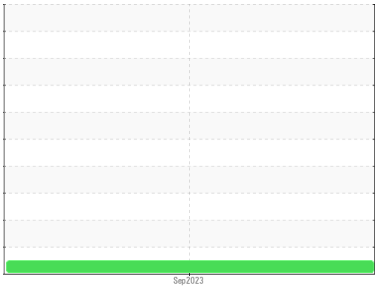
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
812089
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- GAL)

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
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. There is no indication of any contamination 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		**GFL0088347**	---	---
Sample Date		Client Info		**28 Sep 2023**	---	---
Machine Age	hrs	Client Info		**2174**	---	---
Oil Age	hrs	Client Info		**600**	---	---
Oil Changed		Client Info		**Changed**	---	---
Sample Status				**NORMAL**	---	---

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**37**	---	---
Chromium	ppm	ASTM D5185(m)	>20	**<1**	---	---
Nickel	ppm	ASTM D5185(m)	>4	**0**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Silver	ppm	ASTM D5185(m)	>3	**<1**	---	---
Aluminum	ppm	ASTM D5185(m)	>20	**34**	---	---
Lead	ppm	ASTM D5185(m)	>40	**0**	---	---
Copper	ppm	ASTM D5185(m)	>330	**2**	---	---
Tin	ppm	ASTM D5185(m)	>15	**<1**	---	---
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)	35	**6**	---	---
Barium	ppm	ASTM D5185(m)	0	**<1**	---	---
Molybdenum	ppm	ASTM D5185(m)	0	**62**	---	---
Manganese	ppm	ASTM D5185(m)	0	**0**	---	---
Magnesium	ppm	ASTM D5185(m)	10	**976**	---	---
Calcium	ppm	ASTM D5185(m)	2340	**1092**	---	---
Phosphorus	ppm	ASTM D5185(m)	1110	**970**	---	---
Zinc	ppm	ASTM D5185(m)	1210	**1218**	---	---
Sulfur	ppm	ASTM D5185(m)	3890	**2481**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**5**	---	---
Sodium	ppm	ASTM D5185(m)		**2**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**74**	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.7**	---	---
Nitration	Abs/cm	ASTM D7624*	>20	**9.6**	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	**20.8**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**16.8**	---	---

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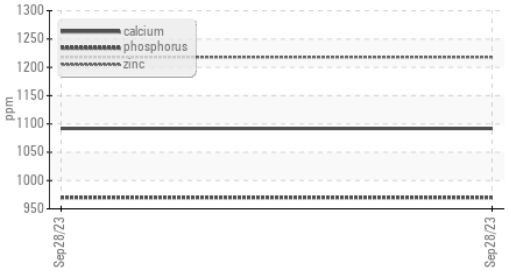
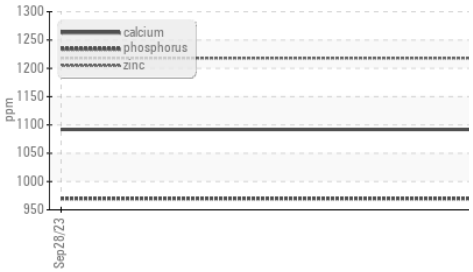
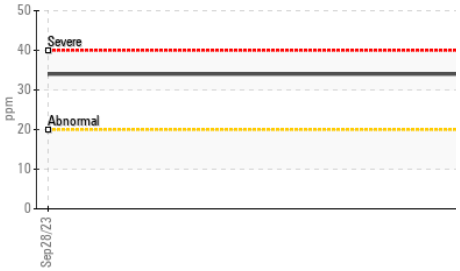
Additives



Additives



Aluminum (ppm)

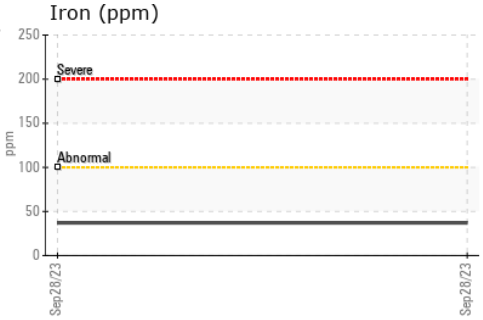


VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	---	---
Free Water	scalar	Visual*		**NEG**	---	---

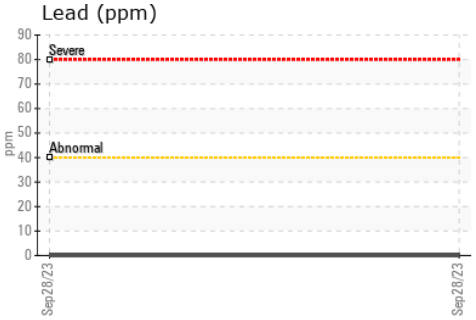
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.7	**13.9**	---	---

GRAPHS

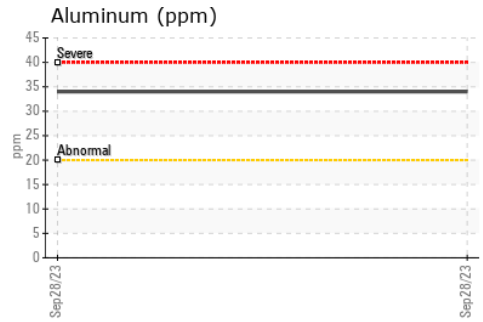
Iron (ppm)



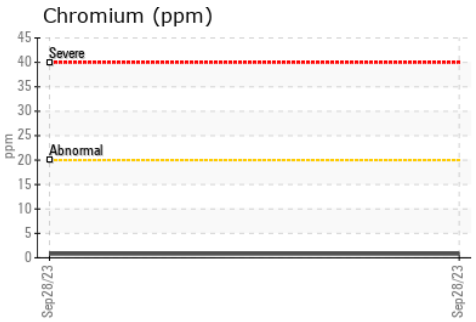
Lead (ppm)



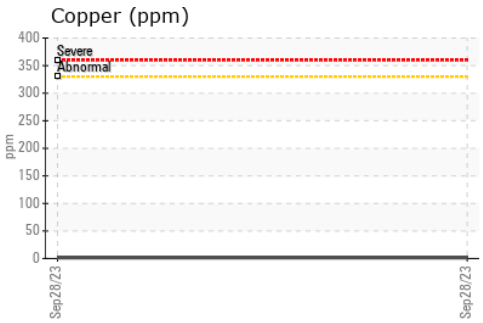
Aluminum (ppm)



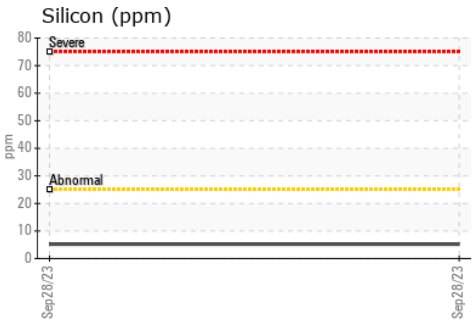
Chromium (ppm)



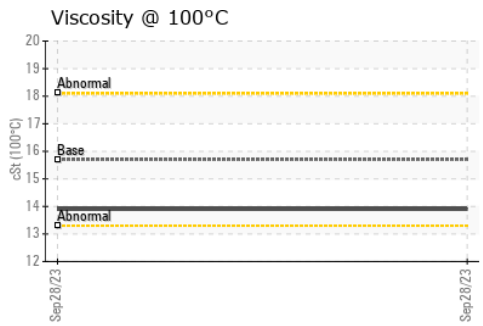
Copper (ppm)



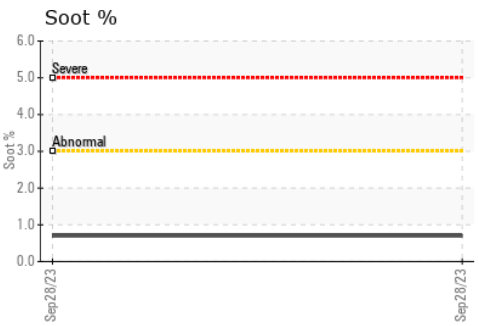
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0088347 **Received** : 04 Oct 2023
Lab Number : 02586573 **Diagnosed** : 04 Oct 2023
Unique Number : 5655639 **Diagnostician** : Wes Davis
Test Package : MOB 1

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.

GFL Environmental - 508
1926 hWY 17 West
North Bay, ON
CA P1B 2H3
Contact: Angele Labonte
angele.labonte@gflenv.com
T: (705)472-1768
F: