

Chrysler IIIH Task Force
Conference Call Minutes
September 19, 2014

Attendees

Chrysler: Haiying Tang

SwRI: Sid Clark, Karin Haumann, Pat Lang

Intertek: Charlie Leverett, Addison Schweitzer

Lubrizol: George Szappanos, Mike Conrad

Afton: Ed Altman, Raymond Smart, Dave Glaenzer

Ashland: Tim Caudill, Amol Savant

Oronite: Jerry Wang

Shell: Scott Lindholm

OHT: Jason Bowden, Matt Bowden

Halterman: Tracey King

TMC: Rich Grundza

Karin opened the meeting with a review of action items from the September 12, 2014 Conference Call;

- Labs will work with OHT to standardize the fuel rail connection requirements to minimize overhung mass at the fuel rail. **Still Pending, discussion continued later in this call.**
- ⊖ Karin will contact Tom Smith for requirements from the Surveillance Panel to the Pass Car Panel.- **There was considerable discussion as to whether the Chrysler Test was acting under the Sequence III Surveillance Panel, or whether the Classification Panel was to request the formation of a New Surveillance Panel to recommend the test to the Classification Panel. This item is still open.**
- Lubrizol will run their coolant system full open to map the system capabilities using the Kundinger Fluid Processor setup with the Spiral Heat Exchanger.
- ⊖ ~~Karin will give feedback on any limitations SwRI may have for specification of fan installation due to test cell space limitations.~~ **Karin indicated to the group that there appears to be ample room on the SwRI stands to include addition of the proposed air management fans suggested by Lubrizol to direct air over the exhaust gas sensors in the Takedown Pipes. Karin will work on standardized specifications based on Lubrizol's recommendation.**

- ~~Sid to include copy of AOAP Direction for Task Force working on recommendations for GF-6 tests to be brought forward for Matrix Testing. — Done~~
AOAP needs to request test Sponsor form a Task Force that will recommend tests are precise, reproducible, and have ability to discriminate and are ready for Matrix.
Recommendation is forwarded to PCEOCP for ready for Matrix Vote and then AOAP for decision on inclusion in Specification.
 The Task Force openly discussed this subject questioning the aforementioned statement as discussed at the AOAP Meeting. Mr. Dave Glaenzer indicated he formed this task force under his jurisdiction as the Sequence III Chairman to finalize the procedure and move the test forward, to the PCEOCP based on Surveillance Panel recommendation that the test precision and reproducibility was acceptable for matrix testing. The group discussed this and multiple people gave their opinions, too many for the secretary to capture, with the final understanding the process will be discussed at the upcoming Surveillance Panel Meetings in October.
- Sid committed to having the Assembly Manual complete and ready for distribution the week of September 22nd.
 Further development, Sid will be traveling to San Antonio September 22nd and will have the Assembly Manual completed for the review on September 30, 2014.
- Karin will coordinate use of Reference Oil 434 blend 1 or 2 for prove-out testing with the Sequence III Surveillance Panel Chair and Frank Farber. **Karin is in contact with the TMC discussing which 434 should be used for IIIH work.**
- Karin to work with Chrysler, OHT, and Intertek to provide materials to Afton and Lubrizol for prove-out testing. This includes Engine Controllers and Fixed Camshaft Phasers. **In process, Tim Caudill from Ashland asked about the process to flash an engine controller. Jeff Betz informed Tim the best way was to ship the controller to Jeff Betz and he would flash and return the controller. Jason asked about inventory of engine controllers. Jeff indicated the controller flashing capability would be retained by Chrysler. Karin confirmed the latest version control algorithm for the fixed camshaft phasers performed correctly with all final calibrations confirmed and locked. George asked if the new controller had the higher coolant temperature calibration and the response was no that could not be changed due to many control loops that depend on that value. George indicated Lubrizol was using a 3 kΩ resistance value which allows a hot engine just enough injection pulse to start. George and Karin will check and respond to Ed Altman on setting up his resistance value (Karin confirmed the 3 kΩ resistor will yield a 55 deg coolant temp). Amol asked whether the dyno harness provided a trouble code light and the response was No, labs are using a Snap-on scan tool to perform diagnostics on the IIIH. Addison indicated that the engine will most likely not start if there are any fault codes.**
- TMC will provide an update on the Data Dictionary for the IIIH on the next call.
Rich Grundza will issue Data Dictionary Monday for review with possible editing reviews still pending.
- ~~Karin will provide SwRI block measurements to IAR.~~

Lab Updates:

- 1) Intertek; proving out latest controller flash for fixed phaser operation. Waiting on final installation of second stand pending final design of coolant system. Have honed an engine block and sent to SwRI for comparison surface finish measurements. Rich Grundza asked if the intent was to use the SV-10 Sunnen Honer and Mititoyo Surface Finish measurement equipment for the IIIH. Charlie and Karin indicated the equipment will be the same as used for other tests. Charlie suggested we have enough information within the Draft Procedure to put together a Stand Check List.

The group discussed whether anyone is actually working on supplying Reference Oil 2 (REO2) to the TMC. Jerry Wang explained that the supplier has discussed availability with the TMC however; the initial inventory or REO2 for prove-out testing will be supplied through SwRI.

The group discussed quantities of REO2 with comment from Rich Grundza and Jerry Wang. The group all understands the REO2 used for Matrix testing and final supply for the category reference oil will be follow-up blends.

- 2) Ed Altman Afton indicated they were in the process of making modifications to their coolant system and would be at least another week before running shake down work.
- 3) George Szappanos indicated Lubrizol was doing the same and should be running about the same time.

Procedure and Assembly Manual Updates:

Karin informed the group she inadvertently sent the editorial version of the Draft Procedure to everyone and had just forwarded the non-editorial version of the document to the group asking everyone to disregard the earlier document.

Sid is working on the Draft of the Assembly Manual and plans to have it available for the review scheduled for September 30, 2014 in San Antonio.

The group discussed the crankcase ventilation system diagram sent out with photos of one of the SwRI stands. Ed Altman commented that the information on the diagram did not match the actual system being used in the photo that accompanied the diagram.

This discussion prompted an action item to revisit the crankcase ventilation system design, standardizing the design and forwarding documentation to the group for further discussion.

The group discussed fuel rail configurations and working with OHT to decide upon fuel inlet connections, pressure and temperature measurement requirements that minimize overhung mass on the actual fuel rail. Labs will work with OHT to standardize the configuration and connection requirements.

Charlie Leverett asked about earlier comments that all EOT parts would be rendered unusable by the test labs. The group discussed the reasons behind the requirement and Jeff Betz indicated that his suggestion would be to store used materials so the test life could be extended if needed.

The group discussed supply requirements of cylinder heads through IMTS. Chrysler will work with IMTS to outline a plan to meet the requirements for Matrix testing and continued supply for the first 6 months and beyond.

Jeff Betz indicated current plans for fastener replacement will include cylinder head bolts and connecting rod fasteners for each build.

Karin will continue work on the honing procedure without using the Windage tray during main cap installation. Jeff Betz confirmed the Windage tray is not used during honing and final sizing of the cylinders on the production hone. Karin confirmed the cylinder bore distortion measurements using the BHJ Torque Plates did not change with the elimination of the Windage tray.

Jason asked direction on processing front covers for the latest coolant system designs. Jeff Betz indicated he preferred using new covers and Afton and Intertek both commented they preferred threaded connections for the connections to the front cover. Ed Altman will work with Jason to provide information on modifications performed at Afton.

Action Items:

This is a compilation from notes recorded during the call, with comments from member participants during the Draft Review. Certain subjects may not necessarily be in exact order; however, they are believed to represent an accurate account of the call. If anyone feels changes or additional content may be necessary, please contact Sid Clark @ 586-873-1255 or Sidney.Clark@swri.org

Thanks, Sid