

IN-PROCESS AUDIT

PURPOSE-

To identify during a manufacturing process the type of defects, the amount of defects and the root cause of the problem so that measures can be taken to correct and prevent future recurrence. This is done by quantifying each type of defect, at what frequency, thus requiring corrective and preventive measures to be taken immediately by the supplier production and quality teams.

TYPES OF AUDITS-

1. Cutting Quality Audit
2. Fusing Quality Audit
3. 1st in-line (sewing) Inspection
4. 2nd in-line (sewing, pressing) Inspection

RECOMMENDATION-

The use of Statistical Process Control (SPC) or any other effective internationally recognized tool for quality control is recommended.

An attribute control chart for workmanship and aesthetic evaluation containing data, p chart and corrective action documentation area is more appropriate and is a more effective tool.

A variable control chart for spec measurement is also appropriate when conducting in-process garment spec measurement audit. It contains data, an average / range chart and a corrective action documentation area.

This type of tool can be simplified without the use of any complicated formulas, by analyzing on a daily basis using the average and range on the lines of the control charts.

(For help in installing this process, contact local Kate Spade & Company Quality Manager)

CUTTING QUALITY AUDIT-

PURPOSE-

The purpose of conducting this audit is to ensure that any errors made during cutting can be rectified prior to distributing cut bundles to sewing floor. This is the first point of manufacturing as such the cutting room is the where issues related to cutting quality can be prevented.

1. Quality problems detected at this point can either be corrected by re-cutting, making adjustments in sewing, cutting alterations or notifying the customer for approval or rejection prior to producing garments.
2. Problems prevented at this stage are much more cost effective.
3. The cutting audit provides feedback to the cutting rooms so prevention may be addressed as the POs are being spread, cut or bundled. The feedback provided in defect type and defect %.
4. The audit ensures the producing facility that the cutting room is operating at a certain level of quality and shall not create production problems resulting from improper cutting. Once a PO is accepted into production the end quality results are the producing facility responsibility unless prior agreements are made.

RESPONSIBILITY-

It is the responsibility of the supplier to conduct these audits throughout the manufacturing process of our product.

CONDITIONS FOR AUDIT-

- A. Supplier audit teams must be assigned to specific cutting tables based on capacity of cutting output.
- B. Lighting level must be adequate and must be between 120-130 foot candles.
- C. Typically two different formats can be used for the cutting area.
 - (a) Spread inspection report
 - (b) Cut accuracy audit report

PROCEDURE-

1	Check marker for accuracy pf number of parts, placement and size ration.
2	During the spread inspection, the auditor must ensure that the fabric is spread relaxed without any waviness and stretching. Grain line must be accurate.
3	In the case of stretch fabric it is recommended to relax the fabric overnight in a container or in pallet prior to spreading.
4	The auditor must ensure during the spread inspection, that all defects are marked by the workers who spread the fabric.
5	Shades must also be checked and compared with original shade band, while any variation in shade found during spreading must also be addressed immediately.
6	Marker paper for manual cutting must be placed correctly ensuring the fabric selvage is well away from cut perimeter.
7	Auditors must use an AQL sampling plan as a guide for selecting sample size when conducting a cut accuracy audit.
8	Graded patterns must be available to compare cutting accuracy at top, middle and bottom layers of each critical panel. Top marker paper is not ideal to compare accuracy of cut panels.
9	At a different stage, an inspection for accuracy of numbering of parts must also be included as part of cut accuracy audit.
10	All results found must be documented and appropriate corrective measures taken.

Fabric relaxing prior to cutting



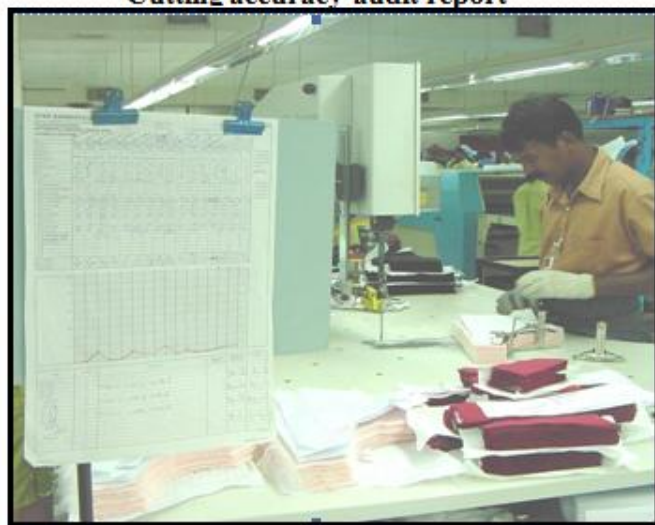
Checking of marker prior to cutting



Cut accuracy audit



Cutting accuracy audit report



FUSING QUALITY AUDIT-

PURPOSE-

This audit is done to ensure that relevant panels that are fused does not delaminate or have a change in appearance. Once goods are pressed or washed there is no way the appearance can be changed due to delaminating of fusible interlining. Therefore a proactive role must be taken especially for suppliers who make synthetic product like jackets, blouses, shirts, pants and shorts or those who make unlined jacket that undergoes after treatment.

RESPONSIBILITY-

It is the responsibility of the supplier to conduct these audits throughout the manufacturing process of our product.

CONDITIONS FOR FUSING AUDIT-

- A. Location of fusing machine and audit table must be under a well illuminated area. A minimum of 120-130 foot candles is required to conduct a proper audit.
- B. A pre-established fuse line temperature, speed and pressure must be available as guide during the audit. This can be established based on test done using actual fabric and interlining, either in-house or by the fusible interlining supplier.
- C. A Newton scale or likewise apparatus must be available to check the bond strength of the fusing.
- D. Thermo paper strips must also be available to check the temperature of the fuse line.
- E. A simple record book or a Statistical Process Control (SPC) attribute chart can be used to monitor the records or history of the audits.

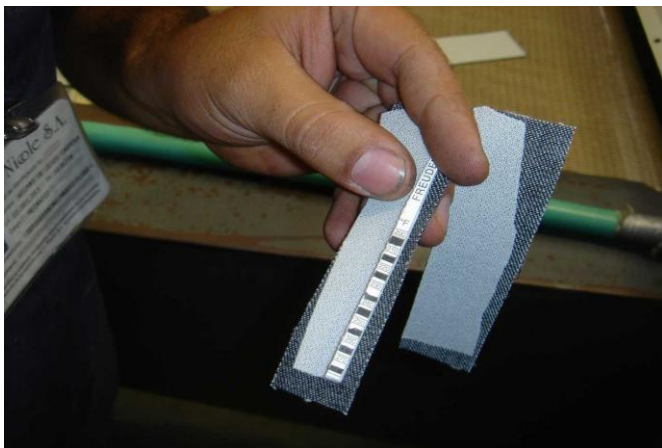


PROCEDURE-

1. Based on the pre-established fusing standard that can be provided by interlining supplier or vendor product development area/internal laboratory, the auditor can prepare to fuse a few pieces of fabric or parts with the appropriate fusible interlining.
2. A thermo paper strip is to be placed in between the fusible interlining and fabric and sent through the fusing machine.



3. If the strip has turned black at the appropriate temperature line, then that should be compared with the pre-established fuse line temperature. If the temperature is high on the test pieces, then the temperature of the machine must be lowered. Likewise if it is low, the temperature must be increased.

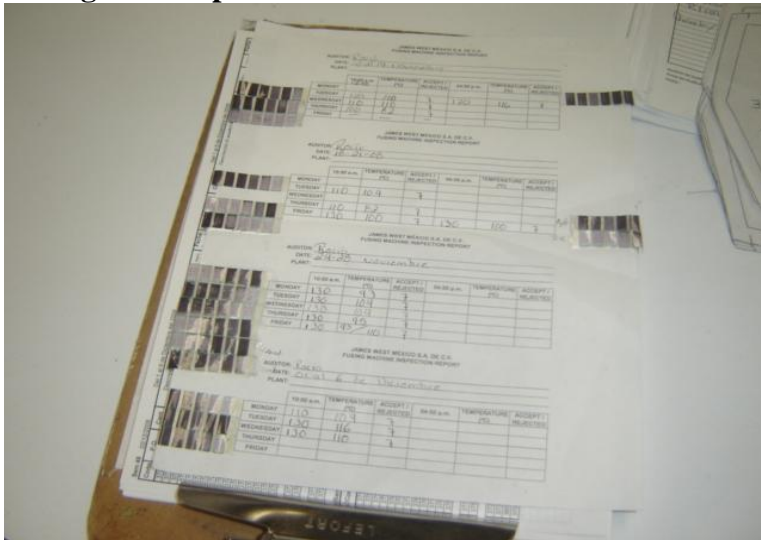


4. The Newton is to be used to compare the actual pressure of the machine against the pre-established standard. A small swatch of fabric is placed between the fusible interlining and fabric so that the hook of the scale can pull the self fabric while the auditor pulls the small swatch already glued at one end of the fusible interlining. (For help in this test, please contact local Kate Spade & Company field associate.)



5. Results of the fuse line temperature and the bond strength must be kept either in a log book or using a control chart.
6. Typically these audits can be done two to three times a day. Once at the beginning of the work day, and once after the lunch or tea break, at which time machines temperature are lowered to conserve energy and machine usage.

Fusing audit report records



1st & 2nd IN-LINE AUDIT (INSPECTION)-

PURPOSE-

The purpose of conducting in-line inspection for workmanship and measurement is to ensure that the product has conformed to initial requirements as stipulated on the tech package and compared with the sealed bag sample already established by the Kate Spade & Company field associate. This is the primary level of inspection with regards to workmanship and measurement.

RESPONSIBILITY-

It is the responsibility of the supplier to establish a team, to conduct these audits throughout the manufacturing process of our product. Kate Spade & Company field associate may visit locations randomly and conduct a general overview, but it is the responsibility of the supplier to ensure that the product is inspected during manufacturing.

CONDITIONS FOR 1st & 2nd IN-LINE AUDIT-

- A. Experienced and trained auditors with good knowledge in quality auditing function and ability to identify problems very quickly.
- B. Table with proper illumination, preferably 140-150 foot candles.
- C. Complete tech pack, approved trim card, sealed bag sample, measurement tape, and Kate Spade & Company approved in-line report. (Please refer copy of IN- LINE INSPECTION REPORT which must be used for all Kate Spade & Company products.)

PROCEDURE-

	The 1 st in-line inspection must be conducted by vendor’s QC team prior to completion of the first 50 units from the sewing line. This inspection must be done by evaluating thoroughly all completed garments against the trim card and sealed bag sample.
	It is an absolute must that the 1 st in-line inspection is carried for each style and color and documented appropriately.
	A quick stand up meeting amongst vendor production and quality staff is recommended upon review of the 1 st in-line inspection report. Follow-up reviews must be done for critical operations by vendor technical staff if corrective action agreed upon has been affected.
	Vendors QC must continue to do routine machine by machine quality audits using internal quality control procedures and documentation.
	The 2 nd in-line inspection must be conducted by vendor QC when the style is undergoing initial pressing. In this case, this could be done when at the middle of sewing program or 50-60% out of sew.
	During the 2 nd in-line inspection, it is critical to establish a pressing standard to be used as a reference by the pressing staff.
	Inspected garments during the 2 nd in-line inspection, must be critiqued to the highest standard and comments and concerns documented in the in-line inspection report.
	A follow up stand up meeting is ideal at this stage to discuss all issues as it is the last point where the sewing line staff can rectify prior to completion of sewing.
	Vendor QC must also perform routine pressing machine by machine quality checks using internal quality control procedures and documentation.



Kate Spade & Company recommended in-line and spec measurement reports are shown in the following pages.

IN - LINE INSPECTION REPORT

(ACCESSORIES / HATS & BAGS)

STYLE # - COLOR - LINE / MODULE# - DATE -
 CONTRACTOR / CODE - PLANT / CODE - ORDER QTY - FINISH QTY -
 QTY INSPECTED - INSPECTION TYPE - 1st / 2nd

HR SHORT FORM USED DURING THIS INSPECTION- Yes / No

OVERALL STANDARDS ARE ACCEPTABLE- Yes / No

RAW MATERIALS	Correct	Incorrect
Leather / PVC / PU / Fabric		

TRIMS	Placement		Quality	
	Correct	Incorrect	Correct	Incorrect
Main Label				
Size / Care / C.O. Label				
Contractor Code / Style				
Thread				
Buttons				
Zipper				
Hook and Bar / Eye				
Rivet & Burr Quality / Color				
Belt / Scarf				
Elastic				
Tapes				
Pocketing				
Lining				
Combo				



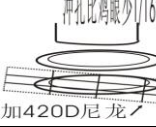
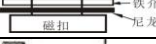
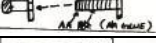
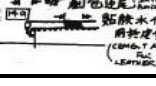
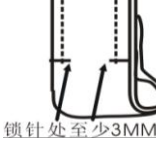
SEWING MACHINE CONDITION:	Acceptable	Unacceptable
Table surface		
Oil level & condition		
Needle type & Size		

AFTER TREATMENT:	Acceptable	Unacceptable
Color match to standard		
Hand match to standard		
Dry Process match to standard		
Abrasion match to standard		

REFERENCES	Available	Not Available
Trim Card		
PP Size Set Approved Sample		
Sealed Bag Sample		

OPERATION	Correct	Incorrect
Cutting (direction/matching)		
Knitting (hat)		
Linking (hat)		
Hand Stitching		
zipper - smooth when zip open and close		
Rivets		
Embroidery		
Applique		
Printing		
Heat Transfer		
Thread trimming		
Pressing		
For flimey leather, such as larm, reinforcement at seam edge strong suggested		

TEST RESULT:	Pass	Fail
pH. Test results		
AZO dye test		
Dry and Wet crocking		
Acid test for hardware		
Lead testing		
Nickel testing		
Drop test		

Description	SKETCH	OK/ Not OK
A. Handle Holder Tabs 2 fold 420D nylon or one fold webbing (size is 1/16" tl less than narrowest point of tab)		
B. Hand Strip Final end is insert 10mm secured with a drop of glue and one hand tack. Starting end of lacking strip is insert 15mm and secured with a drop of glue. For extra security the lacking end is overlapped by the 1st & 2nd strip.		
C. Hardware application 1. Mold diameter must be thin 1/16" than the grommet. 2. Don't use a hammer and use proper die mold. 3. Adding 420D nylon at back side of grommet/ rivet.		
D. Magnetic Snap Magnetic snap should include reinforce washer.		
E. The Screw Application The screw should use red-glue to secure.		
F. Skive Leather 1. PVC must not skive except only to skive 5/8" at joint part 2. Leather OK to skive but must be 0.8mm min - 1.0mm max		
G. Hand Stitch Hand stitch placement must be more 3mm distance from edge.		

COMMENTS

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Name of Auditor:
 Signature of Auditor:
 Date:

Name of Supplier Representative:
 Signature of Supplier Representative:
 Date:

SIZE SPECIFICATION REPORT (TOPS)	
STYLE: _____	COLOR: _____
P.O No: _____	DATE: _____
	No. OF GARMENTS MEASURED _____
	No. OF GARMENTS OUT OF TOLERANCE _____
SIZE	
CHEST / BUST	
ACROSS FRONT	
ACROSS SHOULDER	
SHOULDER SEAM	
WAIST	
BOTTOM SWEEP	
FRONT LENGTH	
ARM HOLE	
SLEEVE LENGTH	
CUFF OPENING	
ACROSS BACK	
BACK LENGTH	
NECK OPENING	
FRONT NECK	
BACK NECK	
TOTAL NECK	

SIZE SPECIFICATION REPORT (BOTTOMS)	
STYLE: <input style="width: 100%;" type="text"/>	COLOR: <input style="width: 100%;" type="text"/>
P.O No: <input style="width: 100%;" type="text"/>	DATE: <input style="width: 100%;" type="text"/>
	No. OF GARMENTS MEASURED <input style="width: 50%;" type="text"/>
	No. OF GARMENTS OUT OF TOLERANCE <input style="width: 50%;" type="text"/>
SIZE	
WAIST	
WAIST EXTENDED	
HIGH HIP	
LOW HIP	
MUSCLE / CENTER FRONT LTH	
THIGH	
KNEE	
LEG OPENING / SWEEP	
FRONT RISE	
ZIPPER	
INSEAM / OUTSEAM	
BACK RISE	
CENTER BACK LENGTH	