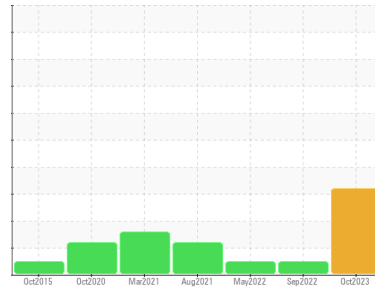




# OIL ANALYSIS REPORT

Sample Rating Trend



COOL CHEMICALS



Machine Id  
**4501**  
 Component  
**Front Natural Gas Engine**  
 Fluid  
**RDL-3647 (40 LTR)**

## DIAGNOSIS

### Recommendation

Check for low coolant level. 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

Aluminum ppm levels are abnormal. Piston wear is indicated.

### Contamination

Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative.

### Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear. The condition of the oil is acceptable for the time in service (see recommendation).

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0094400</b>	GFL0055412	GFL0042896
Sample Date	Client Info	<b>13 Oct 2023</b>	02 Sep 2022	27 May 2022
Machine Age	hrs	<b>17366</b>	17366	17366
Oil Age	hrs	<b>17366</b>	17366	17366
Oil Changed	Client Info	<b>N/A</b>	Changed	Changed
Sample Status		<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
PQ	ASTM D8184*	<b>0</b>	---	---	
Iron	ppm	ASTM D5185(m) >50	<b>46</b>	7	20
Chromium	ppm	ASTM D5185(m) >4	<b>3</b>	<1	2
Nickel	ppm	ASTM D5185(m) >2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m) >3	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185(m) >9	<b>▲ 13</b>	1	3
Lead	ppm	ASTM D5185(m) >30	<b>24</b>	<1	3
Copper	ppm	ASTM D5185(m) >35	<b>4</b>	1	4
Tin	ppm	ASTM D5185(m) >4	<b>1</b>	0	<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) 50	<b>10</b>	12	10
Barium	ppm	ASTM D5185(m) 5	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 50	<b>133</b>	53	57
Manganese	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 560	<b>507</b>	515	584
Calcium	ppm	ASTM D5185(m) 1510	<b>1481</b>	1485	1577
Phosphorus	ppm	ASTM D5185(m) 780	<b>654</b>	677	728
Zinc	ppm	ASTM D5185(m) 870	<b>906</b>	844	956
Sulfur	ppm	ASTM D5185(m) 2040	<b>2341</b>	1988	2096
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >+100	<b>22</b>	11	39
Sodium	ppm	ASTM D5185(m)	<b>▲ 4458</b>	55	58
Potassium	ppm	ASTM D5185(m) >20	<b>▲ 521</b>	71	39
Glycol	%	ASTM D7922*	<b>0.0</b>	0.0	0.0

## INFRA-RED

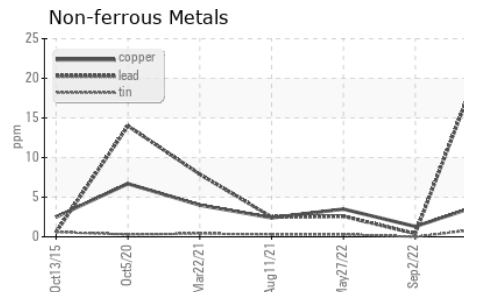
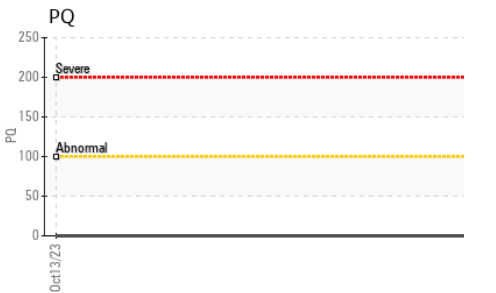
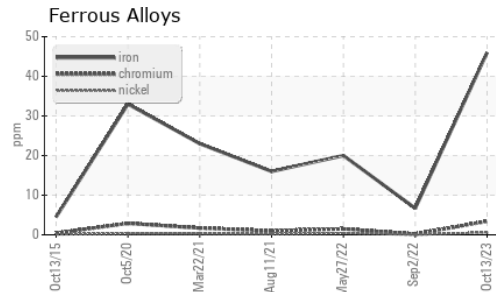
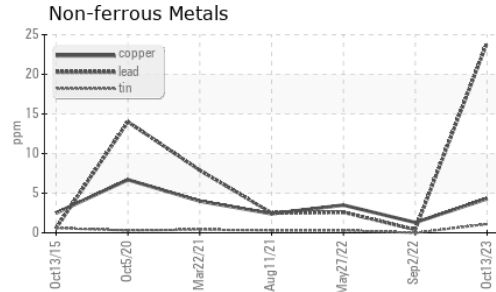
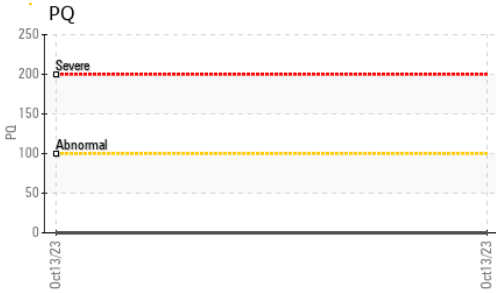
method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*	<b>0</b>	0	0	
Nitration	Abs/cm	ASTM D7624*	>20	<b>21.9</b>	10.9	11.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>31.1</b>	22.6	27.0

## FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>19.9</b>	19.0	20.9



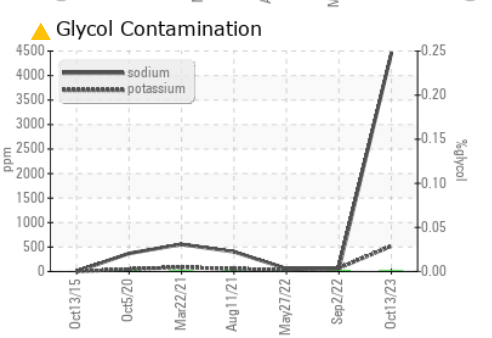
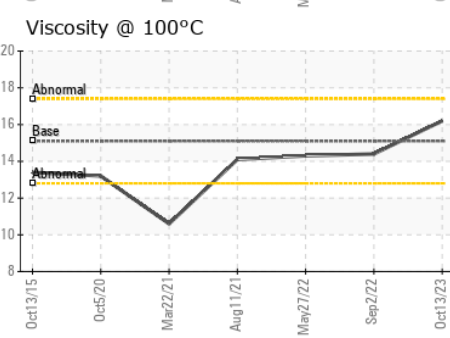
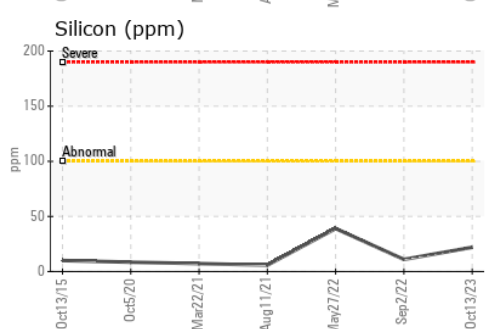
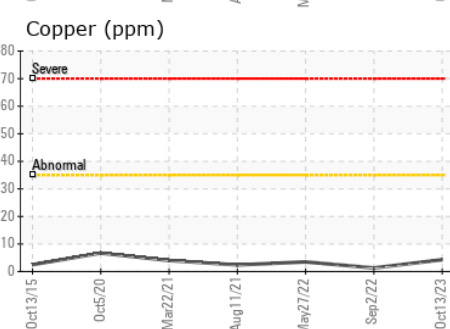
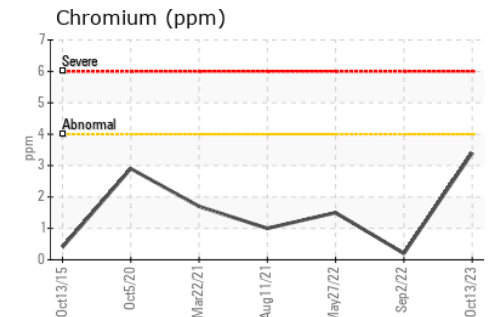
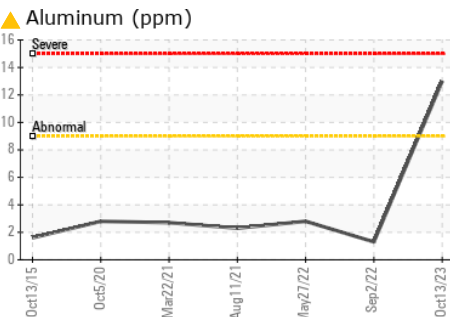
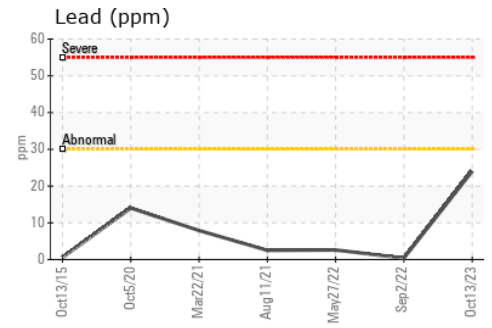
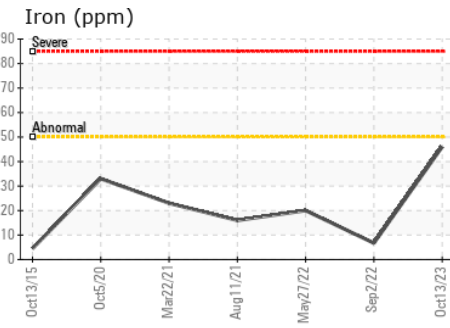
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	16.2	14.4

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0094400  
**Lab Number** : 02589274  
**Unique Number** : 5658340  
**Test Package** : MOB 1 ( Additional Tests: Glycol, PQ )  
**Received** : 16 Oct 2023  
**Diagnosed** : 17 Oct 2023  
**Diagnostician** : Kevin Marson

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.

**GFL Environmental - 222 - Sandhill**  
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