This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: D6923 – 17

Standard Test Method for Evaluation of Engine Oils in a High Speed, Single-Cylinder Diesel Engine—Caterpillar 1R Test Procedure[1]

This standard is issued under the fixed designation D6923; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

INTRODUCTION

Any properly equipped laboratory, without outside assistance, can use the test procedure described in this test method. The ASTM Test Monitoring Center (TMC)[2] provides calibration oils and an assessment of the test results obtained on those oils by the laboratory. By this means, the laboratory will know whether their use of the test method gives results statistically similar to those obtained by other laboratories. Furthermore, various agencies require that a laboratory utilize the TMC services in seeking qualification of oils against specifications. For example, the U.S. Army has such a requirement in some of its engine oil specifications. Accordingly, this test method is written for those laboratories that use the TMC services. Laboratories that choose not to use these services should ignore those portions of the test method that refer to the TMC. Information Letters issued periodically by the TMC may modify this test method.[3] In addition, the TMC may issue supplementary memoranda related to the test method.

1. Scope*

1.1 This test method covers stressing an engine oil under modern high-speed diesel operating conditions and measures the oil's deposit control, lubrication ability, and resistance to oil consumption. It is performed in a laboratory using a standardized high-speed, single-cylinder diesel engine.[4]

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.2.1 *Exceptions*—Where there is no direct SI equivalent such as screw threads, national pipe threads/diameters, and tubing size, or where a sole source supplier is specified.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.* Being an engine test method, this test method does have definite hazards that require safe practices (see Appendix X2 on Safety).

1.4 The following is the Table of Contents:

Scope	1
Referenced Documents	2
Terminology	3
Summary of Test Method	4
Significance and Use	5
Apparatus and Installation	6
Intake Air System	6.2.1
Exhaust System	6.2.2
Fuel System	6.2.3
Oil Consumption System	6.2.4
Engine Oil System	6.2.5
Engine Coolant System	6.2.6
Engine Instrumentation	6.2.7
Reagents and Materials	7
Oil Samples	8
Preparation of Apparatus	9
General Engine Assembly Practices	9.1
Complete Engine Inspection	9.2
Copper Component	9.3
Engine Lubricant System Flush	9.4
Engine Piston Cooling Jet	9.5
Engine Measurements and Inspections	9.6
Cylinder Head	9.7
Valve Guide Bushings	9.8

[1] This test method is under the jurisdiction of ASTM Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants and is the direct responsibility of Subcommittee D02.B0 on Automotive Lubricants.

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[2] ASTM Test Monitoring Center (TMC), 6555 Penn Avenue, Pittsburgh, PA 15206-4489.

[3] Until the next revision of this test method, the ASTM Test Monitoring Center (TMC) will update changes in the test method by means of information letters. Information letters may be obtained from the ASTM Test Monitoring Center, 6555 Penn Ave., Pittsburgh, PA 15206-4489. Attention: Administrator. This edition incorporates revisions in all information Letters through No. 16-1.

[4] Available from Caterpillar Inc., Engine System Technology Development, P.O. Box 610, Mossville, IL 61552-0610.

*A Summary of Changes section appears at the end of this standard

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