

MACK-Volvo Surveillance Panel Meeting Notes

06/02/2021 @ 10:30 A.M. EST

Attendees

SwRI: Isaac Leer, Michael Lochte, Robert (Bob) Warden, Jose Starling, Travis Kostan
Oronite: David Lee, Josephine Martinez
Afton: Christian Porter, Todd Dvorak
Infineum: David Brass (Chairman), Elisa Santos, Jim Gutzwiller
Intertek: Garrett White (Secretary), Khaled Elnagi, Martin Chadwick
Lubrizol: Jim Matasic, Nick Ariemma
CP Chem: Jon VanScoyoc
Haltermann: Prasad Tumati
Exxon Mobil: Paul Rubas, Steve Jetter
TMC: Sean Moyer
TEI: Derek Grosch
Volvo: Patrick Holmes

Agenda

1. Meeting Platform (Switch to MS Teams)
2. Volvo T-13 Back-Order Parts Update
3. MACK T-12 Reference Test Update
4. MACK T-12 Parts Understanding
5. Volvo T-13 Alternative Fuel Procedure

Action Items and Key Points

- Patrick Holmes to follow up internally on the backlog of non-kit parts for the T-13 engine (MP8).
- SwRI completed their T-12 coordinated reference run. Phase 1 oil consumption average finished at 31.2 g/hr and phase 2 oil consumption average finished at 96.7 g/hr. Intertek is halfway through phase 2. Phase 1 oil consumption average completed at 22.5 g/hr and phase 2 average is currently at 90.7 g/hr. Afton and Lubrizol are projected to begin their runs within a week from today.
- Intertek's 3D imaging data of batch F piston crowns was forwarded by Derek to the manufacturer. **No response yet, Derek to follow up on this.**
- Volvo T-13 alternative fuel supplier operational data requirements were modified by removing the average front and rear pre turbo exhaust temperatures and using tailpipe temperature instead. The range of acceptance for tailpipe temperature will be ± 15.0 °C relative to the initial test with approved fuel.

- **Motion passed** to allow for vote by email ballot for approval of the T-13 Alternative Fuel Supplier Requirements document contingent on the changes of the operational data tables. The changes include removing average pre turbo front and rear exhaust temperature and using tailpipe temperature with a range of acceptance of ± 15 °C from the initial test with approved fuel.

Summary of Discussion

Meeting Platform (Switch to MS Teams)

- TMC notified the panel that there is a chance they will not be able to use WebEx soon for the panel meetings.
- David – The next potential platform to use for meetings is Microsoft Teams. Are there any concerns with using this platform?
- Bob W. – Is there a call-in number available for meetings using Teams?
- David – Not sure, we will need to check to see if this function is available.
- Next meeting will still utilize WebEx.

Volvo T-13 Back-Order Parts Update

- Christian provided a list of part numbers to Patrick Holmes that are currently on back order according to Afton's local parts supplier.
- Patrick – I will follow up and see where those things stand.
- Christian – The timeline of the backorder is very long and concerning and could put the labs in a bad position.
- The parts currently on back order include the following: connecting rods, coolant pipe, water pump, rear main seal, outer valve springs, inner valve springs, exhaust valves and intake valves.
- David – Any other labs ran into this issue?
- Lubrizol nor Intertek have experienced this issue.

MACK T-12 Reference Test Update

- SwRI completed and reported their coordinated reference run on the new hardware with Batch F subgroup E piston crowns.
 - Phase 1 OC average = 31.2 g/hr ; Phase 2 OC average = 96.7 g/hr
- David – Where are the other labs currently at in their references?
- Garrett – Intertek is currently halfway through phase 2. Phase 1 average oil consumption was 22.5 g/hr. Phase 2 oil consumption average currently at 90.7 g/hr. Test should complete this weekend.
- Lubrizol is projected to begin their reference tomorrow morning (6/3) and Afton will start on Monday of next week.
- Historical data of previous T-12 references was reviewed. Oil consumption in the current reference runs is slightly elevated when compared to older runs. Delta lead severity following the increase in oil consumption rate.
- Garrett – When did SwRI run out of oil in the external bucket?
- Isaac – 250 hours
- Bob W. – Will we use parts acceptance date or EOT date of references to determine the start of the calibration periods?

- Sean – Panels typically make that decision through a motion. It has varied in the past between panels.
- David – We will include this in the motion that will be used to approve the new hardware.

MACK T-12 Parts Understanding

- 3D imaging data of the new T-11/T-12 piston crowns from Intertek was provided to TEI.
- TEI forwarded data to the manufacturer but has not heard back.
- **Derek to follow up with the manufacturer.**

Volvo T-13 Alternative Fuel Procedure

- Format updated to reflect the one used for the T8 alternative fuel supplier criteria document. This includes paragraph numbering and word changes (i.e. “will” changing to “shall”)
- Calibration oil 823 to be used, or subsequent approved oil blends.
- Operational data plots were updated to include data from Intertek and Lubrizol.
- Operational parameter averages plotted are: Average torque, tailpipe temperature, front and rear exhaust temperature, intake CO2 and exhaust CO2.
- Christian – Could we use average tailpipe temperature and remove the front and rear exhaust pre turbo? The location where tailpipe temperature should be measured is called out in procedure and should be more consistent.
- David – Should we remove the average front and rear pre-turbo exhaust temperature requirement and use tailpipe temperature? A suitable range for tailpipe temperature would be ± 15 °C according to the data plots.
- Average front and rear exhaust temperature were removed, and tailpipe temperature put in its place, tests on new fuel must be ± 15 °C of initial test on approved fuel.
- Garrett – For negative QI tests will engineering reviews be allowed?
- David – It would be better to have the panel review this special case.
- Martin – Is there a line that allows for further review or re-run of a test if the requirements are not met?
- David – Yes, AX3.3.
 - Paragraph AX3.3 allows for petitions to the panel in the event a fuel fails to meet the requirements. It will be left to the discretion of the panel members to determine whether a fuel is accepted or not in this case.
- David – Any other operational parameters to be added into this?
- No other operational parameters were added.

David - Motion to use email ballot for approval of the Volvo T-13 fuel requirement procedure by email ballot, contingent on the changes of the table for operational parameter requirements.

Garrett White seconded the motion.

Opposed: None

Waive: None

Motion carried.

- David – Is a 3-week time frame enough for review and voting?
- Afton and Lubrizol confirmed this should be enough time.
- David - June 18th is when ballots will be due. I will send out an email after the final edits have been made.
- Only one vote/response from each company is needed.

Meeting adjourned: 11:22 AM EST

Next Meeting Date/Time

June 30th, 10:00 -12:00 AM EST