



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

Area  
**(YA172348) GFL035**

Machine Id  
**925056**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 40 (38 QTS)**



**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>GFL0116470</b>	GFL0102344	GFL0085168
Sample Date		Client Info		<b>25 Apr 2024</b>	16 Feb 2024	02 Nov 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>600</b>	600	600
Filter Age	hrs	Client Info		<b>0</b>	0	600
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>6</b>	9	4
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
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.

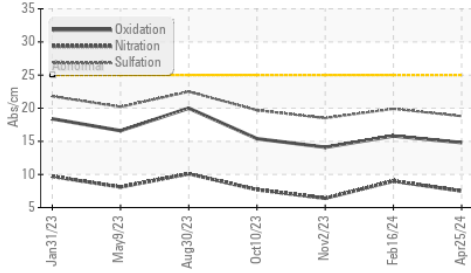
Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	2
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.3</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.5</b>	9.0	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</b>	19.9	18.5
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**

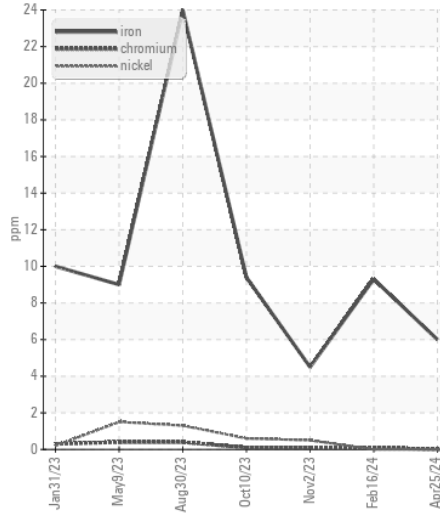
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>216	<b>4</b>	3	0
Boron	ppm	ASTM D5185m	250	<b>&lt;1</b>	7	9
Barium	ppm	ASTM D5185m	10	<b>0</b>	<1	5
Molybdenum	ppm	ASTM D5185m	100	<b>60</b>	61	61
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>970</b>	869	824
Calcium	ppm	ASTM D5185m	3000	<b>1130</b>	1121	1116
Phosphorus	ppm	ASTM D5185m	1150	<b>1047</b>	965	1043
Zinc	ppm	ASTM D5185m	1350	<b>1295</b>	1197	1163
Sulfur	ppm	ASTM D5185m	4250	<b>3536</b>	2589	3027
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	15.8	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.4</b>	6.1	8.1
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.7</b>	13.0	13.4

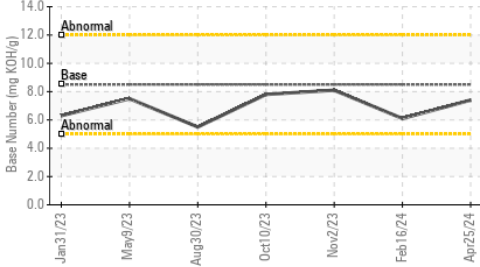
**FT-IR (Direct Trend)**



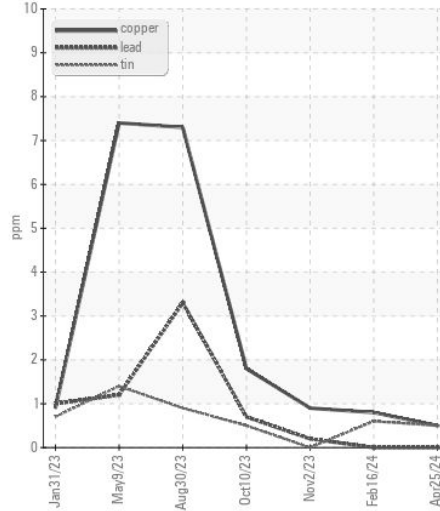
**Ferrous Alloys**



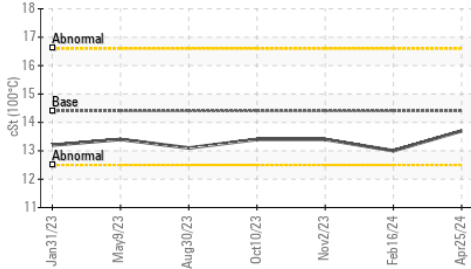
**Base Number**



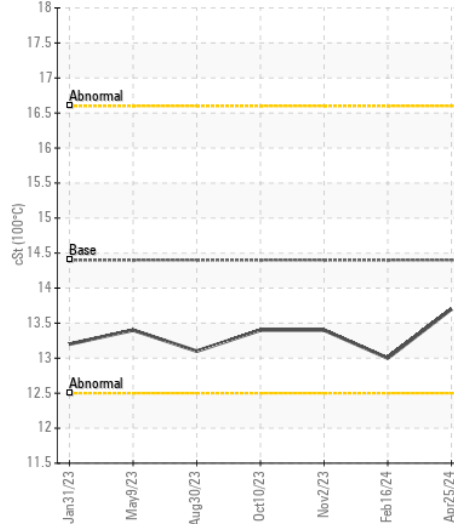
**Non-ferrous Metals**



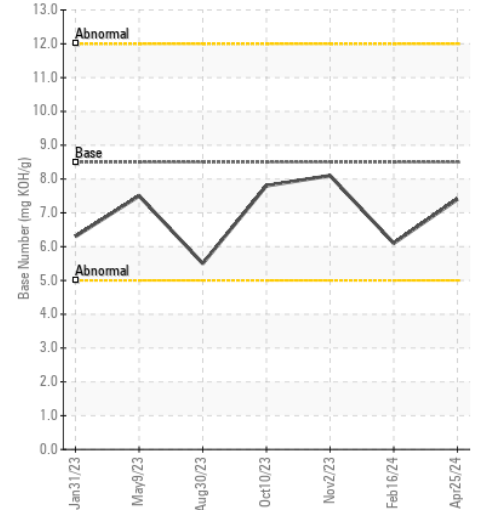
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116470  
**Lab Number** : 06161145  
**Unique Number** : 10996568  
**Test Package** : FLEET

**Received** : 26 Apr 2024  
**Tested** : 26 Apr 2024  
**Diagnosed** : 26 Apr 2024 - Wes Davis

**GFL Environmental - 035 - Greensboro**  
 1236 Elon Place  
 High Point, NC  
 US 27263  
 Contact: JORGE COSTA  
 jorge.costa@gflenv.com  
 T: (336)668-3712  
 F:

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)