

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

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Chairman, ASTM Section D02.B0.03

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	Ballot in progress	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 under the following performance categories:
 - ASTM D 7450
 - Lubricants for automotive axles
 - Update of API Category GL-5
 - 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
 - Canceled on February 16, 2005
 - Proposed Category PM-2
 - Lubricants for synchronized manual transmissions in commercial vehicles
 - Currently under development

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
 - Shortage of lubrified hardware for the L-37 test is still an issue
 - Recent batches rejected due to severe results on good reference oils
 - Evaluation of a new (pilot) batch is underway
 - Surveillance Panel meeting weekly to review results
 - Decision to manufacture remainder of batch (or not) should be made by mid-November
 - Additional testing will be required to verify acceptability of entire batch
 - Hope to have hardware available for candidate oil testing in late December, 2009 or early January, 2010

ASTM Section D02.B0.03

- Update on Test Procedures, continued
 - Reported in April, 2009 that only one calibrated Cyclic Durability test stand available within the industry
 - Normally have two stands available
 - Stand at second laboratory was unable to calibrate due to test severity problem
 - This stand has recently completed the calibration process and is again available for candidate oil testing
 - Work to approve SS&C test as an ASTM Standard Test Method nearing completion
 - Procedure written in ASTM format
 - Ballot to approve passed within Subcommittee D02.B0
 - Committee D02 ballot in progress

ASTM Section D02.B0.03

- Update on Performance Categories
 - Work on the development of proposed Category PM-2 continues
 - Progress has been slow due to the lack of a standardized pitting test and competition for limited industry resources
 - Task Force requested input on possible pitting test procedures and possible reference oils from ASTM and CEC members
 - Task Force recently requested input/assistance from Japanese Automobile Manufacturers Association (JAMA)