

ASTM Update
to the
LRI Gear Oil Review Committee

August 14, 2008

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 with good reference oil
 - Will increase use of new/replacement oil to help determine if this is an oil-related issue
 - Not of sufficient magnitude to inhibit use of test
- Have identified cause of and solution for occasional problem with foaming
- 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
 - Lubricated hardware continues to be in short supply
 - Testing on new batch of hardware revealed tendency to produce Pitting/Spalling on oils with known good performance in the field
 - Unable to address via introduction of correction factors
 - Surveillance Panel investigating affect of modifying build/pattern and changes in test operating conditions
 - Results available in early September

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 of hardware on order
- General
 - Procedure has been approved as an ASTM Standard
 - ASTM D 7452-08
 - Now available for purchase
 - Implementation of a Rater Calibration process is in progress

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
- Hardware
 - Adequate supplies of hardware available

Status of the 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 also available
 - No known test stand-related problems
- Test continues to be in a 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 – Appears to be addressing the issue
 - Not of sufficient magnitude to inhibit use of test
- 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
 - Adequate supplies of all elastomers available
- General
 - Panel identified need to clarify pass/fail criteria for elongation
 - Work to update SAE J2360 and ASTM D 5760 (API Category MT-1) in progress

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
- Future activities include
 - Determine if there is a need to update the selection of reference oils
 - Write the test procedure in the form of an ASTM Standard

Status of the API Category GL-5 Update/Rewrite

- API Category GL-5 has been approved as an ASTM Standard
 - ASTM D 7450-08
 - Now available for purchase

Status of the Gear Rating Workshop

- Gear Rating Workshop held in Troy, Michigan on May 28 through May 30
 - Purpose was to familiarize attendees with automotive gear oil test procedures, provide a basic level of training in rating techniques, etc.
 - 17 participants from 11 different companies
 - Oil marketers, additive manufacturers, Original Equipment Manufacturers, etc..
 - Additional workshops will be held on a periodic basis

Future Activities

- Work Group has been formed within SAE to better define the need for a standardized test to evaluate the efficiency of axle lubricants
 - Initial meeting held on July 24
 - 34 participants from a variety of different organizations
 - Additive manufacturers, oil marketers, Original Equipment Manufacturers, testing facilities, etc.
 - Considerable discussion regarding test techniques which are currently available, participant's experience with these test procedures, etc.
 - General agreement that a standardized procedure is required
 - Follow-up meeting to be held in September