

Seq. IIIH Piston Hardware Task Force

Teleconference

Wednesday, May 24, 2017

2:00 – 4:00 EDT

WebEx Information included with Outlook Invite

Agenda (ATTACHMENT 1)

1.) Attendance.

- a. Addison Schweitzer, Charlie Leverette, Pat Lang, Chaudhry Ankit, Amol Savant, Bob Campbell, Rich Grundza, Jason Bowden, Todd Dvorak, Jerry Brys, Sid Clark, Haiying Tang

2.) Meeting Minutes: 5-24-17 Conference Call

- a. Note from Jason Bowden – 5/24/17 Action Item #1 Correction – The minutes indicate 90 hours. I believe that the agreed upon hour for oil sample after 90 hours was 95, but would like to confirm.
 - i. Confirmed that the oil sample should be at 95 hours.

3.) Open Action Item Review

- o **Action Item #1:** Confirm how the JTEC data is being collected. Ankit will survey the labs to have them provide the raw data that is being collected along with each labs practices for measuring barometric pressure, JTEC flow, temp, etc.)-Ankit Chaudhry –
 - **ONGOING-** Waiting on a couple of responses and then will review at 6/21/17 meeting.
- o **Action Item #2:** Todd Dvorak will review honing analysis he prepared for the November 2016 Panel meeting comparing the correlation pre and post matrix by lab vs. blowby and output results – Todd Dvorak
 - **ONGOING** Will confirm that the study only included BC2 hardware.
- o **Action Item #3:** Amol will survey the labs to determine how they are insulating the exhaust downpipes and how the exhaust systems are routed- Amol Savant-
 - **ONGOING** Will summarize information and present at the 6/21/17 call.
- o **Action Item #4:** DOE Engine Hour Increase from 90 – 100 hrs. Ed Altman and Addison Schweitzer will develop a procedure for labs to conduct final ratings after 90 hours and then rebuild the engine to run an additional 10 hours and conduct an additional round of ratings. The labs will conduct an oil sample at 95 hours.

- **ONGOING.** Intertek and Afton have run test. Summary shown below. Additional test is being run at SwRI and data should be available by 6/21/17.
- Addison commented that they believe the milder WPD result at 100 hours may be attributed to the disassembly and rating of the pistons. The PVIS for both tests showed an increase in severity at 100 hours.
- Afton test on 434-2 showed an increase in PVIS severity
- The group commented that the initial data does look promising as the oils appear to show better separation at 100 hours on PVIS.

Intertek (Ref. 438-1)	90 Hour	100 Hour
PVIS	15.90%	33.20%
WPD	3.88	3.84

Intertek (Ref. 436)	90 Hour	100 Hour
PVIS	14.11%	40.40%
WPD	4.88	4.81

Afton (Ref. 434-2)	90 Hour	100 Hour
PVIS	35.90%	130.90%
WPD	4.95	3.71

- **Action Item #5:** Southwest to conduct screener tests using increased load and speed. The engine will use BC4 hardware, stabilize conditions before adjusting either load or speed. All operational data will be captured for review by task force.
 - **ONGOING.** Lubrizol ran tests and George will provide a summary to the group next meeting.
- **Action Item #6:** Southwest and Intertek will review possible screener tests with increased ring gaps and report to task force.
 - **ONGOING.** Initial screener test was run with ring gaps at 30/40. The blowby data indicates this blowby may have overshoot the target. It appears that this ring gap strategy was very similar to BC3 blowby levels. An additional test will be run with different gaps and reported to the task force.
- **Action Item #7:** Southwest to conduct study on blowby evacuation system to determine if returning the system to the original configuration during the matrix has an effect on severity.
 - **ONGOING.** Southwest has an engine in the stand and is determining what changes will be made to the blowby system to return it to its original configuration. The group realizes that the system in place right now are superior to the original design and would most likely not want to revert back to the original design, but this data point may be useful to try and understand the original shift from Matrix to Post Matrix.

- **Action Item #8:** Labs to fill in DOE Reduced Ring Gap Summary Chart missing data so that the statisticians can review this information. Jason Bowden will receive replies and provide chart to statisticians for review.
 - **ONGOING.** Jason Bowden will summarize responses received from the labs and follow up with labs if additional information is required.
- **6/14/17 Action Item #1:** Addison will generate oil pressure plot for 436-1 100 hour test.
- **6/14/17 Action Item #2:** George Szappanos will supply summary of original blowby evacuation system changes to Task Force.

4.) **Old Business - NONE**

5.) **New Business - NONE**

6.) **Motion and Action Item Review (ATTACHMENT 2)**

7.) **Meeting adjourn**

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4.) **Old Business**

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6.) **Motion and Action Item Review**

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Seq. IIIH Severity Task Force

Motion and Action Items

June 14, 2017

Motions:

None

Action Items:

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