

**HEAVY-DUTY ENGINE OIL CLASSIFICATION PANEL  
OF  
ASTM D02.B0.02  
May 10, 2001  
Sheraton World Resort, Orlando, FL**

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**ACTION ITEMS**

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| <b>1. Resolve lead and rod bearing weight loss variability.</b>   | <b>T-10 Task Force</b>     |
| <b>2. Resolve filter pleat collapse effect on filter delta P.</b> | <b>M-11 EGR Task Force</b> |
| <b>3. IR Oxidation data loaded on TMC website.</b>                | <b>Joe Franklin</b>        |
| <b>4. Piston Deposit Task Force.</b>                              | <b>Bill Kleiser</b>        |
| <b>5. Letter to Seq. III S. P. regarding 60 hr. III F data.</b>   | <b>Jim McGeehan</b>        |
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**MEETING MINUTES**

- 1.0 Call to Order
- 1.1 Chairman Jim McGeehan called the meeting to order at 8:07 a.m. on May 10, 2001, in the Indian room of the Sheraton World Resort of Orlando, Florida. There were 13 members or representatives present, along with approximately 25 guests. The attendance list is shown as Attachment 2.
- 2.0 Agenda
- 2.1 The announced agenda (Attachment 1) was reviewed and John Zalar will give a PC-9 matrix update after membership review.
- 2.2 The summer meeting schedule is shown as Attachment 3.
- 2.3 Greg Shank presented Dan Larkin with an award for serving as the EMA Lubricants Committee chairman for so many years.
- 3.0 Previous Meeting Minutes
- 3.1 The minutes of the February 22, 2001 meeting in Chicago were approved as posted on the TMC website.
- 4.0 Membership
- 4.1 Mark Rees of Ethyl will replace Charles Passut as a member.

## 5.0 PC-9 Matrix Update

- 5.1 John Zalar presented an update on the status of PC-9 matrix testing (Attachment 4). There was some discussion with regard to the time allotted for new product development, currently shown as 9 months in the timeline, but that is not "official".

## 6.0 Mack T-10

- 6.1 Greg Shank gave an update on T-10 matrix status (Attachment 5) and indicated there was some unanticipated variation in lead and rod bearing weight loss. Some tests may need to be re-run, but he felt preliminary matrix analysis will be done by the June ASTM meeting.

## 7.0 Cummins M-11 EGR

- 7.1 Dave Stehouwer reported on the M-11 EGR matrix status (Attachment 6) and on proposed soot normalization schemes (Attachment 7). He also revealed that some of the variation seen in oil filter delta pressure may be the result of filter pleat pinching. The test filters were built without any hot melt glue bands which help keep the filter media pleats from bunching together and thus effectively reduce the media surface area available for flow. See the picture in Attachment 6.

## 8.0 Oxidation

- 8.1 Dwayne Tharp was missing in action at the time, so Joe Franklin reported on the IR Oxidation T.F. status (Attachment 8) and noted they have standardized on IR units per cm of cell thickness. They are also looking at revisions to the TAN method to help reduce its variability. Chairman McGeehan stressed that the IR oxidation data for the matrix tests needs to be loaded on the TMC website and all the available data should be ready by the May 25<sup>th</sup> meeting.
- 8.2 Jim Ziemer presented concerns his organization has with IR oxidation determination (Attachment 9). He feels that normalization for soot content should occur if IR analysis for oxidation is adopted. Ted Selby suggested that perhaps soot in the samples could be removed using membrane dialysis. Jim Ziemer felt that perhaps the Seq. III F test with no soot would be a better approach to oxidation resistance demonstration.
- 8.3 Dave Stehouwer felt that the category should stick with a diesel test.
- 8.4 Greg Shank showed some slides from the Rich Lee oxidation task force which indicate that EGR has an effect on oxidation (Attachment 10).

## 9.0 CAT 1Q

- 9.1 Dwayne Tharp gave an update on the 1Q matrix status (Attachment 11) and said the task force had a teleconference scheduled for the next day (May 11) to discuss recent problems.

## 10.0 Piston Deposits

- 10.1 In light of the 1Q report, there was lengthy discussion with regard to piston deposit results from the T-10 and M-11 EGR matrix tests. That data has been collected, but not posted, on the TMC website. Both test sponsors will work to get their test's weighted deposits and oil consumption data posted.

- 10.2 Steve Kennedy suggested that a task force be formed to look at deposits from these other tests, along with the 1Q data. Bill Kleiser “volunteered” to form this task force and was supported by “volunteers” Lew Williams, Greg Shank, Steve Kennedy, Mark Rees, Dave Stehouwer and Dwayne Tharp.
- 11.0 Low Temperature Pumpability
  - 11.1 Chris May presented an update on the LOTRUO work (Attachment 12) and indicated significant progress in method development. He expects they will have statistical analysis of their testing completed by the June ASTM meeting and will be able to issue a research report shortly thereafter.
  - 11.2 Dave Stehouwer showed some data from a proprietary cold room study looking at time to oil for various fresh and sooted oils (Attachment 13). Since they had also looked at the cold temperature viscosities, he felt that a much lower limit than currently exists is warranted for viscosity at cold temperatures.
- 12.0 Elastomer Compatibility
  - 12.1 Mark Rees presented the Elastomer Task Force report for Tom Boschert (Attachment 14). Round robin tests are underway. Data and the procedure are posted on the TMC website. They plan to have all the testing completed and the data analyzed by the July meeting.
- 13.0 Other PC-9 Limits
  - 13.1 Greg Shank spoke about limits for tests other than the new engine tests. He indicated that the T-8E limit for PC-9 may come down. He then addressed the high temperature, high shear issue for multi-vis 30 grade oils (Attachment 15). and indicated the EMA felt a minimum of 3.5 cP is needed.
  - 13.2 Dan Larkin requested that “exit ballots” be used again for the less controversial, older tests and Chairman McGeehan agreed to use them.
- 14.0 Backward Compatibility
  - 14.1 Bill Kleiser made a pitch for backward compatibility of oils meeting PC-9 requirements (Attachment 16). Lew Williams seconded Bill’s motion that it be the intent of the HDEOCP that oils meeting PC-9 requirements would be deemed as also fulfilling CH-4 requirements. The motion passed with 11 for, 0 against and 0 abstains.
- 15.0 Seq. III F for Seq. III E
  - 15.1 Lew Williams reported for the Seq. III E Replacement Task Force (Attachment 17). They proposed limits using the Seq. III F in place of the Seq. III E of 325% @ 60 hours for CG-4 heavy duty oils and 295% @ 60 hours for CH-4 oils. Pat Fetterman raised concerns that the LTMS system would not provide alerts or severity adjustments for 60 hour results. After some discussion, it was proposed that the LTMS system could monitor the 60 hour data as well as the 80 hour data, but the Sequence III Surveillance Panel needs to be advised of the request and agree to cooperate. Chairman McGeehan indicated he could send the Seq. III S.P. a letter. Lew Williams moved and Pat Fetterman seconded adoption of the above proposed III F limits for CG-4 and CH-4 oils. The motion passed with 13 for, 0 against and 0 abstains.
- 16.0 Other Business

- 16.1 Greg Shank announced that the TMC and CAT Surveillance Panel would be asked at the June ASTM meeting to begin monitoring the CAT 1R test.
- 16.2 The June meeting in San Diego will be planned for all day and will switch rooms with the PCEOCP.
- 17.0 Adjournment
  - 17.1 The meeting was adjourned at 11:29 a.m.

Submitted by:

Jim Wells  
Secretary to the HDEOCP