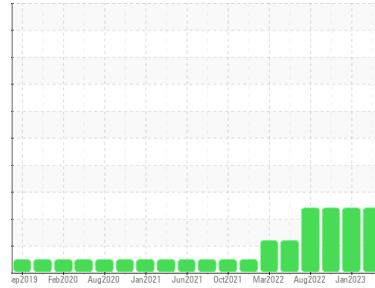




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
401183
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- 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 oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0088963	GFL0050004	GFL0054564
Sample Date	Client Info		27 Sep 2023	27 Jan 2023	03 Nov 2022
Machine Age	hrs	Client Info	25897	24208	23660
Oil Age	hrs	Client Info	551	548	591
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			SEVERE	SEVERE	SEVERE

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	12	5	6
Chromium	ppm	ASTM D5185(m) >20	0	0	0
Nickel	ppm	ASTM D5185(m) >5	<1	<1	<1
Titanium	ppm	ASTM D5185(m) >2	0	0	<1
Silver	ppm	ASTM D5185(m) >2	0	0	0
Aluminum	ppm	ASTM D5185(m) >20	<1	1	1
Lead	ppm	ASTM D5185(m) >40	1	<1	<1
Copper	ppm	ASTM D5185(m) >330	<1	<1	<1
Tin	ppm	ASTM D5185(m) >15	0	<1	<1
Antimony	ppm	ASTM D5185(m)	0	<1	<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) 0	4	3	4
Barium	ppm	ASTM D5185(m) 0	<1	0	0
Molybdenum	ppm	ASTM D5185(m) 60	52	51	56
Manganese	ppm	ASTM D5185(m) 0	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	844	850	902
Calcium	ppm	ASTM D5185(m) 1070	907	958	1011
Phosphorus	ppm	ASTM D5185(m) 1150	891	969	1018
Zinc	ppm	ASTM D5185(m) 1270	1041	1056	1113
Sulfur	ppm	ASTM D5185(m) 2060	2241	2358	2469
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	3	2	3
Sodium	ppm	ASTM D5185(m)	3	2	3
Potassium	ppm	ASTM D5185(m) >20	0	<1	<1
Fuel	%	ASTM D7593* >3.0	10.1	10.1	6.5

INFRA-RED

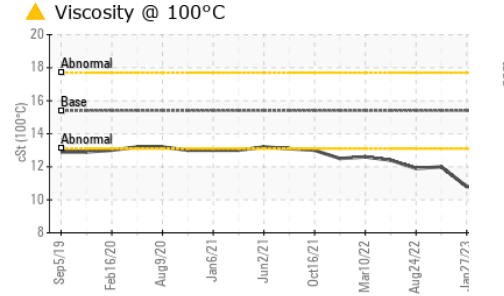
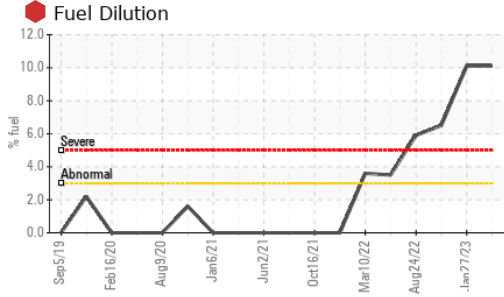
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >4	0.5	0	0.1
Nitration	Abs/cm	ASTM D7624* >20	9.1	9.0	8.5
Sulfation	Abs/.1mm	ASTM D7415* >30	19.4	19.6	19.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	15.3	16.0	16.3



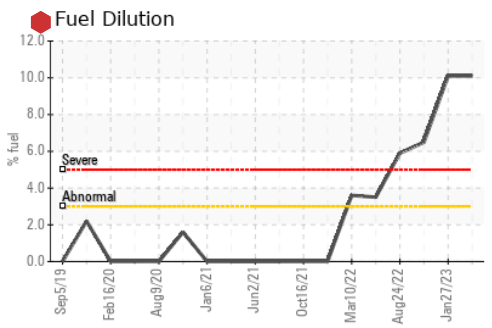
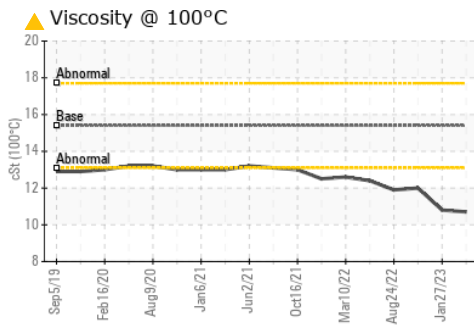
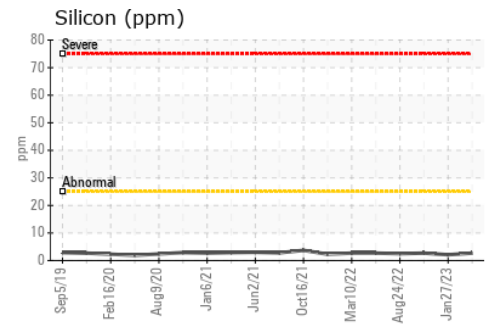
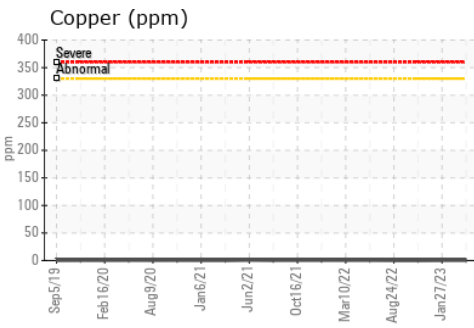
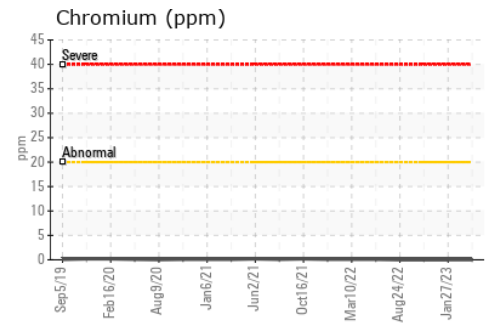
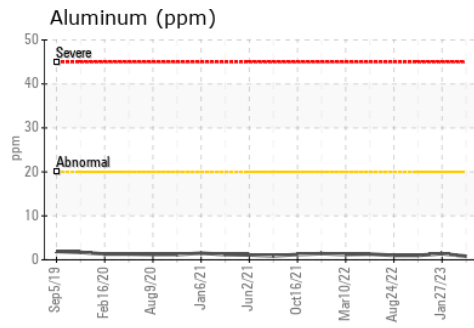
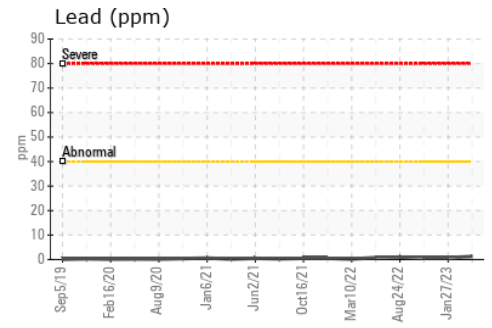
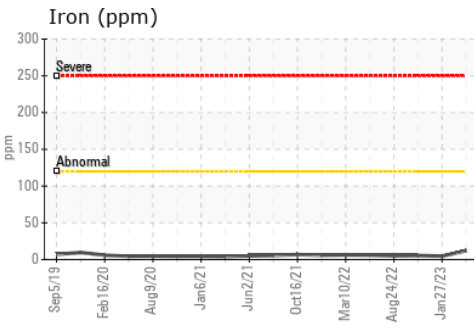
OIL ANALYSIS REPORT



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)	15.4	▲ 10.7	▲ 10.8
				▲ 12.0	

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0088963 **Received** : 28 Sep 2023
Lab Number : 02585711 **Diagnosed** : 02 Oct 2023
Unique Number : 5646776 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: PercentFuel)

GFL Environmental - 216
 15 Bermondsey Road, Building B
 Toronto, ON
 CA M4B 1Y9
 Contact: Tom Hatzioannidis
 thatzioannidis@gflenv.com
 T: (416)678-9340
 F:

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.