



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

Area  
**OH INGRAM**  
Machine Id  
[OH INGRAM] 008 645896-8  
Component  
Starboard Genset  
Fluid  
CHEVRON DELO 400 XLE 15W40 (--- GAL)

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0063335</b>	MW0064805	MW0064752
Sample Date		Client Info		<b>24 Apr 2024</b>	14 Jan 2024	20 Dec 2023
Machine Age	hrs	Client Info		<b>32725</b>	32359	32011
Oil Age	hrs	Client Info		<b>388</b>	345	397
Filter Age	hrs	Client Info		<b>0</b>	345	397
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>12</b>	4	10
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>5</b>	6	9
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>4</b>	3	3
Lead	ppm	ASTM D5185m	>17	<b>3</b>	6	<1
Copper	ppm	ASTM D5185m	>70	<b>&lt;1</b>	0	1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

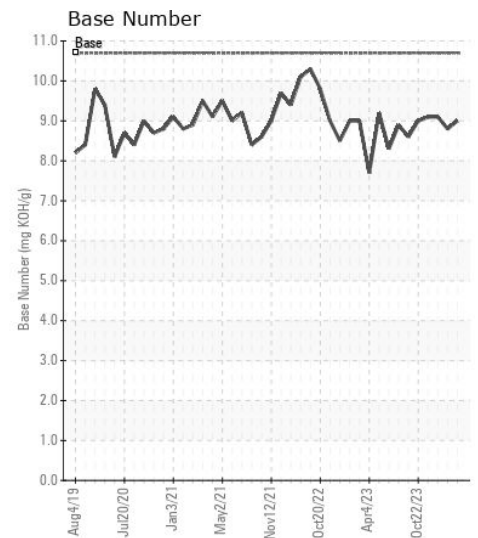
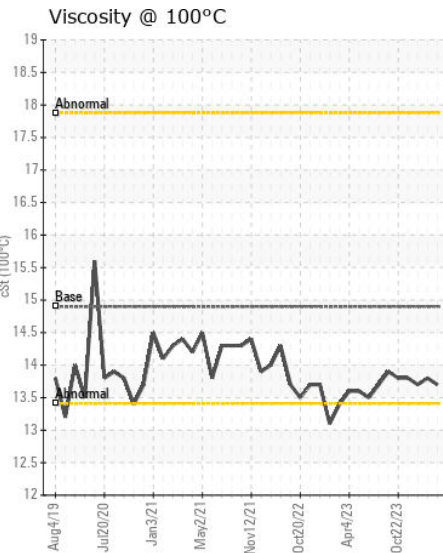
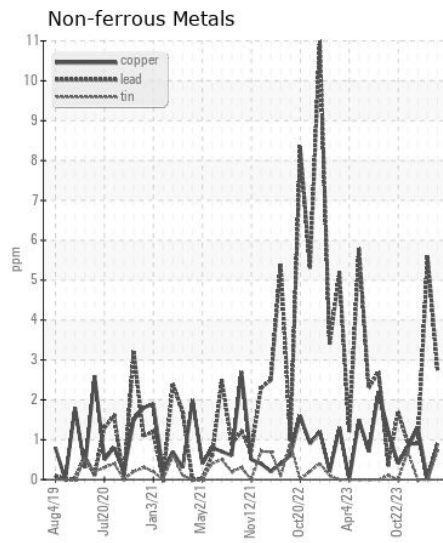
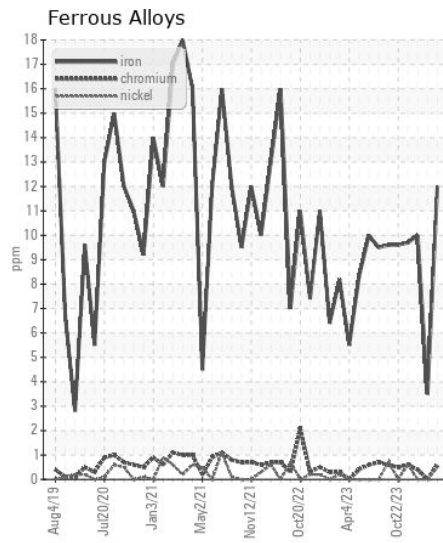
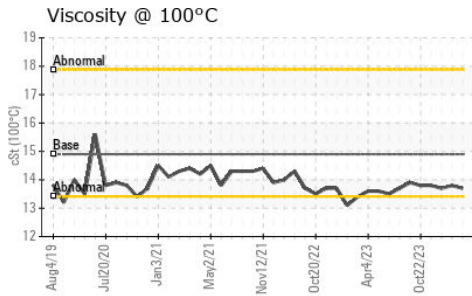
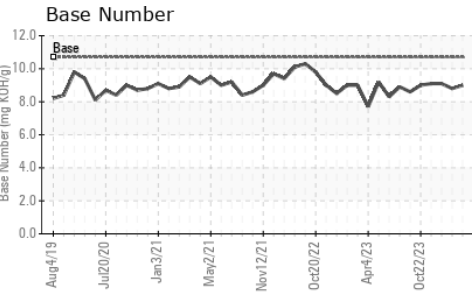
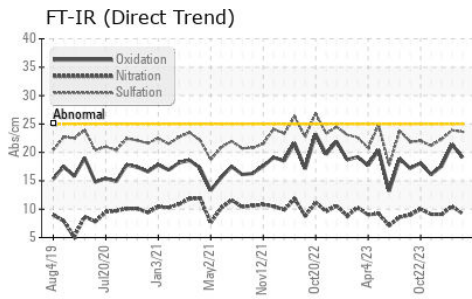
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>11</b>	6	6
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	0	1
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>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	10.5	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.6</b>	23.9	22.3
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>0</b>	1	2
Boron	ppm	ASTM D5185m		<b>308</b>	299	265
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>124</b>	113	100
Manganese	ppm	ASTM D5185m		<b>2</b>	1	1
Magnesium	ppm	ASTM D5185m		<b>722</b>	768	834
Calcium	ppm	ASTM D5185m		<b>1700</b>	1813	1894
Phosphorus	ppm	ASTM D5185m	760	<b>775</b>	829	925
Zinc	ppm	ASTM D5185m	830	<b>951</b>	984	1066
Sulfur	ppm	ASTM D5185m	2770	<b>3163</b>	3235	3231
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.1</b>	21.4	17.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>9.0</b>	8.8	9.1
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.7</b>	13.8	13.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0063335  
**Lab Number** : 06178141  
**Unique Number** : 11029467  
**Test Package** : MAR 2  
**Received** : 13 May 2024  
**Tested** : 15 May 2024  
**Diagnosed** : 15 May 2024 - Sean Felton

**INGRAM BARGE**  
 900 S 3RD ST  
 PADUCAH, KY  
 US 42003

Contact: ALLEN WILLHELM  
 allen.willhelm@ingrambarga.com  
 T: (270)415-4467  
 F: (615)695-3697

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)