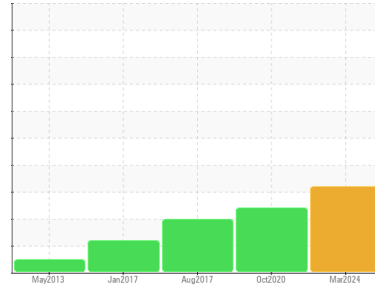




Area  
**[GTT224-318]**  
 Machine Id  
**TRANE L10J05276**  
 Component  
**Chiller**  
 Fluid  
**TRANE 0022 (--- GAL)**



**DIAGNOSIS**

**▲ Recommendation**  
 The acid number (AN) indicates that your fluid has reached the end of its useful life, please proceed with a complete oil change. Check for indications of excessive refrigerant charge such as bubbles present in the sight glass. The operation of this unit should be reviewed closely by a service engineer. We recommend an early resample to monitor this condition.

**▲ Wear**  
 Iron and tin ppm levels are abnormal. Motor bearing wear is occurring. The zinc reading shows corrosion damage occurring on the zinc galvanized spray eliminator screen which is located above the evaporator tube bundle. The high metal levels indicate corrosion in the system.

**Contamination**  
 The water content is negligible. 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.

**SAMPLE INFORMATION**

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GTT0002096</b>	GTT35369	GTT35371
Sample Date	Client Info	<b>06 Mar 2024</b>	01 Oct 2020	28 Aug 2017
Machine Age	hrs	<b>0</b>	---	---
Oil Age	hrs	<b>0</b>	---	---
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

**WEAR METALS**

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185(m) >8	<b>▲ 26</b>	▲ 8	▲ 63
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>&lt;1</b>	<1	2
Copper ppm	ASTM D5185(m) >8	<b>6</b>	<1	8
Tin ppm	ASTM D5185(m) >4	<b>▲ 8</b>	<1	123
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>2</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>0</b>	---	---
Phosphorus ppm	ASTM D5185(m) 35	<b>&lt;1</b>	---	---
Zinc ppm	ASTM D5185(m) 0	<b>▲ 1015</b>	▲ 76	867
Sulfur ppm	ASTM D5185(m) 30	<b>0</b>	---	---
Lithium ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---

**CONTAMINANTS**

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185(m) >15	<b>8</b>	---	---
Sodium ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---
Potassium ppm	ASTM D5185(m) >20	<b>&lt;1</b>	---	---
ppm Water	ASTM D6304* >50	<b>57</b>	185	172



**FLUID DEGRADATION**

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g	ASTM D974* 0.05	<b>▲ 1.47</b>	▲ 1.189	▲ 2.633

# 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>36.6</b>	---	---

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

## GRAPHS



**Sample No.** : GTT0002096  
**Lab Number** : 02622182  
**Unique Number** : 5747301  
**Received** : 14 Mar 2024  
**Tested** : 20 Mar 2024  
**Diagnosed** : 20 Mar 2024 - 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.

**Collins HVAC/R Inc.**  
 6-14845 Yonge St Suite 537  
 Auroa, ON  
 CA L4G 6H8  
 Contact: Service Manager  
 accounting@collinshvacr.ca  
 T: (416)678-5035  
 F: