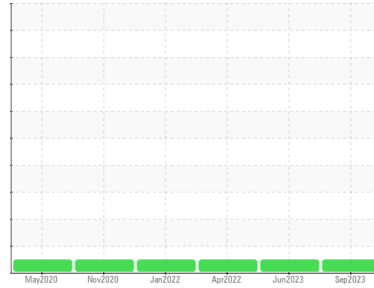




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
[1146104]
 Machine Id
828013

Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 40 (--- 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	GFL0093933	GFL0062930	GFL0041332
Sample Date	Client Info	14 Sep 2023	21 Jun 2023	12 Apr 2022
Machine Age	hrs	11816	11287	8837
Oil Age	hrs	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) >80	18	11	22
Chromium	ppm ASTM D5185(m) >5	<1	<1	<1
Nickel	ppm ASTM D5185(m) >2	0	<1	<1
Titanium	ppm ASTM D5185(m)	0	0	<1
Silver	ppm ASTM D5185(m) >3	0	0	0
Aluminum	ppm ASTM D5185(m) >30	2	1	3
Lead	ppm ASTM D5185(m) >30	<1	0	<1
Copper	ppm ASTM D5185(m) >150	2	1	2
Tin	ppm ASTM D5185(m) >5	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) 250	6	14	10
Barium	ppm ASTM D5185(m) 10	0	0	0
Molybdenum	ppm ASTM D5185(m) 100	57	60	60
Manganese	ppm ASTM D5185(m)	<1	<1	<1
Magnesium	ppm ASTM D5185(m) 450	922	920	1026
Calcium	ppm ASTM D5185(m) 3000	1037	1074	1055
Phosphorus	ppm ASTM D5185(m) 1150	999	1015	1064
Zinc	ppm ASTM D5185(m) 1350	1144	1150	1252
Sulfur	ppm ASTM D5185(m) 4250	2363	2516	2531
Lithium	ppm ASTM D5185(m)	<1	<1	0

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >20	6	7	3
Sodium	ppm ASTM D5185(m) >216	7	6	7
Potassium	ppm ASTM D5185(m) >20	4	<1	2

INFRA-RED

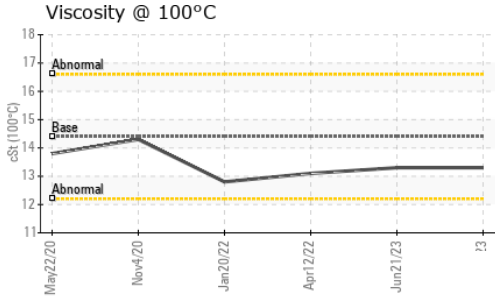
method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.4	0.2	0.2
Nitration	Abs/cm ASTM D7624* >20	10.2	8.7	10.4
Sulfation	Abs/.1mm ASTM D7415* >30	21.1	19.5	22.5

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414* >25	17.8	16.0	18.1



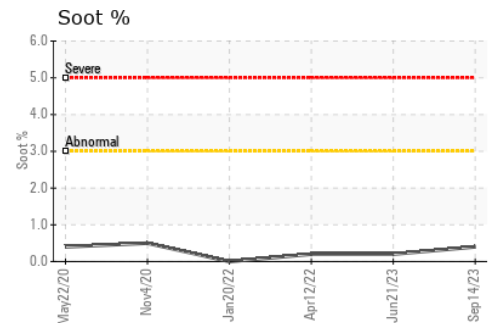
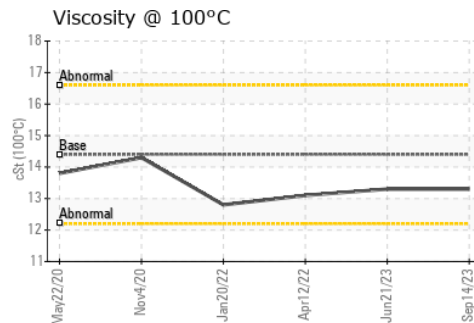
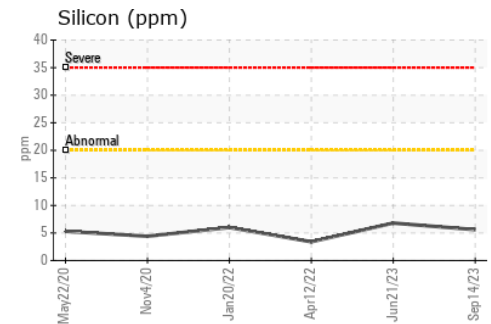
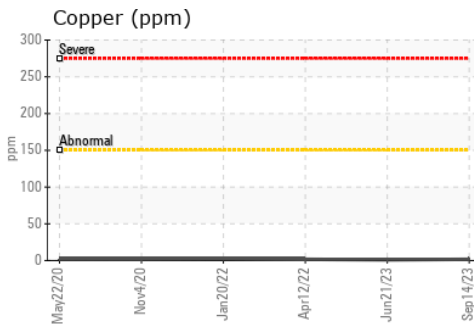
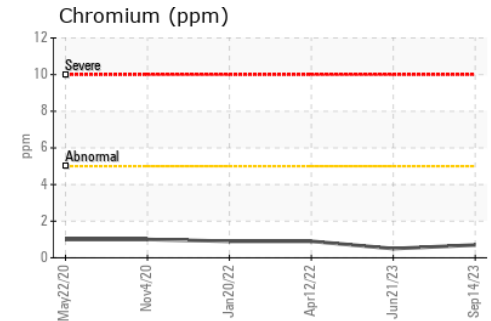
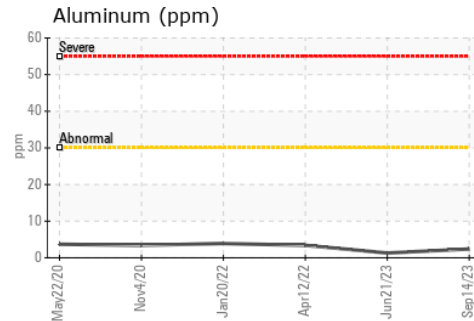
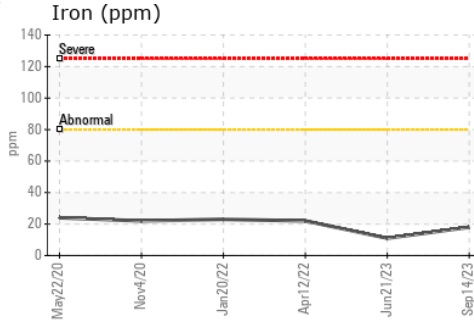
OIL ANALYSIS REPORT



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)	14.4	13.3	13.1

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 777 - Belleville-Municipal waste
Sample No. : GFL0093933 **Received** : 20 Sep 2023 197 Putman Industrial Road
Lab Number : 02583835 **Diagnosed** : 20 Sep 2023 Belleville, ON
Unique Number : 5644900 **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.

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