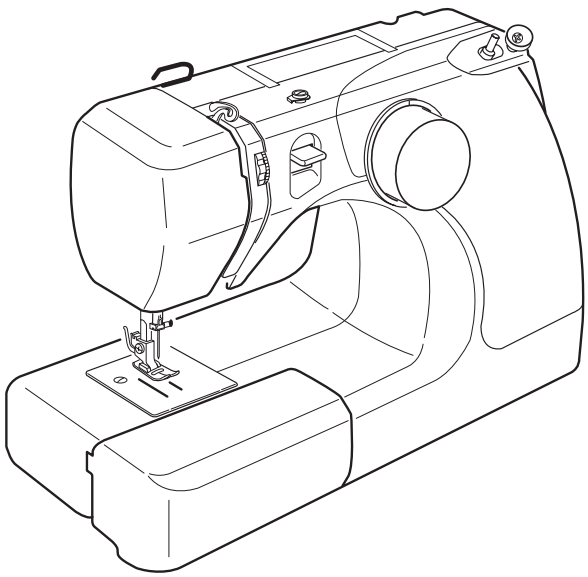
Instruction Book



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.
2. Always unplug before replacing a sewing machine bulb. Replace bulb with same type rated 15 Watts.

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 this 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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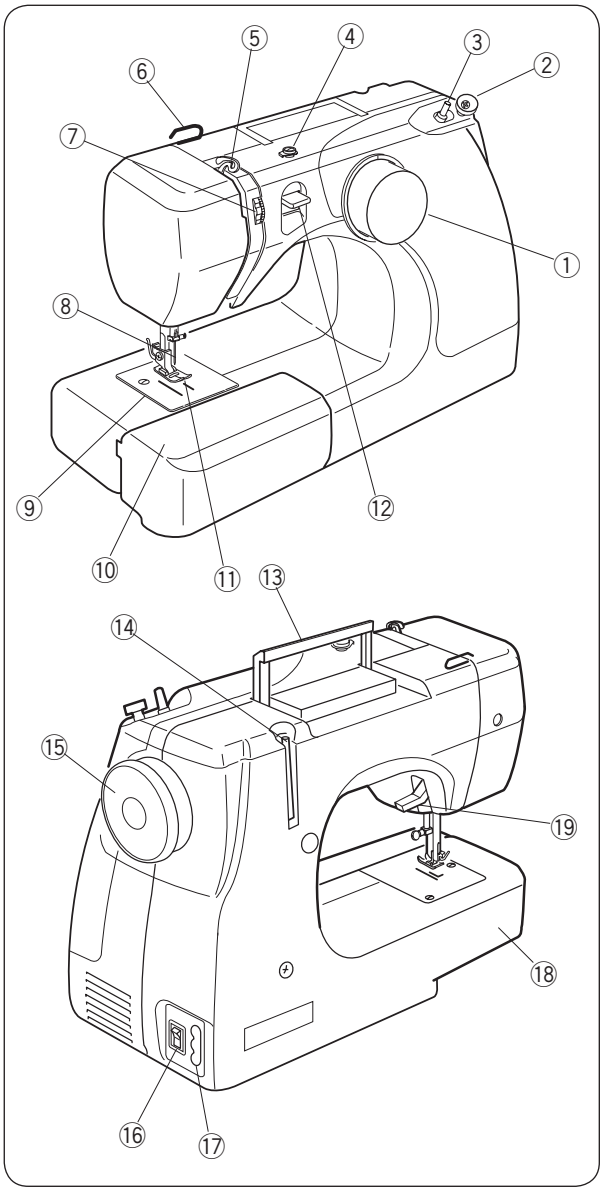
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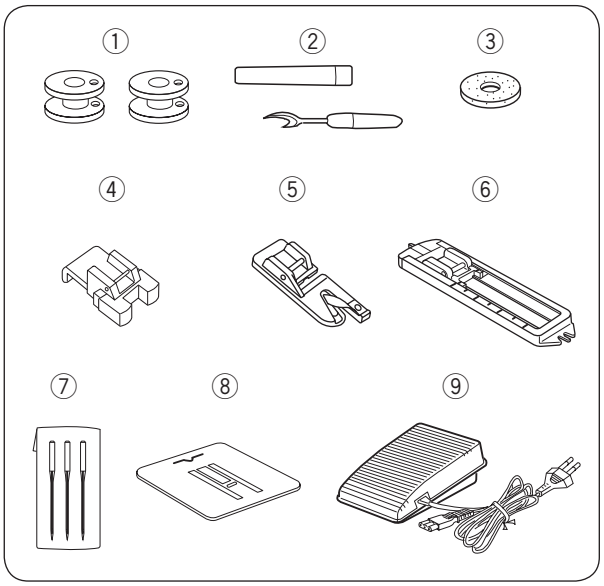
ESSENTIAL PARTS

Names of Parts

① Stitch selector dial
② Bobbin winder stopper
③ Bobbin winder spindle
④ Bobbin winder thread guide
⑤ Thread take-up lever
⑥ Top cover thread guide
⑦ Thread tension dial
⑧ Needle
⑨ Needle plate
⑩ Extension table
⑪ Presser foot (zigzag foot)
⑫ Reverse stitch button
⑬ Carrying handle
⑭ Spool pin
⑮ Handwheel
⑯ Power switch
⑰ Machine socket
⑱ Free arm
⑲ Presser foot lifter

NOTE:
To carry the sewing machine, hold the carrying handle with your hand, and support the sewing machine with the other hand.

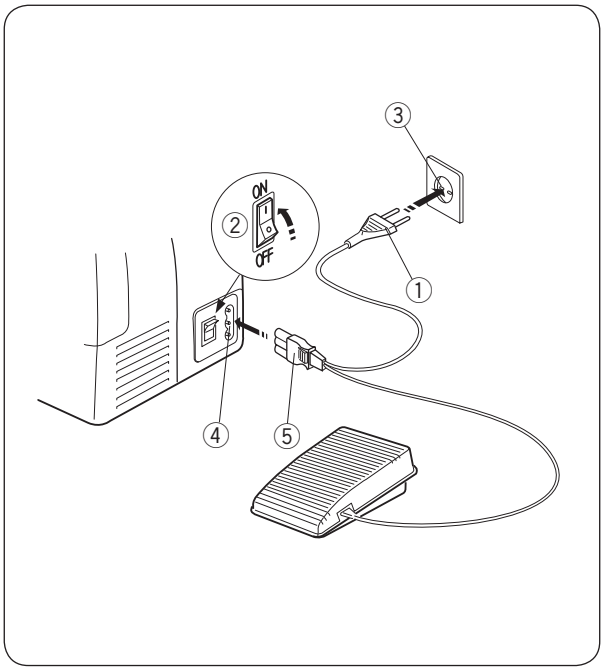
NOTE:
Sewing machine design and specifications are subject to change without prior notice.



Standard Accessories

① Bobbin
② Seam ripper/ Buttonhole opener
③ Felt
④ Button sewing foot
⑤ Round hemmer foot
⑥ Sliding buttonhole foot
⑦ Needle set
⑧ Darning plate
⑨ Foot control

* The power supply plug (Foot control) included may differ from the illustration.



GETTING READY TO SEW

Connecting the Machine to the Power Supply

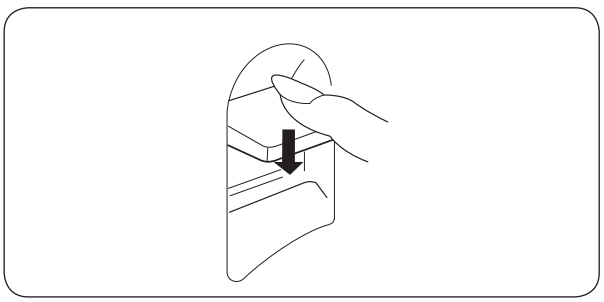
1 Turn off the power switch.
2 Insert the machine plug into the machine socket.
3 Insert the power supply plug into the outlet.
4 Turn on the power switch to activate the power and sewing light.

① Power supply plug*
② Power switch
③ Outlet
④ Machine socket
⑤ Machine plug

* The power supply plug included may differ from the illustration.

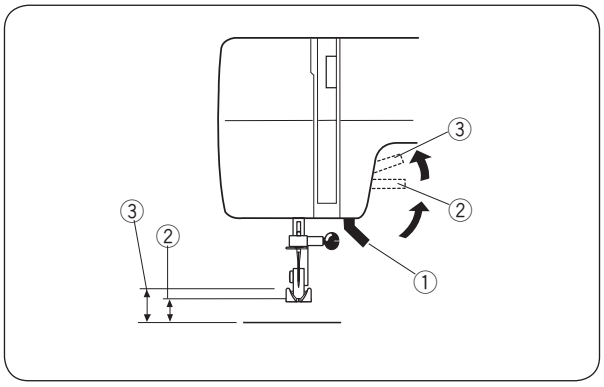
⚠CAUTION:
Before connecting the power cord, make sure the voltage and frequency shown on the machine conform to your electrical power.

NOTE:
While in operation, always keep your eyes on the sewing area, and 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 parts.
– when clearning the machine.
Do not place anything on the foot control, otherwise the machine will run inadvertently.



Reverse Stitch Button

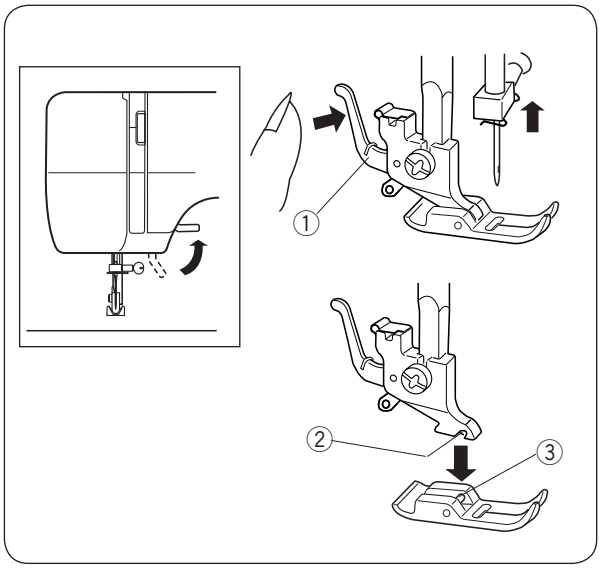
As long as you keep the reverse stitch button depressed, the machine will sew in reverse.



Presser Foot Lifter

The presser foot lifter raises and lowers your presser foot.
You can raise it about 0.6 cm (1/4″) higher than the normal up position for easy removal of the presser foot or to help you to place heavy fabric under the foot.

① Lowest position
② Normal up position
③ Highest position



To Attach and Remove the Presser Foot

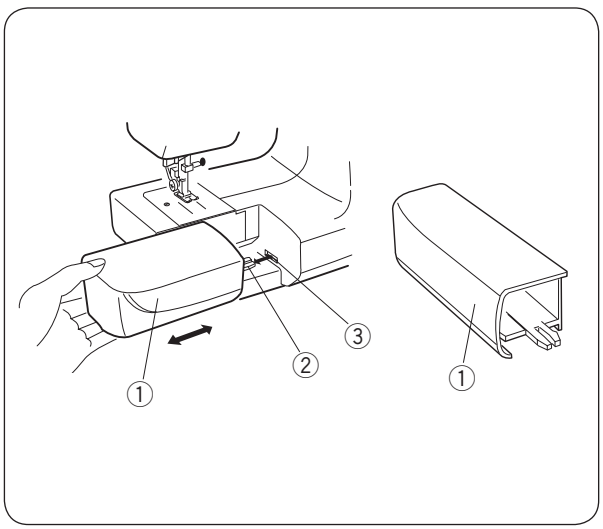
⚠ CAUTION:
Turn off the power switch when changing the presser foot.

To remove:
Turn the handwheel toward you to raise the needle to its highest position. Raise the presser foot. Press the lever on the back of the foot holder. The presser foot will drop off.

① Lever

To attach:
Place the presser foot so the pin on the foot lines up just under the groove of the foot holder. Lower the foot holder to lock the foot in place.

② Groove
③ Pin

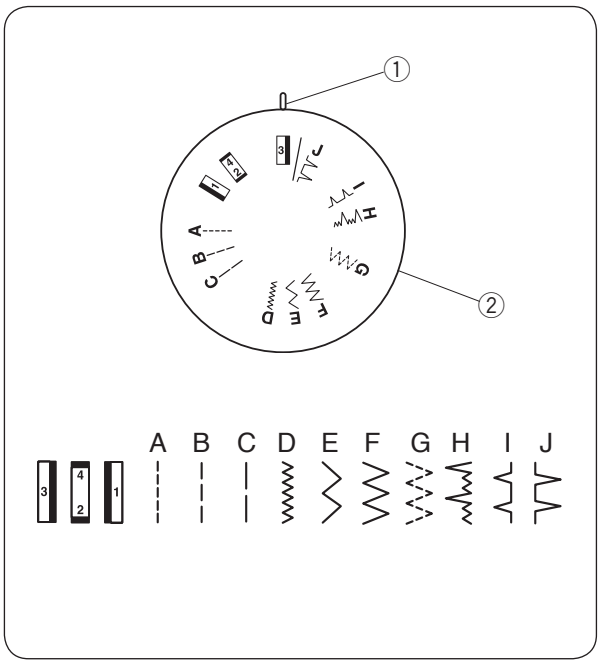


Extension Table

To remove:
Pull the table away from the machine, as illustrated, for “free-arm” sewing of cuffs and sleeves. The extension table can be used as accessory box.

To attach:
Push the extension table, inserting the tab into the slot until the table snaps into the machine.

① Extension table
② Tab
③ Slot

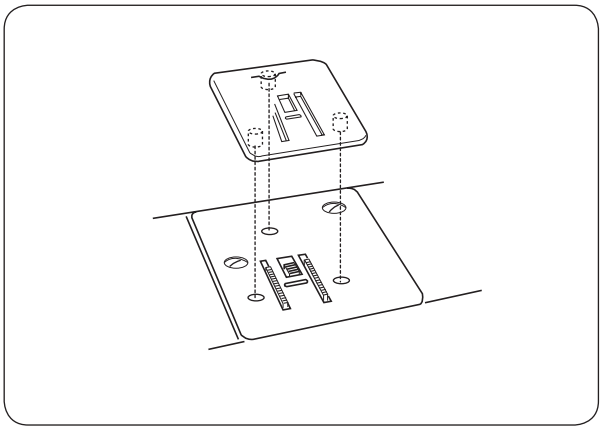


Stitch Selector

① Setting mark
② Stitch selector

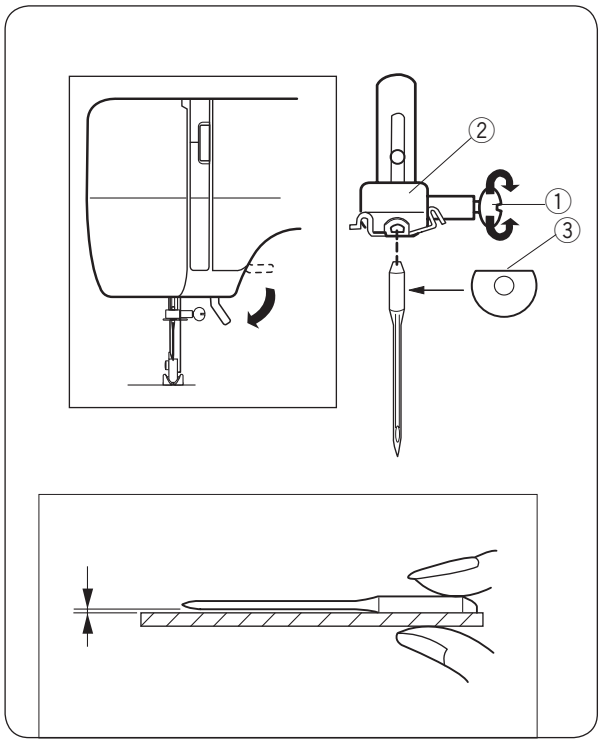
Raise the needle above the fabric.
Turn the dial to select the desired pattern.

NOTE:
To avoid needle or fabric damage, make sure the needle is up and out of the fabric while selecting a stitch.



Darning Plate

Position the darning plate with 3 pins on the bottom.
Fit the darning plate pins into the needle plate holes. The feed dogs will show through the darning plate holes.



Changing Needle

① Needle clamp screw
② Needle clamp
③ Flat side

Raise the needle by turning the handwheel toward you, then lower the presser foot.
Loosen the needle clamp screw by turning it counterclockwise.
Remove the needle from the clamp.
Insert the new needle into the needle clamp with the flat side away from you.
When inserting the needle into the clamp, push it up as far as it will go and tighten the clamp screw firmly with the screwdriver.

To check the needle

Place the flat side of the needle on something flat (needle plate, glass etc.). The clearance between the needle and flat surface should be consistent. Never use a bent or blunt needle.

Fabric		Thread	Needle
Fine	Lawn Georgette Tricot Organza Crepe	Silk #80-100 Cotton #80-100 Synthetic #80-100	#9/65- 11/75
Medium	Sheeting Jersey Broadcloth Fleece	Silk #50 Cotton #50-80 Synthetic #50-80	#11/75- 14/90
Heavy weight	Denim Tweed Coating Quilting	Silk #30-50 Cotton #40-50 Synthetic #40-50	#14/90- 16/100

NOTE:
3 x #14/90 needles are included in the envelop. (Part No. 639804000).

Fabric and Needle Chart

- For general sewing, use needle size 11/75 or 14/90.
- 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.
- Always test the needle size on a small scrap of the fabric that will be used for actual sewing.
- In general, use the same thread for the needle and bobbin.

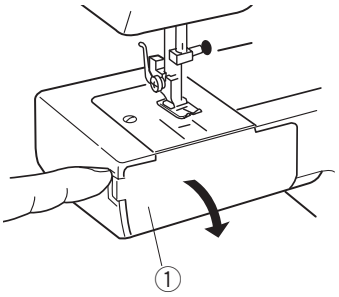
NOTE:
When sewing stretch fabrics, very fine fabrics and synthetics, use a blue tip needle (Part No. 990311000, sold separately). The blue tip needle effectively prevents skipped stitches.

Bobbin Winding

- **Removing the bobbin case**

Remove the extension table by pulling it to the left.

① Shuttle cover

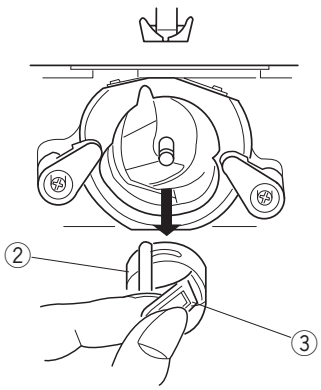


Raise the needle by turning the handwheel toward you.

To remove the bobbin case from the shuttle, pull open the latch of the bobbin case. Pull the bobbin case straight out of the shuttle.

② Bobbin case

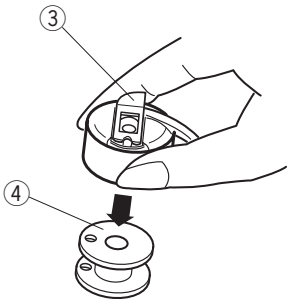
③ Latch

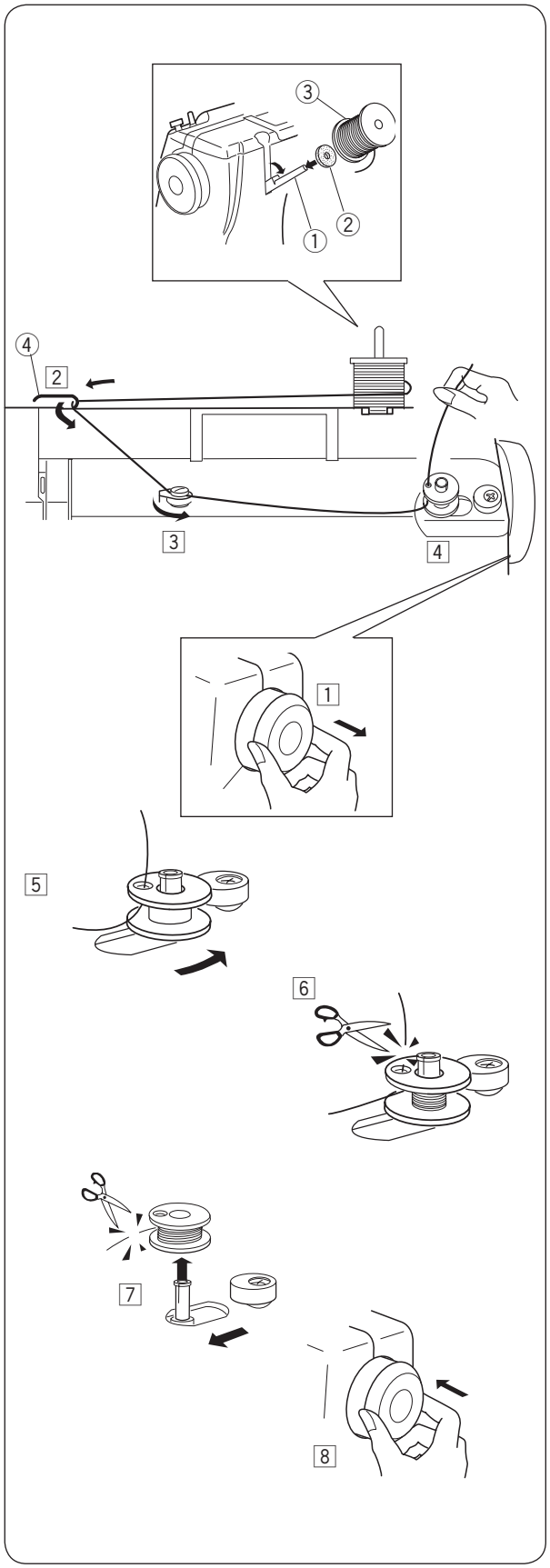


- **Removing the bobbin**

To remove the bobbin, release the latch and the bobbin will drop out of the bobbin case as illustrated.

④ Bobbin





• **Bobbin winding**

The spool pin is stored in the back of the sewing machine. Pull out the spool pin.
Place the felt and the spool in order.
The end of the thread should be coming out from the spool as shown.

① Spool pin
② Felt
③ Spool of thread

1 Release the clutch by pulling out the handwheel. This will stop the needle from moving while you wind the bobbin.

2 Draw thread from the spool. Guide the thread around the thread guide.
④ Thread guide

3 Pass the thread between the tension disks. Thread through the hole in the bobbin from the inside to the outside.

4 Put the bobbin on the bobbin winder spindle.

5 Push the bobbin to the right.

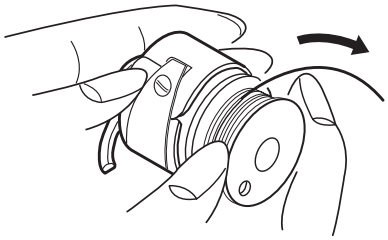
6 With the free end of the thread held in your hand, depress the foot control. Stop the machine when it has made a few turns, and cut the thread close to the hole in the bobbin.

7 Depress the foot control again. When the bobbin is fully wound, it stops automatically. Return the bobbin winder to its original position by moving the spindle to the left, and cut the thread.

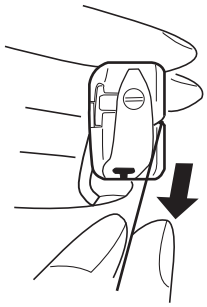
8 Push the handwheel to the left to engage the clutch.
* The machine will not function until the clutch is engaged.

Threading Bobbin Case

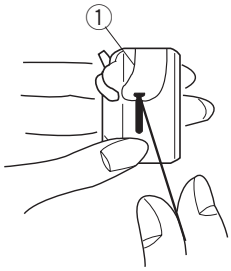
1 Place the bobbin into the bobbin case.
Make sure the thread unwinds in the direction of arrow.



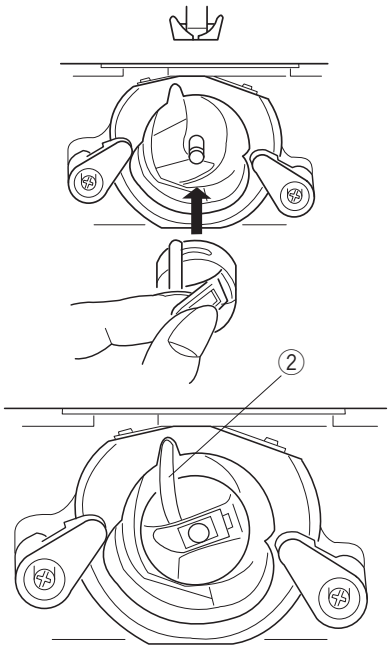
2 Pull the thread into the bobbin case slot.



3 Draw the thread under the tension spring and into the delivery eye.
* Leave about 10 cm (4″) of free thread.
① Tension spring



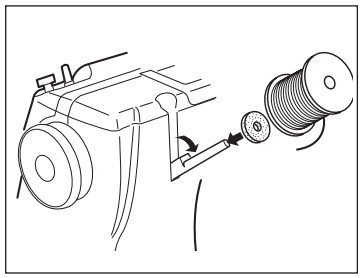
4 Holding the latch open, position the bobbin case into the shuttle, and then release the latch. Place the horn into the recess of the hook race.
The case should lock into the place when the latch is released.
② Horn

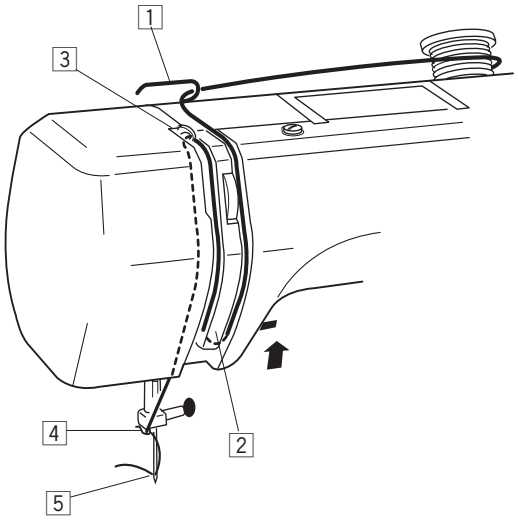


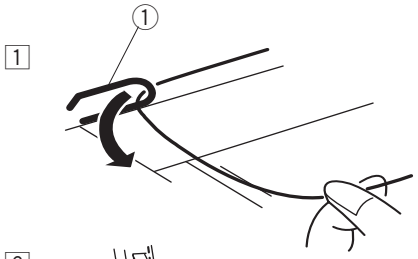
Threading the Machine

• Threading the machine

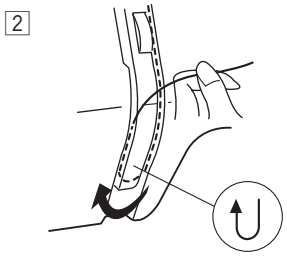
* Place a spool on the spool pin, with thread coming off as shown.
* Raise the thread take-up lever to its highest position by turning the handwheel counterclockwise.
* Raise the presser foot.



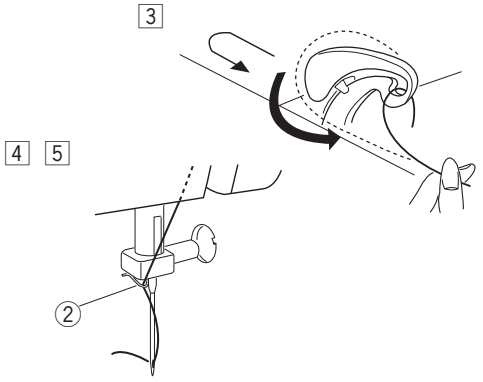




1 Draw the end of thread around the thread guide.
① Thread guide



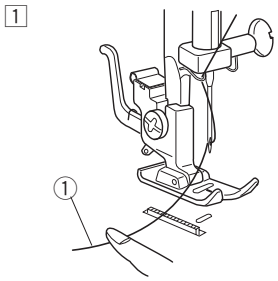
2 While holding the thread near the spool, draw the end of the thread down along the right channel and around the bottom of the guide plate.

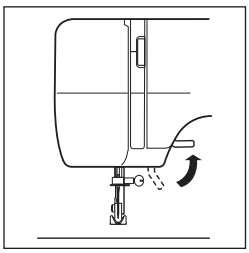


3 Firmly draw the thread up along the left channel. Slip the thread into the slit of the thread take-up lever from right to left and down into the take-up lever eye.

4 Slide the thread behind the needle bar thread guide on the left.
② Needle bar thread guide

5 Thread the needle from front to back.

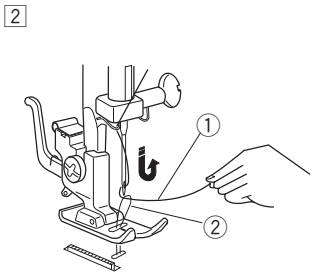


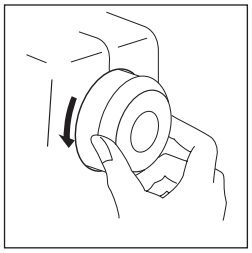


Drawing Up Bobbin Thread

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

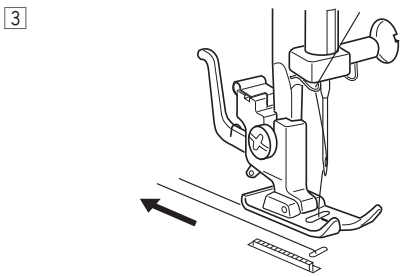
① Needle thread



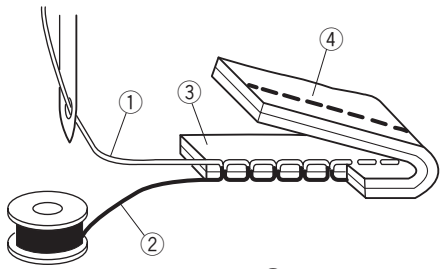


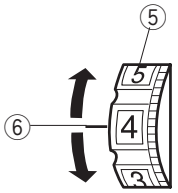
2 Turn the handwheel slowly toward you for one complete turn.
Bring the bobbin thread up by pulling the needle thread.

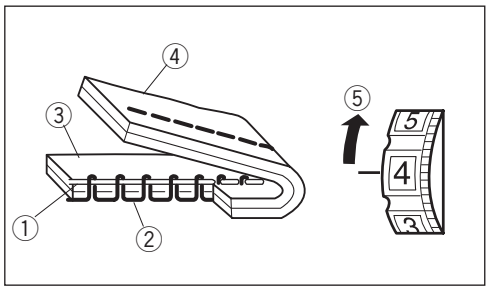
① Needle thread
② Bobbin thread

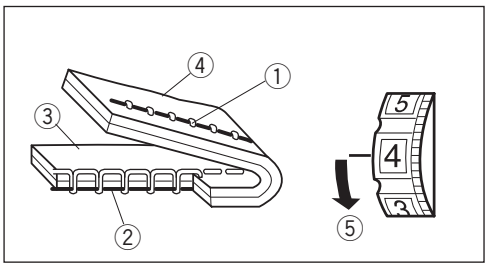


3 Pull 4″ (10 cm) of both threads back and under the presser foot.









Adjusting the Needle Thread Tension

- **Balanced tension:**

  The ideal straight stitch has threads locked between two layers of fabric, as illustrated.

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

  Turn the dial to adjust the tension.

  ⑤ To loosen
  ⑥ To tighten

  The tension requires adjustment depending on:

  - stiffness and thickness of the fabric
  - number of fabric layers
  - type of stitch

- **Thread tension is too tight**

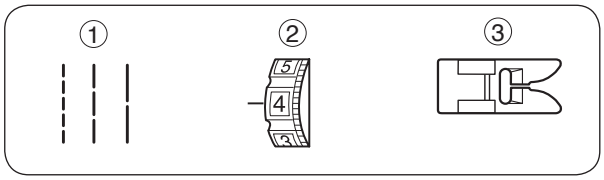
  ① Needle thread (Top thread)
  ② Bobbin thread (Bottom thread)
  ③ Right side (Top side) of fabric
  ④ Wrong side (Bottom side) of fabric
  ⑤ To loosen

  If the bobbin thread shows through on the right side (top side) of the fabric, turn the dial to a lower tension setting number to loosen the needle thread tension.

- **Thread tension is too loose**

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

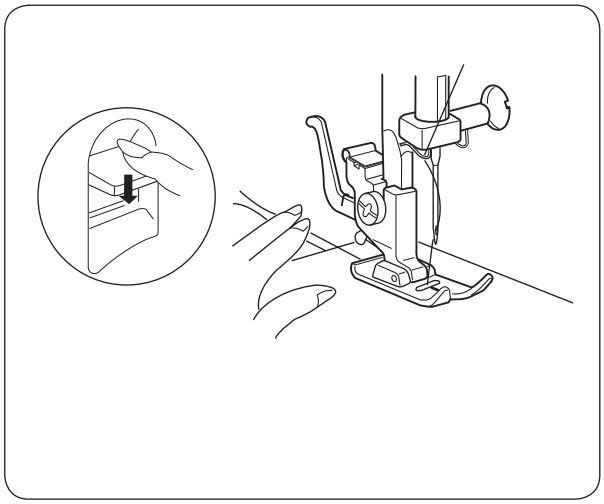
  If the needle thread shows through on the wrong side (bottom side) of the fabric, turn the dial to a higher tension setting number to tighten the needle thread tension.



BASIC SEWING

Straight Stitch

① Stitch selector: A - C
② Thread tension: 2 a 6
③ Presser foot: Zigzag foot



• **Starting to sew**

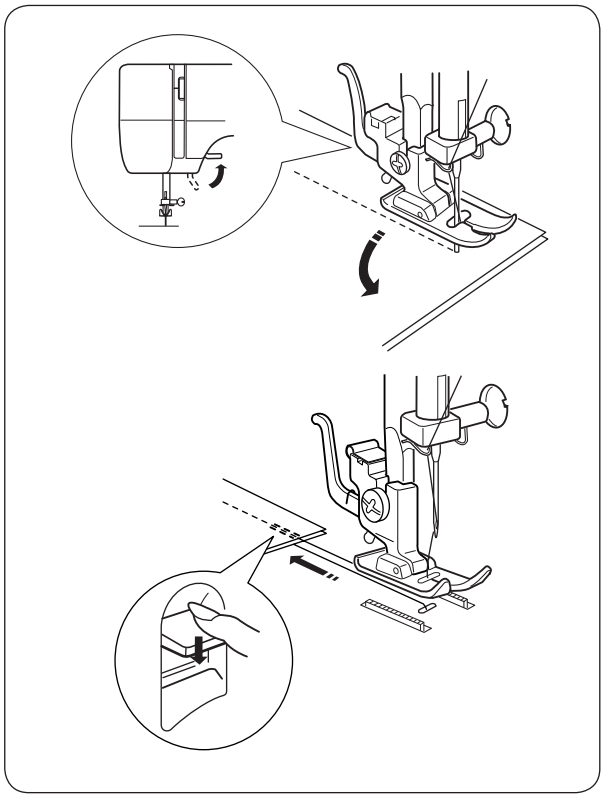
Raise the presser foot and position the fabric next to a seam guide line on the needle plate. Lower the needle to the point where you want to start. Lower the presser foot and pull the threads toward the back.

Depress the foot control. Gently guide the fabric along the seam guide line letting the fabric feed naturally.

NOTE:
5/8″ (1.6 cm) seam allowance is most common.

• **Securing a seam**

To fasten the beginning of a seam, press the reverse stitch control and sew several reverse stitches first. Then start sewing forward.



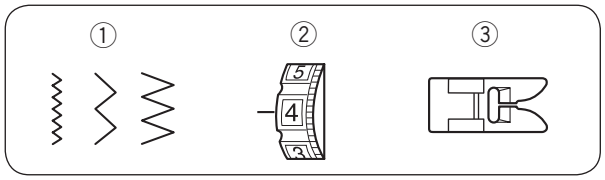
• **Turning a Square Corner**

The cornering guide is useful to maintain a 5/8″ seam allowance when turning a square corner.

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

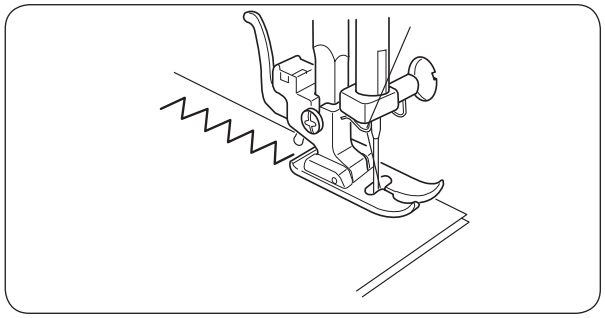
• **Finishing sewing**

To fasten the ends of a seam, press the reverse stitch control and sew several reverse stitches. Raise the presser foot. Remove the fabric.

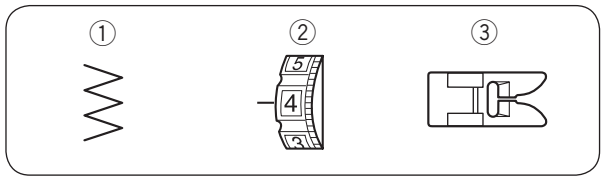


Zigzag Stitch

① Stitch selector: D - F
② Thread tension: 2 a 5
③ Presser foot: Zigzag foot

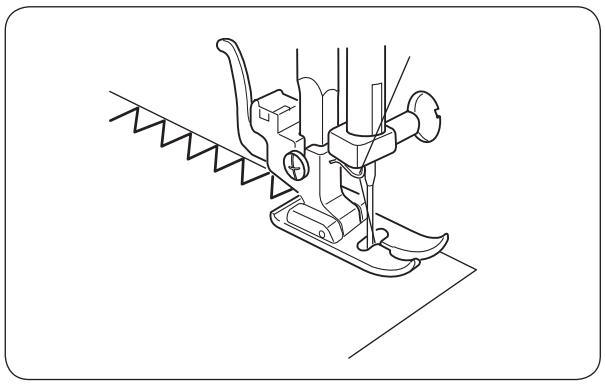


The zigzag stitch is one of the most common and versatile stitches. It can be a utility stitch for button sewing, buttonhole making, hemming, overcasting, mending and darning.
It can also be used to decorate with trims, appliques and cut work, or as a decorative stitch.

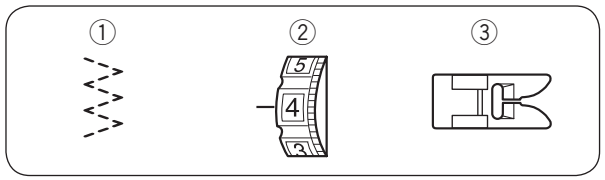


Overcasting Stitch

① Stitch selector: F
② Thread tension: 1 a 4
③ Presser foot: Zigzag foot

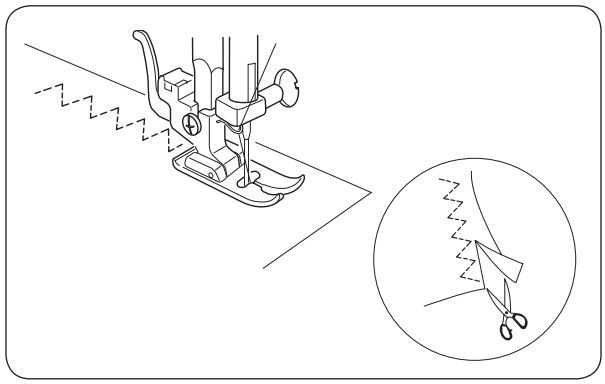


This stitch is useful in garment construction, and in finishing the raw edges of any sewing project. Start overcasting about 1/8″(0.3 cm) inside the raw corner of a seam. The right tip of the stitch should just clear the seam edge.



Multiple Zigzag Stitch

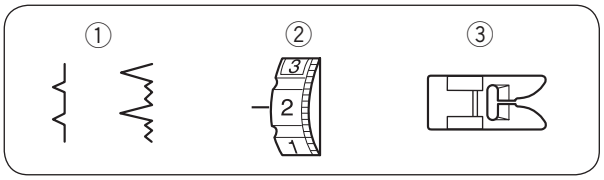
① Stitch selector: G
② Thread tension: 1 a 4
③ Presser foot: Zigzag foot



This stitch is used to finish the seam allowance on synthetics and other fabrics that tend to pucker. Place your fabric to allow a 1.6 cm (5/8″) seam. Trim the seam allowance after sewing.

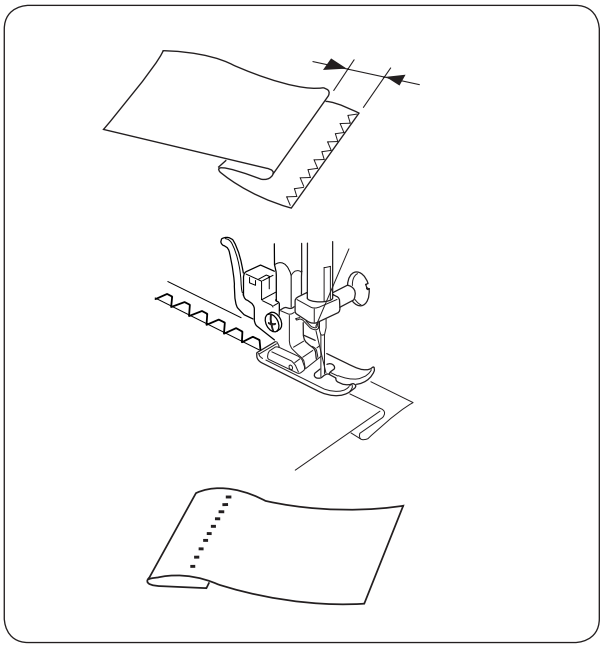
NOTE:
Be careful not to cut the stitches.

It is also handy for darning and mending tears.



Blind Hem Stitch

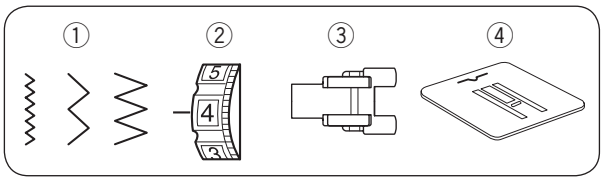
① Stitch selector: I or H
② Thread tension: 1 to 4
③ Presser foot: Zigzag foot



On heavyweight fabrics that ravel, the raw edge should be overcast first. Then fold the hem, as illustrated, leaving 1/4″ (0.7 cm) of the hem edge showing.

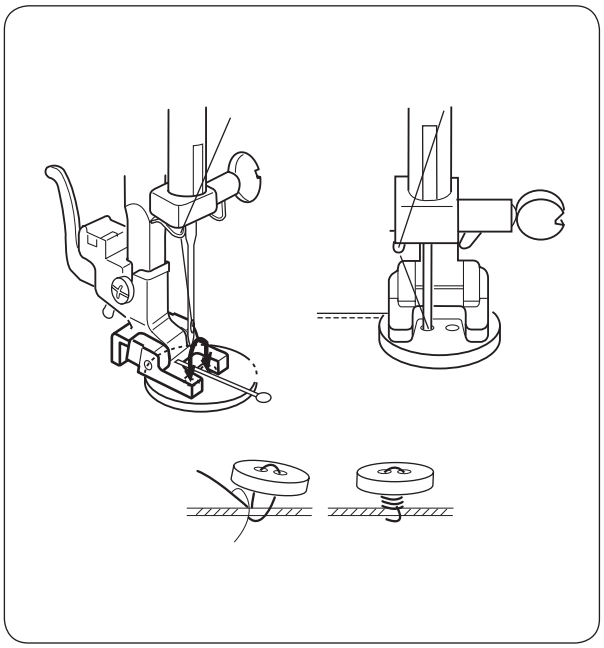
Position the fabric so the needle at its leftmost position just pierces the edge of the fold.

After hemming is completed, press together both sides of the finished hem. The top side of the fabric should show only the blind stitches.

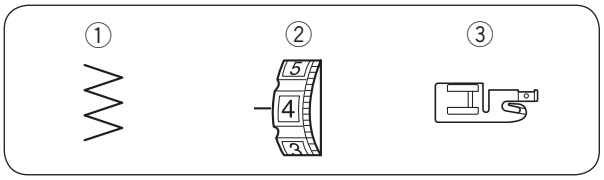


Button Sewing

① Stitch selector: D - F
② Thread tension: 2 to 6
③ Presser foot: Button sewing foot
④ Darning plate

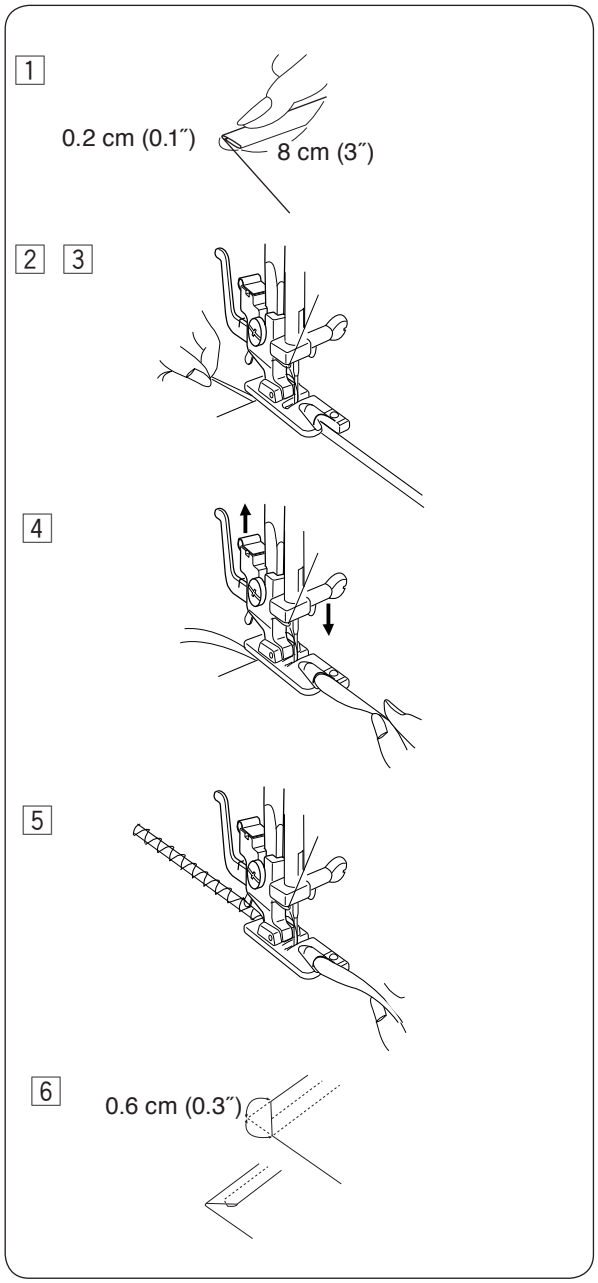


1 Attach the darning plate. Place the button below the button sewing foot, making sure to align the holes with the foot. Turn the handwheel, so that the needle is in its leftmost position, and then drop the needle through the left hole in the button.
2 Lower the presser foot to hold the button in place. Determine which zigzag width setting matches the distance between the button holes. The needle must go safely through each hole when sewing.
3 Depress the foot control and sew about 10 stitches.
4 Trim excess threads from both sides of the fabric.



Rolled Hem

① Stitch selector: F
② Thread tension: 3 to 6
③ Presser foot: Round hem foot



1 Make a double 0.2 cm (0.1″) fold approximately 8 cm (3″) in length.

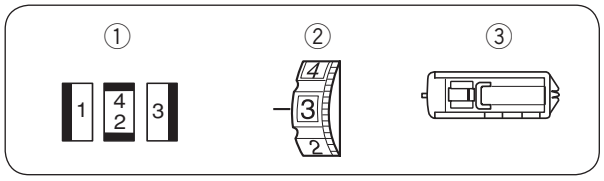
2 Lower the needle at the left stitch into the fabric at the point to the left of the hem (not on the hem).
Lower the round hemmer foot.

3 Turn the power switch on.
Sew 3 or 4 stitches while pulling the needle and bobbin threads.

4 Lower the needle into the fabric and raise the foot.
Insert the folded portion of the fabric into the curl of the foot.

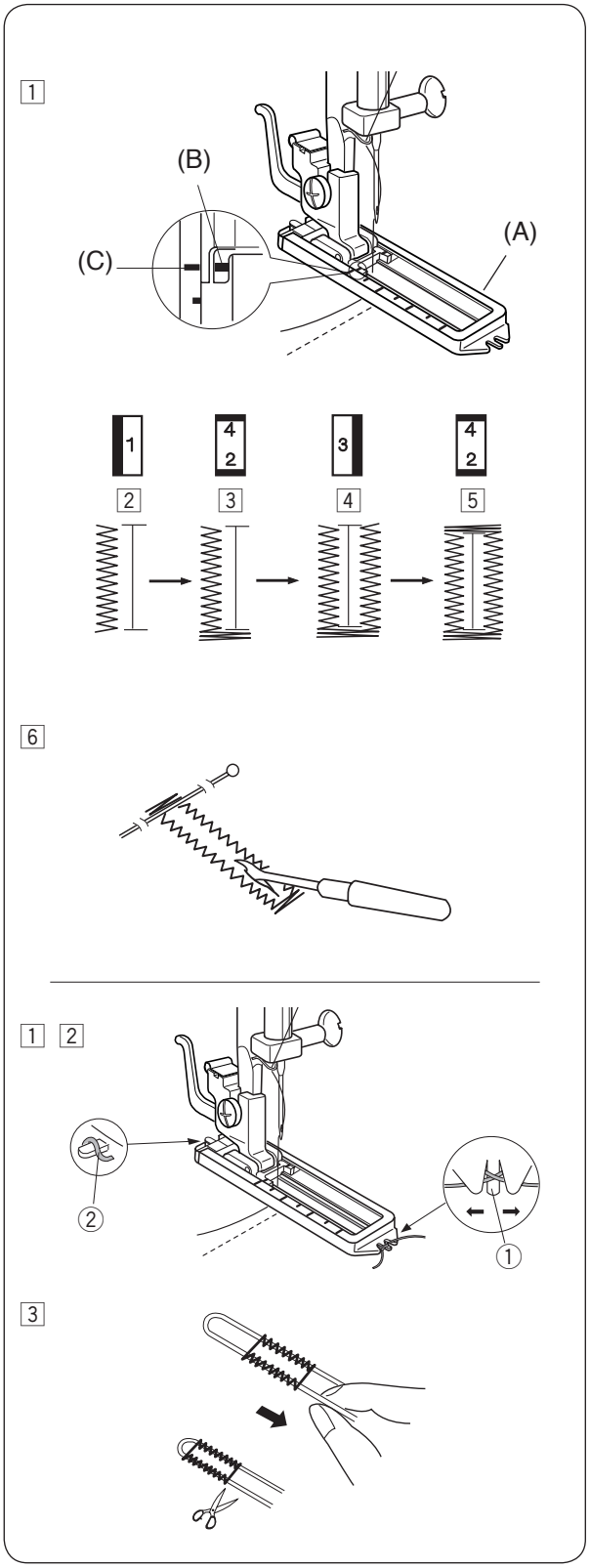
5 Lower the foot, then sew while lifting up the edge of the fabric to keep it feeding into the curl smoothly and evenly.
* Needle at the right stitch should be off the hem (not on the hem).

6 Trim about 0.6 cm (0.3″) from corners as illustrated, to reduce bulk.



Buttonhole

① Stitch selector: 1 4 2 3
② Thread tension: 1 to 5
③ Presser foot: Sliding buttonhole foot



• Starting to sew

1 Attach the buttonhole foot. Carefully mark the buttonhole length on the fabric.
Place the fabric under the foot, with the button hole marking running toward you.
Move the slider (A) toward you so the top mark (C) on the slider aligns with the start mark (B).
Lower the presser foot.

2 Set the stitch selector at 1. Sew forward until you reach the front mark of your buttonhole. Stop sewing at a left stitch.

3 Set the stitch selector at 4 2. Sew four (4) to six (6) stitches. Stop sewing at a right stitch.

4 Set the stitch selector at 3. Sew until you return to the start mark of the buttonhole. Stop sewing at a right stitch.

5 Set the stitch selector at 4 2. Sew four (4) to six (6) stitches. Stop sewing at a left stitch.

6 Remove the fabric and place a pin just before the bartack at each end to prevent cutting bartacks. Cut the opening with the buttonhole opener.

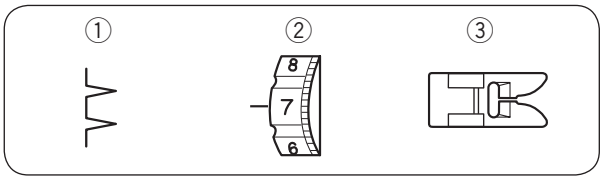
NOTE:
When sewing a buttonhole at the edge of a fabric, set the sliding buttonhole foot as illustrated and sew in reverse [3 → 4 2 → 1 → 4 2].

Corded Buttonhole

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

2 Sew the buttonhole over the cord in the same procedure as above.
Remove the fabric from the machine and cut the sewing threads only.

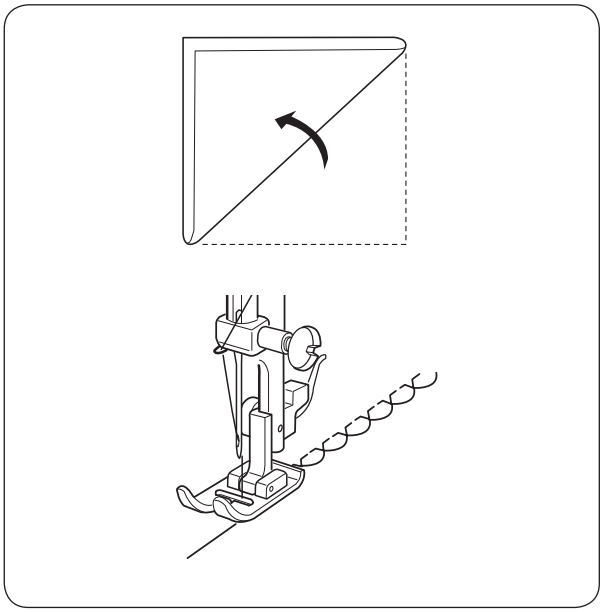
3 Pull the left end of the filler cord to tighten it. Thread the end through a darning needle, draw the wrong side of the fabric and cut.



DECORATIVE STITCH

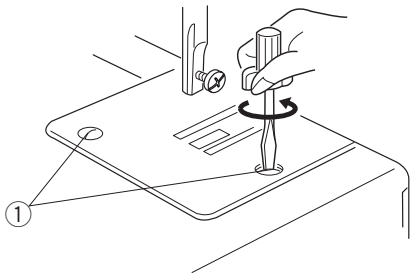
Shell Tuck

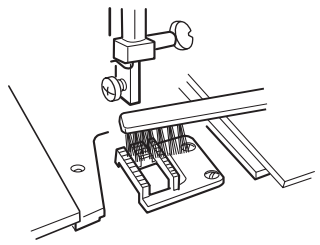
① Stitch selector: J
② Thread tension: 6 to 8
③ Presser foot: Zigzag foot

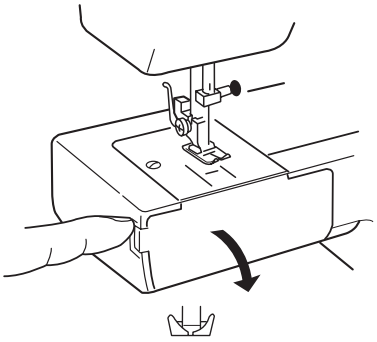


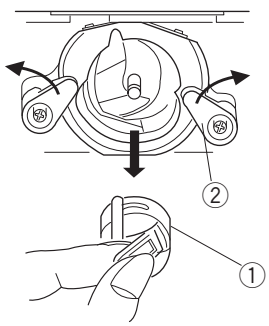
Use a light weight fabric such as tricot.
Fold and stitch on bias.

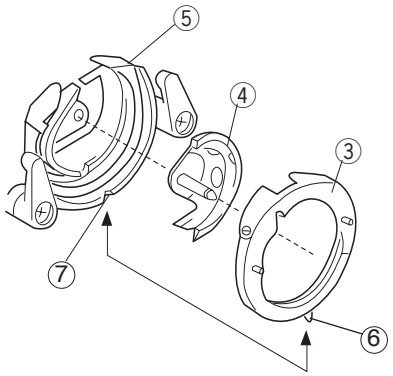
Place the folded edge along the slot of foot.
The needle should fall off the edge of the fabric on the right forming a tuck.











CARE OF YOUR MACHINE

⚠ CAUTION:

- Turn the power switch off and/or unplug the machine before dismantle or cleaning 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.

NOTE:

- Screwdriver is not included with this machine.
- Clean the outside of the machine with a soft cloth and mild soap.

Cleaning Feed Dog

1 Remove the needle and the presser foot.
2 Remove the needle plate setscrew and remove the needle plate.
① Setscrew

With a brush, clean out any dust and lint clogging the feed dog teeth.
Reset the needle plate.

Cleaning Shuttle Race Area

Dismantling Shuttle Race Unit:

Raise the needle to its highest position and open the cover. Open the hinged latch of bobbin case and take it out of the machine.
Open the shuttle race ring holders and remove the shuttle race ring. Remove the shuttle.

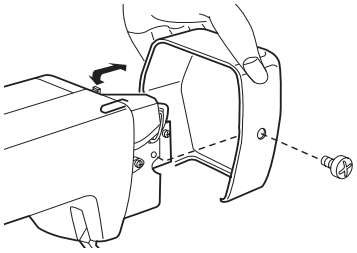
* Clean the shuttle race with a brush and a soft dry cloth.

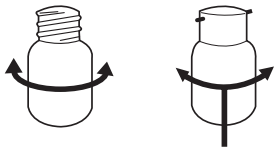
① Bobbin case
② Shuttle race ring holder
③ Shuttle race ring
④ Shuttle
⑤ Shuttle race

Assembling Shuttle Race Unit:

Hold the shuttle by the center pin and fit it carefully back into the shuttle race, forming a perfect circle with the shuttle driver.
Attach the shuttle race ring making sure the bottom pin fits into the notch.
Lock the shuttle race ring by turning the holders back into position. Insert the bobbin case.

⑥ Pin
⑦ Notch





Replacing the Light Bulb

⚠CAUTION:
- Turn the power switch off and/or unplug the machine before replacing the light bulb.
- As the light bulb could be HOT, protect your fingers when you handle it.

NOTE:
Phillips head screwdriver is not included with this machine.

Unplug the machine.
Remove the setscrew and face cover.

(A)
– Turn the bulb counterclockwise to remove.
– Replace with a new bulb and turn it clockwise.

(B)
– While pushing the bulb up, turn it counterclockwise to remove.
– Put in a new bulb by pushing it up and turning it clockwise.

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 set properly under the presser foot at the beginning of sewing. 6. The fabric is not drawn to the rear when the sewing has finished. 7. The thread is either too heavy or too fine for the needle.	Page 9 Page 11 Page 5 Page 5 Page 12 Page 12 Page 5
The bobbin thread breaks.	1. The bobbin thread is not threaded properly in the bobbin case and shuttle. 2. Lint has collected in the shuttle area. 3. The bobbin is damaged and does not turn smoothly.	Page 8 Page 18 Replace the bobbin.
The needle breaks.	1. The needle is incorrectly inserted. 2. The needle is bent or blunt. 3. The needle clamp screw is loose. 4. The needle thread tension is too tight. 5. The fabric is not drawn to the rear when the sewing has finished. 6. The needle is too fine for the fabric being sewn.	Page 5 Page 5 Page 5 Page 11 Page 12 Page 5
Skipped stitches.	1. The needle is incorrectly inserted. 2. The needle is bent or blunt. 3. The needle and/or threads are not suitable for the work being sewn. 4. A blue tip needle is not being used for sewing stretch, very fine fabrics and synthetics. 5. The needle thread is not threaded properly. 6. The wrong needle is being used.	Page 5 Page 5 Page 5 Page 5 Page 9 Page 5
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.	Page 11 Page 9 Page 5
The fabric is not feeding smoothly.	1. The feed dog is packed with lint.	Page 18
The machine does not work.	1. The machine is not plugged in. 2. A thread is caught in the shuttle race. 3. The clutch is disengaged.	Page 3 Page 18 Page 7
Noisy operation	1. There is thread caught in the shuttle race. 2. Lint has built up in the shuttle or the shuttle race.	Page 18 Page 18