



Machine Id
NO UNIT GFL0102599

Component
Diesel Engine

Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. The oil change at the time of sampling has been noted. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0102599	---	---
Sample Date		Client Info		19 Feb 2024	---	---
Machine Age	hrs	Client Info		12166	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

Aluminum ppm levels are noted. All other component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	73	---	---
Chromium	ppm	ASTM D5185(m)	>5	2	---	---
Nickel	ppm	ASTM D5185(m)	>2	2	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)	>3	0	---	---
Aluminum	ppm	ASTM D5185(m)	>30	▲ 9	---	---
Lead	ppm	ASTM D5185(m)	>30	3	---	---
Copper	ppm	ASTM D5185(m)	>150	2	---	---
Tin	ppm	ASTM D5185(m)	>5	<1	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---

CONTAMINATION

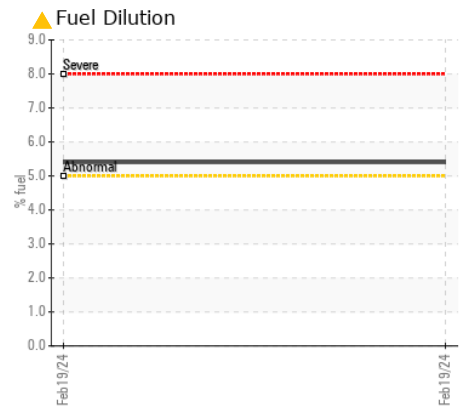
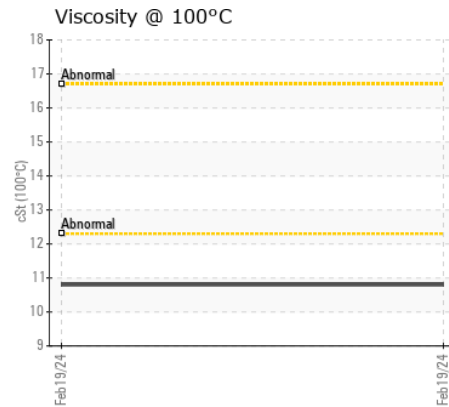
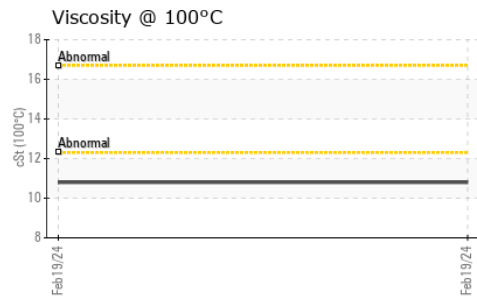
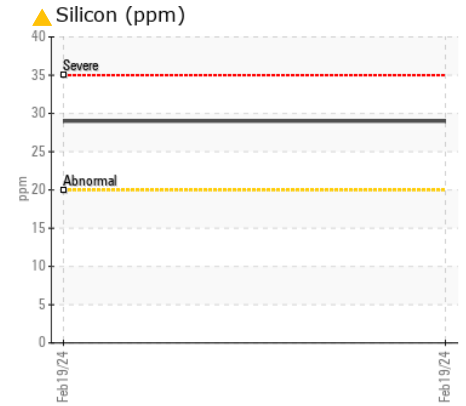
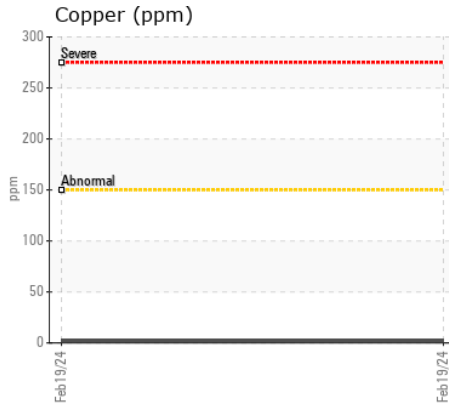
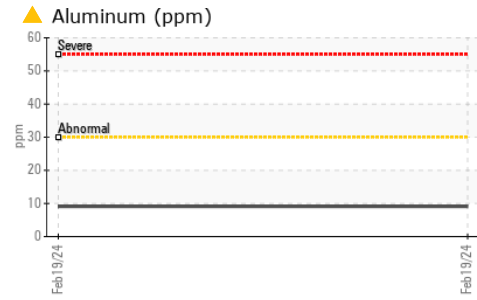
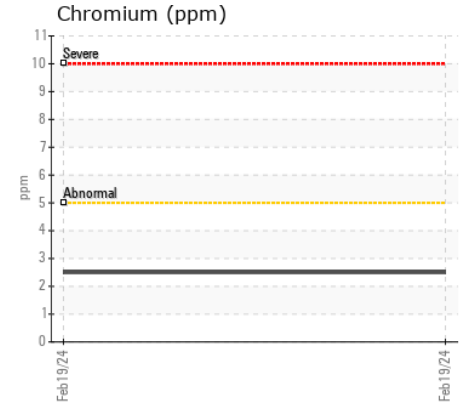
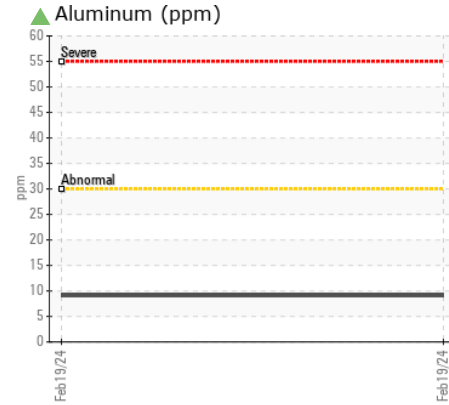
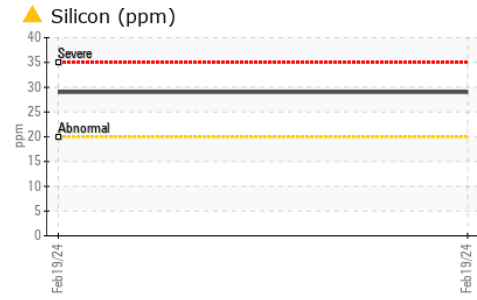
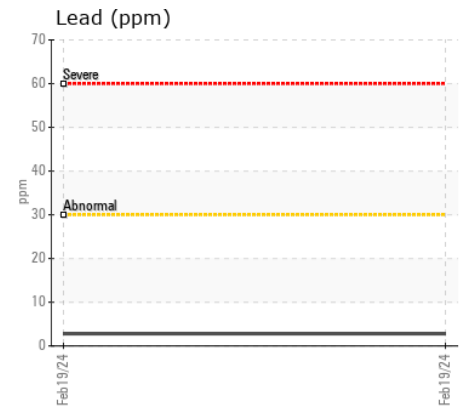
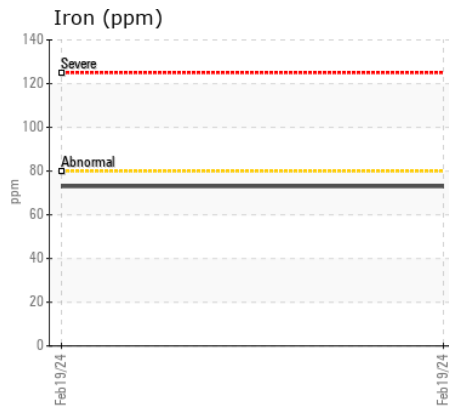
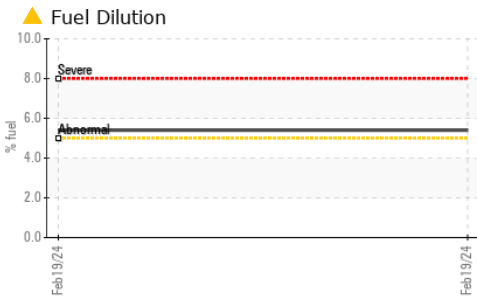
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is a moderate amount of fuel present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>20	▲ 29	---	---
Potassium	ppm	ASTM D5185(m)	>20	10	---	---
Fuel	%	ASTM D7593*	>5	▲ 5.4	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	ASTM D7844*	>3	1.2	---	---
Nitration	Abs/cm	ASTM D7624*	>20	11.4	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.7	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		7	---	---
Boron	ppm	ASTM D5185(m)		1	---	---
Barium	ppm	ASTM D5185(m)		0	---	---
Molybdenum	ppm	ASTM D5185(m)		58	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)		927	---	---
Calcium	ppm	ASTM D5185(m)		1034	---	---
Phosphorus	ppm	ASTM D5185(m)		963	---	---
Zinc	ppm	ASTM D5185(m)		1140	---	---
Sulfur	ppm	ASTM D5185(m)		2456	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.0	---	---
Visc @ 100°C	cSt	ASTM D7279(m)		10.8	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0102599 **Received** : 20 Feb 2024
Lab Number : 02616561 **Tested** : 22 Feb 2024
Unique Number : 5733671 **Diagnosed** : 22 Feb 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

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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.