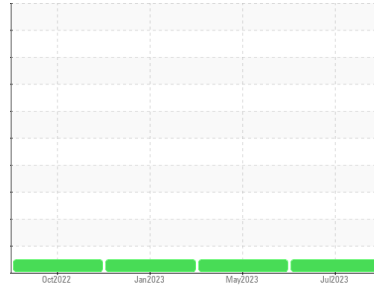




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**220066**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### 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	history 1	history 2
Sample Number	Client Info		<b>GFL0084274</b>	GFL0077618	GFL0063777
Sample Date	Client Info		<b>06 Jul 2023</b>	08 May 2023	16 Jan 2023
Machine Age	kms	Client Info	<b>448071</b>	442122	11472
Oil Age	kms	Client Info	<b>0</b>	0	349
Oil Changed	Client Info		<b>N/A</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history 1	history 2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185(m)	>100	<b>11</b>	15	19
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>1</b>	2	4
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>0</b>	<1	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
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	history 1	history 2	
Boron	ppm	ASTM D5185(m)	250	<b>4</b>	2	4
Barium	ppm	ASTM D5185(m)	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	100	<b>58</b>	58	57
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	<b>967</b>	955	932
Calcium	ppm	ASTM D5185(m)	3000	<b>1069</b>	1145	1108
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1034</b>	1034	1018
Zinc	ppm	ASTM D5185(m)	1350	<b>1180</b>	1173	1185
Sulfur	ppm	ASTM D5185(m)	4250	<b>2498</b>	2460	2450
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

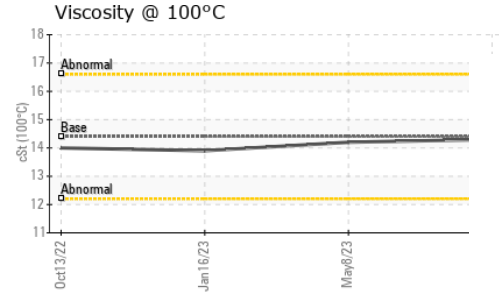
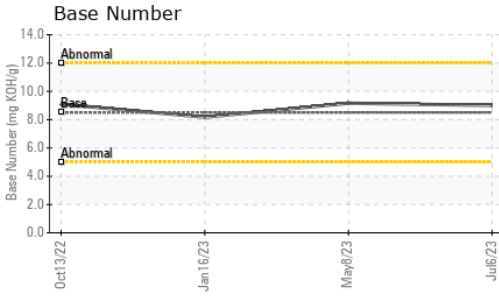
	method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	4	3
Sodium	ppm	ASTM D5185(m)	>158	<b>1</b>	1	2
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	1	3

## INFRA-RED

	method	limit/base	current	history 1	history 2	
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>5.8</b>	6.7	7.4
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>19.1</b>	19.7	20.7



# OIL ANALYSIS REPORT

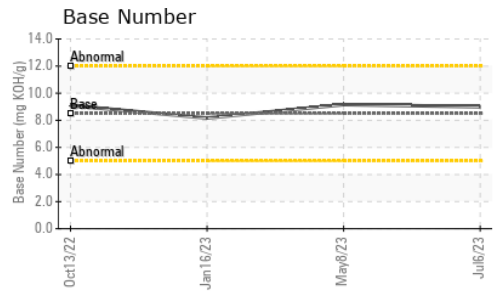
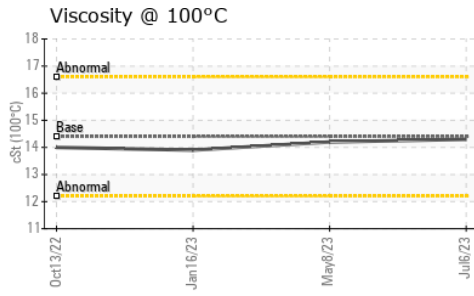
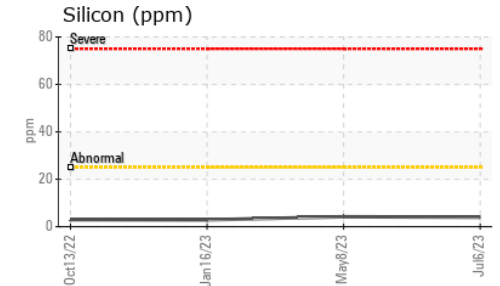
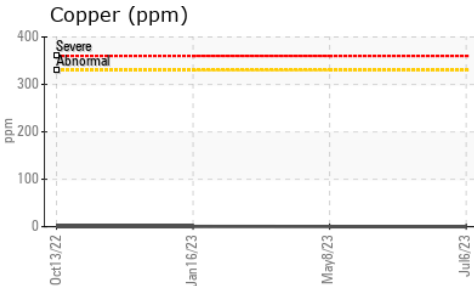
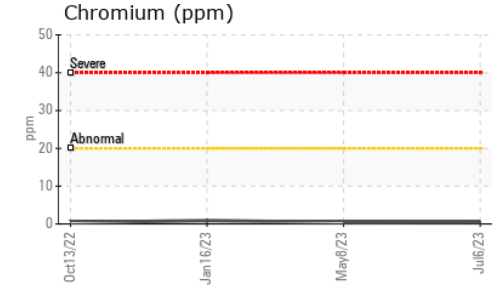
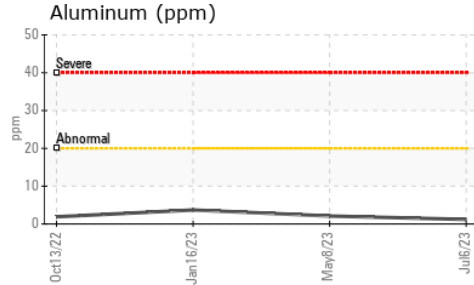
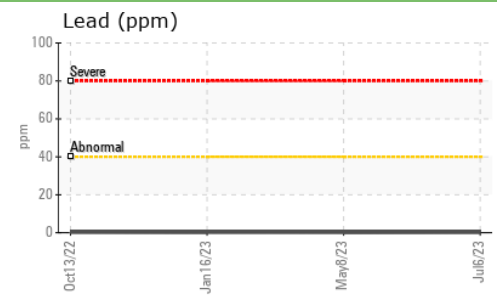
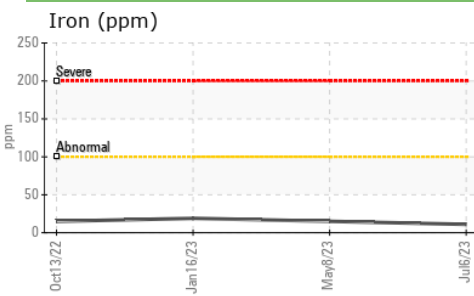


FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>15.0</b>	15.7	16.1
Base Number (BN)	mg KOH/g	ASTM D2896*	8.5	<b>9.00</b>	9.16	8.17

VISUAL		method	limit/base	current	history 1	history 2
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	<b>14.3</b>	14.2	13.9

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County  
**Sample No.** : GFL0084274 **Received** : 11 Jul 2023  
**Lab Number** : 02568985 **Diagnosed** : 12 Jul 2023  
**Unique Number** : 5606031 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2

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.

Contact: GFL Calgary  
 calgarymaintenance@gflenv.com  
 T: (403)369-6163