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November 22, 2004

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Unapproved Minutes of the November 16, 2004
Sequence VG Surveillance Panel Meeting
Held in San Antonio, Texas

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Chairman Farnsworth called the meeting to order at 9:02am. The Agenda was passed out and reviewed. *{The Agenda is shown in Attachment 1.}*

Membership Changes – Ed Altman will replace Dave Glaenzer as the voting member. Mr. Glaenzer would like to remain on the mailing list. *{A Membership list, which was circulated at the meeting, is shown in Attachment 2.}*

Motion & Action Item Recorder – Bill Buscher is the Motion & Action Item recorder for this meeting.

Approval of 5/11/04 Meeting Minutes – The minutes for the 5/11/04 meeting were approved unanimously and without comment.

Review of Action Items – The action items from the last meeting were reviewed in detail. *{A copy of those Action Items is shown in Attachment 3.}* Copies of the ACC analysis request letter and ACC's response letter, from Action Item #1, are included in these minutes *{See Attachments 4 & 5.}*

Test Sponsor Report – Mike Riley gave the Test Sponsor report. He noted that there are still seven "2000 engines" and hardware kits available from the vendor at this time.

TMC Report – Due to time constraints, Rich Grundza did not present the TMC report at the Chairman's request. His "highlight" overheads are attached. *{See Attachment 6.}* Mr. Grundza gave an update

Sequence VG Surveillance Panel Meeting
November 16, 2004; 9:00am to 12:00pm
San Antonio, Texas

of recent target activity in the Sequence VG test. There was some discussion on the usage of reference oil 1007 and the panel decided to again use this oil for calibration in Sequence VG tests. Oil 1007 will now be used at a 30% assignment rate in the Sequence VG test. His full report can be reviewed at the following link:

<ftp://ftp.astmtmc.cmu.edu/docs/gas/sequencev/semiannualreports/vg-10-2004.pdf>

Motion (Farnsworth/Glaenzer) – Update the standard deviation used for calculation of severity adjustments in the Sequence VG test to include reference oil 1006, 1006-2, 1007, and 1009 data only. The panel would also like the *LTMS Manual* to indicate which oils were used in the calculation of these values. The motion passed unanimously by voice vote.

Fuel Supply Report – Rich Grundza and James Carter gave the Fuel Supply Report. Mr. Grundza gave a report on recent fuel reblend activities involving two small pilot batches and the performance of those batches. The first batch was rejected because of a component in the blend. The second batch was approved with severe APV results. Haltermann Products is proceeding with blending activities and anticipate approval testing shortly.

Jim Carter went on to discuss the ongoing blending activity. He anticipates the new batch will be ready for approval testing in early December 2004. He also presented the latest analysis results on the current batch of Sequence VG fuel. *{See Attachment 7.}* There are 88,467 gallons remaining of the current fuel batch, which is approximately seven months or 126 tests. There was some discussion on how to manage this remaining inventory of test fuel amongst the laboratories. The panel asked Haltermann Products to review the ordering trends of the past 2.5 years and use that information to allocate the remaining fuel inventory to the industry.

TMC Action Item – TMC to send out fuel certification matrix test results to the Surveillance Panel as they become available.

Operational & Hardware Items – Dwight Bowden noted that the Upper Engine Harness is no longer available from Ford so OH Technologies is in the process of sourcing a new wiring harness to make available to the industry. Bill Buscher is currently evaluating a prototype harness in his laboratory.

Clarify Procedural Requirements for Mineral Spirits – The recently passed Specifications for Mineral Spirits used in the Sequence VG test were discussed. The Surveillance Panel previously approved a requirement that laboratories were required to use a solvent meeting Standard Specification D 235 Type II Class C requirements. *{See Attachment 8.}*

Motion (Dwight Bowden/Bill Buscher) The Mineral Spirits used in a Sequence VG test must meet the requirements for Standard Specification D 235 Type II Class C mineral spirits for Aromatic Content, Flash Point, and Color. The laboratories shall also obtain Certificate of Analysis for each batch of solvent obtained by the laboratory. The motion passed unanimously by voice vote.

Scope and Objectives – Chairman Farnsworth presented the Scope and Objectives of the Sequence VG Surveillance Panel for review. *{See Attachment 9.}*

Old Business – There was no old business.

New Business – There was no new business.

The meeting was adjourned at 10:27am. The next meeting is at the call of the chairman.

Agenda
Sequence VG Surveillance Panel
November 16, 2004
9:00AM – 12:00Noon
San Antonio, Texas

1. Chairman comments
2. Attendance sign-in sheet distribution
3. Membership changes
4. Motion and Action recorders
5. Approval of minutes for May 11, 2004 All
6. Review action Items from last meeting G. Farnsworth
7. Test Sponsor report M. Riley
8. TMC Report Rich Grundza
 - *Any questions on 6 month TMC report?*
 - *Target updates for oils 1009, 925-3, 1006-2*
9. Fuel Supply report Rich Grundza
 - *Summary of fuel reblend activity* James Carter
 - *Projected life of current batch*
10. Operational and Hardware items All
11. Clarify procedural requirements for mineral spirits Rich Grundza
12. Review Scope & Objectives All
13. Old Business
14. New Business
15. Adjourn

<u>Name</u>	<u>Member</u>	<u>e-mail</u>
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Action Items Review

May 11, 2004 Meeting

- 1.) Surveillance Panel Chairman to request from ACC candidate roller follower pin wear and ring wear data for review to determine if these parameters are meaningful. **Done – response communicated to VG members 10/19/2004**
- 2.) Rich Grundza to organize a conference call to develop a plan for introduction of a new Sequence VG fuel batch. Task Force to include Gordon Farnsworth, Ritch Grundza, Jim Carter and any other Surveillance Panel member that is interested. **Done – Rich will be giving a summary of activity during this meeting.**
- 3.) Labs to calculate their Sequence VG fuel usage in all test types and report to Surveillance panel Chairman. **Done**
- 4.) Surveillance Panel Chairman will report that the Surveillance Panel discussed the GF-4 category calibration oil and the Surveillance Panel felt that the current slate of calibration oils provided the best selection to date. No other oils for the VG have been brought to the chair's attention to date or presented at this meeting for discussion. **Done**

Reply to:
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Doug Anderson
American Chemistry Council

Dear Doug:

At the May 11, 2004 ASTM Sequence VG surveillance panel meeting, the topic of 'rate & report' items was again discussed. The sequence VG panel plans to make a data based decision in May 2005 to decide if follower pin wear and ring gap increase can be dropped from the 'rate & report' parameters. In order to aid this effort, the panel asked for the Sequence VG chairman to request the release by ACC of individual candidate data for roller pin wear and ring gap increase for analysis by the test sponsor and panel members.

As chairman of the sequence VG panel, this letter formally requests that ACC consider providing the VG panel with all individual VG candidate test data in a blind coded manner for the period of January 1, 2004 through January 1, 2005. I recognize that this request may seem a little early since the period of requested data has not completed yet. However, I wanted to get this request submitted for discussion within ACC to determine if this data will be forthcoming in early 2005 when available.

The following candidate test information is desired as a minimum:

Test date
Test oil code (blind)
Test Lab (blind)
SAE Viscosity grade
Avg. follower pin wear for cylinder #8
Avg. ring gap increase for cylinders #1 & 8
Average Engine Sludge
Average Engine Varnish
Pass/fail against VG requirements for GF-4

The Sequence VG panel however would strongly prefer to also get percent phosphorous and all GF-4 specification ratings (such as Rocker Arm Cover Sludge, etc.) if possible.

Please advise the ACC response to this request.

Sincerely Yours,

Gordon Farnsworth, Chairman
ASTM Sequence VG Surveillance Panel



October 19, 2004

Mr. Gordon Farnsworth
ASTM Sequence VG Chair

Dear Gordon,

The American Chemistry Council's (ACC) Product Approval Protocol Task Group (PAPTG) has reviewed your letter requesting candidate data for the Sequence VG for the period of January 1, 2004 through January 1, 2005.

As you are probably aware, PAPTG provided analysis of the Sequence VG pin wear and ring gap increase from ACC candidate data to the ASTM Sequence VG Surveillance Panel in June 2003. PAPTG has reached consensus to update the June 2003 analysis (see attached file) and provide a similar analysis to the VG Surveillance Panel in early 2005. PAPTG would like to point out that while we honor the request for percent phosphorus levels for the period of January 1, 2004 through January 1, 2005, the data will likely be closely clustered around the maximum specification of 0.08% phosphorus.

Please contact Doug Anderson (Ph. 703-741-5616; email: Doug.Anderson@americanchemistry.com) if you have any comments or questions.

Regards,

Joan Evans
Anderson

Joan Evans
PAPTG Chair

Doug

Doug Anderson
PAPTG Manager

Attachment: June 2003 VG Data Analysis

CC: ACC Product Approval Protocol Task Group (PAPTG) Members without attachment

Target Update

- Updated targets for 1009 (n=30), 1006-2 1006-2 (n=30) and 925-3 (n=22) See Memo 04-094.
- No future updates for 1009 and 1006-2, 925-3 will be updated (fixed) @ 30 tests. tests.
- 1006-2, 18 tests on Romeo, 12 on AER
1009, 19 tests on Romeo, 11 on AER
925-3, 5 tests on Romeo, 17 on AER

Current Vs 30 Test Targets for 1006-2

Parameter	Current (n =20)		Fixed (n=30)	
	Mean	s	Mean	s
AES	8.69	0.42	8.65	0.41
AEV	9.25	0.11	9.24	0.11
APV	8.45	0.13	8.52	0.14
OSCR	0.918	0.649	0.896	0.579
RAC	9.41	0.16	9.40	0.15

Current Vs 30 Test Targets for 1009

Parameter	Current (n =20)		Fixed (n=30)	
	Mean	s	Mean	s
AES	7.87	0.43	7.94	0.52
AEV	9.00	0.15	8.99	0.11
APV	7.80	0.29	7.79	0.28
OSCR	2.274	1.044	2.200	1.038
RAC	9.29	0.19	9.29	0.18

Current Vs 22 Test Targets for 925-3

Parameter	Current (n =10)		Fixed (n=22)	
	Mean	s	Mean	s
AES	6.23	0.62	6.51	0.60
AEV	8.57	0.24	8.58	0.20
APV	7.40	0.28	7.38	0.28
OSCR	4.147	0.649	4.084	0.665
RAC	7.38	0.45	7.40	0.48

Other Reference Oil Items

- Continue to Use 1007. No tests since introduction of Romeo. Targets already fixed at 30.
- Continue to generate data on 925-3

Fuel Batch Approval

- Two Small batches blended, First unacceptable. Problems traced to component in blend. Second batch accepted, with APV severe.
- Haltermann/Dow obtaining components, proceeding with blend, anticipate approval approval testing shortly



SEQUENCE VG FUEL REPORT

November 1, 2004

SALEABLE GALLONS AT HALTERMANN PRODUCTS	88,467
GALLONS SHIPPED 6 MONTH PERIOD 5/1/2004 – 11/1/2004	77,500
AVERAGE USAGE PER MONTH	12,920
NUMBER OF TESTS SUPPORTED BY PRESENT INVENTORY	126
NUMBER OF MONTHS OF INVENTORY ON HAND	7

ASTM D 235 Requirements					
Physical and Chemical Properties	ASTM Test	Type II High Flash Point, Class C Limits	ShellSol 142/D60	ExxSol D60	CitGo 142/6613
Aromatic Content, Range, Vol %	D1319	0-2	0.1¹	0.6³	<.1⁵
Commercial reference		low aromatic	?	?	?
Appearance		Clear/Free of suspended matter	?	Bright & Clear ³	?
Flash Point, °F (°C), min	D56	142 (61)	68.3¹	65³	66.1⁵
Color, min	D156	Not darker than + 25 saybolt or Pt-CO Scale	30 Sabolt¹	30 Sabolt³	+30 Sabolt⁵
Kauri-Butanol value, min <--->max	D1133	28 <---> 39	31 ²	31.3 ⁴	31 ⁵
Bromine Number, max	D1159	0.1	?	0 ⁴	?
Odor (per customer/supplier request)	-	-	-	-	-
Doctor Test	D235	Negative	Negative ²	Negative ⁴	Negative ⁵
Distillation, °F (°C)	-	-	-	-	-
Initial boiling point, min	D86	350 (177)	196 ¹	370 ⁴	385 ⁵
50% Recovered, max	D86	395 (202)	388 ²	386 ⁴	389 ⁵
Dry point, max	D86	415 (213)	386 ¹	415 ⁴	406 ⁵
Residue from distillation:	-	-	-	-	-
Vol %, max	D86	1.5	?	0.5 ⁴	?
Acidity	D1093	Neutral	Neutral ²	Neutral ⁴	Neutral ⁵
Copper corrosion, max rating	D130	2A	1A ¹	1B ⁴	1A ⁵
Apparent Specific Gravity 60/60 °F (15.6/15.6°C): min <---> max	D4052	0.76 <---> 0.81	0.801 ¹	0.796 ³	0.79 ⁵

Note 1, ShellSol CofA 09/30/04

Note 2, ShellSol 11/3/03 CAC Registry # 64742-88-7

Note 3, Exxsol Internet Data Sheet, 1993

Note 4, Laboratory analysis of material sample Summer 2004, Lab is checking for a CofA shipment receipt

Note 5, Citgo Internet Data Sheet,

Note 6, Citgo CofA, Lab is checking for a CofA shipment receipt

Motion from the November 3rd, 2004 Gear Section Meeting:

Only Aromatic Content, Flash Point, and Color are the Phys and Chem Properties B0.03 recommends as critical and needing specified.

With respect to the Mineral Spirits/Hydrocarbon Cleaning Solvent Specification D235, Type II, Class C currently required in the D02.B0.03 test procedures, we instruct the ASTM TMC to provide a temporary waiver (not force the labs to absolutely prove D235 requirements). The length of waiver is extended to one week after the February 2005 LRI to provide time for D02.B0.01 and .02 to review and adopt or modify standard verbiage for recommendation to all the sections/procedures.

If the solvent issue has not been resolved by Feb LRI, the gear group will create our own language for implementation

ASTM SEQUENCE V SURVEILLANCE PANEL

SCOPE AND OBJECTIVES

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 BO.01, Passenger Car Engine Oil Classification Panel, ASTM Light Duty Rating Task Force, ASTM Committee B0.01, CMA Monitoring Agency and CRC 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.

Objectives

1. Establish VG fuel reblend confirmation trial timing
2. Approval testing of next VG fuel reblend
3. Review need for Rate & Report items
4. Future engine supply plan

Target Date

June, 2004 (Done)
Jan, 2005
May, 2005
May, 2005

G. R. FARNSWORTH, Chairman
Sequence VG Surveillance Panel

Updated Nonember 16, 2004
San Antonio, Texas