OIL ANALYSIS REPORT

VOLVO PENTA

CROWN JEWEL   VOLVO PENTA 70112034276 - PORT DIESEL ENGINE

Sample No: VPA036995

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

SAMPLE INFORMATION

Sample Number		**VPA036995**	VPA046768	---	---
Sample Date		**25 Apr 2024**	09 Aug 2023	---	---
Machine Hours		**430**	188	---	---
Oil Hours		**241**	188	---	---
Oil Changed		**Changed**	Changed	---	---
Sample Status		**ATTENTION**	ATTENTION	---	---

OIL CONDITION

Visc @ 100°C	cSt	🟠 **11.6**	🟡 10.6	---	---
Base Number (BN)	mg KOH/g	🟩 **8.4**	🟩 7.6	---	---
Oxidation (PA)	%	**61**	62	---	---

CONTAMINATION

Water	%	**NEG**	NEG	---	---
Soot %	%	🟩 **0.7**	🟩 0.4	---	---
Nitration (PA)	%	**68**	74	---	---
Sulfation (PA)	%	**58**	54	---	---
Glycol	%	**NEG**	NEG	---	---
Fuel	%	⚠️ **3.3**	⚠️ 2.8	---	---
Silicon	ppm	🟩 **12**	🟩 37	---	---
Sodium	ppm	🟩 **12**	🟩 4	---	---
Potassium	ppm	🟩 **3**	🟩 4	---	---

WEAR METALS

Iron	ppm	🟩 **26**	🟩 15	---	---
Copper	ppm	⚠️ **125**	🟩 147	---	---
Lead	ppm	🟩 **2**	🟩 2	---	---
Tin	ppm	🟩 **2**	🟩 3	---	---
Aluminum	ppm	🟩 **3**	🟩 7	---	---
Chromium	ppm	🟩 **1**	🟩 2	---	---
Molybdenum	ppm	🟩 **64**	🟩 76	---	---
Nickel	ppm	🟩 **3**	🟩 1	---	---
Titanium	ppm	🟩 **<1**	🟩 0	---	---
Silver	ppm	🟩 **<1**	🟩 <1	---	---
Manganese	ppm	🟩 **<1**	🟩 2	---	---
Vanadium	ppm	**<1**	0	---	---

ADDITIVES

Calcium	ppm	🟩 **1190**	🟩 2144	---	---
Magnesium	ppm	🟩 **809**	🟩 121	---	---
Zinc	ppm	🟩 **1163**	🟩 1177	---	---
Phosphorus	ppm	🟩 **938**	🟩 980	---	---
Barium	ppm	🟩 **<1**	🟩 0	---	---
Boron	ppm	🟩 **8**	🟩 46	---	---

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Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level is abnormal. All other component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Depot:	VP152963
Unique No:	11103951
Signed:	Doug Bogart
Report Date:	05 Jul 2024

OIL ANALYSIS REPORT

GRAPHS

Iron (ppm)

Lead (ppm)

Aluminum (ppm)

Chromium (ppm)

⚠ Copper (ppm)

Silicon (ppm)

● Viscosity @ 100°C

Base Number