OIL ANALYSIS REPORT

VOLVO PENTA

TED HANNIG TED HANNIG VOLVO PENTA 2204404067 - DIESEL ENGINE

Sample No: VPA051913

Oil Type: VOLVO PENTA SAE 15W40

SAMPLE INFORMATION

Sample Number		VPA051913	 	
Sample Date		08 Apr 2024	 	
Machine Hours		0	 	
Oil Hours		0	 	
Oil Changed		Changed	 	
Sample Status		SEVERE	 	
OIL CONDITION				
Visc @ 100°C	cSt	13.49	 	
Oxidation (PA)	%	87	 	
CONTAMINATION				
Water	%	0.500	 	
Water Soot %	%	▲ 0.500 □ 1	 	
Soot %				
	%	1	 	
Soot % Nitration (PA)	% %	■1 98	 	
Soot % Nitration (PA) Sulfation (PA)	% % %	1 98 63	 	
Soot % Nitration (PA) Sulfation (PA) Glycol	% % %	1 98 63 NEG	 	
Soot % Nitration (PA) Sulfation (PA) Glycol Fuel	% % % % %	1 98 63 NEG <1.0	 	

WEAR METALS

Iron	ppm	9 56	 	
Copper	ppm	🔺 170	 	
Lead	ppm	28	 	
Tin	ppm	7	 	
Aluminum	ppm	4 3437	 	
Chromium	ppm	🔺 59	 	
Molybdenum	ppm	289	 	
Nickel	ppm	A 76	 	
Titanium	ppm	2	 	
Silver	ppm	 <1	 	
Manganese	ppm	10	 	
Vanadium	ppm	<1	 	

ADDITIVES

Calcium	ppm	1691	 	
Magnesium	ppm	1200	 	
Zinc	ppm	1705	 	
Phosphorus	ppm	1468	 	
Barium	ppm	2	 	
Boron	ppm	39	 	

Helmuts Marine Service

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

Diagnosis

We advise that you check for the source of the water. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend that you inspect the component for an overhaul determination. We recommend an early resample to monitor this condition.Generally an abnormal to severe rate of wear throughout the component. The high sodium (Na) level indicates the possible presence of salt water. There is a moderate concentration of water present in the oil. The oil is no longer serviceable due to the presence of contaminants and wear.

 Depot:
 VP152741

 Unique No:
 10968319

 Signed:
 Doug Bogart

 Report Date:
 09 Apr 2024

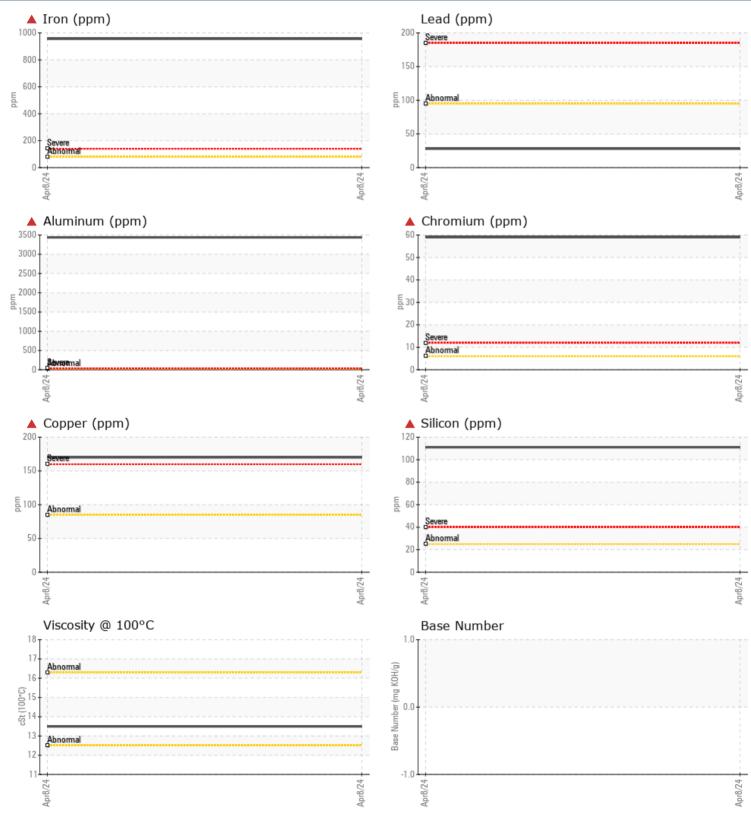
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Report Id: VP152741 [WUSCAR] 06143511 (Generated: 04/09/2024 18:50:30) Rev: 1
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Contact/Location: NADINE URCIUOLI - VP152741

OIL ANALYSIS REPORT



GRAPHS



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Contact/Location: NADINE URCIUOLI - VP152741