



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HBR
Component
Starboard Reduction Gear
Fluid
PETRO CANADA DURON MARINE SAE 40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW05904498	MW05843488	MW05824237
Sample Date		Client Info		20 Jul 2023	09 May 2023	18 Apr 2023
Machine Age	hrs	Client Info		25256	24489	23883
Oil Age	hrs	Client Info		768	1210	607
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	3	4	2
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	0	1
Lead	ppm	ASTM D5185m	>100	<1	0	0
Copper	ppm	ASTM D5185m	>50	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

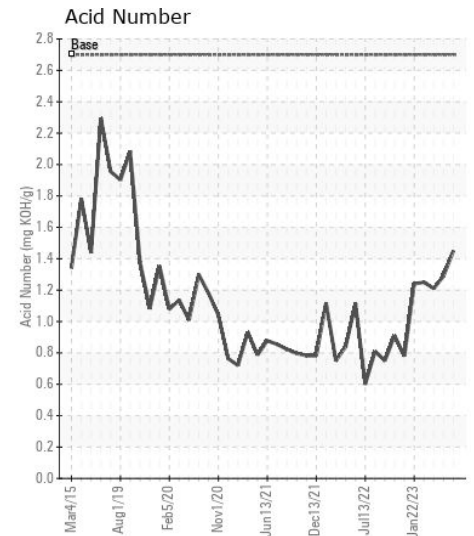
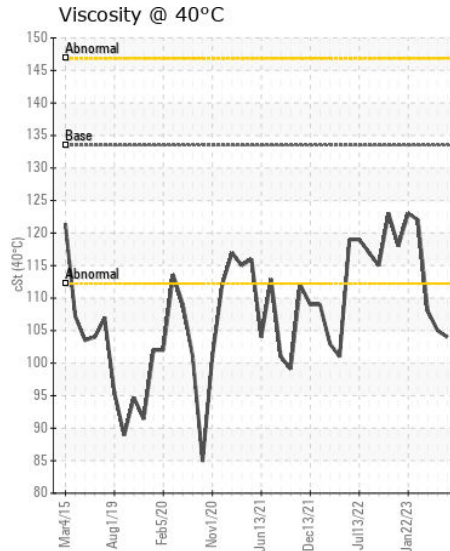
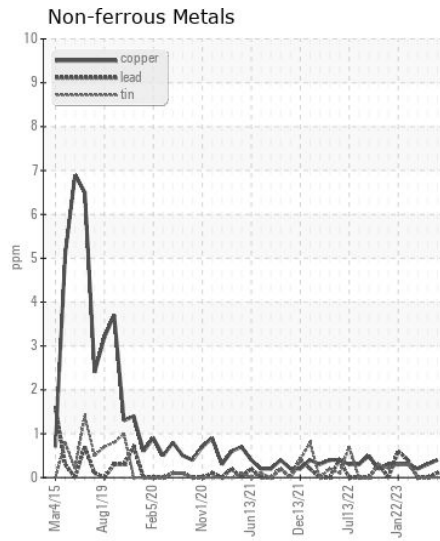
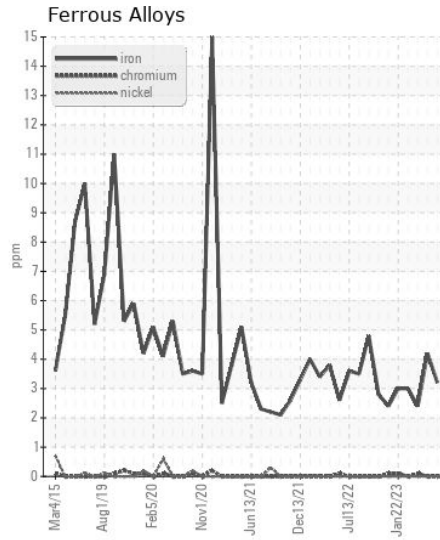
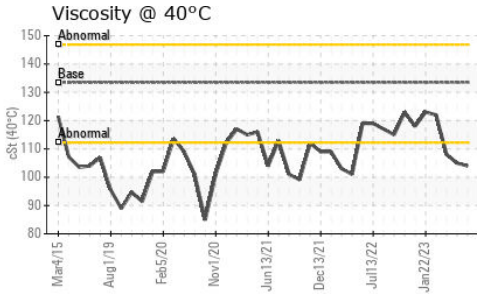
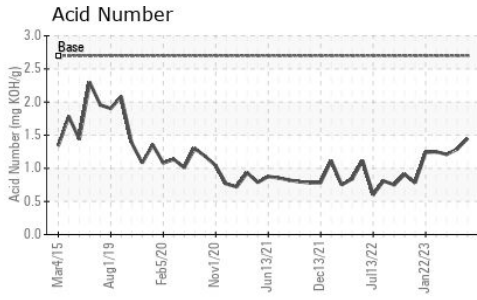
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	6	6	4
Potassium	ppm	ASTM D5185m	>20	2	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	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		0	1	2
Boron	ppm	ASTM D5185m	1.0	530	448	391
Barium	ppm	ASTM D5185m	1.0	2	2	0
Molybdenum	ppm	ASTM D5185m	1.0	66	76	57
Manganese	ppm	ASTM D5185m	1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	15	176	224	159
Calcium	ppm	ASTM D5185m	2540	2758	3256	2709
Phosphorus	ppm	ASTM D5185m	1000	997	1090	858
Zinc	ppm	ASTM D5185m	1110	1141	1211	990
Sulfur	ppm	ASTM D5185m	3700	3841	4135	3860
Acid Number (AN)	mg KOH/g	ASTM D8045	2.7	1.45	1.29	1.21
Visc @ 40°C	cSt	ASTM D445	133.5	104	105	108



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW05904498
Lab Number : 05904498
Unique Number : 10565854
Test Package : MAR 2

Received : 21 Jul 2023
Tested : 25 Jul 2023
Diagnosed : 25 Jul 2023 - Angela Borella

ILLINOIS MARINE TOWING
 PO BOX 391
 LEMONT, IL
 US 60439

Contact: RHETT DANIEL
 rdaniel@imtowing.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)

T: (630)280-4926
 F: (630)739-2041