

HEAVY-DUTY ENGINE OIL CLASSIFICATION PANEL
OF
ASTM D02.B0.02
December 6, 2016
Hilton Orlando Lake Buena Vista – Palm 3
Lake Buena Vista, Florida, USA

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ACTION ITEMS

1. HDEOCP monitor activity with Seals SP regarding long term bias shifts.

MINUTES

- 1.0 Call to order
 - 1.1 The Heavy Duty Engine Oil Classification Panel (HDEOCP) was called to order by Chairman Shawn Whitacre at 1:30 p.m. on Tuesday December 6, 2016, in the Palm 3 Room of the Hilton Orlando Lake Buena Vista Hotel, Lake Buena Vista, Florida.
 - 1.2 There were 14 members present and 71 guests present. The attendance list is included as Attachment 2.
- 2.0 Agenda
 - 2.1 The agenda circulated prior to the meeting (included as **Attachment 1**) was modified slightly. New items are a short report on the DD13 test and Laura Birnbaumer will provide an update on a ballot item.
 - 2.2 The Anti-trust statement was presented. **Attachment 1a**
- 3.0 Minutes
 - 3.1 Fix the start time of the last meeting. The December 2015 and June 2016 meeting minutes were approved.
- 4.0 Membership
 - 4.1 There were three membership changes. Cory Koglin replaces Mike McLaughlin for Afton. Mary Dery replaces Galen Greene for BASF. Don Smolenski replaces David Gray from Evonik.
- 5.0 Existing tests/categories
 - 5.1 Review of status of carry-over engine tests that support API CK-4, FA-4 and legacy categories (Sean Moyer, TMC). **Attachment 3**
 - 5.1.1 Sean and Mark Cooper combined efforts for Sean to give one unified report. The EOAT is currently uncalibrated. CAT tests will have availability for the foreseeable future. COAT still working on Micromotion instrument software and calibration issues. Mack legacy tests still have Oil Consumption as a concern. T-12 ring batch available

in January 2017. Cummins tests have no issues. Statement was made that Cummins are looking at an ISX replacement test. No new update for the RFWT. IIF/IIIG Hardware projected to be depleted 1Q17. A correlation between the 2 tests is expected to be complete by 1Q17. The EOAT using last known hardware and having oil temp control issues. May need provisional licensing until COAT to EOAT correlation is complete.

6.0 Old Business

6.1 Replacement of TMC 1006 reference oil (Brent Calcut, Afton). **Attachment 4**

6.1.1 Reference oil 1006 is running out. Much activity has occurred to get a replacement. 1006 Group 1 basestock is not available so it can't be made anymore. There is about a 1.5 year supply. There are 8 test areas that use this fluid; the most critical areas are seals testing. A task force was formed. Input was solicited from elastomer experts. Existing oils were tried and rejected. A clone oil was tried which is the best option. Seals tests scoping for Light Duty and Heavy Duty seals were evaluated. Engine tests will have enough 1006 and new tests do not need 1006. The Sequence VIII might need 1006. Elastomers will use clone and further testing will take place. Group has found a reliably sourced Group 1 basestock. Naming and numbering may or may not change for OEM specs.

6.1.2 Mike Alessi led a related task force to determine if absolute limits could be set for elastomers instead of relative limits.

6.2 Evaluation of fixed limits for elastomer compatibility (Michael Alessi, ExxonMobil). **Attachment 5**

6.2.1 Statistical differences exist between laboratories. **Attachment 5a.** Until lab differences are fixed, fixed limits can't be implemented. The Seals SP had a workshop to improve things. Improved supply buys some time but differences are a problem. TMC cumulative summation (cusum) plots don't look good. **Attachment 5b.** Seals issues have been going on a long time and formal request has been sent to SP chairman. Need to keep this issue in front of HDEOCP. Reference bands are wide and reference tests are not failing. Need to get EMA perspective on this.

6.3 Update on DD13 Scuffing (Suzanne Neal, DTNA; Patrick Joyce, Lubrizol). **Attachment 6**

6.3.1 Suzanne Neal of Daimler and Patrick Joyce of Lubrizol presented an update. A timeline was given of the history getting to an ASTM test method. In October the method received D8074. They invited members to join the SP if interested.

7.0 New Business

7.1 Phosphorus limits for API CK-4 and API FA-4 (Ron Romano, Ford). **Attachment 7**

7.1.1 Ron provided Ford's position on 6.7L wear test and concerns about CK-4 oils less than 1000 ppm phosphorus. Testing internally showed some wear concerns. Showed photos of parts with wear. Ford will not be recommending CK-4 or FA-4 oils and will keep recommending CJ-4 oils. Ford would like a phosphorous limit in D4485. An alternative is to have a phosphorus label on the container. Ford has released a new spec and has an official approval program in place. Optional ways exist to get a formulation approved without the wear test. 200+ products approved already. Status of test is the procedure could be available middle of 1Q17. Ford will start a public task force when ready to release procedure. (Get right presentation from Ron). Ford has published a position statement.

- 7.2 Review of Ballot item WK51995 to revise ASTM D4485-15a (Laura Birnbaumer, Chevron Oronite). **Attachment. 8**

7.2.1 Laura has a suggestion to modify how PC-11 should be included into D4485. 3 more items need their own ballots. Proposal 1 is to copy CI-4 D5800 language to newer categories. Proposal 2 is to change "requirement" to "required" for T-11 for the Used Oil MRV. Proposal 3 is to break out all viscosity grades for CK-4 to have multiple columns to make it crystal clear. Laura was asked to create the actual proposal.

8.0 Next meetings

8.1 The next meeting will be at the call of the chairman or during ASTM in Boston June 2017.

9.0 The meeting was adjourned at 2:47 pm.