



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

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>MW06017505</b>	MW05981972	MW05904496
Sample Date		Client Info		<b>23 Nov 2023</b>	16 Oct 2023	20 Jul 2023
Machine Age	hrs	Client Info		<b>38072</b>	37404	36707
Oil Age	hrs	Client Info		<b>668</b>	697	975
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>	24	38
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>2</b>	1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	1	<1
Lead	ppm	ASTM D5185m	>100	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>50	<b>8</b>	5	8
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>LIGHT</b>	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

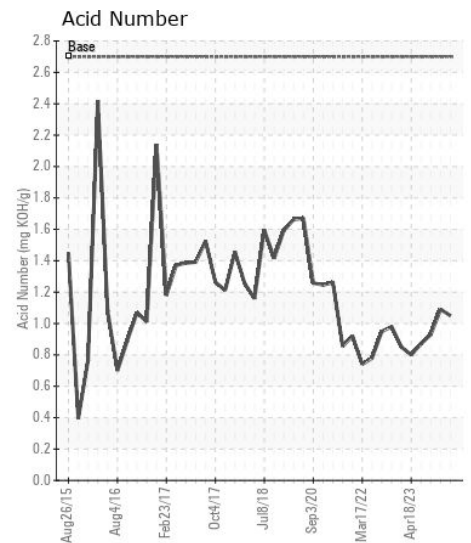
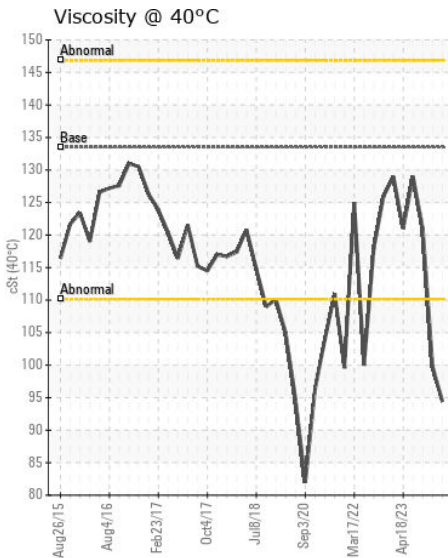
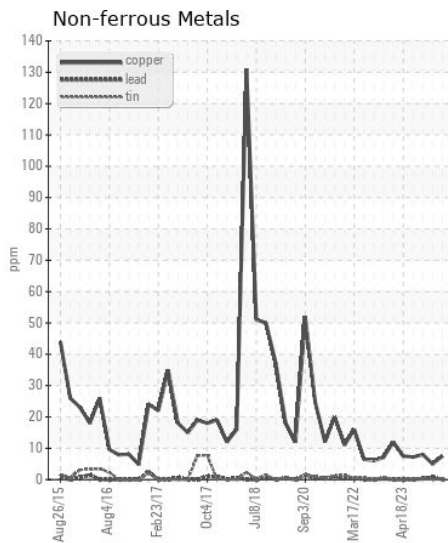
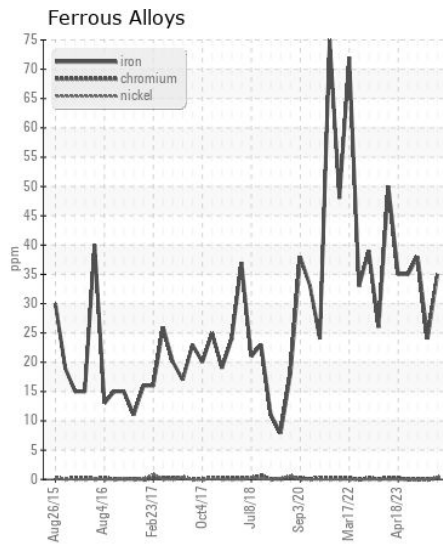
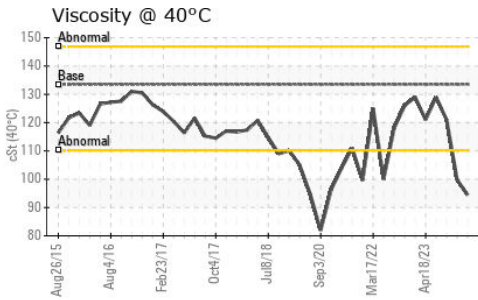
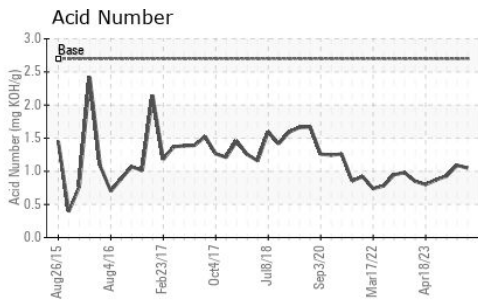
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>5</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	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>0</b>	2	0
Boron	ppm	ASTM D5185m	1.0	<b>291</b>	282	328
Barium	ppm	ASTM D5185m	1.0	<b>0</b>	3	2
Molybdenum	ppm	ASTM D5185m	1.0	<b>59</b>	52	34
Manganese	ppm	ASTM D5185m	1	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	15	<b>291</b>	253	107
Calcium	ppm	ASTM D5185m	2540	<b>1907</b>	1984	2250
Phosphorus	ppm	ASTM D5185m	1000	<b>653</b>	792	723
Zinc	ppm	ASTM D5185m	1110	<b>853</b>	885	827
Sulfur	ppm	ASTM D5185m	3700	<b>3336</b>	3006	3062
Acid Number (AN)	mg KOH/g	ASTM D8045	2.7	<b>1.05</b>	1.09	0.93
Visc @ 40°C	cSt	ASTM D445	133.5	<b>94.4</b>	99.8	121



Certificate L2367

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

**Sample No.** : MW06017505

**Lab Number** : 06017505

**Unique Number** : 10756649

**Test Package** : MAR 2

**Received** : 24 Nov 2023

**Tested** : 28 Nov 2023

**Diagnosed** : 29 Nov 2023 - Jonathan Hester

**ILLINOIS MARINE TOWING**

PO BOX 391

LEMONT, IL

US 60439

Contact: RHETT DANIEL

rdaniel@imtowing.com

T: (630)280-4926

F: (630)739-2041

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)