

OIL ANALYSIS REPORT



ED OELTJEN DANIEL/502899 VOLVO PENTA SGM323SPL - STARBOARD DIESEL ENGINE

Sample No: VPA062858
Oil Type: VOLVO PENTA SAE 15W40

SAMPLE INFORMATION

Sample Number	VPA062858	VPA055434	VPA048972	---
Sample Date	15 Apr 2024	27 Mar 2023	29 Mar 2022	---
Machine Hours	723	677	615	---
Oil Hours	0	76	0	---
Oil Changed	Changed	N/A	Changed	---
Sample Status	ATTENTION	NORMAL	NORMAL	---

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OIL CONDITION

Visc @ 100°C	cSt	13.6	13.7	14.12	---
Base Number (BN)	mg KOH/g	9.8	9.8	10.6	---
Oxidation (PA)	%	62	62	71	---

CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	0.4	0.4	0.7	---
Nitration (PA)	%	59	62	82	---
Sulfation (PA)	%	57	57	64	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	18	13	22	---
Sodium	ppm	5	4	0	---
Potassium	ppm	5	2	4	---

Diagnosis

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Cylinder, crank, or cam shaft wear is indicated. All other 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	105	69	89	---
Copper	ppm	15	11	16	---
Lead	ppm	1	1	1	---
Tin	ppm	1	<1	1	---
Aluminum	ppm	8	5	6	---
Chromium	ppm	5	3	5	---
Molybdenum	ppm	86	60	65	---
Nickel	ppm	4	3	0	---
Titanium	ppm	<1	0	0	---
Silver	ppm	<1	0	<1	---
Manganese	ppm	<1	<1	<1	---
Vanadium	ppm	<1	<1	0	---

ADDITIVES

Calcium	ppm	1520	1058	1146	---
Magnesium	ppm	1434	950	1019	---
Zinc	ppm	1858	1236	1364	---
Phosphorus	ppm	1624	1025	1132	---
Barium	ppm	0	0	0	---
Boron	ppm	1	0	1	---

Depot: VP794951
Unique No: 10989449
Signed: Don Baldrige
Report Date: 23 Apr 2024

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**VOLVO
PENTA**

GRAPHS

