

ASTM Update  
to the  
LRI Gear Oil Review Committee

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Chairman, ASTM Section D02.B0.03

## 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
  - Test was running severe - Has recently returned to historic level of severity
- Hardware
  - Adequate supplies of hardware available

## 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
  - Test severity (with approved hardware) at historic levels
- Hardware: Non-lubrited
  - Recently approved a new batch of non-lubrited hardware
  - Required that contact stress be reduced by 13% to achieve desired level of test severity
- Hardware: Lubrited
  - Most recent batch of hardware produced unacceptable results (severe)
  - Reducing level of contact stress did not address the problem
  - Manufacturer will make a new pilot batch of hardware with optimized geometry, hardware, lapping, etc. for evaluation
  - Industry will evaluate non-lubrited version of this hardware, then evaluate lubrited version if acceptable results are obtained

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

- General question/comment regarding hardware
  - Surveillance Panel may investigate affect of lubriting only the ring, rather than both the pinion and the ring
  - Intent would be to replace the current test with this modified version
  - Panel would appreciate hearing the LRI Gear Oil Review Committee's comments on this approach
- General question/comment regarding the lubrited test and the SAE J2360 Standard
  - Some Panel members concerned that this test may continue to be unavailable for an extended length of time
  - Lack of test could inhibit ability to obtain SAE J2360 approvals
  - Panel interested in hearing the LRI Gear Oil Review Committee's thoughts/comments/suggestions on ways for Presenters to obtain SAE J2360 approvals during this period
    - Alternate tests?
    - Field tests using lubrited hardware?
    - Other?

## 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
  - Test severity at historic levels
- Hardware
  - Adequate supplies of hardware available
  - Industry making preparations to obtain a new batch
    - Targeted to be available in early 2011

## 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
- Test severity continues to be an issue
  - Test in an alarm status for Carbon/Varnish and Sludge (severe)
  - Test recently triggered an alarm for Toluene Insolubles (severe)
  - ASTM Test Monitoring Center will make lab visits to determine cause of problem
    - Will inspect both the Mechanical labs and the supporting Chemical/Analytical labs
- Hardware
  - Adequate supplies of hardware available

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

- Work to improve the consistency of Carbon/Varnish ratings continues
  - Initial evaluation of a fixture to hold the gears at a specified angle and distance from the rating light looked promising
  - Additional evaluations are being conducted
    - Use may/will be required if results continue to show value
  - Hope this will help address the current severity problem in this area

## Status of the ASTM D 5579 (Cyclic Durability) Test

- Test availability and operation
  - One stand available at each of two labs
  - No known stand-related problems
  - Test severity at historic levels
- Hardware
  - Adequate supplies of hardware available
    - Will last approximately one year
  - New batch has been ordered
    - Expect delivery in two to three weeks



## 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
  - Test severity at historic levels
- Hardware
  - Adequate supplies of elastomer available
- Reference Oils
  - Two reference oils (TMC 161 and TMC 168) are not able to be reblended
  - Replacement for TMC 161 has been identified
  - Surveillance Panel needs to identify replacement for TMC 168
    - Two or three possible replacements have been identified
    - Need to introduce replacement is not urgent – Current inventory of TMC 168 expected to last two or three years