



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



Machine Id  
**414072**  
Component  
**Diesel Engine**  
Fluid  
**{not provided} (35)**

**RECOMMENDATION**

No corrective action is recommended at this time. 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>GFL0119075</b>	---	---
Sample Date		Client Info		<b>31 May 2024</b>	---	---
Machine Age	hrs	Client Info		<b>0</b>	---	---
Oil Age	hrs	Client Info		<b>0</b>	---	---
Filter Age	hrs	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>N/A</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>33</b>	---	---
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	---	---
Nickel	ppm	ASTM D5185m	>5	<b>4</b>	---	---
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185m	>20	<b>10</b>	---	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m	>330	<b>224</b>	---	---
Tin	ppm	ASTM D5185m	>15	<b>3</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---

**CONTAMINATION**

Elemental level of silicon (Si) above normal indicating ingress of seal material. Tests indicate that there is no fuel present in the oil.

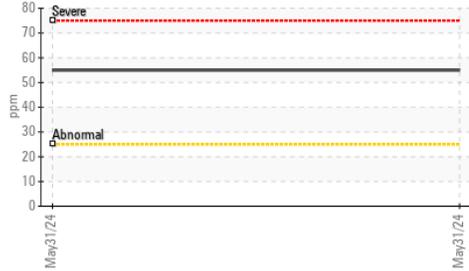
Silicon	ppm	ASTM D5185m	>25	<b>▲ 55</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>22</b>	---	---
Fuel	%	ASTM D3524	>3.0	<b>0.3</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	*ASTM D7844	>4	<b>0.3</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.6</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.9</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	---	---

**FLUID CONDITION**

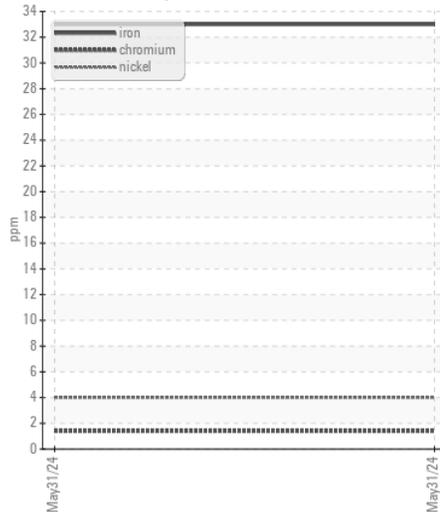
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>2</b>	---	---
Boron	ppm	ASTM D5185m		<b>151</b>	---	---
Barium	ppm	ASTM D5185m		<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m		<b>113</b>	---	---
Manganese	ppm	ASTM D5185m		<b>4</b>	---	---
Magnesium	ppm	ASTM D5185m		<b>722</b>	---	---
Calcium	ppm	ASTM D5185m		<b>1316</b>	---	---
Phosphorus	ppm	ASTM D5185m		<b>723</b>	---	---
Zinc	ppm	ASTM D5185m		<b>871</b>	---	---
Sulfur	ppm	ASTM D5185m		<b>2431</b>	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.6</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.1</b>	---	---
Visc @ 100°C	cSt	ASTM D445		<b>10.4</b>	---	---

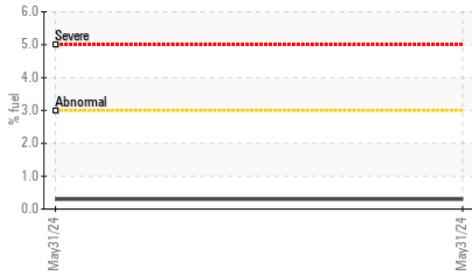
▲ Silicon (ppm)



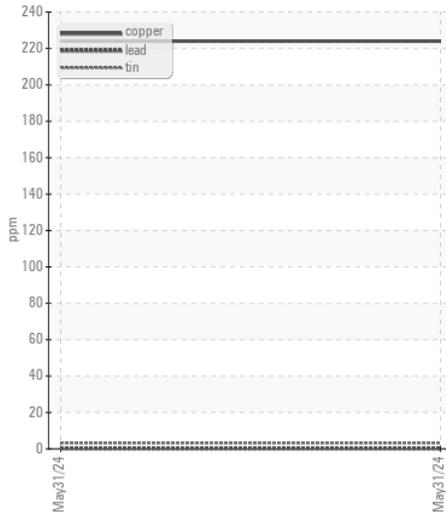
Ferrous Alloys



Fuel Dilution



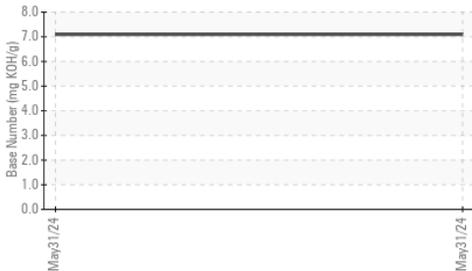
Non-ferrous Metals



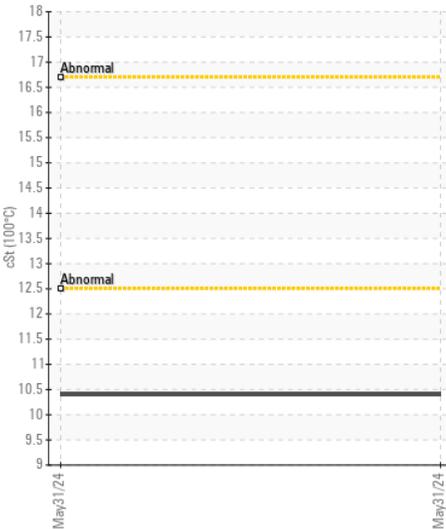
FT-IR (Direct Trend)



Base Number



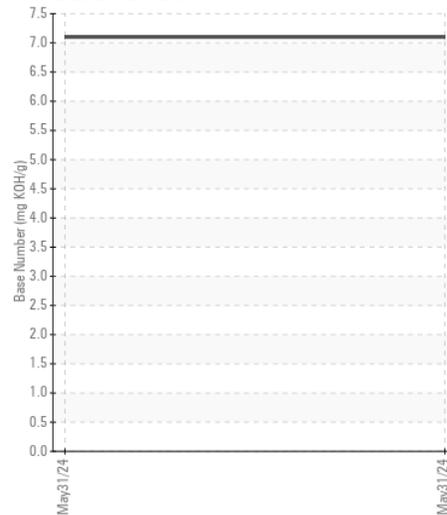
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0119075

Lab Number : 06197512

Unique Number : 11059635

Test Package : FLEET ( Additional Tests: FuelDilution, PercentFuel )

Received : 03 Jun 2024

Tested : 05 Jun 2024

Diagnosed : 05 Jun 2024 - Sean Felton

GFL Environmental - 045 - Tidewater

3821 Cook Blvd.

Chesapeake, VA

US 23323

Contact: ELVIN RODRIGUEZ

elvinrodriguez@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: