



**PERFORMANCE  
UNDER  
PRESSURE**

**OIL ANALYSIS REPORT**

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area

**No. 1 Paper Machine**

Machine Id

**1 PM PULL STK TOP ROLL DRIVE Str.#045 611-46-03 MO2756-29**

Component

**Gear Unit**

Fluid

**ROYAL PURPLE SYNERGY 90/220 (8 GAL)**

**RECOMMENDATION**

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RP0039775</b>	RP0038179	RP0039735
Sample Date		Client Info		<b>16 May 2024</b>	22 Mar 2024	29 Dec 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	<b>0</b>	0	0
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>0</b>	0	0
Lead	ppm	ASTM D5185m	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

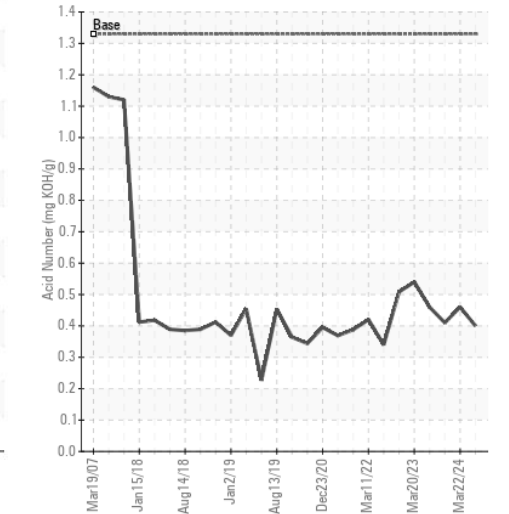
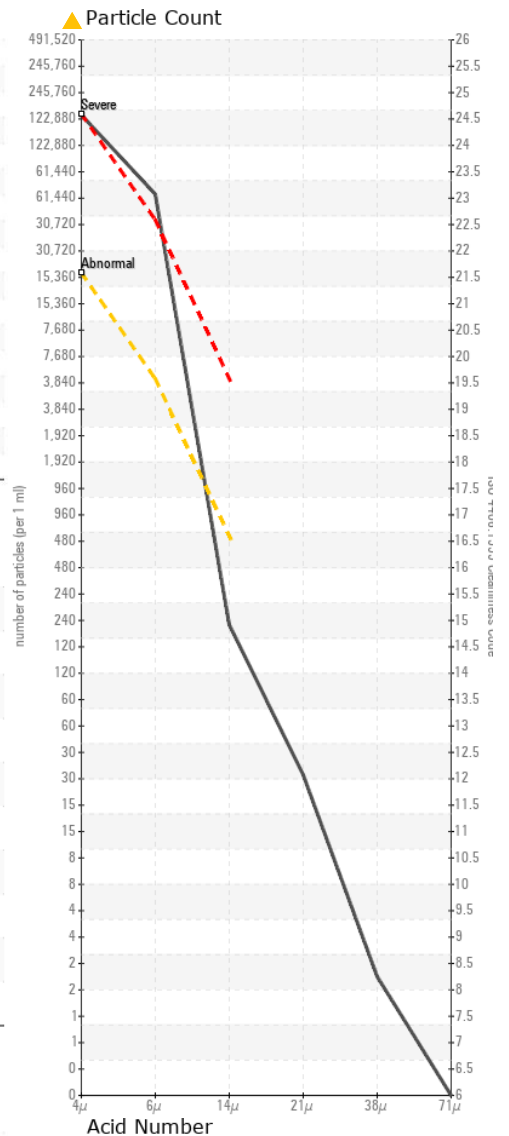
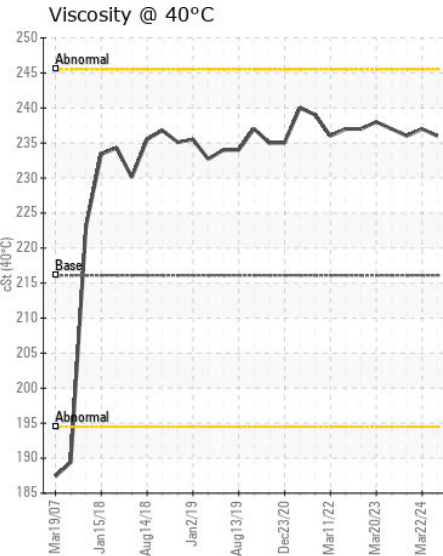
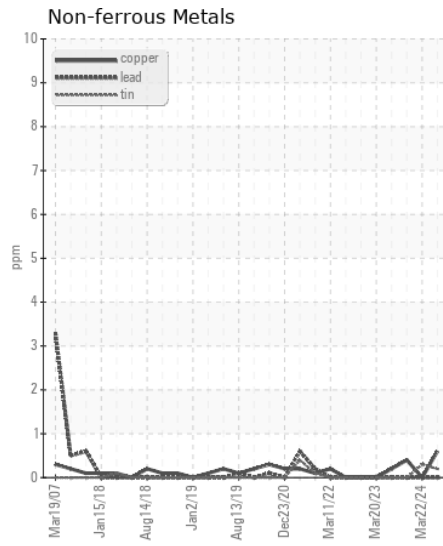
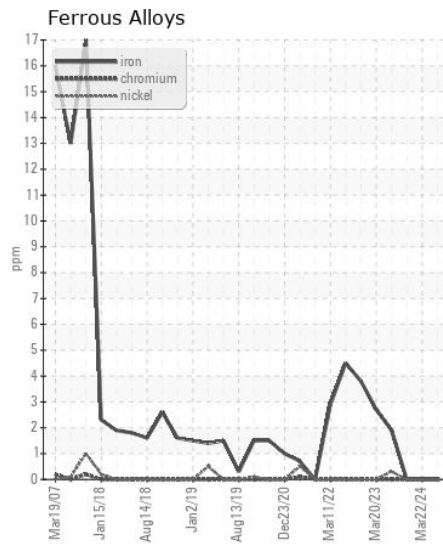
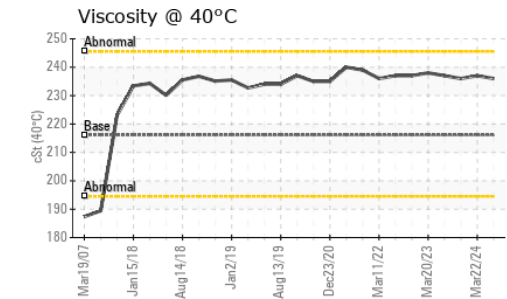
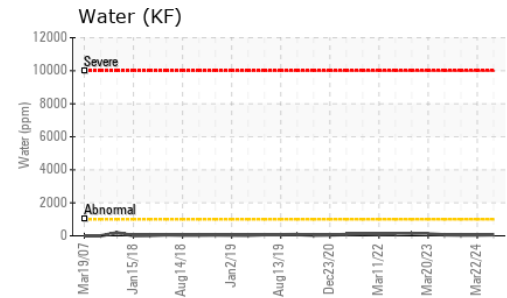
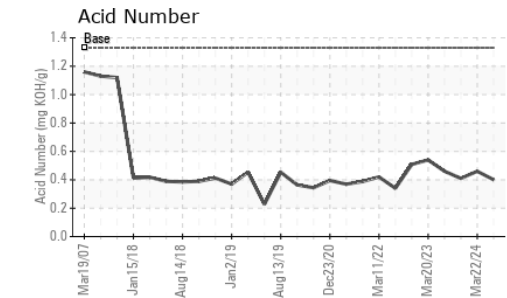
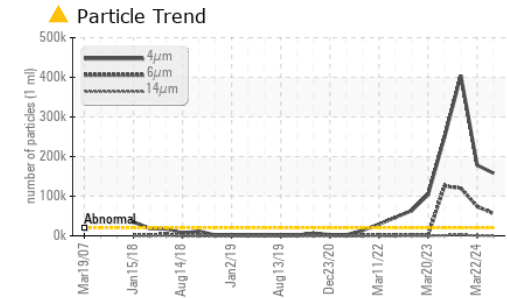
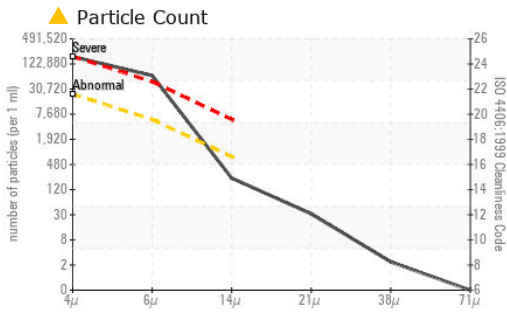
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>2</b>	<1	1
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	<1	0
Water	%	ASTM D6304	>0.1	<b>0.006</b>	0.004	0.004
ppm Water	ppm	ASTM D6304	>1000	<b>63</b>	47	45
Particles >4µm		ASTM D7647	>20000	<b>▲ 157923</b>	▲ 178134	▲ 404181
Particles >6µm		ASTM D7647	>5000	<b>▲ 55936</b>	▲ 74013	▲ 120071
Particles >14µm		ASTM D7647	>640	<b>200</b>	478	▲ 2401
Particles >21µm		ASTM D7647	>160	<b>28</b>	105	▲ 446
Particles >38µm		ASTM D7647	>40	<b>2</b>	4	15
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>▲ 24/23/15</b>	▲ 25/23/16	▲ 26/24/18
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

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

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Boron	ppm	ASTM D5185m		<b>0</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>0</b>	0	0
Calcium	ppm	ASTM D5185m		<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185m	370	<b>44</b>	44	35
Zinc	ppm	ASTM D5185m		<b>0</b>	0	0
Acid Number (AN)	mg KOH/g	ASTM D8045	1.33	<b>0.40</b>	0.46	0.41
Visc @ 40°C	cSt	ASTM D445	216.1	<b>236</b>	237	236



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : RP0039775

Lab Number : 06187647

Unique Number : 11044399

Test Package : IND 2 ( Additional Tests: PrtCount )

Received : 22 May 2024

Tested : 23 May 2024

Diagnosed : 24 May 2024 - Don Baldrige

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

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)