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Committee D02 on PETROLEUM PRODUCTS AND LUBRICANTS

Issued: March 05, 2010

Reply to: Dan Worcester
Southwest Research Institute
528 Tom Slick Ave
San Antonio, TX 78228
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Email: dan.worcester@swri.org

The unapproved minutes of the 01.19.2010 Sequence VI Surveillance Panel conference call.

The meeting was called to order at 9:30AM by Chairman Charlie Leverett.

Agenda
The Agenda is the email as Attachment 1.

1.0 Roll Call
The attendance list is Attachment 2.

2.0 Minutes
The minutes from the 11.18.2009 face to face meeting were approved unanimously.

3.0 Action Items

3.1 All labs are to supply response time to TMC by 02.15.2010.
3.2 All labs are to include manifold pressure on their break-in plots for new engines. This will be at one second intervals effective for new engine break-ins after 11.18.2009.
3.3 There will be an editorial change to Section 6.6.5.3 sub-section 2 to match sections 3, 4, and 5. This will be updated for ASTM VID procedure D7589.
3.4 There will be an editorial change to Section 6.5.12 for the Badger valve to be "suitable for use" and only define one valve.
3.5 Dan Worcester noted that Rosemount 1151 dP transmitter is no longer available. The 3051 is a higher precision unit and should become the acceptable alternative.

4.0 Old Business

4.1 The motion to increase fuel to flow meter temperature delta limits was tabled at the 11.18.2009 meeing. There has not been further action.

5.0 New Business

5.1 Dan Worcester made the following motion:

Motion: Recommend to the Surveillance Panel Section 6.4.2.1 be modified as follows

a. Change load cell range to (0 to 68) kg.
b. See X1.5 for recommended units.
c. For X1.5, add Vishay Sensortronic, 60001-100-0116 or 60001-150-0116
d. **Vishay Americas**
One Greenwich Place
Shelton, CT
06484
United States
Phone: 1-402-563-6866
Fax: 1-402-563-6296
E-mail: business-americas@vishay.com

Dan Worcester, but there was no second.

Discussion was that the load cell was recommended and a motion was not needed to add a vendor. Also to specify a higher range would require a definition of load arm length. The motion was withdrawn.

5.2 Dan Worcester made the following motion:

Motion: Recommend to the Surveillance Panel Section 11.6.1.1 be modified as follows:
Change maximum allowable down time to 18 hours.
Change maximum unscheduled shutdowns to 6.

Discussion: these additional downtime hours will allow us to leave an overnight shutdown to await day shift for repairs. This test is longer than the VIB [the origin of the current limits], and at this point the VID seems to have more shutdowns for a couple of recurrent problems.

After further discussion, it was agreed longer down time would be a good thing. The motion was modified to allow 18 hours of down time, but remain with 4 shutdowns.

Motion: Recommend to the Surveillance Panel Section 11.6.1.1 be modified as follows:
Change maximum allowable down time to 18 hours.
Change maximum unscheduled shutdowns to 4.

Dan Worcester, and Mark Sutherland second. The motion passed with 7 for, none against, and 5 waives.

5.3 There was discussion on load cell power supply ambient. I am including the entire discussion from the Agenda to capture this information:

At the November 13, 2008 Sequence VI Surveillance Panel meeting, based on a presentation made by George Szappanos, the panel approved a motion limiting the excitation voltage deviation to the dynamometer load cell to no more than 0.01% from the nominal value during the course of a test (1mV for a 10v supply). This was added to the test report forms 16-18.

During the December 16, 2008 Sequence VI Surveillance Panel teleconference call, the load cell voltage specification presented as a motion at the November 13, 2008 SP meeting was reviewed and the existing excitation voltage delta specification was removed. In addition to monitoring and recording load cell excitation voltage, the monitoring and recording of load cell power supply ambient temperature was initiated to determine a control specification for future testing. Once again we added information to the test report on forms 10-15. Such a control specification may be based on the information presented by George Szappanos in November, 2008 whereas a precision power supply, held within a predetermined temperature range based on the power supply temperature error can attain the ≤ 0.01% error that we aspired to. Some examples given by George were:

If power supply is accurate to within 0.0025% per °C, the maximum deviation of power supply ambient would be 4.0°C.
If power supply is accurate to within 0.0015% per °C, the maximum deviation of power supply ambient would be 7.0°C.
If power supply is accurate to within 0.0005% per °C, the maximum deviation of power supply ambient would be 20.0°C.

I have just reviewed a test that had power supply ambient delta of 25.4°C and question why there is such a range. We do not have validity limits on load cell power supply ambient delta at this time; however, we should now have over one year's worth of data to study. As we delve into the load cell excitation voltage issue, it is most important that we not lose sight of this information.

At Afton, we have use a power supply accurate to 0.0015% per degree C, thus allowing a deviation of 7.0°C to maintain the ≤ 0.01% error.
Labs are to supply their precision on the load cell voltage amplifier, and there will be another call to discuss this issue.

5.2 Dan Worcester asked that two new items be discussed.

5.2.1 SwRI had a broken valve spring on one engine. This was supplied to GM for analysis, and there will be no further action at this point.

5.2.2 Oxygen sensors seem to have a short life. This is actually caused by high temperatures for these and the knock sensors. GM has replacement connectors and a repair procedure.

Motion: Recommend to the Surveillance Panel labs be allowed to use the GM connector parts and procedure to repair damage to the engine wiring harness.

Dan Worcester, and George Szappanos second. Passed unanimous.

Action: Dan Worcester will supply the GM part numbers for the connector repair kits.

The Knock Sensor is # 88988963
The Crank Sensor is #8898337
The Cam Sensor # 88988595

3. The next conference call will be per the Chairman.

4. The meeting adjourned at 10:15 AM.

Sequence VI Conference Call

January 19, 2010 @ 09:30 CT

Call in # (800) 391-9177
Conference Code: 4875645502

Agenda

1.) Roll Call

2.) Approval of meeting minutes
2.1 November 18, 2009 Sequence VI Surveillance Panel meeting held in Warren.

3.) Action Items
3.1 System response time for "each stand" within your Lab due to TMC by February 15th.

3.2 All labs to report manifold pressure at a minimum of one second intervals for all future engine break-ins. Submit data to the TMC. Data are to be reviewed at next SP meeting.

3.3 Make editorial change to test procedure section 6.6.5.3 sub-section 2 as per SP discussion (so it matches sub-sections 3, 4 and 5). Discussion: *Section 6.5.3 allows either the 311 or 312 versions of the Burkert valves. Consensus was to standardize the wording in D 7589 [the newly released VID procedure].*

3.4 Make editorial change to test procedure section 6.5.12 as per SP discussion (change required to suitable). Discussion: *2.5 Section 6.5.12 specifies a Badger model TCV-101. This will be an editorial change to be "suitable for use" and only define one valve.*

3.5 Dan Worcester noted one valve in the procedure has been superseded. Dan will send out information on a valve that has been superseded by a new part number.

4.) Old Business

4.1 Tabled motion from 11/18/09 meeting
Motion – Revise the test procedure to increase the fuel-to-flow meter limit from ≤ 4°C to ≤ 10°C.
George Szappanos, Charlie Leverett second / Tabled for further review

5.) New business

5.1 Motions from Dan:
I would like to make the following motions:

5.1.1 Recommend to the Surveillance Panel Section 6.4.2.1 be modified as follows

a. Change load cell range to (0 to 68) kg.
b. See X1.5 for recommended units.
c. For X1.5, add Vishay Sensortronic, 60001-100-0116 or 60001-150-0116

d. **Vishay Americas**
One Greenwich Place
Shelton, CT
06484
United States
Phone: 1-402-563-6866
Fax: 1-402-563-6296
E-mail: business-americas@vishay.com

5.1.2 Recommend to the Surveillance Panel Section 11.6.1.1 be modified as follows:

5.1.2.1 Change maximum allowable down time to 18 hours.

5.1.2.2 Change maximum unscheduled shutdowns to 6.

Discussion: these additional downtime hours will allow us to leave an overnight shutdown to await day shift for repairs. This test is longer than the VIB [the origin of the current limits], and at this point the VID seems to have more shutdowns for a couple of recurrent problems.

5.2 Dave's request for discussion on Load cell power supply ambient

At the November 13, 2008 Sequence VI Surveillance Panel meeting, based on a presentation made by George Szappanos, the panel approved a motion limiting the excitation voltage deviation to the dynamometer load cell to no more than 0.01% from the nominal value during the course of a test (1mV for a 10v supply). This was added to the test report forms 16-18.

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I have just reviewed a test that had power supply ambient delta of 25.4°C and question why there is such a range. We do not have validity limits on load cell power supply ambient delta at this time; however, we should now have over one year's worth of data to study. As we delve into the load cell excitation voltage issue, it is most important that we not lose sight of this information.

At Afton, we have use a power supply accurate to 0.0015% per degree C, thus allowing a deviation of 7.0°C to maintain the ≤ 0.01% error.

Any *Discussion?*

5.3 Dan has requested we have some discussion on the following items:

5.3.1 Valve springs. I had one break on an engine with 3000 hours and drop a valve.

5.3.2 Oxygen sensors seem to have a short life. Anyone else having that problem?

5.4 Any additional business?

6.0 Adjournment

ASTM SEQUENCE VI SURVEILLANCE PANEL

Name	Address	Phone/Fax/Email	Attendance
Bowden, Dwight Voting Member	OH Technologies, Inc. P.O. Box 5039 Mentor, OH 44061-5039	Phone: 440-354-7007 Fax: 440-354-7080 dhbowden@ohtech.com	Present
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	Present
Andy Ritchie Voting Member	Infineum 1900 East Linden Ave. Linden, NJ 07036-0735	Phone: 908-474- Fax: 908-474-3637	Gordon
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	Present
John Rosenbaum Voting member	Chevron Global Lubricants	Phone:	
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	Present
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	Present
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	Present
Caudill, Timothy Voting Member	Ashland, Inc. 21st and Front Streets Ashland, KY 41101	Phone: 606-329-5708 Fax: 606-329-3009 Tlcaudill@ashland.com	Present
Dan Worcester Voting Member	Southwest Research Institute (SwRI) 6220 Culebra Road San Antonio, TX 78228	Phone: Fax: dan.worcester@swri.org	Present
Szappanos, George Voting Member	Lubrizol 29400 Lakeland Blvd. Wickliffe, OH 44092	Phone: 440-347- Fax: 440-347-4096 George.Szappanos@lubrizol.com	Present
Glaenzer, David Voting Member	Afton Research Center 500 Spring Street Richmond, VA 23218	Phone: 804-788-5214 Fax: 804-788-6358 Dave_Glaenzer@ethyl.com	Present
Tracey King Voting Member	Chrysler	Phone: Fax: tek1@chrysler.com	
Sutherland, Mark Voting Member	Chevron Oronite Company LLC 4502 Centerview Ste. 210 San Antonio, TX 78228	Phone: 731-5605 Fax: 731-5621 msut@chevrontexaco.com	Present
Robert Stockwell Voting Member	ConocoPhillips Lubricants R&D Passenger Car Engine Oil	office 580-767-6894 Robert.T.Stockwell@conocophillips.com	Present
Teri Kowalski Voting Member	Toyota	Phone: 734-995-4032 teri.kowalski@tema.toyota.com	

ASTM SEQUENCE VI SURVEILLANCE PANEL

Name	Address	Phone/Fax/Email	Attendance

Guest Present at meeting

Castanien, Chris

Farnsworth, Gordon

ASTM SEQUENCE VI SURVEILLANCE PANEL

Name	Address	Phone/Fax/Email	Attendance

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