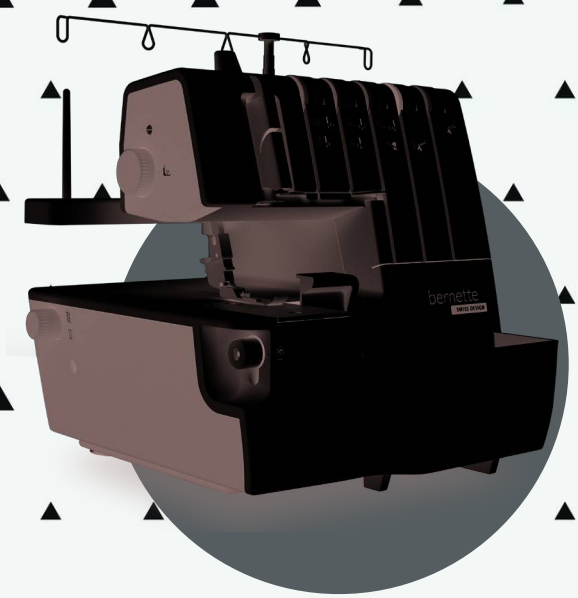


b48
FUNLOCK



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.

WARNING:

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.

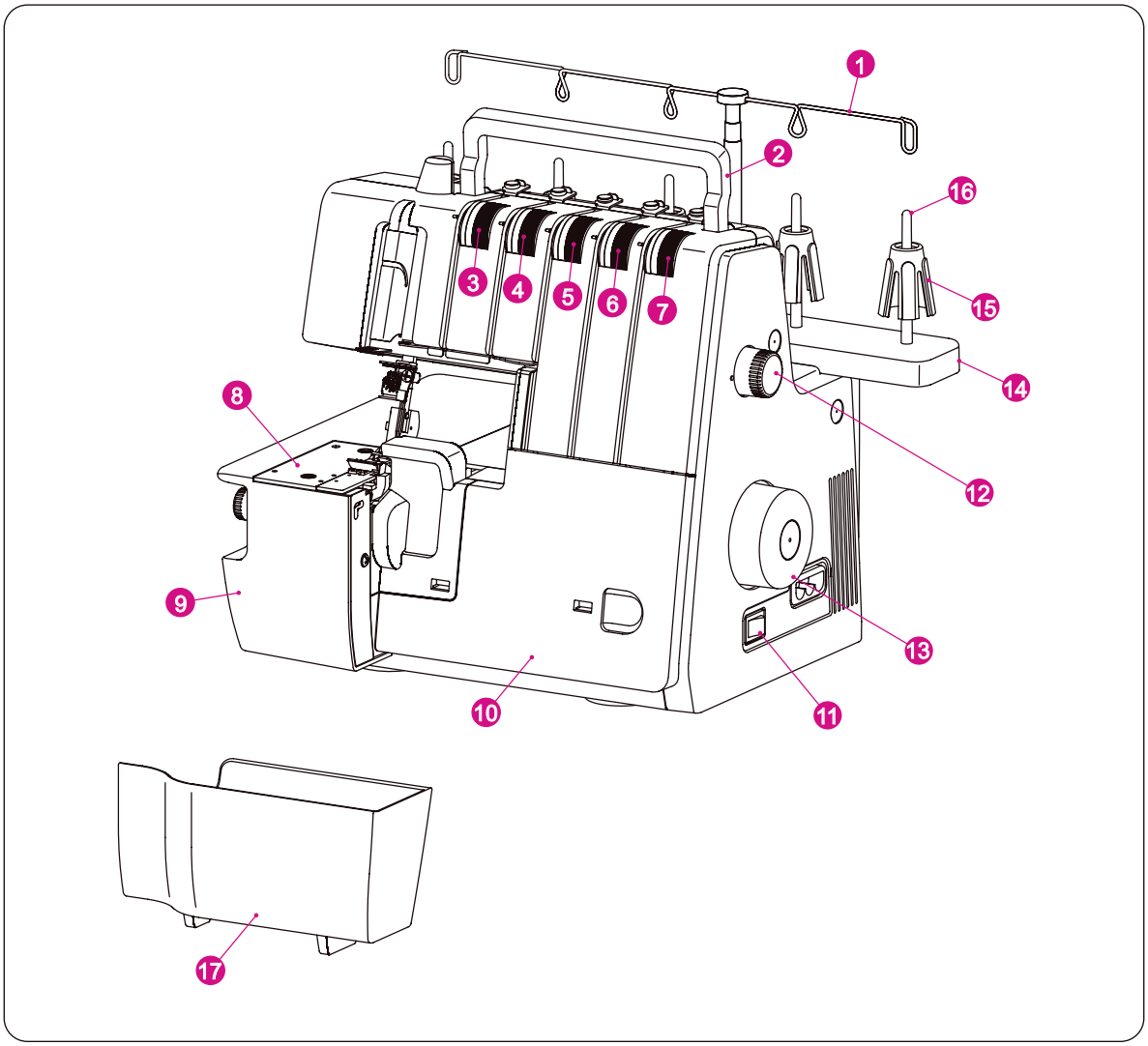
SAVE THESE INSTRUCTIONS!

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.

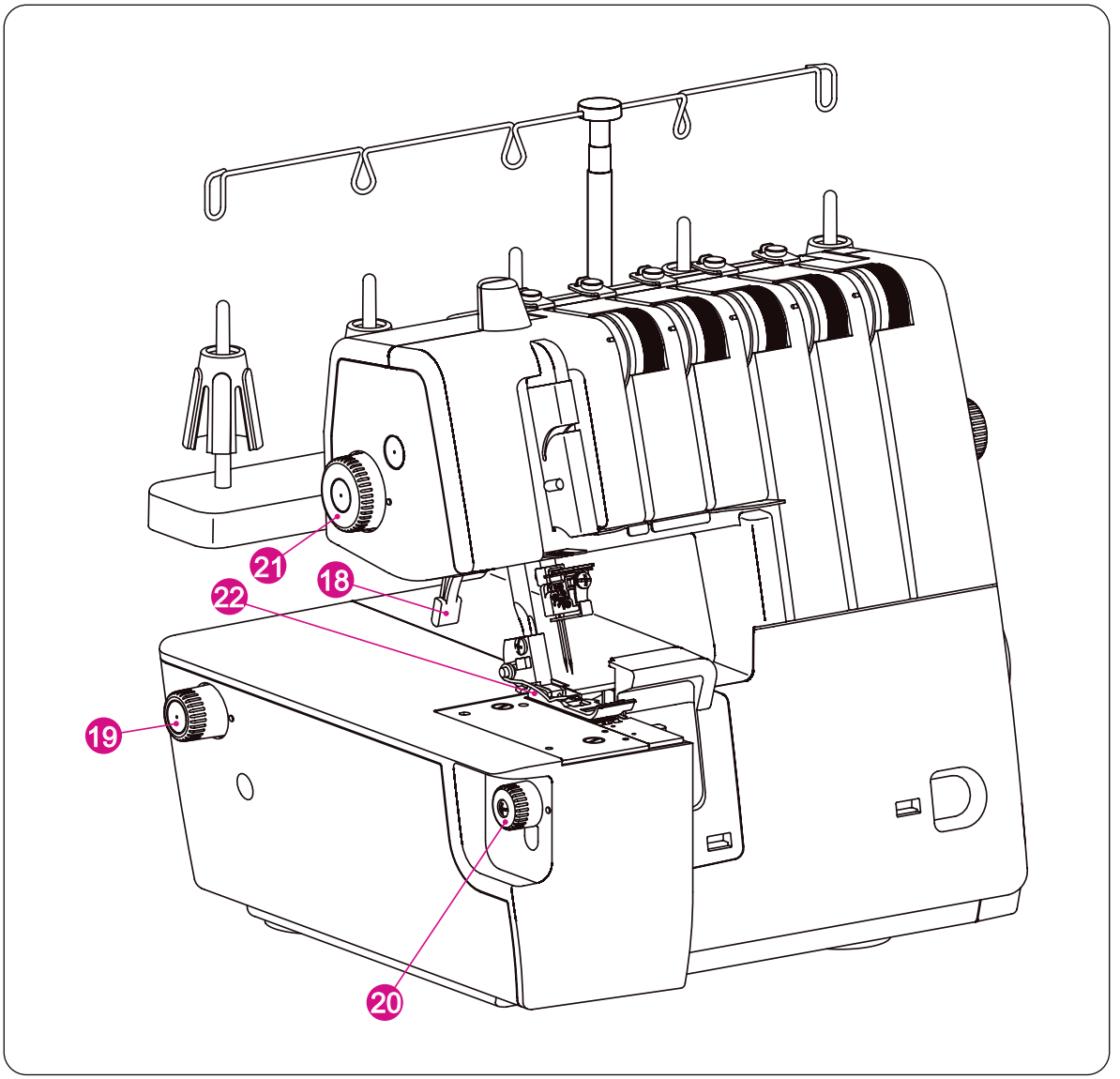
Outside of Europe (except for the USA and Canada): This appliance may only be used by persons (including children) with reduced physical, sensory or mental capabilities or by persons who lack experience and knowledge of how to operate the machine under supervision and after instruction on how to use 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

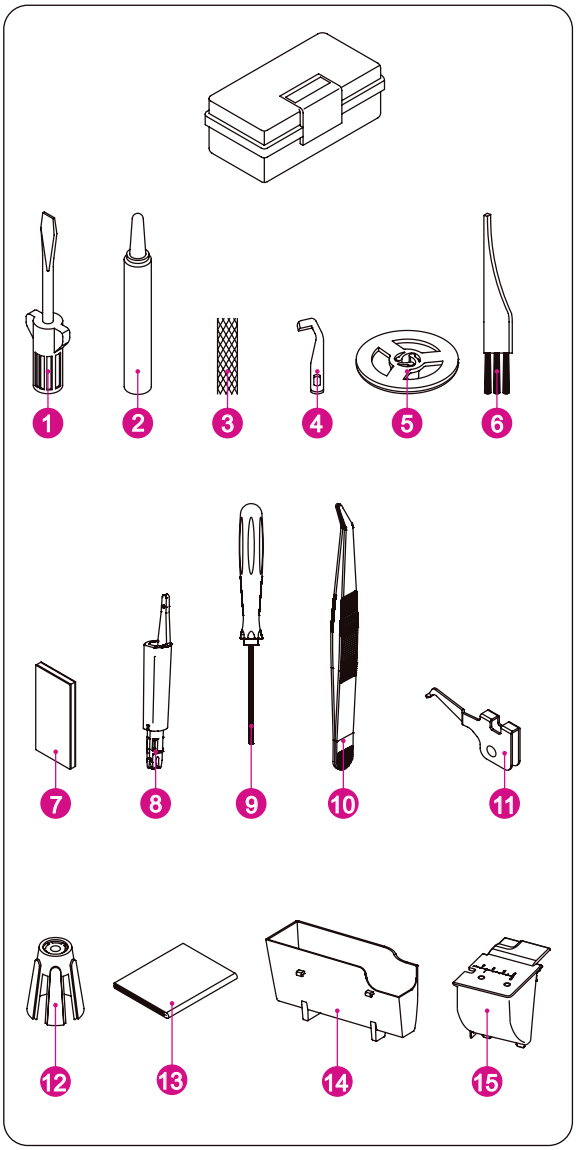
Details of machine



① Retractable thread stand
② Carrying handle
③ Left needle thread tension lever (yellow)
④ Right needle thread tension dial (green)
⑤ Upper looper thread tension dial (blue)
⑥ Lower looper thread tension dial (red)
⑦ Chainstitch looper thread tension dial (violet)
⑧ Stitch plate
⑨ Sewing table
⑩ Looper cover
⑪ Power / Light switch
⑫ Stitch length dial
⑬ Handwheel
⑭ Thread stand
⑮ Spool stabilizer
⑯ Spool pin
⑰ Cut-offs Bin



⑱ Presser foot lifter
⑲ Differential feed dial
⑳ Cutting width dial
㉑ Presser foot pressure wheel
㉒ Standard presser foot Overlock/Coverstitch



ACCESSORIES

Standard

① Screw driver (large size)
② Oiler
③ Spool net (5x)
④ Spare upper knife
⑤ Spool cap (5x)
⑥ Brush
⑦ Needle set (ELx705)
⑧ Needle Threader / inserter
⑨ Allen screw driver (small)
⑩ Tweezers
⑪ Upper looper converter (ULC)
⑫ Spool stabilizer (5x)
⑬ Dust cover
⑭ Cut-offs Bin
⑮ Cover-/Chainstitch Insert

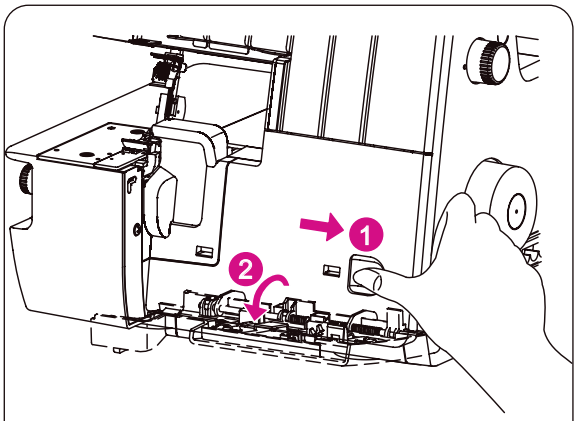
Needle Information

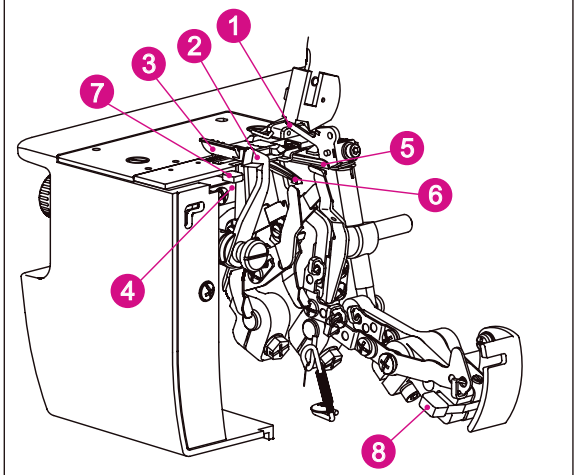
This overlock uses a flat shank industrial needle (ELx705).

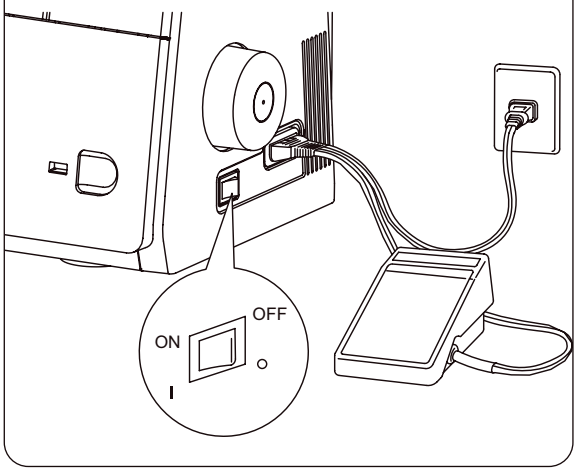
Do not attempt to use a standard household sewing machine needle of any size or type in this overlock.

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

CAUTION:
Be sure looper cover is closed when sewing.

Principal Parts behind the Looper Cover

(1) Upper looper
(2) Upper knife (moveable)
(3) Standard presser foot Overlock/Coverstitch
(4) Fixed position lower knife
(5) Lower looper
(6) Chain/Cover looper
(7) Rolled Hem lever
(8) Upper looper clutch

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.

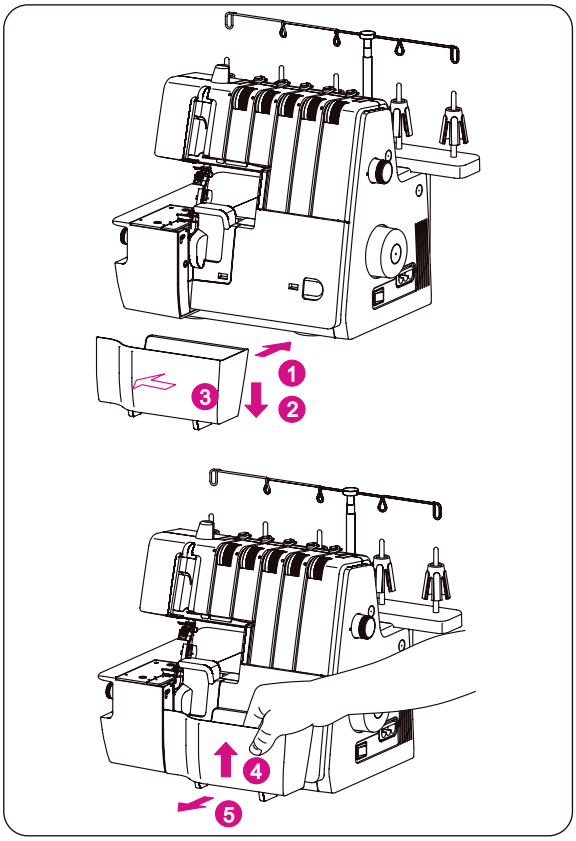
If it still does not fit contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.

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.



Cut-offs Bin

- **To attach**

– Insert the Cut-offs Bin (1) in the looper cover.

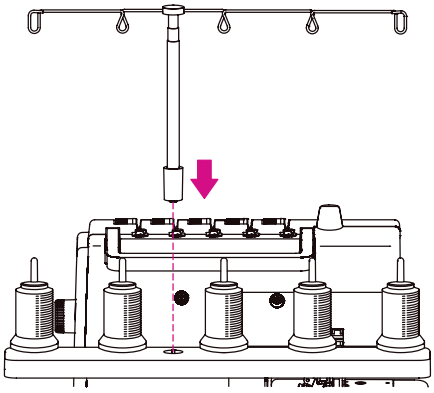
– Be sure to press the Cut-offs Bin downward (2).

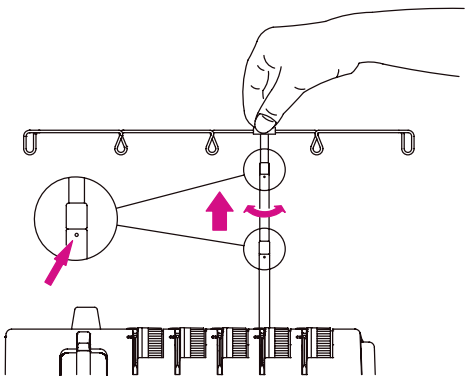
– Be sure the left side of Cut-offs Bin (3) is mounted near the cutter where the scraps drop.

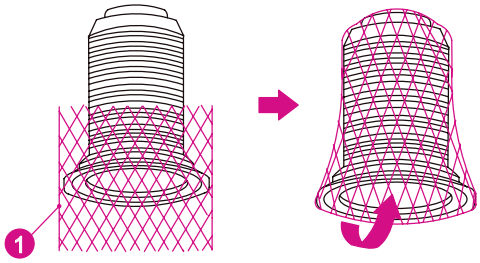
- **Removal**

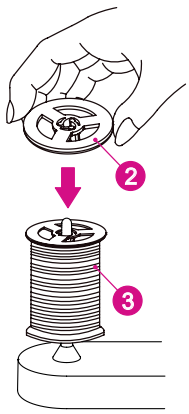
– Pull the Cut-offs Bin upward as the instruction (4).

– To remove (5), hold the Cut-offs Bin as shown and pull it outward.









PREPARATION FOR THREADING

Setting up the Retractable thread stand

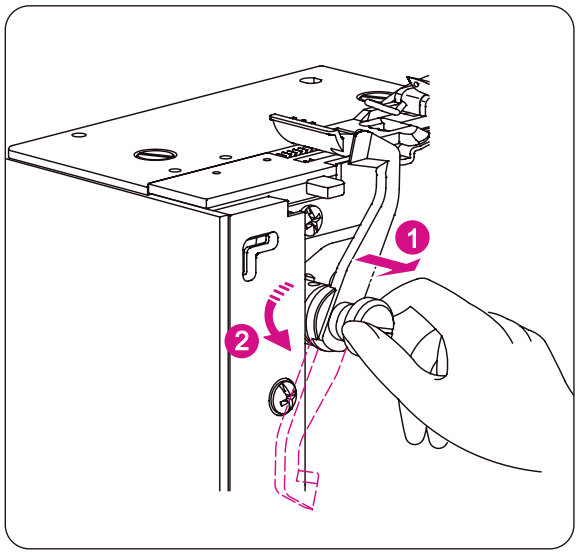
– Take out the retractable thread stand from the top of Styrofoam, and insert it as shown on the left illustration.
– This machine is shipped with the retractable thread stand on the top of styrofoam.
– Fully extend the retractable thread stand.
– The two joints on the telescope will click into place 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).

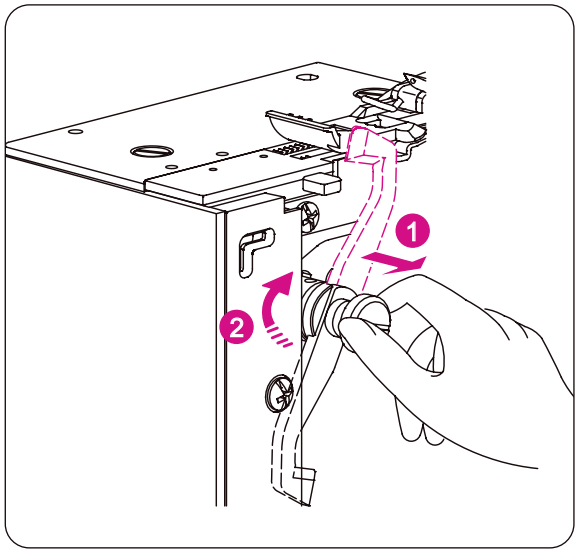


HOW TO DISENGAGE UPPER KNIFE

CAUTION:
Be sure to turn off power switch.

- **To place upper knife in nonworking position**

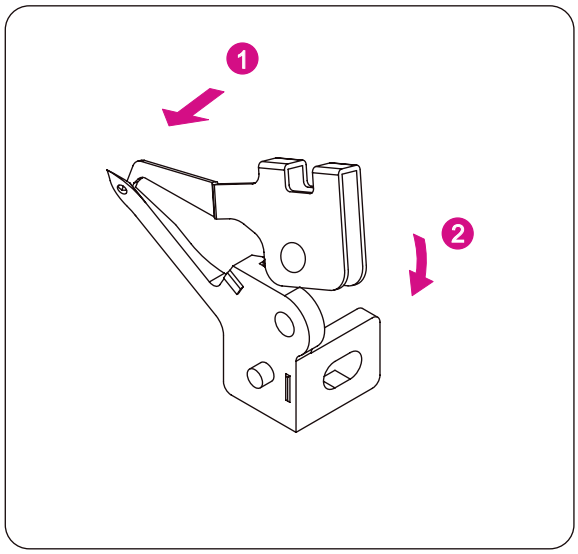
– Open looper cover (refer page 10).
– Pull the upper knife holder (1) to the right as far as it will go.
– Turn the holder (2) toward counter clockwise until the knife clicks into a lock position.



- **To place upper knife in working position**

– Open looper cover.
– Pull the upper knife holder (1) to the right as far as it will go.
– Turn the holder (2) clockwise until the knife clicks into the working position.

CAUTION:
Always close looper cover before operating machine.



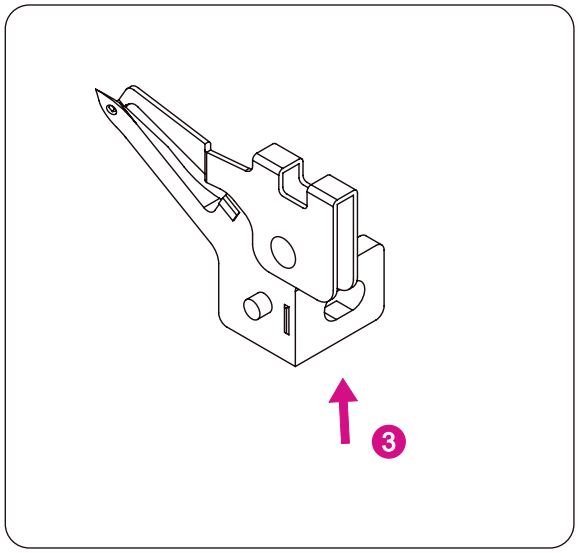
UPPER LOOPER CONVERTER (ULC)

CAUTION:
Be sure to turn off power switch.

When not threading the upper looper, the upper looper converter must be engaged into the upper looper eye.

Attach the Upper Looper Converter

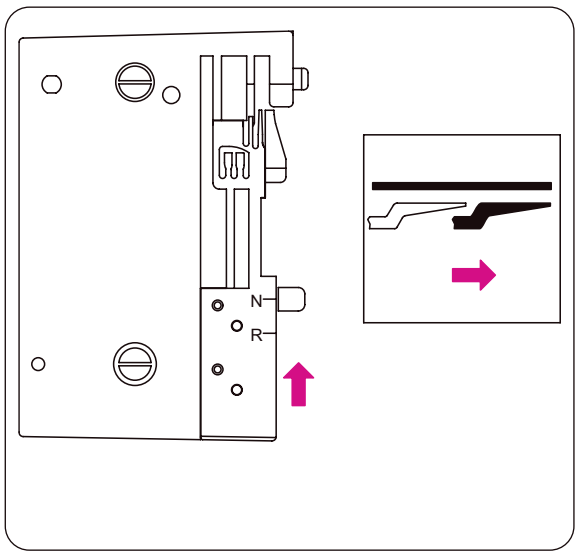
– To engage the upper looper converter, insert the sharp part (1) into the eye of upper looper.
– A raised point located in the trough of upper looper converter must be inserted and fixed (2) in the eye of the upper looper converter.



Remove the Upper Looper Converter

When using the upper looper, the upper looper converter must be disengaged.

– To disengage the upper looper converter, raise the handle (3) of upper looper according to picture.



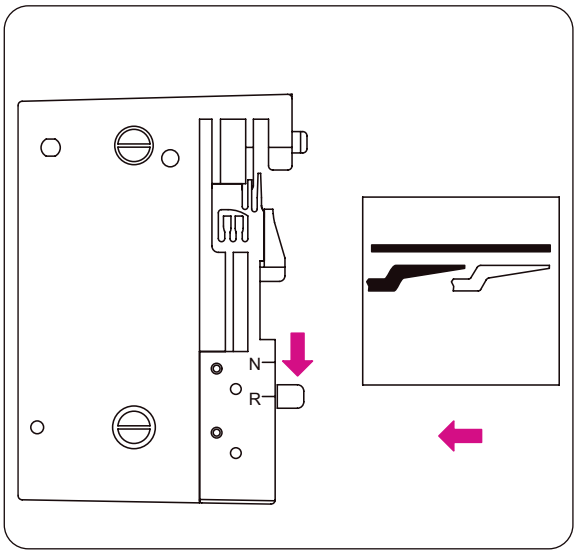
STANDARD OVERLOCK AND ROLLED HEM STITCHING

Sew Standard Overlock

Set seam width finger knob to "N" to move seam width finger to standard overlock sewing position.

PLEASE NOTE:

Be sure to push seam width finger knob as far as it will go in the direction of setting "N".

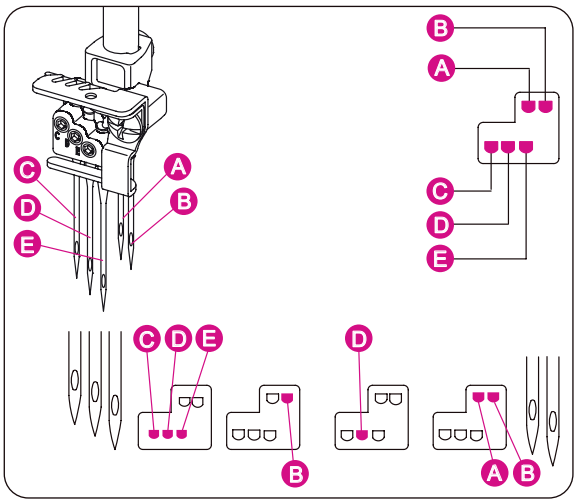


Sew Rolled Hem

Set seam width finger knob to "R" to retract the seam width finger and set it for rolled hem.

PLEASE NOTE:

Be sure to push seam width finger knob as far as it will go in the direction of setting "R".



HOW TO REMOVE AND INSERT NEEDLES

Needle Position

– With this machines, five needles can be inserted to the needle holder as shown. Only one or two or three needles are to be used for sewing.

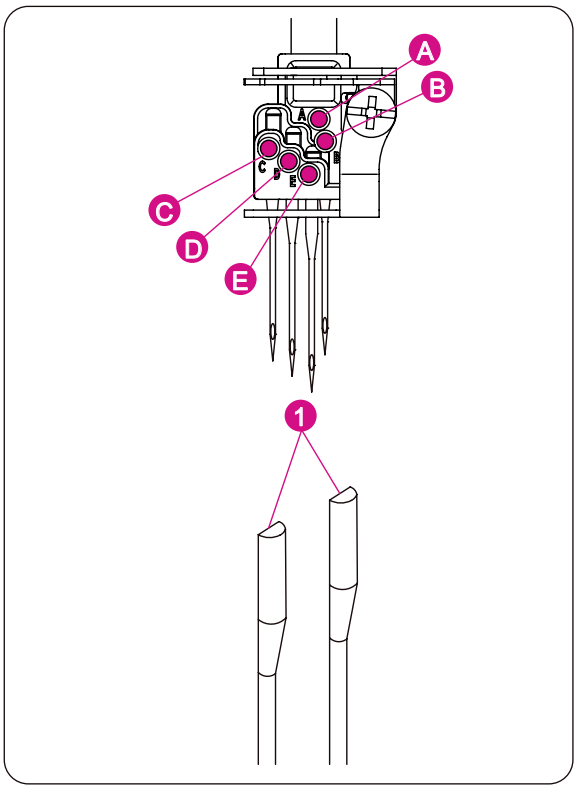
– Do not attempt to use four or five needles.

– The Stitch overview refers to different needle positions by illustrating the needle holder.

PLEASE NOTE:

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

(A) Left Needle (LN)
(B) Right Needle (RN)
(C) Left Coverstitch Needle (LC)
(D) Center Coverstitch Needle (CC)
(E) Right Coverstitch Needle (RC)

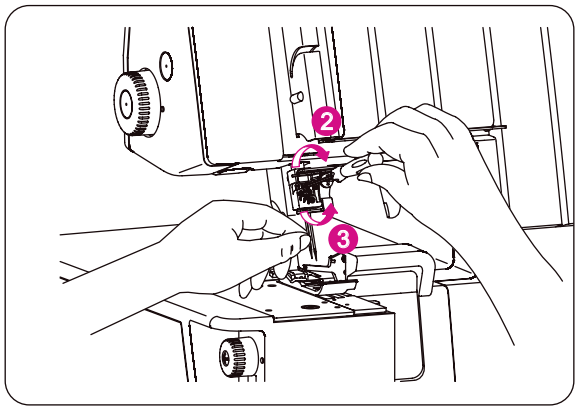


To Remove Needle(s)

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.

(A) Left needle (LN)
(B) Right needle (RN)
(C) Left Coverstitch Needle (LC)
(D) Center Coverstitch Needle (CC)
(E) Right Coverstitch Needle (RC)



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.

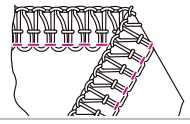
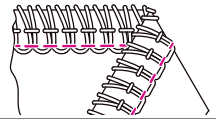
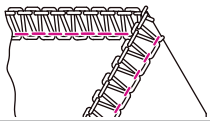
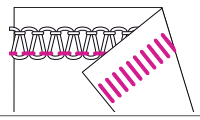
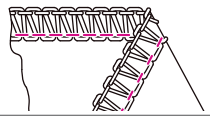
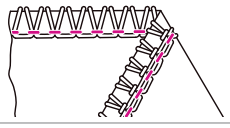
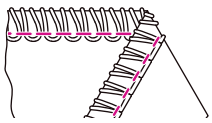
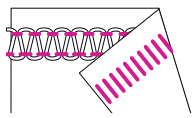
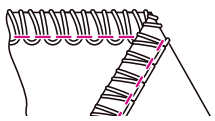
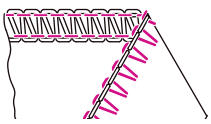
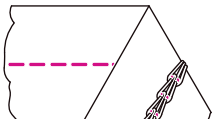
Do not use Standard Household Needles.

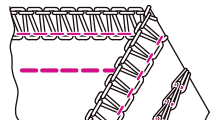
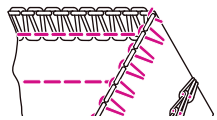
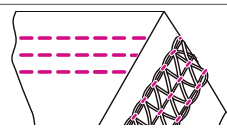
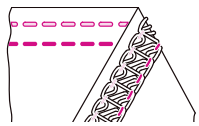
PLEASE NOTE:

When inserting needles into the (A,B) or (C, D, E) sockets it is necessary to loosen (3) all Allen Screws.
After inserting the needles equally tighten all Screws (2).

STITCH OVERVIEW

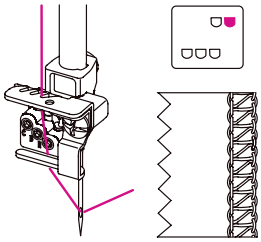
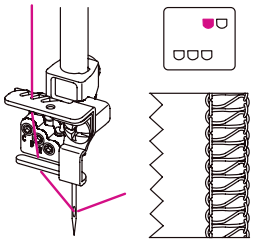
This machine is capable of producing various types of stitches according to the combination of needle positions, threading methods, tension adjustment and the use of upper looper converter ULC.

	Stitch Type		Use	Page
1	4–Thread Overlock with integrated safety seam		2–needle 4–Thread stitch that is ideal for medium to heavyweight stretchy fabrics such as double knits and swim wear.	49
2	3–Thread Super Stretch		2–needle 3–Thread stitch that is ideal for light weight, extremely stretchy fabrics such as tricot and spandex.	48
3 **4**	3–Thread Overlock wide 3–Thread Overlock narrow		1–needle 3–Thread stitch is used for overedging and seaming on common fabrics. A 4 mm and 6 mm overlock seam width can be obtained by changing the needle position.	46
5 **6**	3–Thread Flatlock wide 3–Thread Flatlock narrow		1–needle 3–Thread stitch is used for butted or lapped seams and ornamental stitching with decorative thread. Also a 4 mm and 6 mm flatlock width can be obtained by changing the needle position.	47
7	3–Thread Narrow Seam		1–needle 3–thread stitch is for edging light weight fabrics.	59
8	3–Thread Rolled Hem		1–needle 2–thread stitch is used for sewing narrow rolled hems. For a beautiful rolled hem, thread the upper looper with decorative thread and the needle and lower looper with light weight regular thread.	59
9 **10**	2–Thread Wrapped Overlock wide 2–Thread Wrapped Overlock narrow		1–needle 2–Thread stitch is used for seaming light weight or stretch fabrics. A 4 mm and 6 mm overlock seam width can be obtained by changing the needle position.	43
11 **12**	2–Thread Flatlock wide 2–Thread Flatlock narrow		1–needle 2–Thread stitch is used for butted or lapped seams and ornamental stitching with decorative thread. Also a 4 mm and 6 mm flatlock width can be obtained by changing the needle position.	45
13	2–Thread Rolled Hem		1–needle 2–thread stitch is used for fine rolled hems.	60
14 **15**	2–Thread Overlock wide 2–Thread Overlock narrow		1–needle 2–Thread stitch is used for overedging common fabrics. A 4 mm and 6 mm overlock seam width can be obtained by changing the needle position.	44
16	2-Thread Chainstitch		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 upper looper and movable knife.	41

Stitch Type		Use		Page
17 **18**	3-Thread Overlock & Chain wide 3-Thread Overlock & Chain narrow		The 5-Thread stitch is a safety stitch made up of combined 3-Thread overlock and double chainstitch. A wide seam is formed by using left needle. Overlock and seaming can be done in one operation on non-stretch fabrics.	51
19 **20**	2-Thread Overlock & Chain wide 2-Thread Overlock & Chain narrow		The 4-Thread stitch is a safety stitch made up of combined 2-Thread overlock and double chainstitch. A wide seam is formed by using left needle. Overlock and seaming can be done in one operation on non-stretch fabrics.	50
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.	55
22 **23**	3-Thread Coverstitch wide 3-Thread Coverstitch narrow		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. A narrow seam is formed by using left and center needles.	54

Depending on the needle positions used, this machine can sew 2-/3- and 4-Thread Overlock Stitches at a width of 4mm and 6 mm.

Also, for overedging heavyweight fabrics, the seam width can be increased still more by turning the cutting width dial. (Refer page 36)

Overlock width	**4.0 mm**	**6.0 mm**
Needle used	**Overlock right needle**	**Overlock left needle**
Needle tread tension dial	**Green**	**Yellow**
		

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 sewing chainstitches, set stitch length to over 2 mm.

– When sewing coverstitches, set stitch length to over "•" (2.5 mm).

THREADING THE MACHINE

List of abbreviations

Machine Setting

SL = Stitchlength
DF = Differential Dial
CW = Cutting Width
KG = Knife Guard (for Overlock Stitches)
CSI = Cover/Chainstitch Inserter (for Cover-/Chainstitches)
RHP = Rollhemlever Position

Thread Tension Color Code

yellow = (LN, LC, CC)
green = (RN, LN)
blue = (UL, RC)
red = (LL)
violet = (CL)

Needles and Loopers

LN = Left Needle
RN = Right Needle

LC = Left Coverstitch Needle for CS
CC = Center Coverstitch Needle for CS
RC = Right Coverstitch Needle for CS
CS = Chain-/Coverstitches

UL = Upper Looper
ULC = Upper Looper Converter
LL = Lower Looper
CL = Cover-/Chainstitch Looper

Threading Chart Summary

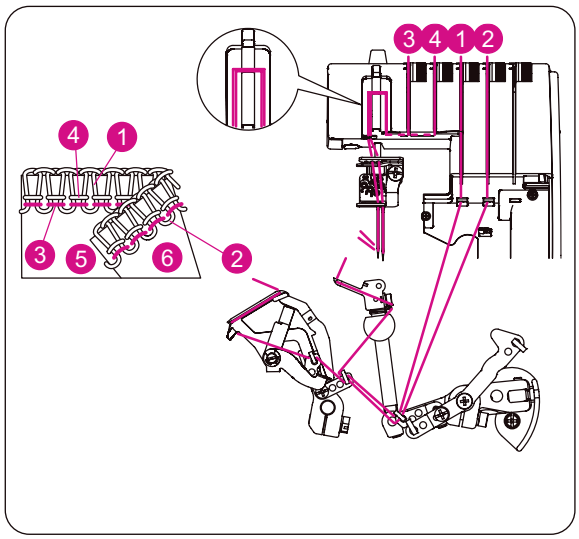
Stitch Type		Machine Settings						Thread Tension				
		SL	DF	KG/CSI	CW	RHP	NP	Yellow	Green	Blue	Red	Violet
1	4-Thread Overlock with integrated safety seam	2.5	1	KG	6	N		4.0	4.0	4.0	4.0	
2	3-Thread Super Stretch	2.5	1	KG	6	N		4.0	4.0		3.5	
3	3-Thread Overlock wide	2.5	1	KG	6	N		3.0		4.5	3.5	
4	3-Thread Overlock narrow	2.5	1	KG	6	N			4.5	4.5	4.0	
5	3-Thread Flatlock wide	2.5	1	KG	6	N		0.0		4.5	7.0	
6	3-Thread Flatlock narrow	2.5	1	KG	6	N			0.0	4.5	6.5	
7	3-Thread Narrow Seam	1.5	1	KG	5	R			4.0	5.0	4.0	
8	3-Thread Rolled Hem	1	1	KG	5	R			4.0	4.0	6.0	
9	2-Thread Wrapped Overlock wide	2.5	1	KG	6	N		2.5			3.0	
10	2-Thread Wrapped Overlock narrow	2.5	1	KG	6	N			4.5		3.5	
11	2-Thread Flatlock wide	2.5	1	KG	6	N		0.0			4.0	
12	2-Thread Flatlock narrow	2.5	1	KG	6	N			0.0		4.5	
13	2-Thread Rolled Hem	1	1	KG	5	R			4.5		4.0	
14	2-Thread Overlock wide	2.5	1	KG	6	N		0.0			4.0	
15	2-Thread Overlock narrow	2.5	1	KG	6	N			0.0		4.5	
16	2-Thread Chainstitch	3	1	CSI	-	R			4.5			5.5
17	3-Thread Overlock & Chainstitch wide	2.5	1	KG	6	N		2.0	5.5	4.5	3.5	5.5
18	3-Thread Overlock & Chainstitch narrow	2.5	1	KG	6	N		2.0	4.5	4.5	4.0	5.5
19	2-Thread Overlock & Chainstitch wide	2.5	1	KG	6	N		2.0	0.0		4.5	5.5
20	2-Thread Overlock & Chainstitch narrow	2.5	1	KG	6	N		2.0	0.0		5.0	5.5
21	4-Thread Coverstitch	3	1	CSI	-	R		3.0	6.0	6.5		4.0
22	3-Thread Coverstitch wide	3	1	CSI	-	R		3.0		6.5		4.0
23	3-Thread Coverstitch narrow	3	1	CSI	-	R		3.0	6.0			4.0

Machine Setting

SL = Stitchlength
DF = Differential Dial
CW = Cutting Width
KG = Knife Guard (for Overlock Stitches)
CSI = Cover/Chainstitch Insert (for Cover-/Chainstitches)
RHP = Rollhemlever Position

Thread Tension Color Code

yellow = (LN, LC, CC)
green = (RN, LN)
blue = (UL, RC)
red = (LL)
violet = (CL)



Threading Diagram Overlock Stitches

– A color coded threading diagram is located inside the looper cover for quick reference.

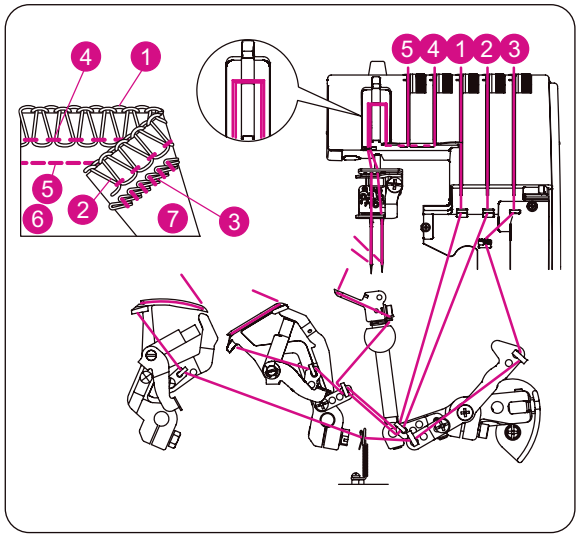
– Thread the machine in the order (1)–(4).

PLEASE NOTE:

Threads go through the take-up lever cover for Overlock as shown.

- **Tension color code Overlock Stitches**

(1) Upper looper thread (Blue)
(2) Lower looper thread (Red)
(3) Left needle thread (Yellow)
(4) Right needle thread (Green)
(5) Topside of fabric
(6) Underside of fabric



Threading Diagram Overlock and Chainstitches

– A color coded threading diagram is located inside the looper cover for quick reference.

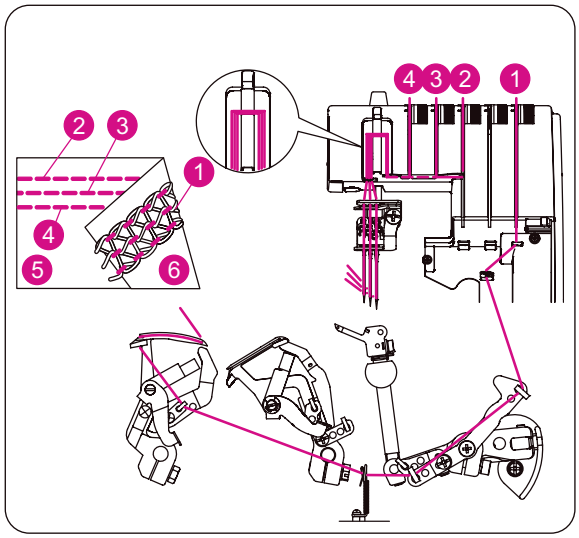
– Thread the machine in the order (1)–(5).

PLEASE NOTE:

Threads go through the take-up lever cover for Overlock as shown.

- **Tension color code Overlock and Safety Stitch**

(1) Upper looper thread (Blue)
(2) Lower looper thread (Red)
(3) Chain looper thread (Violet)
(4) Right needle thread (Green)
(5) Left needle thread (Yellow)
(6) Topside of fabric
(7) Underside of fabric



Threading Diagram Coverstitches

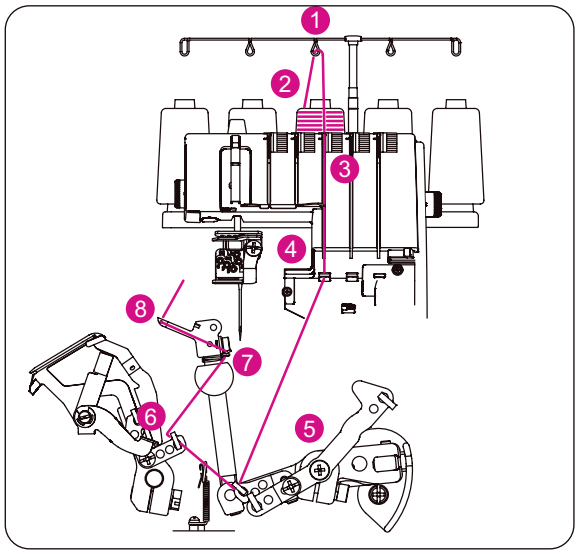
– A color coded threading diagram is located inside the looper cover for quick reference.

– Thread the machine in the order (1)–(4).

- **Tension color code Coverstitch**

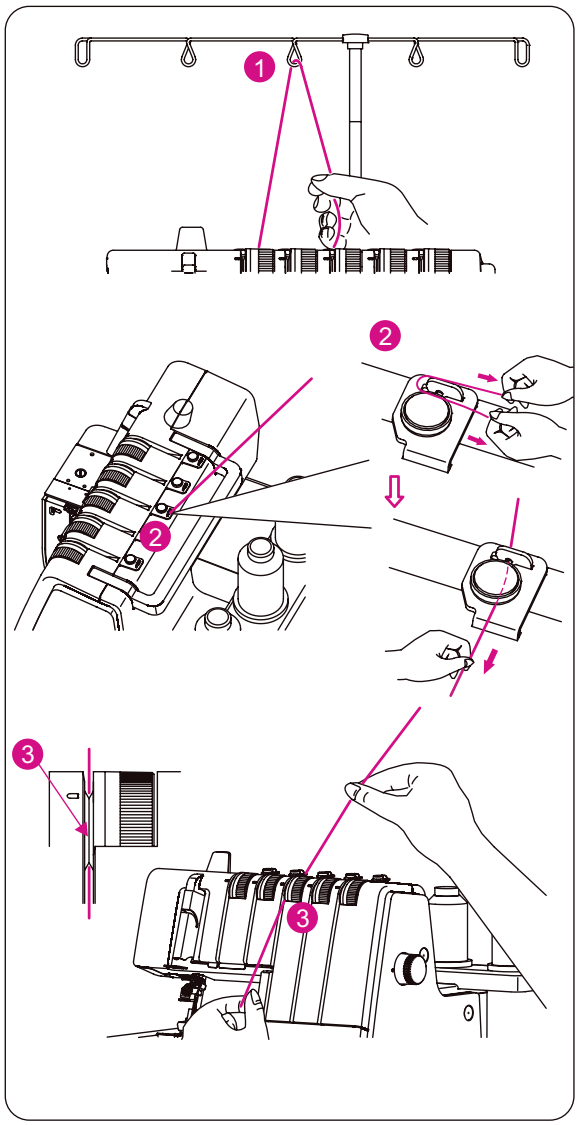
(1) Coverstitch looper thread (Violet)
(2) Cover Right needle thread (Blue)
(3) Cover/Chain Center needle thread (Green)
(4) Cover Left needle thread (Yellow)
(5) Topside of fabric
(6) Underside of fabric

Threading the Upper Looper (Blue)



CAUTION:
Be sure to turn off power switch.

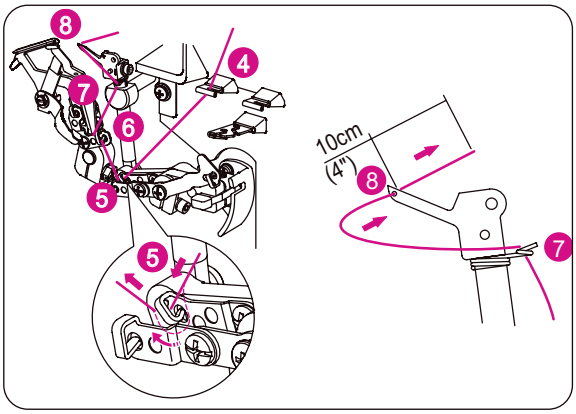
– Raise the presser foot to open the tension discs.
– Thread the upper looper as indicated (1)–(8).



– 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.

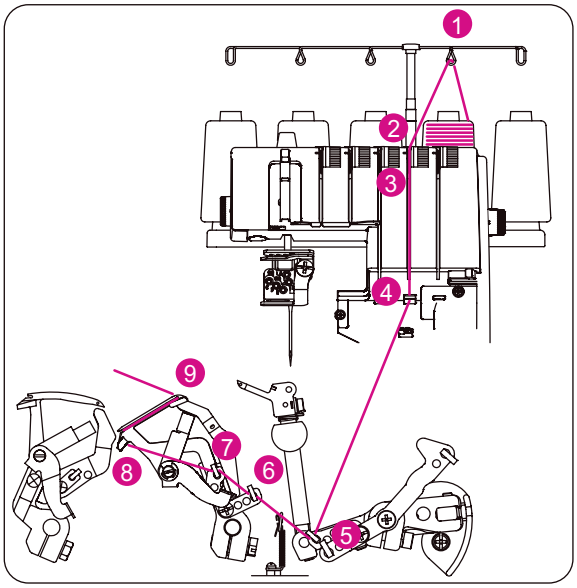
– While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs (3).



– Thread the looper area of the machine following the blue color coded thread guides (4)–(8).
– Thread the hole in the upper looper from front to back (8).

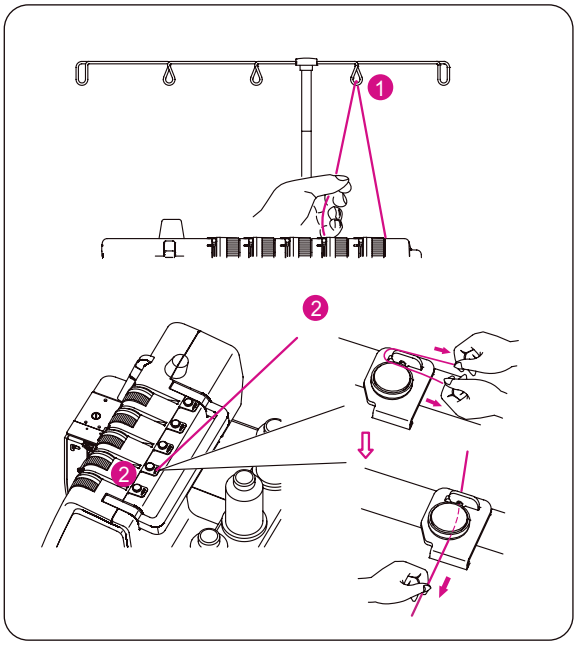
PLEASE NOTE:

Make sure thread passes behind lower looper. Use of tweezers in the looper cover will make needle eye threading easy.



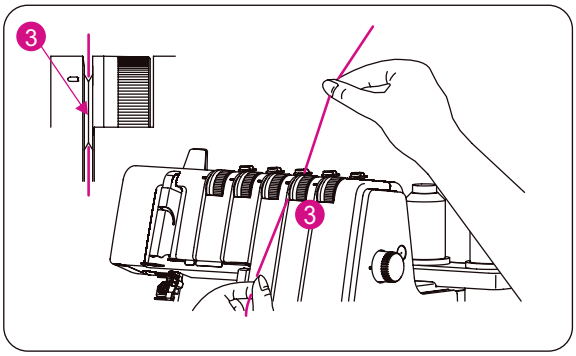
Threading the Lower Looper (Red)

– Raise the presser foot to open the tension discs.
– Thread the lower looper as indicated (1)–(9).

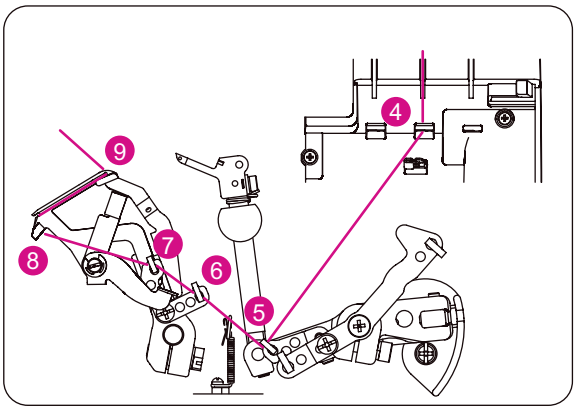


– Pass thread from back to the front through the thread guide (1).

– 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.



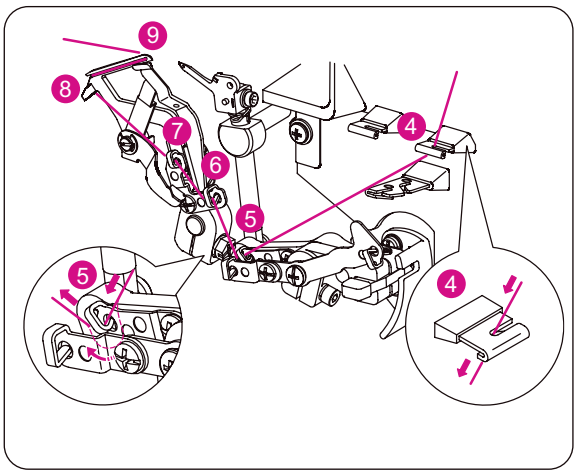
– While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs (3).
– Turn the handwheel toward you until the lower looper extends out 5–10 mm from the stitch plate edge.



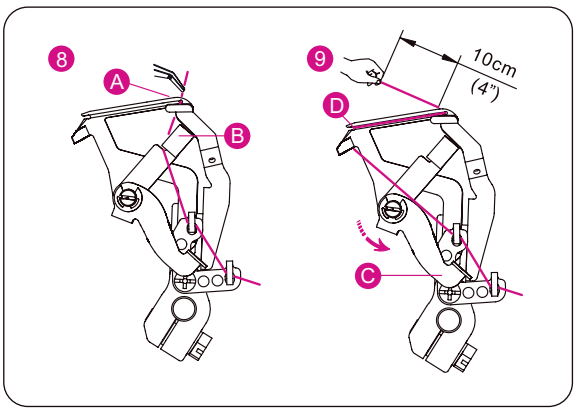
– Thread the looper area of the machine following the red color coded thread guides (4)–(9).

PLEASE NOTE:

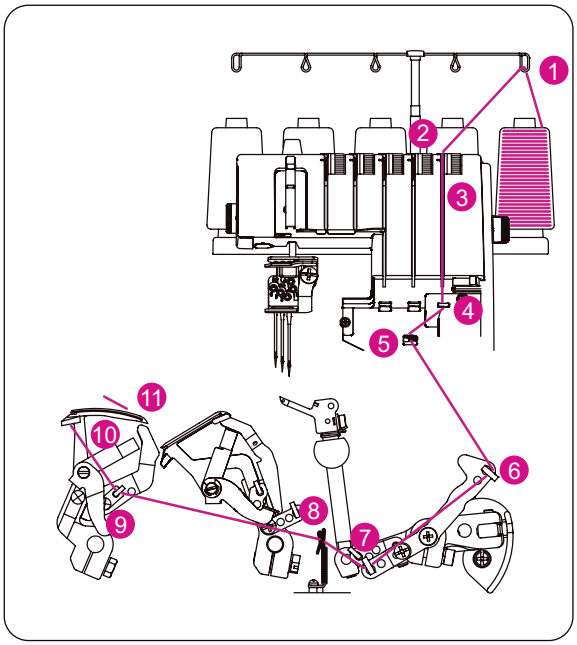
Use of tweezers in the looper cover will make needle eye threading easy.



– Place the thread with the point of the tweezers slightly from left and to the right of threading guide (4).



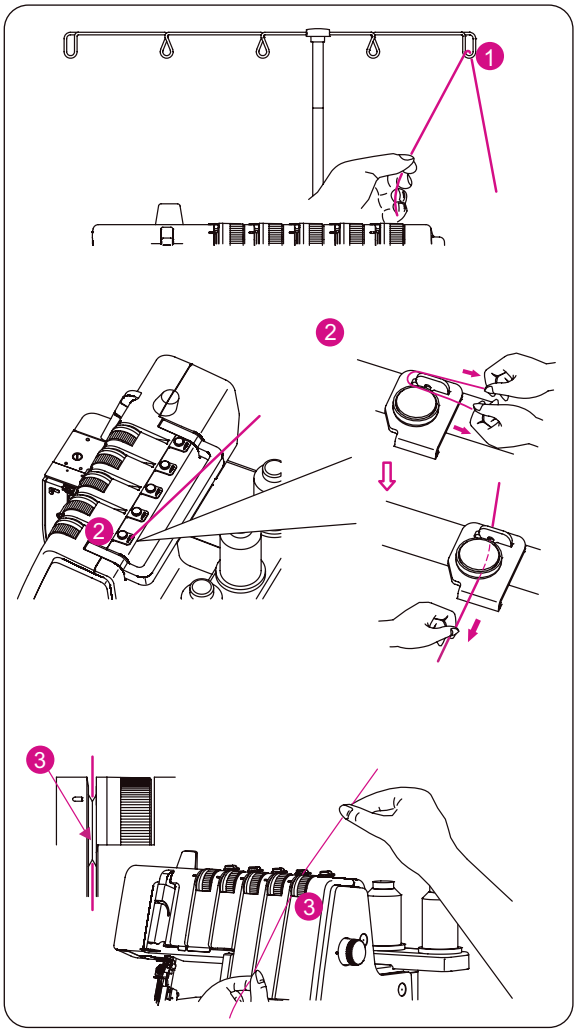
– Thread the looper eye (A) from front to back.
– Pull about 10 cm (4 inches) of thread.
– Position thread into V cutout (B) on threader.
– Firmly hold thread tail with left hand and pull Threader lever (C) up into place (D).



Threading the Chainstitch/ Coverstitch Looper (Violet)

CAUTION:
Be sure to turn off power switch.

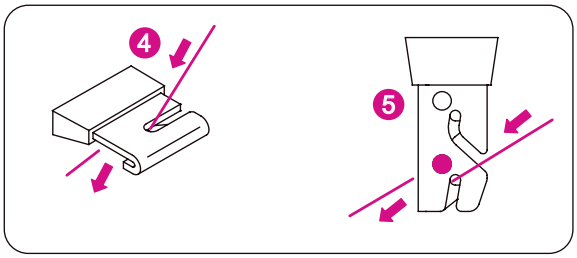
– Raise the presser foot to open the tension discs.
– Thread the chainstitch/coverstitch looper as indicated (1)–(11).

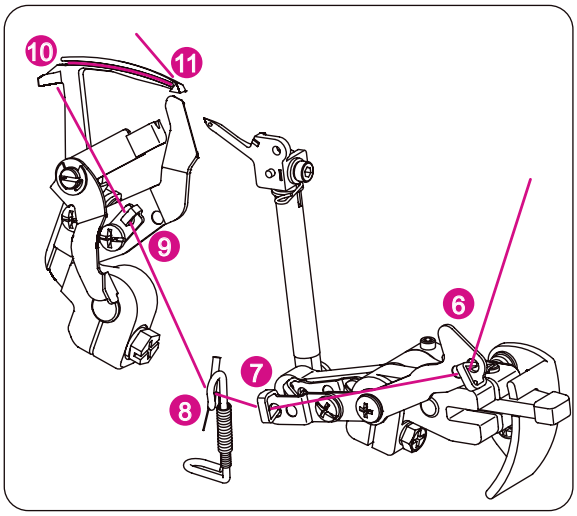


– Pass thread from back to the front through the thread guide (1).

– Thread the pre-tension guide by pulling the thread towards the 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).



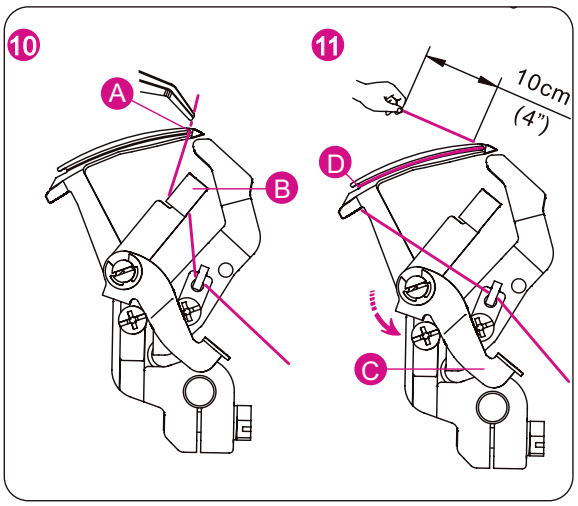


– Turn the hand wheel toward you until the chainstitch looper extends out 10mm from the throat plate edge.
– Thread the looper area of the machine following the violet color-coded thread guides (4)–(11).

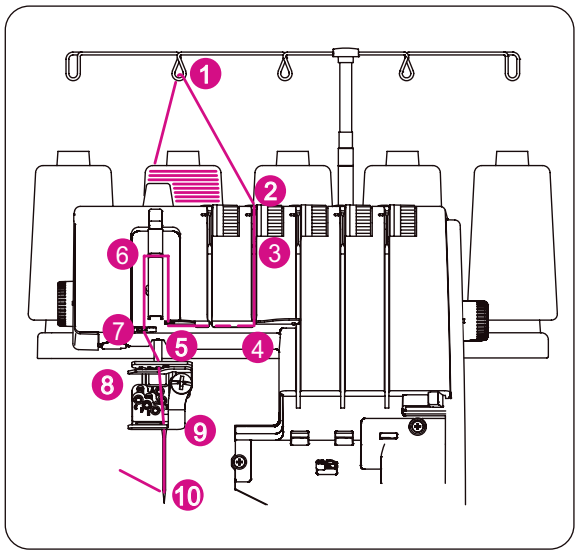
PLEASE NOTE:

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), (7) and (8).



– 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).

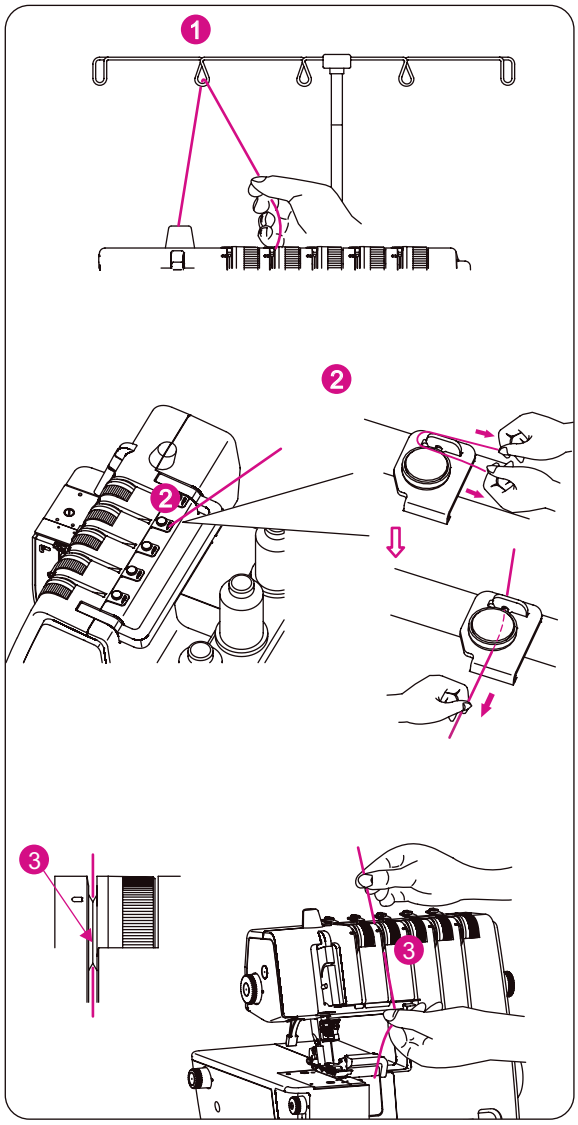


Threading the Overlock Right Needle (Green)

(B On Needle Clamp)

CAUTION:
Be sure to turn off power switch.

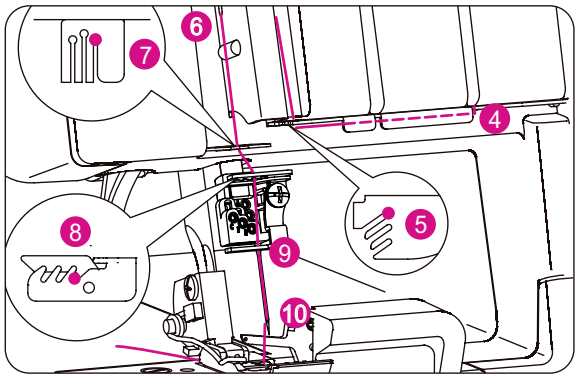
– Raise the presser foot to open the tension discs.
– Thread the right needle as indicated (1)–(10).



– 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).



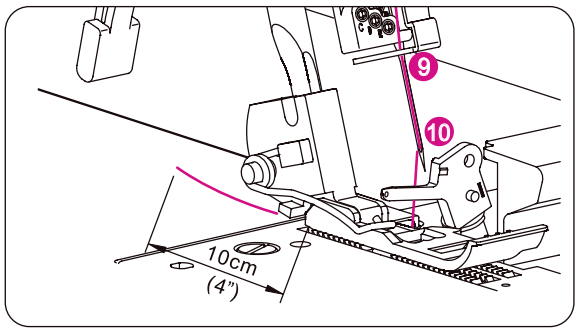
– Continue to thread points (4)–(10).

PLEASE NOTE:

Slip the thread into the rear slot on the thread guide (5)and into the slot on the take-up lever cover (6). Then slip the thread into the right slot on the thread guides (7) and (8).

Before threading eye of needle, slip thread behind thread guide (9) located on the bottom of the needle holder.

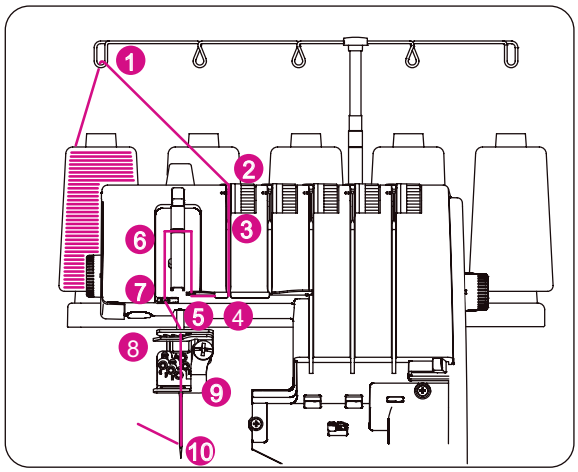
– Thread the eye of the right needle (10).



PLEASE NOTE:

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

– The position of the thread must be behind the thread guide.
– Draw about 10 cm (4 inches) of thread through needle eye towards the rear of machine.
– Place the thread to the back, under the presser foot.



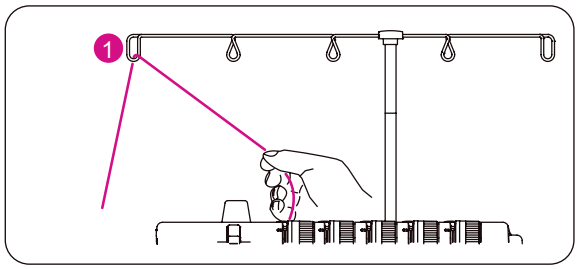
Threading the Overlock Left Needle (Yellow)

(A On Needle Clamp)

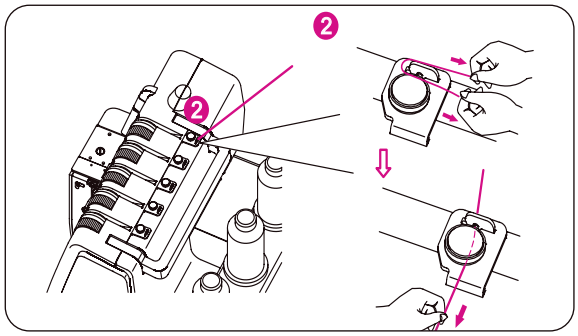
CAUTION:

Be sure to turn off power switch.

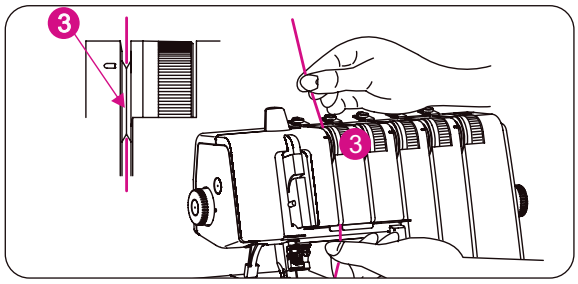
– Raise the presser foot to open the tension discs.
– Thread the left needle as indicated (1)–(10).



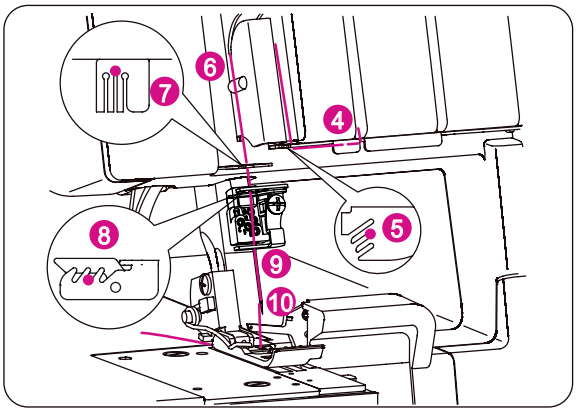
– Pass thread from back to the front through the thread guide (1).



– 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.



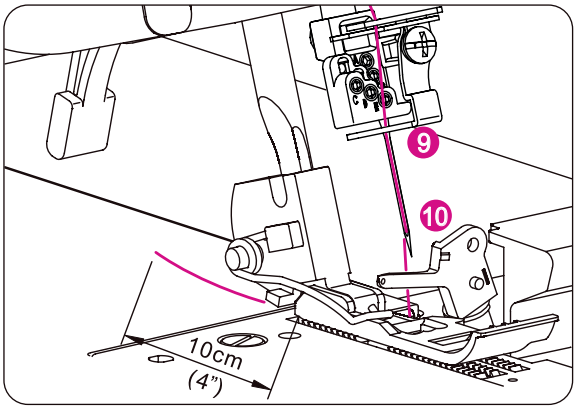
– While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs (3).



– Continue to thread points (4)–(10).

PLEASE NOTE:

Slip the thread into the middle slot on the thread guide (5) and into the slot on the take-up lever cover (6).
Then slip the thread into the middle slot on the thread guides (7) and (8).



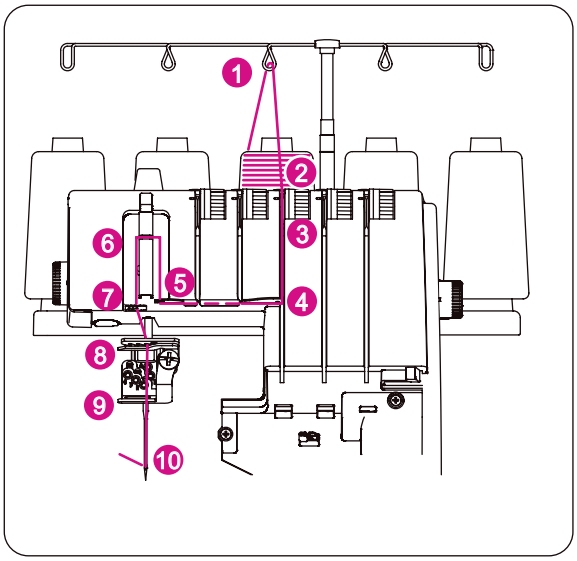
Before threading eye of needle, slip thread behind thread guide (9) located on the bottom of the needle holder.

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

PLEASE NOTE:

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

– The position of the thread must be behind the thread guide.
– Draw about 10 cm (4 inches) of thread through needle eye towards the rear of machine.
– Place the thread to the back, under the presser foot.



Threading the Coverstitch Needles

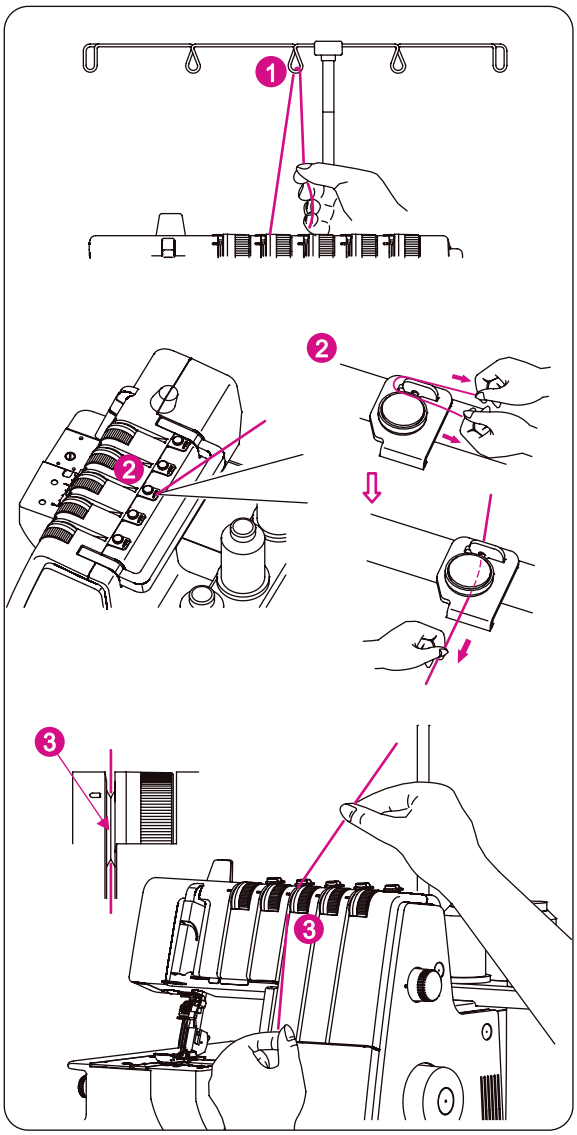
- **Right Coverstitch Needle (Blue)**

(E On Needle Clamp)

> **CAUTION:**
> Be sure to turn off power switch.

– Raise the presser foot to open the tension discs.

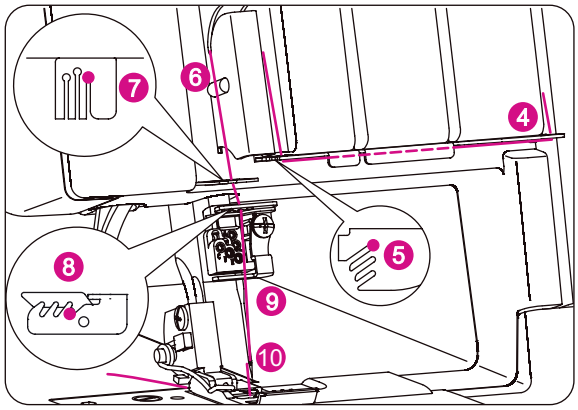
– Thread the right coverstitch needle as indicated (1)–(10).



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

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

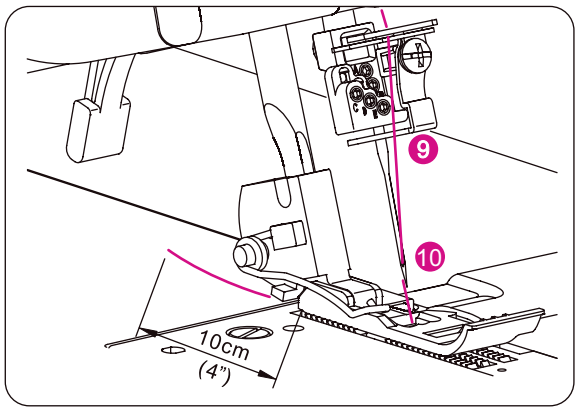
– While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs (3).



– Continue to thread points (4)–(10).

PLEASE NOTE:

Slip thread into the rear slot on the thread guide (5) and bottom slot of take-up lever cover (6). Then slip thread into the right slot on the thread guide (7), and into the right slot on the thread guide (8).



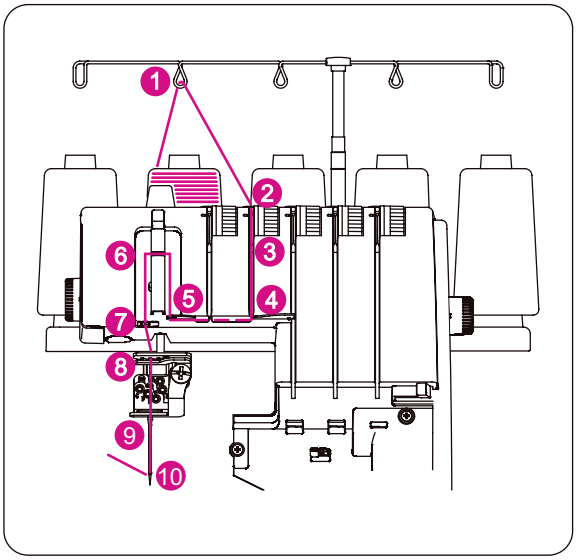
Before threading the eye of the needle, make sure thread is in front of thread guide located on the bottom of the needle holder (9).

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

PLEASE NOTE:

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

– The position of the thread must be behind the thread guide.
– Draw about 10 cm (4 inches) of thread through needle eye towards the rear of machine.
– Place the thread to the back, under the presser foot.



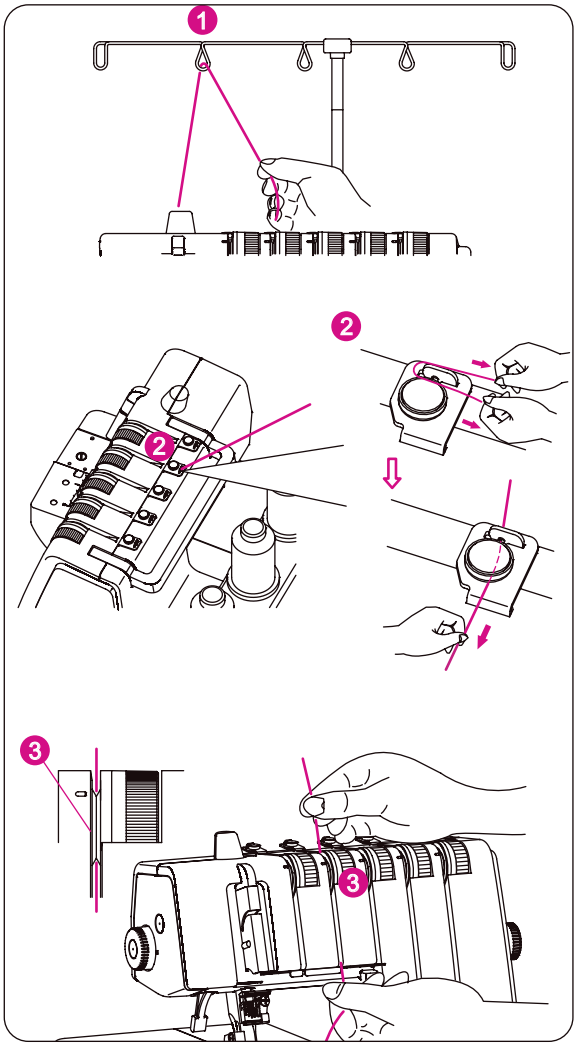
- **Center Coverstitch/Chainstitch Needle (Green)**

(D On Needle Clamp)

CAUTION:

Be sure to turn off power switch.

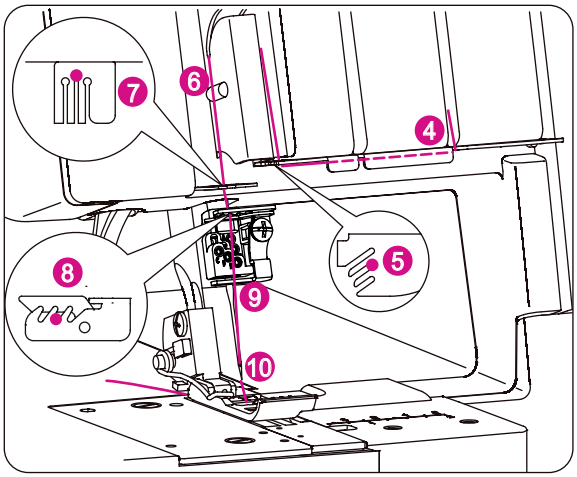
– Raise the presser foot to open the tension discs.
– Thread the center coverstitch/chainstitch needle as indicated (1)–(10).



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

– Thread the pre-tension guide by pulling the thread towards the 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).

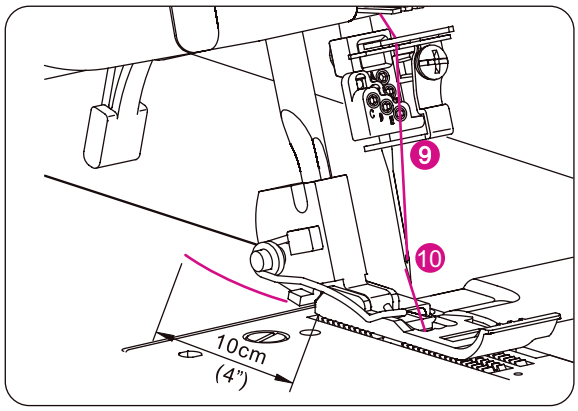


– Continue to thread points (4)–(10).

PLEASE NOTE:

Slip thread into the middle slot on the thread guide (5) and bottom slot of take-up lever cover (6).
Then slip thread into the middle slot on the thread guide (7) and thread guide (8).

Before threading the eye of the needle, make sure thread is in front of thread guide located on the bottom of the needle holder (9).

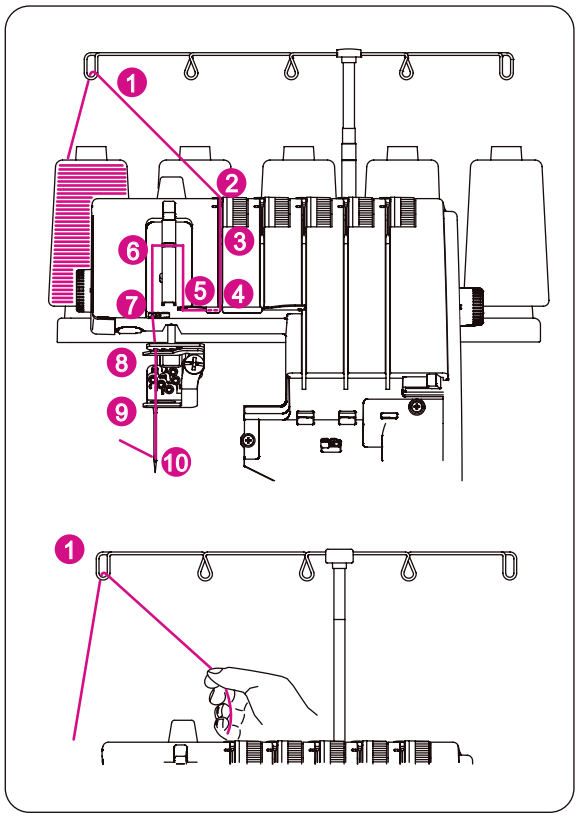


– Thread the eye of the center needle (10).

PLEASE NOTE:

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

– The position of the thread must be behind the thread guide.
– Draw about 10 cm (4 inches) of thread through needle eye towards the rear of machine.
– Place the thread to the back, under the presser foot.



- **Left Coverstitch Needle (Yellow)**

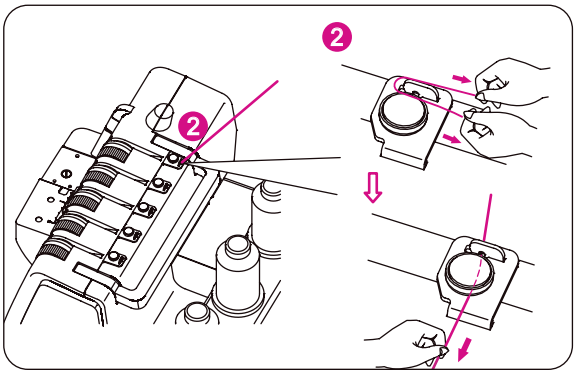
(C On Needle Clamp)

CAUTION:

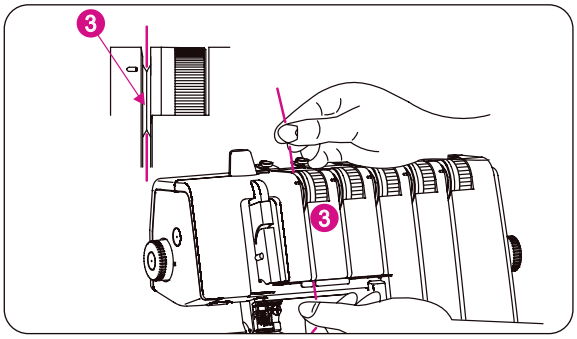
Be sure to turn off power switch.

– Raise the presser foot to open the tension discs.
– Thread the left coverstitch as indicated (1)– (10).

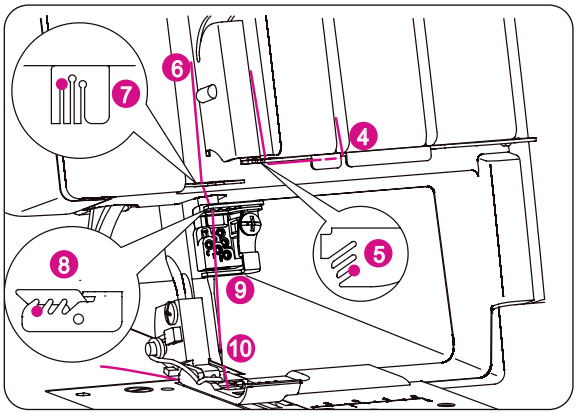
– Pass thread from back to the front through the thread guide (1).



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



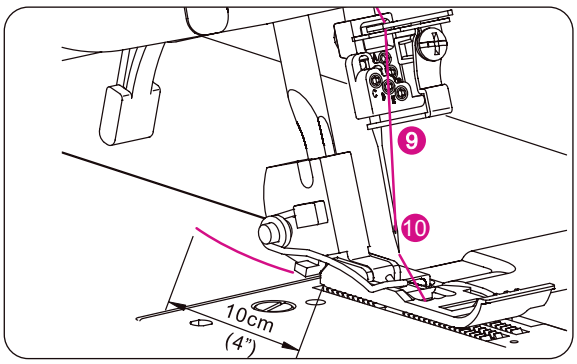
– While holding thread with fingers, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs (3).



– Continue to thread points (4)–(10).

PLEASE NOTE:

Slip thread into the front slot on the thread guide (5) and lower slot of take-up lever cover (6). Then slip thread into the left slot on the thread guide (7), and into the left slot on the thread guide (8).



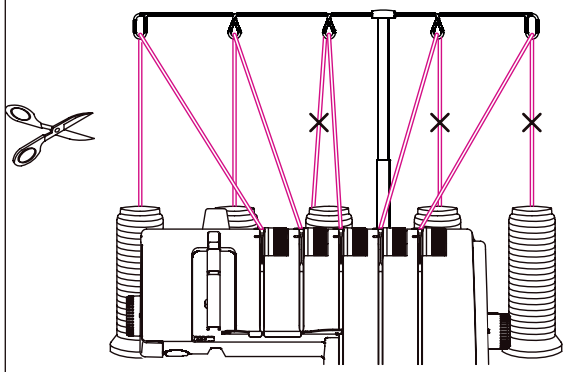
Before threading eye of needle, slip thread behind thread guide (9) located on the bottom of the needle holder for Coverstitch.

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

PLEASE NOTE:

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

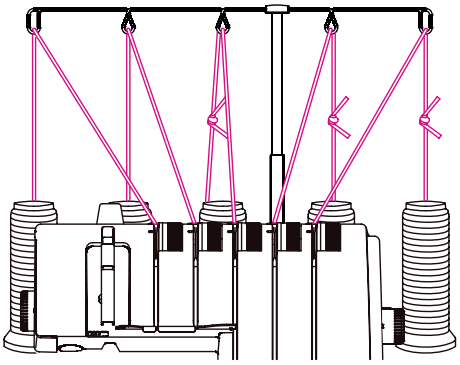
– The position of the thread must be behind the thread guide.
– Draw about 10 cm (4 inches) of thread through needle eye towards the rear of machine.
– Place the thread to the back, under the presser foot.



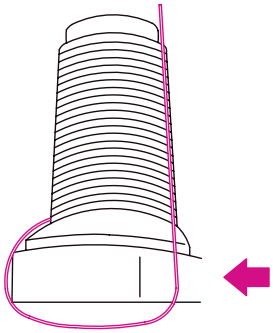
HOW TO CHANGE THREADS

Tie on method

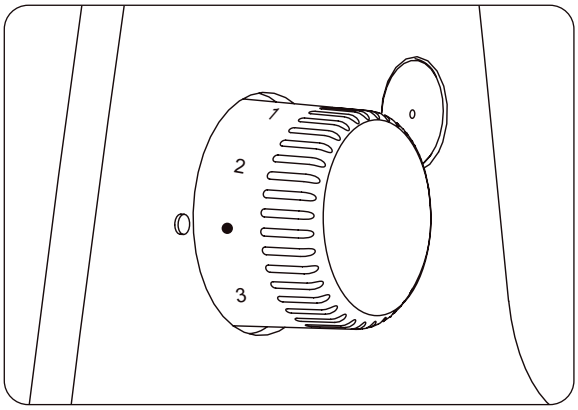
– To change thread type or color, clip thread near the spool.



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



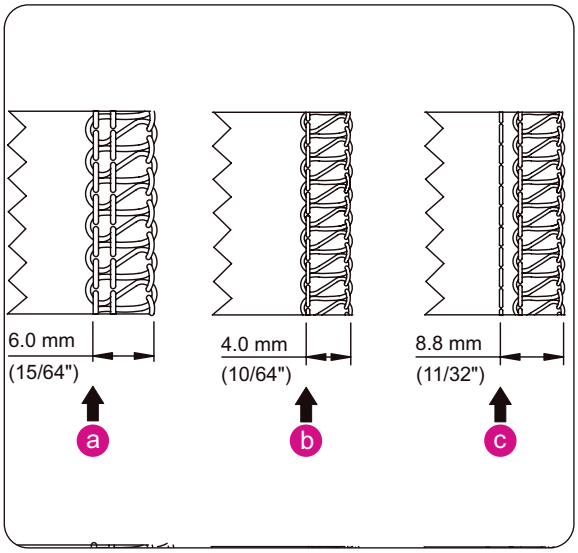
– Pull the threads through the machine one at a time.
– If threads do not pull easily, check for tangles on thread guides or looping under thread stand.
– When pulling thread through the needles, **STOP** when the knot is in front of the needle.
– Cut the knot and thread the needle eye.



HOW TO ADJUST THE STITCH LENGTH

Stitch lenght dial

– The stitch length dial should be set on the "● = 2.5" setting for most sewing conditions.
– Adjust the stitch length to 2.5 – 4 when sewing heavy weight fabrics.
– For rolled hems and narrow seams set the stitch length between 1 and 2.
– A shorter stitch length can be used to avoide fabric from puckering.
– Adjust the stitch length to 2 – 4 when sewing highly stretchy fabrics.



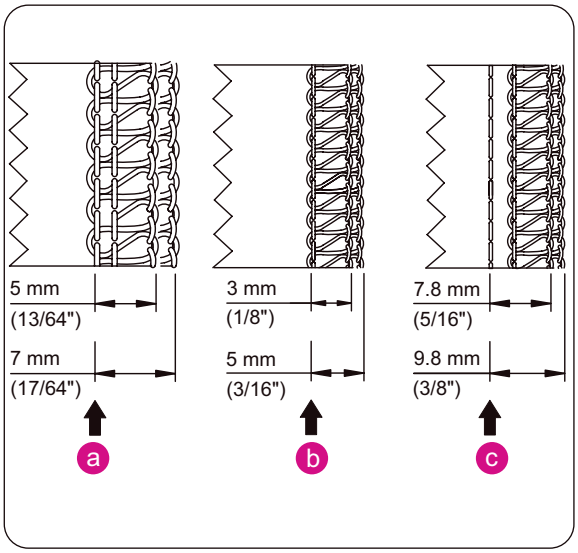
HOW TO ADJUST THE SEAM WIDTH

Overlock seam width can be achieved by repositioning the needle position and also with the cutting width dial.

Width adjustment by changing needle position

Overlock seam width can be adjusted by changing the needle position.

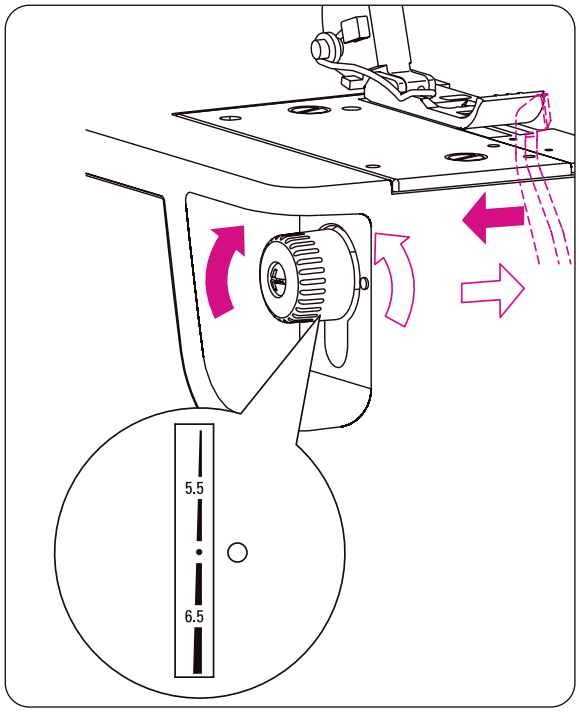
(a) When using left needle
6 mm (15/64")
(b) When only right needle is used
4 mm (10/64")
(c) When using chainstitch needle
8.8 mm (11/32")



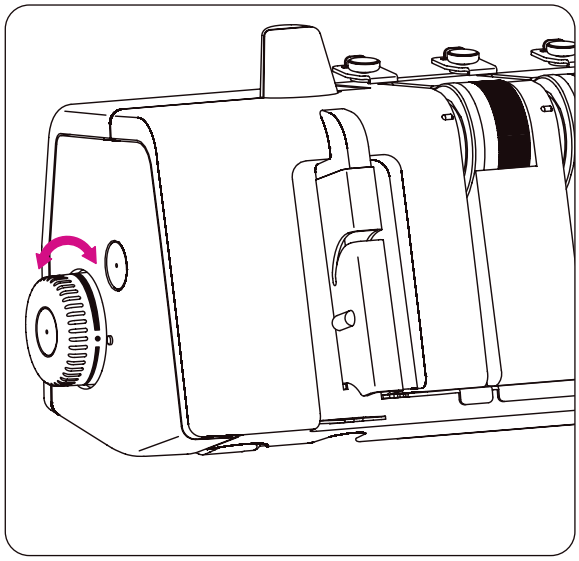
Cutting width dial

Use of cutting width dial will permit further adjustment within the width range shown below.

(a) When using left needle
5-7 mm (15/64")
(b) When only right needle is used
3-5 mm (1/8"-3/16")
(c) When using chainstitch needle
7.8–9.8 mm (5/16"–3/8")



– Turn the cutting width dial counter clockwise to increase width of cutting, and clockwise to decrease width of cutting.



HOW TO ADJUST THE PRESSER FOOT PRESSURE

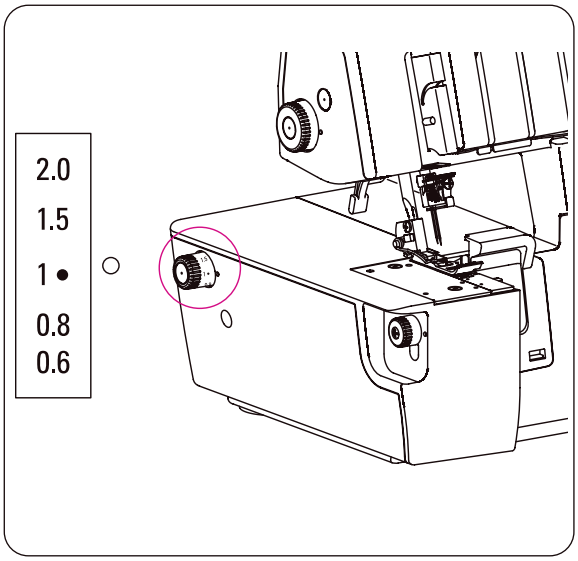
Presser foot pressure wheel

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 heavyweight fabrics.

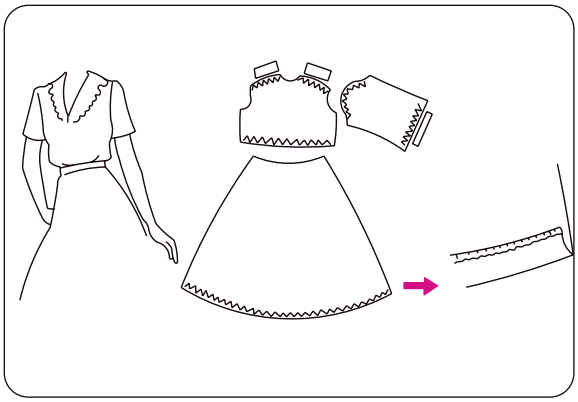
In such case, use "●" for normal, "L" for the lightest pressure and "H" for the heaviest.

– For light weight fabric Decrease the pressure.
– For heavy weight fabric Increase the pressure.
– Testsew to define the optimal pressure for your sewing project.



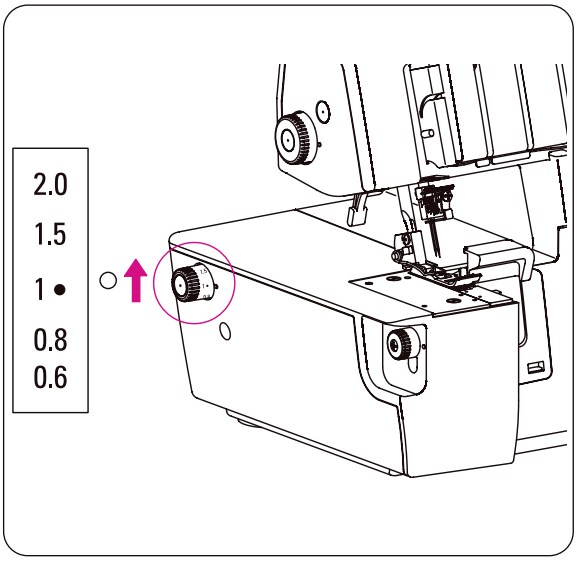
DIFFERENTIAL FEED

– 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 pictured 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 Overlock (1–2.0)

Gathered overlock is most suited for shirring sleeves, yokes, front and back bodices, skirt hems, etc. in stretch fabrics as well as knits and jersey before assembling into garment.

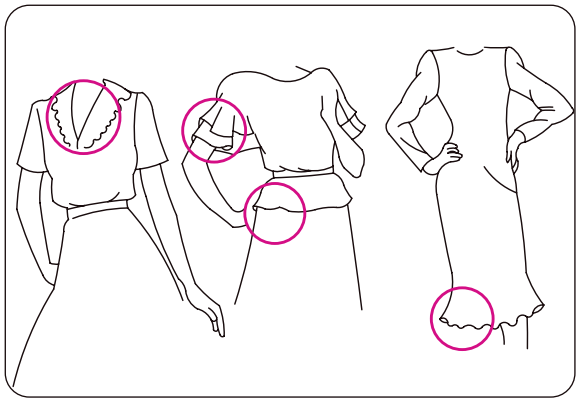


- **To set the differential feed dial for gathering**

– 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.

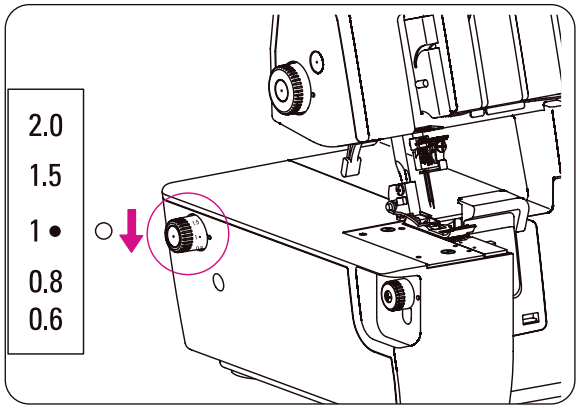
PLEASE NOTE:

For normal overlock stitching, set differential feed dial to graduation “1”.



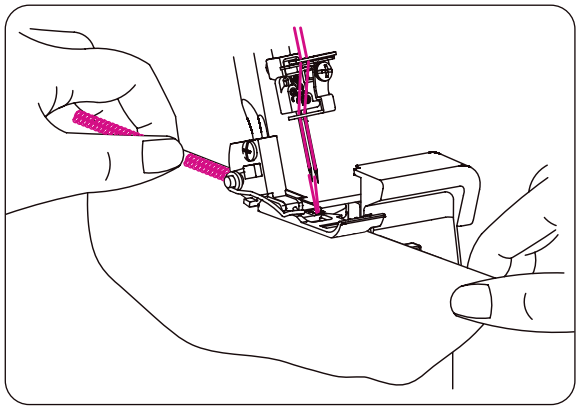
Stretch Overlock (1–0.6)

Stretch overlock is ideal for sewing decorative collars, sleeves, skirt hems, etc. on loosely knit and woven fabrics.



- **To set the differential feed dial for stretch**

– To stretch, set the differential feed between 0.6 and 1.



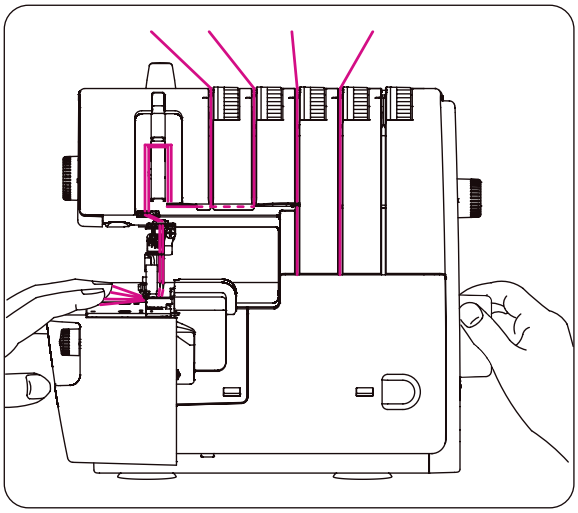
– To sew a seam, apply gentle tension to the fabric by holding the seam lightly in front and back of the presser foot.

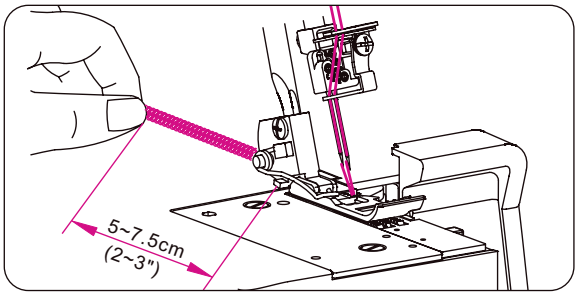
PLEASE NOTE:

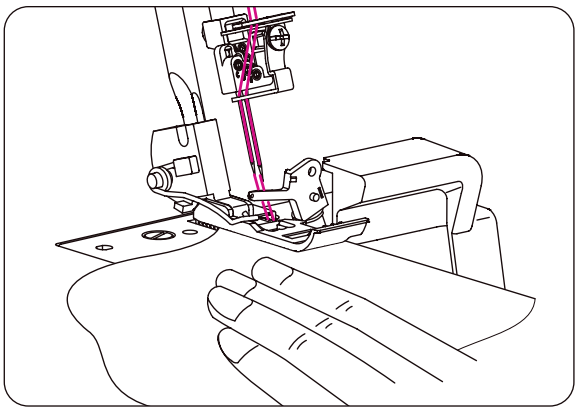
If amount of “stretch” is not correctly set in relation to the fabric being sewn, the fabric is apt to shift away from the needle resulting in improperly sewn overlock seam.

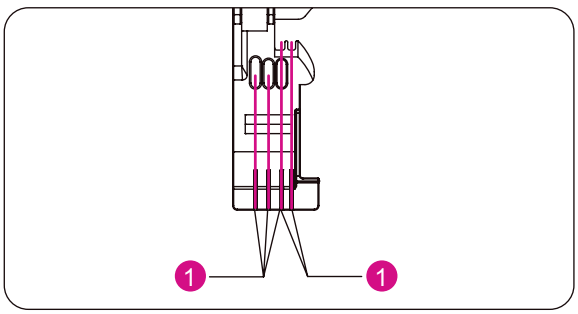
In such case, reset differential feed dial closer to the center mark.

Be sure to reset the differential feed dial to graduation “1” for normal overlock stitching.









CHAINING OFF AND TEST SEWING

PLEASE NOTE:

The following instructions do not apply to coverstitch. For instructions on coverstitch, see page 51 “How to Sew a Coverstitch.”

– When the machine is completely threaded, bring all of the threads across the stitch plate and slightly to the left under the presser foot.
– Lower the presser foot to activate the thread tensions.
– Hold the threads and apply a slight tension.
– Turn the handwheel toward you 2 or 3 complete turns to start the thread chain.

– Continue holding the chain and press on the foot controller until the chain is 5–7.5 cm (2–3 inches) in length.
– Place fabric under the front of the presser foot and sew a test sample.

PLEASE NOTE:

Do not pull on the fabric while sewing as this may deflect the needle, causing it to break.

– At the end of the sample, continue to run the machine with the presser foot down until the chain reaches 15–20 cm (6–8 inches) in length.

PLEASE NOTE:

In case it is difficult to chain off and pull the fabric lightly backward.

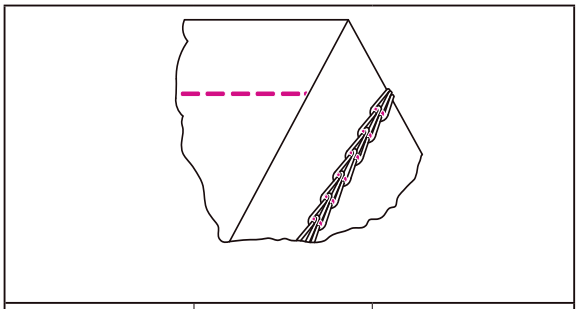
– Cut thread.

PLEASE NOTE:

Anytime you have rethreaded the machine always chain off and sew a text sample to test tensions and make adjustments as necessary.

Information

A mark (1) to indicate the needle location is provided on the presser foot fitted on this machine. Use this mark as a guide when sewing.



NP		Refer page 15
N/R	R	Refer page 14/15
SL	3-4	Refer page 33
CL/UL	CL	Refer page 42
ULC	–	Refer page 14

HOW TO SEW A Chainstitch

2-Thread Chainstitch

PLEASE NOTE:

– These are suggested tension settings only.

– Tension settings are effected by;

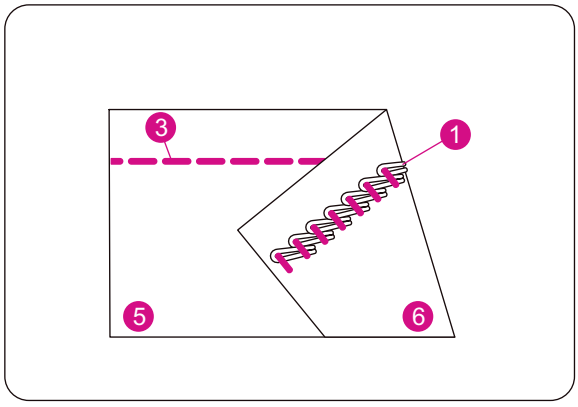
1. Type and thickness of fabric
2. Needle size
3. Size, type and fiber content of thread

– Stitch length for 2-Thread 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	Red	Violet
		4.5			**5.5**



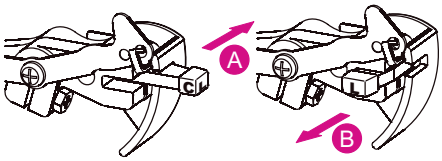
Thread Color Code Refer page 21.

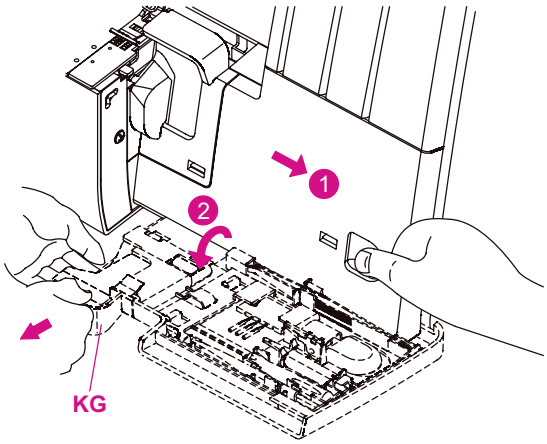
• How to balance the thread tension

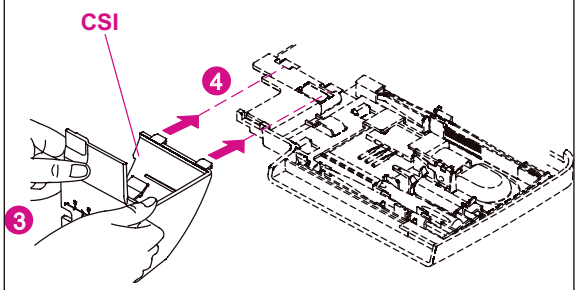
When the chainstitch needle thread tension is too loose;

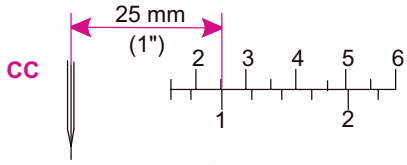
– Turn the needle thread tension dial (green) toward a higher number.

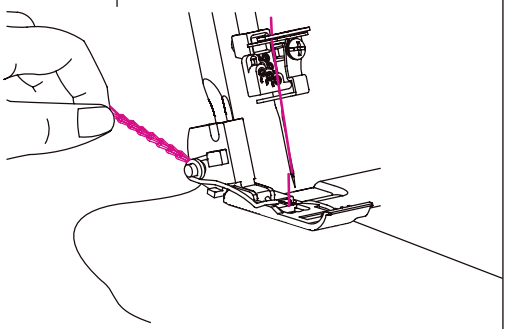
– Or, turn the chainstitch looper thread tension dial (violet) toward a lower number.











Machine set up

The 2-Thread chainstitch is sewn with 2 threads, one needle and one looper. Normally, the machine trims the fabric edge while the seam is being sewn. However, a chainstitch seam can be placed at a desired distance from edge of fabric by putting the knife in a nonworking position, disengaging the upper looper and installing the chainstitch seam guide plate.

- **Move knife into nonworking position**

– Refer page 13 for instructions on placing upper knife in nonworking position.

- **Disengage upper looper**

– Turn handwheel till driving shaft is at its most right position, otherwise danger may occur.

– Push clutch button to the left and up (A) for coverstitch/chainstitch or to the left and down (B) for overlock.

- **To re-engage upper looper**

– Turn handwheel till driving shaft is at its most right position, otherwise danger may occur.

– Push clutch button to the left and up (A) for coverstitch/chainstitch or to the left and down (B) for overlock.

- **To install the seam guide plate**

– Open the looper cover

– Remove knife cover (KG) and install seam guide plate (CSI).

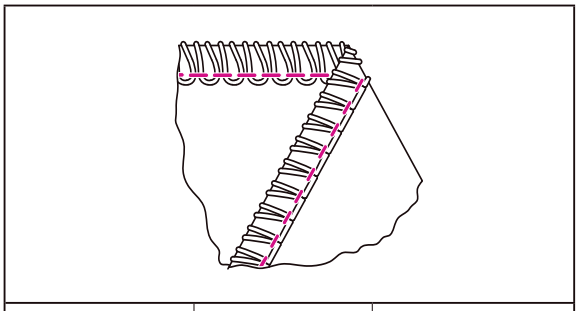
– The graduations on seam guide plate indicate the distance from chainstitch needle. Use this as a guide when checking the distance between coverstitch left needle and fabric edge.

- **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.

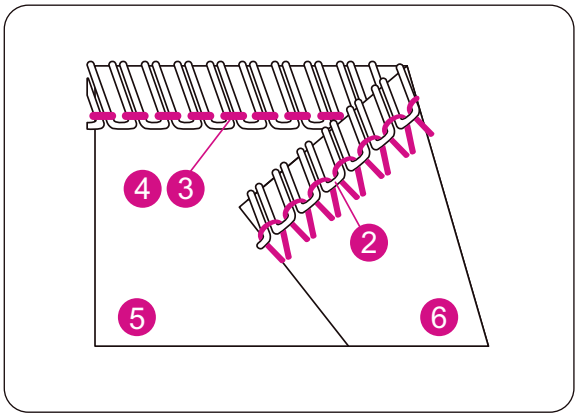
– When starting to sew after threading the machine, sew 2–3 cm on a scrap fabric and chain-off to make a chain.

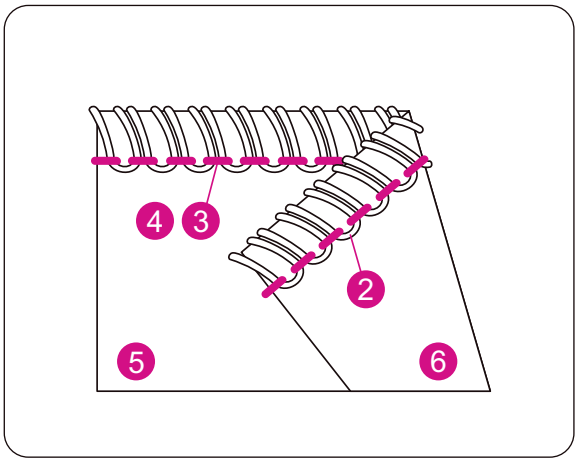
– At end of sewing, pull the fabric lightly to the rear of machine and chain-off.



NP	/	Refer page 15
N/R	N	Refer page 14/15
SL	2.5-4	Refer page 33
CL/UL	UL	Refer page 42
ULC		Refer page 14

Thread Color Code Refer page 21.





HOW TO SEW A OVERLOCK STITCH

2-Thread Wrapped Overlock

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

- **Correct balance**

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

2-Thread Wrapped Overlock narrow					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
		4.5		**3.5**	

2-Thread Wrapped Overlock wide					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
	2.5			**3.0**	

- **How to balance the thread tension**

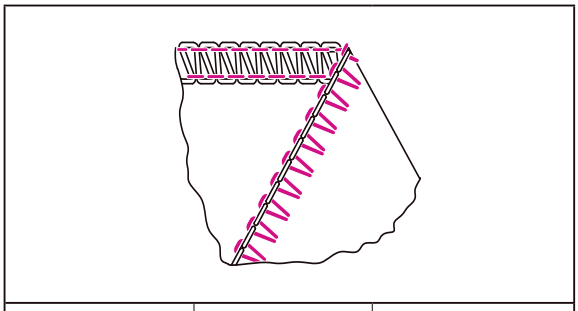
When the lower looper thread tension is too tight or needle thread tension is too loose;

– Turn the lower looper thread tension dial (red) toward a lower number.

– Or, turn the needle thread tension dial (yellow or green) toward a higher number.

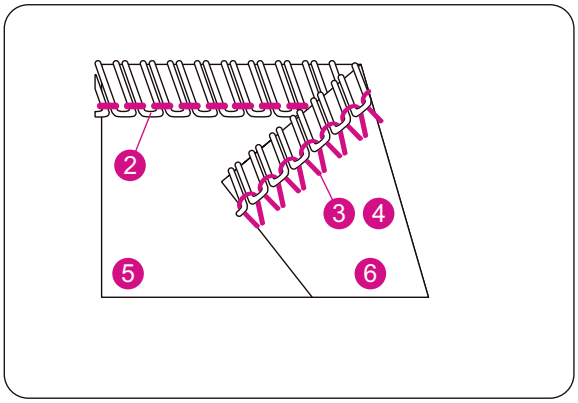
When the lower looper thread tension is too loose;

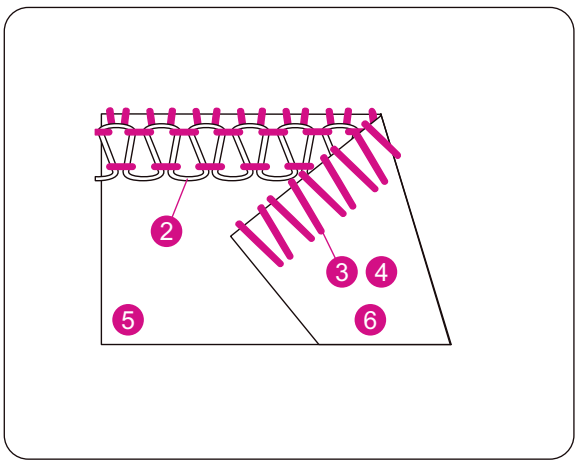
– Turn the lower looper thread tension dial (red) toward a higher number.



NP	/	Refer page 15
N/R	N	Refer page 14/15
SL	2.5-4	Refer page 33
CL/UL	UL	Refer page 42
ULC		Refer page 14

Thread Color Code Refer page 21.





2-Thread Overlock

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

• Correct balance

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

2-Thread Overlock narrow					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
		0.0		**4.5**	

2-Thread Overlock wide					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
	0.0			**4.0**	

• How to balance the thread tension

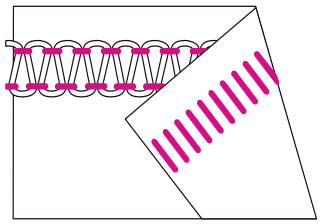
When the lower looper thread lies on the underside of the fabric;

– Turn the lower looper thread tension dial (red) toward a higher number.

When the needle thread tension is too loose;

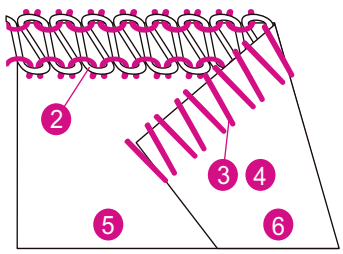
– Turn the needle thread tension dial (yellow or green) toward a higher number.

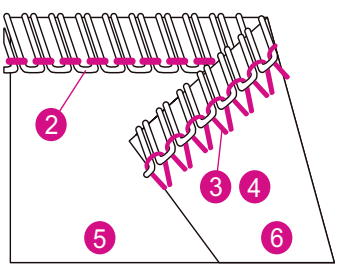
– Or, turn the lower looper thread tension dial (red) toward a lower number.



NP	/	Refer page 15
N/R	N	Refer page 14/15
SL	2.5-4	Refer page 33
CL/UL	UL	Refer page 42
ULC		Refer page 14

Thread Color Code Refer page 21.





2-Thread Flatlock

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

• Correct balance

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

2-Thread Flatlock narrow					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
		0.0		**4.5**	

2-Thread Flatlock wide					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
	0.0			**4.0**	

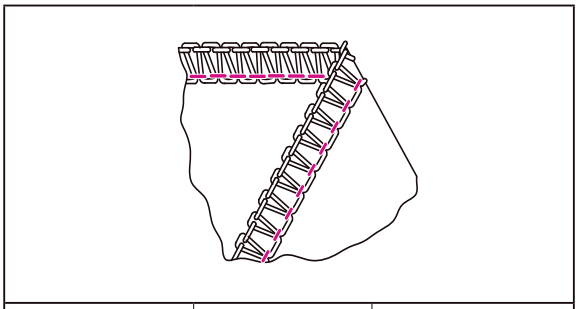
• How to balance the thread tension

When the lower looper thread tension is too tight or needle thread tension is too loose;

– Turn the lower looper thread tension dial (red) toward a lower number.

When the lower looper thread tension is too loose;

– Turn the lower looper thread tension dial (red) toward a higher number.



NP	/	Refer page 15
N/R	N	Refer page 14/15
SL	2.5-4	Refer page 33
CL/UL	UL	Refer page 42
ULC	–	Refer page 14

Thread Color Code Refer page 21.

3-Thread Overlock

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

• Correct balance

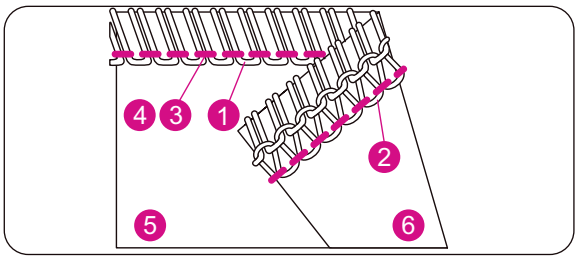
– Set each tension dial to recommended setting and test sew on a sample of your fabric.

3-Thread Overlock narrow

Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
		4.5	**4.5**	**4.0**	

3-Thread Overlock wide

Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
	3.0		**4.5**	**3.5**	

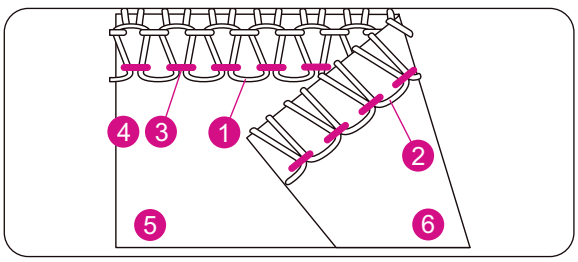


• How to balance the thread tension

When the upper looper thread lies on the underside of the fabric;

– Turn the upper looper thread tension dial (blue) to a higher number.

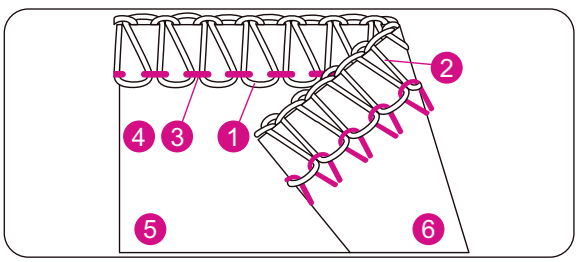
– Or, turn the lower looper thread tension dial (red) to a lower number



When the lower looper thread appears on the top of the fabric;

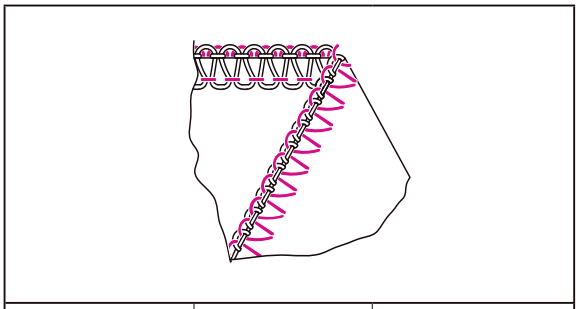
– Turn the lower looper thread tension dial (red) toward a higher number.

– Or, turn the upper looper thread tension dial (blue) to a lower number.



When the needle thread is too loose;

– Turn the needle tension dial (yellow or green) to a higher number.



NP	/	Refer page 15
N/R	N	Refer page 14/15
SL	2.5-4	Refer page 33
CL/UL	UL	Refer page 42
ULC	–	Refer page 14

Thread Color Code Refer page 21.

3-Thread Flatlock

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

• Correct balance

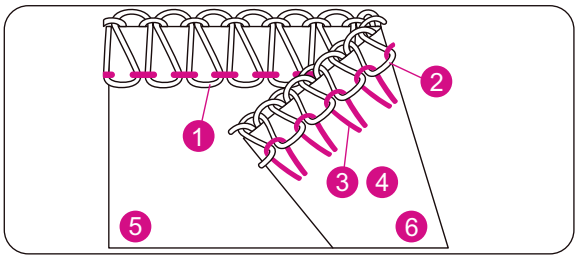
– Set each tension dial to recommended setting and test sew on a sample of your fabric.

3-Thread Flatlock, narrow

Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
		0	**4.5**	**6.5**	

3-Thread Flatlock, wide

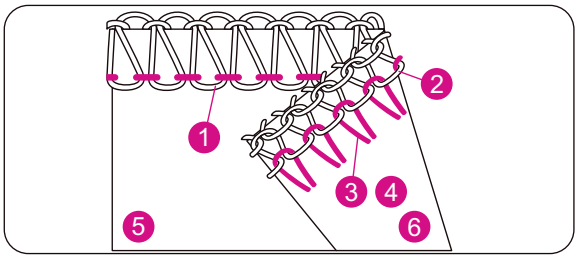
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
	0		**4.5**	**7.0**	



• How to balance the thread tension

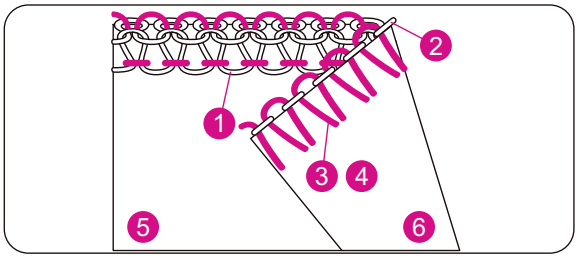
When the lower looper thread tension is too loose;

– Turn the lower looper thread tension dial (red) toward a higher number.



When the upper looper thread tension is too loose;

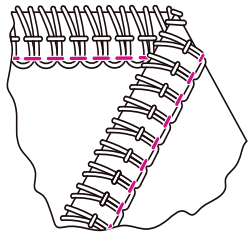
– Turn the upper looper thread tension dial (blue) toward a higher number.



When the needle thread tension is too loose;

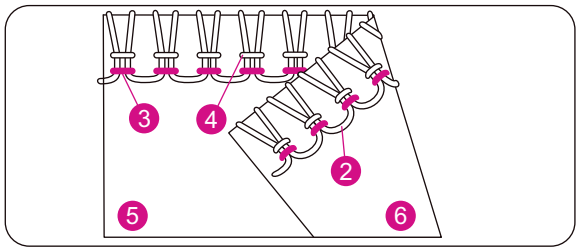
– Turn the needle thread tension dial (yellow or green) toward a higher number.

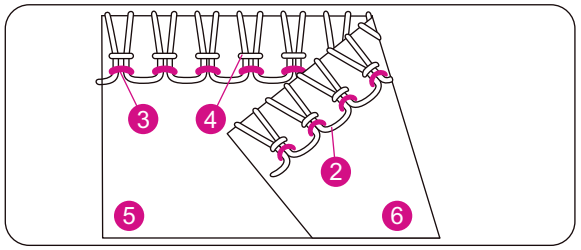
– Or, turn the upper looper thread tension dial (blue) toward a lower number.

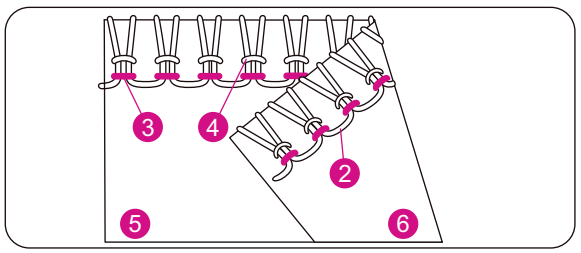


NP		Refer page 15
N/R	N	Refer page 14/15
SL	2.5-4	Refer page 33
CL/UL	UL	Refer page 42
ULC		Refer page 14

Thread Color Code Refer page 21.







3-Thread Super Stretch

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

• Correct balance

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

3-Thread Super Stretch					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
	4.0	**4.0**		**3.5**	

• How to balance the thread tension

When the lower looper thread tension is too loose;

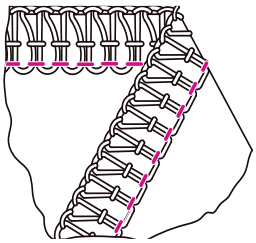
– Turn the lower looper thread tension dial (red) toward a higher number.

When the left needle thread tension is too loose;

– Turn the left needle thread tension dial (yellow) toward a higher number.

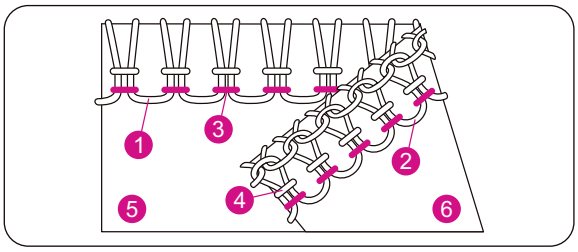
When the right needle thread tension is too loose;

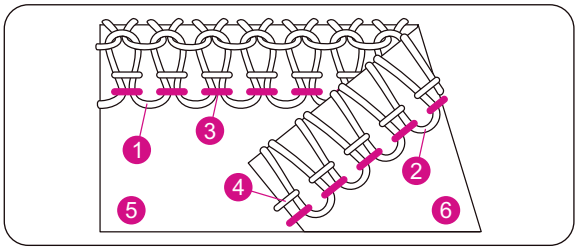
– Turn the needle thread tension dial (green) toward a higher number.

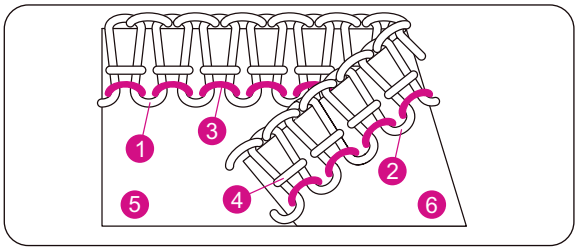


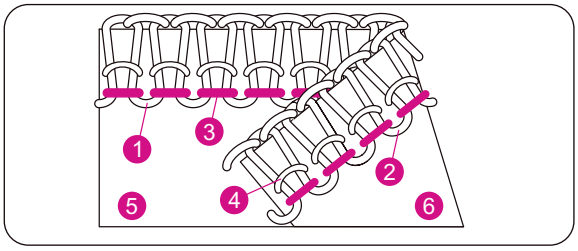
NP		Refer page 15
N/R	N	Refer page 14/15
SL	2.5-4	Refer page 33
CL/UL	UL	Refer page 42
ULC	–	Refer page 14

Thread Color Code Refer page 21.









4-Thread Overlock with integrated safety seam

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

• Correct balance

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

4-Thread Overlock with integrated safety seam						
Medium weight fabric	Thread tension dial					
	Yellow	Green	Blue	Red	Violet	
	4.0	**4.0**	**4.0**	**4.0**		

• How to balance the thread tension

When the upper looper thread lies on the underside of the fabric;

– Turn the upper looper thread tension dial (blue) toward a higher number.

– Or, turn lower looper thread tension dial (red) to a lower number.

When the lower looper thread appears on the top of the fabric;

– Turn the lower looper thread tension dial (red) toward a higher number.

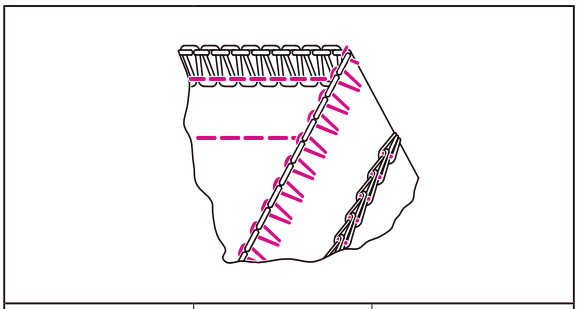
– Or, turn the upper looper thread tension dial (blue) toward a lower number

When the left needle thread tension is too loose;

– Turn the needle thread tension dial (yellow) toward a higher number.

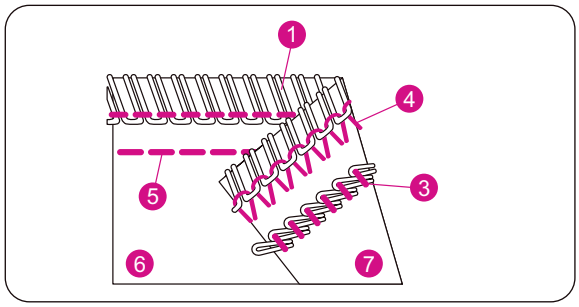
When the right needle thread tension is too loose;

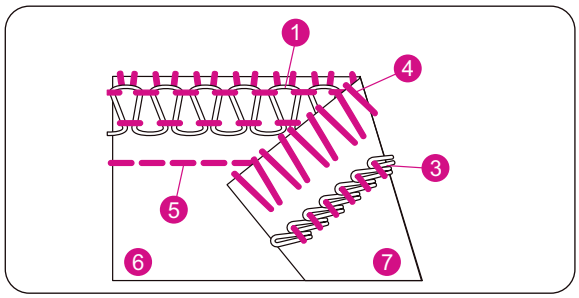
– Turn the right needle thread tension dial (green) toward a higher number.

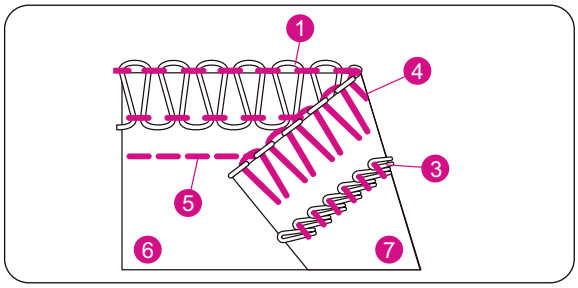


NP	/	Refer page 15
N/R	N	Refer page 14/15
SL	2.5-4	Refer page 33
CL/UL	UL	Refer page 42
ULC		Refer page 14

Thread Color Code Refer page 21.







2-Thread Overlock & Chain

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

• Correct balance

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

2-Thread Overlock & Chain, narrrow					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
	2.0	**0.0**		**5.0**	**5.5**

2-Thread Overlock & Chain, wide					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
	2.0	**0.0**		**4.5**	**5.5**

• How to balance the thread tension

When the lower looper thread appears on the top of the fabric;

– Turn the lower looper thread tension dial (red) to a higher number.

– Or, turn the upper looper thread tension dial (blue) toward a lower number.

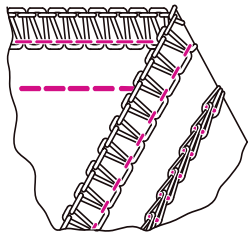
When the right needle thread is too loose;

– Turn the right needle thread tension dial (green) toward a higher number.

When the chain needle thread tension is too loose;

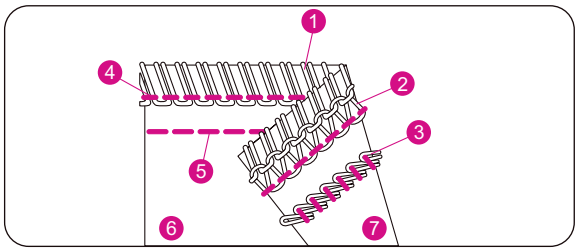
– Turn the chainstitch needle thread tension dial (yellow) toward a higher number.

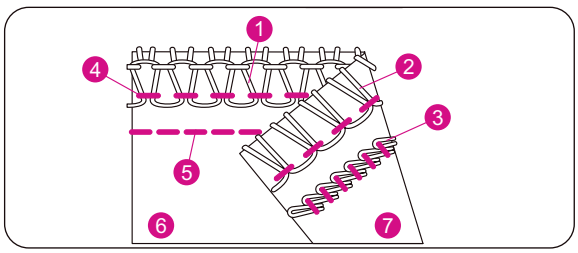
– Or, turn the chainstitch looper thread tension dial (violet) toward a lower number.

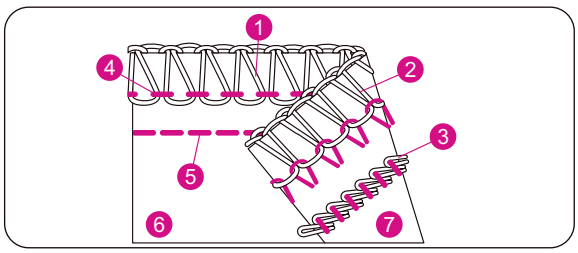


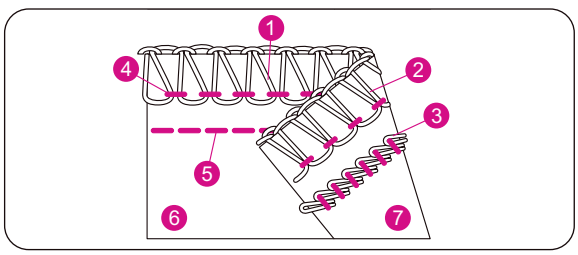
NP	/	Refer page 15
N/R	N	Refer page 14/15
SL	2.5-4	Refer page 33
CL/UL	UL	Refer page 42
ULC	–	Refer page 14

Thread Color Code Refer page 21.









3-Thread Overlock & Chain

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

- **Correct balance**

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

3-Thread Overlock & Chain, narrow					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
	2.0	**4.5**	**4.5**	**4.0**	**5.5**

3-Thread Overlock & Chain, wide					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
	2.0	**5.5**	**4.5**	**3.5**	**5.5**

- **How to balance the thread tension**

When the upper looper thread lies on the underside of the fabric;

– Turn the upper looper thread tension dial (blue) to a higher number.

– Or, turn lower looper thread tension dial (red) to a lower number.

When the lower looper thread appears on the top of the fabric;

– Turn the lower looper thread tension dial (red) toward a higher number.

– Or, turn the upper looper thread tension dial (blue) toward a lower number.

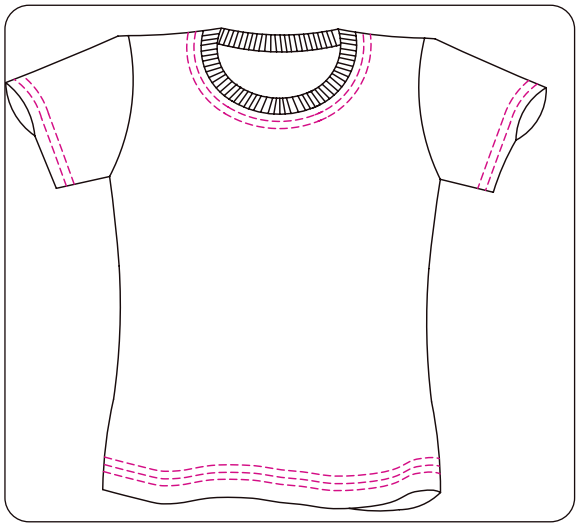
When the left needle thread tension is too loose;

– Turn the left needle thread tension dial (green) toward a higher number.

When the chainstitch needle thread tension is too loose;

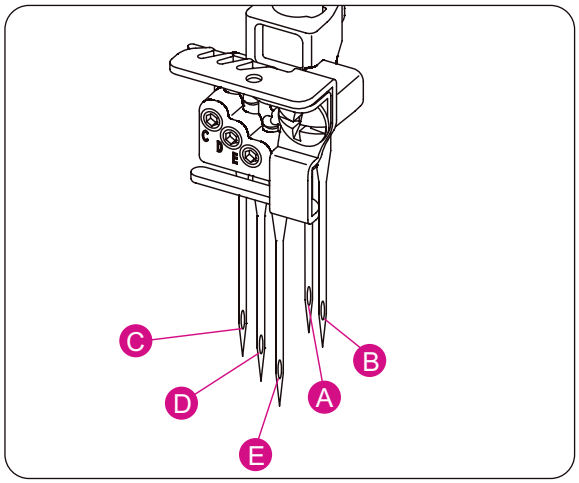
– Turn the chainstitch needle thread tension dial (yellow) toward a higher number.

– Or, turn the chainstitch looper thread tension dial (violet) toward a lower number.



HOW TO SEW A Coverstitch

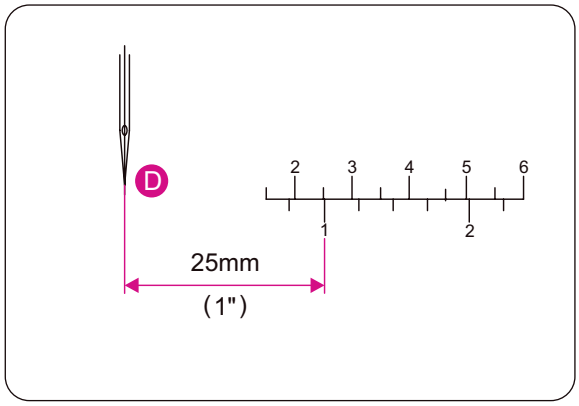
- This machine can produce a 3-thread 5.6 mm wide bottom coverstitch.
- The coverstitch can be used for covering, binding or top-stitching necklines and for hemming the bottom, of T-shirts and sweat suits, etc. in addition to flat joining seams (plain seaming).
- The coverstitch is most suitable for 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).

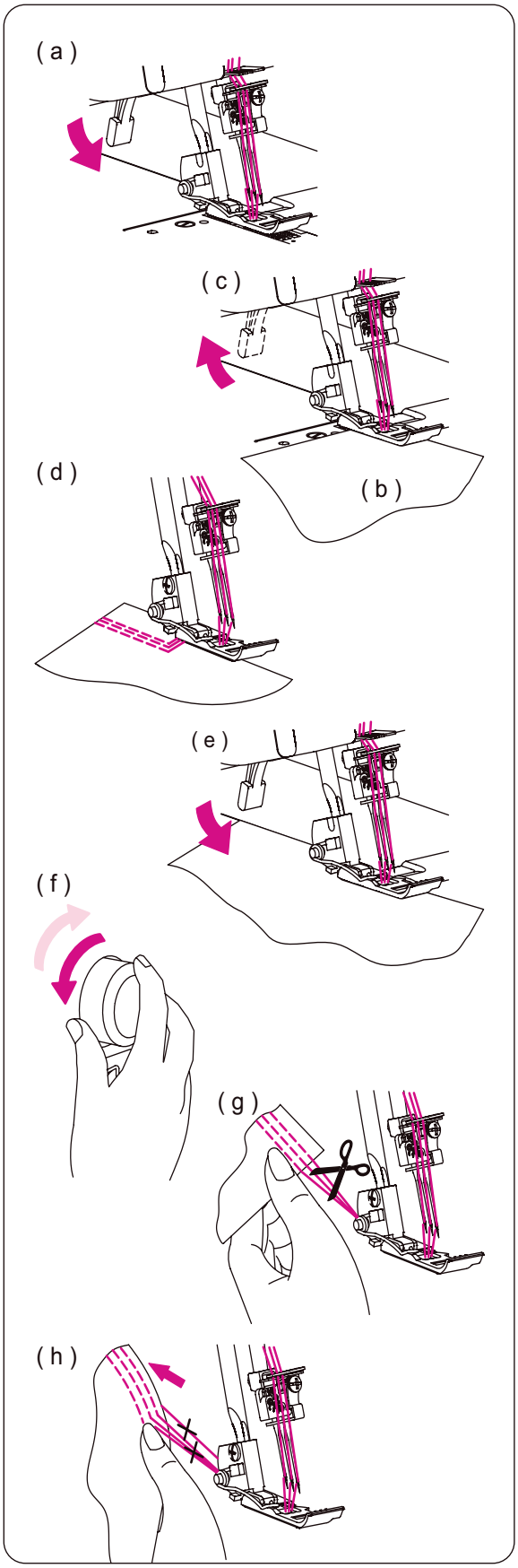


Machine set up

CAUTION:
Be sure to turn off power switch.

- Open looper cover. (Refer page 10)
- Disengage upper looper. (Refer page 42)
- Place the movable upper knife in the non working position. (Refer page 13)
- Set seam width finger knob on "R" side. (Refer page 15) Set CSI/KG clutch (Refer page 42).
- Remove overlock right needle (B) and overlock left needle (A).
- For Triple 5.6mm coverstitch, install coverstitch right needle (E), coverstitch center needle (D) and coverstitch left needle (C). (See pages 30-34)
- Pass thread through needles (E), (D) and (C) and thread coverstitch looper (violet) (See pages 25-26)
- Install seam guide plate. (Refer page 42)
- The graduations on seam guide plate indicate the distance from coverstitch center 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 not under the needles.

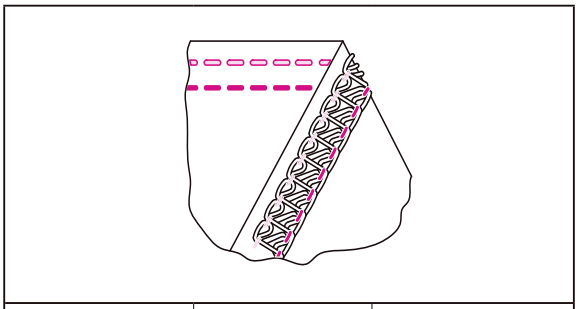
(e) Raise presser feet.

(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.

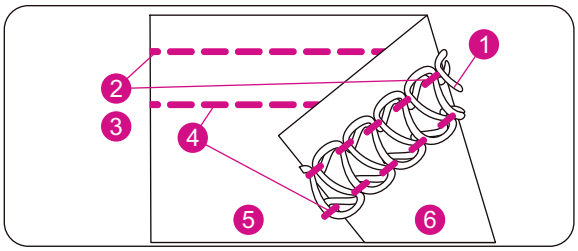
PLEASE NOTE:

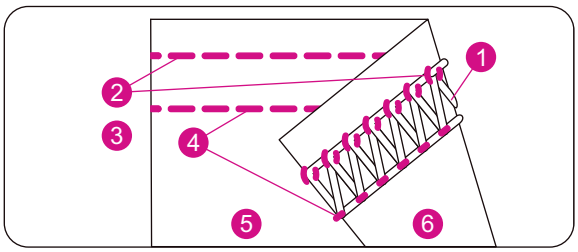
(h) The instructions given when sewing coverstitches because chaining-off at the end of sewing is not possible.

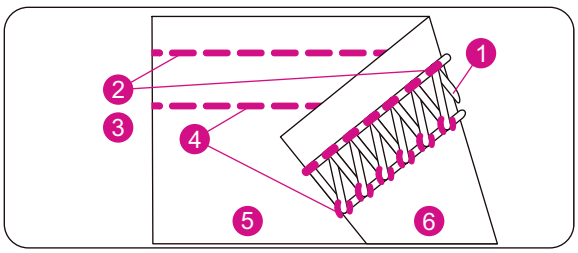


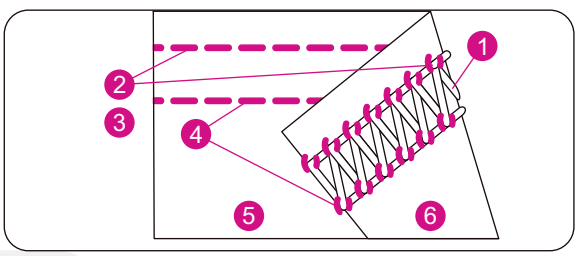
NP	/	Refer page 15
N/R	R	Refer page 14/15
SL	3-4	Refer page 33
CL/UL	CL	Refer page 42
ULC	–	Refer page 14

Thread Color Code Refer page 21.









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, narrow					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
Polyester	**3.0**	**6.0**			**4.0**

3-Thread Coverstitch, wide					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
Polyester	**3.0**		**6.5**		**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 left needle thread tension is too loose;

– Turn the coverstitch left needle thread tension dial (yellow) toward a higher number.

– Or, turn coverstitch looper thread tension dial (violet) toward a lower number.

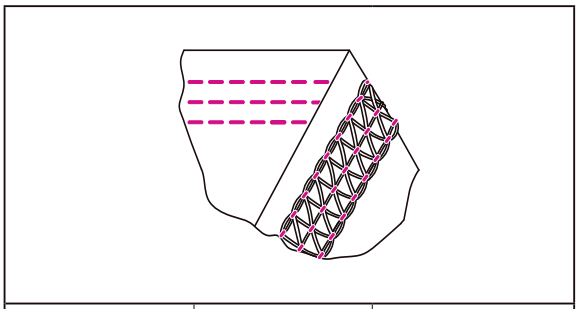
When the coverstitch right needle thread tension is too loose;

– Turn the coverstitch right needle thread tension dial (green) or (yellow) toward a higher number.

– Or, turn the coverstitch looper thread tension dial (violet) toward a lower number.

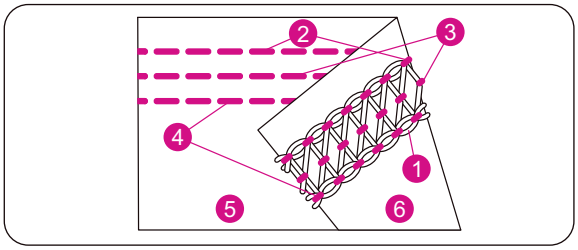
When the top surface of fabric bulges between needle threads and the seams on the underside of the fabric becomes tight;

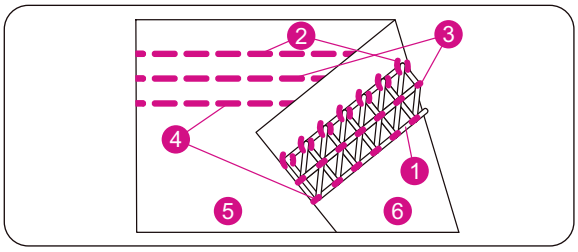
– Turn the coverstitch looper thread tension dial (violet) toward a lower number.

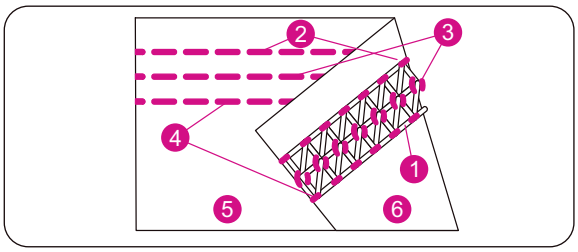


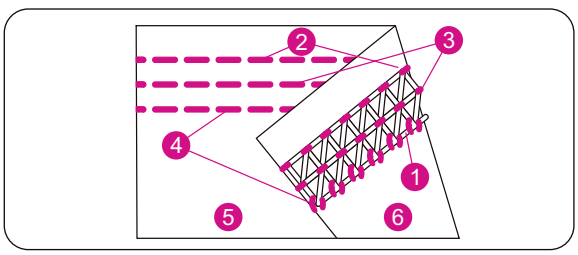
NP		Refer page 15
N/R	R	Refer page 14/15
SL	3-4	Refer page 33
CL/UL	CL	Refer page 42
ULC	–	Refer page 14

Thread Color Code Refer page 21.









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, narrow					
Medium weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
Polyester	**3.0**	**6.0**	**6.5**		**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 left needle thread tension is too loose;

– Turn the coverstitch left needle thread tension dial (yellow) toward a higher number.

– Or, turn coverstitch looper thread tension dial (violet) toward a lower number.

When the coverstitch center needle thread tension is too loose;

– Turn the coverstitch center needle thread tension dial (green) toward a higher number.

– Or, turn coverstitch looper thread tension dial (violet) toward a lower number.

When the coverstitch right needle thread tension is too loose;

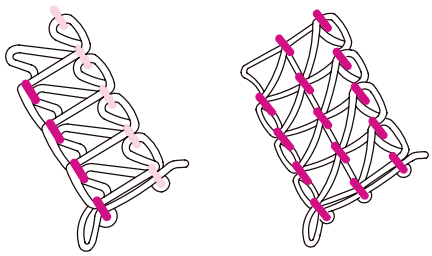
– Turn the coverstitch right needle thread tension dial (blue) toward a higher number.

– Or, turn the coverstitch looper thread tension dial (violet) toward a lower number.

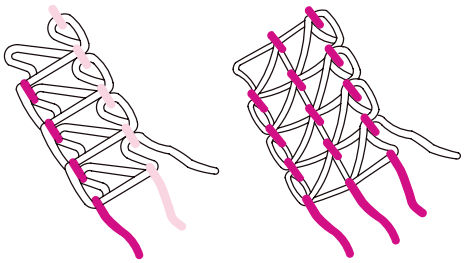
When the top surface of fabric bulges between needle threads and the seams on the underside of the fabric becomes tight;

– Turn the coverstitch looper thread tension dial (violet) toward a lower number.

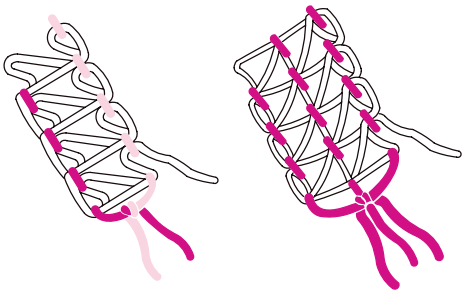
Securing the seam end



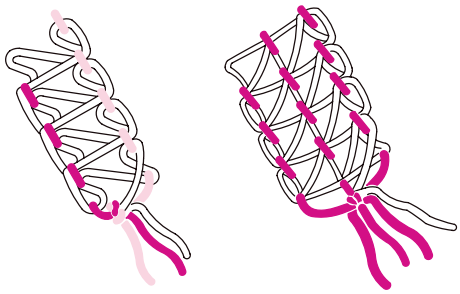
– Since the seams formed by coverstitch unravel when the looper thread is pulled out at the end of sewing, secure the seam end in the following manner.



– 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.



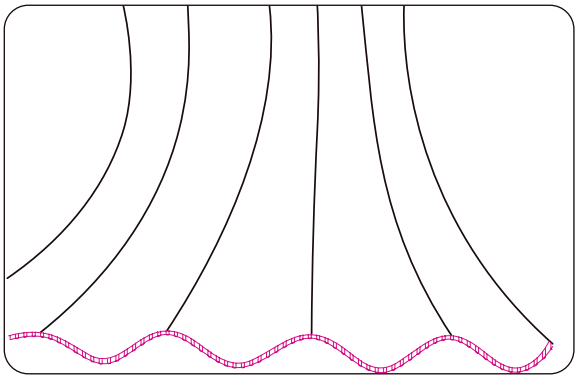
– When sewing is stopped halfway, pull out the needle threads (2- or 3-Threads) on the underside of the fabric and knot the threads in the same manner as described above.

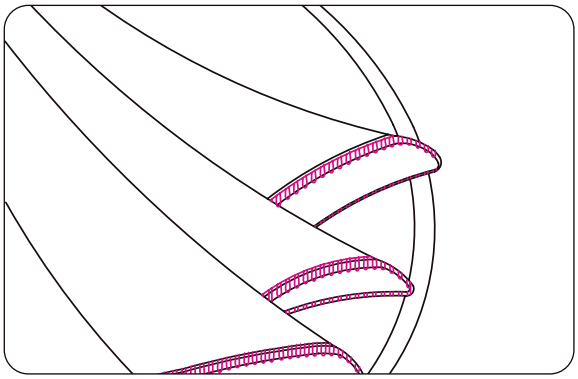


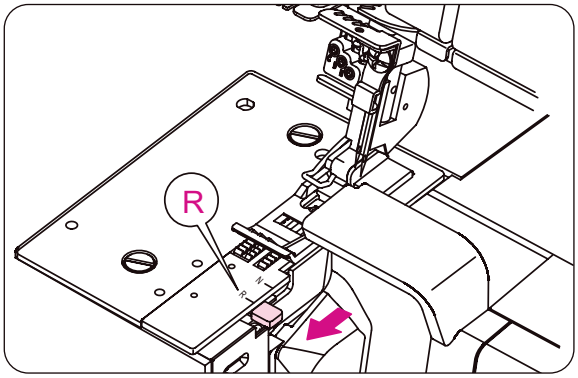
– Cut extra threads.

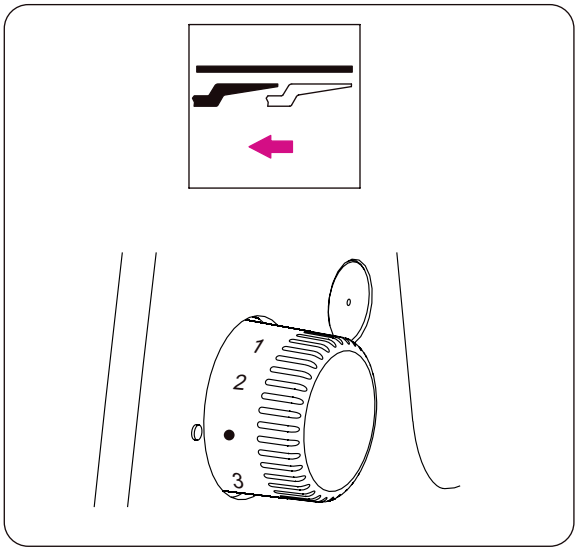
PLEASE NOTE:

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.









HOW TO SEW A ROLLED HEM

– This machine can sew three types of rolled hems.
– Rolled hemming is done by rolling and overedging the fabric edge.
– Light weight fabrics such as lawn, voile, organdy, crepe, etc. perform the best.
– Rolled hemming is not suited for heavy or stiff fabrics.

PLEASE NOTE:

Rolled hemming can only be performed with the overlock right needle.

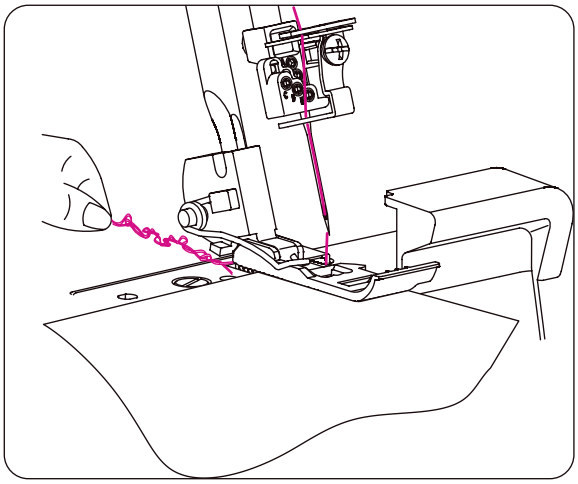
Machine set up

CAUTION:
Be sure to turn off power switch.

– Remove the overlock left needle.
– Move seam width finger knob to setting "R".
– Align left face of seam width finger support plate with "R" mark on stitch plate by turning cutting width dial, as required.
– Set stitch length dial to 1–2 and a fine seam will be sewn.

Needle:
ELx705

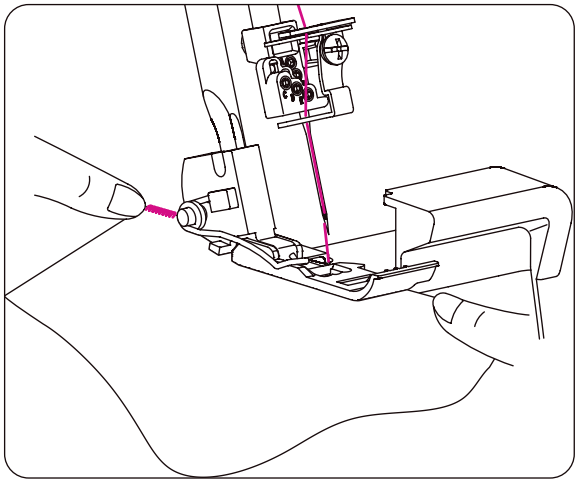
Thread:
A variety of thread combinations can be used for rolled hemming.



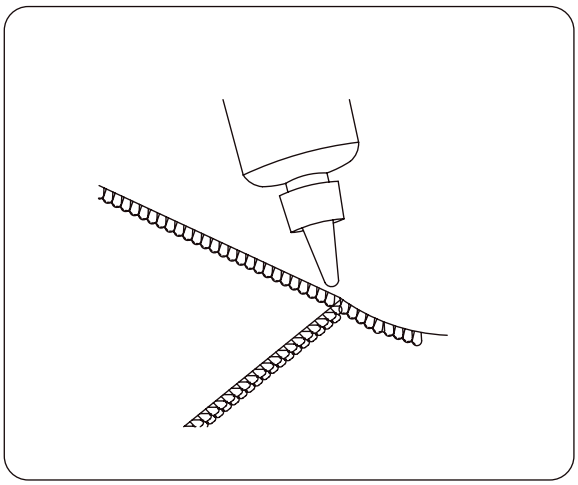
Additional information about rolled hemming

– Hold the thread chain when you begin sewing to keep it from curling into the seam.

– Place a slight tension on the material in the sewing direction and a finer seam finish can be obtained.



– The minimum overlock stitch width that can be obtained for rolled hemming is approximately 1.5 mm (1/16 inch) since the cutting width cannot be set below 3.5 mm (9/64 inch).

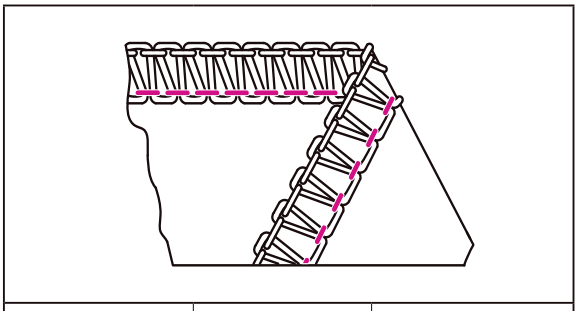


• **To secure the rolled hem thread chain**

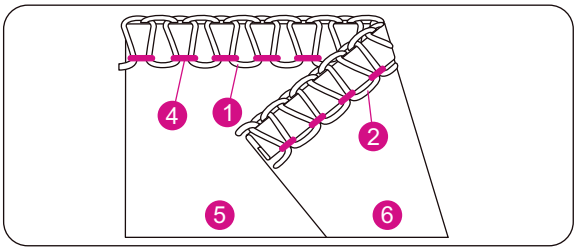
– Apply a small drop of liquid seam sealant to the end of the seam. Allow to dry, then cut the chain close to the stitches.

PLEASE NOTE:

Test the liquid seam sealant for color fastness before use.



NP		Refer page 15
N/R	R	Refer page 14/15
SL	1-2	Refer page 33
CL/UL	UL	Refer page 42
ULC	–	Refer page 14



3-Thread Narrow Seam

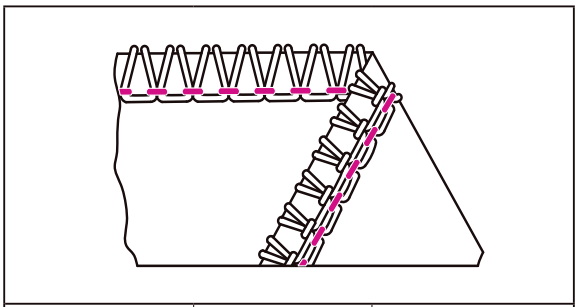
PLEASE NOTE:

For a beautiful narrow seam thread the upper and lower looper with wooly nylon and the needle with fine normal overlock thread.

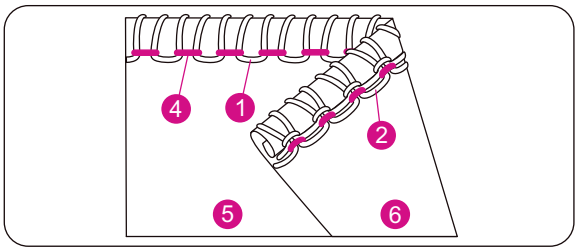
- **Correct balance**

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

3-Thread Narrow Seam					
Light weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
Polyester		**4.0**	**5.0**	**4.0**	



NP		Refer page 15
N/R	R	Refer page 14/15
SL	1-2	Refer page 33
CL/UL	UL	Refer page 42
ULC	–	Refer page 14



3-Thread Rolled Hem

PLEASE NOTE:

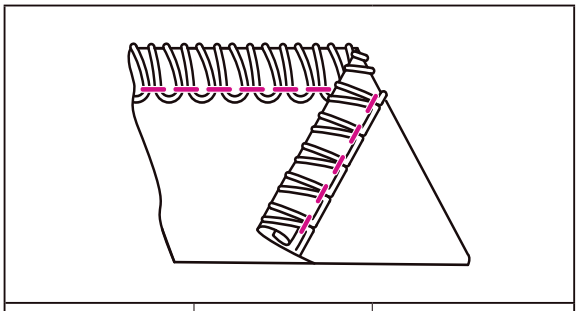
For a beautiful rolled hem thread the upper looper with wooly nylon and the needle and lower looper with light weight regular thread.

- **Correct balance**

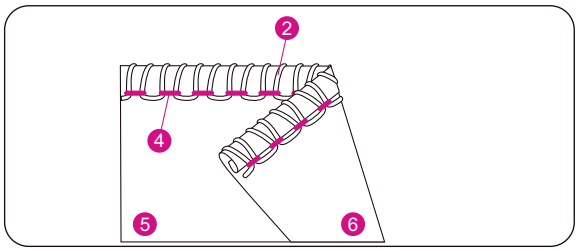
– Set each tension dial to recommended setting and test sew on a sample of your fabric.

3-Thread Rolled Hem					
Light weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
Polyester		**4.0**	**4.0**	**6.0**	

Thread Color Code Refer page 21.



NP		Refer page 15
N/R	R	Refer page 14/15
SL	1-2	Refer page 33
CL/UL	UL	Refer page 42
ULC		Refer page 14



2-Thread Rolled Hem

PLEASE NOTE:

For a beautiful rolled hem thread the lower looper with wooly nylon and the needle with light weight regular thread.

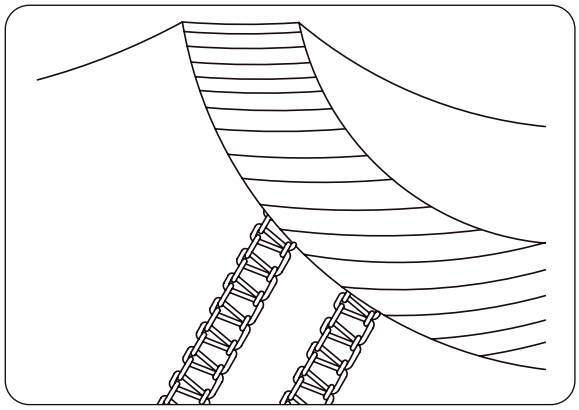
- **Correct balance**

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

2-Thread Rolled Hem

Light weight fabric	Thread tension dial				
	Yellow	Green	Blue	Red	Violet
Polyester		**4.5**		**4.0**	

Thread Color Code Refer page 21.

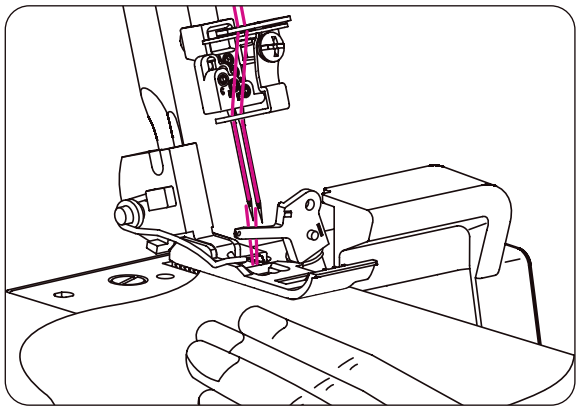


STITCH VARIATIONS AND SEWING TECHNIQUES

How To Sew A Flatlock Decorative Seam

A flatlock stitch is achieved by adjusting the tension of the 2-Thread or 3-Thread overlock stitch, sewing the seam, and then pulling the fabric apart to flatten the seam.

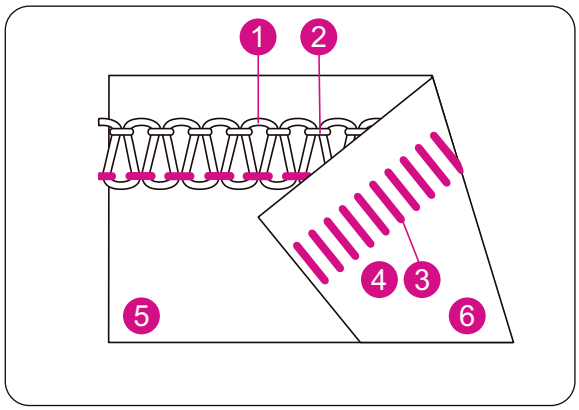
The flatlock stitch can be used as a construction and decorative stitch or for ornamentation only.



- **Machine Set Up**

– Use either overlock right needle or overlock left needle.

– Begin with the machine threaded and tension balanced for the 2-Thread flatlock stitch (refer page 45) or 3-Thread flatlock stitch. (Refer page 47)



Thread Color Code Refer page 21.

- **Flatlocking A Seam**

– Place the fabric wrong sides together to sew a decorative stitch on the right side of the garment.

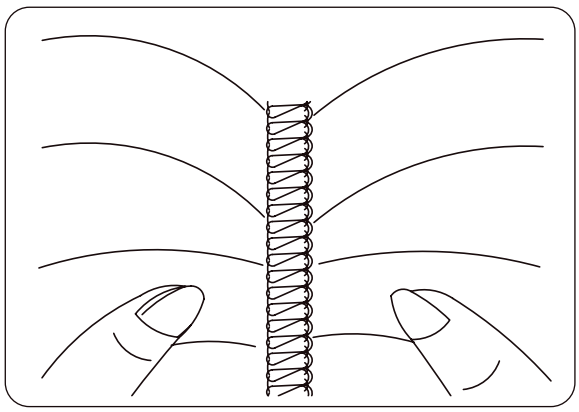
– Sew the seam, trimming the excess fabric.

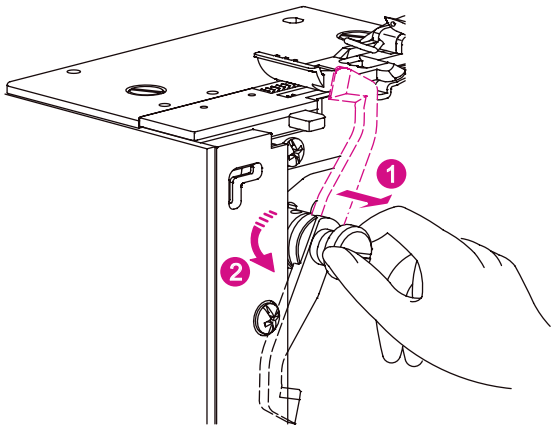
– The needle thread (yellow or green) will form a V on the underside of the fabric.

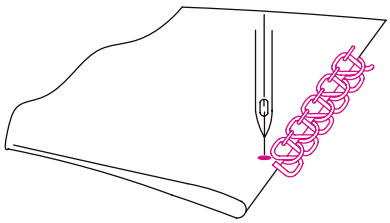
– In the 3-thread flatlock, the lower looper thread will form a straight line on the fabric edge. The upper looper thread will lie on top of the stitch.

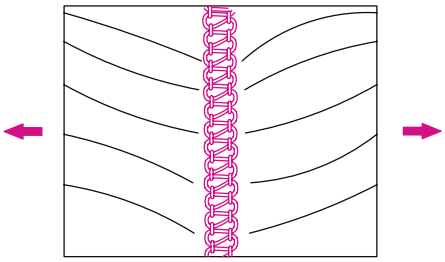
– In the 2-thread flatlock, the lower looper thread will lie on top of the stitch.

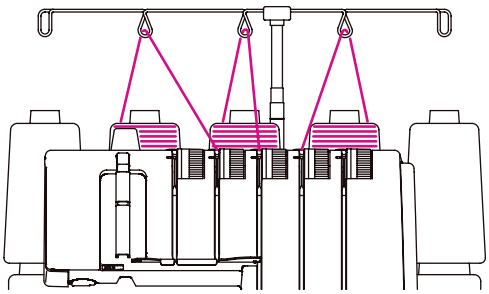
– Pull on opposite sides of the seam to pull the stitches flat.



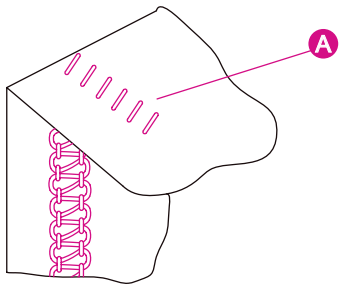








Thread Color Code Refer page 21.



- **Decorative Flatlocking**

– Disengage the upper knife (page 13). The fabric is not trimmed on this stitch.

– Fold fabric wrong sides together.

– Position the fabric so the seam is sewn with part of the stitch extending off the fabric.

– Pull on opposite sides of the stitch to flatten

- **Additional Information About Flatlocking**

– The tensions must be correctly adjusted for the fabric to pull flat.

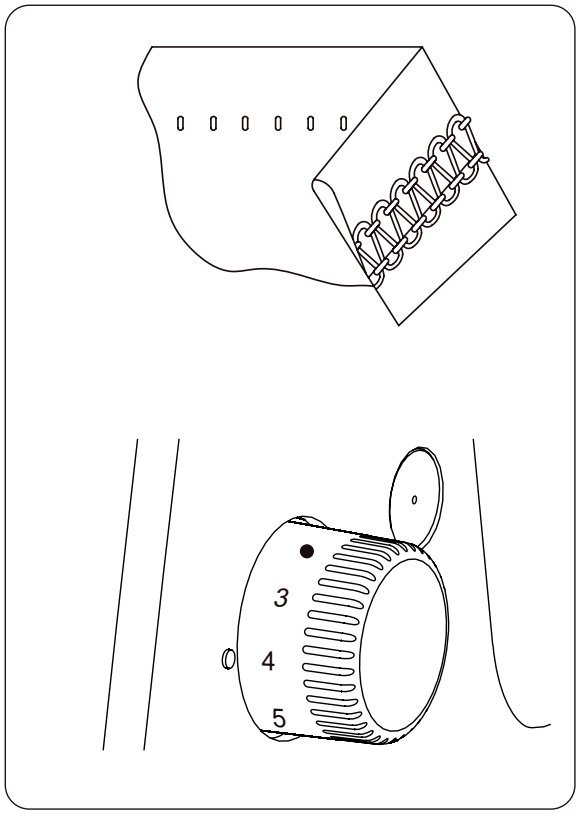
– The upper looper thread is the prominent thread in a 3-thread flatlock.

– The lower looper thread is the prominent thread in a 2-thread flatlock.

– Thread decorative yarn in the prominent threading path accordingly.

– For a ladder stitch, sew seam with right sides together.

– The needle thread will be the prominent thread that creates the ladder (A).



How to sew an Overlock Blind Hem

The excess fabric is trimmed and the hem is sewn and the raw edges are overlocked in one operation.

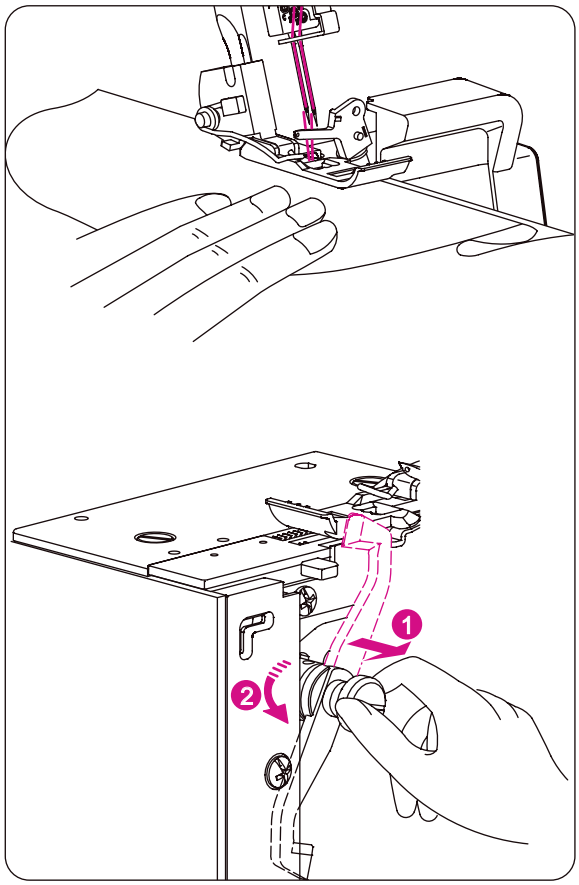
The overlock blind hem is best suited for sewing knit wear. It provides a durable finish that is almost invisible.

Use overlock right needle and adjust machine for a narrow 3-Thread overlock stitch. (Refer page 45)

– Set the stitch length dial at 4.
– Fold the hem to the wrong side of the fabric, then back to the right side with 6 mm (1/4 inch) beyond the fold.
– Stitch on the extended hem edge, allowing the machine needle to barely catch the edge of the fold.

PLEASE NOTE:

An optional blindstitch foot is available (Refer page 70).

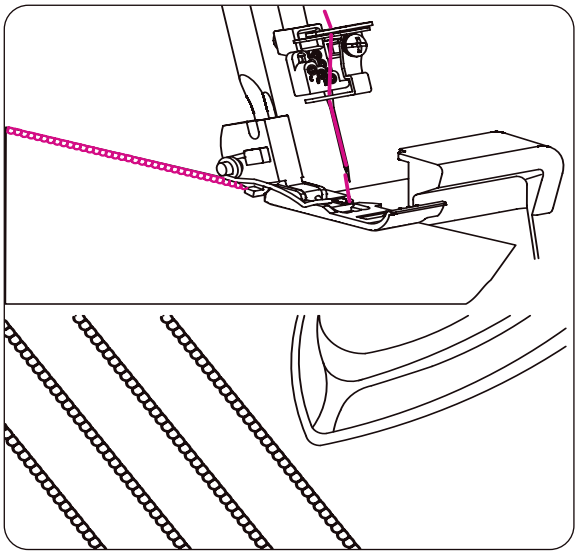


How to sew Pin Tucks

– Sew decorative pin tucks on the fabric before cutting out the garment.
– Use overlock right needle and adjust machine for a narrow 3-Thread overlock stitch. (Refer page 45)
– Place the movable upper knife in the nonworking position. (Refer page 13)
– Mark the fabric with the desired number of pin tucks using a water-soluble fabric marker.

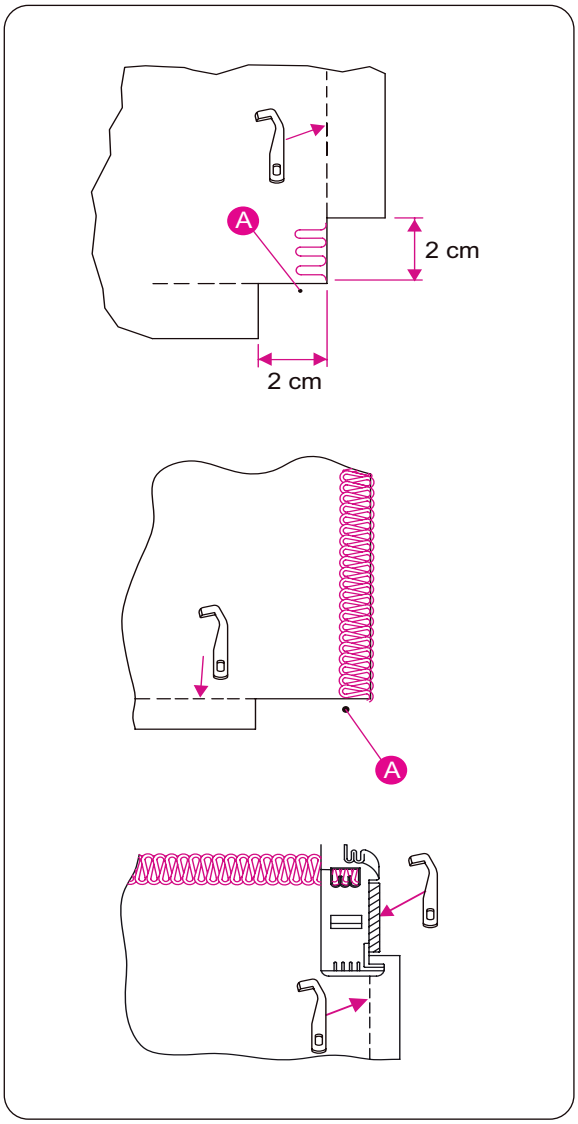
PLEASE NOTE:

For this technique also a 3-thread rolled hm or a 3-thread narrow seam can be used.



– Fold the fabric with the wrong sides together and sew.

– Press the pin tucks in the same direction.



How to turning Square Corners

- **Outside Corner**

– Cut out approximately 2 cm (51/64 inch) from the corner, in line with the overlock seam edge.

– Sew one stitch beyond point (A) and stop.

– Raise needle and presser foot.

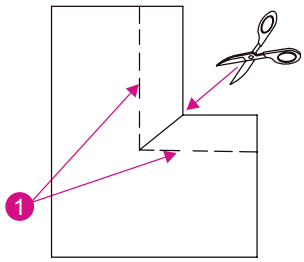
– Pull the fabric to the rear of the machine just enough to release the thread caught on the finger of the stitch plate.

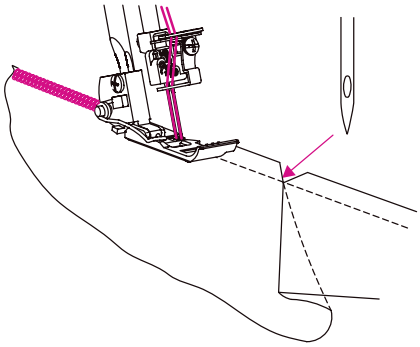
PLEASE NOTE:

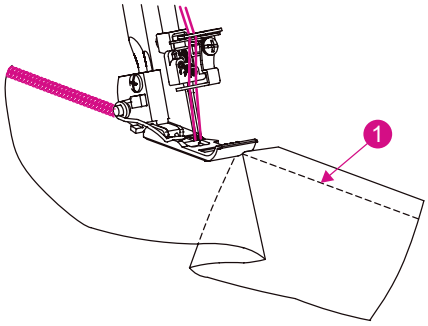
Presser foot has been removed to show detail.

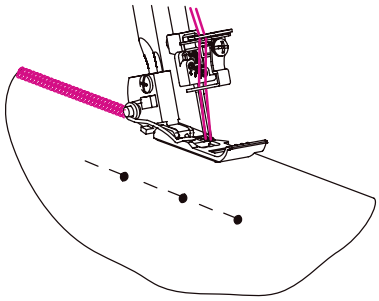
– Turn the fabric and lower the presser foot so that the upper knife is positioned in line with the cut edge.

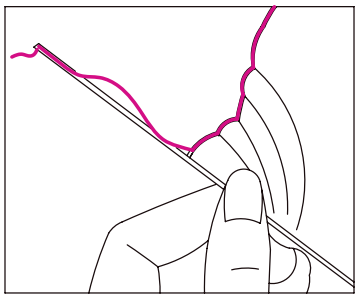
– Pull slack threads up, then start to sew.











- **Inside Corner**

– Cut inside corner up to seam line (1) as shown.
– Sew along seam line.
– Sew up to end of fold. (Leave needle in fabric)

PLEASE NOTE:

Presser foot has been removed to show detail.

– Raise presser foot. (Leave needle in fabric)
– Spread fold and re-fold so that seam line is straight

– Turn the fabric and lower the presser foot so that the upper knife is positioned in line with the cut edge.
– Pull slack threads up, then start to sew.

CAUTION:

Sewing over pins will damage and /or destroy the cutting edge of the knives.

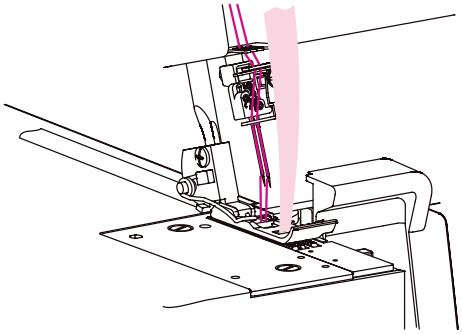
- **Pin Placement**

– Insert pins to the left of the presser foot. The pins will be easy to remove and are away from the cutting action of the knives.

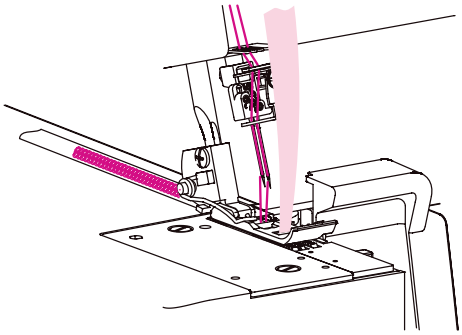
- **Securing The Thread Chain**

– Thread a large eye, hand sewing needle (such as a tapestry needle) with the thread chain.
– Pull the thread chain into the overlock stitches or between two layers of fabric.

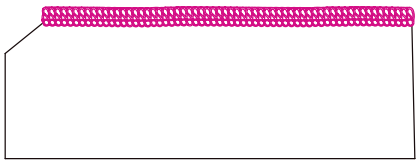
How to Reinforce a Seam



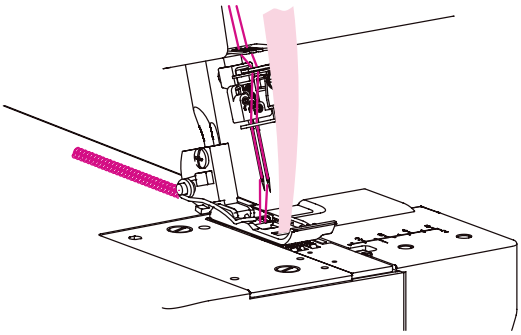
– Inserting twill tape while overlock sewing will stabilize the seam.



– Insert the tape through the hole in the front of the foot.
– Position the tape under the foot to the back of the machine and sew the garment seam.

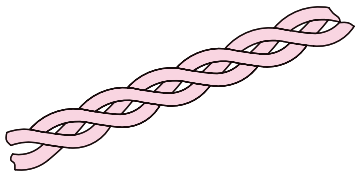


– The tape is attached as the seam is sewn.

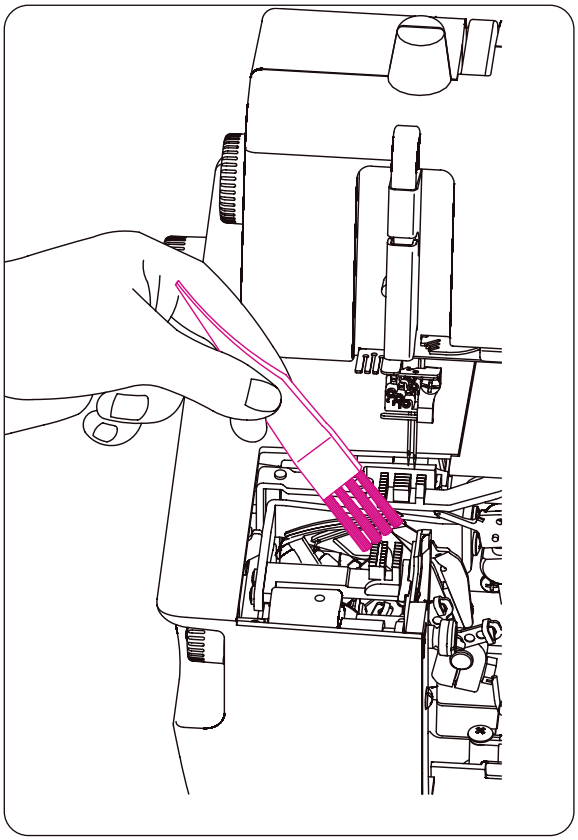


• **Braiding by Chaining off**

– Place the movable upper knife in nonworking position.
– Insert filler cord such as yarn or twill type through the hole in the front of the foot.
– Position the filler cord under the foot and chain off the desired length.



– Chained off braids can be used individually or woven into 3 or 4 ply braids.



MACHINE MAINTENANCE

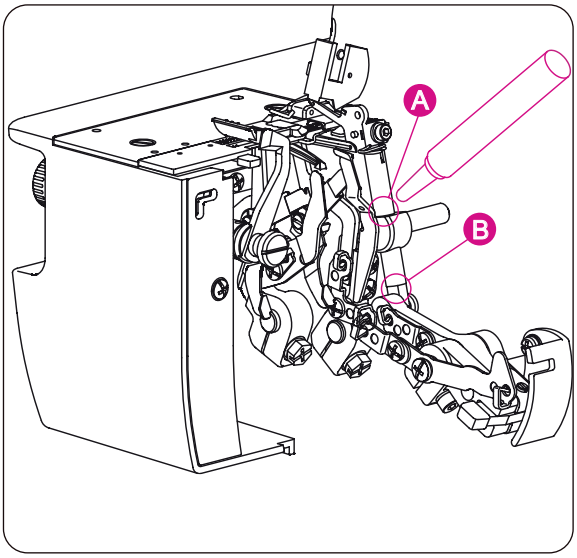
An overlock machine requires more maintenance than a conventional machine for two reasons:

1. A lot of lint is produced due to the cutting action of the knives.
2. An overlock runs at a very high speed and needs to be oiled frequently to lubricate the internal working parts.

Cleaning The Machine

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

– Clean the lint from the looper and knife area often with a dry lint brush.



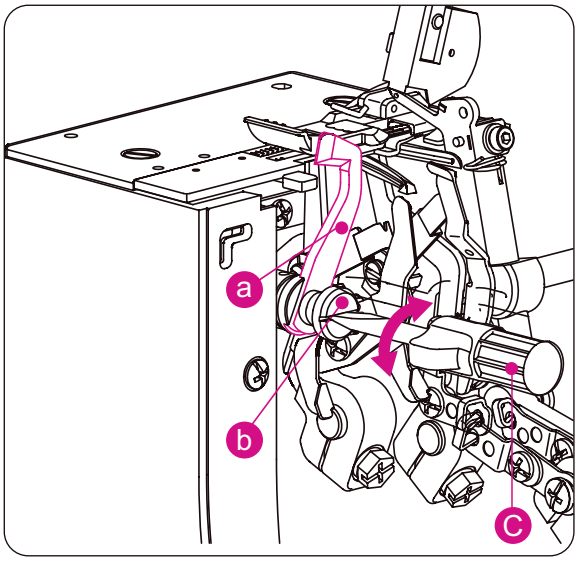
Oiling The Machine

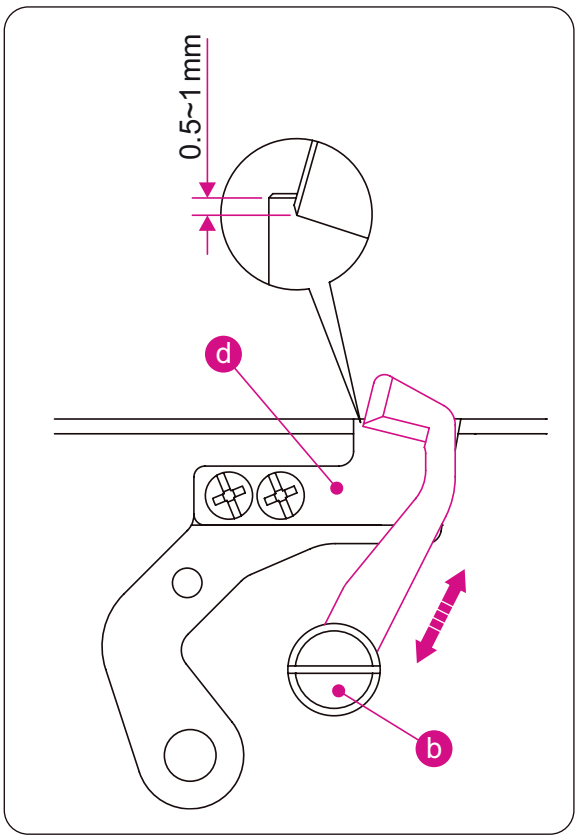
CAUTION:
Before lubricating your machine, disconnect power line plug from the wall receptacle.

– 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.



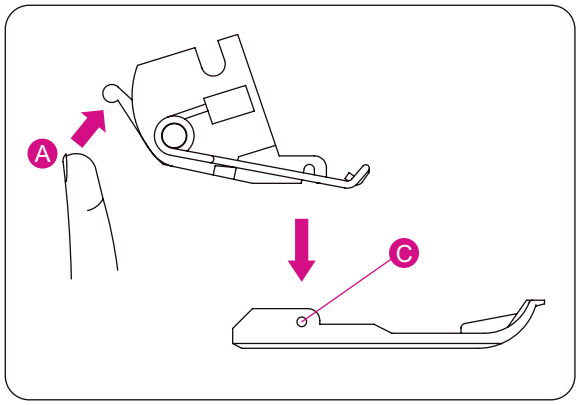


Replace the Upper Knife

CAUTION:
Before replacing the upper knife, disconnect power line plug from the wall receptacle.

– The upper knife should be changed when it becomes dull.
– The upper knife can be replaced according to the directions provided, however if there are any difficulties experienced, consult your dealer representative to make the replacement.
– Be sure that the power line plug is disconnected from the electric source.

(a) Open the looper cover and set the upper knife in the working position.
(b) Loosen the upper knife set screw
(c) Remove the upper knife and turn the handwheel to lower the upper knife holder to its lowest position.
(d) In this position, put a new upper knife in the groove of the upper knife holder, making sure that the edge of the upper knife is approximately 0.5–1.0 mm below the surface of the fixed cutting blade.
(b) Tighten upper knife set screw.



OPTIONAL ACCESSORIES

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

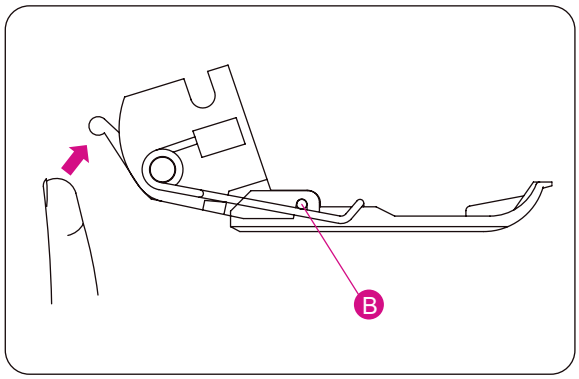
PLEASE NOTE:

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.

CAUTION:

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



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.

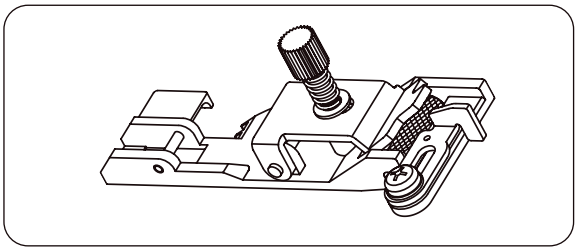
- **Replacement**

– 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.

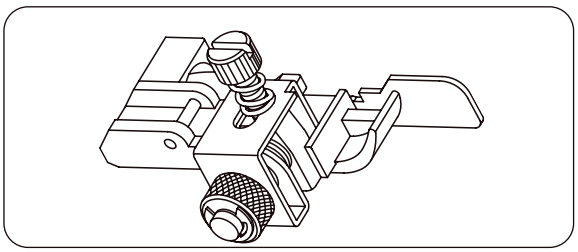
– Raise presser foot shank and make sure the presser foot sole is properly attached to the presser foot shank.

Optional Overlock Presser Feet



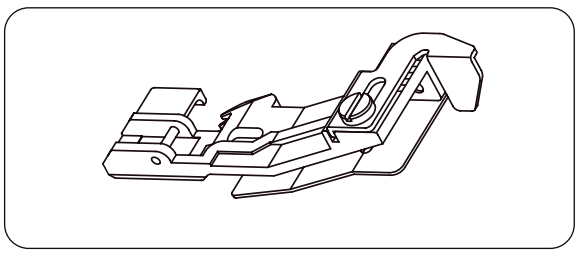
- **Elasticator Foot**

– This foot is used for attaching elastic tape to the garment and the amount of contraction of the elastic tape can be adjusted as required.



- **Blind stitch Foot**

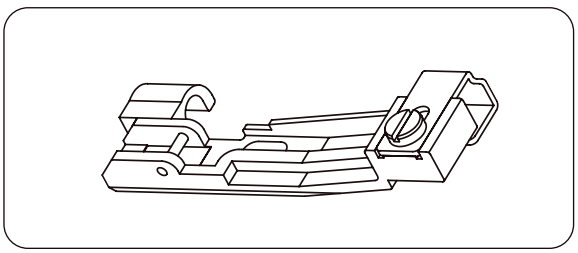
– This foot is for sewing cuffs on knit fabrics, skirt and trouser seams where seam should not be visible.



- **Gathering Foot**

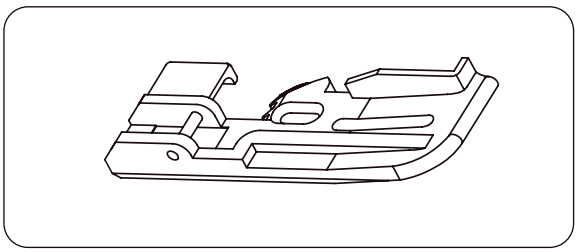
– This foot is most suited for gathering when sewing tiered skirts, yokes, cuffs and frills on skirts, etc.

– This foot is also suited for sewing two fabrics together and gathering the bottom fabric in one operation.



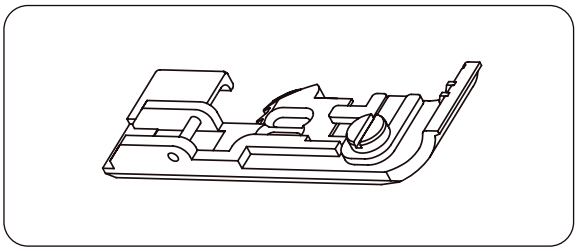
- **Beading/Sequins Foot**

– This foot is used for sewing on beads, etc.



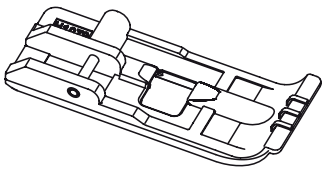
- **Piping Foot**

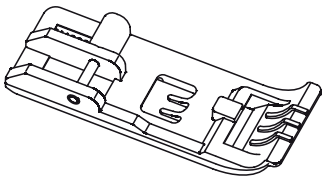
– This sewing foot is suited for sewing welting between two plies of fabric.

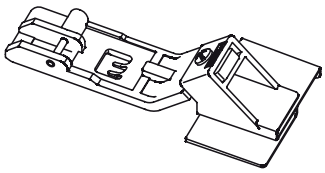


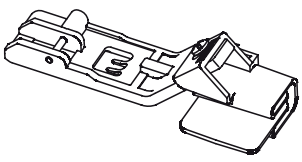
- **Ribbon–couching Foot**

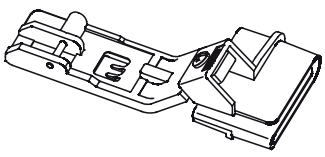
– This sewing foot is suited for sewing on tapes, etc.

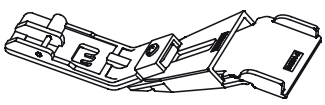


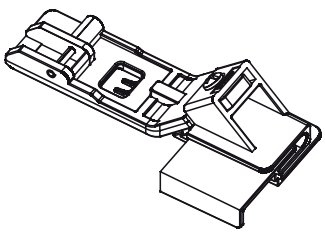












Optional Cover Presser Feet

- **Cording Foot**

– 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.

- **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.

- **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 neaten 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.

- **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.

TROUBLESHOOTING

Overview

Condition	Cause	Remedy Page
Fabric does not feed well.	1. Lengthen stitch length. 2. Increase presser foot pressure for heavy weight fabric. 3. Decrease presser foot pressure for light weight fabric.	36 37 37
Needle breaks	1. Insert needle correctly. 2. Do not pull fabric while sewing. 3. Tighten needle set screw. 4. Use a larger needle on heavy fabrics.	15 40 15 15
Thread breaks.	1. Check threading. 2. Check for tangled or caught thread. 3. Insert needle correctly. 4. Insert new needle, current needle may be bent or have a blunt point. 5. Use only high quality thread. 6. Loosen thread tension.	21–34 35 15 15 72 40–51
Stitch skip.	1. Insert new needles, current needles may be bent or have a blunt point. Use only ELx705 overlock needles. 2. Tighten needle set screw. 3. Insert needles correctly. 4. Change type or size of needles. 5. Check threading. 6. Increase presser foot pressure. 7. Use a high quality thread.	9 15 15 15 21–34 37 72
Irregular stitches.	1. Balance thread tension. 2. Check for tangled or caught thread. 3. Check threading.	40–51 35 21–34
Fabric puckers.	1. Loosen thread tension. 2. Check for tangled or caught thread. 3. Use high quality light weight thread. 4. Shorten stitch length. 5. Decrease presser foot pressure for light weight fabrics.	40–55 35 72 36 37
Irregular trimming.	1. Check alignment of knives. 2. Replace one or both knives.	68 68
Fabric jams.	1. Close looper cover before sewing. 2. Check for tangled or caught thread. 3. Compress thick layers of fabric with conventional machine before sewing with overlock.	10 35
Machine does not operate.	1. Connect machine to power source and switch it on. 2. Close the looper cover.	10

FABRIC, THREAD AND NEEDLE CHART

Overview

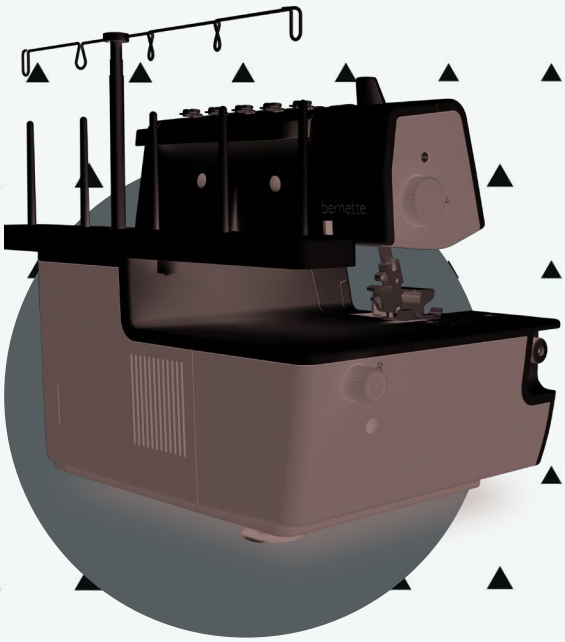
Woven			
Fabric		Thread	Needle ELx705
Light weight	Lawn Organdy Voile Crepe	Cotton: #100 Silk/ Rayon: #100 Spun: #80 – #90 Polyester: #80 – #100	#80/12
Medium weight	Muslin Seersucker Satin Gabardine Broadcloth	Cotton: #60 – #80 Silk/ Rayon: #50 Spun: #60 – #80 Polyester: #60 – #80	#90/14, #80/12
Heavy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

SPECIFICATION
Technical Summary

Stitch Formations	23 stitches 1-3 needles 2 loopers	
Needle system	ELx705	
Cutting width	5-7 mm from the left needle 3-5 mm from the right needle	
Stitch length	1-4 mm (standard: rolled hemming 1-2, ordinary overlock N=2.5)	
Differential feed	stretching 0.6 - 1 gathering 1 - 2	
Presser foot lift	4.5 mm	
Sewing Light	LED	
Sewing speed	1300 stitches/max.	
Foot control	Type 4C-316B for (USA/Canada)	Type 4C-316C / 4C-326G / 4C-345G for other countries
Dimensions (L x B x H) mm	360 x 300 x 290	
Weight (kg)	7.8 kg	

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