

coverlock™ 3.0

PFAFF
Perfection starts here.™

Owner's Manual



This household sewing machine is designed to comply with IEC/EN 60335-2-28 and UL1594.

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic safety precautions should always be followed, including the following:

Read all instructions before using this household sewing machine. Keep the instructions at a suitable place close to the machine. Make sure to hand them over if the machine is given to a third party.

DANGER – To reduce the risk of electric shock:

- A sewing machine should never be left unattended when plugged in. Always unplug this sewing machine from the electric outlet immediately after using and before cleaning, removing covers, lubricating or when making any other user servicing adjustments mentioned in the instruction manual.
- Always unplug before relamping. Replace bulb with same type rated 15 Watt.

WARNING – To reduce the risk of burns, fire, electric shock, or injury to person:

- Do not allow to be used as a toy. Close attention is necessary when this sewing machine is used by or near children.
- Use this sewing machine only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
- Never operate this sewing machine 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 sewing machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
- Never operate the sewing machine with any air openings blocked. Keep ventilation openings of the sewing machine and foot control free from the accumulation of lint, dust, and loose cloth.
- Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
- Always use the proper needle plate. The wrong plate can cause the needle to break.
- Do not use bent needles.
- Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
- Wear safety glasses.
- Switch the sewing machine off ("0") when making any adjustment in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot, etc.
- Never drop or insert any object into any opening.
- Do not use outdoors.
- Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
- To disconnect, turn all controls to the off ("0") position, then remove plug from outlet.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- The foot control is used to operate the machine. Avoid placing other objects on the foot control.
- Do not use the machine if it is wet.
- If the supply cord connected with the foot control is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person, in order to avoid a hazard.
- This sewing machine is provided with double insulation. Use only identical replacement parts. See instructions for Servicing of Double-Insulated Appliances.

SAVE THESE INSTRUCTIONS

For Europe only:

This appliance 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 appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

The noise level under normal operating conditions is less than 75dB(A).

The machine must only be used with foot control of type 4C-345G22 for Europe, 4C-345C25 for UK, manufactured by Wakaho Electric Industrial Co., Ltd.

For outside Europe:

This sewing machine is not intended for use by persons (including 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 sewing machine by a person responsible for their safety. Children should be supervised to ensure that they do not play with the sewing machine.

The noise level under normal operating conditions is less than 75dB(A).

The machine must only be used with foot control of type 4C-345B22 for USA/Canada, 4C-345C23 for Australia, manufactured by Wakaho Electric Industrial Co., Ltd.

SERVICING OF DOUBLE INSULATED PRODUCTS

In a double-insulated product, two systems of insulation are provided instead of grounding. No ground means is provided on a double-insulated product, nor should a means for grounding be added to the product. Servicing of 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 those parts in the product. A double-insulated product is marked with the words 'DOUBLE INSULATION' or 'DOUBLE INSULATED'.



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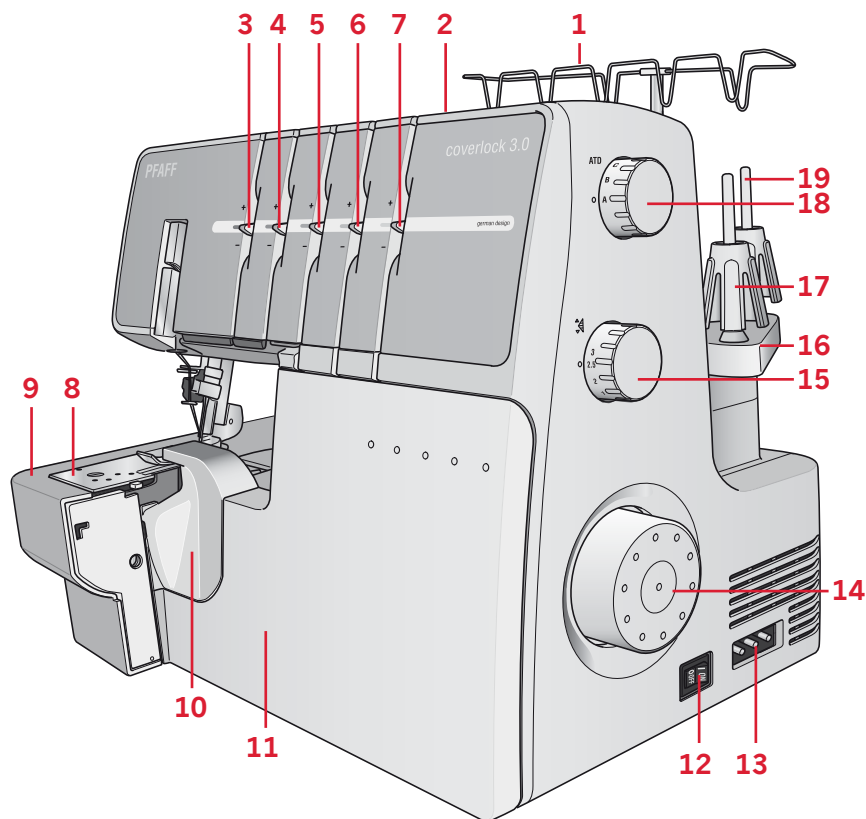
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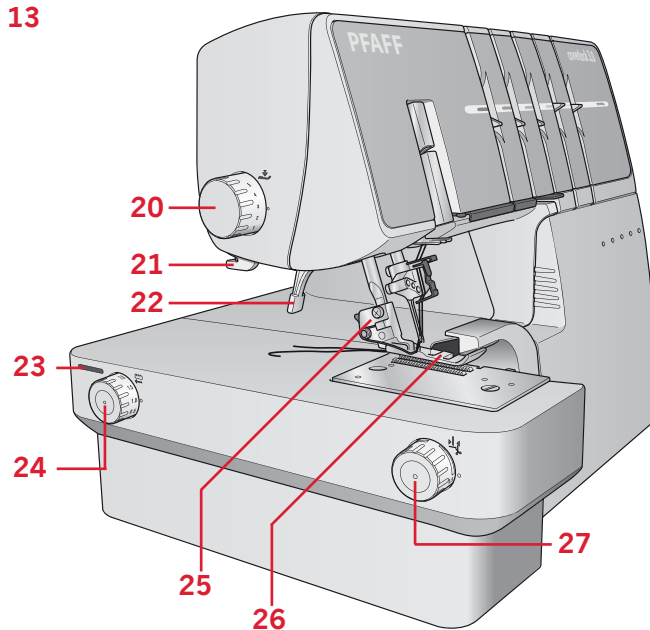
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Parts of the machine

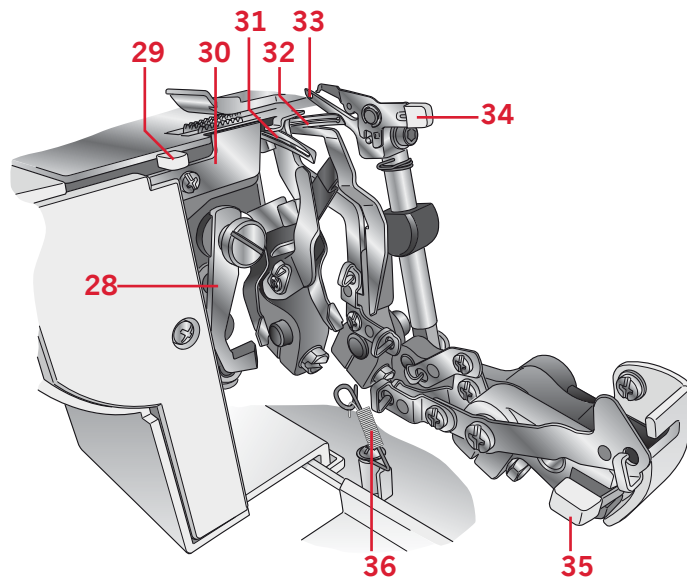


1. Telescopic thread stand
2. Handle
3. Left needle thread tension fine tuning lever (blue)
4. Right needle thread tension fine tuning lever (green)
5. Upper looper thread tension fine tuning lever (red)
6. Lower looper thread tension fine tuning lever (yellow)
7. Chainstitch looper thread tension fine tuning lever (purple)
8. Stitch plate
9. Flat bed extension
10. Cutter cover A
11. Front cover
12. Power & light switch
13. Foot control/electric power cord socket
14. Handwheel
15. Stitch length dial
16. Spool stand
17. Cone holder
18. Auto tension dial (ATD)
19. Spool pin



20. Presser foot pressure adjusting dial
21. Thread cutter
22. Presser foot lift
23. Hole for extension table
24. Differential feed adjusting dial
25. Presser foot ankle
26. Presser foot
27. Cutting width dial

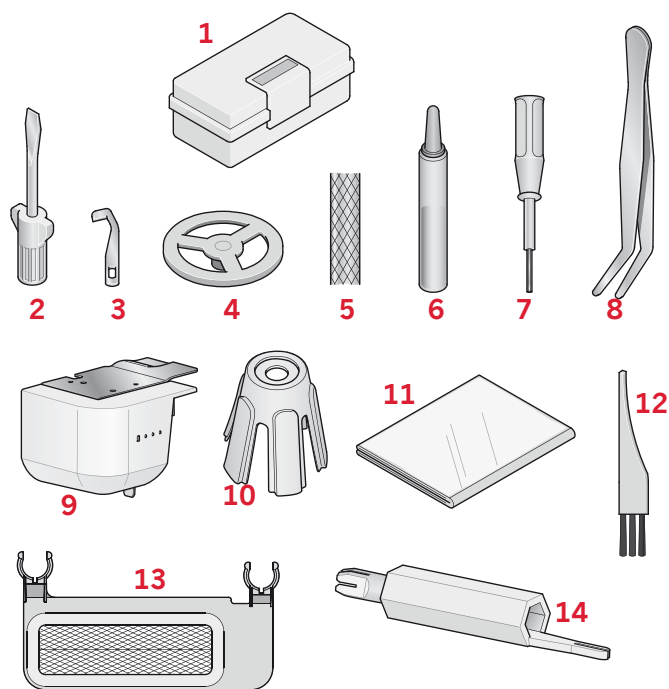
- 28. Moveable upper cutter
- 29. Stitch finger lever
- 30. Stationary lower cutter
- 31. Chainstitch/Coverstitch looper
- 32. Lower looper
- 33. Upper looper
- 34. 2-thread converter
- 35. Upper looper clutch
- 36. Chain/coverstitch thread guide



Accessories

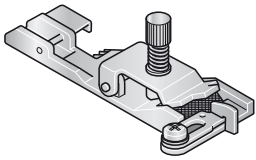
Accessories are contained in the accessory box.

- 1. Accessory box
- 2. Screwdriver
- 3. Knife blade (for the movable upper cutter)
- 4. Thread unreeling discs (5)
- 5. Thread spool nets (5)
- 6. Oiler
- 7. Allen key
- 8. Tweezers
- 9. Coverstitch table B (for Cover/chainstitch)
- 10. Cone holders (5)
- 11. Dust cover
- 12. Lint brush
- 13. Waste tray
- 14. Needle threader
- 15. Extension table including four legs and push pin (not pictured).
Assemble the extension table and legs according to the illustrations provided with the table. The push pin is used in the small holes in the table to hold your fabric in place when sewing circles (see page 31).
- 16. Needle pack (not pictured) system ELx705 including three needles, size #14/90 and two needles, size #12/80. Two needles, size #14/90, are in the machine on delivery.



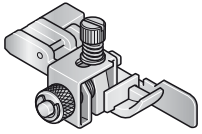
Optional accessories from INSPIRA™

Optional presser feet specially prepared for this machine are available at your PFAFF® dealer. The snap-on type presser foot used on this machine allows easy removal and replacement.



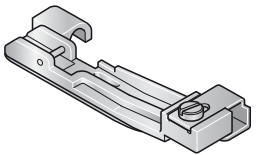
Elastic Foot 620 08 65-96

The Elastic Foot guides and stretches narrow elastic ($\frac{1}{4}$ - $\frac{1}{2}$ " , 6-12mm) as you sew it to fabric. It is great for sewing for active wear, lingerie and other elastic insertion techniques.



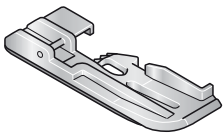
Blindhem & Lace Foot 620 08 69-96

The Blindhem Foot is perfect for sewing invisible hems and for applying lace. The hem is sewn, overcast and trimmed in one step.



Beading Foot 620 08 66-96

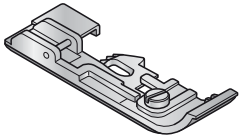
The Beading Foot smoothly guides beads and pearls through a channel on the foot for easy application on garments or crafts.



Piping Foot 620 08 67-96

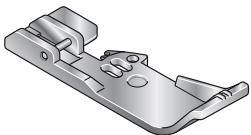
The Piping Foot is perfect for inserting packaged piping into seams and on edges for a tailored finish. The trim is sewn between the two layers of fabric in one step. A groove under the foot helps guide the piping. You can also create your own piping for a custom finish.

The Piping Foot makes it fast and easy to cover cording with fabric and to insert piping into seams for a professional look!



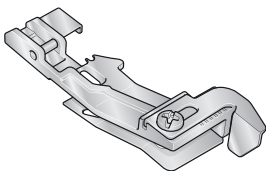
Taping Foot 620 08 68-96

The Taping Foot is used to apply seam tapes to seams to prevent stretching. It is especially good for stabilizing shoulder seams. With this foot you can reinforce and construct seams in one step.



Corded Wavy Edge Foot 620 09 72-96

Sewing a decorative wavy edge is easy with the Corded Wavy Edge Foot. The curvy, softly ruffled edge is a perfect finish for bridal veils, figure skating costumes, ballet skirts, crafts and more.



Gathering Foot 620 08 83-96

The Gathering Foot is perfect for gathering a single layer of fabric or simultaneously gathering and stitching two layers of fabric. (The bottom fabric layer will be gathered and the top layer remains flat.) Suitable for light and medium weight woven fabrics.

Some fabrics have a lot of excess dye which can cause discoloration on other fabric but also on your overlock machine. This discoloring may be very difficult or impossible to remove.

Fleece and denim fabric, especially red and blue, often contain a lot of excess dye.

If you suspect that your fabric/ready-to-wear garment contains a lot of excess dye, always pre-wash it before sewing to avoid the discoloring.

Connecting the foot control and the power supply

Foot control to use with this machine:

Type 4C-345B22 for USA/Canada

Type 4C-345G22 for Europe

Type 4C-345C25 for UK

Type 4C-345C23 for Australia

Before plugging your machine in, make sure the voltage is the same as indicated on the plate under the machine. Specifications vary from country to country.

- Connect the foot control/electric power cord to the socket on the machine.
- Plug the power cord plug into the electric outlet.
- Push the power switch to “1” to turn on the machine.
- Press the foot control to start sewing. Use the foot control to adjust the sewing speed. The harder you press, the faster the machine will sew.

On the right side of the foot control is a speed control slide (A) for selecting full or half maximum speed. If you press the foot control to the bottom, the machine runs at the maximum speed set by the speed control slide. To stop the machine from sewing, remove your foot from the control.

- Push the power switch to “0” to turn off the machine.

Note: When the front cover is open the safety switch is activated and prevents the machine from sewing, even if the foot control is pressed.

Note: Your coverlock™ overlock machine is adjusted to provide the best stitch result at normal room temperature. Extreme hot and cold temperatures can affect the sewn result.

Setting up the spool stand

Insert the spool stand then push to right as illustrated.

Setting up the telescopic thread stand

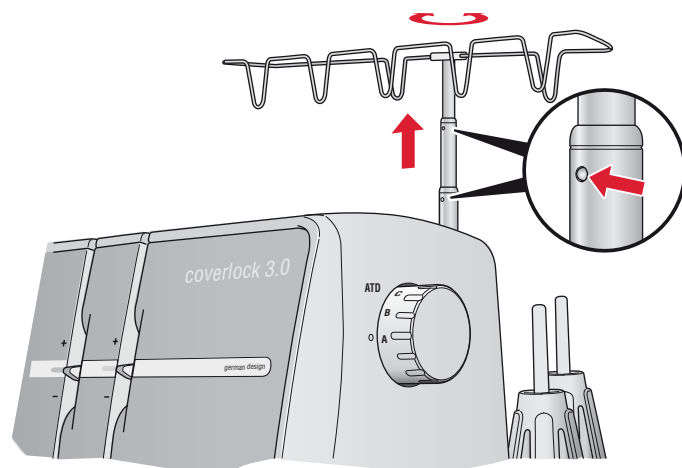
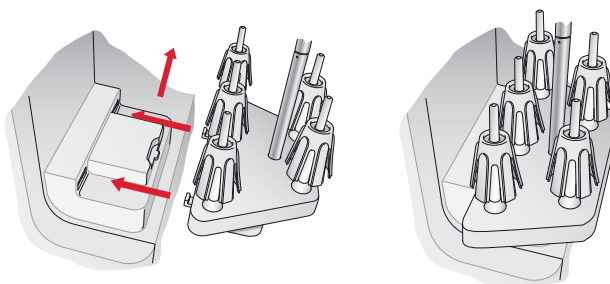
Extend the telescopic thread stand to its full height, then turn until it clicks into place. Place the thread spools over the cone holders on the spool pin.

If the machine is already threaded, straighten the threads to prevent tangling.



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

This appliance has a polarized plug (one blade wider than the other). To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way.



Front cover

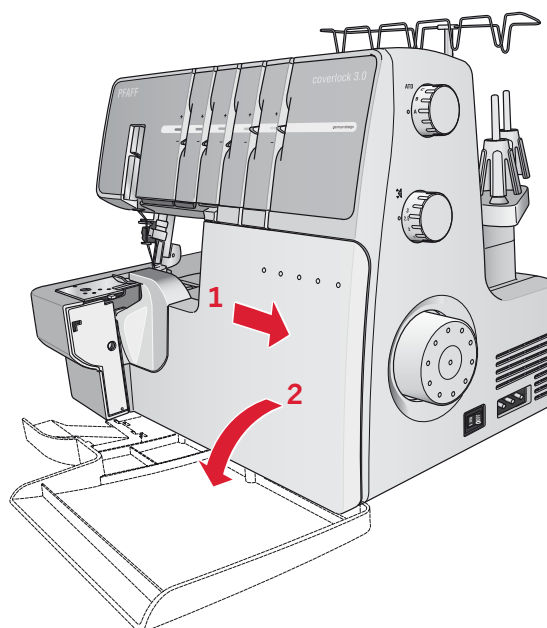
Open

First push the cover to the right as far as it will go and then pull it downward toward you.

Close

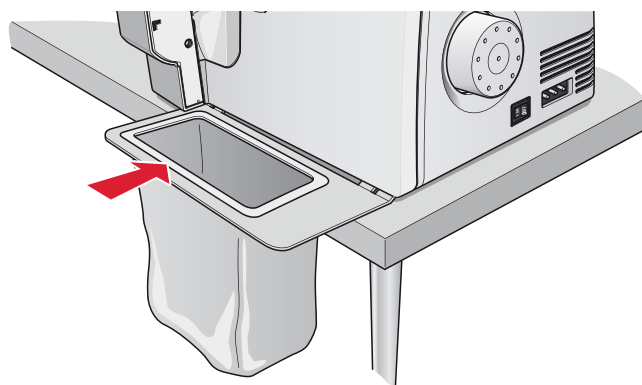
First pull the cover upward and then slide it to the left until it locks.

Note: The front cover has a safety switch and the machine will not sew if the front cover is open.



Attaching the waste tray

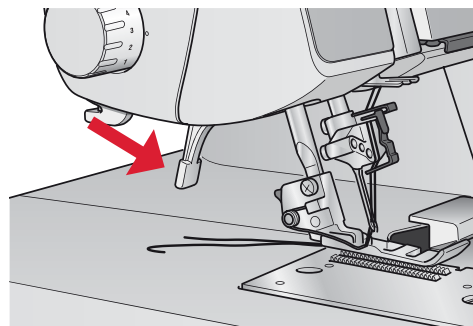
Position the machine so the front is nearly aligned with the edge of the table. Insert the U-shaped hooks of the waste tray onto the two suction cups on the underside of the machine. Make sure the trim falls into the bag while sewing.




Presser foot lift

Raise the presser foot by lowering presser foot lift at the back of the machine.

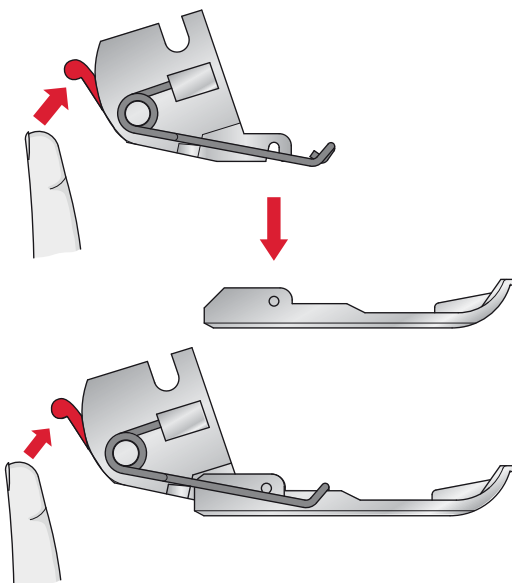
Pressing down on the presser foot lift puts the presser foot in the extra lift position.



Changing the presser foot

 Turn off the main power switch and unplug the machine.

- Raise the presser foot.
- Turn the handwheel toward you until the needles are at the highest position.
- Push the red button on the back of the presser foot ankle to release the presser foot.
- Raise the presser foot to the extra lift position and the foot will come off.
- Place the new foot with the pin right underneath the groove of the ankle while in the extra lift position. Lower the presser foot. Push the red button on the back of the presser foot ankle and the foot will snap into place.

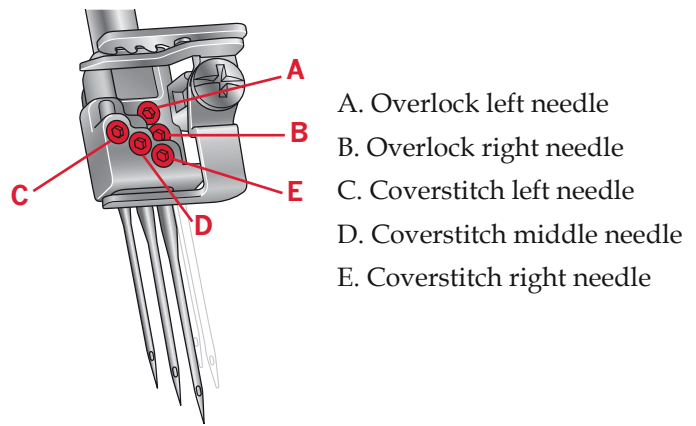


Needle information

This overlock uses a flat shank industrial needle that eliminates the possibility of inserting the needle backwards.


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

Use INSPIRA™ needle EL x 705 sizes 14/90 and 12/80, supplied with this machine.



- A. Overlock left needle
- B. Overlock right needle
- C. Coverstitch left needle
- D. Coverstitch middle needle
- E. Coverstitch right needle

Changing the needles

 Turn off the main power switch and unplug the machine.

- Turn the handwheel toward you until the needles are at the highest position.
- Place a thick piece of fabric under the presser foot. Lower the needles halfway into the fabric.
- Loosen, but do not remove the needle clamp screw with the allen key while you are holding the needles.

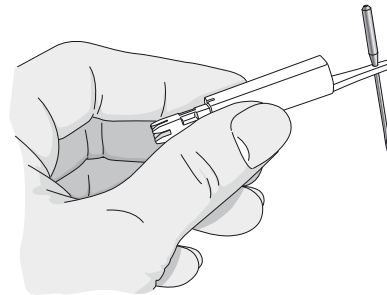
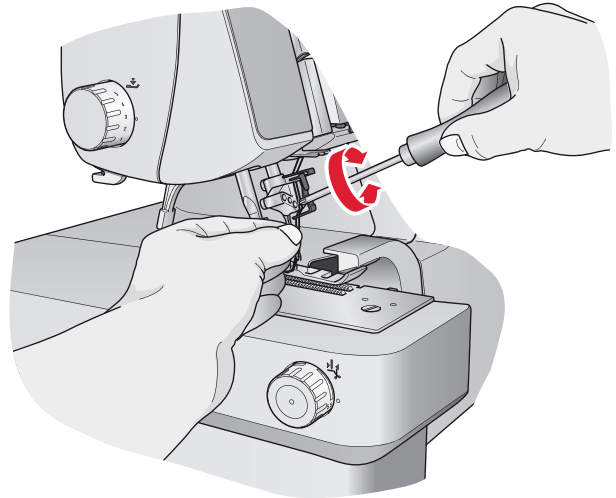
Note: When inserting needles into the A and/or B needle clamps it is necessary to loosen the needle clamp screws for both A and B.

- Remove the selected needle.
- Hold the new needle with the flat surface to the back.
- Insert the needle into the needle clamp as far as it will go.

Note: We recommend using the hole in the needle threader to hold the needle.


- Securely tighten the needle clamp screw using the allen key.

Note: Do not over-tighten the screw as this may cause the needle clamp to be damaged.

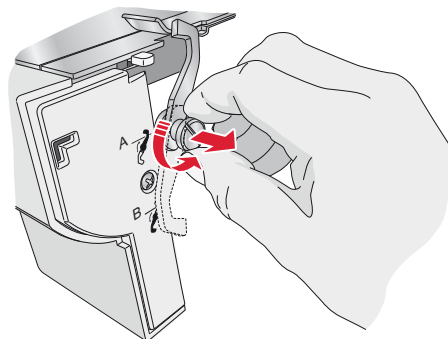


Movable upper cutter

Disengaging, position B

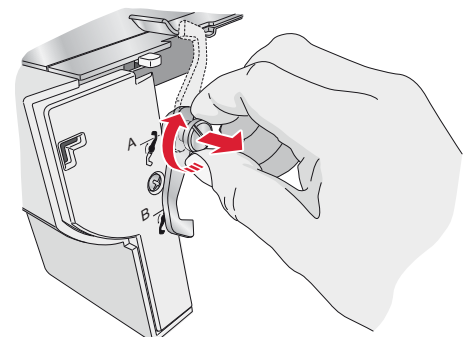
 Turn off the main power switch and unplug the machine.

- Turn the handwheel toward you until the upper cutter is raised to the highest position.
- Open the front cover.
- Pull the movable cutter knob to the right as far as it will go.
- Turn the knob toward you counter clockwise until the cutter clicks into the locked position B.




Engaging, position A

- Open the front cover and pull the movable cutter knob to the right as far as it will go.
- Turn the knob clockwise until the cutter clicks into the cutting position A.



2-thread overlock converter

Engaging


 Turn off the main power switch and unplug the machine.

2-thread overlock stitches are sewn using one needle thread and the lower looper thread. Before sewing, the 2-thread converter must be attached to the upper looper.

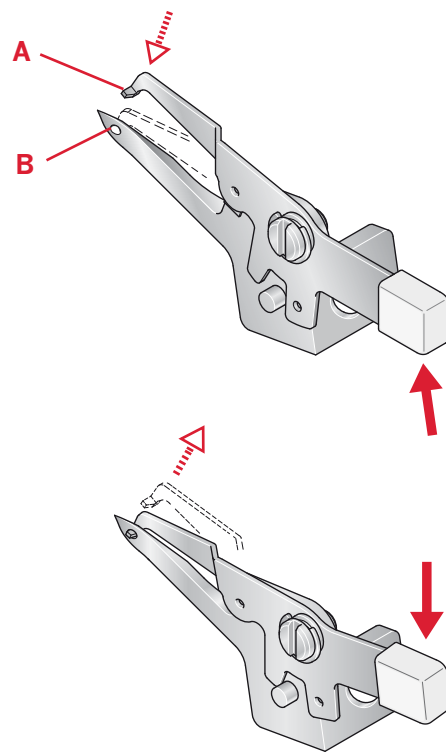
The 3-thread stretch overlock stitch is also sewn with the 2-thread overlock converter engaged.

- Open the front cover.
- Raise the white handle on the 2-thread converter to insert the sharp edge (A) of the converter in the eye (B) of the upper looper.

Disengaging

 Turn off the main power switch and unplug the machine.

- Lower the white handle on the converter and remove the sharp edge (A) from the eye (B) of the upper looper.



Upper looper

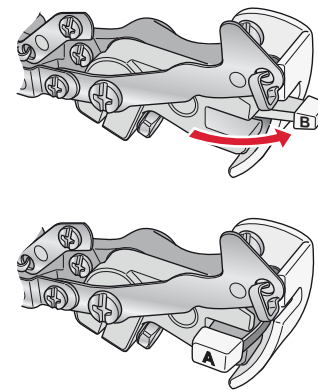
Disengaging

For coverstitch and chaintitch sewing the upper looper needs to be disengaged.

- Turn the handwheel until the upper looper is in its lowest position.
- Push the clutch lever to the right and back until position B is visible from the front.

Engaging

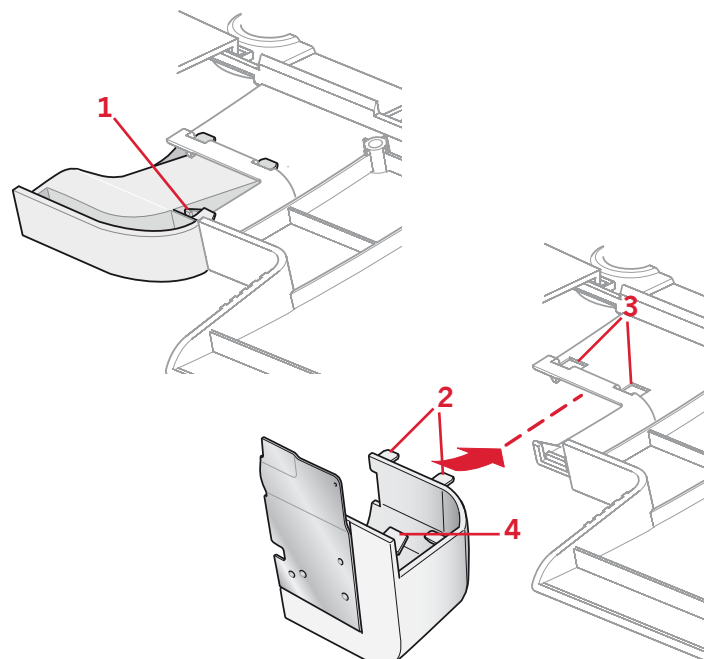
- Turn the handwheel until the upper looper is in its lowest position.
- Pull the clutch lever toward you until position A is visible from the front.



Changing to coverstitch table B

For coverstitch and chaintitch sewing the coverstitch table B should be used.

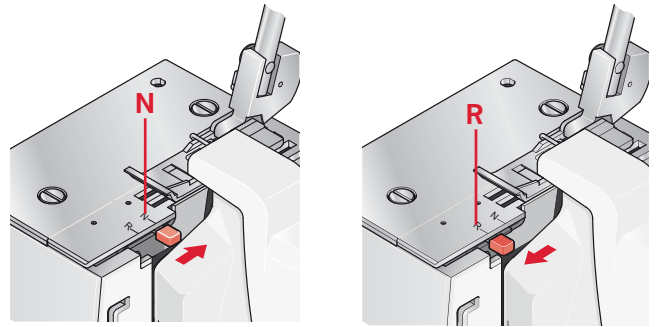
- Lift the hook (1) to release the cutter cover A and pull it towards you.
- Insert the coverstitch table B by fitting the two front pins (2) into the holes (3) and make sure the hook (4) clicks into place.



Stitch finger lever setting

The stitch finger lever should be set to N for all standard overlock sewing. To sew rolled edge you need to retract the stitch finger by setting the stitch finger lever to R.

When moving the stitch finger lever, be sure to push the lever as far as it will go in each direction.



General threading information

A color coded diagram is located inside the front cover for quick reference. Always start threading the upper looper, followed by the lower looper and then the needles from right to left.

See the table below for recommendations on what needles and thread to use for different fabric weights.

Tip: Your new machine is threaded to sew a standard overlock. Tie your own threads to these threads and carefully pull them through the machine, to easily thread your new overlock machine the first time.

Re-threading if a thread breaks

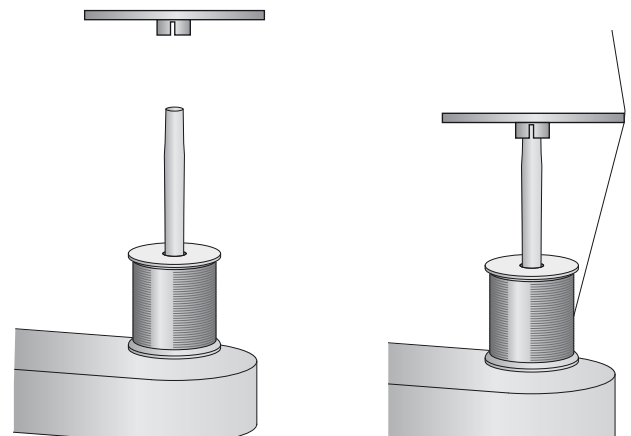
If the two loopers are not threaded in the correct order they will not create a stitch. If a looper thread breaks always do the following:

1. Unthread the needle(s)
2. Unthread the loopers
3. Thread the upper looper
4. Thread the lower looper
5. Thread the needle(s) from right to left

The following pages give you detailed step by step instructions on threading.

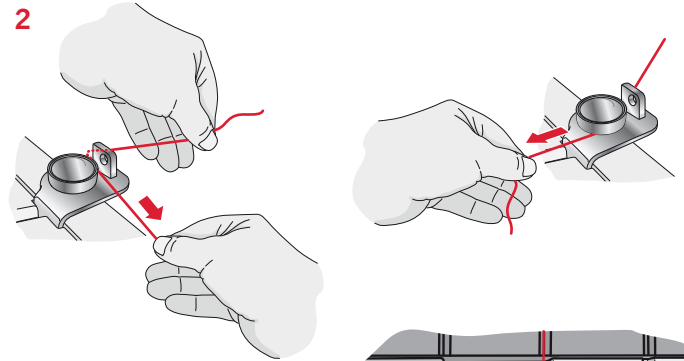
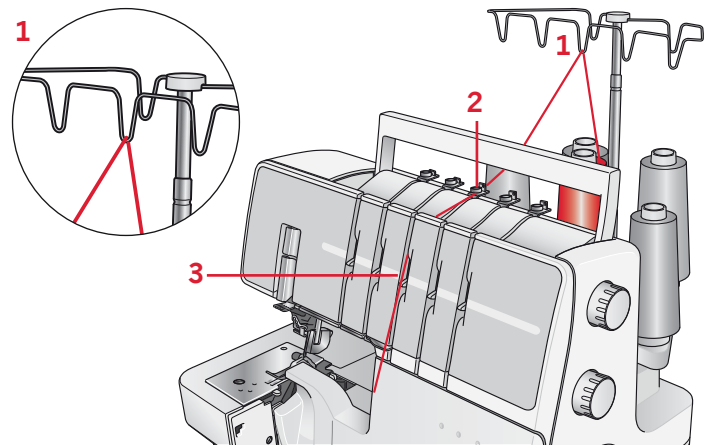
Fabric	Light fabric (voil, crepe, georgette, etc.)	Medium fabric (cotton, chino, wool, satin etc.)	Heavy fabric (denim, jersey, tweed etc.)
Needles	#12/80	#14/90	#14/90
Thread	Polyester (spun filament) Twisted thread #60/2 - #100/3 Twisted thread #80/3 - #100/3	Twisted thread #60/2	Twisted thread #50/2 - #60/2

Note: When using standard thread spools, place the thread unreeling disc as shown to prevent the thread from getting caught on the edge of the spool.

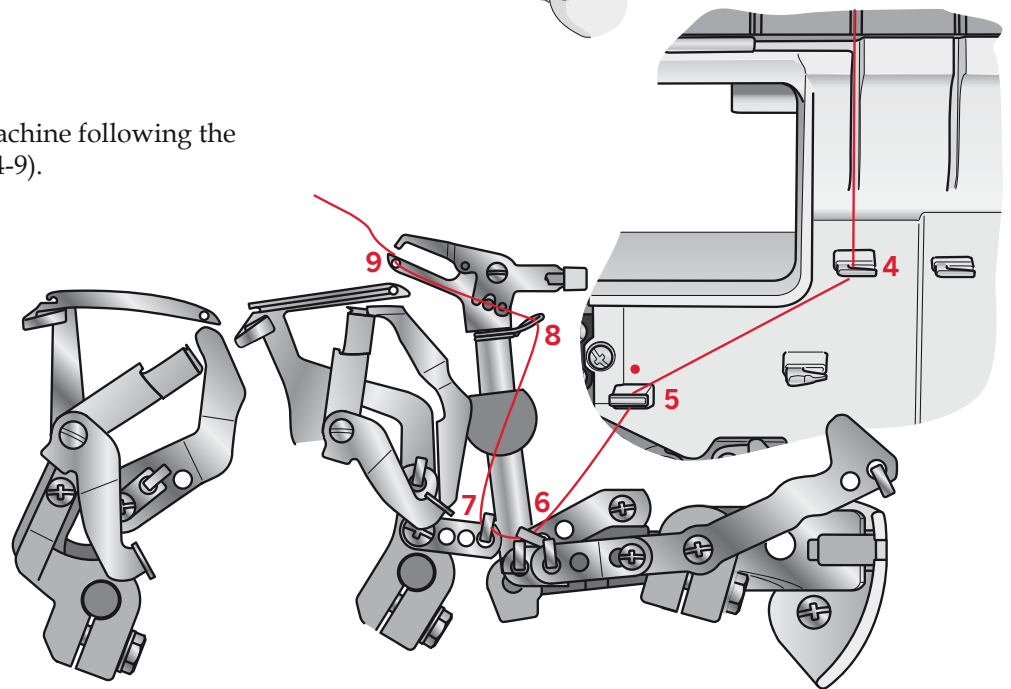


Threading the upper looper (red)

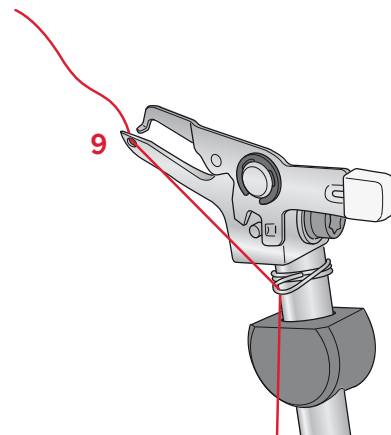
- Raise the presser foot to release tension discs.
- Pass the thread from back to front through the thread guide on the thread stand (1).
- Thread the top cover thread guide by pulling the thread towards the right until it slips under the guide. Then pull the thread along the right side of the button as illustrated (2).
- Lift up the handle and bring the thread under it. While holding the thread with both hands, pass it between the tension discs and pull it down to make certain it is properly placed between the tension discs (3)



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

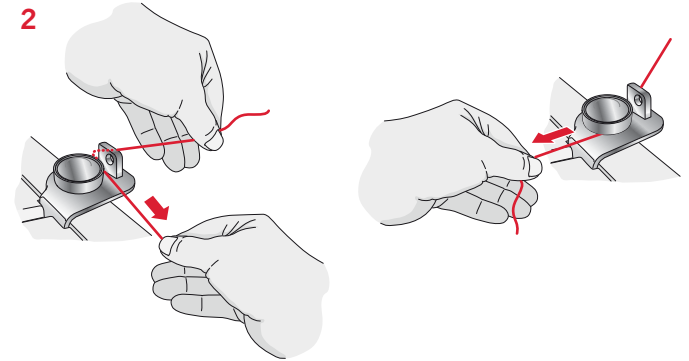
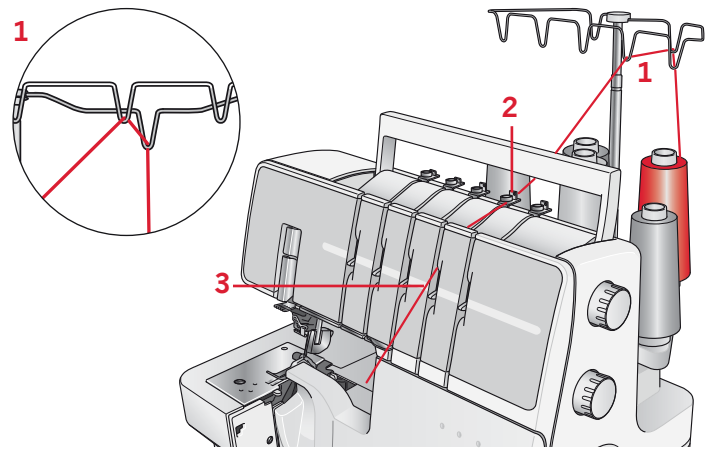


- Use the tweezers to thread the hole in the upper looper from front to back (9).
- Pull about 10 cm (4") of thread through the looper and place it to the back of the stitch plate.

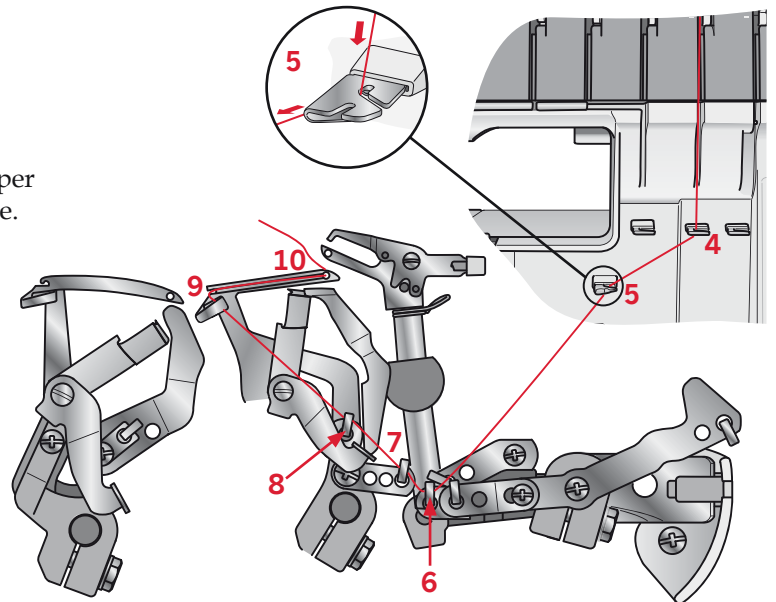


Threading the lower looper (yellow)

- Raise the presser foot to release tension discs.
- Pass the thread from back to front through the thread guide on the thread stand (1).
- Thread the top cover thread guide by pulling the thread towards the right until it slips under the guide. Then pull the thread along the right side of the button as illustrated (2).
- Lift up the handle and bring the thread under it. While holding the thread with both hands, pass it between the tension discs and pull it down to make certain it is properly placed between the tension discs (3).



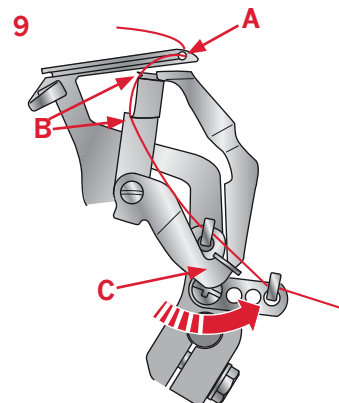
- Turn the handwheel toward you until the lower looper extends out 10 mm (3/8") from the needle plate edge.
- Thread the looper area of the machine following the yellow color coded thread guides (4-10).
- Place the thread through threading guide (4).
- Place the thread through the right slot of threading guide (5).



- To thread the last thread guide (9), pull about 10 cm (4") of thread through the guide (8).

Tip: Moving the stitch finger lever to R makes the threading easier. Remember to set it back to N before starting to sew.

- Thread the looper eye (A) from front to back using the tweezers. Make sure the thread runs into the "V" cutouts (B) on threader lever. Firmly hold the thread tail with left hand and pull the threader lever (C) up into place and back to snap the thread into thread guide 9.



Threading chainstitch looper (purple)

- Raise the presser foot to release tension discs.
- Pass the thread from back to front through the thread guide on the thread stand (1).
- Thread the top cover thread guide by pulling the thread towards the right until it slips under the guide. Then pull the thread along the right side of the button as illustrated (2).
- Lift up the handle and bring the thread under it. While holding the thread with both hands, pass it between the tension discs and pull it down to make certain it is properly placed between the tension discs (3).

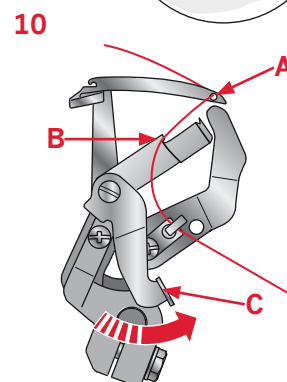
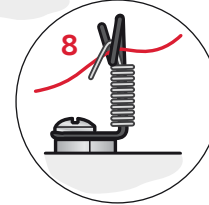
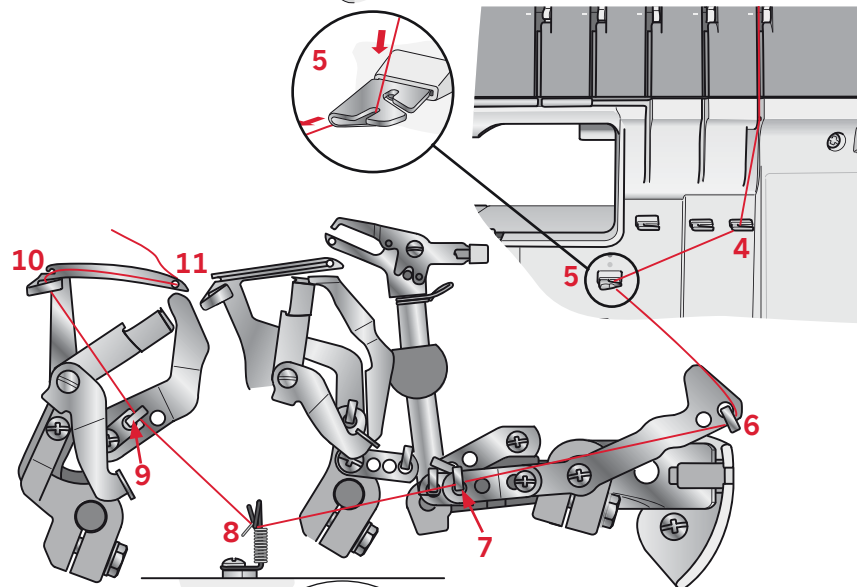
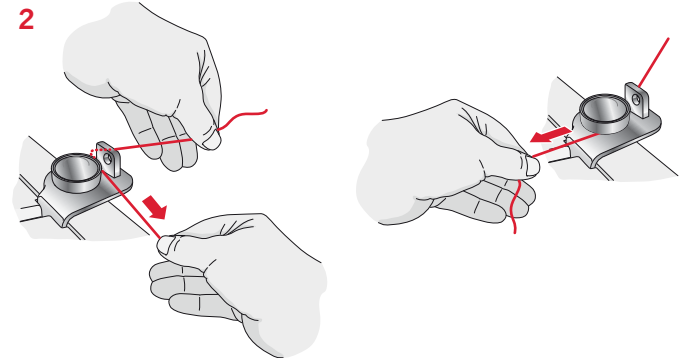
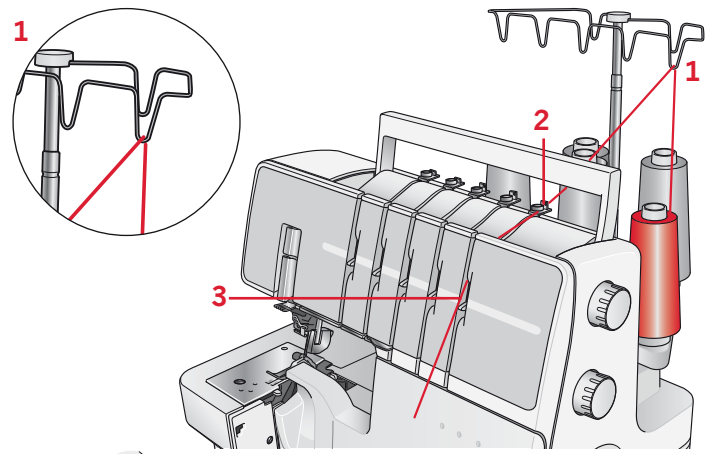
- Turn the handwheel toward you until the chainstitch looper is at the far right.
- Thread the looper area of the machine following the purple color coded thread guides (4-11).

- Place the thread through threading guide (4).
- Place the thread through the front slot of threading guide (5).

- Thread the chainstitch thread guide (8) by holding the thread in front of the thread guide pin and pulling the thread backward and up, until the thread rests inside the thread guide loop and under the spring.
- To thread the last thread guide (10), pull about 10 cm (4") of thread through the guide (9).

Tip: Moving the stitch finger lever to R makes the threading easier. Remember to set it back to N before starting to sew.

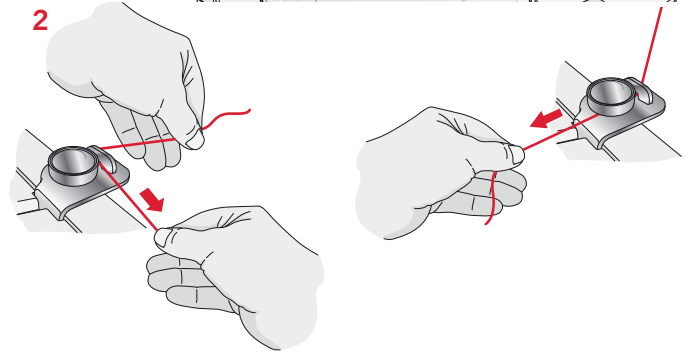
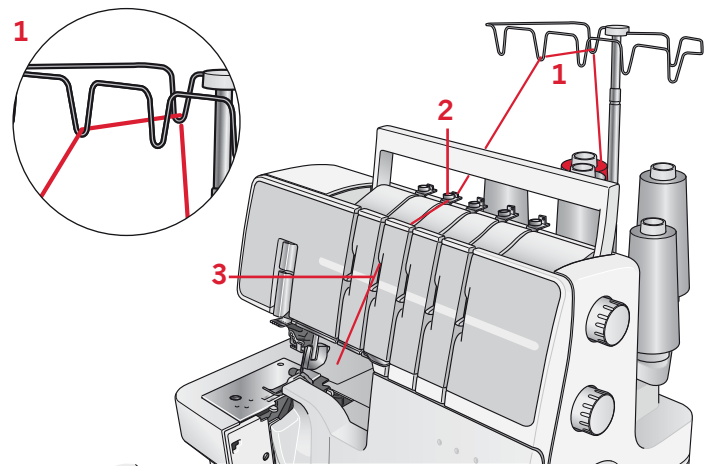
- Thread the looper eye (A) from front to back using the tweezers. Make sure the thread runs into the left "V" cutout (B) on threader lever. Firmly hold the thread tail with left hand and pull the threader lever (C) up into place and back to snap the thread into thread guide 10.



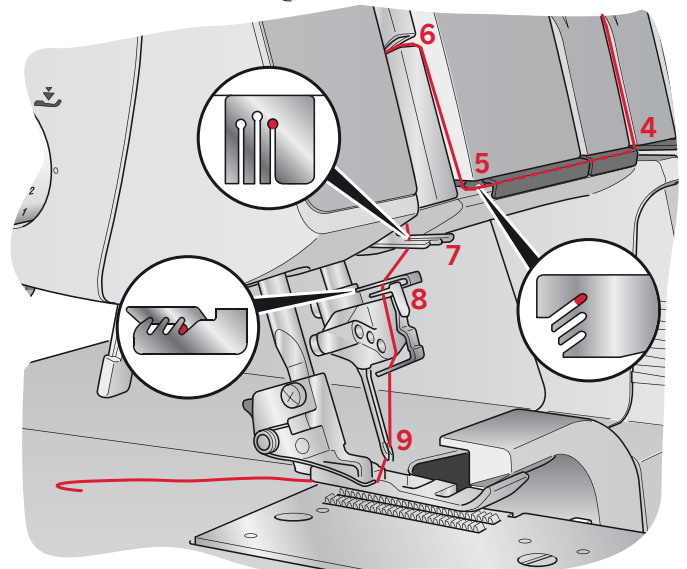
Threading the right needle

(green, B on needle clamp)

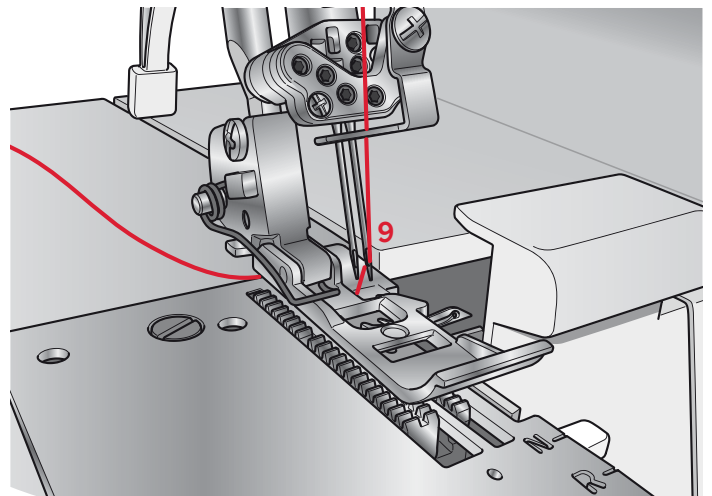
- Raise the presser foot to release tension discs.
- Pass the thread from back to front through the thread guide on the thread stand (1).
- Thread the top cover thread guide by pulling the thread towards the right until it slips under the guide. Then pull the thread along the right side of the button as illustrated (2).
- Lift up the handle and bring the thread under it. While holding the thread with both hands, pass it between the tension discs and pull it down to make certain it is properly placed between the tension discs (3).



- Continue to thread points (4-8).
- 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).



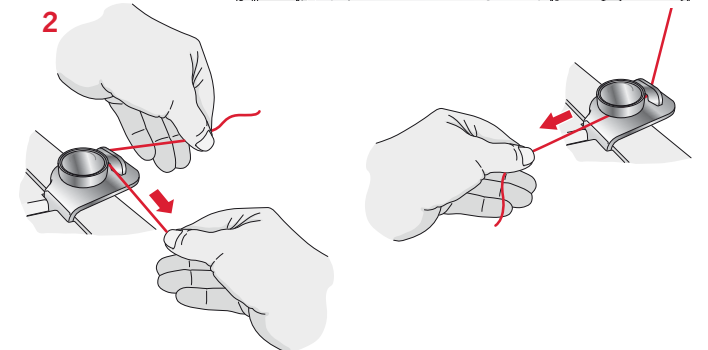
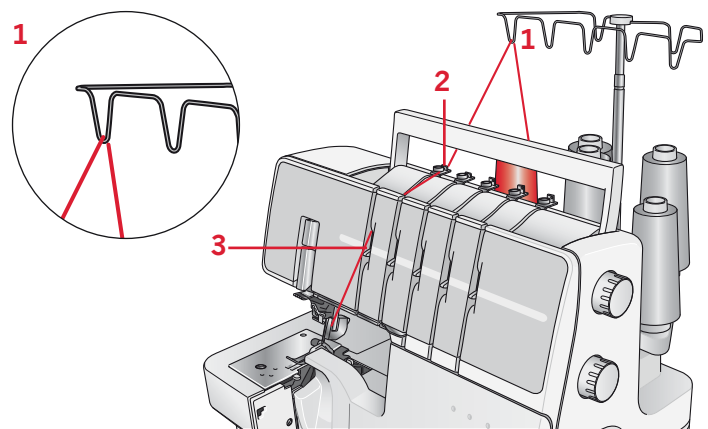
- Before threading the eye of the needle, make sure the thread is behind the thread guide located on the bottom of the needle clamp.
- Thread the eye of the needle (9). Use the needle threader (see page 21) to make needle eye threading easier.
- Pull about 10 cm (4") of thread through needle eye to hang free.
- Place the thread to the back, under the presser foot.



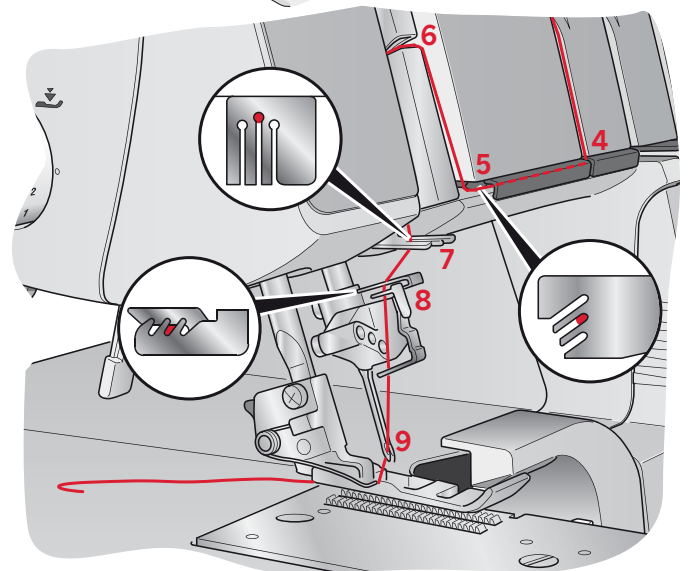
Threading the left needle

(blue, A on needle clamp)

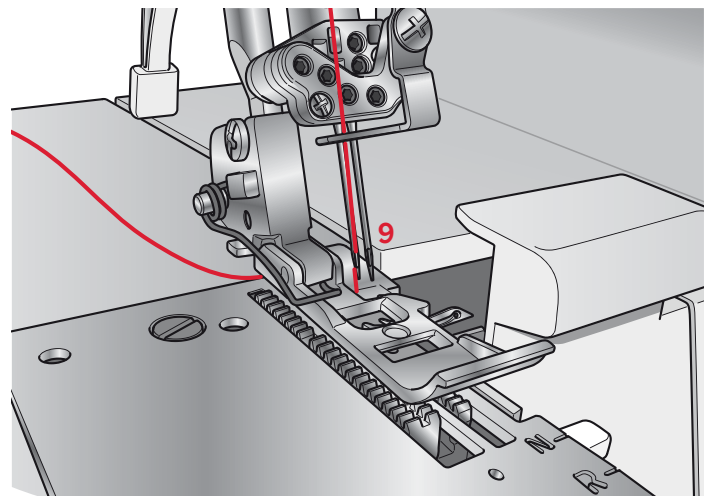
- Raise the presser foot to release tension discs.
- Pass the thread from back to front through the thread guide on the thread stand (1).
- Thread the top cover thread guide by pulling the thread towards the right until it slips under the guide. Then pull the thread along the right side of the button as illustrated (2).
- Lift up the handle and bring the thread under it. While holding the thread with both hands, pass it between the tension discs and pull it down to make certain it is properly placed between the tension discs (3).



- Continue to thread points (4-8).
- Slip the thread into the middle slot on the thread guide (5) and the slot on the take-up lever cover (6). Then slip the thread into the middle slot on the thread guides (7) and (8).



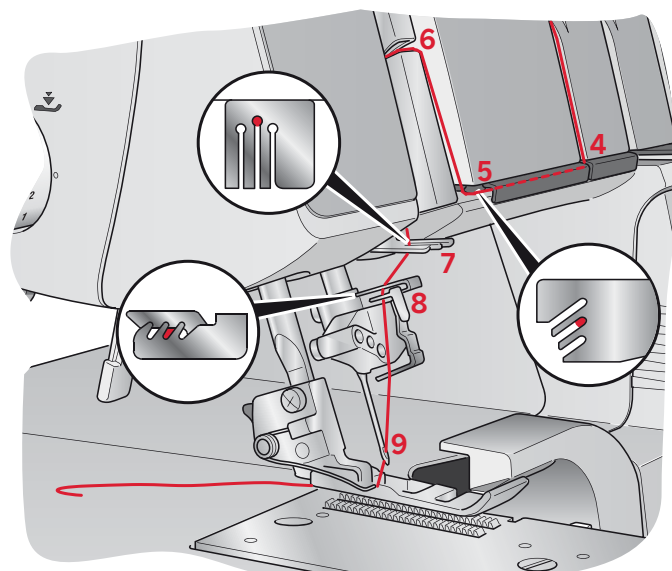
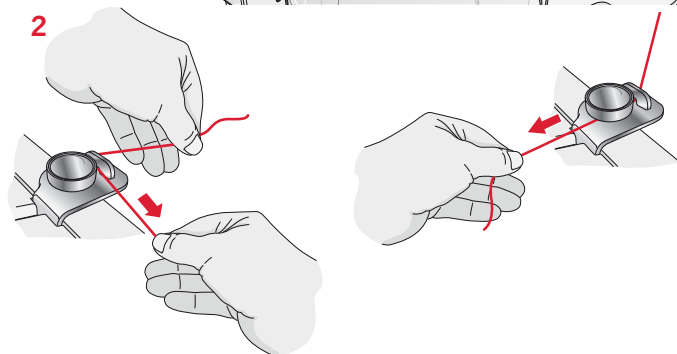
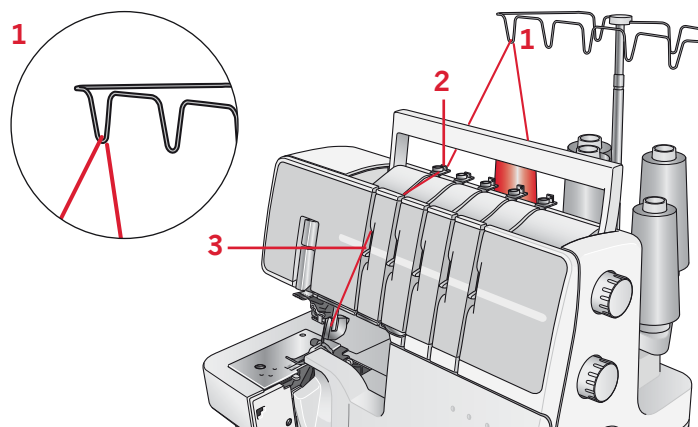
- Before threading the eye of the needle, make sure the thread is behind the thread guide located on the bottom of the needle clamp.
- Thread the eye of the needle (9). Use the needle threader (see page 21) to make needle eye threading easier.
- Pull about 10 cm (4") of thread through needle eye to hang free.
- Place the thread to the back, under the presser foot.



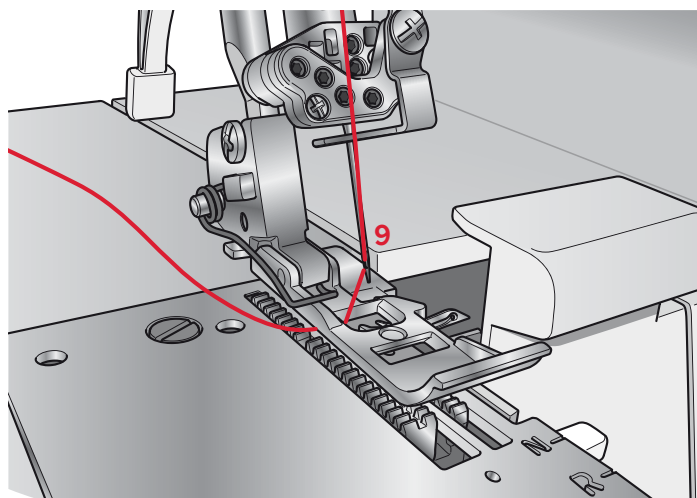
Threading the chainstitch needle

(blue, D on needle clamp)

- Raise the presser foot to release tension discs.
 - Pass the thread from back to front through the thread guide on the thread stand (1).
 - Thread the top cover thread guide by pulling the thread towards the right until it slips under the guide. Then pull the thread along the right side of the button as illustrated (2).
 - Lift up the handle and bring the thread under it. While holding the thread with both hands, pass it between the tension discs and pull it down to make certain it is properly placed between the tension discs (3).
-
- Continue to thread points (4-8).
 - 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 the eye of the needle, make sure the thread is in front of the thread guide located on the bottom of the needle clamp.
- Thread the eye of the needle (9). Use the needle threader (see page 21) to make the threading easier.
- Pull about 10 cm (4") of thread through needle eye to hang free.
- Place the thread to the back, under the presser foot.

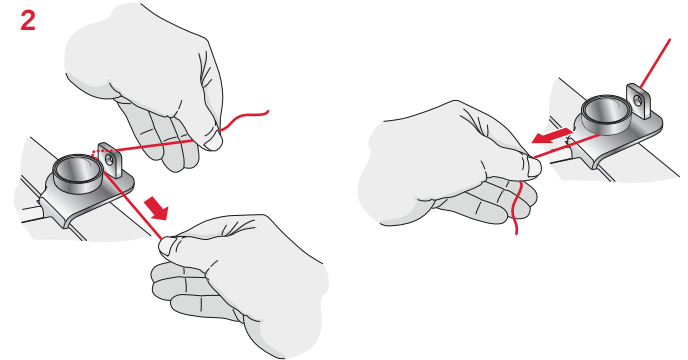
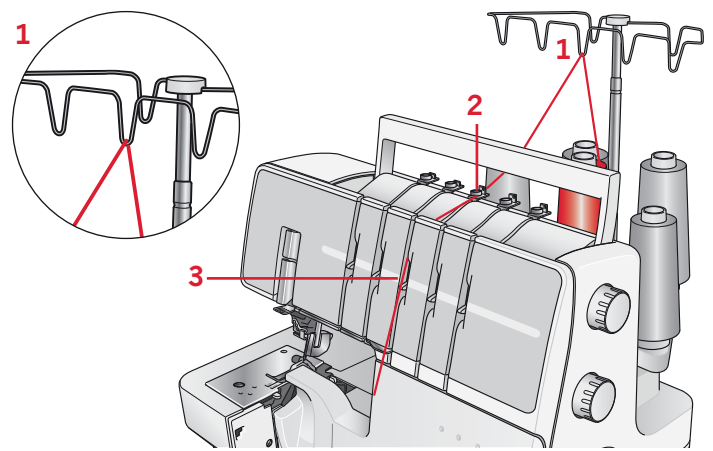


Threading the coverstitch needles

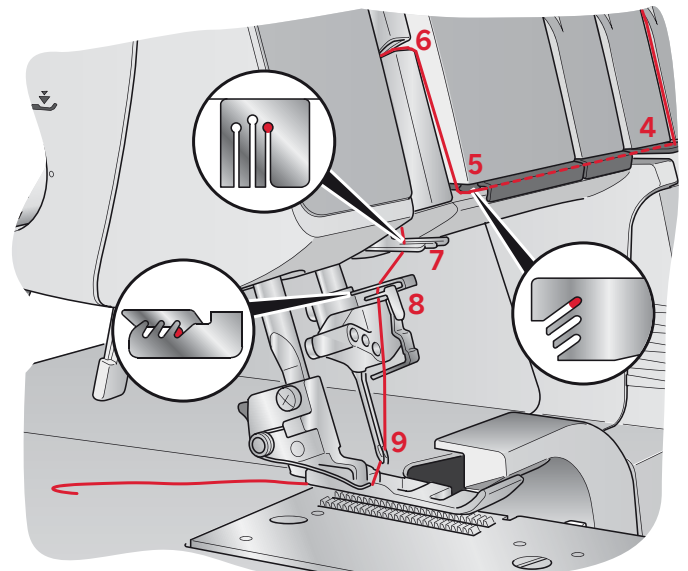
Note: Thread the needles in to following order: right (E), middle (D), left (C)

Threading the right coverstitch needle (red, E on the needle clamp)

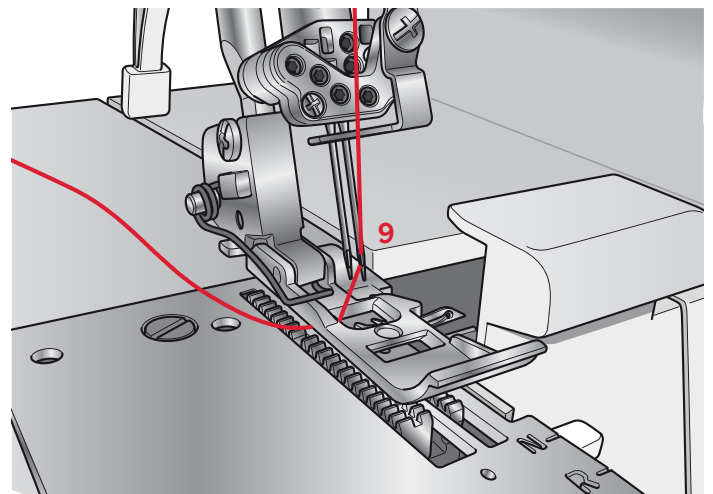
- Raise the presser foot to release tension discs.
- Pass the thread from back to front through the thread guide on the thread stand (1).
- Thread the top cover thread guide by pulling the thread towards the right until it slips under the guide. Then pull the thread along the right side of the button as illustrated (2).
- Lift up the handle and bring the thread under it. While holding the thread with both hands, pass it between the tension discs and pull it down to make certain it is properly placed between the tension discs (3).



- Continue to thread points (4-8).
- Slip 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).

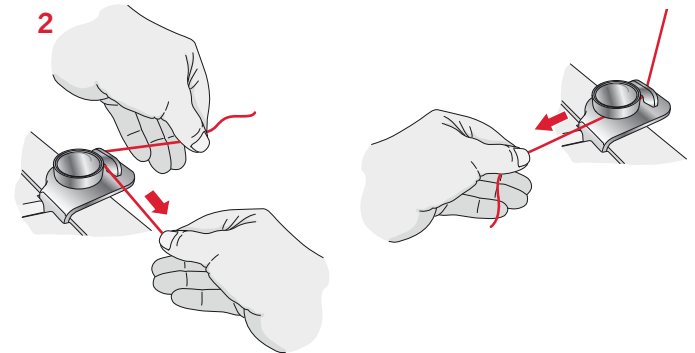
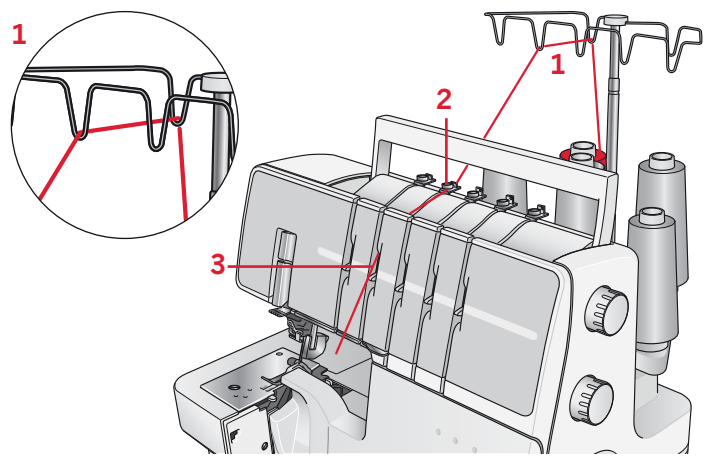


- Before threading the eye of the needle, make sure the thread is in front of the thread guide located on the bottom of the needle clamp for coverstitch.
- Thread the eye of the needle (9). Use the needle threader (see page 21) to make the threading easier.
- Pull about 10 cm (4") of thread through needle eye to hang free.
- Place the thread to the back, under the presser foot.

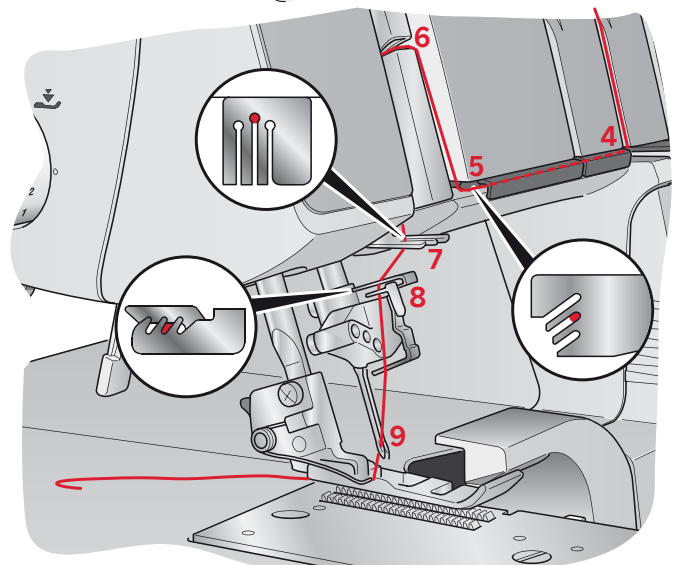


Threading the middle coverstitch/chainstitch needle (green, D on the needle clamp)

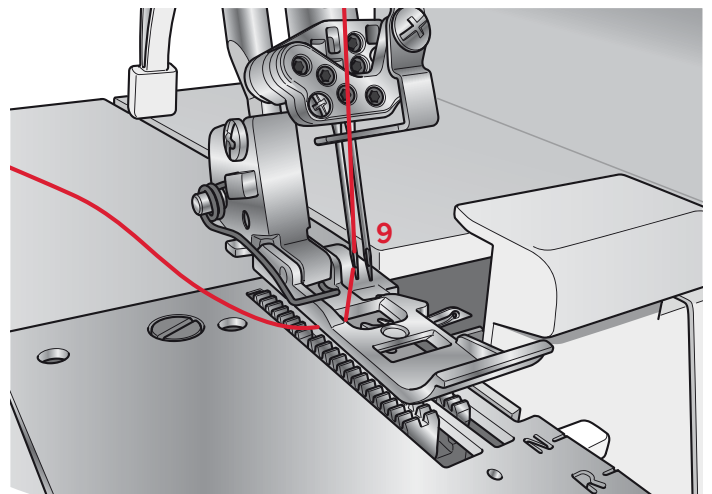
- Raise the presser foot to release tension discs.
- Pass the thread from back to front through the thread guide on the thread stand (1).
- Thread the top cover thread guide by pulling the thread towards the right until it slips under the guide. Then pull the thread along the right side of the button as illustrated (2).
- Lift up the handle and bring the thread under it. While holding the thread with both hands, pass it between the tension discs and pull it down to make certain it is properly placed between the tension discs (3).



- Continue to thread points (4-8).
- 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).

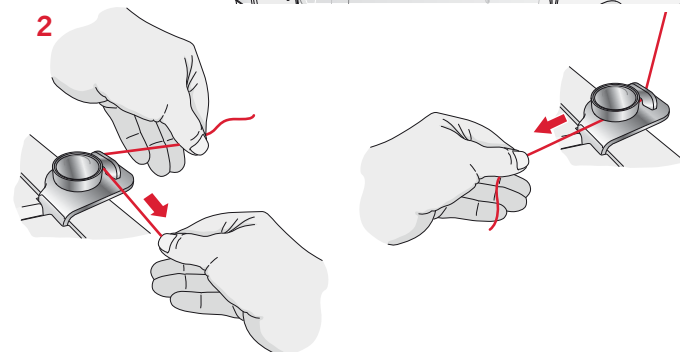
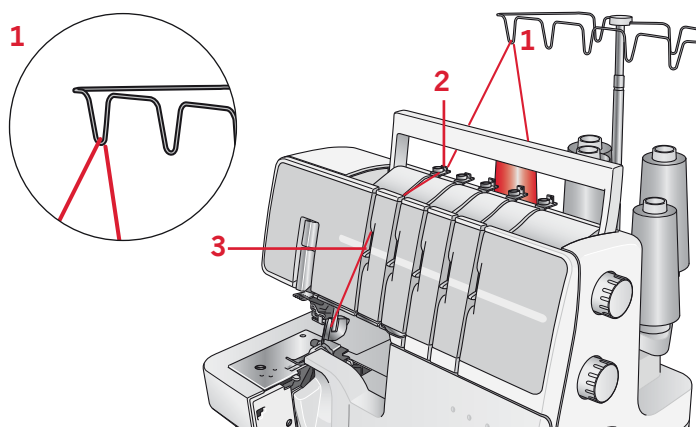


- Before threading the eye of the needle, make sure the thread is in front of the thread guide located on the bottom of the needle clamp for coverstitch and for chainstitch.
- Thread the eye of the needle (9). Use the needle threader (see page 21) to make the threading easier.
- Pull about 10 cm (4") of thread through needle eye to hang free.
- Place the thread to the back, under the presser foot.

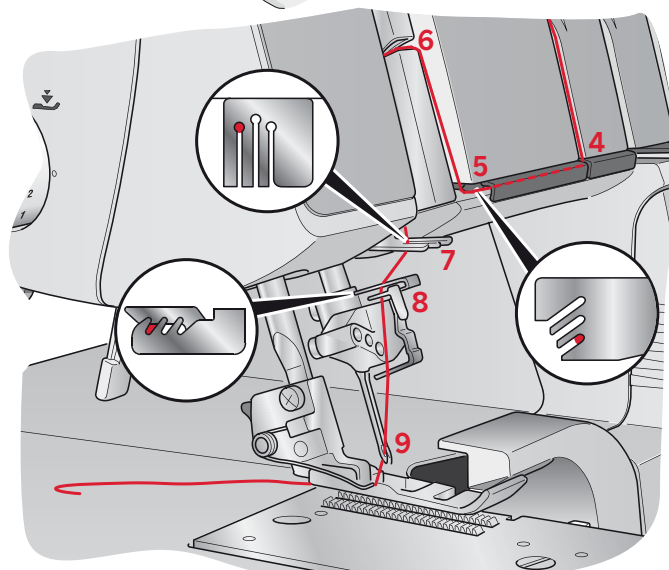


Threading the coverstitch left needle (blue, C on the needle clamp)

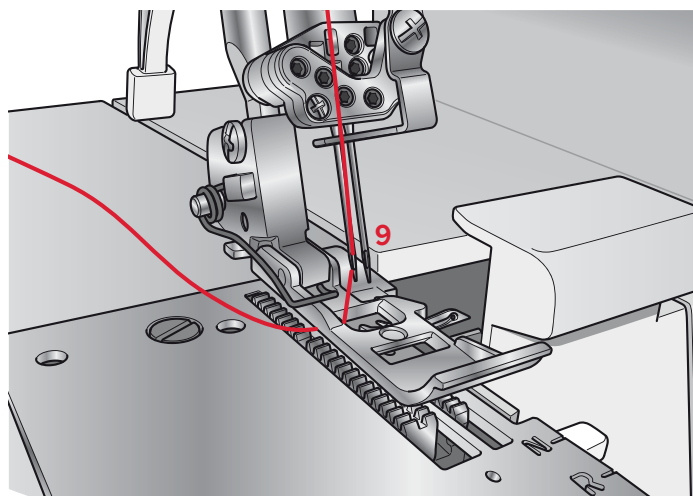
- Raise the presser foot to release tension discs.
- Pass the thread from back to front through the thread guide on the thread stand (1).
- Thread the top cover thread guide by pulling the thread towards the right until it slips under the guide. Then pull the thread along the right side of the button as illustrated (2).
- Lift up the handle and bring the thread under it. While holding the thread with both hands, pass it between the tension discs and pull it down to make certain it is properly placed between the tension discs (3).



- Continue to thread points (4-8).
- Slip the thread into the front slot on the thread guide (5) and the slot on the take-up lever cover (6). Then slip the thread into the left slot on the thread guides (7) and (8).



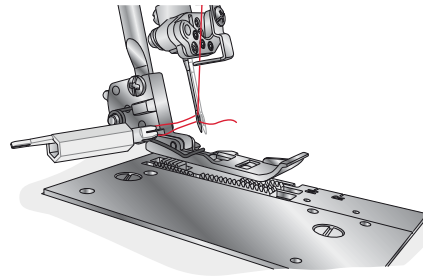
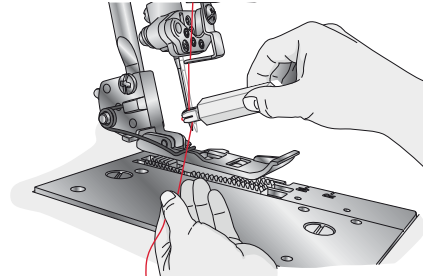
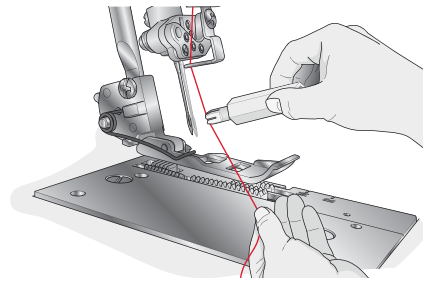
- Before threading the eye of the needle, make sure the thread is in front of the thread guide located on the bottom of the needle clamp.
- Thread the eye of the needle (9). Use the needle threader (see page 21) to make the threading easier.
- Pull about 10 cm (4") of thread through needle eye to hang free.
- Place the thread to the back, under the presser foot.



Needle threader

To make threading the needles easier, use the needle threader included with the accessories.

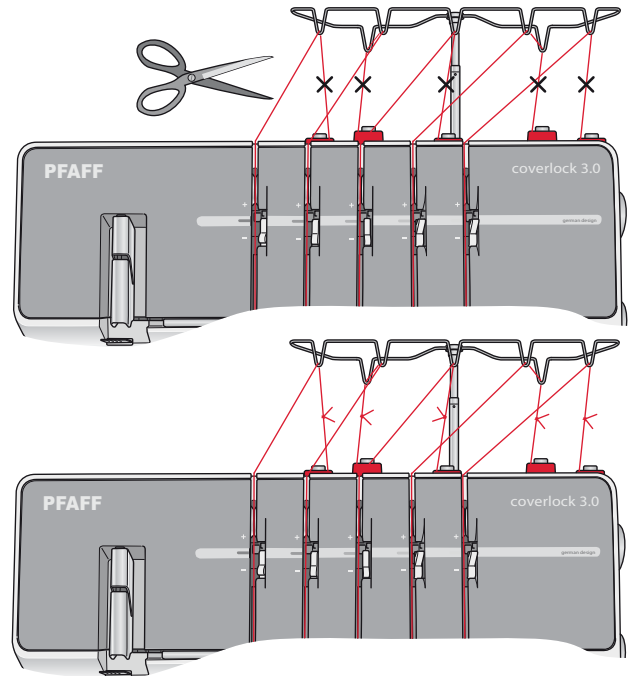
- Turn the handwheel so the needles are in their highest position and lower the presser foot. Make sure one of the rectangular markings of the needle threader is pointing upwards. Place the thread from right to left in the notch on the tip of the needle threader.
- Hold the needle threader against the needle. Move the needle threader down to the needle eye and press gently against the needle, causing a small metal pin to push the thread through the needle eye and form a thread loop.
- Use the needle threader to pull the thread loop out behind the needle.



Changing thread

The following is an easy way to change threads:

- Cut the thread in use near the spool, behind the guides on the telescopic thread stand.
- Remove the thread spool and place the new thread on the spool pin.
- Tie the end of the new thread to the end of the old thread. Cut the thread tails to 2-3 cm (1") in length and firmly pull both threads to test knot security.
- Raise the presser foot to release the tension discs.
- Pull the threads through the machine one at a time until the knots are in front of the needle. If the threads do not pull easily, check for tangles on thread guides or looping under thread stand.
- Cut the thread behind the knot and thread the needle.













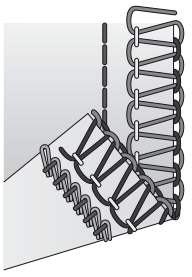
Stitch overview

The settings shown in this table are our recommendations based on normal conditions. The correct tension is set automatically by the use of the Auto Tension Dial (ATD). It may be necessary to adjust the thread tension according to the stitch, type of fabric and thread you are using. For best results make tension adjustments in small steps of no greater than half a number at a time. Always test sew on a sample of your fabric before sewing on your garment.

Different stitches are obtained by combining the ATD with different needle positions, threading methods, and the use of the 2-thread converter.

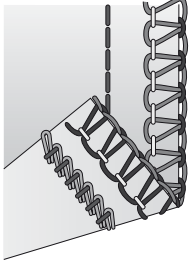
Icon explanation:

	Needle position	N/R	Stitch finger lever setting
	Stitch length		2-thread converter
	Cutting width	A/B	Setting for upper cutter, clutch lever and use of cutter cover A or coverstitch table B
	Differential feed		

Stitch	ATD					N/R		A/B	Threading path				
									B	G	R	Y	P
	B	A and D	2.5	6.0	1.0	N	No	A	•	•	•	•	•

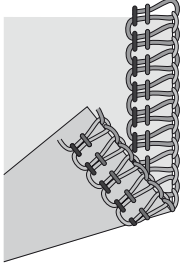
5-thread safety stitch, wide

For joining with a reinforced stitch and overcasting in one step. A durable chainstitch seam with overlock edge for garment sewing, quilt piecing and other projects.

	A	B and D	2.5	6.0	1.0	N	No	A	•	•	•	•	•
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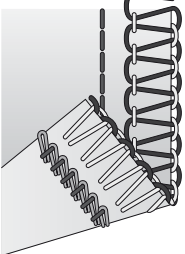
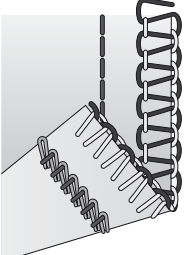
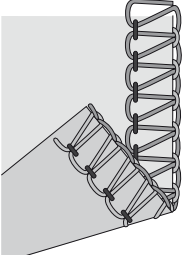
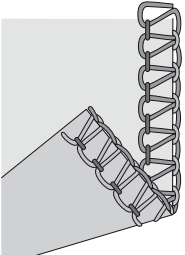
5-thread safety stitch, narrow

For joining with a reinforced stitch and overcasting in one step. A durable chainstitch seam with overlock edge for garment sewing, quilt piecing and other projects.

	A	A and B	2.5	6.0	1.0	N	No	A	•	•	•	•	
------------------------------------------------------------------------------------	---	---------	-----	-----	-----	---	----	---	---	---	---	---	--

4-thread overlock

For all seams where stretch or give is needed, such as neck edges, side seams, sleeves, etc. Specialty techniques can be done with a 4-thread overlock seam such as gathering, applying piping with the optional piping foot and elastic with the optional elastic foot.

Stitch	ATD					N/R		A/B	Threading path					
									B	G	R	Y	P	
	I	A and D	2.5	6.0	1.0	N	Yes	A	•	•	•	•		
4-thread safety stitch, wide For joining with reinforced stitch and overcasting in one step. Converter required.														
	I	B and D	2.5	6.0	1.0	N	Yes	A	•	•	•	•		
4-thread safety stitch, narrow For joining with reinforced stitch and overcasting in one step. Converter required.														
	B	A	2.5	6.0	1.0	N	No	A	•		•	•		
3-thread overlock, wide For sewing two layers of stretchy fabric or overcasting a single layer of light to medium fabric. Use heavier threads in the loopers to create decorative braids. (Hold your hand behind the presser foot and gently and slowly pull the thread chain as you sew, trying to keep the same tension as it has been sewn onto fabric.)														
	A	B	2.5	6.0	1.0	N	No	A		•	•	•		
3-thread overlock, narrow For sewing two layers of stretchy fabric or overcasting a single layer of light fabric. Popular for creating decorative tucks. Use decorative threads in the loopers and regular thread in the needle. Use different colors in the loopers to get an interesting effect.														

Stitch	ATD					N/R		A/B	Threading path					
									B	G	R	Y	P	
	A	B	1.5	6.0	1.0	R	No	A		•	•	•		

3-thread narrow edge*

For edging lightweight fabrics. It gives a nice finish on silky scarves, pillow ruffles and napkins. Thread the upper looper with a decorative thread, such as 40 weight rayon for a beautiful satin edge. Read more on page 29.

	F	A	2	6.0	1.0	N	No	A	•		•	•		
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3-thread flatlock, wide

For sewing stretchy fabrics together with a decorative effect either with the flatlock side or the ladder stitch side. Create varying effects by threading the upper looper with decorative thread. Read more on page 30.

	F	B	2	6.0	1.0	N	No	A		•	•	•		
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3-thread flatlock, narrow

For sewing stretchy fabrics together with a decorative effect either with the flatlock side or the ladder stitch side. Create varying effects by threading the upper looper with decorative thread. Read more on page 30.

	G	A and B	2	6.0	1.0	N	Yes	A	•	•		•		
--	---	---------	---	-----	-----	---	-----	---	---	---	--	---	--	--






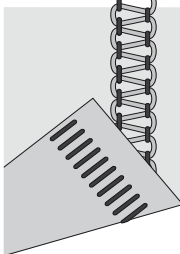
3-thread stretch overlock

For sewing extra stretchy fabrics. Add additional stretch by using a stretchy type thread in the lower looper. Change the thread tension accordingly.

* Not recommended for heavyweight woven fabrics or medium to heavyweight stretch fabrics.

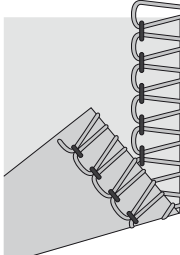
Stitch	ATD					N/R		A/B	Threading path					
									B	G	R	Y	P	
	C	B	1	6.0	1.0	R	No	A		•	•	•		
3-thread rolled edge* For edging lightweight fabrics. It gives a nice finish on silky scarves, pillow ruffles and napkins. For a beautiful rolled edge, thread the upper looper with decorative thread and the needle and lower looper with lightweight regular thread. Read more on page 29.														
	E	A	2	6.0	1.0	N	Yes	A	•				•	
2-thread overlock, wide For overcasting a single layer of light to medium weight fabrics. Converter required.														
	E	B	2	6.0	1.0	N	Yes	A		•			•	
2-thread overlock, narrow For overcasting a single layer of light to medium weight fabrics. Converter required.														
	E	B	2	6.0	1.0	R	Yes	A		•			•	
2-thread narrow edge* Use for edging lightweight fabrics. Converter required. Read more on page 29.														

* Not recommended for heavyweight woven fabrics or medium to heavyweight stretch fabrics.

Stitch	ATD					N/R		A/B	Threading path					
									B	G	R	Y	P	
	E	A	2	6.0	1.0	N	Yes	A	•				•	

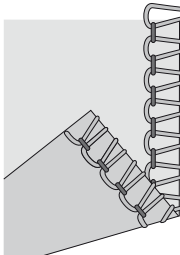
2-thread flatlock, wide

For sewing stretchy fabrics together with a decorative effect either with the flatlock side or the ladder stitch side. Create varying effects by threading the lower looper with decorative thread. Converter required. Read more on page 30.

	G	A	2	6.0	1.0	N	Yes	A	•				•	
----------------------------------------------------------------------------------	---	---	---	-----	-----	---	-----	---	---	--	--	--	---	--

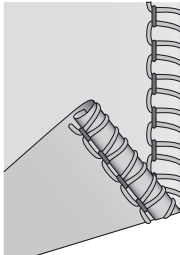
2-thread wrapped overlock, wide

Decorative finish for garments and homedec. Converter required.

	D	B	2	6.0	1.0	N	Yes	A		•			•	
------------------------------------------------------------------------------------	---	---	---	-----	-----	---	-----	---	--	---	--	--	---	--

2-thread wrapped overlock, narrow

Gives a beautiful finish to lightweight fabrics. Use transparent threads with this stitch to get an almost invisible edge, this gives a very beautiful look on finer fabrics. Converter required.

	B	B	1	6.0	1.0	R	Yes	A		•			•	
------------------------------------------------------------------------------------	---	---	---	-----	-----	---	-----	---	--	---	--	--	---	--

2-thread rolled edge*

For edging lightweight fabrics. It gives a nice finish on silky scarves, pillow ruffles and napkins. Thread the lower looper with a decorative thread, such as 40 weight rayon for a beautiful satin edge. Converter required. Read more on page 29.

* Not recommended for heavyweight woven fabrics or medium to heavyweight stretch fabrics.

Stitch	ATD					N/R		A/B	Threading path				
									B	G	R	Y	P
	J	C, D and E	2.5	-	1.0	R	No	B	•	•	•		•

Coverstitch, triple

For hems on stretch fabrics and for decorative effects on all kind of fabrics. Use decorative thread in looper for embellishment. Read more on page 29.

	H	C and E	2.5	-	1.0	R	No	B	•		•		•
--	---	---------	-----	---	-----	---	----	---	---	--	---	--	---

Coverstitch, wide

For hems on stretch fabrics and for decorative effects on all kind of fabrics. Use decorative thread in looper for embellishment. Read more on page 29.

	K	C and D	2.5	-	1.0	R	No	B	•	•			•
--	---	---------	-----	---	-----	---	----	---	---	---	--	--	---

Coverstitch, narrow

For hems on stretch fabrics and for decorative effects on all kind of fabrics. Use decorative thread in looper for embellishment. Read more on page 29.

	D	D	2.5	-	1.0	R	No	B		•			•
--	---	---	-----	---	-----	---	----	---	--	---	--	--	---


Chainstitch

For all types of sewing such as construction, hemming and piecing quilts. Baste with ease for construction as it is an easily unraveled stitch, and never run out of bobbin thread. Use decorative thread in looper for embellishment. Read more on page 31.

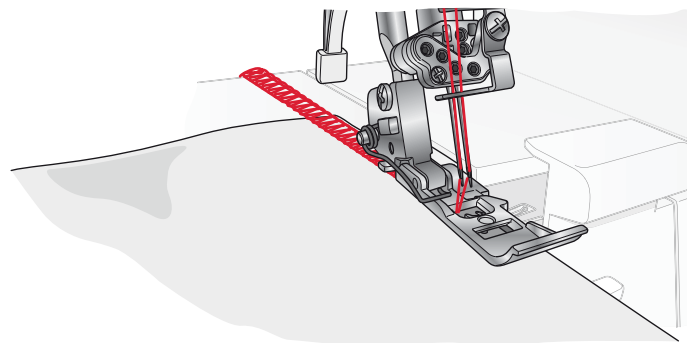
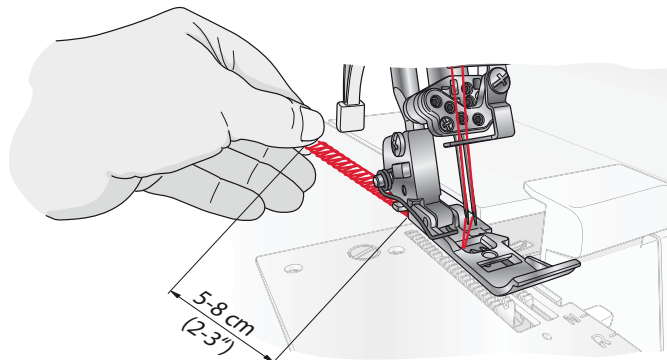
Start sewing

Pin placement

When securing the fabric pieces using pins, insert straight pins to the left of the presser foot. The pins will be easy to remove and are away from the cutters.

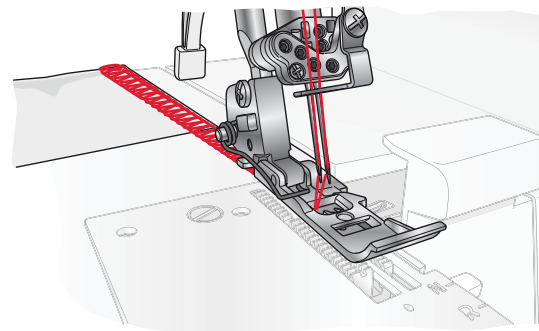
 *Sewing over pins will damage and might destroy the cutting edge of the cutters.*

- When the machine is completely threaded, close the front cover and bring all of the threads over the stitch plate and slightly to the left under the presser foot.
- Ensure that the upper blade moves against the lower blade correctly by turning the handwheel slowly toward you. If the blades are not moving correctly, check if there are any fabric or waste thread stuck between the blades.
- Hold the threads and pull them slightly.
- Turn the handwheel toward you two to three complete turns to start making a thread chain. Check if all threads wind around the stitch finger of the stitch plate.
- If the threads do not wind around the finger, make sure each thread is threaded correctly.
- Continue holding the thread chain while pressing the foot control. Sew until the chain is 5-8 cm (2-3") in length.
- Place fabric under the front of the presser foot and sew a test sample. Guide the fabric slightly with your left hand while sewing. Do not pull on the fabric as this may deflect the needle, causing it to break.



Chain off

- When you reach the end of the fabric, continue sewing while drawing the finished fabric gently backwards and to the left. This is called chaining off. It prevents the threads from coming undone and prepares for the next sewing task.
- Cut off the thread chain 2-5 cm (1-2") behind the presser foot using the thread cutter on the left side of the machine. Pull the threads around the thread cutter from the back, then toward you.



Tip: When you have re-threaded the machine, always chain off and test sew a sample to test thread tension.

Tip: The presser foot on this machine has marks to indicate the needle position. Use this as a guide when sewing.

Rolled edge sewing

The rolled edge stitch is appropriate for lightweight fabrics such as lawn, voile, organdy, crepe, etc. The rolled edge is achieved by adjusting the thread tension to make the fabric edge roll under the fabric while overlocking. Adjust the thread tension to change the degree of rolling. To sew a rolled edge you need to set the stitch finger lever to R. (See page 11)

Tip: For a beautiful rolled edge, thread the upper looper with a decorative thread and the needle and lower looper with lightweight regular thread.

Note: Make a thread chain and test sew on a sample of your fabric before sewing on your garment. Hold the thread chain before sewing to keep it from curling into the seam.

Note: The minimum overlock stitch width that can be obtained for rolled edging is approximately 1.5 mm.

Coverstitch sewing

The coverstitch can be used for covering, binding or top-stitching necklines and for hemming the bottom of T-shirts and sweatsuits, etc. in addition to flat joining seams (plain seaming). The coverstitch is most suitable for stretchy fabrics. It can also be used for woven fabrics.

Machine set up

- Disengage the movable upper cutter. (See page 9)
- Set the stitch finger lever to R. (See page 11)
- If inserted, remove needle B and needle A.
- Install needles C, D and/or E depending on desired coverstitch.
- Disengage the upper looper. (See page 10)
- Remove cutter cover A and install coverstitch table B (see page 10). The graduations on the coverstitch table indicate the distance, in cm and inches, from coverstitch middle needle. Use it as a guide when positioning the fabric edge.
- Close front cover.

Start sewing

- Raise the presser foot by lowering presser foot lift.
- Place material under the presser foot behind the needle.
- Lower the presser foot by raising the presser foot lift.

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

Securing the coverstitch seam end

Chaining off is not possible after sewing coverstitch because it causes the seam to unravel when the looper thread is pulled out at the end of sewing. Therefore, secure the seam end in the following manner.

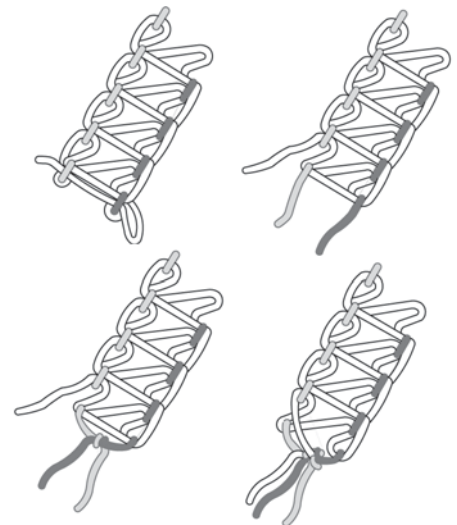
When sewing through to the edge of fabric

- Knot the needle threads (2 or 3 threads) together first, as shown on the illustration.
- Tie these threads with the looper threads.
- Cut extra threads.

When sewing is stopped halfway

- Raise the presser foot and turn the handwheel one full rotation away from you. Pull the fabric under and behind the presser foot while securing the thread ends with your thumb and your forefinger to prevent the seam from unraveling.
- Pull out the needle threads (2 or 3 threads) on the underside of the fabric and knot the threads in the same manner as described above.
- Cut extra threads.

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



Flatlock sewing

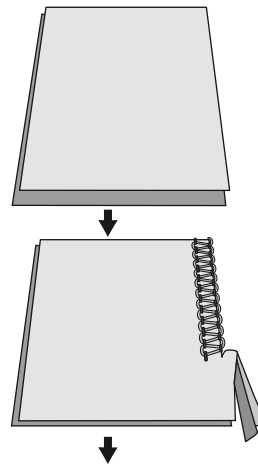
A flatlock stitch is made by sewing the seam and pulling the fabric apart to flatten the seam. The flatlock stitch can be used both as a decorative construction stitch, sewing two pieces together (Standard flatlock stitch), or for embellishment on only one piece of fabric (Ornamental flatlock stitch).

There are two ways to sew a flatlock stitch. Either with the wrong sides of the fabric together to create a decorative look, or with the right sides together, to create a ladder stitch.

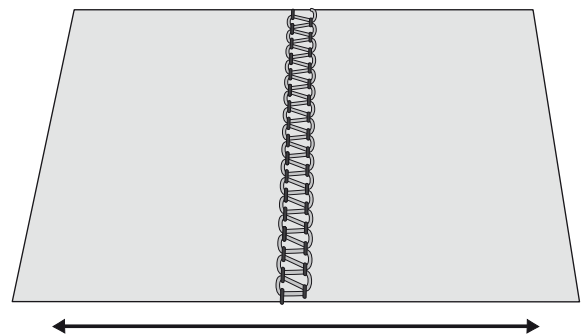
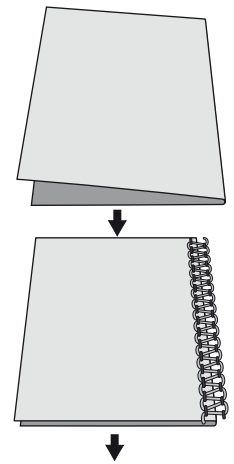
Standard flatlock stitch

- Use the left or the right needle.
- **For 2-thread flatlock:** Engage the 2-thread converter (see page 10). Thread the lower looper and the left (A) or right (B) needle.
- **For 3-thread flatlock:** Thread the lower and upper looper and the left (A) or right (B) needle.
- Set the ATD to E for 2-thread flatlock and to F for 3-thread flatlock.
- Place the wrong sides of the two pieces of fabric together to sew a decorative stitch on the right side of the garment.
- Sew the seam, trimming the excess fabric. The needle thread will form a V on the underside of the fabric. The lower looper thread will pull into a straight line at the fabric edge.
- Unfold the fabric and pull on opposite sides of the seam to pull the stitches flat.

Standard flatlock stitch



Ornamental flatlock stitch



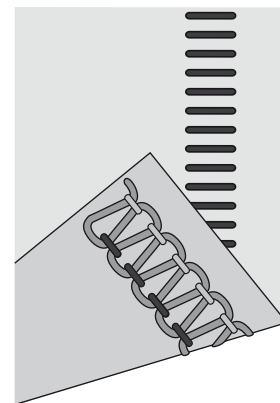
Ornamental flatlock stitch

- Place the movable upper cutter in the B position (see page 9). The fabric should not be trimmed on this stitch.
- Follow steps 1-3 above.
- Fold the fabric piece, wrong sides together, to sew a decorative stitch from the right side of the garment (at the fold).
- Position the fabric so the seam is sewn with part of the stitch extending off the fabric.
- Unfold the fabric and pull on opposite sides of the stitch to flatten.

Tip: The upper looper thread is the prominent thread in the flatlock stitch. Place a decorative thread in the upper looper and regular threads in the lower looper and needle.

Ladder stitch


To create a ladder stitch, sew with right sides of the fabric together. The needle thread will be the prominent thread that creates the ladder.



3-thread ladder stitch

Chainstitch sewing

The chainstitch is sewn with two 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 upper cutter in B position, disengaging the upper looper and installing coverstitch table B. (See page 9-10)

 Turn off the main power switch and unplug the machine.

Machine set up

- Disengage the movable upper cutter. (See page 9)
- Disengage the upper looper. (See page 10)
- Remove cutter cover A and install coverstitch table B (see page 10). The graduations on the coverstitch table indicate the distance, in cm and inches, from coverstitch middle needle. Use it as a guide when positioning the fabric edge.

Start and end of sewing

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.

Sewing hints

Pintuck sewing

Sew decorative pintucks on the fabric before cutting out the garment. Use overlock right needle and set the ATD to A for a 3-thread overlock, narrow.

Note: The rolled edge stitch can also be used for this technique.

- Disengage the movable upper cutter. (See page 9)
- Mark the fabric with the desired number of pintucks using a water-soluble fabric marker.
- Fold the fabric with the wrong sides together and sew.
- Press the pintucks in the same direction.

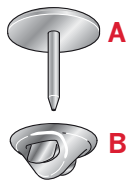
Sew in circles

(only suitable for heavy and medium weight fabrics)

The extension table has 13 holes in it, used to sew in circles.

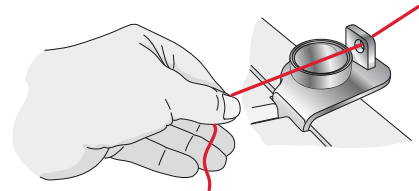
Sew circles with the movable upper cutter engaged (A position, see page 9) to get a beautiful edge, or disengage the movable upper cutter (B position, see page 9) and sew circle embellishments.

- Mark a dot in the center of the area that will be the circle and place stabilizer under the fabric.
- Pierce the fabric at the mark with the sharp end of the push pin (A). Place the pin into the selected hole on the extension table. Push the pin and its bottom plate (B) together.
- Lower the presser foot and sew. The fabric will feed in a circle around the push pin.
- When the circle is complete, overlap the seam for a few centimetres (an inch). Thread the threads into a large eyed, hand sewing needle and pull them to the wrong side of the fabric and secure.

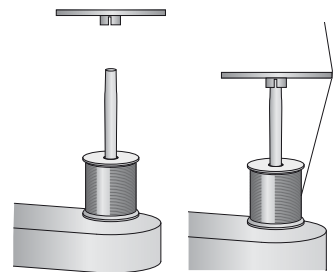


Sewing with heavy decorative threads in the loopers

Heavy decorative threads need less thread tension than regular threads to give the best sewing result. When threading a heavy decorative thread, place the thread through the hole in the top cover looper thread guide and let it pass above the guide as illustrated below. Then continue threading as described in the threading section.

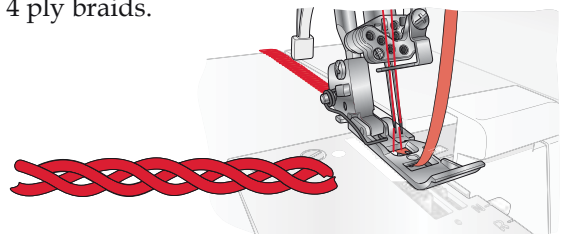


Note: When using decorative threads, place the thread unreeling disc as shown to prevent the thread from getting caught on the edge of the spool.



Braiding by chaining off

1. Disengage the movable upper cutter. (See page 9)
2. Insert filler cord such as yarn or twill tape through the hole in the front of the foot.
3. Position the filler cord under the foot and chain off the desired length.
4. Chained off braids can be used individually or woven into 3 or 4 ply braids.



Securing the thread chain

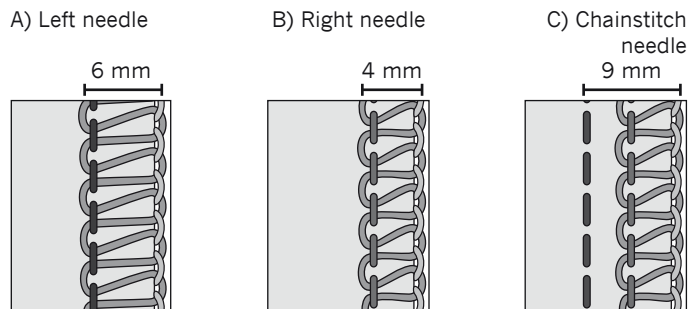
Thread the chain into a large eyed, hand sewing needle. Insert the needle into the end of the seam and pull the chain into the seam to secure the threads.

Stitch width adjustment

The stitch width can be increased or decreased by changing the needle position or with the cutting width dial.

Width adjustment by changing needle position

- A) When only the left needle, or when both needles are used the stitch width is 6 mm.
- B) When only the right needle is used the stitch width is 4 mm.
- C) When using the chainstitch needle the stitch width is 9 mm.

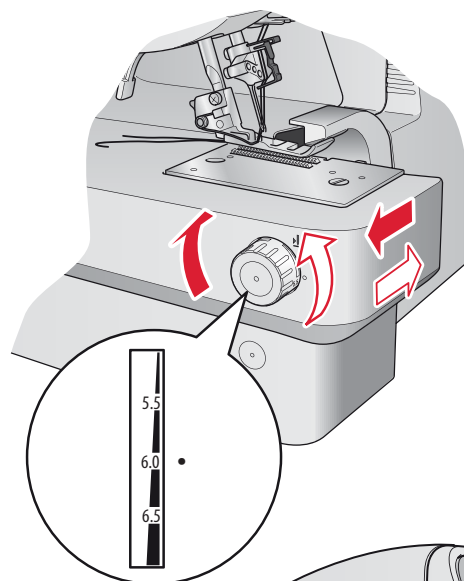


Width adjustment with the cutting width dial

By fine tuning the cutting width using the cutting width dial further adjustments are possible within the range shown below.

- When only the left needle is used: 5 - 7 mm
- When only the right needle is used: 3 - 5 mm
- When using the chainstitch needle: 8 - 10 mm

Turn the dial to adjust the desired seam width. For standard setting the dial should be set to 6.0.



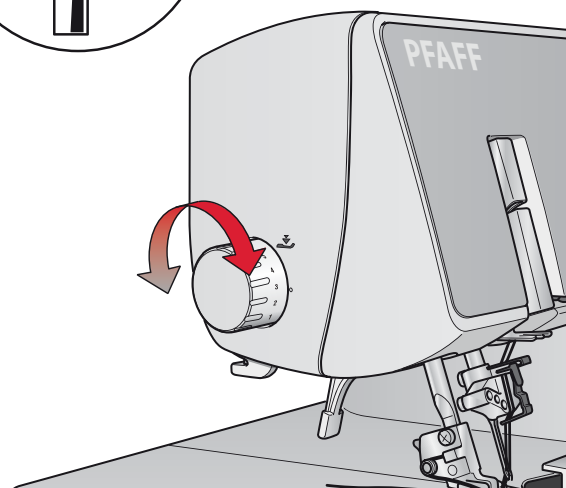
Presser foot pressure adjustment

The presser foot pressure for sewing based on normal conditions should be set to 2.5. Adjustments in some instances may be necessary. Increase or decrease the pressure until you are satisfied with the result. Always test sew on a sample of your fabric before sewing on your garment.

Less pressure: Decrease the pressure by turning the adjustment dial in counter-clockwise direction to a value between 2.5 and 1.

More pressure: Increase the pressure by turning the adjustment dial in clockwise direction to a value between 2.5 and 5.

Back to standard setting: Turn the adjustment dial until the mark on the knob is set to 2.5.

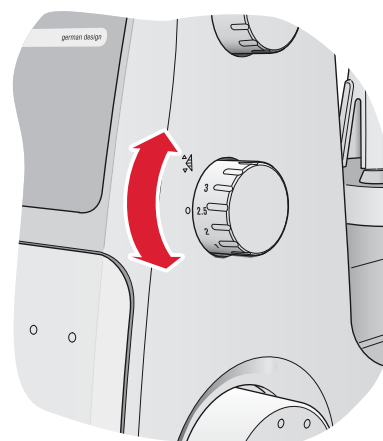


Stitch length adjustment

The stitch length dial should be set to 2.5 for most sewing conditions.

Adjust the stitch length to 4 mm when sewing on heavyweight fabrics.

Adjust the stitch length to 2 mm when sewing on lightweight fabrics.

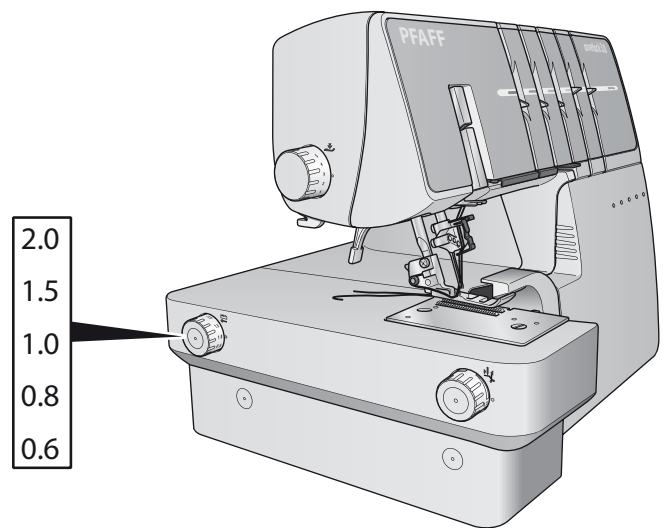


Differential feed adjustment

The differential feed system consists of two sets of feed teeth arranged one behind the other. Both feed teeth work independently of each other to give perfect results when sewing on speciality fabrics. When the amount of feed by the front feed teeth is changed in relation to the feed by the rear feed teeth it will “stretch” or “gather” the fabric.

Use the differential feed to prevent stretching of knit fabrics and puckering of lightweight fabrics.

For overlock stitching on normal fabric, set the differential feed adjusting dial to 1.0.



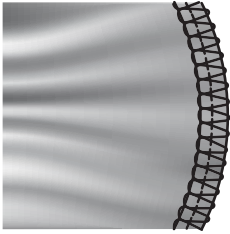
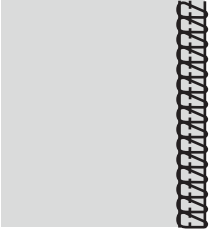
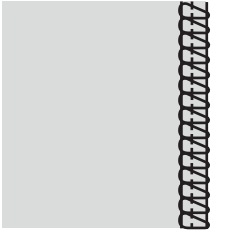

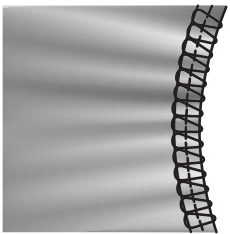
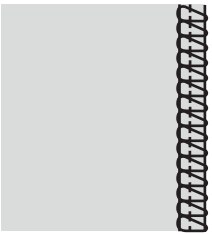
Gathered overlock (stretch, knit fabrics)

When overedging stretch fabric, such as knits and jersey, adjust the differential feed to a value between 1.0 and 2.0.

The setting depends on the material being sewn as well as the desired amount of gathering. Test sew with different settings before sewing on your garment.

Stretch overlock (lightweight fabrics)

When overedging light woven or loosely knit fabrics, such as silk and silky knitwear, adjust the differential feed to a value between 0.6 and 1.0. When sewing, apply gentle tension to the fabric by holding the seam lightly in front and back of the presser foot. The setting depends on the material being sewn as well as the desired amount of stretching. Test sew with different settings before sewing on your garment.

Fabric	Differential feed 1.0	Adjustment	Result
Stretch fabric (Knit, jersey)		1.0 - 2.0	
Non-stretch fabric (Chino, denim)		1.0	
Lightweight fabric (Silk, silky knitwear)		0.6 - 1.0	

Thread tension fine tuning

Thread tension is automatically set when selecting a stitch type with the Auto Tension Dial (ATD), but it may have to be fine tuned with the fine tuning levers depending on:

- Type and thickness of the fabric
- Needle size
- Size, type and fibre content of the thread

2-thread overlock	
When the lower looper thread lies on the underside of the fabric	Move the lower looper thread tension fine tuning lever (yellow) toward a higher position. Or, move the needle thread tension fine tuning lever (blue or green) toward a lower position.
When the needle thread tension is too loose	Move the needle thread tension fine tuning lever (blue or green) toward a higher position. Or, move the lower looper thread tension fine tuning lever (yellow) toward a lower position.

2-thread overlock, wrap	
When the lower looper thread tension is too tight or needle thread tension is too loose	Move the lower looper thread tension fine tuning lever (yellow) toward a lower position. Or, move the needle thread tension fine tuning lever (blue or green) toward a higher position.
When the lower looper thread tension is too loose	Move the lower looper thread tension fine tuning lever (yellow) toward a higher position.

3-thread flatlock stitch	
When the lower looper thread tension is too loose	Move the lower looper thread tension fine tuning lever (yellow) toward a higher position. Or, move the needle thread tension fine tuning lever (blue or green) toward a lower position.
When the upper looper thread tension is too loose	Move the upper looper thread tension fine tuning lever (red) toward a higher position. Or, move the needle thread tension fine tuning lever (blue or green) toward a lower position.
When the needle thread tension is too loose	Move the needle thread tension fine tuning lever (blue or green) toward a higher position. Or, move the upper looper thread tension fine tuning lever (red) toward a lower position.

3-thread overlock	
When the upper looper thread lies on the underside of the fabric	Move the upper looper thread tension fine tuning lever (red) to a higher position. Or, move the lower looper thread tension fine tuning lever (yellow) to a lower position.
When the lower looper thread appears on the top of the fabric	Move the lower looper thread tension fine tuning lever (yellow) toward a higher position. Or, move the upper looper thread tension fine tuning lever (red) to a lower position.
When the needle thread is too loose	Move the needle tension fine tuning lever (blue or green) to a higher position.

4-thread overlock	
When the upper looper thread lies on the underside of the fabric	Move the upper looper thread tension lever (red) toward a higher position. Or, move lower looper thread tension fine tuning lever (yellow) toward a lower position.
When the lower looper thread appears on the top of the fabric	Move the lower looper thread tension fine tuning lever (yellow) toward a higher position. Or, move the upper looper thread tension fine tuning lever (red) toward a lower position.
When the left needle thread tension is too loose	Move the needle thread tension fine tuning lever (blue) toward a higher position.
When the right needle thread tension is too loose	Move the right needle thread tension fine tuning lever (green) toward a higher position.

Safety stitch	
When the lower looper thread tension is too loose	Move the lower looper thread tension fine tuning lever (yellow) toward a higher position.
When the upper looper thread lies on the underside of the fabric	Move the upper looper thread tension fine tuning lever (red) to a higher position. Or, move lower looper thread tension fine tuning lever (yellow) to a lower position.
When the lower looper thread appears on the top of the fabric	Move the lower looper thread tension fine tuning lever (yellow) toward a higher position. Or, move the upper looper thread tension fine tuning (red) lever toward a lower position.
When the right needle thread tension is too loose	Move the needle thread tension fine tuning lever (green) toward a higher position.
When the chainstitch needle thread tension is too loose	Move the chainstitch needle thread tension fine tuning lever (blue) toward a higher position. Or, move the chainstitch looper thread tension fine tuning lever (purple) toward a lower position.

Chainstitch	
When the chainstitch needle thread tension is too loose	Move the needle thread tension fine tuning lever (blue) toward a higher position. Or, move the chainstitch looper thread tension fine tuning lever (purple) toward a lower position.


Coverstitch	
When the coverstitch looper thread is too loose	Move the coverstitch looper thread tension fine tuning lever (purple) toward a higher position.
When the coverstitch left needle thread tension is too loose	Move the coverstitch left needle thread tension fine tuning lever (blue) toward a higher position. Or, move coverstitch looper thread tension fine tuning lever (purple) toward a lower position.
When the coverstitch middle needle thread tension is too loose	Move the coverstitch middle needle thread tension fine tuning lever (green) toward a higher position. Or, move coverstitch looper thread tension fine tuning lever (purple) toward a lower position.
When the coverstitch right needle thread tension is too loose	Move the coverstitch right needle thread tension fine tuning lever (red) toward a higher position. Or, move the coverstitch looper thread tension fine tuning lever (purple) toward a lower position.
When the top surface of fabric bulges between needle threads and the seams on the underside of the fabric becomes tight;	Move the coverstitch looper thread tension fine tuning lever (purple) toward a lower position.

Machine maintenance

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


- A lot of lint is produced when the cutters are cutting the fabric.
- An overlock runs at a very high speed and needs to be oiled frequently to lubricate the internal working parts.

Cleaning

 Turn off the main power switch and unplug the machine.

- Open the front cover and remove all the lint using the lint brush.
- Close the front cover and wipe the exterior surface of your machine with a soft cloth to remove any dust or lint built up.

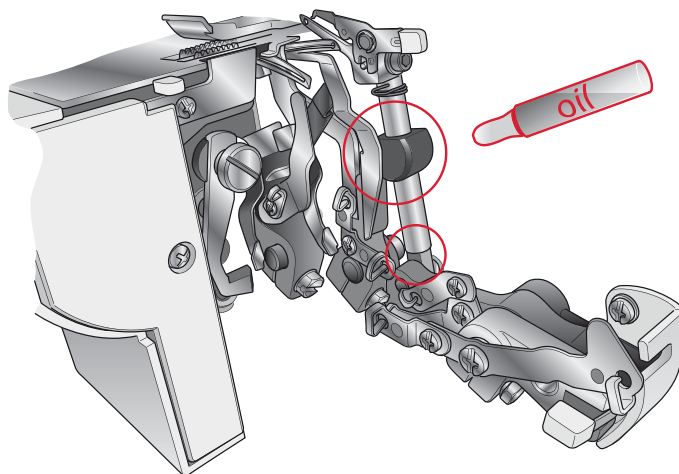
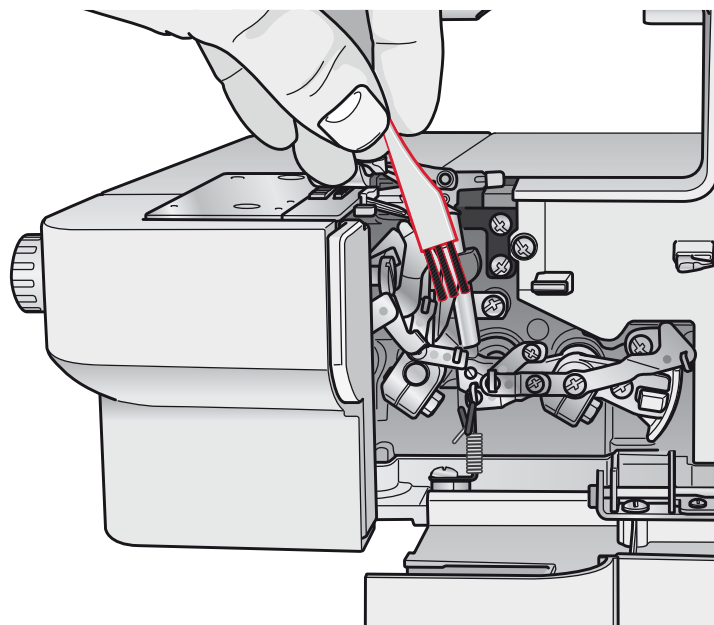
Oiling

 Turn off the main power switch and unplug the machine.


To keep the machine running smoothly and quietly the moving parts, pointed out on the picture, must be lubricated often.

Use supplied sewing machine oil. Do not use any other oil, it could damage the machine.

Wipe the machine surface to remove all excess oil before sewing.

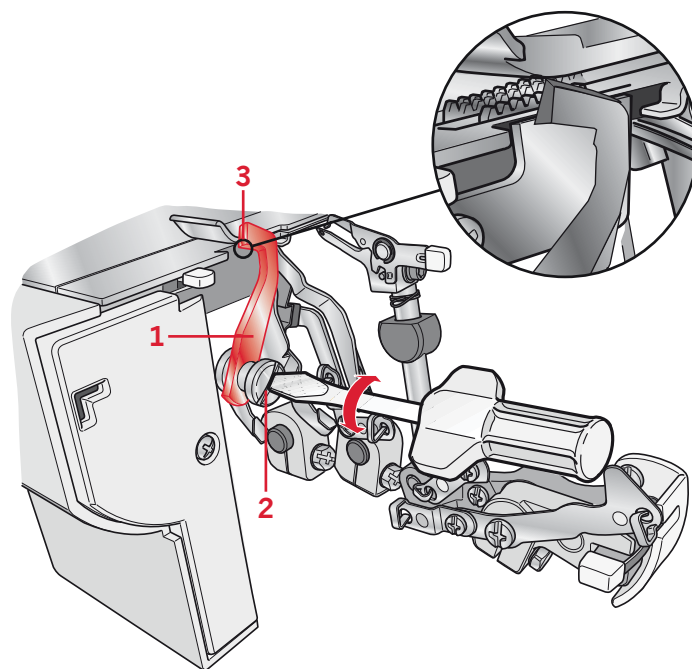


Replacing the movable upper cutter

 Turn off the main power switch and unplug the machine.

The movable upper cutter should be changed when it becomes dull. The upper cutter can be replaced according to the following directions. If you are having any difficulties, consult your authorized PFAFF® dealer.

- Open the front cover and set the movable upper cutter (1) in A position (See page 9).
- Loosen the set screw (2) and remove the upper cutter (1).
- Turn the handwheel until the upper cutter holder is in its lowest position.
- Place a new upper cutter in the groove of the upper cutter holder and tighten the set screw (2).
- Make sure the front edge of the movable upper cutter is 0.5-1.0 mm lower than the cutting edge of the stationary cutter (3).



Changing the light bulb



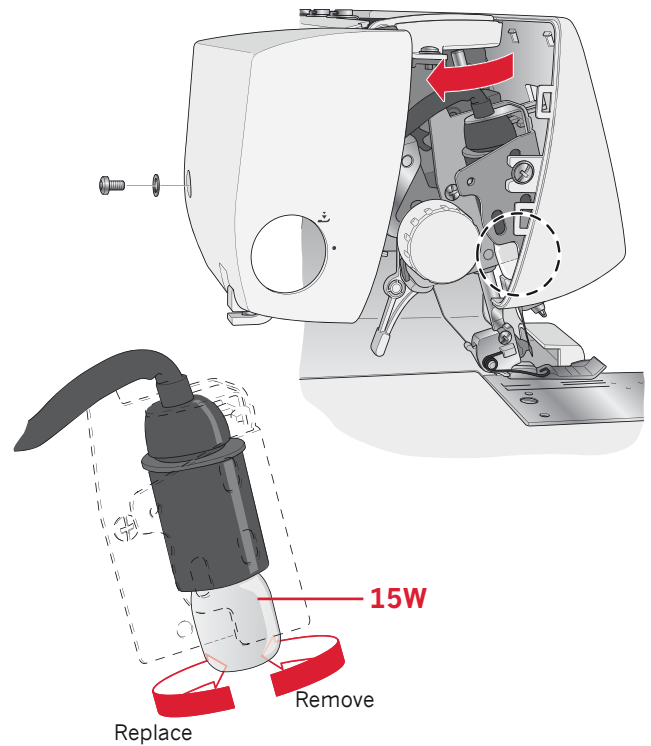
Turn off the main power switch and unplug the machine.

Be sure the light bulb has cooled off before changing it.

Replace the light cover before connecting the power cord.

Only use light bulbs of the same type rated 15W. Light bulbs are available at your authorized PFAFF® dealer.

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



Storage

When the machine is not in use, be sure to keep it unplugged. Cover the machine with the dust cover to protect it from the dust. Store the machine, so it is not exposed to direct sunlight or humidity.

Servicing

If you have any questions regarding service and/or operation, contact your local PFAFF® dealer.

Trouble shooting

Problem	Solution
Fabric does not feed well	<ul style="list-style-type: none"> - Lengthen stitch length. - Increase presser foot pressure for heavyweight fabric. - Decrease presser foot pressure for lightweight fabric. - Check the differential feed.
Needle breaks	<ul style="list-style-type: none"> - Insert needle correctly. - Do not pull fabric while sewing. - Tighten needle set screw. - Use a larger size needle on heavy fabrics.
Thread breaks	<ul style="list-style-type: none"> - Check threading. - Check for tangled or caught thread. - Insert needle correctly. - Insert new needle, current needle may be bent or have a blunt point. - Use high quality thread. - Loosen thread tension.
Skipped stitches	<ul style="list-style-type: none"> - Insert new needle, current needle may be bent or have a blunt point. - Tighten needle set screw. - Insert needle correctly. - Change type or size of needle. - Check threading. - Increase presser foot pressure. - Use a high quality thread.
Irregular stitches	<ul style="list-style-type: none"> - Balance thread tension. - Check for tangled or caught thread. - Check threading.
Fabric puckers	<ul style="list-style-type: none"> - Loosen thread tension. - Check for tangled or caught thread. - Use high quality lightweight thread. - Shorten stitch length. - Decrease presser foot pressure for lightweight fabrics. - Check the differential feed.
Irregular trimming	<ul style="list-style-type: none"> - Check alignment of cutters. - Replace one or both cutters.
Fabric jams	<ul style="list-style-type: none"> - Check for tangled or caught thread. - Compress thick layers of fabric with conventional machine before sewing with overlock.
Machine does not operate	<ul style="list-style-type: none"> - Connect machine to power source correctly.

Machine specifications

Sewing speed	1100 stitches/min
Stitch length	1.0 - 4.0 mm
Differential feed ratio	0.6 - 2.0
Overlock stitch width	Left needle: 5 - 7 mm Right needle: 3 - 5 mm Coverstitch: 3 - 6 mm
Presser foot rise	4.5 mm
Needles	INSPIRA™ overlock needles - system ELx705 size: #14/90, #12/80
Number of needles	3, 2, 1
Number of threads	2, 3, 4,5
Machine dimensions Length Width Height	404 mm 320 mm 326 mm
Weight	9.5 kg

We reserve the right to change the machine equipment and the assortment of accessories without prior notice, or make modifications to the performance or design. Such modifications, however, will always be to the benefit of the user and the product.

Intellectual Property

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Please note that on disposal, this product must be safely recycled in accordance with relevant National legislation relating to electrical/electronic products. Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available. When replacing old appliances with new ones, the retailer may be legally obligated to take back your old appliance for disposal free of charge.

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

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Drottningatan 2, SE-56184, Huskvarna, SWEDEN



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