ENGINEERING CHANGE ORDER

REQUEST DATE	6/18/2020	REQUESTED BY	MAJLI RUIZ	REQUESTED RELEASE DATE	6/23/2020	ECO #	ECO-00009
AFFECTED PRODUCT LINES	WOVEN WOOD ROMAN SHADES (953 AND 958 PRODUCT LINES)						
REASON FOR CHANGE	PROCESS IMPROVEMENT: REDUCE OPERATION CYCLE TIME IN ASSEMBLY PROCESS – VALANCE ASSEMBLY.						
DESCRIPTION OF CHANGE	REQUEST VALANCE TO BE SENT DETACHED FROM THE SHADE AND WITH VALANCE HEM READY AT 1" (SUPPLIER WILL PERFORM THE HEM OPERATION).						
COST IMPACT	N/A						

DOCUMENT / PART NUMBER	OLD REV	NEW REV	DOCUMENT/ PART DESCRIPTION	CHANGE DESCRIPTION	FORM, FIT, OR FUNCTION AFFECTED Yes, or No	PART DISPOSITION (USE AS IS) (REWORK) (SCRAP) (OBSOLETE) (RETURN TO VENDOR) (OTHER)
953 FAMILY			CORDLESS WOVEN WOOD ROMAN SHADE	VALANCE SPEC CHANGE (SEE ENG REPORT IN PAG 3 – 5)	YES	N/A
958 FAMILY			TDBU CORDLESS WOVEN WOOD ROMAN SHADE	VALANCE SPEC CHANGE (SEE ENG REPORT IN PAG 3 – 5)	YES	N/A

ADDITIONAL INFORMATION	1. THIS CHANGE IS APPLICABLE FOR ALL COLORS IN 953 AND 958 PRODUCT FAMILIES. 2. PRODUCT SPEC SHEETS MUST BE UPDATED ACCORDINGLY AND PROVIDED BY THE SUPPLIER.

AFFECTED DOCUMENTS / PROCESSES (CHECK ALL THAT APPLY)

BOM / CONFIG	☐	PRODUCT / PART SPEC	☒	QC CHECKLIST	☒	PART DRAWING	☐	ASSEMBLY DRAWING	☐	INSTR SHEET	☐	PROCESS VISUAL AIDS	☒	WORK INSTRUCTIONS	☒

ECO APPROVALS ROUTING

APPROVER	APPROVAL REQUIRED	APPROVER NAME	APPROVAL STATUS	APPROVED ON	NOTES
PHASE II MANAGEMENT (US - DL)	☒	T. DAVIDSON	APPROVED	06/22/2020	
PHASE II PROD DEV (US - NY)	☒	L. HUNT	APPROVED	06/22/2020	
MANAGEMENT (MX)	☒	L. MONTEJO	APPROVED	06/19/2020	
QC / ENG (MX)	☒	H. AMEZQUITA	APPROVED	06/19/2020	
IT (MX)	☐				
PRODUCTION (MX)	☐				
MATERIALS (MX)	☐				

ACTIONS REQUIRED		
BOM / CONFIG	☐	WILL BE MODIFIED BY IT (MX)
PRODUCT / PART SPEC	☒	WILL BE MODIFIED QC / ENG (MX)
QC CHECKLIST	☒	WILL BE MODIFIED QC / ENG (MX)
PART DRAWING	☐	WILL BE MODIFIED QC / ENG (MX)
ASSEMBLY DRAWING	☐	WILL BE MODIFIED QC / ENG (MX)
INSTR SHEET	☐	WILL BE MODIFIED QC / ENG (MX)
PROCESS VISUAL AIDS	☒	WILL BE MODIFIED QC / ENG (MX)
WORK INSTRUCTIONS	☒	WILL BE MODIFIED QC / ENG (MX)

PICTURES, DRAWINGS, ETC.

Hemtack
S.A. De C.V.

ENGINEERING REPORT

REPORT TITLE:	SAMPLE TESTING 953-VALANCE WITH BOTTOM HEM	**REPORT DATE:**	18/06/2020
REPORT NUMBER:	ENGREP-024	**CREATED BY:**	J. Majli Jauregui R.
QA & ENGINEERING APPROVAL	**CC:**		
Hugo Amezquita	Lulú Montejo, Marcos Chang, Janine Moreno, Gladys Bautista, Miriam Calderon.		

1. Background:

With the objective of improving our process and reduce operation cycle time, an improvement was evaluated that consist in removing and modifying current operations in the woven wood shade assembly process.

A request was submitted to the supplier to provide samples of the Valance presentation. The change specifically is aimed at eliminating steps in the assembly operation that become complex under certain circumstances. The change could help us achieve an increase in production volume of this product.

2. Analysis:

We received 10 samples, one of each color with a range of 24 final width.

The development of the tests focused on the direct processes where the balance is modified according to the specifications (final measure) of the client and on the finished product.

Width adjustment: Ease and cleanliness of cutting process were evaluated.

Final balance and pre-quality assembly: Time study was performed to compare against the current method.

CRAZY GLUE 1”

(Picture 1)

CUTTING SECTION BOTTOM HEM

(Picture 2)

TABLE 1

Test Samples:

Operation:	# 3 PRE QUALITY & BALANCE		
CYCLES	Seg.	W	L
1	55	22	50
2	92	22	50
3	72	22	50
4	81	22	50
5	71	22	50
6	86	22	50
7	74	22	50
8	80	22	50
9	78	22	50
10	82	22	50
TE	77.1		
TN	69.4		
STANDARD TIME	**81.9**		
PZA/HRS	**44**		

Standard time of the current process:

TABLE 2

TE	189.9
TN	170.9
STANDARD TIME	***201.6***
PZA/HRS	***18***

Summary:

TABLE 3

	ACTUAL PROCESS	*IMPROVE PROCESS*	*RESULT*	*COMMENTS*
STANDARD TIME	**201.6**	81.9	-60%	POTENTIAL REDUCTION TIME CYCLE
PZA./HRS.	**18**	44.0	+26	POTENTIAL PZA. / HOUR INCREASE

3. Conclusion:

In a previous inspection I verified that the samples were within the gluing dimensions (Picture 1). And that they had the lower frame already formed, which was satisfactory in all samples.

In the width cutting process, the cleanliness of the cut was exceptional without leaving chipping marks or irregular cutting, the machine we used is within sufficient force capacity to maintain its operation without getting stuck in the cut (Picture 2).

The potential benefit originally identified is validated in a reduction in time of up to 60% of the operation, simplifying the operations of the final process to finish the curtain (Table 3).

The results were satisfactory and samples provided were approved and we request that the change be implemented as soon as possible.

NOTE: It will be necessary to update the product specification sheets in accordance to this change.