

Section D02.B0.03 Status Report
to
Subcommittee D02.B0

December 5, 2007

ASTM Section D02.B0.03

- Scope
 - This Section is responsible for the promotion of knowledge of, and specifications, test methods and terminology for automotive gear lubricants and fluids. This includes gear lubricants used in rear drive axles, power dividers, and fluids used in manual and automatic transmissions of wheeled or track laying vehicles such as passenger cars, recreation vehicles, taxicabs, trailers, trucks, buses, tractors, construction and farm vehicles.
- Objectives
 - Keep existing performance tests operational, at historic severity and precision levels.
 - Ensure that performance test parts and reference oils are available in adequate supply and of a consistent quality.
 - Develop and maintain performance tests for gear lubricant and transmission fluid categories.
 - Maintain surveillance of test procedures under Section jurisdiction.
 - Work to improve test precision and correlation with field service.
 - Maintain active liaison with related organizations (CEC, SAE, API, etc.)

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Test Procedures Under the Jurisdiction of Section D02.B0.03

Common Designation	ASTM Designation	Purpose of Test
L-33-1	D 7038	To evaluate the rust and corrosion-inhibiting properties of a water-contaminated lubricant
L-37	D 6121	To evaluate the load-carrying, wear, and extreme pressure properties of a lubricant under low-speed, high-torque conditions
L-42	Pending	To determine the anti-scoring properties of a lubricant subjected to high-speed and shock conditions
L-60-1	D 5704	To evaluate the thermal and oxidative stability of a lubricant
Cyclic Durability	D 5579	To evaluate the thermal stability of a lubricant in a cyclic durability test
Oil Seal Compatibility	D 5662	To determine the compatibility of a lubricant with specific polyacrylate, fluoroelastomer, and nitrile seal materials
Storage Solubility & Compatibility	Pending	To insure that lubricants maintain their integrity during storage, and that they are compatible with other lubricants intended for use in similar applications

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- Tests under the jurisdiction of the Section are used to evaluate lubricants under the following performance categories:
 - API Category GL-5
 - Lubricants for automotive axles
 - Soon to be available as an ASTM Specification
 - ASTM D 5760
 - Lubricants for non-synchronized manual transmissions in buses and heavy-duty trucks
 - Also known as API Category MT-1
 - SAE J2360
 - Multipurpose gear-lubricating oils
 - Technical equivalent of the MIL-PRF-2105E Specification
 - Proposed Category PM-2
 - Lubricants for synchronized manual transmissions in commercial vehicles
 - Currently under development

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- Update on Test Procedures
 - All tests under the jurisdiction of the Section are available for use
 - Continue to see a slight severity trend (severe) in the L-33-1, L-60-1, and Cyclic Durability tests
 - Not of sufficient magnitude to inhibit use of these tests
 - ASTM Test Monitoring Center working with Surveillance Panels and test laboratories to identify and address source of problem
 - Adequate supplies of hardware available for all tests other than the L-37
 - Shortage of lubrified hardware for the L-37 test
 - Recent batch of hardware rejected due to severity and variability of results on reference oils
 - Manufacture of new/replacement batch of hardware in progress

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- Update on Test Procedures, continued
 - L-42 test procedure has been written in the form of an ASTM Test Method
 - Ballot within Subcommittee D02.B0 has completed
 - No negatives were received
 - Will be balloted within Committee D02 in early 2008
 - Storage Solubility and Compatibility (SS&C) test is now under the jurisdiction of Section D02.B0.03
 - Surveillance Panel has been formed to oversee test
 - ASTM Test Monitoring Center has assumed responsibility for distribution of “compatibility” oils
 - Have also implemented a process to monitor the quality and consistency of these oils
 - Procedure being written in the form of an ASTM Test Method

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- Update on Performance Categories
 - API Category GL-5 has been written in the form of an ASTM Specification
 - Intent was to address deficiencies in the current document
 - Current document referenced outdated test procedures, included ambiguous acceptance criteria for some tests, was not readily available, etc.
 - Ballot within Subcommittee D02.B0 has completed
 - No negatives were received
 - Will be balloted within Committee D02 in early 2008
 - Work on the development of proposed Category PM-2 continues
 - New category for synchronized manual transmissions in commercial vehicles