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**elna**  
SWISS DESIGN

## Instruction Manual

664





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

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

1. Do not allow to be used as a toy. Close attention is necessary when this 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.

## 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. The maximum permissible power for the sewing lamp bulb is 15 watts.
6. 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.

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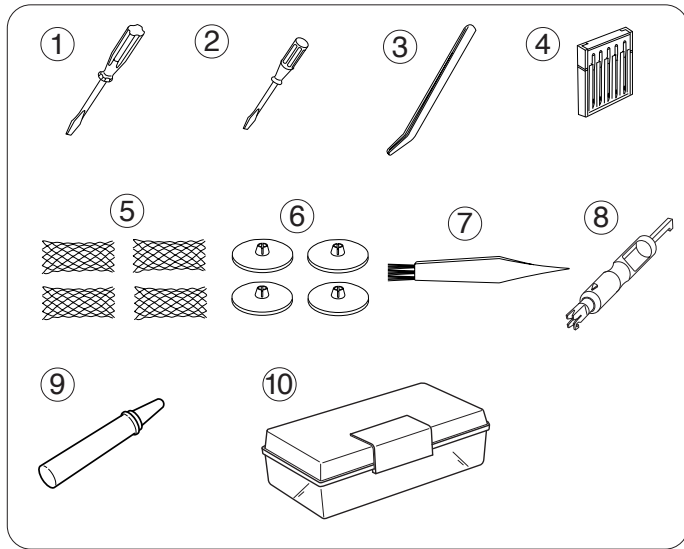
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## PREPARATION

### 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 Needle plate setting knob
- ⑲ Presser foot
- ⑳ Thread cutter
- ㉑ Presser foot lifter
- ㉒ Needle plate
- ㉓ Upper knife release knob
- ㉔ Cutting width adjusting dial
- ㉕ Lower looper
- ㉖ Upper looper
- ㉗ Upper knife
- ㉘ Lower knife



## 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 Accessory box



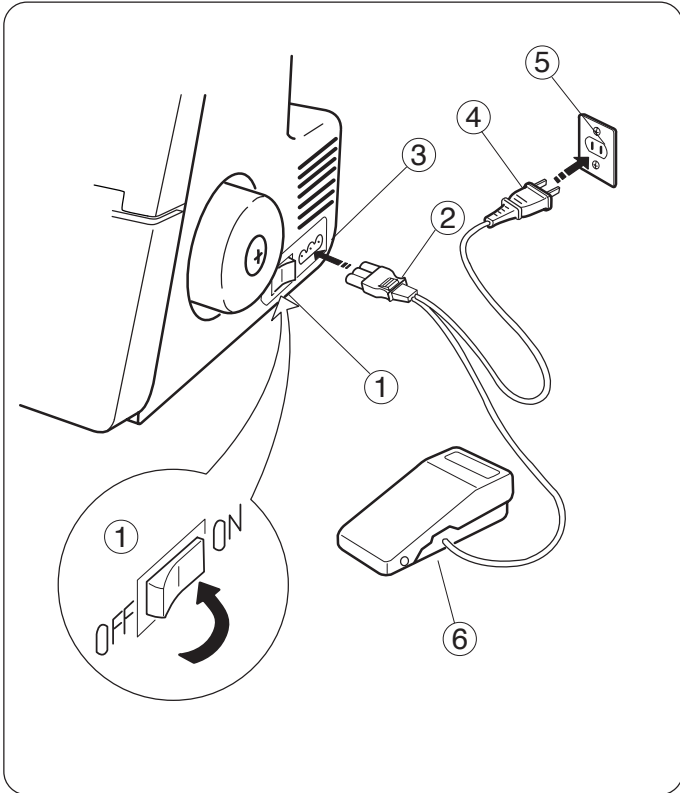
## Connecting the Machine to the Power Supply

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



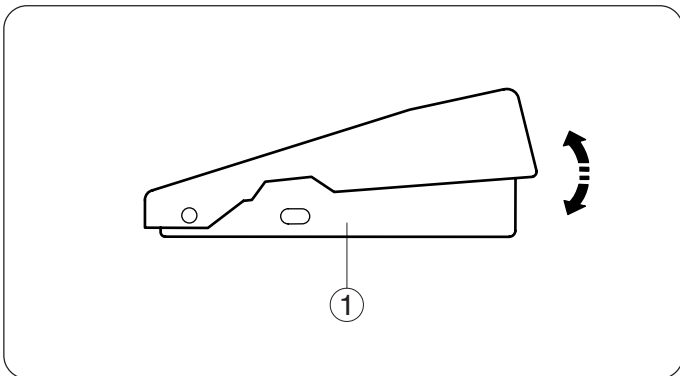
## Controlling Sewing Speed

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 lifter up, and practice controlling the speed.

- ① Speed controller



## Operating Instructions:

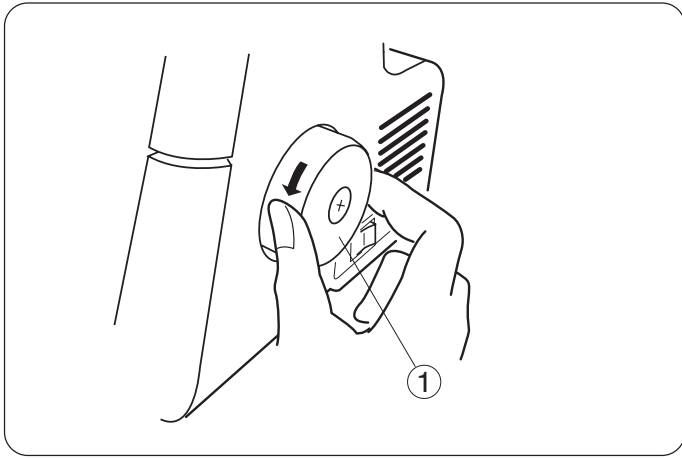
The symbol “O” on a switch indicates the “off” position of the switch.

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:

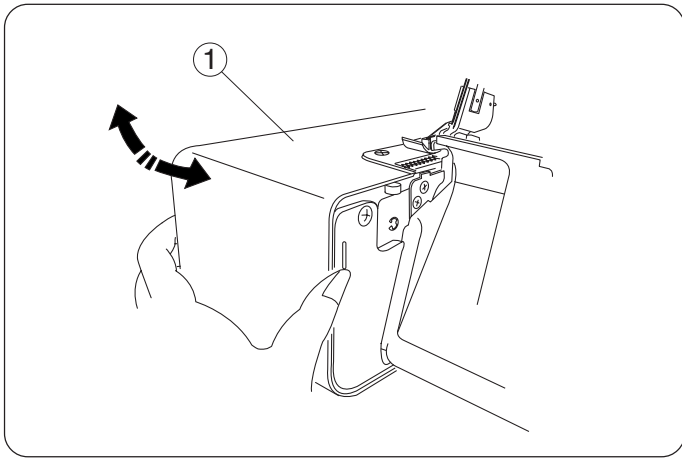
- \* While in operation, always keep your eye on the sewing area, and do not touch any moving parts such as the thread take-up lever, loopers, handwheel, needle or knives.
- \* Always disconnect the machine from the power supply:
  - when leaving the machine unattended.
  - when attaching or removing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

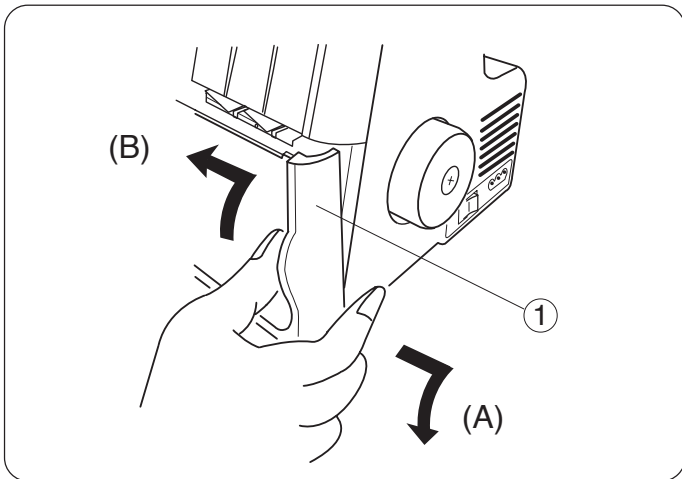
To open:

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.

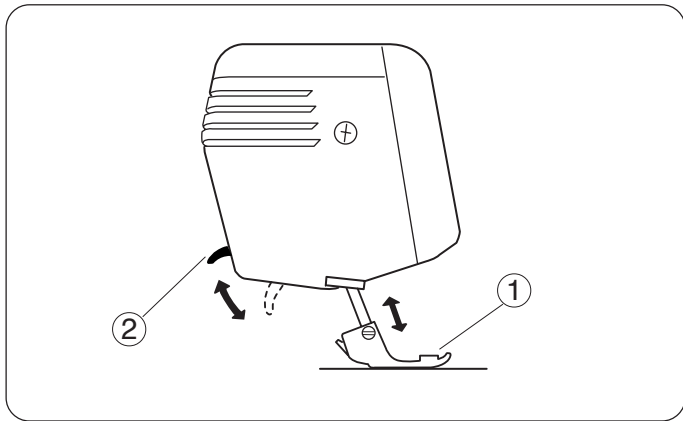
To close: (B)

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.



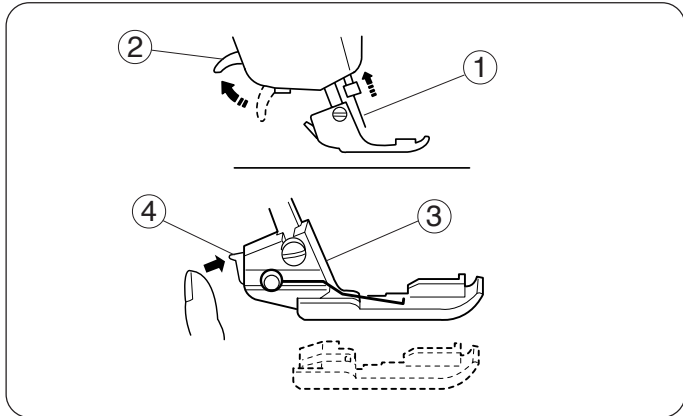
### Raising or Lowering the Presser Foot

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.

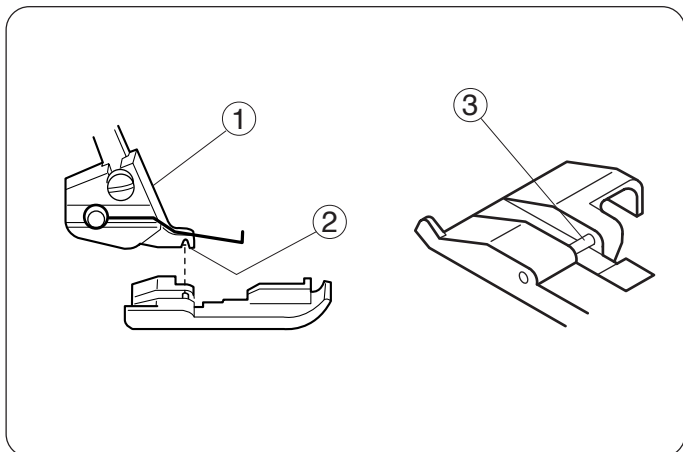
- ① Presser foot
- ② Presser foot lifter



### 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.

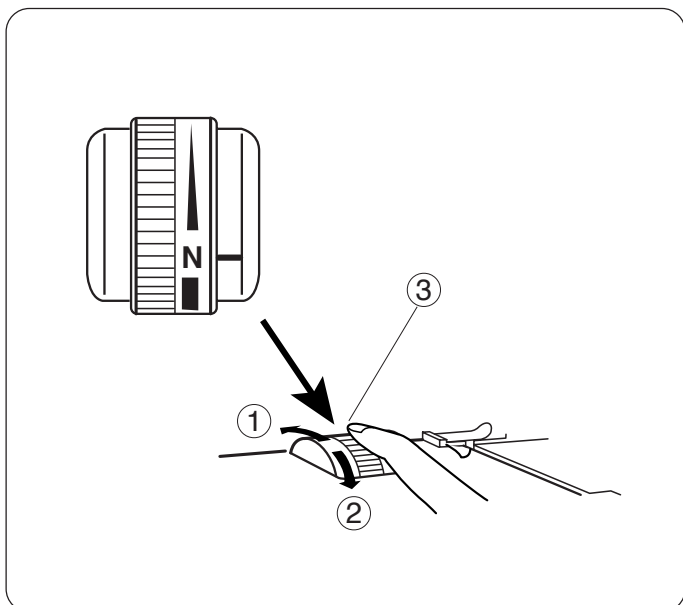
- ① Needle
- ② Presser foot lifter
- ③ Foot holder
- ④ Lever



### 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

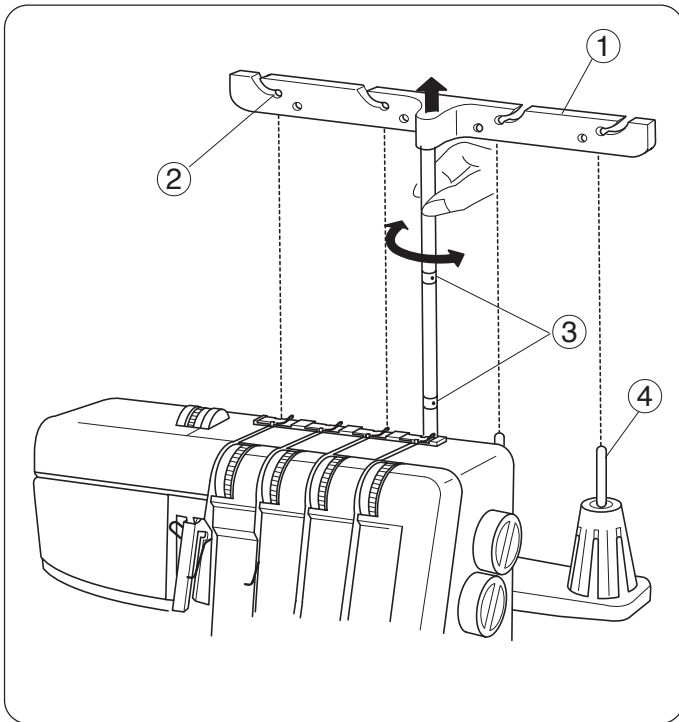
It is not necessary to adjust the presser foot's pressure for normal sewing.

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



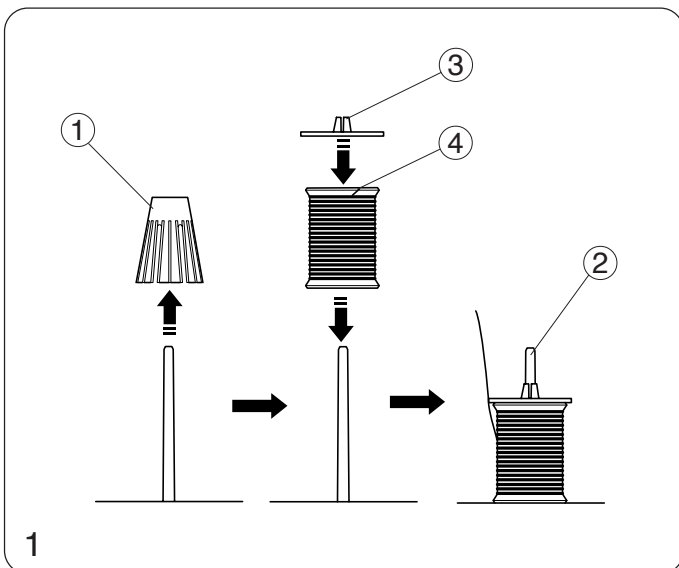
## The Position of Thread Guide Bar

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

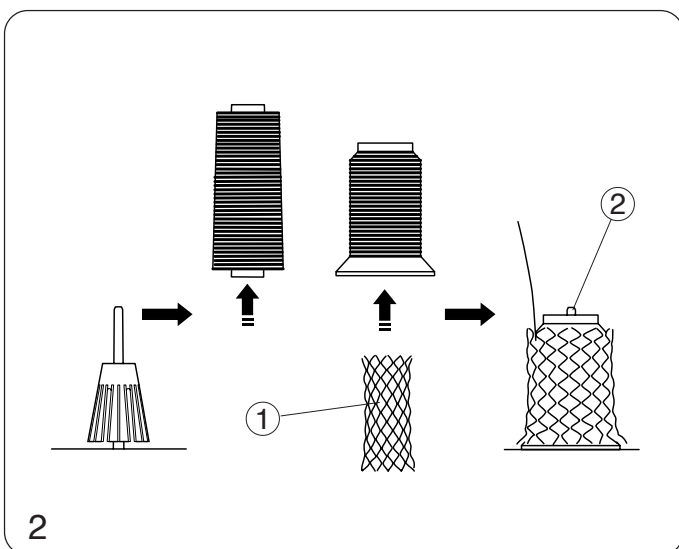
\* Make sure the two stoppers on the thread guide shaft, as shown, are set in at the correct position.



## Attaching the Spool Holder Cap and Net

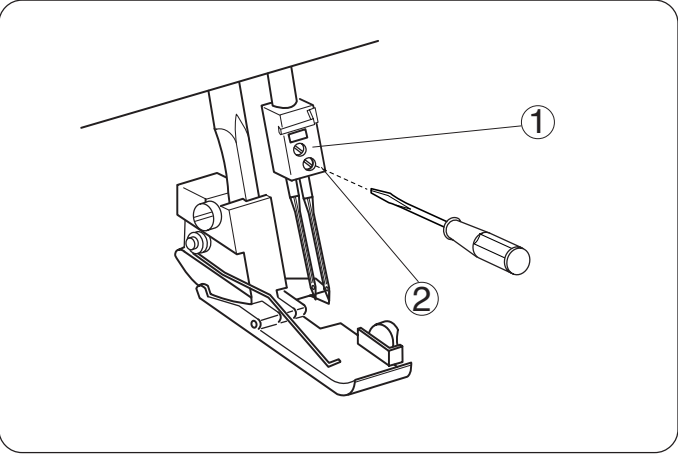
1. When you use a small thread spool, pull out the spool holder from the spool pin. Then place the spool and put the spool holder cap on top of it.

- ① Spool holder
- ② Spool pin
- ③ Spool holder cap
- ④ Slit



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



**Changing Needles**

Turn off the power switch and unplug the machine.

Raise the needle to its highest position.

Then loosen the left or right needle clamp screw for the needle you are going to remove.

- ① Needle clamp screw on the left
- ② Needle clamp screw on the right

\* Use HA-1SP #14 Needle or #11.

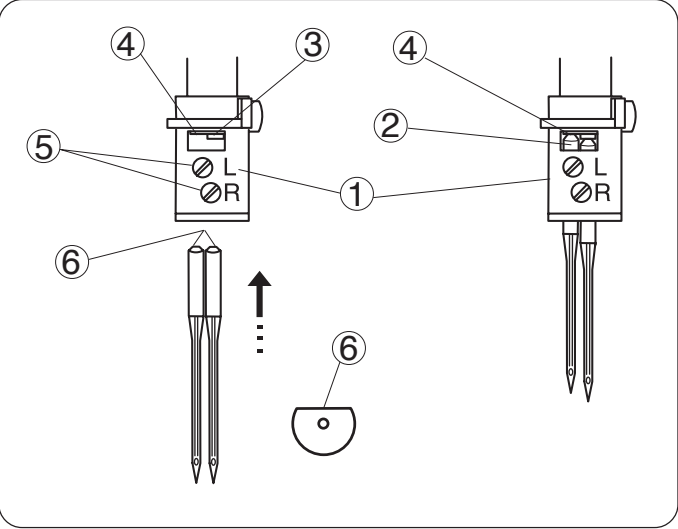
**To attach the needle on the right**

Insert a new needle into the needle clamp with the flat side to the back until the top of the needle touches the stopper pin, then tighten the needle clamp screw on the right.

**To attach the needle on the left**

Insert a new needle into the needle clamp with the flat side to the back until the top of the needle touches the edge of the needle bar, then tighten the needle clamp screw on the left.

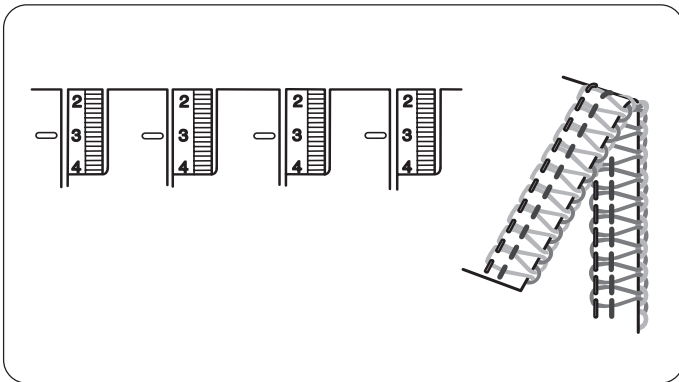
\* When the needles are set correctly, the left needle is higher than the right one.



- ① Needle clamp
- ② Needle
- ③ Needle stopper pin
- ④ Edge of needle bar
- ⑤ Needle clamp screws
- ⑥ Flat side to the back

\* Do not use any needle which is bent or blunt.

## Stitch Definition



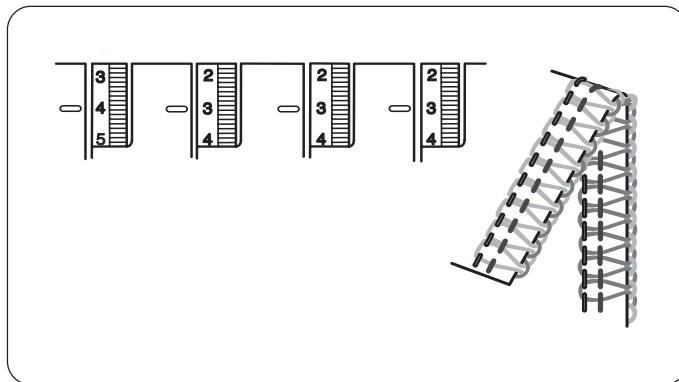
### 1 Safety 4 Thread

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.

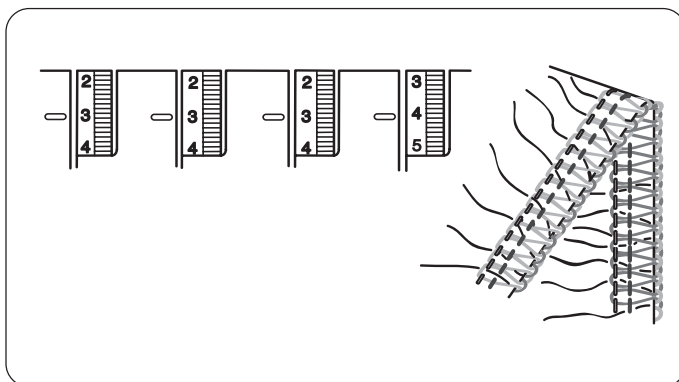


### 2 Stretch Knit

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.

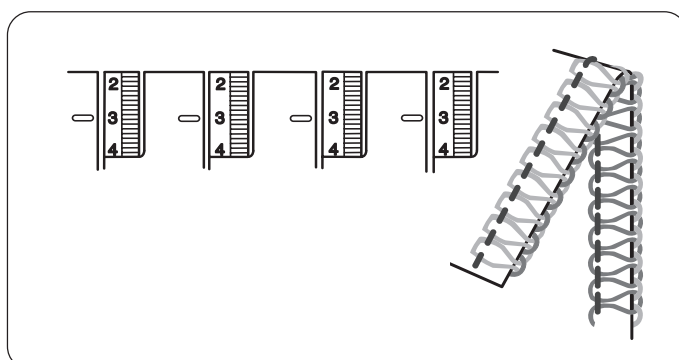


### 3 Gathering 4

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.

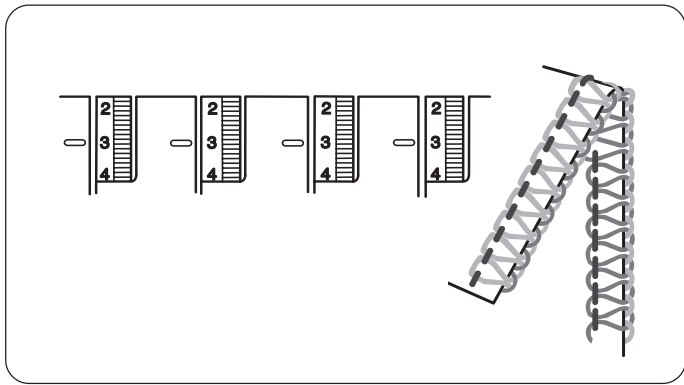


### 4 3 Thread Wide

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.

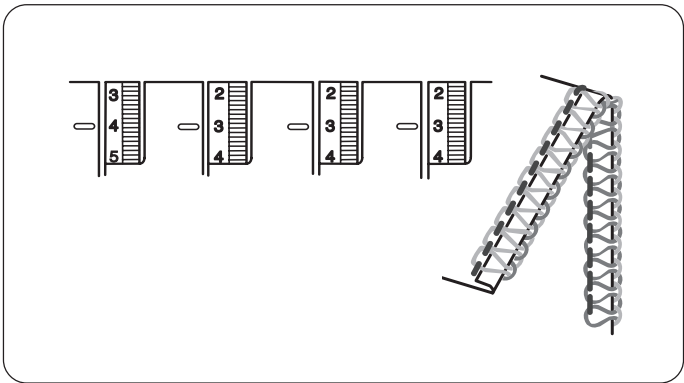


**5 3 Thread**

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.

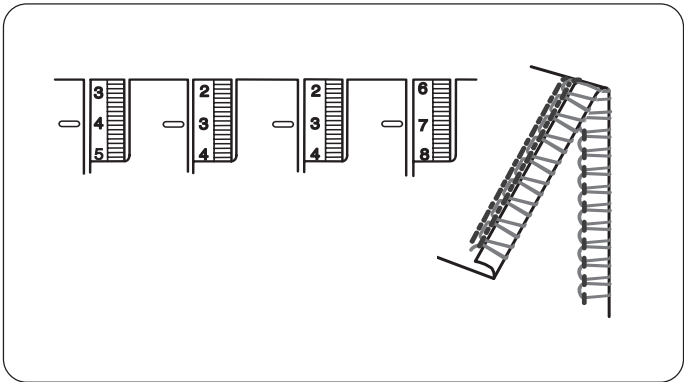


**6 Narrow Hem 3**

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.

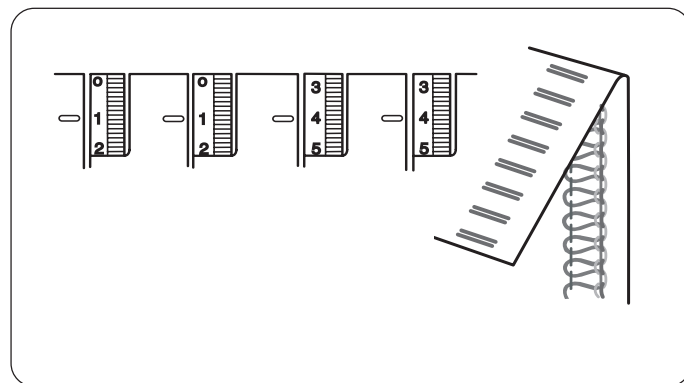


**7 Rolled Hem 3**

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.



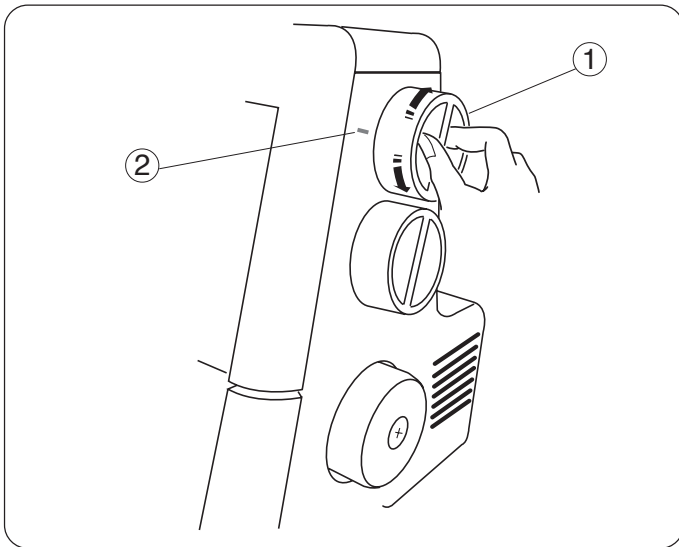
**8 Flatlock 3**

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**

1. Construction method for bulky knitwear.
2. Decorative accent.



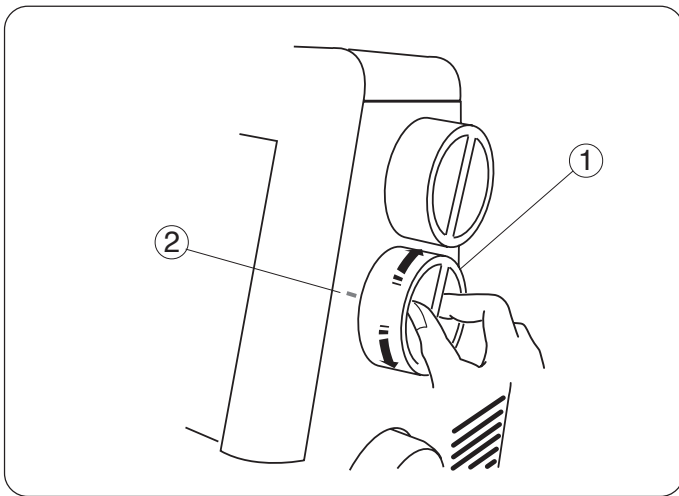
## Adjustment of Stitch Length

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



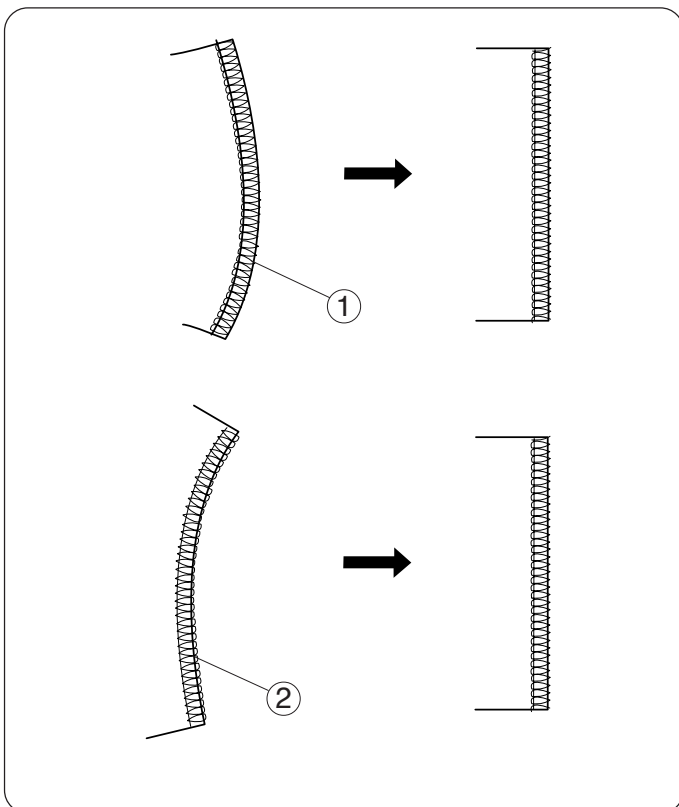
## Adjustment of Differential Feed Ratio

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.



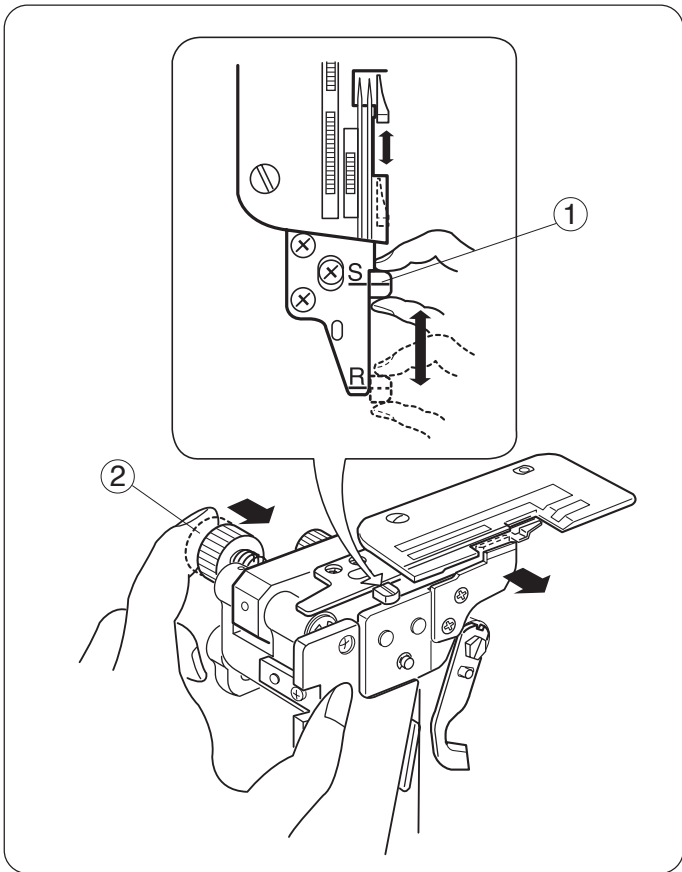
## Adjustment of Needle Plate Setting Knob (Changing to Standard Serging or Rolled Hemming)

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 15).
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 15). Close the looper cover and side cover.

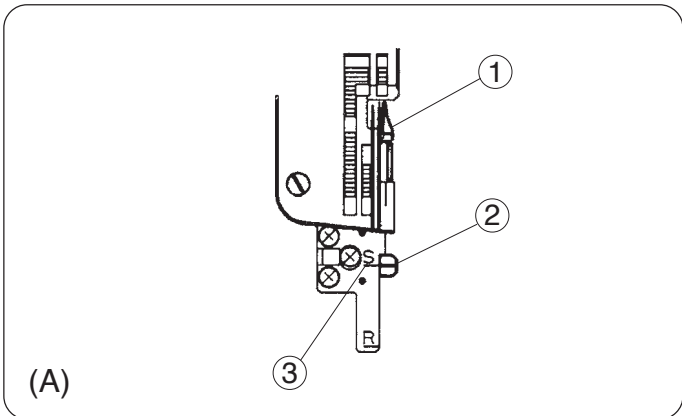
- ① Needle plate setting knob
- ② Cutting width adjusting dial



### (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.

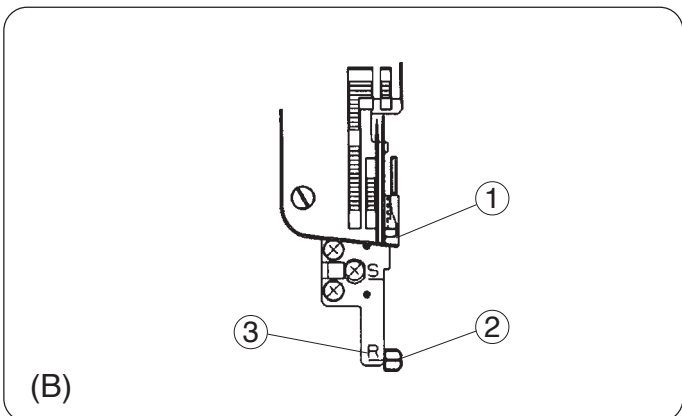
- ① Chaining finger
- ② Needle plate setting knob
- ③ Guide line S

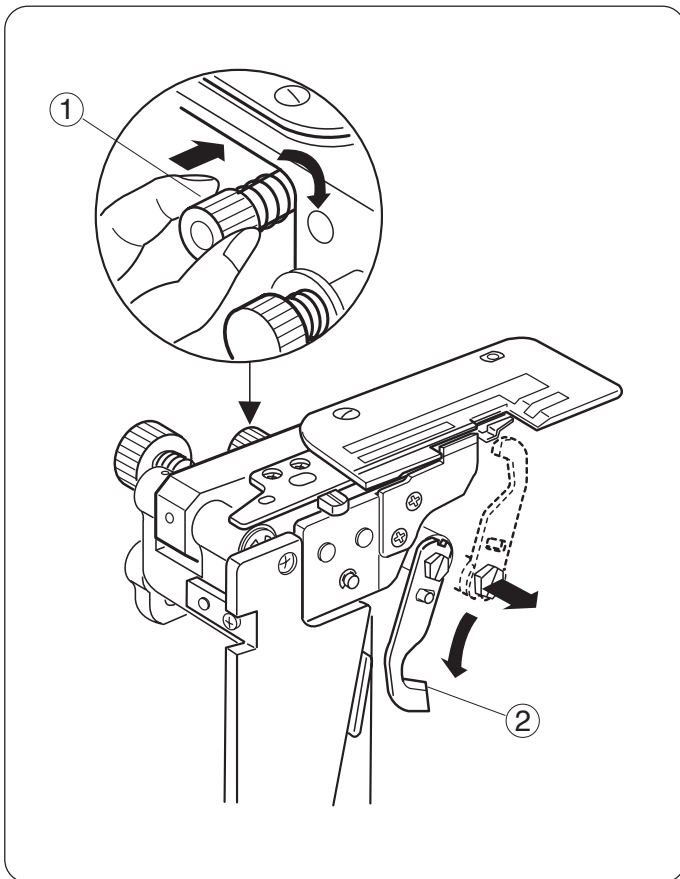


### (B) Rolled Hemming

\* 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

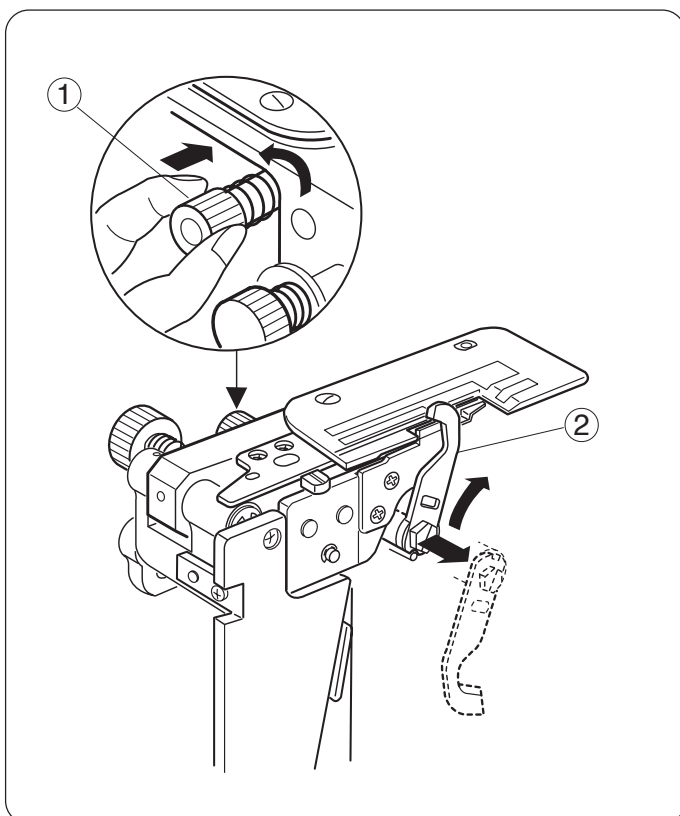




### To Deactivate the Upper Knife

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

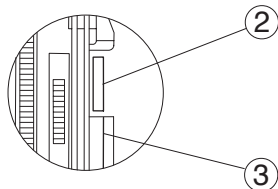
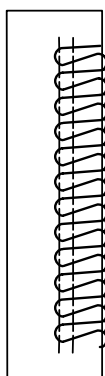
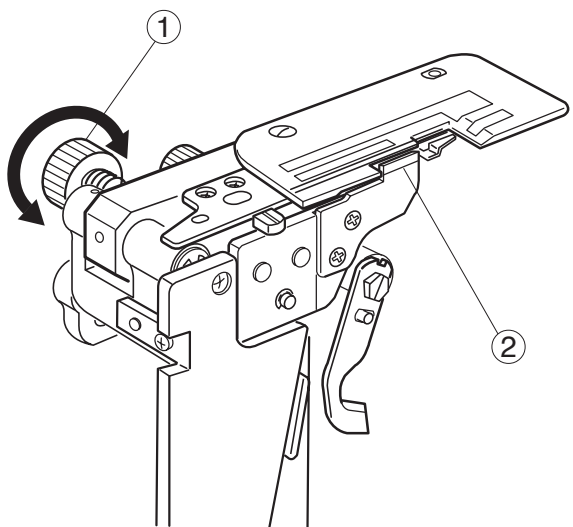
## Adjustment of Cutting Width

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

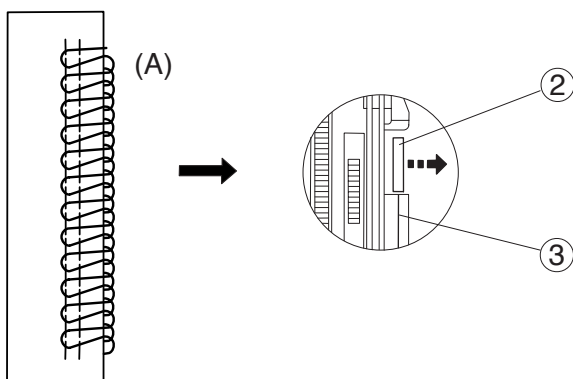
Open the side cover and deactivate the upper knife. Turn the cutting width adjusting dial to move the lower knife to the desired position.

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

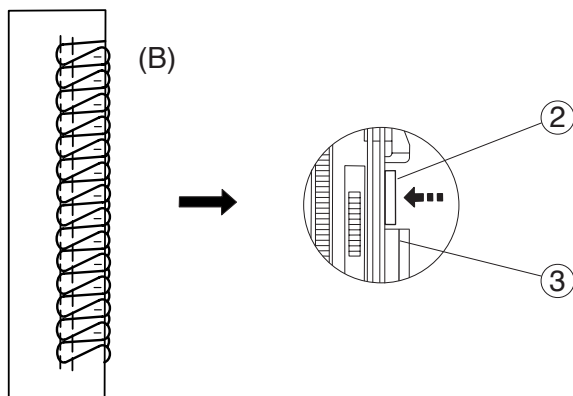
- ① Cutting width adjusting dial
- ② Lower knife
- ③ Guide line on the needle plate



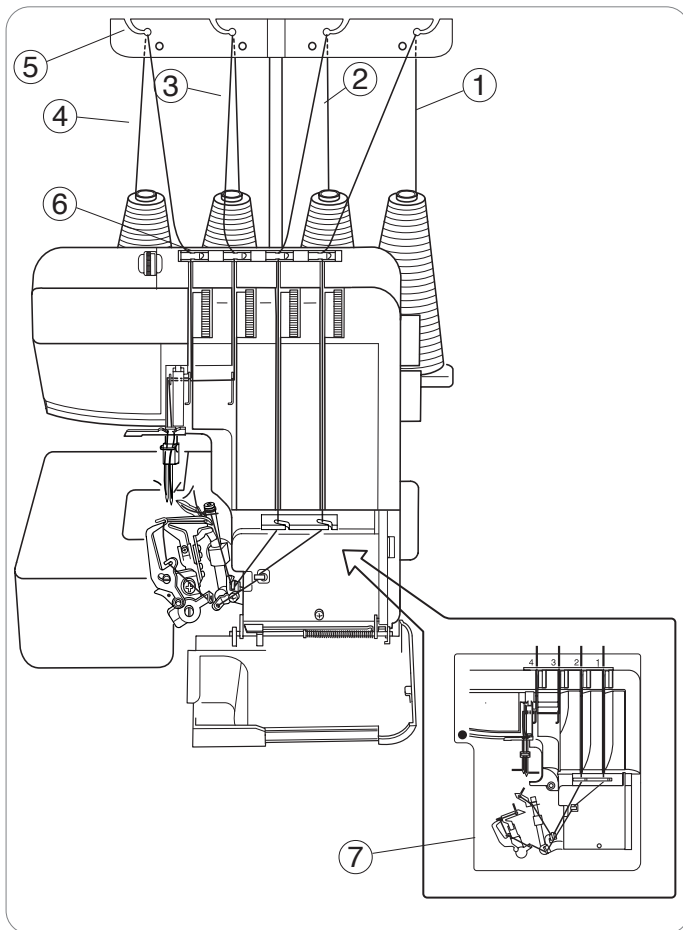
- (A) When cutting width is too narrow.  
Turn the cutting width adjusting dial clockwise.  
Lower knife will move to right.



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



Close the looper cover and side cover.  
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
- 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.

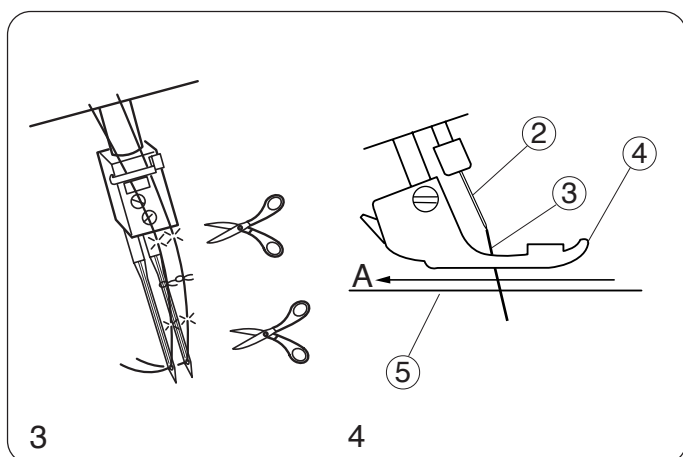
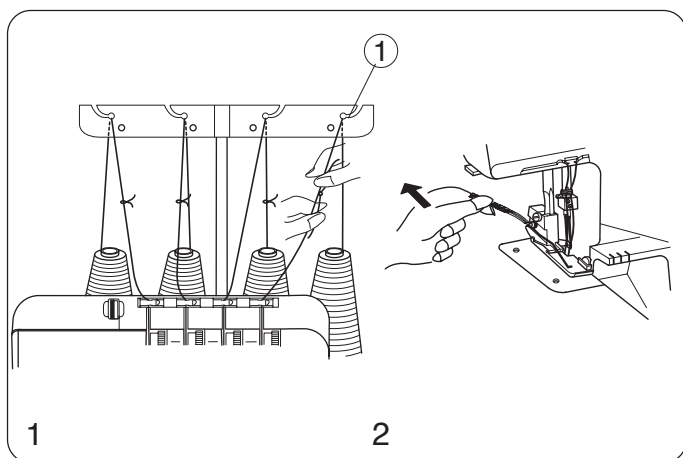
\* Turn off the power switch before threading the machine.

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

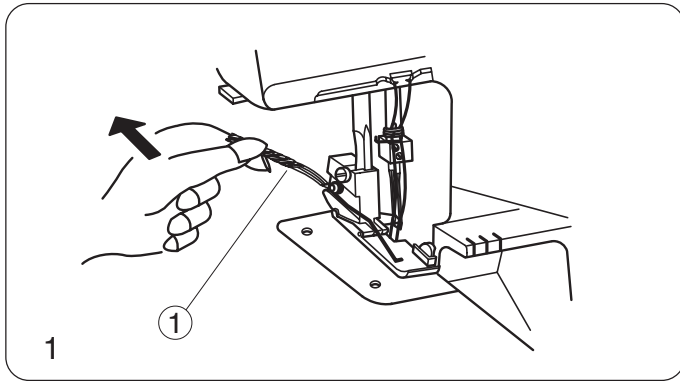
- For re-threading the machine easily, start from the lower looper, upper looper, right needle and left needle threads.

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").



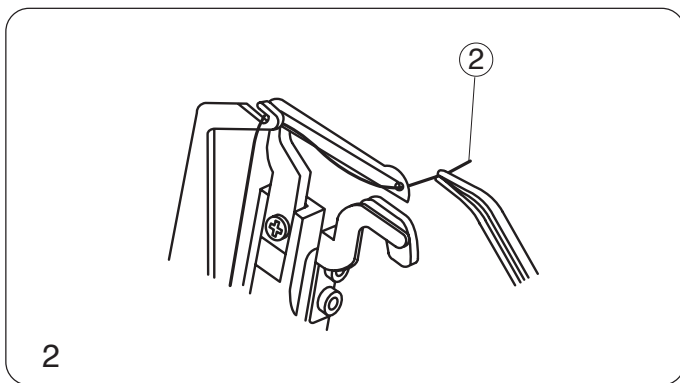
- If one of the threads is broken, follow the re-threading procedure as follows:
- \* Turn off the power switch and unplug the machine.

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.



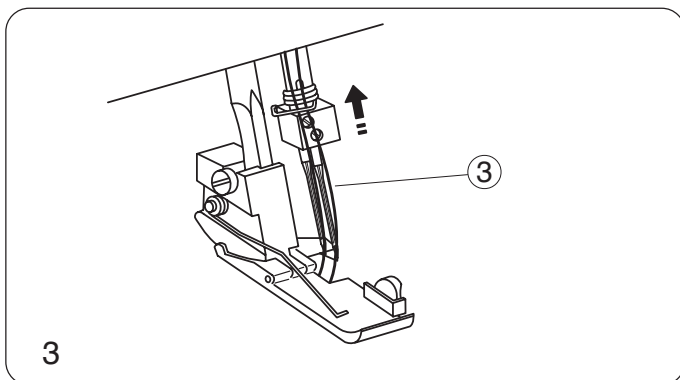
- ① Cut off the tangled threads.

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



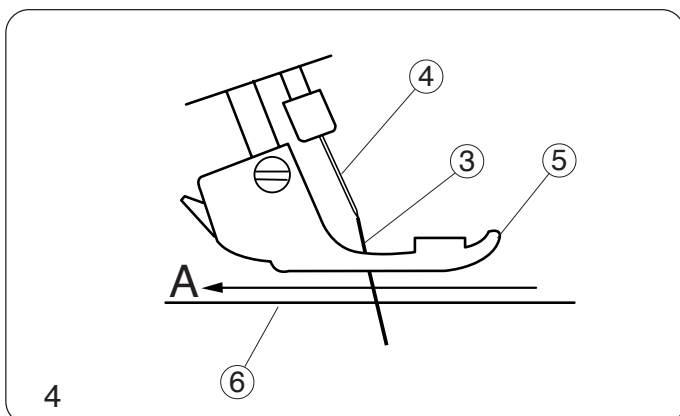
- ② Lower looper thread

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

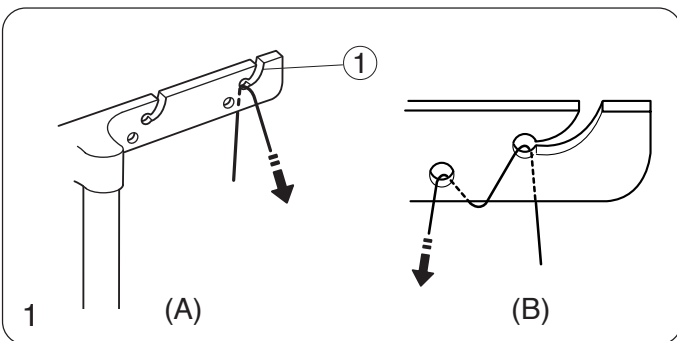
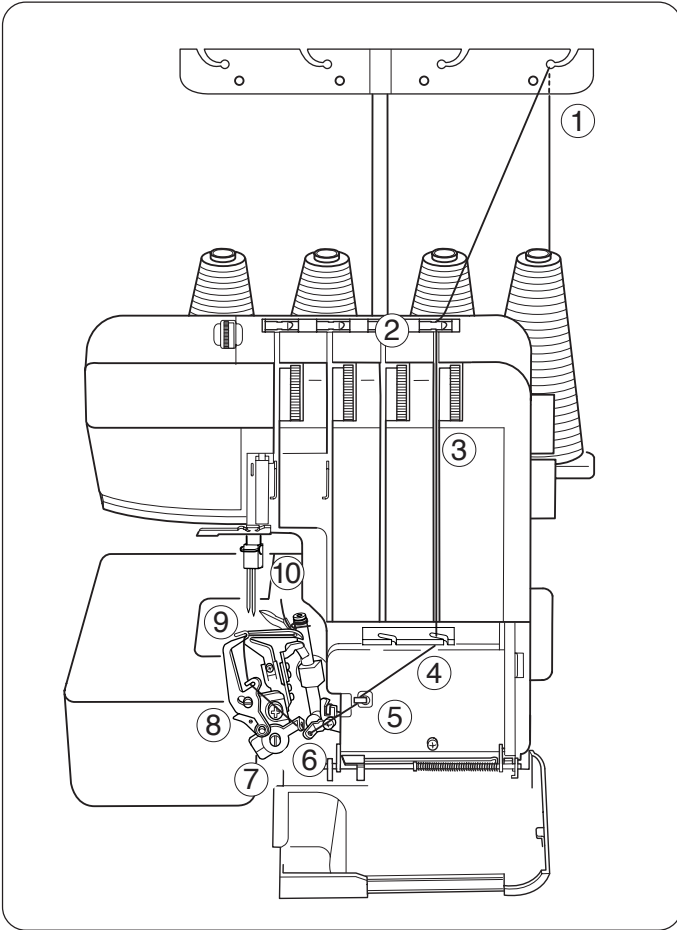
## Threading the Lower Looper

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.

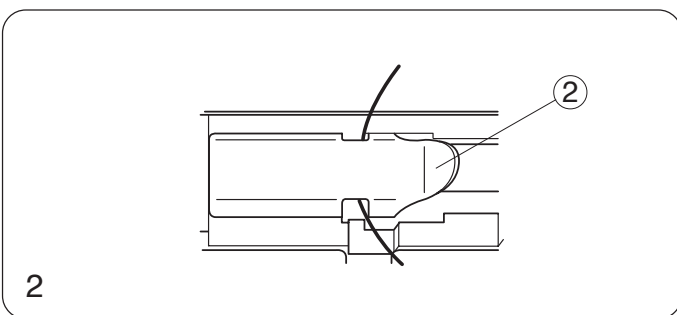
\* A convenient threading chart is placed on the machine body inside the looper cover.



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

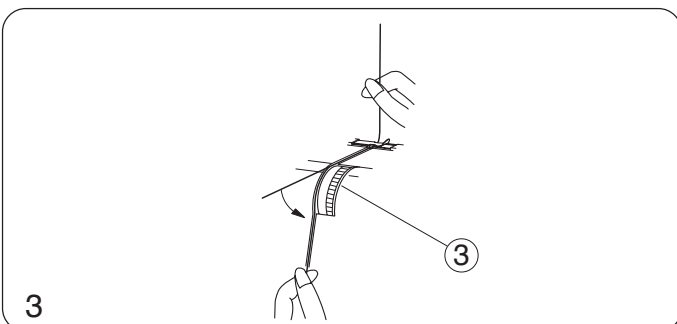
\* If the thread is coming out from the thread guide groove, pass the thread through the thread guide hole again as shown: B

① Thread guide



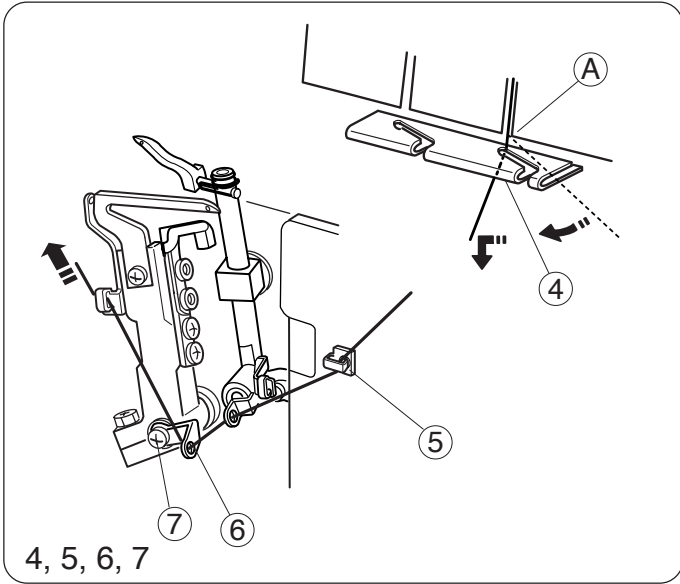
2. After threading the thread guide bar, slip the thread into the first guide on the machine as shown.

② Thread guide



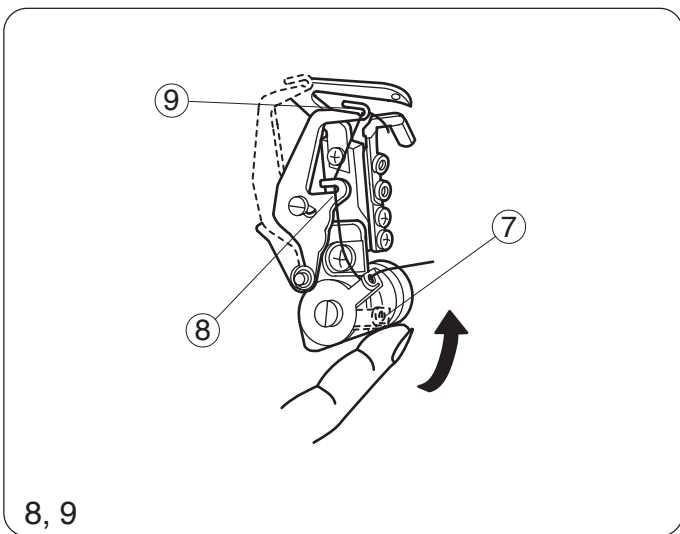
3. Hold the thread at both ends and tug gently to ensure the thread is correctly inserted between the tension discs. ( If the presser foot lifter is raised, the thread easily inserts between the tension discs.)

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 Thread guide.
- ⑥ Looper thread take-up lever (lower)
- ⑦ Lower looper thread guide (1)



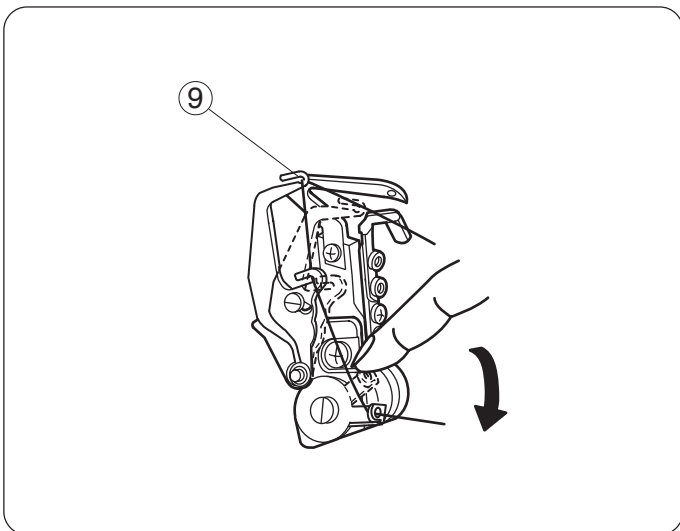
8. Turn the handwheel toward you to move the lower looper to the right side.

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.

Pass the thread through the lower looper thread guide (2).

9. Pass the thread through the lower looper thread guide (3).

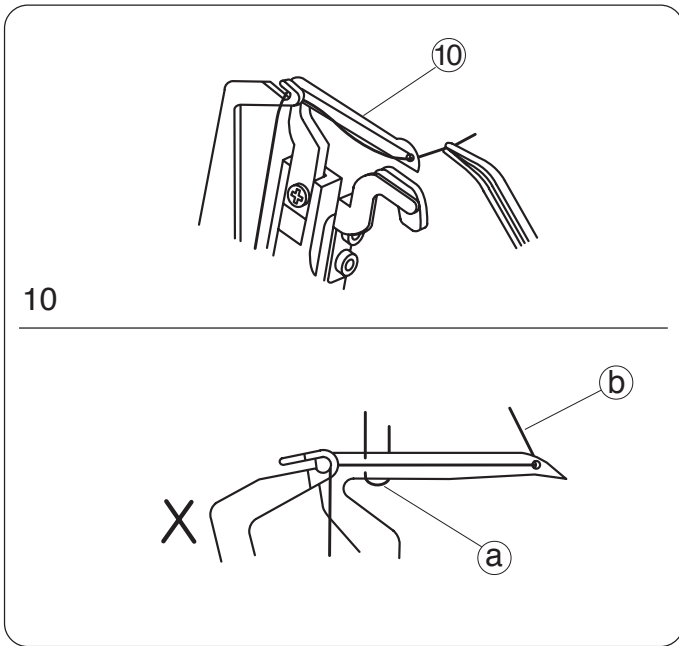
- ⑧ Lower looper thread guide (2)
- ⑨ Lower looper thread guide (3)



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.

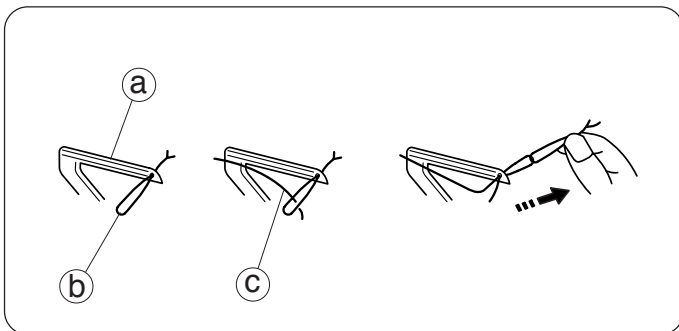
\* You can return the lower looper thread guide (1), (2) and (3) to their original position automatically by turning the handwheel counterclockwise.



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.

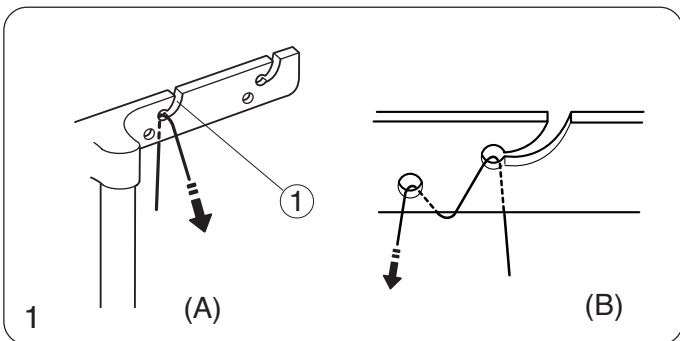
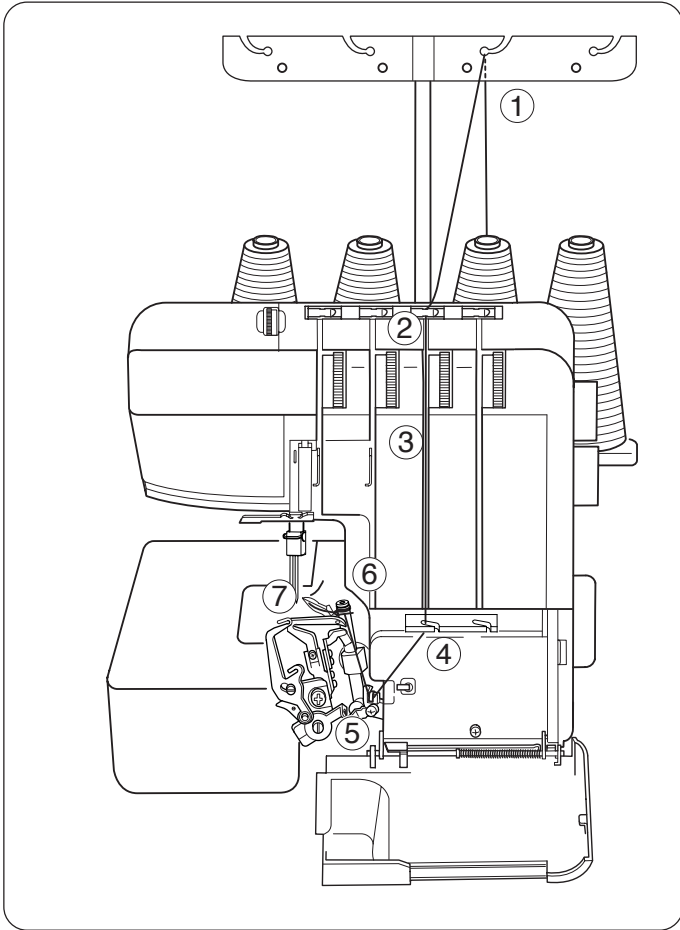
- Ⓐ Lower looper
- Ⓑ Ordinary thread
- Ⓒ Woolly nylon/polyester thread



## Threading the Upper Looper

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

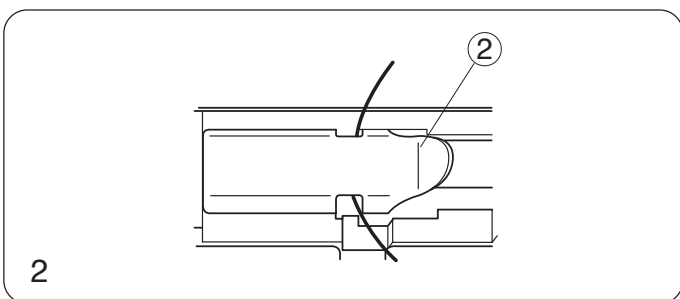
- \* The points to thread for upper looper are marked in yellow.
- \* A convenient threading chart is placed on the machine body inside the looper cover.



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

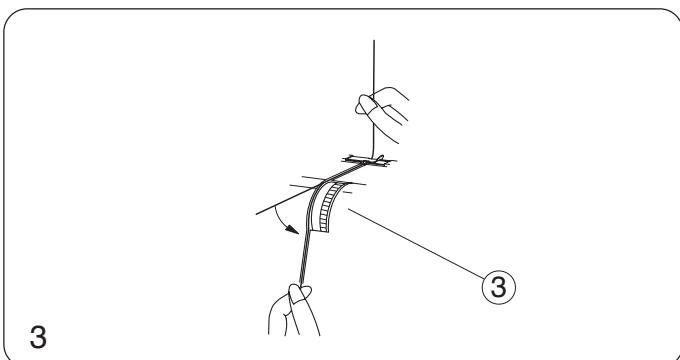
- \* If the thread is coming out from the thread guide groove, pass the thread through the thread guide hole again as shown: B

① Thread guide



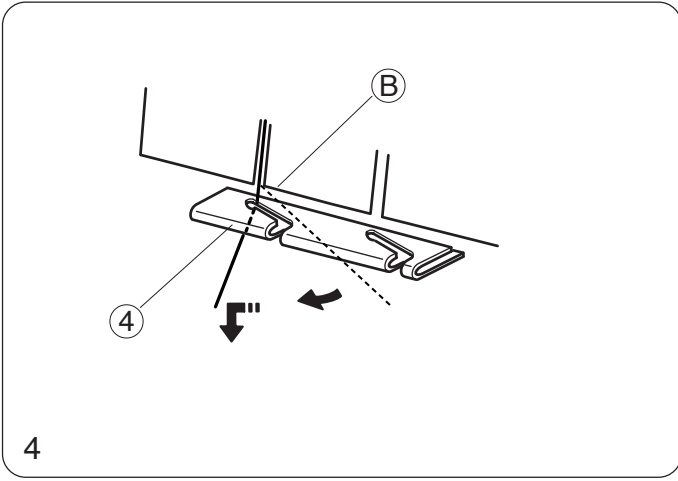
2. After threading the thread guide bar, slip the thread into the first guide on the machine as shown.

② Thread guide



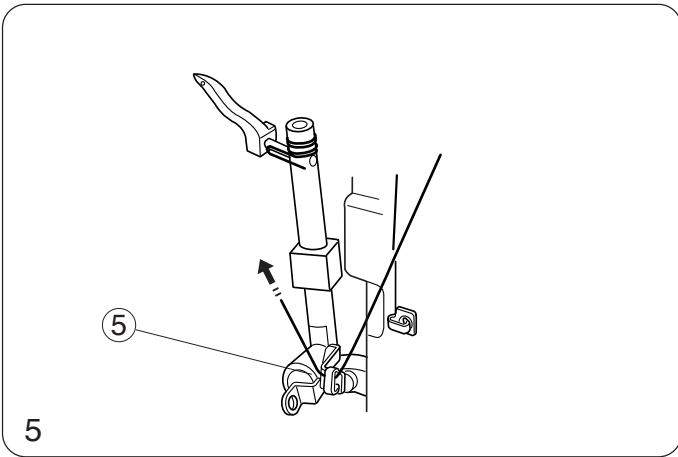
3. Hold the thread at both ends and tug gently to ensure the thread is correctly inserted between the tension discs. (If the presser foot lifter is raised, the thread easily inserts between the tension discs.)

③ Upper looper thread tension dial



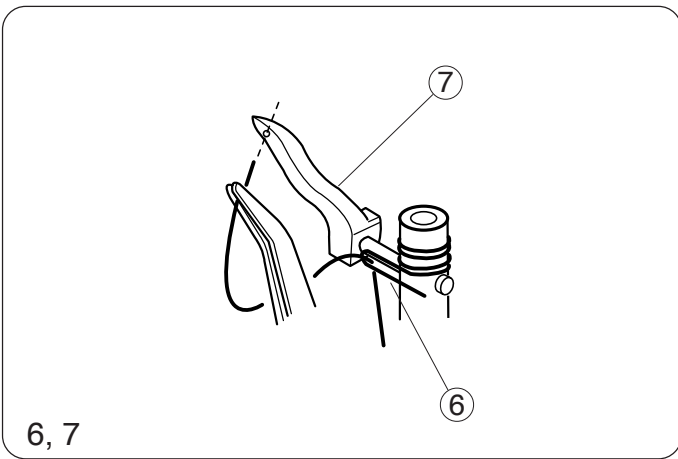
4. Hook the thread on the corner (B), and then pass the thread through the looper thread guide.

④ Looper thread guide



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

⑤ Looper thread take-up lever (upper)

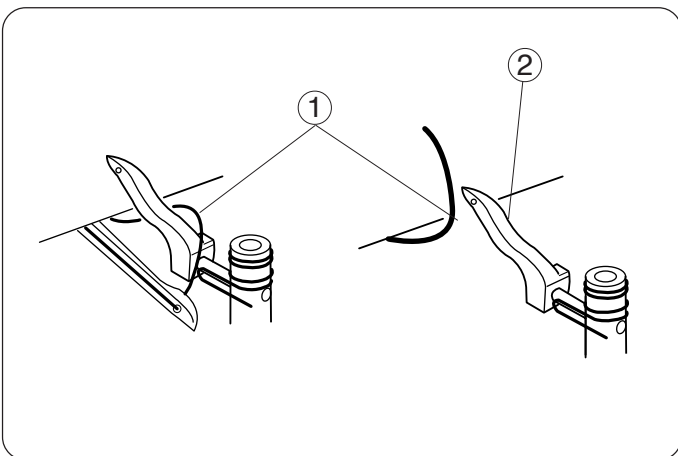


6. Pass the thread through upper looper thread guide.

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.

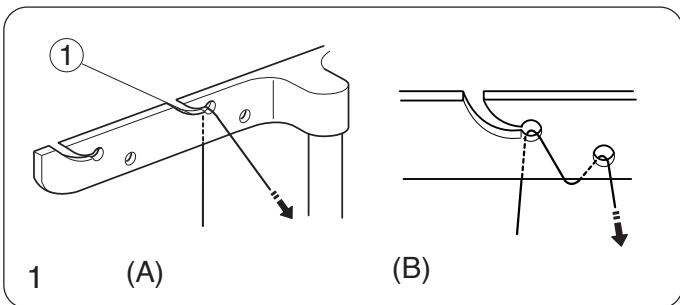
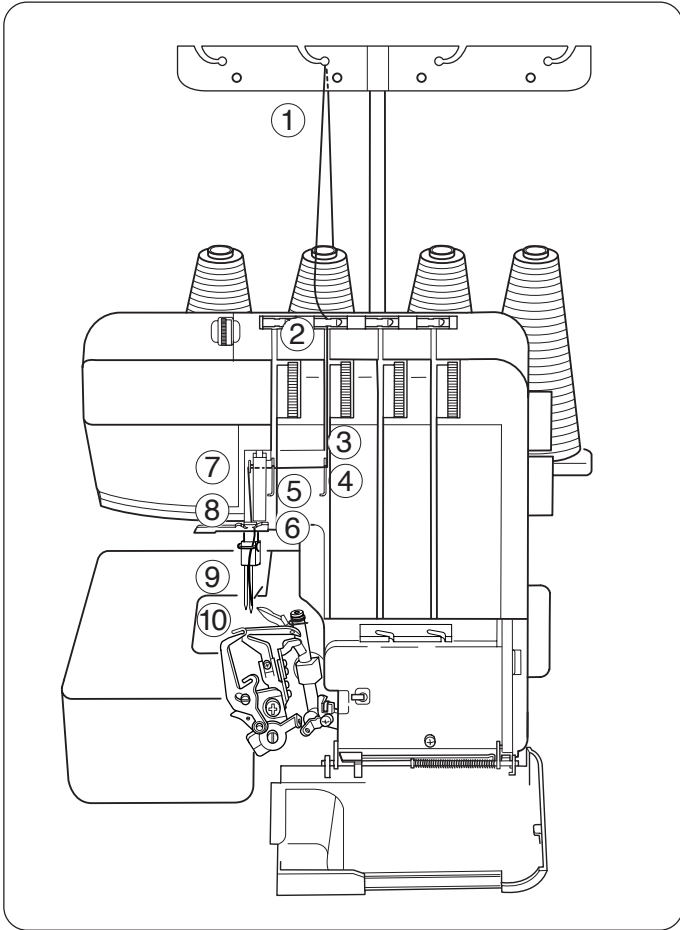
① Lower looper thread

② Upper looper

## Threading the Needle on the Right

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

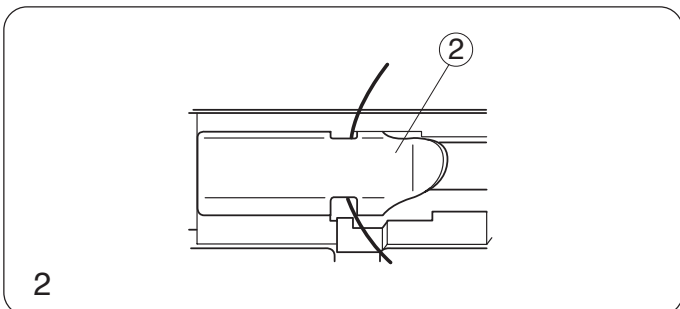
- \* The points to thread for needle on the right are marked in red.
- \* A convenient threading chart is placed on the machine body inside the looper cover.



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

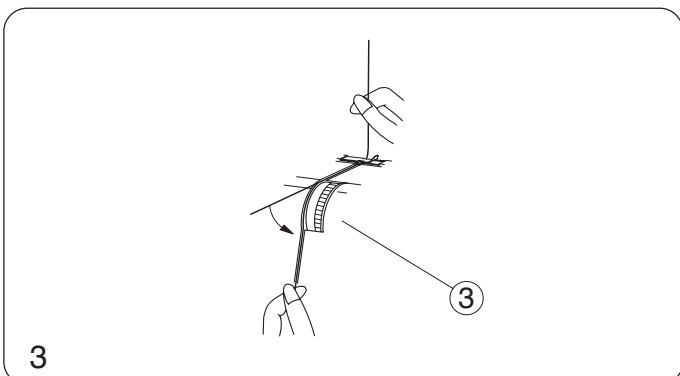
- \* If the thread is coming out from the thread guide groove, pass the thread through the thread guide hole again as shown: B

① Thread guide



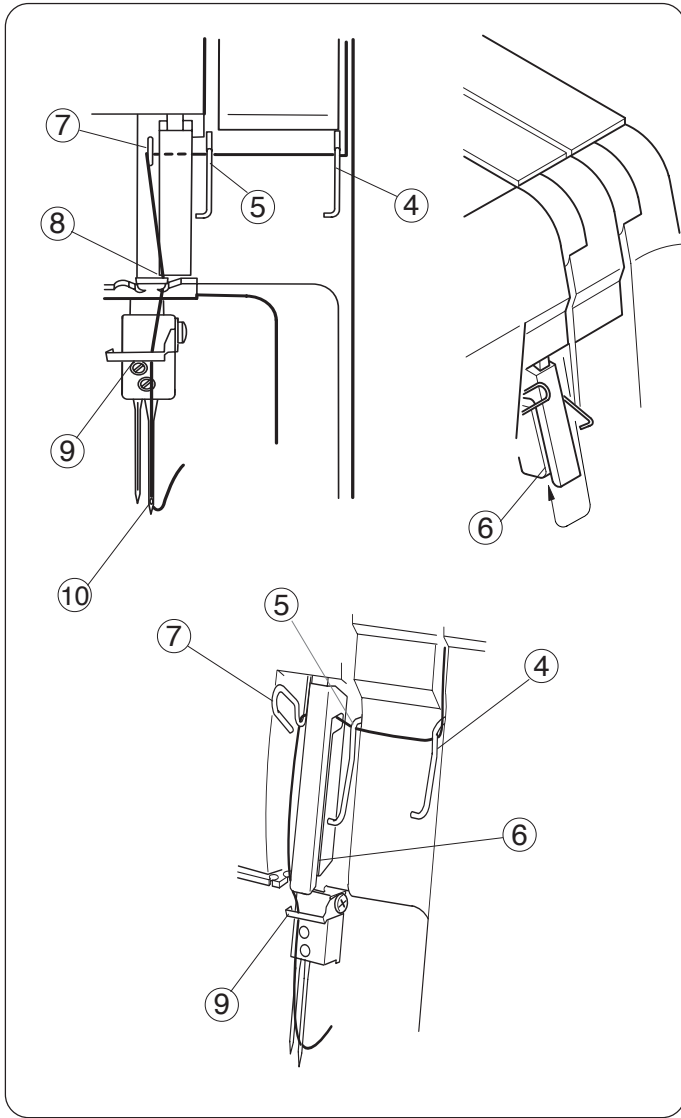
2. After threading the thread guide bar, slip the thread into the first guide on the machine as shown.

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

### IMPORTANT:

When threading the needle, be sure to:

- turn the power switch off.
- lower the presser foot.

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

- ① Triangle mark
- ② 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.

- ③ V-notch

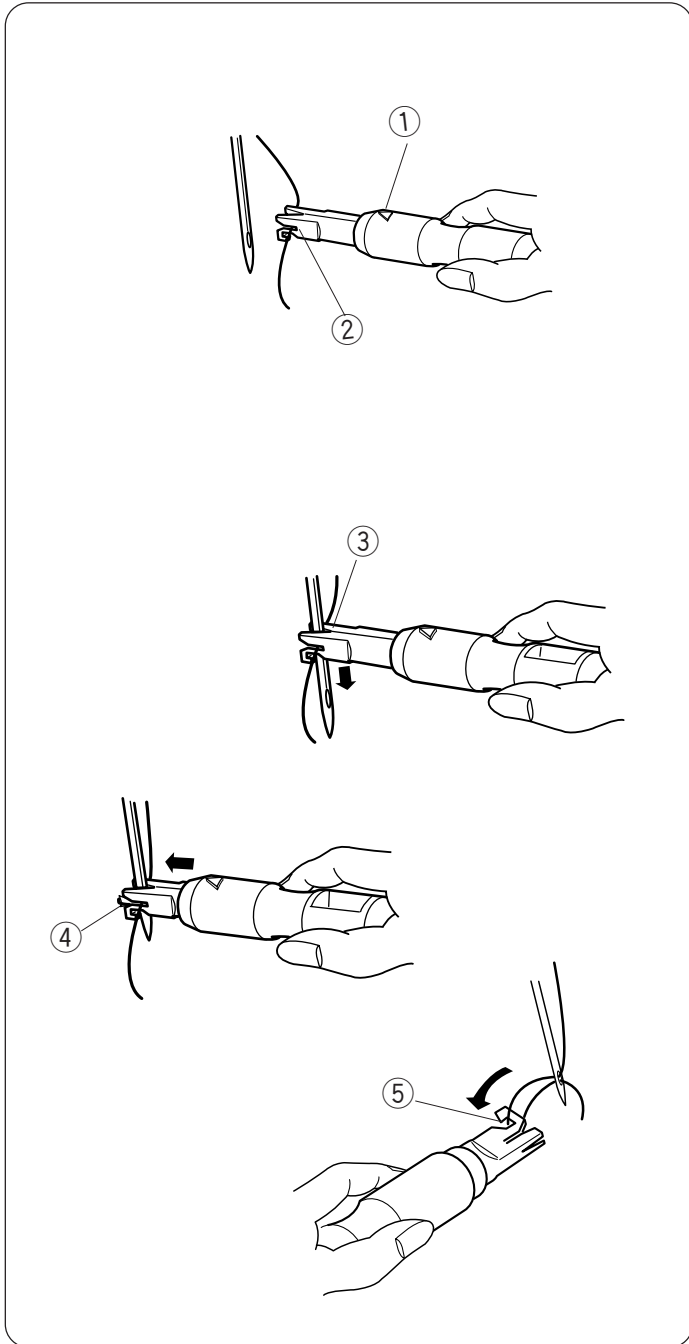
Push the threader until the threader pin comes out through the needle eye with a loop of thread.

- ④ 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.

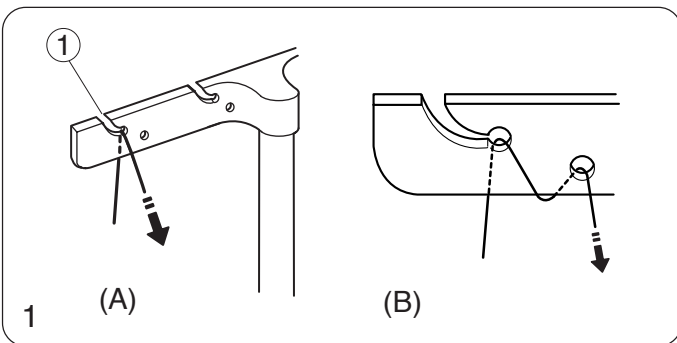
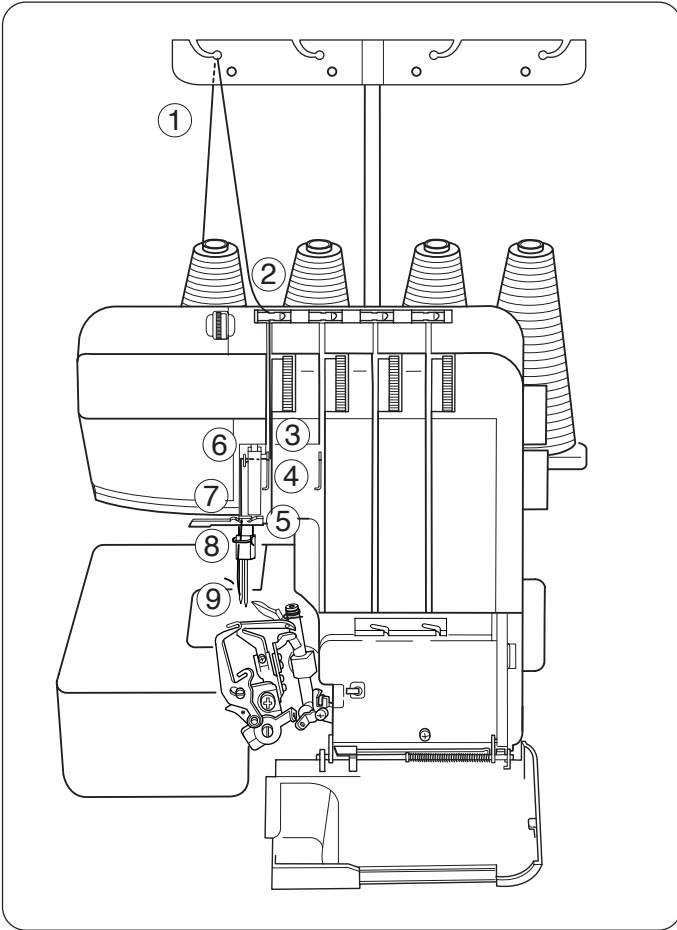
- ⑤ Hook



## Threading the Needle on the Left

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

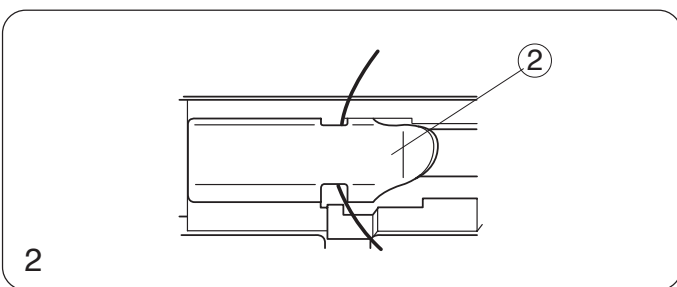
- \* The points to thread for needle on the left are marked in blue.
- \* A convenient threading chart is placed on the machine body inside the looper cover.



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

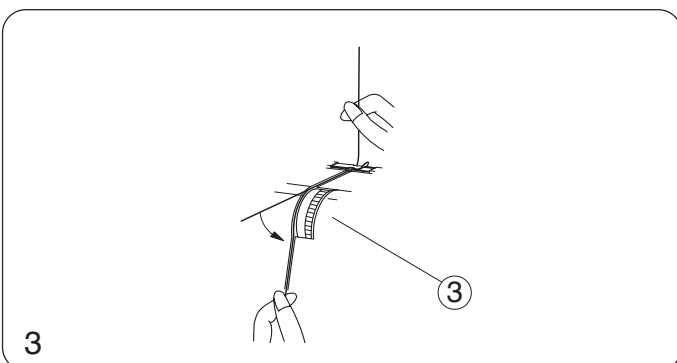
- \* If the thread is coming out from the thread guide groove, pass the thread through the thread guide hole again as shown: B

① Thread guide



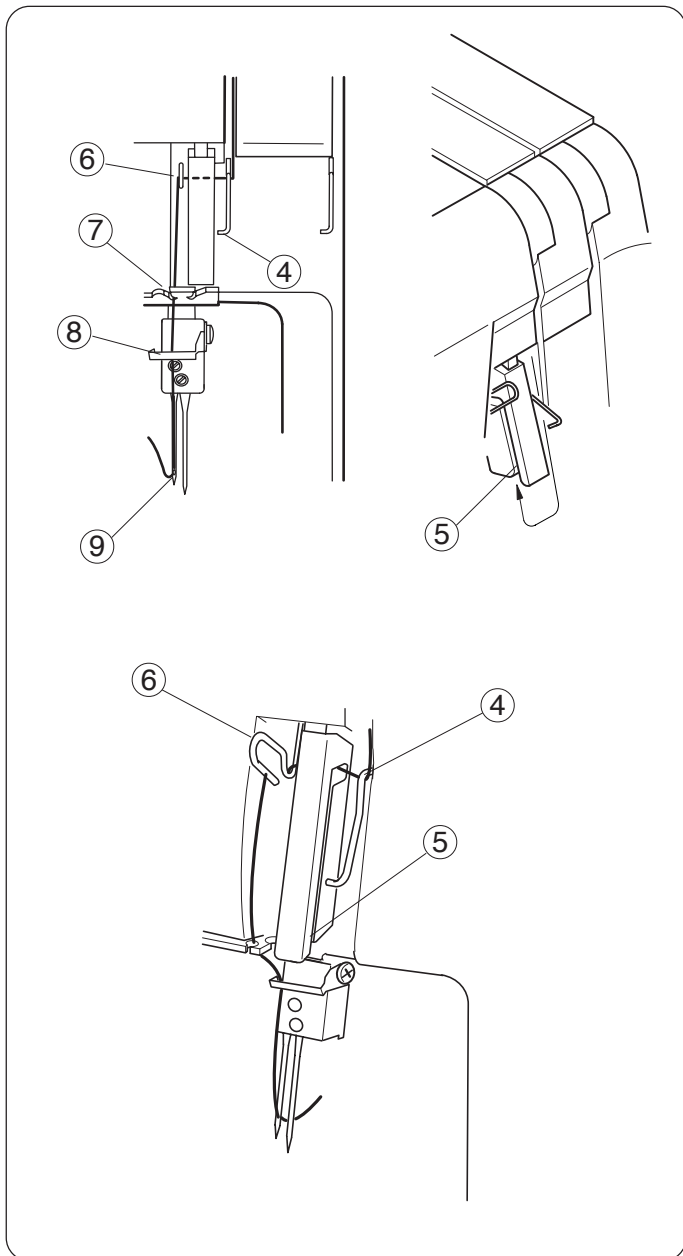
2. After threading the thread guide bar, slip the thread into the first guide on the machine as shown.

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

## 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

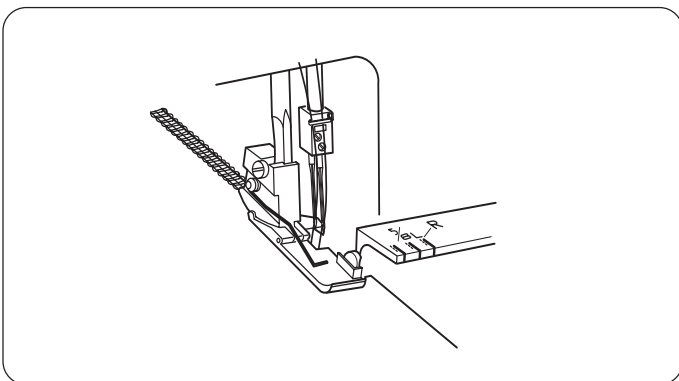
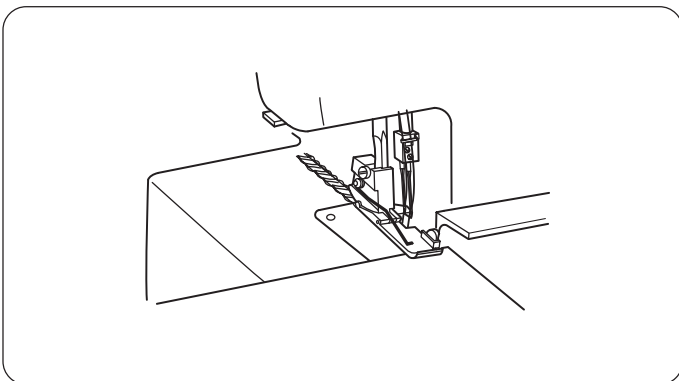
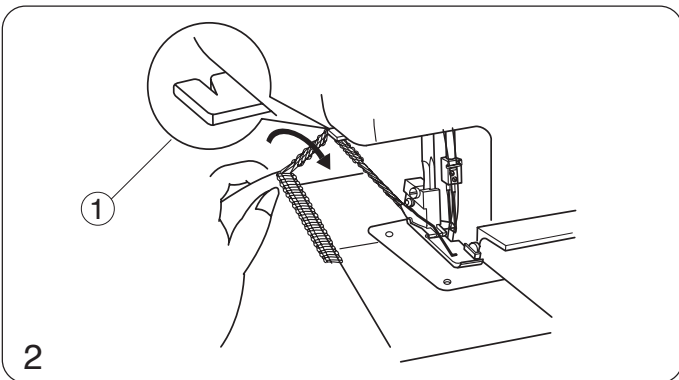
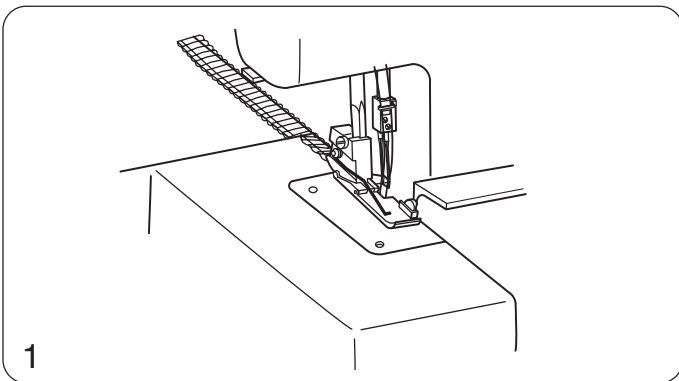
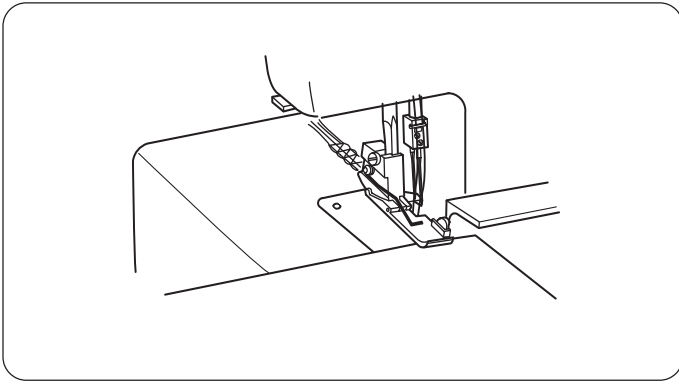
On the top of the looper cover are guide lines indicating the distance from the needle position.

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 chaining 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

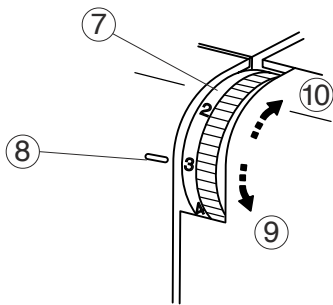
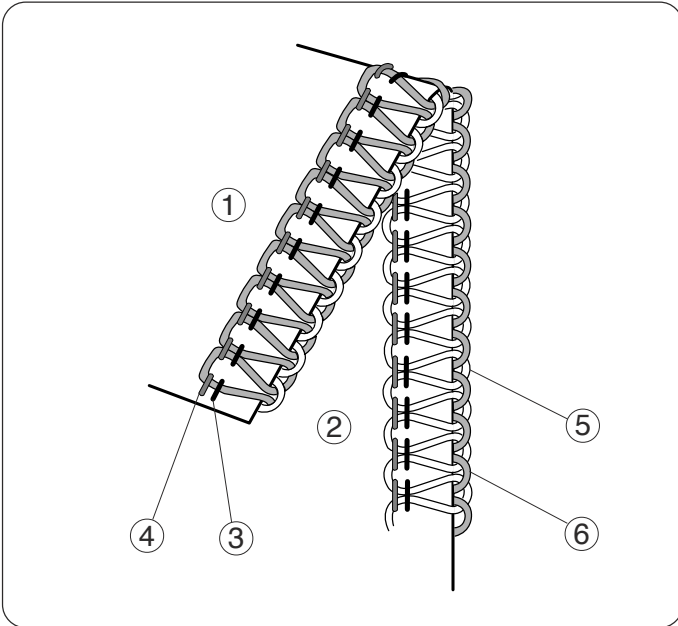
### Thread tension adjustment

\* 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



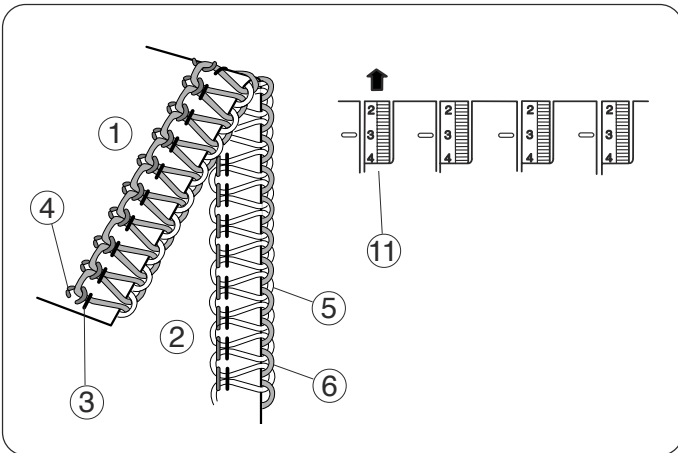
### Left needle thread tension is too loose

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



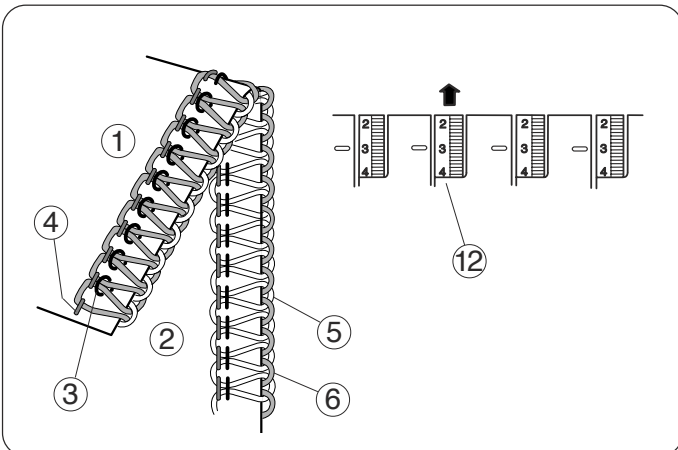
### Right needle thread tension is too loose

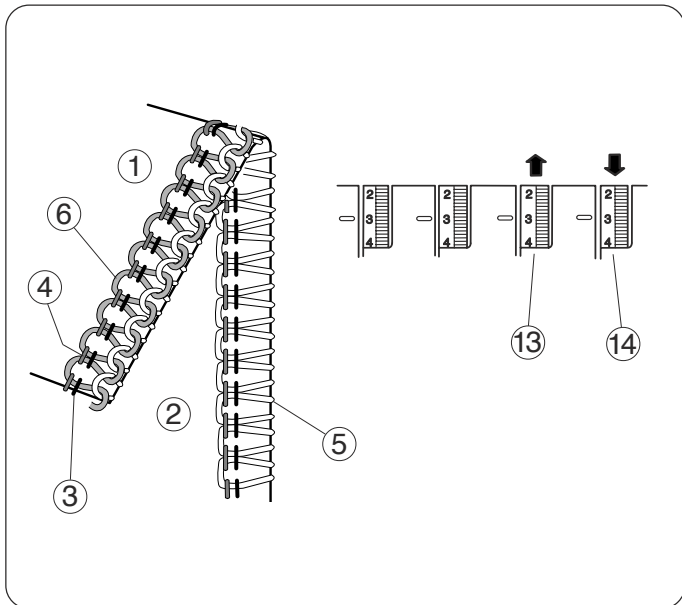
The illustration shows sewing results when the right needle thread tension is too loose.

Remedy:

Tighten the right needle thread tension.

- ⑫ Right needle thread tension dial





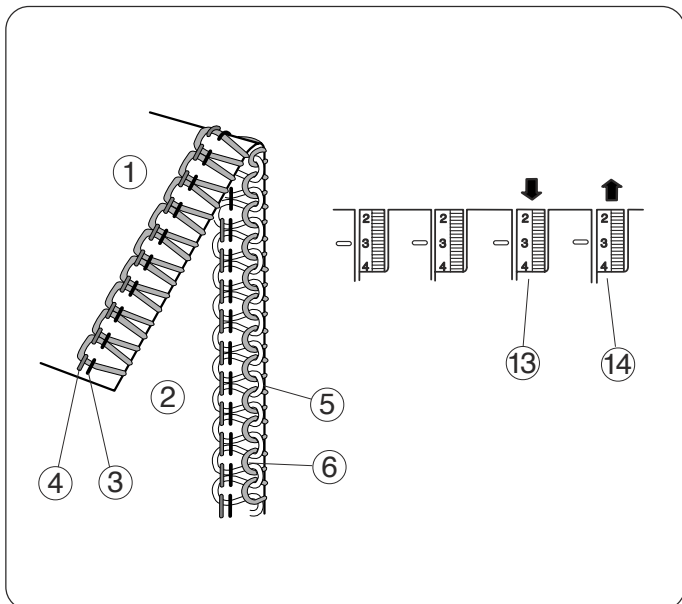
### Looper thread tension is out of balance (1)

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

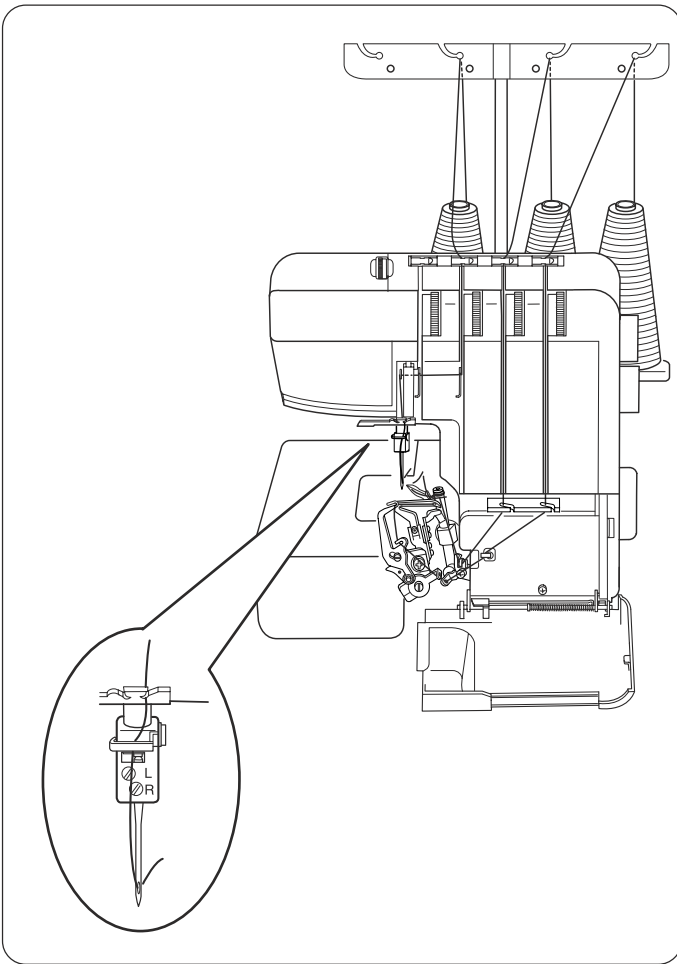
#### Using the needle on the right only (for narrow hem 3)

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:**

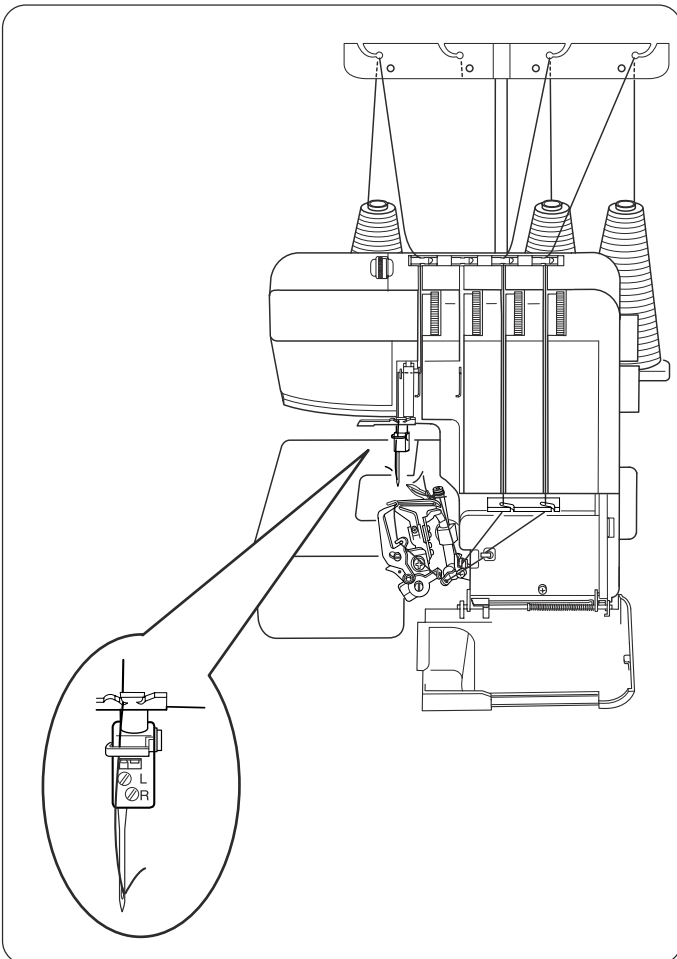
Tighten the needle clamp screw on the side that is not being used to prevent losing the screw.

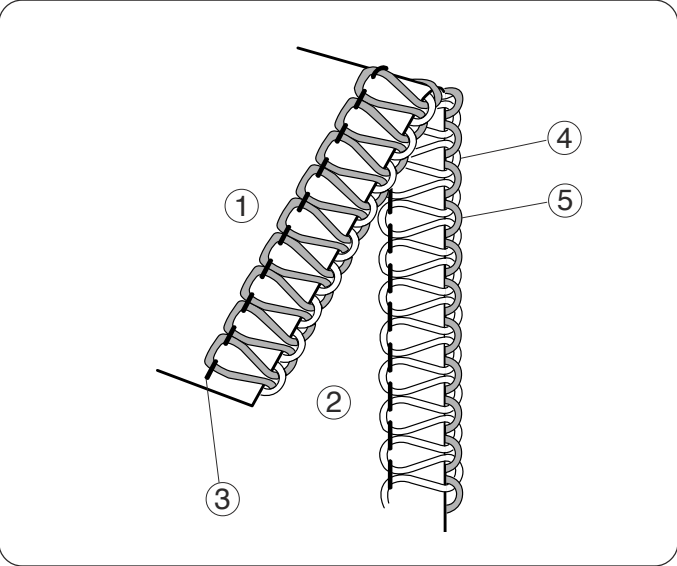


#### Using the needle on the left only (for 3-thread)

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.



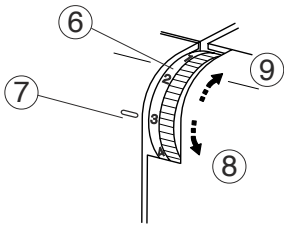


**Thread Tension (3 threads)**

**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.

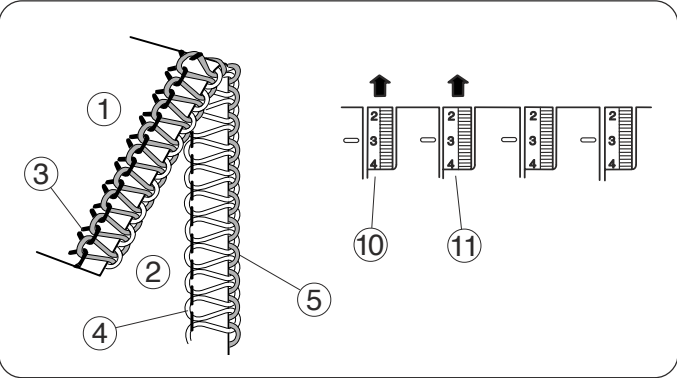
- ① Wrong side of fabric
- ② Right side of fabric
- ③ Right or left needle thread
- ④ Upper looper thread
- ⑤ Lower looper thread



**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

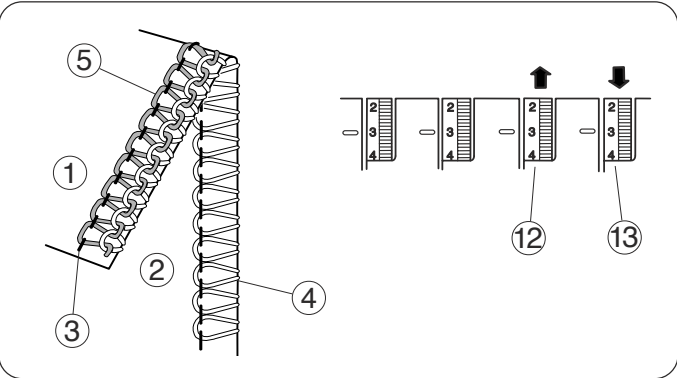


**Needle thread tension is too loose**

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

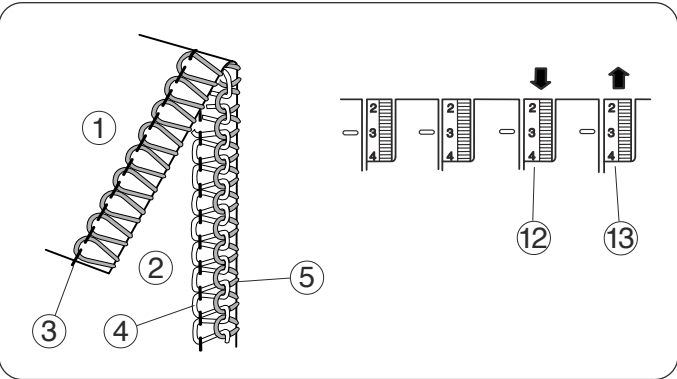


**Looper thread tension is out of balance (1)**

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

## Thread Tension for Rolled Hemming

### 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

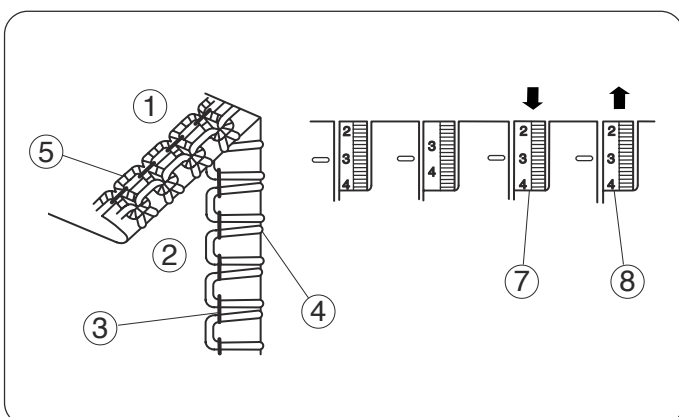
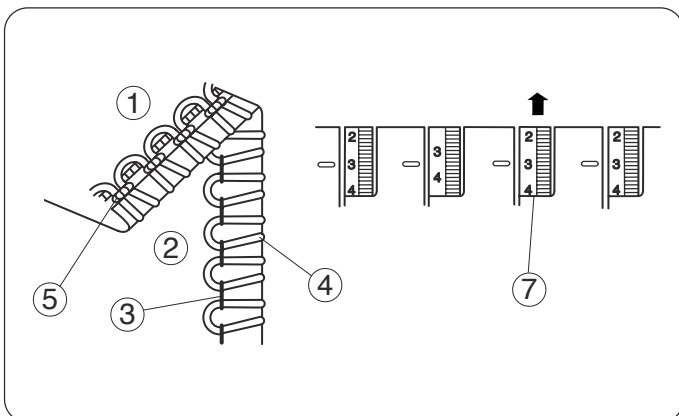
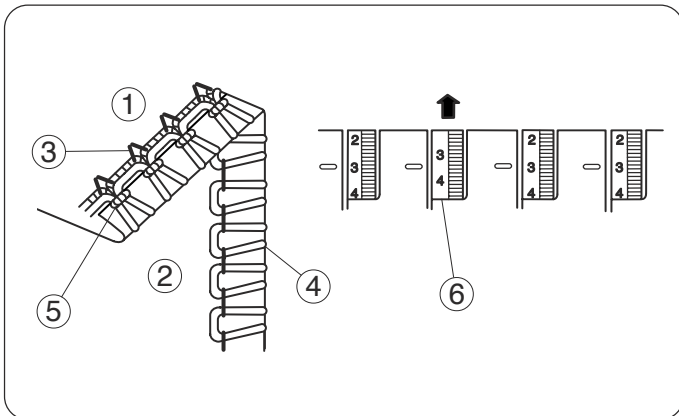
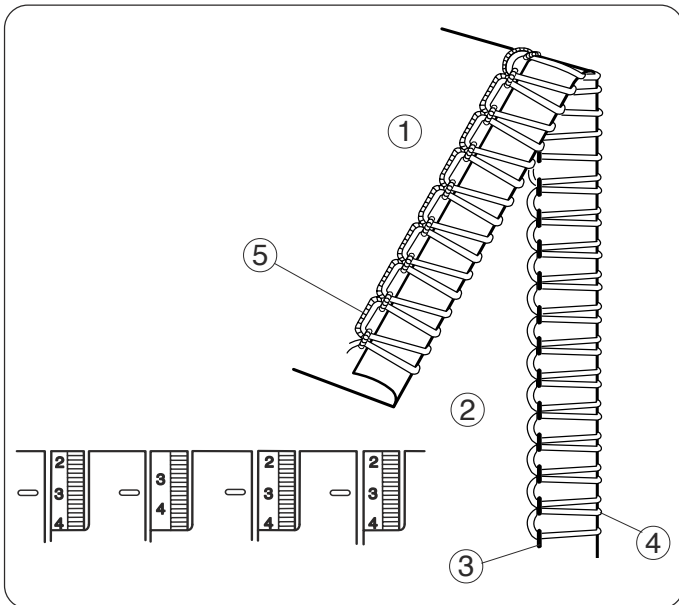
### Looper thread tension is out of balance

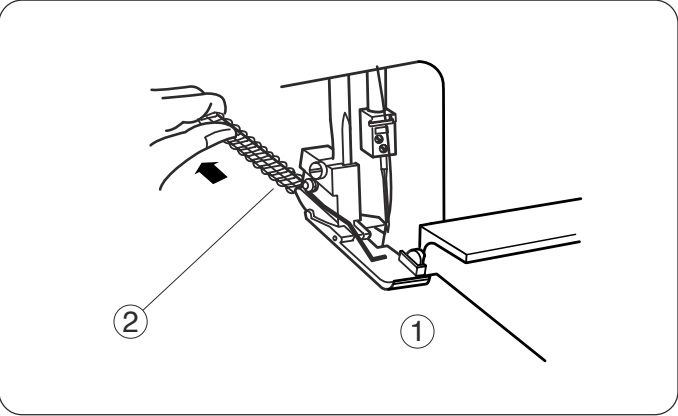
The illustration shows sewing results when the upper looper thread tension is too tight and/or lower looper thread tension is too loose.

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

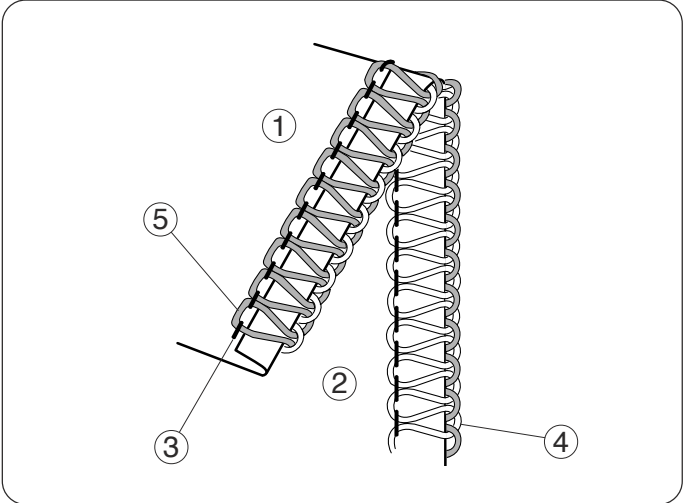




**Rolled hemming**

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

- ① Fabric
- ② Thread chain



**For narrow hemming**

**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

**NOTE:** The upper knife is sold separately.

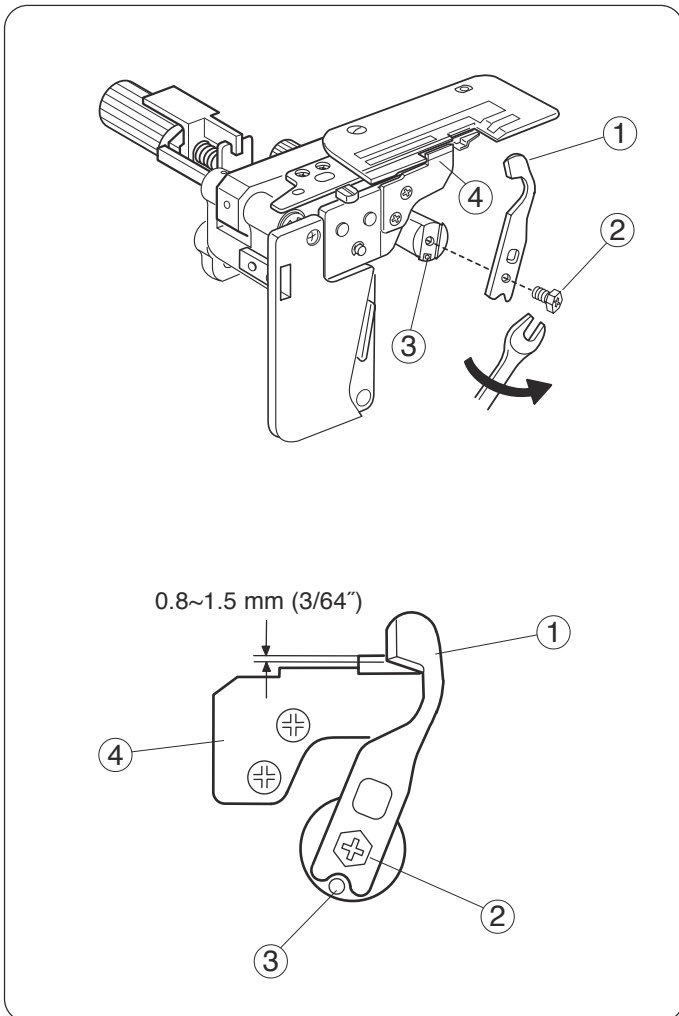
#### To remove:

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

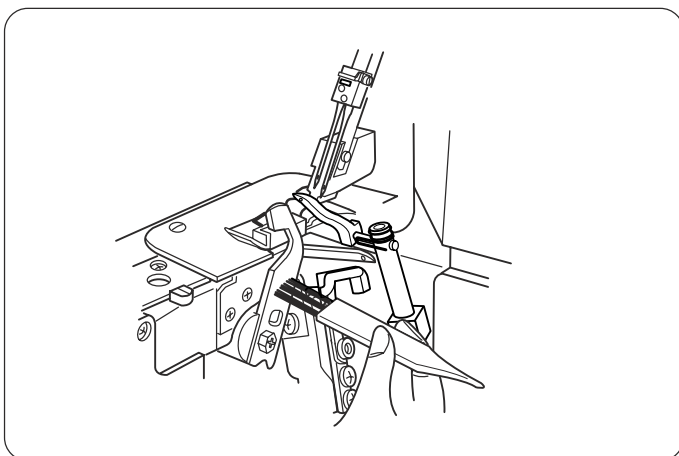


### Cleaning Upper Knife Area

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





## Replacing the Light Bulb

1. Turn off the power switch and unplug the machine.
2. Loosen the face plate set screw, and remove the face plate.

- ① Face plate
- ② Set screw

### To remove:

Push and twist to the left.

### To attach:

Push and twist to the right.

Reattach the face plate, and retighten the face plate set screw.

- ③ Light bulb
- ④ To remove
- ⑤ To attach

### Note:

- \* The machine is designed to use a 15 WATT maximum light bulb.
- \* The light bulb will be HOT. Protect your fingers when you handle it.

## 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.

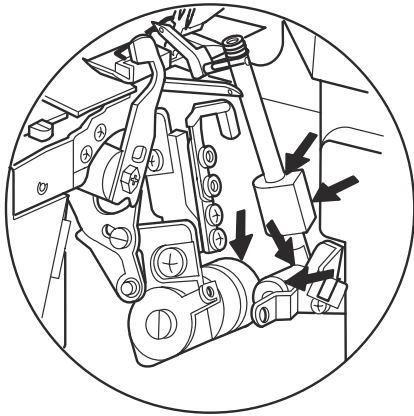
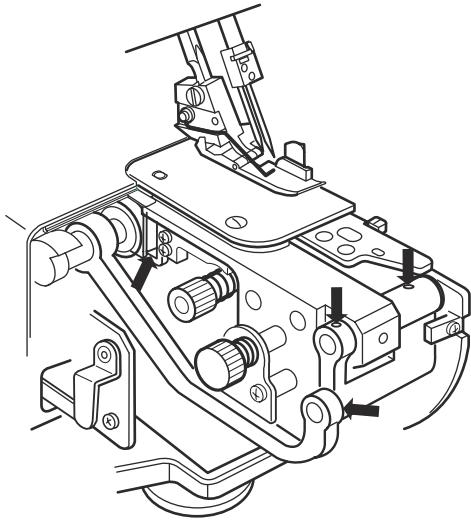
- ③ Feed dogs

## 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.

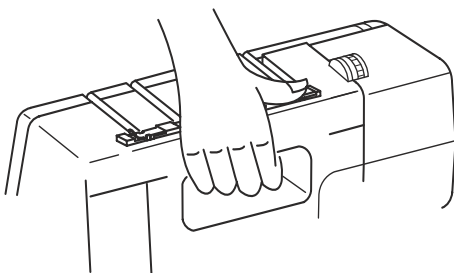
\* Open the side cover and apply oil.



\* 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
<b>The fabric is not being fed smoothly.</b>	<ol style="list-style-type: none"> <li>1. The feed dog is packed with lint.</li> <li>2. The presser foot has been raised.</li> </ol>	<p>See page 37. Lower the presser foot.</p>
<b>The needle breaks.</b>	<ol style="list-style-type: none"> <li>1. The needle is incorrectly inserted.</li> <li>2. The needle is bent or blunt.</li> <li>3. The fabric is pulled strongly.</li> </ol>	<p>See page 10. Replace the needle. Pull the fabric lightly.</p>
<b>The thread breaks.</b>	<ol style="list-style-type: none"> <li>1. The machine is not correctly threaded.</li> <li>2. The needle or looper thread tension is too tight.</li> <li>3. The needle is incorrectly inserted.</li> <li>4. The needle is bent or blunt.</li> </ol>	<p>See pages 17-28. See pages 32-35. See page 10. Replace the needle.</p>
<b>Skipped stitches</b>	<ol style="list-style-type: none"> <li>1. The needle is bent or blunt.</li> <li>2. The machine is not correctly threaded.</li> <li>3. The needle is incorrectly inserted.</li> </ol>	<p>Replace the needle. See pages 17-28. See page 10.</p>
<b>The seam is not sewn neatly.</b>	<ol style="list-style-type: none"> <li>1. The needle and/or looper thread tensions are not correctly adjusted.</li> <li>2. The machine is not correctly threaded.</li> <li>3. The stitch is not suitable for the fabric being sewn.</li> <li>4. The thread is not between the tension discs.</li> </ol>	<p>See pages 31-35. See pages 17-28.  See pages 11-12. See pages 19, 22, 24 and 27.</p>
<b>Seam puckering</b>	<ol style="list-style-type: none"> <li>1. The needle or looper thread tension is too tight.</li> <li>2. The machine is not correctly threaded.</li> <li>3. The differential feed dial is not correctly adjusted.</li> </ol>	<p>See pages 32-35. See pages 17-28.  See page 15.</p>
<b>The machine does not operate.</b>	<ol style="list-style-type: none"> <li>1. The machine has not been plugged in firmly.</li> <li>2. The power switch is turned off.</li> </ol>	<p>See page 6. See page 6.</p>
<b>The fabric is not cut neatly.</b>	<ol style="list-style-type: none"> <li>1. The position of the upper knife is not adjusted properly.</li> <li>2. The upper knife is dull.</li> </ol>	<p>See page 37. Replace the upper knife. (See page 34.)</p>



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