

MACK-Volvo Surveillance Panel Meeting Notes

10/25/2023 1:00 P.M. EST

Attendees

SwRI: Robert Warden, Isaac Leer, Jose Starling
Oronite: Josephine Martinez
Afton: Joseph Hoehn, Amanda Stone
Infineum: David Brass (Chairman), Elisa Santos, Jacob Goodale
Intertek: Garrett White (Secretary), Khaled Elnagi
Lubrizol: Austin Brininger
CP Chem:
Haltermann:
Exxon Mobil: Paul Rubas, Steve Jetter
TMC: Sean Moyer
TEI: Derek Grosch
Ford:
Volvo:

Agenda

1. Volvo T-13 Reference Oil Decision
2. MACK T-11 Parts Approval
3. Volvo T-13 Bearings
4. MACK T-11 / T-12 Coolant
5. AOB

Action Items and Key Points

- **Motion passed** to choose the oil from supplier A, with technology 2 (2A) with an HTHS that meets the FA-4 requirements as the T-13 reference oil for PC-12.
- **Motion passed** to approve of the new parts batch YYYYFZQWB, with random subgroup F batch parts, excluding subgroup A, for use in the T-11. T-11 tests can be conducted on parts without requiring additional referencing. Standard reference periods can be maintained.
- **Motion passed** to allow use of Delo Extended Life 50/50 coolant (T-13 coolant) in the MACK T-11 test. The same coolant must be maintained through the reference period.

Summary of Discussion

Volvo T-13 Reference Oil Decision

- T-13 test results from 2 different suppliers, with 3 different technologies were reviewed.
- Supplier A provided data from 5 oils.
 - Oils 1A and 1B are slight modifications of one another and both are 5W-30 with HTHS within the FA-4 requirements.
 - Oils 1A and 1B produced FTIR results of 80 and 96.4 while KV40 results were 22.8 and 39.8, respectively.
 - 2A, 2B and 2C are also from supplier A, all three are 10W-30 and are above the HTHS max limit for FA-4.
 - The results for 2A, 2B and 2C ranged as follows: FTIR 77.2-87.6, %KV40 24.2-32.2
 - Oils 2A, 2B and 2C can be blended to have HTHS that meets FA-4 requirements.
- Supplier B provided test results from two oils, oil A and oil C.
 - Oil A was a 5W-30 however it did not meet the HTHS requirements for FA-4 and oil B was a 10W-40.
 - The results of oil A were FTIR = 81.0 and %KV40 = 24.6.
 - The results of oil B were FTIR = 79.5 and %KV40 = 26.9.
- The current reference oil is group 2 base stock, 10W-30 that meets HTHS requirements for FA-4.

David Brass motions to choose supplier A, oil with technology 2 (oil 2A) to be blended having an HTHS that meets the FA-4 requirements.

Robert Warden - Seconded motion

No objections to this motion were noted.

TMC: Waives

Blanket Vote Count: Yes (8), No (0), Abstain (1), No Answer (4)

Motion carried

MACK T-11 Parts Approval

- Motion carried in the meeting held on September 8th, 2023 that parts combination YYYYFZQWB, where piston crown is batch F with random subgroup excluding subgroup A, were approved for T-12 but not for T-11 in September 2023.
 - Y = Top Ring, Y = Second Ring, Y = Oil Ring, F = Piston Crown, Z = Connecting Rod Bearing, Q = Main Bearing, W = Liner, B = Piston Skirt

David Brass motions to approve of the new parts combination YYYYFZQWB, with random subgroup F batch parts, excluding subgroup A, for use in the T-11. T-11 tests can be conducted on parts without requiring additional referencing. Standard reference periods can be maintained.

Austin Brininger - Seconded motion

No objections to this motion were noted.

Blanket Vote Count: Yes (9), No (0), Abstain (0), No Answer (4)

Motion carried

Volvo T-13 Bearings

- Lab A received connecting rod bearings with a different surface coating which have part number 23994963. TEI confirmed there are 3000 sets of original bearings which are part number 21610676.
- The rod bearings with the red coating are to be exchanged with TEI for bearings with part number 21610676.

MACK T-11 / T-12 Coolant

- Producer of Pencool 3000 (The Penray Companies, Inc.) has discontinued this coolant.
- Pencool 3000 coolant is specified in the test procedures for the T-11 and T-12.
- Lab A completed a T-11 reference test on Delo Extended Life 50/50 Pre-mix coolant. This is the same coolant used in the Volvo T-13 test.
- David Brass - Does a motion need to be made to allow lab A's stand to calibrate for T-11?
- Sean – Yes
- Isaac shared a soot versus viscosity increase plot of this T-11 reference run on the Delo coolant.
- Garrett – Were similar timing values used for soot generation?
- Isaac – Similar to our recent references.
- Sean – Panel would need to motion to approve the use of an alternate coolant.
- Jacob – It might be good to reserve all Pencool 3000 for the T-12 and allow the DELO to be used for the T-11.
- David to send a note to Volvo to see if the Delo Extended Life 50/50 coolant is OK for use in older engines.
- David – I ask that labs check their inventory of Pencool 3000 to ensure they have enough to reach the end of their T-12 reference periods.

Sean Moyer motions that the T-11 is allowed to use Delo Extended Life 50/50 coolant (T-13 coolant). The same coolant must be maintained through the reference period.

Robert Warden - Seconded motion

No objections to this motion were noted.

Blanket Vote Count: Yes (9), No (0), Abstain (0), No Answer (4)

Motion carried

AOB

None

Next Meeting Date/Time

Next meeting date: TBD

Meeting adjourned 10/25/2023 1:59 PM EST