



## CROSSMAN VOLVO PENTA A 1093330 - STARBOARD DIESEL ENGINE

Sample No: VPA037307

Oil Type: DIESEL ENGINE OIL SAE 15W40

SAMPLE INFORMAT	TION			
		VPA037307	VPA049868	 
Sample Number Sample Date		07 Jul 2024	09 Oct 2023	 
Machine Hours		365		
			329	
Oil Hours		0	0	 
Oil Changed		N/A	N/A	 
Sample Status		NORMAL	NORMAL	 
OIL CONDITION				
Visc @ 100°C	cSt	■12.83	□13.1	 
Base Number (BN)	mg KOH/g	<b>■</b> 9.5	■9.7	 
Oxidation (PA)	%	53	57	 
CONTAMINATION				
	0/	NEC	NEC	
Water	%	NEG <b>■</b> 0.1	NEG	 
Soot %		_	_	 
Nitration (PA)	%	40	48	 
Sulfation (PA)	%	50	53 NEC	 
Glycol	%	NEG	NEG	 
Fuel	%	<1.0	<1.0	 
Silicon	ppm	■3	<b>5</b>	 
Sodium	ppm	<b>2</b>	<b>0</b>	 
Potassium	ppm	■3	<b>3</b>	 
WEAR METALS				
Iron	ppm	<b>7</b>	<b>1</b> 1	 
Copper	ppm	■3	<u></u> 5	 
Lead	ppm	<b>2</b>	■3	 
Tin	ppm	<b>□</b> <1	<b>-</b> <1	 
Aluminum	ppm	<b>2</b>	<b>0</b>	 
Chromium	ppm	■0	<b>=</b> <1	 
Molybdenum	ppm	<b>■57</b>	<b>4</b> 7	 
Nickel	ppm	<b>□</b> <1	1	 
Titanium	ppm	<b>0</b>	<b>=</b> <1	 
Silver	ppm	<b>0</b>	0	 
Manganese		<b>0</b>	□ <1	 
Vanadium	ppm	0	0	 
	РРП		U	
ADDITIVES				
Calcium	ppm	<b>1109</b>	■1196	 
Magnesium	ppm	■895	<b>724</b>	 
Zinc	ppm	<b>1302</b>	□ 1152	 
Phosphorus	ppm	<b>1118</b>	■967	 
Barium	ppm	■0	<b>1</b>	 
Boron	ppm	<b>11</b>	<b>2</b> 5	 
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## **Outstanding Marine**

PO Box 274 GALENA, MD US 21635 Contact: Ronda Bolinger rlwb@verizon.net

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## 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:VP153685Unique No:11114216Signed:Doug BogartReport Date:08 Jul 2024

## **OIL ANALYSIS REPORT**



