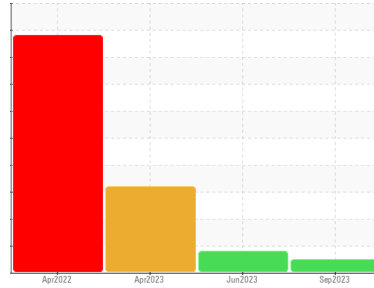




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
Or392

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX AW 46 (--- GAL)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Please specify the component make and model with your next sample. (Customer Sample Comment: Oil used is Hydrex XV all season. We added bleu Hydraulic oil dye)

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0092199	GFL0056444	GFL0056397
Sample Date	Client Info		15 Sep 2023	12 Jun 2023	17 Apr 2023
Machine Age	hrs	Client Info	9138	8240	8240
Oil Age	hrs	Client Info	1900	1400	1000
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			NORMAL	ATTENTION	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >20	11	13	11
Chromium	ppm	ASTM D5185(m) >10	5	7	6
Nickel	ppm	ASTM D5185(m) >10	<1	0	0
Titanium	ppm	ASTM D5185(m)	0	<1	<1
Silver	ppm	ASTM D5185(m)	0	0	0
Aluminum	ppm	ASTM D5185(m) >10	<1	1	1
Lead	ppm	ASTM D5185(m) >10	<1	2	0
Copper	ppm	ASTM D5185(m) >75	<1	<1	<1
Tin	ppm	ASTM D5185(m) >10	0	0	0
Antimony	ppm	ASTM D5185(m)	0	<1	0
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	<1	<1	1
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 0	10	16	▲ 17
Manganese	ppm	ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 0	165	247	▲ 277
Calcium	ppm	ASTM D5185(m) 50	282	399	▲ 428
Phosphorus	ppm	ASTM D5185(m) 330	706	697	735
Zinc	ppm	ASTM D5185(m) 430	831	774	840
Sulfur	ppm	ASTM D5185(m) 760	1600	1809	▲ 1847
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >20	2	3	3
Sodium	ppm	ASTM D5185(m)	2	3	2
Potassium	ppm	ASTM D5185(m) >20	0	1	<1

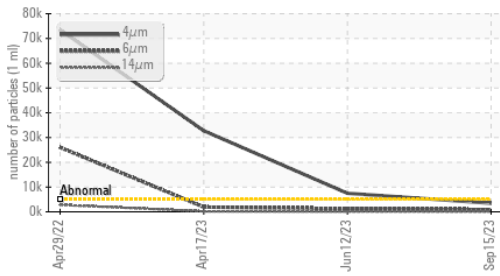
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	3451	▲ 7489	▲ 32748
Particles >6µm	ASTM D7647	>1300	889	1259	▲ 1912
Particles >14µm	ASTM D7647	>160	54	90	▲ 165
Particles >21µm	ASTM D7647	>40	10	19	50
Particles >38µm	ASTM D7647	>10	1	0	3
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	19/17/13	▲ 20/17/14	▲ 22/18/15

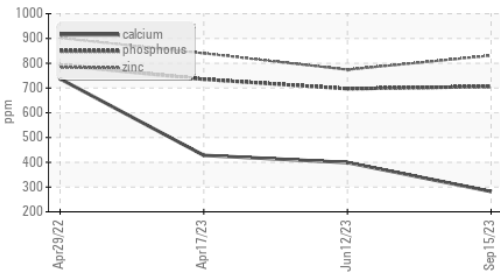


OIL ANALYSIS REPORT

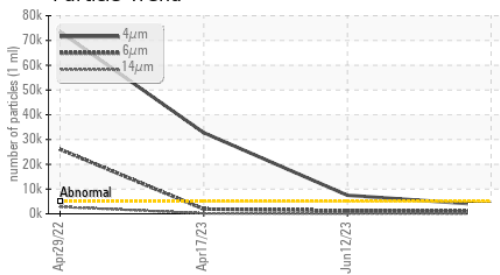
Particle Trend



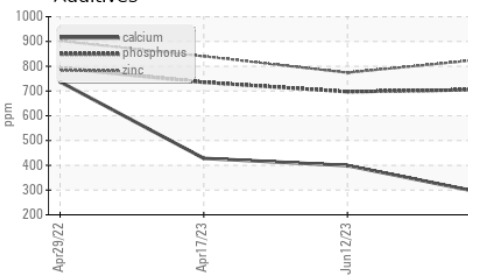
Additives



Particle Trend



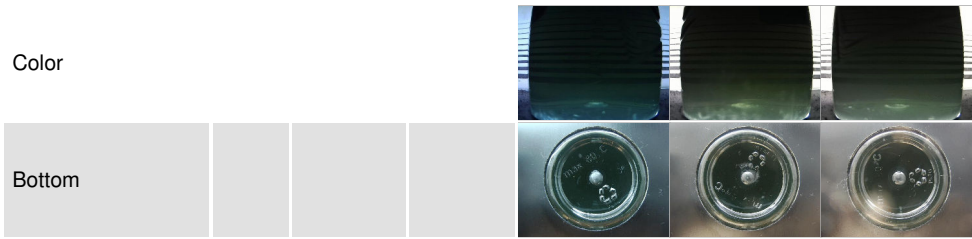
Additives



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

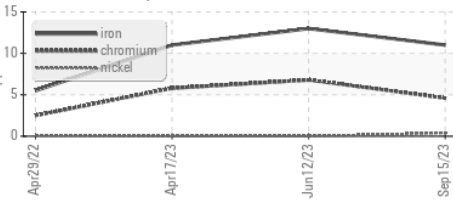
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	46.4	44.1	45.5	44.7

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

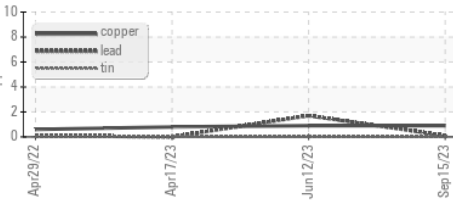


GRAPHS

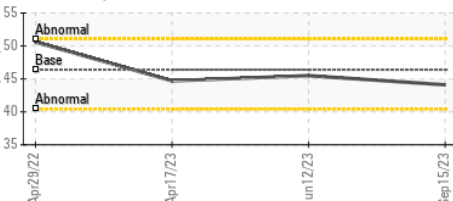
Ferrous Alloys



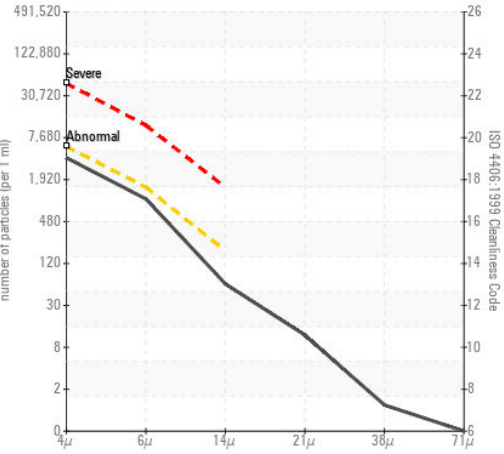
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 720 - Lafleche - Landfill
Sample No. : GFL0092199 **Received** : 21 Sep 2023
Lab Number : 02584439 **Diagnosed** : 25 Sep 2023
Unique Number : 5645504 **Diagnostician** : Bill Quesnel
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.

17125 Lafleche Road,
 Moose Creek, ON
 CA K0C 1W0
 Contact: Charles Bergeron
 cbergeron@gflenv.com
 T: (613)538-4853
 F: