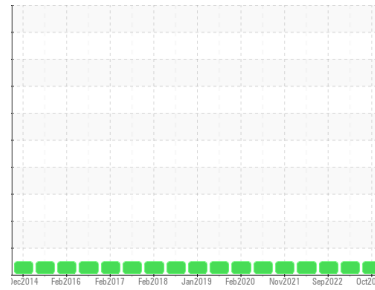




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**MTR [73946]**  
 Machine Id  
**TINHGEN1LUB**

Component  
**Bearing**  
 Fluid  
**ESSO TERESSO ISO 32 (615 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>WC0862797</b>	WC0678277	WC0678254
Sample Date	Client Info		<b>05 Oct 2023</b>	28 Feb 2023	12 Sep 2022
Machine Age	mths	Client Info	<b>0</b>	0	0
Oil Age	mths	Client Info	<b>60</b>	60	60
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Not Changd
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>2</b>	2	2
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>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m) >20	<b>3</b>	3	3
Copper	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185(m)	<b>0</b>	<1	<1
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>2</b>	0	<1
Phosphorus	ppm	ASTM D5185(m)	<b>38</b>	39	41
Zinc	ppm	ASTM D5185(m)	<b>20</b>	19	20
Sulfur	ppm	ASTM D5185(m)	<b>3141</b>	3201	3307
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

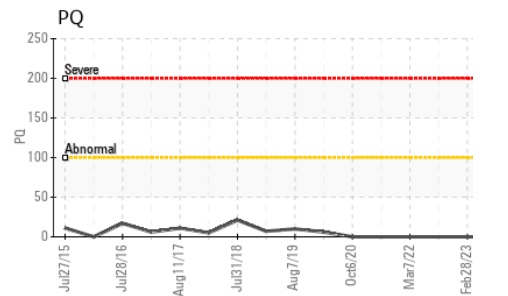
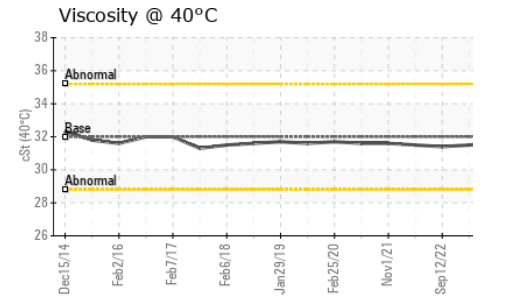
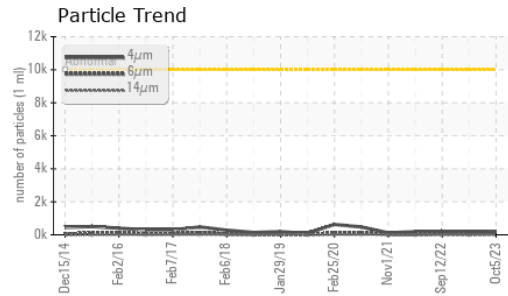
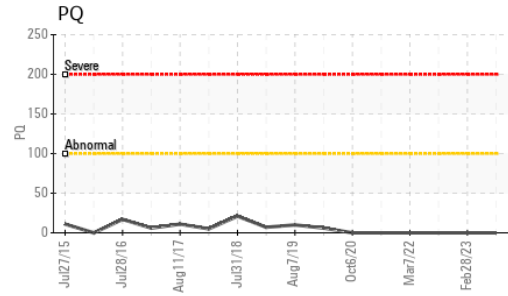
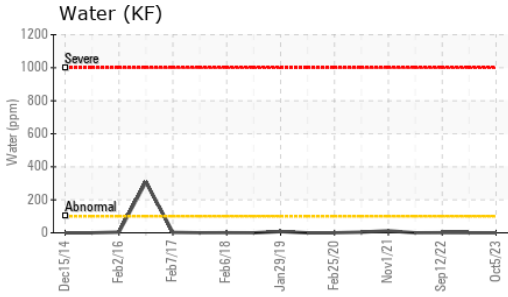
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	<b>5</b>	5	6
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Water	%	ASTM D6304* >2	<b>0.00</b>	0.001	0.001
ppm Water	ppm	ASTM D6304*	<b>0.00</b>	0.1	0.6

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>208</b>	200	213
Particles >6µm	ASTM D7647	>2500	<b>64</b>	43	57
Particles >14µm	ASTM D7647	>160	<b>8</b>	4	7
Particles >21µm	ASTM D7647	>40	<b>1</b>	2	2
Particles >38µm	ASTM D7647	>10	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/14	<b>15/13/10</b>	15/13/9	15/13/10



# OIL ANALYSIS REPORT

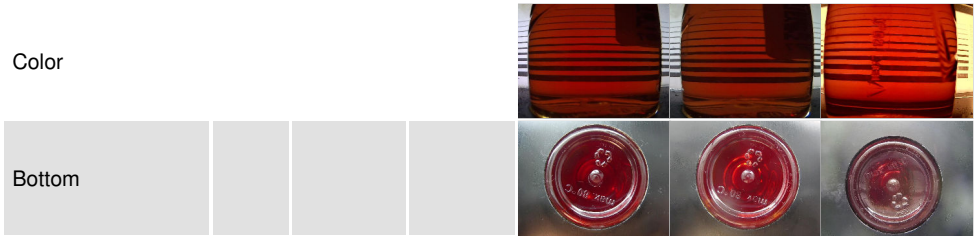


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		<b>0.14</b>	0.13	0.14

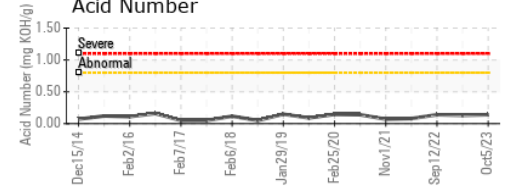
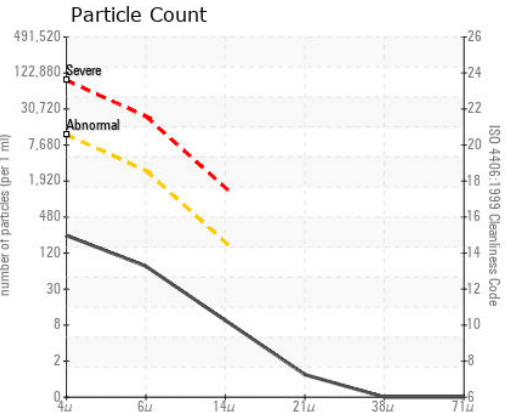
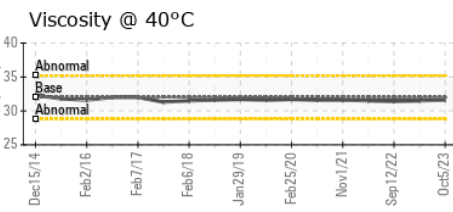
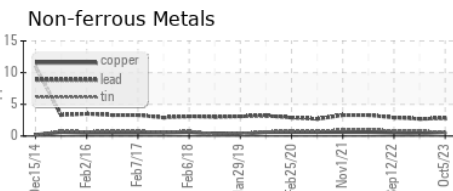
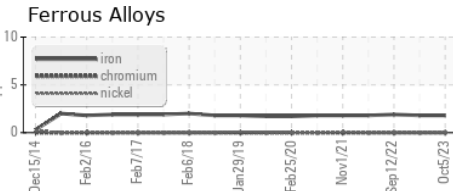
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32	<b>31.6</b>	31.5	31.4

SAMPLE IMAGES		method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **ALGONQUIN POWER SYSTEMS INC.**  
**Sample No.** : WC0862797 **Received** : 06 Oct 2023 **354 DAVIS ROAD**  
**Lab Number** : **02587641** **Diagnosed** : 10 Oct 2023 **OAKVILLE, ON**  
**Unique Number** : 5656707 **Diagnostician** : Kevin Marson **CA L6J 2X1**  
**Test Package** : IND 2 ( Additional Tests: KF, PQ, TAN Man ) **Contact: Antonino Champ Fernando**  
 To discuss this sample report, contact Customer Service at 1-800-268-2131. **antoninoChamp.fernando@algonquinpower.com**  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. **T: (905)465-7065**  
 Validity of results and interpretation are based on the sample and information as supplied. **F: x:**