## Mack Surveillance Panel

#### Wednesday December 19, 2012 2:00 p.m. – 3:00 p.m. Eastern Time Dial-in number: 877-344-4239 Passcode: 373055#

# Mack Surveillance Panel Meeting Notes

The teleconference convened at 2:00 p.m. Eastern time, with Mark Cooper as Surveillance Panel Chair.

## Membership / Attendance

Mark Cooper

Group

Jim Rutherford, Mark Cooper, Mike Alessi, Greg Shank, Ken Goshorn, Jim Gutzwiller, Jeff Clark, Sean Moyer, Zack Bishop, Bob Campbell, Jim Moritz, Zack Bishop, Jim Matasic, John Alborn, Addison Schweitzer, and Scott Richards.

## T-12 Parts and Related Issues with TUXO Hardware

The conversation began with ascertaining whether the piston ring and liner suppliers were contacted. Ken Goshorn was able to get a hold of the ring supplier at Mahle and received the proper contact information but could not get a hold of the liner supplier. Batch R, S, T and U piston rings were sent to Ken Goshorn from Zack Bishop for analysis. Ken Goshorn stated that he would need to contact the ring supplier prior to proceeding. The last time piston rings were an issue it was a matter of porosity. Oil consumption currently is 2-3 times what it was. Mark Cooper questioned if historical reference data was needed. TMC was asked if the TMC database would have the data readily available.

The previous liner batches would be needed for a proper comparison. Jim Matasic stressed that the microstructure of the liners would tell a better story than Rockwell hardness.

## Action Item:

Mark Cooper requested that the industry test labs search for old liner batches R and S for comparison.

## Action Item:

Mark Cooper requested that the previous ring batches R, S, and T be sent to Mahle and Lubrizol for analysis.

Ring batches R, S, T, and U are to be analyzed before the face to face meeting of January 9<sup>th</sup>. Previous analysis presented by Zack Bishop of TEI showed Rockwell hardness values of 46-49 on the liner batches. Rockwell hardness was about all that could be completed according to Zack Bishop due to the curvature of the specimen being tested.

If the Mack T-12 test type was to become unavailable, the industry must be notified. This issue was agreed to be addressed at the face to face meeting. Greg Shank and Mark Cooper were in agreement that a Round Robin needed to

be conducted out of necessity for a much needed industry update. Further analysis of the results revealed that the chemical analysis lead ppm/connecting rod bearing weight loss correlation has gotten worse. There were liner outliers on 3 tests and the iron does not show correlation. The surveillance panel has inspected the bearings, the liners, and will now look at the piston rings. The batch ID on the pistons was questioned by Scott Richards. Zack Bishop stated that there was not an issue with the labeling. There have been recent issues in the industry of stuck top rings according to IAR and SwRI.

#### Action Item:

Mark Cooper requested that six minute operational data be made available to the surveillance panel. Jim Matasic volunteered to compile the operational data, generate plots and compare. Jim Matasic requested that the industry test labs provide the operational data with defined terms for ease of implementation into one file.

It was suggested that the recent TUXO hardware industry required references be compared against the most recent STWN references from each test lab. This would produce a nine total test comparison.

#### **Old Business / New Business**

It was suggested by Greg Shank that the face to face meetings begin at 8:30 a.m. and start with a three hour Mack T-13 Taskforce Meeting followed by a Mack Surveillance Panel Meeting to last the remainder of the day.

#### **Next Meeting**

#### Mark Cooper

Mark Cooper

The next proposed face to face Mack Surveillance Panel Meeting was decided to be held on January 9<sup>th</sup> 2013 following the Mack T-13 Taskforce Meeting.

Meeting Adjourned at 3:00 p.m. Eastern time.