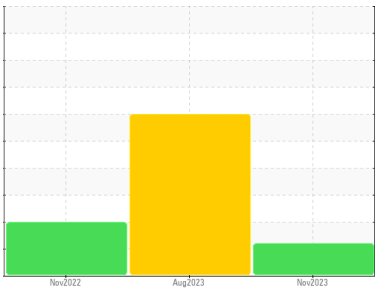
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
OR870
Component
Hydraulic System
Fluid
PETRO CANADA PRODURO TO-4 SAE 10W (--- GAL)

DIAGNOSIS

Recommendation
The filter change at the time of sampling has been noted. 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.

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		**GFL0076990**	GFL0054634	GFL0054592
Sample Date		Client Info		**18 Nov 2023**	02 Aug 2023	05 Nov 2022
Machine Age	hrs	Client Info		**24572**	24031	22711
Oil Age	hrs	Client Info		**532**	2000	2000
Oil Changed		Client Info		**Not Changd**	Changed	Changed
Sample Status				**ABNORMAL**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**4**	6	8
Chromium	ppm	ASTM D5185(m)	>10	**<1**	2	2
Nickel	ppm	ASTM D5185(m)	>10	**0**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)		**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>10	**1**	1	2
Lead	ppm	ASTM D5185(m)	>10	**1**	<1	<1
Copper	ppm	ASTM D5185(m)	>75	**2**	2	3
Tin	ppm	ASTM D5185(m)	>10	**0**	0	<1
Antimony	ppm	ASTM D5185(m)		**0**	0	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)	1	**2**	3	2
Barium	ppm	ASTM D5185(m)	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	1	**<1**	2	7
Manganese	ppm	ASTM D5185(m)	1	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1	**11**	9	8
Calcium	ppm	ASTM D5185(m)	2864	**2556**	2030	1672
Phosphorus	ppm	ASTM D5185(m)	987	**873**	907	828
Zinc	ppm	ASTM D5185(m)	1162	**1061**	1015	931
Sulfur	ppm	ASTM D5185(m)	3713	**2920**	2613	2232
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**6**	8	5
Sodium	ppm	ASTM D5185(m)		**1**	1	<1
Potassium	ppm	ASTM D5185(m)	>20	**2**	2	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **29084**	⬢ 55461	⬢ 59721
Particles >6µm		ASTM D7647	>1300	▲ **2311**	▲ 3182	▲ 3459
Particles >14µm		ASTM D7647	>160	**70**	63	81
Particles >21µm		ASTM D7647	>40	**14**	11	26
Particles >38µm		ASTM D7647	>10	**2**	0	2
Particles >71µm		ASTM D7647	>3	**1**	0	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **22/18/13**	⬢ 23/19/13	⬢ 23/19/14

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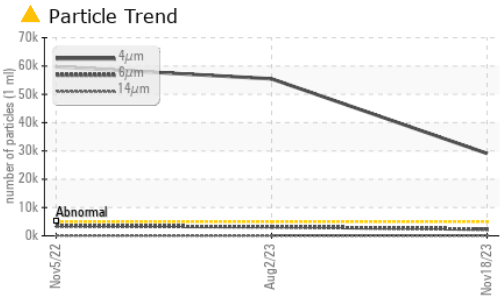
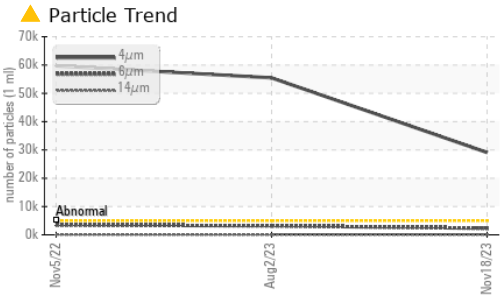
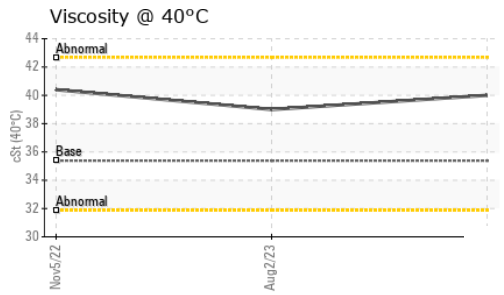


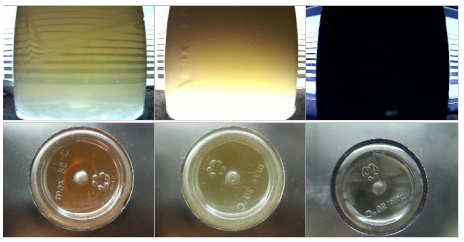




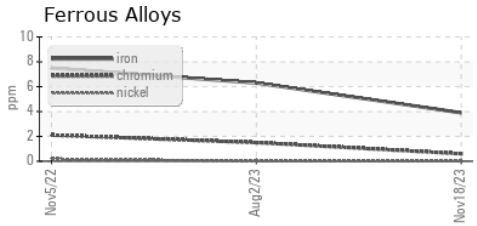
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	▲ WGOIL	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	**NEG**	▲ .2%	NEG
Free Water	scalar	Visual*		**NEG**	▲ 1%	NEG

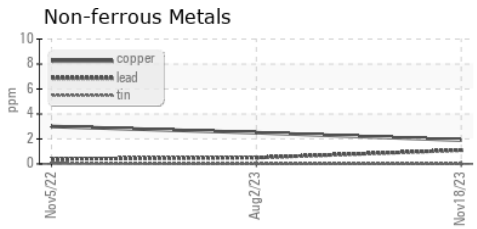
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	35.38	**40.0**	39.0	40.4

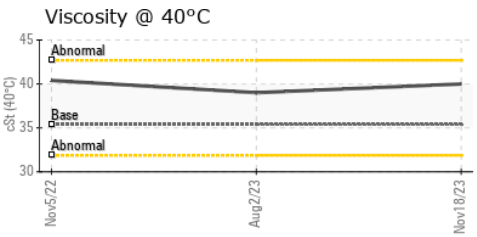
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

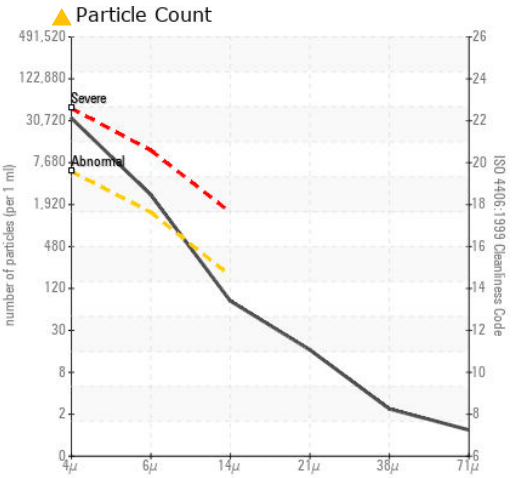


GRAPHS









ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 575 - Squamish Hauling**
Sample No. : GFL0076990 **Received** : 05 Dec 2023 38950 Queens Way,
Lab Number : 02600988 **Diagnosed** : 07 Dec 2023 Squamish, BC
Unique Number : 5694073 **Diagnostician** : Wes Davis CA V8B 0K8
Test Package : MOB 1 (Additional Tests: PrtCount) Contact: Dean Imbeau

To discuss this sample report, contact Customer Service at 1-800-268-2131. dimbeau@gflenv.com
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (604)892-5604
Validity of results and interpretation are based on the sample and information as supplied. F: (604)892-5238