



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

Area  
**CAM**  
Machine Id  
**CAM**  
Component  
**Starboard Main Engine**  
Fluid  
**CHEVRON DELO 710 LS (300 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0065411</b>	MW0031807	MW0031723
Sample Date		Client Info		<b>01 Apr 2024</b>	30 Apr 2022	08 Apr 2022
Machine Age	hrs	Client Info		<b>23812</b>	10986	10479
Oil Age	hrs	Client Info		<b>8193</b>	10986	556
Filter Age	hrs	Client Info		<b>1850</b>	1056	556
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>15</b>	17	20
Chromium	ppm	ASTM D5185m	>8	<b>0</b>	1	2
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	1	2
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	1
Lead	ppm	ASTM D5185m	>18	<b>3</b>	7	8
Copper	ppm	ASTM D5185m	>80	<b>11</b>	14	16
Tin	ppm	ASTM D5185m	>14	<b>5</b>	8	9
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**

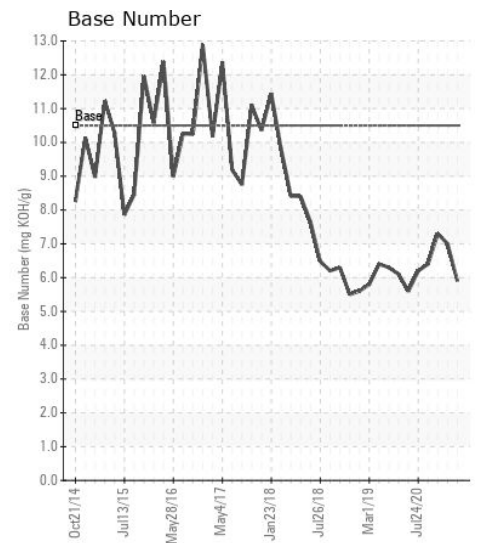
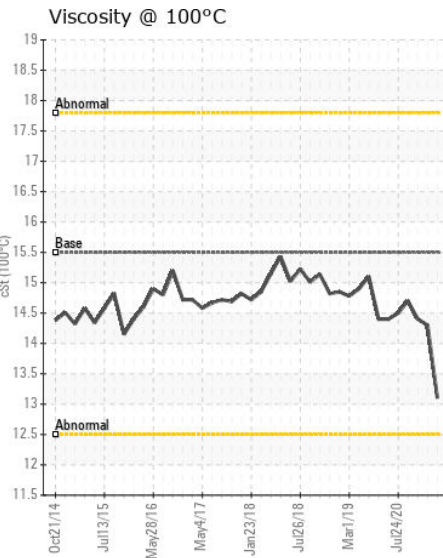
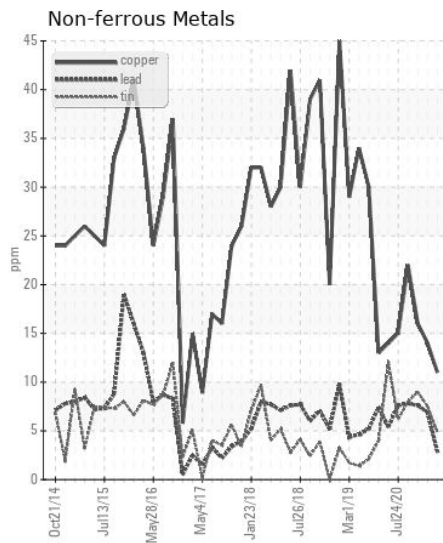
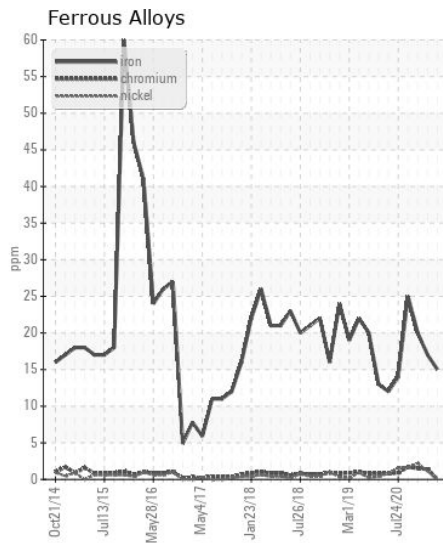
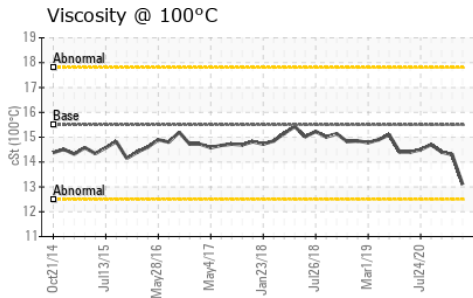
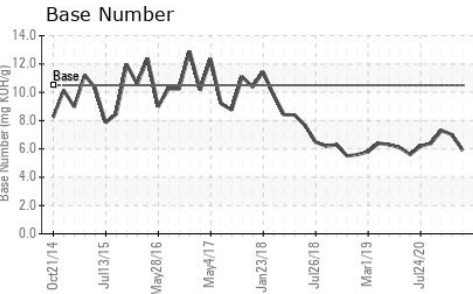
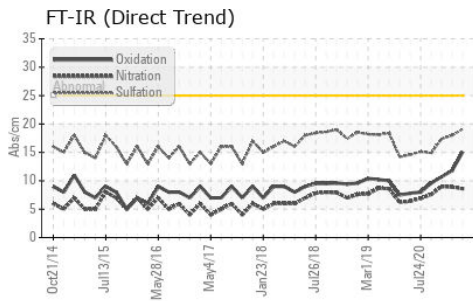
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>2</b>	2	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	<1
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</b>	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	8.9	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	18.0	17.4
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>&lt;1</b>	2	2
Boron	ppm	ASTM D5185m		<b>32</b>	35	37
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>49</b>	44	51
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>49</b>	13	13
Calcium	ppm	ASTM D5185m		<b>3703</b>	3519	3663
Phosphorus	ppm	ASTM D5185m		<b>56</b>	15	17
Zinc	ppm	ASTM D5185m		<b>49</b>	0	0
Sulfur	ppm	ASTM D5185m		<b>2625</b>	2083	2207
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.1</b>	11.8	10.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>5.9</b>	7.0	7.3
Visc @ 100°C	cSt	ASTM D445	15.5	<b>13.1</b>	14.3	14.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0065411  
**Lab Number** : 06158714  
**Unique Number** : 10994137  
**Test Package** : MAR 2

**Received** : 24 Apr 2024  
**Tested** : 25 Apr 2024  
**Diagnosed** : 25 Apr 2024 - Wes Davis

**AMERICAN RIVER TRANSPORTATION CO.**  
 P.O. BOX 2889  
 ST. LOUIS, MO  
 US 63111  
 Contact: BRIAN GRIEWING  
 brian.griewing@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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