

ASTM Update
to the
LRI Gear Oil Review Committee

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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
 - Adequate supplies of hardware available
- General
 - Labs working on next-generation test
 - Will use American Axle “K2XX” axle
 - Initial testing on pilot batch of hardware looked promising
 - Additional testing will be conducted on pilot batch to verify viability of procedure, fine-tune rating technique, determine if current rating factors are still appropriate, etc.

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
 - Inventory at labs periodically low due to delayed/intermittent delivery from supplier
- General
 - Labs continuing work on next-generation test
 - Details on following slides

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

- Eventual replacement for the current L-37 test
- Updated test stand uses electric motor as power source
- Industry focusing on procedure using L-37-type hardware manufactured by Gleason
- Industry group currently writing test procedure, will make lab visits, hold a build workshop, etc.
 - Intended to improve consistency of test
- Delivery of large batch of hardware delayed from June/July to October
- Targeting 2nd quarter of CY 2015 for finalization/approval of 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
 - Supplies of hardware diminishing
 - Industry placing order for new batch
 - Expect delivery in 4th quarter CY 2014
- Reference Oils
 - TMC 117 introduced as replacement for good reference oil (TMC 116)
 - Used to calibrate test stands
 - Used to establish acceptance criteria for candidate oils
 - TMC 117 produces less scoring than TMC 116
 - Will require correction factor to maintain test at current level of severity

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

- Test availability and operation
 - Test stands available at multiple labs
- Hardware
 - Adequate supplies of test gears available
- General
 - Panel investigating cause(s) for differences in test severity between labs
 - Industry-wide severity trend (severe) has existed for several years
 - Recent introduction of new batch of hardware may be having an effect
 - Situation is confusing
 - Different reference oils responding differently
 - Not all labs responding in the same manner
 - Recent meeting (yesterday) identified several areas requiring further investigation
 - Differences in oil charge, air box temperature, et al

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 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
 - Baths available at two labs
 - No known “stand” (bath) related problems
- Hardware
 - Adequate supplies of elastomer available