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Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

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Unconfirmed Minutes of ASTM ROBO Surveillance Panel

Issued July 31 for Teleconference July 8, 2015

Call to order: The meeting, via teleconference, was called to order by the chair, Alan Flamberg, shortly after 10 AM, Wednesday, July 8, 2015. 21 members and guests were in attendance. The meeting was held via teleconference and WebEx using with the attached Powerpoint.

Review of Membership:

Revised membership.

*in attendance

Ace Glass	Jim Abbott, John Ross
Afton	Shelia Thompson*, Bill Lam , Jeff Yang*
ASTM TMC	Tom Schofield*
BASF	Mary Dery*, Bridgett Rakestraw*, Phillipe Rabbat , Derek Wong
BP	Irwin Goldblatt , Betsy Kaplan
Chevron Oronite	Kaustav Sinha
ExxonMobil	Dennis Gaal*
Infineum	Andy Richie, Sapna Eticala*
Intertek	Joe Franklin, Matt Schlaff*
Kuwait Petroleum	Leen Poot
Lubrizol	Grant Hutchinson*, Aimee Shinhearl, Rick Hartman
PetroChina	Li Shaohui , Sun Ruihua, Peng Wang, Xiaogang Li, Xu Li
Evonik Oil Additives	Alan Flamberg*, Justin Mills*, Bruce Zweitzig*, Joan Souchik*

RT Vanderbilt	Al Filho*, Ron Hiza, Simon Tung
SwRI	Becky Grinfield, Joe De La Cruz, Mike Birke*, Young-Li McFarland
Ashland Inc. / Valvoline	Amol Savant*, Kevin Figgatt*, Steve Lazzara

Also in attendance from Evonik:

Bob Cybert*

Alex Tsay*

Don Smolinski*

David Gray*

Revision to D7528 (ROBO)

The first edition of the test method was published in 2009. The surveillance panel later agreed that the method should be edited to make the use of TMC (ASTM Test Monitoring Center) monitoring mandatory. An independent revision of the method, the current D7528-13, was published before the planned mandatory TMC revision was complete. The current revision updates the units of measure to SI units as much as possible and made some editorial style updates. We now need to incorporate the revisions as planned by the Surveillance Panel. These include:

Incorporating changes proposed by Tom Schofield which make use of TMC services mandatory. Wording may will need to be edited as much as possible to align with Subcommittee B guidelines distributed in 2015.

Delete Table 1, the set-up guidelines, which use obsolete reference oil batches, and refer the user to the TMC where the current oils are maintained.

Working group: Alan Flamberg, Justin Mills, Tom Schofield (who has completed his part) and Joe Franklin (who will review the editing and may be asked for Subcommittee B facilitator help if needed).

Timing: Intend to share the draft prior the next teleconference for review during the teleconference.

Status of the method's statistics

Method statistics were prepared by Tom Schofield and presented by Alan Flamberg at the ASTM D02.B.7 meeting in June 2015 and again at this teleconference (see slides). The method continues to have a mild bias relative to the original data and variability is on the rise.

Ways to reduce bias and variability

Discussed sources of variability and possibly bias in the test.

Temperature – the temperature as monitored doesn't seem to change much, but the location of the thermocouple could be critical as could the surface temperatures which are mostly unknown and may vary with units.

NO₂ feed continues to be a sore point and possible source of variation.

Vacuum control valve. Briefly mentioned, but this was considered to be a major source of variability in the past.

Reactor consistency. Concern was expressed about the consistency of the Ace Glass reactors. Hot spots in the reactor can cause coking and sludge formation. What kind of QC is done, and can we use some of those QC techniques to monitor our reactors?

Action: Alan and Justin schedule a visit to Ace Glass. A previous visit was very productive in communication with Ace the needs of this test.

Action: All – send ideas on ways to reduce bias and variability to Alan.

If we cannot find a way to move the severity of the test more to the middle, the next approach may be to apply some kind of severity adjustments, similar to what is done with engine tests.

Action: Alan and Tom – begin discussions with engine test statisticians to see what techniques might be appropriate to our data.

435-2

This test oil is available and currently being used by the Sequence IIIG. We have about 5 gallons of 435-1, our current reference oil, left and possibly another 10 gallons could be made available to us (**Action:** Tom check) We have data on ROBO on 435-2. The group consensus was to stay with 435-1 for now.

Tom mentioned there are still several samples of the original 435 oil at some of the labs. The group agreed these would be interesting to study, but did not agree on how to do so. Options include letting the labs that want to run them do so, assigning them blindly as certification runs (the oil is still listed in our certification table) or running them as donated runs.

Rough accounting: 6 out of 10 labs have samples, mostly 2 samples but one lab has 7. TMC still has an additional 7 samples. Samples are coded. Samples cannot be transferred to different labs due to chain of custody concerns.

Action: Alan to make a proposal and discuss this again at our next meeting.

Other test oils are in good shape: 434-1 (once Tom reserves some more), 435-1 and 438.

Rules – TMC – new labs, new rigs

Rules for accepting new labs and new rigs at existing labs may need some refining. We will discuss more at the next or future meetings.

New Business

Tom mentioned we still have oils from our original Round Robin. Oils 83 (47 gallons), 84 (3.3 gallons) and 85 (3.3 gallons). They are from 2008 and Tom would like to dispose of them. There could be some value of these oils as there is Round Robin data on them.

Action: Alan – review oils, discuss this again at our next meeting and come to a resolution.

GF-6 and the so-called “Sequence IIIH”. Currently the ROBO test remains in the proposed specification. We don’t know if there will be a IIIHA with used oil low temperature viscosity requirements.

Action: Alan to make contact with the AOAP (Auto Oil Advisory Panel) chair to express our willingness to continue maintaining the ROBO test through GF-6 and to ask if any other actions by our group are needed.

Next meeting

Wednesday, August 19, 2015. By Teleconference and Webex. 10:00AM – 12 Noon EDT.