



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[1281541]
Machine Id
810046
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		GFL0093979	GFL0093951	GFL0093944
Sample Date		Client Info		29 May 2024	15 Feb 2024	14 Nov 2023
Machine Age	hrs	Client Info		5852	5266	4704
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	31	30	24
Chromium	ppm	ASTM D5185(m)	>5	1	2	1
Nickel	ppm	ASTM D5185(m)	>2	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>30	3	4	4
Lead	ppm	ASTM D5185(m)	>30	0	<1	<1
Copper	ppm	ASTM D5185(m)	>150	2	3	3
Tin	ppm	ASTM D5185(m)	>5	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	VLITE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

There is no indication of any contamination in the oil.

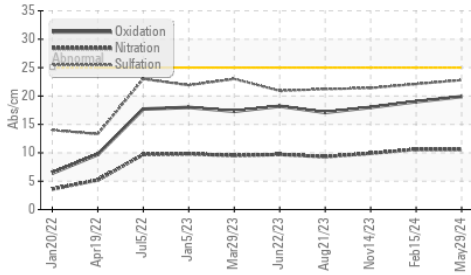
Silicon	ppm	ASTM D5185(m)	>20	5	4	5
Potassium	ppm	ASTM D5185(m)	>20	3	4	6
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.6	0.6	0.5
Nitration	Abs/cm	ASTM D7624*	>20	10.6	10.6	9.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.8	22.1	21.4
Silt	scalar	Visual*	NONE	VLITE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

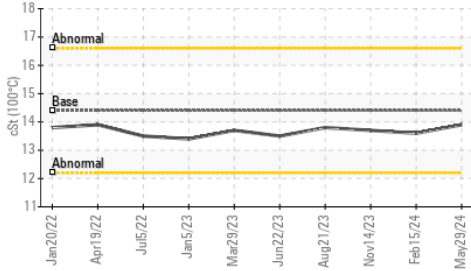
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>216	8	8	8
Boron	ppm	ASTM D5185(m)	250	4	5	6
Barium	ppm	ASTM D5185(m)	10	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	62	59	61
Manganese	ppm	ASTM D5185(m)		<1	0	0
Magnesium	ppm	ASTM D5185(m)	450	986	933	971
Calcium	ppm	ASTM D5185(m)	3000	1116	1119	1101
Phosphorus	ppm	ASTM D5185(m)	1150	1015	980	994
Zinc	ppm	ASTM D5185(m)	1350	1216	1158	1223
Sulfur	ppm	ASTM D5185(m)	4250	2387	2501	2452
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.9	19.0	18.0
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	13.9	13.6	13.7

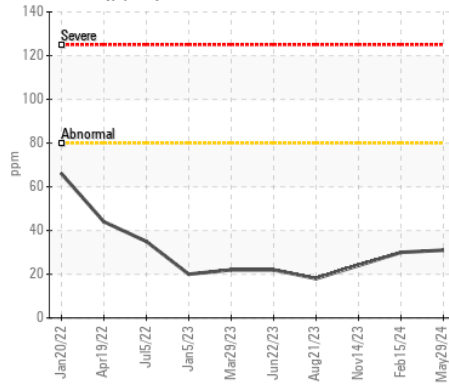
FT-IR (Direct Trend)



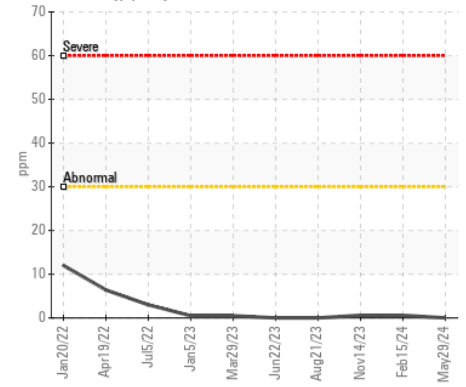
Viscosity @ 100°C



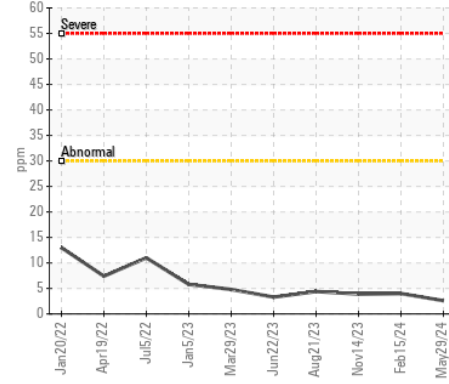
Iron (ppm)



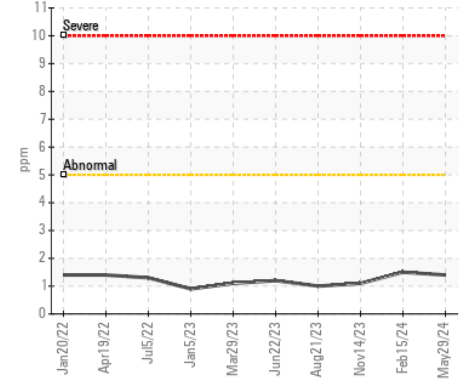
Lead (ppm)



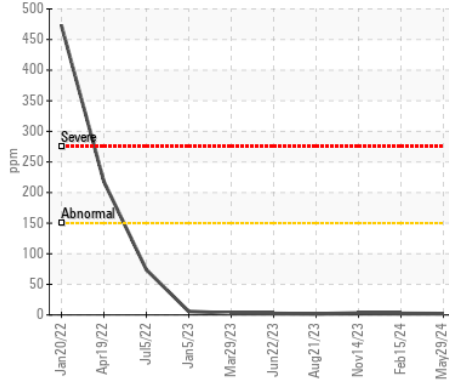
Aluminum (ppm)



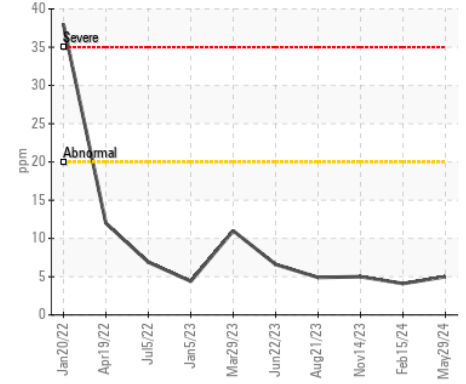
Chromium (ppm)



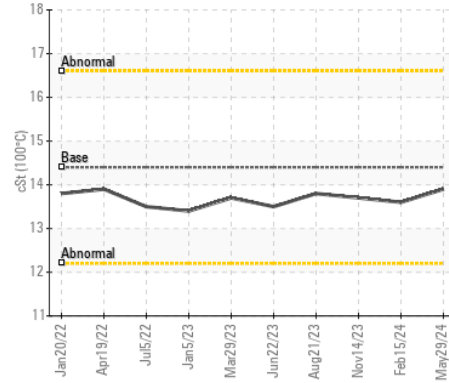
Copper (ppm)



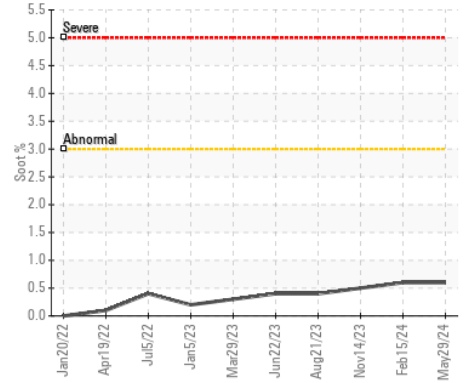
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0093979
Lab Number : 02638787
Unique Number : 5787949
Test Package : MOB 1 (Additional Tests: Visual)

GFL Environmental - 777 - Belleville-Municipal waste
 197 Putman Industrial Road
 Belleville, ON
 CA K8N 4Z6
 Contact: Ian Patton
 ipatton@gflenv.com
 T: (905)831-6297
 F: (905)426-3577

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.