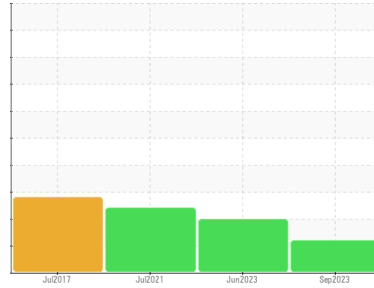




PROBLEM SUMMARY

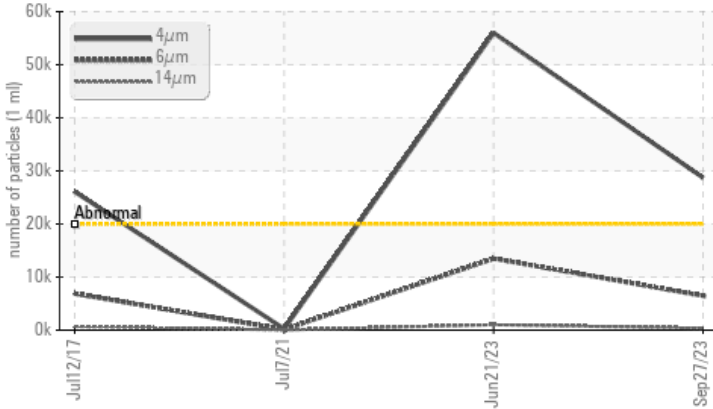
Area
COR
 Machine Id
LONGSPILHOIST1TIL
 Component
Gearbox
 Fluid
SHELL OMALA S2 GX 68 (1 LTR)

Sample Rating Trend



COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status			ATTENTION	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>20000	▲ 28720	▲ 55995	240
Particles >6µm	ASTM D7647	>5000	▲ 6458	▲ 13488	120
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 22/20/16	▲ 23/21/17	15/14/12

Customer Id: ALGMIS
 Sample No.: WC0574202
 Lab Number: 02588754
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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.

HISTORICAL DIAGNOSIS

21 Jun 2023 Diag: Kevin Marson

ISO



The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. 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



07 Jul 2021 Diag: Kevin Marson

WATER



We advise that you check for the source of water entry. 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 advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate concentration of water present in the oil. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. 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



12 Jul 2017 Diag: Kevin Marson

WATER



We advise that you check for the source of water entry. 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 advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. There is a moderate concentration of water present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

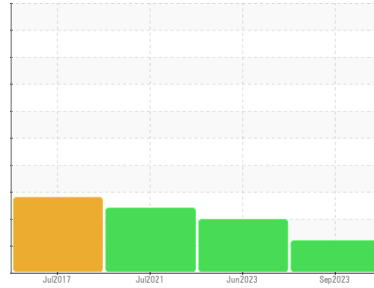
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
COR
Machine Id
LONGSPILHOIST1TIL
Component
Gearbox
Fluid
SHELL OMALA S2 GX 68 (1 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.

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		WC0574202	WC0681461	WC0574223
Sample Date	Client Info		27 Sep 2023	21 Jun 2023	07 Jul 2021
Machine Age	mths	Client Info	311	308	284
Oil Age	mths	Client Info	3	36	44
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ATTENTION	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>200	3	0	0
Chromium	ppm	ASTM D5185(m)	>15	0	0	0
Nickel	ppm	ASTM D5185(m)	>15	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		<1	0	0
Aluminum	ppm	ASTM D5185(m)	>25	0	0	0
Lead	ppm	ASTM D5185(m)	>100	0	0	0
Copper	ppm	ASTM D5185(m)	>200	<1	0	<1
Tin	ppm	ASTM D5185(m)	>25	0	0	0
Antimony	ppm	ASTM D5185(m)	>5	0	0	0
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)		2	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)		5	<1	0
Phosphorus	ppm	ASTM D5185(m)		274	<1	0
Zinc	ppm	ASTM D5185(m)		4	1	0
Sulfur	ppm	ASTM D5185(m)		7510	187	127
Lithium	ppm	ASTM D5185(m)		<1	<1	0

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>50	5	<1	0
Sodium	ppm	ASTM D5185(m)		<1	2	2
Potassium	ppm	ASTM D5185(m)	>20	0	0	0

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 28720	▲ 55995	240
Particles >6µm	ASTM D7647	>5000	▲ 6458	▲ 13488	120
Particles >14µm	ASTM D7647	>640	353	▲ 1017	30
Particles >21µm	ASTM D7647	>160	83	▲ 360	3
Particles >38µm	ASTM D7647	>40	6	25	0
Particles >71µm	ASTM D7647	>10	2	1	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 22/20/16	▲ 23/21/17	15/14/12

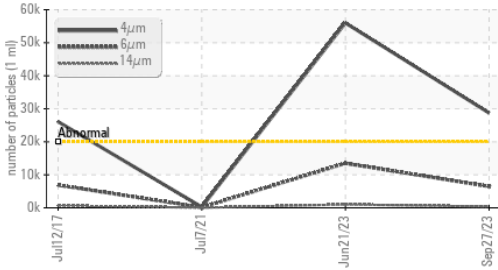
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.39	0.13	0.20

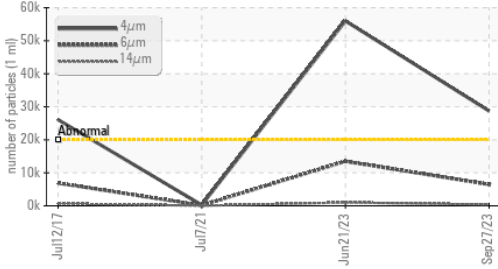


OIL ANALYSIS REPORT

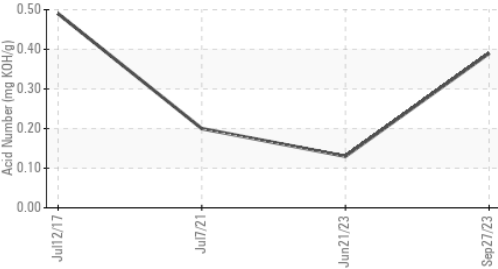
▲ Particle Trend



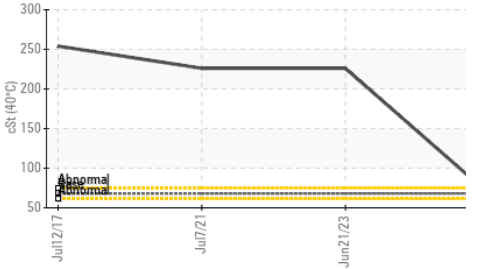
▲ Particle Trend



Acid Number



Viscosity @ 40°C



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	▲ HAZY
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

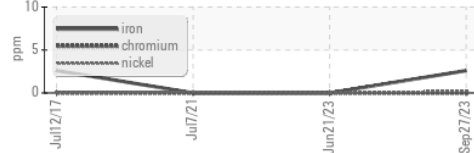
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68	67.4	226

SAMPLE IMAGES

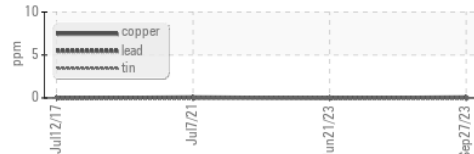
method	limit/base	current	history1	history2
Color				
Bottom				
PrtFilter			no image	no image

GRAPHS

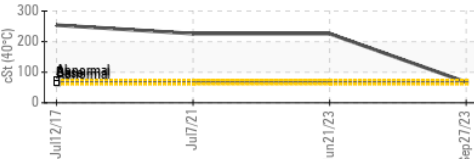
Ferrous Alloys



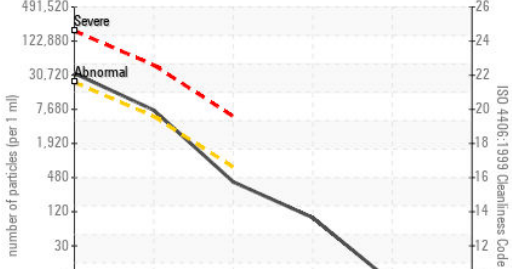
Non-ferrous Metals



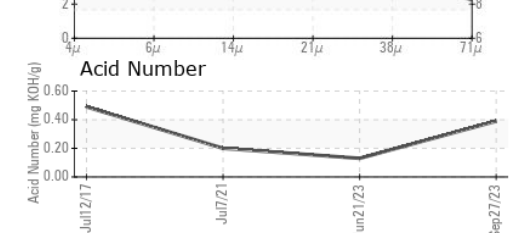
Viscosity @ 40°C



▲ Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ALGONQUIN POWER SYSTEMS INC.**
Sample No. : WC0574202 **Received** : 12 Oct 2023 354 DAVIS ROAD
Lab Number : 02588754 **Diagnosed** : 13 Oct 2023 OAKVILLE, ON
Unique Number : 5657820 **Diagnostician** : Wes Davis CA L6J 2X1
Test Package : IND 2 (Additional Tests: PrtCount, TAN Man)
 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.