WEAR CONTAMINATION FLUID CONDITION

NORMAL

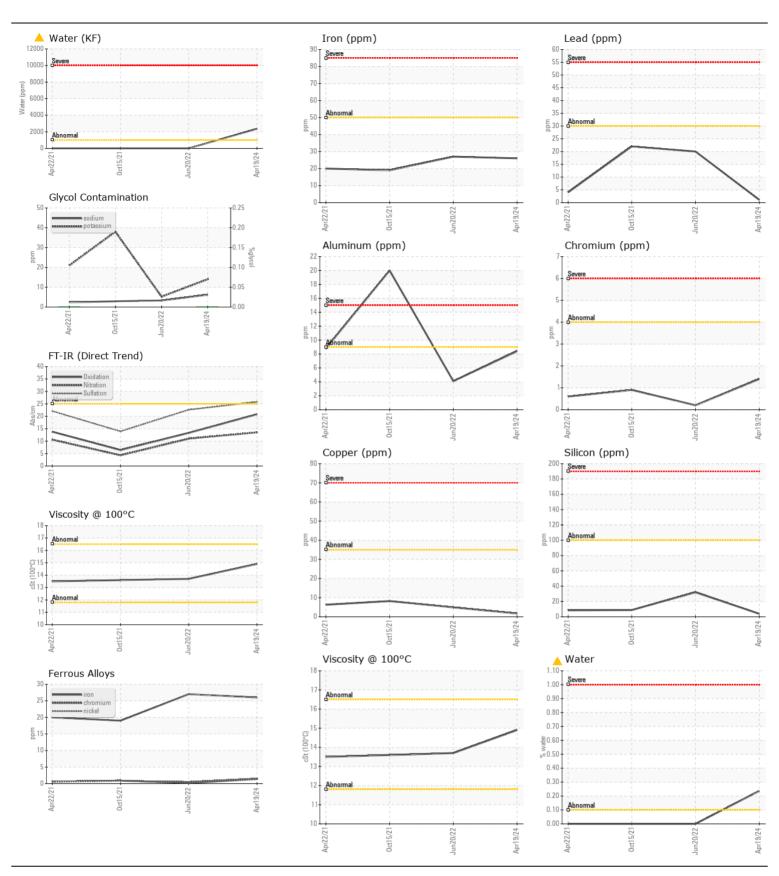
ABNORMAL

NORMAL

Machine Id **931001**

Component Natural Gas Engine

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		GFL0051754	GFL0051729	GFL003510
We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.	Sample Date		Client Info		19 Apr 2024	20 Jun 2022	15 Oct 202
	Machine Age	hrs	Client Info		8751	3735	2530
	Oil Age	hrs	Client Info		1200	1200	1200
	Filter Age	hrs	Client Info		1200	1200	1200
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				ABNORMAL	NORMAL	ATTENTION
WEAR	Iron	ppm	ASTM D5185(m)	>50	26	27	19
	Chromium	ppm		>4	1	<1	<1
All component wear rates are normal.	Nickel	ppm	ASTM D5185(m)	>2	2	<1	<1
	Titanium	ppm	ASTM D5185(m)		0	<1	<1
	Silver	ppm	ASTM D5185(m)	>3	0	0	<1
	Aluminum	ppm	ASTM D5185(m)		8	4	20
	Lead	ppm	ASTM D5185(m)	>30	1	20	22
	Copper	ppm	ASTM D5185(m)	>35	2	5	8
	Tin	ppm	ASTM D5185(m)	>4	<1	2	3
	Vanadium	ppm	ASTM D5185(m)		0	0	0
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>+100	4	32	9
70117AIIIII17ATTOIT	Potassium	ppm	ASTM D5185(m)		14	5	38
There is a moderate concentration of water present in the oil. Test for glycol is negative.	Water	%	ASTM D6304*	>0.1	▲ 0.236		
	ppm Water	ppm	ASTM D6304*		<u>^</u> 2364		
	Glycol	%	ASTM D7922*		0.0		
	Soot %	%	ASTM D7844*		0	0	0
	Nitration	Abs/cm	ASTM D7624*	>20	13.5	11.0	4.3
	Sulfation	Abs/.1mm	ASTM D7415*	>30	25.8	22.6	13.9
	Silt	scalar	Visual*	NONE	NONE		
	Debris	scalar	Visual*	NONE	NONE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
	Appearance	scalar	Visual*	NORML	NORML		
	Odor	scalar	Visual*	NORML	NORML	NORML	NORM
	Emulsified Water	scalar	Visual*	>0.1	.2 %	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)	>101	6	3	3
The oil is no longer serviceable due to the presence of contaminants.	Boron	ppm	ASTM D5185(m)		9	52	42
	Barium	ppm	ASTM D5185(m)		0	0	0
	Molybdenum	ppm	ASTM D5185(m)		63	4	7
	Manganese	ppm	ASTM D5185(m)		1	2	2
	Magnesium	ppm	ASTM D5185(m)		652	40	48
	Calcium	ppm	ASTM D5185(m)		1862	1719	1827
	Phosphorus	ppm	ASTM D5185(m)		776	735	796
	Zinc	ppm	ASTM D5185(m)		1025	897	955
	Sulfur	ppm	ASTM D5185(m)		2123	1726	1733
	Oxidation	Abs/.1mm	ASTM D7414*	>25	20.8	13.3	6.4
	Visc @ 100°C	cSt	ASTM D7279(m)		14.9	13.7	13.6





CALA ISO 17025:2017 Accredited

Laboratory

Sample No.

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : GFL0051754 Lab Number : 02630909

Received **Tested** Unique Number : 5772062 Diagnosed

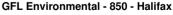
Test Package : MOB 1 (Additional Tests: Glycol, KF, Visual) To discuss this sample report, contact Customer Service at 1-800-268-2131.

: 23 Apr 2024

: 24 Apr 2024

: 24 Apr 2024 - Kevin Marson

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.



20 SIMMONDS DRIVE DARTMOUTH, NS CA B3B 1R3 Contact: Tony Yates tyates@gflenv.com T: (902)468-5551