



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

Area  
**MARTHA LYNN**  
Machine Id  
[**MARTHA LYNN**] 008 504678-8  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON DELO 400 LE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0038875</b>	MW0037581	MW0063275
Sample Date		Client Info		<b>17 Apr 2024</b>	07 Feb 2024	01 Feb 2024
Machine Age	hrs	Client Info		<b>26147</b>	25490	25360
Oil Age	hrs	Client Info		<b>313</b>	345	215
Filter Age	hrs	Client Info		<b>313</b>	345	215
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

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

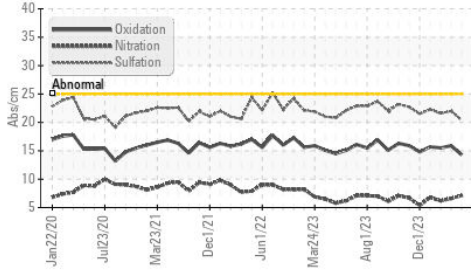
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	0	0
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.3</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.1</b>	6.6	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.4</b>	22.0	21.6
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**

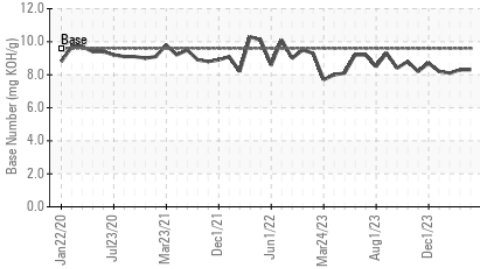
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>0</b>	0	0
Boron	ppm	ASTM D5185m		<b>280</b>	479	526
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>82</b>	99	99
Manganese	ppm	ASTM D5185m		<b>2</b>	2	2
Magnesium	ppm	ASTM D5185m		<b>635</b>	537	534
Calcium	ppm	ASTM D5185m		<b>1535</b>	1496	1548
Phosphorus	ppm	ASTM D5185m	1200	<b>777</b>	874	918
Zinc	ppm	ASTM D5185m	1300	<b>911</b>	1011	1091
Sulfur	ppm	ASTM D5185m	3200	<b>3325</b>	2720	2855
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.3</b>	15.9	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	<b>8.3</b>	8.3	8.1
Visc @ 100°C	cSt	ASTM D445	15.7	<b>13.8</b>	13.5	13.4

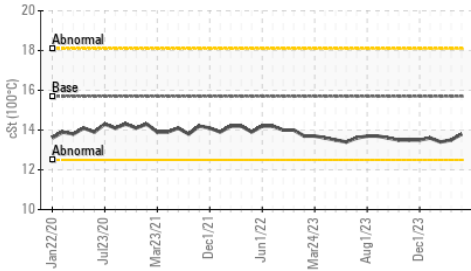
FT-IR (Direct Trend)



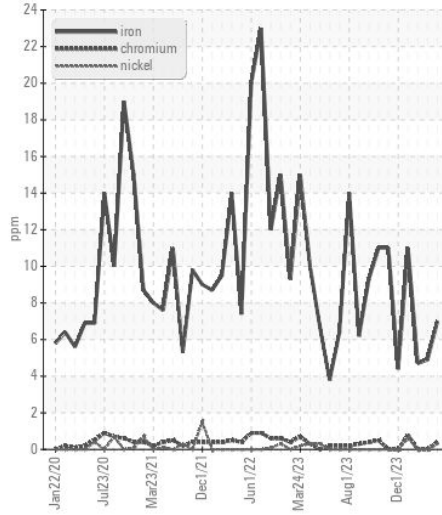
Base Number



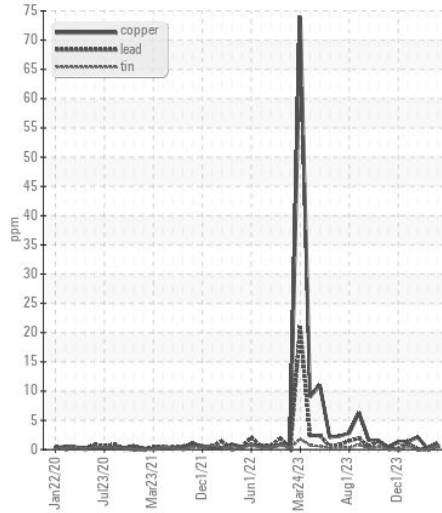
Viscosity @ 100°C



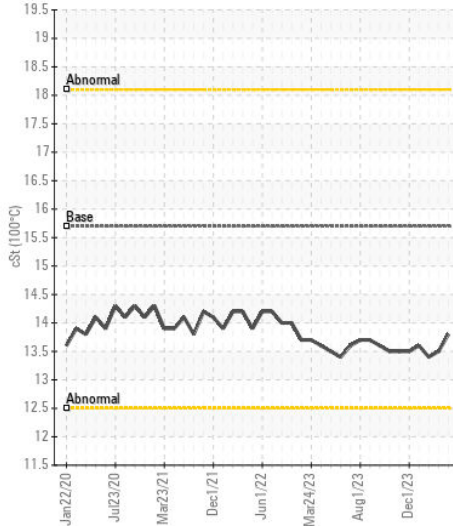
Ferrous Alloys



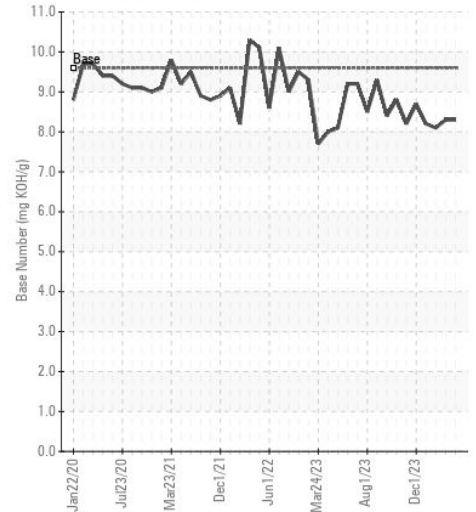
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0038875  
**Lab Number** : 06178218  
**Unique Number** : 11029544  
**Test Package** : MAR 2  
**Received** : 13 May 2024  
**Tested** : 14 May 2024  
**Diagnosed** : 14 May 2024 - Wes Davis

**INGRAM BARGE**  
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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)