## **OIL ANALYSIS REPORT**

### RAVEN 502618 VOLVO PENTA 20132126222 - PORT DIESEL ENGINE

Sample No: VPA058481

Oil Type: CHEVRON DELO 400 MULTIGRADE 15W40

Sample Number		VPA058481	VPA034316	 
Sample Date		02 Apr 2024	16 Feb 2023	 
Machine Hours		119	58	 
Oil Hours		61	58	 
Oil Changed		Changed	Changed	 
Sample Status		NORMAL	ATTENTION	 
OIL CONDITION				
Visc @ 100°C	cSt	13.1	12.3	 
Base Number (BN)	mg KOH/g	<b>10.0</b>	10.0	 
Oxidation (PA)	%	56	54	 
CONTAMINATION				
Water	%	NEG	NEG	 
Soot %	%	0.1	0.1	 
Nitration (PA)	%	40	45	 
Sulfation (PA)	%	52	51	 
Glycol	%	NEG	NEG	 
Fuel	%	<1.0	0.7	 
Silicon	ppm	<b>1</b> 0	21	 
Sodium	ppm	<b>  </b> <1	1	 
Potassium	ppm	<b>10</b>	18	 
WEAR METALS				
ron	ppm	6	9	 
Copper	ppm	<b>1</b>	3	 
_ead	ppm	<b>□</b> <1	1	 
Tin	ppm	<b>□</b> <1	1	 
Aluminum	ppm	<b>4</b>	7	 
Chromium	ppm	□ <1	1	 
Molybdenum	ppm	66	66	 
Nickel	ppm	<b>□</b> <1	0	 
Titanium	ppm	<b>  </b> <1	<b></b> < 1	 
Silver	ppm	0	0	 
Manganese	ppm	<b></b> <1	2	 
Vanadium	ppm	<1	0	 
ADDITIVES				
Calcium	ppm	1233	1403	 
Magnesium	ppm	<b>1086</b>	818	 
Zinc	ppm	1433	1307	 
	ppm	<b>1156</b>	1028	 
Phosphorus	ppin			
Barium	ppm	0	0	 
Phosphorus Barium Boron				 

#### North Harbor Diesel Inc

720 30Th Street ANACORTES, WA US 98221 Contact: ED MCFARLIN ed@northharbordiesel.com T: 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 acceptable for the time in service.

Report Id: VP179089 [WUSCAR] 06145685 (Generated: 04/14/2024 12:43:16) Rev: 1

 Unique No:
 10970493

 Signed:
 Don Baldridge

 Report Date:
 14 Apr 2024

 Contact/Location: ED MCFARLIN - VP179089

VP179089

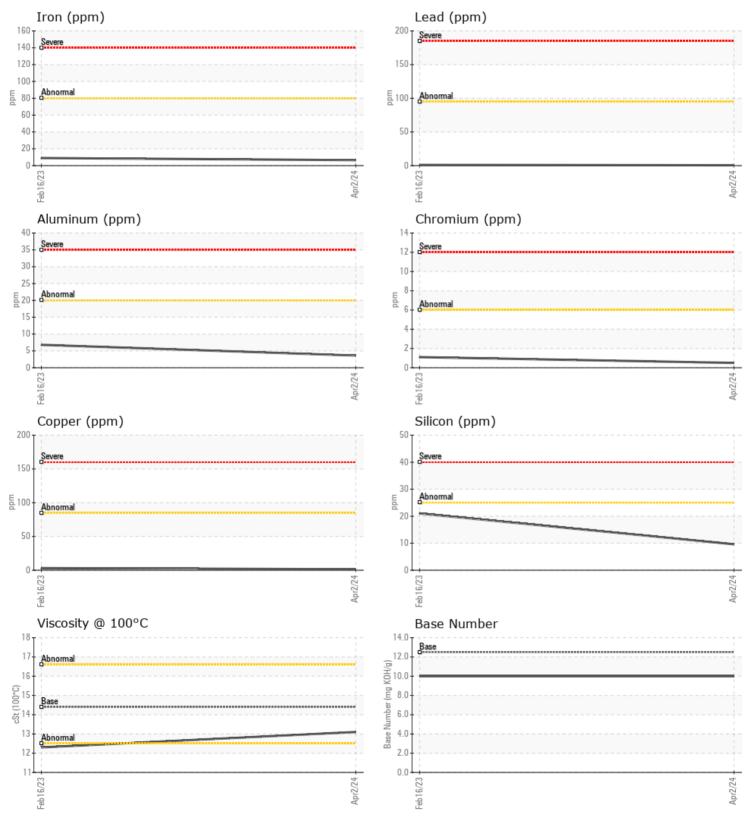
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# **OIL ANALYSIS REPORT**



#### GRAPHS



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