
December 5, 2005

To: OSCT Surveillance Panel and Task Force

From: Don Bell

Subject: OSCT Task Force Meeting Minutes

A teleconference was held on November 30, 2005 with the following OSCT task force members to discuss relevant issues and updates regarding the oil seal compatibility test (ASTM D5662).

Attendees:

D. Lind (TMC)

D. Bell (Afton)

B. Grinfield (SWRI)

D. Korpi Misich and J. Gropp (Lz)

T. Marougy (Eaton)

The following are minutes from this meeting:

1. **ASTM D5662-99 Procedure Revisions**
 - A. The OSCT information letter (05-1) that was drafted in 2005 automatically revised the D5662 procedure, so this there is no rush to rebalot D5662 by the end of 2005.
 - B. Another OSCT information letter (05-2) was approved on Nov. 30th, 2005 as written: When using a wire hanger to aid in the weighing of the test coupon, deduct the weight of the wire hanger from the gross weight to determine the actual weight of the test coupon. Record the actual weight of the test coupons in the test report and use the actual weights for the percent volume change calculations.
 - C. The task force drafted and agreed upon all proposed revisions to the D5662 procedure. A request for motions will be made to the OSCT Surveillance Panel by D. Bell at the February 8, 2006 ASTM meeting #139 to obtain approvals for all proposed revisions to D5662. D5662 will be revised as approved and rebaloted in 1Q06 to finalize the revisions.

2. **Elastomer Batch Shelf Life**
 - A. The task force discussed steps for potentially increasing the shelf life beyond the stated 2 years for newly approved seal batches.
 - B. The test labs decided upon the following testing program:
 - i. check initial elastomer parameters and send results to D. Lind for comparison to previous tests conducted on the following old lots of elastomers:
 - nitrile (N321) manufactured 1/27/2000
 - fluoroelastomer (347) manufactured 10/20/1999
 - polyacrylate (325) manufactured 8/11/1999
 - ii. conduct D5662 (12 dumbbells) on each elastomer above using all reference fluids (if time permits).
 - iii. Results will be reviewed by the task force when available.

3. **Alternate Elastomers**
 - A. The task force discussed the possibility of using alternate seal materials for D5662.
 - B. T. Marougy and B. McGlone will try to identify updated elastomer materials/formulas used in today's gear axles that may be more relevant than those used today for testing as per D5662. If identified, we will need to have coupons/slabs produced for testing.

4. **Calibration Procedure for Instron**

Both test labs have finalized the calibration procedure for the Instron. D. Lind will send D. Bell the procedure, which will be sent out via e:mail to the OSCT surveillance panel for motion to approve.

5. **Alternative Procedure for Conducting References**

- A. The task force discussed scenarios to avoid always conducting references with candidates per D5662 and thus save on approved lots of elastomer. The current process of conducting a reference with every candidate is likely no longer required because hard pass/fail limits have been established for all elastomers.
- B. One idea was to only conduct a reference run once every 3 or 6 months and have it apply to the following 3 to 6 month period. Control charts could show acceptability.
- C. This will be further discussed with the OSCT surveillance panel and possibly voted on at the Feb. 8th ASTM meeting.

6. **Other Potential OSCT Topics for Future Review As Time Permits**

- A. Update the current reference oils with more relevant formulations.
- B. New elastomer property to measure that may be more relevant than the elongation measurement.
- C. Possibly reducing the number of elastomer specimens from 12 to 8. This is not highly likely due to relatively high variability among elongation measurements per elastomer batch.