

Facilitator Report to ASTM Section D02.B0.10 Standards Acceleration

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Report period: June 2008 to Dec 2008

Cummins ISB method

The draft approved by the ISB Surveillance Panel in May 2008 has been successfully balloted by Sub B in June 2008 and by D02 in Sept.2008. The method has been assigned **D7484-08** and is now published.

There were no negatives in either ballots and only one comment (to an abstention vote) which was withdrawn after discussion.

Inclusion of GF-5 elastomers in the Elastomer Test Method D 7216

ILSAC require five elastomers intended for GF-5 to be added to the Elastomer Test Method D7216. It was agreed with the SP chair that a self-standing Annex describing the procedure for the GF-5 elastomers was the preferred option as this allows the tests for HD and PC elastomers to be clearly distinguished.

A draft Information Letter, comprising the new Annex and some editorial changes to the main body of the method, was prepared and approved, with some changes, by the Surveillance Panel. The TMC initiated the Sub B ballot on Oct. 30, 2008. The results of this ballot were as follows:

- 49 affirmative, 0 negative, 51 abstain.

The Information Letter is now effectively part of D7216 and can be used for GF-5. At the next revision of D7216 the content of the IL will be added to the method and the revision will be balloted at D-02.

ROBO Test Method

This is a bench test designed to replace the Seq. IIIGA oil ageing engine test and has potential for use in ILSAC GF-5. A draft of the ROBO method was received in June 2008 with a target that a Sub B ballot should be completed by Dec 5, 2008.

With good co-operation from the SP chair, Alan Flamberg, a final draft was developed for approval by the Surveillance Panel on Oct. 31, 2008. (As a measure of the input involved, the original and final drafts were 3700 and 7400 words long. In addition, an Information Pack was developed for uploading on the TMC website to assist new users in setting up the apparatus.) In parallel, the SP successfully carried out a precision round robin and wrote a Research Report which allowed a robust precision statement to be written for the method.

The draft was approved by the SP on Nov. 3, 2008 and the Sub B ballot initiated with completion on Dec. 5, 2008. The unofficial results of the ballot so far are:

- 30 affirmative, 0 negative, 11 abstain.

There have been no comments. Assuming no last minute negatives, a D02 ballot will be initiated in Jan. 2009 and the method should be available for use in GF-5.

Storage Solubility and Compatibility Test (SSCT) for Gear Oils

This test is under the jurisdiction of Section 3 and involves combining two independent FED methods written in 1986. (FED-STD-791/3440.1 *Storage Solubility Characteristics of Universal Gear Oils* and FED-STD-791/3430.2 *Compatibility Characteristics of Universal Gear Oils*.)

An original draft required extensive revision to make a coherent single test from the two individual independent tests. A draft with many queries was sent to the Surveillance Panel for comment in May 2008. Significant input has been obtained from Becky Grinfield (SWRI are the only lab conducting the test) and a new draft was produced in Nov. 08. This draft still

needs further work and SP input to further consolidate the two tests into a coherent ASTM method.

There are two outstanding issues both of which will need resolution by the Surveillance Panel before we can ballot:

a) Testing of the reference oils: Six reference oils are used to determine test oil compatibility. These reference oils are typical of the additive and base oil technology currently used for gear oils and do not normally produce residues on storage. As currently written the method requires the reference oils to be tested each time a test oil is subjected to the compatibility tests. The Surveillance Panel needs to address the reason for testing the reference oils, the section of the test where they should be tested and the frequency of testing.

b) Precision data: No precision data is available and it is unlikely that data can be generated to allow r and R to be determined. This is because only one lab runs the test (so R cannot be determined) and reference and test oils normally do not give residues so r cannot easily be determined.

Although the method allows quantification of any residues formed, the test appears to be mainly a pass/fail type of test (i.e. residue is found or not found). One option regarding precision is that only **qualitative** results are reported (i.e. residue or no residue). All quantitative measurements could be placed in a (non-mandatory) Appendix where they would be available if required. Because they are not reported, they do not need to feature in the precision section (as with Seq. IIIG oil consumption). We can then invoke A21.5.1 of the ASTM Form & Style for the precision statement:

11.1 Precision and Bias—Because the reported test results are non-quantitative, no information is presented about either the precision or bias of this Test Method for measuring residues formed during storage, or during the compatibility tests with reference oils.

Input from the Surveillance Panel is required to resolve how to address the precision statement issue.

In the event the method achieves ASTM standard status, SAE J2360 should to be revised to replace the FED methods by the ASTM method.