

OIL ANALYSIS REPORT



JOHN LUGGER SAM VOLVO PENTA 7011383669 - STARBOARD DIESEL ENGINE

Sample No: VPA060426
Oil Type: VOLVO PENTA SAE 15W40

SAMPLE INFORMATION

Sample Number	VPA060426	VPA048927	VPA037053	VPA030680
Sample Date	13 Mar 2024	11 Nov 2022	01 Feb 2022	07 Mar 2020
Machine Hours	1442	1127	861	450
Oil Hours	0	176	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	12.8	13.1	12.9	12.7
Base Number (BN)	mg KOH/g	8.4	10.0	9.7	---
Oxidation (PA)	%	68	73	68	61

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.7	0.5	0.5	0.4
Nitration (PA)	%	76	81	72	61
Sulfation (PA)	%	61	66	64	57
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	5	5	9
Sodium	ppm	2	<1	2	3
Potassium	ppm	1	0	0	0

WEAR METALS

Iron	ppm	14	11	13	11
Copper	ppm	126	80	87	50
Lead	ppm	2	<1	2	<1
Tin	ppm	1	<1	<1	<1
Aluminum	ppm	2	<1	<1	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	65	66	57	61
Nickel	ppm	3	0	0	1
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	1183	1143	1053	1009
Magnesium	ppm	974	960	947	871
Zinc	ppm	1259	1247	1188	1069
Phosphorus	ppm	1083	1089	1074	967
Barium	ppm	0	0	0	0
Boron	ppm	14	5	10	3

Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The copper level is abnormal. 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.

Depot: VP794951
Unique No: 10937612
Signed: Don Baldrige
Report Date: 22 Mar 2024

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VOLVO PENTA

GRAPHS

