

LOUIS VUITTON

EXISTING TRAINING COURSES



Savoir - Faire

Quality and technical culture

Formation
Brûlage et
Collage des fils

Support de Formation
Août 2020
Emmanuelle S.
1 heure 30



Module point Main

Cliquez pour ajouter un sous-titre



École des savoir-faire luxueux
L'Institut de la Haute Couture et du Luxe

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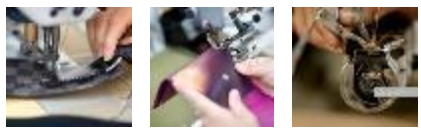
GAINING EXPERTISE IN CRITICAL PROCESSES: STITCHING

Theoretical training course
2024



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LIMITED RIGHTS
Made available for demonstration



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CONTENTS

Introduction

Part 1: Basics of stitching

Part 2: Critical process standards

Part 3: Specific modules



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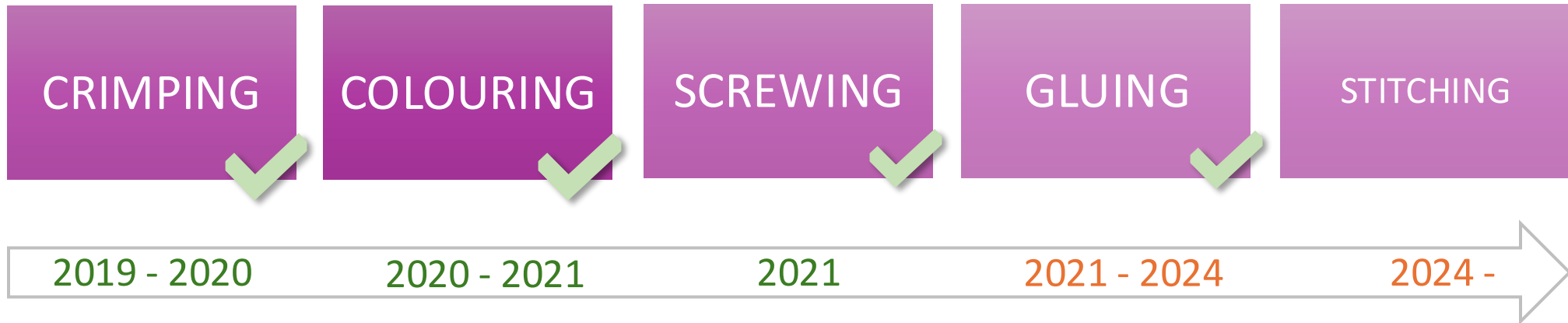
INTRODUCTION

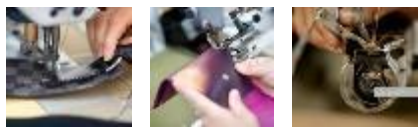


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DEPLOYING CRITICAL PROCESSES

 Site Responsibility Network Returns Target
< 2,5‰



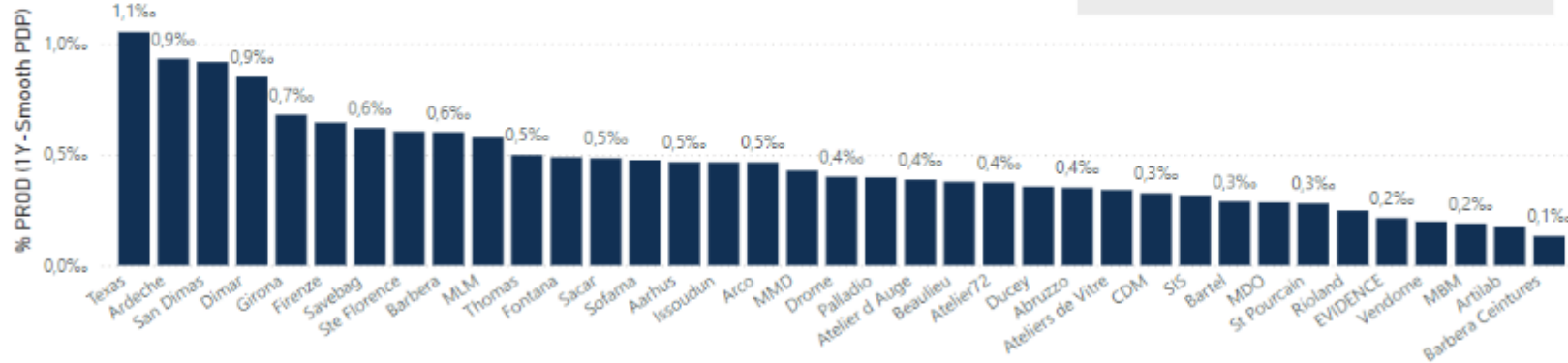


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NETWORK RETURNS

RR (Chrono < 1Y) - Process Critiques

% PROD (1Y-Smooth PDP) par SITE_NAME



Pôle

ATELIER

Date

24/09/2023 23/09/2024

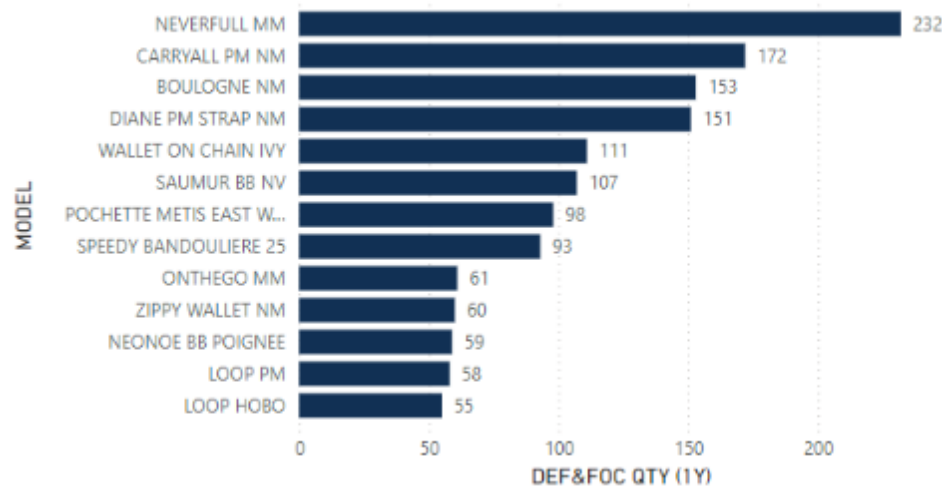
4274

DEF&FOC QTY (1Y)

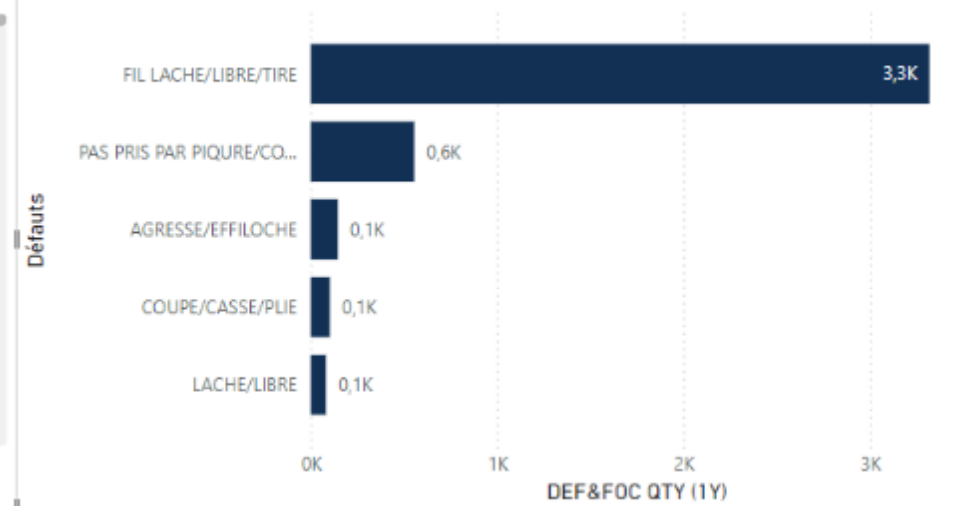
0,5%

% PROD (1Y-Smooth PDP)

DEF&FOC QTY (1Y) par MODEL



DEF&FOC QTY (1Y) par Défauts





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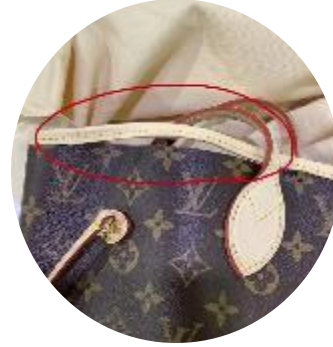
CUSTOMER PHOTOGRAPHS

Not held by the stitching

Unstitched loose

Cut by the stitching

Irregular stitching



Loose stitching

Burnt stitches

KO hand

Fixed loop stitch

KO chape stitching





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CAUSES

Design rules not complied with/unknown

Process parameters not complied with/unknown

Beau Geste not yet mastered

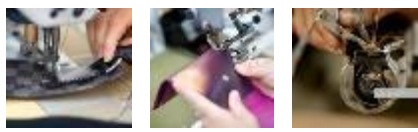


Self-checks not carried out



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PART 1: THE BASICS OF STITCHING



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DEFINITIONS OF THE STITCHING ON A PRODUCT

The specific criteria for a product, such as thread colour, tone on tone or contrasting or saddle stitches, are provided in the Go Style report. If a stitch is not specified in the Go Style guide, use the generic criteria of the Design Guide instead.

COMPTE-RENDU GO STYLE

NEW DISCOVERY BACKPACK PM MNG HERITAGE



SKU/ PDM:	M12780
COLLECTION :	MNG HERITAGE
SITE :	BARBERA
DESIGNER :	Joel Kröll
CS :	Laura Cornand
Maquette de réf. n°	DUPLI
Présentation le	10/04/2024
Objectif de GoProd	TDC CCPM
GO STYLE	○ Dernière présentation Style
GO SOLIDITE	▲ Risques spécifiques à lever avant GoProd

GUIDE DE CONCEPTION MAROQUINERIE



Direction Industrielle Service Qualité

PARTIE CS/CDP

Intitulé	Photos	Commentaires	Statut
Codes de la ligne		<p>Corps : kit Toile PU BIOSOFT MNG HERITAGE Ver</p> <p>Quartiers : Plutone Mar Ver T/T</p> <p>Doublets : Twill Ver</p> <p>PMB: Argemé Brun sur Ver</p> <p>Filet T/C Mar. de N. Nickel, curseur Argenté Brut</p> <p>Fils : T/T</p> <p>Marquage interne sur le intérieur : à chaud</p> <p>Cordons et boutons : Ver T/T</p>	<p>○ OK sur maquette</p>



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DEFINITIONS

Stitching tasks are usually found downstream. Stitching can be assembly stitching or decorative stitching.

Reinforcement stitching

Decorative & finishing stitching

Handle stitching

Chape stitching

Topstitching

Gusset stitching

Upper body stitching
(reinforcement stitching)

Bottom stitching



NéoNoe BB bag



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DEFINITIONS

Stitching tasks are usually found downstream. Stitching can be assembly stitching or decorative stitching.

Reinforcement stitching

Stitching to assemble the flap to the body of the bag

Flap stitching

Double gusset stitching

Handle stitching

Vertical patch pocket stitching

Separation stitching

Upper body stitching

Bottom stitching

Decorative & finishing stitching

Upper body strap stitching

Upper patch pocket stitching

Upper separation stitching



Capucines mini bag



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DEFINITIONS

Stitching tasks are usually found downstream. Stitching can be assembly stitching or decorative stitching.

Reinforcement stitching

Finishing stitching (all around the product)

PCC stitching on the gorge

Bottom stitching

Upper gorge stitching

Zipper stitching



PF Victorine

Decorative & finishing stitching



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DEFINITIONS

Stitching tasks are usually found downstream. Stitching can be assembly stitching or decorative stitching.

Reinforcement stitch

Shoulder strap chape stitching



Shoulder strap stitching



Shoulder strap

Decorative & finishing stitching



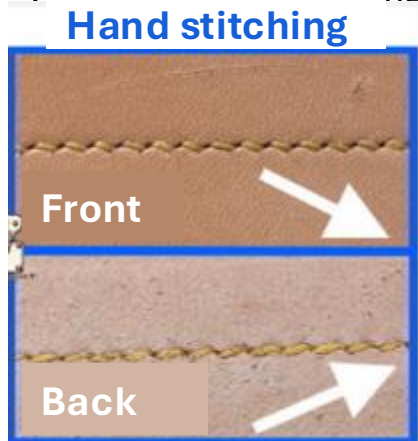
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DEFINITIONS

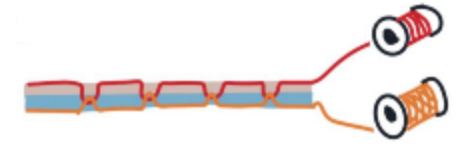
Hand stitching



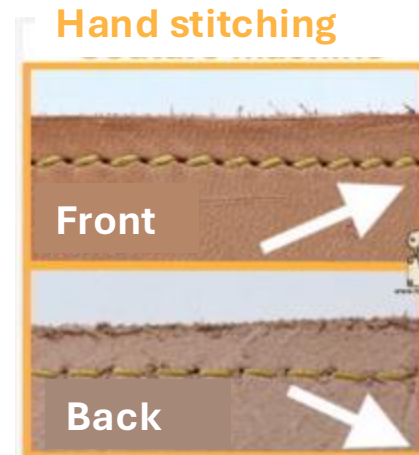
- Use: Rarely used at LV, only on leather handles and fixed loops
- Number of needles: 2 needles (straight or curved) and a waxed thread
- Process: The thread passes through the pieces of leather using two needles and a thread to make a knot. If ever the thread breaks, the stitching will not come undone. (Only on leather)
- Pros: Durable
- Cons: Time consuming and ergonomics



Machine stitching



- Use: Widely used at LV
- Number of needles: 1 needle
- Process: The threads cross within the pieces of leather but always remain on their respective side, each thread holding the other. If one of the threads break, the stitching can come undone because the second thread is no longer held in place by the first.
- Pros: Fast labour time
- Cons: Less durable





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DEFINITIONS

Type of stitch:

The stitch used is a signature of the Maison, and it varies according to the material used. Maison LV uses two types of stitches:

- The straight stitch
- The saddle stitch

The needle will be different depending on the stitch used.

Saddle stitch



Straight stitch



Correlation guide

MATERIAL	TYPE OF STITCH
Fabric and textile	Saddle stitch
Outer leather	Saddle stitch
Inner leather	Saddle stitch or straight stitch tolerated if using a CNC sewing machine
Patent leather	Straight stitch
Grained Epi leather	Straight stitch
Other leathers	Saddle stitch

*This varies according to the type of CNC sewing machine used



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DEFINITIONS

Stitch length

It will vary according to the product family. This is also a signature component of Maison LV.
It is measured with a stitch gauge

STITCH LENGTH	
Leather goods	3 over 11 – 12 mm
Small leather goods	4 over 10 – 11 mm
Fine leather goods	4 over 11 – 12 mm
Luggage	3 over 13 – 14 mm
Empreinte component line	3 over 10 – 11 mm

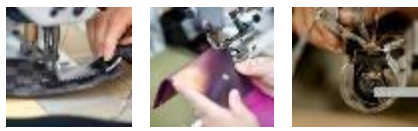


Stitching distance

It will vary according to the product family, the piece being stitched and components around the seam.
It is measured with a shim

STITCHING DISTANCE Leather work		STITCHING DISTANCE Small leather goods
With grooving	3 mm from the edge	2.5 mm from the edge
Without grooving	2.5 mm from the edge	
Badge/patch without grooving	1.5 mm from the edge	1.5 mm from the edge
Textile shoulder straps	4 mm from the edge	
Patch pocket assembly on lining	3 mm from the edge	2.5 mm from the edge





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DEFINITIONS

Thread size

The thread size, used to define a thread includes 2 elements:

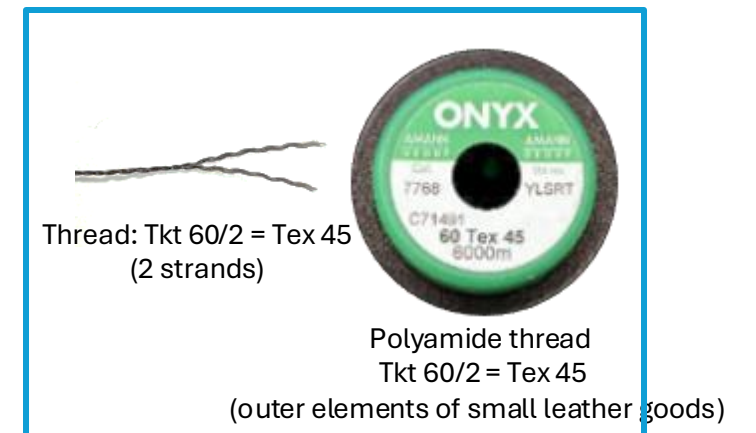
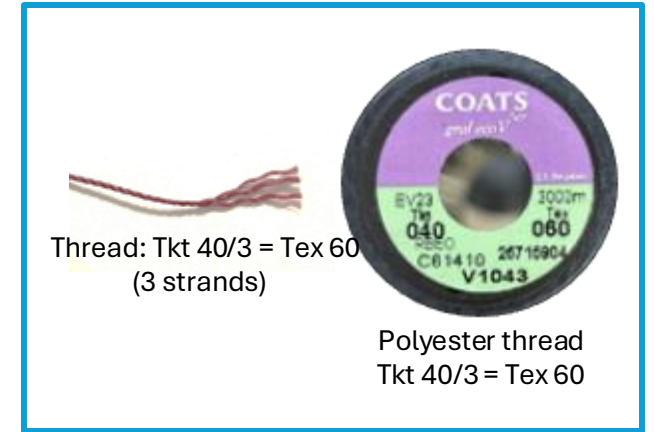
40/3

An indication of thread thickness: using Tkt and Tex

An indication of the number of strands: number of strands that make up the thread

Tkt: Inversely proportional to the thickness of the thread: A larger number means a thinner thread.

Tex: Directly proportional to the thickness of the thread: A larger number means a thicker thread. The thread has a crucial role in the resistance and appearance of the stitching, the thread size will vary depending on the type of stitching required.



Stitch type	Thread size	
Assembly/Mounting and Outer stitching	20/3 top	30/3 bottom
Lining stitching	30/3 top	30/3 bottom
Components	20/3 top	20/3 bottom
Chape	20/3 top	20/3 bottom
Badge and inner openings	20/3 top	20/3 bottom
Badge and inner openings	20/3 top*	20/3 bottom*
Small leather goods	40/3 top	40/3 bottom
Ornament stitching	80/3 a authorised on the bottom	
CC slot separation	80/3 bottom	
Luggage	20/3 top	20/3 bottom
Empreinte leather goods line DNA	15/3 top	30/3 bottom
Empreinte component line DNA	15/3 top	20/3 bottom
Empreinte small leather goods line DNA	20/3 top	40/3 bottom

* L'utilisation de fil 30/3 est également acceptée





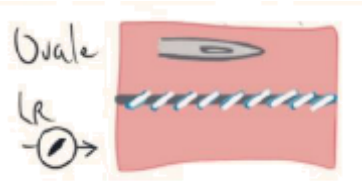
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DEFINITIONS

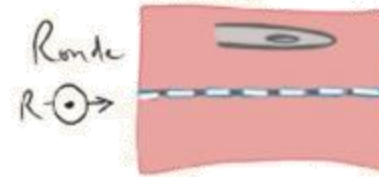
Type of needle

The type of stitch will depend on the type of needle used. There are two main types of needle:

Oval needle = saddle stitch



Round needle = straight stitch





STITCHES

NOTE

A saddle stitch **must be 100% saddle except for double stitches**

When the **same seam** goes through **different types of material**, choose the appropriate stitch (saddle or straight) for the dominant material.

Type d'aiguille	Needle	Material	Correlation guide	
Point Sellier 	LR, LL	Soft leather	MATERIAL	TYPE OF STITCH
	VR, LR	Hard thick leather	Fabric and textile	Saddle stitch
	All + P, PCL, PCR	Medium hard leather	Outer leather	Saddle stitch
Point Droit 	LR, LL	Textile lining	Inner leather	Saddle stitch or straight stitch tolerated if using a CNC sewing machine
	SD,R	Soft leather	Patent leather	Straight stitch
	DI,D,DH	Hard thick leather	Grained Epi leather	Straight stitch
	All+S	Medium hard leather	Other leathers	Saddle stitch
	SD, R, S	Textile lining		
	Reco in construction / Use R for coated fabric	Fabric and textile		

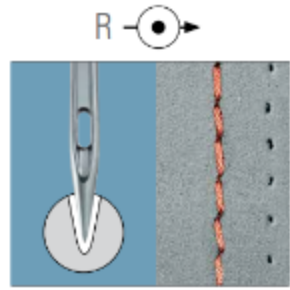
Needle size (nm)	Thread size
65 - 75	80/3
90 - 110	40/3
100 - 120	30/3
110 - 130	20/3
130 - 160	15/3



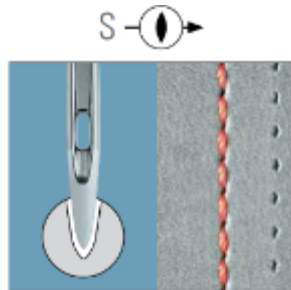
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NEEDLE CHARACTERISTICS:

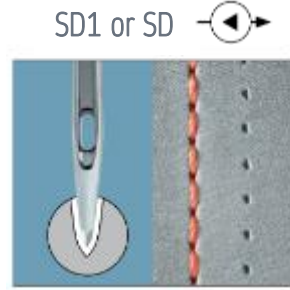
Main types of needle tip



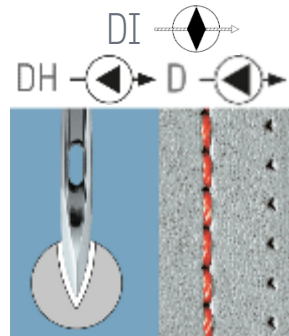
- Standard round tip with no cutting action
- **Straight stitch**
- Soft leathers and textiles
- Multidirectional applications (CNC sewing machine)



- Cuts the leather in the direction of the stitching
- **Straight stitch**
- Longitudinal and clearly visible penetration holes in the seam
- Soft or medium-hard leathers



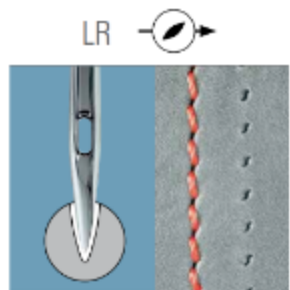
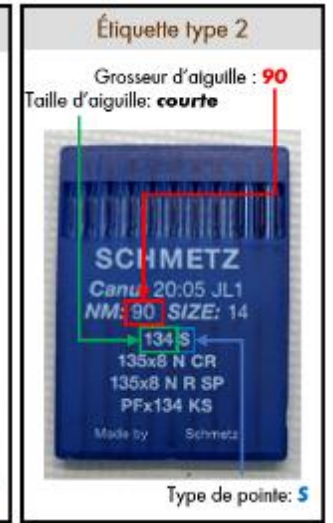
- Round tip with polished triangle in the outer part of the tip
- **Straight stitch**
- Multidirectional applications (CNC sewing machines)
- Leathers, textiles and plastics



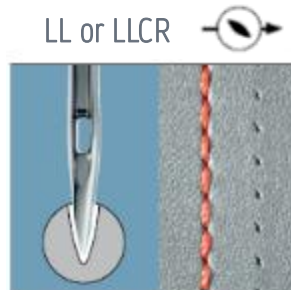
- Triangular tip D: Hard DH: Medium-hard. DI: Rhombic tip
- **Straight stitch**
- Hard and very hard leathers
- Multidirectional applications (CNC sewing machines)



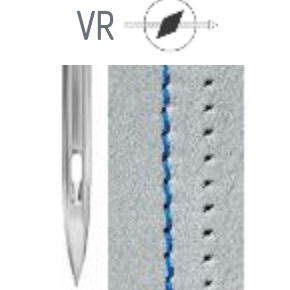
- Light ballpoint tip
- **Straight stitch**
- Woven materials (prevents fabric from fraying)



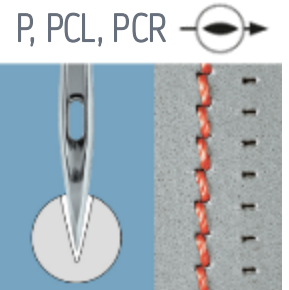
- Cuts the leather 45° to the right of the direction of the stitching
- **Saddle stitch**
- Highly visible angled penetration holes
- Soft to medium-hard leather



- Cuts the leather 45° towards the left of the direction of the stitching
- **Saddle stitch** (If hook to the left of the needle LL and LLCR, it produces a finish similar to LR with a hook to the right)
- All type of leather
- 2-needle or left post-bed applications



- Rhombic tip with a 45° angle to the right
- **Saddle stitch**
- Better cutting capacity than the LR tip
- Hard and very hard leathers



- Cuts the leather at a 90° angle to the direction of the stitching
- **Saddle stitch**
- Medium-hard leathers
- The shape of the PCx tips provides more protection for the thread. PCL: use if right hook. PCR: use if right hook.

Machine systems (needle size):

- **134** : short needle (dual feed sewing machine)
- **134-35**: long needle (triple feed sewing machine)

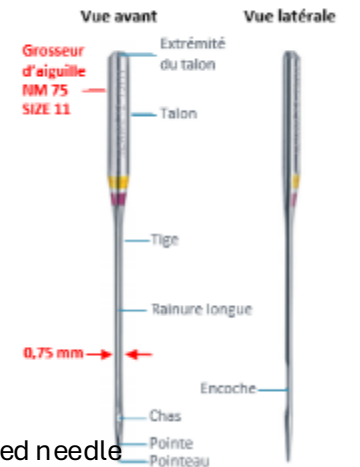
Other possible types of needle:

- **LR2**: polished LR tip needle
- **KKS** : S tip needle with a short heel
- **SAN12** : specific for 2-needle sewing machines
- **GEBEDUR**: Groz-Beckert titanium nitride-coated needle (gold colour)
- **SERV100**: SCHMETZ titanium nitride-coated needle (gold colour)



- Standard chrome-plated needle
- GEBEDUR needle (Groz-Beckert)
- SERV 100 needle (Schmetz)

Structure de l'aiguille





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STITCHING FINISH

The stitching finish is the way the stitching is completed. It will depend on whether the stitched component is stressed or not. It secures the stitching and ensures it will hold against all types of uses and wear.

The start and/or end of stitching are subjected to traction or friction (almost all seams)

Endpoints = Product RESISTANCE: 3 points 2

passes BACK-AND-FORTH (Back stitching)

⇒ Endpoints + thread burning top and bottom

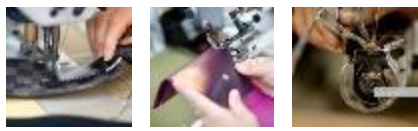
⇒ Endpoints + drawing and gluing the ends of the thread along the seam, only on rigid materials.

Or Option of drawing + **knotting** + gluing the ends of the thread along the seam without a mandatory endpoint

The start and/or end of stitching are not subjected to traction or friction (not visible)

Finishing stitches = APPEARANCE of the product.

⇒ 1 pass on the 3 stitches at the start of the seam + gluing/drawing.



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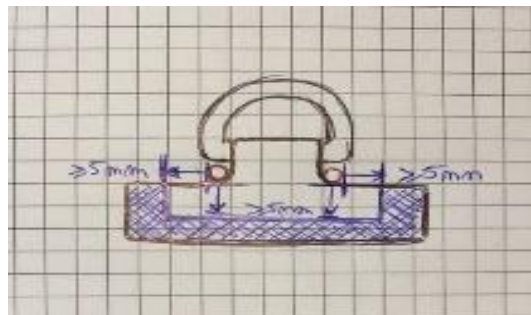
CHAPE STITCHING LINE

The stitching line is the direction for stitching. It is defined during the development stage in accordance with the design guide.

You must comply with this stitching line.

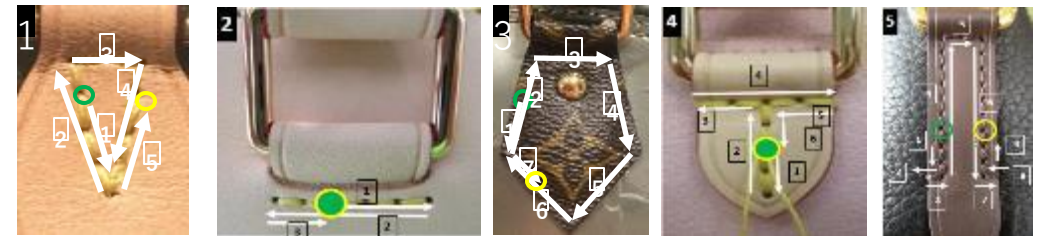
RULES



- Do not start or end the stitching in areas subjected to tension and friction.
- Do not stitch in skived parts.
Except for T-shaped chape. If skiving is required, always follow the areas represented on the diagram opposite
- Always use **20/3 thread on top and 20/3 below** for chapes.

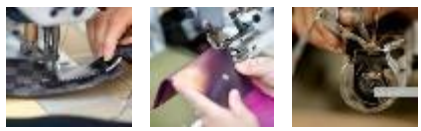


STITCHING LINES → MOST USED BY THE MAISON

- Do not start or end the stitching in areas subjected to tension and friction.
- Endpoints required at the start and end of the stitching.



- Key:**
 - Start of the stitching: 
 - End of the stitching: 



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MACHINE TYPE

There are several types of machines, the machine used is defined according to the type of assembly and product.

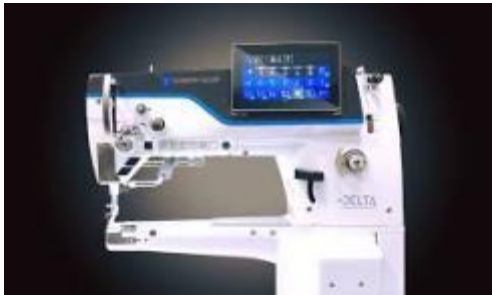
Flat-bed sewing machine



CNC sewing machines



Cylinder-bed sewing machine



Special machine



Post-bed sewing machine



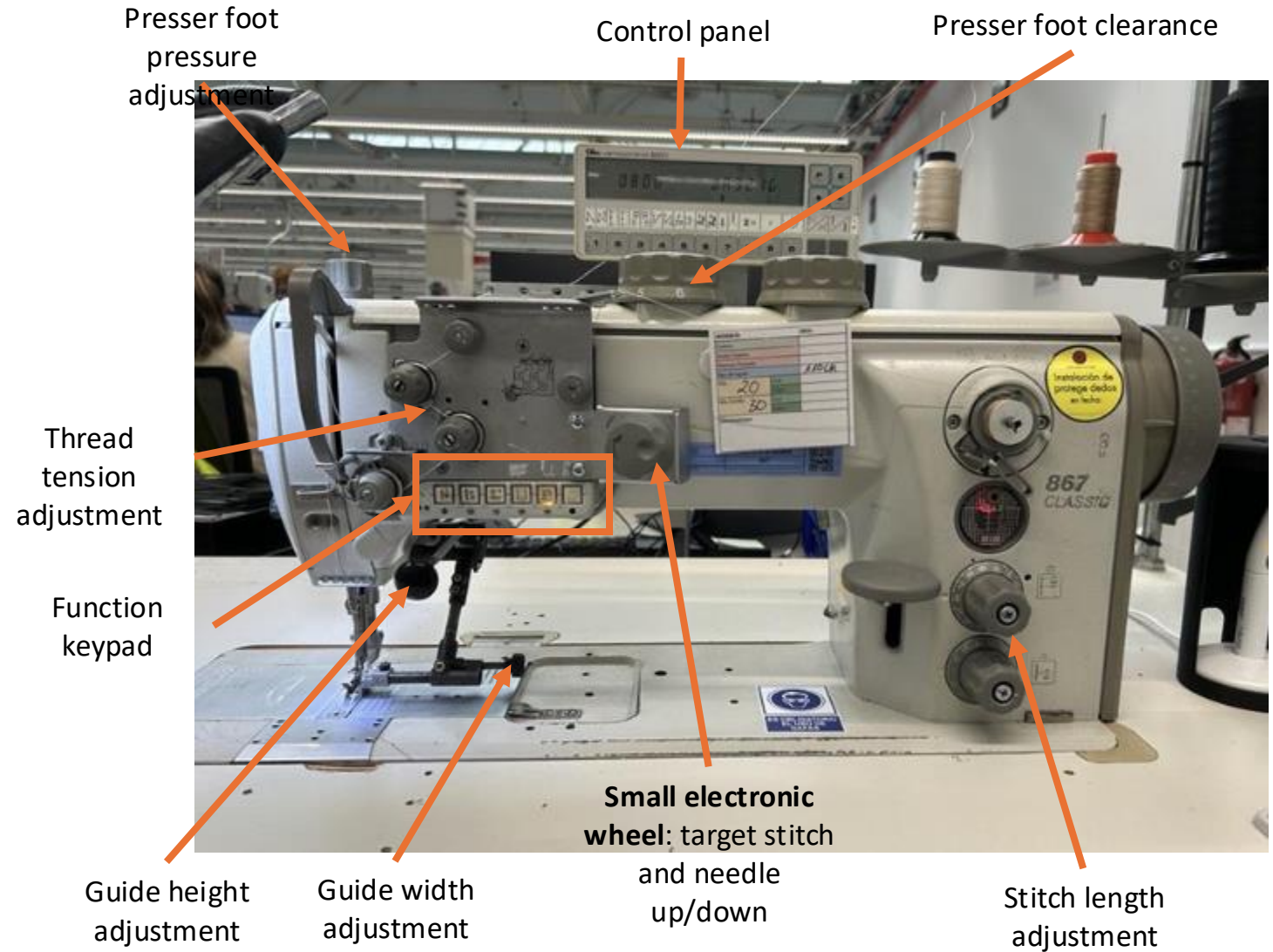


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MACHINE SETTINGS

Important machine parameters:

- Machine suitable for the type of assembly
- Thread size and type
- Needle type and condition
- Guide type: Distance to edge
- Stitch length
- Thread tension,
- Bobbin adjustment
- Pressure
- Pressure foot type
- Endpoint positioning





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HAND STITCHING

Some finished products will required hand stitching on gussets, braided chains and fixed loops.
It is crucial to follow the stitching lines and finish to make sure these stitches are resistant.

There is a specific module to master this subject.

Module point Main

Cliquez pour ajouter un sous-titre



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THREAD BURNING AND GLUING

The thread burning and thread gluing processes will have a great impact on the finish of the stitching.
There is a specific module for these two processes.

Formation Brûlage et Collage des fils

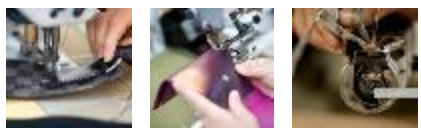
Support de Formation
Aout 2020
Emmanuelle S.
1 heure 30





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PART 2: CRITICAL PROCESS STANDARDS



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WORKSTATION STANDARDS

Ergonomics and safety

- Poster “Do not touch the wheel”

Start

- Test piece
- Machine threading direction

Operating Procedure - Instruction sheet

- Details of operation (start and end of stitching)
- Needle
- Thread
- Foot
- Bobbin direction
- Specific equipment: clamps, guide, edge guide



Monitoring

- Response sheet
- Alignment point

Quality

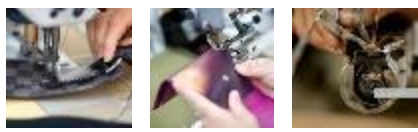
- Self-check form

Maintenance N1

- Oiling machines + other equipment

Tools

- Thread cutter
- Shim
- Stitch gauge
- Steel ruler
- Awl
- (Thread burner or thread glue)
- Machine oil
- Brush
- Screwdriver



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OPERATING PROCEDURE - INSTRUCTION SHEET

Operating Procedure - Instruction sheet

- Details of operation (start and end of stitching)
- Needle
- Thread
- Foot
- Bobbin direction
- Specific equipment: clamps, guide, edge guide

BELLA - AMBRE DE L'ASSOIR

P7 Montage doublure cavour (Pochette) TABLE

- 1 Mettre le renfort à 1 mm du bord sur le dos de la doublure corps (attention au sens de la microfibre)
- 2 Positionner la doublure cavour endroit contre l'endroit de la doublure corps au niveau de l'encoche
- 3 Débuter le piquage à **3 points + 1/2 point du bord**
Faire **2 passages sur 3 points d'arrêts**
- 4 Terminer le piquage avec 2 passages sur 3 points
Le coupe fils coupe à 2cm
- 5 Répéter les opérations 2 à 5 ci-dessus avec la deuxième doublure corps

Points de vigilance

1 Envers microfibre

Encoche

5

3/4

Placer le haut de la doublure cavour à cet endroit pour démarrer

3/4

Ne pas couper les fils

Ou utiliser le gabarit pour dessiner un repère

04/11/2021

Neverfull Toile	Piqure Bordure
Type de machine	Machine canon
Type de point	Point sellier
Aiguille	120 LR
Distance du bord	3mm
Fils dessus	20/3
Fils dessous	30/3
Longueur de points	3 points pour 11/12
Points d'arrêt	3 points en début et en fin
Outils/Guides spécifiques	Guide bordeur ressort
Date de création	28/09/2024

SKU	Code Fils
M94315 - NEVERFULL MNG NOIR	30/3 NOIR C09933
M94316 - NEVERFULL DAM EBENE	30/3 MARRON C09934



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START WITH OK - START WITHOUT OK

- Not systematic
- To be done in a targeted manner
 - Critical workstation
 - In case of change of SKU or PDM
- How:
 - Identify workstations at risk the method checklist + warning stickers
 - Team leader brief when change of SKU, reminder of the settings to be checked
 - Visually check the first or the last box (Be careful, change the settings)
- Prerequisite:
 - Operating procedure and instruction sheet at the workstation
 - Trained leatherworkers
 - Have start stitches to be checked



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SELF-CHECK SHEET

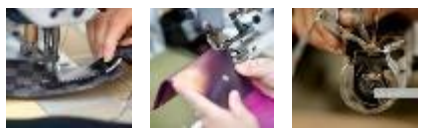
 **LOCATION: Workstation**
 **MANAGER: Quality** 

OBJECTIVE: List the self-check points specific to the stitching operation being carried out

6	PIQUIRE DES ENCHAPPES	POINTS D'AUTOCONTRÔLE BEAUBOURG	Avril 19
<p>RESISTANCE/FUNCTIONALITY</p> <ol style="list-style-type: none"> 1 Make sure the leather is not burnt 2 Make sure there are no aggressive stitches → Feel the stitches with your finger 3 Make sure overlapping stitches do not cut the material 			
<p>GENERAL / AESTHETIC APPEARANCE</p> <ol style="list-style-type: none"> 1 Check that the chape is correctly centred 2 Check that the chape is not off centre → tolerance of 0.5 mm 3 Check that the tab and the body are correctly aligned, edge to edge 			



- Standardise the stitching **RESISTANCE/FUNCTIONALITY** and **GENERAL APPEARANCE/AESTHETICS:** Most of the points related to the stitching are provided on the next slide.
- Optional specific elements can be added if necessary
- Carried out by the leatherworkers

















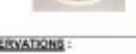


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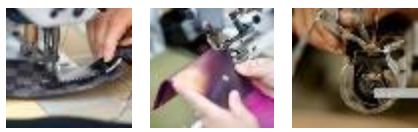
MAINTENANCE N1

 **LOCATION:** Line input  **OBJECTIVE:** Define the first maintenance operations that can be carried out by leatherworkers.

 **MANAGER:** Leatherworker

16-669 Fiche Préventif N1				
Nom équipement	Type équipement	Constructeur	Photo	Fréquence
MAC	669	DURKOPP		Hebdomadaire
Consignes de sécurité		EPI	Outils/Conso.	Temps total
- Machine arrêtée - Arrêt d'urgence enclenché			- Troussevis plat - Côté Alène - Pinceau - Côté Terc	15 min
Tâches à réaliser				
Temps alloué		Action		
5 min		Nettoyage de la plaque aiguille		
		1 - Aiguille enlevée, lever le pied manuellement. 2 - Dévisser la plaque aiguille. 3 - Nettoyer la plaque en appliquant du dégraissant avec le pinceau. 4 - Remonter la plaque.		
Temps alloué		Action		
15 min		Nettoyage du bloc crochet		
		2 - Enlever le capot conette et le boîtier conette		
		3 - Désosser l'archet avec un tournevis plat pour accéder à la capsule (3 vis)		
		4 - Enlever la capsule en alignant le trou avec la première vis du flasque aux trous situés sur le bras		
		5 - Dégraisser le bloc crochet et nettoyer l'intérieur (pinceau + gants + dégraissant)		
		6 - Nettoyer également les composants du bloc crochet au pinceau		
		7 - Lubrifier la rainure du crochet (une goutte d'huile)		
		8 - Remettre la capsule en s'assurant que les 2 trous soient bien alignés		
		9 - Vérifier que la capsule est bien positionnée et ne tourne pas.		
		10 - Remonter le tout en pré-vissant la vis du milieu de l'archet		
		11 - Vérifier le niveau d'huile, faire l'appoint si nécessaire		
		12 - Pincer sur un chiffon pour nettoyer l'excès d'huile du crochet.		

- N1 maintenance operation carried out by the leatherworkers
- Weekly schedule



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ALIGNMENT POINTS

 **LOCATION:** RPO zone  **OBJECTIVE:** Identify potential deviation at the workstation
 **MANAGER:** Team leader

PA 3.14.01 P | **Qualité** | # Ecart autocon
 # Ecart autocontrôle (aval)

To be improved



1. Self-check points are in place.
2. They are clearly visible and well positioned.
3. The leatherworker understands and carries out the self-check points.
4. The self-check point is consistent with the operation
5. The required self-check tools and masters are provided at the workstation

- Carried out during RPO field visits



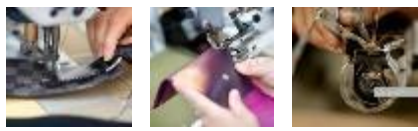
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PART 3: SPECIFIC MODULES



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DEVELOPER



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DESIGN GUIDE

All information related to stitching: stitch standard, stitch type, thread size, needle type, chape construction, stitching line can be found in the design guide.

It is regularly updated by the development quality team who are the referents.

Any stitching operation must comply with the design guide

GUIDE DE CONCEPTION MAROQUINERIE



Direction Industrielle Service Qualité

1

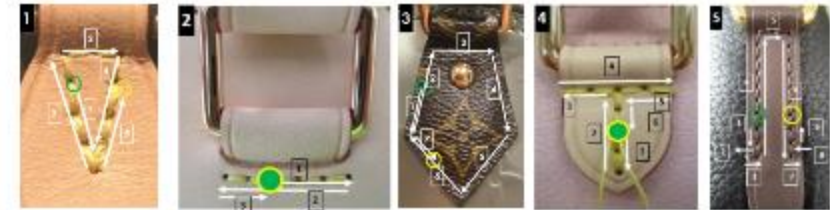
ENCHAPES ET RÈGLES DE PIQUAGE

- 1 - Les enchapes
- 2 - Les indéchirables
- 3 - Les chemins de piqûre
- 4 - Le piquage

LES CHEMINS DE PIQÛRE SUR LES DIFFÉRENTES ENCHAPES 2/3

CHEMINS DE PIQÛRE → LES PLUS UTILISÉS DANS LA MAISON

- Pas de démarrage ou fin de piqûre aux extrémités soumises à traction et à froissement.
- Points d'arrêts obligatoires en début et fin de piqûre.



Légende :

- Démarrage de la piqûre : ● (green)
- Fin de piqûre : ● (yellow)

Enchapes

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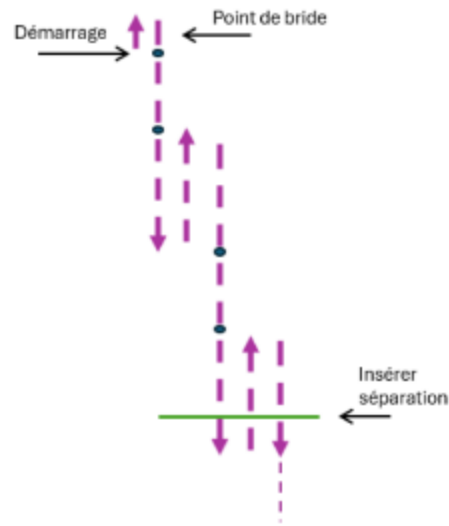


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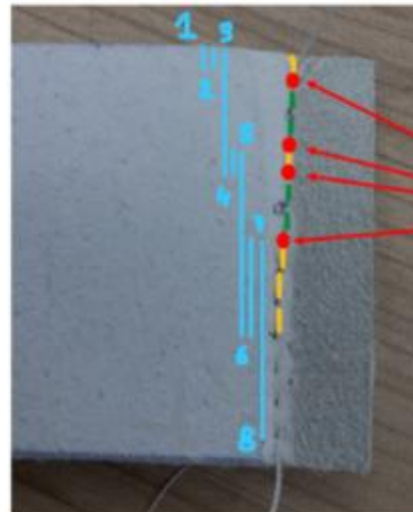
POINTS OF ATTENTION

Some operations may impact or compromise the stitching, so it is important to implement measures to ensure its durability over time. Here we have an example of the stitching line around the drilled holes for the chape of the Capucines bag

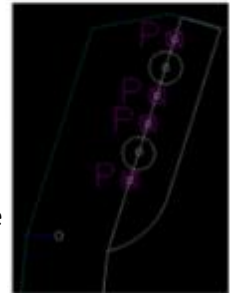
CAPUCINES ICONES MINI



Stitching line (front/back assembly)



- Stitching line (front/back assembly)
- Awls to be included in the tools
- > Guide the leatherworkers along the stitching line
- Yellow > endpoint
- Green > simple stitch
- Blue > stitching line
- Stitch length: 3 stitches for 11/12mm





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LEATHERWORKERS



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PROHIBITED PRACTICES

Make a stitching repair

Why?

- ⇒ Because it compromises the final product's structural integrity
- ⇒ Because it will not last

Good practice

- ⇒ If possible, unpick and restitch the piece, if not place it in the KO bin

Not follow the stitching line

Why?

- ⇒ Because the stitching line guarantees the stitching is resistant.

Good practice

- ⇒ Always follow the stitch line as defined in the design guide



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PROHIBITED PRACTICES

Tuck in a loose thread that has been incorrectly burnt/cut into the edge

Why?

⇒ Because it will come out again and create a loose thread

Good practice

⇒ Ensure the thread is burnt correctly by using the Thread Burning Beau Geste, with the knot properly centred at the middle of the edge

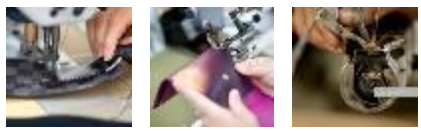
Not provide the defined pre-stitching.

Why?

⇒ The pre-stitching is used to hold the pieces that will be later assembled using the finishing stitching

Good practice

⇒ Always follow the pre-stitching as defined in the design guide



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PROHIBITED PRACTICES

Hand stitching with a thread other than Texam thread

Why?

⇒ Because the Texam thread is less slippery than a classic thread and helps the knot to hold better.

Good practice

⇒ Make sure you use Texam thread

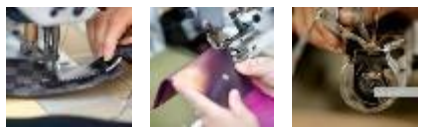
Add less than 3 endpoints at the end of a seam that is regularly stressed

Why?

⇒ The endpoint is resistant because of the use of 3 endpoints

Good practice

⇒ Add 3 endpoints at the end of a seam that is regularly stressed



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PROHIBITED PRACTICES

Finish your stitching with a saddle stitch.

Why?

⇒ Because there is a greater risk that it will come apart over time.

Good practice

⇒ Add 3 endpoints after the saddle stitch to ensure the stitching is resistant

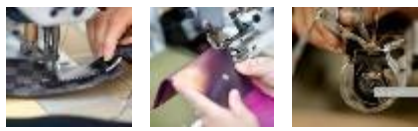
Have the beautiful flawless seam inside the product

Why?

⇒ Because the signature of the Maison is to have the beautiful seams on the outside of the product.

Good practice

⇒ Stitch on the outside of the product (except for some products)



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DEFAULT LIBRARY AND TOLERANCES

Stitching tolerances are included in the design guide. If in doubt, you can contact your quality referent in the workshop

STITCHING TOLERANCE



VISIBLE BOBBIN THREADS (leather goods and small leather goods)

3 stitches MAX returning on a 7-cm circular area

Unless the threads are of different colour + outer side of the product: 1 stitch MAX returning on a 7-cm circular area

Unless INNER SIDE of small leather goods (Tone on tone and different colour threads): 6 stitches max
(if 2 consecutive stitches at the saddle stitch, 2*2 consecutive stitches are authorised)

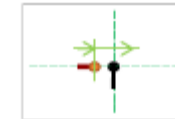
STITCHING JUNCTION

Leather goods	Nominal	Underlap or overlap
Stitching Junction BOTTOM	Stitch -in- stitch	2 mm max (value - 1/2 stitch)
Stitching Junction FRONT and SIDE		0,5mm max

Point dans Point = OK



1/2 point en retrait = OK



Small leather goods

Nominal: Stitch-in-stitch

Tolerance: 1/2 stitch underlap OR 1/2 stitch overlap

SADDLE STITCHES

Tolérance	Maroquinerie	Petite Maro
Mini	2 mm	
Maxi	5 mm	4 mm





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DEFAULT LIBRARY AND TOLERANCES

Pictures of stitching defects.





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METHODS AND MAINTENANCE

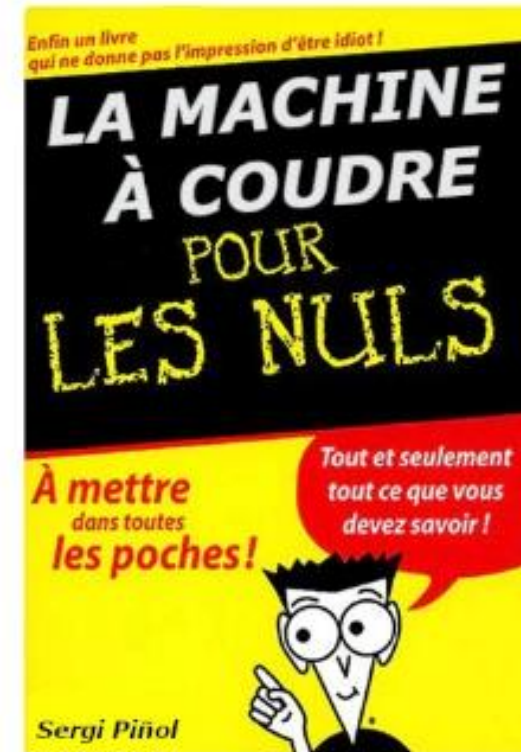


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SELECTING THE SEWING MACHINES

There is no flowchart to help choose the sewing machines; the decision is left to the workshop. Teams can discuss this with prototyping centre to get some idea of the machines to be used.

A catalogue of machines is available on the Louis Vuitton Standards SharePoint for the Workshops.

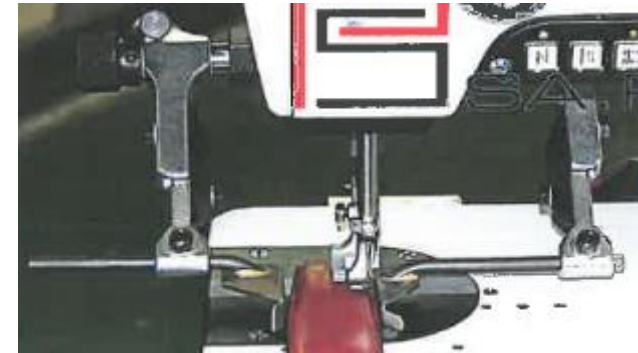
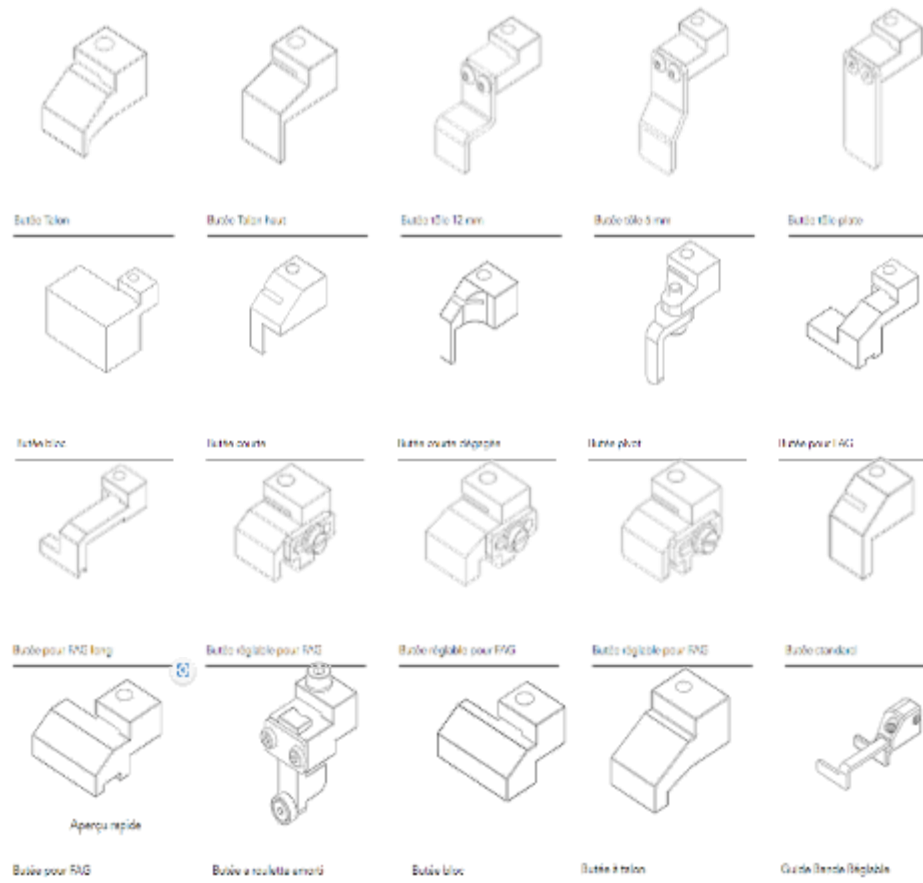




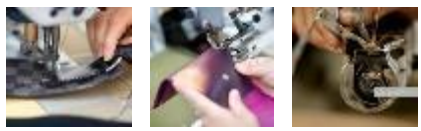
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FOCUS ON GUIDES

The guide is essential to maintaining the position of the workpiece in relation to the needle/stitching. There are many different versions. On digital machines, the X and Z distance of the guide can be modified depending on the program. Several distances may be available on a program for each segment.



The guide can be used to the right or to the left



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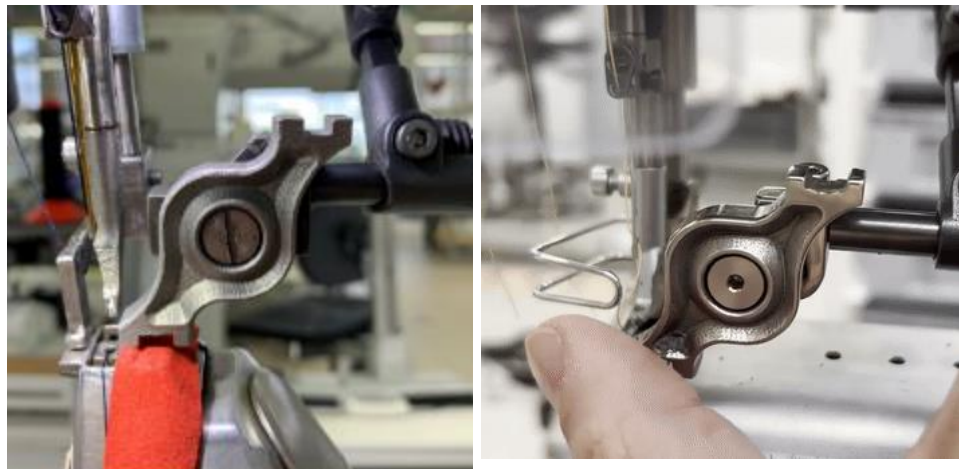
GUIDE EXAMPLES

Here are a few examples of current guides. To find out more, you can refer to the training course aimed at the machine referent.

Special guides, such as guides for



Guide 2 positions FAG ouverte / fermé v1



Guide 2 positions FAG ouverte / fermé v2

Edge guides

Edge guide: for stitching borders and trimmings



Edge guide with spring to absorb variable thicknesses



Edge guide + piping: to add piping and trimmings





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CNC SEWING MACHINES

In addition to the machines we use in the workshop, we also have CNC sewing machines. When installing these CNC sewing machines, ensure that the stitches it produces meet quality standards:

- Thread size
- Stitch type: straight or saddle stitch
- Stitching line

In case of non-compliance with these standards, contact the technical management team to ensure that the appropriate machine is being used, and the workshop quality manager for possible exemptions.

Turning-head CNC sewing machine



Juki AMS-251

Rotating plate CNC sewing machine



Linea20 R14



Mitsubishi PLK-J360°

CNC sewing machine with a rotating sewing mechanism



Dürkopp 911Revolve



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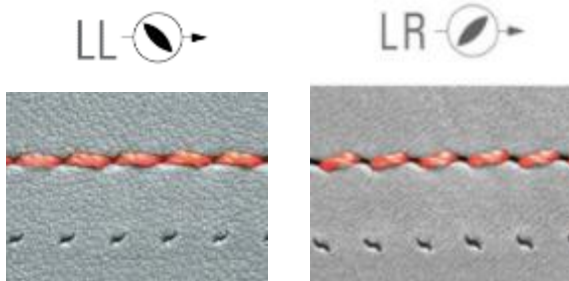
ADJUSTMENT FOR SADDLE STITCHES

The saddle stitch is a signature of the Maison; it must be used on leather products (except patent leather and epi leather, see design guide).

The settings for this saddle stitch vary depending on the machines used.

Machine: Flat-bed, cylinder-bed,

The appearance of saddle stitch can be simulated on a machine using diamond-shaped needles (LR or LL type). These needles make an angled hole in the leather, which generates angled stitches, similar to the hand saddle stitch.

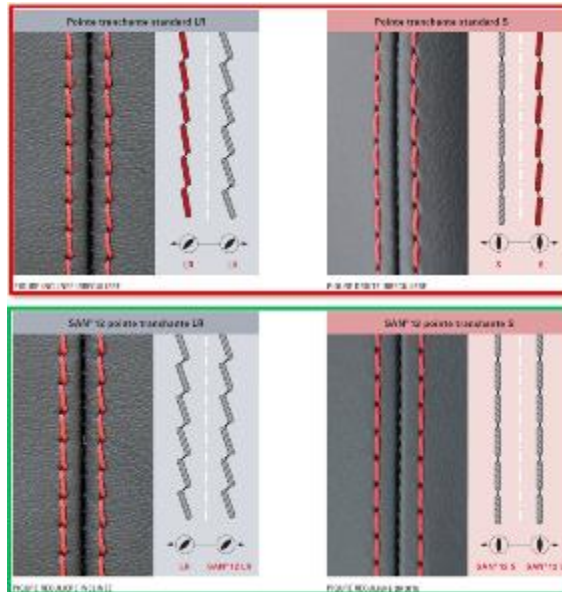


Machine: 2-needle stitching

To produce a saddle stitch on both sides when sewing on a 2-needle machine, you must not use the same needle on both sides.

The best results are achieved with the special Groz Beckert SAN12 LR or SCHMETZ LLCR needles

[Link to the Savoir-Faire Wiki on this topic.](#)



Machine: CNC sewing machines

You can get a good quality saddle stitch in all directions in an automated quilting with classic machines because we cannot guarantee that the needle always works in the right direction to create the saddle stitch.

However, better results are obtained with machines with a vertical axis hook than with horizontal axis machines.

To create a proper saddle stitch in all directions in a CNC sewing machine, you must use rotary machines (rotary head, rotary table or rotary needle). (see slide on the CNC sewing machine)





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STITCHING HELP AND POKA YOKE

There are tools that can help leatherworkers to achieve proper stitching. We are increasingly finding these tools to reduce the mental load on our leatherworkers. A few examples

Remote vision guide

It helps the leatherworker to see hidden parts of the piece he/she is working on



Awls and notches

Awls and notches are used as guides for stitching and they generally indicate where to start stitching



Clamps/Templates

They are used to position and hold the different pieces in place during operation



Poka Yoke templates

In addition to holding the piece in place for stitching, it helps to ensure a component is in the right position, such as positioning a handle or checking for the presence of a half-round D-ring



Poka Yoke



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QUALITY



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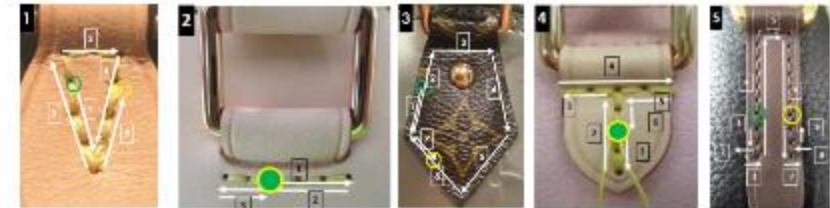
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Enchapes

Direction Industrielle Service Qualité