



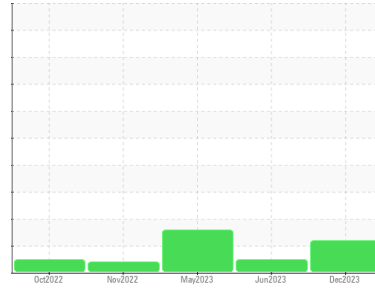
OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL



Machine Id
FREIGHTLINER 811013
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

Check for low coolant level. 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

Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service (see recommendation).

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0056304	GFL0056313	GFL0056361
Sample Date	Client Info		28 Dec 2023	05 Jun 2023	05 May 2023
Machine Age	kms	Client Info	172429	142204	138030
Oil Age	kms	Client Info	0	0	0
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ATTENTION	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	1.7
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>75	35	18	54
Chromium	ppm	ASTM D5185(m)	>5	2	<1	2
Nickel	ppm	ASTM D5185(m)	>4	<1	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>15	6	3	8
Lead	ppm	ASTM D5185(m)	>25	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>100	2	1	3
Tin	ppm	ASTM D5185(m)	>4	<1	<1	<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	5	13	15
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	68	65	69
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	970	918	856
Calcium	ppm	ASTM D5185(m)	1070	1085	1105	1179
Phosphorus	ppm	ASTM D5185(m)	1150	1012	1045	981
Zinc	ppm	ASTM D5185(m)	1270	1199	1129	1088
Sulfur	ppm	ASTM D5185(m)	2060	2641	2636	2489
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

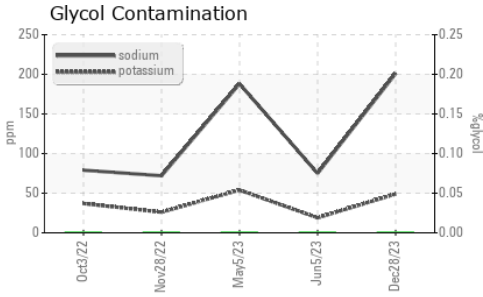
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	6	5	11
Sodium	ppm	ASTM D5185(m)		▲ 201	75	▲ 188
Potassium	ppm	ASTM D5185(m)	>20	49	19	54
Glycol	%	ASTM D7922*		0.0	0.0	0.0

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>6	1	0.4	1
Nitration	Abs/cm	ASTM D7624*	>20	10.5	6.8	10.4
Sulfation	Abs./1mm	ASTM D7415*	>30	21.9	19.0	22.2



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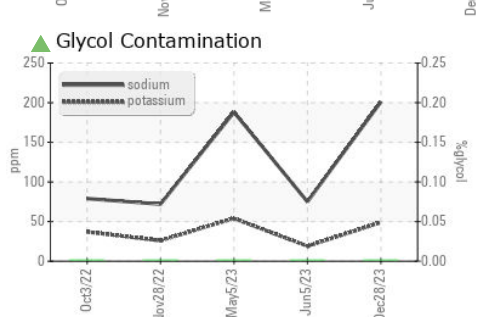
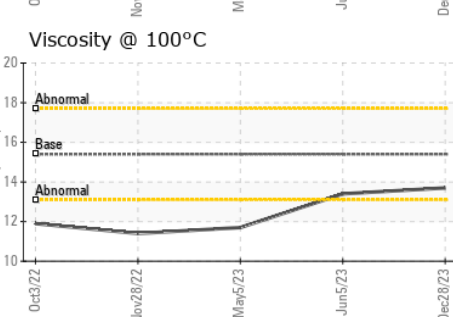
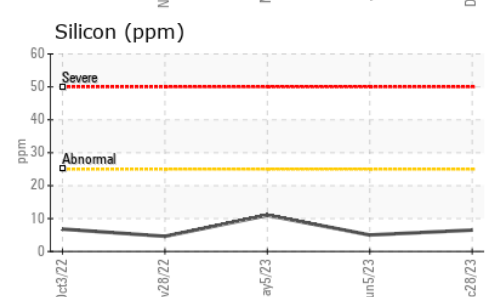
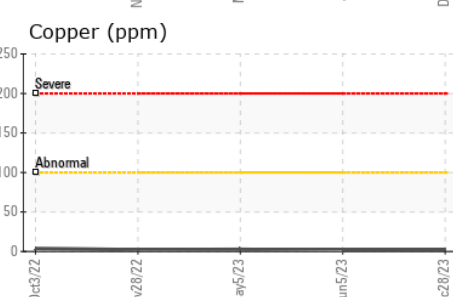
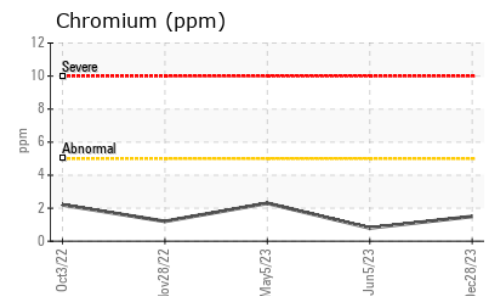
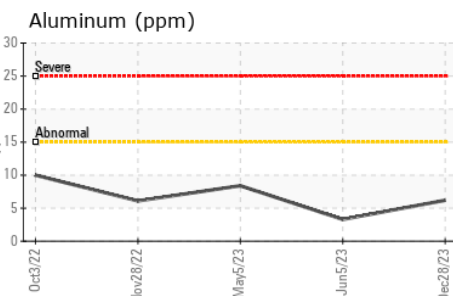
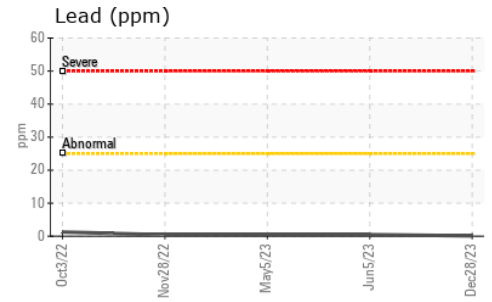
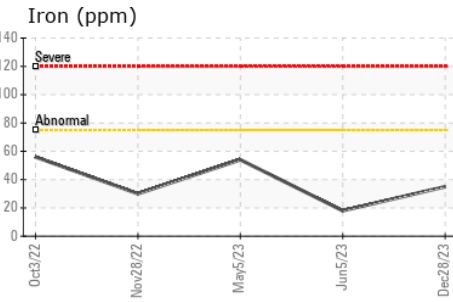
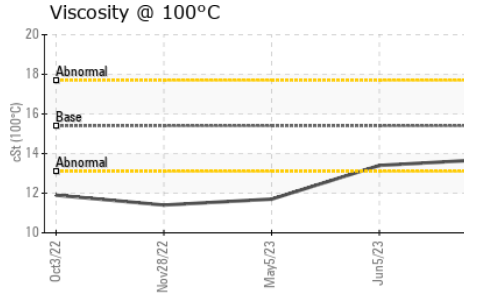


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	16.9	13.9	16.9

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	13.7	13.4	▲ 11.7

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 255 - Blind River**
Sample No. : GFL0056304 **Received** : 02 Jan 2024 **9 Industrial Park Road East**
Lab Number : **02605748** **Diagnosed** : 02 Jan 2024 **Blind River, ON**
Unique Number : 5698833 **Diagnostician** : Kevin Marson **CA P0R 1B0**
Test Package : MOB 1 (Additional Tests: Glycol) **Contact: Jason Haman**
jhaman@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.