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

June 18, 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
Storage Solubility & Compatibility		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
    - Recently updated and approved as ASTM D 7450
  - 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
  - Adequate supplies of hardware available for all tests other than the L-37
    - Recent batch of lubrited L-37 hardware rejected due to severity and variability of results on reference oils
    - Manufacture of new batch of hardware in progress
    - Evaluation of new batch to begin in late June or early July

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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 ASTM D 7452
    - “Thank You” to Cory Koglin and Hap Thompson
  - 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
    - Procedure being written in the form of an ASTM Test Method

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- Update on Performance Categories
  - Ballot to approved API Category GL-5 as an ASTM Standard has completed and passed
    - Has been assigned ASTM D 7450
    - “Thank You” to Juan Buitrago and Hap Thompson
  - Work on the development of proposed Category PM-2 continues
    - New category for synchronized manual transmissions in commercial vehicles
    - Identification of a suitable pitting test has been a challenge
  - SAE has been asked to evaluate the need for a standardized test to measure the efficiency of axle lubricants
    - Work Group has been formed within SAE to better define need
    - Expect ASTM to be asked to identify/develop a standardized test
      - Timing for such a request is not known at this time

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- Other Activities
  - Gear Rating Workshop was held on May 28 through May 30
    - Intended to familiarize attendees with automotive gear oil test procedures, rating techniques, etc.
      - 17 participants from 11 different companies
        - » Oil marketers, additive manufacturers, Original Equipment Manufacturers, etc.
    - “Thank You” to SAE and Presenters
    - Additional workshops will be held on a periodic basis