

PROBLEM SUMMARY

Sample Rating Trend

WEAR



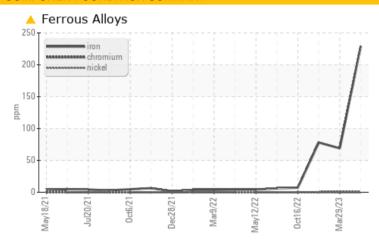
Pulp Mill A-Line

A-Line Unbleached ThickStockPmp Drive End (S/N 0241-02-05-010-030-010-030)

Pump Drive

ROYAL PURPLE SYNERGY 90/220 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS										
Sample Status				ABNORMAL	ABNORMAL	ATTENTION				
Iron	ppm	ASTM D5185m	>150	<u>^</u> 229	69	<u>▲</u> 78				

Customer Id: INTTEX Sample No.: RP0031723 Lab Number: 05902863 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

29 Mar 2023 Diag: Don Baldridge

WATER



We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a light concentration of water present in the oil. Free water present. The AN level is acceptable for this fluid.



27 Feb 2023 Diag: Don Baldridge

WATER



No corrective action is recommended at this time. Resample at the next service interval to monitor. Gear wear is indicated. There is a light concentration of water present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



16 Oct 2022 Diag: Don Baldridge

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





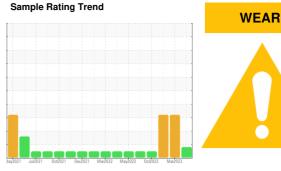
OIL ANALYSIS REPORT

Pulp Mill A-Line

A-Line Unbleached ThickStockPmp Drive End (S/N 0241-02-05-010-030-010-030)

Pump Drive

ROYAL PURPLE SYNERGY 90/220 (--- GAL)



DIAGNOSIS

Recommendation

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

Gear wear is indicated. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

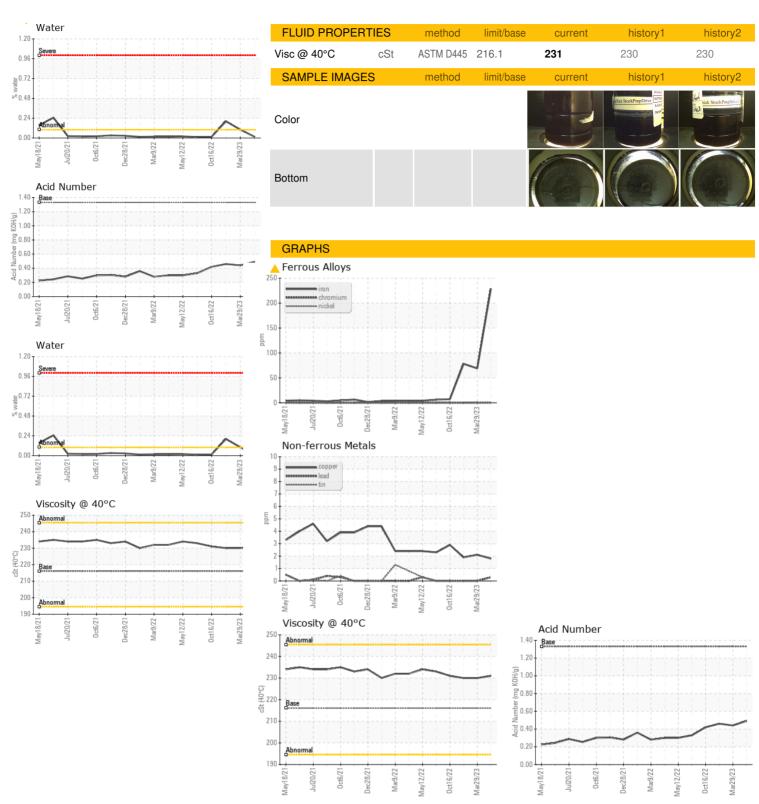
Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		RP0031723	RP0031080	RP0031037
Sample Date		Client Info		18 Jul 2023	29 Mar 2023	27 Feb 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				ABNORMAL	ABNORMAL	ATTENTION
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	<u>229</u>	69	△ 78
Chromium	ppm	ASTM D5185m		<1	<1	0
Nickel	ppm	ASTM D5185m	>10	0	<1	<1
Titanium	ppm	ASTM D5185m	>10	0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	8	19	<u>^</u> 21
Lead	ppm	ASTM D5185m	>100	<1	0	0
Copper		ASTM D5185m		2	2	2
Copper Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm		→10	0	0	0
vanadium Cadmium	ppm	ASTM D5185m ASTM D5185m		0	0	0
	ppm			-		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		3	2	2
Magnesium	ppm	ASTM D5185m		29	32	39
Calcium	ppm	ASTM D5185m		0	10	14
Phosphorus	ppm	ASTM D5185m	370	136	160	192
Zinc	ppm	ASTM D5185m		0	13	14
CONTAMINANTS		method	limit/base	current	history1	history2
	ppm		limit/base >50	current 4	history1 5	history2 6
CONTAMINANTS Silicon Sodium	ppm ppm					
Silicon		ASTM D5185m		4	5	6
Silicon Sodium	ppm	ASTM D5185m ASTM D5185m	>50	4 1	5	6 2
Silicon Sodium Potassium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>50 >20	4 1 2	5 1 <1	6 2 <1
Silicon Sodium Potassium Water	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304	>50 >20 >0.1	4 1 2 0.014	5 1 <1 △ 0.101	6 2 <1 • 0.202 • 2020
Silicon Sodium Potassium Water ppm Water	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304	>50 >20 >0.1 >1000	4 1 2 0.014 147.2	5 1 <1 \$\triangle 0.101 \$\triangle 1010	6 2 <1 • 0.202 • 2020
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method	>50 >20 >0.1 >1000 limit/base	4 1 2 0.014 147.2 current	5 1 <1 ▲ 0.101 ▲ 1010 history1	6 2 <1 ▲ 0.202 ▲ 2020 history2 0.46
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA Acid Number (AN)	ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method ASTM D8045	>50 >20 >0.1 >1000 limit/base 1.33	4 1 2 0.014 147.2 current 0.49	5 1 <1 <1 0.101 ▲ 1010 history1 0.44	6 2 <1 ▲ 0.202 ▲ 2020 history2 0.46
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal	ppm ppm % ppm TION mg KOH/g	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method ASTM D8045 method	>50 >20 >0.1 >1000 limit/base 1.33 limit/base	4 1 2 0.014 147.2 current 0.49	5 1 <1 <1 0.101 ▲ 1010 history1 0.44 history1	6 2 <1 ▲ 0.202 ▲ 2020 history2 0.46 history2
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA' Acid Number (AN) VISUAL White Metal Yellow Metal	ppm ppm % ppm TION mg KOH/g	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 method ASTM D8045 method *Visual	>50 >20 >0.1 >1000 limit/base 1.33 limit/base NONE	4 1 2 0.014 147.2 current 0.49 current NONE	5 1 <1 ▲ 0.101 ▲ 1010 history1 0.44 history1 NONE	6 2 <1 ▲ 0.202 ▲ 2020 history2 0.46 history2 NONE
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA Acid Number (AN) VISUAL	ppm ppm % ppm TION mg KOH/g scalar scalar	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 Method ASTM D8045 Method *Visual *Visual	>50 >20 >0.1 >1000 limit/base 1.33 limit/base NONE NONE	4 1 2 0.014 147.2 current 0.49 current NONE	5 1 <1 ▲ 0.101 ▲ 1010 history1 0.44 history1 NONE NONE	6 2 <1 ▲ 0.202 ▲ 2020 history2 0.46 history2 NONE NONE
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm % ppm TION mg KOH/g scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method ASTM D8045 method *Visual *Visual	>50 >20 >0.1 >1000 limit/base 1.33 limit/base NONE NONE NONE	4 1 2 0.014 147.2 current 0.49 current NONE NONE	5 1 <1 ▲ 0.101 ▲ 1010 history1 0.44 history1 NONE NONE NONE	6 2 <1 △ 0.202 △ 2020 history2 0.46 history2 NONE NONE NONE
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal Yellow Metal Precipitate	ppm ppm % ppm TION mg KOH/g scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method ASTM D8045 method *Visual *Visual *Visual *Visual	>50 >20 >0.1 >1000 limit/base 1.33 limit/base NONE NONE NONE NONE	4 1 2 0.014 147.2 current 0.49 current NONE NONE NONE NONE NONE NONE NONE	5 1 <1 0.101 ▲ 0.101 ▲ 1010 history1 0.44 history1 NONE NONE NONE NONE	6 2 <1 △ 0.202 △ 2020 history2 0.46 history2 NONE NONE NONE NONE
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm % ppm TION mg KOH/g scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 Method ASTM D8045 Method *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>50 >20 >0.1 >1000 limit/base 1.33 limit/base NONE NONE NONE NONE NONE NONE NONE NONE	4 1 2 0.014 147.2 current 0.49 current NONE NONE NONE NONE NONE NONE NONE NON	5 1 <1 <1 0.101 1010 history1 0.44 history1 NONE NONE NONE NONE NONE NONE NONE NON	6 2 <1 0.202 2020 history2 0.46 history2 NONE NONE NONE NONE NONE NONE NONE NON
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm % ppm % ppm TION mg KOH/g scalar sca	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 Method ASTM D8045 Method *Visual	>50 >20 >0.1 >1000 limit/base 1.33 limit/base NONE NONE	4 1 2 0.014 147.2 current 0.49 current NONE NONE NONE NONE NONE NONE NONE NON	5 1 <1 0.101 1010 history1 0.44 history1 NONE NONE NONE NONE NONE NONE NONE NON	6 2 <1
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm % ppm TION mg KOH/g scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 Method ASTM D8045 Method *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>50 >20 >0.1 >1000 limit/base 1.33 limit/base NONE NONE NONE NONE NONE NONE NONE NONE	4 1 2 0.014 147.2 current 0.49 current NONE NONE NONE NONE NONE NONE NONE NON	5 1 <1 <1 0.101 1010 history1 0.44 history1 NONE NONE NONE NONE NONE NONE NONE NON	6 2 <1



OIL ANALYSIS REPORT







Laboratory Sample No. Lab Number **Unique Number**

: RP0031723 : 05902863 : 10564219

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received Diagnosed

: 19 Jul 2023 : 21 Jul 2023 Diagnostician : Don Baldridge **GRAPHIC PACKAGING INTERNATIONAL**

9978 FM 3129 QUEEN CITY, TX US 75572

F: (903)796-1969

Contact: DAVID COTHREN david.cothren@graphicpkg.com

T: (903)796-1690

Test Package : IND 2 Certificate L2367 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)