



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

Area  
**SAMUEL B RICHMOND**  
Machine Id  
[SAMUEL B RICHMOND] 008 652589-8  
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>MW06238645</b>	MW06183599	MW0062885
Sample Date		Client Info		<b>08 Jul 2024</b>	11 May 2024	12 Mar 2024
Machine Age	hrs	Client Info		<b>34482</b>	33847	38158
Oil Age	hrs	Client Info		<b>305</b>	33847	395
Filter Age	hrs	Client Info		<b>0</b>	0	395
Oil Changed		Client Info		<b>N/A</b>	N/A	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>6</b>	6	7
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>4</b>	4	3
Lead	ppm	ASTM D5185m	>17	<b>&lt;1</b>	0	2
Copper	ppm	ASTM D5185m	>70	<b>1</b>	1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
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**

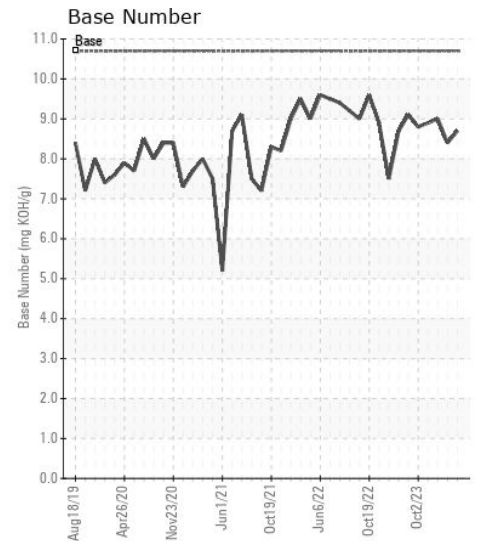
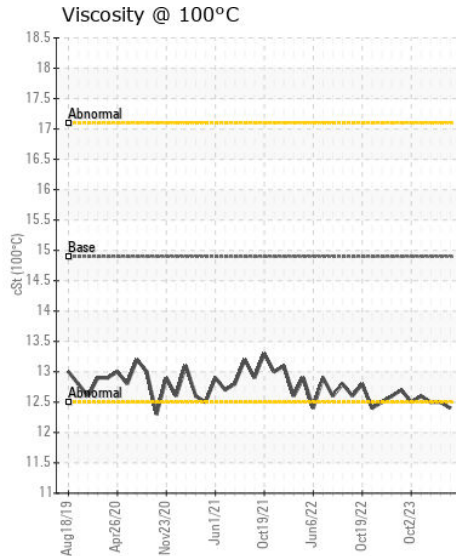
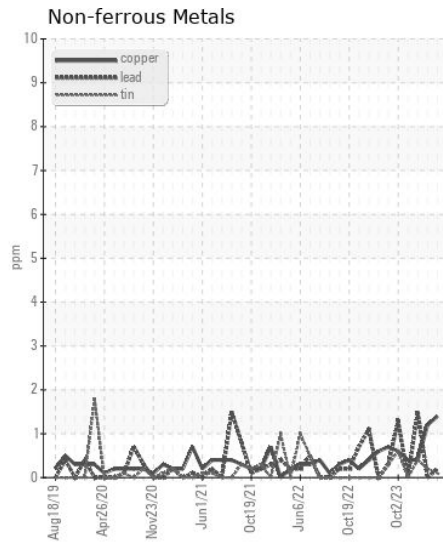
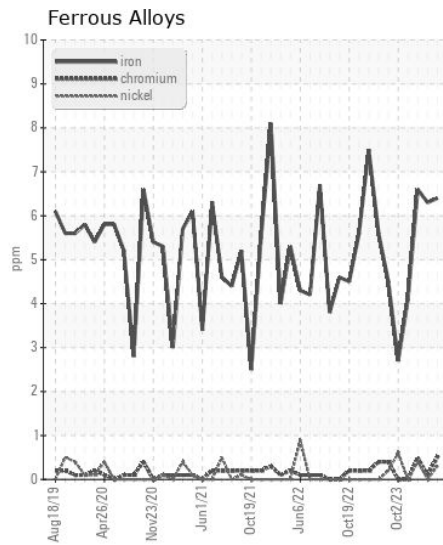
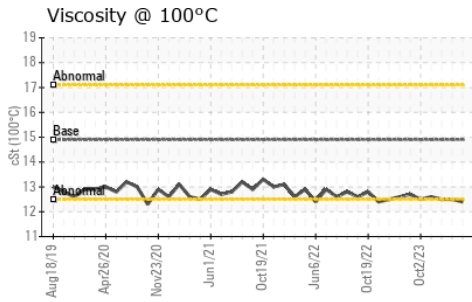
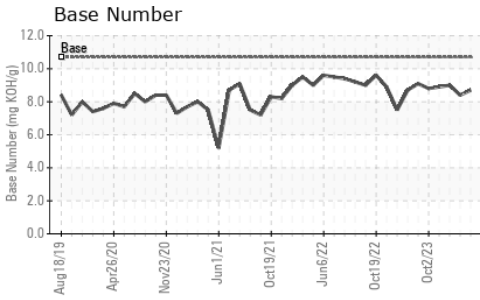
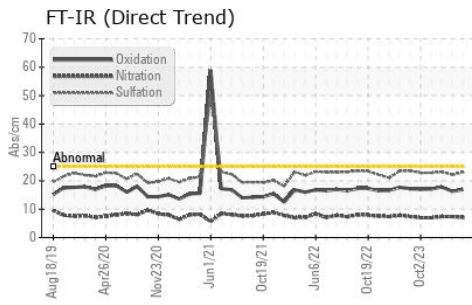
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>7</b>	6	8
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	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>7.1</b>	7.4	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.0</b>	22.1	23.1
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>2</b>	<1	0
Boron	ppm	ASTM D5185m		<b>413</b>	428	361
Barium	ppm	ASTM D5185m		<b>1</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>146</b>	130	135
Manganese	ppm	ASTM D5185m		<b>3</b>	2	2
Magnesium	ppm	ASTM D5185m		<b>772</b>	731	652
Calcium	ppm	ASTM D5185m		<b>1794</b>	1646	1571
Phosphorus	ppm	ASTM D5185m	760	<b>874</b>	738	718
Zinc	ppm	ASTM D5185m	830	<b>1002</b>	871	834
Sulfur	ppm	ASTM D5185m	2770	<b>2877</b>	2985	2510
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.9</b>	16.3	17.8
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>8.7</b>	8.4	9.0
Visc @ 100°C	cSt	ASTM D445	14.9	<b>12.4</b>	12.5	12.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : MW06238645

Lab Number : 06238645

Unique Number : 11127479

Test Package : MAR 2

Received : 16 Jul 2024

Tested : 17 Jul 2024

Diagnosed : 17 Jul 2024 - Wes Davis

INGRAM BARGE

900 S 3RD ST

PADUCAH, KY

US 42003

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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)