HEAVY-DUTY ENGINE OIL CLASSIFICATION PANEL

OF

ASTM D02.B0.02 May 18, 2004 DoubleTree Hotel – O'Hare, Rosemont, IL

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ACTION ITEMS

1.	Issue "Exit" ballot on PC-10 Chemical Limits.	Jim McGeehan
2.	Should D4485 reflect variable pass/fail limits on seals test.	HDEOCP

MINUTES

- 1.0 Call to Order
 - 1.1 The May 18, 2004 meeting of the HDEOCP was called to order at 8:00 a.m. by Chairman Jim McGeehan at the DoubleTree Hotel of Rosemont, IL. There were 19 members present or represented and there were 18 guests present. The attendance list is shown as Attachment 2.
- 2.0 Agenda
 - 2.1 The published agenda (Attachment 1) was reviewed, with no suggested changes.
- 3.0 Membership
 - 3.1 Scott Harold will replace Michael Weismiller for Ciba.
- 4.0 Previous Meeting Minutes
 - 4.1 Several people noted an incorrect reference oil designation for the ISM in paragraph 10.11 of the February 19, 2004 minutes. The reference oil listed as 870-2 should have been identified as oil 830-2.
 - 4.2 The minutes of the February 19, 2004 meeting were approved with the change noted above.
- 5.0 PC-10 Matrix Funding
 - 5.1 Steve Kennedy reported that API had agreed on up to one million dollars in funding for PC-10 matrix tests, contingent on equal commitments from EMA and ACC. See Attachment 3. Chairman McGeehan asked if funding commitments from these two organizations would be firm by the June meeting in Salt Lake City. Representatives from ACC indicated their commitment would probably be firm by then and EMA said they would try.
- 6.0 PC-10 Chemical Limits
 - 6.1 Rick Finn presented the recommendations of the Chemical Limits Task Force (see Attachment 4). The Task Force agreed on a 1% maximum sulfated ash limit, a 0.12%

maximum phosphorus limit and a 0.4% maximum sulfur limit. Rick Finn moved and Pat Fetterman seconded that these proposed limits be sent to all "B" and API "Lubes" committee members as an "exit" ballot. The intent of the ballot being to flush out potential support and / or opposition for the limits before a HDEOCP vote in June. The motion passed with 14 for, 1 against, 1 abstain. The "exit" ballot is to be returned in time for review by the Task Force prior to the June 22 meeting of the HDEOCP and is to be structured such that abstentions are prohibited.

- 6.2 Jim McGeehan distributed a letter (see Attachment 5) from the Kline Co. regarding a potential study by them of base stock supply and availability. Lew Williams spoke in favor of the study. An API member was concerned this was headed toward a non-technical reason for limits and West Alexander suggested that ILSAC had contributed to funding for the study conducted a few months ago on GF-4 questions. Tom Franklin suggested waiting until the exit ballot results are in and then see if the study is needed. There is some thought that the first study (PCMO) already included potential HD use of Group II stocks.
- 7.0 PC-10 Timeline
 - 7.1 Bill Runkle presented three timelines (see Attachment 6) depicting the current scenario and two versions of an ACC suggested scenario where technology demonstration occurs before limits are set and commercial qualification begins.
- 8.0 PC-10 Test Development
 - 8.1 Cummins ISB
 - 8.11 Dave Stehouwer reported on the ISB (see Attachment 7) and moved that the ISB be declared ready for matrix testing. Greg Shank seconded the motion. There is no formal recommendation from the ISB Task Force on this and Pat Fetterman suggested this declaration is premature. The motion passed, sort of, with 4 votes in favor, 3 against and 10 abstains. This item will be back on the June meeting agenda. A Cummins Surveillance Panel meeting is scheduled for June 21, in Salt Lake City.
 - 8.2 Cummins ISM
 - 8.21 Dave Stehouwer also reported on the status of the ISM (see Attachment 8), noting three development tests have completed with a fourth underway.
 - 8.3 Caterpillar C13
 - 8.31 Abdul Cassim reported on C13 status (see Attachment 9) and stated that for PC-10, the C13 might adopt closed crankcase ventilation and use ultra low sulfur fuel. They also want to use the 1P test to help ensure protection against high temperature piston deposits and aid in backward compatibility...and not use the 1N test.
 - 8.4 Mack T-12
 - 8.41 Greg Shank reported on T-12 test development status (see Attachment 10). The engine platform and fuel sulfur level are undecided at this time. They hope to have more resolved by the June meeting. Concern was raised over how "production" representative the test would be if it were based on T-10/T-11 hardware.
- 9.0 PC-10 Matrix Design
 - 9.1 Steve Kennedy reported on the Matrix Design Task Force status (see Attachment 11) and solicited additional task force volunteers. He also brought up the subject of additive

technology selection and plans to ask the API Lubes committee how many technologies they feel are needed if the matrices are sized for precision only.

- 10.0 Other
 - 10.1 Pat Fetterman made a motion that the engine tests for PC-10 be frozen at the December 2004 HDEOCP meeting and Bill Runkle seconded it. The motion passed with 13 votes for, 0 against, 4 abstains.
 - 10.2 Jim McGeehan again emphasized his thoughts about the need for contingency backup tests (see Attachment 12), should the anticipated tests falter.
- 11.0 CI-4 Seal Test Monitoring
 - 11.1 Joe Franklin, as a member of the Seal Test Surveillance Panel, made a presentation relating the history of the CI-4 seal test results and questioning the value of full TMC monitoring of the test (see Attachment 13). Joe made a motion to repeal the request for full TMC monitoring of the CI-4 seals test, but keep in place the current informal monitoring. Charlie Passut seconded the motion. During discussion, John Zalar noted that many times the TMC would receive reference oil results in batches and since those results would effect acceptance bands and targets, more timely reporting was needed. Also, during the discussion, it was estimated full TMC monitoring would add 15% to 20% to the cost of the tests. The motion failed with 4 in favor, 7 against, and 5 abstains.
 - 11.2 John Zalar raised the question should D4485 reflect that the seals pass / fail limits are being adjusted based on reference oil test results. This is to be looked at and brought up again at the June meeting.
- 12.0 Next Meeting
 - 12.1 The next meeting is scheduled for 1:00 p.m. on June 22, 2004 in the Grand America Hotel, Salt Lake City, Utah.
- 13.0 Adjournment
 - 13.1 The meeting was adjourned at 11:15 a.m.

Submitted by:

Jim Wells Secretary to the HDEOCP