

ASTM D7038 (L-33-1) MOISTURE CORROSION TEST
SURVEILLANCE PANEL MEETING
November 12, 2025

Meeting Minutes

I. Approval of Minutes

August 13, 2025 LRI

Motion: Nick Schaup

Second: Payton Wright

Vote: Unanimous

II. Membership Review of Voting Members

Name	Company
Beck, Dylan	ASTM TMC
Carowick, Jessica	Cummins
Comfort, Allen	US Army CCDC-GVSC
Gibson, Trevor	Dana
Goyal, Arjun	BASF
Jetter, Steve	Exxon Mobil
McCollum, Clarence	Richful
Muransky, Troy	AAM
Murray, Reagan	Intertek
Sangpeal, Matt	Afton
Schaup, Nick	Lubrizol
Schweitzer, Addison	Shell
Smith, Andrew	Infineum
Vander Wal, Camden	Daimler
Warden, Rebecca	Chevron Oronite
Wright, Payton	SwRI
Zreik, Khaled	General Motors

a. Motion: Update Intertek's voting member to Reagan Murray

Motion: Nick Schaup

Second: Wes Venhoff

Vote: Unanimous

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III. Business

- a. New batch overheating during motoring phase
 - i. All labs in the industry have seen the new 31XX gear batch overheating during the motoring phase. The Specification is $180 \pm 1^{\circ}\text{F}$ and the axles are occasionally overheating by $\sim 5^{\circ}\text{F}$.
 - ii. There were multiple potential causes proposed by AAM but there is no confirmed cause at this time.
 - iii. The specification allows leeway into what type of cooling fan is used, so the labs will attempt running using a higher CFM 12" diameter fan.
 - iv. Afton and SwRI will also try running a dummy axle with a lower fill volume of 1.8L instead of the current 2.7L.
- b. 31XX Batch approval run data review
 - i. The TMC presented slides showing the current test runs using approved reference oils on the new 31XX gear batch.
 - ii. There were 3 valid and 3 invalid data points presented for the 155-2 reference oil. The data aligned with the current T1XX reference oil targets using the current AAM correction factors.
 - iii. There were 2 valid and 2 invalid data points presented for the 126 reference oil. The data aligned mostly aligned with the current T1XX targets, but all the data was on the mild side with 1 of the valid tests falling outside the current reference oil targets using the current AAM correction factors.
 - iv. Due to the 126 data being on the mild side and showing concerns of not discriminating, all 3 labs are to run 1 additional 126 reference oil test each before the follow up meeting on 12/3. This additional run will not count against the reference period.
 - v. If necessary, the raters will rate the parts with and without the old T1XX rating template.
- c. Thermocouple Probe Location
 - i. The current procedure has specific dimensions for where the thermocouple should be placed inside the axle housing. This will need to be updated for the new 31XX axle.
 - ii. The vote to change the procedure was put on hold until all axle specific verbiage could be addressed. The Chairman will review the ASTM D7038 procedure for any call outs to specific hardware needing updates and will present new verbiage as needed at February LRI.
 - iii. It was brought up that overheating phenomenon may be due to the current thermocouple placement if it is not properly submerged in the test fluid. Lubrizol will run the axle with a clear cover to see if the thermocouple is submerged during the motoring phase. The Chairman will reach out to AAM to see if they are will to review their fluid simulation to tell us if placing the thermocouple centered in axle will allow the thermocouple to be submerged during the motoring phase.

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d. Revoking the Downtime limits

- i. During August 2025 LRI, a motion was made to not allow shutdowns during the oven phase of this test and to add an allowed deviation percentage to the oven fan speed with an implementation date of 10/13/25. This previous motion has been revoked.

Motion: Anthony Lange

Second: Arjun Goyal

Vote: Unanimous

- ii. The motion passed in May and August did not allow any downtime during the oven phase which did not follow the intent of the motion. The original intent was to allow 1 hour of the oven fan being off while not extending the run time.
- iii. During February 2026 LRI the motion will be revisited with new verbiage with possible alternative wording being “off test time” or “run time”.
- iv. There was discussion about moving to a different system entirely. The 2 that were discussed as options are DAQCA 3 or using a QI system. These options will be reviewed before proposing new verbiage in February.

e. New vs old axle rating area discrepancies

- i. There are differences in the size of components when comparing the old T1XX axle to the new 31XX axle. The side gears within the 31XX axle are noticeably larger than the side gears for the T1XX axle. Due to this the rating templates used for the side gears are no longer accurate.
- ii. It is currently unknown whether the raters are using the old templates are using no templates for rating the new axle batch.
- iii. A meeting will be set up with the raters the week of 11/17 to discuss how they are currently using the templates. New templates may have to be made.

IV. Additional Discussion / Business?

- a. None

V. Summary of Action Items

- a. All 3 Labs to run a 126-1 reference test on the new axle batch to generate more data before the 12/3 meeting.
- b. Follow up meeting on 12/3/25 to review the new 126 reference oil tests, and potentially approve the new gear batch.
- c. SwRI and Afton will run a setup version of the new 31XX axle at the 2.7 liter and 1.8(factory fill level) to see if that affects heat generation.
- d. Raters will meet the week of 11/17 to discuss the rating templates and how they are being used on the new axle for the percentage of rust for the area for including the side gears

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- e. New verbiage will be developed for the “shutdown limits” for the oven storage phase as the previous motion was voided.
- f. The Chairman will review the ASTM D7038 procedure for any call outs to specific hardware needing updates and will present new verbiage as needed at February LRI.

VI. Adjournment

Motion: Micheal Portell

Second: Arjun Goyal

Vote: Unanimous

Thank you,
Anthony Lange
ASTM D7038 Chairman

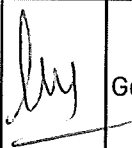
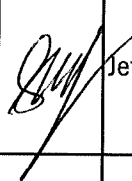
ASTM D7038 L33-1 Surveillance Panel Participants List

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Initials	Name	Voting V/NV	Company Name Company Address	Phone / Email
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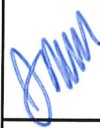
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