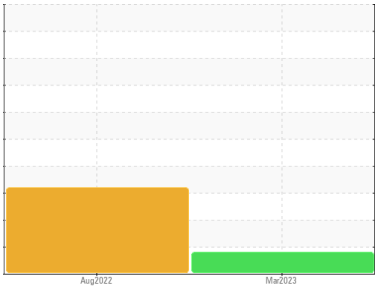
PROBLEM SUMMARY

Sample Rating Trend

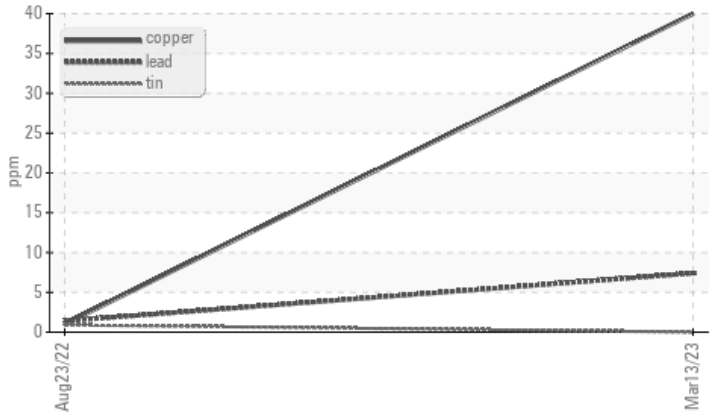


WEAR

Machine Id
FULL FLIGHT SIMULATO L3 EMZK 564 (FAA 1638)
Component
Hydraulic System
Fluid
SHELL NATURELLE HF-E ISO 68 (190 LTR)

COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



RECOMMENDATION

Resample at the next service interval to monitor. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	---
Copper	ppm	ASTM D5185m	>20	▲ **40**	1	---

Customer Id: AIRAURCO
Sample No.: ST36940
Lab Number: 05812184
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Contact Required	---	---	?	Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.

HISTORICAL DIAGNOSIS

23 Aug 2022 Diag: Doug Bogart

VISCOSITY

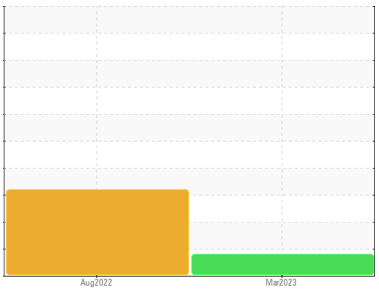
We recommend you service the filters on this component. We advise an early resample to confirm this situation. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue. If sample was mailed in original kit packaging, it's possible Postal Service lost sample bottle and put another used oil into container.All component wear rates are normal. There is a high amount of particulates present in the oil. The water content is negligible. The oil viscosity is higher than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type. The AN level is acceptable for this fluid.

view report

STAUFF FILTRATION TECHNOLOGY

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
FULL FLIGHT SIMULATO L3 EMZK 564 (FAA 1638)
Component
Hydraulic System
Fluid
SHELL NATURELLE HF-E ISO 68 (190 LTR)

DIAGNOSIS

▲ Recommendation

Resample at the next service interval to monitor. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.

▲ Wear

The copper level is abnormal. All other 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	history 1	history 2
Sample Number		Client Info		**ST36940**	ST39549	---
Sample Date		Client Info		**13 Mar 2023**	23 Aug 2022	---
Machine Age	hrs	Client Info		**0**	0	---
Oil Age	hrs	Client Info		**14758**	11592	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**ABNORMAL**	ABNORMAL	---

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>20	**5**	4	---
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	---
Nickel	ppm	ASTM D5185m	>20	**0**	<1	---
Titanium	ppm	ASTM D5185m		**0**	0	---
Silver	ppm	ASTM D5185m		**0**	<1	---
Aluminum	ppm	ASTM D5185m	>20	**4**	2	---
Lead	ppm	ASTM D5185m	>20	**7**	1	---
Copper	ppm	ASTM D5185m	>20	▲ **40**	1	---
Tin	ppm	ASTM D5185m	>20	**0**	<1	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
Cadmium	ppm	ASTM D5185m		**0**	0	---

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m		**0**	7	---
Barium	ppm	ASTM D5185m		**0**	0	---
Molybdenum	ppm	ASTM D5185m		**0**	60	---
Manganese	ppm	ASTM D5185m		**6**	<1	---
Magnesium	ppm	ASTM D5185m		**9**	852	---
Calcium	ppm	ASTM D5185m		**<1**	1156	---
Phosphorus	ppm	ASTM D5185m		**208**	1040	---
Zinc	ppm	ASTM D5185m		**28**	1248	---
Sulfur	ppm	ASTM D5185m		**2319**	3786	---

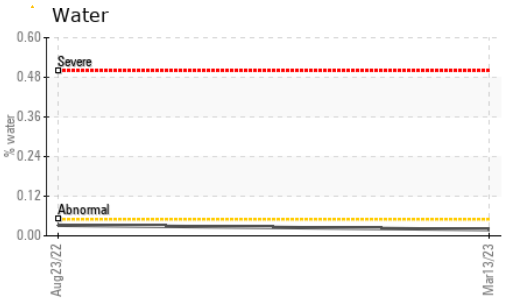
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>15	**<1**	4	---
Sodium	ppm	ASTM D5185m		**<1**	3	---
Potassium	ppm	ASTM D5185m	>20	**0**	1	---
Water	%	ASTM D6304	>0.05	**0.019**	0.032	---
ppm Water	ppm	ASTM D6304	>500	**199.4**	322.3	---

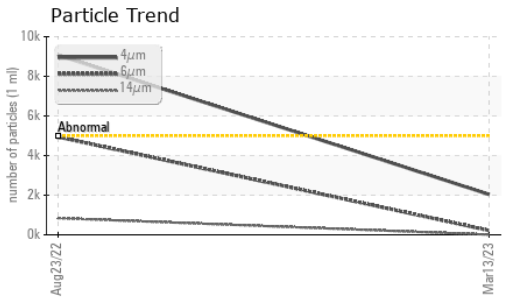
FLUID CLEANLINESS		method	limit/base	current	history 1	history 2
Particles >4µm		ASTM D7647	>5000	**2038**	▲ 9074	---
Particles >6µm		ASTM D7647	>1300	**217**	▲ 4943	---
Particles >14µm		ASTM D7647	>160	**9**	▲ 841	---
Particles >21µm		ASTM D7647	>40	**1**	▲ 283	---
Particles >38µm		ASTM D7647	>10	**0**	▲ 44	---
Particles >71µm		ASTM D7647	>3	**0**	▲ 4	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**18/15/10**	▲ 20/19/17	---

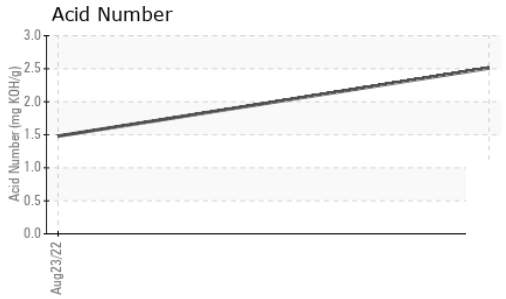
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045		**2.51**	1.48	---

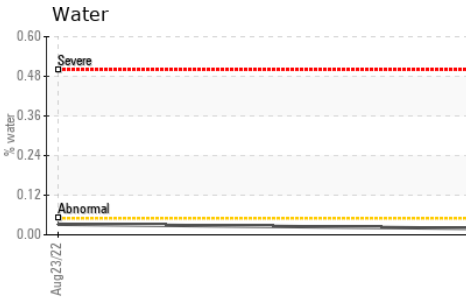
STAUFF FILTRATION TECHNOLOGY

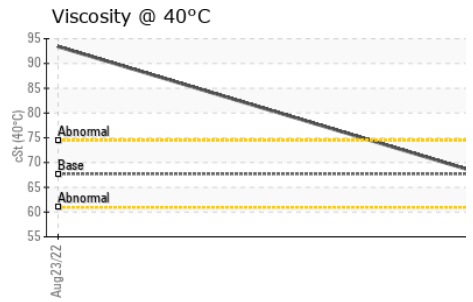
OIL ANALYSIS REPORT





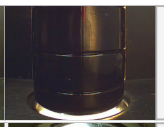
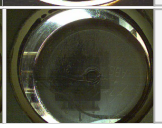




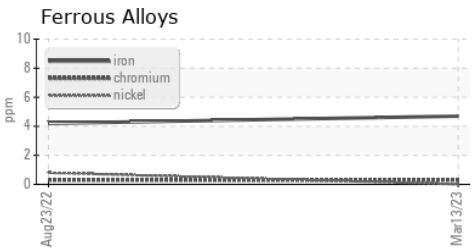


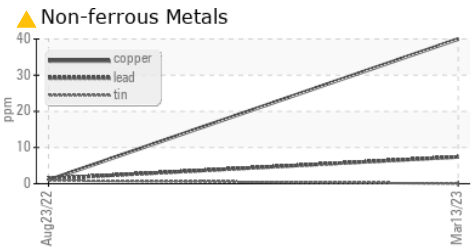
VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**LIGHT**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.05	**NEG**	NEG	---
Free Water	scalar	*Visual		**NEG**	NEG	---

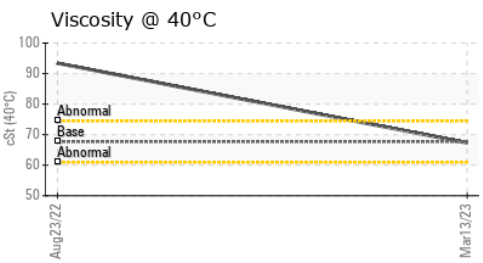
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445	67.7	**67.3**	▲ 93.41	---

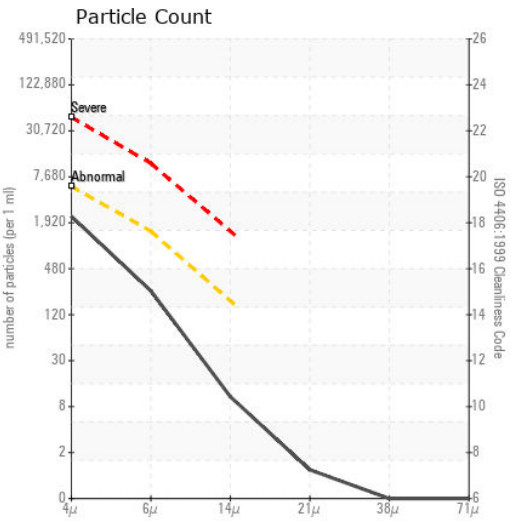
SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color					no image
Bottom					no image

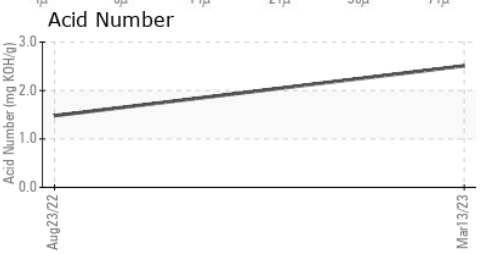
GRAPHS











Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ST36940 **Received** : 05 Apr 2023
Lab Number : 05812184 **Diagnosed** : 12 Apr 2023
Unique Number : 10414976 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF)

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)

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