



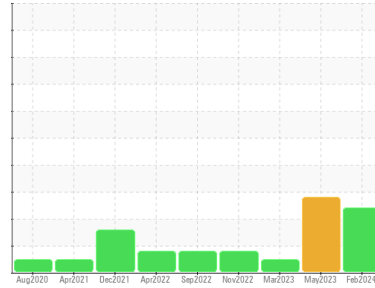
OIL ANALYSIS REPORT

Sample Rating Trend

FUEL



Machine Id
727004
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 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		GFL0102848	GFL0082564	GFL0071297
Sample Date	Client Info		12 Feb 2024	09 May 2023	13 Mar 2023
Machine Age	hrs	Client Info	0	38250	38038
Oil Age	hrs	Client Info	0	0	546
Oil Changed	Client Info		N/A	N/A	N/A
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)	>120	16	8	16
Chromium	ppm	ASTM D5185(m)	>20	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	<1	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	2	1	2
Lead	ppm	ASTM D5185(m)	>40	2	<1	3
Copper	ppm	ASTM D5185(m)	>330	3	<1	2
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
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)	0	31	▲ 41	4
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	38	40	53
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	460	▲ 492	890
Calcium	ppm	ASTM D5185(m)	1070	1597	▲ 1643	1060
Phosphorus	ppm	ASTM D5185(m)	1150	675	803	1027
Zinc	ppm	ASTM D5185(m)	1270	782	▲ 851	1108
Sulfur	ppm	ASTM D5185(m)	2060	1944	2147	2416
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

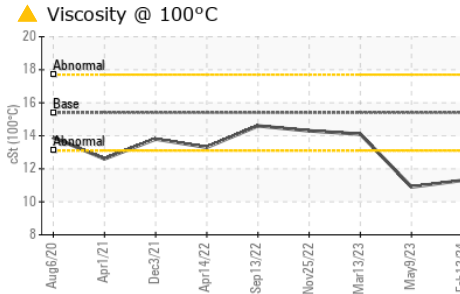
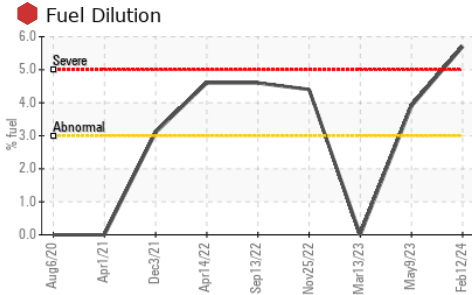
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	3	4	2
Sodium	ppm	ASTM D5185(m)		2	2	1
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1
Fuel	%	ASTM D7593*	>3.0	● 5.7	▲ 3.9	<1.0

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	3.2	1.8	2
Nitration	Abs/cm	ASTM D7624*	>20	11.2	7.4	6.0
Sulfation	Abs./1mm	ASTM D7415*	>30	27.8	24.1	22.0



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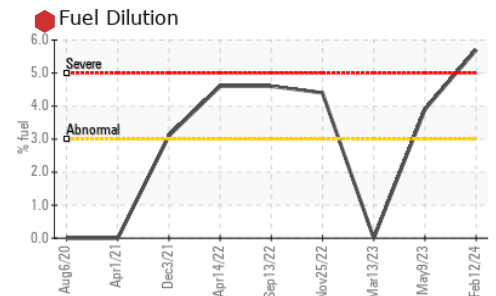
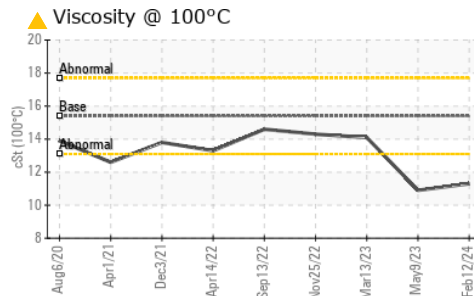
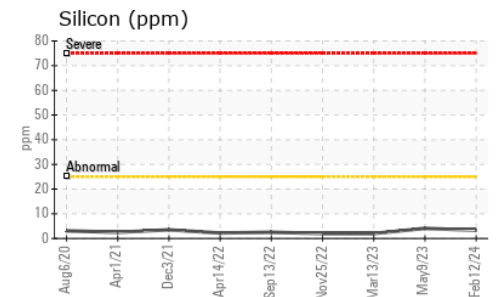
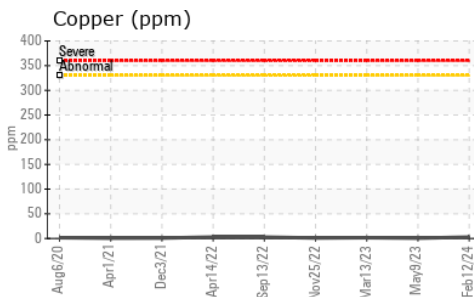
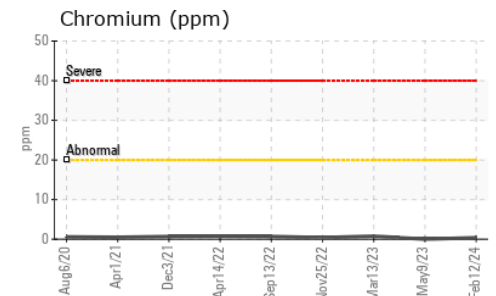
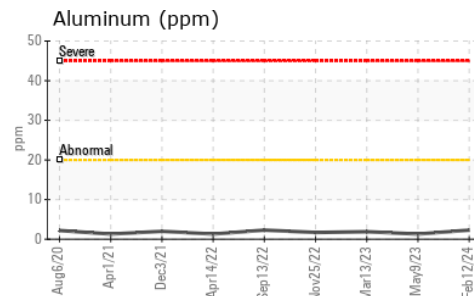
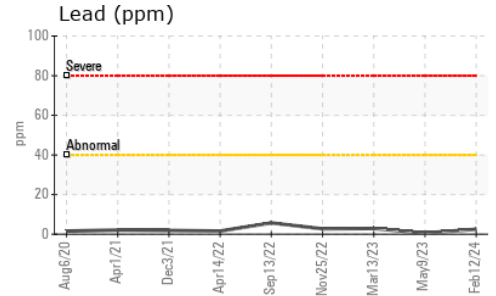
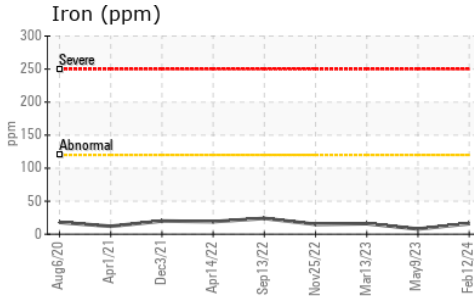


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	21.5	18.3	7.7

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)	15.4	▲ 11.3	▲ 10.9	14.1

GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0102848
Lab Number : 02615242
Unique Number : 5724337
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 246 - Windsor
 2700 Deziel Dr
 Windsor, ON
 CA N8W 5H8
 Contact: Dave Varga
 dvara@gflenv.com
 T: (519)944-8009
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*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.*