



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

Machine Id  
**914031**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 40 (--- 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>GFL0115359</b>	GFL0110889	GFL0110918
Sample Date		Client Info		<b>12 Mar 2024</b>	20 Feb 2024	01 Feb 2024
Machine Age	hrs	Client Info		<b>1327</b>	1180	1035
Oil Age	hrs	Client Info		<b>147</b>	145	152
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>29</b>	22	16
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>4</b>	3	3
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	1	1
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	1	1
Lead	ppm	ASTM D5185m	>40	<b>1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>151</b>	179	81
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

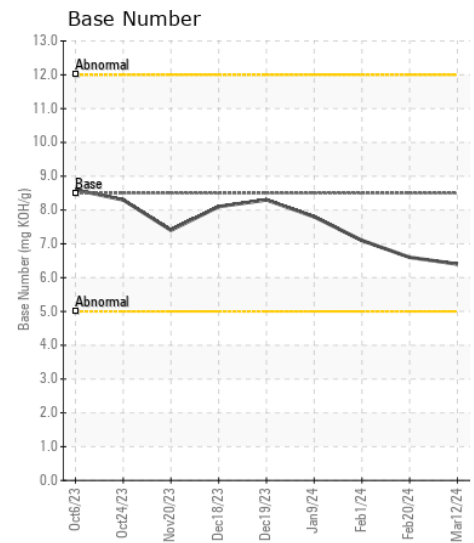
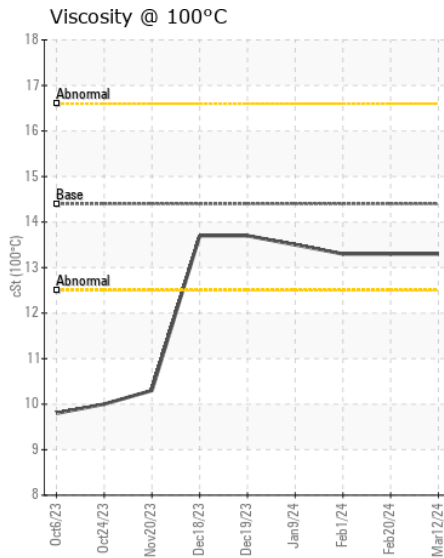
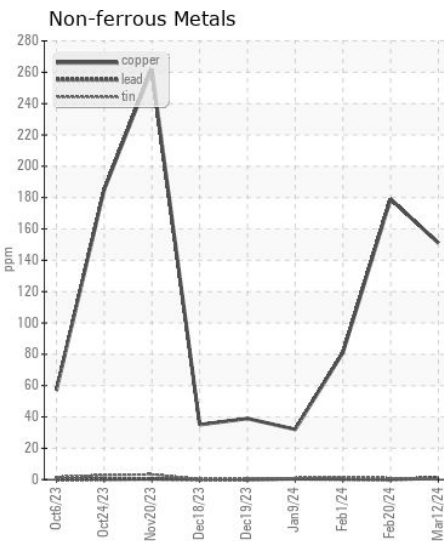
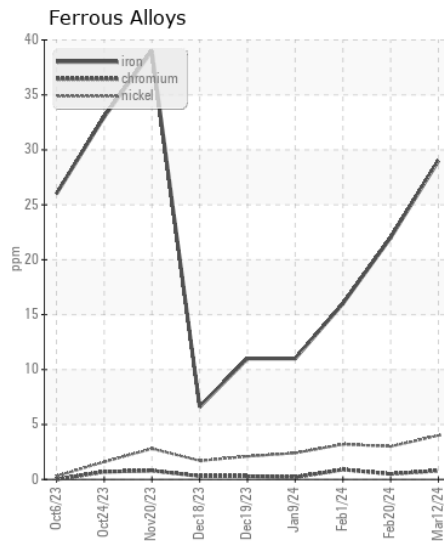
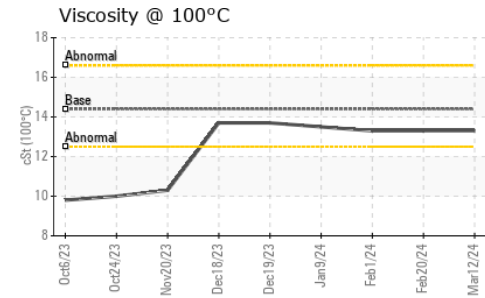
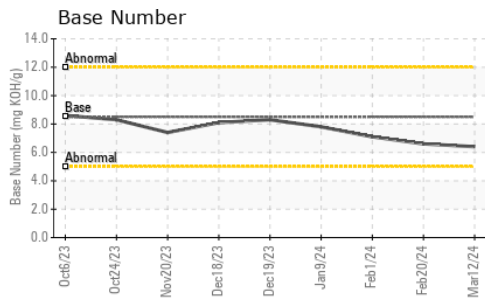
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	8	8
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	1	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.1</b>	8.7	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.5</b>	20.1	19.9
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	>216	<b>4</b>	3	2
Boron	ppm	ASTM D5185m	250	<b>7</b>	11	10
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>61</b>	61	58
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	1
Magnesium	ppm	ASTM D5185m	450	<b>924</b>	916	871
Calcium	ppm	ASTM D5185m	3000	<b>1081</b>	1024	1048
Phosphorus	ppm	ASTM D5185m	1150	<b>951</b>	983	1099
Zinc	ppm	ASTM D5185m	1350	<b>1111</b>	1198	1091
Sulfur	ppm	ASTM D5185m	4250	<b>2785</b>	2527	3171
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.0</b>	16.5	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.4</b>	6.6	7.1
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.3</b>	13.3	13.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0115359  
**Lab Number** : 06123016  
**Unique Number** : 10937167  
**Test Package** : FLEET

**Received** : 19 Mar 2024  
**Tested** : 20 Mar 2024  
**Diagnosed** : 20 Mar 2024 - Wes Davis

**GFL Environmental - 814 - Little Rock Hauling**  
 4005 Hwy 161 N.  
 Little Rock, AR  
 US 72117  
 Contact: Michael Lovin  
 mlovin@gflenv.com

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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F: