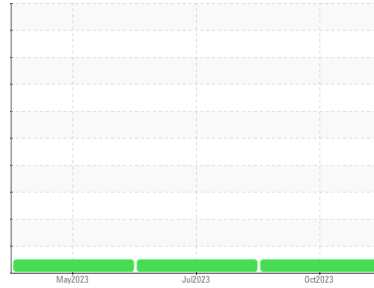




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
911050
 Component
Diesel Engine
 Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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		GFL0094191	GFL0086481	GFL0081966
Sample Date	Client Info		06 Oct 2023	12 Jul 2023	29 May 2023
Machine Age	hrs	Client Info	1184	1184	873
Oil Age	hrs	Client Info	1184	0	0
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	0.7
Glycol	WC Method		NEG	NEG	0.0

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	20	16	70
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	2
Nickel	ppm	ASTM D5185(m)	>5	<1	1	10
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	<1	2
Lead	ppm	ASTM D5185(m)	>40	1	<1	5
Copper	ppm	ASTM D5185(m)	>330	16	19	121
Tin	ppm	ASTM D5185(m)	>15	<1	1	5
Antimony	ppm	ASTM D5185(m)		0	0	<1
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)		5	5	3
Barium	ppm	ASTM D5185(m)		<1	0	<1
Molybdenum	ppm	ASTM D5185(m)		62	55	1
Manganese	ppm	ASTM D5185(m)		0	<1	5
Magnesium	ppm	ASTM D5185(m)		950	890	67
Calcium	ppm	ASTM D5185(m)		1075	1133	2023
Phosphorus	ppm	ASTM D5185(m)		927	1003	856
Zinc	ppm	ASTM D5185(m)		1170	1182	1039
Sulfur	ppm	ASTM D5185(m)		2173	2418	2384
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	5	7	55
Sodium	ppm	ASTM D5185(m)		5	4	8
Potassium	ppm	ASTM D5185(m)	>20	4	2	14

INFRA-RED

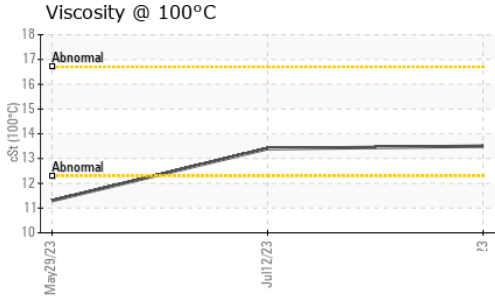
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0	0.4	0.8
Nitration	Abs/cm	ASTM D7624*	>20	8.7	7.0	7.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.2	20.1	23.7

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.8	14.5	15.2



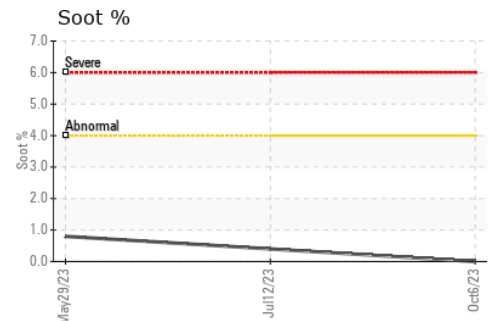
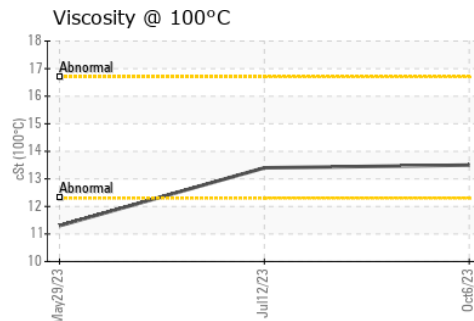
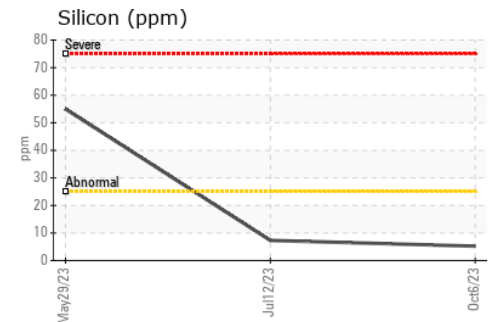
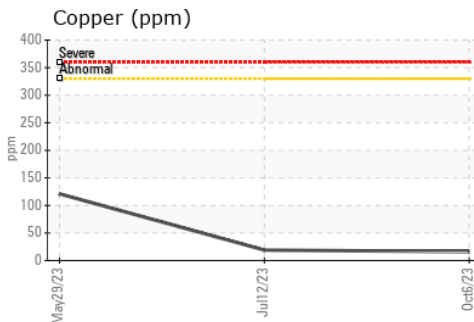
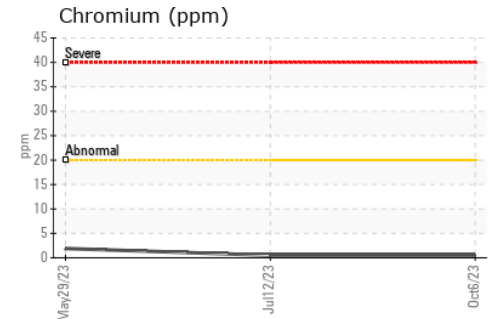
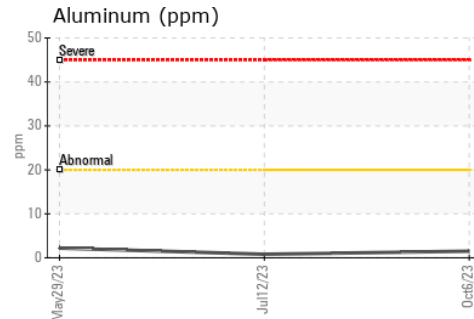
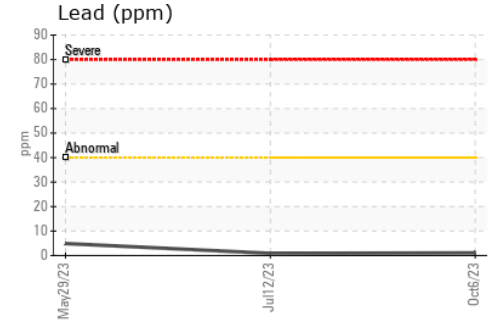
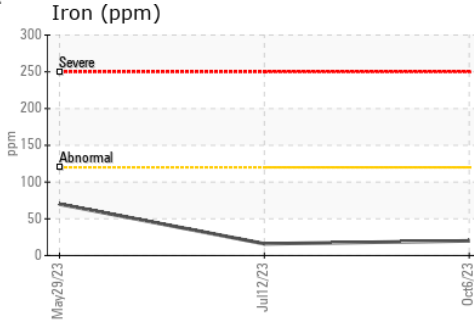
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	13.5	13.4	11.3

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0094191
Lab Number : **02588101**
Unique Number : 5657167
Test Package : MOB 1

GFL Environmental - 217 - Aurora
 14131 BAYVIEW AVE, AURORA YARD
 AURORA, ON
 CA L4G 0K6
 Contact: Mike Havens
 MHavens@gflenv.com
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 F: (905)713-2445

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.