



Machine Id
514006
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0115565	GFL0098570	---
Sample Date		Client Info		31 May 2024	26 Dec 2023	---
Machine Age	hrs	Client Info		104718	58570	---
Oil Age	hrs	Client Info		46148	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	Changed	---
Filter Changed		Client Info		N/A	Changed	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	48	58	---
Chromium	ppm	ASTM D5185(m)	>20	<1	1	---
Nickel	ppm	ASTM D5185(m)	>5	2	2	---
Titanium	ppm	ASTM D5185(m)	>2	0	0	---
Silver	ppm	ASTM D5185(m)	>2	0	0	---
Aluminum	ppm	ASTM D5185(m)	>20	8	▲ 28	---
Lead	ppm	ASTM D5185(m)	>40	1	4	---
Copper	ppm	ASTM D5185(m)	>330	59	132	---
Tin	ppm	ASTM D5185(m)	>15	2	5	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

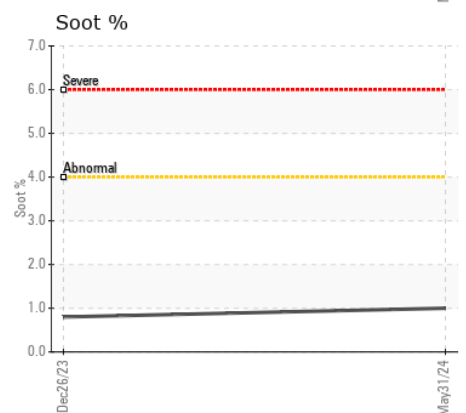
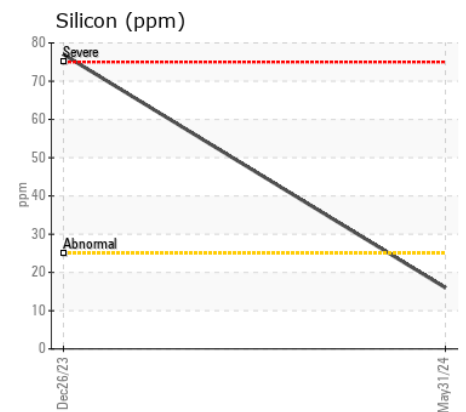
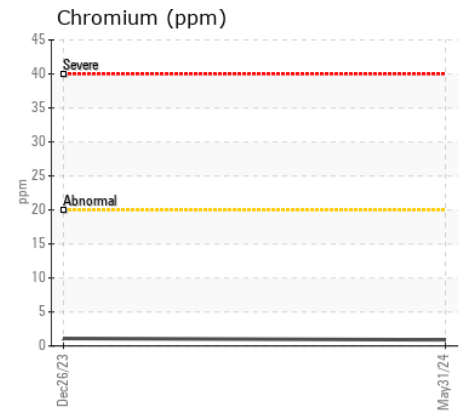
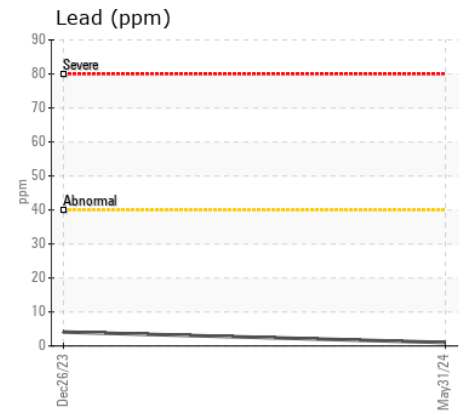
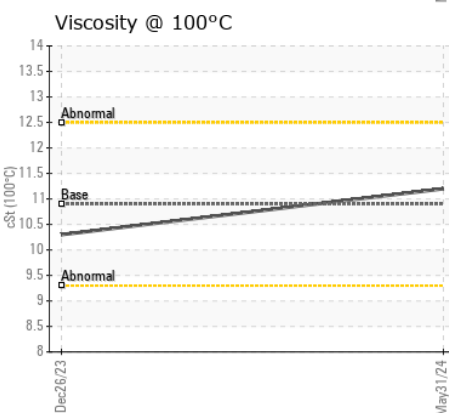
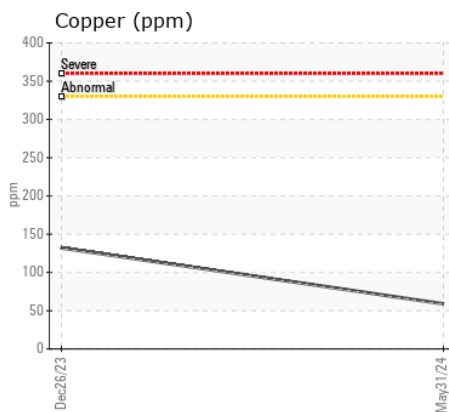
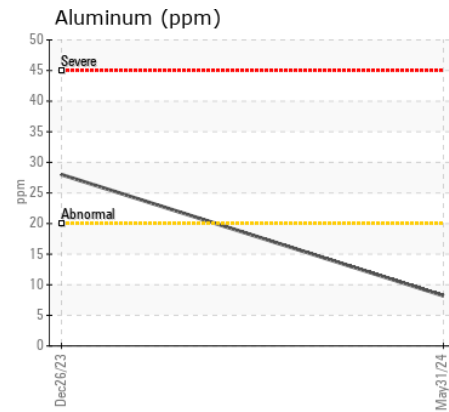
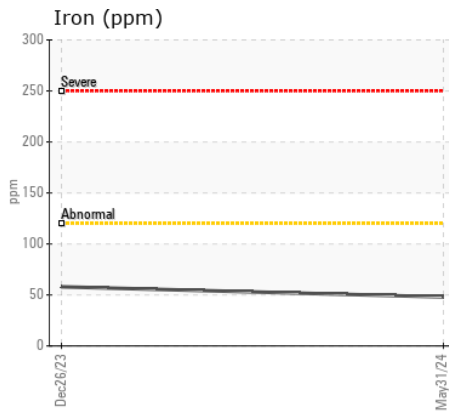
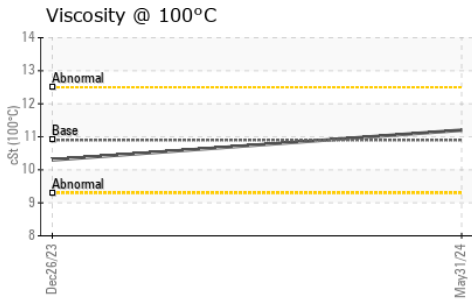
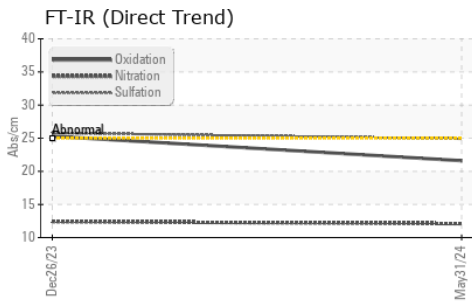
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	16	▲ 77	---
Potassium	ppm	ASTM D5185(m)	>20	19	41	---
Fuel		WC Method	>3.0	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	ASTM D7844*	>4	1	0.8	---
Nitration	Abs/cm	ASTM D7624*	>20	12.1	12.4	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.9	25.8	---
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	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		2	4	---
Boron	ppm	ASTM D5185(m)	250	4	24	---
Barium	ppm	ASTM D5185(m)	10	0	<1	---
Molybdenum	ppm	ASTM D5185(m)	100	67	114	---
Manganese	ppm	ASTM D5185(m)		1	3	---
Magnesium	ppm	ASTM D5185(m)	450	920	764	---
Calcium	ppm	ASTM D5185(m)	3000	1219	1392	---
Phosphorus	ppm	ASTM D5185(m)	1150	887	692	---
Zinc	ppm	ASTM D5185(m)	1350	1132	799	---
Sulfur	ppm	ASTM D5185(m)	4250	2040	1817	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.6	25.3	---
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	11.2	10.3	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0115565 **Received** : 04 Jun 2024
Lab Number : 02639552 **Tested** : 05 Jun 2024
Unique Number : 5788714 **Diagnosed** : 05 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Visual)

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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.