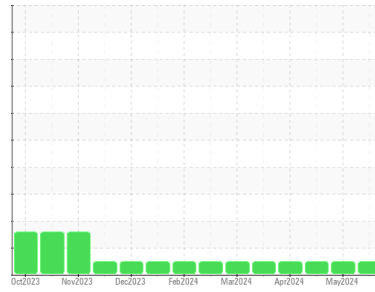




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**914031**

Component

**Diesel Engine**

Fluid

**DISEL ENGINE OIL SAE 40 (--- GAL)**

## DIAGNOSIS

### Recommendation

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

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>GFL0123022</b>	GFL0123040	GFL0119417
Sample Date	Client Info			<b>11 Jun 2024</b>	22 May 2024	30 Apr 2024
Machine Age	hrs	Client Info		<b>1889</b>	1745	1591
Oil Age	hrs	Client Info		<b>144</b>	154	66
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>17</b>	13	9
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>4	<b>5</b>	4	5
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	<1	1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	2
Copper	ppm	ASTM D5185m	>330	<b>71</b>	58	39
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	2

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>10</b>	2	8
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>63</b>	61	55
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	1
Magnesium	ppm	ASTM D5185m	450	<b>933</b>	923	1001
Calcium	ppm	ASTM D5185m	3000	<b>1111</b>	1114	1153
Phosphorus	ppm	ASTM D5185m	1150	<b>1019</b>	985	1088
Zinc	ppm	ASTM D5185m	1350	<b>1239</b>	1186	1297
Sulfur	ppm	ASTM D5185m	4250	<b>3013</b>	3052	3706

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	0	4
Sodium	ppm	ASTM D5185m	>216	<b>5</b>	3	3
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	2

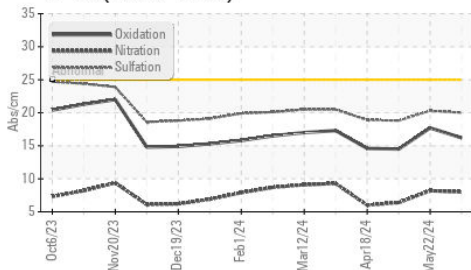
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	8.2	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.0</b>	20.3	18.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.2</b>	17.7	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.2</b>	7.7	8.0

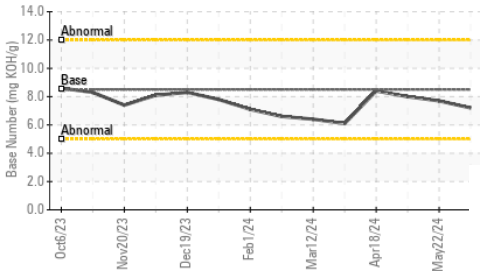


# OIL ANALYSIS REPORT

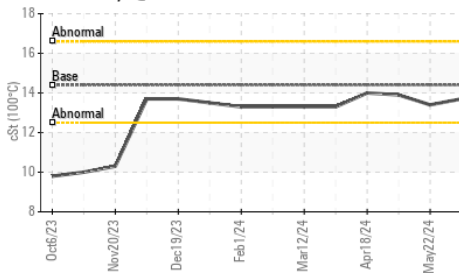
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

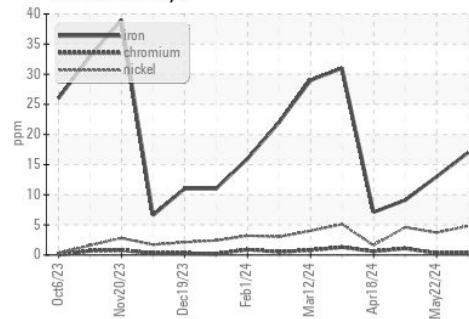


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

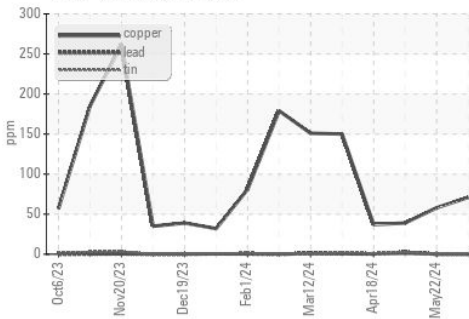
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.7	13.4

## GRAPHS

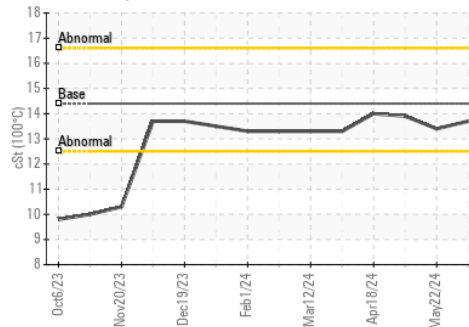
Ferrous Alloys



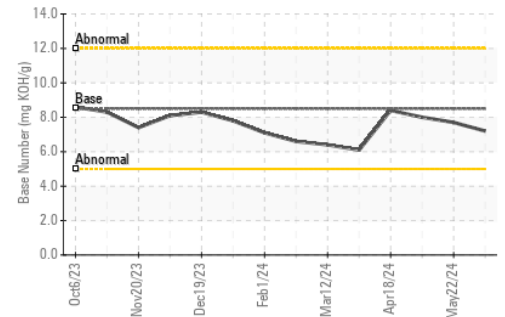
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0123022  
 Lab Number : 06212869  
 Unique Number : 11085733  
 Test Package : FLEET

Received : 17 Jun 2024  
 Tested : 19 Jun 2024  
 Diagnosed : 19 Jun 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)