

# OIL ANALYSIS REPORT

# VOLVO PENTA

## WINDSERVE VOLVO PENTA 10132167580 - STARBOARD DIESEL ENGINE

**Sample No:** VPA05929135  
**Oil Type:** VOLVO 15W30

### SAMPLE INFORMATION

Sample Number	<b>VPA05929135</b>	VPA045091	VPA046657	VPA045095
Sample Date	<b>20 Aug 2023</b>	20 Aug 2023	20 Aug 2023	18 Aug 2023
Machine Hours	<b>1</b>	1	0	1
Oil Hours	<b>1</b>	1	7	1
Oil Changed	<b>Changed</b>	Not Changd	Changed	Changed
Sample Status	<b>ATTENTION</b>	ABNORMAL	SEVERE	SEVERE

**SENESCO MARINE**  
10 MACNAUGHT ST  
NORTH KINGSTOWN, RI  
US 02852  
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F:

### OIL CONDITION

Visc @ 100°C	cSt	<b>12.98</b>	12.88	12.95	12.95
Base Number (BN)	mg KOH/g	<b>9.8</b>	9.8	9.9	10.0
Oxidation (PA)	%	<b>72</b>	72	72	72

### CONTAMINATION

Soot %	%	<b>0</b>	0	0	0
Nitration (PA)	%	<b>43</b>	43	43	43
Sulfation (PA)	%	<b>57</b>	56	57	56
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>17</b>	17	16	16
Sodium	ppm	<b>3</b>	3	3	3
Potassium	ppm	<b>2</b>	3	3	3

### WEAR METALS

Iron	ppm	<b>2</b>	2	2	2
Copper	ppm	<b>2</b>	2	2	2
Lead	ppm	<b>0</b>	0	0	0
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>0</b>	0	0	0
Chromium	ppm	<b>0</b>	0	0	0
Molybdenum	ppm	<b>44</b>	45	44	44
Nickel	ppm	<b>0</b>	0	0	0
Titanium	ppm	<b>&lt;1</b>	<1	<1	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>1</b>	1	1	1
Vanadium	ppm	<b>&lt;1</b>	<1	<1	<1

### ADDITIVES

Calcium	ppm	<b>1744</b>	1763	1740	1725
Magnesium	ppm	<b>394</b>	397	394	389
Zinc	ppm	<b>1079</b>	1088	1073	1069
Phosphorus	ppm	<b>899</b>	897	882	885
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>76</b>	77	77	76

### Diagnosis

Oil and filter change at the time of sampling has been noted. All component wear rates are normal. There is a moderate amount of particulates present in the oil. The condition of the oil is acceptable for the time in service.

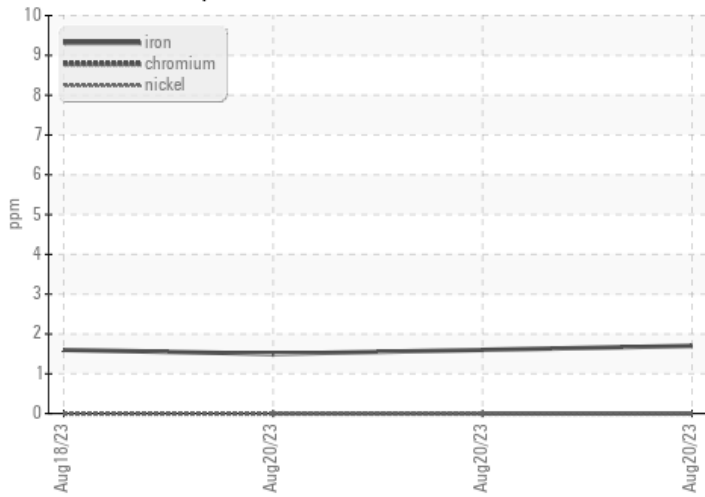
**Depot:** VPSENNOR  
**Unique No:** 10609082  
**Signed:** Doug Bogart  
**Report Date:** 21 Aug 2023

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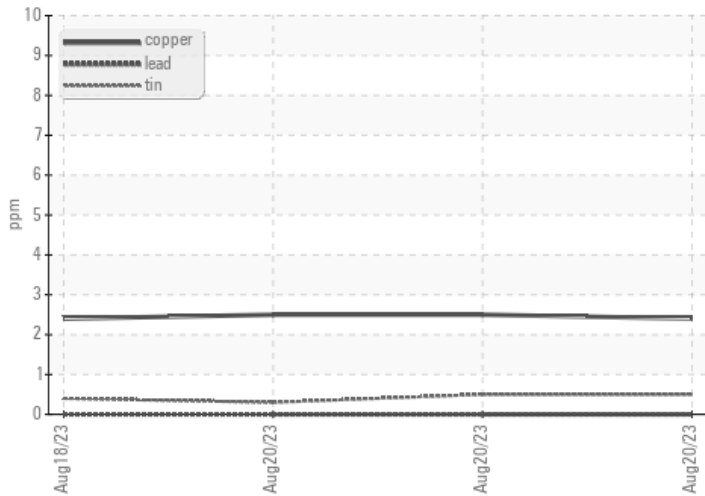
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## GRAPHS

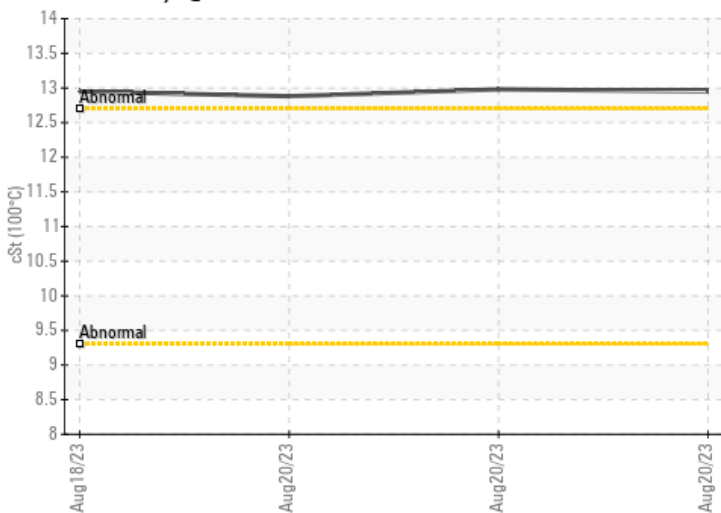
### Ferrous Alloys



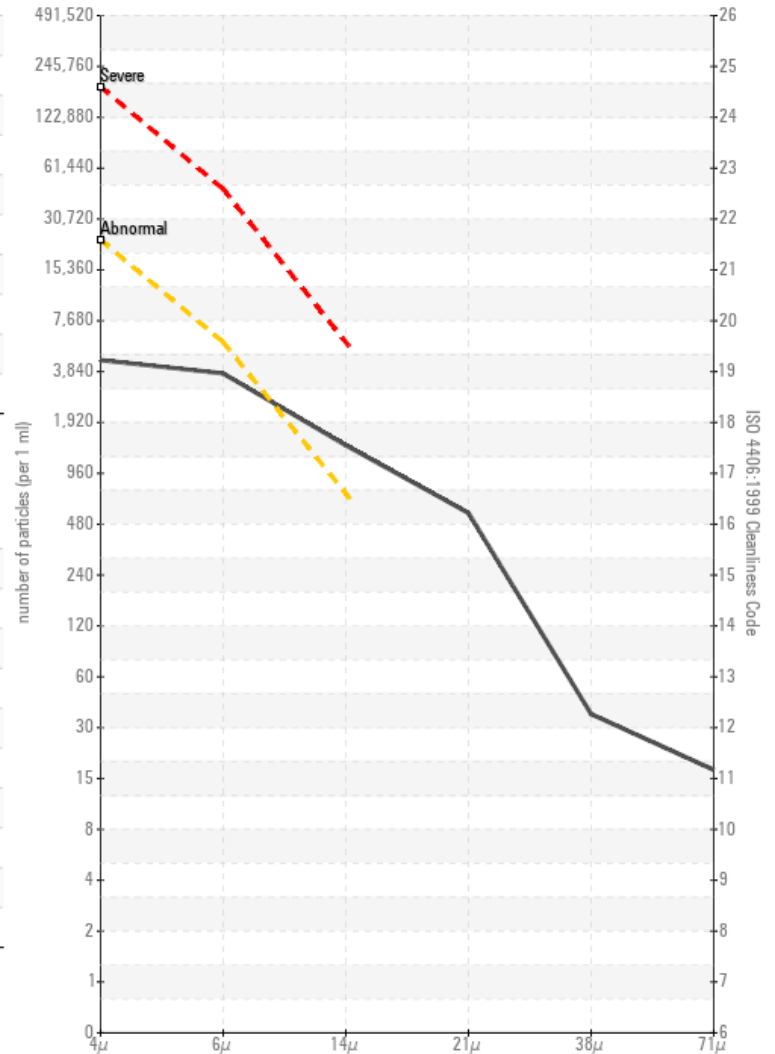
### Non-ferrous Metals



### Viscosity @ 100°C



### Particle Count



### Base Number

