

100 Barr Harbor Drive ■ PO Box C700 ■ West Conshohocken, PA 19428-2959

Telephone: 610-832-9500 ■ Fax: 610-832-9555 ■ e-mail: service@astm.org ■ Website: www.astm.org

Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

Chairman: W. JAMES BOVER, ExxonMobil Biomedical Sciences Inc, 1545 Route 22 East, PO Box 971,

Annandale, NJ 08801-0971, (908) 730-1048, FAX: 908-730-1197, EMail: wjbover@erenj.com First Vice Chairman: KENNETH O. HENDERSON, Cannon Instrument Co, PO Box 16, State College, PA 16804,

(814) 353-8000, Ext: 0265, FAX: 814-353-8007, EMail: kenohenderson@worldnet.att.net Second Vice Chairman: SALVATORE J. RAND, 221 Flamingo Drive, Fort Myers, FL 33908, (941) 481-4729,

FAX: 941-481-4729

Secretary: MICHAEL A. COLLIER, Petroleum Analyzer Co LP, PO Box 206, Wilmington, IL 60481,

(815) 458-0216, FAX: 815-458-0217, EMail: macvarlen@aol.com

Assistant Secretary: JANET L. LANE, ExxonMobil Research and Engineering, 600 Billingsport Rd, PO Box 480,

Paulsboro, NJ 08066-0480, (856) 224-3302, FAX: 856-224-3616, EMail: janet_l_lane@email.mobil.com

Staff Manager: DAVID R. BRADLEY, (610) 832-9681, EMail: dbradley@astm.org

Originally Issued: April, 2011

Reply to: Richard Grundza

ASTM Test Monitoring Center

6555 Penn Avenue Pittsburgh, PA 15206 Phone: 412-365-1031 Fax: 412-365-1047

rax. 412-303-1041

Email: reg@astmtmc.cmu.edu

Unapproved Minutes of the March 31, 2011 Sequence III Conference Call

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The teleconference began at 11:00 a.m. Eastern.

1.0) Roll Call

1.1) Membership. Ms. Terry Kowalski of Toyota, Mr. Mike McMillen, Mr. Scott Rajala of Idemitsu Lubricants America Corp. and Tom Wingfield of Chevron Phillips Chemical Co. all wish to be added as non voting members.

1.2) The meeting attendance is shown in **Attachment 1**.

2.0) Approval of minutes

2.1) Minutes from the following meetings were approved without objection

(motion: Seman, Bowden):

March 17, 2011 Teleconference

3.0) Action Item Review

3.1) 09/11/2009 (Glaenzer/Grundza) conduct a round robin to study Phosphorus measurement for IIIGB test.

STATUS: OPEN

3.2) 03/17/2011 Panel to look for a replacement reference oil, perhaps in the 275% vis increase range.

STATUS: OPEN

3.3) 03/17/2011 Dave Glaenzer will from a task force to study different ways to evaluate reference results for PVIS in the IIIF Test.

STATUS: OPEN

4.) Old Business

4.1) 3/17/ 2011 Request to change wording in D7320 Section 6.10.5 (oil filter replacement).

Proposed wording for a potential e-ballot was circulated and is included as attachment 2. Since there were comments, it was agreed to discuss this change during this call. Jason Bowden suggested dropping the last line in 6.10.5.1, which was agreed to by the membership on the call. Jason's comments are also included in attachment 2. The group also decided to add a line to 6.10.5.2 to require draining for a minimum of 15 minutes and to clarify 6.10.5.1 to allow only one filter or cooler or both change during a test. Concerns were raised by Andy Ritchie if changing the filter may alter test severity and Ed Altman had voiced concerns that the filter could be clogging due to oil performance and causing the wormholing. After additional discussion, the panel agreed to the change by a vote of 6 for, 2 against and 2 waives. Not being unanimous and

potentially controversial, this information letter will be balloted before Subcommittee B prior to issue. (Motion: Greg Seman, 2nd Charlie Leverett)

4.2) 3/17/2011 UEB Oil and Test Start Criteria.

The panel discussed test start criteria. Charlie Leverett had circulated a punch list of items prior to the conference call, which he reviewed during the meeting. Considerable discussion took place as to the oil to use and whether labs should try to run on the same fuel batch. Data from the previous UEB was reviewed and is included as attachment 3. The panel agreed to use reference oil 434-1 and to have parts rated by a red, white or blue category rater. Attachment 4 contains the updated UEB guidelines, with changes highlighted in red. Motion: Approve the UEB instructions as amended, using reference oil 434-1. Motion Rich Grundza, 2nd Matt Snider, Unanimous.

4.3) 3/17/2011 1006-2 Results and Statistical Analysis.

The panel discussed the recent conference call of the statistics group regarding 1006-2 severity. The TMC had received correspondence from the supplier indicating that their analysis showed no degradation in the oil properties. ACTION ITEM: The TMC was requested to see if any oxidation tests were run by the supplier and how that data compared to the original data.

6.) New Business

There was no new business

7.) Next Meeting

7.1) The next meeting will be at the call of the chair. The statisticians studying the IIIF 1006-2 severity issue will meet via conference call on April 7, 2011. The meeting adjourned at 12:00 p.m

Voting Members Present ASTM Sequence III Surveillance Panel (17 Voting members)

Attachment 1

Phone/Fax/Email Signature Name/Address Present Voting Member 804-788-5279 Ed Altman Afton Chemical Corporation 804-788-6358 ed.altman@aftonchemical.com 500 Spring Street Richmond, VA 23219 USA Present Art Andrews 856-224-3013 Non-Voting Member ExxonMobil Products Research arthur.t.andrews@exxonmobil.com 600 Billingsport Rd. Paulsboro, NJ 08066 USA Present Non-Voting Member 210-877-0223 Zack Bishop Test Engineering, Inc. 210-690-1959 12718 Cimarron Path zbishop@tei-net.com San Antonio, TX 78249-3423 USA Non-Voting Member Doyle Boese 908-474-3176 Present Infineum 908-474-3637 1900 E. Linden Avenue doyle.boese@infineum.com Linden, NJ 07036 USA Non-Voting Member Present 440-354-7007 Adam Bowden OH Technologies, Inc. 440-354-7080 adbowden@ohtech.com 9300 Progress Parkway P.O. Box 5039 Mentor, OH 44061-5039 USA Voting Member Present 440-354-7007 Jason Bowden 440-354-7080 OH Technologies, Inc. 9300 Progress Parkway . jhbowden@ohtech.com P.O. Box 5039 Mentor, OH 44061-5039 USA Non-Voting Member Present 440-354-7007 Dwight H. Bowden OH Technologies, Inc. 440-354-7080 9300 Progress Parkway dhbowden@ohtech.com P.O. Box 5039 Mentor, OH 44061-5039

USA

Name/Address	Phone/Fax/Email		Signatur	e
Matt Bowden OH Technologies, Inc. 9300 Progress Parkway P.O. Box 5039 Mentor, OH 44061-5039 USA	440-354-7007 440-354-7080 mjbowden@ohtech.com	Non-Voting Member	Present_	
Jerome A. Brys Lubrizol Corp. 29400 Lakeland Blvd. Wickliffe, Ohio 44092 USA	440 347-2631 jerome.brys@lubrizol.com	Non-Voting Member	Present	
Bill Buscher III Southwest Research Institute 6220 Culebra Road P.O. Box 28510 San Antonio, TX 78228 USA	210-522-6802 210-684-7523 william.buscher@swri.org	Non-Voting Member	Present_	
Bob Campbell Afton Chemical Corporation 500 Spring Street Richmond, VA 23219 USA	804-788-5340 804-788-6358 bob.campbell@aftonchemica	Non-Voting Member	Present	
James Carter Haltermann Solutions 2296 Hulett Rd. Okemos, MI 48864 USA	517-347-3021 517-347-1024 <u>jecarter@jhaltermann.com</u> Cell: 517-896-0897	Voting Member	Present	
Chris Castanien The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, OH 44092 USA	440-347-2973 440-944-8112 cca@lubrizol.com	Non-Voting Member	Present	
Timothy L. Caudill Ashland Oil Inc. 22 nd & Front Streets Ashland, KY 41101 USA	606-329-1960 x5708 606-329-2044 tlcaudill@ashland.com	Voting Member	Present	,
Martin Chadwick Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238 USA	210-706-1543 210-684-6074 martin.chadwick@intertek.co	Non-Voting Member	Present	

Name/Address	Phone/Fax/Email		Signature
Jeff Clark Sequence III Secretary ASTM Test Monitoring Center 6555 Penn Avenue Pittsburgh, PA 15206 USA	412-365-1032 412-365-1047 jac@atc-erc.org	Non-Voting Member	Present
Sid Clark Southwest Research 50481 Peggy Lane Chesterfiled, MI 48047 USA	586-873-1255 Sidney.L.Clark@sbcglobal.net	Non-Voting Member	Present
Johnny M De La Zerda Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238 USA	210-523-4621 210-523-4607 johnny.delazerda@intertek.con	Non-Voting Member	Present
Todd Dvorak Afton Chemical Corporation P.O. Box 2158 Richmond, VA 23218-2158 USA	804-788- 6367 804-788- 6388 todd.dvorak@aftonchemical.co	Non-Voting Member	Present
Frank Farber ASTM Test Monitoring Center 6555 Penn Avenue Pittsburgh, PA 15206 USA	412-365-1030 412-365-1047 fmf@astmtmc.cmu.edu	Non-Voting Member	Present
Gordon R. Farnsworth Infineum RR # 5 Box 211 Montrose, PA 18801 USA	570-934-2776 570-934-0141 gordon.farnsworth@infineum.c	Non-Voting Member om	Present
Joe Franklin Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238 USA	210-523-4671 210-523-4607 joe.franklin@intertek.com	Non-Voting Member	Present

Name/Address	Phone/Fax/Email		Signature
David L. Glaenzer Afton Chemical Corporation 500 Spring Street P.O. Box 2158 Richmond, VA 23218-2158 USA	804-788-5214 804-788-6358 dave.glaenzer@aftonchemica Surveillance Panel Chairma		Present
Richard Grundza ASTM Test Monitoring Center 6555 Penn Avenue Pittsburgh, PA 15206 USA	412-365-1031 412-365-1047 reg@astmtmc.cmu.edu	Voting Member	Present
Tracey King Chrysler LLC 800 Chrysler Drive CIMS 482-00-13 Auburn Hills, MI 48326-2757 USA	248-576-7500 248-576-7490 tek1@chrysler.com	Voting Member	Present
Clayton Knight Test Engineering, Inc. 12718 Cimarron Path San Antonio, TX 78249-3423 USA	210-690-1958 210-690-1959 cknight@tei-net.com	Voting Member	Present
Patrick Lang Southwest Research Institute 6220 Culebra Road P.O. Box 28510 San Antonio, TX 78228 USA	210-522-2820 210-684-7523 plang@swri.edu	Voting Member	Present
Charlie Leverett Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238 USA	210-647-9422 210-523-4607 <u>charlie.leverett@intertek.com</u>	Voting Member	Present
Josephine G. Martinez Chevron Oronite Company LLC 100 Chevron Way Richmond, CA 94802 USA	510-242-5563 510-242-3173 jogm@chevrontexaco.com	Non-Voting Member	Present

Name/Address	Phone/Fax/Email		Signature
Bruce Matthews GM Powertrain Mail Code 483-730-472 823 Jocyln Avenue Pontiac, MI 48340 USA	248-830-9197 248-857-4441 bruce.matthews@gm.com Test Sponsor Representative	Voting Member	Present
Timothy Miranda BP Castrol Lubricants USA 1500 Valley Road Wayne, NJ 07470 USA	973-305-3334 973-686-4039 <u>Timothy.Miranda@bp.com</u>	Voting Member	Present
Mark Mosher ExxonMobil Technology Co. Billingsport Road Paulsboro, NJ 08066 USA	856-224-2132 856-224-3628 mark.r.mosher@exxonmobil.co	Voting Member	Represented by Mike Hoey
Phil Rabbat BASF Corporation 500 White Plains Road Tarrytown, NY 10591-9005 USA	914-785-2217 914-785-3681 phil.rabbat@basf.com	Non-Voting Member	
Allison Rajakumar The Lubrizol Corporation Drop 152A 29400 Lakeland Blvd. Wickliffe, OH 44092 USA	440-347-4679 440-347-2014 Allison.Rajakumar@Lubrizol.co	Non-Voting Member	Present
Andrew Ritchie Infineum 1900 East Linden Avenue P.O. Box 735 Linden, NJ 07036 USA	908-474-2097 908-474-3637 Andrew.Ritchie@Infineum.com	Voting Member	Present
Ron Romano Ford Motor Company Diagnostic Service Center II Room 410. 1800 Fairlane Drive Allen Park, MI 48101 USA	313-845-4068 313-32-38042 rromano@ford.com	Voting Member	Present

Name/Address	Phone/Fax/Email		Signature
Jim Rutherford Chevron Oronite Company LLC 100 Chevron Way Richmond, CA 94802 USA	510-242-3410 510-242-3173 jaru@chevrontexaco.com	Non-Voting Member	Present
Philip R. Scinto The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, OH 44092 USA	440-347-2161 440-347-9031 prs@lubrizol.com	Non-Voting Member	Present
Greg Seman The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, OH 44092 USA	440-347-2153 440-347-4096 greg.seman@lubrizol.com	Voting Member	Present
Matt J. Snider GM Powertrain General Motors Corporation MC - 483-730-322 823 Joclyn Rd. Pontiac, MI 48090-9055 USA	248-672-3563 248-857-4441 mathew.j.snider@gm.com	Non-Voting Member	Present
Thomas Smith Valvoline P.O. Box 14000 Lexington, KY 40512-1400 USA	859-357-2766 859-357-7084 <u>trsmith@ashland.com</u> PCEOCP Chair	Voting Member	Present
Mark Sutherland Chevron Oronite Company LLC 4502 Centerview Drive Suite 210 San Antonio, TX 78228 USA	210-731-5621 210-731-5699 msut@chevrontexaco.com	Voting Member	Present
Ben O. Weber Southwest Research Institute 6220 Culebra Road P.O. Box 28510 San Antonio, TX 78228 USA	210-522-5911 210-684-7530 <u>bweber@swri.edu</u> Sub-Committee D02.B01 Cha	Non-Voting Member	Present

date:

Name/Address	Phone/Fax/Email		Signature
Joe Vujica The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, OH 44092 USA	440-347-2057 440-347-4096 jsvu@lubrizol.com	Non-Voting Member	Present
Jerry Wang Chevron Oronite Company LLC 7080 Colchester Lane Ypsilanti, MI 48197	734-48- 3806 none jwdy@chevron.com	Non-Voting Member	Present
Mike Me Millon	mmemille	w 123 @ comca	est. Net

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Modifies Test Method D7320-10

as amended by Information Letters 10-2, 10-3, 10-4 and 10-5

6.10.5 The oil cooler or oil filter, or both can be replaced once each test if the oil filter pressure differential during test operations is greater than 100 kPa, if bypass operation is detected, or if the oil pressure delta slowly climbs as test hours are accumulated and decreases by more than 10 kPa in less than 1 min or when the real-time oil delta pressure value exceeds the average of the test's first hour delta pressure by 10kPa, the oil filter can be replaced. As this could happen independent of viscosity increase, and over a short or long period of time, there is no time constraint that must be met for the change to take place.

6.10.5.2 If the oil filter is replaced during the test, place a pan underneath it to catch any oil lost from the system or filter, or both. Invert the oil filter and allow the filter to drain any oil contained in the old oil filter. Add the captured oil to the new oil filter before installing it on the test engine. Allow the filter to drain for a minimum of 15 min.

Dave,

Thank you for sending this out. I have a couple comments with regards to the Draft Information Letter.

6.10.5._ The last sentence, "As this could happen independent of viscosity increase, and over a short or long period of time, there is no time constraint that must be met for the change to take place.", should be deleted as I do not think an explanation needs to be included for each action taken in the Seq. III procedure. I think the previous portion as written in this draft captures the intent of what the Seq. III Panel recommends for replacing oil filters and coolers.

Section 6.10.5.2_ Lubrizol original proposal had a timeframe of 15 minutes to drain the oil from the filter while it was upside down. Should this be included in this draft? I realize that the labs will have the motivation to capture all oil from the oil filter.

If you have any questions please do not hesitate to contact me.

Best regards,

Jason H. Bowden OH Technologies, Inc.

Voice: (440) 354-7007 (ext. 101)

Fax: (440) 354-7080

E-mail: jhbowden@ohtech.com

Mail: P.O. Box 5039 Mentor, OH 44061-5039

Street: 9300 Progress Parkway

Mentor, OH 44060

LTMSLAB	LTMSAPP IND	VAL	LTMSDATE PVI	S	Vis Severity WPD	٧	VPD Sever A	CLWti	ACLW Seve AC	CLW seve OI	LCON
G	3	434 AG	20060218	110.3	157.9071	3.9	4.577	3.6376	3.8201	45.6	4.24
Α	1	434 LG	20060220	245.9	N/A	3.74 N	I/A	4.2327	N/A	69	4.55
D	1	434 AG	20060226	69.5	95.35805	4.74	5.3639	3.6163	3.6163	37.2	3.75
E	1	434 AG	20060227	71.3	71.3	4.04	4.04	3.5025	3.5025	33.2	3.08
В	1	434 AG	20060227	73.1	109.2834	4.76	4.76	3.7111	3.9587	52.4	4.05
F	1	434 AG	20060228	132.9	203.3411	4.06	4.06	4.0239	4.0239	55.9	4.29
Α	1	434 AG	20060320	83.3	83.3	4.2	5.0663	3.7038	3.7038	40.6	3.38
Results on 434 after on UEB Blocks											
Α	1	434 AC	20060329	83.1		3.7		3.8022			3.21
G	3	434 OC	20060331	103.7		4.44		3.8754			3.77
D	1	434 AC	20060402	107.4		3.64		3.8607			3.77
В	2	434 OC	20060502	53.2		4.33		2.8094			3.62
F	1	434 AC	20060515	88.6		3.47		3.7136			3.41

HSTUKT

0 Test declared invalid by lab due to engine damage

0 Re-run of invalid test

U

Sequence III Unified Build Engine Operation Instructions

April 2011

Please follow the directions below when conducting you Sequence IIIG test on the unified build engine:

- 1) Contact the TMC and request oil 434-1 for this test. This will be considered a donated test and the TMC will give each lab that conducts a UEB test an extension of one run or one week to their calibration period.
- 2) The fuel injectors need to be flow checked prior to use in this test. Document the values and also note what cylinder the injector is supplying.
- 3) Take a minimum of one-quart fuel sample from the fuel line that feeds the stand that you are running the test on (purge the line as necessary before taking the actual sample), note the fuel batch code. If you have access to a refrigerated fuel storage facility please utilize it for this sample.
- 4) Perform a <u>complete stand instrumentation calibration</u> before test as if this were an official reference test. Please ensure that you sharp edge orifice meter is consistent with section 6.16 of the IIIG Procedural draft 2D and you method of blowby calculation is consistent with section 11.11 of the D7320. It is also recommended that you perform your laboratory's routine maintenance (cleaning and inspection) on the blowby meter prior to this test.
- 5) Take an 8-ounce glycol sample from the engine after the timing run is completed. *Retain this sample for possible analysis*.
- 6) Post test, please save all components from the engine including timing chain, timing gears, all bearings, cylinder heads, piston rings, gaskets, etc., all EOT bearings and rings need to be identified during teardown. If we get unusual results, we may need to look back at these parts.
- 7) All deposit ratings should be performed by a rater that has been classified as 'red, white or blue. These classifications were determined at the last rating workshop.

Pistons shall be sent to SwRI for referee rating once the Lab has completed their ratings.

8) At EOT, measure the cam and lifters for wear. Upon completion, send the cam and lifters to Intertek at the following address:

Intertek AR 5404 Bandera Rd. San Antonio, TX 78238 Attention: Charlie McMillan

- 9) Perform IIIGA & IIIGB analyses on the EOT sample.
- 10) Take piston photos as you would with a normal reference test.
- 11) If possible, conduct the UEB test on a IIIG stand that is next in line for a reference in your lab.