



Test Monitoring Center

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T-9 INFORMATION LETTER 03-1
Sequence No. 5

October 24, 2003

ASTM consensus has not been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.

TO: Mack Mailing List

SUBJECT: Cleaning Solvent

The Mack Surveillance Panel approved the following change to test method D 6483:

At the request of the Technical Guidance Committee, the Mack Surveillance Panel agreed to adopt ASTM D 235 – Type II, Class C as the standardized requirement for cleaning solvent. All sections of the test method that call for “aliphatic naphtha” have been changed to call for “solvent” which meets ASTM D 235 – Type II, Class C. Sections affected are 7.4, 8.1.1 through 8.1.5, 10.1.3.2, 10.1.4.2, 10.2.3.4, 10.2.4.1, and A3.5. Also, Section 2, Referenced Documents, has been revised by adding D 235 and adding a footnote (new footnote 4). Existing footnotes 4 through 10 have been updated and existing footnotes 10 through 19 have been renumbered as 11 through 20. The use of cleaning solvent that meets these requirements is mandatory as of January 1, 2004.

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Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/procedure_and_ils/t9/il03-01.pdf

Distribution: Email

(Revises Test Method D 6483-03)

2. Referenced Documents

2.1 ASTM Standards:

D 86 Test Method for Distillation of Petroleum Products at Atmospheric Pressure³

D 93 Test Methods for Flash Point by Pensky-Martens Closed Cup Tester³

D 97 Test Method for Pour Point of Petroleum Products³

D 129 Test Method for Sulfur in Petroleum Products (General Bomb Method)³

D 130 Test Method for Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test³

D 235 Standard Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)⁴

D 287 Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)³

D 445 Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (the Calculation of Dynamic Viscosity)³

D 482 Test Method for Ash from Petroleum Products³

D 524 Test Method for Ramsbottom Carbon Residue of Petroleum Products³

D 613 Test Method for Cetane Number of Diesel Fuel Oil⁵

D 664 Test Method for Acid Number of Petroleum Products by Potentiometric Titration³

D 1319 Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption³

D 2500 Test Method for Cloud Point of Petroleum Oils³

D 2622 Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry³

D 2709 Test Method for Water and Sediment in Middle Distillate Fuels by Centrifuge³

D 2896 Test Method for Base Number of Petroleum Products by Potentiometric Perchloric Acid Titration³

D 4052 Test Method for Density and Relative Density of Liquids by Digital Density Meter⁶

D 4485 Specification for Performance of Engine Oils⁶

D 4737 Test Method for Calculated Cetane Index by Four Variable Equation⁶

D 4739 Test Method for Base Number Determination by Potentiometric Titration⁶

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)⁶

D 5302 Test Method for Evaluation of Automotive Engine Oils for Inhibition of Deposit Formation and Wear in a Spark-Ignition Internal Combustion Engine Fueled with Gasoline and Operated Under Low-Temperature, Light-Duty Conditions⁶

D 5844 Test Method for Evaluation of Automotive Engine Oils for Inhibition of Rusting (Sequence IID)⁷

D 5967 Test Method for Evaluation of Diesel Engine Oils in T-8 Diesel Engine⁷

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁸

E 178 Practice for Dealing With Outlying Observations⁸

E 344 Terminology Relating to Thermometry and Hydrometry⁹

2.2 SAE Standards:¹⁰

SAE J1995 Engine Power Test Code - Spark Ignition and Compression Ignition - Gross Power Rating

³*Annual Book of ASTM Standards, Vol 05.01.*

⁴*Annual Book of ASTM Standards, Vol 06.04.*

⁵*Annual Book of ASTM Standards, Vol 05.05.*

⁶*Annual Book of ASTM Standards, Vol 05.02.*

⁷*Annual Book of ASTM Standards, Vol 05.03.*

⁸*Annual Book of ASTM Standards, Vol 14.02.*

⁹*Annual Book of ASTM Standards, Vol 14.03.*

¹⁰*Available from Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.*

Existing footnotes 10 through 19 renumbered as 11 through 20

7.4 *Cleaning Materials*—Use a solvent meeting ASTM D 235, Type II, Class C for cleaning parts. Other materials, such as diesel fuel, may be required by some labs to ensure parts cleanliness. (**Warning**—Use adequate safety precautions with all solvents and cleaners.)

8.1 *Cleaning of Parts*:

8.1.1 *Engine Block*— Thoroughly spray the engine with solvent (see 7.4) to remove any oil remaining from the previous test and air-dry.

8.1.2 *Rocker Covers and Oil Pan*—Remove all sludge, varnish, and oil deposits. Rinse with solvent, and air-dry.

8.1.3 *Auxiliary Oil System*—Flush all oil lines, galleries, and external oil reservoirs with solvent to remove any previous test oil, and then air-dry.

8.1.4 *Oil Cooler and Oil Filter*—Flush the oil cooler and filter lines first with solvent to remove any previous test oil, and then air-dry.

8.1.5 *Cylinder Head*— Clean the cylinder heads, using a wire brush, to remove deposits, and rinse with solvent to remove any sludge and oil, and then air-dry.

10.1.3.2 Clean the rings with solvent (see 7.4). Use a soft brush if necessary. Spray rings dry with air. Rinse in pentane. Do not handle rings with bare hands. Use gloves or plastic covered tongs.

10.1.4.2 Clean the bearings with solvent (see 7.4). Use a soft brush if necessary. Spray bearings dry with air. Rinse in pentane. Do not handle bearings with bare hands. Use gloves or plastic covered tongs.

10.2.3.4 Spray the rings with solvent and then spray the rings dry with air. Rinse in pentane. Do not handle rings with bare hands. Use gloves or plastic covered tongs.

10.2.4.1 Clean the bearings with solvent (see 7.4). Use a soft brush if necessary. Spray bearings dry with air. Rinse in pentane. Do not handle bearings with bare hands. Use gloves or plastic covered tongs.

A3.5 Cleaning solvent that meets ASTM D 235, Type II, Class C is available from local petroleum product suppliers.