

OIL ANALYSIS REPORT

VOLVO PENTA

GARRISON NORTON 3252-200 VOLVO PENTA 70112003804 - STARBOARD DIESEL ENGINE

Sample No: VPA258847

Oil Type: VOLVO PENTA SAE 15W40

SAMPLE INFORMATION

Sample Number	VPA258847	VPA045246	VPA037362	---
Sample Date	12 Jul 2023	30 Aug 2022	20 Oct 2021	---
Machine Hours	266	198	98	---
Oil Hours	0	100	97	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	NORMAL	NORMAL	ATTENTION	---

GRAND BANKS

450 SW SALEM RD

STUART, FL

US 34994

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F:

OIL CONDITION

Visc @ 100°C	cSt	12.8	12.4	▲ 11.4	---
Base Number (BN)	mg KOH/g	10.3	11.1	---	---
Oxidation (PA)	%	55	61	62	---

CONTAMINATION

Soot %	%	0.1	0.1	0.3	---
Nitration (PA)	%	42	49	48	---
Sulfation (PA)	%	52	55	53	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	0.6	---
Silicon	ppm	6	11	33	---
Sodium	ppm	1	<1	2	---
Potassium	ppm	2	0	2	---

WEAR METALS

Iron	ppm	5	6	20	---
Copper	ppm	4	8	24	---
Lead	ppm	0	<1	2	---
Tin	ppm	<1	<1	2	---
Aluminum	ppm	<1	<1	2	---
Chromium	ppm	<1	<1	<1	---
Molybdenum	ppm	64	54	55	---
Nickel	ppm	<1	<1	0	---
Titanium	ppm	0	0	<1	---
Silver	ppm	0	<1	<1	---
Manganese	ppm	<1	<1	1	---
Vanadium	ppm	0	0	<1	---

ADDITIVES

Calcium	ppm	1152	964	1154	---
Magnesium	ppm	1057	835	784	---
Zinc	ppm	1404	1110	1179	---
Phosphorus	ppm	1177	915	959	---
Barium	ppm	0	<1	0	---
Boron	ppm	2	5	22	---

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 suitable for further service.

Depot: VP531377

Unique No: 10560873

Signed: Don Baldrige

Report Date: 18 Jul 2023

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GRAPHS

