

OIL ANALYSIS REPORT



JOHN GREGORY VOLVO PENTA 2013906340 - STARBOARD DIESEL ENGINE

Sample No: VPA056156
Oil Type: VOLVO PENTA SAE 15W40

SAMPLE INFORMATION

Sample Number	VPA056156	VPA044271	VPA040697	---
Sample Date	04 Jan 2024	22 Nov 2022	09 Dec 2021	---
Machine Hours	976	750	502	---
Oil Hours	200	200	200	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	NORMAL	NORMAL	NORMAL	---

GRAND BANKS
 450 SW SALEM RD
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OIL CONDITION

Visc @ 100°C	cSt	13.2	12.8	12.7	---
Base Number (BN)	mg KOH/g	8.7	8.5	9.5	---
Oxidation (PA)	%	60	65	63	---

CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	0.4	0.4	0.3	---
Nitration (PA)	%	62	67	62	---
Sulfation (PA)	%	54	59	57	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	4	6	9	---
Sodium	ppm	2	1	2	---
Potassium	ppm	<1	<1	3	---

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	8	9	10	---
Copper	ppm	1	1	3	---
Lead	ppm	<1	1	1	---
Tin	ppm	<1	1	1	---
Aluminum	ppm	1	1	2	---
Chromium	ppm	<1	<1	<1	---
Molybdenum	ppm	59	58	60	---
Nickel	ppm	0	<1	0	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	0	<1	---
Manganese	ppm	<1	<1	<1	---
Vanadium	ppm	<1	<1	0	---

ADDITIVES

Calcium	ppm	1096	1066	1120	---
Magnesium	ppm	952	922	1024	---
Zinc	ppm	1273	1217	1335	---
Phosphorus	ppm	1058	985	1114	---
Barium	ppm	0	0	0	---
Boron	ppm	<1	3	1	---

Depot: VP531377
Unique No: 10822417
Signed: Don Baldrige
Report Date: 11 Jan 2024

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**VOLVO
PENTA**

GRAPHS

