



Area
GFL216
Machine Id
4603
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		GFL0113888	GFL0101399	GFL0093781
Sample Date		Client Info		06 Mar 2024	12 Dec 2023	11 Sep 2023
Machine Age	hrs	Client Info		24153	23601	425318
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	6	6	5
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	4	3	1
Lead	ppm	ASTM D5185(m)	>40	1	1	2
Copper	ppm	ASTM D5185(m)	>330	6	<1	<1
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

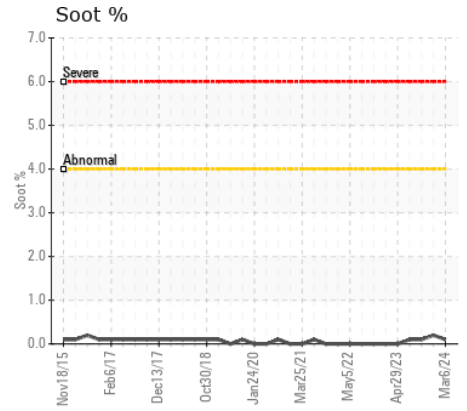
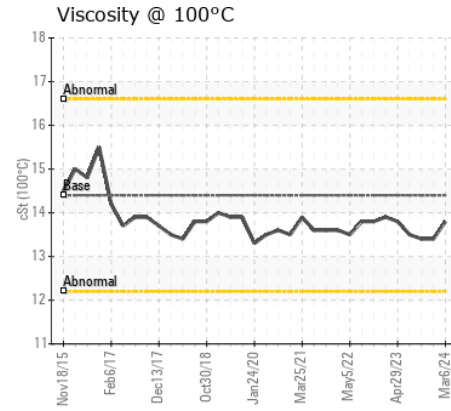
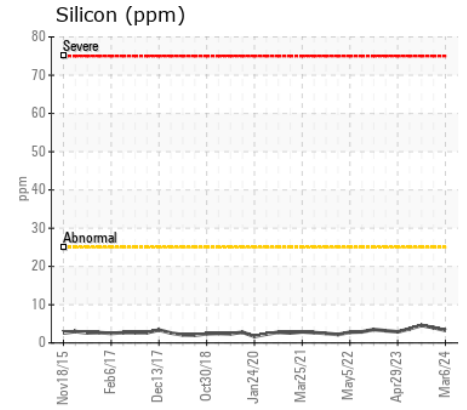
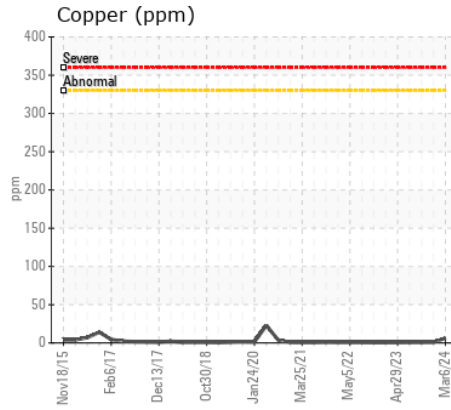
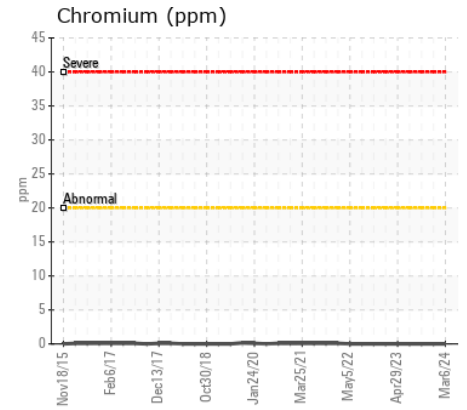
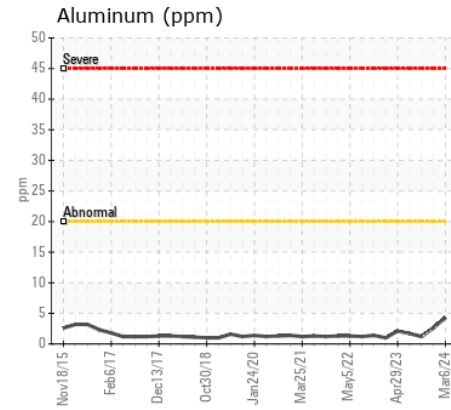
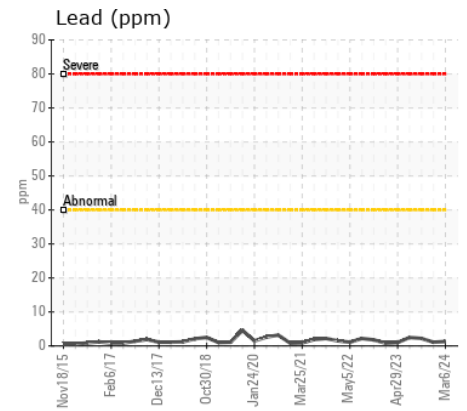
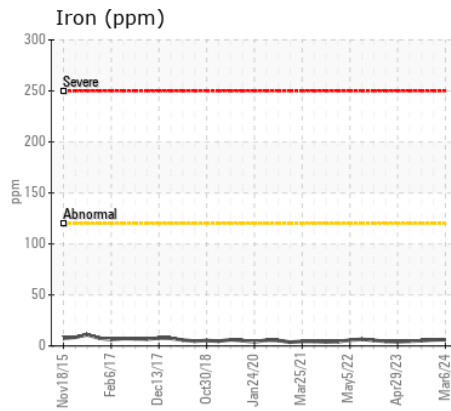
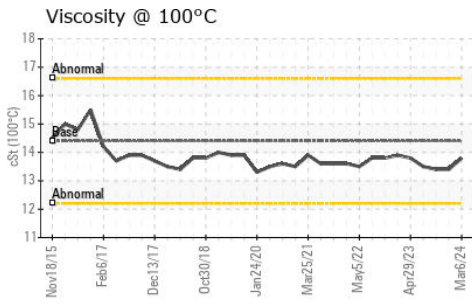
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	3	4	5
Potassium	ppm	ASTM D5185(m)	>20	2	0	2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.1	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	8.8	8.9	8.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.7	19.3	19.8
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	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)	>216	4	3	5
Boron	ppm	ASTM D5185(m)	250	2	4	4
Barium	ppm	ASTM D5185(m)	10	0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	100	58	61	60
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	450	950	956	951
Calcium	ppm	ASTM D5185(m)	3000	1029	1030	1038
Phosphorus	ppm	ASTM D5185(m)	1150	985	968	950
Zinc	ppm	ASTM D5185(m)	1350	1164	1193	1173
Sulfur	ppm	ASTM D5185(m)	4250	2525	2455	2284
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.6	16.6	16.0
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	13.8	13.4	13.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113888 **Received** : 08 Mar 2024
Lab Number : 02620745 **Tested** : 08 Mar 2024
Unique Number : 5737855 **Diagnosed** : 08 Mar 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Visual)

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.

T:
F: