

OIL ANALYSIS REPORT



BERNARD GOODIN 3723/55-15 VOLVO PENTA 2013660339 - STARBOARD DIESEL ENGINE

Sample No: VPA053516
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA053516	VPA047956	---	---
Sample Date	08 Apr 2024	19 Jan 2023	---	---
Machine Hours	700	800	---	---
Oil Hours	0	150	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	NORMAL	---	---

GRAND BANKS
 450 SW SALEM RD
 STUART, FL
 US 34994
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OIL CONDITION

Visc @ 100°C	cSt	13.3	13.0	---	---
Base Number (BN)	mg KOH/g	9.4	9.7	---	---
Oxidation (PA)	%	53	55	---	---

CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.2	0.2	---	---
Nitration (PA)	%	46	57	---	---
Sulfation (PA)	%	50	52	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	2	6	---	---
Sodium	ppm	<1	1	---	---
Potassium	ppm	0	3	---	---

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	11	17	---	---
Copper	ppm	2	3	---	---
Lead	ppm	<1	2	---	---
Tin	ppm	1	1	---	---
Aluminum	ppm	5	25	---	---
Chromium	ppm	<1	2	---	---
Molybdenum	ppm	61	68	---	---
Nickel	ppm	0	<1	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	<1	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	<1	0	---	---

ADDITIVES

Calcium	ppm	1061	1213	---	---
Magnesium	ppm	973	1063	---	---
Zinc	ppm	1170	1453	---	---
Phosphorus	ppm	1008	1184	---	---
Barium	ppm	0	0	---	---
Boron	ppm	0	0	---	---

Depot: VP531377
Unique No: 10989299
Signed: Sean Felton
Report Date: 23 Apr 2024

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GRAPHS

