OIL ANALYSIS REPORT

NADINE URCIUOLI MICHAEL PAPAY VOLVO PENTA A1114658 - STARBOARD DIESEL ENGINE

Sample No: VPA059557

Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

Sample Number		VPA059557	VPA040890	
Sample Date		13 Dec 2023	11 Apr 2022	
Machine Hours		373	189	
Oil Hours		373	189	
Oil Changed		Changed	Not Changd	
Sample Status		NORMAL	NORMAL	
OIL CONDITION				
Visc @ 100°C	cSt	12.9	12.8	
Base Number (BN)	mg KOH/g	10.1	11.3	
Oxidation (PA)	%	55	64	
CONTAMINATION				
Water	%	NEG	NEG	
Soot %	%	0.1	0.1	
Nitration (PA)	%	43	47	
Sulfation (PA)	%	52	58	
Glycol	%	NEG	NEG	
Fuel	%	<1.0	<1.0	
Silicon	ppm	8	23	
Sodium	ppm	1	2	
Potassium WEAR METALS	ppm	1	□<1	
Iron	ppm	19	15	
Copper	ppm	5	13	
Lead	ppm	3	9	
Tin	ppm	1	3	
Aluminum	ppm	7	13	
Chromium	ppm	2	2	
Molybdenum	ppm	59	59	
Nickel	ppm	3	2	
Titanium	ppm	0	0	
Silver	ppm	0	□ <1	
Manganese Vanadium	ppm	□ <1 0	0 < 1	
	ppm	0	U	
ADDITIVES				
Calcium	ppm	1042	1242	
Magnesium	ppm	930	958	
Zinc	ppm	1257	1239	
Phosphorus	ppm	1033	1123	
Barium	ppm ppm	0	□ 0 □ 9	
Boron				

Helmuts Marine Service

619 Canal Street SAN RAFAEL, CA US 94901-3545 Contact: NADINE URCIUOLI SERVICE@HELMUTSMARINE.COM T: x: F: x:

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:
 VP152741

 Unique No:
 10795640

 Signed:
 Don Baldridge

 Report Date:
 21 Dec 2023

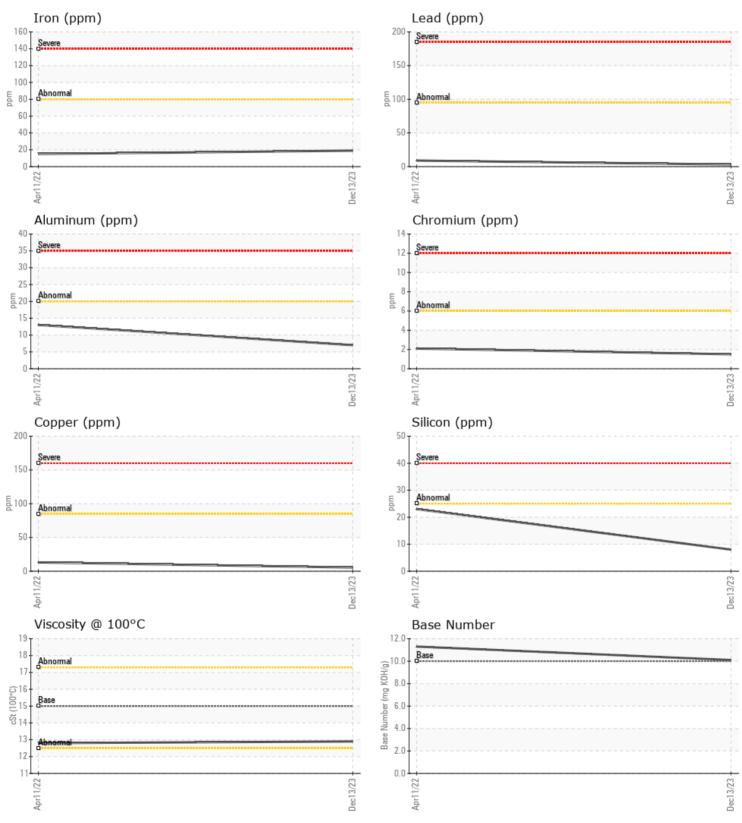
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VOLVO PENTA

OIL ANALYSIS REPORT



GRAPHS



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Contact/Location: NADINE URCIUOLI - VP152741