

ASTM Update  
to the  
LRI Gear Oil Review Committee

August 12, 2010

J. L. Gropp

Chairman, ASTM Section D02.B0.03

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

- Test availability and operation
  - Test stands available at multiple labs
  - No known test stand-related problems
- Hardware
  - Adequate supplies of hardware available
- General Comments
  - Developing new/additional rating aids to improve accuracy of ratings

## 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: Non-lubrited
  - Adequate supplies of hardware available
- Hardware: Lubrited
  - Shortage of hardware continues to be a problem
  - Manufacturer producing a new pilot batch of hardware with optimized geometry, hardware, lapping, etc. for evaluation
    - Should be available in ten to twelve weeks
    - Testing will focus on hardware where both pinion and ring have been lubrited
    - May/will run testing on hardware where only the ring has been lubrited (if necessary)

## 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
  - Panel discussing need/timing for next batch
    - Initial indications are that cost of hardware will increase significantly

## 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 severity continues to be an issue
  - Test in an alarm status for Carbon/Varnish and Sludge (severe)
  - Test recently triggered an alarm for Toluene Insolubles (severe)
  - ASTM Test Monitoring Center will make lab visits to determine cause of problem
    - Will inspect both the Mechanical labs and the supporting Chemical/Analytical labs
- Hardware
  - Adequate supplies of hardware available

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

- General Comments
  - Work to improve the consistency of Carbon/Varnish ratings continues
    - Evaluation of a fixture to hold the gears at a specified angle and distance from the rating light continues

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

- Test availability and operation
  - One stand available at each of two labs
  - No known stand-related problems
  - Test severity at historic levels
- Hardware
  - Adequate supplies of hardware available
    - Should last six months or more
  - New batch of hardware has been received
    - Will be evaluated/introduced at next calibration period for each test stand

## 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 elastomer available
- Reference Oils
  - Two reference oils (TMC 161 and TMC 168) are not able to be reblended
  - Replacement for TMC 161 has been identified
    - Will develop database of results in combination with reference tests on TMC 161
  - Surveillance Panel has identified possible replacements for TMC 168
    - Will introduce at a later date



## Status of the ASTM D 5662 (Oil Seal Compatibility) Test, continued

- Surveillance Panel was asked several questions regarding the 1000-hour seal test described in Section 2.4.4 of the PD4000 document
  - Will be discussed during the Open Meeting portion of the August, 2010 LRI Meeting