



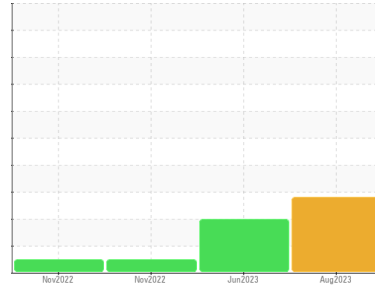
OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



Machine Id
911046
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. 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	GFL0064881	GFL0064857	GFL0064842
Sample Date	Client Info	30 Aug 2023	01 Jun 2023	30 Nov 2022
Machine Age	hrs	0	0	698
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	Changed	Changed
Sample Status		SEVERE	ABNORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >120	14	24	5
Chromium	ppm	ASTM D5185(m) >20	<1	1	0
Nickel	ppm	ASTM D5185(m) >5	<1	1	<1
Titanium	ppm	ASTM D5185(m) >2	0	<1	0
Silver	ppm	ASTM D5185(m) >2	<1	<1	0
Aluminum	ppm	ASTM D5185(m) >20	1	2	1
Lead	ppm	ASTM D5185(m) >40	<1	<1	<1
Copper	ppm	ASTM D5185(m) >330	1	4	<1
Tin	ppm	ASTM D5185(m) >15	<1	3	<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	4	37	6
Barium	ppm	ASTM D5185(m) 10	0	<1	0
Molybdenum	ppm	ASTM D5185(m) 100	39	42	55
Manganese	ppm	ASTM D5185(m)	<1	4	<1
Magnesium	ppm	ASTM D5185(m) 450	625	507	897
Calcium	ppm	ASTM D5185(m) 3000	721	1611	1115
Phosphorus	ppm	ASTM D5185(m) 1150	686	767	1039
Zinc	ppm	ASTM D5185(m) 1350	770	844	1114
Sulfur	ppm	ASTM D5185(m) 4250	1676	1959	2621
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >25	7	▲ 44	6
Sodium	ppm	ASTM D5185(m) >158	4	9	2
Potassium	ppm	ASTM D5185(m) >20	3	10	0
Fuel	%	ASTM D7593* >3.0	21.1	2.8	<1.0

INFRA-RED

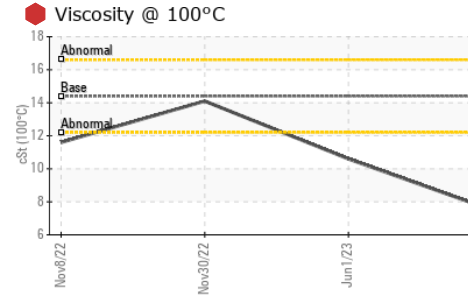
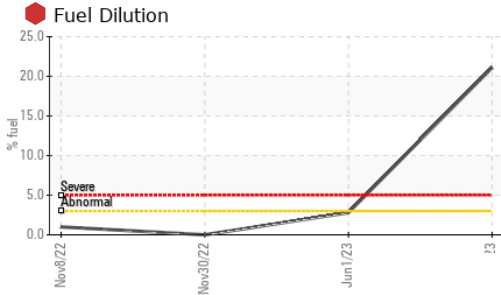
method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >4	0.4	0.5	0
Nitration	Abs/cm	ASTM D7624* >20	9.0	8.2	5.2
Sulfation	Abs/.1mm	ASTM D7415* >30	26.4	23.9	19.7

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414* >25	28.1	22.0	14.9



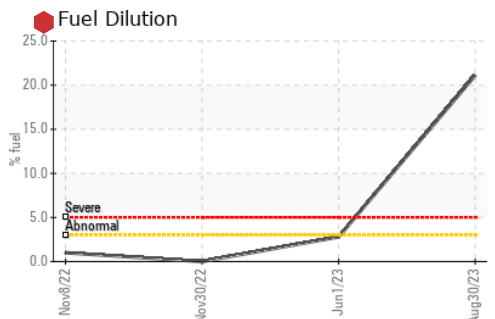
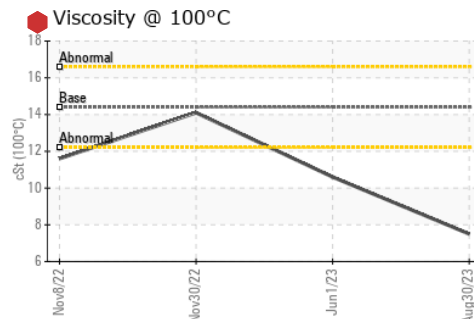
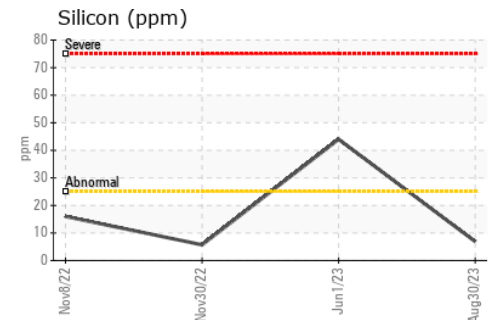
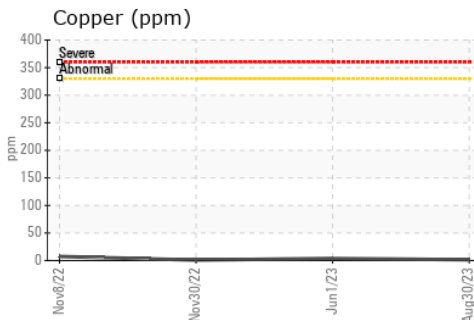
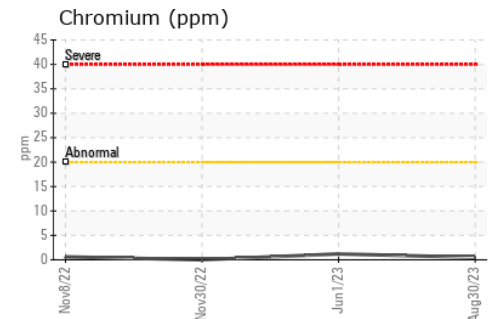
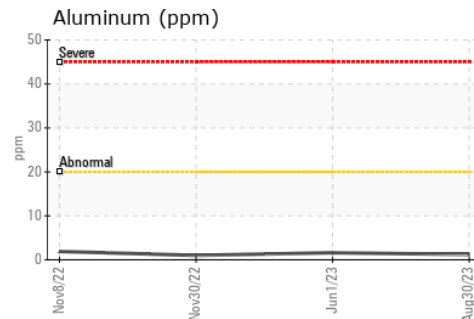
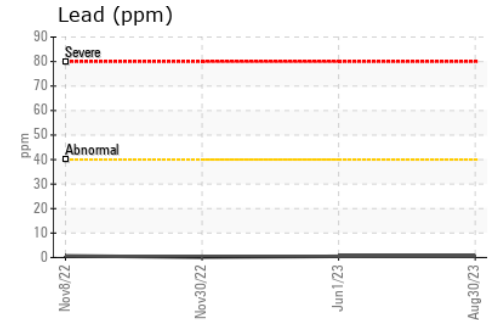
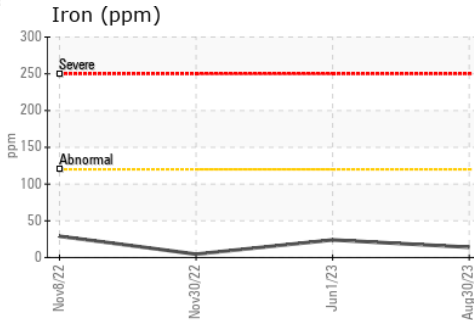
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	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	7.5	10.6

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 558 - Grand Prairie
Sample No. : GFL0064881 **Received** : 05 Sep 2023
Lab Number : 02580304 **Diagnosed** : 06 Sep 2023
Unique Number : 5633364 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

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.

558 - Grand Prairie
 8003 - 110 Street,
 Grande Prairie, AB
 CA T8W 6T2
 Contact: Tristen Ebach
 tebach@gflenv.com
 T: (780)532-3086
 F: (780)513-5217