

OIL ANALYSIS REPORT

**VOLVO
PENTA**

7011366198 - STARBOARD DIESEL ENGINE

Sample No: VPA047275

Oil Type: CHEVRON DELO 400 MULTIGRADE 15W40

SAMPLE INFORMATION

Sample Number	VPA047275	VPA034207	VPA033949	---
Sample Date	07 Jul 2023	15 Jun 2023	08 Jun 2022	---
Machine Hours	10795	10661	9197	---
Oil Hours	100	600	601	---
Oil Changed	Not Changd	Changed	Changed	---
Sample Status	MARGINAL	ABNORMAL	MARGINAL	---

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OIL CONDITION

Visc @ 100°C	cSt	12.5	11.5	12.4	---
Base Number (BN)	mg KOH/g	8.7	9.9	8.7	---
Oxidation (PA)	%	51	60	61	---

CONTAMINATION

Soot %	%	0.1	0.2	0.2	---
Nitration (PA)	%	56	56	58	---
Sulfation (PA)	%	49	54	54	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	2.3	4.4	3.2	---
Silicon	ppm	4	3	2	---
Sodium	ppm	2	0	2	---
Potassium	ppm	2	1	<1	---

WEAR METALS

Iron	ppm	3	5	6	---
Copper	ppm	11	22	22	---
Lead	ppm	<1	<1	1	---
Tin	ppm	<1	<1	<1	---
Aluminum	ppm	1	0	1	---
Chromium	ppm	<1	0	<1	---
Molybdenum	ppm	21	73	49	---
Nickel	ppm	0	<1	0	---
Titanium	ppm	0	<1	0	---
Silver	ppm	0	0	0	---
Manganese	ppm	<1	<1	<1	---
Vanadium	ppm	0	0	0	---

ADDITIVES

Calcium	ppm	1235	1202	1086	---
Magnesium	ppm	814	946	866	---
Zinc	ppm	936	1222	1111	---
Phosphorus	ppm	786	1076	928	---
Barium	ppm	0	0	0	---
Boron	ppm	62	29	9	---

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected 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: VPCHRNAOV
Unique No: 10559725
Signed: Don Baldrige
Report Date: 17 Jul 2023

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GRAPHS

