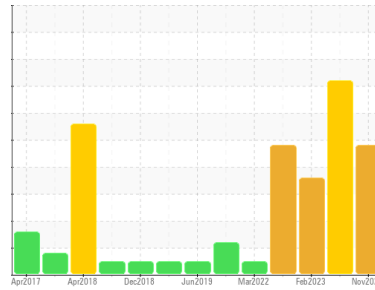




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
8128
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. 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 moderate 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		GFL0097622	GFL0078000	GFL0064093
Sample Date	Client Info		14 Nov 2023	09 Jun 2023	16 Feb 2023
Machine Age	hrs	Client Info	15573	15346	0
Oil Age	hrs	Client Info	0	0	15275
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	SEVERE	ATTENTION

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>80	21	13	32
Chromium	ppm	ASTM D5185(m)	>5	2	1	2
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>30	9	2	3
Lead	ppm	ASTM D5185(m)	>30	3	2	0
Copper	ppm	ASTM D5185(m)	>150	77	11	4
Tin	ppm	ASTM D5185(m)	>5	<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)	2	2	7	2
Barium	ppm	ASTM D5185(m)	0	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	50	121	61	67
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	849	788	863
Calcium	ppm	ASTM D5185(m)	1050	934	835	997
Phosphorus	ppm	ASTM D5185(m)	995	944	897	966
Zinc	ppm	ASTM D5185(m)	1180	1098	1041	1085
Sulfur	ppm	ASTM D5185(m)	2600	2417	2312	2402
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

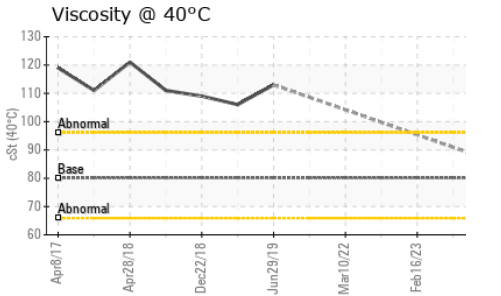
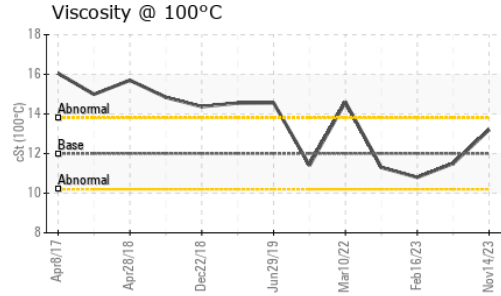
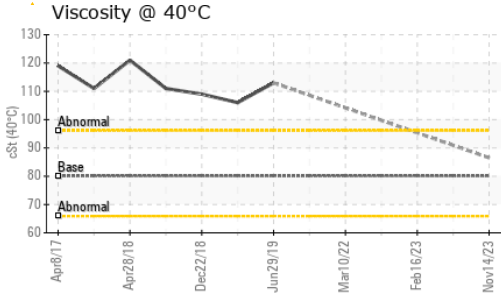
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	5	5	6
Sodium	ppm	ASTM D5185(m)		▲ 1687	▲ 291	▲ 314
Potassium	ppm	ASTM D5185(m)	>20	▲ 6	2	2
Glycol	%	ASTM D7922*		▲ 0.087	◆ 1.252	▲ 0.014

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.1	0.3	0.7
Nitration	Abs/cm	ASTM D7624*	>20	8.6	7.5	8.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.5	17.1	22.0



OIL ANALYSIS REPORT

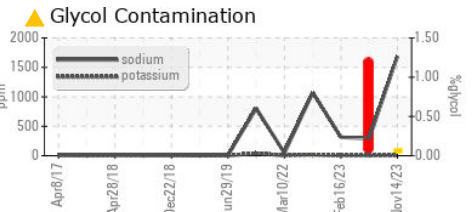
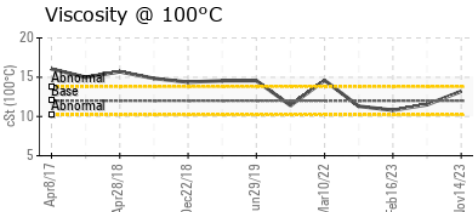
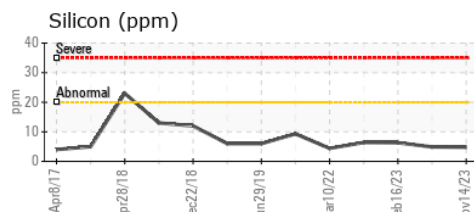
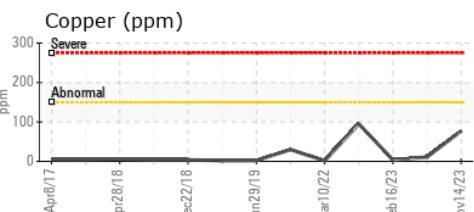
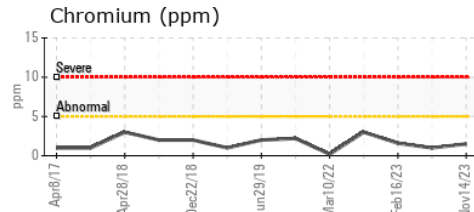
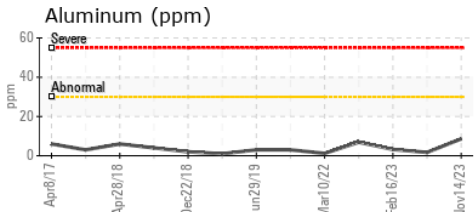
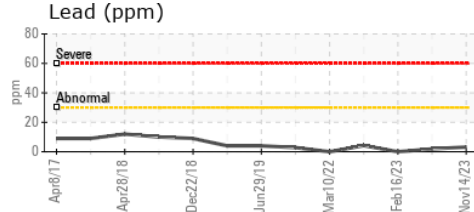
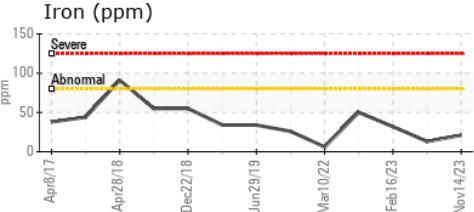


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	13.7	13.8	16.0

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	VLITE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
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 @ 40°C	cSt	ASTM D7279(m)	80.1	86.5	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	13.2	11.5	10.8
Viscosity Index (VI)	Scale	ASTM D2270*	144	153	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 554 - Edmonton SW**
Sample No. : GFL0097622 **Received** : 21 Nov 2023 **8409 - 15th Street NW**
Lab Number : **02597799** **Diagnosed** : 21 Nov 2023 **Edmonton, AB**
Unique Number : 5682879 **Diagnostician** : Wes Davis **CA T6P 0B8**
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual) **Contact: Tim Greig**
To discuss this sample report, contact Customer Service at 1-800-268-2131. **tgreig@gflenv.com**
Test denoted () outside scope of accreditation, (m) method modified, (e) tested at external lab.* **T: (780)231-0521**
Validity of results and interpretation are based on the sample and information as supplied. **F:**