



Machine Id  
**MWL**  
Component  
**Starboard Reduction Gear**  
Fluid  
**PETRO CANADA DURON MARINE SAE 40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW05824220</b>	MW05749646	MW05663530
Sample Date		Client Info		<b>18 Apr 2023</b>	24 Jan 2023	10 Oct 2022
Machine Age	hrs	Client Info		<b>34700</b>	33089	32713
Oil Age	hrs	Client Info		<b>745</b>	376	377
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	<b>35</b>	26	39
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>100	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>50	<b>8</b>	7	6
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	<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**

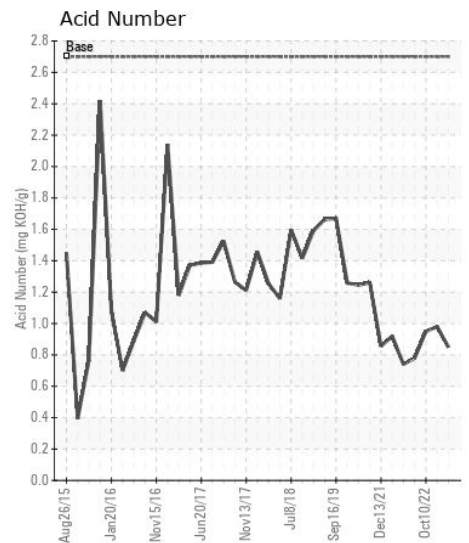
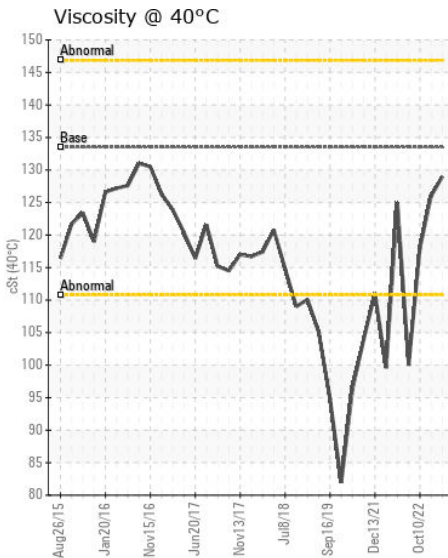
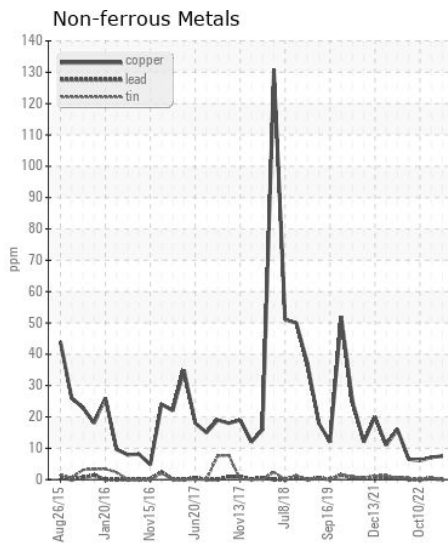
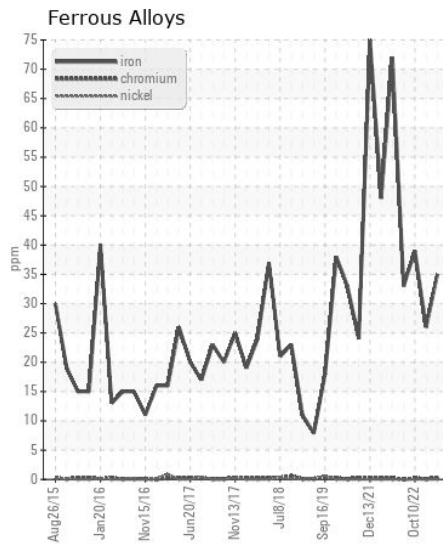
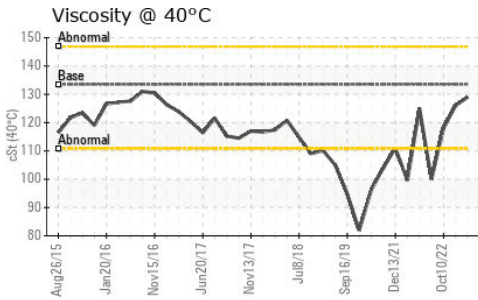
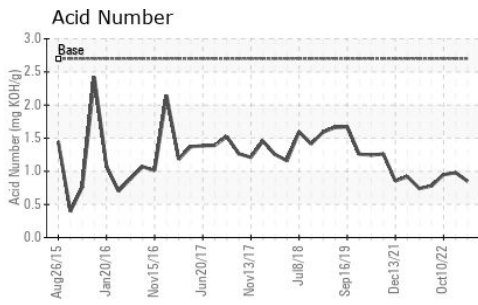
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>3</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	2	2
Boron	ppm	ASTM D5185m	1.0	<b>279</b>	240	247
Barium	ppm	ASTM D5185m	1.0	<b>0</b>	2	2
Molybdenum	ppm	ASTM D5185m	1.0	<b>30</b>	29	36
Manganese	ppm	ASTM D5185m	1	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	15	<b>66</b>	73	135
Calcium	ppm	ASTM D5185m	2540	<b>2250</b>	2009	2203
Phosphorus	ppm	ASTM D5185m	1000	<b>689</b>	609	696
Zinc	ppm	ASTM D5185m	1110	<b>785</b>	712	830
Sulfur	ppm	ASTM D5185m	3700	<b>3207</b>	2769	3039
Acid Number (AN)	mg KOH/g	ASTM D8045	2.7	<b>0.85</b>	0.98	0.95
Visc @ 40°C	cSt	ASTM D445	133.5	<b>129</b>	126	118



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : MW05824220

**Lab Number** : 05824220

**Unique Number** : 10432303

**Test Package** : MAR 2

**Received** : 19 Apr 2023

**Tested** : 20 Apr 2023

**Diagnosed** : 21 Apr 2023 - Jonathan Hester

**ILLINOIS MARINE TOWING**

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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)