



Test Monitoring Center

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Sequence VIII Information Letter 10-1
Sequence No. 13
May 20, 2010

TO: Sequence VIII Mailing List
SUBJECT: Test Temperature for 0W oils

During the May 12, 2010 Sequence VIII Surveillance Panel meeting, the panel agreed to include 0W oils in the operating specifications contained in Table 2. Section 1.1 and Figure X3.2 have also been revised to include 0W oils. The attached changes are effective May 12, 2010.

Fred Gerhart
Chairman,
Sequence VIII Surveillance Panel

Frank M. Farber
Administrator
ASTM Test Monitoring Center

Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceviii/procedure_and_ils/il10-1-13.pdf

Distribution: Email

(Revises Test Method D6709-09a, as amended by Information Letters 08-2, 09-1 and 09-2)

1.1 This test method covers the evaluation of automotive engine oils (SAE grades 0W, 5W, 10W, 20, 30, 40, and 50, and multi-viscosity grades) intended for use in spark-ignition gasoline engines. The test procedure is conducted using a carbureted, spark-ignition Cooperative Lubrication Research (CLR) Oil Test Engine (also referred to as the Sequence VIII test engine in this test method) run on unleaded fuel. An oil is evaluated for its ability to protect the engine and the oil from deterioration under high-temperature and severe service conditions. The test method can also be used to evaluate the viscosity stability of multi-viscosity-graded oils. Companion test methods used to evaluate engine oil performance for specification requirements are discussed in the latest revision of Specification D4485.

TABLE 2 Test Operating Conditions

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

		Column No. ---->	1	2	3	4	5	6	7	8	9	10
HEADER	OBSERVER											
	DATE											
	TIME											
	TOTAL HOURS ON STEADY-STATE TEST											
TEST PARAMETER												
ENG	ENGINE SPEED	(3150 ± 25 r/min)										
	ENGINE OUTPUT	(Record, W)										
TEMPERATURES	OIL GALLERY	(135 ± 1°C: SAE 0W, 5W, 10W oils)										
		(143.5 ± 1°C: SAE 20, 30, 40, 50 & multigrade oils)										
	COOLANT OUTLET	(93.5 ± 1°C)										
	COOLANT INLET	(Record, °C)										
	COOLANT DIFFERENTIAL	(5.6 ± 1 °C)										
	CARBURETOR INTAKE AIR	(Record, °C)										
PRESSURES	OIL GALLERY	(280 ± 10 kPa)										
	CRANKCASE VACUUM	(.500 ± .120 Pa)										
	EXHAUST BACK PRESSURE	(0 to 3.4 kPa)										
	INTAKE VACUUM	(Record, kPa)										
FLOWS	FUEL	(2.15 ± 0.11 kg/h)										
	*CARBURETOR AIR	(approx. 30.2 kg/h)										
	*AIR FUEL RATIO	(13.43 ± 0.5)										
	CRANKCASE OFF-GAS	(850 ± 28 SLH)										
	ROCKER AIR	(Record, SLH)										
	BLOWBY	(approx. 280 ± 60 SLH)										
MISC	*IGNITION ADVANCE	(35 ± 1° Before Top Dead Center, BTDC)										
	OIL HEATER POWER	(Optional, record if used for oil temp control, W)										

* Required during Hours: 1, 10, 20 and 30.

FIG. X3.2 Test Data Log Sheet