



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

Area  
**RONALD L SENSENBACH**  
Machine Id  
[RONALD L SENSENBACH] 003 685579-3  
Component  
Starboard Main Engine  
Fluid  
CHEVRON DELO 400 XLE 15W40 (--- GAL)

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0068218</b>	MW0068223	MW0058699
Sample Date		Client Info		<b>01 May 2024</b>	01 Apr 2024	02 Mar 2024
Machine Age	hrs	Client Info		<b>30561</b>	29835	29125
Oil Age	hrs	Client Info		<b>657</b>	1404	647
Filter Age	hrs	Client Info		<b>657</b>	656	647
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>2</b>	6	9
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>3</b>	3	2
Lead	ppm	ASTM D5185m	>18	<b>0</b>	2	0
Copper	ppm	ASTM D5185m	>80	<b>&lt;1</b>	4	6
Tin	ppm	ASTM D5185m	>14	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

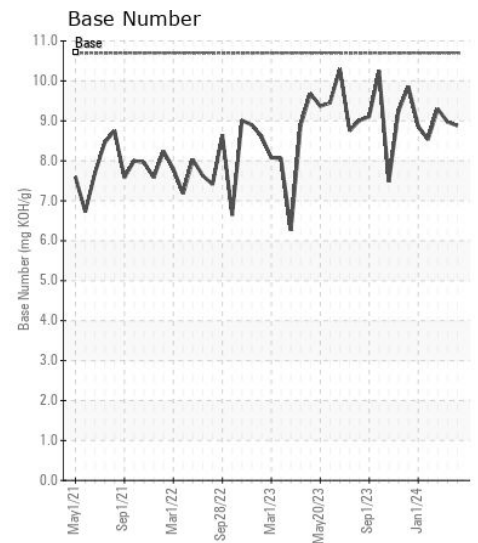
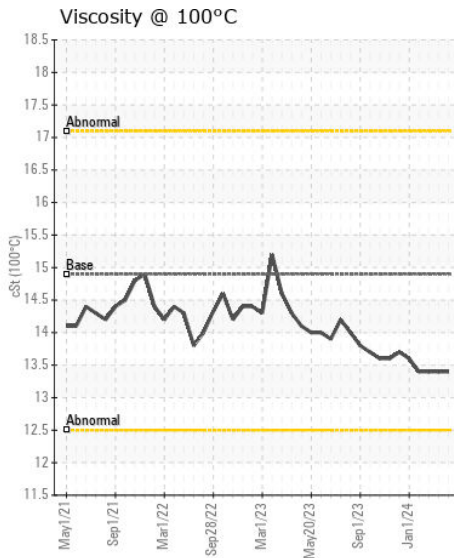
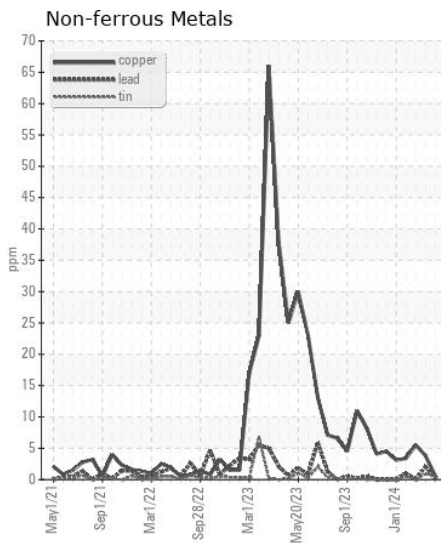
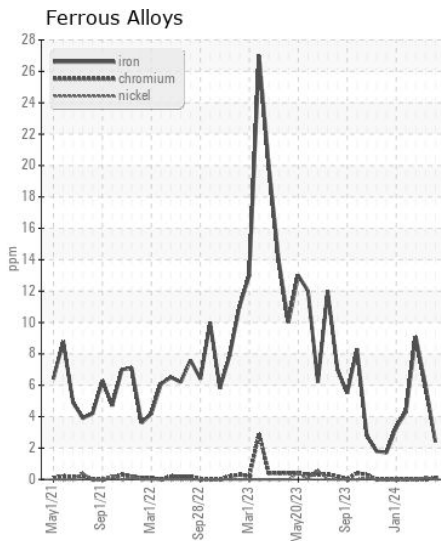
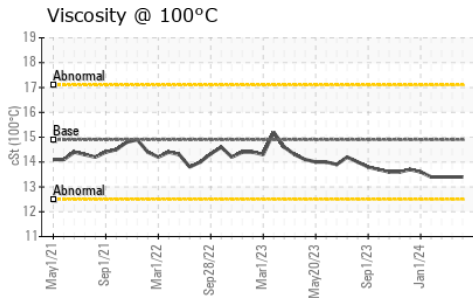
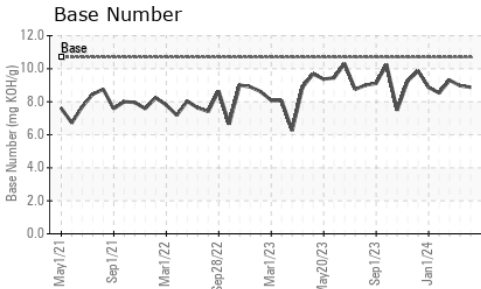
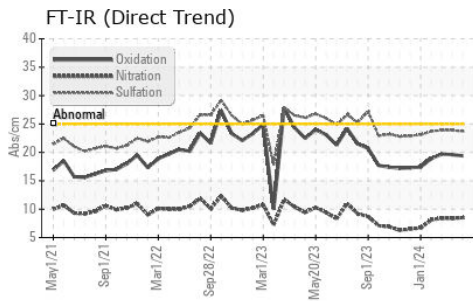
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	2
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		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.5</b>	8.4	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.7</b>	23.9	23.9
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	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>&lt;1</b>	0	3
Boron	ppm	ASTM D5185m		<b>348</b>	339	308
Barium	ppm	ASTM D5185m		<b>1</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>121</b>	140	124
Manganese	ppm	ASTM D5185m		<b>1</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>648</b>	763	649
Calcium	ppm	ASTM D5185m		<b>1448</b>	2041	1515
Phosphorus	ppm	ASTM D5185m	760	<b>753</b>	833	715
Zinc	ppm	ASTM D5185m	830	<b>850</b>	1056	777
Sulfur	ppm	ASTM D5185m	2770	<b>2850</b>	3678	2780
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.4</b>	19.6	19.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>8.88</b>	8.97	9.30
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.4</b>	13.4	13.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0068218  
**Lab Number** : 06177889  
**Unique Number** : 11029215  
**Test Package** : MAR 2  
**Received** : 13 May 2024  
**Tested** : 14 May 2024  
**Diagnosed** : 14 May 2024 - Wes Davis

**INGRAM BARGE**  
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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)