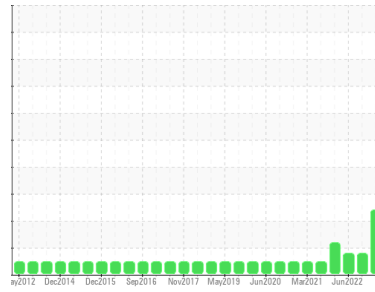




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area
GFL216
 Machine Id
5547
 Component
Diesel Engine
 Fluid

CASTROL TECTION EXTRA SAE 15W-40 (40 LTR)

DIAGNOSIS

▲ Recommendation

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

▲ Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0121949	GFL0061859	GFL0049961
Sample Date	Client Info	28 Apr 2024	02 Dec 2022	10 Jun 2022
Machine Age	kms	727642	693537	20912
Oil Age	kms	0	0	451
Oil Changed	Client Info	Changed	N/A	Changed
Sample Status		SEVERE	MARGINAL	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	40	9	15
Chromium	ppm	ASTM D5185(m) >20	<1	0	<1
Nickel	ppm	ASTM D5185(m) >5	1	<1	<1
Titanium	ppm	ASTM D5185(m) >2	0	0	0
Silver	ppm	ASTM D5185(m) >2	0	0	0
Aluminum	ppm	ASTM D5185(m) >20	7	3	3
Lead	ppm	ASTM D5185(m) >40	10	<1	<1
Copper	ppm	ASTM D5185(m) >330	2	<1	2
Tin	ppm	ASTM D5185(m) >15	<1	<1	<1
Antimony	ppm	ASTM D5185(m)	0	<1	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) 30	49	4	4
Barium	ppm	ASTM D5185(m)	0	0	0
Molybdenum	ppm	ASTM D5185(m)	97	57	57
Manganese	ppm	ASTM D5185(m)	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 110	683	930	969
Calcium	ppm	ASTM D5185(m) 2740	1286	1069	1016
Phosphorus	ppm	ASTM D5185(m) 1240	659	1044	1049
Zinc	ppm	ASTM D5185(m) 1350	781	1152	1174
Sulfur	ppm	ASTM D5185(m) 3520	1942	2587	2555
Lithium	ppm	ASTM D5185(m)	<1	<1	0

CONTAMINANTS

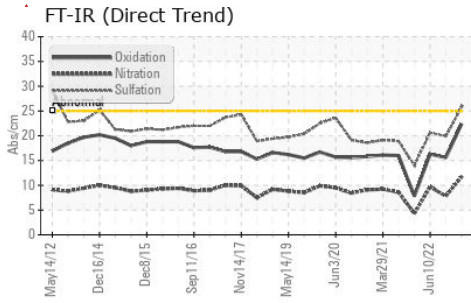
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >25	6	3	3
Sodium	ppm	ASTM D5185(m)	8	4	2
Potassium	ppm	ASTM D5185(m) >20	1	<1	1
Fuel	%	ASTM D7593* >3.0	▲ 6.3	▲ 3.2	▲ 3.3

INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >4	0.6	0	0
Nitration	Abs/cm	ASTM D7624* >20	11.7	7.8	9.7
Sulfation	Abs/.1mm	ASTM D7415* >30	25.8	19.9	20.6



OIL ANALYSIS REPORT

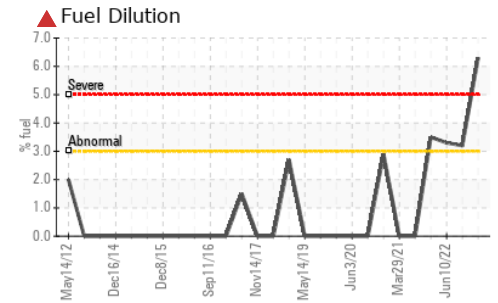
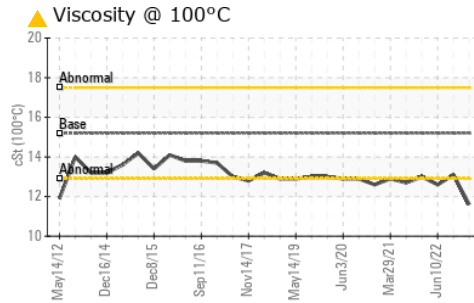
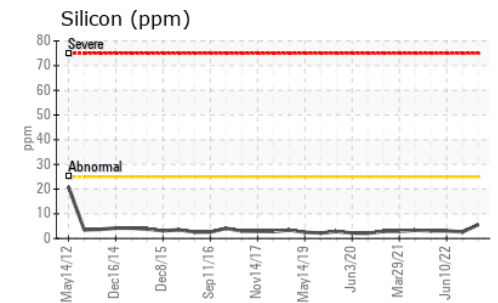
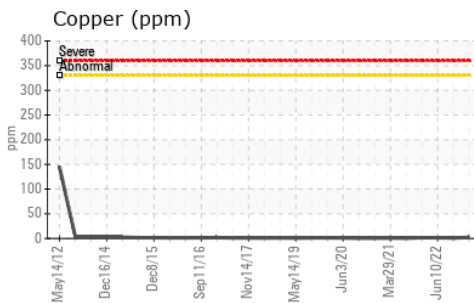
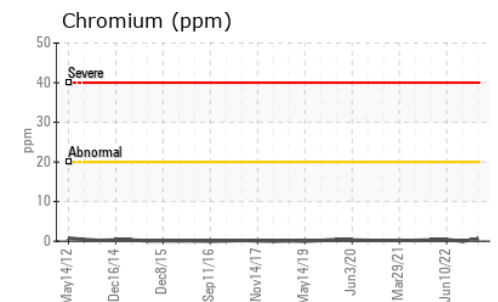
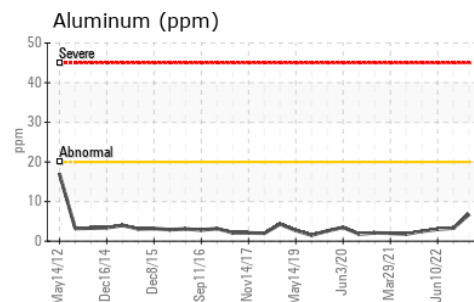
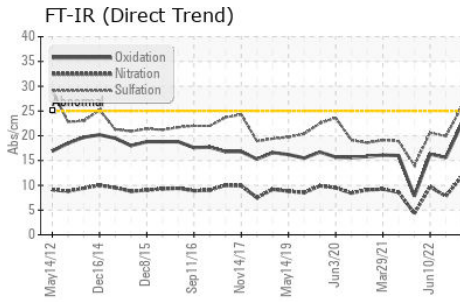
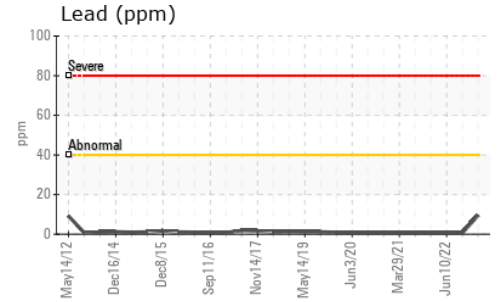
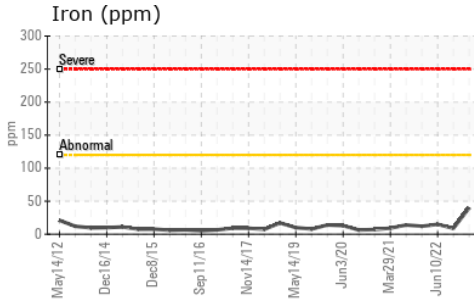
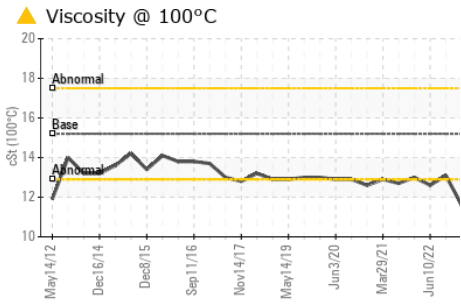


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	22.4	15.6	16.3

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)	15.2	▲ 11.6	13.1	12.6

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0121949
Lab Number : 02635537
Unique Number : 5776690
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 252 - GTA Hauling
 3668 Weston Road
 North York, ON
 CA M9L 1W2
 Contact: Amanda Cipollone
 acipollone@gflenv.com

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.