

ASTM Section D02.B0.03 Update
to
SAE Technical Committee 3

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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.)

ASTM Section D02.B0.03

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	D 7452	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
SS&C	D 7603	To insure that lubricants maintain their integrity during storage, and that they are compatible with other lubricants intended for use in similar applications

ASTM Section D02.B0.03

- Tests under the jurisdiction of the Section are used to evaluate lubricants against the requirements of the following performance specifications:
 - ASTM D 7450
 - Lubricants for automotive axles
 - Details tests and acceptance criteria for API Category GL-5
 - ASTM D 5760
 - Lubricants for non-synchronized manual transmissions in buses and heavy-duty trucks
 - Details tests and acceptance criteria for API Category MT-1
 - SAE J2360 Standard
 - Multipurpose gear-lubricating oils
 - Technical equivalent of the MIL-PRF-2105E Specification
 - Canceled on February 16, 2005

ASTM Section D02.B0.03

- Update on Test Procedures
 - All tests under the jurisdiction of the Section are available for use
 - No issues or problems to report for the L-33-1, L-42, L-60-1, Oil Seal Compatibility, and SS&C tests
 - Continues to be only one Cyclic Durability test stand available within the industry
 - Test stand at second lab being relocated
 - Timing for stand to be returned to service is unknown
 - The available stand has been able to meet the industry's needs
 - Shortage of hardware for the L-37 test continues to be a problem
 - Details on following slides

ASTM Section D02.B0.03

- Status of L-37 Test
 - Two types of hardware are used in the L-37 test
 - Non-lubrited hardware required for API Category GL-5 and the SAE J2360 Standard
 - Lubrited hardware required for the SAE J2360 Standard
 - Not required for API Category GL-5
 - Non-lubrited hardware
 - Hardware available, but supplies diminishing
 - New batch being manufactured in combination with new batch of lubrited hardware
 - Hope to have hardware approved and available for use in 2nd quarter of CY 2012

ASTM Section D02.B0.03

- Status of L-37 Test, *continued*
 - Lubricated hardware
 - No hardware currently available within the industry
 - Manufacture of a new batch is in progress
 - Testing on a pilot batch suggests that test length may need to be reduced to produce acceptable results
 - Hope to have hardware approved and available for use in 2nd quarter of CY 2012
 - Development of an updated test is in progress
 - Details on following slide

ASTM Section D02.B0.03

- Status of L-37 Test, *continued*
 - Industry recognizes need to update L-37 test
 - Current test stand uses a gasoline engine and a transmission
 - Both are potential sources of variation, require periodic maintenance, may encounter mechanical problems, etc.
 - Updated test stand will use an electric motor as the power source
 - Strong desire to move to an axle which is more representative of current production
 - Ratio, metallurgy, manufacturing techniques, etc. of current axle are somewhat dated
 - Two labs developed alternate tests for consideration
 - Industry picked one for further development
 - Four labs have updated test stands in place
 - Fine-tuning of test procedure is in progress
 - Hope to have complete within one year

ASTM Section D02.B0.03

- Outstanding business
 - ASTM has suspended work on the development of Proposed Category PM-2
 - Lubricants for commercial vehicles synchromesh manual transmissions and transaxles
 - Indications are that interest in and need for this category no longer exists
 - Requesting confirmation from SAE Technical Committee 3 that work on development of this category may be terminated