



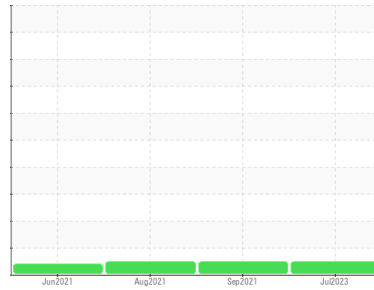
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
910077
 Component
Diesel Engine
 Fluid
CASTROL TECTION EXTRA SAE 15W-40 (--- LTR)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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	history 1	history 2
Sample Number	Client Info		GFL0086763	GFL0032463	GFL0025595
Sample Date	Client Info		06 Jul 2023	14 Sep 2021	04 Aug 2021
Machine Age	hrs	Client Info	1428	1428	1148
Oil Age	hrs	Client Info	1428	500	500
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history 1	history 2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185(m)	>120	15	14	14
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<1	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	1	2
Lead	ppm	ASTM D5185(m)	>40	2	1	<1
Copper	ppm	ASTM D5185(m)	>330	34	44	13
Tin	ppm	ASTM D5185(m)	>15	2	1	1
Antimony	ppm	ASTM D5185(m)		0	0	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	history 1	history 2	
Boron	ppm	ASTM D5185(m)	30	10	3	2
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		47	4	6
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	110	188	56	101
Calcium	ppm	ASTM D5185(m)	2740	2070	2339	2290
Phosphorus	ppm	ASTM D5185(m)	1240	960	886	921
Zinc	ppm	ASTM D5185(m)	1350	1128	1082	1080
Sulfur	ppm	ASTM D5185(m)	3520	2467	2564	2762
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185(m)	>25	4	5	6
Sodium	ppm	ASTM D5185(m)		5	5	4
Potassium	ppm	ASTM D5185(m)	>20	<1	2	2

INFRA-RED

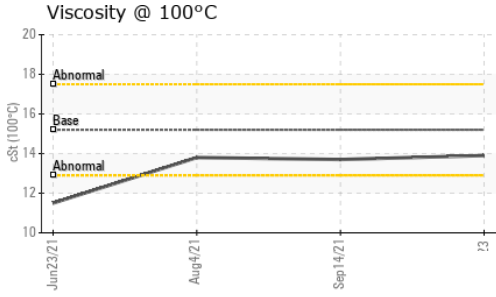
	method	limit/base	current	history 1	history 2	
Soot %	%	ASTM D7844*	>4	0.4	0.2	0.3
Nitration	Abs/cm	ASTM D7624*	>20	9.2	7.4	6.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.7	20.6	19.4

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.1	12.7	11.1



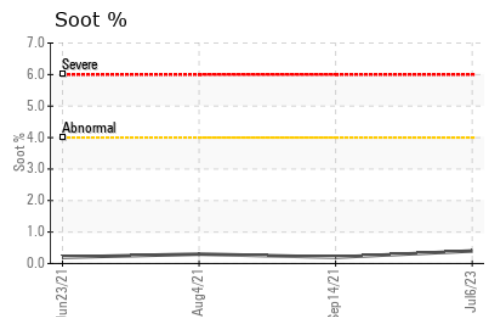
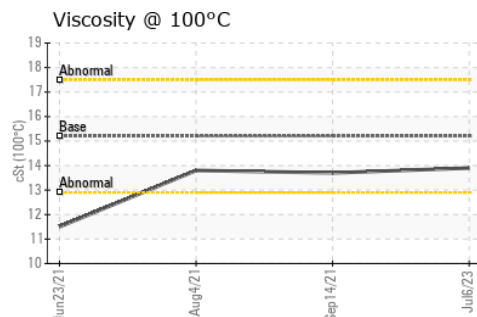
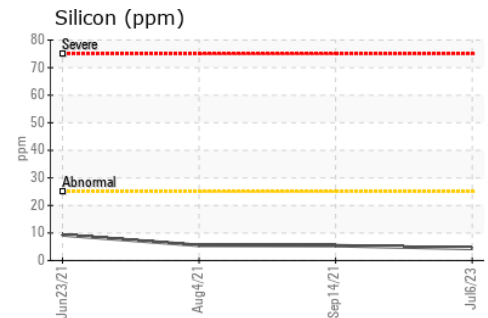
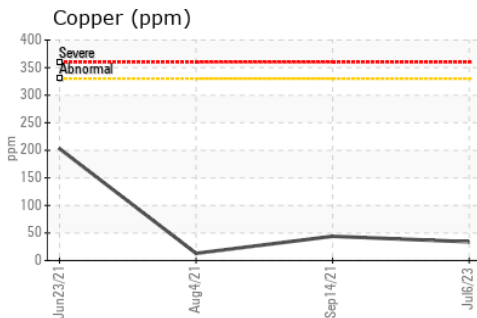
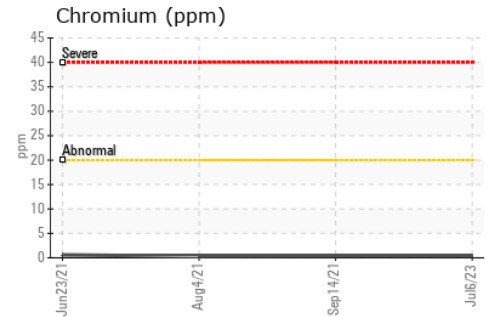
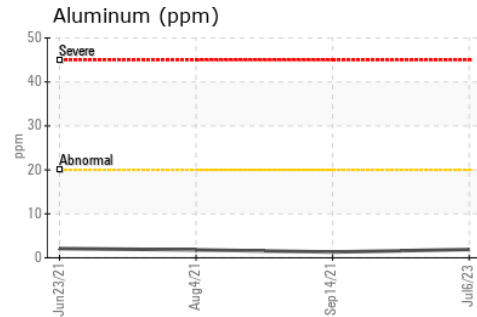
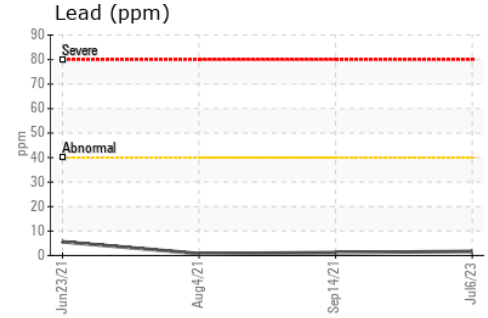
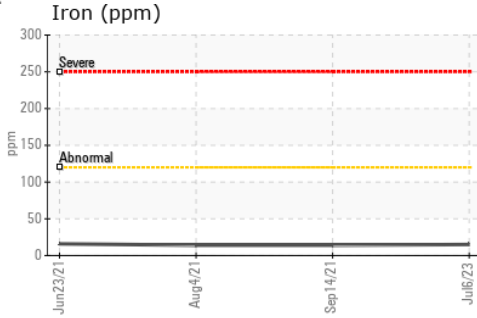
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	15.2	13.9	13.7

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 222 - Sandhill**
Sample No. : GFL0086763 **Received** : 10 Jul 2023 **SANDHILL DISPOSAL & RECYCLING DIVIS, 19 COMMERCE ROAD**
Lab Number : 02568662 **Diagnosed** : 10 Jul 2023 **ORANGEVILLE, ON**
Unique Number : 5605708 **Diagnostician** : Wes Davis **CA L9W 3X5**
Test Package : MOB 1 **Contact: GLENN COOK**
gcook@gflenv.com
T: (519)940-4167
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.