



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>ABNORMAL</b>

Machine Id  
**501106**  
 Component  
**Diesel Engine**  
 Fluid  
**SAE 10W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0120309</b>	GFL0098571	GFL0079635
Sample Date		Client Info		<b>21 May 2024</b>	27 Dec 2023	24 Jul 2023
Machine Age	kms	Client Info		<b>624267</b>	504339	515142
Oil Age	kms	Client Info		<b>0</b>	0	61432
Filter Age	kms	Client Info		<b>0</b>	0	61432
Oil Changed		Client Info		<b>Not Changd</b>	N/A	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>29</b>	31	32
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>1</b>	1	1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	<b>4</b>	4	3
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	2	3
Copper	ppm	ASTM D5185(m)	>330	<b>8</b>	6	7
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

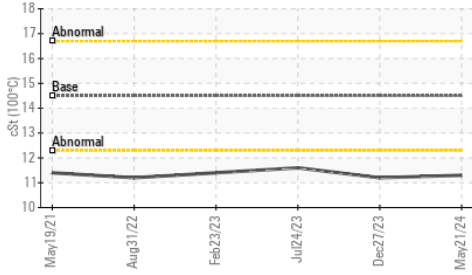
Silicon	ppm	ASTM D5185(m)	>25	<b>5</b>	5	5
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	6	3
Fuel	%	ASTM D7593*	>6.0	<b>0.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.7</b>	0.6	0.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.5</b>	11.4	10.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>24.1</b>	23.8	22.4
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

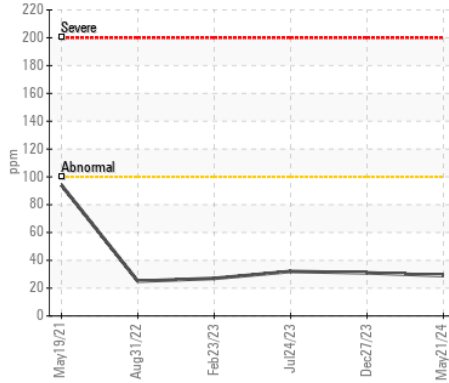
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>401	<b>6</b>	5	6
Boron	ppm	ASTM D5185(m)		<b>2</b>	2	1
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>61</b>	62	60
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185(m)		<b>956</b>	954	993
Calcium	ppm	ASTM D5185(m)		<b>1157</b>	1121	1101
Phosphorus	ppm	ASTM D5185(m)		<b>933</b>	954	1020
Zinc	ppm	ASTM D5185(m)		<b>1162</b>	1177	1212
Sulfur	ppm	ASTM D5185(m)		<b>2166</b>	2261	2105
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>19.6</b>	19.5	17.8
Visc @ 100°C	cSt	ASTM D7279(m)	14.5	<b>▲ 11.3</b>	11.2	11.6

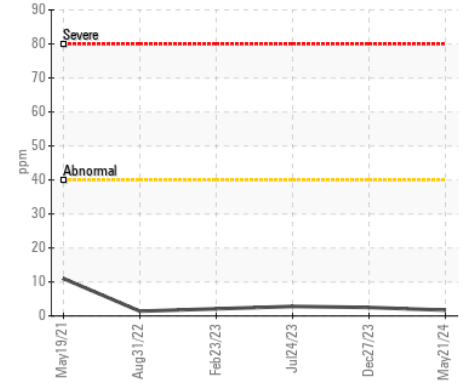
▲ Viscosity @ 100°C



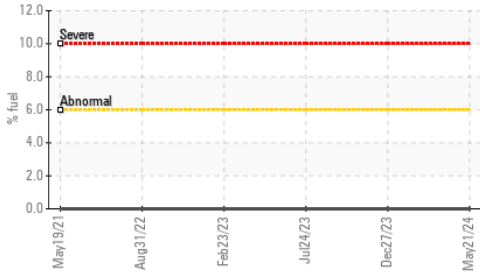
Iron (ppm)



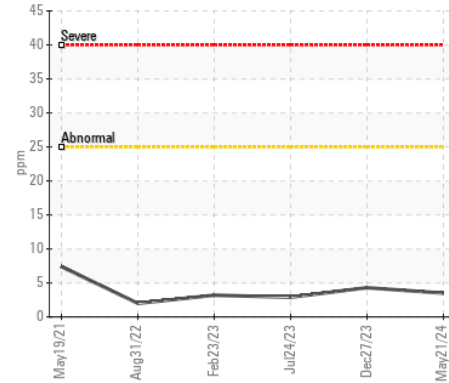
Lead (ppm)



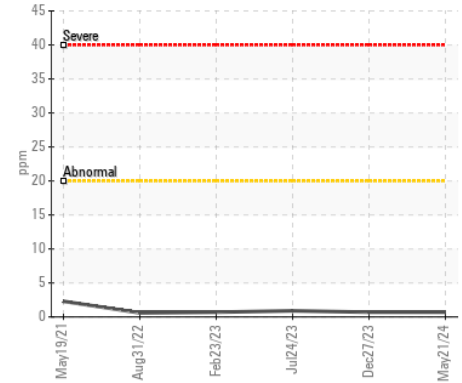
Fuel Dilution



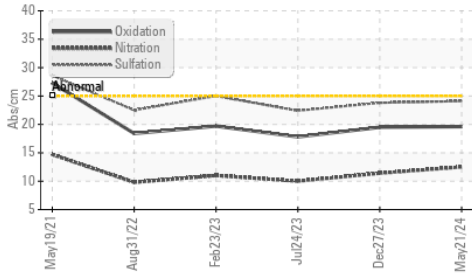
Aluminum (ppm)



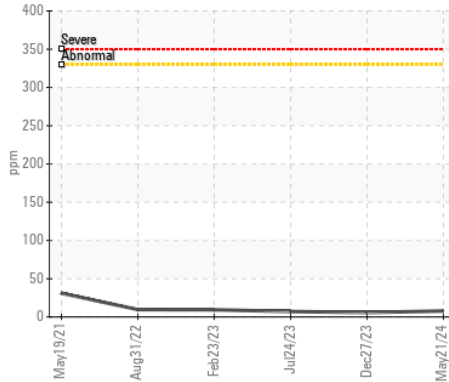
Chromium (ppm)



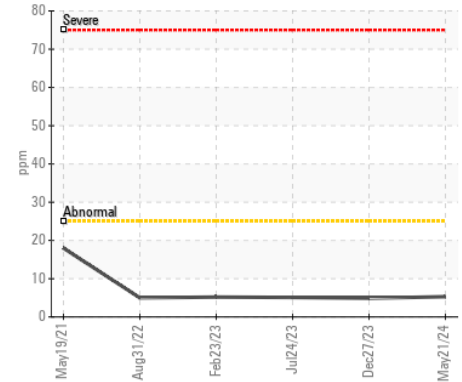
FT-IR (Direct Trend)



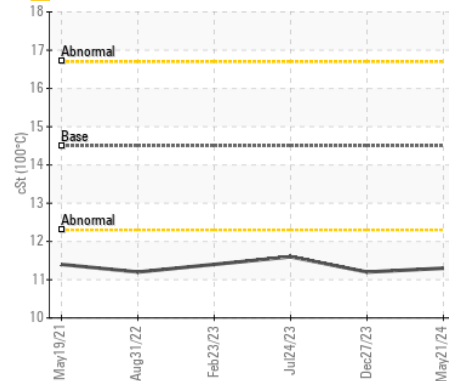
Copper (ppm)



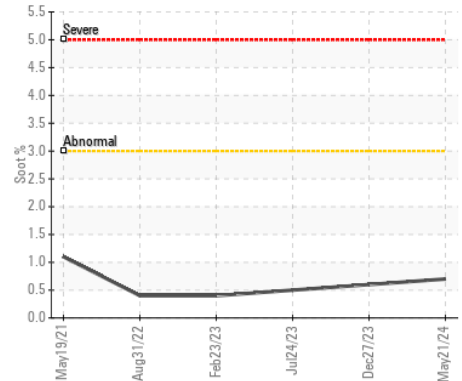
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0120309 **Received** : 24 May 2024  
**Lab Number** : 02637403 **Tested** : 27 May 2024  
**Unique Number** : 5786565 **Diagnosed** : 27 May 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )

**GFL Environmental - 245 - BJ Bear**  
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 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.