



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



Machine Id  
**429009**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0113259</b>	GFL0090853	GFL0055369
Sample Date		Client Info		<b>06 Mar 2024</b>	05 Sep 2023	24 Jun 2022
Machine Age	hrs	Client Info		<b>6798</b>	6568	5983
Oil Age	hrs	Client Info		<b>0</b>	0	604
Filter Age	hrs	Client Info		<b>0</b>	0	604
Oil Changed		Client Info		<b>N/A</b>	N/A	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	<b>6</b>	10	4
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>2</b>	4	1
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

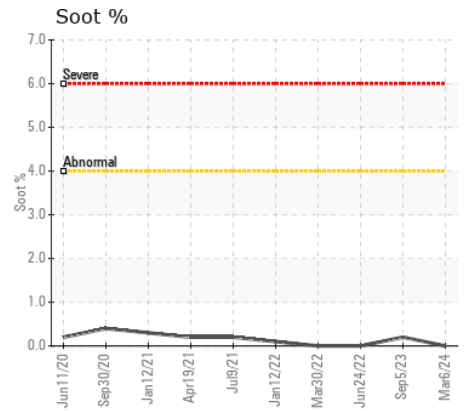
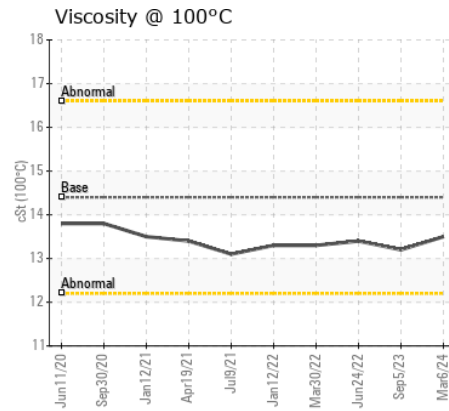
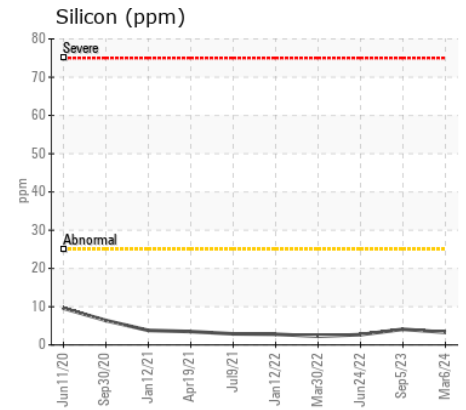
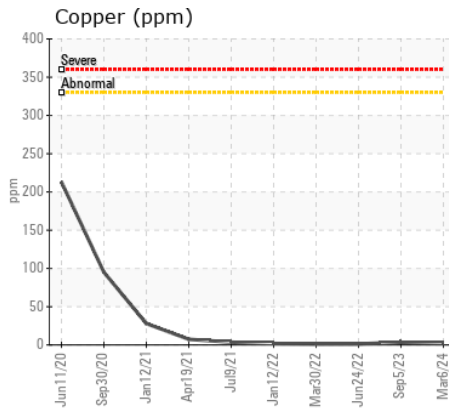
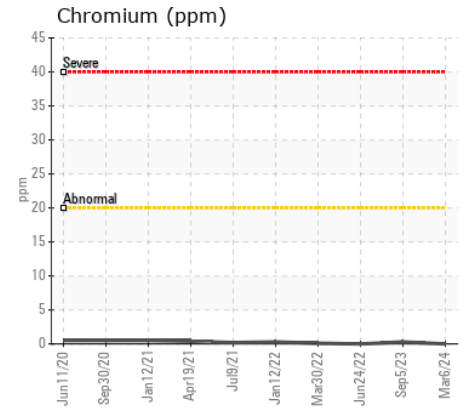
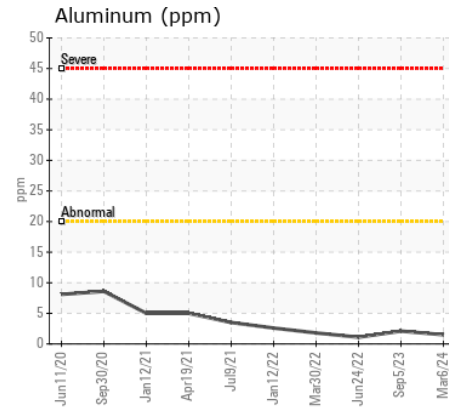
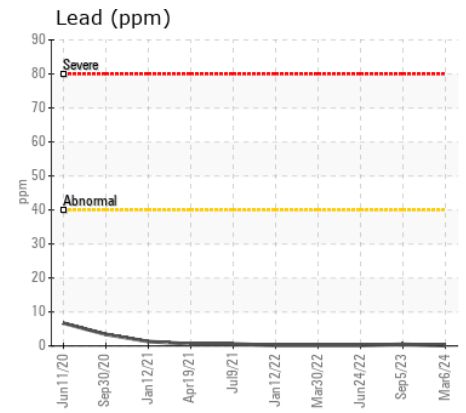
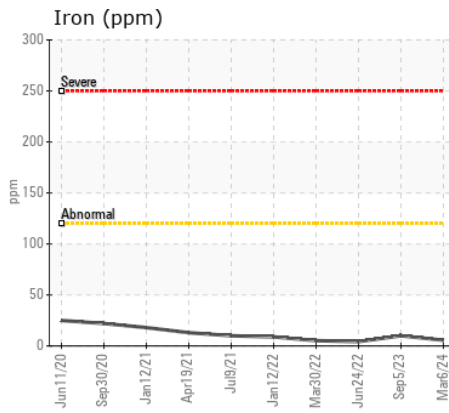
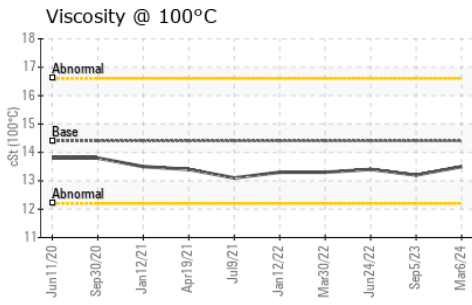
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>3</b>	4	3
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	3	1
Fuel		WC Method	>3.0	<b>&lt;1.0</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*	>4	<b>0</b>	0.2	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>6.1</b>	8.1	7.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>17.9</b>	20.2	20.5
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>158	<b>2</b>	3	2
Boron	ppm	ASTM D5185(m)	250	<b>7</b>	6	6
Barium	ppm	ASTM D5185(m)	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	100	<b>57</b>	57	56
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	<b>902</b>	929	917
Calcium	ppm	ASTM D5185(m)	3000	<b>1022</b>	1043	1081
Phosphorus	ppm	ASTM D5185(m)	1150	<b>976</b>	998	983
Zinc	ppm	ASTM D5185(m)	1350	<b>1113</b>	1154	1148
Sulfur	ppm	ASTM D5185(m)	4250	<b>2661</b>	2437	2598
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>13.7</b>	14.8	14.7
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	<b>13.5</b>	13.2	13.4



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0113259  
**Lab Number** : 02620427  
**Unique Number** : 5737537  
**Test Package** : MOB 1

**Received** : 07 Mar 2024  
**Tested** : 07 Mar 2024  
**Diagnosed** : 07 Mar 2024 - Wes Davis

**GFL Environmental - 246 - Windsor**  
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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.