

OIL ANALYSIS REPORT

**VOLVO
PENTA**

TIM BOWE ANDREW FISCHER PANDA 173931 - CENTER GENSET

Sample No: VPA050691
Oil Type: SHELL 15W40

SAMPLE INFORMATION

Sample Number	VPA050691	VPA045238	VPA038255	---
Sample Date	27 Oct 2023	21 Sep 2022	02 Aug 2021	---
Machine Hours	947	700	416	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	N/A	---
Sample Status	NORMAL	NORMAL	NORMAL	---

GRAND BANKS

450 SW SALEM RD
STUART, FL
US 34994
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OIL CONDITION

Visc @ 100°C	cSt	13.1	13.2	13.3	---
Base Number (BN)	mg KOH/g	9.8	9.9	---	---
Oxidation (PA)	%	59	69	66	---

CONTAMINATION

Soot %	%	0.1	0.2	0.2	---
Nitration (PA)	%	46	63	63	---
Sulfation (PA)	%	53	60	58	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	6	14	17	---
Sodium	ppm	<1	3	4	---
Potassium	ppm	<1	8	5	---

WEAR METALS

Iron	ppm	1	8	14	---
Copper	ppm	<1	6	2	---
Lead	ppm	0	<1	3	---
Tin	ppm	<1	<1	<1	---
Aluminum	ppm	1	2	0	---
Chromium	ppm	<1	<1	<1	---
Molybdenum	ppm	61	23	27	---
Nickel	ppm	0	0	0	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	<1	<1	---
Manganese	ppm	<1	<1	<1	---
Vanadium	ppm	0	<1	0	---

ADDITIVES

Calcium	ppm	1173	1822	1973	---
Magnesium	ppm	988	398	363	---
Zinc	ppm	1407	1242	1242	---
Phosphorus	ppm	1123	1017	1071	---
Barium	ppm	0	0	0	---
Boron	ppm	15	103	127	---

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: VP531377
Unique No: 10727194
Signed: Don Baldrige
Report Date: 07 Nov 2023

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GRAPHS

