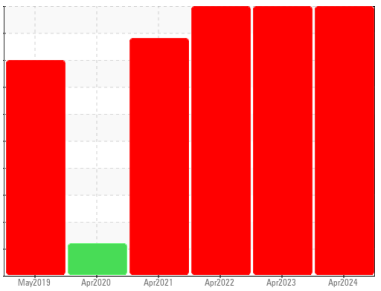
STAUFF FILTRATION TECHNOLOGY

PROBLEM SUMMARY

Sample Rating Trend

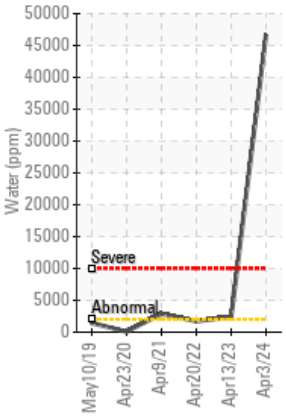


WEAR

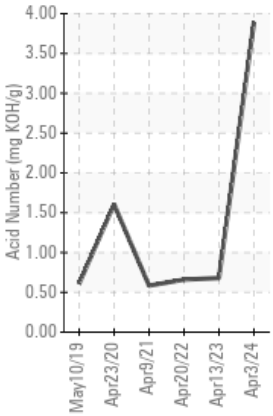
Machine Id
FALK WERKSPOOR 1
Component
Gearbox
Fluid
AMALIE 220 (10 GAL)

COMPONENT CONDITION SUMMARY

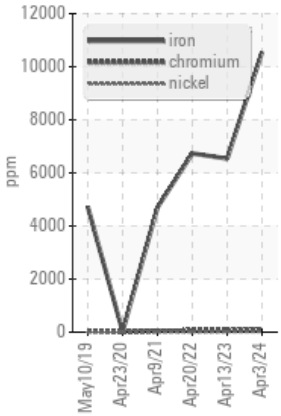
▲ Water (KF)



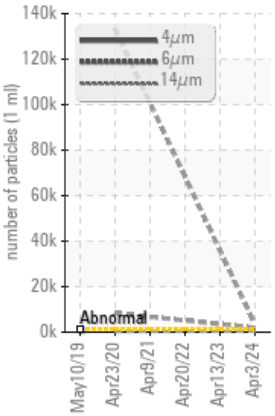
▲ Acid Number



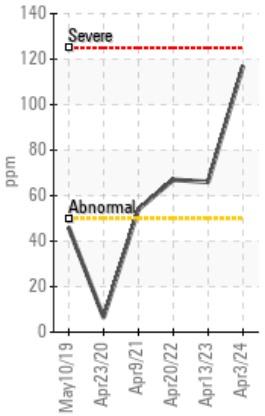
▲ Ferrous Alloys



▲ Particle Trend



▲ Silicon (ppm)



RECOMMENDATION

We advise that you check for the source of water entry. We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. 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				**SEVERE**	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>200	▲ **10551**	▲ 6536	▲ 6735
Chromium	ppm	ASTM D5185m	>15	▲ **102**	▲ 61	▲ 62
Nickel	ppm	ASTM D5185m	>15	▲ **18**	12	10
Silicon	ppm	ASTM D5185m	>50	▲ **117**	▲ 66	▲ 67
Water	%	ASTM D6304	>0.2	▲ **4.67**	▲ 0.241	▲ 0.171
ppm Water	ppm	ASTM D6304	>2000	▲ **46700**	▲ 2410	▲ 1710
Particles >4µm		ASTM D7647	>1300	▲ **3523**	---	---
Particles >6µm		ASTM D7647	>320	▲ **1919**	---	---
Particles >14µm		ASTM D7647	>80	▲ **327**	---	---
Particles >21µm		ASTM D7647	>20	▲ **110**	---	---
Particles >38µm		ASTM D7647	>4	▲ **17**	---	---
Particles >71µm		ASTM D7647	>3	▲ **2**	---	---
Oil Cleanliness		ISO 4406 (c)	>17/15/13	▲ **19/18/16**	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		▲ **3.89**	0.68	0.66
Emulsified Water	scalar	*Visual	>0.2	▲ **0.2%**	0.2%	0.2%

Customer Id: HYDBELFL
Sample No.: ST28187
Lab Number: 06143078
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
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Contact Required	---	---	?	Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

HISTORICAL DIAGNOSIS

WEAR

13 Apr 2023 Diag: Jonathan Hester

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.Gear wear is indicated. Appearance is unacceptable There is a light concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high amount of visible silt present in the sample. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

WEAR

20 Apr 2022 Diag: Jonathan Hester

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.Moderate concentration of visible metal present. Gear wear is indicated. Appearance is milky. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

WEAR

09 Apr 2021 Diag: Don Baldridge

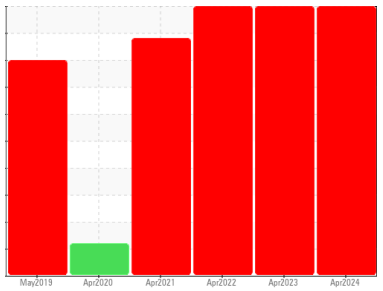
We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.The iron level is severe. Gear wear is indicated. There is a light concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report

STAUFF FILTRATION TECHNOLOGY

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
FALK WERKSPOOR 1
Component
Gearbox
Fluid
AMALIE 220 (10 GAL)

DIAGNOSIS

▲ Recommendation
We advise that you check for the source of water entry. We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Due to an abnormal test result it is recommended to contact Stauff Corp at (201)-444-7800 for help resolving the issue.

▲ Wear
Gear wear is indicated.

▲ Contamination
There is a high amount of particulates present in the oil. There is a high concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

▲ Fluid Condition
The AN level is above the recommended limit. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**ST28187**	ST44853D	ST42873
Sample Date		Client Info		**03 Apr 2024**	13 Apr 2023	20 Apr 2022
Machine Age	mths	Client Info		**0**	0	0
Oil Age	mths	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	SEVERE	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	▲ **10551**	▲ 6536	▲ 6735
Chromium	ppm	ASTM D5185m	>15	▲ **102**	▲ 61	▲ 62
Nickel	ppm	ASTM D5185m	>15	▲ **18**	12	10
Titanium	ppm	ASTM D5185m		**2**	2	2
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	● **22**	● 21	● 20
Lead	ppm	ASTM D5185m	>100	**9**	0	3
Copper	ppm	ASTM D5185m	>200	**55**	27	32
Tin	ppm	ASTM D5185m	>25	**8**	2	0
Antimony	ppm	ASTM D5185m	>5	**---**	---	---
Vanadium	ppm	ASTM D5185m		**2**	1	1
Cadmium	ppm	ASTM D5185m		**2**	<1	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**55**	37	38
Barium	ppm	ASTM D5185m		**20**	16	0
Molybdenum	ppm	ASTM D5185m		**65**	68	67
Manganese	ppm	ASTM D5185m		**110**	59	62
Magnesium	ppm	ASTM D5185m		**73**	38	35
Calcium	ppm	ASTM D5185m		**490**	380	412
Phosphorus	ppm	ASTM D5185m		**267**	241	250
Zinc	ppm	ASTM D5185m		**72**	76	81
Sulfur	ppm	ASTM D5185m		**13102**	12382	9988

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	▲ **117**	▲ 66	▲ 67
Sodium	ppm	ASTM D5185m		**28**	21	20
Potassium	ppm	ASTM D5185m	>20	**733**	389	402
Water	%	ASTM D6304	>0.2	▲ **4.67**	▲ 0.241	▲ 0.171
ppm Water	ppm	ASTM D6304	>2000	▲ **46700**	▲ 2410	▲ 1710

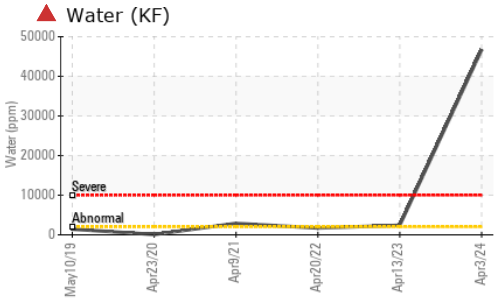
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>1300	▲ **3523**	---	---
Particles >6µm		ASTM D7647	>320	▲ **1919**	---	---
Particles >14µm		ASTM D7647	>80	▲ **327**	---	---
Particles >21µm		ASTM D7647	>20	▲ **110**	---	---
Particles >38µm		ASTM D7647	>4	▲ **17**	---	---
Particles >71µm		ASTM D7647	>3	▲ **2**	---	---
Oil Cleanliness		ISO 4406 (c)	>17/15/13	▲ **19/18/16**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		▲ **3.89**	0.68	0.66

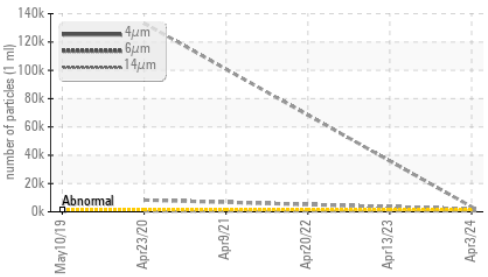
OIL ANALYSIS REPORT

STAUFF FILTRATION TECHNOLOGY

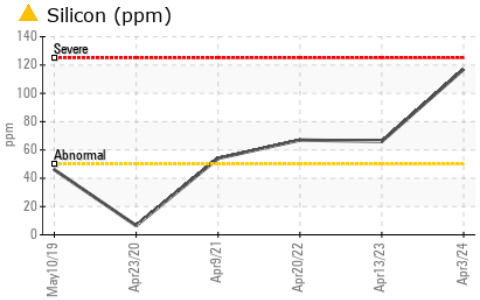
Water (KF)



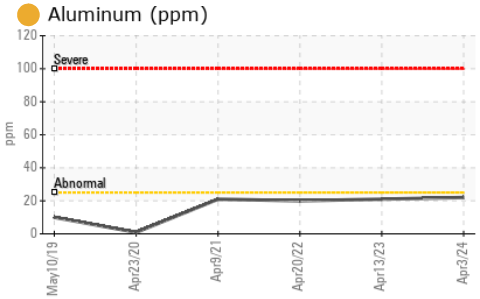
Particle Trend



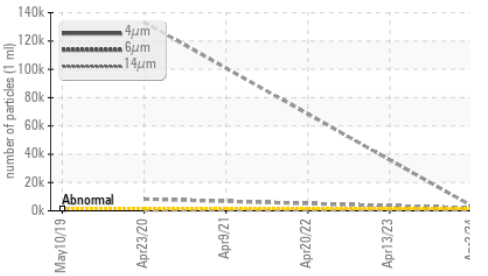
Silicon (ppm)



Aluminum (ppm)

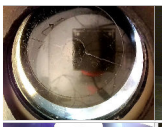
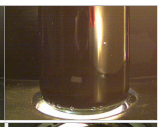
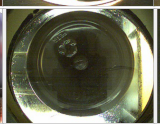


Particle Trend



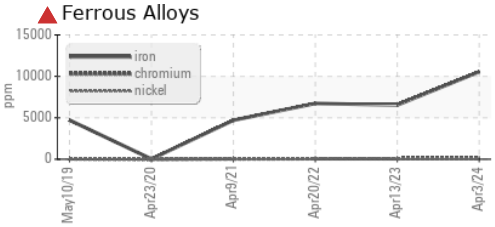
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	▲ MODER
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	▲ HEAVY	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	● MILKY	● MILKY
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	▲ **0.2%**	0.2%	0.2%
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**299**	289	311

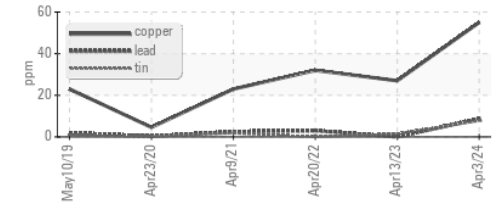
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

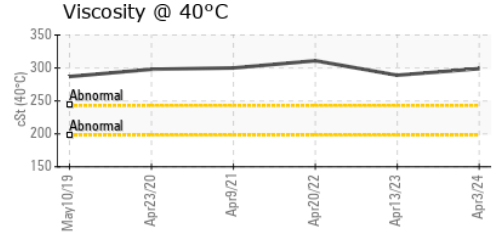
Ferrous Alloys



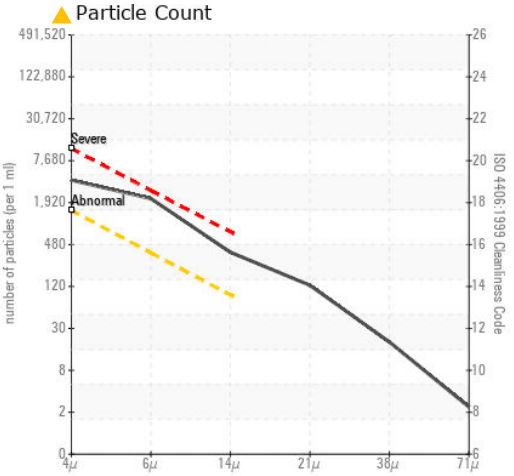
Non-ferrous Metals



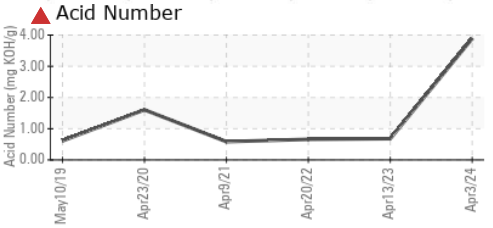
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ST28187
Lab Number : 06143078
Unique Number : 10967886
Test Package : IND 2 (Additional Tests: KF, PrtCount)

Received : 09 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 2024 - Jonathan Hester

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)

HYDRAULIC SUPPLY COMPANY
326 SE 1ST ST
BELLE GLADE, FL
US 33430
Contact: ROBERT RETALEATO
r.retaleato@hydraulic-supply.com;rsr@hydraulic-supply.com
T: (561)996-4431
F: (561)996-8531

Report Id: HYDBELFL [WUSCAR] 06143078 (Generated: 04/15/2024 17:12:57) Rev: 1
Contact/Location: ROBERT RETALEATO - HYDBELFL