



Standard Test Method for Evaluation of Automotive Engine Oils for Valve-Train Wear Performance in Cummins ISB Medium-Duty Diesel Engine¹

This standard is issued under the fixed designation D7484; 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 procedure described in this test method. However, the ASTM Test Monitoring Center (TMC)² provides reference oils and an assessment of the test results obtained on those oils by the laboratory. By these means, the laboratory will know whether its 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 imposes such a requirement in connection with several Army engine lubricating oil specifications.

Accordingly, this test method is written for use by laboratories that utilize the TMC services. Laboratories that choose not to use these services may simply ignore those portions of the test method that refer to the TMC.

This test method may be modified by means of information letters issued by the TMC.² In addition, the TMC may issue supplementary memoranda related to the method.

1. Scope*

1.1 This test method, commonly referred to as the Cummins ISB Test, covers the utilization of a modern, 5.9 L, diesel engine equipped with exhaust gas recirculation and is used to evaluate oil performance with regard to valve-train wear.

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*—SI units are provided for all parameters except where there is no direct equivalent such as the units for screw threads, National Pipe Threads/diameters, tubing size, or where there is a sole source of supply equipment specification.

1.2.2 See also [A8.1](#) for clarification; it does not supersede [1.2](#) and [1.2.1](#).

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 limitations prior to use. See [Annex A1](#) for general safety precautions.

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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 Until the next revision of this test method, the ASTM Test Monitoring Center 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 Avenue, Pittsburgh, PA 15206-4489. Attention Administrator. This edition incorporates revisions in all information letters through No. 16–1. www.astmtmc.cmu.edu.