



Test Monitoring Center

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Sequence IIIF Information Letter 04-2
Sequence No. 15

June 15, 2004

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: Undercrown Rating Area Definition Clarification
Flow Meter Specifications
MRV Reporting
Amount of Test Oil Used for Camshaft & Lifter Lubrication

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. This Information Letter references Test Method D6984-03.

Undercrown Rating Area Definition Clarification

During the May 12, 2004 meeting of the Sequence III Surveillance Panel, the panel approved a motion to revise the definition for the area to be rated in the undercrown rating, which is made as part of the overall WPD rating in the test. This new definition is to clarify the area to be rated and not a change to the area to be rated as part of the test. A revised 12.4.2.1 is attached.

Flow Meter Specifications

During the May 12, 2004 meeting of the Sequence III Surveillance Panel, the panel approved a motion to revise the accuracy requirements for Coriolis fluid flow meters from 0.25% to 0.75% of the reading. A revised 10.8.5 is attached.

MRV Reporting

During the May 12, 2004 meeting of the Sequence III Surveillance Panel, the panel approved a motion to revise the definition for MRV reporting to bring them in line with Test Method D4684. Yield Stress values under 35 Pa shall be reported as "<35" rather than "NM" for all future tests. A revised 12.6.2 is attached.

Amount of Test Oil Used for Camshaft & Lifter Lubrication

During the May 12, 2004 meeting of the Sequence III Surveillance Panel, the panel approved a motion to add a requirement on the amount of test oil used to lubricate the camshaft and lifters during engine assembly. A 118 mL (4 oz) quantity of test oil is required for this operation and any excess oil is to be poured into the engine valley after the camshaft and lifters have been installed. A new 9.28.2.1 is attached.



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Attachments

c: ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceiii/procedure_and_ils/IIF/IL04-2.pdf

Distribution: Electronic Mail

9.28.2.1 Use 118 mL (4 oz) of test oil to lubricate the camshaft and lifters during engine assembly. Pour any remaining oil into the lifter valley of the engine after this process is complete.

10.8.5 *Flow*—For systems incorporating vortex-shedding measuring (liquid), use ± 0.75 percent of reading; for vortex shedding measuring (gas), use ± 3.0 percent of full scale; for magnetic measurements, use ± 1.0 percent of reading; for Coriolis measurements, use ± 0.75 percent of reading.

12.4.2.1 The undercrown area to be rated is defined as the area on the undercrown of the piston that is demarcated by casting lines on the piston itself, which resemble a common adhesive bandage. Rate only the area on the underside of the piston crown. Do not rate any parts of the inside surfaces of the piston skirts as part of the undercrown rating.

12.6.2 Run the mini-rotary viscometer test (Test Method D 4684), MRV-TP1, at the recommended temperature (based on the passing used oil CCS result) using the table shown in SAE J300. Report the end-of-test mini-rotary viscometer test results as MRV Temperature in °C as follows: (1) If a yield stress greater than 35 Pa is obtained at the designated temperature, report the yield stress in Pa and note the apparent viscosity as not measured (NM). (2) If a yield stress exceeding 35 Pa is not obtained at the designated temperature, report the yield stress as “<35” to indicate that the yield stress did not exceed 35 Pa. Record the apparent viscosity in cP. (3) Report the results on Form 6 in the standardized report form set (see Annex A5).