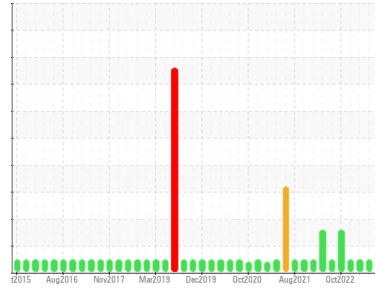




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



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**  
 Resample at the next service interval to monitor.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

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

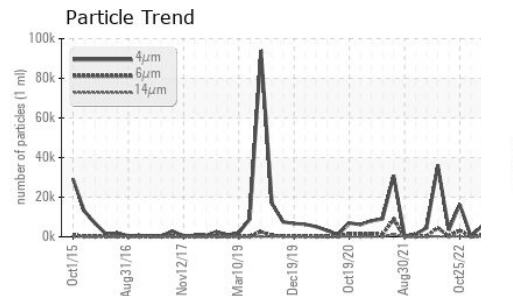
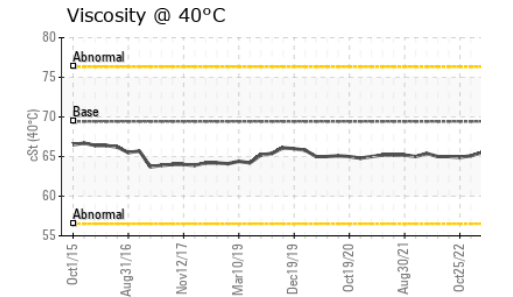
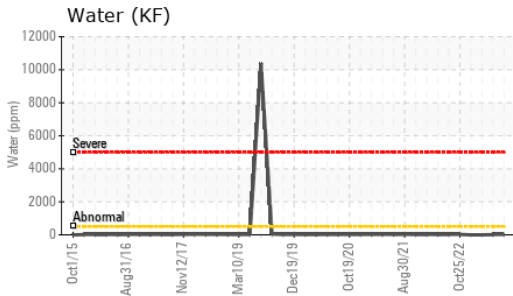
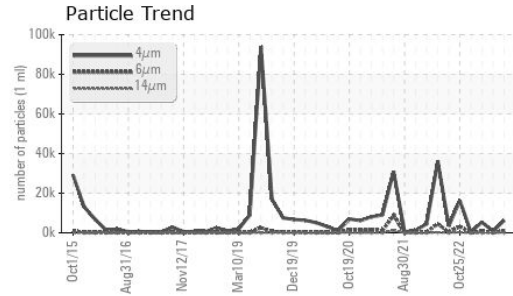
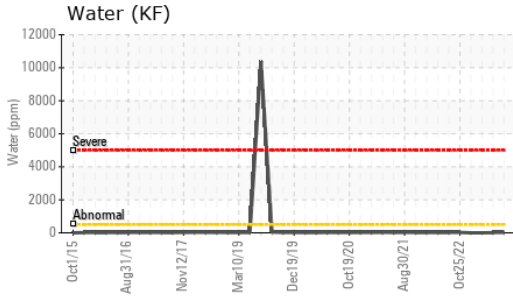
SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0841331</b>	WC0822102	WC0803281
Sample Date	Client Info			<b>19 Aug 2023</b>	19 Jun 2023	19 Apr 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

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

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	11	<b>&lt;1</b>	<1	0
Calcium	ppm	ASTM D5185(m)	39	<b>49</b>	49	50
Phosphorus	ppm	ASTM D5185(m)	260	<b>341</b>	361	371
Zinc	ppm	ASTM D5185(m)	279	<b>437</b>	426	423
Sulfur	ppm	ASTM D5185(m)	2109	<b>5129</b>	4949	5481
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Sodium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
Water	%	ASTM D6304*	>0.05	<b>0.002</b>	0.001	0.00
ppm Water	ppm	ASTM D6304*	>500	<b>16.9</b>	10.4	0.00

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>6209</b>	746	5414
Particles >6µm		ASTM D7647	>1300	<b>981</b>	166	778
Particles >14µm		ASTM D7647	>160	<b>42</b>	21	20
Particles >21µm		ASTM D7647	>40	<b>10</b>	5	7
Particles >38µm		ASTM D7647	>10	<b>1</b>	1	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>--/17/14	<b>20/17/13</b>	17/15/12	20/17/11

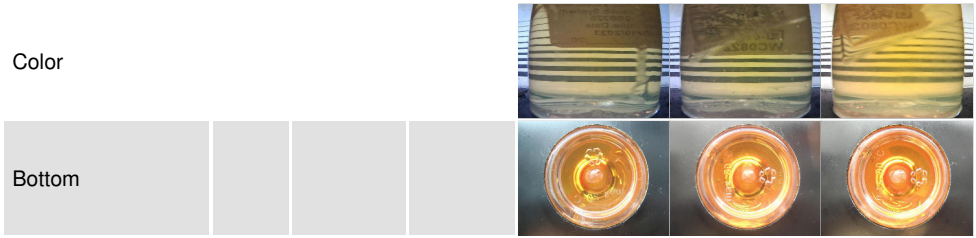


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.37	<b>0.46</b>	0.41	0.43

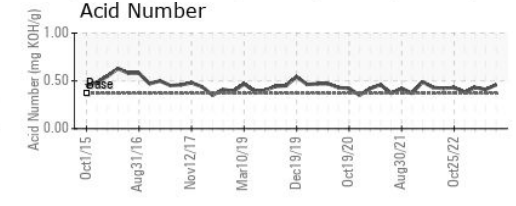
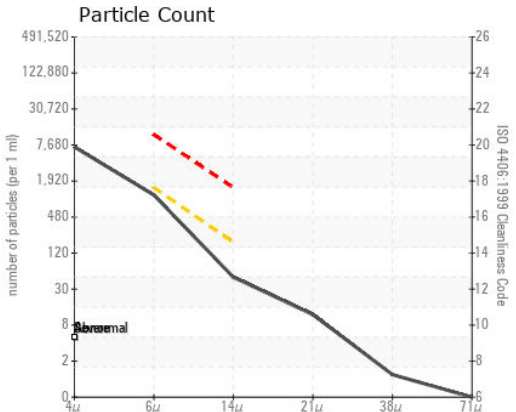
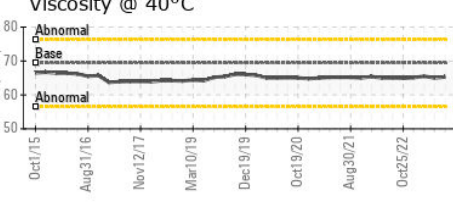
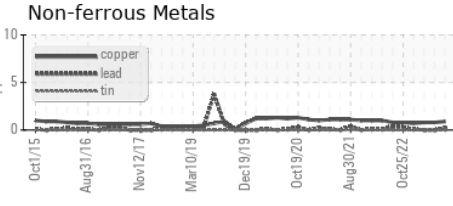
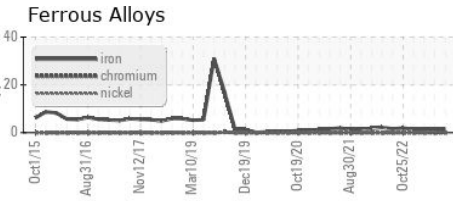
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	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*	>0.05	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	69.43	<b>65.3</b>	65.0	65.5

SAMPLE IMAGES		method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0841331  
**Lab Number** : 02588277  
**Unique Number** : 5657343  
**Test Package** : IND 2 ( Additional Tests: KF, TAN Man )

**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

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.