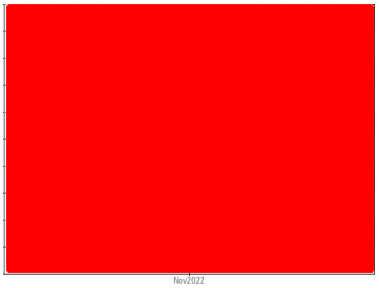
PROBLEM SUMMARY

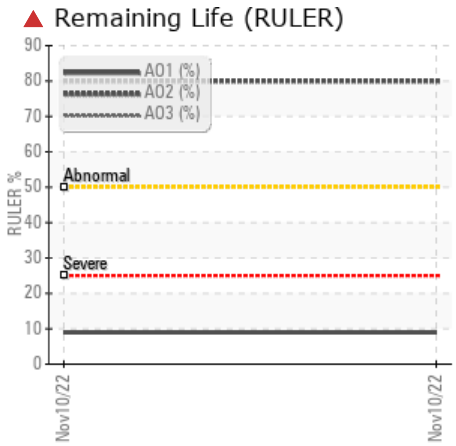
Sample Rating Trend

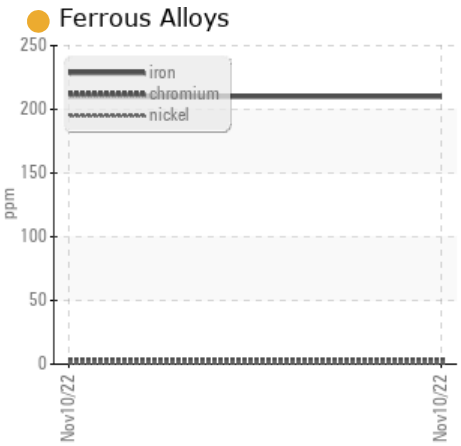


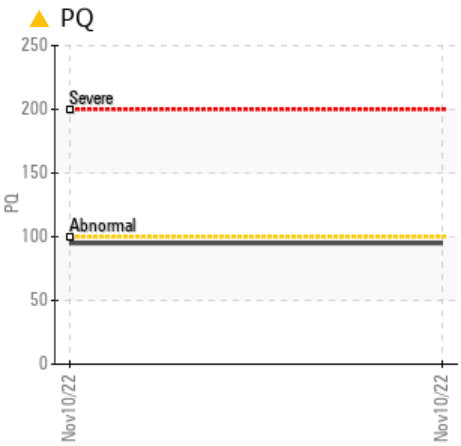
DEGRADATION

Area
MILL
Machine Id
450.1090W Press Top Outfeed Drum Bearing WEST
Component
Grease
Fluid
KLUBER KLUBERLUB PHB 71-461 (--- GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We recommend that you re-grease the component if this has not already been done. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time. Analytical Ferrography: Red oxides (rust) are present in abnormal amounts. Suggest purging the grease sump to clear the contamination from the system. Ferrous rubbing and sliding wear are elevated from abrasive contamination due to the contamination.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	---	---
PQ		ASTM D8184		▲ **95**	---	---
Ferrous Rubbing	Scale 0-10	*ASTM D7684		▲ **3**		
Ferrous Sliding	Scale 0-10	*ASTM D7684		▲ **3**		
Ferrous Red Oxides	Scale 0-10	*ASTM D7684		▲ **4**		
Anti-Oxidant 1	%	ASTM D6971	<25%	▲ **9**	---	---

Customer Id: ARABEN
Sample No.: WC0785706
Lab Number: 05798169
Test Package: GRS 3

To manage this report scan the QR code

To discuss the diagnosis or test data:
Aaron Black +1
aaron.black@wearcheck.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

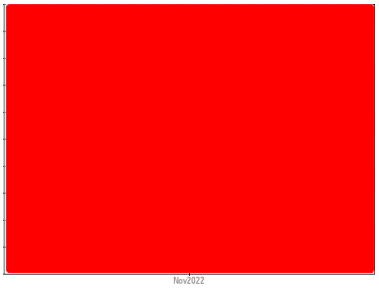
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	MISSED	Feb 14 2024	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

GREASE ANALYSIS

Sample Rating Trend



DEGRADATION

Area
MILL
Machine Id
450.1090W Press Top Outfeed Drum Bearing WEST
Component
Grease
Fluid
KLUBER KLUBERLUB PHB 71-461 (--- GAL)

DIAGNOSIS

Recommendation

We recommend that you re-grease the component if this has not already been done. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time. Analytical Ferrography: Red oxides (rust) are present in abnormal amounts. Suggest purging the grease sump to clear the contamination from the system. Ferrous rubbing and sliding wear are elevated from abrasive contamination due to the contamination.

Wear

Iron ppm levels are noted. PQ levels are marginal.

Grease Condition

Linear Sweep Voltammetry (RULER– ASTM D6971) testing indicates one of the anti-oxidants present in the oil will soon be depleted. The oil is no longer serviceable due to the presence of contaminants.

Contaminants

There is no indication of any contamination in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0785706**	---	---
Sample Date		Client Info		**10 Nov 2022**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Grease Age	hrs	Client Info		**0**	---	---
Grease Serviced		Client Info		**Not Changd**	---	---
Sample Status				**SEVERE**	---	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		▲ **95**	---	---
Iron	ppm	ASTM D5185m	>20	● **210**	---	---
Chromium	ppm	ASTM D5185m	>20	**3**	---	---
Nickel	ppm	ASTM D5185m	>20	**1**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---
Titanium	ppm	ASTM D5185m		**0**	---	---
Vanadium	ppm	ASTM D5185m		**0**	---	---
Lead	ppm	ASTM D5185m	>20	**4**	---	---
Copper	ppm	ASTM D5185m	>20	**40**	---	---
Tin	ppm	ASTM D5185m	>20	**0**	---	---
Silver	ppm	ASTM D5185m		**<1**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	650	**78**	---	---
Magnesium	ppm	ASTM D5185m		**<1**	---	---
Manganese	ppm	ASTM D5185m		**1**	---	---
Molybdenum	ppm	ASTM D5185m		**5**	---	---
Phosphorus	ppm	ASTM D5185m	860	**643**	---	---
Zinc	ppm	ASTM D5185m	1030	**711**	---	---

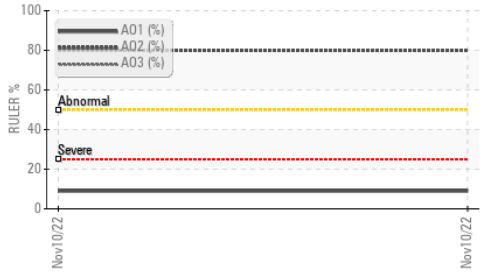
THICKENER/SOAP		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m		**2**	---	---
Barium	ppm	ASTM D5185m		**<1**	---	---
Calcium	ppm	ASTM D5185m	30	**48**	---	---
Sodium	ppm	ASTM D5185m		**12**	---	---
Lithium	ppm	ASTM D5185m		**2**	---	---
Sulfur	ppm	ASTM D5185m	11650	**2423**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**5**	---	---
Potassium	ppm	ASTM D5185m		**2**	---	---
Water	%	ASTM D6304	>2	**0.012**	---	---
ppm Water	ppm	ASTM D6304		**121.6**	---	---

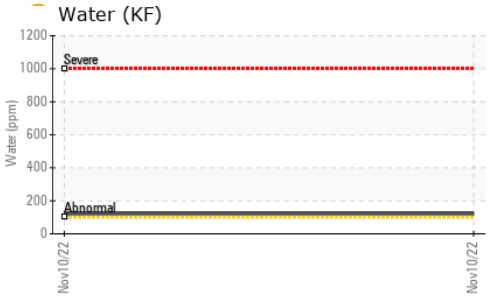
GREASE CONDITION		method	limit/base	current	history1	history2
Grease Color		*Visual		**Blue**	---	---
Texture		*In-house		**Long fiber**	---	---
NLGI Consistency	NLGI Scale	*SKF Method		**1-2**	---	---
Anti-Oxidant 1	%	ASTM D6971	<25%	▲ **9**	---	---
Anti-Oxidant 2	%	ASTM D6971	<25%	**80**	---	---

GREASE ANALYSIS

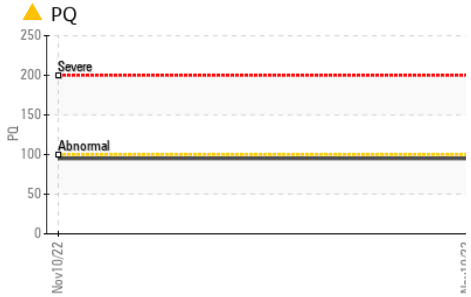
Remaining Life (RULER)



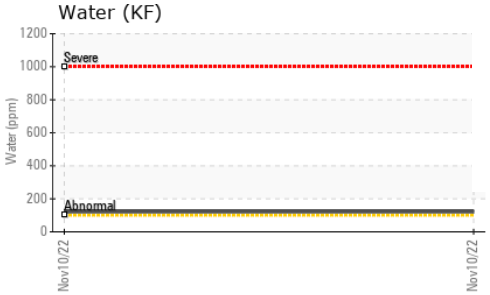
Water (KF)

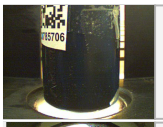
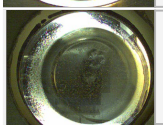


PQ



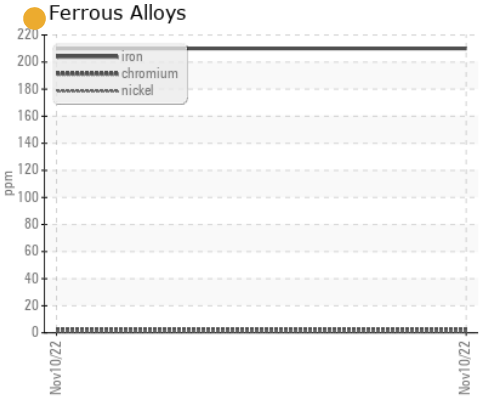
Water (KF)



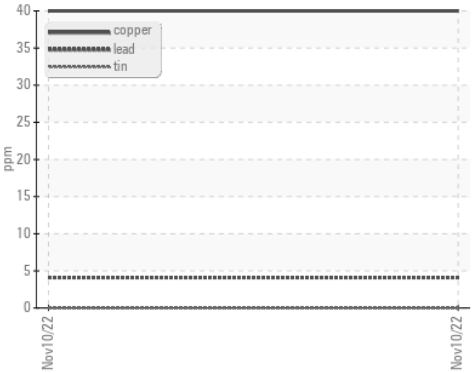
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

GRAPHS

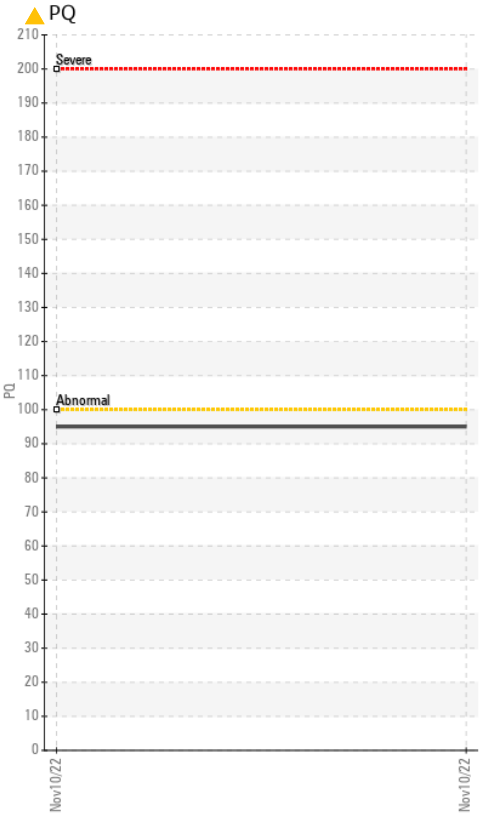
Ferrous Alloys



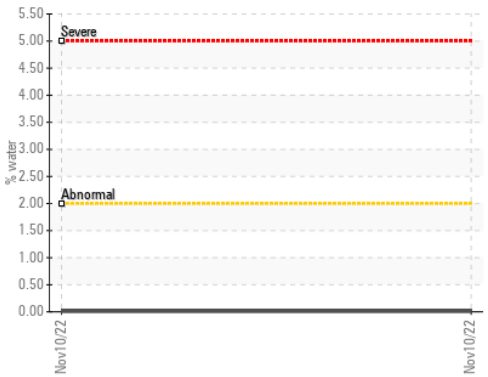
Non-ferrous Metals



PQ



Water



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0785706
Lab Number : 05798169
Unique Number : 10387853
Test Package : GRS 3 (Additional Tests: SCREEN)

Received : 21 Mar 2023
Tested : 12 Apr 2023
Diagnosed : 12 Apr 2023 - Aaron Black

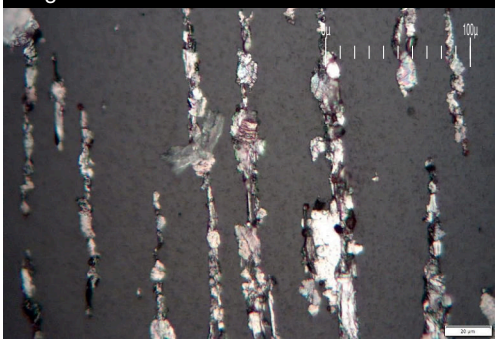
To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

ARAUCO-Carolina Particleboard-BENNETTSVILLE
582 WILLIAMETTE ROAD HWY 912
BENNETTSVILLE, SC
US 29512
Contact: JEFF SCOTT
jeff.scott@arauco.com
T: (843)454-9635
F:

FERROGRAPHY REPORT

Area
MILL
Machine Id
450.1090W Press Top Outfeed Drum Bearing WEST
Component
Grease
Fluid
KLUBER KLUBERLUB PHB 71-461 (--- GAL)

Magn: 500x Illum: RW



Magn: 500x Illum: RW

Magn: 500x Illum: RW

Magn: 100x Illum: RW

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	*ASTM D7684		3		
Ferrous Sliding	Scale 0-10	*ASTM D7684		3		
Ferrous Cutting	Scale 0-10	*ASTM D7684				
Ferrous Rolling	Scale 0-10	*ASTM D7684				
Ferrous Break-in	Scale 0-10	*ASTM D7684				
Ferrous Spheres	Scale 0-10	*ASTM D7684				
Ferrous Black Oxides	Scale 0-10	*ASTM D7684				
Ferrous Red Oxides	Scale 0-10	*ASTM D7684		4		
Ferrous Corrosive	Scale 0-10	*ASTM D7684				
Ferrous Other	Scale 0-10	*ASTM D7684				
Nonferrous Rubbing	Scale 0-10	*ASTM D7684				
Nonferrous Sliding	Scale 0-10	*ASTM D7684				
Nonferrous Cutting	Scale 0-10	*ASTM D7684				
Nonferrous Rolling	Scale 0-10	*ASTM D7684				
Nonferrous Other	Scale 0-10	*ASTM D7684				
Carbonaceous Material	Scale 0-10	*ASTM D7684				
Lubricant Degradation	Scale 0-10	*ASTM D7684				
Sand/Dirt	Scale 0-10	ASTM D7684				
Fibres	Scale 0-10	*ASTM D7684				
Spheres	Scale 0-10	*ASTM D7684				
Other	Scale 0-10	*ASTM D7684		2		

WEAR

Iron ppm levels are noted. PQ levels are marginal.

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