SUPRA
ENTERPRISES CORP

Manual

SINGER 14T970C COVER STITCH

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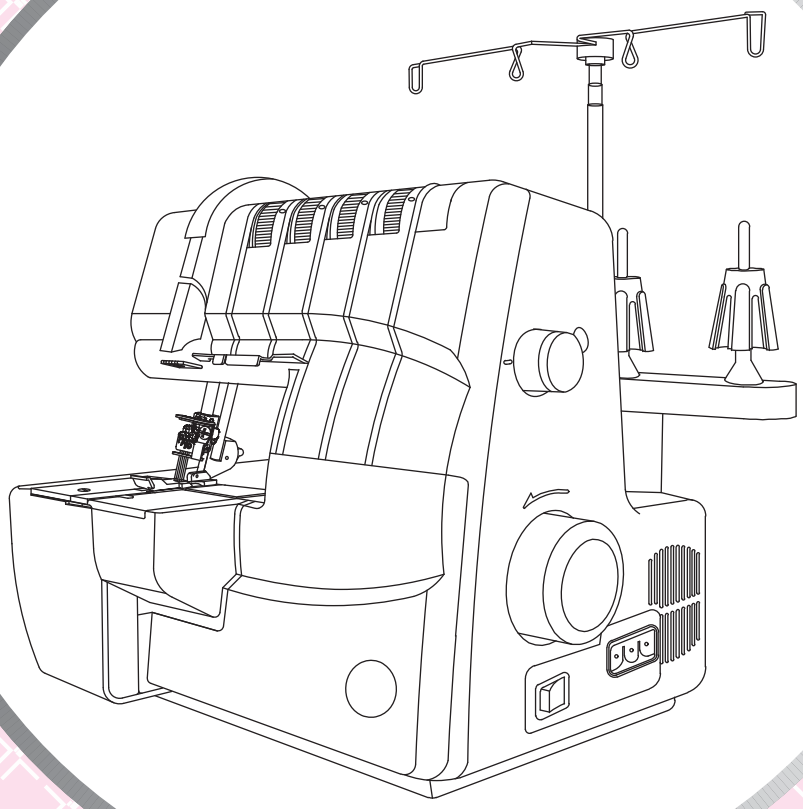
SINGER®

INSTRUCTION BOOK



PREFACE

Thank you for your purchase of this Combination Overlock, Chain Stitch and Cover Stitch Sewing Machine. This machine, that is intended for household use will provide you with excellent performance in sewing from light to heavy material (lawn to denim).

Please refer to this Instruction Book for proper use and optimum service. To get the most out of your sewing machine, read the entire Instruction Book before attempting to operate the machine. Then familiarize yourself with the machine by following the Instruction Book page by page.

To ensure that you are always provided with the most modern sewing capabilities, the manufacturer reserves the right to change the appearance, design or accessories of this sewing machine when considered necessary without notification or obligation.

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic safety precautions should always be followed, including the following: Read the instruction carefully before you use the machine.

⚠ DANGER - To reduce the risk of electric shock:

* The appliance should never be left unattended when plugged in.
* Always unplug this appliance from the electric outlet immediately after using and before cleaning.
* Always unplug this sewing machine from the electric outlet immediately after using and before cleaning, removing covers, relamping, lubricating or when making any other user servicing adjustments mentioned in the instruction manual.

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

* Do not allow this appliance to be used as a toy. Close attention is necessary when this appliance is used by or near children and infirm persons.
* Use this appliance only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
* Never operate this appliance 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 the appliance to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
* Never operate the appliance with any air openings blocked. Keep ventilation openings of the sewing machine and foot control free from the accumulation of lint, dust, and loose cloth.
* Keep fingers away from all moving parts. Special care is required around the sewing machine needle and cutter.
* Always use the proper stitch plate. The wrong plate can cause the needle to break.
* Do not use bent needles.
* Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
* Switch the sewing machine off “ O “ when marking any adjustments in the needle area, such as threading needle area, such as threading needle, changing needle, threading looper, or changing presser foot and the like.

* Never drop or insert any object into any opening.

* Do not use outdoors.

* Do not operate where aerosol (spray) products are being used or where oxygen is being administered.

* To disconnect, turn all controls to the off “ O “ position, then remove plug from outlet.

* Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

* Use only identical replacement parts. See instructions for servicing double insulated appliances.

* If oil gets in eyes, immediately, rinse the oil out with water. If you swallow oil by mistake, immediately consult a medical doctor.

* Close cover before operating machine.

* Keep the instructions at a suitable place close to the machine and hand it over if you give the machine to a third party.

* Use the machine only in dry locations. Don’t use the machine if it’s wet or in humid environment.

SAVE THESE INSTRUCTIONS

This overlock sewing machine is intended for household use only.

* The machine may only be used with foot pedal type 4C-326G/ 4C-316C/ 4C-345G/ 4C-326C manufactured by Wakaho. Never place anything on the pedal.

* European contact window provided.

* The sound pressure level at normal operation is smaller than 76dB(A).

* SERVICING DOUBLE-INSULATED PRODUCTS (USA and Canada version excepted) In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means is provided on a double-insulated product nor should a means for grounding be added to the product. Servicing a double-insulated product requires extreme care and knowledge of the system and should and only be done by qualified service personnel. Replacement parts for a double-insulated product must be identical to those parts in the product. A double-insulated product is marked with the words DOUBLE INSULATION or DOUBLE INSULATED. The symbol ⧈ may also be marked on the product.

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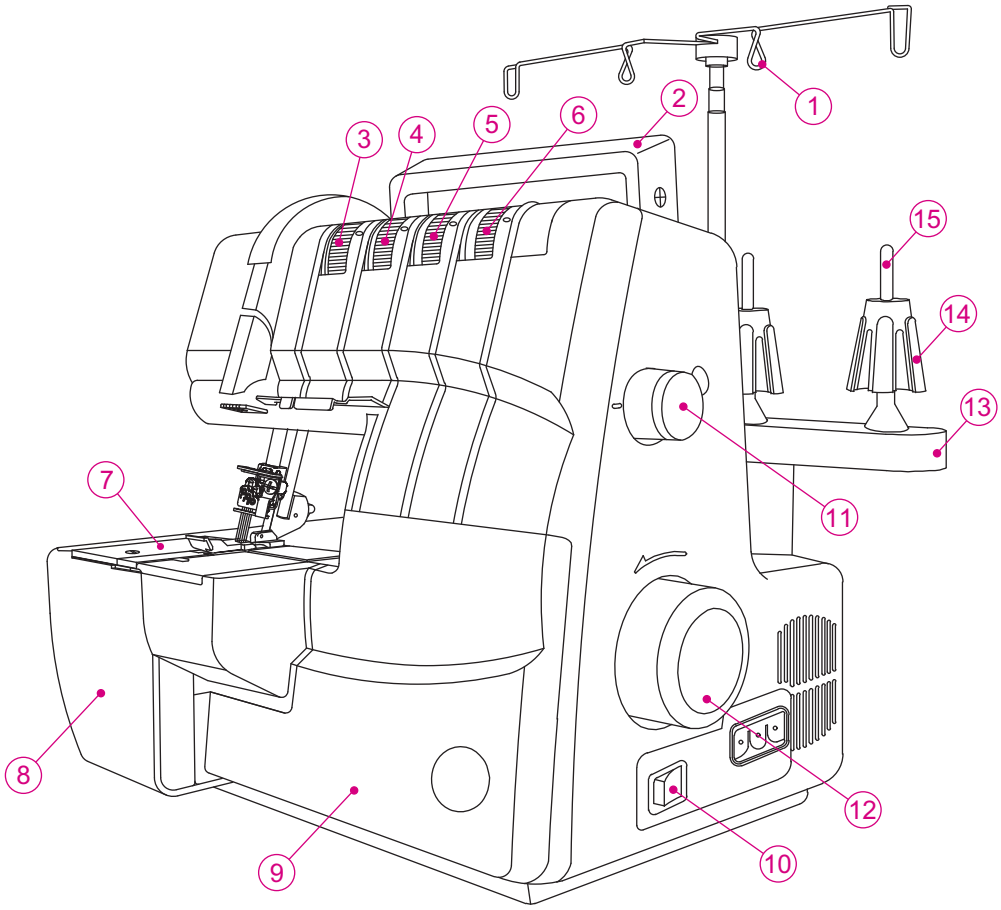
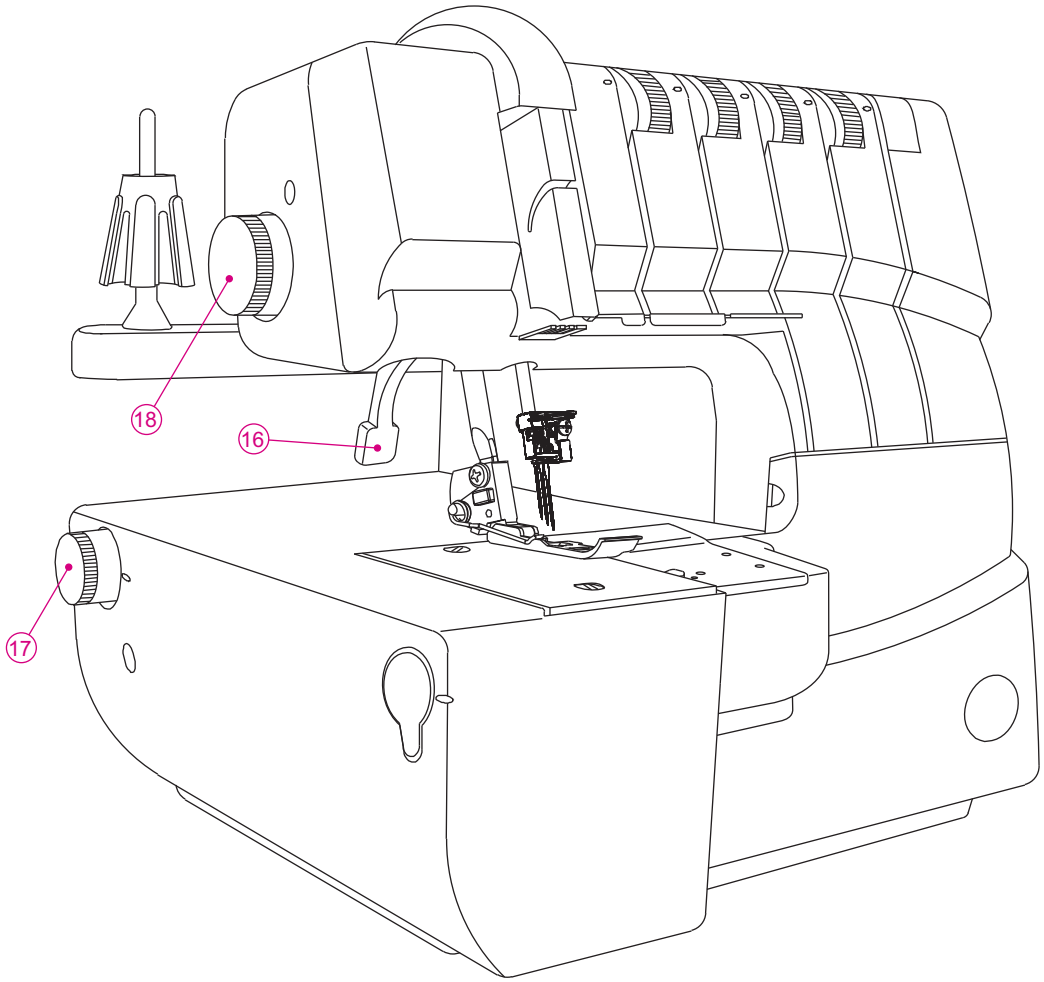
1. PRINCIPAL PARTS

1. Thread Guides and Holder
2. Handle
3. Left Needle Thread Tension Dial (blue)
4. Middle Needle Thread Tension Dial (green)
5. Right Needle Thread Tension Dial (red)
6. Chain Stitch Looper Thread Tension Dial (yellow)
7. Throat Plate
8. Cloth Plate
9. Looper Cover
10. Power & Light Switch
11. Stitch Length Dial
12. Hand Wheel
13. Spool Stand
14. Cone Adaptor
15. Spool Pin



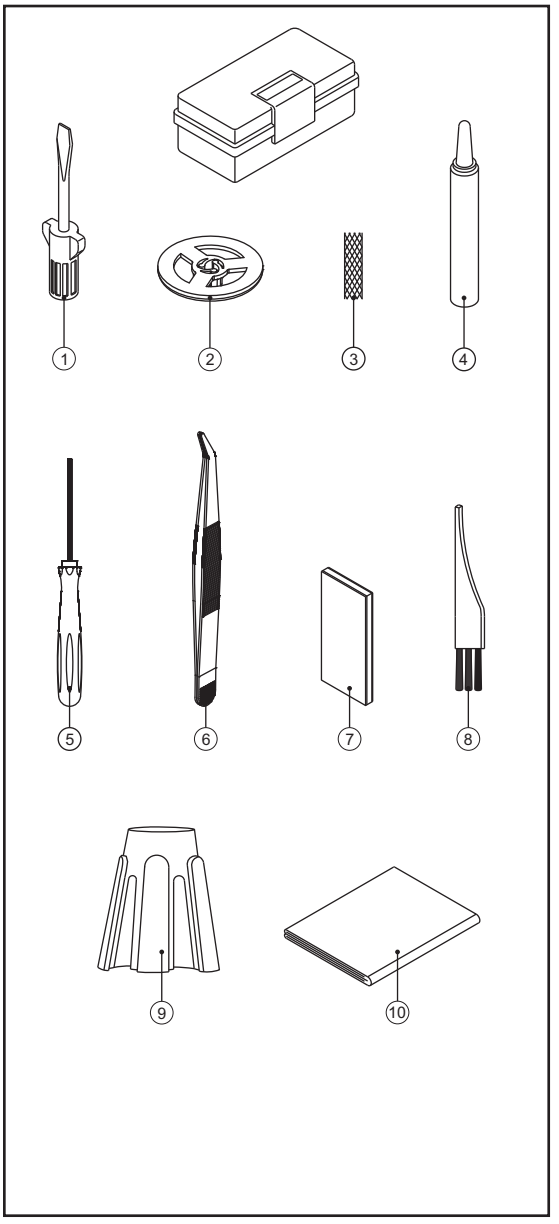
16. Presser Bar Lifter and Tension Release
17. Differential Feed Adjusting Dial
18. Foot Pressure Adjusting Dial



2. ACCESSORIES

Accessories are contained in the accessory case

1.	Screw Driver (large size)	1
2.	Thread Unwinder Spool Cap	4
3.	Anti-Spill Net	4
4.	Oiler	1
5.	Allen Screw Driver (small)	1
6.	Tweezers	1
7.	Needle Set	1
8.	Brush	1
9.	Spool Holder	1
10.	Machine Cover	1



3. NEEDLE INFORMATION

- This cover stitch uses a flat shank industrial needle that eliminates the possibility of inserting the needle backwards.
- Do not attempt to use a standard household sewing machine needle of any size or type in this cover stitch.
- SINGER 2022 Needles size 14/90 are furnished with the machine.
- Only use SINGER 2022 Needles size 14/90 and 11/80 as supplied in the accessory case.

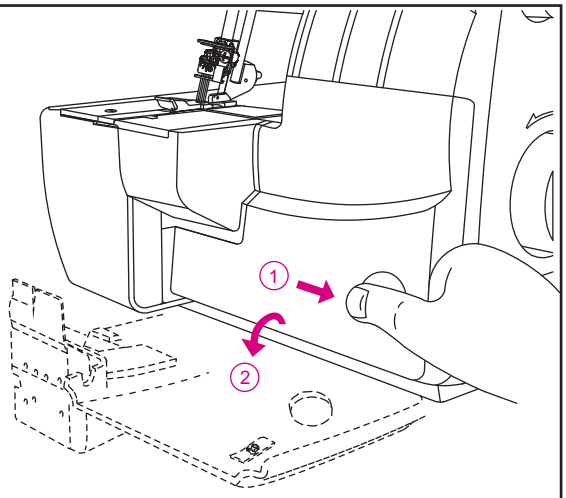
SINGER 2022
Overlock needle

4. HOW TO OPEN LOOPER COVER

Caution:
Be sure to turn off power switch.

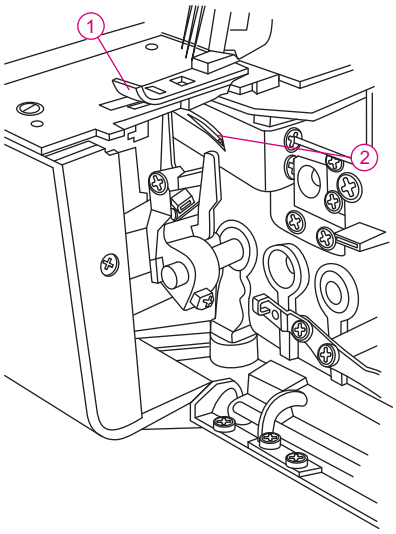
- Push the cover to the right as far as it will go.
- Pull cover down toward you.

Caution:
Be sure looper cover is closed when sewing.



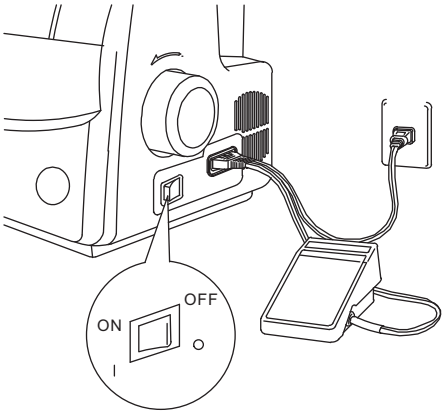
5. PRINCIPAL PARTS BEHIND THE LOOPER COVER

1. Chain/Cover Looper



6. PREPARATION PRIOR TO SEWING

- Connect the controller/electric plug to the machine receptacle.
- Plug power line into electric outlet.
- Power Switch: Push "I" mark side to turn “ON”
  Push "O" mark side to turn “OFF”
- To run the machine and control the speed, press the controller.
- The harder you press, the faster the machine will sew.
- To stop the machine from sewing, remove your foot from the controller.



WARNING:

Use only foot controller provided with this machine.
(Type 4C-316B for U.S.A. & CANADA only)
Be sure to make reference to “Warning” on following Page.

POLARIZED PLUG INFORMATION (FOR U.S.A. & CANADA ONLY)

This appliance has 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 way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.

Warning:

* Be sure that the electrical voltage of the electric outlet (wall receptacle) is the same as the rated voltage of the motor.

* Handle the foot controller with care and avoid dropping it on the floor. Be sure not to place anything on top of it when not in use.

* Disconnect the power line plug from the electric outlet when changing needles, presser feet or when leaving the machine unattended. This eliminates the possibility of starting the machine by accidentally pressing the controller.

7. PREPARATION FOR THREADING

Setting Up the Thread Guide Holder

- Take out the thread guide from the top of Styrofoam, and insert it as shown on the right illustration.
- This machine is shipped with the thread guide holder on the top of styrofoam.
- Fully extend the thread guide holder.
- The two joints on the telescope will click into place when they are correctly positioned.
- Center the thread guides above the spool pins.
- Place thread over the cone adapters on the spool pins.

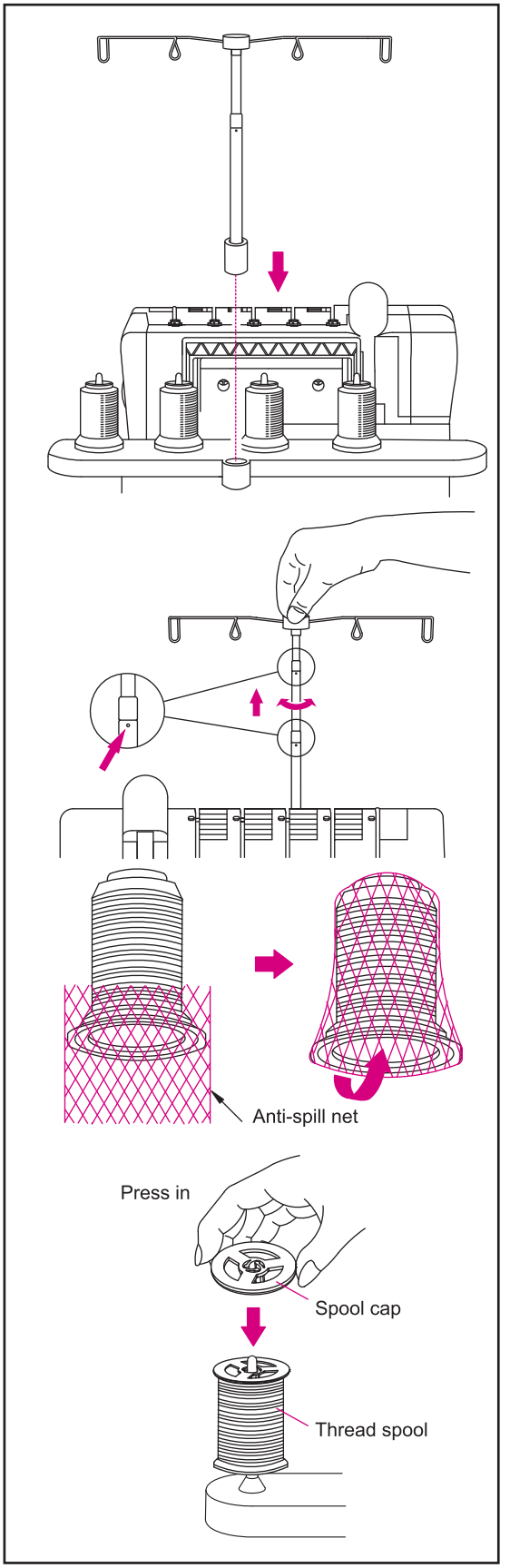
Note: Your new machine is threaded to sew Triple Cover Stitch. Refer to Page 45 for instructions on tying on to the threads.

Anti-spill Net

- When using synthetic threads that easily spill off the cone, slip the anti-spill net furnished with the machine over the thread from the bottom of the cone leaving the thread end hanging free at the top the anti-spill net as shown at right.

Spool Cap

- When using a regular thread spool, fit the spool cap supplied with the machine onto the thread spool as shown at right.

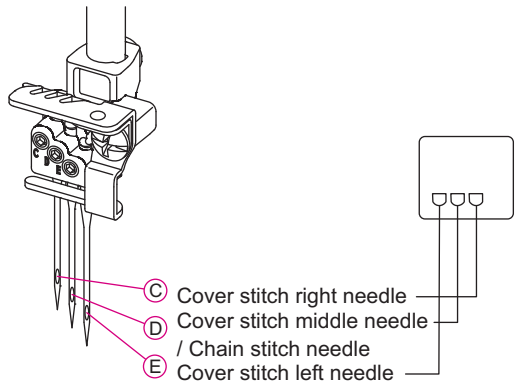


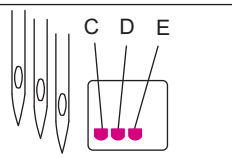
8. HOW TO REMOVE AND INSERT NEEDLES

Needle Position

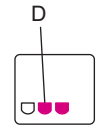
- With this machines, three needles can be inserted to the needle clamp as shown in the drawing.
- The Instruction Book refers to different needle positions by illustrating the needle clamp at right.

Note: When all cover stitch needles are inserted,the left needle will be slightly higher than the others.





Left, middle and right cover stitch needle thread



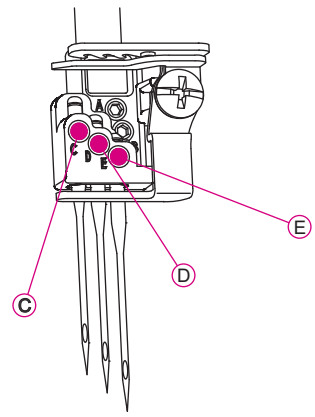
Chain stitch needle thread

To Remove Needle(s)

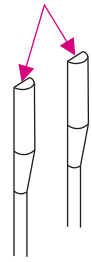
Caution:
Be sure to disconnect the machine from the electric outlet before removing needle(s).

- Turn the hand wheel toward you until the needles are at their highest position.
- Place a thick piece of fabric [such as felt] under the presser foot. Lower the needles halfway into the fabric.
- Loosen, but do not remove the needle set screws with the small allen screwdriver. Hold the needles with your fingers and raise the needle bar. The needles will remain in the fabric.

C. Cover stitch left needle
D. Cover stitch middle needle
E. Cover stitch right needle



Flat surface to the rear

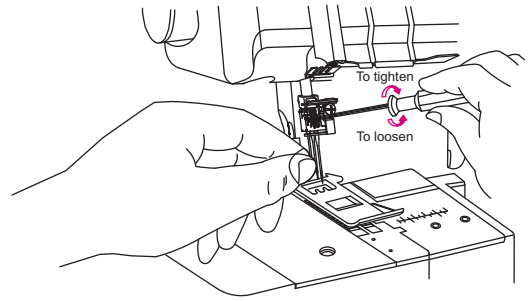


Attention:
After removing the specific needle which is not currently to be used for sewing, remember to fasten the set screw in the screw hole of the needle clamp and to just fasten tight into the hole. Please do not over-tighten the screw into the hole or the needle clamp will be damaged.

To Insert Needles(s)

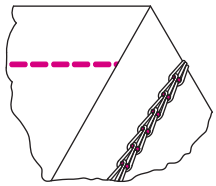
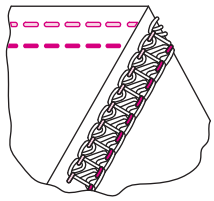
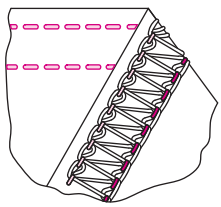
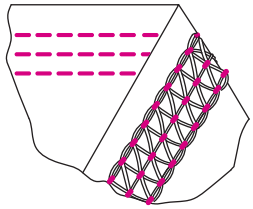
- Hold the needle with the flat surface to the back.
- Insert the needle into the needle socket as far as it will go.
- When inserting a needle, if you first lower it down into the hole in the throat plate it will line up with the needle socket. Then direct it upwards

This machine uses SINGER 2022 needles.
Do not use Standard Household Needles.



9. SELECTION OF STITCHES

This machine is capable of producing 4 types of stitches according to the combination of needle positions, threading methods, tension adjustment.

Stitch Type			Reference Page
1. Double Chain Stitch		A 1-needle 2-thread straight stitch is used for construction or decorative stitching. Seams also can be sewn at desired distance from edge of fabric by disengaging the right looper and movable knife.	44
2. Cover Stitch Narrow (2.8mm)		2-needle, 3-thread cover stitch is suitable for stretchy fabrics such as knits, etc. A narrow seam is formed by using left and middle needles.	38
3. Cover Stitch Wide (5.6mm)		2-needle 3-thread cover stitch is suitable for stretchy fabrics such as knits, etc. A wide seam is formed by using left and right needles.	38
4. Triple Cover Stitch (5.6mm)		3-needle 4-thread cover stitch is suitable for stretchy fabrics such as knits, etc. A triple seam is formed by using left, middle, and right needle.	25

10. HANDY REFERENCE CHART

	Stitch Type		Tension Dial: Numbers shown are average settings on medium weight fabric with Standard#60 polyester spun thread				Page
			Blue	Green	Red	Yellow	
1	Double Chain Stitch			7.0		7.5	44
2	Cover stitch Narrow	2.8mm	6.0	7.0		6.5	38
3	Cover stitch Wide	5.6mm	6.0		7.0	6.0	38
4	Triple Cover stitch	5.6mm	6.0	7.0	7.0	4.0	25

The thread tension becomes tighter as the dials are tumed to higher numbers. The tension settings shown on this page as well as throughout the Instruction book are suggested guides. Adjust thread tensions to suit the fabric and size of thread of thread used. For best results make tension adjustments in small increments of no greater than half a number at a time.

* When chainstitching under conditions given in No.1, set stitch length to over 2mm.
* When cover stitching under conditions given in No.2, 3, 4, set stitch length to over N (2.5mm).

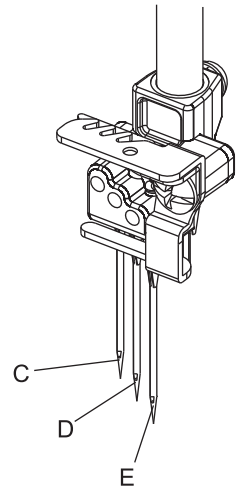
11. HOW TO SEW A COVER STITCH

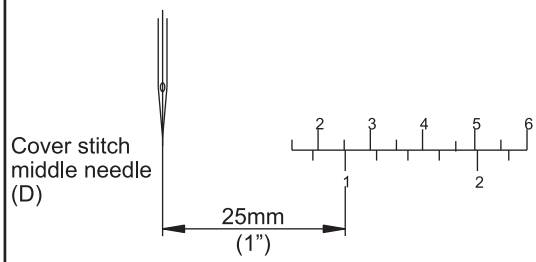
- This machine can produce a 3-thread 5.6 mm wide bottom cover stitch.
- The cover stitch can be used for covering, binding or top-stitching necklines and for hemming the bottom, of T-shirts and sweat suits, etc. in addition to flat joining seams (plain seaming).
- The cover stitch is most suitable for stretchy fabrics such as knit.
- It also can be used in woven fabrics such as denim, but careful attention must be paid to the tension settings or there is the possibility of thread breakage and or skipping.
- If you experience skipping or thread breakage sewing denim change needles first and then adjust the tensions little by little (1/4 number at a time).

Machine Set up

Caution:
Be sure to turn off power switch.

- Open looper cover. (See page 8)
- For Triple 5.6mm cover stitch, install cover stitch right needle (E), cover stitch middle needle (D) and cover stitch left needle (C).
- Pass thread through needles (E), (D) and (C) and thread cover stitch looper [yellow].
- The graduations on seam guide plate indicate the distance from cover stitch middle needle.
  Use it as a guide when positioning fabric edge.
- Close looper cover.





Additional Information About Cover Stitch

At start of sewing

- Raise presser foot. (a)

- Place fabric under presser foot behind the needle. (b)
- Lower presser foot. (c)

Note:
When you start to sew from the middle of the fabric, place the fabric at the desired starting point of sewing. (d)

At end of sewing

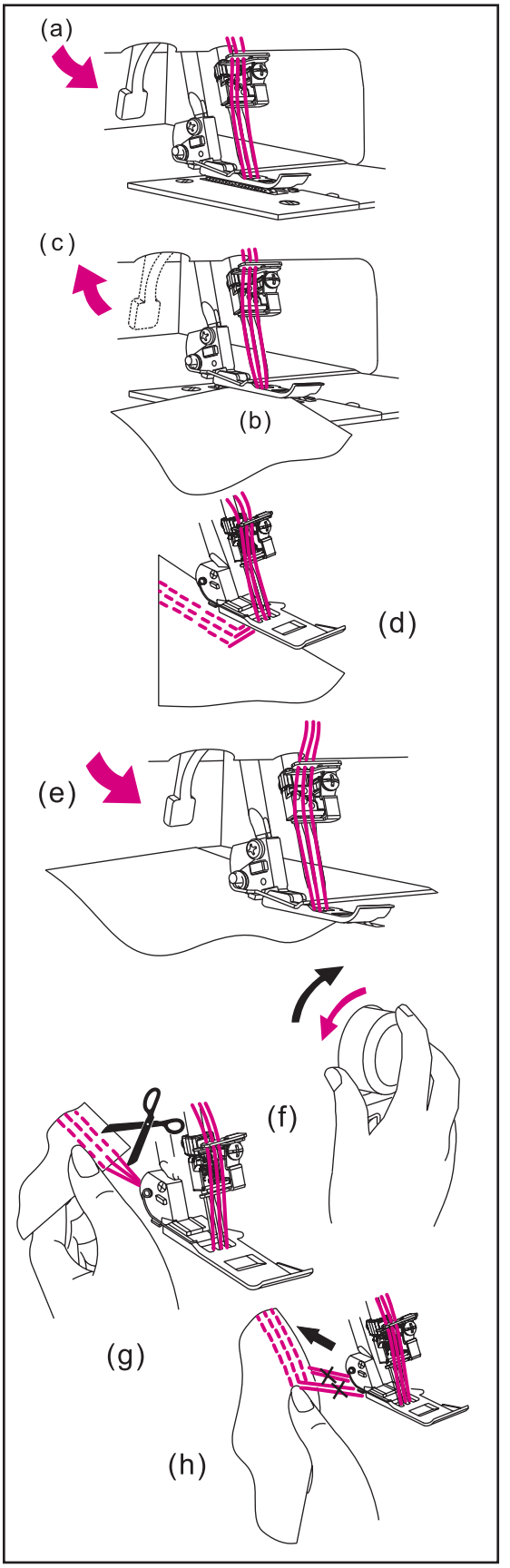
stop sewing when the fabric is not under the needles

- Raise presser foot. (e)

- Turn the hand wheel toward you one circle (counter-clockwise), then turn away from you one circle back, (Clockwise) stopping with needles in the highest position. (f)

- Place your thumb on the stitches, then pull out the fabric lightly to rear of machine and cut the threads. (g)

Note:
The instructions are given when sewing cover stitches because it is not possible to chain-off when doing a cover stitch. (h)



Securing the Seam End

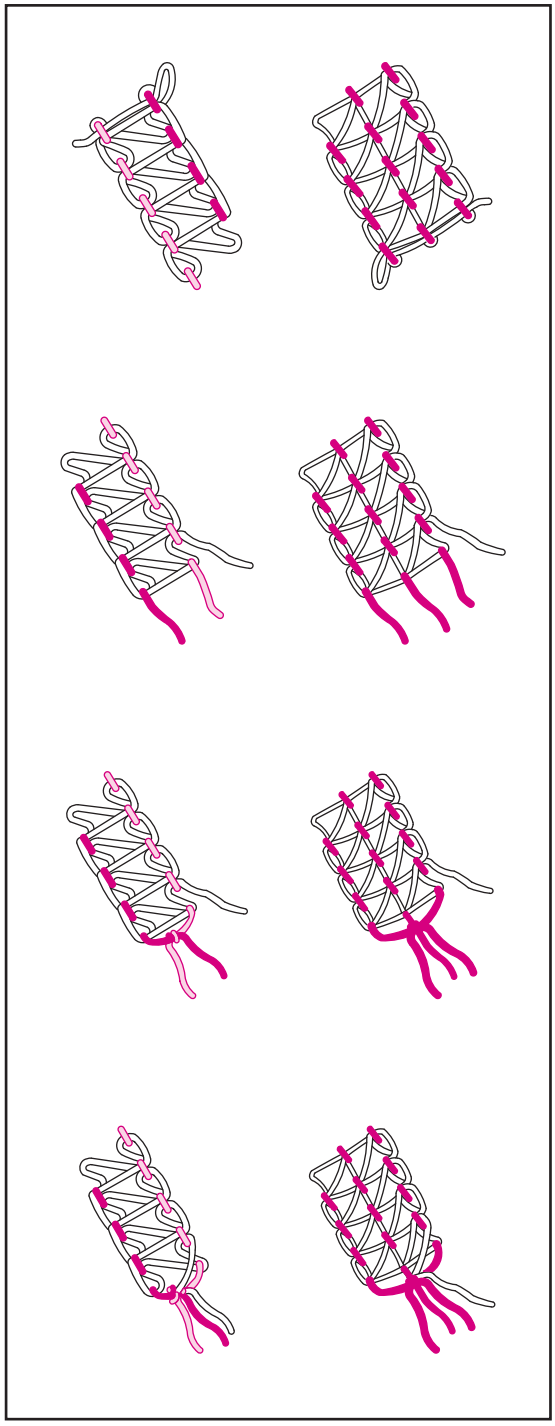
- Since the seams formed by cover stitch unravel when the looper thread is pulled out at the end of sewing, secure the seam end in the following manner.

- When sewing through to the edge of fabric, among the threads coming out of the fabric edge, knot the needle threads (2 or 3 threads) together first, as shown on the right illustration. Then, tie these threads with the looper threads.

- When sewing is stopped halfway, pull out the needle threads (2 or 3 threads) on the underside of the fabric and knot the threads in the same manner as described above.

- Cut extra threads.

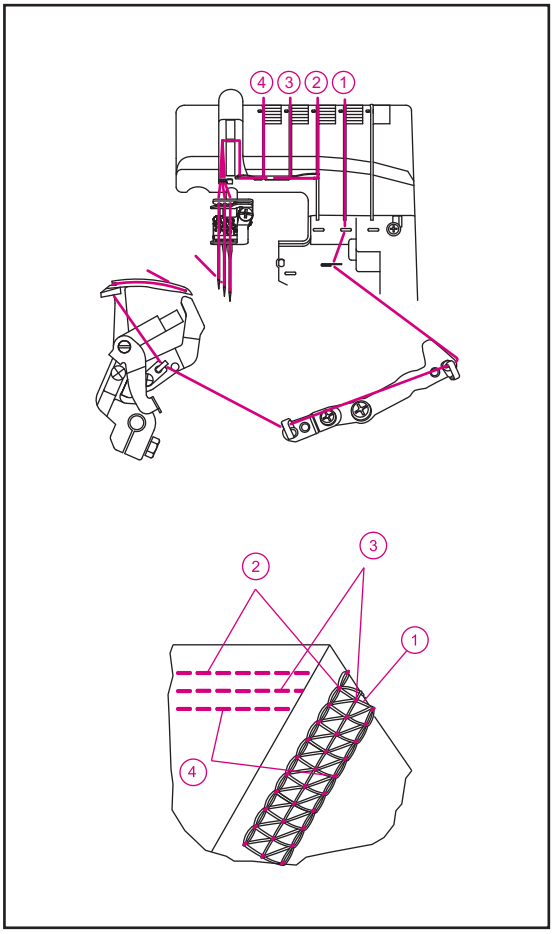
Note: Normally, the seams at the start of sewing do not unravel, but it is safe to secure the seam end following the same steps as described when sewing through to the edge of fabric.



12. THREADING THE MACHINE

Threading Diagram:
Three Thread Cover Stitch

- A color coded threading diagram is located inside the looper cover for quick reference.
- Thread the machine in the order 1 to 4 as shown at right.

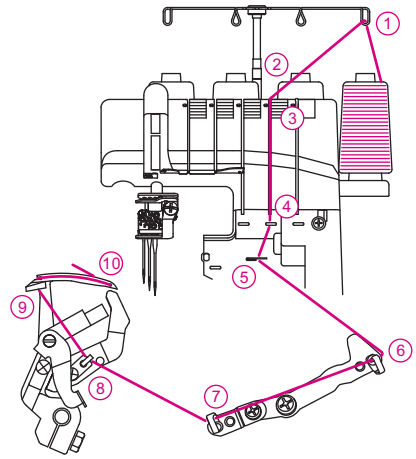


Tension Color Code: Cover Stitch

1. Cover stitch looper thread ..... Yellow
2. Right needle thread ..... Red
3. Middle needle thread ..... Green
4. Left needle thread ..... Blue

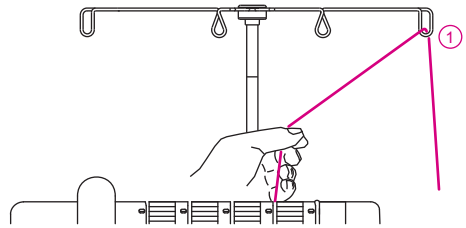
1) Threading the Chain Stitch/Cover Stitch Looper (Yellow)

- Thread the chain stitch/cover stitch looper as indicated 1~10.

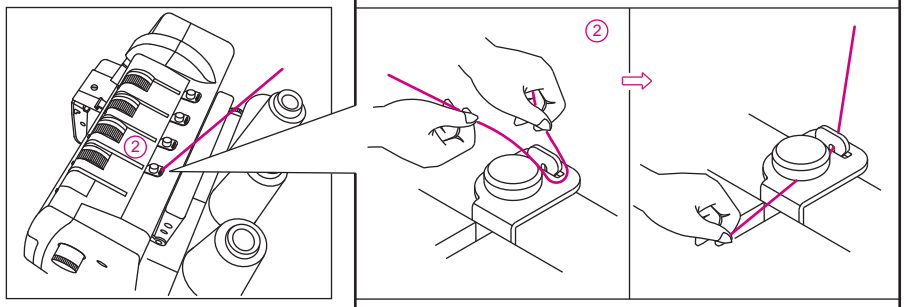


- Raise Presser foot to release Tension discs.

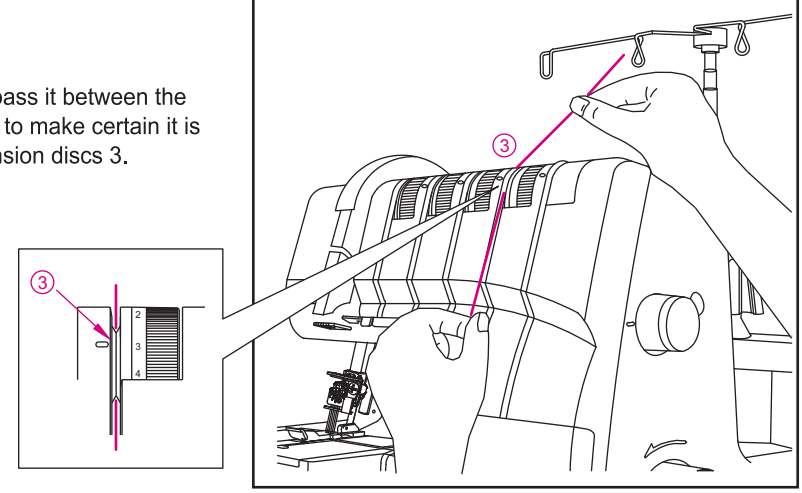
- Pass thread from back to the front through the thread guide 1.



- Thread the top cover thread guide by pullin the thread towards the left until it slips under guide. Then pull threa along the right side of button as illustrated.

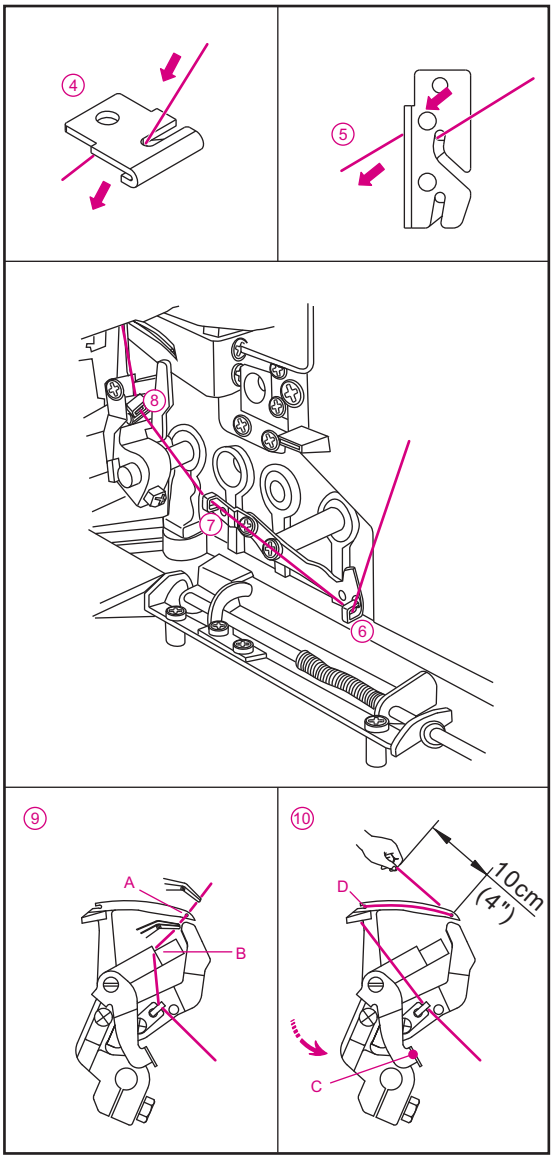


- While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.



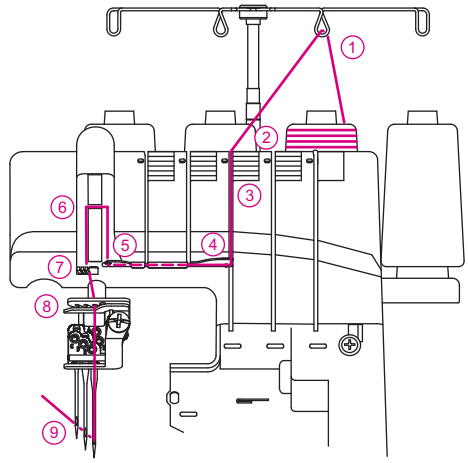
- Turn the hand wheel toward you until the chain stitch looper extends out 10mm from the throat plate edge.
- Thread the looper area of the machine following the yellow color-coded thread guides 4~10.

  Note: Use the tweezers provided in the accessory case to aid in threading the looper.
- Place the thread with the point of the tweezers through threading guide 4.
- Place the thread with the point of the tweezers through the front slot of threading guide 5.
- Place the thread with the point of the tweezers through threading guide 6,7 and 8.
- Thread the looper eye (A) from front to back. Pull about 10cm (4 inches) of thread through the looper. Position thread into V cutout (B) on threader. Firmly hold thread tail with left hand and pull threader lever (C) up into place (D).



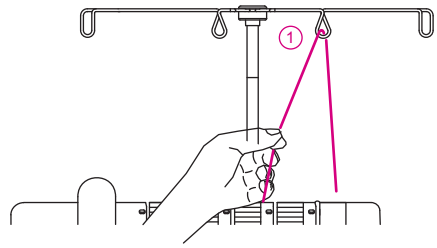
(2) Threading the Cover Stitch Right Needle (Red) (E on needle clamp)

- Thread the cover stitch right needle as indicated 1-9.

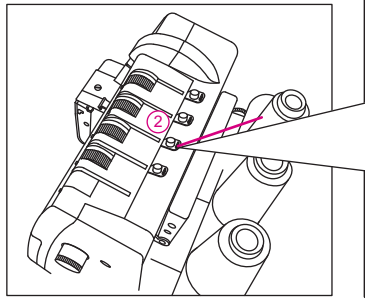


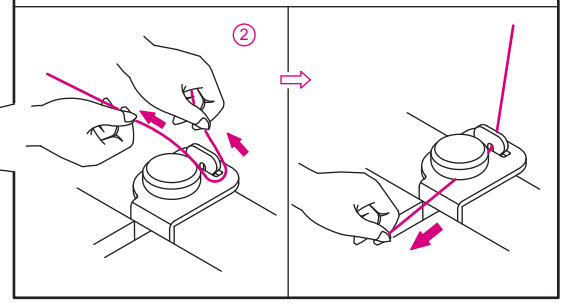
- Raise Presser foot to release Tension discs.

- Pass thread from back to the front through the thread guide 1.

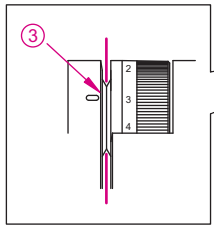


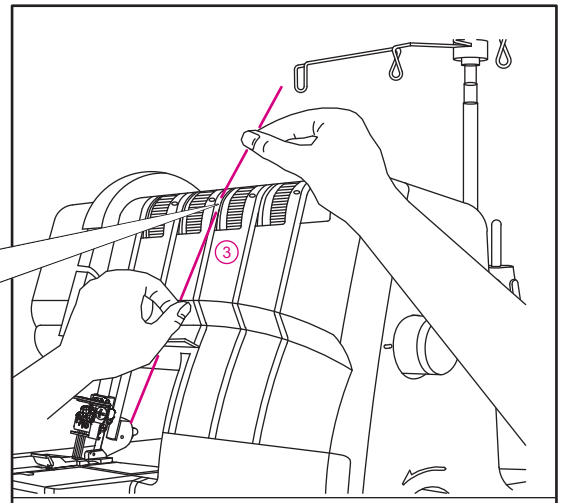
- Thread the top cover thread guide by pulling the thread towards the left until it slips under guide. Then pull thread along the right side of button as illustrated.





- While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.

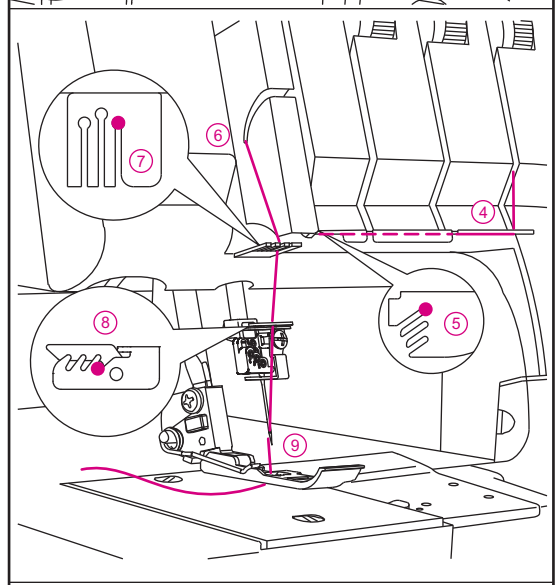




- Continue to thread points 4~8.

  Note: Slip thread into the rear slot on thread guides 5. Slip the thread into the slot of the Take-up Lever Cover 6. Slip the thread into the right slots for thread guides 7 and 8.

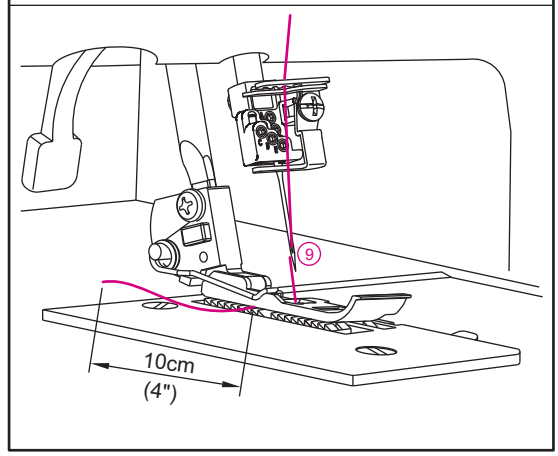
Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of the needle clamp for Cover stitch.



- Thread the eye of the right needle 9.

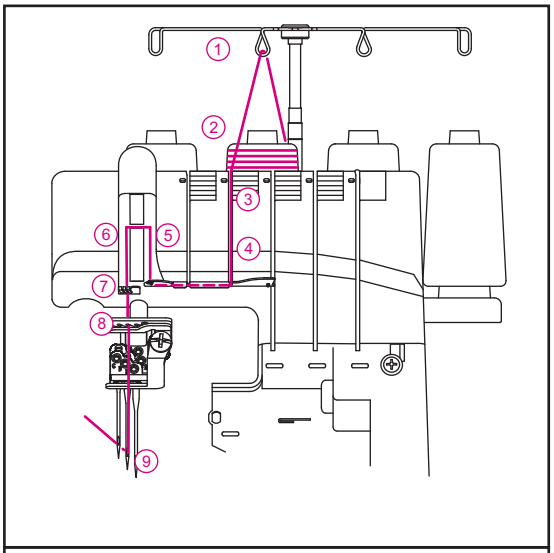
  Note: Use of tweezers in the accessory case will make needle eye threading easy.

- Draw about 10cm (4 inches) of thread through needle eye towards the rear of the machine.
- Place the thread to the back under the presser foot.



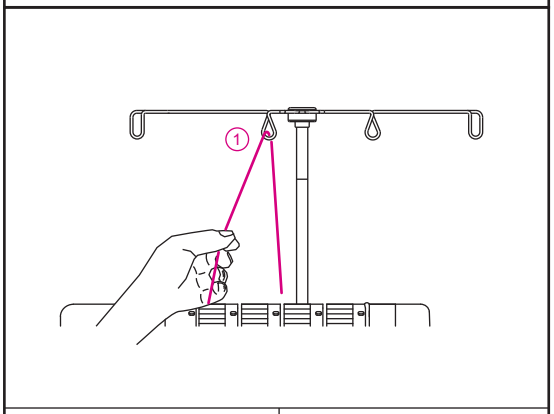
(3) Threading the Cover Stitch Middle/Chain Stitch Needle (Green) (D on needle clamp)

- Thread the cover stitch middle/chain stitch needle as indicated 1~9.

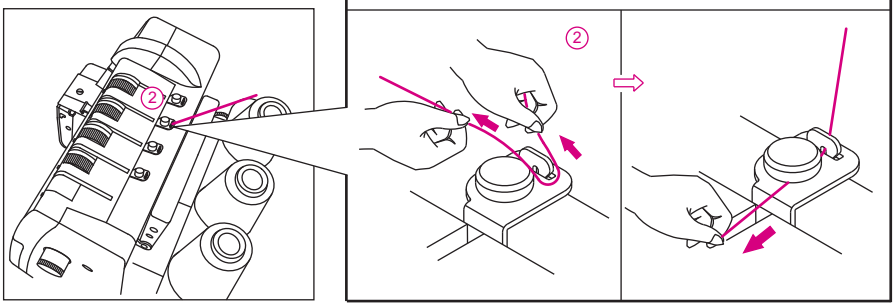


- Raise the Presser Foot to release Tension discs.

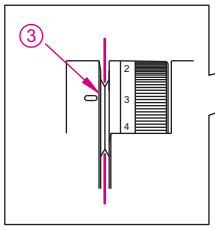
- Pass thread from back to the front through the thread guide 1.

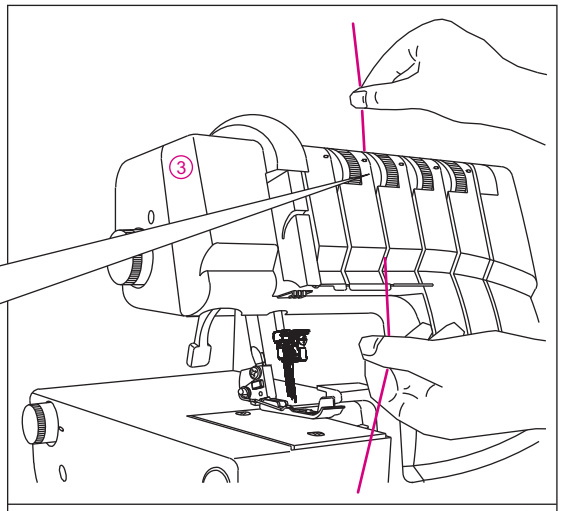


- Thread the top cover thread guide by pulling the thread towards the left until it slips under guide. Then pull thread along the right side of button as illustrated.



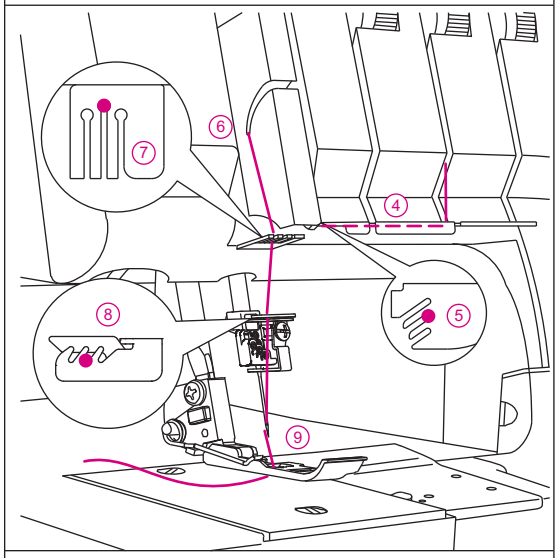
- While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.





- Continue to thread points 4~8.

  Note: Slip thread into the middle slot of the thread guide 5 and into the slot of take-up lever cover 6. Then continue by slipping thread into the middle slot of the thread guides 7 and 8.

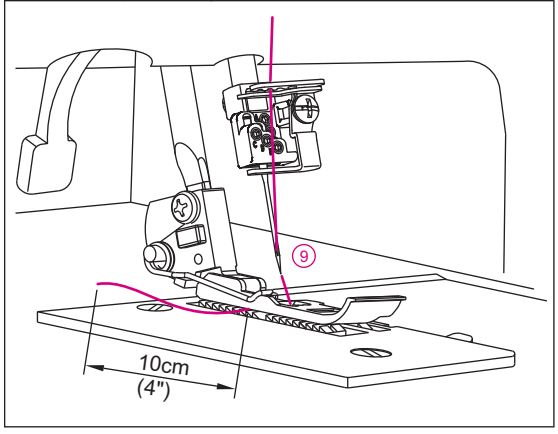


Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of the needle clamp for Cover stitch and for Chain stitch.

- Thread the eye of the right needle 9.

  Note: Use of tweezers in the accessory case will make needle eye threading easy.

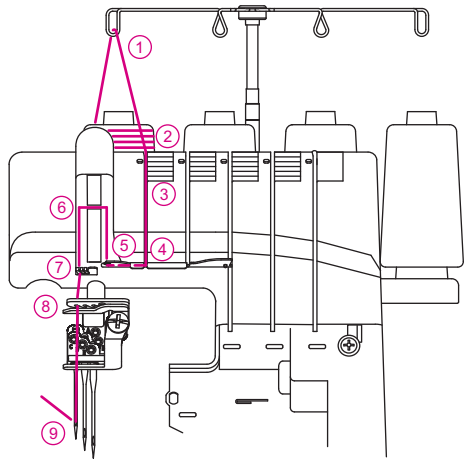
- Draw about 10cm (4 inches) of thread through needle eye towards the rear of the machine.
- Place the thread to the back under the presser foot.



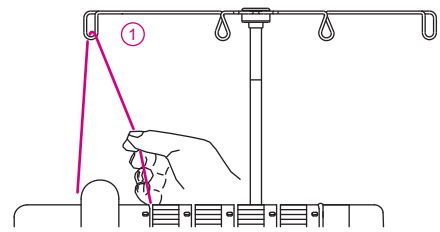
4) Threading the Cover Stitch Needles

(1) Threading the Cover Stitch Left Needle (Blue) (C on needle clamp)

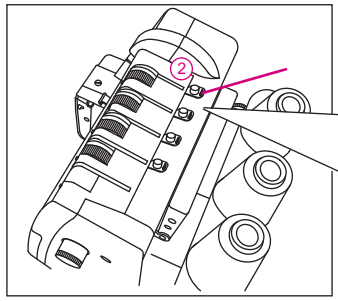
- Thread the cover stitch left/chain stitch needle as indicated 1~9.

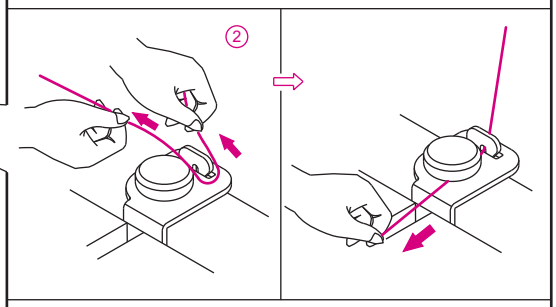


- Raise Presser foot to release Tension discs.



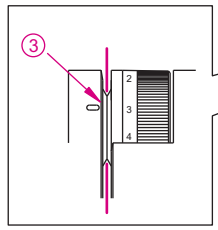
- Pass thread from back to the front through the thread guide 1.

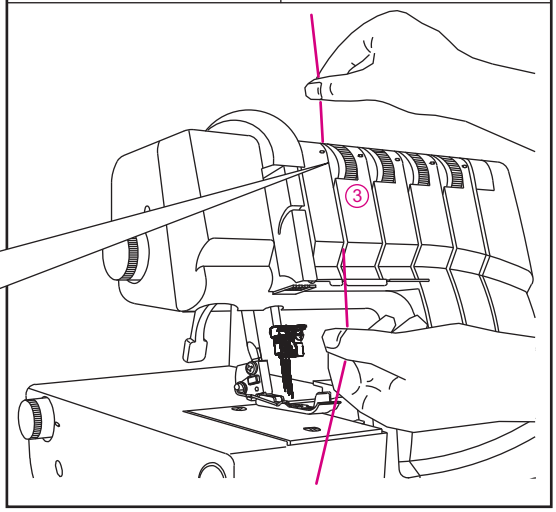




- Thread the top cover thread guide by pulling the thread towards the left until it slips under guide. Then pull thread along the right side of button as illustrated.

- While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.





- Continue to thread points 4~8.

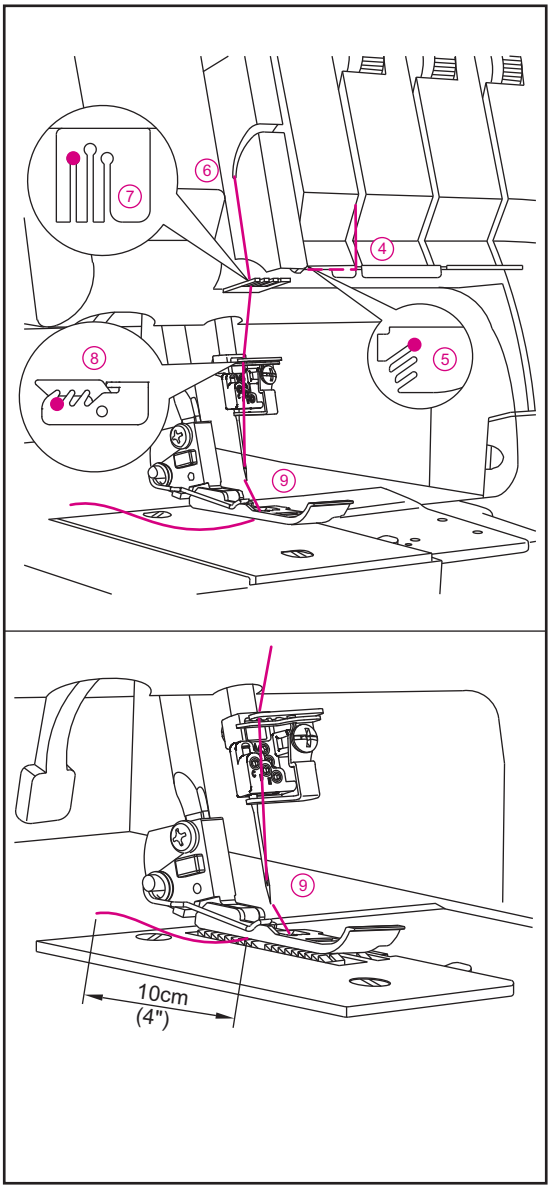
  Note: Slide thread into front slot on thread guide 5 and the slot of take-up lever over 6. Then slip thread into left slots of thread guides 7 and 8.

- Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of the needle clamp.

- Thread the eye of the left needle 9.

  Note: Use of tweezers in the accessory case will make needle eye threading easy.

- Draw about 10cm (4 inches) of thread through needle eye to hang free.
- Place the thread to the back, under the presser foot.



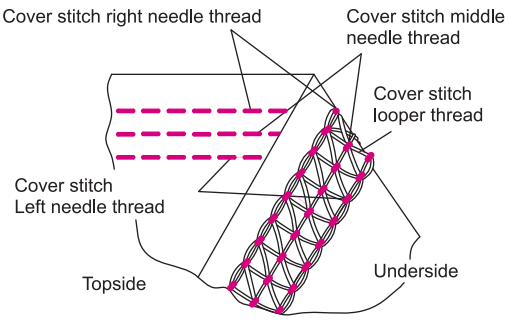
Three-Thread Cover Stitch Suggested Tension Settings

Note: * These are suggested tension settings only.

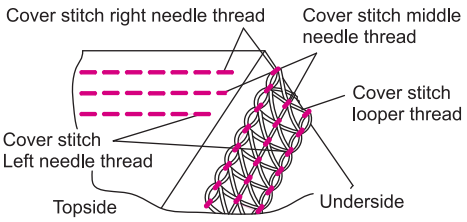
* Tension settings are effected by;
  1) Type and thickness of fabric
  2) Needle size
  3) Size, type and fiber content of thread

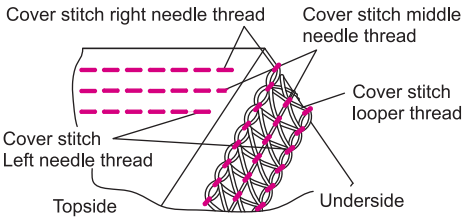
* Stitch length for cover stitch should be set at over N (2.5mm).

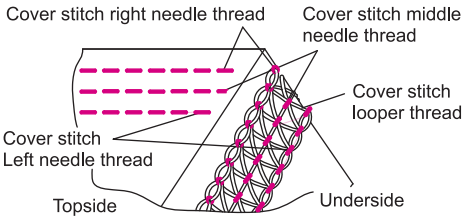
NEEDLE POSITION	
STITCH LENGTH	N~4

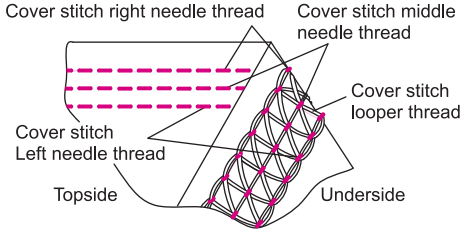


Cover stitch looper Thread	Tension Dial			
	Blue	Green	Red	Yellow
Polyester	6.0	7.0	7.0	4.0
Woolly nylon	6.0	7.0	7.0	0









Correct Balance

- Set each tension dial to settings shown at right and test sew on a sample of your fabric.

How to Balance

- When the cover stitch looper thread is too loose;
  -Turn the cover stitch looper thread tension dial (yellow) toward a higher number.

- When the cover stitch left needle thread tension is too loose;
  -Turn the cover stitch left needle thread tension dial (blue) toward a higher number.
  -Or, turn cover stitch looper thread tension dial (yellow) toward a lower number.

- When the cover stitch middle needle thread tension is too loose;
  -Turn the cover stitch middle needle thread tension dial (green) toward a higher number.
  -Or, turn cover stitch looper thread tension dial (yellow) toward a lower number.

- When the cover stitch right needle thread tension is too loose;
  -Turn the cover stitch right needle thread tension dial (red) toward a higher number.
  -Or, turn the cover stitch looper thread tension dial (yellow) toward a lower number.

- When the top surface of fabric bulges between needle threads and the seams on the underside of the fabric becomes tight;
  - Turn the cover stitch looper thread tension dial (yellow) toward a lower number.

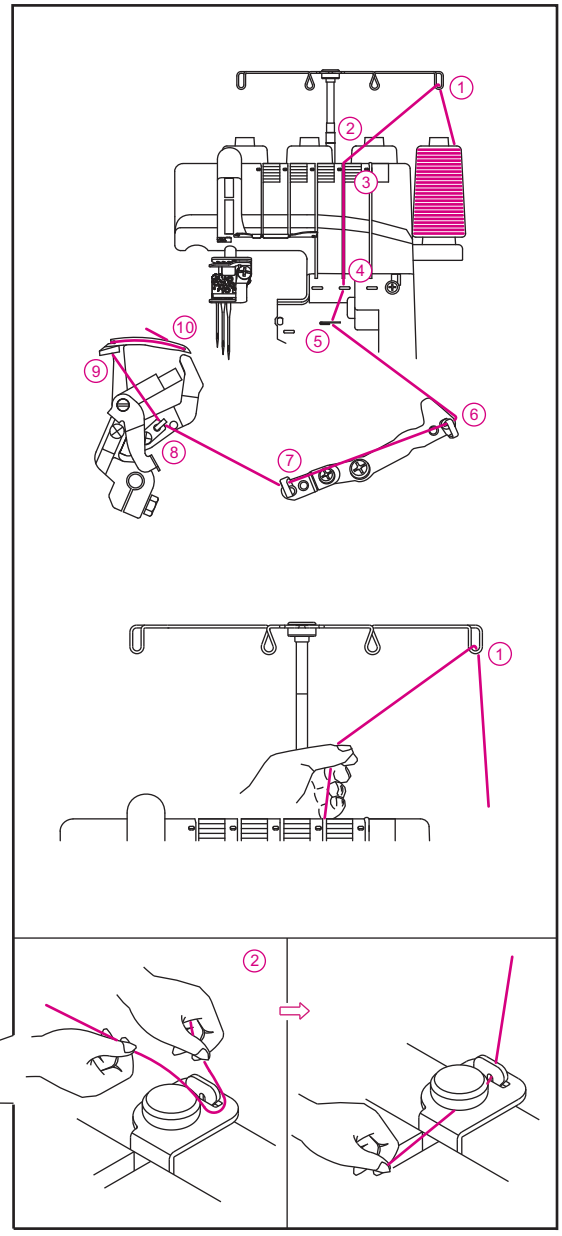
Threading Diagram: Cover Stitch - Two Thread Narrow

Tension Color Code: Two Thread Narrow Cover

1. Cover Stitch Looper..... Yellow
2. Middle Needle Thread (D) ..... Green
3. Left Needle Thread (C)..... Blue
4. Remover Needle (E)

1) Threading the Chain Stitch/Cover Stitch Looper (Yellow)

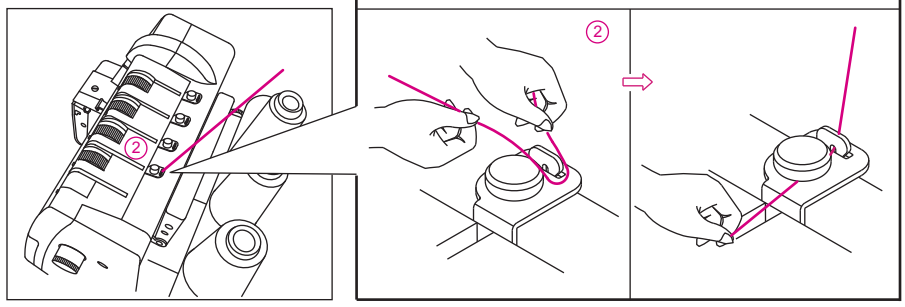
- Thread the chain stitch/cover stitch looper as indicated 1~10.



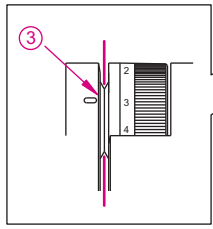
- Raise Presser foot to release Tension discs.

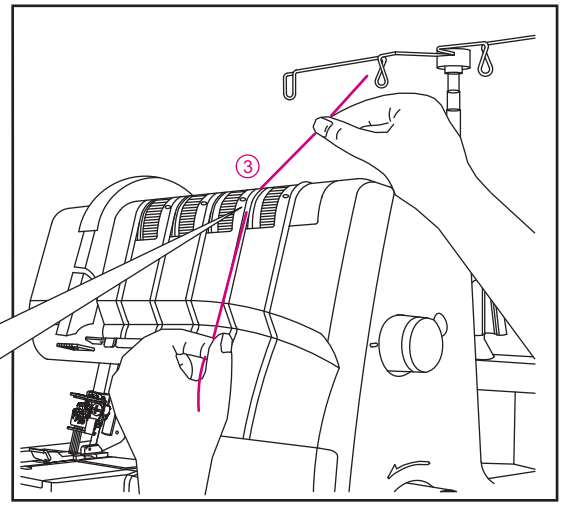
- Pass thread from back to the front through the thread guide 1.

- Thread the top cover thread guide by pulling the thread towards the left until it slips under guide. Then pull thread along the right side of button as illustrated.



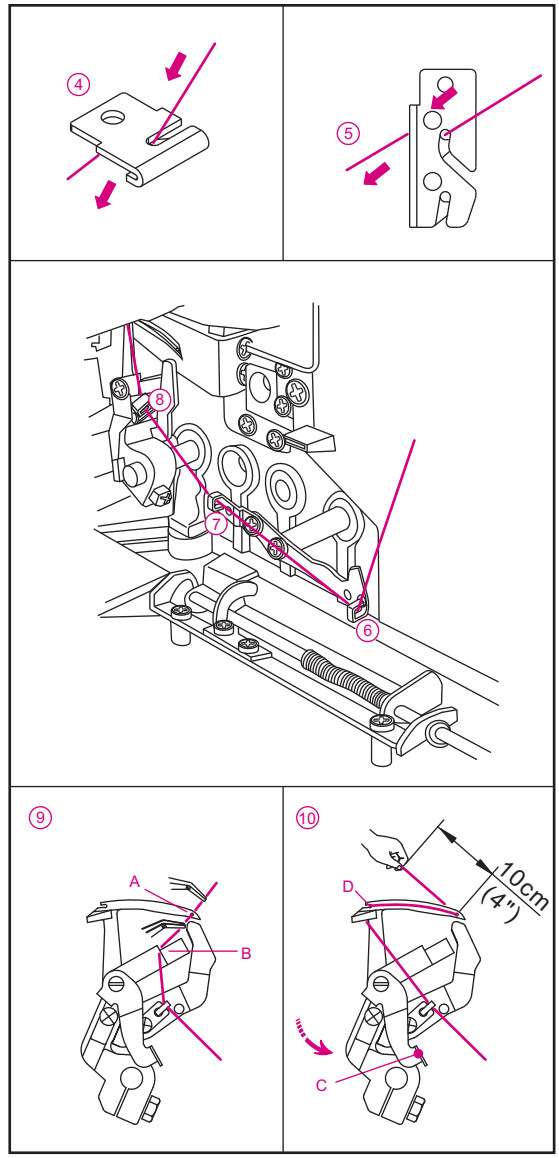
- While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.





- Turn the hand wheel toward you until the chain stitch looper extends out 10mm from the throat plate edge.
- Thread the looper area of the machine following the yellow color-coded thread guides 4~10.

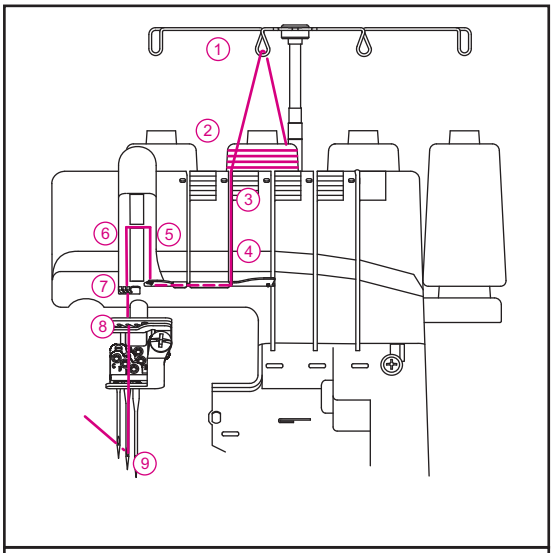
  Note: Use the tweezers provided in the accessory case to aid in threading the looper.
- Place the thread with the point of the tweezers through threading guide 4.
- Place the thread with the point of the tweezers through the front slot of threading guide 5.
- Place the thread with the point of the tweezers through threading guide 6,7 and 8.



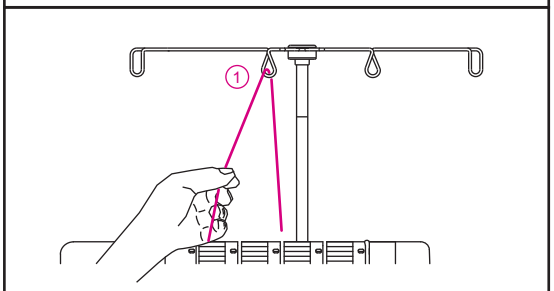
- Thread the looper eye (A) from front to back. Pull about 10cm (4 inches) of thread through the looper. Position thread into V cutout (B) on threader. Firmly hold thread tail with left hand and pull threader lever (C) up into place (D).

(2) Threading the Cover Stitch Middle/Chain Stitch Needle (Green) (D on needle clamp)

- Thread the cover stitch middle/chain stitch needle as indicated 1~9.

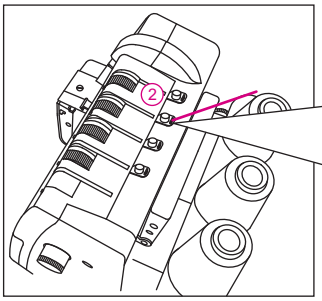


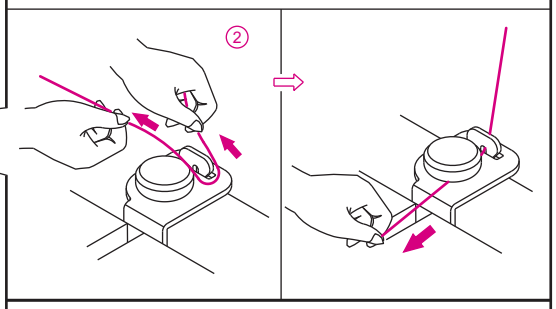
- Raise the Presser Foot to release Tension discs.



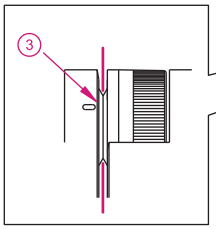
- Pass thread from back to the front through the thread guide 1.

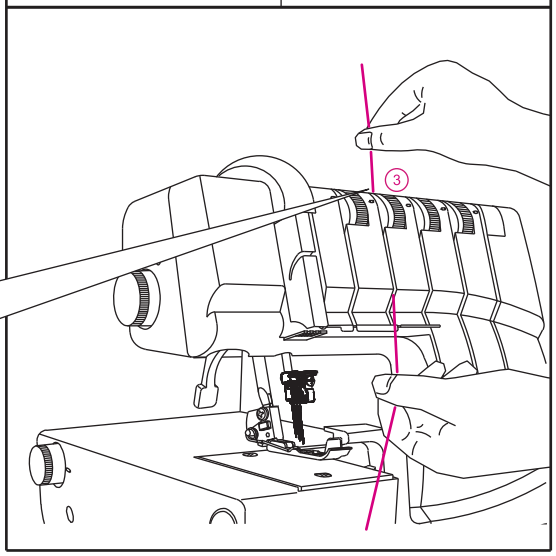
- Thread the top cover thread guide by pulling the thread towards the left until it slips under guide. Then pull thread along the right side of button as illustrated.





- While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.

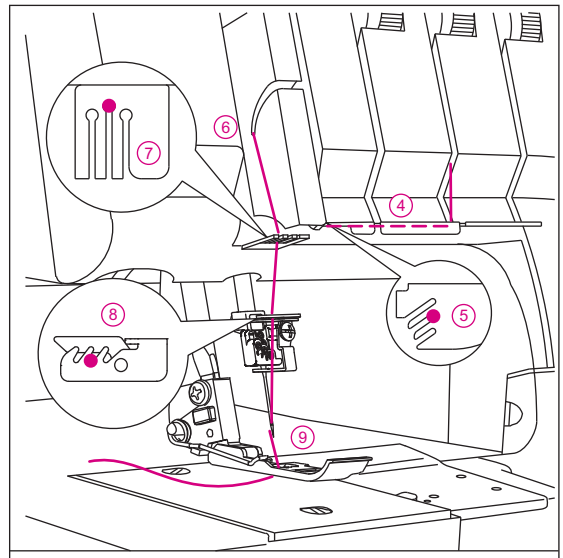




- Continue to thread points 4~8.

  Note: Slip thread into the middle slot of the thread guide 5 and into the slot of take-up lever cover 6. Then continue by slipping thread into the middle slot of the thread guides 7 and 8.

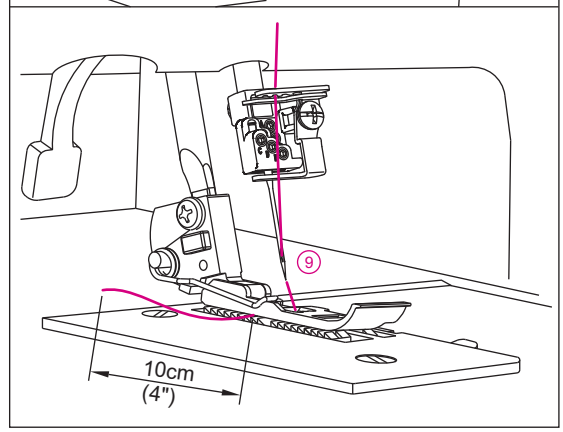
Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of the needle clamp for Cover stitch and for Chain stitch.



- Thread the eye of the right needle 9.

  Note: Use of tweezers in the accessory case will make needle eye threading easy.

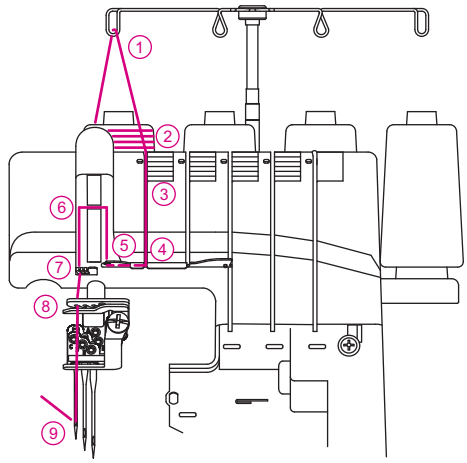
- Draw about 10cm (4 inches) of thread through needle eye towards the rear of the machine.
- Place the thread to the back under the presser foot.



Threading the Cover Stitch Needles

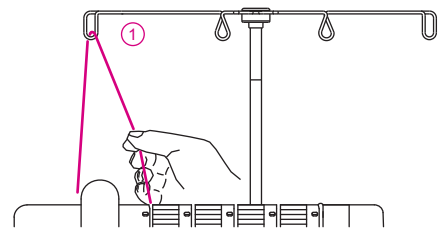
(3) Threading the Cover Stitch Left Needle (Blue) (C on needle clamp)

- Thread the cover stitch left/chain stitch needle as indicated 1~9.

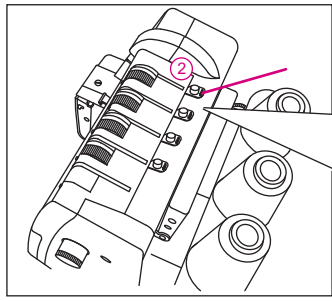


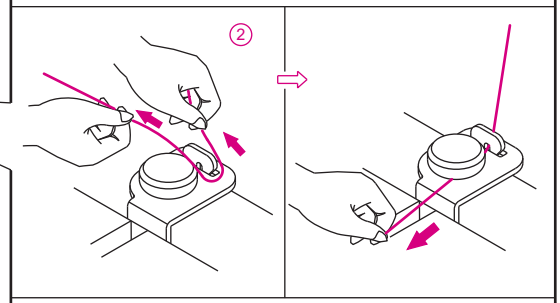
- Raise Presser foot to release Tension discs.

- Pass thread from back to the front through the thread guide 1.

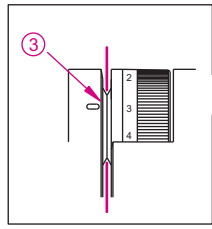


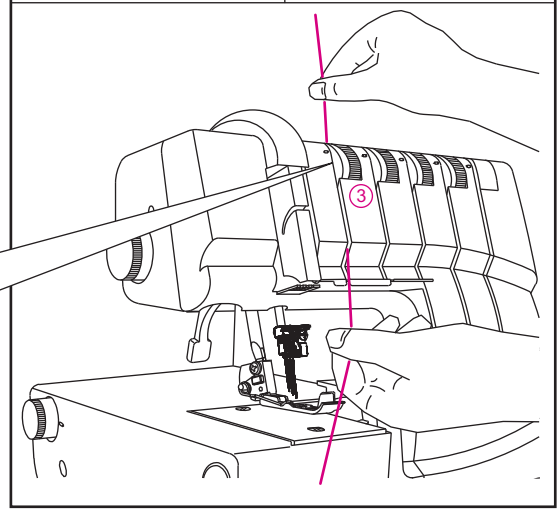
- Thread the top cover thread guide by pulling the thread towards the left until it slips under guide. Then pull thread along the right side of button as illustrated.





- While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.





- Continue to thread points 4~8.

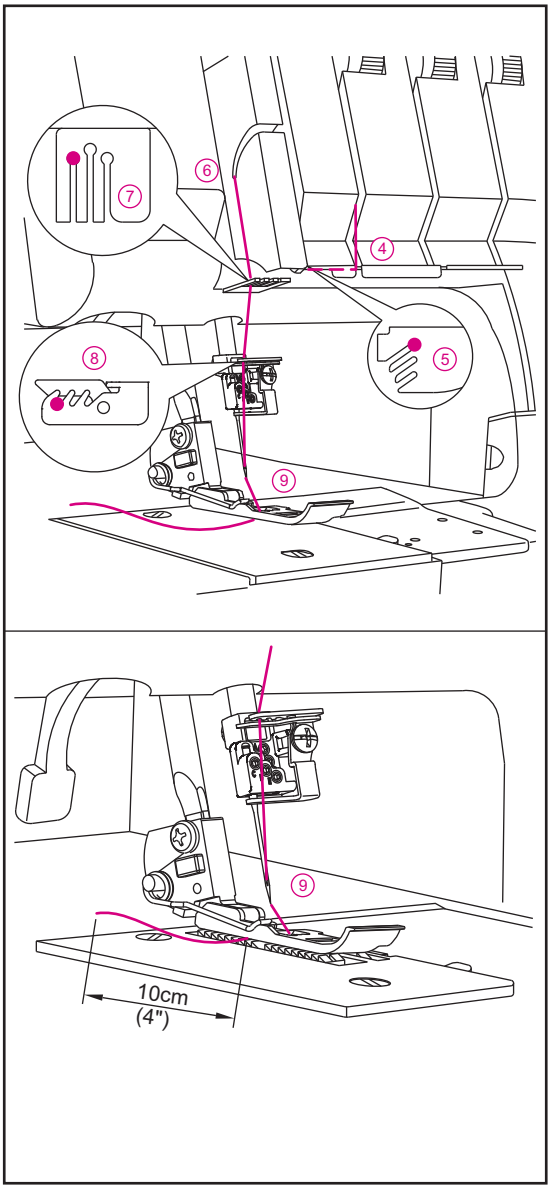
  Note: Slide thread into front slot on thread guide 5 and the slot of take-up lever over 6. Then slip thread into left slots of thread guides 7 and 8.

- Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of the needle clamp.

- Thread the eye of the left needle 9.

  Note: Use of tweezers in the accessory case will make needle eye threading easy.

- Draw about 10cm (4 inches) of thread through needle eye to hang free.
- Place the thread to the back, under the presser foot.



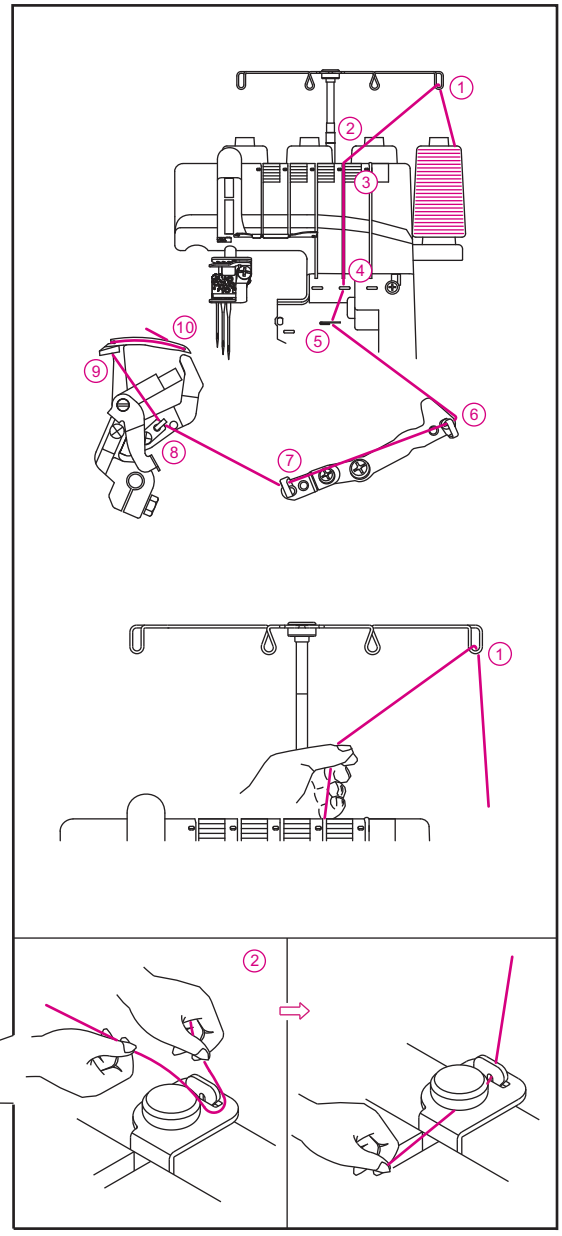
Threading Diagram: Cover Stitch - Two Thread Wide

Tension Color Code: Two Thread Wide Cover

1. Cover Stitch Looper..... Yellow
2. Middle Needle Thread (E) ..... Red
3. Left Needle Thread (C)..... Blue
4. Remover Needle (D)

1) Threading the Chain Stitch/Cover Stitch Looper (Yellow)

- Thread the chain stitch/cover stitch looper as indicated 1~10.

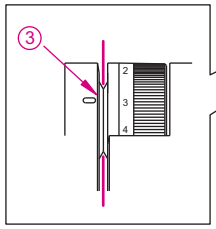


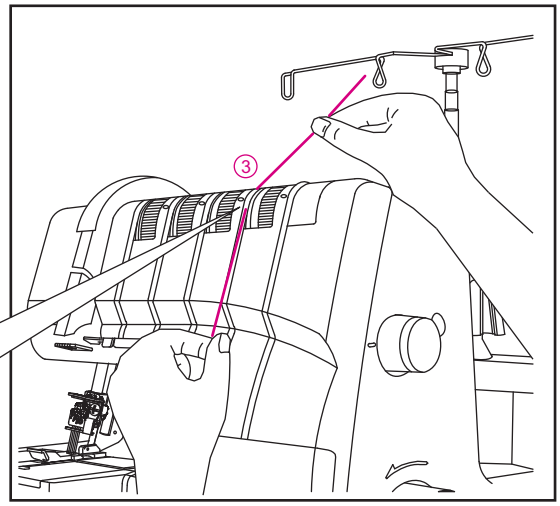
- Raise Presser foot to release Tension discs.

- Pass thread from back to the front through the thread guide 1.

- Thread the top cover thread guide by pulling the thread towards the left until it slips under guide. Then pull thread along the right side of button as illustrated.

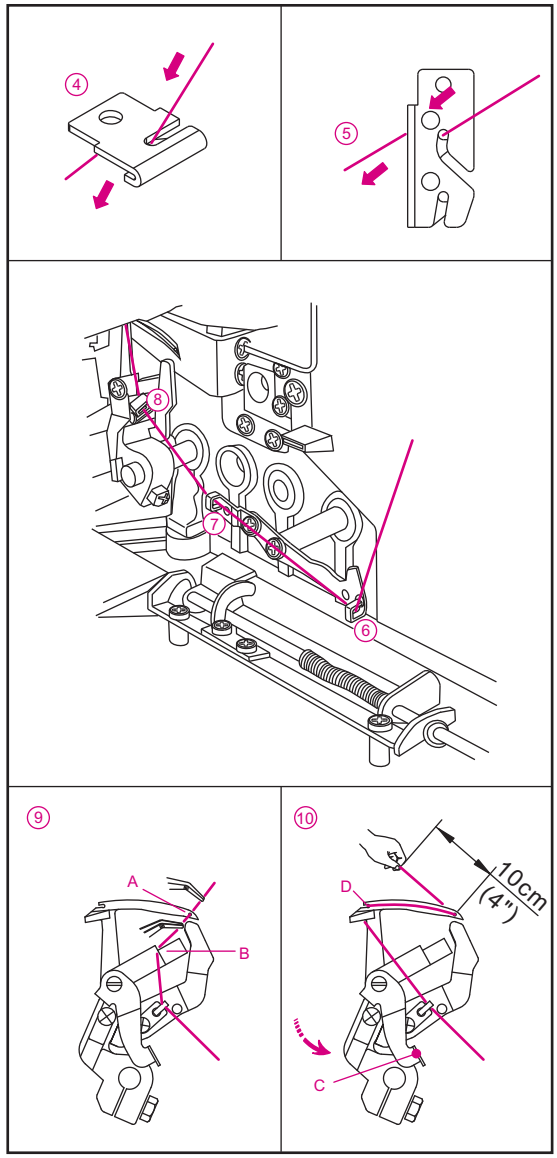
- While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.





- Turn the hand wheel toward you until the chain stitch looper extends out 10mm from the throat plate edge.
- Thread the looper area of the machine following the yellow color-coded thread guides 4~10.

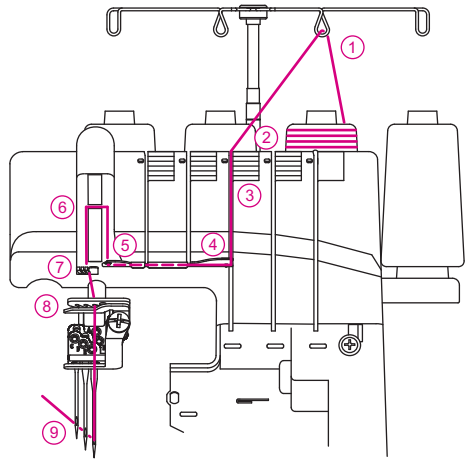
  Note: Use the tweezers provided in the accessory case to aid in threading the looper.
- Place the thread with the point of the tweezers through threading guide 4.
- Place the thread with the point of the tweezers through the front slot of threading guide 5.
- Place the thread with the point of the tweezers through threading guide 6,7 and 8.



- Thread the looper eye (A) from front to back. Pull about 10cm (4 inches) of thread through the looper. Position thread into V cutout (B) on threader. Firmly hold thread tail with left hand and pull threader lever (C) up into place (D).

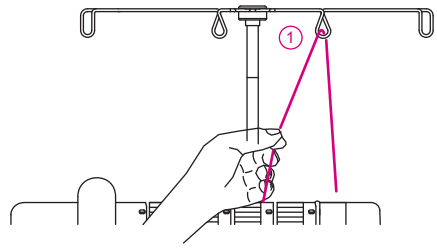
(2) Threading the Cover Stitch Right Needle (Red) (E on needle clamp)

- Thread the cover stitch right needle as indicated 1-9.

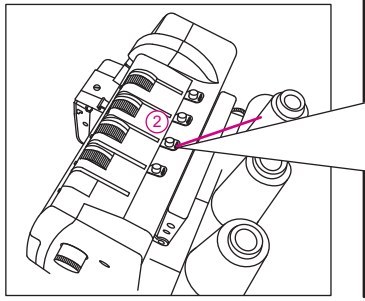


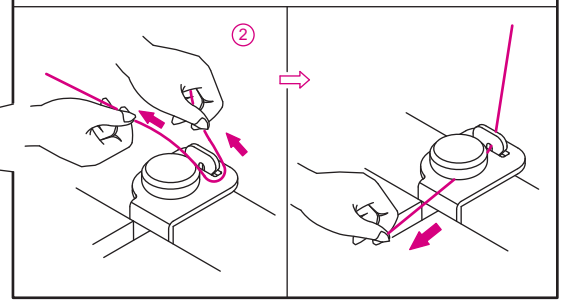
- Raise Presser foot to release Tension discs.

- Pass thread from back to the front through the thread guide 1.

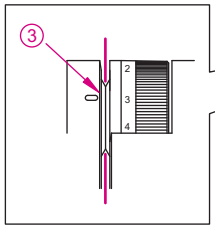


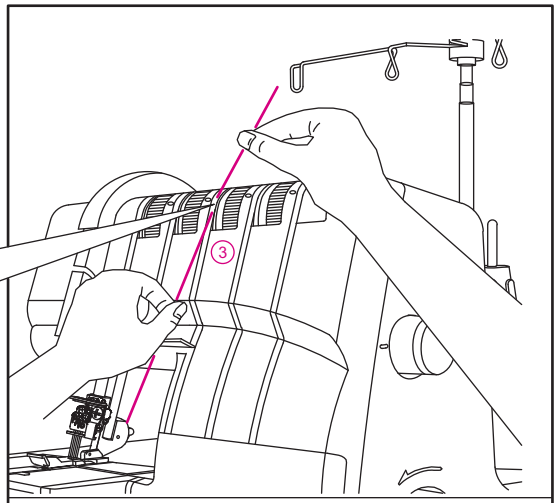
- Thread the top cover thread guide by pulling the thread towards the left until it slips under guide. Then pull thread along the right side of button as illustrated.





- While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.

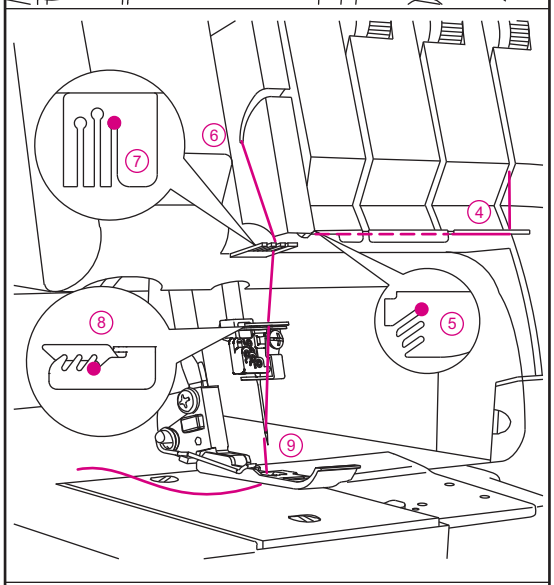




- Continue to thread points 4~8.

  Note: Slip thread into the rear slot on thread guides 5. Slip the thread into the slot of the Take-up Lever Cover 6. Slip the thread into the right slots for thread guides 7 and 8.

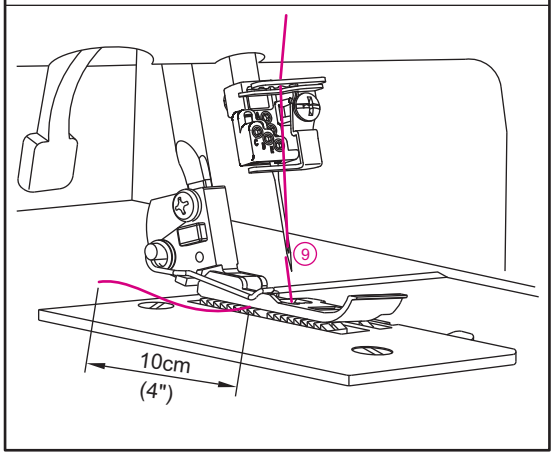
Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of the needle clamp for Cover stitch.



- Thread the eye of the right needle 9.

  Note: Use of tweezers in the accessory case will make needle eye threading easy.

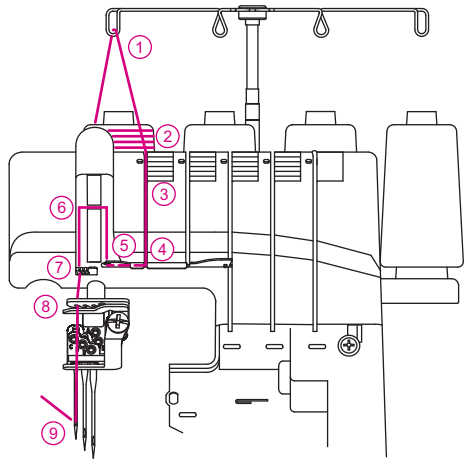
- Draw about 10cm (4 inches) of thread through needle eye towards the rear of the machine.
- Place the thread to the back under the presser foot.



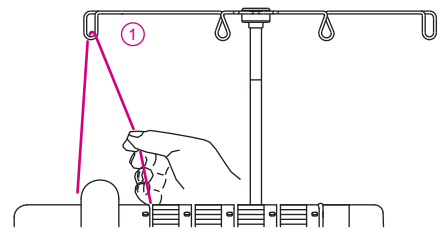
3) Threading the Cover Stitch Needles

(1) Threading the Cover Stitch Left Needle (Blue) (C on needle clamp)

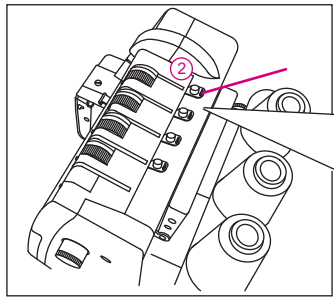
- Thread the cover stitch left/chain stitch needle as indicated 1~9.

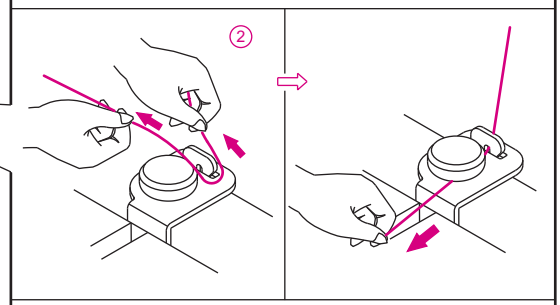


- Raise Presser foot to release Tension discs.



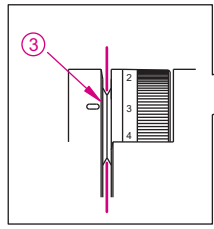
- Pass thread from back to the front through the thread guide 1.

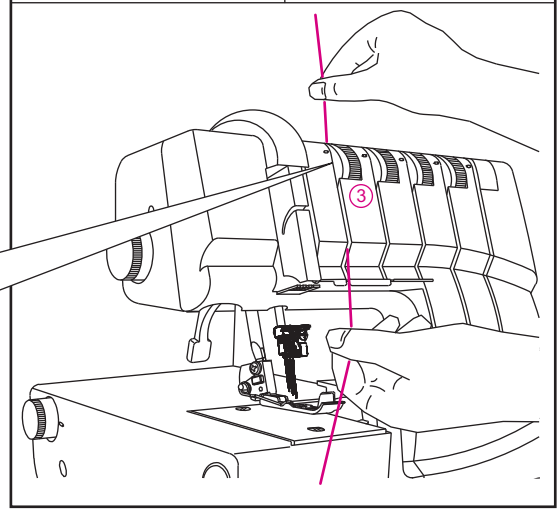




- Thread the top cover thread guide by pulling the thread towards the left until it slips under guide. Then pull thread along the right side of button as illustrated.

- While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.





- Continue to thread points 4~8.

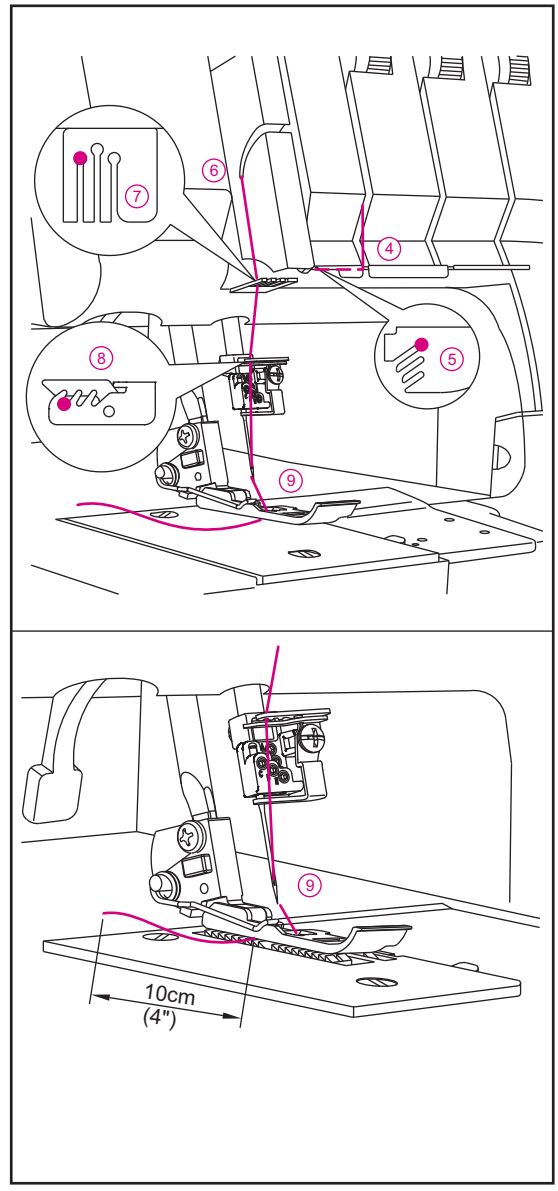
  Note: Slide thread into front slot on thread guide 5 and the slot of take-up lever over 6. Then slip thread into left slots of thread guides 7 and 8.

- Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of the needle clamp.

- Thread the eye of the left needle 9.

  Note: Use of tweezers in the accessory case will make needle eye threading easy.

- Draw about 10cm (4 inches) of thread through needle eye to hang free.
- Place the thread to the back, under the presser foot.



Two-Thread Cover Stitch Suggested Tension Settings

Note: * These are suggested tension settings only.

* Tension settings are effected by;
  1) Type and thickness of fabric
  2) Needle size
  3) Size, type and fiber content of thread

* Stitch length for cover stitch should be set at over N (2.5mm).

Correct Balance

- Set each tension dial to settings shown at right and test sew on a sample of your fabric.

How to Balance

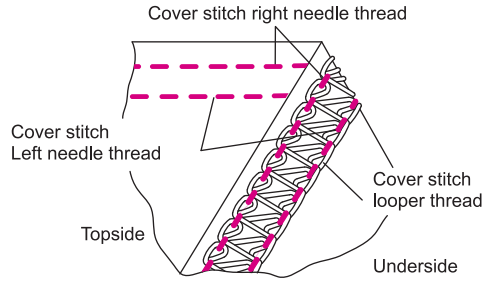
- When the cover stitch looper thread is too loose;
  -Turn the cover stitch looper thread tension dial (yellow) toward a higher number.

- When the cover stitch left needle thread tension is too loose;
  -Turn the cover stitch left needle thread tension dial (blue) toward a higher number.
  -Or, turn cover stitch looper thread tension dial (yellow) toward a lower number.

- When the cover stitch right needle thread tension is too loose;
  -Turn the cover stitch right needle thread tension dial (green) or (blue) toward a higher number.
  - Or, turn the cover stitch looper thread tension dial (yellow) toward a lower number.

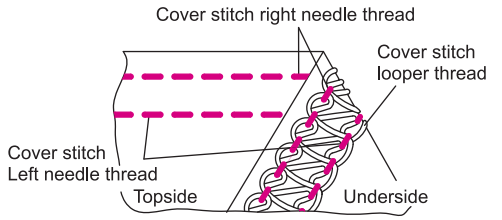
- When the top surface of fabric bulges between needle threads and the seams on the underside of the fabric becomes tight;
  - Turn the cover stitch looper thread tension dial (yellow) toward a lower number.

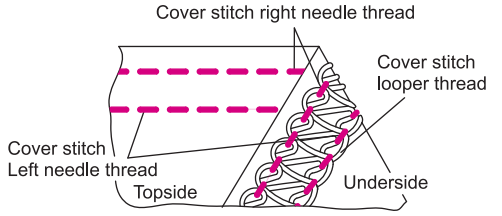
NEEDLE POSITION		
STITCH LENGTH	N~4	

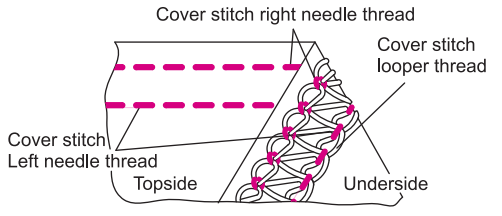


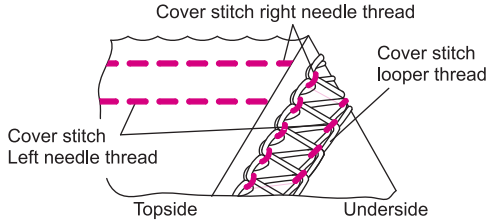
Cover stitch looper Thread	Tension Dial			
	Blue	Green	Red	Yellow
Polyester	6.0	7.0		5.0
Woolly nylon	6.0	7.0		0

Cover stitch looper Thread	Tension Dial			
	Blue	Green	Red	Yellow
Polyester	6.0		7.0	4.0
Woolly nylon	6.0		7.0	0



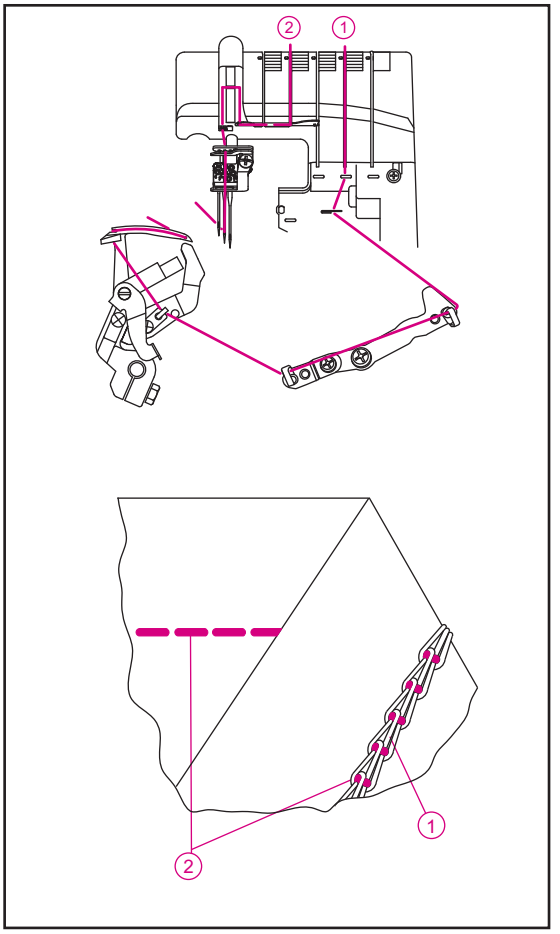






Threading Diagram: Chain Stitch

- A color coded threading diagram is located inside the looper cover for quick reference.
- Remove Left (C) and Right (E) Needle
- Thread the machine in the order 1 to 2 as shown at right.

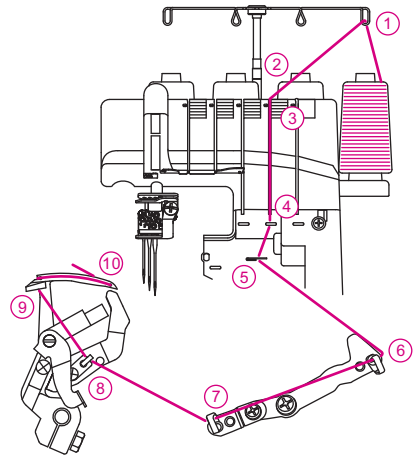


Tension Color Code: Chain Stitch

1. Chain stitch looper thread ..... Yellow
2. Chain stitch needle thread (D)... Green

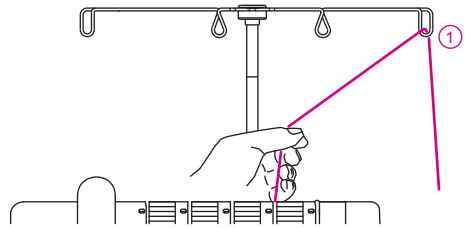
1) Threading the Chain Stitch/Cover Stitch Looper (Yellow)

- Thread the chain stitch/cover stitch looper as indicated 1~10.

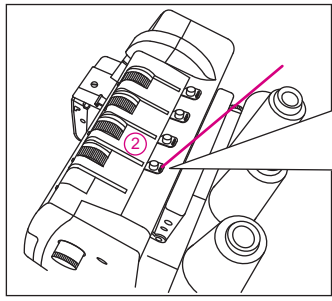


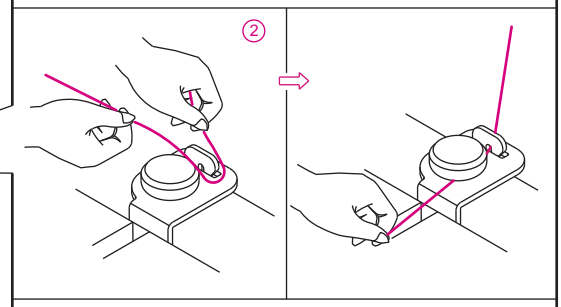
- Raise Presser foot to release Tension discs.

- Pass thread from back to the front through the thread guide 1.

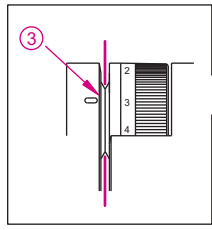


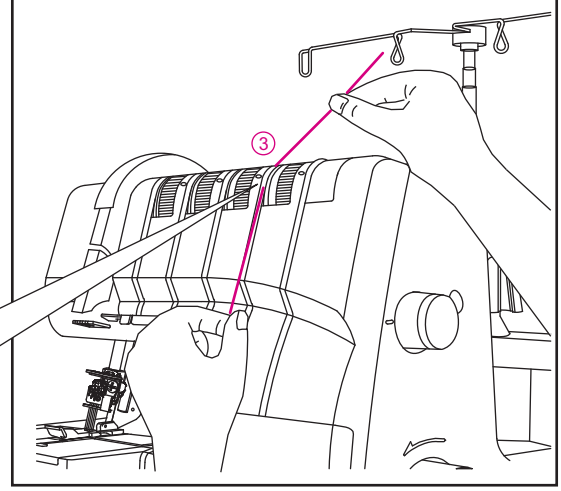
- Thread the top cover thread guide by pullin the thread towards the left until it slips under guide. Then pull threa along the right side of button as illustrated.





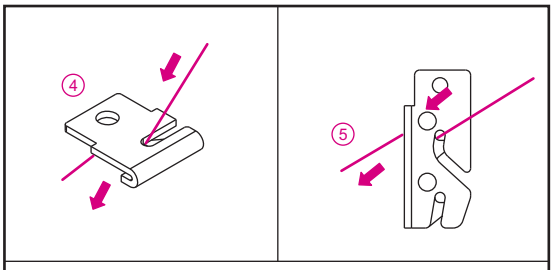
- While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.

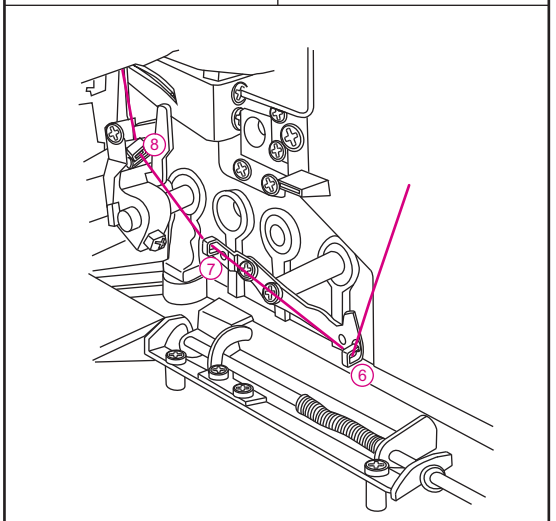




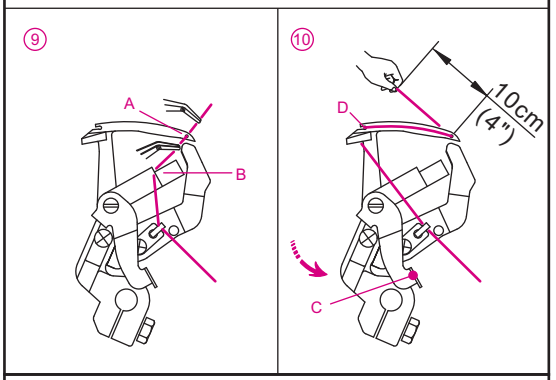
- Turn the hand wheel toward you until the chain stitch looper extends out 10mm from the throat plate edge.
- Thread the looper area of the machine following the yellow color-coded thread guides 4~10.

  Note: Use the tweezers provided in the accessory case to aid in threading the looper.
- Place the thread with the point of the tweezers through threading guide 4.
- Place the thread with the point of the tweezers through the front slot of threading guide 5.
- Place the thread with the point of the tweezers through threading guide 6,7 and 8.



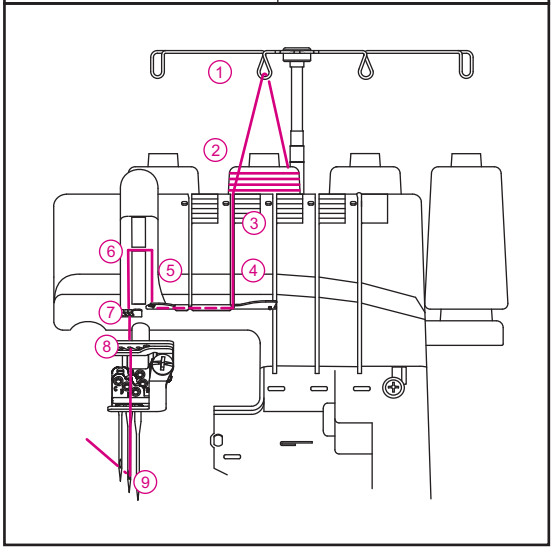


- Thread the looper eye (A) from front to back. Pull about 10cm (4 inches) of thread through the looper. Position thread into V cutout (B) on threader. Firmly hold thread tail with left hand and pull threader lever (C) up into place (D).

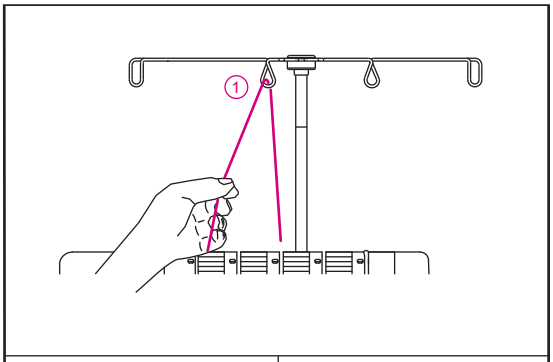


(2) Threading the Cover Stitch Middle/Chain Stitch Needle (Green) (D on needle clamp)

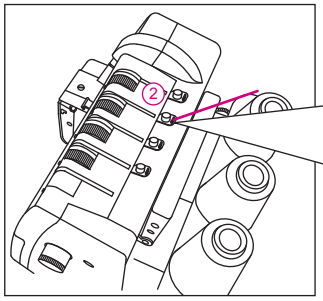
- Thread the cover stitch middle/chain stitch needle as indicated 1~9.
- Raise the Presser Foot to release Tension discs.
- Pass thread from back to the front through the thread guide 1.

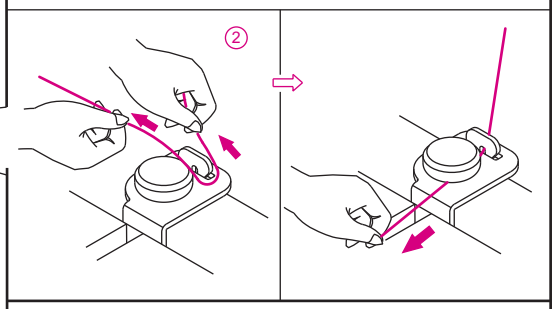


- Pass thread from back to the front through the thread guide 1.

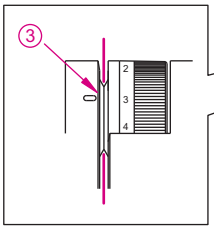


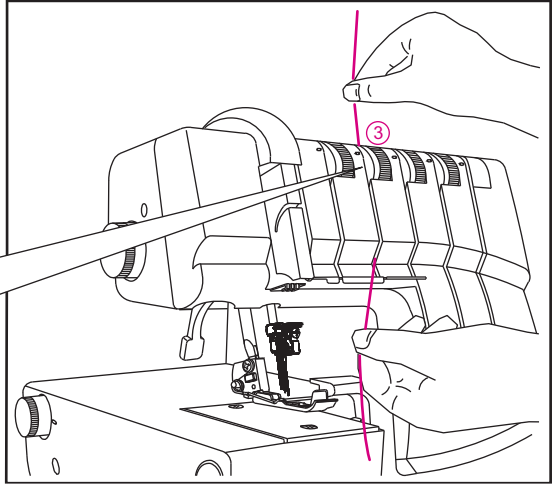
- Thread the top cover thread guide by pulling the thread towards the left until it slips under guide. Then pull thread along the right side of button as illustrated.





- While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.

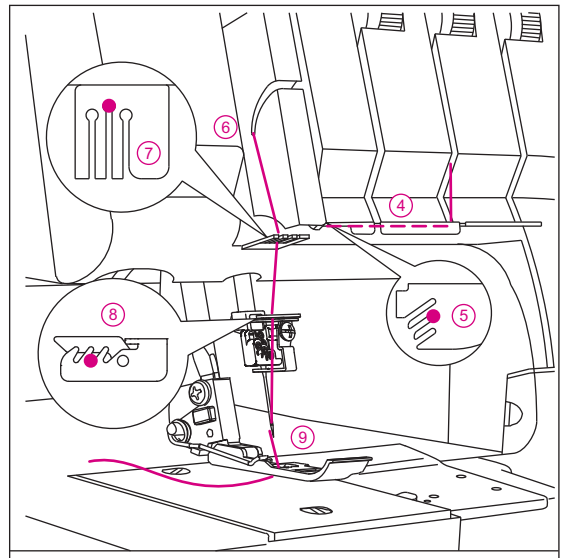




- Continue to thread points 4~8.

  Note: Slip thread into the middle slot of the thread guide 5 and into the slot of take-up lever cover 6. Then continue by slipping thread into the middle slot of the thread guides 7 and 8.

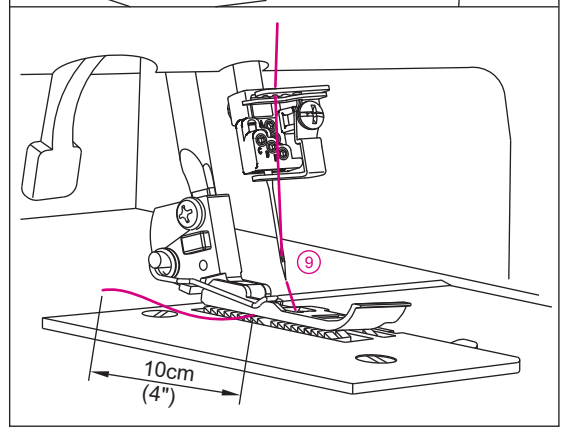
Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of the needle clamp for Cover stitch and for Chain stitch.



- Thread the eye of the right needle 9.

  Note: Use of tweezers in the accessory case will make needle eye threading easy.

- Draw about 10cm (4 inches) of thread through needle eye towards the rear of the machine.
- Place the thread to the back under the presser foot.



Double Chain Stitch Suggested Tension Settings

Note: * These are suggested tension settings only.

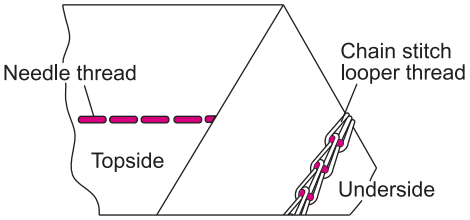
* Tension settings are effected by;
  1) Type and thickness of fabric
  2) Needle size
  3) Size, type and fiber content of thread

* Stitch length for double chain stitch should be set at over 2mm.

NEEDLE POSITION	
STITCH LENGTH	2 ~ 4

Correct Balance

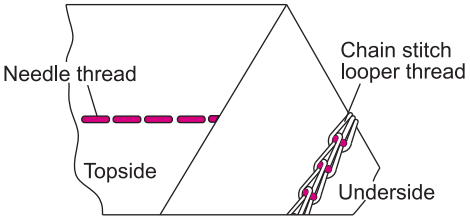
- Set each tension dial to settings shown at right and test sew on a sample of your fabric.



Fabric	Tension Dial			
	Blue	Green	Red	Yellow
Medium weight		7.0		7.5

How to Balance

- When the chain stitch needle thread tension is too loose;
  -Turn the needle thread tension dial (green) toward a higher number.
  -Or, turn the chain stitch looper thread tension dial (yellow) toward a lower number.

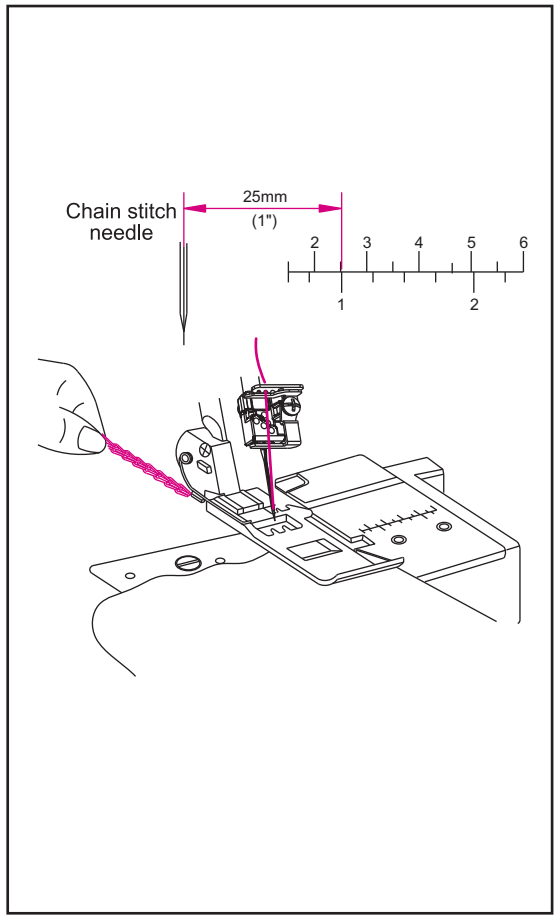


How to Sew

The double chain stitch is sewn with 2 threads, one needle and one looper.

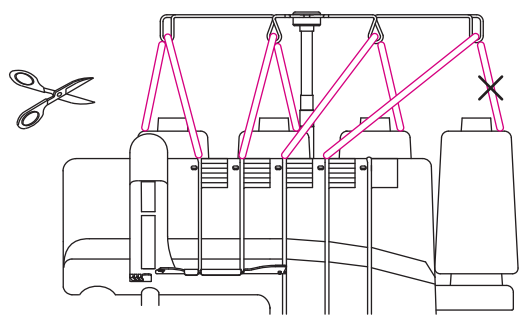
Start and end of sewing

- When starting to sew, pull the thread chain lightly to the rear of machine until the needle penetrates the fabric.
- When starting to sew after threading the machine, sew 2 ~ 3 cm on a scrap fabric and chain-off to make a chain.
- At end of sewing, pull the fabric lightly to the rear of machine and chain-off.

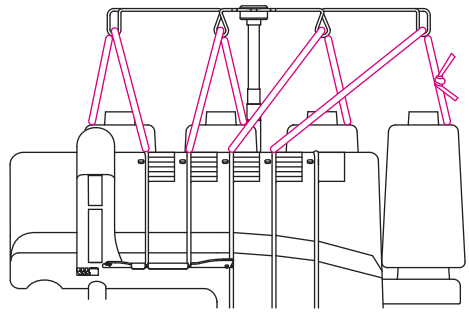


13. HOW TO CHANGE THREADS: TIE ON METHOD

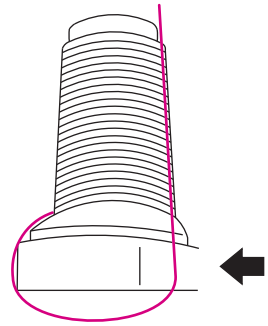
- To change thread type or color, clip thread near the spool.



- Place new thread on stand.
- Tie new thread and old thread ends together with a square knot. Clip thread tails to 2~3cm (1 inch) length. If clipped too short, threads may come untied.
- Firmly pull both thread to test knot security.



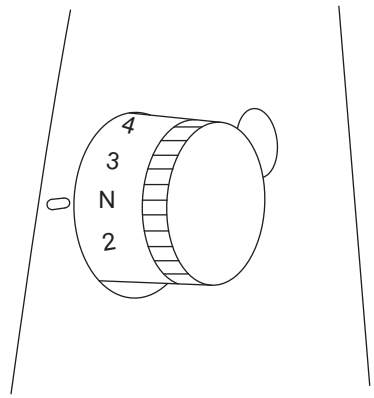
- Raise Presser foot to release Tension discs.



- Pull the threads through the machine one at a time.
- If threads do not pull easily, check for tangles on thread guides or looping under thread stand.
- When pulling thread through the needles, STOP when the knot is in front of the needle.
- Cut the thread, and insert it through the needle.

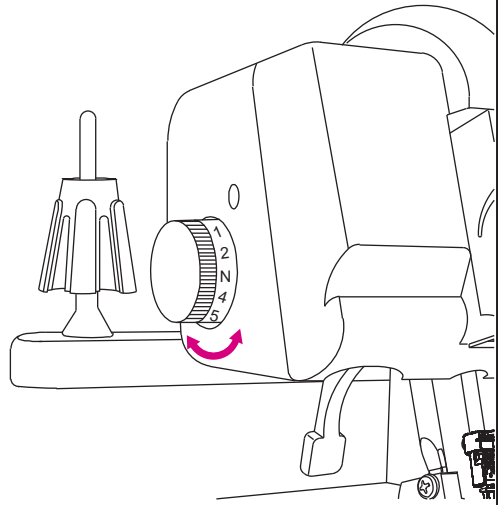
14. HOW TO ADJUST THE STITCH LENGTH

- The stitch length dial should be set on the N setting for most sewing conditions.
- Adjust the stitch length to N~ 4 when sewing heavy weight fabrics.
- Adjust the stitch length to 2~N when sewing lightweight fabrics to obtain excellent seams without puckering.



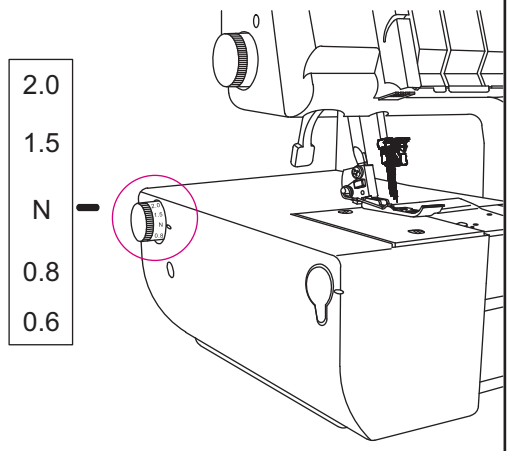
15. HOW TO ADJUST THE PRESSER FOOT PRESSURE

- The presser foot pressure of this machine is pre-adjusted at the factory to suit the sewing of medium weight fabrics.
- Most of the materials do not require adjustment of presser foot pressure. However, there are some instances where adjustment is necessary, such as when sewing lightweight and heavyweight fabrics.
- In such case, N for normal, 1 for the lightest pressure, and 5 for the heaviest.
- For lightweight fabric...Decrease the pressure
- For heavyweight fabric...Increase the pressure



16. DIFFERENTIAL FEED

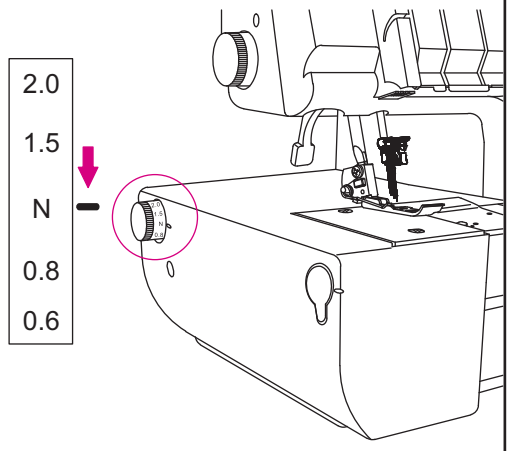
- Differential feed is a system which “stretches” or “gathers” the fabric, when the amount of feed of front feed dogs in relation to the rear feed dogs is changed.
- The differential feed ratio ranges from 1:0.6~1:2.0. Adjustment is made by means of the differential feed adjusting dial pictured at right.
- Use of differential feed is very effective in stretch fabrics.
- Setting “N” is differential feed adjusting dial setting for ratio 1:1.



To set the differential feed adjusting dial for gathering

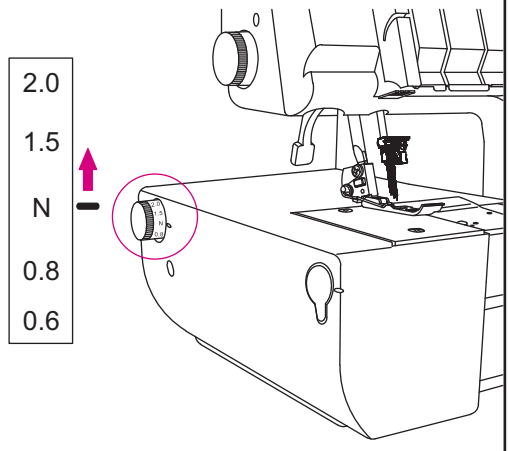
- Set differential feed adjusting dial above setting “N”. Setting of adjusting dial depends on material being sewn as well as the amount of desired gather. Therefore set dial to suit the fabric and test sew before sewing your garment.

  Note: For normal stitching, set differential feed adjusting dial to graduation “N”.



To set the differential feed adjusting dial for stretch

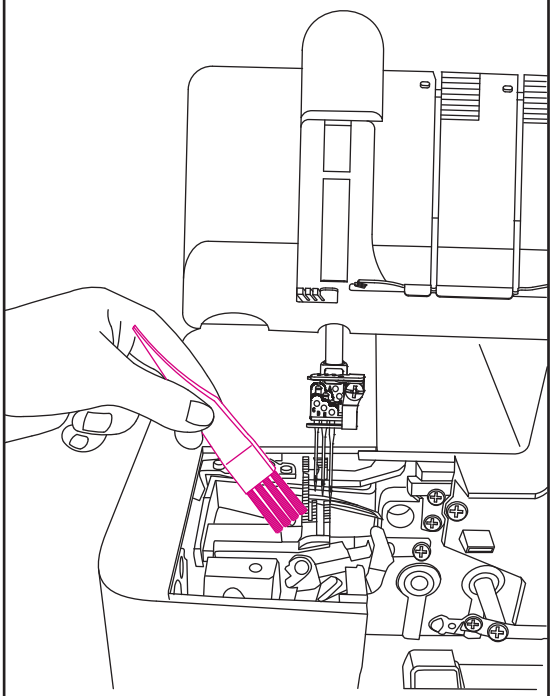
- Set differential feed adjusting lever knob below setting “N”.



Cleaning the Machine

Danger:
Before cleaning your machine, disconnect power line plug from the wall receptacle.

- Clean the lint from the looper area often with a dry lint brush.

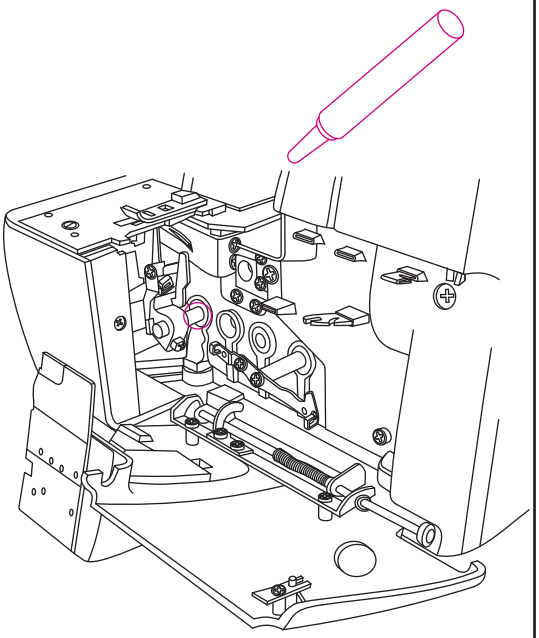


Oiling the Machine

Danger:
Before cleaning your machine, disconnect power line plug from the wall receptacle.

- The oiling points shown in the diagram, should be oiled periodically.

Note: Use only sewing machine oil. Do not use any other oil or damage could result.



How to Exchange Light Bulb

Danger:
Always unplug before re-lamping.

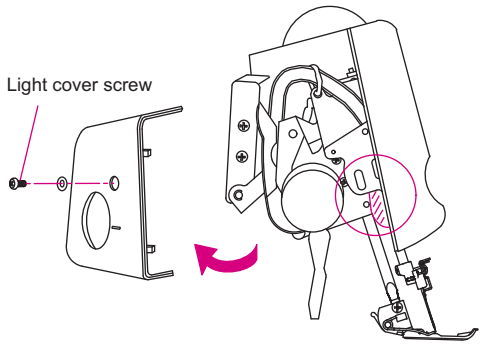
- Light bulb is available at your dealer shop. Take old bulb to the dealer shop and ask for same bulb.
- If voltage indicated on the electrical rating plate of your machine is 120V, ask for light bulb conforming to following specification.

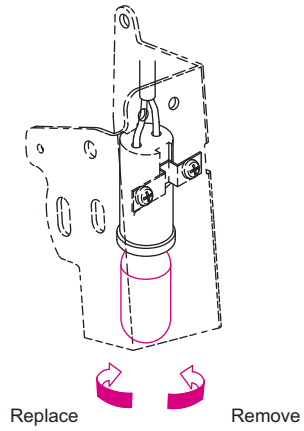
- Bayonet type: 110~120V, 15W
  • Glass shape: T-20
  • Lamp cap: E12
  • Overall length: 48mm

- Remove light cover screw and while pushing the cover lightly to the rear, swing cover to the left and remove from machine as shown in the illustration. Turn bulb to the left to remove. To replace the bulb, push bulb into the socket and turn to the right.

Caution:
Be sure the light bulb has cooled off before changing with a new one.

Warning:
Replace the light cover first before connecting the power line plug.

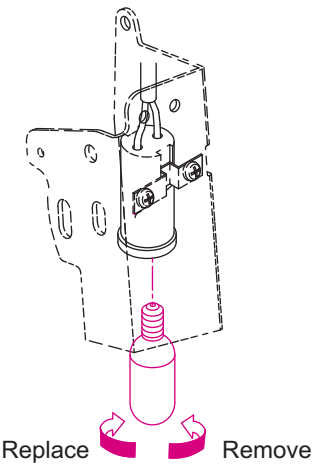




- If voltage indicated on the electrical rating plate of your machine is 220-240V, ask for light bulb conforming to following specification.

- Edison type (screw type): 220~240V, 15W
  • Glass shape: T-22
  • Lamp cap: E14
  • Overall length: 56mm

- Remove light cover screw and while pushing the cover lightly to the rear, swing cover to the left and remove from machine as shown in the illustration. Turn bulb to the left to remove. To replace the bulb, screw bulb into the socket and turn to the right.



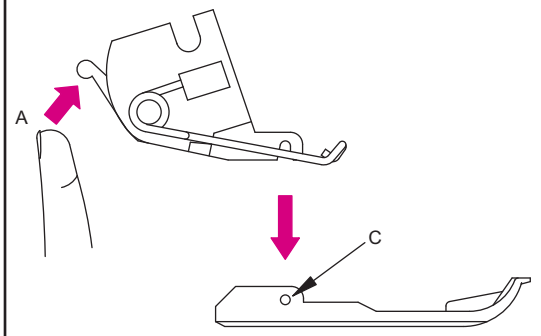
18. SNAP-ON TYPE PRESSER FOOT

- The following snap-on type presser foot specially prepared for this machine are available at extra-charge.

  Note: Do not use presser foot made for other machines. Use of such presser foot may result in interference with the needle and can be hazardous.

- The snap-on type presser foot of this machine permits easy removal and replacement.

Caution:
Be sure to disconnect the power line plug or turn off the power switch when changing the presser foot.

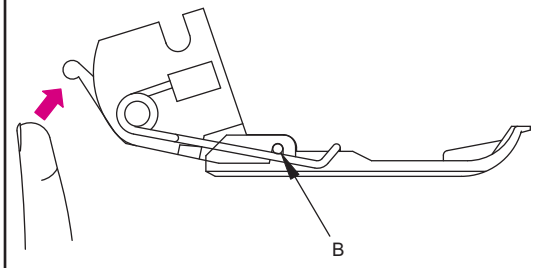


Removal

- Raise presser foot and raise needle bar to its highest position.
- Press red colored lever (A) located on back of clamp under the presser foot shank, raise presser bar lifter to its High Lift position and while holding the presser bar lifter in this position, remove the presser foot plate.

Replacement

- Place presser foot plate on throat plate under presser foot shank so that hinge pin (C) will fit in slot (B) of the shank. Then lower presser bar lifter.
- If presser foot plate can not be placed under presser foot shank easily, raise presser bar lifter to its High Lift position and while holding it in this position, place presser foot plate under presser foot shank. Then lower presser bar lifter.
- Raise presser bar lifter and make sure the presser foot plate is properly attached to the presser foot shank.



19. TROUBLESHOOTING CHART

Problem	Solution	Page
Fabric does not feed well	- Lengthen stitch length. - Increase presser foot pressure for heavy weight fabric. - Decrease presser foot pressure for lightweight fabric.	47 47 47
Needle breaks	- Insert needle correctly. - Tighten needle set screw. - Use a larger needle on heavy fabrics.	11 11 11
Thread breaks	- Check threading. - Cheek for tangled or caught thread. - Insert needle correctly. - Insert new needle, current needle may be bent or have a blunt point. - Use only high quality thread. - Loosen thread tension.	16-45 46 11 7 34 12, 25, 38, 44
Stitch skip	- Insert new needles, current needles may be bent or have a blunt point. Use only Branded Style SINGER 2022 Needles. - Tighten needle set screw. - Insert needles correctly. - Change type or size of needles. - Check threading. - Increase presser foot pressure. - Use a high quality thread.	7 11 11 11 16-45 21 53
Irregular stitches	- Balance thread tension. - Check for tangled or caught thread. - Check threading.	12, 25, 38, 44 20 16-45
Fabric puckers	- Loosen thread tension. - Check for tangled or caught thread. - Use high quality lightweight thread. - Shorten stitch length. - Decease presser foot pressure for lightweight fabrics.	12, 25, 38, 44 46 53 21 21
Fabric jams	- Close looper cover before sewing. - Check for tangled or caught thread. - Compress thick layers of fabric with conventional machine before sewing.	8 46
Machine does not operate	- Connect machine to power source.	8

20. RELATIONSHIP BETWEEN CLOTH, THREAD AND NEEDLE

Type of Fabric	Type of Thread	Needle SINGER 2022
WOVEN		
Lightweight Lawn, Organdy, Voile, Crepe, etc.	Cotton: #100 Silk/ Rayon: #100 Spun: #80 ~ #90 Polyester: #80 ~ #100	#11/80
Medium Weight Muslin, Seersucker, Satin, Gabardine, Broadcloth, etc	Cotton: #60 ~ #80 Silk/ Rayon: #50 Spun: #60 ~ #80 Polyester: #60 ~ #80	#14/90, #11/80
Heavy Weight Oxford, Denim, Tweed, Serge,Corduroy	Cotton: #40 ~ #60 Silk/ Rayon: #40 ~ #60 Spun: #60 ~ #80 Polyester: #50 ~ #80	#14/90
KNIT		
Tricot	Spun: #80 ~ #90 Polyester: #60 ~ #80	#11/80
Jersey	Spun: #60 ~ #80 Polyester: #60 ~ #80 Cotton: #60 ~ #80	#14/90, #11/80
Wool (woven, knit)	Spun: #60 ~ #80 Polyester: #50 ~ #60 Woolly nylon Woolly Polyester	#14/90, #11/80

21. SPECIFICATION

Item	Specification
Sewing speed	1,300 spm maximum
Differential feed ratio	1:0.6 ~ 1:2 (with differential feed machine)
Cover stitch needle gauge	Two needles: 2.8mm (narrow), 5.6mm (wide) Triple needles: 5.6mm
Needle bar stroke	27mm
Pressure foot rise	4.5mm
Needle	SINGER 2022 #90
Number of threads	2~4
Machine dimensions (mm)	
Width	360
Depth	290
Height	300
Weight (kg)	7.3kgs

RECYCLING

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

When replacing old appliances with new one, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.