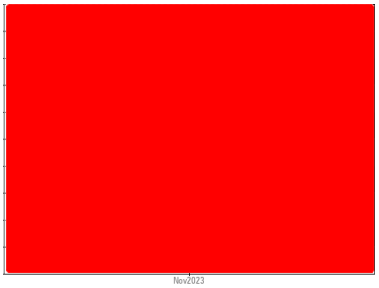
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
EX0301
Component
Rear Left Final Drive
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Iron and titanium ppm levels are severe. PQ levels are severe. Chromium ppm levels are abnormal. Aluminum ppm levels are noted. Gear wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring.

Contamination

There is a moderate concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High amount of ingressed dirt has caused abrasive wear to the component.

Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0094025**	---	---
Sample Date		Client Info		**29 Nov 2023**	---	---
Machine Age	kms	Client Info		**6340**	---	---
Oil Age	kms	Client Info		**0**	---	---
Oil Changed		Client Info		**Changed**	---	---
Sample Status				**SEVERE**	---	---

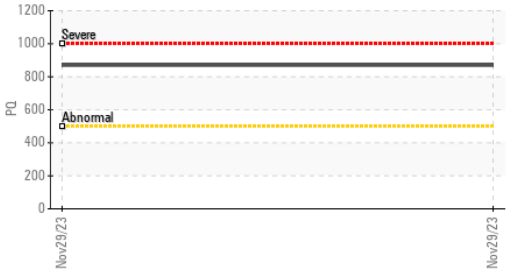
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*	>500	**870**	---	---
Iron	ppm	ASTM D5185(m)	>800	**2709**	---	---
Chromium	ppm	ASTM D5185(m)	>10	**11**	---	---
Nickel	ppm	ASTM D5185(m)	>5	**1**	---	---
Titanium	ppm	ASTM D5185(m)	>15	**36**	---	---
Silver	ppm	ASTM D5185(m)	>2	**<1**	---	---
Aluminum	ppm	ASTM D5185(m)	>75	**438**	---	---
Lead	ppm	ASTM D5185(m)	>10	**2**	---	---
Copper	ppm	ASTM D5185(m)	>75	**5**	---	---
Tin	ppm	ASTM D5185(m)	>8	**0**	---	---
Antimony	ppm	ASTM D5185(m)	>50	**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**<1**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**8**	---	---
Barium	ppm	ASTM D5185(m)		**1**	---	---
Molybdenum	ppm	ASTM D5185(m)		**<1**	---	---
Manganese	ppm	ASTM D5185(m)		**27**	---	---
Magnesium	ppm	ASTM D5185(m)		**73**	---	---
Calcium	ppm	ASTM D5185(m)		**2322**	---	---
Phosphorus	ppm	ASTM D5185(m)		**760**	---	---
Zinc	ppm	ASTM D5185(m)		**971**	---	---
Sulfur	ppm	ASTM D5185(m)		**8175**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>400	**1729**	---	---
Sodium	ppm	ASTM D5185(m)		**78**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**141**	---	---
Water	%	ASTM D6304*	>0.2	**0.932**	---	---
ppm Water	ppm	ASTM D6304*	>2000	**9325**	---	---

OIL ANALYSIS REPORT

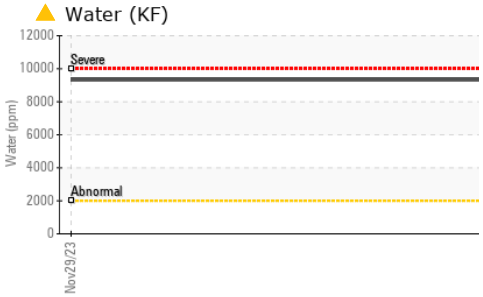
PQ



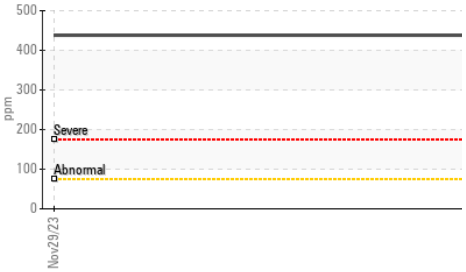
Ferrous Alloys

Water (KF)

Water (KF)



Aluminum (ppm)



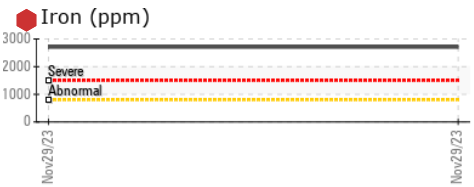
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	---	---
Emulsified Water	scalar	Visual*	>0.2	▲ **.2%**	---	---
Free Water	scalar	Visual*		**NEG**	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)		**107**	---	---

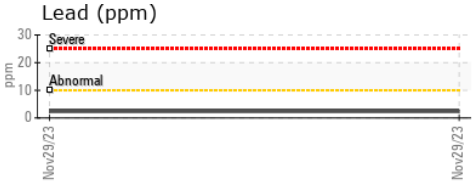
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS

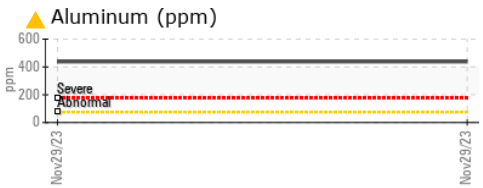
Iron (ppm)



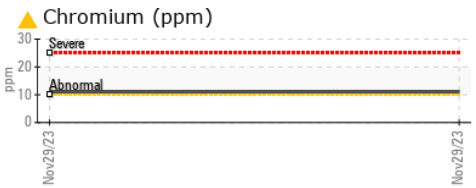
Lead (ppm)



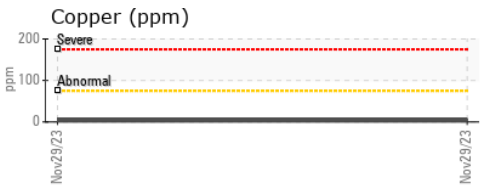
Aluminum (ppm)



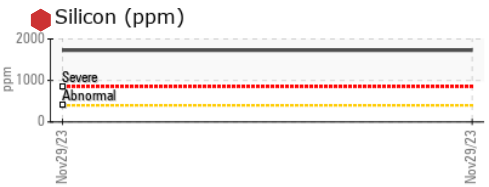
Chromium (ppm)



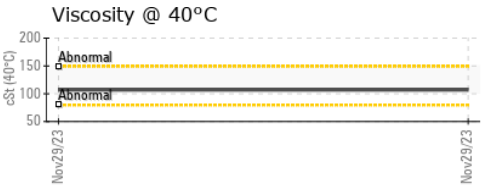
Copper (ppm)



Silicon (ppm)



Viscosity @ 40°C



Water

CALA Testing Accreditation No. 1005078
ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0094025
Lab Number : 02601956
Unique Number : 5695041
Test Package : MOB 1 (Additional Tests: KF, PQ)

Received : 08 Dec 2023
Diagnosed : 11 Dec 2023
Diagnostician : Kevin Marson

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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