

HEAVY-DUTY ENGINE OIL CLASSIFICATION PANEL OF

ASTM D02.B0.02

December 7, 2004

The Marriott Waterside Hotel – Tampa, FL

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ACTION ITEMS

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| 1. T-10 / T-9 data. | All |
| 2. Input to BOI/VGRA Task Force on BOI for ISB and T-12. | EMA |
| 3. Form task force to evaluate potential VTW test redundancies. | HDEOCP |
| 4. Input on piston deposit test(s) for inclusion in PC-10. | EMA |
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MINUTES

- 1.0 Call to Order
 - 1.1 Chairman Jim McGeehan called a meeting of the Heavy Duty Engine Oil Classification Panel (HDEOCP) to order at 1:29 p.m. on December 7, 2004 in Grand Salon I/J of the Marriott Waterside Hotel of Tampa, Florida. There were 17 members present or represented and approximately 56 guests present. The attendance list is shown as Attachment 2.
- 2.0 Agenda
 - 2.1 The published agenda (see Attachment 1) was reviewed and Fred Girshick was added early with a report on shear stability.
- 3.0 Previous Meeting Minutes
 - 3.1 Bill Runkle moved that the minutes of the previous meeting be approved as distributed and posted on the TMC web site. Lew Williams seconded the motion, which passed by unanimous voice vote.
- 4.0 Membership
 - 4.1 There were no changes to the membership (see Attachment 3).
- 5.0 Shear Stability, 90 Cycle
 - 5.1 Fred Girshick, chairman of the Sub-committee 7 Task Group on Ninety Cycle Shear Stability, reported that the test method has been approved and published, with method number D7109 assigned. The method currently has a preliminary precision statement, but that will be revised to a full precision statement and balloted early next year, after the round robin now in progress is completed. See Attachment 4.

6.0 PC-10 Matrix Design, Funding and Test Oils

- 6.1 Steve Kennedy reported on the PC-10 matrix funding and design (see Attachment 5) and noted the Memorandum of Agreement (MOA) will state the ISB and T-12 matrices can not start until the base oil interchange (BOI) guidelines are defined and agreed upon.
- 6.2 Barry Deane indicated the BOI/VGRA Task Force plans to meet toward the end of January to formulate a recommendation to the API Lubricants Committee. They request EMA input as soon as possible and plan to ballot their recommendation to the API LC before the MOA is issued.
- 6.3 The possibility was raised that matrix oils blended with the Group III base stock could blend to a 10W-40 grade rather than a 15W-40 grade. No concerns or objections were raised by the panel.

7.0 PC-10 Timeline

- 7.1 Bill Runkle presented the revised PC-10 timeline, see Attachment 6.

8.0 ISM Exit Ballot

- 8.1 Jim McGeehan reviewed the exit ballot results on including the ISM in PC-10 (see Attachment 7). There were 3 negatives and several affirmative comments expressing hope that tests now underway will help alleviate concerns.
- 8.2 Steve Kennedy's negative centered on concern that there are probable redundancies with 3 valve train wear tests (ISM, ISB, RFWT) and he wants to see a task force formed to evaluate the need for 3 tests.
- 8.3 Charlie Passut's negative is concerned that no soot correction exists and no outlier criteria have been defined.
- 8.4 Mike Lynskey's negative is concerned there is inadequate OFDP separation in the test.
- 8.5 An ISM presentation by Dave Stehouwer, not made at the meeting, is included for reference (see Attachment 8).

9.0 PC-10 New Test Development Status

9.1 Mack T-12

- 9.11 Greg Shank reported on the status of the T-12 test development (see Attachment 9). The T-12 Task Force recommends use of dyed PC-10 fuel and including oil 820-2 as a matrix test oil. He also mentioned concern with condensation possibly making it to the intake manifold. Greg made and Steve Kennedy seconded a motion that reference oil 820-2 be included as one of the PC-10 T-12 matrix oils. The motion passed with 15 votes for, 0 against, 0 abstain.

9.2 Caterpillar C13

- 9.21 Abdul Cassim reported on the C13 test development status (see Attachment 10). He indicated the task force is looking at a new low reference oil.

9.3 Cummins ISB

- 9.31 Dave Stehouwer presented the ISB report (see Attachment 11). Dave made and Greg Shank seconded a motion that reference oil 830-2 be included as a PC-10 ISB matrix test oil. The motion passed with 16 for, 0 against, 0 abstain.

10.0 Piston Deposit Tests

- 10.1 Tom Cousineau presented C13 and 1P piston temperature data from testing sponsored by the ACC (see Attachment 12).

- 10.2 Greg Shank reviewed the EMA position (see Attachment 13) and indicated they had not yet reached consensus because of the wide spread in piston temperatures. It was noted their 1N temperature data was obtained in 1994.
 - 10.3 Abdul Cassim reviewed piston temperature data (see Attachment 10) and indicated CAT is willing to support inclusion of the 1K or 1N in PC-10, but not at the expense of losing the 1P. No 1K/1N vs. 1P data will be coming from Infineum or Lubrizol.
 - 10.4 Pat Fetterman presented 1K piston temperature data they had obtained by a different technique (see Attachment 14). It also indicates hotter temperatures in the ring belt than the steel pistons.
 - 10.5 EMA have agreed to reach a position by the next HDEOCP meeting, at which time, hopefully, the piston deposit tests to be included in PC-10 can be agreed upon.
- 11.0 Next Meeting
- 11.1 The next meeting is scheduled for January 13, 2005 in San Antonio.
 - 11.2 Following meetings are tentatively set for February 10 and March 2, 2005, probably in Chicago.
- 12.0 PC-10 Review
- 12.1 Jim McGeehan presented a review and update of PC-10 progress, see Attachment 15.
- 13.0 PC-10 Fuel
- 13.1 Jim Wells reviewed the tax penalty (20 cents per gallon) if PC-10 tests use clear or "on-highway" fuel. Mack indicated their fuel system supplier sees no problem with using dyed "off-road" fuel. Detroit Diesel, Cummins and International also indicated they see no problems with dyed fuel.
 - 13.2 Barry Deane recommended that if dyeing was agreed to, it should be done at the minimum acceptable level. The PC-10 fuel supplier, ChevronPhillips, indicated they could supply fuel with dye in the range of regulated minimum to regulated minimum plus 2%. Pat Fetterman made and Charlie Passut seconded a motion that starting in 2005, PC-10 ULSD fuel be dyed to qualify for "off-road" tax status at the minimum to minimum plus 2% regulated dye rate. The motion passed via unanimous voice vote, with one abstention.
 - 13.3 The above discussion raised the question in regard to PC-9 fuel, which is currently clear or un-dyed. Bill Kleiser made a motion, seconded by Lew Williams, that the HDEOCP recommend to the surveillance panels of tests using PC-9 fuel, that PC-9 fuel be dyed to qualify for "off-road" tax status at the minimum to minimum plus 2% dye rate and that it be a running change. The motion passed via unanimous voice vote, with one abstention.
 - 13.4 For reference on dye rates, see Footnote "C" of Table 1 in D975.
- 14.0 T-10 for T-9
- 14.1 Once again, no data available yet. Greg Shank promised to have some for the next meeting.
- 15.0 Adjournment
- 15.1 The meeting was adjourned at 4:13 p.m. on December 7, 2004.

Submitted by:

Jim Wells
Secretary to the HDEOCP