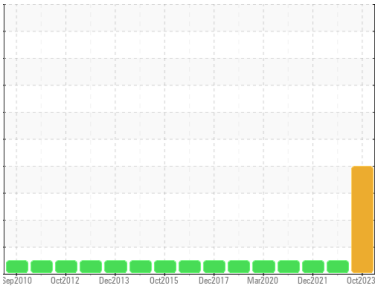
OIL ANALYSIS REPORT

Area
90 Sparks Ch#1 [4500054809]
Machine Id
CARRIER 4509Q19418
Component
Chiller
Fluid
CASTROL AIRCOL SW 68 (--- GAL)

Sample Rating Trend



WATER

DIAGNOSIS

▲ Recommendation

This unit should be monitored closely by a service engineer as these wear conditions tend to advance rapidly. If not recently done change any filter driers to reduce moisture level. We recommend an early resample to monitor this condition.

▲ Wear

Copper, lead and tin ppm levels are abnormal. The lead and tin levels indicate bearing wear, and the copper may be plating from the bearing backing.

▲ Contamination

There is a trace of moisture present in the oil. The elevated moisture content is associated with POE oils which are hygroscopic, and can absorb moisture from sampling and processing.

Fluid Condition

The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GTT0001442**	GTT14852	GTT14853
Sample Date		Client Info		**31 Oct 2023**	05 Apr 2023	07 Dec 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**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>8	**<1**	<1	<1
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	▲ **8**	<1	<1
Copper	ppm	ASTM D5185(m)	>8	▲ **5**	<1	<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	**0**	---	---
Calcium	ppm	ASTM D5185(m)	0	**0**	---	---
Phosphorus	ppm	ASTM D5185(m)	800	**263**	---	---
Zinc	ppm	ASTM D5185(m)	5	**5**	7	<1
Sulfur	ppm	ASTM D5185(m)	10	**20**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**36**	---	---
Sodium	ppm	ASTM D5185(m)		**0**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**4**	---	---
ppm Water	ppm	ASTM D6304*	>100	▲ **485**	276	133

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.05	**0.06**	0.107	0.026

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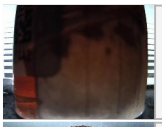
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	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	**62.0**	---	---

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

GRAPHS

Sample No. : GTT0001442 **Recieved** : 03 Jan 2024
Lab Number : 02606392 **Diagnosed** : 12 Jan 2024
Unique Number : 5707478 **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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