

OIL ANALYSIS REPORT



JIM FLYNN VOLVO PENTA 2006040255 - STARBOARD DIESEL ENGINE

Sample No: VPA059955
Oil Type: CHEVRON DELO 400 SDE SAE 15W40

SAMPLE INFORMATION

Sample Number	VPA059955	VPA034138	VPA043606	---
Sample Date	04 Jan 2024	09 Feb 2023	22 Apr 2022	---
Machine Hours	435	416	385	---
Oil Hours	0	30	7	---
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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 T: (360)299-1904
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OIL CONDITION

Visc @ 100°C	cSt	█ 13.9	█ 14.0	█ 14.3	---
Base Number (BN)	mg KOH/g	█ 8.2	█ 8.9	█ 9.4	---
Oxidation (PA)	%	49	62	56	---

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.

CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	█ 0.1	█ 0.1	█ 0.1	---
Nitration (PA)	%	55	53	68	---
Sulfation (PA)	%	50	60	54	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	█ 2	█ 5	█ 3	---
Sodium	ppm	█ 1	█ 1	█ <1	---
Potassium	ppm	█ 3	█ 2	█ <1	---

WEAR METALS

Iron	ppm	█ 0	█ 6	█ 4	---
Copper	ppm	█ <1	█ 2	█ 2	---
Lead	ppm	█ <1	█ 2	█ <1	---
Tin	ppm	█ 0	█ <1	█ <1	---
Aluminum	ppm	█ <1	█ 2	█ 1	---
Chromium	ppm	█ 0	█ <1	█ <1	---
Molybdenum	ppm	9	█ 87	<1	---
Nickel	ppm	█ 0	█ <1	█ <1	---
Titanium	ppm	█ 0	█ <1	█ 0	---
Silver	ppm	█ 0	█ 3	█ <1	---
Manganese	ppm	█ 0	█ <1	█ <1	---
Vanadium	ppm	0	0	<1	---

ADDITIVES

Calcium	ppm	█ 1245	█ 1490	█ 1420	---
Magnesium	ppm	█ 692	█ 653	█ 778	---
Zinc	ppm	█ 804	█ 817	█ 841	---
Phosphorus	ppm	█ 631	█ 647	█ 728	---
Barium	ppm	█ 0	█ 0	█ 0	---
Boron	ppm	█ 110	█ 296	█ 90	---

Depot: VP179089
Unique No: 10823678
Signed: Don Baldrige
Report Date: 12 Jan 2024

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**VOLVO
PENTA**

GRAPHS

