OIL ANALYSIS REPORT

NADINE URCIUOLI DEAN WAVEREN VOLVO PENTA 2004001665 - CENTER DIESEL ENGINE

Sample No: VPA055337

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

Sample Number		VPA055337				
Sample Date		11 Dec 2023				Helmuts Marine Service
Machine Hours		1486				619 Canal Street
Oil Hours		1486				SAN RAFAEL, CA
Oil Changed		Changed				US 94901-3545
Sample Status		ABNORMAL				Contact: NADINE URCIUOLI
						SERVICE@HELMUTSMARINE.COM T: x:
OIL CONDITION						F: x:
Visc @ 100°C	cSt	13.5				
Base Number (BN)	mg KOH/g	9.1				Diagnasia
Oxidation (PA)	%	71				Diagnosis
CONTAMINATION						Oil and filter change at the time of sampling has been noted. No corrective action is recommended
Water	%	NEG				this time. Resample at the next
Soot %	%	0.1				service interval to monitor.The
Nitration (PA)	%	80				aluminum level is abnormal. All oth
Sulfation (PA)	%	58				component wear rates are normal.
Glycol	%	NEG				There is no indication of any
Fuel	%	<1.0				contamination in the oil. The BN
Silicon	ppm	18				result indicates that there is suitab
Sodium	ppm	2				alkalinity remaining in the oil. The condition of the oil is acceptable for
Potassium	ppm	1				the time in service.
WEAR METALS	ppm	44				
Copper		1 6				
	ppm ppm	_				
Lead	ppm	1 6				
Lead Tin	ppm ppm	□ 16 □ 10				
_ead Tin Aluminum	ppm ppm ppm	16 10 1			 	
Lead Tin Aluminum Chromium	ppm ppm ppm ppm	□ 16 □ 10 □ 1 ▲ 94		 	 	
Lead Tin Aluminum Chromium Molybdenum	ppm ppm ppm ppm ppm	□ 16 □ 10 □ 1 ▲ 94 □ 6		 		
Lead Tin Aluminum Chromium Molybdenum Nickel	ppm ppm ppm ppm ppm ppm	□ 16 □ 10 □ 1 □ 94 □ 6 □ 48		 		
Lead Tin Aluminum Chromium Molybdenum Nickel Titanium	ppm ppm ppm ppm ppm ppm	□ 16 □ 10 □ 1 □ 94 □ 6 □ 48 □ 1				
Copper Lead Tin Aluminum Chromium Molybdenum Nickel Titanium Silver Manganese	ppm ppm ppm ppm ppm ppm ppm	16 10 1 94 6 48 1 0				
Lead Tin Aluminum Chromium Molybdenum Nickel Titanium Silver Manganese	ppm ppm ppm ppm ppm ppm ppm ppm	 16 10 1 94 6 48 1 0 0 		Image: Section of the section of		
Lead Tin Aluminum Chromium Molybdenum Nickel Titanium Silver	ppm ppm ppm ppm ppm ppm ppm ppm ppm	16 10 1 94 6 48 1 0 0 0 <1		Image: Section of the section of		
Lead Tin Aluminum Chromium Molybdenum Nickel Titanium Silver Manganese Vanadium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	16 10 1 94 6 48 1 0 0 0 <1		Image: Section of the section of		
Lead Fin Aluminum Chromium Molybdenum Nickel Fitanium Silver Manganese Vanadium ADDITIVES	ppm ppm ppm ppm ppm ppm ppm ppm ppm	<pre>16 10 1 94 6 48 1 0 0 0 </pre>				
Lead Fin Aluminum Chromium Molybdenum Nickel Fitanium Silver Manganese Vanadium ADDITIVES Calcium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	<pre>16 10 10 1 94 6 48 1 1 0 0 0 </pre>				
Lead Tin Aluminum Chromium Molybdenum Vickel Titanium Silver Manganese /anadium ADDITIVES Calcium Magnesium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	<pre>16 10 10 1 94 6 48 1 0 0 0 0 </pre> <pre>100 100 100 100 100 100 100 100 100 100</pre>				
Lead Tin Aluminum Chromium Molybdenum Vickel Titanium Silver Manganese /anadium ADDITIVES Calcium Magnesium Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	<pre>16 10 10 1 94 6 48 1 0 0 0 </pre> <pre></pre> <pre></pre> <pre>100</pre> <pre>100</pre> <pre>1087</pre> 942 1231				

Contact/Location: NADINE URCIUOLI - VP152741

20 Dec 2023

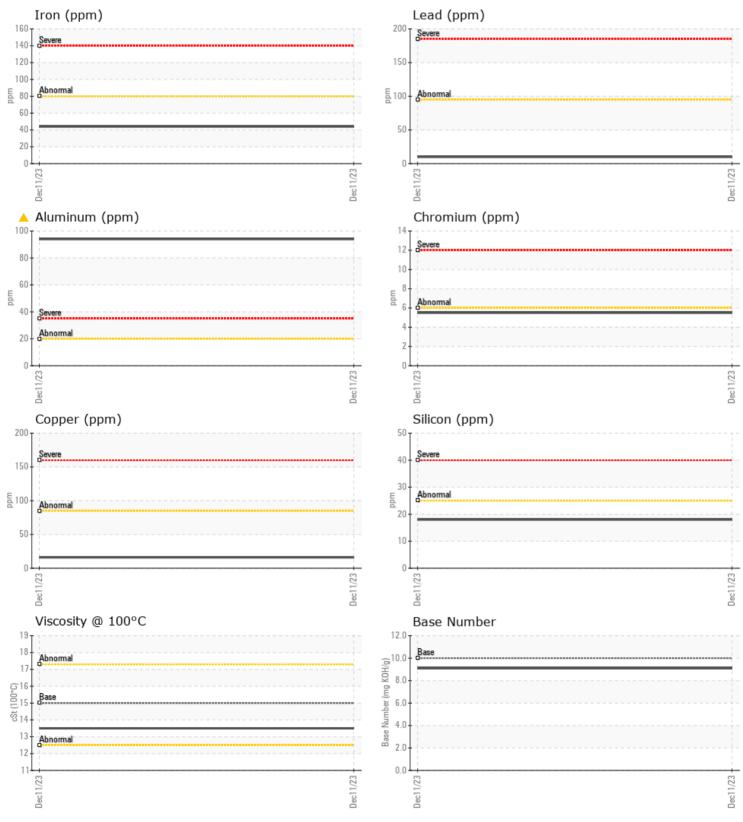
Report Date:



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GRAPHS



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