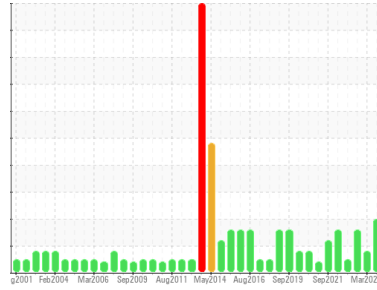




PROBLEM SUMMARY

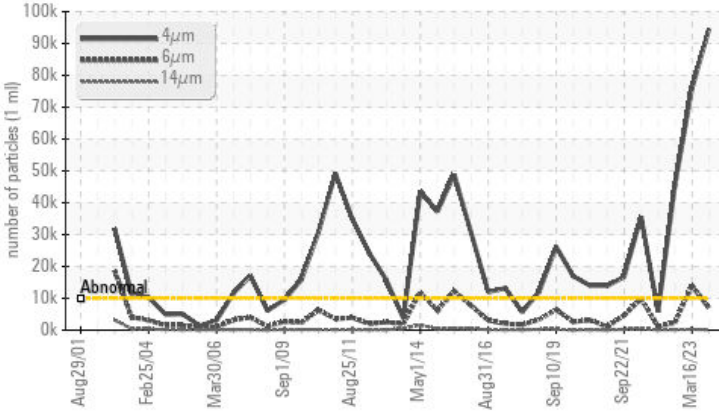
Area
COR
 Machine Id
LONGGEN3BRGDS
 Component
Bearing
 Fluid
SHELL TURBO T ISO 68 (25 LTR)

Sample Rating Trend



COMPONENT CONDITION SUMMARY

Particle Trend



RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>10000	🔴 94525	🟡 45568	🟡 75944
Particles >6µm	ASTM D7647	>2500	🟡 6947	2380	🟡 14013
Oil Cleanliness	ISO 4406 (c)	>20/18/14	🔴 24/20/14	🟡 23/18/14	🟡 23/21/15

Customer Id: ALGMIS
 Sample No.: WC0790723
 Lab Number: 02588629
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
 Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

16 Mar 2023 Diag: Kevin Marson

ISO



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Particles >4µm and oil cleanliness are abnormally high. The water content is negligible. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



16 Mar 2023 Diag: Kevin Marson

ISO



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Oil Cleanliness are abnormally high. Particles >4µm are abnormally high. Particles >6µm are abnormally high. Particles >14µm are notably high. The water content is negligible. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



06 Oct 2022 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

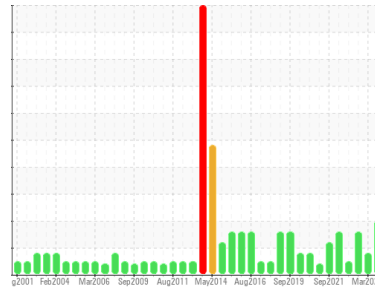
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
COR
 Machine Id
LONGGEN3BRGDS

Component
Bearing
 Fluid
SHELL TURBO T ISO 68 (25 LTR)

DIAGNOSIS

Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

Wear

All component wear rates are normal.

Contamination

There is a high 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 oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0790723	WC0681490	WC0681491
Sample Date	Client Info		12 Sep 2023	16 Mar 2023	16 Mar 2023
Machine Age	mths	Client Info	311	305	305
Oil Age	mths	Client Info	11	5	5
Oil Changed	Client Info		Changed	Not Changd	Not Changd
Sample Status			SEVERE	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m) >20	4	4	1
Chromium	ppm	ASTM D5185(m) >20	0	0	0
Nickel	ppm	ASTM D5185(m) >20	<1	0	0
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	<1	0	0
Aluminum	ppm	ASTM D5185(m) >20	<1	0	0
Lead	ppm	ASTM D5185(m) >20	0	0	<1
Copper	ppm	ASTM D5185(m) >20	<1	<1	4
Tin	ppm	ASTM D5185(m) >20	<1	<1	<1
Antimony	ppm	ASTM D5185(m)	0	<1	<1
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	<1	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	0	0
Calcium	ppm	ASTM D5185(m)	<1	0	0
Phosphorus	ppm	ASTM D5185(m)	2	1	<1
Zinc	ppm	ASTM D5185(m)	<1	<1	3
Sulfur	ppm	ASTM D5185(m)	20	20	18
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	<1	<1	0
Sodium	ppm	ASTM D5185(m)	<1	0	<1
Potassium	ppm	ASTM D5185(m) >20	0	<1	0
Water	%	ASTM D6304* >2	0.002	0.001	0.001
ppm Water	ppm	ASTM D6304*	20.6	9.1	8.4

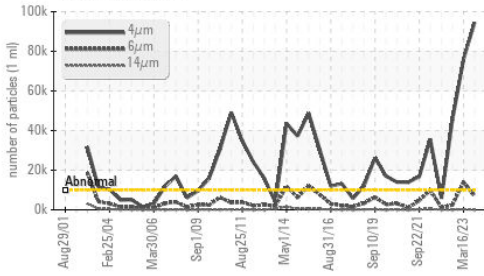
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	94525	45568	75944
Particles >6µm	ASTM D7647	>2500	6947	2380	14013
Particles >14µm	ASTM D7647	>160	81	103	243
Particles >21µm	ASTM D7647	>40	17	32	51
Particles >38µm	ASTM D7647	>10	1	2	2
Particles >71µm	ASTM D7647	>3	1	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/14	24/20/14	23/18/14	23/21/15

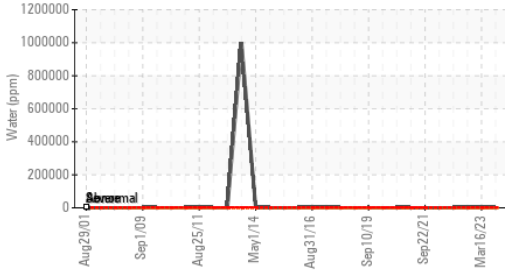


OIL ANALYSIS REPORT

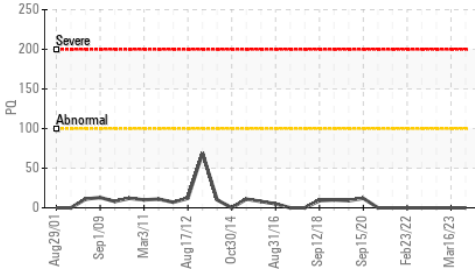
Particle Trend



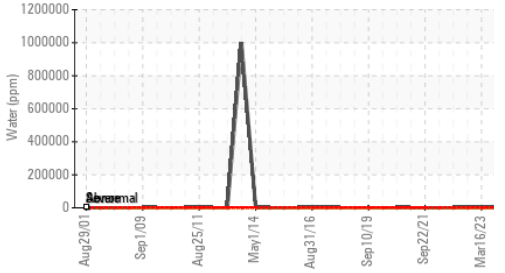
Water (KF)



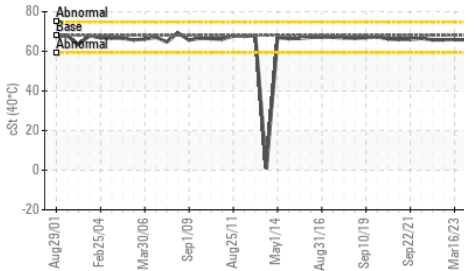
PQ



Water (KF)



Viscosity @ 40°C



FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g ASTM D974*	.05	0.10	0.07	0.06

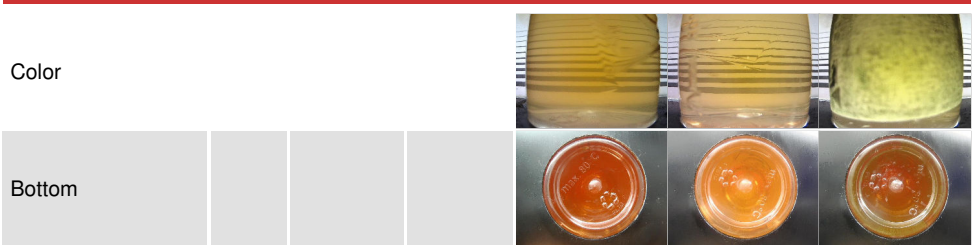
VISUAL

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	NEG

FLUID PROPERTIES

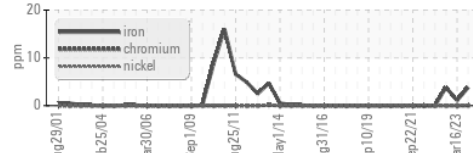
method	limit/base	current	history1	history2	
Visc @ 40°C	cSt ASTM D7279(m)	68	65.8	65.9	65.8

SAMPLE IMAGES

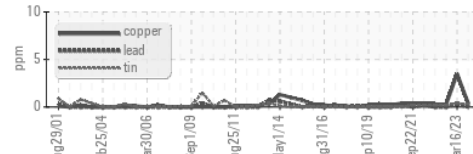


GRAPHS

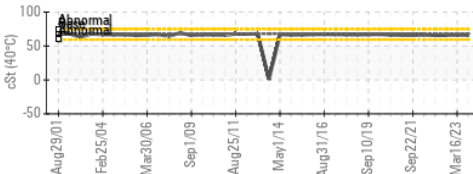
Ferrous Alloys



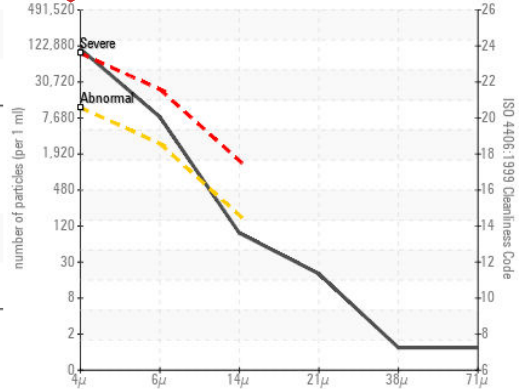
Non-ferrous Metals



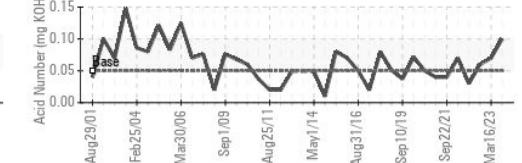
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
 Sample No. : WC0790723
 Lab Number : 02588629
 Unique Number : 5657695
 Test Package : IND 2 (Additional Tests: KF, PrtCount, TAN Man)

ALGONQUIN POWER SYSTEMS INC.
 354 DAVIS ROAD
 OAKVILLE, ON
 CA L6J 2X1
 Contact: Antonino Champ Fernando
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 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.