OIL ANALYSIS REPORT

JOHN KEYES 7716690 VOLVO PENTA A214045 - STARBOARD DIESEL ENGINE

Sample No: VPA046811

Oil Type: NOT GIVEN

SAMPLE INFORMATION

Sample Number		VPA046811	 	
Sample Date		19 Sep 2023	 	
Machine Hours		909	 	
Oil Hours		0	 	
Oil Changed		Changed	 	
Sample Status		ABNORMAL	 	
OIL CONDITION				
Visc @ 100°C	cSt	14.2	 	
Base Number (BN)	mg KOH/g	9.2	 	
Oxidation (PA)	%	78	 	
CONTAMINATION				
Soot %	%	0.7	 	
Nitration (PA)	%	93	 	
Sulfation (PA)	%	68	 	
Glycol	%	NEG	 	
Fuel	%	<1.0	 	
Silicon	ppm	10	 	
Sodium	ppm	<u> </u>	 	
Potassium	ppm	26	 	

WEAR METALS

Iron	ppm	134	 	
Copper	ppm	16	 	
Lead	ppm	6	 	
Tin	ppm	3	 	
Aluminum	ppm	A 136	 	
Chromium	ppm	8	 	
Molybdenum	ppm	100	 	
Nickel	ppm	5	 	
Titanium	ppm	□ <1	 	
Silver	ppm	□ <1	 	
Manganese	ppm	2	 	
Vanadium	ppm	<1	 	

ADDITIVES

Calcium	ppm	1663	 	
Magnesium	ppm	617	 	
Zinc	ppm	936	 	
Phosphorus	ppm	713	 	
Barium	ppm	0	 	
Boron	ppm	222	 	

PENTA

Pacific Power Group - VP981534 7215 S 228th St Kent, WA US 98032 Contact: PAT RYAN pryan@pacificpowergroup.com T: (253)520-5163 F:

Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.The aluminum level is abnormal. Piston wear is indicated. Sodium and/or potassium levels are high. The BN result indicates that there is suitable alkalinity remaining in the oil.

 Depot:
 VP99031103

 Unique No:
 10673364

 Signed:
 Jonathan Hester

 Report Date:
 04 Oct 2023

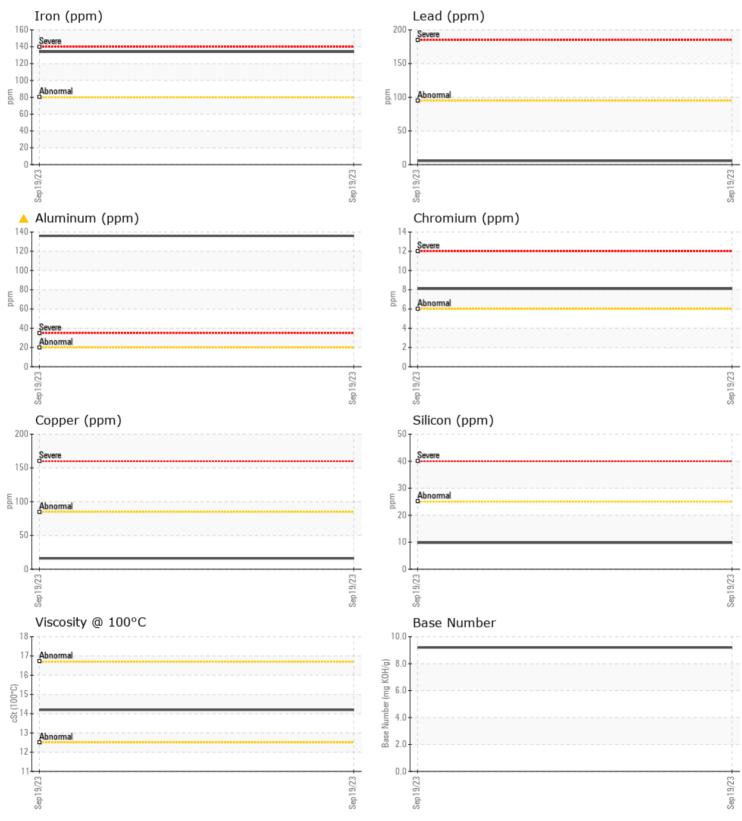
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Contact/Location: PAT RYAN - VP99031103

OIL ANALYSIS REPORT



GRAPHS



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Contact/Location: PAT RYAN - VP99031103