



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

Area  
**LOUISIANA BELLE**  
Machine Id  
**LBE**  
Component  
**Starboard Genset**  
Fluid  
**DIESEL ENGINE OIL SAE 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>MW0065094</b>	MW0065065	MW0065110
Sample Date		Client Info		<b>08 May 2024</b>	27 Mar 2024	13 Feb 2024
Machine Age	hrs	Client Info		<b>39253</b>	38818	38484
Oil Age	hrs	Client Info		<b>0</b>	0	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	>50	<b>3</b>	2	5
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>2</b>	1	3
Lead	ppm	ASTM D5185m	>17	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>70	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

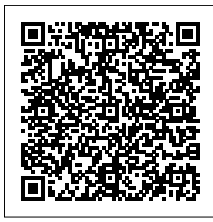
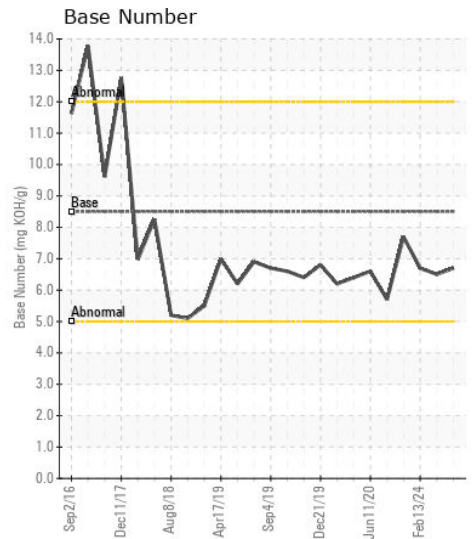
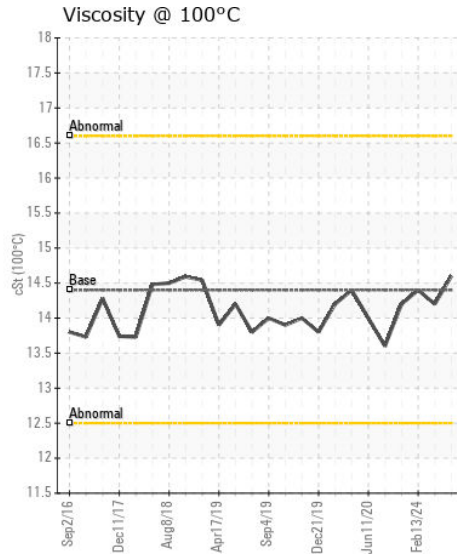
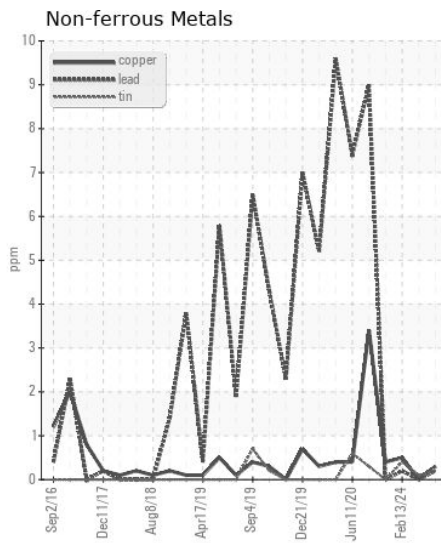
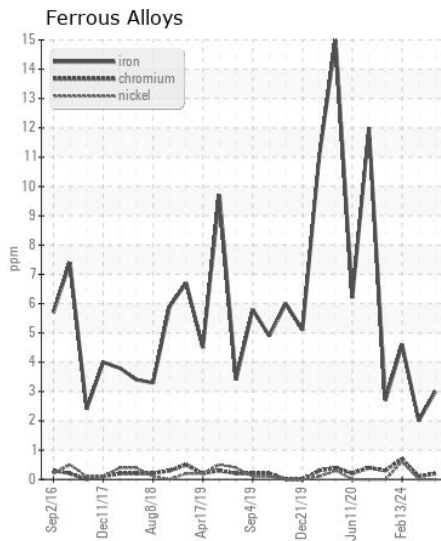
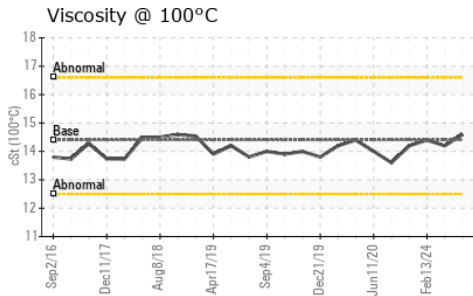
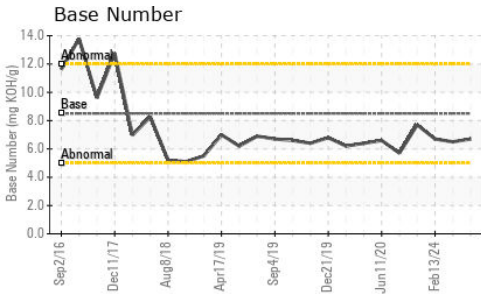
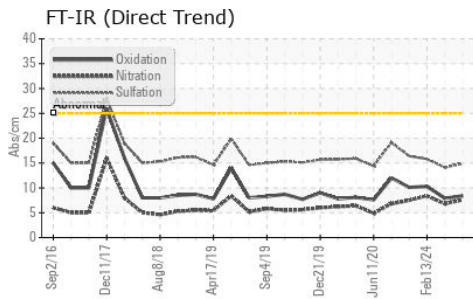
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	19	4
Potassium	ppm	ASTM D5185m	>20	<b>2</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>0.1</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.6</b>	6.8	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>14.9</b>	14.1	15.8
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	>158	<b>0</b>	<1	1
Boron	ppm	ASTM D5185m	250	<b>47</b>	49	25
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	34
Molybdenum	ppm	ASTM D5185m	100	<b>44</b>	44	31
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>8</b>	9	8
Calcium	ppm	ASTM D5185m	3000	<b>3313</b>	3459	2604
Phosphorus	ppm	ASTM D5185m	1150	<b>6</b>	0	37
Zinc	ppm	ASTM D5185m	1350	<b>0</b>	0	30
Sulfur	ppm	ASTM D5185m	4250	<b>3779</b>	2830	2336
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>8.4</b>	7.9	10.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.7</b>	6.5	6.7
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.6</b>	14.2	14.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0065094  
**Lab Number** : 06185924  
**Unique Number** : 11042676  
**Test Package** : MAR 2

**AMERICAN RIVER TRANSPORTATION CO.**  
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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)