

**Sequence IIIH Task Force
Conference Call
November 24, 2014
09:00 Central 10:00 Eastern**

Attendees:

Chrysler: Haiying Tang, Jeff Betz

SwRI: Sid Clark, Karin Haumann

Intertek: Addison Schweitzer, Charlie Leverett

Lubrizol: George Szappanos, Kevin O'Malley, Michael Conrad, Ravi Tallamraju

Afton: Ed Altman

Ashland: Amol Savant

OHT: Jason Bowden

TMC: Rich Grundza

Karin, I joined this call 30 minutes late so this is a carryover attendee list for your review and addition of conversations prior to my joining the call

Review of Action Items from the November 13, conference call

Action Items

- 1) Sid will work with IMTS to outline ordering information, cylinder head core return procedures, serial number identifications and packaging concerns over Left / Right identification and Karin will request IMTS start participation on all Task Force calls
- 2) Rich will work on including a special case for IIIH prove-out testing data summary on the TMC Web Site.
- 3) Rich will work on the final report package including all parameter updates and changes required as result of recent discussions during the Task Force Meetings.
- 4) Rich will try to summarize his notes on information and changes discussed during the Lubrizol and Afton lab visits.
- 5) Forms changes for Rich:
 - Fuel temperature control should be at 30°C.
 - Intake air temperature needs to be changed from 38°C to 35°C in the report package.
 - Coolant out pressure needs to be controlled at 200kPa measured at the OHT outlet.
 - Piston rating photos need to be changed from Thrust / Anti-Thrust to Front & Rear.
 - Karin commented the form also needs to reflect ratings on the pin boss areas rather than piston skirt areas.
 - Move coolant flow from non-controlled to controlled parameters.
 - Add Air-to-fuel data to report forms understanding everyone is using some sort of wide-band sensor to read the AFR. setting to be 14.4 ± 0.4 Air-to-fuel ratios.
- 6) Karin agreed to compile a list of set points for control parameters and forms package recording for discussion during the next call.
- 7) Karin will update initial oil fill worksheets to reflect the most recent changes.
- 8) After discussion about a motion to remove the production air filter box and run lab filtered inlet air to reduce the pressure restriction at the test cell, the call was dropped and the question was never

officially called. The group should revisit the question, properly wording the motion and calling the question to officially make the change.

Lubrizol reported completing their first run on REO2, and the 434-1 run was EOT as of 11/23/14. The second test was run with a new muffler and the exhaust backpressure control was acceptable.

Afton will start their REO2 run today with results expected on Monday.

Rich stated that we should be able to upload the 434-1 results to the TMC website this week. He asked the labs to request from the DCC representative if it is acceptable to have a 2 week beta period and a 2 week implementation period.

Dave Glaenzer pointed out that the group needs to be sure all labs have the same sample rate to be able to compare the data.

There was discussion about comparing differences in build data, and all labs agreed to send bore trace measurements to Karin to be compiled together for a data review.

The group discussed the needs for future inventory levels of cylinder heads for the Chrysler IIIH test.

Karin asked the labs to consider their inventory requirements understanding each lab would commit to a specific number of Seed Head materials as these heads were ordered direct from Chrysler to start the initial inventory for the labs.

Addison asked if there would be a program set up for rework of core return materials vs seed head materials. Dave answered yes there will be a process for receiving core materials and reworking those materials.

In summary IMTS currently processed enough materials for 16 cylinder heads per stand based on the understanding there will be 9 test stands in the industry. This would mean each lab is currently responsible to purchase 16 seed heads per test stand.

Discussion continued with the understanding the current number of seed heads materials will not be sufficient to maintain current prove-out testing and matrix testing requirements.

Dave informed the labs he needs to try to understand what quantity of heads will be required for laboratory in-house quantities of cylinder heads on the shelf.

Dave also needs to have the labs understand the core return process from each lab needs to be coordinated within IMTS so he can schedule processing of the core materials at one time. The labs asked if the core materials would be kept separated so that material was allocated for each individual lab.

Dave commented the core materials would be kept separate, however IMTS will need to have a minimum quantity of core materials to start processing. IMTS agreed they would verify receipt of core materials and send an estimated turn around or processing time back to the labs.

The group also discussed concerns about protecting the cylinder heads from scratching the mating surfaces during shipping. Dave commented about the packaging acquired for the shipping of these heads and Ed

Altman commented that the labs would also need packaging for storage of post-test cylinder heads as they will be retaining these materials.

Final comment on cylinder heads was the labs were asked to work with Karin and Dave to provide the number of Seed Head materials they would require for an in-house inventory so IMTS can submit an order to Chrysler and start processing the in-house inventory level requirements to support the matrix and first testing period until the core return program can be set up.

George asked if the current seed head materials was supposed to be retained for Prove-out testing only and the answer was yes these materials are not to be used for any other testing than prove-out testing at this time.

The group moved to questions about inlet air filtration and the fact that the group needs to come up with some sort of specification for lab inlet air filtration.

Jason updated the labs on oil pan fabrication and efforts in fabrication of a gasket for the oil pan vs the use of RTV. The group discussed concerns that the gasket would actually lower the level of the oil in the sump. Jason asked the labs to look at the gasket and respond.

George indicated he was going to start his next test using the gasketed oil pan and the group suggested he watch the oil level for indication of aeration.

Karin indicated the next meeting will be December 3rd to review the data and asked the labs to forward any data to Karin for forwarding to Rich for inclusion in the TMC Database for those discussions.

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