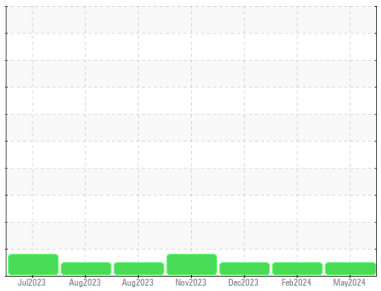
OIL ANALYSIS REPORT

Machine Id
413135
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (25 LTR)

Sample Rating Trend



NORMAL

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		**GFL0122310**	GFL0111757	WC0875110
Sample Date		Client Info		**21 May 2024**	06 Feb 2024	13 Dec 2023
Machine Age	hrs	Client Info		**21854**	1592	21854
Oil Age	hrs	Client Info		**600**	0	20611
Oil Changed		Client Info		**Changed**	Changed	N/A
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	**13**	12	5
Chromium	ppm	ASTM D5185(m)	>20	**0**	<1	0
Nickel	ppm	ASTM D5185(m)	>5	**2**	3	2
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	0
Silver	ppm	ASTM D5185(m)	>2	**0**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	**2**	3	1
Lead	ppm	ASTM D5185(m)	>40	**4**	2	1
Copper	ppm	ASTM D5185(m)	>330	**189**	72	62
Tin	ppm	ASTM D5185(m)	>15	**0**	<1	0
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	**7**	13	21
Barium	ppm	ASTM D5185(m)	10	**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	**60**	60	60
Manganese	ppm	ASTM D5185(m)		**<1**	0	0
Magnesium	ppm	ASTM D5185(m)	450	**965**	940	940
Calcium	ppm	ASTM D5185(m)	3000	**1060**	1085	1018
Phosphorus	ppm	ASTM D5185(m)	1150	**1003**	1038	997
Zinc	ppm	ASTM D5185(m)	1350	**1198**	1203	1179
Sulfur	ppm	ASTM D5185(m)	4250	**2496**	2717	2635
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**2**	3	3
Sodium	ppm	ASTM D5185(m)	>158	**1**	<1	1
Potassium	ppm	ASTM D5185(m)	>20	**6**	6	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.2**	0.2	0
Nitration	Abs/cm	ASTM D7624*	>20	**8.6**	7.9	5.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	**20.0**	20.5	18.3

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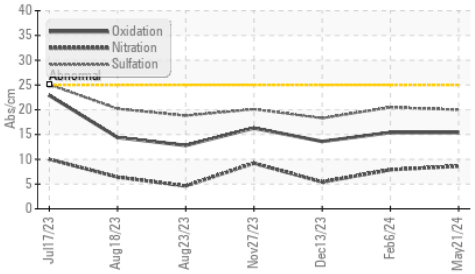
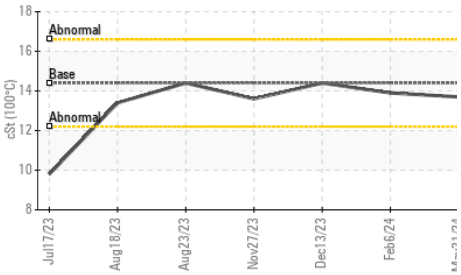
FT-IR (Direct Trend)



Viscosity @ 100°C



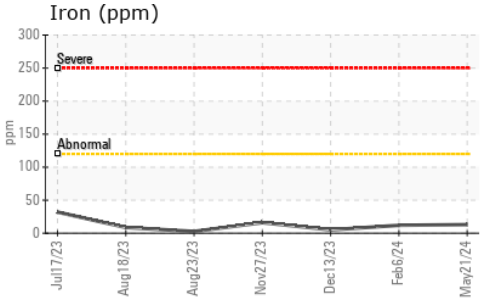
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**15.4**	15.4	13.6

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

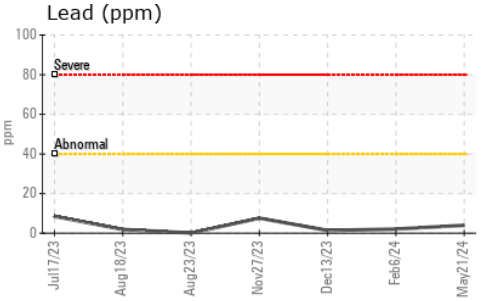
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	**13.7**	13.9	14.4

GRAPHS

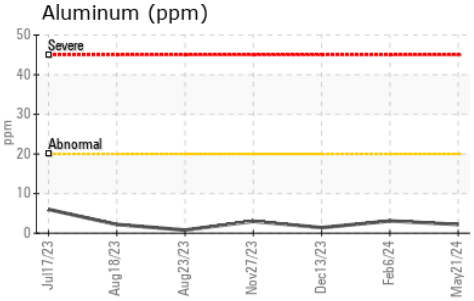
Iron (ppm)



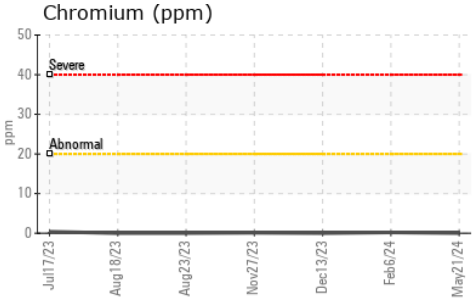
Lead (ppm)



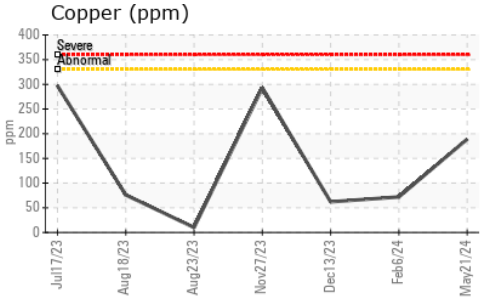
Aluminum (ppm)



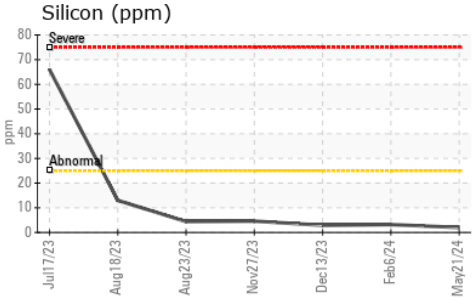
Chromium (ppm)



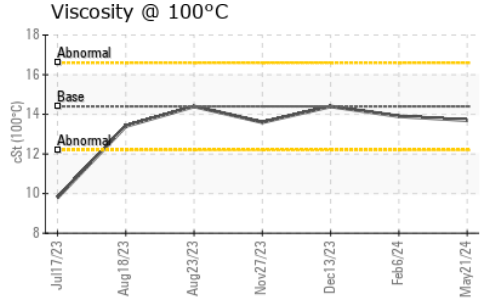
Copper (ppm)



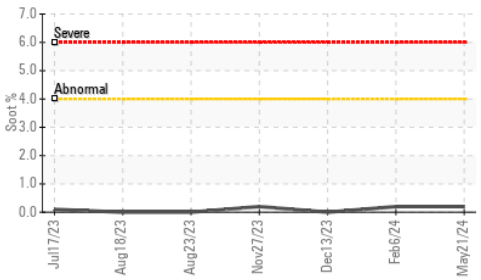
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0122310
Lab Number : 02637887
Unique Number : 5787049
Test Package : MOB 1

Received : 28 May 2024
Tested : 28 May 2024
Diagnosed : 28 May 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.

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