



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

Machine Id  
**402465**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

**RECOMMENDATION**

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample. 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>GFL0064668</b>	GFL0046832	GFL0046839
Sample Date		Client Info		<b>09 Jan 2023</b>	02 Dec 2022	24 Feb 2022
Machine Age	hrs	Client Info		<b>4546</b>	4467	1125
Oil Age	hrs	Client Info		<b>79</b>	3342	1125
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>6</b>	18	51
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	3
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	13	44
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	2	3
Copper	ppm	ASTM D5185m	>330	<b>2</b>	7	64
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	1
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**

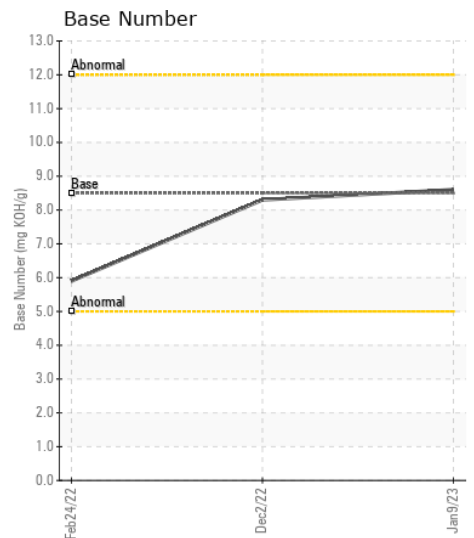
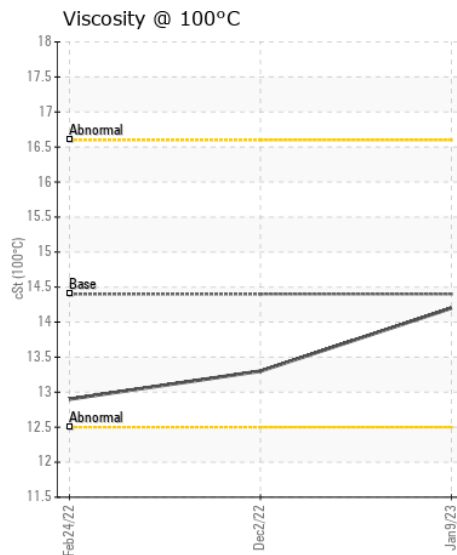
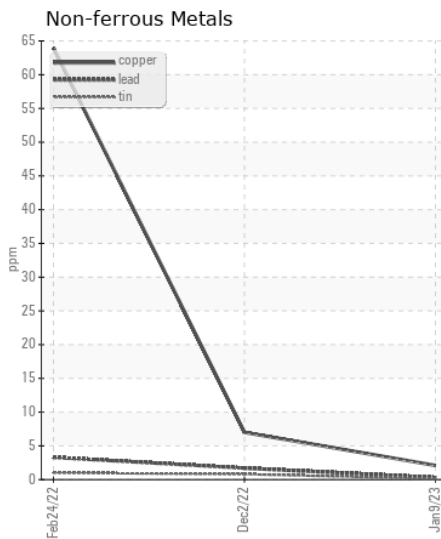
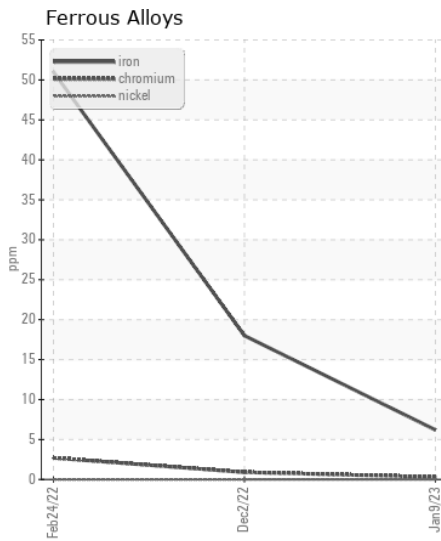
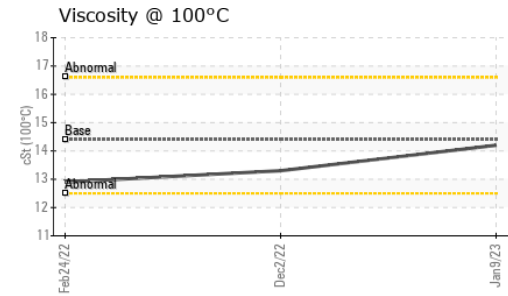
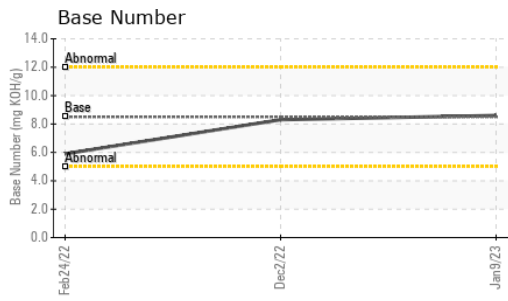
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	7	14
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	17	86
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>0.1</b>	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.8</b>	9.5	10.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.8</b>	21.7	24.4
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>0</b>	2	5
Boron	ppm	ASTM D5185m	250	<b>3</b>	10	131
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>57</b>	65	113
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m	450	<b>822</b>	965	650
Calcium	ppm	ASTM D5185m	3000	<b>1042</b>	1147	1631
Phosphorus	ppm	ASTM D5185m	1150	<b>946</b>	1030	740
Zinc	ppm	ASTM D5185m	1350	<b>1095</b>	1286	928
Sulfur	ppm	ASTM D5185m	4250	<b>2643</b>	3561	2126
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.4</b>	17.6	18.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.6</b>	8.3	5.9
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.2</b>	13.3	12.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0064668 **Received** : 17 Jan 2023  
**Lab Number** : 05741275 **Diagnosed** : 18 Jan 2023  
**Unique Number** : 10295874 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

GFL Environmental - 9999 - Moved No Longer Used Units

US  
Contact:

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: