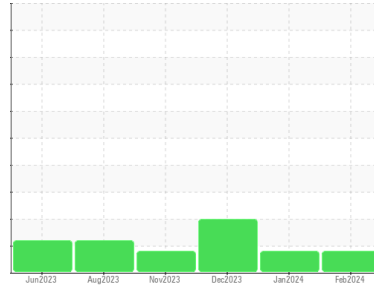




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
Paper Machine
 Machine Id
Wet End Lubrication System
 Component
Bearing Lube
 Fluid
MOBIL DTE PM 220 (2000 GAL)

DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

▲ Wear

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

Contamination

MPC (Membrane Patch Colorimetry) test indicates acceptable levels of varnish present. The amount and size of particulates present in the system are acceptable.

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		WC0776638	WC0776503	WC0776597
Sample Date	Client Info		26 Feb 2024	26 Jan 2024	27 Dec 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			MARGINAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	3	4	4
Chromium	ppm	ASTM D5185m >5	<1	0	0
Nickel	ppm	ASTM D5185m >20	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >4	0	<1	0
Lead	ppm	ASTM D5185m >30	0	0	0
Copper	ppm	ASTM D5185m >17	▲ 37	▲ 46	▲ 50
Tin	ppm	ASTM D5185m >10	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	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	2	2	1
Molybdenum	ppm	ASTM D5185m	0	0	<1
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	7	6	2
Calcium	ppm	ASTM D5185m	116	117	120
Phosphorus	ppm	ASTM D5185m	549	663	605
Zinc	ppm	ASTM D5185m	744	799	805
Sulfur	ppm	ASTM D5185m	10083	10868	9872

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	1	<1	1
Sodium	ppm	ASTM D5185m	21	23	19
Potassium	ppm	ASTM D5185m >20	0	2	<1
Water	%	ASTM D6304 >0.2	0.011	0.032	0.016
ppm Water	ppm	ASTM D6304 >2000	115	322	166

FLUID CLEANLINESS

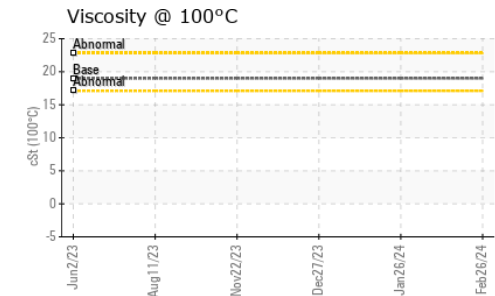
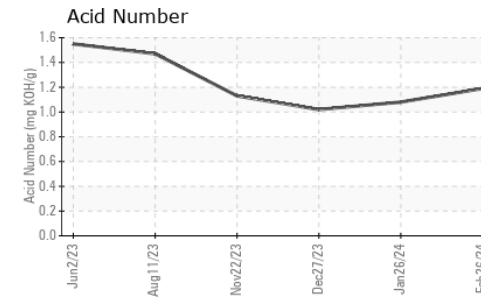
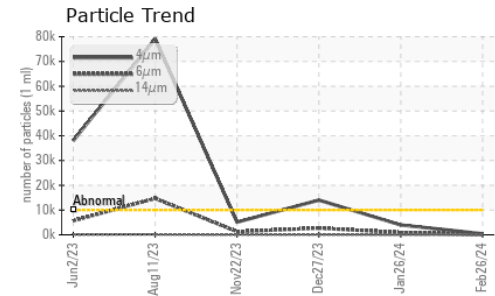
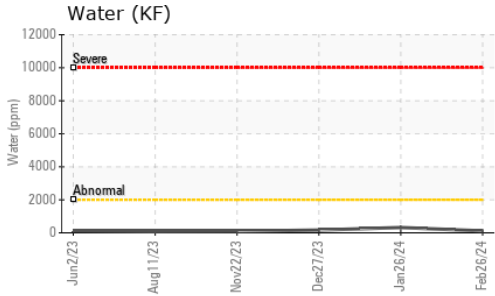
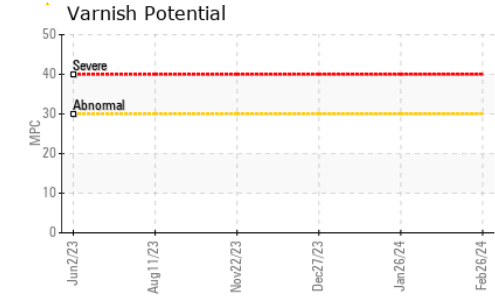
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	434	3972	● 14022
Particles >6µm	ASTM D7647	>2500	122	895	● 2701
Particles >14µm	ASTM D7647	>160	9	31	54
Particles >21µm	ASTM D7647	>40	2	8	5
Particles >38µm	ASTM D7647	>10	0	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/14	16/14/10	19/17/12	● 21/19/13

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.19	1.08	1.02
MPC Varnish Potential	Scale	ASTM D7843 >15	4	---	---



OIL ANALYSIS REPORT



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	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 220	210	211	208

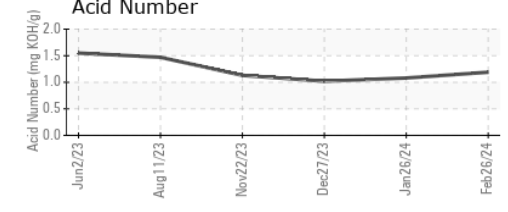
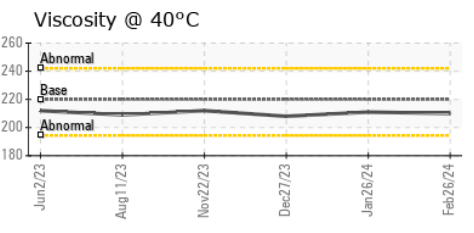
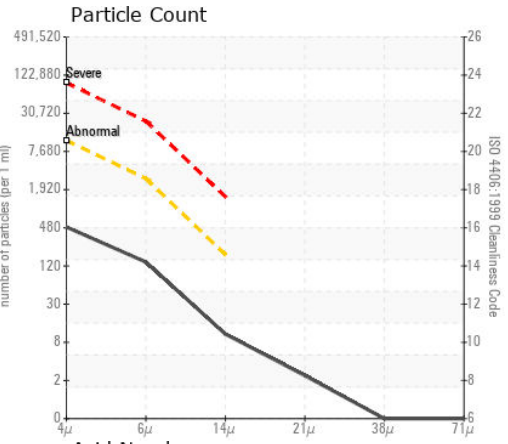
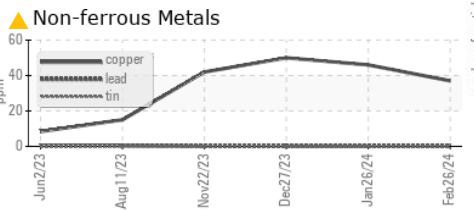
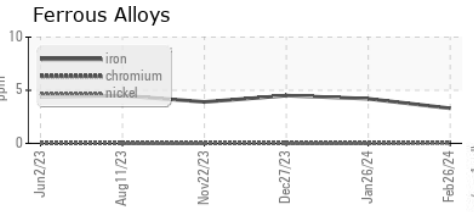
SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

Bottom

MPC

GRAPHS

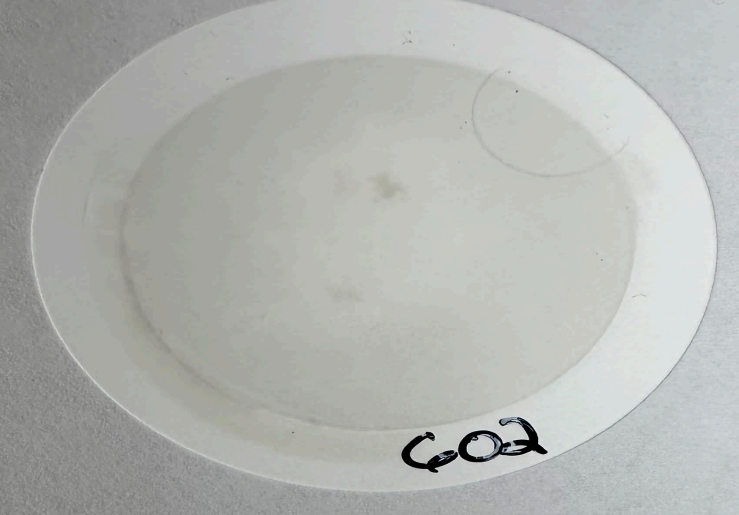


Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0776638 **Received** : 27 Feb 2024
Lab Number : 06101602 **Tested** : 05 Mar 2024
Unique Number : 10899832 **Diagnosed** : 05 Mar 2024 - Doug Bogart
Test Package : AOM 1 (Additional Tests: KF)

CASCADES CONTAINERBOARD PACKAGING - BEARPACK PROJECT
 10026 OLD RIDGE ROAD
 ASHLAND, VA
 US 23005
 Contact: MARC-ANDRE HUBERT
 marc-andre_hubert@cascades.com

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)

MPC (Varnish Test)



Sample Color & Clarity



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