

**HEAVY-DUTY ENGINE OIL CLASSIFICATION PANEL**

OF

ASTM D02.B0.02

December 5, 2000

Opryland Hotel, Nashville, TN

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**ACTION ITEMS**

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| 1. | <b>Operational matrix test data to TMC within one week of EOT.</b> | <b>Matrix Labs</b>                    |
| 2. | <b>One gallon samples of all EOT matrix oils to Chris May.</b>     | <b>Matrix Labs</b>                    |
| 3. | <b>Review matrix data after five tests.</b>                        | <b>1Q, T-10, M-11 EGR Task Forces</b> |
| 4. | <b>3F for 3E in previous C categories.</b>                         | <b>3F/3E Task Force</b>               |
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**MEETING MINUTES**

- 1.0 Call to Order
  - 1.1 Chairman Jim McGeehan called the meeting to order at 1:05 p.m. on Dec. 5, 2000, in the Memphis A room of the Opryland Hotel in Nashville, TN. There were 13 members present or represented and approximately 68 guests in attendance. The attendance list is shown as Attachment 2.
- 2.0 Agenda
  - 2.1 The agenda for the meeting (Attachment 1) was reviewed and the Cat 1Q discussion was moved up to just after membership.
- 3.0 Meeting Minutes
  - 3.1 The minutes of the November 2, 2000 meeting were approved as posted on the TMC website.
- 4.0 Membership
  - 4.1 Ken Chao of John Deere was added as a member. Robert Stockwell will replace Bob Olree as a member from GM and Shawn Whitacre will replace John Graham as a member from Cummins.
- 5.0 Cat 1Q
  - 5.1 Dave Nycz presented a report on the Cat 1Q status (Attachment 3) and moved that the HDEOCP affirm the test ready to start matrix testing. Steve Kennedy seconded the motion. With regard to the data Dave presented, Charlie Passut asked if the means of oils 1005 and E4 still separated if a pooled standard deviation was used. Dave had not

made that calculation and did not know. Lew Williams was concerned with oil consumption on the test and felt that lately, oil consumption control has been worse than when the test first started. He stated that the results causing his concern may be chemistry related, but he wanted to know if anyone else had experienced similar concerns.....no response. The motion to agree that the 1Q is ready for matrix testing passed with 12 for, 0 against, 0 abstain.

#### 6.0 PC-9 Matrix Status

- 6.1 John Zalar reported on the PC-9 matrix status (Attachment 4). He indicated that three T-10 matrix tests had started and one 1Q test. He stated that he and the other statisticians will confer on matrix results and conclusions before issuing any reports to the test task forces. He also stated that all matrix test results will be posted on the TMC website. The TMC needs to be notified of all matrix test aborts and EOT's as soon as possible. Likewise, they need to receive the test operational data, via comma delimited or Excel files, within one week of EOT.
- 6.2 Don Marn showed the Matrix Design Task Force changes requested at the Nov. 2, 2000 HDEOCP meeting (Attachment 5).

#### 7.0 Mack T-10

- 7.1 Wim Van Dam reported on the T-10 status (Attachment 6) and talked about pausing the matrix to review the data from the first runs on the preferred oil. He plans to have a teleconference of the Task Force during the first week in January and a Task Force meeting the week of January 15<sup>th</sup>, if necessary.

#### 8.0 Cummins M-11 EGR

- 8.1 Lew Williams expressed concern about lab-to-lab variability with the test (Attachment 7) and wanted to delay start of its matrix until the problem is resolved.
- 8.2 Shawn Whitacre reported on the last Task Force meeting and an engine build workshop, both held in San Antonio in mid-November. He showed the individual crosshead wear data from two of the recent Lubrizol tests (Attachment 8) and noted that data from a third test was not being considered because of high silicon levels in the oil. The individual results from the other two labs were very close except for four positions. The results from those four positions look like anomalies or outliers, but since there are two each, intake and exhaust, statistically, they could not be removed. Metallurgical data from several crossheads of this batch have looked very consistent, so it is quite possible that the significant wear differences have cropped up because of differences in the rocker levers. The rocker levers and possible operational differences are now being investigated.

#### 9.0 PC-9 Matrix: Start, Pause, Review

- 9.1 Lew Williams moved and Charlie Passut seconded, to have each matrix test type pause after at least five test results are available on the featured oils, for review by the test type Task Force. The Task Force is to complete review of the data within one week of EOT of the fifth test. The TMC is not to issue a second oil for those stands until the Task Force gives the go ahead. The motion passed with 12 for, 0 against and 1 abstain.

#### 10.0 PC-9 Timeline

- 10.1 Jim Wells presented the timeline update for Brent Shoffner (Attachment 9). Dick Kuhlman reminded the group that tests could be brought online individually, thus possibly shortening the overall timeline.

#### 11.0 Elastomer Task Force

- 11.1 Dave Stehouwer presented the Elastomer Task Force report for Tom Boschert (Attachment 10) and noted that a ballot of the procedure in D11.15 received two negatives. It will be re-balloted next year after some round-robin work. The Task Force will meet in mid-January to review the procedure and re-write the ballot.
- 12.0 Emissions Status
- 12.1 Greg Shank reviewed the latest twists in the fluctuating emissions saga. It seems there is now an initiative by certain states to have all diesel engine manufacturers use the European 13 mode plus the transient cycle and a Not-To-Exceed limit for the 2004 – 2007 timeframe.
- 13.0 III F / III E
- 13.1 Bill Nahumck reviewed the proposed 3F limits to be used to demonstrate 3E performance for older passenger car categories (Attachment 11).
- 13.2 Ralph Cherrillo questioned what was being proposed for older heavy duty categories which included the 3E. After a fruitless attempt soliciting a volunteer to chair a task force to work on this problem, Jim McGeehan said he would chair it himself. Among the volunteers then, to participate in this task force, were Pat Fetterman, Bill Nahumck, Charlie Passut, Lew Williams and Bill Kleiser.
- 14.0 Low Temperature Used Oil
- 14.1 Steve Kennedy raised the question about which test type will be chosen to provide the “used” oil for low temperature viscosity evaluation.
- 14.2 Chris May reported the LOTRUO group now has several labs running development evaluations on the ‘used’ oils already provided.
- 14.3 Since the answer to Steve’s question has not been decided, it was agreed to provide Chris with one gallon samples from the EOT drain oil of each matrix test. This means Chris and his group should end up with 82 gallons of used oil from the matrix. It was noted each sample should be homogenized (ala the VIT8 procedure) before it is split.
- 15.0 L-38
- 15.1 A similar scenario to the 3E/3F situation is developing with the L-38 / Seq. 8 tests. At some point in the future it may be necessary to consider use of the Seq. 8 results for older C categories which call for L-38 results.
- 16.0 Adjournment
- 16.1 The meeting was adjourned at 3:03 p.m. The next meeting will be at the call of the chairman.

Submitted by:

Jim Wells  
Secretary to the HDEOCP