## **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	<b>14.0</b>	13.0	 
Base Number (BN)	mg KOH/g	7.5	10.9	 
Oxidation (PA)	%	57	62	 
CONTAMINATION				
Water	%	NEG	NEG	 
Soot %	%	<b>0.1</b>	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	<b>A</b> 114	<b></b> <1	 
WEAR METALS				
Iron	ppm	<b>45</b>	14	 
Copper	ppm	<b>10</b>	7	 
Lead	ppm	2	5	 
Tin	ppm	<b></b> <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	<b>1</b>	□ <1	 
Vanadium	ppm	0	0	 
ADDITIVES				
Calcium	ppm	<b>1811</b>	1202	 
Magnesium	ppm	806	965	 
Zinc	ppm	<b>1185</b>	1311	 
	ppm	<b>1026</b>	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

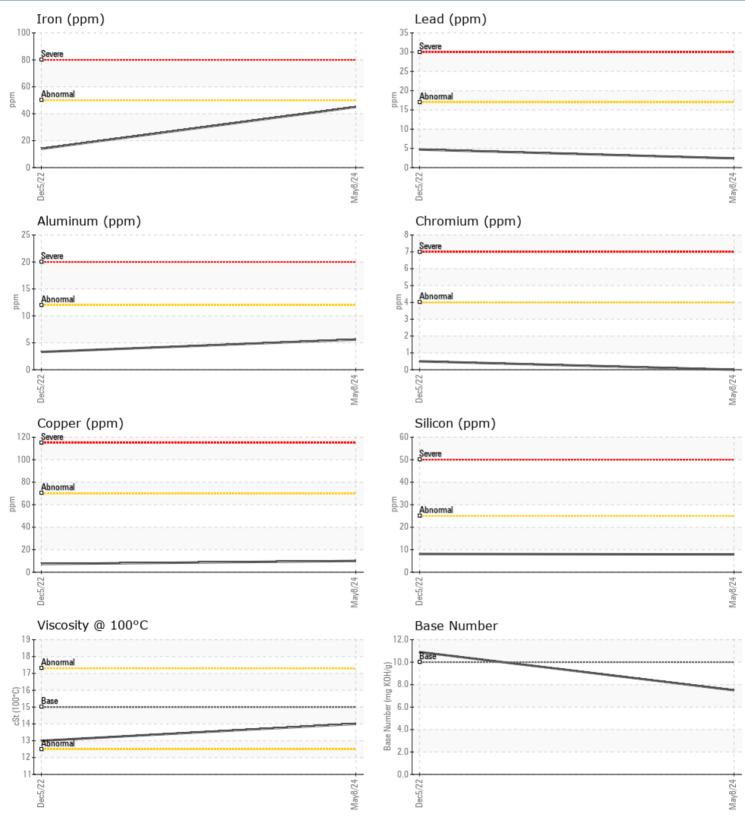
VP1298996 11061881 Jonathan Hester 13 Jun 2024

Contact/Location: Service Manager - VP1298996

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#### GRAPHS



Report Id: VP1298996 [WUSCAR] 06199758 (Generated: 06/13/2024 12:04:38) Rev: 1

Contact/Location: Service Manager - VP1298996