

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

## MICHACCINO M50454 - CENTER DIESEL ENGINE

**Sample No:** VPA058114

**Oil Type:** SHELL ROTELLA T 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA058114</b>	VPA044230	VPA025327	VPA024688
Sample Date	<b>02 Nov 2023</b>	03 Jan 2023	10 Jan 2022	19 Oct 2018
Machine Hours	<b>843</b>	772	708	639
Oil Hours	<b>71</b>	64	0	0
Oil Changed	<b>Changed</b>	Changed	Not Changd	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

### The Talaria Company

202 Banks St., One Little Harbor Landing  
OXFORD, MD

US 21654

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.1</b>	12.9	13.4	13.59
Base Number (BN)	mg KOH/g	<b>7.9</b>	8.7	9.4	---
Oxidation (PA)	%	<b>67</b>	71	73	44

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.2</b>	0.2	0.1	0.1
Nitration (PA)	%	<b>63</b>	69	70	48
Sulfation (PA)	%	<b>57</b>	58	59	40
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>2</b>	3	3	2
Sodium	ppm	<b>&lt;1</b>	4	2	4
Potassium	ppm	<b>7</b>	5	3	1

### WEAR METALS

Iron	ppm	<b>8</b>	11	18	7
Copper	ppm	<b>63</b>	57	34	10
Lead	ppm	<b>&lt;1</b>	<1	1	<1
Tin	ppm	<b>0</b>	<1	<1	0
Aluminum	ppm	<b>1</b>	2	2	1
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>6</b>	4	17	53
Nickel	ppm	<b>&lt;1</b>	0	0	<1
Titanium	ppm	<b>&lt;1</b>	0	<1	0
Silver	ppm	<b>0</b>	<1	<1	0
Manganese	ppm	<b>0</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>2159</b>	2221	1812	1172
Magnesium	ppm	<b>33</b>	59	250	902
Zinc	ppm	<b>1126</b>	1126	1175	1173
Phosphorus	ppm	<b>930</b>	975	944	960
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>201</b>	166	130	6

### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

**Depot:** VP592286

**Unique No:** 10751226

**Signed:** Angela Borella

**Report Date:** 21 Nov 2023

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## GRAPHS

