

OIL ANALYSIS REPORT



NADINE URUIOLI SCOTT LINGEN VOLVO PENTA 7008508430 - STARBOARD DIESEL ENGINE

Sample No: VPA052157
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

Sample Number	VPA052157	VPA050629	VPA038595	---
Sample Date	29 Apr 2024	01 Jun 2023	14 Feb 2022	---
Machine Hours	238	238	127	---
Oil Hours	238	238	127	---
Oil Changed	Changed	Not Changd	Changed	---
Sample Status	NORMAL	NORMAL	NORMAL	---

Helmut's Marine Service
 619 Canal Street
 SAN RAFAEL, CA
 US 94901-3545
 Contact: NADINE URUIOLI
 SERVICE@HELMUTSMARINE.COM
 T: x:
 F: x:

OIL CONDITION

Visc @ 100°C	cSt	13.1	13.2	13.4	---
Base Number (BN)	mg KOH/g	9.9	10.3	10.6	---
Oxidation (PA)	%	55	56	68	---

CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	0.2	0.2	0.2	---
Nitration (PA)	%	48	53	53	---
Sulfation (PA)	%	52	53	65	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	11	12	24	---
Sodium	ppm	2	1	4	---
Potassium	ppm	<1	0	1	---

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.

WEAR METALS

Iron	ppm	13	16	13	---
Copper	ppm	67	43	41	---
Lead	ppm	0	0	0	---
Tin	ppm	<1	0	<1	---
Aluminum	ppm	4	5	7	---
Chromium	ppm	1	1	2	---
Molybdenum	ppm	64	66	111	---
Nickel	ppm	1	<1	<1	---
Titanium	ppm	0	<1	<1	---
Silver	ppm	<1	<1	<1	---
Manganese	ppm	1	<1	<1	---
Vanadium	ppm	0	0	0	---

ADDITIVES

Calcium	ppm	1151	1150	1500	---
Magnesium	ppm	1007	974	718	---
Zinc	ppm	1322	1248	929	---
Phosphorus	ppm	1144	1014	811	---
Barium	ppm	0	0	<1	---
Boron	ppm	6	24	292	---

Depot: VP152741
Unique No: 11018394
Signed: Sean Felton
Report Date: 10 May 2024

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VOLVO PENTA

GRAPHS

