



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
400573
Component
Diesel Engine
Fluid
CASTROL 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0100709	GFL0093118	GFL0070456
Sample Date		Client Info		06 Jun 2024	12 Dec 2023	16 Jun 2023
Machine Age	kms	Client Info		700612	690048	662055
Oil Age	kms	Client Info		0	0	0
Filter Age	kms	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	43	▲ 113	▲ 123
Chromium	ppm	ASTM D5185(m)	>5	2	▲ 6	▲ 7
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>30	18	29	▲ 35
Lead	ppm	ASTM D5185(m)	>30	0	<1	0
Copper	ppm	ASTM D5185(m)	>150	26	10	10
Tin	ppm	ASTM D5185(m)	>5	<1	1	1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

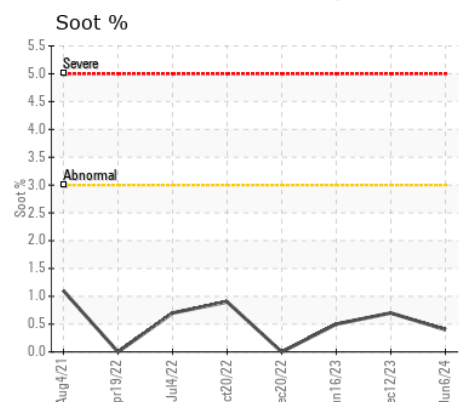
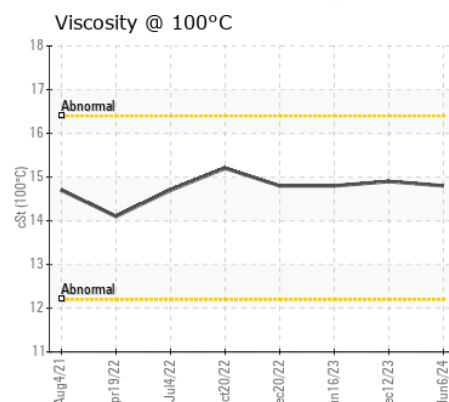
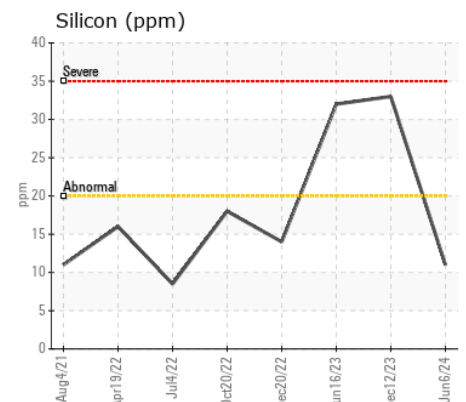
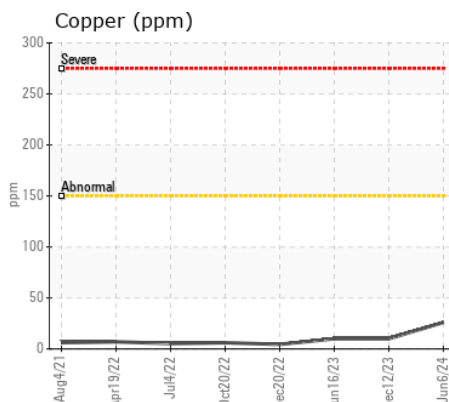
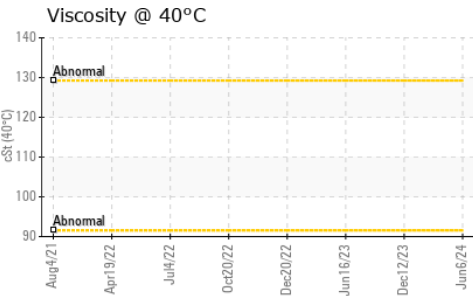
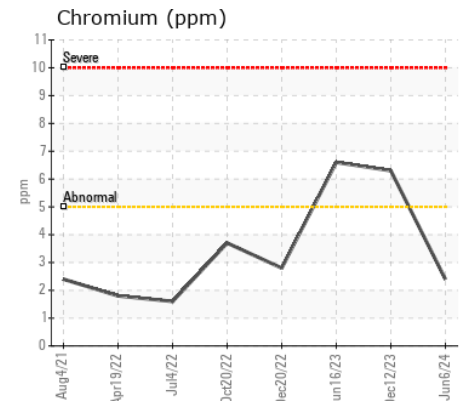
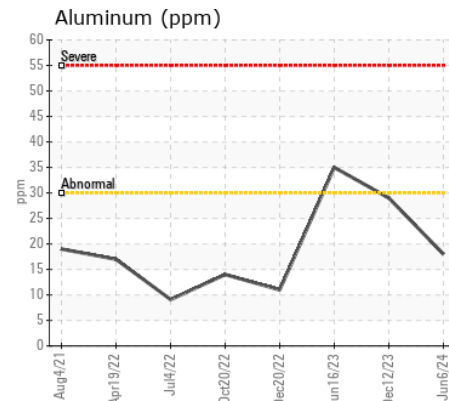
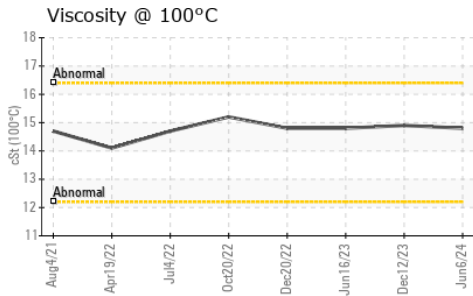
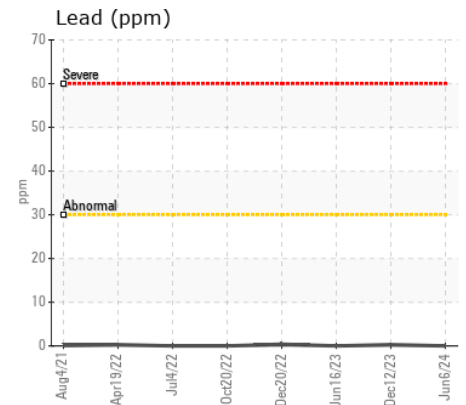
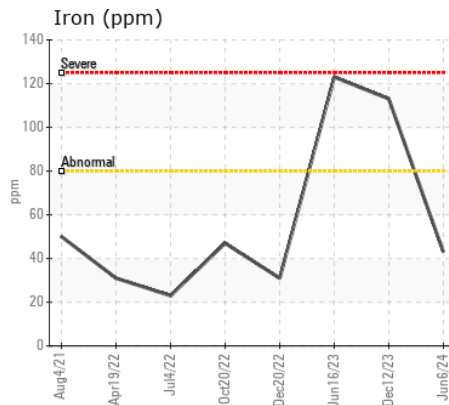
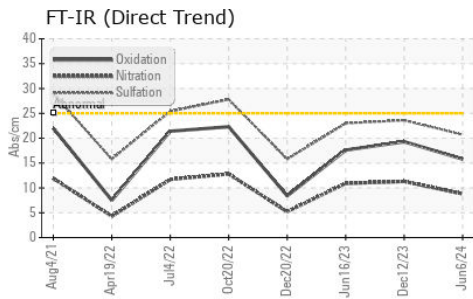
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	11	▲ 33	▲ 32
Potassium	ppm	ASTM D5185(m)	>20	2	5	5
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.4	0.7	0.5
Nitration	Abs/cm	ASTM D7624*	>20	8.8	11.3	10.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.7	23.6	23.0
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	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)	>406	3	5	6
Boron	ppm	ASTM D5185(m)		11	7	12
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		51	51	36
Manganese	ppm	ASTM D5185(m)		<1	<1	2
Magnesium	ppm	ASTM D5185(m)		810	780	555
Calcium	ppm	ASTM D5185(m)		1254	1353	1603
Phosphorus	ppm	ASTM D5185(m)		985	998	1023
Zinc	ppm	ASTM D5185(m)		1160	1195	1201
Sulfur	ppm	ASTM D5185(m)		2520	2606	2723
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.8	19.3	17.6
Visc @ 40°C	cSt	ASTM D7279(m)		109	---	---
Visc @ 100°C	cSt	ASTM D7279(m)		14.8	14.9	14.8
Viscosity Index (VI)	Scale	ASTM D2270*		140	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0100709
Lab Number : 02641307
Unique Number : 5798846
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)

GFL Environmental - 861 - Moncton
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 CA E1A 1P9
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*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.*