

User Manual

Elna Elina PRO

IMPORTANT SAFETY INSTRUCTIONS

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

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

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

Read all instructions before using this overlock machine.

DANGER— To reduce the risk of electric shock:

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

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

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

SAVE THESE INSTRUCTIONS

The design and specifications are subject to change without a prior notice.



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

Do's and Don'ts

1. Always be aware of the up-and-down movement of the needle and do not turn your attention away from the machine while it is running.
2. When leaving the sewing machine unattended, the main switch of the machine must be switched off or the plug must be removed from the socket-outlet.
3. When servicing the sewing machine, or when removing covers or changing lamps, the machine must be disconnected from the power supply by removing the plug from the socket-outlet.
4. Do not place anything on the foot control, otherwise the machine will start inadvertently, or the control or motor may burn out.
5. When using your sewing machine for the first time, place a piece of waste fabric under the presser foot and run the machine without thread for a few minutes. Wipe away any oil which may have appeared.

TABLE OF CONTENTS

PREPARATION

| | |
|--|----|
| Names of Parts | 4 |
| Attaching the Waste Chip Box | 5 |
| Accessory Box | 5 |
| Standard Accessories | 5 |
| Storing the Accessories | 5 |
| Connecting the Machine to the Power Supply | 6 |
| Controlling Sewing Speed | 6 |
| How to turn the Handwheel | 7 |
| Opening and Closing the Side Cover | 7 |
| Opening and Closing the Looper Cover | 7 |
| Raising or Lowering the Presser Foot | 8 |
| Removing the Presser Foot | 8 |
| Attaching the Presser Foot | 8 |
| Adjustment of Foot Pressure | 8 |
| The Position of Thread Guide Bar | 9 |
| Attaching the Spool Holder Cap and Net | 9 |
| Accessories for Decorative Threads | 10 |
| Stitch Reference Display | 10 |
| Stitch Definition | 11 |
| Adjustment of Stitch Length | 14 |
| Adjustment of Differential Feed Ratio | 14 |
| Needle Position | 15 |
| Lower Looper Pre-Tension Setting Lever | 16 |
| Changing to Two-thread Serging | 17 |
| Adjustment of Needle Plate Setting Knob | 18 |
| To Deactivate the Upper Knife | 19 |
| To Activate the Upper Knife | 19 |
| Adjustment of Cutting Width | 20 |
| Threading the Machine | 21 |
| Threading the Lower Looper | 23 |
| Threading the Upper Looper | 26 |
| Threading the Needle on the Right | 28 |
| Threading the Needle with the Needle Threader .. | 30 |
| Threading the Needle on the Left | 31 |

TEST STITCHING

| | |
|---------------------------------------|----|
| Starting Sewing | 33 |
| Finishing Sewing | 33 |
| Sewing Continuously | 33 |
| How to Use Guide Lines | 33 |
| Securing Ends | 34 |
| Thread Tension (4 threads) | 35 |
| 3-Thread Serging | 37 |
| Thread Tension (3 threads) | 38 |
| 2-Thread Serging..... | 39 |
| Thread Tension (2 threads)..... | 40 |
| Thread Tension for Rolled Hem 3 | 42 |

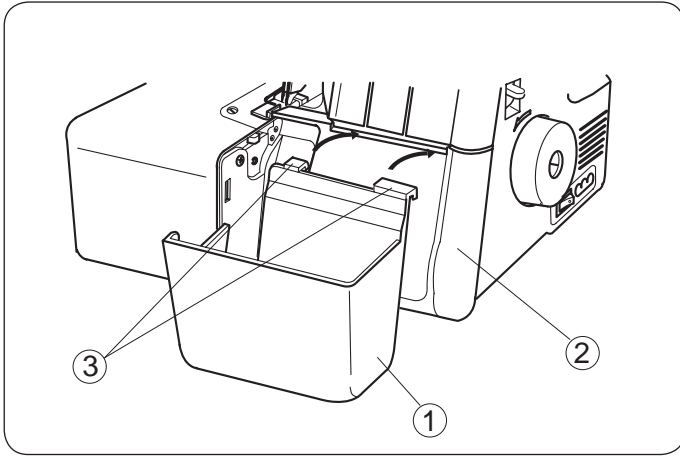
CARE OF YOUR MACHINE

| | |
|---------------------------------|----|
| Replacing the Upper Knife | 44 |
| Cleaning Upper Knife Area | 44 |
| Cleaning the Feed Dog | 45 |
| Oiling the Machine | 46 |
| Carrying the Machine | 46 |
| Troubleshooting | 47 |

PREPARATION

Names of Parts

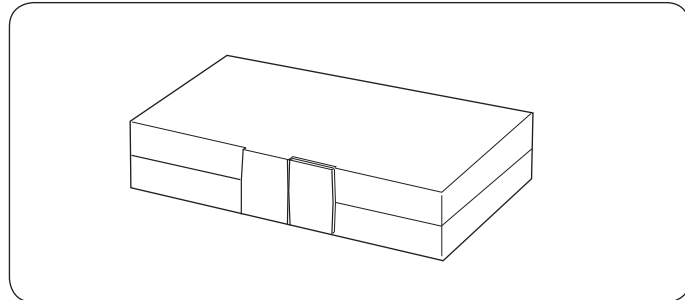
- ① Left needle thread tension dial
- ② Right needle thread tension dial
- ③ Upper looper thread tension dial
- ④ Lower looper thread tension dial
- ⑤ Side cover
- ⑥ Looper cover
- ⑦ Handwheel
- ⑧ Power switch
- ⑨ Machine socket
- ⑩ Differential feed dial
- ⑪ Stitch length dial
- ⑫ Spool stand
- ⑬ Spool holder
- ⑭ Spool pin
- ⑮ Thread guide bar
- ⑯ Thread guide
- ⑰ Pressure adjusting dial
- ⑱ Lower looper pre-tension setting lever
- ⑲ Needle plate setting knob
- ⑳ Presser foot
- ㉑ Thread cutter
- ㉒ Presser foot lifter
- ㉓ Needle plate
- ㉔ Upper knife release knob
- ㉕ Cutting width adjusting dial
- ㉖ Lower looper
- ㉗ Upper looper
- ㉘ Upper knife
- ㉙ Lower knife
- ㉚ Changeable thread guide
- ㉛ Stitch reference dial
- ㉜ Cutting width indicator window



Attaching the Waste Chip Box

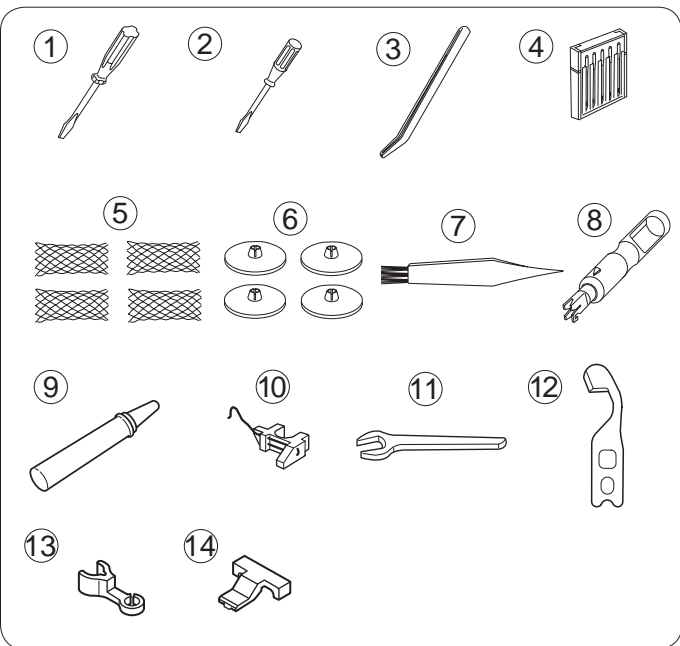
Hang the waste chip box on the looper cover with the hooks.

- ① Waste chip box
- ② Looper cover
- ③ Hook



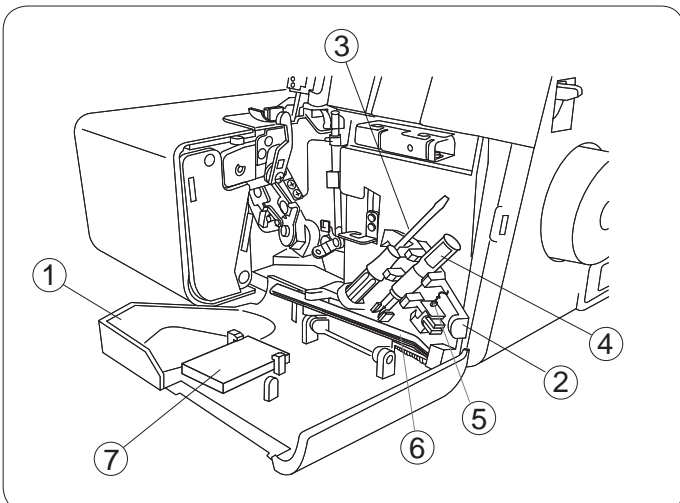
Accessory Box

The accessories can be stored in the accessory box.



Standard Accessories

- ① Screwdriver (Large)
- ② Screwdriver (Small)
- ③ Tweezers
- ④ Set of needles No.11, No.14
- ⑤ Nets
- ⑥ Spool holder caps
- ⑦ Lint brush
- ⑧ Needle threader
- ⑨ Oil
- ⑩ 2 thread converter
- ⑪ Spanner
- ⑫ Upper knife
- ⑬ Snap on thread guide
- ⑭ Tension release clip

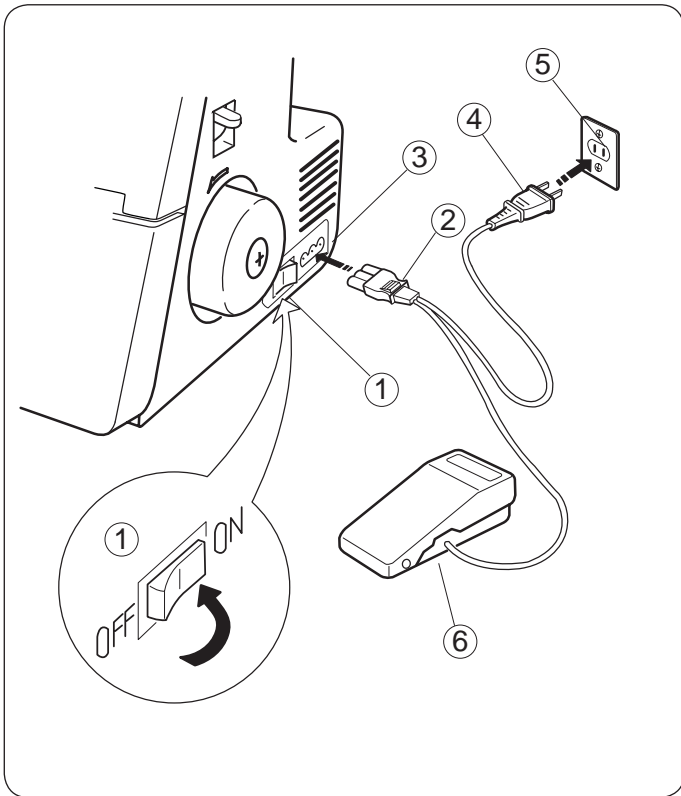


Storing the Accessories

You can store the accessories such as screwdriver, needle set etc. inside of the looper cover.

Pull up the accessory holder and store the accessories as shown.

- ① Looper cover
- ② Accessory holder
- ③ Screwdriver
- ④ Needle threader
- ⑤ 2-thread converter
- ⑥ Tweezers
- ⑦ Needle set



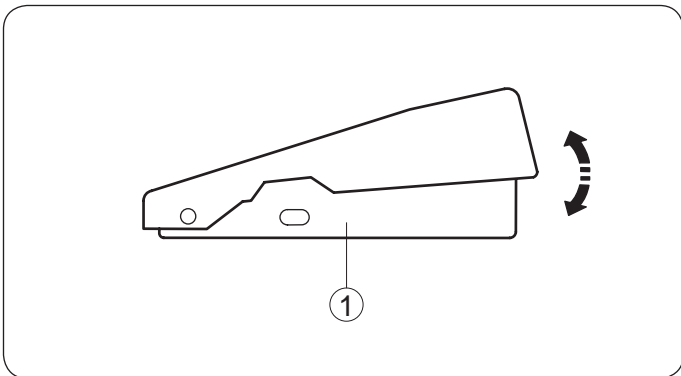
Connecting the Machine to the Power Supply

Turn off the power switch, and connect the machine plug to the machine socket.

Connect the power supply plug to your power supply.

Turn on the power switch.

- ① Power switch
- ② Machine plug
- ③ Machine socket
- ④ Power supply plug
- ⑤ Power supply
- ⑥ Speed controller



Controlling Sewing Speed

Sewing speed can be varied by the speed controller. The harder you press on the controller, the faster the machine runs.

Step on the speed controller with the presser foot up, and practice controlling the speed.

- ① Speed controller

Operating Instructions:

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

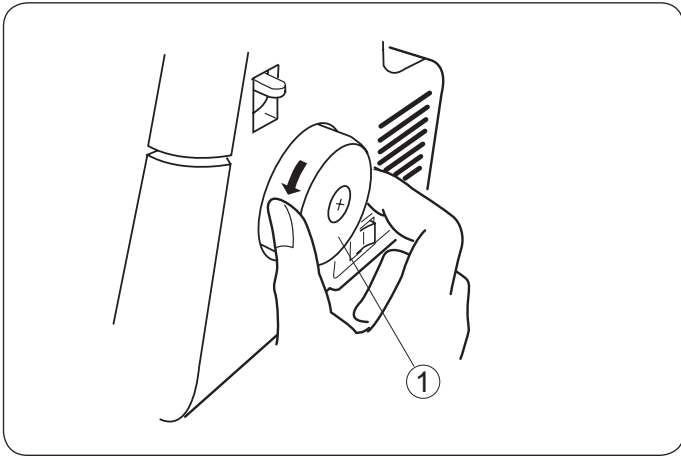
This machine is equipped with a polarized plug (one blade wider than the other):

To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way (U.S.A. only).

Foot control model YC-482J-EC is used with this machine (U.S.A only).

For your safety:

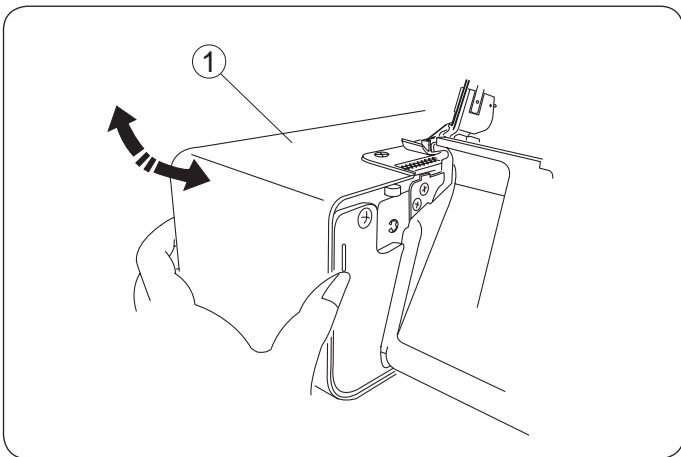
- * While in operation, always keep your eye on the sewing area, and do not touch any moving parts such as the thread take-up lever, loopers, handwheel, needle or knives.
- * Always disconnect the machine from the power supply:
 - when leaving the machine unattended.
 - when attaching or removing parts.
 - when threading or cleaning the machine.
- * Do not place anything on the speed controller, except when the machine is in use.



How to Turn the Handwheel

Always turn the handwheel toward you (Counterclockwise).

- ① Handwheel



Opening and Closing the Side Cover

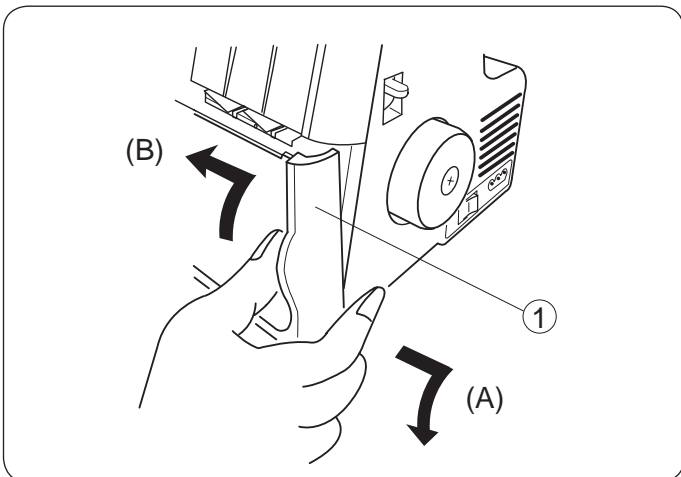
To open:

Push the side cover to the left.

To close:

Push the side cover to the right.

- ① Side cover



Opening and Closing the Looper Cover

To open: (A)

While pushing with the thumb to the right as far as it will go, pull the looper cover toward you.

To close: (B)

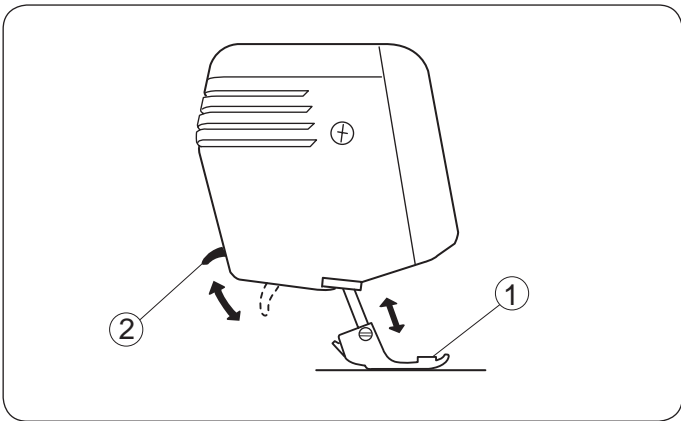
Lift the looper cover and push it against the machine. The looper cover snaps into its position automatically.

- ① Looper cover

Note:

Always close both side cover and looper cover when the machine is in use.

The machine will not operate if the looper cover is open.



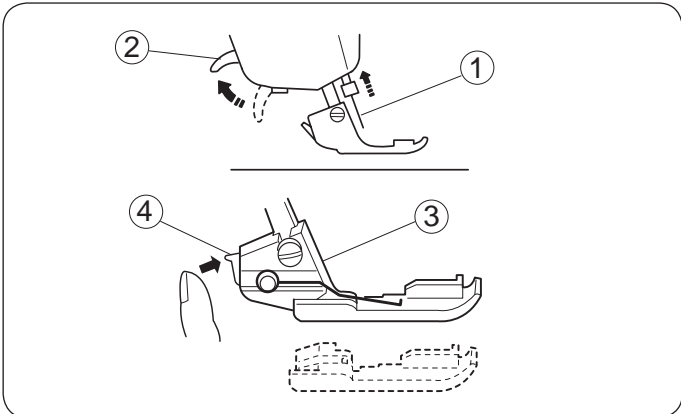
Raising or Lowering the Presser Foot

By raising or lowering the presser foot lifter, the presser foot goes up or down.

- * While in operation, keep the presser foot lowered except when threading the machine or test running without threads.

Thread tension will be released when the presser foot lifter is raised.

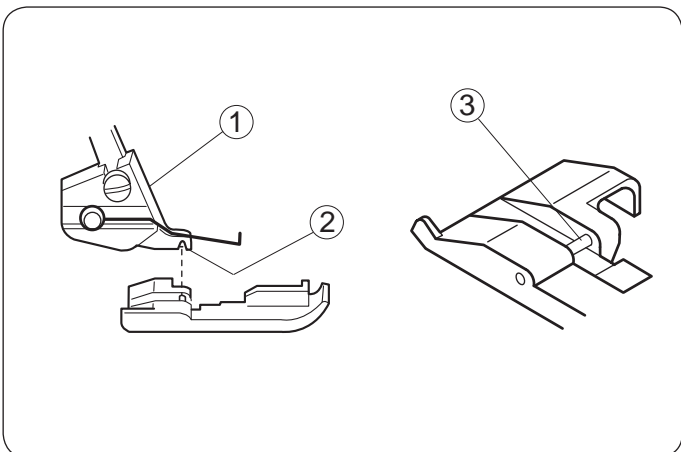
- ① Presser foot
- ② Presser foot lifter



Removing the Presser Foot

1. Turn off the power switch and unplug the machine.
2. Raise the needle and the presser foot.
3. Press the lever located on the back of the foot holder. The presser foot will drop off.

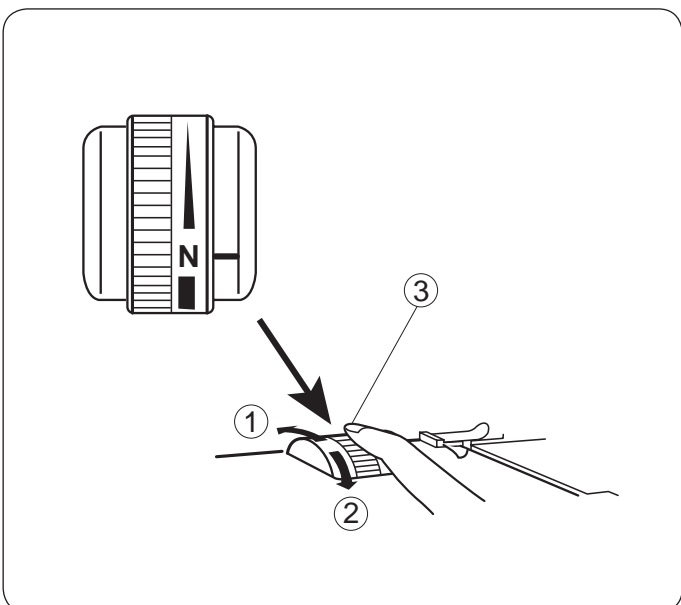
- ① Needle
- ② Presser foot lifter
- ③ Foot holder
- ④ Lever



Attaching the Presser Foot

1. Turn off the power switch and unplug the machine.
2. Place the presser foot so that the pin on the foot lies just under the groove of the foot holder.
3. Lower the foot holder to lock the foot into place.
4. Raise the presser foot lifter to check that the presser foot is secure.

- ① Foot holder
- ② Groove
- ③ Pin



Adjustment of Foot Pressure

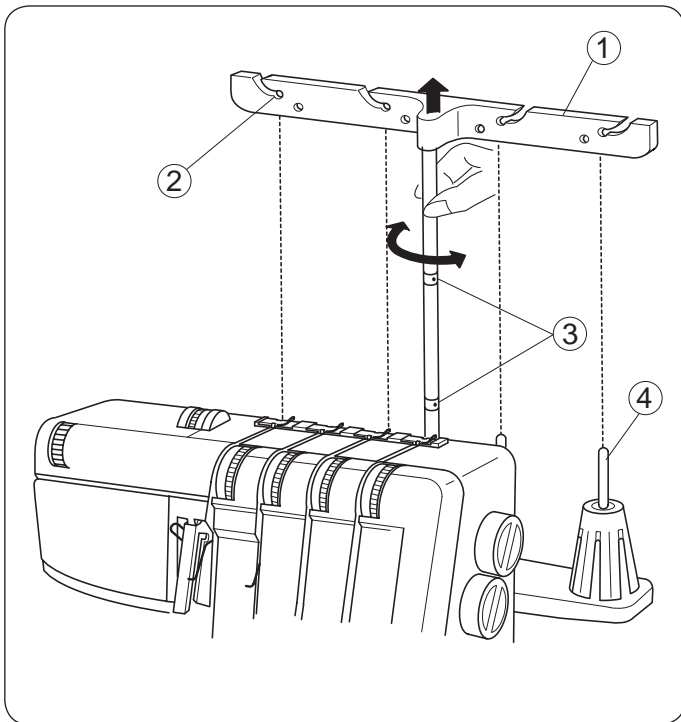
It is not necessary to adjust the presser foot's pressure for normal sewing.

When you sew heavy or lightweight fabrics, turn the adjusting dial:

- backward for heavyweight fabric.
- forward for lightweight fabric.

* For normal sewing, set the adjusting dial at "N".

- ① To increase
- ② To decrease
- ③ Adjusting dial



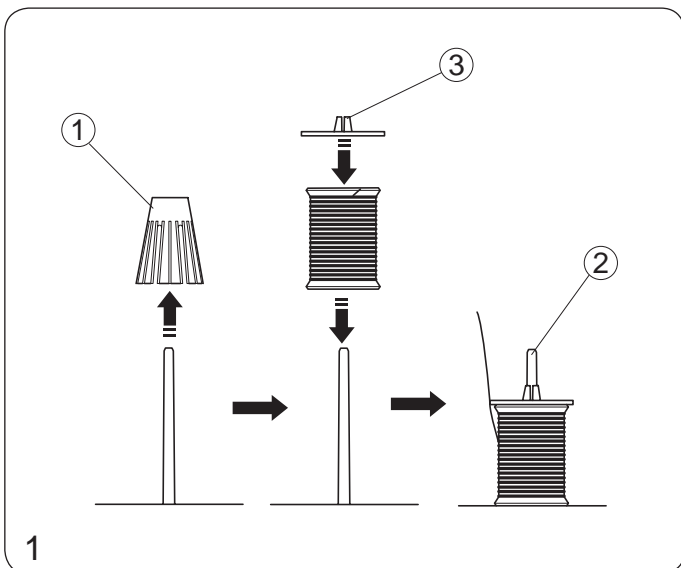
The Position of Thread Guide Bar

Pull the thread guide bar up as far as it will go.

Turn the thread guide bar so that the thread guides are right above the spool pins.

- ① Thread guide bar
- ② Thread guide
- ③ Stoppers
- ④ Spool pin

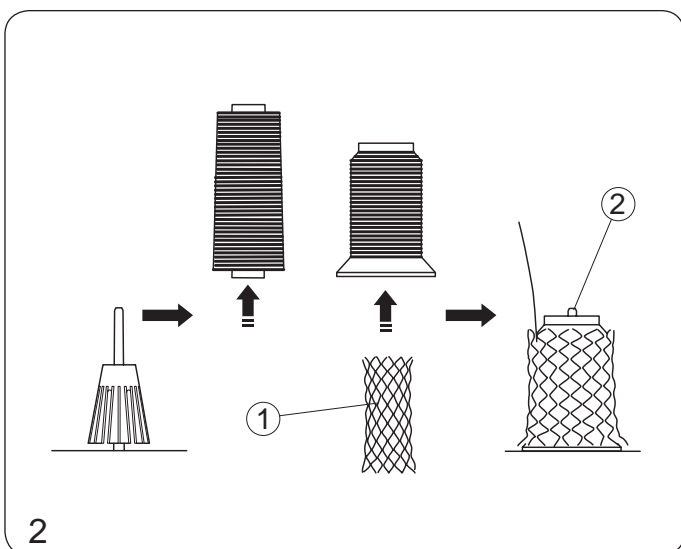
* Make sure the two stoppers on the thread guide shaft, as shown, are set in at the correct position.



Attaching the Spool Holder Cap and Net

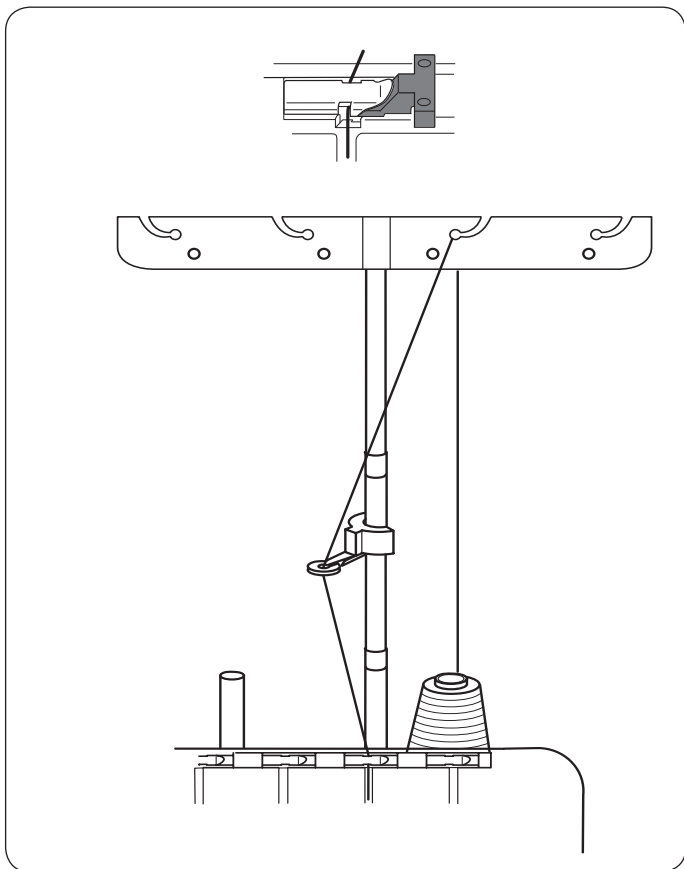
1. When you use a small thread spool, pull out the spool holder from the spool pin. Then place the spool and put the spool holder cap on top of it.

- ① Spool holder
- ② Spool pin
- ③ Spool holder cap



2. If the thread slips down from the spool during threading and/or sewing, put a net on the spool as illustrated to prevent jamming.

- ① Net
- ② Spool pin



Accessories For Decorative Threads

There are many decorative threads available for overlock use. Make sure you choose threads and yarns that smoothly pass through the looper or needle. Never use a thread that breaks easily if you pull on it. Do not use fuzzy (ex. mohair yarn) or uneven threads that can catch on thread guides.

Tension Release Clips

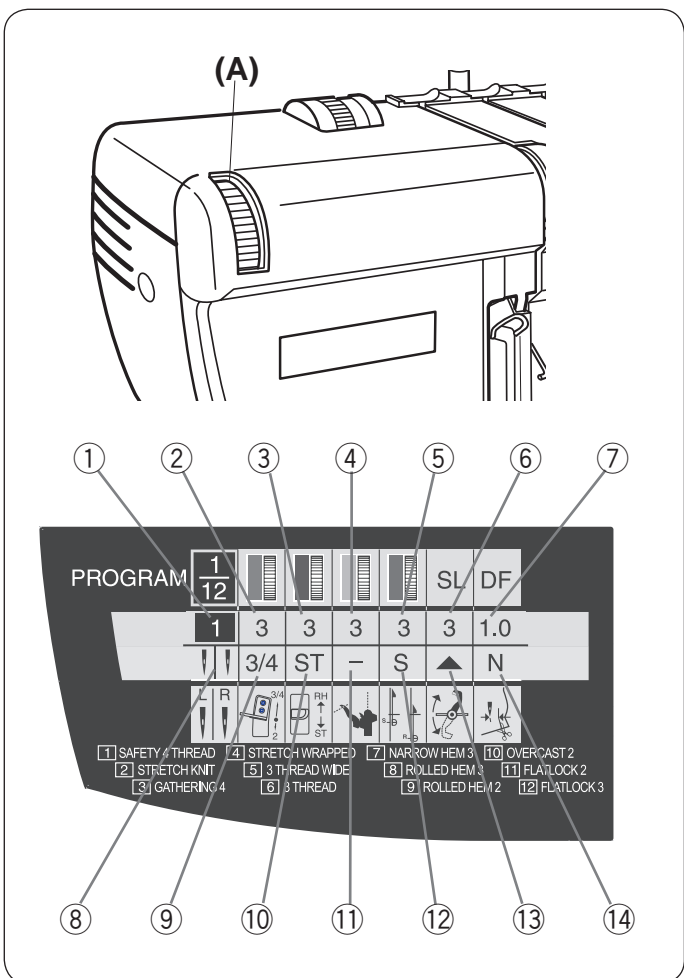
Place the tension release clip into any thread guide that is using a decorative thread.

Snap-on Thread Guide

Decorative threads may tangle. Snap the thread guide onto the thread guide pole and pass the upper looper thread as shown.

IMPORTANT:

When using decorative threads, sew at a slower and consistent speed to prevent uneven stitches.



Stitch Reference Display

The stitch reference display shows recommended tensions and other machine settings for the 12 stitches.

Turn the stitch reference dial to set the number of the desired stitch at the upper row in the display window.

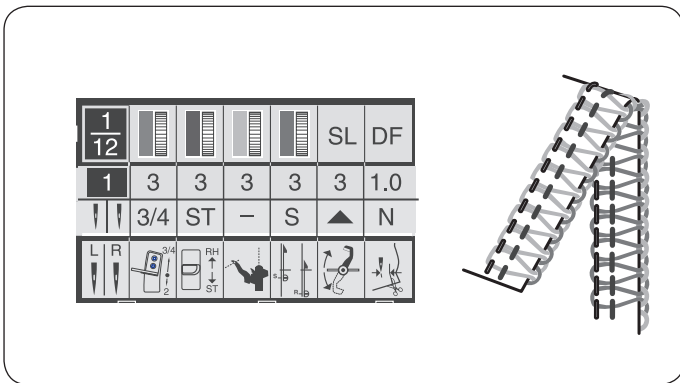
(A) Stitch reference dial

- ① Stitch number
- ② Left needle thread tension
- ③ Right needle thread tension
- ④ Upper looper thread tension
- ⑤ Lower looper thread tension
- ⑥ Stitch length (SL)
- ⑦ Differential feed ratio (DF)
- ⑧ Needle position
- ⑨ Changeable thread guide
- ⑩ Lower looper pre-tension setting lever
- ⑪ 2 thread converter
- ⑫ Needle plate setting knob
- ⑬ Upper knife
- ⑭ Cutting width

The stitch names in various languages are provided on the separate labels.

Stick a label of the desired language under the display window.

Stitch Definition



1 Safety 4 Thread

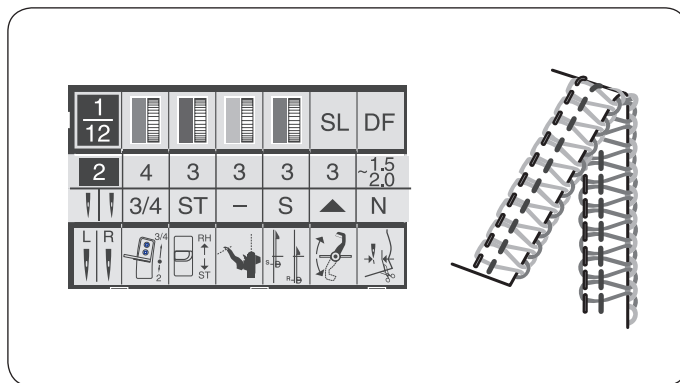
An overlock stitch that has 2 needle threads, a lower and upper looper thread is a safety 4 thread.

The stitch stretches without breaking.

The second needle thread reinforces the durability and strength of the stitch, but the stitch retains its elasticity.

Common Uses

1. Excellent for sewing knit garments.
2. Appropriate for loose fitting woven garments.

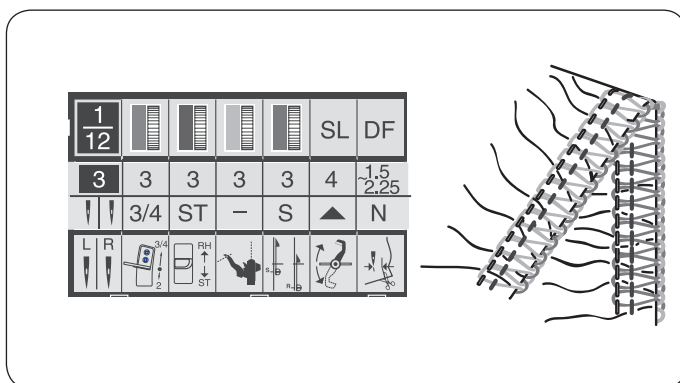


2 Stretch Knit

The same characteristics as the Safety 4 Thread, the Stretch Knit program uses the differential feed and stitch length settings to prevent knitwear from stretching while sewing.

Common Uses

1. Apply ribbing to knit necklines, cuffs or waistbands.
2. Construction method for sweater knits.

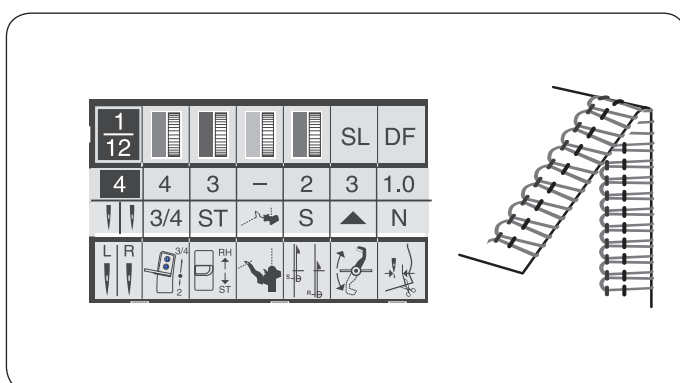


3 Gathering 4

The same characteristics as the Safety 4 Thread, the Gathering 4 program uses the differential feed, stitch length and tight needle tensions to easily and evenly gather fabrics for ruffles. This technique works best on light to medium weight fabrics.

Common Uses

1. Tiered skirts
2. Home decorating accents.

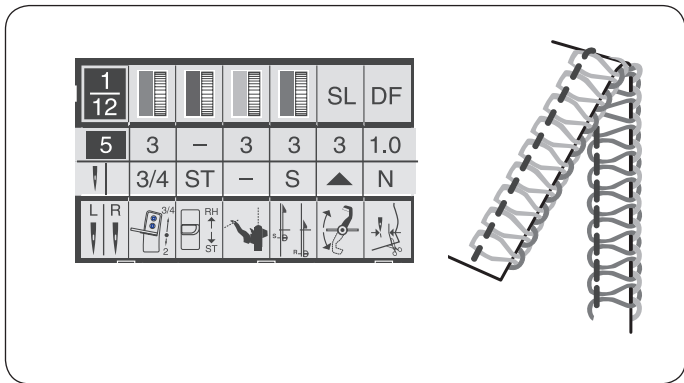


4 Stretch Wrapped

A stretch wrapped stitch uses two needles and the lower looper for maximum stretch. The second needle thread increases the stitch's durability.

Common Uses

1. Construction method for sportswear and swimwear.

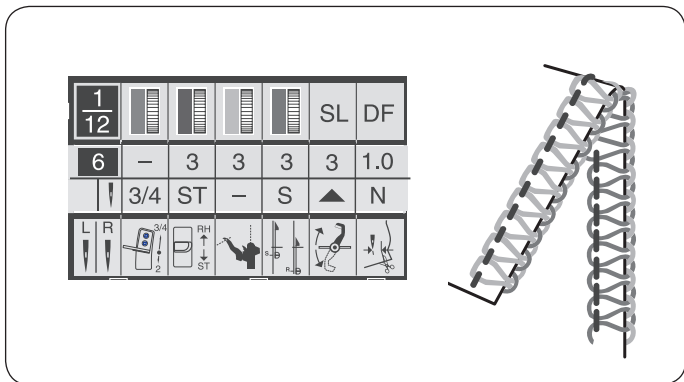


5 3 Thread Wide

Three threads lock together on the fabric edge forming a balanced stitch. The overlock stitch is suitable for medium to heavyweight fabrics.

Common Uses

1. Construction method for knitwear.
2. Edge finish on single layer of fabric.

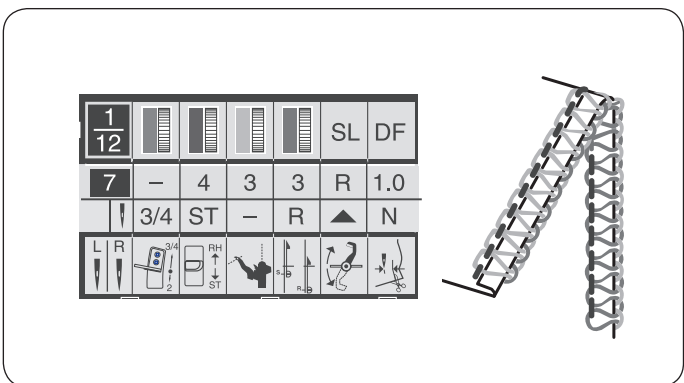


6 3 Thread

The same characteristics as the 3 Thread Wide. This narrower version is suitable for light to medium weight fabrics.

Common Uses

1. Construction method for lingerie.
2. Edge finish on single layer of fabric.

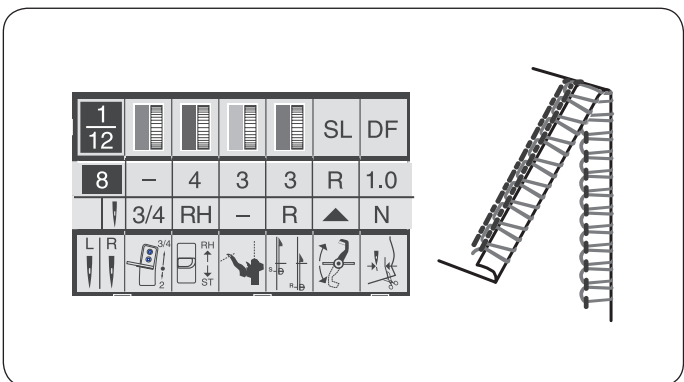


7 Narrow Hem 3

Three threads form a balanced stitch that is a great narrow edge finish.

Common Uses

1. Hemming method for scarves, napkins and ruffles.
2. Construction method for undergarments made of lightweight knit fabrics.

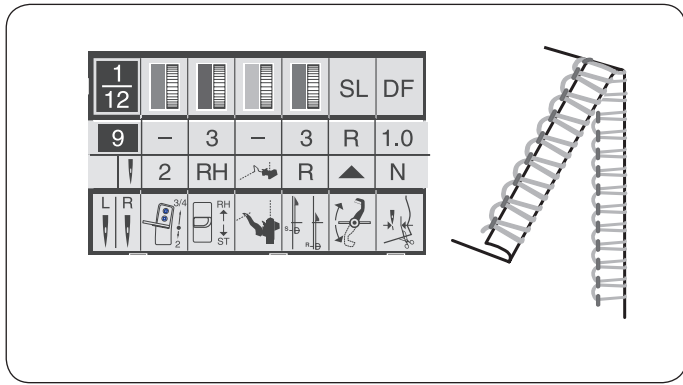


8 Rolled Hem 3

Three threads form an unbalanced stitch. When the stitch is formed, the fabric is rolled inside the stitch.

Common Uses

1. Hemming method for light to medium weight fabrics.
2. Pintucks for decoration.

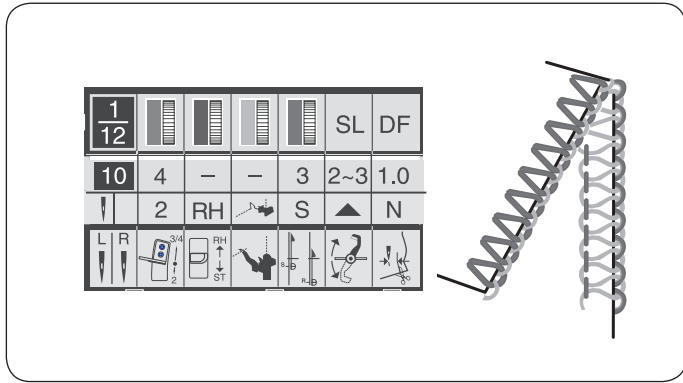


9 Rolled Hem 2

The needle and lower looper threads form a stitch that rolls the fabric before encasing the edge.

Common Uses

- Since there are only 2 threads, the result is lighter and finer than Rolled Hem 3. This is an advantage for lightweight fabrics like chiffon and bridal veiling edging.

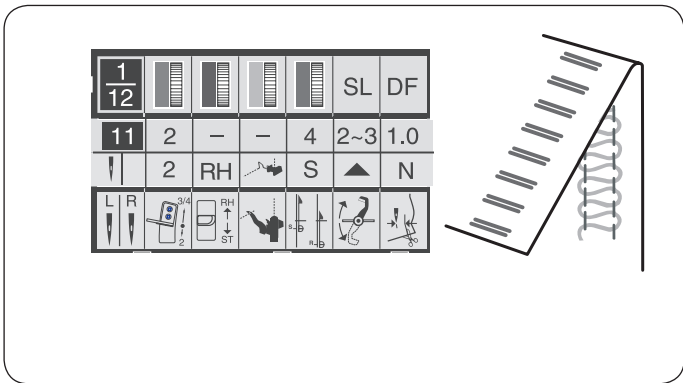


10 Overcast 2

The needle and lower looper threads form an edge finish that is lightweight and flat.

Common Uses

- Finish an open seam edge on lightweight fabrics.

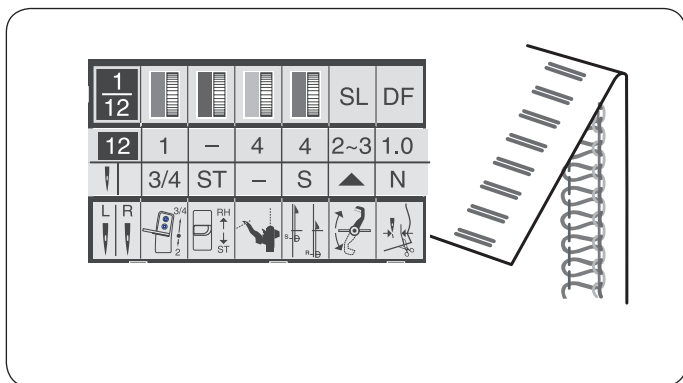


11 Flatlock 2

The needle and lower looper threads form a stitch that can be pulled flat.

Common Uses

- Construction method for undergarments.
- Hemming technique.



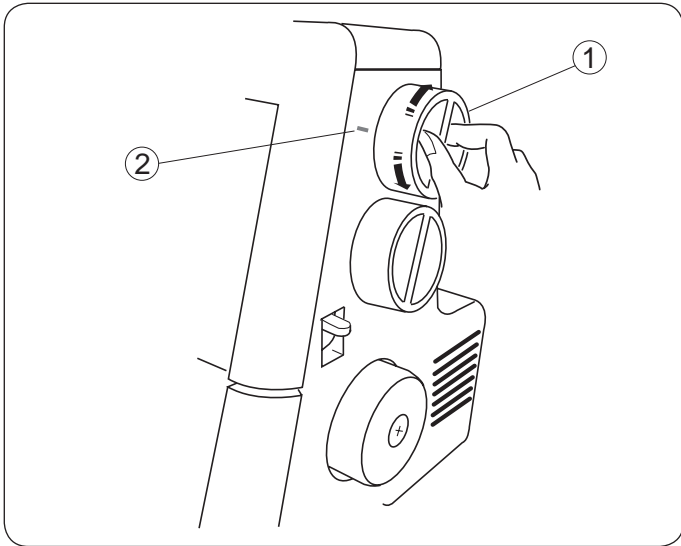
12 Flatlock 3

Three threads form an unbalanced stitch that can be pulled open into a flat seam.

The seam resembles the exposed stitch seen on ready-to-wear sweatshirts and knit sportswear.

Common Uses

- Construction method for bulky knitwear.
- Decorative accent.



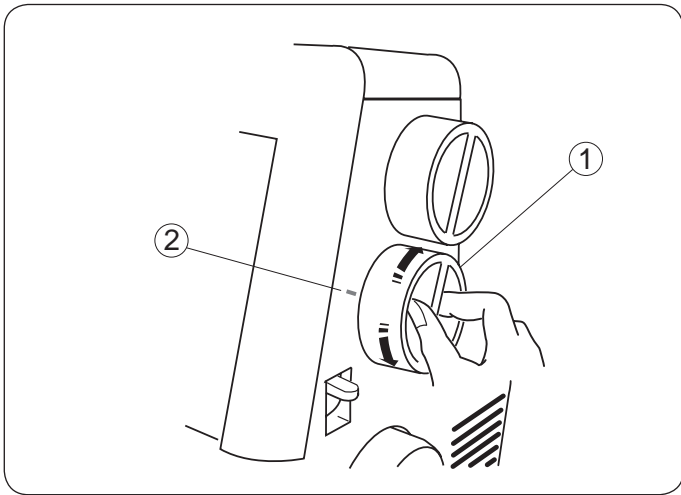
Adjustment of Stitch Length

To select stitch length, turn the dial.

The larger the number, the longer the stitch.

The stitch length can be adjusted from 1 to 5 mm. Position "R" is for rolled and narrow hemmings.

- ① Stitch length dial
- ② Setting mark



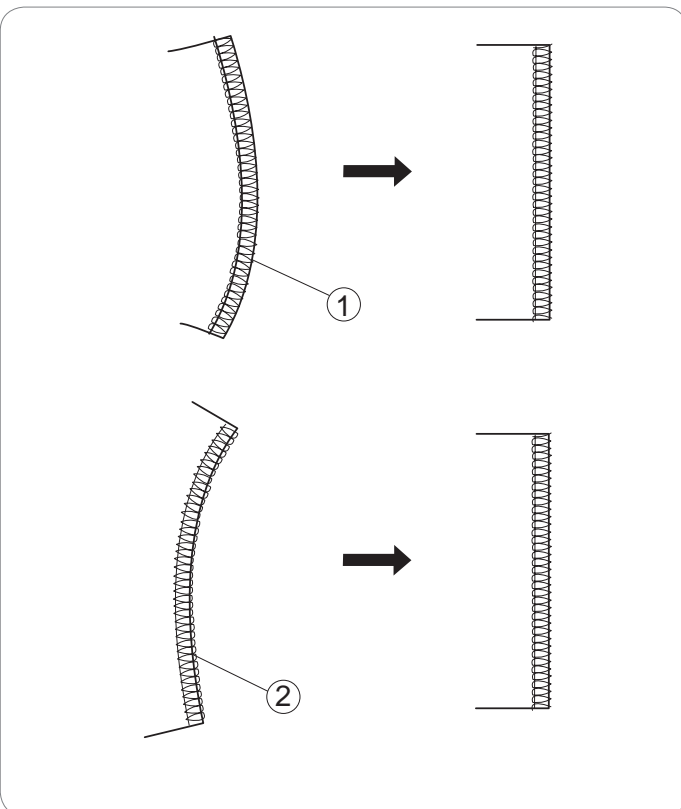
Adjustment of Differential Feed Ratio

The differential feed ratio can be altered by turning the dial.

The number on the dial indicates the ratio between the main and the sub feed motion.

1.0 indicates the neutral position.

- ① Differential feed dial
- ② Setting mark



How to Adjust

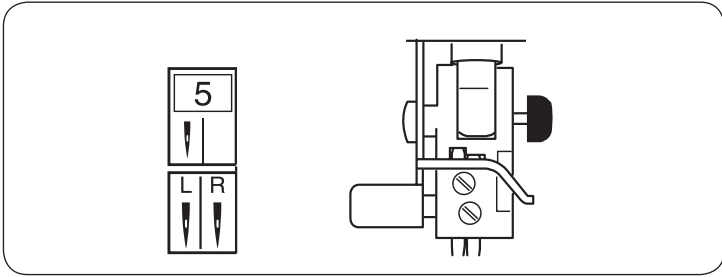
- If the sewn fabric is stretched, turn the dial counterclockwise (toward 2.2).

- If the sewn fabric is gathered, turn the dial clockwise (toward 0.5).

- ① Stretched
- ② Gathered

- * When the stitch length dial is set between 1 to 4, the maximum effective differential feed ratio is 2.25.

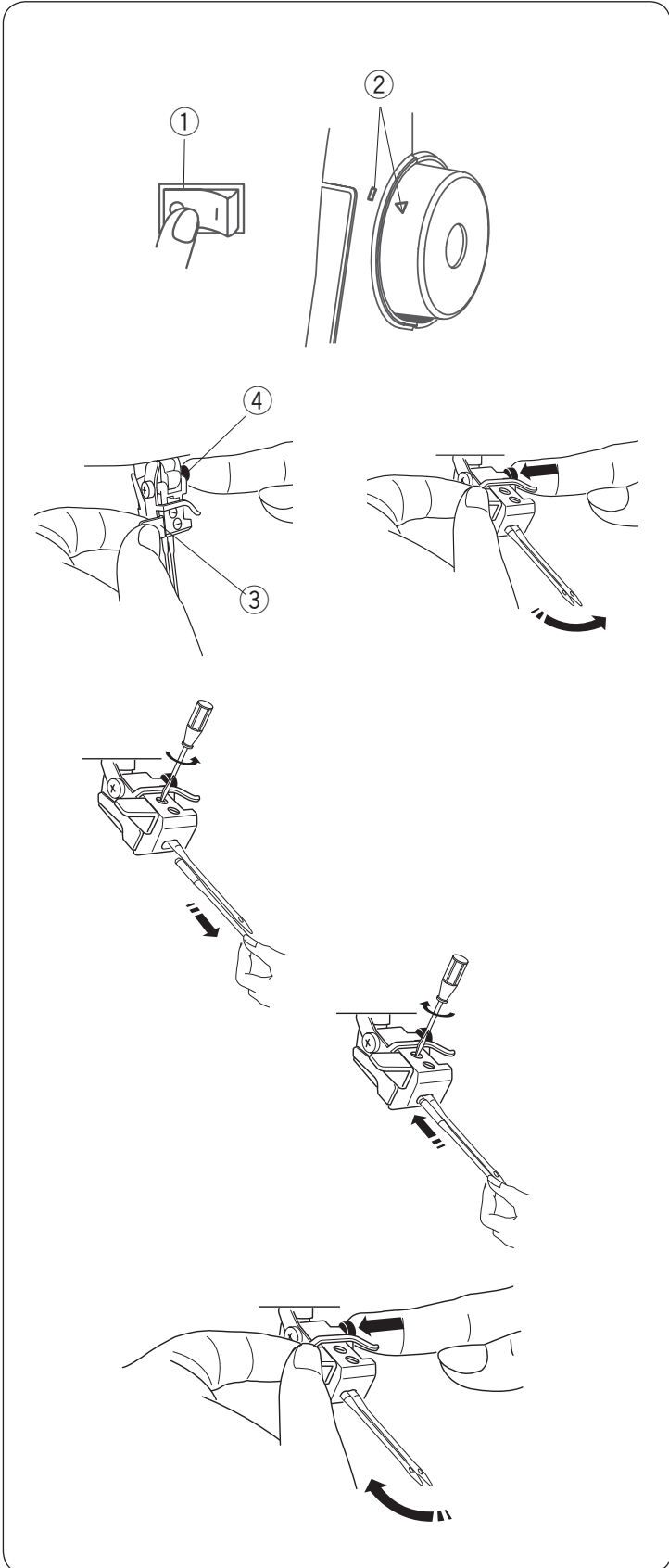
When the stitch length dial is set between 4 and 5, the maximum differential feed ratio will automatically be set between 2.25 and 1.8.



Needle Position

The needles to be used for a specific stitch are indicated by icons above the needle position marks.

Remove a needle if not to be used.



Tilting up the needle clamp

The needle clamp can be tilted up for easy needle replacement and threading.

IMPORTANT:

When removing and inserting the needles, be sure to:

- turn the power switch ① off.
- turn the handwheel toward you and match the alignment marks ②.
- lower the presser foot.

Grasp the tab and pull the needle clamp up while pushing the button.

- ③ Tab
- ④ Button

CAUTION:

Do not turn the handwheel while the needle clamp is tilted up.

Removing the needle

Loosen the setscrew with the screwdriver.

Pull the needle down to remove.

Lightly tighten the setscrew to prevent it from loosening during sewing.

Inserting the needle

Loosen the setscrew of the desired needle position. Insert the needle with the flat side to the back.

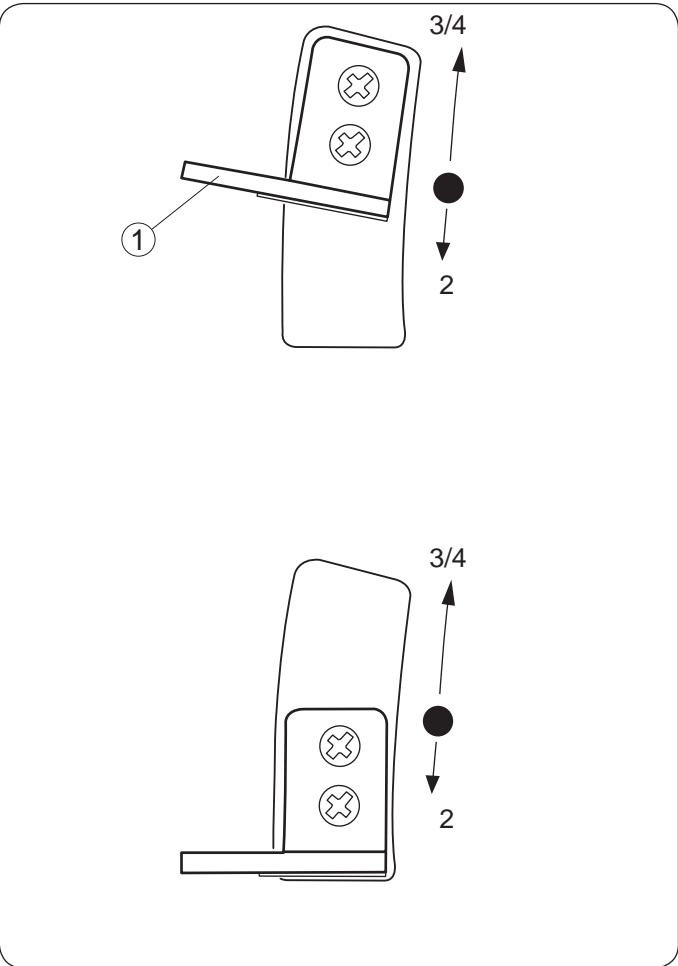
Push the needle up as far as it will go and tighten the setscrew securely.

Tilting down the needle clamp

Grasp the tab and push the needle clamp down while pushing the button.

Release the button when the needle clamp is locked in position.

Turn the handwheel slowly and check that the needle(s) does not hit or thrust the presser foot or needle plate.



Changeable Thread Guide

3/4 thread serging

Push up the guide for serging with 3 or 4 threads.

- ① Changeable thread guide

2 thread serging

Push down the guide for serging with 2 threads.

Lower Loper Pre-Tension Setting Lever

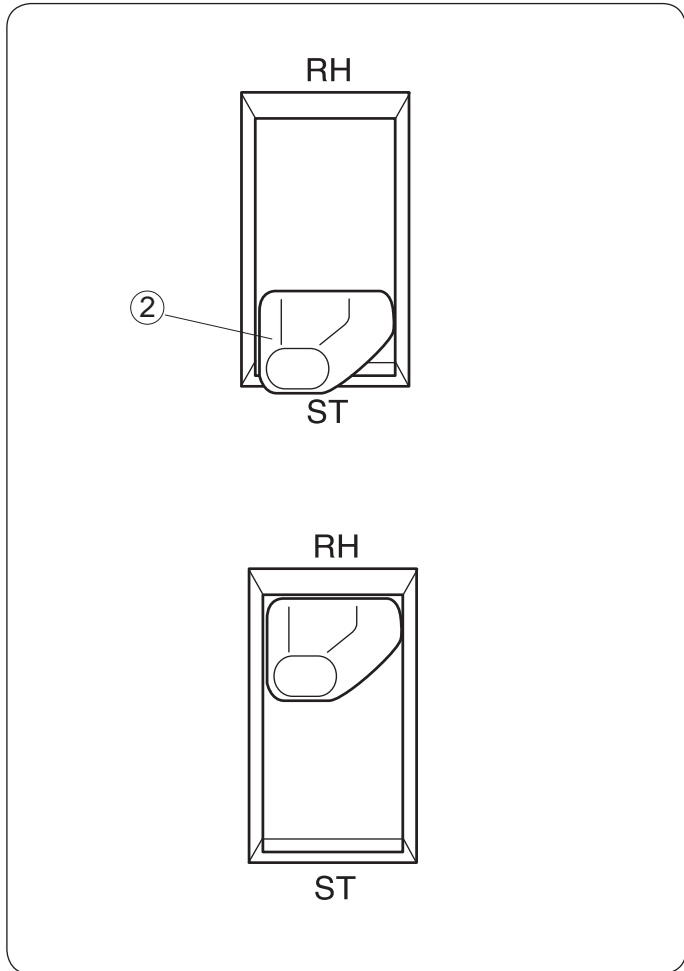
Standard serging (ST)

Push down the lever for standard serging with 2, 3 or 4 threads

- ② Lower looper pre-tension setting lever

Rolled hemming (RH)

Push up the lever for rolled hemming with 2 or 3 threads.



Changing to Two-thread Serging

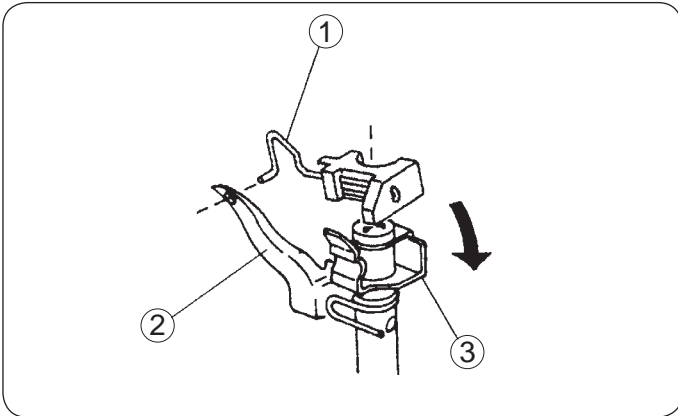
Attach the spreader to the upper looper for 2-thread sewing.

* In case of two-thread serging, use one needle thread and the lower looper thread. Remove other threads.

To attach the spreader

Put the tip of the spreader into the hole on the upper looper, and slide the spreader down into the holder.

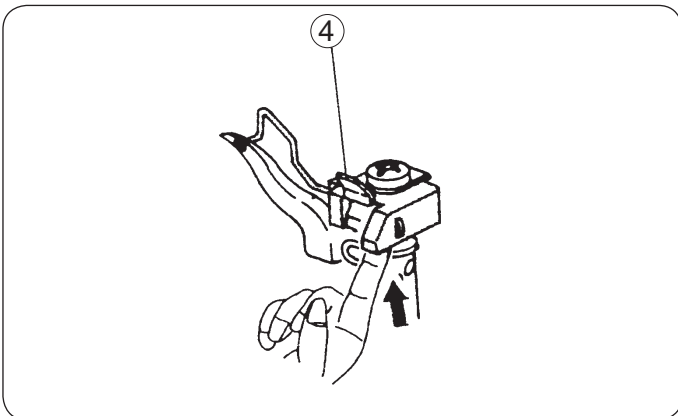
- ① Spreader
- ② Upper looper
- ③ Holder



To remove the spreader

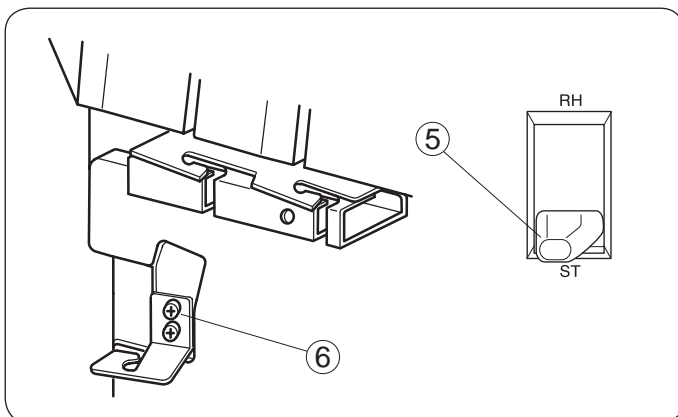
Pull tab on the holder toward you lightly. Push the bottom of the spreader up and pull it out.

- ④ Tab



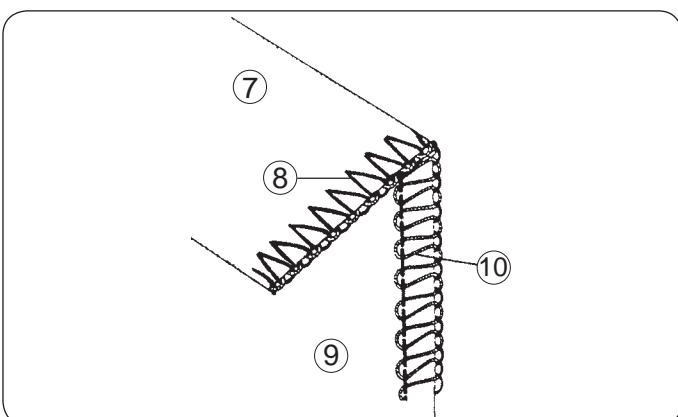
For standard two-thread serging, set the machine as illustrated.

- ⑤ Lower looper pre-tension setting lever (ST position)
- ⑥ Changeable thread guide (lower position)



Standard two-thread serging is as illustrated.

- ⑦ Wrong side of fabric
- ⑧ Needle thread
- ⑨ Right side of fabric
- ⑩ Lower looper thread



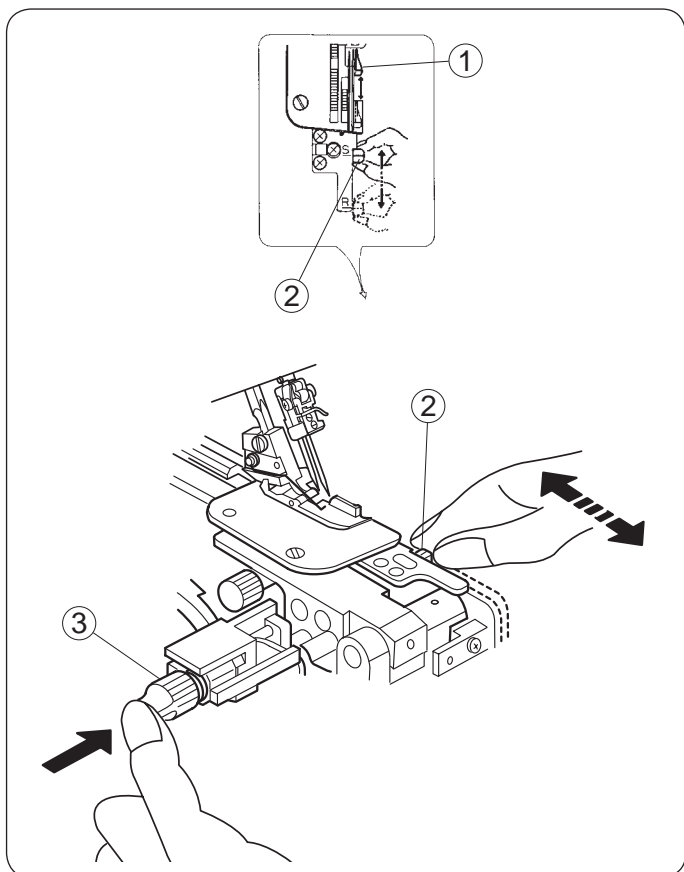
Adjustment of Needle Plate Setting Knob (Changing to Standard Serging or Rolled Hemming)

The needle plate setting knob is connected with the chaining finger.

The chaining finger will slide back and forth when you set the needle plate setting knob at "S" or "R".

1. Turn off the power switch and unplug the machine.
2. Open the looper cover and side cover. Deactivate the upper knife (refer to page 19).
3. Push the cutting width adjusting dial to the right as far as it will go, then, move the needle plate setting knob to the guide line of S (for Standard Serging) or R (for Rolled Hemming). Release the cutting width adjusting dial to the left gently.
4. Activate the upper knife (refer to page 19). Close the looper cover and side cover.

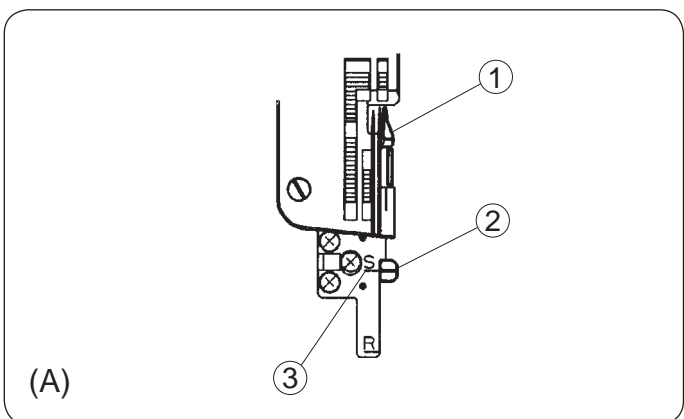
- ① Chaining finger
- ② Needle plate setting knob
- ③ Cutting width adjusting dial



(A) Standard Serging

* The chaining finger is located beside the needle plate as shown in diagram (A) for guiding the flat edge of the fabric for overlock sewing.

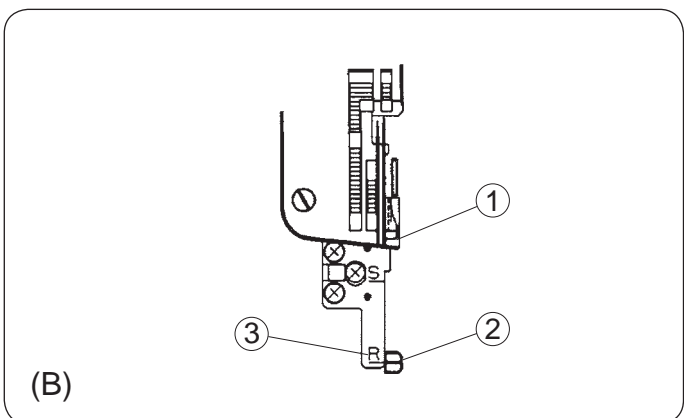
- ① Chaining finger
- ② Needle plate setting knob
- ③ Guide line S

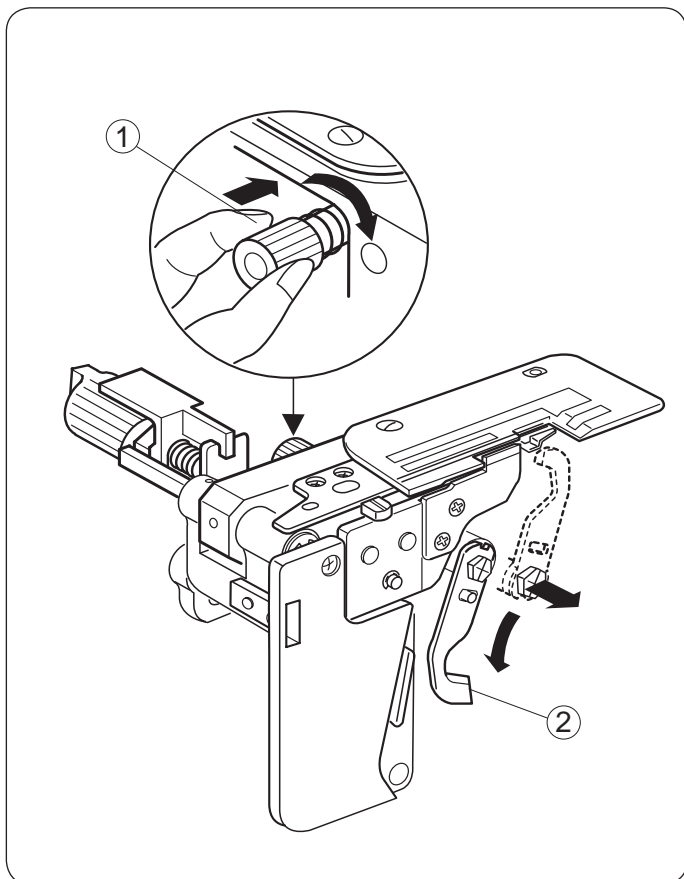


(B) Rolled Hemming

* Pull the needle plate setting knob toward you from "S" to "R" position, so the edge of the fabric will be rolled for hemming, picot edging and narrow hemming sewing.

- ① Chaining finger
- ② Needle plate setting knob
- ③ Guide line R

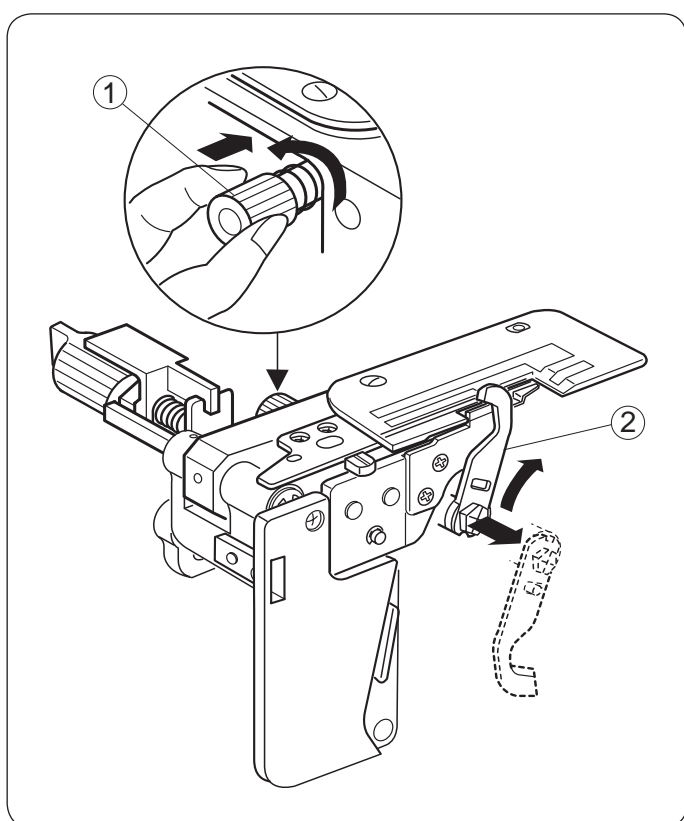




To Deactivate the Upper Knife

1. Turn off the power switch and unplug the machine.
2. Open the looper cover and side cover.
3. Turn the upper knife release knob toward you while pushing it to the right, then guide the hole on the upper knife to the pin to lock the upper knife in the down position.
4. Turn the handwheel to check if the upper knife is deactivated.
5. Close the looper cover and side cover.

- ① Upper knife release knob
- ② Upper Knife



To Activate the Upper Knife

1. Turn off the power switch and unplug the machine.
2. Open the looper cover and side cover.
3. Turn the upper knife release knob away from you while pushing it to the right, then guide the groove on the upper knife to the pin to lock the upper knife in the up position.
4. Turn the handwheel to check if the upper knife is activated.
5. Close the looper cover and side cover.

- ① Upper knife release knob
- ② Upper knife

Adjustment of Cutting Width

When cutting width is too narrow or too wide against seam width, adjust it as follows.

Turn the cutting width adjusting dial to move the lower knife to the desired position.

* The lower knife position can be set at 3–5 mm from the right needle position.

- ① Cutting width adjusting dial
- ② Lower knife
- ③ Guide line on the needle plate

Open the side cover to fully expose the cutting width adjusting dial and deactivate the upper knife to more easily turn the dial for wider stitch.

NOTE:

For general sewing, align the outer edge of the lower knife with the guide line on the needle plate and the indicator ④ is set at “N”.

- ④ Indicator

Open the side cover to fully expose the cutting width adjusting dial and deactivate the upper knife to more easily turn the dial for wider stitch.

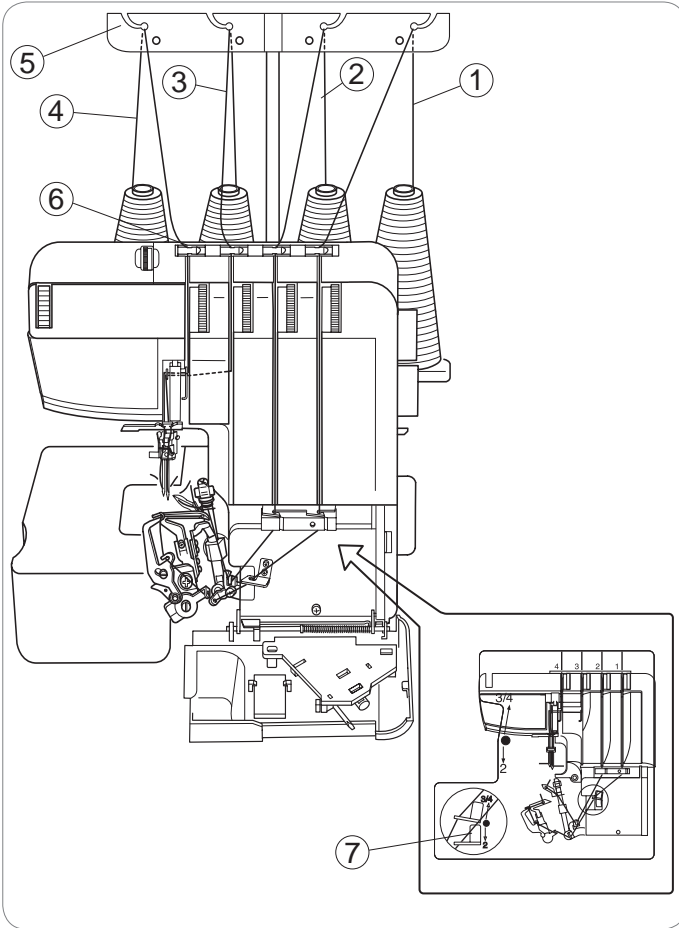
- (A) When cutting width is too narrow.
Turn the cutting width adjusting dial clockwise.
Lower knife will move to right.

- (B) When cutting width is too wide.
Turn the cutting width adjusting dial counterclockwise.
Lower knife will move to left.

Test stitch to check the cutting width.

Threading the Machine

The illustration shows the machine threaded with four threads.

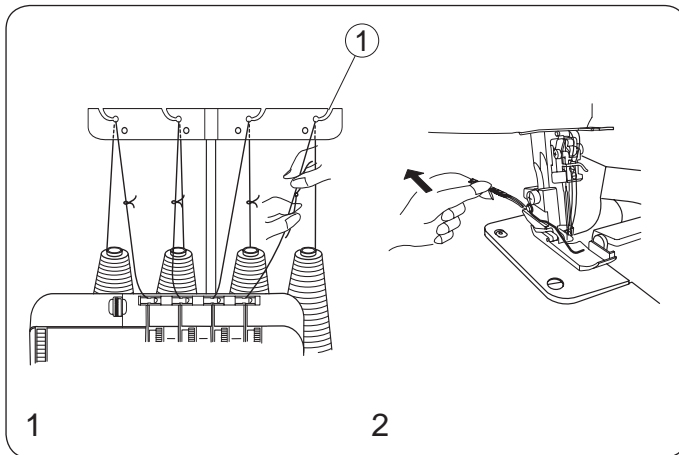


- ① Lower looper thread
- ② Upper looper thread
- ③ Right needle thread
- ④ Left needle thread
- ⑤ Thread guide
- ⑥ Thread guide plate
- ⑦ Threading chart

The machine is pre-threaded to make threading easier.

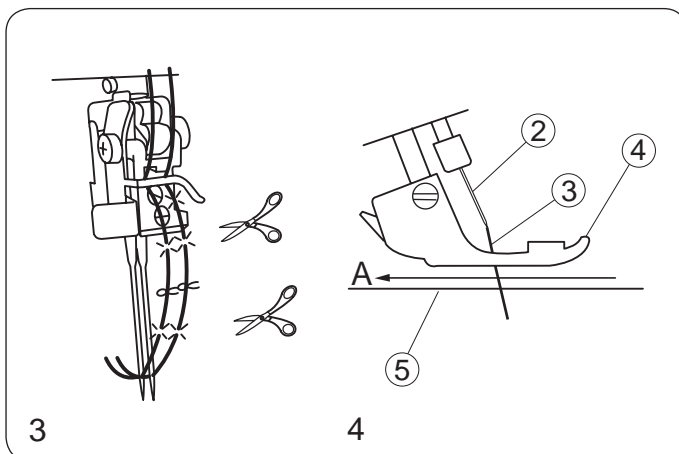
Tie the end of a new thread to one of the pre-set threads, and pull it to draw the new thread through the machine, following the steps below.

* Turn off the power switch before threading the machine.



1. Pull the threads from the spools and draw them through the thread guides, then tie the thread ends together.
2. Raise the presser foot, draw the threads until the knots are coming out from under the back of the presser foot.
3. However, stop drawing the needle threads when the knots reach just before the needle eye. Cut the knots and thread the needle eye.
4. Before starting sewing, clear the needle threads from under the presser foot to make sure they are not caught below the needle plate.

(Draw the needle threads in the direction A.)
Then pull out the threads to the back approximately 10 cm (4") away from the presser foot. Lower the presser foot, and you are now ready to sew.



- ① Thread guide
- ② Needle
- ③ Needle thread
- ④ Presser foot
- ⑤ Needle plate

- For re-threading the machine easily, start from the lower looper, upper looper, right needle and left needle threads.

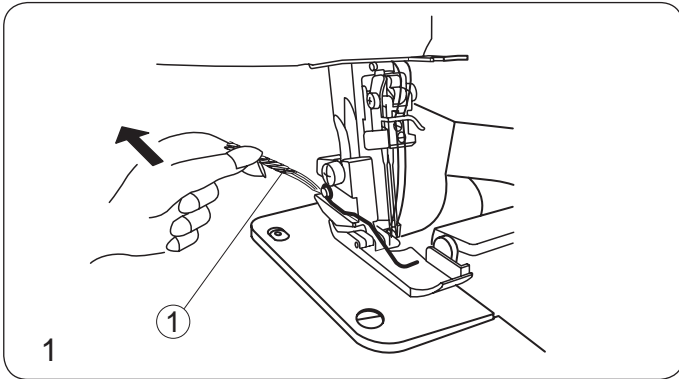
Make sure to clear the needle threads out from below the needle plate and draw them to the back and under the presser foot about 10 cm (4").

- If one of the threads is broken, follow the re-threading procedure as follows:

* Turn off the power switch and unplug the machine.

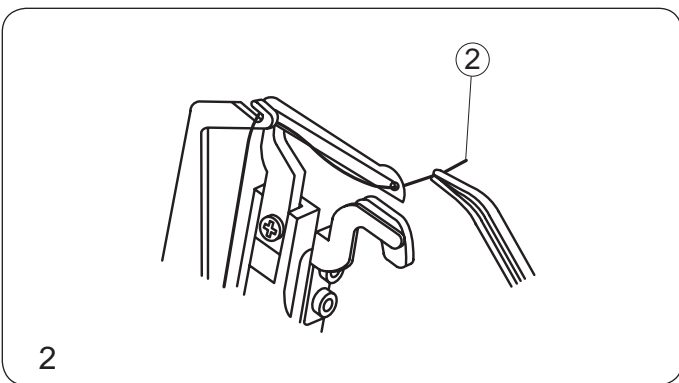
1. Raise the presser foot and pull the thread chain out to the back of the presser foot, and cut the chain to separate each of the threads.

① Cut off the tangled threads.



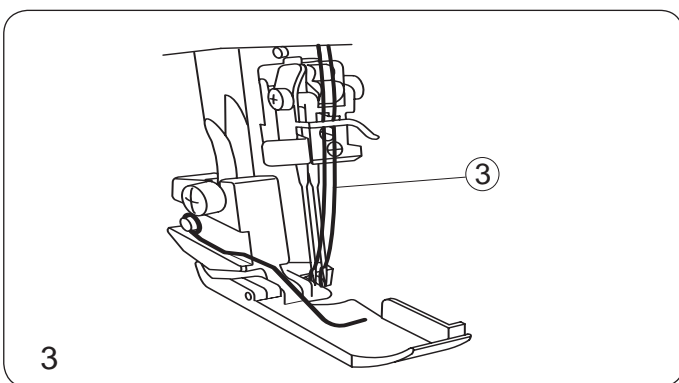
2. Re-thread the thread which had been broken. Example: Re-thread the lower looper thread.

② Lower looper thread



3. Turn the handwheel toward you until the needle comes to its highest position.

③ Needle thread



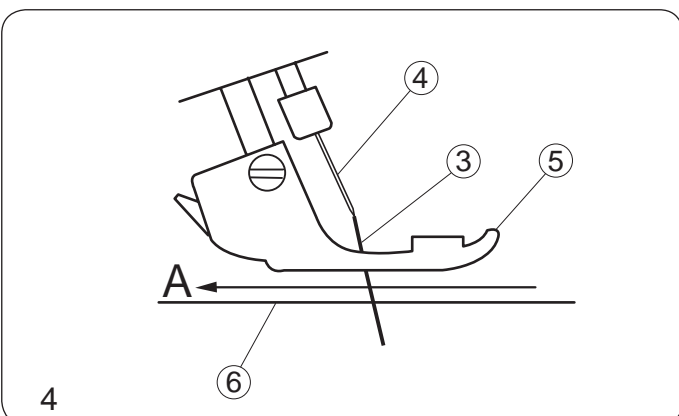
4. Pull the threads from under the presser foot with tweezers and pull out the needle threads above the needle plate. Draw out 10 cm (4") away from the presser foot. (Draw the needle thread in the direction A)

③ Needle thread

④ Needle

⑤ Presser foot

⑥ Needle plate



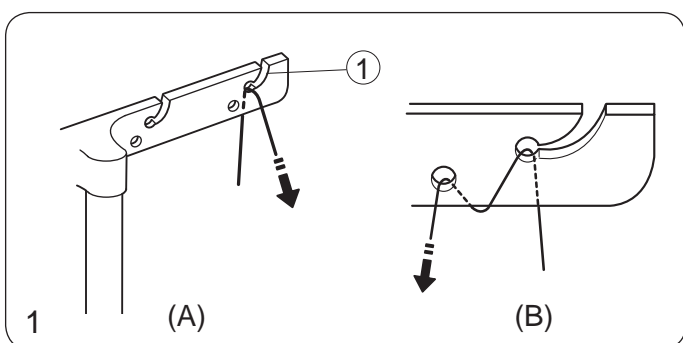
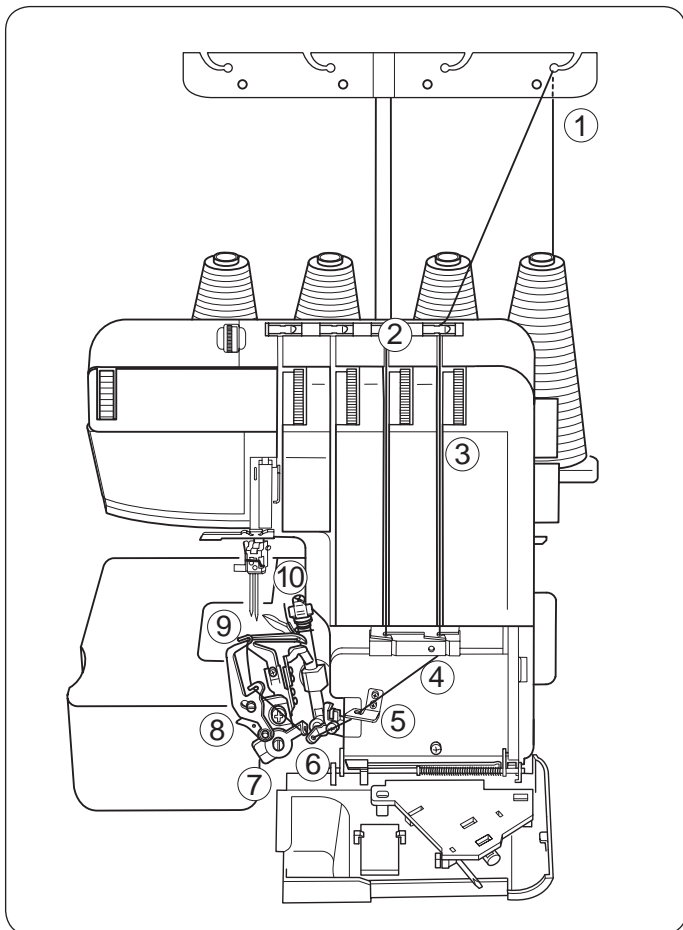
Threading the Lower Looper

Open the looper cover.

Place the spool of thread on the right side spool pin.

* The points to thread for lower looper are marked in green.

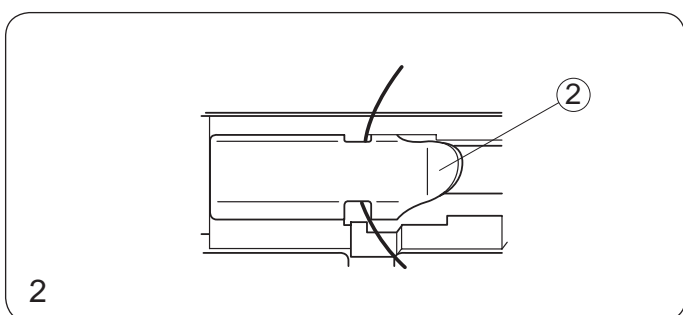
* A convenient threading chart is placed on the machine body inside the looper cover.



1. Draw the thread through the right side thread guide from back to front: A

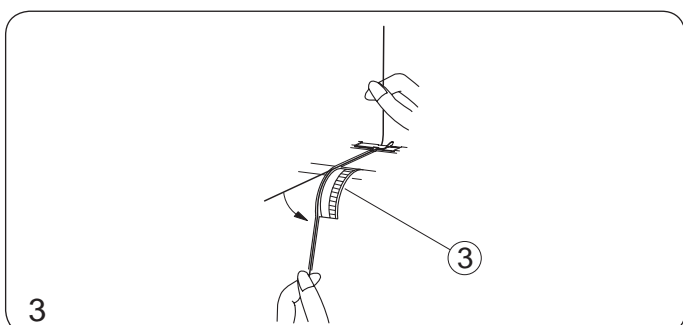
* If the thread is coming out from the thread guide groove, pass the thread through the thread guide hole again as shown: B

① Thread guide



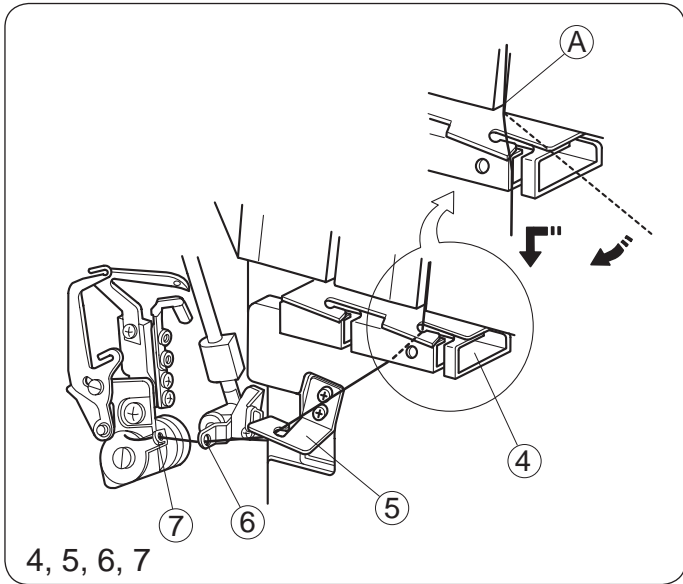
2. After threading the thread guide bar, slip the thread into the first guide on the machine as shown.

② Thread guide

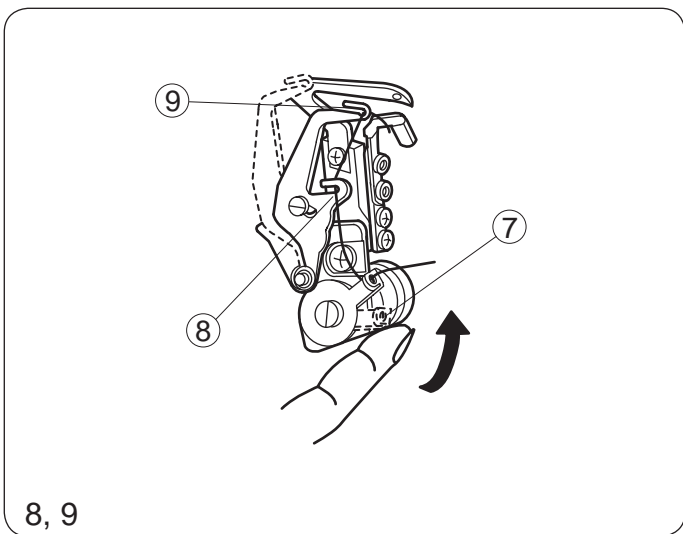


3. Hold the thread at both ends and tug gently to ensure the thread is correctly inserted between the tension discs. (If the presser foot lifter is raised, the thread easily inserts between the tension discs.)

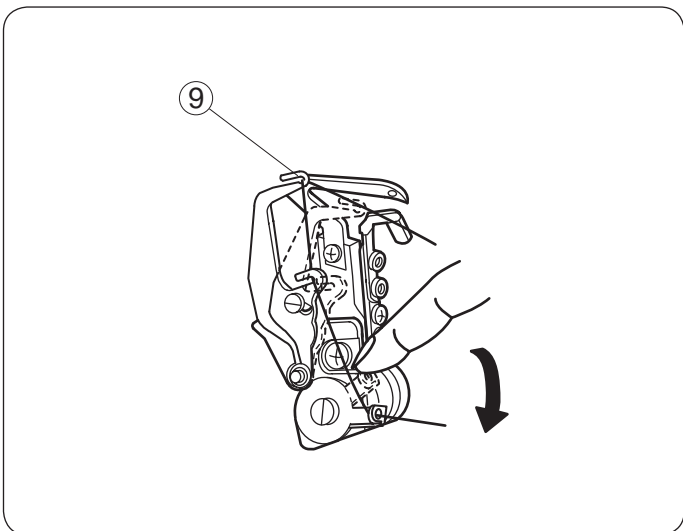
③ Lower looper thread tension dial



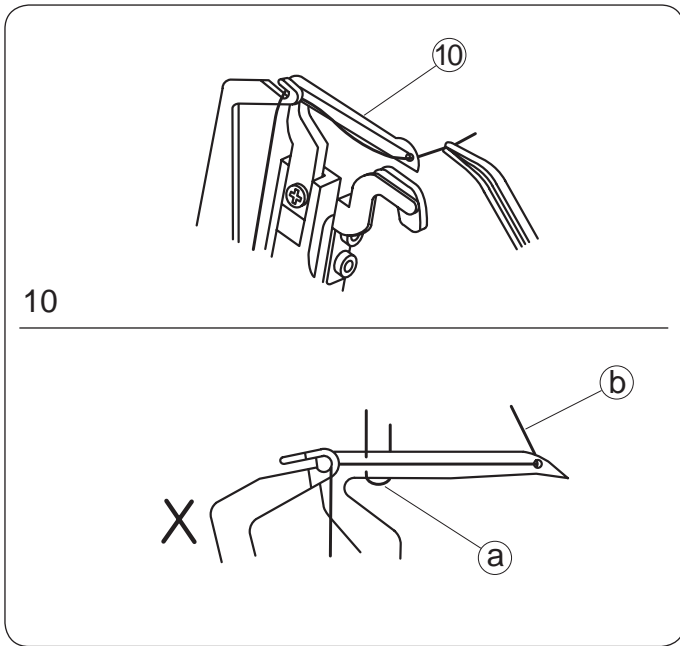
4. Hook the thread on the corner (A), and then pass the thread through the looper thread guide.
 5. Pass the thread through the changeable thread guide.
 6. Pass the thread through the looper thread take-up lever (lower).
 7. Pass the thread through the lower looper thread guide (1).
- ④ Looper thread guide
 - ⑤ Changeable thread guide.
 - ⑥ Looper thread take-up lever (lower)
 - ⑦ Lower looper thread guide (1)



8. Turn the handwheel toward you to move the lower looper to the right side.
Then lift up the lower looper thread guide (1).
When you do this, the lower looper thread guide (2) and (3) are moved to the right for easy threading.
 9. Pass the thread through the lower looper thread guide (3).
- ⑧ Lower looper thread guide (2)
 - ⑨ Lower looper thread guide (3)



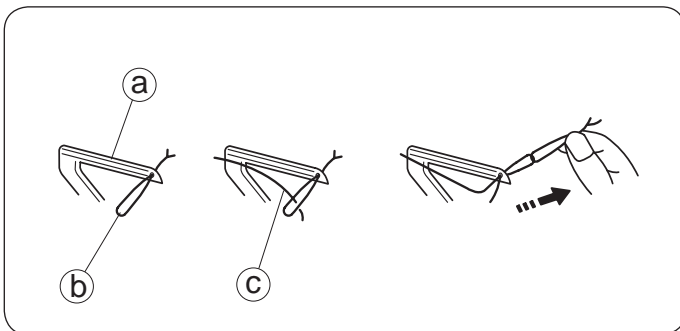
- Holding the end of the thread, push the lower looper thread guide (1) down with your other hand to return it to its original position.
Lower looper thread guides (2) and (3) will return to their original position automatically.
- * You can return the lower looper thread guide (1), (2) and (3) to their original position automatically by turning the handwheel counterclockwise.



10. Move the lower looper to its rightmost position by turning the handwheel, and draw the thread with a pair of tweezers through the hole on the lower looper 10 cm (4") or more.

* Make sure the needle threads are not tangled on the lower looper.

- ⑩ Lower looper
- Ⓐ Needle thread
- Ⓑ Lower looper thread

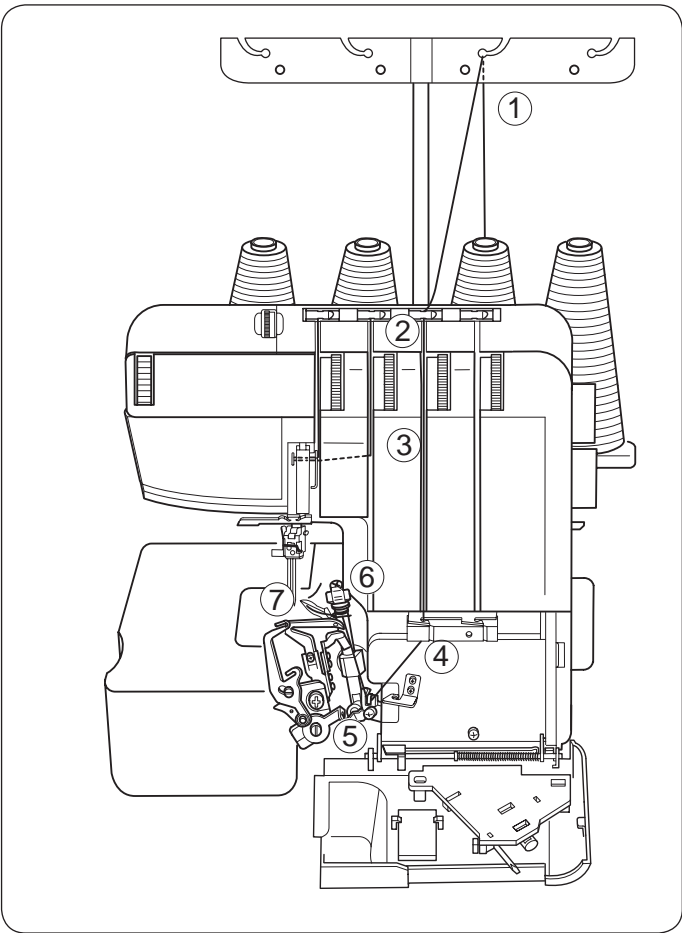


NOTE: How to thread woolly nylon/polyester thread.

* The illustration at left shows one of the easiest ways to pass woolly nylon/polyester thread through the lower looper.

* Use the same method with the upper looper.

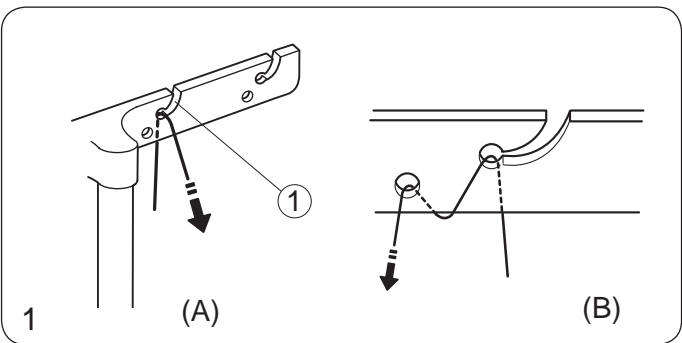
- Ⓐ Lower looper
- Ⓑ Ordinary thread
- Ⓒ Woolly nylon/polyester thread



Threading the Upper Looper

Place a spool of thread on the spool pin second from the right.

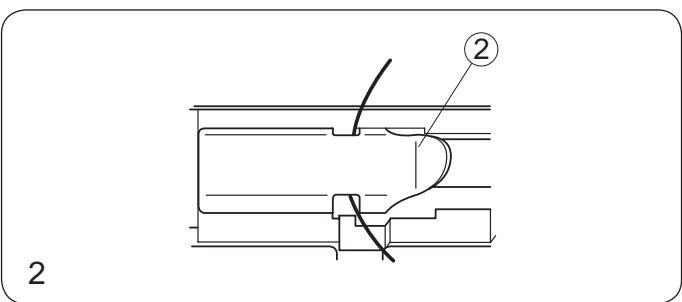
- * The points to thread for upper looper are marked in yellow.
- * A convenient threading chart is placed on the machine body inside the looper cover.



1. Draw the thread through the thread guide second from the right from back to front: A

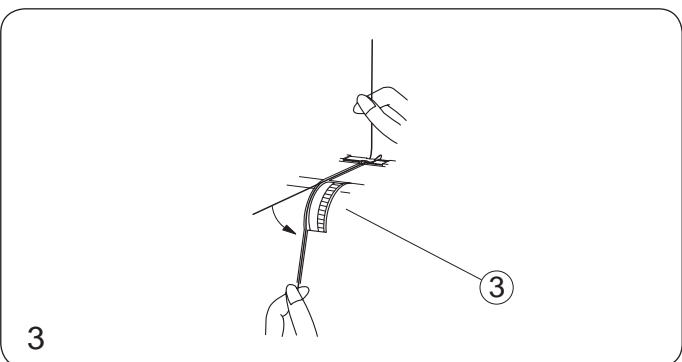
- * If the thread is coming out from the thread guide groove, pass the thread through the thread guide hole again as shown: B

① Thread guide



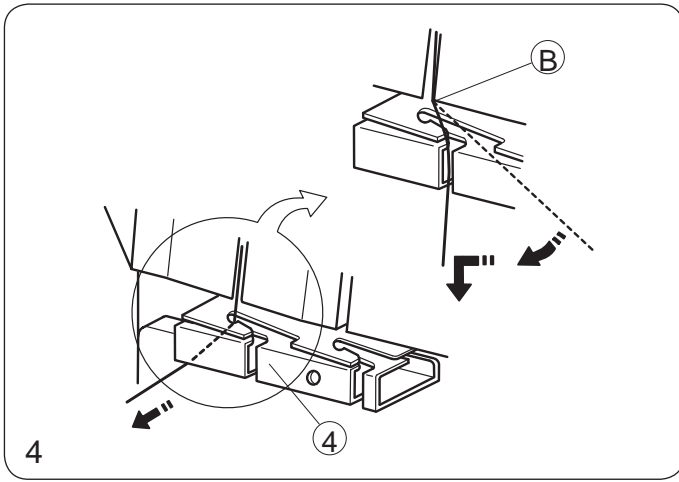
2. After threading the thread guide bar, slip the thread into the first guide on the machine as shown.

② Thread guide



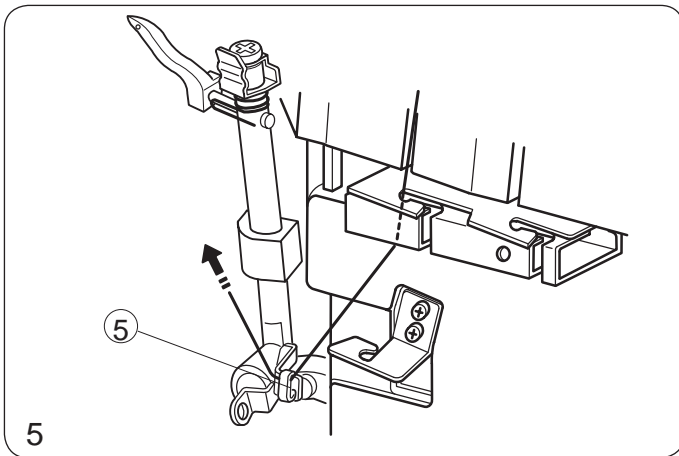
3. Hold the thread at both ends and tug gently to ensure the thread is correctly inserted between the tension discs. (If the presser foot lifter is raised, the thread easily inserts between the tension discs.)

③ Upper looper thread tension dial



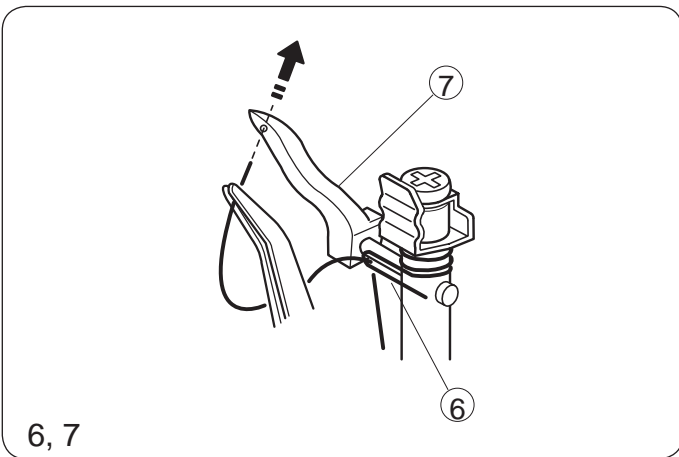
4. Hook the thread on the corner **B**, and then pass the thread through the looper thread guide.

④ Looper thread guide



5. Pass the thread through the looper thread take-up lever (upper).

⑤ Looper thread take-up lever (upper)

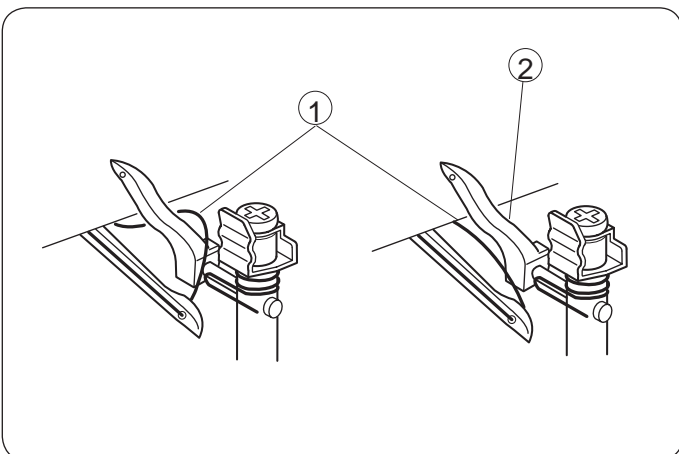


6. Pass the thread through upper looper thread guide.

7. Holding the end of the thread with a pair of tweezers, pass it through the hole on the upper looper. Pull 10 cm (4") or more of thread through the hole.

⑥ Upper looper thread guide

⑦ Upper looper



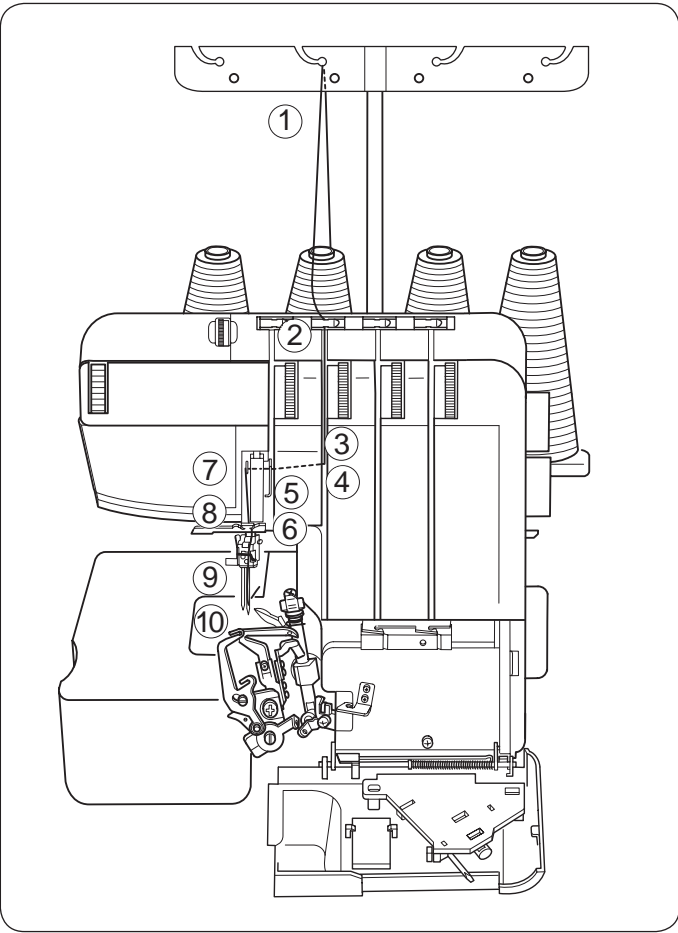
• **How to thread only the Upper Looper**

Turn the handwheel toward you until the upper looper comes to the middle point of its travel, and unhook the thread of the lower looper from the upper looper. Thread the upper looper.

Lower looper thread

① Upper looper

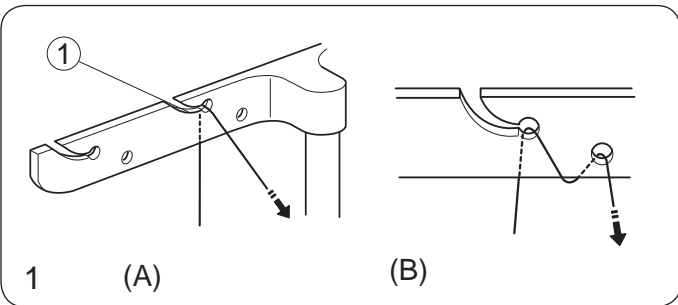
②



Threading the Needle on the Right

Place the spool of thread on the spool pin second from the left.

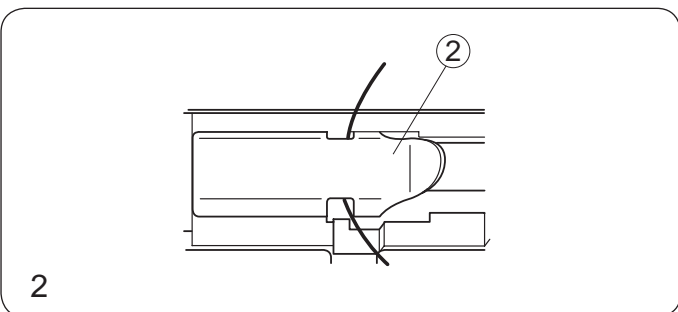
- * The points to thread for needle on the right are marked in red.
- * A convenient threading chart is placed on the machine body inside the looper cover.



1. Draw the thread through the thread guide second from the left from back to front: A

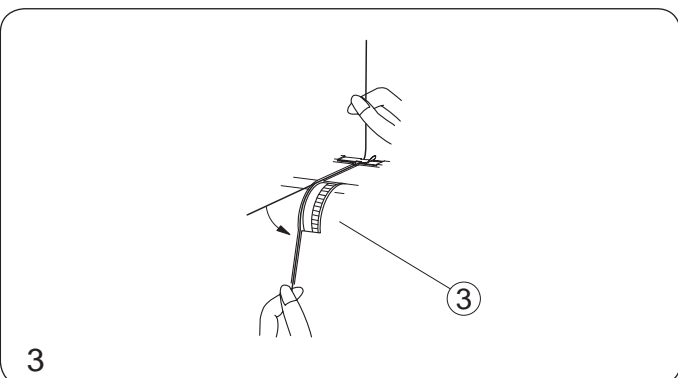
- * If the thread is coming out from the thread guide groove, pass the thread through the thread guide hole again as shown: B

① Thread guide



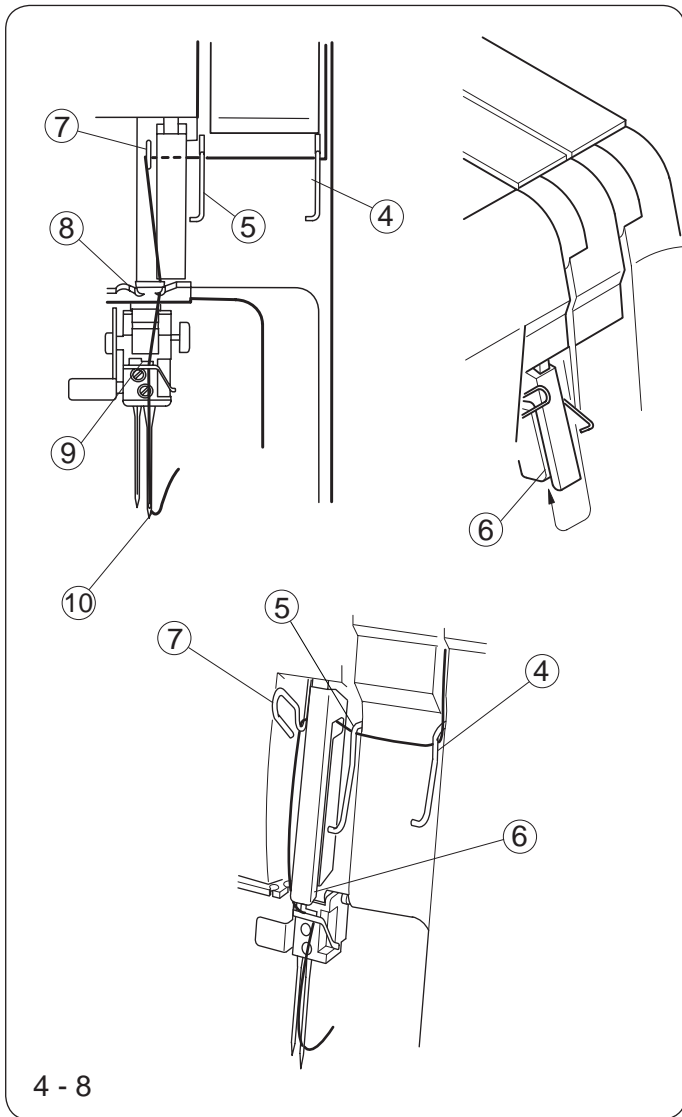
2. After threading the thread guide bar, slip the thread into the first guide on the machine as shown.

② Thread guide



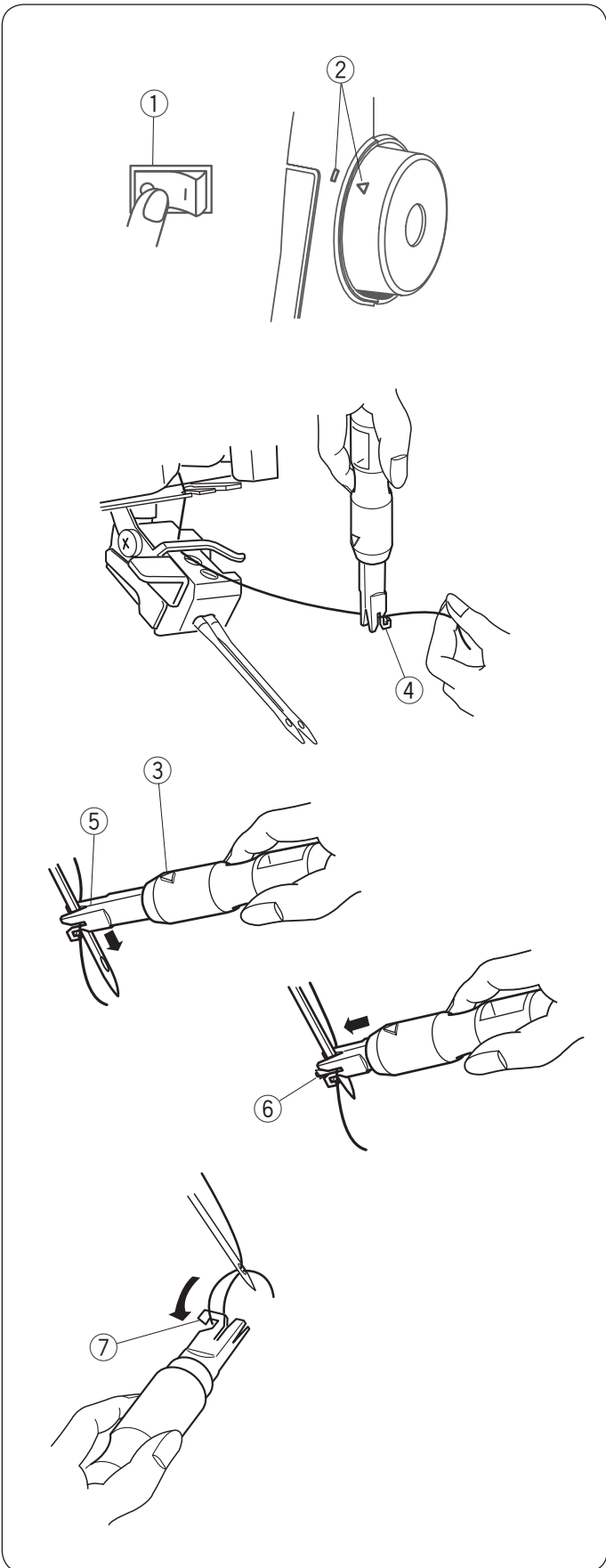
3. Hold the thread at both ends and tug gently to ensure the thread is correctly inserted between the tension discs. (If the presser foot lifter is raised, the thread easily inserts between the tension discs.)

③ Right needle thread tension dial



4. Pass the thread under the thread guides ④ and ⑤ from the right to the left.
5. Slip the thread into the slit ⑥ of the take-up lever cover from the bottom. Pull the thread up and hang it up over the third thread guide ⑦.
6. Pull down the thread and slip it into the right notch of the guide plate ⑧.
7. Pass the thread from the right to the back of the needle bar thread guide ⑨.
8. Thread the right needle ⑩ from front to back and pull the thread about 10 cm (4") from the eye of the needle to the back under the foot (refer to the subsequent page for how to thread the needle).

- ④ Thread guide (right)
- ⑤ Thread guide (left)
- ⑥ Slit of the take-up lever cover
- ⑦ Third thread guide
- ⑧ Guide plate
- ⑨ Needle bar thread guide
- ⑩ Right needle



Threading the Needle with the Needle Threader

The needle clamp can be tilted up for easy threading (see page 15).

When rethreading, remove the thread from the needle eye before tilting up the needle clamp.

IMPORTANT:

When tilting up the needle clamp, be sure to:

- turn the power switch off.
- turn the handwheel toward you and match the alignment marks.
- lower the presser foot.

① Power switch

② Alignment marks

Hold the needle threader with the triangle mark facing up. Insert the thread into the Y-notch of the threader from the right.

③ Triangle mark

④ Y-notch

Slide the threader down along the needle while pushing it gently until the threader pin goes into the needle eye.

Place the V-notch over the needle just above the needle eye.

⑤ V-notch

Push the threader until the threader pin comes out through the needle eye with a loop of thread.

⑥ Threader pin

Remove the threader from the needle slowly, leaving the thread loop behind the needle eye.

Using the hook, pull the loop of the thread out to the back.

⑦ Hook

CAUTION:

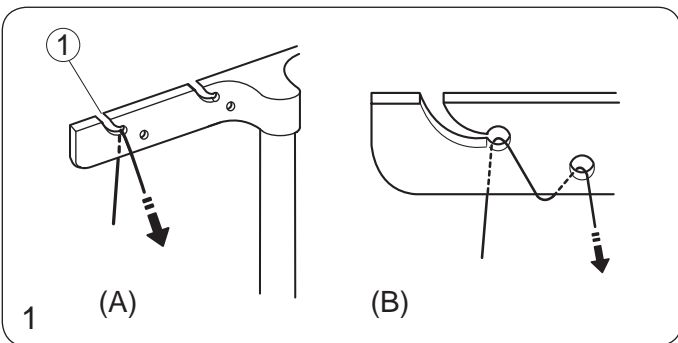
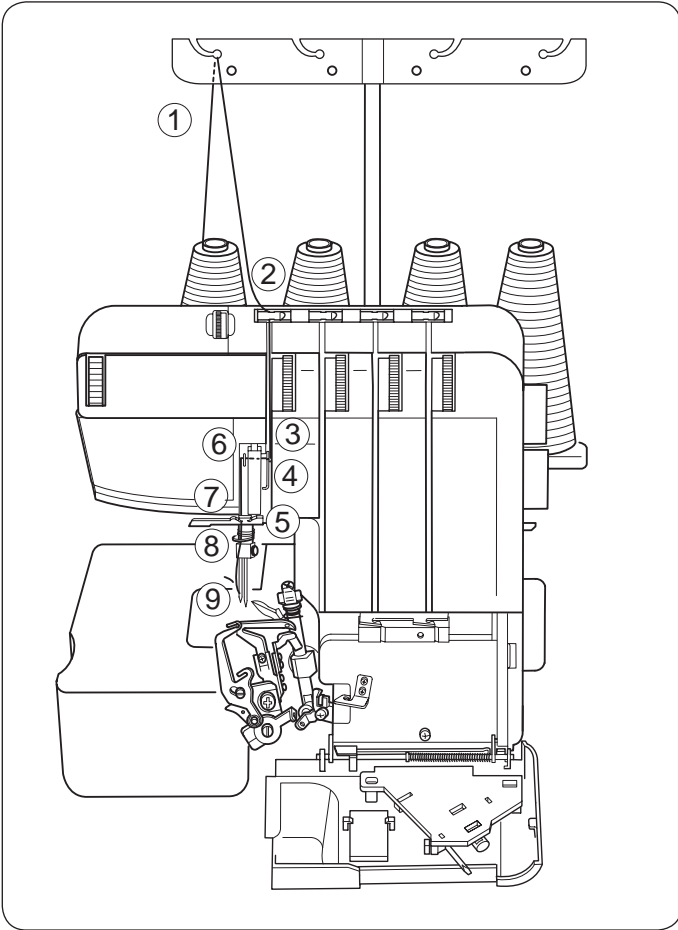
Do not turn the hand wheel when the needle clamp is being tilted up, otherwise it may cause a damage to the needle clamp.

Threading the Needle on the Left

Place the spool of thread on the left side spool pin.

* The points to thread for needle on the left are marked in blue.

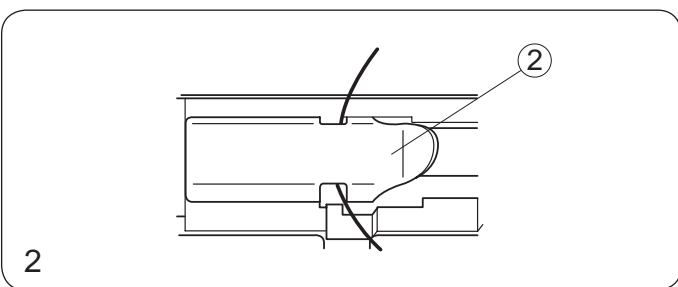
* A convenient threading chart is placed on the machine body inside the looper cover.



1. Draw the thread through the thread guide on the left from back to front: A

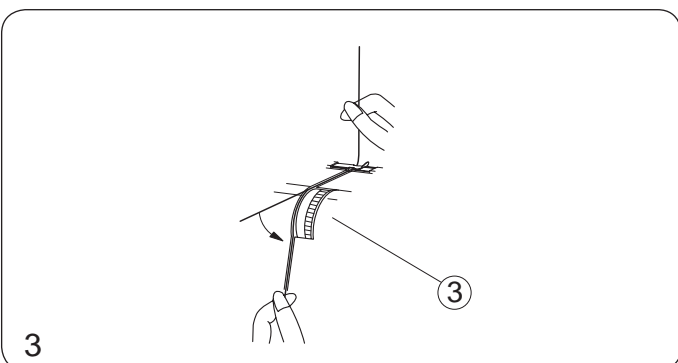
* If the thread is coming out from the thread guide groove, pass the thread through the thread guide hole again as shown: B

① Thread guide



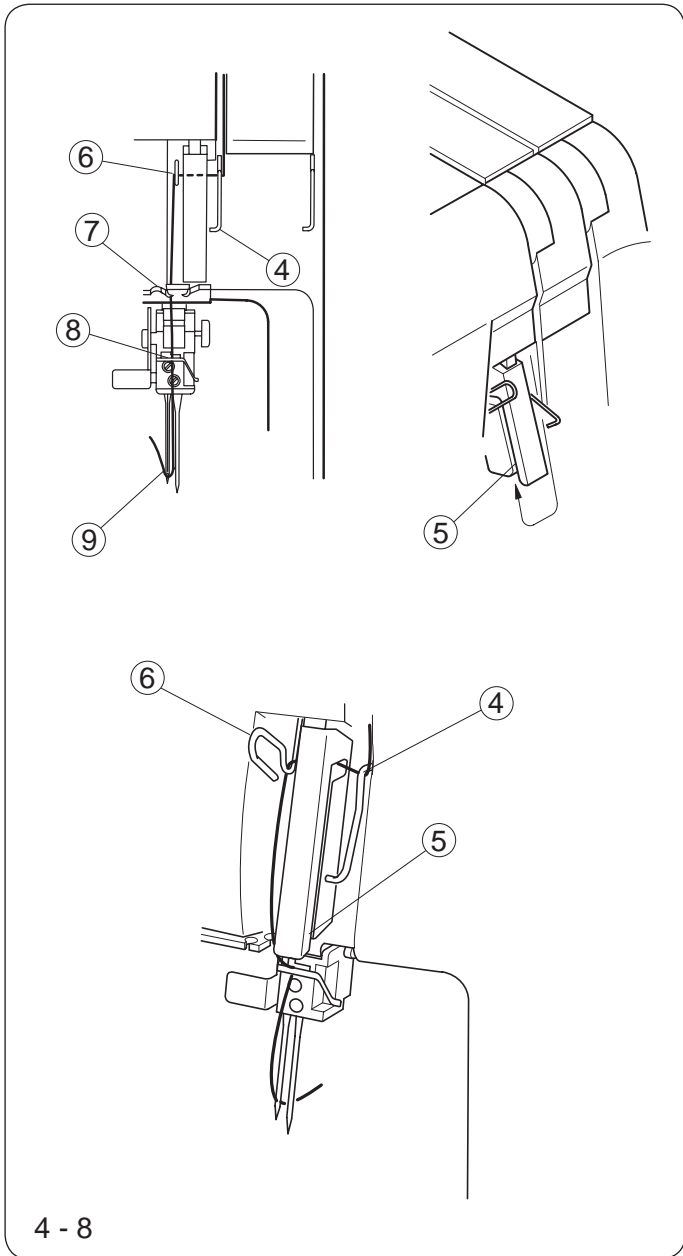
2. After threading the thread guide bar, slip the thread into the first guide on the machine as shown.

② Thread guide



3. Hold the thread at both ends and tug gently to ensure the thread is correctly inserted between the tension discs. (If the presser foot lifter is raised, the thread easily inserts between the tension discs.)

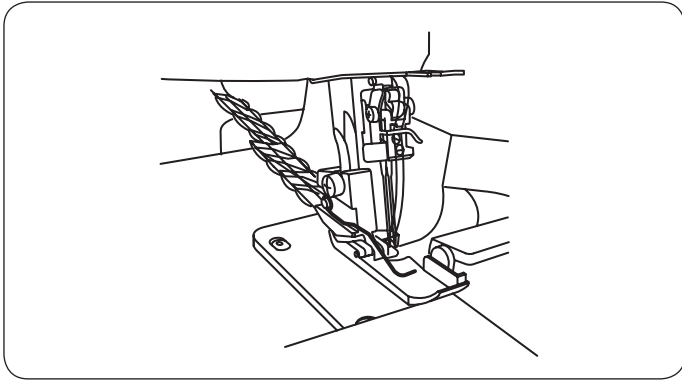
③ Left needle thread tension dial



4. Pass the thread under the thread guide ④ from the right to the left.
5. Slip the thread into the slit ⑤ of the take-up lever cover from the bottom. Pull the thread up and hang it up over the third thread guide ⑥.
6. Pull down the thread and slip it into the left notch of the guide plate ⑦.
7. Pass the thread from the right to the back of the needle bar thread guide ⑧.
8. Thread the left needle ⑨ from front to back and pull the thread about 10 cm (4") from the eye of the needle to the back under the foot (refer to the previous page for how to thread the needle).

- ④ Thread guide
- ⑤ Slit of the take-up lever cover
- ⑥ Third thread guide
- ⑦ Guide plate
- ⑧ Needle bar thread guide
- ⑨ Left needle

4 - 8

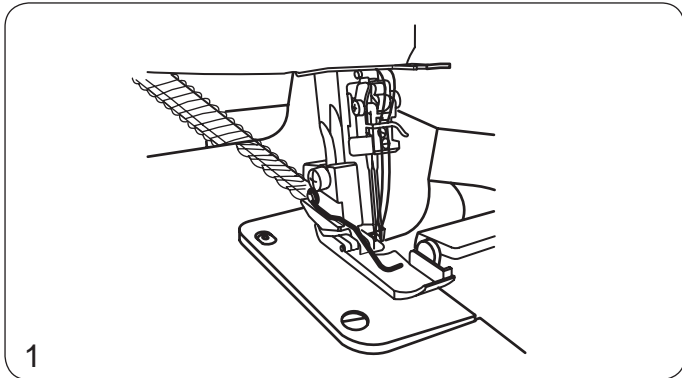


TEST STITCHING

Starting Sewing

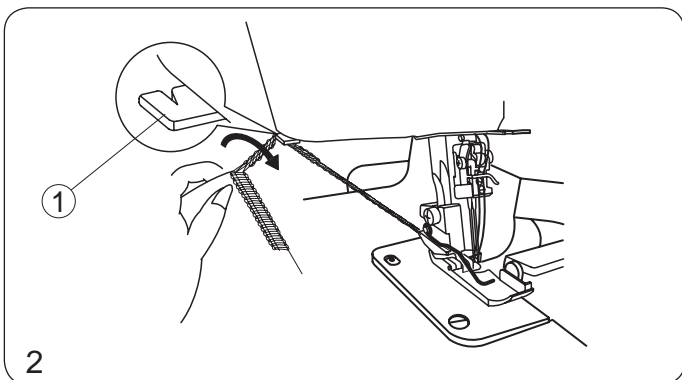
Insert the fabric under the toe of the foot (It is not necessary to raise the foot.)
 Turn the handwheel gently toward you a couple of turns and check the thread chain. Then start sewing slowly. The fabric will automatically be fed.
 Guide the fabric in the desired direction.

- * For heavyweight fabric, raise the presser foot and insert the fabric in front of the knife. Then lower the foot and start to sew while guiding the fabric.



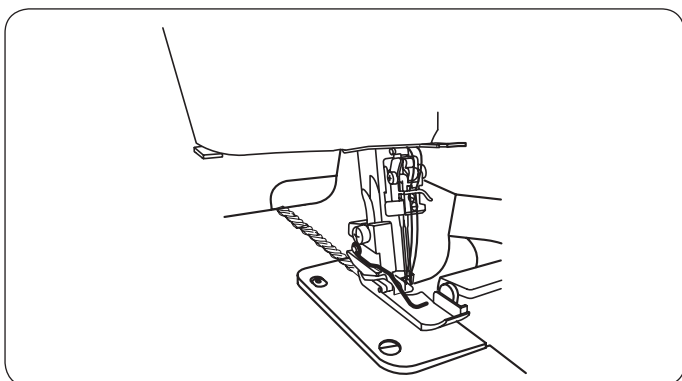
Finishing Sewing

1. When stitching is completed, continue to run the machine slowly to produce a thread chain for about 12 cm (5") while pulling the thread chain slightly to the back.



2. Cut the threads with the thread cutter as illustrated, leaving about 5 cm (2") thread chain from the end of the fabric.

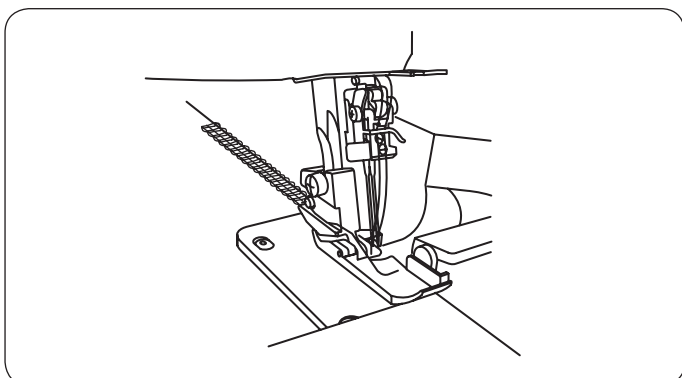
- ① Thread cutter



Sewing Continuously

Insert the next fabric under the toe of the foot, then start sewing. It is not necessary to raise the presser foot for ordinary fabric.

- * For heavyweight fabric, raise the presser foot and insert the fabric in front of the knife. Then lower the foot and start to sew while guiding the fabric.



How to use Guide Lines

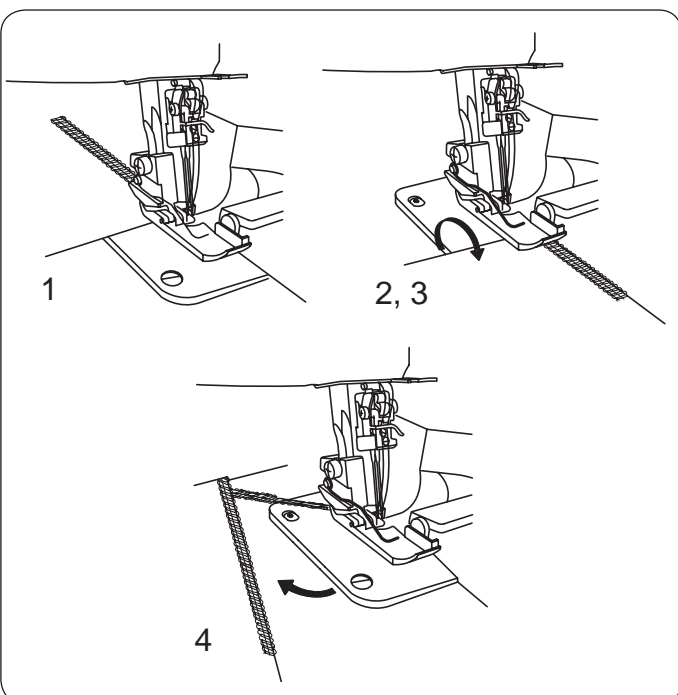
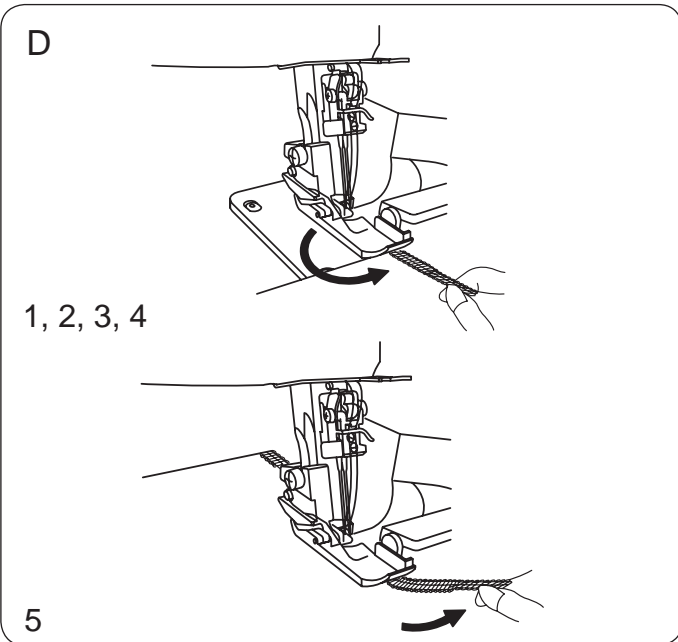
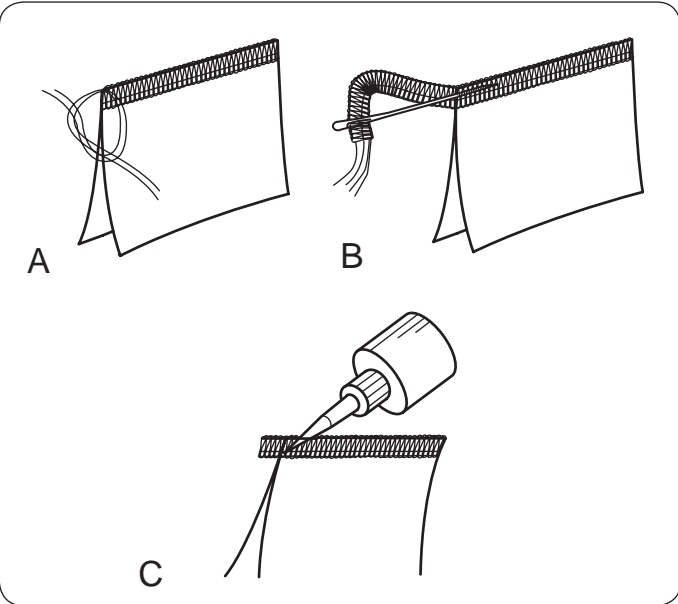
On the top of the looper cover are guide lines indicating the distance from the needle position.

Please use them as sewing guides.

Mark L indicates the distance from the left needle.

Mark R indicates the distance from the right needle.

The distance between center of guide line and needle position is 5/8 inch.



Securing Ends

To avoid unravelling, it is necessary to leave a thread chain about 5 cm (2") long at the beginning and at the end of a seam. To secure the beginning and end of a seam, choose one of the following methods.

At the beginning

- A. Separate the end of the threads and knot them.
- B. Thread the chain through a large eyed needle, and weave that chain through the overlock stitches on the fabric.
- C. Cut the chain at the edge of the fabric. Then apply a small amount of seam sealant on the end of the threads.

- D. 1. Before putting your fabric on the machine, sew a thread chain about 5 cm (2") long behind the needle.
2. Put your fabric on the machine. Then serge a few stitches and stop.
3. Raise the presser foot and bring the thread chain from the left around and under the presser foot.
4. Place the thread chain between the presser foot and upper knife, holding it in position as you lower the presser foot to sew.
5. After sewing about 2.5 cm (1"), move the chain to the right and under the upper knife, cutting the chain as you sew.

At the end of a seam

* You can use the same methods as "At the beginning" to secure the end of a seam except "D" or you can use the method shown below.

1. Serge one stitch off the end of a seam.
2. Raise the needle and presser foot, and gently pull the threads off the chancing finger.
3. Turn the fabric over so that the under side is up.
4. Serge about 2.5 cm (1") over stitching and angle off the fabric.

Thread Tension (4 threads)

Balanced tension

The illustration at left shows sewing results with balanced tension settings. However, adjusting the thread tension may be required depending upon the type of fabric and thread being used.

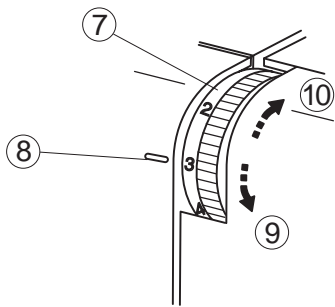
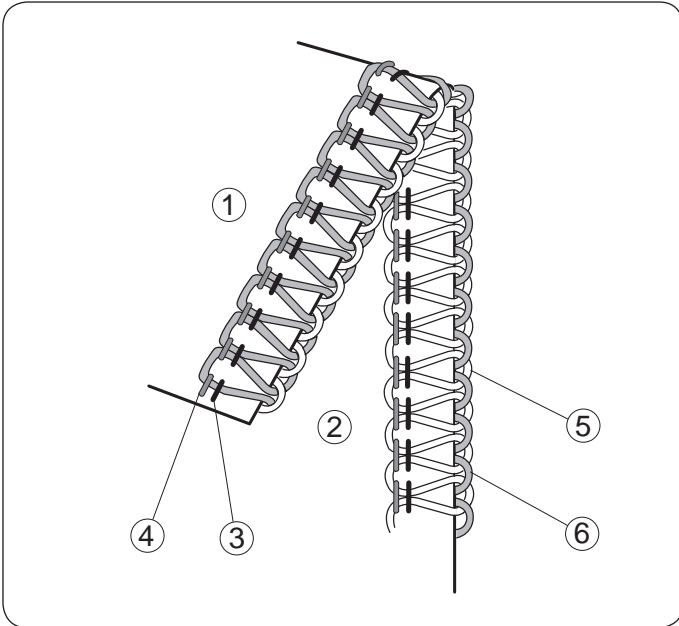
- ① Wrong side of fabric
- ② Right side of fabric
- ③ Right needle thread
- ④ Left needle thread
- ⑤ Upper looper thread
- ⑥ Lower looper thread

Thread tension adjustment

- * Set all four thread tension dials at "3".
- Then sew, and check the thread tensions.

If the tension balance on the test piece is not satisfactory, you can adjust the thread tension with the thread tension dial.

- ⑦ Thread tension dial
- ⑧ Setting mark
- ⑨ Loosen
- ⑩ Tighten



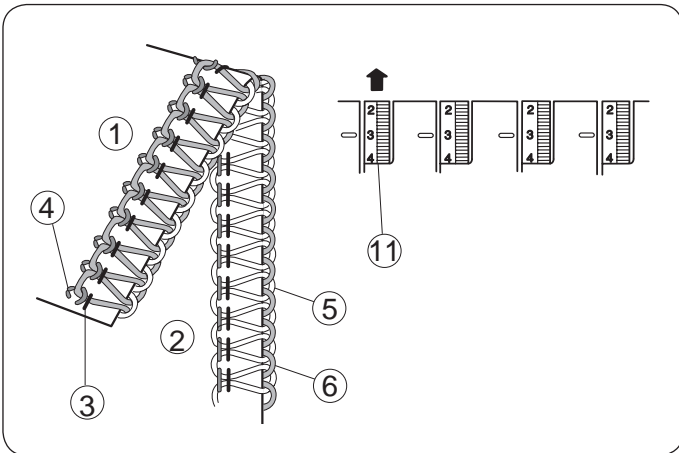
Left needle thread tension is too loose

The illustration shows sewing results when the left needle thread tension is too loose.

Remedy:

Tighten the left needle thread tension.

- ⑪ Left needle thread tension dial



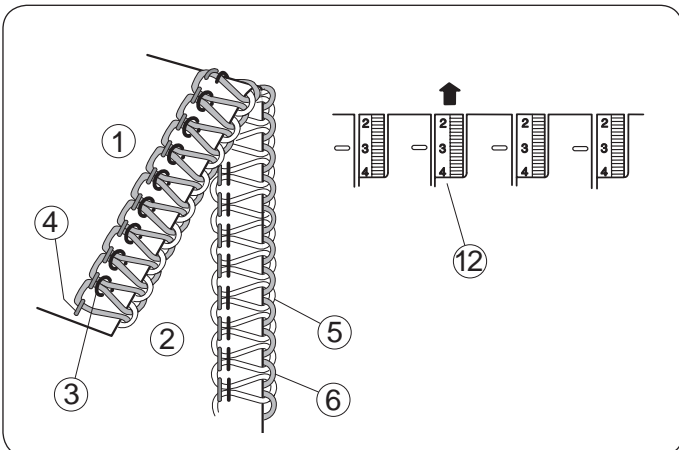
Right needle thread tension is too loose

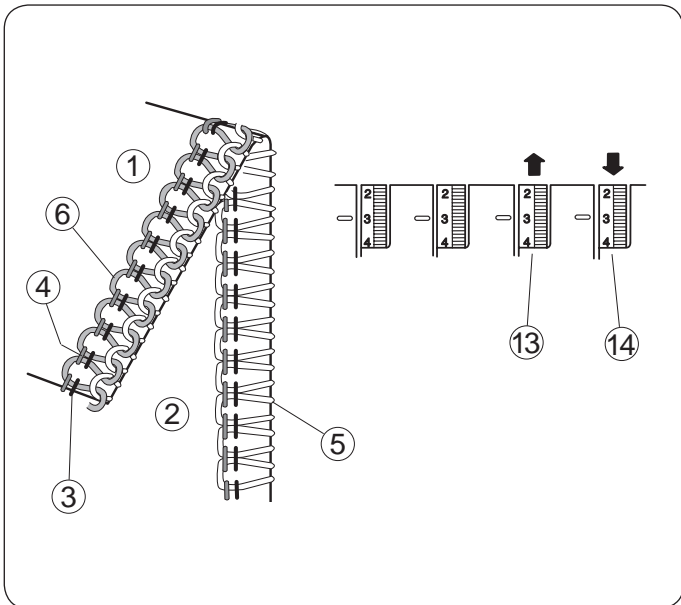
The illustration shows sewing results when the right needle thread tension is too loose.

Remedy:

Tighten the right needle thread tension.

- ⑫ Right needle thread tension dial





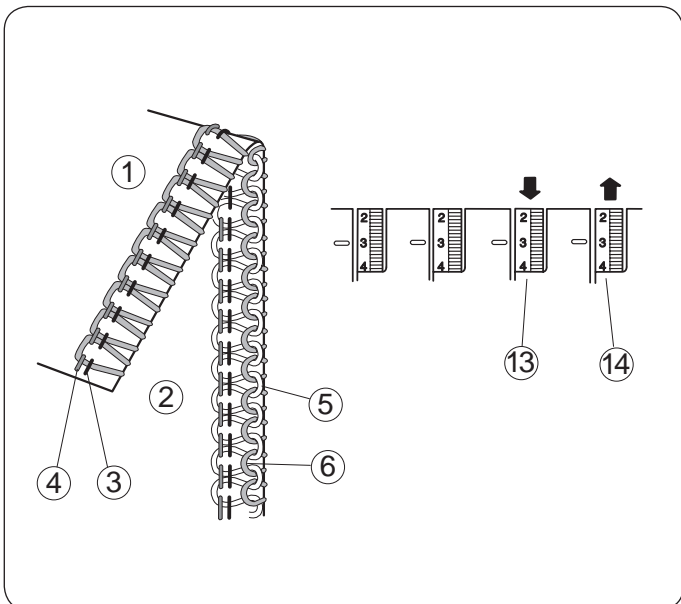
Looper thread tension is out of balance (1)

The illustration shows sewing results when the lower looper thread tension is too tight and/or upper looper thread tension is too loose.

Remedy:

Loosen lower looper thread tension and/or tighten upper looper thread tension.

- ① Wrong side of fabric
- ② Right side of fabric
- ③ Right needle thread
- ④ Left needle thread
- ⑤ Upper looper thread
- ⑥ Lower looper thread
- ⑬ Upper looper thread tension dial
- ⑭ Lower looper thread tension dial



Looper thread tension is out of balance (2)

The illustration shows sewing results when the upper looper thread tension is too tight and/or lower looper thread tension is too loose.

Remedy:

Loosen upper looper thread tension and/or tighten lower looper thread tension.

- ⑬ Upper looper thread tension dial
- ⑭ Lower looper thread tension dial

3-Thread Serging

Using the needle on the right only (for stitch numbers 6-9)

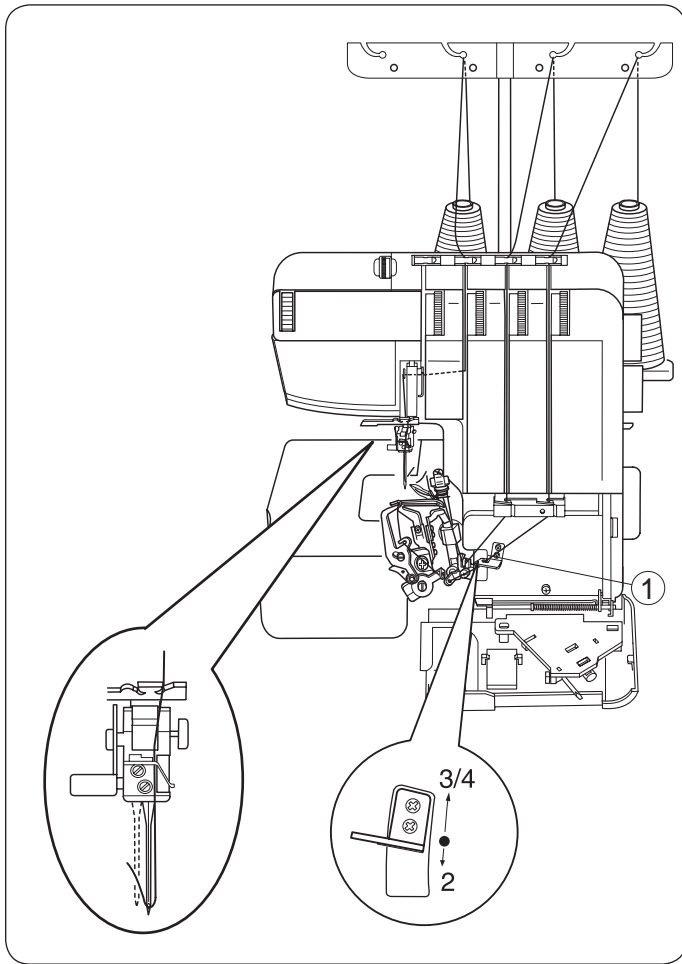
When you use the right needle, the standard sewing width is 3.5 mm.

The illustration on the left shows you how to thread the needle.

Note:

Tighten the needle clamp screw on the side that is not being used to prevent losing the screw.

- ① Changeable thread guide: 3/4

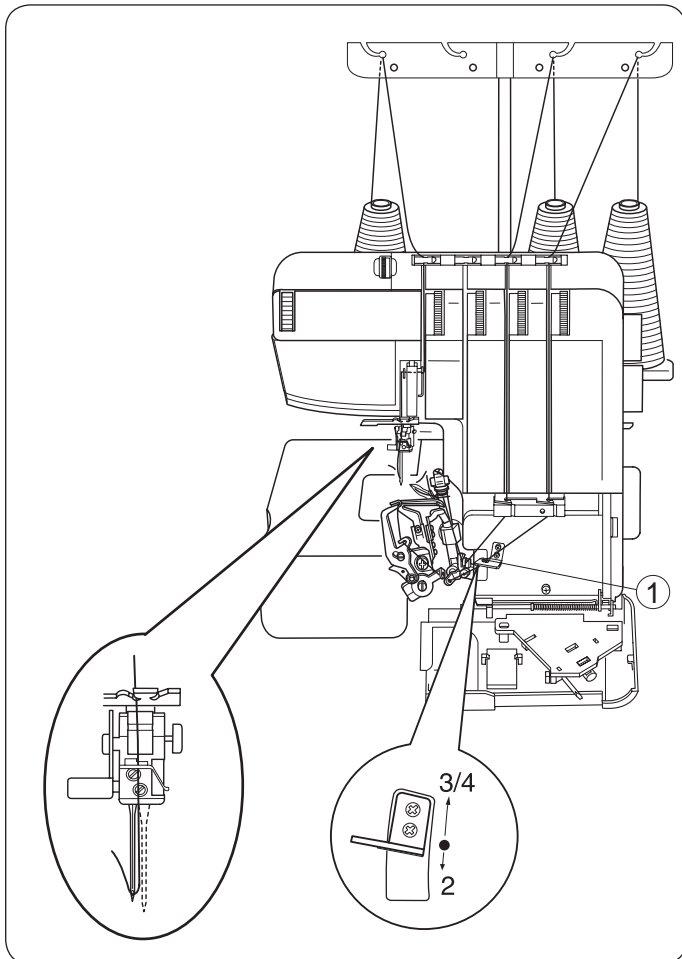


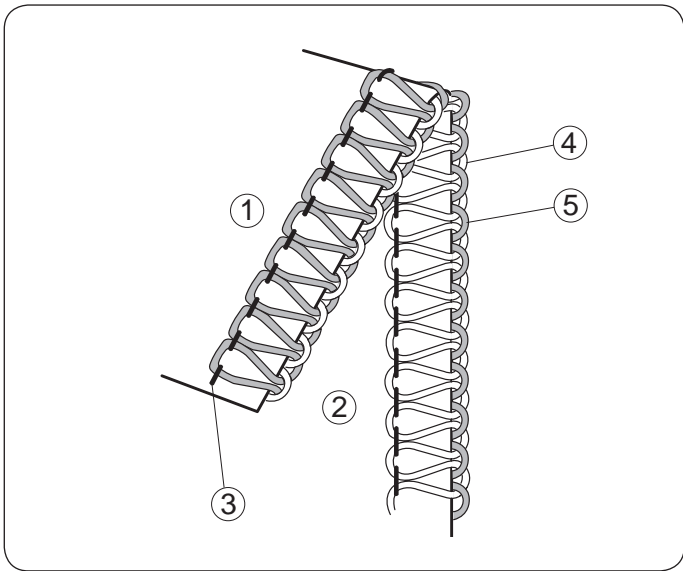
Using the needle on the left only (for stitch numbers 10-12)

When you use the left needle, the standard sewing width is 5.7 mm.

The illustration at left shows you how to thread the needle.

- ① Changeable thread guide: 3/4



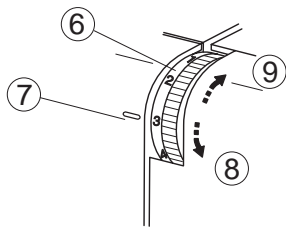


Thread Tension (3 threads)

Balanced tension

The illustration at left shows sewing results with balanced tension settings. However, adjusting the thread tension may be required depending on the type of fabric and thread being used.

- ① Wrong side of fabric
- ② Right side of fabric
- ③ Right or left needle thread
- ④ Upper looper thread
- ⑤ Lower looper thread



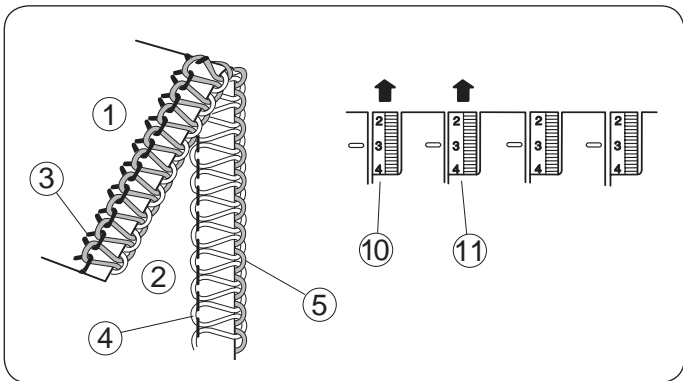
Thread tension adjustment

* Set three thread tension dials at "3".

Then sew, and check the thread tensions.

If the tension balance on the test piece is not satisfactory, you can adjust the thread tension with thread tension dial.

- ⑥ Thread tension dial
- ⑦ Setting mark
- ⑧ Loosen
- ⑨ Tighten



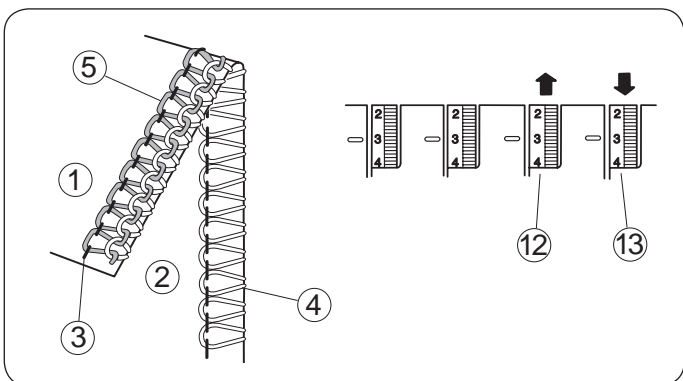
Needle thread tension is too loose

The illustration shows sewing results when the needle thread tension is too loose.

Remedy:

Tighten needle thread tension.

- ⑩ Left needle thread tension dial
- ⑪ Right needle thread tension dial



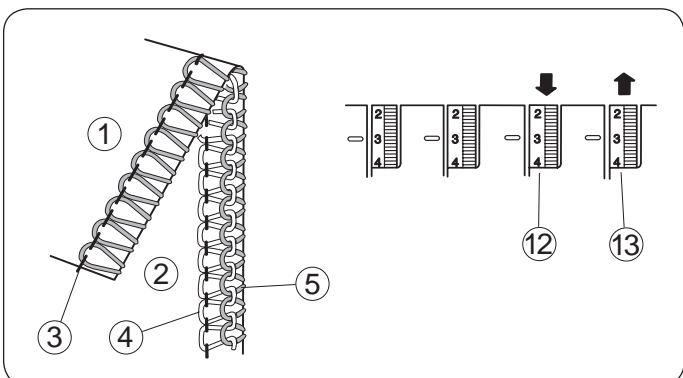
Looper thread tension is out of balance (1)

The illustration shows sewing results when the lower looper thread tension is too tight and/or upper looper thread tension is too loose.

Remedy:

Loosen lower looper thread tension and/or tighten upper looper thread tension.

- ⑫ Upper looper thread tension dial
- ⑬ Lower looper thread tension dial



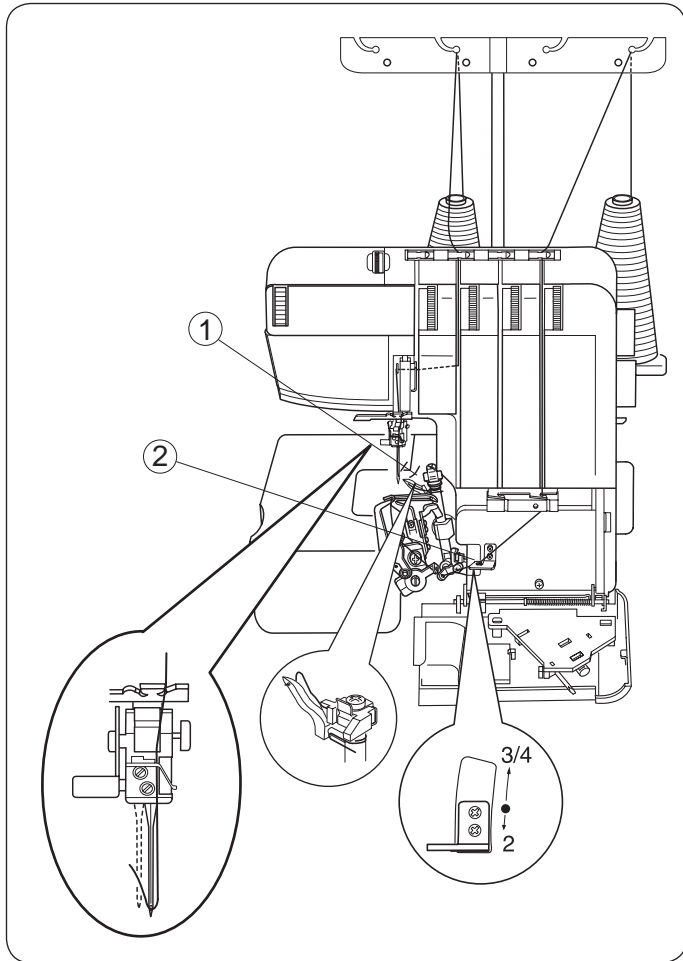
Looper thread tension is out of balance (2)

The illustration shows sewing results when the upper looper thread tension is too tight and/or lower looper thread tension is too loose.

Remedy:

Loosen upper looper thread tension and/or tighten lower looper thread tension.

- ⑫ Upper looper thread tension dial
- ⑬ Lower looper thread tension dial



2-Thread Serging

**Using the needle on the right only
(for Rolled hem 2): 3.5 mm width**

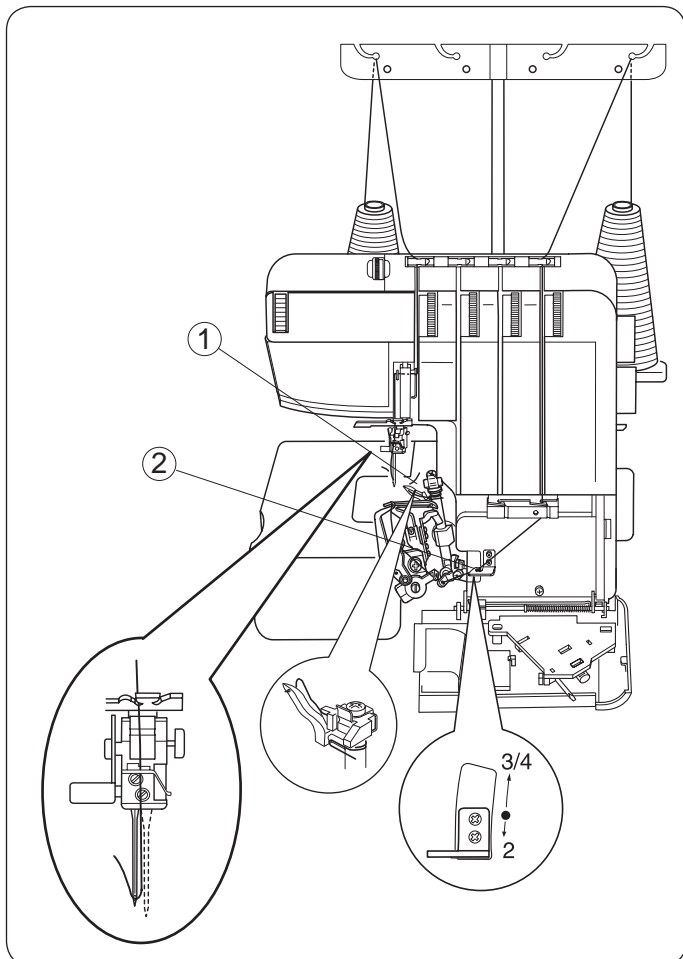
When you use the right needle, the standard sewing width is 3.5 mm.

The illustration on the left shows you how to thread the needle.

Note:

Tighten the needle clamp screw on the side that is not being used to prevent losing the screw.

- ① 2 thread converter
- ② Changeable thread guide: 2

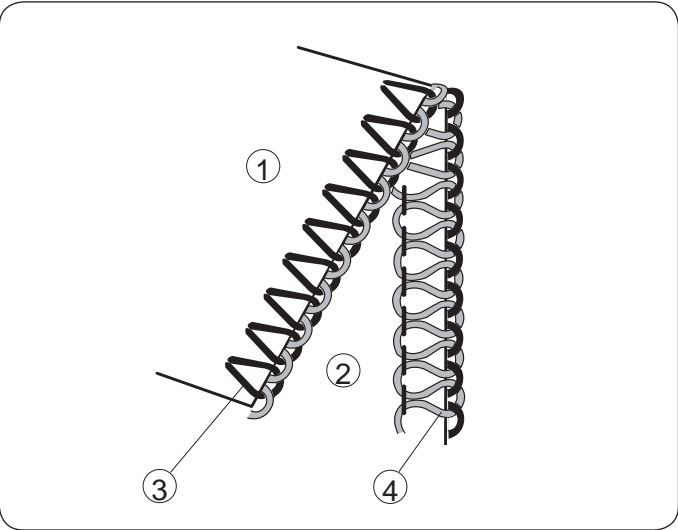


**Using the needle on the left only
(for Overcast 2 and Flatlock 2)**

When you use the left needle, the standard sewing width is 5.7 mm.

The illustration at left shows you how to thread the needle.

- ① 2 thread converter
- ② Changeable thread guide: 2



Thread Tension (2 threads)

Correct tension

The illustration at left shows sewing results with correct tension settings. However, adjusting the thread tension may be required depending on the type of fabric and thread being used.

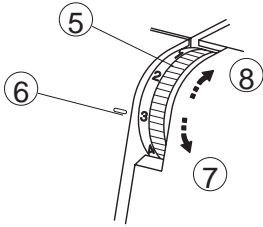
- ① Wrong side of fabric
- ② Right side of fabric
- ③ Right or left needle thread
- ④ Lower looper thread

Thread tension adjustment

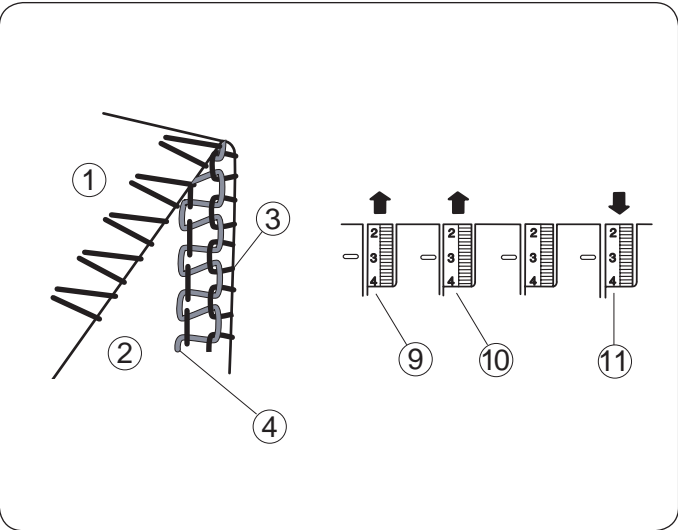
* Set two thread tension dials at “3”.

Then sew, and check the thread tensions.

If the tension balance on the test piece is not satisfactory, you can adjust the thread tension with thread tension dial.



- ⑤ Thread tension dial
- ⑥ Setting mark
- ⑦ Loosen
- ⑧ Tighten



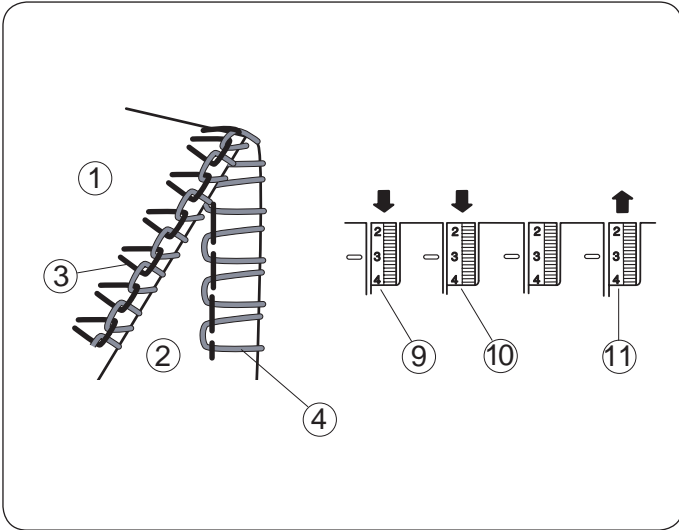
Needle/Lower looper thread tension is out of balance (1)

The illustration shows sewing results when the lower looper thread tension is too tight and/or needle thread tension is too loose.

Remedy:

Loosen lower looper thread tension and/or tighten needle thread tension.

- ⑨ Left needle thread tension dial
- ⑩ Right needle thread tension dial
- ⑪ Lower looper thread tension dial



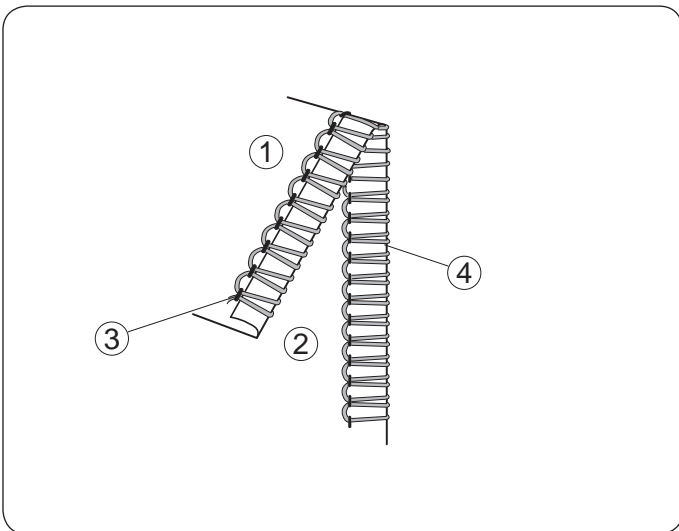
Needle/Lower looper thread tension is out of balance (2)

The illustration shows sewing results when the needle thread tension is too tight and/or lower looper thread tension is too loose.

Remedy:

Loosen needle thread tension and/or tighten lower looper thread tension.

- ⑨ Left needle thread tension dial
- ⑩ Right needle thread tension dial
- ⑪ Lower looper thread tension dial



Balanced tension for rolled hem

The illustration shows sewing result with balanced tension settings.

Set the changeable thread guide at the lowered position.

Tension adjustment may be required depending on the type and thickness of fabric and threads being used.

Make a trial sewing with the fabric and threads you wish to use to obtain in the best results by adjusting tension.

- ① Wrong side of fabric
- ② Right side of fabric
- ③ Needle thread
- ④ Lower looper thread

Thread Tension for Rolled Hem 3

Balanced tension

The illustration at left shows sewing results with balanced tension settings.

Adjusting the thread tension may be required depending on the type of fabric and thread being used.

- ① Wrong side of fabric
- ② Right side of fabric
- ③ Right needle thread
- ④ Upper looper thread
- ⑤ Lower looper thread

Thread tension adjustment

1. Set the tension dial as shown.
2. Sew and check the tensions.
3. If the tension balance on the test piece is not satisfactory, you can adjust the thread tension with thread tension dial.

Needle thread tension is too loose

The illustration shows the sewing results when the right needle thread tension is too loose.

Remedy:

Tighten the right needle thread tension.

- ⑥ Right needle thread tension dial

Upper looper thread tension is too loose

The illustration shows the sewing results when the upper looper thread tension is too loose.

Remedy:

Tighten the upper looper thread tension.

- ⑦ Upper looper thread tension dial

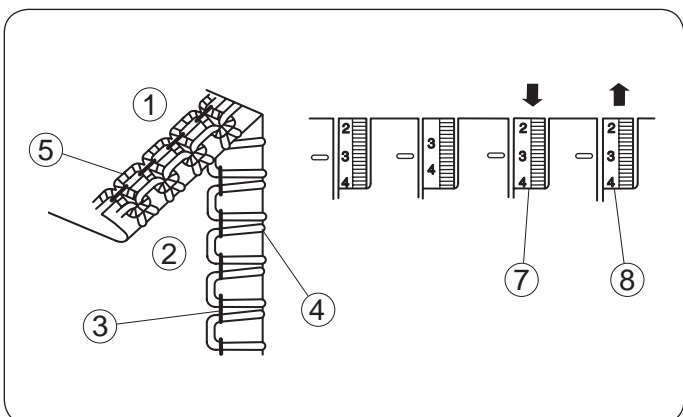
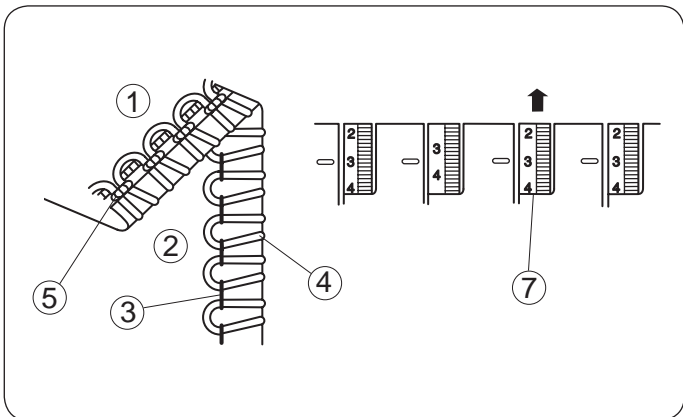
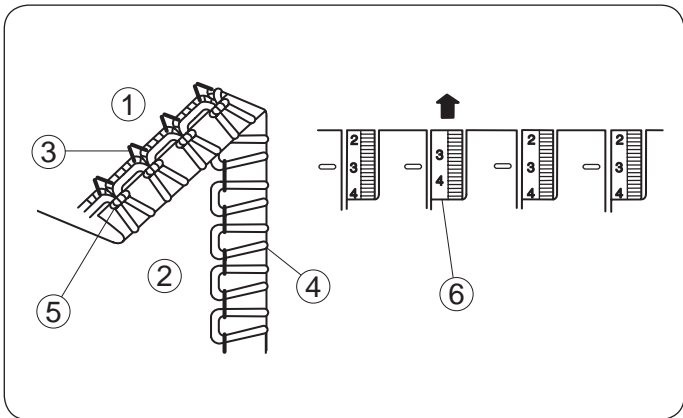
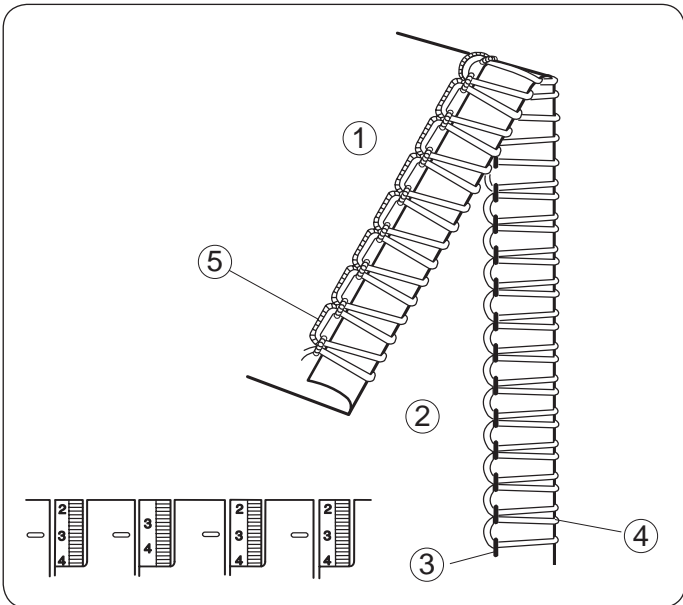
Looper thread tension is out of balance

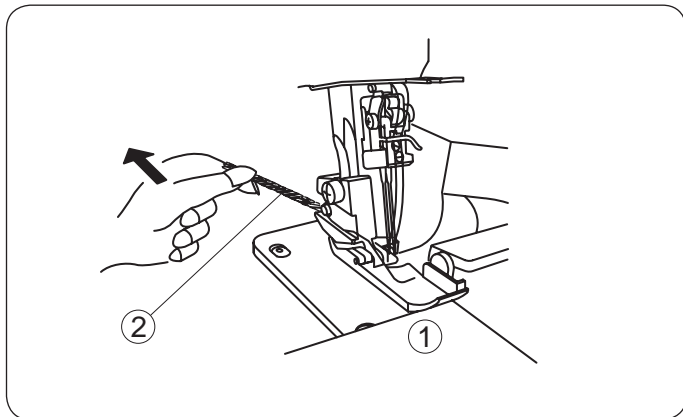
The illustration shows sewing results when the upper looper thread tension is too tight and/or lower looper thread tension is too loose.

Remedy:

Loosen upper looper thread tension and/or tighten lower looper thread tension.

- ⑦ Upper looper thread tension dial
- ⑧ Lower looper thread tension dial

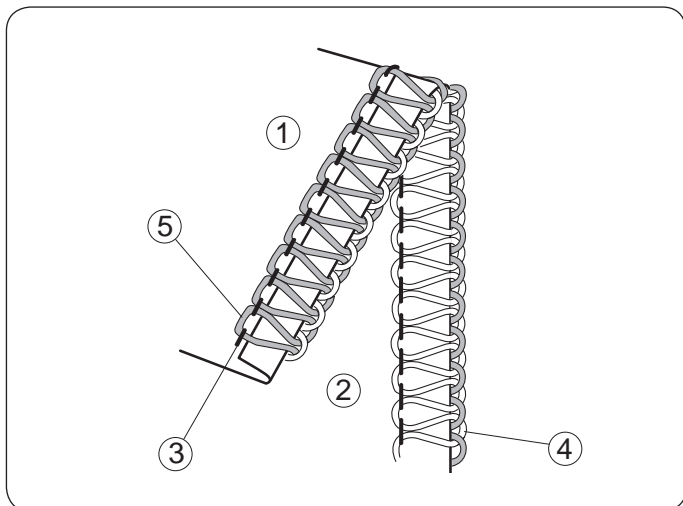




Rolled hem 3

Pull the end of thread chain to the back lightly in the beginning and end of sewing.

- ① Fabric
- ② Thread chain



For narrow hem 3

Balanced tension

The illustration at left shows sewing results with balanced tension settings.

- ① Wrong side of fabric
- ② Right side of fabric
- ③ Right needle thread
- ④ Upper looper thread
- ⑤ Lower looper thread

CARE OF YOUR MACHINE

CAUTION:

Turn the power switch off and unplug the machine before cleaning or maintenance.

Replacing the Upper Knife

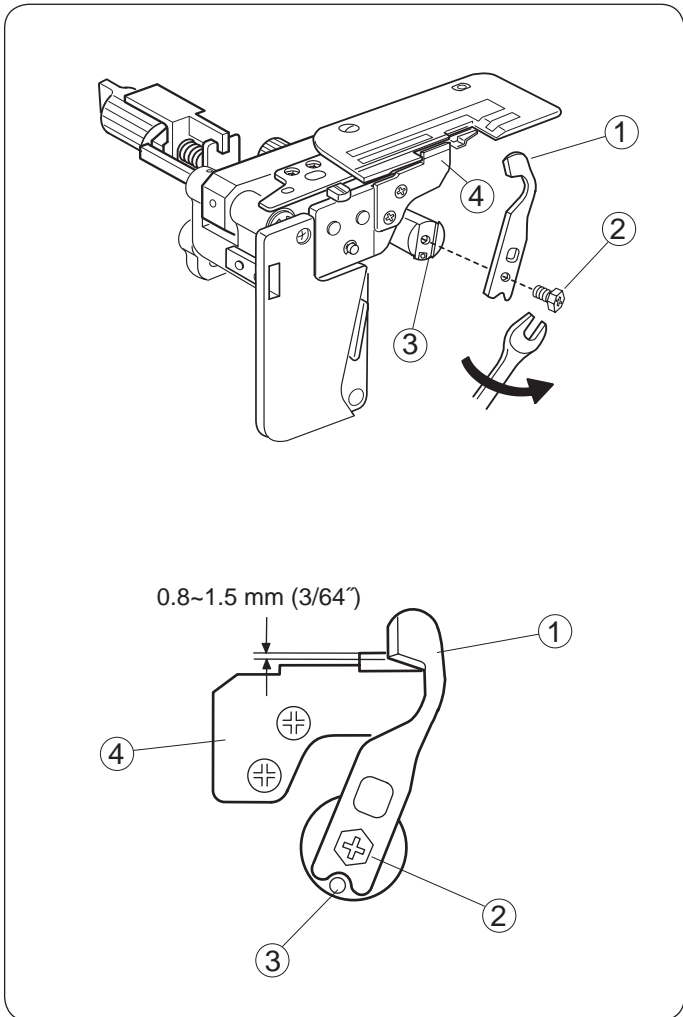
To remove:

1. Turn off the power switch and unplug the machine.
2. Open the looper cover and side cover.
3. Turn the handwheel toward you until the upper knife reaches its highest position.
4. Remove the hexagonal bolt and the upper knife.

To attach:

1. Insert new upper knife into the groove of the knife holder and stopper pin. Then tighten the hexagonal bolt slightly.
2. Turn the handwheel toward you until the upper knife reaches its lowest position. Loosen the hexagonal bolt, and adjust the position of the upper knife so that its blade overlaps the edge of lower knife 0.8 mm to 1.5 mm (3/64"), as shown. Then, tighten the hexagonal bolt firmly.
3. Close the looper cover and side cover.

- ① Upper knife
- ② Hexagonal bolt
- ③ Stopper pin
- ④ Lower knife

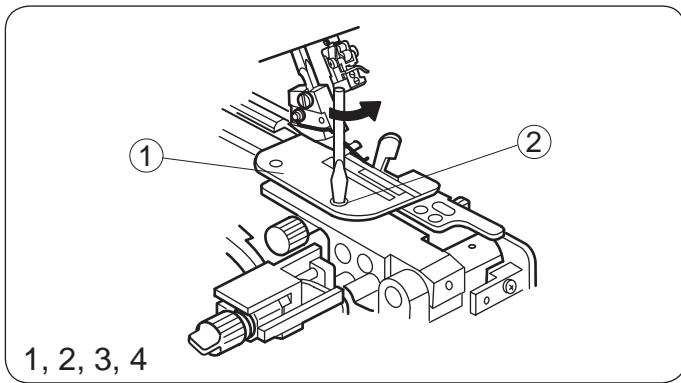


Cleaning Upper Knife Area

1. Turn off the power switch and unplug the machine.
2. Open the looper cover. Remove the waste pieces to the front with a lint brush.

* You may use a vacuum cleaner to clean the upper knife area or feed dog.

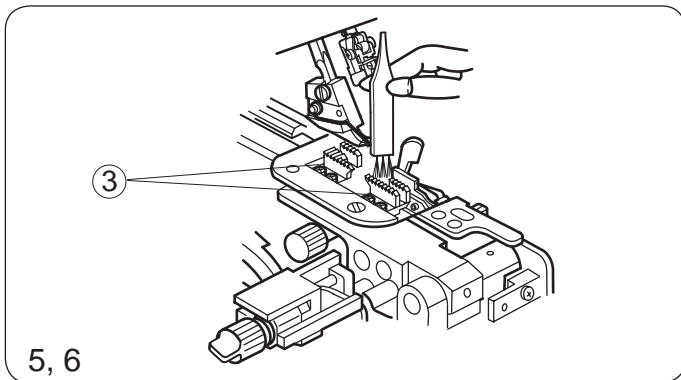
* The lower knife will last over one year in normal use. However, if you run over a pin or a hard object, it may be required to replace both upper and lower knives at the same time.



Cleaning the Feed Dog

1. Turn off the power switch and unplug the machine.
2. Open the looper cover and side cover.
3. Remove the needles and presser foot.
4. Remove the needle plate set screw, and remove the needle plate.

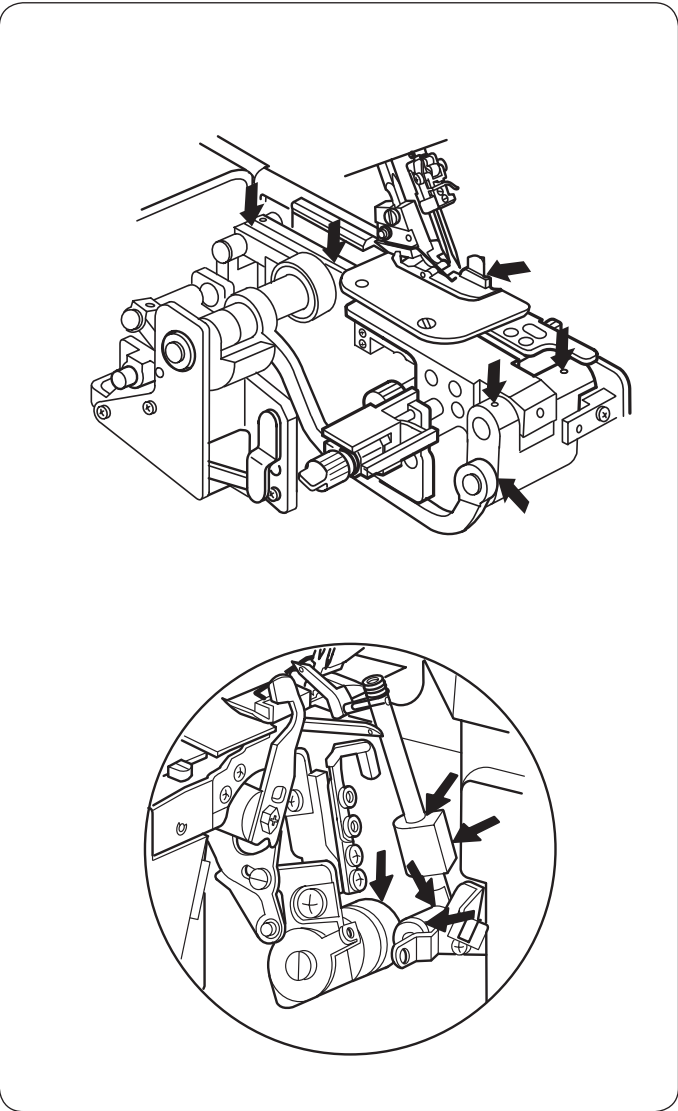
- ① Needle plate
- ② Needle plate set screw



5. Brush out the lint around the feed dogs to the front by using the lint brush or use a vacuum cleaner.

6. Reattach the needle plate, presser foot and needles.
Close the looper cover and side cover.

- ③ Feed dogs



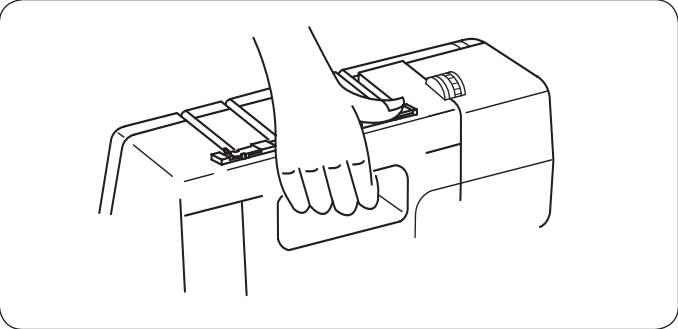
Oiling the Machine

Apply a few drops of fine quality sewing machine oil to the parts indicated with arrows.

It is recommended to apply oil once a week in normal use, once in ten hours in continuous use.

* Open the side cover and apply oil.

* Open the looper cover and apply oil.



Carrying the Machine

Put your fingers into the hole of the rear arm as illustrated.

Troubleshooting

| Condition | Cause | Reference |
|--|---|--|
| The fabric is not being fed smoothly. | <ol style="list-style-type: none"> 1. The feed dog is packed with lint. 2. The presser foot has been raised. | See page 45. Lower the presser foot. |
| The needle breaks. | <ol style="list-style-type: none"> 1. The needle is incorrectly inserted. 2. The needle is bent or blunt. 3. The fabric is pulled strongly. | See page 15. Replace the needle. Pull the fabric lightly. |
| The thread breaks. | <ol style="list-style-type: none"> 1. The machine is not correctly threaded. 2. The needle or looper thread tension is too tight. 3. The needle is incorrectly inserted. 4. The needle is bent or blunt. | See pages 21-31. See pages 35-42. See page 15. Replace the needle. |
| Skipped stitches | <ol style="list-style-type: none"> 1. The needle is bent or blunt. 2. The machine is not correctly threaded. 3. The needle is incorrectly inserted. | Replace the needle. See pages 21-31. See page 15. |
| The seam is not sewn neatly. | <ol style="list-style-type: none"> 1. The needle and/or looper thread tensions are not correctly adjusted. 2. The machine is not correctly threaded. 3. The stitch is not suitable for the fabric being sewn. 4. The thread is not between the tension discs. | See pages 35-42. See pages 21-31. See pages 11-13. See pages 23, 26, 28 and 31. |
| Seam puckering | <ol style="list-style-type: none"> 1. The needle or looper thread tension is too tight. 2. The machine is not correctly threaded. 3. The differential feed dial is not correctly adjusted. | See pages 35-42. See pages 21-31. See page 14. |
| The machine does not operate. | <ol style="list-style-type: none"> 1. The machine has not been plugged in firmly. 2. The power switch is turned off. | See page 6. See page 6. |
| The fabric is not cut neatly. | <ol style="list-style-type: none"> 1. The position of the upper knife is not adjusted properly. 2. The upper knife is dull. | See page 44. Replace the upper knife. (See page 44.) |

