



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
924003
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0102865	GFL0102871	GFL0078524
Sample Date		Client Info		27 Mar 2024	08 Jan 2024	20 Apr 2023
Machine Age	hrs	Client Info		0	0	20058
Oil Age	hrs	Client Info		21494	20961	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	17	12	16
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	4	6	6
Lead	ppm	ASTM D5185(m)	>40	0	<1	<1
Copper	ppm	ASTM D5185(m)	>330	7	6	6
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

Light fuel dilution occurring. No other contaminants were detected in the oil.

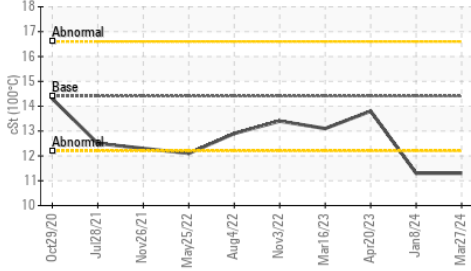
Silicon	ppm	ASTM D5185(m)	>25	3	4	9
Potassium	ppm	ASTM D5185(m)	>20	3	4	<1
Fuel	%	ASTM D7593*	>3.0	2.5	2.1	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.5	0.3	0
Nitration	Abs/cm	ASTM D7624*	>20	9.4	7.7	5.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.4	22.7	17.9
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

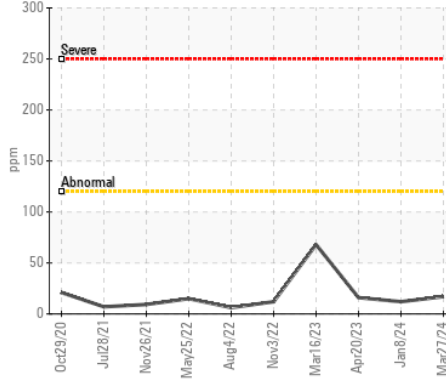
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>158	3	3	5
Boron	ppm	ASTM D5185(m)	250	33	33	5
Barium	ppm	ASTM D5185(m)	10	0	0	0
Molybdenum	ppm	ASTM D5185(m)	100	42	38	57
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)	450	478	453	933
Calcium	ppm	ASTM D5185(m)	3000	1654	1624	1096
Phosphorus	ppm	ASTM D5185(m)	1150	697	716	1066
Zinc	ppm	ASTM D5185(m)	1350	834	837	1163
Sulfur	ppm	ASTM D5185(m)	4250	1954	2096	2649
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.4	20.0	13.2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ 11.3	▲ 11.3	13.8

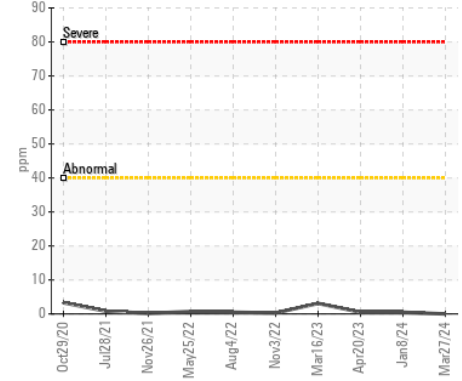
▲ Viscosity @ 100°C



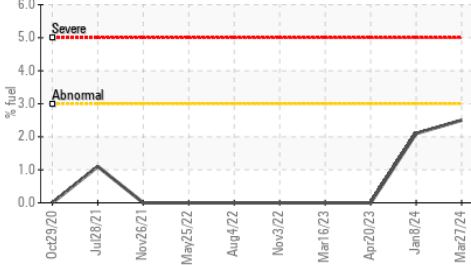
Iron (ppm)



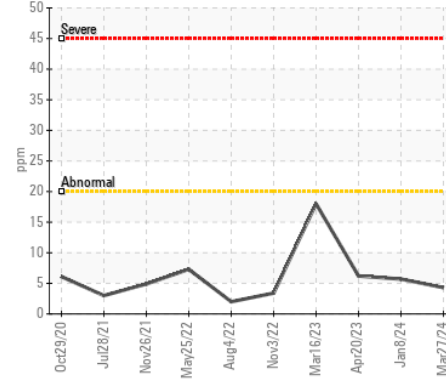
Lead (ppm)



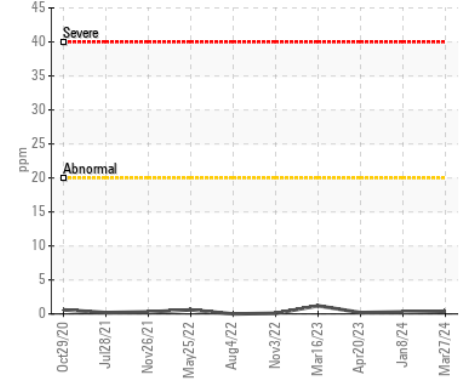
Fuel Dilution



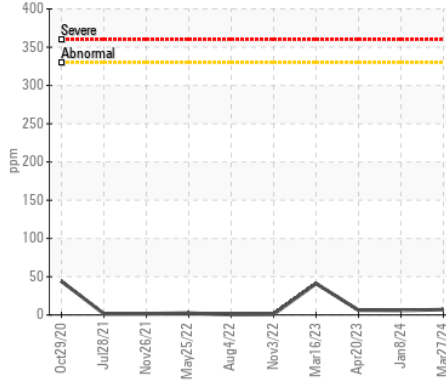
Aluminum (ppm)



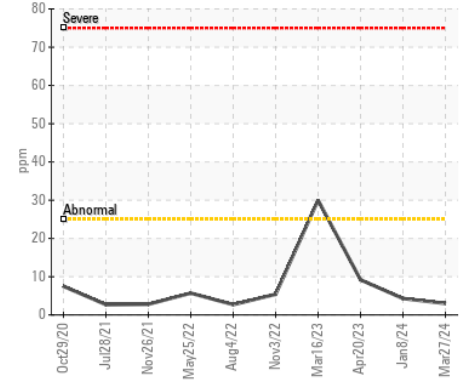
Chromium (ppm)



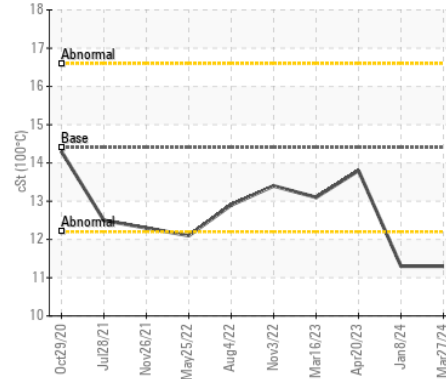
Copper (ppm)



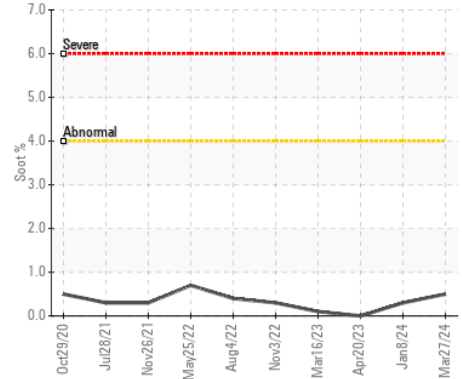
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

Sample No. : GFL0102865

Lab Number : 02625137

Unique Number : 5750256

Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

Received : 28 Mar 2024

Tested : 01 Apr 2024

Diagnosed : 01 Apr 2024 - Kevin Marson

GFL Environmental - 246 - Windsor

2700 Deziel Dr

Windsor, ON

CA N8W 5H8

Contact: Dave Varga

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T: (519)944-8009

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.