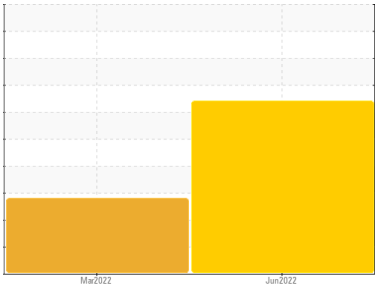
PROBLEM SUMMARY

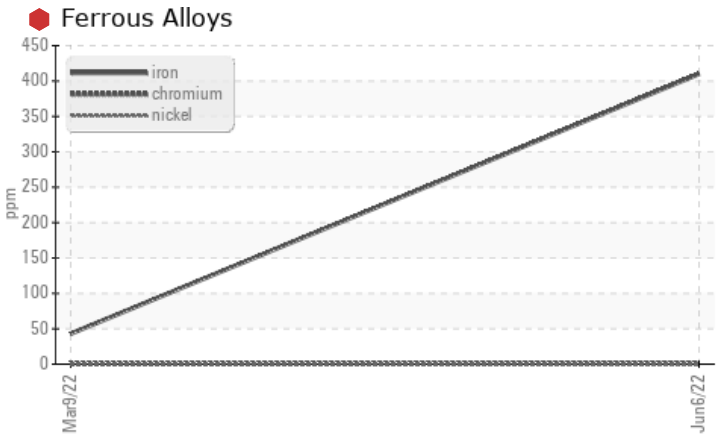
Sample Rating Trend



WEAR

Machine Id
HEATER (S/N NO INFO ON SIF/BOTTLE)
Component
Heat Transfer Fluid
Fluid
NOT GIVEN (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component if applicable. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. We were unable to perform a particle count due to a high concentration of particles present in this sample.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	ABNORMAL	---
Iron	ppm	ASTM D5185m	>125	**410**	43	---
Debris	scalar	*Visual	NONE	**MODER**	NONE	---

Customer Id: BLUFRU
Sample No.: TO10000615
Lab Number: 05575703
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	MISSED	Sep 08 2023	?	We advise that you inspect for the source(s) of wear.
Change Filter	MISSED	Sep 08 2023	?	We recommend you service the filters on this component if applicable.
Resample	MISSED	Sep 08 2023	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.
Information Required	MISSED	Sep 08 2023	?	Please specify the brand, type, and viscosity of the oil on your next sample.

HISTORICAL DIAGNOSIS

09 Mar 2022 Diag: Doug Bogart

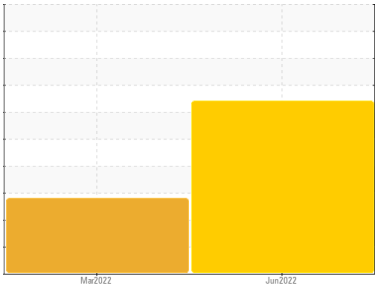
WATER

Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is a moderate concentration of water present in the fluid. The amount and size of particulates present in the system are acceptable. The AN level appears to be above the recommended limit.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
HEATER (S/N NO INFO ON SIF/BOTTLE)
Component
Heat Transfer Fluid
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component if applicable. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear
The iron level is severe.

Contamination
Moderate concentration of visible dirt/debris present in the transformer oil.

Fluid Condition
The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**TO10000615**	TO10000613	---
Sample Date		Client Info		**06 Jun 2022**	09 Mar 2022	---
Machine Age	hrs	Client Info		**0**	0	---
Oil Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**SEVERE**	ABNORMAL	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>125	**410**	43	---
Chromium	ppm	ASTM D5185m		**<1**	<1	---
Nickel	ppm	ASTM D5185m		**0**	0	---
Titanium	ppm	ASTM D5185m		**0**	0	---
Silver	ppm	ASTM D5185m	>2	**0**	0	---
Aluminum	ppm	ASTM D5185m	>5	**1**	0	---
Lead	ppm	ASTM D5185m	>30	**0**	0	---
Copper	ppm	ASTM D5185m	>10	**0**	0	---
Tin	ppm	ASTM D5185m	>2	**2**	<1	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
Cadmium	ppm	ASTM D5185m		**0**	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**2**	<1	---
Barium	ppm	ASTM D5185m		**0**	0	---
Molybdenum	ppm	ASTM D5185m		**0**	0	---
Manganese	ppm	ASTM D5185m		**4**	0	---
Magnesium	ppm	ASTM D5185m		**0**	0	---
Calcium	ppm	ASTM D5185m		**<1**	0	---
Phosphorus	ppm	ASTM D5185m		**5**	22	---
Zinc	ppm	ASTM D5185m		**0**	0	---
Sulfur	ppm	ASTM D5185m		**38**	0	---

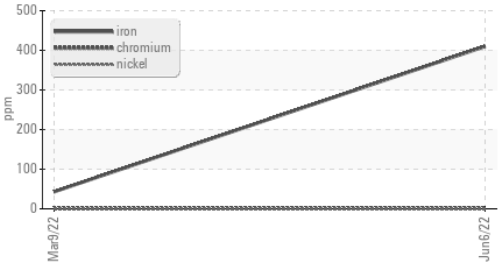
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**2**	<1	---
Sodium	ppm	ASTM D5185m		**<1**	2	---
Potassium	ppm	ASTM D5185m	>20	**0**	0	---
Water	%	ASTM D6304	>0.0035	**0.016**	0.504	---
ppm Water	ppm	ASTM D6304	>35	**163.5**	5040	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**---**	2171	---
Particles >6µm		ASTM D7647	>1300	**---**	1182	---
Particles >14µm		ASTM D7647	>160	**---**	201	---
Particles >21µm		ASTM D7647	>40	**---**	68	---
Particles >38µm		ASTM D7647	>10	**---**	10	---
Particles >71µm		ASTM D7647	>3	**---**	1	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**---**	18/17/15	---

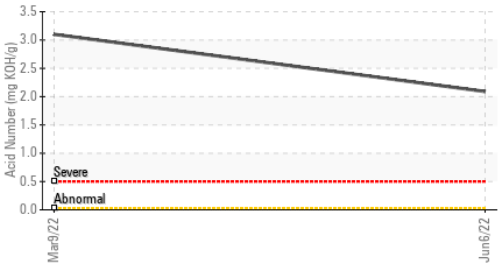
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**2.09**	3.10	---

OIL ANALYSIS REPORT

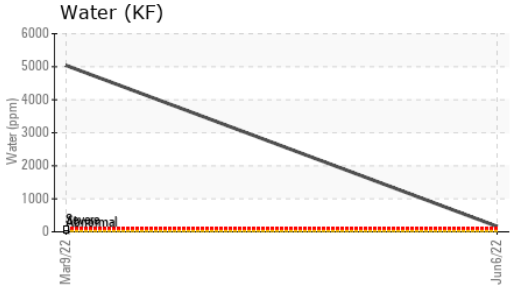
Ferrous Alloys



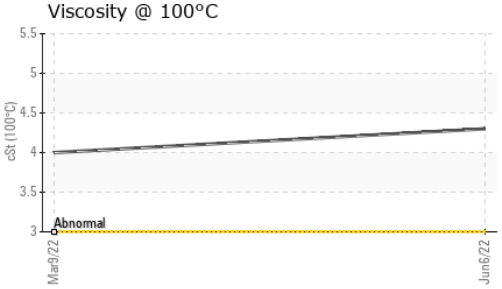
Acid Number



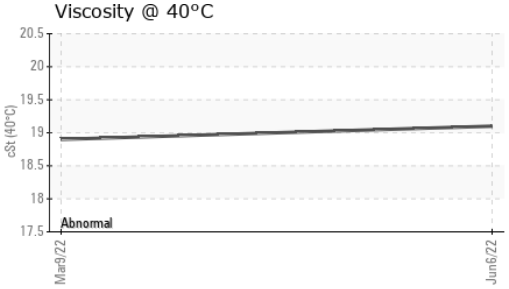
Water (KF)



Viscosity @ 100°C

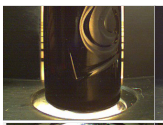
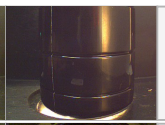
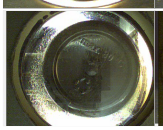
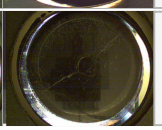


Viscosity @ 40°C



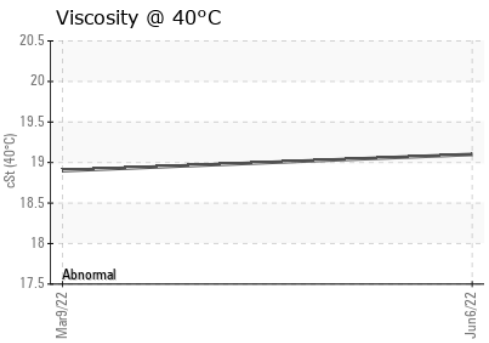
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	▲ **MODER**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.0035	**NEG**	0.2%	---
Free Water	scalar	*Visual		**NEG**	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**19.1**	18.9	---
Visc @ 100°C	cSt	ASTM D445		**4.3**	4	---
Viscosity Index (VI)	Scale	ASTM D2270		**135**	108	---

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

GRAPHS

Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10000615 **Received** : 23 Jun 2022
Lab Number : 05575703 **Diagnosed** : 27 Jun 2022
Unique Number : 10025120 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

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)

ERGON - FRUITA

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US
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