

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

## ZF 42069R - INBOARD - STARBOARD GEARBOX

Sample No: VPA020413

Oil Type: SHELL ROTELLA T 40

### SAMPLE INFORMATION

Sample Number	VPA020413	---	---	---
Sample Date	12 Sep 2023	---	---	---
Machine Hours	664	---	---	---
Oil Hours	100	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

### CAROLINA MARINE DIESEL

PO BOX 24159  
HILTON HEAD, SC  
US 29925

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### OIL CONDITION

Visc @ 40°C	cSt	■ 103	---	---	---
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### CONTAMINATION

Silicon	ppm	■ 7	---	---	---
Sodium	ppm	■ 37	---	---	---
Potassium	ppm	■ 4	---	---	---

### WEAR METALS

PQ		■ 28	---	---	---
Iron	ppm	■ 38	---	---	---
Copper	ppm	▲ 476	---	---	---
Lead	ppm	▲ 172	---	---	---
Tin	ppm	■ <1	---	---	---
Aluminum	ppm	■ 3	---	---	---
Chromium	ppm	■ <1	---	---	---
Molybdenum	ppm	■ 78	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	■ <1	---	---	---
Vanadium	ppm	0	---	---	---

### ADDITIVES

Calcium	ppm	■ 2713	---	---	---
Magnesium	ppm	■ 39	---	---	---
Zinc	ppm	■ 910	---	---	---
Phosphorus	ppm	■ 935	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 65	---	---	---

### Diagnosis

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Copper and lead ppm levels are abnormal. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: CARHILSC

Unique No: 10658407

Signed: Angela Borella

Report Date: 22 Sep 2023

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## GRAPHS

