OIL ANALYSIS REPORT

COLLIN MADDEN PATRICK/502474-5250 VOLVO PENTA 2071180082 - STARBOARD DIESEL ENGINE

Sample No: VPA059053

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

Sample Number				
		VPA059053	VPA036013	
Sample Date		23 Oct 2023	26 Oct 2021	
Machine Hours		1121	0	
Oil Hours		0	100	
Oil Changed		Changed	Changed	
Sample Status		NORMAL	NORMAL	
OIL CONDITION				
Visc @ 100°C	cSt	13.6	14.4	
Base Number (BN)	mg KOH/g	10.1		
Oxidation (PA)	%	60	61	
CONTAMINATION				
Soot %	%	0.4	0.3	
Nitration (PA)	%	55	60	
Sulfation (PA)	%	54	57	
Glycol	%	NEG	NEG	
Fuel	%	<1.0	< 1.0	
Silicon	ppm	4	3	
Sodium	ppm	4	2	
Potassium	ppm	3	3	
WEAR METALS				
lron	ppm	10	8	
Copper	ppm	16	8	
Lead	ppm	■4	3	
Tin	ppm		 <1	
Aluminum	ppm	4	1	
Chromium	ppm	1	 <1	
Molybdenum	ppm	57	16	
Nickel	ppm	2	2	
Titanium	ppm	■ <1	□ <1	
Silver	ppm	0	 <1	
Manganese	ppm	0	<1	
Vanadium	ppm	<1	<1	
ADDITIVES				
Calcium	ppm	1020	1432	
Magnesium	ppm	937	612	
Zinc	ppm	1202	923	
		1071	737	
Phosphorus	ppm			
	ppm ppm	0 5	0	

Endor Marine LLC - Coastal Marine - 152124 4300 11th Ave. NW SEATTLE, WA US 98107 Contact: WILLOW YANARELLA service@coastalmarineengine.com T: (206)784-3703 F: (206)784-8823

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:
 VP794951

 Unique No:
 10713542

 Signed:
 Don Baldridge

 Report Date:
 30 Oct 2023

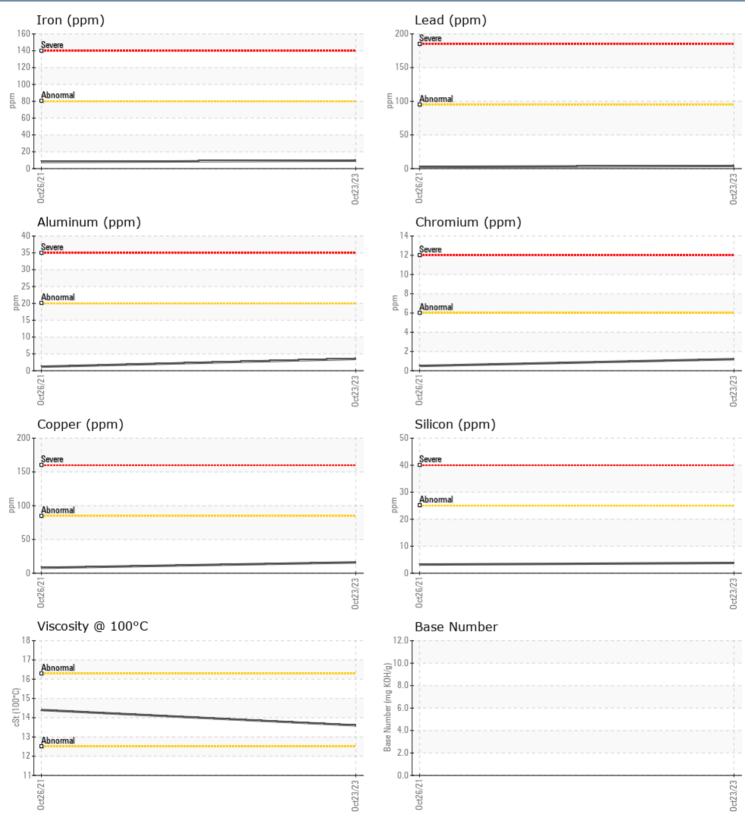
Contact/Location: WILLOW YANARELLA - VP794951



OIL ANALYSIS REPORT



GRAPHS



Report Id: VP794951 [WUSCAR] 05990880 (Generated: 10/31/2023 17:24:42) Rev: 1

Contact/Location: WILLOW YANARELLA - VP794951