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Sequence VIII Surveillance Panel Meeting Minutes
Tuesday, June 10, 2025
Virtual
1:00 - 1:45 PM CDT

Minutes recorded by Joseph Riou
Direct any comments or corrections to: joseph.riou@swri.org

The attendance list can be found as Attachment #1.

There were no membership changes brought to the attention of the panel.

Agenda:

The agenda can be found as Attachment #2.

Meeting Minutes:

No corrections or changes were received for the November 19, 2024, minutes. A motion was made for acceptance by Pat Lang and seconded by Adrian Alfonso. The minutes were approved as written.

Pat went over the parts supply and noted that we have 647 sets of 03-22 bearings, and the rest of the parts are in good supply.

Wes Venhoff presented the most recent LTMS charts. Wes showed the TBWL and SVIS are in control and noted that there is only a single reference oil 1009-1, and TMC has 15-16 drums of this oil remaining.

Travis then presented the new LTMS proposal and noted that this proposal is what the stats group recommends. He noted that the TBWL parameter is a critical parameter and that it will have a severity adjustment applied, whereas the SVIS is a non-critical parameter, and would not have a severity adjustment applied. Sean Moyer asked why the SVIS would be called a non-critical parameter if you can still fail a reference with this parameter.

Travis mentioned that he and the stats group had a similar conversation and concluded that looking through the rest of the LTMS for all tests, that this is how it has been.

Pat recalled that it has always been a "non-critical" parameter even though you can still fail a reference on SVIS. Robert suggested that the name of the parameter be changed from "non-critical" and suggested "non-severity adjusted". Travis noted that since this term is not used anywhere else in the LTMS that it would not make sense. Sean noted that he would be okay with leaving the name as-is but is okay with changing. Pat agreed that since the term "non-critical" conflicts with the fact that stands can fail on this parameter that it sounds conflicting. Travis then states that throughout the LTMS all parameters are either "critical" or "non-critical".

Travis recalls why the old LTMS system may have had these nomenclatures set up, and states that in the old system there were different consequences for critical and non-critical parameters, not necessarily that the parameters can fail a stand. He states that the "new" LTMS system does not have this separation. It was agreed upon to change the terminology in the new LTMS proposal from "Critical Parameter only" to "TBWL only" in section titled "Exceed Stand-Engine EWMA of Standardized Test Result (Z_i)" subsection "Level 1". This was in hopes to prevent confusion. Using this terminology, the SVIS parameter was changed to a "critical" parameter since this determines stand calibration validity.

Travis continues to explain the rest of the LTMS system, notes that it is the same as the rest of the Sequence testing, except for the Level 1 limit, which is there for when a new stand-engine combination is introduced, so that the stand-engine must perform within tighter limits to be accepted. Todd noted that none of the targets have changed, so this is only affecting the LTMS system itself. He notes that in the current LTMS system there is what is known as a "dead band", where no SA is applied. This new system does not have that "dead band" so there will be a continuous SA.

Mike Deegan asked if the 10-hour stripped viscosity is still a "pass/fail" criterion; Pat confirmed that it is.

Pat then presented the motion noted below to approve the implementation of the new LTMS system with the effective date of June 25, 2025:

Motion:

The Sequence VIII Surveillance Panel approves implementation of the LTMS system in the Sequence VIII Test as outlined in the document reviewed during the surveillance panel call and attached to the minutes. Implementation date is June 25, 2025, which allows for the two-week waiting period for LTMS changes. Once the new system is implemented, only reference tests that EOT on or after June 25, 2025, are subject the actions required by any alarms triggered by the new system.

Motioner: Pat Lang
Second: Adrian Alfonso
Count: 12/0/1 (Approve/negative/waive)

Travis asked if the LTMS document that was modified from the original that was sent out before the call should be the accepted document. Pat said yes and it will be attached to the minutes (see Attachment #3).

There was no new business.

Adjournment:

The meeting was adjourned at approximately 1:45 PM CDT.

Next Meeting:

The next meeting will be scheduled as needed.

Attachment #1

Attendance List

ASTM SEQUENCE VIII SURVEILLANCE PANEL
VOTING MEMBERSHIP ATTENDANCE RECORD

Virtual Mtg.
June 10, 2025

Name	Address	Attendance	Vote:
Alfanso, Adrian	Intertek 5404 Bandera Road San Antonio, TX 78238 Phone:210-647-9429 adrian.alfonso@intertek.com	✓	Approve
Bowden, Jason	OH Technologies, Inc. P.O. Box 5039 Mentor, OH 44061-5039 Phone: 440-354-7007 dhbowden@ohtech.com	✓	A
Savant, Amol	Valvoline 21st and Front Streets Ashland, KY 41101 Phone: 606-585-8982 acsavant@valvolineglobal.com		
Maddock, Ben	Afton Chemical 500 Spring Street P.O. Box 2158 Richmond, VA 23218 Ben.Maddock@aftonchemical.com	✓	A
Venhoff, Wes	ASTM/TMC 203 Armstrong Drive Freeport, PA 16229 Phone: 412-365-1034 wnv@astmtmc.org	✓	A
Demel, Seth	Shell Projects and Technology-USA 3333 Hwy 6 Houston, TX 77082 Phone:281-544-9754 Sameul.Demel@shell.com	✓	A
Hennessy, Ed	Haltermann Solutions Phone No: 313-378-1051 ehennessy@jhaltermann.com		
Riou, Joseph	Southwest Research Institute 6220 Culebra Road P.O. Box 28510 San Antonio, TX 78228-0510 Phone: 210-522-6266 jriou@swri.org	✓	A

ASTM SEQUENCE VIII SURVEILLANCE PANEL
VOTING MEMBERSHIP ATTENDANCE RECORD

6/10/25

Name	Address	Attendance	Vote:
Lanctot, Dan	Test Engineering Inc. 12718 Cimarron Path San Antonio, TX 78249-3423 Phone: 210-690-1958 dlanctot@tei-net.com	✓	W
Deshpande, Venkat	Toyota Motor North America, Inc. 1555 Woodridge Ann Arbor, Mi 48105 Phone: 734-995-0121 Cell: 734-730-6709 venkat.deshpande@toyota.com	✓	A
Cosgrove, Bradley	GM Global Propulsion Systems Phone: 313-590-2186 Bradley.Cosgrove@gm.com	✓	A
Rubas, Paul	ExxonMobil Research and Engineering Company Email: paul.j.rubas@exxonmobil.com		
Tang, Haiying	Stellantis Phone: 248-512-0593 haiying.tang@stellantis.com		
Stockwell, Robert	Chevron Oronite Company LLC 4502 Centerview Drive Suite 210 San Antonio, TX 78228 Phone: 210-232-3188 Robert.stockwell@chevron.com	✓	A
Agudelo, Jorge	BP Lubricants USA 1500 Valley Rd Wayne, NJ 07470 Jorge.Agudelo@BP.com		

ASTM SEQUENCE VIII SURVEILLANCE PANEL
VOTING MEMBERSHIP ATTENDANCE RECORD

6/10/25

Name	Address	Attendance	Vote:
Deegan, Mike	Ford Motor Company 17228 Federal Drive Allen Park, MI 48101 Phone: 313-805-8942 mdeegan@ford.com	✓	A
Koricherla, Manindra	Infineum Phone: 908-474-2097 Manindra.koricherla@infineum.com	✓	A
Szappanos, George	Lubrizol Corporation 29400 Lakeland Blvd. Wickliffe, OH 44092 Phone: 440-347-2631 George.szappanos@lubrizol.com	✓	A

ASTM SEQUENCE VIII SURVEILLANCE PANEL
NON- VOTING MEMBERSHIP and GUESTS ATTENDANCE RECORD

6/10/25

Name	Address	Phone/Fax/Email	Attendance
Sean Moyer	TMC		✓
Travis Kostan	SwRI		✓
Dylan Beck	TMC		✓
Amanda Stone	Afton		✓
Todd Dvorak	Infineum		✓
Riccardo Affinito	Oronite		✓
JO Martinez	Oronite		✓

Attachment #2

Agenda

1) Welcome

2) Attendance

3) Approval of the minutes from the November 19, 2024, meeting in San Antonio. Minutes are posted to TMC website.

4) Parts supply update (TEI)

5) TMC Update (Wes Venhoff)

   a. Review LTMS trends
   b. Reference oil status

6) Conversion to the new LTMS system (Travis Kostan)

7) New Business

8) Next Meeting will be at the call of the chair

9) Adjournment

Attachment #3

LTMS Document

Sequence VIII LTMS Requirements

The following are the specific Sequence VIII calibration test requirements.

A. Reference Oils and Parameters

The critical parameter is Total Bearing Weight Loss (TBWL). The reference oil required for test stand-engine calibration is a reference oil accepted by the ASTM Sequence VIII Surveillance Panel. The means and standard deviations for the current reference oil for the test parameters are presented below.

TOTAL BEARING WEIGHT LOSS
Unit of Measure: mg
CRITICAL PARAMETER

Reference Oil	Mean	Standard Deviation
1009-1	14.0	3.38

10-HOUR STRIPPED VISCOSITY
Unit of Measure: centistokes
CRITICAL PARAMETER

Reference Oil	Mean	Standard Deviation
1009-1	9.77	0.07

B. Acceptance Criteria

1. New Test Stand-Engines

- A minimum of two (2) operationally valid calibration tests, with no Level 1 e_i or Level 2 Z_i alarms after the second operationally valid test must be conducted in a new stand-engine on the approved reference oil. If the above criteria cannot be met then a minimum of three (3) operationally valid calibration tests, with no Level 3 e_i or level 2 Z_i alarms after the third operationally valid test must be conducted in a new stand-engine on any approved reference oils.

2. Existing Test Stand-Engines

- The stand-engine must have previously been accepted into the system by meeting the LTMS requirements

- Existing test stand-engines that have run an acceptable reference in the past 180 days may calibrate with 1 test.

- Following the necessary tests, check the status of the control charts and follow the prescribed actions.

3. Reference Oil Assignment

   Once test stand-engines have been accepted into the system, the TMC will assign reference oils for continuing calibration according to the reference oil mix:

   - Scheduled calibration tests should be conducted on reference oil 1009-1 and subsequent approved reblends.

4. Control Charts

   In Section 1, the construction of the control charts that constitute the Lubricant Test Monitoring System is outlined. For the Sequence VIII, Z_0 =mean Y_i of the first two operationally valid tests in the stand-engine. The constants used for the construction of the control charts for the Sequence VIII, and the response necessary in the case of control chart limit alarms, are depicted below. Note that control charting all parameters is required.

LUBRICANT TEST MONITORING SYSTEM CONSTANTS

		EWMA Chart		Stand-Engine Prediction Error	
		Severity		Severity and Precision	
Chart Level	Limit Type	Lambda	Alarm	Limit Type	Limit
Stand-Engine	Level 1	0.3	± 0.000	Level 1	± 1.515
	Level 2		± 1.800	Level 2	± 1.734
				Level 3	± 2.066
Industry	Level 1	0.2	± 0.775	--	--
	Level 2		± 0.859	--	--

The following are the steps that must be taken in the case of exceeding control chart limits. The steps are listed in order of priority, although charts should be studied simultaneously to determine the cause(s) of a problem. In the case of multiple alarms, contact the TMC for guidance. The laboratory always has the option of removing any stand-engine from the system.

- Exceed Stand-Engine chart of Prediction Error (e_i)

  Level 3:

  - Immediately conduct one additional reference test in the stand-engine that triggered the alarm. Do not update the control charts until the follow up reference test is completed and Excessive Influence (refer to Section 1.A.5) has been performed.

  Level 2:

  - The Level 2 limit applies in situations that have been pre-determined by the surveillance panel to have a potential impact on test results. These situations may include the introduction of new critical parts, fuel batches, reference oil reblends, or other test components. When these conditions have been met and a Level 2 alarm is triggered, immediately conduct one additional reference test in the stand-engine that triggered the alarm. Evaluate the subsequent test(s) using Level 3 limit.

  Level 1:

  - The Level 1 limit applies to the first two tests in a new stand-engine. When a Level 1 alarm is exceeded, immediately conduct one additional test in the stand-engine that triggered the alarm. Evaluate subsequent test(s) using the Level 3 limit.

- Exceed Stand-Engine EWMA of Standardized Test Result (Z_i)

  Level 2:

  - Conduct one additional reference test in the stand-engine that triggered the alarm. The stand-engine that triggered the alarm is not qualified for non- reference tests until the Level 2 alarm is cleared.

  - In instances where the surveillance panel has deemed that industry-wide circumstances are impacting the Level 2 alarm, the TMC may be asked to review stand-engine calibration status in accordance with the surveillance panel's findings.

  Level 1 (TBWL only):

  - The Level 1 limit applies to all reference tests that are control charted, even when other alarms have been triggered. Level 1 uses Zi to determine the stand-engine severity adjustment (SA). Calculate the stand-engine SA as follows and confirm the calculation with the TMC:

    $$\text{TBWL SA} = (-Z_i) * 3.38$$

The following industry issues are handled by the TMC and do not require individual laboratory action.

- Exceed Industry EWMA of Standardized Test Result (Z_i)

Level 2:

- The TMC informs the surveillance panel that the limit has been exceeded. The surveillance panel then investigates and pursues resolution of the alarm.

Level 1:

- The TMC investigates whether severity adjustments are adequately addressing the trend, investigates the possible causes, and communicates as appropriate with industry.