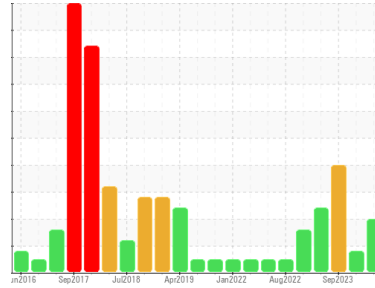




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
1149

Component
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		GFL0112394	GFL0091572	GFL0091621
Sample Date	Client Info		04 Mar 2024	18 Oct 2023	20 Sep 2023
Machine Age	kms	Client Info	406000	21425	345414
Oil Age	kms	Client Info	0	0	10761
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			SEVERE	ABNORMAL	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)	>127	72	36	123
Chromium	ppm	ASTM D5185(m)	>3	2	<1	3
Nickel	ppm	ASTM D5185(m)	>30	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>59	30	5	14
Lead	ppm	ASTM D5185(m)	>29	2	1	9
Copper	ppm	ASTM D5185(m)	>135	<1	<1	1
Tin	ppm	ASTM D5185(m)	>2	<1	0	<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)	1	2	3	3
Barium	ppm	ASTM D5185(m)	1	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	52	55	51
Manganese	ppm	ASTM D5185(m)	1	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	819	884	770
Calcium	ppm	ASTM D5185(m)	1070	977	993	887
Phosphorus	ppm	ASTM D5185(m)	1150	920	944	827
Zinc	ppm	ASTM D5185(m)	1270	1052	1117	968
Sulfur	ppm	ASTM D5185(m)	2060	2417	2418	2050
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

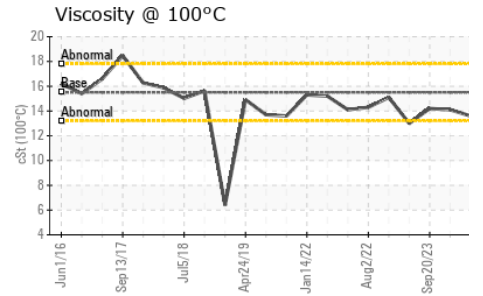
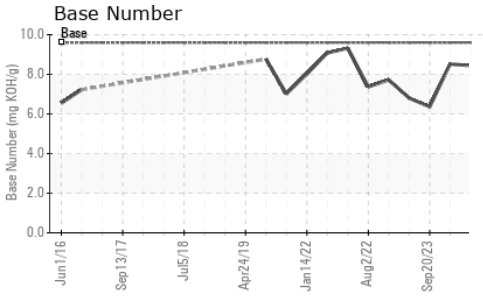
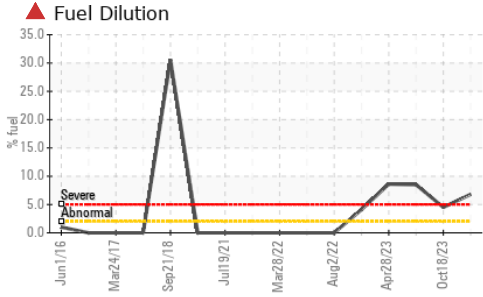
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Silicon	ppm	ASTM D5185(m)	>18	5	4	6
Sodium	ppm	ASTM D5185(m)		1	1	2
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1
Fuel	%	ASTM D7593*	>2.0	▲ 6.8	▲ 4.5	▲ 8.5

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	2.6	1.9	▲ 5.1
Nitration	Abs/cm	ASTM D7624*	>20	13.8	9.5	18.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	27.0	24.0	38.0



OIL ANALYSIS REPORT

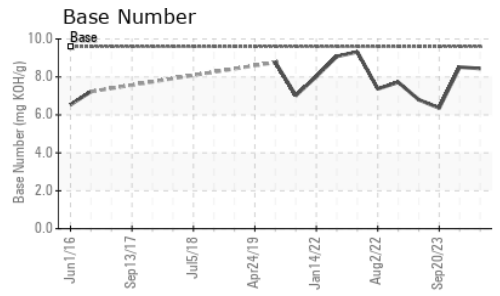
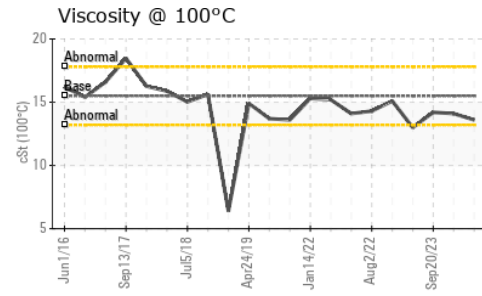
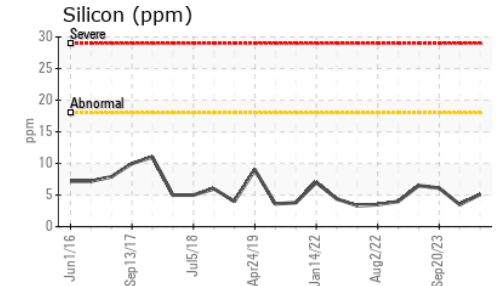
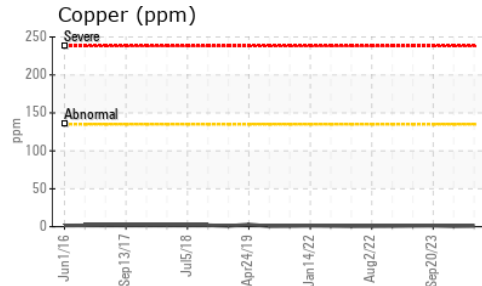
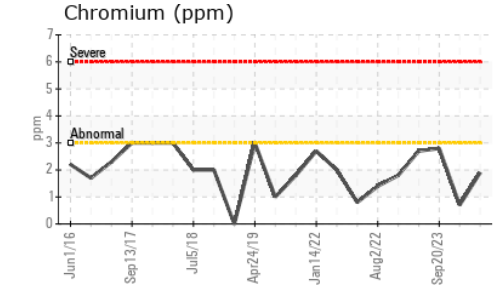
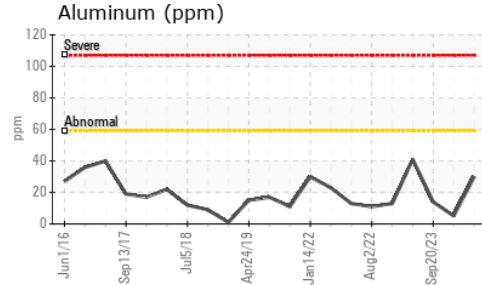
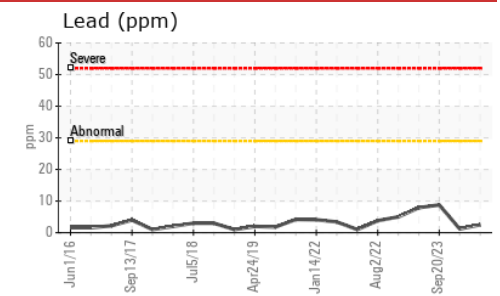
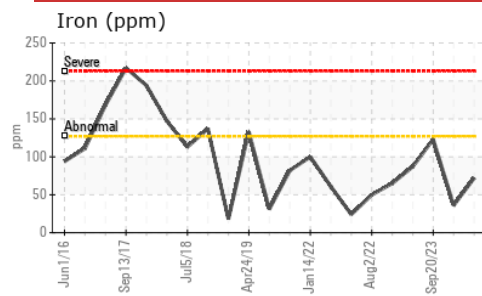


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	22.5	18.0	33.0
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	8.44	8.52	6.36

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	13.6	14.1	14.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0112394
Lab Number : 02621348
Unique Number : 5746467
Test Package : MOB 2 (Additional Tests: PercentFuel)
Received : 12 Mar 2024
Tested : 13 Mar 2024
Diagnosed : 13 Mar 2024 - Wes Davis

GFL Environmental - 550 - Rocky View County
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 calgarymaintenance@gflenv.com
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 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.