100 Barr Harbor Drive PO Box C700 West Conshohocken, PA 19428-2959 USA tel +1.610.832.9500 fax +1.610.832.9666 www.astm.org

COMMITTEE D02 on PETROLEUM PRODUCTS, LIQUID FUELS, AND LUBRICANTS

CHAIRMAN: Randy F Jennings, Tennessee Dept Of Agric, P O Box 40627, Nashville, TN 37204, United States (615) 837-5150, Fax: (615) 837-5327, e-mail: randy.jennings@tn.gov

FIRST VICE CHAIRMAN: James J Simnick, Bp America, 150 Warrenville Rd, Naperville, IL 60563, United States

(630) 420-5936, Fax: (630) 420-4831, e-mail: simnicjj@bp.com

SECOND VICE CHAIRMAN: Michael A Collier, Petroleum Analyzer Co Lp, 21114 Hwy 113, Custer Park, IL 60481,

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SECOND SECRETARY: Hind M Abi-Akar, Caterpillar Inc, Building H2000, Old Galena Road, Mossville, IL

61552, United States (309) 578-9553, e-mail: abi-akar_hind@cat.com

SECRETARY: Scott Fenwick, National Biodiesel Board, PO Box 104848, Jefferson City, MO 65110-

4898, United States (800) 841-5849, Fax: (537) 635-7913,

 $e\hbox{-mail: } sfenwick@biodiesel.org$

STAFF MANAGER: Alyson Fick, (610) 832-9710, e-mail: afick@astm.org

Call to Order

ASTM D02.B0.08, the Test Monitoring System Executive Committee, met on Monday, December, 2017 at 5:30 p.m. in the Marriott Marquis Houston. Six voting members and several other attendees were present. Attendance list is Attachment A (most attendees did not sign).

Committee Voting Members

Bob Campbell, Present Jason Anderson, Present Eric Johnson, Not Present Ron Loomis, Not Present Doyle Boese, Present Mike Alessi, Not Present Jason Bowden, Present Suzanne Neal, Present Greg Shank, Present

The agenda is shown as Attachment B.

Meeting Minutes

The June 26, 2017 meeting minutes were approved as posted.

Membership

The membership was reviewed. No changes were made.

The current members and their terms are shown on the next page.

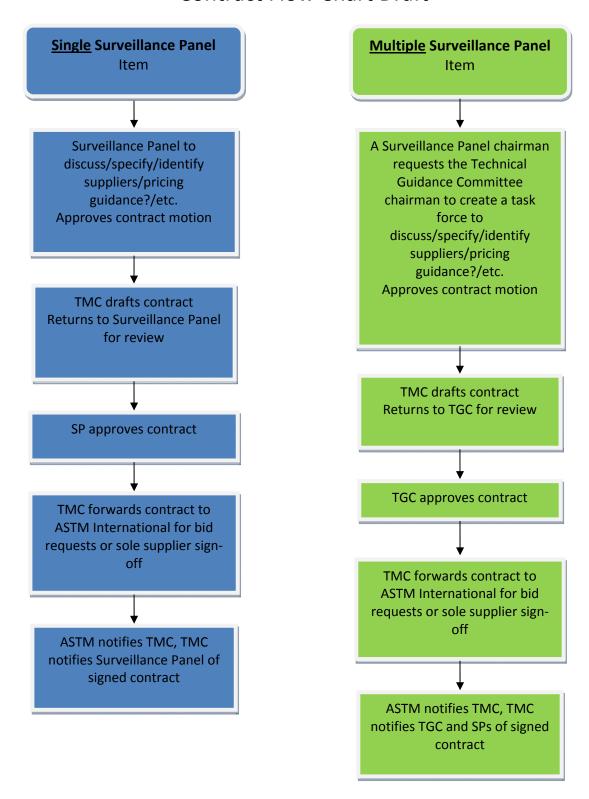
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Greg Shank | | | | | | U | U | | | | | | |
| Jason Anderso | | | | U | U | U | U | | | | | | |
| Mike | | | | | | Р | Р | | | | | | |
| ΛΙρςςί | | | | | | | | | | | | | |
| Suzanne | | | | | U | U | | | | | | | |
| Neal | | | | | | | | | | | | | |
| Eric | | | U | U | U | U | | | | | | | |
| Johnson | | | | | | | | | | | | | |
| Bob Campbell | | | | Р | Р | Р | Р | | | | | | |
| Ron | | | | | Р | Р | | | | | | | |
| Loomis | | | | | | | | | | | | | |
| Doyle | | | Р | Р | Р | Р | | | | | | | |
| Boese | | | - | ' | | | | | | | | | |
| Jason Bowden | G | G | G | G | G | G | | | · | | · | | |

Eligibility; P=Producer, U=User, G=General Interest

Technical Guidance Committee (TGC) Report - Pat Lang

Pat's report is shown as Attachment C. Pat's report also included a report from the Rating Task Force and Fuel Task Force. There was some overlap from the earlier TGC meeting at the start of the Executive Committee meeting on the topic of the ASTM TMC contract creation/procurement process. The below flowchart was reviewed and a further lengthy discussion took place on whether it was appropriate for TMC to be handling the creation of procurement contracts between ASTM and suppliers. The TMC noted that the Executive Committee had already voted to move forward with the contract creation process and PC-10 fuel would most likely be the first test case once the Fuel Task Force defines the specification. Dan Pridemore noted that ACC supports the need for developing procurement contracts as identified by each surveillance panel. Several attendees felt that the TMC/ASTM should not be involved in this process. The discussions ended with no notable changes to the procurement process that the executive committee previously approved.

Contract Flow Chart Draft



<u>Test Monitoring Center (TMC) Report – Frank Farber</u> Frank's report is shown as Attachment D. The TMC informed the committee that all two-cycle reference oils would be discarded.

There were no old or new business items.

The meeting ended at approximately 6:00 pm.

Respectfully submitted,

Frank M. Farber, Secretary

Frank m failer

ASTM Test Monitoring System Executive Committee

Attachments FMF/fmf

ASTM Test Monitoring System Executive Committee Meeting December 4, 2017 Houston, TX

Voting Members

| NAME | COMPANY AND ADDRESS | PHONE NUMBER E-MAIL ADDRESS FAX NUMBER | PRESENT |
|---|--|--|---------|
| Afton Chemical Corporation 500 Spring Street Chairman P.O. Box 2158 Richmond, VA 23218-2158 | | Phone: (804) 788-5236 e-mail: bob.campbell@aftonchemical.com FAX: (804) 788-5340 | 5.4 |
| Mike Alessi Paulsboro Technology Center 600 Billingsport Road Paulsboro, NJ 08066-0480 | | Phone: (856) 224-2309 e-mail michael.l.alessi@exxonmobil.com FAX: (856) 224- | |
| Jason Anderson | PACCAR | Phone: | |
| Doyle Boese | Infineum USA, L.P. 1900 East Linden Avenue Linden, NJ 07036-0536 | e-mail: <u>Jason.Andersen@PACCAR.com</u> Phone: (908) 474-3176 e-mail: <u>doyle.boese@infineum.com</u> FAX: (908) 474-3637 | |
| Jason Bowden | OH Technologies 9300 Progress Parkway P. O. Box 5039 Mentor, OH 44061-5039 | Phone: (440) 354-7007 e-mail: <u>ihbowden@ohtech.com</u> FAX: (440) 354-7080 | |
| Eric Johnson | General Motors | Phone: 248-705-1086 e-mail: eric.r.johnson@gm.com FAX: | |
| Ron Loomis | The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, OH 44092 | Phone: (440) 347-4046 e-mail: Ron.Loomis@lubrizol.com FAX: (440) 347-1555 | |
| Suzanne Neal | Daimler/Detroit Diesel Corporation 13400 Outer Drive, West Detroit, MI 48239 | Phone: (313) 592-7130 e-mail: <u>Suzanne.neal@daimler.com</u> FAX: (313)592-7104 | |
| Greg Shank | Volvo Powertrain 13302 Pennsylvania Avenue Hagerstown, MD 21742-2693 | Phone: (301) 790-5817 e-mail: greg.shank@volvo.com FAX: (301)790-5815 | |
| | | | |
| | | | |

ASTM Test Monitoring System Executive Committee Meeting December 4, 2017 Houston, TX

Non-Voting Members

| | | PHONE NUMBER | |
|----------------------------|----------------------------------|---|--------------|
| NAME | COMPANY AND ADDRESS | E-MAIL ADDRESS | PRESENT |
| | | FAX NUMBER | 111202111 |
| Don Bell | Afton Chemical Corporation | Phone: (804) 788-6332 | |
| OSCT | 500 Spring Street | e-mail: don.bell@aftonchemical.com | |
| | PO Box 2158 | FAX: (804) 788-6243 | |
| | Richmond, VA 23218-2158 | , | ł |
| Mike Birke | Southwest Research Institute | Phone: (210) 522-5310 | |
| LDEOC/EOEC | 6620 Culebra Road | e-mail: mbirke@swri.org | |
| Chairman | San Antonio, TX 78228-0510 | FAX: (210) 522-5907 | 1 |
| William Buscher, III | Intertek | Phone: (210) 240-8099 | |
| Sequence IVA & | 5404 Bandera Road | e-mail: william.buscher@intertek.com | |
| B01 Chairman | San Antonio, TX 78238 | FAX: (210) 684-7523 | |
| Tim Brooke | ASTM | Phone: (610) 832-9729 | |
| ASTM International | 100 Barr Harbor Drive | e-mail: tbrooke@astm.org | |
| <u> </u> | West Conshohocken, PA 19428 | FAX: (610) 832- | l |
| Mike Faile TEOST, TEOST- | The Lubrizol Corporation | Phone: (440) 347- | |
| MHT | 29400 Lakeland Boulevard | e-mail: | |
| Chairperson | Wickliffe, OH 44092-2298 | FAX: (440) 347-8061 | 1 |
| Mark Cooper | Chevron Oronite Company, LLC | Phone: (210) 731-5606 | |
| T-8/T-8E, T-11, T-12, T-13 | 4502 Centerview Drive, Suite 210 | e-mail: mawc@chevrontexaco.com | |
| Chairman | San Antonio, TX 78228 | FAX: (210) 731-5699 | |
| | 17,75220 | FAA. (210) /31-3099 | |
| Mark Devlin | Afton Chemical Corporation | Phone: (804) 788-6322 | |
| Gelation Index | 500 Spring Street, P.O. Box 2158 | e-mail: mark.devlin@aftonchemical.com | 1 |
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| Frank Farber | ASTM Test Monitoring Center | Phone: (412) 365-1030 | |
| TMC | 6555 Penn Avenue | e-mail: fmf@astmtmc.cmu.edu | |
| Director | Pittsburgh, PA 15206-4489 | FAX: (412) 365-1030 | |
| Joe Franklin | Intertek Automotive Research | Phone: (210) 523-4671 | |
| Subcommittee B | 5404 Bandera Road | e-mail: joe.franklin@intertek.com | |
| Chairman | San Antonio, TX 78238-1933 | FAX: (210) 681-8300 | |
| Pat Lang | Southwest Research Institute | Phone: (210) 522-2820 | - |
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| TGC Chairman | San Antonio, TX 78228-0510 | FAX: (210) 684-7523 | |
| Robert Stockwell | Chevron Oronite | Phone: (210) 232-3188 | |
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| Chairman | Suite 210 | FAX: | |
| | San Antonio, TX 78228 | raa. | |
| John Glaser | Intertek Automotive Research | Phone: (210) 647-9459 | - |
| Intertek | 5404 Bandera Road | |] |
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| Eric Donovan | Afton Chemical Corporation | FAX: (210) 684-6074 | |
| L-42 | 500 Spring Street | Phone: (804) 788- | |
| | | e-mail: eric.donovan@aftonchemical.com | L |

Attachment A 3 of 5

ASTM Test Monitoring System Executive Committee Meeting December 4, 2017

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| | | , TX | |
|--------------------|---|---|----------|
| | P.O. Box 2158 Richmond, VA 23218-2158 | FAX: (804) 788-6358 | <u> </u> |
| Scote/C13 Chairman | Infineum USA, L.P. 4335 West Piedras Drive, Suite101 | Phone: (210) 732-8132 x13 e-mail: james.gutzwiller@infineum.com FAX: (210) 732-8480 | |
| | | | |

ASTM Test Monitoring System Executive Committee Meeting December 4, 2017 Houston, TX

| NAME | COMPANY AND ADDRESS | PHONE NUMBER E-MAIL ADDRESS | PRESENT |
|-------------------------|------------------------------|---|---------|
| Brad Bubonic | The Lubrizol Corporation | Phone: (440) 347- | |
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| EOAT | 6220 Culebra Road | e-mail: ryan.johnson@swri.org | ļ |
| | San Antonio, TX 78228-0510 | FAX: (210) 684-7530 | |
| Brian Koehler | Southwest Research Institute | Phone: (210) 522-3588 | |
| НТСТ | 6220 Culebra Road | e-mail: <u>bkoehler@swri.edu</u> | |
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| Greg Miranda | The Lubrizol Corporation | Phone: (440) 347- | |
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| | Wickliffe, OH 44092-2298 | FAX: (440) 347- | ļ |
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| D5800, D6417 | 300 Woolwich Street South | e-mail: svonluka@safety-kleen.com | |
| Chairman | Breslau, Ontario NOB 1M0 | FAX: (519) 648-2033 | |
| | CANADA | , | ļ |
| Yong-Li McFarland EOFT, | Southwest Research Institute | Phone: (210) 522-2715 | |
| EOWT | 6220 Culebra Road | e-mail: yongli.mcfarland@swri.org | |
| Chairperson / | San Antonio, TX 78238-0510 | FAX: (210) 522-5791 | |
| Jim Moritz | Intertek Automotive Research | Phone: (210) 523-4601 | |
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| Leonard Orzech | Intertek Automotive Research | Phone: (210) 523-4680 | |
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| Chairman | Wickliffe, OH 44092-2298 | FAX: (440) 347- | |
| Gil Reinhard | Intertek Automotive Research | Phone: (210) 523-4674 | |
| СВТ, НТСВТ | 5404 Bandera Road | e-mail: gil.reinhard@intertek.com | |
| A I Div. 1.5 | San Antonio, TX 78238-1933 | FAX: (210) 681-8300 | |
| Andrew Ritchie | Infineum USA, L.P. | Phone: (908) 474-2097 | |
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| Chairman | Linden, NJ 07036-0536 | FAX: (908) 474-3637 | |
| Angela Trader | Intertek Automotive | Phone: (210) 264-5911 | |
| 33-1 | 5404 Bandera Road | e-mail: angela.trader@intertek.com | [|
| Chairperson | San Antonio, TX 78238-1993 | FAX: (210) | |

ASTM Test Monitoring System Executive Committee Meeting December 4, 2017 Houston, TX

Visitors

| NAME | COMPANY AND ADDRESS | PHONE NUMBER E-MAIL ADDRESS FAX NUMBER | PRESENT |
|----------------------------|---------------------|--|---------|
| Michael Lookte Pat Lang | SWRI | 210522-5430 MLOCHTER SWRIPRG | |
| Pat Lang | Surt | 210-522-2820 Patrick. lange sweet | |
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ASTM Test Monitoring System Executive Committee Meeting Monday – December 4, 2017 5:30 - 6:30 PM

Marriott Marquis Houston; Houston, TX **AGENDA**

- 1. Call to Order
- 2. Approval of Minutes June 26, 2017
- 3. Membership
- 4. Receive, Accept and Take Action on Reports
 - Technical Guidance Committee Pat Lang
 - Test Monitoring Center Frank Farber
- 5. New Business
- 6. Old Business
- 7. Next Meeting Monday, June 25, 2018 Phoenix, AZ
- 8. Adjournment

Technical Guidance Committee Report

Prepared by: Patrick Lang
December 4, 2017
Houston, TX

TGC Meetings Conducted This Reporting Period

- The TGC conducted a meeting on June 28,
 2017 during ASTM meeting week in Boston.
- A conference call/WebEx was conducted on August 30, 2017.
- Conference call with ACC (LCTWG) group and TGC chair on 10/24/17.

Accomplishments this Reporting Period

- After much debate and review the recommended wording for Alternate Supplier Protocol is getting close to the final form:
 - Draft wording was presented to the PCMO surveillance panels the week of November 13th
 - Will be presented to the HD surveillance panels in near future
 - All comments to be considered and final wording sent back to SP's for acceptance vote
 - After a successful vote, it will be requested that the wording be added to the individual test procedures

Draft of the wording that was generated during the August 30, 2017 Technical Guidance Committee Meeting Conference Call:

Alternate Supplier Protocol

ASTM International policy is to encourage the development of test procedures based on generic equipment. It is recognized that there are occasions where critical/sole-source equipment has been approved by the technical committee (surveillance panel/task force) and is required by the test procedure. The technical committee that oversees the test procedure is encouraged to clearly identify if the part is considered critical in the test procedure. If a part is deemed to be critical, ASTM encourages alternate suppliers to be given the opportunity for consideration of supplying the critical part/component providing they meet the approval process set forth by the technical committee.

An alternate supplier can start the process by initiating contact with the technical committee (current chairs shown on ASTM TMC website). The supplier should advise on the details of the part that is intended to be supplied. The technical committee will review the request and determine feasibility of an alternate supplier for the requested replacement critical part. In the event that a replacement critical part has been identified and proven equivalent the sole-source supplier footnote shall be removed from the test procedure.

Procurement Process for Testing Materials

- Good discussion between TGC chair and LCTWG group on the procurement process within ASTM.
- LCTWG encourages TGC to work towards creating guidelines for the TMC to follow for the multiple bidding process.
- LCTWG encourages the TGC to be involved with "coaching" the alternate supplier requests through the process.
- LCTWG has offered to help where needed.



Rater Task Force Update to TGC

12/4/2017

Passion for Solutions.

What we've been doing......

- Conference call 7/11
- ▲ HD Workshop week of 10/2
- **№ Post-Mortem Conference call 10/26**
- Call to be scheduled Jan, 2018



Workshop update

- New format for last two workshops seems to work well
- Parts quantity at workshop may need adjustment
- Requirement for "experienced rater" will be further defined by TMC
- Some parts weren't fully rated, so discussion on how to determine precision if this occurs again TMC to propose
- Improve interactions between raters and coaches
 - ◆ TMC to provide shirts to make coaches more recognizable
- Rerate requirements/allowances during workshop need clarification



CEC Manuals 20/21

- Currently nobody owns them, so they are very outdated
- Suggest ASTM take the manual's over, get them updated, and manage like our test methods
 - ◆ Who should own it?



Ongoing Actions

- Group has an open action item to upgrade the rating booth light requirement (currently outdated T12 fluorescents required)
- Continue to review parts availability and workshop protocols to ensure the industry are properly served
- Ensure more interaction between rating community and surveillance panels
- Potentially Manual upgrade and ownership



TGC Fuels Task Force

Update to TGC 12/4/2017

8/3/ Meeting

- Reviewed fuel data report forms
- TMC reviewed TMC website data upload portal
- Start date TBD based on finalization of fuel specs

11/27/17 Meeting

- PC10 ULSD Fuels Spec Review
 - Spec to be kept on TMC website and test procedures to refer to spec and location
 - Eliminates potential variation and need to update multiple procedures when spec is updated
 - Discussion around using D6079 as replacement for D6078 for lubricity method and spec
 - ISB, T12, DD13, C13, and COAT to approve change
 - Task Force working to add spec on Bio-Diesel content
 - Task Force working to update Sulfur content method
- CPChem to provide data analysis of all batches of PC10 and PC9 fuel for data analysis and refinement of specs
- PC9 Fuel Spec Review
 - Review started by Task force and needs completed
 - More complicated due to varying differences in test procedures

Recommended PC10 Fuel Spec

| Measurement | Units | Method | Spec |
|-----------------------|----------------|-------------------------|-------------|
| Additives | | Lubricity Additive Only | |
| Distillation | | | |
| 90% Volume | | | 292-332 |
| API Gravity | ºAPI | D4052 | 34-37 |
| Cetane Index | unitless | ASTM D976 | report |
| Cetane Number | unitless | ASTM D613 | 43-47 |
| Specific Gravity | | D4052 | 0.840-0.855 |
| Ramsbottom Carbon | | | |
| Residue on 10% | % | ASTM D524 | max 0.35 |
| Distillation | | | |
| Net Heating Value | MJ/kg | ASTM D3338 | report |
| Composition, | volume % | ASTM D5186 | 26-31.5 |
| aromatics | volume 78 | A31W1D3180 | 20-31.3 |
| Composition, olefins | volume % | ASTM D1319 | report |
| Composition, | volume % | ASTM D1319 | report |
| saturates Ash | | ASTM D482 | |
| | mass % | | max 0.005 |
| Flash Point | ōC | ASTM D93 | min 54 |
| Pour Point | ≅C | ASTM D97 | max -18 |
| Cloud Point | ºC | ASTM D2500 | report |
| Strong Acid Number | mg KOH/g | ASTM D664 | max 0.00 |
| Total Acid Number | mg KOH/g | ASTM D664 | max 0.05 |
| Accelerated Stability | mg/100 mL | ASTM D2274 | max 1.5 |
| Copper Corrosion | classification | ASTM D130 | max 1 |
| Kinematic Viscosity | cSt | ASTM D445 | 2.0-2.6 |
| Water and Sediment | volume % | ASTM D2709 | max 0.05 |
| Total Sulfur | mg/kg | ASTM D5453 | 7-15 |
| Lubricity (HFRR) | μm | D6079 | max 460 |
| Bio-Diesel | XXX | XXX | XXX |

TGC Fuels Task Force Recommendations to TGC

- PC10 Fuel Spec to be agreed upon by each test method using PC10 fuel
 - All effected surveillance panels to vote and approve
- Fuel Specs to be kept on TMC website and referred to within procedures
 - All HD surveillance panels to modify procedures by removing current spec and adding comment on test fuel and location of spec for that fuel
 - ► PC9, PC10, and SDTF

December 4, 2017 Meeting

 TGC Meeting held prior to the Executive Committee meeting. A verbal update on details of meeting will be given.

Scope and Objectives

The Technical Guidance Committee is a standing committee under the ASTM Test Monitoring System Executive Committee. The TGC shall consist of the chairmen of the surveillance panels of monitored tests, a representative of each of the test developers/sponsor who are responsible for the test procedures and the Director. The Technical Guidance Committee will advise the Director in technical matters concerning test procedures.

This will involve working with the surveillance panels, test developers, critical parts suppliers, fuel suppliers and testing laboratories across all testing types to improve the repeatability and reproducibility of the test procedures. The TGC will provide guidance for future test developments. Additionally, the TGC chairman will liaise with the ACC PAPTG Chair.

Objectives:

- 1) Develop guidelines for issues that are potentially common to all HD/PC engine, gear and bench testing.
- 2) Work with the Rating Committee to provide guidance for issues related to visual deposit ratings.
- 3) Provide guidance on best practices for critical component identification within test procedures.
- 4) Continue to refine the "Guide for Test Development" document as new categories are developed.