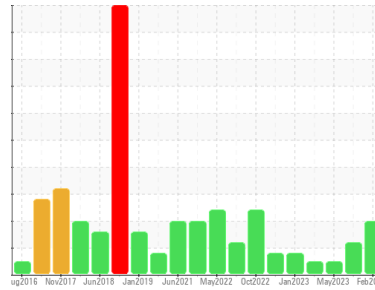




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
8269

Component
Front Diesel Engine

Fluid
PETRO CANADA DURON XL SYN BLEND 15W40 (22 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

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0112421	GFL0091568	GFL0077627
Sample Date	Client Info	27 Feb 2024	12 Oct 2023	18 May 2023
Machine Age	hrs	15600	15960	304790
Oil Age	hrs	0	0	304790
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		SEVERE	ABNORMAL	NORMAL

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) >75	37	37	18
Chromium	ppm ASTM D5185(m) >5	2	2	<1
Nickel	ppm ASTM D5185(m) >4	<1	<1	<1
Titanium	ppm ASTM D5185(m) >2	0	0	<1
Silver	ppm ASTM D5185(m) >2	<1	<1	0
Aluminum	ppm ASTM D5185(m) >15	5	5	3
Lead	ppm ASTM D5185(m) >25	<1	<1	<1
Copper	ppm ASTM D5185(m) >100	1	1	<1
Tin	ppm ASTM D5185(m) >4	0	0	0
Antimony	ppm ASTM D5185(m)	0	0	<1
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) 1	2	2	2
Barium	ppm ASTM D5185(m) 1	0	<1	0
Molybdenum	ppm ASTM D5185(m) 60	51	52	56
Manganese	ppm ASTM D5185(m) 1	0	0	<1
Magnesium	ppm ASTM D5185(m) 1010	818	825	905
Calcium	ppm ASTM D5185(m) 1070	971	916	1042
Phosphorus	ppm ASTM D5185(m) 1150	866	844	998
Zinc	ppm ASTM D5185(m) 1270	1044	1042	1102
Sulfur	ppm ASTM D5185(m) 2060	2189	2074	2368
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

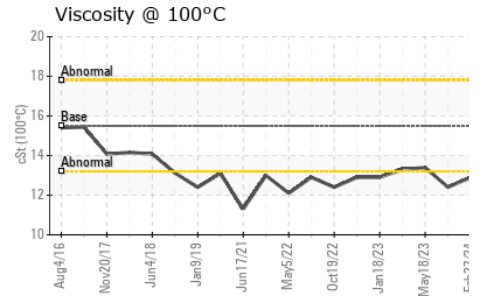
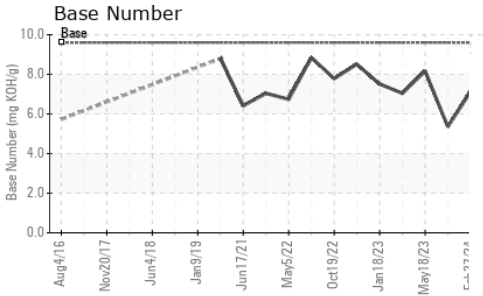
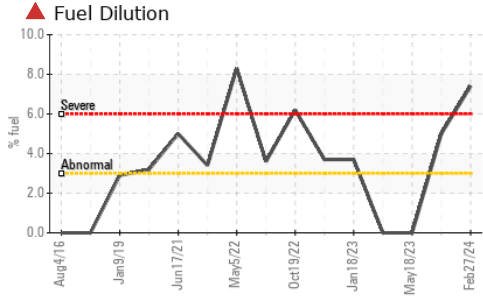
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	7	17	6
Sodium	ppm ASTM D5185(m)	8	8	6
Potassium	ppm ASTM D5185(m) >20	2	<1	0
Fuel	% ASTM D7593* >3.0	▲ 7.4	▲ 5	<1.0

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >6	1.8	1.6	0.7
Nitration	Abs/cm ASTM D7624* >20	12.9	12.8	8.7
Sulfation	Abs/.1mm ASTM D7415* >30	26.5	28.8	21.1



OIL ANALYSIS REPORT

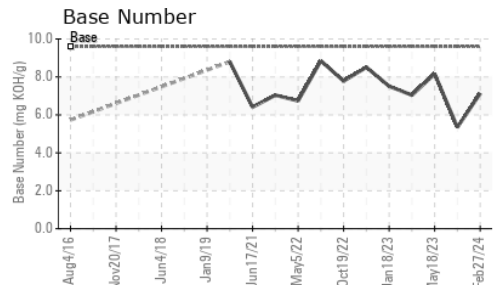
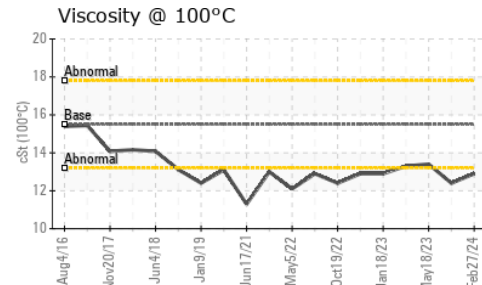
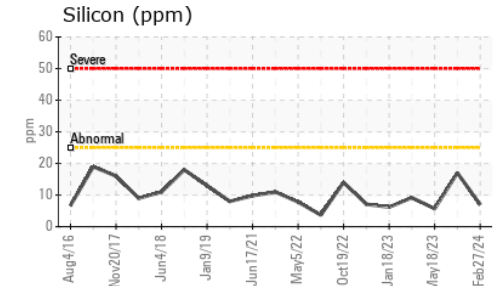
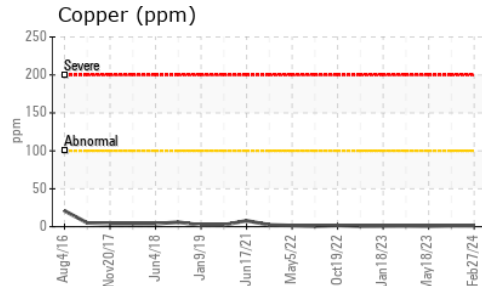
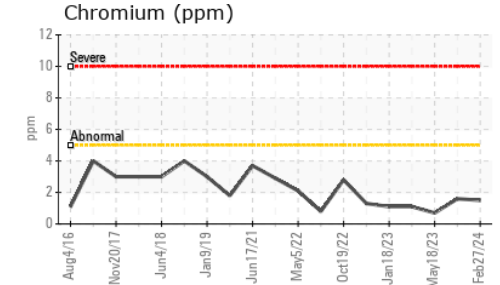
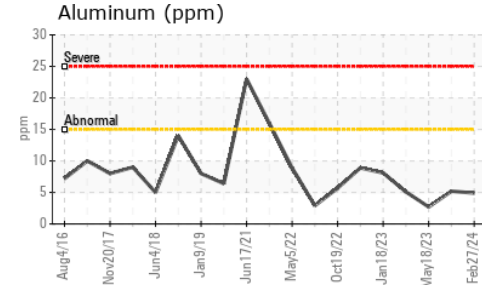
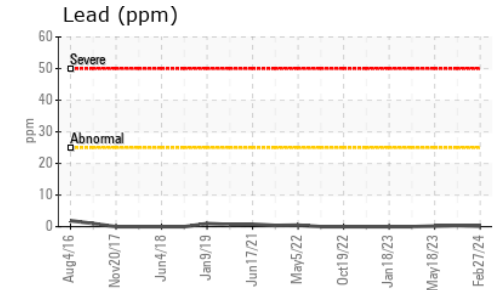
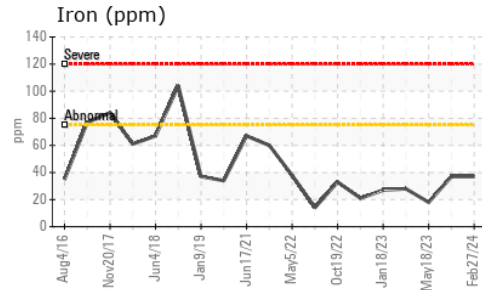


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	25.1	30.3	18.0
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	7.13	5.35	8.16

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)	15.5	12.9	▲ 12.4	13.4

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0112421
Lab Number : **02618614**
Unique Number : 5735724
Test Package : MOB 2 (Additional Tests: PercentFuel)
Received : 28 Feb 2024
Tested : 29 Feb 2024
Diagnosed : 29 Feb 2024 - Kevin Marson

GFL Environmental - 550 - Rocky View County
 220 Carmek Blvd
 Rocky View County, AB
 CA T1X 1X1
 Contact: GFL Calgary
 calgarymaintenance@gflenv.com
 T:
 F: (403)369-6163

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.