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Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

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> Issued: February 06, 2012 Dan Worcester Reply to: Southwest Research Institute 6220 Culebra Rd. San Antonio, TX 78238 Phone: 210.522.2405 Fax: 210.684.7523 Email: dworcester@swri.org

These are the unapproved minutes of the 02.06.2012 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 01.23.2012 Conference Call.

Motion – Accept the minutes of the 01.23.2012 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. OHT has included an estimated timeline for depletion of these engines as Attachment 3.
- 3.2 GM will report on its findings regarding the failed SwRI engine to the SP when available. The tear down is complete and a report will be released when review by the 3.6 Team is completed. Visual inspection did not find a problem.
- 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.
- 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. Rich gave the okay to proceed with used oil analysis 01/23/12, Charlie will send the reminder to participating Labs. Once data is available it should be sent to Rich at TMC to summarize. The analysis will consist of DIR 5.8, DIR 6.1, HFRR @ 120 and HFRR @ 140 & Fuel Dilution. Analysis would be done on the normal EOT sample. HFRR was deleted due to a special method was used in the development which may not be accessible to all labs.
- 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. GM is checking on this.

4.) Old Business

4.1 There is no old business.

5.) New Business

- 5.1 Review latest data from Lubrizol, SwRI & IAR. LZ result was mild with a large BLA shift.
- 5.2 The SP needs to determine if we have enough data to proceed with the order of the 2012 engines.

Motion – Accept the 2012 engines as a suitable replacement for VID testing. Unanimous.

Charlie Leverett, Jason Bowden, second.

- 5.3 Review timeline for 2012 engines. There is a survey from OHT for labs to estimate the number of engines required from 2015 to 2021. 10 engines will be needed for matrix testing. GM has asked to see the results of the survey.
- 5.4 Use of 2012 engines once they have completed the original study. This was not defined.

6.) Next Meeting

At the call of the chairman, after SwRI, LZ and IAR complete their 542 reference runs.

7.) Meeting Adjourned

The meeting adjourned at 9:43 AM. Charlie Leverett, Dan Worcester, second.

Sequence VI Surveillance Panel conference Call February 6th @ 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 01/23/2012 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. **46 as-of 01/23/12**

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.

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 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. Rich gave the okay to proceed with used oil analysis 01/23/12, Charlie will send the reminder to participating Labs. Once data is available it should be sent to Rich at TMC to summarize. The analysis will consist of DIR 5.8, DIR 6.1, HFRR @ 120 and HFRR @ 140 & Fuel Dilution. Analysis would be done on the normal EOT sample. HFRR was deleted due to a special method was used in the development which may not be accessible to all labs.

3.6 Engine Build Task Force will review build options for the current VID engines. **Does not need any further action as-of 01/23/12**

3.7 GM will check to see if the fixed cam gears can be installed during assembly on 2012 engines.

3.8 A Task Force will be setup to review the current VID Standard with the goal/Scope being to better standardize, Dave has agreed to chair the task force.

4.) Old Business

4.1) None

5.) New Business

5.1 Review latest data from Lubrizol, SwRI & IAR.

5.2 The SP needs to determine if we have enough data to proceed with the order of the 2012 engines.

5.3 Review timeline for 2012 engines.

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

6.) Next Meeting

Call of the chairman

7.) Meeting Adjourned

ASTM SEQUENCE VI SURVEILLANCE PANEL

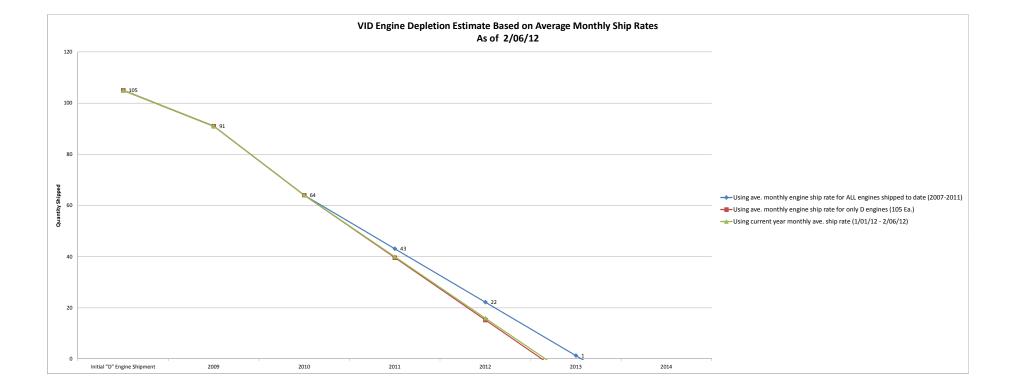
Nomo			
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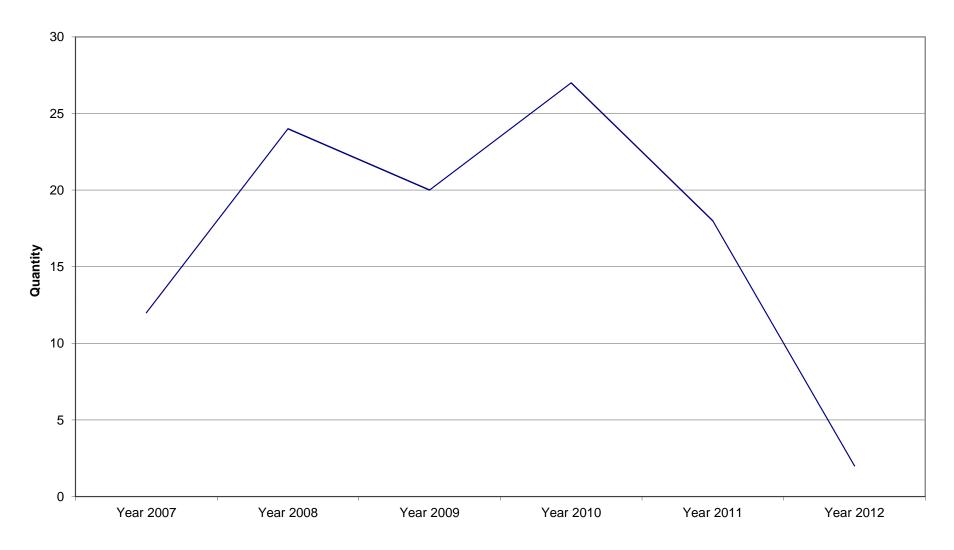
Name	Address	Phone/Fax/Email	Attendance

Guest Present at meeting

	Bob Olree, Jim Carter	
Guests		



VID Engine Shipments by Year



	VID Engine Quantity Required for GF5 using Ave. Monthly Ship Rate for all Engines Shipped		
VID Engine Quantity Required for GF5 using Ave. Monthly Ship Rate for "D" Engines Only	to Date	Average Monthly Ship Rate by Year	
As of: 2/06/12 (Ship Dates from 8/9/09-2/06/12	As of: 2/06/12	2007	1.00
Average = 61 engines / 30 months = 2.03	Average= 1.74	2008	2.00
	-	2009	1.67
Months left in GF-5 (2/06/12 thru 12/31/2015) (46)	Months left in GF-5 (2/06/12- 12/31/2015) (46)	2010	2.25
		2011	1.50
46 months X 2.03 per month = 93	46 months X 1.74 per month = 80	2012	2.00
		2013	
Current Engine Balance (2/06/12) (44)	Current Engine Balance (2/06/12) (44)	2014	
		2015	
Difference: 93-44= 49	Difference: 80-44=36		
Quantity Short	Quantity Short	Overall Yearly Average	1.74
49	36		