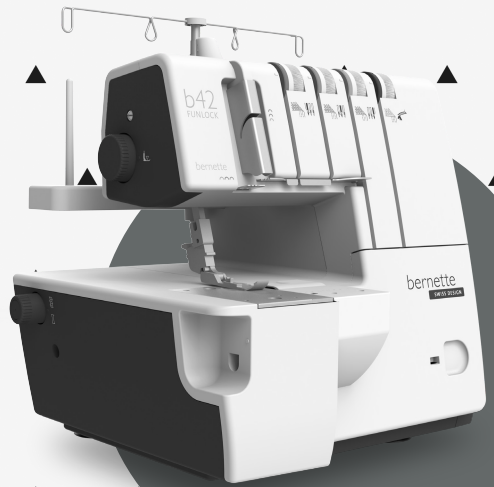




b42  
FUNLOCK



Instruction Manual

bernette

SWISS DESIGN



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# IMPORTANT

Precautions should always be followed, including the following:

Read all the instructions before using this machine.

**In general when the machine is not in use, it should be disconnected from the electricity supply.**

## DANGER!

As a protection against electrical shock:

1. The machine should never be left unattended when plugged in.
2. Always unplug this machine from the electrical outlet after using and before cleaning.
3. LED Radiation. Do not view directly with optical instruments. Class 1M LED product.

## WARNING!

As a protection against burns, fire, electric shock or injury to persons:

1. Use this machine only for purposes as described in this manual. Use only attachments, accessories and parts recommended by the manufacturer.
2. Do not allow this machine to be used as a toy. Close attention is necessary when this machine is used by or near children. The machine is not intended for use by persons (and children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge. Unless they have been given supervision or instruction concerning use of the machine by a person responsible for their safety. To ensure children do not play with

the machine they must be supervised.

Never operate this machine if:

- the cord or the plug are damaged,
  - it is not working properly,
  - it has been dropped or damaged,
  - it has fallen into water.
3. Return the machine to your local authorized BERNINA dealer for examination or repair.
  4. Never operate the machine with any air openings blocked. Keep ventilation openings of the machine free from the accumulation of lint, dust and loose cloth.
  5. Keep fingers away from all moving parts. Special care is required around the sewing needle and the knife.
  6. Never insert any objects into any openings on the machine.
  7. Do not use the machine outdoors.
  8. Do not operate the machine where aerosol products (sprays) or oxygen are being used.
  9. Do not pull or push the fabric while stitching. This can result in needle breakage.
  10. Switch the machine off «0» when making any adjustments in the needle area, such as threading the needle, changing the needle, threading the looper, or changing the presser foot.
  11. Always unplug the machine from the electrical outlet when removing covers, when covers are opened to raise the knife or thread the loopers, when lubricating or when making any other user servicing adjustments mentioned in the instruction manual.
  12. Do not use bent needles.


13. Always use the original BERNINA stitch plate. The wrong stitch plate can cause needle breakage.
14. This machine is provided with double insulation (except for USA and Canada). Use only original spare parts. See instructions for servicing of double-insulated products.
15. Use only foot controller provided with this machine. (Type 4C-316B for USA & CANADA only).

## All rights reserved

For technical and product improvement reasons, the machine's features, parts and accessory are subject to unannounced changes and alterations at any time. The accessory included can differ from country to country.

## SERVICING OF DOUBLE-INSULATED PRODUCTS

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 be done only by qualified service personnel. Replacement parts for a double-insulated product must be identical to the original parts in the product. A double-insulated product is marked with the words: «Double insulation» or «Double insulated».

The symbol  may also mark such a product.



### CAUTION:

This machine is intended for household use only. If used intensively or commercially, regular cleaning and especially attentive care is required.

Signs of wear and tear owing to intensive or commercial use are not covered automatically, even if they occur within the warranty period. The decision on how to deal with any such cases rests with the local authorised servicing staff.

### PLEASE NOTE:

If the machine is stored in a cold room, it should be brought to a warm room about one hour before use.

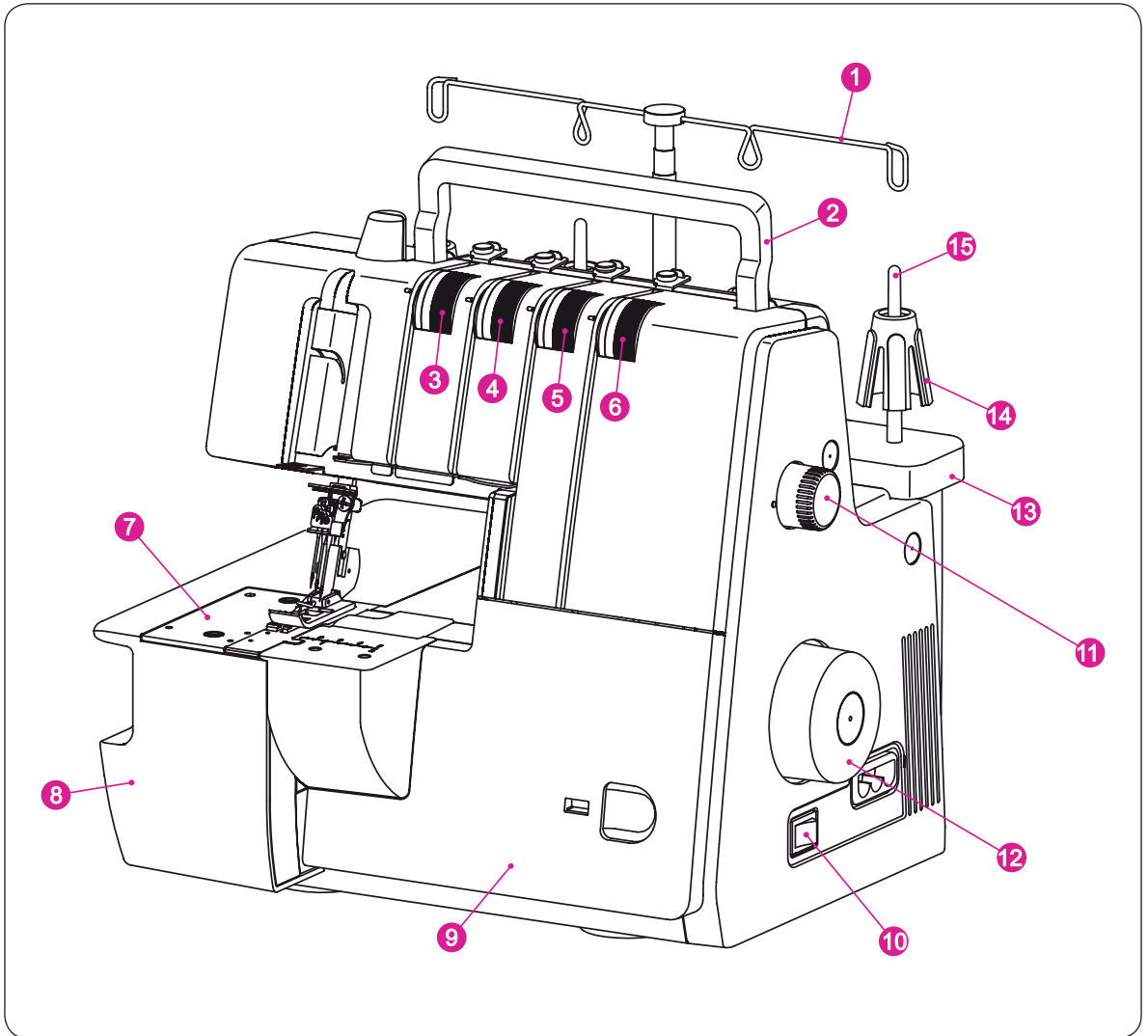
## SAVE THESE INSTRUCTIONS!

Europe only: This appliance may only be used by children over eight and by persons with reduced physical, sensory or mental capabilities or by persons who lack experience and knowledge of how to operate the machine under supervision, after instruction on how to use the equipment safely and once they have understood the potential dangers. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Outside of Europe (except for the USA and Canada): This appliance may only be used by persons (including children) with reduced physical, sensory or mental capabilities or by persons who lack experience and knowledge of how to operate the machine under supervision and after instruction on how to use the equipment safely by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

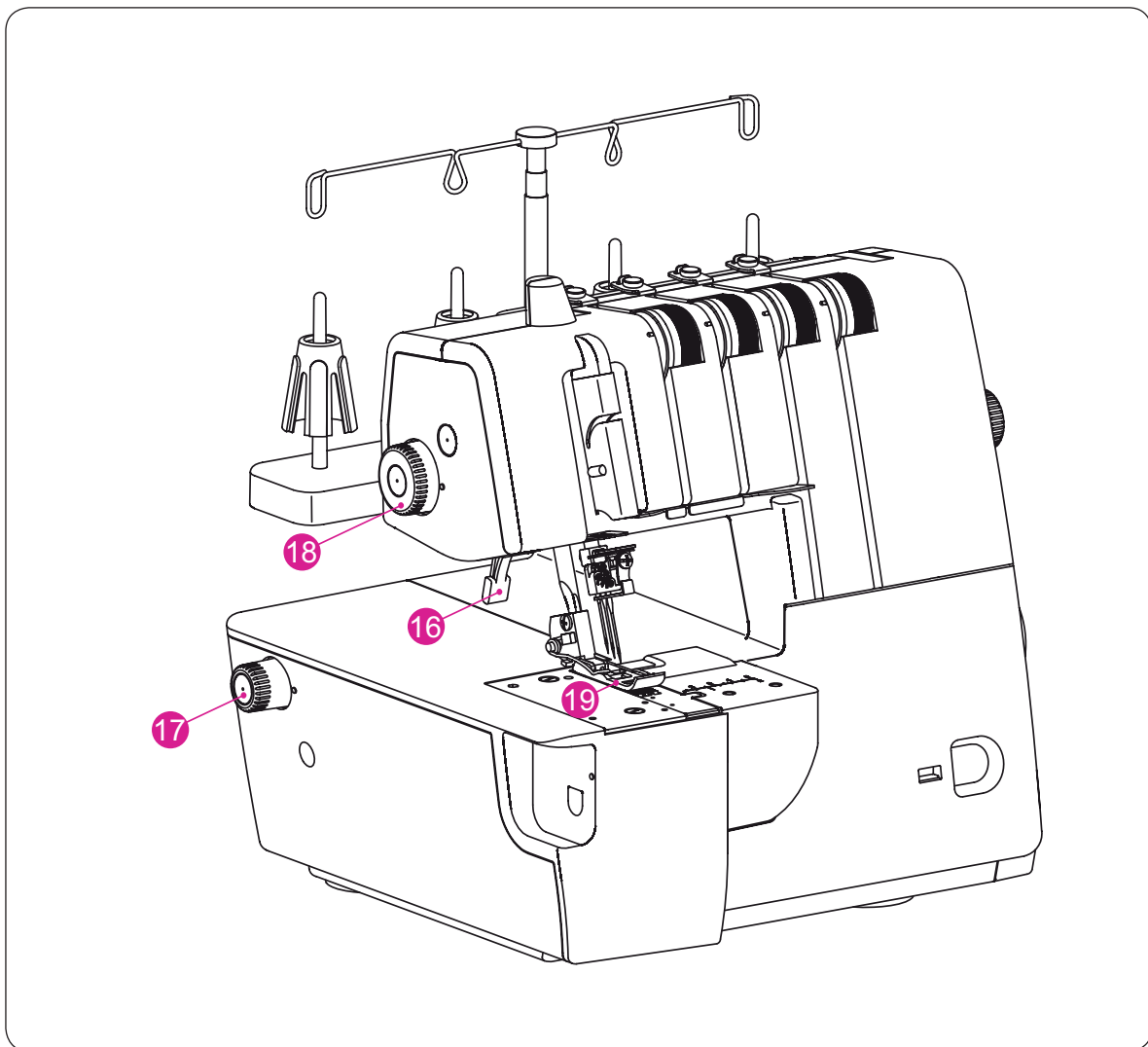
# NAME OF PARTS

## Details of machine

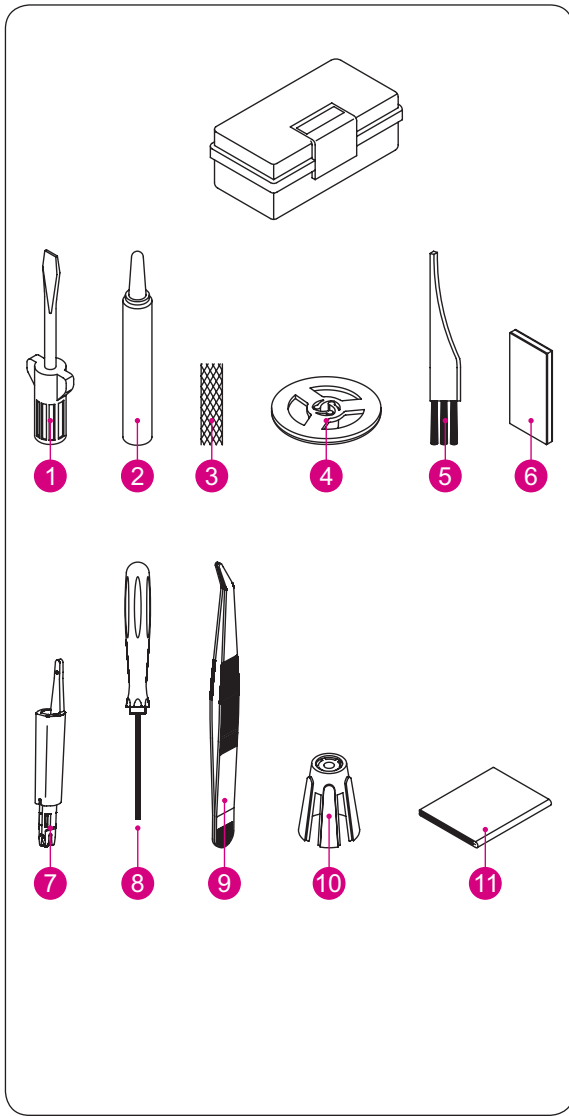


- ① Retractable thread stand
- ② Carrying handle
- ③ Cover left needle thread tension dial (yellow)
- ④ Cover center needle thread tension dial (green)
- ⑤ Cover right needle thread tension dial (blue)
- ⑥ Chain stitch looper thread tension dial (violet)
- ⑦ Stitch plate
- ⑧ Sewing table

- ⑨ Looper cover
- ⑩ Power / Light switch
- ⑪ Stitch length dial
- ⑫ Handwheel
- ⑬ Thread stand
- ⑭ Spool stabilizer
- ⑮ Spool pin



- ①⑥ Presser foot lifter
- ①⑦ Differential feed dial
- ①⑧ Presser foot pressure wheel
- ①⑨ Standard presser foot Coverstitch



## ACCESSORIES

### Standard

- ① Screw driver (large size)
- ② Oiler
- ③ Spool net (4x)
- ④ Spool cap (4x)
- ⑤ Brush
- ⑥ Needle set (ELx705)\*
- ⑦ Needle Threader / inserter
- ⑧ Allen screw driver (small)
- ⑨ Tweezers
- ⑩ Spool stabilizer (4x)
- ⑪ Dust cover

### Needle Information

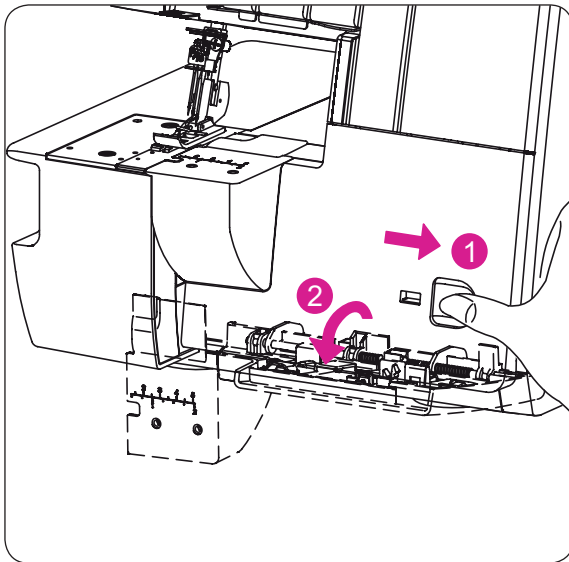
This overlock uses a flat shank industrial needle (ELx705).

**Do not attempt to use a standard household sewing machine needle of any size or type in this overlock.**

Needle ELx705 size 80/12 is furnished with the machine.

**Only use needles of system ELx705 sizes 70/10 - 90/14.**





## HOW TO OPEN LOOPER COVER



### CAUTION:

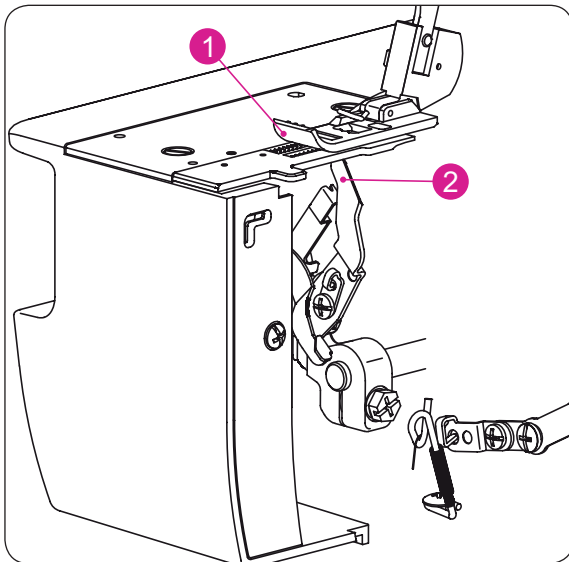
Be sure to turn off power switch.

1. Push the looper cover to the right as far as it will go.
2. Pull looper cover down toward you.



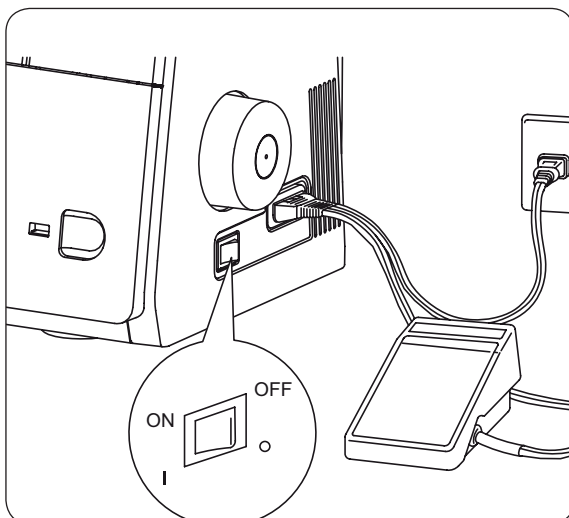
### CAUTION:

Be sure looper cover is closed when sewing.



## Principal Parts behind the Looper Cover

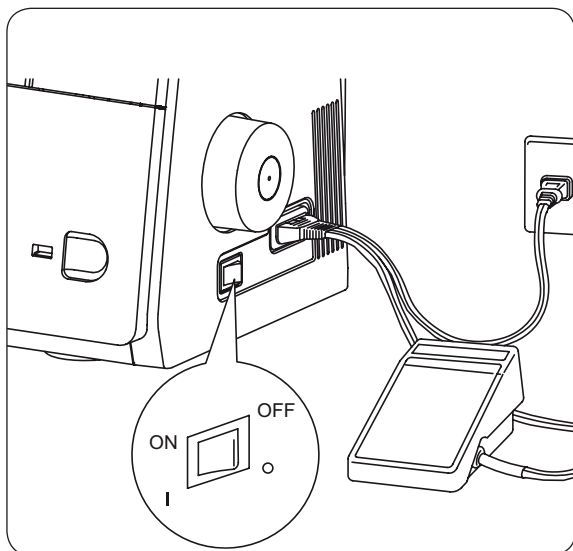
- (1) Standard presser foot
- (2) Chainstich / Coverstitch looper



## PREPARATION TO SEWING

### Power Switch

- Connect the controller/electric plug to the machine receptacle.
- Plug power line into electric outlet.
- Push "I" mark side to turn "ON"
- Push "O" mark side to turn "OFF"



## Foot Controller

- 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



### CAUTION:

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

### • Polarized plug information

(FOR USA & 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.



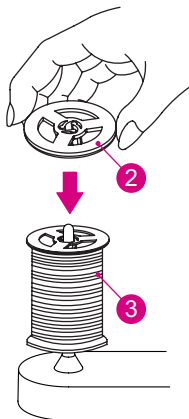
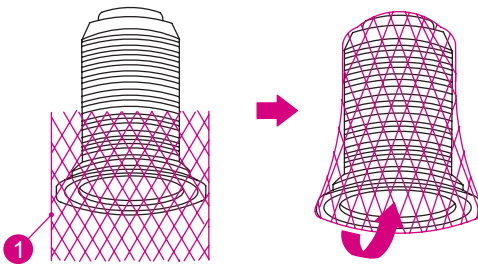
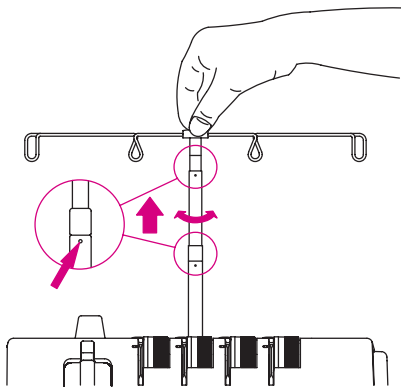
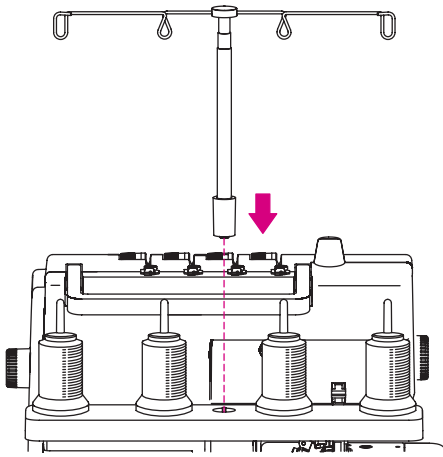
### CAUTION:

- 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.

## PREPARATION FOR THREADING

### Setting up the Retractable thread stand

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



### Spool net

When using synthetic threads that easily spill off the cone, slip the spool net (1) furnished with the machine over the thread from the bottom of the cone leaving the thread end hanging free at the top the spool net.

### Spool Cap

When using a regular thread spool, fit the spool cap (2) supplied with the machine onto the thread spool (3).

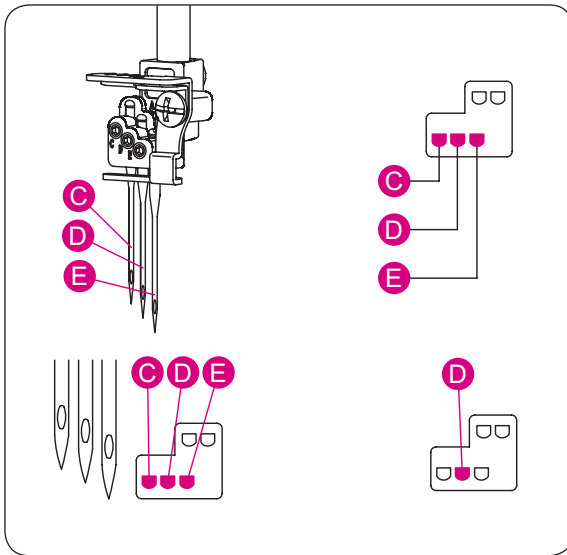
# HOW TO REMOVE AND INSERT NEEDLES

## Needle Position

- With this machines, three needles can be inserted to the Needle holder as shown.
- The Stitch overview refers to different needle positions by illustrating the Needle holder.

### PLEASE NOTE:

When all coverstitch needles are inserted, the left needle will be slightly higher than the others.



## To Remove Needle(s)

### CAUTION:

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

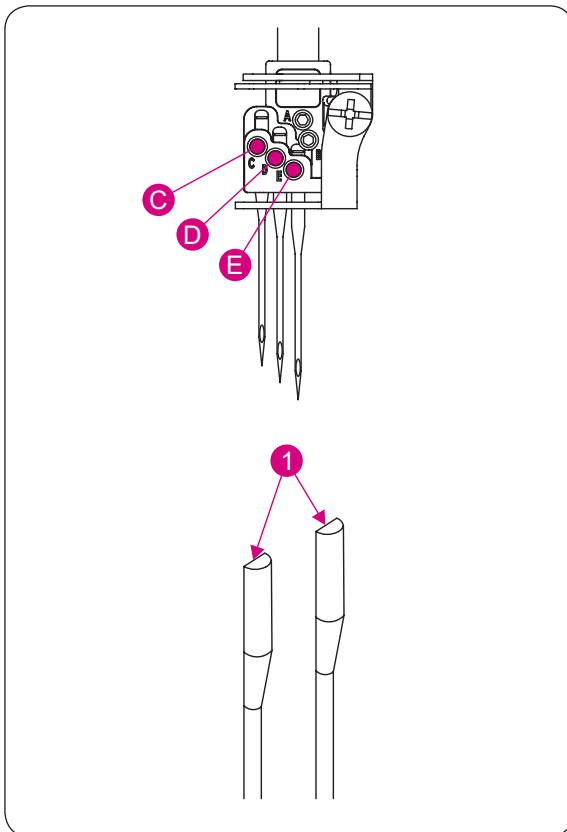
- Turn the hand wheel counterclockwise until the needles are at their highest position.
- Hold the needle to be removed with the needle holder (stored in the looper cover).
- Loosen the setscrew and remove the needle.

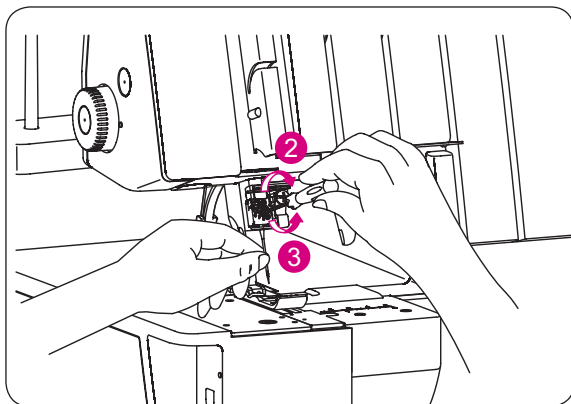
- (C) Left Coverstitch Needle (LC)
- (D) Center Coverstitch Needle (CC)
- (E) Right Coverstitch Needle (RC)

### CAUTION:

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 holder and to just fasten tight into the hole.

Please do not over-tighten the screw into the hole or the Needle holder will be damaged.





## To Insert Needle(s)

- Hold the needle with the flat surface (1) 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 stitch plate it will line up with the needle socket. Then direct it upwards.

**This machine uses ELx705 needles.**

**Do not use Standard Household Needles.**





### PLEASE NOTE:

When inserting needles into a sockets (C-E) it is necessary to loosen (3) all Allen Screws. After inserting the needles equally tighten all Screws (2).

# STITCH OVERVIEW

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

Stitch Type	Use	Page
16 2-Thread Chainstitch	1-needle 2-Thread straight stitch is used for construction or decorative stitching.	27
21 4-Thread Coverstitch	3-needle, 4-Thread coverstitch is suitable for stretchy fabrics such as knits, etc. A triple seam is formed by using left, middle, and right needles.	31
22 3-Thread Coverstitch wide	2-needle, 3-Thread coverstitch is suitable for stretchy fabrics such as knits, etc. A wide seam is formed by using left and right needles.	30
23 3-Thread Coverstitch narrow	2-needle, 3-Thread coverstitch is suitable for stretchy fabrics such as knits, etc. A narrow seam is formed by using left and center needles.	30

Stitch Type (BERNINA Stitch Number)	Suggested Machine Settings			Thread Tension			
	SL	DF	NP	Yellow	Green	Blue	Violet
16 2-Thread Chainstitch	3	1		–	2.5	–	5.5
21 4-Thread Coverstitch	3	1		4.0	4.0	4.0	4.0
22 3-Thread Coverstitch wide	3	1		4.0	–	4.0	4.0
23 3-Thread Coverstitch narrow	3	1		4.0	4.0	–	4.0

## Suggested Machine Setting

SL = Stitchlength  
DF = Differential feed dial  
NP = Needleposition

## Thread Tension Color Code

yellow = (LC)  
green = (CC)  
blue = (RC)  
violet = (CL)

The thread tension becomes tighter as the dials are tuned 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 sewing chainstitches, set stitch length to over 2 mm.
- When sewing coverstitches, set stitch length to over "•" (2.5 mm).

# THREADING THE MACHINE

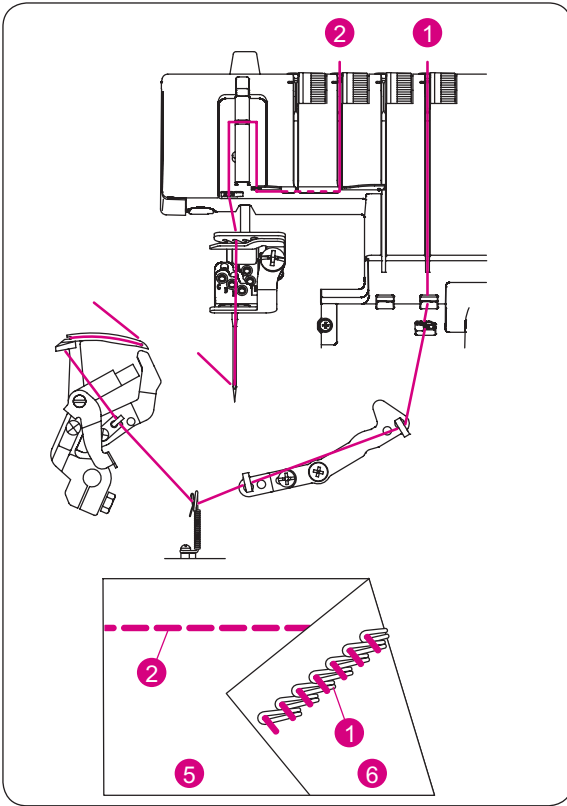
## Threading Diagram Chainstitch

- **Chainstitches**

- A color coded threading diagram is located inside the looper cover for quick reference.
- Thread the machine in the order (1)-(2).

- **Tension Color Code**

- (1) Chain stitch looper thread (Violet)
- (2) Chain stitch needle thread (Green)
- (5) Topside of fabric
- (6) Underside of fabric



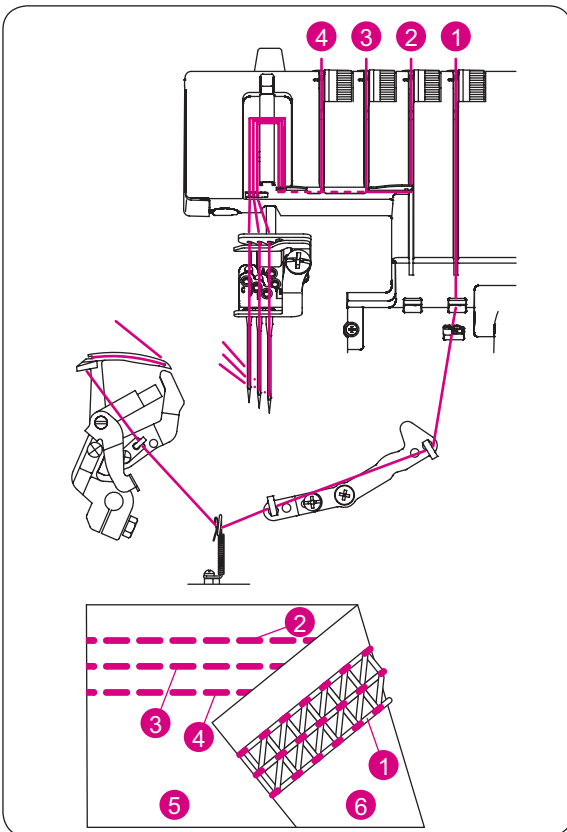
## Threading Diagram Coverstitch

- **Coverstitch**

- A color coded threading diagram is located inside the looper cover for quick reference.
- Thread the machine in the order (1)-(4).

- **Tension Color Code**

- (1) Chain stitch looper thread (Violet)
- (2) Right Coverstitch Needle (Blue)
- (3) Center Coverstitch Needle (Green)
- (4) Left Coverstitch Needle (Yellow)
- (5) Topside of fabric
- (6) Underside of fabric

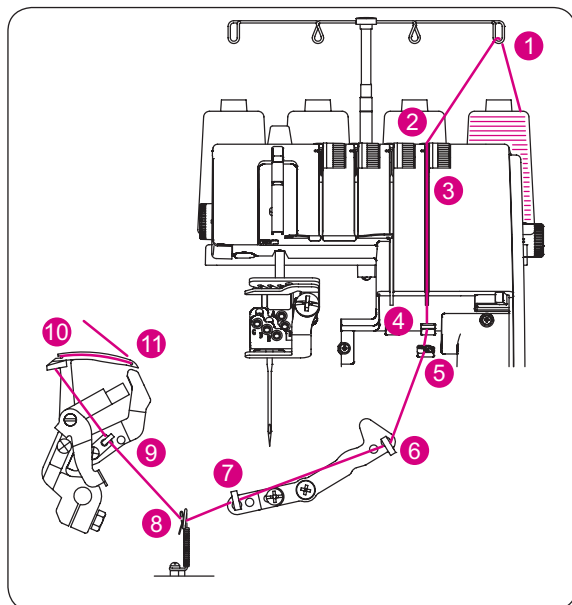


## Threading the Chainstitch/ Coverstitch Looper (Violet)

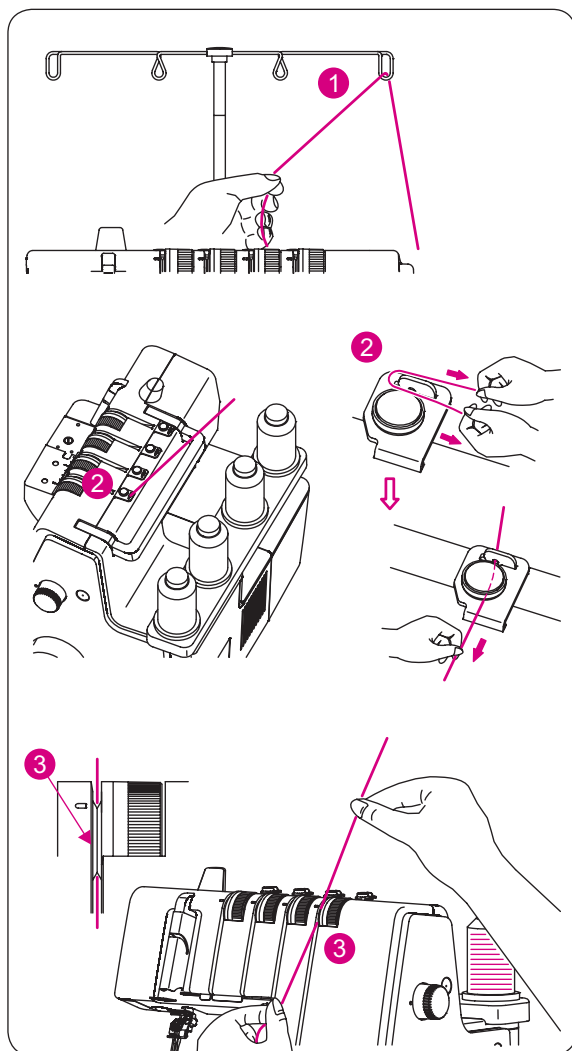


### CAUTION:

Be sure to turn off power switch.



- Raise the presser foot to open the tension discs.
- Thread the chainstitch/coverstitch looper as indicated (1)–(11).

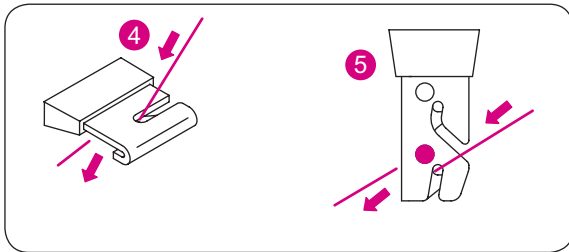


- Pass thread from back to the front through the thread guide (1).

- Thread the pre-tension guide by pulling the thread towards the left until it slips under guide (2). Then pull thread along the right side of pre-tension 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).

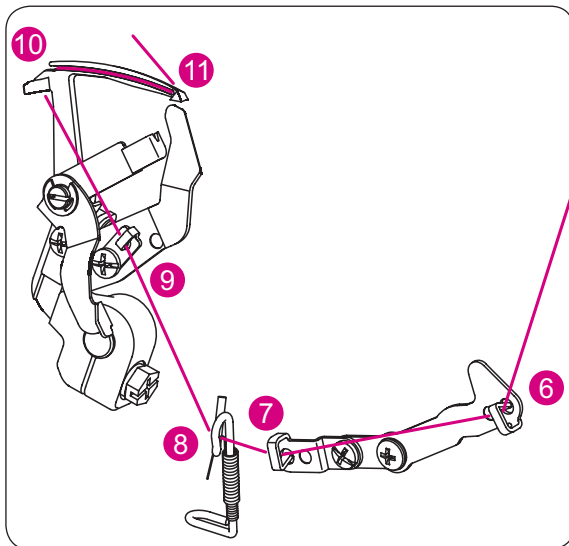




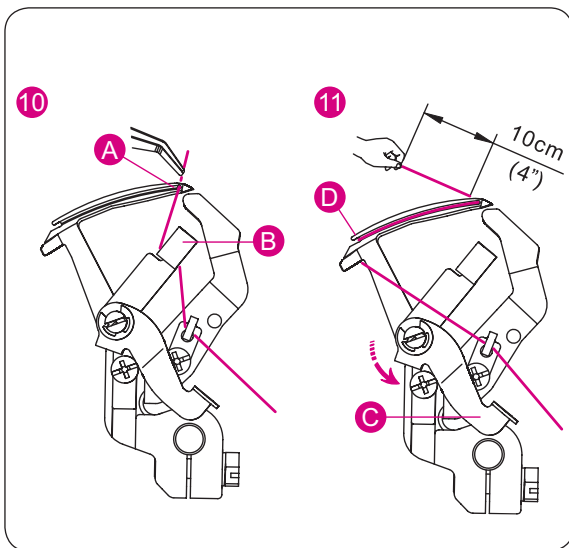
- Turn the hand wheel toward you until the chainstitch looper extends out 10mm from the needle plate edge.
- Thread the looper area of the machine following the violet color-coded thread guides (4)–(11).

**PLEASE NOTE:**

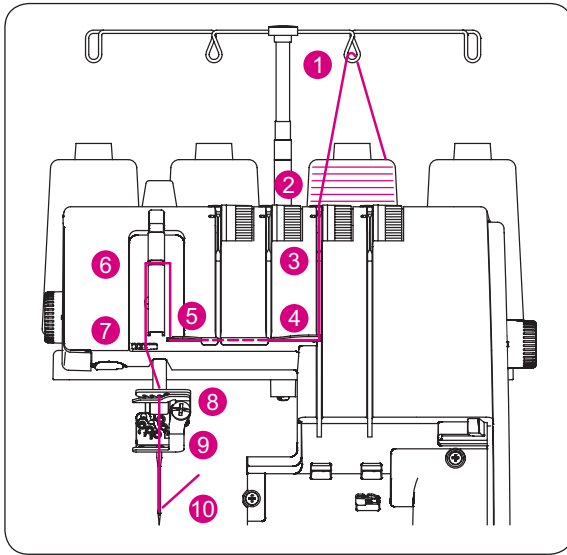
Use of tweezers in the looper cover will make needle eye threading easy.



- 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 (6-9).



- Thread the looper eye (A) from front to back.
- Pull about 10 cm (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).



## Threading the Right Coverstitch Needle (Blue)

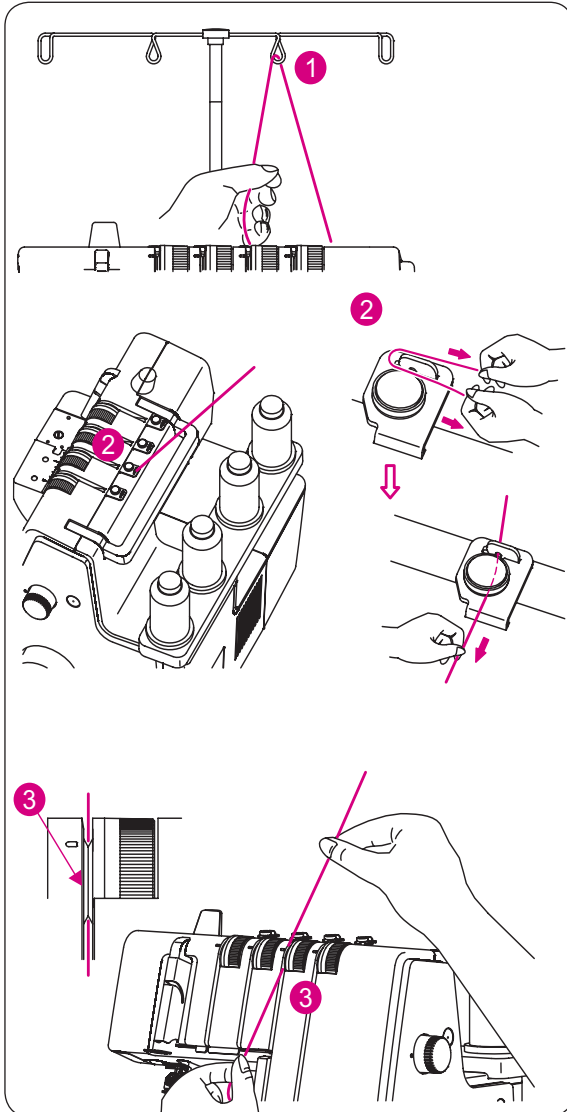
(E on Needle holder)



### CAUTION:

Be sure to turn off power switch.

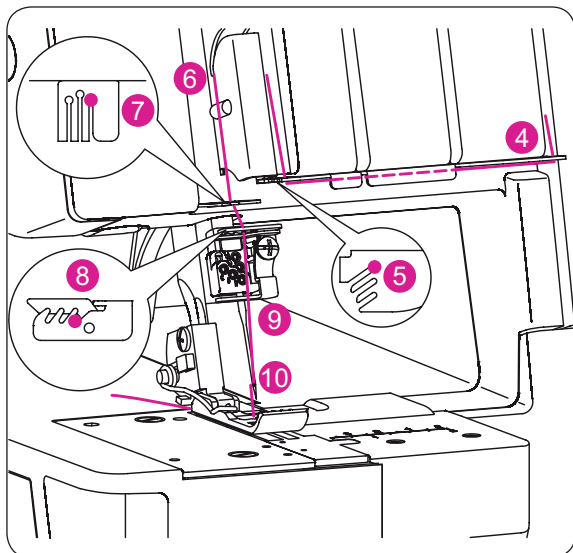
- Raise the presser foot to open the tension discs.
- Thread the Right Coverstitch needle as indicated (1)–(10).



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

- Thread the pre-tension guide by pulling the thread towards the right until it slips under guide (2). Then pull thread along the right side of pre-tension 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).

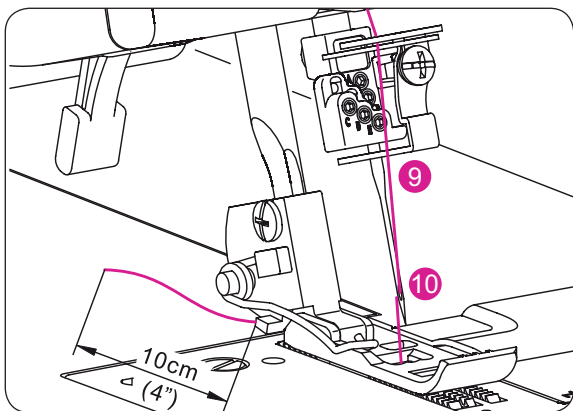


- Continue to thread points (4)–(9).

**PLEASE NOTE:**

Slide thread into rear slot on thread guide (5). Slip the thread into the slot of the Take-up Lever Cover (6). Slip the thread into the right slots for thread guides (7-9).

- Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of Needle holder for Coverstitch.



- Thread the eye of the right needle (10).

**PLEASE NOTE:**

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

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

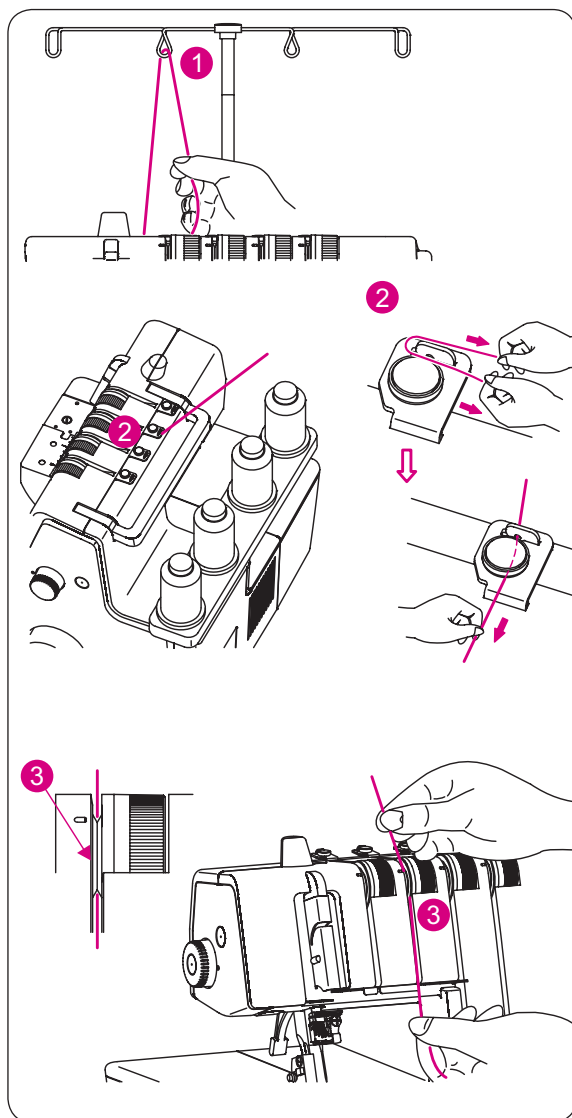
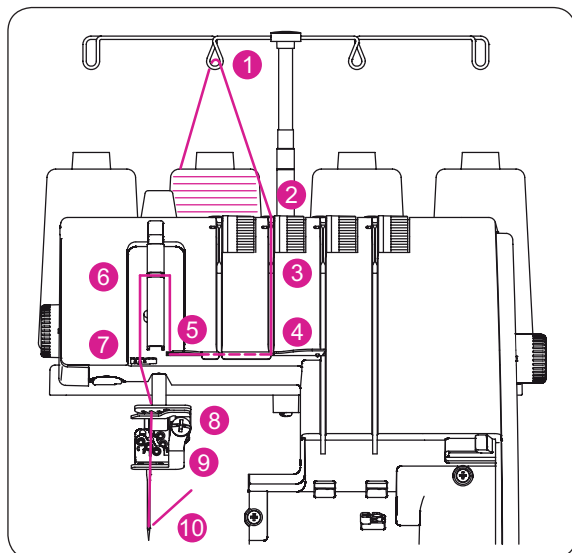
## Threading the Center Coverstitch/ Chainstitch Needle (Green)

(D on Needle holder)



### CAUTION:

Be sure to turn off power switch.

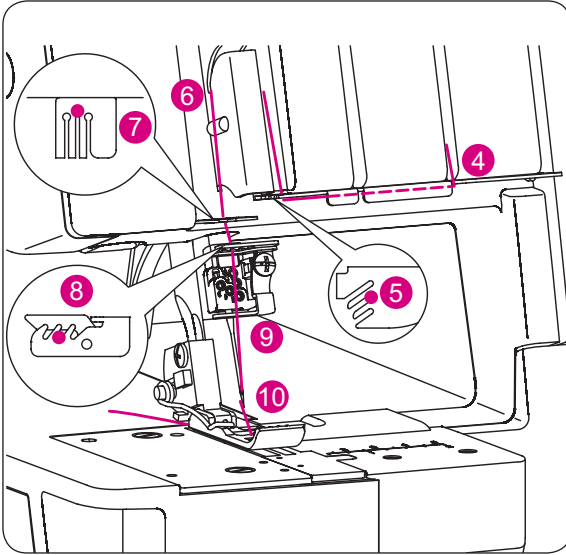


- Raise the presser foot to open the tension discs.
- Thread the Center Coverstitch/Chainstitch needle as indicated (1)–(10).

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

- Thread the pre-tension guide by pulling the thread towards the right until it slips under guide (2). Then pull thread along the right side of pre-tension 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).

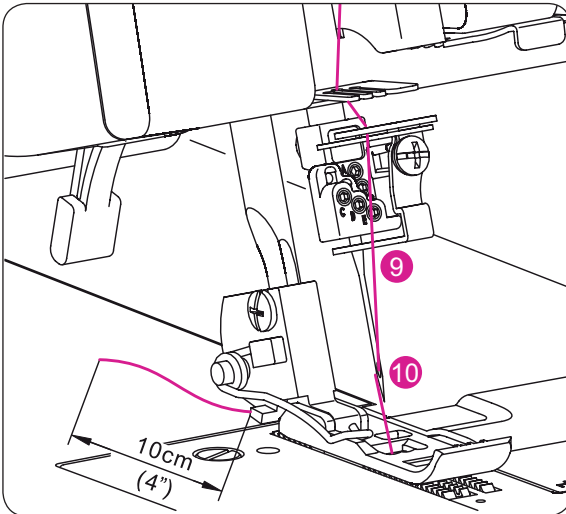


- Continue to thread points (4)–(9)

**PLEASE NOTE:**

Slide thread into middle slot on thread guide (5). Slip the thread into the slot of the Take-up Lever Cover (6). Slip the thread into the middle slots for thread guides (7-9).

- Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of Needle holder for Coverstitch.



- Thread the eye of the middle needle (10).

**PLEASE NOTE:**

Use of tweezers in the looper cover will make needle eye threading easy.

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

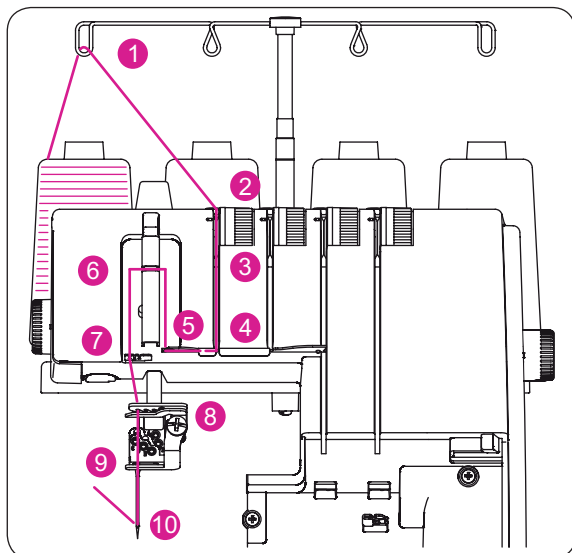
## Threading the Coverstitch Needle (Yellow)

(C on Needle holder)

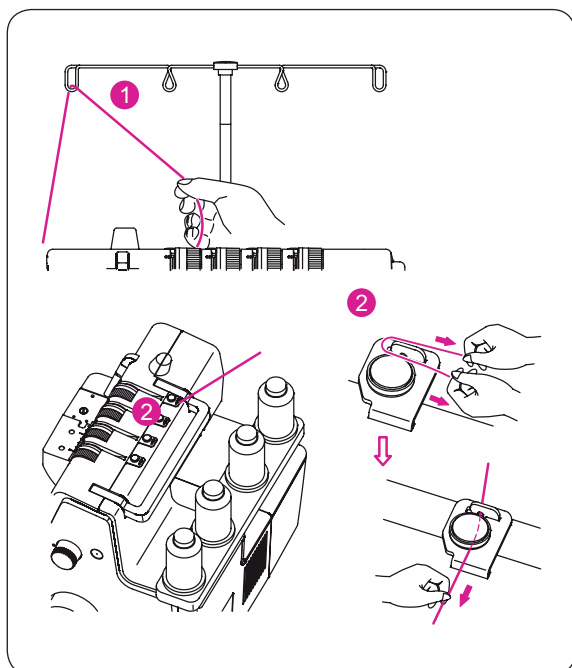


### CAUTION:

Be sure to turn off power switch.

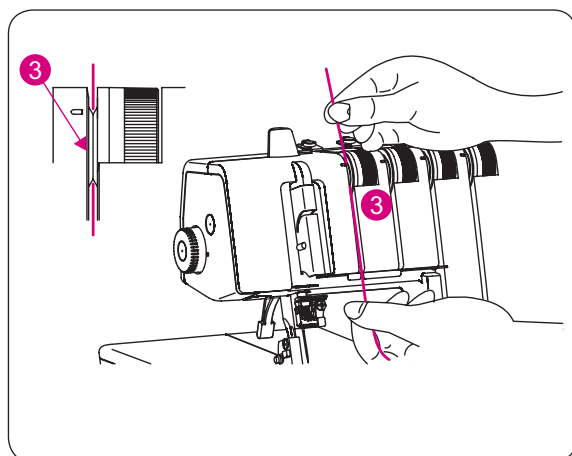


- Raise the presser foot to open the tension discs.
- Thread the Center Coverstitch/chainstitch needle as indicated (1)–(10).

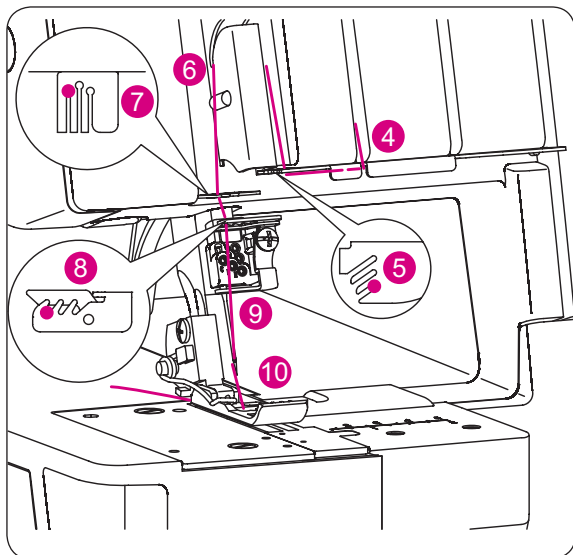


- Pass thread from back to the front through the thread guide (1).

- Thread the pre-tension guide by pulling the thread towards the right until it slips under guide (2). Then pull thread along the right side of pre-tension 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).

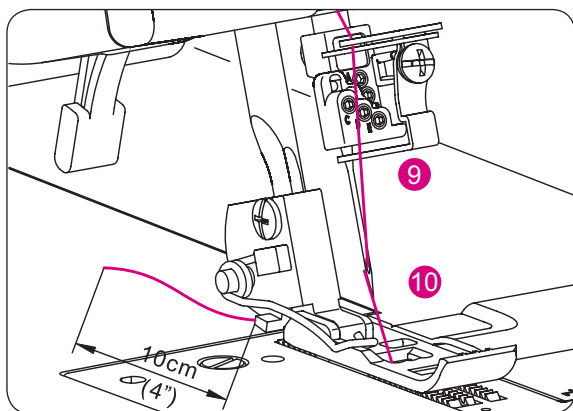


- Continue to thread points (4)–(9).

**PLEASE NOTE:**

Slide thread into front slot on thread guide (5). Slip the thread into the slot of the Take-up Lever Cover (6). Slip the thread into the left slots for thread guides (7-9).

- Before threading eye of needle, make sure thread is in front of thread guide located on the bottom of Needle holder for Coverstitch.



- Thread the eye of the left needle (10).

**PLEASE NOTE:**

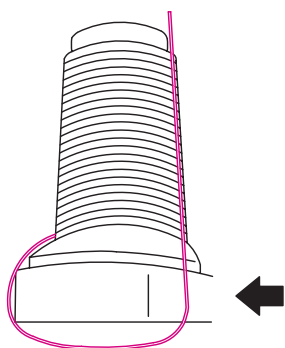
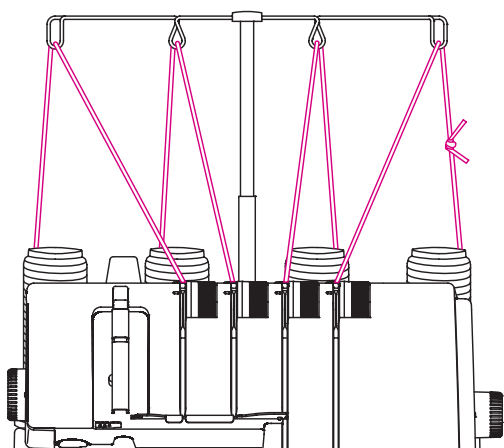
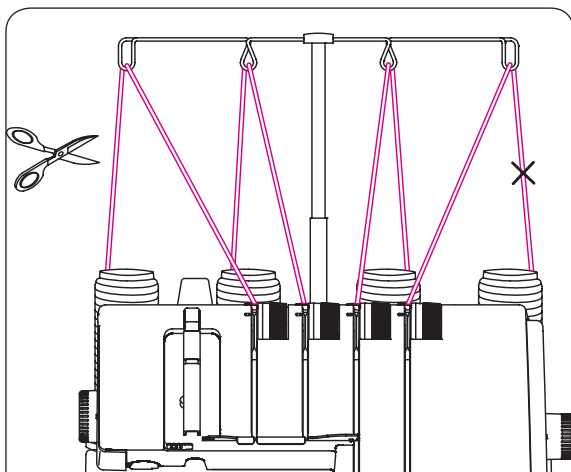
Use of tweezers in the accessory case will make needle eye threading easy.

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

## HOW TO CHANGE THREADS

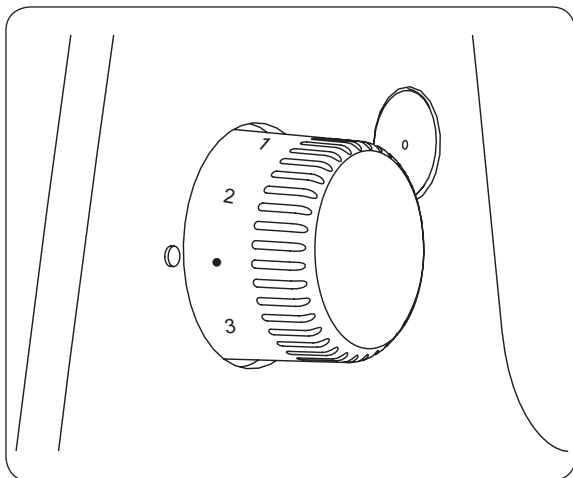
### Tie on method

- 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 threads to test knot security.
- Raise the presser foot to open the 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 knot and thread the threads in the needle eye.

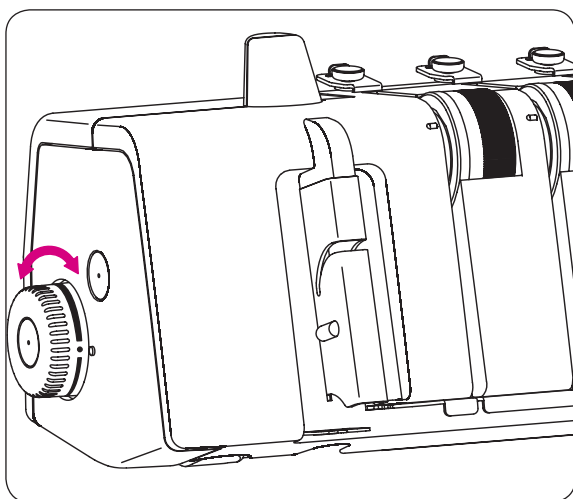




## HOW TO ADJUST

### Stitch length dial

- The stitch length dial should be set on the "•" setting for most sewing conditions.
- Adjust the stitch length to • – 4 when sewing heavy weight fabrics.
- Adjust the stitch length to 2 – 4 when sewing highly stretchy fabrics.



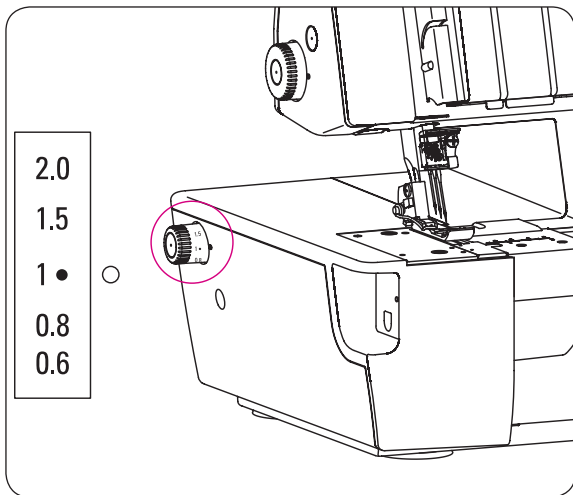
### Presser Foot pressure

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 light weight and heavy weight fabrics.

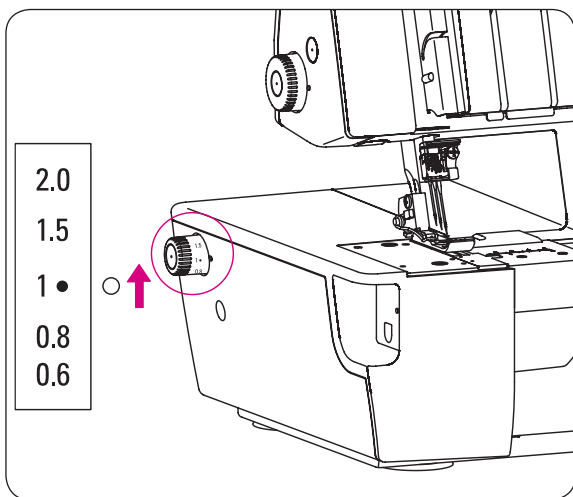
In such case, "•" for normal, "L" for the lightest pressure, and "H" for the heaviest.

- For light weight fabric decrease the pressure.
- For heavy weight fabric increase the pressure.
- Testsew to define the optimal pressure for your sewing project.



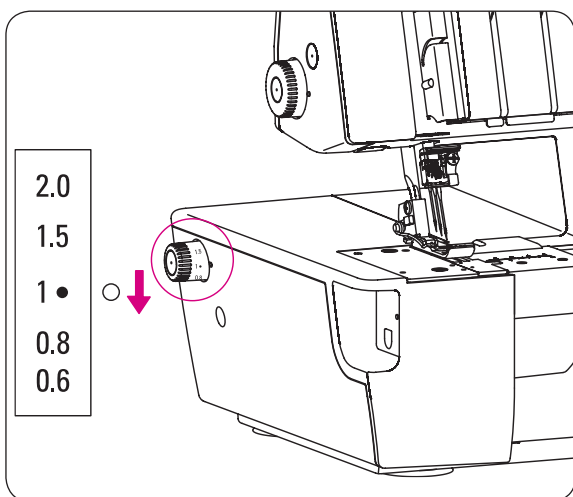
## DIFFERENTIAL FEED

- 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 0.6–2.0. Adjustment is made by means of the differential feed dial at left.
- Use of differential feed is very effective in overedging stretch fabrics and fabrics cut on the bias.
- Setting "1" is differential feed dial setting for ratio 1:1.



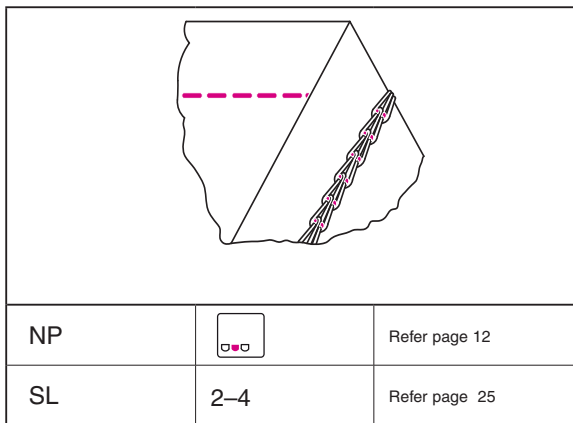
## Gathered Coverstitch (1–2.0)

- **To set the differential feed dial for gathering**
  - Set differential feed dial above setting "1".
  - 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.



## Stretch Coverstitch (1–0.6)

- **To set the differential feed dial for stretch**
  - Set differential feed dial between setting "0.6" - "1".



# HOW TO SEW A CHAINSTITCH

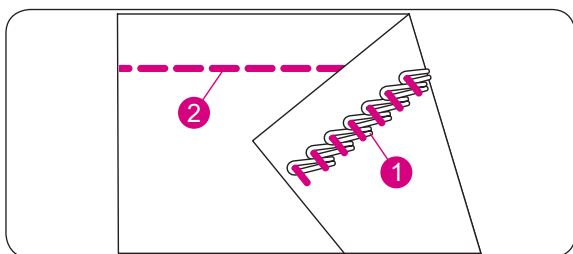
## 2-Thread Chainstitch

### PLEASE 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 chainstitch should be set at over 2 mm.

### • Correct balance

- Set each tension dial to recommended setting and test sew on a sample of your fabric.



2-Thread Chainstitch				
Medium weight fabric	Thread tension dial			
	Yellow	Green	Blue	Violet
Polyester		2.5		5.5

### • How to balance the thread tension

When the chainstitch needle thread tension is too loose;

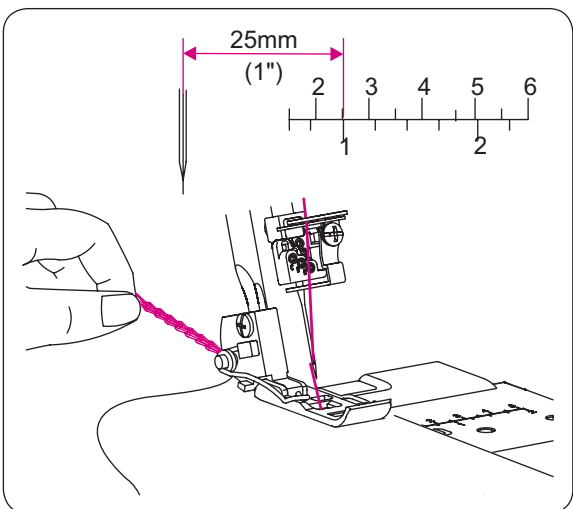
- Turn the needle thread tension dial (green) toward a higher number.
- Or, turn the chainstitch looper thread tension dial (violet) toward a lower number.

### • How to sew

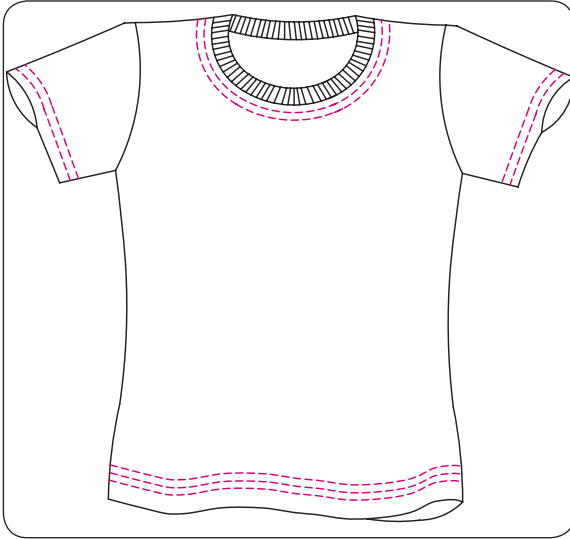
The chainstitch is sewn with 2 threads, one needle and one looper.

### • 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.

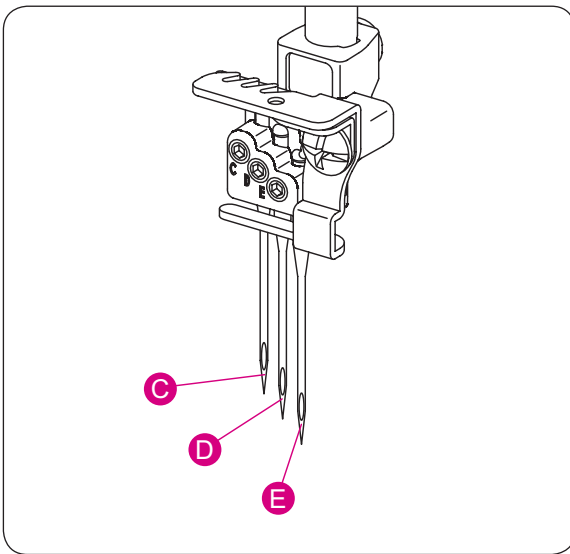


Thread Color Code refer page 15.



## HOW TO SEW A COVERSTITCH

- This machine can produce a 3-thread 5.6 mm wide bottom coverstitch.
- The coverstitch 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 coverstitch 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).



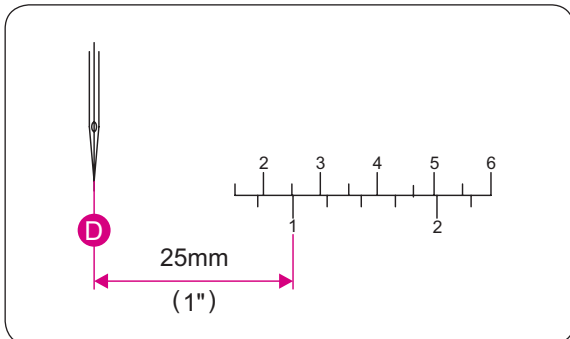
## Machine set up



### CAUTION:

Be sure to turn off power switch.

- Open looper cover. (Refer page 9)
- For Triple 5.6 mm coverstitch, install Right Coverstitch Needle (E), Coverstitch Center Needle (D) and Coverstitch Needle (C). (Refer page 12)
- Pass thread through needles (E), (D) and (C) and thread chainstitch looper (violet) (Refer pages 18-23)



- The graduations on cover stitch insert indicate the distance from Center Coverstitch Needle.
- Use it as a guide when positioning fabric edge.
- Close looper cover.

## Additional Information About Coverstitch

- **At start of sewing**

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

**PLEASE NOTE:**

When you start to sew from the middle of the fabric, place the fabric at the desired of starting point of sewing.

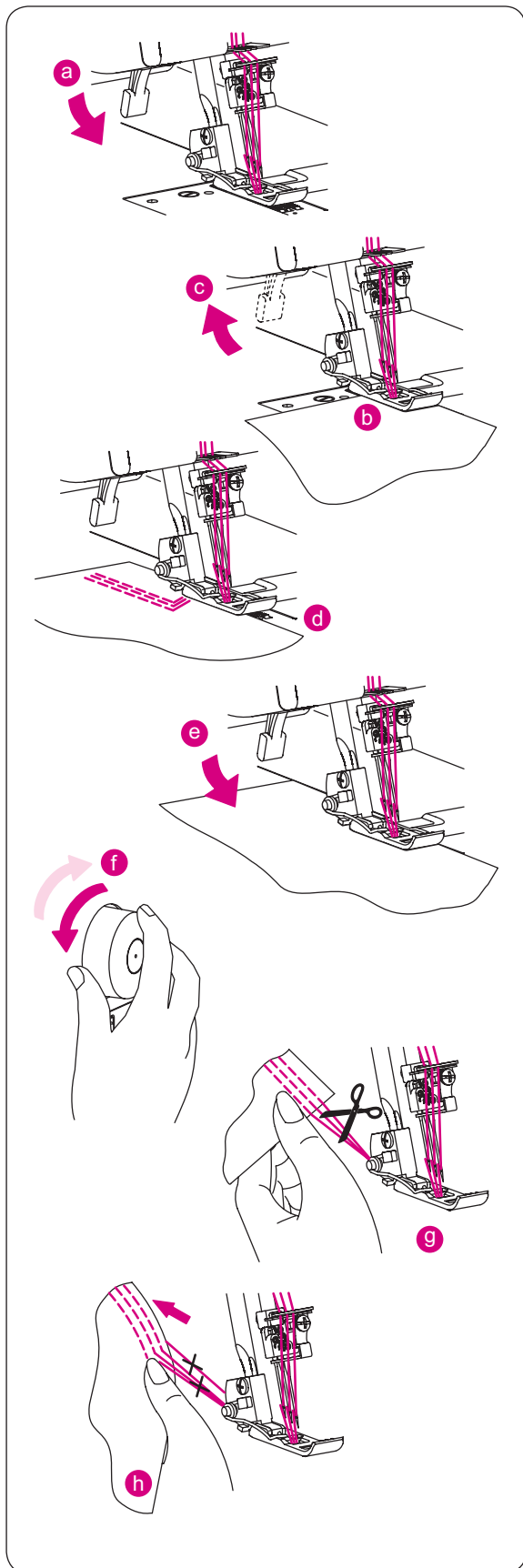
- **At end of sewing**

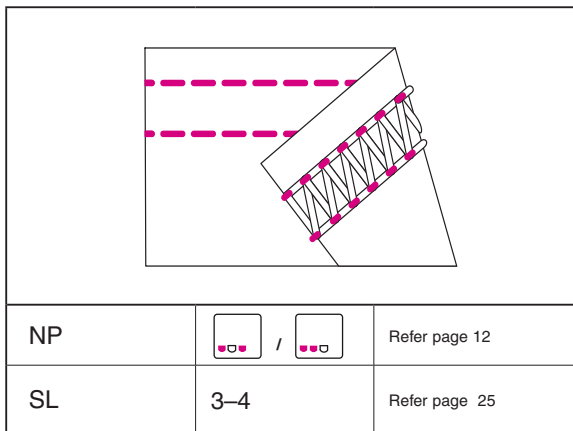
- (d) Stop sewing when the fabric is at the seam end.
- (e) Raise presser foot.

- (f) Turns the hand wheel toward you one circle (anti-clockwise), then turns contrary one circle back (Clockwise).
- (g) Pull out the fabric lightly to rear of machine and cut the threads to take out the fabric.

**PLEASE NOTE:**

- (h) The instructions given when sewing coverstitches because chaining-off at the end of sewing is not possible.





### 3-Thread Coverstitch

#### PLEASE 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 coverstitch should be set at over "•" (2.5 mm).

#### • Correct balance

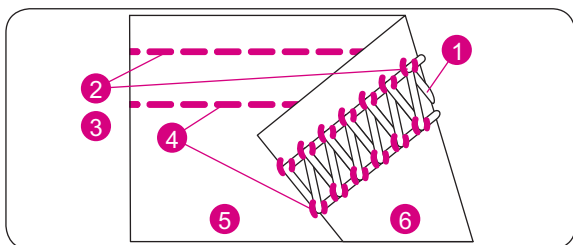
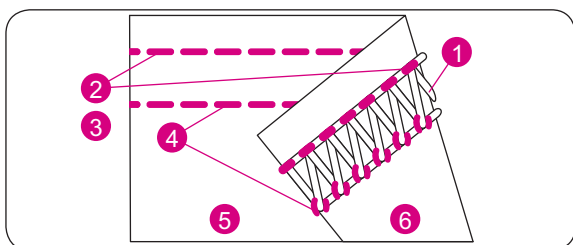
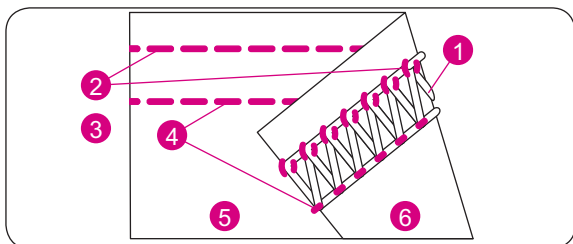
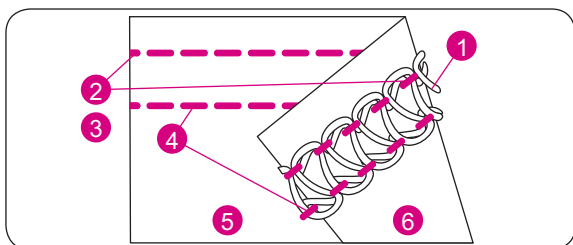
- Set each tension dial to recommended setting and test sew on a sample of your fabric.

#### 3-Thread Coverstitch wide

Fabric	Thread tension dial			
	Yellow	Green	Blue	Violet
Polyester	4.0		4.0	4.0

#### 3-Thread Coverstitch narrow

Fabric	Thread tension dial			
	Yellow	Green	Blue	Violet
Polyester	4.0	4.0		4.0



#### • How to balance the thread tension

When the coverstitch looper thread is too loose;

- Turn the coverstitch looper thread tension dial (violet) toward a higher number.

When the Coverstitch Needle thread tension is too loose;

- Turn the Left Coverstitch Needle thread tension dial (yellow) toward a higher number.
- Or, turn coverstitch looper thread tension dial (violet) toward a lower number.

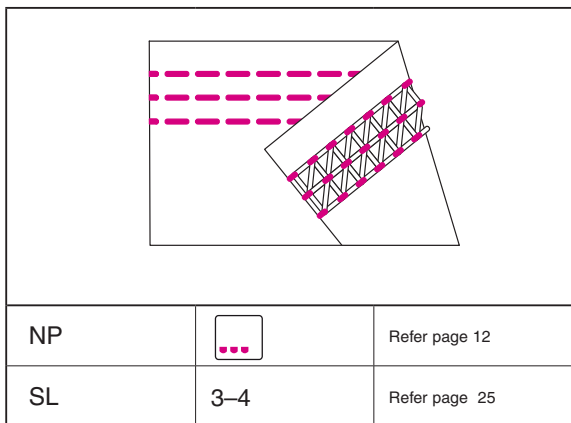
When the Right Coverstitch needle thread tension is too loose;

- Turn the Right Coverstitch needle thread tension dial (green) or (blue) toward a higher number.
- Or, turn the coverstitch looper thread tension dial (violet) 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 coverstitch looper thread tension dial (violet) toward a lower number.

Thread Color Code refer page 15.



## 4-Thread Coverstitch

### PLEASE NOTE:

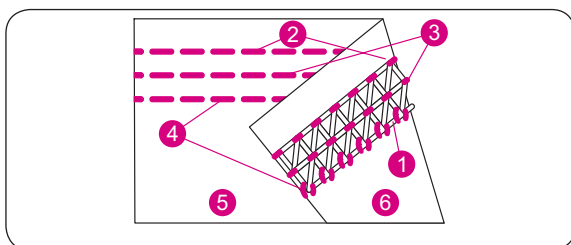
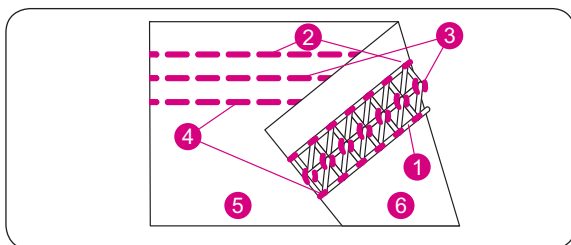
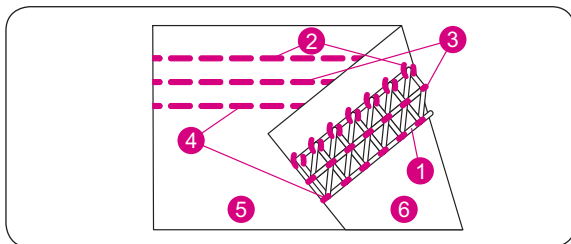
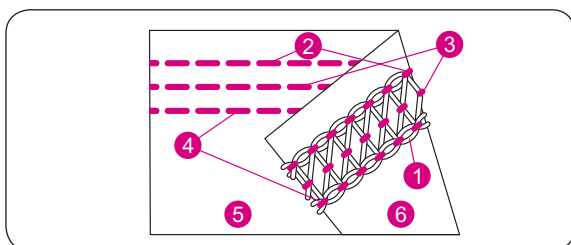
- These are suggested tension settings only.
- Tension settings are effected by;
  1. Type and thickness of fabric
  2. Needle size
  3. Size, type and fiber content of thread
- Stitch length for coverstitch should be set at over "•" (2.5 mm).

### • Correct balance

- Set each tension dial to recommended setting and test sew on a sample of your fabric.

### 4-Thread Coverstitch

Fabric	Thread tension dial			
	Yellow	Green	Blue	Violet
Polyester	4.0	4.0	4.0	4.0



### • How to balance the thread tension

When the coverstitch looper thread is too loose;

- Turn the coverstitch looper thread tension dial (violet) toward a higher number.

When the Left Coverstitch Needle thread tension is too loose;

- Turn the Left Coverstitch Needle thread tension dial (yellow) toward a higher number.
- Or, turn coverstitch looper thread tension dial (violet) toward a lower number.

When the Center Coverstitch Needle thread tension is too loose;

- Turn the Center Coverstitch Needle thread tension dial (green) toward a higher number.
- Or, turn coverstitch looper thread tension dial (violet) toward a lower number.

When the Right Coverstitch needle thread tension is too loose;

- Turn the Right Coverstitch needle thread tension dial (blue) toward a higher number.
- Or, turn the coverstitch looper thread tension dial (violet) 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 coverstitch looper thread tension dial (violet) toward a lower number.

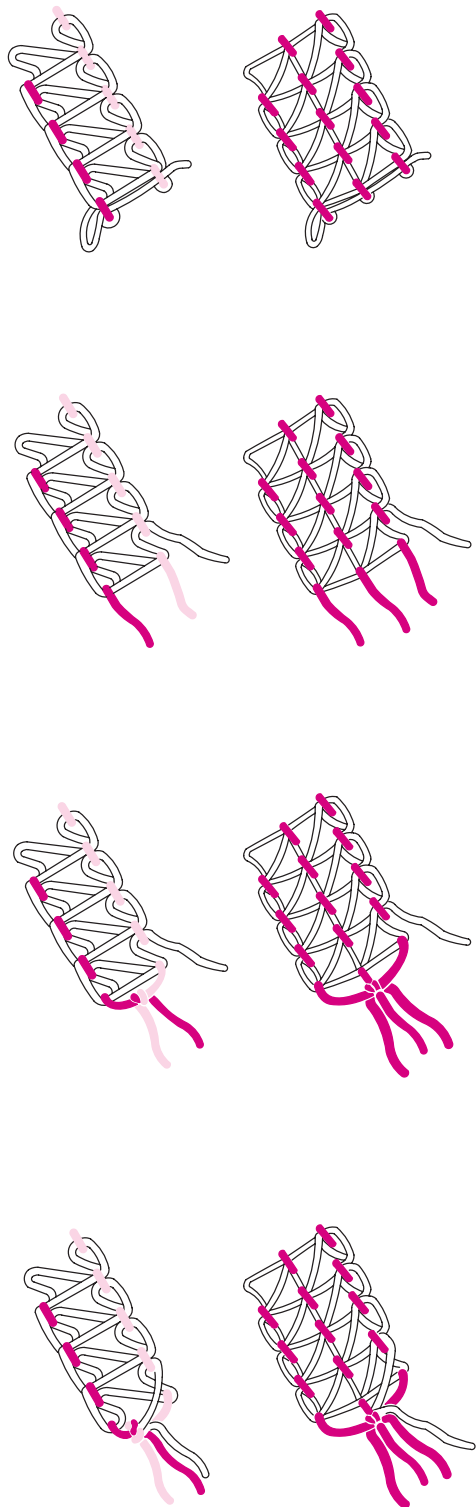
Thread Color Code refer page 15.

## SECURING THE SEAM END

- Since the seams formed by coverstitch 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 left 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.

### PLEASE NOTE:

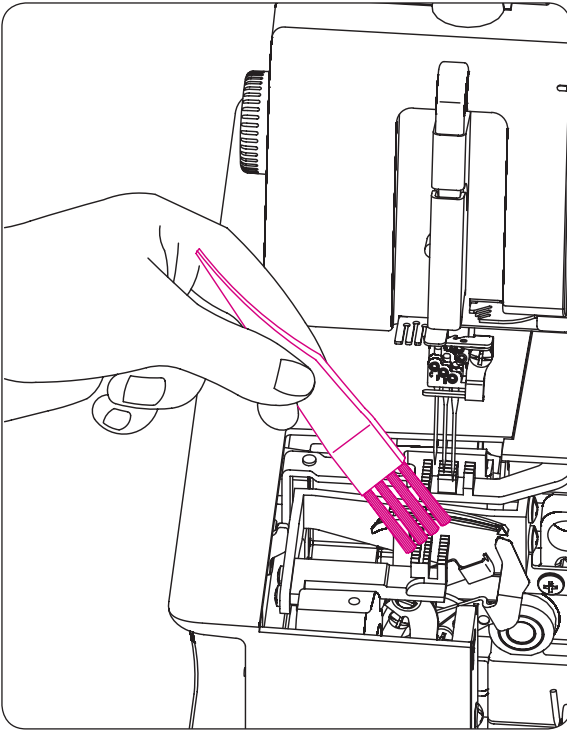
- Normally, the seams at the start of sewing do not unravel, but it is safe to secure the seam end following the same steps as described when sewing through to the edge of fabric.





## MACHINE MAINTENANCE

### Cleaning the Machine

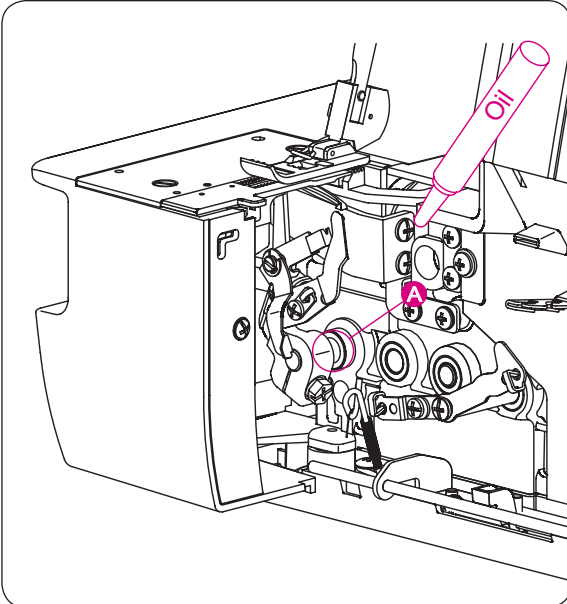


#### CAUTION:

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

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

### Oiling the Machine



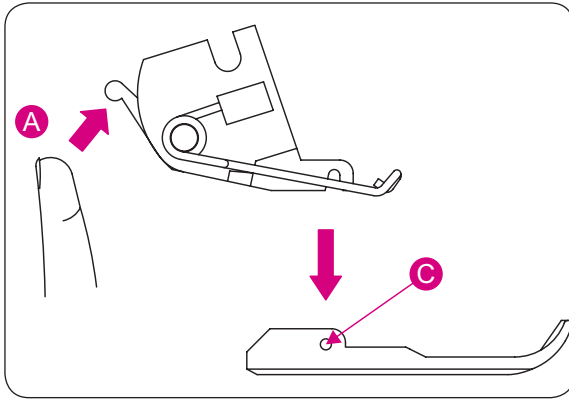
#### CAUTION:

Before lubricating your machine, disconnect power line plug from the wall receptacle.

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

#### PLEASE NOTE:

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



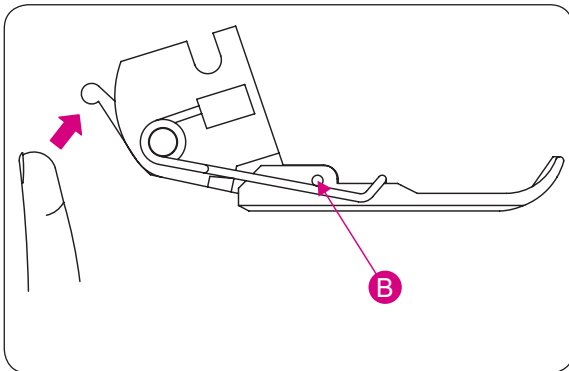
## OPTIONAL ACCESSORIES

The following optional presser feet specially prepared for this machine are available at extra-charge.

### PLEASE NOTE:

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

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



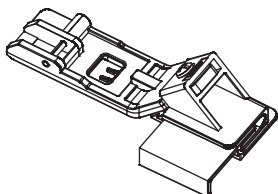
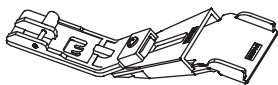
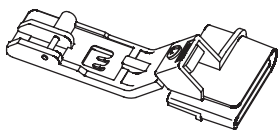
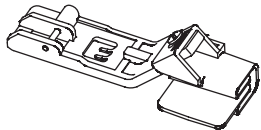
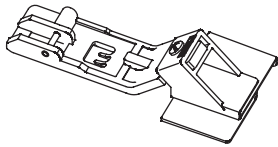
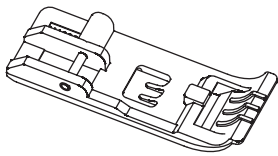
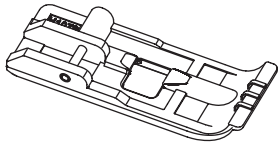
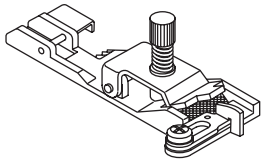
## Snap-On Type Presser Foot

### • Removal

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

### • Replacement

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



## Optional Cover Presser Feet

### • Elasticator Foot

- The Elasticator foot guides and stretches the elastic as it is being sewn on. Ideal for lingerie, swimwear, sportswear and home textiles.

### • Cording Foot and Guide

- This presser foot guides decorative and fine cords of up to 2 mm thickness exactly and precisely below the coverstitch seam as they are being sewn on. Alternatively, it can also be used to create and insert piping.

### • Standard Presser Foot with clear sole

- The clear sole affords the perfect view of your sewing project. It is ideal for decorative seams which have been previously tailor-tacked, as well as for positioning at the beginning or end of a seam.

### • Lace Foot

- For sewing lace, trim and tapes onto hems. The bottom edge of the fabric is simultaneously neatened with a narrow or wide coverstitch, creating a flat joining seam.

### • Binder Attachment for unfolded bias tape

- The binder attachment creates practical edge finishes with unfolded bias tape in a width of 25 to 28 mm. Self-cut bias tape can also be used for a professional look.

### • Hemmer Foot

- The hemmer foot quickly and easily sews even seams with a depth of 2.5 cm. A narrow or wide coverstitch can be used to neatens the cut edge.

### • Belt-loop Foot

- The belt-loop foot is used to fold bias or straight binding, which it then quickly and easily turns into straps or belt loops with the cover- or chainstitch.

### • Hemmer and Lace Foot

- This presser foot sews tapes or lace below a fabric edge, which is simultaneously folded to form a hem. A coverstitch neatens both edges at the same time, whilst the material is folded by 1 cm.

# TROUBLESHOOTING

Condition	Cause	Remedy Page
<b>Fabric does not feed well.</b>	1. Lengthen stitch length.	25
	2. Increase presser foot pressure for heavy weight fabric.	25
	3. Decrease presser foot pressure for light weight fabric.	25
<b>Needle breaks.</b>	1. Insert needle correctly.	12
	2. Tighten needle set screw.	12
	3. Use a larger needle on heavy fabrics.	12
<b>Thread breaks.</b>	1. Check threading.	15–23
	2. Check for tangled or caught thread.	20
	3. Insert needle correctly.	12
	4. Insert new needle, current needle may be bent or have a blunt point.	12
	5. Use only high quality thread.	37
	6. Loosen thread tension.	27–31
<b>Stitch skip.</b>	1. Insert new needles, current needles may be bent or have a blunt point. Use only ELx705 overlock needles.	12
	2. Tighten needle set screw.	12
	3. Insert needles correctly.	12
	4. Change type or size of needles.	12
	5. Check threading.	15–23
	6. Increase presser foot pressure.	25
	7. Use a high quality thread.	37
<b>Irregular stitches.</b>	1. Balance thread tension.	27–31
	2. Check for tangled or caught thread.	20
	3. Check threading.	15–23
<b>Fabric puckers.</b>	1. Loosen thread tension.	27–31
	2. Check for tangled or caught thread.	20
	3. Use high quality light weight thread.	37
	4. Shorten stitch length.	25
	5. Decrease presser foot pressure for light weight fabrics.	25
<b>Fabric jams.</b>	1. Close looper cover before sewing.	9
	2. Check for tangled or caught thread.	20
	3. Compress thick layers of fabric with conventional machine before sewing with overlock.	
<b>Machine does not operate.</b>	1. Connect machine to power source.	9, 10

## FABRIC, THREAD AND NEEDLE CHART

Woven			
Fabric		Thread	Needle ELx705
Light weight	Lawn Organdy Voile Crepe	Cotton: #100 Silk/ Rayon: #100 Spun: #80– #90 Polyester: #80– #100	#80/12
Medium weight	Muslin Seersucker Satin Gabardine Broadcloth	Cotton: #60– #80 Silk/ Rayon: #50 Spun: #60– #80 Polyester: #60– #80	#90/14, #80/12
Heavy weight	Oxford Denim Tweed Serge Corduroy	Cotton: #40– #60 Silk/ Rayon: #40– #60 Spun: #60– #80 Polyester: #50– #80	#90/14

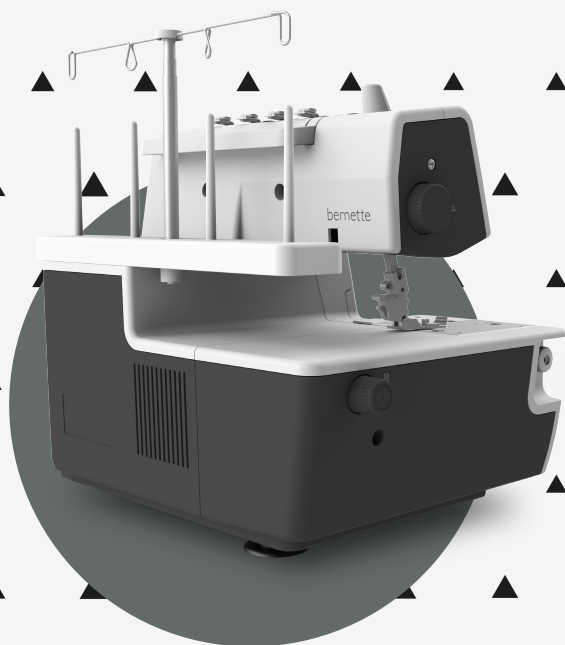
Knit			
Fabric		Thread	Needle ELx705
Light weight	Tricot	Spun: #80– #90 Polyester: #60– #80	#80/12
Medium weight	Jersey	Spun: #60– #80 Polyester: #60– #80 Cotton: #60– #80	#90/14, #80/12
Heavy weight	Wool (woven, knit)	Spun: #60– #80 Polyester: #50– #60 Woolly nylon	#90/14, #80/12

# SPECIFICATION

## Technical Summary

Stitch Formations	4 stitches 1–3 needles 1 looper	
Needle system	ELx705	
Coverstitch needle gauge	Two needles: 2.8 mm (narrow), 5.6 mm (wide) Triple needles: 5.6 mm	
Differential feed dial	stretching 0.6–1 gathering 1–2	
Presser foot lift	4.5 mm	
Sewing speed	1300 stitches/minutes	
Foot control	Type 4C–316B for (USA/Canada)	Type 4C–316C / 4C–326C / 4C–326G / 4C–345G for other countries
Dimensions (L x B x H) mm	336 x 263 x 294	
Weight (kg)	6.8 kg	





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