



## STAHL BILLH. VOLVO PENTA 4012173218 - STARBOARD GASOLINE ENGINE

Sample No: VPA059644

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

SAMPLE INFORMAT	TION			
Sample Number		VPA059644	 	
Sample Date		02 Jan 2024	 	
Machine Hours		705	 	
Oil Hours		50	 	
Oil Changed		Changed	 	
Sample Status		NORMAL	 	
OIL CONDITION				
Visc @ 100°C	cSt	<b>15.41</b>	 	
Base Number (BN)	mg KOH/g	<b>6.8</b>	 	
Oxidation (PA)	%	8	 	
CONTAMINATION				
CONTRIBUTION				
Water	%	NEG	 	
Soot %	%	<b>■</b> 0	 	
Nitration (PA)	%	5	 	
Sulfation (PA)	%	8	 	
Glycol	%	NEG	 	
Fuel	%	<1.0	 	
Silicon	ppm	<b>12</b>	 	
Sodium	ppm	<b>15</b>	 	
Potassium	ppm	<b>■</b> 3	 	
WEAR METALS				
Iron	ppm	<b>■27</b>	 	
Copper	ppm	<b>■</b> 18	 	
Lead	ppm	<b>1</b>	 	
Tin	ppm	<b>■&lt;1</b>	 	
Aluminum	ppm	<b>13</b>	 	
Chromium	ppm	<b>■&lt;1</b>	 	
Molybdenum	ppm	<b>40</b>	 	
Nickel	ppm	<b>■&lt;1</b>	 	
Titanium	ppm	<1	 	
Silver	ppm	■0	 	
Manganese	ppm	■1	 	
Vanadium	ppm	0	 	
ADDITIVES				
Calcium	ppm	<b>1</b> 563	 	
Magnesium	ppm	■ 1363 ■ 18	 	
Zinc	ppm	<b>□</b> 729	 	
Phosphorus	ppm	■ 665	 	
Barium	ppm	<b>8</b>	 	
Boron	ррт	■0	 	
DOTOIT	ppiii		 	

## **McDonnell Marine Service**

63 Old Windsor Rd.
BLOOMFIELD, CT
US 06002-1404
Contact: Brian McDonnell
brmcdonnell@comcast.net
T:

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 suitable for further service.

Depot:VP153357Unique No:10819338Signed:Jonathan HesterReport Date:11 Jan 2024

## **OIL ANALYSIS REPORT**



