



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

Machine Id  
**LOUISIANA HERITAGE**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (4 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0052231</b>	MW0052129	MW0042774
Sample Date		Client Info		<b>23 May 2024</b>	13 Mar 2024	03 Jan 2024
Machine Age	hrs	Client Info		<b>52023</b>	51197	50386
Oil Age	hrs	Client Info		<b>1562</b>	755	1787
Filter Age	hrs	Client Info		<b>1562</b>	755	1787
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>23</b>	23	▲ 57
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	1	▲ 7
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	2
Titanium	ppm	ASTM D5185m		<b>15</b>	16	16
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>8</b>	3	13
Lead	ppm	ASTM D5185m	>17	<b>19</b>	8	16
Copper	ppm	ASTM D5185m	>70	<b>14</b>	3	40
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	4
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

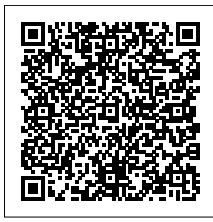
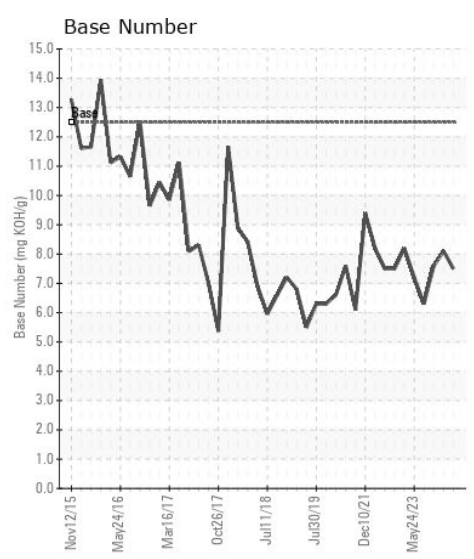
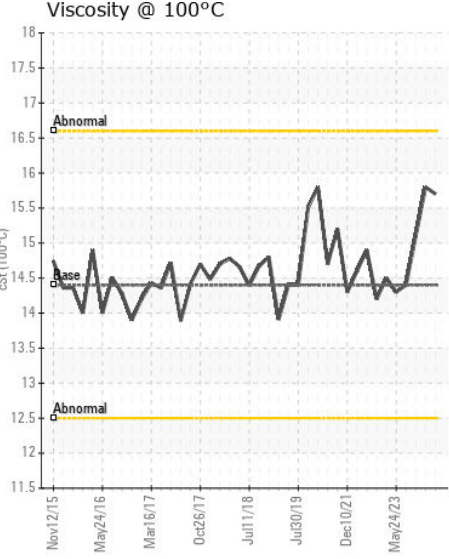
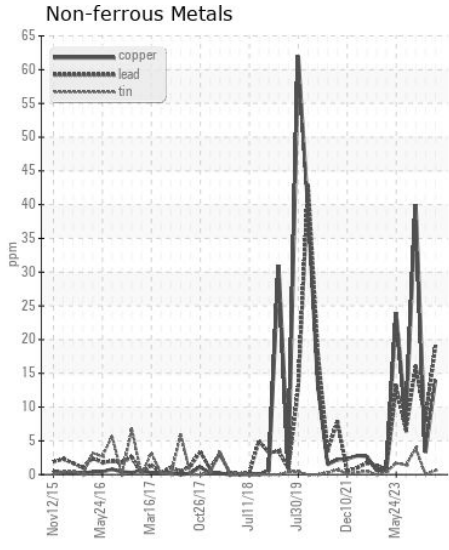
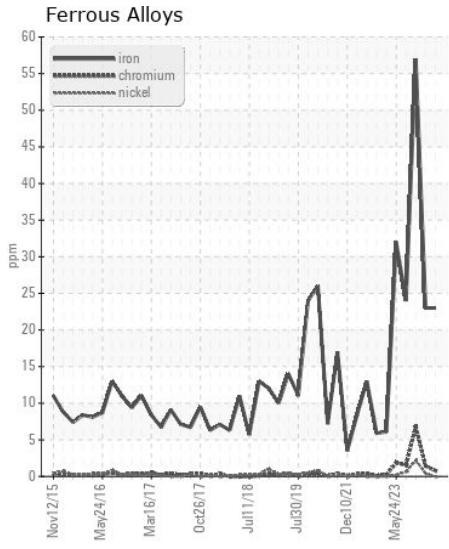
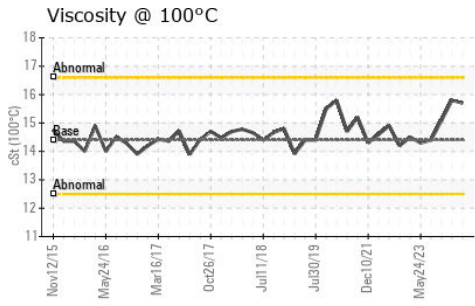
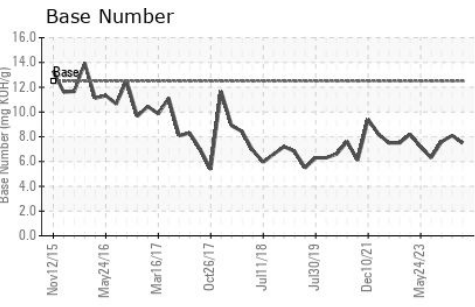
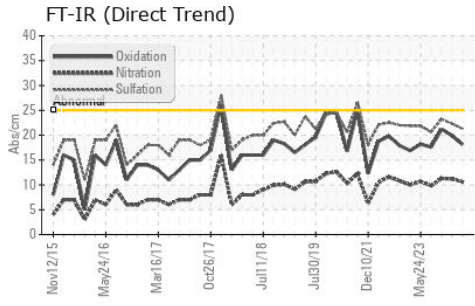
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	13
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	4	33
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>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.6</b>	11.2	11.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.3</b>	22.3	23.2
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>4</b>	4	16
Boron	ppm	ASTM D5185m	151	<b>55</b>	70	79
Barium	ppm	ASTM D5185m	0.4	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	250	<b>32</b>	37	44
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m	0	<b>775</b>	843	882
Calcium	ppm	ASTM D5185m	2046	<b>1920</b>	2171	2164
Phosphorus	ppm	ASTM D5185m	1043	<b>809</b>	879	952
Zinc	ppm	ASTM D5185m	943	<b>1021</b>	1073	1219
Sulfur	ppm	ASTM D5185m	5012	<b>3600</b>	4111	3761
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.1</b>	19.9	21.2
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>7.5</b>	8.1	7.6
Visc @ 100°C	cSt	ASTM D445	14.4	<b>15.7</b>	15.8	15.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0052231  
**Lab Number** : 06195225  
**Unique Number** : 11057348  
**Test Package** : MAR 2  
**Received** : 30 May 2024  
**Tested** : 31 May 2024  
**Diagnosed** : 31 May 2024 - Angela Borella

**AMERICAN RIVER TRANSPORTATION CO.**  
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 US 63111  
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 F: (314)481-5278

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)