



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

Machine Id  
**LOUISIANA LAGNIAPPE**

Component  
**Starboard Main Engine**

Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (44 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0052160</b>	MW0052158	MW0003436
Sample Date		Client Info		<b>02 Feb 2024</b>	02 Feb 2024	30 Nov 2023
Machine Age	hrs	Client Info		<b>7484</b>	0	6031
Oil Age	hrs	Client Info		<b>1453</b>	0	1468
Filter Age	hrs	Client Info		<b>1453</b>	0	1468
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	---	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>15</b>	22	17
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>11</b>	10	11
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>&lt;1</b>	2	<1
Lead	ppm	ASTM D5185m	>18	<b>4</b>	0	2
Copper	ppm	ASTM D5185m	>80	<b>&lt;1</b>	3	<1
Tin	ppm	ASTM D5185m	>14	<b>&lt;1</b>	0	0
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**

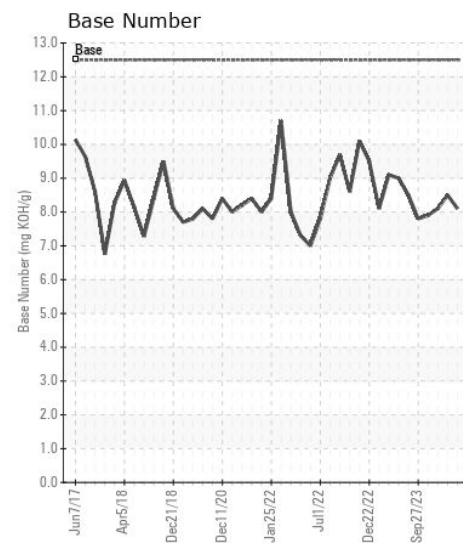
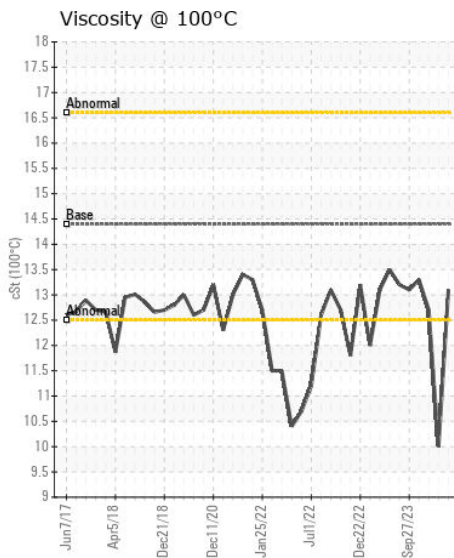
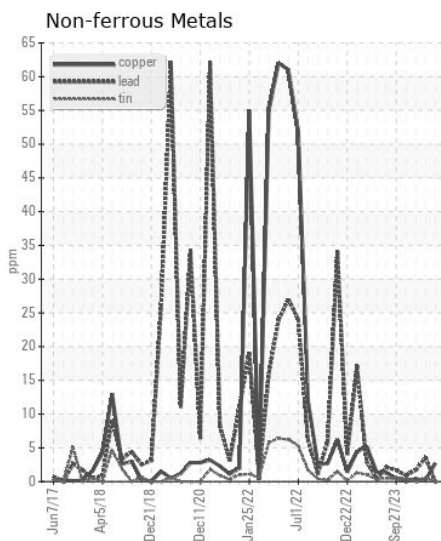
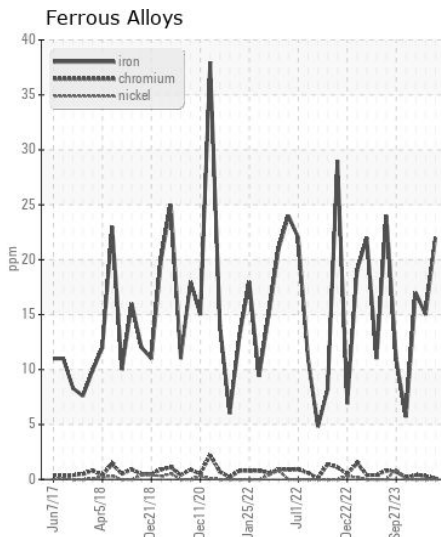
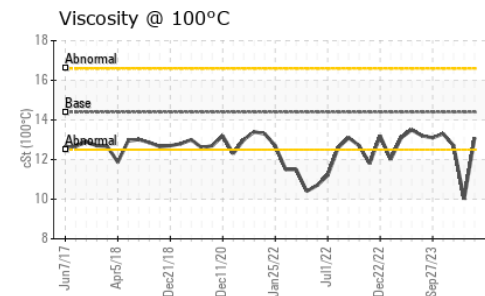
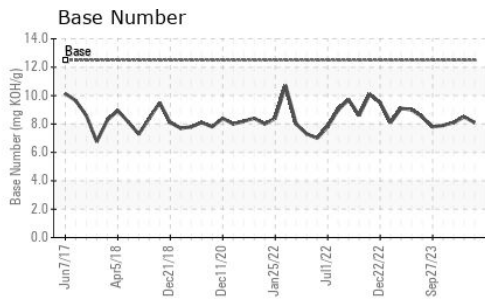
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>&lt;1</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	6	0
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>0.4</b>	0	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.1</b>	6.1	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.6</b>	18.0	19.6
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>13</b>	1	2
Boron	ppm	ASTM D5185m	151	<b>86</b>	148	105
Barium	ppm	ASTM D5185m	0.4	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	250	<b>25</b>	40	27
Manganese	ppm	ASTM D5185m		<b>1</b>	0	<1
Magnesium	ppm	ASTM D5185m	0	<b>553</b>	528	577
Calcium	ppm	ASTM D5185m	2046	<b>1464</b>	1719	1640
Phosphorus	ppm	ASTM D5185m	1043	<b>690</b>	800	705
Zinc	ppm	ASTM D5185m	943	<b>817</b>	923	878
Sulfur	ppm	ASTM D5185m	5012	<b>2836</b>	3252	3221
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.6</b>	12.7	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>8.1</b>	8.5	8.1
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.1</b>	10.0	12.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0052160  
**Lab Number** : 06084632  
**Unique Number** : 10872077  
**Test Package** : MAR 2

**Received** : 09 Feb 2024  
**Tested** : 12 Feb 2024  
**Diagnosed** : 12 Feb 2024 - Sean Felton

**AMERICAN RIVER TRANSPORTATION CO**  
 8400 RIVER RD, PO BOX 656  
 WESTWEGO, LA  
 US 70094-2317  
 Contact: KEVIN CHIASSON  
 kevin.chiasson@adm.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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F: