MACK-Volvo Surveillance Panel Meeting Notes
02/19/2025 @ 2:00 PM EST

Attendees

SwRI: Robert Warden, Isaac Leer, Travis Kostan
Afton: Joseph Hoehn, Amanda Stone
Infineum: Andrew Smith (Chairman), Todd Dvorak
Intertek: Garrett White (Secretary), Khaled Elnagi
Lubrizol: Austin Brininger
TMC: Sean Moyer
TEI: Derek Grosch
ExxonMobil: Mike Alessi

Agenda

- Volvo T-13 New Reference Oil Testing Update
- Volvo T-13 Parts Timeline Update
- T12 ICF Discussion
- AOB

Action Items and Key Points

- All labs expect to have their 2nd and final new reference oil test runs reported to TMC in early-March for the Volvo T-13.
- Next batch T-13 liners and pistons have been delivered to TEI. Measurements to be completed within the next couple of weeks. Piston pins expected to be received this week with all rings expected to be received within the next 2 weeks. Coordinated references are expected to begin in the March-April 2025 timeframe.
- **Motion passed** to add a "CLNTID" field to the data dictionary for the MACK T-12. Field should be text with field length of 12 characters matching the existing parts batch fields. "DELO" and "Pencool" will be the appropriate entries for coolant types.
- **Motion passed** to update PB and PB2 industry correction factors to 0.4696 and 0.6079, respectively. Labs will need to resubmit all reference tests conducted on DELO coolant for recalculation of reference statuses. The updated ICF and lab SA's will apply to candidates that START on or after 2/19/25.

Summary of Discussion

Volvo T-13 New Reference Oil Testing Update

- Lab A – 2nd test complete with data submitted to TMC yesterday
- Lab B – 170 hours into 2nd run, should complete next week
- Lab D – Both runs completed, should have data reported today-tomorrow
- Lab G – Should complete 2nd run this weekend with data reported first week of March

Volvo T-13 Parts Timeline Update

- Liner batch E and piston batch A have been received by TEI
- Piston pin production has completed, should arrive this week a TEI
- Piston rings should arrive within the next couple weeks
- Coordinated references planned for March-April timeframe

MACK T-12 ICF Discussion

- February 4th meeting, SP agreed to explore PB and PB2 ICF's using the results from tests with only the new coolant (Chevron Delo 50/50 Premix) and latest hardware batch Z/Q bearings.
- The average log(DPB) is 2.6364 from the 4 runs completed on the new coolant and Z/Q bearings.
- Taking the difference of the current target for Pb and the calculated average of the 4 tests resulted in a recommended additive ICF of 0.4696 in the transformed, logarithmic space.
- The average log(DPB2) is 1.5171 from the 4 runs completed on the new coolant and Z/Q bearings.
- Taking the difference of the current target for Pb2 and the calculated average of the 4 tests resulted in a recommended additive ICF of 0.6079 in the transformed, logarithmic space.

Isaac Leer motions to add a "CLNTID" field to the data dictionary. Field should be text with field length of 12 characters matching the existing parts batch fields. "DELO" and "Pencool" will be the appropriate entries for coolant types.

Garrett White seconds the motion

Afton: Yes

Intertek: Yes

SwRI: Yes

TMC: Yes

Lubrizol: Yes

TEI: Yes

Infineum: Yes

ExxonMobil: No vote

Vote Count: Yes (7), No (0), Waive (0), No Vote (1)

Motion carried

Isaac Leer motions to update PB and PB2 industry correction factors as follows. Labs will need to resubmit all reference tests conducted on DELO coolant for recalculation of reference statuses. The updated ICF and lab SA's will apply to candidates that START on or after 2/19/25. Full details of changes are as follow:

For PB Update:

11.6.4.4 (8) For all tests run on VXYPD, VXYPE, VXYPF, and WYZQF hardware combinations with Pencool Coolant, determine the final ΔLead at EOT result by applying the correction factor calculated according to the following equations:

If 〖OC〗_(100-300)>65.0 g/hr:

〖ΔLead〗_Final= e^((0.03234(65.0- 〖OC〗_(100-300))+ln(ΔLead)))

If 〖OC〗_(100-300)<65.0 g/hr:

〖ΔLead〗_Final= ΔLead

Where:

〖ΔLead〗_Final=final ΔLead at EOT,ppm,

ΔLead =value calculated per Eq3 (11.6.4.3),ppm,and

〖OC〗_(100-300)=average oil consumption calculated in 11.6.6,g/hr

and add:

11.6.4.4 (9) For all tests run on WXYPF and WYZQF hardware combinations with DELO Coolant, determine the final ΔLead at EOT result by applying the correction factor calculated according to the following equations:

If 〖OC〗_(100-300)>65.0 g/hr:

〖ΔLead〗_Final= e^((ln〖(ΔLead)+0.03234(65.0- 〖OC〗_(100-300))+0.4696〗))

If 〖OC〗_(100-300)<65.0 g/hr:

〖ΔLead〗_Final=e^((ln(ΔLead)+0.4696))

Where:

〖ΔLead〗_Final=final ΔLead at EOT,ppm,

ΔLead =value calculated per Eq3 (11.6.4.3),ppm,and

〖OC〗_(100-300)=average oil consumption calculated in 11.6.6,g/hr

For PB2 Update:

11.6.5.1 (8) For all tests run on VXYPD, VXYPE, VXYPF, and WYZQF hardware combinations with Pencool Coolant, determine the final ΔLead (250 to 300)h result by applying the correction factor calculated according to the following equations:

If 〖OC〗_(100-300)>65.0 g/hr:

〖ΔLead(250-300)〗_Final= e^((0.04089(65.0- 〖OC〗_(100-300))+ln(〖ΔLead〗_(250-300))))

If 〖OC〗_(100-300)<65.0 g/hr:

〖ΔLead(250-300)〗_Final= ΔLead(250-300)

Where:

〖ΔLead(250-300)〗_Final=final ΔLead (250 to 300) h ,ppm,

ΔLead(250-300) =value calculated per 11.6.5,ppm,and

〖OC〗_(100-300)=average oil consumption calculated in 11.6.6,g/hr

and add:

11.6.5.1 (9) For all tests run on WXYPF and WYZQF hardware combinations with DELO Coolant, determine the final ΔLead (250 to 300)h result by applying the correction factor calculated according to the following equations:

If 〖OC〗_(100-300)>65.0 g/hr:

〖ΔLead(250-300)〗_Final= e^((0.04089(65.0- 〖OC〗_(100-300))+ln(〖ΔLead〗_(250-300))+0.6079))

If 〖OC〗_(100-300)<65.0 g/hr:

〖ΔLead(250-300)〗_Final=e^((ln(〖ΔLead〗_(250-300))+0.6079))

Where:

〖ΔLead(250-300)〗_Final=final ΔLead (250 to 300) h ,ppm,

ΔLead(250-300) =value calculated per 11.6.5,ppm,and

〖OC〗_(100-300)=average oil consumption calculated in 11.6.6,g/hr

Garrett White seconds the motion

Afton: Yes

Intertek: Yes

SwRI: Yes

TMC: Yes

Lubrizol: Yes

TEI: Yes

Infineum: Yes

ExxonMobil: No vote

Vote Count: Yes (7), No (0), Waive (0), No Vote (1)

Motion carried

AOB

None

Next Meeting Date/Time

Next meeting around mid-March.

Meeting adjourned at 2:39 PM EST