



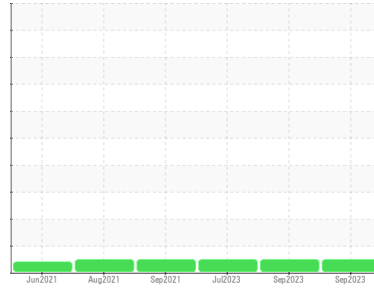
OIL ANALYSIS REPORT

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	history1	history2
Sample Number	Client Info		GFL0042859	GFL0094452	GFL0086763
Sample Date	Client Info		29 Sep 2023	18 Sep 2023	06 Jul 2023
Machine Age	hrs	Client Info	0	1428	1428
Oil Age	hrs	Client Info	0	1428	1428
Oil Changed	Client Info		N/A	N/A	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	3	12	15
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	<1	<1
Silver	ppm	ASTM D5185(m)	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	3	2
Lead	ppm	ASTM D5185(m)	>40	<1	2	2
Copper	ppm	ASTM D5185(m)	>330	2	18	34
Tin	ppm	ASTM D5185(m)	>15	0	1	2
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	history1	history2	
Boron	ppm	ASTM D5185(m)	30	54	15	10
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		86	80	47
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	110	67	108	188
Calcium	ppm	ASTM D5185(m)	2740	2112	2082	2070
Phosphorus	ppm	ASTM D5185(m)	1240	929	1001	960
Zinc	ppm	ASTM D5185(m)	1350	1133	1154	1128
Sulfur	ppm	ASTM D5185(m)	3520	2975	2549	2467
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	3	4	4
Sodium	ppm	ASTM D5185(m)		3	5	5
Potassium	ppm	ASTM D5185(m)	>20	1	<1	<1

INFRA-RED

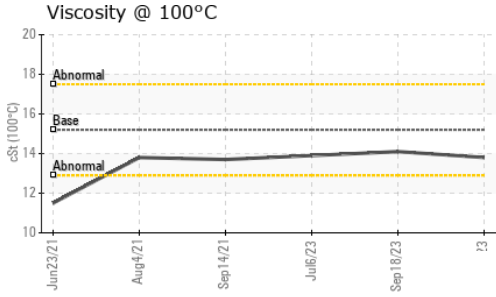
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0.1	0.4	0.4
Nitration	Abs/cm	ASTM D7624*	>20	8.0	9.7	9.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.0	20.4	20.7

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.0	16.2	15.1



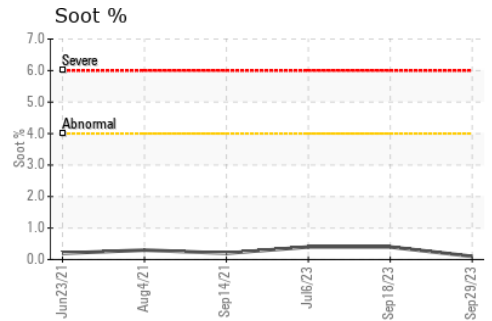
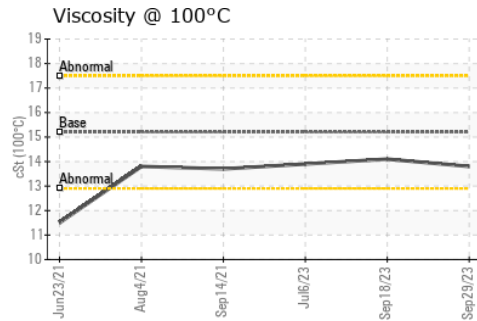
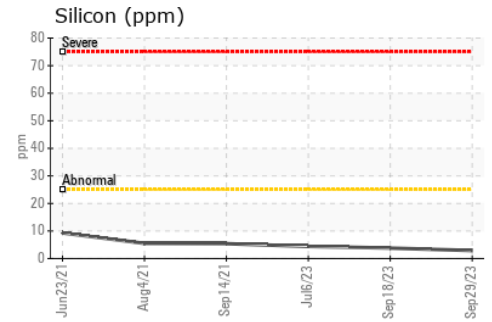
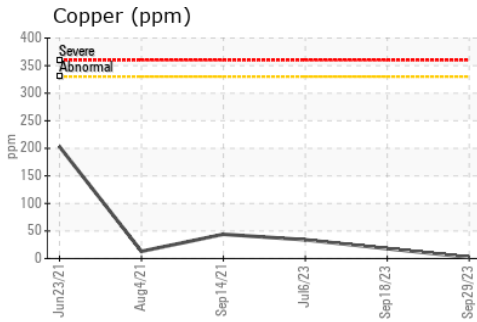
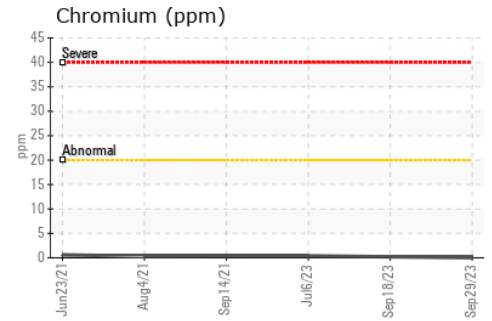
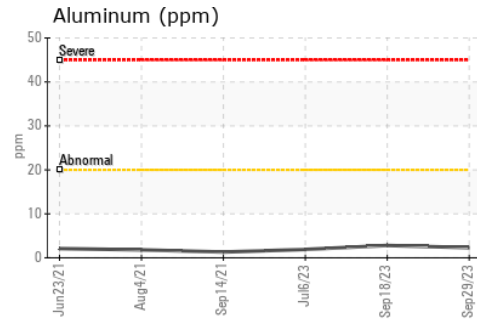
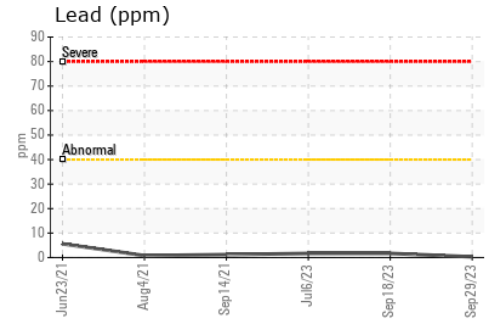
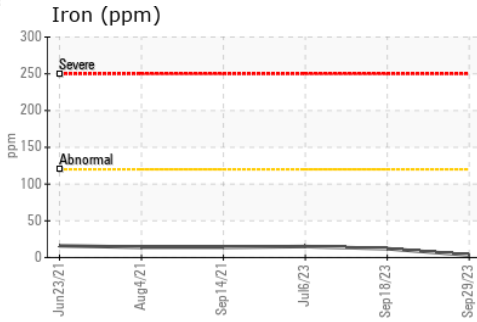
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.2	13.8	14.1

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0042859
Lab Number : 02586621
Unique Number : 5655687
Test Package : MOB 1

GFL Environmental - 222 - Sandhill
 SANDHILL DISPOSAL & RECYCLING DIVIS, 19 COMMERCE ROAD
 ORANGEVILLE, ON
 CA L9W 3X5
 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.