



Machine Id
727007
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- 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		GFL0113212	GFL0113232	GFL0102880
Sample Date		Client Info		03 Jun 2024	02 May 2024	21 Nov 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		11037	10920	10569
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				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	3	8	14
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>5	0	0	<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	1	3	3
Lead	ppm	ASTM D5185(m)	>40	0	0	<1
Copper	ppm	ASTM D5185(m)	>330	<1	1	2
Tin	ppm	ASTM D5185(m)	>15	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

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

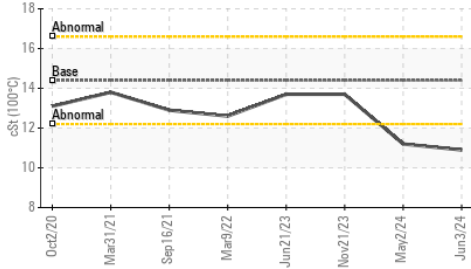
Silicon	ppm	ASTM D5185(m)	>25	3	3	3
Potassium	ppm	ASTM D5185(m)	>20	0	<1	4
Fuel	%	ASTM D7593*	>3.0	1.5	1.8	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0	0.2	0.5
Nitration	Abs/cm	ASTM D7624*	>20	5.8	8.2	9.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.1	23.1	24.5
Silt	scalar	Visual*	NONE	VLITE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
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

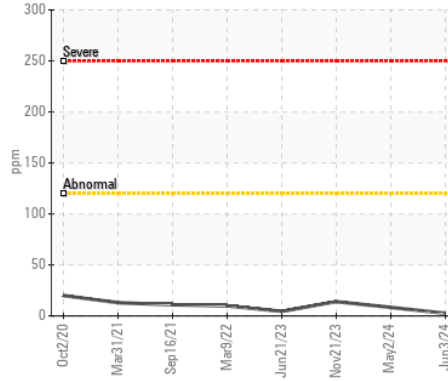
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>216	2	2	7
Boron	ppm	ASTM D5185(m)	250	50	42	47
Barium	ppm	ASTM D5185(m)	10	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	37	41	6
Manganese	ppm	ASTM D5185(m)		0	<1	0
Magnesium	ppm	ASTM D5185(m)	450	473	447	100
Calcium	ppm	ASTM D5185(m)	3000	1620	1729	1991
Phosphorus	ppm	ASTM D5185(m)	1150	731	725	891
Zinc	ppm	ASTM D5185(m)	1350	820	862	1123
Sulfur	ppm	ASTM D5185(m)	4250	2037	2087	2552
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.6	20.6	18.7
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ 10.9	▲ 11.2	13.7

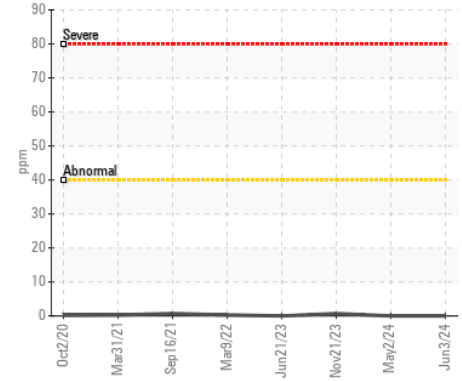
▲ Viscosity @ 100°C



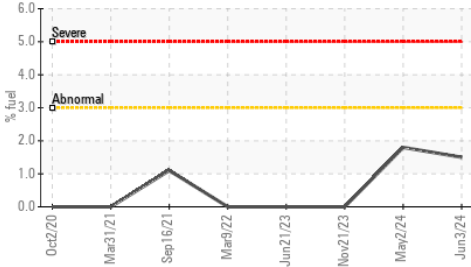
Iron (ppm)



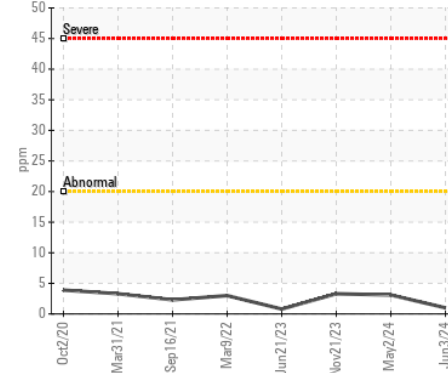
Lead (ppm)



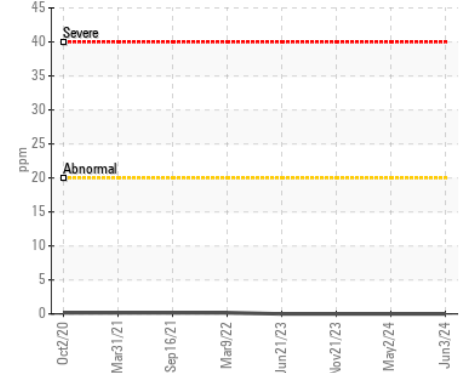
Fuel Dilution



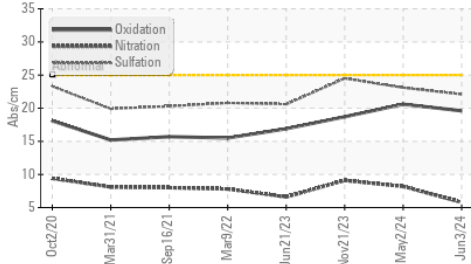
Aluminum (ppm)



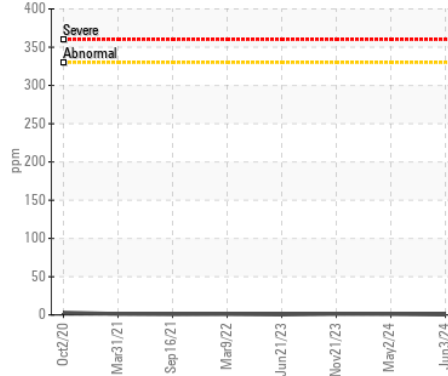
Chromium (ppm)



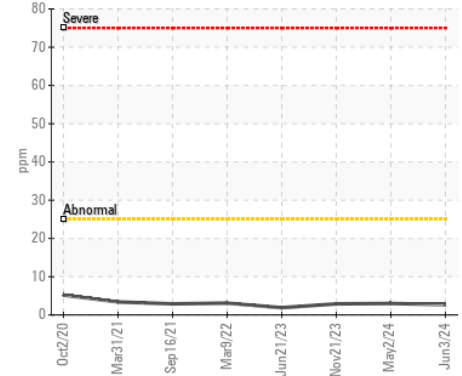
FT-IR (Direct Trend)



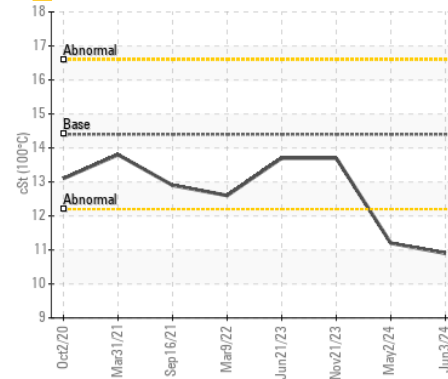
Copper (ppm)



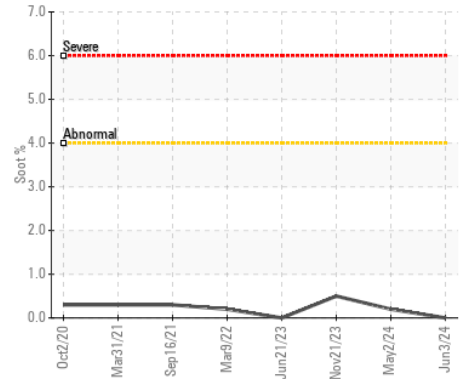
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113212
Lab Number : 02639796
Unique Number : 5788958
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, Visual)

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 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.*