



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

Machine Id  
**JULIE WHITE**  
Component  
**Starboard Main Engine**  
Fluid  
**PETRO CANADA DURON MARINE SAE 40 (39 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MWM667160</b>	MWM667179	MWM667144
Sample Date		Client Info		<b>03 Nov 2023</b>	11 Sep 2023	10 Jul 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>900</b>	800	1000
Filter Age	hrs	Client Info		<b>0</b>	0	0
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	>75	<b>2</b>	5	8
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>1</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Lead	ppm	ASTM D5185m	>18	<b>3</b>	1	4
Copper	ppm	ASTM D5185m	>80	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m	>14	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

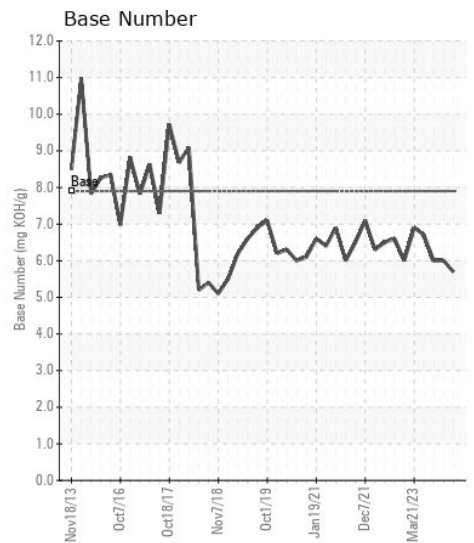
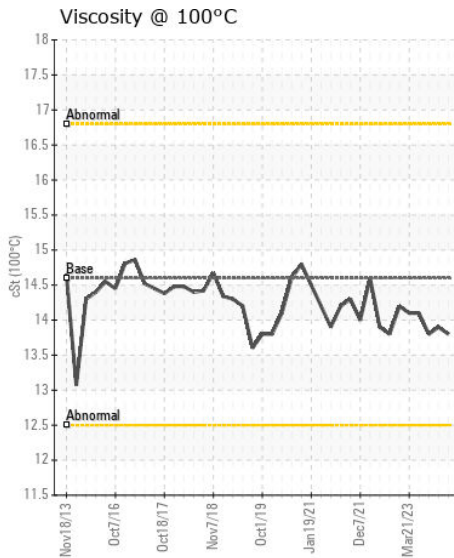
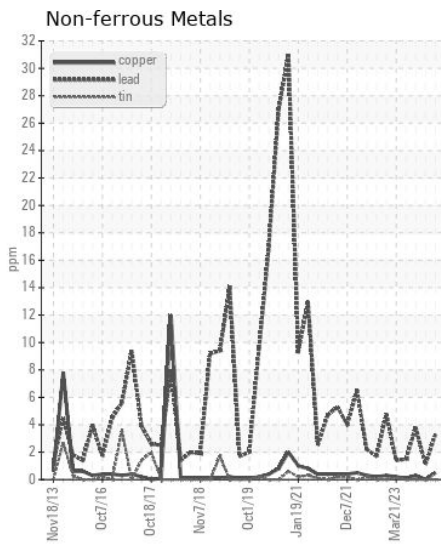
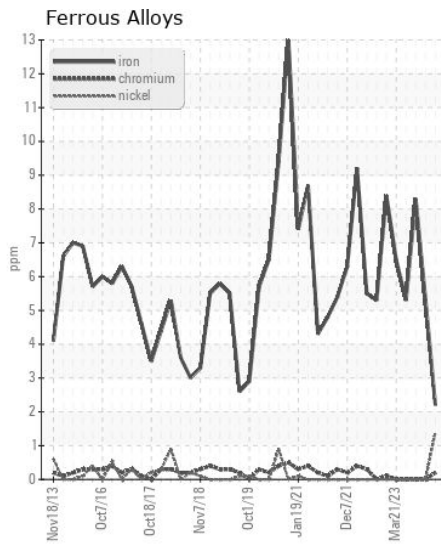
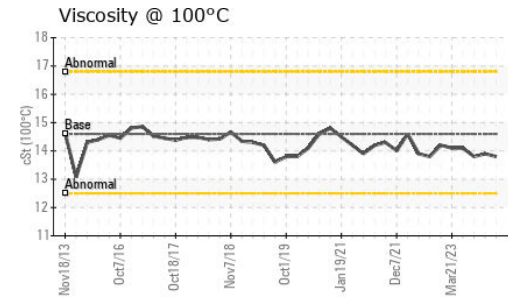
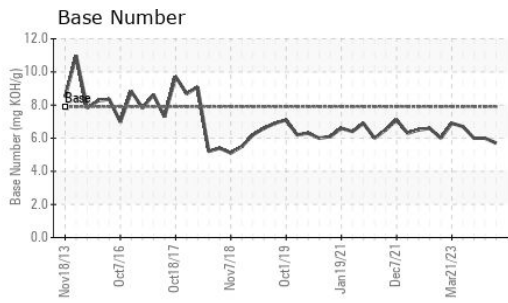
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>3</b>	2	3
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	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>0.2</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.2</b>	6.9	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.1</b>	16.0	17.1
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	>75	<b>0</b>	<1	3
Boron	ppm	ASTM D5185m	1.0	<b>0</b>	6	6
Barium	ppm	ASTM D5185m	1.0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m	1.0	<b>2</b>	<1	3
Manganese	ppm	ASTM D5185m	1	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	15	<b>893</b>	871	895
Calcium	ppm	ASTM D5185m	2540	<b>985</b>	981	1092
Phosphorus	ppm	ASTM D5185m	1000	<b>1050</b>	1054	1028
Zinc	ppm	ASTM D5185m	1110	<b>1325</b>	1229	1222
Sulfur	ppm	ASTM D5185m	3700	<b>3035</b>	2743	3148
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.3</b>	11.2	12.2
Base Number (BN)	mg KOH/g	ASTM D2896	7.9	<b>5.7</b>	6.0	6.0
Visc @ 100°C	cSt	ASTM D445	14.6	<b>13.8</b>	13.9	13.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MWM667160 **Received** : 12 Jan 2024  
**Lab Number** : 06059076 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10830458 **Diagnostician** : Don Baldrige  
**Test Package** : MAR 2

**AMERICAN RIVER TRANS. CO. PEORIA**  
 534 WESLEY RD  
 CREVECOEUR, IL  
 US 61610  
 Contact: STEVE BUCCO

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)

T: (309)360-3931  
 F: (309)694-7030