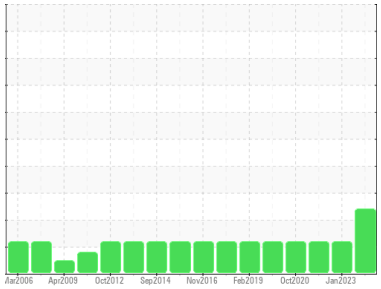
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
5001 Yonge Ch#2 [PR2311300159]
Machine Id
CARRIER 1990J43052
Component
Chiller
Fluid
TRANE 0022 (--- GAL)

DIAGNOSIS

▲ Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as TRANE 0022, however, a fluid match indicates that this fluid is Esso Nuto H 46 or a similar product. The increased readings on copper, zinc, phosphorus and the oil acid number are all associated with the effects of additives blended in this oil formulation. Please confirm the oil type and grade on your next sample.

▲ Wear

Lead ppm levels are noted. All other component wear rates are normal.

Contamination

The water content is negligible. There is no indication of any contamination in the oil.

▲ Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. 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		**GTT0001278**	GTT7484	GTT7485
Sample Date		Client Info		**21 Nov 2023**	23 Jan 2023	20 Oct 2021
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ATTENTION**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>8	**4**	<1	<1
Chromium	ppm	ASTM D5185(m)	>2	**0**	<1	<1
Nickel	ppm	ASTM D5185(m)		**0**	---	---
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	▲ **12**	<1	<1
Copper	ppm	ASTM D5185(m)	>8	**525**	304	166
Tin	ppm	ASTM D5185(m)	>4	**0**	<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	**0**	---	---
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	**0**	---	---
Calcium	ppm	ASTM D5185(m)	0	▲ **19**	---	---
Phosphorus	ppm	ASTM D5185(m)	35	▲ **278**	---	---
Zinc	ppm	ASTM D5185(m)	0	▲ **86**	78	60
Sulfur	ppm	ASTM D5185(m)	30	▲ **650**	---	---
Lithium	ppm	ASTM D5185(m)		**1**	---	---

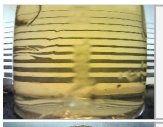
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**24**	---	---
Sodium	ppm	ASTM D5185(m)		**<1**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**<1**	---	---
ppm Water	ppm	ASTM D6304*	>50	**14**	86	96

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.05	**0.10**	▲ 0.107	▲ 0.213

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	**43.5**	---	---

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

GRAPHS

Sample No. : GTT0001278 **Recieved** : 28 Dec 2023
Lab Number : 02605703 **Diagnosed** : 09 Jan 2024
Unique Number : 5698788 **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.

Daikin Applied Canada Inc.
8-641 Chrislea Road
Vaughan, ON
CA L4L 8A3
Contact: Michelle Tomlinson
svctoronto@daikinapplied.com
T:
F: