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

April 15, 2008

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	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		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
    - Has been rewritten and approved as an ASTM Standard
  - 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

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- 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, Cyclic Durability, Oil Seal Compatibility, and SS&C tests
  - Shortage of lubrited hardware for the L-37 test is still an issue
    - Most recent batch produced very severe results on “good” reference oils
      - Unable to implement correction factors to compensate for severity
      - Attempts to modify test conditions to permit hardware to be used were not successful
    - Industry is in the process of obtaining a new batch of hardware
      - Should be available for evaluation in May/June timeframe

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- Update on Test Procedures, continued
  - Ballot to approve the L-42 test procedure as an ASTM Standard has completed and passed
    - Has been assigned D 7452
    - Available for purchase in six to eight weeks
  - Implementation of a Rater Calibration Process in the L-42 test is in progress
  - Storage Solubility and Compatibility (SS&C) test is being written in the form of an ASTM Standard

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- Update on Performance Categories
  - Ballot to approve API Category GL-5 as an ASTM Standard has completed and passed
    - Has been assigned D 7450
    - Available for purchase in six to eight weeks
  - Work on the development of proposed Category PM-2 continues
    - New category for synchronized manual transmissions in commercial vehicles
    - Progress has been slow due to the lack of a standardized pitting test and competition for limited industry resources

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- Miscellaneous Activities
  - A Gear Rating Workshop will be held in Troy, Michigan on May 28 through May 30
    - Intent is to familiarize attendees with automotive gear oil test procedures, provide a basic level of training in rating techniques, etc.
    - Register through the SAE website (www.sae.org)
      - Under Education & Training, Seminars