



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

MARK C

Machine Id

[MARK C] 003 543154-3

Component

Starboard Main Engine

Fluid

CHEVRON DELO 400 LE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0065901	MW0067910	MW0065913
Sample Date		Client Info		01 Jun 2024	01 May 2024	03 Apr 2024
Machine Age	hrs	Client Info		22851	22132	21439
Oil Age	hrs	Client Info		580	609	658
Filter Age	hrs	Client Info		580	609	658
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Filter Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<1	4	3
Chromium	ppm	ASTM D5185m	>8	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	1
Titanium	ppm	ASTM D5185m	>3	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	1	0
Aluminum	ppm	ASTM D5185m	>15	2	5	3
Lead	ppm	ASTM D5185m	>18	0	<1	1
Copper	ppm	ASTM D5185m	>80	4	4	3
Tin	ppm	ASTM D5185m	>14	0	<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

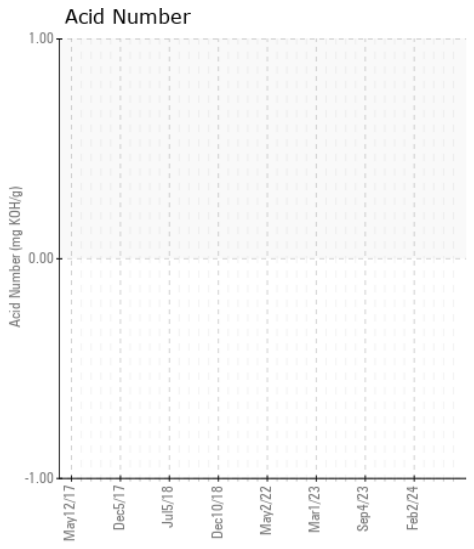
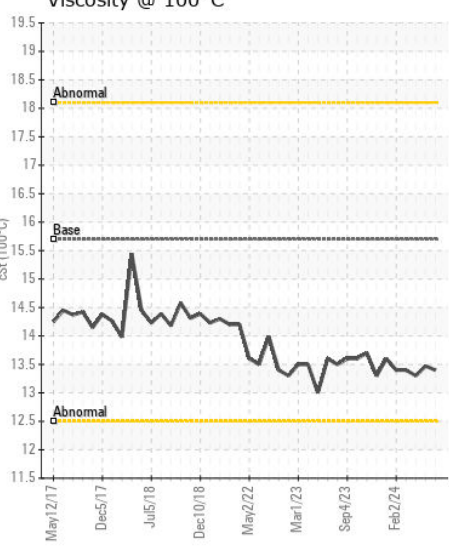
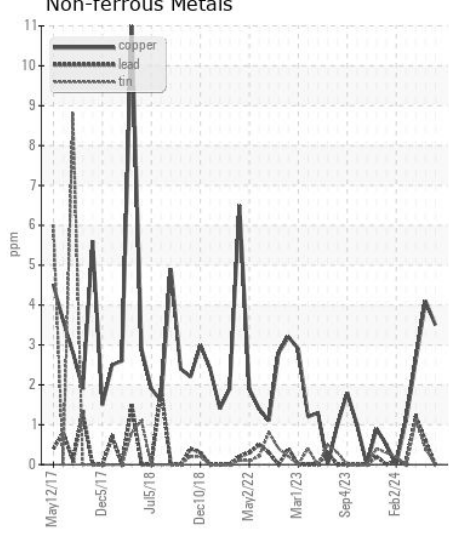
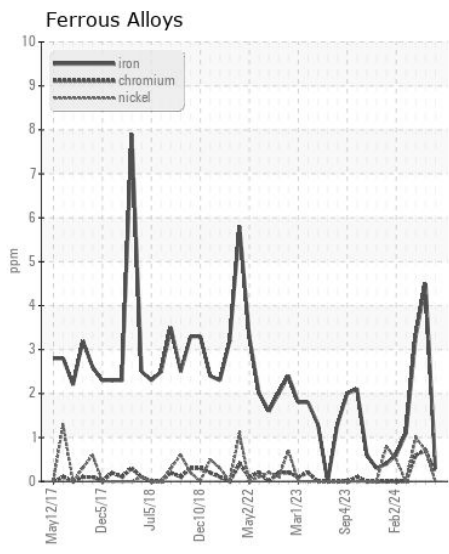
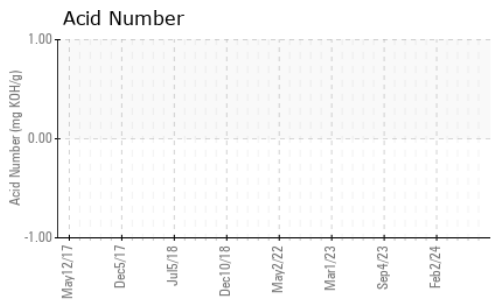
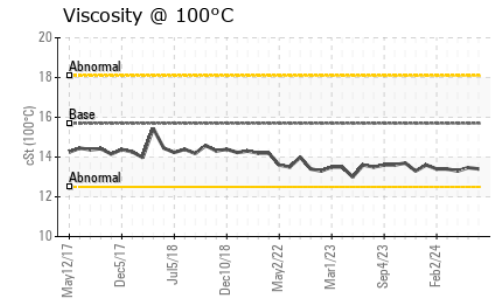
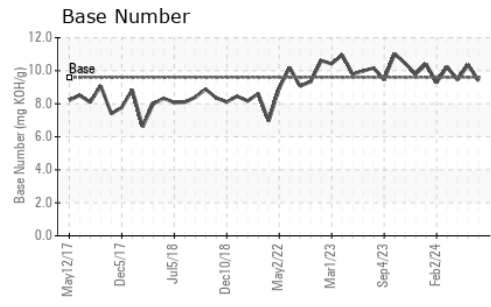
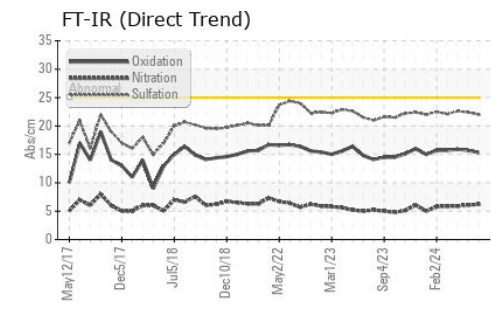
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	4	7	6
Potassium	ppm	ASTM D5185m	>20	2	2	2
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	6.2	6.1	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	22.4	22.6
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 condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<1	3	<1
Boron	ppm	ASTM D5185m		335	465	402
Barium	ppm	ASTM D5185m		0	<1	<1
Molybdenum	ppm	ASTM D5185m		111	145	128
Manganese	ppm	ASTM D5185m		0	1	1
Magnesium	ppm	ASTM D5185m		534	705	592
Calcium	ppm	ASTM D5185m		1537	1827	1594
Phosphorus	ppm	ASTM D5185m	1200	664	835	688
Zinc	ppm	ASTM D5185m	1300	910	1017	745
Sulfur	ppm	ASTM D5185m	3200	2634	3324	2512
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	15.7	15.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	9.40	10.36	9.44
Visc @ 100°C	cSt	ASTM D445	15.7	13.4	13.47	13.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0065901 **Received** : 26 Jun 2024
Lab Number : 06221416 **Tested** : 27 Jun 2024
Unique Number : 11099613 **Diagnosed** : 27 Jun 2024 - Sean Felton
Test Package : MAR 2 (Additional Tests: TAN Man)

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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