



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
MARK DULEY
Machine Id
[MARK DULEY] 003 298357-3
Component
Starboard Main Engine
Fluid
CHEVRON DELO 710 LS (250 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0064400	MW0064403	MW0064259
Sample Date		Client Info		10 Mar 2024	01 Mar 2024	06 Feb 2024
Machine Age	hrs	Client Info		42811	42571	42006
Oil Age	hrs	Client Info		1981	1731	968
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	10	9	3
Chromium	ppm	ASTM D5185m	>8	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>3	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	2	2
Lead	ppm	ASTM D5185m	>18	0	0	0
Copper	ppm	ASTM D5185m	>80	1	<1	0
Tin	ppm	ASTM D5185m	>14	<1	<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

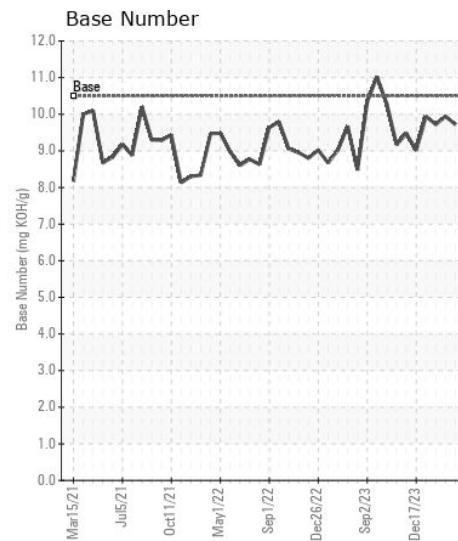
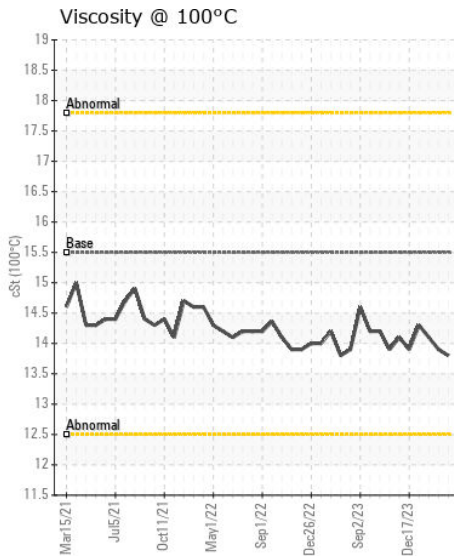
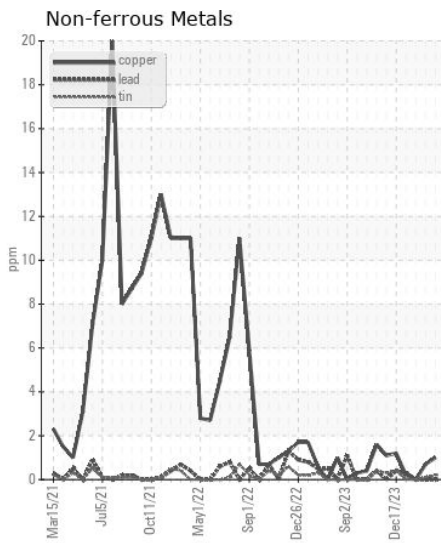
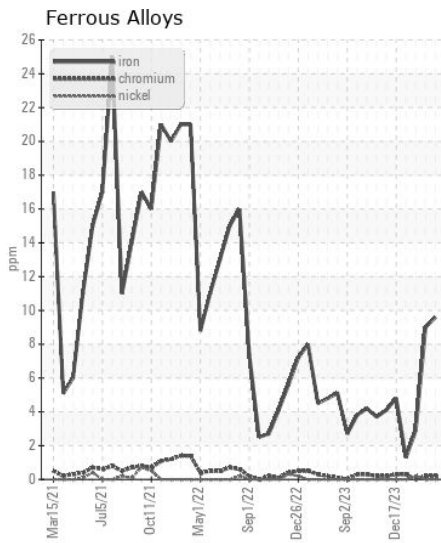
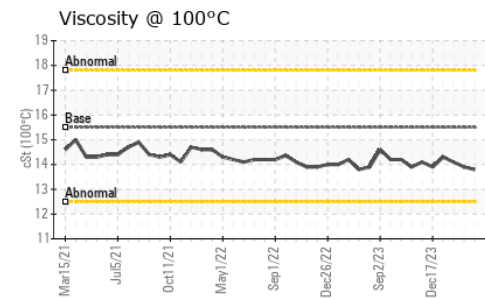
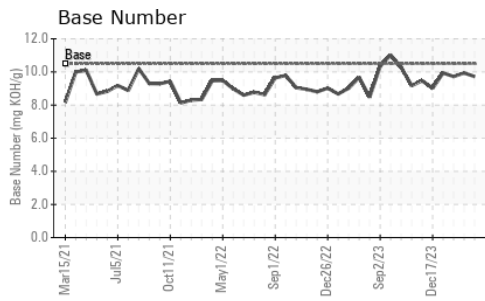
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	4	4	3
Potassium	ppm	ASTM D5185m	>20	0	0	<1
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		0.3	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.9	6.9	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	14.0	13.9	13.7
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	2	2	<1
Boron	ppm	ASTM D5185m		44	45	45
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		46	47	43
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		11	11	18
Calcium	ppm	ASTM D5185m		3233	3300	3189
Phosphorus	ppm	ASTM D5185m		3	<1	3
Zinc	ppm	ASTM D5185m		0	0	<1
Sulfur	ppm	ASTM D5185m		2491	2449	2196
Oxidation	Abs/.1mm	*ASTM D7414	>25	7.4	7.4	6.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	9.72	9.94	9.72
Visc @ 100°C	cSt	ASTM D445	15.5	13.8	13.9	14.1



Certificate L2367

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

Sample No. : MW0064400

Lab Number : 06123245

Unique Number : 10937396

Test Package : MAR 2

Received : 19 Mar 2024

Tested : 20 Mar 2024

Diagnosed : 20 Mar 2024 - Wes Davis

INGRAM BARGE

900 S 3RD ST

PADUCAH, KY

US 42003

Contact: JUSTIN WHEELER

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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)