

**HEAVY-DUTY ENGINE OIL CLASSIFICATION PANEL  
OF  
ASTM D02.B0.02  
June 19, 2001  
Sheraton Hotel & Marina, San Diego, CA**

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**ACTION ITEMS**

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|-----------|---|-------------------------------|
| <b>1.</b> | <b>Issue first set of 'exit' ballots.</b> | <b>J. McGeehan</b>            |
| <b>2.</b> | <b>Resolve HTHS issue.</b>                | <b>HDEOCP</b>                 |
| <b>3.</b> | <b>Report on matrix data analysis.</b>    | <b>M-11 EGR &amp; T-10 TF</b> |
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**MINUTES**

- 1.0 Call to Order
  - 1.1 Chairman Jim McGeehan called the meeting to order at 9:02 a.m. on June 19, 2001, in the Harbor Island Room of the Sheraton Harbor Island Hotel of San Diego, CA. There were 13 members present or represented and approximately 75 guests present. The attendance list is shown as Attachment 2.
- 2.0 Agenda
  - 2.1 The announced agenda (Attachment 1) was reviewed and due to conflicts with other meetings, the used oil viscometrics and 'B' ballot reports were moved ahead of exit ballots, HTHS and elastomer discussions.
- 3.0 Previous Meeting Minutes
  - 3.1 The minutes of the May 25, 2001, meeting in Chicago were approved as distributed and posted on the TMC website.
- 4.0 Membership
  - 4.1 Chairman McGeehan reviewed the panel membership (Attachment 3). Tom Cousineau replaces Mark Rees of Ethyl as a member.
- 5.0 Chairman's Comments
  - 5.1 Chairman McGeehan reviewed the PC-9 development program and the proposed meeting / objective timeline. Attachment 4.

## 6.0 PC-9 Matrix Status

- 6.1 John Zalar presented a report (Attachment 5) on the status of the matrix tests. All M-11 EGR and T-10 testing should complete by July 2<sup>nd</sup> and the 1R tests could complete by August 10<sup>th</sup>. Dale Carroll asked if T-10 / M-11 tests currently running would replace existing tests posted on the TMC website and would the existing test data then disappear. The answer was that the existing data would not disappear.
- 6.2 Steve Kennedy reported that the ACC and API had not yet approved use of MOA funds for the 1R, but he expected that to happen by next week. Ralph Cherrillo said the API BOI / VGRA Task Force had not yet fully approved use of the 1P BOI guidelines for the 1R, but he expected that to complete soon.

## 7.0 Mack T-10

- 7.1 Greg Shank gave an update on T-10 matrix testing and presented the T-10 matrix piston deposit data (Attachment 6). He mentioned that upper rod bearing average weight loss (URBWL) could be used instead of oil lead level. When asked about piston deposits, he said he did not want them to become an additional pass/fail parameter for the T-10, unless they were directly connected to oil consumption.
- 7.2 Jim Rutherford presented some 'preliminary' analysis of the T-10 matrix data (Attachment 7) and also stated that review of the ACC template with the Task Force revealed no major obstacles at this time.
- 7.3 Joe Franklin reviewed the FTIR oxidation data to date (Attachment 8) and the panel requested that the raw data be included in the minutes.

## 8.0 Cummins M-11 EGR

- 8.1 Dave Stehouwer presented an update on M-11 EGR matrix activity and results (Attachment 9). He showed the results from one test completed with a re-worked oil filter and indicated a second test was underway. He also indicated he is looking for more tests to help determine how much difference the filter re-work might make in filter delta P, since the one test falls within the band of matrix results with that oil.

## 9.0 Caterpillar 1R

- 9.1 Dwayne Tharp indicated CAT supports the 1R and listed some of the commonalities and differences from the 1Q (Attachment 10).
- 9.2 Don Marn presented the Matrix Design Task Force recommendations for the 1R matrix (Attachment 11). After considerable discussion on the merits of using two or three oils in this matrix, Lew Williams moved to accept the MDTF "Alternate" proposal, which uses three oils. Dwayne Tharp seconded the motion, which passed unanimously by voice vote. The 3 oils will be PC-9A, PC-9D and PC-9M (1005). All 1R matrix stands had already started tests on oils A or M, to allow time for completion by August.

## 10.0 Used Oil Viscometrics

- 10.1 Dave Stehouwer presented results from a low temperature engine oil flow study, done with sooted oils (Attachment 12).

- 10.2 Chris May presented an update on the LOTRUO activities (Attachment 13) and indicated they plan to ballot the modified D4684 method (MRV) in a couple of months as an annex to D4684, since it would not be mandatory. Chris agreed to send the data he had as a spreadsheet to Jim Rutherford.
- 10.3 Jim McGeehan presented low temperature sooted oil data from an SAE paper of his, #2000-01-1989 (Attachment 14).
- 11.0 Sequence IIIF for Sequence IIIE
  - 11.1 Bill Nahumck reported on the Sequence III Surveillance Panel activity and presented several things they agreed to do to accommodate use of the IIIF test in older HD categories (Attachment 15). The proposals would require a procedure change and thus a 'B' ballot, probably in conjunction with a ballot on D4485.
  - 11.2 Jim McGeehan presented proposed limits for multiple Seq. IIIF tests in the CH-4 and CG-4 categories (Attachment 16).
- 12.0 Ballot Results
  - 12.1 Jim McGeehan reported that the 'B' ballot to replace the L-38 in older HD categories with the Sequence VIII was a passing ballot with no negatives (Attachment 17).
- 13.0 Lunch Break
- 14.0 High Temperature / High Shear
  - 14.1 Bill Kleiser presented some data and observations with regard to HTHS (Attachment 18).
  - 14.2 Pat Fetterman presented more data and observations on HTHS (Attachment 19).
  - 14.3 Greg Shank presented some data and EMA's recommendations for HTHS limits (Attachment 20). Dave Stehouwer moved to accept the recommendation of 3.5 cP minimum HTHS limit for xW-30 new oil. Don Marn seconded the motion. After lots of discussion between the opposing camps, the motion passed with 6 votes for, 4 against and 1 abstain. Since this result seemed to guarantee 'B' ballot negatives, it was decided to see how the other two proposals might fare. Greg Shank moved and Don Marn seconded to adopt the 3.3 cP minimum HTHS from EOAT (HEUI) samples at 5 or 10 hours. This proposal also passed, but with a 5 for, 4 against, 2 abstain vote. This was even less favorable, so the third proposal was tried. Greg Shank moved and Don Marn seconded that the HTHS limit be set at 3.3 cP minimum for xW-30 oils, after shear (in the Bosch injector apparatus). This motion also passed with a 6 for, 4 against, 1 abstain vote – not exactly consensus either. So, work remains to be done on this issue.
- 15.0 Exit Ballots
  - 15.1 Jim McGeehan presented (Attachment 21) how he plans to split the 'exit' ballots up and indicated he would send them to the 'B' membership to help surface potential problems earlier.
  - 15.2 Pat Fetterman voiced a concern over adopting existing limits for the 1N without any data on PC-9 oils.

16.0 Elastomer Compatibility

- 16.1 Dave Stehouwer presented the Elastomer Task Force report for Tom Boschert (Attachment 22) and noted there is a proposal being considered on statistically handling a candidate oil's results versus the reference oil, but it needs more work.

17.0 Next Meeting

- 17.1 Chairman McGeehan cautioned everyone to plan for full day meetings on August 15<sup>th</sup> and September 5<sup>th</sup>.

18.0 Adjournment

- 18.1 The meeting was adjourned at 3:21 p.m. on June 19, 2001.

Submitted by,

Jim Wells

Secretary to the HDEOCP