

ASTM Section D02.B07 Engine Oil Volatility Surveillance Panel

Date: February 19<sup>th</sup>, 2015, 11:00 EST

Location: WebEx and Telecon

Agenda and Minutes:

1. Roll call, membership changes?

Meeting Participants:

Company	name
Ad Systems	Didier Pigeon
Afton Chemical Corporation	Sheila Thompson
ASTM Test Monitoring Center	Tom Schofield
Chevron Global Lubricants	Ariana Marbley
Chevron Oronite Company, LLC	Kaustav Sinha
ExxonMobil Research and Engineering	Dennis Gaal
Intertek Automotive Research	Joe Franklin Matt Schlaff
PAC	Sandra Chirk
Savant Incorporated	Jon Evans
Savant, Inc.	Maggie Smerdon
Southwest Research Institute	Mike Birke
Tannas Company	Greg Miiller
The Lubrizol Corporation	Grant Hutchinson Jeff Winfield
Valvoline	Rich Ochenkowski Josh Frederick
Millenium Analytics	Kishore Nadkami

Members removed:

Carrie Sims (Chevron Oronite, LLC)  
Allen Thomas (ExxonMobil Refining and Supply Comp)

New members added:

Sheila Thompson (Afton Chemical Corporation)  
Ariana Marbley (Chevron Global Lubricants)

2. Vote on addition of the firmware revision level to the D5800 data dictionary (current version attached in multiple forms):

Motion (J. Frederick):

Add the field "FIRMWARE" to the data dictionary for D5800

- For NCK2-5G format is "Vx.x/y.y" (e.g. V2.5/2.0)
- For NCK2 or for Method C, value is "N/A"

Seconded: Tom Schofield

Vote: Motion approved unanimously

Next Steps: TMC to implement voted changes in D5800 data dictionary.

3. Review of data from VOLD14 round robin

Thirty-three measurements across 19 instruments yielded a mean value of 12.99% and a standard deviation of 0.62%.

- a. First, some related considerations

The following questions were posed to the group:

1. What's the relevance of the round robin data if the D5800 test is out of control?
2. What is our duty as a Surveillance Panel if the test is out of control?
3. What is the definition of "out of control"?

TMC has well documented procedures for monitoring engine tests, and the Classification Panels have established criteria to authorize the suspension of industry wide laboratory calibration status when a test is judged to be giving uninterpretable

performance. The governing documents for these procedures and criteria were referenced in the meeting, and are included as attachments to these meeting minutes.

While these criteria have not historically been applied to D5800 data, they provide a precedent if we wish to evaluate the “control” of this measurement. One statistician (employed by Ashland Inc.) analyzed the publicly-available D5800 data, with the resulting control charts suggesting numerous “out of control” points for both severity and precision. A portion of this analysis was shared during this WebEx. As a next step, a committee of statisticians has been established, including representatives from multiple organizations. This committee will be asked to review the data and the initial analysis, and to make recommendations back to the Surveillance Panel regarding the current control status of D5800.

b. Discussion of next steps

Returning to the matter of VOLD14 as a mandatory daily check oil, the group expressed concern that (33) data points collected in the round robin might be insufficient to define a robust mean and standard deviation, especially in light of the questionable control status of D5800. Didier Pigeon expressed concern that the round robin included mostly NCK2-5G instruments. Others offered that the instrument distribution in the round robin is consistent with the broader population throughout industry. Joe Franklin suggested that, if we move forward with a daily check oil, there should be a clearly defined plan for periodically reevaluating the mean, standard deviation, and control limits. Assuming a daily check oil is implemented, that oil will be used as the QC check for every calibration run submitted to TMC. Tom Schofield indicated that there are approximately fifteen D5800 calibration runs every 6 months. After significant discussion, the following vote was progressed:

Motion (J. Frederick):

- Institute VOLD14 as a mandatory daily check oil for TMC labs
  - Mean of 12.99, UCL of 14.2, and LCL of 11.8
- In parallel, evaluate control status of D5800 procedure
- Re-evaluate the VOLD14 mean and control limits after every (15) D5800 calibration runs submitted to TMC.

Seconded: Grant Hutchinson

Vote: Motion approved unanimously

Next Steps: Tom Schofield to draft a technical memorandum to the TMC labs, documenting this new requirement, along with timing and pricing.

4. Other business?

A Tannas representative indicated that they will be hosting a D5800C workshop at their facility in Midland, MI, March 24-26.

The teleconference closed at 12:00 with Josh Frederick thanking everybody for their participation.

Respectfully submitted on March 4<sup>th</sup>, 2015

Josh Frederick