



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

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		MW05823770	MW05774579	MW05745135
Sample Date		Client Info		18 Apr 2023	22 Feb 2023	19 Jan 2023
Machine Age	hrs	Client Info		57820	56935	56157
Oil Age	hrs	Client Info		885	778	724
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

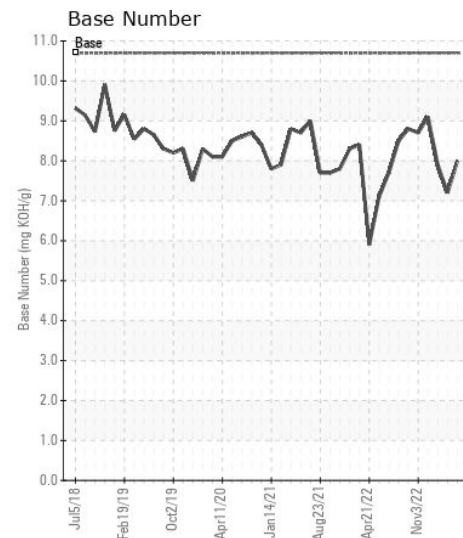
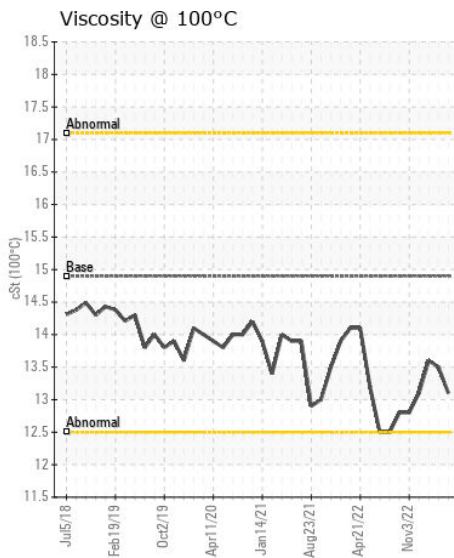
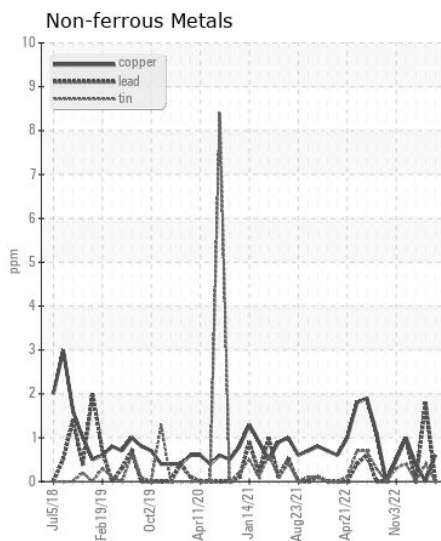
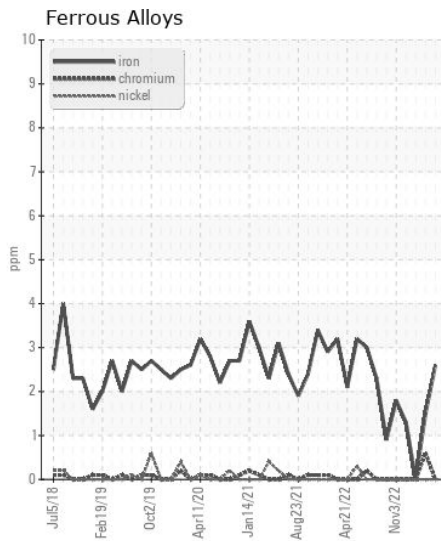
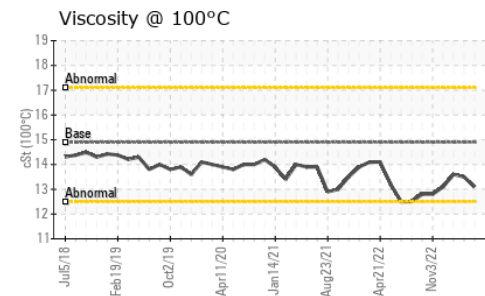
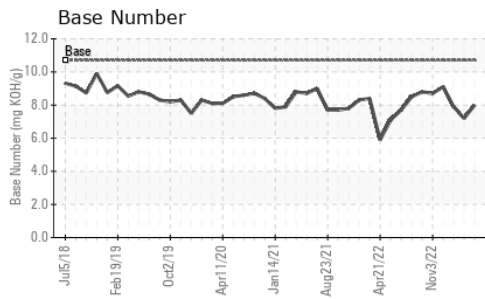
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	4	4	3
Potassium	ppm	ASTM D5185m	>20	1	2	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	5.9	5.9	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4	21.2	21.3
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	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	<1	0	0
Boron	ppm	ASTM D5185m		354	380	387
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		94	86	77
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		461	444	361
Calcium	ppm	ASTM D5185m		1608	1474	1108
Phosphorus	ppm	ASTM D5185m	760	780	909	694
Zinc	ppm	ASTM D5185m	830	939	1160	811
Sulfur	ppm	ASTM D5185m	2770	2700	3272	2674
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	15.4	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	8.0	7.2	7.9
Visc @ 100°C	cSt	ASTM D445	14.9	13.1	13.5	13.6



Certificate L2367

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

Sample No. : MW05823770

Lab Number : 05823770

Unique Number : 10431853

Test Package : MAR 2

Received : 19 Apr 2023

Tested : 21 Apr 2023

Diagnosed : 23 Apr 2023 - Don Baldrige

ILLINOIS MARINE TOWING

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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)