

OIL ANALYSIS REPORT

**VOLVO
PENTA**

CROWN JEWEL VOLVO PENTA 70112034294 - STARBOARD DIESEL ENGINE

Sample No: VPA036807
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA036807	VPA046692	---	---
Sample Date	25 Jun 2024	09 Aug 2023	---	---
Machine Hours	430	188	---	---
Oil Hours	241	188	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ATTENTION	ATTENTION	---	---

Jas Marine Service Inc.
1009 Newman RD.
LAKE PARK, FL
US 33403
Contact: DEBBIE
debbie@jasmarine.com
T: (561)844-3224
F:

OIL CONDITION

Visc @ 100°C	cSt	11.6	10.6	---	---
Base Number (BN)	mg KOH/g	8.3	7.4	---	---
Oxidation (PA)	%	60	62	---	---

CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.7	0.4	---	---
Nitration (PA)	%	68	73	---	---
Sulfation (PA)	%	58	54	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	2.5	2.9	---	---
Silicon	ppm	13	40	---	---
Sodium	ppm	3	4	---	---
Potassium	ppm	2	4	---	---

WEAR METALS

Iron	ppm	18	15	---	---
Copper	ppm	121	133	---	---
Lead	ppm	2	2	---	---
Tin	ppm	2	3	---	---
Aluminum	ppm	3	6	---	---
Chromium	ppm	1	1	---	---
Molybdenum	ppm	64	75	---	---
Nickel	ppm	3	1	---	---
Titanium	ppm	<1	<1	---	---
Silver	ppm	<1	<1	---	---
Manganese	ppm	<1	2	---	---
Vanadium	ppm	<1	0	---	---

ADDITIVES

Calcium	ppm	1172	2132	---	---
Magnesium	ppm	841	133	---	---
Zinc	ppm	1185	1166	---	---
Phosphorus	ppm	948	971	---	---
Barium	ppm	<1	0	---	---
Boron	ppm	3	49	---	---

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: 11103952
Signed: Doug Bogart
Report Date: 05 Jul 2024

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GRAPHS

