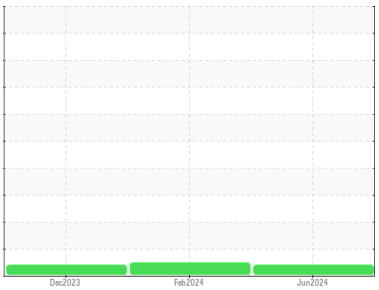
OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
414022
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (36 LTR)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0118954**	GFL0086779	GFL0086778
Sample Date		Client Info		**05 Jun 2024**	21 Feb 2024	22 Dec 2023
Machine Age	hrs	Client Info		**1592**	792	622
Oil Age	hrs	Client Info		**1592**	792	600
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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**	10	29
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	<1
Nickel	ppm	ASTM D5185(m)	>5	**<1**	1	2
Titanium	ppm	ASTM D5185(m)	>2	**<1**	<1	0
Silver	ppm	ASTM D5185(m)	>2	**<1**	1	<1
Aluminum	ppm	ASTM D5185(m)	>20	**3**	4	6
Lead	ppm	ASTM D5185(m)	>40	**7**	11	13
Copper	ppm	ASTM D5185(m)	>330	**273**	455	415
Tin	ppm	ASTM D5185(m)	>15	**<1**	<1	3
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	**34**	84	258
Barium	ppm	ASTM D5185(m)	10	**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	**92**	90	117
Manganese	ppm	ASTM D5185(m)		**<1**	<1	4
Magnesium	ppm	ASTM D5185(m)	450	**41**	153	687
Calcium	ppm	ASTM D5185(m)	3000	**2208**	2039	1421
Phosphorus	ppm	ASTM D5185(m)	1150	**999**	974	661
Zinc	ppm	ASTM D5185(m)	1350	**1167**	1081	767
Sulfur	ppm	ASTM D5185(m)	4250	**2967**	3129	2014
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**6**	16	55
Sodium	ppm	ASTM D5185(m)	>158	**2**	2	3
Potassium	ppm	ASTM D5185(m)	>20	**4**	7	10
Fuel	%	ASTM D7593*	>3.0	**0.1**	<1.0	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.1**	0	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**10.4**	9.9	10.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	**20.8**	18.9	24.3

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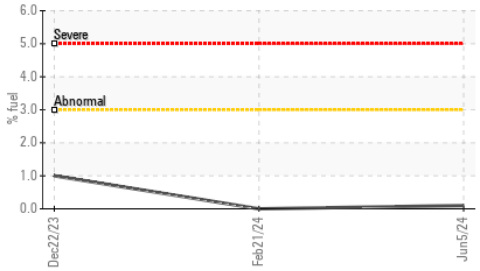
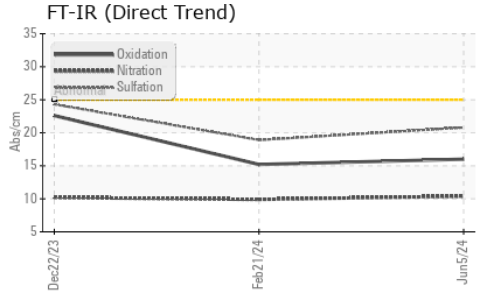
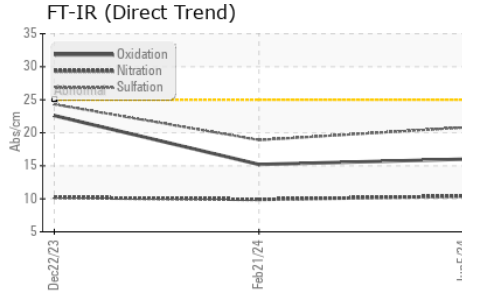
Fuel Dilution



FT-IR (Direct Trend)



FT-IR (Direct Trend)



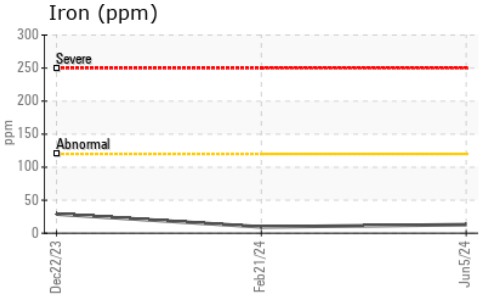
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**16.0**	15.2	22.6

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

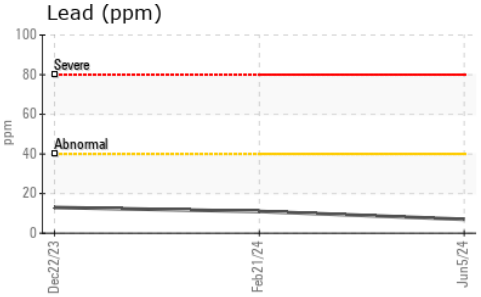
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ **11.0**	12.4	▲ 9.6

GRAPHS

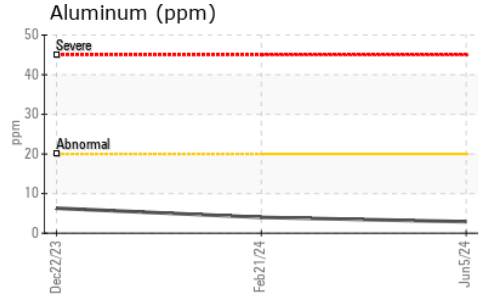
Iron (ppm)



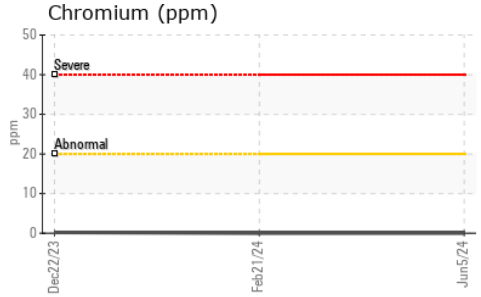
Lead (ppm)



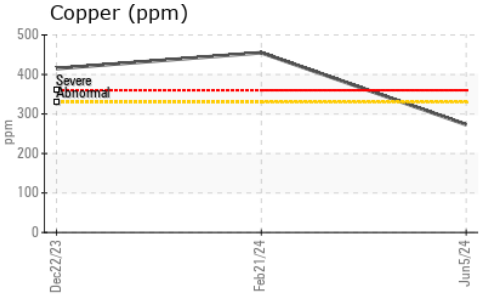
Aluminum (ppm)



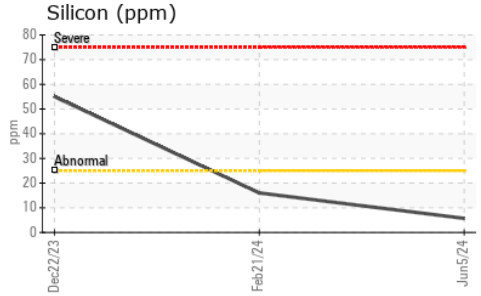
Chromium (ppm)



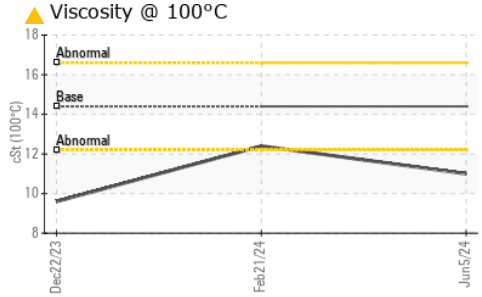
Copper (ppm)



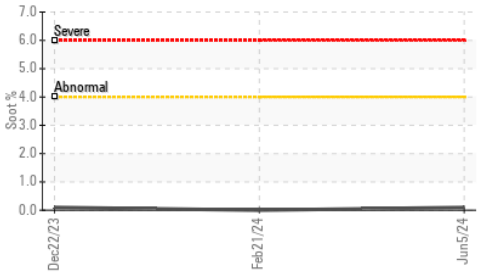
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0118954
Lab Number : 02640080
Unique Number : 5789242
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

Received : 06 Jun 2024
Tested : 07 Jun 2024
Diagnosed : 07 Jun 2024 - Kevin Marson

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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