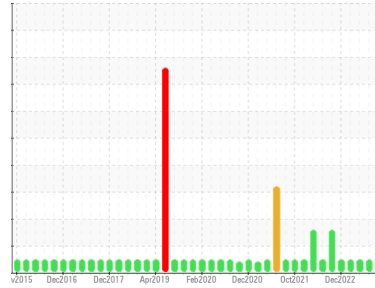




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
Temboard/Service/Stock Preparation
 Machine Id
N/A N/A [804-236-020] TB Softwood Refiner #2
 Component
Hydraulic System
 Fluid
SHELL TELLUS 68 (37 LTR)

DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0861531	WC0841331	WC0822102
Sample Date	Client Info		19 Oct 2023	19 Aug 2023	19 Jun 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			ATTENTION	NORMAL	NORMAL

WEAR METALS

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

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<1	0
Barium	ppm	ASTM D5185(m)	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0
Magnesium	ppm	ASTM D5185(m) 11	0	<1	<1
Calcium	ppm	ASTM D5185(m) 39	52	49	49
Phosphorus	ppm	ASTM D5185(m) 260	339	341	361
Zinc	ppm	ASTM D5185(m) 279	423	437	426
Sulfur	ppm	ASTM D5185(m) 2109	2103	5129	4949
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

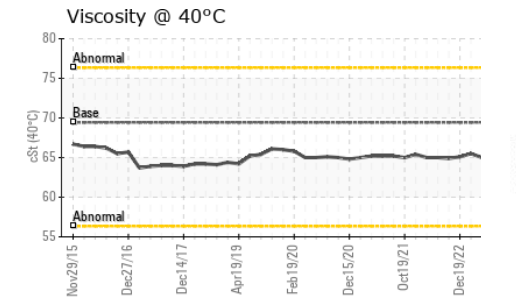
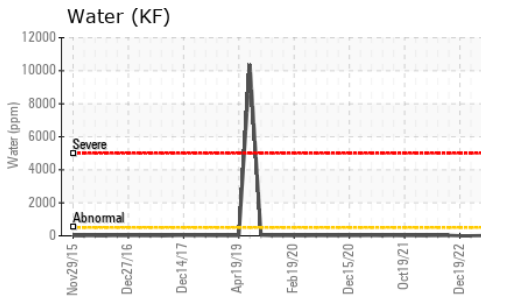
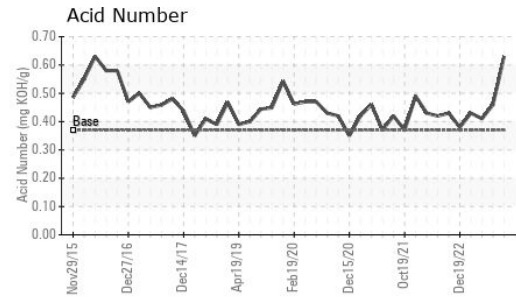
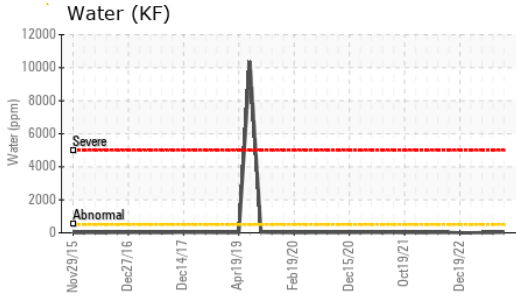
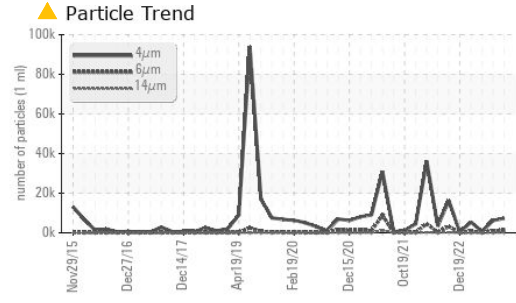
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	2	<1	<1
Sodium	ppm	ASTM D5185(m)	0	0	0
Potassium	ppm	ASTM D5185(m) >20	4	0	<1
Water	%	ASTM D6304* >0.05	0.003	0.002	0.001
ppm Water	ppm	ASTM D6304* >500	31	16.9	10.4

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		7341	6209	746
Particles >6µm	ASTM D7647	>1300	▲ 1364	981	166
Particles >14µm	ASTM D7647	>160	93	42	21
Particles >21µm	ASTM D7647	>40	23	10	5
Particles >38µm	ASTM D7647	>10	2	1	1
Particles >71µm	ASTM D7647	>3	1	0	0
Oil Cleanliness	ISO 4406 (c)	>--/17/14	▲ 20/18/14	20/17/13	17/15/12

OIL ANALYSIS REPORT



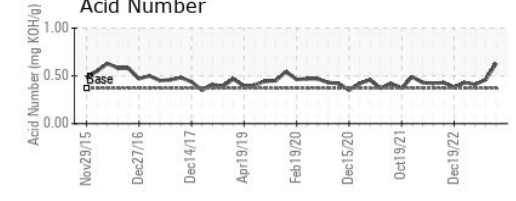
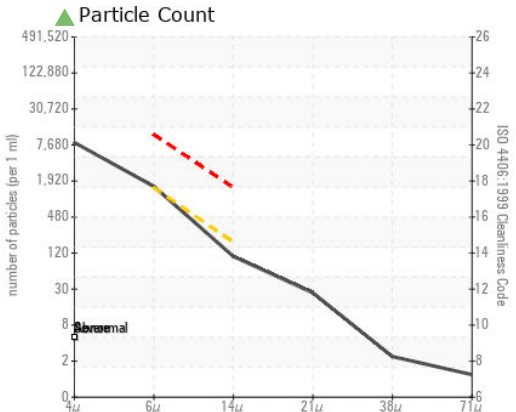
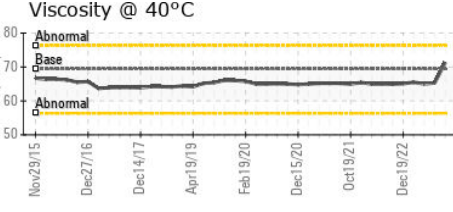
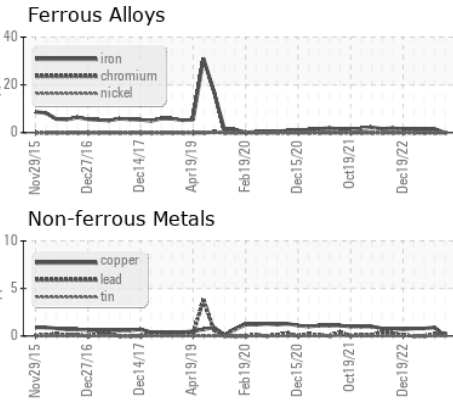
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.37	0.63	0.46	0.41

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	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)	69.43	71.3	65.3	65.0

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0861531 **Received** : 11 Jan 2024
Lab Number : **02608201** **Diagnosed** : 15 Jan 2024
Unique Number : 5709287 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: KF, TAN Man)

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.

Rayonier Advanced Materials
 P.O.Box 6000, 33 Kipawa Road
 Temiscaming, QC
 CA J0Z 3R0
 Contact: Santosh Raikar
 santosh.raikar@rayonieram.com
 T: (819)627-4931
 F: (819)627-1507