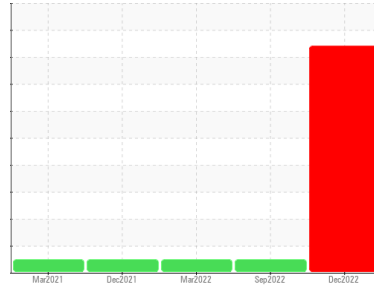




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
421007

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (40 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 high 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		GFL0063937	GFL0055414	GFL0042877
Sample Date	Client Info		07 Dec 2022	02 Sep 2022	02 Mar 2022
Machine Age	hrs	Client Info	25361	22197	500
Oil Age	hrs	Client Info	25361	22197	500
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			SEVERE	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	36	20	16
Chromium	ppm	ASTM D5185(m) >20	3	<1	1
Nickel	ppm	ASTM D5185(m) >50	2	<1	<1
Titanium	ppm	ASTM D5185(m) >2	<1	<1	0
Silver	ppm	ASTM D5185(m) >2	0	0	0
Aluminum	ppm	ASTM D5185(m) >50	6	3	2
Lead	ppm	ASTM D5185(m) >40	2	<1	<1
Copper	ppm	ASTM D5185(m) >330	5	1	1
Tin	ppm	ASTM D5185(m) >15	<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) 0	17	2	6
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 60	76	56	58
Manganese	ppm	ASTM D5185(m) 0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	896	897	979
Calcium	ppm	ASTM D5185(m) 1070	1049	1058	1045
Phosphorus	ppm	ASTM D5185(m) 1150	1047	1027	1059
Zinc	ppm	ASTM D5185(m) 1270	1147	1138	1202
Sulfur	ppm	ASTM D5185(m) 2060	2596	2450	2585
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	10	3	4
Sodium	ppm	ASTM D5185(m)	1517	3	3
Potassium	ppm	ASTM D5185(m) >20	219	4	<1
Glycol	%	ASTM D7922*	0.995	NEG	NEG

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	1	1.1	0.7
Nitration	Abs/cm	ASTM D7624* >20	16.7	9.6	8.7
Sulfation	Abs/.1mm	ASTM D7415* >30	22.8	22.3	21.0

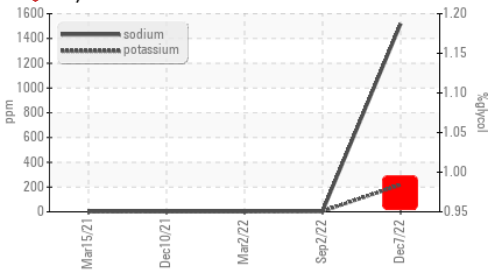
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	18.8	16.7	15.4



OIL ANALYSIS REPORT

Glycol Contamination

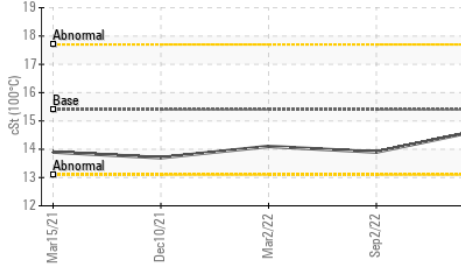


VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

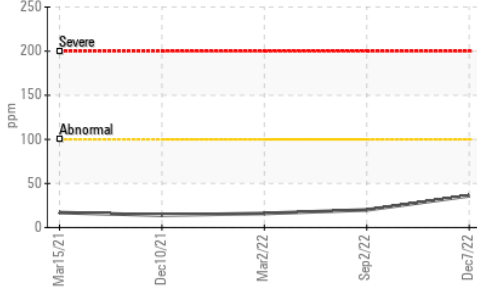
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.7	13.9

GRAPHS

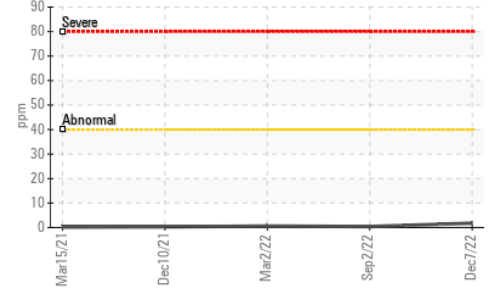
Viscosity @ 100°C



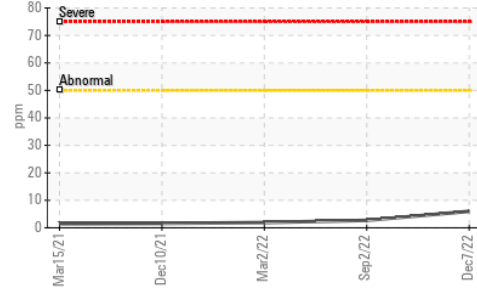
Iron (ppm)



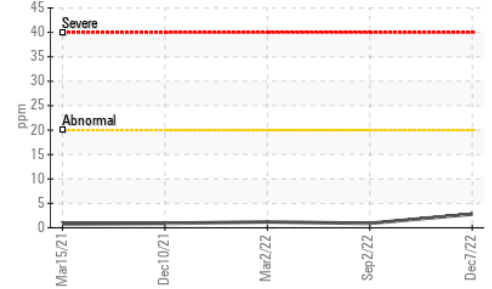
Lead (ppm)



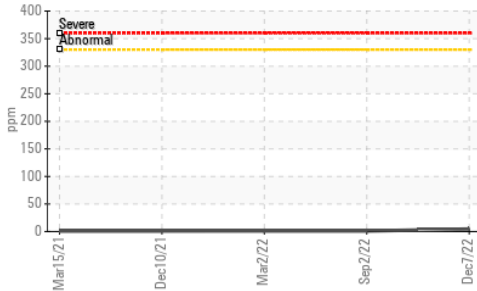
Aluminum (ppm)



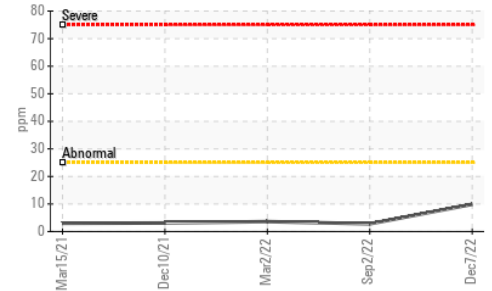
Chromium (ppm)



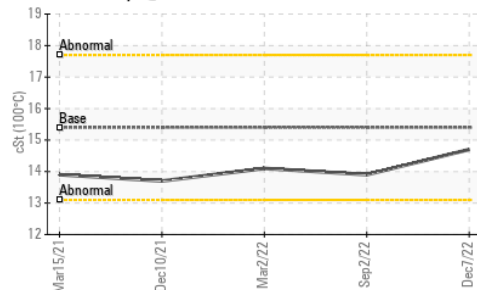
Copper (ppm)



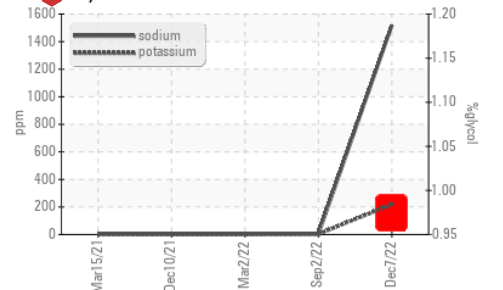
Silicon (ppm)



Viscosity @ 100°C



Glycol Contamination



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0063937
Lab Number : 02527537
Unique Number : 5500535
Test Package : MOB 1 (Additional Tests: Glycol)

Received : 08 Dec 2022
Diagnosed : 08 Dec 2022
Diagnostician : Kevin Marson

GFL Environmental - 222 - Sandhill
 SANDHILL DISPOSAL & RECYCLING DIVIS, 19 COMMERCE ROAD
 ORANGEVILLE, ON
 CA L9W 3X5
 Contact: GLENN COOK
 gcook@gflenv.com
 T: (519)940-4167
 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.