

OIL ANALYSIS REPORT



RICK GARTON 3729/54-01 VOLVO PENTA 7011440531 - PORT DIESEL ENGINE

Sample No: VPA050485

Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA050485	VPA044577	VPA039139	VPA028805
Sample Date	17 Jun 2024	08 Nov 2022	04 Oct 2021	31 Mar 2021
Machine Hours	587	512	476	440
Oil Hours	0	120	100	70
Oil Changed	Changed	Changed	Changed	N/A
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

GRAND BANKS

450 SW SALEM RD
STUART, FL
US 34994
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OIL CONDITION

Visc @ 100°C	cSt	12.7	13.0	12.4	12.5
Base Number (BN)	mg KOH/g	9.8	11.3	---	---
Oxidation (PA)	%	56	59	58	60

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.1	0.2	0.2
Nitration (PA)	%	51	49	49	48
Sulfation (PA)	%	53	55	54	58
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	4	9	9
Sodium	ppm	<1	<1	2	1
Potassium	ppm	3	2	0	0

WEAR METALS

Iron	ppm	4	4	4	3
Copper	ppm	22	10	18	16
Lead	ppm	0	<1	0	<1
Tin	ppm	<1	<1	0	<1
Aluminum	ppm	1	1	<1	<1
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	58	57	54	60
Nickel	ppm	0	<1	<1	0
Titanium	ppm	0	0	<1	0
Silver	ppm	0	3	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	1082	1037	1050	1116
Magnesium	ppm	974	907	955	1018
Zinc	ppm	1286	1185	1135	1265
Phosphorus	ppm	1061	989	1006	1118
Barium	ppm	0	0	0	0
Boron	ppm	3	2	4	3

Diagnosis

No corrective action is recommended at this time. 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 condition of the oil is acceptable for the time in service.

Depot: VP531377
Unique No: 11098671
Signed: Don Baldrige
Report Date: 27 Jun 2024

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GRAPHS

