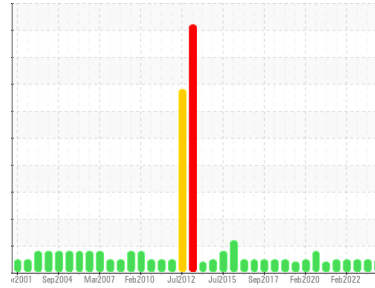




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**COR**  
 Machine Id  
**LONGGEN2BRGUS**  
 Component  
**Bearing**  
 Fluid  
**SHELL TURBO T ISO 68 (25 LTR)**

## 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.

### 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>WC0790727</b>	WC0681469	WC0681486
Sample Date	Client Info		<b>14 Sep 2023</b>	22 Feb 2023	12 Sep 2022
Machine Age	mths	Client Info	<b>312</b>	305	300
Oil Age	mths	Client Info	<b>19</b>	12	31
Oil Changed	Client Info		<b>Not Changed</b>	Not Changed	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>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>0</b>	<1	0
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	<1
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

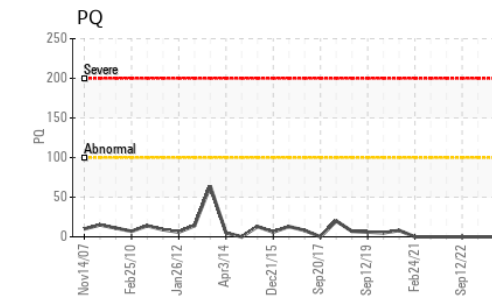
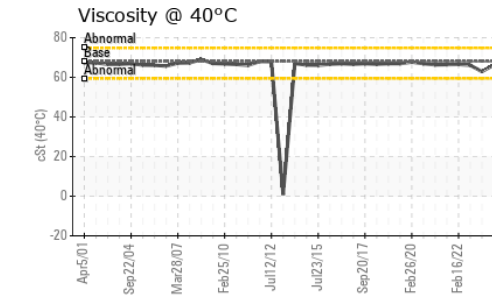
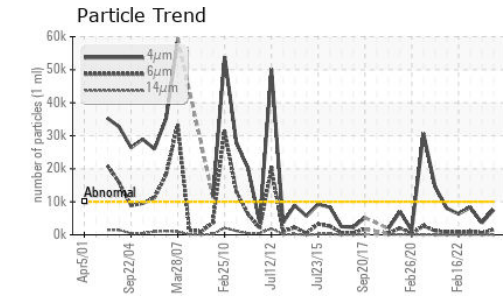
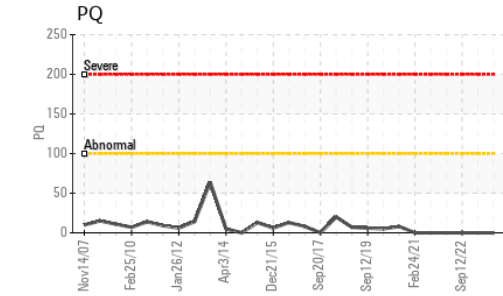
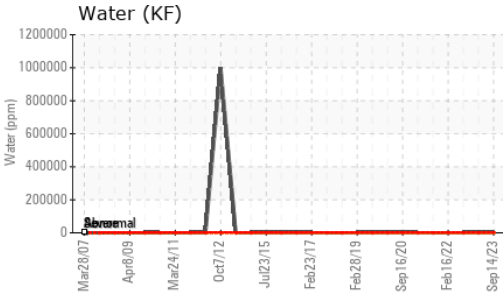
	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Calcium	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	0
Phosphorus	ppm	ASTM D5185(m)	<b>2</b>	1	1
Zinc	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Sulfur	ppm	ASTM D5185(m)	<b>84</b>	44	33
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>&lt;1</b>	<1	1
Sodium	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	<1	0
Water	%	ASTM D6304* >2	<b>0.001</b>	0.001	0.001
ppm Water	ppm	ASTM D6304*	<b>12.7</b>	7.7	11.2

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>7537</b>	3661	8256
Particles >6µm	ASTM D7647	>2500	<b>1532</b>	636	1108
Particles >14µm	ASTM D7647	>160	<b>50</b>	45	62
Particles >21µm	ASTM D7647	>40	<b>9</b>	15	17
Particles >38µm	ASTM D7647	>10	<b>1</b>	1	1
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	1
Oil Cleanliness	ISO 4406 (c)	>20/18/14	<b>20/18/13</b>	19/16/13	20/17/13



FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	.05	<b>0.08</b>	0.05

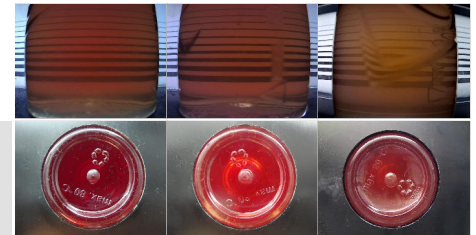
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68	<b>66.2</b>	62.9

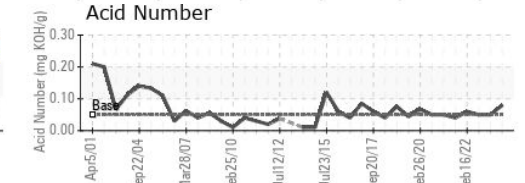
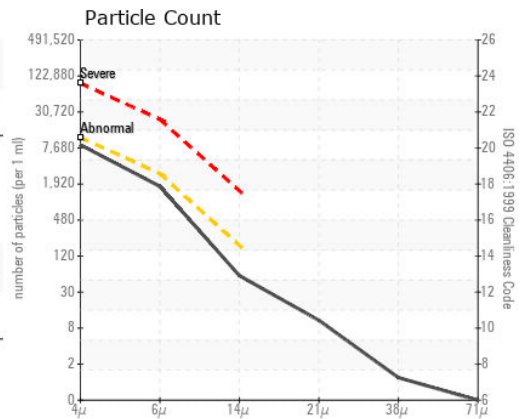
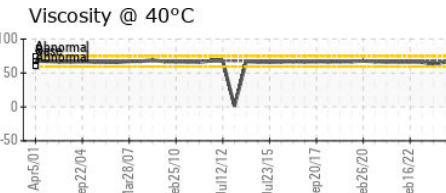
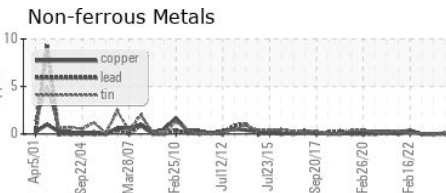
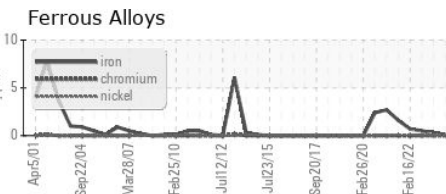
SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

Bottom



## GRAPHS



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0790727  
**Lab Number** : 02586444  
**Unique Number** : 5655510  
**Test Package** : IND 2 ( Additional Tests: KF, PrtCount, TAN Man )

**Received** : 03 Oct 2023  
**Tested** : 04 Oct 2023  
**Diagnosed** : 04 Oct 2023 - Kevin Marson

**ALGONQUIN POWER SYSTEMS INC.**  
 354 DAVIS ROAD  
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 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.