



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**VV061055**  
Component  
**Starboard Diesel Engine**  
Fluid  
**VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0847282	---	---
Sample Date		Client Info		31 Oct 2023	---	---
Machine Age	hrs	Client Info		477	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>80	11	---	---
Chromium	ppm	ASTM D5185(m)	>6	<1	---	---
Nickel	ppm	ASTM D5185(m)	>2	1	---	---
Titanium	ppm	ASTM D5185(m)	>2	0	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>20	2	---	---
Lead	ppm	ASTM D5185(m)	>95	<1	---	---
Copper	ppm	ASTM D5185(m)	>85	3	---	---
Tin	ppm	ASTM D5185(m)	>9	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---

## CONTAMINATION

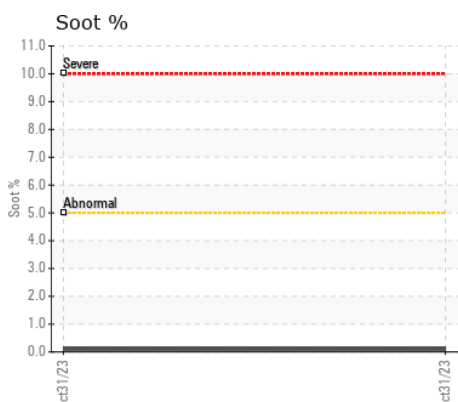
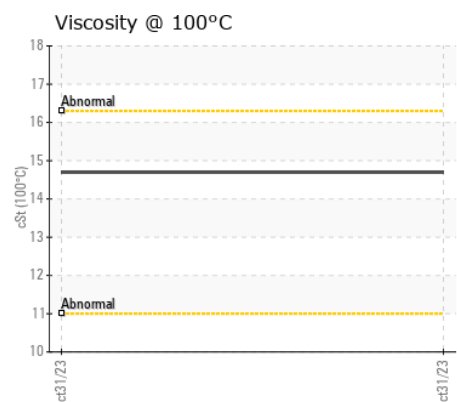
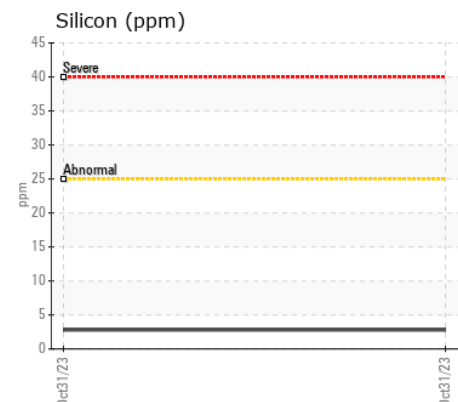
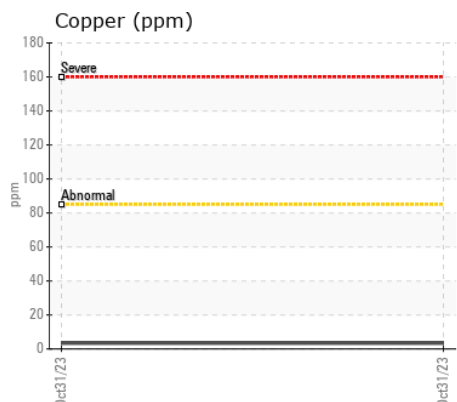
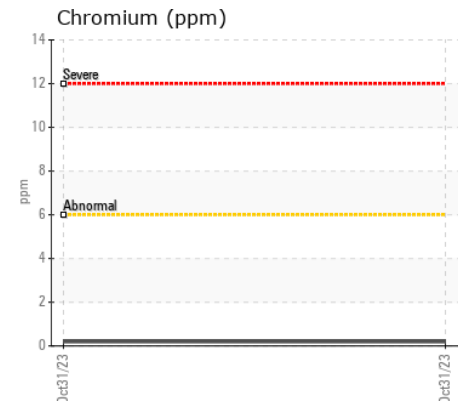
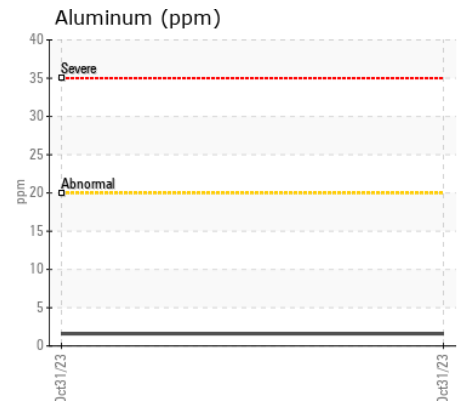
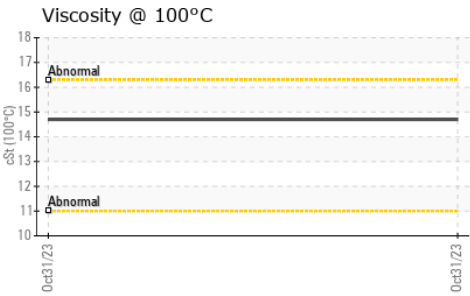
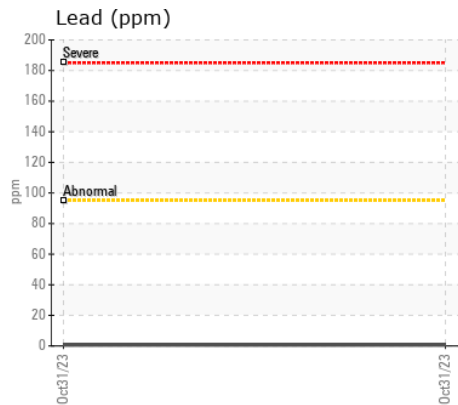
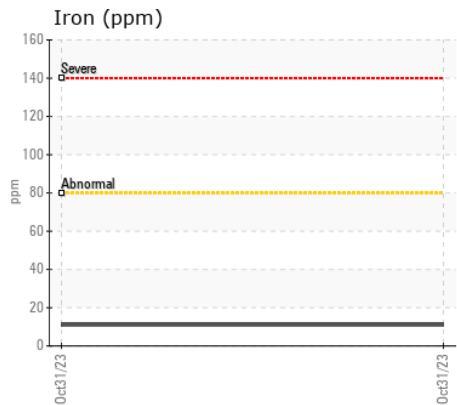
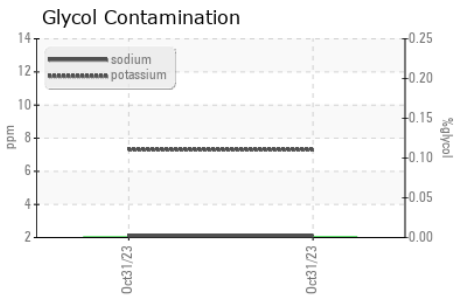
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	3	---	---
Potassium	ppm	ASTM D5185(m)	>20	7	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol	%	ASTM D7922*		0.0	---	---
Soot %	%	ASTM D7844*		0.1	---	---
Nitration	Abs/cm	ASTM D7624*	>20	6.8	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.7	---	---
Emulsified Water	scalar	Visual*	>0.1	NEG	---	---

## FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	---	---
Boron	ppm	ASTM D5185(m)		163	---	---
Barium	ppm	ASTM D5185(m)		0	---	---
Molybdenum	ppm	ASTM D5185(m)		0	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)		12	---	---
Calcium	ppm	ASTM D5185(m)		2094	---	---
Phosphorus	ppm	ASTM D5185(m)		963	---	---
Zinc	ppm	ASTM D5185(m)		1093	---	---
Sulfur	ppm	ASTM D5185(m)		3080	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.9	---	---
Visc @ 100°C	cSt	ASTM D7279(m)		14.7	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0847282 **Received** : 29 Feb 2024  
**Lab Number** : 02618836 **Tested** : 29 Feb 2024  
**Unique Number** : 5735946 **Diagnosed** : 29 Feb 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Glycol )

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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.