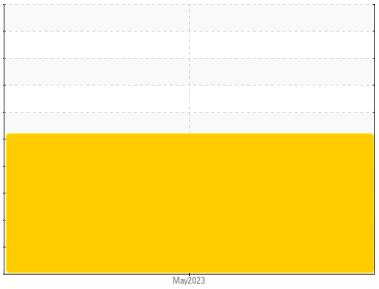
PROBLEM SUMMARY

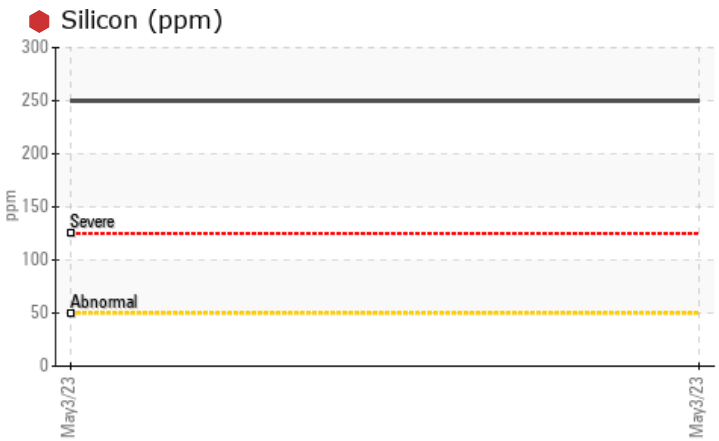
Sample Rating Trend

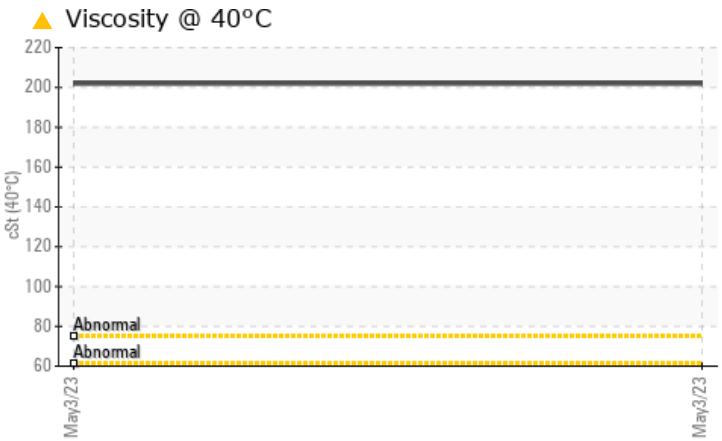


DIRT

Area
BLDG 63 [53386481]
Machine Id
LIGHTNIN AG-3310, Fermentor FE-3310 Agitator
Component
Gearbox
Fluid
BEL-RAY NO-TOX FG 68 (--- GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	---	---
Silicon	ppm	ASTM D5185m	>50	**250**	---	---

Customer Id: MERELK
Sample No.: BRI004923
Lab Number: 05845958
Test Package: IND 1

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

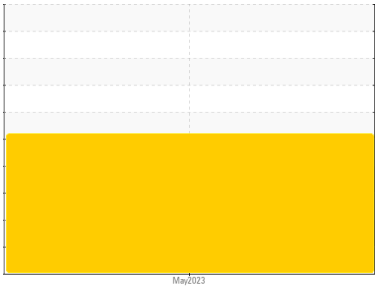
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Area
BLDG 63 [53386481]
Machine Id
LIGHTNIN AG-3310, Fermentor FE-3310 Agitator
Component
Gearbox
Fluid
BEL-RAY NO-TOX FG 68 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
Viscosity of sample indicates oil is within ISO 220 range, advise investigate. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**BRI004923**	---	---
Sample Date		Client Info		**03 May 2023**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**SEVERE**	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**7**	---	---
Chromium	ppm	ASTM D5185m	>15	**<1**	---	---
Nickel	ppm	ASTM D5185m	>15	**0**	---	---
Titanium	ppm	ASTM D5185m		**<1**	---	---
Silver	ppm	ASTM D5185m		**0**	---	---
Aluminum	ppm	ASTM D5185m	>25	**0**	---	---
Lead	ppm	ASTM D5185m	>100	**0**	---	---
Copper	ppm	ASTM D5185m	>200	**0**	---	---
Tin	ppm	ASTM D5185m	>25	**0**	---	---
Vanadium	ppm	ASTM D5185m		**0**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

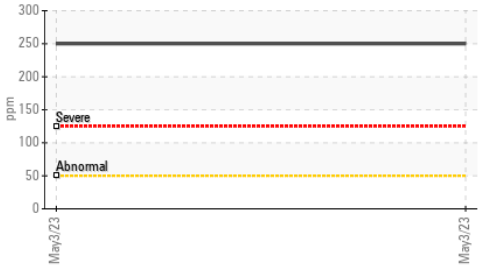
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	---	---
Barium	ppm	ASTM D5185m		**0**	---	---
Molybdenum	ppm	ASTM D5185m		**0**	---	---
Manganese	ppm	ASTM D5185m		**<1**	---	---
Magnesium	ppm	ASTM D5185m		**0**	---	---
Calcium	ppm	ASTM D5185m		**3**	---	---
Phosphorus	ppm	ASTM D5185m		**419**	---	---
Zinc	ppm	ASTM D5185m		**22**	---	---
Sulfur	ppm	ASTM D5185m		**517**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**250**	---	---
Sodium	ppm	ASTM D5185m		**<1**	---	---
Potassium	ppm	ASTM D5185m	>20	**3**	---	---

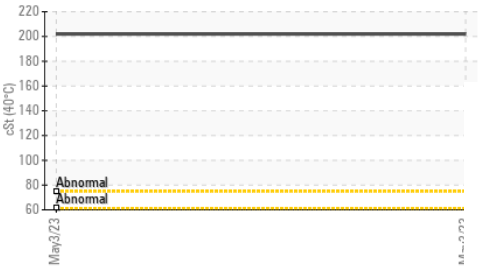
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*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**	---	---

OIL ANALYSIS REPORT

Silicon (ppm)



Viscosity @ 40°C

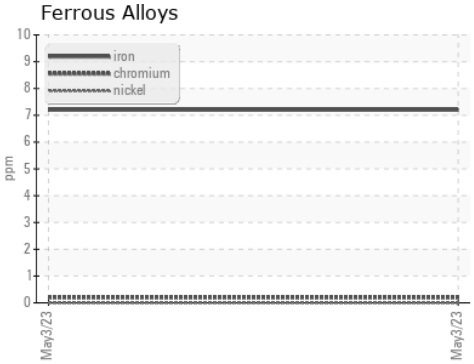


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		▲ **202**	---	---

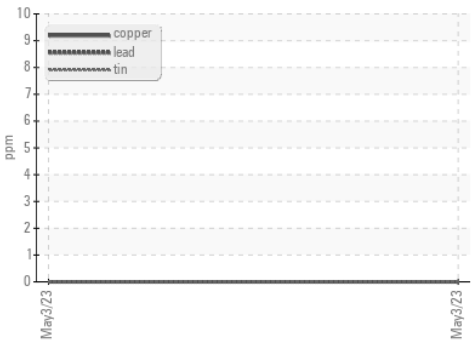
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

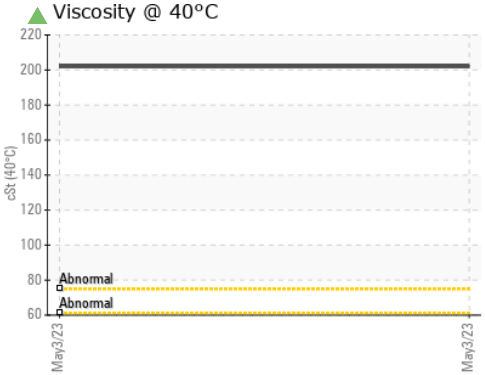
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : BRI004923
Lab Number : 05845958
Unique Number : 10470065
Test Package : IND 1

Received : 12 May 2023
Tested : 15 May 2023
Diagnosed : 17 May 2023 - Jonathan Hester

IDG/MERCK SHARPE AND DOHME
2778 S EAST SIDE HWY, BUILDING 44
ELKTON, VA
US 22827
Contact: DJ Hamilton
david.hamilton2@merck.com
T: (540)298-1211
F:

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)