

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 DO2 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: November 24, 2009

Reply to: Richard Grundza

**ASTM Test Monitoring Center** 

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

Email: reg@astmtmc.cmu.edu

Unapproved Minutes of the November 19, 2009 Sequence VG Surveillance Panel Meeting held in Warren, MI

This document is not an ASTM standard; it is under consideration within an ASTM technical committee but has not received all approvals required to become an ASTM standard. It shall not be reproduced or circulated or quoted, in whole or in part, outside of ASTM committee activities except with the approval of the chairman of the committee having jurisdiction and the president of the society. Copyright ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

The meeting was called to order at 9:00 am by Chairman Andy Ritchie.

A list of attendees is included as attachment 1

Agenda Review

Bill Buscher is Action & Motion recorder.

The Agenda was accepted as shown on Attachment 2.

Sequence VG Meeting Minutes November 19, 2009 Warren, MI

### Membership Changes

Raham Kirkwood replaces Dan Worcester as the voting member for Southwest Research.

### Meeting Minute Status

The May 6, 2009 meeting minutes were approved by the surveillance panel.

### Review of Action Items from Last Meeting

Only one motion or action item was reviewed from last meeting. Motions and Action Items As Recorded at the Meeting by Bill Buscher

Action Item O&H task force to perform a thorough Sequence VG test procedure review, and to investigate poor precision that was observed during the fuel prove-out matrix. Review still remains to be completed

### **Test Sponsor Report**

Ron Romano did not have a formal report, but summarized the recent issues with the pistons from Federal Mogul. The pistons will be replaced by Federal Mogul as they were found to have unacceptable levels of staining. An update on the replacement will be given later in the meeting when Ford Component Sales representative is available.

### Fuel Supplier Report

Mark Overaker identified that only two minor adjustments to RVP have been made to the current fuel batch, which is much better than the type and amount of adjustments made to the previous batches. He commented that even with the elevated temperatures this summer in Texas, the floating roof seal appears to be doing a much better job of maintaining fuel integrity. It appears that, based on current consumption rates, there is about a 10 month supply of fuel left. A considerable discussion by the panel led to an agreement to meet in the first quarter of 2010 to review the activities of the TGC Test Fuel Task Force and to develop a plan for approving the next batch of fuel. A copy of the fuel suppliers report can be found as attachment 3.

### Test Monitoring Center Report

A copy of the TMC report can be obtained from the TMC website. There were no questions or comments regarding the TMC report. There were no questions or comments on the report.

### ACC Monitoring Agency Report

No formal report was given. A copy of the report is available on the ACC Monitoring Agency website.

Sequence VG Meeting Minutes November 19, 2009 Warren, MI

### Hardware Task Force.

Ford Component sales discussed the status of the pistons and the cost associated with shipping them airfreight from India. Air freight charges are approximately \$8200 for the 3200 pistons, and labs will be charged proportionally, based on the number of pistons being replaced. It was pointed out that the air freight is to Federal Mogul's facility in Mansville. It is uncertain whether there will be additional handling charges from Mansville. The previous batch was distributed by TEI, and there were additional handling charges, but these have not been discussed by Federal Mogul.

### Scope and Objectives

A review of the scope and objectives was conducted. The revised scope and objectives are included as attachment 4. Andy Ritchie also gave a brief presentation of his report to subcommittee D0.02.B0., also included in attachment 4.

#### New and Old Business

Under new business, Bill Buscher drafted an action item for the panel to see if we have a potential GF-4 or GF-5 reference oil for the VG, TMC to query suppliers of 5 primary VID reference oils (A, B, C, D and X) to see if data exists for these oils on the other GF-5 engine tests, or if they would be willing to generate data on the other GF-5 engine tests. Bill also made a second motion to review the current VG ltms to drop or relax precision requirements. The panel members embarked on a lengthy discourse about the actions currently being taken by the current LTMSTask Force. The panel agreed to convene a meeting shortly after the final version from the LTMS Task Force is available to review the potential of adopting the LTMS system proposed by the task force.

A listing of Motions and Action items recorded during the meeting is included as attachment 5.

The meeting was adjourned at 10:38 pm.

(18 Voting members)

November 19, 2009

Name/Address	Phone/Fax/Email		Signature
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 charlie.leverett@intertek.com	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
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 Castrol Technology Center 240 Centennial Avenue Piscataway, NJ 08854 USA	732-980-3634 973-686-4039 <u>Timothy.Miranda@Castrol.com</u>	Voting Member	Present

Name/Address	Phone/Fax/Email		Signature	
Mark Mosher ExxonMobil Technology Company Billingsport Road Paulsboro, NJ 08066 USA	856-224-2132 856-224-3628 mark.r.mosher@exxonmobil.com	Voting Member	Present	
Allison Rajakumar The Lubrizol Corporation Drop 152A 29400 Lakeland Blvd. Wickliffe, OH 44092 USA	440-347-4679 440-347-2014 Allison.Rajakumar@Lubrizol.com	Non-Voting Member	Present	AV
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	<del>*************************************</del>
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 <u>rromano@ford.com</u> Test Sponsor Rep	Voting Member	Present	
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 S2400 In Corporation  29400 Lakeland Boulevard Wickliffe, OH 44092	2352 440-347- <u>2153</u> 440-347-4096 <u>greg.seman@lubrizol.com</u>	Voting Member	Present	Mil-

USA

Name/Address	Phone/Fax/Email	_	Signature
Ed Altman Afton Chemical Corporation P.O. Box 2158 Richmond, VA 23218-2158 USA	804-788-5279 804-788-6358 ed.altman@aftonchemical.com	Voting Member	Present
Zack Bishop Test Engineering, Inc. 12718 Cimarron Path San Antonio, TX 78249-3423 USA	210-877-0223 210-690-1959 zbishop@tei-net.com	Non-Voting Member	Present
Doyle Boese Infineum 1900 E. Linden Avenue Linden, NJ 07036 USA	908-474-3176 908-474-3637 doyle.boese@infineum.com	Non-Voting Member	Present
Adam Bowden OH Technologies, Inc. 9300 Progress Parkway P.O. Box 5039 Mentor, OH 44061-5039 USA	440-354-7007 440-354-7080 adbowden@ohtech.com	Non-Voting Member	Present
Jason Bowden OH Technologies, Inc. 9300 Progress Parkway P.O. Box 5039 Mentor, OH 44061-5039 USA	440-354-7007 440-354-7080 jhbowden@ohtech.com	Voting Member	Present
Dwight H. Bowden OH Technologies, Inc. 9300 Progress Parkway P.O. Box 5039 Mentor, OH 44061-5039 USA	440-354-7007 440-354-7080 dhbowden@ohtech.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_WAJS
Bdo CAmpbell Apron Chemical	804 788 5340 F) 6358 Bob. Campbell @ AFR	Tonchen al. com	NU RLC
Page 1 of 6	10-2		4

Name/Address	Phone/Fax/Email		Signature
James Carter Haltermann Products 3520 Okemos Rd. Suite #6-176 Okemos, MI USA	517-347-3021 517-347-1024 jecarter@jhaltermann.com	Voting Member	Present A Re-
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 <sup>nd</sup> & 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.com	Non-Voting Member	Present
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_Sed
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.com	Non-Voting Member	Present

Name/Address	Phone/Fax/Email	1	Signature
Matt J. Snider GM Powertrain General Motors Corporation MC - 483-730 (322) 472 823 Joseph Rd. Pontiac, MI 48090-9055 USA 48 340 - 2970	248-672-3563 248-857-4441 mathew.j.snider@gm.com	Non-Voting Member	Present July Just
Thomas Smith Valvoline P.O. Box 14000 Lexington, KY 40512-1400 USA	859-357-2766 859-357-7084 trsmith@ashland.com 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 Chair	Non-Voting Member	Present
Joe Vujica The Lubrizol Corporation 29400 Lakeland Boulevard Wickliffe, OH 44092 USA	440-347-2058 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
MARK OVERAKER HALTERMANN M HOUSTON, TX 77015	713-877-3668 HOVERAKER @ THAITER	NANN , COM	
Raham Kirkwood	210-639-3481		
SWRI	rkirkwood & Swri.ord	3	

Name/Address	Phone/Fax/Email		Signature
Todd Dvorak Afton Chemical Corporation P.O. Box 2158 Richmond, VA 23218-2158 USA	804-788- 6367 804-788- 6388 todd.dvorak@aftonchemical.com	Non-Voting Member F	Present
Frank Farber Teff Clorke ASTM Test Monitoring Center 6555 Penn Avenue Pittsburgh, PA 15206 USA	412-365-103 <del>0-2</del> 412-365-1047 fmt@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.com	Non-Voting Member	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
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@aftonchemical.com Surveillance Panel Chairman	Non-Voting Member	Present
Irwin L. Goldblatt Castrol Americas 240 Centennial Avenue Piscataway, NJ 08854-3910 USA	732-980-3606 973-686-4224 <u>irwin.goldblatt@cnacm.com</u>	Voting Member	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_KCH
Larry Hamilton The Lubrizol Corporation 29400 Lakeland Boulevard	<del>440-347-2326</del> 440-347-4096 <u>Idha@lubrizol.com</u>	Non-Voting Member	Present (by phone

USA

Wickliffe, OH 44092

Phil Scinto Lhrizol

440-347-2161 Phil. Scinto eL brizol. Com

DNS

Allison Rajakumar Lubrizol

440-347-4679 alpd@ lubrizol.com AMR

To Martnez Ormife Dan Smolenski

510 2425563 jogm@dovron.com My 248-255-7892 clonaldij. Smolenski wom.com

### Agenda Sequence VG Surveillance Panel November 19<sup>th</sup> 2009 9.00–12:00 p.m.

GM Technical Center in Warren, MI

1. Chairman comments.	
2. Attendance sign-in distribution.	
3. Membership changes.	
4. Motion and Action recorders.	
5. Approval of minutes for May 6 <sup>th</sup> 2009	All
6. Review action items from last meeting.	Andy Ritchie
7. Test Sponsor report.	Ron Romano
8. TMC Report.	Rich Grundza
- Questions on semi-annual report.	
9. Current Fuel Supply.	Jim Carter
10. 10. New Fuel Batch Update	Jim Carter
11. Operational and Hardware Items.	All
12. VG parts supply update	Ford Component Sales
13. Review Scope and Objectives.	All
14. Old business	All
15. New business	All
16. Adjourn	



## SVGMII Fuel Report

Mark Overaker
Director of Manufacturing and Supply Chain
Haltermann Products

November 19, 2009

Test and Reference Fuels



## Agenda

- Fuel adjustments Tank History
  - Excel file submitted
- Fuel Tank Survey
  - Excel File submitted
- Current inventory
- Consumption rate
- Timeframe to next batch
- Proposed plan to re-build next batch
  - Customer input required
    - Average Industry Free-Capacity
    - Time to empty once fully replenished

Test and Reference Fuels



# Fuel Adjustments – Tank History

PRODUCT: SVGM2

PRODUCT CODE: HF295

Batch No.: XC2721NX10 Nixon Test Info: Sample date: 10/20/2009 9/15/2009 9/8/2009 10/7/2009 9/14/2009 8/28/2009 8/28/2009 8/24/2009 7/10/2009

Nixon

6/30/2009

1258 gallons

TEST	METHOD	UNITS	SF	PECIFICATION	ONS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
			MIN	TARGET	MAX										797	958				
Distillation - IBP	ASTM D86	C	23.9		35.0	28.7	32.8	30.8	35.0	32.1	28.1	32.9		28.5	29.6	29.5	29.5		31.8	28.9
5%		C				43.8	43.7	43.6	43.6	42.5	41.1	46.4		45.7	42.3	42.5	45.9		49.2	44.1
10%		C	48.9		57.2	51.7	51.7	51.1	51.0	50.4	49.0	53.7		53.0	49.8	49.8	53.4		55.4	51.3
20%		C				65.1	64.9	64.1	63.5	62.8	62.3	66.6		66.4	63.0	62.7	67.1		68.1	64.6
30%		C				81.1	81.1	79.7	79.0	78.3	78.1	81.1		82.7	78.5	78.7	83.8		84.4	80.7
40%		C				98.5	98.7	96.8	96.7	96.4	96.2	97.6		99.4	96.8	97.6	100.8		100.7	98.6
50%		C	98.9		115.6	108.9	108.9	107.9	108.1	108.1	107.0	108.5		109.2	108.0	108.4	109.7		109.7	108.3
60%		C				114.6	114.7	114.1	114.3	114.3	113.3	114.7		115.9	114.1	114.5	115.9		115.7	114.4
70%		C				122.2	121.9	121.6	122.2	121.8	120.7	122.8		124.0	121.6	122.1	125.2		123.9	123.4
80%		C				140.3	140.2	139.4	140.4	140.0	38.3	141.4		145.4	139.6	140.5	148.9		145.7	145.3
90%		C	162.8		176.6	173.4	171.8	171.3	172.7	172.5	171.1	173.4		175.7	170.6	172.3	177.3		175.3	175.4
95%		C				184.4	184.3	183.5	184.8	184.6	182.8	186.0		194.8	183.2	184.5	201.3		192.8	192.8
Distillation - EP		C	196.1		212.8	212.2	212.1	211.8	212.5	212.5	210.3	212.9		209.0	211.6	212.8	212.2		213.6	208.6
Recovery		vol %		Report		98.4	98.0	97.3	97.3	96.6	97.1	97.4		96.8	97.8	97.2	96.2		97.5	98.0
Residue		vol %			2.0	0.6	0.6	1.1	0.8	0.9	1.1	1.0		1.1	1.1	1.1	1.1		1.1	1.1
Loss		vol %		Report		1.0	1.4	1.6	1.9	2.5	1.8	1.6		2.1	1.3	1.7	2.7		1.4	0.9
Gravity	ASTM D4052	%PI		Report		57.6	57.7	57.5	57.7	57.4	57.7	57.7		57.5	57.7	57.7	57.5	57.6	57.3	57.6
Density	ASTM D4052	kg/m3		Report		0.748	0.748	0.749	0.748	0.749		747.7			0.7478	0.7478	0.7490	0.7483	0.7495	0.7474
Reid Vapor Pressure	ASTM D323	kPa	60.6		63.4	62.4	63.5	62.3	63.0	62.8	62.5	61.6	62.3	62.1	62.6	62.8	62.1	60.8	57.9	62.7
Carbon	ASTM E191	wt fraction	0.8580		0.8690															0.8632
Carbon	ASTM D3343	wt fraction		Report								0.8673								0.8664
Oxygen	ASTM D4815	wt %			0.05							< 0.01								< 0.01
Sulfur	ASTM D5453	mg/kg			200							4								<17.0
Lead	ASTM D3237	mg/l			2.6							<2.5								<2.5
Phosphorous	ASTM D3231	mg/l			1.3							< 0.2								< 0.2
Composition, aromatics	ASTM D1319	vol %			35.0							32.2								30.4
Composition, olefins	ASTM D1319	vol %	5.0		10.0							6.2								5.9
Composition, saturates	ASTM D1319	vol %		Report								61.7								63.8
Oxidation Stability	ASTM D525	minutes	1440									>1440								>1440
Copper Corrosion	ASTM D130				1							1a								1a
Existent gum, washed	ASTM D381	mg/100mls			3							2.0							< 0.5	< 0.5
Research Octane Number	ASTM D2699		96.0		98.0							98.0								98.0
Motor Octane Number	ASTM D2700			Report							l	88.7	l							89.2
R+M/2	D2699/2700			Report							l	93.4	l							93.6
Sensitivity	D2699/2700		7.5									9.3								9.2
Net Heat of Combustion	ASTM D240	Btu/lb		Report								18232								18395
Additive, Ethyl antioxidant	calculated	ptb		Report																3.5
						D86 by SWRI					-		-							
APPROVED BY:					ANALYST	Intk-SA	Intk-SA	JAM	Intk-SA	Intk-SA	JAM	Intertek-DP	JAM	INS	JAM	JAM	INS	INS	INS	INS

Added Added

1062 gallons

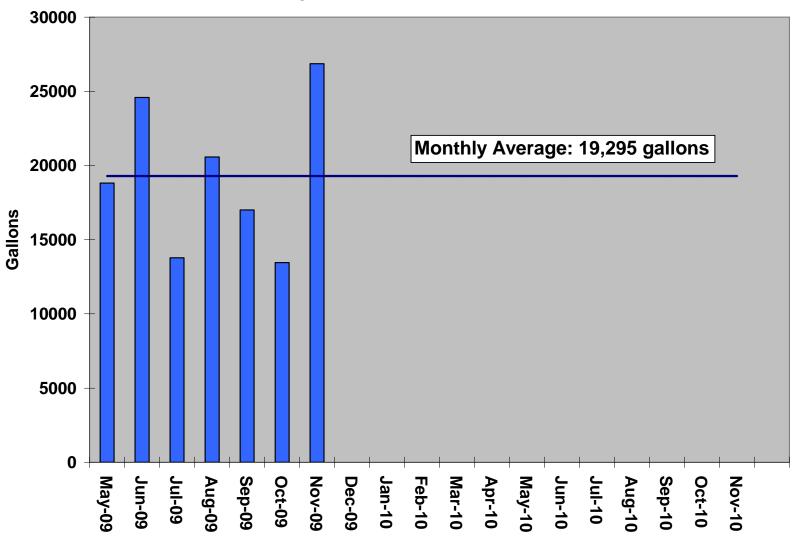


## **Current Inventory**

- 356,000 gallons starting inventory after testing was completed and fuel was qualified in 5/09
- 140,429 gallons total consumption to date
  - 12,061 gallons used in engine tests
  - 128,368 sold after approval
- RVP Adjustment
  - 2,320 gal "light" stream added (2 adjustments)
- Estimated Inventory as of 11/30/2009
  - 217,891 gallons



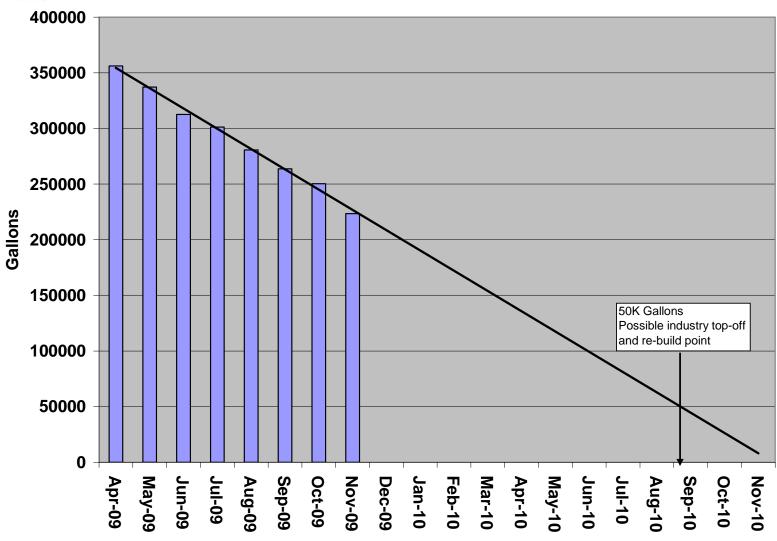
## Monthly Consumption



Test and Reference Fuels



## Consumption Rate & Re-build Point



Test and Reference Fuels

# Proposed plan-next re-build

- Deplete inventory to specified level
  - Determine average volume necessary to fill customer inventory to full capacity at any point in time
  - Add heel and safety margin volume to determine level that will trigger re-build plans
  - Action proposed when inventory reaches 30k 50k gallons
    - Estimate fall 2010
  - Plan Timing
    - Estimate 2 months to re-build
    - 1 month to fill / evaluate and adjust (if necessary)
    - 1 month for engine testing
      - Timing contingent on level of testing needed as determined by the panel
    - Must determine if customers can operate during this period without contingencies

Test and Reference Fuels



## **Next Batch**

- Formulation target identical to last batch
  - CoA and speciation analysis will be conducted
- All components are currently commercially available and are projected to remain so
- Next batch volume must be determined by panel
- Assuming same volume for next batch as last batch, price estimate based on last batch's raw material pricing is \$9.19/gal (actual will be calculated at time of fill) Next batch price drivers
  - 23% reduction from current price
  - Assumes reduction in number of tests by ½
  - Elimination of up-front tank preparation costs

Test and Reference Fuels



### **Sequence VG Fuel Report**

**November 18, 2009** 

217,971
19,295
145
10

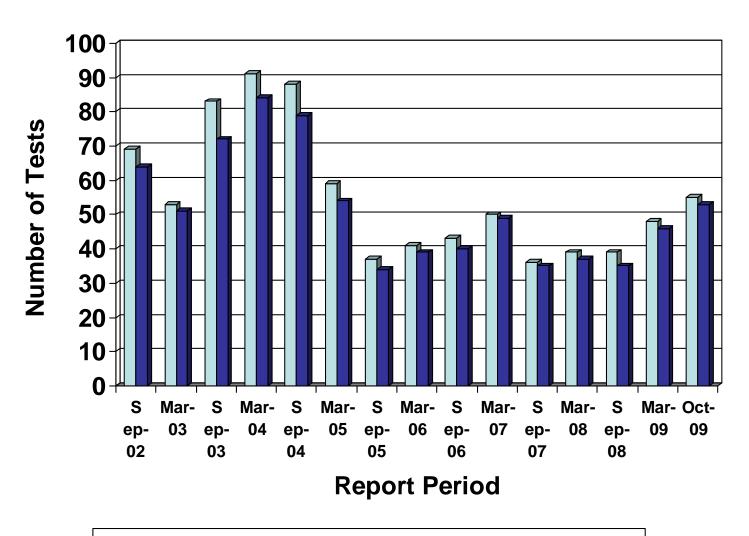
# Sequence VG S.P. Presentation to Subcommittee D02.B

Prepared By: Andrew Ritchie, S.P. Chairman

November 2009

## Sequence VG S.P. Report

## **Candidate Test Activity**



■ Total Reported Tests
■ Operationally Valid

## Sequence VG S.P. Report Reference Oil Update

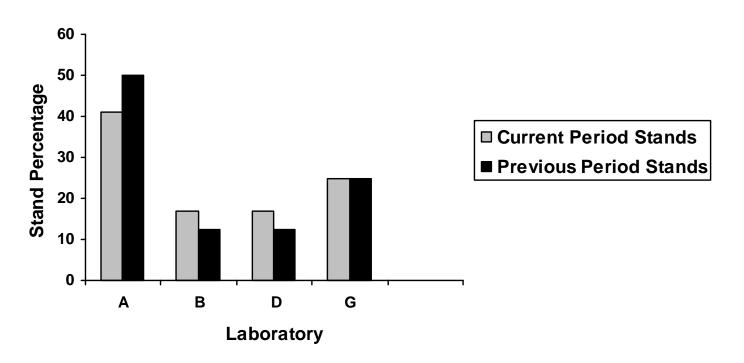
- There is ample supply (3 years or more) of all active VG reference oils:
  - **925-3** SAE 5W30 failing reference oil
  - 1006-2 SAE 5W30 passing reference oil
  - 1007 SAE 5W30 passing reference oil
  - 1009 SAE 5W30 borderline passing reference oil

## Sequence VG S.P. Report Panel Activity

- The VG Surveillance panel met November 19th 2009.
  - Surveillance panel will meet next 1H 2010.
  - Correction factors for new fuel batch XC2721NX10 approved October 1<sup>st</sup> 2009.
    - Information Letter 09-2 Sequence No. 33
  - Panel will start process of evaluating a new fuel batch.

## Sequence VG S.P. Report LTMS Laboratory/Stand Distribution

### **Laboratory/Stand Distribution**



## **Sequence VG S.P. Report** Industry Reference Severity Summary

6 month time frame

<u>Variable</u>	Pooled s All Oils	Mean Delta/s	Based on	Delta in Reported Units
RAC	0.23	0.27	8.0	0.06
AES	0.55	0.05	7.8	0.03
APV	0.30	-0.91	7.5	-0.27
AEV	0.13	-0.59	8.9	-0.08
OSCR	0.61	-0.12	20	-1.5

## Sequence VG S.P. Report Sequence VG S.P. Scope

The Sequence V Surveillance Panel is responsible for the surveillance and continued improvement of the Sequence VG test documented in ASTM Standard D6593 as updated by the Information Letter System. Data on test precision and laboratory versus field correlation will be solicited and evaluated at least every six months. Improvements in rating technique, test operation, test monitoring and test validation will be accomplished through continual communication with the Test Sponsor, ASTM Test Monitoring Center, ASTM B0.01, Passenger Car Engine Oil Classification Panel, ASTM Light Duty Rating Task Force, ASTM Committee B0.01, ACC Monitoring Agency and ASTM Motor Rating Methods Group. Actions to improve the process will be recommended when deemed appropriate based on input from the preceding. Industry transition to new engine hardware batches will be monitored and redistribution of existing hardware facilitated to accomplish uniform industry implementation. Development and correlation of updated test procedures with previous test procedures will be reviewed by the panel. This process will provide the best possible test procedure for evaluating automotive lubricant performance with respect to the lubricant's ability to prevent engine sludge, engine varnish, oil screen plugging, oil ring clogging and ring sticking.

## Sequence VG S.P. Report Sequence VG S.P. Objectives

<u>Objectives</u>	Target Date
1. Ensure a secure supply of SVGM2 fuel is available to accommodate testing through GF-5, anticipating the need for one or more additional batch of SVGM2 fuel to be blended.	
2. Review fuel correction factors for new fuel batch XC2721NX10	Complete, See Info Letter 09-2

## Sequence VG S.P. Report

Information Item for Subcommittee B/B01

### Sequence VG Surveillance Panel November 19, 2009 9:00AM – 12:00PM GM Technical Center Warren, MI

### Motions and Action Items <a href="As Recorded at the Meeting by Bill Buscher">As Recorded at the Meeting by Bill Buscher</a>

- 1. Action Item O&H task force to perform a thorough Sequence VG test procedure review, and to investigate poor precision that was observed during the fuel prove-out matrix.
- 2. Action Item Haltermann to distribute monthly status reports for the current fuel batch to the SP members.
- 3. Action Item SP to request a fuel batch approval plan from the TGC test fuel task force.
- 4. Action Item Schedule a SP conference call in March 2010 to review status of current fuel batch, review the approval process for a new fuel batch and plan for blending a new batch.
- 5. Action Item FCS to contact labs with details on shipping and handling costs for the replacement pistons.
- 6. Action Item Labs to submit purchase orders to FCS for the replacements pistons within one week of receiving the information mentioned in the action item above.
- 7. Action Item To see if we have a potential GF-4 or GF-5 reference oil for the VG, TMC to query suppliers of 5 primary VID reference oils (A, B, C, D and X) to see if data exists for these oils on the other GF-5 engine tests, or if they would be willing to generate data on the other GF-5 engine tests.
- 8. Action Item Plan for an LTMS review at the May 2010 Surveillance Panel meeting, or preferably sooner, once the LTMS task force and TGC has met.