

OIL ANALYSIS REPORT

**VOLVO
PENTA**

EXLEY JB CATERPILLAR 4KG06481 - PORT DIESEL ENGINE

Sample No: VPA044787

Oil Type: CAT DIESEL ENGINE OIL 15W40

SAMPLE INFORMATION

Sample Number	VPA044787	VPA044801	VPA035978	---
Sample Date	15 Nov 2023	01 Nov 2022	23 Nov 2021	---
Machine Hours	1151	1102	1064	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	ABNORMAL	NORMAL	ATTENTION	---

Point Judith Marina

360 Gooseberry Road
WAKEFIELD, RI
US 02879

Contact: MATT ST. ANGELO
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OIL CONDITION

Visc @ 100°C	cSt	█ 14.7	█ 14.8	█ 15.0	---
Base Number (BN)	mg KOH/g	█ 10.5	█ 11.5	█ 8.8	---
Oxidation (PA)	%	█ 37	41	66	---

CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	█ 0.3	█ 0.1	█ 0.2	---
Nitration (PA)	%	█ 48	49	50	---
Sulfation (PA)	%	█ 43	45	57	---
Glycol	%	NEG	NEG	█ 0.0	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	█ 3	█ 4	█ 2	---
Sodium	ppm	▲ 209	█ 37	▲ 101	---
Potassium	ppm	█ 12	█ 4	█ 13	---

Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. The BN result indicates that there is suitable alkalinity remaining in the oil.

WEAR METALS

Iron	ppm	█ 30	█ 34	█ 27	---
Copper	ppm	█ 3	█ 2	█ 2	---
Lead	ppm	█ 2	█ <1	█ 1	---
Tin	ppm	█ 0	█ <1	█ <1	---
Aluminum	ppm	█ <1	█ <1	█ <1	---
Chromium	ppm	█ <1	█ <1	█ <1	---
Molybdenum	ppm	█ 2	█ 5	█ 3	---
Nickel	ppm	█ 0	█ 0	█ <1	---
Titanium	ppm	█ <1	█ 0	█ <1	---
Silver	ppm	█ 0	█ 0	█ <1	---
Manganese	ppm	█ <1	█ <1	█ <1	---
Vanadium	ppm	<1	0	<1	---

ADDITIVES

Calcium	ppm	█ 1413	█ 1522	█ 2322	---
Magnesium	ppm	█ 1302	█ 1074	█ 39	---
Zinc	ppm	█ 1399	█ 1284	█ 1192	---
Phosphorus	ppm	█ 990	█ 1076	█ 1063	---
Barium	ppm	█ 0	█ 0	█ 0	---
Boron	ppm	█ 5	█ 22	█ 174	---

Depot: VP153811
Unique No: 10755296
Signed: Jonathan Hester
Report Date: 27 Nov 2023

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GRAPHS

