



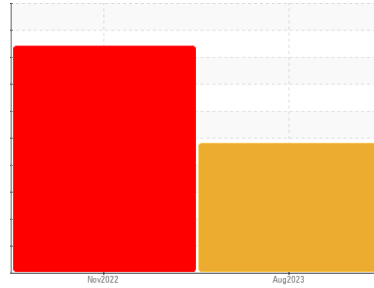
OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL



Machine Id
OR869
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. 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

Test for glycol is positive. There is a light concentration of glycol present 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		GFL0076983	GFL0054600	---
Sample Date	Client Info		25 Aug 2023	12 Nov 2022	---
Machine Age	hrs	Client Info	16750	16291	---
Oil Age	hrs	Client Info	460	706	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			ABNORMAL	SEVERE	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	32	46	---
Chromium	ppm	ASTM D5185(m) >20	4	6	---
Nickel	ppm	ASTM D5185(m) >2	0	<1	---
Titanium	ppm	ASTM D5185(m) >2	0	<1	---
Silver	ppm	ASTM D5185(m) >2	0	0	---
Aluminum	ppm	ASTM D5185(m) >25	3	6	---
Lead	ppm	ASTM D5185(m) >40	4	7	---
Copper	ppm	ASTM D5185(m) >330	2	4	---
Tin	ppm	ASTM D5185(m) >15	0	<1	---
Antimony	ppm	ASTM D5185(m)	0	<1	---
Vanadium	ppm	ASTM D5185(m)	0	0	---
Beryllium	ppm	ASTM D5185(m)	0	0	---
Cadmium	ppm	ASTM D5185(m)	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	11	25	---
Barium	ppm	ASTM D5185(m) 0	0	0	---
Molybdenum	ppm	ASTM D5185(m) 60	88	111	---
Manganese	ppm	ASTM D5185(m) 0	<1	1	---
Magnesium	ppm	ASTM D5185(m) 1010	972	918	---
Calcium	ppm	ASTM D5185(m) 1070	1086	1166	---
Phosphorus	ppm	ASTM D5185(m) 1150	1044	1067	---
Zinc	ppm	ASTM D5185(m) 1270	1229	1237	---
Sulfur	ppm	ASTM D5185(m) 2060	2487	2511	---
Lithium	ppm	ASTM D5185(m)	<1	<1	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	22	44	---
Sodium	ppm	ASTM D5185(m)	▲ 600	▲ 1240	---
Potassium	ppm	ASTM D5185(m) >20	▲ 14	▲ 30	---
Glycol	%	ASTM D7922*	▲ 0.012	◆ 0.169	---

INFRA-RED

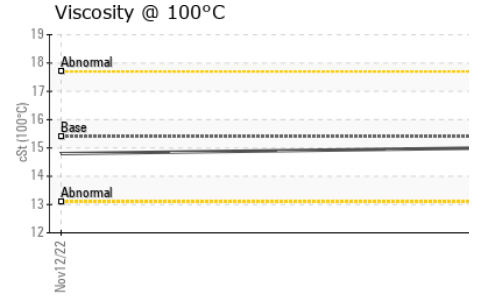
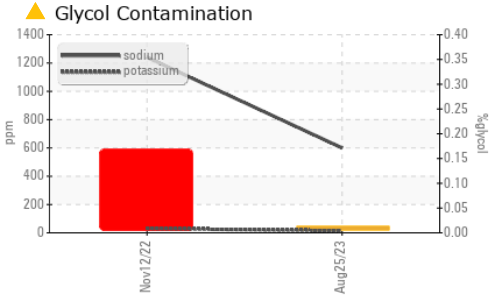
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	0.2	0.2	---
Nitration	Abs/cm	ASTM D7624* >20	11.2	14.9	---
Sulfation	Abs/.1mm	ASTM D7415* >30	21.3	22.1	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	17.7	18.6	---



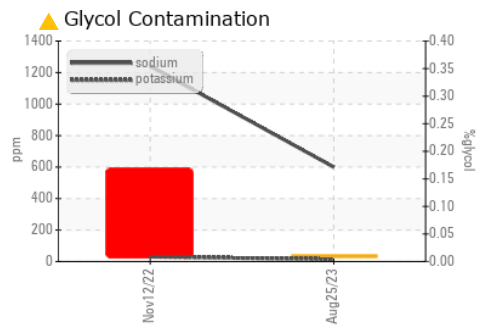
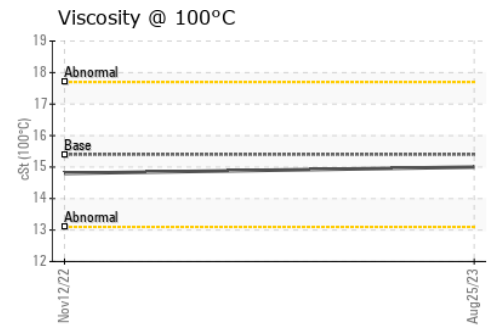
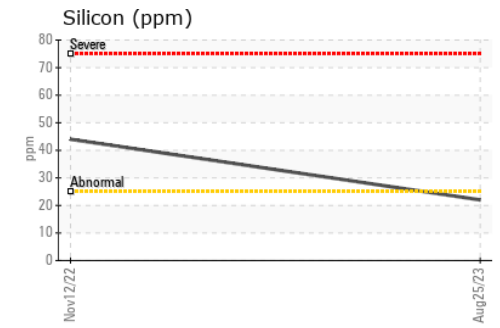
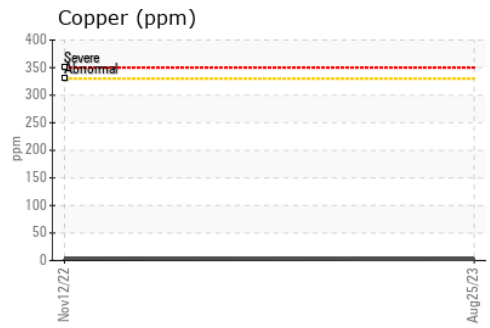
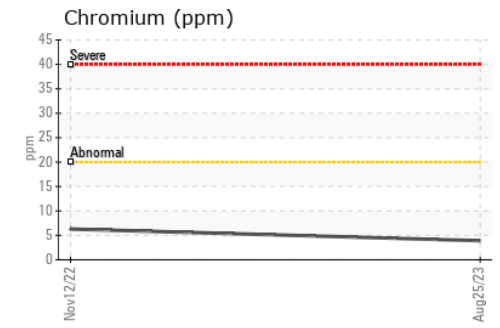
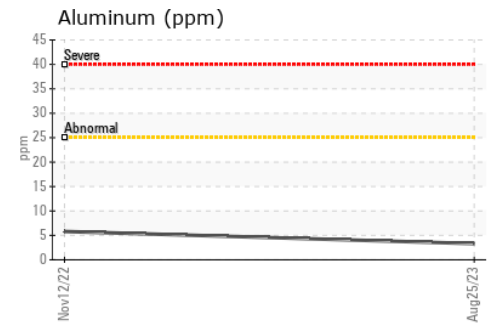
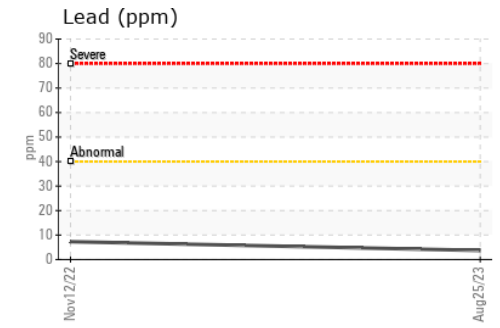
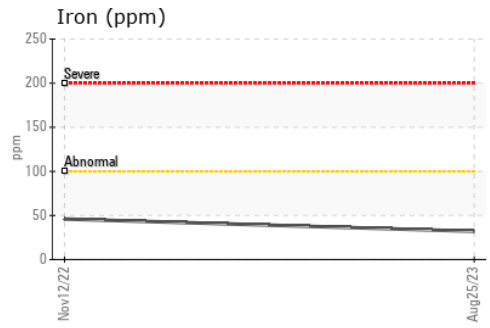
OIL ANALYSIS REPORT



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	15.0	14.8

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 575 - Squamish Hauling
Sample No. : GFL0076983 **Received** : 30 Aug 2023 38950 Queens Way,
Lab Number : 02579276 **Diagnosed** : 30 Aug 2023 Squamish, BC
Unique Number : 5632336 **Diagnostician** : Kevin Marson CA V8B 0K8
Test Package : MOB 1 **Contact:** Dean Imbeau
 dimbeau@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.