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Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

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November 23, 2004

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

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The meeting was called to order at 2:40 PM by Chairman Bill Buscher. A membership list was circulated for members and quests to sign in. The signed membership list is included as Attachment 1. A copy of the agenda is included as Attachment 2. There were no membership changes. Minutes from the May 11th, 2004 meeting were approved as written, motion to approve, Jerry Brys, 2nd, Dan Worcester.

Review of Action Items from Previous Meeting

- 1. Action Item Bill will contact Nissan to verify the long and short-term hardware supply commitment by Nissan. Short-term: Done. Long-term: Chairman has attempted to contact Nissan on multiple occasions, but Nissan fails to respond.
- 2. Action Item Bill to discuss the round robin differences with lab G to try and improve their measurement agreement with the rest of the industry. Done, Lab G has re-measured the round robin camshafts. Chairman will be giving an update during this meeting.
- 3. Action Item Lab E1 to provide the IVA chairman their traces of the round robin camshaft measurements. Done.
- 4. Action Item IVA labs to provide to the chairman how the indexing was done for the round robin data (TEI fixture used?), as well as the cutoff verification used by each lab. Done. Chairman will be giving a summary during this meeting.

- [Motion made by Jerry Brys and seconded by Dwight Bowden] All the camshaft bearing bore
 measurements are now optional and removed from the test report. Effective today. Passed
 unanimously, with 2 waives. Done. Sequence IVA Information Letter No. 04-1 issued on July 19,
 2004.
- Action Item Mike K will double check that the approved ASTM Test Method includes all
 information letters released to date. Done. Sequence IVA Information Letter No. 04-1 issued on July
 19, 2004.
- 7. Action Item The IVA chairman will report that the SP discussed the GF-4 category calibration oil and the SP felt that the current slate of calibration oils provided the best selection to date. No other oils for the IVA have been brought to the chair's attention to date or presented at this meeting for discussion. Done. Chairman reported to PCEOCP.

Fuel Supplier Report

Jim Carter presented the Fuels Supplier report (see attachment 3). Fuel in storage has not degraded. Usage has dropped off lately. SWRI will be placing an order for 16000 gallons in the next month or two. Industry survey will be conducted to determine fuel usage for the next six months. There does not appear to be any fuel related issues at this time.

TMC Report

A copy of the Test Monitoring Center Semi-annual report was decimated to all members of the panel before the meeting and can be accessed via the following link:

ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceiv/semiannualreports/IVA-10-2004.pdf. No target updates are planned, industry control charts indicate the test is in control. There were a couple of alarms which occurred during the period, and appeared to have been generated by one stand. No other comments were noted on the TMC Report.

Test Hardware Report

There were some questions on short term availability, since the solicitation letter was not received before the last meeting. However, the solicitation letter from Nissan was sent in June. No survey has been conducted recently and none is planned. No tests have been obtained on 2003 hardware. There is still large supply of 2001 & 2002 hardware. Screening tests on new batches are at the discretion of the lab. Dan Worcester commented that small parts orders seem to cause Nissan trouble. Bill Buscher commented that his indication from Nissan was that small orders were not a big issue. Nissan typically pulls parts off the assembly line and typically, a batch is one day of production. In the past, Nissan would pull 20 cams here or there, but the 2000, 2001, 2002 and 2003 all have been one day of production. A similar approach is taken to batching of cylinder heads. Gordon Farnsworth asked if this will be production hardware or repair parts in the future. Ben Weber continues to check on this for class panel. The panel agreed that long term availability needs to be addressed in January for GF-5 development. Several members felt that this may not be an issue, since the cost to stock parts for this test would relatively inexpensive. It was suggested that it may be possible to run longer than 16 runs for block and 8 runs per head. One recommendation was that blocks and heads be saved. Bill Buscher commented that the Japanese run these parts until block and cam towers threads strip. After some discussion, a motion was made by Gordon Farnsworth, with 2nd Worcester, that engine replacement after 20 tests and head replacement after 10 test be adopted, effective 11/16/04. Motion was approved with one waive. The panel will review RSI data for shifts at next meeting. This change will also require modification of the report forms to add a field for number of runs on block.

Review of Cam Wear Round Robin

Review of the data on both the high and low wear cams was conducted. 5 of 6 labs used TEI device, while one lab used a degree wheel. The data did not suggest any differences between the TEI device and degree wheel. Current tracer number in the data base tracks to the stylus paper work. Mike Kasimirsky stated that the stylus diameter can not be readily verified. Labs agreed to make the paperwork available to verify the stylus diameter. Review of data showed a potential difference at Lab G. Subsequent investigation showed that Lab G had used an incorrect filter cutoff. When the filter cutoff was addressed, the data fell in line. The panel agreed to conduct another round robin next year, using a cam(s) from a different lab. An action item to request labs submit camshaft(s) closer to pass limit for 2005 round robin was assigned. Another possibility would be cams with 3 or more lobes missing edges. The profile traces would need to be supplied with the cams. Submit cams to Bill Buscher by 1/1/05. The potential exists for a metrology workshop and possibly a build workshop next year.

Quality Index U & L Values

Mike Kasimirsky presented the data regarding revised U&L values to be used for Quality Index calculations for engine coolant outlet temperature. This data was circulated via TMC Memorandum 04-083. A copy of this memo can be accessed via the following link:

<u>ftp://ftp.astmtmc.cmu.edu/docs/gas/sequenceiv/memos/mem04-083.pdf</u>. The panel agreed to issue an information letter to revise the U&L's for coolant out temperature, effective with the issuance of the letter. The panel also directed the TMC to evaluate a potential change in U & L's for exhaust backpressure.

Instrumentation Calibration Requirements

Dave Glaenzer presented proposed changes to instrumentation calibration. After some discussion, the panel agreed to issue an information letter to delineate the changes tabulated below.

panel a	igreed to issue an information let	tter to delineate the changes tabulated below.
10.2	All instrumentation Transducers	Every 6 months
10.2.1	Dynamometer Torque	At start of each test following second flush
		Whenever operational data indicates an abnormality
10.2.3	Coolant Flow	Every 6 months
10.2.4	Fuel Consumption	Every 6 months
10.2.5	Air-to-fuel Sensor	When Sensor replaced
10.2.6	Temperature Measurment	Every 6 months
	-	Oil to cylinder head to be calibrated with each
		Cylinder head change
10.2.7	Pressure Measurement	Every 6 months

10.2.8.1 Intake Air Humidity Every 6 months

These changes will be effective with the issuance of the letter.

Revise/Clarify Procedural Requirements for Mineral Spirits

The panel revisited the choice of mineral spirits for use in the test method. The mineral spirits requirement will only require that the aromatic content, flash point and color requirements of ASTM D 235, Type II, Class C solvent must be met. Laboratories will use the Certificate of Analysis documentation for each batch to verify that these requirements have been met.

Sequence IVA Surveillance Panel Meeting November 16, 2004 San Antonio, TX

Scope and Objectives

Scope and Objectives were reviewed and updated as appropriate. A copy of the updated scope and objectives is included as attachment 4.

A copy of the motions and action items from this meeting is included as attachment 5.

The next meeting will be held in May of 2005, or at the call of the chair.

There being no further business, the meeting was adjourned at 4:20 PM

Attachment 1 page 1 of 7

MEMBERSHIP ASTM IVA SURVEILLANCE PANEL

November 16, 2004

N. 1. 1. 17	COLUMN AND DESCRIPTION OF THE PROPERTY OF THE	November 16, 2004
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MEMBERSHIP ASTM IVA SURVEILLANCE PANEL

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27.12.07		November 16, 2004
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NON-MEMBER MAILING LIST ASTM IVA SURVEILLANCE PANEL

November 16, 2004

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NON-MEMBER MAILING LIST ASTM IVA SURVEILLANCE PANEL

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NON-MEMBER MAILING LIST ASTM IVA SURVEILLANCE PANEL

Attachment 1

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November 16, 2004

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NON-MEMBER MAILING LIST ASTM IVA SURVEILLANCE PANEL

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NON-MEMBER MAILING LIST ASTM IVA SURVEILLANCE PANEL

Attachment) Paje 7 of 7 November 16, 2004

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	Phone No.: Fax No.: Email:	
	Phone No.: Fax No.: Email:	

Attachment 2 page 1.f1

Sequence IVA Surveillance Panel

San Antonio, Texas SwRI, Building 209, Conference Room 103 November 16, 2004 3:00 p.m. - 5:00 p.m.

AGENDA

1.	Chairman comments	
2.	Attendance sign-in sheet distribution	
3.	Membership changes	
4.	Motion and Action recorders	
5.	Approval of minutes for 05/11/2004	All
6.	Review Action Items from last meeting	Buscher
7.	Fuel supplier report – KA24E Green Fuel	Carter
8.	TMC reference oil report	Kasimirsky
9.	Test hardware report	Buscher
10.	Update on camshaft wear measurement round robin	Buscher
11.	Resetting Quality Index U & L values	All
12.	Revise instrumentation calibration requirements	All
13.	Revise/Clarify procedural requirements for mineral spirits	All
14.	Review Scope & Objectives	All
15.	Old business	
16.	New business	
17.	Next meeting	
18.	Adjourn	

Attachment 3 Page 1 of 1

 PRODUCT:
 KA24E TEST FUEL
 Batch No.:
 SJ2921LS01
 SI2821LS01
 SE2621LS01

 PRODUCT CODE:
 HF008
 Tank No.:
 622
 605
 604

 Analysis Date:
 11/2/2004
 10/1/2004
 6/2/2004

TEST	METHOD UNITS		SPECIFICATIONS		RESULTS	RESULTS	RESULTS	
1231	METHOD	ONITS	MIN	TARGET	MAX	RESULIS	RESULIS	RESULIS
Distillation - IBP	ASTM D86	°F	75	TARGET	95	89	82	84
5%	AO TWI BOO	°F				109	109	107
10%		°F	120		135	123	123	124
20%		°F	,,20		.00	145	145	148
30%		°F				172	172	176
40%		°F				205	203	206
50%		°F	200		230	223	223	224
60%		°F				233	232	233
70%		°F				242	243	243
80%		°F				263	263	262
90%		°F	300		325	324	325	324
95%		°F				346	347	347
Distillation - EP		°F	385		415	401	406	408
Recovery		vol %		Report		97.2	97.6	97.2
Residue		vol %		Report	-	1.0	1.0	1.0
Loss		vol %		Report		1.8	1.4	1.8.
Gravity	ASTM D4052	°API	58.7		61.2	59.1	58.9	59.4
Density	ASTM D4052	kg/l	0.734		0.744	0.742	0.743	0.741
Reid Vapor Pressure	ASTM D323	psi	8.8		9.2	9.2	9.2	9.1
Carbon	ASTM E191	wt fraction	0.8580		0.8667	0.8657	0.8645	0.8652
Carbon	ASTM D3343	wt fraction		Report		0.8668	0.8671	0.8672
Sulfur	ASTM D4294	wt %	0.01		0.04	0.02	0.02	0.02
Lead	ASTM D3237	g/gal			0.05	< 0.01	< 0.01	< 0.01
Oxygen	ASTM D4815	wt %			0.05	< 0.05	< 0.05	< 0.05
Composition, aromatics	ASTM D1319	vol %			35.0	31.8	32.1	30.9
Composition, olefins	ASTM D1319	vol %	5.0		10.0	6.9	6.5	6.1
Composition, saturates	ASTM D1319	vol %		Report		61.3	61.4	63.0
Oxidation Stability	ASTM D525	minutes	1440			>1440	>1440	>1440
Copper Corrosion	ASTM D130				1	1	1	1
Gum content, washed	ASTM D381	mg/100ml			5	<1	1	1
Research Octane Number	ASTM D2699		96.0		97.5	97.2	97.0	97.5
Motor Octane Number	ASTM D2700			Report		88.1	87.3	87.9
R+M/2	D2699/2700			Report		92.7	92.2	92.7
Sensitivity	D2699/2700		7.5			9.1	9.7	9.6
Net Heat of Combustion	ASTM D240	btu/lb		Report		18407	18436	18345
Color	Visual			Green		Green	Green	Green

Attachment 4 pagel of 1

ASTM Sequence IVA Surveillance Panel

Scope and Objectives

Scope

The Sequence IVA Surveillance Panel is responsible for the surveillance and continued improvement of the Sequence IVA test documented in Test Method D 6891 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 wear measurement technique, test operation, test monitoring and test validation will be accomplished through continual communication with the Test Sponsor and Parts Distributor, ASTM Test Monitoring Center, ASTM Committee D02.B0.01 and the ASTM Passenger Car Engine Oil Classification Panel. Actions to improve the process will be recommended when deemed appropriate based on input from the proceeding. The Panel will review development and correlation of updated test procedures with previous test procedures. This process will provide a suitable test procedure for evaluating an automotive lubricant's effect on controlling cam lobe wear for overhead valvetrain equipped engines with sliding cam followers.

Objectives	Target Date
 Conduct 2005 round robin Conduct 2005 metrology/build workshop 	May 2005 Nov. 2005
3. Confirm short and long-term hardware availability	On-going
William A. Buscher III, Chairman Sequence IVA Surveillance Panel	Updated: Nov. 2004

Sequence IVA Surveillance Panel November 16, 2004 3:00PM – 5:00PM San Antonio, Texas

Motions and Action Items
As Recorded at the Meeting by Jason Bowden

Motion - Jerry Brys / Dan Worcester - Approval of Minutes for 5/11/04. Approved without changes.

Action Item - Bill Buscher will contact ILSAC chairman, Bob Olree, and inform him that Nissan has not been responding to the VIA Panel with regards to long and short-term supply commitment by Nissan. Nissan sent email in May stating they would support hardware to 2008.

Action Item – Fuel Supplier (Jim Carter) will survey the industry on projected fuel usage for the next 6 months.

Motion - Gordon Farnsworth / Dan Worcester – Extend block head usage from 16/8 to 20/10 respectively. Effective 11/16/04. Passed with one waive.

Action Item - Labs begin saving blocks and heads for future testing.

Action Item - Panel review RSI and TMC data in 6 months to make sure no shifts have occurred. Chairman will ask ACC to provide ACW time plot of individual data points including engine block and head runs. Report data from December through May.

Motion - Dwight Bowden / Dan Worcester - Modify test report to include engine block run. Passed.

Action Item - Labs submit camshafts that show wear near the 90 micron limit for camshaft wear measurement round robin. A copy of profile traces to be submitted with camshafts to Bill Buscher by January 1st, 2005.

Motion - Mark Mosher / Dwight Bowden - Utilize the test data from memorandum 04-083 to recalculate the Qi U & L values for coolant out temperature only. Effective with issuance of information letter. Passed.

Action Item - TMC to review exhaust back pressure data to determine if Qi U & L values should be revised.

Motion - Dave G. / Dwight Bowden - Change ASTM 6891-03 Instrumentation Requirements to a 6 month requirement except Dynamometer Torque.

10.2 All instrumentation Transducers Every 6 months

Attachment 5 page 2012

10.2.1	Dynamometer Torque	At start of each test following second flush Whenever operational data indicates an abnormality
10.2.3	Coolant Flow	Every 6 months
10.2.4	Fuel Consumption	Every 6 months
10.2.5	Air-to-fuel Sensor	When Sensor replaced
10.2.6	Temperature Measurment	Every 6 months Oil to cylinder head to be calibrated with each Cylinder head change
10.2.7	Pressure Measurement	Every 6 months
10.2.8.	l Intake Air Humidity	Every 6 months

Motion - Dwight Bowden / Jerry Brys - The mineral spirits requirement will only require that the aromatic content, flash point and color requirements of ASTM D 235, Type II, Class C solvent must be met. Laboratories will use the Certificate of Analysis documentation for each batch to verify that these requirements have been met. Passed.