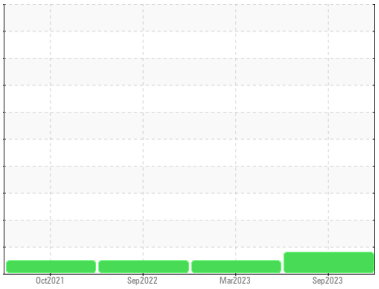
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
731053
Component
Natural Gas Engine
Fluid
RDL-3647 (--- LTR)

DIAGNOSIS

Recommendation

Please note that all wear metal and contaminant levels are being considered accumulative. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes BN to determine the suitability of the oil for continued use.

Wear

Lead ppm levels are marginal. A sharp increase in the lead level is noted. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0085896**	GFL0064338	GFL0054885
Sample Date		Client Info		**12 Sep 2023**	16 Mar 2023	19 Sep 2022
Machine Age	hrs	Client Info		**5305**	4250	3180
Oil Age	hrs	Client Info		**1200**	1200	1000
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**MARGINAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	**13**	12	10
Chromium	ppm	ASTM D5185(m)	>4	**2**	1	<1
Nickel	ppm	ASTM D5185(m)	>2	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	<1	<1
Silver	ppm	ASTM D5185(m)	>3	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>9	**2**	2	2
Lead	ppm	ASTM D5185(m)	>30	▲ **20**	3	2
Copper	ppm	ASTM D5185(m)	>35	**2**	2	2
Tin	ppm	ASTM D5185(m)	>4	**1**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	<1	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	50	**7**	9	9
Barium	ppm	ASTM D5185(m)	5	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	50	**63**	57	55
Manganese	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	560	**642**	611	587
Calcium	ppm	ASTM D5185(m)	1510	**1674**	1795	1682
Phosphorus	ppm	ASTM D5185(m)	780	**796**	794	768
Zinc	ppm	ASTM D5185(m)	870	**987**	994	974
Sulfur	ppm	ASTM D5185(m)	2040	**2209**	2122	2101
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>+100	**4**	4	4
Sodium	ppm	ASTM D5185(m)		**9**	8	8
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	<1

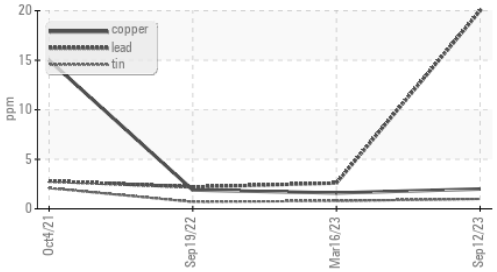
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**11.6**	10.2	11.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	**26.3**	24.4	23.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**20.5**	17.1	19.8

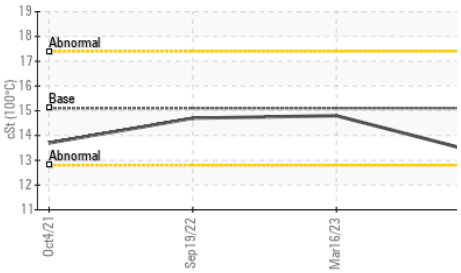
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

OIL ANALYSIS REPORT

Non-ferrous Metals



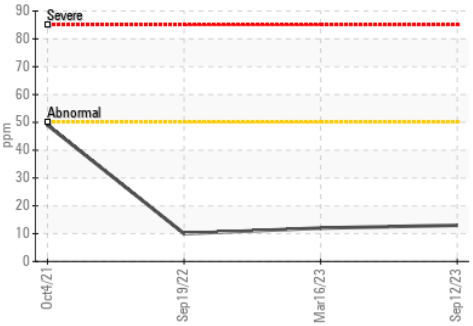
Viscosity @ 100°C



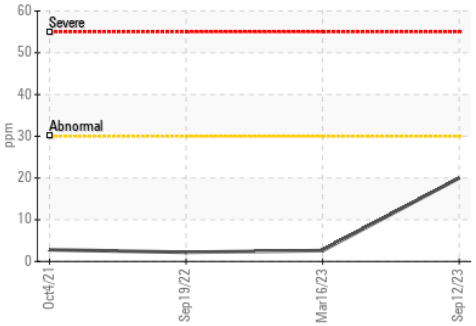
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	**13.3**	14.8	14.7

GRAPHS

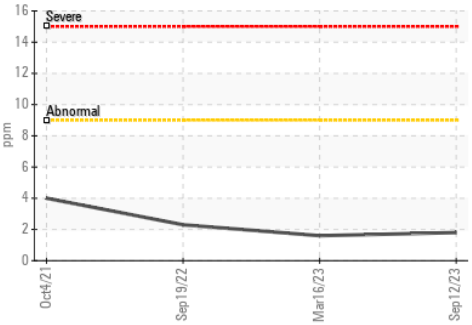
Iron (ppm)



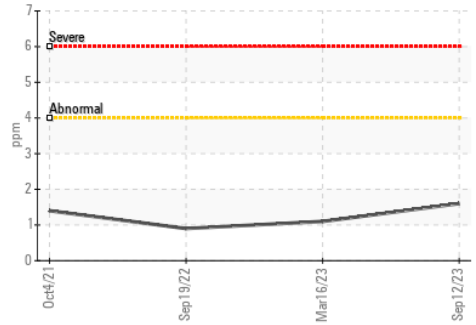
Lead (ppm)



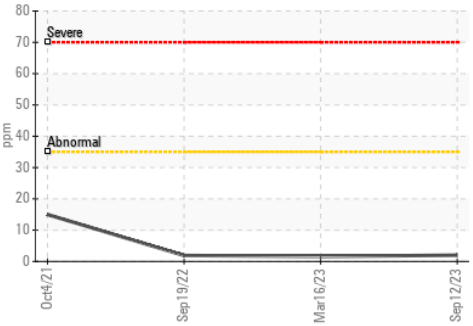
Aluminum (ppm)



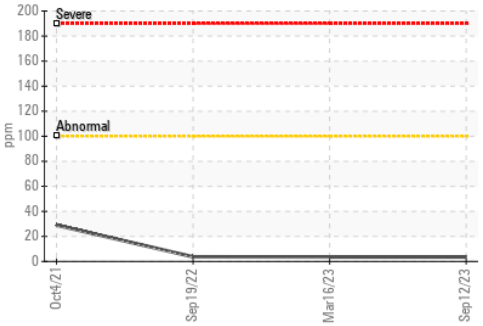
Chromium (ppm)



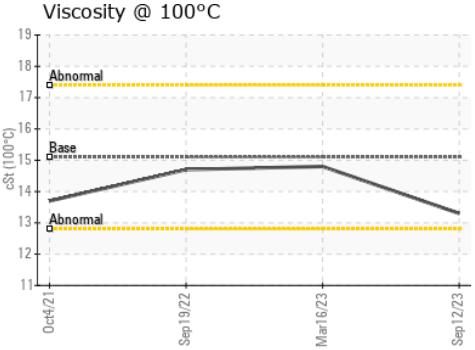
Copper (ppm)



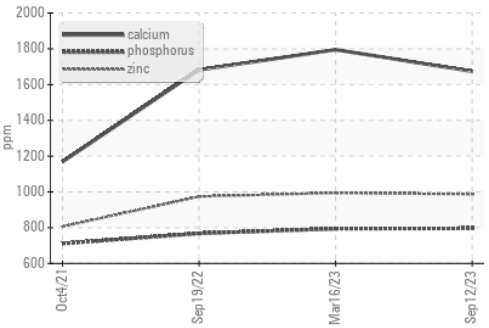
Silicon (ppm)



Viscosity @ 100°C



Additives



ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 209 - Hamilton**		
Sample No.	: GFL0085896	**Received**	: 14 Sep 2023
Lab Number	: 02582475	**Diagnosed**	: 14 Sep 2023
Unique Number	: 5643540	**Diagnostician**	: Kevin Marson
Test Package	: MOB 1		

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.

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