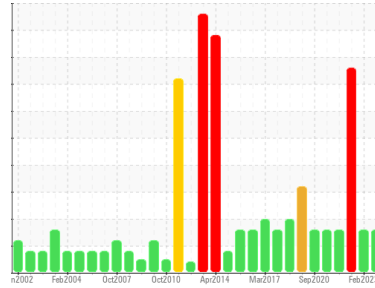




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**COR**  
 Machine Id  
**LONGGEN1BRGDS**  
 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>WC0790718</b>	WC0790737	WC0681476
Sample Date	Client Info		<b>06 Nov 2023</b>	15 Feb 2023	20 Jun 2022
Machine Age	mths	Client Info	<b>316</b>	307	299
Oil Age	mths	Client Info	<b>9</b>	17	9
Oil Changed	Client Info		<b>Changed</b>	Changed	Not Changed
Sample Status			<b>ATTENTION</b>	ABNORMAL	SEVERE

## 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>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>&lt;1</b>	0	0
Lead	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	<1	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>	0	0
Barium	ppm	ASTM D5185(m)	<b>0</b>	0	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>0</b>	0	0
Calcium	ppm	ASTM D5185(m)	<b>0</b>	4	0
Phosphorus	ppm	ASTM D5185(m)	<b>4</b>	0	2
Zinc	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Sulfur	ppm	ASTM D5185(m)	<b>7</b>	19	27
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

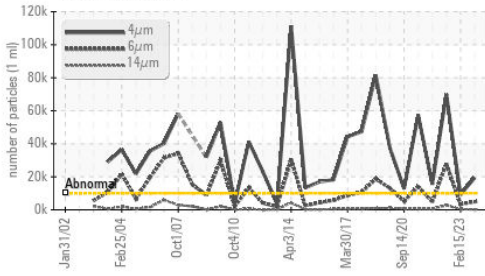
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	<b>0</b>	0	0
Sodium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Potassium	ppm	ASTM D5185(m) >20	<b>2</b>	0	<1
Water	%	ASTM D6304* >2	<b>0.002</b>	0.001	0.002
ppm Water	ppm	ASTM D6304*	<b>22</b>	13.0	15.9

## FLUID CLEANLINESS

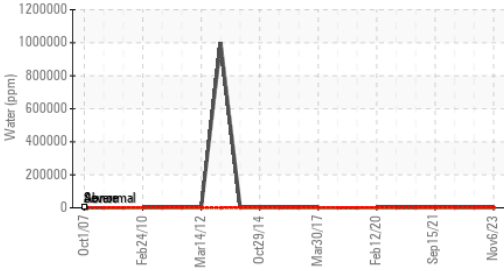
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>▲ 19356</b>	9211	▲ 69961
Particles >6µm	ASTM D7647	>2500	<b>▲ 4798</b>	▲ 3447	▲ 27895
Particles >14µm	ASTM D7647	>160	<b>▲ 216</b>	▲ 403	▲ 2741
Particles >21µm	ASTM D7647	>40	<b>46</b>	▲ 121	▲ 621
Particles >38µm	ASTM D7647	>10	<b>3</b>	5	▲ 20
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	1
Oil Cleanliness	ISO 4406 (c)	>20/18/14	<b>▲ 21/19/15</b>	▲ 20/19/16	▲ 23/22/19

# OIL ANALYSIS REPORT

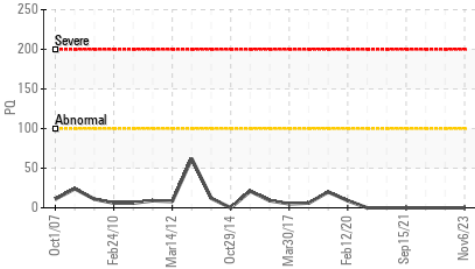
### Particle Trend



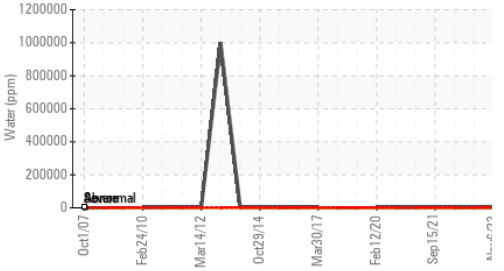
### Water (KF)



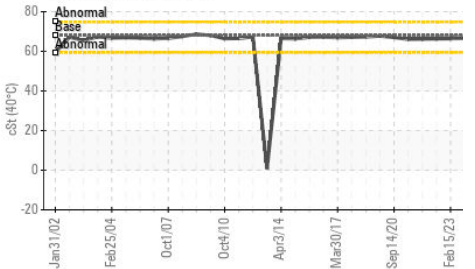
### PQ



### Water (KF)



### Viscosity @ 40°C



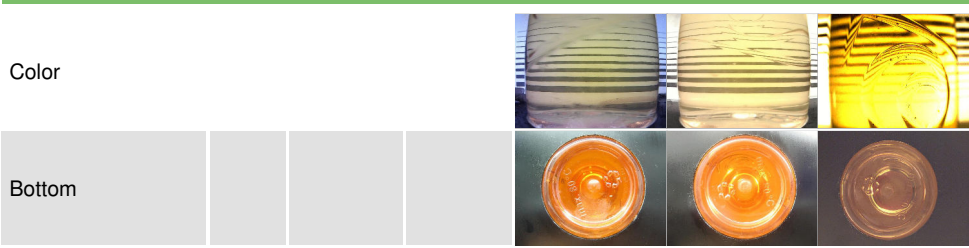
### FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g	ASTM D974* .05	<b>0.06</b>	0.06	0.06
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* >2	<b>NEG</b>	NEG	NEG

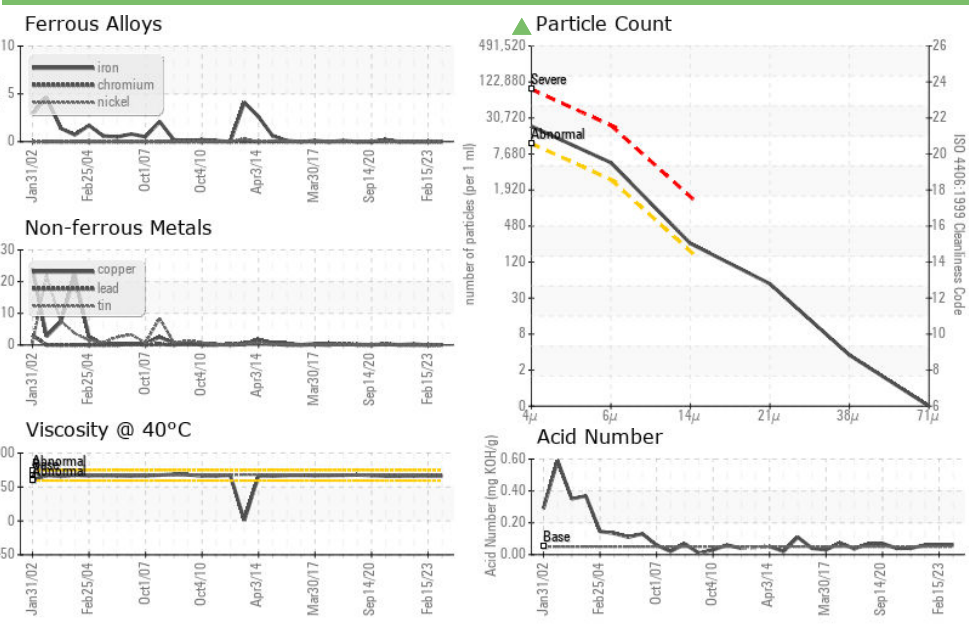
### FLUID PROPERTIES

method	limit/base	current	history1	history2
Visc @ 40°C cSt	ASTM D7279(m) 68	<b>66.5</b>	66.4	66.3

### SAMPLE IMAGES



### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0790718 **Received** : 02 Jan 2024  
**Lab Number** : **02605960** **Tested** : 24 Jan 2024  
**Unique Number** : 5707046 **Diagnosed** : 24 Jan 2024 - Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, PrtCount, TAN Man )

**ALGONQUIN POWER SYSTEMS INC.**  
 354 DAVIS ROAD  
 OAKVILLE, ON  
 CA L6J 2X1  
 Contact: Antonino Champ Fernando  
 antoninoChamp.fernando@algonquinpower.com  
 T: (905)465-7065  
 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.