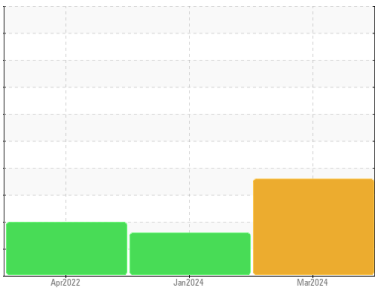
OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
351183
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

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 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		**GFL0096781**	GFL0096843	GFL0039222
Sample Date		Client Info		**20 Mar 2024**	31 Jan 2024	02 Apr 2022
Machine Age	kms	Client Info		**217808**	212384	181282
Oil Age	kms	Client Info		**0**	5000	5000
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	MARGINAL	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	▲ 3.4
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**29**	37	21
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**<1**	<1	0
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**3**	6	4
Lead	ppm	ASTM D5185(m)	>40	**<1**	3	2
Copper	ppm	ASTM D5185(m)	>330	**1**	1	1
Tin	ppm	ASTM D5185(m)	>15	**0**	0	<1
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	<1
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	**4**	12	21
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	50	**94**	238	132
Manganese	ppm	ASTM D5185(m)	0	**<1**	0	<1
Magnesium	ppm	ASTM D5185(m)	950	**874**	534	465
Calcium	ppm	ASTM D5185(m)	1050	**1044**	1273	1176
Phosphorus	ppm	ASTM D5185(m)	995	**863**	686	● 679
Zinc	ppm	ASTM D5185(m)	1180	**1036**	787	● 724
Sulfur	ppm	ASTM D5185(m)	2600	**2162**	1855	● 1737
Lithium	ppm	ASTM D5185(m)		**<1**	<1	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**5**	13	11
Sodium	ppm	ASTM D5185(m)		**19**	24	15
Potassium	ppm	ASTM D5185(m)	>20	▲ **63**	80	12
Glycol	%	ASTM D7922*		▲ **0.011**	0.0	0.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**11.8**	2.4	10.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	**23.9**	7.8	23.9

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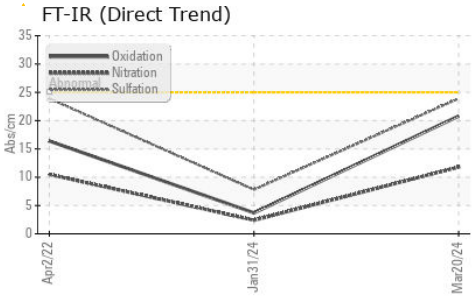
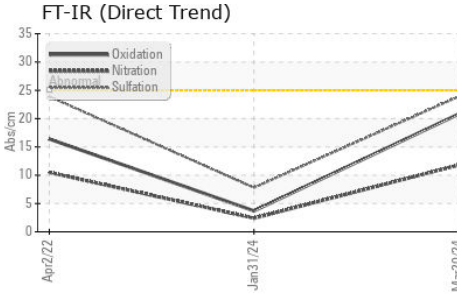
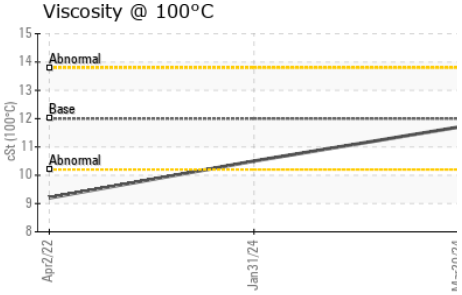
FT-IR (Direct Trend)



FT-IR (Direct Trend)



Viscosity @ 100°C



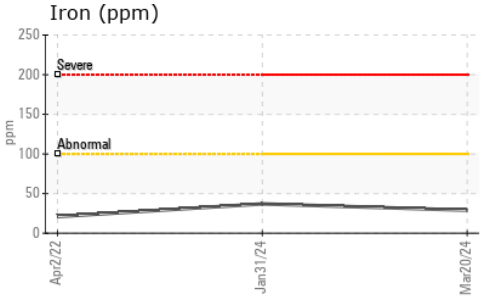
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**20.8**	3.7	16.4

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	▲ .2%	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

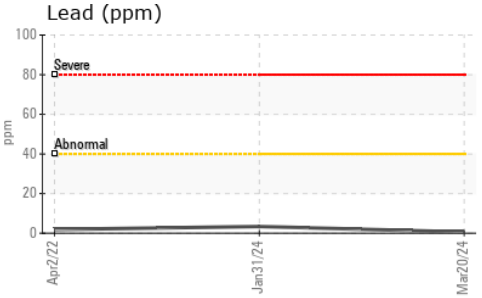
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	**11.7**	10.5	9.2

GRAPHS

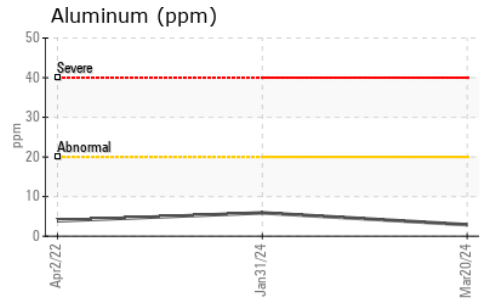
Iron (ppm)



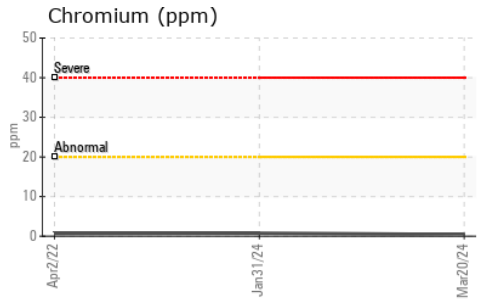
Lead (ppm)



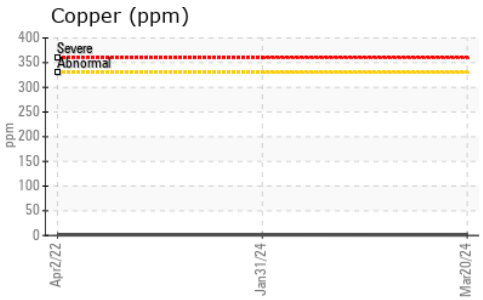
Aluminum (ppm)



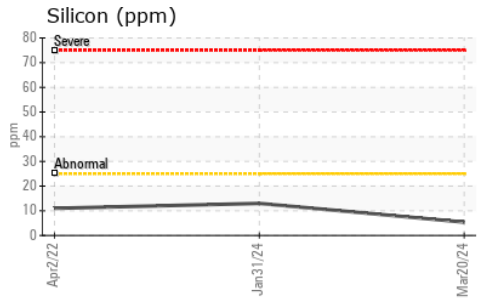
Chromium (ppm)



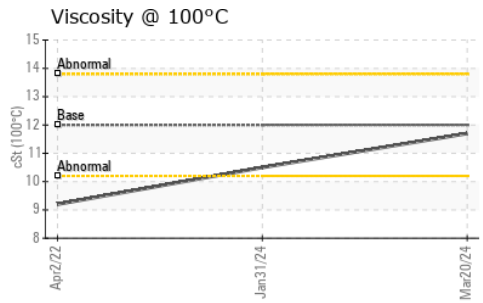
Copper (ppm)



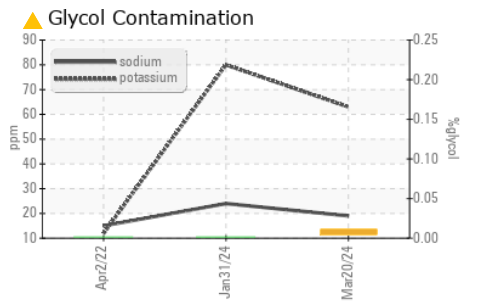
Silicon (ppm)



Viscosity @ 100°C



▲ Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0096781
Lab Number : 02631115
Unique Number : 5772268
Test Package : MOB 1 (Additional Tests: Glycol)

Received : 24 Apr 2024
Tested : 24 Apr 2024
Diagnosed : 24 Apr 2024 - Wes Davis

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.

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