



Area
GFL216
Machine Id
413071
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0108435	GFL0099676	GFL0087411
Sample Date		Client Info		09 Jan 2024	27 Oct 2023	27 Jun 2023
Machine Age	kms	Client Info		81473	72997	51895
Oil Age	kms	Client Info		0	0	0
Filter Age	kms	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

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>120	9	12	11
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	2	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	1	1
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	2	3	5
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

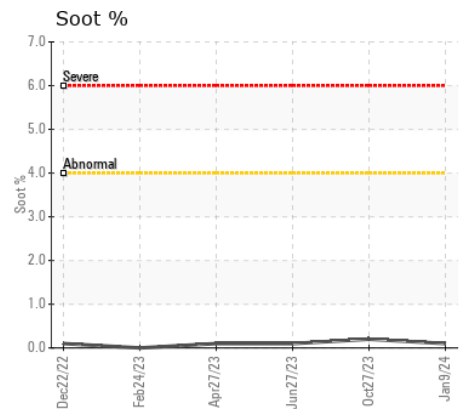
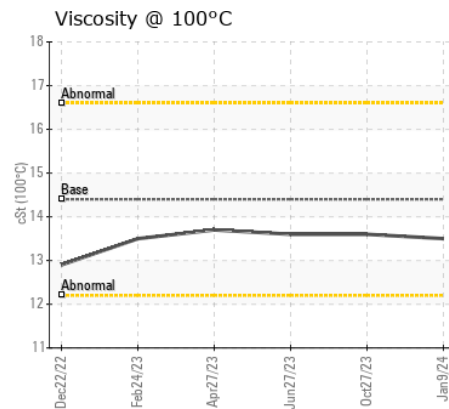
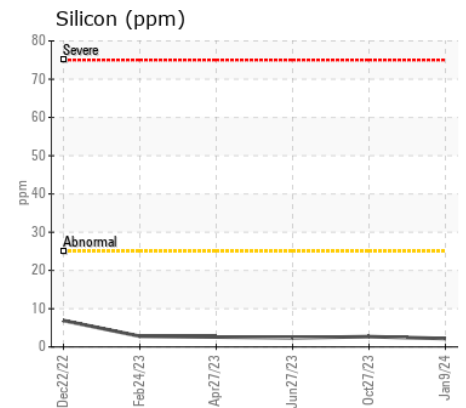
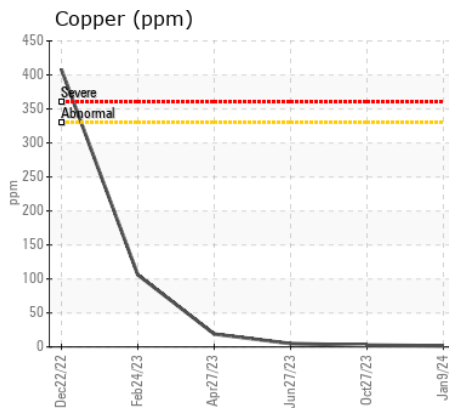
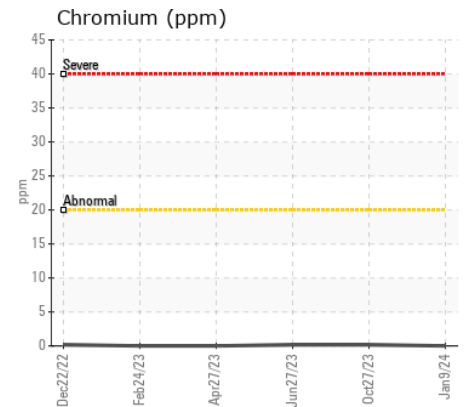
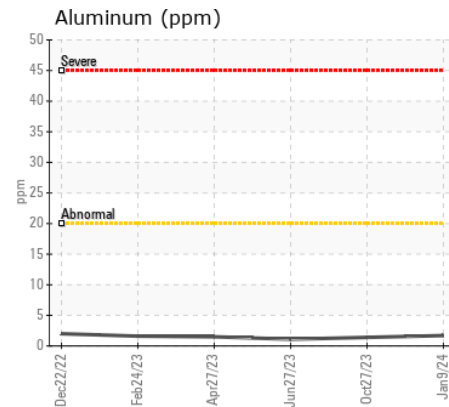
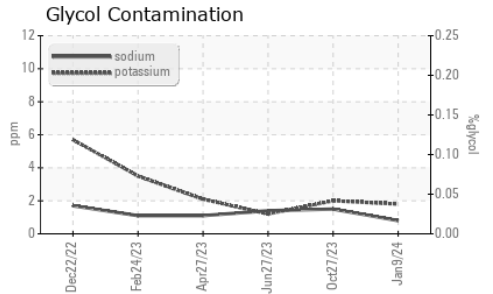
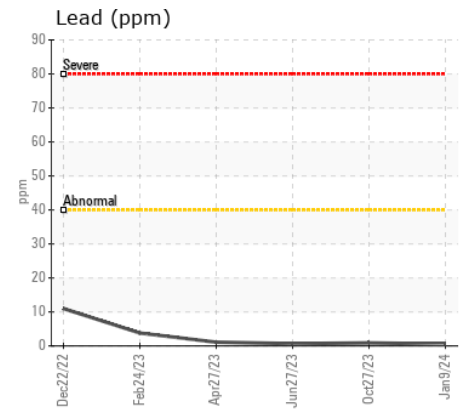
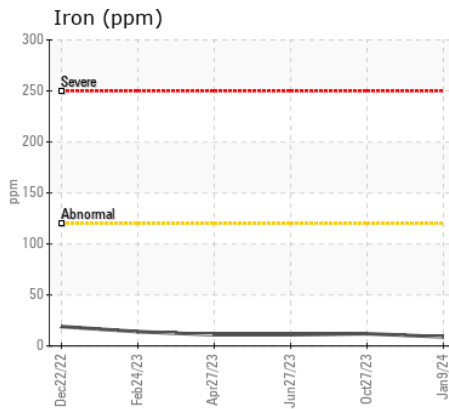
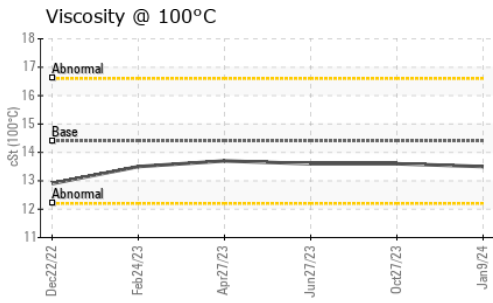
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	2	3	2
Potassium	ppm	ASTM D5185(m)	>20	2	2	1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.1	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	8.0	8.0	7.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.1	19.3	19.5
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	<1	2	1
Boron	ppm	ASTM D5185(m)	250	2	4	6
Barium	ppm	ASTM D5185(m)	10	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	100	60	60	59
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)	450	978	973	952
Calcium	ppm	ASTM D5185(m)	3000	1073	1054	1017
Phosphorus	ppm	ASTM D5185(m)	1150	1029	997	1057
Zinc	ppm	ASTM D5185(m)	1350	1187	1201	1178
Sulfur	ppm	ASTM D5185(m)	4250	2675	2521	2528
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.9	14.9	14.7
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	13.5	13.6	13.6



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 252 - GTA Hauling
Sample No. : GFL0108435 **Received** : 12 Jan 2024 3668 Weston Road
Lab Number : 02608368 **Diagnosed** : 15 Jan 2024 North York, ON
Unique Number : 5709454 **Diagnostician** : Kevin Marson CA M9L 1W2
Test Package : MOB 1 (Additional Tests: Glycol) 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.