Mack T-13 Teleconference

Thursday January 3, 2013
11:00 a.m. – 12:00 p.m. Eastern Time
Dial-in number:
888-272-5498
Access Code:
4069278

Mack T-13 Teleconference Meeting Notes

The conference meeting convened at 11:00 a.m. Eastern time with Mike Alessi as the Mack T-13 Taskforce Chair.

Membership / Attendance **Riccardo Conti**

Mike Alessi, Riccardo Conti, Greg Shank, Ken Goshorn, Allison Athey, Pat Fetterman, Bob Salgueiro, Jim Gutzwiller, Bob Campbell, Jim Matasic, Jim Moritz, Mark Cooper, Jim Rutherford, Scott Richards, Addison Schweitzer, Zack Bishop, Jeff Clark, and Sean Moyer.

Review of Test Five/Proposed New Test Cycle and Oil Sample Scheme **Industry**

Greg Shank began the meeting by confirming that the failed piston, piston rings, and cylinder liner from cylinder four from test five at ExxonMobil were received and visually inspected. Greg stated that there was a crack in the piston crown that was noticed. Greg Shank proposed lowering the oil gallery temperature to 130˚C and the coolant out temperature to 110˚C. Bob Campbell questioned if the Mack T-13 was being ran on the edge from a thermal stand point and if the load on the engine should be lowered. Ken Goshorn responded that the failure appeared to be driven by a thermal issue over a load issue specifically with respect to oil gallery temperature. Bob Campbell suggested lowering the load on the engine as this was not a wear test.

Scott Richards questioned Ken Goshorn as to his opinion on the cause of scuffing and where it originated from. Ken Goshorn answered that the scuffing appears to have started at the top and was shown in the second land of the piston.

Bob Campbell asked what would cause a crack in the piston crown. Ken Goshorn stressed that the crack was in the rear of the piston across the bowl rim and was likely driven by combustion temperatures as well as oil gallery and coolant out temperatures. Carbon deposits insulating piston cooling was considered to be a byproduct of higher oil gallery temperature according to Ken Goshorn. Bob Campbell suggested lowering the PCP to lower combustion temperatures. Test number five at ExxonMobil was at 3400 PCP, whereas Mack/Volvo Powertrain runs in house 100 hour durability testing at 3300 PCP on 10W-30 3.5 HTHS and less oils. The operational conditions for test number six decided upon were as follows:

3300 PCP
130˚C versus 125˚C Oil Gallery Temperature (To be determined January 9th)
110˚C Coolant out Temperature

Action Item:

Riccardo Conti of ExxonMobil requested that a 3300 PCP ECM flash be provided by Mack/Volvo Powertrain to conduct Test number six.

Greg Shank stressed that he would like to wait for a decision on oil gallery temperature at the Mack T-13 Taskforce meeting on January 9th.

Greg Shank discussed the possibility of Riccardo Conti measuring PCP. Riccardo stated that he would need to install the other engine in order to measure PCP which would push back the next start about a week. Greg responded that he would discuss internally the ability to complete testing to prevent the engine swap.

Action Item:

Greg Shank requested that the recent EOT hardware from Test number five at ExxonMobil be over-nighted to San Antonio to be available for inspection at the Mack T-13 Taskforce face to face meeting on January 9th.

Action Item:

Greg Shank requested that ExxonMobil over-nighted all six injectors from test number five for spray testing at Mack/Volvo Powertrain.

Another suggestion presented for the next test was to increase the oil sampling rate during the second half of the test. The oil samples were projected to take place every 24 hours up to 120 hours and increase to every 12 hours after 120 hours was reached. The oil additions 1500 grams every 50 hours would remain unchanged. Jim Moritz proposed to wait until 168 hours to proceed with the 12 hour sampling rate. Both Jim Moritz and Bob Campbell were in agreement to dropping the KV40 and KV100 to every 24 hours, to decrease the TGA Soot sample interval the same as viscosities, to leave ICP wear metals and oxidation sampling intervals as suggested, and to leave TBN/TAN sampling frequency as a question to be addressed. Greg Shank agreed to discuss the oil sampling analysis and frequency in detail at the face to face meeting on January 9th.

Start Date of the Next Test **Riccardo Conti**

Riccardo Conti stated that he would be ready to begin test number six by next Tuesday (1/8/2013). Greg Shank stressed that further discussion take place at the face to face Mack T-13 Taskforce meeting next week on January 9th about lowering the oil gallery temperature to 130˚C versus 125˚C as it would only delay the start by one day.

Oil Shipment from TMC **Riccardo Conti/TMC**

Riccardo Conti stated that the shipment of reference oil 821 had not yet been received by ExxonMobil. Sean Moyer verified that ExxonMobil should be receiving it by early next week from TMC.

Industry Stand Installation Progress **Industry**

SwRI stated that they were still troubleshooting and running a power curve.

Intertek will have the stand installation completed by January 9th in time for the face to face meetings.

Schedule for Next Meeting **Riccardo Conti**

The next proposed Mack T-13 Taskforce Meeting will be face to face on January 9th, 2013 following the Mack Surveillance Panel Meeting at Intertek in San Antonio, Texas. Mike Alessi is to send the agenda for the meeting on January 9th.

Meeting Adjourned at 10:56 a.m. Eastern Time.