

Mack Surveillance Panel

Thursday February 21, 2013
10:30 a.m. – 12:00 p.m. Eastern Time

Dial-in number:

877-344-4239

Passcode:

133378#

Mack Surveillance Panel Meeting Notes

The teleconference convened at 10:30 a.m. Eastern time, with Mark Cooper as Surveillance Panel Chair.

Membership / Attendance

Mark Cooper

Jim Moritz, Jim Matasic, Allison Rajakumar, Bob Campbell, Christian Porter, Jeff Clark, Sean Moyer, Elisa Santos, Bob Salgueiro, Addison Schweitzer, Scott Richards, Mark Cooper, Jim Rutherford, Mark Sutherland, Zack Bishop, Riccardo Conti, Chuck Anderson, Jim Carter, Greg Shank, Allison Athey, and Chris Cauley.

Results of the Mack T-11 Reference Tests on ‘Tweaked’ Oil 822

Group

The Surveillance Panel reviewed the Mack T-11 reference test summary in a spreadsheet entitled T11 -822 tweaked data assembled by Jim Matasic. The file displays comparison plots containing the data from the original 822 reference oil versus 822 tweaked reference oil following industry reference test completions. The panel analyzed the tab within the file labeled “TGA vs Delta Vis (zoomed).” Afton declared their reference on the tweaked 822 reference oil as invalid due to high oil consumption (~61 g/hr) and the VIS shearing down towards the end of the test. Bob Campbell mentioned that his Mack T-11 was rebuilt (SSWN Hardware) and running another reference currently, to complete in 200 hours (~8 days). The industry correction factors must be applied to the current industry required references as it was related to hardware of the test according to Bob Campbell and Jeff Clark. TMC requested that the industry test labs submit the T-11 reference data utilizing the current industry correction factors. TMC also suggested that the Severity Adjustment’s of the industry test labs would be used to determine the performance of “tweaked” reference oil 822. Greg Shank agreed with the Panel to await Afton’s current Mack T-11 reference completion for further discussion on TMC reference oil 822. Bob Campbell stated that all data should be available from the current test by Monday 3/4/2013.

Elisa Santos provided a Word Document during the teleconference with the same data presented in a side by side comparison. Jim Matasic pointed out that the two tests that exhibited flattening out of the VIS had the timings advanced towards the end of the test.

Action Item:

Allison Rajakumar, Elisa Santos, and Jim Rutherford agreed to get together and analyze the test data presented from the call from a statistical standpoint.

Mark Cooper mentioned to the statisticians that the need from the Panel's standpoint is to verify that the test is on target with historic performance with respect to historic reference oils. Once this reference oil is agreed upon, the industry will have to run references again on the new engine hardware and the panel will have to meet again to discuss the path forward. The Panel will need to decide the hardware to be used going forward shortly.

The Mack T-11 injectors are different than that of the Mack T-12. The industry needs to verify that the injectors being used are in fact what are specified in the test procedure. Mark Sutherland verified that all industry test labs were utilizing the correct injectors although one lab has yet to respond. Mark Sutherland stated that the injector body number can be different, but that the injector tip numbers are consistent. Bob Campbell stressed that these discrepancies are in need of clarification by the manufacturer. Scott Richards suggested that the Panel get in contact with BOSCH to address this issue and declare them as a critical part to be under TEI control.

Action Item:

Once Mark Sutherland obtains all of the injector numbers from both the injector tip and body from each industry test lab he is to provide them to Greg Shank for procedural verification internally.

Status and Availability of Mack T-12 and T-11 Tests

Group

The PO for the liners was issued to Mack/Volvo Powertrain by TEI according to Mark. Greg Shank stressed that Federal Mogul could not begin manufacturing of the liners until receipt of a PO or a PO number. From the previous teleconference discussion, Federal Mogul agreed to proceed with casting of the liners in the mean time due to time constraints. Federal Mogul was provided with the surface finish parameters within the body of the PO from TEI. Chuck Anderson at Federal Mogul confirmed that the manufacturing process has begun. He stated that the week of March 4th the liners should be approaching the finishing stage. Federal Mogul requested more in depth details on the surface finish parameters with which Federal Mogul will take an existing print and modify it with the requests by the panel that will act as the production standard moving forward. The frequency of replacing the Vickers stones was to be determined by Federal Mogul. Chuck Anderson stated that the practice is to have a slave liner used to break in the stones followed by production. Jim Moritz suggested targeting a value of 40 for R_{vk} . Chuck Anderson is planning to obtain 250 liners out of 600 castings. Chris Cauley questioned the panel if a small amount of liners could be received while production was in progress to expedite the industry reference testing was preferred. This was the optimum outlook according to the panel. The surveillance panel will meet to discuss in the effect of high oil consumption, or sporadic results. Greg Shank agreed that the industry test labs begin testing by April 15th.

Action Item:

Mark Sutherland of TEI to provide surface finish requested for the liner batch outlined on the PO to the Surveillance Panel.

The Surface Finish Parameters as outlined by the PO from TEI are as follows:

Crosshatch Angle Specification is $45^{\circ} \pm 2.5^{\circ}$

Parameter	Average	Units
R _a	14.9	μin
R _k	37.9	μin
R _{mr1} %	6.1	%
R _{mr2} %	82.5	%
R _{pk}	10.6	μin
R _{vk}	37.6	μin
V _o	3302250	(μin*μin)/in

Action Item:

Greg Shank and Chris Cauley agreed to provide Federal Mogul with the critical surface finish parameters.

Mark Cooper brought the possibility of analyzing piston crowns. According to TEI, another batch of 3000 piston crowns has been received.

Mack T-10A – Allow More Than 5 Candidate tests on a Calibration **Group**

The teleconference initiated discussion over extending the 5 candidate test calibration. Scott Richards mentioned that historically we requested a high reference frequency in order to gauge severity shifts of the T10A. Jeff Clark agreed with Scott's statement and added further that it was an issue that was never revisited. The current calibration test is 5 candidate tests or 6 months.

Motion

Scott Richards and Mark Cooper initiated a motion to extend the reference interval on a Mack T-10A to 15 valid candidate tests or 9 months.

Jim Moritz seconded the motion.

All For
None Opposed
TEI Waives

*Note: The motion will go into effect (2/21/2013) due to non controversial meeting discussion. Information letter will be issued by TMC in the near future.

Mack T-10A Reference Oil – (Out of T-10A Reference Oil 820-3) **Group**

The second issue on the Mack T-10A was that TMC reference oil 820-3 currently depleted. Scott Richards questioned the group if there were any retains existing in the industry. The reference oil replacement for the Mack T-10A is to be determined by the Panel.

Next Meeting **Mark Cooper**

The next proposed Mack Surveillance Panel Meeting was decided to be held on March 5th 2013 at 2:00 PM EST.

Meeting Adjourned at 12:04 p.m. Eastern time.