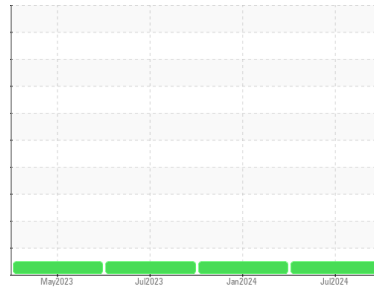




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
931013
 Component
Natural Gas 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			GFL0112706	GFL0102922	GFL0087015
Sample Date	Client Info			16 Jul 2024	25 Jan 2024	31 Jul 2023
Machine Age	hrs	Client Info		4628	3495	27621
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.1	NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	19	16	26
Chromium	ppm	ASTM D5185(m)	>5	1	<1	1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>5	<1	0	2
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	4	3	4
Lead	ppm	ASTM D5185(m)	>40	9	2	2
Copper	ppm	ASTM D5185(m)	>150	2	2	4
Tin	ppm	ASTM D5185(m)	>4	<1	<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	6	13	5
Barium	ppm	ASTM D5185(m)	10	<1	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	57	53	55
Manganese	ppm	ASTM D5185(m)		<1	<1	2
Magnesium	ppm	ASTM D5185(m)	450	581	569	616
Calcium	ppm	ASTM D5185(m)	3000	1740	1686	1570
Phosphorus	ppm	ASTM D5185(m)	1150	713	746	790
Zinc	ppm	ASTM D5185(m)	1350	960	931	948
Sulfur	ppm	ASTM D5185(m)	4250	2003	2124	1978
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	8	6	6
Sodium	ppm	ASTM D5185(m)	>158	14	9	10
Potassium	ppm	ASTM D5185(m)	>20	7	4	10

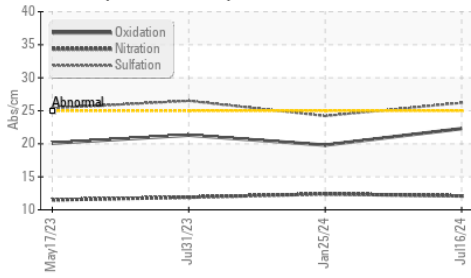
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	12.1	12.4	11.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	26.2	24.2	26.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	22.3	19.8	21.3

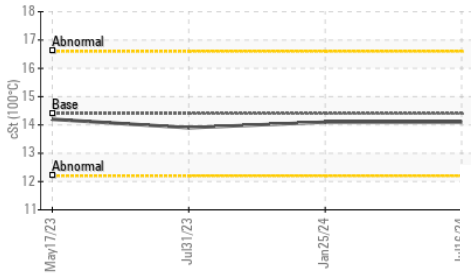


OIL ANALYSIS REPORT

FT-IR (Direct Trend)



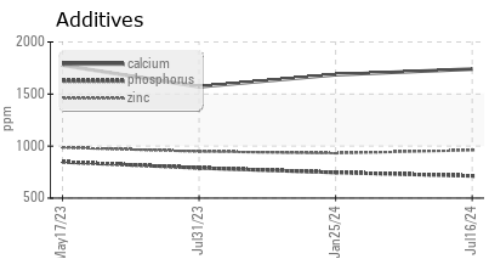
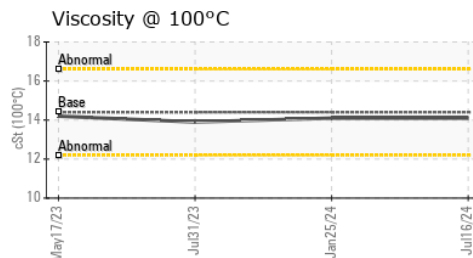
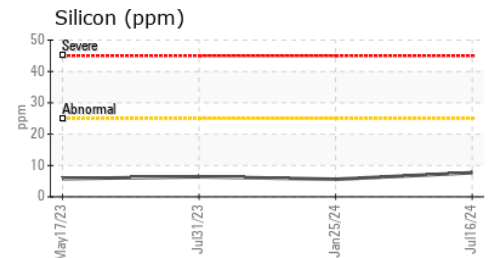
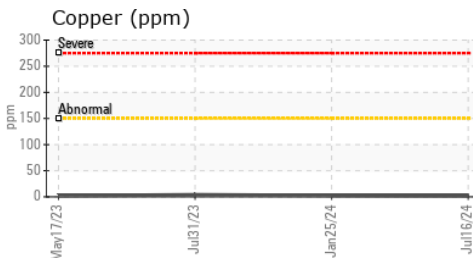
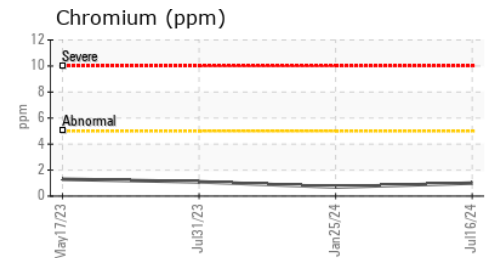
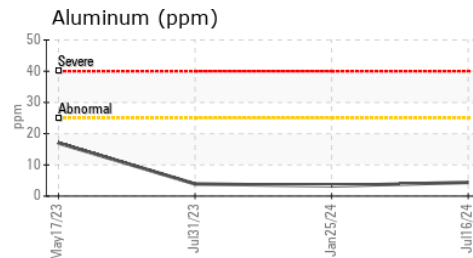
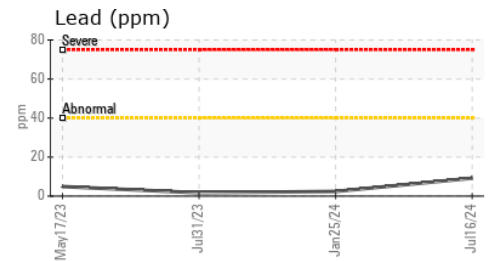
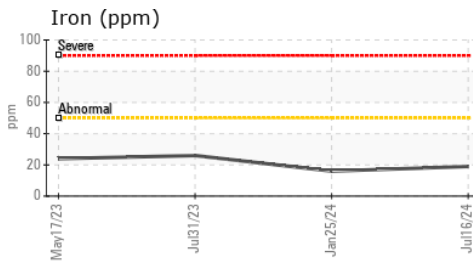
Viscosity @ 100°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	---
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	NORML
Emulsified Water	scalar	Visual*	>0.1	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	14.1	13.9

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0112706
Lab Number : 02648866
Unique Number : 5814418
Test Package : MOB 1 (Additional Tests: Visual)

GFL Environmental - 253 - TOR APT
 15 Bermondsey Road - Building B
 Toronto, ON
 CA M4B 1Y9
 Contact: Natalia Stalynska
 nstalynska@gflenv.com

Received : 19 Jul 2024
 Tested : 19 Jul 2024
 Diagnosed : 19 Jul 2024 - Wes Davis

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.