



## MEENA BARSOUM 11446 MC CUMMINS 74541799 - STARBOARD DIESEL ENGINE

Sample No: VPA060205

Oil Type: SHELL ROTELLA T4 15W40

	FIGN			
SAMPLE INFORMAT	ION			
Sample Number		VPA060205	 	
Sample Date		04 Oct 2023	 	
Machine Hours		0	 	
Oil Hours		0	 	
Oil Changed		N/A	 	
Sample Status		NORMAL	 	
OIL CONDITION				
Visc @ 100°C	cSt	■14.1	 	
Base Number (BN)	mg KOH/g	■8.9	 	
Oxidation (PA)	%	65	 	
CONTAMINATION				
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Soot %	%	<b>0.5</b>	 	
Nitration (PA)	%	53	 	
Sulfation (PA)	%	58	 	
Glycol	%	NEG	 	
Fuel	%	<1.0	 	
Silicon	ppm	<b>6</b>	 	
Sodium	ppm	<b>2</b>	 	
Potassium	ppm	<b>6</b>	 	
WEAR METALS				
Iron	ppm	<b>20</b>	 	
Copper	ppm	■82	 	
Lead	ppm	<b>2</b>	 	
Tin	ppm	<b>1</b>	 	
Aluminum	ppm	<b>2</b>	 	
Chromium	ppm	<b>-&lt;1</b>	 	
Molybdenum	ppm	<b>■8</b>	 	
Nickel	ppm	<b>■</b> 3	 	
Titanium	ppm	<b>0</b>	 	
Silver	ppm	<b>■</b> <1	 	
Manganese	ppm	<b>1</b>	 	
Vanadium	ppm	<1	 	
ADDITIVES				
Calcium	ppm	■2058	 	
Magnesium	ppm	63	 	
Zinc	ppm	<b>■</b> 1178	 	
Phosphorus	ppm	■1003	 	
Barium	ppm	■0	 	
Boron	ppm	<b>■</b> 157	 	
	F P			

## **BAY MARINE**

3 E MADISON ST WAUKEGAN, IL US 60085

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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:VP1174336Unique No:10686743Signed:Angela BorellaReport Date:12 Oct 2023

## **OIL ANALYSIS REPORT**



