

# OIL ANALYSIS REPORT



**7719361 VOLVO PENTA D6-435I-F A601122 - CENTER DIESEL ENGINE**

**Sample No:** VPA050769

**Oil Type:** VOLVO VDS-4.5 Premium Motor Oil 15W40

## SAMPLE INFORMATION

Sample Number	<b>VPA050769</b>	VPA028599	VPA026354	VPA024237
Sample Date	<b>22 Mar 2024</b>	04 Nov 2021	27 May 2020	20 Nov 2018
Machine Hours	<b>880</b>	615	444	230
Oil Hours	<b>880</b>	0	213	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**Pacific Power Group - VP981534**  
 7215 S 228th St  
 Kent, WA  
 US 98032  
 Contact: PAT RYAN  
 pryan@pacificpowergroup.com  
 T: (253)520-5163  
 F:

## OIL CONDITION

Visc @ 100°C	cSt	<b>13.3</b>	13.3	13.1	13.27
Base Number (BN)	mg KOH/g	<b>9.7</b>	---	---	---
Oxidation (PA)	%	<b>59</b>	57	54	38

## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.5</b>	0.3	0.4	0.2
Nitration (PA)	%	<b>63</b>	53	54	48
Sulfation (PA)	%	<b>54</b>	53	53	41
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	0.2	<1.0	<1.0
Silicon	ppm	<b>5</b>	4	7	18
Sodium	ppm	<b>1</b>	1	2	4
Potassium	ppm	<b>0</b>	<1	1	3

## 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	<b>23</b>	14	17	24
Copper	ppm	<b>13</b>	10	11	18
Lead	ppm	<b>&lt;1</b>	2	2	3
Tin	ppm	<b>&lt;1</b>	1	2	0
Aluminum	ppm	<b>2</b>	1	2	6
Chromium	ppm	<b>&lt;1</b>	<1	<1	1
Molybdenum	ppm	<b>58</b>	61	53	44
Nickel	ppm	<b>4</b>	2	2	2
Titanium	ppm	<b>0</b>	0	0	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	1
Vanadium	ppm	<b>0</b>	0	0	0

## ADDITIVES

Calcium	ppm	<b>1134</b>	1044	945	1177
Magnesium	ppm	<b>963</b>	965	840	1050
Zinc	ppm	<b>1220</b>	1221	1015	1334
Phosphorus	ppm	<b>1054</b>	1037	926	1127
Barium	ppm	<b>0</b>	0	0	<1
Boron	ppm	<b>9</b>	5	3	3

**Depot:** VP99031103  
**Unique No:** 10954889  
**Signed:** Sean Felton  
**Report Date:** 04 Apr 2024

# OIL ANALYSIS REPORT

# VOLVO PENTA

## GRAPHS

