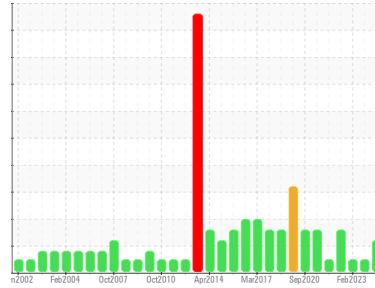




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**COR**  
Machine Id  
**LONGGEN1BRGUS**  
Component  
**Bearing**  
Fluid  
**SHELL TURBO T ISO 68 (25 LTR)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

### 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>WC0790715</b>	WC0790724	WC0790726
Sample Date	Client Info		<b>06 Nov 2023</b>	13 Sep 2023	15 Feb 2023
Machine Age	mths	Client Info	<b>316</b>	310	307
Oil Age	mths	Client Info	<b>9</b>	12	29
Oil Changed	Client Info		<b>Not Changed</b>	Not Changed	Changed
Sample Status			<b>ATTENTION</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>0</b>	0	0
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >20	<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) >20	<b>&lt;1</b>	0	0
Lead	ppm	ASTM D5185(m) >20	<b>0</b>	<1	0
Copper	ppm	ASTM D5185(m) >20	<b>0</b>	<1	0
Tin	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
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	history1	history2
Boron	ppm	ASTM D5185(m)	<b>0</b>	<1	<1
Barium	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185(m)	<b>3</b>	3	0
Zinc	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Sulfur	ppm	ASTM D5185(m)	<b>9</b>	34	25
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

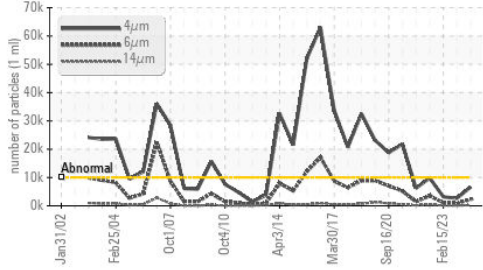
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	<b>0</b>	0	0
Sodium	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Potassium	ppm	ASTM D5185(m) >20	<b>2</b>	0	0
Water	%	ASTM D6304* >2	<b>0.002</b>	0.002	0.001
ppm Water	ppm	ASTM D6304*	<b>19</b>	22.2	14.2

## FLUID CLEANLINESS

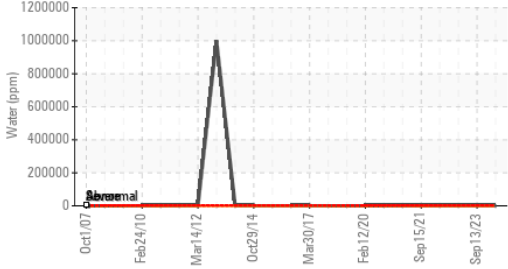
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>6653</b>	2636	3174
Particles >6µm	ASTM D7647	>2500	<b>2265</b>	821	1071
Particles >14µm	ASTM D7647	>160	<b>▲ 248</b>	71	116
Particles >21µm	ASTM D7647	>40	<b>▲ 68</b>	18	37
Particles >38µm	ASTM D7647	>10	<b>6</b>	2	4
Particles >71µm	ASTM D7647	>3	<b>2</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/14	<b>▲ 20/18/15</b>	19/17/13	19/17/14

# OIL ANALYSIS REPORT

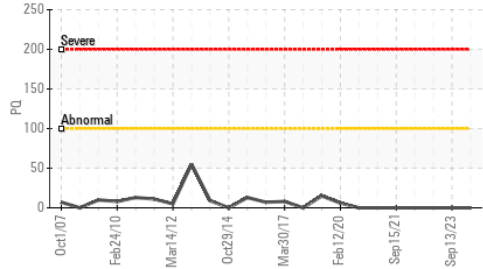
### Particle Trend



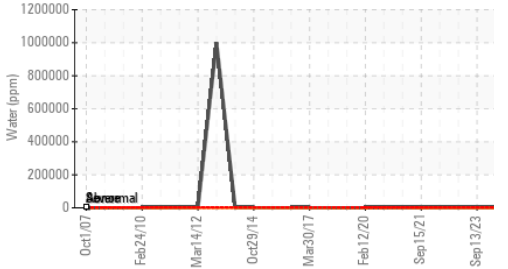
### Water (KF)



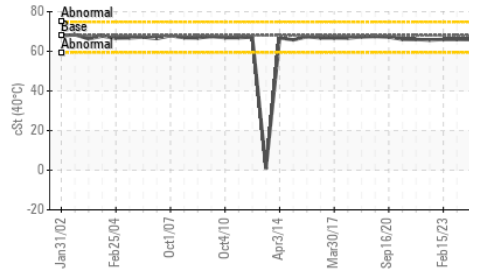
### PQ



### Water (KF)



### Viscosity @ 40°C

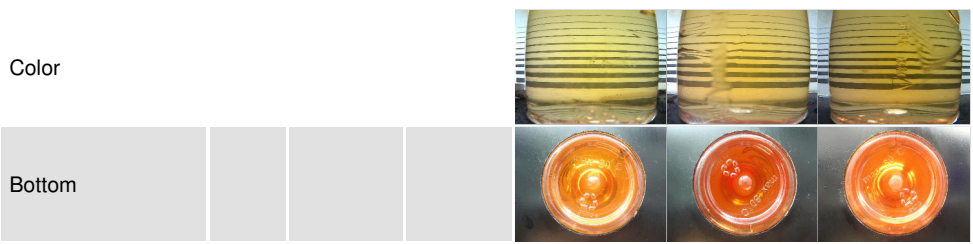


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	.05	<b>0.06</b>	0.05	0.04

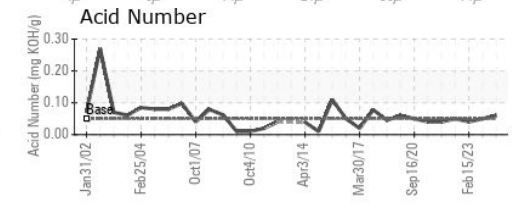
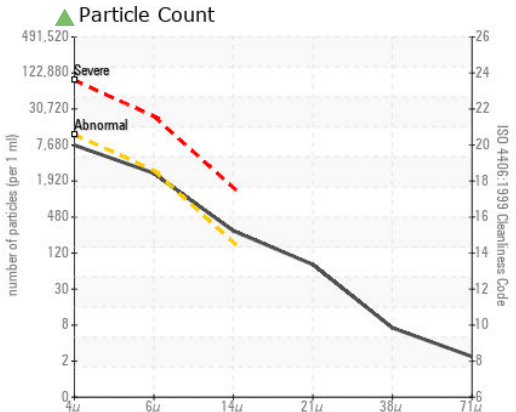
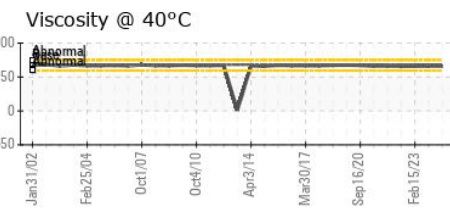
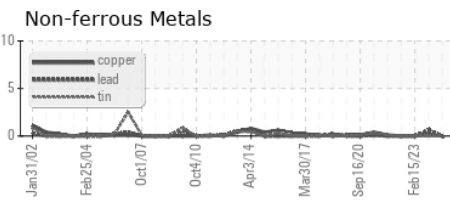
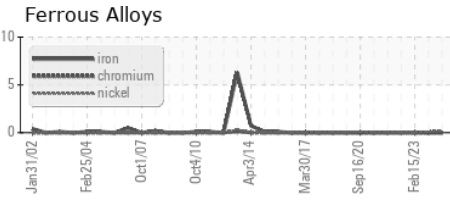
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	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>65.9</b>	66.0	66.0

### SAMPLE IMAGES



### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0790715  
**Lab Number** : 02605961  
**Unique Number** : 5707047  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, PrtCount, TAN Man )

**ALGONQUIN POWER SYSTEMS INC.**  
 354 DAVIS ROAD  
 OAKVILLE, ON  
 CA L6J 2X1

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: Antonino Champ Fernando  
 antoninoChamp.fernando@algonquinpower.com  
 T: (905)465-7065  
 F: x: