

OIL ANALYSIS REPORT



ALAN ERICKSON 502689 VOLVO PENTA A508643 - PORT DIESEL ENGINE

Sample No: VPA058184
Oil Type: CHEVRON DELO 400 MULTIGRADE 15W40

SAMPLE INFORMATION

Sample Number	VPA058184	VPA027011	VPA027858	---
Sample Date	09 Feb 2024	20 Jan 2023	20 Mar 2020	---
Machine Hours	1025	898	535	---
Oil Hours	127	0	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	NORMAL	NORMAL	NORMAL	---

North Harbor Diesel Inc
 720 30Th Street
 ANACORTES, WA
 US 98221
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OIL CONDITION

Visc @ 100°C	cSt	13.8	13.8	14.0	---
Base Number (BN)	mg KOH/g	8.5	8.7	---	---
Oxidation (PA)	%	53	60	55	---

CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	0.4	0.4	0.4	---
Nitration (PA)	%	64	54	62	---
Sulfation (PA)	%	52	61	53	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	4	6	5	---
Sodium	ppm	1	<1	3	---
Potassium	ppm	3	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 suitable for further service.

WEAR METALS

Iron	ppm	17	19	14	---
Copper	ppm	3	3	4	---
Lead	ppm	<1	1	1	---
Tin	ppm	<1	<1	<1	---
Aluminum	ppm	26	28	3	---
Chromium	ppm	2	2	<1	---
Molybdenum	ppm	23	110	27	---
Nickel	ppm	2	2	3	---
Titanium	ppm	<1	0	0	---
Silver	ppm	0	0	0	---
Manganese	ppm	0	<1	<1	---
Vanadium	ppm	0	0	0	---

ADDITIVES

Calcium	ppm	1216	1444	1345	---
Magnesium	ppm	662	625	601	---
Zinc	ppm	750	841	854	---
Phosphorus	ppm	739	696	793	---
Barium	ppm	10	0	0	---
Boron	ppm	114	350	218	---

Depot: VP179089
Unique No: 10885596
Signed: Don Baldrige
Report Date: 20 Feb 2024

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GRAPHS

