

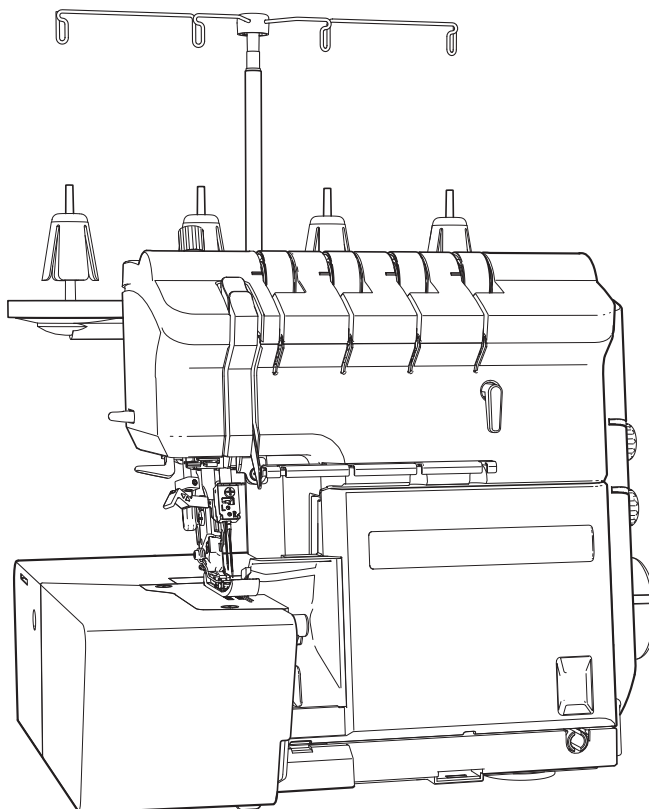
2-Needle, 2/3/4-Thread Overlock Sewing Machine

MO-2800

INSTRUCTION MANUAL

IMPORTANT:

Read all safety regulations carefully and understand them before using your sewing machine.
Retain this instruction manual for future reference.

EN

“IMPORTANT SAFETY INSTRUCTIONS”

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

“DANGER ___ To reduce the risk of electric shock:”

1. The appliance should never be left unattended when plugged in.
2. Always unplug this appliance from the electric outlet immediately after using and before cleaning.


“WARNING ___ To reduce the risk of burns, fire, electric shock, or injury to persons:”

1. Do not use the appliance as a toy. Caution is advised when the appliance is used by children, or near children. This sewing machine can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the sewing machine in a safe way and understand the hazards involved. Children shall not play with the sewing machine. Cleaning and user maintenance shall not be made by children without supervision.
2. Use this appliance only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
3. Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the appliance to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air openings blocked. Keep ventilation openings of the sewing machine and foot control free from the accumulation of lint, dust, and loose cloth.
5. Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
6. Always use the proper stitch plate. The wrong plate can cause the needle to break.
7. Do not use bent needles.
8. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
9. Do not carry out sewing with a marking pin stuck in the material since doing so can cause knife/needle breakage. In addition, do not attempt to cut anything other than fabric and thread with the upper/lower knives.
10. Switch the sewing machine off “O” when making any adjustments in the needle area, such as threading needle, changing needle, threading looper, or changing presser foot and the like.
11. Always unplug the machine from the electrical outlet when removing covers, when covers are opened to thread the loopers, when lubricating or when making any other user servicing adjustments mentioned in the instruction manual.
12. Never drop or insert any object into any opening.
13. Do not use outdoors.
14. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
15. To disconnect, turn all controls to the off “O” position, then remove plug from outlet.
16. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
17. Basically, the machine should be disconnected from the electricity supply when not in use.
18. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
19. (Except USA/Canada) This machine is provided with double insulation.
Use only identical replacement parts. See instructions for servicing Double-Insulated machine.

“SERVICING DOUBLE-INSULATED PRODUCTS

(Except USA / Canada)”

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 only be done by qualified service personnel. Replacement parts for a double-insulated product must be identical to those parts in the product. A double-insulated product is marked with the words DOUBLE INSULATION or DOUBLE INSULATED.

The symbol  may also be marked on the product.

“SAVE THESE INSTRUCTIONS”

“This overlock sewing machine is intended for household use only.”

Congratulations on your purchase of a JUKI sewing machine.

Please be sure to read safety precautions in “To use the sewing machine safely” in the Instruction Manual before use to fully understand the functions and operating procedures of the sewing machine so as to use the sewing machine for a long time.



After you have read the Instruction Manual, please be sure to keep it together with the warranty so that you can read it whenever necessary.

The warranty does not apply to any failures under conditions other than normal state use (failures that occur in the case the sewing machine is used without following the Instruction Manual or precautions given on the labels attached to the main body), and consumable parts (such as needles and knives). For warranty information, check the contents of the separate warranty.











To use the sewing machine safely

Marks and pictographs included in the Instruction Manual and shown on the sewing machine are used so as to ensure safe operation of the sewing machine and to prevent possible risk of injury to the user and other people.

Warning marks are used for different purposes as described below.

 WARNING	Indicates that there is a possible risk of death or serious injury if this mark is ignored and the sewing machine is used in a wrong manner.
 CAUTION	Indicates the operation, etc. which can cause a possible risk of personal injury and/or physical damage if this mark is ignored and the sewing machine is used in a wrong manner.

Pictographs mean the following:

	Danger warning which is not specified		There is a risk of electrical shock		There is a risk of fire		There is a risk of injury to hands, etc.
	Prohibited matter which is not specified		Disassembly/alteration is prohibited		Do not place fingers under the needle		Do not pour oil, etc.
	Generally required behavior		Disconnect the power plug				

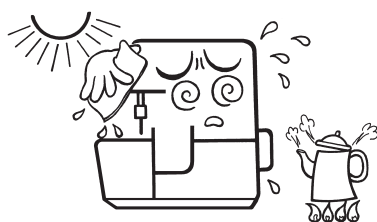
WARNING

For the combination of the material and the thread and needle, in particular, refer to the explanation table in “Replacement of the needle”.

If the needle or thread does not match the material used such as in the case that an extra heavy-weight material (e.g., denim) is sewn with a thin needle (#11 or higher), the needle can break resulting in an unexpected personal injury.

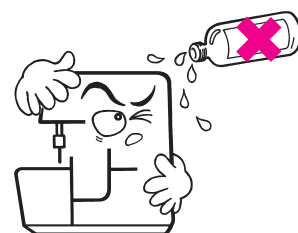
Other precautions

- Do not put the sewing machine under the direct sunlight or in a humid place.



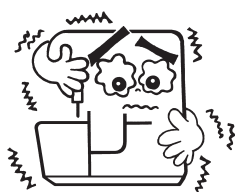
- Do not wipe the sewing machine with solvent such as thinner.

When the sewing machine is soiled, put a small quantity of neutral detergent on a piece of soft cloth and carefully wipe off the sewing machine with it.



Be aware that the following state can take place since the sewing machine incorporates semi-conductor electronic parts and precise electronic circuits.

- Be sure to use the sewing machine in the temperature range from 5°C to 40°C. If the temperature is excessively low, the machine can fail to operate normally.



* The operating temperature of the sewing machine is between 5°C and 40°C. Do not use the sewing machine under the direct sunlight, near the burning things such as a stove and candle, or in a humid place. By so doing, the temperature in the interior portion of the sewing machine can rise or the coating of the power cord can melt, causing fire or electrical shock.



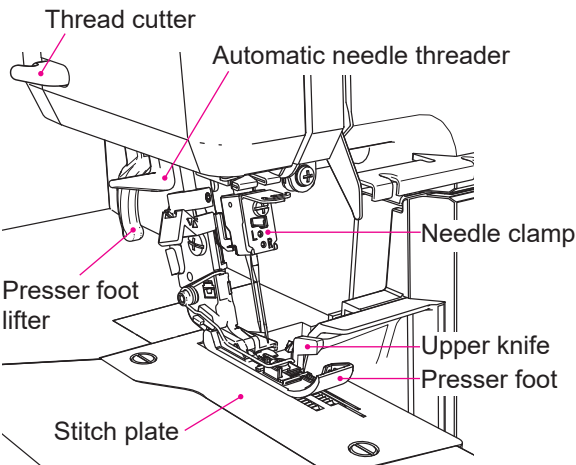
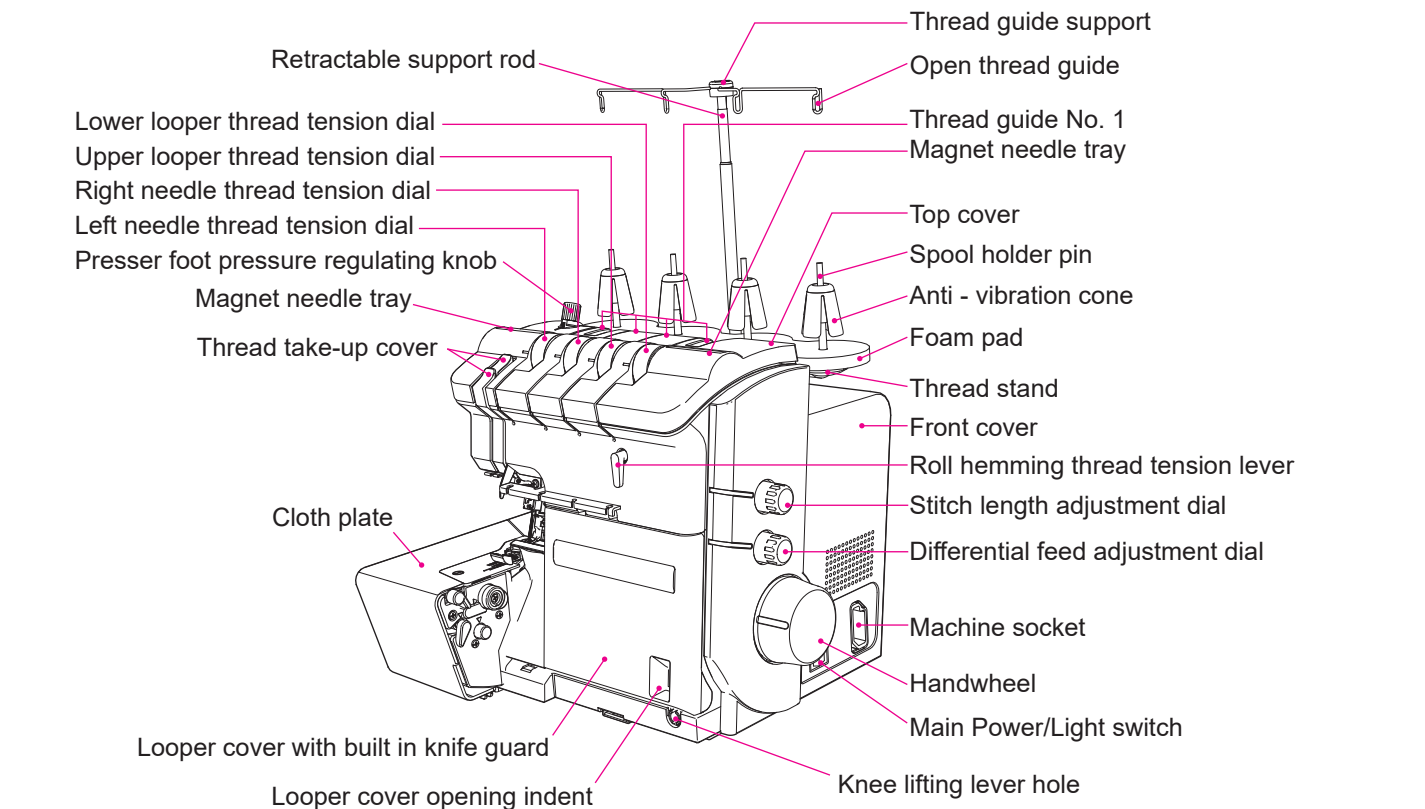
Please scan the QR code with your mobile phone/tablet to access the operation support video or visit our video site.

<https://www.youtube.com/playlist?list=PLY0cKTfgy6QxSL4KJbrMb7oA7D4OglJZc>


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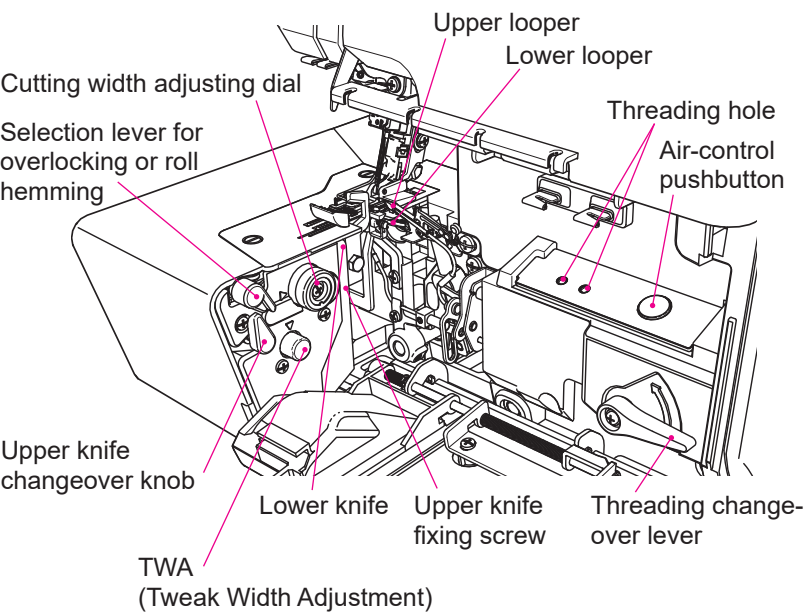
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Details of the machine



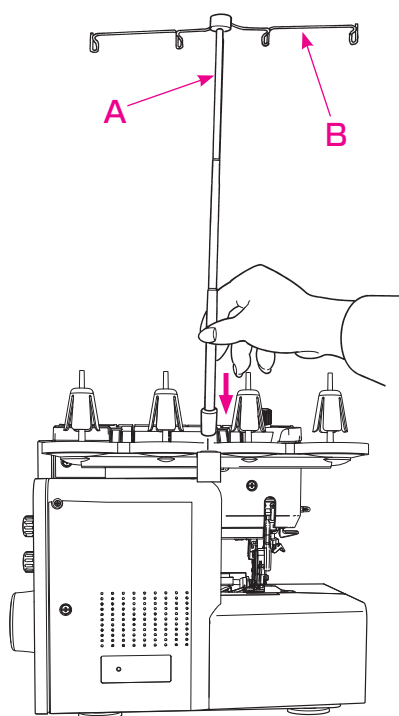
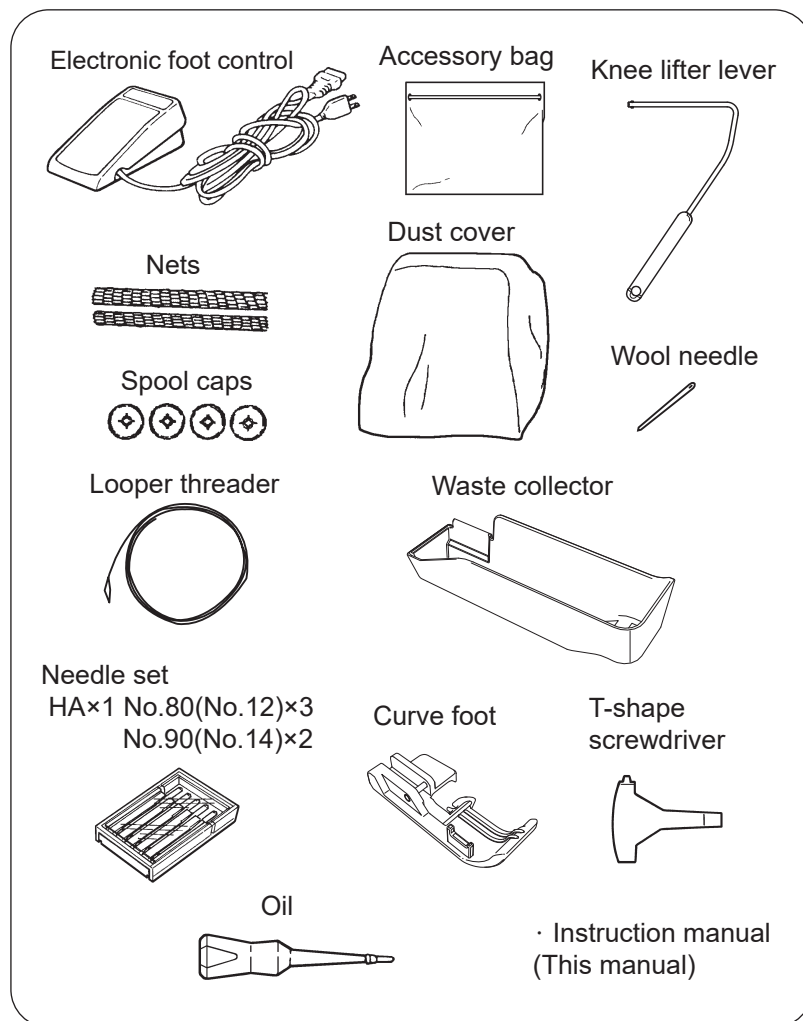
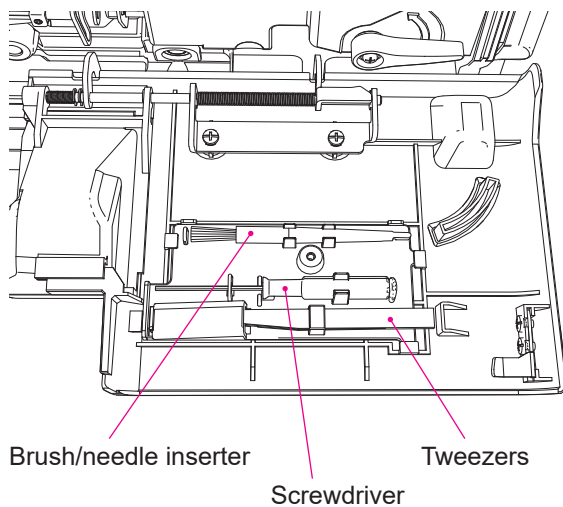
● View with looper cover open

 CAUTION	Be sure to turn off the power switch before opening the looper cover.
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Details of the machine

● Accessories

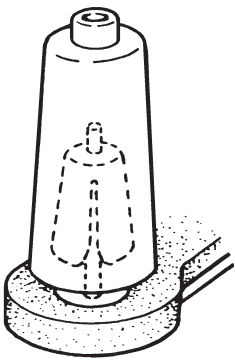
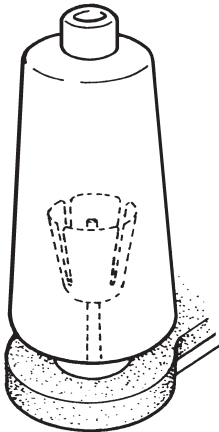
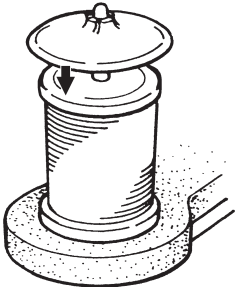
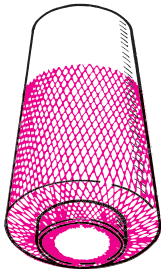


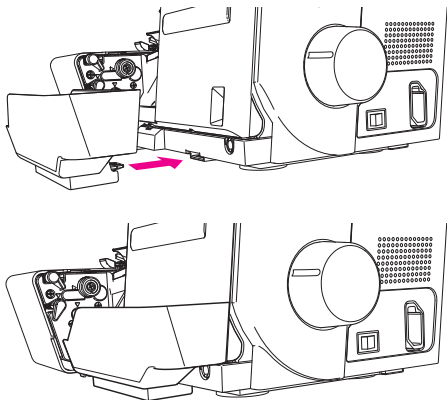
Thread stand

Push the support rod firmly into the socket on the back of the machine.

Raise the support rod (A) fully, turning slightly until the position catches engage. Position the thread guide (B) on the thread stand so that the arrow is to the front.

Preparing the machine / Using the machine

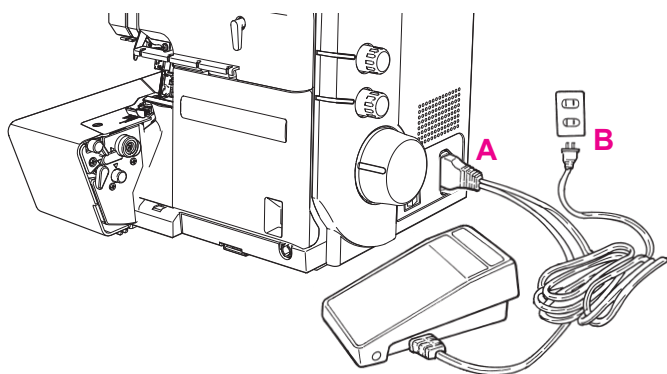
	<p>Thread / cones / spools</p> <p>The anti-vibration cone should be used with the wider edge at the bottom on the spool holder pin when sewing with cones.</p>		<p>Large spools</p> <p>If large industrial spools are used, position the anti-vibration cone upside down on the spool holder pin, i .e. with the wider edge at the top.</p>
	<p>Household spools</p> <p>Remove the anti-vibration cones. Place spools on spool holder pins and push the spool caps on with the rounded side downwards.</p>		<p>Thread net</p> <p>If the threads slip and get twisted, cover the looper spools with the net supplied in the accessory bag.</p>



Waste collector

Clip the waste collector into the opening on the looper cover. It catches the cut-off fabric as you sew, keeping your working area neat and tidy.

Preparing the machine / Using the machine



CAUTION:

Be sure to turn OFF the power switch before plugging/unplugging the controller.

Attaching the foot control

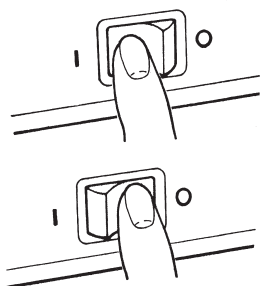
Plug foot control into the machine socket (A) and then into main socket (B). The foot control regulates the sewing speed. The sewing speed can be adjusted by increasing or decreasing the pressure on the foot control.

“WARNING”

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 main socket only one way.

If the plug does not fit fully in the polarized main socket, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper polarized main socket. Do not modify the plug in any way. (for USA, Canada only)



Main Power/light switch

The main power/light switch is conveniently placed on the handwheel side of the machine in front of the socket.

I = On with light

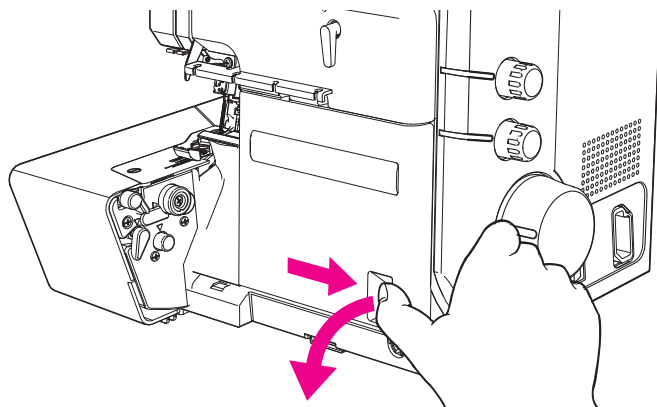
O = Off

* After pressing the switch, the power will be turned OFF in two or three seconds.

CAUTION:

Perform these following steps when you are not using your sewing machine.

1. Be sure to turn OFF the power switch.
2. Be sure to remove the power plug from the wall outlet.
3. Do not place a thing on the foot controller.



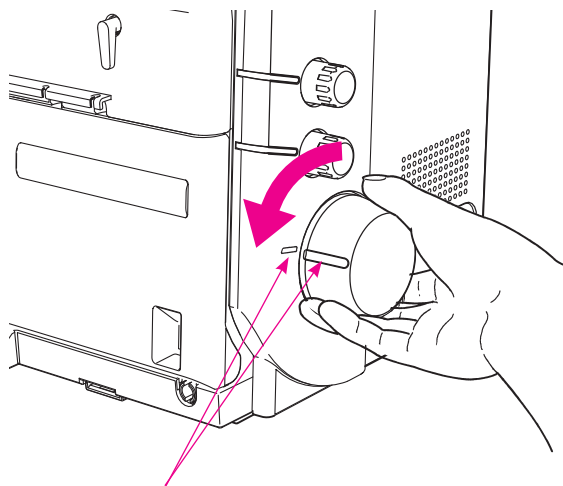
Looper cover

To open, press to the right with your thumb in the indent provided and tilt the cover towards you. To close push it up and press lightly to the right. The cover engages automatically.

Safety device: The sewing machine is equipped with a safety device in order to prevent malfunction. In any of the following cases, the safety device works to prevent the sewing machine from running.

- * When the looper cover is opened
- * When the cloth plate is opened
- * When the presser foot is raised

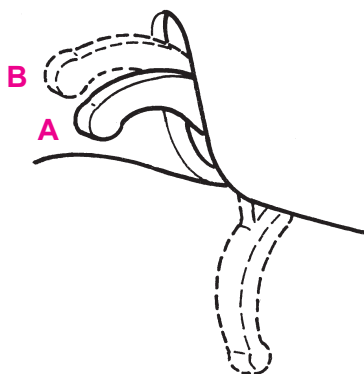
Using the machine



* The needle is brought to its upper end by aligning the “■” marking on the side of the front cover with the “□” marking on the handwheel.

Handwheel

The handwheel turns forward, i.e. in the same direction as on a household sewing machine.

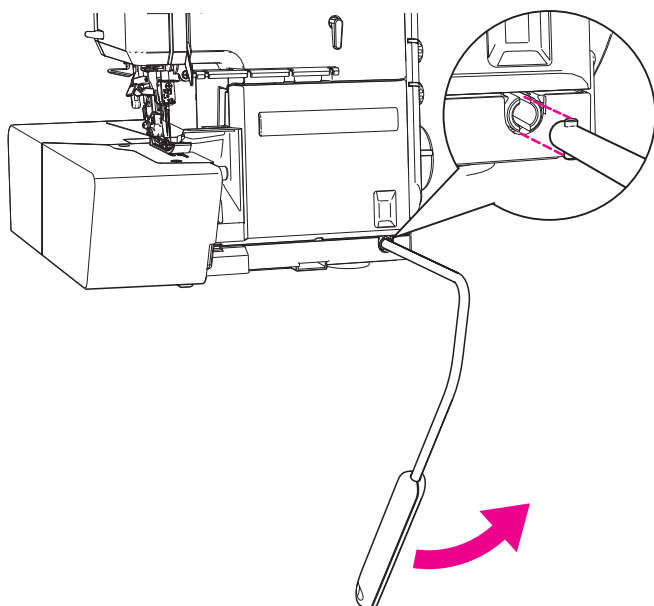


Two step presser foot lifter with integrated front foot lift

To raise the presser foot, lift the presser foot lever on the rear of the machine, until it engages (A). It can be raised again to the maximum height and held in this position to provide more space between presser foot and stitch plate (B).

When the foot is raised (A and B), the front of the foot is automatically lifted.

Note: When the presser foot is raised, all the tensions are released making it easier to thread the machine.



How to use the knee lifting lever

You can lift/lower the presser foot without taking your hands off the material.

1. Insert the protruding part of the knee lifting lever into the recessed part of the mounting hole.
2. Press the knee lifting lever to the right to lift the presser foot, or to the left to lower it.

* Do not touch the knee lifting lever during sewing. If you touch it, the presser foot will go up to cause a deformation of the seam.

Using the machine

Changing the presser foot

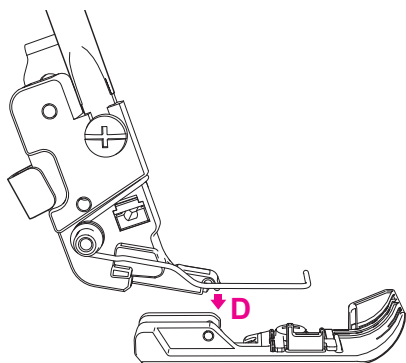
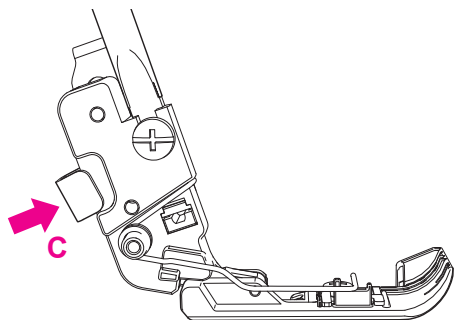


CAUTION

When you want to change the presser foot, turn OFF the power switch and lower the upper knife.

- Raise the presser foot.
- Turn handwheel towards you until needles are fully raised. Match the matching up marks on handwheel and side cover.

Press the catch (C) to release the presser foot from the clamp. Raise the presser foot shank to the highest position (B) and remove the presser foot to the left. To attach the presser foot, place it under the shaft. The groove in the shaft should line up exactly with the presser foot pin (D). Lower the presser foot lifting lever and check that the groove in the shank should line up exactly with the presser foot pin (D). If it is not lined up, press the catch (C) to line up.



How to use the presser foot

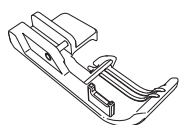
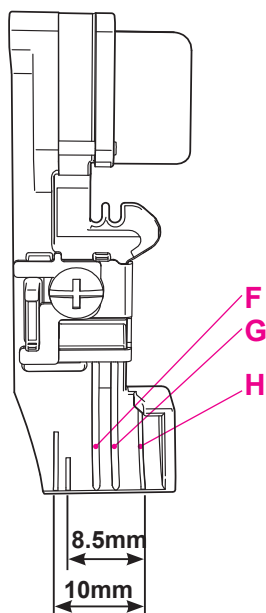
Use the marker on the presser foot as a guide when placing the material under the presser foot.

(F) Left needle position

(G) Right needle position

(H) Knife position (when the cutting width adjusting dial is set at scale mark "3.0")

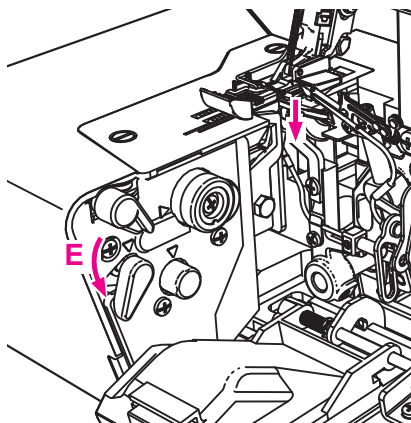
The knife position represents the position at which the material is cut.



• Curve foot

The curve foot is able to make small turns since it is smaller than the standard presser foot. It is useful for sewing small curves.

Using the machine



To carry out sewing without cutting the material (the upper knife is deactivated)



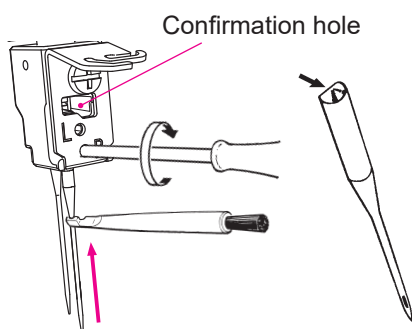
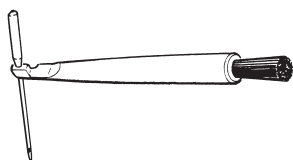
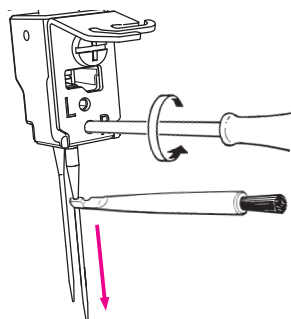
CAUTION

To deactivate the upper knife, lift the presser foot and turn OFF the power switch.

1. Lower the upper knife changeover knob in the direction of the arrow.
2. Check to be sure that the knife is lowered.

Caution:

To use the upper knife, place the upper knife changeover knob to the E position and turn the handwheel by hand about two turns to lift the upper knife.



Inserting the needles



CAUTION

Switch the machine off (Power switch to "0")

Needles can be inserted quickly and easily with the practical needle inserter.

- Disconnect machine from electricity supply.

Turn handwheel towards you until needles are fully raised. Match the matching up marks on handwheel and side cover.

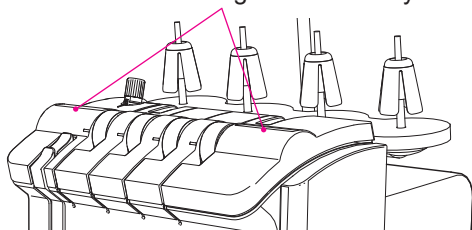
Lower the presser foot.

Using the screwdriver, loosen the needle setscrews and remove the needles.

Place the right-hand needle, flat side towards the back, into the hole of the needle inserter and insert the needle as far as possible into the needle clamp. Tighten the setscrew lightly and then insert the left-hand needle in the same way and tighten both setscrews.

- * You can check that the needle is fully inserted into the hole of the needle inserter through the confirmation hole.
- * Be aware that the sheet metal inside the needle clamp may be bent if you tighten the screw excessively. Take care not to excessively tighten the screw.

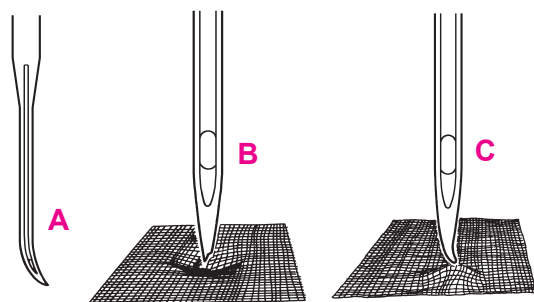
Magnet needle tray



• Magnet needle tray

You can place the needle you have changed on this tray.

Needle and thread



Needles

Needles must be in perfect condition. Problems can occur if needles:

- A** are bent.
- B** are damaged or blunt.
- C** have hooked points.

Needle and thread

The needle size used depends on the thread. The needles should be in accordance with thread used.

When sewing, the thread is fed through the long groove in the needle. If the needle is too fine, the thread does not fit into the groove and stitches will be skipped.

Use needles No. 70 - 90.

* It is recommended to use JLx2 needle, especially when sewing thick materials, overlapped section, etc, with overlock machine.

Thread/decorative threads

Sewing and special overlock threads are manufactured in a wide variety of types, weights and combination of fibres. It is worth investing in good quality threads for perfect sewing results. Decorative threads specially made for overlockers (available on cones) are also becoming widely available. We recommend following the basic guidelines when using special threads on your overlocker:

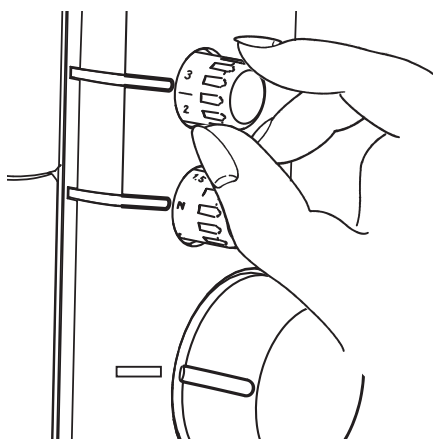
- Purchase threads on cones or spools which are produced exclusively for overlocking.
- When using normal spools, use the spool caps (in accessory bag).
- Only use decorative threads in the loopers. The thread must move easily and without resistance through the thread guides and looper eyes.
- The thicker the thread, the longer the stitch length (3-4).
- The thicker the thread, the looser the tensions.
- Sew slowly when using decorative threads. Pull the thread chain gently to the rear when starting to sew.

Always test sew decorative threads before starting to sew your work.

Thread, needle, application table

Thread	Needles	Where	Application
All purpose overlock thread 120/2 (polyester)	70-90	Needles and looper threads	For all overlock.
Polyester-continuous filaments		Loopers only	Neatening edges
Woolly nylon		Loopers only	Soft seams in knits, rolled hems.
Spun Polyester	80-90	Needles, and looper threads	Seams in all fabrics.
Embroidery/darning and decorative threads	70-90	Loopers only	Neatening edges, rolled hems.

Adjustments and settings



Stitch length

It can be adjusted while sewing.

The stitch length is infinitely variable from 0.7 to 4 mm. Most overlock work is done with a basic setting of 2.5 mm.

For roll hemming or narrow overlocking, it is best to set the dial at “0.7 to 1.5”.

For blind stitch which requires the “use of separately-available presser foot”, set the dial at “4”.

Cutting width



CAUTION

Switch the machine off (Power switch to “0”)

- Raise the upper knife.
- Turn cutting width adjustment dial in the desired direction.
- Lower upper knife.

The position of the lower knife determines the width of the seam.

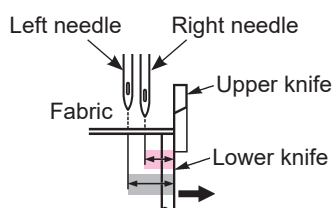
Reduce the cutting width if the edges of fine fabric curl up when being sewn (A).

Increase the cutting width if the loops seem to be too loose (B).

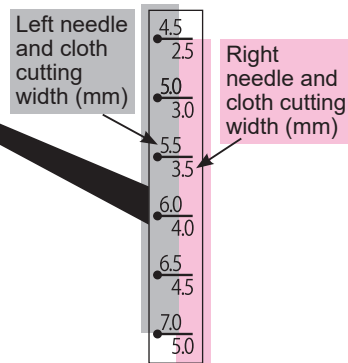


WARNING

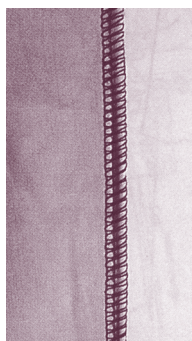
Do not carry out sewing with a marking pin stuck in the material. In addition, do not attempt to cut anything other than fabric and thread with the upper/lower knives. Be aware that doing so can cause needle break or personal injury.



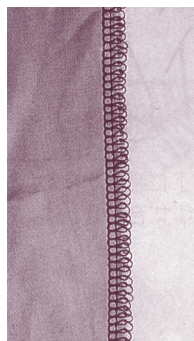
Scale marks on the cutting width adjusting dial



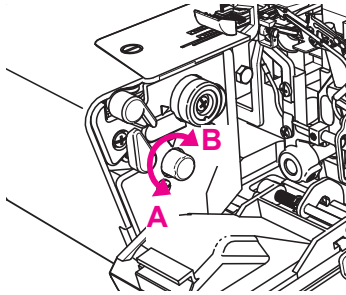
A



B



Adjustments and settings

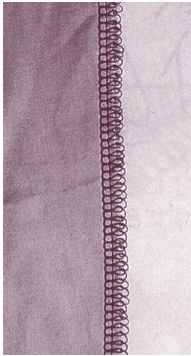


TWA (Tweak Width Adjustment)

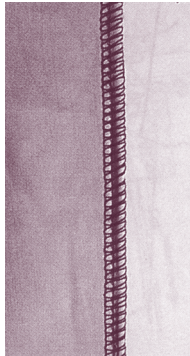
Overlocking width is set in conjunction with the adjustment of the lower knife position. It is also possible to finely adjust the overlocking width separately.

- A** To decrease the overlocking width
- B** To increase the overlocking width

C



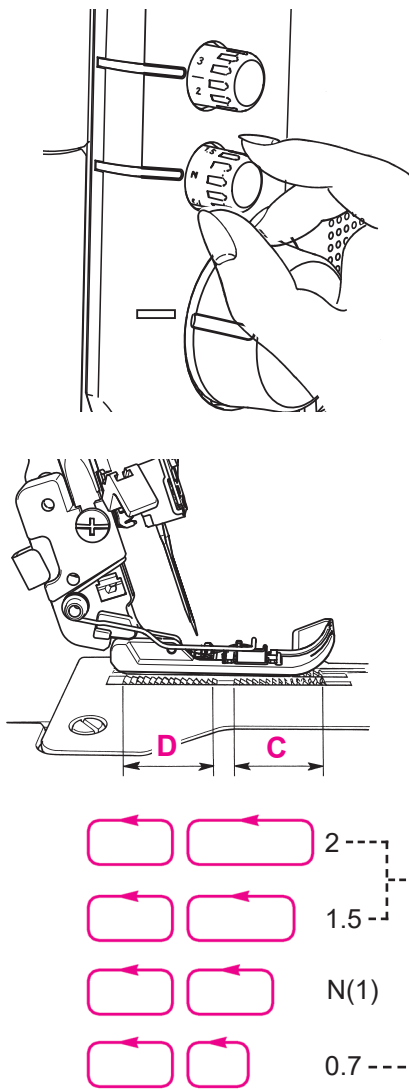
D



- C** The material edge does not reach the seam. (There are gaps in the material edge within the seam)
→ Turn the TWA knob in the direction of decreasing the overlocking width.
- D** The material edge projects from the seam or curls.
→ Turn the TWA knob in the direction of increasing the overlocking width.

* If the excess of thread or material curling cannot be corrected with the "lower knife position" or "overlocking width adjustment", or if you want to finely adjust the texture of seam, adjust the upper/lower looper thread tension dial.

Adjustments and settings



Differential feed

There are two feed dogs one front (C) and one rear (D). The two feed dogs move independently and the distance each feed dog travels during one complete movement can be adjusted. The differential feed prevents fluting or waving in knitted or stretch fabrics and movements between the layers of fabric. It also ensures pucker-free seams in smooth fabric such as nylon or closely woven fabric.

Perfectly flat seams in knits or stretch fabrics.

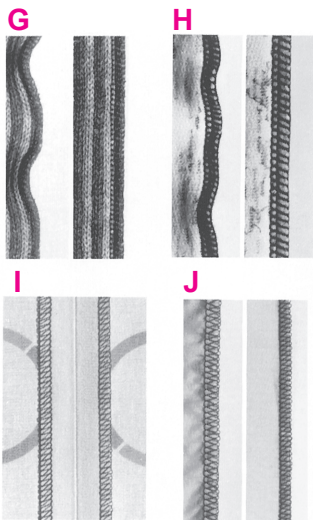
The distance travelled by the front feed dog should be greater than that of the rear feed dog. The front feed dog, therefore, feeds an amount of fabric which the rear feed dog can take up behind the needle without stretching the fabric. (E)

Pucker - free seams in nylon or closely woven fabrics.

The distance travelled by the rear feed dog should be greater than that of the front feed dog. The front feed dog, therefore, holds the fabric back so that the rear feed dog can take it up behind the needle without any puckering. (F)

Adjusting the differential feed

The differential feed can be adjusted by simply turning the differential feed adjustment dial in the direction desired. Always make a trial run. The differential feed is infinitely variable and can be adjusted while sewing.

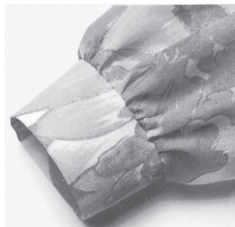


Adjusting the differential feed

Simply turn the dial in the direction desired for fully variable adjustment while sewing. Test sew.

	Effect	Fabric
2	Wave-free seams (G)	Thick wool knits, hand knitted articles, very stretchy fabrics
1.5	Wave-free seams (H)	Cotton, silk, synthetic jersey, sweatshirt fabrics and fine knits
N	Normal feed (I)	Woven fabrics
0.7	No puckering (J)	Fine nylon jersey, closely woven fabrics, lining fabric satin, poplin

Adjustments and settings



Gathering

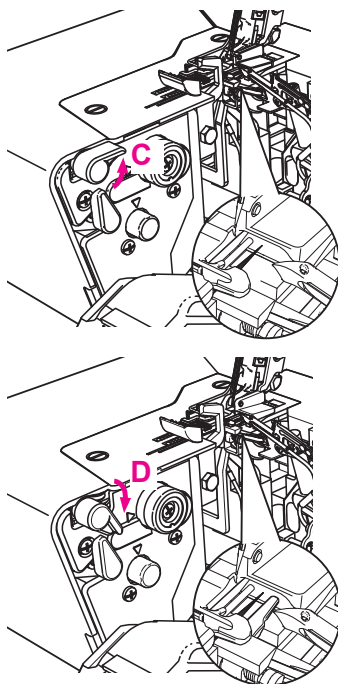
Using the differential feed, a single layer of fabric can be gathered before sewing it to the garment.

For example, sleeve heads and lower edges, yokes, lace edging or frills.

Adjustment:

- Stitch: 4-thread overlock
- Differential feed: 2
- Stitch length: 3-4
- Cutting width: 2-3

Increase the needle thread tension (6-8) for a tighter gather.



Roll hemming

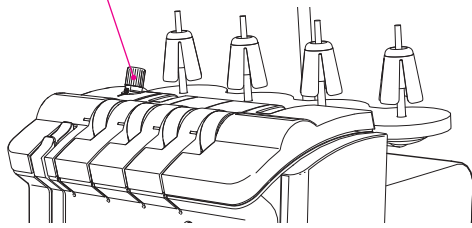
- Turn the handwheel towards you until the needles are fully raised.
- For roll hemming, move the overlocking width changeover knob upward and check that the overlocking claw retracts. (C).
- For standard overlocking, move the overlocking width changeover knob downward and check that the overlocking claw projects. (D).

The roll hemmer is fully integrated in the machine. The edge of the fabric will be automatically rolled over, producing a very narrow, fine seam or hem.

Roll hemming is ideal for finishing edges on all fine fabrics, such as evening clothes, lingerie, scarves, frills and also for curtains and napkins.

Adjustments and settings

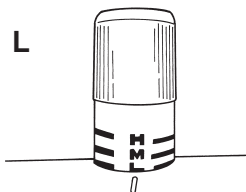
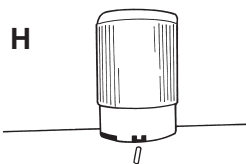
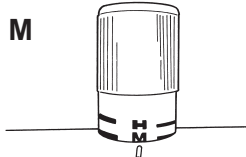
Presser foot pressure regulating knob



Presser foot pressure

The presser foot pressure is factory adjusted to a medium setting. Align the marker line on the presser foot pressure regulating knob with the upper end of the top cover.

- Position of knob for normal pressure (**M**) = Medium.
- More pressure: for thick or stiff fabrics such as denim, tweed, firm linen (**H**) = High.
- Less pressure: for light-weight or sheer fabrics and knits (**L**) = Low.



Threading preparations / Tips

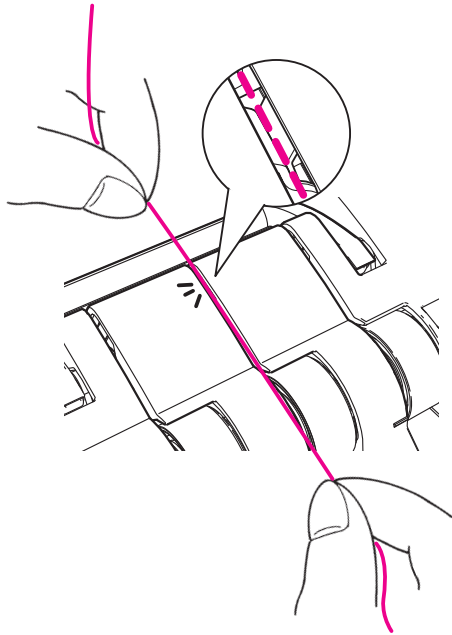
1. Extend the retractable support rod fitted with open thread guide as far as it goes.
2. Raise the presser foot. (Tension disk opens.)
3. Open the looper cover.
4. Turn the power on.

Threading sequence

The thread guides can be threaded in any sequence.

The threading sections are color coded correspondingly.

- Lower looper thread (red markings)
- ▲ Upper looper thread (purple markings)
- Right needle thread (green markings)
- ◆ Left needle thread (beige markings)






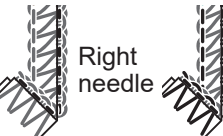






Threading the thread guide No. 1

Bring down the thread you have put on the retractable support rod and fit it in the thread guide No. 1 until you hear a click.

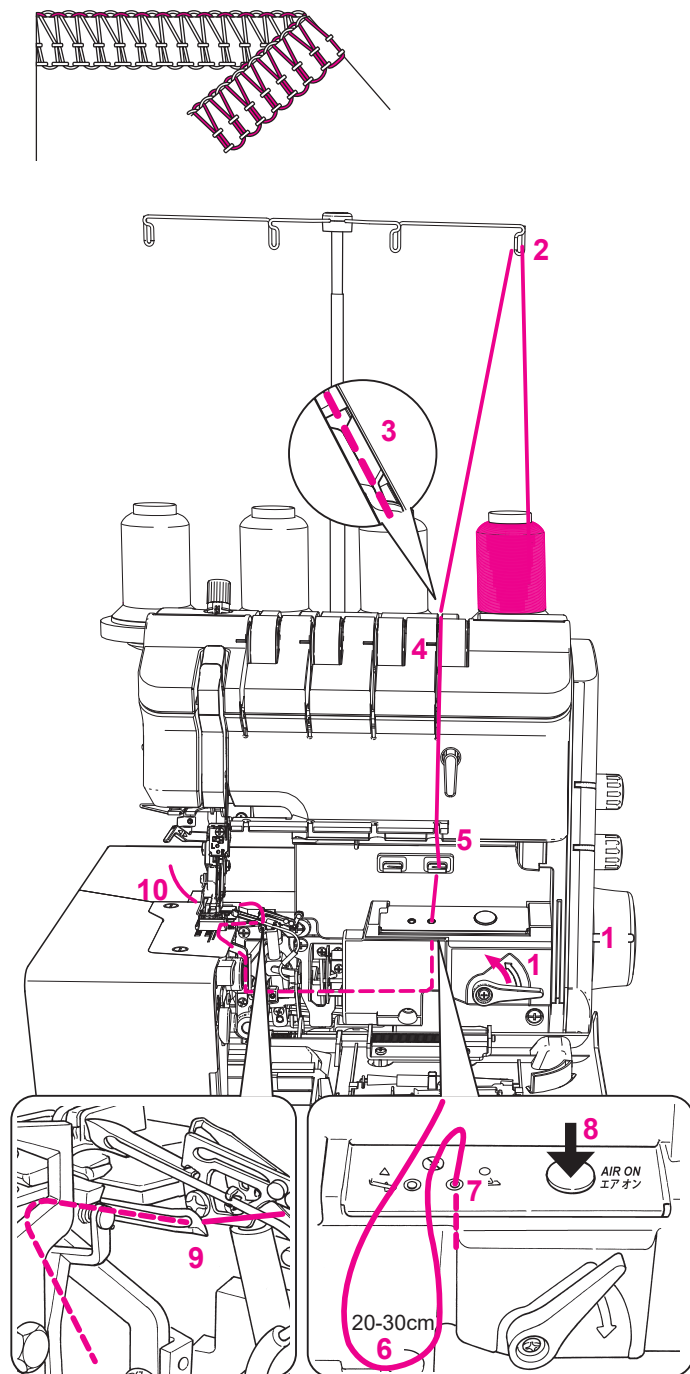
Bring the thread toward you along the groove.

Stitch chart

* The scale marks of the tension regulating dial listed below are just a guide. The correct adjustment differs according to the type of thread and material to be used.

Stitch	Stitch width	Thread tension	Basic settings
4-Thread overlock with integrated safety seam 	5-7.5 mm, right and left needles	Left needle (beige) 3-5 Right needle (green) 3-5 Upper looper (purple) 3-5 Lower looper (red) 3-5	Stitch length: 2.5 Cutting width: 2.5-5.0 (Left needle 4.5-7.0) Differential: N-2 (knits) 0.7-N (wovens)
3-Thread super stretch 	5-7.5 mm, right and left needles	Left needle (beige) 3-5 Right needle (green) 3-5 Lower looper (red) 1.5-4	Stitch length: 2-2.5 Cutting width: 2.5-5.0 (Left needle 4.5-7.0) Differential: N-2 (knits) 0.7-N (wovens) Upper looper converter
3-Thread overlock  Left needle Right needle	5-7.5 mm, left needle	Left needle (beige) 3-5 Upper looper (purple) 3-5 Lower looper (red) 3-5	Stitch length: 2.5 Cutting width: 2.5-5.0 (Left needle 4.5-7.0) Differential: N-2 (knits) 0.7-N (wovens)
	3-5.5 mm, right needle	Right needle (green) 3-5 Upper looper (purple) 3-5 Lower looper (red) 3-5	
3-Thread Flatlock  Left needle Right needle	5-7.5 mm, left needle	Left needle (beige) 1-3 Upper looper (purple) 1-5 Lower looper (red) 5-7	Stitch length: 2-2.5 Cutting width: 2.5-5.0 (Left needle 4.5-7.0) Differential: N
	3-5.5 mm, right needle	Right needle (green) 1-3 Upper looper (purple) 1-5 Lower looper (red) 5-7	
3-Thread narrow seam 	2 mm, right needle	Right needle (green) 3-6 Upper looper (purple) 3-6 Lower looper (red) 3-5	Stitch length: 0.7-1.5 Cutting width: 2.5-3.5 (Left needle 4.5-5.5) Differential: N-0.7 Stitch lever: roll hem
3-Thread roll hem 	2 mm, right needle	Right needle (green) 3-5 Upper looper (purple) 3-4 Lower looper (red) 3-5	Stitch length: 0.7-1.5 Cutting width: 2.5-3.5 (Left needle 4.5-5.5) Differential: N-0.7 Stitch lever: roll hem
2-Thread wrapped overlock  Left needle Right needle	5-7.5 mm, left needle	Left needle (beige) 4-6 Lower looper (red) 3-5	Stitch length: 1-2.5 Cutting width: 2.5-5.0 (Left needle 4.5-7.0) Differential: N Upper looper converter
	3-5.5 mm, right needle	Right needle (green) 3.5-5.5 Lower looper (red) 2.5-4.5	
2-Thread Flatlock  Left needle Right needle	5-7.5 mm, left needle	Left needle (beige) 1-3 Lower looper (red) 3-5	Stitch length: 2-3 Cutting width: 2.5-5.0 (Left needle 4.5-7.0) Differential: N Upper looper converter
	3-5.5 mm, right needle	Right needle (green) 2-4 Lower looper (red) 4-6.5	
2-Thread roll hem 	2 mm, right needle	Right needle (green) 3-5 Lower looper (red) 4-6	Stitch length: 0.7-1.5 Cutting width: 2.5-3.5 (Left needle 4.5-5.5) Differential: N-0.7 Upper looper converter
2-Thread overlock  Left needle Right needle	5-7.5 mm, left needle	Left needle (beige) 1-3.5 Lower looper (red) 4-6	Stitch length: 2.5 Cutting width: 2.5-5.0 (Left needle 4.5-7.0) Differential: N Upper looper converter
	3-5.5 mm, right needle	Right needle (green) 1.5-4 Lower looper (red) 5.5-7.5	

Threading 4/3 Thread OL



Lower looper thread, red markings



Switch the machine off (power switch "0")

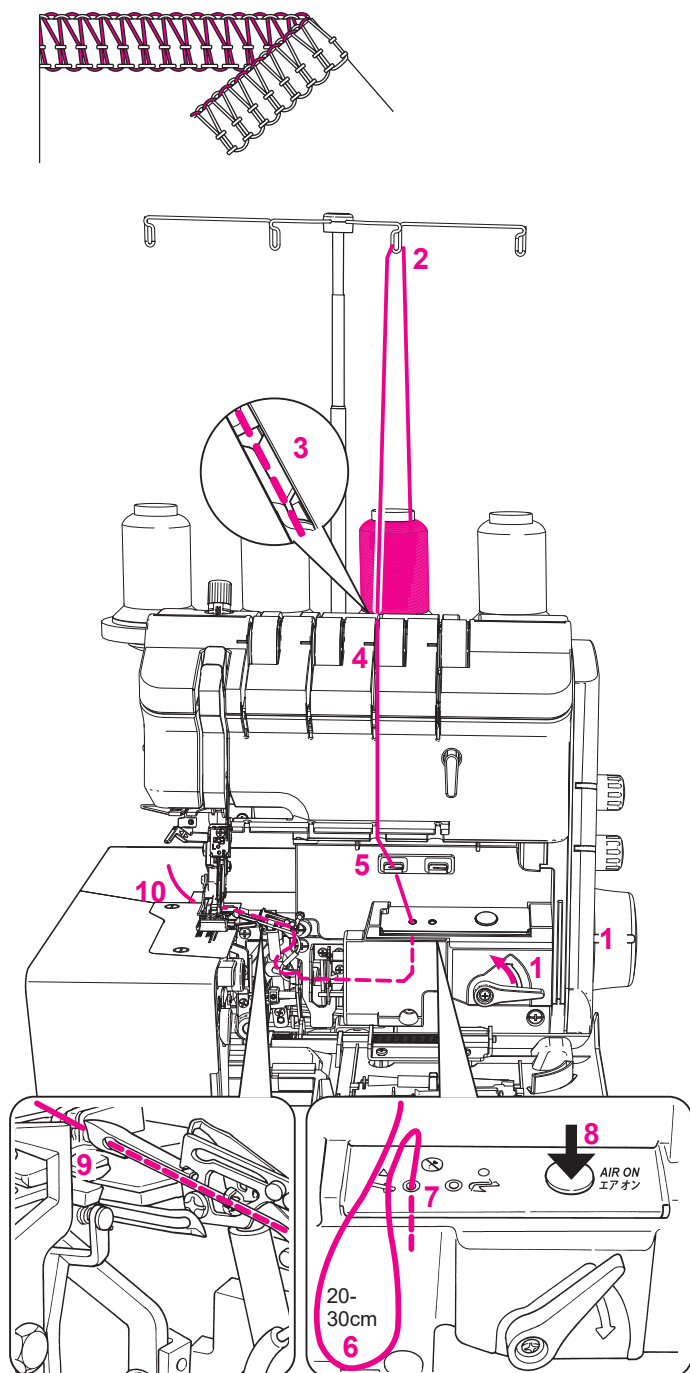
Place the spool on the spool holder pin as illustrated.

- (1) Raise the threading changeover lever in the direction of the arrow.
Turn the handwheel toward you until it clicks.
(The threading pipe is connected.)
- (2) Thread the thread guide which is located just above the spool from back to front.
- (3) Thread the thread guide No. 1.
- (4) Pull the thread by both hands and thread the thread guide.
- (5) Thread the thread guide.
- (6) Pull out the thread by 20 to 30 cm to let it sag inside the looper cover.
- (7) Pass the top end of thread through threading hole by 1 to 2 cm.
- (8) Press the air-control pushbutton.
- (9) Check to be sure that the thread comes out from the top end of the lower looper.
- (10) Bring the pulled-out thread down from above the upper looper to route it under the presser foot and pull it out from its rear.

Note:

If the upper or lower looper thread breaks during sewing, re-threading is necessary. Remove both the broken and unbroken looper threads. Then, set the threading changeover lever to the threading side to carry out threading of the upper and lower loopers.

Threading 4/3 Thread OL



Upper looper thread, purple markings



Switch the machine off (power switch "0")

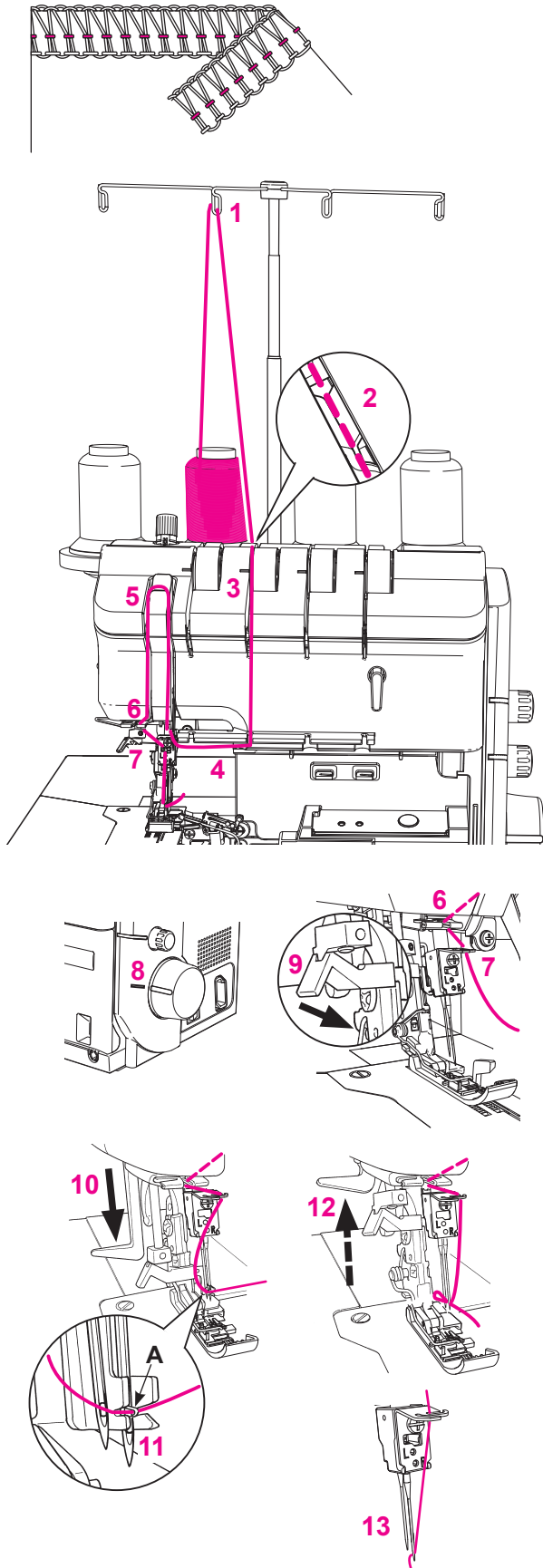
Place the spool on the spool holder pin as illustrated.

- (1) Raise the threading changeover lever in the direction of the arrow.
Turn the handwheel toward you until it clicks.
(The threading pipe is connected.)
- (2) Thread the thread guide which is located just above the spool from back to front.
- (3) Thread the thread guide No. 1.
- (4) Pull the thread by both hands and thread the thread guide.
- (5) Thread the thread guide.
- (6) Pull out the thread by 20 to 30 cm to let it sag inside the looper cover.
- (7) Pass the top end of thread through threading hole by 1 to 2 cm.
- (8) Press the air-control pushbutton.
- (9) Check to be sure that the thread comes out from the top end of the upper looper.
- (10) Pull the thread by approximately 10 cm to route it under the presser foot and pull it out from its rear.

Caution:

After you have completed threading of the upper and lower loopers, be sure to return the threading changeover lever to its home position. If not, the looper cover cannot be closed.

Threading 4/3 Thread OL



Right-hand needle, green markings

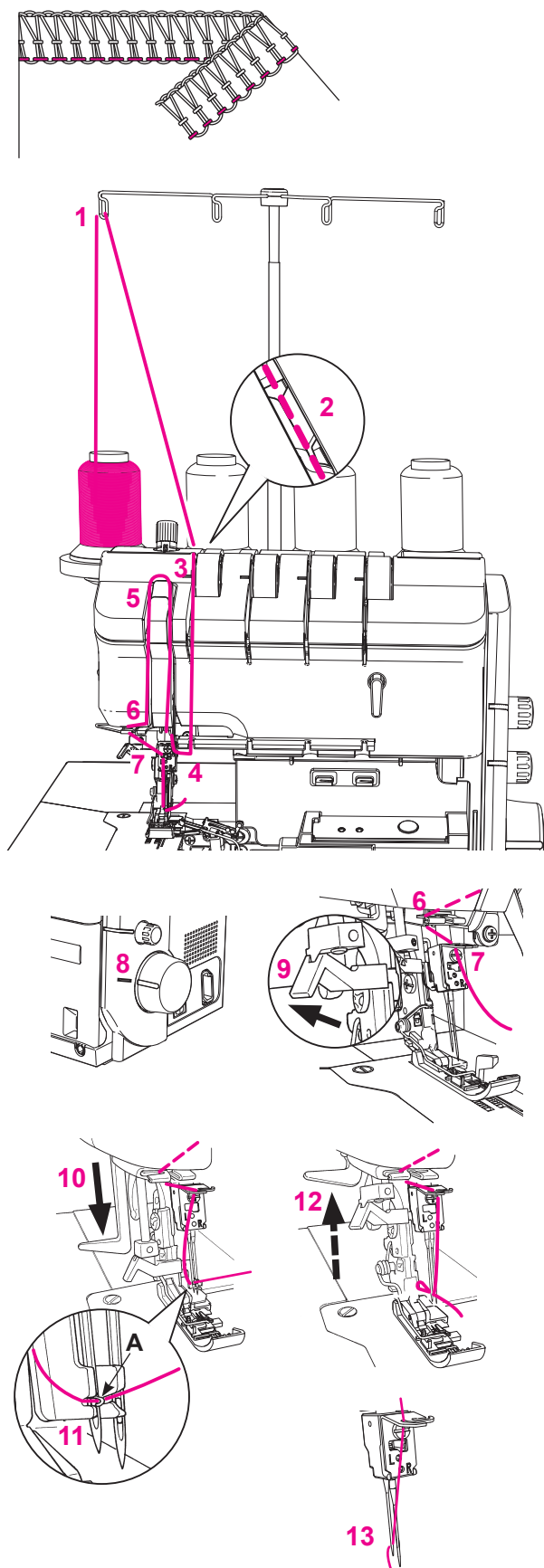


Switch the machine off (power switch "0")

Place the spool on the spool holder pin as illustrated.

- (1) Thread the thread guide which is located just above the spool from back to front.
- (2) Thread the thread guide No.1
- (3) Route the thread in the groove.
- (4) Put the thread under the thread guide plate.
- (5) Thread the thread take-up cover (marked in green)
- (6) Thread the thread guide (right-hand side).
- (7) Thread the needle bar thread guide (right-hand side).
- (8) Turn the handwheel to align the "□" marking on it with the "■" marking on the side of the front cover. Lower the presser foot.
- (9) Set the right-/left-needle changeover lever to the right needle side.
Be sure to move the right-/left-needle changeover lever to the right needle side until it will go no further.
- (10) Lower the threading lever as far as it goes.
- (11) Push the thread into section **A** with both hands.
- (12) The thread automatically passes through the needle eyelet by pushing the threading lever upward.
- (13) Pull out the thread by approximately 10 cm to route it under the presser foot and draw it out from its rear.

Threading 4/3 Thread OL



Left-hand needle, beige markings

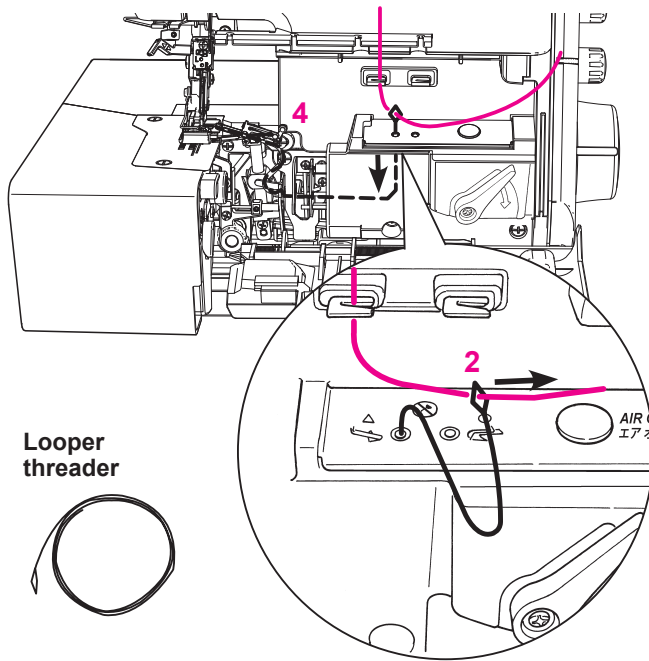


Switch the machine off (power switch "0")

Place the spool on the spool holder pin as illustrated.

- (1) Thread the thread guide which is located just above the spool from back to front.
- (2) Thread the thread guide No.1
- (3) Route the thread in the groove.
- (4) Put the thread under the thread guide plate.
- (5) Thread the thread take-up cover (marked in beige)
- (6) Thread the thread guide (left-hand side).
- (7) Thread the needle bar thread guide (left-hand side).
- (8) Turn the handwheel to align the "□" marking on it with the "■" marking on the side of the front cover. Lower the presser foot.
- (9) Set the right-/left-needle changeover lever to the left needle side.
Be sure to move the right-/left-needle changeover lever to the left needle side until it will go no further.
- (10) Lower the threading lever as far as it goes.
- (11) Push the thread into section **A** with both hands.
- (12) The thread automatically passes through the needle eyelet by pushing the threading lever upward.
- (13) Pull out the thread by approximately 10 cm to route it under the presser foot and draw it out from its rear.

Threading 4/3 Thread OL



How to use the looper threader

To thread woolly thread or any thread that cannot pass smoothly through the threading holes, it is recommended either to use the “looper threader” supplied in the accessory bag, or to prepare an approximately 30cm long spun thread or the like, tie it at the end of the woolly thread, pass the spun thread through the threading hole and pull it until the woolly thread passes through the hole.

(The looper threader can also be used as a cleaning tool for pipes.)

1. Raise the threading changeover lever in the direction of the arrow. Turn the handwheel toward you until it clicks.
2. Pass the thread through the looper threader ring.
3. Pass the looper threader through the looper by hand until it comes out from the end of the looper.
4. When the looper threader comes out from the end of the looper, draw it out until thread comes out.

Caution:

Do not press the air-control pushbutton.

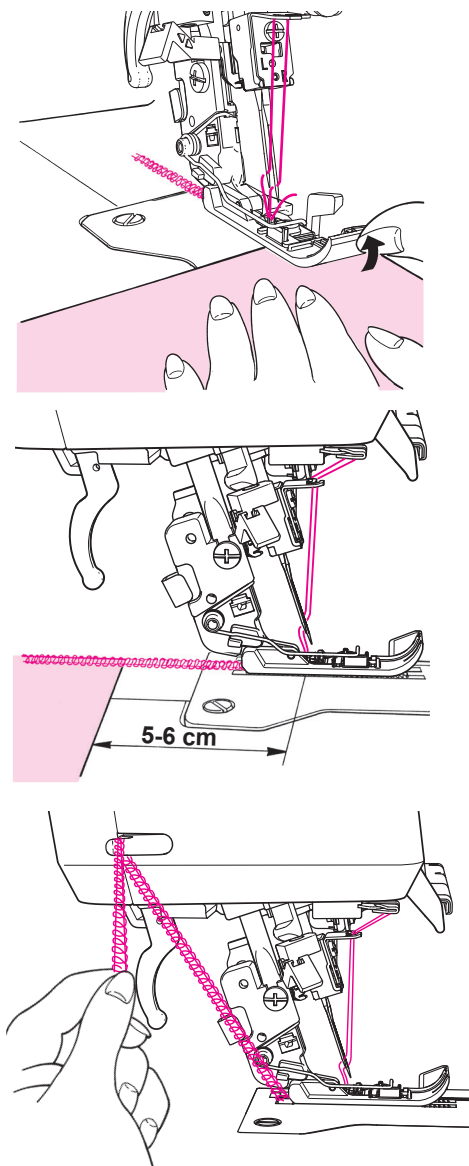
Note:

If the upper or lower looper thread breaks during sewing, re-threading is necessary. Remove both the broken and unbroken looper threads. Then, set the threading changeover lever to the threading side to carry out threading of the upper and lower loopers.

Caution:

After the completion of threading of the upper and lower loopers, return the threading changeover lever to its home position. If not, the looper cover cannot be closed.

Trial sewing



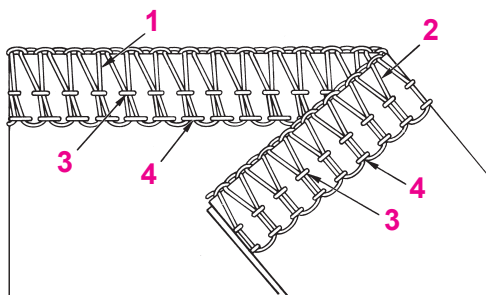
Sewing test

Use two plies of material to check that the quality of the finished seam and thread tensions are correct.

1. Close the looper cover. Turn the power on.
2. Check that the upper knife is raised.
3. Lower the presser foot.
4. While holding the thread trailing from the rear of the presser foot by hand, depress the controller to produce chain-off thread by 6 to 7 cm.
5. Raise the front side of the presser foot with fingers and insert the material under the presser foot until the upper knife is reached.
6. Start the sewing machine.
7. After the completion of sewing, produce chain-off thread by 5 to 6 cm.
8. Put the chain-off thread over the thread trimming blade for trimming.

* Chain-off thread is stitch-formed thread with no material.

Thread tension

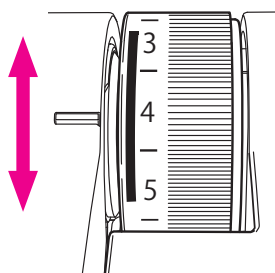


Check your trial run

4/3 Thread OL

1. Upper looper thread (purple).
2. Lower looper thread (red).
3. Right-hand needle thread (green).
4. Left-hand needle thread (beige).

Perfect stitch formation is when both looper threads meet at the fabric edge. The needle threads form straight stitches for a stretchy and durable seam.



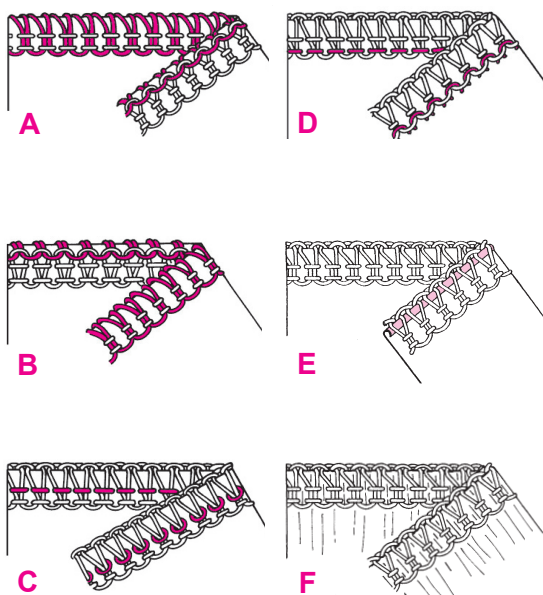
Thread tension

Thread tension should be properly adjusted to suit the various types of work.

The ideal tension setting for most fabrics and threads is between 3 and 5. However this can vary quite considerably when special threads such as filament, woolly nylon, buttonhole twist (cordonnet), pearl yarn or decorative threads are used. Only use decorative threads in the looper. The thread must move easily and without resistance through the looper eye. Infinitely variable adjustments can be made from 1 - 9.

Turn the dial downwards for less tension.

Turn the dial upwards for more tension.

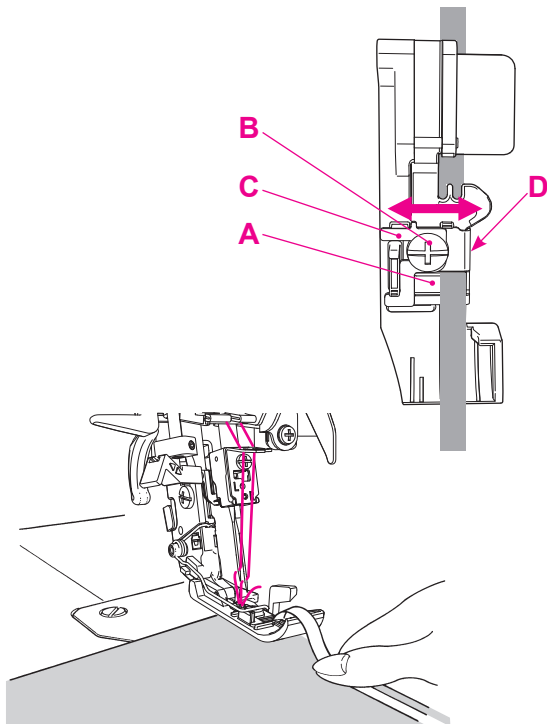


Adjusting the thread tension

Turn the tension dials by quarter or half number, then test sew again and check the result.

- The loops are formed on the underside.
Tighten the upper looper thread tension, (purple) or loosen the lower looper thread tension, red (**A**).
- The loops are formed on the upper side.
Tighten the lower looper thread tension, (red) or loosen the upper looper thread tension, purple (**B**).
- The right-hand needle thread forms loops on the underside.
Tighten the right-hand needle thread tension, green (**C**).
- The left-hand needle thread forms loops on the underside.
Tighten the left-hand needle thread tension, beige (**D**).
- The edge of the fabric curls up, tension of both looper threads is too tight:
Loosen upper and lower looper thread tensions, purple and red (**E**).
- The fabric puckers during sewing:
Loosen the right- or left-hand needle thread tension, green or beige (**F**).

Practical Sewing - Overlock



Sewing in tape

The standard presser foot is equipped with a tape guide.

A tape can be sewn into the shoulder or side seams of garments made from knits or stretch fabrics to prevent stretching.

1. Turn the handwheel toward you to bring the needle to its upper end.
2. Lift the presser foot. Pass the tape through the tape guide groove **A** and pull it out until the rear side of the presser foot is reached. Then, lower the presser foot.

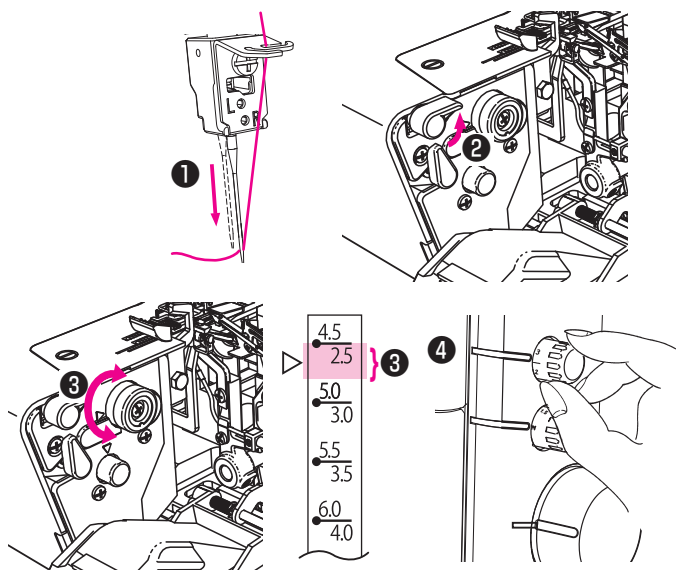
3. Loosen the guide adjustment screw **B** with the accessory T-screwdriver.

Adjust the tape guide **C** to the tape width (**D**) and tighten the guide adjustment screw.

4. Turn the handwheel by hand to sew the tape by two or three stitches.

5. Place the material on which you want to sew the tape under the presser foot.

6. Sew the tape while lightly supporting the tape by hand.



Carrying out hemming and narrow overlocking

The sewing machine incorporates the hemming device to enable roll hemming and narrow overlocking. The sewing machine is able to overlock the material edges such as bottoms and sleeve cuffs beautifully while automatically folding them inwardly.

Preparation for hemming

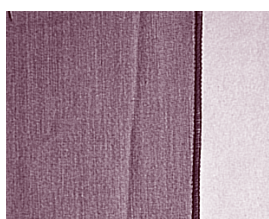
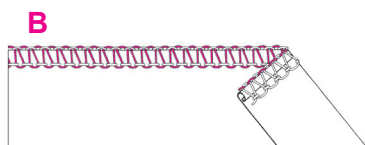
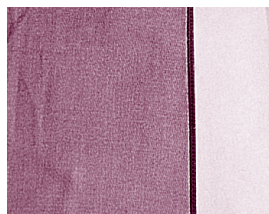
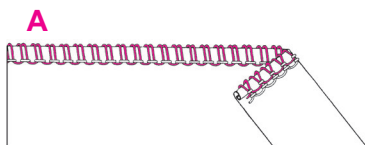
1. Install the right needle only.
2. Pull the overlocking width changeover knob toward you to lower the overlocking claw.
3. Set the cutting width adjusting dial at the scale mark "2.5 to 3.5".
4. When using filament thread or woolly nylon thread, set the stitch length adjustment dial (stitch length) at "0.7 to 1.5".

Roll hemming (A)

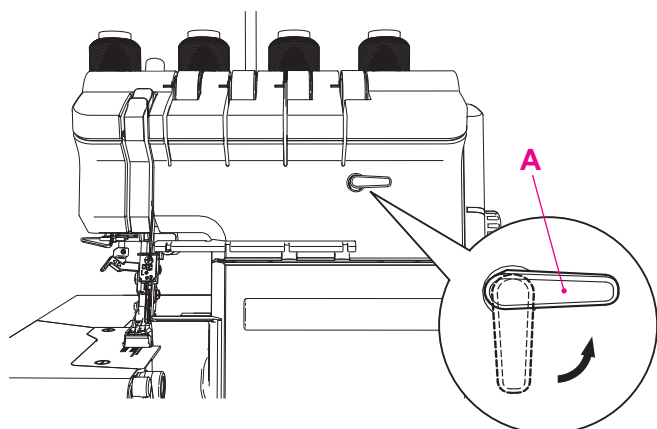
The roll hemming is the stitch system that laps the material edge with the upper looper thread.

Narrow overlocking (B)

The narrow overlocking is the overlock stitch system overlocking width of which is narrower than the standard one.



Practical Sewing - Overlock



Thread tension for roll hemming (roll hemming and narrow overlocking)

● Roll hemming thread tension lever

Raise the roll hemming thread tension lever **A** up to perform roll hemming without adjusting the thread tension dial.

Raise the roll hemming thread tension lever up to obtain the thread tension that is suited to roll hemming.

Be sure to return the lever to its home position after you have finished roll hemming.

● Thread tension reference table

Refer to the following reference table for the thread tension.

The thread tension slightly differs with the type of material and thread to be used.

Use thin spun thread up to No.90 (Tex No. 18) for roll hemming.

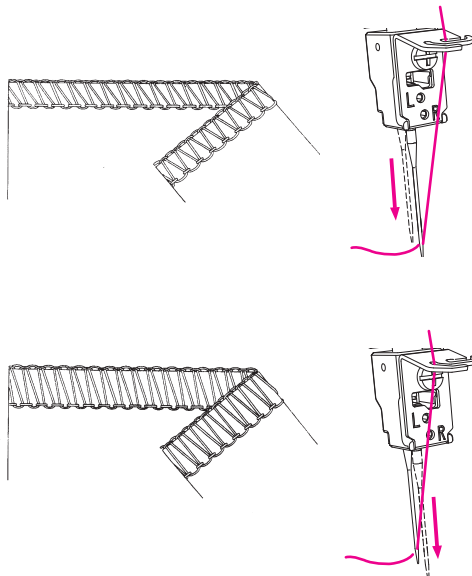
Use woolly nylon thread only as the upper looper thread.

Thread tension dial Thread	For roll hemming			For narrow overlocking		
	Right needle thread	Upper Looper thread	Lower Looper thread	Right needle thread	Upper Looper thread	Lower Looper thread
Polyester spun Tex No.18 (Japanese system No:90)	3-5	3-4	3-5 (*)	3-6	4-6	3-5 (*)
Polyester filament Tex No.12 (Japanese system No:80)	3-5	3-4	3-5 (*)	4-6	4-5	3-5 (*)
Woolly nylon Tex No.26 (Only use for Upper Looper)	-	3-4	-	-	3-4	-

NOTE: The values marked with (*) are approximate guides for the case of using the roll hemming thread tension lever.

If you adjust the thread tension without using the lever, it will be necessary to increase the thread tension near to the maximum value.

Practical Sewing - Overlock



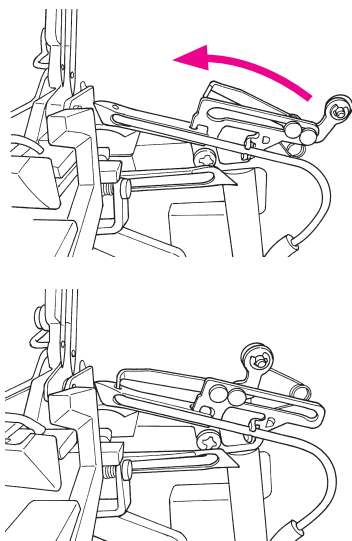
Wrapped overlocking with three threads

For wrapped overlocking with the right needle (3 to 5.5 mm in width)

1. Remove the left needle.
2. Thread the upper and lower loopers in the same manner as the standard sewing (2-needle, 4-thread).

For wrapped overlocking with the left needle (5 to 7.5 mm in width)

1. Remove the right needle.
2. Thread the upper and lower loopers in the same manner as the standard sewing (2-needle, 4-thread).



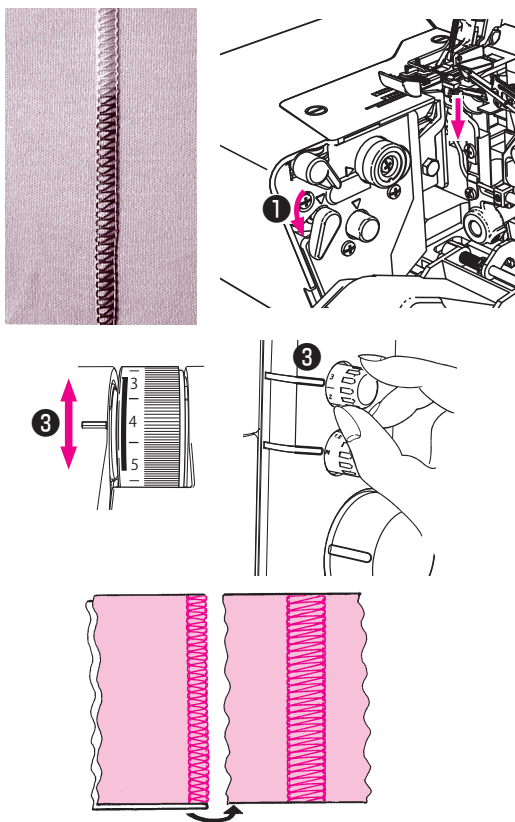
2-/3-thread changeover attachment

Use the 2-/3-thread changeover attachment when it is desired to carry out 2-needle overlocking, cover stitch (flatlock) or 2-thread hemming.

1. Turn off the power switch.
2. Press the 2-/3-thread changeover attachment mounted on the upper looper to the left.
3. Check that the projection of the 2-/3-thread changeover attachment is inserted into the hole in the top end of the looper.

In the aforementioned state, the upper looper thread is not fed. However, the lower looper thread is fed to form 2-thread stitches.

Practical Sewing - Overlock



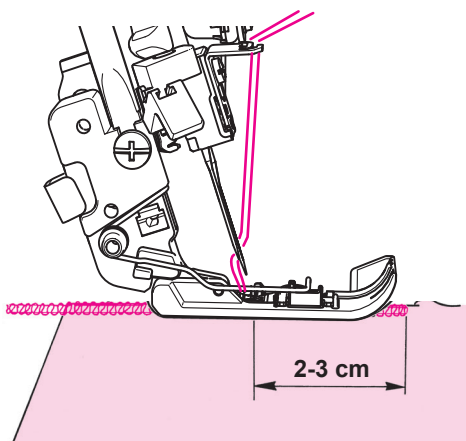
Cover stitch with three threads (flatlock)

1. Deactivate the upper knife.
2. Use a decorative thread as the upper looper thread. (Filament thread is best-suited as the needle thread and the lower looper thread. However, spun thread can also be used.)
3. Adjust the tension regulating dial and stitch length adjustment dial.

Adjust the dials so that the thread tension is slightly reduced.

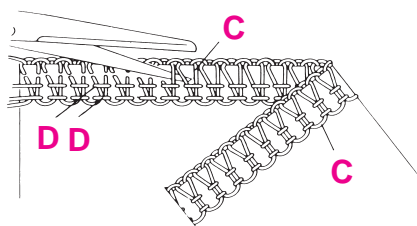
Scale mark of tension regulating dial	Thread tension of left or right needle	1 - 3
	Thread tension of upper looper	1 - 5
	Thread tension of lower looper	5 - 7
Stitch length adjustment dial		2 - 2.5

4. Use either the left needle or the right needle only.
In the case of the left needle: Wide cover stitches are sewn. (5 to 7.5 mm)
In the case of the right needle: Narrow cover stitches are sewn. (3 to 5.5 mm)
5. Fold the material in two. Carry out sewing with a preset overlocking width.
6. After the completion of sewing, unfold the material.



Thread breakage during sewing

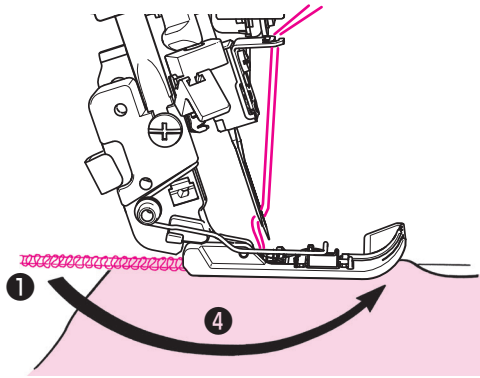
Sew off immediately at an angle and remove the work. Re-thread. If the upper or lower looper thread breaks during sewing, re-threading is necessary. Remove both the broken and unbroken looper threads. Then, set the threading lever to the threading side to carry out threading of the upper and lower loopers. First thread the looper and then the needles. Start sewing again about 2 - 3 cm in front of the break.



Unpicking seams

Using sharp scissors, cut the loops (C). Pull the needle thread (D) and the stitches will come undone.

Practical Sewing - Overlock



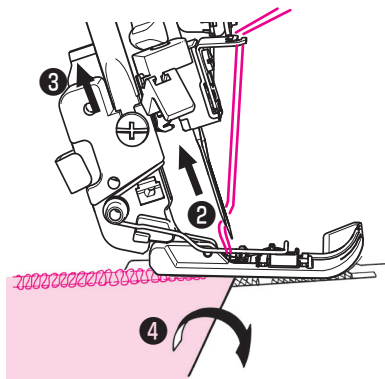
Securing thread ends at the beginning and end of sewing

Overlock stitches can unravel if the threads are not secured at the beginning and end of sewing. Secure the thread ends.

Securing thread ends with the overlock machine

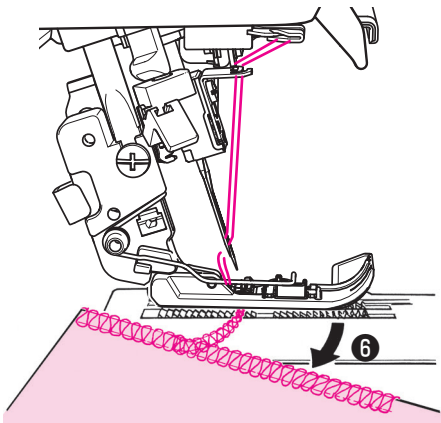
1) Securing thread ends at the beginning of sewing

1. Pull out chain-off thread produced at the beginning of sewing by 3 to 4 cm.
 2. Sew the material by two or three stitches.
 3. Lower the needle and raise the presser foot.
 4. Draw out the chain-off thread toward you and place it between the presser foot and the material from the left side.
 5. Lower the presser foot and sew the chain-off thread on the material.
- * If you do not sew the chain-off thread on the material, produce a longer chain-off thread at the beginning and end of sewing. Then, make a knot of the chain-off thread or put the chain-off thread under the seam with a wool needle.
- * When stitches cross each other, chain-off thread is automatically secured.



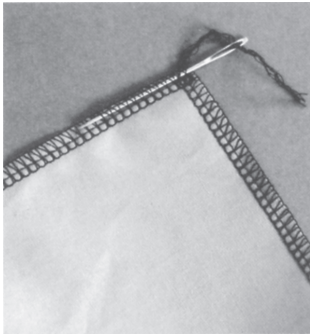
2) Securing thread ends at the end of sewing

1. Stop the needle at the end of material.
2. Lift the needle.
3. Raise the presser foot.
4. Turn the material upside down. Lower the needle so that it enters the outside edge of finished seam.
5. Lower the presser foot.
6. Carry out sewing to produce chain-off thread by 2 to 3 cm taking care not to allow the finished seam to come in contact with the upper knife. Remove the material.
7. Secure the chain-off thread.



Practical Sewing - Overlock

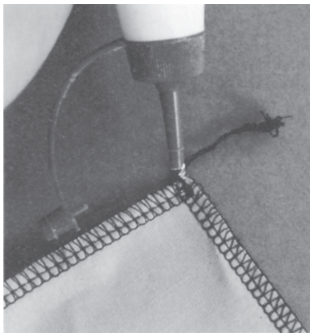
A



In the case of securing thread ends with a wool needle: (A)

Leave a 2 to 3 cm long chain-off thread at the beginning and end of sewing. Put the chain-off threads in the finished seam by means of a wool needle.

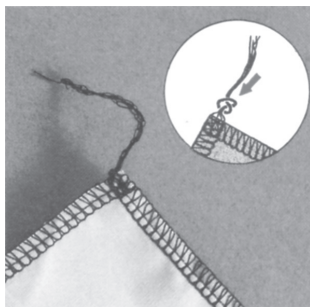
B



In the case of securing thread ends with glue for handicraft: (B)

Apply a little amount of glue for handicraft at the root of chain-off thread on the material. Cut out the excess of chain-off thread after the glue has dried.

C



Securing thread ends by making a knot: (C)

Bind all threads together and make a knot at the nearest position of the material. Then, cut out the excess of the threads.

Maintenance

Cleaning and lubricating



CAUTION

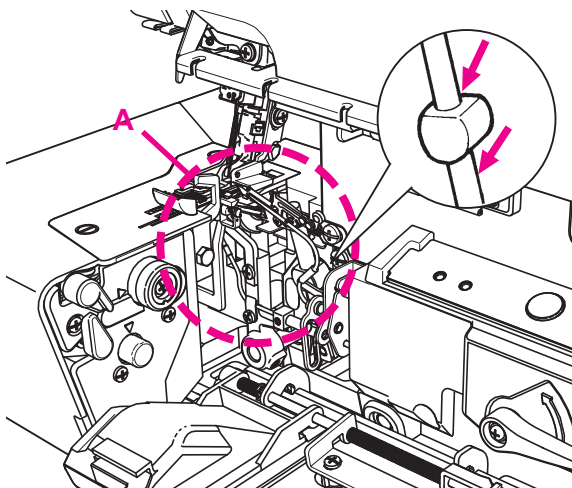
Turn off the power switch and disconnect the power plug from the wall outlet before starting cleaning or lubricating the machine.

As you use the sewing machine, lint is likely to accumulate in the sewing machine. It is necessary to remove the lint periodically.

Since lint accumulates particularly in the sections around the throat plate and lower knife, remove the lint from those sections on a periodic basis. (A)

When cleaning the pipes of the upper and lower loopers, use the "looper threader" supplied in the accessory bag. (Refer to page 24 for how to use it.)

You may concern about the sewing noise, although not frequently, since this sewing machine uses special materials in critical sections. In such a case, apply one or two drops of oil to the points indicated with an arrow in the figure.



Precautions to be taken when handling oil

- * In the event the oil gets in the eye or adheres on skin, immediately wash it off in order to prevent irritation and rash.
- * If swallowed accidentally, immediately seek for medical advice in order to prevent diarrhea and vomiting.
- * Keep the oil away from children.
- * Oil disposal is obliged by legislation. Dispose of the oil properly in compliance with the relevant legislation.

How to use an accessory oiler



CAUTION

Be careful not to hurt your hands while working.

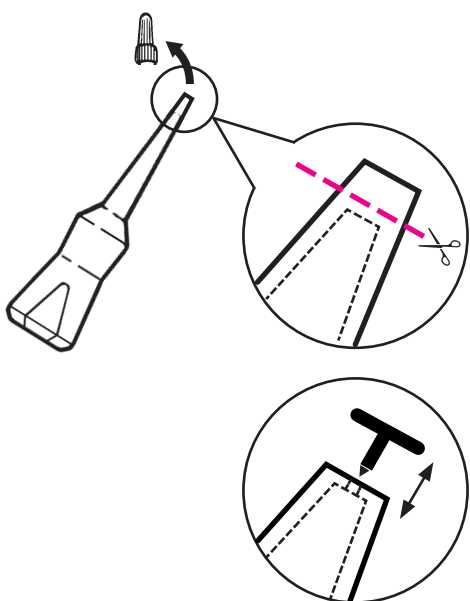
When you use the oiler for the first time, remove the cap and cut the tip of the oiler spout slightly with a pair of scissors. Then, make a hole in the tip with a pushpin or the like.

- * Be aware that, if you cut the tip of the oiler spout excessively, the hole will become larger to make it hard to supply a constant amount of oil.

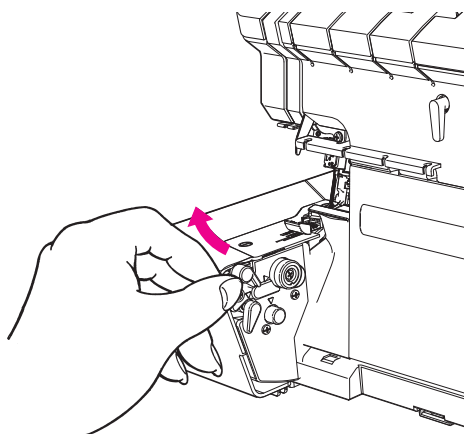
1. Cut the tip with a pair of scissors.

- * It is important to leave the resin-sealed portion (approximately 0.5 mm) instead of cutting the tip until the penetrated portion is reached.

2. Make a hole with a pushpin or the like.



Maintenance



To carry out cleaning with the cloth plate opened



CAUTION

Be sure to turn off the power switch before opening the cloth plate.

- **How to open the cloth plate**
Push this side of the cloth plate to the left to open it.
- **How to close the cloth plate**
Push the cloth plate toward the sewing machine.

Replacing the knife

It is not normally necessary to replace the lower knife since it is made of special ultrahard material. If the knife blade tip has chipped, replace the knife with a new one.

Contact your distributor for the replacement of the lower and upper knives.

Trouble shooting guide

Problem	Cause	Solution	Page
The machine does not sew:	<ul style="list-style-type: none"> • Looper or cloth plate cover is open. • The main switch is not on. • The machine is not plugged in. 	<ul style="list-style-type: none"> • Close the looper or the cloth plate cover. • Switch machine on. (Main switch to "I") • Insert plug into main socket. 	8 8 7
Fabric does not feed evenly	<ul style="list-style-type: none"> • Differential feed is wrongly adjusted. • Presser foot pressure is too low. 	<ul style="list-style-type: none"> • Check the differential feed setting. • Adjust the presser foot pressure. 	15 17
Thread breaks	<ul style="list-style-type: none"> • Thread tension is too tight for the thread being used. • The machine is not threaded correctly. • Needles are incorrectly inserted. • Wrong needles. 	<ul style="list-style-type: none"> • Reduce thread tension. • Check the threading. • Insert needles fully into needle clamp with flat side to the back. • Use needle system 130/705H or JLx2. 	26 20 11 11
Needles break	<ul style="list-style-type: none"> • Needles are bent or blunt, points are damaged. • Needles are not inserted correctly. • Fabric was pulled while sewing. 	<ul style="list-style-type: none"> • Replace needles. • Insert needles fully into needle clamp with flat side to the back. • Guide fabric gently with both hands. 	12 11 --
Skipped stitches	<ul style="list-style-type: none"> • Needles are bent or blunt. • Wrong needles used. • Presser foot pressure is too low. 	<ul style="list-style-type: none"> • Replace the needles. • Use needle system 130/705H or JLx2. • Increase presser foot pressure. 	11 11 17
Poor stitch formation	<ul style="list-style-type: none"> • Threads are not correctly between the tension dials. • Thread has got caught. • Machine is incorrectly threaded. 	<ul style="list-style-type: none"> • Check if thread is lying between tension discs. • Raise the presser foot and pull the thread. • Check threading path of each thread. • Check threading path of each thread. 	18 18 20 20
Seams flute or wave, especially when sewing knits	<ul style="list-style-type: none"> • Fabric was pulled while sewing. • Presser foot pressure is too tight. • Differential feed is set incorrectly. 	<ul style="list-style-type: none"> • Guide fabric gently. • Reduce presser foot pressure. • Adjust differential feed to N - 2. 	-- 17 15
Seams pucker	<ul style="list-style-type: none"> • Needle thread tension is too tight. • Differential feed is set incorrectly. 	<ul style="list-style-type: none"> • Reduce the needle thread tension. • Adjust differential feed to 0.7 - N. 	26 15
Fabric edges curl	<ul style="list-style-type: none"> • Too much fabric is in the stitch. • Thread tension is too tight. • Stitch selection lever is on roll hem. 	<ul style="list-style-type: none"> • Reduce cutting width. • Reduce thread tension. • Set selection lever to overlock. 	13 26 16
Thread loops are too loose	<ul style="list-style-type: none"> • Too little fabric in the stitch. 	<ul style="list-style-type: none"> • Increase the cutting width. 	13
Motor failure	<ul style="list-style-type: none"> • Noise is heard. • Motor does not turn at all. • Sparks are abnormally large. 	<ul style="list-style-type: none"> • Replace the carbon brush with a new one. <p>(Note) Contact your distributor to ask for the replacement of the carbon brush.</p>	--
Needle eyelet cannot be threaded	<ul style="list-style-type: none"> • The "■" marking on the side of the front cover is not aligned with the "□" marking on the handwheel. 	<ul style="list-style-type: none"> • Turn the handwheel to align the "□" marking on it with the "■" marking on the side of the front cover. 	22,23
Upper and lower loopers cannot be threaded	<ul style="list-style-type: none"> • When the handwheel is not fixed. • When the thread is not inserted into the bottom of the threading hole. • When the thread is not slacked before the threading hole. • When the thread is caught somewhere in the thread path. • When the pipe is clogged with lint. 	<ul style="list-style-type: none"> • Raise the threading changeover lever and turn the handwheel to fix it. • Insert the thread into the threading hole by 1 to 2 cm. • Slack the thread before the threading hole. • Remove the thread from the location where it has been caught. • Thread the loopers by means of the looper threader supplied in the accessory bag to remove the lint in the pipe. 	20,21 20,21 20,21 -- 24

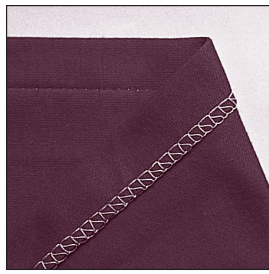
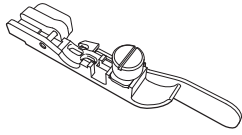
Technical data

Stitch choice	Over lock	2 needles, 2 loopers: 4 thread overlock with integrated safety seam 1 needle, 2 loopers: 3 thread overlock, flatlock roll hem 1 needle, 1 looper: 2 thread overlock, flatlock roll hem 2 needles, 1 looper: 3 thread super stretch
Needle system		SCHMETZ 130/705 H or JLx2
Seam width		3.5-5.5 mm (3/2 thread overlock) 5.5-7.5 mm (4 thread overlock / 3/2 thread overlock / 3 thread super stretch)
Stitch length		0.7-4 mm
Differential feed		No puckering 0.7 - N No waving or fluting in knits N - 2
Presser foot lifter		6 mm
Handwheel		rotates forwards
Sewing speed		Up to 1500 sti/min
Weight		10.0 kg
Dimensions		350 (W) x 310 (D) x 340 (H) mm
Foot control model No.		YC-482 (USA and Canada only) YC-483N (220-240V)

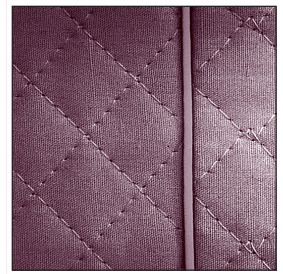
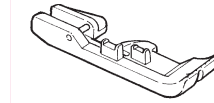
We reserve the right to make changes in the interest of technical progress.

Optional Accessories

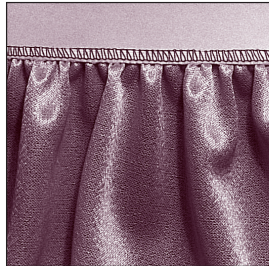
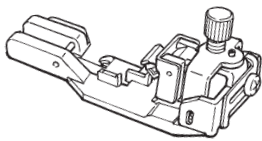
- Blind stitch presser foot
- Universal Blind Stitch Presser Foot



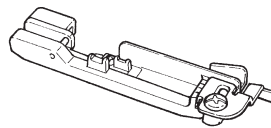
- Piping presser foot



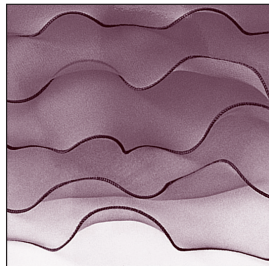
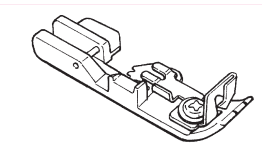
- Elasticator



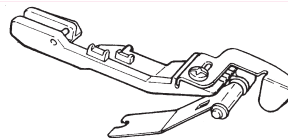
- Beading presser foot



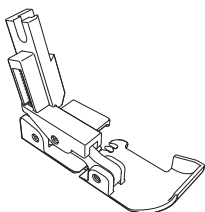
- Cording presser foot



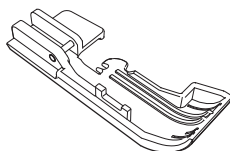
- Gathering presser foot



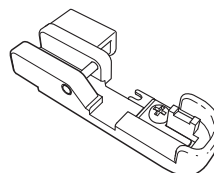
- Tractor foot



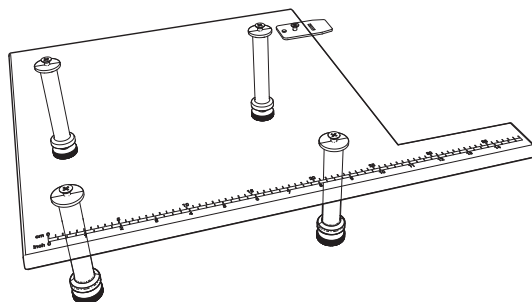
- Clear foot



- Curved Beading Presser Foot



- Wide table



Contact your local dealer.



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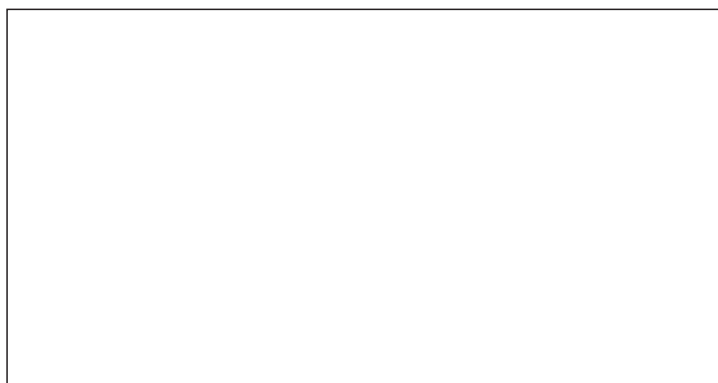
2-11-1, TSURUMAKI, TAMA-SHI,
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