Test Monitoring Center
6555 Penn Avenue
Pittsburgh, PA 15206-4489
(412) 365-1000

Sequence IIIF Information Letter 01-3
Sequence No. 6
November 28, 2001

APPROVED BY ASTM D02.B 11/5/01
(DATE)

TO: Sequence IIIF Mailing List

SUBJECT: Sequence IIIF-HD

This Information Letter implements action items approved by the Sequence IIIF Surveillance Panel. This Information Letter addresses specific parts and procedures pertaining to quality, consistency, performance, and accountability of test parts as part of the ongoing effort by the panel to ensure continual process improvement of the Sequence IIIF test. Updated sections of the Sequence IIIF Test Procedure Draft are attached.

Sequence IIIF-HD

The Sequence IIIF Surveillance Panel, in conjunction with the Heavy Duty Engine Oil Classification Panel, have approved a reduced-length version of the Sequence IIIF test, called the Sequence IIIF-HD test, for use as a replacement test for the Viscosity Increase portion of the Sequence IIIE test. The Sequence IIIF-HD is a Sequence IIIF test that is terminated at 60 hours instead of 80 hours. The performance measure for the Sequence IIIF-HD is percent viscosity increase at 60 hours. No deposit ratings or wear measurements are required for this reduced-length test. The Sequence IIIF-HD can also be run as part of a normal 80 hour Sequence IIIF test.

Sidney L. Clark
Senior Contact Engineer
GM Powertrain Materials Engineering

John L. Zalar
Administrator
ASTM Test Monitoring Center

Attachment

c: ftp://tmc.astm.cmri.cmu.edu/docs/gas/sequenceiii/procedure_and_ils/IL01-3.pdf

1.4 This test method is arranged as follows:

Annexes

A11. **Sequence IIIF-HD Test Procedure**

A11.1 *Overview*

A11.1.1 The Sequence IIIF-HD test was developed to replace the viscosity increase portion of the Sequence IIIE test (Test Method D5533). The Sequence IIIF-HD test consists of examining the percent viscosity increase data obtained at 60 hours, rather than the normal 80 hours for a Sequence IIIF test. No parts ratings or measurements are required in the Sequence IIIF-HD test. A separate Sequence IIIF-HD Report Form Set is available from the TMC for reporting Sequence IIIF-HD test results. Do not use the Sequence IIIF Report Form Set to report Sequence IIIF-HD test results.

A11.2 *Preparation of Apparatus* – Prepare the Sequence IIIF-HD test engine in the same manner as a Sequence IIIF test engine. No special preparations are required or permitted on test engines for Sequence IIIF-HD use.

A11.3 *Calibration*

A11.3.1 There is no stand-alone calibration system for the Sequence IIIF-HD test. Consider any stand that is calibrated for Sequence IIIF testing to be calibrated for Sequence IIIF-HD testing.

A11.3.2 No special calibration of stand instrumentation is required for Sequence IIIF-HD testing.

A11.3.3 Calculate severity adjustments for percent viscosity increase at 60 h for all normal Sequence IIIF reference oil tests and apply in the same manner as severity adjustments in the Sequence IIIF test.

A11.3.4 A Sequence IIIF-HD test counts as one run against the Sequence IIIF stand calibration period for the stand on which it is run. A test run as a combined Sequence IIIF/Sequence IIIF-HD test counts as only one run against the stand calibration period for the stand on which it is run.

A11.4 *Test Procedure* – The Sequence IIIF-HD test can be conducted in one of two ways:

A11.4.1 *Stand-alone Sequence IIIF-HD Test* – If only a Sequence IIIF-HD test result is needed, conduct the test in the normal manner as listed in this test method until the test reaches the 60 h point. When the 60 h point is reached, terminate the test according to the procedure listed in 12.16. Analyze the used oil samples for viscosity increase according to 13.13. No other ratings or measurements are required.

A11.4.2 *Combined Sequence IIIF/Sequence IIIF-HD Test* – If both Sequence IIIF and Sequence IIIF-HD test results are desired on a non-reference oil, conduct the test in the normal manner as listed in this test method, including all ratings, measurements, and used oil analyses. Once completed, report the percent viscosity increase results at 60 h as the Sequence IIIF-HD results and report the Sequence IIIF results in the normal manner.

A11.5 *Quality Index* – Calculate quality index results for Sequence IIIF-HD test results based upon a test length of 60 h, rather than 80 h for a normal Sequence IIIF test. Consider only operational data for the first 60 h (in the case of combined Sequence IIIF/Sequence IIIF-HD tests) in Sequence IIIF-HD Quality Index calculations.

A11.6 *Test Reporting* – Report Sequence IIIF-HD tests using the separate Sequence IIIF-HD Report Form Set, available from the TMC.

A11.7 *Precision & Bias*

A11.7.1 Test precision is established on the basis of reference oil test results (for operationally valid tests) monitored by the ASTM TMC. The data are reviewed semiannually by the Sequence IIIF Surveillance Panel. Contact the ASTM TMC for current industry data.

A11.7.2 Bias is determined by applying an accepted statistical technique to reference oil test results, and when a significant bias is determined, a severity adjustment is permitted for non-reference oil test results.