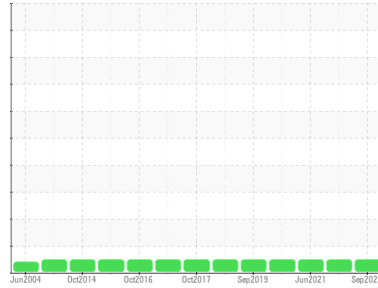




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
COR
Machine Id
LONGSPILHOIST1GEARMAIN
Component
Main Gearbox
Fluid
SHELL OMALA S2 G 68 (30 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 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		WC0790721	WC0681481	WC0574225
Sample Date	Client Info		27 Sep 2023	18 Aug 2022	17 Jun 2021
Machine Age	mths	Client Info	311	298	284
Oil Age	mths	Client Info	25	14	44
Oil Changed	Client Info		Not Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>200	<1	<1
Chromium	ppm	ASTM D5185(m)	>15	0	0
Nickel	ppm	ASTM D5185(m)	>15	0	<1
Titanium	ppm	ASTM D5185(m)		0	0
Silver	ppm	ASTM D5185(m)		<1	0
Aluminum	ppm	ASTM D5185(m)	>25	0	0
Lead	ppm	ASTM D5185(m)	>100	<1	<1
Copper	ppm	ASTM D5185(m)	>200	<1	<1
Tin	ppm	ASTM D5185(m)	>25	0	0
Antimony	ppm	ASTM D5185(m)	>5	0	0
Vanadium	ppm	ASTM D5185(m)		0	0
Beryllium	ppm	ASTM D5185(m)		0	0
Cadmium	ppm	ASTM D5185(m)		0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	6.2	1	2
Barium	ppm	ASTM D5185(m)	0.0	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0
Magnesium	ppm	ASTM D5185(m)	0	0	0
Calcium	ppm	ASTM D5185(m)	0.0	2	<1
Phosphorus	ppm	ASTM D5185(m)	290	293	310
Zinc	ppm	ASTM D5185(m)	3.8	3	2
Sulfur	ppm	ASTM D5185(m)	8167	7411	7187
Lithium	ppm	ASTM D5185(m)		<1	<1

CONTAMINANTS

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

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	13322	4536	2268
Particles >6µm	ASTM D7647	>5000	2698	796	365
Particles >14µm	ASTM D7647	>640	88	44	15
Particles >21µm	ASTM D7647	>160	16	14	3
Particles >38µm	ASTM D7647	>40	1	0	0
Particles >71µm	ASTM D7647	>10	1	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	21/19/14	19/17/13	18/16/11

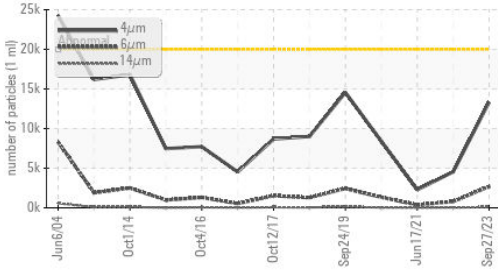
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.41	0.32	0.45

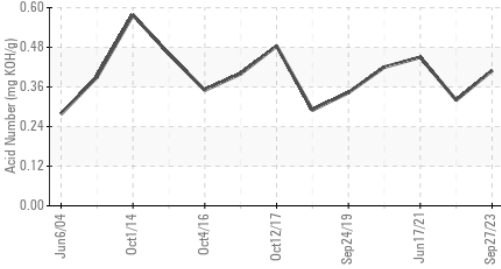


OIL ANALYSIS REPORT

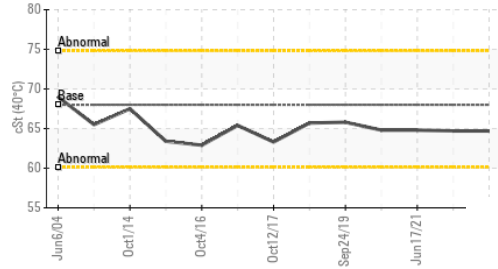
Particle Trend



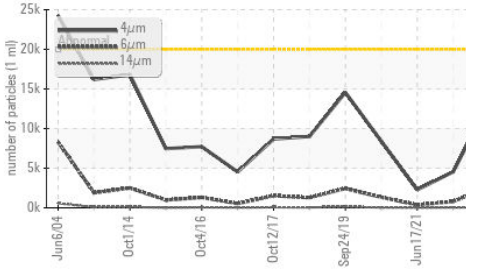
Acid Number



Viscosity @ 40°C



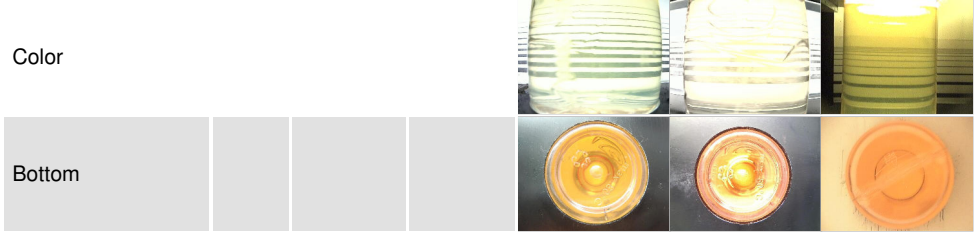
Particle Trend



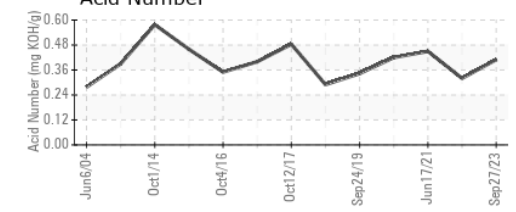
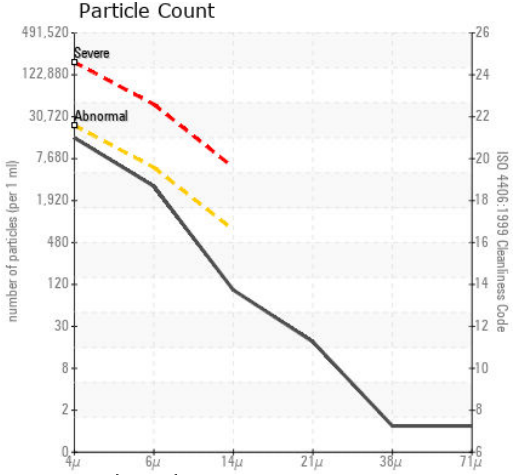
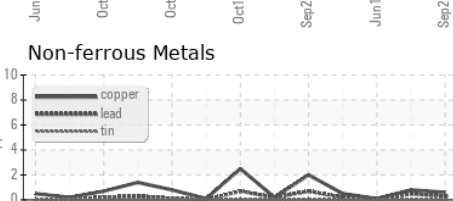
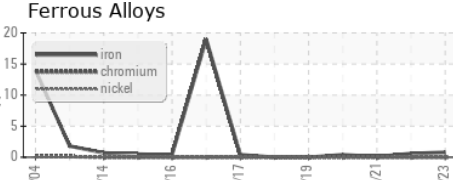
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>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)	68.0	64.7	64.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 ALGONQUIN POWER SYSTEMS INC.
Sample No. : WC0790721 **Received** : 12 Oct 2023 354 DAVIS ROAD
Lab Number : 02588753 **Diagnosed** : 13 Oct 2023 OAKVILLE, ON
Unique Number : 5657819 **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.