Sequence IIIG Information Letter 10-1
Sequence No. 26
April 27, 2010

ASTM consensus has not been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.

TO: Sequence III Mailing List

SUBJECT: Correction to Phosphorus Retention Formula

Recently, it was noted that the equation for calculating phosphorus retention contained in X3.1.1 contained an error in the variable description. Specifically, variable Ca_{t100} was defined as analytical results from the initial oil sample, where it should be defined as analytical results from end of test results and variable P_{tI} is defined as analytical results from the end-of-test oil sample and it should be defined as analytical results from the initial oil sample.

The changes to Test Method D 7320 are attached.

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Attachments

c: ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceiii/procedure_and_ils/IIIG/IL10-1.pdf

Distribution: Electronic Mail

Modifies Test Method D7320-09a

as amended by Information Letters 09-2, 09-3, 09-4, 09-5 and 09-6

X3.1.1 The Sequence IIIGB supplement to the Sequence IIIG test was developed to generate used oil samples to measure the phosphorus retention of a test lubricant after 100 h of Sequence IIIG test operation. No parts ratings or measurements are required in the Sequence IIIGB test. A separate Sequence IIIGB Report Form Set is available from the TMC for reporting Sequence IIIGB test results. Do not use the Sequence IIIG Report Form Set to report Sequence IIIGB test results. The oil samples used for measurement of the phosphorus retention in the Sequence IIIGB test are the initial oil sample, removed from the engine following the initial run-in, and the end-of -test 100 h oil sample. The phosphorus retention calculation is:

$$Phosphorous\ Retention = (Ca_{tI} / Ca_{t100}) \times (P_{t100} / P_{tI}) \times 100 \tag{X3.1}$$

where:

Ca_{tI}	=	analytical results from the initial oil sample,
P_{tI}	=	analytical results from the initial oil sample,
P_{t100}	=	analytical results from the end-of-test oil sample, and
Ca_{t100}	=	analytical results from the end-of-test oil sample.