



**POWER SYSTEMS**  
**SYSTÈMES DE PUISSANCE**

**OIL ANALYSIS REPORT**

WEAR	<b>SEVERE</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**2006014620**  
Component  
**Starboard Diesel Engine**  
Fluid  
**SAE 15W40 (--- GAL)**

**RECOMMENDATION**

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

**WEAR**

Aluminum and iron ppm levels are severe. Cylinder, crank, or cam shaft wear is indicated. Piston wear is indicated.

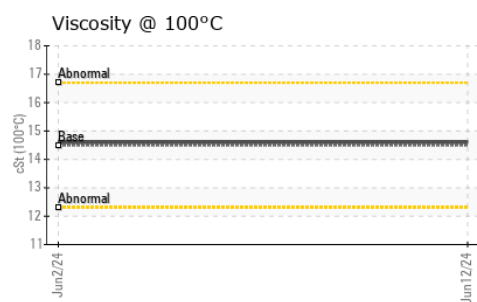
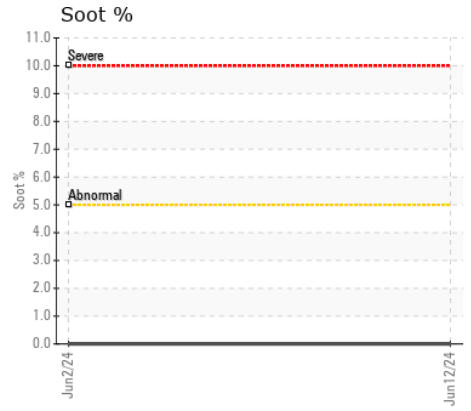
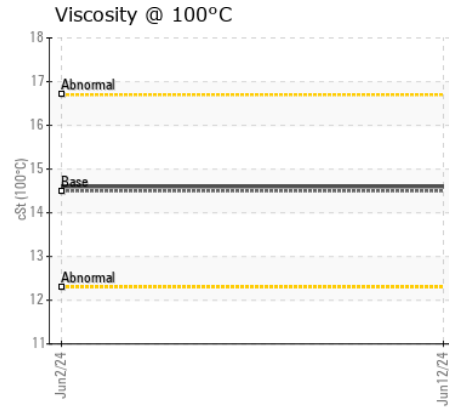
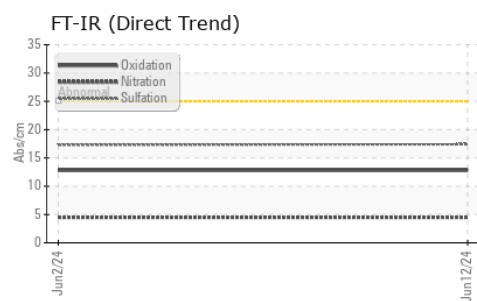
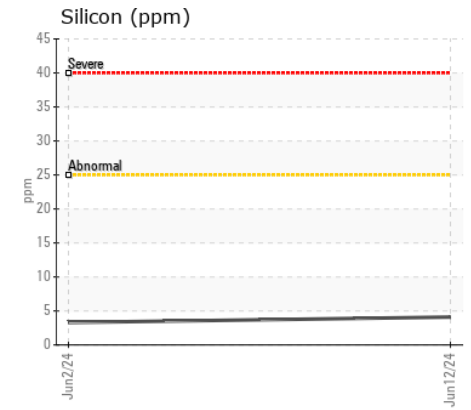
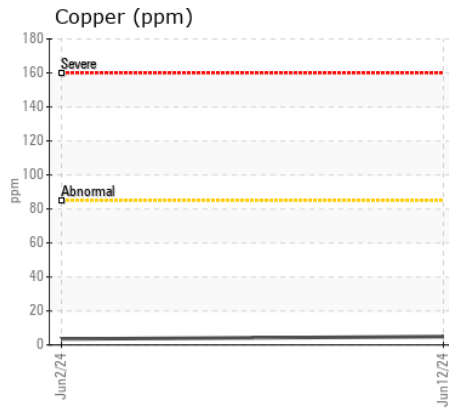
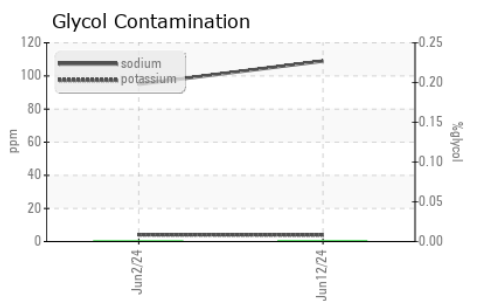
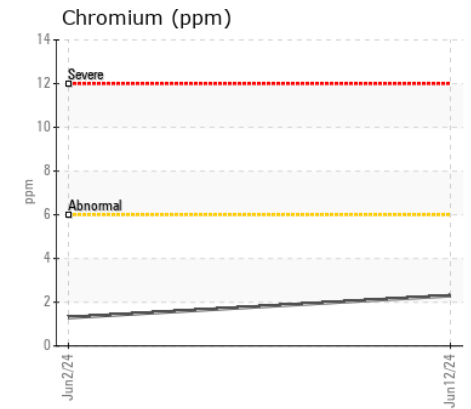
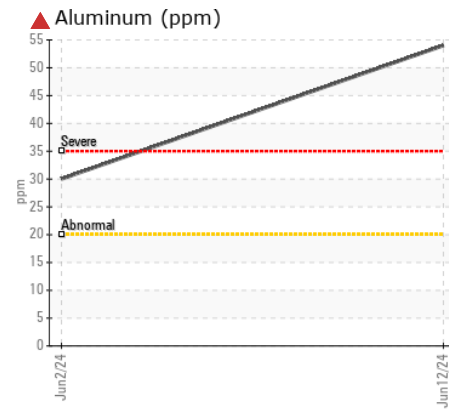
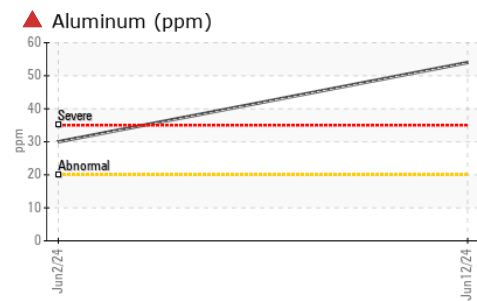
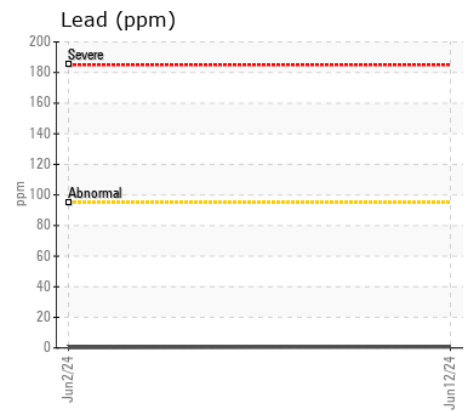
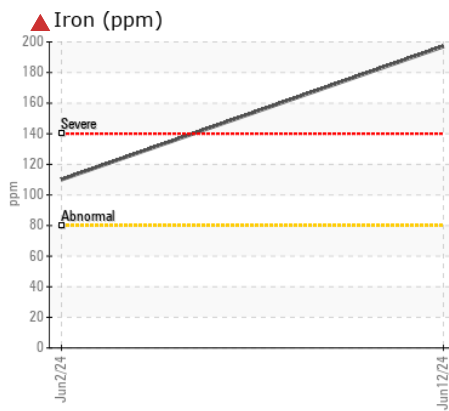
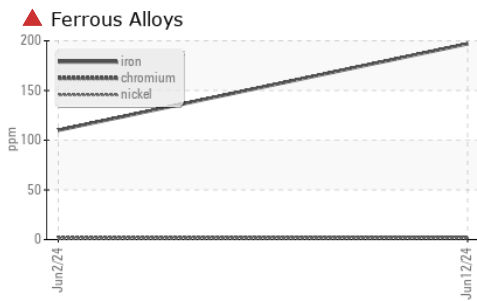
**CONTAMINATION**

There is no indication of any contamination in the oil.

**FLUID CONDITION**

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WA0021666</b>	WA0021447	---
Sample Date		Client Info		<b>12 Jun 2024</b>	02 Jun 2024	---
Machine Age	hrs	Client Info		<b>0</b>	936	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>N/A</b>	Not Changd	---
Filter Changed		Client Info		<b>N/A</b>	Not Changd	---
Sample Status				<b>SEVERE</b>	NORMAL	---
PQ		ASTM D8184*		<b>15</b>	---	---
Iron	ppm	ASTM D5185(m)	>80	<b>▲ 197</b>	110	---
Chromium	ppm	ASTM D5185(m)	>6	<b>2</b>	1	---
Nickel	ppm	ASTM D5185(m)	>2	<b>1</b>	<1	---
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	---
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>▲ 54</b>	30	---
Lead	ppm	ASTM D5185(m)	>95	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185(m)	>85	<b>5</b>	4	---
Tin	ppm	ASTM D5185(m)	>9	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	3	---
Potassium	ppm	ASTM D5185(m)	>20	<b>4</b>	4	---
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.1	<b>NEG</b>	NEG	---
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	---
Soot %	%	ASTM D7844*		<b>0</b>	0	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>4.5</b>	4.5	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>17.4</b>	17.3	---
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	NEG	---
Sodium	ppm	ASTM D5185(m)	>57	<b>109</b>	95	---
Boron	ppm	ASTM D5185(m)		<b>2</b>	2	---
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185(m)		<b>58</b>	57	---
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185(m)		<b>974</b>	961	---
Calcium	ppm	ASTM D5185(m)		<b>1018</b>	1017	---
Phosphorus	ppm	ASTM D5185(m)		<b>989</b>	983	---
Zinc	ppm	ASTM D5185(m)		<b>1138</b>	1124	---
Sulfur	ppm	ASTM D5185(m)		<b>2567</b>	2541	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>12.8</b>	12.8	---
Visc @ 40°C	cSt	ASTM D7279(m)	115	<b>108</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.5	<b>14.6</b>	14.6	---
Viscosity Index (VI)	Scale	ASTM D2270*	128	<b>139</b>	---	---



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WA0021666 **Received** : 13 Jun 2024  
**Lab Number** : 02641629 **Tested** : 17 Jun 2024  
**Unique Number** : 5799168 **Diagnosed** : 17 Jun 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: Glycol, KV40, PQ, VI )

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.

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