OIL ANALYSIS REPORT

SCOTT GOTSCHOW 70112027009 - STARBOARD DIESEL ENGINE

Sample No: VPA044733

Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION Sample Number VPA044733 Sample Date 08 Oct 2023 Machine Hours 500 130 **Oil Hours** Oil Changed Changed NORMAL Sample Status **OIL CONDITION** Visc @ 100°C cSt 12.9 Base Number (BN) mg KOH/g 9.0 Oxidation (PA) % 63 CONTAMINATION Soot % % 0.2 % Nitration (PA) 53 Sulfation (PA) % 54 % NEG Glycol Fuel % <1.0 Silicon ppm 6 Sodium 3 ppm Potassium **4** ppm WEAR METAL

Iron	ppm	2	 	
Copper	ppm	1 5	 	
Lead	ppm	1	 	
Tin	ppm	■ <1	 	
Aluminum	ppm	2	 	
Chromium	ppm	□<1	 	
Molybdenum	ppm	26	 	
Nickel	ppm		 	
Titanium	ppm	0	 	
Silver	ppm	0	 	
Manganese	ppm	□<1	 	
Vanadium	ppm	0	 	

ADDITIVES

Calcium	ppm	1712	 	
Magnesium	ppm	279	 	
Zinc	ppm	1178	 	
Phosphorus	ppm	990	 	
Barium	ppm	0	 	
Boron	ppm	88	 	

INTERSTATE POWER SYSTEMS

2901 E 78TH ST MINNEAPOLIS, MN US 55425 Contact: BRADY GARBRECHT brady.garbrecht@istate.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.

 Depot:
 VP1103105

 Unique No:
 10695340

 Signed:
 Don Baldridge

 Report Date:
 16 Oct 2023

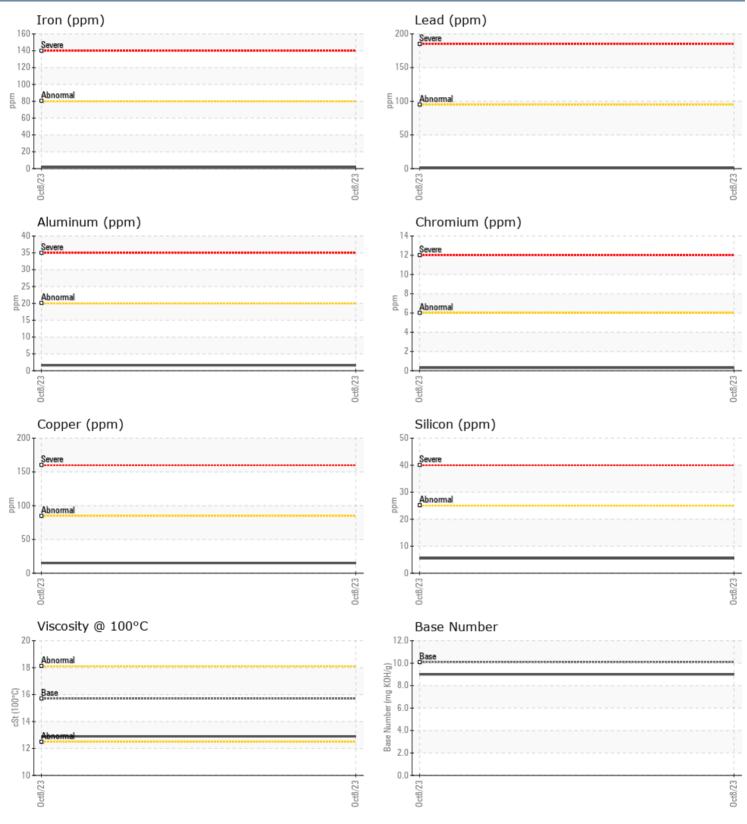
Contact/Location: BRADY GARBRECHT - VP1103105



OIL ANALYSIS REPORT



GRAPHS



Report Id: VP1103105 [WUSCAR] 05978045 (Generated: 10/28/2023 23:30:28) Rev: 1

Contact/Location: BRADY GARBRECHT - VP1103105