

HEAVY-DUTY ENGINE OIL CLASSIFICATION PANEL

OF

ASTM D02.B0.02

June 19, 2007

Loews Miami Beach Hotel, Miami Beach, FL

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ACTION ITEMS

1. **Set up a conference call to discuss allowing a C13 in place of a 1P**
 2. **ChevronPhillips supply a list of fuel supply issues to the HDEOCP**
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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 1:30 p.m. on Tuesday, June 19, 2007, in the Poinciana 4 Room of the Loews Miami Beach Hotel, Miami Beach, FL.
- 1.2 There were 13 members present and 53 guests present. The attendance list is shown as Attachment 2.

2.0 Agenda

- 2.1 The agenda was modified to include an API update for CF-4 and a fuel supply issue. The modified version is included as Attachment 1.

3.0 Minutes

- 3.1 The minutes from the December 6, 2006 meeting the May 10, 2007 conference call were approved as issued.

4.0 Membership

- 4.1 There was one mailing list change. Brent Calcut replaces Scott Zechiel for Detroit Diesel.

5.0 API Recommendation

- 5.1 API Lubes Committee Decision on API CF-4. The HDEOCP was not able to resolve the T-12 test to the T-6 test equivalent limits. The Lubes committee met to discuss the issue of CF-4 tests not being available. The API decision is that no more CF-4 licenses will be issued. Existing CF-4 licenses will expire at the end of June 2008. CG-4 remains in place. A recommendation will be issued to marketers to upgrade from CG-4 to CH-4 but CG-4 tests are available.

6.0 Status of Ballots

- 6.1 Secretary Moritz presented a summary of ballots issued. See Attachment 3. Someone asked about the previous discussion relating to a passing C13 test result being allowed in

place of a 1P or 1R. CAT will look into it, but might be OK with it. The January 26, 2007 meeting minutes reflect the previous discussion.

7.0 Exit Criteria Ballot

7.1 Cathy Devlin discussed Afton's negative on the ISM to M11 limits. See Attachment 4. The Cummins Surveillance Panel saw the presentation the previous day. Differences between the tests and some test data were shown. Afton has agreed to run one test on 1005 and the Surveillance Panel agreed to recommend to the HDEOCP that this be allowed to happen. Also, a request was made to obtain other data. Cummins is willing to wait and see what the 1005 test run shows. The run and data review would be complete by September 2007. Chairman McGeehan showed the results of the exit criteria ballot. See Attachment 5. Cummins clearly wants this resolved and some limits will be agreed upon during the September time frame. There was no disagreement in the HDEOCP to wait and see what the data shows.

8.0 Sequence III in D4485

8.1 Steve Kennedy presented some improved wording for the Sequence III in D4485. See Attachment 6. The alternate use of the IIIG is at a different performance limit and should be stated that way. A proposed footnote indicates that Sequence IIIG limits are more restrictive and are not intended to indicate equivalence and that results meeting the IIIG criteria stated can be used in lieu of the Sequence IIIF. Longer term, alternate limits for the IIIG should be developed to correspond to the IIIF. **Steve Kennedy moved to amend D4485 to include the footnote shown. Pat Fetterman seconded. The motion carried on a unanimous voice vote.**

9.0 Mack T-11 to T-8

9.1 Mark Cooper discussed the Mack Surveillance Panel recommendation that a passing T-11 be allowed in place of a passing T-8 or T-8E for the applicable category. The Mack Surveillance Panel recommends that the HDEOCP modify D4485 to allow a passing T-11 at CI-4 plus level in place of a T-8 or T-8E in the applicable categories. **Pat Fetterman moved that a footnote be included in D4485 that a passing T-11 at CI-4+ level can be used in place of either a T-8 or a T-8E in the applicable categories. Cathy Devlin seconded. This is not intended to indicate equivalence, but allow a CH-4 claim on a CI-4 oil. The motion carried on a unanimous voice vote.**

10.0 Category Process

10.1 Lew Williams presented a report on an improvement process. See Attachment 7. Greg Shank, Steve Kennedy, and Lew worked on this. The HDEOCP and other stakeholders were asked to provide feedback on HD category development and deployment. Fourteen responses were received. The highest priority from each trade association and the next highest 3 were summarized. A table of questions and responses was shown. The lowest score is a more favorable response or desire, thus a higher rating. The goal is to form teams to develop recommendations to improve the process. By 2012, European emissions limits will be very similar to those in the U.S. and as such, the oil requirements could be very similar and a common specification could exist for those two markets. The EMA would like to focus on using the same tests. A starting point would be to use common tests possibly at different limits. Initiatives exist to continue the globalization of engine platforms.

10.2 Lew Williams will be on a team to work on #8: Jim McGeehan and Greg Shank signed up for #12. Steve Kennedy pointed out that #1, 5, 4 are very similar and volunteered the DEOAP to work on those. Item #11 was not chaired at this time. This is a good start and was much work.

11.0 API CJ-4

11.1 EMA update on 2007 rollout of product is confidential, but there was a huge pre-buy.

12.0 EMA Biodiesel Status Report

12.1 Greg Shank presented an EMA report on B20. See Attachment **8, page 1**. The EMA is concerned about oxidation, deposits, corrosion, fuel dilution (which is a huge concern), and oil drain intervals. Customers will not accept a reduced oil drain interval. The National Bio-Diesel Board will co-sponsor engine tests with the EMA. The tests to be run will be the C13, ISB, and T12 with the reference oil for that test. The tests will include additional oil analysis and hardware inspection. What happens if all the tests fail? It is too early to tell. Everyone is gaining experience with B20 in the field. The B20 will be blended with B100 that meets D6751 and that the EMA believes is representative and will be soy based. These tests will not adequately screen for fuel dilution. A suggestion was made to include the low temp MRV from the T12 oil. What about emissions with bio? EPA and ARB have plans (ARB has money) to evaluate emissions changes with B20, B50, and B100. NOx increases 3-6% with B20.

13.0 2010 Lubricant Requirements

13.1 Greg Shank presented, for the EMA, some feedback on CJ-4 oil field performance. See Attachment **8, page 2**. Limited data looks good, but there could be possible loss of TBN retention. The EMA requests industry data be submitted to Roger Gault to be coded and distributed. The EMA has identified some possible, future additional performance requirements. Among these are increased oxidation protection; the IIIG oxidation requirement might not be enough. Engine oil operating temps could increase 30F. The ROBO might work. The EMA is requesting ROBO data on heavy duty oils. Turbo deposits are still a need and a group in Europe is working on that. Fuel economy is huge and some gains are needed. EMA is willing to discuss formulation changes to get some fuel economy. Take HTHS down to a 3 and try it in a T12. None of these are related to 2010. Chemical limits are TBD. And the EMA is open to test redundancy. Heather DeBaun will look at that again. Today, the EMA is not saying they need PC-11 in 2010, but performance concerns have been listed.

14.0 New Business

14.1 Fuel supply issues. All of the diesel Surveillance Panels had comments that all the labs have had times where fuel delivery had long delays. A question was asked about going back to the fuel specification and to allow labs to select from other suppliers rather than have a sole source. The original specification was developed to allow multiple fuel suppliers, then a task force was created to select a sole supplier. Scott Cobb of ChevronPhillips was in the room and spoke up. Don Burnett has moved into a different position. This is the first meeting for Scott. He offered some reasons for the supply issues. Loading tank cars is the most recent issue; there has not been enough fuel in a batch to fill a tank car which might short other labs using trucks. Also, feedstock supplies have been in short supply. Higher sulfur feedstocks for PC-9 could become an issue and be in short supply. They should be able to supply fuel in rail cars again soon. Scott was asked to provide a list of major issues the HDEOCP needs to know about. A question was asked about the supply contract. Ben Weber explained that the supply was put out for bid and the price was tied to a commodity price of fuel. Scott asked whether the HDEOCP wants an update on PC-9 fuel and the panel said yes.

15.0 The meeting was adjourned at 3:10 pm.