



## GARY SWEARINGEN 7719584 VOLVO PENTA A1118518 - CENTER DIESEL ENGINE

Sample No: VPA050845

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

SAMPLE INFORMAT	TION				
Sample Number		VPA050845	VPA056775	VPA025737	
Sample Date		11 Apr 2024	01 May 2023	09 Feb 2022	
Machine Hours		476	361	185	
Oil Hours		476	0	185	
Oil Changed		Changed	Changed	Changed	
Sample Status		NORMAL	ATTENTION	ATTENTION	
OIL CONDITION					
Visc @ 100°C	cSt	<b>13.3</b>	11.8	<b>□</b> 12.8	
Base Number (BN)	mg KOH/g	<b>■ 10.0</b>	<b>11.2</b>	■ 11.3	
Oxidation (PA)	%	58	65	87	
CONTAMINATION					
Water	%	NEG	NEG	NEG	
Soot %	%	MEG ■ 0.5	■ 0.5	■ 0.5	
Nitration (PA)	%	48	60	54	
Sulfation (PA)	%	54	54	68	
Glycol	%	NEG	NEG	NEG	
Fuel	%	<1.0	0.4	<1.0	
Silicon	ppm	■6	□ 0.4 □ 12	31	
Sodium	ppm	2	<b>4</b> 1	<u>5</u> 5	
Potassium	ppm	<b>0</b>	<b>3</b>	<b>2</b>	
WEAR METALS					
		_1.		- 21	
Iron	ppm	<b>■ 16</b>	<b>2</b> 3	<b>3</b> 1	
Copper	ppm	<b>6</b>	<u>11</u>	<b>□</b> 19	
Lead <del>-</del> ·	ppm	<b>2</b>	<b>4</b>	<b>7</b>	
Tin	ppm	<b>1</b>	<b>2</b>	<b>6</b>	
Aluminum	ppm	<b>8</b>	<b>1</b> 5	<b>2</b> 7	
Chromium	ppm	<b>2</b>	<b>3</b>	<b>3</b>	
Molybdenum	ppm	<b>■</b> 60	<b>□</b> 57	<b>4</b> 1	
Nickel	ppm	<b>2</b>	<b>□</b> 5	4	
Titanium	ppm	<b>0</b>	0	<1	
Silver	ppm	<b>0</b>	0	<b>0</b>	
Manganese	ppm	<b>■</b> <1	<1	2	
Vanadium	ppm	0	0	0	
ADDITIVES					
Calcium	ppm	<b>1182</b>	<b>1229</b>	<b>1713</b>	
Magnesium	ppm	909	909	<b>526</b>	
Zinc	ppm	<b>1197</b>	<b>1246</b>	<b>1103</b>	
Phosphorus	ppm	<b>1045</b>	■1002	■957	
Barium	ppm	<b>0</b>	□0	□ 0	
Boron	ppm	<b>11</b>	<b>9</b>	<b>5</b> 5	

## Pacific Power Group - VP981534

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

## 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.

Depot:VP99031103Unique No:10992761Signed:Jonathan HesterReport Date:25 Apr 2024

Contact/Location: PAT RYAN - VP99031103

## **OIL ANALYSIS REPORT**



