



INVESTIGATION REPORT DELAMINATION PROBLEM

I. PROBLEM DESCRIPTION

1.1. ISSUE:

DELAMINATION PROBLEM ON DAY SHIFT & NIGHT SHIFT PLAN

1.2. ITEM DESCRIPTION: PLEASE SEE ATTACHED FILE

Daily Production Progress						
Date: 27-Apr						
Shift: Night Shift						
Machine: Lamination 2						
Item #	Job Order #	Item Code	Item Description	Plan	Actual	Reject
1	JO-015373	515583000	LOUVEL EGY CHINA-8	245	245	2 DOHTE
2	JO-015374	515293000	LOUVEL 2 BACK ETD ETE	1500	1500	2 DOHTE
3	JO-015375	516292200	LOUVEL 2 MIDX ICB FOR	3500	3500	0 DOHTE
4	JO-015376	516213000	LOUVEL 2 MIDX REF ETE	100	100	4 DOHTE
5	JO-015377	516213200	LOUVEL 2 MIDX REF ETE	3300	3300	2 DOHTE
6	JO-015378	515011400	LOUVEL 2 MIDX ETE VAI	200	200	1 DOHTE
7	JO-015380	516292800	LOUVEL 2 MIDX ICB FOR	500	500	0 DOHTE
8	JO-015379	515411300	LOUVEL 2 MIDX ETE VAI	3500	3500	3 DOHTE
11	TOTAL			2685	6525	6459
12						28

Daily Production Progress						
Date: 28-Apr						
Shift: Day Shift						
Machine: Lamination 2						
Item #	Job Order #	Item Code	Item Description	Plan	Actual	Reject
1	JO-015375	515583000	LOUVEL EGY CHINA-8	245	245	2 DOHTE
2	JO-015376	516292200	LOUVEL 2 MIDX ICB FOR	3500	3500	0 DOHTE
3	JO-015377	516213000	LOUVEL 2 MIDX REF ETE	100	100	4 DOHTE
4	JO-015378	516213200	LOUVEL 2 MIDX REF ETE	3300	3300	2 DOHTE
5	JO-015379	515011400	LOUVEL 2 MIDX ETE VAI	200	200	1 DOHTE
6	JO-015380	516292800	LOUVEL 2 MIDX ICB FOR	500	500	0 DOHTE
7	JO-015374	515411300	LOUVEL 2 MIDX ETE VAI	3500	3500	3 DOHTE
8	JO-015373	515583000	LOUVEL EGY CHINA-8	245	245	2 DOHTE
11	TOTAL			3140	3140	0
12						0

1.3. BACKGROUND:

Delamination problem trap during day shift process at Diecut 3 Machine.
Also occurred for 8 JO's of Day Shift.

Total amount of = 10,930.80 USD = PHP546,540.00

II. BACKGROUND

Manpower Allocation :

Night shift :

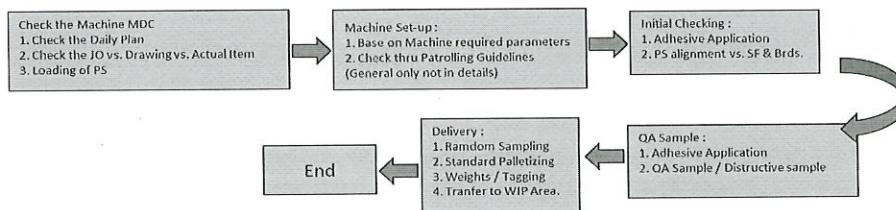
- 1-Sub-leader/Sr. Operator
- 1-Regular Employee
- 3- Agency Employee

Day Shift :

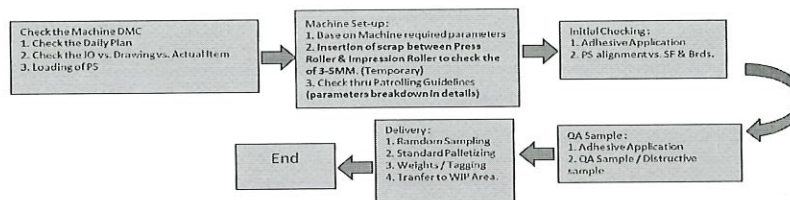
- 1-Sub-leader/Sr. Operator
- 1-Regular Employee
- 3- Agency Employee

III. METHOD

Before :



Current :



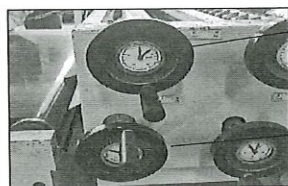
II. IMMEDIATE ACTION

ACTION ITEMS	Target Date:	Person In-charge
Meeting with Laminator Operator & all operator to highlight the delamination issue.	April 28, 2022	N. Cepeda
Inform MPD Department about the problem encountered.	April 28, 2022	Planning
Check the critical item base on MPD simulation, sorting & rework of item with small quantity requirement.	April 28, 2023	Production Team
Note : For sorting of remaining items.		

III. PROBLEM ANALYSIS

Direct Cause :

- > Delamination problem occurred due to pressed laminated boards after Lamination 2 process.
- > Pressed laminated board was due to Press roller set-up because of encountered warp & delay feeding of SF & PS materials.



Press Roller

Impression Roller

- > Operator assumed that the adjustment done between Press Roller & Impression roller was correct.
- > Press Roller in reverse set-up are same in appearance of both reverse & normal set-up.

Indirect Cause :



KANEPACKAGE PHILIPPINE INC.
Rm. 5 King Road 115P II, Brgy. La Mesa, Calamba City, Laguna
Telephone No. (049) 510-7146 to 59
Fax No. (049) 548-8332

DATE: April 28, 2022
CONTROL NO. _____

INVESTIGATION REPORT DELAMINATION PROBLEM

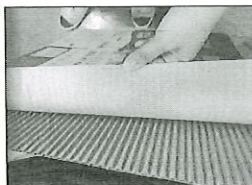
- > Actual output base on visual checking of glue application between PS & SF was good.
- > Glue Application actual range from 4mm to 5mm but the standard requirement is 2mm.
- > Operator judgement the actual out is good base on actual destructive testing.
- > Operator failed to follow the the standard requirement for glue application.

Illustration :

Good : Glue Application



Reject : Glue Application



IV. PREVENTIVE ACTION

ACTION ITEMS	Target Date:	Person In-charge
Orientation to operator about the set-up between pressed roller & impression roller to include the glue width standard requirement.	April 29, 2022	N. Cepeda
Ask training from ME about the paper Iodine test as of awareness operator the significance & standard of glue application on corrugated boards.	May 3, 2022	N. Royales
Ask Eng'g to provide limit meter switch to control to rotate the Press Roller.	Immediate	E. Macatangay
Posting of signages additional parameters to all machines visible to operator to help control the reoccurrence of another problem.	April 29, 2022	A. Dequito

INVESTIGATION REPORT FOR DELAMINATION

DIRECT CAUSE PROCESS/MATERIAL	W1- Delamination occur due to poor adhesion of singleface ang printed sheets.
	W2- Poor adhesion of singleface to printed sheets caused by sagging of glue in the side of singleface (must be on the tip of the flute).
	W3- Glue sag on the side of flute due to over pressed applied during lamination process.
	W4- Over pressed is caused by wrong adjustment of the pressed up roller.
	W5- Adjustment setting must be set to 3-5 upward or clockwise. (Operator set to 3-5 but moving the rocker to counterclockwise or downward until he position the gauge to 3-5 requirement)

DIRECT CAUSE PROCESS/MATERIAL	W1- Delamination is not detected since changes on set up was made after the destructive test. Note: Destructive test is done once every set up or material type. Remarks: First run using singleface setting is good.					
	Shift	Date Process	Job Order #	Item Code	Item Description	Lot Quantity
	DS	April 28, 2022	JO-015396	515512400	LIONEL MAY ASIA;B (PROCESS COST) A F	300
	DS	April 28, 2022	JO-015397	515821700	LIONEL MGY ASIA; B CC300	500
	DS	April 28, 2022	JO-015398	515088900	LIONEL MAY ICB FOR CHINA	200
	DS	April 28, 2022	JO-015399	515298000	LIONEL MGY CHINA	100
	DS	April 28, 2022	JO-015400	516228200	LIONEL 2 FAL ICB FOR EUROPE;B CC350	500
	DS	April 28, 2022	JO-015401	516000800	LIONEL FPY ICB ASIA CC300	600
	DS	April 28, 2022	JO-015402	515855400	LIONEL FGY BRAZIL;B	100
	DS	April 28, 2022	JO-015403	515855600	LIONEL F ASIA;B CC350 REVISED CODE 5	700

IMMEDIATE ACTION

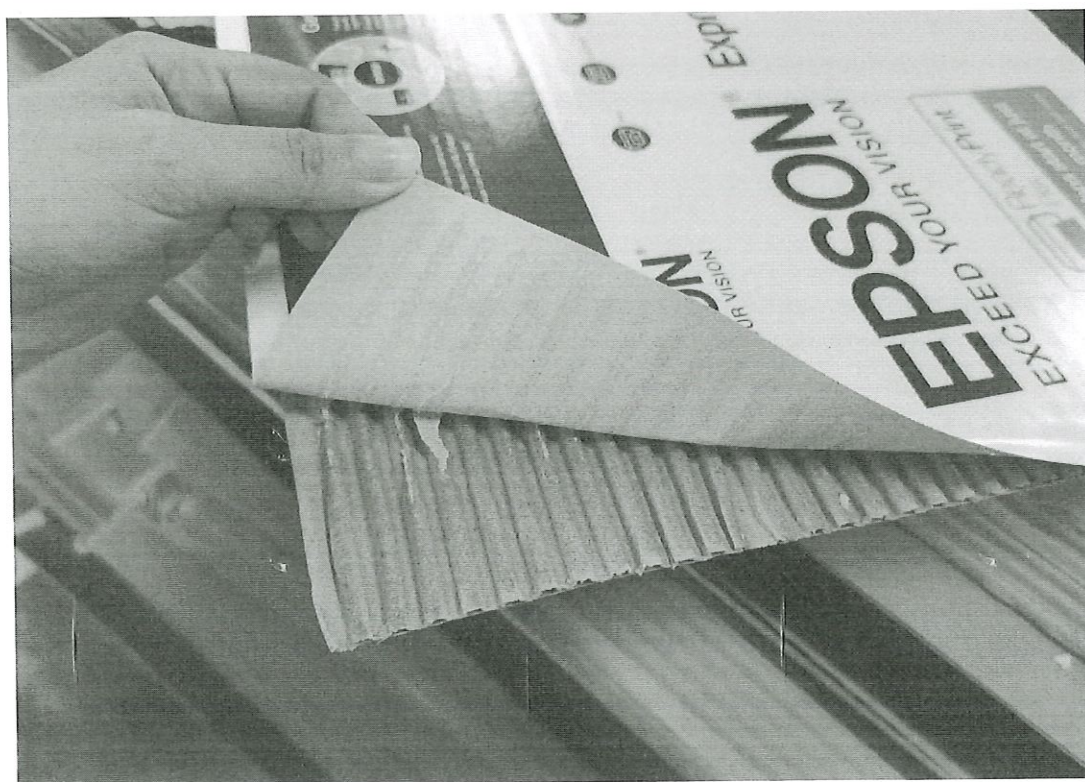
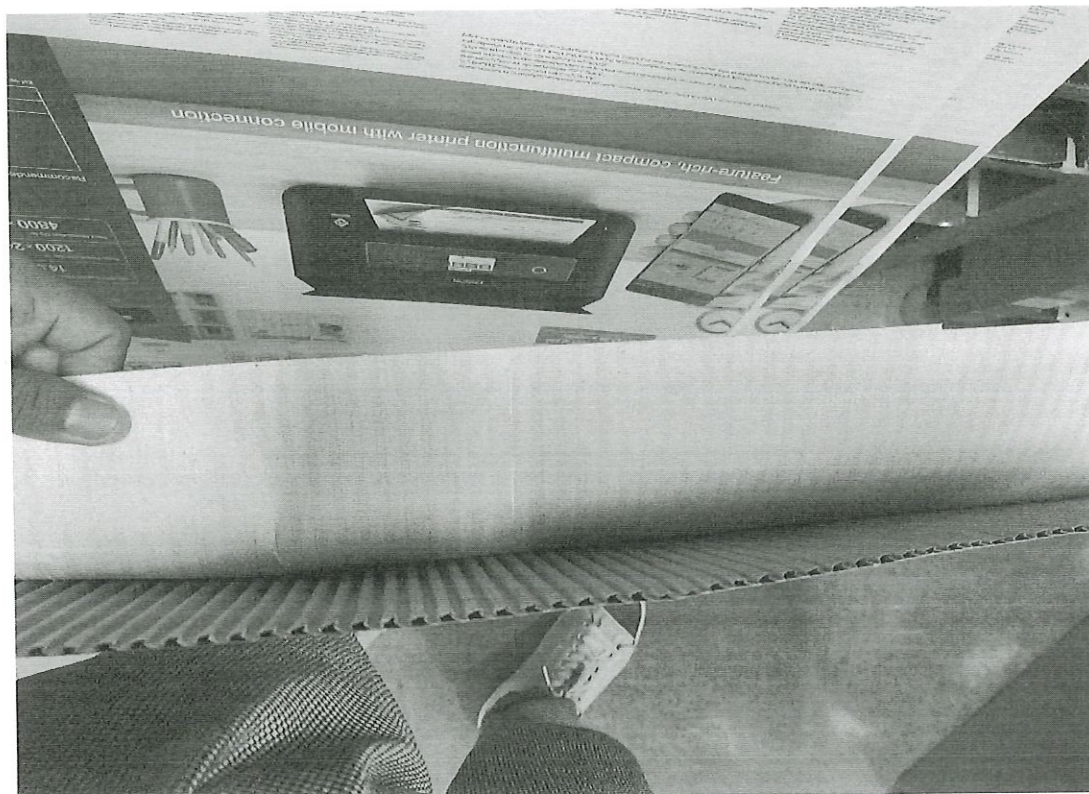
DIRECT CAUSE
PROCESS/MATERIAL

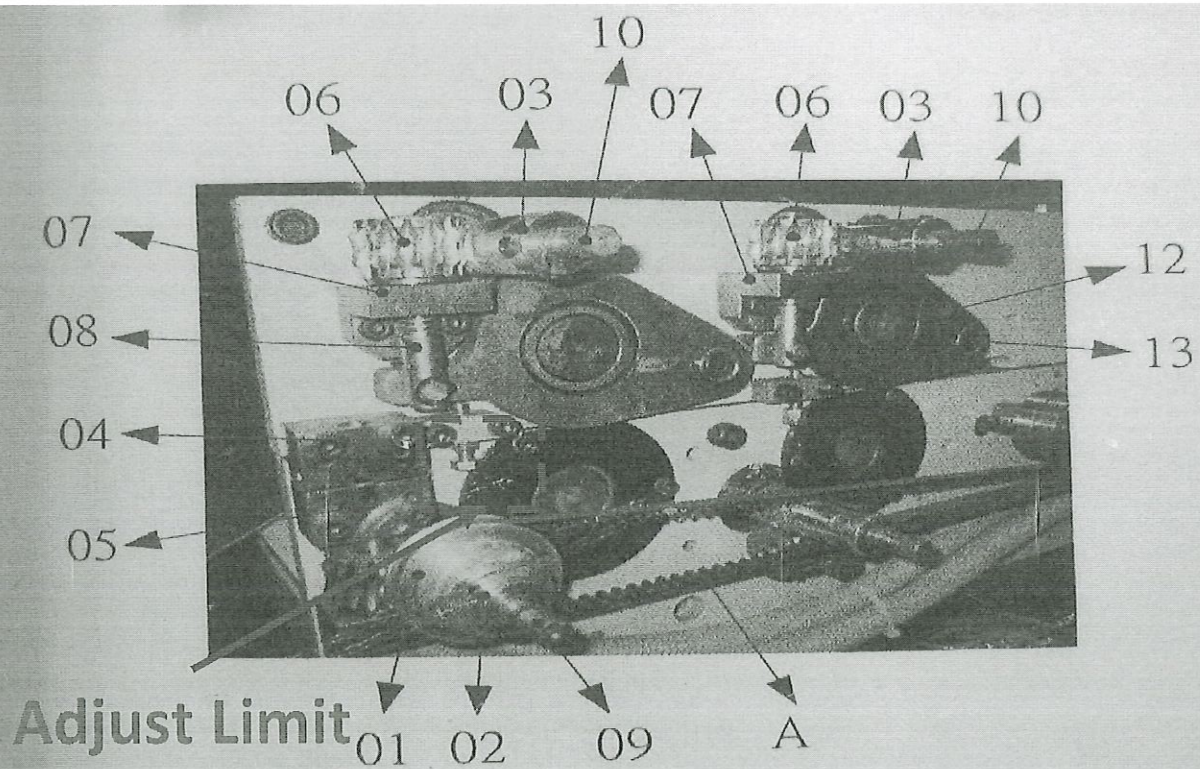
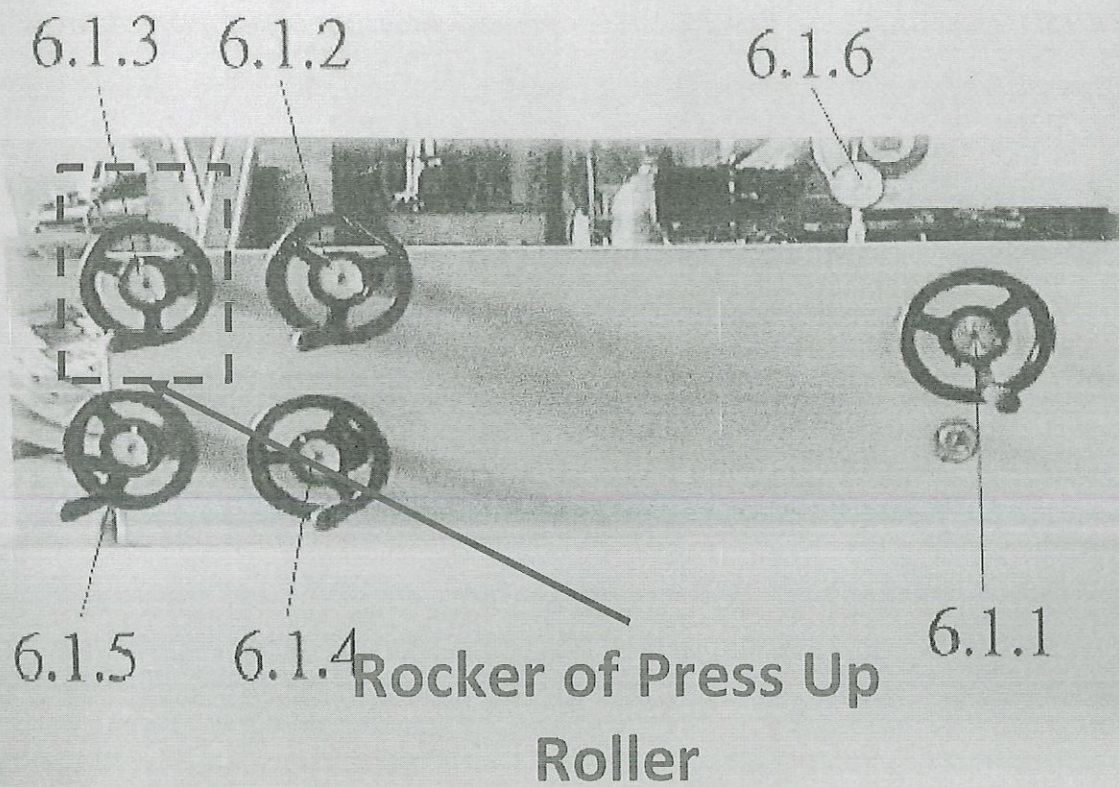
>Sort all affected items.
>Implement 1pc destructive per running.

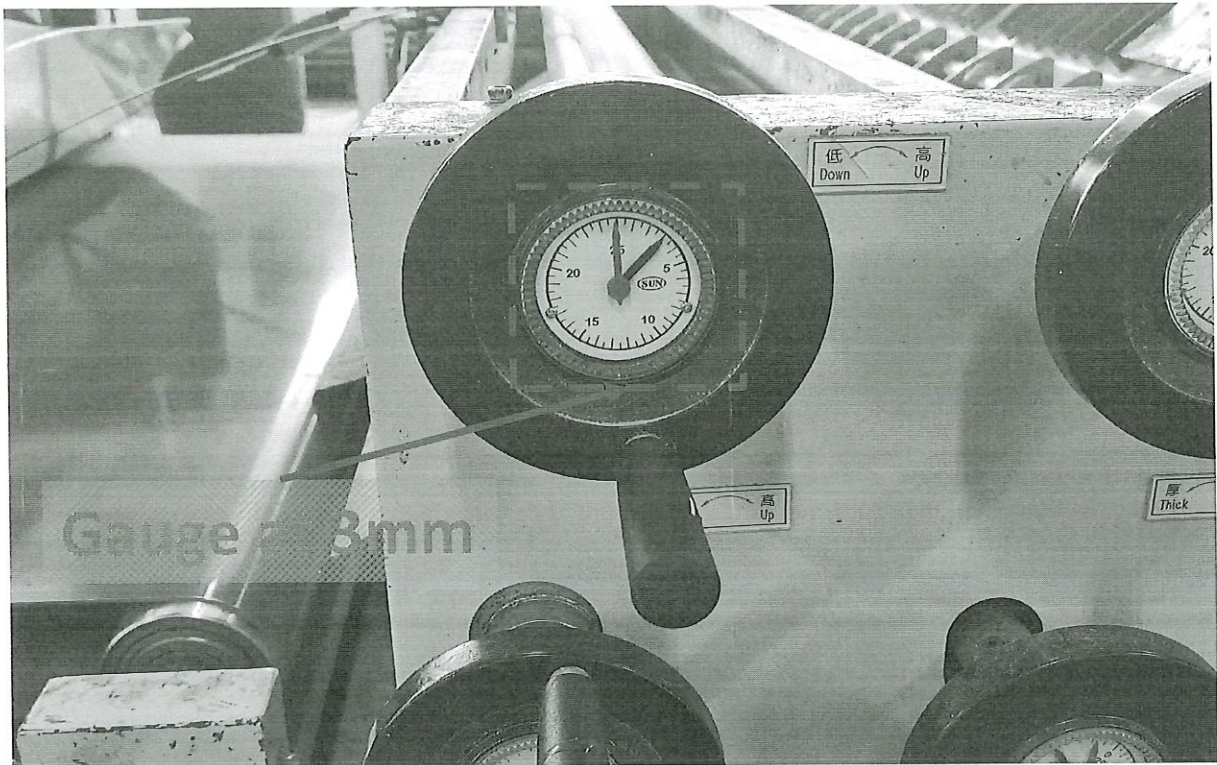
CORRECTIVE ACTION

DIRECT CAUSE
PROCESS/MATERIAL

To set the limiter of press up roller to minimum of 3mm to 5mm.
PIC: Engineering







BEFORE

Item #	Shift	Date Process	Job Order #	Item Code	Item Description	Lot Quantity	Good qty	Unit Cost	Total Cost	Remarks
1	DS	April 28, 2022	JO-015396	515512400	LIONEL MAY ASIA;B (PROCESS COST) A FLU	298	0	298 \$ 1.96	\$ 583.54	Reject due to Delamination
2	DS	April 28, 2022	JO-015397	515821700	LIONEL MGY ASIA; B CC300	499	0	499 \$ 1.96	\$ 977.14	Reject due to Delamination
3	DS	April 28, 2022	JO-015398	515088900	LIONEL MAY ICB FOR CHINA	200	30	170 \$ 1.93	\$ 386.44	Reject due to Delamination
4	DS	April 28, 2022	JO-015399	515298000	LIONEL MGY CHINA	100	30	70 \$ 1.96	\$ 195.82	Reject due to Delamination
5	DS	April 28, 2022	JO-015400	516228200	LIONEL 2 FAL ICB FOR EUROPE;B CC350	499	0	499 \$ 2.35	\$ 1,174.45	Reject due to Delamination
6	DS	April 28, 2022	JO-015401	516000800	LIONEL FPY ICB ASIA CC300	598	0	598 \$ 2.00	\$ 1,194.68	Reject due to Delamination
7	DS	April 28, 2022	JO-015402	515855400	LIONEL FGY BRAZIL;B	80	0	80 \$ 2.08	\$ 166.32	Reject due to Delamination
8	DS	April 28, 2022	JO-015403	515855600	LIONEL F ASIA;B CC350 REVISED CODE 515	699	0	699 \$ 2.13	\$ 1,490.13	Reject due to Delamination
9	NS	April 27, 2022	JO-015376	516213900	LIGHT MB REFRESH EUROPE DE,R;B CC300	100	100	0 \$ 1.19	\$ 119.08	Reject due to Delamination
10	NS	April 27, 2022	JO-015377	516213200	LIGHT FB EUR R ;B CC300	1098	0	1098 \$ 1.37	\$ 1,499.87	Reject due to Delamination
11	NS	April 27, 2022	JO-015379	515911400	LOUVRE 2 MDX EPIL WH CC350	198	3	195 \$ 1.42	\$ 281.95	Reject due to Delamination
12	NS	April 27, 2022	JO-015380	516297800	LOUVRE 2 MDX ICB FOR ASIA WH;C CC350	500	0	500 \$ 1.34	\$ 672.40	Reject due to Delamination
13	NS	April 27, 2022	JO-015378	516412300	LIME MB EUROPE DE R;B CC300	966	78	888 \$ 1.26	\$ 1,218.51	Reject due to Delamination
						5835	241	5594 \$ 22.96	\$ 9,960.34	
								P 498,016.84		

Remarks: All item subject for rework on April 30, 2022

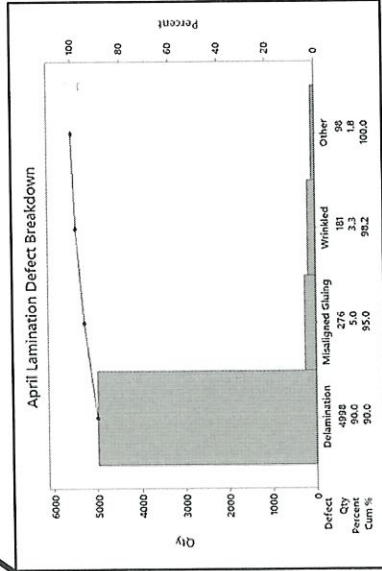
After

Item #	Shift	Date Process	Job Order #	Item Code	Item Description	Inline report Good qty			Inventory of Delamination		Unit Cost	Total Cost	Remarks
						Input Qty	Output qty	Reject qty	Lot Quantity	Variance			
1	DS	April 28, 2022	JO-015396	515512400	LIONEL MAY ASIA;B	298	289	9	298	0	\$ 1.96	\$0.00	
2	DS	April 28, 2022	JO-015397	515821700	LIONEL MGY ASIA; B CC300	486	479	7	499	-13	\$ 1.96	\$25.46	
3	DS	April 28, 2022	JO-015398	515088900	LIONEL MAY ICB FOR CHINA	179	178	1	200	-21	\$ 1.93	\$40.58	
4	DS	April 28, 2022	JO-015399	515298000	LIONEL MGY CHINA	96	90	6	100	-4	\$ 1.96	\$7.83	
5	DS	April 28, 2022	JO-015400	516228200	LIONEL 2 FAL ICB FOR EUROPE;B CC350	0	0	0	499	-499	\$ 2.35	\$1,174.45	
6	DS	April 28, 2022	JO-015401	516000800	LIONEL FPY ICB ASIA CC300	436	426	10	598	-162	\$ 2.00	\$323.64	
7	DS	April 28, 2022	JO-015402	515855400	LIONEL FGY BRAZIL;B	70	65	5	80	-10	\$ 2.08	\$20.79	
8	DS	April 28, 2022	JO-015403	515855600	LIONEL F ASIA;B	523	0	523	699	-176	\$ 2.13	\$375.20	
9	NS	April 27, 2022	JO-015376	516213900	LIGHT MB REFRESH EUROPE DE,R;B CC300	92	89	3	100	-8	\$ 1.19	\$9.53	GOOD
10	NS	April 27, 2022	JO-015377	516213200	LIGHT FB EUR R;B CC300	1230	228	1002	1098	132	\$ 1.37	\$180.31	
11	NS	April 27, 2022	JO-015379	515911400	LOUVRE 2 MDX EPIL WH CC350	7	7	0	198	-191	\$ 1.42	\$271.98	
12	NS	April 27, 2022	JO-015380	516297800	LOUVRE 2 MDX ICB FOR ASIA WH;C CC350	286	0	286	500	-214	\$ 1.34	\$287.79	
13	NS	April 27, 2022	JO-015378	516412300	LIME MB EUROPE DE R;B CC300	539	79	460	966	-427	\$ 1.26	\$538.62	

RECOVERY RATE
4242 1930 2312
72.70%

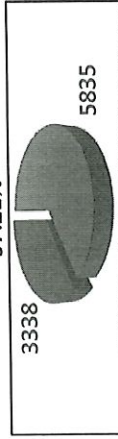
Unit Cost \$ 22.96 \$ -2,895.55
Total Cost -P 144,777.29

Remarks: All reject item subject for rework on April 30, 2022



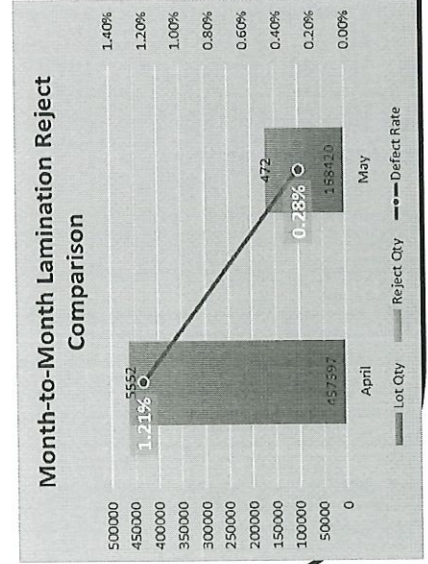
Delamination

57.21%



■ Affected Qty ■ Rework ■ % Recover

Affected Qty	5835
Rework	3338
% Recover	57.21%



- Top defect contributor for the month of April is delamination.
- Running rejection is at 1.21% with 5,552 pcs reject out of 457,597 pcs input quantity.
- Rejection exceeds the rejection limit of below 0.23%.

Cause:

Due to wrong adjustment of the press up roller. Setting must be set to 3-5 upward or clockwise. (Operator set to 3-5 but moving the rocker to counterclockwise or downward until he position the gauge to 3-5 requirement)

Action Plan:

1. Installed Limiter on the presses roller to prevent over/wrong adjustment
- Status: DONE (May 4-5, 2022)

Detection Improvement:

1. Conduct glue application checking every start of mass production for panel A and panel B
Specification: Glue width must be 2-3mm.
2. Conduct destructive test
Before: 1 pc per material type
After: 1pc per material type + 1pcs/1000pcs machine output

