



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

Machine Id  
**JODY MCMINN**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (5 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0057844</b>	MW0033249	MW0033248
Sample Date		Client Info		<b>22 Apr 2024</b>	01 Jan 2024	08 Apr 2023
Machine Age	hrs	Client Info		<b>0</b>	0	1437
Oil Age	hrs	Client Info		<b>500</b>	500	484
Filter Age	hrs	Client Info		<b>500</b>	500	484
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
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	>50	<b>22</b>	26	20
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>13</b>	12	14
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>2</b>	1	2
Lead	ppm	ASTM D5185m	>17	<b>2</b>	1	0
Copper	ppm	ASTM D5185m	>70	<b>1</b>	1	3
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

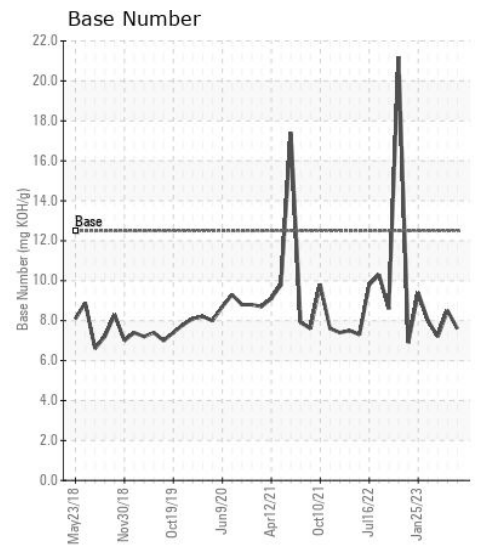
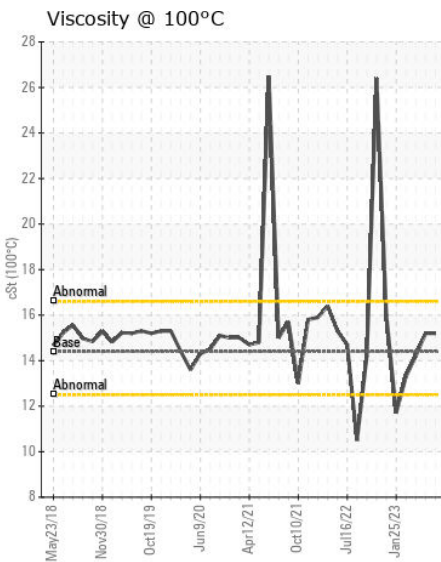
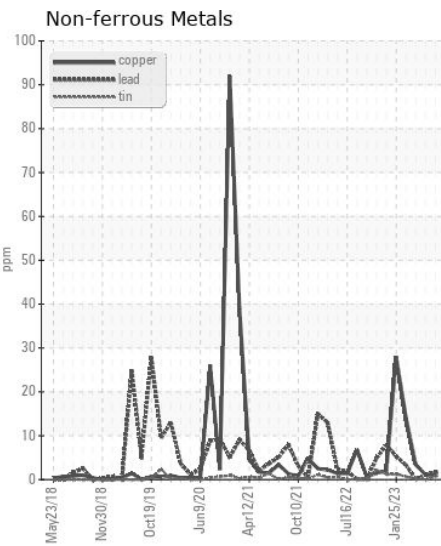
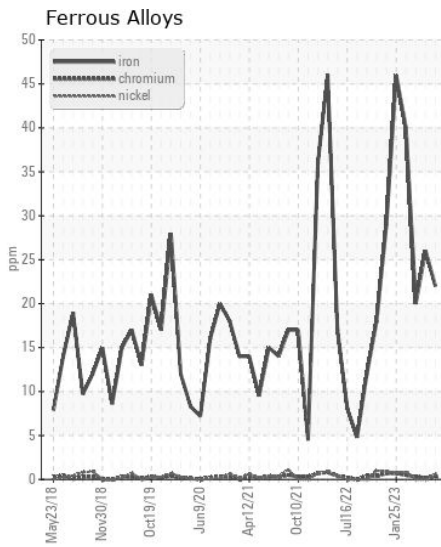
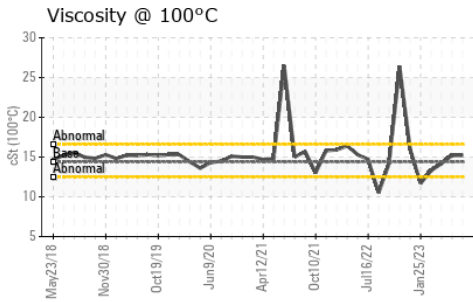
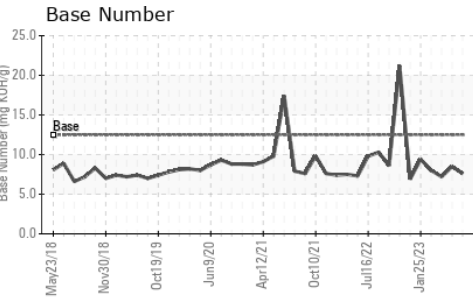
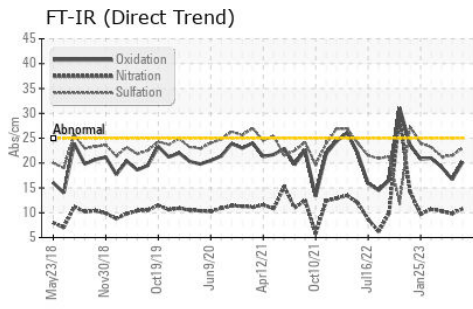
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	1	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>0.3</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.8</b>	9.8	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.0</b>	21.5	21.3
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		<b>2</b>	3	6
Boron	ppm	ASTM D5185m	151	<b>210</b>	169	109
Barium	ppm	ASTM D5185m	0.4	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	250	<b>42</b>	40	61
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m	0	<b>555</b>	640	804
Calcium	ppm	ASTM D5185m	2046	<b>2467</b>	2350	1685
Phosphorus	ppm	ASTM D5185m	1043	<b>877</b>	863	773
Zinc	ppm	ASTM D5185m	943	<b>1049</b>	1073	932
Sulfur	ppm	ASTM D5185m	5012	<b>3976</b>	3583	3855
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.2</b>	16.7	19.2
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>7.6</b>	8.5	7.2
Visc @ 100°C	cSt	ASTM D445	14.4	<b>15.2</b>	15.2	14.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0057844  
**Lab Number** : 06178221  
**Unique Number** : 11029547  
**Test Package** : MAR 2

**Received** : 13 May 2024  
**Tested** : 14 May 2024  
**Diagnosed** : 14 May 2024 - Wes Davis

**MAGNOLIA MARINE TRANSPORT**  
 697 HAINING ROAD  
 VICKSBURG, MS  
 US 39183  
 Contact: MMT MAINTENANCE PLANNERS  
 mmtmaintenanceplanners@ergon.com

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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