



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

Area  
**AARON F BARRETT**  
Machine Id  
**[AARON F BARRETT] 003 664964-3**  
Component  
**Starboard Main Engine**  
Fluid  
**CHEVRON DELO 710 LS (375 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0062758</b>	MW0062763	MW0062770
Sample Date		Client Info		<b>01 Apr 2024</b>	01 Mar 2024	01 Feb 2024
Machine Age	hrs	Client Info		<b>44183</b>	43440	42744
Oil Age	hrs	Client Info		<b>44183</b>	43440	42744
Filter Age	hrs	Client Info		<b>44183</b>	0	42744
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	None	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>16</b>	15	17
Chromium	ppm	ASTM D5185m	>8	<b>2</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>2</b>	1	2
Lead	ppm	ASTM D5185m	>18	<b>7</b>	4	7
Copper	ppm	ASTM D5185m	>80	<b>28</b>	18	22
Tin	ppm	ASTM D5185m	>14	<b>6</b>	4	5
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.

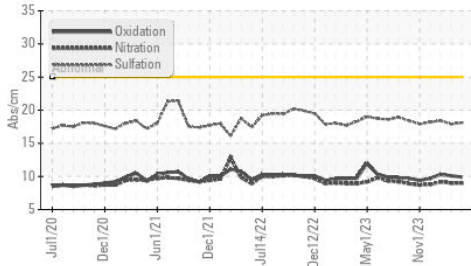
Silicon	ppm	ASTM D5185m	>20	<b>6</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	0.6	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	9.0	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.1</b>	17.9	18.4
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**

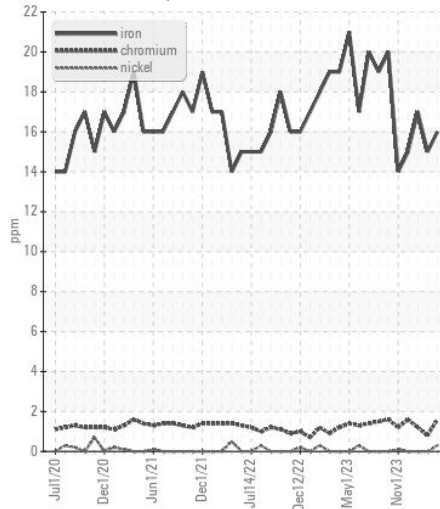
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<b>7</b>	5	5
Boron	ppm	ASTM D5185m		<b>47</b>	36	38
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>53</b>	41	46
Manganese	ppm	ASTM D5185m		<b>2</b>	1	2
Magnesium	ppm	ASTM D5185m		<b>11</b>	12	14
Calcium	ppm	ASTM D5185m		<b>4007</b>	3073	3400
Phosphorus	ppm	ASTM D5185m		<b>6</b>	10	5
Zinc	ppm	ASTM D5185m		<b>&lt;1</b>	4	2
Sulfur	ppm	ASTM D5185m		<b>2929</b>	2440	2295
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>9.9</b>	10.1	10.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>8.74</b>	9.25	7.80
Visc @ 100°C	cSt	ASTM D445	15.5	<b>15.0</b>	15.0	14.9

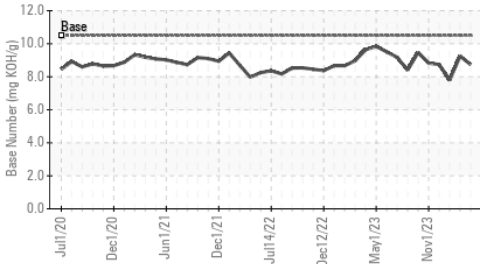
**FT-IR (Direct Trend)**



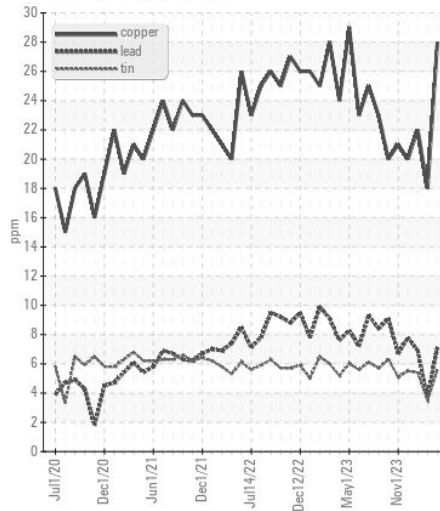
**Ferrous Alloys**



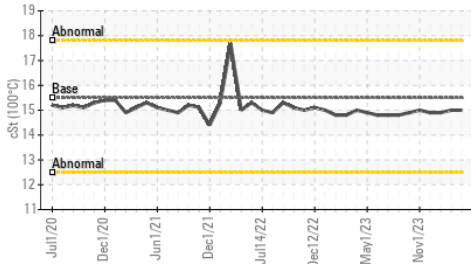
**Base Number**



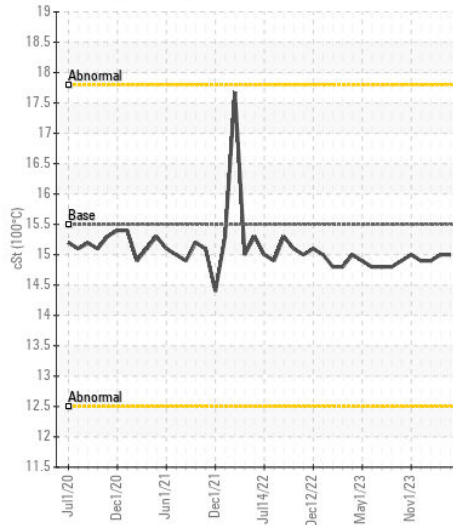
**Non-ferrous Metals**



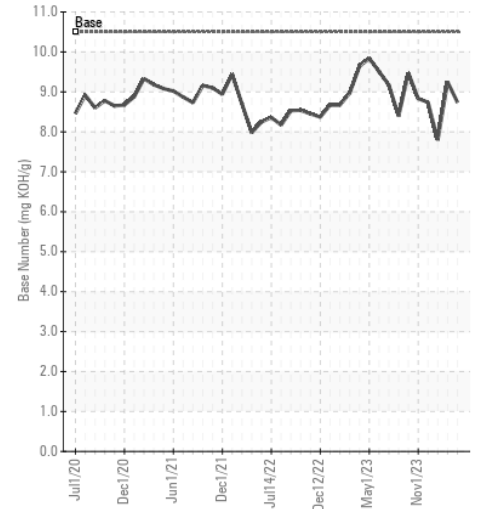
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : MW0062758

**Lab Number** : 06148165

**Unique Number** : 10978243

**Test Package** : MAR 2

**Received** : 12 Apr 2024

**Tested** : 15 Apr 2024

**Diagnosed** : 15 Apr 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)