

PROBLEM SUMMARY

Sample Rating Trend

WEAR



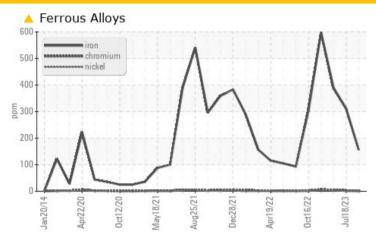
Pulp Mill A-Line

5A ThickStockPumpInput West End (S/N Warren 125 HD)

Drive End Pump

ROYAL PURPLE SYNERGY 90/220 (5 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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

PROBLEMATIC T	EST RE	SULTS				
Sample Status				ABNORMAL	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>90	156	311	389

Customer Id: INTTEX Sample No.: RP0003451 Lab Number: 05968373 Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data: Doug Bogart +1 (800)237-1369 x4016 dougb@wearcheckusa.com

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

18 Jul 2023 Diag: Don Baldridge

WEAR



We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.



27 Mar 2023 Diag: Don Baldridge

WEAR



We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. Free water present. The AN level is acceptable for this fluid.



27 Feb 2023 Diag: Doug Bogart

WEAR



We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. The iron level is severe. Appearance is milky. There is a moderate concentration of water present in the oil. The oil viscosity is higher than normal. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid.





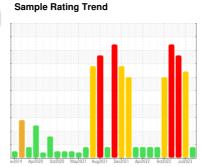
OIL ANALYSIS REPORT

Pulp Mill A-Line

5A ThickStockPumpInput West End (S/N Warren 125 HD)

Drive End Pump

ROYAL PURPLE SYNERGY 90/220 (5 GAL)





DIAGNOSIS

Recommendation

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

Gear wear is indicated.

Contamination

There is no indication of any contamination in the

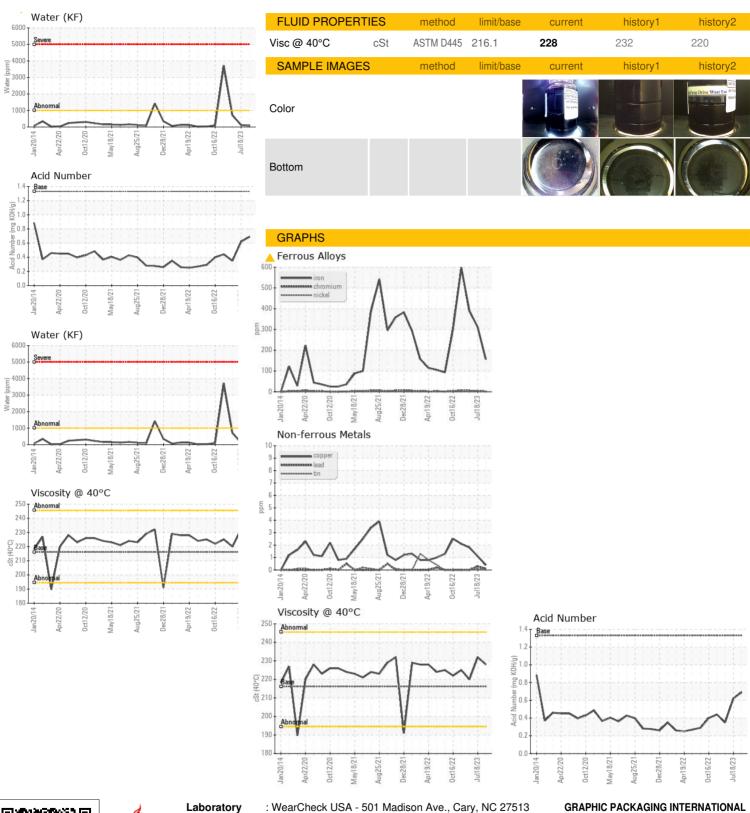
Fluid Condition

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

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		RP0003451	RP0031078	RP0031081
Sample Date		Client Info		28 Sep 2023	18 Jul 2023	27 Mar 2023
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	SEVERE	SEVERE
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	156	311	389
Chromium	ppm	ASTM D5185m	>5	1	3	5
Nickel	ppm	ASTM D5185m	>5	<1	<1	3
Γitanium	ppm	ASTM D5185m	>3	0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>7	3	7	5
_ead	ppm	ASTM D5185m	>12	<1	<1	0
Copper	ppm	ASTM D5185m	>30	<1	1	2
rin	ppm	ASTM D5185m	>9	0	<1	0
/anadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	2
Nolybdenum	ppm	ASTM D5185m		<1	<1	<1
Manganese	ppm	ASTM D5185m		2	4	4
Magnesium	ppm	ASTM D5185m		2	0	6
Calcium	ppm	ASTM D5185m		14	20	46
Phosphorus	ppm	ASTM D5185m	370	442	460	289
Zinc	ppm	ASTM D5185m	070	<1	0	9
LING	ppiii	AO IIVI DO IOOIII		\ 1	U	J
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	limit/base >60	9	9	6
Silicon Sodium		ASTM D5185m ASTM D5185m	>60	9 <1	9	6 <1
Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>60 >20	9	9 1 1	6 <1 <1
Silicon Sodium Potassium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304	>60 >20 >.1	9 <1 <1 0.007	9	6 <1
Silicon Sodium Potassium Water	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>60 >20 >.1	9 <1 <1	9 1 1	6 <1 <1
Silicon Sodium Potassium Water	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304	>60 >20 >.1	9 <1 <1 0.007	9 1 1 0.012	6 <1 <1 <1 0.070
Silicon Sodium Potassium Water opm Water	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304	>60 >20 >.1 >1000	9 <1 <1 0.007 72.9	9 1 1 0.012 127.6	6 <1 <1 <0.070 700
Silicon Sodium Potassium Water opm Water FLUID DEGRADA	ppm ppm ppm % ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method	>60 >20 >.1 >1000 limit/base 1.33	9 <1 <1 0.007 72.9 current 0.69 current	9 1 1 0.012 127.6 history1 0.62 history1	6 <1 <1 <0.070 700 history2 0.35
Silicon Sodium Potassium Nater Opm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal	ppm ppm % ppm .TION mg KOHig	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 method ASTM D8045 method *Visual	>60 >20 >.1 >1000 limit/base 1.33 limit/base NONE	9 <1 <1 0.007 72.9 current 0.69 current NONE	9 1 1 0.012 127.6 history1 0.62 history1 NONE	6 <1 <1 <0.070 700 history2 0.35 history2 NONE
Silicon Sodium Potassium Nater Opm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal	ppm ppm % ppm .TION	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method ASTM D8045 method	>60 >20 >.1 >1000 limit/base 1.33	9 <1 <1 0.007 72.9 current 0.69 current	9 1 1 0.012 127.6 history1 0.62 history1	6 <1 <1 <1 0.070 700 history2 0.35
Silicon Sodium Potassium Water Opm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal Yellow Metal	ppm ppm % ppm .TION mg KOHig	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 method ASTM D8045 method *Visual	>60 >20 >.1 >1000 limit/base 1.33 limit/base NONE	9 <1 <1 0.007 72.9 current 0.69 current NONE	9 1 1 0.012 127.6 history1 0.62 history1 NONE	6 <1 <1 <0.070 700 history2 0.35 history2 NONE
Silicon Sodium Potassium Water ppm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal Yellow Metal Precipitate	ppm ppm % ppm % ppm TION mg KOHig	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 method ASTM D8045 method *Visual	>60 >20 >.1 >1000 limit/base 1.33 limit/base NONE NONE	9 <1 <1 0.007 72.9 current 0.69 current NONE NONE	9 1 1 0.012 127.6 history1 0.62 history1 NONE	6 <1 <1 <0.070 700 history2 0.35 history2 NONE NONE
Silicon Sodium Potassium Vater Spm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal Vellow Metal Precipitate Silt	ppm 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	>60 >20 >.1 >1000 limit/base 1.33 limit/base NONE NONE NONE	9 <1 <1 <0.007 72.9 current 0.69 current NONE NONE NONE	9 1 1 0.012 127.6 history1 0.62 history1 NONE NONE	6 <1 <1 <0.070 700 history2 0.35 history2 NONE NONE NONE
Silicon Sodium Potassium Nater Opm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm 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	>60 >20 >.1 >1000 limit/base 1.33 limit/base NONE NONE NONE NONE	9 <1 <1 <1 0.007 72.9 current 0.69 current NONE NONE NONE NONE NONE	9 1 1 0.012 127.6 history1 0.62 history1 NONE NONE NONE NONE	6 <1 <1 <0.070 700 history2 0.35 history2 NONE NONE NONE NONE
Silicon Sodium Potassium Water Opm Water FLUID DEGRADA Acid Number (AN)	ppm ppm % ppm % ppm XTION mg KOH/g scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 method ASTM D8045 method *Visual *Visual *Visual *Visual *Visual *Visual	>60 >20 >.1 >1000 limit/base 1.33 limit/base NONE NONE NONE NONE NONE NONE	9 <1 <1 <1 0.007 72.9 current 0.69 current NONE NONE NONE NONE NONE NONE NONE	9 1 1 0.012 127.6 history1 0.62 history1 NONE NONE NONE NONE NONE MODER	6 <1 <1 <0.070 700 history2 0.35 history2 NONE NONE NONE NONE LIGHT
Silicon Sodium Potassium Nater Dpm 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 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	>60 >20 >.1 >1000 limit/base 1.33 limit/base NONE NONE NONE NONE NONE NONE NONE NON	9 <1 <1 <1 0.007 72.9 current 0.69 current NONE NONE NONE NONE NONE NONE NONE NON	9 1 1 0.012 127.6 history1 0.62 history1 NONE NONE NONE NONE NONE NONE NONE NON	6 <1 <1 <0.070 700 history2 0.35 history2 NONE NONE NONE NONE NONE NONE NONE NON
Silicon Sodium Potassium Nater Dpm Water FLUID DEGRADA Acid Number (AN) VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm % ppm TION mg KOHig scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D6304 ASTM D6304 Method ASTM D8045 Method *Visual	>60 >20 >.1 >1000 limit/base 1.33 limit/base NONE NONE	9 <1 <1 <1 0.007 72.9 current 0.69 current NONE NONE	9 1 1 0.012 127.6 history1 0.62 history1 NONE NONE NONE NONE NONE NONE NONE NON	6 <1 <1 0.070 700 history2 0.35 history2 NONE NONE NONE NONE NONE NONE NONE NON



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : IND 2

: RP0003451 : 05968373 : 10674924

Received Diagnosed Diagnostician

: 03 Oct 2023 : 04 Oct 2023 : Doug Bogart **GRAPHIC PACKAGING INTERNATIONAL** 9978 FM 3129

QUEEN CITY, TX US 75572

Contact: DAVID COTHREN david.cothren@graphicpkg.com

> T: (903)796-1690 F: (903)796-1969

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)