

ASTM Update
to the
LRI Gear Oil Review Committee

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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
 - Labs beginning development of next-generation test
 - Want to use axle more representative of current production
 - American Axle “K2XX”
 - Initial testing on good and poor reference oils looks promising
 - Pilot batch (40 axles) of test hardware at labs
 - Will use this hardware to verify viability of hardware/procedure, develop rating templates, identify weighting factors, etc.
 - Panel will hold meeting in San Antonio to work out details of test matrix

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
- Hardware
 - Adequate supplies of hardware available

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

- Eventual replacement for the current L-37 test
- Work to finalize test procedure using American Axle hardware continues
 - Initial results on good and poor reference oils looked promising
 - Obtained unexpected (severe) results on two commercial oils with proven performance in the current L-37 test
 - Test matrix designed to evaluate modifications in test procedure being developed
 - Intent is to insure that test is operating at the desired level of severity
- One lab working on a “back up” approach
 - Uses L-37-type hardware manufactured by Gleason
 - Pinion and ring installed in an L-37 housing
 - Initial testing demonstrated ability to discriminate between good and poor reference oils
 - Testing on oil(s) with proven performance in the current L-37 test in progress

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
- Hardware
 - Adequate supplies of hardware available
 - New batch will be ordered if necessary to insure test remains available until replacement test has been developed
- Reference Oils
 - Work underway to introduce a replacement for the good reference oil
- General
 - Beginning discussion of development of a replacement test
 - May move to electric motor as power source
 - Move to more current hardware

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

- Test availability and operation
 - Test stands available at multiple labs
 - Test Monitoring Center working with labs to identify and eliminate sources of variability in measuring Pentane and Toluene Insolubles
- Hardware
 - Adequate supplies of test gears available
- General
 - Labs now required to use new gear rating jig to rate Sludge and Carbon/Varnish
 - Holds gears at a specific angle and distance from the rating light
 - Expected to improve consistency of ratings

Status of the ASTM D 5579 (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 D 5662 (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