



OIL ANALYSIS REPORT

Sample Rating Trend

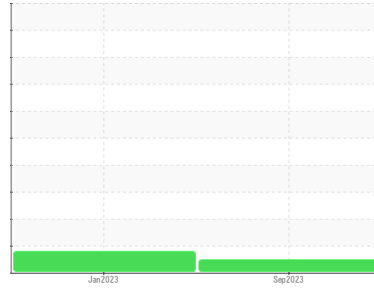
NORMAL



Machine Id
HS-3 - 920482

Component
Refrigeration Compressor

Fluid
REFRIG COMP OIL ISO 68 (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Fluid Condition

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		USP0001817	USP246514	---
Sample Date	Client Info		28 Sep 2023	24 Jan 2023	---
Machine Age	hrs	Client Info	0	13640	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			NORMAL	ATTENTION	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >8	0	0	---
Chromium	ppm	ASTM D5185m >2	0	0	---
Nickel	ppm	ASTM D5185m	0	0	---
Titanium	ppm	ASTM D5185m	0	0	---
Silver	ppm	ASTM D5185m >2	0	0	---
Aluminum	ppm	ASTM D5185m >3	0	0	---
Lead	ppm	ASTM D5185m >2	0	0	---
Copper	ppm	ASTM D5185m >8	0	0	---
Tin	ppm	ASTM D5185m >4	0	0	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	0	0	---
Barium	ppm	ASTM D5185m 5	0	0	---
Molybdenum	ppm	ASTM D5185m 5	0	0	---
Manganese	ppm	ASTM D5185m	<1	0	---
Magnesium	ppm	ASTM D5185m 5	0	0	---
Calcium	ppm	ASTM D5185m 12	0	0	---
Phosphorus	ppm	ASTM D5185m 12	0	0	---
Zinc	ppm	ASTM D5185m 12	0	0	---
Sulfur	ppm	ASTM D5185m 1000	9	0	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<1	<1	---
Sodium	ppm	ASTM D5185m	0	0	---
Potassium	ppm	ASTM D5185m >20	<1	<1	---
Water	%	ASTM D6304 >0.01	0.001	0.002	---
ppm Water	ppm	ASTM D6304 >100	0.00	23.7	---

FLUID CLEANLINESS

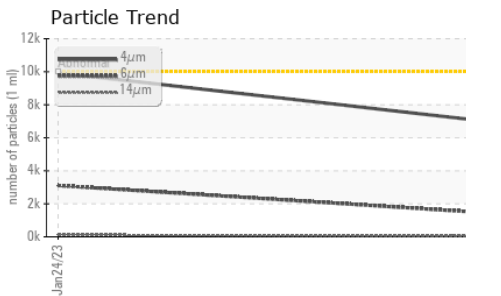
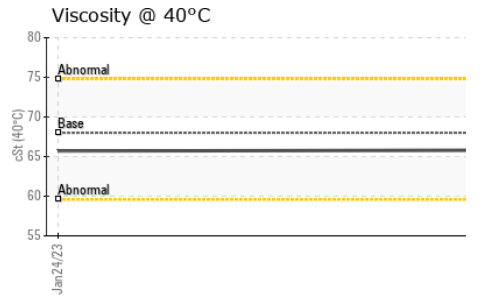
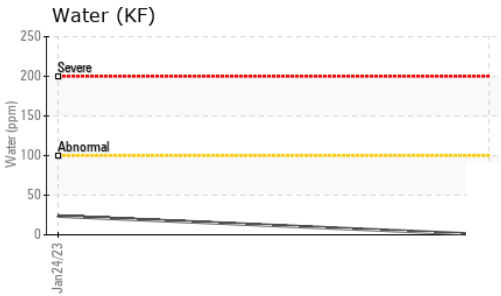
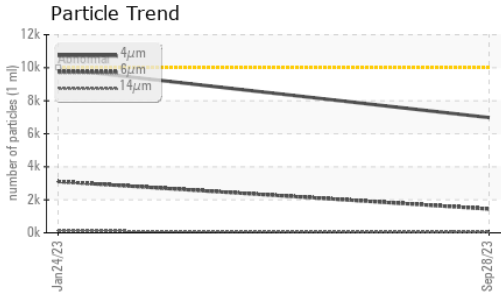
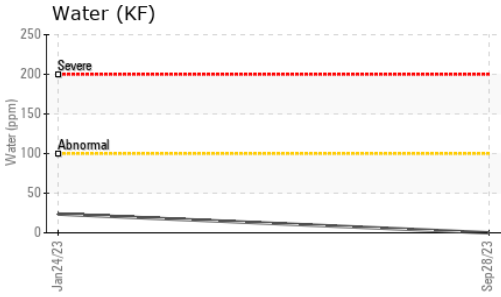
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	6979	9932	---
Particles >6µm	ASTM D7647	>2500	1445	▲ 3107	---
Particles >14µm	ASTM D7647	>320	41	118	---
Particles >21µm	ASTM D7647	>80	7	11	---
Particles >38µm	ASTM D7647	>20	0	1	---
Particles >71µm	ASTM D7647	>4	0	0	---
Oil Cleanliness	ISO 4406 (c)	>20/18/15	20/18/13	▲ 20/19/14	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974 0.10	0.014	0.015	---



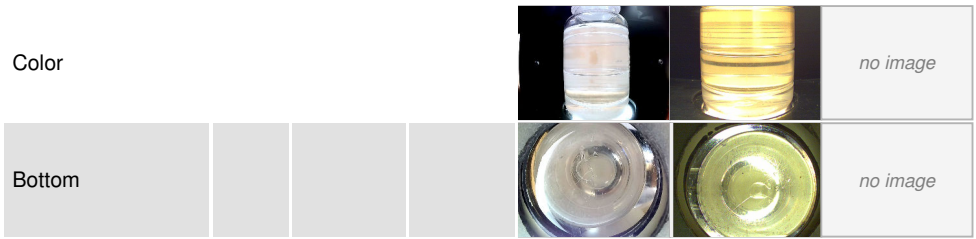
OIL ANALYSIS REPORT



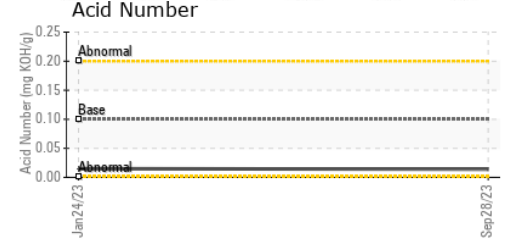
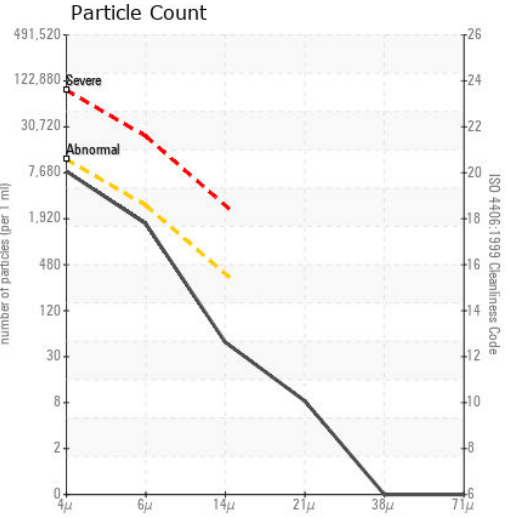
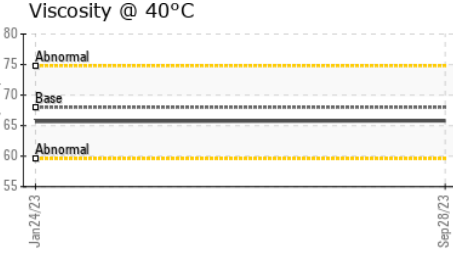
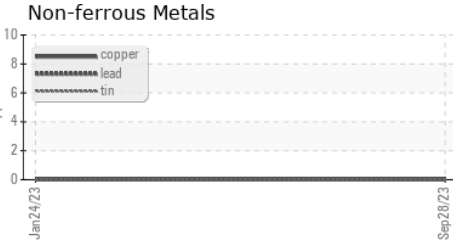
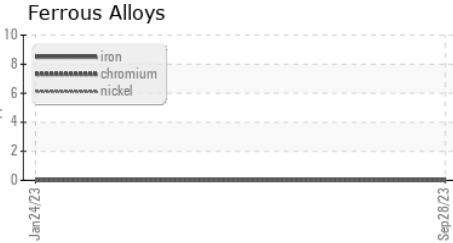
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.01	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 68	65.8	65.7	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP0001817 **Received** : 28 Sep 2023
Lab Number : **05964227** **Diagnosed** : 29 Sep 2023
Unique Number : 10670778 **Diagnostician** : Doug Bogart
Test Package : IND 2

AMERICOLD
 18531 US HWY 20 W
 EAST DUBUQUE, IL
 US 61025
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)