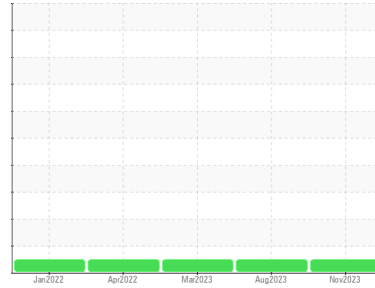




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
[1175794]
 Machine Id
810047

Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Recommendation

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

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			GFL0093946	GFL0062939	GFL0062909
Sample Date	Client Info			15 Nov 2023	21 Aug 2023	16 Mar 2023
Machine Age	hrs	Client Info		4804	4294	3373
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	27	23	30
Chromium	ppm	ASTM D5185(m)	>20	1	1	2
Nickel	ppm	ASTM D5185(m)	>4	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	5	6	3
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	2	2	3
Tin	ppm	ASTM D5185(m)	>15	0	<1	<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)	250	5	5	4
Barium	ppm	ASTM D5185(m)	10	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	100	60	59	60
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	955	959	951
Calcium	ppm	ASTM D5185(m)	3000	1094	1069	1105
Phosphorus	ppm	ASTM D5185(m)	1150	981	1040	1071
Zinc	ppm	ASTM D5185(m)	1350	1215	1188	1179
Sulfur	ppm	ASTM D5185(m)	4250	2453	2486	2453
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

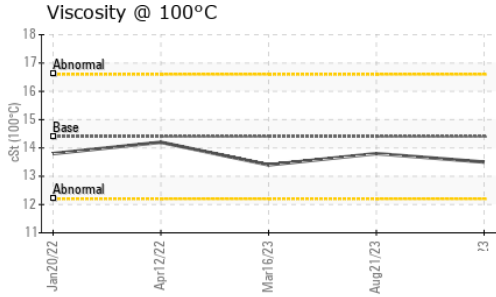
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	4	4	4
Sodium	ppm	ASTM D5185(m)	>216	8	7	7
Potassium	ppm	ASTM D5185(m)	>20	9	13	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.5	0.4	0.1
Nitration	Abs/cm	ASTM D7624*	>20	9.4	8.6	6.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.5	20.8	18.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.9	16.1	10.5



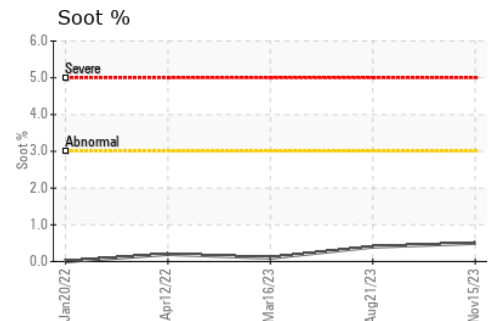
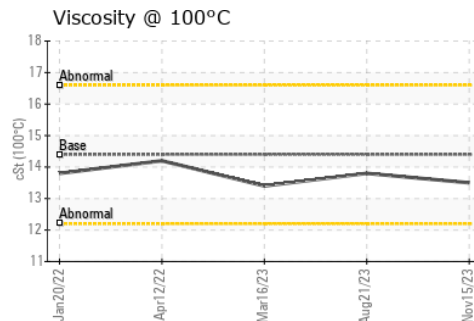
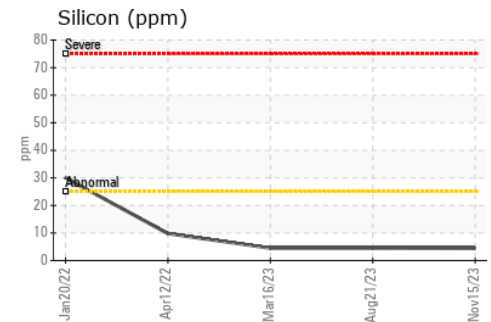
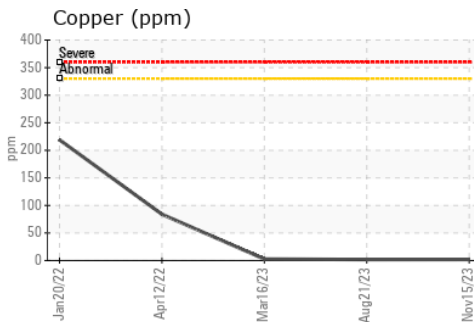
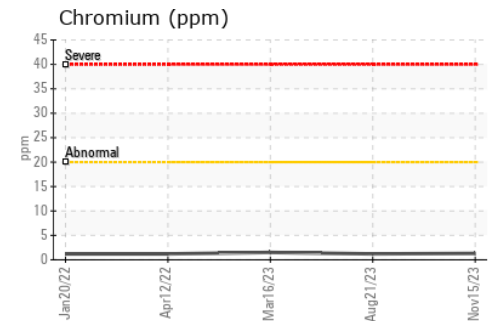
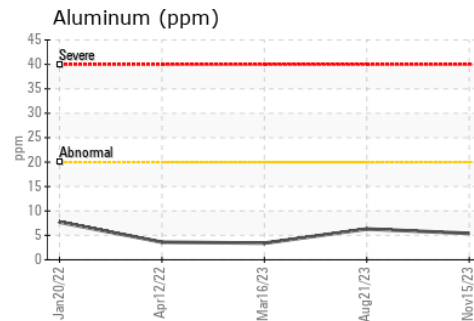
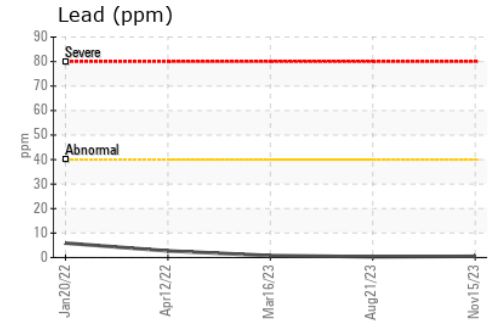
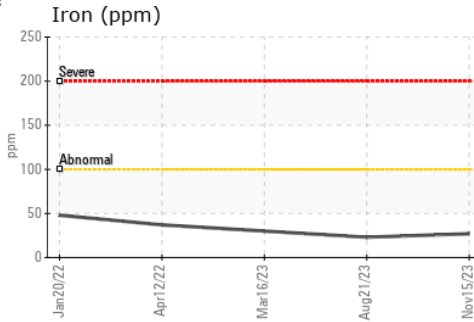
OIL ANALYSIS REPORT



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)	14.4	13.5	13.8	13.4

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 777 - Belleville-Municipal waste
Sample No. : GFL0093946 **Received** : 16 Nov 2023 197 Putman Industrial Road
Lab Number : 02596770 **Diagnosed** : 16 Nov 2023 Belleville, ON
Unique Number : 5681850 **Diagnostician** : Wes Davis CA K8N 4Z6
Test Package : MOB 1

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.

Contact: Andrea Michael
 amichael@gflenv.com
 T: (613)962-7144
 F: (613)962-1994