



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

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

RECOMMENDATION

We recommend that you change the oil at the next available stoppage or outage. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW06151661	MW06101487	MW06071444
Sample Date		Client Info		16 Apr 2024	26 Feb 2024	25 Jan 2024
Machine Age	hrs	Client Info		26002	25089	24169
Oil Age	hrs	Client Info		913	920	723
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	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	5	11	6
Chromium	ppm	ASTM D5185m	>8	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>3	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	<1	<1	<1
Lead	ppm	ASTM D5185m	>18	11	▲ 23	11
Copper	ppm	ASTM D5185m	>80	0	2	2
Tin	ppm	ASTM D5185m	>14	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

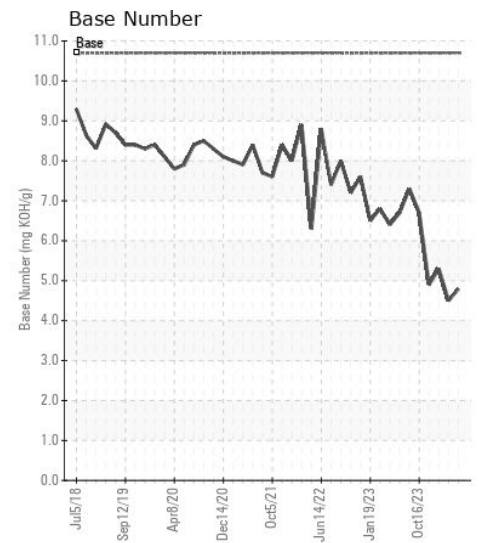
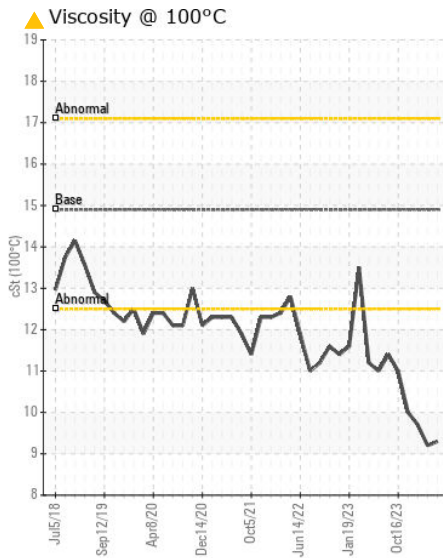
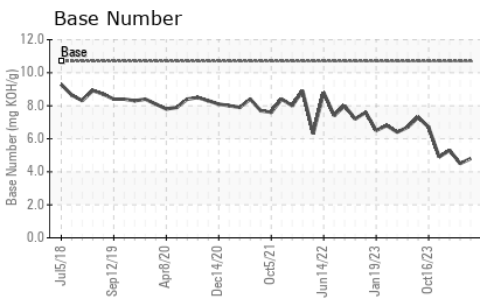
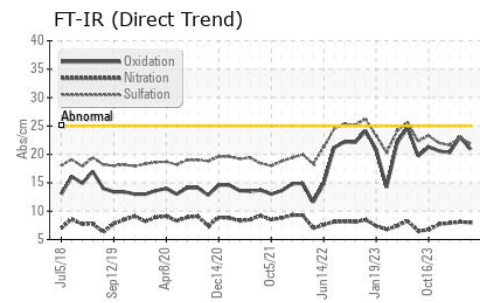
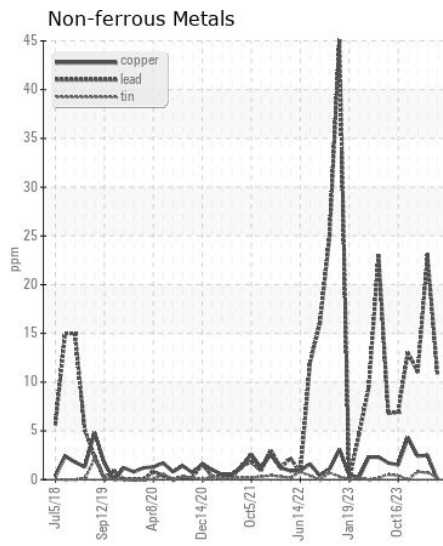
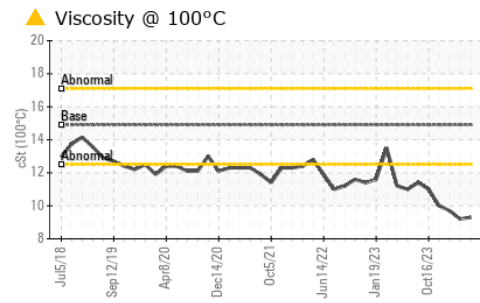
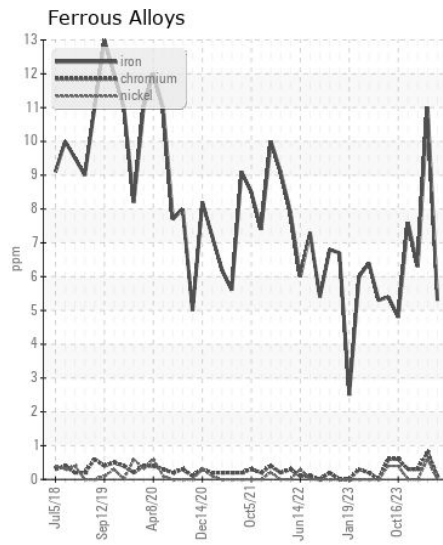
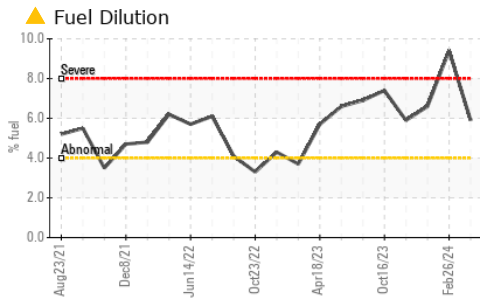
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>20	3	4	3
Potassium	ppm	ASTM D5185m	>20	0	3	0
Fuel	%	ASTM D3524	>4.0	▲ 5.9	▲ 9.4	▲ 6.6
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.0	8.1	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.9	22.9	21.6
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>75	0	0	1
Boron	ppm	ASTM D5185m		55	63	88
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		15	26	32
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		80	109	117
Calcium	ppm	ASTM D5185m		2097	1716	1985
Phosphorus	ppm	ASTM D5185m	760	802	672	783
Zinc	ppm	ASTM D5185m	830	917	826	897
Sulfur	ppm	ASTM D5185m	2770	3623	3134	2653
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.9	23.1	20.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	4.8	4.5	5.3
Visc @ 100°C	cSt	ASTM D445	14.9	▲ 9.3	▲ 9.2	▲ 9.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW06151661 **Received** : 17 Apr 2024
Lab Number : 06151661 **Tested** : 22 Apr 2024
Unique Number : 10981739 **Diagnosed** : 22 Apr 2024 - Wes Davis
Test Package : MAR 2 (Additional Tests: PercentFuel)

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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)