

DD13 Scuffing Test ASTM Taskforce
Meeting Notes May 5th, 2016
Location: Southwest Research Institute

Original Agenda:

Original Agenda for Thursday May 5th, 2016 Taskforce Meeting	
Meeting Goals:	
<ul style="list-style-type: none"> Come to agreement on the Procedure to submit it to ballot for the June ASTM meeting. 	
Comments:	
<ul style="list-style-type: none"> Please review the latest draft of the procedure before our face to face meeting next Thursday. If any corrections/changes are found, please email them to Suzanne Neal and Patrick Joyce before the face to face meeting. 	
Topic	Time (Central)
Arrive/Introductions	7:45 AM - 8:00 AM
DD13 Procedure Review	8:00 AM - 9:00 AM
Agree on Transformation	9:00 AM – 10:00 AM
General Referencing and Candidate Testing Requirements	10:00 AM – 10:15 AM
Review Submission Process for Ballot	10:15 AM – 10:30 AM
Timeline Review	10:30 AM – 10:45 AM
Qi Review	10:45 AM - end
Lunch	12:00 PM
Appendix K Review	If applicable

Meeting Notes/Action Items – Suzanne Neal:

(Action Items in **Yellow**)

Procedure Review:

- 8:14 AM - Agreement to adjust the 9.2.5 Pretest Break in Sequence
 - Following any shutdowns that occur in the break-in, the remainder of the 15 min. break-in is to be run before proceeding to 9.2.6.
- 8:18 AM – Discussed oil drain vs. oil filter change (order)
- 8:22 AM – Changing CAN Data Acquisition to “Optional”, currently waiting on Non-Disclosure agreements from Daimler for the labs. Once these Non-Disclosure agreements are complete, TMC forms will need to be formatted and then the CAN Data will need to be added to the TMC data base.
- 8:27 AM – Adjusted Section 1.1 to say “Uncoated Top Ring” and liner adhesive wear
- 8:29 AM – Added “50/50” premixed coolant to clarify.
- 8:31 AM – For referencing changed from “Non interpretable and invalid” to just “invalid”.
- 8:40 AM – Discussed Terry’s comments for the Qi section. (Sean will follow up with Terry’s question to make sure if the formatting is correct and to follow up on “TMC Statisticians”)
- 8:44 AM – Discussed Table formatting for A6.* tables and one needs to be updated (A6.4)

Transformations:

- 8:48 AM – Reviewing Transformation proposed by Kevin and other option proposed by Infineum, we also reviewed the possibility of no transformation temporarily until we receive more data.
- 8:50 AM – Kevin’s Presentation on the transform he proposed and no transformation
- 8:50 AM to 10:40 AM – Discussion between Statisticians (Kevin O’Malley, Jim Rutherford, Elisa Santos) and taskforce.
- 10:45 AM – Taskforce came to the agreement to have no transformation and to put an action item for the surveillance panel to find a new transformation when more data is available.

Parts Update:

- 10:05 AM – Mark Sutherland gave an update on the parts.
 - Approximately 300 pistons/rings will be available short term
 - In the future, 3 to 4 weeks out, approximately 2000 pistons will be available from Federal Mogul.
- 10:11 AM – Discussed piston cooling nozzles availability, Jacob indicated that the nozzles can be purchased individually, and Mark Sutherland will follow up to see if he can get them.
 - Then an action item for the surveillance panel is to come up with a cooling nozzle way to check. Labs will start keeping used cooling nozzles for the future just in case.

Referencing Discussions and Questions:

- 10:20 AM - Oil X has the TMC oil code which is Oil 864 also known as DD13X
- 10:30 AM - There is not enough stock of the “old oil X” so we will move forward with the following:
 - New Oil X → Old Top Rings (Old Hardware)
 - New Oil X → New Top Rings (New Hardware)
 - Oil X at least a month in a half until it will reach the labs.
- 10:51 AM - ~~Come back to this topic later this afternoon and schedule a meeting to follow up on these topics if needed-~~ (completed at 12:10 PM)
- 11:00 AM review of Kevin’s new LTMS limits based on the decision to use no transformation.
- 11:18 AM Kevin will send the new LTMS limits to Sean Moyer
- 11:20 AM Kevin will send the updated procedure section to Patrick

Joe Franklin – Update on Submission Process for the Procedure to Ballot

11:50 AM to 12:10 PM

- At B meeting in June (section 2 business())request a surveillance panel to be formed)
- Procedure will be submitted to the B committee and then needs to be submitted to the D02 group which cannot be until August (Which is when it will get an ASTM D number)

Referencing Discussions and Questions:

12:10 PM to 12:50 PM – Discussion of Table below provided by Daimler

		Lab 1		Lab 2		Lab 3	
Hardware/ Oil Set		Matrix Stand	All New Stands	Matrix Stand	All New Stands	Matrix Stand	All New Stands
1	Old Rings w/ Old Oil (C or X)	Not needed as it was completed in matrix	Acceptable for calibration	Not needed as it was completed in matrix	Acceptable for calibration	Not needed as it was completed in matrix	Acceptable for calibration
2	Old Rings w/ New Oil (Oil X – New) – not likely to happen, old rings are out...	Not needed	Not needed, but acceptable for calibration based on Set 4	Not needed	Not needed, but acceptable for calibration based on Set 4	Not needed	Not needed, but acceptable for calibration based on Set 4
3	New Rings w/ Old Oil (C or X)	1 stand only that has also run Set 1, further stands acceptable for calibration		1 stand only that has also run Set 1, further stands acceptable for calibration		1 stand only that has also run Set 1, further stands acceptable for calibration	
4	New Rings w/ New Oil (Oil X – New)	Based on feedback from other test precedence, this would just be rolled into regular referencing					

12:50 PM: Suzanne will send whatever stock of Oil X and Oil C she has left to Sean Moyer to have it available at TMC and have it available for the labs for referencing the new rings.

12:55 PM: Discussion: each lab will have a different date that they will be able to submit tests that were completed on a referenced test – stand dependent - (basically from EOT of the last acceptable reference test)

1:00 PM: Suzanne will let Sean Moyer know when email address to send the reference test information.

Qi Limits: (Sean Moyer)

1:04 PM to 2:00 - Sean Moyer presented what information is currently put together for Qi limits.

- It was requested that if the labs have data from stage 2 that they can share with TMC to help with the Qi limits of Stage 2 that it would be appreciated.
- Reviewed Table 1 from procedure (see picture below):
 - Labs will pull previous test data to measure time constants and discuss during the week of (May 9th – May 13th 2016) [Minimum of 30 hours of stage 2 data which is 60 total with stage 1 and stage 2]

8.6.7 *System Time Responses*—The maximum allowable system time responses are shown in **Table 1**. Determine system time responses in accordance with the Data Acquisition and Control Automation II (DACA II) Task Force Report²².

TABLE 1 Maximum Allowable System Time Responses

Measurement Type	Time Response, s
Speed	2.0
Torque	2.0
Temperature	3.0
Pressure	3.0
Flow Rate	45.0

- Plan is to keep table 1 and Qi's the way it is for the procedure submission but this will addressed in surveillance panel meeting.

Attendee List for DD13 Face to Face Meeting 5/5/2016 at SWRI

Attendee List for DD13 Face to Face Meeting 5/5/2016 at SWRI		In Person	Phone
1. Bob Campbell	Afton Chemical	X	
2. Bob Salgueiro	Infineum	X	
3. James Gutzwiller	Infineum	X	
4. Elisa Santos	Infineum	X	
5. Suzanne Neal	Daimler	X	
6. Daniel Kozub	Daimler	X	
7. Greg Shank	Volvo/Mack	X	
8. Patrick Joyce	Lubrizol	X	
9. James Matasic	Lubrizol	X	
10. Kevin O'Malley	Lubrizol	X	
11. Jose Starling	SWRI	X	
12. James McCord	SWRI	X	
13. Jacob Goodale	Intertek	X	
14. Jim Moritz	Intertek	X	
15. Joe Franklin	Intertek	X	
16. Sean Moyer	TMC	X	
17. Jim Rutherford	Chevron Oronite	X	
18. Michael Alessi	Exxon Mobil	X	
19. Mark Sutherland	TEI	X	
20. Bhaskar Prabhakar	Exxon Mobil	X	
21. Mark Cooper	Chevron Oronite	X	
22. Travis Kostan	SWRI	X	
23. Michael Lochte	SWRI	X	
24. Gregory Braziunas	Daimler		X
25. John Loop	Lubrizol		X
26. David Brass	Infineum		X
27. Robert Warden	SWRI	X	
28. Jim Carrol	SWRI	X	

Meeting Notes 5/5/2016 – Jacob Goodale

DD13 Task Force meeting 5/5/2016
Southwest Research Institute.

Procedure

Procedure is set to be sent out for ballot 5/12/16

A shutdown during the 15 minute break in will run the 32 minute warm up and resume at whatever point of the break in it was at before the shutdown.

Changing the diagnostic link recorded values to optional as well as the Intake and exhaust CO2 measurements.

Transformation

Oil X and Oil C have different variance. There needs to be more data reported.

Don't do a transformation now and explore the transformation once more data becomes available.

Data outside of Oil C and Oil X that lands in the middle (between 30 and 200 hours) shows repeatability. There is a want for a reference oil that will fall somewhere between 60-150 hours to help show stand severity.

It was agreed upon to not have a transform at the moment. Due to the limited data set. The Task Force agreed.

To do item for the surveillance panel will be to revisit the topic of the transformation and decide if it is needed later.

General Referencing and Candidate Testing

Parts Update – in contact with federal mogul should receive 300 piston kits. There should be enough pistons to make 40-50 kits. This will not be considered a batched part.

Long term batch is 12-16 weeks out around 2000 pistons, second ring and oil ring. This will be considered a batched part moving forward.

If the p-tube is reused targeting may be needed. TEI will still supply piston cooling nozzle.

Reference oil code will be 864.

Separate out the new batch of reference oil and the new batch of rings to not confound results. Does it have to be on the same stand the matrix was run in? A new stand can be used to prove out the new hardware as long as there is data to show performance on Oil C or Oil X. This data must be shared with the Task Force before running the reference.

When will Daimler start receiving data? Daimler will accept data now from candidate testing ran in a referenced stand.

There is a month to a month and a half lead time on reference oil from TMC.

146 gallons of Oil X could still be available. This will be verified. Around 120 gallons of oil c remains.

This oil volume will be utilized to bring in the new top ring batch.

Reference targets updated without transform

Oil X – 47.6 mean stdev of oil 36

Oil C – 33.17 mean

Lab oil engine stdev of all data 25.7

LTMS document needs to be updated now that a transform has been agreed upon.

Std is 26.

Final draft will be sent out after face to face meeting.

Greg's comments on new hardware (the table displayed by Suzanne)

Would you accept data from a new stand that has run Oil C previously? yes, this could be used to prove new hardware.

If Oil C was run to procedure the new ring can be referenced in that stand.

Stand selection should be decided by the test user. Following ACC stand selection for calibrated test stands is recommended.

Labs will send out intent on which stand will run references as well as if oil is needed.

Calibration time period will start at the end of the last completed reference or acceptable matrix test.

Labs will have to send a PDF to Daimler of the final report for reference tests.

Hours to scuff will be reported as a whole number.

Labs will run time constants from test stands as well as reporting 60 hours of stage 2 operational data.

Timeline review

Data Dictionary Beta should be completed by the end of the week.

ASTM timing update

The ballot needs to close properly before the ASTM meeting. Ballot has to be up and posted before the 24th of May.

Thursday and Friday of next week will allow enough time for ASTM to approve it.

D2 ballot will be in August (30 day ballot)

Who makes up the B and D ballot group?

B is automotive lubricants, all surveillance panels and organizations; B is a subcommittee of D.

The ballot must pass both levels of ASTM before getting a number assigned.

How to become a surveillance panel? Request it at the meeting in June to keep monitoring this test.

Which ballot is a bigger hurdle B or D?

B is technical side and D2 would be a more general question no real issues with D2 usually.

Everyone has a right to vote. All negatives must be addressed.