

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
  - Panel discussing next hardware order
    - Availability of current hardware in question
    - Labs looking at 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 adequate, but diminishing
  - New batch being manufactured in conjunction with new batch of lubrited hardware
  - Hope to have hardware approved and available for candidate oil testing in late 2<sup>nd</sup> quarter or early 3<sup>rd</sup> quarter of CY 2012

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

- Hardware: Lubrited
  - Shortage of hardware continues to be an issue
  - Manufacture of a new batch is in progress
  - Hope to have hardware approved and available for candidate oil testing in late 2<sup>nd</sup> quarter or early 3<sup>rd</sup> quarter of CY 2012
  - As previously reported, test length may be adjusted slightly to maintain historic level of test severity
    - Pilot batch produced severe results
    - Reducing test length to twenty hours yielded acceptable results

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

- Eventual replacement for the current L-37 test
- Will use electric motor as the power source, eliminate the use of a manual transmission, use current-production hardware, etc.
- Work to fine-tune test is underway
  - Four labs have test stands in place
  - First batch of test hardware has been manufactured
  - Testing on reference oils is in progress
- Intent is to have procedure finalized and approved test hardware available within one year
  - Introduction will be timed to coincide with depletion of existing axle inventory

## 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
  - Most labs have sufficient hardware to last until the next batch is available
    - One lab has depleted their inventory
  - Pilot batch of hardware is currently under evaluation
    - Initial results encouraging, but seeing some drive-side scoring
    - Labs will modify conditioning phase of test to determine if this will eliminate problem
    - Manufacturer will be contacted to determine if processing changes (modification to lapping and/or other change) would be beneficial
    - Question: Is LRI willing to accept test results which have drive-side scoring?

## 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 hardware available
  - New batch of hardware currently being evaluated
    - Some concern that hardware may be producing directionally-severe Carbon/Varnish results
    - Additional testing will be conducted to determine if a correction factor is required

## 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
      - Test no longer a part of the SAE J2360 Standard
  - The available test stand has been able to meet the industry's needs
  - No known stand-related problems
  - Test severity at historic levels
- Hardware
  - Adequate supplies of hardware available
  - 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