OIL ANALYSIS REPORT

BARDIN NORTHERN LIGHTS BARDIN (S/N NOT GIVEN) - PORT GENSET

Sample No: VPA954170

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

Sample Number		VPA954170	VPA041189	
Sample Date		08 May 2024	05 Dec 2022	
Machine Hours		0	424	
Oil Hours		0	0	
Oil Changed		Changed	N/A	
Sample Status		ABNORMAL	NORMAL	
OIL CONDITION				
Visc @ 100°C	cSt	14.0	13.0	
Base Number (BN)	mg KOH/g	7.5	10.9	
Oxidation (PA)	%	57	62	
CONTAMINATION				
Water	%	NEG	NEG	
Soot %	%	0.1	0.2	
Nitration (PA)	%	59	57	
Sulfation (PA)	%	58	58	
Glycol	%	NEG	NEG	
Fuel	%	<1.0	<1.0	
Silicon	ppm	8	8	
Sodium	ppm	<u> </u>	2	
Potassium	ppm	A 114	 <1	
WEAR METALS				
Iron	ppm	45	14	
Copper	ppm	10	7	
Lead	ppm	2	5	
Tin	ppm	 <1	<1	
Aluminum	ppm	6	3	
Chromium	ppm	0	<1	
Molybdenum	ppm	27	61	
Nickel	ppm	0	0	
Titanium	ppm	0	0	
Silver	ppm	0	<1	
Manganese	ppm	1	□ <1	
Vanadium	ppm	0	0	
ADDITIVES				
Calcium	ppm	1811	1202	
Magnesium	ppm	806	965	
Zinc	ppm	1185	1311	
	ppm	1026	986	
Phosphorus				
Phosphorus Barium Boron	ppm ppm	■1 ■110	0	

VOLVO PENTA

FULL KEEL MARINE SERVICES 314 LEGION AVE ANNAPOLIS, MD US 21401 Contact: Service Manager FULLKEELMARINESERIVES@GMAIL.COM T: (410)507-3542

Diagnosis

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

Depot:VFUnique No:11Signed:JoReport Date:13

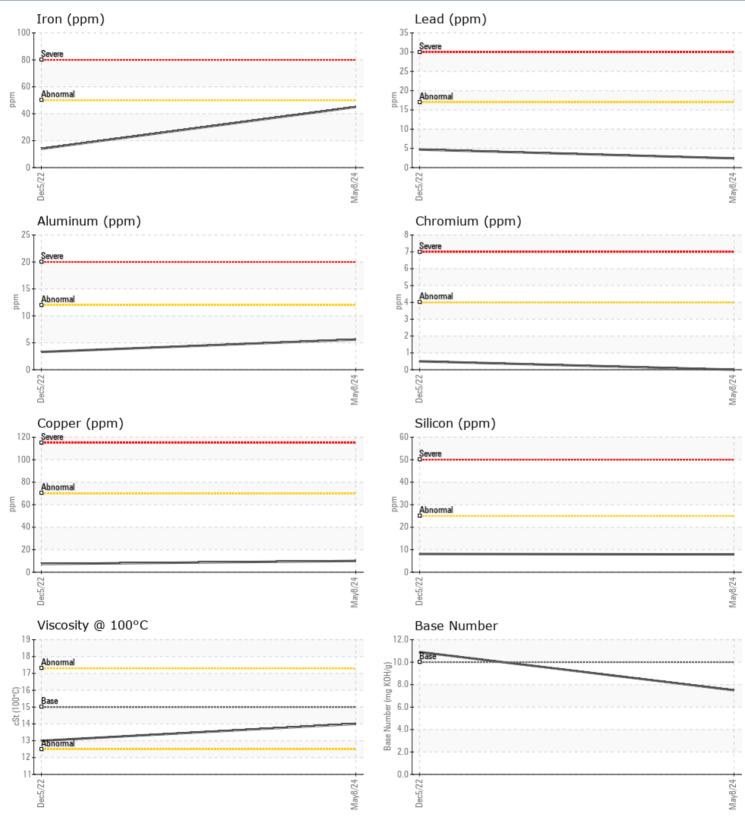
VP1298996 11061881 Jonathan Hester 13 Jun 2024

Contact/Location: Service Manager - VP1298996

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GRAPHS



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Contact/Location: Service Manager - VP1298996