pdf

Distribution: Email

(Revises Test Method D6750-14 as amended by IL 14-1)

13. Report

Report Forms

13.1 For reference oil tests, the standard-ized report forms and data dictionary for reporting test results and for summarizing the operational data are required. All report forms making up the 1K/1N final report are available at the TMC website (http://www.astmtmc.cmu.edu).
13.1.1 Report all deposits, wear and engine operational data as required by the report forms.
13.1.2 Report a summary of the overall test results on the Test Report Summary form of the test report.

Reporting Top Groove Fill (TGF) – 1K Tests Only

13.2 Add the appropriate industry correction factor from Table 2.
13.2.1 Add any lab severity adjustment.
13.2.2 Report result as TGFFNL

Reporting Top Groove Fill (TGF) – 1N Tests Only

13.3 Convert TGF percent to transformed units:

$$TTGF = \ln(TGF+1) \qquad (2)$$

13.3.1 Add the appropriate industry correction factor from Table 2 to TTGF and report as TTGFCOR.
13.3.2 Add any lab severity adjustment to TTGFCOR and report as TTGFFNL
13.3.3 Convert the final transformed value back to TGF percent

$$TGFFNL = \exp(TTGFFNL) - 1 \qquad (3)$$

TABLE 2 Test Parameter Correction Factors

NOTE 1—For tests not meeting any of the tabulated conditions the correction factor for all parameters is 0.

Conditions:	TGF	WD	TTLHC	BSOC	ETOC
1N, 1Y3998 cylinder liner, Tests starting before April 20th, 2015	0	0	-0.451	0	0
1N, 1Y3998 cylinder liner, Tests starting on or after April 20th, 2015	0.419954	0	0	0	0
1K, Currently there are no correction factors for 1K parameters	0	0	0	0	0

Reporting Weighted Demerits (WD)

13.4 Add the appropriate industry correction factor from Table 2.
13.4.1 Add any lab severity adjustment.
13.4.2 Report result as WDFNL

Reporting Top Land Heavy Carbon (TLHC) – 1K Test Only

13.5 Add the appropriate industry correction factor from Table 2.
13.5.1 Add any lab severity adjustment.
13.5.2 Report result as TLHCFNL

Reporting Top Land Heavy Carbon (TLHC) – 1N Test Only

13.6 Convert TLHC percent to transformed units:

(Revises Test Method D6750-14 as amended by IL 14-1)

$$TTLHC = \ln(TLHC + 1) \qquad (4)$$

13.6.1 Add the appropriate industry correction factor from Table 2 to TTLHC and report as TTLHCCOR.
13.6.2 Add any lab severity adjustment to TTLHCCOR and report as TTLHCFNL.
13.6.3 Convert TTLHCFNL back to TLHC percent:

$$TLHCFNL = \exp(TTLHCFNL) - 1 \qquad (5)$$

Reporting Brake Specific Oil Consumption (BSOC)

13.7 Add the appropriate industry correction factor from Table 2.
13.7.1 Add any lab severity adjustment.
13.7.1 Report result as BSOCFNL

Reporting End of Test Oil Consumption (ETOC)

13.8 Add the appropriate industry correction factor from Table 2.
13.8.1 Add any lab severity adjustment.
13.8.2 Report result as ETOCFNL

Reconfigure and renumber remaining section 13 accordingly.