

OIL ANALYSIS REPORT

VOLVO PENTA

BIZZY M51689 - STARBOARD DIESEL ENGINE

Sample No: VPA058448

Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

Sample Number	VPA058448	VPA044169	VPA030048	VPA010838
Sample Date	29 Nov 2023	21 Dec 2022	26 Feb 2020	26 Oct 2017
Machine Hours	1034	0	0	811
Oil Hours	0	0	0	0
Oil Changed	N/A	Changed	N/A	Changed
Sample Status	SEVERE	NORMAL	NORMAL	NORMAL

The Talaria Company

202 Banks St., One Little Harbor Landing
OXFORD, MD

US 21654

Contact: TRACY PELLERIN

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OIL CONDITION

Visc @ 100°C	cSt	█ 14.4	█ 13.7	█ 13.7	█ 13.72
Base Number (BN)	mg KOH/g	█ 9.0	█ 8.8	---	---
Oxidation (PA)	%	█ 69	71	59	█ 48

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	█ 0.2	█ 0.1	█ 0.2	█ 0
Nitration (PA)	%	█ 86	58	53	█ 50
Sulfation (PA)	%	█ 67	58	51	█ 42
Glycol	%	█ 0.12	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	█ 16	█ 5	█ 6	█ 5
Sodium	ppm	▲ 5444	█ 2	█ 2	█ 3
Potassium	ppm	▲ 265	█ 8	█ 0	█ 2

WEAR METALS

Iron	ppm	█ 350	█ 17	█ 16	█ 11
Copper	ppm	▲ 441	█ 4	█ 4	█ 7
Lead	ppm	█ 10	█ 2	█ <1	█ <1
Tin	ppm	█ 7	█ <1	█ 0	█ 8
Aluminum	ppm	█ 81	█ 2	█ 3	█ 2
Chromium	ppm	▲ 10	█ <1	█ <1	█ <1
Molybdenum	ppm	█ 38	█ 2	█ 46	█ 58
Nickel	ppm	█ 4	█ <1	█ <1	█ 1
Titanium	ppm	█ 0	█ 0	█ <1	█ 0
Silver	ppm	█ 0	█ <1	█ 0	█ 0
Manganese	ppm	█ 2	█ <1	<1	<1
Vanadium	ppm	█ 0	<1	0	0

ADDITIVES

Calcium	ppm	█ 1939	█ 2307	█ 1248	█ 1096
Magnesium	ppm	█ 1397	█ 27	█ 797	█ 908
Zinc	ppm	█ 1292	█ 1259	█ 1077	█ 1131
Phosphorus	ppm	█ 1060	█ 1034	█ 927	█ 893
Barium	ppm	█ 0	█ 0	█ 0	█ 0
Boron	ppm	█ 63	█ 191	█ 26	█ 2

Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. The copper level is abnormal. Piston, ring and cylinder wear is indicated. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil. The oil is no longer serviceable due to the presence of contaminants.

Depot: VP592286

Unique No: 10767893

Signed: Jonathan Hester

Report Date: 05 Dec 2023

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GRAPHS

