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Services Inc.; Butler, Shayna D

**Subject:** Mack Surveillance Panel Meeting Minutes - Monday, February 25, 2019

**Date:** Monday, February 25, 2019 15:17:25

Attachments: MAHLE 19R-04-14 (003).pdf

#### Everyone,

The following are the unconfirmed minutes of the Mack Surveillance Panel Meeting held on Monday, February 25, 2019. The meeting was conducted by WebEx. Please feel free to let me know if there are any changes or revisions needed. Members should check for any follow-ups or actions. Thank you.

### **Participants:**

Afton - Christian Porter, Abaigeal Ritzenthaler

ExxonMobil – Cliff Salvesen

Haltermann – Prasad Tumati

Infineum – Bob Salgueiro (Secretary), Elisa Santos, Jim Gutzwiller

Intertek – Jim Moritz, Juan Veja

Lubrizol – Jim Matasic

Oronite – Mark Cooper (Chairman), Jo Martinez

SwRI – Bob Warden, Jim McCord, Travis Kostan

TEI - Derek Grosch, Mark Sutherland

TMC – Sean Moyer

Volvo – Patrick Holmes

### Regrets:

Afton - Bob Campbell ExxonMobil – Shayna Butler Lubrizol – Kevin O'Malley

# **Mack Surveillance Panel Meeting**

The Mack Surveillance Panel meeting was called to order just after 2:04 PM Eastern, by Mark Cooper, Chairman of the Mack Surveillance Panel.

The agenda topics are listed below, with discussions and actions following.

## Agenda Topics in Bold Below, with discussion notes and actions following:

• Volvo T-13 Bearings and Liners Update Discussion

The rough surface appearing T-13 Connecting Rod bearings were reviewed by the right folks at MAHLE (analysis attached) and they did agree with the analysis Volvo had provided and indicated these parts should have been sorted at the manufacturing facility and rejected as out-of-spec. The nodules are in the Ni layer and some are subsurface, not visible to the naked eye, suggesting that as soon as tin flashing is gone through, the crank journal could hit the nodules.

- SwRI had volunteered to run a calibration test on the new liners and with a set of the roughest connecting rod bearings TEI could find, to test their impact. SwRI had spun over their engine by hand a few times and then rechecked one of the rough bearings and it appeared to have smoothed out. However, SwRI opted not to fire the engine after the feedback from MAHLE through TEI about the bearings being out of spec.
  - IAR had volunteered to run a calibration test with new liners but with smooth bearings so results could be compared to SwRI's "rough bearing" calibration test. IAR also did not start their test after the input from MAHLE through TEI was received.
- Based on the input from TEI that MAHLE would consider these bearings are out of spec, the Mack Surveillance Panel agreed to wait until a new batch of T-13 con rod bearings is available from the supplier before proceeding with T-13 calibration tests.
- TEI is working with Volvo on obtaining T-13 con rod replacement bearings. TEI will send the new bearings to Intertek and SwRI once available. TEI waiting to hear from MAHLE on timing to receive new bearings.
  - ACTION: Volvo to follow up with MAHLE on how quickly a replacement batch of bearings can be provided to TEI.
- Mark will review test unavailability requirements and communicate to them to the Surveillance Panel to determine if the criteria for the T-13 being unavailable are met or not. Mark will share both the API and ASTM definitions of test unavailability as they are different. API's view is if test not available at independent labs, then test is unavailable. ASTM only if test is unavailable at ANY lab, then is a test unavailable. Currently, Lz still does have old T-13 hardware. The timeframe for resolving the bearing issue is unclear at this point. Mark will reach out to API to notify them of the status of the T-13 and how long it's been down. Mark will also reach out to ASTM for some clarification on some of the aspects of the process for determining if a test is unavailable and who to communicate to and by when.

## • Oil Filter Housing for Older Mack Tests

Mack no longer makes the current style oil filter housing, 27GB525M2. TEI needs to restock with the new style, 27GB332-M2, which has not yet been approved. There were some questions about flow through the centrifugal filter and centrifugal filter speed when the issue was originally brought up.

- Key difference was there is no boss for a secondary support bracket. Centrifugal filter speed was to be confirmed to determine how much flow goes through the centrifugal filter. There are 2 housings, one has an internal bypass relief valve and the other has an external bypass relief valve. Intertek had tested the housing with the external relief valve 27GB332-M2 and got some thermocouple data on it. Even if the filter speed is different between the new and old housing, there are no alternatives so it was suggested we just use the hardware we have available. TEI agreed they can buy enough to last the life of the test. To change this part, would require a motion because the part number is listed in the test procedure.
- MOTION: Jim Moritz motioned and Bob Warden seconded to switch to the oil filter housing

in Mack test procedures from the original style, part number 27GB525M2 to the new style with the external bypass, part number 27GB332-M2.

Hearing no objections and no waives, the motion carried.

## • Mack T-11 and T-12 parts supply Update

- TEI announced plans to buy enough liners, plus all other parts for the T-11/T-12, to last the remaining life of the tests. The only exception is piston top rings which TEI is checking on with MAHLE. TEI has about 1000 top rings in stock so about 3 years worth. Eventually, all parts will get a batch. Since the top ring is critical to liner wear in the T-12, coordinated reference testing may be needed when the next batch of top rings are brought in.
- **Next Meeting:** Mack will cancel the Mar 13<sup>th</sup> meeting since SwRI and Intertek are not running this batch of T-13 con rod bearings.

The Mack Surveillance Panel adjourned at 2:43 PM

Respectfully submitted, **Bob Salgueiro** 

Mack Surveillance Panel Secretary

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