

# OIL ANALYSIS REPORT

# VOLVO PENTA

## MURPHY ZEUS/MERCURY ZEUS/MERCURY - INBOARD (S/N NOT GIVEN) - STARBOARD GEARBOX

Sample No: VPA058208

Oil Type: NOT GIVEN

### SAMPLE INFORMATION

Sample Number	VPA058208	VPA043380	VPA040358	---
Sample Date	20 Dec 2023	03 Aug 2022	26 Jul 2022	---
Machine Hours	0	0	0	---
Oil Hours	0	0	0	---
Oil Changed	N/A	N/A	N/A	---
Sample Status	SEVERE	ABNORMAL	SEVERE	---

Walstrom Marine - 767948

501 Bay Street  
HARBOR SPRINGS, MI  
US 49740

Contact: MARK LEWIS  
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### OIL CONDITION

Visc @ 40°C	cSt	■ 38.2	■ 162	39.4	---
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### CONTAMINATION

Water	%	NEG	▲ 0.403	NEG	---
Silicon	ppm	■ 9	■ <1	■ 4	---
Sodium	ppm	■ 0	■ 0	■ <1	---
Potassium	ppm	■ 7	■ 0	■ 1	---

### Diagnosis

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The copper level is severe. Clutch disc wear or oil cooler leaching indicated. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

### WEAR METALS

PQ		■ 21	■ 20	■ 29	---
Iron	ppm	■ 35	■ 21	■ 32	---
Copper	ppm	● 833	■ 19	● 614	---
Lead	ppm	■ 30	■ <1	■ 23	---
Tin	ppm	■ 0	■ <1	■ <1	---
Aluminum	ppm	■ 3	■ <1	■ 1	---
Chromium	ppm	■ <1	0	<1	---
Molybdenum	ppm	■ 57	37	■ 48	---
Nickel	ppm	■ <1	<1	0	---
Titanium	ppm	<1	0	■ 0	---
Silver	ppm	0	<1	0	---
Manganese	ppm	<1	<1	■ <1	---
Vanadium	ppm	0	0	0	---

### ADDITIVES

Calcium	ppm	2910	213	■ 2531	---
Magnesium	ppm	20	0	■ 17	---
Zinc	ppm	967	2	■ 770	---
Phosphorus	ppm	868	249	■ 691	---
Barium	ppm	0	0	■ <1	---
Boron	ppm	283	2	■ 216	---

Depot: VP154879  
Unique No: 10802998  
Signed: Jonathan Hester  
Report Date: 26 Dec 2023

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## GRAPHS

