



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

Machine Id  
**JOHN NUGENT (S/N 74-G1-1025)**  
Component  
**Starboard Main Engine**  
Fluid  
**CHEVRON DELO 710 LS (350 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0053193</b>	MW0053307	MW0053317
Sample Date		Client Info		<b>15 Apr 2024</b>	15 Mar 2024	15 Feb 2024
Machine Age	hrs	Client Info		<b>16834</b>	16090	15408
Oil Age	hrs	Client Info		<b>16834</b>	16090	15408
Filter Age	hrs	Client Info		<b>324</b>	986	304
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>31</b>	28	28
Chromium	ppm	ASTM D5185m	>8	<b>1</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>2</b>	1	2
Lead	ppm	ASTM D5185m	>18	<b>4</b>	3	2
Copper	ppm	ASTM D5185m	>80	<b>20</b>	18	18
Tin	ppm	ASTM D5185m	>14	<b>8</b>	7	7
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

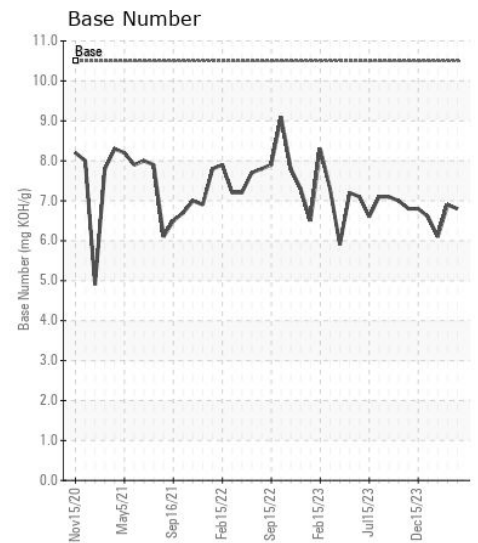
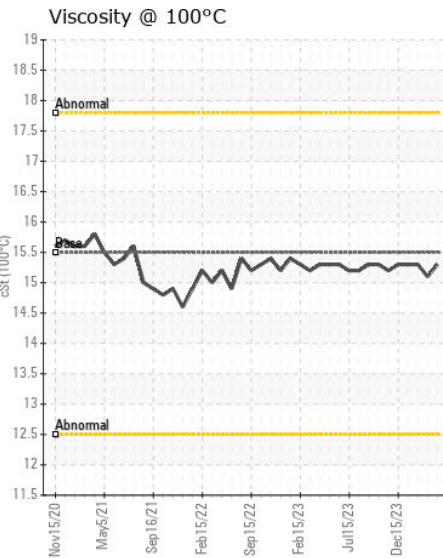
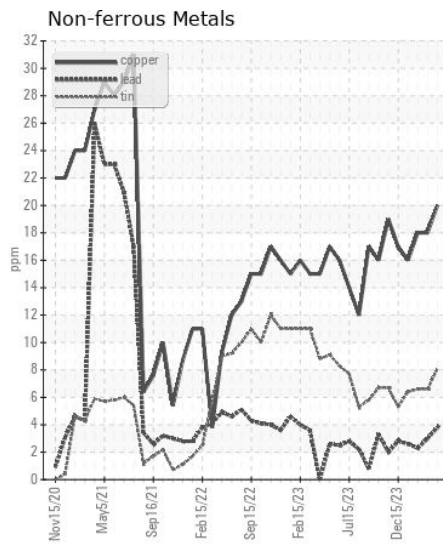
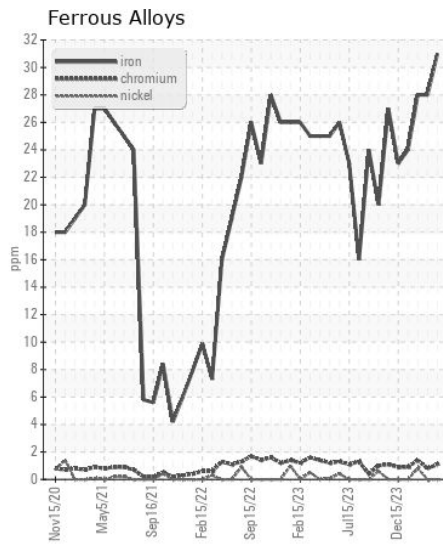
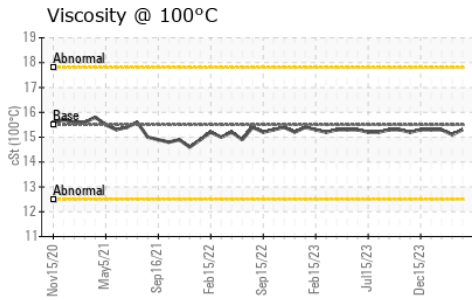
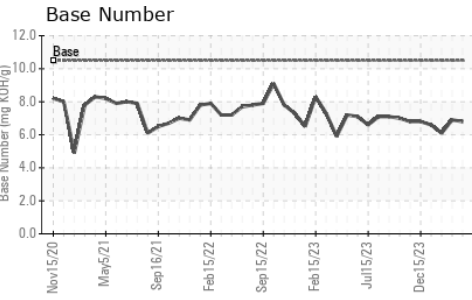
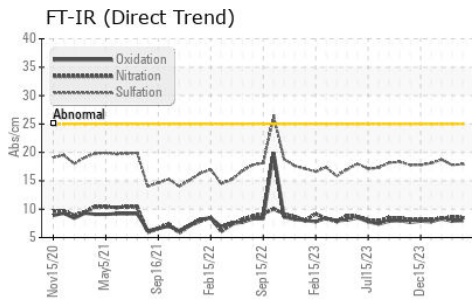
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>3</b>	3	3
Potassium	ppm	ASTM D5185m	>20	<b>13</b>	17	3
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	>3	<b>1.8</b>	1.8	1.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.5</b>	8.6	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.9</b>	17.8	18.7
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>8</b>	9	2
Boron	ppm	ASTM D5185m		<b>40</b>	34	36
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>50</b>	47	45
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>12</b>	33	10
Calcium	ppm	ASTM D5185m		<b>3657</b>	3570	3369
Phosphorus	ppm	ASTM D5185m		<b>6</b>	16	5
Zinc	ppm	ASTM D5185m		<b>6</b>	18	2
Sulfur	ppm	ASTM D5185m		<b>2653</b>	2562	2360
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>8.0</b>	7.9	8.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>6.8</b>	6.9	6.1
Visc @ 100°C	cSt	ASTM D445	15.5	<b>15.3</b>	15.1	15.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0053193  
**Lab Number** : 06161207  
**Unique Number** : 10996630  
**Test Package** : MAR 2

**Received** : 26 Apr 2024  
**Tested** : 26 Apr 2024  
**Diagnosed** : 26 Apr 2024 - Wes Davis

**AMERICAN COMMERCIAL LINES**  
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 US 47130  
 Contact: RONALD SCHNEIDER  
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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)

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