

Mack / Volvo Surveillance Panel Meeting

December 19, 2024

David Brass (chair)

Agenda

- Volvo T-13 New Reference Oil Testing Timing
- Volvo T-13 Parts Timelines
- Mack T-12 Reference Testing with Chevron Delo Extended Life Coolant
 - Operational Review / Stats Review
- Volvo T-13 Procedure Update
- AOB

Volvo T-13 Reference Oil Matrix Testing

Lab A / Stand 1	Lab B / Stand 1	Lab D / Stand 1	Lab G / Stand 1
New Reference Oil	New Reference Oil	New Reference Oil	New Reference Oil
New Reference Oil	New Reference Oil	New Reference Oil	New Reference Oil

Both tests must be conducted in the same stand and run consecutively (no candidates in between)

Reference Oil Timing Updates from Dec 2, 2024 Meeting:

Lab A: Start by Week of December 16

Lab B: Start by December 20

Lab D: Start by Week of December 16

Lab G: Start By End of Year

Reference Oil Timing Updates from Dec 19, 2024 Meeting:

Lab A: Started 1st Test on December 19

Lab B: Start beginning of January

Lab D: 1st test running, expected completion ~ Dec 25

Lab G: Start early January

Current Reference Status

Lab	Stand	Reference Date	Date Reference Expires
A	2	3/5/24	1/16/25
A	4	4/20/23	3/23/24
A	8	10/4/24	8/4/25
B	3	6/3/24	4/3/25
D	1	3/3/25	1/3/25
D	2	5/4/24	3/4/25
G	1	7/4/24	5/4/25
G	2	7/22/23	5/22/24
G	3	5/2/25	3/2/25

Volvo T-13 Parts Batching

- TEI is actively trying to obtain batches of the following parts:

Part	Batch	Part Number	Production Expectation
Liner	E	21334768	3000 received by TEI
Piston	A	21170742	January 31, 2025
Piston Pin	A	20569833	Production to Complete by Dec 16
Top Ring	A	21251596	February 28, 2025
2 nd Ring	A	20590309	February 28, 2025
Oil Ring	A	20568155	To be provided after PO received

All parts batches are expected to be delivered by March 2025. Goal would be to reference all new parts batches together.

TEI is having difficulty with order fulfillment from Jegs.com. Orders have had delays due to lack of oil rings. At the moment we might have to revert to Portugal rings for some or all of the rings used for tests.

TEI to spot purchase rings from dealer network to determine date codes, what rings are accessible?

14 of 60 ring sets were received with 800k stamps.

Next delivery from Jegs is expected to be received on Dec 23. Is this still the case?

124 ring sets received from Jegs on 12/18

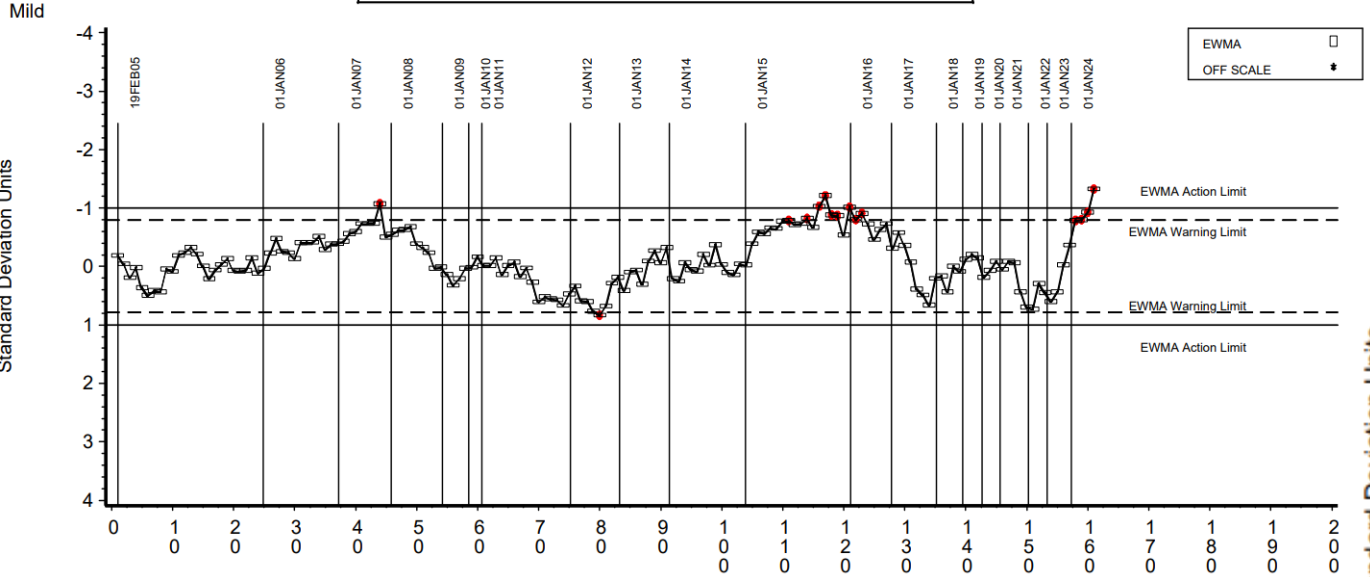
Mack T-12 Reference Testing with Chevron Delo Extended Life Coolant - Status

- A4 completed **acceptable calibration** reference using Chevron Delo Extended Life Coolant 50/50 on 9/11/24
- G4 completed **out of calibration** reference using Chevron Delo Extended Life Coolant 50/50 on 9/9/24
- G4 completed **acceptable calibration** reference using Chevron Delo Extended Life Coolant 50/50 on 10/9/24
- D1 completed **out of calibration** reference using Chevron Delo Extended Life Coolant 50/50 on 10/27/24

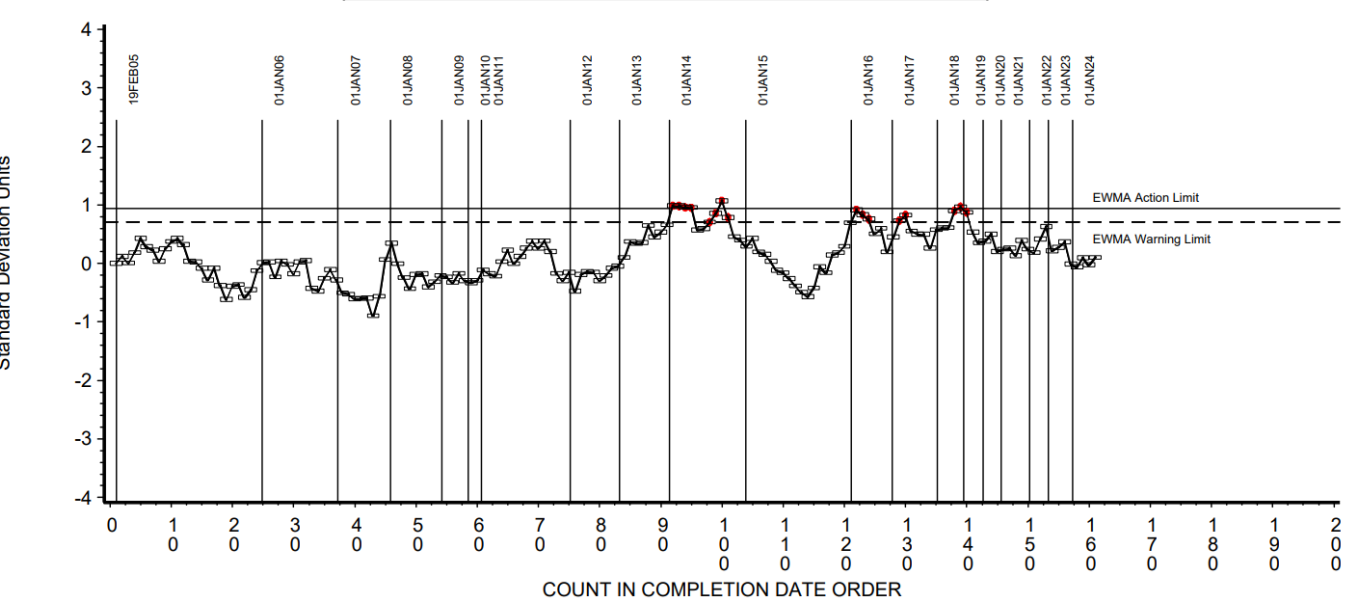
Mack T-12 Charts – PB

Trans. Res. Delta PB @ EOT

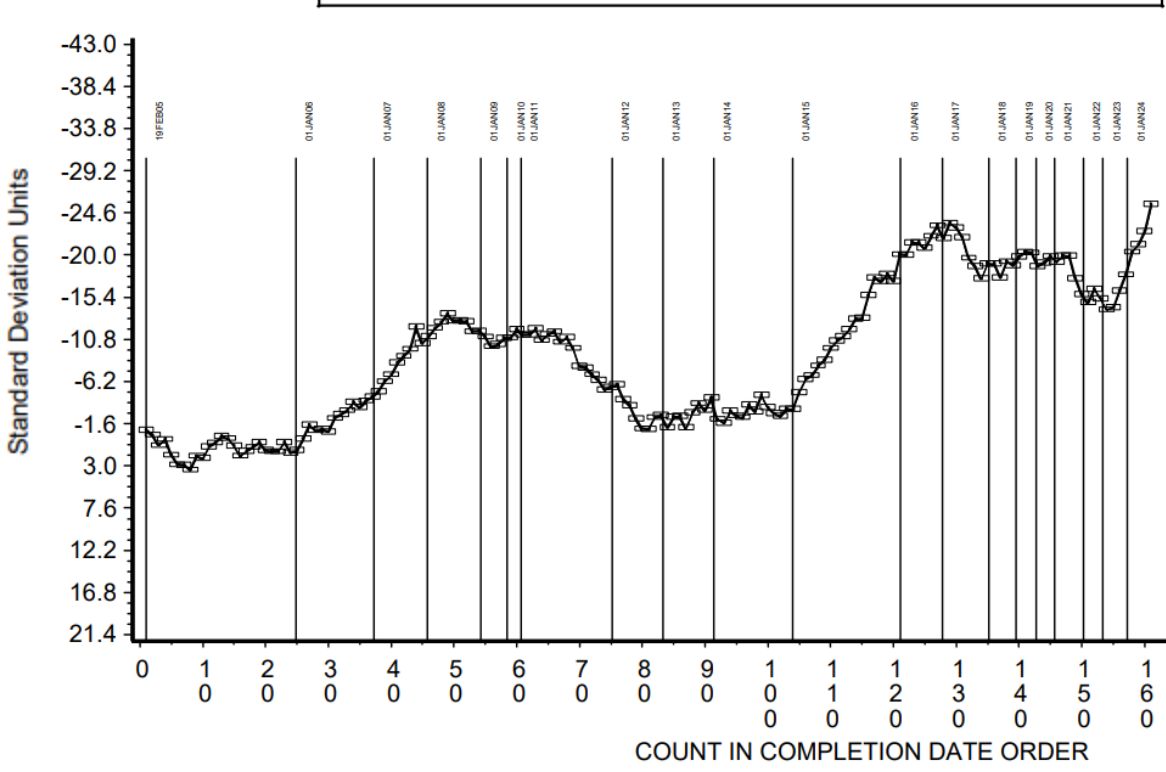
LTMS Severity Analysis



LTMS Precision Analysis



CUSUM Severity Analysis

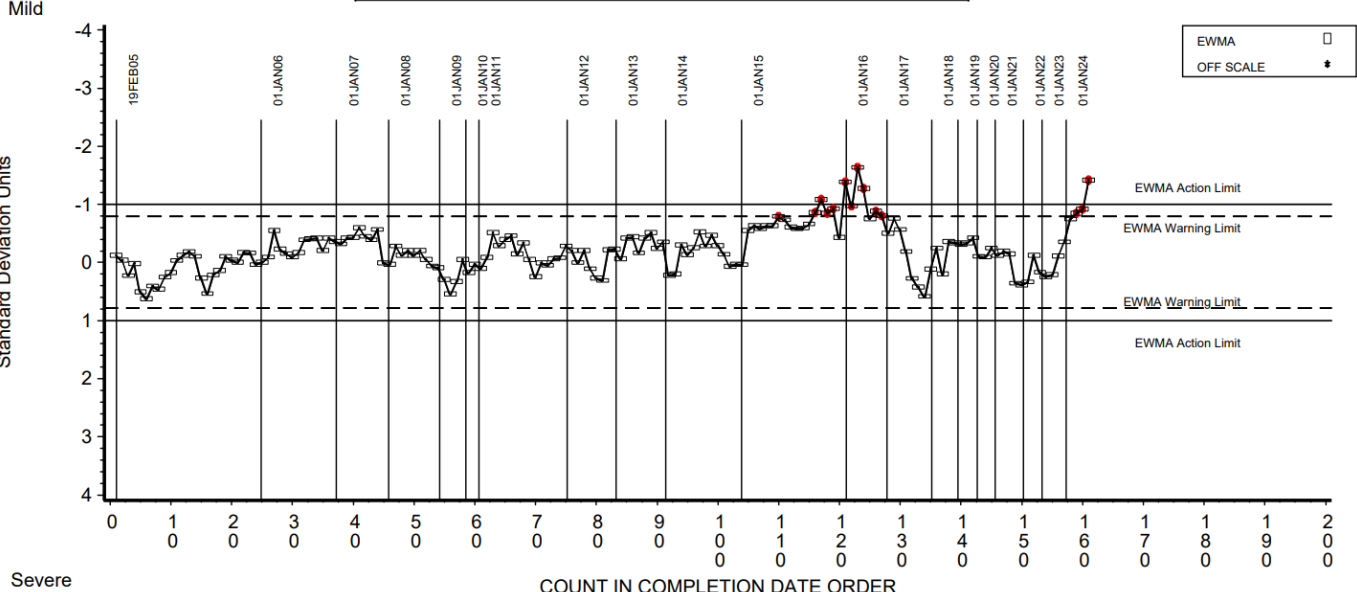


PB is in severity action alarm in the mild direction

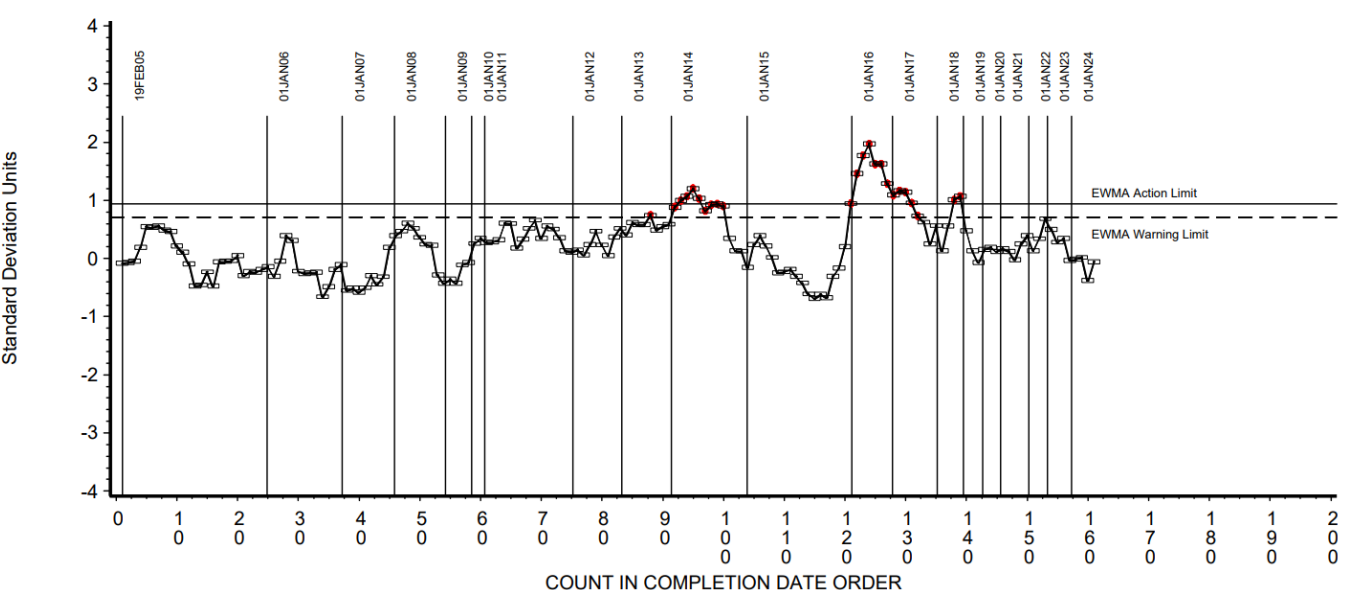
Mack T-12 Charts – PB2

Trans. Res. Delta PB 250-300Hr

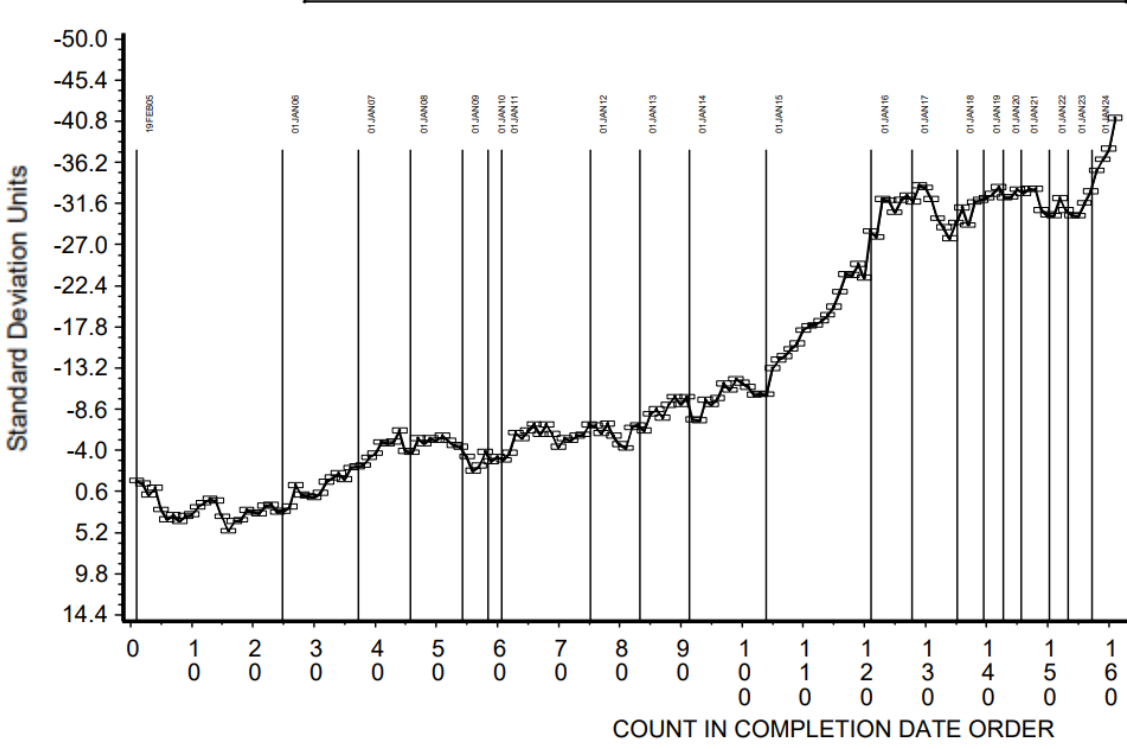
LTMS Severity Analysis



LTMS Precision Analysis



CUSUM Severity Analysis



PB2 is in severity action alarm in the mild direction

Operational Review of Mack T-12 Tests

- Review held on December 2 and contained
 - Tests with Chevron Delo Extended Life Coolant
 - Tests with Parts Batch YFZQWB
 - Prior Tests with Parts Batch X(FsubE)YPWB

Statistical Review of Mack T-12 Tests

- Reviews includes
 - Effect of Chevron Delo Extended Life Coolant with YFZQWB parts to Pencool Coolant
 - Comparison of Parts Batch YFZQWB to prior parts batches (assumes no difference from the coolant)

Volvo T-13 Procedure Update

Suggestion from Joseph Hoehn (Afton):

- Update procedure (D8048 8.6 Measurements) to include wording to account for non-mandatory measurements

Examples of such measurements include:

- 8.6.3.9 *Air Cleaner*—Locate pickups to read the pressure differential for both the high and low sides across the air cleaner, as shown in [Figs. A5.28 and A5.29](#).
- 8.6.3.10 *Coolant Pump*—Locate the pickup on the right side cover, as shown in [Fig. A5.30](#).

Motion from Joseph Hoehn (Afton), Second Sean Moyer (TMC)

- Updates to be added to sections 8.6.2, 8.6.3
 - 8.6.2 Temperatures: The measurement of any temperature that is not listed in Table 1 Test Conditions as being controlled, ranged or uncontrolled but record, should be considered non-mandatory and at the discretion of the laboratory.
 - 8.6.3 Pressures: The measurement of any pressure that is not listed in Table 1 Test Conditions as being controlled, ranged or uncontrolled but record, should be considered non-mandatory and at the discretion of the laboratory.