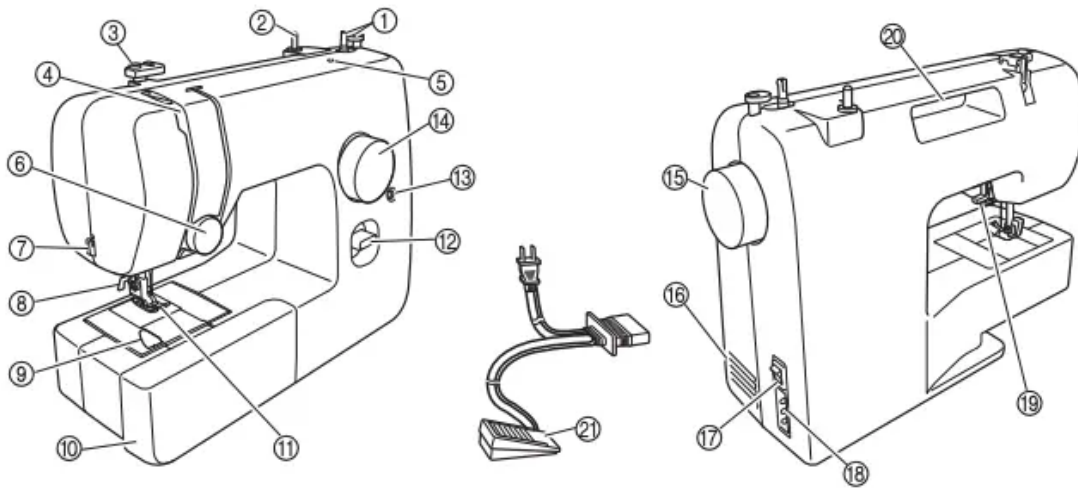


## KNOWING YOUR SEWING MACHINE

### THE MAIN PARTS

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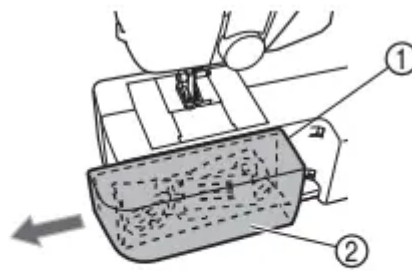
- ① **Bobbin winder (Page 13)**  
This winds the thread onto the bobbin for use as the lower thread.
- ② **Spool pin (Page 13, 17)**  
This holds the spool of thread.
- ③ **Thread guide (Page 13, 17)**  
This is used when winding the thread onto the bobbin and then threading the machine.
- ④ **Thread take-up lever (Page 18)**
- ⑤ **Hole for extra spool pin (Page 26)**  
This holds a second spool of thread for sewing with the twin needle.
- ⑥ **Upper tension-control dial (Page 27)**  
This controls the tension of the upper thread.
- ⑦ **Thread cutter (Page 24)**  
Pass the threads through the thread cutter to cut them.
- ⑧ **Needle threader (Page 19)**  
(This is only available on certain models.)
- ⑨ **Quick-set bobbin (Page 16, 21)**  
(This is only available on certain models.)
- ⑩ **Flat bed attachment with accessory compartment (Page 6)**
- ⑪ **Presser foot (Page 10)**
- ⑫ **Reverse sewing lever (Page 12)**  
Push this lever to stitch in the reverse direction.
- ⑬ **Buttonhole fine-adjustment screw (Page 34)**
- ⑭ **Pattern selection dial (Page 11)**  
Rotate the dial in either direction to choose the stitch you want.
- ⑮ **Handwheel**  
Used to manually raise and lower the needle.
- ⑯ **Air vent**  
The air vent allows the air surrounding the motor to circulate. Do not cover the air vent while the machine is being used.
- ⑰ **Main power and sewing light switch (Page 8)**  
You can turn the main power and sewing light switch on and off.

- ⑱ **Foot controller jack / socket (Page 7)**  
Plug in the foot controller plug and connect the machine to the power supply.
- ⑲ **Presser foot lever (Page 17)**  
Used to raise and lower the presser foot.
- ⑳ **Handle**  
Carry the machine by its handle when transporting.
- ㉑ **Foot controller (Page 8)**  
You can use this to control the sewing speed, and to start and stop sewing.

## Flat bed attachment

The accessories can be stored in a compartment inside the flat bed attachment.

- 1 Slide the flat bed attachment to the left to open it.



- ① Flat bed attachment
- ② Storage compartment

## USING YOUR SEWING MACHINE



### WARNING

- Use only regular household electricity for the power source. Using other power sources may result in fire, electric shock, or damage to the machine.
- Make sure that the plugs on the power cord are firmly inserted into the electrical outlet and the power supply jack on the machine. Otherwise, a fire or electric shock may result.
- Do not insert the plug on the power cord into an electrical outlet that is in poor condition.
- Turn off the main power and remove the plug in the following circumstances:
  - When you are away from the machine
  - After using the machine
  - When the power fails during use
  - When the machine does not operate correctly due to a bad connection or a disconnection
  - During electrical storms



### CAUTION

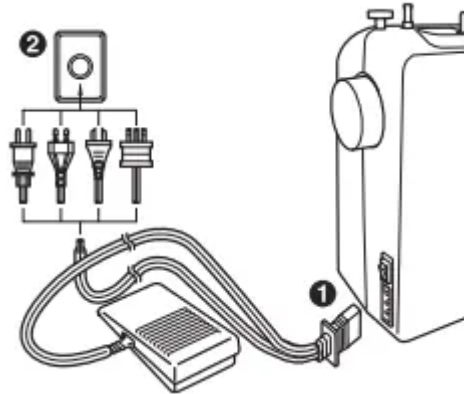
- Use only the power cord included with this machine.
- Do not use extension cords or multi-plug adapters with many other appliances plugged in to them. Fire or electric shock may result.
- Do not touch the plug with wet hands. Electric shock may result.
- When unplugging the machine, always turn off the main power first. Always grasp the plug to remove it from the outlet. Pulling on the cord may damage the cord, or lead to fire or electric shock.
- Do not allow the power cord to be cut, damaged, modified, forcefully bent, pulled, twisted, or bundled. Do not place heavy objects on the cord. Do not subject the cord to heat. These things

may damage the cord and cause fire or electric shock. If the cord or plug is damaged, take the machine to your authorized Brother Service Center for repairs before continuing use.

- Unplug the power cord if the machine is not to be used for a long period of time. Otherwise a fire may result.

### Connecting plugs

- 1 Connect the foot controller plug to the machine.
- 2 Connect the power supply plug to a wall outlet.



### Note

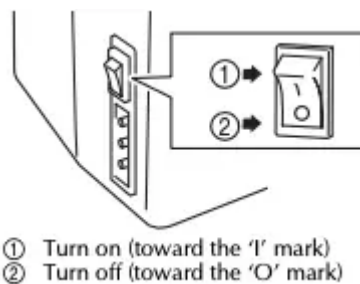
- If a power outage occurs while the sewing machine is being operated, turn off the main power and unplug the power supply cord. When restarting the sewing machine, follow the necessary procedure to correctly operate the machine.

(For U.S.A. only)

- This appliance has a polarized plug (one blade wider than the other). To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If the plug 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

### Main power and sewing light switch

This switch turns the main power and sewing light on or off.



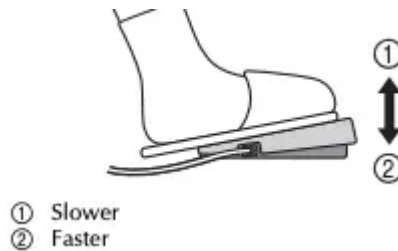


## CAUTION

- Do not turn on the machine while pressing down the foot controller. The machine may start unexpectedly and cause personal injury or damage to the machine.

### Foot controller

When you press the foot controller down lightly, the machine will run at a low speed. When you press harder, the machine's speed will increase. When you take your foot off the foot controller, the machine will stop



You should make sure that nothing is placed on the foot controller when the machine is not in use.



## CAUTION

- Do not allow pieces of cloth and dust to build up on the foot controller. Doing so could cause a fire or an electric shock.



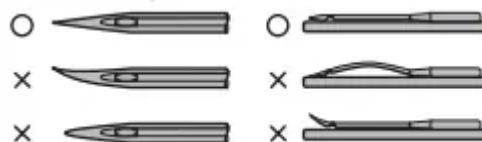
### Note

(For U.S.A. only)

- Foot Controller: Model KD-1902 This foot controller can be used on the machine with product code 888-X64/X74/ X77/X87. The product code is mentioned on the machine rating plate.

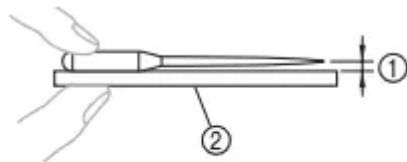
### Checking the needle

The sewing needle must always be straight and sharp for smooth sewing.



#### ■ Checking the needle correctly

Put the flat side of the needle on a flat surface. Check the needle from the top and the sides. Dispose of any bent needles safely



- ① Parallel space
- ② Level surface (bobbin cover, glass, etc.)

## Replacing the needle



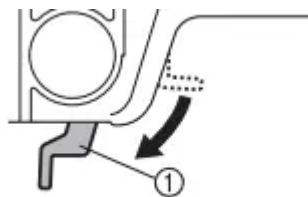
### CAUTION

- Always turn off the machine before you change the needle. Otherwise, injuries may occur if the foot controller is accidentally pressed and the machine starts sewing.
- Only use sewing machine needles for home use. Other needles may bend or break and cause injury.
- Never sew with a bent needle. A bent needle will easily break and cause injury.

1 Turn off the machine.

2 Raise the needle by turning the handwheel toward you (counterclockwise) so that the mark on the wheel points up.

3 Lower the presser foot lever.



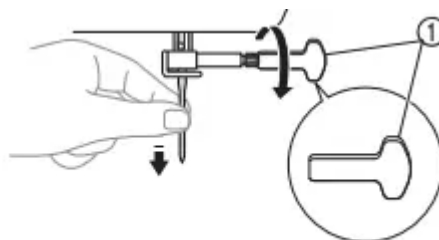
- ① Presser foot lever



### CAUTION

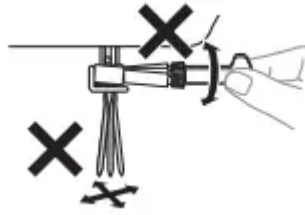
- Before replacing the needle, place fabric or paper under the presser foot to prevent the needle from falling into the hole in the needle plate.

4 Hold the needle with your left hand, and then use a screwdriver to turn the needle clamp screw counterclockwise to remove the needle.

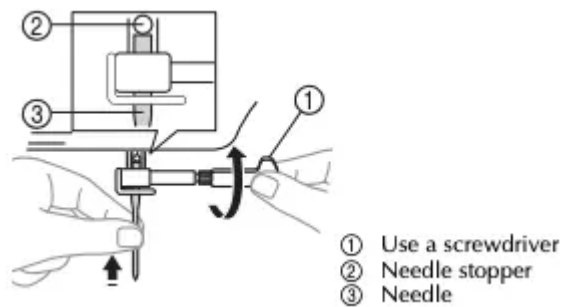


- ① Use a screwdriver

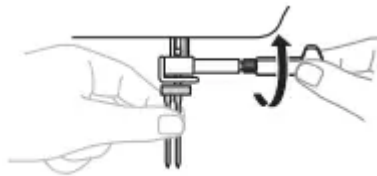
- Do not use excessive force when loosening or tightening the needle clamp screw, otherwise certain parts of the sewing machine may be damaged.



5 With the flat side of the needle toward the back of the machine, insert the needle until it touches the needle stopper. Next, tighten the needle clamp using a screwdriver.



Install the twin needle in the same way



#### CAUTION

- Make sure you insert the needle until it touches the stopper, and securely tighten the needle clamp screw with a screwdriver, otherwise the needle may break or the machine may be damaged.

#### Changing the presser foot



#### CAUTION

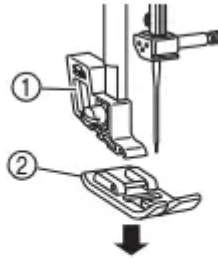
- Always turn off the machine before you change the presser foot. If you leave the power on and step on the controller, the machine will start and you may be injured.
- Always use the correct presser foot for the stitch pattern you have chosen. If you use the wrong presser foot, the needle may strike the presser foot and bend or break, and may cause injury.
- Only use presser feet that have been designed to be used with this machine. Using any other presser foot may cause accident or injury

You will have to change the presser foot depending on what you want to sew and how.

1 Turn off the machine. Raise the presser foot lever.

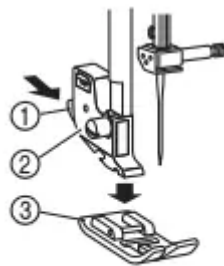
2 Raise the needle by turning the handwheel toward you (counterclockwise) so that the mark on the wheel points up.

3 Remove the presser foot by pulling it vertically downward.



- ① Presser foot holder
- ② Presser foot

Press the black button at the back of the presser foot holder to release the presser foot.



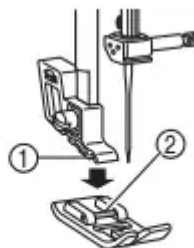
- ① Black button
- ② Presser foot holder
- ③ Presser foot

### Note

- Depending on the type of presser foot holder, the method of releasing the presser foot will vary.

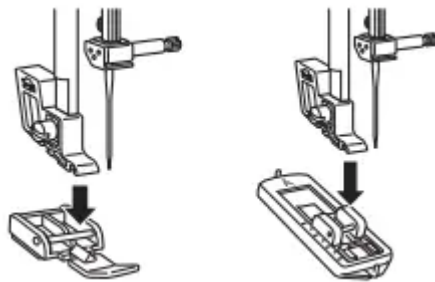
4 Put a different presser foot on the needle plate so that the bar on the presser foot is in line with the slot on the shank.

5 Lower the presser foot lever and fix the presser foot onto the shank. If the presser foot is in the correct place, the bar should snap in.



- ① Shank
- ② Bar

## ■ Presser foot installation orientation



### CAUTION

- If the presser foot is not installed with the correct orientation, the needle may strike the presser foot, which may bend or break the needle and cause injury.

## THE CONTROLS

### Pattern selection dial



### CAUTION

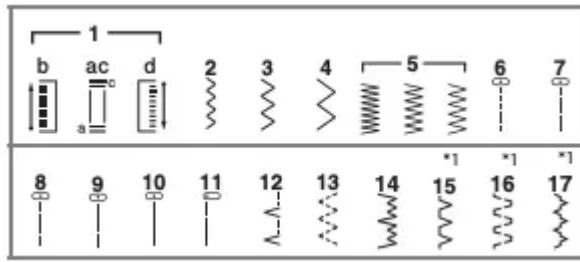
- When you use the pattern selection dial to choose a pattern, raise the needle by turning the handwheel toward you (counterclockwise) so that the mark on the wheel points up. If the needle is in the down position when you turn the pattern selection dial, the needle, presser foot or fabric may be damaged.

To choose a stitch, simply turn the pattern selection dial in either direction.



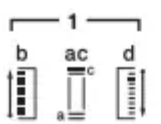



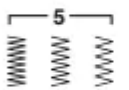




- ① Pattern selection dial
- ② Chosen pattern number









## Patterns and stitch names



\*1 : Stitch nos. 15-17 are only available on certain models.

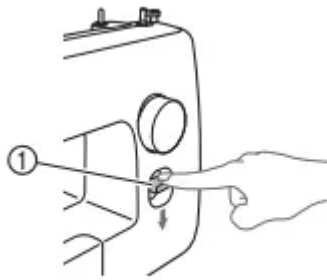


| Pattern   | Preset Length<br>(mm (inch)) | Reference<br>Page     |
|---|------------------------------|-----------------------|
| Stitch Name   | Preset Width<br>(mm (inch))  |                       |
|    | 0.5 (1/32)                   | 33                    |
| 4-STEP AUTOMATIC<br>BUTTONHOLE  | 5 (3/16)                     |                       |
|    | 0.7 (1/32)                   | 29, 36, 37,<br>39     |
| ZIGZAG STITCH   | 1.8 (1/8)                    |                       |
|    | 1.5 (1/16)                   | 29, 36, 37,<br>39     |
| ZIGZAG STITCH   | 3.3 (3/16)                   |                       |
|    | 2 (1/16)                     | 29, 36, 37,<br>39     |
| ZIGZAG STITCH   | 5 (3/16)                     |                       |
|    | 0.5 (1/32)                   | 29, 36                |
| ZIGZAG (SATIN)<br>STITCH  | 5 (3/16)                     |                       |
|  | 1.6 (1/16)                   | 29, 38                |
| STRAIGHT STITCH<br>(Center Needle<br>Position)                                      | —                            |                       |
|  | 1.8 (1/8)                    | 29, 38                |
| STRAIGHT STITCH<br>(Center Needle<br>Position)                                      | —                            |                       |
|  | 2 (1/16)                     | 29, 38                |
| STRAIGHT STITCH<br>(Center Needle<br>Position)                                      | —                            |                       |
|  | 3 (1/8)                      | 29, 35, 36,<br>38, 39 |
| STRAIGHT STITCH<br>(Center Needle<br>Position)                                      | —                            |                       |

| Pattern   | Preset Length<br>(mm (inch)) | Reference<br>Page |
|---|------------------------------|-------------------|
| Stitch Name   | Preset Width<br>(mm (inch))  |                   |
|    | 4 (3/16)                     | 29, 38            |
| STRAIGHT STITCH<br>(Center Needle<br>Position)                                      | —                            |                   |
|    | 2.5 (3/32)                   | 29, 36, 38        |
| STRAIGHT STITCH<br>(Left Needle<br>Position)  | —                            |                   |
|    | 2 (1/16)                     | 30, 39            |
| BLIND HEM STITCH  | 5 (3/16)                     |                   |
|  | 1 (1/16)                     | 31                |
| ELASTIC STITCH  | 5 (3/16)                     |                   |
|  | 2 (1/16)                     | 30, 39            |
| STRETCH BLIND<br>HEM STITCH   | 5 (3/16)                     |                   |
|  | 2 (1/16)                     | 31                |
| OVEREDGE STITCH   | 5 (3/16)                     |                   |
|  | 1.2 (1/16)                   | 32                |
| DOUBLE ACTION<br>STITCH   | 5 (3/16)                     |                   |
|  | 1.2 (1/16)                   | 32                |
| BRIDGING STITCH   | 5 (3/16)                     |                   |

### Reverse sewing lever

You can use reverse sewing for back tacking and reinforcing seams. To sew in reverse, push the reverse sewing lever in as far as possible and hold it in that position while you lightly push the foot controller. To sew forward, release the reverse sewing lever. The machine will then sew forward. The length of reverse stitches is fixed at 2 mm (1/16 inch).



① Reverse sewing lever

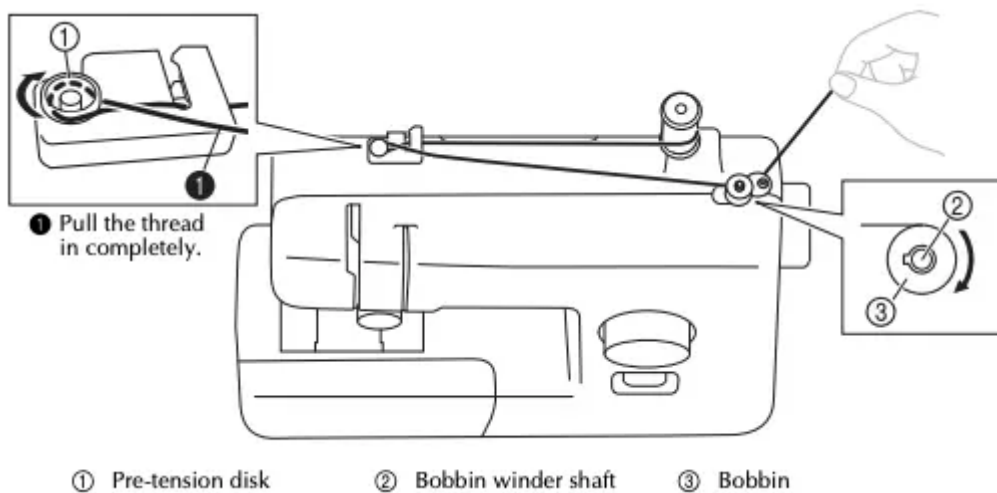
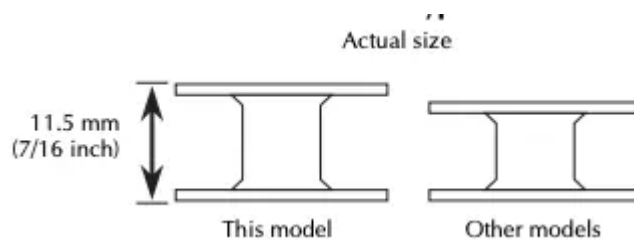
## THREADING THE MACHINE

### Winding the bobbin

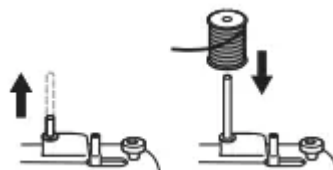


#### CAUTION

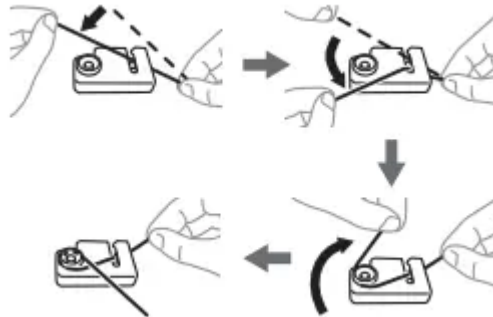
• We designed the bobbin that comes with this machine. If you use bobbins from other models, the machine will not work properly. Only use the bobbin that comes with this machine or bobbins of the same type (part code: SA156, SFB: XA5539-151). Using other bobbins may cause damage to the machine. SA156 is Class 15 type bobbin.



1 Pull up the spool pin and put a spool of thread on this pin.



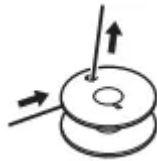
2 While holding the thread from the spool with your right hand, pass the thread toward you, in the groove on the thread guide. Then, pass the thread around the pre-tension disk and pull the thread in completely



**CAUTION**

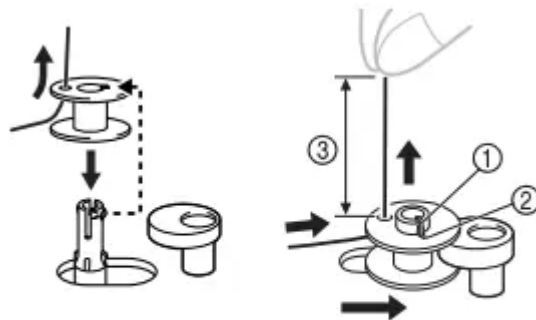
- If the spool of thread is in the wrong place, or is set incorrectly, the thread may tangle on the spool pin.

3 Pass the end of the thread through the hole on the bobbin from the inside of the bobbin.



4 Put the bobbin onto the bobbin winder shaft and slide the bobbin winder shaft to the right. Turn the bobbin clockwise, by hand, until the projection slides into the notch of the bobbin.

- Make sure to pull out 7 to 10 cm (3-4 inches) of thread from the hole on the bobbin.



- ① Projection
- ② Notch
- ③ 7-10 cm (3 – 4 inches)



**CAUTION**

- Pull the thread taut and hold the end of the thread straight up. If the thread is too short, not pulled taut or held at an angle, injuries may occur when the thread is wound around the bobbin.

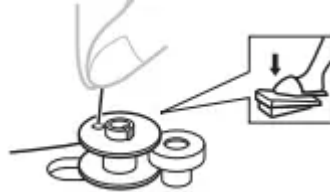
5 Turn on the machine.



## CAUTION

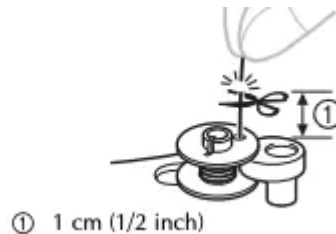
- Do not turn on the machine while pressing down the foot controller. The machine may start unexpectedly and cause personal injury or damage to the machine.

6 While holding the end of the thread, gently press the foot controller to wind the thread around the bobbin a few times. Then stop the machine.



7 Trim the excess thread above the bobbin.

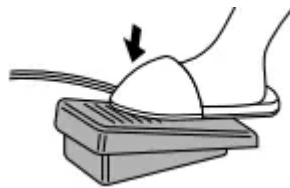
- Leave 1 cm (1/2 inch) of thread from the hole on the bobbin.



## CAUTION

- Make sure you follow the instructions carefully. If you do not cut the excess thread completely before winding the bobbin, when the thread runs low it may tangle around the bobbin and cause the needle to break.

8 Press the foot controller to start.



9 When the bobbin seems full and begins spinning slowly, take your foot off the foot controller.

10 Cut the thread, slide the bobbin winder shaft to the left and remove the bobbin.



## Note

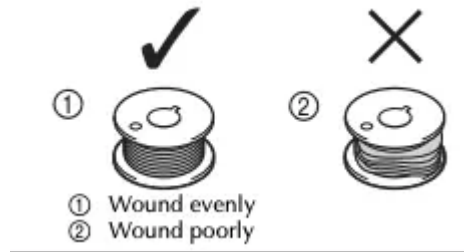
- When the sewing machine is started or the handwheel is turned after winding the thread around the bobbin, the machine will make a clicking sound; this is not a malfunction.

- The needle bar does not move when you slide the bobbin winder shaft to the right.



### CAUTION

- Not winding the bobbin properly may cause the thread tension to loosen, and may break the needle.



### Lower threading

Install the bobbin wound with thread.

- For more details on using the quick-set bobbin, see page 16.



### CAUTION

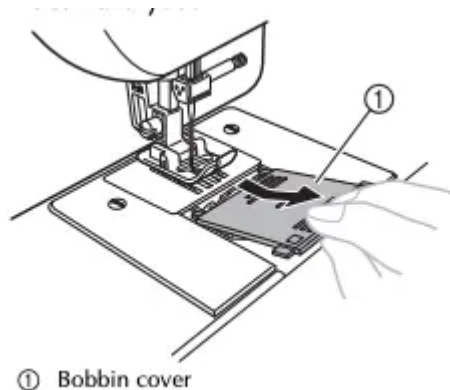
- Make sure you turn off the machine while threading. If you accidentally step on the foot controller and the machine starts to sew, you could be injured.

1 Prepare the bobbin wound properly before threading the lower thread.

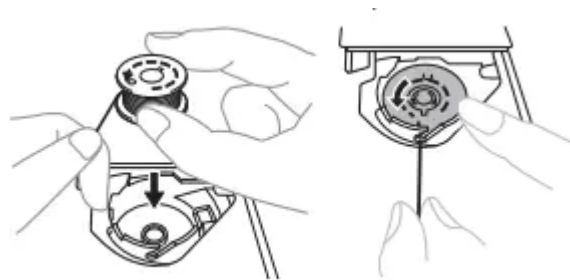
- See page 13 for the details about bobbin winding.

2 Raise the needle by turning the handwheel toward you (counterclockwise) and raise the presser foot lever.

3 Remove the bobbin cover by sliding it and lift toward you.



4 Put the bobbin in so the thread comes out in the direction shown by the arrow.

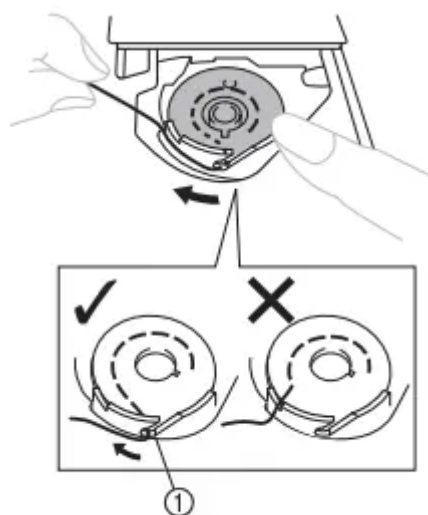


## CAUTION

- Make sure you set the bobbin so the thread unrolls in the right direction. If the thread unrolls in the wrong direction, it may cause the thread tension to be incorrect or break the needle.

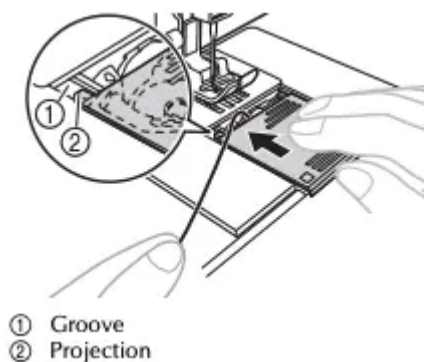
5 Hold the end of the thread, push the bobbin down with your finger, and then pass the thread through the slit, as shown.

- If the thread is not correctly inserted through the tension-adjusting spring of the bobbin case, it may cause incorrect thread tension.



① Tension-adjusting spring

6 Replace the bobbin cover. Put the projection into the bobbin race retainer groove and push closed.



① Groove  
② Projection

- Make sure that the end of the thread comes out from the cover toward the rear of the machine (as shown in the illustration).
- Draw up the lower thread before starting sewing. Refer to “Drawing up the lower thread” on page 21 after threading the upper thread.

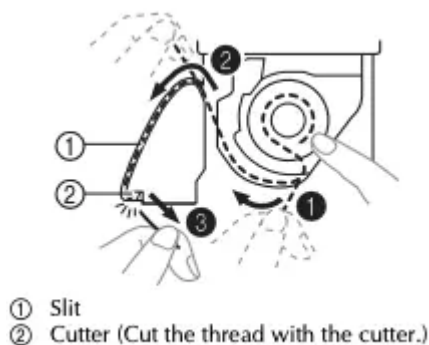
### Lower threading (for models equipped with a quick-set bobbin)

Install the bobbin wound with thread. This feature is only available on certain models.

1 Follow steps 1 to 4 from “Lower threading” on page 15.

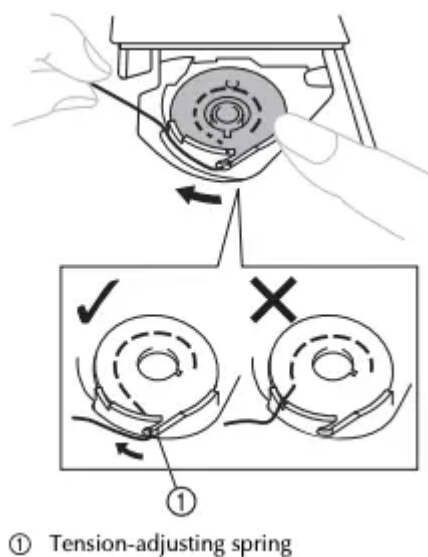
2 While lightly holding down the bobbin with your right hand as shown, guide the thread through the slit (1 and 2). Then, pull the thread toward you to cut it with the cutter (3).

- At this time, check that the bobbin easily rotates counterclockwise.

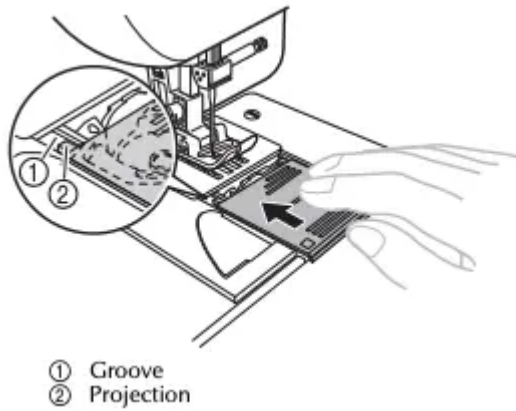


### Note

- If the thread is not correctly inserted through the tension-adjusting spring of the bobbin case, it may cause incorrect thread tension.

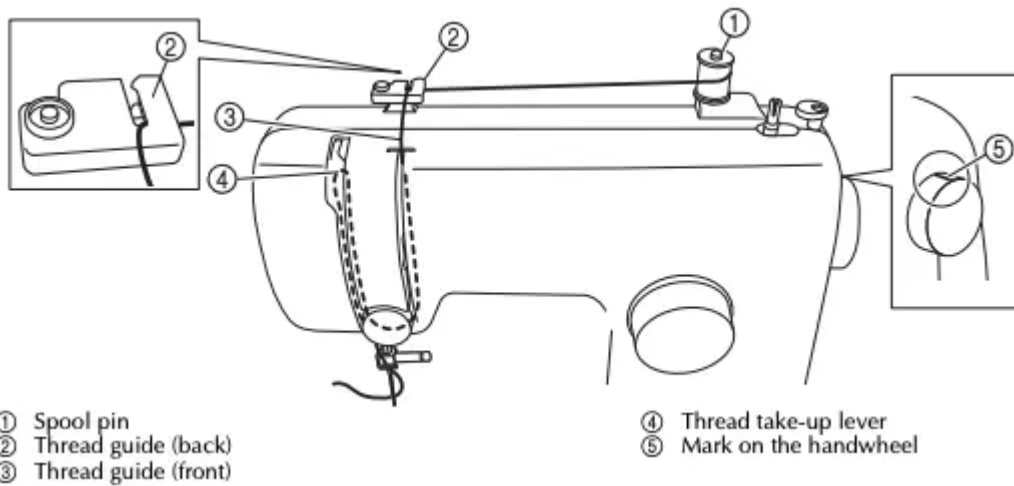


3 Replace the bobbin cover. Put the projection into the race retainer groove and push closed.



- Start sewing after threading the lower and upper thread. When sewing gathers or darts, you can draw up the lower thread by hand so that some thread will be left over. Refer to the steps in “Drawing up the lower thread” (page 21).

### Upper threading

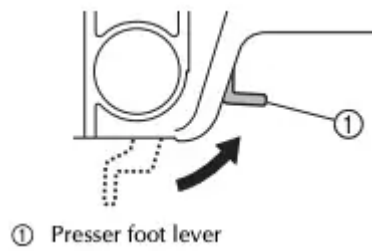


### CAUTION

- When threading the upper thread, carefully follow the instructions. If the upper threading is not correct, the thread may become tangled or the needle may bend or break.
- Never use a thread weight of 20 or lower.
- Use the needle and the thread in the correct combination. For details on the correct combination of needles and threads, refer to “FABRIC, THREAD, AND NEEDLE COMBINATIONS” on page 22.

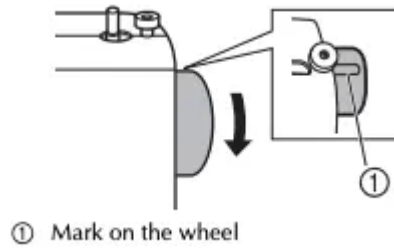
1 Turn off the machine.

2 Raise the presser foot lever.

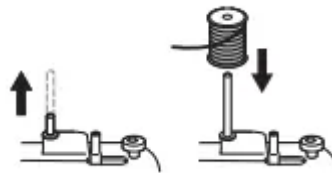


3 Raise the needle by turning the handwheel toward you (counterclockwise) so that the mark on the wheel points up.

- If the needle is not correctly raised, the sewing machine can not be threaded.



4 Pull up the spool pin and put a spool of thread on this pin.

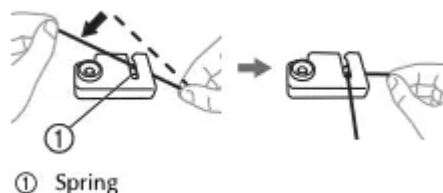


### CAUTION

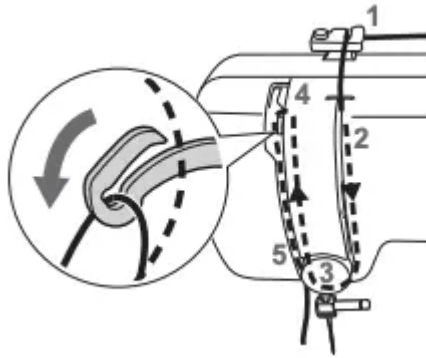
- If the spool of thread is in the wrong place, or is set incorrectly, the thread may tangle on the spool pin and cause the needle to break.

5 While holding the thread from the spool with your right hand, pass the thread toward you, in the groove on the thread guide.

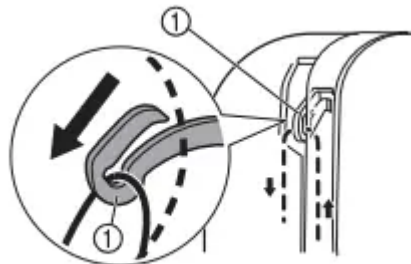
- Make sure that the spring in the groove catches the thread.



6 Feed the upper thread as shown in the following illustration.



7 Make sure you guide the thread through the thread take-up lever from right to left as shown in the following illustration.



① Thread take-up lever

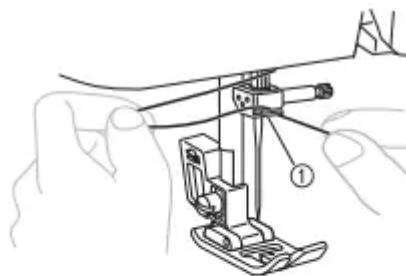


### Memo

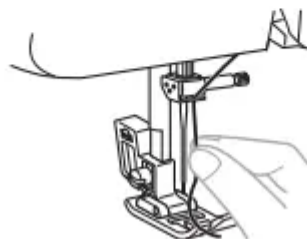
- If the thread take-up lever is lowered, the upper thread can not be wrapped around the thread take-up lever. Make sure you raise the needle by turning the handwheel toward you (counterclockwise) so that the mark on the wheel points up.

8 Put the thread behind the guide above the needle.

- The thread can easily be passed behind the needle bar thread guide by holding the thread in your left hand, then feeding the thread with your right hand.

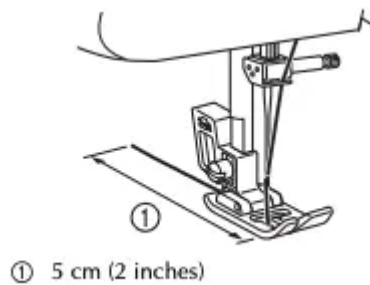


① Needle bar thread guide



9 Thread the needle from front to back leaving a thread tail of about 5 cm (2 inches).

- If your sewing machine is equipped with a needle threader, use the needle threader to thread the needle (see next section).



### Note

- Make sure you raise the presser foot lever and the thread take-up lever before you feed the upper thread.
- If you incorrectly feed the thread you may cause sewing problems.

### Using the needle threader (for models equipped with a needle threader)

This feature is only available on certain models.



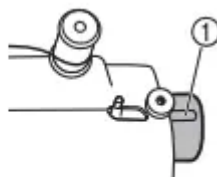
### CAUTION

- The needle threader can be used with a 75/11 through 100/16 home sewing machine needle. However, the needle threader cannot be used with a 65/9 home sewing machine needle. When using special thread such as transparent nylon thread or metallic thread, the needle threader cannot be used.
- Thread with a thickness of 130/120 or thicker cannot be used with the needle threader.
- The needle threader cannot be used with the wing needle or the twin needle.
- If the needle threader cannot be used, refer to “Upper threading” on page 17.

1 Follow steps 1 to 8 from “Upper threading” on page 17 before using the needle threader.

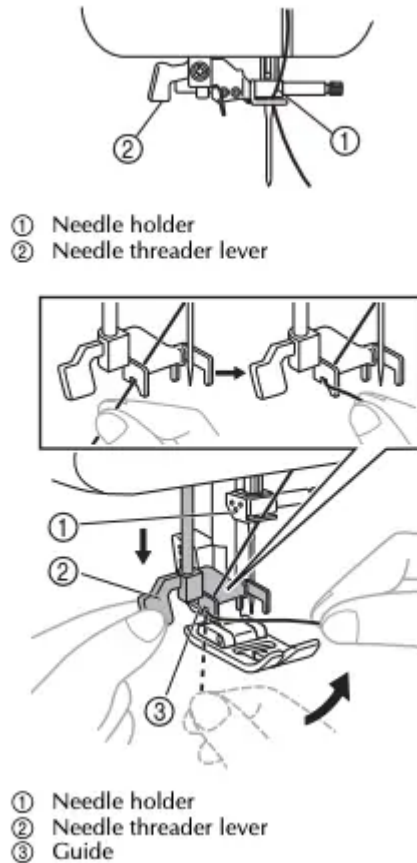
2 Lower the presser foot lever.

3 Make sure that the mark on the wheel points up as shown in the following illustration.

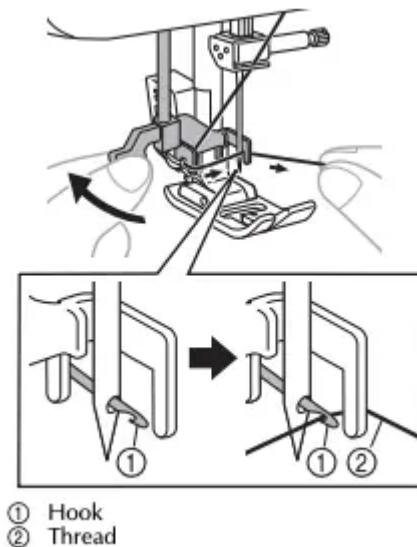


① Mark on the wheel

4 While lowering the needle threader lever, hook the thread onto the guide.

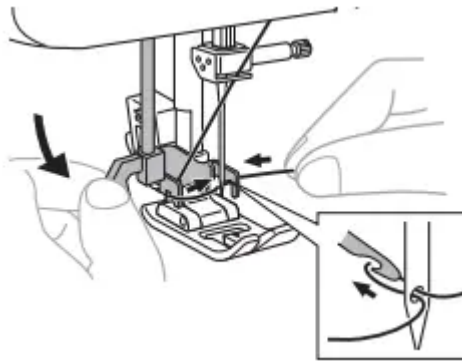


5 Pull down the needle threader lever as much as possible, and then turn the lever toward the back of the machine (away from you). Make sure that the hook passes through the eye of the needle and grabs the thread

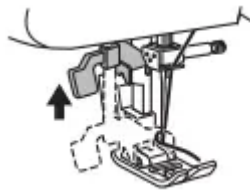


- Hold the thread in front of the needle to make sure that the hook grabs it.

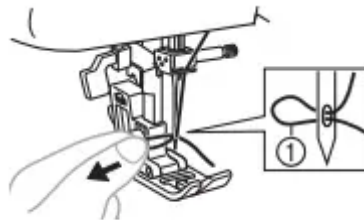
6 While lightly holding the thread, turn the needle threader lever toward the front of the machine (toward you). The hook will pull the thread through the needle.



7 Raise the needle threader lever.



8 Pull the loop of the thread passed through the eye of the needle toward the rear of the machine.



① Loop of thread

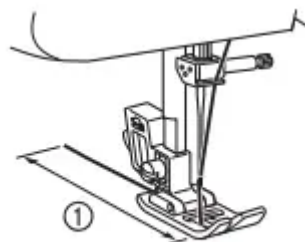


### CAUTION

- Be careful not to pull on the thread with force or it may bend the needle.
- If the thread does not pass through the eye of the needle, start from step 3 again.

9 Raise the presser foot lever.

10 Pass the end of the thread through the presser foot, and then pull out about 5 cm (2 inches) of thread toward the rear of the machine.



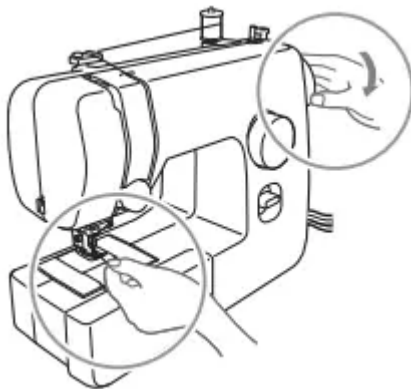
① 5 cm (2 inches)

 **Note**

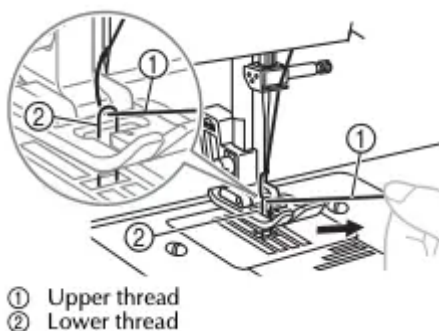
- If you incorrectly feed the thread you may cause sewing problems.

**Drawing up the lower thread**

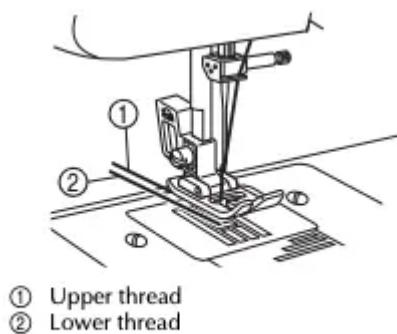
1 While lightly holding the end of the upper thread, slowly turn the handwheel toward you (counterclockwise) by hand to lower and then raise the needle.



2 Pull on the upper thread to draw up the lower thread.



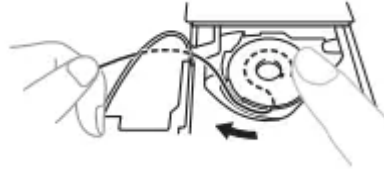
3 Pull out about 10 cm (4 inches) of both threads and put them toward the back of the machine under the presser foot.



- For models equipped with a quick-set bobbin

You can begin sewing immediately without drawing up the bobbin thread. When sewing gathers or darts, you can draw up the lower thread by hand so that some thread will be left over. Before you draw up the lower thread, put the bobbin back in.

- 1 Remove the bobbin cover, and then reinstall the bobbin.
- 2 Pass the thread along the slit in the direction of the arrow, and leave it there without cutting it.



- The bobbin cover should still be removed.
- 3 Draw up the lower thread as described in the previous steps 1 to 3.
  - 4 Replace the bobbin cover.

## FABRIC, THREAD, AND NEEDLE COMBINATIONS

| Fabric Type/Application |                    | Thread           |       | Size of Needle                                     |
|-------------------------|--------------------|------------------|-------|--|
|                         |                    | Type             | Size  |  |
| Medium weight fabrics   | Broadcloth         | Cotton thread    | 60-90 | 75/11-90/14  |
|                         | Taffeta            | Synthetic thread |       |  |
|                         | Flannel, Gabardine | Silk thread      | 50    |  |
| Thin fabrics            | Lawn               | Cotton thread    | 60-90 | 65/9-75/11   |
|                         | Georgette          | Synthetic thread |       |  |
|                         | Challis, Satin     | Silk thread      | 50    |  |
| Thick fabrics           | Denim              | Cotton thread    | 30    | 100/16   |
|                         |                    | 50               |       |  |
|                         | Corduroy           | Synthetic thread | 50-60 | 90/14-100/16                                       |
| Tweed                   | Silk thread        |                  |       |  |
| Stretch fabrics         | Jersey             | Thread for knits | 50-60 | Ball point needle<br>75/11-90/14<br>(gold colored) |
|                         | Tricot             |                  |       |  |
| Easily frayed fabrics   |                    | Cotton thread    | 50-90 | 65/9-90/14   |
|                         |                    | Synthetic thread |       |  |
|                         |                    | Silk thread      | 50    |  |
| For top-stitching       |                    | Synthetic thread | 30    | 100/16   |
|                         |                    | Silk thread      | 50-60 | 75/11-90/14  |

### Note

- Never use a thread weighted #20 or lower. It may cause machine malfunction.

### Memo

- The lower the thread number, the thicker the thread; and the higher the needle number, the thicker the needle.

### ■ Ball point needle

Use the ball point needle when sewing on stretch fabrics or fabrics where skipped stitches easily occur.

### ■ Transparent nylon thread

Use a 90/14 to 100/16 needle, regardless of the fabric or thread.



#### **CAUTION**

- Make sure you follow the needle, thread, and fabric combinations listed in the table. Using the wrong combination, such as heavyweight fabric like denim with a small needle (65/9-75/11), may bend or break the needle. The wrong combination may also cause the seam to be uneven, the fabric to pucker, or the machine to skip stitches.

## **SEWING BASICS**

### **Please read before sewing**



#### **CAUTION**

- To avoid being injured, watch the needle carefully while you are using the machine. Keep your hands away from moving parts.
- Do not stretch or pull the fabric during sewing, otherwise the needle may be damaged and you may be injured.
- Do not use bent or broken needles, otherwise you may be injured.
- Take care that the needle does not hit basting pins or other objects during sewing. The needle may break and you may be injured.
- Always use the correct presser foot. If you use the wrong presser foot, the needle may hit the presser foot and bend or break and you may be injured.
- When you turn the handwheel by hand, always turn it toward you (counterclockwise). Turning it the other way may cause the thread to tangle and damage the needle or fabric, and you may be injured.
- Do not start sewing without placing the fabric under the presser foot, otherwise the presser foot may be damaged.

### **Starting sewing**

- 1 Turn on the machine.



## CAUTION

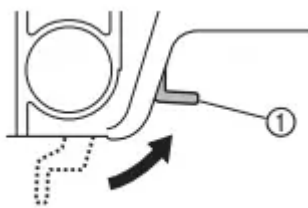
- Do not turn on the machine while pressing down the foot controller. The machine may start unexpectedly and cause personal injury or damage to the machine.

2 Raise the needle by turning the handwheel toward you (counterclockwise) so that the mark on the wheel points up.

3 Turn the pattern selection dial to select a stitch (see page 11).

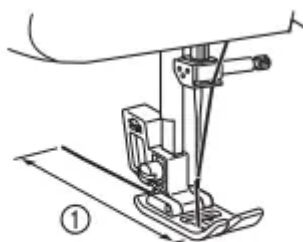
4 Change the presser foot (see page 10).

5 Raise the presser foot lever.



① Presser foot lever

6 Place the fabric under the presser foot, pass the thread under the presser foot, and then pull out about 5 cm (2 inches) of thread toward the rear of the machine

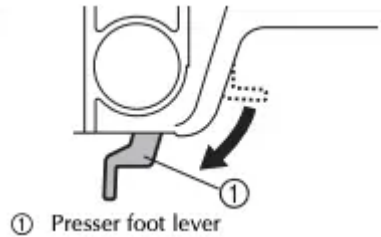


① 5 cm (2 inches)

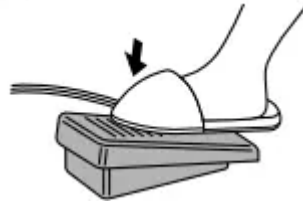
7 While holding the end of the thread and the fabric with your left hand, turn the handwheel toward you (counterclockwise) with your right hand to lower the needle to the starting point of the stitching.



8 Lower the presser foot lever.



9 Slowly press down on the foot controller.



- The machine starts sewing.

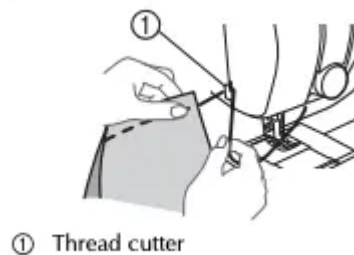
10 Take your foot off the foot controller.

- The machine stops sewing.
- You can use reverse sewing for back tacking and reinforcing seams by pressing the reverse sewing lever. Refer to “Reverse sewing lever” on page 12 for the details.

11 Raise the needle by turning the handwheel toward you (counterclockwise).

12 Raise the presser foot lever.

13 Pull the fabric to the left side of the machine, and then pass the threads through the thread cutter to cut them.



## **Trial sewing**

A trial piece of fabric should be sewn. Use a piece of fabric and thread that are the same as those used for your project, and check the thread tension and stitch length and width.

## **Changing the sewing direction**

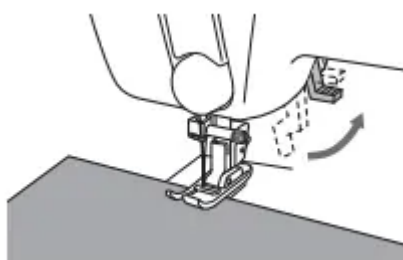
Stop the machine with the needle in the fabric at the point where you want to change the sewing direction, and then raise the presser foot lever. Using the needle as a pivot, turn the fabric, lower the presser foot lever, and then continue sewing



## Sewing thick fabrics

### ■ If the fabric does not fit under the presser foot

If the fabric does not fit easily under the presser foot, raise the presser foot lever even higher to bring the presser foot to its highest position.

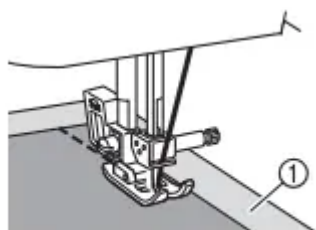


### CAUTION

- If fabric more than 6 mm (15/64 inch) thick is sewn or if the fabric is pushed with too much force, the needle may bend or break.

## Sewing thin fabrics

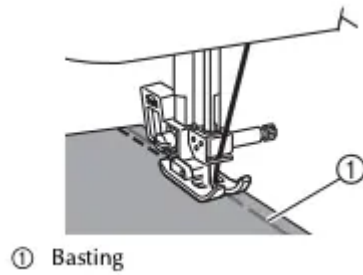
When sewing thin fabrics, the stitching may become misaligned or the fabric may not feed correctly. If this occurs, place thin paper or stabilizer material under the fabric and sew it together with the fabric. When you have finished sewing, tear off any excess paper.



① Stabilizer material or paper

## Sewing stretch fabrics

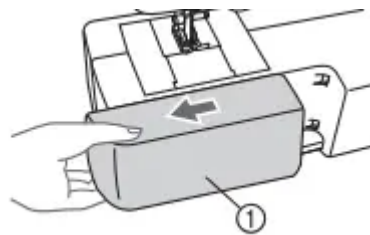
First, baste the pieces of fabric together, and then sew without stretching the fabric.



### Stitching cylindrical pieces

Removing the flat bed attachment makes it easier to sew cylindrical pieces such as cuffs and pant legs, or hard-to-reach areas.

1 Slide the flat bed attachment to the left to release it.



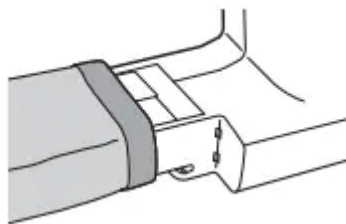
1 Flat bed attachment

- With the flat bed attachment removed, free-arm sewing is possible.

#### Note

- When you are finished with free-arm sewing, install the flat bed attachment back in its original position.

2 Slide the part that you wish to sew onto the arm, and then sew from the top.



### Sewing with a twin needle (Option)

We have designed your machine so you can sew with this needle and two top threads. You can use the same color or two different colors of thread for making decorative stitches.





## CAUTION

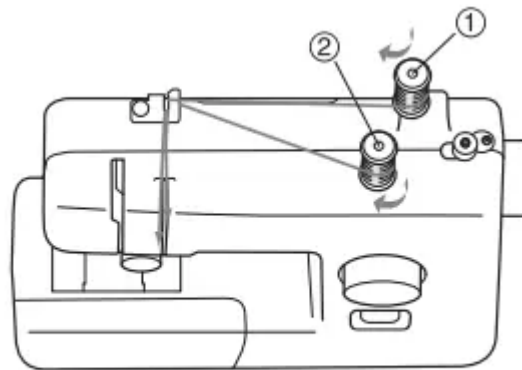
- Use only twin needles that have been made for this machine (part code: X57521-021:2.0/75 with a 2 mm width). Other needles could break and damage the machine.
- Make sure that the needle does not strike the presser foot.
- Do not sew with bent needles. The needle could break and injure you.

### ■ Attaching the twin needle

Attach the twin needle in the same way as a single needle (see page 8–9). The flat side of the needle should face toward the back and the rounded side should face toward you.

### ■ Attaching the extra spool pin

Put the extra spool pin in the hole on the top of the machine. Put the second spool of thread onto the extra spool pin.



- ① First spool
- ② Second spool

### ■ Twin needle threading

You should thread each needle separately.



#### Note

#### Models equipped with a needle threader

- You cannot use the needle threader to thread the twin needle. Instead, thread the twin needle by hand, from front to back. Using the needle threader may damage the machine.

1 Use the thread from the first spool to thread the machine to the needle bar thread guide.

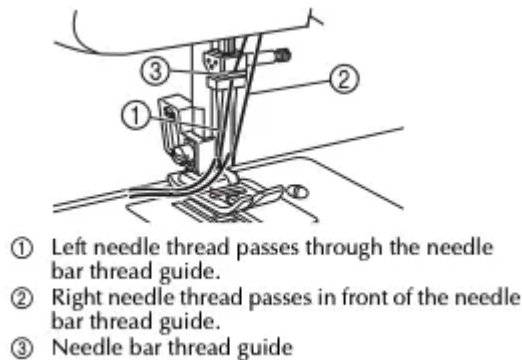
The path for threading the machine to the needle bar thread guide is the same as for normally threading the machine (for a single needle). See page 18 for more details.

2 Thread the left needle from front to back.

3 Use the thread from the second spool to thread the machine to the thread take-up lever.

The path for threading the machine to the thread take-up lever is the same as for normally threading the machine (for a single needle). See page 18 for more details.

4 Thread the right needle from front to back. Do not pass the thread behind the needle bar thread guide.



5 Attach zigzag foot “J”.

For details on changing the presser foot, refer to “Changing the presser foot” on page 10.



#### CAUTION

- When using the twin needle, be sure to attach zigzag foot “J”, otherwise the needle may break or the machine may be damaged.

6 Turn on the machine.



#### CAUTION

- Do not turn on the machine while pressing down the foot controller. The machine may start unexpectedly and cause personal injury or damage to the machine.

7 Select a stitch.



#### CAUTION

- After selecting a stitch, slowly turn the handwheel toward you (counterclockwise) and check that the needle does not touch the presser foot. If the needle hits the presser foot, the needle may bend or break.
- The twin needle should only be used with the Straight Stitch (Center Needle Position) and the Zigzag Stitch (1.5 mm (1/16 inch) width). Do not use the twin needle with any other stitches.

8 Start sewing.

For details on starting to sew, refer to “Starting sewing” on page 23.

- Two lines of stitching are sewn parallel to each other.



## CAUTION

- When changing the sewing direction, be sure to raise the needle from the fabric, and then raise the presser foot lever and turn the fabric. Otherwise the needle may break or the machine may be damaged.

## Thread tension

The tension of the thread will affect the quality of your stitches. You may need to adjust it when you change fabric or thread.

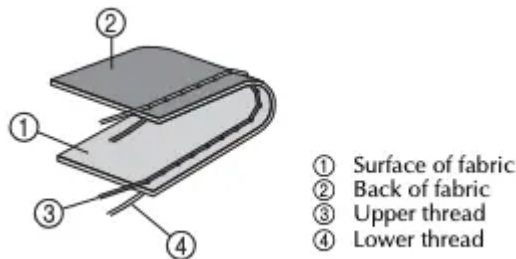


## Memo

- We recommend that you do a test sample on scrap of a fabric before you start to sew.

### ■ Correct tension

Correct tension is important as too much or too little tension will weaken your seams or cause puckers on your fabric.



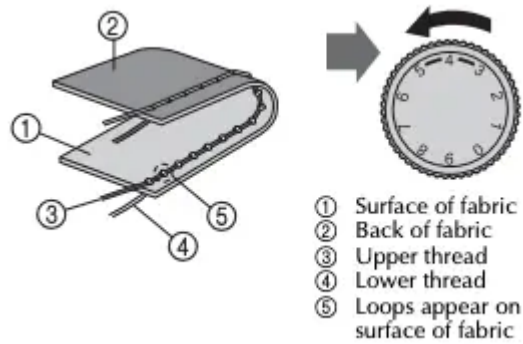
### ■ Upper tension is too tight

Loops will appear on the surface of the fabric.



## Note

- If the bobbin thread was incorrectly threaded, the upper thread may be too tight. In this case, refer to “Lower threading” on page 15 and rethread the bobbin thread.



- ① Surface of fabric
- ② Back of fabric
- ③ Upper thread
- ④ Lower thread
- ⑤ Loops appear on surface of fabric

Solution

Reduce the tension by turning the upper tension control dial to a lower number.

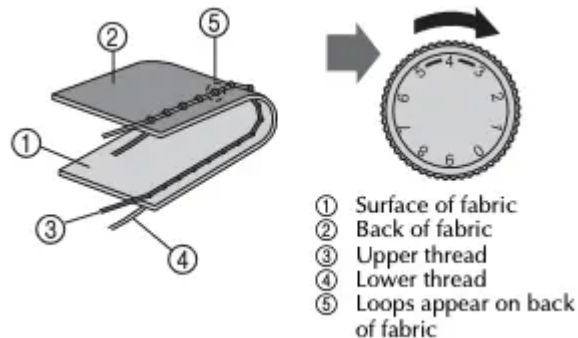
■ Upper tension is too loose

Loops appear on the back of the fabric.



**Note**

- If the upper thread was incorrectly threaded, the upper thread may be too loose. In this case, refer to “Upper threading” on page 17 and rethread the upper thread.



- ① Surface of fabric
- ② Back of fabric
- ③ Upper thread
- ④ Lower thread
- ⑤ Loops appear on back of fabric

Solution

Increase the tension by turning the upper tension control dial to a higher number.

## APPENDIX

### MAINTENANCE

#### Restrictions on oiling

In order to prevent damaging this machine, it must not be oiled by the user. This machine was manufactured with the necessary amount of oil applied to ensure correct operation, making periodic oiling unnecessary. If problems occur, such as difficulty turning the handwheel or an unusual noise, immediately stop using the machine, and contact your authorized Brother Service Center or the nearest authorized Brother Service Center.

## Precautions on storing the machine

Do not store the machine in any of the locations described below, otherwise damage to the machine may result, for example, rust caused by condensation.

- Exposed to extremely high temperatures
- Exposed to extremely low temperatures
- Exposed to extreme temperature changes
- Exposed to high humidity or steam
- Near a flame, heater or air conditioner
- Outdoors or exposed to direct sunlight
- Exposed to extremely dusty or oily environments



### Note

- In order to extend the life of this machine, periodically turn it on and use it. Storing this machine for an extended period of time without using it may reduce its efficiency.

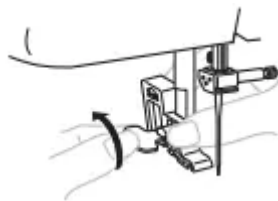
## Cleaning



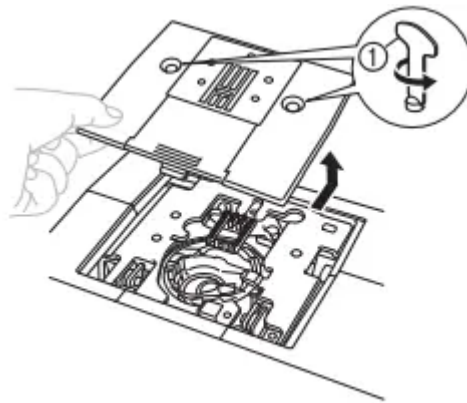
### CAUTION

- Make sure you unplug the machine before you clean it, otherwise you risk getting an electric shock or being injured.

- 1 Turn off the machine and unplug it.
- 2 Raise the needle and the presser foot.
- 3 Loosen the presser foot screw and the needle clamp screw to remove the presser foot holder and the needle.

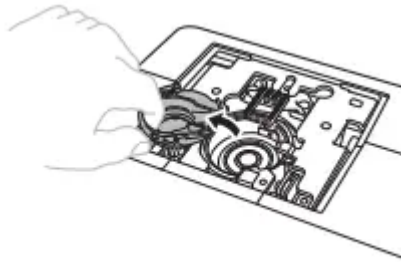


- 4 Using the screwdriver, remove the two screws. Lift up the needle plate as shown in the illustration, and then slide the needle plate to the left to remove it.

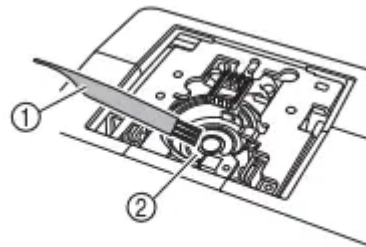


① Use the screwdriver

5 Grasp the bobbin case, and then lift it out to the left.



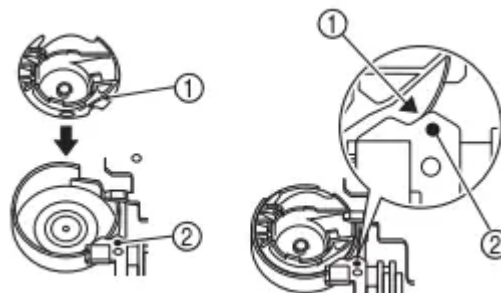
6 Use the cleaning brush or a vacuum cleaner to remove any dust from the bobbin race and its surrounding area.



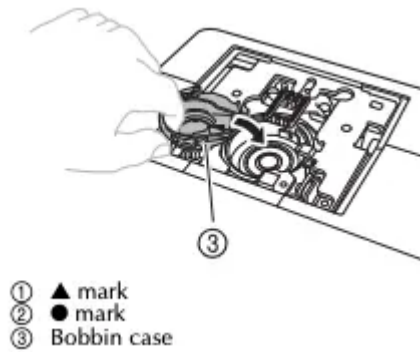
① Cleaning brush  
② Race

- Do not apply oil to the bobbin case.

7 Insert the bobbin case so that the ▲ mark on the bobbin case aligns with the ● mark on machine as shown below

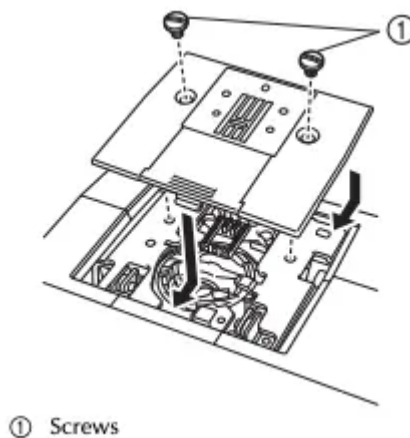


- Align the ▲ and ● marks.



- Make sure that the indicated points are aligned before installing the bobbin case.

8 Install the needle plate, and then tighten the screws.



- Make sure that you install the needle plate securely.



## CAUTION

- Never use a bobbin case that is scratched; otherwise the upper thread may become tangled, the needle may break, or sewing performance may suffer. For a new bobbin case (part code: XE9326-001), contact your nearest authorized Brother Service Center.
- Make sure that you fit the bobbin case properly, otherwise the needle may break.

## TROUBLESHOOTING

If the machine stops operating correctly, check the following possible problems before requesting service. You can solve most problems by yourself. If you need additional help, the Brother Solutions Center offers the latest FAQs and troubleshooting tips. Visit us at “ <http://support.brother.com> ”. If the problem persists, contact your Brother dealer or the nearest authorized Brother Service Center.

**The sewing machine does not work.**

The main power switch is turned off.

- Turn on the main power switch

The bobbin-winder shaft is pushed to the right.

- Move the bobbin-winder shaft to the left.

You have not used the foot controller properly.

- Use the foot controller properly.

**Fabric being sewn with the machine cannot be removed.**

Thread is tangled below the needle plate.

- Lift up the fabric and cut the threads below it, and clean the race.

**The needle breaks.**

The needle is incorrectly installed.

- Correctly install the needle.

The needle clamp screw is loose.

- Use the screwdriver to firmly tighten the screw.

The needle is bent or blunt.

- Replace the needle.

The upper thread was not threaded correctly.

- Correct the upper threading.

You have not used the right combination of fabric, thread and needle.

- Choose a thread and needle that are appropriate for the type of fabric.

The presser foot you are using is not appropriate for the type of stitch that you want to sew.

- Attach the presser foot that is correct for the type of stitch that you want to sew.

The upper thread tension is too tight.

- Loosen the upper thread tension.

You are pulling the fabric too much.

- Lightly guide the fabric.

You have not fitted the spool properly.

- Fit the spool properly.

The area around the hole in the needle plate or the presser foot is scratched.

- Replace the needle plate. Contact your retailer or the nearest authorized Brother Service Center.

The bobbin case is scratched.

- Replace the bobbin case. Contact your retailer or the nearest authorized Brother Service Center.

You have not used a bobbin that has been designed for this machine.

- Use a bobbin that has been designed for this machine.

### **The upper thread breaks.**

You have not threaded the upper thread properly. (For example, you have not fitted the spool properly, or the thread has come out of the guide above the needle.)

- Correct the upper threading.

There are knots or tangles in the thread.

- Remove any knots or tangles.

The needle is not appropriate for the thread you are using.

- Choose a needle that is appropriate for the type of stitch.

The upper thread tension is too tight.

- Loosen the upper thread tension

The needle is bent or blunt.

- Replace the needle.

The needle is incorrectly installed.

- Correctly install the needle.

The area around the hole in the needle plate or the presser foot is scratched.

- Replace the needle plate. Contact your retailer or the nearest authorized Brother Service Center.

The bobbin case is scratched, or has a burr on it.

- Replace the bobbin case. Contact your retailer or the nearest authorized Brother Service Center.

You have not used a bobbin that has been designed for this machine.

- Use a bobbin that has been designed for this machine.

### **The lower thread is tangled or breaks.**

You have not wound the bobbin thread properly.

- Wind the bobbin thread properly.

The bobbin is scratched or does not turn smoothly.

- Replace the bobbin.

The thread is tangled.

- Remove the tangled thread and clean the race.

You have not used a bobbin that has been designed for this machine.

- Use a bobbin that has been designed for this machine.

Bobbin is set incorrectly.

- Reset the bobbin thread correctly

### **The thread tension is incorrect.**

You have not threaded the upper thread properly.

- Correct the upper threading.

You have not wound the bobbin thread properly.

- Wind the bobbin thread properly.

You have not threaded the right combination of thread and needle for the fabric you are using.

- Choose a thread and needle that are appropriate for the type of fabric.

You have not attached the presser foot holder properly.

- Attach the presser foot holder properly.

The thread tension is incorrect.

- Adjust the tension of the upper thread.

You have not used a bobbin that has been designed for this machine.

- Use a bobbin that has been designed for this machine.

Bobbin is set incorrectly.

- Reset the bobbin thread correctly.

### **The fabric is wrinkled.**

You have not threaded the upper thread properly or fitted the bobbin properly.

- Thread the upper thread and wind the bobbin thread properly.

You have not fitted the spool properly.

- Fit the spool properly.

You have not used the right combination of fabric, thread and needle.

- Choose a thread and needle that are appropriate for the type of fabric.

The needle is bent or blunt.

- Replace the needle.

If thin fabrics are being sewn, the fabric is not being fed correctly.

- Sew with stabilizer material under the fabric.

The presser foot you are using is not appropriate for the type of stitch that you want to sew.

- Attach the presser foot that is correct for the type of stitch that you want to sew.

The thread tension is incorrect.

- Adjust the tension of the upper thread.

### **Stitches are skipped.**

You have not threaded the upper thread properly.

- Correct the upper threading.

You have not used the right combination of fabric, thread and needle.

- Choose a thread and needle that are appropriate for the type of fabric.

The needle is bent or blunt.

- Replace the needle.

The needle is incorrectly installed.

- Correctly install the needle.

Dust has accumulated under the needle plate or in the bobbin case.

- Remove the needle plate and clean the plate and the bobbin case.

### **The needle threader can not be used.**

The needle has not been raised to the correct position.

- Raise the needle by turning the handwheel toward you counterclockwise) so that the mark on the wheel points up.

You have not inserted the needle properly.

- Insert the needle properly.

### **The stitch is not sewn correctly.**

The presser foot that you are using is not correct for the type of stitch.

- Attach the presser foot that is correct for the type of stitch that you want to sew.

The thread tension is incorrect.

- Adjust the tension of the upper thread.

The thread is tangled.

- Remove the tangled thread. If the thread is tangled in the bobbin case, clean the bobbin case.

**The fabric does not feed.**

The darning plate is fitted on the needle plate.

- Remove the darning plate.

You have not used the right combination of fabric, thread and needle.

- Choose a thread and needle that are appropriate for the type of fabric.

The thread is tangled, for example, in the race.

- Remove the tangle thread. If the thread is tangled in the race, clean the race.

The presser foot you are using is not appropriate for the type of stitch that you want to sew.

- Attach the presser foot that is correct for the type of stitch that you want to sew.

**Warning**

This content is compiled from multiple sources and is provided for reference purposes only. It may not be complete or fully applicable to all situations. If you are unable to resolve your issue, please contact the product manufacturer or an authorized service provider for official support.

