



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		GFL0113232	GFL0102880	GFL0078513
Sample Date		Client Info		02 May 2024	21 Nov 2023	21 Jun 2023
Machine Age	hrs	Client Info		0	0	12843
Oil Age	hrs	Client Info		10920	10569	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				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	8	14	4
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>5	0	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	3	3	<1
Lead	ppm	ASTM D5185(m)	>40	0	<1	0
Copper	ppm	ASTM D5185(m)	>330	1	2	<1
Tin	ppm	ASTM D5185(m)	>15	0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

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

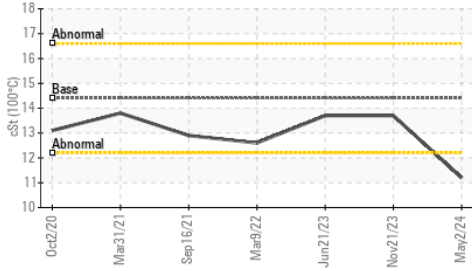
Silicon	ppm	ASTM D5185(m)	>25	3	3	2
Potassium	ppm	ASTM D5185(m)	>20	<1	4	4
Fuel	%	ASTM D7593*	>3.0	1.8	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.2	0.5	0
Nitration	Abs/cm	ASTM D7624*	>20	8.2	9.1	6.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.1	24.5	20.6
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

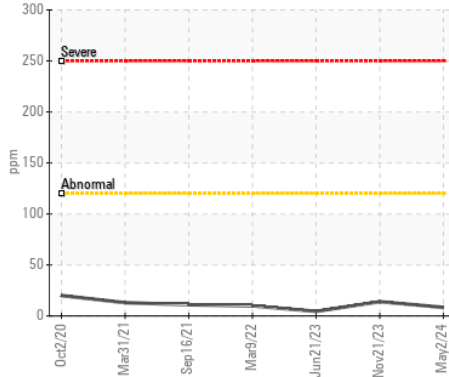
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>216	2	7	2
Boron	ppm	ASTM D5185(m)	250	42	47	133
Barium	ppm	ASTM D5185(m)	10	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	100	41	6	9
Manganese	ppm	ASTM D5185(m)		<1	0	0
Magnesium	ppm	ASTM D5185(m)	450	447	100	103
Calcium	ppm	ASTM D5185(m)	3000	1729	1991	2000
Phosphorus	ppm	ASTM D5185(m)	1150	725	891	962
Zinc	ppm	ASTM D5185(m)	1350	862	1123	1086
Sulfur	ppm	ASTM D5185(m)	4250	2087	2552	2796
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.6	18.7	16.9
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ 11.2	13.7	13.7

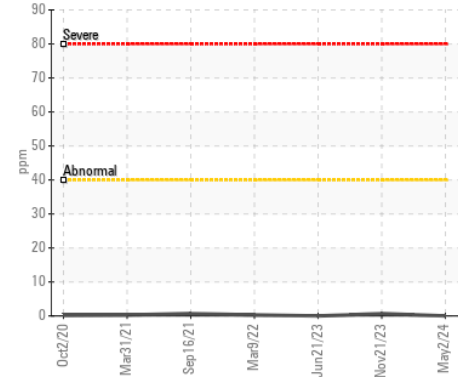
▲ Viscosity @ 100°C



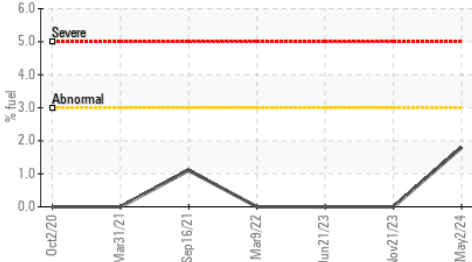
Iron (ppm)



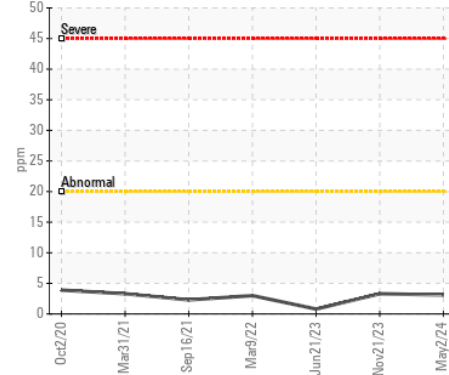
Lead (ppm)



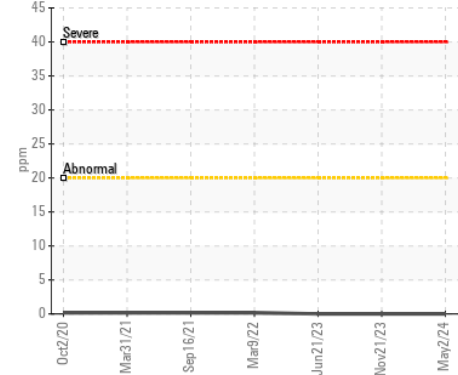
Fuel Dilution



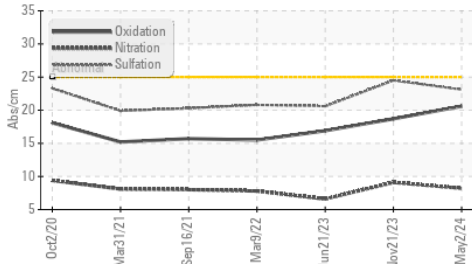
Aluminum (ppm)



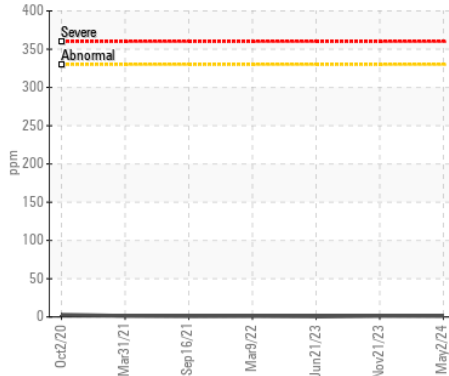
Chromium (ppm)



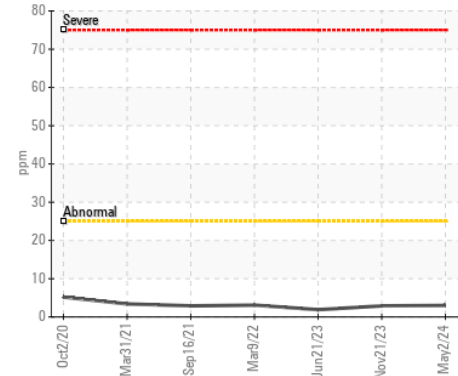
FT-IR (Direct Trend)



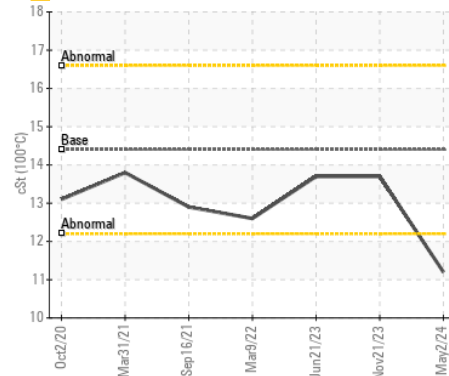
Copper (ppm)



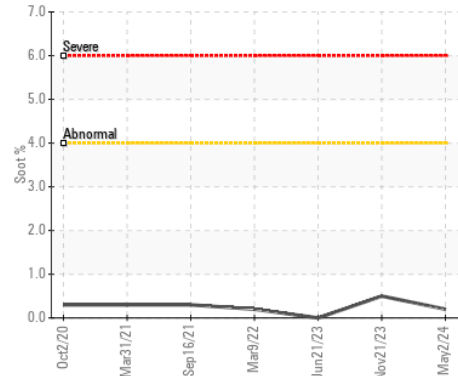
Silicon (ppm)



▲ Viscosity @ 100°C



Soot %



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113232
Lab Number : 02633407
Unique Number : 5774560
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 246 - Windsor
 2700 Deziel Dr
 Windsor, ON
 CA N8W 5H8
 Contact: Dave Varga
 dvarga@gflenv.com
 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.