



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

Machine Id  
**AGC**  
Component  
**Starboard Main Engine**  
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>MW05862881</b>	MW05843080	MW05823770
Sample Date		Client Info		<b>01 Jun 2023</b>	09 May 2023	18 Apr 2023
Machine Age	hrs	Client Info		<b>58964</b>	58674	57820
Oil Age	hrs	Client Info		<b>290</b>	854	885
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

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

**CONTAMINATION**

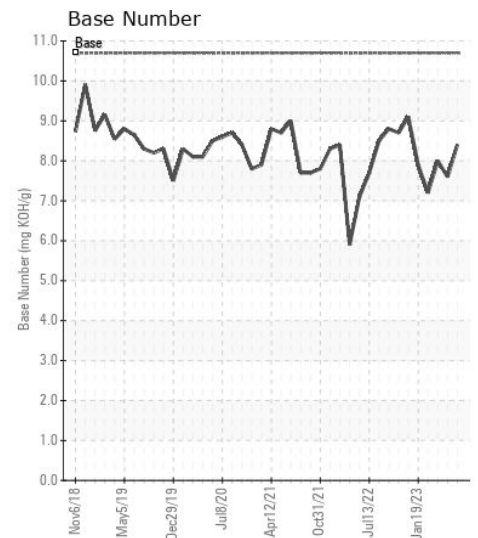
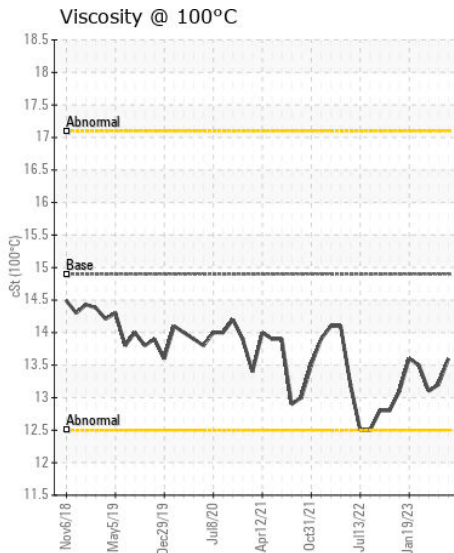
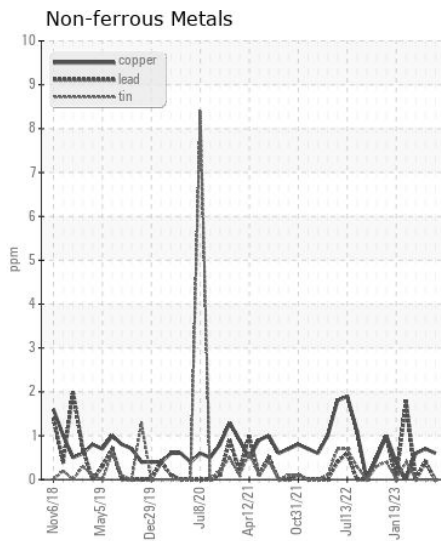
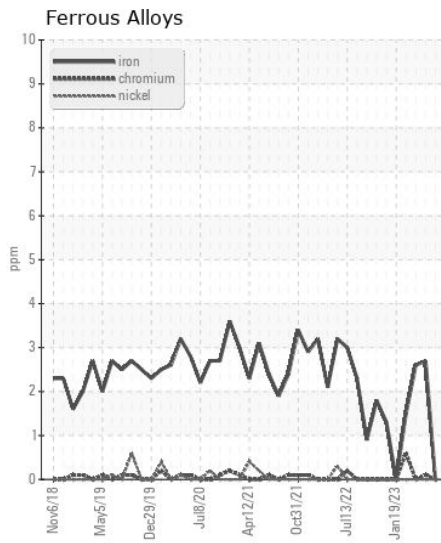
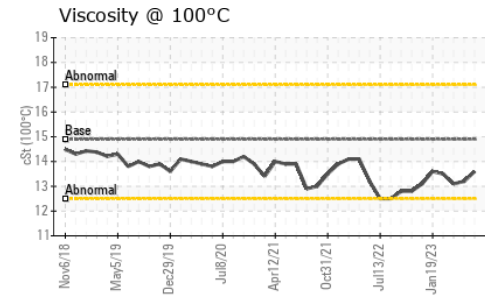
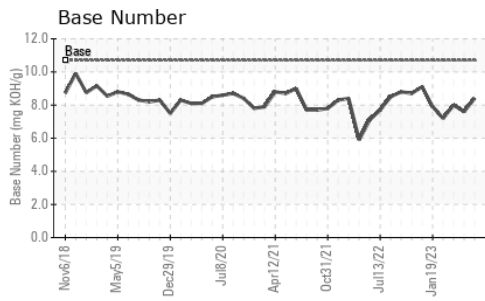
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>4</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	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>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.2</b>	6.6	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.6</b>	22.7	21.4
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>&lt;1</b>	0	<1
Boron	ppm	ASTM D5185m		<b>408</b>	312	354
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>88</b>	91	94
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>437</b>	482	461
Calcium	ppm	ASTM D5185m		<b>1473</b>	1385	1608
Phosphorus	ppm	ASTM D5185m	760	<b>928</b>	760	780
Zinc	ppm	ASTM D5185m	830	<b>1129</b>	926	939
Sulfur	ppm	ASTM D5185m	2770	<b>3690</b>	2925	2700
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.3</b>	17.6	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>8.4</b>	7.6	8.0
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.6</b>	13.2	13.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW05862881 **Received** : 02 Jun 2023  
**Lab Number** : 05862881 **Tested** : 02 Jun 2023  
**Unique Number** : 10497346 **Diagnosed** : 05 Jun 2023 - Don Baldrige  
**Test Package** : MAR 2

**ILLINOIS MARINE TOWING**  
 PO BOX 391  
 LEMONT, IL  
 US 60439  
 Contact: RHETT DANIEL  
 rdaniel@imtowing.com  
 T: (630)280-4926  
 F: (630)739-2041

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)