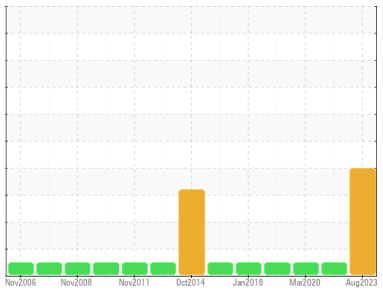
OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION

Area
Queens Univ. Sterling 1B
Machine Id
CARRIER 4797F10798(1B)
Component
Chiller
Fluid
REFRIGERATION OIL (POE) (--- GAL)

DIAGNOSIS

▲ Recommendation
The oil is near the end of it`s useful service life, recommend schedule an oil change. 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, lead, zinc and copper ppm levels are noted. 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GTT0001454**	GTT15501	GTT15502
Sample Date		Client Info		**02 Aug 2023**	01 Mar 2021	09 Mar 2020
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	▲ **10**	2	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	▲ **2**	1	<1
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	**3**	---	---
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)	10	**0**	---	---
Phosphorus	ppm	ASTM D5185(m)	250	**1**	---	---
Zinc	ppm	ASTM D5185(m)	0	▲ **49**	8	9
Sulfur	ppm	ASTM D5185(m)	400	**25**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**21**	---	---
Sodium	ppm	ASTM D5185(m)		**0**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**<1**	---	---
ppm Water	ppm	ASTM D6304*	>200	**172**	231	290

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.07	▲ **0.18**	0.109	0.084

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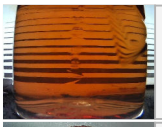
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	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)		**120**	---	---

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

GRAPHS

Sample No. : GTT0001454
Lab Number : 02606350
Unique Number : 5707436
Test Package : IND 2 (Additional Tests: KV40)

Recieved : 03 Jan 2024
Diagnosed : 09 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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