WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL NORMAL

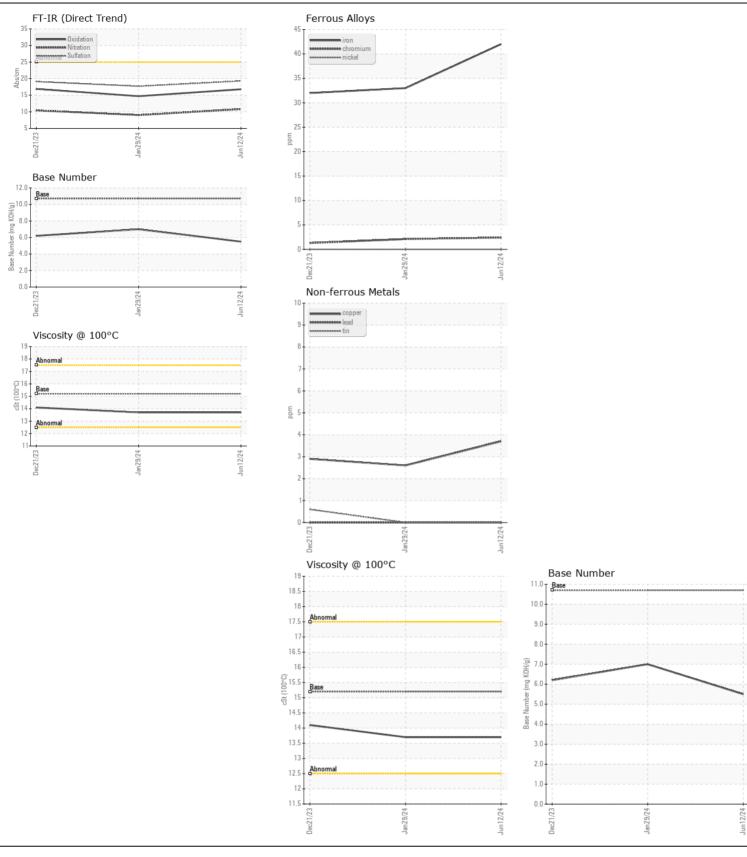


GFL981

FREIGHTLINER 425130-SW4504

Diesel Engine

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		GFL0111294	GFL0111347	GFL009548
	Sample Date		Client Info		12 Jun 2024	29 Jan 2024	21 Dec 202
	Machine Age	hrs	Client Info		11637	11141	10960
	Oil Age	hrs	Client Info		496	500	500
	Filter Age	hrs	Client Info		0	500	500
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	>80	42	33	32
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>5	2	2	1
	Nickel	ppm	ASTM D5185m	>2	0	0	0
	Titanium	ppm	ASTM D5185m		0	<1	0
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m	>30	8	6	7
	Lead	ppm	ASTM D5185m	>30	0	0	0
	Copper	ppm	ASTM D5185m	>150	4	3	3
	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	>20	12	12	8
SSITTAMINATION	Potassium	ppm	ASTM D5185m		3	1	3
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	0.4	0.2	0.4
	Nitration	Abs/cm	*ASTM D7624	>20	10.8	9.0	10.4
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.3	17.7	19.1
	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	NORMI
	Odor	scalar	*Visual	NORML	NORML	NORML	NORM
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185m		2	2	2
	Boron	ppm	ASTM D5185m		53	108	65
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	2	8
	Molybdenum	ppm	ASTM D5185m		127	119	108
	Manganese	ppm	ASTM D5185m		0	<1	<1
	Magnesium	ppm	ASTM D5185m		645	625	639
	Calcium	ppm	ASTM D5185m		1185	1150	1205
	Phosphorus	ppm	ASTM D5185m		659	678	696
	Zinc	ppm	ASTM D5185m		818	767	771
	Sulfur	ppm	ASTM D5185m		2745	2903	2953
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.8	14.7	16.9
	Base Number (BN)		ASTM D2896		5.5	7.0	6.2
	()	0 - 3	ASTM D445			13.7	14.1







Certificate L2367

Laboratory Sample No.

: GFL0111294 Lab Number : 06241406 Unique Number : 11130240 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 19 Jul 2024 **Tested**

: 20 Jul 2024 Diagnosed : 20 Jul 2024 - Wes Davis

GFL Environmental - 981 - Port Arthur Hauling

1000 S Business Park Dr Port Arthur, TX US 77640

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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)