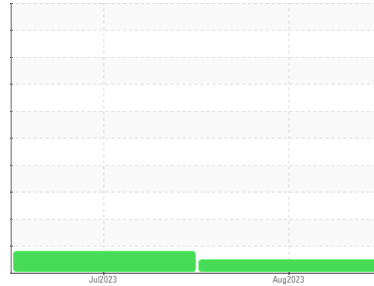




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
413135
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- 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		GFL0091069	GFL0086483	---
Sample Date	Client Info		23 Aug 2023	17 Jul 2023	---
Machine Age	hrs	Client Info	21854	564	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		Not Changed	Changed	---
Sample Status			NORMAL	ABNORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	0.6	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >120	3	32	---
Chromium	ppm	ASTM D5185(m) >20	0	<1	---
Nickel	ppm	ASTM D5185(m) >5	0	3	---
Titanium	ppm	ASTM D5185(m) >2	0	0	---
Silver	ppm	ASTM D5185(m) >2	<1	1	---
Aluminum	ppm	ASTM D5185(m) >20	<1	6	---
Lead	ppm	ASTM D5185(m) >40	<1	8	---
Copper	ppm	ASTM D5185(m) >330	10	297	---
Tin	ppm	ASTM D5185(m) >15	0	3	---
Antimony	ppm	ASTM D5185(m)	<1	0	---
Vanadium	ppm	ASTM D5185(m)	0	0	---
Beryllium	ppm	ASTM D5185(m)	0	0	---
Cadmium	ppm	ASTM D5185(m)	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 250	7	209	---
Barium	ppm	ASTM D5185(m) 10	0	<1	---
Molybdenum	ppm	ASTM D5185(m) 100	58	119	---
Manganese	ppm	ASTM D5185(m)	<1	4	---
Magnesium	ppm	ASTM D5185(m) 450	956	698	---
Calcium	ppm	ASTM D5185(m) 3000	1052	1442	---
Phosphorus	ppm	ASTM D5185(m) 1150	1063	720	---
Zinc	ppm	ASTM D5185(m) 1350	1168	810	---
Sulfur	ppm	ASTM D5185(m) 4250	2657	1969	---
Lithium	ppm	ASTM D5185(m)	<1	<1	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	4	66	---
Sodium	ppm	ASTM D5185(m) >158	1	3	---
Potassium	ppm	ASTM D5185(m) >20	<1	11	---

INFRA-RED

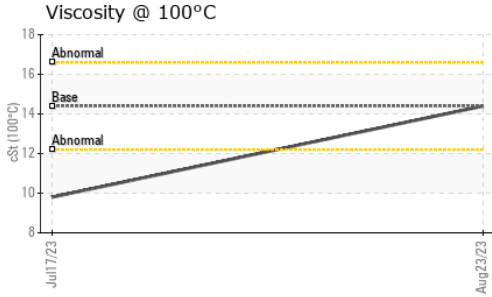
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >4	0	0.1	---
Nitration	Abs/cm	ASTM D7624* >20	4.6	10.0	---
Sulfation	Abs/.1mm	ASTM D7415* >30	18.8	25.1	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	12.8	22.9	---



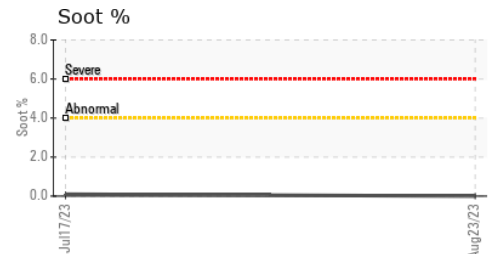
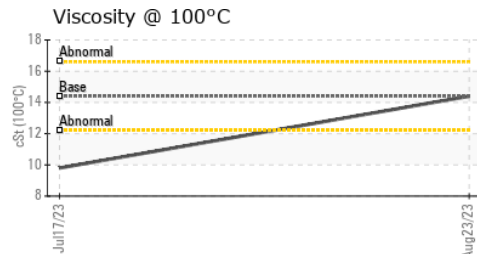
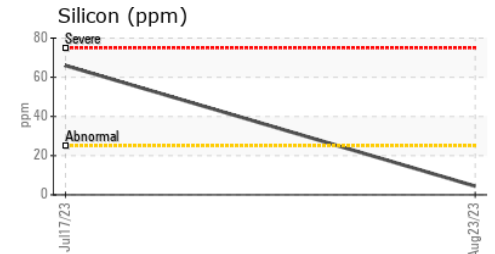
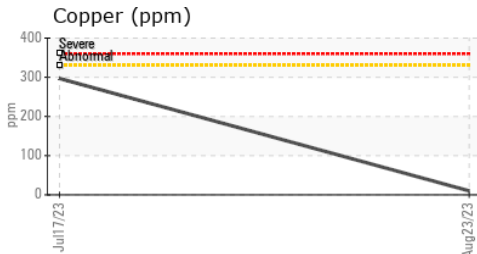
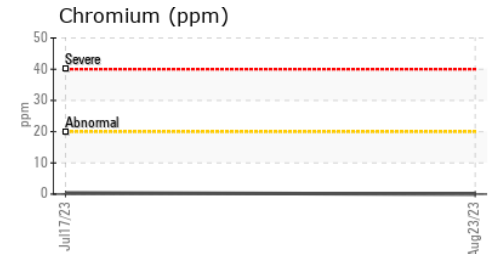
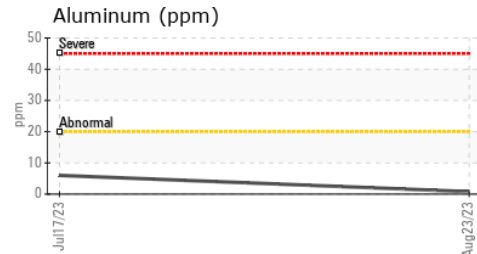
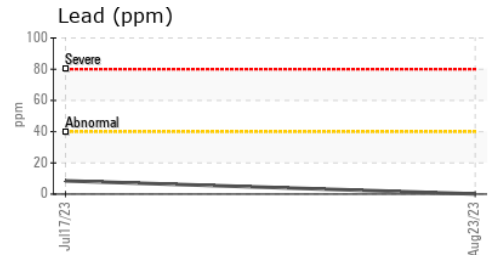
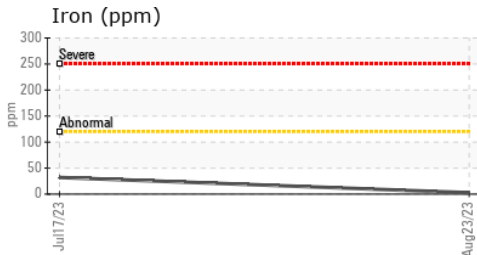
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ 9.8	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0091069 **Received** : 24 Aug 2023
Lab Number : 02577955 **Diagnosed** : 24 Aug 2023
Unique Number : 5631015 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: Visual)

GFL Environmental - 217 - Aurora
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 AURORA, ON
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 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.