OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id
153000
Component
Diesel Engine
Fluid
MOBIL 1 5W30 (--- GAL)

DIAGNOSIS

Recommendation
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
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		**GFL0100635**	---	---
Sample Date		Client Info		**16 Nov 2023**	---	---
Machine Age	kms	Client Info		**17755**	---	---
Oil Age	kms	Client Info		**3099**	---	---
Oil Changed		Client Info		**Changed**	---	---
Sample Status				**NORMAL**	---	---

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**66**	---	---
Chromium	ppm	ASTM D5185(m)	>20	**2**	---	---
Nickel	ppm	ASTM D5185(m)	>2	**<1**	---	---
Titanium	ppm	ASTM D5185(m)	>2	**0**	---	---
Silver	ppm	ASTM D5185(m)	>2	**0**	---	---
Aluminum	ppm	ASTM D5185(m)	>25	**11**	---	---
Lead	ppm	ASTM D5185(m)	>40	**2**	---	---
Copper	ppm	ASTM D5185(m)	>330	**43**	---	---
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)	94	**28**	---	---
Barium	ppm	ASTM D5185(m)	0.0	**1**	---	---
Molybdenum	ppm	ASTM D5185(m)	0.0	**143**	---	---
Manganese	ppm	ASTM D5185(m)		**5**	---	---
Magnesium	ppm	ASTM D5185(m)	1388	**405**	---	---
Calcium	ppm	ASTM D5185(m)	820	**1338**	---	---
Phosphorus	ppm	ASTM D5185(m)	720	**657**	---	---
Zinc	ppm	ASTM D5185(m)	780	**781**	---	---
Sulfur	ppm	ASTM D5185(m)	2240	**2222**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**68**	---	---
Sodium	ppm	ASTM D5185(m)		**11**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**5**	---	---
Glycol	%	ASTM D7922*		**0.0**	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0**	---	---
Nitration	Abs/cm	ASTM D7624*	>20	**20.0**	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	**48.2**	---	---

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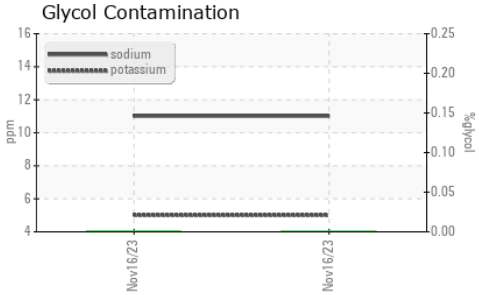
Glycol Contamination



Viscosity @ 100°C

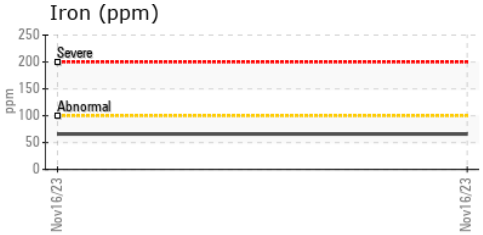
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**42.1**	---	---

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	**VLITE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	---	---
Emulsified Water	scalar	Visual*	>0.2	**NEG**	---	---
Free Water	scalar	Visual*		**NEG**	---	---

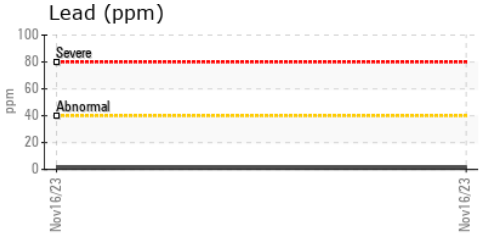
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	11.3	**12.7**	---	---

GRAPHS

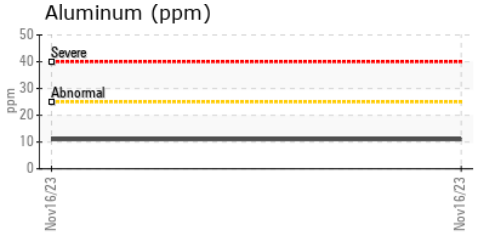
Iron (ppm)



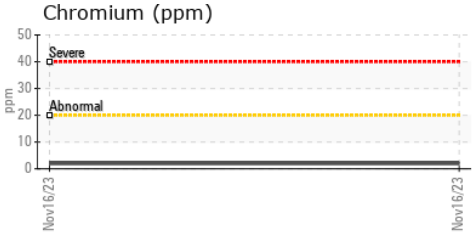
Lead (ppm)



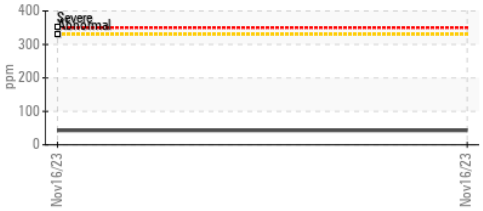
Aluminum (ppm)



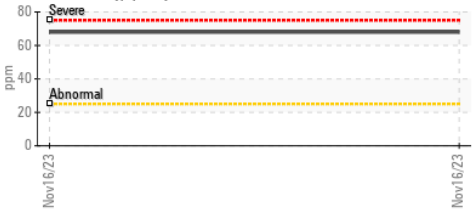
Chromium (ppm)



Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C

Soot %

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 575 - Squamish Hauling**
Sample No. : GFL0100635 **Received** : 20 Nov 2023 38950 Queens Way,
Lab Number : 02597346 **Diagnosed** : 21 Nov 2023 Squamish, BC
Unique Number : 5682426 **Diagnostician** : Kevin Marson CA V8B 0K8
Test Package : MOB 1 (Additional Tests: Glycol, Visual) Contact: Jonas Araujo

To discuss this sample report, contact Customer Service at 1-800-268-2131. jaraujo@gflenv.com
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T:
Validity of results and interpretation are based on the sample and information as supplied. F: