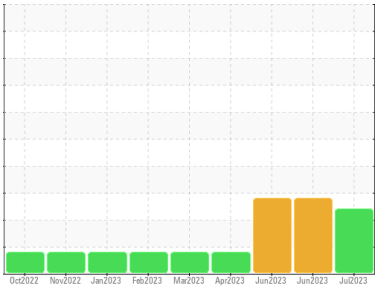
PROBLEM SUMMARY

Sample Rating Trend

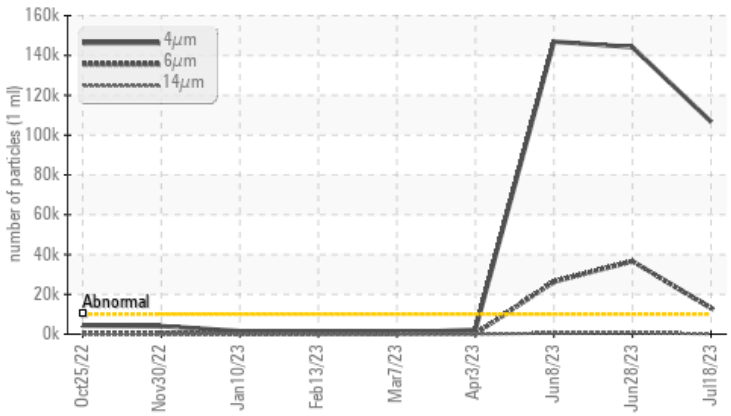


WEAR

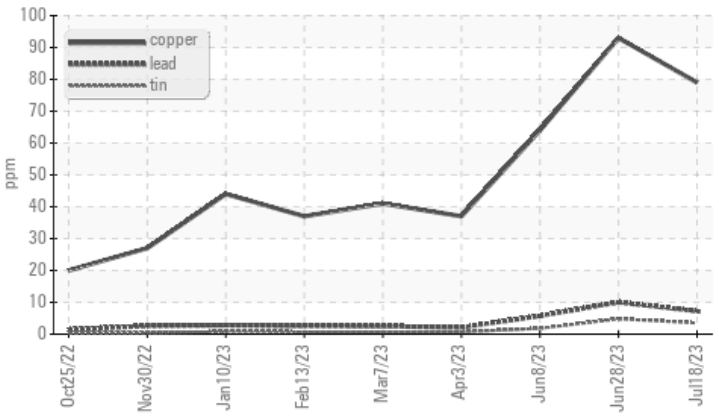
Area
Paper Side
Machine Id
Paper Machine 1 Main Bowser
Component
Bearing Lube
Fluid
SHELL PM S2 M 220 (3500 GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



▲ Non-ferrous Metals



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Copper	ppm	ASTM D5185m	>17	▲ **79**	▲ 93	▲ 64
Particles >4µm		ASTM D7647	>10000	▲ **106706**	▲ 144181	▲ 146940
Particles >6µm		ASTM D7647	>2500	▲ **13072**	▲ 36621	▲ 26367
Particles >14µm		ASTM D7647	>160	▲ **193**	▲ 684	▲ 518
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **24/21/15**	▲ 24/22/17	▲ 24/22/16

Customer Id: MCKPOR
Sample No.: PE0000990
Lab Number: 05904874
Test Package: PLANT

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@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
Change Filter	---	---	?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS

28 Jun 2023 Diag: Jonathan Hester

WEAR

We recommend you service the filters on this component. We advise that you inspect for the source(s) of wear. Resample at the next service interval to monitor.The copper level is abnormal. All other component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

08 Jun 2023 Diag: Jonathan Hester

WEAR

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data updates.The copper level is abnormal. All other component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

03 Apr 2023 Diag: Angela Borella

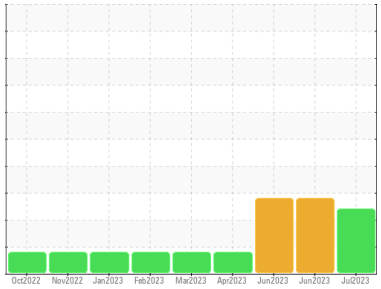
WEAR

No corrective action is recommended at this time. Resample at the next service interval to monitor.The copper level is abnormal. All other component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
Paper Side
Machine Id
Paper Machine 1 Main Bowser
Component
Bearing Lube
Fluid
SHELL PM S2 M 220 (3500 GAL)

DIAGNOSIS

▲ Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

▲ Wear

The copper level is abnormal. All other component wear rates are normal.

▲ Contamination

There is a high amount of particulates present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PE0000990**	PE0000984	PE0000983
Sample Date		Client Info		**18 Jul 2023**	28 Jun 2023	08 Jun 2023
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**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**14**	16	19
Iron	ppm	ASTM D5185m	>120	**3**	6	4
Chromium	ppm	ASTM D5185m	>5	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>20	**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>4	**0**	0	0
Lead	ppm	ASTM D5185m	>30	**7**	10	6
Copper	ppm	ASTM D5185m	>17	▲ **79**	▲ 93	▲ 64
Tin	ppm	ASTM D5185m	>10	**4**	5	2
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**2**	0	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	2
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m		**3**	4	1
Calcium	ppm	ASTM D5185m		**91**	58	134
Phosphorus	ppm	ASTM D5185m		**790**	647	657
Zinc	ppm	ASTM D5185m		**1075**	905	927
Sulfur	ppm	ASTM D5185m		**6089**	6210	6177

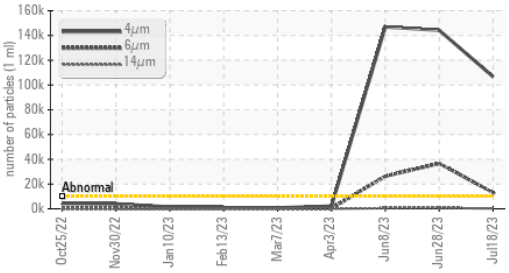
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**2**	2	2
Sodium	ppm	ASTM D5185m		**0**	<1	<1
Potassium	ppm	ASTM D5185m	>20	**<1**	2	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ **106706**	▲ 144181	▲ 146940
Particles >6µm		ASTM D7647	>2500	▲ **13072**	▲ 36621	▲ 26367
Particles >14µm		ASTM D7647	>160	▲ **193**	▲ 684	▲ 518
Particles >21µm		ASTM D7647	>40	**29**	▲ 117	▲ 96
Particles >38µm		ASTM D7647	>10	**1**	2	5
Particles >71µm		ASTM D7647	>3	**0**	0	1
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **24/21/15**	▲ 24/22/17	▲ 24/22/16

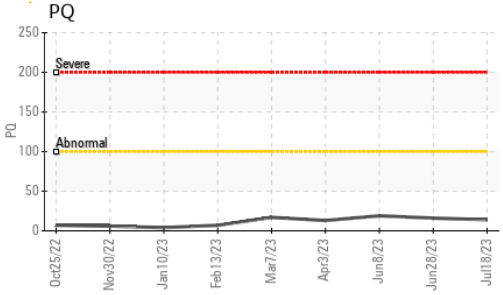
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.85**	0.91	0.77

OIL ANALYSIS REPORT

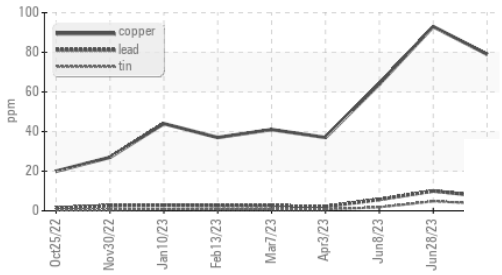
Particle Trend



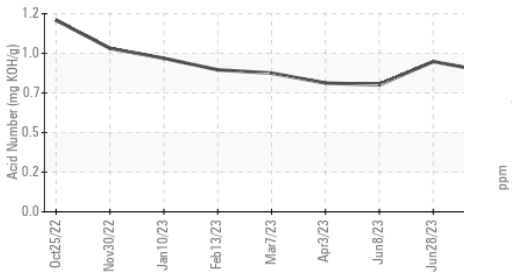
PQ



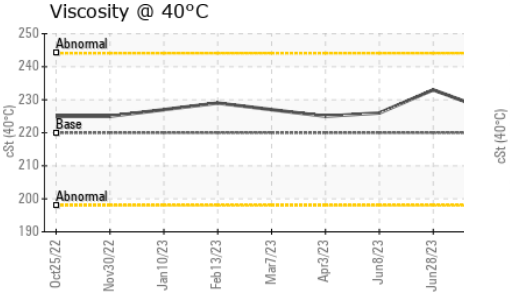
Non-ferrous Metals



Acid Number

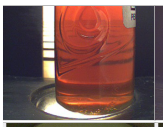
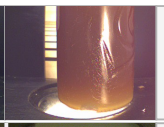


Viscosity @ 40°C



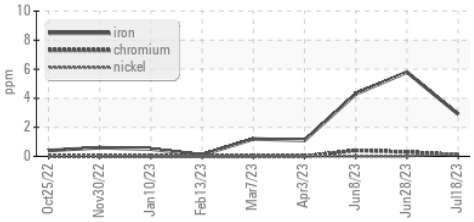
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**LIGHT**	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	**227**	233	226

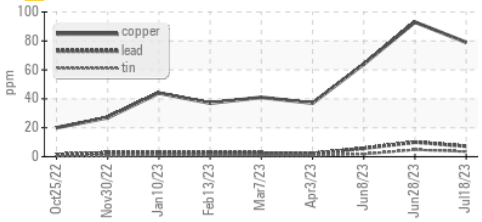
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					no image
Bottom					no image

GRAPHS

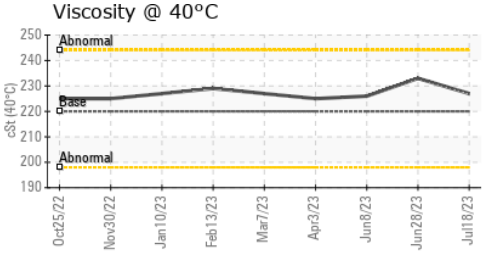
Ferrous Alloys



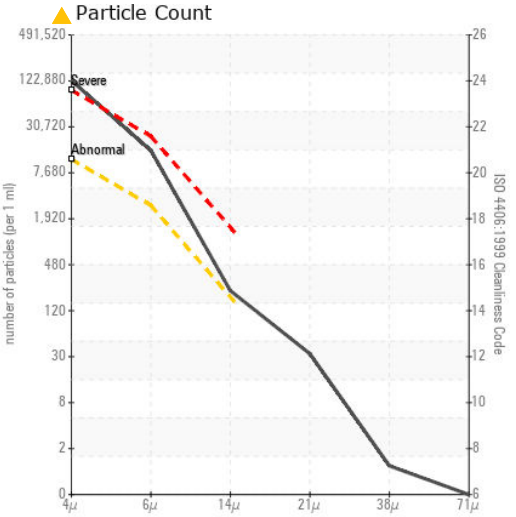
Non-ferrous Metals



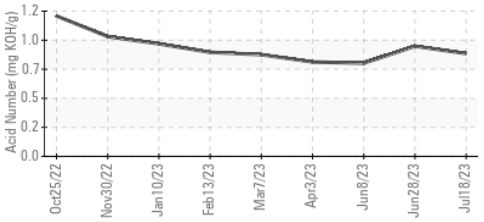
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0000990 **Received** : 21 Jul 2023
Lab Number : 05904874 **Diagnosed** : 24 Jul 2023
Unique Number : 10566230 **Diagnostician** : Doug Bogart
Test Package : PLANT (Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN)

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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Report Id: MCKPOR [WUSCAR] 05904874 (Generated: 07/24/2023 15:20:47) Rev: 1

Submitted By: CHAD GALLAUHER