

# OIL ANALYSIS REPORT

# VOLVO PENTA

## NORTHERN LIGHTS 0642-58267 - PORT GENSET

**Sample No:** VPA051741

**Oil Type:** VOLVO VDS-4.5 Premium Motor Oil 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA051741</b>	VPA034053	VPA034080	VPA038799
Sample Date	<b>04 Oct 2023</b>	08 Mar 2023	23 Nov 2022	20 Apr 2022
Machine Hours	<b>5981</b>	4995	4611	3461
Oil Hours	<b>986</b>	1179	750	468
Oil Changed	<b>Changed</b>	Changed	Not Changd	Not Changd
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

### NEWT MARINE

5 JONES ST  
DUBUQUE, IA  
US 52001  
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T:  
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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.0</b>	12.3	13.0	13.3
Base Number (BN)	mg KOH/g	<b>8.9</b>	9.8	10.6	10.4
Oxidation (PA)	%	<b>63</b>	67	69	67

### CONTAMINATION

Soot %	%	<b>0.1</b>	0.1	0.1	0.1
Nitration (PA)	%	<b>55</b>	64	63	58
Sulfation (PA)	%	<b>55</b>	58	61	60
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	0.3	<1.0	<1.0
Silicon	ppm	<b>4</b>	5	4	4
Sodium	ppm	<b>4</b>	1	2	2
Potassium	ppm	<b>1</b>	1	0	0

### 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.

### WEAR METALS

Iron	ppm	<b>6</b>	10	8	10
Copper	ppm	<b>2</b>	<1	<1	<1
Lead	ppm	<b>7</b>	11	8	4
Tin	ppm	<b>0</b>	<1	<1	<1
Aluminum	ppm	<b>1</b>	2	<1	2
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>61</b>	65	65	68
Nickel	ppm	<b>0</b>	<1	0	0
Titanium	ppm	<b>0</b>	0	0	0
Silver	ppm	<b>0</b>	0	0	<1
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>1075</b>	1160	1144	1198
Magnesium	ppm	<b>1048</b>	1031	1011	1090
Zinc	ppm	<b>1381</b>	1372	1291	1278
Phosphorus	ppm	<b>1069</b>	1077	1049	1140
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>&lt;1</b>	2	4	6

**Depot:** VP99298099  
**Unique No:** 10722505  
**Signed:** Sean Felton  
**Report Date:** 01 Nov 2023

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## GRAPHS

