



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Area
COR
Machine Id
LONGTUR1RUNHUB
Component
Turbine
Fluid
SHELL TURBO T ISO 68 (200 LTR)

RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. Resample in 30-45 days to monitor this situation. Please note that this is a corrected copy for data entry updates.

WEAR

All component wear rates are normal.

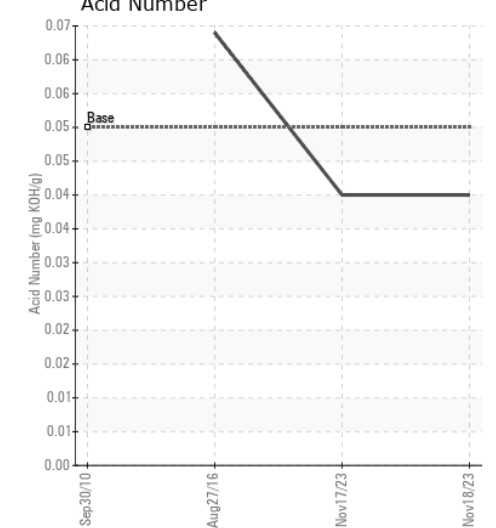
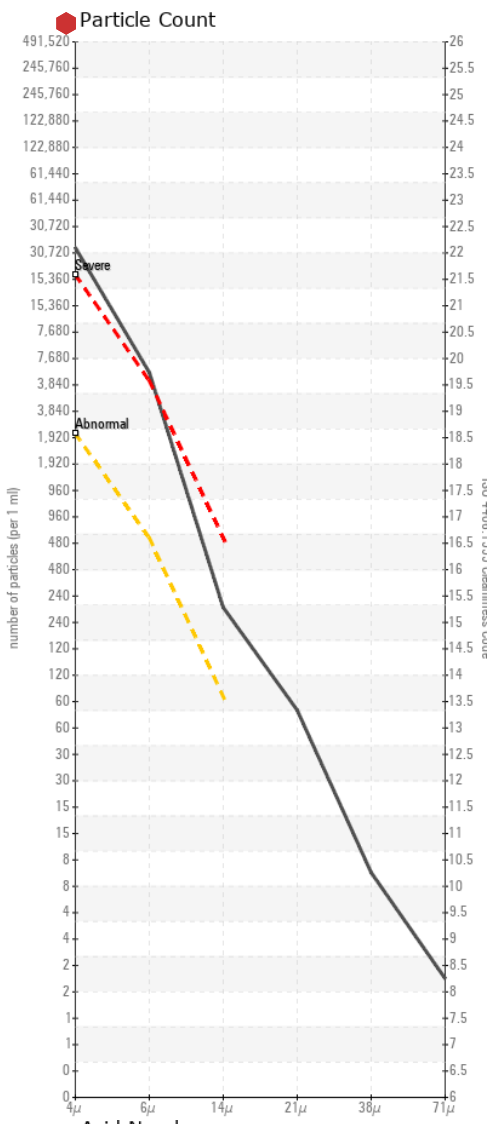
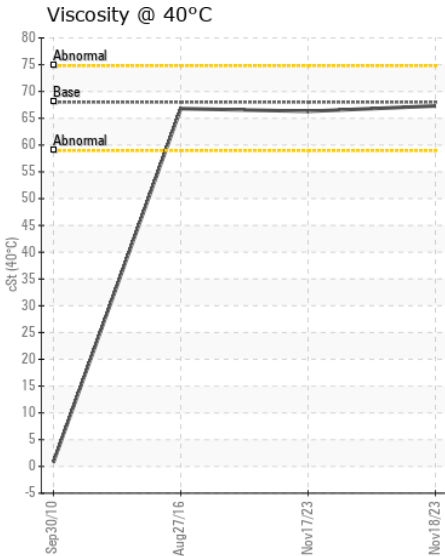
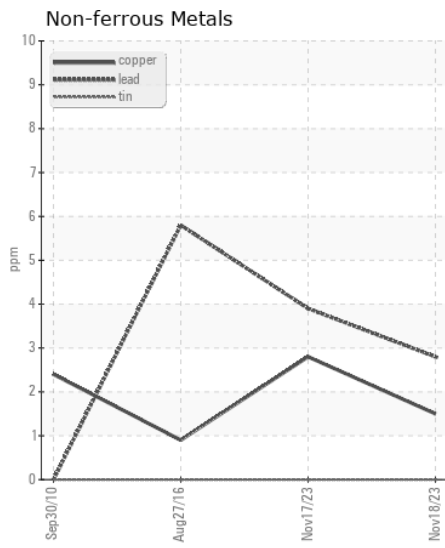
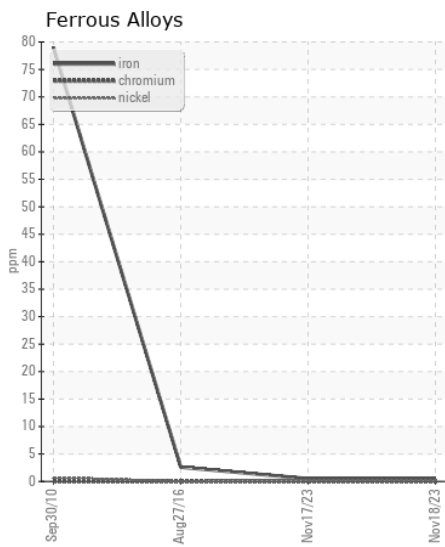
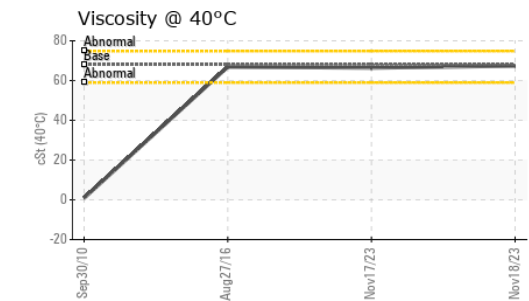
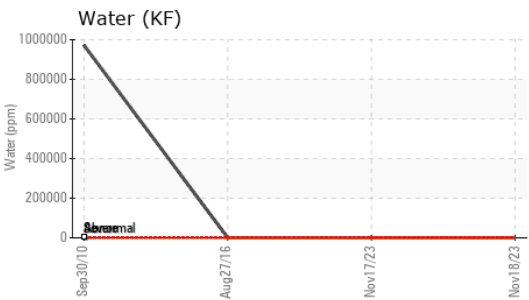
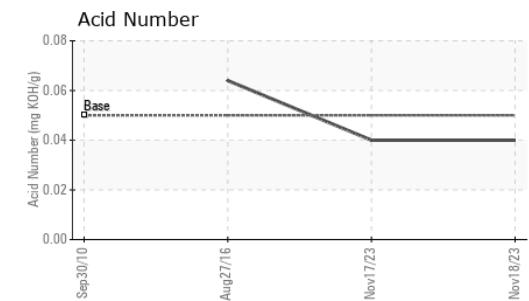
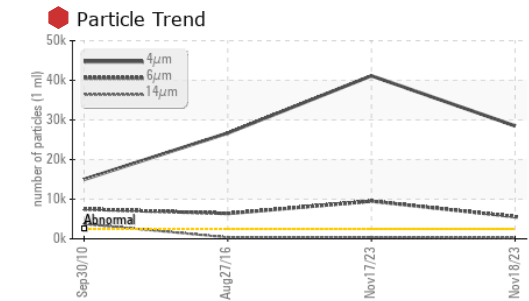
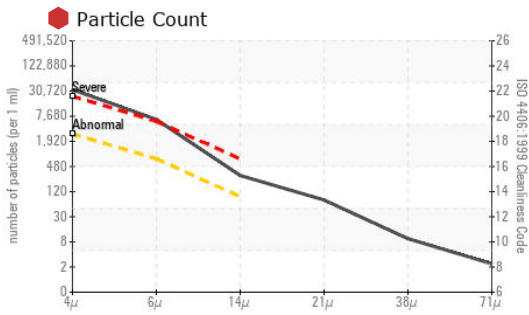
CONTAMINATION

There is a high amount of particulates (2 to 100 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0790716	WC0790717	WC965004
Sample Date		Client Info		18 Nov 2023	17 Nov 2023	27 Aug 2016
Machine Age	mths	Client Info		311	311	223
Oil Age	mths	Client Info		128	128	39
Filter Age	mths	Client Info		11	11	1
Oil Changed		Client Info		Not Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	SEVERE
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Iron	ppm	ASTM D5185(m)	>10	<1	<1	3
Chromium	ppm	ASTM D5185(m)	>3	0	0	0
Nickel	ppm	ASTM D5185(m)	>3	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>3	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>3	3	▲ 4	▲ 6
Copper	ppm	ASTM D5185(m)	>4	2	3	<1
Tin	ppm	ASTM D5185(m)	>3	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
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Silicon	ppm	ASTM D5185(m)	>10	0	0	<1
Potassium	ppm	ASTM D5185(m)	>20	2	3	0
Water	%	ASTM D6304*	>0.03	0.00	0.00	0.00
ppm Water	ppm	ASTM D6304*	>300	0	0	0.00
Particles >4µm		ASTM D7647	>2500	28503	41148	26689
Particles >6µm		ASTM D7647	>640	5574	9501	6392
Particles >14µm		ASTM D7647	>80	257	403	350
Particles >21µm		ASTM D7647	>20	67	89	77
Particles >38µm		ASTM D7647	>4	8	6	3
Particles >71µm		ASTM D7647	>3	2	1	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	22/20/15	23/20/16	22/20/16
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.03	NEG	NEG	NEG
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Sodium	ppm	ASTM D5185(m)		4	4	5
Boron	ppm	ASTM D5185(m)		0	0	<1
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)		<1	0	0
Calcium	ppm	ASTM D5185(m)		1	1	<1
Phosphorus	ppm	ASTM D5185(m)		2	5	1
Zinc	ppm	ASTM D5185(m)		1	3	2
Sulfur	ppm	ASTM D5185(m)		57	62	113
Acid Number (AN)	mg KOH/g	ASTM D974*	.05	0.04	0.04	0.064
Visc @ 40°C	cSt	ASTM D7279(m)	68	67.3	66.3	66.8



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ALGONQUIN POWER SYSTEMS INC.**
Sample No. : WC0790716 **Received** : 02 Jan 2024 354 DAVIS ROAD
Lab Number : 02605897 **Diagnosed** : 24 Jan 2024 OAKVILLE, ON
Unique Number : 5706983 **Diagnostician** : Kevin Marson CA L6J 2X1
Test Package : IND 2

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.

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