



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
PRO
Machine Id
PRO
Component
Starboard Main Engine
Fluid
CHEVRON DELO 710 LS (300 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0054644	MW0050869	MW0043944
Sample Date		Client Info		10 Nov 2023	02 Jun 2023	12 Feb 2023
Machine Age	hrs	Client Info		1078	51923	49540
Oil Age	hrs	Client Info		1078	9122	6682
Filter Age	hrs	Client Info		1078	1252	1674
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	14	8	9
Chromium	ppm	ASTM D5185m	>8	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>3	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	1	0	0
Lead	ppm	ASTM D5185m	>18	6	<1	3
Copper	ppm	ASTM D5185m	>80	11	11	11
Tin	ppm	ASTM D5185m	>14	5	2	3
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

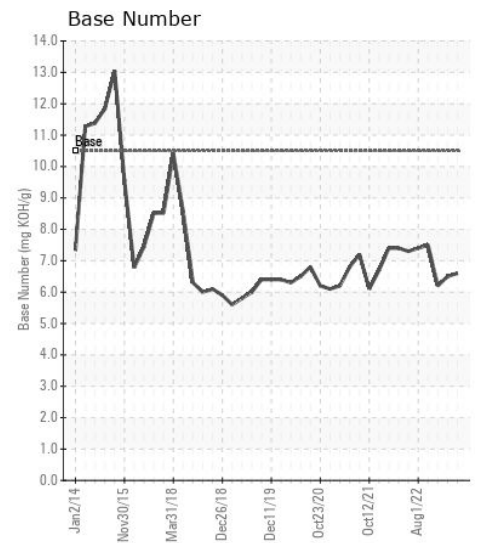
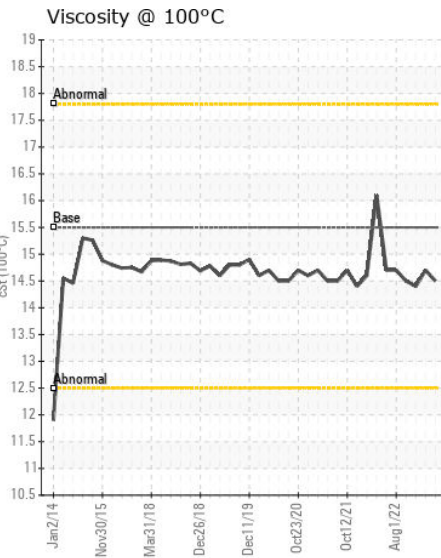
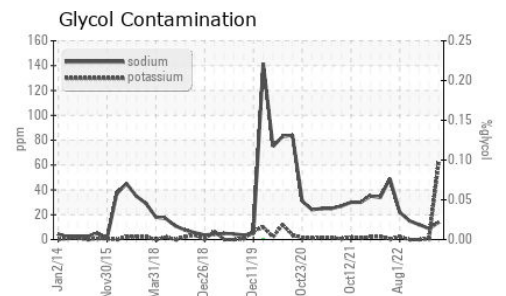
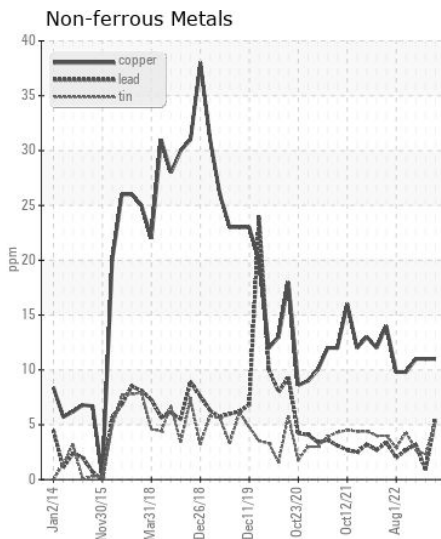
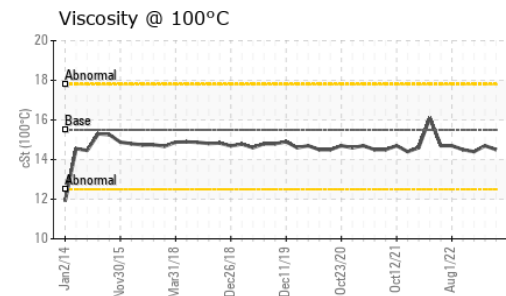
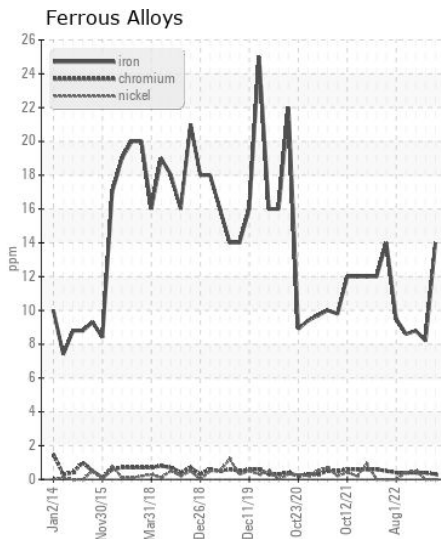
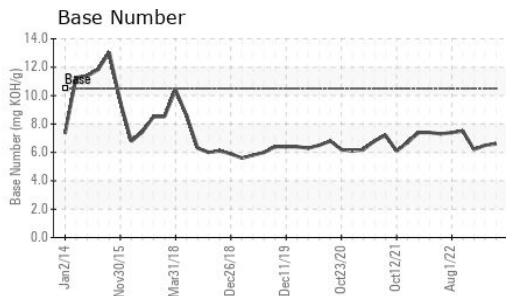
Sodium and/or potassium levels are high. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>20	4	3	3
Potassium	ppm	ASTM D5185m	>20	63	<1	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	6.3	7.3	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	14.7	16.3	16.1
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	14	9	12
Boron	ppm	ASTM D5185m		40	48	43
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		46	44	42
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		11	9	12
Calcium	ppm	ASTM D5185m		3212	3237	3309
Phosphorus	ppm	ASTM D5185m		4	<1	4
Zinc	ppm	ASTM D5185m		0	0	0
Sulfur	ppm	ASTM D5185m		2114	2341	2124
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.1	9.8	9.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	6.6	6.5	6.2
Visc @ 100°C	cSt	ASTM D445	15.5	14.5	14.7	14.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0054644 **Received** : 10 Jan 2024
Lab Number : 06056346 **Diagnosed** : 11 Jan 2024
Unique Number : 10822295 **Diagnostician** : Jonathan Hester
Test Package : MAR 2 (Additional Tests: Glycol)

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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)