



PROBLEM SUMMARY

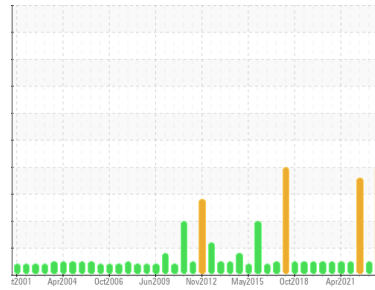
Sample Rating Trend

ISO



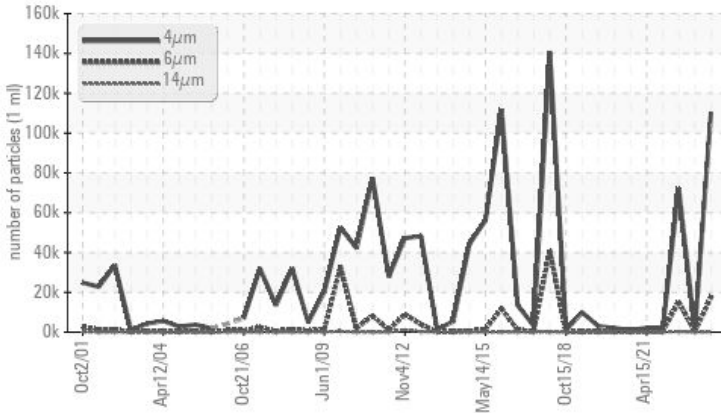
Area
Temboard/Finishing/Pulp Preparation
Machine Id
N/A N/A [808-397-005] TB BCTMP Bale Destacker

Component
Hydraulic System
Fluid
ESSO NUTO H ISO 46 (200 LTR)

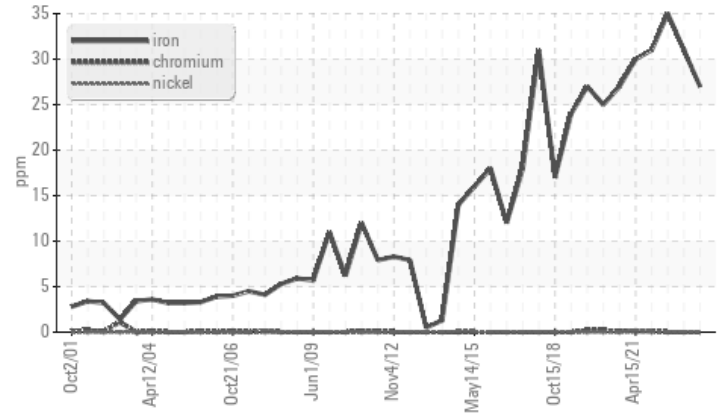


COMPONENT CONDITION SUMMARY

Particle Trend




Ferrous Alloys



RECOMMENDATION

Check seals and/or filters for points of contaminant entry. We advise that you check for visible metal particles in the oil. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	NORMAL	SEVERE
Particles >6µm	ASTM D7647	>640	17370	147	15169
Oil Cleanliness	ISO 4406 (c)	>--/16/14	24/21/14	16/14/11	23/21/15
White Metal	scalar	Visual*	VLITE	NONE	NONE
PrtnFilter				no image	no image

Customer Id: TEMTEMMD
Sample No.: WC0861528
Lab Number: 02608199
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
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Kevin.Marson@wearcheck.com

To change component or sample information:
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gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check For Visual Metal	---	---	?	We advise that you check for visible metal particles in the oil.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

15 Apr 2023 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



25 Oct 2022 Diag: Kevin Marson

ISO



Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. All component wear rates are normal. Particles >6µm and oil cleanliness are severely high. Particles >14µm are notably high. Particles >21µm are notably high. The water content is negligible. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report



15 Oct 2021 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report





OIL ANALYSIS REPORT

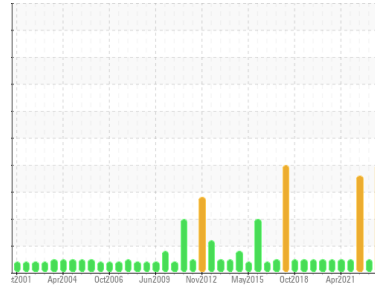
Sample Rating Trend

ISO



Area
Temboard/Finishing/Pulp Preparation
Machine Id
N/A N/A [808-397-005] TB BCTMP Bale Destacker

Component
Hydraulic System
Fluid
ESSO NUTO H ISO 46 (200 LTR)



DIAGNOSIS

Recommendation

Check seals and/or filters for points of contaminant entry. We advise that you check for visible metal particles in the oil. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

Wear

Light concentration of visible metal present. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0861528	WC0803278	WC0745499
Sample Date	Client Info		15 Oct 2023	15 Apr 2023	25 Oct 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			SEVERE	NORMAL	SEVERE

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		3	0	6
Iron	ppm	ASTM D5185(m) >20	27	31	35
Chromium	ppm	ASTM D5185(m) >20	0	0	0
Nickel	ppm	ASTM D5185(m) >20	0	0	0
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	0	0	0
Aluminum	ppm	ASTM D5185(m) >20	<1	0	<1
Lead	ppm	ASTM D5185(m) >20	1	0	<1
Copper	ppm	ASTM D5185(m) >20	2	1	1
Tin	ppm	ASTM D5185(m) >20	0	0	0
Antimony	ppm	ASTM D5185(m)	0	<1	0
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	<1	<1

ADDITIVES

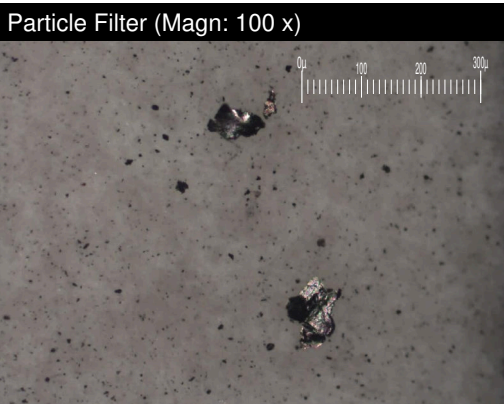
	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	0	0	<1
Barium	ppm	ASTM D5185(m) 0	0	0	0
Molybdenum	ppm	ASTM D5185(m) 0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	<1
Magnesium	ppm	ASTM D5185(m) 5	<1	<1	1
Calcium	ppm	ASTM D5185(m) 50	46	40	40
Phosphorus	ppm	ASTM D5185(m) 330	338	351	350
Zinc	ppm	ASTM D5185(m) 410	410	394	387
Sulfur	ppm	ASTM D5185(m) 2700	5062	4310	4185
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	3	4	4
Sodium	ppm	ASTM D5185(m)	<1	1	1
Potassium	ppm	ASTM D5185(m) >20	4	0	0
Water	%	ASTM D6304* >0.05	0.002	0.00	0.001
ppm Water	ppm	ASTM D6304* >500	20	0.00	10.9

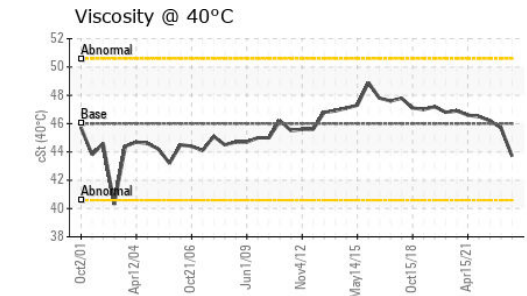
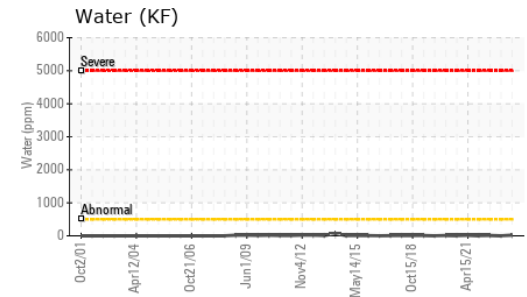
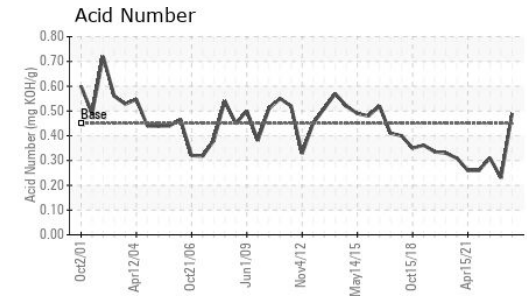
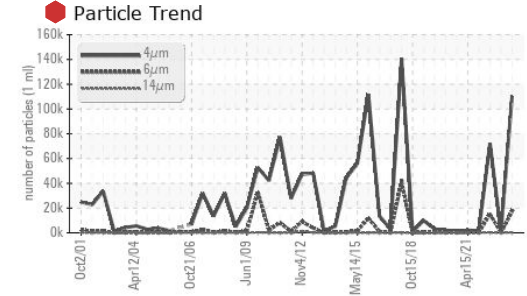
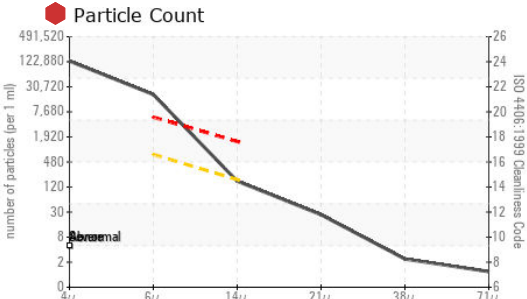
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		110238	609	72309
Particles >6µm	ASTM D7647	>640	17370	147	15169
Particles >14µm	ASTM D7647	>160	147	13	282
Particles >21µm	ASTM D7647	>40	23	4	58
Particles >38µm	ASTM D7647	>10	2	0	2
Particles >71µm	ASTM D7647	>3	1	0	0
Oil Cleanliness	ISO 4406 (c)	>--/16/14	24/21/14	16/14/11	23/21/15





OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.45	0.49	0.23	0.31

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	▲ VLITE	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	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*	>0.05	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46	43.7	45.7	46.2

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



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0861528 **Received** : 11 Jan 2024
Lab Number : **02608199** **Diagnosed** : 15 Jan 2024
Unique Number : 5709285 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, KF, PQ, PrtFilter, TAN Man)

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.