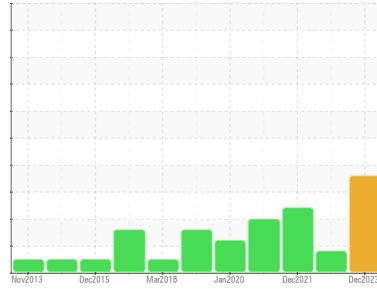


# OIL ANALYSIS REPORT

Sample Rating Trend



**DEGRADATION**



Area  
**Bell- 220 Simcoe St. [792224]**  
 Machine Id  
**TRANE L89M-04057**  
 Component  
**Chiller**  
 Fluid  
**TRANE 0022 (--- GAL)**



**DIAGNOSIS**

**▲ Recommendation**  
 We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

**▲ Wear**  
 Copper, lead and tin ppm levels are abnormal. Motor bearing wear is occurring. The elevated copper reading suggests the effects of oil migration through the evaporator (oil loss from the compressor) possibly occurring during intervals of operation at low cooling load conditions.

**Contamination**  
 There is no indication of any contamination in the oil.

**▲ Fluid Condition**  
 The AN level is above the recommended limit. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

**SAMPLE INFORMATION**

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GTT0001501</b>	GTT53586	GTT53587
Sample Date	Client Info		<b>20 Dec 2023</b>	01 Mar 2023	21 Dec 2021
Machine Age	hrs	Client Info	<b>0</b>	---	---
Oil Age	hrs	Client Info	<b>0</b>	---	---
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>ABNORMAL</b>	ATTENTION	ATTENTION

**WEAR METALS**

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >8	<b>2</b>	1	2
Chromium	ppm	ASTM D5185(m) >2	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m) >2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m) >3	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m) >2	<b>▲ 2</b>	<1	<1
Copper	ppm	ASTM D5185(m) >8	<b>▲ 97</b>	▲ 47	▲ 31
Tin	ppm	ASTM D5185(m) >4	<b>▲ 6</b>	<1	<1
Antimony	ppm	ASTM D5185(m)	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	---	---

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	<b>0</b>	---	---
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m) 0	<b>0</b>	---	---
Manganese	ppm	ASTM D5185(m) 0	<b>0</b>	---	---
Magnesium	ppm	ASTM D5185(m) 0	<b>0</b>	---	---
Calcium	ppm	ASTM D5185(m) 0	<b>2</b>	---	---
Phosphorus	ppm	ASTM D5185(m) 35	<b>18</b>	---	---
Zinc	ppm	ASTM D5185(m) 0	<b>17</b>	8	6
Sulfur	ppm	ASTM D5185(m) 30	<b>850</b>	---	---
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---

**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	<b>12</b>	---	---
Sodium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Potassium	ppm	ASTM D5185(m) >20	<b>4</b>	---	---
ppm Water	ppm	ASTM D6304* >50	<b>11</b>	15	▲ 43



**FLUID DEGRADATION**

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974* 0.05	<b>▲ 0.10</b>	0.043	0.031

# OIL ANALYSIS REPORT

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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m) 47	<b>38.0</b>	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

## GRAPHS



**Sample No.** : GTT0001501      **Recieved** : 03 Jan 2024  
**Lab Number** : **02606411**      **Diagnosed** : 12 Jan 2024  
**Unique Number** : 5707497      **Diagnostician** : Bill Quesnel  
**Test Package** : IND 2 ( Additional Tests: KV40 )

*To discuss this sample report, contact Customer Service at 1-905-847-9300 Ext 26.*

*Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.*

*Damages: Seller shall in no event be liable for special, incidental, or consequential damages, of a commercial nature, resulting from any cause.*

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