

ASTM Update
to the
LRI Gear Oil Review Committee

April 12, 2007

Status of ASTM D 7038 (L-33-1) Test

- Test availability and operation
 - Test stands available at multiple labs
 - No known test stand-related problems
- Industry in an alarm status due to test severity (severe)
 - Alarm triggered (primarily) by one laboratory, but severe trend exists at more than one laboratory
 - Could be related to rating and/or hardware issues
 - Investigation to identify and address source of problem underway
 - Test can continue to be used pending resolution of problem
- Hardware
 - Adequate supplies of hardware available

Status of ASTM D 6121 (L-37) Test

- Test availability and operation
 - Test stands available at multiple labs
 - No known test stand-related problems
 - Test severity at historic levels
- Hardware
 - Lubrited hardware is in short supply
 - Production of a new batch of lubrited hardware has been delayed from 4th quarter of 2006 to 2nd quarter of 2007
 - Labs will work quickly to approve new batch of hardware upon receipt
 - Anticipate approval in mid-June
- General
 - Activity to improve rating aids continues
 - Updated photos for Rippling
 - “Molds” for Wear and Ridging

Status of L-42 Test

- Test availability and operation
 - Test stands available at multiple labs
 - No known test stand-related problems
 - Test severity at historic levels
- Hardware
 - Hardware is in short supply
 - Evaluation/approval of a new batch of hardware is in progress
 - Anticipate approval in mid-to-late April
- General
 - ASTM facilitator working with Surveillance Panel to write/approve test procedure as an ASTM Standard Test Method
 - Implementation of a Rater Calibration process is in progress

Status of L-42-1 Test

- L-42-1 test was intended to be an improved version of the L-42 test
 - Improved standardization of test stands
 - Tighter controls on test operation
 - Etc.
- Ongoing improvements in the L-42 test have addressed most/all of the areas of concern
 - Standardization of test stand hardware, data acquisition equipment/technique, etc.
 - Publication of the test procedure as an ASTM Standard Test Method
 - Tighter control on test operation is an ongoing activity
 - Difficult to accomplish in a dynamic test
- No longer a need to identify the improved test as a new test procedure

Status of ASTM D 5704 (L-60-1) Test

- Test availability and operation
 - Test stands available at multiple labs
 - No known test stand-related problems
 - Slight severity trend (severe) for Carbon/Varnish
 - Activity to improve test stand standardization may address
- Hardware
 - Adequate supplies of hardware available

Status of ASTM D 5579 (Cyclic Durability) Test

- Test availability and operation
 - One calibrated test stand available at each of two independent labs
 - Additional, non-calibrated test stands are also available
 - No known test stand-related problems
 - Slight severity trend (severe)
 - May be related to move to newer hardware
 - Reference oil test targets were recently updated to reflect use of newer hardware – May address severity question
- Hardware
 - Adequate supplies of hardware available

Status of ASTM D 5662 (Oil Seal Compatibility) Test

- Test availability and operation
 - Baths available at two labs
 - No known “stand” (bath) related problems
 - Test severity at historic levels
- Hardware
 - Recently implemented a new process to evaluate/approve new batches of elastomers
 - Seems to be working well
 - Recently approved new batches of PA, FL, and NI elastomers
 - No problems with availability are anticipated
- General
 - Surveillance Panel will survey Original Equipment Manufacturers and seal manufacturers as to the relationship/relevance of currently-used elastomers to typical commercial materials
 - May be time for an update

API Category GL-5 Task Force Update

- API Category GL-5 has been written in the form of an ASTM Standard
- New document will address several shortcomings of existing document
 - Use of currently-available test procedures
 - Better definition of pass/fail criteria
 - Better definition of test requirements for SAE 70W-xx and SAE 75W-xx lubricants
- Updated document currently being reviewed by an ASTM facilitator
- Hope to send to ASTM for balloting in the near future

PM-2 Task Force Update

- Proposed performance category for synchronized manual transmissions in commercial vehicles
- Includes numerous performance tests which are appropriate for lubricants intended for use in manual transmissions
 - Emphasis on wear protection, elastomer compatibility, resistance to oxidation, synchromesh performance, etc.
- Pass/fail limits have been proposed for several of the performance tests
- Reference oils are required to identify appropriate pass/fail limits for remaining tests
 - Task Force will solicit input and assistance from SAE Technical Committee 3, Original Equipment Manufacturers, etc.