

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
 - Unsure of continued availability of current hardware
 - Labs evaluating alternate axle

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: Non-lubrited
 - Supplies of hardware diminishing
 - New batch was manufactured in conjunction with new batch of lubrited hardware
 - Evaluation of new batch should begin in 1-2 weeks
 - Hope to have hardware approved and available for candidate oil testing in 3rd/4th quarter of CY 2012

Status of the ASTM D 6121 (L-37) Test, continued

- Hardware: Lubrited
 - Shortage of hardware continues to be an issue
 - New batch of pinions and rings has been made - Assembly of axles is in progress
 - Previous testing on a pilot batch suggested that slight reduction in test length (to 20 hours) would be required in order to maintain historic level of test severity
 - Initial testing on production batch suggests further modification of test conditions may be required
 - Results appear to be more severe than those obtained on the pilot batch
 - Will conduct testing at 16 and 18 hour test length

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

- Eventual replacement for the current L-37 test
- Uses electric motor as the power source, eliminates the manual transmission which was required when fired-engine used as power source, uses current-production hardware, etc.
- Work to finalize test procedure underway
 - Four labs have test stands in place
 - Testing on reference oils is in progress
 - Not all results coming out as expected/desired
 - Seeing some inconsistent results
 - Some concerns regarding distress on bearings and/or cracking/breakage of pinion teeth
 - May need to modify test conditions to obtain desired level of test severity and discrimination

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 diminishing
 - One lab has depleted their inventory
 - Industry evaluated pilot run of new batch
 - Saw small amount of drive-side scoring
 - Manufacture of large batch is in progress
 - Should be at labs in late October
 - Hope to address drive-side scoring during conditioning phase of test

Status of the ASTM D 7452 (L-42) Test, continued

- General comments
 - May need a replacement for TMC 116
 - “Good” reference oil used to establish pass/fail limit
 - Appears that supplier is unable to provide a reblend
 - Potential suppliers of an alternate reference oil should contact ASTM Test Monitoring Center
 - Surveillance Panel approved the use of new/additional rating aids
 - Expected to improve the accuracy/consistency of scoring ratings

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
- Hardware
 - Adequate supplies of test gears available
 - New batch of test gears has been approved for use
- General Comments
 - Approved use of new alternator as replacement for currently-specified alternator which is no longer available
 - Used to place small load on gears (to prevent “chatter”)

Status of the ASTM D 5579 (Cyclic Durability) Test

- Test availability and operation
 - Currently only one test stand available within the industry
 - Unsure if the second stand at a different lab will or will not be returned to service
 - High start-up cost and potential for limited utilization
 - The available test stand has been able to meet the industry's needs
 - No known stand-related problems
 - Test severity at historic levels
- Hardware
 - Current inventory of hardware at approved lab should last 1+ year(s)
 - Surveillance Panel has been advised that manufacturer making change in sliding clutch assembly and mating gears
 - Surveillance Panel will evaluate to insure that test severity is not affected
 - Lab will continue to use existing hardware in interim

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