

OIL ANALYSIS REPORT

VOLVO PENTA

RAY KOHLER 33CTGMHD0001 - STARBOARD GENSET

Sample No: VPA023261

Oil Type: 5W40 SYN

SAMPLE INFORMATION

Sample Number	VPA023261	VPA034001	VPA038817	---
Sample Date	01 Aug 2023	22 Feb 2023	26 Jul 2022	---
Machine Hours	1813	1336	857	---
Oil Hours	250	155	425	---
Oil Changed	Changed	Not Changd	Changed	---
Sample Status	NORMAL	NORMAL	NORMAL	---

NEWT MARINE

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OIL CONDITION

Visc @ 100°C	cSt	█ 13.7	█ 13.7	█ 14.8	---
Base Number (BN)	mg KOH/g	8.5	9.2	8.7	---
Oxidation (PA)	%	72	71	87	---

CONTAMINATION

Soot %	%	█ 0.1	█ 0.1	█ 0.1	---
Nitration (PA)	%	74	75	91	---
Sulfation (PA)	%	52	53	60	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	█ 4	█ 5	█ 9	---
Sodium	ppm	█ 3	█ 0	█ 4	---
Potassium	ppm	█ 1	█ 5	█ 1	---

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	█ 8	█ 11	█ 22	---
Copper	ppm	█ <1	█ 6	█ 3	---
Lead	ppm	█ 0	█ <1	█ <1	---
Tin	ppm	█ 0	█ 0	█ 0	---
Aluminum	ppm	█ <1	█ 2	█ 1	---
Chromium	ppm	█ <1	█ 2	█ 4	---
Molybdenum	ppm	56	60	60	---
Nickel	ppm	█ 0	█ 0	█ 0	---
Titanium	ppm	<1	<1	<1	---
Silver	ppm	█ 0	█ 0	0	---
Manganese	ppm	<1	<1	<1	---
Vanadium	ppm	<1	0	0	---

ADDITIVES

Calcium	ppm	900	912	857	---
Magnesium	ppm	1100	987	1037	---
Zinc	ppm	1347	1222	1247	---
Phosphorus	ppm	1024	1037	1009	---
Barium	ppm	0	0	2	---
Boron	ppm	37	29	42	---

Depot: VP99298099
Unique No: 10593015
Signed: Don Baldrige
Report Date: 11 Aug 2023

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GRAPHS

