



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

Area  
**MARTHA LYNN**  
Machine Id  
**[MARTHA LYNN] 003 504678-3**  
Component  
**Starboard Main Engine**  
Fluid  
**CHEVRON DELO 710 LS (350 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0054298</b>	MW0046712	MW0048693
Sample Date		Client Info		<b>01 Jul 2023</b>	02 Jun 2023	29 Apr 2023
Machine Age	hrs	Client Info		<b>14277</b>	13913	13233
Oil Age	hrs	Client Info		<b>14277</b>	13913	13233
Filter Age	hrs	Client Info		<b>14277</b>	210	116
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>None</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>6</b>	4	6
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>1</b>	1	0
Lead	ppm	ASTM D5185m	>18	<b>4</b>	5	5
Copper	ppm	ASTM D5185m	>80	<b>24</b>	29	31
Tin	ppm	ASTM D5185m	>14	<b>3</b>	4	4
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

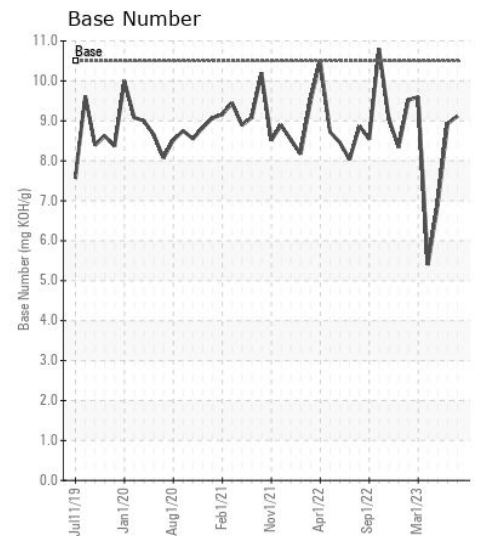
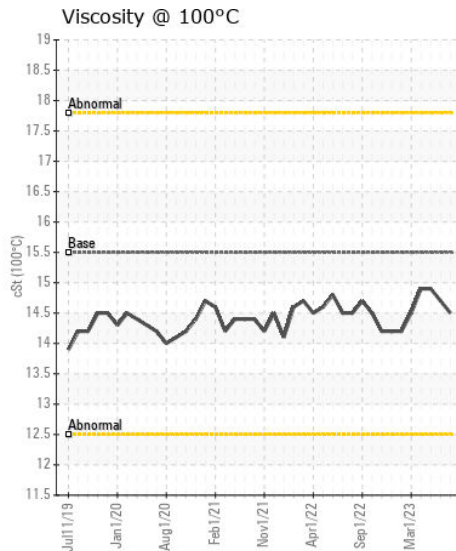
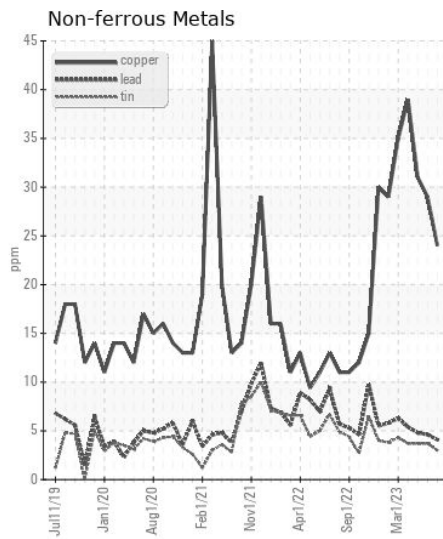
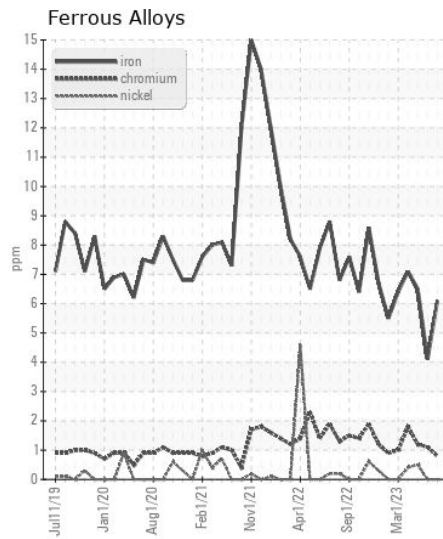
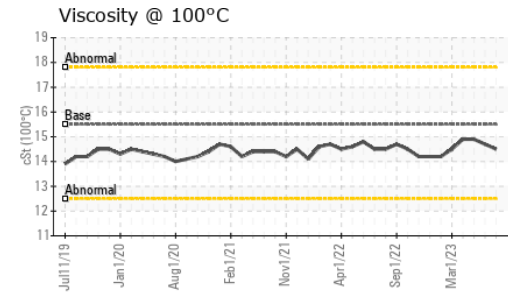
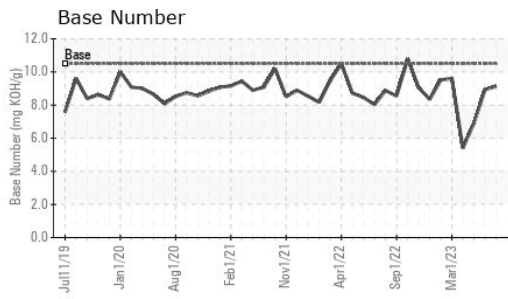
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>2</b>	3	3
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</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	>3	<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.6</b>	9.6	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>16.6</b>	16.5	15.8
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	>75	<b>&lt;1</b>	0	0
Boron	ppm	ASTM D5185m		<b>34</b>	37	38
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>43</b>	44	47
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>12</b>	16	12
Calcium	ppm	ASTM D5185m		<b>3293</b>	3499	3625
Phosphorus	ppm	ASTM D5185m		<b>2</b>	5	4
Zinc	ppm	ASTM D5185m		<b>5</b>	8	16
Sulfur	ppm	ASTM D5185m		<b>2159</b>	2152	2435
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>10.0</b>	10.0	10.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>9.12</b>	8.93	6.91
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.5</b>	14.7	14.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0054298 **Received** : 08 Jan 2024  
**Lab Number** : 06054133 **Diagnosed** : 09 Jan 2024  
**Unique Number** : 10820082 **Diagnostician** : Wes Davis  
**Test Package** : MAR 2

**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)