



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id
CR 271171 Bow Thruster Hyd.
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 68 (120 LTR)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0844562	WC0844544	WC0750121
Sample Date		Client Info		14 May 2024	03 Feb 2024	29 Jul 2023
Machine Age	hrs	Client Info		2222	2167	0
Oil Age	hrs	Client Info		389	334	0
Filter Age	hrs	Client Info		45	73	0
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Not Changed	Not Changed	Not Changed
Sample Status				ATTENTION	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	2	3	3
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>10	0	<1	<1
Lead	ppm	ASTM D5185(m)	>20	4	<1	3
Copper	ppm	ASTM D5185(m)	>20	4	4	2
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

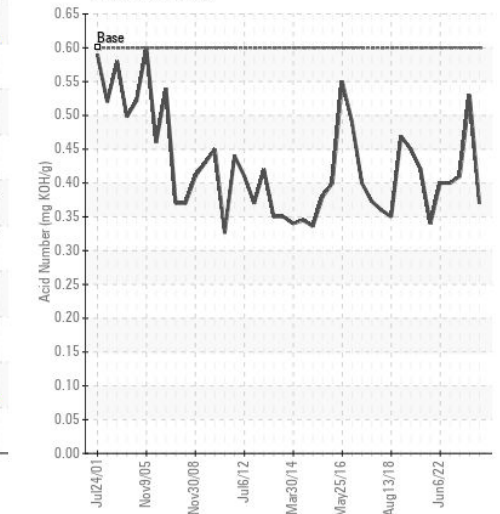
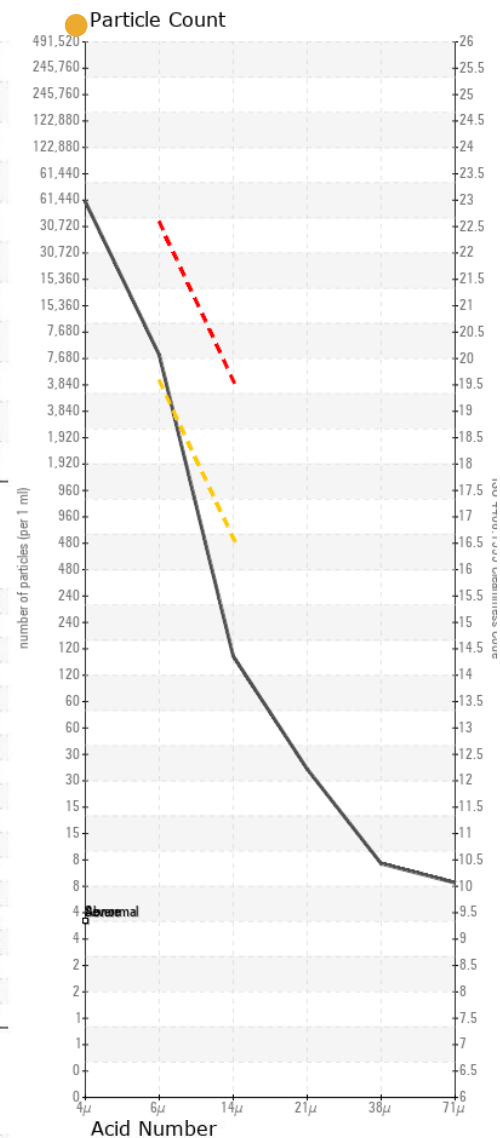
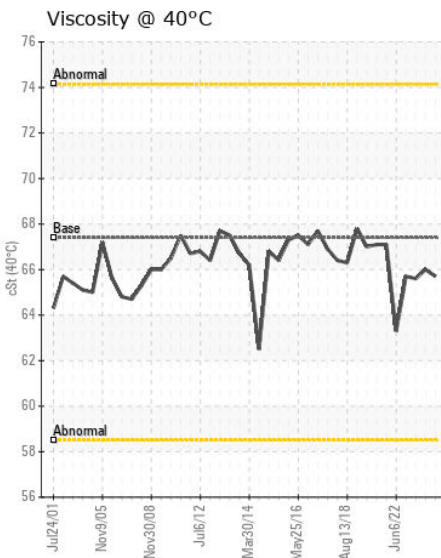
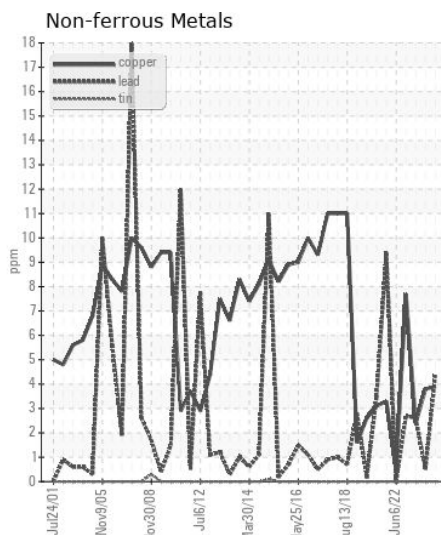
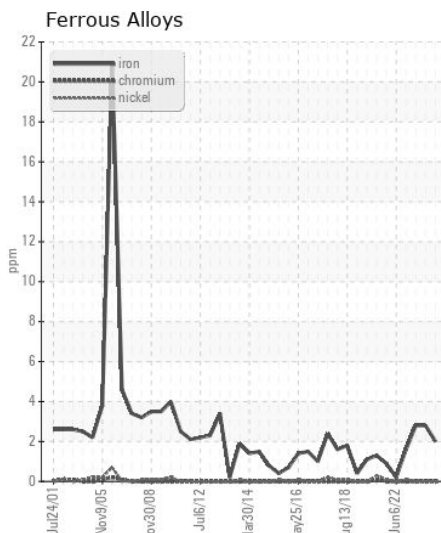
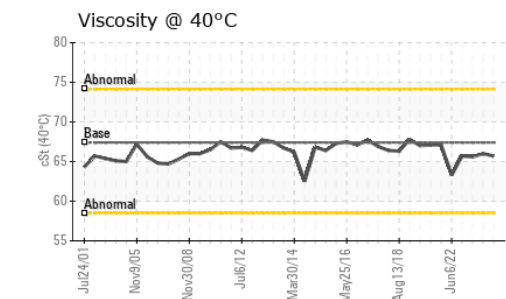
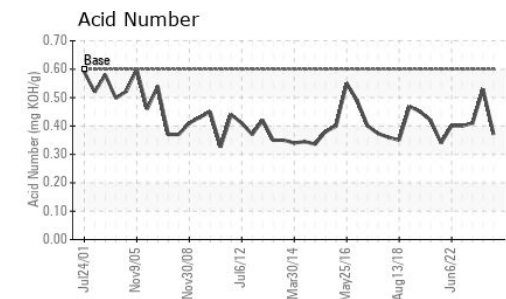
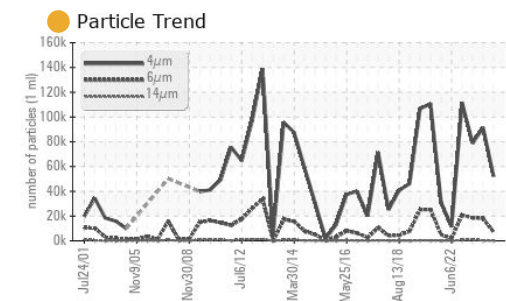
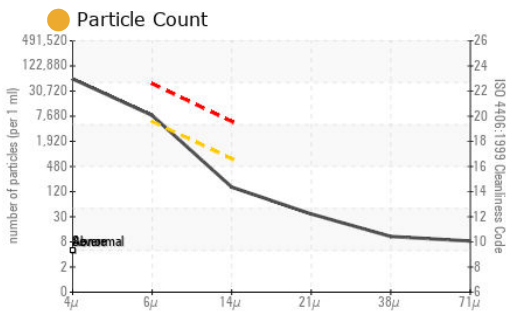
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>15	0	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Water		WC Method	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647		52086	91215	78870
Particles >6µm		ASTM D7647	>5000	6996	▲ 18017	▲ 18495
Particles >14µm		ASTM D7647	>640	136	330	● 827
Particles >21µm		ASTM D7647	>160	31	43	195
Particles >38µm		ASTM D7647	>40	9	2	6
Particles >71µm		ASTM D7647	>10	7	1	1
Oil Cleanliness		ISO 4406 (c)	>-/19/16	23/20/14	▲ 24/21/16	▲ 23/21/17
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	VLITE
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*	>0.05	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 D5185(m)		2	2	<1
Boron	ppm	ASTM D5185(m)	0	<1	0	<1
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	<1	<1
Calcium	ppm	ASTM D5185(m)	50	49	50	50
Phosphorus	ppm	ASTM D5185(m)	330	311	313	354
Zinc	ppm	ASTM D5185(m)	430	400	388	402
Sulfur	ppm	ASTM D5185(m)	760	1347	1486	1399
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.37	0.53	0.41
Visc @ 40°C	cSt	ASTM D7279(m)	67.4	65.7	66.0	65.6



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0844562
Lab Number : 02637157
Unique Number : 5786319
Test Package : MAR 2
Received : 23 May 2024
Tested : 27 May 2024
Diagnosed : 27 May 2024 - Wes Davis

CANADIAN COAST GUARD
 CCGS CAPE ROGER, PO BOX 5667
 ST. JOHN'S, NL
 CA A1C 5X1
 Contact: Chief Engineer
 caperogerce@ccrg.ccs-ngcc.gc.ca
 T: (709)685-6843
 F: (709)685-6059

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.