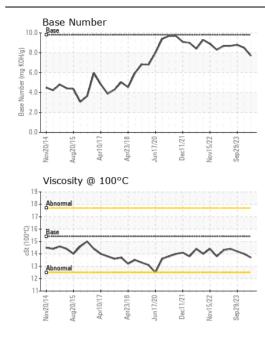
WEAR CONTAMINATION **FLUID CONDITION**

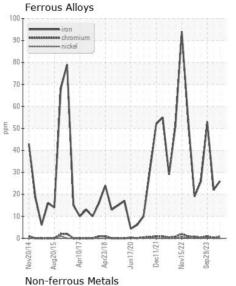
NORMAL NORMAL NORMAL

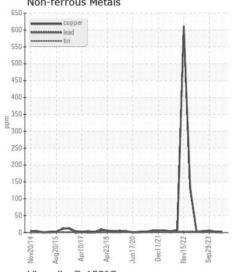
(YA113932)
Machine Id
2433

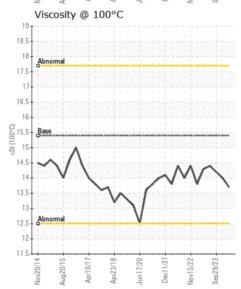
Component
Diesel Engine

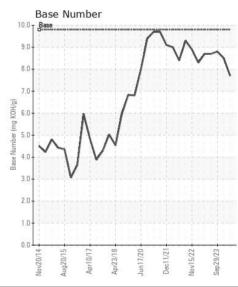
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		GFL0099830	GFL0089981	GFL0074444
	Sample Date		Client Info		10 Feb 2024	23 Jan 2024	29 Sep 202
	Machine Age	hrs	Client Info		18690	512899	512899
	Oil Age	hrs	Client Info		600	512899	512899
	Filter Age	hrs	Client Info		0	315	315
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	>75	26	22	53
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
	Nickel	ppm	ASTM D5185m	>5	0	0	<1
	Titanium	ppm	ASTM D5185m	>2	0	0	0
	Silver	ppm	ASTM D5185m	>2	0	0	0
	Aluminum	ppm	ASTM D5185m	>54	1	<1	1
	Lead	ppm	ASTM D5185m	>20	<1	1	2
	Copper	ppm	ASTM D5185m	>240	2	3	6
	Tin	ppm	ASTM D5185m	>5	0	0	<1
	Vanadium	ppm	ASTM D5185m		0	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>35	10	4	5
	Potassium	ppm	ASTM D5185m	>20	2	2	18
There is no indication of any contamination in the oil.	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	1	0.6	1.2
	Nitration	Abs/cm	*ASTM D7624	>20	11.2	6.4	7.2
	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	18.7	20.0
	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		<1	2	3
	Boron	ppm	ASTM D5185m	0	4	3	1
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	8	0	0
	Molybdenum	ppm	ASTM D5185m		66	59	63
	Manganese	ppm	ASTM D5185m	0	0	<1	<1
	Magnesium	ppm	ASTM D5185m	1010	939	987	937
	Calcium	ppm	ASTM D5185m		1048	1104	1037
	Phosphorus	ppm	ASTM D5185m		873	1086	1039
	Zinc	ppm	ASTM D5185m		1219	1290	1271
	Sulfur	ppm	ASTM D5185m		2823	3261	3189
	Oxidation	Abs/.1mm	*ASTM D7414		19.2	13.9	14.2
	Base Number (BN)	0 0			7.7	8.5	8.8
	Visc @ 100°C	cSt	ASTM D445	15.4	13.7	14.0	14.2













Certificate L2367

Laboratory Sample No.

Lab Number : 06088560

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0099830

Unique Number : 10876005 Test Package : FLEET

Received **Tested** Diagnosed

: 14 Feb 2024 : 15 Feb 2024

: 15 Feb 2024 - Wes Davis

GFL Environmental - 018 - Fayetteville 4621 Marracco Drive

Hope Mills, NC US 28348

Contact: Robert Carter robert.carter@gflenv.com T: (910)596-1170

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)

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