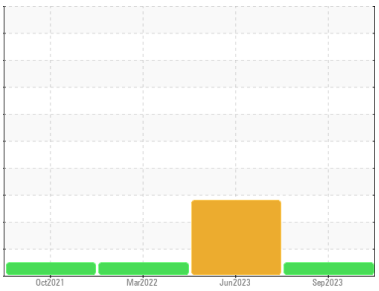
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
301205
Component
Gasoline Engine
Fluid
PETRO CANADA DURON SAE 10W30 (--- 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.

Wear
All component wear rates are normal.

Contamination
There is no indication of any contamination in the oil.

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		**GFL0084119**	GFL0063674	GFL0039312
Sample Date		Client Info		**21 Sep 2023**	04 Jun 2023	03 Mar 2022
Machine Age	kms	Client Info		**306751**	296106	265450
Oil Age	kms	Client Info		**5000**	5000	5000
Oil Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**NORMAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	**<1.0**	<1.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>150	**90**	▲ 235	33
Chromium	ppm	ASTM D5185(m)	>20	**1**	4	1
Nickel	ppm	ASTM D5185(m)	>5	**1**	3	1
Titanium	ppm	ASTM D5185(m)		**12**	<1	<1
Silver	ppm	ASTM D5185(m)	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>40	**8**	27	4
Lead	ppm	ASTM D5185(m)	>50	**<1**	<1	0
Copper	ppm	ASTM D5185(m)	>155	**2**	3	<1
Tin	ppm	ASTM D5185(m)	>10	**0**	<1	0
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**<1**	1	<1
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	**15**	12	9
Barium	ppm	ASTM D5185(m)	1	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	1	**69**	66	66
Manganese	ppm	ASTM D5185(m)	1	**3**	7	1
Magnesium	ppm	ASTM D5185(m)	10	**628**	544	419
Calcium	ppm	ASTM D5185(m)	2942	**1087**	1501	1038
Phosphorus	ppm	ASTM D5185(m)	1102	**662**	656	619
Zinc	ppm	ASTM D5185(m)	1351	**814**	742	707
Sulfur	ppm	ASTM D5185(m)	3903	**2065**	2152	1866
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>30	**6**	13	4
Sodium	ppm	ASTM D5185(m)	>400	**45**	115	49
Potassium	ppm	ASTM D5185(m)	>20	**3**	10	2
Glycol	%	ASTM D7922*		**0.0**	0.0	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**18.3**	▲ 24.1	4.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	**35.4**	▲ 43.3	16.2

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**38.2**	▲ 51.7	9.3

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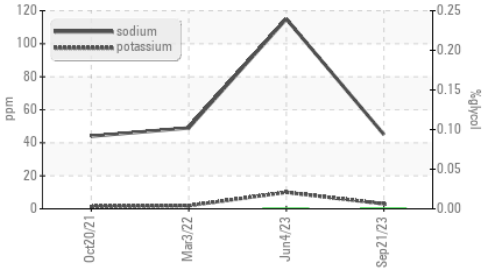
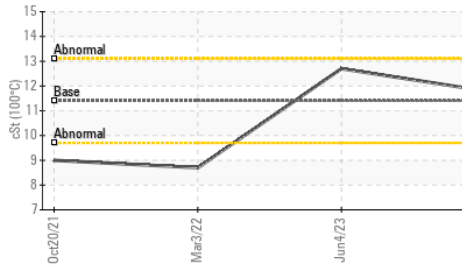
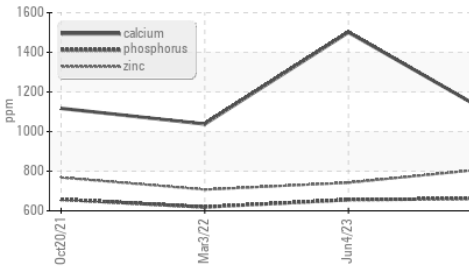
Glycol Contamination



Viscosity @ 100°C



Additives

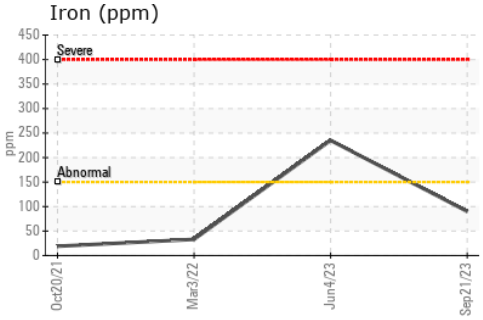


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

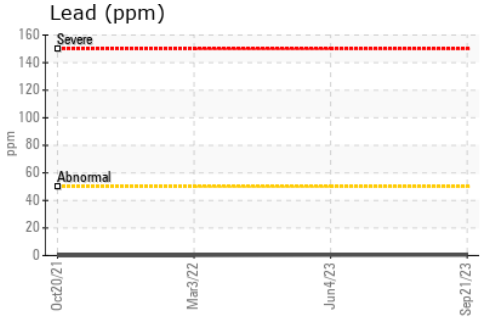
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	11.4	**11.8**	12.7	8.7

GRAPHS

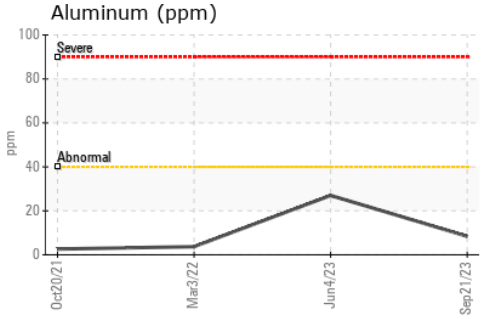
Iron (ppm)



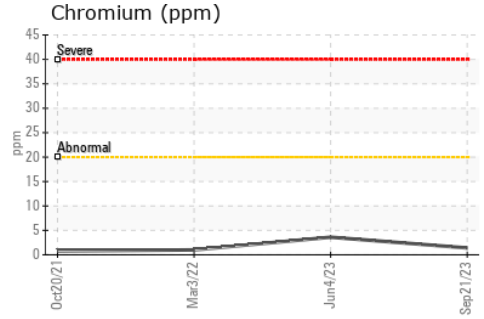
Lead (ppm)



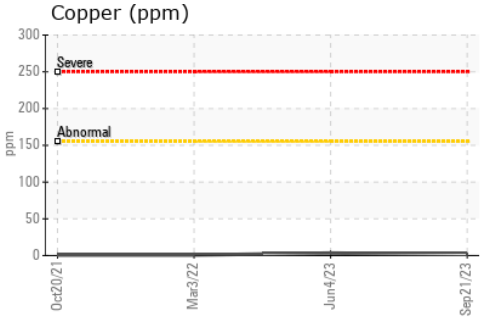
Aluminum (ppm)



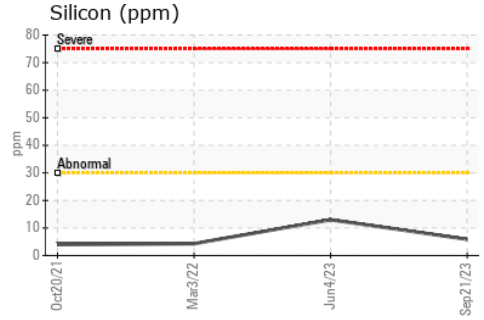
Chromium (ppm)



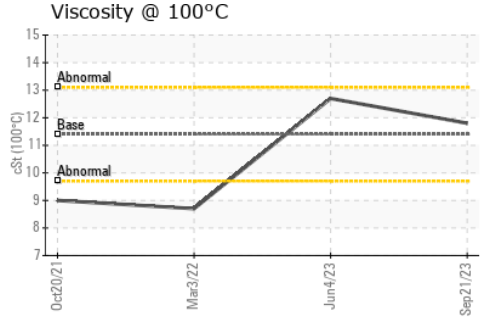
Copper (ppm)



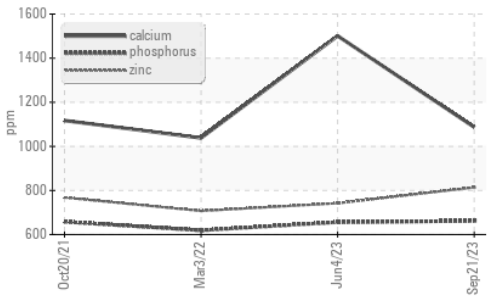
Silicon (ppm)



Viscosity @ 100°C



Additives



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 574 - Vancouver Fleet**
Sample No. : GFL0084119 **Received** : 24 Oct 2023
Lab Number : 02591277 **Diagnosed** : 25 Oct 2023
Unique Number : 5668356 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol)

70 Golden Drive,
Coquitlam, BC
CA V3K 6B5
Contact: Allison Adams
aadams@gflenv.com
T: (604)529-4023
F:

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.