

ASTM Chain Wear Development Team Meeting

Wednesday 8th February, 2017

Written By: Al Lopez

Op Data Review – Kevin OMalley / Travis Kostan

- Travis presented the plots for additional tests conducted post matrix. The goal was to establish validity of each test and determine if they should be included in the statistical analysis. The summary of the review is seen in pages 3 and 4 of the presentation. <ftp://ftp.astmtmc.cmu.edu/refdata/gas/cwt/plots/>
- The tests in question from Labs A and G were studied and the following decisions were made.
 - Test 8-0-34 from Lab A was conducted as an experiment to observe load control change effect on severity. This test will not be included in the statistical analysis.
 - Test 120-0-1 from Lab G was conducted using 2016 /2014 hardware. The test data is not usable in the statistical analysis and will not be included.
 - All other additional tests were deemed valid from an operational stand point.
- A final determination of validity will be made once we analyze the ramp data. Martin Chadwick is currently working on that presentation.
- Fuel pressure differences seen at Lab A in these tests resulted in a change in the procedure. Going forward fuel pressure will have a target pressure window that is the same as the LSPI test. (430 - 470 kPa)
- Alex pointed out that the amount of energy required to drive the high pressure engine fuel pump may change if the incoming pressure is not consistent from stand to stand. No data is available at this time to make any conclusions on this effect but it was agreed to make the incoming pressure equal and with a target range.

Blowby Stack Configuration:

- Christian Porter presented the current drawing of the blowby stack configuration and a photo of the Afton stack. The group discussed differences in the dimensions seen at each lab and agreed to standardize the blowby tree in critical areas.
Attached:



Chain Wear Blowby
Measurements afton



- The following dimensions are now required to meet the drawing specs before the next round of tests are started.
 - Heat exchanger distance above the rocker cover.
 - Oil separator distance above the heat exchanger
 - PCV distance above the oil separator
 - From the bottom of the heat exchanger the assembly will go straight up with no bends or elbows in plumbing.
 - The diameter of the tubing is standardized

- Felt volunteered to make a new drawing for the procedure that includes all of the changes

- Ron agreed to start running the requested additional tests once the labs have made the changes in blowby stacks and fuel pressure.

Attendees:

Jason Soto
Felt Mounce
Ron Romano
Charlie Leverett
Christian Porter
Travis Kostan
Alex Ebner
Nathan Bean
Al Lopez

Next Meeting:

- TBD.