

**HEAVY-DUTY ENGINE OIL CLASSIFICATION PANEL**  
OF  
ASTM D02.B0.02  
December 9, 2008  
Tampa Marriott Waterside, Tampa, FL

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**ACTION ITEMS**

**1. Recommendation to declare CF-2 obsolete**

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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, December 9, 2008, in the Florida Salon V of the Tampa Marriot Waterside Hotel, Tampa, FL.
- 1.2 There were 10 members present and 47 guests present. The attendance list is shown as Attachment **2**.

2.0 Agenda

- 2.1 The agenda shown (included as Attachment **1**) was reviewed by Chairman McGeehan.

3.0 Minutes

- 3.1 The minutes from June 17, 2008 were approved as written.

4.0 Membership

- 4.1 Jim Linden replaces Bob Olree from GM.

5.0 EMA Update

- 5.1 Heather Debaun presented an update from the EMA. See Attachment **3**. The EMA supports the task force investigation of the emulsion situation. The EMA has not heard from the EOAT Surveillance Panel regarding a possible severity shift. The Surveillance Panel has discussed the topic. There seems to be some changes in severity. Ryan Johnson is the new chair of the EOAT Surveillance Panel. Some CJ-4 oils are shearing out of grade and data is being collected. If data exists and can be shared, submit it to Greg Shank or Roger Gault. The Biodiesel Bench Test Task Force met and is forming a scope and objectives. The 1M-PC supply of parts will stop in January of 2009.

6.0 Water-Oil Emulsion Task Force

- 6.1 Hind Abi-Akar presented an overview and update of the emulsion task force. See Attachment **4**. Slide 11 was inadvertently omitted. CAT is seeing an oil-water emulsion formation increase throughout a line up of engine applications. Older category oils

separated the oil and water, but newer category oils resulted in a stable emulsion. There is a range of temperature and humidity under which the emulsion forms. An engine was run to evaluate. A "passing" oil lets the water separate from the oil. Field data from CAT engines suggests that most brands and additive packages result in emulsion formation. The emulsion is made up of 70-90% water. Often, rust is present under the emulsion. Both the rust and emulsion are concerns.

- 6.2 A bench test has been developed at CAT named the Oil-Water Emulsion Stability Test (O-WEST). Multiple runs have been made. CJ-4 oils separate about 3.3% water and a mild fail separates about 9.2% and a passing oil separates about 19.8% water. The task force met at CAT and witnessed an O-WEST demonstration. CAT will be running a field test for evaluation of CJ-4 oils and passing oils that should last a few months.
- 6.3 CAT will evaluate the passing oil in the Passenger Car Emulsification test and work with ILSAC to maintain universal oils. Also, existing tests will be identified that will be needed to validate the impact of any formulation changes.
- 6.4 Members of the task force have contributed knowledge about the mechanism of emulsion formation relating to thin film composition. Water in the blowby is very acidic. The hand shaking screening test is not sufficient to predict the O-WEST.

#### 7.0 Test Status of Single Cylinder tests

- 7.1 Hind also gave an indication of CAT's support of industry engine tests. See Attachment 5.
- 7.2 1K, 1R, and 1N support will continue. CAT has a dedicated parts person to monitor.
- 7.3 The 1P will be supported and currently have enough liners from the current batch to last through 2009. The 1Y3860 core assembly is out of stock, but will be in stock.
- 7.4 The 1M-PC has parts availability issues. CAT had previously announced stopping support in 2009. The 1Y7943 cylinder head is only available on a MTO (made to order) basis with a several month lead time and very high cost. The 1Y7514 RACK and 1Y0469 BUSHING are out of stock. CAT will no longer support the 1M-PC after January 2009. There are some low usage rate parts available that will be kept for 6 months, but will be discarded after that.

#### 8.0 Test Status of 6V92

- 8.1 Patrick Lai gave an update on the status of the 6V92 test. Last June, an update was promised by December. Two organizations that had considered setting up a stand will not set up a stand. This makes the test unavailable.
- 8.2 Since the 1M-PC and 6V92 will not be available, then CF-2 is not available. The HDEOCP will recommend to B that parts are no longer available and that CF-2 be declared obsolete. A motion was made and seconded by many to recommend that CF-2 be declared obsolete. This was approved with unanimous approval. Also, the 6V92 Surveillance Panel can be disbanded.
- 8.3 Also, the next version of MIL Spec 2104H will not include the 6V92.

#### 9.0 Bio Diesel Bench Test Task Force

- 9.1 Joe Franklin presented an update on the biodiesel task forces. See Attachment 6. The two task forces have been combined into one and have had 2 meetings. A scope has been developed. The target date for bench tests and methods is end of 2010.
- 9.2 One test will be to identify the amount of bio in used oil separate from oxidation.

#### 10.0 Next meetings

- 10.1 The next meeting is planned for June 2009.

#### 11.0 The meeting was adjourned at 2:30 pm.