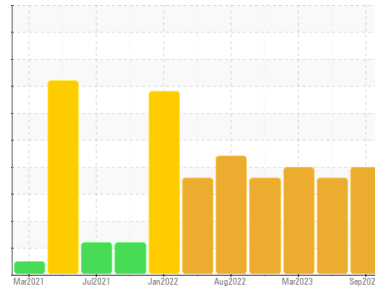




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
501057

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX MV 32 (--- GAL)

DIAGNOSIS

Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0093858	GFL0086177	GFL0077290
Sample Date	Client Info		12 Sep 2023	13 Jun 2023	14 Mar 2023
Machine Age	kms	Client Info	992962	992642	989358
Oil Age	kms	Client Info	0	23000	0
Oil Changed	Client Info		Not Changed	Not Changd	Not Changed
Sample Status			SEVERE	SEVERE	SEVERE

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >40	3	4	4
Chromium	ppm	ASTM D5185(m) >5	2	2	2
Nickel	ppm	ASTM D5185(m) >2	<1	0	0
Titanium	ppm	ASTM D5185(m) >2	0	<1	<1
Silver	ppm	ASTM D5185(m)	0	0	0
Aluminum	ppm	ASTM D5185(m) >8	2	2	2
Lead	ppm	ASTM D5185(m) >5	<1	<1	<1
Copper	ppm	ASTM D5185(m) >20	1	1	1
Tin	ppm	ASTM D5185(m) >2	0	0	0
Antimony	ppm	ASTM D5185(m) >2	0	<1	<1
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	2	2	3
Barium	ppm	ASTM D5185(m) 0	<1	<1	1
Molybdenum	ppm	ASTM D5185(m) 0	<1	1	1
Manganese	ppm	ASTM D5185(m) 1	0	0	0
Magnesium	ppm	ASTM D5185(m) 0	20	22	22
Calcium	ppm	ASTM D5185(m) 50	95	105	101
Phosphorus	ppm	ASTM D5185(m) 330	382	401	385
Zinc	ppm	ASTM D5185(m) 430	444	434	437
Sulfur	ppm	ASTM D5185(m) 760	1039	1131	1085
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >20	3	2	2
Sodium	ppm	ASTM D5185(m)	3	3	3
Potassium	ppm	ASTM D5185(m) >20	<1	<1	<1

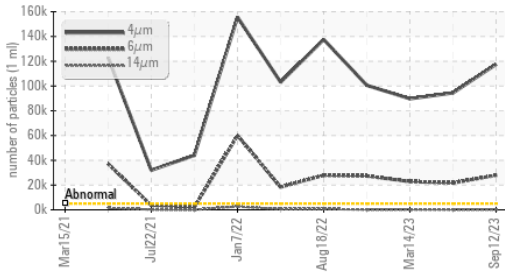
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	117548	94443	89729
Particles >6µm	ASTM D7647	>1300	27893	21670	22868
Particles >14µm	ASTM D7647	>160	230	130	198
Particles >21µm	ASTM D7647	>40	48	18	22
Particles >38µm	ASTM D7647	>10	3	0	1
Particles >71µm	ASTM D7647	>3	1	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	24/22/15	24/22/14	24/22/15

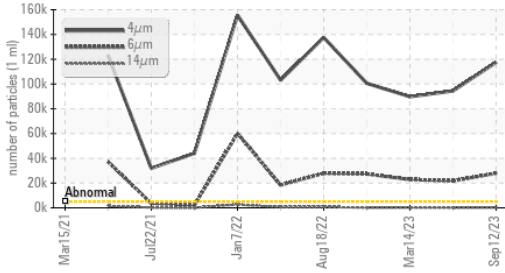


OIL ANALYSIS REPORT

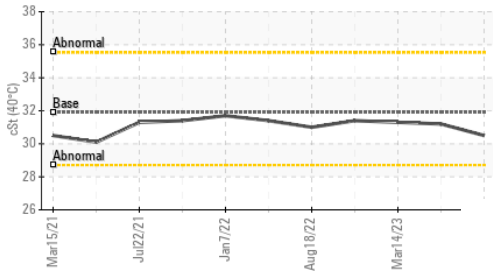
Particle Trend



Particle Trend



Viscosity @ 40°C

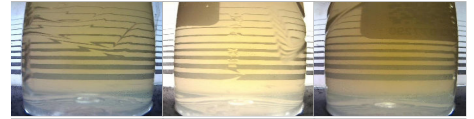


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

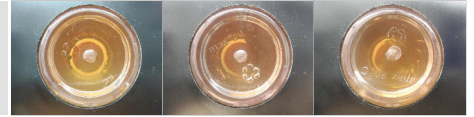
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	31.9	30.5	31.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

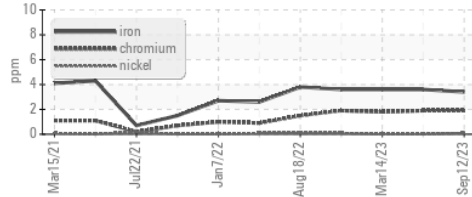


Bottom

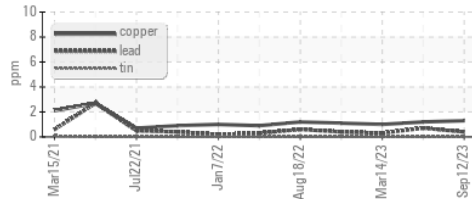


GRAPHS

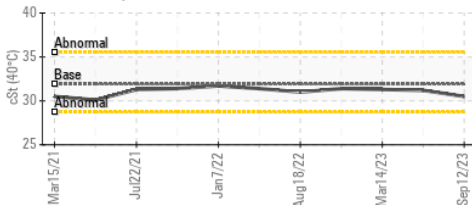
Ferrous Alloys



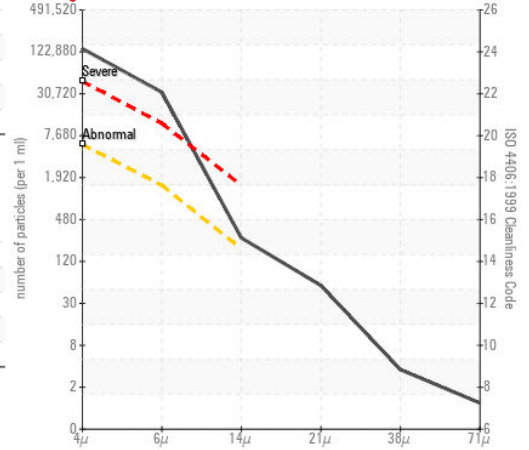
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 257 - North York
Sample No. : GFL0093858 **Received** : 14 Sep 2023
Lab Number : 02582521 **Diagnosed** : 15 Sep 2023
Unique Number : 5643586 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: PrtCount)

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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