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COMMITTEE D02 on PETROLEUM PRODUCTS, LIQUID FUELS, AND LUBRICANTS

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STAFF MANAGER: Alyson Fick, (610) 832-9710, e-mail: afick@astm.org

Sequence VIII Surveillance Panel Conference Call Minutes
Thursday December 17, 2020
9:00-10:00 AM Central

Minutes recorded by Patrick Lang

Direct any comments or corrections to: patrick.lang@swri.org

Membership changes:

- Bradley Cosgrove will be the voting member for General Motors
- Christian Porter will be the voting member for Afton
- Paul Rubas will replace Cliff Salvesen for ExxonMobil
- Mike Deegan will replace Ron Romano of Ford

The attendance list can be found as attachment # 1.

Meeting Minutes Review:

The minutes from the December 4, 2019 meeting were distributed shortly before this call so the chairman stated that we will wait until the next meeting to allow more time for review.

Agenda:

The agenda can be found as attachment # 2.

Central Parts Distributor Report: (Dan Lanctot)

The TEI critical inventory parts levels can be found as attachment # 3. Some critical items are shown below:

- Connecting rod bearings: 357 sets available

- Connecting rods are being supplied via exchange. Labs send cores to TEI to have them reconditioned
- Crankshafts: 4 in stock
- Gasket kits are in good supply
- Cylinder Liners: in stock but have raw materials from same supplier to make more

Fuel Supplier Report: (Prasad Tumati)

- 12,000 gallons of the green fuel currently in inventory.
- A new batch will be started in January 2021 and will be a 40,000-gallon batch.
- New batch is expected to be available in February of 2021.

KA24E Green fuel Specification:

Pat Lang presented the KA24E fuel specification that was recommended by the Fuels Task Force. The specification can be found as attachment #4.

Motion: (Lang/Grundza)

Accept the recommended fuel specification for the KA24E and remove the current specification that is in the test procedure. A comment will be made in the test procedure to refer to the TMC website for the fuel specification.

Motion passed unanimously.

TMC report: (Rich Grundza)

Rich provided the LTMS plots for Bearing Weight Loss and Stripped Viscosity; see attachment #5.

Bearing Weight Loss:

- Bearing weight loss is currently in control but has been heavily driven by Lab A conducting several tests that were mild.
- Lab A has a mild and severe stand.
- Lab B has been consistent on the severe side.

Amol from Valvoline mentioned that he did not have a calibrated stand due to mild results at his lab.

Adrian from Intertek expressed concerns about sudden change in the LTMS plot due to the mild results at Lab A. Is this a lab influence or an over change in the test.

Action:

Rich Grundza will take a look at operational data to see if anything can be determined.

Stripped Viscosity:

- Stripped viscosity is in a severity warning alarm.
- Trending mild since October of 2018

- Rich reported that the analyticals for the reference oils look good based on the normal TMC quality control checks.
- This mild trend is not a significant issue at this point but needs to be watched.

New Business:

Current Technology Reference Oil:

- The group discussed the need for a current technology reference oil.
- Rich mentioned oils 1011 and 1012 as possible considerations.
- Does the oil need to be LSPI compliant?
- What about the Molly level?

No decisions were made just some general comments were provided.

Action:

Chairman to continue looking for a supplier to provide a new reference oil.

Adjournment:

The meeting was adjourned at 10:00 AM CDT.

Next meeting at the call of the chairman.

Attachment #1

Attendance List

12/7/20

webex


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?	Valvoline 21st and Front Streets Ashland, KY 41101 Phone: 606-329-1960 ext 5708 Tcaudill@ashland.com	✓
Campbell, Bob Christian Partner	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
Knights, Clayton <i>Don Luchtot</i>	Test Engineering Inc. 12718 Cimarron Path San Antonio, TX 78249-3423 Phone: 210-690-1958 cknight@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	
Raney, Mike <i>Brad Cosgrove</i>	GM Powertrain Mail Code 483-730-472 823 Jocyn Avenue Pontiac, MI 48340 Phone: 248-408-5384 Michael.p.raney@gm.com	
Salvesen, Clifford <i>Paul RUBAS</i>	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	
Sinha Kaustav <i>Robert Stackwell</i>	Chevron Oronite Company LLC Phone: 713-432-6642 Kaustav.Sinha@chevron.com	
Marks, Brian	BP Lubricants USA 1500 Valley Rd Wayne, NJ 07470 Phone: Brian.Marks@BP.com	

**ASTM SEQUENCE VIII SURVEILLANCE PANEL
VOTING MEMBERSHIP ATTENDANCE RECORD**

Name	Address	Attendance
Ramono, Ron <i>Mike Deegan</i>	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	
Szappanos, George <i>Jerry</i>	Lubrizol Corporation 29400 Lakeland Blvd. Wickliffe, OH 44092 Phone: 440-347-2631 George.Szappanos@lubrizol.com	

Tracy King ✓

Charlie ✓

Attachment #2

Agenda

1. Welcome
2. Membership Changes
3. Acceptance of meeting minutes:
 - a. Review of the December 4, 2019 Conference Call Minutes.
4. CPD Report from TEI
 - a. Critical parts inventory levels
5. Fuel Report
 - a. Current fuel inventory level
 - b. Approval the KA24E fuel specification recommended by the TGC fuels task force
6. TMC Report
 - a. Current LTMS Status
 - i. Previous BWL severe trend
 - ii. Current Stripped Viscosity mild trend
 - b. Reference oil inventory levels
7. Old business
8. New Business
 - a. Find current technology reference oil (GF-6)
9. Next Meeting
10. Adjournment

Attachment # 3

Parts Inventory at TEI

TEI Sequence VIII Critical Parts Inventory (12-17-20):

- 1) Connecting Rod Bearing Sets (100034-1)**
Current Inventory is 357 sets
- 2) Cylinder liners (122183-1)**
4 liners bored to size, final hone done at lab.
- 3) Crankshaft (100038-1)**
4 in stock
- 4) Main Brgs:**
 - a. Std: 89 sets*
 - b. Undersize (US): 285 sets*
- 5) Piston Rings (41274-H):**
 - a. 91 sets*
- 6) Piston (2405):**
 - a. Std: 113 each*
- 7) Camshaft Bearings (8231):**
 - a. Std: 92 sets*
 - b. Undersize (US): 116 sets*
- 8) Camshafts (8211-R):**
 - a. Provide core for rework*
- 9) Connecting Rod (2434-S)**
Provide core and then we have it re-worked.

Attachment # 4

Fuel Task Force Specifications

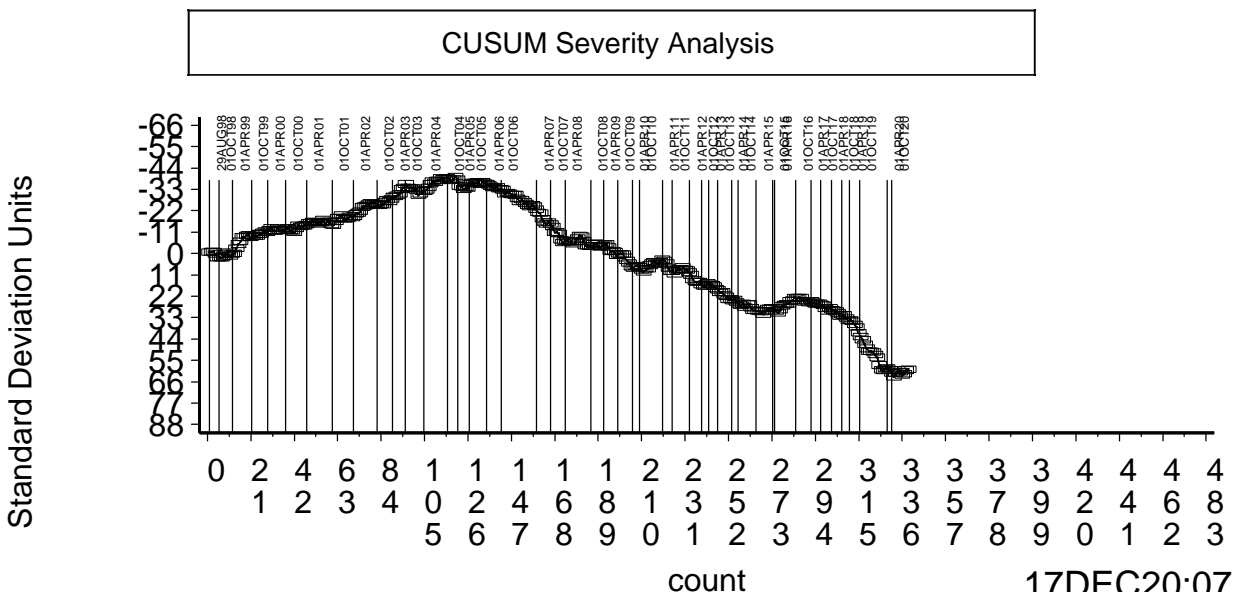
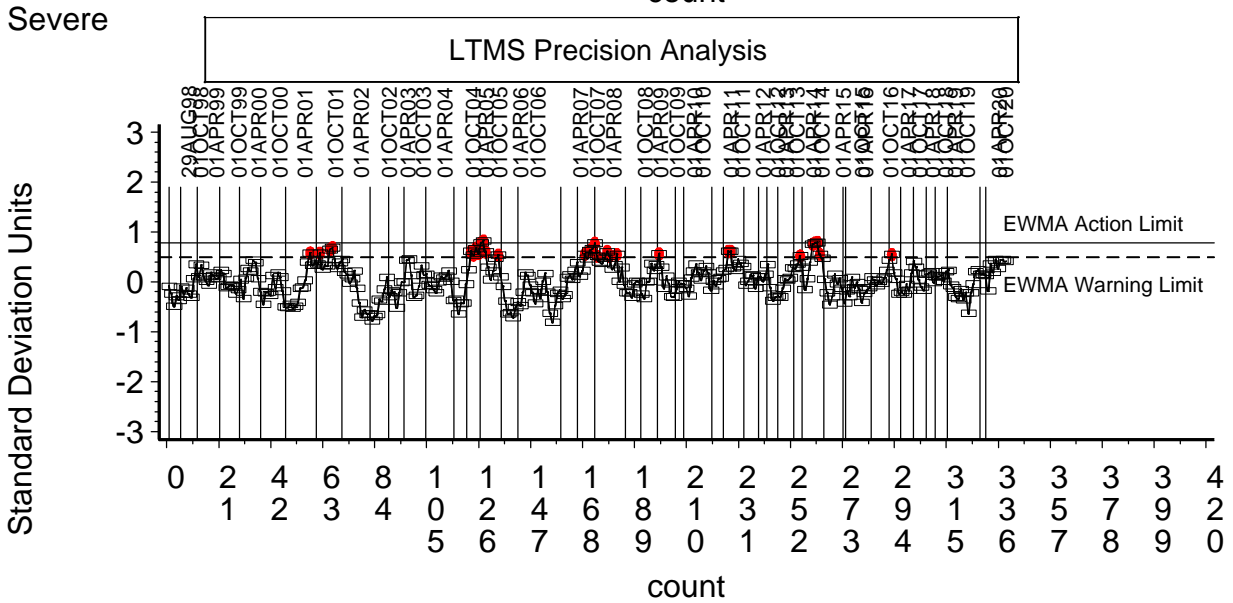
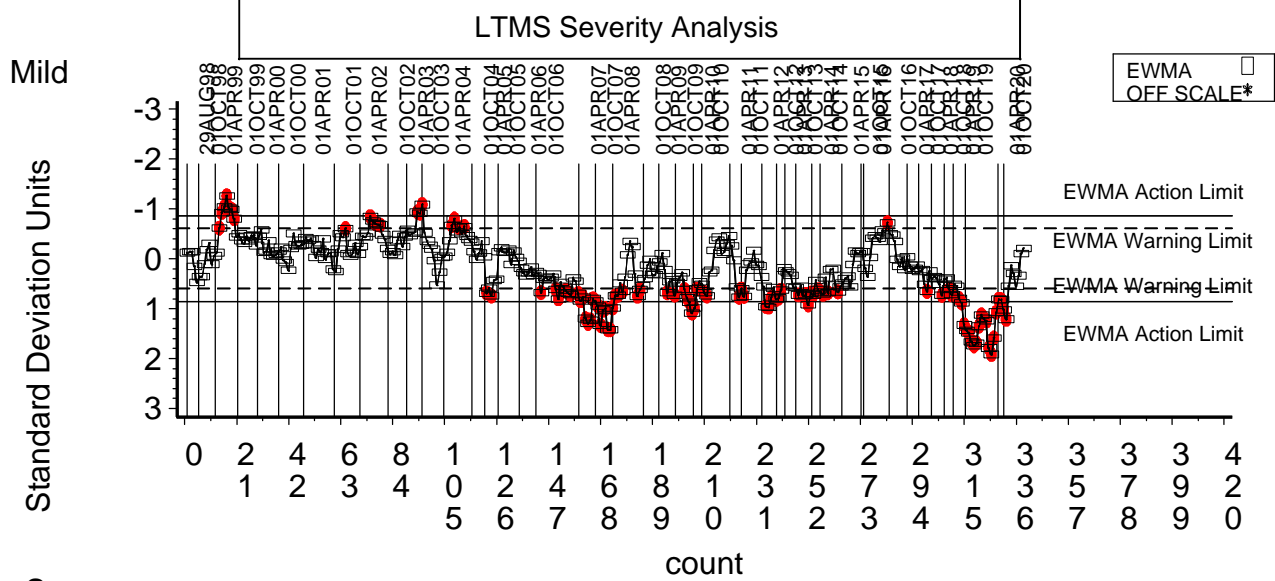
TEST	METHOD	UNITS	SPECIFICATIONS			RESULTS
			MIN	TARGET	MAX	
Distillation, % Evap - IBP	ASTM D86	°F	75		95	
5%		°F				
10%		°F	120		135	
20%		°F				
30%		°F				
40%		°F				
50%		°F	200		230	
60%		°F				
70%		°F				
80%		°F				
90%		°F	300		325	
95%		°F				
Distillation - EP		°F	385		415	
Recovery		vol %		Report		
Residue		vol %		Report		
Loss		vol %		Report		
Gravity @ 60°F	ASTM D4052	°API	58.7		61.2	
Density @ 15°C	ASTM D4052	kg/l	0.734		0.744	
Reid Vapor Pressure	ASTM D5191	psi	8.8		9.2	
Carbon	ASTM D5291	wt fraction	0.8580		0.8667	
Carbon	ASTM D3343	wt fraction		Report		
Sulfur	ASTM D2622	wt %	0.0120		0.0140	
Lead	ASTM D3237	g/gal			0.05	
Oxygen	ASTM D4815	wt %			0.2	
Composition, aromatics	ASTM D5769	vol %	28.5		34.5	
Composition, olefins	ASTM D6550	vol %	5.0		10.0	
Composition, saturates	Calc	vol %		Report		
Oxidation Stability	ASTM D525	minutes	1440			
Copper Corrosion, 3 hr @ 50°C	ASTM D130	Class			1	
Gum content, washed	ASTM D381	mg/100ml			5	
Gum content, unwashed	ASTM D381	mg/100ml			10	
Research Octane Number	ASTM D2699	Rating	96.0		97.5	
Motor Octane Number	ASTM D2700	Rating		Report		
R+M/2	D2699/2700	---		Report		
Sensitivity	D2699/2700	---	7.5			
Net Heating of Combustion	ASTM D240	btu/lb		Report		
Color	Visual			Green		

Attachment # 5

LTMS Bearing Weight Loss Plots & Stripped Viscosity

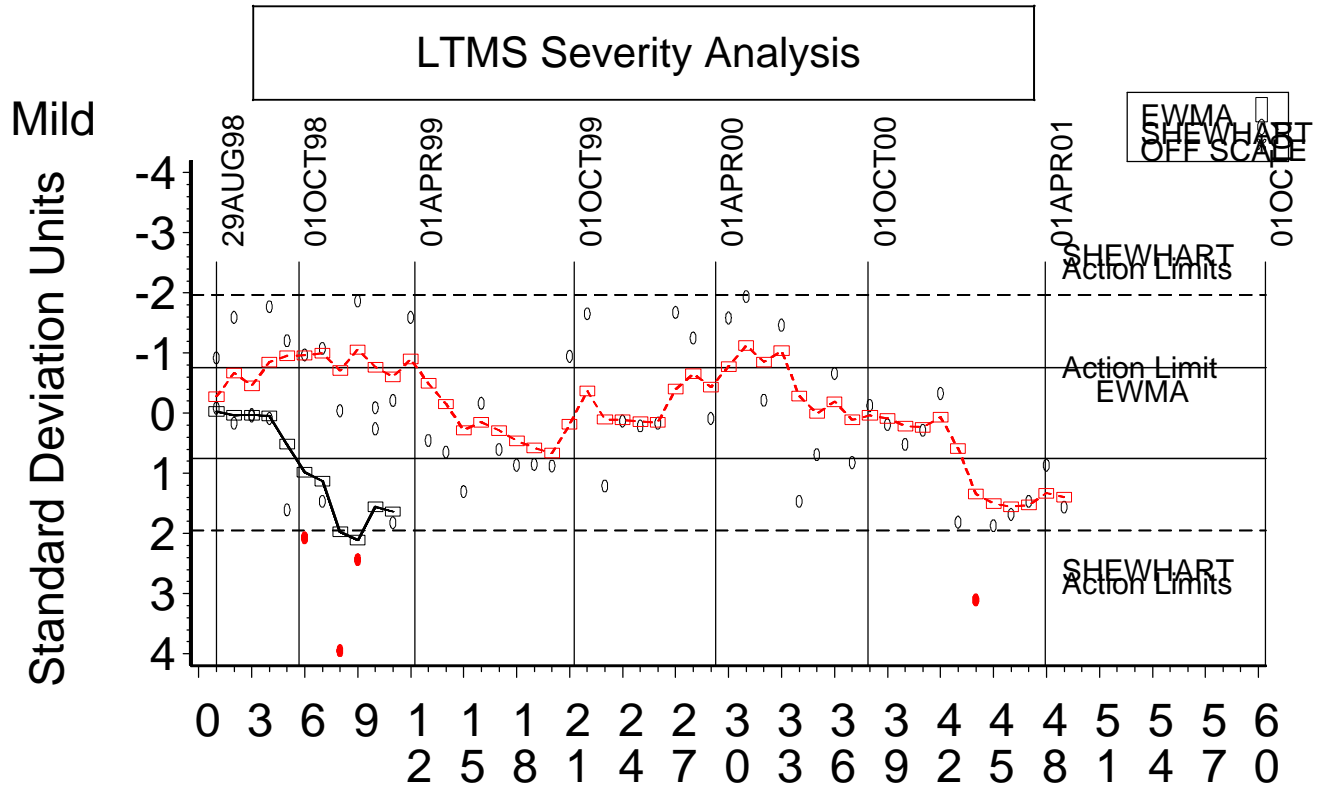


FINAL BEARING WEIGHT LOSS



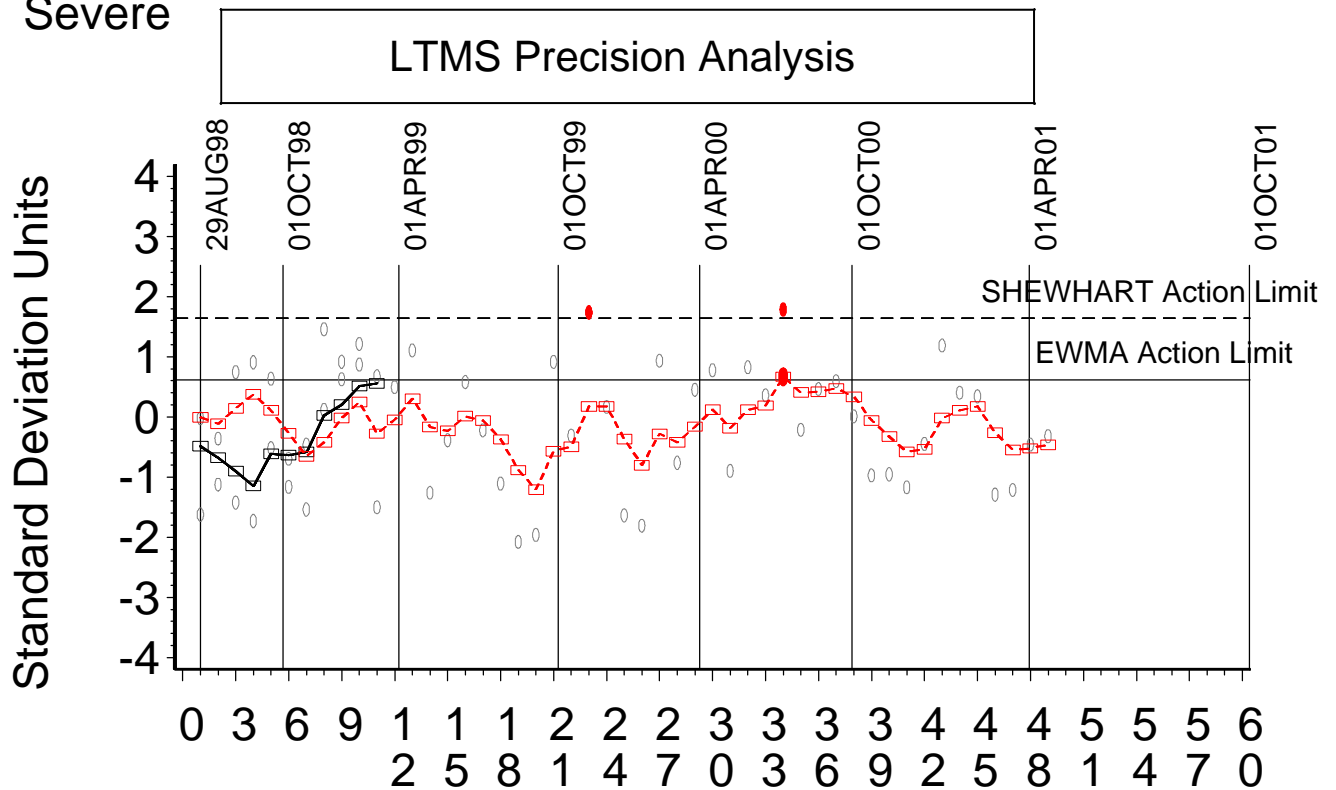


FINAL BEARING WEIGHT LOSS



legend — B-3A-238 - - - B-4-252
count

Severe

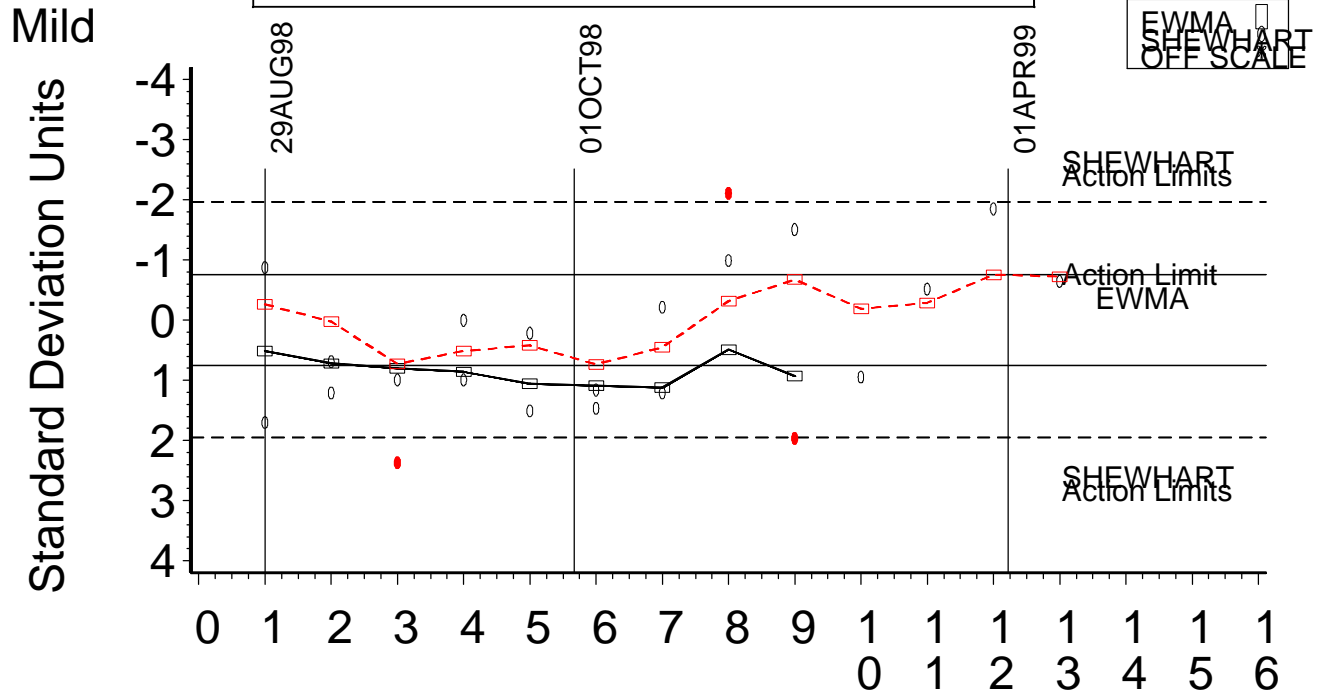


legend — B-3A-238 - - - B-4-252
count



FINAL BEARING WEIGHT LOSS

LTMS Severity Analysis

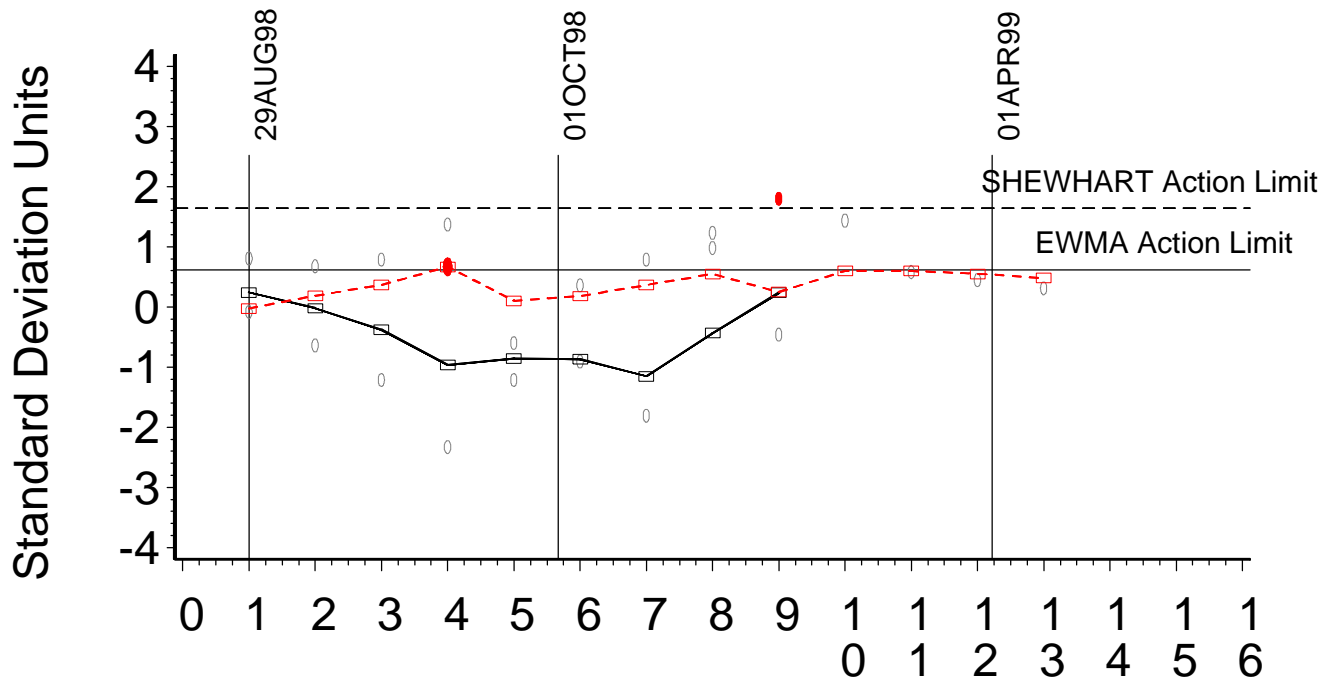


legend

— A-4-152A - - - A-5-S186

Severe

LTMS Precision Analysis



legend

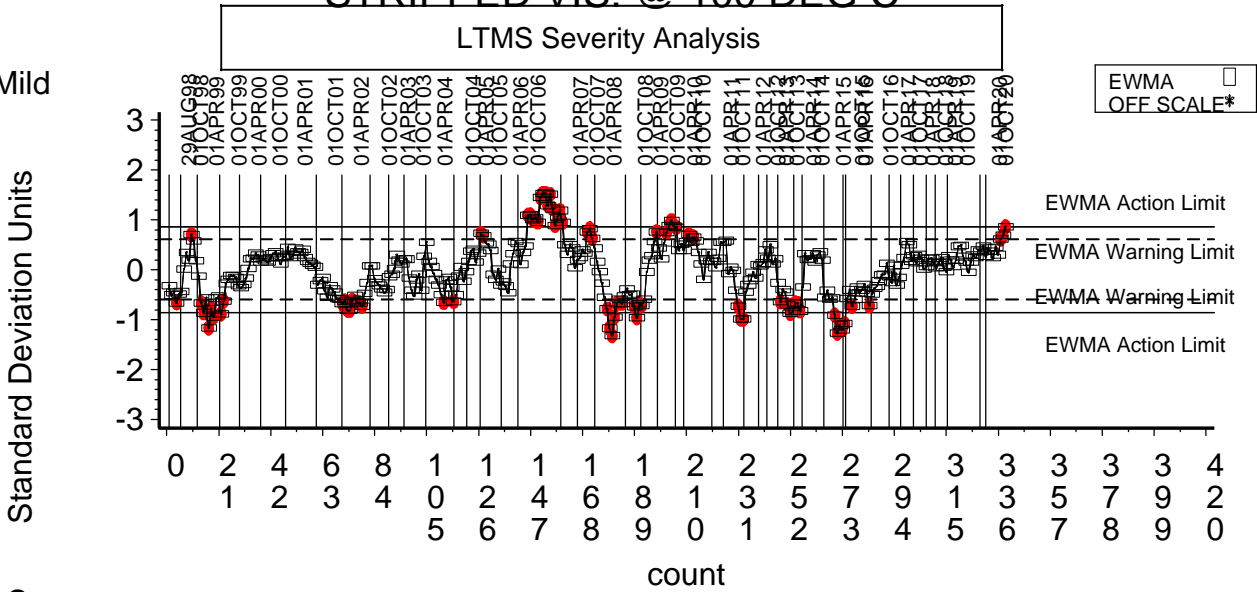
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A5-3

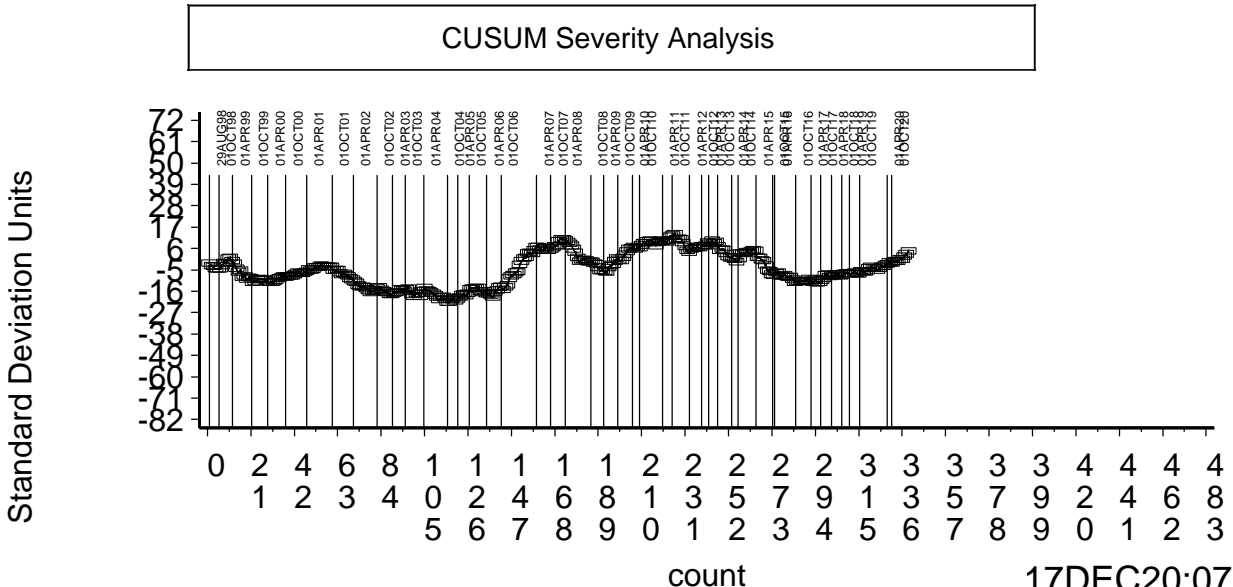
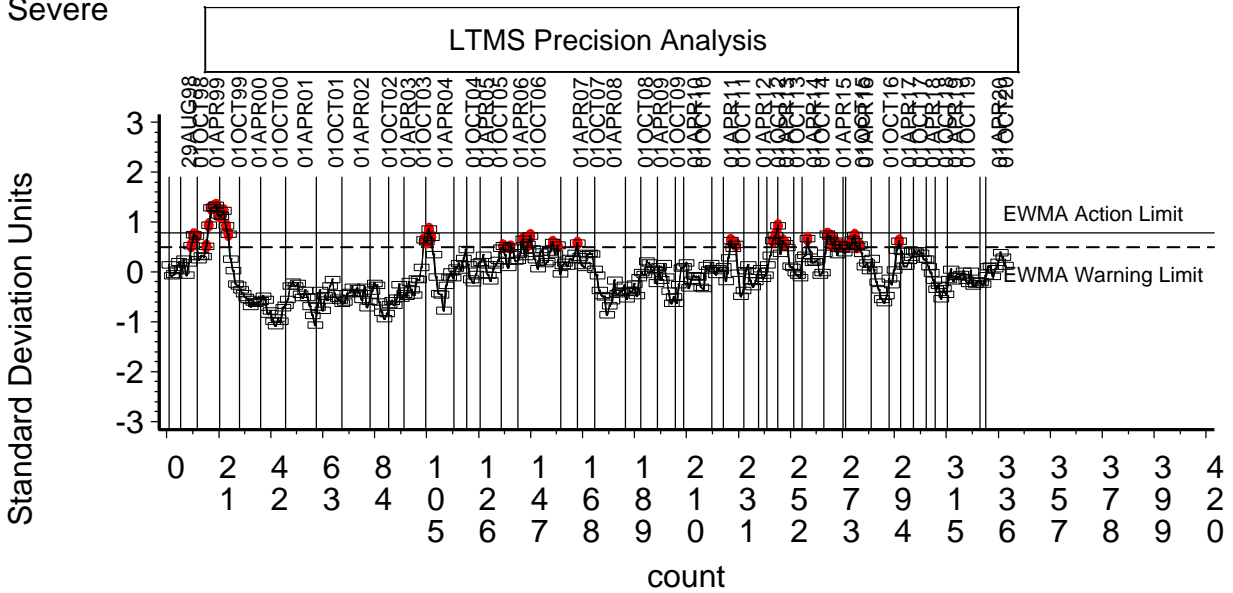
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STRIPPED VIS. @ 100 DEG C

Mild

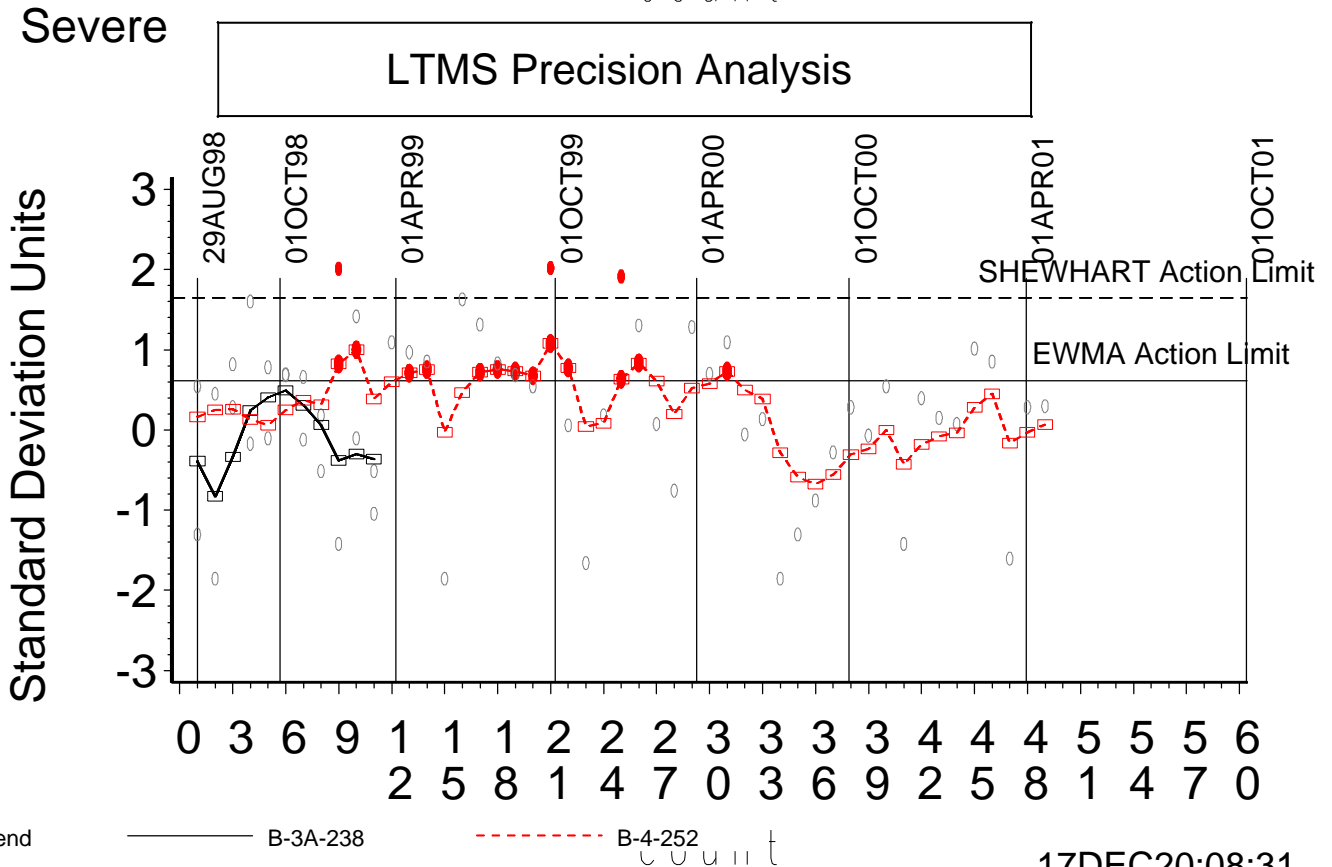
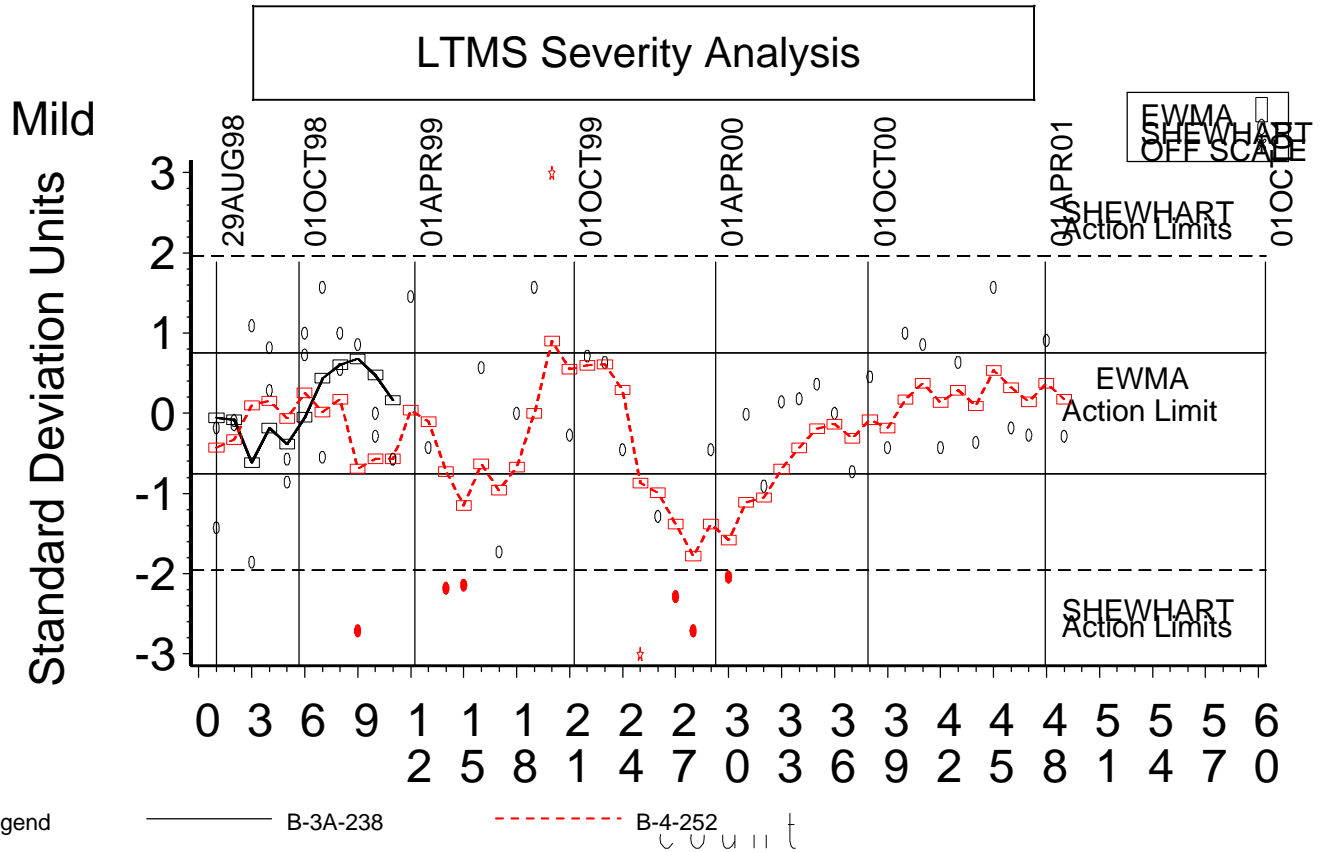


Severe



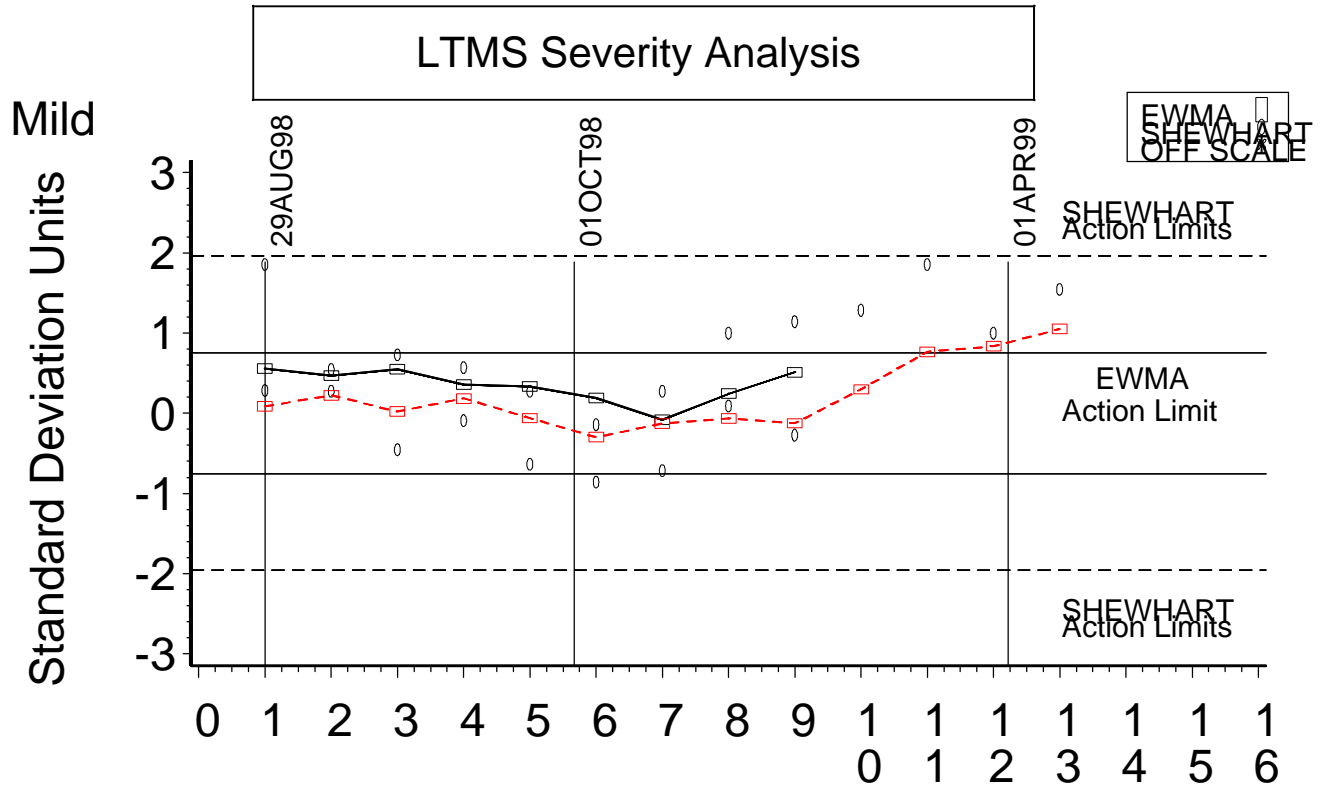


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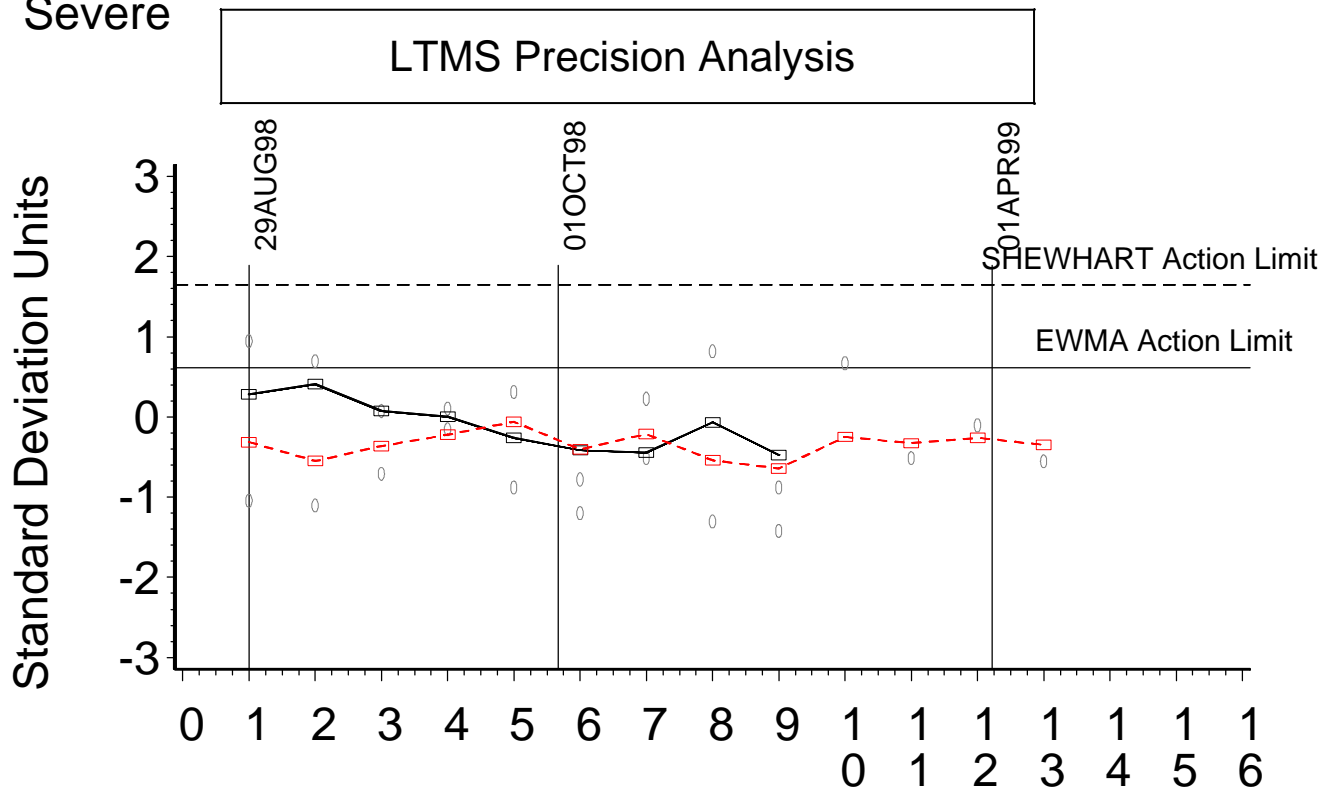


STRIPPED VIS. @ 100 DEG C



legend — A-4-152A - - - A-5-S186

Severe



legend — A-4-152A - - - A-5-S186