## **OIL ANALYSIS REPORT**

### MARK RAY VOLVO PENTA A394762 - STARBOARD DIESEL ENGINE

Sample No: VPA048821

Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

Sample Number		VPA048821	VPA042468	 
Sample Date		06 Mar 2023	20 Sep 2022	 
Machine Hours		1107	0	 
Oil Hours		180	10	 
Oil Changed		Changed	N/A	 
Sample Status		NORMAL	NORMAL	 
OIL CONDITION				
Visc @ 100°C	cSt	13.7	14.0	 
Base Number (BN)	mg KOH/g	<b>10.1</b>	11.3	 
Oxidation (PA)	%	63	61	 
CONTAMINATION				
Soot %	%	0.2	0.1	 
Nitration (PA)	%	58	48	 
Sulfation (PA)	%	56	56	 
Glycol	%	NEG	NEG	 
Fuel	%	<1.0	<1.0	 
Silicon	ppm	<b>7</b>	3	 
Sodium	ppm	3	1	 
Potassium	ppm	3	<b></b> <1	 
WEAR METALS				
Iron	ppm	<b>1</b> 6	8	 
Copper	ppm	<b>4</b>	<1	 
Lead	ppm	2	< 1	 
Tin	ppm	<b></b> <1	0	 
Aluminum	ppm	 16	10	 
Chromium	ppm	3	<1	 
Molybdenum	ppm	59	59	 
Nickel	ppm	2	<1	 
Titanium	ppm	□ □<1	0	 
Silver	ppm	0	0	 
Manganese	ppm	<b>□</b> <1	 <1	 
Vanadium	ppm	0	0	 
ADDITIVES				
			- 4000	
	ppm	1153	1099	 
Calcium				
Calcium Magnesium	ppm	954	840	
Calcium Magnesium Zinc	ppm ppm	<b>1226</b>	1101	 
Calcium Magnesium Zinc Phosphorus	ppm ppm ppm	■ 1226 ■ 974	□ 1101 □ 919	 
Calcium Magnesium Zinc	ppm ppm	<b>1226</b>	1101	 

#### ALL SYSTEMS MARINE

700 MYRICK ST PENSACOLA, FL JS 32505 Contact: TRISTAN JOHNSON allsystemsmarine@yahoo.com I: (228)218-7963 --

VOLVO PENTA

#### 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.

 Depot:
 VP99220003

 Unique No:
 10535821

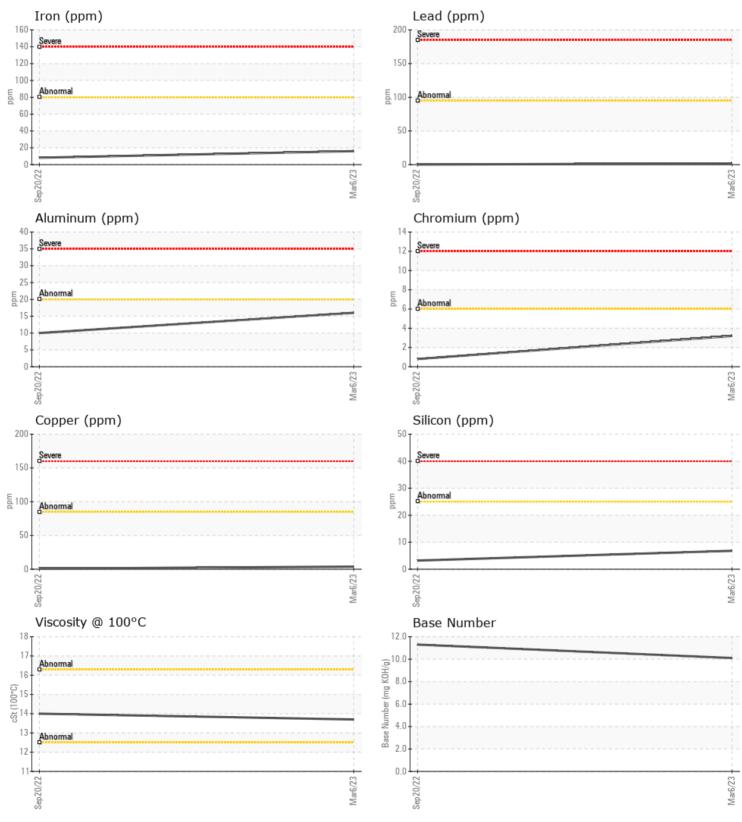
 Signed:
 Don Baldridge

 Report Date:
 30 Jun 2023

# **OIL ANALYSIS REPORT**



#### GRAPHS



Report Id: VP99220003 [WUSCAR] 05885338 (Generated: 06/30/2023 17:59:36) Rev: 1

Contact/Location: TRISTAN JOHNSON - VP99220003