



SURFACE VEHICLE STANDARD

J2360™

DEC2025

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Superseding J2360 MAY2022

(R) Automotive Gear Lubricants for Commercial and Military Use

RATIONALE

In 1998, SAE J2360 was created when the U.S. Army transitioned the MIL-L-2105 to a SAE Surface Vehicle Standard. The Performance Review Institute (PRI) was selected to administer the approval process. This process is defined per PRI document PD4000. Over the past 25 years, various technical requirements have been included in the PD4000 document. The rationale of this revision of SAE J2360 is to transfer the technical requirements from PD4000 Rev N into SAE J2360, thereby maintaining the scope of both documents as SAE J2360 is a technical standard of requirements, and PD4000's intent is a procedural document.

The following summarized changes include: Tables 1 and 2 were created based on information from both documents and include relevant language associated. Table 3 was updated to include flash points requirements for newly classified viscosity grades: 62W-XX, 63W-XX, 64W-XX, and 65W-XX. Table 4 was created by combining the various paragraphs previously contained within this standard for simplification and clarification. And Section 4 was created by moving pieces from various sections and previous appendix to make clear the military requirements.

1. SCOPE

The gear lubricants covered by this standard exceed American Petroleum Institute (API) Service Classification API GL-5 and are intended for automotive units with the primary drive hypoid gears, operating under conditions of high-speed/shock load and low-speed/high-torque. These lubricants may be appropriate for other gear applications where the position of the shafts relative to each other and the type of gear flank contact involve a large percentage of sliding contact. Such applications typically require extreme pressure (EP) additives to prevent the adhesion and subsequent tearing away of material from the loaded gear flanks. These lubricants are not appropriate for the lubrication of worm gears.

The information contained within is intended for the demonstration of compliance with the requirements of this standard and for listing on the Qualified Products List (QPL) administered by the Lubricant Review Institute (LRI). A complete listing of qualification submission requirements and procedures can be found in the Program Document PD4000, available on the Performance Review Institute (PRI) website, <https://www.p-r-i.org/qpl/lubricant-review-institute>.

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2. REFERENCES

2.1 Applicable Documents

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

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 1-877-606-7323 (U.S. and Canada only) or 1-724-776-4970 (outside U.S. and Canada), www.sae.org.

SAE J306 Automotive Driveline Lubricant Viscosity Classification

2.1.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9500, www.astm.org.

ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
ASTM D97	Standard Test Method for Pour Point of Petroleum Products
ASTM D130	Standard Test Method for Corrosiveness to Copper from Petroleum Products by Copper Strip Test
ASTM D445	Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity)
ASTM D664	Standard Test Method for Acid Number of Petroleum Products by Potentiometric Titration
ASTM D892	Standard Test Method for Foaming Characteristics of Lubricating Oils
ASTM D893	Standard Test Method for Insolubles in Used Lubricating Oils
ASTM D1500	Standard Test Method for ASTM Color of Petroleum Products (ASTM Color Scale)
ASTM D1552	Standard Test Method for Sulfur in Petroleum Products by High Temperature Combustion and Infrared (IR) Detection or Thermal Conductivity Detection (TCD)
ASTM D2007	Standard Test Method for Characteristic Groups in Rubber Extender and Processing Oils and Other Petroleum-Derived Oils by the Clay-Gel Absorption Chromatographic Method
ASTM D2270	Standard Practice for Calculating Viscosity Index from Kinematic Viscosity at 40 °C and 100 °C
ASTM D2500	Standard Test Method for Cloud Point of Petroleum Products and Liquid Fuels
ASTM D2622	Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry
ASTM D2896	Standard Test Method for Base Number of Petroleum Products by Potentiometric Perchloric Acid Titration

ASTM D2983	Standard Test Method for Low-Temperature Viscosity of Automatic Transmission Fluids, Hydraulic Fluids, and Lubricants using a Rotational Viscometer
ASTM D3228	Standard Test Method for Total Nitrogen in Lubricating Oils and Fuel Oils by Modified Kjeldahl Method
ASTM D4052	Standard Test Method for Density, Relative Density, and API Gravity of Liquids by Digital Density Meter
ASTM D4951	Standard Test Method for Determination of Additive Elements in Lubricating Oils by Inductively Coupled Plasma Atomic Emission Spectrometry
ASTM D5185	Standard Test Method for Multielement Determination of Used and Unused Lubricating Oils and Base Oils by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES)
ASTM D5662	Standard Test Method for Determining Automotive Gear Oil Compatibility with Typical Oil Seal Elastomers
ASTM D5704 (L-60-1)	Standard Test Method for Evaluation of the Thermal and Oxidative Stability of Lubricating Oils Used for Manual Transmissions and Final Drive Axles
ASTM D5762	Standard Test Method for Nitrogen in Liquid Hydrocarbons, Petroleum and Petroleum Products by Boat-Inlet Chemiluminescence
ASTM D5950	Standard Test Method for Pour Point of Petroleum Products (Automatic Tilt Method)
ASTM D6304	Standard Test Method for Determination of Water in Petroleum Products, Lubricating Oils, and Additives by Coulometric Karl Fischer Titration
ASTM D6443	Standard Test Method for Determination of Calcium, Chlorine, Copper, Magnesium, Phosphorus, Sulfur, and Zinc in Unused Lubricating Oils and Additives by Wavelength Dispersive X-ray Fluorescence Spectrometry (Mathematical Correction Procedure)
ASTM D7038 (L-33-1 Test)	Standard Test Method for Evaluation of Moisture Corrosion Resistance of Automotive Gear Lubricants
ASTM D7419	Standard Test Method for Determination of Total Aromatics and Total Saturates in Lube Basestocks by High Performance Liquid Chromatography (HPLC) with Refractive Index Detection
ASTM D7452 (L-42 Test)	Standard Test Method for Evaluation of the Load Carrying Properties of Lubricants Used for Final Drive Axles, Under Conditions of High Speed and Shock Loading
ASTM D7603	Standard Test Method for Determination of Storage Stability and Compatibility in Automotive Gear Oils
ASTM D8165 (L-37-1 Test)	Standard Test Method for Evaluation of Load-Carrying Capacity of Lubricants Used in Hypoid Final-Drive Axles Operated under Low-Speed and High-Torque Conditions
ASTM E1252	Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis