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Subject: Unconfirmed Minutes of the September 4, 2014 Meeting of the Mack Surveillance Panel
Date: Friday, September 05, 2014 1:48:00 PM
Attachments: [Mack CPD Report T8-T11-T12 9-3-2014.pptx](#)
[Intake Valves July 14.pdf](#)

Here are the minutes from the September 4, 2014 Mack Surveillance Panel meeting.

The valve metallurgy report that was provided by SwRI is also attached.

Thanks.

Mark

From: Fetterman, Pat [mailto:Glen.Fetterman@Infineum.com]
Sent: Thursday, September 04, 2014 8:29 PM
To: Cooper, Mark (MAWC)
Subject: Unconfirmed Minutes of the September 4, 2014 Meeting of the Mack Surveillance Panel

Unconfirmed Minutes of the September 4, 2014 Meeting of the Mack Surveillance Panel at the ExxonMobil Research Center in Paulsboro, NJ.

Participants –

In meeting – Mark Cooper, Chairman; Pat Fetterman, Secretary pro-temp; Greg Shank; Michael Conrad; Kevin O’Malley; Mike Alessi; Bob Campbell; Christian Porter; Jim Matasic; Jim Rutherford; Riccardo Conti; Mrugesh Patel; Sarah Parker; Jim Moritz; Jose Starling Bob Warden; Mark Sutherland; Sean Moyer
On Phone – Jim Gutzwiller; Elisa Santos

Call to Order –

The meeting was called to order at 8:35 am by the Chairman, Mark Cooper, and Mark immediately asked Mark Sutherland to give the CPD report.

CPD Report –

Mark Sutherland reviewed the CPD Report shown in the attachment above. Comments during report:

*) A new batch of T-11/T-12 rings from Federal Mogul is due soon – will be identified as “Batch V”. Ring technology is representative of ~70% of trucks from the E7 era. Surface is electroplated rather than Plasma-sprayed for better consistency, and the crown peak is

targeted toward the high end of spec and centered on the ring face.

First batch will be 250 rings, and the timing for a second larger batch is on the order of six weeks.

There is no batch code for second or oil rings.

SwRI will start a T-12 build for calibration testing as soon as both the Batch V rings and Batch A piston crowns are available.

*) TEI has ~2500 Batch T liners in stock. These are currently only used for T-8 testing. What to do with excess stock to reduce cost of annual property tax? Question left open.

*) TEI has been weighing rod bearings and rings, but has never rejected any parts for this parameter. Can this step be eliminated? Group consensus – YES,

*) All parts have both Kit number and Part number. Can the kit number be eliminated? Group consensus – for now, NO.

*) TEI has seen significant price increases from Volvo, so a future test hardware price increase from TEI is likely. E.G. T-8 Head has gone from \$1000 to \$1800, and Valve Yokes have gone from \$15 to \$85.

*) Mark reviewed overall parts availability as shown in report.

Plan to introduce Batch V rings -

SwRI will run a T-12 calibration test with new rings and piston crowns. EOT results will be reviewed, and if the data look reasonable, all other labs will run a reference test with the new hardware. Once new hardware is accepted, all candidate testing will switch to new hardware.

Motions –

Jim Moritz moved and Bob Warden seconded that – Labs may request calibration extensions so they can reference using new hardware. Pending acceptable reference results at SwRI, all other labs must reference with Batch V rings and Batch A piston Crowns with a test start no later than November 1, 2104.

Motion passed with no dissent.

Mark Sutherland moved and Bob Campbell seconded that – A piston Crown identifier will be added to the end of a cylinder kit ID.

Motion passed with no dissent.

Discussion –

Following a lengthy discussion of “how to”, Jeff Clark suggested the following route forward – Jim Rutherford to send his spread sheet to all labs, and each lab will extract their hardware codes identified by “Test Key” and re-submit their certified data set with explicit instructions to modify the TMC data base to TMC. In turn, the TMC will modify their data base. The code pattern is to be – Liners/Rings/Rods/Mains/Pistons for a five letter code.

Motion-

Bob Campbell moved and Jim Matasic seconded that – Add three fields of hardware batch identifiers for Pistons, Top Rings and Liners to Form 14 and move Rod and Main Bearing batch identifier fields to Form 14.

Motion passed with (8) affirmative; (0) negative and (1) waive.

Mark Sutherland will review TEI identifiers at our next meeting.

Hardware Issues –

Valves –

Intertek has had a recent valve failure.

Labs are seeing differences in valve guide hardness that are “tearing up” reaming tools. Labs are requested to send examples of “hard” guides to Volvo for analysis. Lubrizol was seeing valve sticking in a fresh head build, and they changed guides which eliminated the problem.

Labs have not changed their head building process in 15 years, so this should not contribute to breaking issue.

TEI has identified an aftermarket valve supplier, and SwRI has samples which they will run in a future test. Microscopic examination shows that aftermarket valves have fewer carbide inclusions.

Mack/Volvo has no issue with testing the aftermarket valves, and Bob Warden suggested that, perhaps, they should use them in a T-11 test to get more hours of experience with them.

If any other labs want to try aftermarket valves, contact TEI.

Rods and Rod Bearings –

SwRI has been screening rod bearings which seem to have eliminated issues they were seeing.

TEI is screening rods and they have been rejecting ~1/2 for issues including – bad small end bushing, offset rod/bearing caps, rust, twist and bending.

Oil filter housing –

Jim Moritz reviewed pix of a T-8 oil filter/centrifuge housing installed on a T-12, and noted that Intertek was able to run for a few hours with no issues.

Bob Campbell noted that we should check centrifuge speed, and offered to do so on one of Afton’s T-11 engines.

T-12 Test Fuel –

There is a need to replace the SLBOCLE lubricity requirement with an HFRR limit. Greg Shank suggested that the HFRR limit should be 460 microns max in line with EMA guidelines.

Jim Moritz check a random C of A from the fuel supplier, and the HFRR result was 364 microns, well below the suggested limit.

Mark Cooper will check with the fuel supplier to see if their records can confirm acceptability of a 460 micron limit, and Jim Moritz noted that we must also change the T-12 test report fuel inspection data.

Any Other Business –

Greg Shank asked about a possible T-11 to T-8 correlation, but the group seemed to lack the energy to work on the issue.

Next Meeting –

Desire is to have a Cummins Surveillance Panel/ Mack Surveillance Panel/Mack T-13 face to face meeting in San Antonio somewhere around the timing of the middle of the T-13 matrix testing.

An exact date was not set.

Adjournment-

The meeting was adjourned at 11:40 am.

Respectfully submitted,

Pat Fetterman, Secretary pro-temp.

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