



Machine Id
EIC
Component
Starboard Main Engine
Fluid
CHEVRON DELO 400 XLE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW05862890	MW05823783	MW05765711
Sample Date		Client Info		01 Jun 2023	18 Apr 2023	12 Feb 2023
Machine Age	hrs	Client Info		22037	21149	19686
Oil Age	hrs	Client Info		888	661	634
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				ABNORMAL	ABNORMAL	NORMAL

WEAR

The lead level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	5	6	6
Chromium	ppm	ASTM D5185m	>8	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>3	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	0	0	2
Lead	ppm	ASTM D5185m	>18	▲ 23	9	5
Copper	ppm	ASTM D5185m	>80	2	2	<1
Tin	ppm	ASTM D5185m	>14	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

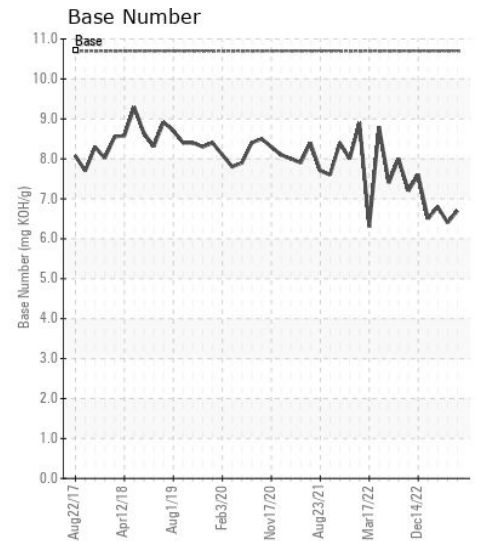
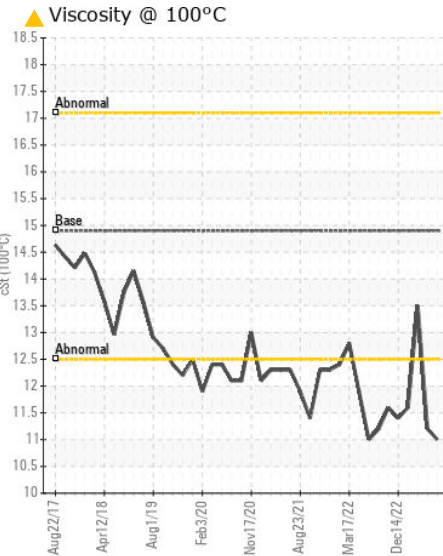
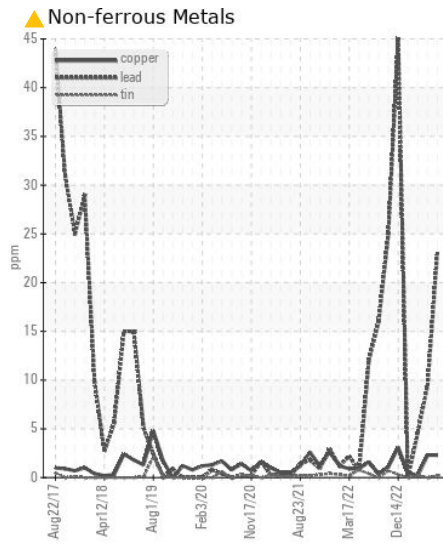
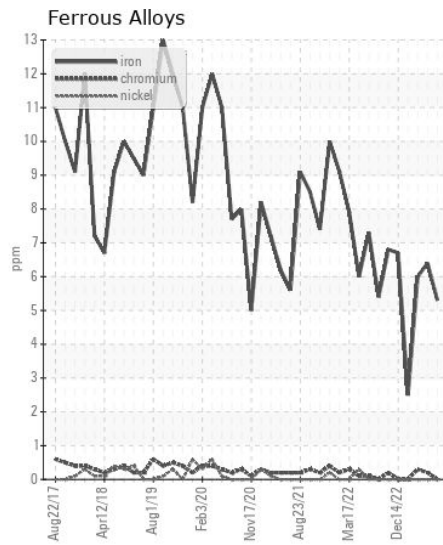
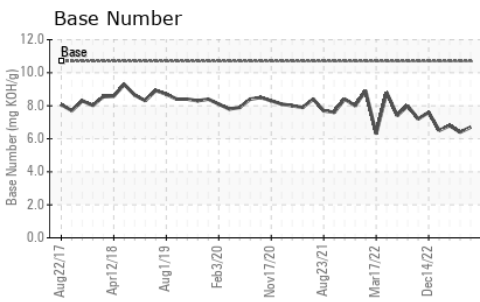
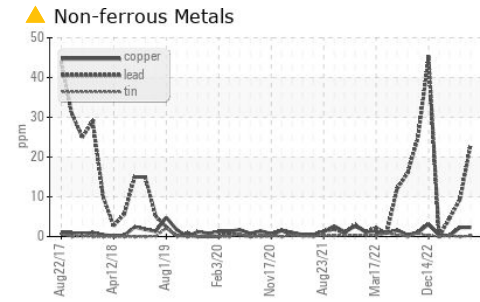
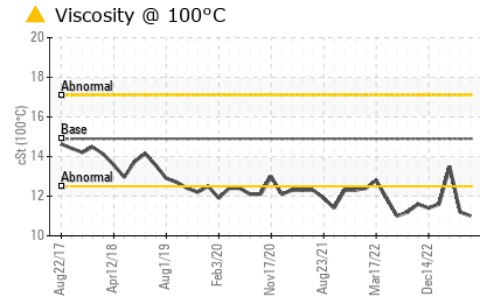
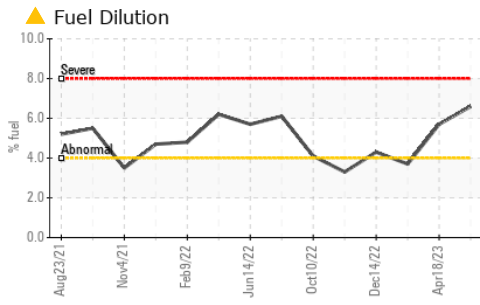
There is a moderate amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>20	5	5	4
Potassium	ppm	ASTM D5185m	>20	<1	1	0
Fuel	%	ASTM D3524	>4.0	▲ 6.6	▲ 5.7	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.3	7.4	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.7	24.1	20.3
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

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>75	<1	<1	2
Boron	ppm	ASTM D5185m		262	312	381
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		93	98	73
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		508	491	281
Calcium	ppm	ASTM D5185m		1576	1479	2215
Phosphorus	ppm	ASTM D5185m	760	699	720	859
Zinc	ppm	ASTM D5185m	830	855	871	1012
Sulfur	ppm	ASTM D5185m	2770	2922	2545	3574
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.7	22.0	14.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	6.7	6.4	6.8
Visc @ 100°C	cSt	ASTM D445	14.9	▲ 11.0	▲ 11.2	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW05862890 **Received** : 02 Jun 2023
Lab Number : 05862890 **Tested** : 05 Jun 2023
Unique Number : 10497355 **Diagnosed** : 05 Jun 2023 - Don Baldrige
Test Package : MAR 2 (Additional Tests: PercentFuel)

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)

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