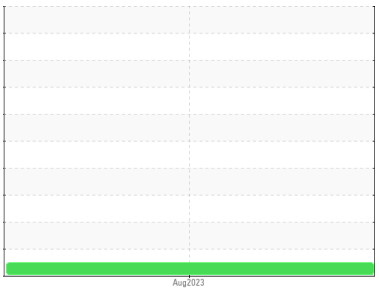
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
413154
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear
Metal levels are typical for a new component breaking in.

Contamination
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

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		**GFL0090626**	---	---
Sample Date		Client Info		**14 Aug 2023**	---	---
Machine Age	hrs	Client Info		**583**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**NORMAL**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>120	**29**	---	---
Chromium	ppm	ASTM D5185(m)	>20	**<1**	---	---
Nickel	ppm	ASTM D5185(m)	>5	**4**	---	---
Titanium	ppm	ASTM D5185(m)	>2	**0**	---	---
Silver	ppm	ASTM D5185(m)	>2	**<1**	---	---
Aluminum	ppm	ASTM D5185(m)	>20	**8**	---	---
Lead	ppm	ASTM D5185(m)	>40	**9**	---	---
Copper	ppm	ASTM D5185(m)	>330	**386**	---	---
Tin	ppm	ASTM D5185(m)	>15	**3**	---	---
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	**226**	---	---
Barium	ppm	ASTM D5185(m)	0	**0**	---	---
Molybdenum	ppm	ASTM D5185(m)	50	**121**	---	---
Manganese	ppm	ASTM D5185(m)	0	**3**	---	---
Magnesium	ppm	ASTM D5185(m)	950	**719**	---	---
Calcium	ppm	ASTM D5185(m)	1050	**1407**	---	---
Phosphorus	ppm	ASTM D5185(m)	995	**754**	---	---
Zinc	ppm	ASTM D5185(m)	1180	**815**	---	---
Sulfur	ppm	ASTM D5185(m)	2600	**2334**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**24**	---	---
Sodium	ppm	ASTM D5185(m)		**3**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**14**	---	---
Fuel	%	ASTM D7593*	>3.0	**1.1**	---	---
Glycol	%	ASTM D7922*		**0.0**	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	**0.1**	---	---
Nitration	Abs/cm	ASTM D7624*	>20	**9.8**	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	**25.8**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**23.7**	---	---

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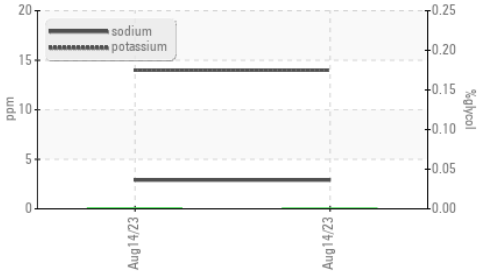
Glycol Contamination

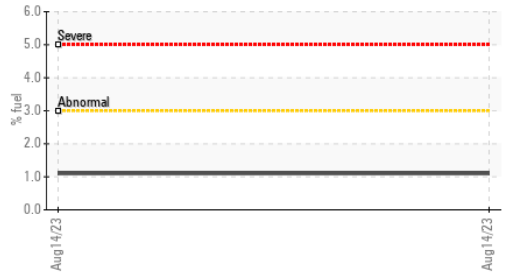


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	---	---
Free Water	scalar	Visual*		**NEG**	---	---

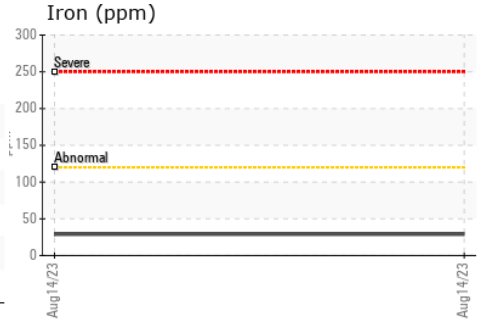
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	**9.5**	---	---

GRAPHS

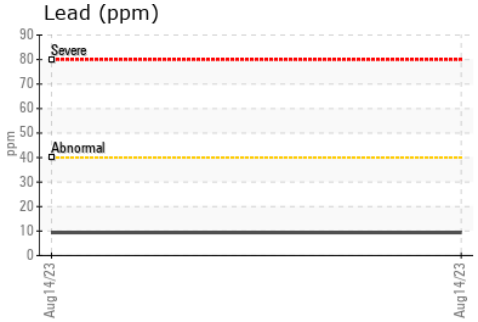
Fuel Dilution



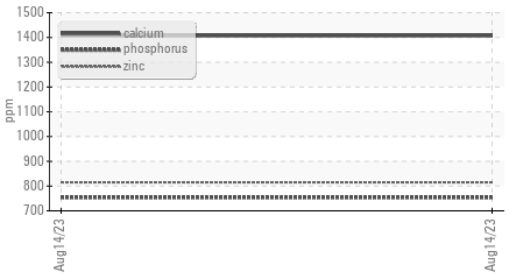
Iron (ppm)



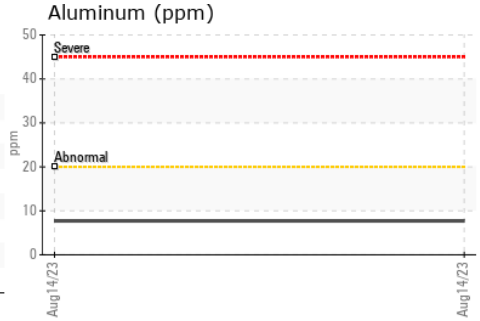
Lead (ppm)



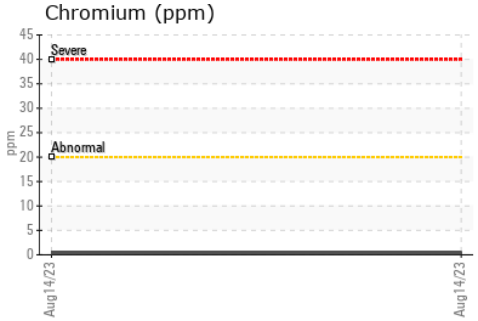
Additives



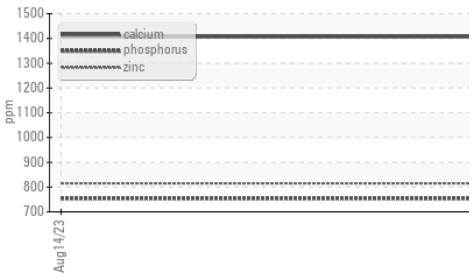
Aluminum (ppm)



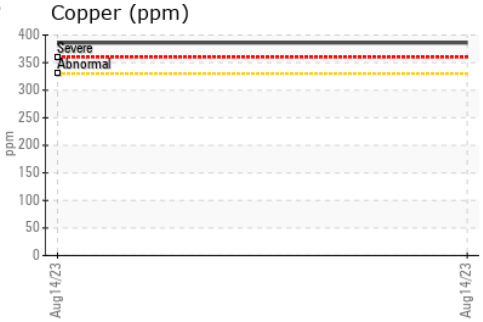
Chromium (ppm)



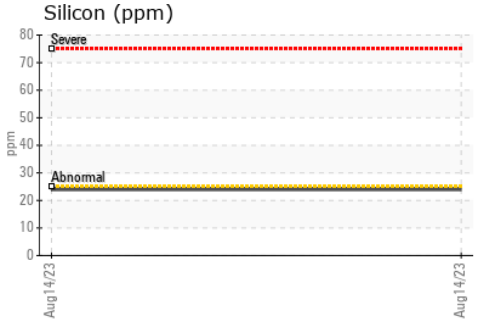
Additives



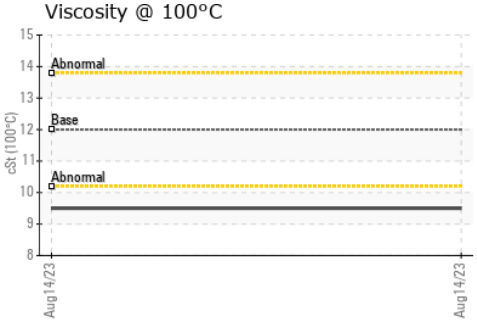
Copper (ppm)



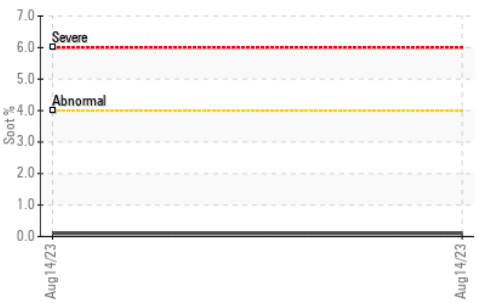
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 554 - Edmonton SW**
Sample No. : GFL0090626 **Received** : 21 Aug 2023
Lab Number : 02577039 **Diagnosed** : 23 Aug 2023
Unique Number : 5630099 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel)

8409 -15th Street NW
Edmonton, AB
CA T6P 0B8
Contact: Tim Greig
tgreig@gflenv.com
T:
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.