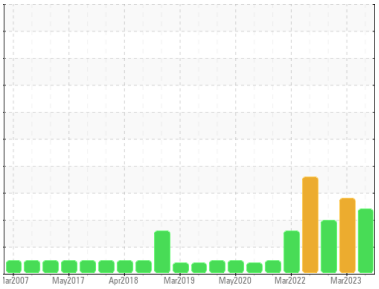
PROBLEM SUMMARY

Sample Rating Trend

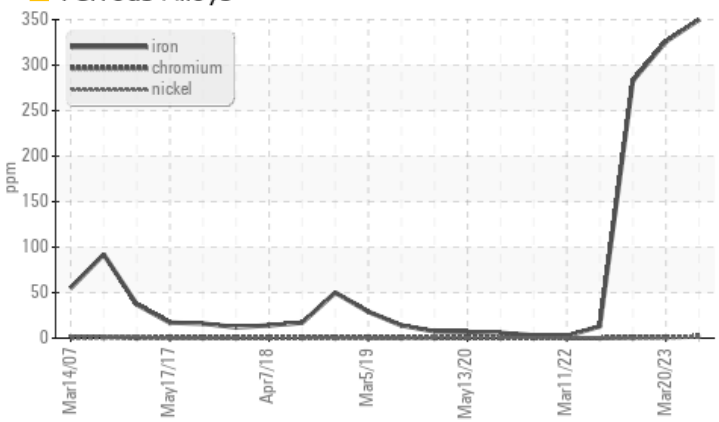


WEAR

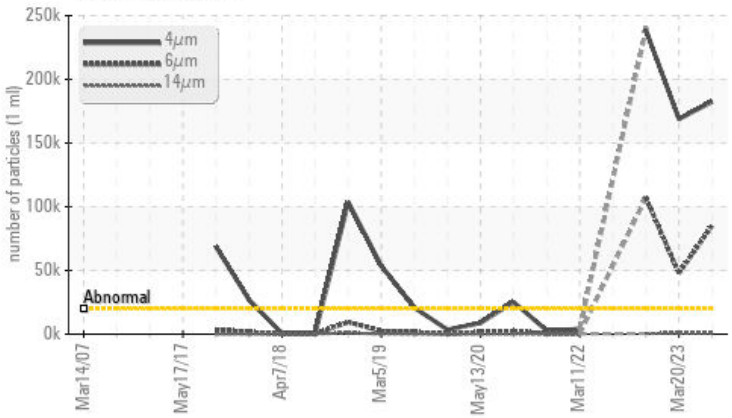
Area
No. 1 Paper Machine
Machine Id
1 PM Lump Breaker Dr. Str. #3 (S/N MO-27565-4)
Component
Gear Unit
Fluid
ROYAL PURPLE SYNERGY 90/220 (--- GAL)

COMPONENT CONDITION SUMMARY

Ferrous Alloys



Particle Trend



RECOMMENDATION

We recommend you service the filters on this component if applicable. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>150	▲ **350**	▲ 326	▲ 283
Particles >4µm		ASTM D7647	>20000	▲ **182455**	▲ 168848	▲ 238741
Particles >6µm		ASTM D7647	>5000	▲ **84980**	▲ 47821	▲ 107086
Particles >14µm		ASTM D7647	>640	▲ **657**	▲ 689	530
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **25/24/17**	▲ 25/23/17	▲ 25/24/16

Customer Id: INTTEX
Sample No.: RP0038231
Lab Number: 05968338
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
Change Filter	---	---	?	We recommend you service the filters on this component if applicable.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

20 Mar 2023 Diag: Don Baldridge

WEAR

We recommend you service the filters on this component if applicable. We recommend an early resample to monitor this condition.Gear wear is indicated. 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 acceptable for the time in service.

view report

27 Dec 2022 Diag: Doug Bogart

WEAR

We recommend you service the filters on this component if applicable. We recommend an early resample to monitor this condition.Gear wear is indicated. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report

14 Oct 2022 Diag: Jonathan Hester

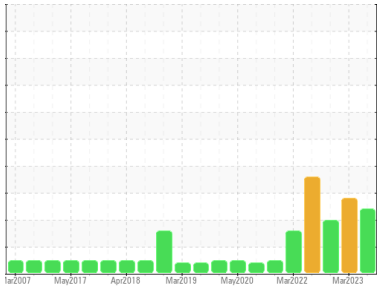
WATER

We advise that you follow the water drain-off procedure for this component, and use off-line filtration to improve the cleanliness of the system fluid. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.All component wear rates are normal. Free water present. 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 condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
No. 1 Paper Machine
Machine Id
1 PM Lump Breaker Dr. Str. #3 (S/N MO-27565-4)
Component
Gear Unit
Fluid
ROYAL PURPLE SYNERGY 90/220 (--- GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component if applicable. We recommend an early resample to monitor this condition.

Wear
Gear wear is indicated.

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 acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**RP0038231**	RP0031730	RP0031066
Sample Date		Client Info		**29 Sep 2023**	20 Mar 2023	27 Dec 2022
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
Iron	ppm	ASTM D5185m	>150	▲ **350**	▲ 326	▲ 283
Chromium	ppm	ASTM D5185m	>10	**2**	1	1
Nickel	ppm	ASTM D5185m	>10	**1**	<1	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	<1	<1
Lead	ppm	ASTM D5185m	>100	**0**	0	0
Copper	ppm	ASTM D5185m	>50	**9**	5	6
Tin	ppm	ASTM D5185m	>10	**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**5**	5	4
Magnesium	ppm	ASTM D5185m		**2**	6	<1
Calcium	ppm	ASTM D5185m		**8**	3	5
Phosphorus	ppm	ASTM D5185m	370	**81**	56	62
Zinc	ppm	ASTM D5185m		**7**	4	5

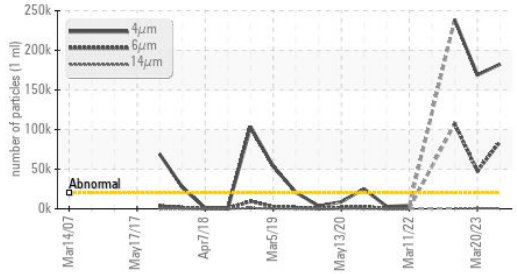
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**10**	6	6
Sodium	ppm	ASTM D5185m		**14**	13	11
Potassium	ppm	ASTM D5185m	>20	**2**	<1	0
Water	%	ASTM D6304	>0.1	**0.008**	0.013	0.054
ppm Water	ppm	ASTM D6304	>1000	**81.7**	130.6	540

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ **182455**	▲ 168848	▲ 238741
Particles >6µm		ASTM D7647	>5000	▲ **84980**	▲ 47821	▲ 107086
Particles >14µm		ASTM D7647	>640	▲ **657**	▲ 689	530
Particles >21µm		ASTM D7647	>160	**60**	▲ 191	112
Particles >38µm		ASTM D7647	>40	**1**	6	1
Particles >71µm		ASTM D7647	>10	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **25/24/17**	▲ 25/23/17	▲ 25/24/16

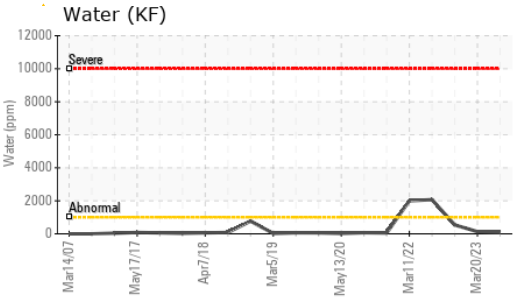
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.33	**0.31**	0.29	0.313

OIL ANALYSIS REPORT

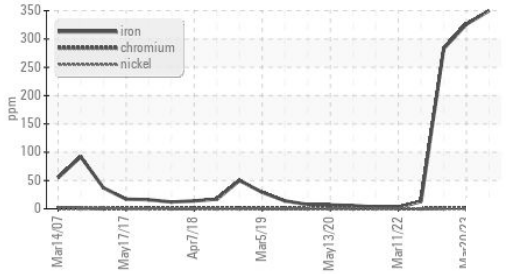
Particle Trend



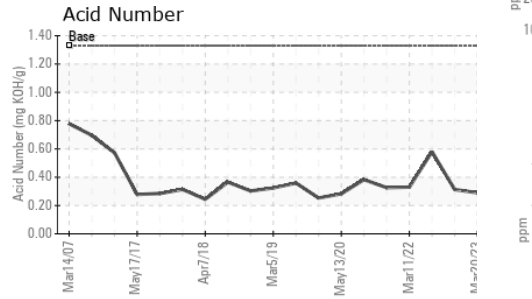
Water (KF)



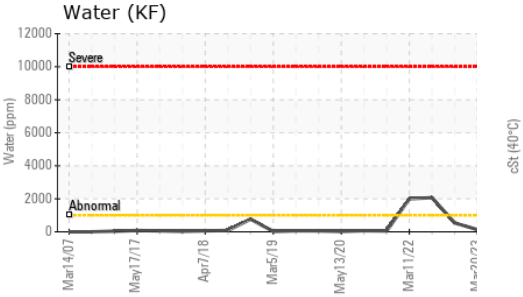
Ferrous Alloys



Acid Number

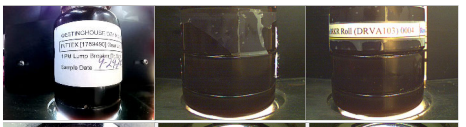
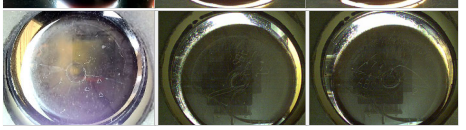


Water (KF)



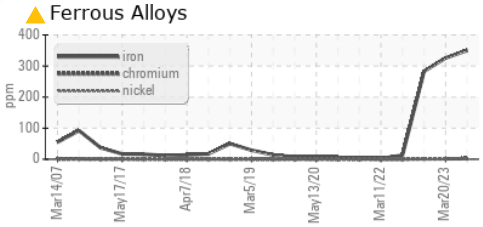
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	LIGHT	VLITE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	0.2%
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	216.1	**227**	226	225

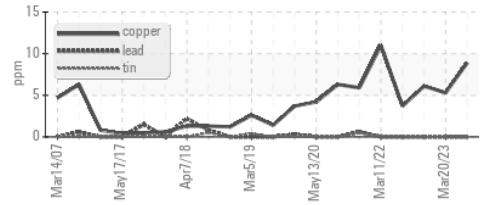
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

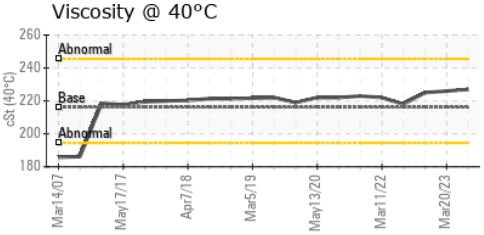
Ferrous Alloys



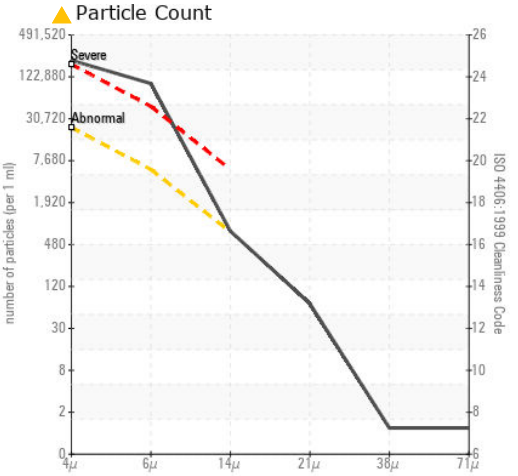
Non-ferrous Metals



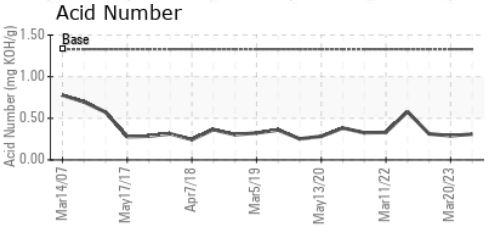
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0038231 **Received** : 03 Oct 2023
Lab Number : 05968338 **Diagnosed** : 05 Oct 2023
Unique Number : 10674889 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: 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)

GRAPHIC PACKAGING INTERNATIONAL
9978 FM 3129
QUEEN CITY, TX
US 75572
Contact: DAVID COTHREN
david.cothren@graphicpkg.com
T: (903)796-1690
F: (903)796-1969