



Designation: D4950 – 19

Standard Classification and Specification for Automotive Service Greases^{1,2}

This standard is issued under the fixed designation D4950; 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

This specification describes current categories of lubricating greases for automotive service-fill applications. A specific designation is assigned to each category. The system is open ended, that is, new designations are assigned for use with new categories as each new set of grease performance characteristics is defined. Grease categories are referenced by automotive manufacturers in making lubrication recommendations and used by grease suppliers and users in identifying products for specific applications.

1. Scope*

1.1 This specification covers lubricating greases suitable for the periodic relubrication of chassis systems and wheel bearings of passenger cars, trucks, and other vehicles.

1.2 This specification defines the requirements used to describe the properties and performance characteristics of chassis greases and wheel bearing greases for service-fill applications.

1.3 The test requirements (acceptance limits) given in this specification are, as the case may be, minimum or maximum acceptable values for valid duplicate test results. Apply no additional corrections for test precision, such as described in Practice D3244, inasmuch as the precision of the test methods was taken into account in the determination of the requirements.

1.4 The values stated in SI units are to be regarded as standard.

1.4.1 *Exceptions*—Test Method D2596 reports test results in kgf units, and Test Method D4289 reports rubber hardness in Durometer Shore A units.

1.5 *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 Recom-*

mendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

2.1 ASTM Standards:³

- D217 Test Methods for Cone Penetration of Lubricating Grease
- D566 Test Method for Dropping Point of Lubricating Grease
- D1264 Test Method for Determining the Water Washout Characteristics of Lubricating Greases
- D1742 Test Method for Oil Separation from Lubricating Grease During Storage
- D1743 Test Method for Determining Corrosion Preventive Properties of Lubricating Greases
- D2265 Test Method for Dropping Point of Lubricating Grease Over Wide Temperature Range
- D2266 Test Method for Wear Preventive Characteristics of Lubricating Grease (Four-Ball Method)
- D2596 Test Method for Measurement of Extreme-Pressure Properties of Lubricating Grease (Four-Ball Method)
- D3244 Practice for Utilization of Test Data to Determine Conformance with Specifications
- D3527 Test Method for Life Performance of Automotive Wheel Bearing Grease
- D4170 Test Method for Fretting Wear Protection by Lubricating Greases
- D4175 Terminology Relating to Petroleum Products, Liquid Fuels, and Lubricants
- D4289 Test Method for Elastomer Compatibility of Lubricating Greases and Fluids

¹ This classification and specification is under the jurisdiction of ASTM Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants and is the direct responsibility of Subcommittee D02.B0.04 on Automotive Greases.

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² This classification and specification was developed as a cooperative effort among the American Society for Testing and Materials, the National Lubricating Grease Institute (NLGI), and the Society of Automotive Engineers (SAE).

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

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