

ASTM Update  
to the  
LRI Gear Oil Review Committee

May 14, 2009

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

- Test availability and operation
  - Test stands available at multiple labs
- Test continues to be in an alarm status for severity (severe) and precision
  - Seeing slight increase in level of rust in certain/specific rated areas
    - Appears to be primarily occurring at one lab
    - Doesn't appear to be a rating issue
    - Test Monitoring Center and test labs working together to identify and address the source of the problem
  - Not of sufficient magnitude to inhibit use of test
- Hardware
  - Adequate supplies of hardware available

## Status of the ASTM D 6121 (L-37) Test

- Test availability and operation
  - Test stands available at multiple labs
  - No known test stand-related problems
  - Test severity (with approved hardware) at historic levels
- Hardware
  - Lubrited hardware continues to be in short supply
  - Most recent batch of hardware (V1L500/xxx) rejected due to tendency to produce (very) severe results on oils with known good performance in the field
  - Manufacture of a new batch of hardware is in progress
    - Expect delivery of pilot batch in early to mid June
    - Delivery of remainder of batch to begin in 3<sup>rd</sup> quarter of CY 2009

## Status of the ASTM D 7452 (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
  - Adequate supplies of hardware available
    - New batch was approved in April
- General
  - Rater calibration process (RCMS) in place as of January 1, 2009
    - All raters have successfully completed the calibration process

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

- Test availability and operation
  - Test stands available at multiple labs
  - No known test stand-related problems
- Test continues to be in a slight severity trend (severe) for Carbon/Varnish. May also be seeing the beginning of a slight severity trend (severe) for Sludge
  - Neither of sufficient magnitude to inhibit use of test
- Evaluating a new rating process designed/intended to improve consistency of Carbon/Varnish ratings
- Hardware
  - Adequate supplies of hardware available

## Status of the ASTM D 5579 (Cyclic Durability) Test

- Test availability and operation
  - Routinely have one calibrated test stand available at each of two independent labs
    - Additional, non-calibrated test stands also available
  - Currently have only one calibrated test stand available within the industry
    - Test stand at one laboratory encountering difficulty calibrating
      - Obtaining severe results on the good reference oil
    - Both test labs and the Test Monitoring Center are working together to identify and address the cause of the problem
      - Exchanging test hardware, comparing stand operation, etc.
- Hardware
  - Adequate supplies of hardware available

## Status of the 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
  - Availability of elastomers has been an occasional problem
    - Surveillance Panel working with the Central Parts Distributor to address the problem
    - Work to determine if the shelf life of the elastomer can be extended is underway
  - Recently updated acceptance bands for Nitrile elastomer
    - Original acceptance bands appear to have been overly restrictive
    - Adoption of new bands should relieve problems with availability

## Status of the Storage Solubility and Compatibility (SS&C) Test

- Surveillance Panel has been formed to oversee test
- ASTM Test Monitoring Center (TMC) has assumed responsibility for maintaining and distributing reference oils
- ASTM Facilitator currently writing the test procedure in the form of an ASTM Standard Test Method
  - Draft has been sent to Task Force for review
- Future activities include
  - Determine if there is a need to update the selection of reference oils



## Other Activities

- Work Group has been formed within SAE to better define the need for a standardized test to evaluate the efficiency of axle lubricants
  - Group met twice in CY 2008
  - Survey to identify possible test methods, references oils, etc. has been sent out to the industry
    - Numerous responses have been received
    - Group will meet to review input and develop a plan for moving forward
  - May hand test development/refinement over to ASTM, or may form a consortium to finalize the test procedure
- Recent ballot to update ASTM D 5760 (API Category MT-1) has completed
  - Clarified pass/fail criteria for elongation in the ASTM D 5662 (oil seal compatibility) test
  - Several additional corrections and improvements were also implemented

## Other Activities

- Task Force continuing work on the development of proposed Category PM-2
  - New category for synchronized manual transmissions in commercial vehicles
  - Progress slow due to lack of standardized pitting test
  - Recently requested input and assistance from Original Equipment Manufacturers, oil marketers, end-users, etc.
    - Requested recommendations for pitting test and potential reference oils
    - Response somewhat limited
  - Follow-up survey will be sent to targeted organizations