SAE International™

SURFACE VEHICLE STANDARD

SAE J1260 | REV. AUG2007

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Superseding J1260 APR1994

Standard Oil Filter Test Oil

RATIONALE

Changing the English units to international standard units and correcting comments issued by others on last ballot.

1. SCOPE

This SAE Standard defines the requirements for an oil to be used in the SAE HS 806 Oil Filter Test Procedures.

2. REFERENCES

2.1 Applicable Publications

The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply.

2.1.1 SAE Publications

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

SAE J183 Engine Oil Performance and Engine Service Classification (Other than "Energy Conserving")

SAE HS 806 Oil Filter Test Procedure

2.1.2 ASTM Publications

Available from the American Society for Metals, 9639 Kinsman Road, Materials Park, OH 44073-0002, Tel: 440-338-5151, www.asminternational.org.

ASTM D 92 Test Method for Flash and Fire Points by Cleveland Open Cup Tester

ASTM D 97 Test Methods for Pour Point of Petroleum Oils

ASTM D 445 Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)

ASTM D 874 Test Method for Sulfated Ash from Lubricating Oils and Additives

ASTM D 892 Test Method for Foaming Characteristics of Lubricating Oils

ASTM D 1298 Test Method for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method

ASTM D 1500 Test Method for ASTM Color of Petroleum Products (ASTM Color Scale)

ASTM D 2270 Standard Practice for Calculating Viscosity Index from Kinematic Viscosity at 40 and 100 °C

ASTM D 2273 Test Method for Trace Sediment in Lubricating Oils

ASTM D 4951 Test Method for Determination of Additive Elements in Lubricating Oils by Inductively Coupled Plasma Atomic Emission Spectrometry

ASTM D 5185 Test Method for Determination of Additive Elements, Wear Metals, and Contaminants in Used Lubricating Oils and Determination of Selected Elements in Base Oils by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES)

3. PROPERTY REQUIREMENTS

The filter test oil shall be formulated from solvent refined petroleum stocks and blended with additives required to meet the specifications shown in Table 1. It shall not contain any viscosity index improver. Figure 1 shows the typical temperature versus viscosity range of the SAE J1260.

The filter test oil shall also contain additives used in motor oil formulations. This oil is strictly an oil filter reference test fluid; it is not intended to meet the current SAE J183 engine service classification requirements.

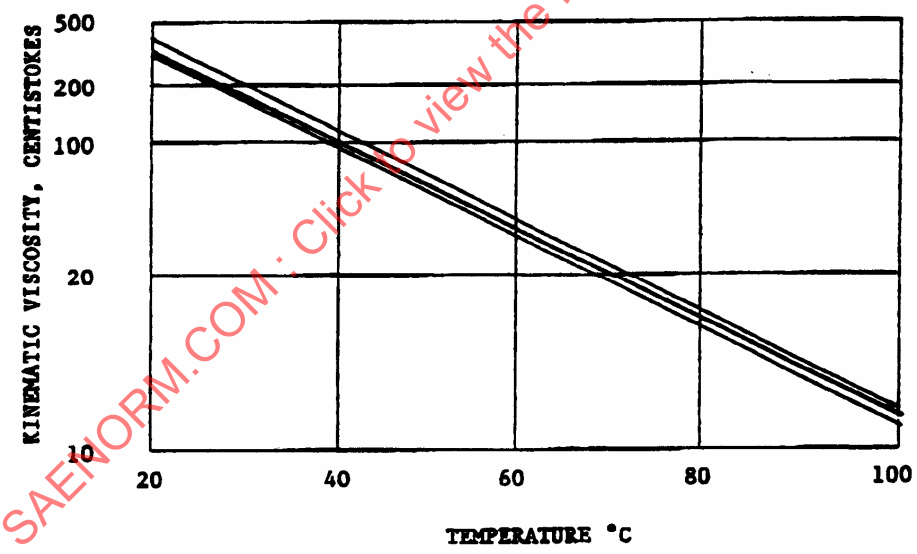

FIGURE 1 - VISCOSITY VERSUS TEMPERATURE RANGE FOR SAE J1260 (RFO-3-93)

TABLE 1 - OIL FILTER TEST OIL SPECIFICATIONS

Property	Specification Limit	Test Designation
Viscosity		ASTM D 445
	Report 100–112 cSt (mm^2/s) at 40 °C	
		ASTM D 445
	11.2–12.2 cSt (mm^2/s) at 100 °C	
Specific Gravity	0.876–0.888 at 15.5/15.5 °C	ASTM D 1298
	0.877–0.889 at 15/15 °C	
Color	5.5 Max	ASTM D 1500
Viscosity Index	95 Min	ASTM D 2270
Flash Point	210 °C Min	ASTM D 92
Pour Point	–17.8 °C	ASTM D 97
Trace Sediment (including water)	0.05% Volume, Max	ASTM D 2273
Foaming Tendency	Seq. I 10 mL	ASTM D 892
(after 5 min blowing)	Seq. II 50 mL	
	Seq. III 10 mL	
Foaming Stability	Seq. I 0 mL	ASTM D 892
(after 10 min settling)	Seq. II 0 mL	
	Seq. III 0 mL	
Additive Composition		
Sulfated Ash, Wt %	0.20 – 0.24	ASTM D 874
Calcium, ppm	440 – 640	ASTM D 4951 / D 5185
Zinc, ppm	160 – 360	ASTM D 4951 / D 5185
Phosphorus, ppm	170 – 370	ASTM D 4951 / D 5185

4. PERFORMANCE CHARACTERISTICS APPROVAL

The following oil performance characteristics must be approved by a panel of test oil users selected by the SAE Filter Test Methods Standards Committee.

4.1 0.8 µm Membrane Filterability

A panel judgment of slow filtration rates, relatable to additive removal or contamination, would constitute grounds for rejection.

4.2 SAE HS 806 Filterability

A panel judgment of filter performance, which deviates measurably from previously qualified batches of oil, would constitute grounds for rejection.

5. SOURCE INFORMATION

Approved (June 1993) Filter Test Oil, RFO-3-93, is available by contacting Rock Valley Oil, 1911 Windsor Road, Rockford, IL 61111, Tel: 815-654-2400, Fax: 815-654-2428.

6. STORAGE AND HANDLING PROCEDURE FOR RFO-3-93 TEST FLUID

It is essential that the RFO-3-93 test fluid has uniform composition when used in testing oil filters to SAE HS 806, or any other original equipment manufacturer test procedures.