

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
 - Will use American Axle “K2XX” axle
 - Pilot batch (40 axles) of test hardware at labs
 - Panel recently held meeting in San Antonio to discuss stand setup, build procedure, rating technique, etc.
 - Each lab will run two tests using pilot batch hardware
 - One test on poor reference oil
 - One test on good reference oil
 - Will use results to verify ability of test to discriminate between oils, fine-tune rating technique, develop new weighting factors (if needed), etc.

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
- General
 - Concerns by some Panel members regarding magnitude of correction factors to be applied to V1L528/P4T883A hardware
 - Particularly in Canadian version of test
 - Some asking if test may be out of control
 - Panel will hold special meeting to discuss issue in more detail

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
 - Test conditions originally proposed produced unexpected severe results on an oil of known good performance
 - One lab running extensive matrix of tests to evaluate modified test conditions
- Second lab working on an alternate approach
 - Using L-37-type hardware manufactured by Gleason
 - Pinion and ring installed in an L-37 housing
 - Appears to be producing desired results on reference oils
 - Additional testing on reference oils and commercially-available formulations underway

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
 - Supplies of hardware dwindling
 - Awaiting response from supplier on request for new batch of hardware
- Reference Oils
 - Work underway to introduce a replacement for the good reference oil
 - May require correction factor to maintain test at current level of severity
- 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
- Hardware
 - Adequate supplies of test gears available
- General
 - Panel investigating cause(s) for differences in test severity between labs
 - May be related to an ongoing, industry-wide severity trend
 - Recent introduction of new batch of hardware may be having an effect
 - Different reference oils responding differently
 - One oil may see an effect in one test parameter, while the other may not

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