

ASTM Update
to the
LRI Gear Oil Review Committee

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J. L. Gropp

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
- Two of the three active/participating labs have recently obtained severe results on the “good” reference oil
 - Has triggered industry severity and precision alarms
 - Labs and the Test Monitoring Center are investigating
- Hardware
 - Adequate supplies of hardware available
- Raters developed rating aids for Area 2
 - Should improve precision of rating that Area
 - Surveillance Panel expected to approve use of aids in near future

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
 - Approval matrix conducted on previously-rejected batches of hardware using 13% reduction in contact stress
 - Non-lubrited batch of hardware approved for use
 - Surveillance Panel concerned by severity and variability of results obtained on lubrited hardware
 - Batch not approved at this time
 - Questions raised regarding the need for this test and its value to the industry
 - Surveillance Panel to determine if the industry's needs can be met through the use of the non-lubrited version of this test, possibly in combination with field test data developed on lubrited hardware

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

- Hardware, continued
 - Investigation into the use of pre-test versus post-test shift in contact pattern for evaluation of wear has been hampered by the efforts to evaluate/approve new batches of non-lubricated and lubricated hardware

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
 - Current batch appears to be providing very consistent results

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 continues to be in a severity trend (severe) for Carbon/Varnish
 - Has triggered an industry alarm
- Also encountering an intermittent severity trend (severe) for Sludge
 - Has been in and out of an industry alarm
- 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 will be conducted
 - Use may/will be required if results continue to show value

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
 - Surveillance Panel will initiate order for a new batch of friction and reaction plates within the next few 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

Status of the Storage Solubility and Compatibility (SS&C) Test

- Procedure has been written in the form of an ASTM Standard Test Method
 - Balloted and approved within ASTM
 - Assigned ASTM D 7603