



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



Area  
**(34748UA)**  
Machine Id  
**811061**  
Component  
**Main 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>GFL0122010</b>	GFL0122066	GFL0116545
Sample Date		Client Info		<b>25 Jun 2024</b>	30 May 2024	03 May 2024
Machine Age	hrs	Client Info		<b>7755</b>	7530	7391
Oil Age	hrs	Client Info		<b>7245</b>	7159	7336
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>9</b>	7	5
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>2</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>2</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<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.

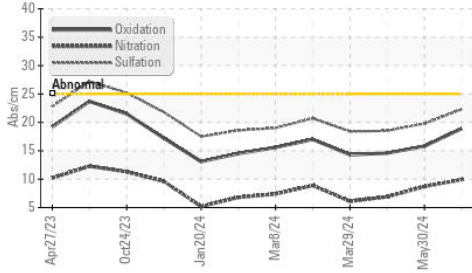
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	3	5
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	3	2
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.9</b>	8.7	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.3</b>	19.8	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**

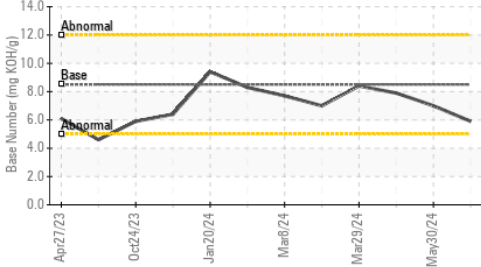
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>216	<b>5</b>	<1	0
Boron	ppm	ASTM D5185m	250	<b>12</b>	17	26
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>62</b>	61	58
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	450	<b>1000</b>	893	887
Calcium	ppm	ASTM D5185m	3000	<b>1210</b>	1123	1112
Phosphorus	ppm	ASTM D5185m	1150	<b>1182</b>	1033	1055
Zinc	ppm	ASTM D5185m	1350	<b>1419</b>	1263	1230
Sulfur	ppm	ASTM D5185m	4250	<b>3493</b>	3210	3449
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.9</b>	15.8	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>5.9</b>	7.0	7.9
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.0</b>	14.1	14.3

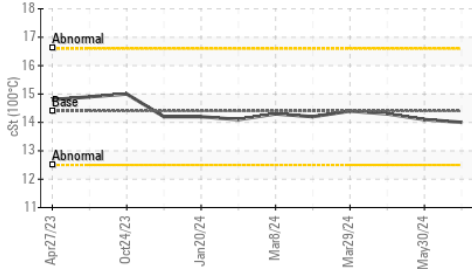
**FT-IR (Direct Trend)**



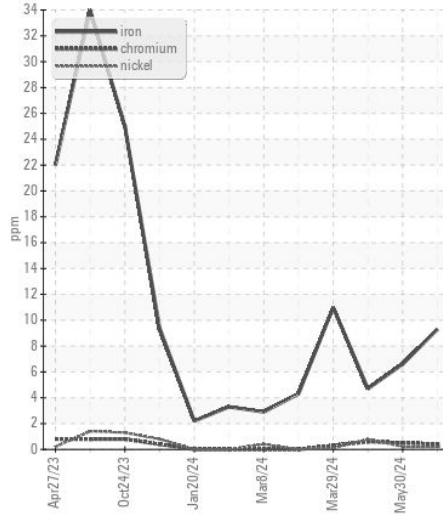
**Base Number**



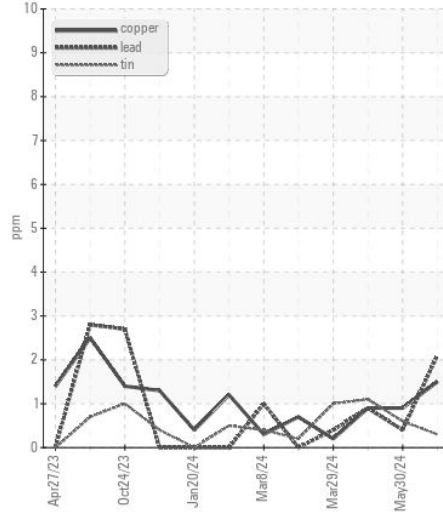
**Viscosity @ 100°C**



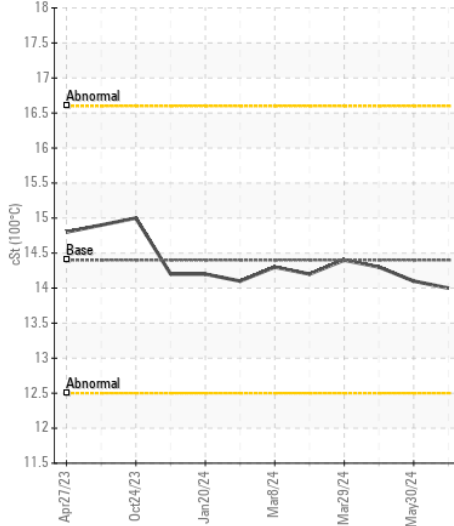
**Ferrous Alloys**



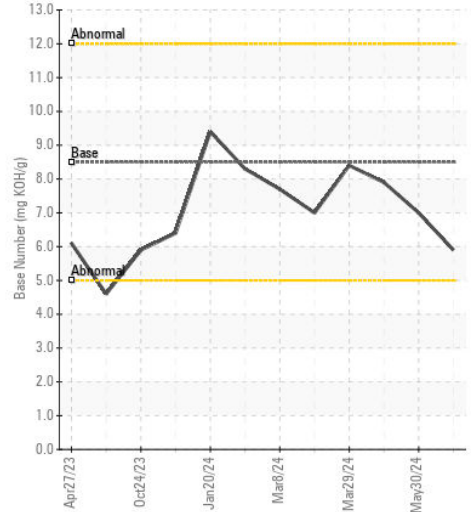
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0122010  
**Lab Number** : 06222169  
**Unique Number** : 11100366  
**Test Package** : FLEET

**Received** : 27 Jun 2024  
**Tested** : 28 Jun 2024  
**Diagnosed** : 28 Jun 2024 - Wes Davis

**GFL Environmental - 652 - Fredericksburg Hauling**  
 10954 Houser Drive  
 Fredericksburg, VA  
 US 22408  
 Contact: WILLIAM MILO  
 wmilo@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)

T:  
F: