
PC-10 Chemical Limits Task Force

Report to HDEOCP

June 22, 2004

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Status Update

- ☑ Consensus was reached during May, 2004 on a set of Chemical Limits for the API Proposed Category PC-10:
 - ♠ Sulfated Ash (D874) – 1.0% max
 - ♠ Phosphorus (D4951) – 0.12% max
 - ♠ Sulfur (D4951 or D2622) – 0.4% max
 - ☑ The Task Force was unanimous in this conclusion
 - ☑ EMA member companies agreed they will design their engines and after-treatment systems around lubricants meeting the agreed chemical limits and will support them (including the 0.4% sulfur maximum) for their 2007-2009 MY engines unless they encounter ‘catastrophic problems’. ‘Catastrophic problems’ are defined as the inability to meet 2007 emissions standards despite good faith efforts to resolve any issues with after-treatment technology changes before requesting any lubricant changes
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Status Update

- ☑ Exit Criteria Ballot by HDEOCP closed 6/15/04
 - ♠ 24 positives and 7 negatives
 - ☑ Negatives encompass
 - ♠ SASH method (ASTM D874) not adequate (need to improve method, select a different method or make it a critical limit)
 - ♠ Sulfur limit too high
 - ♠ Phosphorus limit too high
 - ♠ Wait to set limits until later when more data is available ?
Sulfur and Phosphorus limits too high
 - ☑ A number of comments included in positive ballots reinforced the SASH issue
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Resolution of Negative Ballots

- ☑ One negative on ‘Phosphorus limit set too high’ was withdrawn after discussion
 - ☑ Four negatives on ‘SASH test inadequate’ tentatively resolved – without apparent new negatives - by establishing Multiple Test Acceptance Criteria for SASH. Task Force vote of 14 for, 0 against, 1 abstain included positive votes by all four Exit Criteria ballot negatives
 - ♠ SASH limit of 1.0% max. by D874
 - ♠ Non critical limit
 - ♠ MTAC established (exact limits to be determined with statistical help, but in concept:)
 - ☞ One Test – 0.96
 - ☞ Two Test – 1.00
 - ☞ Three Test – 1.05
 - ♠ Recommendation for an ASTM task group to work on D874 to improve precision
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Resolution of Negative Ballots

☑ Two negatives lack 100% consensus

♠ Sulfur limit too high (Detroit Diesel)

☞ Need to balance against a number of comments on positive ballots that stated concern that the agreed limit was not supported by compelling data, or forewarned opposition if the limit was reduced

♠ Wait to set limits until later when more data is available ? Sulfur and Phosphorus limits too high (Caterpillar)

☞ As above

Next Steps

- ☑ Resolve the two remaining negatives and confirm ongoing support for the SASH MTAC proposal once we have the details
 - ♠ Target Timing: Ideally today, but within next 30 days latest

or

- ☑ Acknowledge that we have achieved a consensus recommendation in the Chemical Limits Task Force (May) and defer the resolution of the Exit Criteria Ballot negatives to HDEOCP