



# OIL ANALYSIS REPORT

Sample Rating Trend

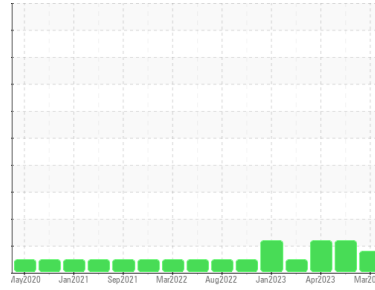
FUEL



Machine Id  
**727006**

Component  
**Diesel Engine**  
Fluid

**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0102897</b>	GFL0097325	GFL0078514
Sample Date	Client Info	<b>15 Mar 2024</b>	14 Dec 2023	20 Apr 2023
Machine Age	hrs	<b>19548</b>	0	17322
Oil Age	hrs	<b>0</b>	18988	0
Oil Changed	Client Info	<b>N/A</b>	N/A	Changed
Sample Status		<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## CONTAMINATION

method	limit/base	current	history1	history2	
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 D5185(m) >120	<b>8</b>	7	8
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m) >2	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m) >40	<b>&lt;1</b>	1	<1
Copper	ppm	ASTM D5185(m) >330	<b>&lt;1</b>	<1	1
Tin	ppm	ASTM D5185(m) >15	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m) 250	<b>6</b>	26	38
Barium	ppm	ASTM D5185(m) 10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 100	<b>57</b>	40	41
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m) 450	<b>851</b>	495	514
Calcium	ppm	ASTM D5185(m) 3000	<b>1096</b>	1616	1729
Phosphorus	ppm	ASTM D5185(m) 1150	<b>913</b>	693	806
Zinc	ppm	ASTM D5185(m) 1350	<b>1080</b>	825	876
Sulfur	ppm	ASTM D5185(m) 4250	<b>2370</b>	1967	2214
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >25	<b>2</b>	4	4
Sodium	ppm	ASTM D5185(m) >158	<b>3</b>	2	2
Potassium	ppm	ASTM D5185(m) >20	<b>2</b>	<1	<1
Fuel	%	ASTM D7593* >3.0	<b>▲ 3.5</b>	▲ 4.1	▲ 3

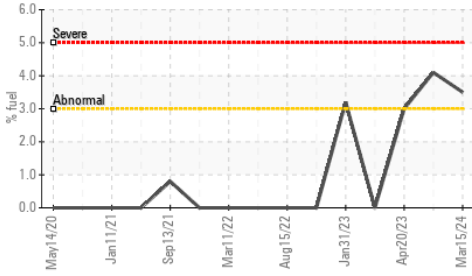
## INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844* >4	<b>0.5</b>	0.6	0.3
Nitration	Abs/cm	ASTM D7624* >20	<b>8.1</b>	9.1	7.7
Sulfation	Abs.1mm	ASTM D7415* >30	<b>19.9</b>	22.9	22.4

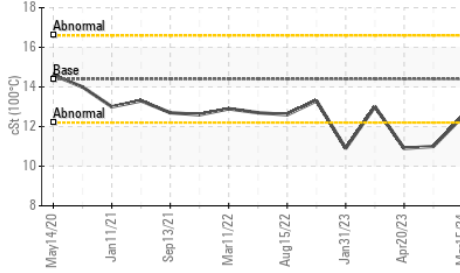


# OIL ANALYSIS REPORT

### ▲ Fuel Dilution



### Viscosity @ 100°C



### FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	15.5	21.5	19.7

### VISUAL

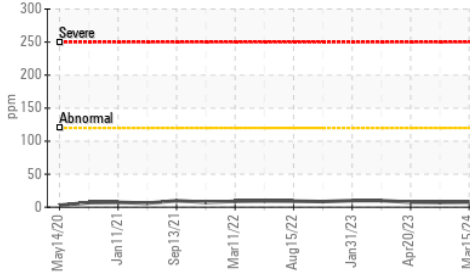
method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*	NEG	NEG	NEG	NEG

### FLUID PROPERTIES

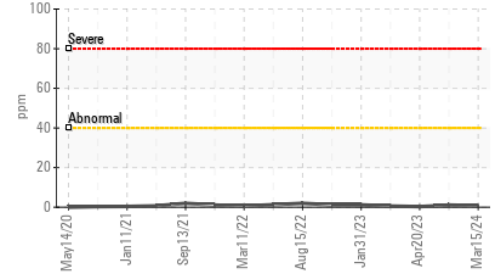
method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	14.4	12.5	▲ 11.0	▲ 10.9

### GRAPHS

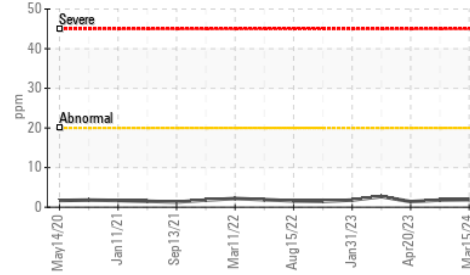
#### Iron (ppm)



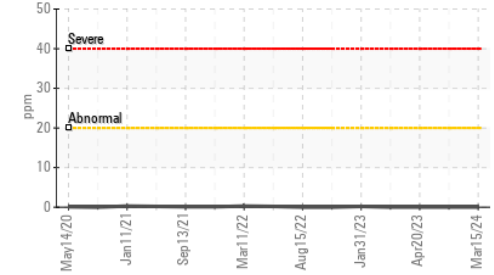
#### Lead (ppm)



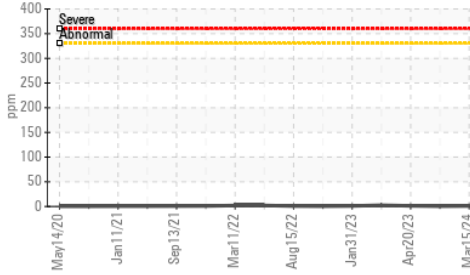
#### Aluminum (ppm)



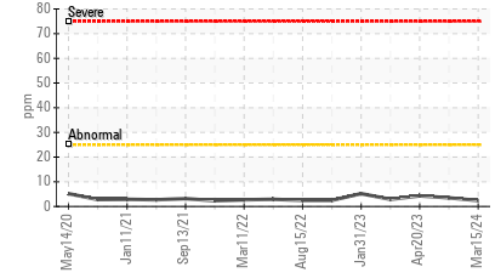
#### Chromium (ppm)



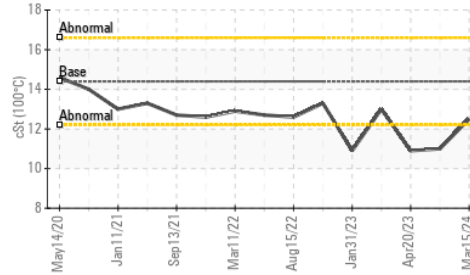
#### Copper (ppm)



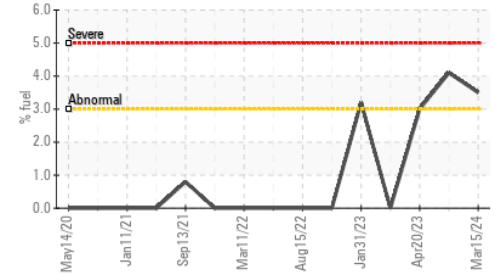
#### Silicon (ppm)



#### Viscosity @ 100°C



#### ▲ Fuel Dilution



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0102897  
**Lab Number** : 02622942  
**Unique Number** : 5748061  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel )

**GFL Environmental - 246 - Windsor**  
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 Windsor, ON  
 CA N8W 5H8  
 Contact: Dave Varga  
 dvarga@gflenv.com  
 T: (519)944-8009  
 F:

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.