ASTM Section D02.B07
Engine Oil Volatility Test Surveillance Panel

Minutes of the Volatility Test Surveillance Panel Telecon
11:00-12:30 EST March 25, 2014

Attendees for the telecon are listed below

Dennis Gaal (Chair)	ExxonMobil Research and Engineering
Sheila Thompson	Afton
Tom Schofield	ASTM TMC
Yvette Mauricia	Chevron Global Lubricants
Michael Long	
Carrie Sims	Chevron Oronite
Kaustav Sinha	
Joan Martinez	
John Griffin	ExxonMobil Refining and Supply
Robert Stockwell	General Motors Company
Kishore Nadkarni	Millenium Analytics Inc
Ted Selby	Savant Incorporated
Neil Turner	
Maggie Smerdon	
Mike Birke	Southwest Research Institute
Greg Miiller	Tannas Company
Jeff Winfield	The Lubrizol Corporation
Danielle Ivancic	
Greg Lentz	
Amy Ross	The Valvoline Company
Josh Fredrick	
Richard Ochenkowski	

The agenda for the telecon was

- Discussion on the use of the new D5800 reference oils in D6417
- Discussion on PDSC method to monitor D5800 reference oil stability
- Discussion on specific D5800B daily check oil
- Additional topics, if time permits

Following roll call, Dennis Gaal reviewed the agenda in Attachment 1.

Discussion on the use of the new D5800 reference oils in D6417

The first topic of discussion was the evaluation and potential use of the new D5800 reference oils in D6417. The previous D5800 reference oils, Oils 52, 55, and 58, were used as references

in both D5800 and D6417. With the change in the D5800 reference oils to VOLC12, VOLD12, and VOLE12, there was interest in determining whether the new D5800 reference oils could also be used as reference oils in D6417. TMC requested D6417 testing, which were donated by two labs, on the new reference oils as well as VOLB12.

Page 3 in Attachment 1 shows the targets for the current D6417 reference oils, which are 5.61%, 6.97%, and 11.68%. These values are well positioned to monitor the test performance relative to the 10% limit in D6417 required by the ILSAC and API "S" categories. The average D6417 values for VOLB12 (14.2%), VOLC12 (7.1%), VOLD12 (3.3%), and VOLE12 (8.6%) are also listed on page 3 of Attachment 1.

Given these results, the SP discussed whether some or all of the current D6417 reference oils could be replaced by the tested oils. The SP recommended to maintain the current D6417 reference oils, as the values for the proposed good reference (3.3%) and the proposed poor reference (14.2%) were far from the industry limit of 10% and there was no interest in changing only one of the D6417 reference oils.

The next step is for the SP to request donations of new reference oils with nominal D6417 targets of 5%, 8%, and 11.5% from the industry.

Discussion on PDSC method to monitor D5800 reference oil stability

Two PDSC methods were proposed to monitor the oxidation stability of the new D5800 reference oils due to the potential stability issue for the previous D5800 reference oils.

The results of the testing on VOLC12, VOLD12, and VOLE12 in ASTM D6186@180ºC and CEC L-85-99@210ºC are shown on page 5 of Attachment 1. The maximum time for break in both methods is 120 minutes, and all three oils showed essentially no break until 120 minutes or longer in either test. Consequently, it was agreed that these test methods at these conditions are not appropriate for sample monitoring.

Mike Birke made a proposal to donate modified ASTM D6186 tests for the three oils, which run at 210ºC and until the oil breaks rather than running at 180 ºC for a maximum of 120 minutes. The results were provided in April and are listed below.

VOL12C: 39 minutes
VOL12D: 26 minutes
VOL12E: 27 minutes

Based on these results, having the oils tested annually at these conditions is planned, but will need to be confirmed by the SP at the next telecon.

Discussion on specific D5800B daily check oil

There was significant discussion at the D.02.06B meeting in Tampa on the value of TMC specifying a daily check oil for D5800B to create greater consistency in the industry as well as to have a more readily available reference oil in North America. At that meeting, Tannas offered their D5800C reference oil, SNC-150, for this purpose, as it is finished oil with a D5800C value around 12% and would be readily available.

The SP took up this discussion, which was not fully resolved during the allotted time. The SP agreed that specifying a daily check oil for TMC monitored labs would be valued. Additionally, it was estimated that having a 6-8 drum batch would be needed to cover the volume needed for the RR to determine the limits for the daily check oil as well as to supply the TMC monitored labs for roughly 2 years before another batch (and RR) would be needed.

Tannas was willing to provide a specific batch of SNC-150 at this volume and discussion was leading towards the SP reaching a decision on this matter, but there were unresolved questions once the discussion turned to the costing and distribution of the oil. These questions led to action items being taken by Dennis Gaal and Kishore Nadkarni and a motion to delay a decision on this topic until the next SP telecon.

This topic will be discussed further at the Indianapolis ASTM meeting and in the next SP telecon.

The telecon closed at 12:30 with Dennis Gaal thanking everyone for their participation.

Respectfully submitted on June 13, 2014

Dennis Gaal

Attachment 1 -
Volatility SP presentat