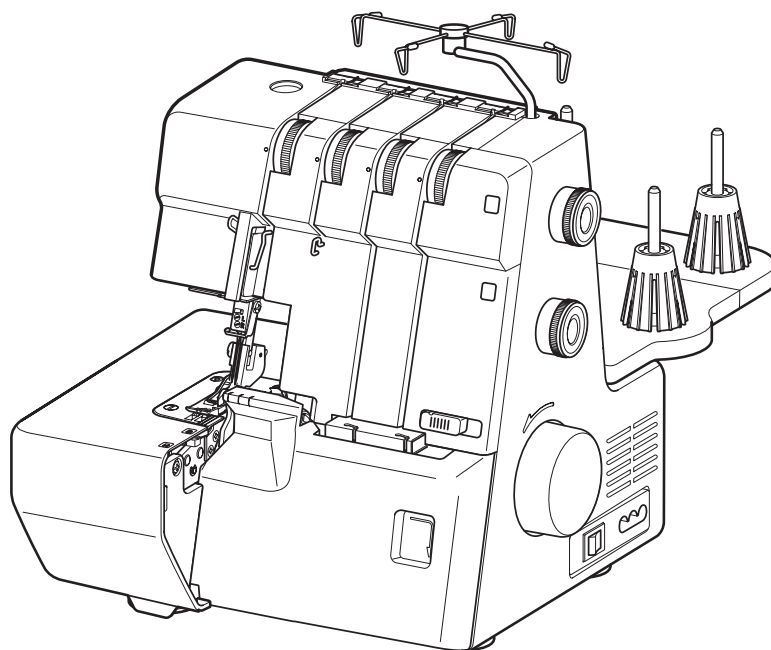


INSTRUCTION BOOK



IMPORTANT SAFETY INSTRUCTIONS

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

This Serger/Overlocker/Overlock machine is designed and manufactured for household use only.

Read all instructions before using this Serger/Overlocker/Overlock machine.

DANGER— To reduce the risk of electric shock:

1. An appliance should never be left unattended when plugged in. Always unplug this Serger/Overlocker/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 Serger/Overlocker/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 Serger/Overlocker/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 Serger/Overlocker/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 Serger/Overlocker/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 Serger/Overlocker/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 Serger/Overlocker/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 Serger/Overlocker/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

For Europe only:

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

For outside Europe (except U.S.A.):

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 the appliance.



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

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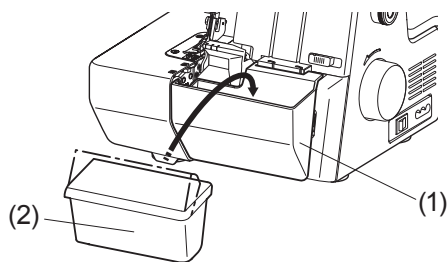
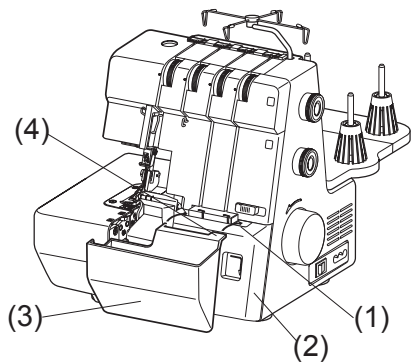
ESSENTIAL PARTS

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

NOTE:

Serger/Overlocker/Overlock machine design and specifications are subject to change without prior notice.



Attaching the Waste Chip Box

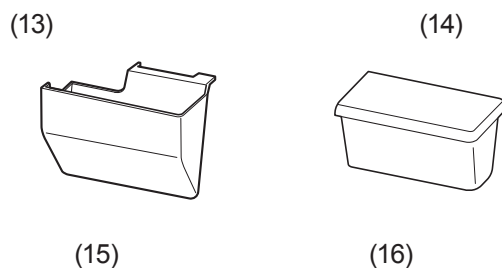
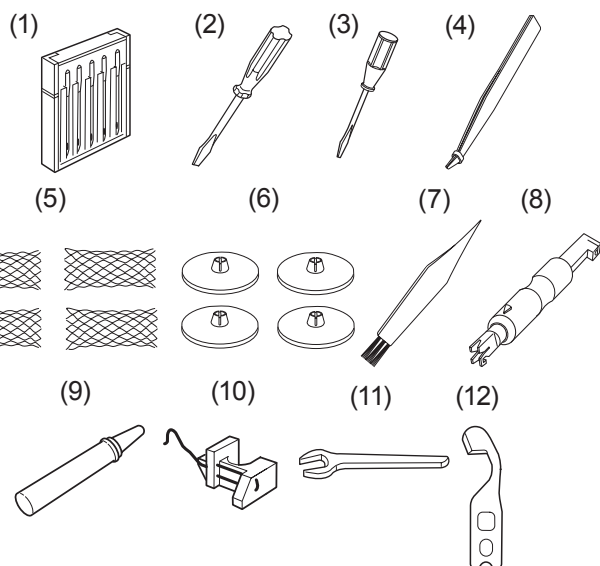
Insert the hook into groove on looper cover.

- (1) Groove
- (2) Looper cover
- (3) Waste chip box
- (4) Hook

Storing the Accessory Box

Insert the accessory box into the waste chip box.

- (1) Waste chip box
- (2) Accessory box



Standard Accessories

No.	Part Name	Part No.
1	Set of needles: (HAX1 SP#11) x 2 (HAX1 SP#14) x 3	784860100
2	Screwdriver (large)	784810002
3	Screwdriver (small)	792030005
4	Tweezers	624801001
5	Nets	624806006
6	Spool holder caps	822020503
7	Lint brush	802424004
8	Needle threader	202024002
9	Oil	741814003
10	Spreader	788618000
11	Spanner	784809008
12	Upper knife	788127007
13	Waste chip box	787171A06
14	Accessory box	787172004
15	Instruction manual	788800643
16	Foot control*	U.S.A. and Canada
		C-1028
		U.K.
		C-2085-1
		Australia
		C-2065
		Continental Europe
		C-2060

* The foot control included may differ from the illustration.



Instructional Video

<https://www.youtube.com/playlist?list=PLQy563Wz2actZHm-r4r9vePGfU7e0iRum>

GETTING READY TO SEW

Connecting the Machine to the Power Supply

WARNING

While in operation, always keep your eyes on the sewing area, and do not touch any moving parts such as the thread take-up lever, handwheel, knives, loopers or needles.

Always turn off the power switch and unplug the machine from the power supply:

- when leaving the machine unattended.
- when attaching or removing parts.
- when cleaning the machine.

Do not place anything on the foot control.

Operating Instructions:

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

1. Turn off the power switch, and connect the machine plug to the machine socket.
2. Connect the power supply plug to your power supply.
3. Turn on the power switch.
 - (1) Power switch
 - (2) Machine plug
 - (3) Machine socket
 - (4) Power supply plug
 - (5) Power supply
 - (6) Foot control

Before Using Your Machine

Before using your machine for the first time, place a scrap of fabric under the presser foot and run the machine without thread for a few minutes. Wipe away any oil which may appear.

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

For the U.S.A. and Canada only:

For appliances 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.

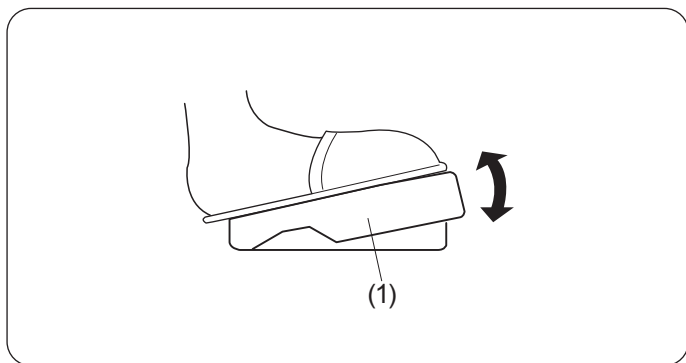
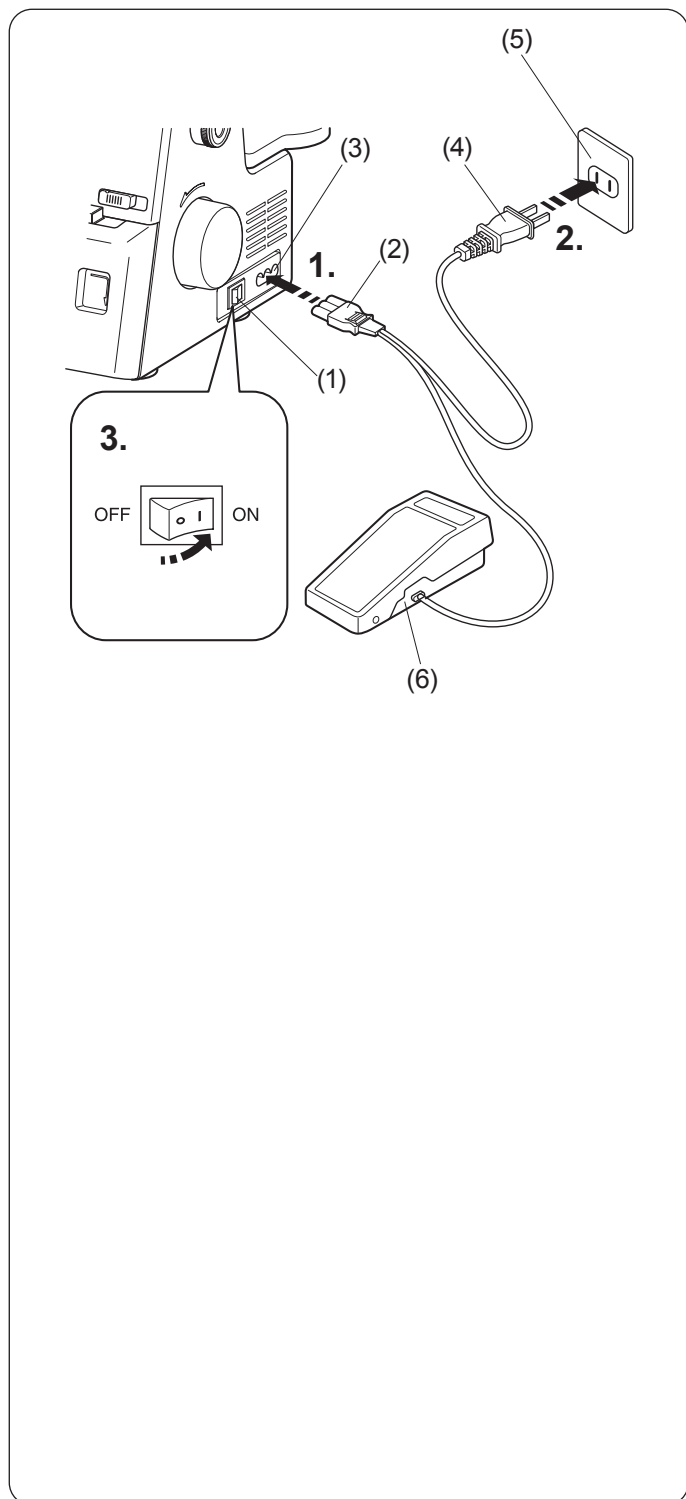
Controlling Sewing Speed

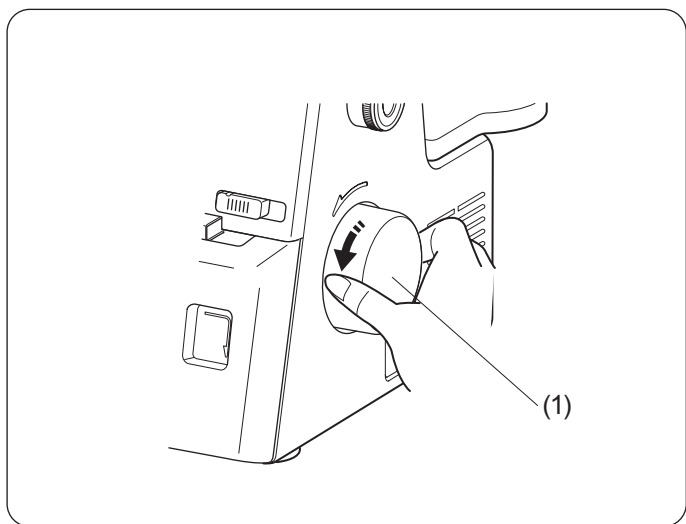
Sewing speed can be varied by the foot control.

The harder you press on the controller, the faster the machine runs.

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

- (1) Foot control

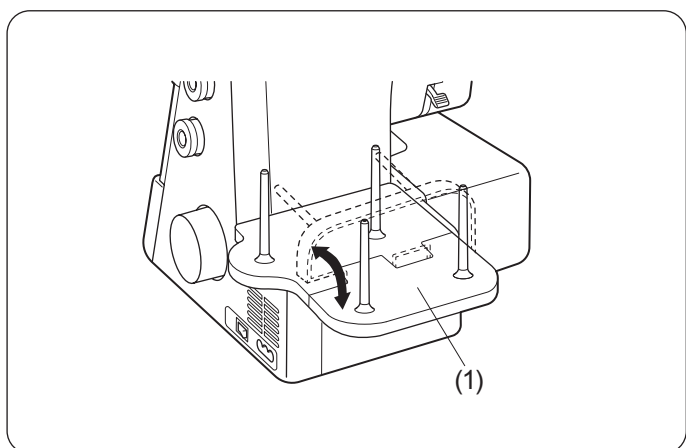




How to Turn the Handwheel

Always turn the handwheel toward you (counterclockwise).

(1) Handwheel



Opening and Closing the Spool Stand

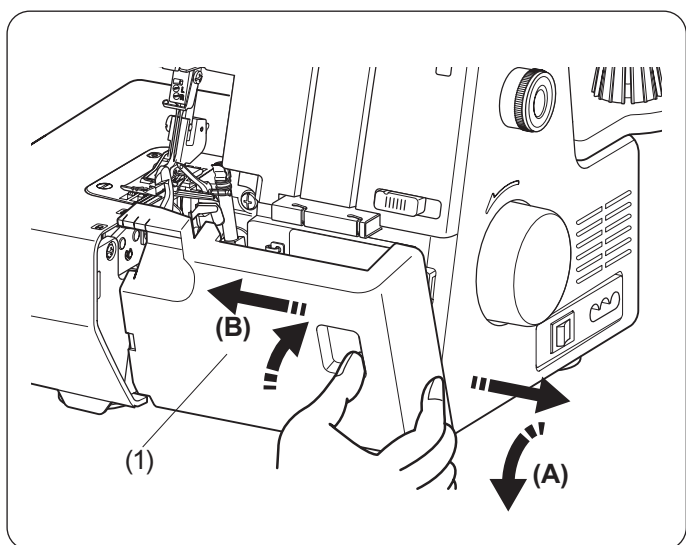
To open:

Open the spool stand when setting the spools.

To close:

Fold the spool stand to store it.

(1) Spool stand



Opening and Closing the Looper Cover

To open:(A)

Hold the looper cover with your thumb and slide it to the right as far as it will go, then pull and open the looper cover toward you.

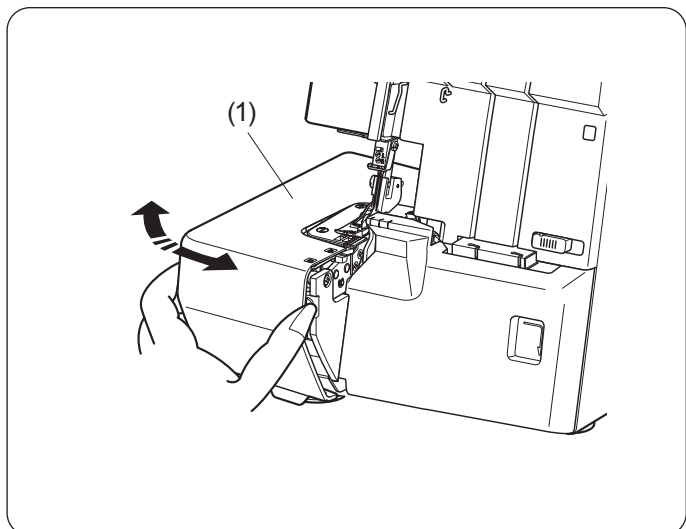
(1) Looper cover

To close:(B)

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

NOTE:

Always close the looper cover when the machine is in use.



Side Cover

To open:

Push the side cover to the left.

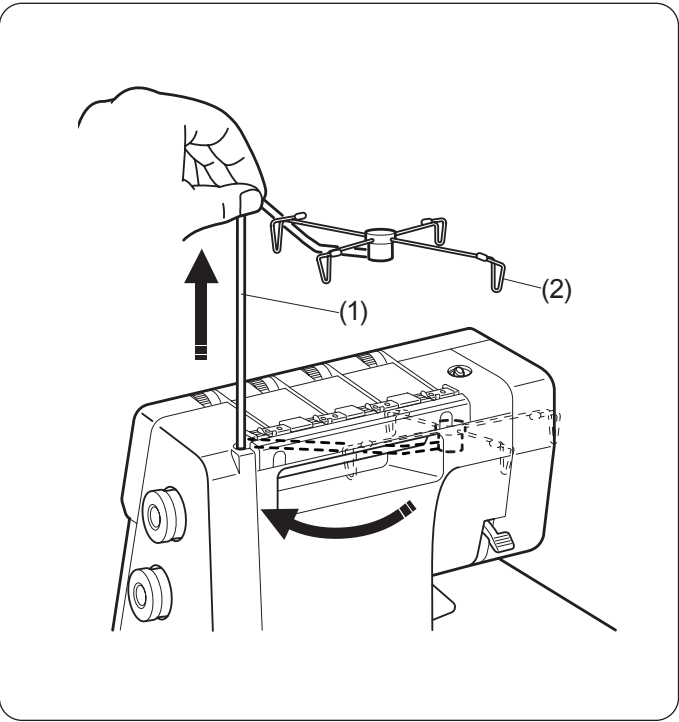
To close:

Push the side cover to the right.

(1) Side cover

NOTE:

Always close the side cover when the machine is in use.



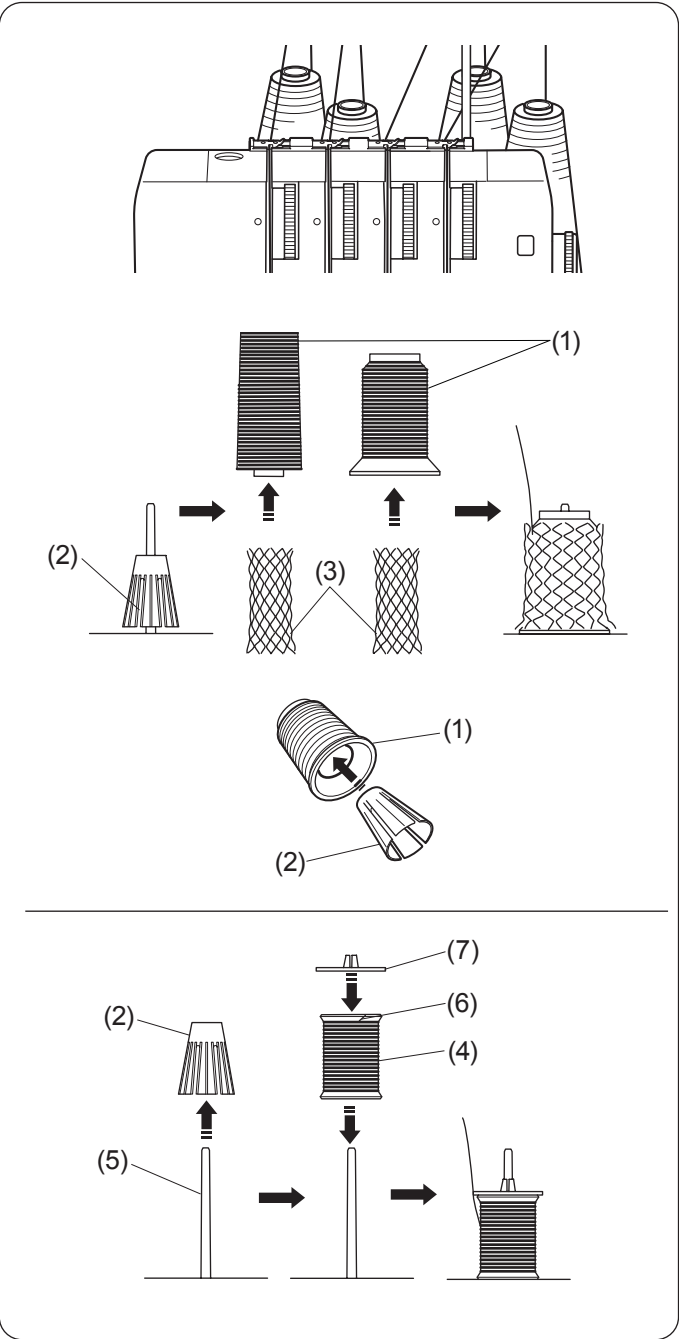
Setting the Thread Guide Bar

Turn the thread guide in the direction of arrow.

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

Be sure to snap the guide bar into places.

- (1) Thread guide bar
- (2) Thread guide



Setting the Spools

You can use two types of spools for this machine.

Spool cones

When using spool cones, attach the spool holders to the spool pins.

If the thread slips down from a spool cone during the threading and/or sewing, put the net over the spool cone as shown to prevent jamming.

- (1) Spool cone
- (2) Spool holder
- (3) Net

NOTE:

If the spool cone is unstable, insert the spool holder into the spool cone all the way before setting it to the spool pin.

Small spools

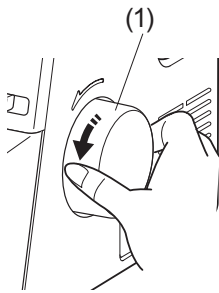
When using small spools, remove the spool holders from the spool pins.

- (2) Spool holder
- (4) Small spool of thread
- (5) Spool pin

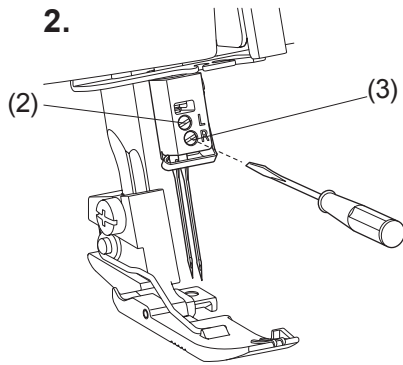
Place the spool with its slit side up, and put the spool holder cap on top of it.

- (6) Slit
- (7) Spool holder cap

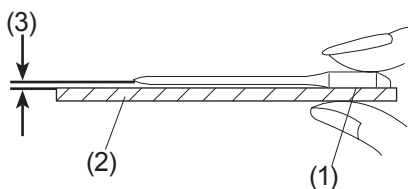
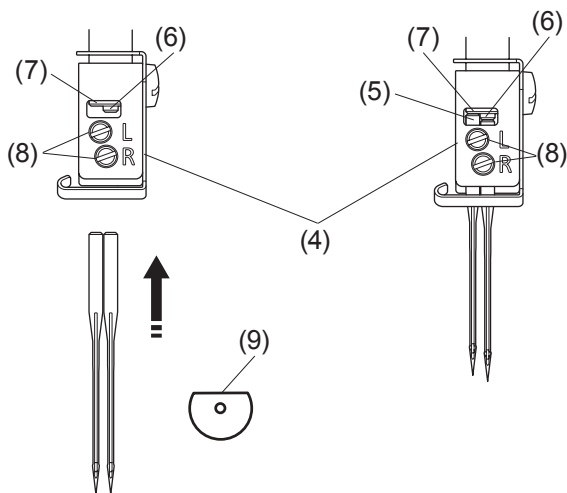
1.



2.



3.



Changing Needle

NOTE:

Use an HAX1 SP #14 or #11 needle.
An HAX1 SP #14 needle is set on the machine.

! WARNING:

Turn OFF the power switch and unplug the machine before changing the needle.

1. Turn the handwheel toward you to raise the needle to its highest position.
(1) Handwheel
2. Loosen the needle clamp screw by turning it counterclockwise. Remove the needle from the needle clamp.
(2) Needle clamp screw on the left
(3) Needle clamp screw on the right

To attach the needle on the right:

3. 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 clockwise.

To attach the needle on the left:

3. 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 clockwise.
(4) Needle clamp
(5) Needle
(6) Needle stopper pin
(7) Edge of needle bar
(8) Needle clamp screws
(9) Flat side

NOTE:

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

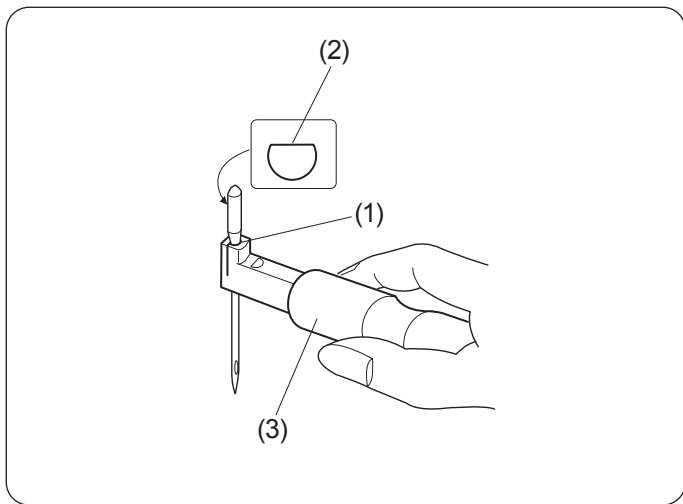
Checking the needle

To see if the needle is in good condition, place the flat side of the needle onto something flat (needle plate, glass etc.). The gap between the needle and the flat surface should be consistent.

- (1) Flat side
- (2) Something flat
- (3) Gap

NOTE:

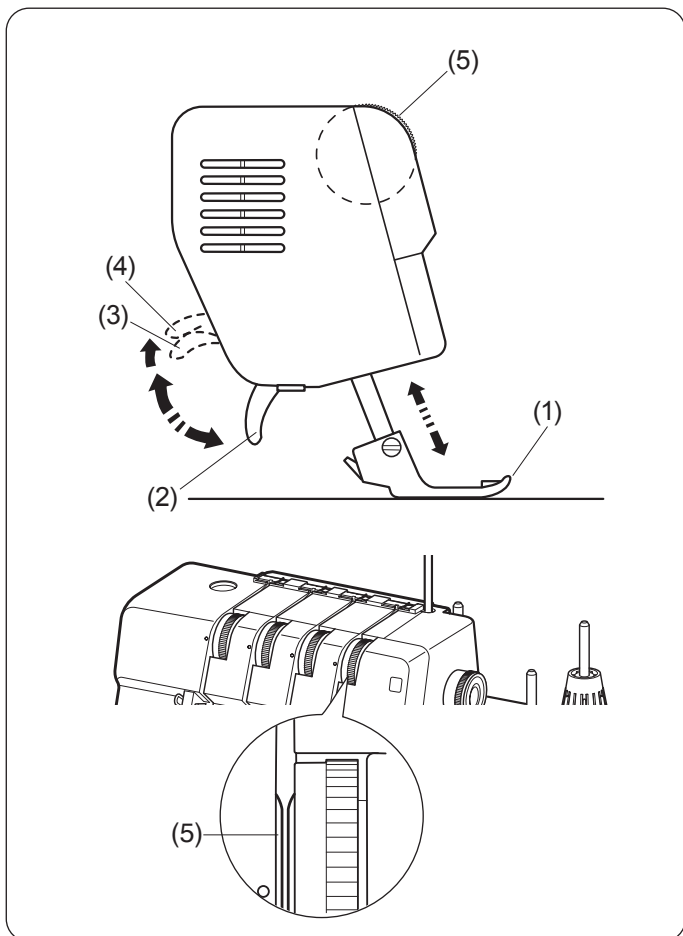
Never use a bent or blunt needle.



How to use the Needle Holder

To attach the needle easily, use the other end of the needle threader to hold the needle.

1. Turn off the power switch and unplug the machine.
 2. Insert a needle into the needle holder with the flat side facing back as shown.
 3. Hold the stem and insert the needle into the needle clamp and push it up as far as it will go. Tighten the needle clamp screw firmly while supporting the holder in place.
 4. Pull the holder down to remove it.
- (1) Hole
(2) Flat side
(3) Stem



Presser Foot Lifter

The presser foot lifter raises and lowers the presser foot. Raise the presser foot lifter before you thread the machine.

You can raise the foot about 1.5 mm (1/16") higher than the normal up position by exerting more pressure when lifting the presser foot. This allows for removing and attaching the needle plate and helps you to place layers of thick fabric.

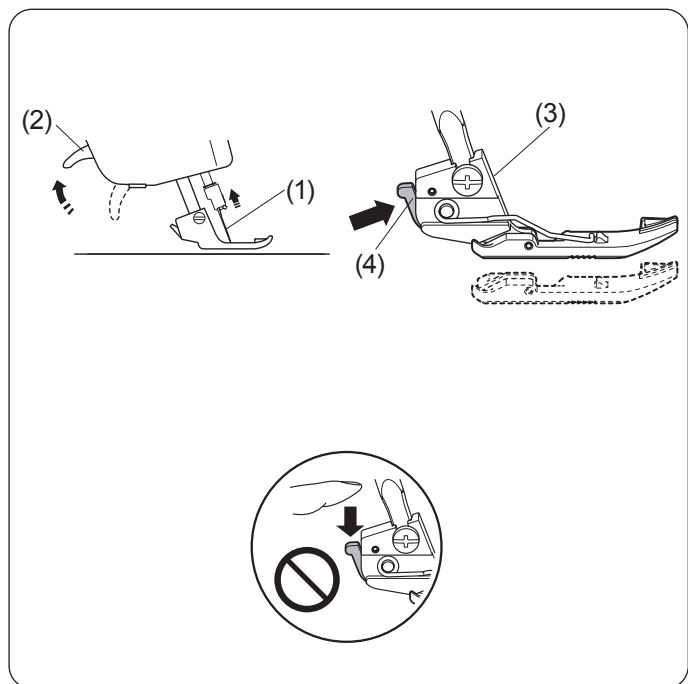
Always lower the presser foot lifter when you start sewing.

- (1) Presser foot
(2) Presser foot lifter
(3) Normal up position
(4) Extra lifted position

NOTE:

Tension disks open and the thread tension will be released when the presser foot lifter is raised.

- (5) Tension disks



Replacing the Presser Foot



CAUTION:

Turn OFF the power switch and unplug the machine before removing or attaching the foot.

Removing the Presser Foot

Turn the handwheel toward you to raise the needle to its highest position. Raise the presser foot lifter.

- (1) Needle
- (2) Presser foot lifter

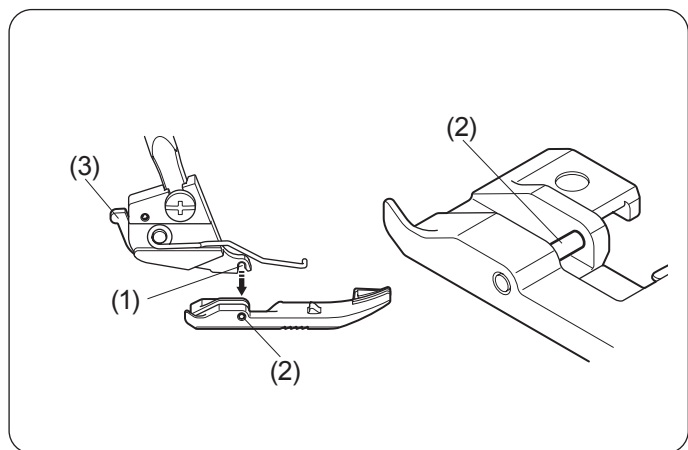
Press the lever located on the back of the foot holder. The presser foot will drop off.

- (3) Foot holder
- (4) Lever



CAUTION:

Do not push the lever from the top.



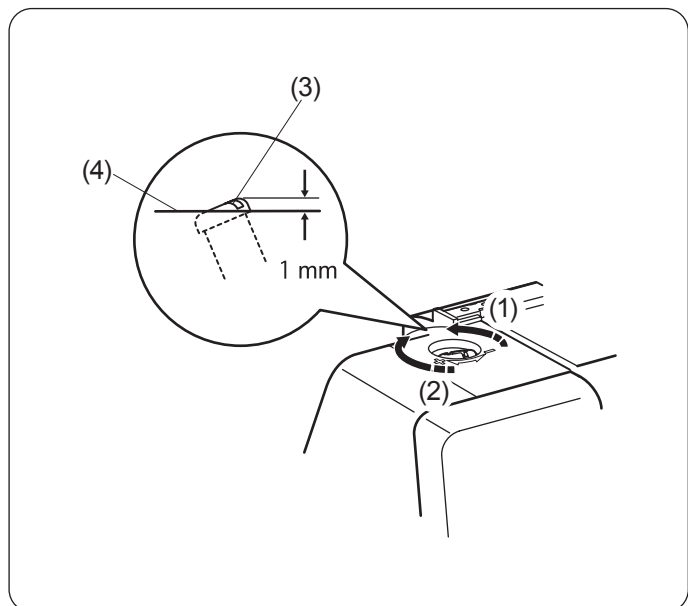
Attaching the Presser Foot

Place the presser foot, so that the pin on the foot lies just under the groove of the foot holder.

Lower the foot holder to lock the foot into place.

Raise the presser foot lifter to check that the presser foot is secure.

- (1) Groove
- (2) Pin
- (3) Lever



Adjusting the Presser Foot Pressure

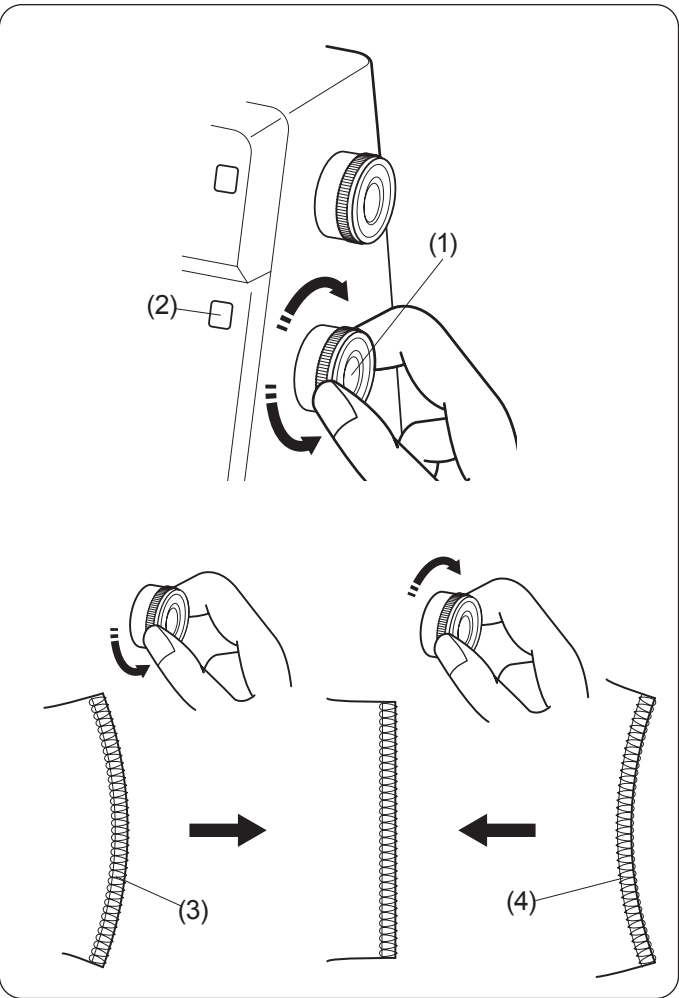
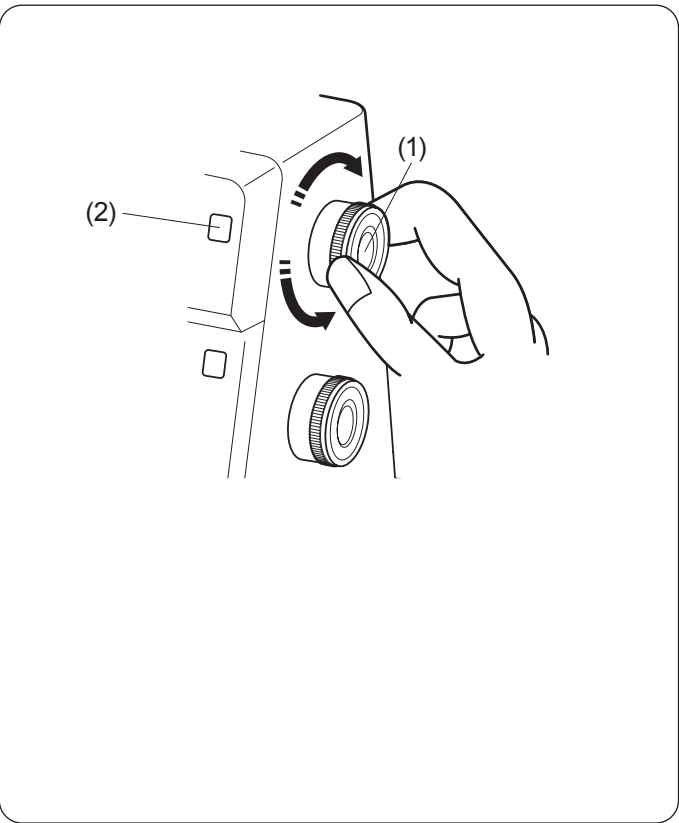
It is not necessary to adjust the presser foot pressure for regular sewing.

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

- clockwise for heavyweight fabric (2).
- counterclockwise for lightweight fabric (1).

For regular sewing, set the adjusting screw so that it sits 1 mm above the top of the machine.

- (1) To decrease
- (2) To increase
- (3) Adjusting screw
- (4) Top of the machine



Adjusting the Stitch Length

To adjust the stitch length, turn the stitch length dial. The larger the number, the longer the stitch length. The smaller the number, the shorter the stitch length.

The number on the stitch length indicator window indicates the stitch length.

- (1) Stitch length dial
- (2) Stitch length indicator window

The standard stitch length setting for serging stitch is “3” (approximately 3 mm).

The dial clicks when you turn the dial to 3.

The stitch length can be adjusted while sewing.

NOTE:

The stitch length can be adjusted from 1 mm to 4 mm. Position “R” is for rolled hemming and narrow hemming (approximately 1.5 mm).

NOTE:

When you sew at a short stitch length, try following two methods together for better results:

- Tighten the needle thread tension.
- Tighten the looper thread tension and/or move the lower knife to the right.

Adjusting the Differential Feed Ratio

Adjust the differential feed ratio when sewing fabrics that tend to stretch or pucker.

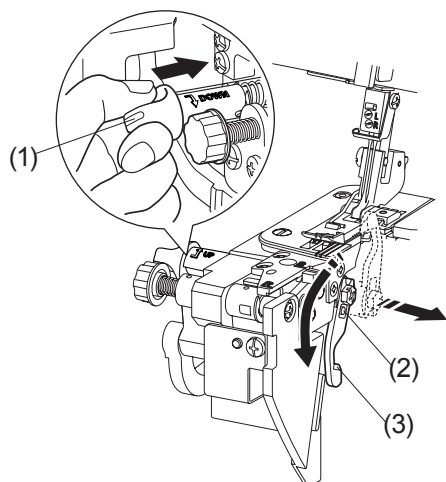
The differential feed ratio can be altered by turning the differential feed dial.

The number on the differential feed ratio indicator window indicates the ratio between the main and the sub feed motion.

- (1) Differential feed dial
- (2) Differential feed ratio indicator window

- Set the dial at 1.0 for regular sewing. The differential dial clicks when you turn the dial at 1.0.
- Set the dial at a lower number when sewing lightweight fabrics that tend to pucker.
- Set the dial at a higher number when sewing stretch fabrics such as knits (refer to page 27).

- (3) Stretched
- (4) Gathered



To Deactivate or Activate the Upper Knife



CAUTION:

Turn the power switch OFF and unplug the machine before deactivating or activating the upper knife.

Do not cut anything else with the upper knife other than fabric, causing the upper knife to break.

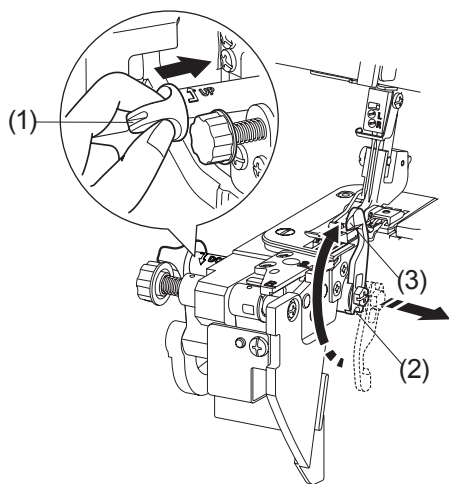
To deactivate:

Open both the looper cover and side cover.

Turn the upper knife release knob toward you while pushing it to the right, then guide the hole on the upper knife to the stopper pin to lock the upper knife in the down position.

Close the looper cover and side cover.

- (1) Upper knife release knob
- (2) Stopper pin
- (3) Upper Knife



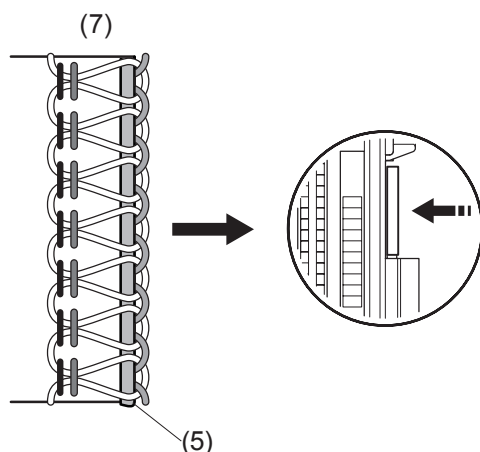
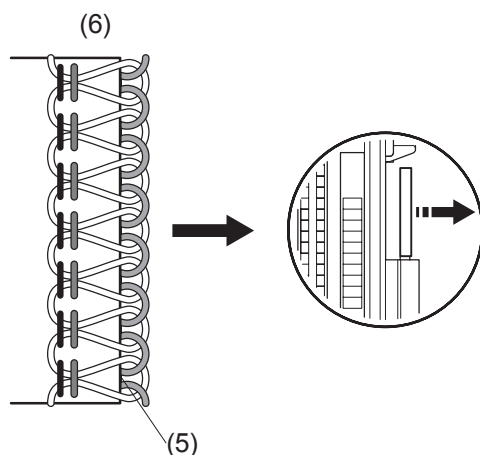
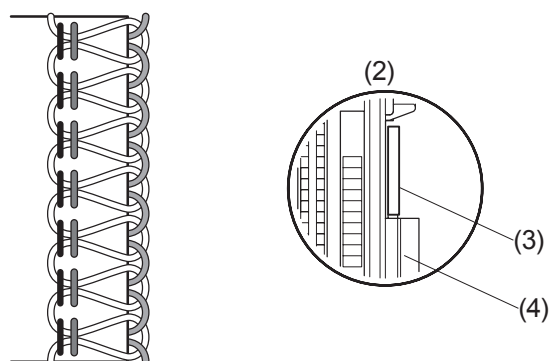
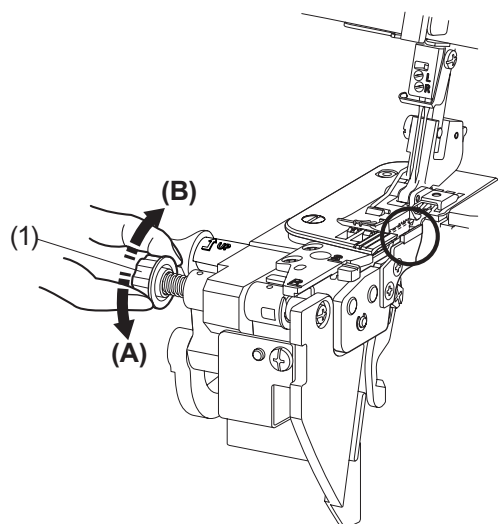
To activate:

Open both the looper cover and side cover.

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 stopper pin to lock the upper knife in the up position.

Close the looper cover and side cover.

- (1) Upper knife release knob
- (2) Stopper pin
- (3) Upper Knife



Adjusting the Cutting Width

⚠ CAUTION:

Turn the power switch OFF and unplug the machine before adjusting the cutting width.

When the cutting width is too narrow or too wide for the seam width, adjust it by turning the cutting width adjusting dial.

(1) Cutting width adjusting dial

Open the looper cover and side cover.

Set the upper knife to down position.

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

When the lower knife is set to the standard position, the right edge of the lower knife is aligned with the guide line on the needle plate.

(2) Standard position

(3) Lower knife

(4) Guide line on the needle plate

(5) Edge of fabric

If the cutting width is too narrow (6), turn the cutting width adjusting dial to the direction of **(A)**.

The lower knife moves to right.

If the cutting width is too wide (7), turn the cutting width adjusting dial to the direction of **(B)**.

The lower knife moves to left.

Sew and check the cutting width.

NOTE:

The cutting width of this model can be adjusted approximately 3.0 to 5.0 mm from the right needle position depending upon your sewing needs or the fabric being used.

Adjusting the Chaining Finger Switch Knob (Changing to Standard Serging or Rolled Hemming)



CAUTION:

Turn the power switch OFF and unplug the machine before adjusting the chaining finger switch knob.

Open the looper cover and side cover.

Set the upper knife to down position.

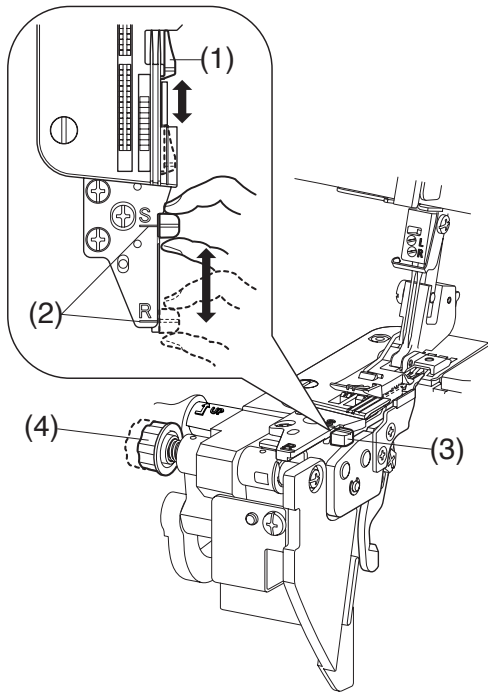
Push the cutting width adjusting dial to the right as far as it will go, then, move the chaining finger switch knob to the guide line of S (for Standard Serging) or R (for Rolled Hemming).

Release the cutting width adjusting dial to the left gently.

Set the upper knife to up position.

Close the looper cover and side cover.

- (1) Chaining finger
- (2) Guide line
- (3) Chaining finger switch knob
- (4) Cutting width adjusting dial

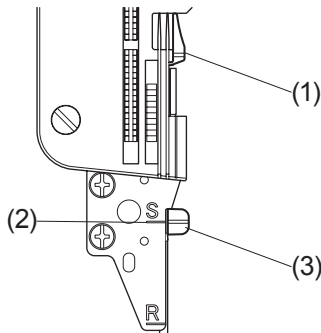


Standard Serging

The chaining finger is located beside the needle plate.

Turn the chaining finger switch knob to "S" for standard serging.

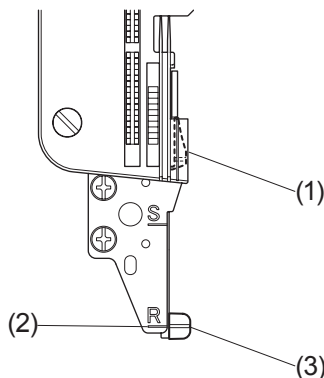
- (1) Chaining finger
- (2) Guide line
- (3) Chaining finger switch knob

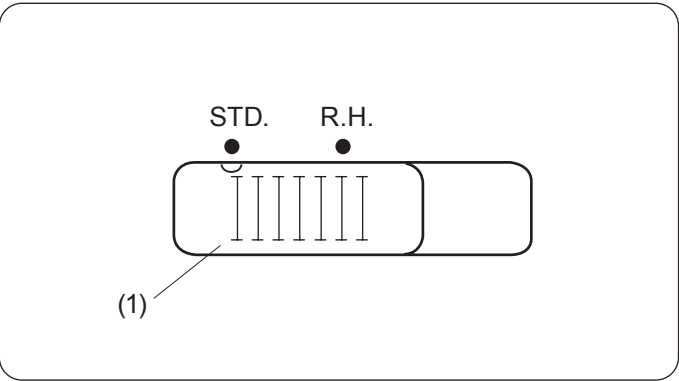


Rolled Hemming

Turn the chaining finger switch knob to "R" for rolled for hemming, picot edging or narrow hemming sewing.

- (1) Chaining finger
- (2) Guide line
- (3) Chaining finger switch knob

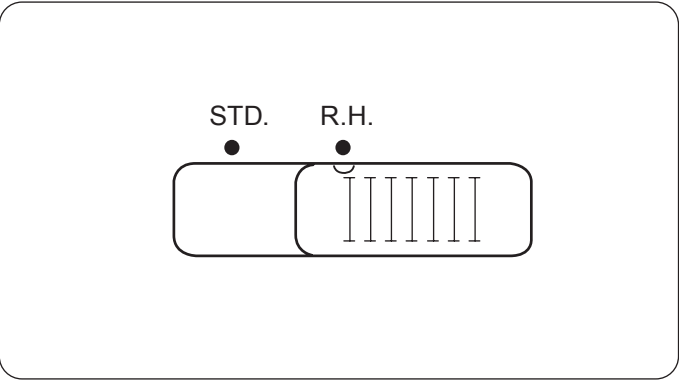




Setting the lower loop pre-tension setting slider and changeable thread guide

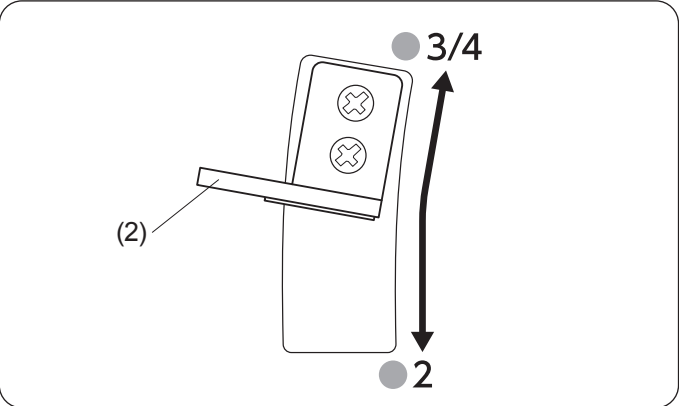
Standard Serging (STD.)

Standard serging with 2, 3 or 4 threads
(1) Lower loop pre-tension setting slider



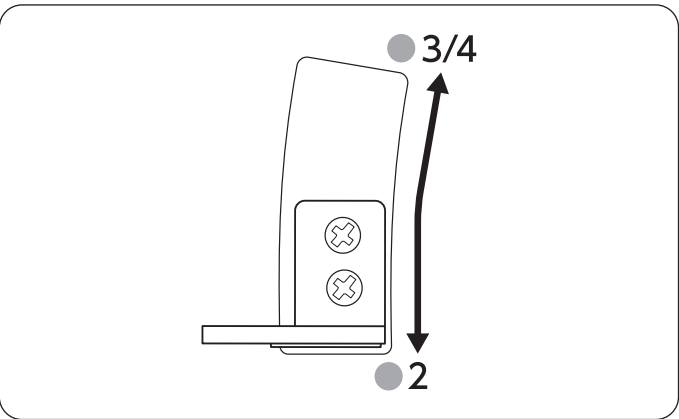
Rolled Hemming (R.H.)

Rolled hemming with 2 or 3 threads



3/4-Thread Serging

Serging with 3 or 4 threads
(2) Changeable thread guide



2-Thread Serging

Serging with 2 threads
Change the setting depending on whether you're doing 3/4-thread serging or 2-thread serging.

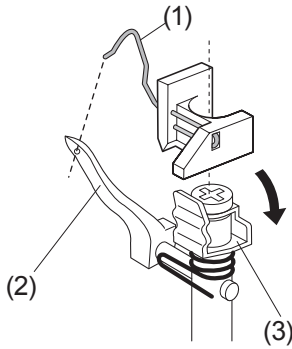
Changing to 2-Thread Serging

* In case of 2-thread serging, use one needle thread and the lower looper thread. Remove other threads.

To attach the spreader

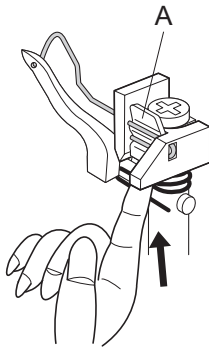
Put the tip of the spreader into the hole on the upper looper, and slide the spreader down into the holder.

- (1) Spreader
- (2) Upper looper
- (3) Holder



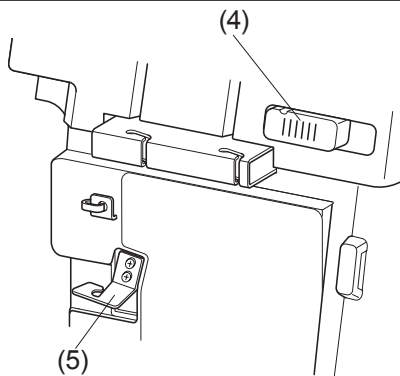
To remove the spreader

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



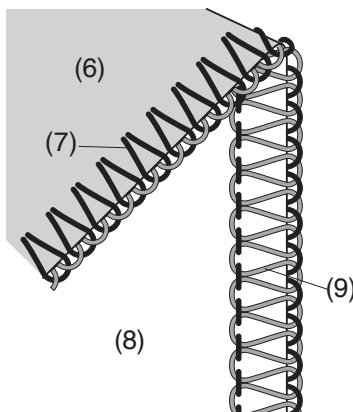
For standard 2-thread serging, set the machine as illustrated.

- (4) Lower looper pre-tension setting slider (STD. position)
- (5) Changeable thread guide (lower position)



Standard 2-thread serging is as illustrated.

- (6) Wrong side of fabric
- (7) Needle thread
- (8) Right side of fabric
- (9) Lower looper thread



MACHINE THREADING

⚠ CAUTION:

Turn off the power switch before threading the machine.

Threading the Machine

The left illustration shows the completed threading conditions of 4 threads.

- (1) Lower looper thread
- (2) Upper looper thread
- (3) Right needle thread
- (4) Left needle thread
- (5) Thread guides
- (6) Top cover 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.

1. Pull the threads from the spools and draw them through the thread guides, then tie the thread ends together.
 - (1) Thread guides
2. Raise the presser foot, draw the looper threads until the knots are coming out from under the back of the presser foot.
3. Draw the needle threads, stop drawing the needle threads when the knots reach just before the needle eye.

- (2) Needle
- (3) Needle thread

4. Cut the knots of needle threads and thread the needle eye.
5. 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).

- (4) Presser foot
- (5) Needle plate

6. Then pull out the threads to the back approximately 10 cm (4") away from the presser foot.
7. Lower the presser foot, and you are now ready to sew.

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

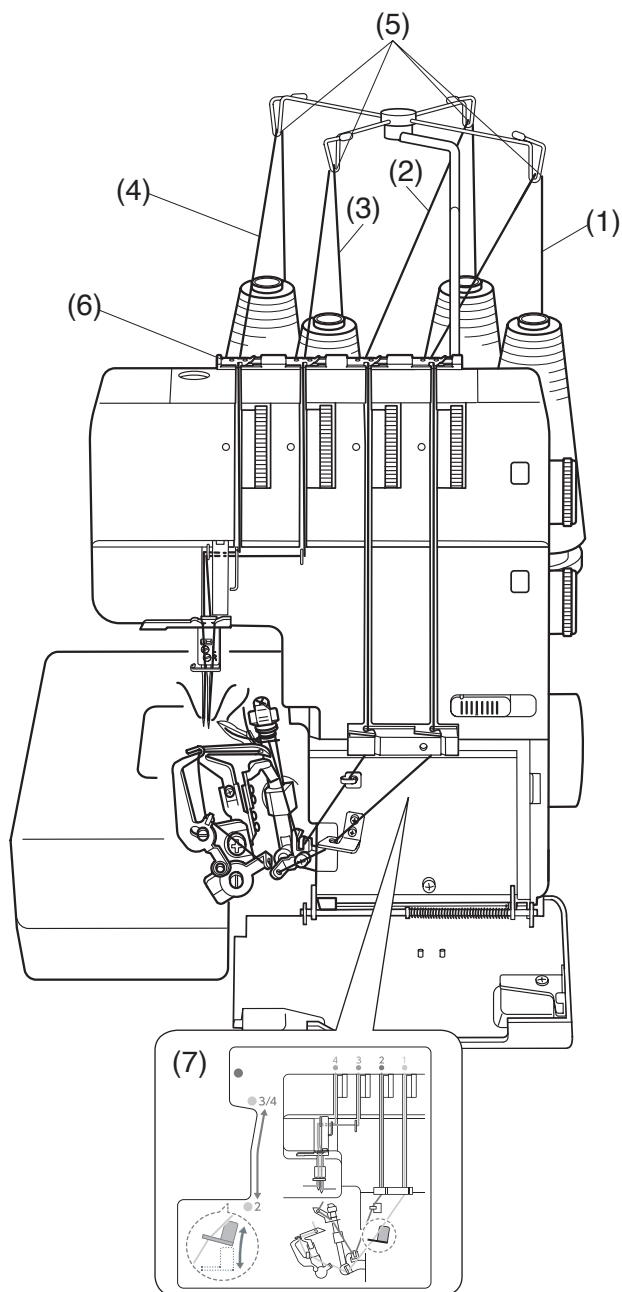
NOTE:

Refer to pages 17-19 for threading the lower looper.

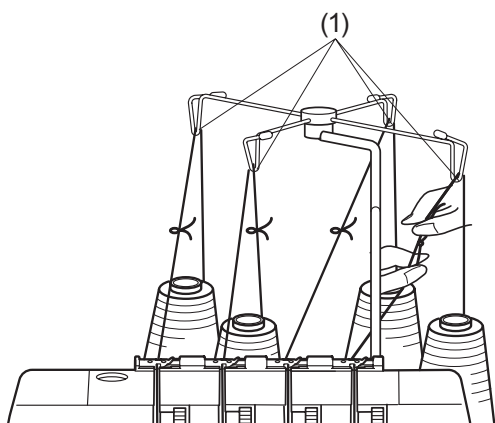
Refer to pages 20-21 for threading the upper looper.

Refer to pages 22-23 for threading the right needle.

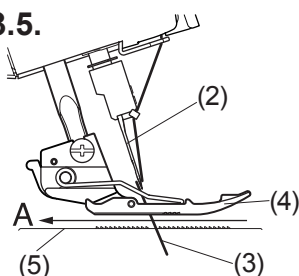
Refer to pages 25-26 for threading the left needle.



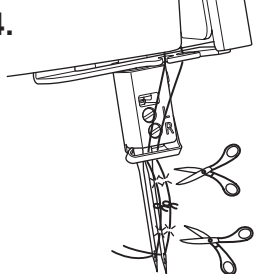
1.



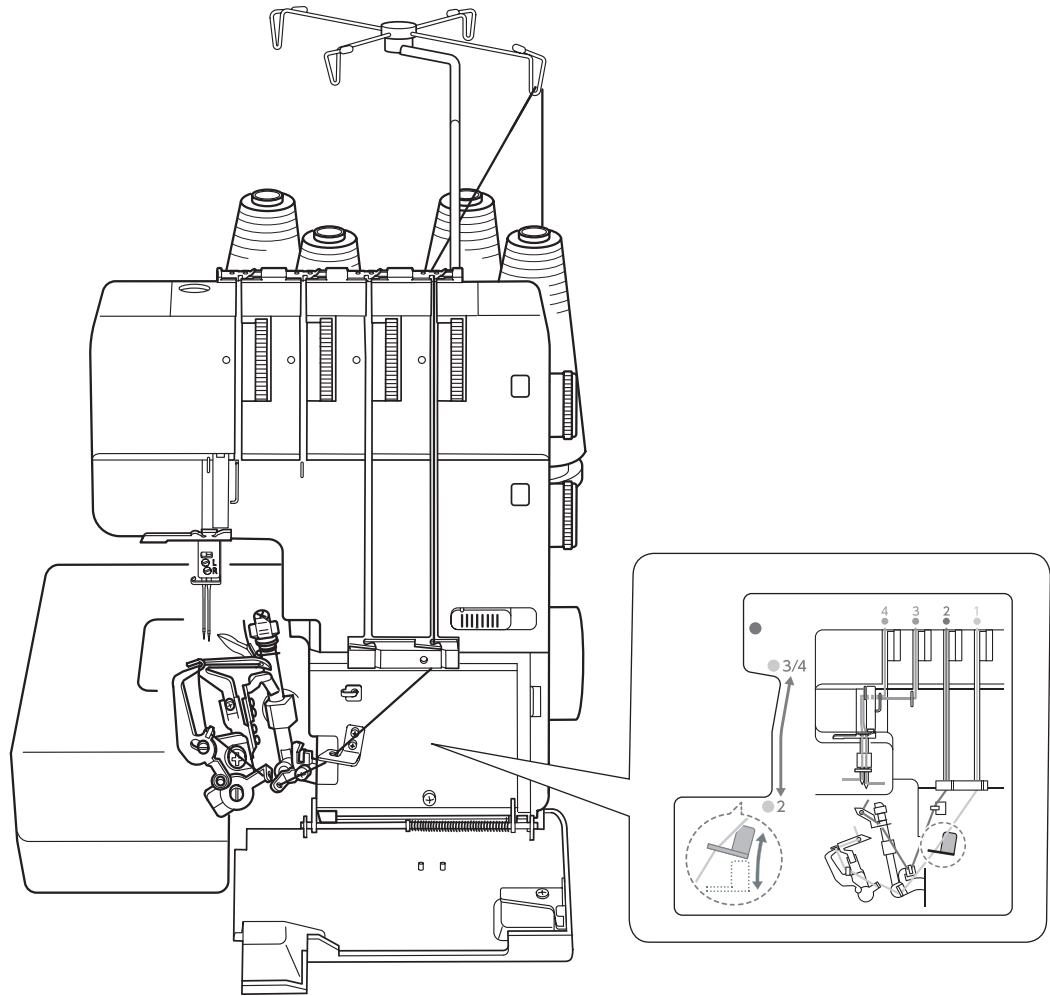
2.3.5.



4.



Threading the Lower Looper



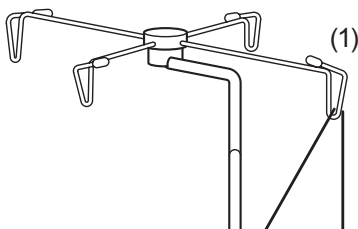
CAUTION:

Turn off the power switch before threading the machine.

NOTE:

- Raise the presser foot lifter for easier threading.
- Open the looper cover and side 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.

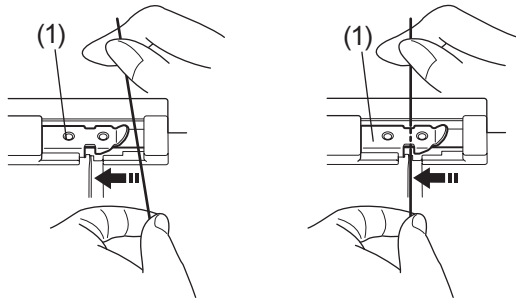
1.



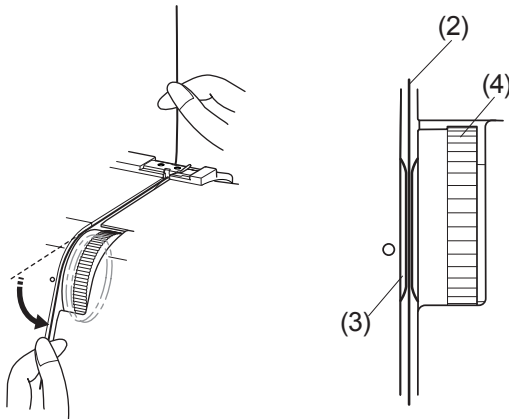
1. Draw the thread through the right side thread guide from back to front.

(1) Thread guide

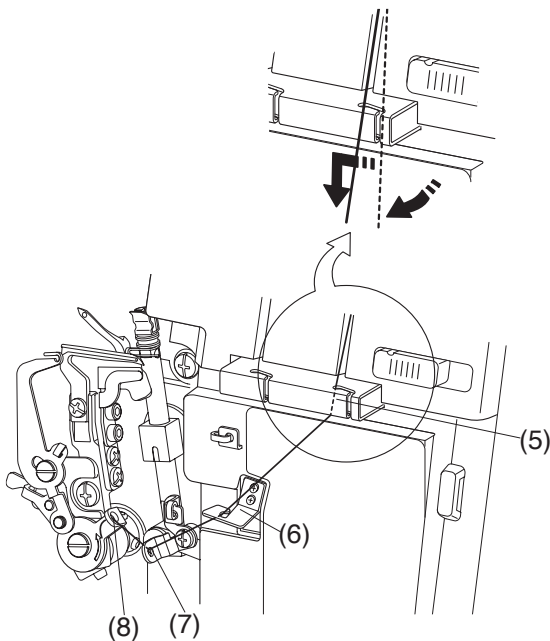
2.



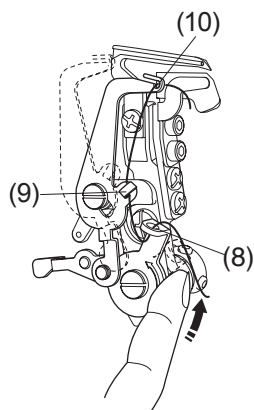
3.



4.5.6.7.



8.9.



2. Slide the thread under the top cover thread guide as illustrated.

(1) Top cover thread guide

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

(2) Thread

(3) Tension disks

(4) Lower looper thread tension dial

4. Pass the thread through the right side of the looper thread guide.

(5) 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 (A).

(6) Changeable thread guide

(7) Looper thread take-up lever (lower)

(8) Lower looper thread guide (A)

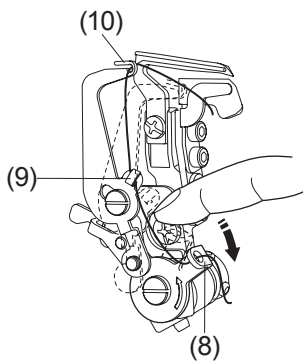
8. Turn the handwheel toward you to move the lower looper to the right side. Then lift up the lower looper thread guide (A). When you do this, the lower looper thread guide (B) and (C) are moved to the right for easy threading.

9. Pass the thread through the lower looper thread guide (B). Pass the thread through the lower looper thread guide (C).

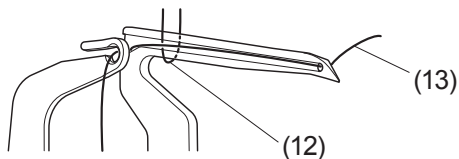
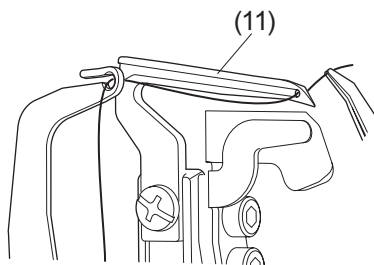
(9) Lower looper thread guide (B)

(10) Lower looper thread guide (C)

10. 11.



12.



Wrong

10. Holding the end of the thread, push the lower loop thread guide (A) down with your other hand to return it to its original position.

(8) Lower loop thread guide (A)

11. Lower loop thread guides (B) and (C) will return to their original position automatically.

(9) Lower loop thread guide (B)

(10) Lower loop thread guide (C)

* You can return the lower loop thread guide (A), (B) and (C) to their original position automatically by turning the handwheel counterclockwise.

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

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

(11) Lower loop

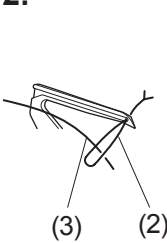
(12) Needle thread

(13) Lower loop thread

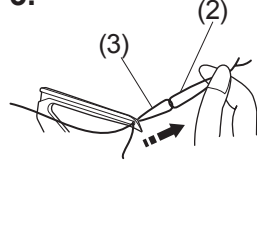
1.



2.



3.



NOTE:

How to thread woolly nylon thread:

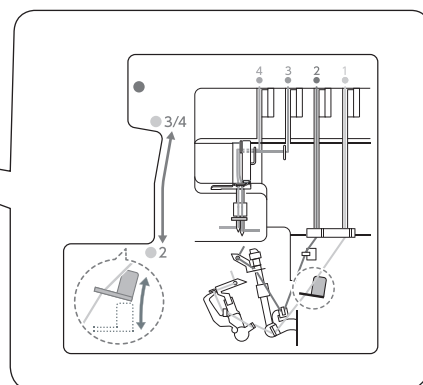
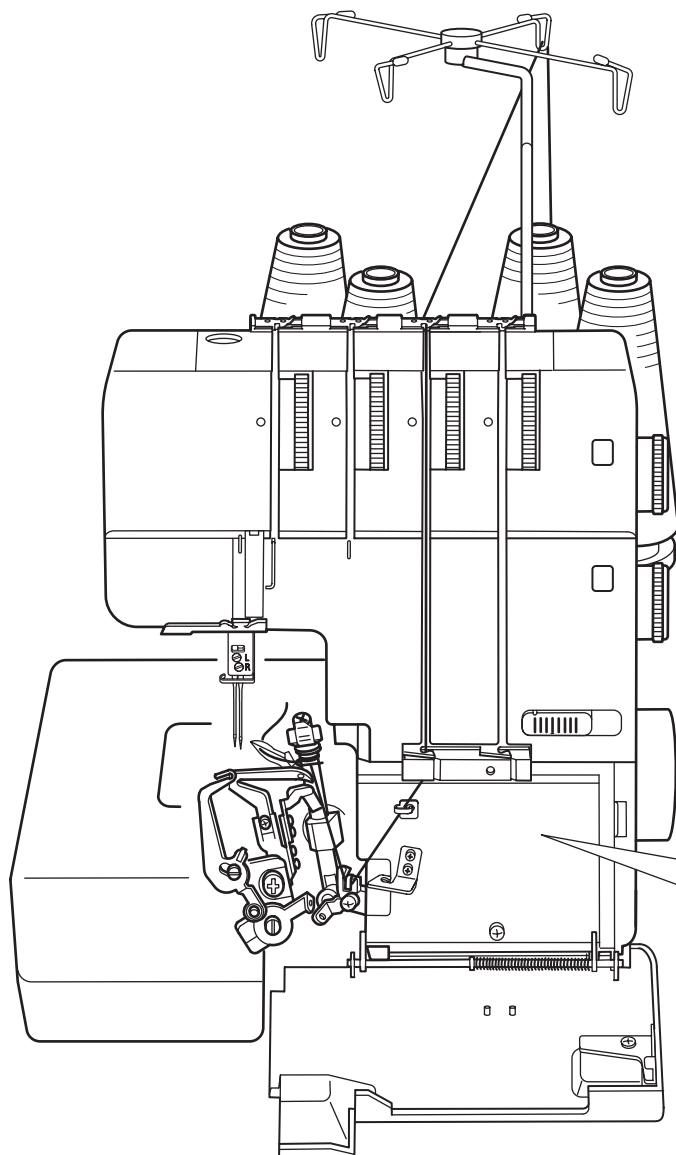
- The illustration at left shows one of the easiest ways to pass woolly nylon thread through the lower loop.
- Use the same method with the upper loop.

(1) Lower loop

(2) Ordinary thread

(3) Woolly nylon thread

Threading the Upper Looper



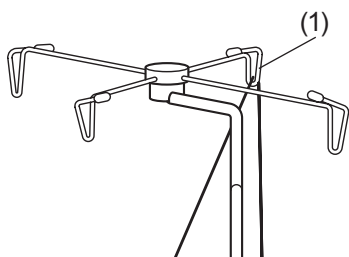
⚠ CAUTION:

Turn off the power switch before threading the machine.

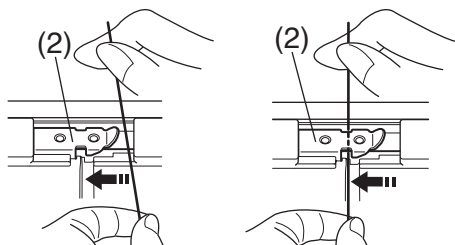
NOTE:

- Raise the presser foot lifter for easier threading.
- Open the looper cover and side cover.
- Place the spool of thread on the rear right spool pin.
- The points to thread for upper looper are marked in red.
- A convenient threading chart is placed on the machine body inside the looper cover.

1.



2.



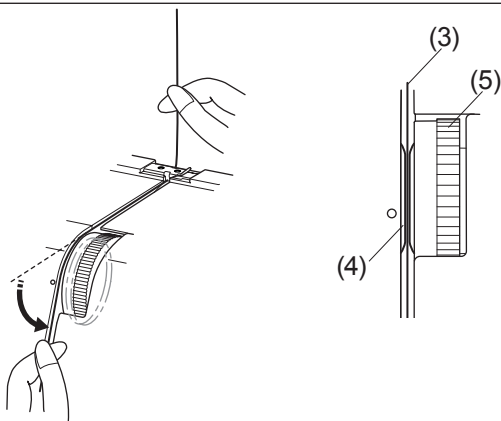
1. Draw the thread through the thread guide second from the right from back to front.

(1) Thread guide

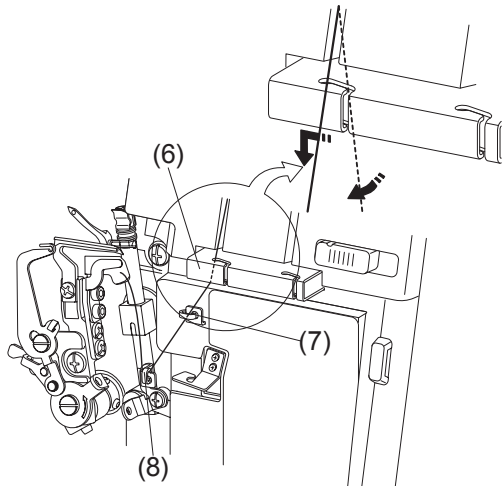
2. Slide the thread under the top cover thread guide as illustrated.

(2) Top cover thread guide

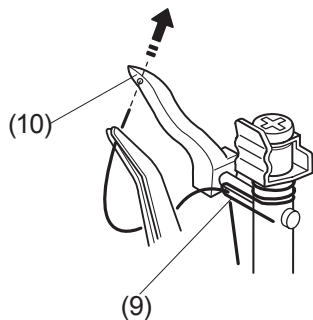
3.



4. 5.



6. 7.



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

- (3) Thread
- (4) Tension disks
- (5) Upper looper thread tension dial

4. Pass the thread through the left side of the looper thread guide.

- (6) Looper thread guide

5. Pass the thread through the upper looper thread guide (A), and the looper thread take-up lever (upper).

- (7) Upper looper thread guide (A)
- (8) Looper thread take-up lever (upper)

6. Pass the thread through upper looper thread guide.

- (9) 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.

- (10) Upper looper

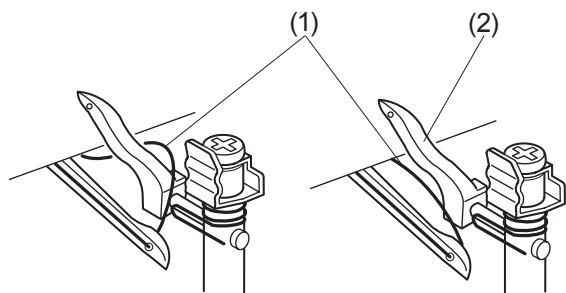
NOTE:

When you thread the upper looper only, to avoid tangled threads pull out both threads over the needle plate and under the presser foot.

NOTE:

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.

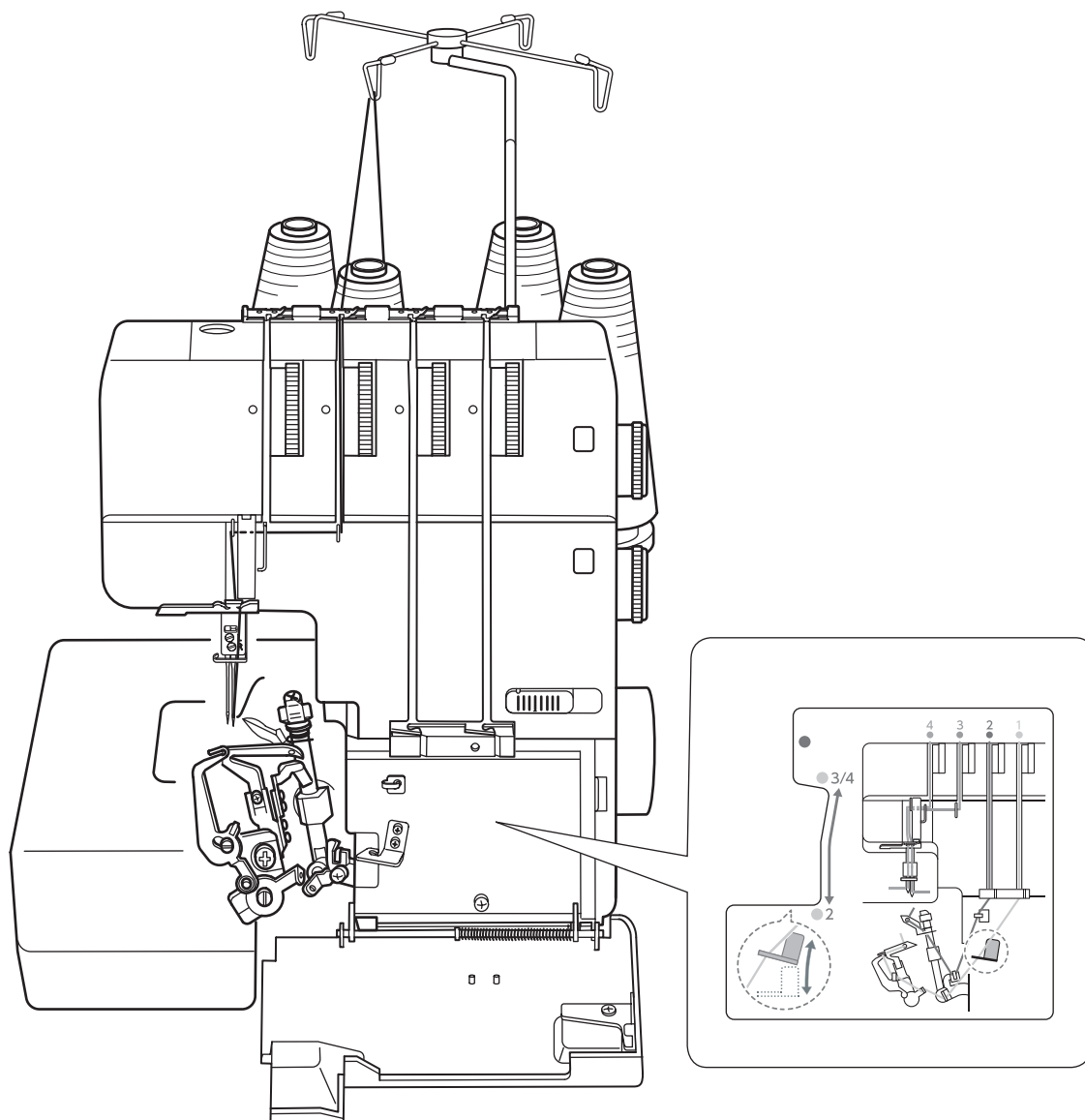
- (1) Lower looper thread
- (2) Upper looper



Wrong

Correct

Threading the Needle on the Right



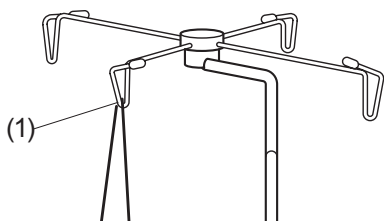
CAUTION:

Turn off the power switch before threading the machine.

NOTE:

- Raise the presser foot lifter for easier threading.
- Open the looper cover and side cover.
- 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 blue.
- A convenient threading chart is placed on the machine body inside the looper cover.

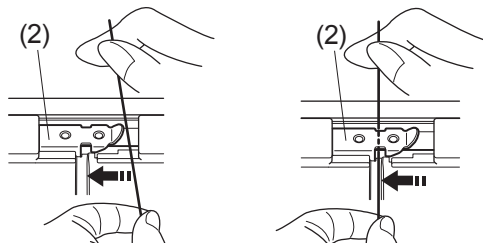
1.



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

(1) Thread guide

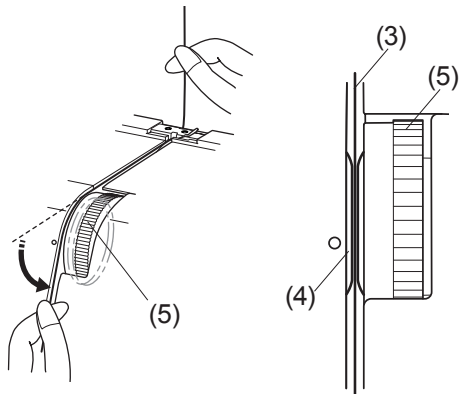
2.



2. Slide the thread under the top cover thread guide as illustrated.

(2) Top cover thread guide

3.



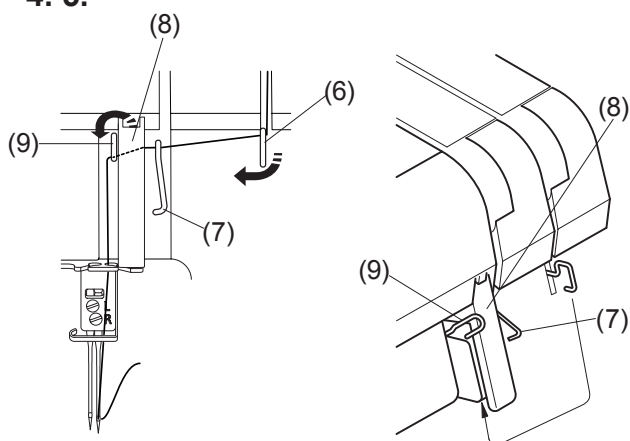
3. Hold the thread at both ends and tug gently to ensure the thread is correctly inserted between the tension disks (If the presser foot lifter is raised, the thread easily inserts between the tension disks).

(3) Thread

(4) Tension disks

(5) Right needle thread tension dial

4. 5.



4. After passing through the front cover thread guide (A), pass the thread from the bottom of the front cover thread guide (B) and the take-up lever cover from right to left.

(6) Front cover thread guide (A)

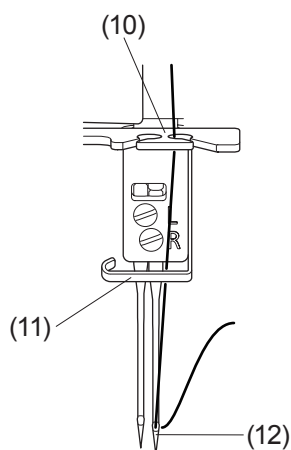
(7) Front cover thread guide (B)

(8) Take-up lever cover

5. Guide the thread over the front cover thread guide (C).

(9) Front cover thread guide (C)

6. 7. 8.



6. Insert the thread into the right slot of needle thread guide plate.

(10) Needle thread guide plate

7. Raise the needle to its highest point and pass the thread through the needle bar thread guide from left to right.

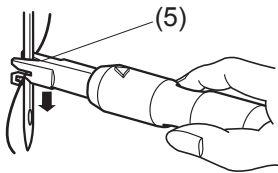
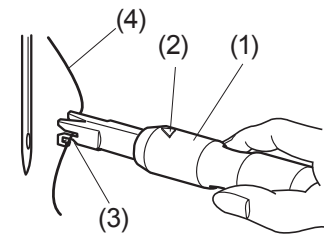
(11) Needle bar thread guide

8. Thread the right needle from front to back and pull the thread about 10 cm (4") from the eye of the needle to the back.

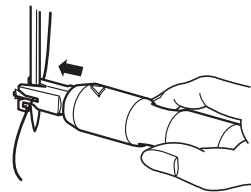
You can easily thread the machine if you use the Needle Threader included in the standard accessory (refer to page 24).

(12) Right needle

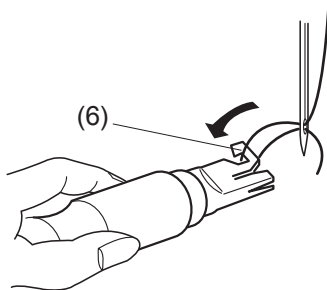
1. 2. 3.



4.



5



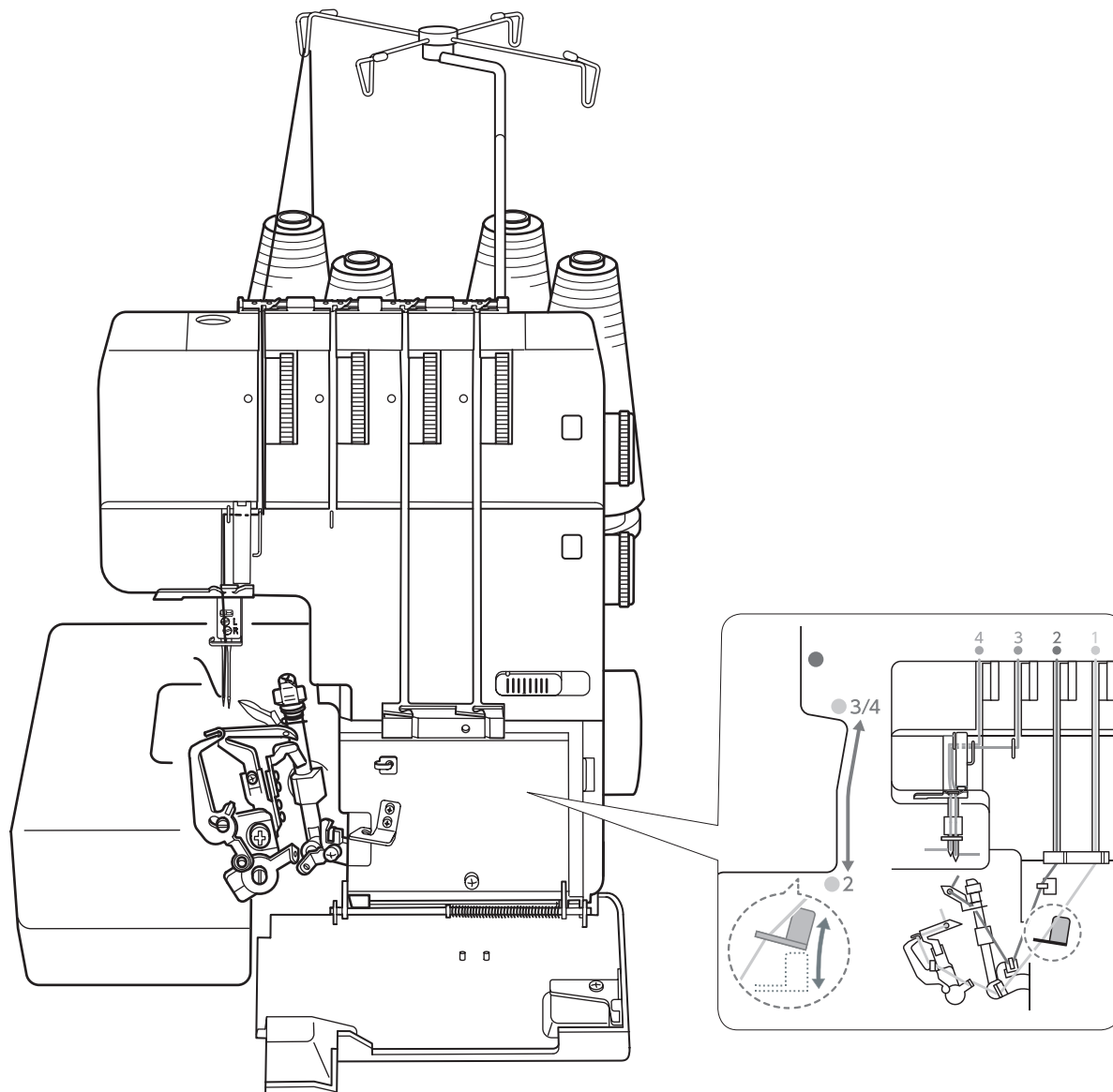
How to use the Needle Threader

- * Turn off the power switch when you use the Needle Threader.
- * Do not use other than for the threading or replacement of the needle.

1. Hold the stem of the threader with the triangle mark up. Guide the thread to insert it into the Y-groove of the nib from right to left.
2. Place the V-groove over the needle just above the needle eye. Make sure the thread does not slip out from the Y-groove.
3. Slide the threader down along the needle while pushing it gently until the threader pin goes into the needle eye.
4. Push the stem so that the threader pin comes out through the needle eye with a loop of thread.
5. Remove the threader from the needle slowly, leaving the thread loop behind the needle eye. Then pick the loop with the hook to pull out the end of thread to the back.

- (1) Stem
- (2) Triangle mark
- (3) Y-groove
- (4) Thread
- (5) V-groove
- (6) Hook

Threading the Needle on the Left



CAUTION:

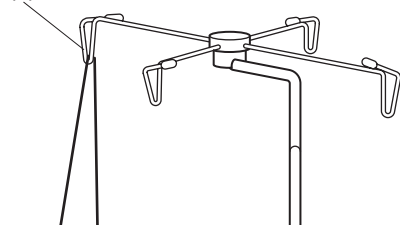
Turn off the power switch before threading the machine.

NOTE:

- Raise the presser foot lifter for easier threading.
- Open the looper cover and side cover.
- Place the spool of thread on the left side spool pin.
- The points to thread for needle on the left are marked in orange.
- A convenient threading chart is placed on the machine body inside the looper cover.

1.

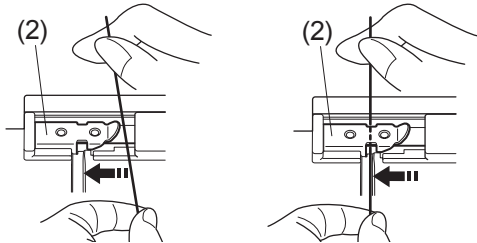
(1)



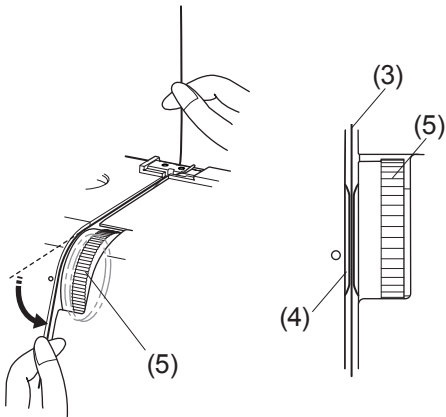
1. Draw the thread through the thread guide on the left from back to front.

(1) Thread guide

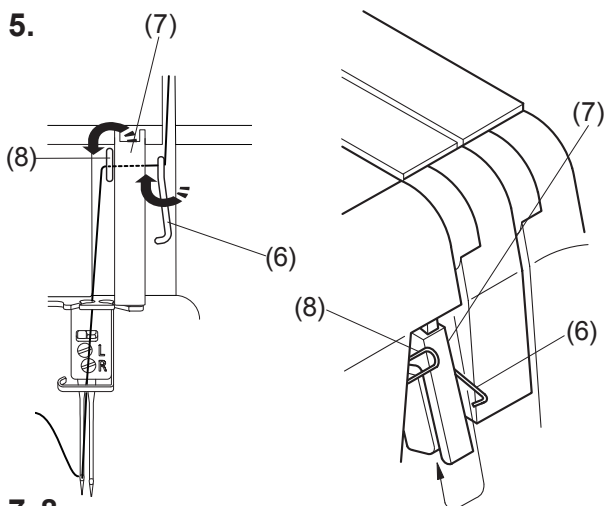
2.



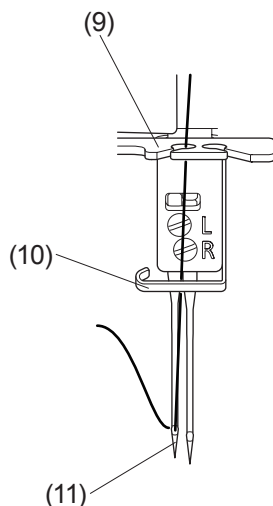
3.



4. 5.



6. 7. 8.



2. Slide the thread under the top cover thread guide as illustrated.

(2) Top cover thread guide

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

(3) Thread

(4) Tension disks

(5) Left needle thread tension dial

4. Slide the thread from the bottom of front cover thread guide (B) and the take-up lever cover right to left.

5. Guide the thread over the front cover thread guide (C).

(6) Front cover thread guide (B)

(7) Take-up lever cover

(8) Front cover thread guide (C)

6. Insert the thread into the left slot of the needle thread guide plate.

7. Raise the needle to its highest point and pass the thread through the needle bar thread guide from left to right.

8. Thread the left needle from front to back and pull the thread about 10 cm (4") from the eye of the needle to the back. You can easily thread the machine if you use the Needle Threader included in the standard accessory (refer to page 24).

(9) Needle thread guide plate

(10) Needle bar thread guide

(11) Left needle

– Gently pull all four thread ends towards the back of the machine.

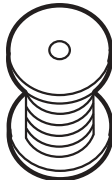

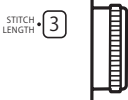
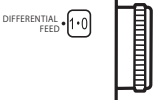
– Run threads under the presser foot and lower the presser foot.

– Close side cover and looper cover.

– Turn handwheel toward you to chain off three or four stitches.

The sewing preparation is now complete.

Thread and Needle Chart

Type of fabric		Type of thread 	Needle 	Stitch length 	Differential feed ratio 
Lightweight	Organdy, Georgette, Lawn, Crepe de chine, Lining	Synthetic #80-100	HAX1 SP #11	2.0-3.0	0.5-1.0
Medium weight	Cotton, Linen, Satin, Ordinary fabric	Synthetic #60-100	HAX1 SP #11-14	2.5-3.5	1.0
Heavy weight	Tweed, Coating, Denim, Doeskin, Thick fabric	Synthetic #50-100	HAX1 SP #14	3.0-4.0	1.0
Knits	Knitted fabric	Synthetic #60-90 Woolly nylon (for upper looper)	HAX1 SP #11-14	2.5-4.0	1.0-2.2

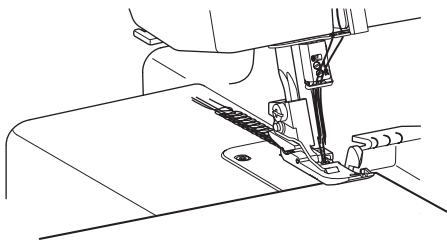
* For details on how to adjust the stitch length and the differential feed ratio, refer to page 10.

* Use woolly nylon thread as upper looper thread for rolled hemming, picot edging and narrow hemming.

NOTE:

Your Serger/Overlocker/Overlock machine uses standard sewing needles (HAX1 SP, #11, #14).

1.2.3.



TEST STITCHING

Starting Sewing

1. Close the side cover and the looper cover. Turn the power switch ON.
2. Make sure that the upper knife is activated (in the raised position).
3. Lower the presser foot lifter.
4. Draw all of the threads back under the foot. Slowly run the machine and produce a 2" (5 cm) thread chain while gently pulling the thread chain to the back. Check the chain.
5. Insert the fabric under the toe of the foot. (You do not need to raise the foot.) 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

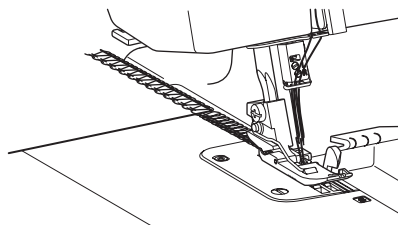
1. When stitching is completed, continue to run the machine slowly to produce a thread chain for about 12 cm (5") while pulling the thread chain slightly to the back.

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

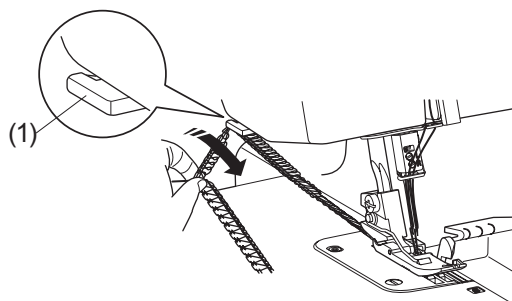
(1) Thread cutter

* The thread cutter becomes blunt as loose threads build up. Remove the loose threads collected in the thread cutter.

1.



2.



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

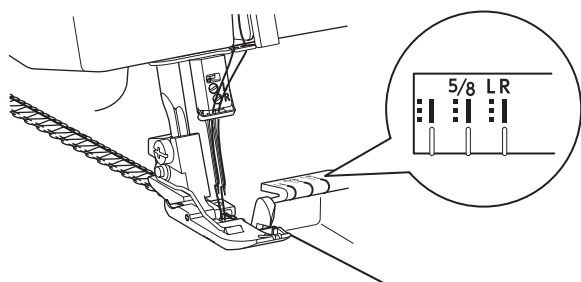
On the top of the looper cover are guide lines indicating the distance from the needle position.

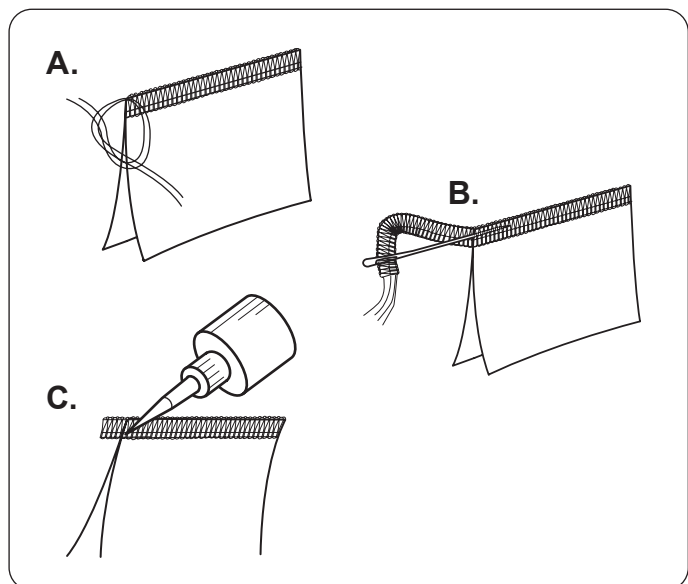
Please use them as sewing guides.

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 15 mm (5/8 inch).



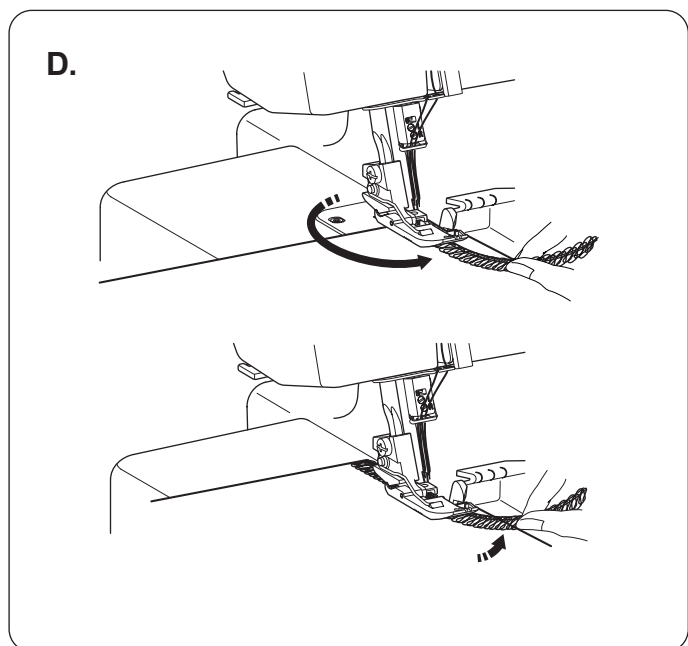


Securing Ends

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.

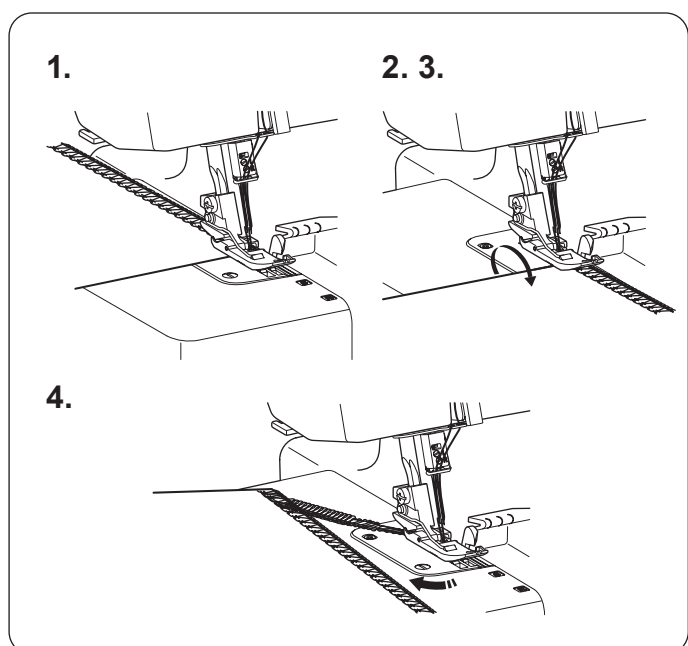
At the beginning of a seam

- A** Separate and tie the thread ends together.
- B** Thread the chain through a large eyed needle, and weave the 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 (Fray Check™ or Fray-No-More™) on the end of the threads.



D Securing the beginning with the machine.

1. Before putting your fabric in 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.

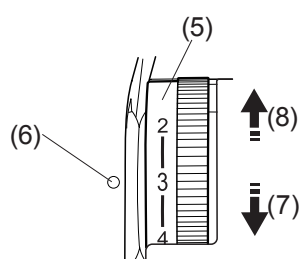
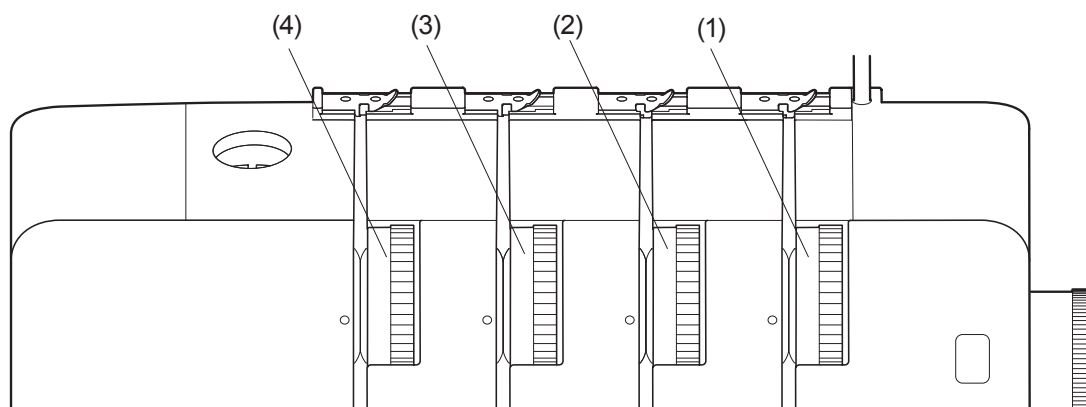


At the end of a seam

Securing the seam end with the machine.

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)



Adjusting the thread tension

Set all four thread tension dials to “3”.

Sew and check the thread tension.

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

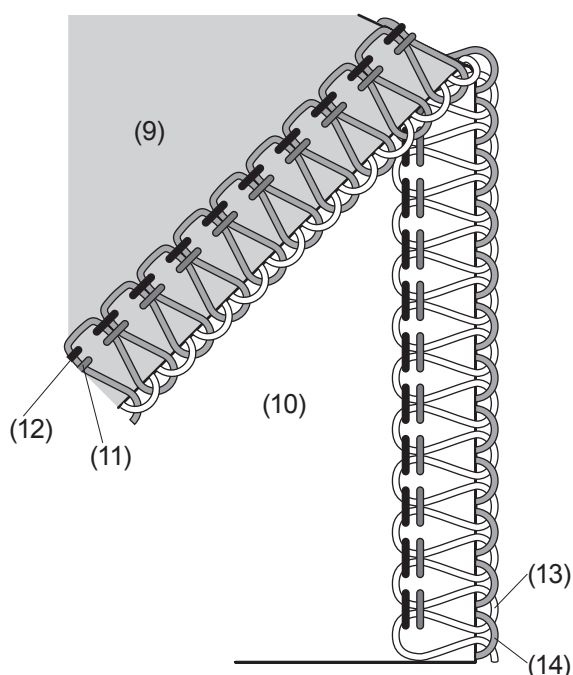
Adjust in the order of needle thread tension to looper thread tension.

For better results, loosen the needle thread tension when you sew lightweight fabrics, and tighten the needle thread tension when you sew heavyweight fabric.

- (1) Lower looper thread tension dial
- (2) Upper looper thread tension dial
- (3) Right needle thread tension dial
- (4) Left needle thread tension dial
- (5) Thread tension dial
- (6) Setting mark
- (7) Loosen
- (8) Tighten

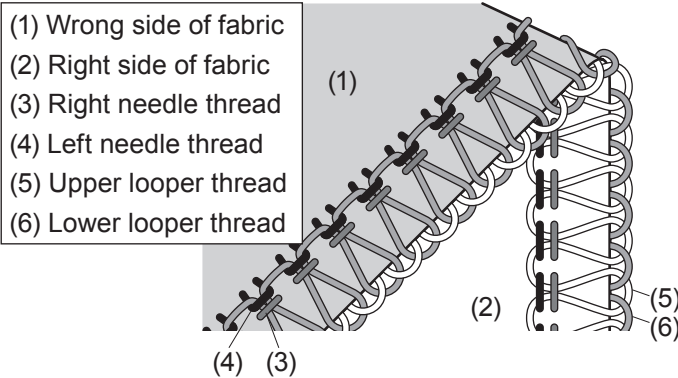
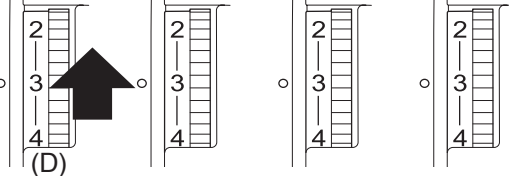
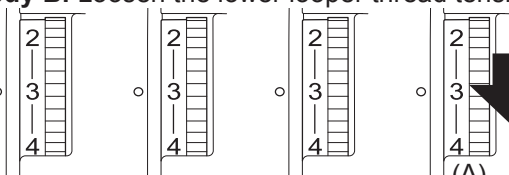
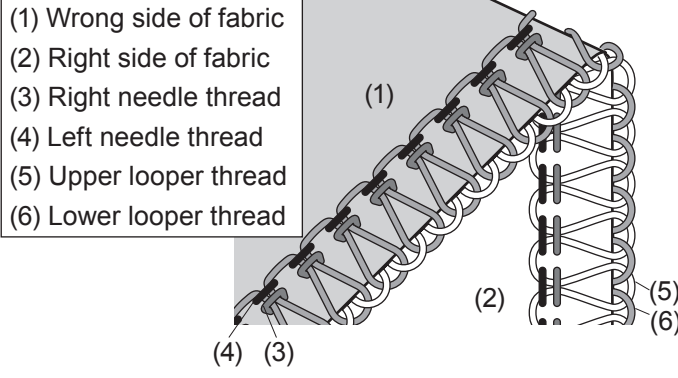
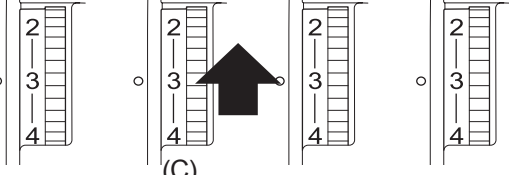
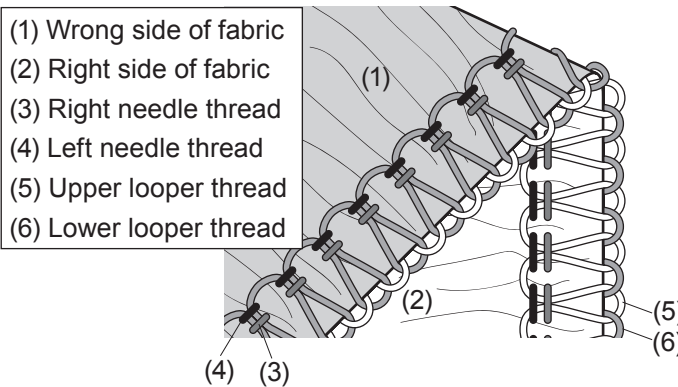
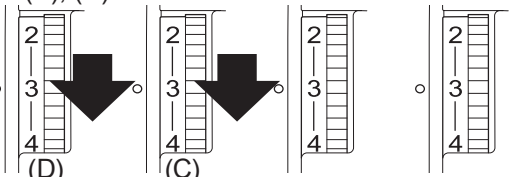

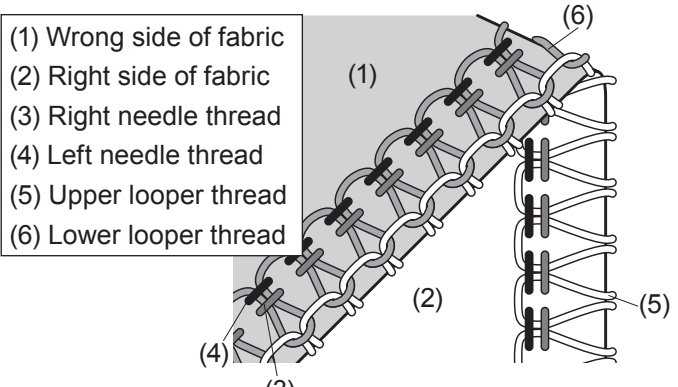
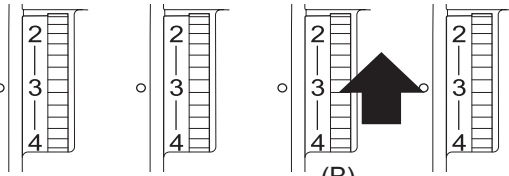
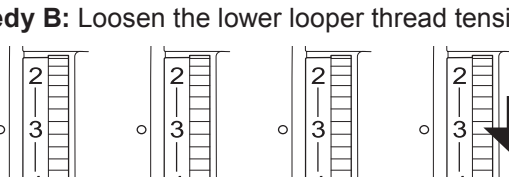
Correct tension

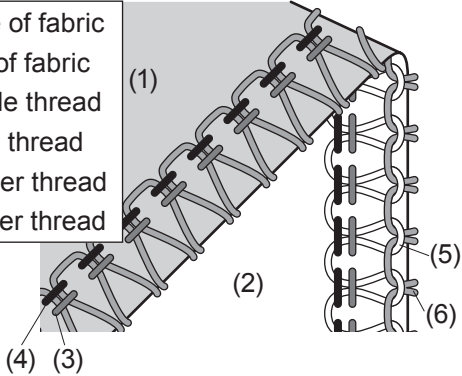
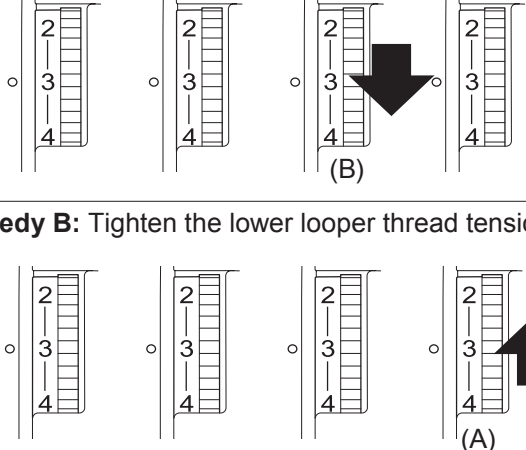
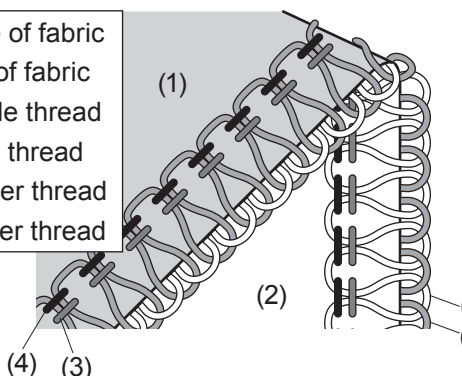
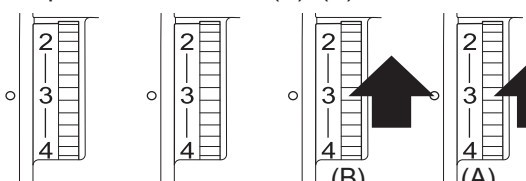
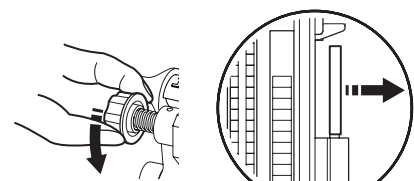
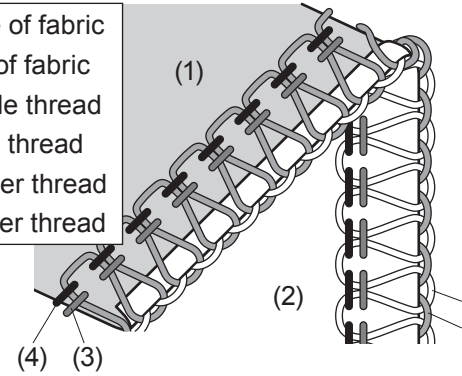
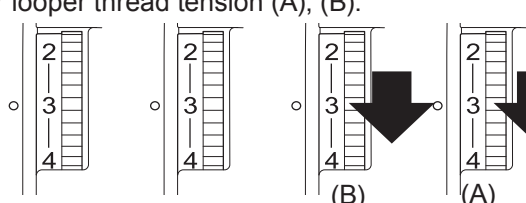
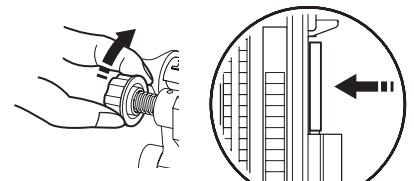
The illustration to the left shows a seam sewn at the correct tension. The upper looper thread and lower looper thread should be on the edge of the fabric. There should be no floating or play in the left and right needle threads on both sides of the fabric. Note that you may need to adjust the thread tension depending on the fabric and thread being used.



- (9) Wrong side of fabric
- (10) Right side of fabric
- (11) Right needle thread
- (12) Left needle thread
- (13) Upper looper thread
- (14) Lower looper thread

Adjusting the Setting of the Machine (4 threads)

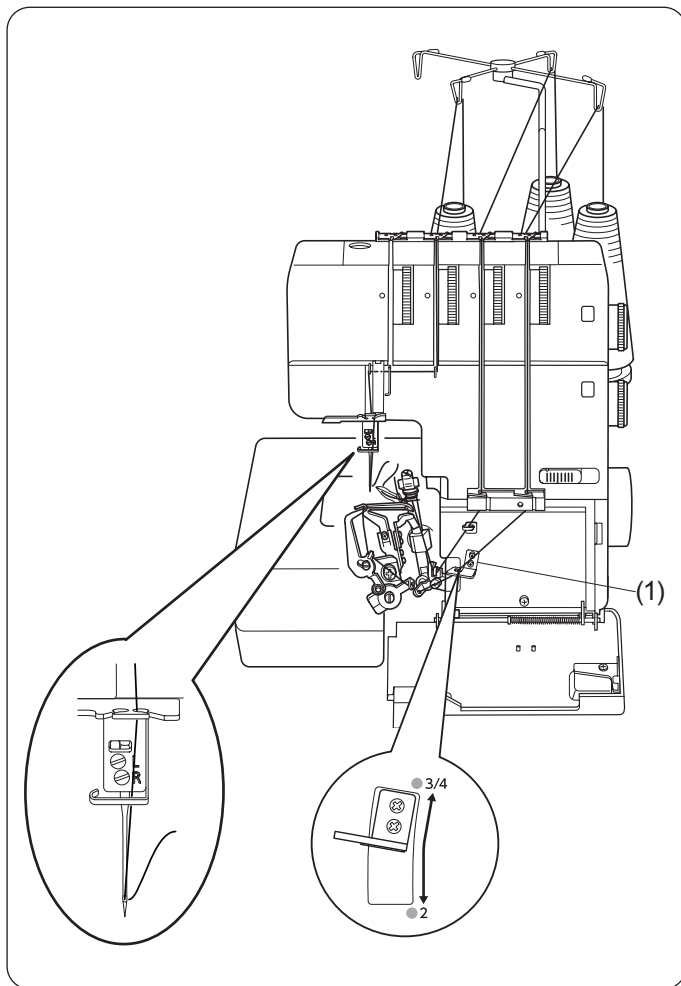
Condition	Remedy
(A) Lower looper thread tension (B) Upper looper thread tension (C) Right needle thread tension (D) Left needle thread tension	
Left needle thread tension is too loose  <p>(1) Wrong side of fabric (2) Right side of fabric (3) Right needle thread (4) Left needle thread (5) Upper looper thread (6) Lower looper thread</p>	Remedy A: Tighten the left needle thread tension (D).  Remedy B: Loosen the lower looper thread tension (A). 
Right needle thread tension is too loose  <p>(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</p>	Tighten the right needle thread tension (C). 
Wrinkles appear on the fabric  <p>(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</p>	Remedy A: Loosen the left and right needle thread tension (C), (D).  Remedy B: When you sew the lightweight fabric, decreasing the differential feed ratio is effective (refer to pages 10 and 27). 
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.  <p>(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</p>	Remedy A: Tighten the upper looper thread tension (B).  Remedy B: Loosen the lower looper thread tension (A). 

Condition	Remedy
(A) Lower looper thread tension (B) Upper looper thread tension (C) Right needle thread tension (D) Left needle thread tension	
<p>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.</p>  <p>(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</p>	<p>Remedy A: Loosen the upper looper thread tension (B).</p>  <p>Remedy B: Tighten the lower looper thread tension (A).</p>
<p>Looper thread tension is too loose</p>  <p>(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</p>	<p>Remedy A: Tighten the upper looper thread tension and lower looper thread tension (A), (B).</p>  <p>Remedy B: Move the cutting width to right (wide). (refer to page 12)</p> 
<p>The fabric is curling in the seams</p>  <p>(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</p>	<p>Remedy A: Loosen the upper looper thread tension and lower looper thread tension (A), (B).</p>  <p>Remedy B: Move the cutting width to left (narrow). (refer to page 12)</p> 

NOTE:

When the fabric is curling in the seams, check if the chaining finger switch knob on "S". If not, turn the chaining finger switch knob to "S" (refer to page 13).

* If the stitch cannot be adjusted by remedy A, try remedy B.



Threading the Machine (3 threads)



CAUTION:

Turn off the power switch before threading the machine.

Using the needle on the right only (for regular 3 threads serging)

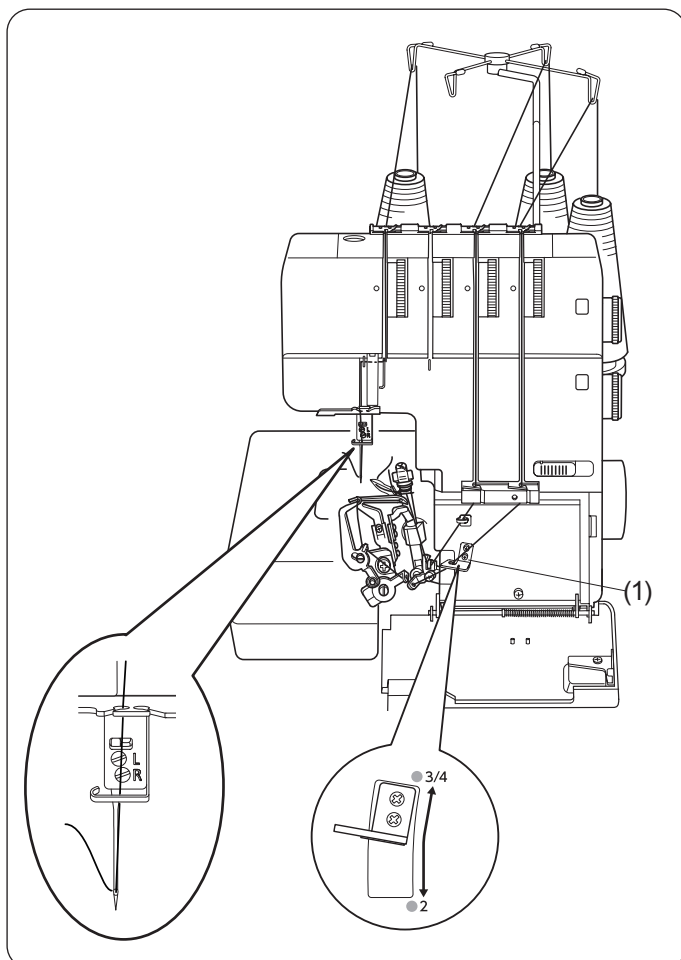
When you use the right needle, the standard sewing width is 3.5 mm.

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

(1) Changeable thread guide: 3/4

NOTE:

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

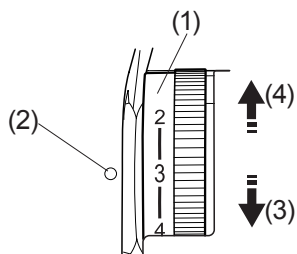


Using the needle on the left only (for wide 3 threads serging)

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)

Adjusting the thread tension

Set the three thread tension dials to "3".

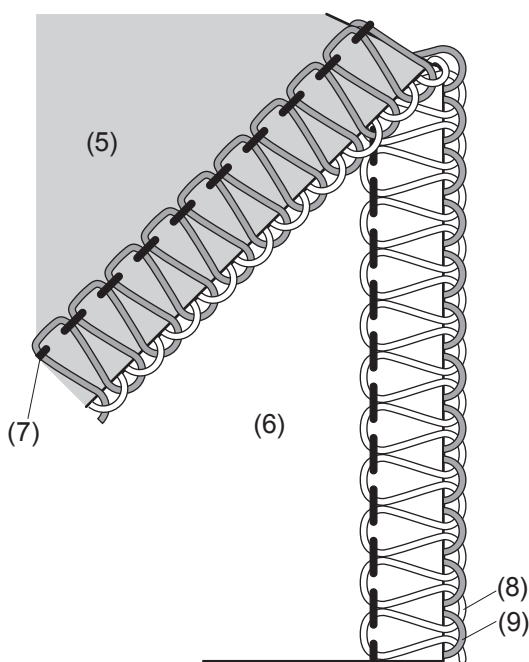
Sew and check the thread tension.

If the tension on the test piece is not satisfactory, you can adjust the thread tension with the thread tension dial. Adjust in the order of needle thread tension to looper thread tension.

- (1) Thread tension dial
- (2) Setting mark
- (3) Loosen
- (4) Tighten

NOTE:

For better results, loosen the needle thread tension when you sew lightweight fabrics, and tighten the needle thread tension when you sew heavyweight fabric.

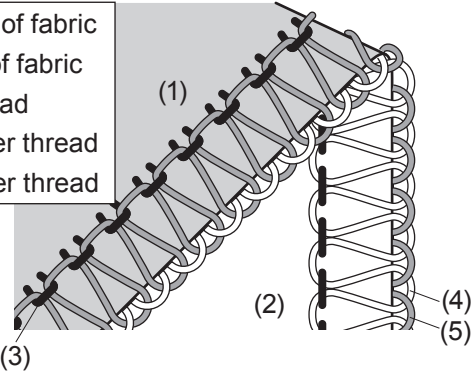
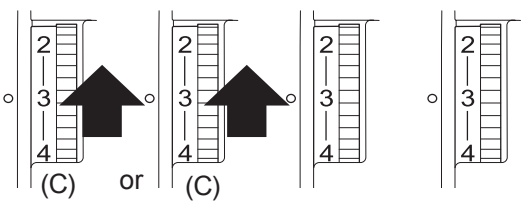
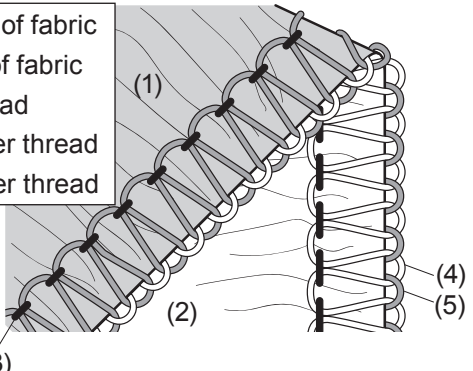
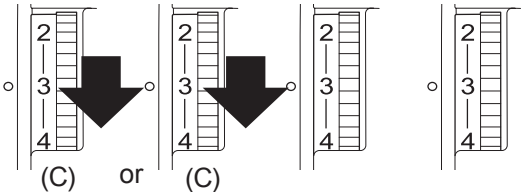

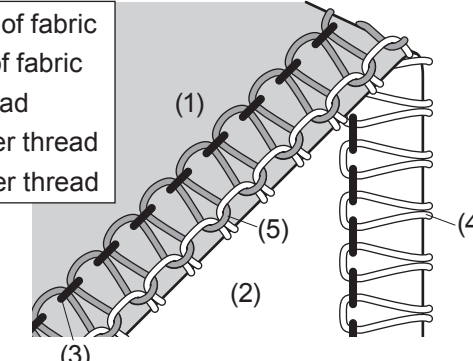
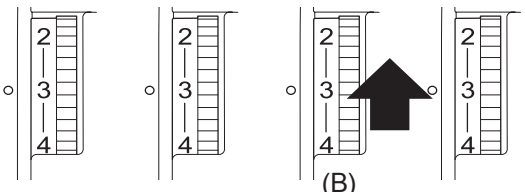
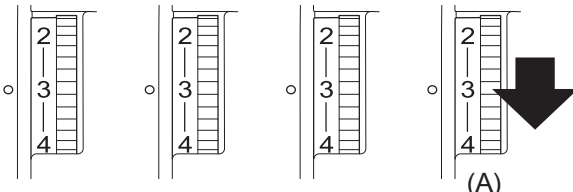


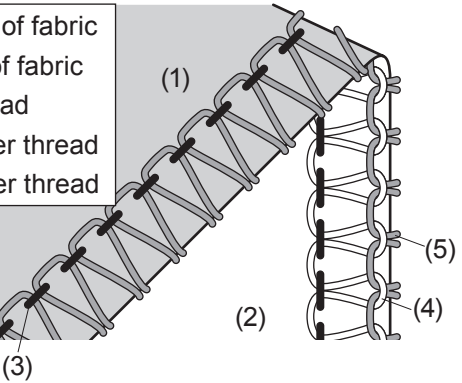
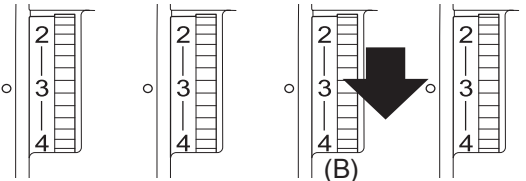
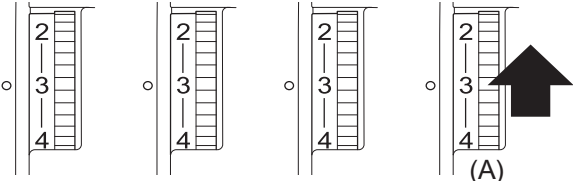
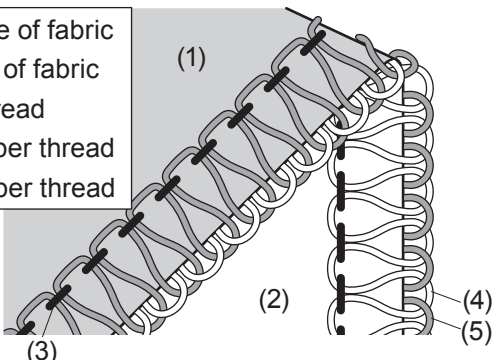
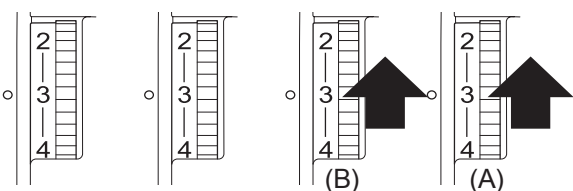
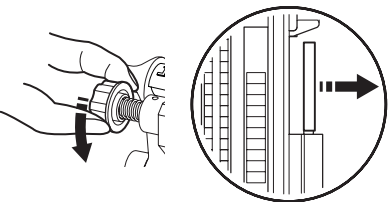
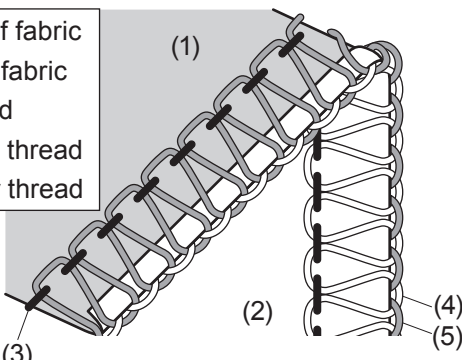
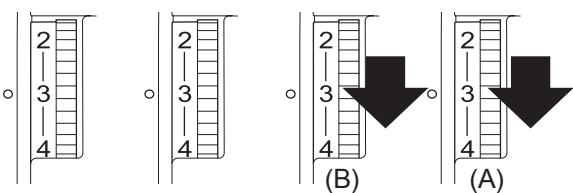
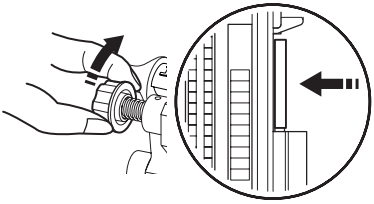
Correct tension

The illustration to the left shows a seam sewn at the correct tension. The upper looper thread and lower looper thread should be on the edge of the fabric. There should be no floating or play in the left or right needle thread on both sides of the fabric. Note that you may need to adjust the thread tension depending on the fabric and thread being used.

- (5) Wrong side of fabric
- (6) Right side of fabric
- (7) Right or left needle thread
- (8) Upper looper thread
- (9) Lower looper thread

Adjusting the Setting of the Machine (3 threads)

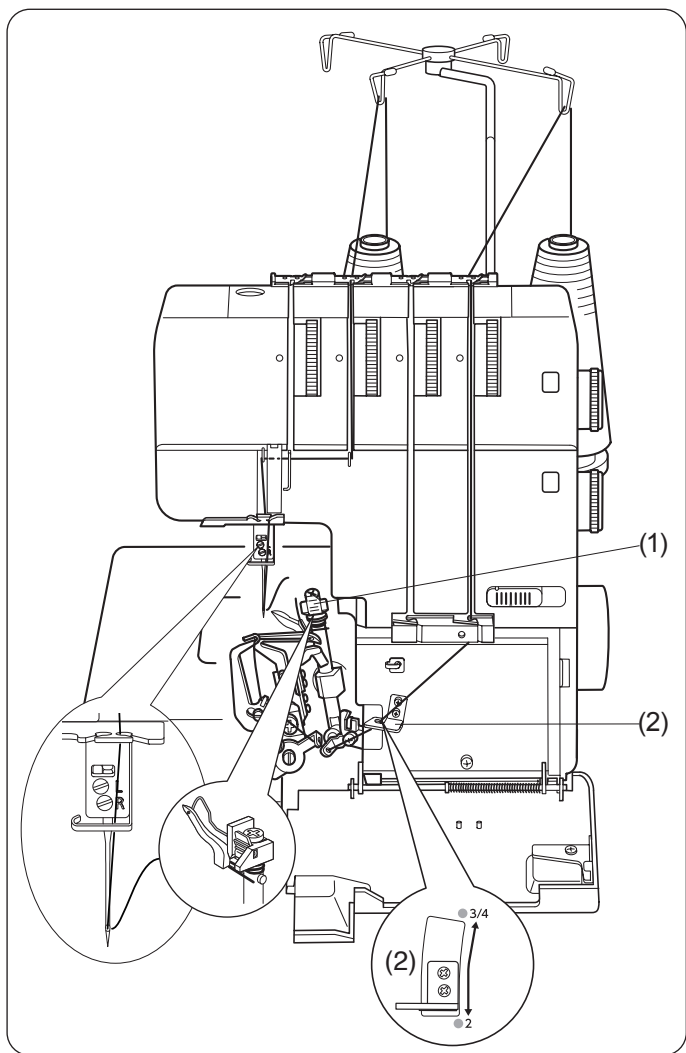
Condition	Remedy
(A) Lower looper thread tension (B) Upper looper thread tension (C) Needle thread tension	
<p>Needle thread tension is too loose</p> <p>(1) Wrong side of fabric (2) Right side of fabric (3) Needle thread (4) Upper looper thread (5) Lower looper thread</p> 	<p>Tighten the needle thread tension (C).</p> 
<p>Wrinkles appear on the fabric</p> <p>(1) Wrong side of fabric (2) Right side of fabric (3) Needle thread (4) Upper looper thread (5) Lower looper thread</p> 	<p>Remedy A: Loosen the needle thread tension (C)</p>  <p>Remedy B: When you sew the lightweight fabric, decreasing the differential feed ratio is effective (refer to pages 10 and 27).</p> 
<p>Looper thread tension is out of balance (1) The illustration shows a seam sewn when the lower looper thread tension is too tight and/or the upper looper thread tension is too loose.</p> <p>(1) Wrong side of fabric (2) Right side of fabric (3) Needle thread (4) Upper looper thread (5) Lower looper thread</p> 	<p>Remedy A: Tighten the upper looper thread tension (B).</p>  <p>Remedy B: Loosen the lower looper thread tension (A).</p> 

Condition	Remedy
(A) Lower looper thread tension (B) Upper looper thread tension (C) Needle thread tension	
<p>Looper thread tension is out of balance (2) The illustration shows a seam sewn when the upper looper thread tension is too tight and/or the lower looper thread tension is too loose.</p> <p>(1) Wrong side of fabric (2) Right side of fabric (3) Needle thread (4) Upper looper thread (5) Lower looper thread</p> 	<p>Remedy A: Loosen the upper looper thread tension (B).</p>  <p>Remedy B: Tighten the lower looper thread tension (A).</p> 
<p>Looper thread tension is too loose</p> <p>(1) Wrong side of fabric (2) Right side of fabric (3) Needle thread (4) Upper looper thread (5) Lower looper thread</p> 	<p>Remedy A: Tighten the upper looper thread tension and lower looper thread tension (A), (B).</p>  <p>Remedy B: Move the cutting width to right (wide). (refer to page 12)</p> 
<p>The fabric is curling in the seams</p> <p>(1) Wrong side of fabric (2) Right side of fabric (3) Needle thread (4) Upper looper thread (5) Lower looper thread</p> 	<p>Remedy A: Loosen the upper looper thread tension and lower looper thread tension (A), (B).</p>  <p>Remedy B: Move the cutting width to left (narrow). (refer to page 12)</p> 

NOTE:

When the fabric is curling in the seams, check if the chaining finger switch knob on "S". If not, turn the chaining finger switch knob to "S" (refer to page 13).

* If the stitch cannot be adjusted by remedy A, try remedy B.



Threading the Machine (2 threads)



CAUTION:

Turn off the power switch before threading the machine.

Using the needle on the right only (for regular 2-thread serging)

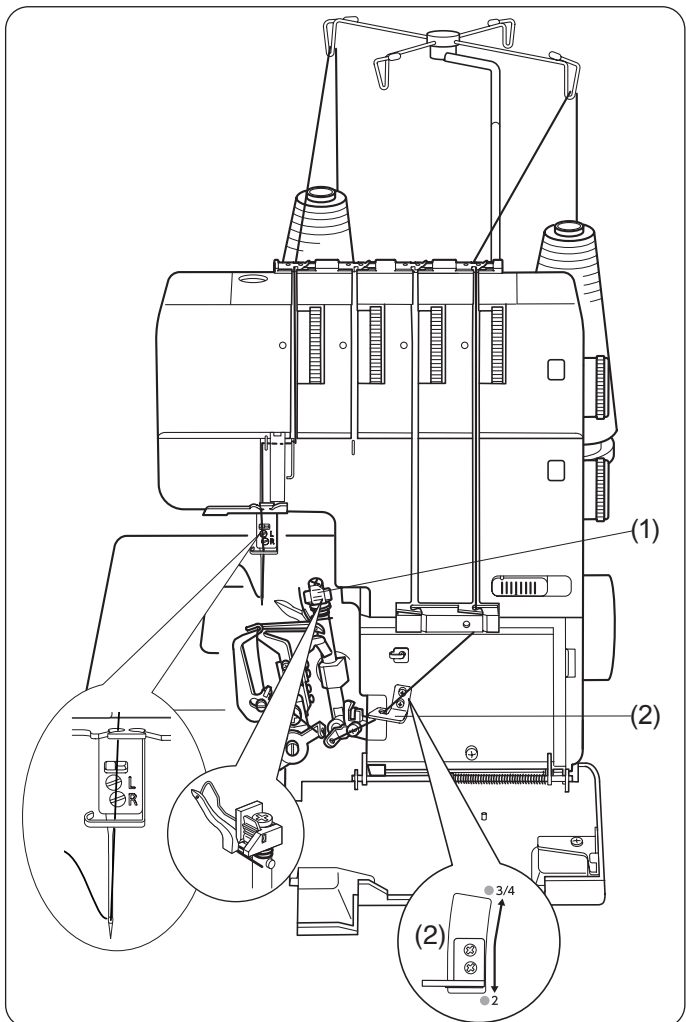
When you use the right needle, the standard sewing width is 3.5 mm.

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

- (1) Spreader
- (2) Changeable thread guide: 2

NOTE:

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

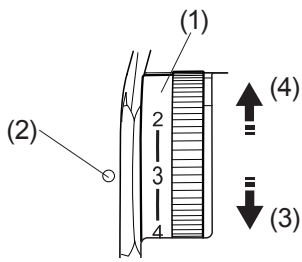


Using the needle on the left only (for wide 2-thread serging)

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) Spreader
- (2) Changeable thread guide: 2



Thread Tension (2 threads)

Adjusting the thread tension

Set the needle thread tension dial to "1".

Set the lower looper thread tension dial to "3".

Sew and check the thread tension.

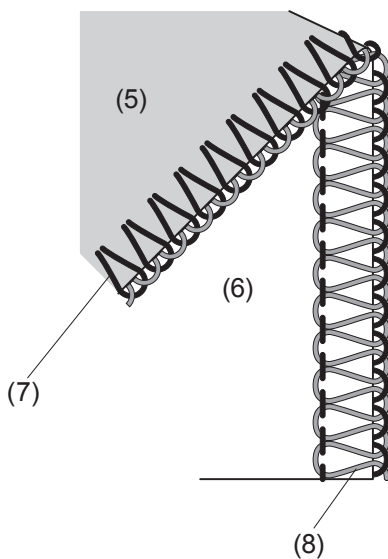
If the tension on the test piece is not satisfactory, you can adjust the thread tension with the thread tension dial.

Adjust in the order of needle thread tension to looper thread tension.

- (1) Thread tension dial
- (2) Setting mark
- (3) Loosen
- (4) Tighten

NOTE:

For better results, loosen the needle thread tension when you sew lightweight fabrics, and tighten the needle thread tension when you sew heavyweight fabric.



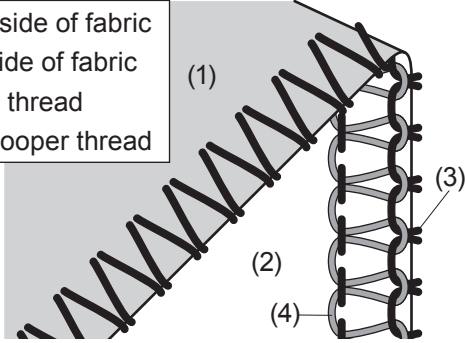
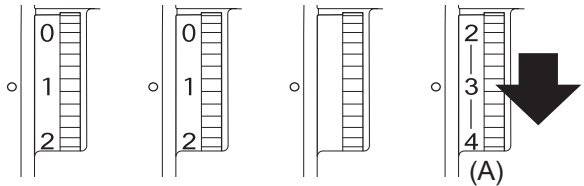
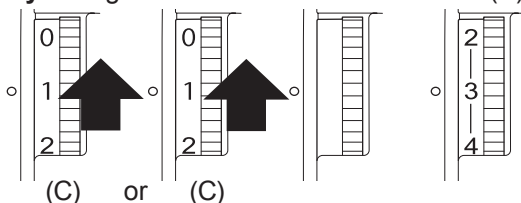
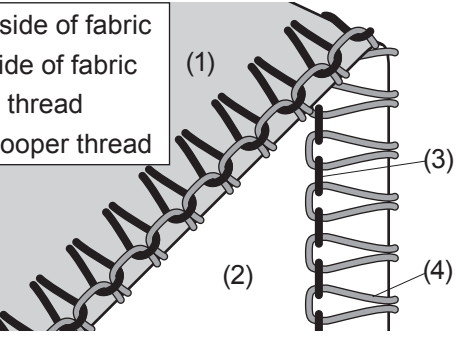
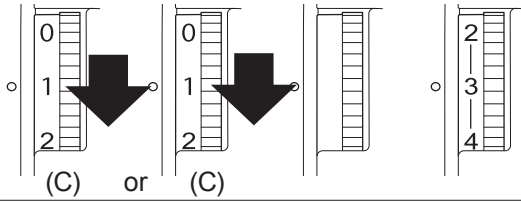
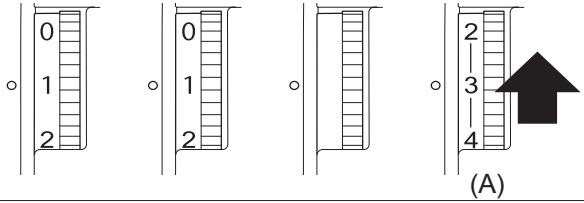
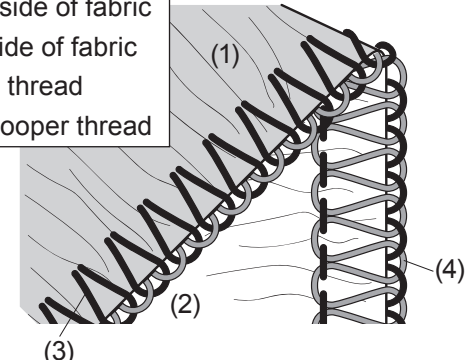
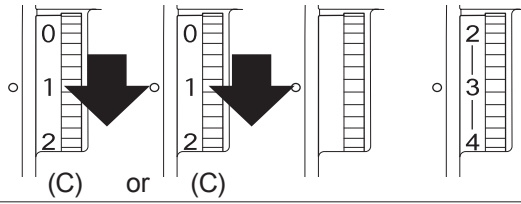

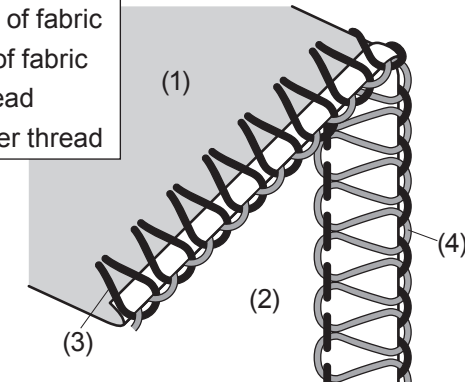
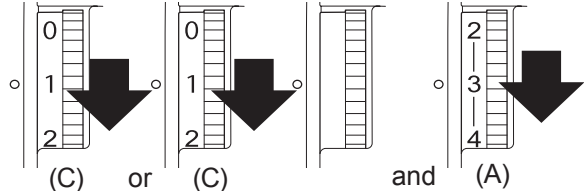
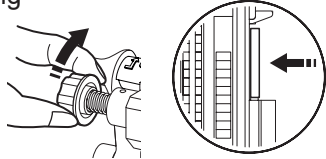
Correct tension

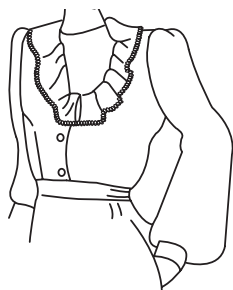
The illustration to the left shows a seam sewn at the correct tension. The lower looper thread should be on the edge of the fabric. There should be no floating or play in the left or right needle thread on both sides of the fabric.

Note that you may need to adjust the thread tension depending on the fabric and thread being used.

- (5) Wrong side of fabric
- (6) Right side of fabric
- (7) Right or left needle thread
- (8) Lower looper thread

Adjusting the Setting of the Machine (2 threads)

Condition	Remedy
(A) Lower looper thread tension (B) Upper looper thread tension (C) Needle thread tension	
Needle/Looper thread tension is out of balance (1) The illustration shows a seam sewn when the lower looper thread tension is too tight and/or the needle thread tension is too loose. <div> (1) Wrong side of fabric (2) Right side of fabric (3) Needle thread (4) Lower looper thread </div> 	Remedy A: Loosen the lower looper thread tension (A).  Remedy B: Tighten the needle thread tension (C). 
Needle/Looper thread tension is out of balance (2) The illustration shows a seam sewn when the needle thread tension is too tight and/or the lower looper thread tension is too loose. <div> (1) Wrong side of fabric (2) Right side of fabric (3) Needle thread (4) Lower looper thread </div> 	Remedy A: Loosen the needle thread tension (C).  Remedy B: Tighten the lower looper thread tension (A). 
Wrinkles appear on the fabric <div> (1) Wrong side of fabric (2) Right side of fabric (3) Needle thread (4) Lower looper thread </div> 	Remedy A: Loosen the needle thread tension (C).  Remedy B: When you sew the lightweight fabric, decreasing the differential feed ratio is effective (refer to pages 10 and 27). 
The fabric is curling in the seams <div> (1) Wrong side of fabric (2) Right side of fabric (3) Needle thread (4) Lower looper thread </div> 	Remedy A: Loosen the lower looper thread tension (A) and the needle thread tension (C).  Remedy B: Move the cutting width to left (narrow). (refer to page 12) 



ROLLED HEMMING, PICOT EDGING AND NARROW HEMMING

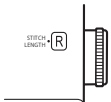
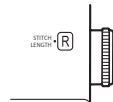
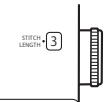
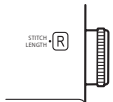
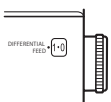

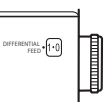
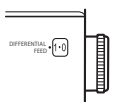
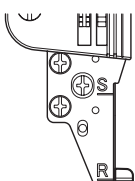
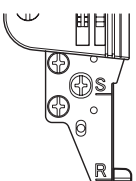
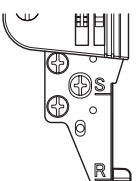
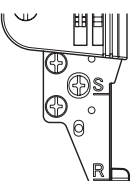
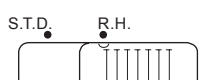
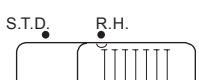
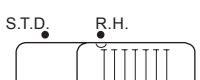
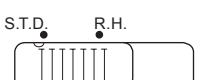
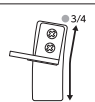
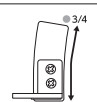
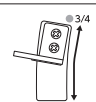
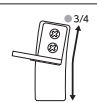
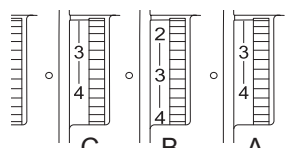
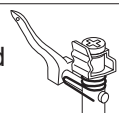
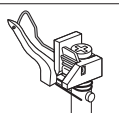
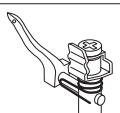
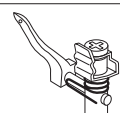
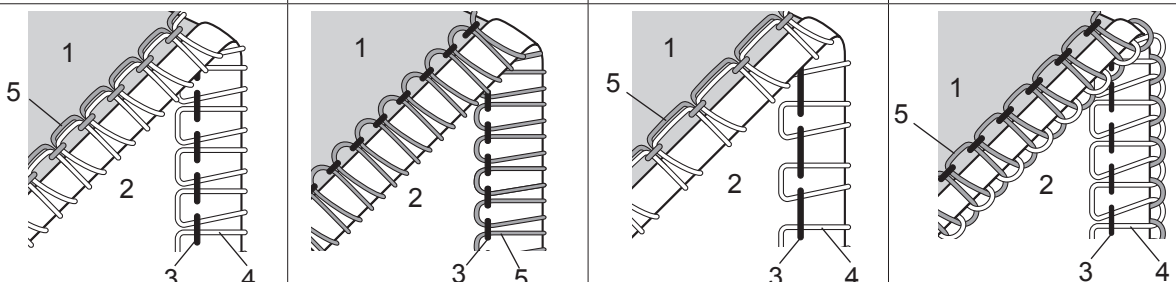
Tension Dial and Machine Settings According to the Thread and Fabric

The setting of tension dials may vary depending on the type and thickness of fabric and thread being sewn.



CAUTION:

Make sure to turn the power switch off before changing the needle or setting the chaining finger switch knob.

	Rolled Hemming (3 threads)	Rolled Hemming (2 threads)	Picot Edging	Narrow Hemming
Stitch length	 (R)	 (R)	 (3-4)	 (R)
Differential feed ratio	 (1.0)	 (1.0)	 (1.0)	 (1.0)
Chaining finger switch knob	 (R)	 (R)	 (R)	 (R)
Upper knife	Activated			
Needle	Using the right needle: HAx1 SP #11 (Remove the left needle.)			
Needle thread	Synthetic: #80-100			
Upper and lower looper threads	Woolly nylon, Synthetic: #80-100		Synthetic: #60-100	Woolly nylon, Synthetic: #80-100
Fabric	Lightweight fabric such as organdy, crepe de chine, lawn and georgette			
Lower looper pre-tension setting slider				
Changeable thread guide				
Standard setting of tension dials	 (A) Lower looper thread tension (B) Upper looper thread tension (C) Right needle thread tension *When you use a woolly nylon thread, loosen the looper thread tension that holds a woolly nylon thread (A and/or B).			
Spreader	Not Attached 	Attached 	Not Attached 	Not Attached 
Correct thread tension	 1. Wrong side of fabric 2. Right side of fabric 3. Needle thread 4. Upper looper thread 5. Lower looper thread			

Thread Tension

For rolled hemming and picot edging

Correct tension

The illustration to the left shows a seam sewn at the correct tension.

Note that you may need to adjust the thread tension depending on the fabric and thread being used.

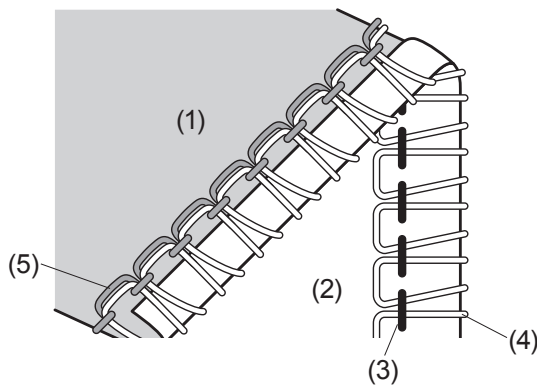
- (1) Wrong side of fabric
- (2) Right side of fabric
- (3) Right needle thread
- (4) Upper looper thread
- (5) Lower looper thread

Adjusting the thread tension

Set the tension dial as shown on page 40.

Sew and check the tension.

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

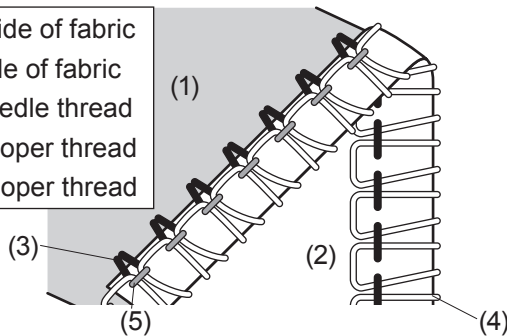


Condition

Needle thread tension is too loose

The illustration shows a seam sewn when the right needle thread tension is too loose.

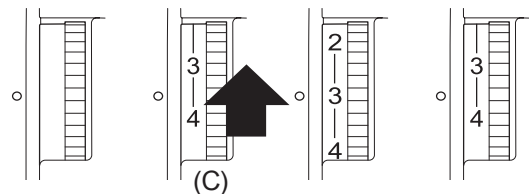
- (1) Wrong side of fabric
- (2) Right side of fabric
- (3) Right needle thread
- (4) Upper looper thread
- (5) Lower looper thread



Remedy

Tighten the right needle thread tension.

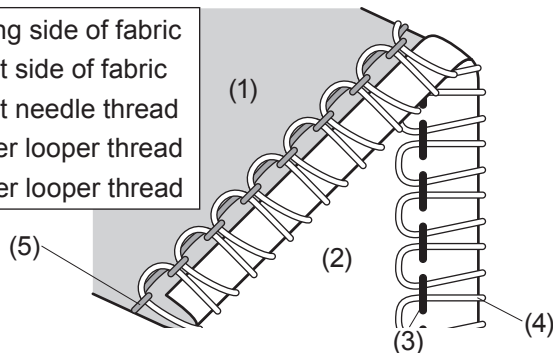
(C) Right needle thread tension



Upper looper thread tension is too loose

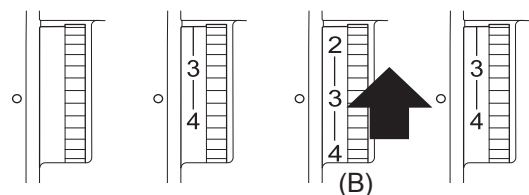
The illustration shows a seam sewn when the upper looper thread tension is too loose.

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



Tighten the upper looper thread tension.

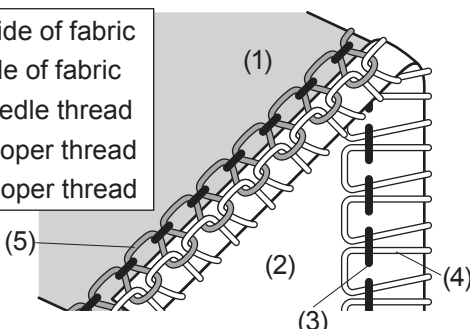
(B) Upper looper thread tension



Looper thread tension is out of balance

The illustration shows a seam sewn when the upper looper thread tension is too tight and/or lower looper thread tension is too loose.

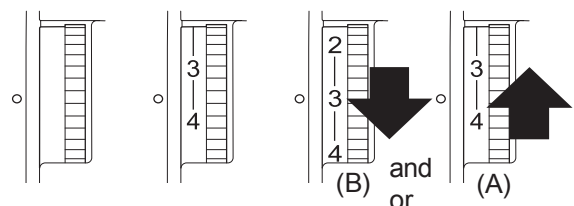
- (1) Wrong side of fabric
- (2) Right side of fabric
- (3) Right needle thread
- (4) Upper looper thread
- (5) Lower looper thread

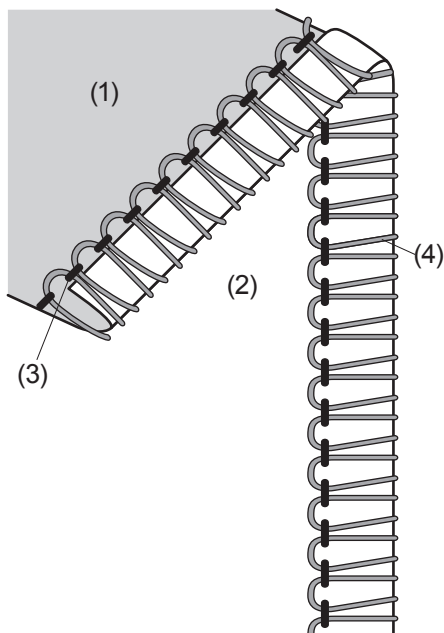


Loosen upper looper thread tension and/or tighten lower looper thread tension.

(A) Lower looper thread tension

(B) Upper looper thread tension





Correct tension for rolled hem (2 threads)

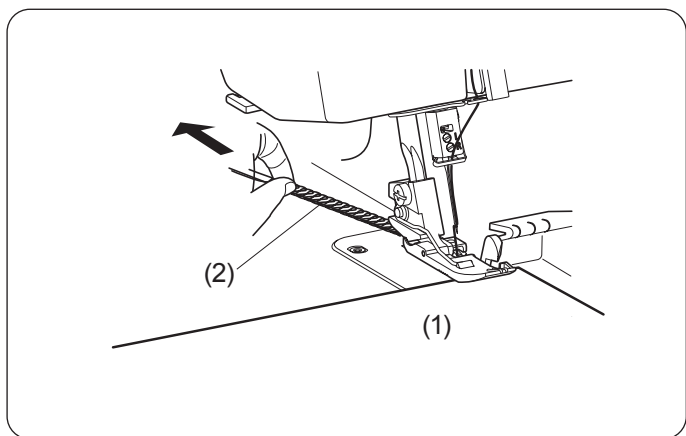
The illustration to the left shows a seam sewn at the correct tension. Set the changeable thread guide at the lowered position and attach the spreader.

Other settings are same as the 3-thread rolled hem (see page 40)

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

Sew a test piece of fabric using the fabric and thread you plan to use, adjusting the thread tension if necessary in order to obtain the best results.

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



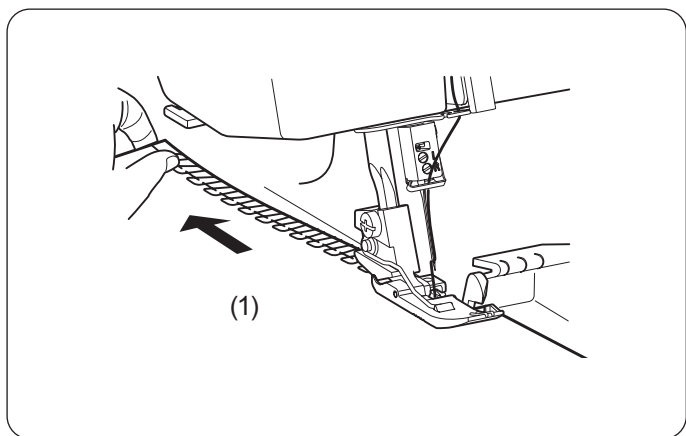
For Better Results

Rolled hemming

Gently pull the end of thread chain to the back at the beginning and end of sewing.

Gently pull the fabric toward you while sewing.

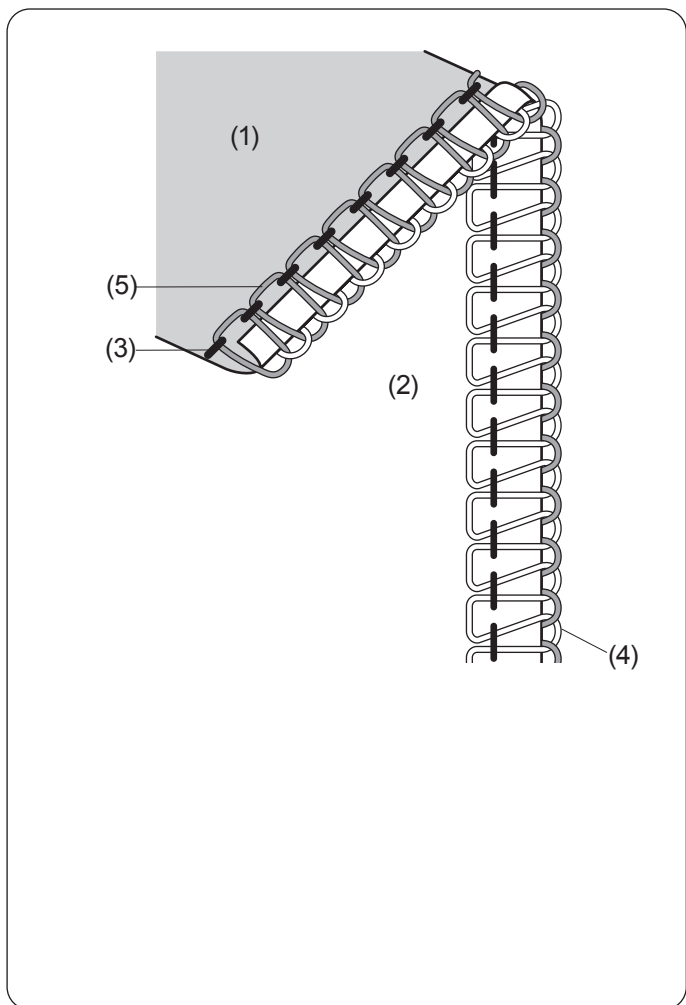
- (1) Fabric
- (2) Thread chain



Picot edging

Gently pull the fabric to the back while sewing.

- (1) Fabric



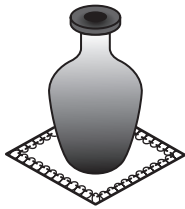
For narrow hemming

Correct tension

The illustration to the left shows a seam sewn at the correct tension.

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

* Refer to pages 34-36 for the adjustment.



ADVANCED TECHNIQUES

Decorative Overedging

NOTE:

- You may need to adjust the thread tension.
- Refer to pages 31-32, 35-36 for thread tension balance adjustment.
- For best results, gently pull the thread chain to the back at the beginning and end of sewing.

⚠ CAUTION:

Make sure to turn the power switch off before changing the needle, deactivating/activating the upper knife or setting the chaining finger switch knob.

Thread and Fabric

Fabric	Thread	
Medium to Heavy Fabric	Needle threads	Synthetic: #60-80
	Upper looper thread	Decorative thread * Use a standard thread for threading.
	Lower looper thread	Synthetic: #60-100

Machine Setting

- (1) Chaining finger switch knob : S (Refer to page 13)
- (2) Upper knife : Activated (Refer to page 11)
- (3) Lower looper pre-tension setting slider: STD (Refer to page 14)
- (4) Changeable thread guide 3/4 (Refer to page 14)

Gathering

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.

NOTE:

Refer to pages 31-32, 35-36 for thread tension balance adjustment.

⚠ CAUTION:

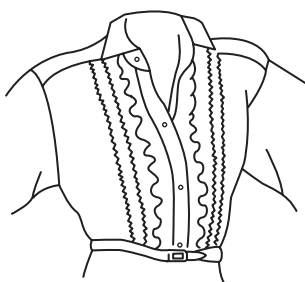
Make sure to turn the power switch off before changing the needle, deactivating/activating the upper knife or setting the chaining finger switch knob.

Thread and Fabric

Fabric	Thread	
Light to Medium Woven Fabric	Needle threads	Synthetic: #60-80
	Upper looper thread	Synthetic: #60-100
	Lower looper thread	

Machine Setting

- (1) Chaining finger switch knob : S (Refer to page 13)
- (2) Upper knife : Activated (Refer to page 11)
- (3) Lower looper pre-tension setting slider: STD (Refer to page 14)
- (4) Changeable thread guide: 3/4 (Refer to page 14)



Pintucking

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.

NOTE:

Refer to page 40 (Narrow Hemming) for thread tension balance adjustment.



CAUTION:

Make sure to turn the power switch off before changing the needle, deactivating/activating the upper knife or setting the chaining finger switch knob.

Thread and Fabric

Fabric	Thread	
Light to Medium Fabric	Needle thread on the right	Synthetic: #60-100
	Upper looper thread Lower looper thread	Synthetic: #60-100

Machine Setting

- (1) Remove the left needle.
- (2) Chaining finger switch knob: R (Refer to page 13)
- (3) Upper knife : Deactivated (Refer to page 11)
- (4) Lower looper pre-tension setting slider: STD (Refer to page 14)
- (5) Changeable thread guide 3/4 (Refer to page 14)

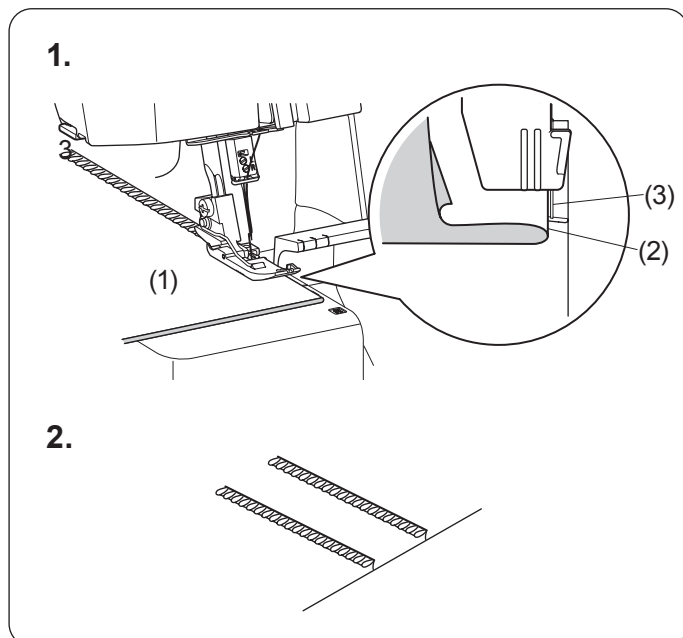
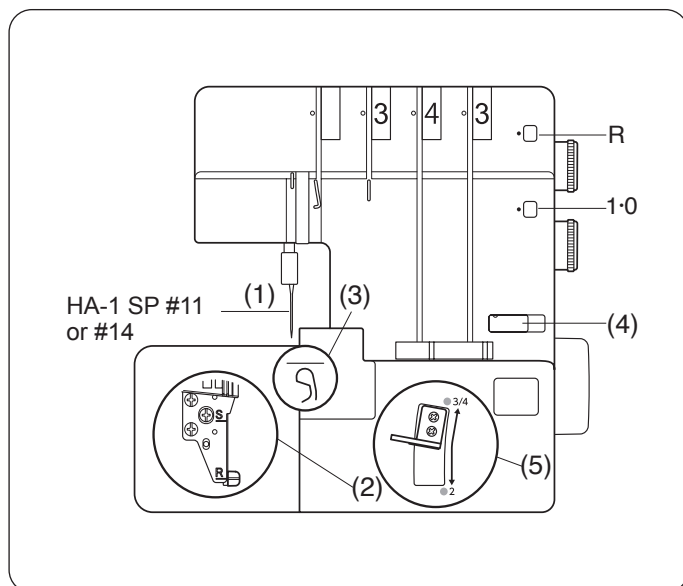
Sewing

1. Sew the folded edge while guiding it along the guide line.

- (1) Right side of fabric
- (2) Folded edge
- (3) Guide line on the needle plate

2. Open the fold flat and press the pintucks to one side.

* After you finish sewing, return the upper knife to the original position (activated).



CARE OF YOUR MACHINE

Replacing the Upper Knife

CAUTION:

Make sure to turn the power switch off and unplug the machine before replacing the upper knife.

To remove:

1. Open the looper cover and side cover.
2. Set the upper knife to down position.
3. Remove the hexagonal bolt, and remove the upper knife.
 - (1) Upper knife
 - (2) Hexagonal bolt
 - (3) Stopper pin
 - (4) Lower knife

To attach:

1. Insert new upper knife into the groove of knife holder and stopper pin, then tighten the hexagonal bolt slightly.
2. Set the upper knife to up position.
3. Turn the handwheel toward you until the upper knife comes to its lowest position.

Loosen the hexagonal bolt, and adjust the position of the upper knife so that the edge of the upper knife overlaps 0.8 mm to 1.5 mm (3/64") from the edge of lower knife as illustrated.

Then tighten the hexagonal bolt firmly.
4. Close the looper cover and side cover.

0.8 to 1.5 mm (3/64")

Cleaning Upper Knife Area

CAUTION:

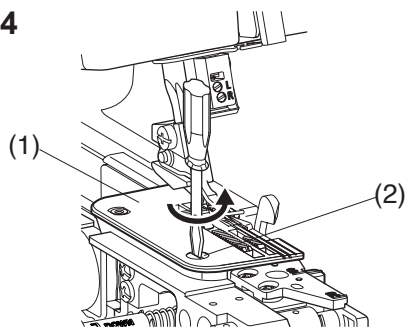
Make sure to turn the power switch off and unplug the machine before cleaning the machine.

Open the looper cover. Remove the waste pieces to the front with a lint brush.

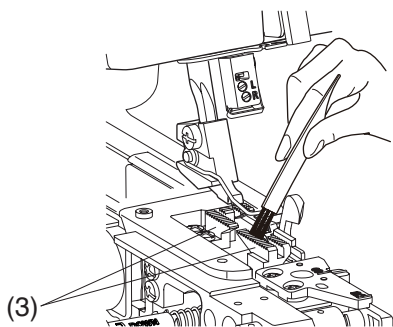
* You may use a vacuum cleaner to clean the upper knife area or feed dog.

* 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.

1. 2. 3. 4



5. 6.



Cleaning the Feed Dog

⚠ CAUTION:

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

Do not dismantle the machine in any way other than what is explained in this section.

1. Open the looper cover and side cover.
2. Remove the needles and presser foot (refer to pages 7 and 9).
3. Remove the needle plate set screw, and remove the needle plate.
 - (1) Needle plate
 - (2) Needle plate set screw
4. Brush out the lint around the feed dogs to the front by using the lint brush or use a vacuum cleaner.
 - (3) Feed dog
5. Reattach the needle plate, presser foot and needles. Close the looper cover and side cover.

NOTE:

Machines with high use frequency tend to have lint or dust around areas beyond the reach and cause malfunctions.

Periodic maintenance is recommended for those machines. Contact the store you purchased the machine.

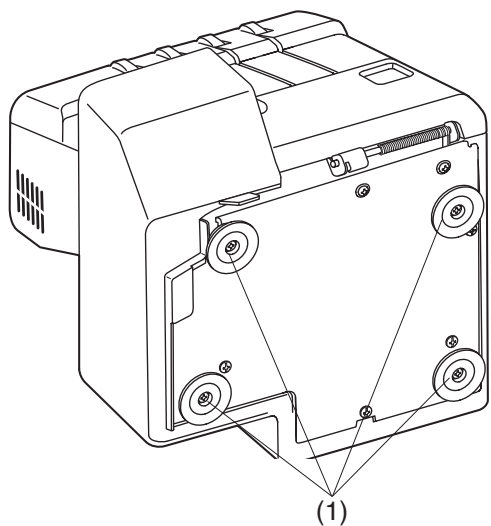
Cleaning the Rubber Foot

⚠ CAUTION:

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

Clean the rubber feet periodically.

- (1) Rubber foot



Oiling the Machine

CAUTION:

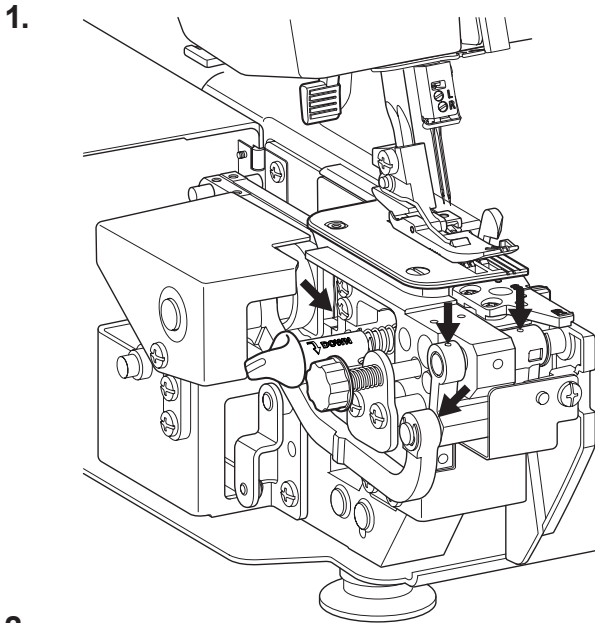
Make sure to turn the power switch off before oiling the machine.

NOTE:

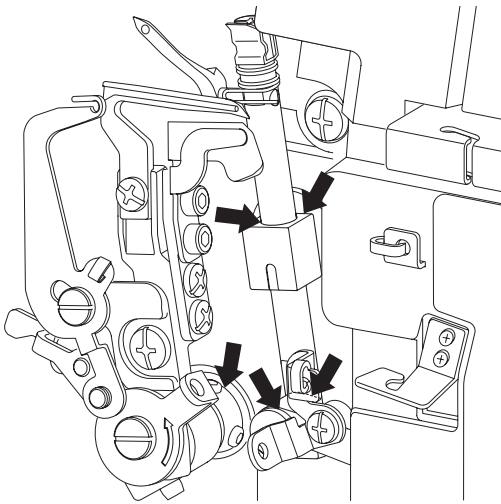
It is recommended to apply oil once a week for normal use or once every 10 hours for continuous use.

Apply a few drops of fine quality Serger/Overlocker/Overlock machine oil to the parts indicated with arrows.

1. Open the side cover and apply oil.

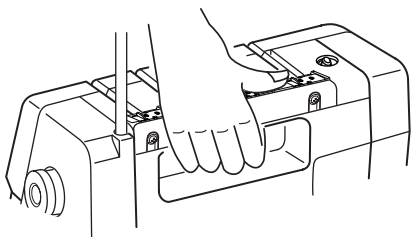


2. Open the looper cover and apply oil.



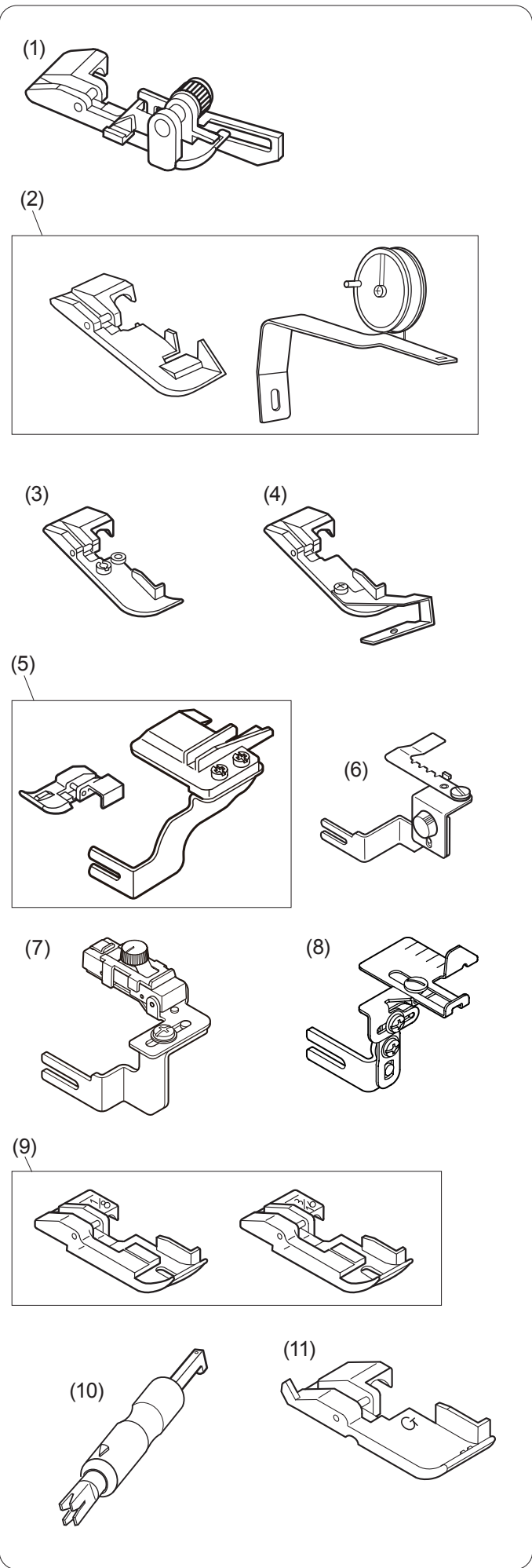
Carrying the Machine

Put your fingers into the carrying handle on the back side of the machine 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. 3. Pressure of the foot is too weak. 	<p>Refer to page 47. Lower the presser foot. Refer to page 9.</p>
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 forcedly pulled. 	<p>Refer to page 7. Refer to page 7. Pull the fabric lightly.</p>
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. 	<p>Refer to pages 16-26, 33, 37. Refer to pages 31-32, 35-36, 39, 41. Refer to page 7. Refer to page 7.</p>
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. 	<p>Refer to page 7. Refer to pages 16-26, 33, 37. Refer to page 7.</p>
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 chaining finger is not set correctly. 4. The needle and/or the thread are not suitable for the fabric being sewn. 5. The thread is not between the tension disks. 6. The stitch length is short. 	<p>Refer to pages 31-32, 35-36, 39, 41. Refer to pages 16-26, 33, 37. Refer to page 13. Refer to pages 27, 40, 44, 45. Refer to pages 18, 21, 23, 26. Refer to page 10.</p>
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. 4. The chaining finger is not set correctly. 	<p>Refer to pages 31-32, 35-36, 39, 41. Refer to pages 16-26, 33, 37. Refer to page 10. Refer to page 13.</p>
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. 	<p>Refer to page 4. Refer to page 4.</p>
The fabric is not cut neatly.	<ol style="list-style-type: none"> 1. The upper knife is on down position. 2. The position of the upper knife is not adjusted properly. 3. The upper knife is dull. 	<p>Refer to page 11. Refer to page 46. Replace the upper knife (refer to page 46).</p>
The fabric curls.	<ol style="list-style-type: none"> 1. The upper looper thread tension or the lower looper thread tension is too tight. 2. The chaining finger is not set correctly. 	<p>Refer to pages 31-32, 35-36, 39, 41. Refer to page 13.</p>
The cutting width is too narrow or too wide for the seam width.	<ol style="list-style-type: none"> 1. The cutting width is not adjusted correctly. 	<p>Refer to page 12.</p>



Optional parts

No.	Part Name	Description	Part No.
1	Blind stitch foot	Use to blind stitch a cuff or a skirt.	202040004
2	Taping foot with tape reel	Use for sewing tape on a shoulder or armpit line to protect from stretching or to decorate. Works well with the taping foot or the cording foot.	202033004
3	Cording foot (1)	Use to sew decorative cording.	202034005
4	Cording foot (2)	Use to sew decorative cording.	202035006
5	Beading attachment	Use for decorative cloth, wide cord decoration, cording, etc.	202041108
6	Gathering attachment	Use when sewing sleeves, cuffs, collars, etc.	202036100
7	Elastic gathering attachment	Use for elastic taping, decorative taping, etc.	202523006
8	Cloth guide	Use to help you create a constant-width seam allowance and when doing flatlock and pintuck sewing.	202525008
9	Piping foot (1/8")	Use to pipe the edge of a sewing article to decorate or strengthen.	202039000
	Piping foot (3/16")		
10	Needle threader	For easy threading and changing needle.	200254605
11	Gathering foot	Use to sew sleeves, yokes, frills, etc.	200248101

NOTE:

Design and specifications are subject to change without prior notice.

