

DD13 Surveillance Panel Teleconference Meeting Minutes

April 13, 2017

11:00 AM CST

Call Participants:

Lubrizol - Patrick Joyce, John Loop
Southwest Research Institute – Jose Starling
Intertek - Jacob Goodale
Daimler - Suzanne Neal
Infineum - Jim Gutzwiller, Elisa Santos, David Brass, Nancy Diggs
Oronite - Mark Cooper
TEI - Mark Sutherland
Evonik - Don Smolenski
Afton – Bob Campbell

Approval of last meeting's minutes

Reports

Parts Update – Mark Sutherland

TEI is in process of returning the first batch of liners received back to Detroit. Detroit is expected to have second batch completed in mid May which doesn't include all measurements or shipping. So likely expect Liners at TEI around June/July. A more accurate update will be given in our next meeting.

Jose will work with TEI to develop a list which shows approximate date when critical hardware changed and approximate kit number. This list will be sent out to the panel for review and then posted to the TMC site as a critical parts list change.

Unfinished Business

Reference test severity – Surveillance Panel

Discussion on how to proceed with the recent change in severity on reference tests took place. The current agreement is that it is best to wait till we have the new batch of liners and we will run a set of coordinated reference runs. The attached design of experiment outline was created during the meeting to help aid in the decision making process of how these upcoming coordinated reference runs should be conducted. It also helps identify the hardware which is being referred to as matrix, middle and new hardware.

New Business

Oil Ring Part Numbers – Labs

Only one of the reference runs that showed mild results was run on the new oil control rings (A471 1118 001) and was conducted at Intertek. The remaining of the mild runs both at Intertek and Lubrizol were run on the old rings (A471 0818 001). Southwest also verified that their most recent reference runs were conducted using the old oil control rings.

The difference between the old and new oil control ring (with part numbers detailed in the section above) are stated to be very similar. The ring body, material, coating and shape is the same, the tension is the same around 1.4 mPa nominal. The spring shape is slightly different and longer which helps it sit

better in the body as stated by Detroit. TEI compared around 200 old and new oil control rings and there was only about 1 N difference as stated by TEI.

Piston Ring Batch Consistency Analysis – Mark Cooper

Comparison of the top rings from batch A and batch B was conducted. They also analyzed the second and oil control rings which were not batched at the time, only labeled as PNB. Mark's presentation is attached, but overall conclusion shows that metallurgy is the "same" and no major difference found.

ASTM Procedure Correction – Jacob Goodale

On the official ASTM D8074-16 procedure for this test Table A6.1 on page 43 shows the break-in time as 20:00 hours. It was pointed out that this should be listed as 00:15 Hrs (or 15 minutes). It was verified that all labs had been running 15 minute "Break-in" portions.

Build Workshop Dates – Patrick Joyce

The DD13 build workshop hosted by Lubrizol is tentatively scheduled for June 21st – June 23rd 2017. The below is a preliminary agenda but may will likely change slightly. Patrick Joyce will send an official invite for the build workshop to all Surveillance Panel members and a call in number provided for the SP meeting portion during the workshop.

- **Agenda for Build Workshop**
 - **Wednesday, June 21st**
 - 8:30 am - 9:00 am: Arrive at LZ
 - 9:00 am - 10:00 am: Stand Visit
 - 10:00 am - Noon: Follow Build
 - Noon - 1:00 pm: Lunch
 - 1:00 pm - 4:00 pm: Follow Build
 - **Thursday, June 22nd**
 - 8:30 am - 9:00 am: Arrive at LZ
 - 9:00 am - Noon: Follow Build
 - Noon - 1:00 pm: Lunch
 - 1:00 pm - 4:00 pm: (Tentative) Surveillance Panel Meeting
 - **Friday, June 23rd**
 - 8:30 am - 9:00 am: Arrive at LZ
 - 9:00 am - Noon: Follow Build
 - 12:00 - 1:00 pm: Lunch
 - 1:00 pm: Depart LZ

Next Meeting

Next meeting is scheduled for June 19th 2017 at 11:00 A.M. CST.