

Mack / Volvo Surveillance Panel Meeting

December 2, 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
- Mack T-8/T-11/T-12 Parts and Reference Oils Status
- 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 Comments from Nov 11, 2024 Meeting:

Lab A: Start Late November

Lab B: Start Mid-Late December

Lab D: Start Early December

Lab G: Start Late November/Early December

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

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

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

Operational Review of Mack T-12 Tests

- Review includes
 - 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

- Review includes
 - Comparison of Parts Batch YFZQWB to prior batches
 - Effect of Chevron Delo Extended Life Coolant

Volvo T-13 Procedure Update

Suggestion from Joseph Hoehn (Afton):

- Update procedure (D8048 8.6 Measurements) to include following wording to account for non-mandatory measurements; The measurement of any parameter which is not reported or defined as controlled, ranged or uncontrolled should be considered non-mandatory and at the discretion of the laboratory.

Examples of such measurements:

- 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](#).

Mack T-8/T-11/T-12 Hardware

Final Parts Batch

	Mack T-11/T-12	Mack T-8	Total Available Kits	Expected Available Kits (After Avg. Rejection Rates)
Top Rings	Y	Y	308	293
2 nd Rings	Y	Y	288	268
Oil Rings	Y	Y	288	277
Piston Crowns	F (Random Subgroup, Excluding sub A)		230 (w/o sub A)	225 (w/o sub A) (Limiting Part for T-11/T-12)
Rod Bearings	Z		296	290
Main Bearings	Q		358	286
Liner	W		319	287
Piston Skirts	B		295	280

- Purchase Rate for T-11/T-12 kits over the last year is 17 kits/year (13 years of parts remaining).
 - Previous purchase rate was 30-45 kits/year (5 – 8 years of parts remaining)
- Current Purchase Rate for T-8 kits is 2 kits/year (21 years of parts remaining)
 - Previous purchase rate was 4-6 kits/year (7 – 10 years of parts remaining)

Reference Oils Inventory

Test	Reference Oil	TMC Inventory from Semi-Annual Report (Gallons)	Supply
Mack T-8	TMC 1005-5	311	1 year supply
Mack T-11	TMC 822-2	664	2 year supply
Mack T-12	TMC 821-4	1874	5+ year supply
Volvo T-13	TMC 823	~100	2 drums remaining
	TMC 823-1	1007	5+ year supply
	TMC 824	724	3+ year supply