

OIL ANALYSIS REPORT

VOLVO PENTA

SAMO SAMO VOLVO PENTA 20132091274 - CENTER RIGHT DIESEL ENGINE

Sample No: VPA049886

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

SAMPLE INFORMATION

Sample Number	VPA049886	VPA046340	---	---
Sample Date	02 Nov 2023	05 Apr 2023	---	---
Machine Hours	302	201	---	---
Oil Hours	50	201	---	---
Oil Changed	Changed	Not Changd	---	---
Sample Status	NORMAL	MARGINAL	---	---

Marine International Diesels Inc.

3600 HACIENDA BLVD UNIT G
DAVIE, FL
US 33314
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OIL CONDITION

Visc @ 100°C	cSt	█ 13.3	█ 13.1	---	---
Base Number (BN)	mg KOH/g	█ 8.3	█ 7.6	---	---
Oxidation (PA)	%	51	33	---	---

CONTAMINATION

Soot %	%	█ 0.2	█ 0.4	---	---
Nitration (PA)	%	41	45	---	---
Sulfation (PA)	%	49	42	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	█ 12	▲ 33	---	---
Sodium	ppm	█ 1	█ <1	---	---
Potassium	ppm	█ 5	█ 25	---	---

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	█ 7	█ 28	---	---
Copper	ppm	█ 10	█ 44	---	---
Lead	ppm	█ 0	█ 1	---	---
Tin	ppm	█ 0	█ 2	---	---
Aluminum	ppm	█ 3	█ 17	---	---
Chromium	ppm	█ <1	█ <1	---	---
Molybdenum	ppm	█ 51	8	---	---
Nickel	ppm	█ 0	█ 0	---	---
Titanium	ppm	█ 0	█ 0	---	---
Silver	ppm	█ 0	█ 0	---	---
Manganese	ppm	█ 0	█ 3	---	---
Vanadium	ppm	0	0	---	---

ADDITIVES

Calcium	ppm	985	█ 1175	---	---
Magnesium	ppm	899	█ 934	---	---
Zinc	ppm	█ 1187	█ 1311	---	---
Phosphorus	ppm	█ 1024	█ 1050	---	---
Barium	ppm	█ 5	█ 0	---	---
Boron	ppm	█ 0	█ 6	---	---

Depot: VP694356
Unique No: 10729261
Signed: Sean Felton
Report Date: 09 Nov 2023

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GRAPHS

