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Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

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Issued: February 23, 2012
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These are the unapproved minutes of the 02.21.2012 Sequence VI Surveillance Panel Conference Call.

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The meeting was called to order at 9:00 AM by Chairman Charlie Leverett.

Agenda

The Agenda is the included as **Attachment 1**.

1.0 Roll Call

The Attendance list **Attachment 2**.

2.0) Approval of minutes

- 2.1) Approval of the minutes of the 02.06.2012 Conference Call.

**Motion – Accept the minutes of the 02.06.2012 VID SP CC. Unanimous.
Charlie Leverett, Jason Bowden, second.**

3.0) Action Item Review

- 3.1 OHT to report VID engine usage and expected depletion date at all Surveillance Panel meetings. **Will be on-going. There are 44.**
- 3.2 GM will report on its findings regarding the failed SwRI engine to the SP when available. **See New Business.**
- 3.3 Update from Afton on their 2012 engine. **Gears are installed but waiting for available stand space.**
- 3.4 GM to report to the SP what the last date of purchase for 2012 LY7 engines at the next SP meeting. **The latest date is 04.15.2012. Responses for the engine survey from OHT are due 02.29.2012. This will go to 2021.**
- 3.5 3.5 Rich Grundza will ask the reference oil suppliers whether they would allow the oil analysis tests mentioned above to be run on their reference oils. **See New Business.**
- 3.6 Engine Build Task Force will review build options for the current VID engines. **Does not need any further action, and this action will be removed.**
- 3.7 GM will check to see if the fixed cam gears can be installed during assembly on 2012 engines. **This will not be done. Labs chose to continue to install at their facilities during new engine/stand preparations.**

4.) Old Business

- 4.1 I have received many questions on how the Break-in Conditions were developed for the VID. This was done in the development phase and the current conditions were suggested by SwRI. I can not find any details in the minutes but I have requested SwRI send me the details or explain in this call. **See New Business.**

5.) **New Business**

- 5.1 Review latest data from Lubrizol, SwRI & IAR. **The results on 542 were all mild. There were big oil pressure differences. The engine response is not the same as the current 2009 D version.**
- 5.2 Review summary of used oil analysis. **Two labs reported DIR in a different format and have been asked to run peak.**

- 5.3 Review GF-6 timeline and discussion on release of for 2012 engines for Matrices beginning in January 2013. OHT will release new engines for new precision matrix testing to support the schedule for 2012-2013. ACC registration would be 08.2013, and first use 01.2015. New targets and/or engine hour corrections may be needed. There was a general consensus the 2009 D version should be used for GF-5 testing.
- 5.4 Use of 2012 engines once they have completed the original study. As GM owns these engines, they will need to define if they are available for further testing. For now they will be held with current test hours.
- 5.5 Review of any comments from the ILSAC/Oil Committee meeting held Feb. 16th. None.
- 5.6 2012 break-in ramps discussion.
 - 5.6.1 There were questions on where the Break In procedure recommended by SwRI came from.
 - 5.6.2 The spreadsheet presented in 2006 is Attachment 3.
 - 5.6.3 VIA and VIB ran the same 1500 and 3500 setpoints. Oil and coolant temperatures were from Stage 5 of the original VID ten stages.
 - 5.6.4 Torque was a ratio of the 4.6 and 3.6 figures for those engines.
 - 5.6.5 After other labs tried the procedure, some changes were made including adding MAP traces and making torque follow a trapezoid shape. Ramp speeds up and down were defined, but overshoot was not controlled.
- 5.7 GM report on the engine returned from SwRI [GM2]. There was visible debris in the main bearings and one cam cap had scuffing. The engine did not lose oil pressure. Their report is Attachment 4.

6.) Next Meeting

At the call of the chairman.

7.) Meeting Adjourned

The meeting adjourned at 9:43 AM.

Charlie Leverett, Dan Worcester, second.

**Sequence VI Surveillance Panel conference Call
February 21st @ 09:00 CST**

Call in #: 800-391-9177

Pass Code: 4875645502

Agenda

1.0) Roll Call

2.0) Approval of minutes

2.1) Approve the minutes from the 02/06/2012 Sequence VI Surveillance Panel conference call.

3.0) Action Item Review

3.1 OHT to report VID engine usage and expected depletion date at all Surveillance Panel meetings. **44 as-of 02/06/12**

3.2 GM will report on its findings regarding the failed SwRI engine to the SP when available. **01/23/12 Bruce mentioned I should be available soon and it will be passed along once GM submits their report.**

3.3. Update from Afton on their 2012 engines. **02/06/12 Fixed Gears installed and engine is ready, waiting for an available stand.**

3.4 GM to report to the SP what the last date of purchase for 2012 LY7 engines at the next SP meeting. **01/23/12 moved to mid April**

3.5 Review use oil analysis, DIR & Fuel dilution. *To be done in new business below.*

3.6 GM will check to see if the fixed cam gears can be installed during assembly on 2012 engines. **02/06/12 GM is checking on this**

3.7 A Task Force will be setup to review the current VID Standard with the Scope/Goal being to better standardize, Dave has agreed to chair the task force. **2/06/12 Dave will work on the scope with GM and a meeting will be held March 27 at 14:00 in conjunction with the Semi annual SP meetings.**

4.) Old Business

4.1) I have received many questions on how the Break-in Conditions were developed for the VID. This was done in the development phase and the current conditions were suggested by SwRI. I can not find any details in

the minutes but I have requested SwRI send me the details or explain in this call.

5.) New Business

5.1 Review latest data from Lubrizol, SwRI & IAR on RO-542.

5.2 Review summary of used oil analysis.

5.3 Review GF-6 timeline and discussion on release of for 2012 engines for Matrices beginning in January 2013.

5.4 Use of 2012 engines once they have completed the original study.

5.5 Review of any comments from the ILSAC/Oil Committee meeting held Feb. 16th.

5.6 2012 break-in ramps discussion.

5.7 GM report on the engine returned from SwRI [GM2].

6.) Next Meeting

Call of the chairman

7.) Meeting Adjourned

ASTM SEQUENCE VI SURVEILLANCE PANEL

Name	Address	Phone/Fax/Email	Attendance
Bowden, Jason Voting Member	OH Technologies, Inc. P.O. Box 5039 Mentor, OH 44061-5039	Phone: 440-354-7007 Fax: 440-354-7080 dhbowden@ohtech.com	Yes, Matt Bowden
Bruce Matthews Voting Member	GM Powertrain Engine Oil Group Mail Code: 483-730-472 823 Joslyn Rd	Pontiac, MI 48340: 248-830-9197 bruce.matthews@gm.com	Yes, Matt Snider
Andy Ritchie Voting Member	Infineum 1900 East Linden Ave. Linden, NJ 07036-0735	Phone: 908-474- Fax: 908-474-3637	Gordon Farnsworth proxy, Mike McMillan, Bob Salguieo
Ron Romano Voting Member	Ford Motor Company 21500 Oakwood Blvd POEE Bldg Rm DR 167 MD 44 Dearborn, MI 48121-2053	Phone: 313-845-4068 rromano@ford.com	
Leverett, Charlie Voting Member	Intertek Automotive Research 5404 Bandera Road San Antonio, TX 78238	Phone: 210-647-9422 Fax: 210-523-4607 charlie.leverett@intertek.com	Yes
Grundza, Rich Voting Member	ASTM TMC 6555 Penn Ave. Pittsburgh, PA 15206-4489	Phone: 412-365-1034 Fax: 412-365-1047 Dml@tmc.astm.cmri.cmu.edu	Yes
Miranda, Timothy Voting Member	BP Castrol Lubricants USA 1500 Valley Road Wayne, NJ 07470	Phone: 973-305-3334 Timothy.Miranda@bp.com	
Mosher, Mark Voting Member	ExxonMobil 600 Billingsport Road Paulsboro, NJ 08066	Phone: 856-224-2132 Fax: 856-224-3628 mark_r_mosher@exxonmobil.com	Yes
Caudill, Timothy Voting Member	Ashland, Inc. 21st and Front Streets Ashland, KY 41101	Phone: 606-329-5708 Fax: 606-329-3009 Tlcaudill@ashland.com	Yes
Dan Worcester Voting Member	Southwest Research Institute (SwRI) 6220 Culebra Road San Antonio, TX 78228	Phone: Fax: dan.worcester@swri.org	Yes, Bill Busher
Szappanos, George Voting Member	Lubrizol 29400 Lakeland Blvd. Wickliffe, OH 44092	Phone: 440-347- Fax: 440-347-4096 George.Szappanos@lubrizol.com	Yes, Jerry Brys, Chris Castanien
Glaenzer, David Voting Member	Afton Research Center 500 Spring Street Richmond, VA 23218	Phone: 804-788-5214 Fax: 804-788-6358	Yes, Todd Dvorak, Christian Porter, Terry Hoffman
Sutherland, Mark Voting Member	Chevron Oronite Company LLC 4502 Centerview Ste. 210 San Antonio, TX 78228	Phone: 210-731-5605 Fax: 731-5621 msut@chevrontexaco.com	Yes, Jo Martinez
Robert Stockwell Voting Member	ConocoPhillips Lubricants R&D Passenger Car Engine Oil	office 580-767-6894 Robert.T.Stockwell@conocophillips.com	
Tracy King Voting Member	Chrysler	Phone: 248-576-7500 tek1@chrysler.com	
Teri Kowalski	Toyota	teri.kowalski@tema.toyota.com	Jim Linden proxy

ASTM SEQUENCE VI SURVEILLANCE PANEL

Name	Address	Phone/Fax/Email	Attendance
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Guest Present at meeting

Guests	Bob Oree, Jim Carter		
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SwRI Suggested VID Breakin Conditions

VID Test Conditions	Stage A	Stage B
Time, mins	4	1
Speed, rpm	1500	3500
Torque, NM	38.0	45.0
Power, kw	6.0	16.5
Oil Temp, °C	80	80
Coolant In Temp, °C	80	80
Fuel Temp to Rail, °C	20	
Coolant Flow, L/min	60	
Exh. Back Press, kPaA	104	Not Specified

Report for Sequence VID Surveillance Panel 02-21-2012 concerning engine 2E.

The 2012 VID engine 2E was at 77 hrs of the 150 hr break-in when it started making valve train noise from the right cylinder bank. The Oberg filters and the cam actuator screens show signs of aluminum, more on the right side than the left. Engine was removed from dyno and returned to GM.

Findings

A single scuffed cam cap was found along with some debris in the main bearings. The origin of this debris is unknown.



**A112940464
Southwest research
oil testing
#3 exhaust cam cap**