



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**413044**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W30 (11 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0103421</b>	GFL0074626	GFL0074636
Sample Date		Client Info		<b>22 Feb 2024</b>	08 Dec 2023	16 Nov 2023
Machine Age	hrs	Client Info		<b>3527</b>	3074	2394
Oil Age	hrs	Client Info		<b>591</b>	137	542
Filter Age	hrs	Client Info		<b>591</b>	138	542
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Sample Status				<b>NORMAL</b>	ATTENTION	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>16</b>	4	10
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>2</b>	<1	1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	2	3
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	<1	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

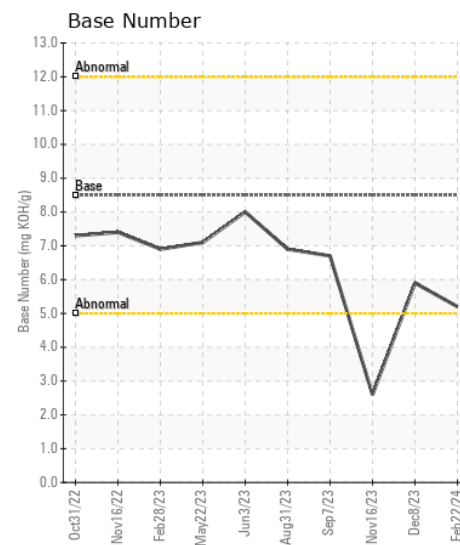
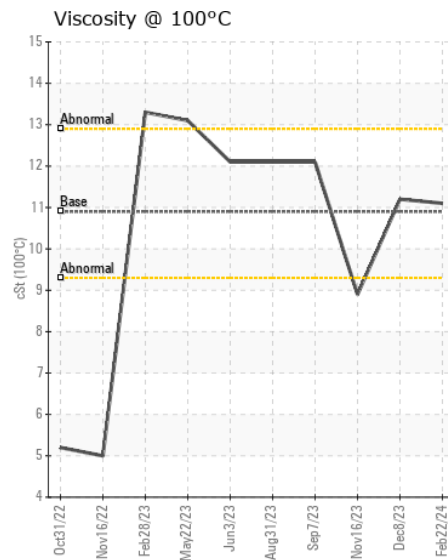
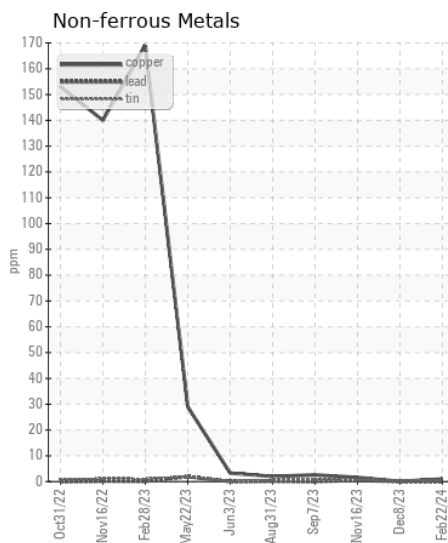
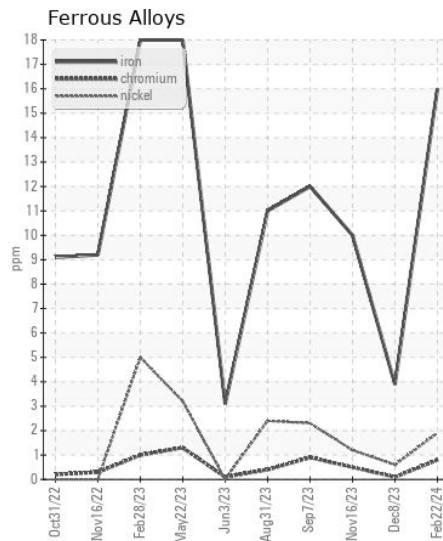
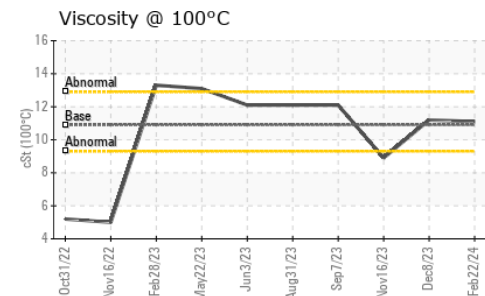
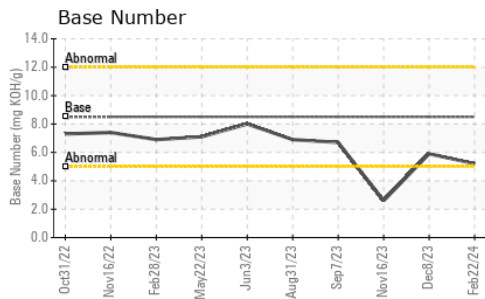
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	3	2
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	3	6
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	0.2
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.4</b>	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.2</b>	4.9	5.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.4</b>	16.1	15.0
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>25	<b>4</b>	1	4
Boron	ppm	ASTM D5185m	250	<b>2</b>	7	0
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>50</b>	45	22
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>623</b>	▲ 648	▲ 335
Calcium	ppm	ASTM D5185m	3000	<b>802</b>	▲ 768	▲ 392
Phosphorus	ppm	ASTM D5185m	1150	<b>757</b>	▲ 765	▲ 491
Zinc	ppm	ASTM D5185m	1350	<b>863</b>	▲ 919	▲ 572
Sulfur	ppm	ASTM D5185m	4250	<b>2025</b>	2269	▲ 1171
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.7</b>	11.0	8.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>5.2</b>	5.9	▲ 2.6
Visc @ 100°C	cSt	ASTM D445	10.9	<b>11.1</b>	▲ 11.2	▲ 8.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0103421  
**Lab Number** : 06099841  
**Unique Number** : 10898071  
**Test Package** : FLEET

**Received** : 26 Feb 2024  
**Tested** : 27 Feb 2024  
**Diagnosed** : 27 Feb 2024 - Wes Davis

**GFL Environmental - 095 - Atlanta West**  
 2699 Cochran Industrial Blvd  
 Douglasville, GA  
 US 30127-1332  
 Contact: Darrell Welch  
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 T: (800)207-6618  
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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)