WEAR CONTAMINATION **FLUID CONDITION**

NORMAL ABNORMAL NORMAL

Machine Id

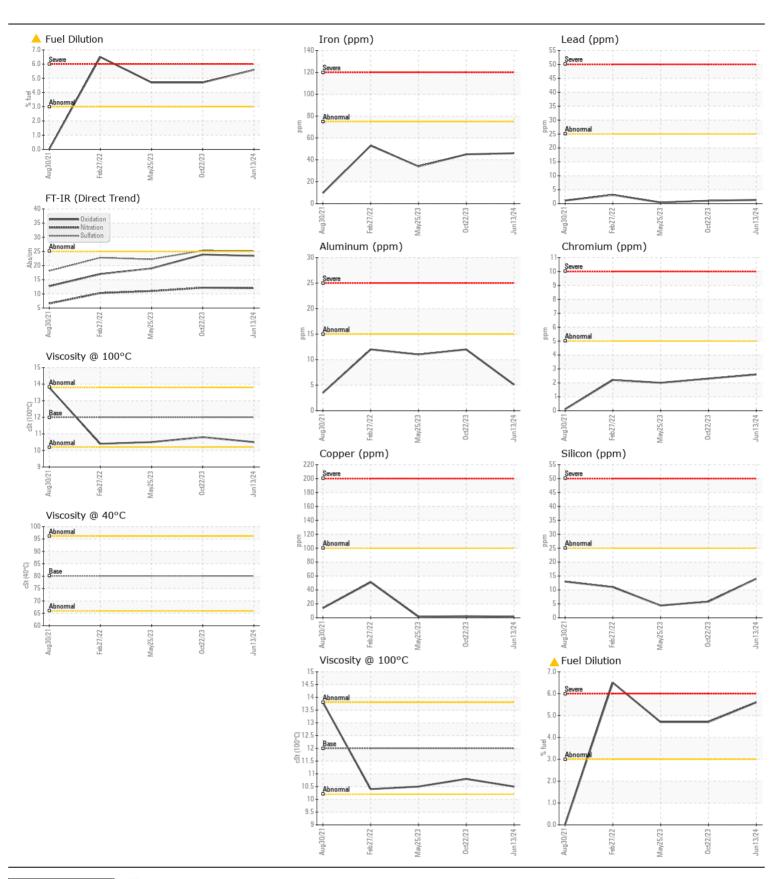
9115
Component
Diesel Engine

RECOMMENDATION The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		GFL0111788	GFL0081957	GFL00819
	Sample Date		Client Info		13 Jun 2024	22 Oct 2023	25 May 20
	Machine Age	hrs	Client Info		3926	2820	2384
	Oil Age	hrs	Client Info		525	435	350
	Filter Age	hrs	Client Info		525	435	350
	Oil Changed		Client Info		Changed	Changed	Change
	Filter Changed		Client Info		Changed	Changed	Change
	Sample Status				ABNORMAL	ABNORMAL	ABNORM
WEAR	Iron	ppm	ASTM D5185(m)	>75	46	45	34
All component wear rates are normal.	Chromium	ppm	ASTM D5185(m)	>5	3	2	2
	Nickel	ppm	ASTM D5185(m)	>4	<1	0	<1
	Titanium	ppm	ASTM D5185(m)	>2	0	0	0
	Silver	ppm	ASTM D5185(m)	>2	<1	<1	<1
	Aluminum	ppm	ASTM D5185(m)	>15	5	12	11
	Lead	ppm	ASTM D5185(m)	>25	1	1	<1
	Copper	ppm	ASTM D5185(m)	>100	2	2	2
	Tin	ppm	ASTM D5185(m)	>4	0	<1	<1
	Vanadium	ppm	ASTM D5185(m)		0	0	0
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>25	14	6	4
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 a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.	Potassium	ppm	ASTM D5185(m)	>20	6	21	17
	Fuel	%	ASTM D7593*	>3.0	△ 5.6	<u>▲</u> 4.7	▲ 4.7
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	ASTM D7844*		1.3	1.3	1
	Nitration	Abs/cm	ASTM D7624*	>20	12.0	12.2	11.0
	Sulfation	Abs/.1mm	ASTM D7415*		25.2 NORM	25.3 NORM	22.2
	Odor Emulsified Water	scalar	Visual* Visual*	NORML >0.2	NORML NEG	NORML NEG	NORN NEG
	Linuisineu water	Scalai	visuai	>0.2			INLG
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		6	6	5
The oil is no longer serviceable due to the presence of contaminants.	Boron	ppm	ASTM D5185(m)	2	4	<1	1
	Barium	ppm	ASTM D5185(m)	0	<1	<1	<1
	Molybdenum	ppm	ASTM D5185(m)	50	58	58	59
	Manganese	ppm	ASTM D5185(m)		<1	<1	0
	Magnesium	ppm	ASTM D5185(m)		923	922	933
	Calcium	ppm	ASTM D5185(m)		1041	1010	1003
	Phosphorus	ppm	ASTM D5185(m)		950	962	953
	Zinc	ppm	ASTM D5185(m)		1143	1147	1139
	Sulfur	ppm	ASTM D5185(m)		2335	2298	2360
		Aha/1mm	ASTM D7414*	\25	23.4	23.9	19.0
	Oxidation	Abs/.1mm					
	Oxidation Visc @ 40°C Visc @ 100°C	cSt cSt	ASTM D7279(m) ASTM D7279(m)	80.1	67.2 10.5	10.8	10.5

Viscosity Index (VI) Scale ASTM D2270* 144

Report Id: GFL557 [WCAMIS] 02642489 (Generated: 06/19/2024 09:30:39) Rev: 1

Contact/Location: GFL Tech - GFL557





CALA ISO 17025:2017 Accredited Laboratory

Sample No.

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

: GFL0111788 Lab Number : 02642489 Unique Number : 5800028

Received **Tested** Diagnosed Test Package: MOB 1 (Additional Tests: KV40, PercentFuel, VI, Visual)

: 18 Jun 2024

: 19 Jun 2024

: 19 Jun 2024 - Wes Davis

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.

GFL Environmental - 557 - Edson

6615 - 4th Ave, Edson, AB **CA T7E 1M5** Contact: GFL Tech

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T: F: