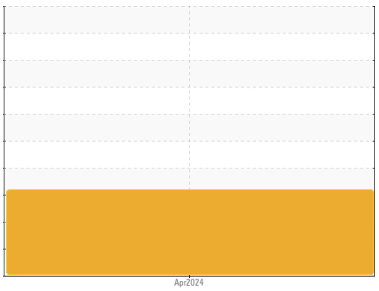
STAUFF FILTRATION TECHNOLOGY

OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Machine Id
WINDLESS IRON BLONDE
Component
Starboard Gearbox
Fluid
GEAR OIL ISO 220 (1 GAL)

DIAGNOSIS

Recommendation
We advise that you check for the source of water entry. We recommend you service the filters on this component if applicable. 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
All component wear rates are normal.

Contamination
There is a high amount of silt (particulates < 14 microns in size) present in the oil. There is a moderate concentration of water present in the oil.

Fluid Condition
Viscosity of sample indicates oil is within ISO 320 range, advise investigate. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**ST46565**	---	---
Sample Date		Client Info		**16 Apr 2024**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**ABNORMAL**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**10**	---	---
Chromium	ppm	ASTM D5185m	>15	**<1**	---	---
Nickel	ppm	ASTM D5185m	>15	**<1**	---	---
Titanium	ppm	ASTM D5185m		**<1**	---	---
Silver	ppm	ASTM D5185m		**0**	---	---
Aluminum	ppm	ASTM D5185m	>25	**5**	---	---
Lead	ppm	ASTM D5185m	>100	**<1**	---	---
Copper	ppm	ASTM D5185m	>200	**3**	---	---
Tin	ppm	ASTM D5185m	>25	**<1**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	---	---
Cadmium	ppm	ASTM D5185m		**<1**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	**7**	---	---
Barium	ppm	ASTM D5185m	15	**0**	---	---
Molybdenum	ppm	ASTM D5185m	15	**<1**	---	---
Manganese	ppm	ASTM D5185m		**<1**	---	---
Magnesium	ppm	ASTM D5185m	50	**1**	---	---
Calcium	ppm	ASTM D5185m	50	**9**	---	---
Phosphorus	ppm	ASTM D5185m	350	**567**	---	---
Zinc	ppm	ASTM D5185m	100	**9**	---	---
Sulfur	ppm	ASTM D5185m	12500	**464**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**16**	---	---
Sodium	ppm	ASTM D5185m		**19**	---	---
Potassium	ppm	ASTM D5185m	>20	**4**	---	---
Water	%	ASTM D6304	>0.2	▲ **0.825**	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ **8256**	---	---

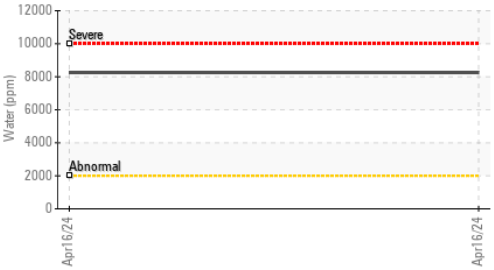
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **157005**	---	---
Particles >6µm		ASTM D7647	>5000	▲ **41488**	---	---
Particles >14µm		ASTM D7647	>640	**366**	---	---
Particles >21µm		ASTM D7647	>160	**33**	---	---
Particles >38µm		ASTM D7647	>40	**3**	---	---
Particles >71µm		ASTM D7647	>10	**1**	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **24/23/16**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	**0.23**	---	---

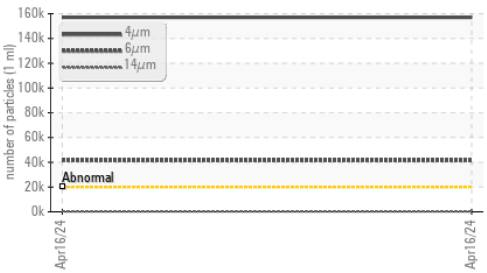
STAUFF FILTRATION TECHNOLOGY

OIL ANALYSIS REPORT

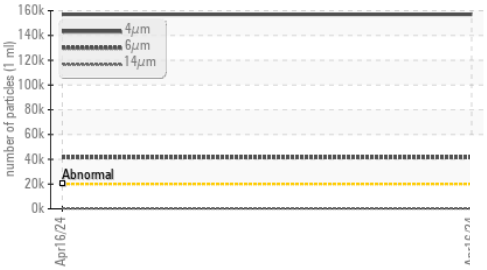
Water (KF)



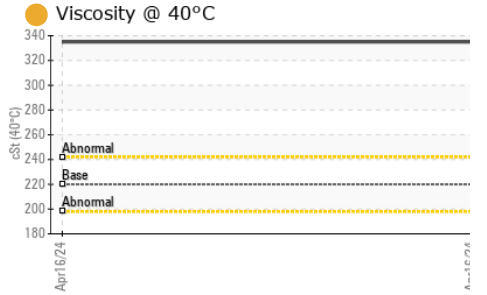
Particle Trend



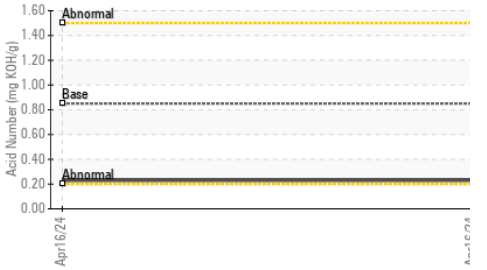
Particle Trend



Viscosity @ 40°C



Acid Number



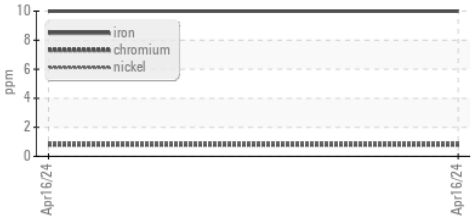
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	**335**	---	---

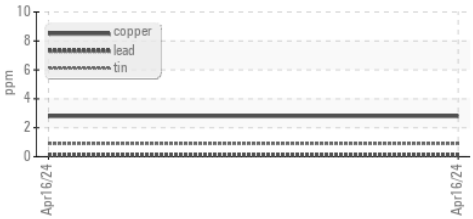
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS

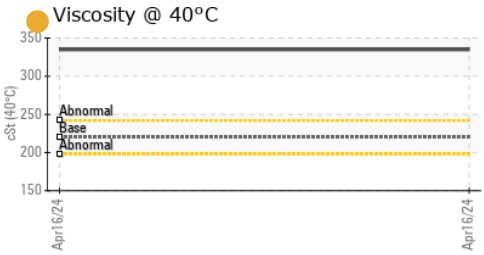
Ferrous Alloys



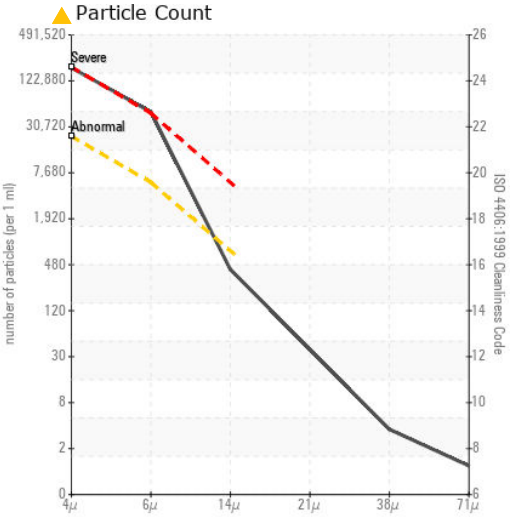
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ST46565 **Received** : 23 Apr 2024
Lab Number : 06158446 **Tested** : 25 Apr 2024
Unique Number : 10993869 **Diagnosed** : 25 Apr 2024 - Don Baldridge
Test Package : IND 2 (Additional Tests: KF, PrtCount)

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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