



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

Area  
**RICK HARNACK**  
Machine Id  
[RICK HARNACK] 008 685578-8  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON DELO 400 XLE 15W40 (7 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0068896</b>	MW06202220	MW06176433
Sample Date		Client Info		<b>29 Jun 2024</b>	28 May 2024	26 Apr 2024
Machine Age	hrs	Client Info		<b>23409</b>	23043	22639
Oil Age	hrs	Client Info		<b>366</b>	404	425
Filter Age	hrs	Client Info		<b>366</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	N/A
Filter Changed		Client Info		<b>Changed</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>5</b>	6	5
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>1</b>	2	2
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>3</b>	4	3
Lead	ppm	ASTM D5185m	>17	<b>0</b>	1	2
Copper	ppm	ASTM D5185m	>70	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

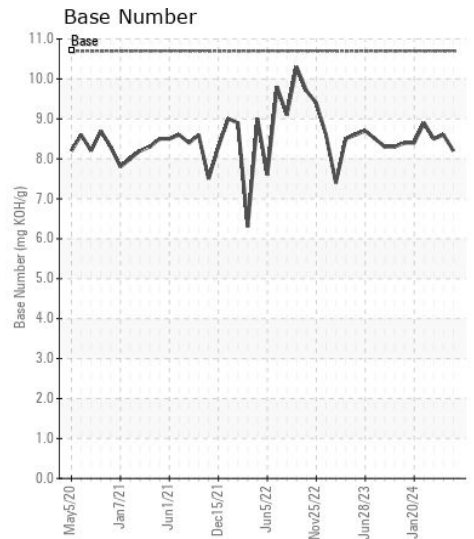
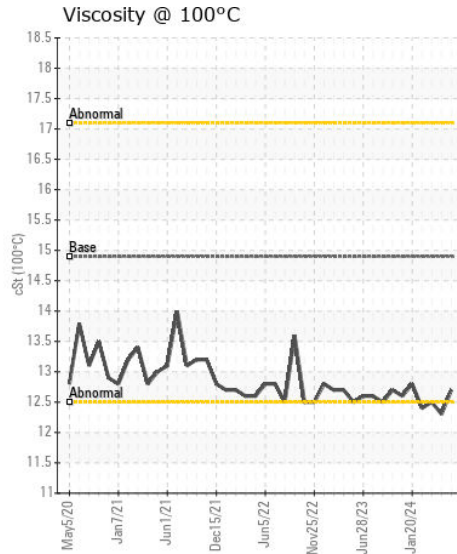
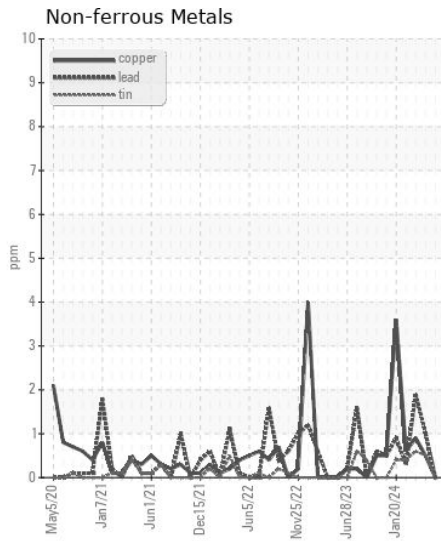
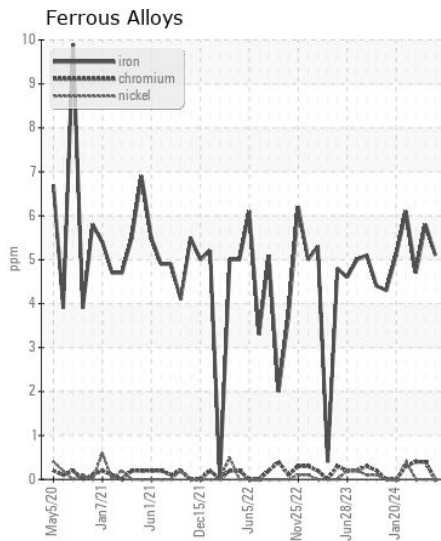
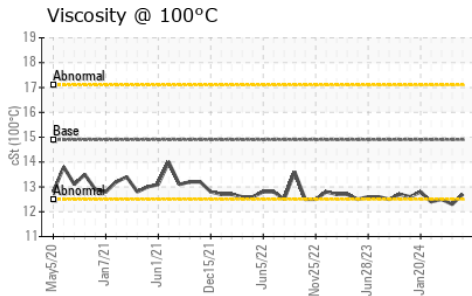
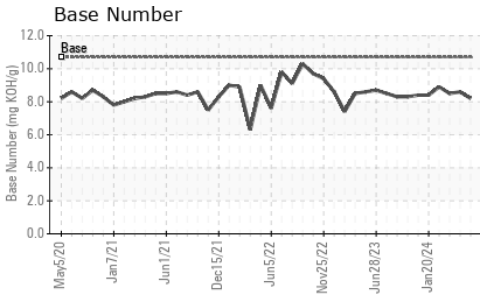
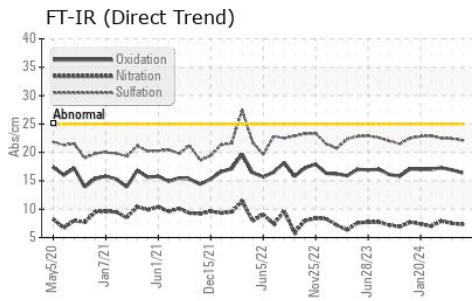
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	7	6
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	3	2
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	7.5	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.1</b>	22.4	22.5
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>1</b>	<1	0
Boron	ppm	ASTM D5185m		<b>309</b>	362	346
Barium	ppm	ASTM D5185m		<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m		<b>110</b>	147	126
Manganese	ppm	ASTM D5185m		<b>4</b>	2	2
Magnesium	ppm	ASTM D5185m		<b>609</b>	770	658
Calcium	ppm	ASTM D5185m		<b>1575</b>	1770	1538
Phosphorus	ppm	ASTM D5185m	760	<b>895</b>	918	751
Zinc	ppm	ASTM D5185m	830	<b>1042</b>	1000	838
Sulfur	ppm	ASTM D5185m	2770	<b>3483</b>	3269	2826
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.4</b>	16.9	17.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>8.2</b>	8.6	8.5
Visc @ 100°C	cSt	ASTM D445	14.9	<b>12.7</b>	12.3	12.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0068896  
**Lab Number** : 06237311  
**Unique Number** : 11126145  
**Test Package** : MAR 2  
**Received** : 15 Jul 2024  
**Tested** : 17 Jul 2024  
**Diagnosed** : 17 Jul 2024 - Wes Davis

**INGRAM BARGE**  
 900 S 3RD ST  
 PADUCAH, KY  
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To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)