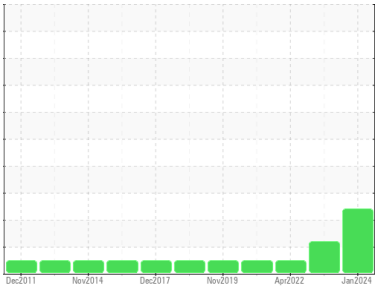
OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION

Area
1 Front St. Ch#1 [796205]
Machine Id
TRANE L86H-40107
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 ppm levels are noted. 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. The high zinc reading indicates corrosion damage occurring on the zinc galvanized spray eliminator screen which is located above the evaporator tube bundle.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GTT0000983**	GTT51098	GTT51099
Sample Date		Client Info		**04 Jan 2024**	31 Mar 2023	20 Apr 2022
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>8	**2**	<1	2
Chromium	ppm	ASTM D5185(m)	>2	**0**	<1	<1
Nickel	ppm	ASTM D5185(m)		**<1**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Silver	ppm	ASTM D5185(m)	>2	**0**	---	---
Aluminum	ppm	ASTM D5185(m)	>3	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>2	**2**	<1	<1
Copper	ppm	ASTM D5185(m)	>8	▲ **69**	2	1
Tin	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	---	---
Barium	ppm	ASTM D5185(m)	0	**0**	---	---
Molybdenum	ppm	ASTM D5185(m)	0	**0**	---	---
Manganese	ppm	ASTM D5185(m)	0	**0**	---	---
Magnesium	ppm	ASTM D5185(m)	0	**<1**	---	---
Calcium	ppm	ASTM D5185(m)	0	**<1**	---	---
Phosphorus	ppm	ASTM D5185(m)	35	**1**	---	---
Zinc	ppm	ASTM D5185(m)	0	▲ **30**	7	12
Sulfur	ppm	ASTM D5185(m)	30	**40**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

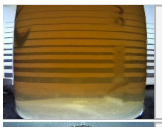
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**2**	---	---
Sodium	ppm	ASTM D5185(m)		**0**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**2**	---	---
ppm Water	ppm	ASTM D6304*	>50	**19**	25	19

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.05	▲ **0.17**	▲ 0.101	0.037

OIL ANALYSIS REPORT

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	47	**27.5**	---	---

SAMPLE IMAGES				current	history1	history2
Color					*no image*	*no image*
Bottom					*no image*	*no image*

GRAPHS

Sample No. : GTT0000983
Lab Number : 02610076
Unique Number : 5711162
Test Package : IND 2 (Additional Tests: KV40)

Recieved : 19 Jan 2024
Diagnosed : 24 Jan 2024
Diagnostician : Bill Quesnel

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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