

Oil Seal Compatibility Test (OSCT) Task Force Meeting Minutes

June 22, 2023

Don Bell

Participants:

B. Grinfield	K. Gutierrez	S. Carr	D. Beck	J. Morris
A. Goyal	D. Mosher	J. LaBond	D. Bell	

An OSCT Task Force Webex meeting was called to order by D. Bell at 2:03 pm on 6/22/2023.

The primary objective for the Task Force is to determine the cause of the recent 1000 hour test results from both labs that did not match each other very well on three different axle oils, especially in regards to %elongation and shore hardness:

1. TMC 155-1 Industry reference oil
2. AGF-00016B01 J2360 qualified oil
3. Dana 75W-90 J2360 qualified oil

Representatives from both labs reviewed their procedures, especially Instron methods, but did not find any significant differences.

Upon careful review of the procedure and 1000 hour data, Lab G determined that the most probable cause of the 1000 hour data not matching that of lab C was human error with a rather inexperienced lab technician using the incorrect set of baseline/unaged data from a different seal to calculate the changes of the seals above upon aging in the bath

This was confirmed by Lab G upon using the correct baseline/unaged data on the lot of polyacrylate and showing that it more closely matched that of Lab C's earlier reported data sets.

A corrective action was put in place at the Labs to avoid future occurrences, which includes the Lab Tech must review the unaged data with the responsible seal Lab Supervisor when the data is outside the reported range. The data can also be cross-checked with the TEI reported data for the unaged seal lot for further confirmation it is the correct unaged data to use for measurements.

Both tests labs will repeat the same 240, 500 and 1000 hour data in single runs on the same lots of PA and FL using the same previously approved Instron method from Lubrizol on the same three axle fluids noted above. Results will be reported to TMC for plotting with the goal of presenting the data at the August 9, 2023 OSCT Surveillance Panel meeting.

At that time, the Panel can discuss adding the Instron procedural method to ASTM D5662 Appendix.

The meeting was adjourned at 2:56 pm.