

## HEAVY-DUTY ENGINE OIL CLASSIFICATION PANEL

OF

ASTM D02.B0.02

December 8, 2009

Anaheim Marriot – Anaheim, CA

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### ACTION ITEMS

1. Mack Surveillance Panel to finalize T-10A interchangeability plan by the end of January.
2. Cummins Surveillance Panel to finalize an ISM test severity recovery plan by the end of January.

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### MINUTES

#### 1.0 Call to order

- 1.1 The Heavy Duty Engine Oil Classification Panel (HDEOCP) was called to order by Chairman Jim McGeehan at 1:40 p.m. on Tuesday December 8, 2009, in the Elite Ballroom of the Anaheim Marriot, Anaheim, CA.
- 1.2 There were 13 members present and 48 guests present. The attendance list is included as **Attachment 2**.

#### 2.0 Agenda

- 2.1 The agenda circulated prior (included as **Attachment 1**) was not changed.

#### 3.0 Minutes

- 3.1 The minutes from the previous meeting were approved as written.

#### 4.0 Membership

- 4.1 Don Smolenski replaces Jim Linden from GM. Chris Castanien has a proxy vote for The Lubrizol Corporation.

#### 5.0 D4485 Revision

- 5.1 Lyle Bowman discussed the needed changes to D4485 due to the obsolescing of older categories. **Attachment 3. Pat Fetterman moved and seconded that CG-4 and CF-2 be removed from D4485. Ray Harris seconded. The motion carried on a unanimous voice vote.**

#### 6.0 D4485 Revision

- 6.1 Brad Carter presented a proposal to allow the T-11A in place of the T-10A. **Attachment 4.**
- 6.2 Chris Castanien presented information for developing a T-12A test based on the MRV result from the 100 hour oil sample from a T-12. **Attachment 5.** The T-11 is a substitute for the

T-8E. Some oils would not pass the T-11, thus would be run in the T-8E. To obtain a used oil MRV result, a T-11A would also have to be run. As such, a T-12A should be available, since the T-12 will be necessary. The 100 hour MRV from a T-12 performs similarly to the T-10A result. The T-10 and T-12 are conducted with different reference oils though. **Chris Castanien moved that the HDEOCP ask the Mack Surveillance Panel to finalize a plan by the end of January to develop test interchangeability for the T-10A allowing the T-11A or results based on the 100 hour MRV from a T-12 test. Brad Carter seconded.** Greg Shank reiterated that each recent category did not include a performance change for that parameter. Discussion centered on sending it to the Mack Surveillance Panel and on provisional licensing from API since the T-10A is essentially unavailable. **The motion carried on a unanimous voice vote.**

#### 7.0 Cummins ISM

- 7.1 Pat Fetterman and Steve Kennedy presented information regarding concerns with the ISM test. **Attachment 6.** Pat discussed some test background and the current situation. Steve showed how the reference oil behaves if total merits are calculated like a candidate oil. The total merits have shifted since the introduction of the Industry Correction Factor (ICF). Pat discussed detailed pass/fail data from two independent labs including results from two matched pair of oils. **Attachments 7 & 8.** Information on Oil Filter Delta Pressure (OFDP) trends presented previously at the Cummins Surveillance Panel was also shown. **Attachment 9.** There are no reference oil runs on the new oil filters yet. The expectation is that when a reference is run, it will show the trend.
- 7.2 Some others haven't seen the trend the same way. **Pat Fetterman moved that the HDEOCP ask the Cummins Surveillance Panel finalize a plan by the end of January to introduce the next batch of crossheads and monitor their severity, investigate and adjust, if necessary, the Injector Adjusting Screw (IAS) merit system to account for the size of the ICF, and address the current OFDP severity. Greg Shank seconded. The motion carried on a unanimous voice vote.**

#### 8.0 Test Status (CAT)

- 8.1 Hind Abi-Akar updated the panel regarding CAT's support of SCOTE tests. **Attachment 10.** All currently supported SCOTE tests will continue to be supported.

#### 9.0 Water-Oil Emulsion Task Force

- 9.1 Hind Abi-Akar presented an update on the emulsion task force with some field test results. **Attachment 11.** The plan is to gather more data in the field and in the O-WEST bench apparatus.

#### 10.0 API Categories

- 10.1 Kevin Ferrick of API presented an update on obsolescing old C categories. **Attachment 12.** The API Lubes Committee members have not yet sent in all ballots regarding the status of CF and there are comments on some ballots that have been submitted. The EMA supports dropping CF which was also used to qualify mono-grade oils. The EMA does not need mono-grade oils for crankcase lubrication anymore.

#### 11.0 EMA Report

- 11.1 Greg Shank gave the EMA report. **Attachment 13.** Field performance seems fine with a few conditions. The EMA would like to see ROBO results from HD type oils. The shear stability correlation may not be current for the latest engines. Aeration discrimination is still a concern. Water emulsion studies are ongoing. There are some reports of field problems with oil filter plugging. How to address fuel economy improvement with a low limit of 3.5

HTHS. The EMA would still like a turbo deposit test. Some development was started in Europe for ACEA, but was not completed in time.

- 11.2 No new oil category is needed for needed for US10 compliant engines, but bundling all the concerns could lead to a PC-11 category.
- 11.3 Issues still exist on the use of B6 to B20 levels of biodiesel. More work needs to be done and the EMA supports task forces. There will surely be more mandates for increased use of biodiesel.

#### 12.0 Test Succession Plan

- 12.1 Chairman McGeehan asked Ben Weber to gather information for a HD hardware update. **Attachment 14.** The best guess to keep CJ-4 current is through 2013. The T-12 liner supply is the limiting factor. Chris Castanien suggested not replacing all tests at once and to prioritize tests to replace one at a time. Greg Shank mentioned that T-13 development has started and could be the first one.

#### 13.0 Drivers for Next Category

- 13.1 Chairman McGeehan presented some history showing that it took 5 years to develop CJ-4. **Attachment 15.** The answer to the question of "When is PC-11?" is approaching 2014. The drivers for change could be fuel economy improvements due to mandated reductions in CO<sub>2</sub>, replacement of existing engine tests, increased use of biodiesel and a change to the chemical limits. The earliest timing could be 2014-2015. What about a global oil category?
- 13.2 The modern hardware is certainly different than the current test hardware. Greg Shank indicated that the EPA could mandate increased fuel economy for HD engines as soon as 2014 and the lubricant will play a role in any fuel economy improvements.

- 14.0 The meeting was adjourned at 3:45 pm.