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SEQUENCE VIII INFORMATION LETTER NO. 04-1
Sequence No. 6
December 9, 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 VIII Mailing List

SUBJECT: Mineral Spirits Specification
Allowing Oversized Pistons
Fuel Flow Specification

This information letter implements action items approved by the Sequence VIII 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 VIII test. This information letter references the latest published version of the Sequence VIII procedure, Test Method D 6709-04.

Mineral Spirits Specification

At the November 17, 2004 meeting of the Sequence VIII Surveillance Panel a motion was approved to revise the standard specification for solvent used in Sequence VIII testing. The required material is mineral spirits meeting the Aromatic Content, Flash Point, and Color specifications for Type II, Class C mineral spirits listed in Specification D 235. Test laboratories are also required to obtain a Certificate of Analysis for each batch of solvent obtained. This change is effective on November 17, 2004. A revised Section 7.2.6 is attached.

Allowing Oversized Pistons

At the November 17, 2004 meeting of the Sequence VIII Surveillance Panel a motion was approved to allow the use of 0.010 in oversized pistons in the Sequence VIII test. These pistons, TEI Part No. 2405-1, will be made available if there is sufficient commercial interest in the part. This change is effective on November 17, 2004. A revised Section 6.1.4 is attached.

Fuel Flow Specification

At the November 17, 2004 meeting of the Sequence VIII Surveillance Panel a motion was approved to correct the fuel flow specification listed in Table 2. The correct value is 2.25 ± 0.11 kg/h (4.96 ± 0.25 lb/h). A revised Table 2 is attached.

Fred Gerhart
Chairman
Sequence VIII Surveillance Panel

John L. Zalar
Administrator
ASTM Test Monitoring Center

Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceviii/procedure_and_ils/il04-1.pdf

Distribution: Electronic mail

7.2.6 Mineral spirits[30] – use mineral spirits meeting the specifications for Aromatic Content (0-2% vol), Flash Point (142°F/61°C, min) and Color (not darker than +25 on Saybolt Scale or 25 on Pt-Co Scale) from Specification D 235 for Type II, Class C mineral spirits. (Warning – Combustible. Health hazard.) Obtain a Certificate of Analysis for each batch of mineral spirits from the supplier.

[30]Mineral spirits meeting the limited Specification D 235, Type II, Class C requirements are available from petroleum solvent suppliers.

6.1.4 *Test Engine Piston*—Obtain a piston for the CLR test engine, TEI Part No. 2405, from TEI. If desired, a piston may be reused if it meets the piston-to-liner clearance specifications. A 0.010 in oversized piston, TEI Part No. 2405-1, may also be used in the Sequence VIII test, provided it meets the piston-to-liner clearance specifications. Do not reuse pistons used in the CLR test engine for L-38 testing, or any other testing with leaded fuel, in Sequence VIII testing. Clean used pistons according to the following procedure before installation in the test engine.

TABLE 2 Test Operating Conditions

Item	Setting
Speed, r/min	3150 ± 25
Load bhp	Adjust load to provide proper fuel flow at specified air-fuel ratio.
Fuel flow, kg/h (lb/h)	2.25 ± 0.11 (4.96 ± 0.25)
Air-fuel ratio	13.43 ± 0.5
Jacket outlet coolant Temperature, °C (°F)	93.5 ± 1 (200 ± 2)
Difference between jacket Inlet and jacket outlet Coolant temperatures, °C (°F)	5.6 ± 1 (10 ± 2)
Gallery oil temperature, °C (°F)	
SAE 5W, 10W	135 ± 1 (275 ± 2)
SAE 20, 30, 40, 50, and multiviscosity-graded oils	143.5 ± 1 (290 ± 2)
Spark advance, °BTDC	35 ± 1
Oil pressure, kPa (psi)	276 ± 14 (40 ± 2)
Crankcase vacuum, Pa (in. H_2O)	500 ± 120 (2 ± 0.5)
Exhaust back pressure, Pa (in. Hg)	0 to 3.4 (0 to 1)
Crankcase off-gas, SLH	850 ± 28
Blowby, SLH	record