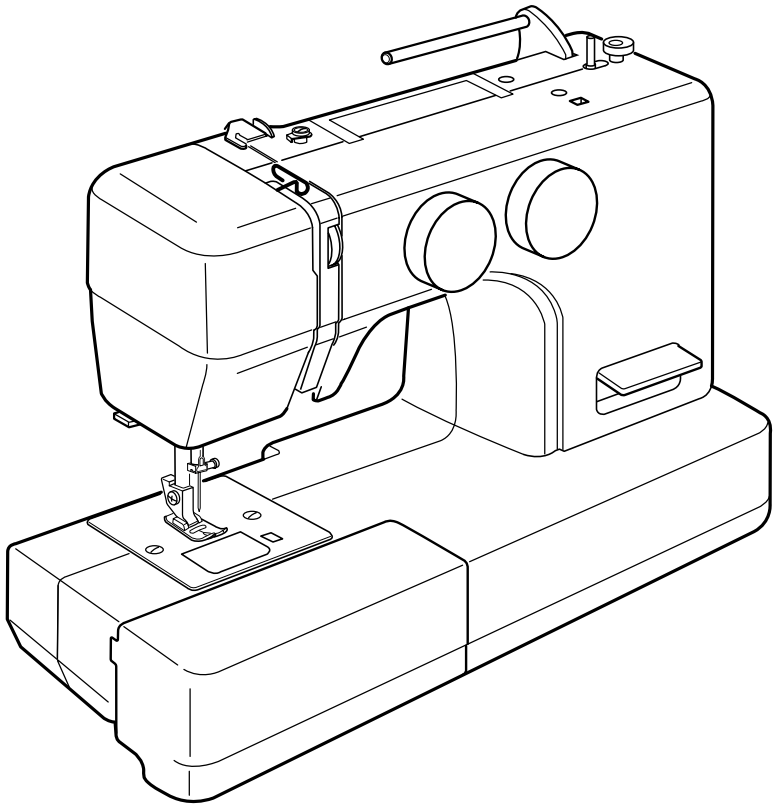
Instruction Book



IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic safety precautions should always be followed, including the following:

This sewing machine is designed and manufactured for household use only.

Read all instructions before using this sewing machine.

DANGER— To reduce the risk of electric shock:

1. An appliance should never be left unattended when plugged in. Always unplug this sewing machine from the electric outlet immediately after using and before cleaning.

WARNING— To reduce the risk of burns, fire, electric shock, or injury to persons:

1. Do not allow to be used as a toy. Close attention is necessary when this sewing machine is used by or near children.
2. Use this appliance only for its intended use as described in this owner's manual. Use only attachments recommended by the manufacturer as contained in this owner's manual.
3. Never operate this sewing machine if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return this sewing machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air opening blocked. Keep ventilation openings of this sewing machine and foot controller free from accumulation of lint, dust and loose cloth.
5. Never drop or insert any object into any opening.
6. Do not use outdoors.
7. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
8. To disconnect, turn all controls to the off ("O") position, then remove plug from outlet.
9. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
10. Keep fingers away from all moving parts. Special care is required around the sewing machine needle and/or cutting blade.
11. Always use the proper needle plate. The wrong plate can cause the needle to break.
12. Do not use bent needles.
13. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
14. Switch this sewing machine off ("O") when making any adjustment in the needle area, such as threading the needle, changing the needle, threading the bobbin or changing the presser foot, and the like.
15. Always unplug this sewing machine from the electrical outlet when removing covers, lubricating, or when making any other adjustments mentioned in this owner's manual.

SAVE THESE INSTRUCTIONS

For Europe only:
This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

For outside Europe (except U.S.A and Canada):
This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
Children should be supervised to ensure that they do not play with the appliance.



Please note that on disposal, this product must be safely recycled in accordance with relevant National legislation relating to electrical/electronic products. If in doubt please contact your retailer for guidance. (European Union only)

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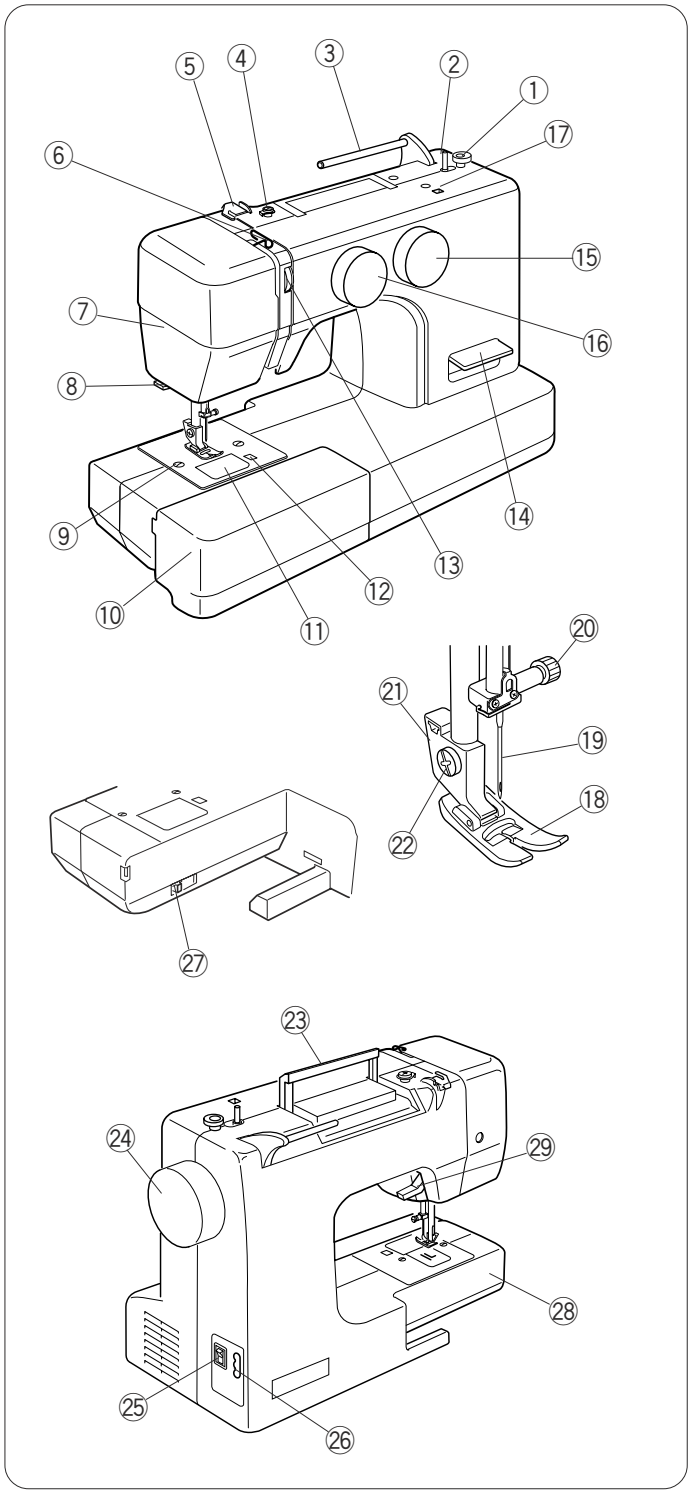
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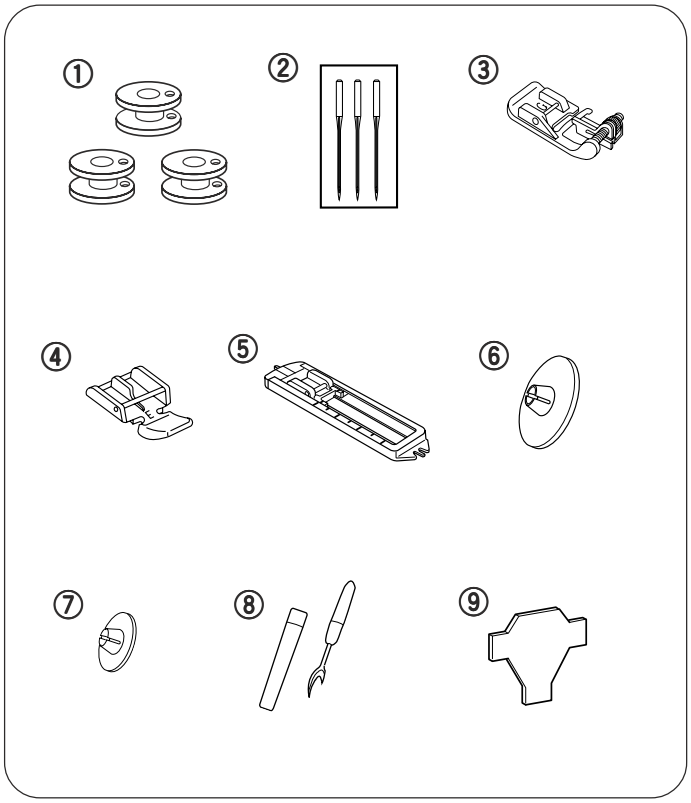
SECTION I. NAMES OF PARTS



Names of Parts

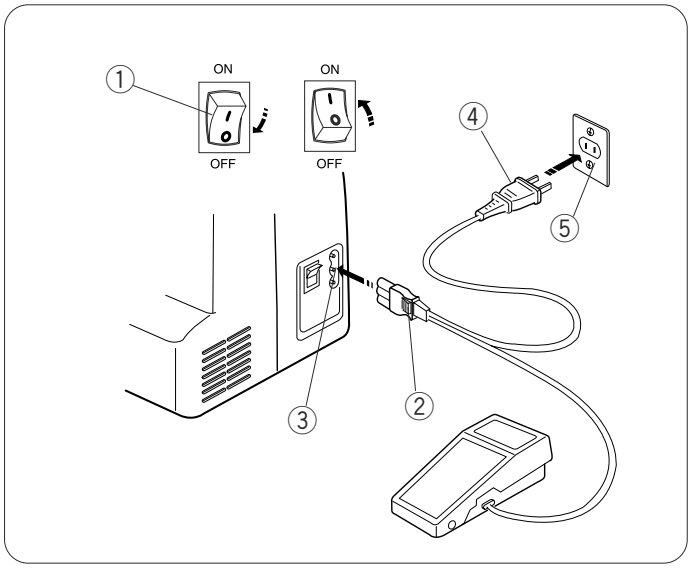
① Bobbin winder stopper
② Bobbin winder spindle
③ Spool pin (page 8)
④ Bobbin winding tension disc
⑤ Thread guide
⑥ Thread take-up lever
⑦ Face plate
⑧ Thread cutter
⑨ Needle plate
⑩ Extension table (Accessory storage)
⑪ Hook cover plate
⑫ Hook cover plate release button
⑬ Thread tension dial
⑭ Reverse stitch control
⑮ Stitch length control dial
⑯ Stitch pattern selector dial
⑰ Hole for additional spool pin
⑱ Presser foot
⑲ Needle
⑳ Needle clamp screw
㉑ Foot holder
㉒ Setscrew
㉓ Carrying handle
㉔ Handwheel
㉕ Power switch
㉖ Machine socket
㉗ Drop feed dogs lever
㉘ Free-arm
㉙ Presser foot lifter

NOTE:
Sewing machine design and specifications are subject to change without prior notice.



Standard Accessories

① Bobbins
② Needles
③ Blind stitch foot: G
④ Zipper foot: E
⑤ Sliding buttonhole foot
⑥ Spool holder (Lrage)
⑦ Spool holder (small)
⑧ Seam ripper
⑨ Screwdriver



SECTION II. GETTING READY TO SEW

Connecting Machine to Power Supply

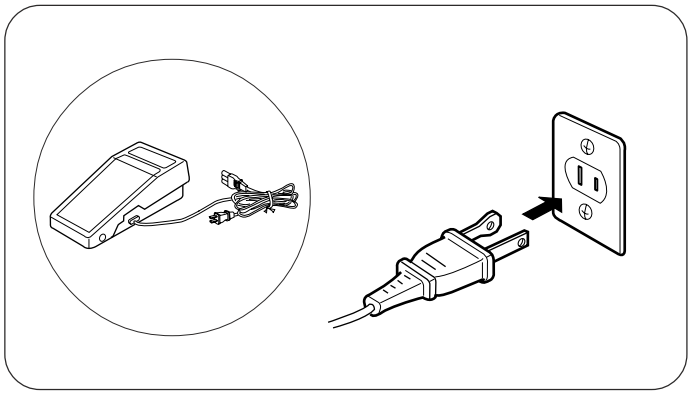
① Power switch
② Machine plug
③ Machine socket
④ Power supply plug
⑤ Wall outlet

Before connecting the power cord, make sure the voltage and frequency shown on the machine conform to your electrical power.

1 Turn the power switch off ①.
2 Insert the machine plug ② into the machine socket ③.
3 Insert the power supply plug ④ into the wall outlet ⑤.
4 Turn the power switch on ①.

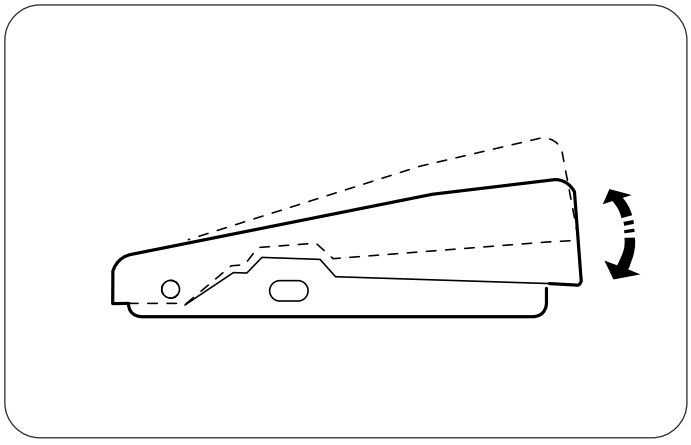
Before Using Your Sewing Machine

Before using your sewing machine for the first time, place a scrap of fabric under the presser foot and run the machine with thread for a few minutes. Wipe away any oil which may appear.



For Your Safety

* While in operation, always keep your eyes on the sewing area. Do not touch any moving parts such as the thread take-up lever, handwheel or needle.
* Always turn off the power switch and unplug from the power supply:
  - When leaving the machine unattended.
  - When attaching or removing any parts.
  - When cleaning the machine.
* Do not place anything on the foot control when not sewing.



Controlling Sewing Speed

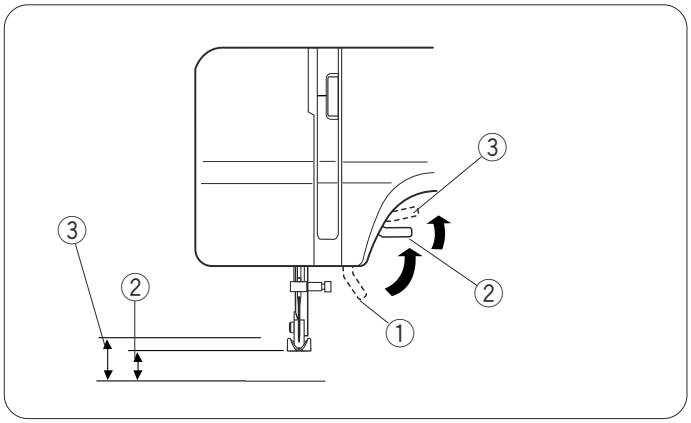
Sewing speed is varied by the foot control.
The harder you press on the foot control, the faster the machine runs.

Operating Instructions:

The symbol "O" of a switch indicates the "off" position of a switch.

For an appliance with a polarized plug (one blade wider than the other):
To reduce the risk of electrical shock, this plug is intended to fit in a polarized outlet only one way.
If it does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.

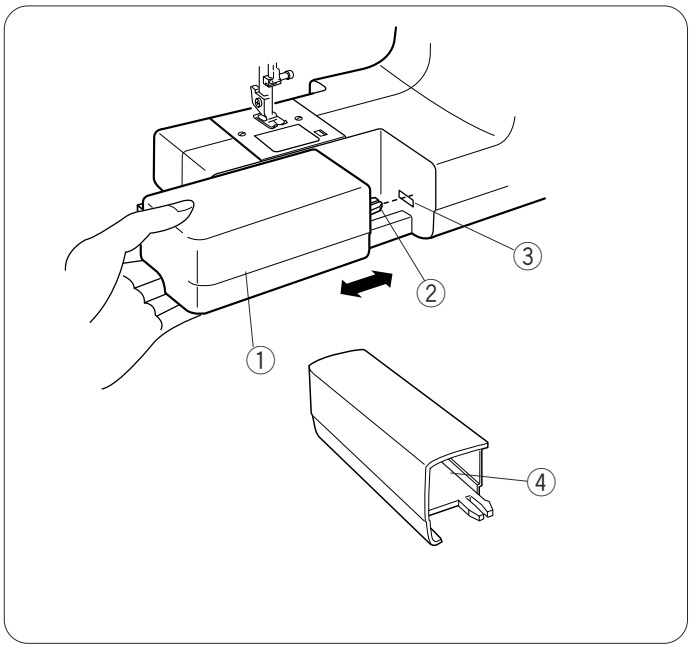
The foot controller Model YC-482J or TJC-150 is used with this sewing machine (USA market only).



Presser Foot Lifter

The presser foot lifter raises and lowers the presser foot.

You can raise the foot about 1/4″ (0.6 cm) higher than the normal up position for easy removal of the presser foot, or to help you place heavy fabric under the foot.
① Lowered position
② Normal up position
③ Extra up position



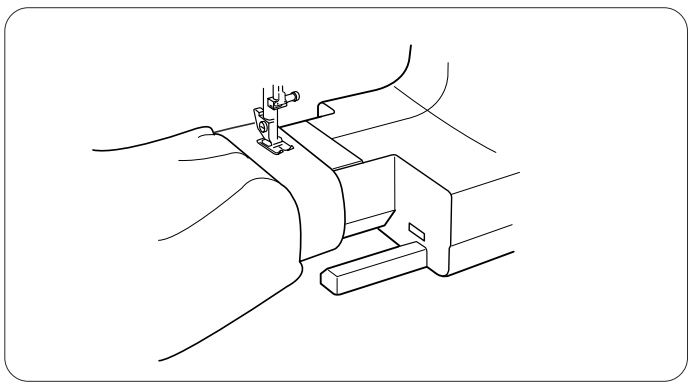
Extension Table

The extension table provides an extended sewing area and can be easily removed for free arm sewing.
The accessories can be stored in the table.

• **Detaching the table**
Pull the table away from the machine, as illustrated.

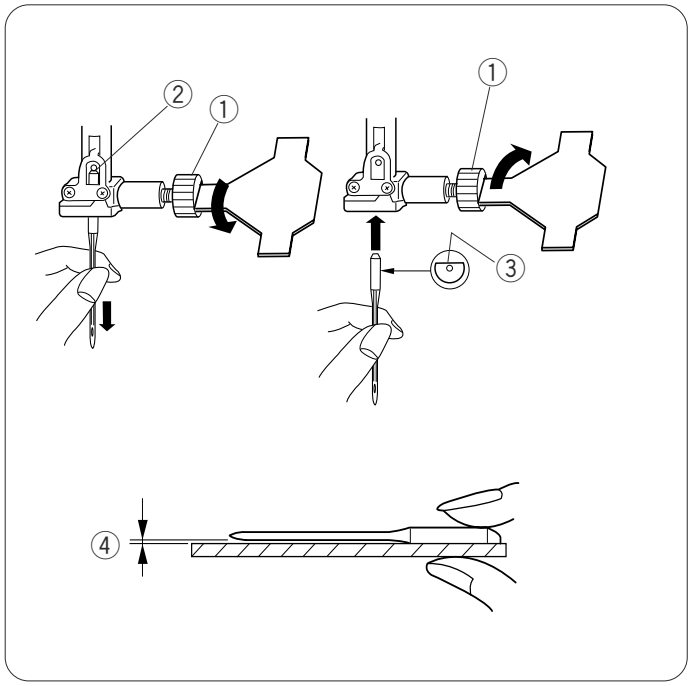
• **Attaching the table**
Push the extension table, inserting the tab into the slot until the table snaps into the machine.

① Extension table
② Tab
③ Slot
④ Accessory storage



Free-arm Sewing

Free-arm sewing is used for stitching sleeves, waistbands, pant legs or any other tubular garments.
It is also useful for darning socks or mending knees or elbows.



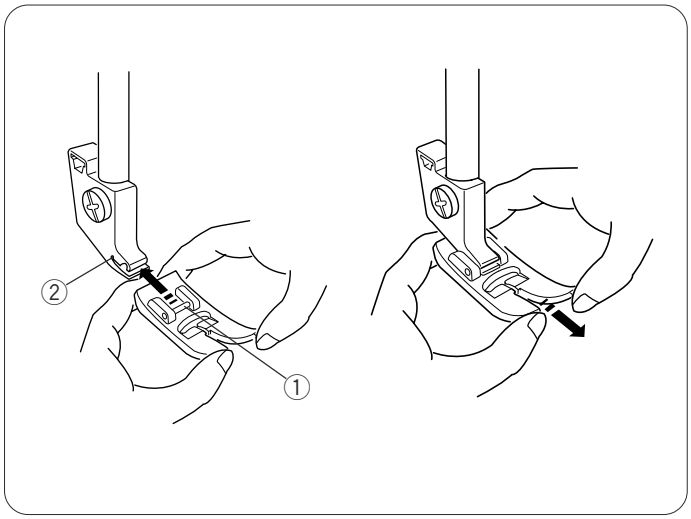
Changing the Needle

① Needle clamp screw
② Needle clamp
③ Flat side
④ Gap

1 Turn off the power switch.
Raise the needle to its highest position by turning the handwheel counterclockwise, toward you, and lowering the presser foot. Loosen the needle clamp screw ① by turning it counterclockwise. Remove the needle from the needle clamp ②.

2 Insert a new needle into the needle clamp ② with the flat side to the rear. When inserting the needle into the needle clamp ②, push it up as far as it goes. Tighten the needle clamp screw ① firmly by turning it clockwise.

3 To see if the needle is good, place the flat side ③ of the needle onto something flat (needle plate, glass, etc.). The gap ④ between the needle and the flat surface should be consistent. Never use a bent or blunt needle. A damaged needle can cause permanent snags or runs in knits, fine silks and silk-like fabrics.

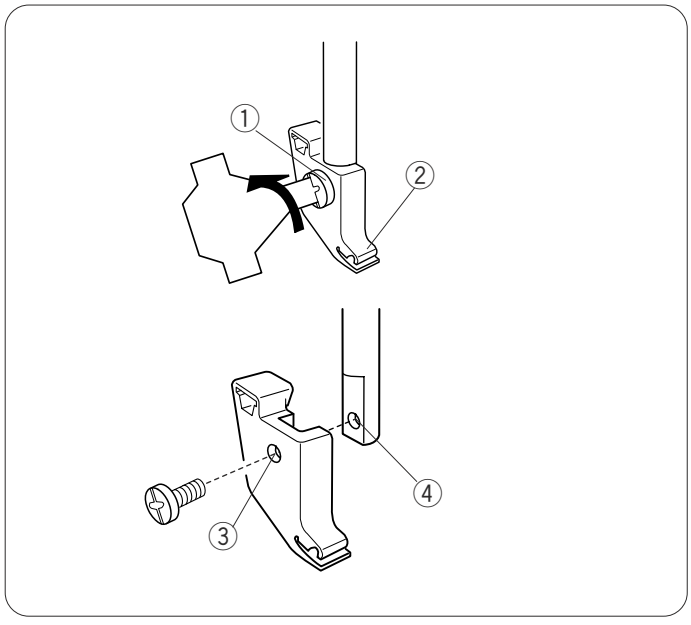


Changing the Presser Foot

CAUTION:
When attaching or removing presser foot, turn OFF the power switch and remove the needle from the needle clamp.

• To attach
Insert the presser foot pin ① into the slit ② of the presser holder and push the presser foot to lock it in place.

• To remove
Pull the foot in the direction of arrow to remove the presser foot.



To Remove and Attach the Foot Holder

CAUTION:
When attaching or removing foot holder, turn OFF the power switch and remove the needle from the needle clamp.

• To remove
Remove the setscrew by turning it counterclockwise with a screwdriver and remove the foot holder.

• To attach
Match the hole in the foot holder with the threaded hole in the presser bar. Fit the setscrew into the hole. Tighten the screw by turning it clockwise with a screwdriver.

① Setscrew
② Foot holder
③ Hole
④ Threaded hole

Selecting Needle and Fabric

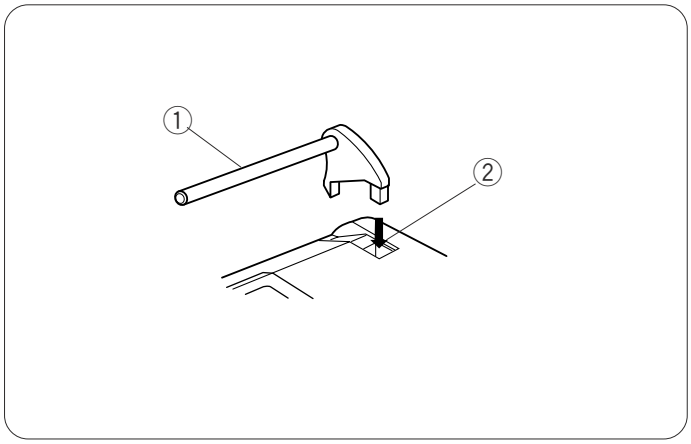
For general sewing, use needle sizes 11 or 14. A fine thread and needle should be used for sewing lightweight fabrics, so the fabric will not be marred. Heavy fabrics require a needle large enough to pierce the fabric without fraying the needle thread. Use the blue needle (optional) to eliminate skipped stitches when sewing knits and synthetic fabrics.

Special needles should be used on certain fabrics. A denim needle with a sharp tip effectively pierces dense fabrics such as denim and canvas. For topstitching, a special topstitching needle with a larger eye accommodates heavier weight thread. Leather needles punch small holes in leather and suede, allowing the thread to follow through the hole.

Check your needles frequently for rough or blunt tips. Snags and runs in knits, fine silks and silk-like fabrics are permanent, and are often caused by damaged needles.

Always purchase a good quality thread. It should be strong, smooth and consistent in thickness.

WEIGHT	FABRIC	TYPE OF NEEDLE	NEEDLE SIZE
Very Light	Chiffon, Georgette, Fine Lace, Organdy, Organdy Net, Tulle	Universal Ball Point	9 (65) 9 (65)
Light	Batiste, Voile, Lawn, Pure Silk, Crepe de Chine, Sheer Crepe, Chambray, Handkerchief Linen, Gingham, Challis, Percale, Wool Crepe, Peau de Soie, Taffeta, Satin, Silk Surah, Satin-backed Crepe, Qiana	Universal Blue	11 (75) 11 (75) 12 (80)
	Single Knits, Jersey, Swimwear, Tricot	Blue Ball Point	11 (75) 11 (75)
	Leather, Suede	Wedge Point Leather	11 (75)
Medium	Flannel, Velour, Velvet, Muslin, Velveteen, Poplin, Corduroy, Broadcloth, Linen, Chintz, Gabardine, Felt, Terry, Burlap, Quilted Fabrics	Universal	14 (90)
	Double Knits, (synthetic and natural) Stretch Velour, Stretch Terry, Sweater Knits	Ball Point	14 (90)
	Leather, Vinyl, Suede	Wedge Point	14 (90)
Heavy	Denim, Sailcloth, Ticking	Denim	16 (100)
	Double Faced Wool, Heavy Coating, Fake Fur, Drapery Fabrics	Universal	16 (100)
	Leather, Suede	Wedge Point Leather	16 (100)
	Canvas, Duck, Upholstery Fabrics	Universal	18 (110)
All	Topstitching for Special Finish	Topstitching	11 (75) 14 (90)

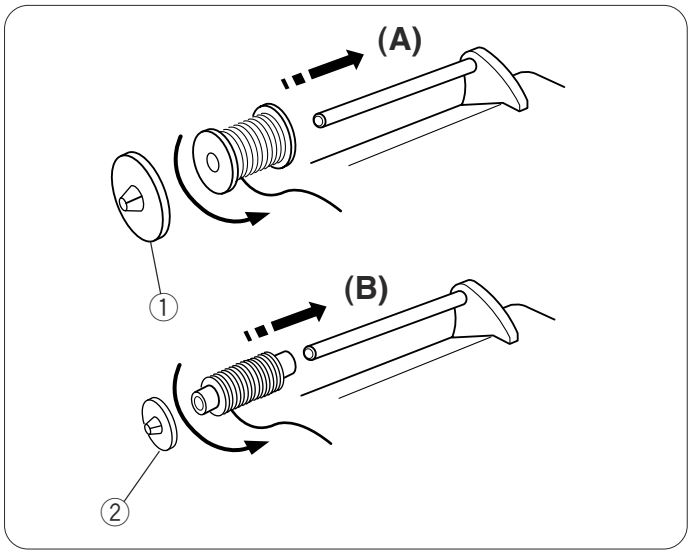


Bobbin Winding

Setting the spool pin

Insert the spool pin into the hole as shown.

① Spool pin
② Hole

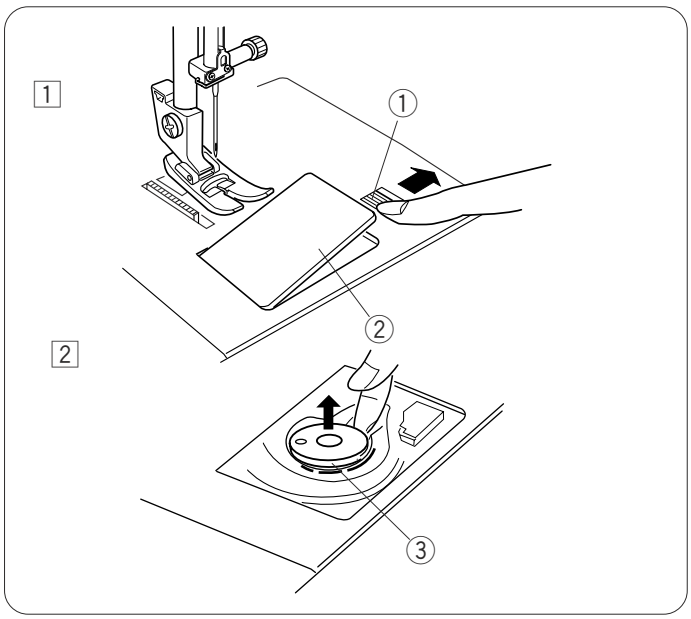


Setting the spool

Place a spool of thread on the spool pin with the thread coming off the back of spool as illustrated.

A: Press the large spool holder ① firmly against the spool of thread.
① Large spool holder

B: For a small spool, use the small spool holder ②.
② Small spool holder

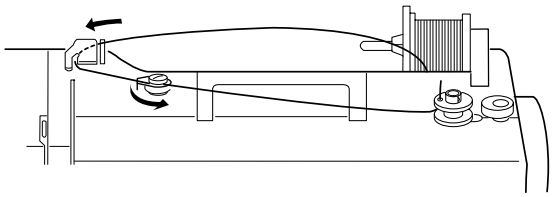


Removing the bobbin

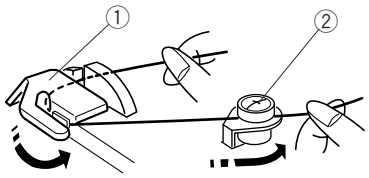
1 Push the hook cover plate release button ① to the right and remove the cover plate.
① Hook cover plate release button
② Hook cover plate

2 Lift out the bobbin.
③ Bobbin

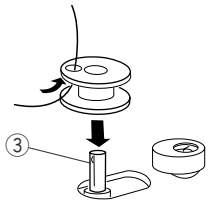
Winding the bobbin



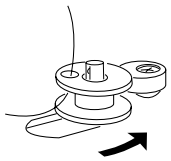
1 2



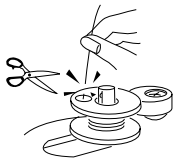
3



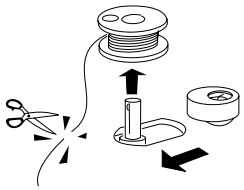
4



5



6



1 Hold the thread with both hands and pass the thread under the thread guide.
① Thread guide

2 Insert the thread firmly under the bobbin winding tension disc.
② Bobbin winding tension disc

3 Pass the thread through the hole in the bobbin from the inside to the outside. Put the bobbin on the bobbin winder spindle.
③ Bobbin winder spindle

4 Push the bobbin winder spindle to the right.

5 Hold the free end of the thread in your hand and start the machine.
Stop the machine when the bobbin has been wound a few layers, and cut the thread close to the bobbin.

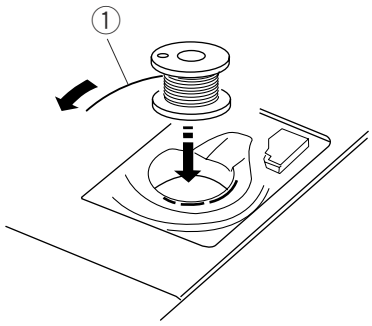
6 Start the machine again. When the bobbin is fully wound, it will stop automatically.
Stop the machine and return the bobbin winder spindle to its original position by moving it to the left, and cut the thread with a pair of scissors. Remove the bobbin from the bobbin winder spindle.

NOTE:
The machine will not sew until the spindle has been returned to the left.

Inserting the bobbin

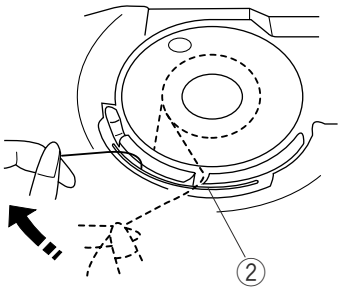
① End of thread
② Notch
③ Notch
④ Threading diagram

1



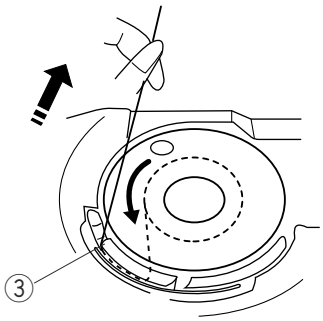
1 Place a bobbin in the bobbin holder with the thread running off counterclockwise.

2



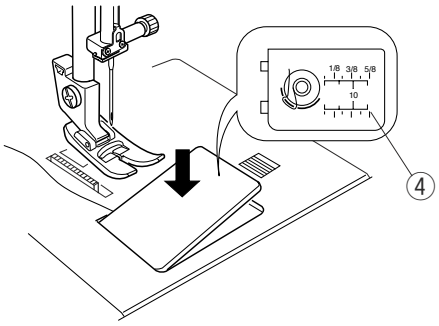
2 Guide the thread into notch ② on the front side of the bobbin holder. Draw the thread to the left, sliding it between the tension spring blades.

3

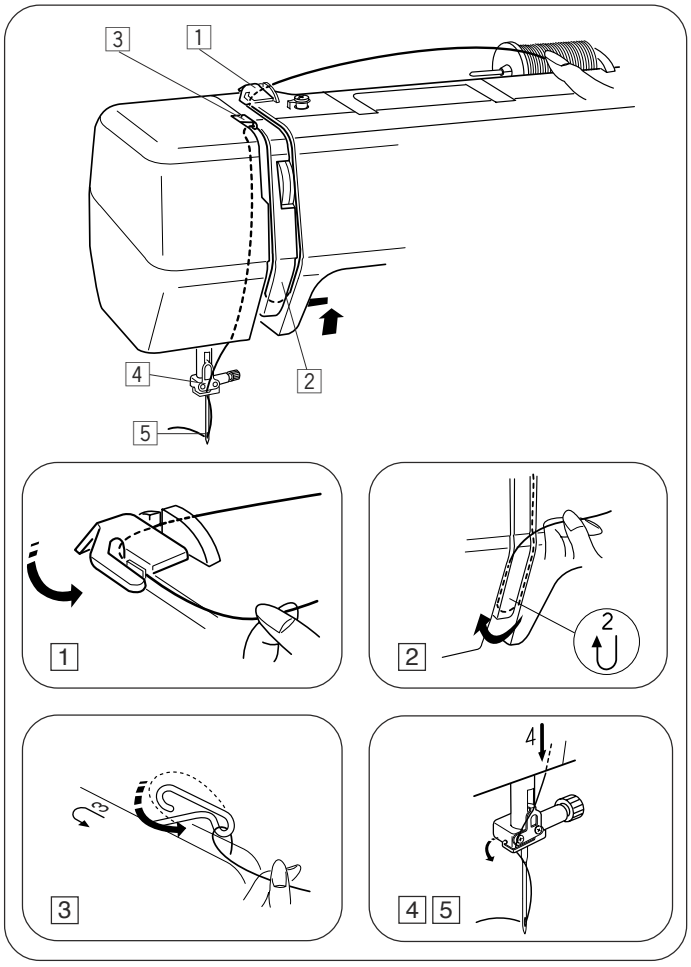


3 Continue to draw the thread lightly until the thread slips into notch ③. Pull out about 6″ (15.0 cm) of thread.

4



4 Attach the hook cover plate. Check the threading by referring to the diagram ④ shown on the hook cover plate.



Threading the Machine

* Raise the thread take-up lever to its highest position by turning the handwheel counterclockwise.
* Raise the presser foot lifter.
* Place a spool on the spool pin, with the thread coming off the back of spool (refer to page 18).

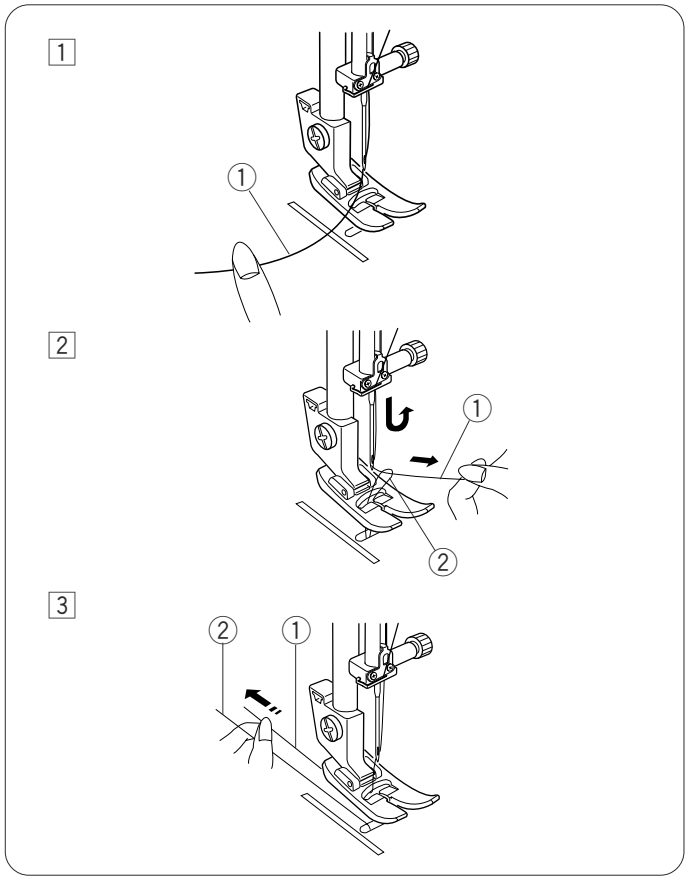
1 Draw the end of the thread around the upper thread guide.

2 While holding the thread near the spool, draw the end of the thread down around the check spring holder.

3 Firmly draw the thread up from right to left over the take-up lever, and down into the take-up lever eye.

4 Slide the thread behind the needle bar thread guide on the left.

5 Thread the needle from front to back, or use a needle threader.

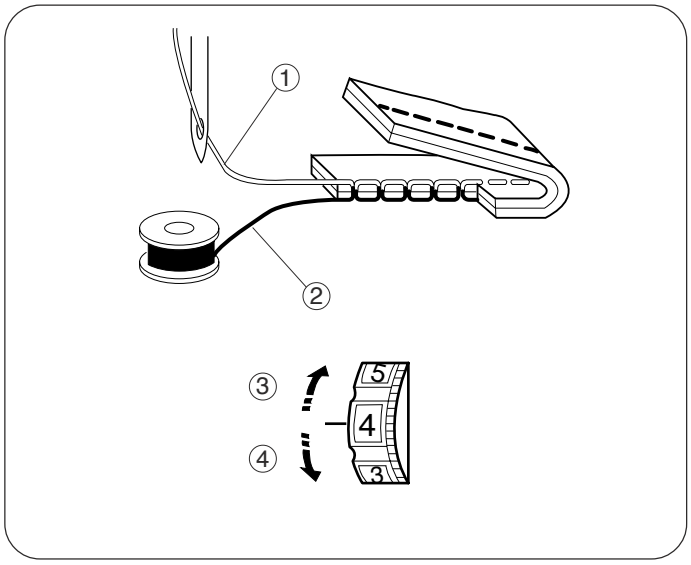


Drawing up the bobbin thread

1 Raise the presser foot and hold the needle thread lightly with your left hand.
① Needle thread

2 Turn the handwheel slowly toward you one complete turn. Bring the bobbin thread up by pulling the needle thread as illustrated.
① Needle thread
② Bobbin thread

3 Pull 4″ (10 cm) of both threads back and under the presser foot.

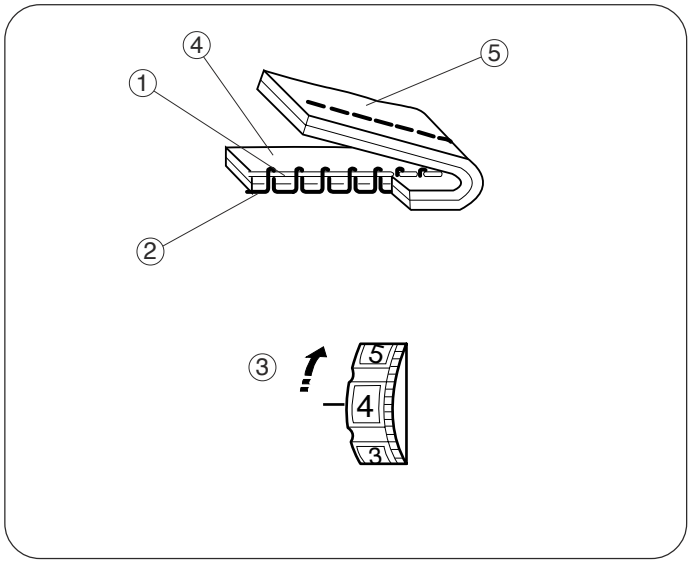


Adjust the Needle Thread Tension for a Straight Stitch

- **Correct tension**

① Needle thread (Top thread)
② Bobbin thread (Bottom thread)
③ To loosen
④ To tighten

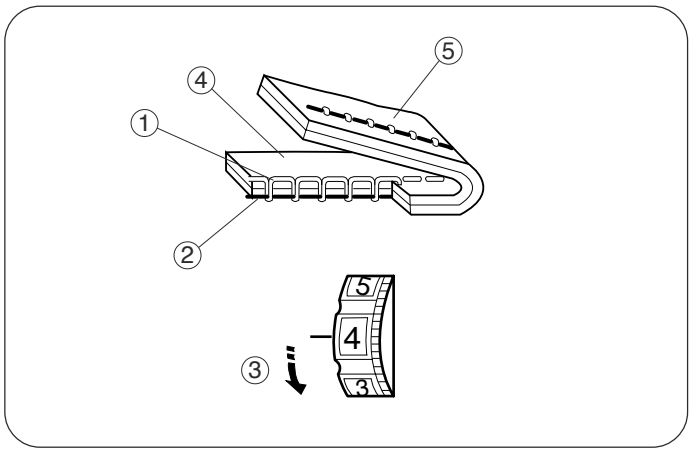
The ideal straight stitch has threads locked between two layers of fabric, as illustrated (magnified to show detail). If you look at the top and bottom of a seam, look to see that the stitches are evenly balanced.
When adjusting the needle thread tension, the higher the number, the tighter the top thread tension.
Results depend on:
- stiffness and thickness of the fabric
- number of fabric layers
- type of stitch



- **Tension is too tight**

① Needle thread (Top thread)
② Bobbin thread (Bottom thread)
③ To loosen tension
④ Right side (Top side) of fabric
⑤ Wrong side (Bottom side) of fabric

The bobbin thread shows through on the wrong side of the fabric, and the stitch feels bumpy. Turn the dial to a lower tension setting number to loosen the needle thread tension.



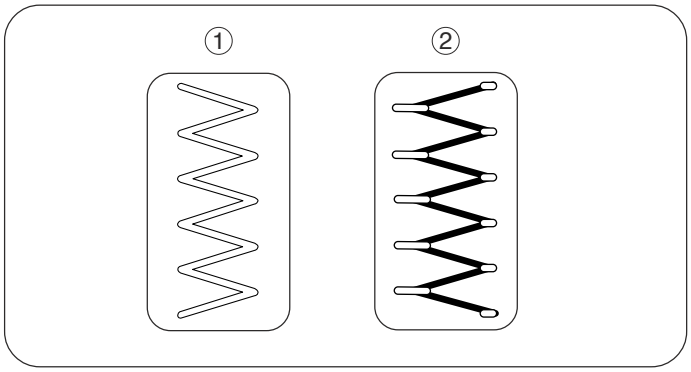
- **Tension is too loose**

① Needle thread (Top thread)
② Bobbin thread (Bottom thread)
③ To tighten tension
④ Right side (Top side) of fabric
⑤ Wrong side (Bottom side) of fabric

The needle thread shows through on the wrong side of the fabric, and the stitch feels bumpy. Turn the dial to a higher tension setting number to tighten the needle thread tension.

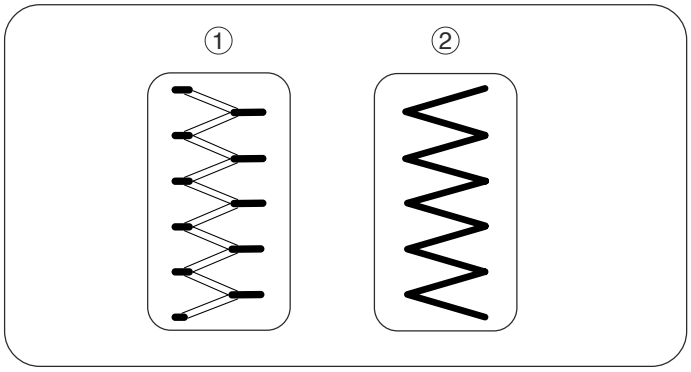
Adjust the Needle Thread Tension for a Zigzag Stitch

For an ideal zigzag stitch, the bobbin thread does not show
on the right side (Top side) of the fabric, and the needle thread shows slightly on the wrong side (Bottom side) of the fabric.
See the illustrations for the correct appearance.
To match this appearance, adjust the needle tension.



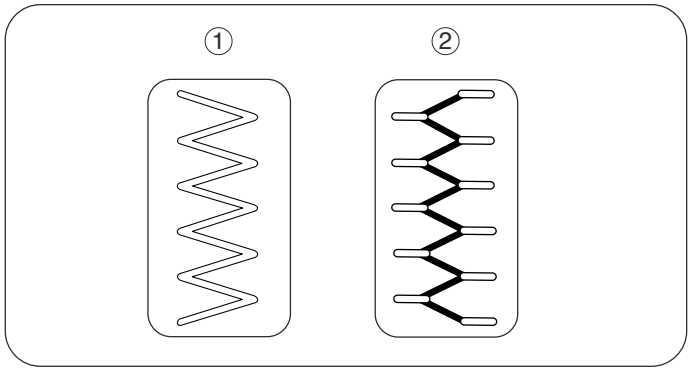
• **Correct tension**
① Right side (Top side) of fabric
② Wrong side (Bottom side) of fabric

Minimize the amount of needle thread visible on the wrong side (Bottom side) of the fabric without causing excessive puckering, or causing the bobbin thread to show on the right side (Top side) of the fabric.
Results vary with fabric, thread and sewing conditions.



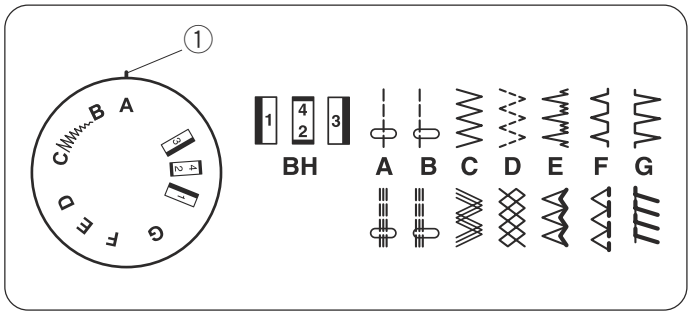
• **Tension is too tight**
① Right side (Top side) of fabric
② Wrong side (Bottom side) of fabric

The corner of each zigzag pulls together on the right side of the fabric.



• **Tension is too loose**
① Right side (Top side) of fabric
② Wrong side (Bottom side) of fabric

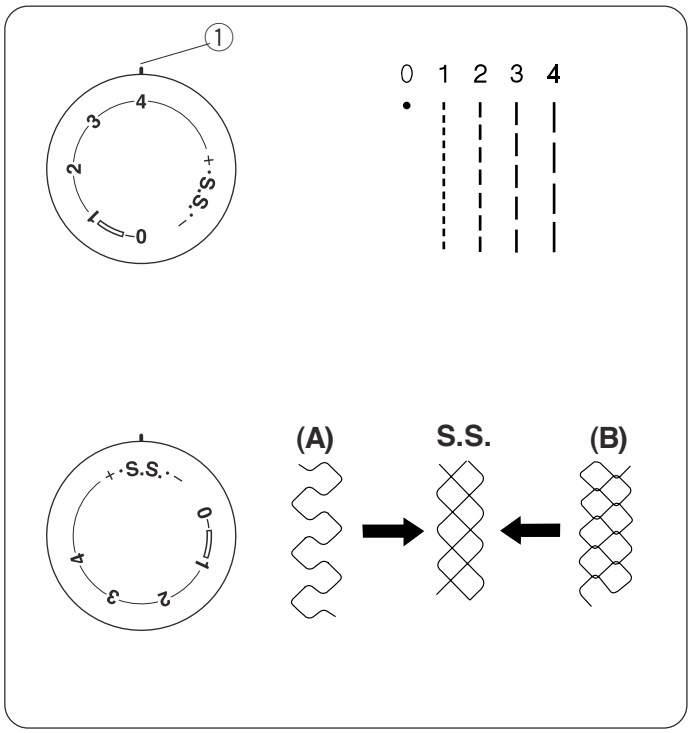
The corner of each zigzag pulls together on the wrong side of the fabric.



Stitch Pattern Selector Dial

Raise the needle and presser foot. Turn the pattern selector dial to set the symbol corresponding to the desired pattern at the setting mark.

① Setting mark



Stitch Length Control Dial

Turn the stitch length control dial to set the desired stitch length at the setting mark.
The higher the number, the longer the stitch length.

① Setting mark

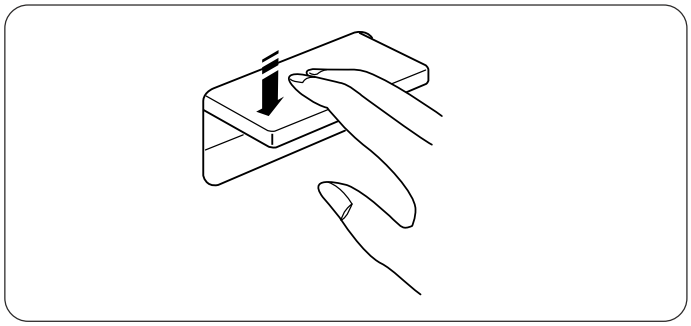
- "▭" is the recommended setting for buttonhole stitching.
- Adjust the dial in the 0.5–4 range when you sew the zigzag stitch.
- Set the dial at "S.S." to sew the stretch stitch patterns.

Adjusting Stretch Stitch Balance

If the stretch stitch patterns are uneven when you sew on a particular fabric, correct them by turning the stitch length dial.

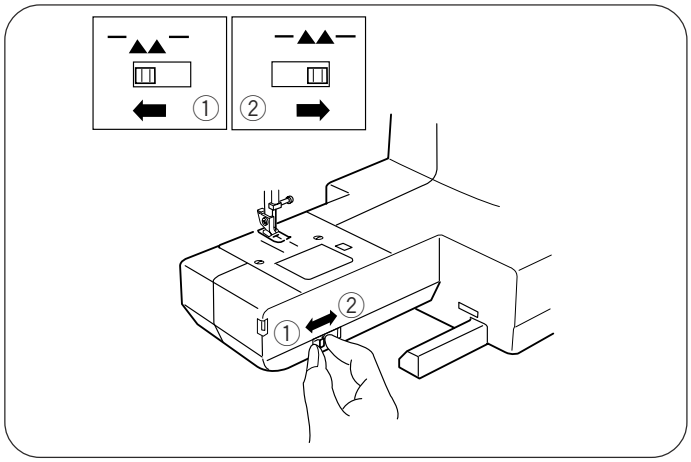
(A) If the patterns are drawn out, correct them by setting the dial to the "–" side.

(B) If the patterns are compressed, correct them by setting the dial to the "+" side.



Reverse Stitch Control

Press the reverse stitch control to sew in reverse.

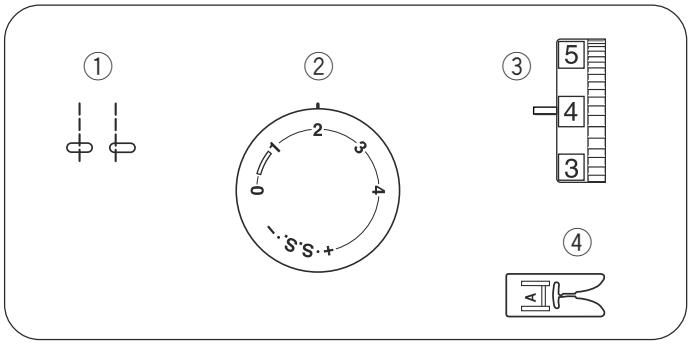


To Drop or Raise the Feed Dogs

The drop feed dogs lever is located underneath the free arm bed.

① To drop the feed dogs, push the lever in the direction of the arrow, as illustrated.

② To raise the feed dogs, push the lever in the direction of the arrow, as illustrated, and turn the handwheel toward you. Feed dogs must be up for normal sewing.

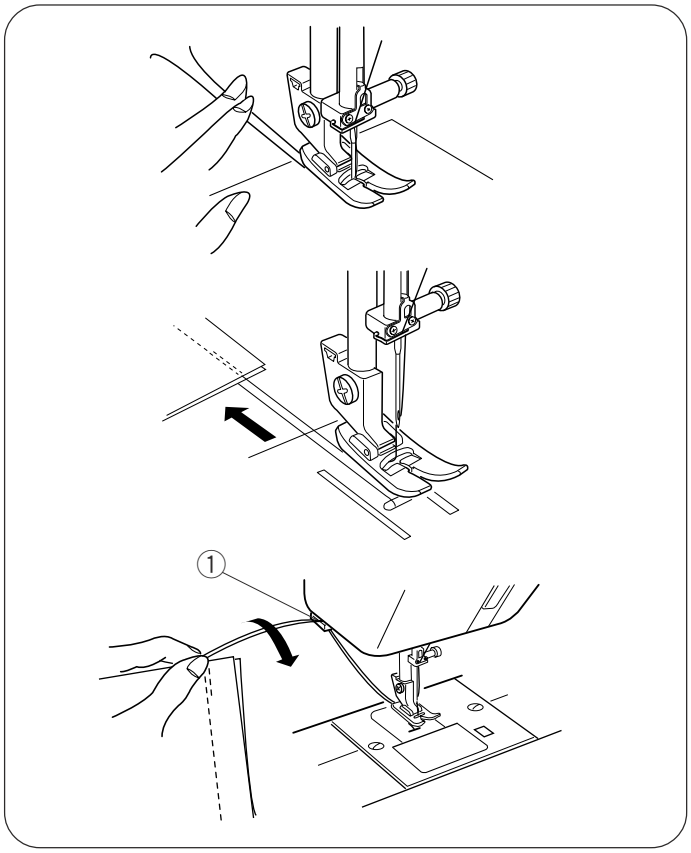


SECTION III. STRAIGHT STITCH SEWING

Straight Stitch

Machine setting

① Stitch selector:	A or B
② Stitch length:	1.5 – 4
③ Needle thread tension:	2 – 6
④ Presser foot:	Zigzag foot: A



- **Starting to sew**

  Raise the presser foot and position the fabric next to a seam guide line on the needle plate (5/8″ (1.6 cm) is most common). Lower the needle to the point where you want to start. Lower the presser foot and pull the threads toward the back. Depress the foot control. Gently guide the fabric along a seam guide line letting the fabric feed naturally.

CAUTION: Do not place fingers near to the presser foot when guiding fabric, or the needle clamp screw may strike and injure your fingers.

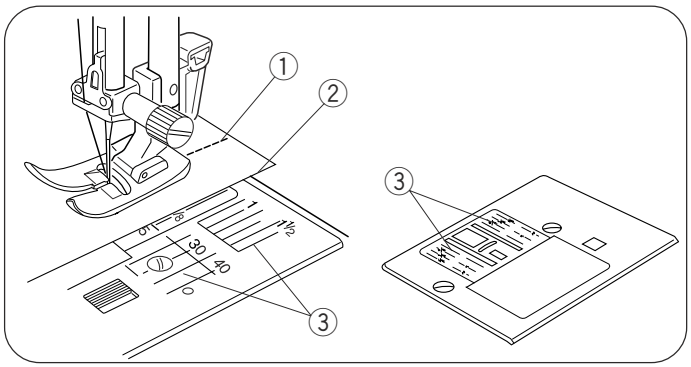
- **Finishing sewing**

  To fasten the ends of a seam, press the reverse stitch control and sew several reverse stitches. Raise the presser foot. Remove the fabric, draw the threads to the back and cut them with the thread cutter. The threads are now the proper length to begin sewing the next seam.

- **Cutting the threads**

You do not need a pair of scissors to cut the thread after sewing. Simply use the built-in thread cutter.

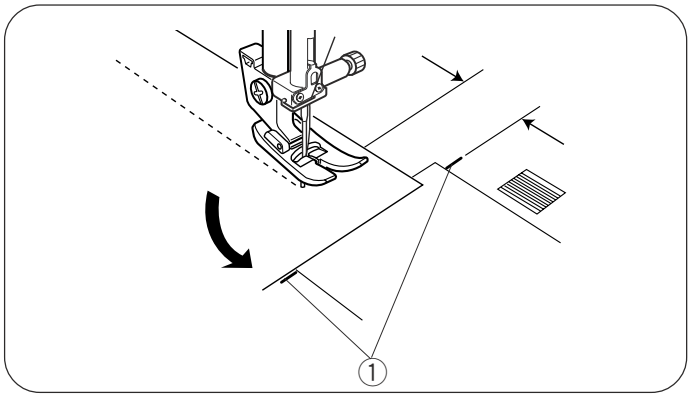
① Thread cutter



Use the Seam Guides

① Center needle position
② Edge of fabric
③ Needle plate guide lines

The seam guides on the needle plate are there to help you measure seam width. The numbers on the needle plate indicate the distance between the center needle position and the edge of the fabric. The lines are 1/8″ (0.3 cm) apart, and are engraved at 3/8″, 4/8″ and 5/8″. The lines in millimeters are 5 mm apart, and are engraved at 10 mm, 15 mm, 30 mm and 40 mm.

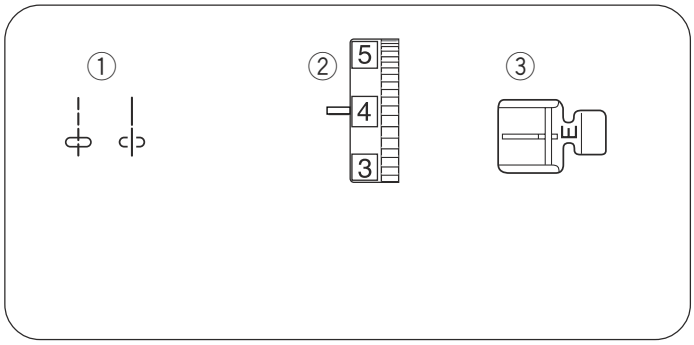


Turn a Square Corner

① Cornering guide

When sewing with fabric edge at 5/8″ seam guide, to turn a square so that sewing continues at same distance from edge.

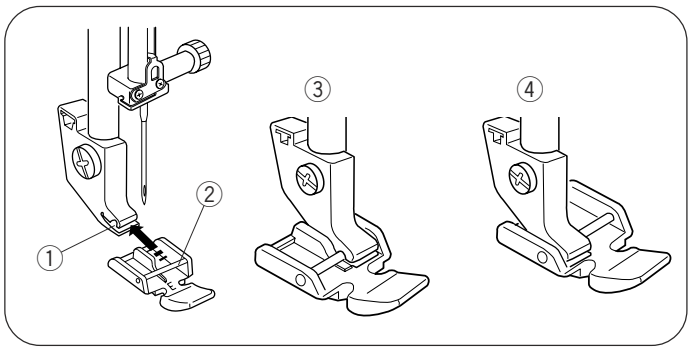
1. Stop stitching when front edge of fabric reaches the cornering guide lines.
2. Lower the needle by turning the hand wheel counterclockwise.
3. Raise the presser foot and turn the fabric counterclockwise 90°.
4. Lower the presser foot, and begin stitching in the new direction.



Zipper Sewing

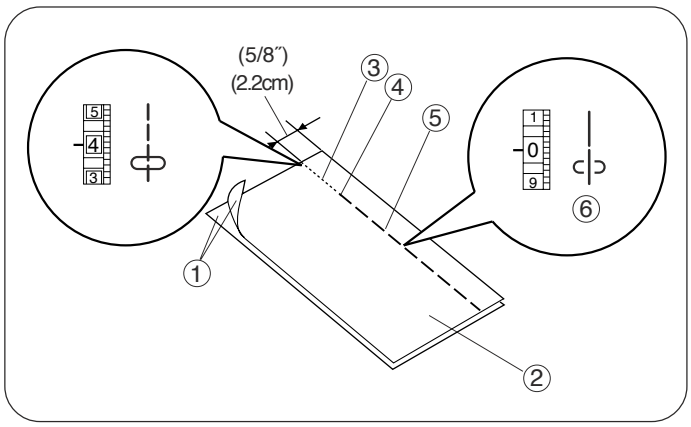
Machine setting

① Stitch selector:
② Needle thread tension: 2 – 6
③ Presser foot: Zipper foot: E



- **To snap on the zipper foot**
  ① Slit
  ② Pin
  ③ To sew left side
  ④ To sew right side

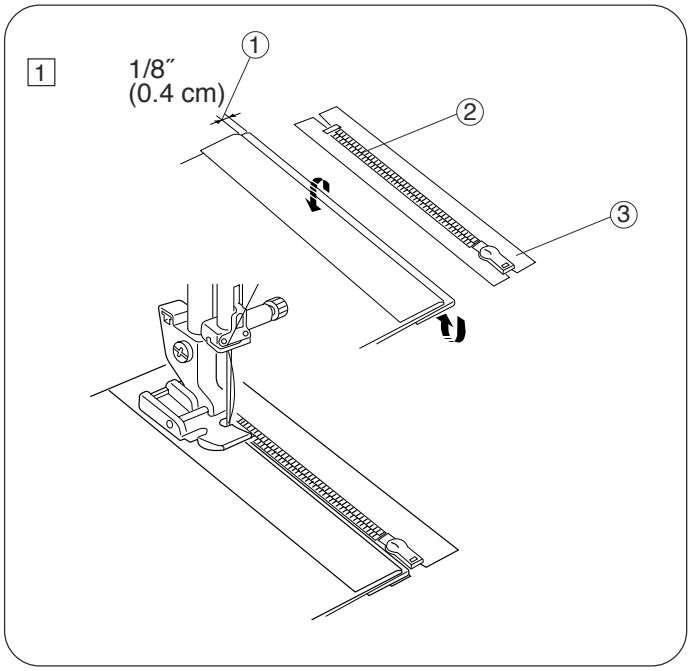
  Fit the pin on the zipper foot into the slit on the foot holder.
  * To sew the left side of the zipper, attach zipper foot on the right-hand side of pin.
  * To sew the right side of zipper, attach the zipper foot on the left-hand side of pin.



Zipper Sewing (Continued)

- **Fabric preparation**
  ① Right (top) side of fabric
  ② Wrong (bottom) side of fabric
  ③ Bottom seam
  ④ Zipper bottom stop position
  ⑤ Basting stitch

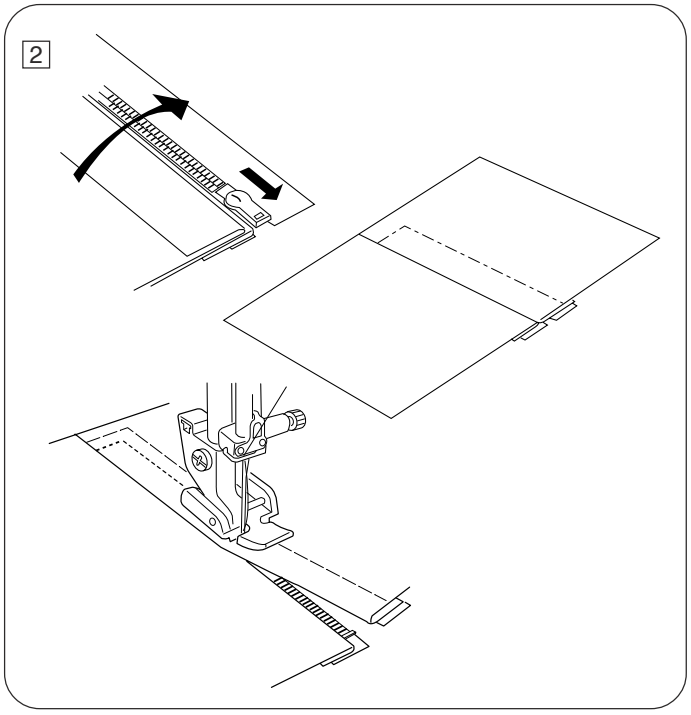
  Place the right (top) sides of the fabric ① together. Sew a bottom seam ③ 5/8″ (2.2 cm) from the right edge to the estimated zipper bottom stop position ④. Sew in reverse a few stitches to lock.
  Set the stitch pattern selector dial to ⑥, set needle thread tension to 0, and sew basting stitch ⑤ the entire length of the zipper sewing.



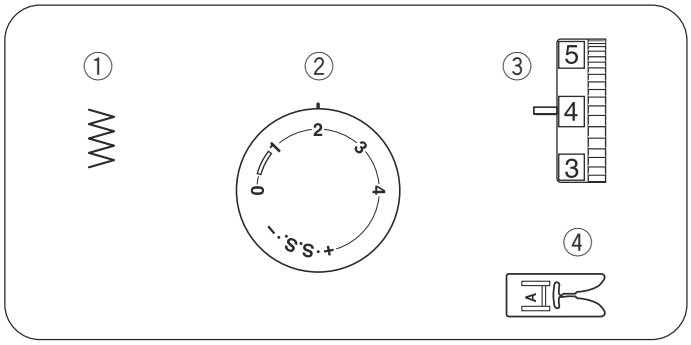
• **To sew**

① 1/8″ (0.4cm) fabric margin
② Zipper teeth
③ Zipper tape

1 Attach zipper foot on right-side of pin.
Fold back the upper layer seam allowance. Fold back the lower layer seam allowance to leave a 1/8" (0.4 cm) margin of fabric ①.
Place zipper teeth next to margin edge and pin margin to zipper tape.
Align zipper foot with margin edge. Return thread tension and stitch length to original settings. Sew a seam the entire length of zipper tape, removing pins as you go. Before reaching pull-tab, stop the machine with needle in the fabric and raise the foot, then unzip a few inches to clear a path for the stitch.
Remove fabric and close zipper.



2 Raise and release foot, and re-attach it on left-hand side of pin.
Take the upper fabric layer and lay it flat over the zipper. Starting just below zipper bottom stop, sew across fabric to about 3/8" to 1/2" distance from the basting stitch line. Turn fabric 90° and sew a seam the entire length of zipper tape. Before reaching pull-tab, stop the machine with needle in fabric and raise the foot. Use seam ripper to open a few inches of basting stitch, then unzip a few inches to clear a path for the stitch. At end of seam, sew in reverse a few stitches to lock.
Once both sides of zipper are sewn, use seam ripper to open the basting stitch.

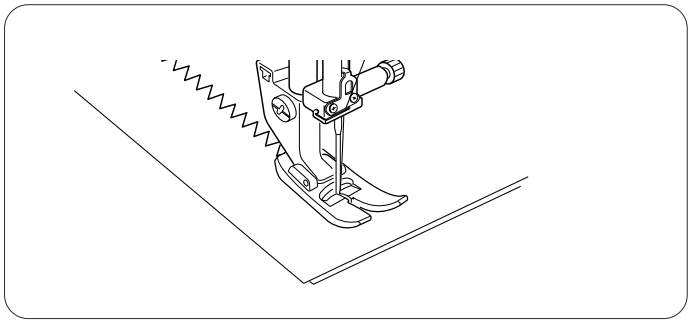


SECTION IV. ZIGZAG STITCH SEWING

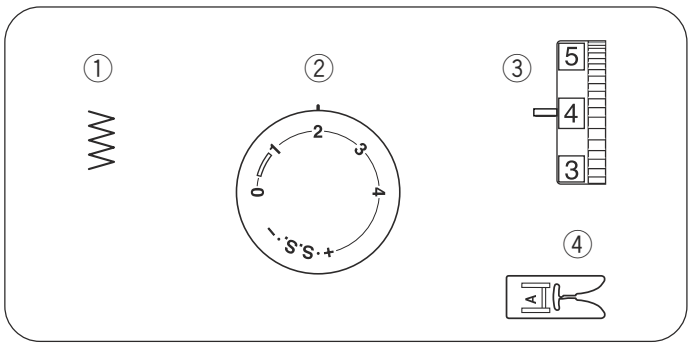
Basic Zigzag

Machine setting

① Stitch selector:	C
② Stitch length:	0.5 – 3
③ Needle thread tension:	2 – 5
④ Presser foot :	Zigzag foot: A



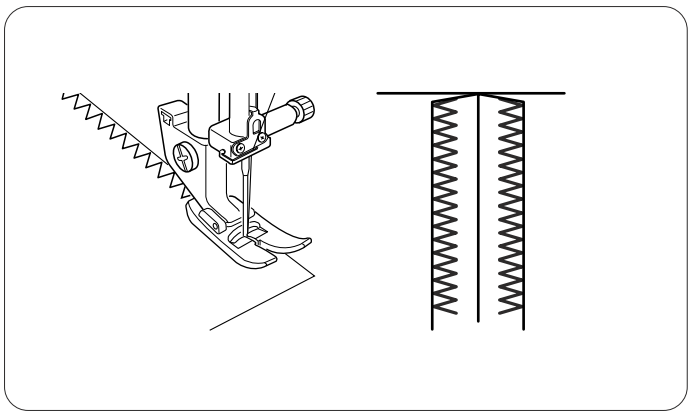
The zigzag stitch is one of the most common and versatile stitches. It can be a utility stitch for button sewing, buttonhole making, hemming, overcasting, mending and darning.
It can also be used to decorate with trims, appliques and cut work or as a decorative stitch.



Overcasting

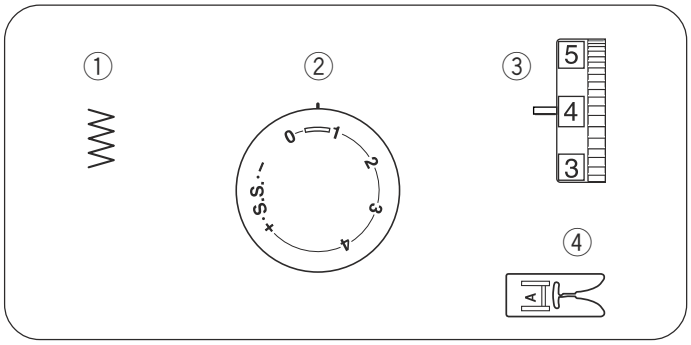
Machine setting

① Stitch selector:	C
② Stitch length:	1 – 2
③ Needle thread tension:	3 – 7
④ Presser foot:	Zigzag foot: A



This stitch is useful in garment construction, and in finishing raw edges of any sewing project.

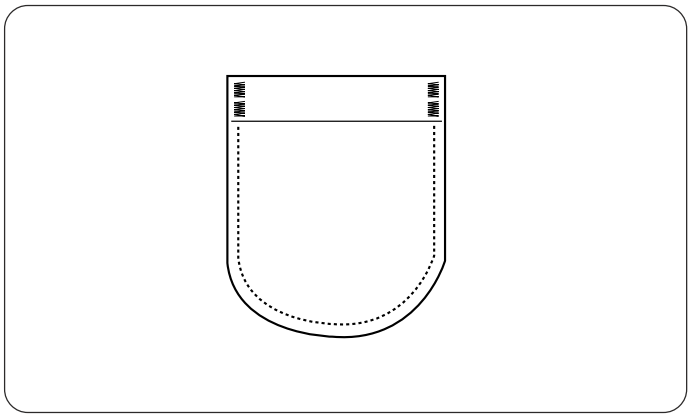
Start overcasting with the rightmost needle position about 1/8″ (0.3 cm) from the row edge of a seam. The right tip of the stitch should just clear the seam edge.



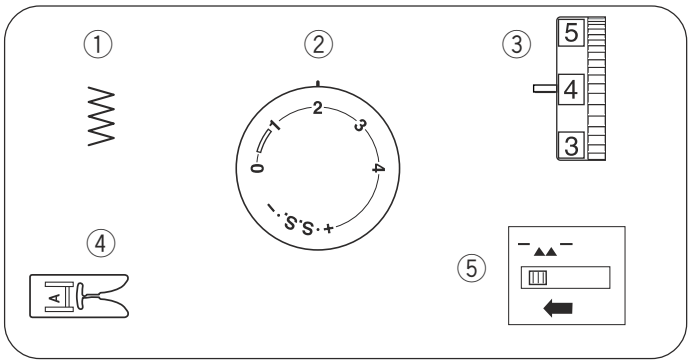
Bar Tacking

Machine setting

① Stitch selector:	B – C
② Stitch length:	0.5 – 1
③ Needle thread tension:	1 – 4
④ Presser foot:	Zigzag foot: A



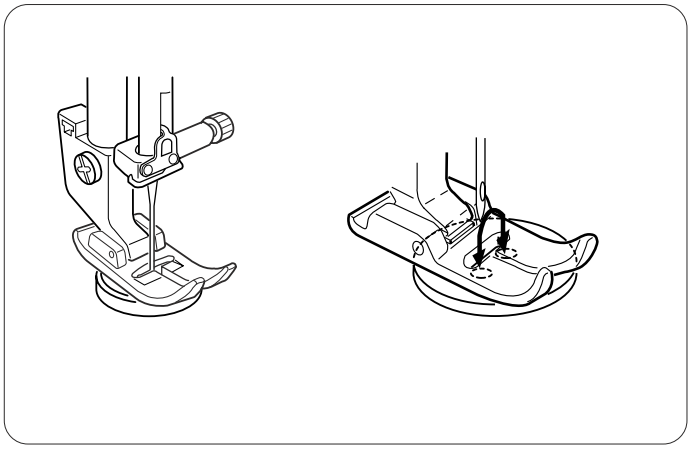
This is similar to a very short satin stitch and is used to reinforce points of strain such as corners, pockets and straps of lingerie.
Sew four (4) to six (6) stitches.



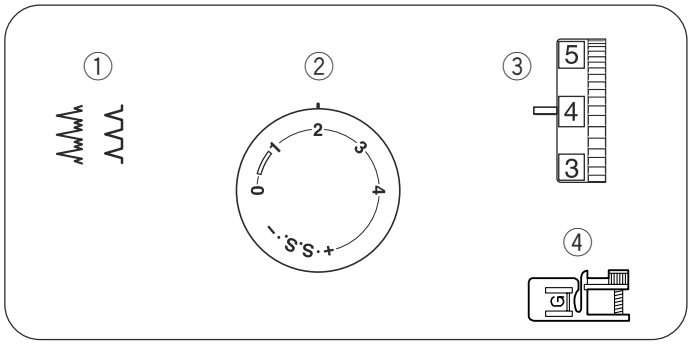
Button Sewing

Machine setting

① Stitch selector:	B – C
② Stitch length:	Any
③ Needle thread tension:	3 – 7
④ Presser foot:	Zigzag foot A
⑤ Feed dog:	Dropped



1. Drop the feed dogs. Place the button below the zigzag foot, making sure to align the holes with the horizontal slot in the foot. Lower the presser foot to hold the button in place.
2. Determine which stitch width setting matches the distance between the button holes. The needle must go safely through each hole when sewing.
   Unthread the needle to help you determine the zigzag width.
3. Thread the needle. Turn the handwheel, so that the needle is in its leftmost position, and then drop the needle through the left buttonhole.
4. Press the foot control and sew about 10 stitches.
5. Sew the other row of holes (if applicable) using the steps above. Trim excess threads from both sides of the fabric.

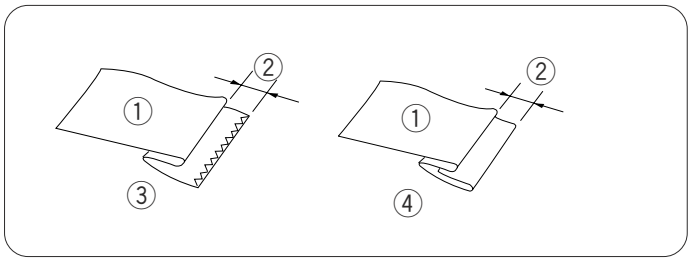


SECTION V. UTILITY STITCHES

Blind Hem Stitch

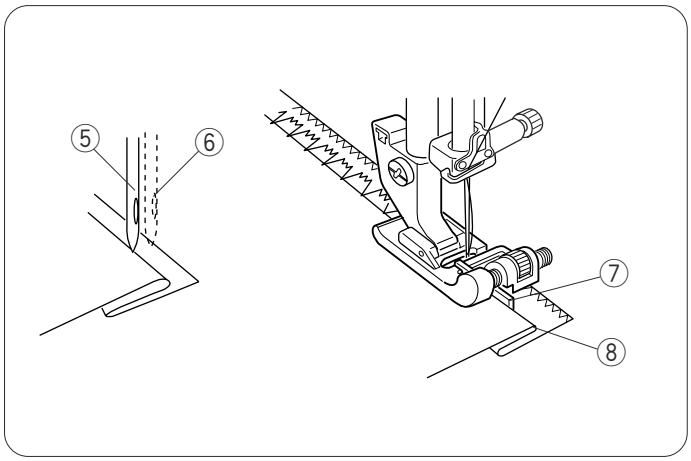
Machine setting

① Stitch selector:	E or F
② Stitch length:	2 – 3
③ Needle thread tension:	2 – 6
④ Presser foot:	Blind hem stitch foot: G



Use the same color thread as the fabric.
On heavy weight fabrics that ravel, the raw edge should be overcast first.
Fold the hem, as illustrated.

① Wrong side (Bottom side) of fabric
② 1/4″-7/16″ (0.4-0.7 cm)
③ Heavy weight fabric
④ Light weight fabric



• **To sew**

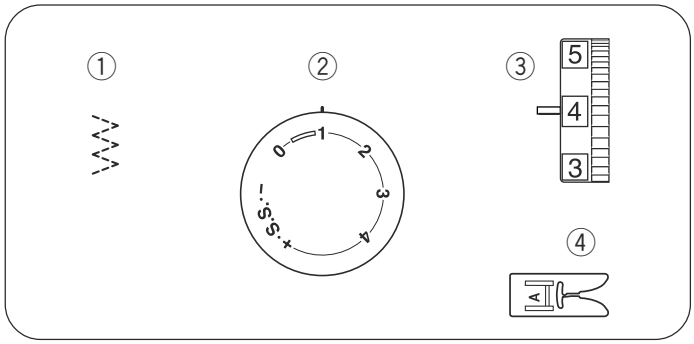
⑤ When the needle comes to the left
⑥ When the needle comes to the right
⑦ Guide
⑧ Folded edge

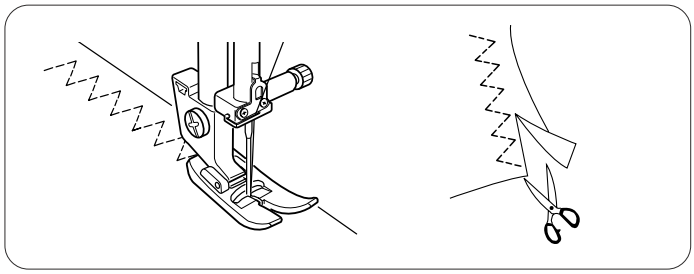
There is a sliding guide screw on the blind hem foot that allows you to precisely control where the needle pierces the edge of the fabric fold. Adjust the screw so that at the leftmost position of the stitch, the needle just pierces the edge of the fold. If the needle pierces too far left, the stitches will show on the right side of the fabric. Lower the presser foot. Sew, guiding the folded edge along the guide
⑦ in the foot.

Multiple Zigzag Stitch

Machine setting

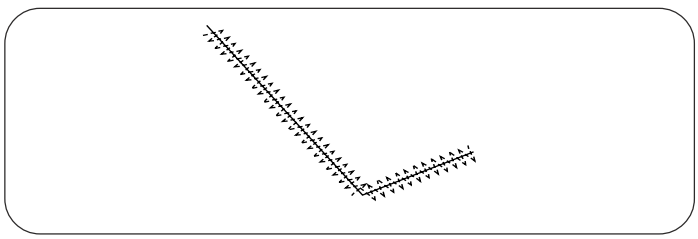
① Stitch selector:	D
② Stitch length:	0.5 – 1
③ Needle thread tension:	3 – 6
④ Presser foot:	Zigzag foot: A





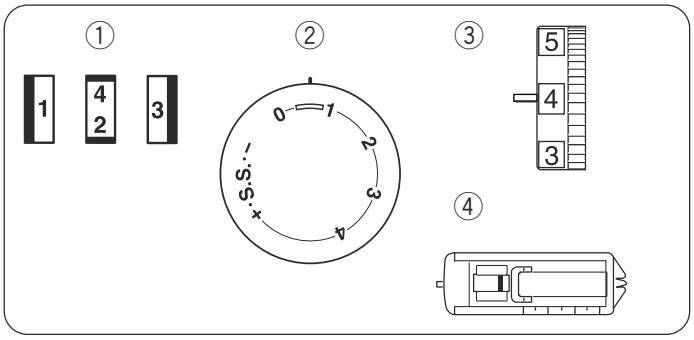
• **Seam finishing**

This stitch is used to finish the seam allowance on synthetics and other fabrics that tend to pucker. The stitch is also excellent for darning and mending tears. Place your fabric to allow a 5/8″ (1.5 cm) seam. Trim excess close to stitching. Be careful not to cut the stitches.



• **Mending**

Position the tear under the needle so that the stitch catches both sides.



4-Step Buttonhole

Machine setting

① Stitch selector:
② Stitch length:
③ Needle thread tension: 1 – 5
④ Presser foot: Sliding buttonhole foot

* For easier buttonhole foot attachment, move the slider all the way to the front of the foot. For easier removal, move the slider all the way to the back of the foot.

• To sew

1 Set the pattern selector dial at " 1 ".
Carefully mark buttonhole length on fabric.
Place the fabric under the foot with the buttonhole marking running toward you.
Draw both the needle and bobbin thread to the left.
Move the slider toward you so that the top mark ② on the lider meets the start mark ①.
① Start mark
② Top mark
③ Needle thread
④ Bobbin thread

NOTE:
The scale on the slider is engraved in centimeters.

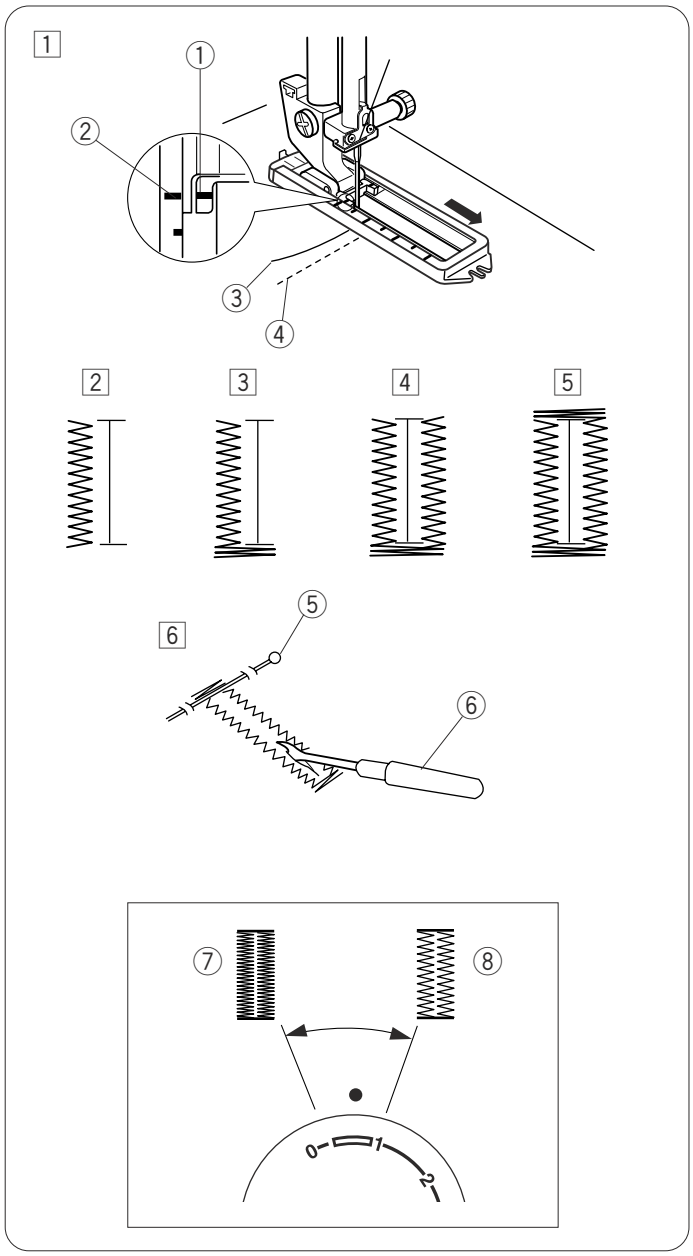
2 Sew forward until you reach the front marking of your buttonhole. Stop sewing at a left stitch.

3 Raise the needle to its highest position.
Set the pattern selector dial at " 4 2 ". Sew 5 stitches, then stop sewing at a right stitch.

4 Raise the needle to its highest position.
Set the pattern selector dial at " 3 ". Sew until the needle reaches the back marking of the buttonhole.

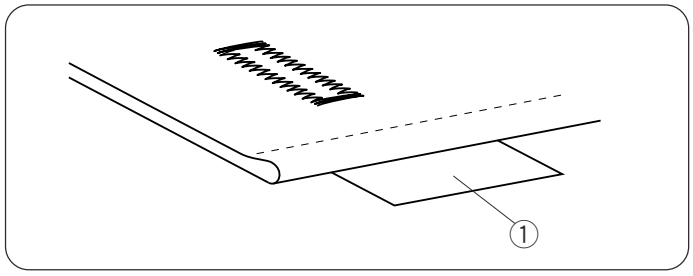
5 Raise the needle to its highest position.
Set the pattern selector dial at " 4 2 ". Sew 5 stitches, then stop sewing. Set the stitch length dial to "0" and the pattern selector dial at straight sewing.
Sew a few locking stitches.

6 Raise the needle and presser foot. Remove the fabric from the machine and cut the sewing thread. Insert a pin inside the bartack.
Then cut the opening with a seam ripper.
Take care not to cut the stitches.
⑤ Pin
⑥ Seam ripper

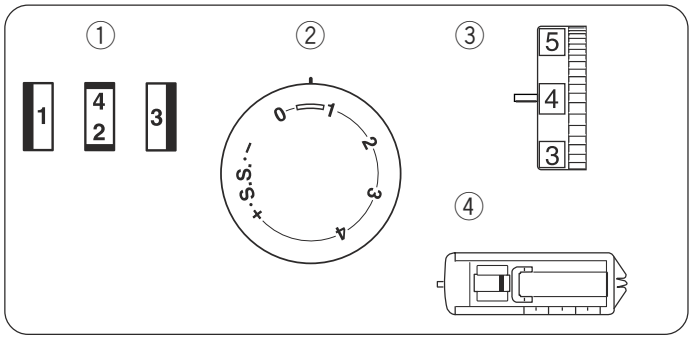


• To adjust buttonhole stitch density

Set the stitch length dial between " " to adjust the buttonhole stitch density.
⑦ Denser buttonhole
⑧ Coarser buttonhole



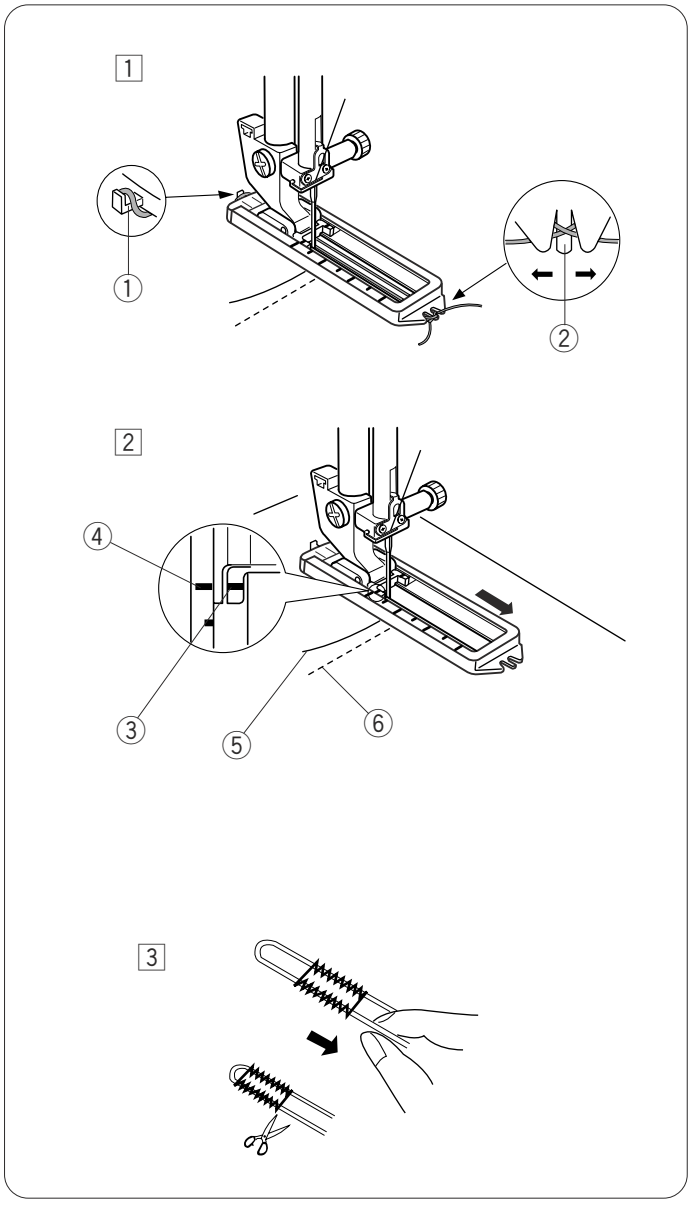
NOTE:
Place a piece of paper under the fabric when you make a buttonhole on the edge of a thick fabric.
This prevents the fabric edge from being trapped into the feed dog window.
① Piece of paper



Corded Buttonhole

Machine setting

① Stitch selector: 
② Stitch length: 
③ Needle thread tension: 1 – 5
④ Presser foot: Sliding buttonhole foot

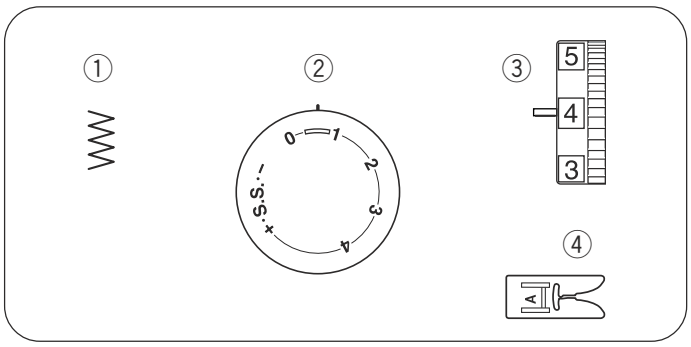


1 With the buttonhole foot raised, hook the filler cord on the spur at the back of the foot.
Bring the ends toward you under the foot, clearing the front end.
Hook the filler cord into the forks on the front of the foot to hold them tight.
① Spur
② Forks

2 Draw both of needle and bobbin thread to the left.
Move the slider toward you so that the top mark ④ on the slider meets the start mark ③.
③ Start mark
④ Top mark
⑤ Needle thread
⑥ Bobbin thread
Lower the needle into the fabric at the starting point and lower the foot.
Depress the foot control gently and sew the buttonhole over the cord.
The sewing sequence is the same as the 4-step buttonhole.

3 Pull the left end of the filler cord to tighten it and cut the excess tails.
To cut the buttonhole opening, refer to the instructions on page 54.

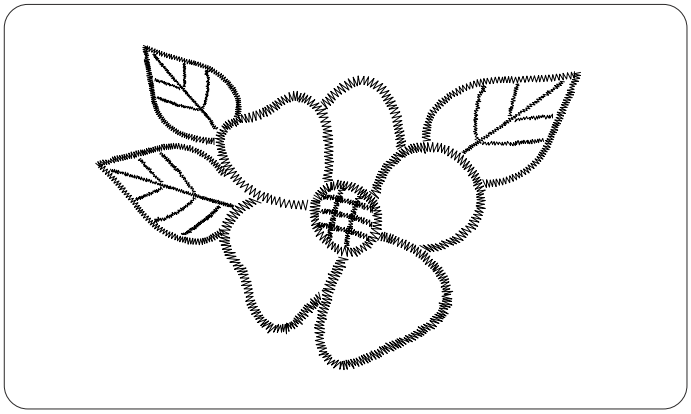
SECTION VI. DECORATIVE STITCHES



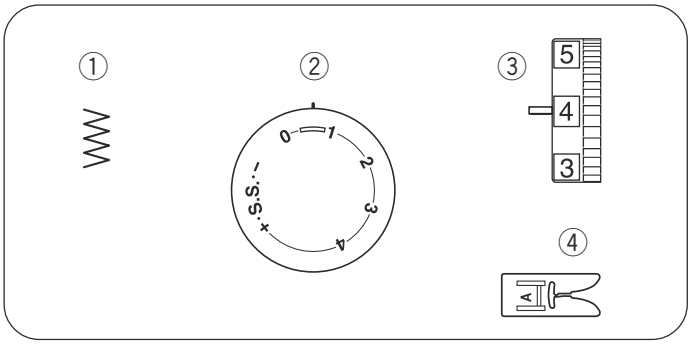
Satin Stitching

Machine setting

① Stitch selector: C
② Stitch length: 0.5 – 1
③ Needle thread tension: 1 – 4
④ Presser foot : Zigzag foot: A



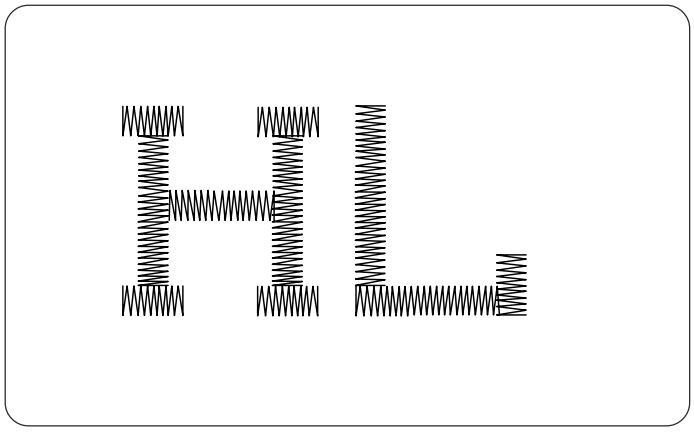
The satin stitch is often used to decorate and to overcast the raw edge on blankets, linens, tablecloths, napkins, etc. It is also attractive in applique.
Once your machine is set up to stitch, test stitch on the fabric being used for best results. A tight satin stitch may pucker some lightweight fabrics.



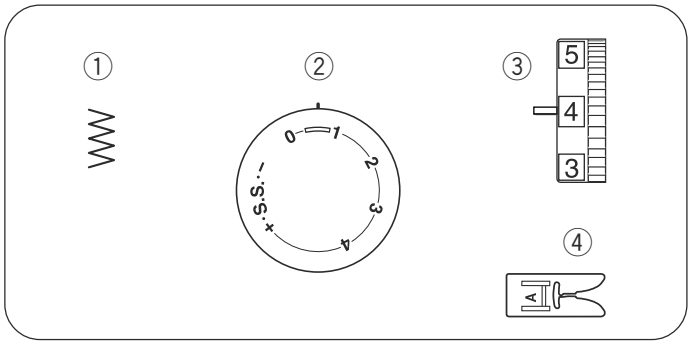
Monogramming

Machine setting

① Stitch selector: C
② Stitch length: 0.5 – 1
③ Needle thread tension: 1 – 4
④ Presser foot: Zigzag foot: A



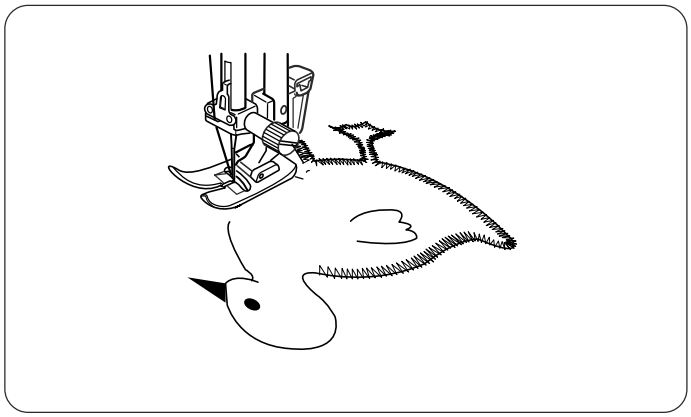
Attach a piece of stabilizer on the wrong side (Bottom side) of the fabric.
Draw letters on the fabric with tailor's chalk. Form each pattern with satin stitch, adjusting stitch width.



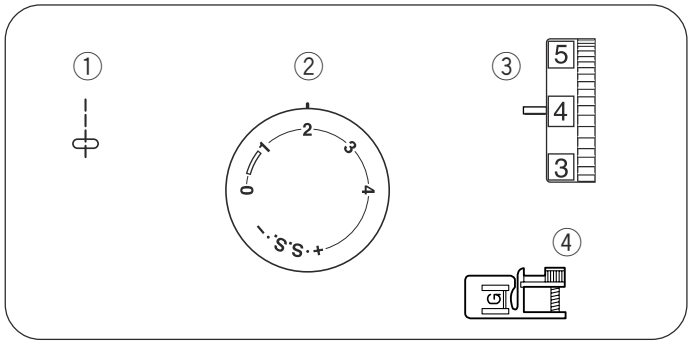
Applique

Machine setting

① Stitch selector: B – C
② Stitch length: 0.5 – 1
③ Needle thread tension: 1 – 4
④ Presser foot: Zigzag foot: A



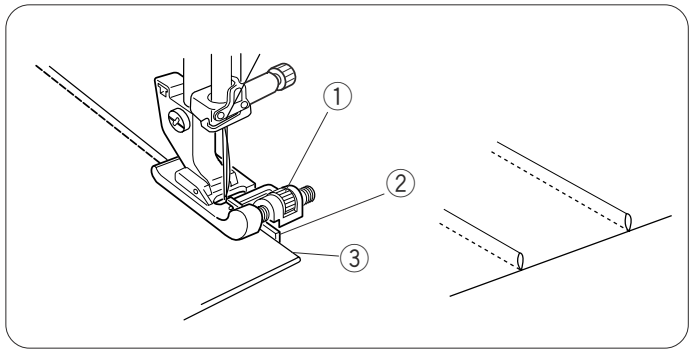
Baste applique pieces on the fabric, or fuse the applique pieces with iron-on fabric joiner. Stitch around the applique making sure the needle falls along the raw edge of the applique.



Pin Tucking

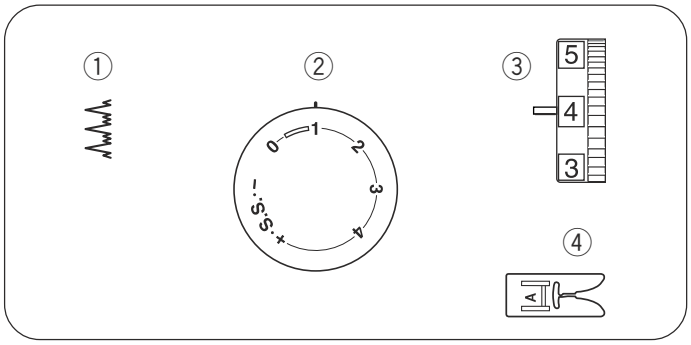
Machine setting

① Stitch selector: A
② Stitch length: 1.5 – 3
③ Needle thread tension: 2 – 6
④ Presser foot: Blind hem stitch foot: G



Fold the fabric wrong sides together and lower the needle into the fabric 0.1 – 0.2 cm inside the folded edge.
Lower the foot and turn the screw to align the guide on the foot with the folded edge.
Sew slowly while guiding the folded edge along the guide.
Open the fabric and iron press the tucks.

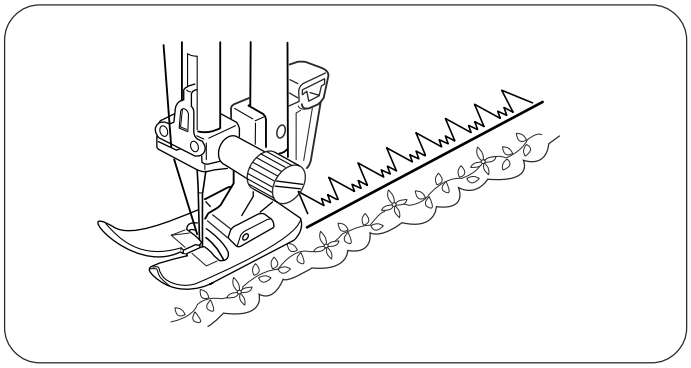
① Screw
② Guide
③ Folded edge



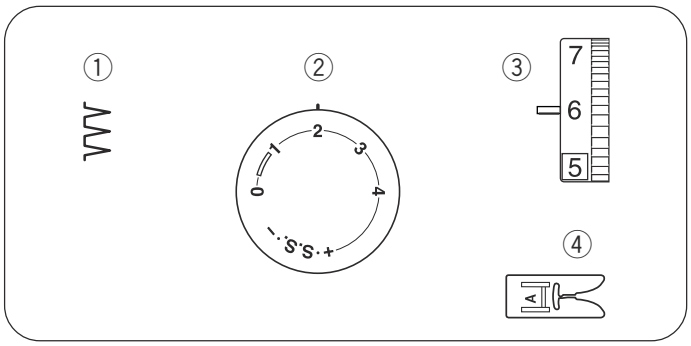
Lace Work

Machine setting

① Stitch selector: E
② Stitch length: 1
③ Needle thread tension: 1 – 4
④ Presser foot: Zigzag foot: A



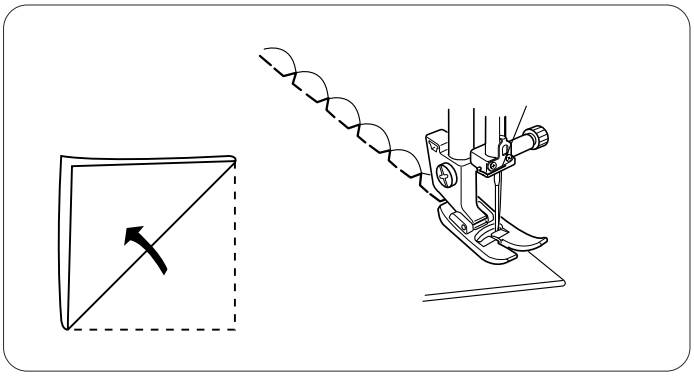
Lace adds a fanciful, feminine touch to blouses and lingerie. Table linens and pillows become more elegant when trimmed with lace.
Fold the raw edge of the fabric at least 5/8″ (1.5 cm). Place lace underneath and topstitch with blind hem stitch. Trim excess fabric close to stitching.



Shell Stitch

Machine setting

① Stitch selector: G
② Stitch length: 2 – 3
③ Needle thread tension: 6 – 8
④ Presser foot: Zigzag foot: A

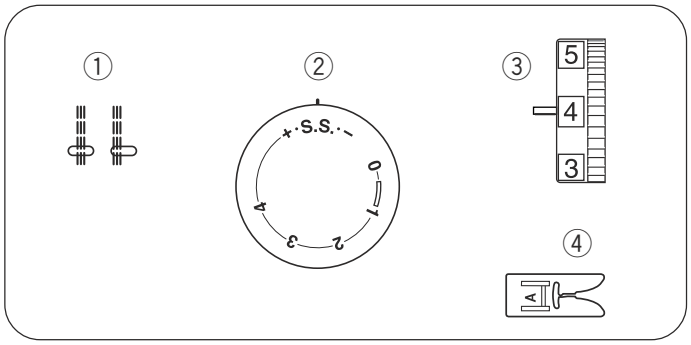


Use a lightweight fabric (tricot, for example). Fold the fabric in bias and stitch on the fold. Allow the needle to just clear the folded edge to create a shelled edge. You may need to increase the needle thread tension slightly.

If you sew rows of shell stitches, space the rows at least 5/8″ (1.5 cm) apart. You can also sew shell stitches on knits or soft silky woven fabrics, in any direction.

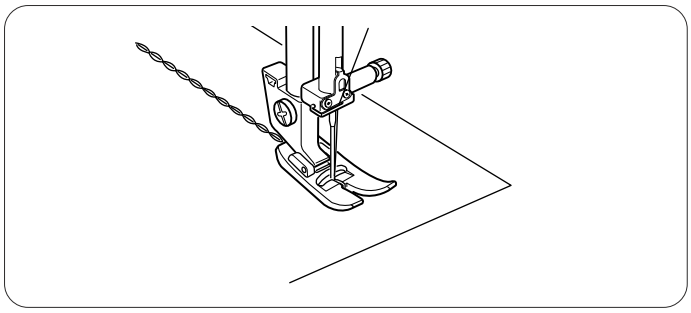
SECTION VII. STRETCH STITCHES

Straight Stretch

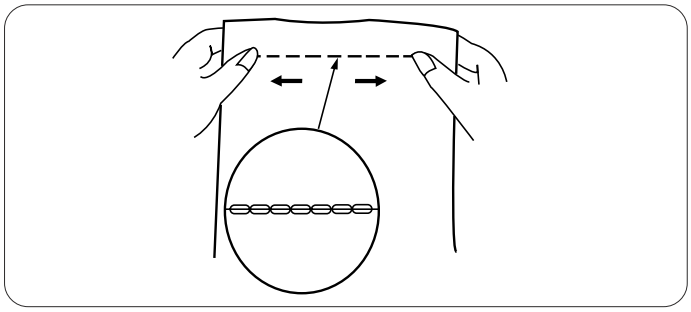


Machine setting

① Stitch selector: A or B
② Stitch length: S.S.
③ Needle thread tension: 2 – 5
④ Presser foot: Zigzag foot: A

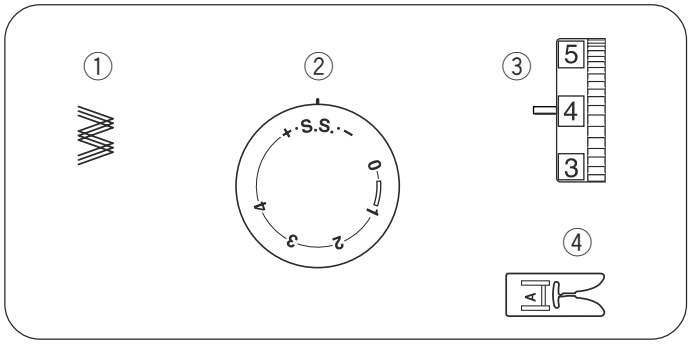


This strong, durable stitch is recommended where both elasticity and strength are necessary in order to insure comfort and durability.



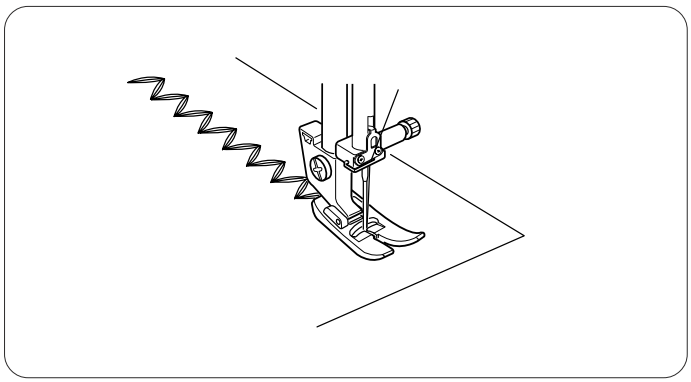
Use it to reinforce areas such as crotch and armhole seams as well as to eliminate puckering on knits and stretch fabrics. Also, use when constructing items requiring extra strength such as backpacks.

Rick-rack Stretch

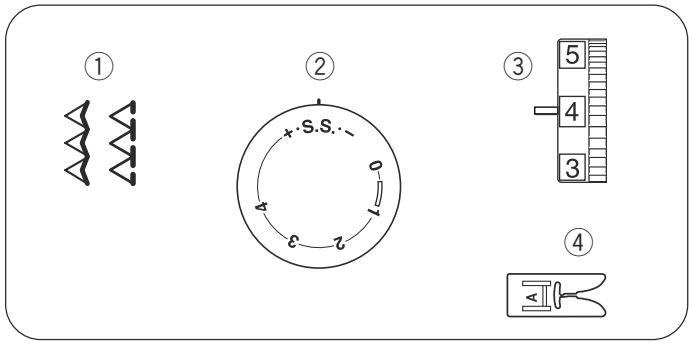


Machine setting

① Stitch selector: C
② Stitch length: S.S.
③ Needle thread tension: 2 – 5
④ Presser foot: Zigzag foot: A



Sew on stretch fabrics in any area that you might use a zigzag stitch. This stitch is used as a decorative topstitch as well.

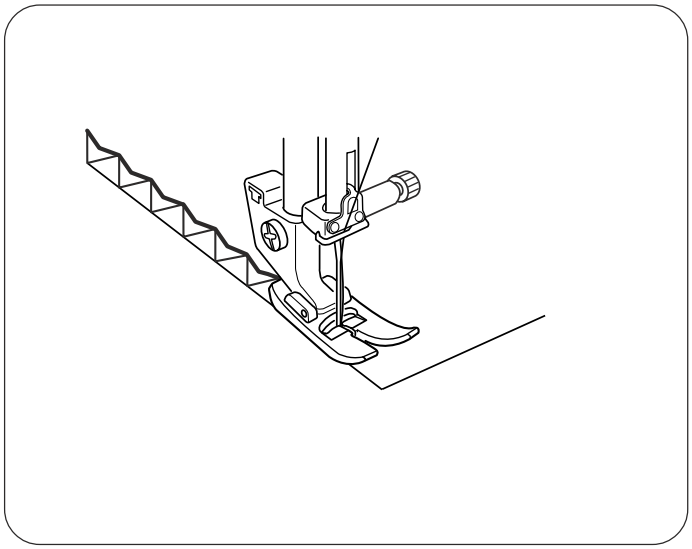


Overcast Stretch Stitching

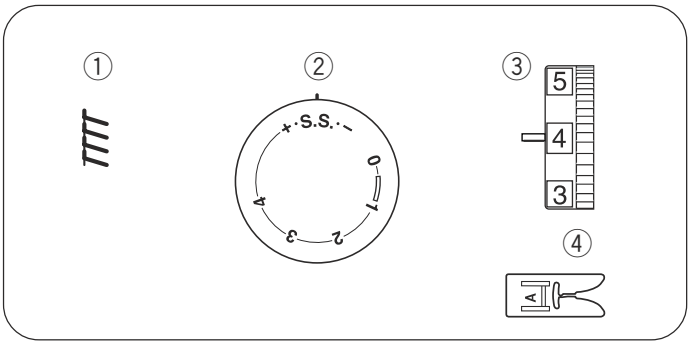
Machine setting

① Stitch selector: E or F
② Stitch length: S.S.
③ Needle thread tension: 2 – 6
④ Presser foot: Zigzag foot: A

This stitch is for sewing a seam with an overcast finish. It is used when making swim wear, ski pants and other garments which require stretch.



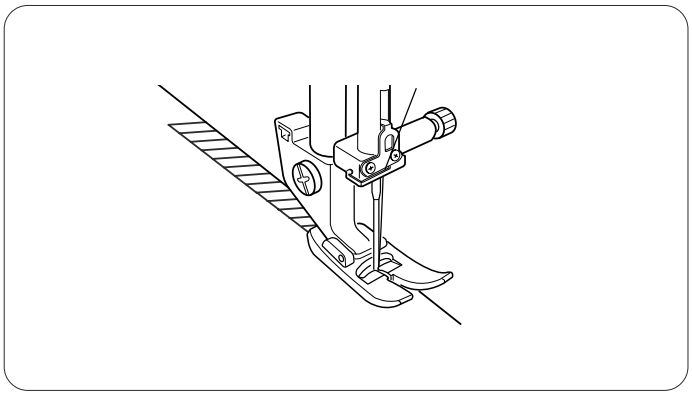
- **To sew**
  Place raw edges of fabric to the “left” of the needle as shown. Sew in a manner so that the needle pierces the fabric very close to the outside edge. Or place the fabric to allow a 5/8″ (1.6 cm) seam, then trim the seam allowance. Raw or worn edges of older garments can be overcast to prevent further raveling.



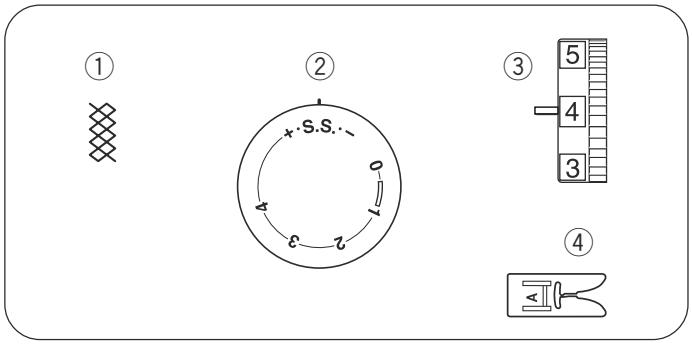
Serging

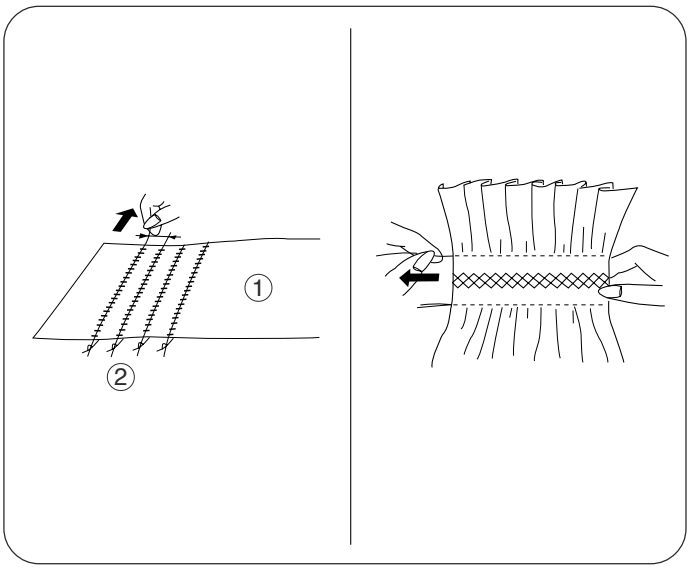
Machine setting

① Stitch selector: G
② Stitch length: S.S.
③ Needle thread tension: 3 – 7
④ Presser foot: Zigzag foot A



This stitch is ideal for 1/4″ (0.6 cm) seams on knits or on medium to heavy weight woven fabrics where you want a narrow seam. It is also great for sewing spandex swim wear. Place the fabric under the presser foot [A] so that the stitches are made over the raw edge.





Smocking

Machine setting

① Stitch selector: D
② Stitch length: S.S.
③ Needle thread tension: 2 – 6
④ Presser foot: Zigzag foot: A

NOTE: Loosen the needle thread tension to make gathering easier.

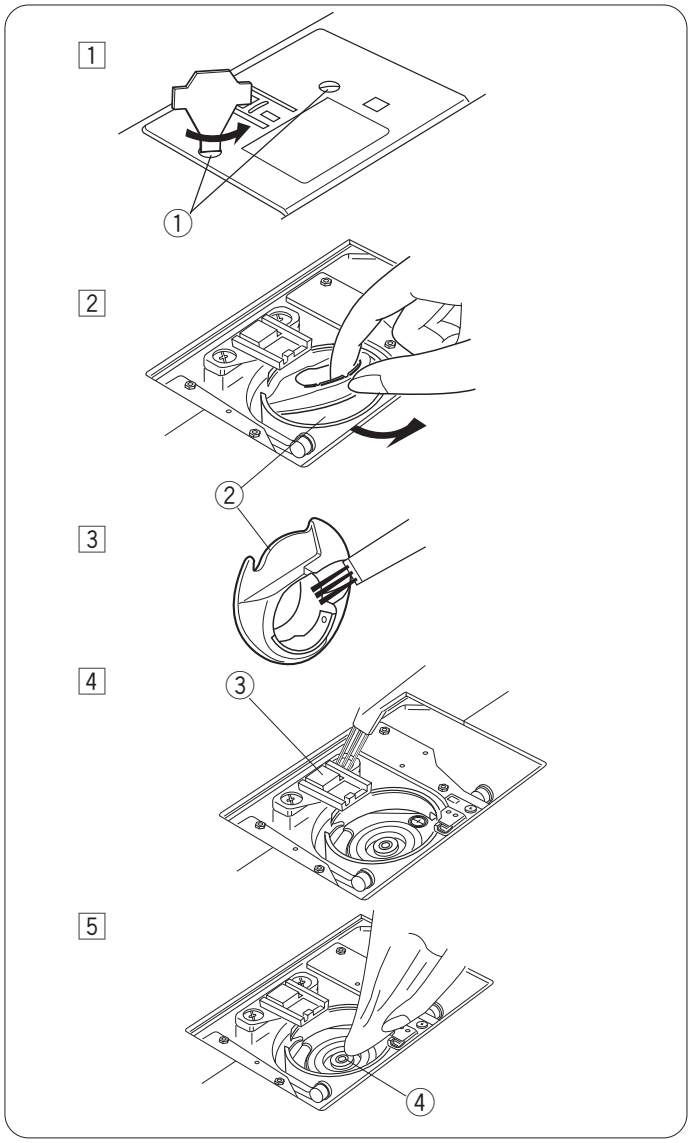
- **To sew**

① Wrong side (Bottom side) of fabric
② Knotted edge

Smocking is a delicate decorative treatment used on children's clothes or women's blouses.
Choose a soft and lightweight fabric such as batiste, gingham or challis. Cut the fabric three times wider than the projected width. Set stitch length at "4" and sew rows of straight stitches 3/8″ (1.0 cm) apart across the area to be smocked.
Knot the threads along one edge ②. From the other edge, pull the bobbin threads (bottom threads) to distribute the gathers evenly and secure the threads.
Sew the smocking stitches between the gathered rows.
Cut the knots and remove the straight stitches by pulling the bobbin threads out.

SECTION VII. CARE OF YOUR MACHINE

NOTE:
* Unplug the machine.
* Do not dismantle the machine other than as explained in this section.
* Do not store the machine in a high-humidity area, near a heat radiator, or in direct sunlight.
* Clean the outside of the machine with a soft cloth and mild soap.



Cleaning the Hook Race and Feed Dogs

1 Remove the presser foot and needle. Remove screw on the needle plate with the screwdriver.
Remove the needle plate and take out the bobbin.
① Screw

2 Lift up the bobbin holder and remove it.
② Bobbin holder

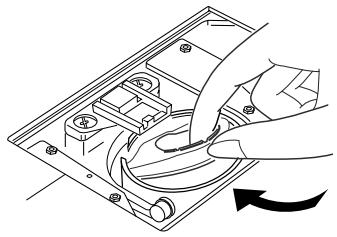
3 Brush out dust and lint. Wipe the bobbin holder with a soft, dry cloth.

4 Clean the feed dogs and hook area with a brush.
③ Feed dogs

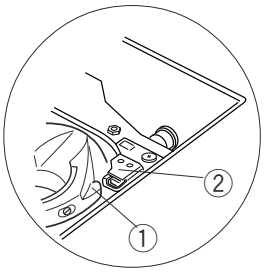
5 Wipe the hook race with a soft, dry cloth.
④ Hook race

NOTE:
You may also use a vacuum cleaner.

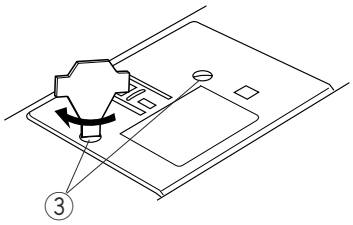
1



2



3



Replacing the Bobbin Holder

1 Insert the bobbin holder into the hook race.

2 Make sure the knob of the bobbin holder fits next to the stopper on the race.
① Knob
② Stopper

3 Replace the bobbin.
Attach the needle plate. Tighten the screw firmly with the screwdriver.
③ Screw

CAUTION: Do not pull the fabric or turn the handwheel when threads or fabric are tangled in the hook area. Remove the needle plate in order to remove the tangled threads.

CAUTION: Do not apply oil to the bobbin holder or hook area, as oil may degrade the bobbin holder.

Troubleshooting

Condition	Cause	Reference
The needle thread breaks.	1. The needle thread is not threaded properly. 2. The needle thread tension is too tight. 3. The needle is bent or blunt. 4. The needle is incorrectly inserted. 5. The needle thread and the bobbin thread are not drawn to the rear and set properly under the presser foot when starting sewing. 6. The threads are not drawn to the back when cut after sewing is finished. 7. The thread is too heavy or too fine for the needle.	Page 11 Page 12 Page 6 Page 6 Page 15 Page 15 Page 7
The bobbin thread breaks.	1. The bobbin thread is not threaded properly in the bobbin holder. 2. Lint has collected in the bobbin holder. 3. The bobbin is damaged and does not turn smoothly. 4. The thread is wound loosely on the bobbin.	 Page 10 Page 29 Replace the bobbin Re-wind the bobbin.
The needle breaks.	1. Needle is incorrectly inserted. 2. The needle is bent or blunt. 3. The needle clamp screw is loose. 4. A proper foot is not used. 5. The threads are not drawn to the back when cut after sewing is finished. 6. The needle is too fine for the fabric being sewn.	Page 6 Page 6 Page 6 Use proper foot. Page 15 Page 7
The needle thread loops.	1. The needle thread tension is too loose. 2. The needle size is not suitable for the thread.	Page 12 Page 7
Skipped stitches	1. The needle is incorrectly inserted. 2. The needle is bent or blunt. 3. The needle and/or thread are not suitable for the fabric being sewn. 4. The needle thread is not threaded properly. 5. A poor quality needle is used.	Page 6 Page 6 Page 7 Page 11 Replace the needle
Seam puckering	1. The needle thread tension is too tight. 2. The needle thread is not threaded properly. 3. The needle is too heavy for the fabric being sewn. 4. The stitch length is too long for the fabric. * Use a stabilizer for very fine fabrics.	Page 12 Page 11 Page 7 Make stitch shorter
The cloth is not fed smoothly.	1. The feed dog is packed with lint. 2. The stitches are too fine. 3. The feed dog was not raised after being lowered. 4. The foot is worn out.	Page 29 Make stitch longer Page 14 Replace the foot
The machine does not work.	1. The machine is not plugged in. 2. Thread is caught in the hook race. 3. The bobbin winder spindle has not been returned to the left. 4. The presser foot is not lowered.	Page 4 Page 29 Page 9 Page 5
Patterns are distorted.	1. The stitch is not balanced.	Page 14
Noisy operation	1. The feed dog is packed with lint. 2. Lint has collected in the bobbin holder.	Page 29 Page 29