



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		MW05824237	MW05774957	WC05745358
Sample Date		Client Info		18 Apr 2023	22 Feb 2023	22 Jan 2023
Machine Age	hrs	Client Info		23883	23283	22657
Oil Age	hrs	Client Info		607	1219	590
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	2	3	3
Chromium	ppm	ASTM D5185m	>10	<1	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	1	1
Lead	ppm	ASTM D5185m	>100	0	<1	<1
Copper	ppm	ASTM D5185m	>50	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

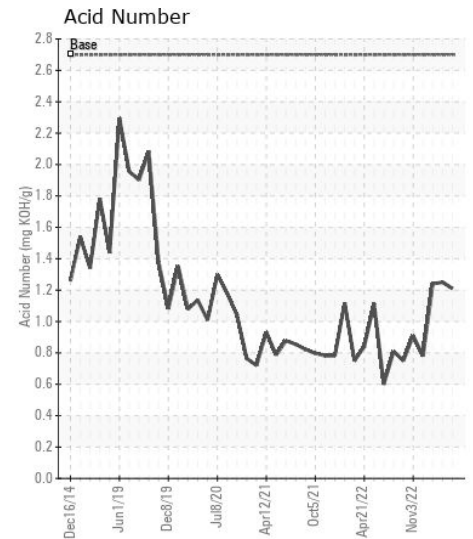
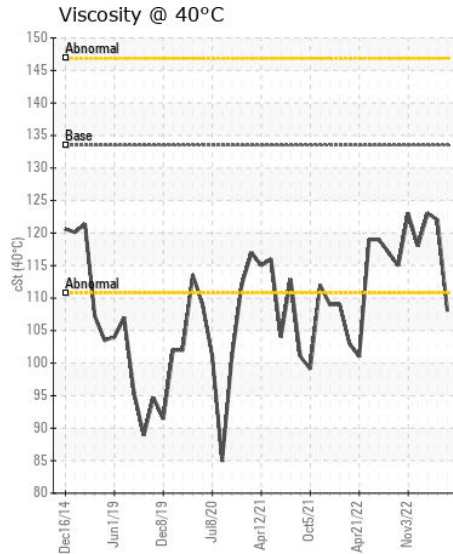
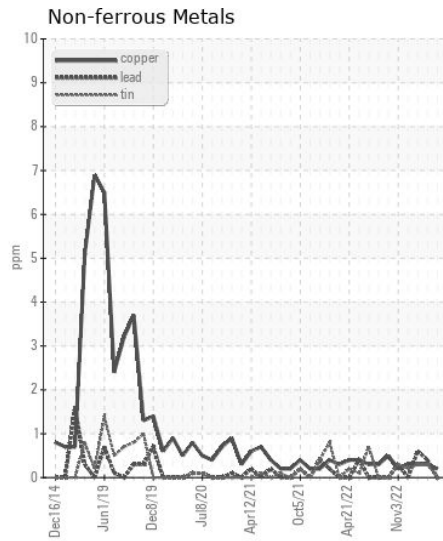
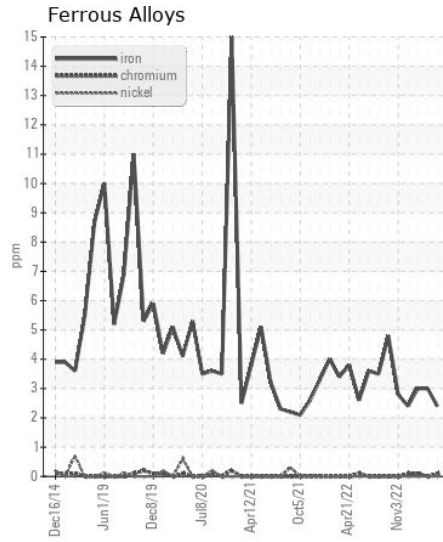
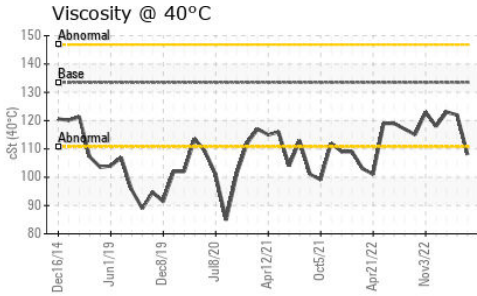
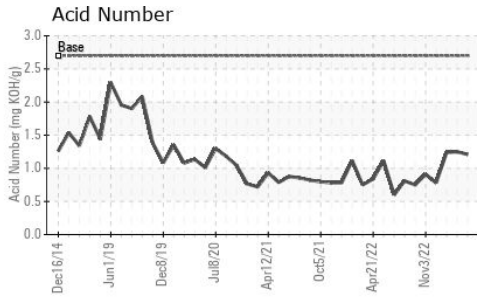
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	4	4	6
Potassium	ppm	ASTM D5185m	>20	0	0	<1
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		2	2	2
Boron	ppm	ASTM D5185m	1.0	391	447	403
Barium	ppm	ASTM D5185m	1.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.0	57	43	45
Manganese	ppm	ASTM D5185m	1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	15	159	50	52
Calcium	ppm	ASTM D5185m	2540	2709	2775	3185
Phosphorus	ppm	ASTM D5185m	1000	858	769	930
Zinc	ppm	ASTM D5185m	1110	990	885	1080
Sulfur	ppm	ASTM D5185m	3700	3860	3519	4362
Acid Number (AN)	mg KOH/g	ASTM D8045	2.7	1.21	1.25	1.24
Visc @ 40°C	cSt	ASTM D445	133.5	108	122	123



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW05824237
Lab Number : 05824237
Unique Number : 10432320
Test Package : MAR 2

Received : 19 Apr 2023
Tested : 21 Apr 2023
Diagnosed : 21 Apr 2023 - Jonathan Hester

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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)