WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL

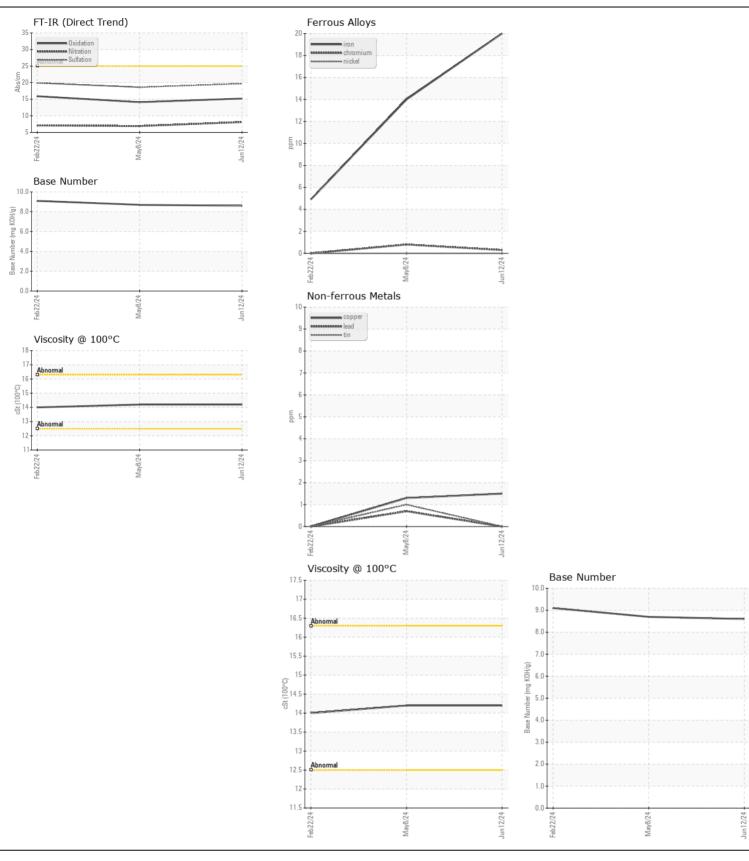
Machine Id

Roll off

Component

2 Diesel Engine

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		GFL0120463	GFL0060358	GFL010861
Resample at the next service interval to monitor.	Sample Date		Client Info		12 Jun 2024	08 May 2024	22 Feb 202
	Machine Age	hrs	Client Info		2819	2352	2352
	Oil Age	hrs	Client Info		500	2352	500
	Filter Age	hrs	Client Info		500	0	500
	Oil Changed		Client Info		Changed	Not Changd	N/A
	Filter Changed		Client Info		Changed	Not Changd	N/A
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	>100	20	14	5
	Chromium	ppm	ASTM D5185m	>20	<1	<1	0
All component wear rates are normal.	Nickel	ppm	ASTM D5185m	>4	0	0	0
	Titanium	ppm	ASTM D5185m		<1	<1	0
	Silver	ppm	ASTM D5185m	>3	<1	<1	0
	Aluminum	ppm	ASTM D5185m		8	6	4
	Lead	ppm	ASTM D5185m		0	<1	0
	Copper	ppm	ASTM D5185m	>330	2	1	0
	Tin	ppm	ASTM D5185m	>15	0	1	0
	Vanadium	ppm	ASTM D5185m		<1	<1	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	5	4	5
SOTTAMINATION	Potassium	ppm	ASTM D5185m		16	11	9
Elevated aluminum (AI) 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.	Fuel	le le · · ·	WC Method		<1.0	<1.0	<1.0
	Water		WC Method		NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0.5	0.4	0.2
	Nitration	Abs/cm	*ASTM D7624	>20	8.1	6.9	7.1
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7	18.6	19.9
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
	Appearance	scalar	*Visual	NORML	NORML	NORML	NORM
	Odor	scalar	*Visual	NORML	NORML	NORML	NORM
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185m	>118	3	5	1
	Boron	ppm	ASTM D5185m		12	10	39
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		0	0	1
	Molybdenum	ppm	ASTM D5185m		66	61	47
	Manganese	ppm	ASTM D5185m		<1	<1	0
	Magnesium	ppm	ASTM D5185m		1025	981	678
	Calcium	ppm	ASTM D5185m		1372	1304	1253
	Phosphorus	ppm	ASTM D5185m		1161	1107	995
	Zinc	ppm	ASTM D5185m		1429	1412	1147
	Sulfur	ppm	ASTM D5185m		3867	3953	2678
	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	14.1	15.9
	Base Number (BN)	mg KOH/g	ASTM D2896		8.6	8.7	9.1
	Visc @ 100°C	cSt	ASTM D445		14.2	14.2	14.0







Certificate L2367

Laboratory Sample No.

: GFL0120463 Lab Number : 06223217 Unique Number : 11101414 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 28 Jun 2024 **Tested**

: 28 Jun 2024 Diagnosed : 28 Jun 2024 - Wes Davis

GFL Environmental - 904B - Menomonie

1706 MIDWAY RD MENOMONIE, WI US 54751 Contact: ANDY KANE

T: (715)202-3420

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)