



# OIL ANALYSIS REPORT

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

Area

## Flotation

Machine Id

### Agitator,Areation,34-AG-201 (S/N 11212408)

Component

## Gearbox

Fluid

### SHELL OMALA S2 G 220 (--- GAL)

### RECOMMENDATION

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### WEAR

All component wear rates are normal.

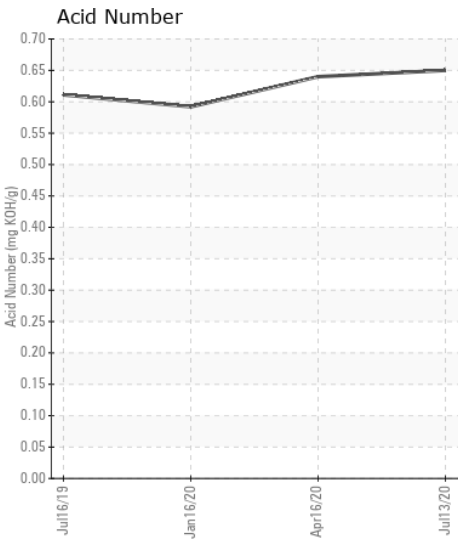
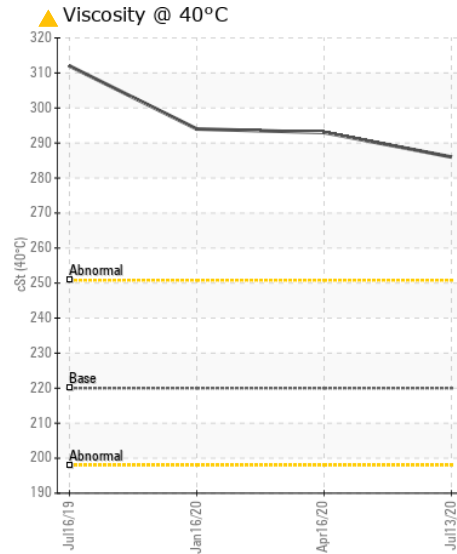
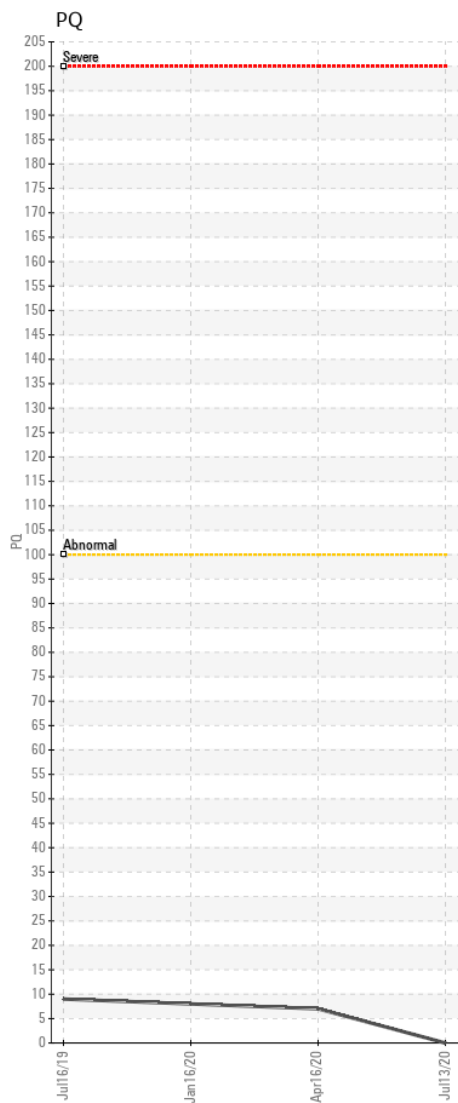
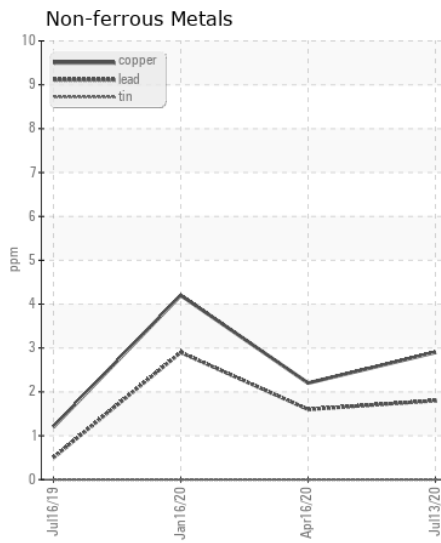
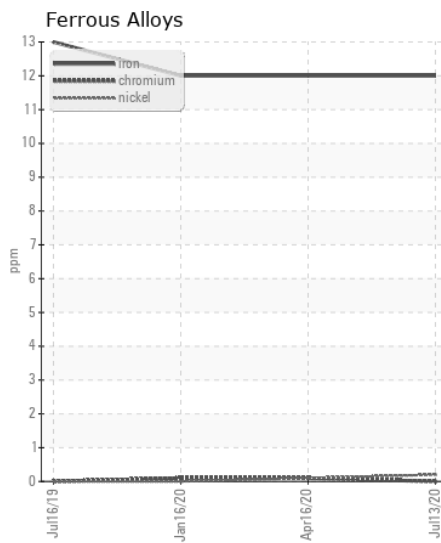
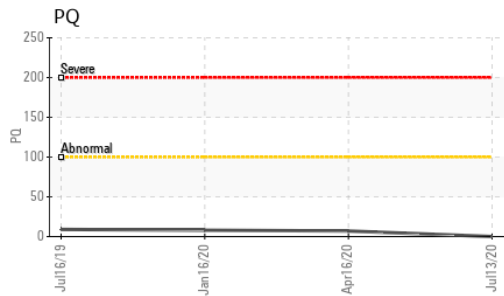
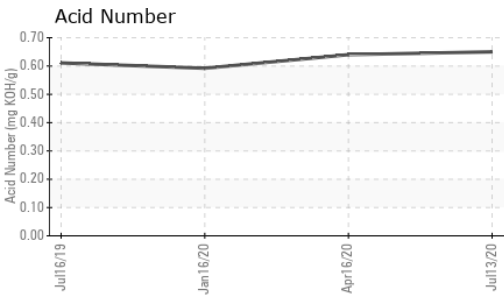
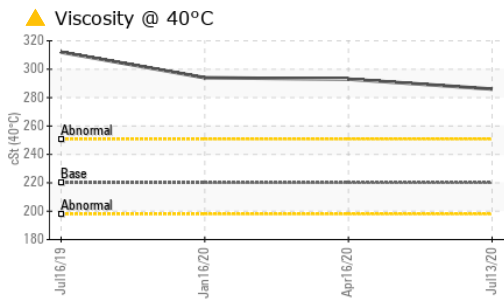
### CONTAMINATION

There is no indication of any contamination in the oil.

### FLUID CONDITION

Viscosity of sample indicates oil is within ISO 320 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0438259</b>	WC0438267	WC0368614
Sample Date		Client Info		<b>13 Jul 2020</b>	16 Apr 2020	16 Jan 2020
Machine Age	mths	Client Info		<b>3</b>	0	0
Oil Age	mths	Client Info		<b>0</b>	0	0
Filter Age	mths	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	N/A	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	N/A	Not Changd
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL
PQ		ASTM D8184*		<b>0</b>	7	8
Iron	ppm	ASTM D5185(m)	>200	<b>12</b>	12	12
Chromium	ppm	ASTM D5185(m)	>15	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>100	<b>2</b>	2	3
Copper	ppm	ASTM D5185(m)	>200	<b>3</b>	2	4
Tin	ppm	ASTM D5185(m)	>25	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>LIGHT</b>	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>50	<b>7</b>	7	8
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Boron	ppm	ASTM D5185(m)	4.4	<b>10</b>	10	10
Barium	ppm	ASTM D5185(m)	0.0	<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185(m)	0	<b>13</b>	13	12
Phosphorus	ppm	ASTM D5185(m)	215	<b>261</b>	252	247
Zinc	ppm	ASTM D5185(m)	0	<b>104</b>	101	87
Sulfur	ppm	ASTM D5185(m)	7039	<b>10470</b>	10537	10679
Acid Number (AN)	mg KOH/g	ASTM D974*		<b>0.65</b>	0.64	0.592
Visc @ 40°C	cSt	ASTM D7279(m)	220	<b>▲ 286</b>	293	294



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0438259 **Received** : 17 Jul 2020  
**Lab Number** : 02365547 **Diagnosed** : 17 Jul 2020  
**Unique Number** : 5072991 **Diagnostician** : Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: TAN Man )

**Vale - Clarabelle Mill**  
 MTW (Mill, Tailings & Water)  
 COPPER CLIFF, ON  
 CA P0M 1N0  
 Contact: Shannon Kingsley

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.

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