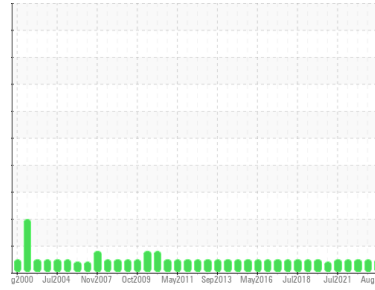




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**WQR**  
 Machine Id  
**CATHGEN8BRGLOW (S/N 218012-1)**  
 Component  
**Lower Bearing**  
 Fluid  
**ESSO TERESSO ISO 68 (11 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable. NOTE: An increase in the particle count is noted.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0779201</b>	WC0779228	WC0548074
Sample Date	Client Info		<b>22 Aug 2023</b>	08 Feb 2023	03 Aug 2022
Machine Age	hrs	Client Info	<b>130445</b>	125878	121701
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Not Changed</b>	Not Changd	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>0</b>	0	<1
Lead	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	0	0
Tin	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	<1	<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) 4.5	<b>0</b>	<1	0
Barium	ppm	ASTM D5185(m) 0.4	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Calcium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	0	0
Phosphorus	ppm	ASTM D5185(m) 0.7	<b>4</b>	3	4
Zinc	ppm	ASTM D5185(m) 0	<b>2</b>	<1	<1
Sulfur	ppm	ASTM D5185(m) 1315	<b>2446</b>	2549	2530
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

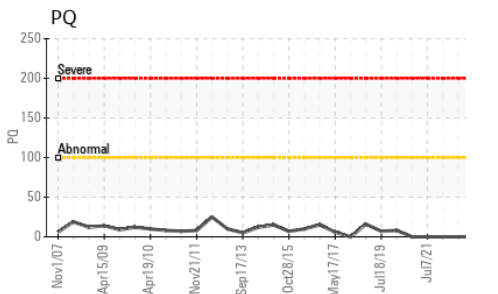
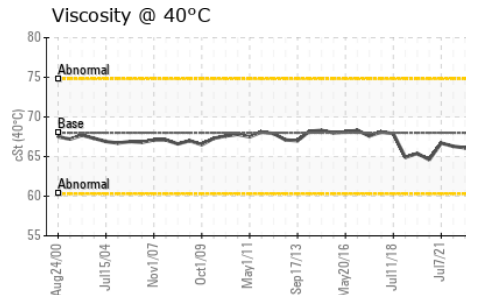
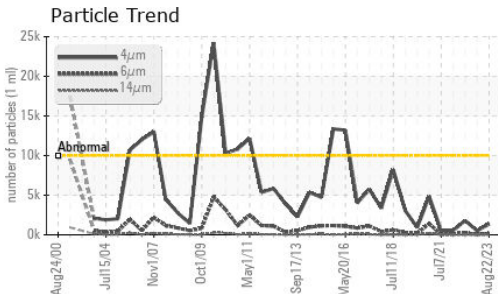
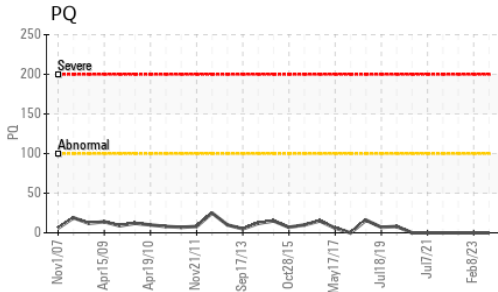
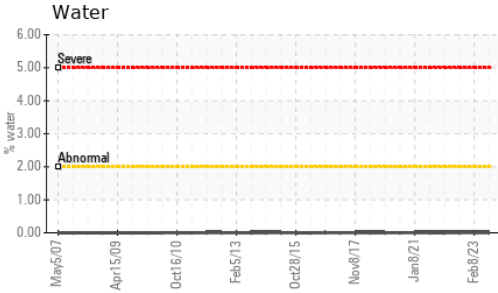
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	<b>3</b>	3	3
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	0	<1
Water	%	ASTM D6304* >2	<b>0.001</b>	0.001	0.003
ppm Water	ppm	ASTM D6304*	<b>12.9</b>	10.8	25.3

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>1351</b>	510	1792
Particles >6µm	ASTM D7647	>2500	<b>153</b>	95	208
Particles >14µm	ASTM D7647	>160	<b>12</b>	8	9
Particles >21µm	ASTM D7647	>40	<b>5</b>	2	3
Particles >38µm	ASTM D7647	>10	<b>1</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/14	<b>18/14/11</b>	16/14/10	18/15/10



# OIL ANALYSIS REPORT

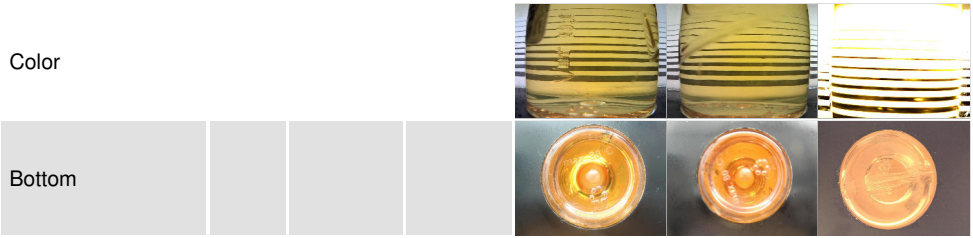


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.02	<b>0.04</b>	0.05	0.04

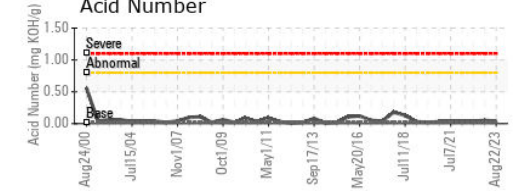
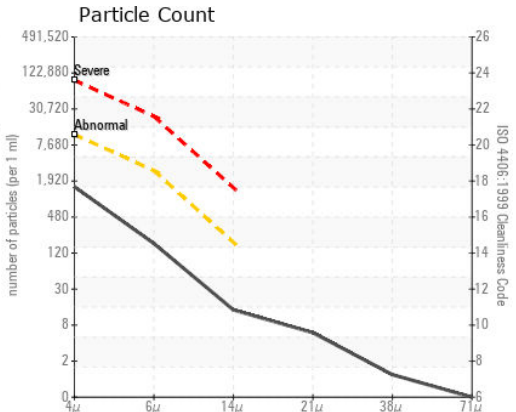
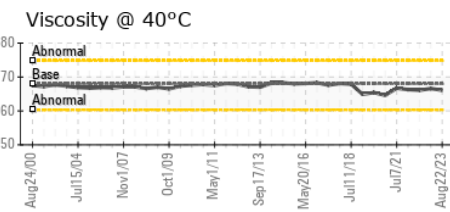
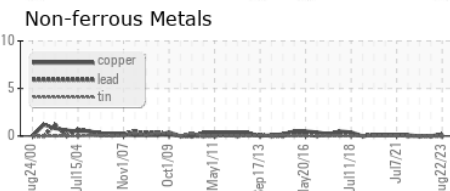
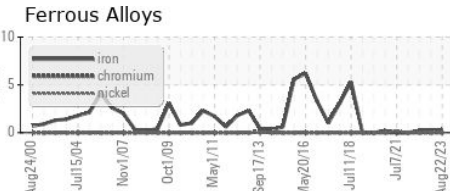
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	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*	>2	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68	<b>66.1</b>	66.6	66.1

SAMPLE IMAGES		method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ALGONQUIN POWER SYSTEMS INC.**  
**Sample No.** : WC0779201 **Received** : 29 Aug 2023  
**Lab Number** : **02579136** **Diagnosed** : 30 Aug 2023  
**Unique Number** : 5632196 **Diagnostician** : Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, PrtCount, TAN Man )

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 antoninoChamp.fernando@algonquinpower.com  
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 F: x:

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.