

## **ASTM Section D02.B0.10**

### **Minutes of Meeting on December 7, 2015**

#### Call to Order

ASTM Section D02.B0.10 on Standards Acceleration met on Monday, December 7, 2015 at 8:00 am at the JW Marriott Hotel in Austin, TX. There were five members and one guest in attendance. The Agenda is shown as Attachment 1. The list of membership and attendance is shown in Attachment 2.

#### Minutes from June 22, 2015 Meeting

The June 22, 2015 meeting minutes were approved.

#### Membership

Laura Birnbaumer requested to be a voting member. Jerry Gropp is retiring so the committee wished him well and thanked him for his contributions.

#### Facilitator Reports

Reports from three facilitators were received. Written reports submitted are shown in Attachment 3.

June 2015 - December 2015	
Facilitator	Hours
Lyle Bowman	105
Terry Bates	170
Hap Thompson	60

#### Facilitator Assignments

Current facilitator assignments were reviewed and are summarized below and on Attachment 4.

Facilitator	Test	Status
Terry	COAT	A draft was sent to the TF on Nov. 17. TF responses are required. Sub Committee B balloting hoped in early 2016
	L-37-1	A revised draft method has been issued and is awaiting round robin precision data
	IIIH	The timing of a Sub B and D02 ballots and the assignment of a D number will depend on the time taken to resolve the precision issues.
	DD13	Draft will be started shortly
Hap	VIE	Draft created and awaiting further test development and precision data
	VIF	Draft to be created
	IVB	Draft in process
	T-13	Sub Committee B ballot expected January 2016
Lyle	VH	Complete draft awaiting further revision before precision matrix.
	Chain Wear	Draft is almost ready to forward to reviewers for comments.
	L-33-2	The last update received about the L-33-1 test method assignment was in April 2015, and I was informed then that a probable target date, for when new hardware would hopefully be approved, was the latter part of this year. That is the 'trigger date' for when a revised/new test method can be initiated.
	LSPI	A draft will be created shortly

Concerns over the progress of the Sub Committee B ballot for the Volvo T-13 and Cat Oil Aeration Test (COAT) were expressed by Joe Franklin and Kevin Ferrick-API. The T-13 ballot is pending some drawing revisions that should be finished in December making a January ballot possible. However, the COAT needs significant task force resolution of several items before the proposed method can be balloted. It is hoped that the task force will resolve these issues promptly so that a ballot can be issued early in 2016.

#### Old Business

No old business

#### Scope and Objectives

A review of the scope and objectives did not result in any changes.

#### New Business

The recent D4485 Sub Committee B ballot responses were reviewed. Lyle Bowman prepared a summary of the comments/revisions that Frank Farber presented as shown below. After some discussion it was decided that at the Heavy Duty Engine Oil Classification Panel meeting the next day the ballot would be reviewed and the negative and comments would be addressed and then taken to the Sub Committee B meeting on Wednesday for final approval.

D4485/WK51955  
D02.B0 Ballot Item  
Errors and Corrections

#### Section 3.1.2

3.1.2 category, n—in engine oils, a designation such as SJ, SL, SM, SN, CH-4, CI-4, CJ-4, **CK-4**, **FA-4**, Energy Conserving, Resource Conserving, and so forth, for a given level of performance in specified engine and bench tests.

The red font addition indicates change; this one spotted by a voter

#### Section 4.1.6

4.1.6 *CK-4 or FA-4*—Oil meeting the performance requirements measured in the following diesel **and gasoline** engine tests, and bench and chemical tests.

Several voters caught this one

#### New Sections 4.1.6.1 and 4.1.6.2

Insert new sections with **descriptions of the T-13 and COAT test methods**

Correction of an obvious oversight error

## Section 4.1.6.2

4.1.6.2 Test Method D7422, the Mack T-12 diesel engine test is used to measure engine oil performance with respect to piston ring and cylinder liner wear, ~~bearing corrosion, and oil consumption~~, using an in-line six cylinder, four-stroke, direct injection, turbo-charged engine with exhaust gas recirculation at levels expected for 2007 emission control engines. This engine test uses fuel with ultra low sulfur content of 15 mg/kg.

Deletions recommended by one voter (?)

## Section 4.1.6.4

4.1.5.6.4 Test Method D7484, the Cummins ISB diesel engine test is used.....

Correction of a simple numbering error

## Section 4.1.6.7

4.1.6.7 ~~Test Method D6984, the Sequence III test, is used to measure bulk oil viscosity increase, which indicates an oil's ability to withstand the higher temperatures found in modern diesel engines. (An alternative is Test Method D7320, the Sequence III test.)~~

Several voters caught wrong inclusion of gasoline test methods

## Section 4.1.6.8

4.1.6.8 Test Method ~~D4684~~ D6896 (MRV TP-1) has been shown to predict field failures resulting from poor low temperature pumpability.

Need for improved test method noted by a voter

## Section 4.1.6.15

4.1.6.15 ~~Test Method D6894, the EOAT procedure, has been correlated with oil aeration in diesel engines equipped with HEUI used in medium duty diesel engines.~~

Deletion needed of a previous CJ test method - noted by several voters

## Footnotes and MTAC

<sup>X</sup> MRV requirement listed as a bench test (Items 12/13)

<sup>W</sup> MTAC accomplished by calculating merits based on average results

<sup>Y</sup> MTAC determined with no option to exclude valid test results

Still some unresolved questions about handling MTAC and footnotes

## Section 6.9

6.9 For CK-4 or FA-4 test results to be valid from the following test types, they shall have been conducted in stands/equipment in current calibration by the TMC: Test Methods D874, D5800, D5966, D6594, D6750, **D6894, D6984**, D7156, D7216, **D7320**, D7422, D7468, D7484, D7549, WK50204 (T-13), and WK51937 (COAT).

Inclusion of three wrong test methods noted by several

## Other recommended corrections/comments received

- Remove API SJ Energy Conserving and API SL Energy Conserving from D4485
- New Annex desired for API CK-4 and FA-4, dealing with outlier criteria, merit systems, and multiple testing
- Removal of T-12 Merit System
- API CK-4 and FA-4 have different T-12 from CJ-4

No comments

### Next Meeting

The meeting will be Monday June 27, 2016 in Bellevue, WA

### Adjournment

The meeting was adjourned at approximately 9:00 am.

Frank M. Farber  
Chairman, ASTM D02.B0.10

Attachments

**ASTM Section D02.B0.10  
Monday, December 7, 2015 Agenda  
8:00- 9:00 AM**


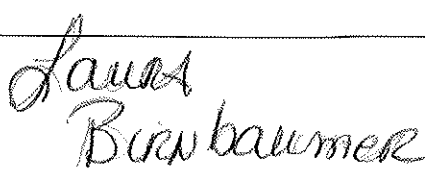

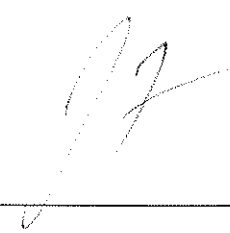

1. Call to Order
2. Approval of June 22, 2015 Meeting Minutes
3. Membership Review
4. Facilitator Assignments
5. Facilitator Reports
  - Lyle Bowman
  - Terry Bates
  - Hap Thompson
6. Old Business
7. Scope & Objectives
8. New Business
  - a. D4485 Revisions
9. Next Meeting – Monday June 27, 2016 Bellevue, WA

Adjournment

Frank M. Farber  
Chairman, ASTM D02.B0.10

B10 Attendance List  
 December 7, 2015  
 Austin, TX

Attachment 2  
 1 of 2

Contact Information	Membership Status	Present
Mark Adams Tribology Testing Labs 7030 East Street Saginaw, MI 48601 989-777-0839 <a href="mailto:mark@tribologytesting.com">mark@tribologytesting.com</a>	Voting Member	
Terry Bates 50 Tower Rd. North Heswall, Wirral CH60, 6RS UNITED KINGDOM +44-151-342-1193 <a href="mailto:batesterryw@aol.com">batesterryw@aol.com</a>	Voting Member	
Laura Birnbaumer Chevron Oronite 100 Chevron Way 60-1146 Richmond, CA 94802 <a href="mailto:LABI@Chevron.com">LABI@Chevron.com</a>	<del>Voting</del> Member	
Lyle O. Bowman 728 Montecillo Road San Rafael, CA 94903 415-479-3004 FAX 415-472-1570 <a href="mailto:lbowman@namwobl.com">lbowman@namwobl.com</a>	Voting Member	
Frank Farber ASTM Test Monitoring Center 6555 Penn Avenue Pittsburgh, PA 15206 412-365-1030 FAX 412-365-1047 <a href="mailto:fmf@astmtmc.cmu.edu">fmf@astmtmc.cmu.edu</a>	Chairman/Secretary	
Joe Franklin Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238 210-523-4671 FAX 210-684-6074 <a href="mailto:joe.franklin@intertek.com">joe.franklin@intertek.com</a>	Voting Member	
Jerry Gropp The Lubrizol Corporation 29400 Lakeland Blvd. Wickliffe, OH 44092 440-347-1223 FAX 440-347-1555 <a href="mailto:jlg@lubrizol.com">jlg@lubrizol.com</a>	Voting Member	
E. A. Hap Thompson PPL Standards Development 404 Twin Oaks Lane St. Johns, FL 32259 904-287-9596 FAX 904-287-9596 <a href="mailto:hapjthom@aol.com">hapjthom@aol.com</a>	Voting Member	



E. A. Hap Thompson  
December 7, 2015

### **Sequence VI E**

I have participated in the weekly conference calls to ensure I remain current on the relevant issues. Additionally, a small technical WG has held calls to work specific issues. It has been necessary to make major revisions to the draft standard over the last six months as a result of these calls and other changes to the method such as adding the first four annexes.

Since the completion of the precision matrix, it appears procedural changes to the method will be necessary such as estimate of the test precision; engine hour correction factor update; reference oil severity adjustments; the number of passing reference oil tests required to calibrate a new engine and the number of candidate oil runs allowed within a reference period, which will require revisions to the test method.

### **Sequence IV B**

There have been numerous conference calls conducted by the WG, and I have been an active participant. These calls have resulted in me making many changes/revisions to the method. The test development team has been researching a solution to an intake camshaft lobe failure phenomenon that has been observed on a small number of development and candidate tests. Once this issue is resolved, it will require further changes to the method.

The precision matrix is to start during January 2016, which will require major revisions to the method.

### **Volvo T-13**

The precision matrix is complete. The draft standard has been cleaned up and distributed to the surveillance panel for review. Once that review is complete and any changes made the method will be placed on the first SC B ballot in January 2016.

**I spent 60 hours working on the 3 documents over the past 6 months.**

Respectfully submitted,

*E. A. Hap Thompson*

E. A. Hap Thompson  
Facilitator



Lyle Bowman's Facilitator Report to B-10  
December 7, 2015

About 105 hours have been spent on various assignments since the June 2015 Meeting.

These efforts have included preparation of 15 D02 ballot items from approved Information Letters, reviewing editor's proofs, and reviewing proposed new Information Letters.

All 15 of the D02 ballot items were approved with minor comments.

A larger amount of my time was spent on preparation of the 15 D02 ballot items than typically has been the case. This was necessary to insert the standardized TMC services document at the beginning of annex sections in affected test methods.

A significant portion of my time has also been spent in the development of the Timing Chain Wear test method, and to a lesser extent the L-33-2 gear oil test method. Development of the LSPI (Low Speed Preignition Test Method) has just been started. So far, have received good support from Ron Romano for the chain wear test, but lesser help for questions posed about the L-33-2 test.

Drafts of the Chain Wear and L-33-2 test methods have been completed, and the VH draft was finished and reviewed by the surveillance panel early in the year.

Do to hardware problems, recent progress reports on finalizing the VH test procedure have not been promising. The Chain Wear test procedure is still being 'tweaked' but no serious problems have been reported.

A D4485 revision to incorporate the new API CK-4 and API FA-4 heavy duty engine oil categories was prepared and submitted for Subcommittee B balloting in time for results to be available at the December Subcommittee B meeting.

Respectfully submitted,  
Lyle Bowman

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

**Facilitator:** Terry Bates

**Report period:** July 2015 to Dec. 2015

Total time spent July, 2015 to Dec 30, 2015 was 170 hours.

### **Caterpillar Engine Oil Aeration Test (COAT)**

Surveillance Panel chair is Martin Thompson (SWRI), TMC contact is Sean Moyer.

Sections on Scope, Reference Documents, Terminology, and Significance & Use were written (these were not covered in the draft received from the TF). Editing of the sections on Apparatus, Engine Liquids, Preparation of Apparatus and Stand Calibration has been completed. In collaboration with Sean, the Procedure section has been subject to extensive rewriting to improve clarity, particularly the subsections dealing with engine break-in/silicon passivation and the determination of temperature sensitivity of density (required for the calculation of oil aeration). In this connection, an Annex A13 detailing the criteria for recalibration of the flow and density meter has yet to be provided by the TF. The section dealing the calculation oil aeration has also been extensively rewritten. Precision data were generated some months ago and are incorporated into the Precision and Bias Statement.

A draft was sent to the TF on Nov. 17 which requires the TF to approve the rewritten sections mentioned above, to provide answers to about 10 queries and to provide the text for the Annex A13. A summary of the main items needing resolution has been sent to the TF.

Recently the lab engineers found significant differences in the way they have set up their stands and the way they are running the test. These issues presumably need to be resolved before a Sub B ballot can be initiated. A guestimate would be that D02 ballot could be completed and a D number issued by end Q1.2016.

### **Sequence IIIH (Chrysler Oxidation and Deposit Test)**

Surveillance Panel chair is Karin Haumann (Shell).

Editing of the previous draft was completed in Sept. Although response to some queries is awaited, the procedure is close to being finalized and the TF consider that the test overall has the ability to measure and separate oils based on viscosity and weighted piston deposits. However, stand differences were found in the precision matrix data and a technical task force has been set up to investigate with the aim of improving precision and minimizing differences between the labs. In an attempt to increase the amount of data available, those running candidate tests may be asked to consider allowing the task force to review the engine operating data.

The timing of a Sub B and D02 ballots and the assignment of a D number will depend on the time taken to resolve the precision issues.

### **L-37-1 Test: Load-Carrying Capacity of Lubricants Used for Final Hypoid Drive Axles**

The test is under the jurisdiction of the L-37 Surveillance Panel; Matt Umerley has replaced Chris Prengaman as the chairman.

The revised method, using pinions and rings manufactured by Gleason and installed by the laboratories in the same (Dana) housing used in the L- 37 test, has now been finalized. A revised version of the procedure has been developed and precision data will be developed shortly.

### Facilitator Assignments

Item	Facilitator
D4485	Lyle Bowman
Standard Revisions	Lyle Bowman

### Heavy Duty Test Assignments

	Test Type	Contact Person	Facilitator
PC-11	C-13 Aeration Test	Sean Moyer – <a href="mailto:sam@astmtmc.cmu.edu">sam@astmtmc.cmu.edu</a>	Terry Bates
	Mack T-13	Sean Moyer – <a href="mailto:sam@astmtmc.cmu.edu">sam@astmtmc.cmu.edu</a>	Hap Thompson
ASTM B02	DD13	Sean Moyer – <a href="mailto:sam@astmtmc.cmu.edu">sam@astmtmc.cmu.edu</a>	Terry Bates

### GF-6 Test Assignments

Test Type	Contact Person	Facilitator
Sequence VH	Rich Grundza - <a href="mailto:reg@astmtmc.cmu.edu">reg@astmtmc.cmu.edu</a>	Lyle Bowman
Sequence IVB	Bill Buscher - <a href="mailto:william.buscher@intertek.com">william.buscher@intertek.com</a>	Hap Thompson
Sequence VIE	Nathan Moles – <a href="mailto:Nathaniel.moles@lubrizol.com">Nathaniel.moles@lubrizol.com</a>	Hap Thompson
Sequence VIF	Nathan Moles – <a href="mailto:reg@astmtmc.cmu.edu">reg@astmtmc.cmu.edu</a>	Hap Thompson
Chain Wear Test	Rich Grundza – <a href="mailto:reg@astmtmc.cmu.edu">reg@astmtmc.cmu.edu</a>	Lyle Bowman
Low Speed Pre-Ignition Test (LSPI)	Rich Grundza – <a href="mailto:reg@astmtmc.cmu.edu">reg@astmtmc.cmu.edu</a>	Lyle Bowman
Chrysler IIIH	Rich Grundza – <a href="mailto:reg@astmtmc.cmu.edu">reg@astmtmc.cmu.edu</a>	Terry Bates

### B03 Test Assignments

Test Type	Contact Person	Facilitator
L-37-1	Chris Prengaman– <a href="mailto:Christopher.Prengaman@lubrizol.com">Christopher.Prengaman@lubrizol.com</a>	Terry Bates
L-33-2	Angela Trader – <a href="mailto:angela.trader@intertek.com">angela.trader@intertek.com</a>	Lyle Bowman

## **ASTM Section D02.B0.10 Standards Acceleration**

### **Scope and Objectives**

#### **Scope**

The section on Standards Acceleration maintains a staff of facilitators to expedite the establishment of standards relating to automotive lubricants. Facilitators' activities include upgrading test procedures to ASTM test methods, and revising standards as needed once they are adopted; the *Form and Style for ASTM Standards* to be followed in all cases.

Section 10 activities will include but are not limited to the following:

1. Determine priority among documents to be advanced to standards with the help of facilitators, based upon input from the appropriate subcommittee.
2. Evaluate and approve new facilitator candidates, as justified by the need for new facilitators.
3. Assign specific documents to selected facilitators.
4. Hear and evaluate the facilitators' reports presented at semiannual meetings of Committee D02. (Each facilitator's report shall be brief and shall include progress, problems, and costs related to his or her standards development activity.)
5. Assist the Test Monitoring Center in establishing funding for the Standards Acceleration Program.
6. Process revisions to D4485, *Standard Specification for Performance of Engine Oils*; D7450, *Standard Specification for Performance of Rear Axle Gear Lubricants Intended for API Category GL-5 Service*; D5760, *Standard Specification for Performance of Manual Transmission Gear Lubricants*; D4859, *Standard Specification for Lubricants for Two-Stroke-Cycle Spark-Ignition Gasoline Engines-TC*
6. Carry out any other activities relative to the Standards Acceleration Program as needed, or as directed by Subcommittee D02.B0.

#### **Objectives**

1. Report a summary to Subcommittee D02.B0 and to appropriate sections of the Standards Acceleration Program status, including actions for approval, at each semi-annual meeting of Subcommittee D02.B0.