

# MACK-Volvo Surveillance Panel Meeting Notes

## 01/30/2025 @ 2:00 PM EST

### Attendees

SwRI: Isaac Leer, Jose Starling, Robert Warden  
Oronite:  
Afton: Joseph Hoehn, Amanda Stone  
Infineum: David Brass (Chairman), Todd Dvorak, Andrew Smith  
Intertek: Garrett White (Secretary), Khaled Elnagi  
Lubrizol: Austin Brininger  
CP Chem:  
Haltermann:  
Exxon Mobil: Mike Shea  
TMC: Sean Moyer  
TEI: Derek Grosch  
Ford:  
Volvo:  
John Deere: Ashu Gupta

### Agenda

- Mack T-12 ICF Discussion
- Volvo T-13 New Reference Oil Check-in
- Volvo T-13 Parts Check-in
- AOB

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### *Action Items and Key Points*

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- TMC to provide theoretical industry charts with the proposed ICF options for T-12 lead (Pb) and lead 2 (Pb2) for the panel members to view. TMC will email these out and discuss them in the next meeting.
- **Motion passed** to stop usage of Pencool in the T-12. Effective today (1/30/2025) only Chevron Delo Extended Life 50/50 Pre-mix coolant is to be used in the MACK T-12 test.
- Labs A, D and G have completed the first of two new reference oil tests for the T-13. 2<sup>nd</sup> tests are estimated to be completed in the early part of March 2025 for all labs.
- 31 kits of the current hardware are available at TEI. Liner batch D is the limiting factor. 38 kits worth of MAHLE Brazil ring sets are available.

- Lubrizol mentioned a need to begin discussing the introduction of the new part number cylinder head soon. Will most likely discuss plans for introduction further once new reference oil and new hardware testing are completed.
- David Brass stepping down from the role as Chairman of the Mack/Volvo Surveillance Panel effective January 30<sup>th</sup>, 2025. Andrew Smith to assume this role effective January 30<sup>th</sup>, 2025.

## Summary of Discussion

### Mack T-12 Reference Testing Statistical Review

- Both lead (Pb) and lead (Pb2) as of this meeting are in a severity action alarm, mild direction.
- Test has experienced both new parts batches, YFZQWB, and new coolant, Chevron Delo Extended Life 50/50 Pre-mix coolant (same coolant used in Volvo T-13 test) in recent tests.
- Review of the data is necessary for potential ICF update due to this alarm.
- Review held on December 2, 2024 contained tests with new coolant, new parts batches and prior parts batch.
- No convincing operational differences found in tests that used the new coolant compared to tests utilizing previous coolant.
- Statistical review of tests with new coolant shared by Todd Dvorak.
- There is a relation between oil consumption and lead. As oil consumption increases, measured lead content increases due to a higher concentration of those metals in the remaining oil volume.
- A correction formula was introduced for this only on tests with oil consumption over 65 g/hr.
- Most recent analysis accounts for bearing batch as a factor and the influence of oil consumption as a factor.
- The analysis only utilized the 4 most recent bearing batches for both main and connecting rod bearings. These include: Z/Q (current), Y/P, X/O, and W/N
- The following recommendations for Pb and Pb2 per the statisticians is as follows:
  - Pb
    - Additive ICF of 0.2336 for all tests, regardless of oil consumption level is applied to the raw lead value.
    - For tests with oil consumption greater than 65.0, an updated, multiplicative factor of 0.0332 applied to the oil consumption factor equation.
  - Pb2
    - Additive ICF of 0.4196 for all tests, regardless of oil consumption level, is applied to the raw lead 2 value.
    - For tests with oil consumption greater than 65.0, the measured oil consumption is subtracted by 65 and then is multiplied with an update value of 0.0429.
- Joseph H – Looks like the average is still low on Pb even with the proposed ICF. In the initial analysis, coolant and hardware were analyzed.
- Todd D – The oil consumption factor was not updated in the initial analysis. Looking at this analysis, there is only a small amount of change with the oil consumption factor. Also, the consensus was if coolant is really a factor is 4 data points enough? The feedback in the stats group was that we wanted to be minimalist and so we only looked at the hardware factor. If the coolant is still believed to be an influence, then we discuss that further.

**Isaac Leer motions to stop usage of Pencool in the T-12. Effective today (1/30/2025) only Chevron Delo Extended Life 50/50 Pre-mix coolant is to be used in the MACK T-12 test.**

*Joseph Hoehn seconds the motion*

Afton: Yes

Intertek: Yes

SwRI: Yes

TMC: Yes

Lubrizol: Yes

TEI: Waive

Exxon: Yes

John Deere: Yes

Infineum Yes

Vote Count: Yes (8), No (0), Waive (1)

**Motion carried**

- Previous analysis included all parts batches, not just the last 4 batches like the most recent/current analysis.
- Joseph H – If we go with today's proposal, would the industry still be in an alarm?
- David B – Unsure, it's something we would need to review.
- David B – Is there a motion for addition of new correction factors for today?
- Garrett W – We would like to see how these changes impact the industry charts before making a decision.
- TMC will put together updated charts with the 4 new ICF options for Pb and Pb2 within the next week and email them to the panel members.
- Sean M – These correction factors are only for Z/Q bearing batches correct?
- David B – Yes
- David B – We will reconvene and look for time to meet next week.

**Volvo T-13 New Reference Oil Testing Check in**

- Lab A completed their first run on January 4<sup>th</sup>.
- Lab D completed their first run in late December.
- Lab G completed their first run yesterday (1/29). Will start the 2<sup>nd</sup> run by the end of next week.
- Lab A 2<sup>nd</sup> run should complete in the next 15 days.
- Lab D to finish their 2<sup>nd</sup> run next week.
- David – When will lab G have their data reported for the 1<sup>st</sup> run?
- Garrett – Should be by end of next week (2/7)
- David – Most likely looking at early March for completion and reporting of all runs.

### **Volvo T-13 Parts Timelines**

- Liners: Batch E, 3000 received.
- Pistons: Production to begin in mid-February 2025.
- Piston pins: Production completed
- Top rings: Production to begin week 8 (February 21 2025)
- 2<sup>nd</sup> rings: Production to begin week 8 (February 21 2025)
- Oil: Production to begin week 8 (February 21 2025)
- Coordinated reference would be desired to start in March/April.
- Other parts updates:
- 231 Brazil ring sets (38 kits)
- 188 batch D liners left (31 kits)
- Should be enough parts to get us through to late March, by the time new parts arrive.

### **AOB**

- Lubrizol mentioned they received a new part number cylinder head when trying to order one utilizing the pre-existing part number.
- Heads are rebuilt every test at Lubrizol, valve seat castings and guide castings are wearing from the removal and reinstallation process.
- Lubrizol ordered a new cylinder head and a new part number head came in that has superseded the old one.
- Castings are identical, all removal components are the same part number.
- Lubrizol is ok in terms of using current heads, but mid-year to Q3 might run in to issues.
- Question raised about when it will be a good time to introduce the new cylinder heads.
- Consensus was once the new reference oil and new parts batches are introduced it would be good to discuss this topic in further depth.

### **Chairman Announcement**

- David Brass to resign as chairman of the Mack/Volvo Surveillance Panel effective today (1/30/2025)
- David thanked everyone for the opportunity to lead this panel.
- Andrew Smith will assume the role as the new chairman effective today (1/30/2025).

### **Next Meeting Date/Time**

February 4<sup>th</sup> at 2:00 PM EST

Meeting adjourned at 3:23 PM EST