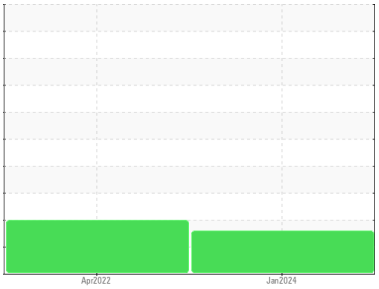
OIL ANALYSIS REPORT

Sample Rating Trend



WATER

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

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a trace of moisture present in the oil. Test for glycol is negative.

Fluid Condition
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0096843**	GFL0039222	---
Sample Date		Client Info		**31 Jan 2024**	02 Apr 2022	---
Machine Age	kms	Client Info		**212384**	181282	---
Oil Age	kms	Client Info		**5000**	5000	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**MARGINAL**	ATTENTION	---

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**37**	21	---
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	---
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	---
Titanium	ppm	ASTM D5185(m)		**<1**	0	---
Silver	ppm	ASTM D5185(m)	>3	**0**	0	---
Aluminum	ppm	ASTM D5185(m)	>20	**6**	4	---
Lead	ppm	ASTM D5185(m)	>40	**3**	2	---
Copper	ppm	ASTM D5185(m)	>330	**1**	1	---
Tin	ppm	ASTM D5185(m)	>15	**0**	<1	---
Antimony	ppm	ASTM D5185(m)		**0**	0	---
Vanadium	ppm	ASTM D5185(m)		**0**	<1	---
Beryllium	ppm	ASTM D5185(m)		**0**	0	---
Cadmium	ppm	ASTM D5185(m)		**0**	0	---

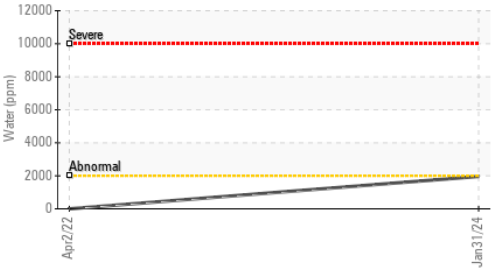
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	**12**	21	---
Barium	ppm	ASTM D5185(m)	0	**0**	0	---
Molybdenum	ppm	ASTM D5185(m)	50	**238**	132	---
Manganese	ppm	ASTM D5185(m)	0	**0**	<1	---
Magnesium	ppm	ASTM D5185(m)	950	**534**	465	---
Calcium	ppm	ASTM D5185(m)	1050	**1273**	1176	---
Phosphorus	ppm	ASTM D5185(m)	995	**686**	▲ 679	---
Zinc	ppm	ASTM D5185(m)	1180	**787**	▲ 724	---
Sulfur	ppm	ASTM D5185(m)	2600	**1855**	▲ 1737	---
Lithium	ppm	ASTM D5185(m)		**<1**	0	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**13**	11	---
Sodium	ppm	ASTM D5185(m)		**24**	15	---
Potassium	ppm	ASTM D5185(m)	>20	**80**	12	---
Water	%	ASTM D6304*	>0.2	▲ **0.196**	---	---
ppm Water	ppm	ASTM D6304*	>2000	▲ **1963**	---	---
Glycol	%	ASTM D7922*		**0.0**	0.0	---

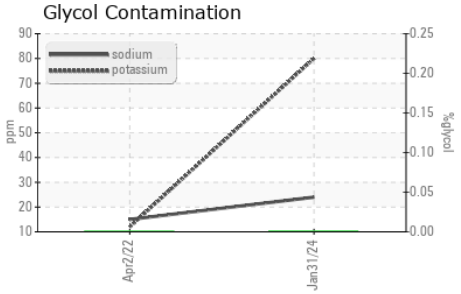
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0**	0	---
Nitration	Abs/cm	ASTM D7624*	>20	**2.4**	10.5	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	**7.8**	23.9	---

OIL ANALYSIS REPORT

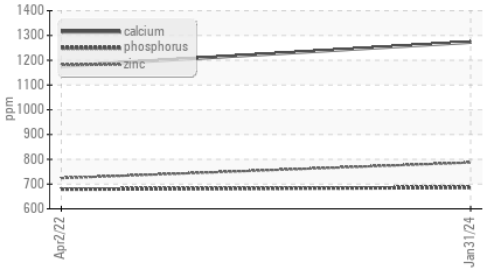
Water (KF)



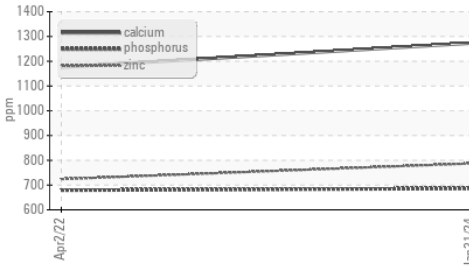
Glycol Contamination



Additives



Additives



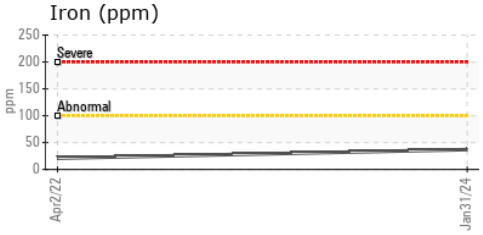
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**3.7**	16.4	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	NORML	---
Emulsified Water	scalar	Visual*	>0.2	▲ **.2%**	NEG	---
Free Water	scalar	Visual*		**NEG**	NEG	---

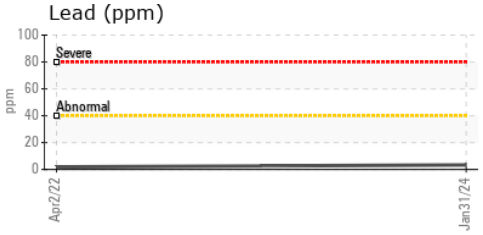
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	**10.5**	9.2	---

GRAPHS

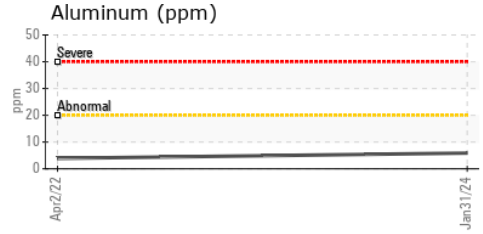
Iron (ppm)



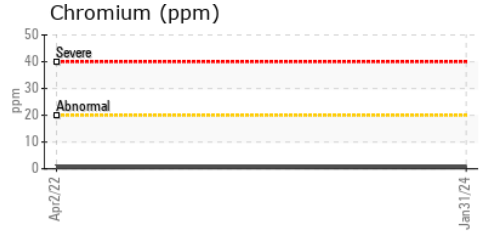
Lead (ppm)



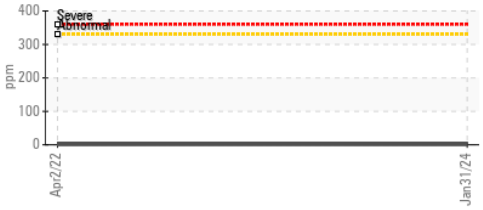
Aluminum (ppm)



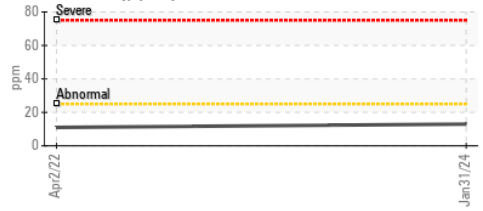
Chromium (ppm)



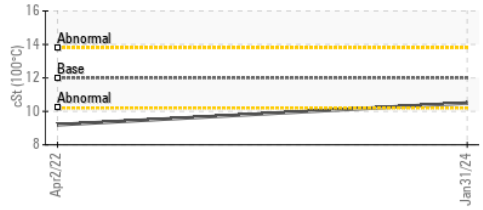
Copper (ppm)



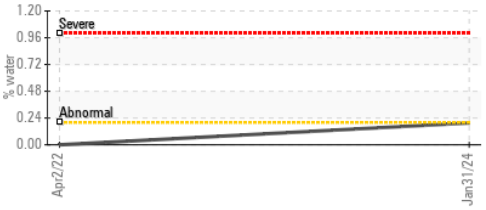
Silicon (ppm)



Viscosity @ 100°C



Water



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0096843
Lab Number : 02615256
Unique Number : 5724351
Test Package : MOB 1 (Additional Tests: Glycol, KF, Visual)

Received : 13 Feb 2024
Tested : 15 Feb 2024
Diagnosed : 15 Feb 2024 - Kevin Marson

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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