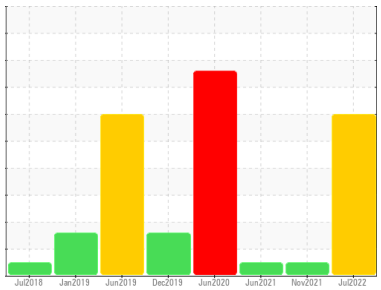
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
9173
Component
Natural Gas Engine
Fluid
RDL-3647 (--- LTR)

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
Chromium ppm levels are severe. Ring wear is indicated. A cylinder ring may be cracked or broken.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0049981**	GFL0037543	GFL0022735
Sample Date		Client Info		**20 Jul 2022**	25 Nov 2021	08 Jun 2021
Machine Age	hrs	Client Info		**14717**	13216	0
Oil Age	hrs	Client Info		**1501**	0	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>45	**43**	40	23
Chromium	ppm	ASTM D5185(m)	>4	**10**	7	4
Nickel	ppm	ASTM D5185(m)	>4	**1**	1	<1
Titanium	ppm	ASTM D5185(m)	>5	**<1**	0	<1
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>25	**6**	12	11
Lead	ppm	ASTM D5185(m)	>45	**4**	9	4
Copper	ppm	ASTM D5185(m)	>175	**14**	17	10
Tin	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	<1	<1
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**	4	5
Barium	ppm	ASTM D5185(m)	5	**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)	50	**59**	59	56
Manganese	ppm	ASTM D5185(m)	0	**1**	1	<1
Magnesium	ppm	ASTM D5185(m)	560	**617**	723	601
Calcium	ppm	ASTM D5185(m)	1510	**1837**	1666	1629
Phosphorus	ppm	ASTM D5185(m)	780	**755**	846	702
Zinc	ppm	ASTM D5185(m)	870	**1026**	1042	960
Sulfur	ppm	ASTM D5185(m)	2040	**2091**	2042	2093
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**6**	8	5
Sodium	ppm	ASTM D5185(m)		**11**	13	9
Potassium	ppm	ASTM D5185(m)	>20	**<1**	1	<1

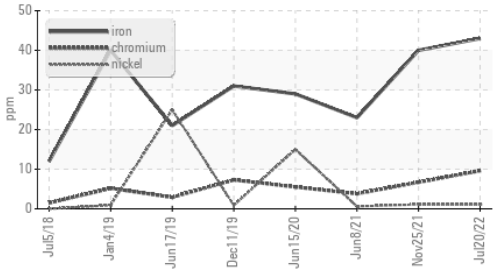
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	0	0
Nitration	Abs/cm	ASTM D7624*	>20	**10.2**	13.3	11.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	**22.4**	27.9	26.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**17.9**	23.2	20.7

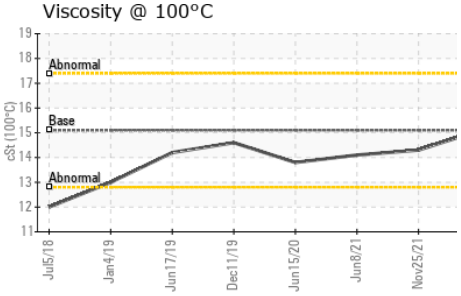
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

OIL ANALYSIS REPORT

Ferrous Alloys



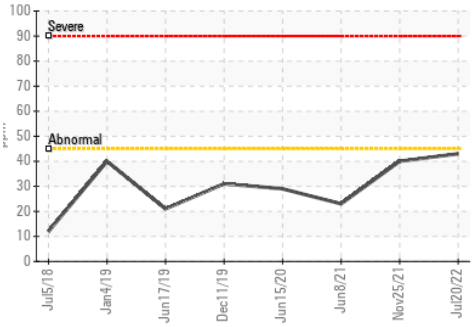
Viscosity @ 100°C



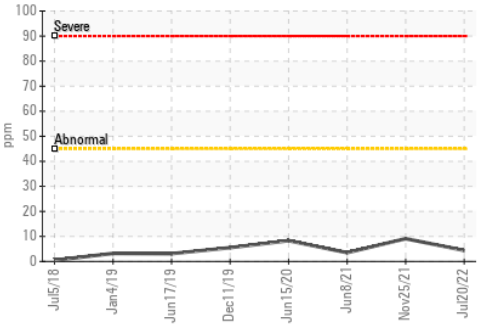
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	**15.1**	14.3	14.1

GRAPHS

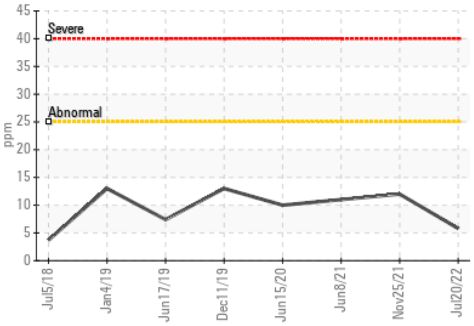
Iron (ppm)



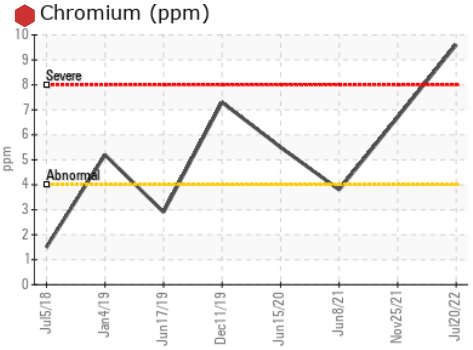
Lead (ppm)



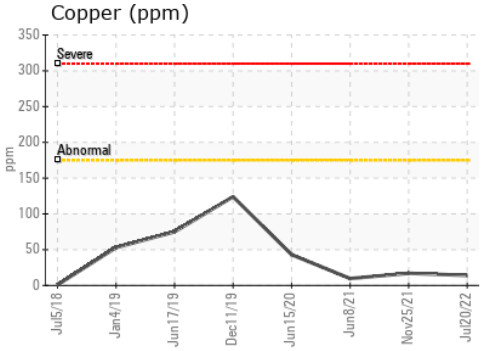
Aluminum (ppm)



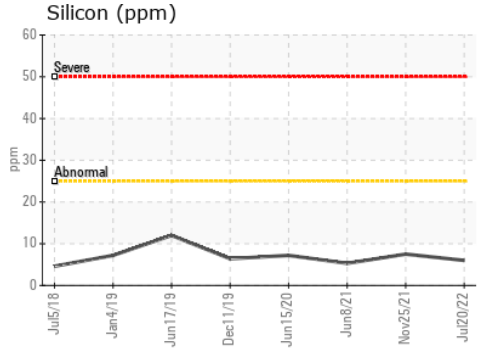
Chromium (ppm)



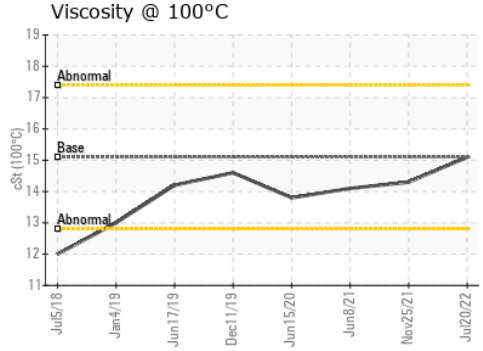
Copper (ppm)



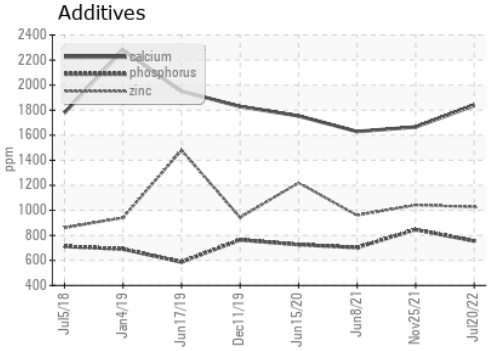
Silicon (ppm)



Viscosity @ 100°C



Additives



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0049981
Lab Number : 02501328
Unique Number : 5434289
Test Package : MOB 1

Received : 22 Jul 2022
Diagnosed : 22 Jul 2022
Diagnostician : Kevin Marson

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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