



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**ROBIN B INGRAM**  
Machine Id  
[ROBIN B INGRAM] 003 617985-3  
Component  
Starboard Main Engine  
Fluid  
CHEVRON DELO 710 LE (250 GAL)

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW06221857</b>	MW06192947	MW06159858
Sample Date		Client Info		<b>01 Jun 2024</b>	28 May 2024	01 Apr 2024
Machine Age	hrs	Client Info		<b>66164</b>	65778	64749
Oil Age	hrs	Client Info		<b>66164</b>	65778	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>15</b>	23	15
Chromium	ppm	ASTM D5185m	>8	<b>1</b>	1	2
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>15	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>18	<b>3</b>	3	5
Copper	ppm	ASTM D5185m	>80	<b>15</b>	14	17
Tin	ppm	ASTM D5185m	>14	<b>3</b>	2	3
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

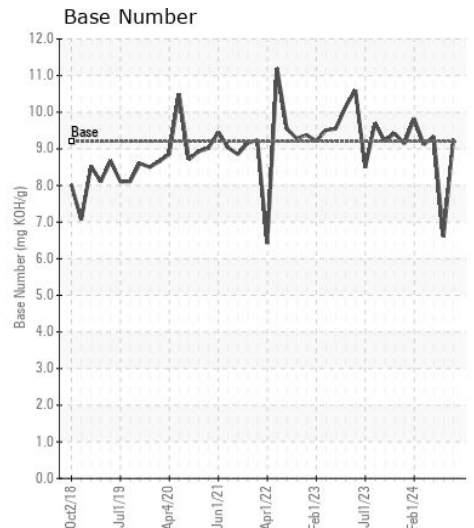
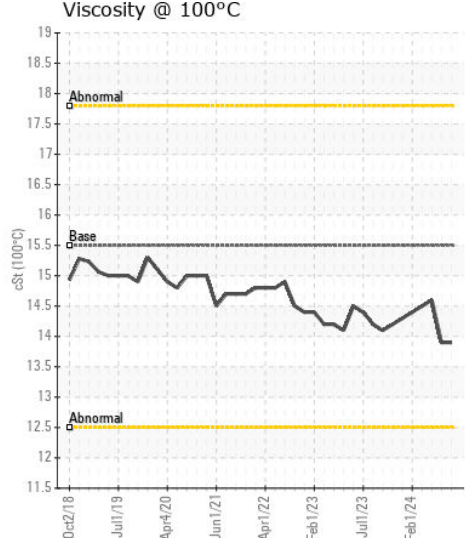
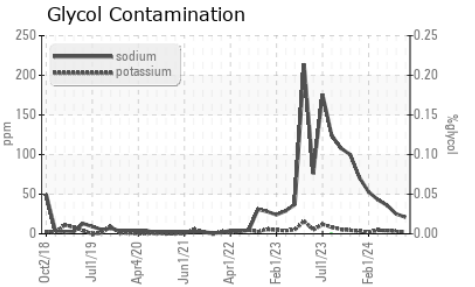
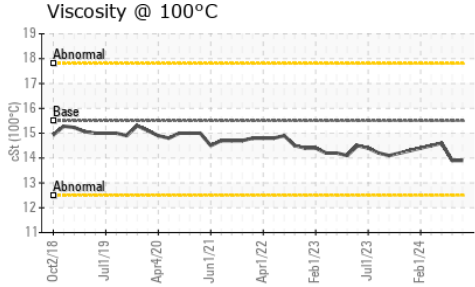
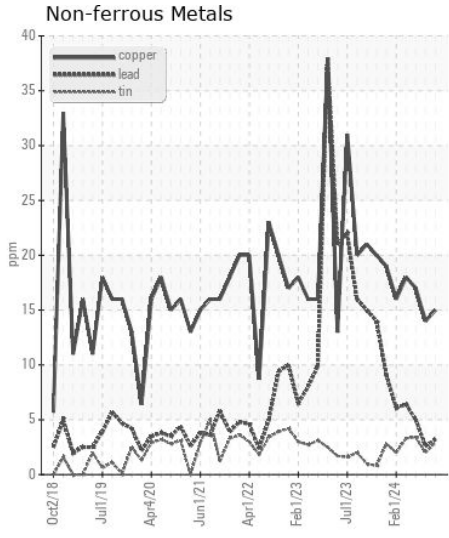
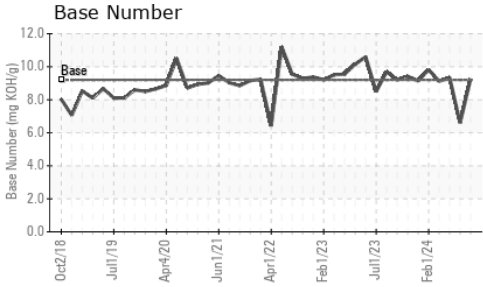
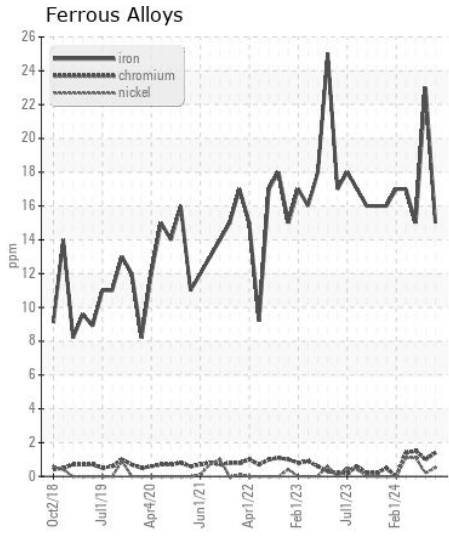
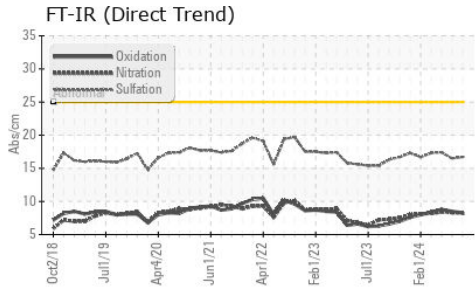
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	6	8
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	3	4
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.8</b>	0.8	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.2</b>	8.3	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>16.7</b>	16.5	17.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	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	<b>21</b>	25	36
Boron	ppm	ASTM D5185m		<b>40</b>	39	46
Barium	ppm	ASTM D5185m		<b>1</b>	0	<1
Molybdenum	ppm	ASTM D5185m		<b>47</b>	43	48
Manganese	ppm	ASTM D5185m		<b>2</b>	1	3
Magnesium	ppm	ASTM D5185m		<b>15</b>	15	22
Calcium	ppm	ASTM D5185m		<b>3416</b>	3092	3511
Phosphorus	ppm	ASTM D5185m		<b>16</b>	24	13
Zinc	ppm	ASTM D5185m	10	<b>7</b>	6	6
Sulfur	ppm	ASTM D5185m		<b>2252</b>	2211	2809
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>8.3</b>	8.5	8.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	<b>9.26</b>	6.6	9.34
Visc @ 100°C	cSt	ASTM D445	15.5	<b>13.9</b>	13.9	14.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW06221857  
**Lab Number** : 06221857  
**Unique Number** : 11100054  
**Test Package** : MAR 2 ( Additional Tests: Glycol )

**Received** : 26 Jun 2024  
**Tested** : 29 Jun 2024  
**Diagnosed** : 29 Jun 2024 - Don Baldrige

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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