

OIL ANALYSIS REPORT

VOLVO PENTA

LIQUID VOLVO PENTA 20132177219 - STARBOARD DIESEL ENGINE

Sample No: VPA053291

Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

Sample Number	VPA053291	---	---	---
Sample Date	01 May 2024	---	---	---
Machine Hours	138	---	---	---
Oil Hours	138	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

FDDA TAMPA

TAMPA, FL
US
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OIL CONDITION

Visc @ 100°C	cSt	█ 12.6	---	---	---
Base Number (BN)	mg KOH/g	█ 9.1	---	---	---
Oxidation (PA)	%	77	---	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. Elemental level of silicon (Si) above normal indicating ingress of seal material. 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.

CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	█ 0.4	---	---	---
Nitration (PA)	%	58	---	---	---
Sulfation (PA)	%	60	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	● 33	---	---	---
Sodium	ppm	█ 2	---	---	---
Potassium	ppm	█ 18	---	---	---

WEAR METALS

Iron	ppm	█ 14	---	---	---
Copper	ppm	█ 6	---	---	---
Lead	ppm	█ <1	---	---	---
Tin	ppm	█ 3	---	---	---
Aluminum	ppm	█ 12	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	█ 52	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	█ 0	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ 2	---	---	---
Vanadium	ppm	0	---	---	---

ADDITIVES

Calcium	ppm	█ 1858	---	---	---
Magnesium	ppm	█ 446	---	---	---
Zinc	ppm	█ 1138	---	---	---
Phosphorus	ppm	█ 982	---	---	---
Barium	ppm	█ <1	---	---	---
Boron	ppm	█ 54	---	---	---

Depot: VP208641
Unique No: 11019449
Signed: Don Baldrige
Report Date: 11 May 2024

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GRAPHS

