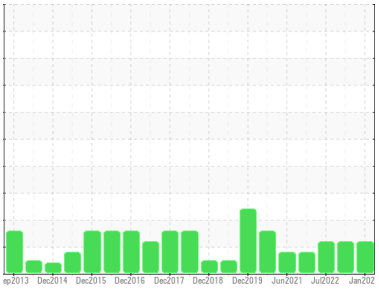
STAUFF FILTRATION TECHNOLOGY

PROBLEM SUMMARY

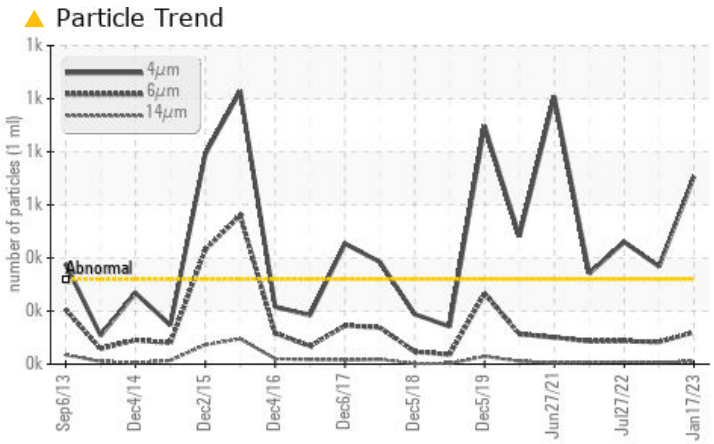
Sample Rating Trend



ISO

Machine Id
REDIFFUSION 767-ER (S/N FLIGHT SIMULATOR)
Component
Hydraulic System
Fluid
MOBIL DTE 24 (400 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ATTENTION	ATTENTION
Particles >4µm		ASTM D7647	>320	▲ **707**	▲ 368	▲ 460
Particles >6µm		ASTM D7647	>80	▲ **120**	▲ 83	▲ 87
Oil Cleanliness		ISO 4406 (c)	>15/13/10	▲ **17/14/10**	▲ 16/14/10	▲ 16/14/10

Customer Id: BOEMIA
Sample No.: ST44808
Lab Number: 06009086
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

30 Dec 2022 Diag: Don Baldridge

ISO

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.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

27 Jul 2022 Diag: Jonathan Hester

ISO

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.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

15 Feb 2022 Diag: Doug Bogart

ISO

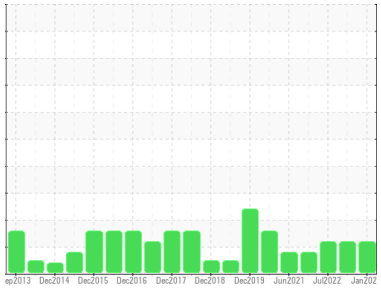
Resample at the next service interval to monitor. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

STAUFF FILTRATION TECHNOLOGY

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
REDIFFUSION 767-ER (S/N FLIGHT SIMULATOR)
Component
Hydraulic System
Fluid
MOBIL DTE 24 (400 GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**ST44808**	ST40589	ST40997
Sample Date		Client Info		**17 Jan 2023**	30 Dec 2022	27 Jul 2022
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ATTENTION	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**<1**	<1	0
Chromium	ppm	ASTM D5185m	>20	**0**	0	0
Nickel	ppm	ASTM D5185m	>20	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**1**	0	<1
Lead	ppm	ASTM D5185m	>20	**0**	0	0
Copper	ppm	ASTM D5185m	>20	**<1**	<1	<1
Tin	ppm	ASTM D5185m	>20	**0**	0	0
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**6**	0	<1
Molybdenum	ppm	ASTM D5185m		**11**	0	0
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m		**3**	0	1
Calcium	ppm	ASTM D5185m		**118**	119	112
Phosphorus	ppm	ASTM D5185m		**509**	441	431
Zinc	ppm	ASTM D5185m		**689**	664	648
Sulfur	ppm	ASTM D5185m		**2908**	2827	2996

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**2**	2	2
Sodium	ppm	ASTM D5185m		**0**	<1	<1
Potassium	ppm	ASTM D5185m	>20	**<1**	0	0
Water	%	ASTM D6304	>0.05	**0.012**	0.010	0.009
ppm Water	ppm	ASTM D6304	>500	**121.3**	101.4	93.8

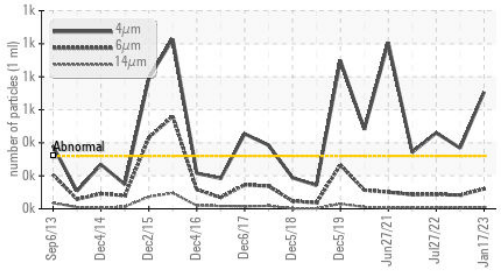
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>320	▲ **707**	▲ 368	▲ 460
Particles >6µm		ASTM D7647	>80	▲ **120**	▲ 83	▲ 87
Particles >14µm		ASTM D7647	>10	**10**	7	8
Particles >21µm		ASTM D7647	>3	**4**	2	2
Particles >38µm		ASTM D7647	>3	**0**	1	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>15/13/10	▲ **17/14/10**	▲ 16/14/10	▲ 16/14/10

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.72**	0.78	0.925

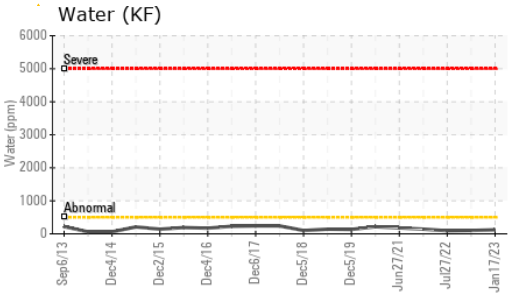
OIL ANALYSIS REPORT

STAUFF FILTRATION TECHNOLOGY

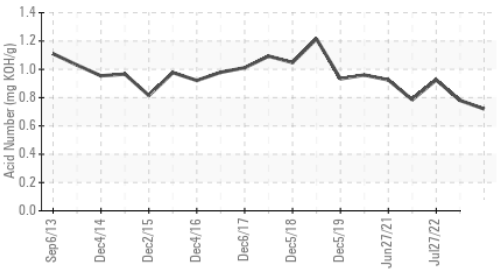
Particle Trend



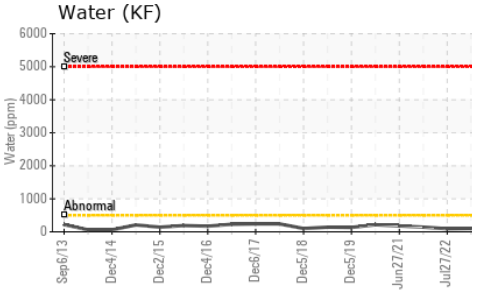
Water (KF)



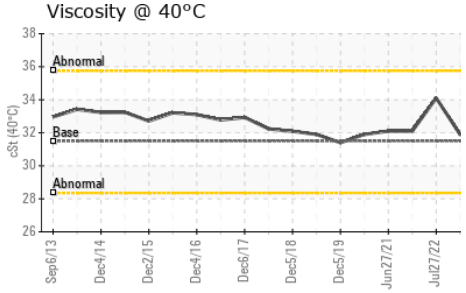
Acid Number



Water (KF)



Viscosity @ 40°C



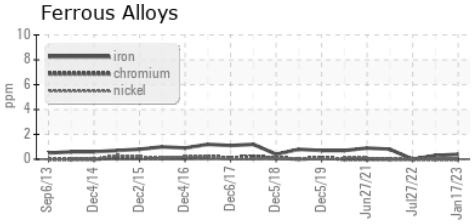
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	31.5	**32.0**	31.9	34.1

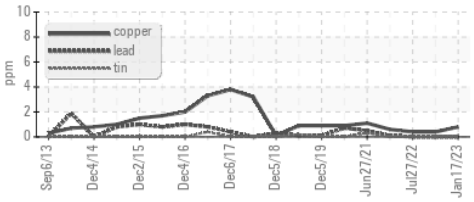
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

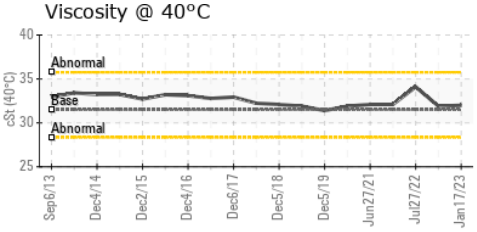
Ferrous Alloys



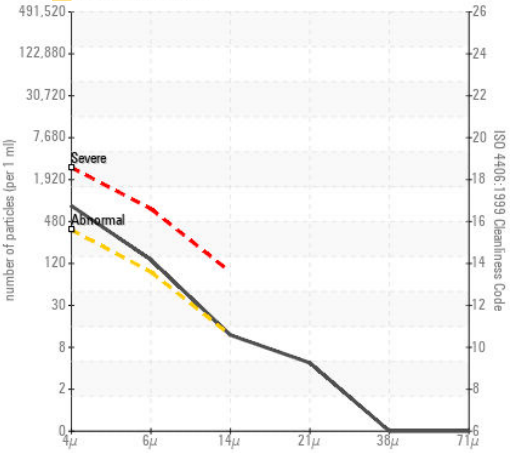
Non-ferrous Metals



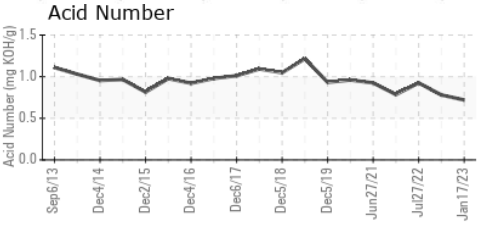
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ST44808 **Received** : 15 Nov 2023
Lab Number : 06009086 **Diagnosed** : 16 Nov 2023
Unique Number : 10742848 **Diagnostician** : Wes Davis
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)

BOEING FLIGHT SERVICES
6601 NW 36TH ST
MIAMI, FL
US 33166
Contact: OSCAR DELGADO
oscar.delgado2@boeing.com
T: (786)265-4700
F: