

Jeff Clark

From: Fetterman, Pat [Glen.Fetterman@Infineum.com]
Sent: Monday, July 15, 2013 3:24 PM
To: Cooper, Mark (MAWC); Alessi, Michael (michael.l.alessi@exxonmobil.com); Athey, Allison; Berman, David (bermadl@cpchem.com); Bishop, Zack; Boese, Doyle; Campbell, Bob (Bob.Campbell@AftonChemical.com); Carter, Brad (bradley.carter@intertek.com); Castanien, Chris (chris.castanien@lubrizol.com); Cauley, Chris; Jeff Clark; Conti, Ricardo (riccardo.conti@exxonmobil.com); Rich Grundza; Gutzwiller, James; Johnson, Kurt D. [kurt.johnson@swri.org]; Kennedy, Steve (steven.kennedy@exxonmobil.com); Matasic, Jim (james.matasic@lubrizol.com); Moritz, Jim (Intertek); Sean A. Moyer; Richards, Scott M. (srichards) (SwRI); Ritchie, Andrew; Rutherford, Jim (JARU); Salgueiro, Bob; Santos, Elisa; Secue, Nick (Nicholas.Secue@Lubrizol.com); Shank, Greg (greg.shank@volvo.com); Sutherland, Mark [msutherland@tei-net.com]; VanScoyoc, Jonathan (vanscj@cpchem.com); Warden, Robert W. (robert.warden@swri.org)
Subject: RE: July 15th - Mack Surveillance Panel Telecon minutes.

Participants –

Mike Alessi; Allison Athey; Zack Bishop; Bob Campbell; Chris Castanien; Chris Cauley; Jeff Clark; Mark Cooper; Pat Fetterman; Jim Gutzwiller; Kurt Johnson; Rick Klein; Jim Matasic; Jim McGeehan; Jim Moritz; Sean Moyer; Allison Rajakumar; Bob Salgueiro; Elisa Santos; Nick Secue; Greg Shank; Mark Sutherland; Bob Warden; Brian Zhu

Unconfirmed Minutes –

The meeting was called to order by the Chairman, Mark Cooper a few minutes after 11 am EDT. Mark apologized for the last minute cancellation of the face to face meetings last week and he indicated that the main topic for this call was to address potential industry correction factors for the use of UUXO hardware in the T-12 test.

There was a brief discussion whether this action was appropriate given the data in hand and on-going investigations into the piston and ring hardware. Greg Shank summed up the test sponsor's position that the test is "better", but certainly not where we want it to be. However, we need to keep the test available for use while we try to improve it even more. There was an extensive discussion of the observed variations in the currently available pistons, and Bob Campbell expressed a concern that the very high levels of oil consumption could lead to running the oil level so low that the engine might uncover the oil pick-up tube and suck air. This discussion morphed into a concern over the potential impact of the recent UUXO results on lab severity adjustments, and it was noted that the panel could choose to "freeze" the lab SA's until we collect additional data.

Brian Zhu indicated that the piston supplier could slightly tighten two areas of the piston manufacturing tolerances. Then can reduce the top ring groove included angle by 2 minutes and 30 seconds, and they can reduce the height of the oil ring groove by 5 microns. Bob Campbell asked how long would it take to get new pistons made using the micro-alloy material, and Brian replied that the issue is the lead time for forging, but he estimated 3 to 4 months total time to produce the finished pistons. Staying with the 4140 forging would shave about a month from that timing.

Jim McGeehan noted that he had authored an SAE paper which addressed a wide range of hardware issues which can impact oil consumption, and Mark Cooper agreed to send the paper to all Panel members. (Done)

Following a discussion regarding potential ways forward, Greg Shank made the following motion:

Move to use the four labs with run 91078 correction factors from Jim Rutherford's presentation, and continue with the current lab severity adjustments calculated before the TUXO and UUXO calibration runs. Pat Fetterman seconded the motion which passed with no dissent, but with the TMC recording a waive.

Following a discussion of which pistons to use going forward, TEI was asked to select "aftermarket" pistons which have a "rounded" piston bowl. Mark Sutherland indicated this will be done, but the selection process will add a few days to the shipping time.

There was a brief discussion of a T-11 at SwRI which just completed with good oil consumption control and apparently good overall results. Data needs to be submitted to the TMC, and the group will address next steps at a separate conference call.

Sean Moyer noted that he needs to have the UUXO test results re-submitted with the appropriate lab CF's applied.

Following another brief discussion, the group offered no dissent on moving forward with an order for a batch of micro-alloy piston forgings.

Greg wants to discuss on any discussion of possible ring issues until after we have settled all piston issues.

The next meeting will be another teleconference at 11 am EDT on Monday, July 22, 2013.

The meeting was adjourned shortly after 12:30 pm.

Respectfully Submitted,

Pat

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