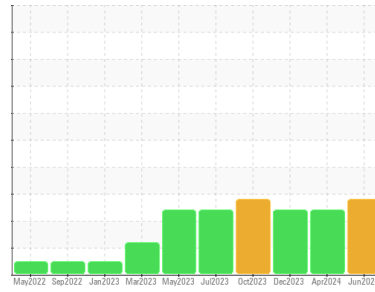




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id

0547

Component

Diesel Engine

Fluid

PETRO CANADA DURON HP 15W40 (--- GAL)

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. 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	GFL0117254	GFL0117317	GFL0099536	
Sample Date	Client Info	13 Jun 2024	11 Apr 2024	20 Dec 2023	
Machine Age	kms	Client Info	368911	19566	349325
Oil Age	kms	Client Info	0	532	0
Oil Changed	Client Info	Changed	Changed	Changed	
Sample Status		SEVERE	SEVERE	SEVERE	

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)	>100	42	52	24
Chromium	ppm	ASTM D5185(m)	>20	2	2	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	2	4	3
Lead	ppm	ASTM D5185(m)	>40	4	4	2
Copper	ppm	ASTM D5185(m)	>330	4	5	2
Tin	ppm	ASTM D5185(m)	>15	2	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)	0	3	2	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	37	47	48
Manganese	ppm	ASTM D5185(m)	0	<1	<1	0
Magnesium	ppm	ASTM D5185(m)	1010	574	767	767
Calcium	ppm	ASTM D5185(m)	1070	648	853	907
Phosphorus	ppm	ASTM D5185(m)	1150	594	793	844
Zinc	ppm	ASTM D5185(m)	1270	724	942	975
Sulfur	ppm	ASTM D5185(m)	2060	1427	1858	2140
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

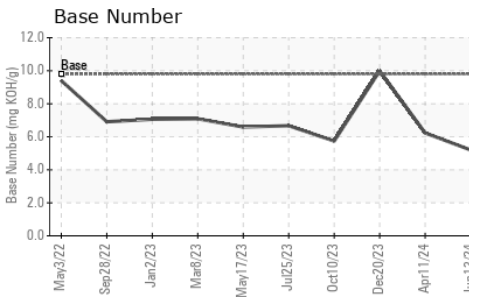
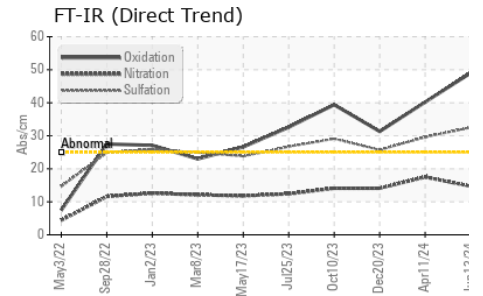
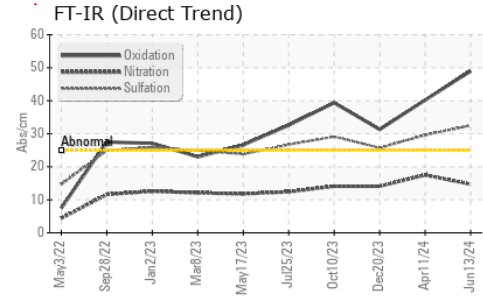
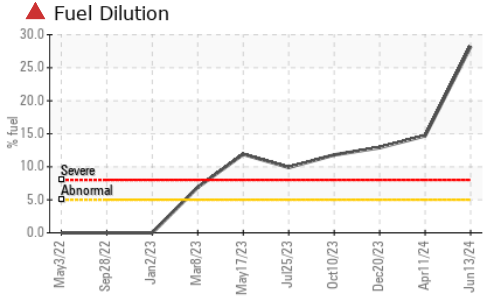
method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>25	11	10	6
Sodium	ppm	ASTM D5185(m)		2	3	1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	3
Fuel	%	ASTM D7593*	>5	▲ 28.2	▲ 14.7	▲ 12.9

INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*	>3	0.7	1	0.6
Nitration	Abs/cm	ASTM D7624*	>20	14.7	17.5	14.1
Sulfation	Abs/1mm	ASTM D7415*	>30	32.5	29.6	25.7



OIL ANALYSIS REPORT

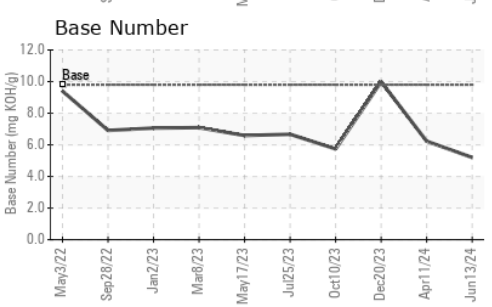
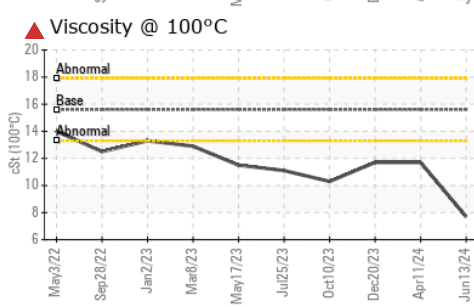
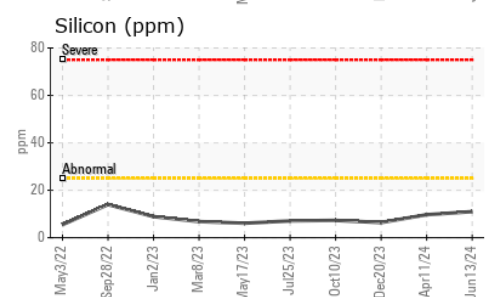
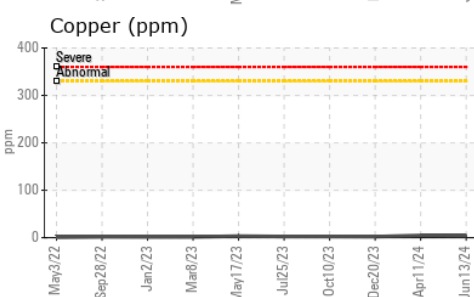
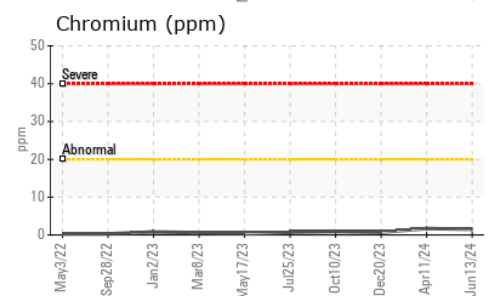
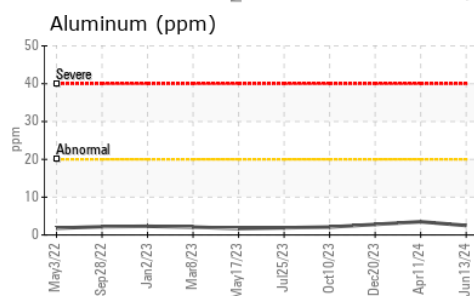
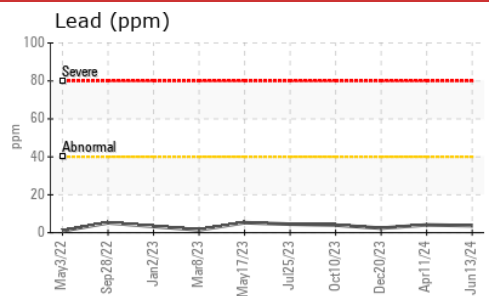
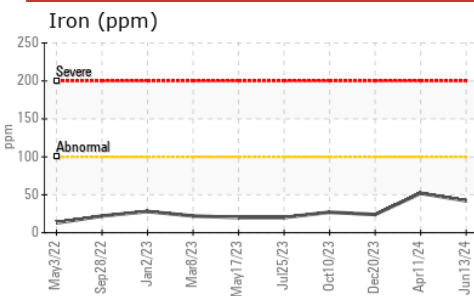


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	49.0	40.2	31.3
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	5.20	6.23	9.99

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)	15.6	▲ 7.7	▲ 11.7	▲ 11.7

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0117254
Lab Number : **02644002**
Unique Number : 5801541
Test Package : MOB 2 (Additional Tests: PercentFuel)

GFL Environmental - 550 - Rocky View County
 220 Carmek Blvd
 Rocky View County, AB
 CA T1X 1X1
 Contact: GFL Calgary
 calgarymaintenance@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.

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