



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

Area  
**GFL216**  
Machine Id  
**4602**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0111708</b>	GFL0101407	GFL0093793
Sample Date		Client Info		<b>05 Mar 2024</b>	06 Dec 2023	22 Sep 2023
Machine Age	kms	Client Info		<b>409314</b>	399238	389315
Oil Age	kms	Client Info		<b>0</b>	0	0
Filter Age	kms	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	<b>8</b>	5	6
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	1	2
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>68</b>	2	<1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

**CONTAMINATION**

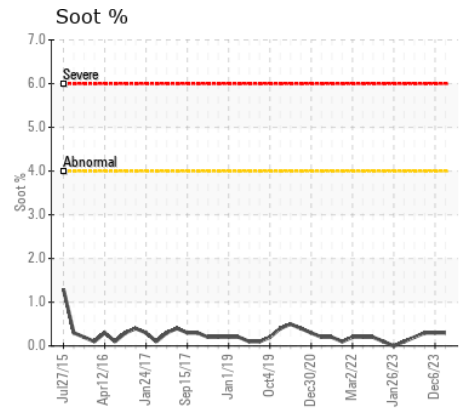
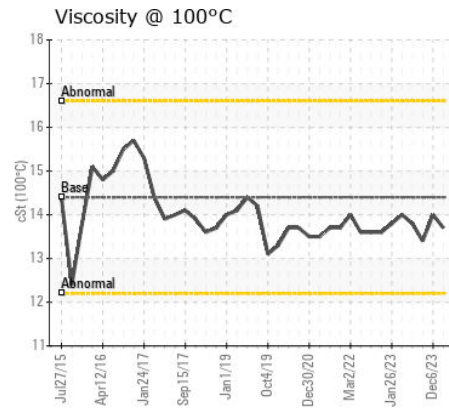
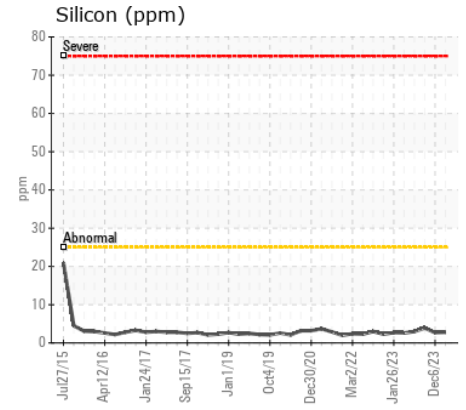
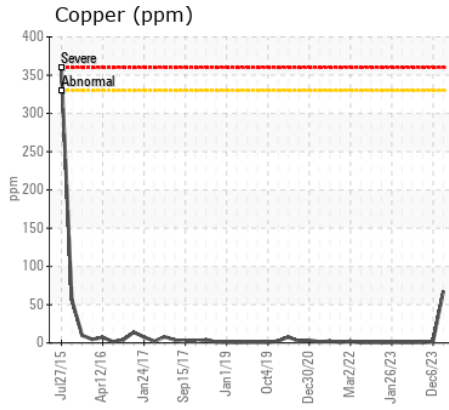
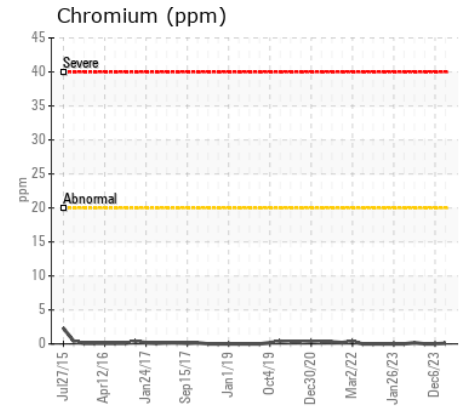
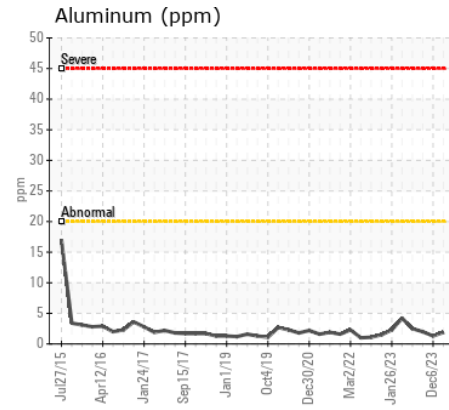
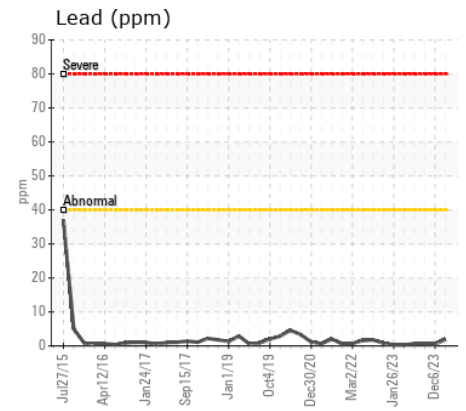
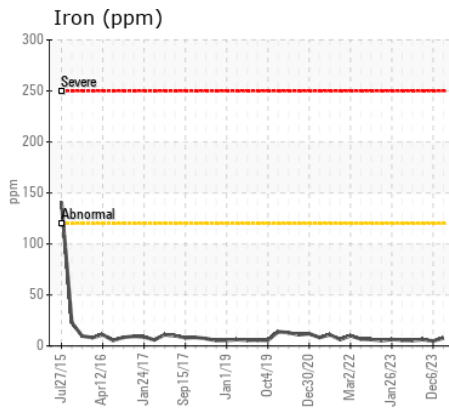
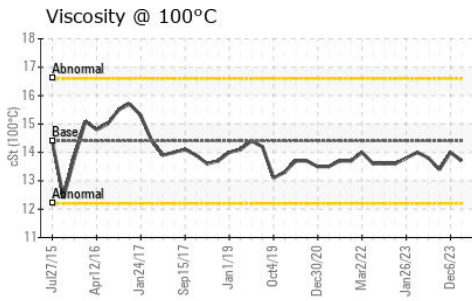
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>3</b>	3	4
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	<1	0
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>0.3</b>	0.3	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.1</b>	8.8	8.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>19.2</b>	18.5	19.2
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)	>216	<b>5</b>	3	6
Boron	ppm	ASTM D5185(m)	250	<b>2</b>	2	5
Barium	ppm	ASTM D5185(m)	10	<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)	100	<b>57</b>	59	61
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	450	<b>938</b>	953	951
Calcium	ppm	ASTM D5185(m)	3000	<b>1030</b>	1049	1042
Phosphorus	ppm	ASTM D5185(m)	1150	<b>981</b>	975	986
Zinc	ppm	ASTM D5185(m)	1350	<b>1143</b>	1185	1184
Sulfur	ppm	ASTM D5185(m)	4250	<b>2645</b>	2553	2471
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.0</b>	15.7	15.9
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	<b>13.7</b>	14.0	13.4



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0111708  
**Lab Number** : 02620754  
**Unique Number** : 5737864  
**Test Package** : MOB 1  
**Received** : 08 Mar 2024  
**Tested** : 08 Mar 2024  
**Diagnosed** : 08 Mar 2024 - Wes Davis

**GFL Environmental - 252 - GTA Hauling**  
 3668 Weston Road  
 North York, ON  
 CA M9L 1W2  
 Contact: Amanda Cipollone  
 acipollone@gflenv.com

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.

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F: