



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

Machine Id  
**RIVER QUEST**  
Component  
**Starboard Genset**  
Fluid  
**PETRO CANADA DURON MARINE SAE 40 (3 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0035979</b>	MW0066784	MW0066819
Sample Date		Client Info		<b>21 May 2024</b>	05 Mar 2024	01 Feb 2024
Machine Age	hrs	Client Info		<b>10709</b>	9787	9378
Oil Age	hrs	Client Info		<b>922</b>	400	794
Filter Age	hrs	Client Info		<b>922</b>	400	794
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>3</b>	5	7
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	0	<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>0</b>	<1	2
Lead	ppm	ASTM D5185m	>17	<b>1</b>	2	5
Copper	ppm	ASTM D5185m	>70	<b>0</b>	2	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
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**

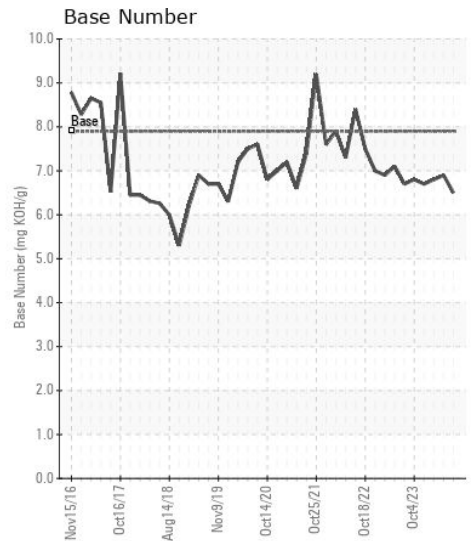
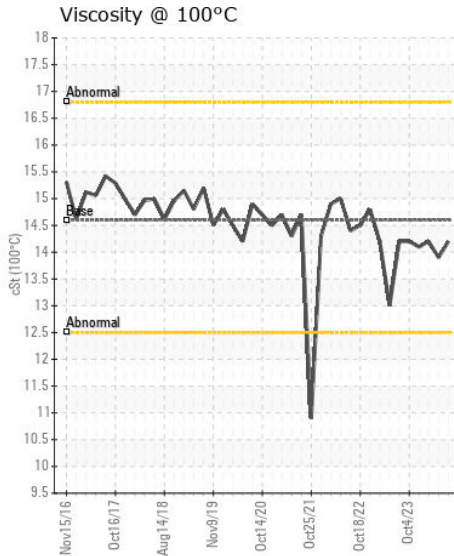
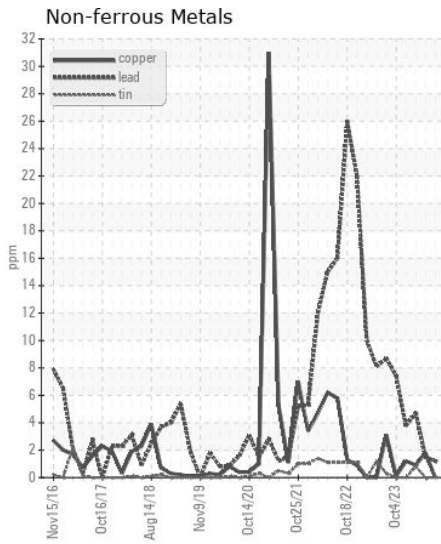
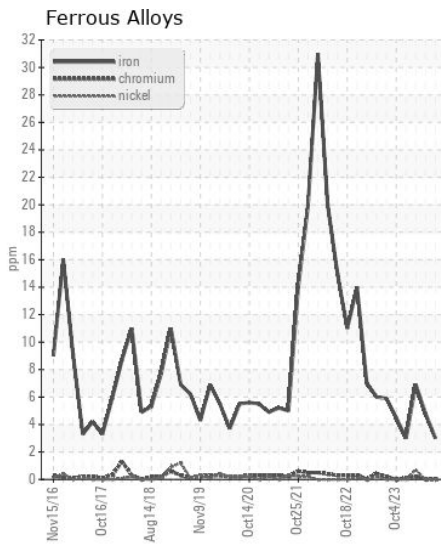
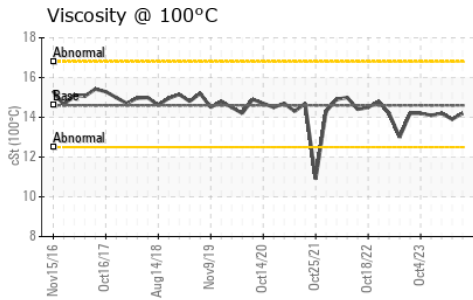
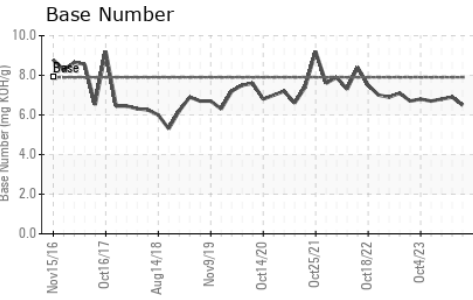
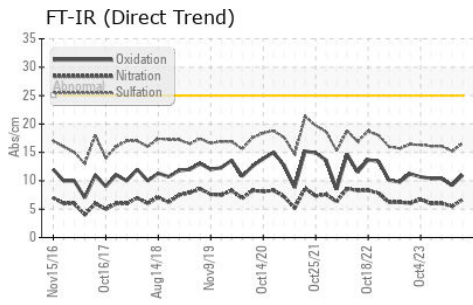
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>2</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	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		<b>0.3</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.7</b>	5.5	6.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>16.6</b>	15.2	16.1
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>	1	0
Boron	ppm	ASTM D5185m	1.0	<b>9</b>	8	15
Barium	ppm	ASTM D5185m	1.0	<b>0</b>	0	13
Molybdenum	ppm	ASTM D5185m	1.0	<b>6</b>	6	12
Manganese	ppm	ASTM D5185m	1	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	15	<b>924</b>	959	906
Calcium	ppm	ASTM D5185m	2540	<b>1129</b>	1149	1133
Phosphorus	ppm	ASTM D5185m	1000	<b>1111</b>	1188	1094
Zinc	ppm	ASTM D5185m	1110	<b>1356</b>	1419	1306
Sulfur	ppm	ASTM D5185m	3700	<b>3287</b>	3687	3441
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.0</b>	9.2	10.4
Base Number (BN)	mg KOH/g	ASTM D2896	7.9	<b>6.5</b>	6.9	6.8
Visc @ 100°C	cSt	ASTM D445	14.6	<b>14.2</b>	13.9	14.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0035979  
**Lab Number** : 06195239  
**Unique Number** : 11057362  
**Test Package** : MAR 2  
**Received** : 30 May 2024  
**Tested** : 31 May 2024  
**Diagnosed** : 31 May 2024 - Wes Davis

**AMERICAN RIVER TRANSPORTATION**  
 1495 EAST ILLINOIS RT 71  
 OTTAWA, IL  
 US 61350  
 Contact: Jackson Hayes  
 jackson.hayes@adm.com  
 T:  
 F: (815)434-5571

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)