

# OIL ANALYSIS REPORT



## RYAN KELLY SAM ZF 20006121 INBOARD - STARBOARD GEARBOX

**Sample No:** VPA060505  
**Oil Type:** DIESEL ENGINE OIL SAE 30

### SAMPLE INFORMATION

Sample Number	<b>VPA060505</b>	VPA047680	VPA002422	---
Sample Date	<b>14 Feb 2024</b>	16 Jan 2023	13 May 2015	---
Machine Hours	<b>980</b>	828	0	---
Oil Hours	<b>0</b>	133	4	---
Oil Changed	<b>Changed</b>	Not Changd	Changed	---
Sample Status	<b>SEVERE</b>	SEVERE	NORMAL	---

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### OIL CONDITION

Visc @ 40°C	cSt	<b>87.8</b>	89.9	97.88	---
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### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Silicon	ppm	<b>7</b>	7	5	---
Sodium	ppm	<b>&lt;1</b>	1	3	---
Potassium	ppm	<b>0</b>	0	2	---

### WEAR METALS

PQ		<b>13</b>	7	25.0	---
Iron	ppm	<b>11</b>	11	14	---
Copper	ppm	<b>243</b>	256	19	---
Lead	ppm	<b>254</b>	255	244	---
Tin	ppm	<b>4</b>	3	0	---
Aluminum	ppm	<b>1</b>	1	3	---
Chromium	ppm	<b>0</b>	<1	<1	---
Molybdenum	ppm	<b>46</b>	45	70	---
Nickel	ppm	<b>0</b>	<1	<1	---
Titanium	ppm	<b>0</b>	<1	<1	---
Silver	ppm	<b>0</b>	<1	0	---
Manganese	ppm	<b>&lt;1</b>	<1	<1	---
Vanadium	ppm	<b>&lt;1</b>	0	0	---

### ADDITIVES

Calcium	ppm	<b>3498</b>	3287	1371	---
Magnesium	ppm	<b>15</b>	29	677	---
Zinc	ppm	<b>1123</b>	1046	1189	---
Phosphorus	ppm	<b>1040</b>	922	1089	---
Barium	ppm	<b>0</b>	5	0	---
Boron	ppm	<b>444</b>	436	138	---

### Diagnosis

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Clutch wear is indicated. 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:** VP794951  
**Unique No:** 10890140  
**Signed:** Sean Felton  
**Report Date:** 26 Feb 2024

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**VOLVO  
PENTA**

## GRAPHS

