

ASTM Chain Wear Task Force Conference Call

Monday 6th June, 2016

Written By: Al Lopez

Attendees:

- See attached attendance list:



Attendance 060616
TF Telecon.pdf

Action Items:

- Finish Precision Matrix Testing (Afton running last test) - completed
- LTMS data review by Statistician Group – on going
- Hardware Order – Engines and Critical Hardware
- Cam phasor activity experiments – on going

Review Qi and Op data Plots of last Afton PM Test:

- See attached TMC presentation – all PM tests included for comparison.



Chain Wear Matrix
Can Bus Data Phase 1



CWT Matrix Data 2-1
ramps.pptx



Chain Wear Matrix
Can Bus Data Phase 2



Chain Wear Matrix
Test Operational Data



Chain Wear Matrix
Test Operational Data

- 20 of 20 tests were reviewed
 - All tests were deemed valid
 - All tests with negative Qi were judged valid
 - Christian reported seeing more load and speed instability with the 0w-16 oil. The engine is not designed to run on 0W-16 oils. The observation was noted.
 - Several tests had pressures reported in gage vs absolute. The labs agreed to fix and re-submit the data by Friday the 10th of June.
 - Kevin O'Mally informed the task force that the stats group will need all of the test files and operational data to review and use for determining the statistical model to apply to the data. A question was raised as to why the operational data was needed since a straight analysis of the test results could be performed quickly. Doyle explained the process to the group at Ron's request. In summary, any operational parameter can be observed and the influence to the results estimated. This can be valuable in the analysis.
 - Concern was raised on Lab severity differences seen in the data. A quick analysis was done by Doyle and the difference in severity is statistically significant. This difference has been correlated to speed and load control and subsequent cam phasor activity. The development group saw this

during the PM. When this was discovered, the best course of action was to finish the matrix and address the problem after completion.

- There is an active action item to experiment with control to see if the laboratories can adjust the engine to increase cam phasor activity at SWRi and to decrease the activity at IAR. Afton has performed somewhat in the middle of the two San Antonio labs.
- Felt informed the group that they had made a control adjustment to increase the cam phasor activity and they are currently running a test.
- Intertek plans on performing a similar adjustment and running a scoping test.
- A meeting is planned to review the different control strategies and resulting cam activity.

Next Conference Call:

- A development team meeting is scheduled for the week of the 13th.