



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

Area  
**VQU**  
Machine Id  
**VQU (S/N RG6090L144364)**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON DELO 710 LS (8 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0060718</b>	MW0060717	MW0060724
Sample Date		Client Info		<b>06 Mar 2024</b>	18 Feb 2024	28 Jan 2024
Machine Age	hrs	Client Info		<b>10439</b>	10242	10017
Oil Age	hrs	Client Info		<b>210</b>	225	267
Filter Age	hrs	Client Info		<b>210</b>	225	267
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>4</b>	4	5
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>1</b>	1	2
Lead	ppm	ASTM D5185m	>17	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>70	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	<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.

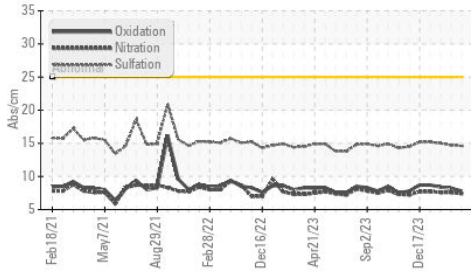
Silicon	ppm	ASTM D5185m	>25	<b>2</b>	2	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	2
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.4</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.4</b>	7.6	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>14.6</b>	14.7	15.0
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**

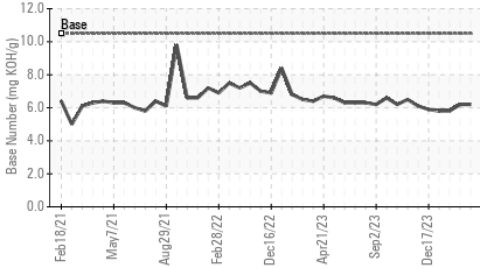
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	4	2
Boron	ppm	ASTM D5185m		<b>37</b>	38	33
Barium	ppm	ASTM D5185m		<b>0</b>	0	34
Molybdenum	ppm	ASTM D5185m		<b>43</b>	43	42
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>10</b>	12	13
Calcium	ppm	ASTM D5185m		<b>3254</b>	3316	2850
Phosphorus	ppm	ASTM D5185m		<b>&lt;1</b>	2	42
Zinc	ppm	ASTM D5185m		<b>0</b>	0	34
Sulfur	ppm	ASTM D5185m		<b>2399</b>	2453	2000
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>7.8</b>	8.2	8.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>6.2</b>	6.2	5.8
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.3</b>	14.5	14.5

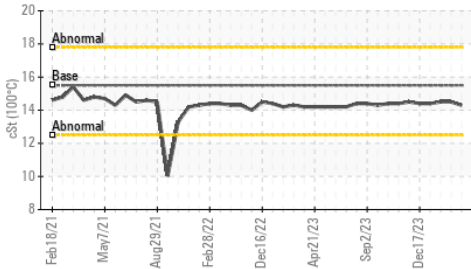
**FT-IR (Direct Trend)**



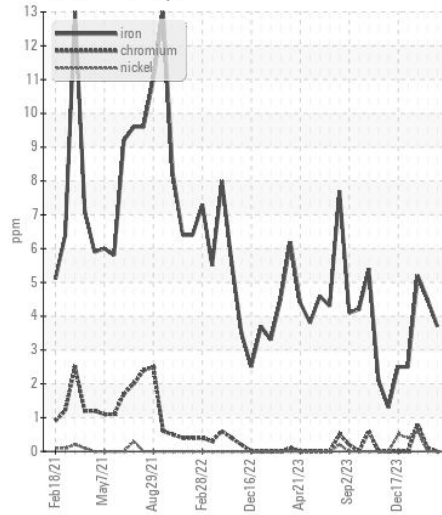
**Base Number**



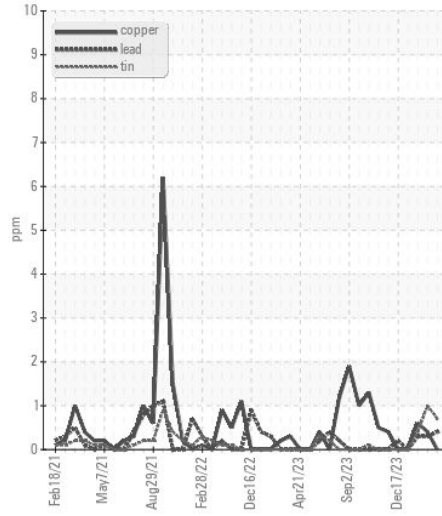
**Viscosity @ 100°C**



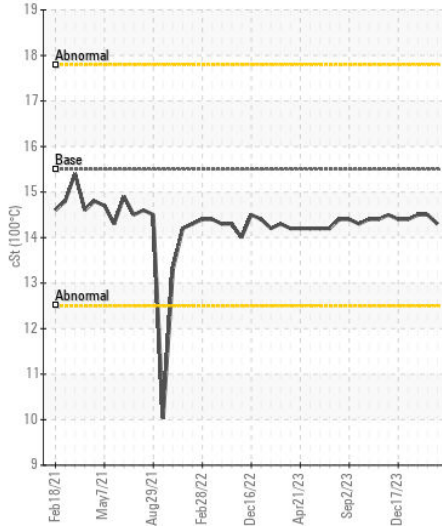
**Ferrous Alloys**



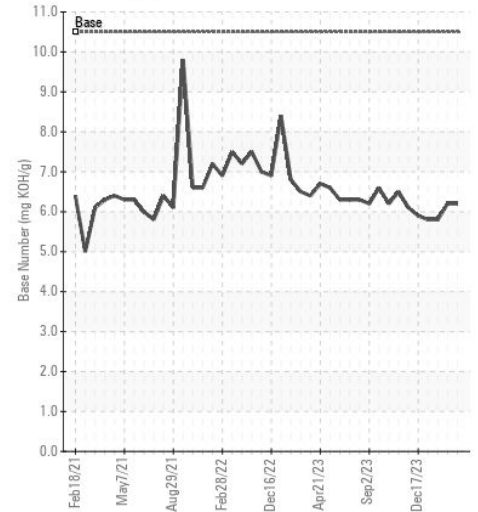
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0060718  
**Lab Number** : 06153935  
**Unique Number** : 10989358  
**Test Package** : MAR 2

**Received** : 19 Apr 2024  
**Tested** : 22 Apr 2024  
**Diagnosed** : 22 Apr 2024 - Wes Davis

**AMERICAN RIVER TRANSPORTATION CO.**  
 P.O. BOX 2889  
 ST. LOUIS, MO  
 US 63111  
 Contact: GST ENGINEEROM  
 gst\_engineerom@admworld.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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