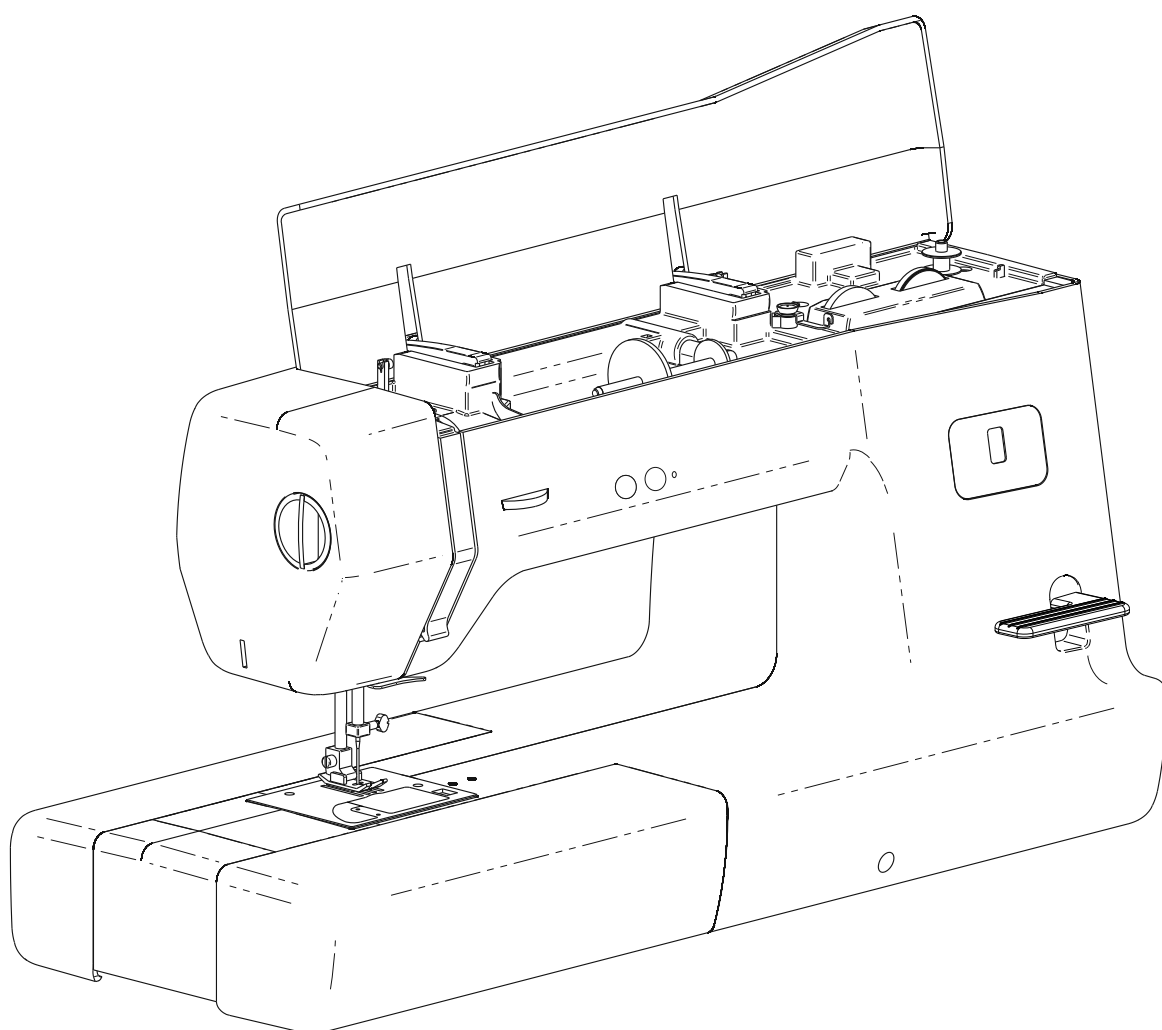


INSTRUCTION BOOK

PRO Q9



novum

IMPORTANT SAFETY INSTRUCTIONS

When using this sewing machine, basic safety precautions should always be followed, including the following:

Read all instructions before using.

DANGER— — To reduce the risk of electric shock.

- 1 This sewing machine should never be left unattended when plugged in . Always unplug this sewing machine from the electrical outlet immediately after using and before cleaning.
2. Do not reach for this sewing machine that has fallen into water. Unplug immediately.
3. Do not place or store sewing machine where it can fall or be pulled into a tub or sink. Do not place or drop into water or other liquid.

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 sewing machine only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this 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, dropped into water. Return this sewing machine to the nearest authorized retailer for examination, repair, electrical or mechanical adjustment.
4. Never operate this sewing machine with any air openings blocked. Keep ventilation openings of this sewing machine and foot control free from the 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 this sewing machine needle.
11. Always use proper needle plate. The incorrect or damaged 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 adjustments in the needle area, such as threading needle , changing needle, threading bobbin, or changing presser foot, etc.
15. Always unplug sewing machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in this instruction manual.
16. Never operate on a soft surface such as a bed or couch where the air openings may be blocked.
17. Do not use the machine near a heat source, such as a stove or iron; otherwise, the machine power cord or garment being sewn may ignite, resulting in fire or an electric shock.
18. When storing this machine, avoid direct sunlight and high humidity location. Do not use or store the machine near a space heater, iron, halogen lamp, or other hot objects in order to have a longer service life.
19. The sewing machine's rating is 220V-240Vac
20. If one of the LED lamps is damaged or broken, it must be replaced by the manufacture or its service agent, in order to avoid a hazard.
21. Never place anything on the foot controller.
22. Use only the foot controller type YC-485EC manufactured by Yamamoto Electric Co., Ltd.
23. The supply cord connected with the foot controller cannot be replaced. If the cord is damaged the foot controller should be scrapped.
24. 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.
25. Children shall not play with the appliance.
26. Cleaning and user maintenance shall not be made by children without supervision.

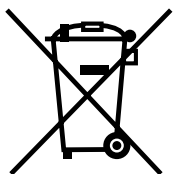
CAUTION- Moving parts- To reduce risk of injury, switch off before servicing.
Close cover before operating machine.

SAVE THESE INSTRUCTIONS

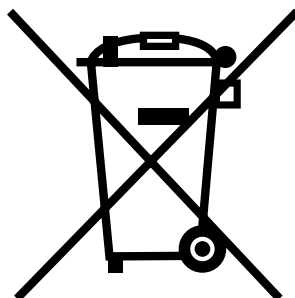
This product is intended for household use.

EU ONLY

RECYCLING



We are committed to the protection of the environment. We strive to minimize the environmental impact of our products by continuously improving product design and our manufacturing methods.



DO NOT THROW AWAY!

At end of life please dispose of this product in an environmentally responsible way.

The crossed-out wheeled bin symbol featured above and on the product's data-plate means that this product falls under the scope of the E.U. "Waste Electrical and Electronic Equipment" (WEEE) directive and "Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment" (ROHS) directive and should not be disposed of with your household waste. At end of life, you must ensure that this product is disposed of in accordance with national and local legislation and that it is sorted as Category 2 "Small Domestic Appliances" WEEE. You may be liable under local and national laws for improper disposal of this product. Please consult the web, or a competent national or local body, for the return and collections systems available to you and the locations of your nearest recycling points.

As an individual you can make a positive impact on reuse, recycling and other forms of recovery of WEEE. This will reduce use of landfill and minimize the environmental impact of the products you use.

Hazardous substances in electronic and electrical products can have a harmful impact on human health and on the environment.

INTRODUCTION

Thank you for purchasing this machine.

Before using this machine, carefully read the "IMPORTANT SAFETY INSTRUCTIONS", and then study this manual for the correct operation of the various functions.

In addition, after you have finished reading this manual, store it where it can quickly be accessed for future reference.

UNPACKING/REPACKING INSTRUCTIONS

Keep the carton and packing materials. You may have to take or send the machine to be repaired. If you do not pack it properly, or do not use the right packing material, the machine could be damaged.

IMPORTANT

- **This packing material is designed to prevent damage. Save this packing material if you need to take or send this machine to be repaired.**

PLEASE READ THESE INSTRUCTIONS BEFORE YOU USE THE MACHINE.

To use the machine safely

1. Make sure you watch the needle carefully while you are sewing. Do not touch the handwheel, thread take-up lever, needle, or other moving parts.
2. Turn off the main power and unplug the cord in the following circumstances :
 - When you have stopped using the machine
 - When you are replacing or removing the needle or any other part
 - If there is a power failure while you are using the machine
 - If you are checking or cleaning the machine
 - Leaving the machine unattended
3. Do not store anything on the foot controller.
4. Plug the machine directly into the wall. Do not use extension cords.

To give your machine a longer life

1. Do not store this machine in direct sunlight or in high humidity conditions. Do not use or store the machine near a heater, iron, halogen lamp or other hot objects.
2. Use only mild soaps or detergents to clean the case. Benzene, thinner, and scouring powders can damage the case and machine, and should never be used.
3. Do not drop or hit the machine.
4. Always consult this manual before you replace or attach presser feet, the needle, or any other parts to make sure you attach them correctly.

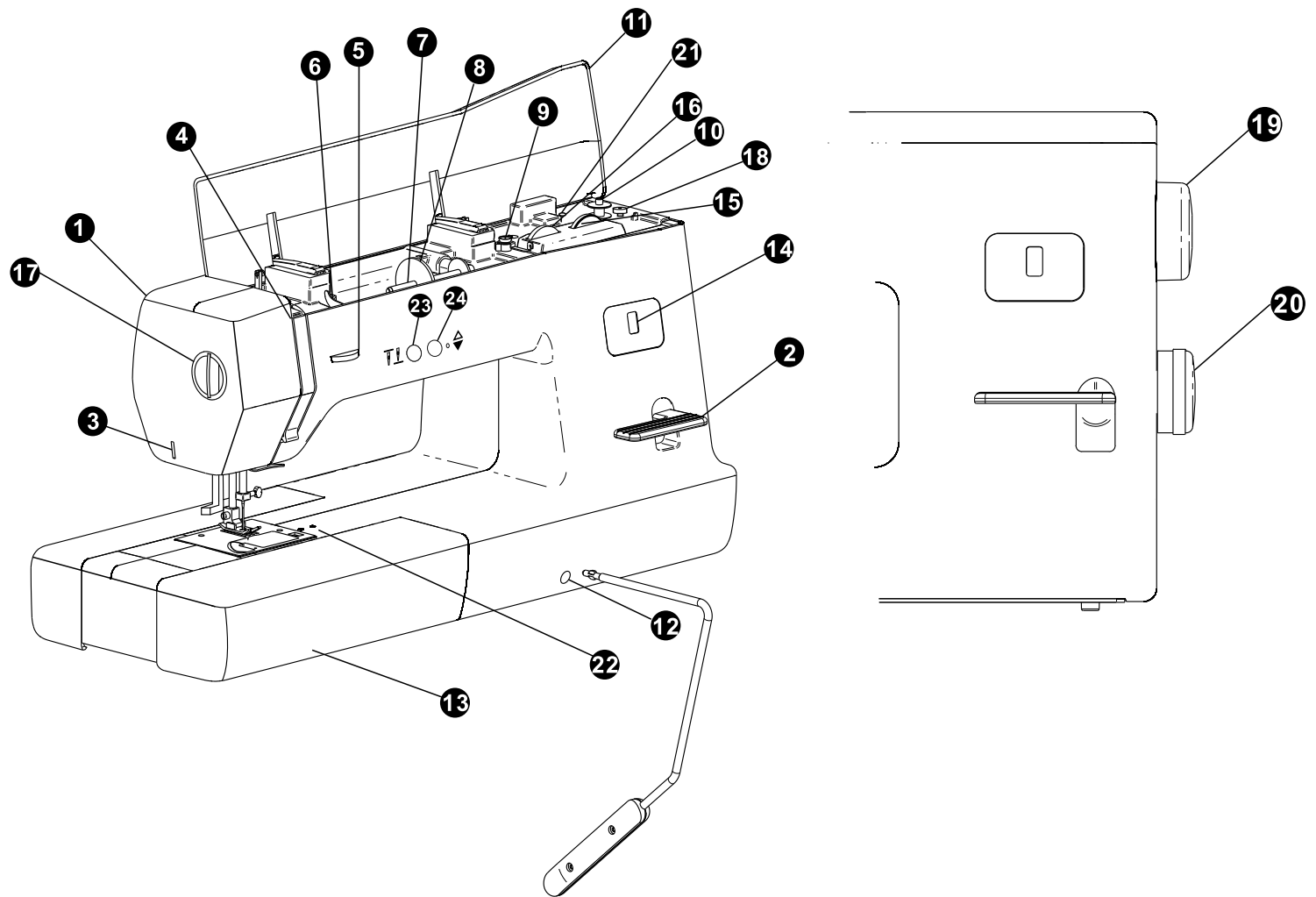
To repair or adjust the machine

If the machine breaks down or needs adjustment, first follow the troubleshooting table to inspect and adjust the machine yourself. If the problem is still there, consult your local authorized retailer.

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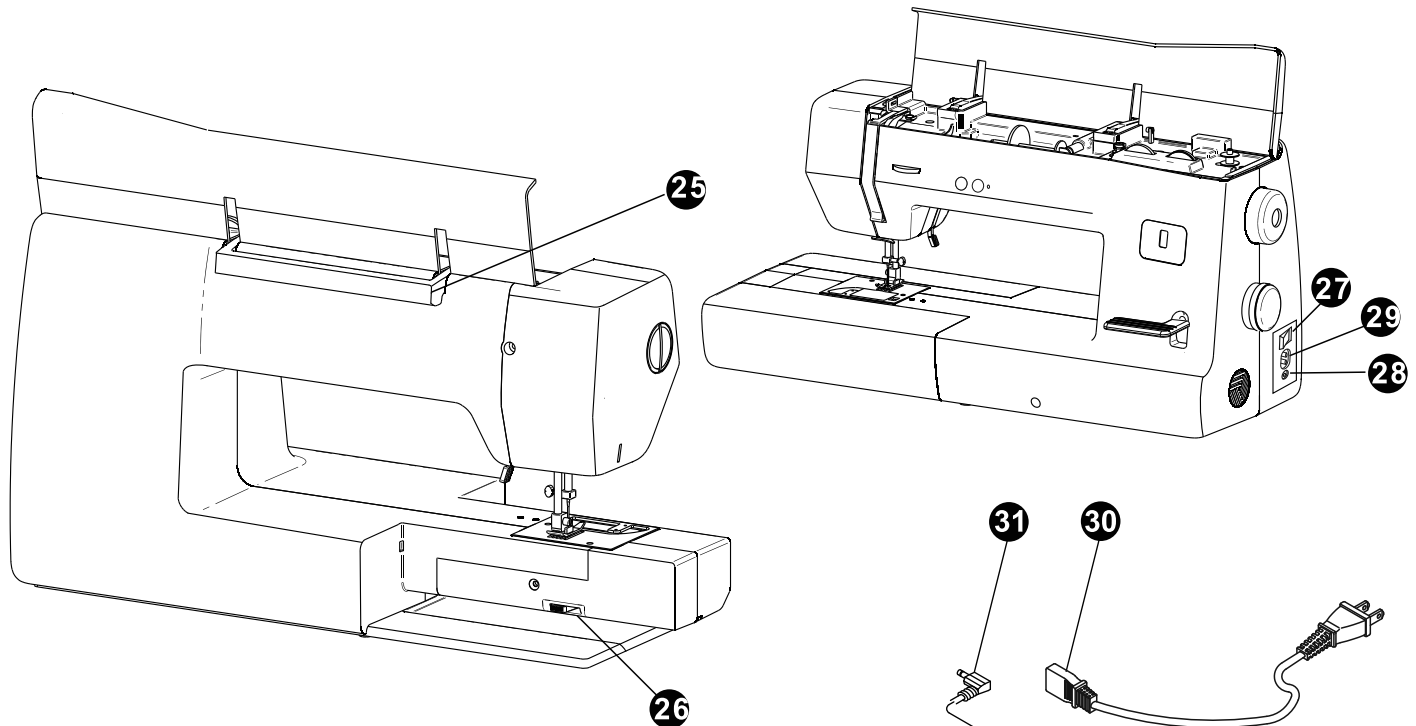
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MAIN PARTS

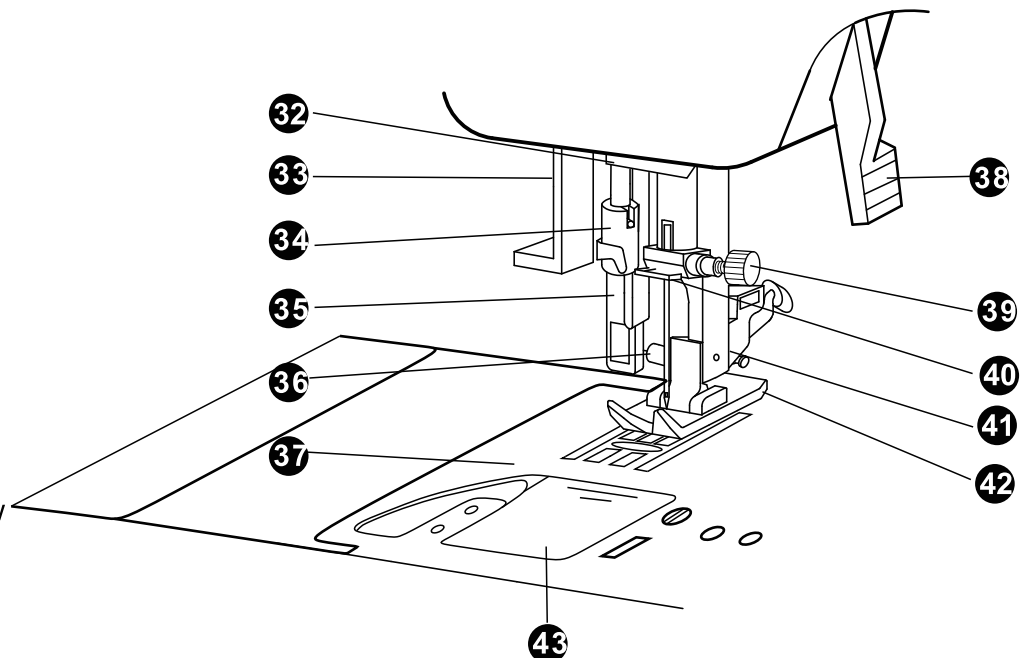


- | | |
|---|---|
| 1 Face Cover | 14 Pattern Indicator |
| 2 Reverse Lever | 15 Stitch Length Dial |
| 3 Thread Cutter | 16 Stitch Width Dial |
| 4 Thread Take-Up Lever (inside) | 17 Presser Foot Pressure Adjustment Dial |
| 5 Thread Tension Regulator | 18 Bobbin Winder Stop |
| 6 Thread Guide Plate | 19 Handwheel |
| 7 Spool Pin | 20 Pattern Selection Dial |
| 8 Spool Cap | 21 Buttonhole Fine Tuning |
| 9 Bobbin Winder Pretension Disc | 22 Thumb Screw Holes |
| 10 Bobbin Winder Shaft | 23 Needle Up/Down Button |
| 11 Top Cover | 24 Needle Stop Position Button |
| 12 Knee Lifter Mounting Slot | |
| 13 Flat Bed Attachment With Accessory Compartments | |

MAIN PARTS

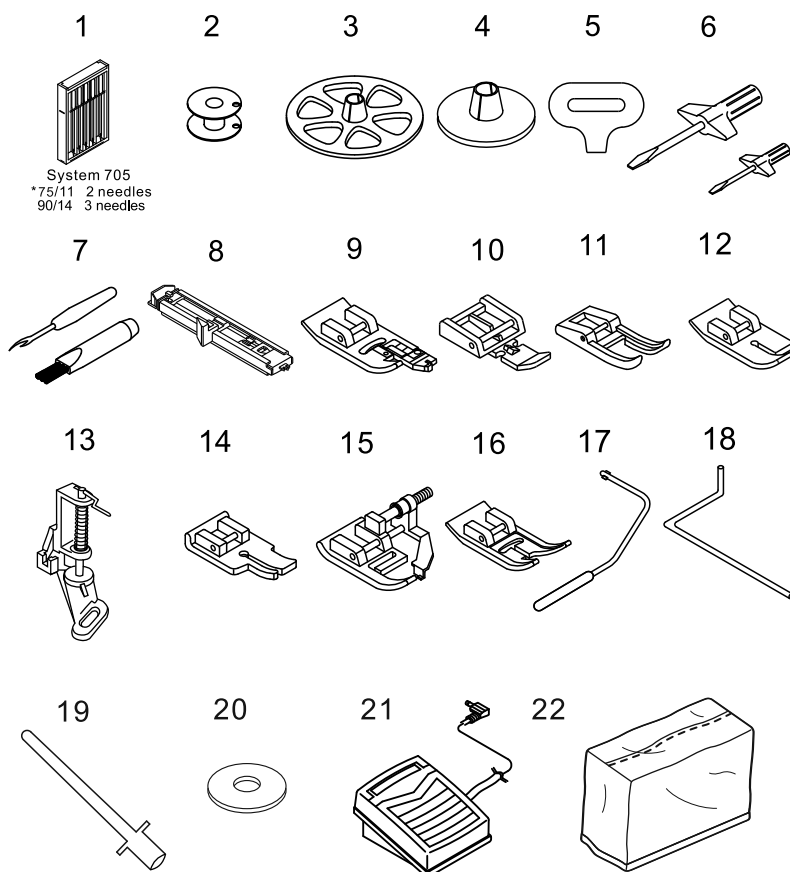


- 25 Carrying Handle
- 26 Drop Feed Dog Lever
- 27 Main Power Switch
- 28 Foot Control Jack
- 29 Power Cord Receptacle
- 30 Power Cord
- 31 Foot Controller
- 32 Lower Thread Guide
- 33 Needle Threader Lever
- 34 Needle Threader
- 35 Buttonhole Lever
- 36 Presser Foot Holder Screw
- 37 Needle Plate
- 38 Presser Foot Lever
- 39 Needle Clamp Screw
- 40 Needle Bar Thread Guide
- 41 Presser Foot Holder
- 42 Presser Foot
- 43 Bobbin Cover



ACCESSORIES

1. Needle Set
2. Bobbin(4)
(one in machine)
3. Spool Cap(large)
4. Spool Cap(small)
5. Needle Plate Screwdriver
6. Screwdrivers
7. Seam Ripper with Brush
8. Buttonhole Foot
9. Overcasting Foot
10. Zipper Foot
11. Open Toe Foot
12. Straight Stitch Foot
13. Darning/Free Motion Quilting Foot
14. 1/4 Inch Quilting Foot
15. Blind Hem Foot
16. All Purpose Foot (on machine)
17. Knee Lifter
18. Quilting Guide
19. Vertical Spool Pin
20. Spool Pin Felt
21. Foot Control Pedal
22. Dust Cover

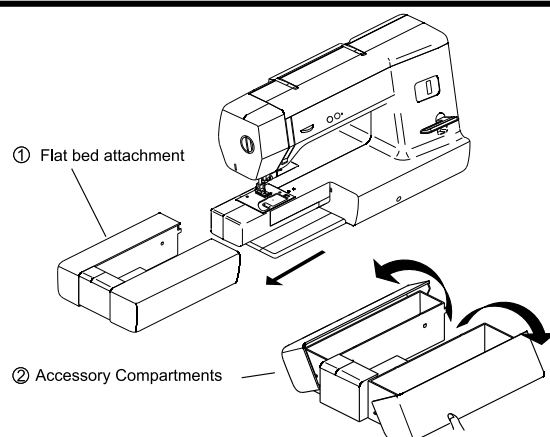


FLAT BED ATTACHMENT

Removing The Flat Bed Attachment

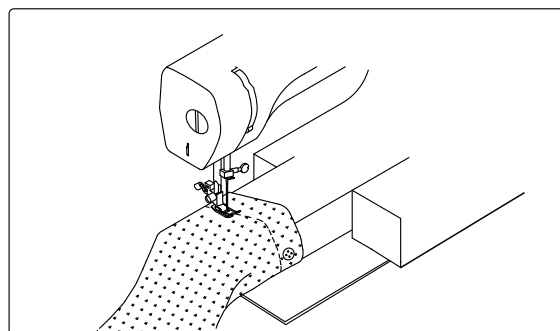
The accessories are stored in the compartments inside the flat bed attachment.

- ① Slide the flat bed attachment to the left to release it.
- ② Pull the top of the flat bed attachment to open the accessory compartments.



Free-Arm Style

Free-arm sewing is convenient for sewing tubular and hard to reach areas. To change your machine to the free arm style, remove the flat bed attachment.



CONNECTING THE MACHINE

Power Connection

- 1 Place machine on a sturdy table and make sure the main power switch is in the OFF position.
- 2 Connect the foot controller plug to the machine.
- 3 Connect the power cord to the machine & plug to a wall outlet.



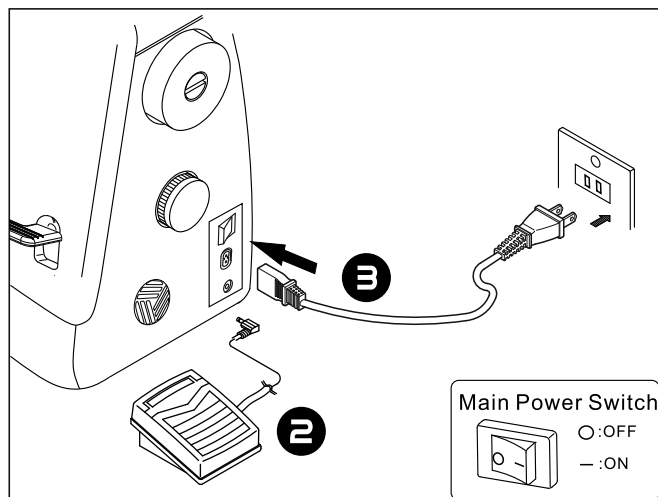
WARNING

- Use regular household electricity for power source. Using other power sources may result in fire, electric shock, or damage to the machine.
- Turn off the main power and remove the plug in the following circumstance:
 - 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

- 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 object on the cord. Do not subject the cord to heat. These behaviors may damage the cord and cause fire or electric shock. If the cord or plug is damaged, take the machine to your authorized retailer 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.



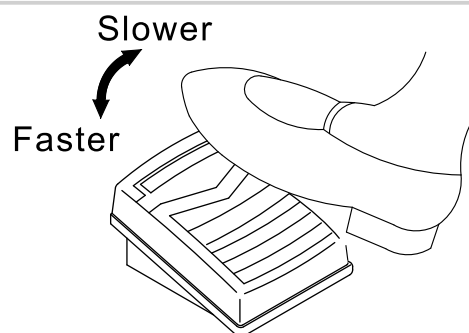
Foot Controller

- 1 Connect the foot control to the machine by inserting the 3 hole plug into the power cord receptacle located on the right side of sewing machine.
- 2 When you press the foot controller lightly, the machine will run at a low speed.
 - When you press harder, the speed of machine will increase. When you take your foot off the foot controller, the machine will stop. You should make sure that no items are 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

Use only foot controller provided with this machine. Foot Controller: Model YC-485EC

CHANGING THE PRESSER FOOT

CAUTION

- Always turn off the power 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 damage machine or cause personal injury.

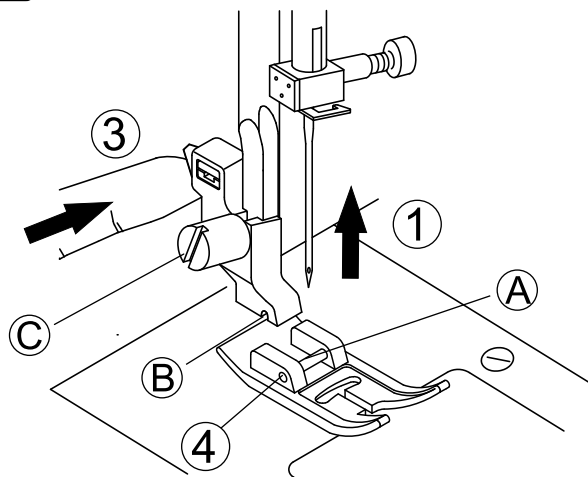
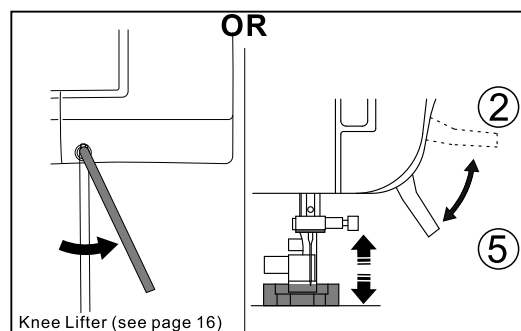
1. Use the Needle Up/Down Button to raise the needle to its highest position.
2. Raise the presser foot lever.
3. Remove the presser foot by pushing the presser foot release lever toward you.
4. Place desired foot with its pin (A) directly under the notch (B) in presser foot holder.
5. Lower the presser foot lever and presser foot will snap into the place

REMOVING THE PRESSER FOOT HOLDER

You may need to remove the presser foot holder to use other presser feet.

To remove, raise the presser foot lever and loosen the presser foot holder screw (C).

To re-attach, tighten the screw after aligning the presser foot holder with lower left side of presser bar.



- (A) Presser foot pin
- (B) Presser foot holder notch
- (C) Presser foot holder screw

CHANGING THE NEEDLE

Select a needle of the right type and size for the fabric to be sewn.
(See Fabric, Thread and Needle Table on page 18.)



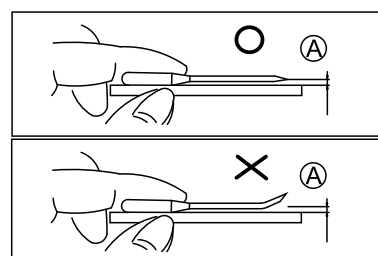
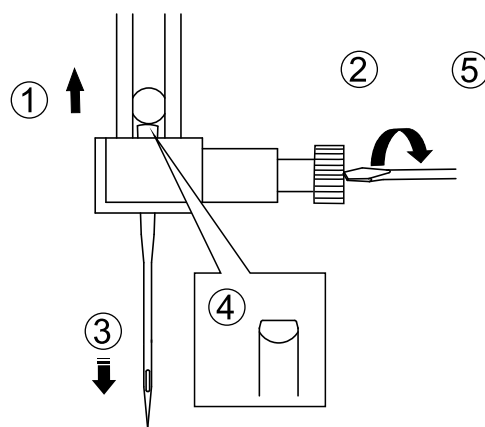
CAUTION: To prevent accidents.

Turn OFF the power before removing the needle.

1. Use the Needle Up/Down Button to raise the needle to its highest position.
2. Loosen the needle clamp screw with screwdriver.
3. Remove the needle.
4. Insert new needle into needle clamp with the flat side to the back and push it up as far as it will go.
5. Tighten the needle clamp screw.

A. Place needle on a flat surface and check to see if bent.

Do Not use any bent or blunt needles.

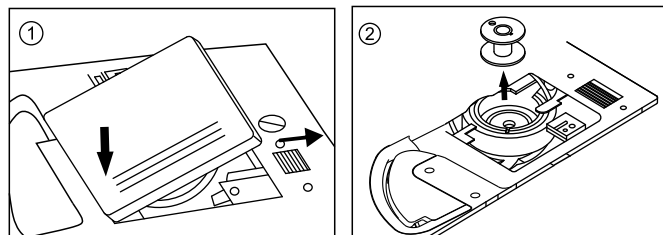


THREADING THE MACHINE

Bobbin Winding

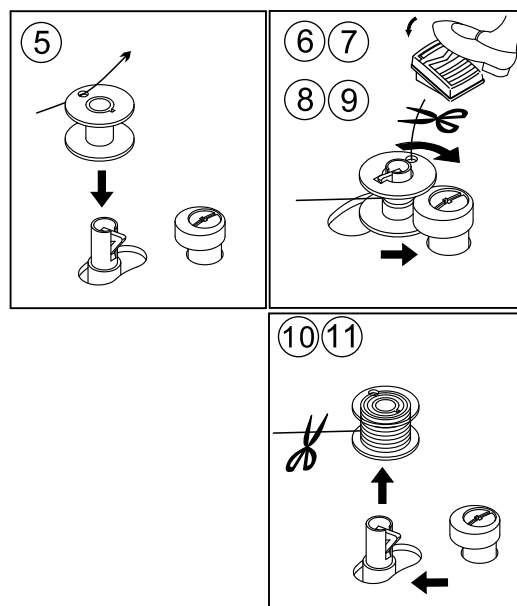
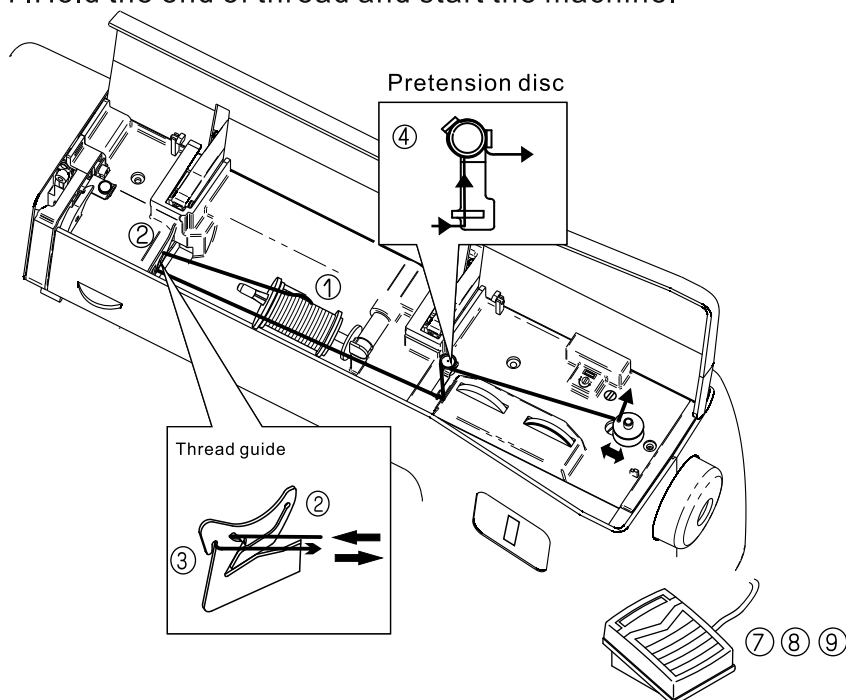
REMOVING THE BOBBIN

1. Remove the bobbin cover by sliding the bobbin cover latch to right and push down the left lower corner of this cover at same time.
2. Remove the bobbin from the machine.



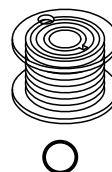
WINDING THE BOBBIN

1. Place a spool of thread onto the spool pin with thread winding off counterclockwise and slide the appropriate spool cap on spool pin until it's against the spool of thread.
2. Pass thread through the thread guide as shown.
3. Pass thread through the bobbin winder thread guide.
4. Guide thread from bobbin winder thread guide through pretension disc as shown.
5. Insert thread through hole in bobbin from inside-out.
6. Place the bobbin on bobbin winder shaft and push to the right to engage bobbin winder.
7. Hold the end of thread and start the machine.
8. After the bobbin winds a few turns, stop the machine and cut the thread as close to the hole as possible.
9. Start the machine again by pressing foot control and wind bobbin at medium speed.
10. The bobbin winding will stop when bobbin is full.
11. Push the bobbin and shaft to the left. Remove the bobbin from the shaft and cut the thread.



CAUTION

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



Use a bobbin that has been correctly wound with thread, otherwise the needle may break or the thread tension will be incorrect.

Lower Threading

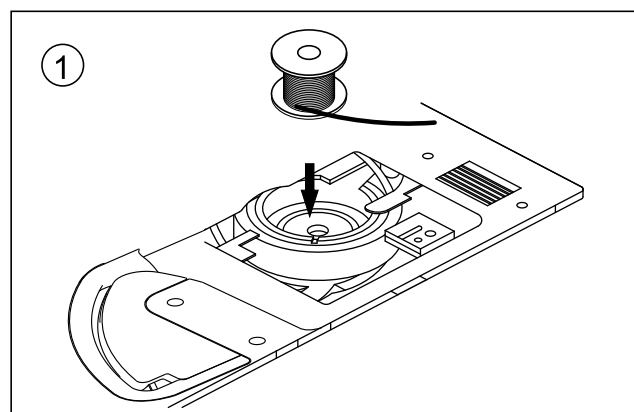
INSERTING THE BOBBIN

1. Insert the bobbin into bobbin case with the thread unwinding counterclockwise.

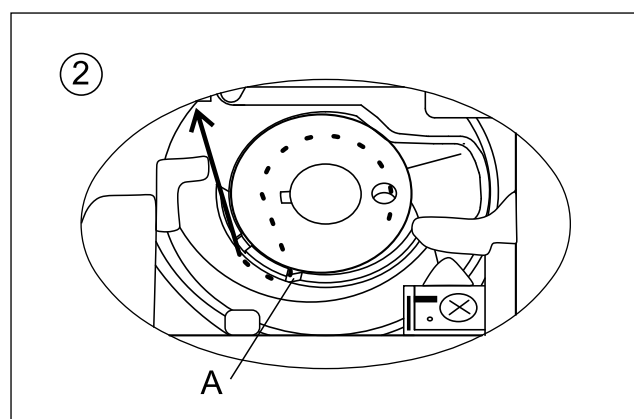


Note

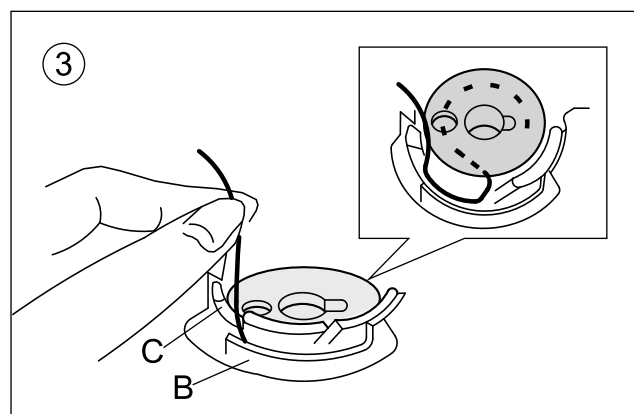
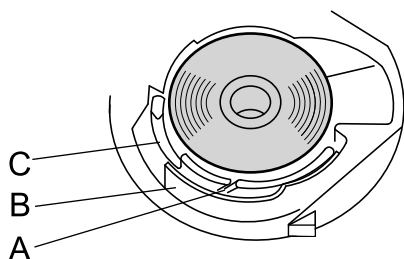
This machine uses Class 15 bobbins. To purchase additional bobbins, please see your retailer.



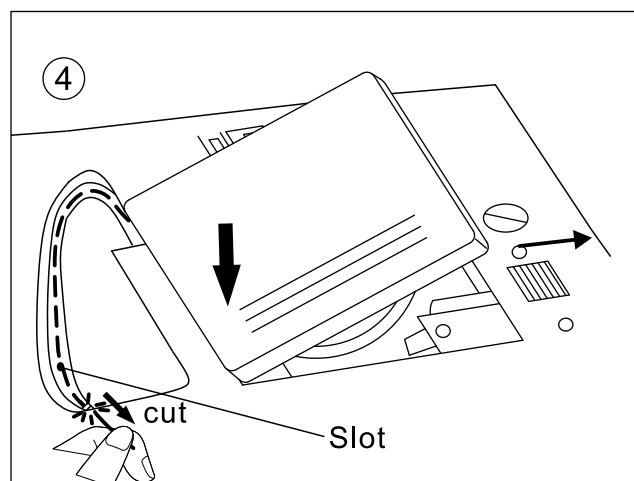
2. Draw thread into notch (A).



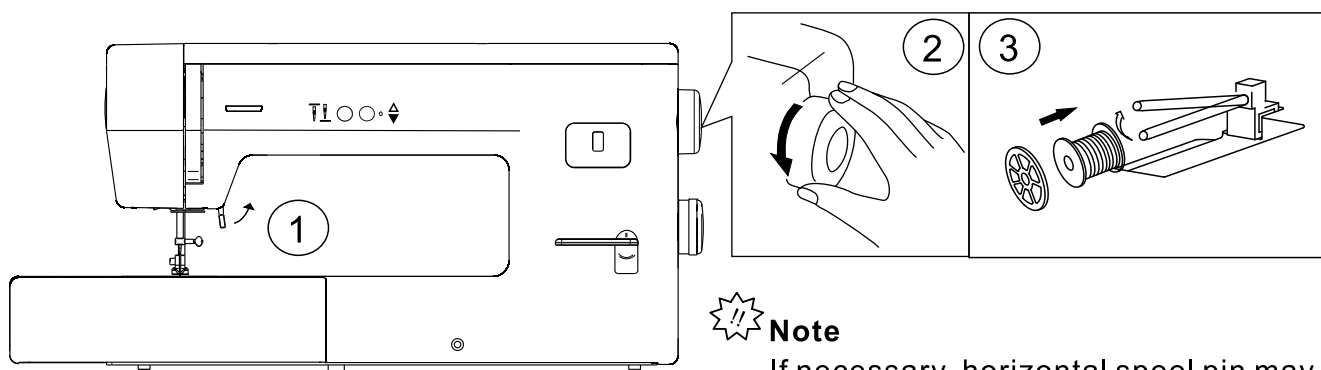
3. Pull thread toward the left and along the inside of spring (B) until it slips into notch (C) being sure that thread does not slip out of notch (A).



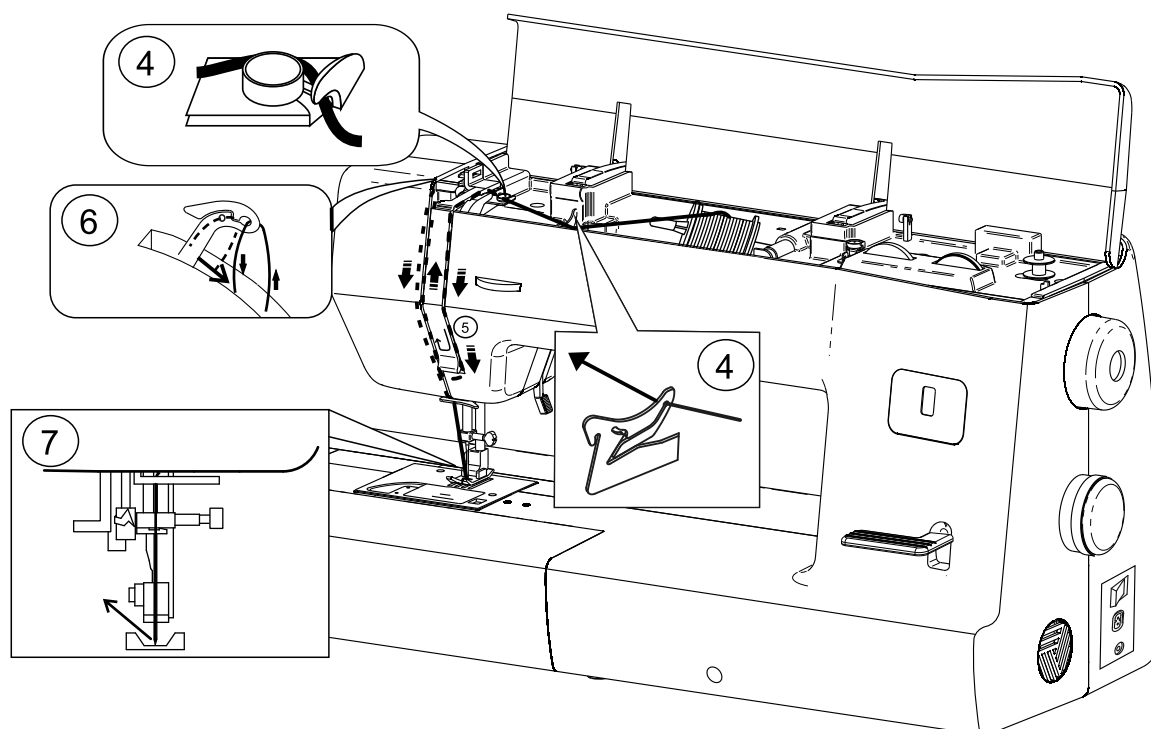
4. While lightly holding down bobbin with your right hand, guide the thread through the slot, pull the thread toward you to cut it with cutter as shown, and then replace the bobbin cover and close.



Upper Threading



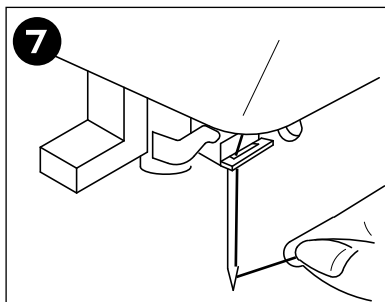
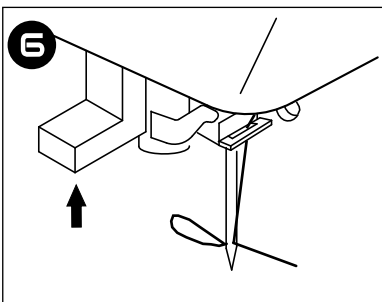
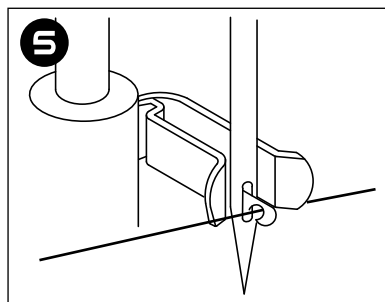
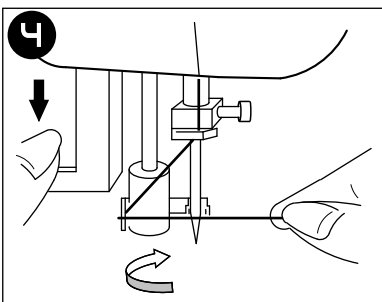
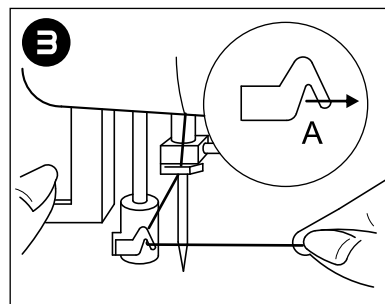
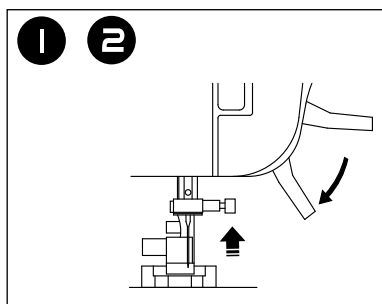
- 1 Raise presser foot lever.
- 2 Rotate the handwheel toward you to raise the take-up lever into the highest position.
- 2-1 Press Needle Up/down button to raise the take-up lever into the highest position.
- 3 Place a spool of thread onto the spool pin and secure with proper size spool cap.
- 4 Pass the thread under thread guide and around pretension disc for upper threading.
- 5 Bring thread forward and down the right channel, then to the left and up the left channel.
- 6 Pull the thread through and into the take-up lever from right to left.
- 7 Pass the thread down the left channel and into the lower thread guide. Slide the thread from right to left into the thread guide on the needle clamp.
- 8 Thread the needle from front to back or follow directions for using the needle threader. (Please refer to page 13)



Using Needle Threader

NEEDLE THREADER

- 1** Lower the presser foot.
- 2** Set needle in highest position by pressing the needle Up/Down button.
- 3** Lower the threader slowly and draw thread through thread guide(A) and pull toward the right.
- 4** Lower the lever as far as it will go so the threader turns and the hook pin will go through the needle eye.
- 5** Position thread below the needle eye and under the hook pin.
- 6** Hold thread loosely and release the lever. Hook will turn and pass thread through needle eye while making a loop.
- 7** Raise presser foot and pull thread out about 10 inches from needle eye.
Note: The needle threader is used for needle sizes 11,12,14 and 16.

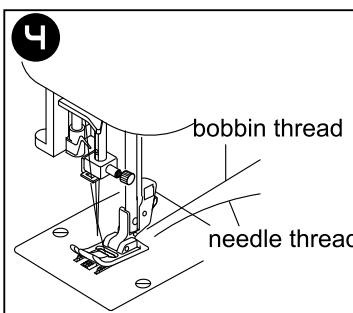
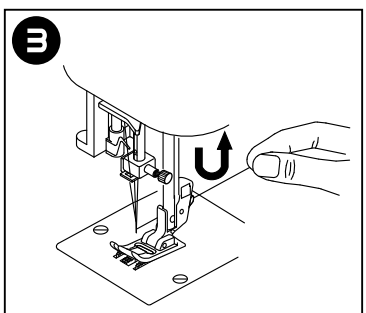
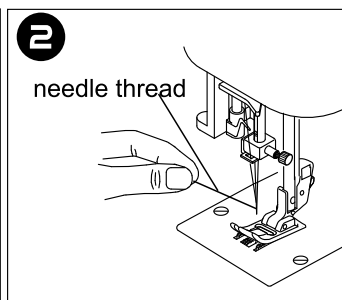
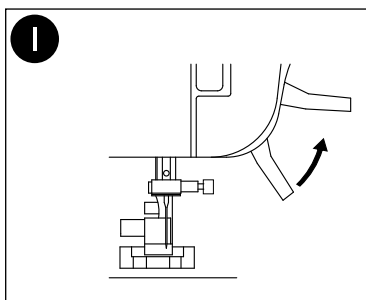


CAUTION: To prevent accidents.

Do not lower the threader lever while machine is operating.

Drawing Up the Lower Thread

- 1** Raise the presser foot lever.
- 2** Hold the needle thread loosely with your left hand and turn the handwheel toward you until the needle goes down into the needle plate and back up to the highest position.
- 3** Lightly pull the top thread upward until a loop of bobbin thread comes up.
- 4** Grasp the bobbin thread and pull both top and bobbin threads under the presser foot and to the back leaving about 5 inches of thread.



CONTROLS

Pattern Selection Dial and Indicator

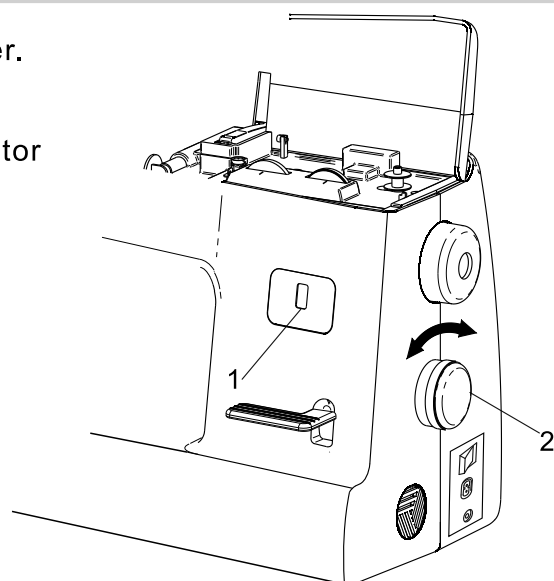
The stitch patterns are printed on inside of the machine's top cover.

To choose a stitch, simply turn the pattern selection dial in either direction until the desired stitch is shown within the Pattern Indicator window.



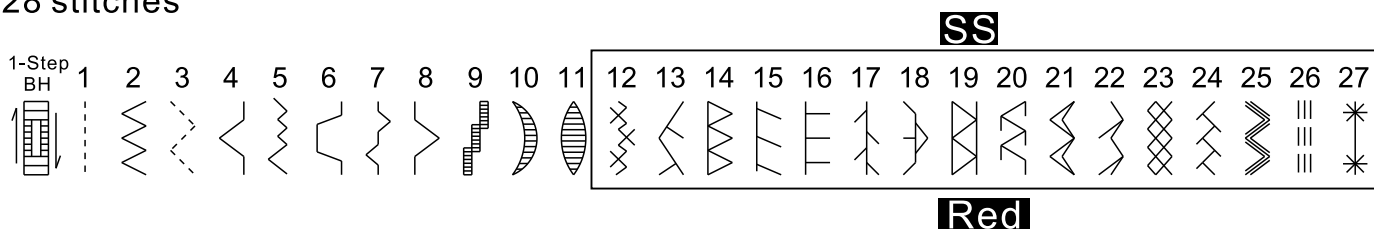
CAUTION

- When you use the pattern selection dial to choose a pattern, turn the handwheel toward you (counterclockwise) to set the needle in the highest position. If the needle is in down position when you turn the pattern selection dial, the needle, presser foot or fabric may be damaged.



- ① Pattern Indicator
- ② Pattern Selection dial

■ 28 stitches



 **Memo : Perfect setting of Stretch Stitch**

Stitch Length Dial: **Red 4**

Stitch Width Dial: **Red 7**

Stitch Length Dial

Depending on the selected stitch, you may need to adjust the stitch length for best results. The numbers marked on the stitch length dial represent the stitch length in millimeters (mm) (1/25 inch). THE HIGHER THE NUMBER, THE LONGER THE STITCH. With the "0" setting, material will not feed. This is used when sewing a button.

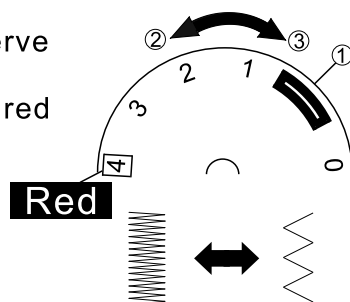
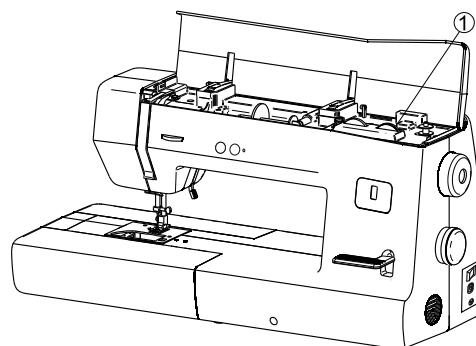
The  range is for making a satin stitch, which is used for making buttonholes and few decorative stitches. The position needed for making the satin stitch varies according to the material and thread being used. To determine the exact dial position, first test the stitch and length settings on a scrap piece of fabric to observe the feeding of the material.

When you desire to sew stretch stitches (**SS**) turn stitch length to red 4 for perfect setting.



CAUTION

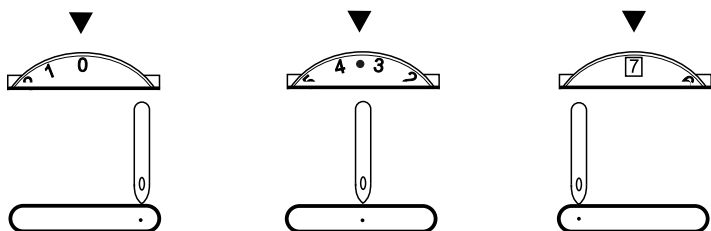
- If the stitches are bunched together, lengthen the stitch length and continue sewing. Do not continue sewing without lengthening the stitch length, otherwise the needle may break and damage machine or cause personal injury.



- ① Stitch length dial
- ② Shorter
- ③ Longer

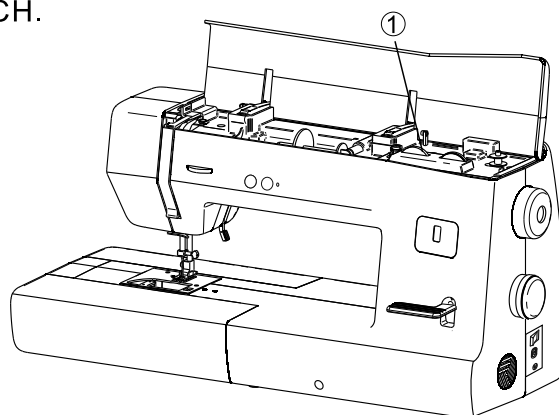
Stitch Width Dial

The numbers marked on the dial represent the stitch width. THE HIGHER THE NUMBER, THE WIDER THE STITCH.



Note

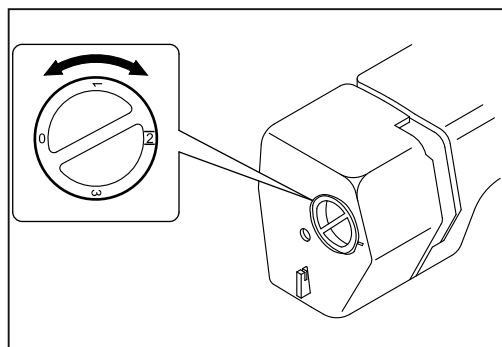
When the Straight or Triple Stretch Stitch is selected, the needle position can be changed from right to left by adjusting the stitch width dial.



① Stitch Width Dial

Presser Foot Pressure Adjustment Dial

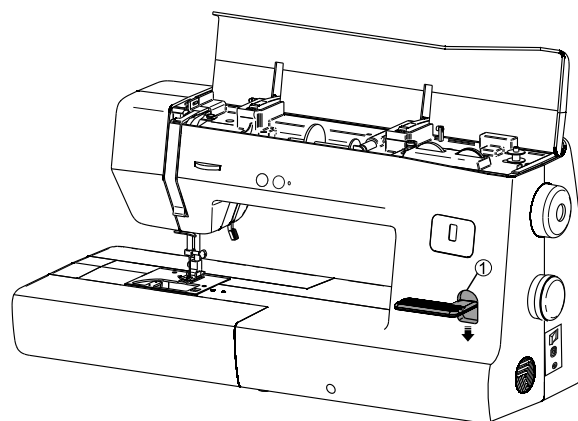
You can adjust the presser foot pressure (the amount of pressure applied to the fabric with the presser foot) by adjusting the Presser Foot Pressure Adjustment Dial. The higher the number, the greater the pressure will be. Set the pressure at "2" for normal sewing.



Reverse Sewing Lever

You can use reverse sewing for back tacking and reinforcing seams.

To sew in reverse, push the reverse sewing lever down 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.

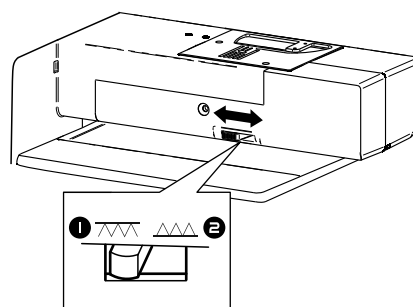


① Reverse Sewing Lever

Drop Feed Dog Lever

The feed dog should be up for all general sewing. Lower the feed dog for free motion darning, embroidery, monogramming and stipple quilting. When the feed dog is lowered, you must move the fabric as you sew.

- ① To lower the feed dog, slide flat bed attachment toward left and then the lever to the left.
- ② To raise the feed dog, slide the lever to the right.

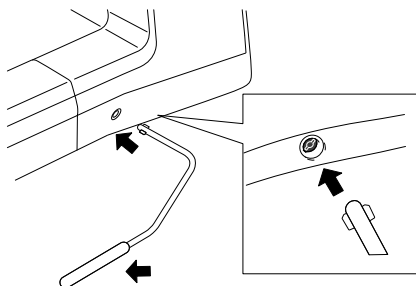


Note: Feed dog will raise once a stitch is completed or by turning handwheel toward you.

Knee Lifter

Using the knee lifter, you can raise and lower the presser foot with your knee, leaving both hands free to handle the fabric.

- 1 Align the tabs on the knee lifter with the notches in the knee lifter mounting slot on the front of the machine. Insert the knee lifter bar as far as possible.

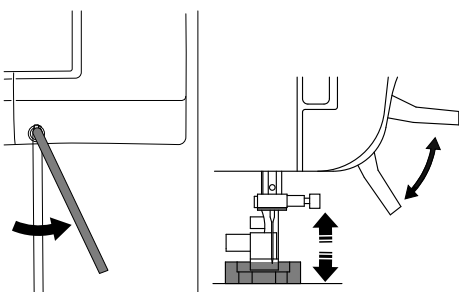


Note

If the knee lifter bar is not pushed into the mounting slot as far as possible, it may come out during use.

- 2 Lower presser foot lever.

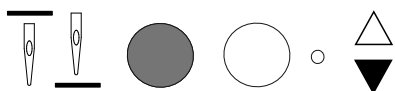
- 3 Use your knee to move the knee lifter to the right in order to raise the presser foot. Release the knee lifter to lower the presser foot.



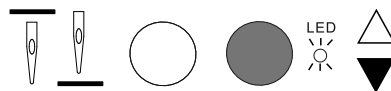
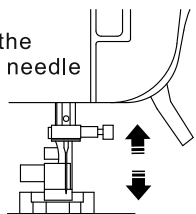
CAUTION

- Be sure to keep your knee away from the knee lifter during sewing. If the knee lifter is pushed during machine operation, the needle may break or thread tension may loosen.

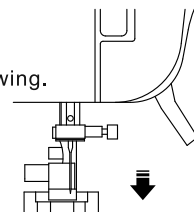
Needle Position Control Button



When you press Needle this button once the needle is in upper position. Press it again needle is in lower position



- When you press needle stop position button, the LED light indicate the needle position is stopped at lower position automatically when you stop sewing.
- When you press needle stop position button, the LED light is off, it indicates the needle position is stopped at upper position automatically when you stop sewing.



SETTING THE THREAD TENSION

The thread tension must be properly balanced. If adjustment is required, this should be made by changing the upper thread tension.

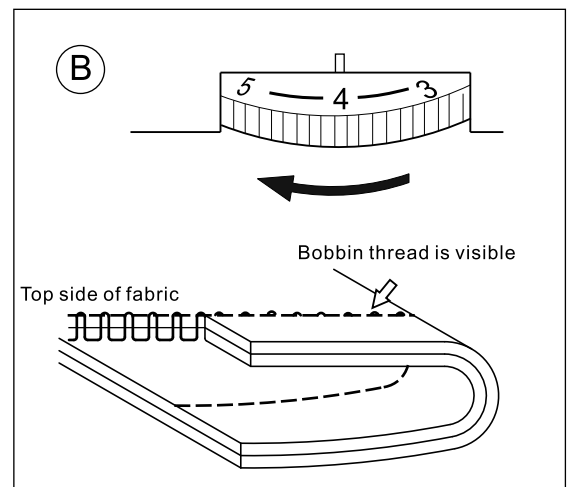
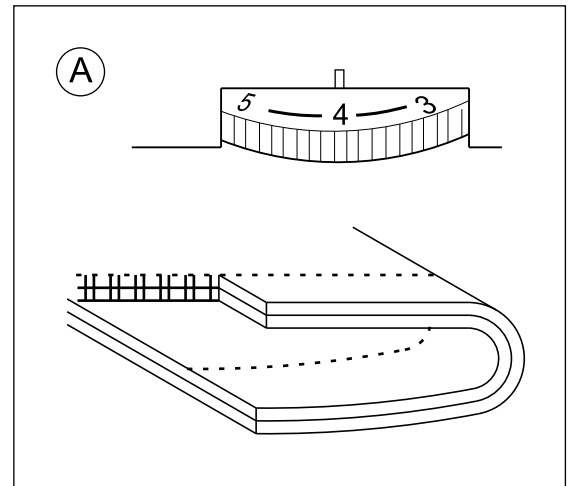
A. Correct Thread Tension

Upper and bobbin threads should interlock approximately in the middle of fabric.

Note: Before you do free motion sewing, the upper thread tension is required to be checked and adjusted to make sure that the thread tension is suitable for your free motion sewing.

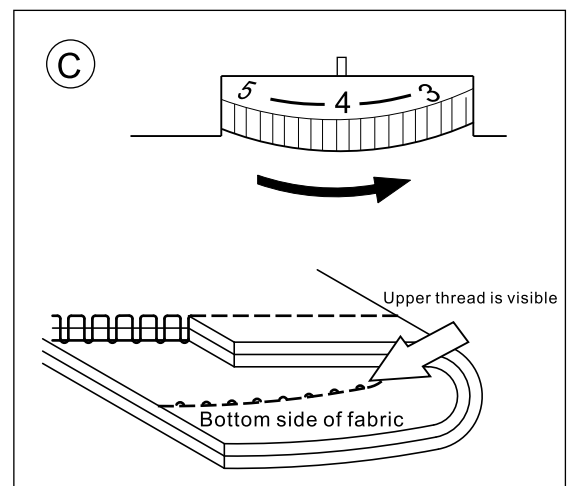
B. When bobbin thread appears on top side of fabric.

Turn the tension dial to a lower number to decrease the upper thread tension.



C. When upper thread appears on the bottom side of fabric.

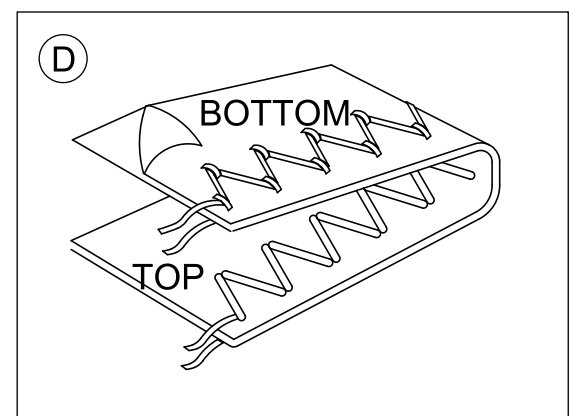
Turn the tension dial to a higher number to increase the upper thread tension.



D. Thread Tension for Zigzag Stitches

To sew zigzag stitches, the upper thread tension should be set to a slightly weaker tension than when sewing straight stitches.

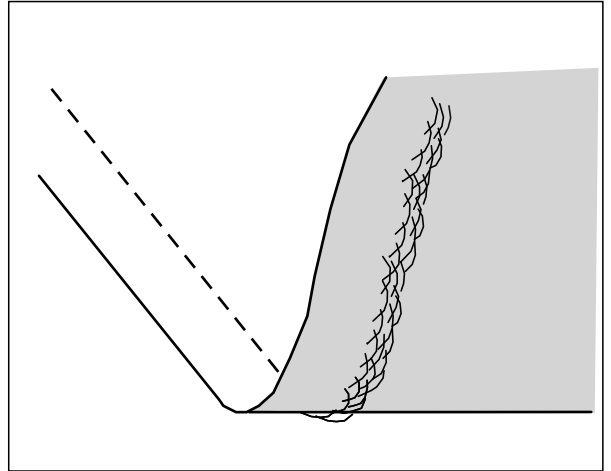
You will obtain a nicer stitch when upper thread appears slightly on bottom side of fabric.



FABRIC, THREAD AND NEEDLE COMBINATIONS

• Helpful Hint

Like shown in drawing, stitches on top side of fabric are good but bottom side tends to have a bunch of thread, it usually means that the upper thread is not threaded correctly or thread tension regulator may not be set correctly. Refer to page 12 for correct upper threading.



CAUTION: To prevent accidents.

The feed dog will feed the fabric automatically.
Do not pull or push on fabric with hands.
It will cause needle breakages or poor quality stitches.

FABRIC, THREAD AND NEEDLE TABLE

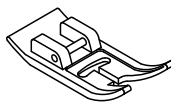
Needle system	Needle size										
	5	7	8	9	10	11	12	13	14	16	18
Ha×1											
System 705	45	55	60	65	70	75	80	85	90	100	110

Select size of thread and needle in accordance with fabric to be sewn.

Type of Fabric	Thread Size	Needle Size
● Lightweight Fabric -thin georgette, organdy, viole, taffeta, silk, etc.	Ctn.# 80 - 100 Silk 60 - 80 Syn. 80 - 100	70/10-75/11 70/10-80/12
● Medium Weight Fabric-gingham, pique, linen, cotton, satin, thin corduroy, velvet.	Ctn.# 50- 80 Silk 50 Syn. 50 - 80	80/12-90/14
● Heavyweight Fabric-gabardine, tweed, denim, corduroy	Ctn.# 40 -50 Silk 50 Syn. 50 - 60	90/14-100/16
● Stretch Fabric-double knit, tricot, spandex, jersey	Ctn.# 50 - 80 Silk 50 Thread for knit	80/12-90/14 Needle for knit and synthetic fabric

To change needle, see page 9.

STRAIGHT STITCH SEWING

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]	All Purpose Foot
Straight Stitch	1 ⋮	0-4 (0-3/16)	0-7* (0-1/4)	

*The stitch width dial has multi-functions depending on stitch selected. Turn the stitch width dial to adjust the needle position. Setting the dial to 0 selects the right needle position; setting the dial to 7 selects the left needle position; setting dial between 0-7 determines width of zigzag type stitches.

■ Starting to sew

❶ Set the pattern selection dial to the Straight Stitch pattern.
Note: By turning the pattern selection dial you are able to choose your desired stitch pattern.

❷ Raise the needle to its highest position and lift the presser foot lever.

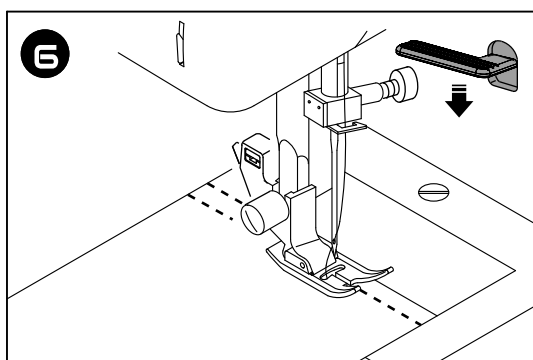
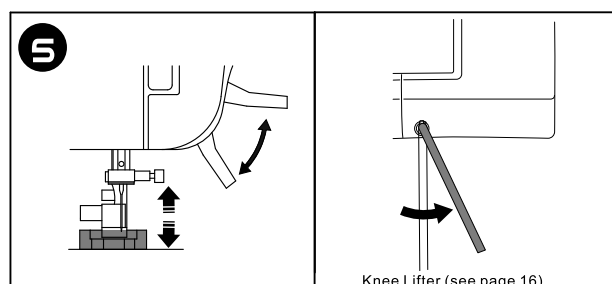
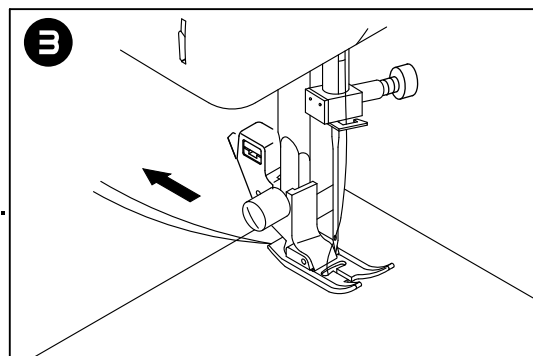
❸ Guide the upper and bobbin threads under the presser foot and toward the back of the machine.

❹ Place the fabric under the presser foot and position the needle 1cm (3/8 inch) from the edge of the fabric.

❺ Lower the presser foot.

❻ To back tack, push down the reverse sewing lever as far as possible, and then press the foot controller to start reverse sewing. Release the foot controller to stop sewing.

❼ Release the reverse sewing lever and start sewing in the forward direction by pressing the foot controller.



CAUTION

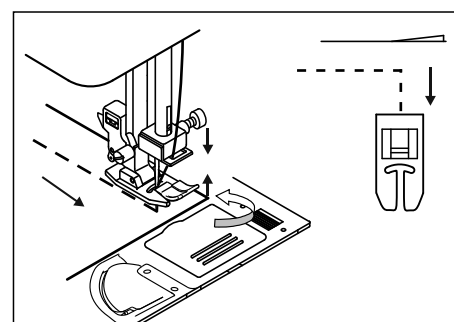
- Make sure the needle does not hit a pin or any other object during sewing. The thread could tangle or the needle could break, causing damage to machine or personal injury.

■ Changing Sewing Direction

❶ Stop the machine at point where you want to change direction with the needle still in the fabric.

❷ Raise the presser foot and turn the fabric to its new direction using the needle as a pivot.

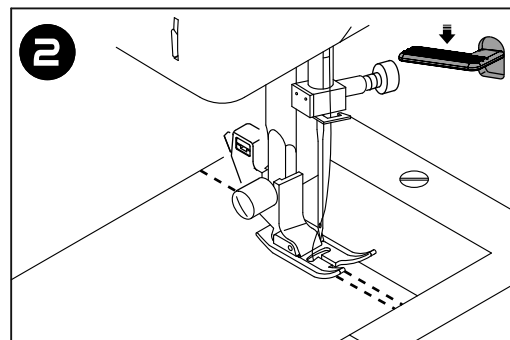
❸ Lower the presser foot and start sewing in the new direction.



■ Finishing Sewing

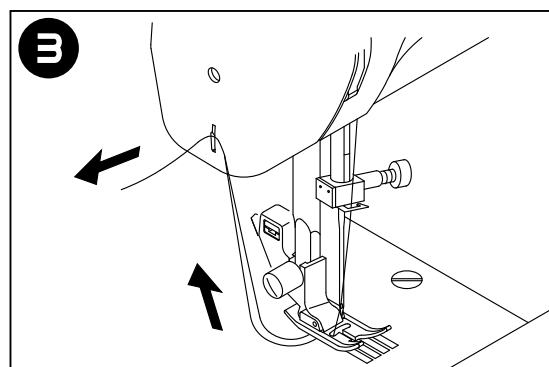
You can use stitches to lock the threads at the end of the seam.

- ❶ To lock stitches, stitch to the end of seam and stop.
- ❷ Push down on the reverse sewing lever and stitch backwards for 1 cm (3/8 inch) from the fabric edge.



■ Removing the Material from the Machine

- ❶ Stop the machine.
Raise the needle to its highest position and make sure that the thread take-up lever is also in its highest position.
- ❷ Lift the presser foot and pull the fabric out gently to the left side of the machine.
- ❸ Cut both threads with the thread cutter on the left hand side of the machine.

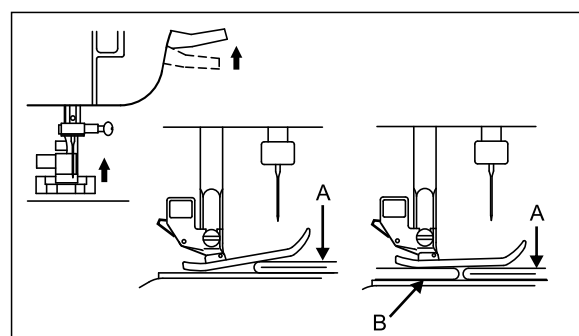


■ Sewing Heavy Fabric

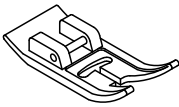
When sewing heavy fabrics, the front of presser foot tends to lift up and sewing will hesitate at the point where the fabric is thicker, such as a cross seam. In this case, place a piece of cardboard or fabric of same thickness under the rear section of the presser foot to level presser foot.

The presser foot lever can be raised 1 step higher for placing heavy materials under the presser foot easily.

Careful guide the fabric with your hand when sewing over thick fabric areas.

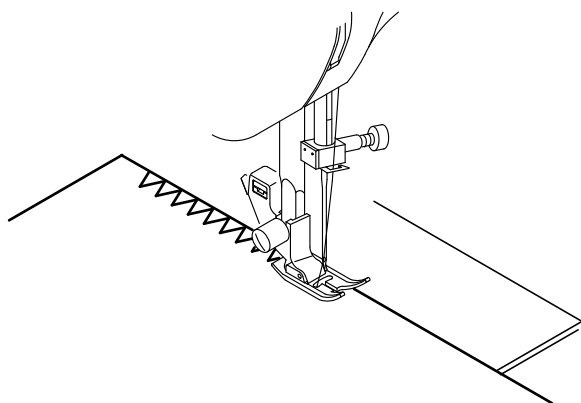


ZIGZAG STITCH SEWING

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]	All Purpose Foot
Zigzag Stitch	2 	0-4 (0-3/16)	0-7* (0-1/4)	

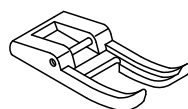
■ Zigzag Stitch

- Turn the pattern selection dial to the Zigzag stitch, and then start sewing.



■ Satin Stitch

Setting the Zigzag Stitch length in the  range produces a satin stitch. The Satin stitch can be used for making buttonholes and a few decorative stitches. Set the pattern selection dial to the zigzag stitch, set the stitch length dial in the  range, and set the stitch width dial between 0 and 7.



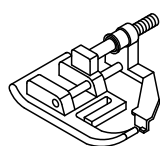
Open Toe Foot



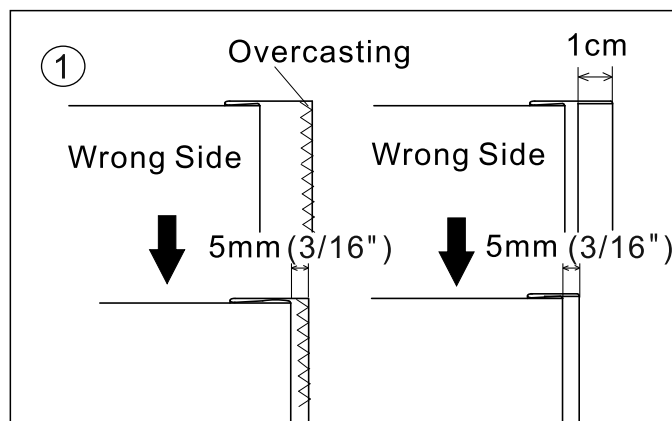
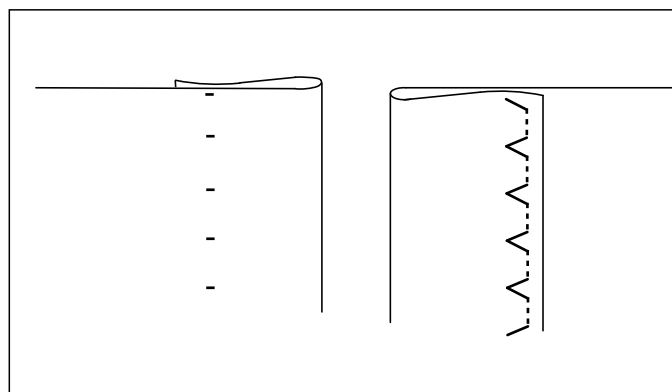
BLIND HEM STITCH SEWING

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Blind Hem Stitch	4 	0-2 (0-1/16)	3.5-5* (1/8-3/16)
Blind Hem Stretch Stitch	5 	0-4 (0-3/16)	0-7* (0-1/4)

Using the Blind Hem Foot



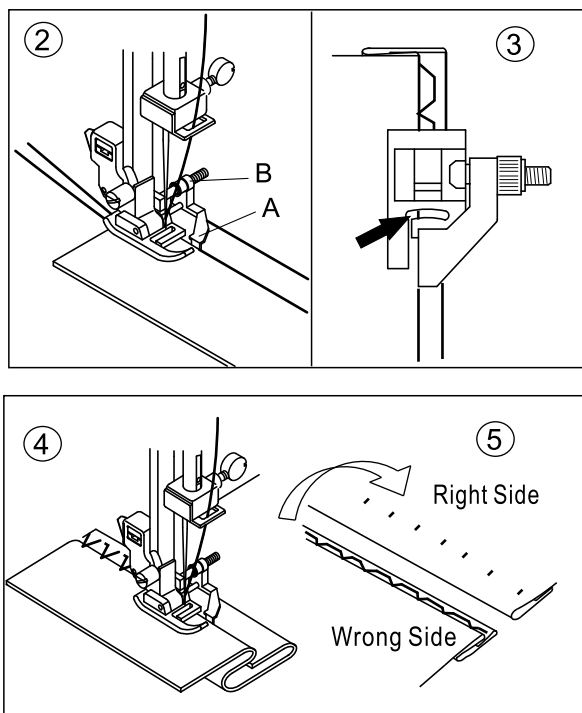
- Fold the fabric as shown on drawing; leaving 5 mm (approximately 3/16 inch) extended past the folded edge.



- 2 The guide (A) on the blind hem foot ensures even feeding of the fabric when blind hem stitching. The guide (A) is adjusted by turning the adjusting screw (B).
- 3 Place fabric so that the straight stitches are on the extended hem edge and the zigzag stitches just catch one thread of the folded edge. Turn the screw so that the guide barely touches the folded edge of fabric.
- 4 Lower the presser foot and sew hem, guiding fabric evenly along the guide.
- 5 Turn the fabric over when you have completed sewing.

Note

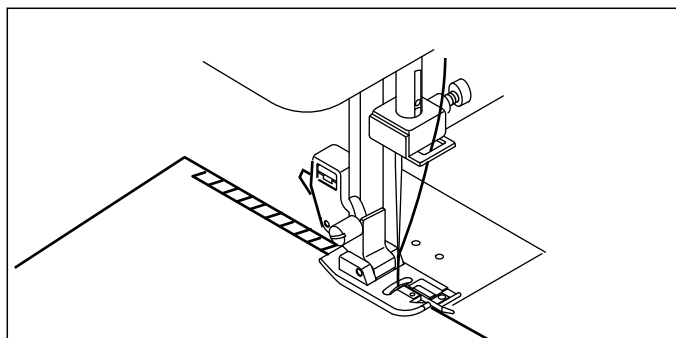
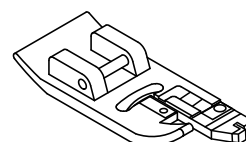
- The Blind Hem Stretch Stitch is useful for stretch fabric.
- If too much of the stitching shows on the right side of the fabric, change to a narrower stitch width or move the guide on the foot to the right. If the zigzag does not meet the fold, widen the stitch width or move the guide on the foot to the left.



OVERCASTING-OVERLOCKING

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Overlock Stitch	14 	SS Red 4	SS Red 7 5-7* (3/16-1/4)
Overcasting Stitch	15 	SS Red 4	SS Red 7 5-7* (3/16-1/4)
Double-Overlock Stitch	19 	SS Red 4	SS Red 7 5-7* (3/16-1/4)
Overcasting Stitch	8 	0-2 (0-1/16)	5-7* (3/16-1/4)
Elastic Zigzag Stitch	3 	0-2 (0-1/16)	5-7* (3/16-1/4)

USING THE OVERCASTING FOOT



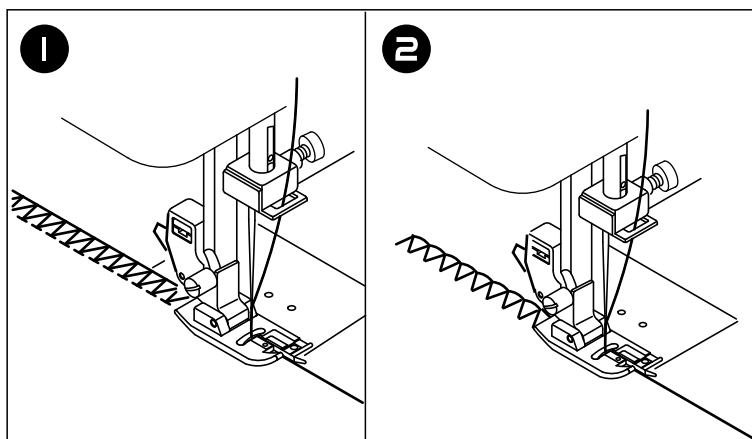
Position the fabric against the guide plate of the overcasting foot so that the needle falls near the edge of the fabric.

- 1 Some stitches can sew the seam and overcasting at the same time. Therefore, it is convenient for sewing easy to ravel and stretch fabrics.
- 2 Overcasting stitches (width 5.0-7.0) are used for preventing raveling of fabrics.

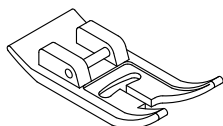


CAUTION

• Overcasting foot should be used for sewing pattern 14, 15, 19 only. Do not change the stitch width narrower than 5.0, or the needle could hit the presser foot and break when sewing other patterns and stitch widths.

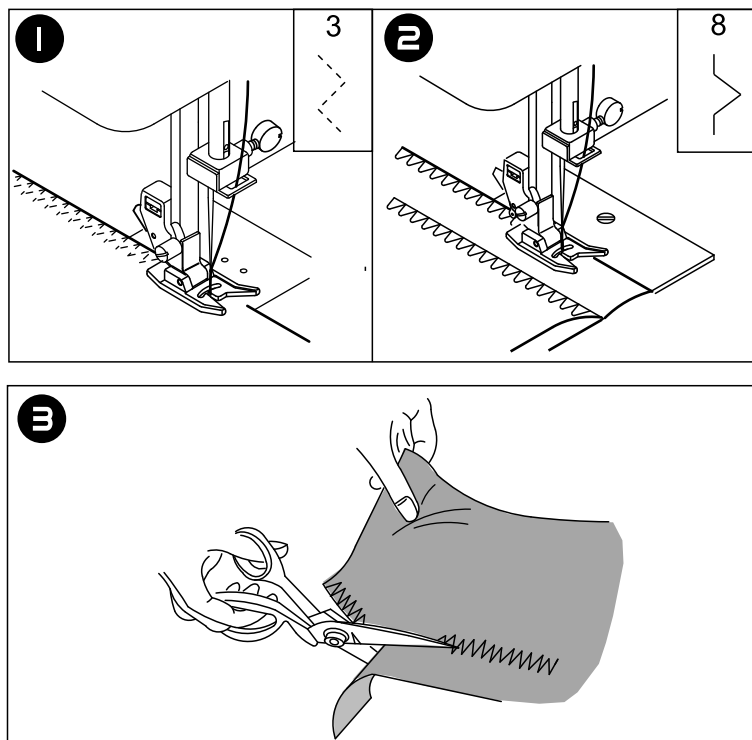


USING THE ALL-PURPOSE FOOT

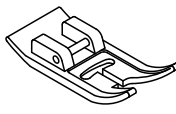


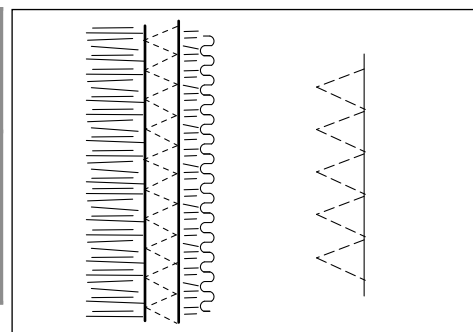
When using the all purpose foot, place the fabric so that the needle will fall near the edge of fabric.

- 1 Use a narrow zigzag width for lightweight fabrics.
- 2 Adjust the width and length for various weights of knit and stretch fabrics. (When using overcasting foot, do not change the width any narrower than 5.0mm.)
- 3 For allotted seam allowances, sew then trim the excess fabric close to the stitching. Be careful not to cut thread when cutting the fabric edge.



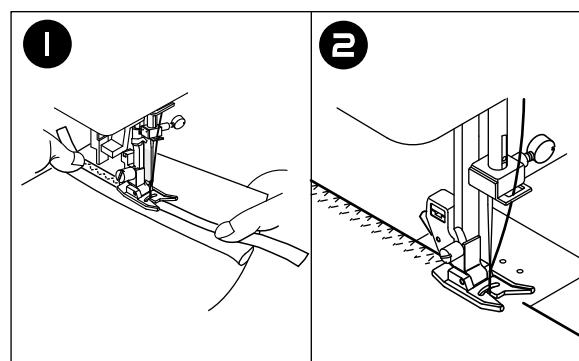
MULTI-STITCH ZIGZAG

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]	All Purpose Foot
Elastic Zigzag Stitch	3 	0-2 (0-1/16)	5-7* (3/16-1/4)	

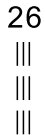
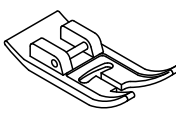
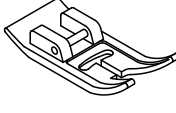


Used for sewing on elastic band and overcast stitching on knit fabrics.

- 1** Elastic Sewing
Stretch elastic in front and back of needle while sewing. Be careful not to bend needle while stitching.
- 2** Overcasting stitching
Used for easy to ravel and knit fabrics. Guide fabric so stitch on right side is at the edge on the fabric. (see page 22)

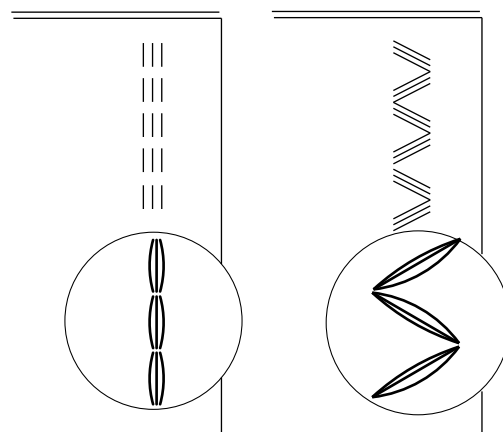


STRETCH STITCH SEWING

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]	All Purpose Foot
Triple Stitch	26 	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)	
Rick-Rack	25 	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)	

Stretch stitch sewing assures you of a stitch that is strong and flexible and will give with the fabric without breaking. Good for stretch or knit fabrics and seams that require flexibility. It is good for joining durable fabrics such as denims.

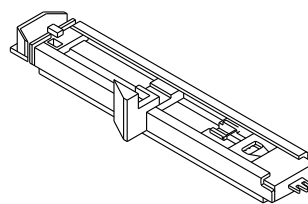
We recommend that you use a needle for knit and synthetic fabrics to prevent skipped stitches and thread breakages.



SEWING BUTTONHOLES

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Buttonhole	1-Step BH 	0-1  (0-1/16)	3.5-7* (1/8-1/4)

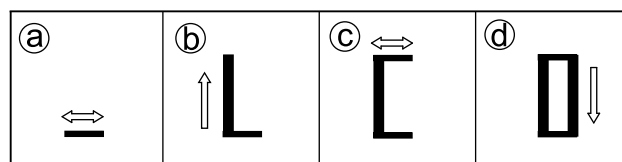
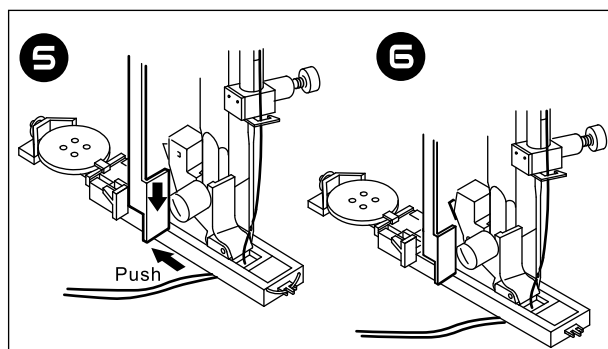
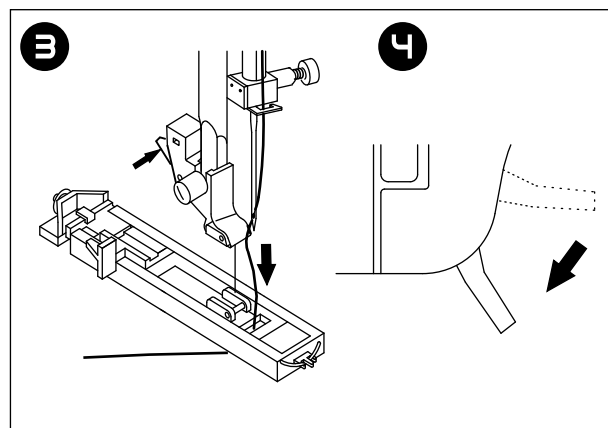
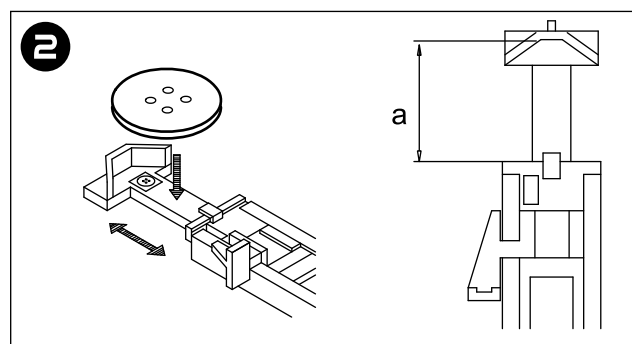
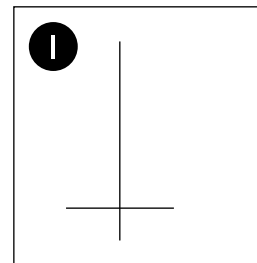
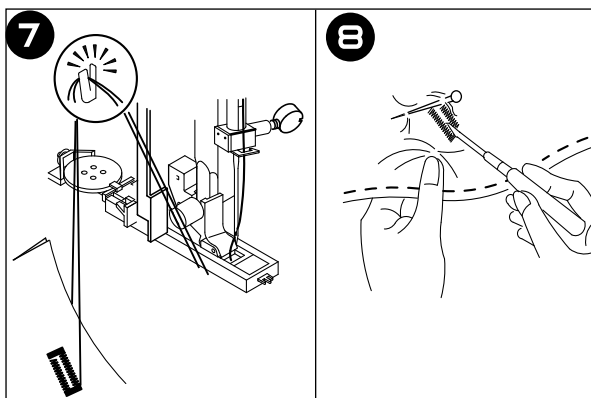
Using the Buttonhole Foot



- 1 Mark position and length of buttonhole on fabric.
- 2 Set button on the base and slide base forward to secure button.
* If button does not fit on the base, adjust slide on base to diameter of button plus thickness of button.
a = Length of button + thickness
- 3 Pass upper thread through the needle opening of buttonhole foot and attach buttonhole foot to machine. Bring upper and bobbin threads to the left under foot.
- 4 Position fabric under buttonhole foot so that the center line mark is in the center of the needle opening in the buttonhole foot. With the main part of the foot pushed to the back lower the presser foot lever.
- 5 Pull the buttonhole lever down as far as possible and then **push the lever toward the back until it clicks.**
- 6 Hold upper thread lightly and start the machine. Stop sewing when right side of buttonhole is completed.

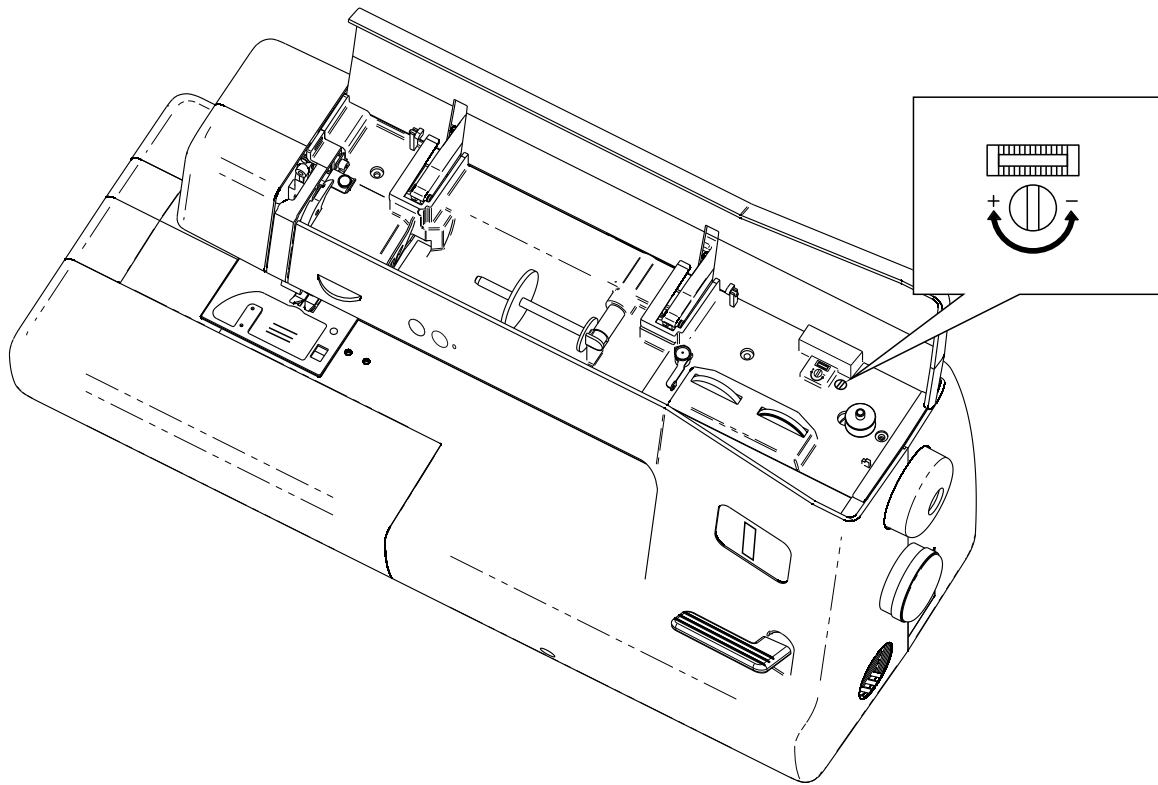
Note

- Machine will not stitch properly if buttonhole lever is not lowered properly or buttonhole foot is not positioned correctly.
- 7 Raise the presser foot and cut threads. To sew same buttonhole, raise presser foot and push the buttonhole lever towards the back until it clicks.
 - 8 With buttonhole cutter, cut center of buttonhole being careful not to cut stitches on either side. Use a pin as a stopper.

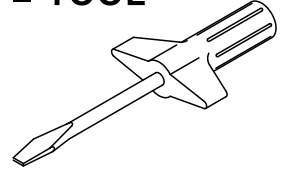


BUTTONHOLE FINE TUNING

■ BUTTONHOLE FINE TUNING ADJUSTMENTS



■ TOOL

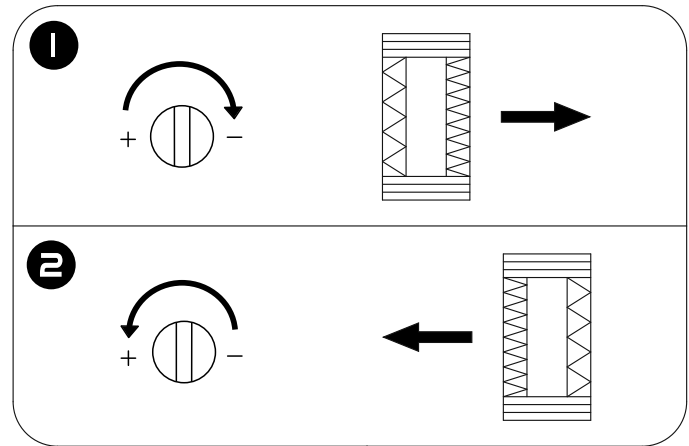


Large Screwdriver

Various types of fabric may have different stitching results when a buttonhole is sewn. The stitch density of the buttonhole's left or right side could be found to be unbalanced. The buttonhole fine tuning will allow you to make adjustments by slightly turning the screw with included large screwdriver.

1 If the stitch density on the buttonhole's right side is less than the left side, use the large screwdriver to turn the fine tuning screw slightly toward the right (clockwise). The increased density will appear on the right side of buttonhole (as shown).

2 If the stitch density on the buttonhole's left side is less than the right side, use the large screwdriver to turn the fine tuning screw slightly toward the left (counterclockwise). The increased density will appear on the left side of buttonhole (as shown).

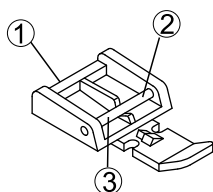


INSERT ZIPPERS AND PIPING

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Straight Stitch	1	0-4 (0-3/16)	3.5 (center) (1/8)

You can use the zipper foot to sew different types of zippers, and can easily position it to the right or left side of the needle.

When sewing the right side of the zipper, attach the presser foot holder to the left pin of zipper foot. When sewing the left side of the zipper, attach the presser foot holder to the right pin of the zipper foot.



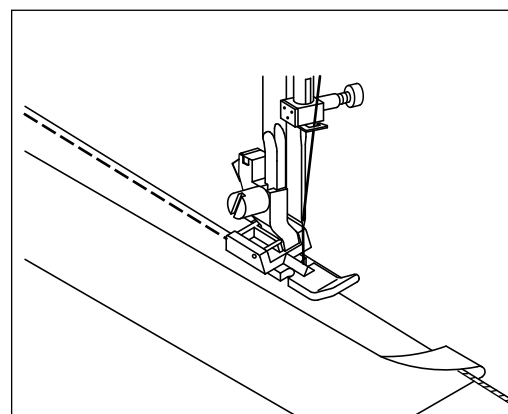
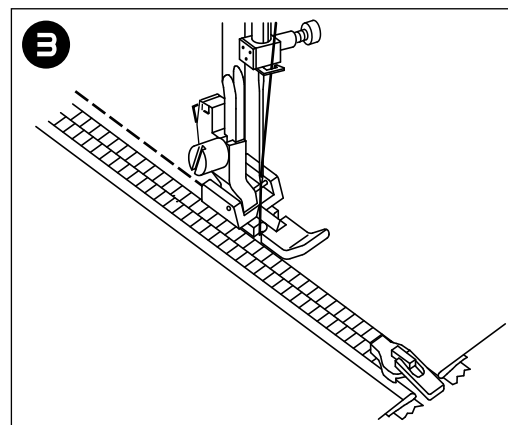
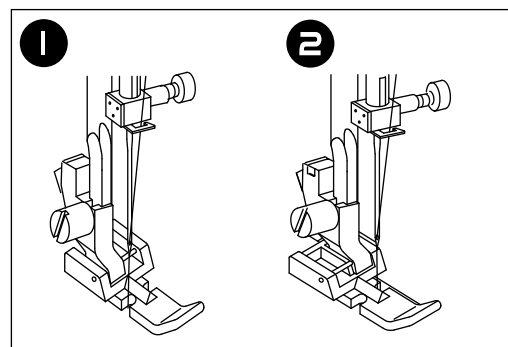
- ① Zipper Foot
- ② Right pin for sewing the left side of the zipper
- ③ Left pin for sewing the right side of the zipper

Align the right side or the left side of the zipper foot pin with the presser foot holder, lower the presser foot lever to attach the foot.

① Needle stitches to the left of foot.

② Needle stitches to the right of foot.

③ To insert zippers, consult the zipper package for instructions on how to prepare zipper placket and place zipper. To sew close to the zipper on the right side, snap the zipper foot onto the presser foot holder on the left side so the needle passes through the opening on the left side of the foot. Snap the foot onto the presser foot holder on the other side of foot to sew close to the left side of the zipper.



PIPING

To insert piping, purchase pre-made piping or cover cording with a bias strip of fabric using the zipper foot snapped on to the right side of the presser foot holder. Place the piping between two layers of fabric. Stitch with the piping next to the foot, so the stitching is tight against the cord.

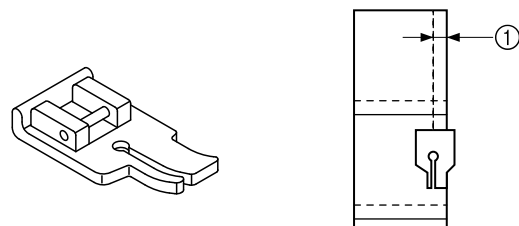
CAUTION

- Turn the handwheel by hand to make sure the needle does not hit the zipper foot before you start sewing. Choosing a different stitch will cause the needle to hit the presser foot and break, which may damage machine or cause personal injury.
- Make sure the needle does not hit the zipper during sewing. If the needle hits the zipper, the needle may break, which may damage machine or cause personal injury.

STRAIGHT STITCH SEAMING AND QUILTING

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Straight Stitch	1 ⋮	0-4 (0-3/16)	3.5 (center) (1/8)

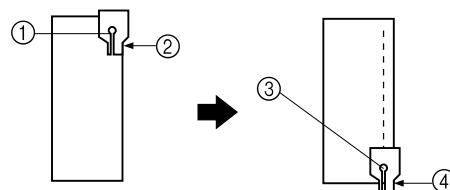
Using the 1/4 Inch Quilting Foot



① Seam allowance 6.5 mm (1/4 inch)

- 1 Set the pattern selection dial to the Straight Stitch. Set the stitch length between 0 (0 inch) and 4 (3/16 inch). Set the stitch width at 3.5 (1/8 inch)(center needle position).
- 2 Attach the 1/4 Inch Quilting Foot.
- 3 Position the presser foot over the fabric and sew as shown in the right side of illustration.

■ Achieving an accurate seam allowance

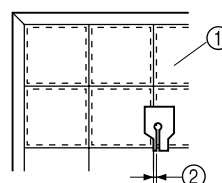


- ① Beginning of stitching
- ② Align this side of foot with the edge of the fabric
- ③ End of stitching
- ④ Align this side of foot with the edge of the fabric

CAUTION

- Only use the Straight Stitch pattern when stitching with straight stitch foot or 1/4 inch quilting foot. Choosing a different stitch pattern will cause the needle to hit the presser foot and break, which may damage machine or cause personal injury.

■ Quickly Stitch together a Quilt

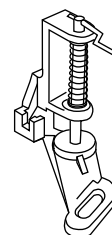


- ① Top of fabric
- ② Seam 3.2 mm (1/8 inch)

Darning/Free Motion Quilting

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Straight Stitch	1 ⋮	0-4 (0-3/16)	3.5 (center) (1/8)

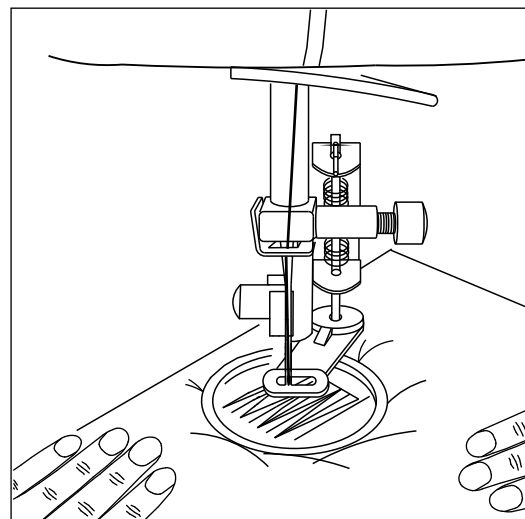
Using Darning/Free Motion Quilting Foot



- Select straight stitch. Set needle in the center needle position.
- Using drop feed lever lower feed dog.
- Remove the presser foot and presser foot holder. Screw the darning/free motion quilting foot onto the presser bar with the extended arm of the foot resting above the needle clamp screw.
- Holding the needle thread, take one stitch and pull up bobbin thread through the fabric.
- Lower presser foot lever and start sewing at a slow to medium speed, moving the fabric back and forth with a steady rhythm.
- Turn fabric and sew another layer of stitching across the first layer of stitching

CAUTION

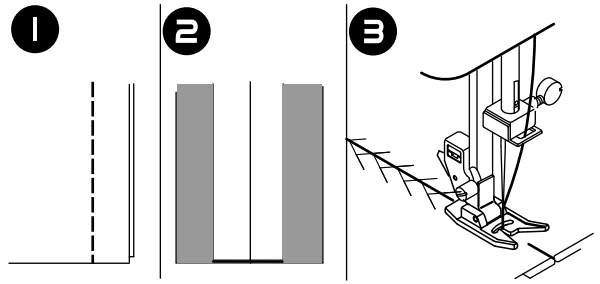
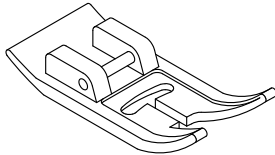
- When using darning/free motion quilting foot on machine with zigzag stitches do not set the stitch width any wider than 4.0. Otherwise needle may deflect and hit the darning/free motion quilting foot causing damage to machine or personal injury.



Patch Work

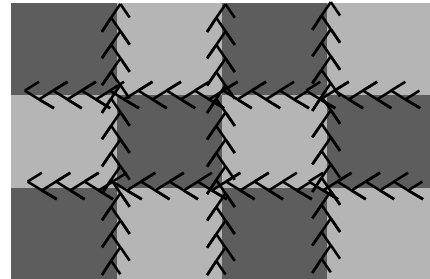
Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Feather Stitch	17 	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Decorative Cross Stitch	23 	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Fagoting Stitch	24 	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)

Using All Purpose Foot

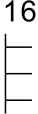


For additional decorative purposes, use a variety of different fabrics.

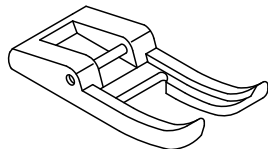
- 1 Place two piece of fabric right sides together and sew a basting stitch.
- 2 Press the seam open.
- 3 Place fabric right side up and stitch with the seam line in the center of the foot. Stitches should fall on both sides of the seam line.



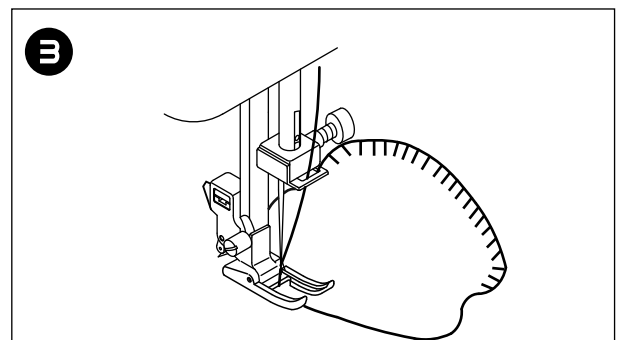
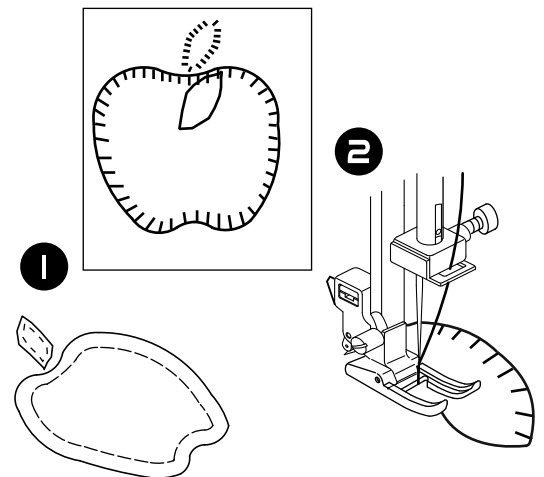
APPLIQUE

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Overcasting	15 	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Decorative Applique	16 	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)

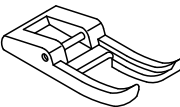
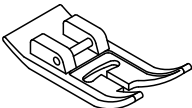
Using Open Toe Foot



- 1 Position the applique on fabric with fabric glue, fusible iron on stabilizer or basting stitches. (When using fabric with frayed edges for the applique, press under 1/4 inch on all the edges)
- 2 Sew along the edge of the applique. Align the straight part of the stitch with the edge of the applique to give this project a hand-made appearance.
- 3 When pivoting corners, lower the needle in the right side of stitch. Raise the presser foot and use the needle to pivot and turn the fabric.



SCALLOP STITCH

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]	Open Toe Foot	All Purpose Foot
Scallop Stitch	10 	0-1 (0-1/16)	3.5-7* (1/8-1/4)		

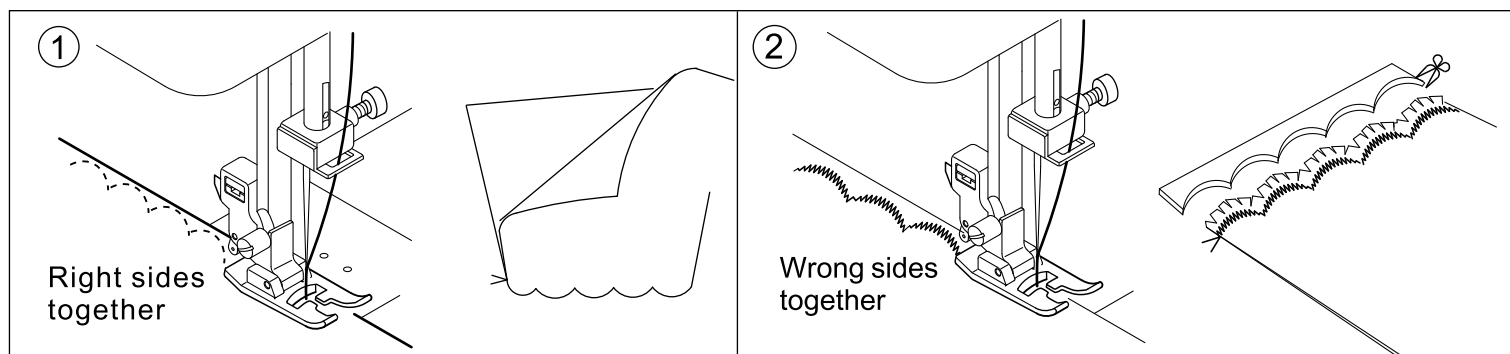
These stitches are used to sew a decorative edge on garments and table cloths using the Opening Toe Foot or the All Purpose Foot.

1 SCALLOP HEM

- (1) Fold the fabric with right sides together and sew near the edge.
- (2) Cut the fabric along the seam leaving an allowance of 3 mm (1/8") for seaming. Notch the allowance.
- (3) Turn fabric with right sides out and gently push out the curved seam then press.

2 DECORATIVE SCALLOP EDGE

- (1) Place the fabric with wrong sides together and stitch near the edge.
- (2) Trim along the outside edge of the stitching; being careful not to cut the stitching.
- (3) Use seam sealant or fabric glue to secure edges of the scallop stitching.



TWIN NEEDLE SEWING (OPTIONAL)

Using Twin Needles

With the twin needle, you can sew parallel lines of the same stitch with two different colored threads. Both upper threads should have the same thickness and quality. Use the vertical spool pin and spool pin felt.(Refer to page 7)



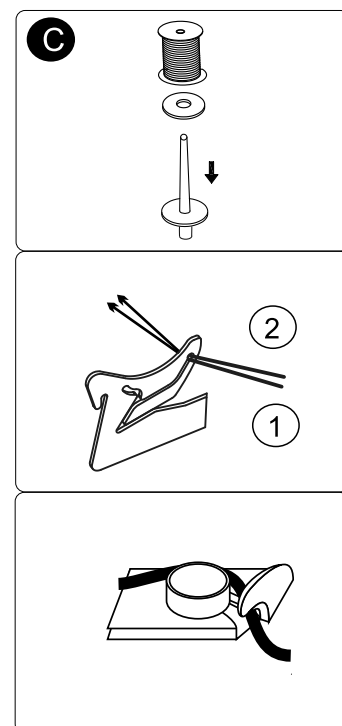
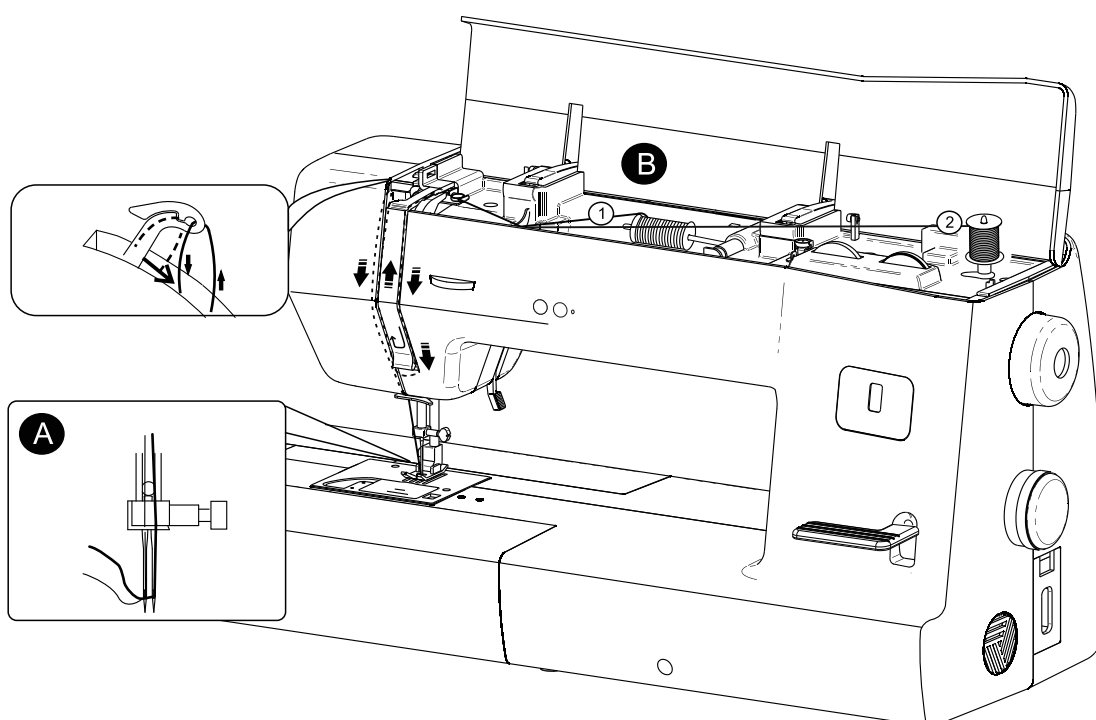
Never use bent needles. Bent needles can easily break, possibly resulting in injuries.

Installing Twin Needle & Threading

1. Remove the single needle and insert twin needle(A). (See page 9)
2. Guide spool thread from horizontal spool pin ① using normal threading procedure (B). (See page 12)
3. Thread the left needle eye by hand from needle front to back (A).
4. Insert vertical spool pin with spool pin felt and thread spool on the bobbin winding shaft located at the right side of the horizontal spool pin (1).
5. Guide spool thread from vertical spool pin ② and thread machine same as Step 2 above.
6. For better sewing results, do not pass second thread through needle bar threading guide, thread right needle eye by hand from front to back (A).
7. Refer to twin needle procedures as outlined in illustrations.



Needle threader cannot be used with twin needle, it may cause damage to machine.



TWIN NEEDLE SEWING

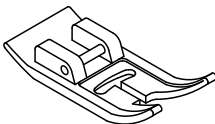
All Purpose Presser Foot

For detail on changing the presser foot, please refer to page 9.

The stitch width must be adjusted at 3.5 mm **only**, for safety reason and the needle must be checked to make sure it safely clears the presser foot and needle plate before sewing by slowly turning handwheel manually.



When using twin needle, be sure to attach All Purpose foot and always check that the needles do not touch needle plate and presser foot, otherwise, the needle may break or damage the machine.

Stitch Name	Pattern	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]	Needle Type	All Purpose Foot
Straight Stitch (ONLY)	1 -----	1-4 (1/16-3/16)	3.5 (Center Needle Position ONLY)	 2.0/90 3.0/90 4.0/90 5.0/90	

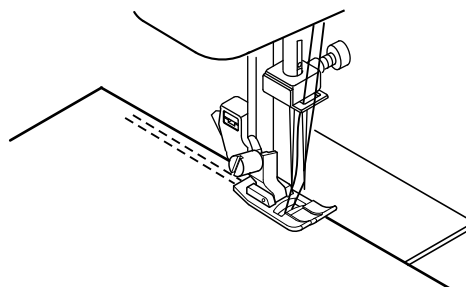


When using the twin needle be sure to select the STRAIGHT STITCH ONLY and Stitch Width Dial is set at 3.5 (center needle position), otherwise the needle may break or the machine may be damaged.

Start to sew

Two lines of stitching are sewn parallel to each other.

(Please refer to page 19 for details for Starting to sew)



When changing the sewing direction raise the needles from the fabric by turning handwheel, and then raise the presser foot lever and turn direction of the fabric. Do not try turning the fabric while twin needle is still in the fabric, otherwise the needle may break or the machine may be damaged.

CARING FOR YOUR MACHINE

To ensure the best possible operation of your machine, it is necessary to keep the essential parts clean at all times. Always disconnect the machine from power supply by removing the plug from the electric outlet.



CAUTION

- Please switch off the main power switch and then disconnect plug from electric outlet before you start cleaning.

CLEANING THE FEED DOG AND HOOK AREA

- 1 Raise the needle to its highest position.
- 2 Remove the bobbin cover and bobbin (1).
- 3 Remove the needle plate (1).
- 4 Remove the bobbin case (2).
- 5 Clean the feed dog and hook area with the lint brush.



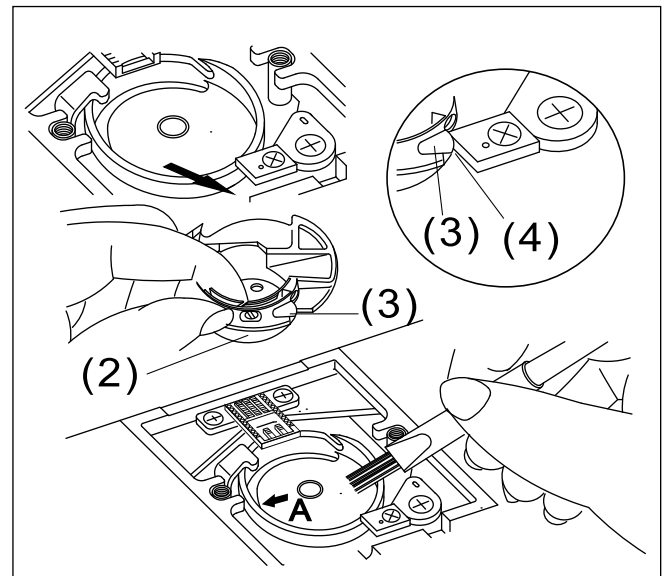
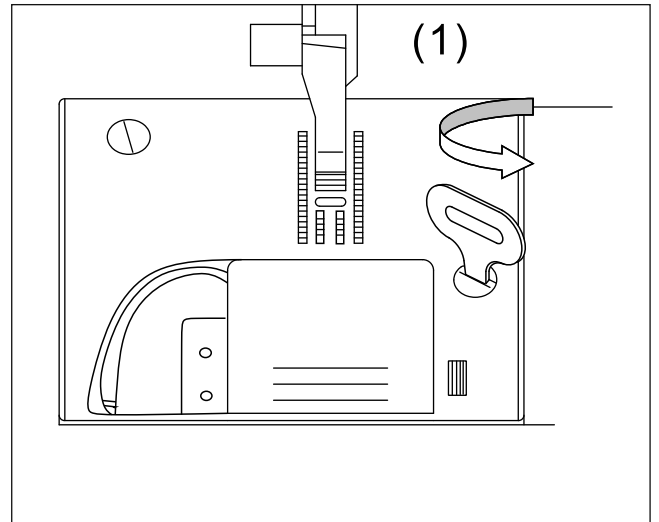
Note

- Put a drop of good quality sewing machine oil on the hook race as indicated by arrow A.
- 6 Replace the bobbin case with the projection (3) positioned against the spring (4). Replace the needle plate.



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.
- Make sure that you fit the bobbin case properly, otherwise the needle may break and damage machine or cause personal injury.



Important Maintenance Message

We recommend taking your machine to an authorized retailer for regular maintenance. Such steps will help to ensure you receive continued, uninterrupted hours of machine operation for the future.

TROUBLESHOOTING

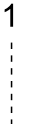
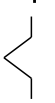
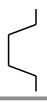
If the machine stops working properly, check the following possible problems.

If the problem is still there, contact your authorized Baby Lock retailer.

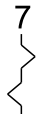
PROBLEM	CAUSE	CORRECTION	PAGE
Upper thread breaks	- Machine not properly threaded. - Thread entwined around bobbin. - Needle inserted incorrectly. - Thread tension too tight. - Thread of incorrect size or poor quality.	Re-thread machine.	12
		Remove entwined thread.	11
		Re-insert needle.	9
		Readjust thread tension.	17
		Choose correct thread.	18
Lower thread breaks	- Bobbin threaded incorrectly. - Bobbin wound unevenly or too full. - Dirt in the bobbin and hook area.	Re-thread the bobbin.	11
		Rewind the bobbin.	10
Machine skips stitches	- Needle inserted incorrectly. - Bent or blunt needle. - Incorrect size of needle on stretch fabric.	Clean the bobbin and hook area.	32
		Re-insert needle.	9
		Insert new needle.	9
		Choose correct size of needle for fabric.	18
Fabric puckers	- Machine not properly threaded. - Bobbin threaded incorrectly. - Blunt needle. - Thread tension too tight.	Use stretch needle	18
		Re-thread machine.	12
		Re-thread the bobbin.	11
		Insert new needle.	9
Machine makes loose stitches or loops	- Bobbin threaded incorrectly. - Machine not properly threaded. - Tension not adjusted properly.	Readjust thread tension.	17
		Re-thread the bobbin.	11
		Re-thread machine.	12
Threader does not thread needle eye	- Needle is not raised to highest position. - Needle inserted incorrectly. - Bent needle. - Eye of needle too small - Hook pin on threader bent	Re-thread machine.	12
		Re-thread the bobbin.	11
		Insert new needle.	9
		Readjust thread tension.	17
		Insert new needle.	9
Machine does not feed properly	- Feed dog is lowered. - Lint and dust accumulated around feed dog. - Presser foot is not lowered. - Buttonhole Sewing Mode: - Buttonhole lever is not lowered completely. - Buttonhole foot is not attached.	Raise the needle.	12
		Re-insert needle.	9
		Insert new needle.	9
		Insert needle size 11 or higher	13
		See authorized retailer	13
Needle breaks	- Fabric pulled while sewing. - Needle is hitting the presser foot. - Needle inserted incorrectly. - Incorrect size needle or thread for fabric being sewn. - Needle is bent.	Raise the feed dog.	15
		Clean the feed dog area.	32
		Lower the presser foot.	9
		Lower the buttonhole lever.	25
		Attach the buttonhole foot.	25
Machine runs with difficulty	Dirt or lint accumulated in the hook race and feed dog.	Do not pull fabric.	18
		Select correct foot, pattern and needle position.	18
		Re-insert needle.	9
		Choose correct size needle and thread.	18
Machine will not run	- Cord not plugged into electrical outlet. - Main power switch is not turned on. - Bobbin winder shaft is pushed to the right.	Insert new needle.	9
		Remove the needle plate and bobbin case and clean the hook race and feed dog.	32
		Insert plug fully into outlet.	8
		Turn on the main power switch.	8
		Push shaft to the left.	10

STITCH REFERENCE CHART

*The Stitch Width Dial has multi-functions depending on stitch selection. Refer to page 19 for complete details.

Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Buttonhole		Creating buttonholes	0-1  (0-1/16)	3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Straight Stitch	1 	General sewing, attaching zippers and creating gathers or pintucks, free-motion quilting etc.	0-4 (0-3/16)	0-7* (0-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Zigzag Stitch	2 	Overcasting and attaching applique, quilting etc.	0-4 (0-3/16)	0-7* (0-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Elastic Zigzag Stitch	3 	Overcasting on medium weight or stretch fabric, attaching elastic or darning etc.	1-4 (1/16-3/16)	1-7* (1/16-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Blind Hem Stitch	4 	Blind hem stitching on medium weight, etc.	1-4 (1/16-3/16)	1-7* (1/16-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Blind Hem Stretch Stitch	5 	Blind hem stitching on stretch fabric	0-4 (0-3/16)	0-7* (0-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Double Action	6 	Attaching elastic to stretch fabrics	0-4 (0-3/16)	0-7* (0-1/4)

STITCH REFERENCE CHART

Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Bridging	7 	Patchwork stitching and decorative stitching	1-4 (1/16-3/16)	1-7* (1/16-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Overcasting Stitch	8 	Overcasting on thin or medium weight fabrics	1-4 (1/16-3/16)	1-7* (1/16-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Satin Stitch	9 	Decorative and satin stitching	0-4 (0-3/16)	3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Satin Stitch	10 	Decorative and satin scallop stitching	0-4 (0-3/16)	3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Satin Stitch	11 	Decorative and satin stitching	0-4 (0-3/16)	3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Stitch	12 	Decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Stitch	13 	Decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)

STITCH REFERENCE CHART

Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Overlock	14 	Overcasting on thin or medium weight fabric Overcasting on thick fabrics	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Overcasting	15 	Applique, decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Applique Stitch	16 	Applique, decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Feather Stitch	17 	Decorative stitching, patchwork	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Stitch	18 	Decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Double Overlock Stitch	19 	Decorative hemming on thin, medium weight and plain weave fabric, heirloom stitching etc.	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Stitch	20 	Decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)

STITCH REFERENCE CHART

Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Stitch	21 	Decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Stitch	22 	Decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Cross Stitch	23 	Decorative and cross stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Fagoting Stitch	24 	Decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Rick rack	25 	Decorative stitching, elastic stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Triple Stitch	26 	Attaching sleeves, sewing in seams, sewing stretch fabrics and decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)
Stitch Name	Pattern	Application	Stitch Length Dial [mm(inch)]	Stitch Width Dial [mm(inch)]
Decorative Stitch	27 	Decorative stitching	SS Red 4	SS Red 7 3.5-7* (1/8-1/4)

