

OIL ANALYSIS REPORT



NADINE URUIOLI SOLANO SHERIFF VOLVO PENTA A1166302 - CENTER DIESEL ENGINE

Sample No: VPA052307
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

Sample Number	VPA052307	VPA055565	---	---
Sample Date	04 Apr 2024	29 Sep 2023	---	---
Machine Hours	406	209	---	---
Oil Hours	406	209	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	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	12.7	12.78	---	---
Base Number (BN)	mg KOH/g	9.8	9.4	---	---
Oxidation (PA)	%	58	62	---	---

CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.4	0.2	---	---
Nitration (PA)	%	53	48	---	---
Sulfation (PA)	%	53	54	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	7	18	---	---
Sodium	ppm	2	3	---	---
Potassium	ppm	2	<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 acceptable for the time in service.

WEAR METALS

Iron	ppm	19	17	---	---
Copper	ppm	8	12	---	---
Lead	ppm	2	3	---	---
Tin	ppm	2	2	---	---
Aluminum	ppm	2	4	---	---
Chromium	ppm	1	1	---	---
Molybdenum	ppm	62	56	---	---
Nickel	ppm	2	3	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	<1	0	---	---

ADDITIVES

Calcium	ppm	1146	1259	---	---
Magnesium	ppm	1007	864	---	---
Zinc	ppm	1237	1194	---	---
Phosphorus	ppm	1061	972	---	---
Barium	ppm	1	0	---	---
Boron	ppm	2	14	---	---

Depot: VP152741
Unique No: 10979830
Signed: Don Baldrige
Report Date: 18 Apr 2024

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VOLVO PENTA

GRAPHS

