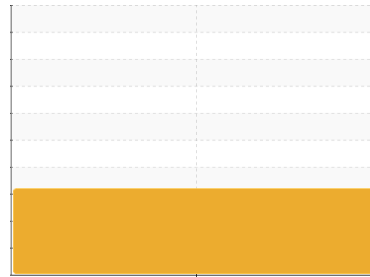




# OIL ANALYSIS REPORT

Sample Rating Trend



SOOT



Machine Id  
**KOUATERA MC100G FMC009**

Component  
**Diesel Engine**

Fluid  
**SHELL 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

### Contamination

There is an abnormal amount of solids and carbon present in the oil.

### Fluid Condition

Viscosity of sample indicates oil is within SAE 50 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC104870</b>	---	---
Sample Date	Client Info		<b>21 Oct 2020</b>	---	---
Machine Age	hrs	Client Info	<b>1834</b>	---	---
Oil Age	hrs	Client Info	<b>250</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>SEVERE</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	---	---
Water	WC Method	>0.2	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		<b>12</b>	---	---
Iron	ppm	ASTM D5185(m) >100	<b>▲ 122</b>	---	---
Chromium	ppm	ASTM D5185(m) >20	<b>4</b>	---	---
Nickel	ppm	ASTM D5185(m) >4	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185(m) >3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m) >20	<b>6</b>	---	---
Lead	ppm	ASTM D5185(m) >40	<b>8</b>	---	---
Copper	ppm	ASTM D5185(m) >330	<b>17</b>	---	---
Tin	ppm	ASTM D5185(m) >15	<b>1</b>	---	---
Antimony	ppm	ASTM D5185(m)	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	<b>2</b>	---	---
Barium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185(m)	<b>16</b>	---	---
Manganese	ppm	ASTM D5185(m)	<b>9</b>	---	---
Magnesium	ppm	ASTM D5185(m)	<b>247</b>	---	---
Calcium	ppm	ASTM D5185(m)	<b>2202</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	<b>944</b>	---	---
Zinc	ppm	ASTM D5185(m)	<b>1227</b>	---	---
Sulfur	ppm	ASTM D5185(m)	<b>2933</b>	---	---
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---

## CONTAMINANTS

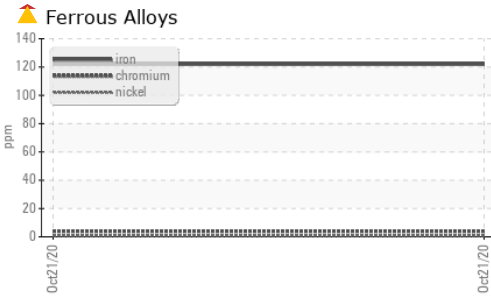
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<b>13</b>	---	---
Sodium	ppm	ASTM D5185(m) >150	<b>4</b>	---	---
Potassium	ppm	ASTM D5185(m) >20	<b>2</b>	---	---

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	<b>● 5.7</b>	---	---
Nitration	Abs/cm	ASTM D7624* >20	<b>17.1</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>44.2</b>	---	---



# OIL ANALYSIS REPORT

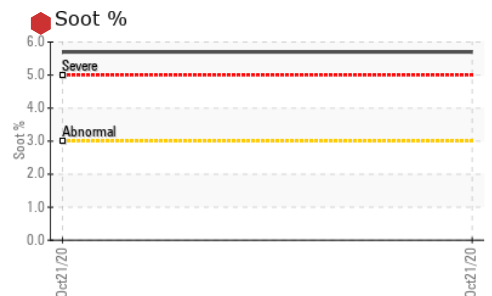
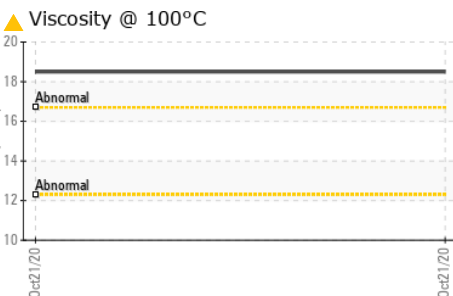
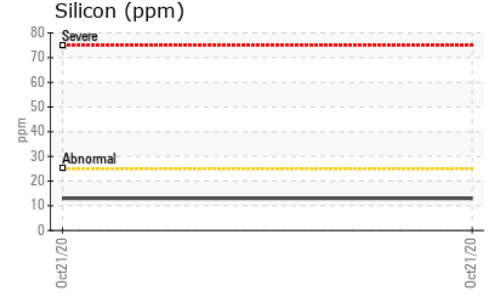
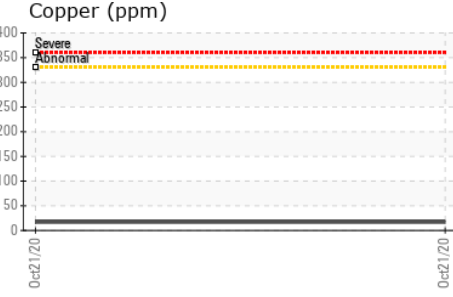
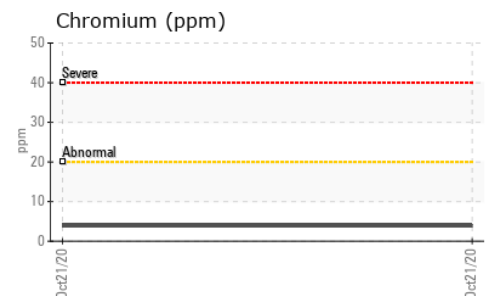
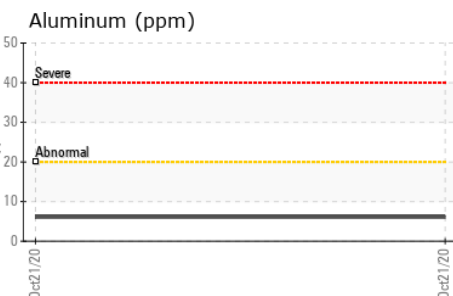
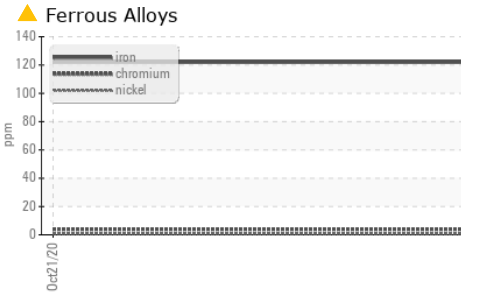
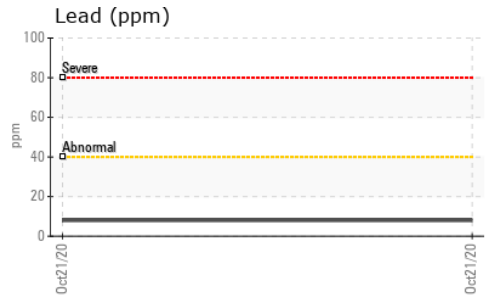
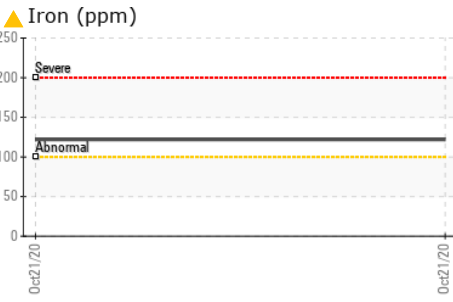
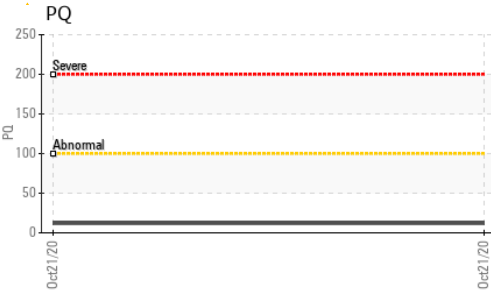


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>33.7</b>	---	---

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)		<b>▲ 18.5</b>	---	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC104870 **Received** : 16 Nov 2020  
**Lab Number** : 02387499 **Diagnosed** : 16 Nov 2020  
**Unique Number** : 5134956 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PQ )

**Agnico Eagle Canada**  
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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.