MAR II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
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. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

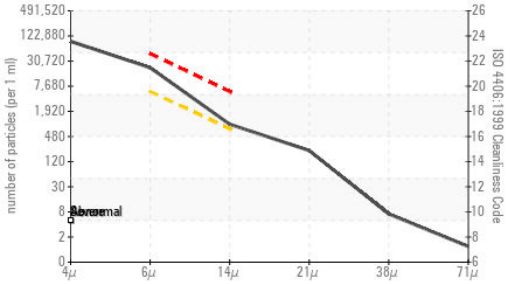
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

FLUID CONDITION

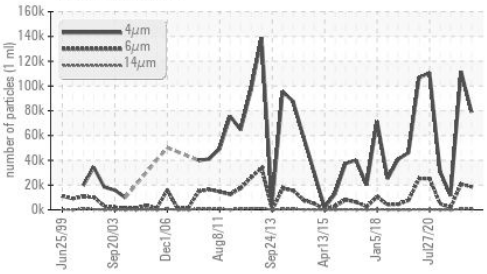
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0750121	WC0763427	WC0460347
Sample Date		Client Info		29 Jul 2023	30 Dec 2022	06 Jun 2022
Machine Age	hrs	Client Info		0	568	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Filter Changed		Client Info		Not Changd	None	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>20	3	2	<1
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	0	<1
Lead	ppm	ASTM D5185(m)	>20	3	3	0
Copper	ppm	ASTM D5185(m)	>20	2	8	<1
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
Silicon	ppm	ASTM D5185(m)	>15	<1	<1	0
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Water		WC Method	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647		78870	111521	11492
Particles >6µm		ASTM D7647	>5000	▲ 18495	▲ 20771	1707
Particles >14µm		ASTM D7647	>640	▲ 827	▲ 666	59
Particles >21µm		ASTM D7647	>160	195	131	9
Particles >38µm		ASTM D7647	>40	6	2	0
Particles >71µm		ASTM D7647	>10	1	0	0
Oil Cleanliness		ISO 4406 (c)	>--/19/16	▲ 23/21/17	▲ 24/22/17	21/18/13
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE	NONE
Appearance	scalar	Visual*	NORML	NORML	▲ WGOIL	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	NEG	.2%	NEG
Sodium	ppm	ASTM D5185(m)		<1	3	<1
Boron	ppm	ASTM D5185(m)	0	<1	3	<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	50	41	51
Phosphorus	ppm	ASTM D5185(m)	330	354	337	324
Zinc	ppm	ASTM D5185(m)	430	402	390	381
Sulfur	ppm	ASTM D5185(m)	760	1399	1476	3644
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.41	0.40	0.40
Visc @ 40°C	cSt	ASTM D7279(m)	67.4	65.6	65.7	63.3

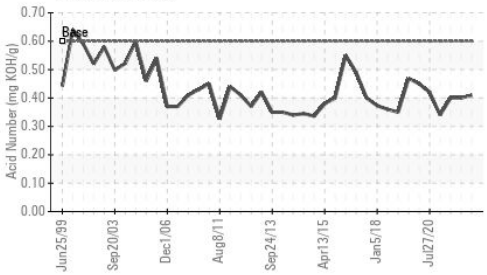
Particle Count



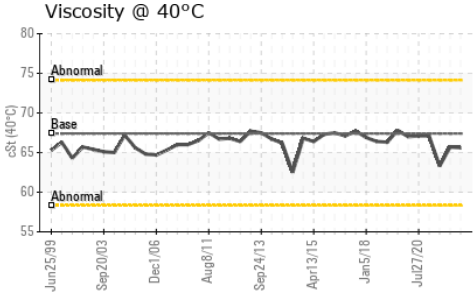
Particle Trend



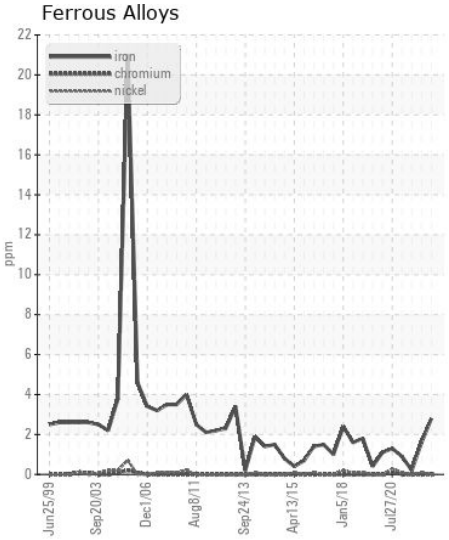
Acid Number



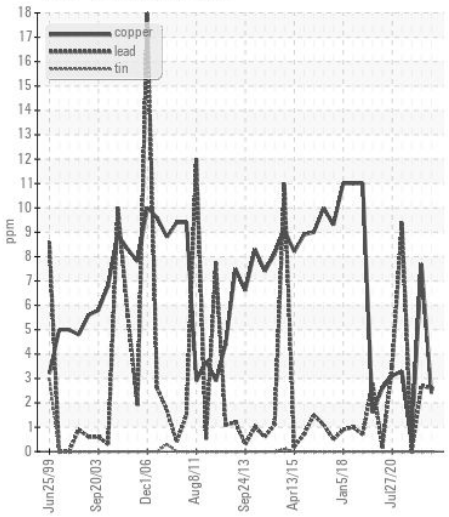
Viscosity @ 40°C



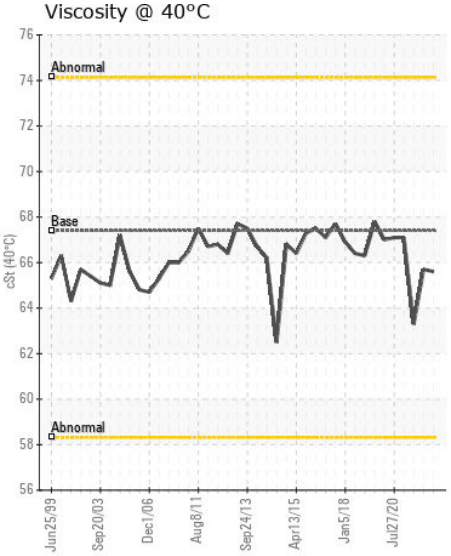
Ferrous Alloys



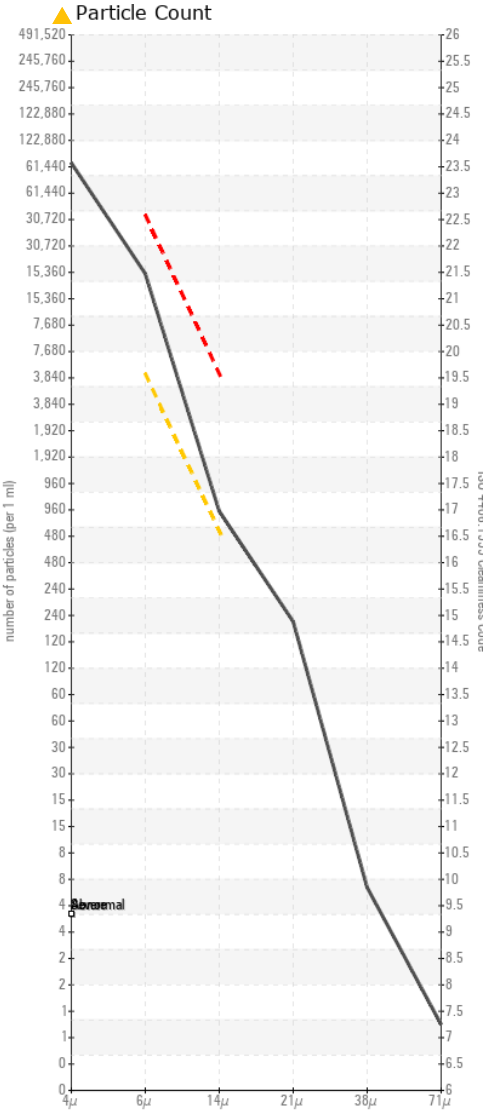
Non-ferrous Metals



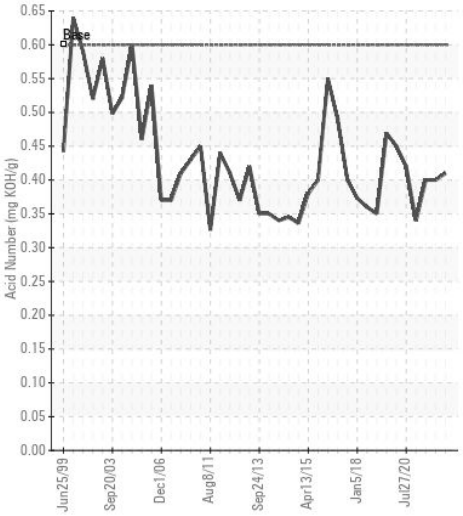
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0750121
Lab Number : 02574226
Unique Number : 5619277
Test Package : MAR 2

Received : 04 Aug 2023
Tested : 08 Aug 2023
Diagnosed : 08 Aug 2023 - Wes Davis

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.

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