

HDEOCP Report

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Chairman

Heavy-Duty Engine Oil Classification Panel

June 22st 2004

Salt Lake City, UT



Motions Passed by HDEOCP

- **75% membership vote by HDEOCP to move forward with PC-10**
- **13% Noack for volatility**
- **90 cycle for shear stability**
- **Vamac added to API CI-4 seal tests**
- **Chemical limits to be frozen by June 22, 04**
- **Engine test to be frozen by Dec. 7th 2004**

Motion passed for Chemical limits

- **Adopted Chemical Limits for PC-10 at:**
 - 1.00% SASH max. (D874)**
 - 0.12% Phosphorus max. (D4951)**
 - 0.4% Sulfur max. (D4951 or D2622)**

As “Non Critical” limits.

Footnote to be added to the document for SASH:

- 1.00% for one test**
- 1.02% for two tests**
- 1.03% for three tests**

Motions passed by HDEOCP

- **The matrix oils may be blended at lower SASH, Phosphorus and Sulfur than the PC-10 Chemical Limits.**
- **Request an endorsement of aromatic in PC-10 fuel to change from, 28-33.5% to 26-31.5%**

Motion votes

- **Sulfur limit: 16 for—one negative—one abstain.**
- **Phosphorus: 17 for –and one abstain**
- **SASH: 18 for –no negatives or abstains**

Engine test status for PC-10

- **Cummins ISB cam and tappet test shown “proof of performance”. Ready for discrimination matrix with 15 ppm fuel sulfur**
- **Cummins ISM demonstrated wear separation for reference oils at 5.5% soot. Matrix work at 6.0% soot planned to increase separation of reference oils for wear and filter delta P, with PC-9 fuel.**
- **Caterpillar C13 oil consumption, piston deposits and blow-by with CCV. Matrix study planned for August 04 with 15 ppm fuel sulfur**
- **Mack T-12 power-cylinder wear and oil oxidation, based on Mack T-10 and Mack T-11 under development at high EGR rates with hardware at labs by 3Q04 and discrimination matrix 4Q04**

Matrix Funding for C13/ISB/T-12

- **API and ACC have agreed to match up to \$1MM. EMA cash and in-kind contributions for PC-10 precision and BOI matrix.**
 - **\$3MM from the trade associations will not fully fund the PC-10 matrix**
 - Precision only=\$4.6 MM (18 tests)**
 - Precision and BOI= \$7.1 MM (28 tests)**
- Next step is to establish the EMA funding**

PC-10 Timing

- **Chemical limits: June 2004**
- **Matrix oils selection: October 2004**
- **Engine tests discrimination: December 2004**
- **Matrix Testing: January to June 2005**
- **Acceptance HDEOCP: June 2005**
- **Technology demonstration: June to Dec 2005**
- **Approve Limits: Dec 2005**
- **Minimum qualification interval: Jan to June 2006**
- **API License: June 2006**
- **Oils in market place by: 3Q2006**

Summary of PC-10

- **Currently on the planned timing schedule, with all programs, including engine tests, matrix funding, matrix design.**
- **Congratulations and appreciation to the following committees: Fuel task-force, Chemical limits task force; Funding and matrix design task-force and each of the engine task-forces**