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Services Inc., Butler, Shayna D

Subject: Mack Surveillance Panel Meeting Minutes - Thursday, January 31, 2019

Date: Thursday, January 31, 2019 17:55:43

Everyone,

The following are the unconfirmed minutes of the Mack Surveillance Panel Meeting held on Thursday, January 31, 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, Bob Campbell

ExxonMobil – Cliff Salvasen

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

TEI - Derek Grosch, Mark Sutherland

TMC – Sean Moyer

Regrets:

Volvo – Patrick Holmes

Mack Surveillance Panel Meeting

The Mack Surveillance Panel meeting was called to order just after 2:00 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:

Mack T-11 & T-12 Liners

• Federal Mogul recently shared that they are planning to repurpose the machine used to hone the liners for the Mack T-11 and Mack T-12 engine tests. They are willing to produce one final batch for the industry, to last the life of the Mack T-11 and T12 tests, but they need to know

how many liners they need to make.

- There was a lengthy discussion around how best to proceed in which the following was considered.
 - Parts usage: In March there were 51 blocks available. Initially it was thought that blocks would be an issue, but usage rate is low. There are no other critical parts for T-11 or T-12 limiting availability at this time. There are 360 V batch liners which equates to about 60 Mack T-11 and T-12 builds.
 - Category timing: How long will API CK-4 last, 10 years? The next category development could arrive around the 2025 timeframe.
 - Alternative suppliers: TEI tried 3rd party liners before but it didn't work out so it is possible to use a 3rd party but risky.
 - TEI Purchase plan: Last time TEI ordered, they estimated a 10% reject rate and still bought 20% more just in case. TEI would use the same plan for this order. Batch U liners won't be in the new cost model. Recall that 2000 Batch U liners were purchased but deemed unusable and that cost was ultimately amortized over the next set of rebuild kits but that added cost will be removed from the kit cost going forward. If the batch size is large, a prepayment from the labs may be needed. TEI will advise.
- Eventually the Surveillance Panel agreed it needs direction from API (DEOAP & EOLCS), ASTM,
 ACC, ACEA, EMA, and Volvo, in a time sensitive manner, on what year they feel the T-11 and T-12 needs to be supported until.
- The surveillance panel agreed upon the following actions:
 - **ACTION:** Test Labs will estimate usage rates and provide annualized T-11/T-12 liner needs to TEI, no later than the 17th of Feb, but preferably earlier!
 - **ACTION:** TEI will ask for 2 weeks (Feb 18th) for them to get an answer to Federal Mogul on how many liners they need to make for this final batch.
 - **ACTION:** Mack Surveillance Panel Chair will send an letter to the various trade organizations above notifying them that at the current rate of usage, the Mack T-11 and T-12 liner batch will last until mid-2020. If they wish the Mack T-11 and T-12 to be available for longer, they need to advise until what year those tests should be supported. Also, Volvo will be notified directly by the Chair advising them of the recommended course of action by the Mack Surveillance Panel.

• Volvo T-13 Bearings and Liners Update Discussion

- Open actions were reviewed:
 - **ACTION:** Volvo will check on the status of the replacement 200 sets of con rod bearing kits (this is about equal to 33 T-13 tests).
 - **ACTION:** Volvo to check if there was any design changes to, or manufacturing process change of, the T-13 liner with the change in supplier.
 - **ACTION:** Volvo will follow up with MAHLE, to make sure there's no risk of damaging the engine by running these con rod bearings with surface roughness, and advise on how soon MAHLE can respond to the SP.
 - TEI provided an update they received from Volvo. One of the engineers at MAHLE did analysis on con rod bearings, but their analysis did not align with Volvo's conclusions. Volvo is investigating further.

ACTION: Mack Surveillance Panel Chair and TEI will follow up and request a follow up response from Volvo on the open actions above.

- Another discussion began regarding the availability status of the Volvo T-13 and the test labs calibration periods if the industry was waiting on parts availability. Whether the current circumstances met the intended definition in the Volvo T-13 procedure of "an industry wide parts shortage" or not was debated.
 - Not all labs are out of Volvo T-13 hardware but the independents are. TEI believed they could order more con rod bearings but to expect a high rejection rate. TEI had liners, but they are just a new batch. The Surveillance Panel was still unable to make decisions on how to proceed pending additional information from Volvo and the supplier.
 - TMC confirmed they are unable to "pause" or "hold" calibration periods. Unused time on calibration periods could be added back once coordinated references are completed. The surveillance panel could vote to adjust calibration periods within the provisions of the Volvo T-13 procedure.
 - Jim Moritz motioned and Bob Warden seconded that the Mack Surveillance Panel directs TMC to adjust calibration periods for the Volvo T-13 as of the day the lab ran out of parts, due to hardware unavailability specifically the connecting rod bearings.
 - Motion Discussion: The intention of the motion is for those labs who ran out of hardware, they start banking unused calibration period and it gets added back to next calibration period. Since the parts running out were not the fault of the labs, the calibration periods should be adjusted for those labs which were affected. The Volvo T-13 procedure says for industry wide parts shortages, the Mack Surveillance Panel may direct TMC to adjust calibration periods. This is an industry wide shortage because no labs can re-order parts. TMC's input was they would not adjust calibration periods under these circumstances. With no further discussion the motion was put to a vote.
 - Mack Surveillance Panel Voted:
 - 1. Opposed TMC
 - 2. Waives None
 - 3. Having nether opposed nor waived, it was assumed the remaining Mack Surveillance Panel Members were in agreement with the motion.
 - 4. The Motion Carries
- The Mack Surveillance Panel will meet next week after to continue working to resolve the above issues.
- Next Meeting: Wednesday Feb 6th at 2:00 3:30 PM Eastern

The Mack Surveillance Panel adjourned at 3:17 PM

Respectfully submitted, **Bob Salgueiro**Mack Surveillance Panel Secretary

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