WEAR
CONTAMINATION
FLUID CONDITION

NORMAL

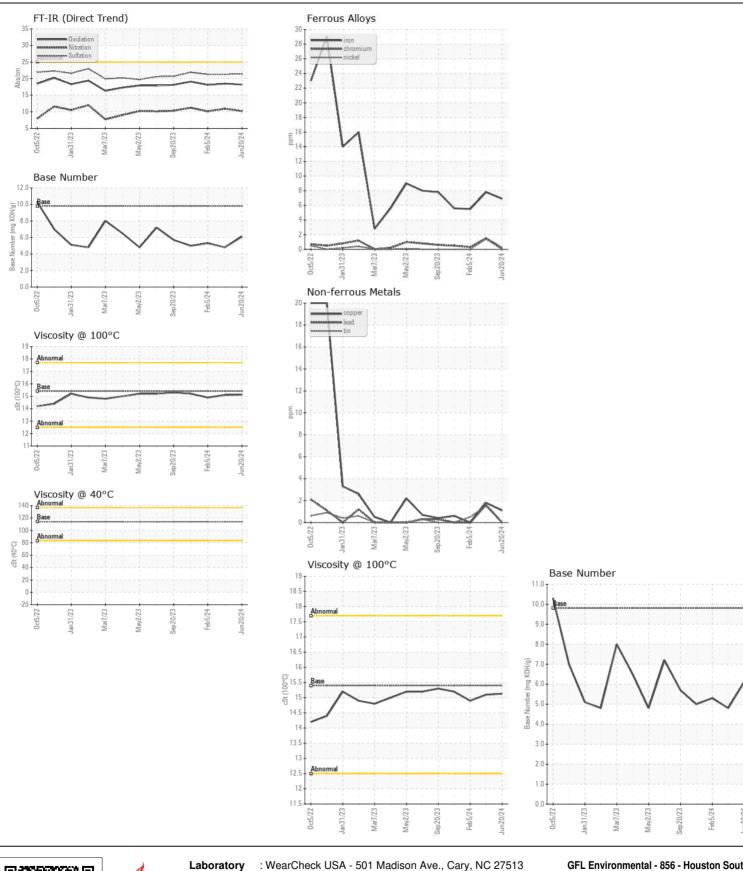
ABNORMAL

NORMAL

Machine Id **733004**

Natural Gas Engine

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Number		Client Info		GFL0121898	GFL0106741	GFL009212
	Sample Date		Client Info		20 Jun 2024	18 Apr 2024	05 Feb 202
	Machine Age	hrs	Client Info		5456	4899	4235
	Oil Age	hrs	Client Info		600	111181	0
	Filter Age	hrs	Client Info		600	111181	0
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				ABNORMAL	NORMAL	NORMA
WEAR	Iron	nnm	ASTM D5185m	\50	7	8	6
MEAN	Chromium	ppm	ASTM D5185m		, <1	2	<1
All component wear rates are normal.	Nickel	ppm	ASTM D5105m		0	1	0
	Titanium	ppm	ASTM D5185m	72	0	<1	0
	Silver	ppm	ASTM D5185m	>3	0	<1	0
	Aluminum	ppm	ASTM D5185m		2	2	1
	Lead	ppm	ASTM D5185m		0	2	0
	Copper	ppm	ASTM D5185m		1	2	0
	Tin	ppm	ASTM D5185m		0	2	<1
	Vanadium	ppm	ASTM D5185m		0	<1	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONI
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m		5	5	3
Moderate concentration of visible dirt/debris present in the oil.	Potassium	ppm	ASTM D5185m		2	2	0
	Water		WC Method	>0.1	NEG	NEG	NEG
	Soot %	%	*ASTM D7844		0	0	0
	Nitration	Abs/cm	*ASTM D7624	>20	10.2	10.9	10.1
	Sulfation	Abs/.1mm	*ASTM D7415		21.4	21.3	21.3
	Silt	scalar	*Visual	NONE	NONE	NONE	INON
	Debris	scalar	*Visual	NONE	▲ MODER	NONE	NON
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NON
	Appearance Odor	scalar	*Visual *Visual	NORML NORML	NORML NORML	NORML NORML	NORN NORN
	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
			Visuai	20.1			INLO
FLUID CONDITION	Sodium	ppm	ASTM D5185m		6	6	6
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185m	0	15	10	18
	Barium	ppm	ASTM D5185m	0	0	<1	0
	Molybdenum	ppm	ASTM D5185m	60	51	58	53
	Manganese	ppm	ASTM D5185m		<1	1	<1
	Magnesium	ppm	ASTM D5185m		591	535	559
	Calcium	ppm	ASTM D5185m		1648	1657	1561
	Phosphorus	ppm	ASTM D5185m		777	643	743
	Zinc	ppm	ASTM D5185m		957	930	977
	Sulfur	ppm	ASTM D5185m		2960	2451	2375
	Oxidation	Abs/.1mm	*ASTM D7414		18.2	18.5	18.1
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.1	4.8	5.3
	Visc @ 100°C	cSt	ASTM D445		15.13	15.1	14.9







Certificate L2367

Laboratory Sample No.

: GFL0121898 Lab Number : 06221713

Unique Number : 11099910 Test Package: FLEET (Additional Tests: KV40)

Received **Tested** Diagnosed

: 26 Jun 2024 : 01 Jul 2024

: 01 Jul 2024 - Jonathan Hester

GFL Environmental - 856 - Houston South

8515 Highway 6 South Houston, TX US 77083

Contact: Apolinar Zacarias pzacariascano@gflenv.com T:

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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