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COMMITTEE D02 on PETROLEUM PRODUCTS, LIQUID FUELS, AND LUBRICANTS

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Sequence VIII Surveillance Panel Conference Call Minutes Wednesday December 4, 2019 10:00-11:00 AM Central

Minutes recorded by Patrick Lang Direct any comments or corrections to: <u>patrick.lang@swri.org</u>

Membership changes:

No membership changes were requested. The attendance list can be found as attachment # 1.

Meeting Minutes Review:

No meeting minutes were reviewed on this call.

Central Parts Distributor Report:

The TEI critical inventory parts levels reported are as follows:

- Connecting rod bearings: 499 sets available
- Connecting rods are being supplied via exchange. Labs send cores to TEI to have them reconditioned
- Crankshafts: 1 in stock and 2 on order from supplier
- Gasket kits are in good supply
- Cylinder Liners: 5 in stock but have raw materials from same supplier to make more

TMC report:

- We are in a EWMA severity action limit alarm on bearing weight loss.
- Stripped viscosity is in control.

Severity Investigations/discussions:

- SwRI did a recent SEM scan of a 06-16 bearing to determine if the copper/lead relationships looked reasonable. The values don't seem to be out of line with the historical numbers. See attachment # 2 for a summary.
- SwRI presented a plot of the BWL trend by lab. The plot demonstrates that the severe shift is with both oil 704 and 1006 but oil 704 seems to be impacted more (very tight range and small standard deviation on 704). See attachment #3 for the plot.
- Adrian from IAR reported that he had not seen a shift in severity as a result of the sulfur specification change in the fuel that was dictated by the IVB test; SwRI confirmed the same. The spec change came in approximately mid-2017.
- Adrian suggested that the may be an oil aging influence.
- Rich Grundza will take a look at the quality control analyticals to see if anything has changed with the reference oils.
- Jerry Brys asked if there could be a potential fuel dilution issue however since the oil temperature is so hot this is not likely to be a problem.
- Labs will continue to investigate the severity trend.

New Business:

• No new business was discussed.

Adjournment:

Next meeting at the call of the chairman.

Attachment #1 Attendance List

12-4-19

Conference Call ASTM SEQUENCE VIII SURVEILLANCE PANEL VOTING MEMBERSHIP ATTENDANCE RECORD

Name	Address	Attendance
Alfonso, Adrian	Intertek 5404 Bandera Road San Antonio, TX 78238 Phone:210-647-9429 adrian.alfonso@intertek.com	
Bowden, Jason	OH Technologies, Inc. P.O. Box 5039 Mentor, OH 44061-5039 Phone: 440-354-7007 dhbowden@ohtech.com	
Caudill, Timothy? Amol Savant?	Valvoline 21st and Front Streets Ashland, KY 41101 Phone: 606-329-1960 ext 5708 Tlcaudill@ashland.com	
Campbell, Bob	Afton Chemical 500 Spring Street P.O. Box 2158 Richmond, VA 23218 Phone: 804-788-5214 Bob.Campbell@aftonchemical.com	
Grundza, Rich	ASTM/TMC 6555 Penn Ave Pittsburgh, PA 15206-4489 Phone: 412-365-1031 reg@astmtmc.cmu.edu	
Hsu, Jeff	Shell	
Tumati, Prasad	Haltermann Solutions Channelview, TX Phone No: 313-300-8300 ptumati@jhaltermann.com	
Hendrix, Anthony	Southwest Research Institute 6220 Culebra Road P.O. Box 28510 San Antonio, TX 78228-0510 Phone: 210-522-3720 ahendrix@swri.org	

ASTM SEQUENCE VIII SURVEILLANCE PANEL VOTING MEMBERSHIP ATTENDANCE RECORD

[Name	Address	Attendance
- L			

Lanctot, Dan	Test Engineering Inc. 12718 Cimarron Path San Antonio, TX 78249-3423 Phone: 210-690-1958 dlanctot@tei-net.com	/
Kowalski, Teri	Toyota Motor North America, Inc. 1555 Woodridge Ann Arbor, Mi 48105 Phone: 734-995-4032 Cell: 734-355-8082 teri.kowalski@tema.toyota.com	
Cushing, Tim	GM Powertrain 823 Jocyln Avenue Pontiac, MI 48340 Phone: 248-881-3518 Timothy.cushing@gm.com	
Salvesen, Clifford	ExxonMobil Research and Engineering Company 600 Billingsport Rd. Paulsboro, NJ 08066 Office: (856) 224-2954 Email: clifford.r.salvesen@exxonmobil.com	
Tang, Haiying	Chrysler (FCA) Phone: haiying.tang@fcagroup.com	
Robert Stockwell Stephen Ketchum For Robert	Chevron Oronite Company LLC 4502 Centerview Drive Suite 210 San Antonio, TX 78228 Phone: 210-232-3188 Robert.Stockwell@chevron.com	V
Marks, Brian Tarry, Preston	BP Lubricants USA 1500 Valley Rd Wayne, NJ 07470 Phone: Brian.Marks@BP.com	

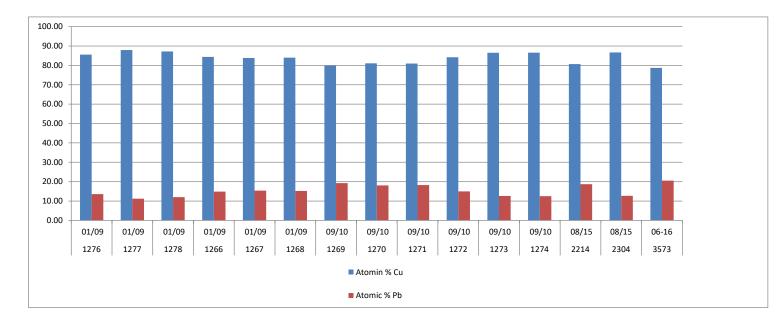
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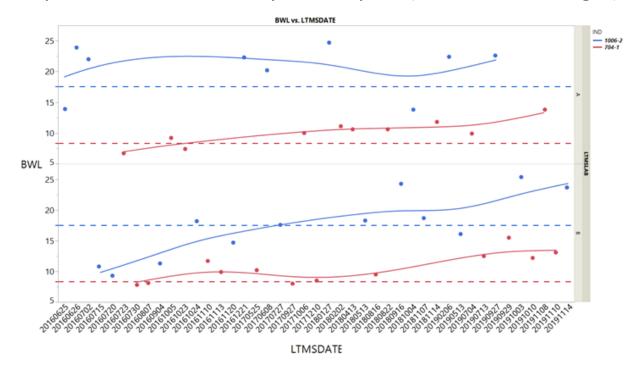
Ramono, Ron	Ford Motor Company Diagnostic Service Center II Room 410 1800 Fairlane Drive Allen Park, MI 48101 Phone: 313-845-4068 rromano@ford.com	
Ritchie, Andy	Infineum P.O. Box 735 1900 East Linden Ave. Linden, NJ 07036-0735 Phone: 908-474-2097 andrew.ritchie@infineum.com	
Brys, Jerry	Lubrizol Corporation 29400 Lakeland Blvd. Wickliffe, OH 44092 Phone: 440-347-2631 jerome.brys@lubrizol.com	1
o charlie	heverett	
Chris	Tay lo-	

Attachment # 2 SEM Bearing Surface Analysis Summary

														3/22/2016	12/2/2019				
Analysis Rpt hrs	1276	1277	1278	1266	1267	1268	1269	1270	1271	1272	1273	1274	2214	2304	3573	Min	Max	AVG	Std Dev
Bearing Batch	01/09	01/09	01/09	01/09	01/09	01/09	09/10	09/10	09/10	09/10	09/10	09/10	08/15	08/15	06-16				
Atomin % Cu	85.57	87.94	87.20	84.37	83.82	84.00	79.88	81.06	80.93	84.20	86.50	86.58	80.66	86.70	78.72	78.72	87.94	83.88	2.96
Atomic % Pb	13.59	11.20	12.00	14.86	15.38	15.18	19.25	18.09	18.25	14.95	12.61	12.53	18.70	12.66	20.55	11.20	20.55	15.32	2.98



Attachment # 3 Bearing Weight Loss Plots by Lab



Sequence VIII BWL Severity trend by lab (dashed line is target):

Severity trend by lab-stand (dashed line is target):

