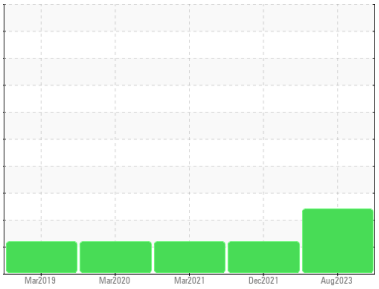
OIL ANALYSIS REPORT

Area
280 Slater Ch#1
Machine Id
CARRIER 4291J44873
Component
Chiller
Fluid
REFRIG COMP OIL ISO 68 (--- GAL)

Sample Rating Trend



WEAR

DIAGNOSIS

▲ Recommendation
The increased readings on copper, zinc and the oil acid number are all associated with the effects of additives blended in this oil formula. 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. Please specify the brand, type, and viscosity of the oil on your next sample.

▲ Wear
Iron and lead ppm levels are abnormal. Pump wear is indicated.

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

Fluid Condition
The AN level is acceptable for this fluid. 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		**GTT0001232**	GTT14024	GTT14025
Sample Date		Client Info		**21 Aug 2023**	07 Dec 2021	01 Mar 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				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>8	▲ **16**	2	2
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	▲ **14**	<1	<1
Copper	ppm	ASTM D5185(m)	>8	▲ **609**	▲ 326	213
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)	5	**0**	---	---
Barium	ppm	ASTM D5185(m)	5	**0**	---	---
Molybdenum	ppm	ASTM D5185(m)	5	**0**	---	---
Manganese	ppm	ASTM D5185(m)		**0**	---	---
Magnesium	ppm	ASTM D5185(m)	5	**0**	---	---
Calcium	ppm	ASTM D5185(m)	12	**13**	---	---
Phosphorus	ppm	ASTM D5185(m)	12	**316**	---	---
Zinc	ppm	ASTM D5185(m)	12	**60**	▲ 88	94
Sulfur	ppm	ASTM D5185(m)	1000	**728**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**14**	---	---
Sodium	ppm	ASTM D5185(m)		**<1**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**0**	---	---
ppm Water	ppm	ASTM D6304*	>100	**4**	79	80

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.10	**0.12**	0.065	▲ 0.213

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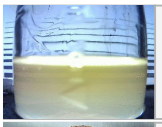
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	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)	68	**58.2**	---	---

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

GRAPHS

Sample No. : GTT0001232 **Recieved** : 28 Dec 2023
Lab Number : 02605636 **Diagnosed** : 05 Jan 2024
Unique Number : 5698721 **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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