## **OIL ANALYSIS REPORT**

### GOLDEN DAZE VOLVO PENTA A557122 - STARBOARD DIESEL ENGINE

Sample No: VPA021988

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

Sample Number		VPA021988	VPA046229	 
Sample Date		28 Nov 2023	22 Feb 2023	 
Machine Hours		368	351	 
Oil Hours		0	0	 
Oil Changed		Changed	N/A	 
Sample Status		NORMAL	NORMAL	 
OIL CONDITION				
Visc @ 100°C	cSt	13.2	13.6	 
Base Number (BN)	mg KOH/g	<b>10.2</b>	10.2	 
Oxidation (PA)	%	54	54	 
CONTAMINATION				
Water	%	NEG	NEG	 
Soot %	%	0.1	0.1	 
Nitration (PA)	%	40	42	 
Sulfation (PA)	%	50	52	 
Glycol	%	NEG	NEG	 
Fuel	%	<1.0	<1.0	 
Silicon	ppm	<b>4</b>	7	 
Sodium	ppm	<b>1</b>	0	 
Potassium	ppm	<b>  </b> <1	2	 
WEAR METALS				
Iron	ppm	5	8	 
Copper	ppm	5	<1	 
Lead	ppm	3	1	 
Tin	ppm	0	<1	 
Aluminum	ppm	<b>  </b> <1	<b></b> < 1	 
Chromium	ppm	0	0	 
Molybdenum	ppm	63	58	 
Nickel	ppm	0	<1	 
Titanium	ppm	0	0	 
Silver	ppm	0	0	 
Manganese	ppm	0	<b></b> < 1	 
Vanadium	ppm	0	0	 
ADDITIVES				
Calcium	ppm	1189	1112	 
Magnesium	ppm	1156	986	 
Zinc	ppm	1567	1350	 
Phosphorus	ppm	1247	1040	 
Barium	ppm	0	0	 
Boron	ppm	0	<1	 

FULL KEEL MARINE SERVICES

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

#### Diagnosis

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Unique No: Signed: Don Baldridge Report Date: 05 Dec 2023

Contact/Location: Service Manager - VP1298996

VP1298996

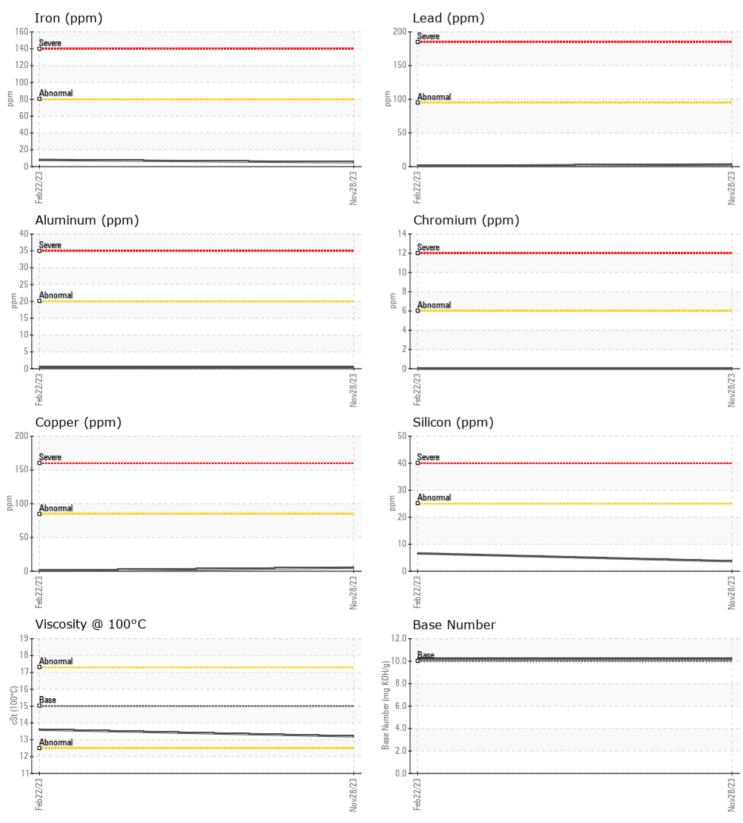
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#### GRAPHS



Report Id: VP1298996 [WUSCAR] 06022885 (Generated: 12/05/2023 12:54:35) Rev: 1

Contact/Location: Service Manager - VP1298996