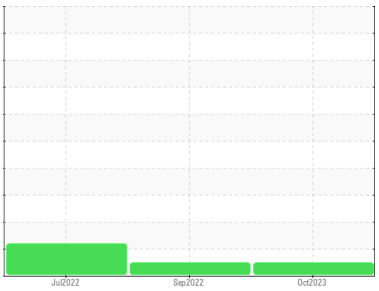
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
229079
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Fluid Condition
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0090742**	GFL0053242	GFL0053258
Sample Date		Client Info		**23 Oct 2023**	08 Sep 2022	04 Jul 2022
Machine Age	hrs	Client Info		**2196**	1318	1139
Oil Age	hrs	Client Info		**600**	600	600
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	0.7
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**11**	7	18
Chromium	ppm	ASTM D5185(m)	>20	**1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	<1	<1
Silver	ppm	ASTM D5185(m)	>3	**<1**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	**14**	10	14
Lead	ppm	ASTM D5185(m)	>40	**1**	4	22
Copper	ppm	ASTM D5185(m)	>330	**48**	139	▲ 647
Tin	ppm	ASTM D5185(m)	>15	**3**	2	4
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)	250	**2**	10	53
Barium	ppm	ASTM D5185(m)	10	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	100	**59**	47	8
Manganese	ppm	ASTM D5185(m)		**0**	<1	1
Magnesium	ppm	ASTM D5185(m)	450	**982**	875	669
Calcium	ppm	ASTM D5185(m)	3000	**1019**	1099	1480
Phosphorus	ppm	ASTM D5185(m)	1150	**996**	990	702
Zinc	ppm	ASTM D5185(m)	1350	**1187**	1072	801
Sulfur	ppm	ASTM D5185(m)	4250	**2448**	2481	2344
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**4**	3	4
Sodium	ppm	ASTM D5185(m)		**2**	2	3
Potassium	ppm	ASTM D5185(m)	>20	**23**	17	30

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**6.7**	5.6	9.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	**19.0**	17.4	21.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**14.7**	13.0	16.2

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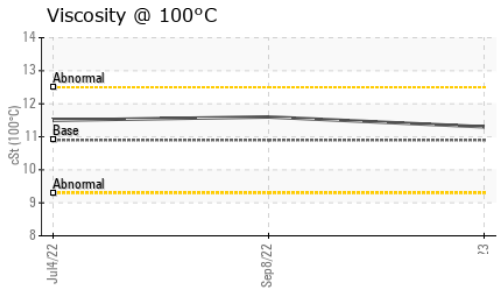
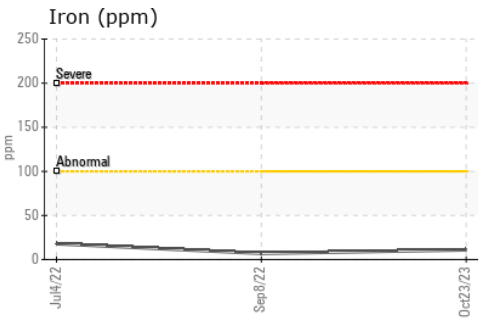
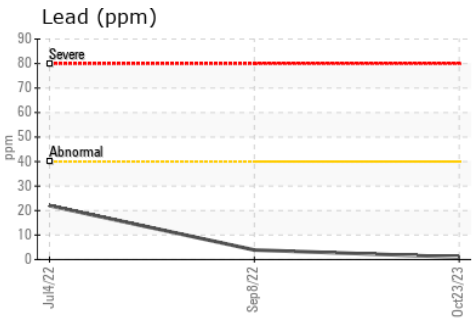


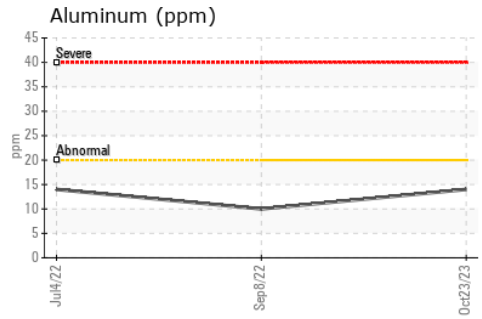
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

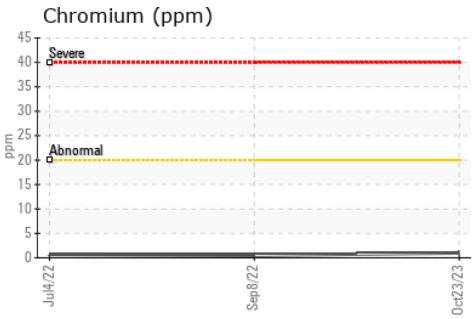
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	**11.3**	11.6	▲ 11.5

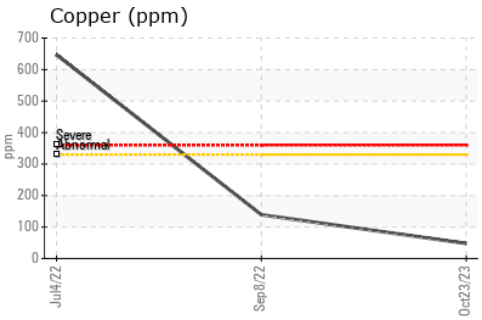
GRAPHS

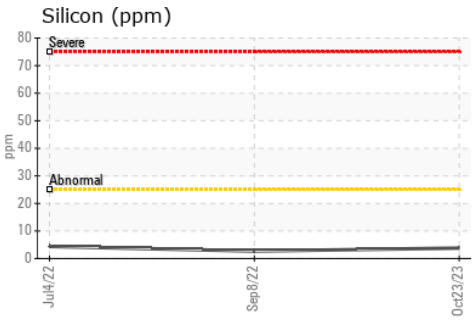


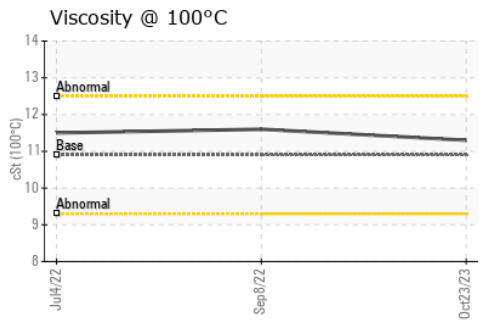


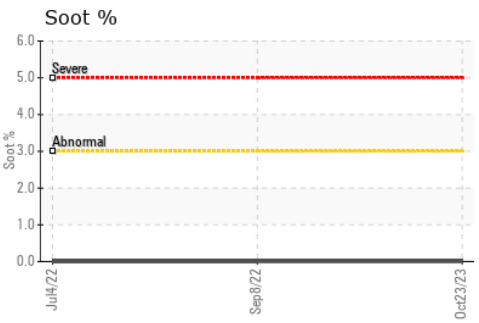












ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 504 - Edmonton**
Sample No. : GFL0090742 **Received** : 14 Nov 2023
Lab Number : 02596065 **Diagnosed** : 14 Nov 2023
Unique Number : 5681145 **Diagnostician** : Wes Davis
Test Package : MOB 1

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Contact: Jerrod Adair
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T:
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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.