

ASTM Update  
to the  
LRI Gear Oil Review Committee

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J. L. Gropp

Chairman, ASTM Section D02.B0.03

## Status of the ASTM D7038 (L-33-1) Test

- Test availability and operation
  - Test stands available at multiple labs
  - No known test stand-related problems
- Hardware
  - Very limited supply of hardware available
- General
  - Labs working on next-generation test
    - Will use American Axle “K2XX” axle
    - Testing on pilot batch showed good discrimination between good and poor reference oils
    - Reference oil testing on large batch of hardware in progress
      - Initial results (from one lab) look promising
    - Targeting 4<sup>th</sup> quarter CY 2015 or 1<sup>st</sup> quarter of CY 2016 for finalization/approval of test procedure

## Status of the ASTM D6121 (L-37) Test

- Test availability and operation
  - Test stands available at multiple labs
  - No known test stand-related problems
- Hardware
  - Very limited supply of supplier-built axles available
  - Procedure which enables labs to obtain approval to build axles in-house using pinions and rings from approved batch of hardware is in place
- General
  - Labs continuing work on next-generation test
    - Details on following slide

## Status of the “Next-Generation” L-37 Test

- Uses L-37-type hardware manufactured by Gleason
- Hardware available at all test labs
- Testing on reference oils is nearing completion
  - Intended to evaluate new test procedure and this batch of hardware
- Some concerns expressed regarding viability of test procedure
  - Introduction of test in current state would require correction factor for Rippling and/or Ridging
  - May want to evaluate modified test conditions, new batch of hardware, or other factors
- Targeting 4<sup>th</sup> quarter of CY 2015 or 1<sup>st</sup> quarter of CY 2016 for finalization and approval of test procedure

## Status of the ASTM D7452 (L-42) Test

- Test availability and operation
  - Test stands available at multiple labs
  - No known test stand-related problems
- Hardware
  - Ample supplies of hardware available

## Status of the ASTM D5704 (L-60-1) Test

- Test availability and operation
  - Test stands available at multiple labs
- Hardware
  - Large quantity of test gears available at all labs
- Surveillance Panel has been asked to focus more attention on addressing ongoing test severity trend
  - Concern that test may not be operating at it's historic level of severity
  - Panel considering implementation of correction factor (for Carbon/Varnish) to address problem

## Status of the ASTM D5579 (Cyclic Durability) Test

- Test availability and operation
  - Continues to be only one calibrated stand within the industry
    - Has been able to meet industry's needs
  - No known test stand-related problems
  - Test severity at historic levels
- Hardware
  - Adequate supplies of hardware available

## Status of the ASTM D5662 (Oil Seal Compatibility) Test

- Test availability and operation
  - Test can be conducted at multiple labs
  - No known test stand (bath)-related problems
- Hardware
  - Adequate supplies of elastomer available
- Reference oils
  - New reference oil to replace TMC 168 has been identified and is being phased in
    - Necessary because supply of TMC 168 is low, and oil can not be reblended
    - Used in the Nitrile seal portion of the test