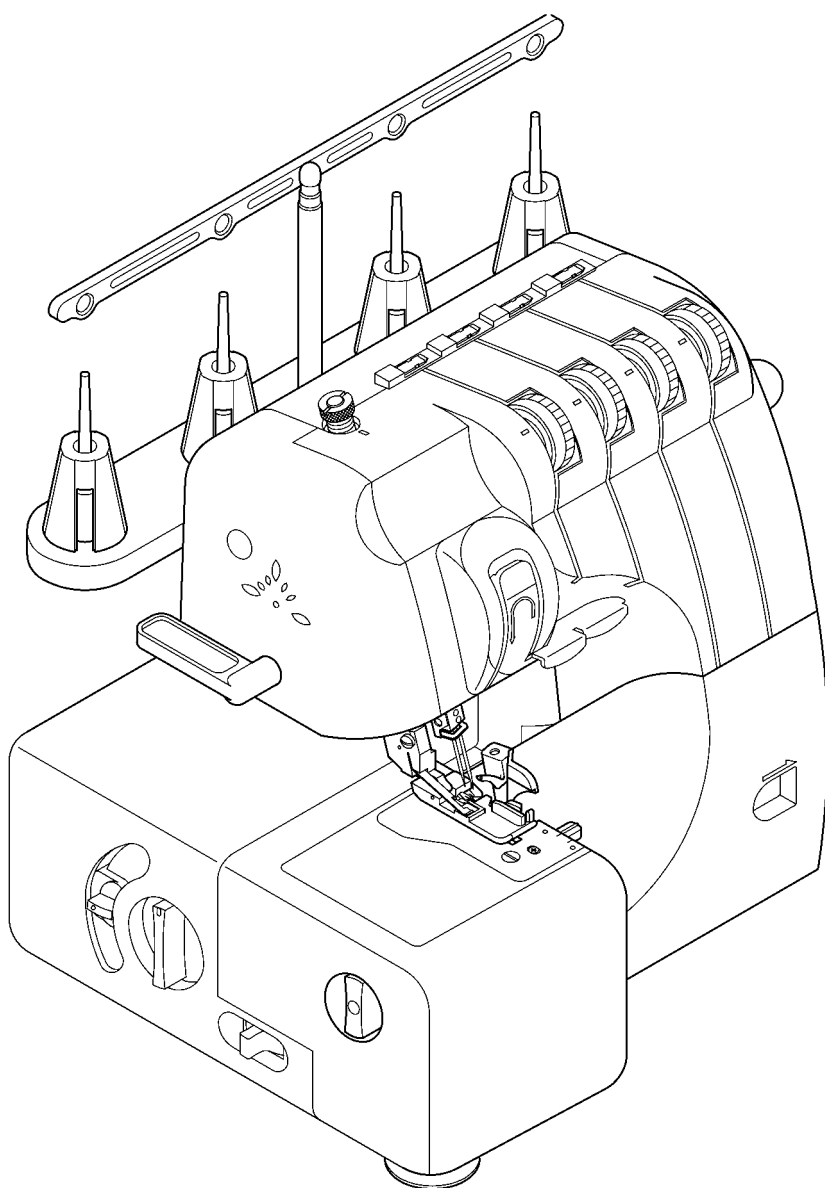


# *HANDBOOK FOR OVERLOCK MACHINE*

---



## **IMPORTANT SAFETY INSTRUCTIONS**

When using this machine, basic safety precautions should always be followed including the following. Read all instructions before using the machine.

### **DANGER**

- \* The machine should never be left unattended when plugged in . Always unplug the machine from the electric outlet immediately after using and before cleaning.

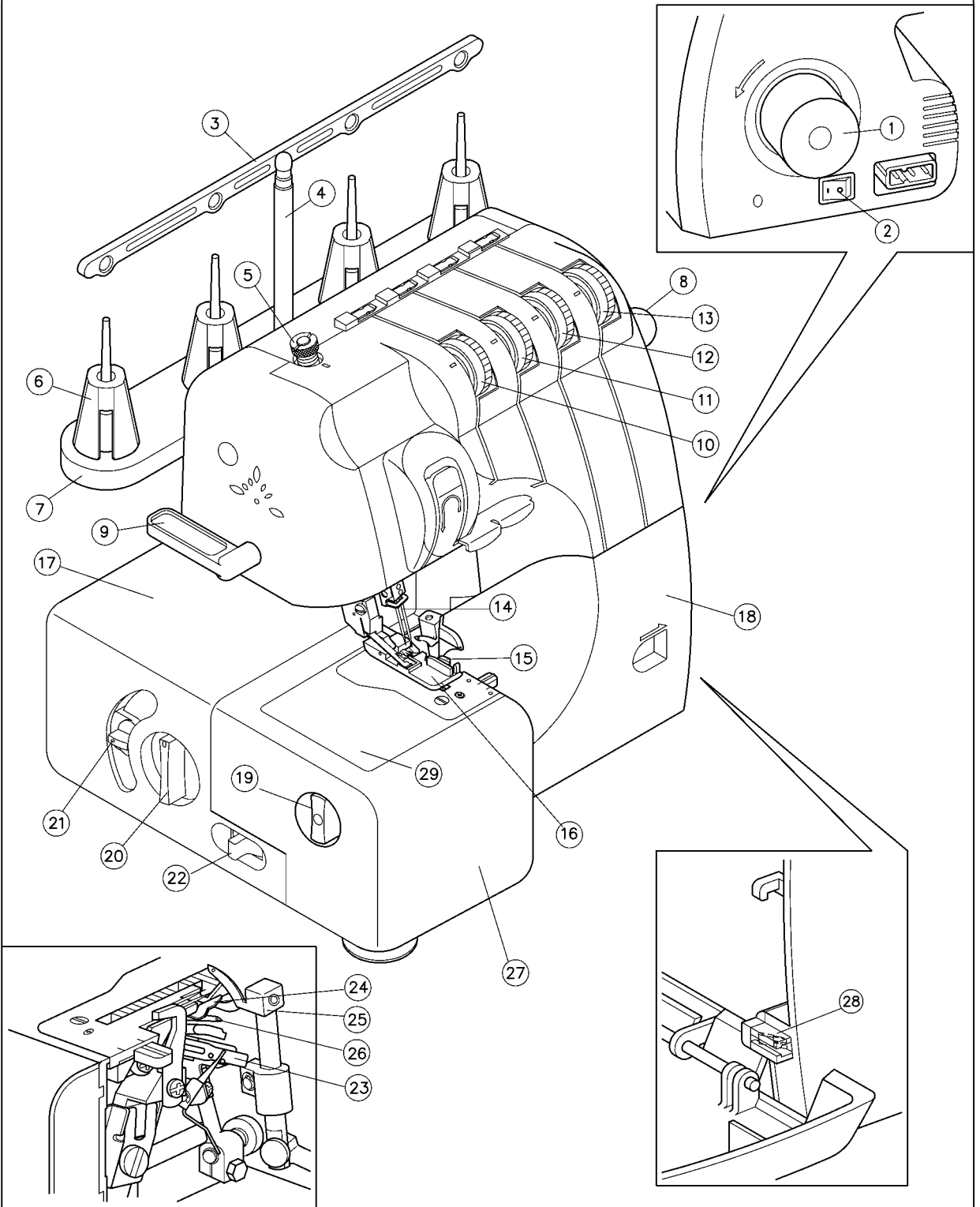
### **Warnings :**

- \* Be sure that the electrical voltage of the electric outlet is the same as the rated voltage of thr motor.
- \* Switch off or unplug the machine when leaving unattended.
- \* Unplu the appliance before carrying out maintenance or replacing lamps.
- \* The appliance is not intended for use by young children or infirm persons without supervision.
- \* Young children should be supervised to ensure that they do not play with the appliance.
- \* If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- \* Do not attempt to adjust the motor belt.
- \* Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
- \* Never drop or insert any object into any opening.

## TABLE OF CONTENTS

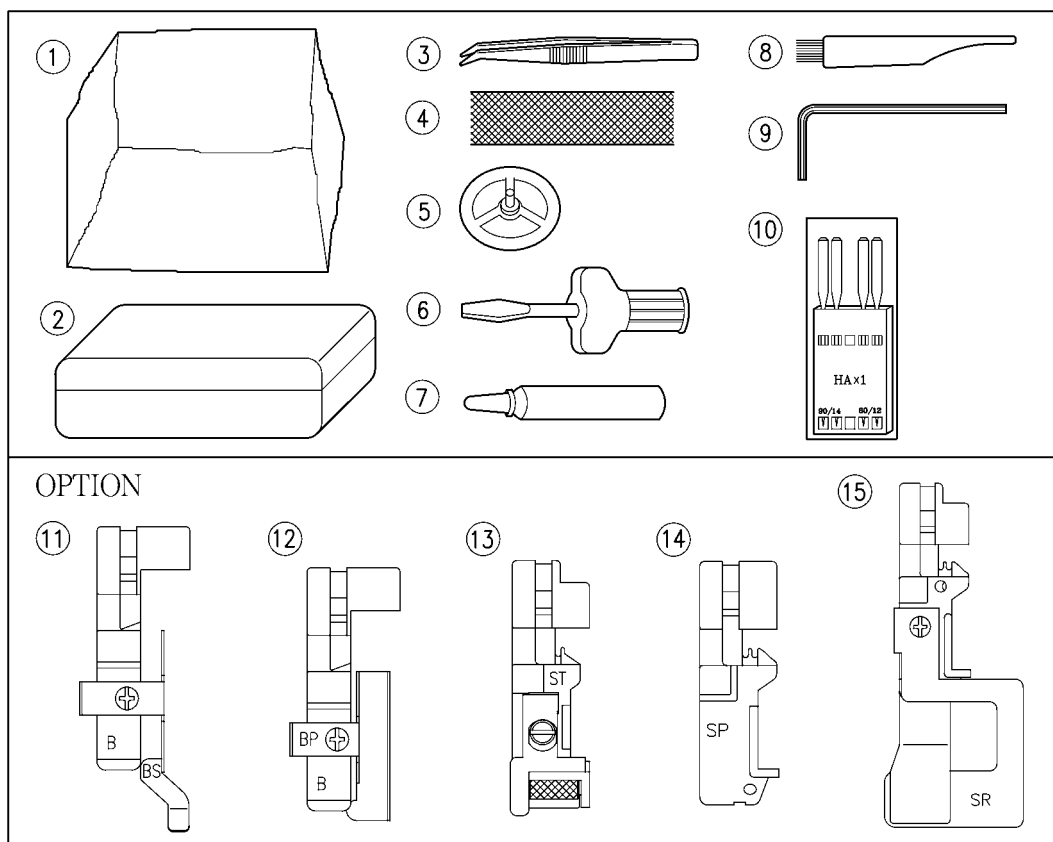
Names of parts and their functions .....	2
Accessories included with your serger .....	4
Needle .....	5
Hand wheel .....	6
Opening and closing the front cover .....	6
How to start the sewing machine .....	7
Foot controller .....	7
How to use the free arm .....	8
Stitch length .....	9
Stitch width .....	9
Differential feed .....	10
Before threading the needle .....	12
How to use the thread spool cap .....	13
How to use the thread net .....	13
Tension release button .....	14
Before threading .....	15
How to thread the upper looper (2 stitch 4 threads) .....	16
How to thread the lower looper .....	18
How to use the thread automatic lower looper looper threader .....	19
How to thread the left needle .....	20
How to thread the right needle .....	21
How to thread the upper looper (1 stitch 3 threads) .....	22
How to thread the lower looper .....	23
How to thread the needle thread .....	24
Comparison chart of sewing materials, thread and needles .....	25
Thread tension .....	26
Chart of thread tension adjustment (2 stitch 4 threads).....	28
Chart of thread tension adjustment (1 stitch 3 threads).....	30
Sewing test .....	31
How to sew a chain pattern .....	32
If threads break during sewing .....	33
Presser foot pressure .....	34
Elementary troubleshooting .....	35
Narrow Overlock Stitch / Rolled Edge Stitch .....	36
Chart of Narrow Overlock / Rolled Edge Stitch .....	39
Other special purpose presser feet that are available .....	40
Upper knife and lower knife .....	41
Retracting upper knife .....	41
Replacing the knives .....	42
Oiling .....	43
Changing the light bulb .....	44
Machine specifications .....	45

# Names of parts and their functions



- 1 Hand wheel
- 2 Main power switch and light switch
- 3 Thread tree
- 4 Spool stand base
- 5 Presser foot pressure adjustment screw
- 6 Spool cushion
- 7 Reel support
- 8 Tension release button
- 9 Presser foot lifting lever
- 10 Left needle thread tension dial
- 11 Right needle thread tension dial
- 12 Upper looper thread tension dial
- 13 Lower looper thread tension dial
- 14 Needles
- 15 Upper knife
- 16 Presser foot
- 17 Cloth plate cover
- 18 Front cover
- 19 Stitch width lever
- 20 Stitch length adjustment dial
- 21 Differential feed ratio adjustment lever
- 22 Upper knife adjustment lever
- 23 Lower looper threading lever
- 24 Stitch finger
- 25 Upper looper
- 26 Lower looper
- 27 Sub table assembly
- 28 Micro safety switch
- 29 Arm cover

## Accessories included with your serger



- The number represents the parts code
- 1 Soft cover (Parts No. TM118)
  - 2 Accessory box (Parts No. TM109)
  - 3 Tweezers (Parts No. TM110)
  - 4 Thread net (Parts No. TM111)  
Two-needle models (4)
  - 5 Thread spool cap (Parts No. TM116)  
Two-needle models (4)
  - 6 Screw driver (Parts No. TM113)
  - 7 Machine oil (Parts No. TM112)
  - 8 Cleaning brush (Parts No. TM114)
  - 9 Hexagonal (Allen) wrench (Parts No. TM108)
  - 10 Needle set: SINGER #2020 (Parts No. TK106)
  - 11 Blind stitch foot (Option)(Parts No. TB108)
  - 12 Bead/Sequin foot (Option) (Parts No. TB111)
  - 13 Elasticator foot (Option) (Parts No. TB112)
  - 14 Piping foot (Option) (Parts No. TB113)
  - 15 Shirring foot (Option) (Parts No. TB114)

## Needle

This sewing machine uses a family size standard needle.

The specification of the needle is HAx1 (130 / 705H).

Replace Needle

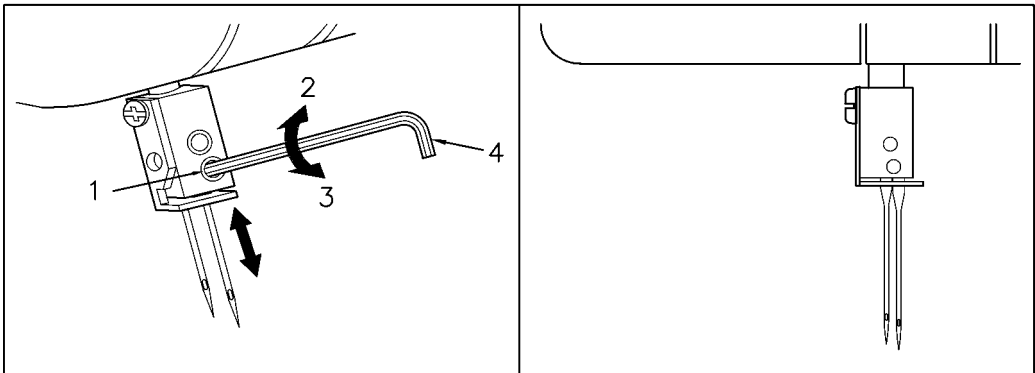
- (1) Turn the hand wheel to raise the needle to the highest position.
- (2) Use the enclosed allen key to loosen the needle set screw.
- (3) Insert the needle shank (flat side to back) into the needle clamp until fully inserted.
- (4) Tighten the needle set screw again.

1 Needle set screw

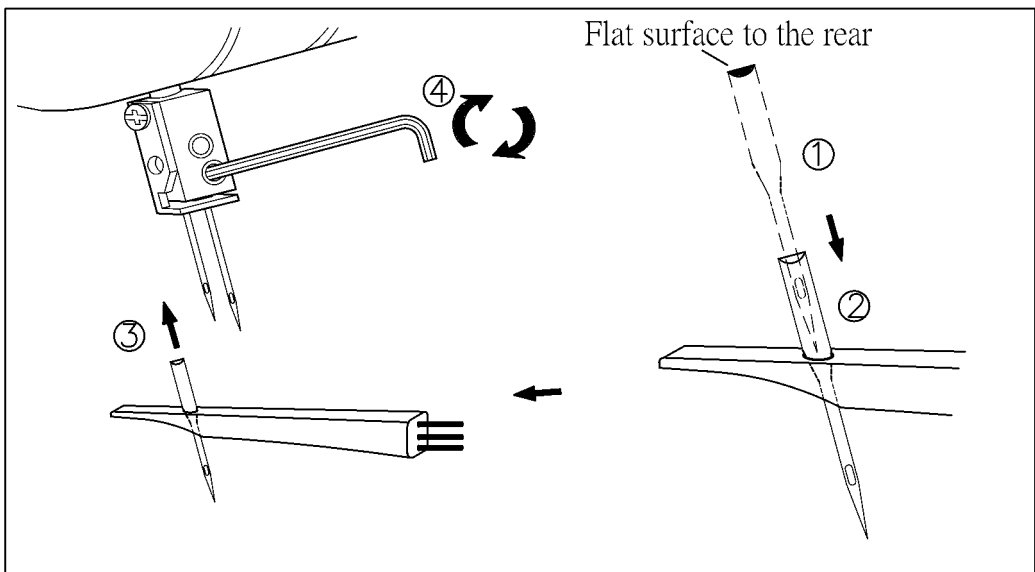
2 Tighten

3 Loosen

4 Allen key



To Insert needle(s)

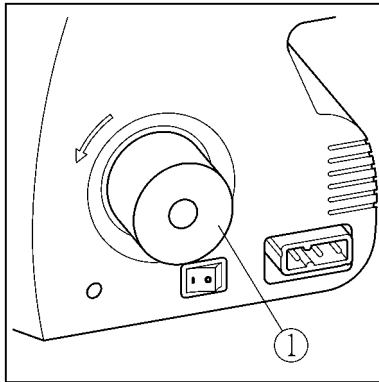


## *Hand wheel*

The motor and hand wheel of this machine turn in a counterclockwise direction (direction of arrow).

This is the same direction as an ordinary home sewing machine.

### ① Hand wheel

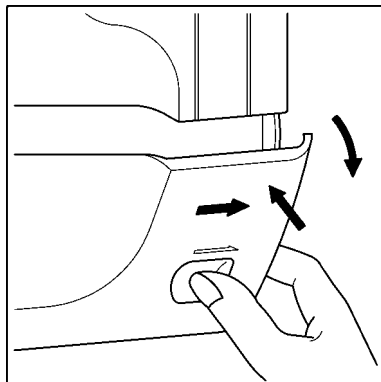


## *Opening and closing the front cover*

It is necessary to open the front cover when threading this machine.

### **NOTE:**

For your safety, when the front cover is opened the power will be cut. Make sure that the front cover is closed when operating the machine.



## ***How to start the sewing machine***

Plug in the sewing machine. Press the power switch to position "1", and the indicator will light. Press the power switch to position "0", the indicator will be extinguished, and the power will be off.

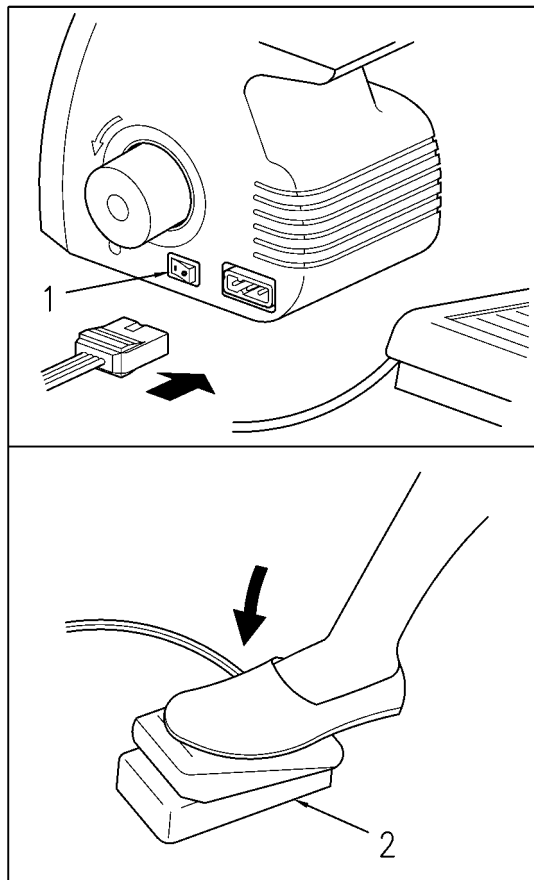
When the front cover is opened, the motor will be switched off immediately although the power switch is at position "1".

If you press the foot controller, the sewing machine is still on a POWER OFF status.

## ***Foot Controller***

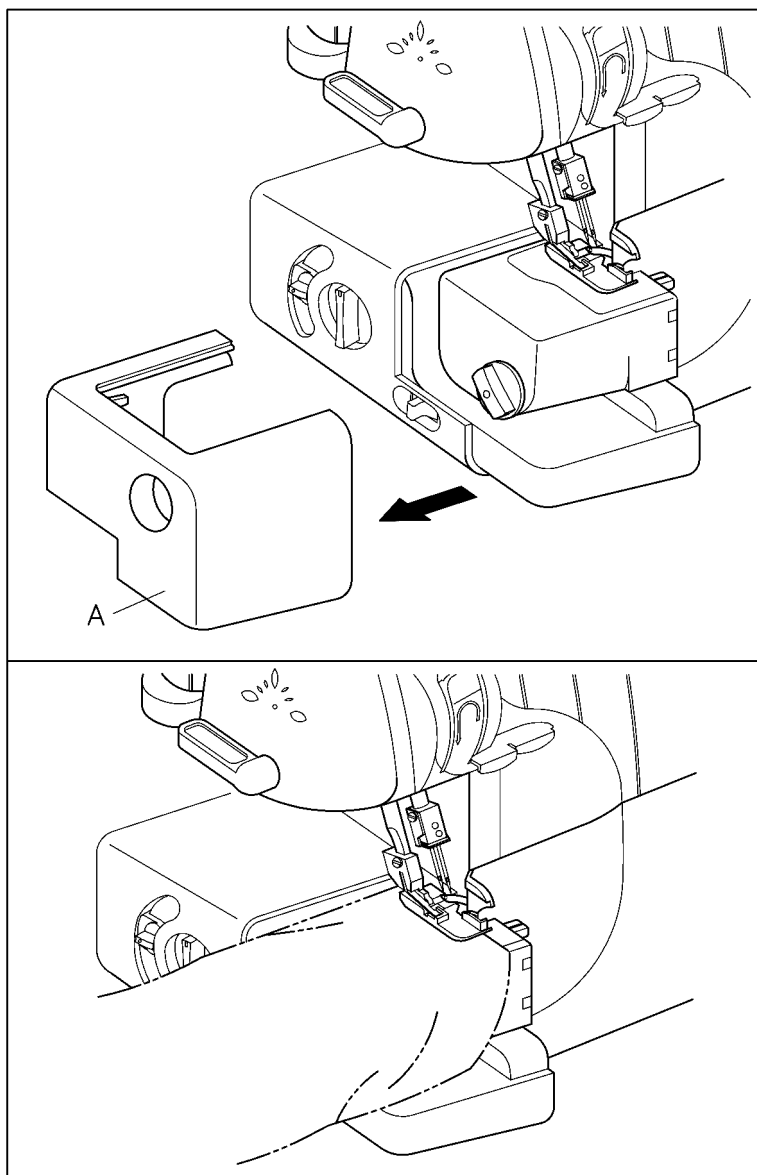
Press the foot controller to control the sewing speed.

- 1 Main Power and Sewing Light Switch
- 2 Foot Controller



## How to use the Free Arm

- 1 Pull piece A to the left.
- 2 Put sleeve or cuff on the Arm cover start the sewing.



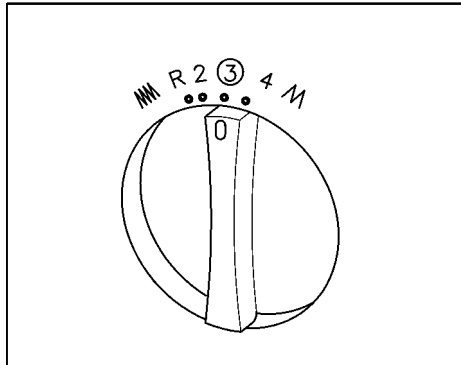
## Stitch Length

To change the stitch length.

- (1) Locate the stitch length adjustment dial on the left side of the machine.
- (2) Twist the stitch length adjustment dial forward to lengthen the stitch to a maximum of 4 mm (5 / 32 inch).

Twist the stitch length adjustment dial backwards to shorten the stitch length to a minimum of 1.1 mm (3 / 64 inch).

- (3) The normal stitch length setting is 2.5 mm to 3 mm.



## Stitch Width

Two-needle models

To change the stitch width.

- (1) Move the stitch width lever located next to the sub table assembly up to reduce the stitch width or down to increase the stitch width.

Adjust the stitch width from R 4,5 mm (11 / 64 inch) to 7 mm (9 / 32 inch).

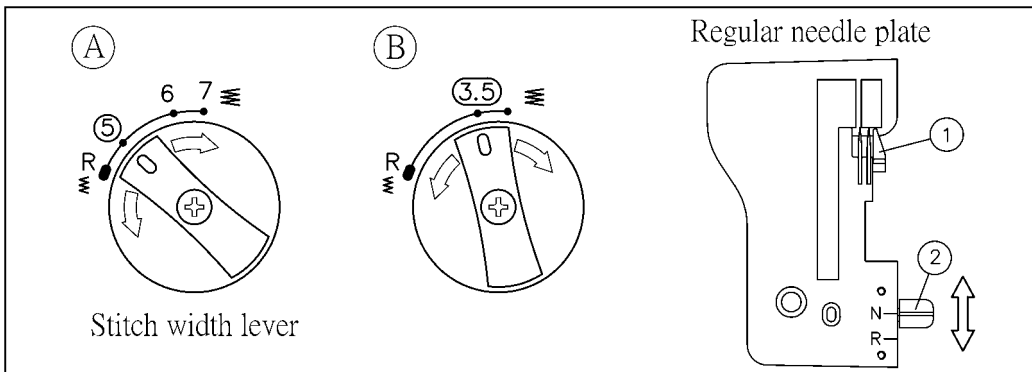
The normal stitch width setting for regular overlock stitch is 5 mm (13 / 64 inch).

One-needle models

\* The width is factory set to 3.5 mm (9 / 64 inch).

- (A) Two-needle models                      (B) One-needle models

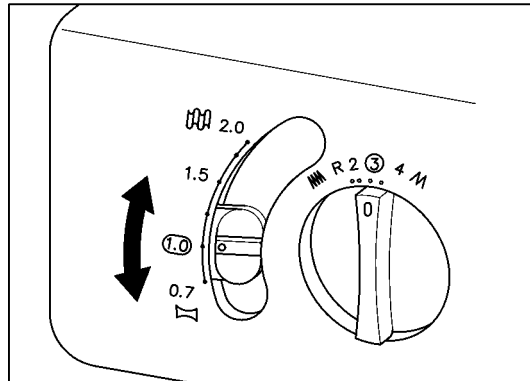
- ① Stitch finger
- ② Stitch finger lever



## Differential Feed

Move the differential feed runner as the figure shown to get your desired cloth feeding rate. The differential feed ratio is from 0.7 to 2.0 .

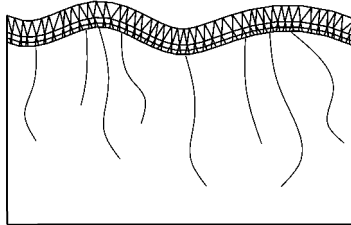
Normally we use a ratio of 1.0 .



Feed ratio	Main feed (rear)	Differential feed (front)	Effect	Application
0.7 ~ 1.0			Material is pulled tight.	Prevents thin materials from puckering.
1.0			Without differential feed.	Normal sewing
1.0 ~ 2.0			Material is gathered or pushed together.	Prevents stretch materials from stretching or puckering.

\* An example where adjustment is required

When stretch material is sewn without using the differential feed, the edge will be wavy.

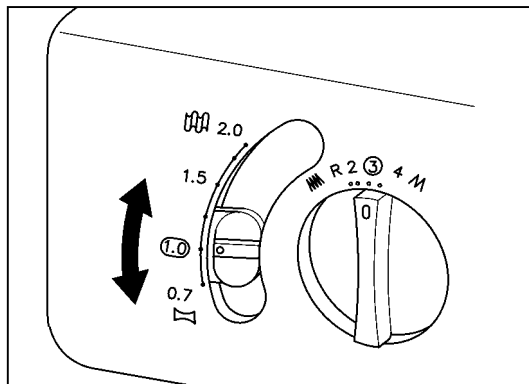


To make the edge more smooth, adjust the feed ratio from 1.0 toward 2.0 .  
(The feed ratio required depends on the elasticity of the material.)

The more elastic the material, the further toward 2.0 the differential feed ratio should be set. Test sew with a scrap of the fabric to find the correct adjustment.

**CAUTION**

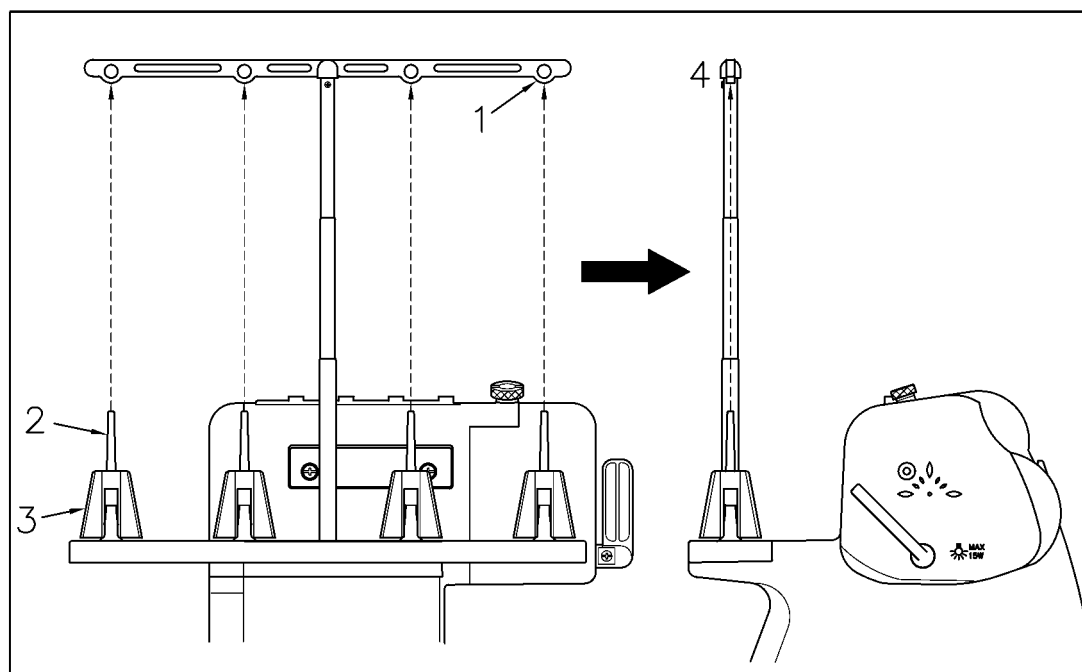
When sewing thick non-stretchable material such as denim, do not use the differential feed as it may damage the fabric.



## *Before Threading the Needle*

Raise the thread tree to the highest position. Then adjust it to the correct position.

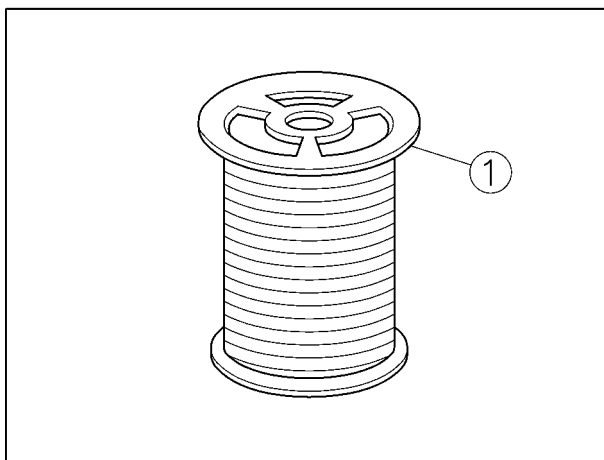
- 1 Thread holder on thread tree
- 2 Reel pin
- 3 Spool cushion
- 4 Correct position



## *How to use the thread spool cap*

If you use a small thread spool, please place the thread spool cap on the spool before you start sewing.

- ① Thread spool cap

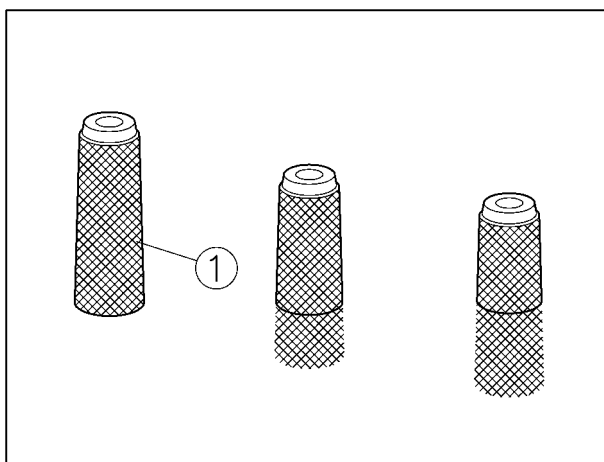


## *How to use the thread net*

If you are sewing with loosely spun nylon thread, we recommend that you cover the thread from slipping off the spool.

Adapt the net to the shape of the spool (see illustration).

- ① Net

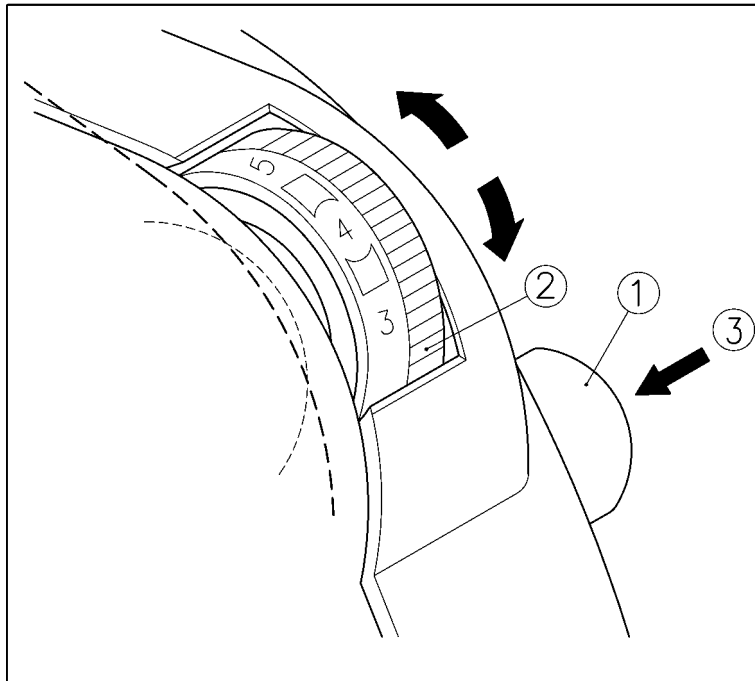


## *Tension release button*

This serger is equipped with a thread tension release button. When threading be sure to:

- (1) Depress the tension release button directly to the right of the tension adjustment wheel.
- (2) Pass the thread through the tension disc which is in the channel next to tension adjustment dial.
- (3) Release the button

- ① Thread tension release button
- ② Thread tension dial
- ③ Depress tension release button



## Before threading

- (1) Turn off the main power switch for safety.
- (2) Raise the presser foot lever.

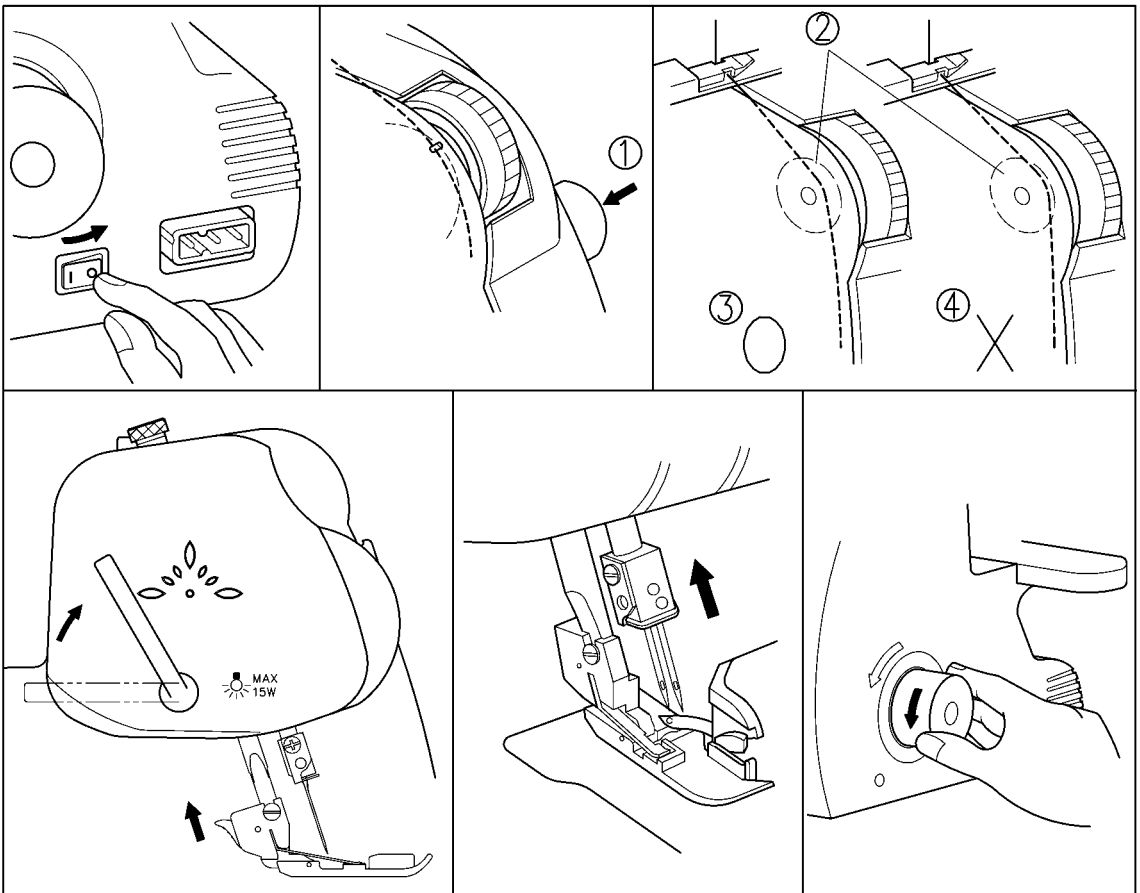
### CAUTION

When threading the needle, always be sure to lift the presser foot lever, and also take care to thread in correct order.

- (3) Set the needle bar to its highest position by turning the handwheel towards you.

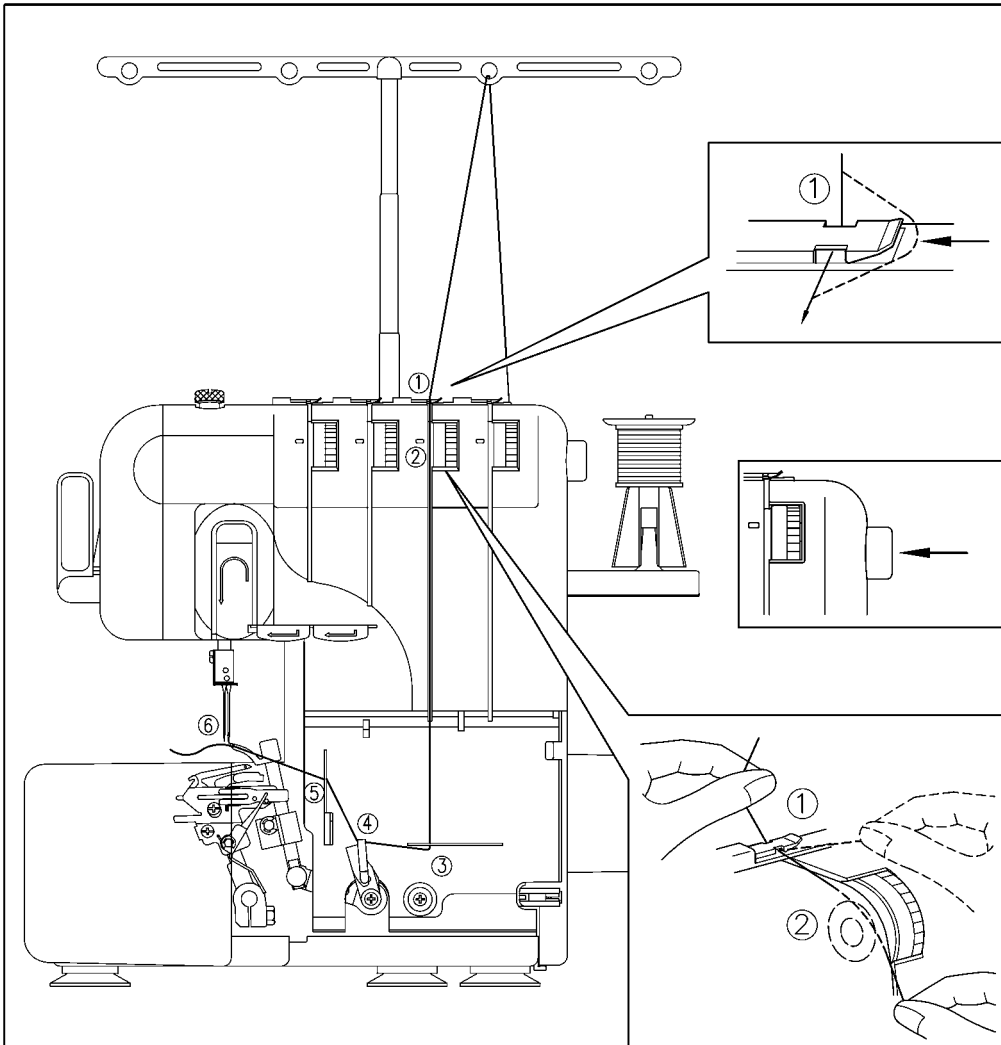
Turn the handwheel to find the easiest position for threading, and then thread the upper looper thread, lower looper thread, right needle thread and then the left needle thread. The proper threading order for this serger is upper looper, lower looper, left needle, and then the right needle.

- ① Depress tension release button
- ② Thread tension disks
- ③ Correct
- ④ Wrong

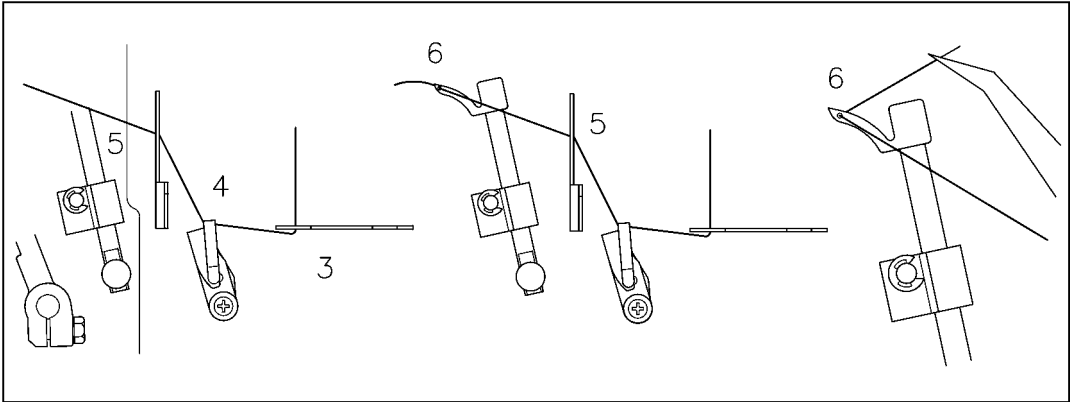


## How to thread the upper looper

See the figure, and thread the upper looper as indicated ①~⑥.

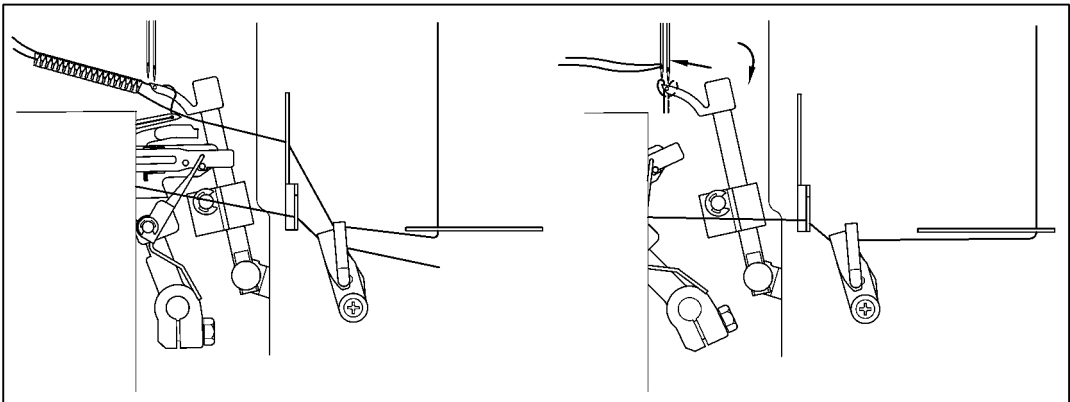


- 1 Pull out the thread from the thread spool. Thread the guide hole of the thread tree from back to front.
- 2 Correctly thread the Thread Guide ①.
- 3 Lead the thread into the groove, and let the thread pass the tension disc of the tension adjustment dial ②.
- 4 Thread the looper area of the machine following the pink color coded thread guides ③~⑤.
- 5 Thread the hole in the upper looper from front to back ⑥.



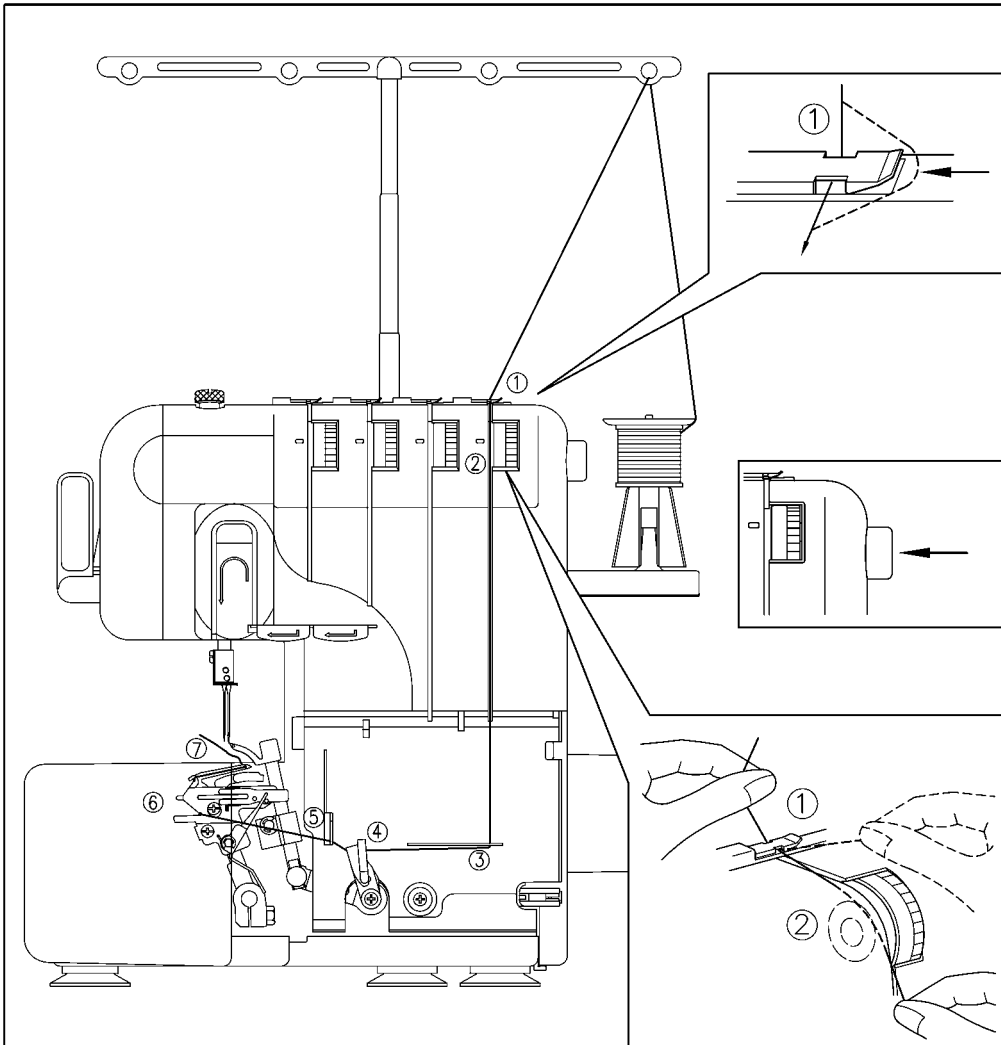
NOTE:

If the upper looper thread breaks during sewing. This may be caused by the lower looper thread getting caught on the upper looper. If this happens, lower the upper looper by turning the hand wheel, remove the lower looper thread from the upper looper, and re-thread the upper looper from at least the tension disk.



## How to thread the lower looper

See the figure, and thread the lower looper as indicated ①~⑦.



- 1 Pull out the thread from the thread spool. Thread the guide hole of the thread tree from back to front.
- 2 Correctly thread the Thread Guide ①.
- 3 Lead the thread into the groove, and let the thread pass the tension disc of the tension adjustment dial ②.
- 4 Thread the looper area of the machine following the yellow color coded thread guides ③~⑦.

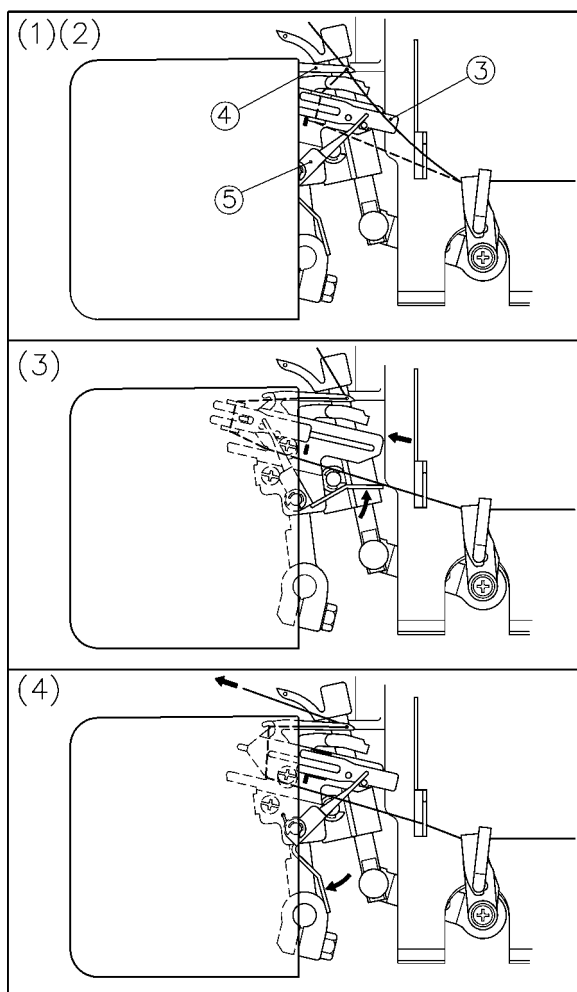
## *How to use the thread automatic lower looper threader*

1. Draw the thread through the lower looper ④ .
2. Slide thread behind finger of thread guide slide ③ .
3. Push up the lower looper threading lever ⑤ to the highest position, until the end of the slide is level with the blue mark.
4. Release the lower looper threading lever ⑤ and then draw the thread out from back of the foot. Do not allow threads to cross.  
Take lower looper thread under that of upper looper.

③ Thread guide slide

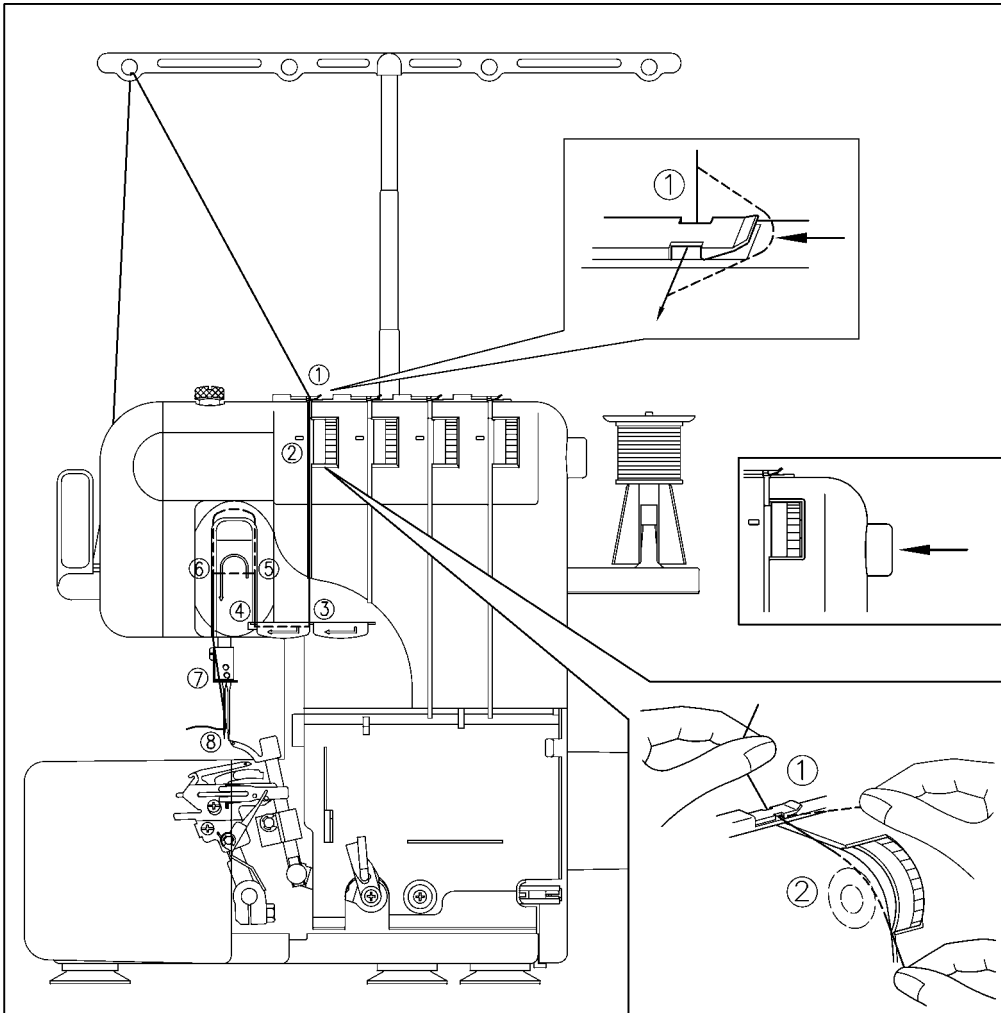
④ Lower looper

⑤ Lower looper threading lever



## How to thread the left needle

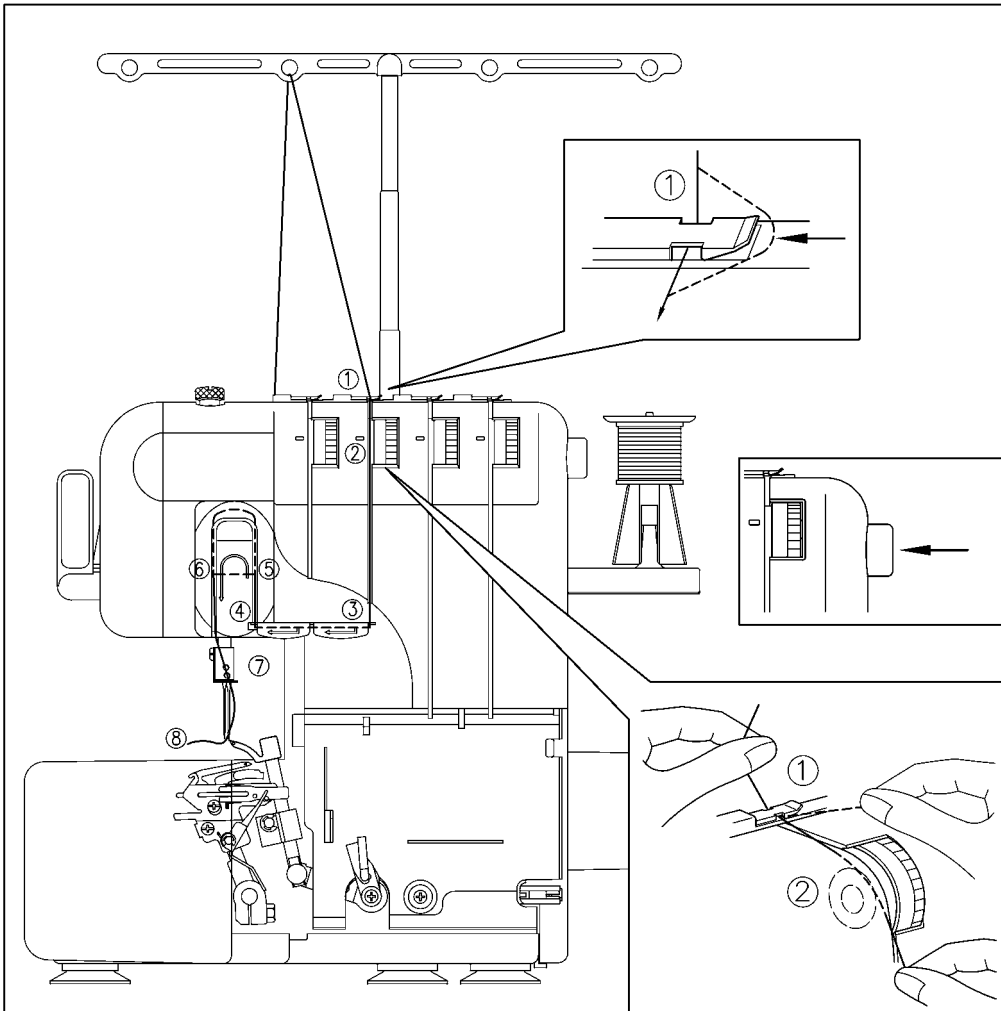
See the figure, Thread the left needle as indicated ①~⑧.



- 1 Pull out the thread from the thread spool. Thread the guide hole of the thread tree from the back to the front.
- 2 Correctly thread the Thread Guide ①.
- 3 Lead the thread into the groove, and let the thread pass the tension disc of the tension adjustment dial ②.
- 4 Continue to thread points ③~⑤.
- 5 When the thread goes through No. ⑥, lead the thread down so as to pass the Thread Guide ⑦. Then, thread the left needle ⑧.

## Threading of right needle

See the figure, Thread the right needle as indicated ①~⑧.



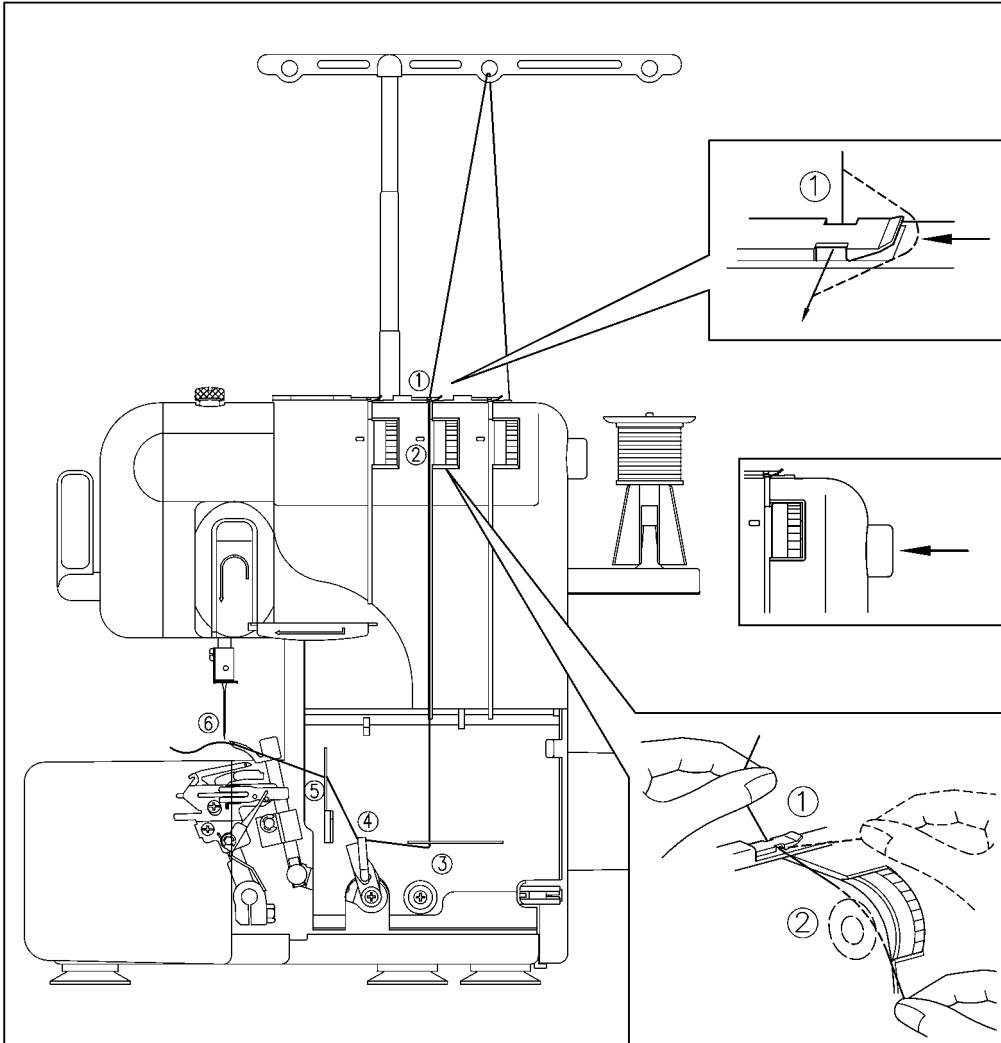
- 1 Pull out the thread from the thread spool. Thread the guide hole of the thread tree from the back to the front.
- 2 Correctly thread the Thread Guide ①.
- 3 Lead the thread into the groove, and let the thread pass the tension disc of the tension adjustment dial ②.
- 4 Continue to thread points ③~⑤.
- 5 When the thread goes through No. ⑥, lead the thread down so as to pass the Thread Guide ⑦. Then, thread the right needle ⑧.

Take all thread ends under the presser foot and lower presser foot to secure threads.

## One-needle models

### How to thread the upper looper

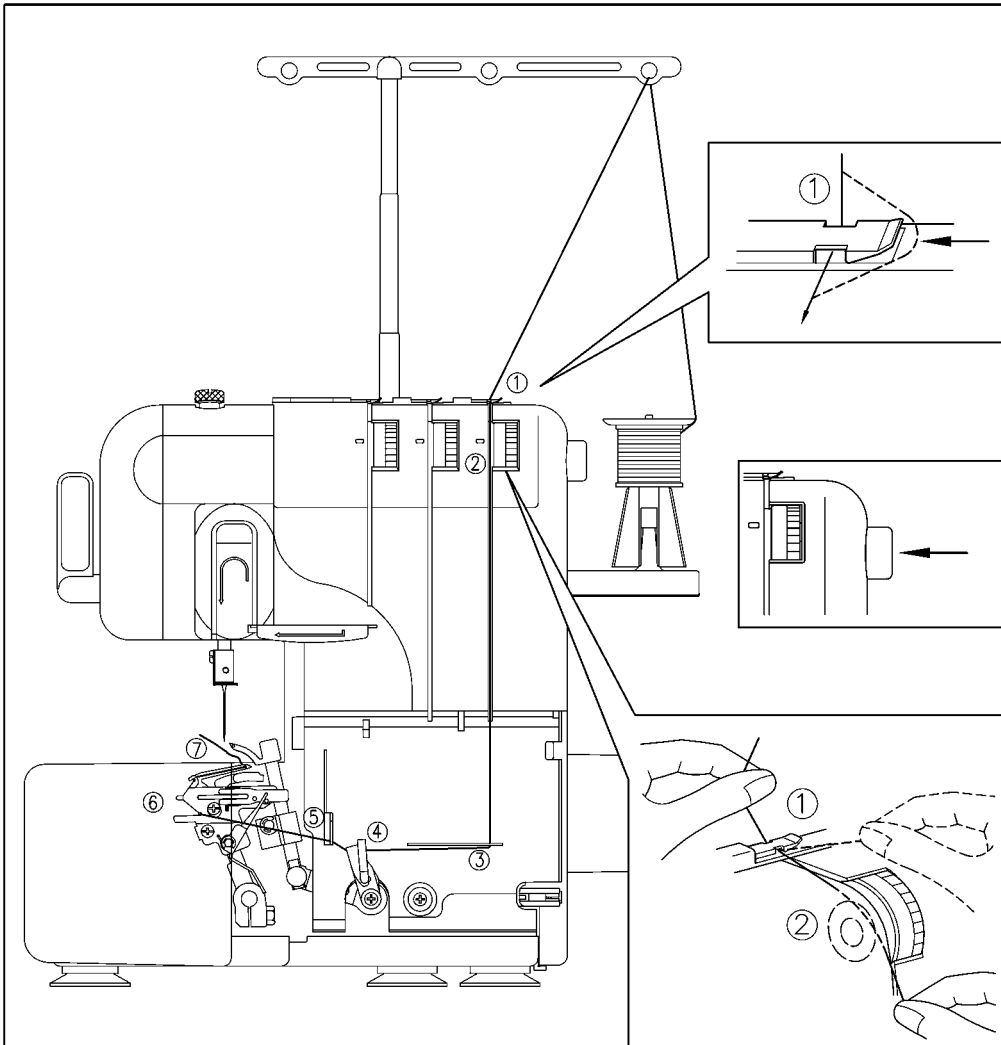
See the figure, and thread the upper looper as indicated ①~⑥.



- 1 Pull out the thread from the thread spool. Thread the guide hole of the thread tree from back to front.
- 2 Correctly thread the Thread Guide ①.
- 3 Lead the thread into the groove, and let the thread pass the tension disc of the tension adjustment dial ②.
- 4 Thread the looper area of the machine following the pink color coded thread guides ③~⑤.
- 5 Thread the hole in the upper looper from front to back ⑥.

## How to thread the lower looper

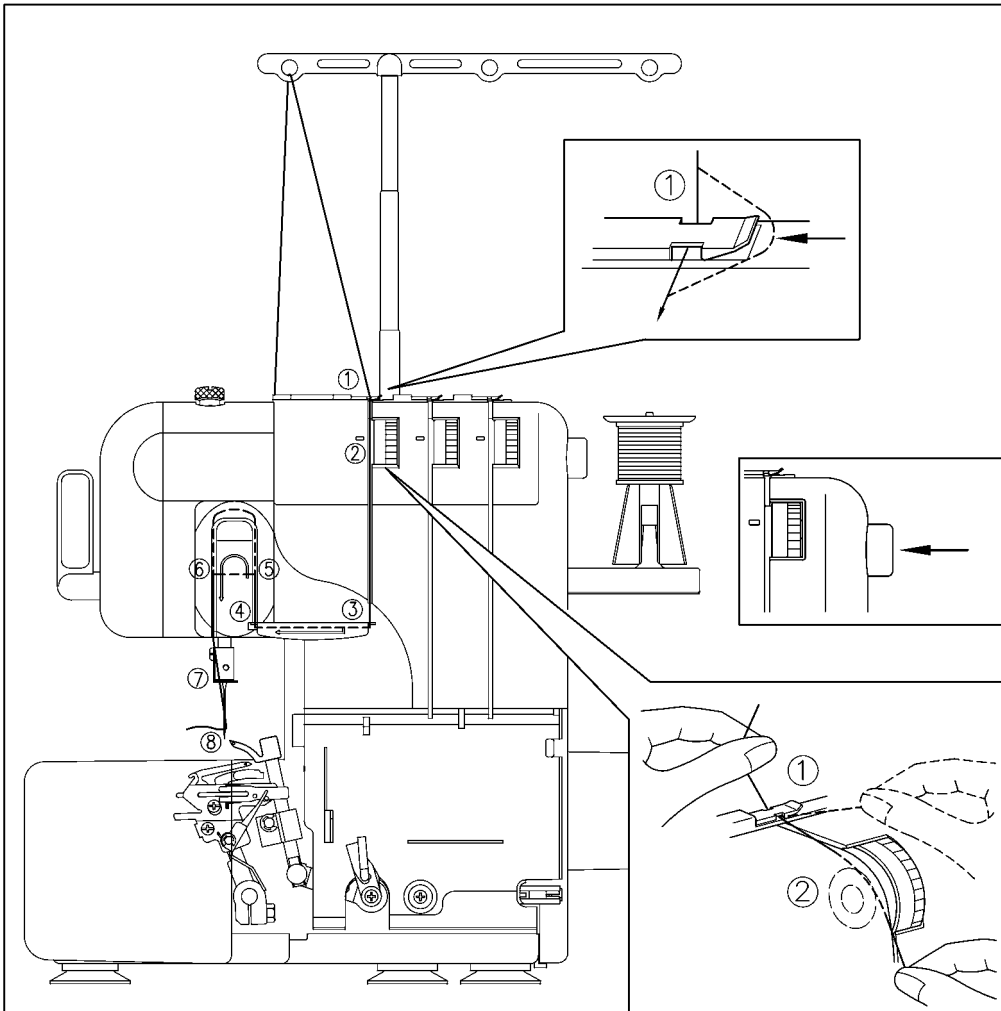
See the figure, and thread the lower looper as indicated ①~⑦.



- 1 Pull out the thread from the thread spool. Thread the guide hole of the thread tree from back to front.
- 2 Correctly thread the Thread Guide ①.
- 3 Lead the thread into the groove, and let the thread pass the tension disc of the tension adjustment dial ②.
- 4 Thread the looper area of the machine following the yellow color coded thread guides ③~⑦.

## How to thread the needle thread

See the figure, Thread the needle as indicated ①~⑧.



- 1 Pull out the thread from the thread spool. Thread the guide hole of the thread tree from the back to the front.
- 2 Correctly thread the Thread Guide ①.
- 3 Lead the thread into the groove, and let the thread pass the tension disc of the tension adjustment dial. Then, hold down the tension release button to the left.
- 4 Pull the thread in the groove to go through the green path in sequence of numbers.
- 5 When the thread goes through No. ⑥, lead the thread down so as to pass the Thread Guide ⑦. Then, thread the needle ⑧.

Take all thread ends under the presser foot and lower presser foot to secure threads.

## *Comparison Chart of Sewing Materials, Threads and Needles*

Material	Stitch	Stitch Length (mm)	Thread	Needle
Light materials Crepe de chine Georgette Lino Organdy Tricot	Overlock stitch	2.0 ~ 3.0	Spun: #80 Cotton: #80.100 Silk: #80.100	HAx1 #70 #80
Light materials Crepe de chine Georgette Lawn Organdy	Narrow / rolled hem stitch	Smaller than 2.0	Needle thread Polyester: #80 Nylon: #80 Looper thread Polyester: #80 Nylon: #80 Woolly nylon thread	HAx1 #70 #80
Medium materials Poplin Gingham Seersucker Gabardine Serge Knitted	Overlock stitch	2.5 ~ 3.5	Spun: #60.80 Cotton: #60.80 Silk: #50.80 Nylon: #50.80 Polyester: #50.80	HAx1 #80 #90
Heavy materials Cashmere Tweed Denim Jersey	Overlock stitch	3.0 ~ 4.0	Cotton: #40.60 Silk: #40.60 Nylon: #30.60 Polyester: #30.60	HAx1 #90

**NOTE:**

Decorative thread will work best in the upper looper for fashion sewing.

## Thread Tension

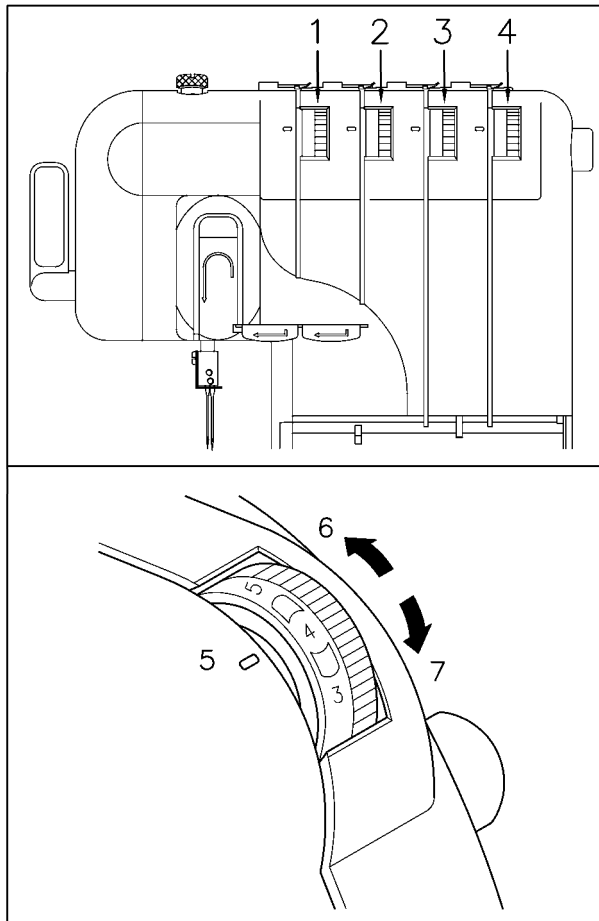
Thread tension dial

From the left to right:

- 1 Blue marked tension disc is for left needle.
- 2 Green marked tension disc is for right needle.
- 3 Pink marked tension disc is for upper looper.
- 4 Yellow marked tension disc is for lower looper.
- 5 Tension selection mark.
- 6 Dial up to decrease tension.
- 7 Dial down to increase tension.

### CAUTION

Make sure that the thread is properly seated in the tension discs by holding the tension release button to the left while passing the thread through the tension discs.



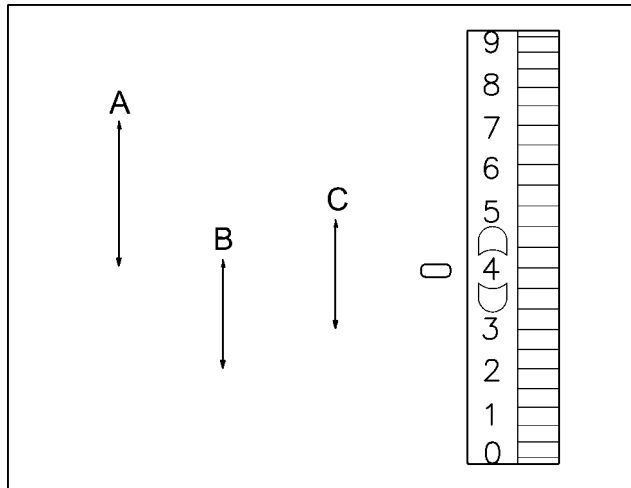
## Tension control

Sewing is possible at position "4" for most circumstances.

If improper stitching occurs, adjust the tension according to the drawing below.

(Standard: SPAN 60 / 3 Z)

- A for heavy tension  
(set from 4 to 7)
- B for light tension  
(set from 4 to 2)
- C for medium tension  
(set from 5 to 3)



There is a thread tension adjustment dial for each needle thread, the lower looper thread and the upper looper thread. The correct thread tension may vary according to the type and thickness of the fabric and the type of thread used. Thread tension adjustments may be necessary for any change in sewing materials.

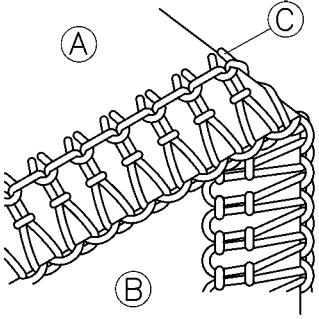
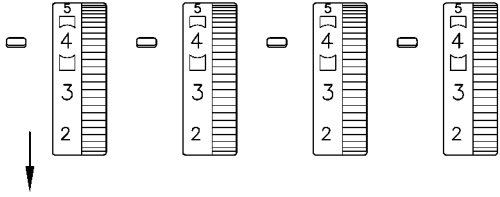
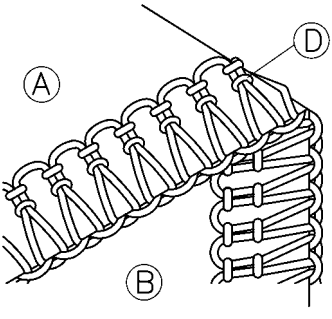
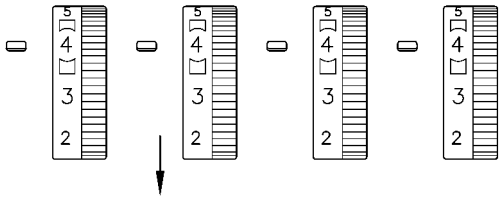
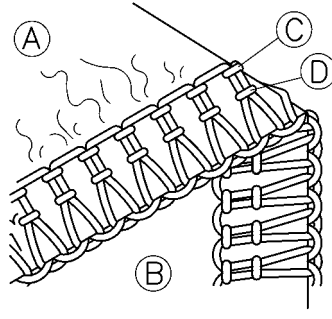
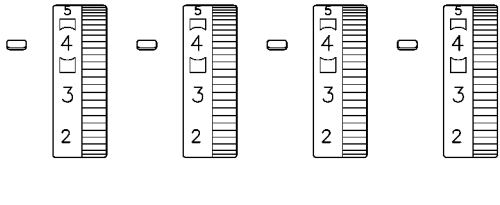
If the stitch quality is insufficient, select a different tension setting from the illustration on the previous or following pages.

### Adjusting the thread tension

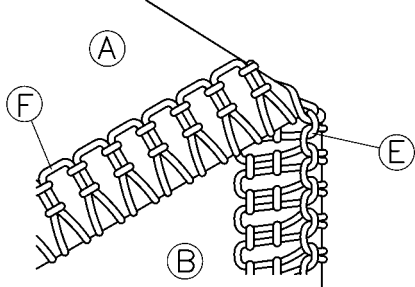
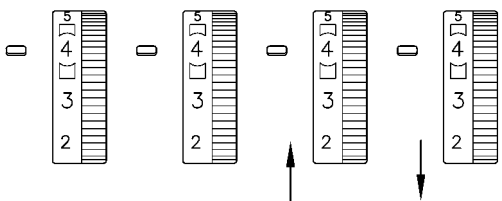
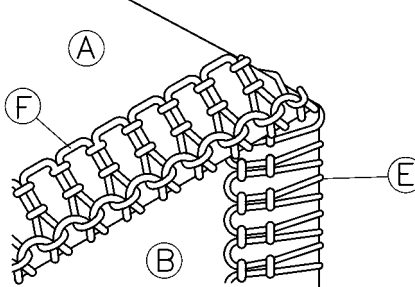
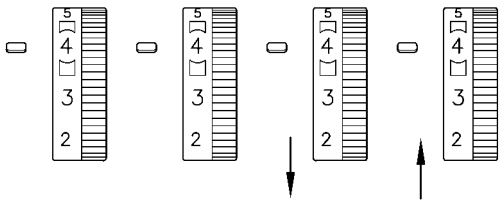
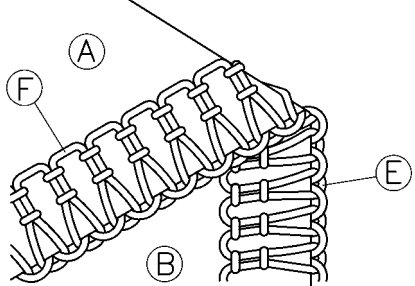
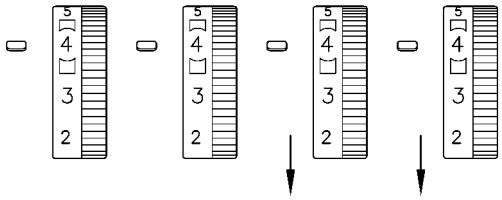
- (1) To select the correct tension, refer to the illustration on the previous page.
- (2) If you cannot find the correct tension, refer to the illustrations "In this case" on following pages.

## Chart of Tension Adjustment (2 stitch 4 threads)

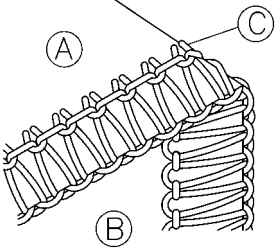
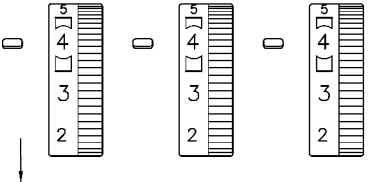
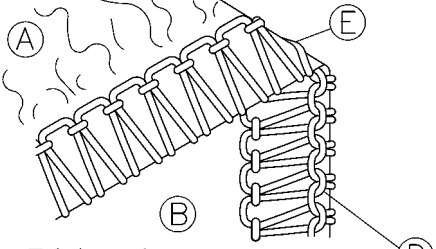
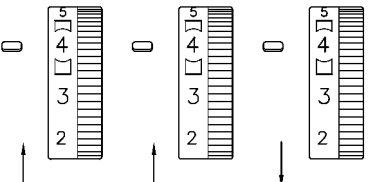
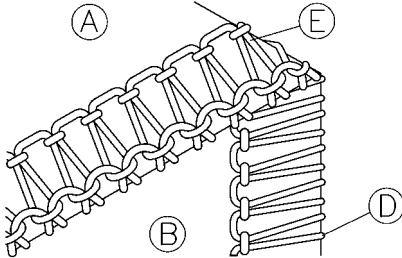
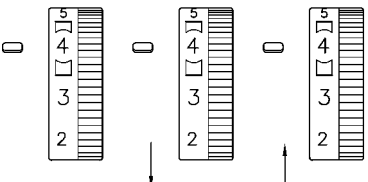
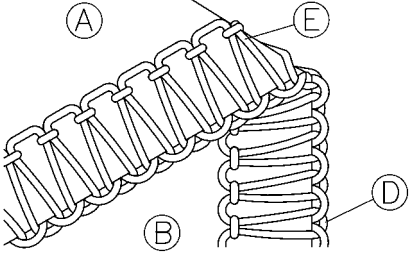
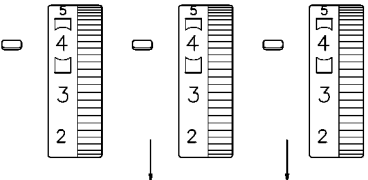
- A Reverse
- B Surface
- C Left needle thread
- D Right needle thread
- E Upper looper thread
- F Lower looper thread

 <p>Left needle thread is loose.</p>	 <p>Tighten left needle thread.</p>
 <p>Right needle thread is loose.</p>	 <p>Tighten right needle thread.</p>
 <p>Left needle thread is tight. Right needle thread is tight.</p>	 <p>Loosen left needle thread. Loosen right needle thread.</p>

# Chart of Tension Adjustment (2 stitch 4 threads)

 <p>Upper looper thread is tight. Lower looper thread is loose.</p>	 <p>Loosen upper looper thread. Tighten lower looper thread.</p>
 <p>Upper looper thread is loose. Lower looper thread is tight.</p>	 <p>Tighten upper looper thread. Loosen lower looper thread.</p>
 <p>Upper looper thread is loose. Lower looper thread is loose.</p>	 <p>Tighten upper looper thread. Tighten lower looper thread.</p>

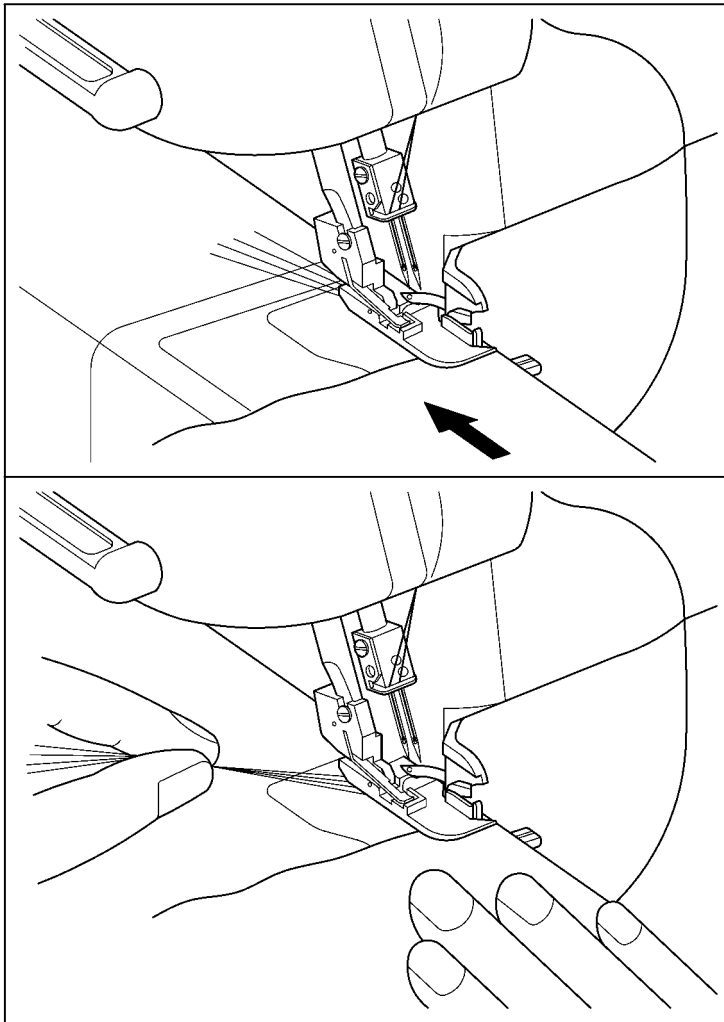
# Chart of tension adjustment (One-needle models)

 <p>A Reverse B Surface C Needle thread D Upper looper thread E Lower looper thread</p>	 <p>Tighten needle thread.</p>
 <p>Fabric puckers Upper looper thread is tight. Lower looper thread is loose.</p>	 <p>Loosen needle thread. Loosen upper looper thread. Tighten lower looper thread.</p>
 <p>Upper looper thread is loose. Lower looper thread is tight.</p>	 <p>Tighten upper looper thread. Loosen lower looper thread.</p>
 <p>Upper looper thread is loose. Lower looper thread is loose.</p>	 <p>Tighten upper looper thread. Tighten lower looper thread.</p>

## ***Sewing test***

Start the sewing test after the threading is completed.

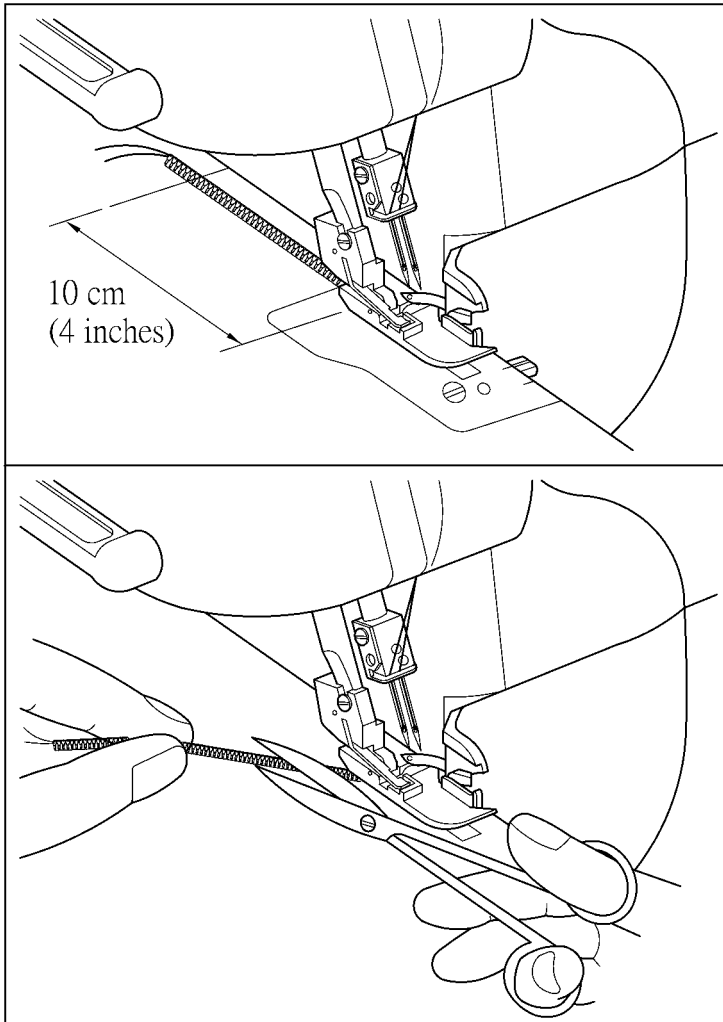
- (1) Raise the presser foot. Place a piece of waste cloth under the presser foot.  
Lower the presser foot. Start to sew. While the machine is sewing, do not raise the presser foot, or the sewing will be uneven.
- (2) Before you operate the foot controller, use your left hand to hold the thread gently, and use your right hand to turn the hand wheel counter clockwise. At the same time, check the sewing status.
- (3) Operate the foot controller gently.



## *How to sew a chain pattern*

After the sewing test is completed, keep on pressing on the foot controller gently until the chain is 10 cm (4 inches) approx. Then, the thread will become a chain pattern automatically.

\* If the tension is uneven, the chain pattern will not be even. If such event happens, please hold the thread gently, and verify the threading order, and also adjust the thread tension. Then, the chain pattern will be even.

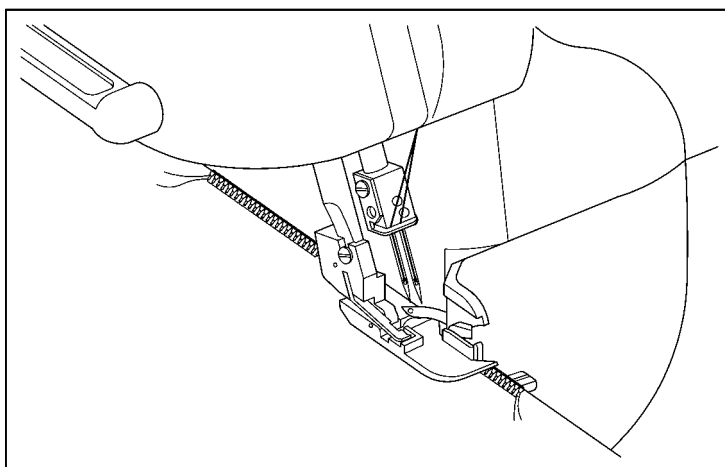


### *If threads break during sewing*

\* If the thread breaks during the sewing, please remove the cloth. Thread the machine in the correct threading order. Thread the upper looper, lower looper and the right needle. Then, thread the left needle. Place the cloth to a position where is 3-5 cm in front of the thread broken place. Proceed with the sewing.

#### CAUTION

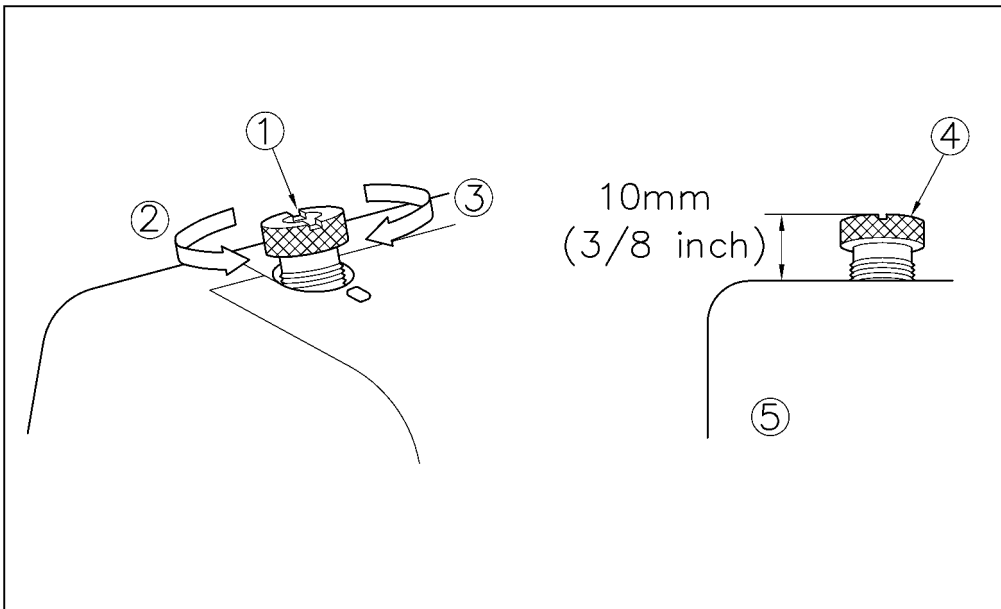
Do not leave straight pins in the fabric when sewing as they will damage the needles and knives.



## *Presser foot pressure*

The pressure of the presser foot can be adjusted by turning the pressure adjustment screw at the top left of this machine. Since this machine has already been adjusted to a pressure suitable for light to medium fabrics, no further adjustment is necessary except when sewing on very heavy or very light materials. Usually, when sewing on very light materials, the presser foot pressure should be loosened. When sewing very heavy materials, the presser foot pressure should be tightened.

- ① Pressure adjustment screw
- ② Less pressure
- ③ More pressure
- ④ Pressure adjustment screw
- ⑤ (Standard height for medium material)



## *Elementary troubleshooting*

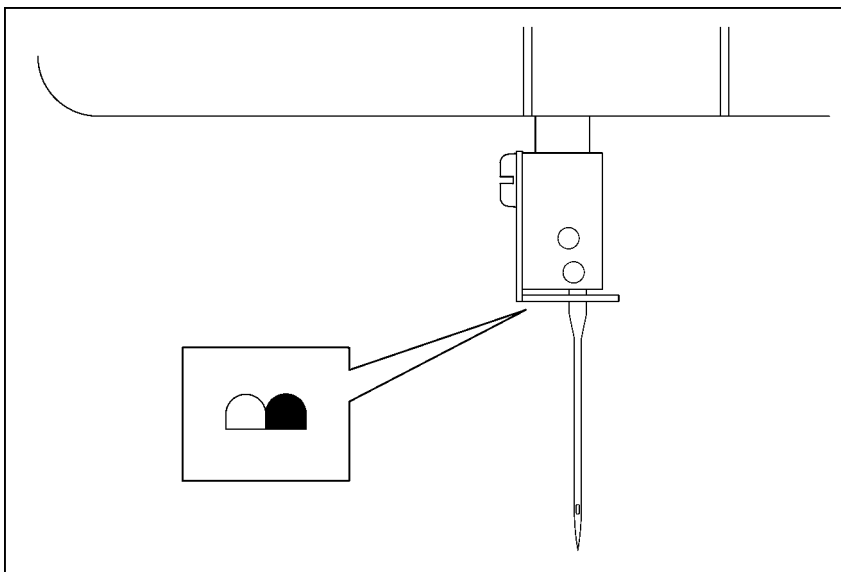
Trouble	Cause	Remedy
Unable to feed cloth	The presser foot has an insufficient pressure.	Turn the pressure screw clockwise to increase pressure.
The needle breaks.	<ol style="list-style-type: none"> <li>1. The needle is bent, or the needle point becomes dull.</li> <li>2. The needle is installed incorrectly.</li> <li>3. Pull the cloth incorrectly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the needle for a new one.</li> <li>2. Re-install the needle correctly.</li> <li>3. Hold down the cloth gently.</li> </ol>
The thread breaks.	<ol style="list-style-type: none"> <li>1. Thread the machine incorrectly.</li> <li>2. The thread tangles.</li> <li>3. The thread tension is too tight.</li> <li>4. The needle is installed incorrectly.</li> <li>5. Use an inadequate needle</li> </ol>	<ol style="list-style-type: none"> <li>1. Re-thread the machine correctly.</li> <li>2. Check the thread spool post, thread tree and others, and remove the tangled threads.</li> <li>3. Adjust thread tension.</li> <li>4. Re-install the needle correctly.</li> <li>5. Use right needle.</li> </ol>
Skipped stitches	<ol style="list-style-type: none"> <li>1. The needle is bent, or the needle point becomes dull.</li> <li>2. The needle is installed incorrectly.</li> <li>3. Use an inadequate needle.</li> <li>4. Thread the machine incorrectly.</li> <li>5. The presser foot has an insufficient pressure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the needle for a new one.</li> <li>2. Re-install the needle correctly.</li> <li>3. Use a suitable needle.</li> <li>4. Re-thread the machine correctly.</li> <li>5. Turn the pressure screw clockwise to increase the pressure.</li> </ol>
Bad stitches	The thread tension is not adjusted.	Adjust the thread tension.
The cloth wrinkles.	<ol style="list-style-type: none"> <li>1. The thread tension is too tight.</li> <li>2. Thread the needle incorrectly, or the thread tangles.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the thread tension when you sew light or thin cloth.</li> <li>2. Remove all the tangled threads, and re-thread the machine correctly.</li> </ol>

## *Narrow Overlock Stitch / Rolled Edge Stitch*

The Narrow overlock/Rolled edge stitch is a decorative finish for lightweight to midweight fabrics. It is often used to complete the edge of a fabric. This stitch is sewn by removing the left needle and using the 3-thread overlock stitch.

Instructions for both Narrow overlock / Rolled edge Stitches

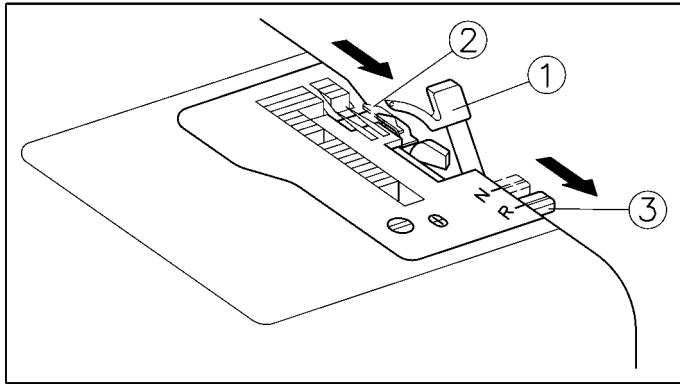
- (1) Remove the left needle (on Two-needle models).
- (2) It is recommended that a #80 Nylon or Polyester thread be used on the following fabric:
  - Georgette
  - Rayon
  - Linen / Light Cotton
  - Broad Cloth
- (3) Thread the machine for a three thread overlock, using the right needle.
- (4) Remove the stitch finger.
  - 1 Raise the presser foot lever.
  - 2 Pull all thread toward the back of the machine.
  - 3 Check to make sure that the thread is no longer wrapped around the stitch finger.
  - 4 Open the front cover.
  - 5 Turn the hand wheel until the upper looper is at its lowest position.
  - 6 Move the stitch finger lever to the position of "R".



NOTE:

Make sure to install stitch finger when sewing regular overlock stitches.

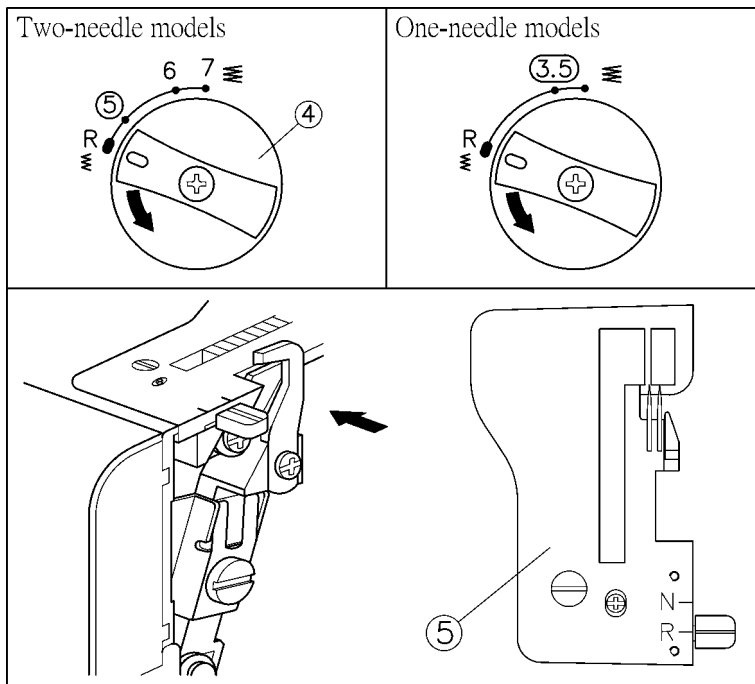
- ① Upper looper
- ② Stitch finger
- ③ Stitch finger lever



(5) Adjust the stitch width for rolled hemming.

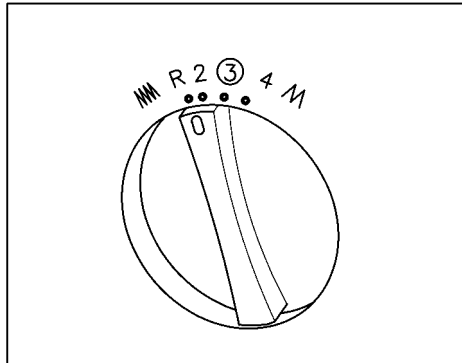
Move the stitch width lever located next to the front cover all the way up to the "R" position.

- ④ Stitch width lever
- ⑤ Needle plate with stitch finger removed



(6) Adjust the stitch length

Set the stitch length adjustment lever to "R" position as shown in the illustration.  
This adjustment is suitable for either Narrow Overlock stitch or Rolled Edge stitch.



To Do Rolled Edge stitch

This application rolls the edge of the fabric inside of the hem stitch. The lower looper tension should be tightened. This pulls the upper looper thread causing the edge of the fabric to fold around the remaining stitch finger. After completing steps (1) through (6) above, adjust your machine to these recommended thread tension settings:

Upper looper thread tension at 4-6

Lower looper thread tension at 5-7

Right needle thread tension at 4-6

Tension may vary slightly according to the fabric and thread used.

To Do Narrow Overlock Stitch

This is a decorative application used for finishing the edge of the fabric. After completing step (1) through (6) above, adjust the thread tension to achieve a normal 3-thread overlock stitch.

Recommended thread tension settings are:

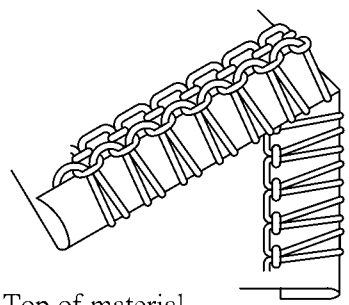
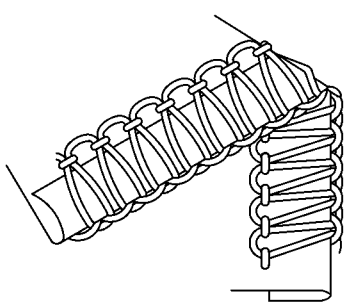
Upper looper thread tension at 4-6

Lower looper thread tension at 4-6

Right needle thread tension at 4-6

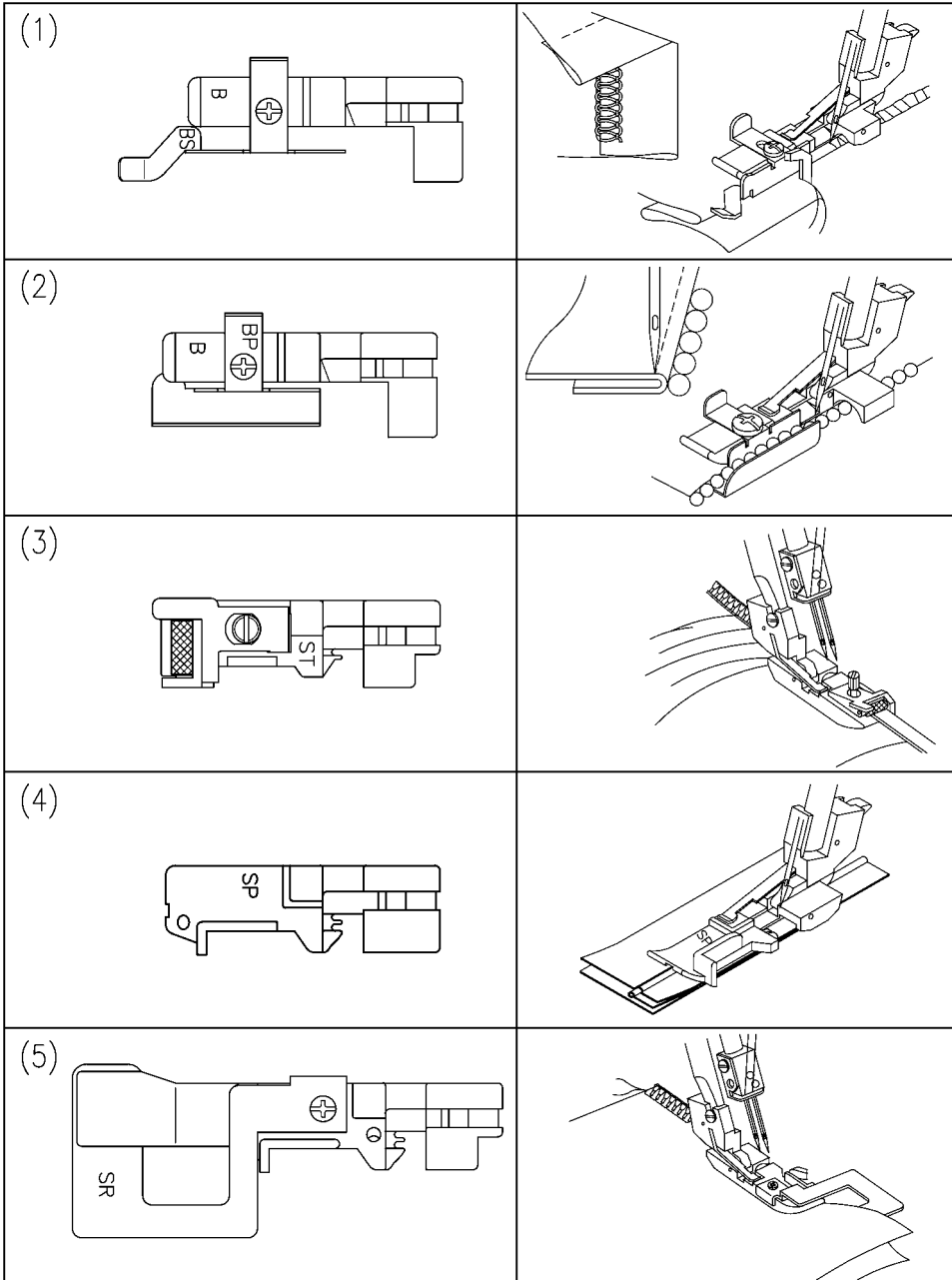
Tension may vary slightly according to the fabric and thread used.

## Chart of Narrow Overlock / Rolled Edge Stitch

	Rolled edge stitch	Narrow overlock stitch
Stitch Style	Underside of material  Top of material	Underside of material 
Fabrics	Light material Crepe de chine Georgette Lawn Organdie	Light material Crepe de chine Georgette Lawn Organdie
Needle thread	Nylon thread #80 Polyester thread #80	Nylon thread #80 Polyester thread #80
Upper looper thread	Wooly nylon thread Decorative thread	Wooly nylon thread Nylon thread #80 Polyester thread #80
Lower looper thread	Nylon thread #80 Polyester thread #80	Nylon thread #80 Polyester thread #80
Stitch Length	R	R
Stitch Width	R.5 (Two-needle models) R (One-needle models)	R.5 (Two-needle models) R (One-needle models)
Stitch Finger	Removed	Removed
Thread Tension		
Needle Thread	4 (4-6)	4 (4-6)
Upper looper Thread	4 (4-6)	5 (4-6)
Lower looper Thread	6 (5-7)	4 (4-6)

## Other special purpose presser feet that are available

- (1) Blind / Flatlock foot      Parts No. TB108
- (2) Bead / Sequin foot      Parts No. TB111
- (3) Elastic foot              Parts No. TB112
- (4) Piping presser foot      Parts No. TB113
- (5) Shirring foot              Parts No. TB114



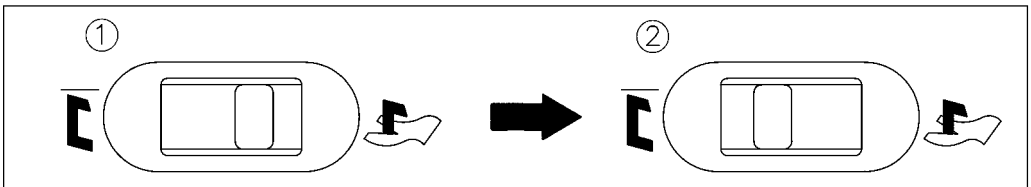
## Upper Knife and Lower Knife

Worn or blunt knives will cause the material to pucker or stitches to be uneven.

- \* If one strand of thread can be cut off in front of or at the rear of the knife, the knife is sharp enough.
- \* When the knives are blunt, replace them as described on the next page. Be sure to unplug the power supply cord from the wall outlet before removing the knives.

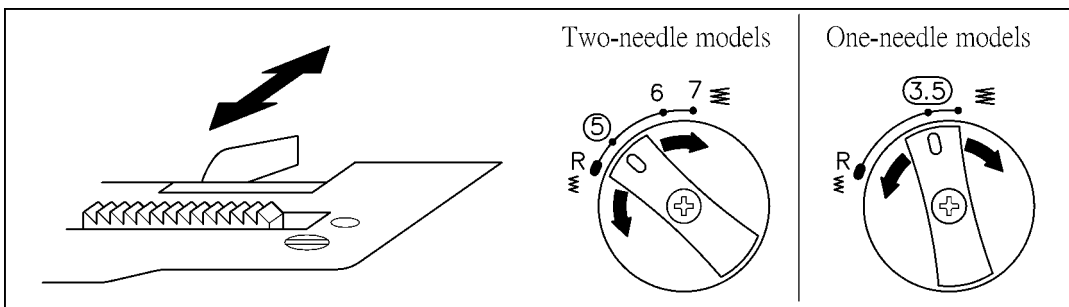
## Retracting upper knife

If you want to sew without cutting, move the upper knife adjustment lever ① → ② so that the upper knife will not be used.



The top part of the upper knife will stick out above the needle plate.

- \* Use the projecting part of the upper knife as a guide for the fabric. Adjust the stitch width lever to move the upper knife to the desired guide position.

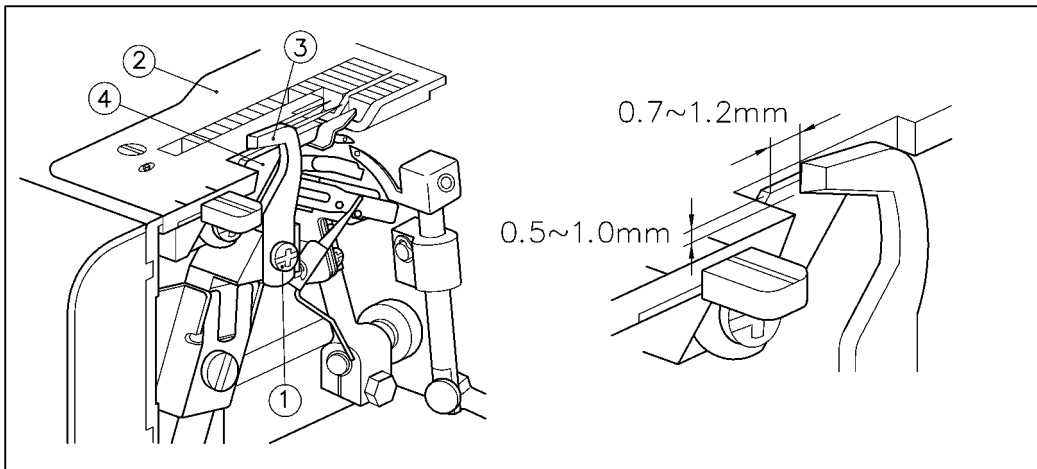


Move the upper knife adjustment lever only while the needle is at its lowest point.

## Replacing the knives

### Replacing the upper knife

- (1) To remove the knife, loosen the upper knife set screw and pull up the upper knife.
  - (2) Insert the new knife into the upper knife holder.
  - (3) Then turn the pulley by hand until the upper knife is in the down position.  
Check that the upper knife is in front of the lower one and adjust the clearance between it and the edge of the lower knife to between 0.5 mm and 1.0 mm.
  - (4) Retighten the upper knife securely.
- ① Upper knife set screw
  - ② Needle plate
  - ③ Upper knife
  - ④ Lower knife



### Replacing the lower knife

- (1) Loosen the lower knife set screw and pull down the lower knife.
- (2) Insert the new knife into the lower knife holder.
- (3) Position the lower knife so that its edge is flush with the needle plate.
- (4) Tighten the lower knife set screw.

\* It is important to adjust the alignment of the upper and lower knives for sharp cutting.

## Oiling

For smooth and silent operation, the moving parts of the machine should be oiled periodically. (See diagram below.)

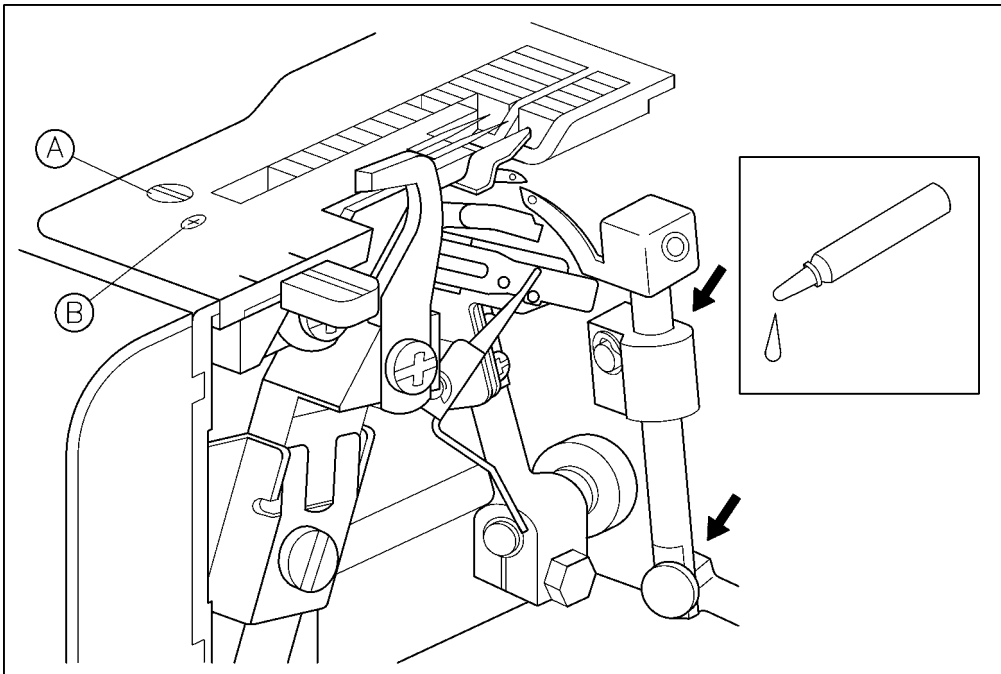
### REMARKS:

Be sure to oil your sewing machine before use.

Always clean the lint off your machine before you apply oil.

OIL THE MACHINE ONCE OR TWICE A MONTH FOR NORMAL USE. IF THE MACHINE IS USED MORE OFTEN. OIL IT ONCE A WEEK.

→ Suggested oiling points



### CLEAN

- 1 The interior of needle plate should be cleaned by brush.
- 2 Loose the screw of A . Then take off the needle plate.
- \* 3 The screw of B . Only for repair & adjustment of the machine. Please don't loosen or adjust.

## Changing the light bulb

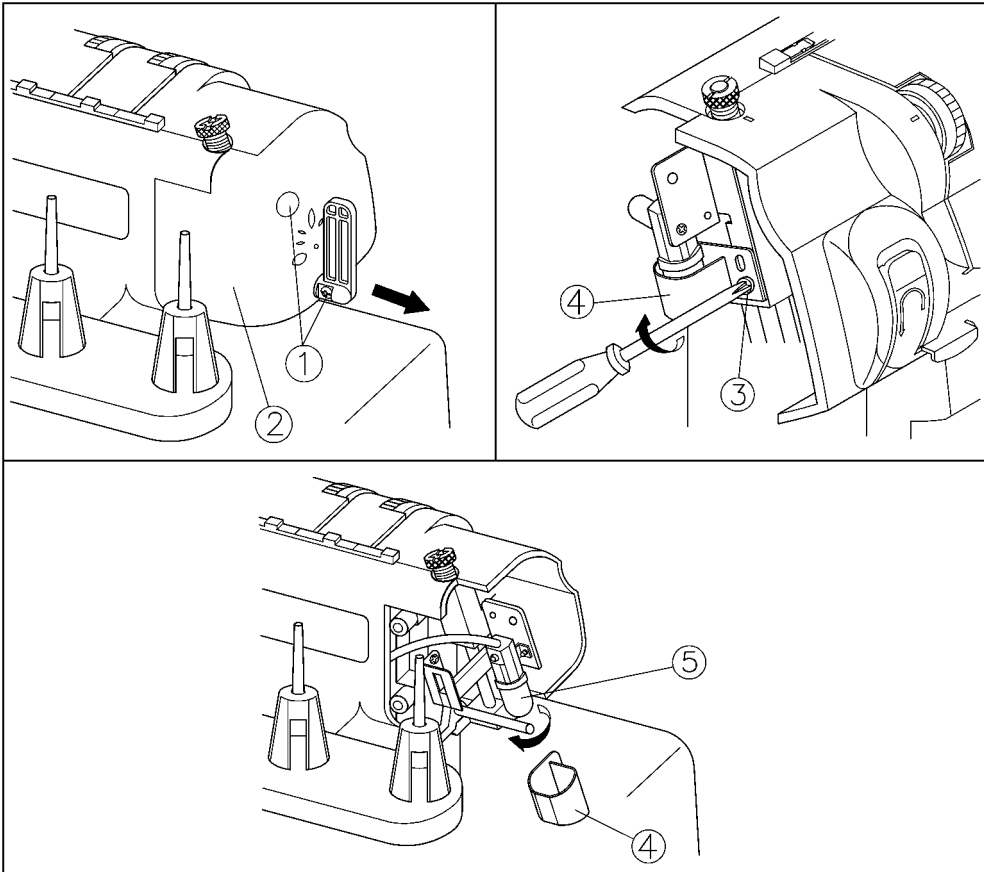
### CAUTION

Always be sure to turn off the power before carrying out the following operation.

Changing the light bulb.

- \* Remove the lamp cover as shown in the illustration.
- \* Loosen the presser foot lifting lever set screw pull up the presser foot lifting lever and remove it.
- \* Loosen the light bulb cover set screw pull up the light bulb cover and remove it.
- \* Take out the light bulb and replace it with a new one.

- ① Screw
- ② Lamp cover
- ③ Screw
- ④ Light bulb cover
- ⑤ Light bulb



## *Machine Specifications*

Use

Light-to heavy-weight materials

Sewing speed

1,250 stitches per minute

Stitch length (pitch)

1.2 mm to 4 mm

Stitch width

2.3 mm to 7.0 mm (Two-needle models)

2.3 mm to 3.5 mm (One-needle models)

Presser foot

Free presser type

Presser foot lift

5 mm to 6 mm (3 / 16 to 15 / 64 inch)

Needle bar stroke

25 mm (1 inch)

Needle

HAX1 (130 / 705H )

No. of needles and threads

Three / Four threads convertible

Two needles or single needle

Machine net weight

7.0 kgs. (Two-needle models)

6.5 kgs. (One-needle models)

Needle set HAX1

#80 (2)

#90 (2)