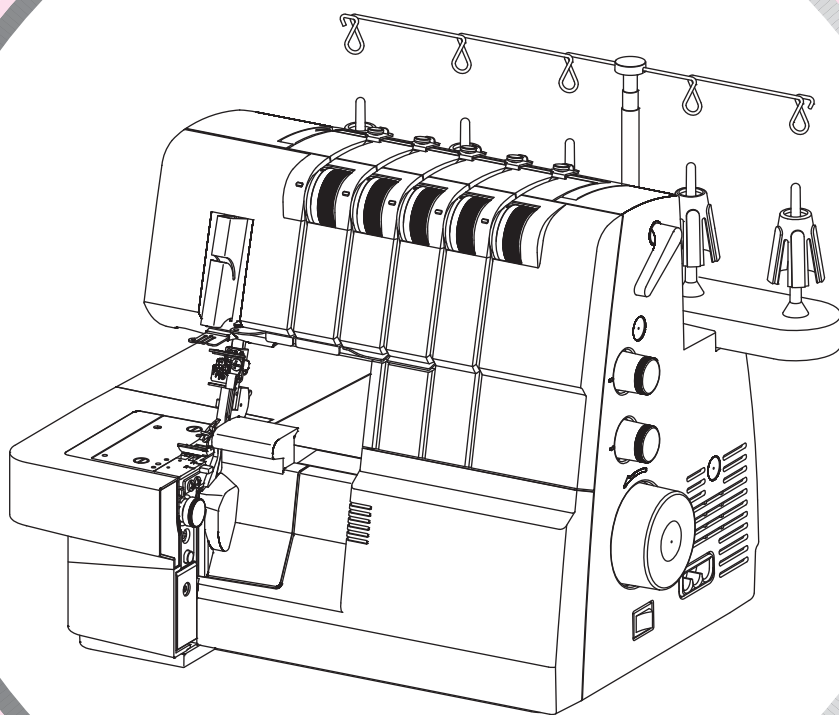


INSTRUCTION BOOK



PREFACE

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

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

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

RECYCLING



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

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

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

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

“IMPORTANT SAFETY INSTRUCTIONS”

When using an electrical appliance, basic safety precautions should always be followed, including the following: Read all instructions before using this overlock 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 allow this appliance to be used as a toy. Close attention is necessary when this appliance is used by or near children and infirm persons.
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 and cutter.
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. Switch the sewing machine off “ O “ when making any adjustments in the needle area, such as threading needle area changing needle, threading looper, or changing presser foot and the like.
10. Always unplug the machine from the electrical outlet when removing covers, when covers are opened to raise the upper cutter or thread the loopers, when lubricating or when making any other user servicing adjustments mentioned in the instruction manual.
11. Never drop or insert any object into any opening.
12. Do not use outdoors.
13. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
14. To disconnect, turn all controls to the off “ O “ position, then remove plug from outlet.
15. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
16. If the power cord of this appliance is damaged, it must be replaced with a special cord by your nearest authorized dealer or service center.

17. If oil gets in eyes, immediately, rinse the oil out with water. If you swallow oil by mistake, immediately consult a medical doctor.
18. To reduce risk of injury, switch off before servicing. Close looper cover before operating.

“SAVE THESE INSTRUCTIONS”

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

- * Keep the instructions at a suitable place close to the machine and hand it over if you give the machine to a third party.
- * Use the machine only in dry locations.
- * Never leave the machine unattended with children or elderly people due to they may not be able to estimate the risk.
- * Don't let children play with the machine.
- * This appliance 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 appliance by a person responsible for their safety.
- * Children should be supervised to ensure that they do not play with the appliance.
- * Always unplug the machine if you leave it unattended, to avoid injury by expediently switch on the machine.
- * Always unplug the machine if you carry out maintenance (oiling, cleaning).
- * Don't use the machine if it's wet or in humid environment.
- * Never pull at the cord, always unplug the machine by gripping the plug.
- * Never place anything on the pedal.
- * Never use the machine if the air vents are blocked keep the air vents of the machine and the foot pedal free from dust, fusel and leftovers.
- * The machine may only be used with foot pedal manufactured by Wakaho. Type 4C-316B for USA and Canada, 4C-316C/4C-326G/4C-345G for other countries.
- * If the supply cord connected with foot pedal is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person, in order to avoid a hazard.

CONSIGNES DE SECURITE

Lors de l'utilisation de cette machine, les précautions élémentaires de sécurité doivent être prises. Lisez attentivement toutes les consignes de sécurité suivantes avant de l'utiliser :



DANGER - Pour réduire le risque de décharges électriques :

- * Ne laissez pas la machine sans surveillance lorsqu'elle est sous tension. Débranchez-la immédiatement après l'utilisation et avant le nettoyage.
- * Débranchez la machine avant de changer l'ampoule. Remplacez l'ampoule par une autre de 15 Watts et du même type. Assurez-vous d'avoir remis le cache après avoir changé l'ampoule.



AVERTISSEMENT - Pour réduire le risque de brûlures, de feu, de décharges électriques ou de blessures Aux personnes :

- * Assurez-vous que le voltage du moteur corresponde à celui de l'installation électrique.
- * Cette machine est conçue pour un usage familial tel que décrit dans cette notice d'utilisation. Utilisez uniquement les accessoires conseillés dans cette notice.
- * Pour débrancher la machine positionnez l'interrupteur sur « O » lorsque vous effectuez des opérations telles que enfilage des aiguilles ou des boucleurs, changement de plaque à aiguille ou de pied presseur etc....
- * Débranchez la machine lorsque vous retirez les carters, lubrifiez le mécanisme ou lors de toute opération d'entretien décrite dans cette brochure.
- * N'essayez pas de régler vous-même la courroie du moteur. Si un réglage s'avère nécessaire, contactez votre Service Après Vente.
- * Manipulez le rhéostat avec précaution et évitez de le faire tomber. Assurez-vous que rien n'est posé dessus.
- * Utilisez la plaque à aiguille adéquate. Une plaque non conforme peut casser l'aiguille.
- * N'utilisez pas d'aiguille tordue.
- * Lors de la couture, éloignez vos doigts de toute pièce en mouvement et particulièrement de l'aiguille.
- * Ne tirez et ne poussez pas le tissu lors de la couture, cela pourrait casser l'aiguille.
- * Pour l'entretien des machines à double isolation, n'utilisez que des pièces de rechange identiques. Voir les instructions pour le service après-vente des appareils à double - isolation.
- * Ne jamais utiliser la machine si le cordon ou la prise électrique sont endommagés, si elle est tombée ou abîmée, si elle a été exposée à l'eau. Contactez votre Service Après Vente pour tout examen, réglage ou réparation.
- * N'utilisez pas la machine si les aérations ou le rhéostat sont obstrués par la poussière, la bourre de fil ou de tissu.
- * N'insérez ou ne faites pas tomber d'objets dans les ouvertures de la machine.
- * Pour réduire le risque de blessures, éteindre l'interrupteur avant l'entretien. Fermer le couvercle boucleur avant exploitation.

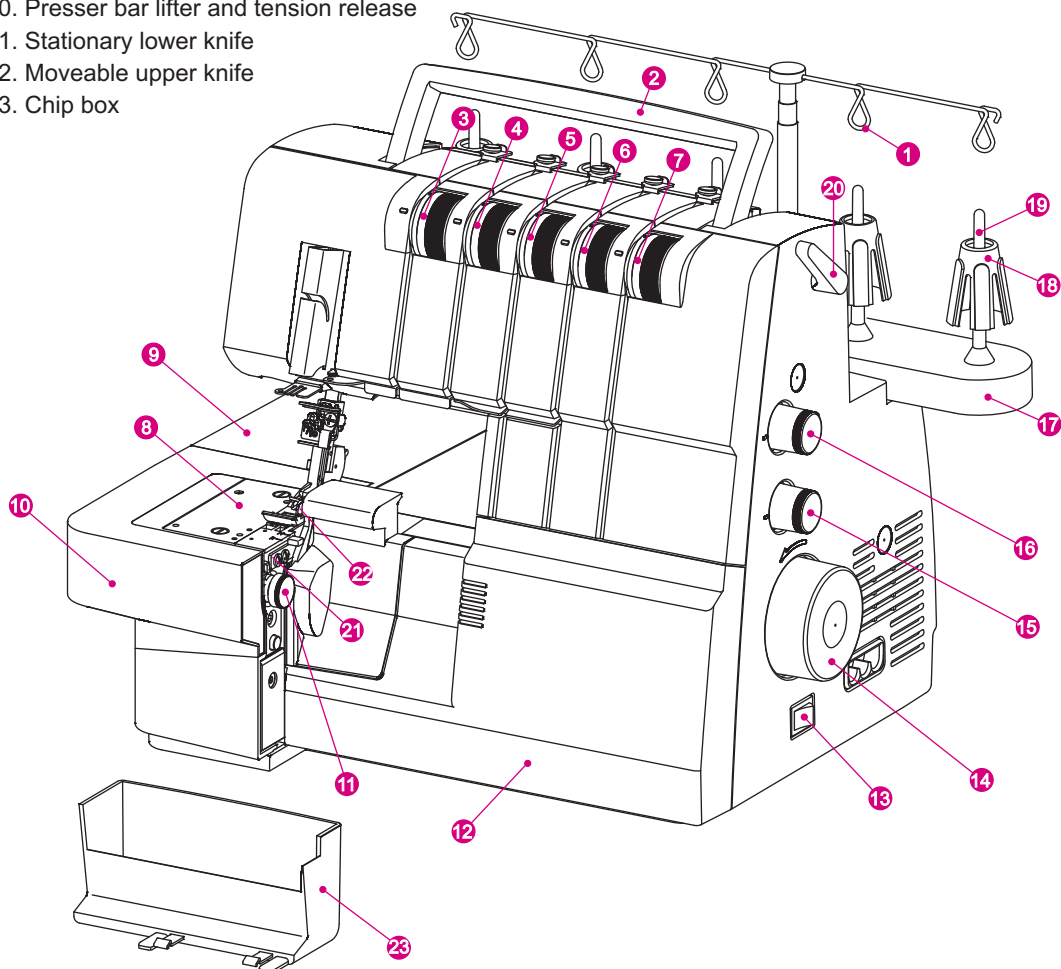
TABLE OF CONTENTS

| | PAGE | | PAGE |
|--|------|--|------|
| 1. PRINCIPAL PARTS | 6 | 18. NEEDLE THREADER | 30 |
| (1) MACHINE OVERVIEW | 6 | 19. HOW TO CHANGE THREADS : TIE ON METHOD | 31 |
| (2) FREE ARM | 7 | 20. STITCH LENGTH ADJUSTMENT | 31 |
| (3) MAIN PARTS BEHIND THE LOOPER COVER | 8 | 21. SEWING HINTS | 32 |
| 2. ACCESSORIES | 8 | (1) SECURING THE THREAD CHAIN | 32 |
| 3. OPTIONAL ACCESSORIES | 9 | (2) BRAIDING BY CHAINING OFF | 32 |
| (1) OVERLOCK PRESSER FOOT | 9 | 22. STITCH WIDTH ADJUSTMENTS | 32 |
| (2) COVERSTITCH PRESSER FOOT | 10 | (1) WIDTH ADJUSTMENT BY CHANGING NEEDLE POSITION | 32 |
| (3) EXTENSION TABLE SET | 10 | (2) WIDTH ADJUSTMENT WITH ADJUSTMENT KNOB | 32 |
| 4. NEEDLE INFORMATION | 11 | 23. SELECTION OF STITCHES | 33 |
| 5. PREPARATION PRIOR TO SEWING | 11 | 24. STITCH OVERVIEW | 35 |
| 6. TELESCOPIC THREAD STAND | 12 | 25. TEST SEWING AND CHAIN OFF | 37 |
| 7. PREPARATION FOR THREADING | 12 | (1) TEST SEWING | 37 |
| (1) SETTING UP THE THREAD GUIDE HOLDER | 12 | (2) CHAIN OFF | 37 |
| (2) ANTI-SPILL NET | 12 | 26. ROLLED EDGE SEWING | 38 |
| (3) SPOOL CAP | 13 | 27. COVERSTITCH SEWING | 38 |
| 8. REMOVAL AND REPLACEMENT OF CHIP BOX | 13 | (1) MACHINE SET UP | 38 |
| (1) REPLACEMENT | 13 | (2) SECURING THE COVERSTITCH SEAM END | 38 |
| (2) REMOVAL | 13 | 28. FLATLOCK SEWING | 39 |
| 9. HOW TO OPEN AND CLOSE LOOPER COVER | 13 | (1) STANDARD FLATLOCK STITCH | 39 |
| (1) OPEN LOOPER COVER | 13 | (2) ORNAMENTAL FLATLOCK STITCH | 39 |
| (2) CLOSE LOOPER COVER | 13 | (3) LADDER STITCH | 39 |
| 10. HOW TO REMOVE AND INSERT NEEDLES | 14 | 29. PRESSER FOOT PRESSURE ADJUSTMENT | 40 |
| (1) NEEDLE POSITION | 14 | 30. DIFFERENTIAL FEED | 40 |
| (2) TO REMOVE NEEDLE (S) | 14 | (1) GATHERED OVERLOCK (STRETCH, KNIT FABRICS) | 40 |
| (3) TO INSERT NEEDLES (S) | 15 | (2) STRETCH OVERLOCK (LIGHTWEIGHT FABRICS) | 40 |
| 11. PRESSER FOOT LIFT | 15 | 31. SUGGESTED TENSION SETTING | 41 |
| 12. CHANGE PRESSER FOOT | 15 | (1) CHAIN STITCH | 41 |
| 13. HOW TO DISENGAGE MOVABLE UPPER CUTTER | 16 | (2) 2-THREAD WRAPPED OVERLOCK | 41 |
| (1) TO PLACE MOVABLE UPPER CUTTER IN NON-WORKING POSITION | 16 | (3) 2-THREAD OVERLOCK | 41 |
| (2) TO PLACE MOVABLE UPPER CUTTER IN WORKING POSITION | 16 | (4) 2-THREAD FLATLOCK | 42 |
| 14. TO CONVERT UPPER LOOPER TO 2-THREAD CONVERTER | 16 | (5) 3-THREAD OVERLOCK | 42 |
| (1) TO USE THE 2-THREAD CONVERTER | 16 | (6) 3-THREAD FLATLOCK | 42 |
| (2) TO DISENGAGE TO UPPER LOOPER | 16 | (7) 3-THREAD STRETCH OVERLOCK | 42 |
| 15. UPPER LOOPER | 17 | (8) 4-THREAD OVERLOCK | 43 |
| (1) DISENGAGE THE UPPER LOOPER | 17 | (9) 4-THREAD SAFETY STITCH | 43 |
| (2) ENGAGE THE UPPER LOOPER | 17 | (10) 5-THREAD SAFETY STITCH | 44 |
| 16. STANDARD OVERLOCK AND ROLLED HEM STITCHING | 17 | (11) COVERSTITCH | 44 |
| (1) TO SEW STANDARD OVERLOCK | 17 | (12) COVERSTITCH, TRIPLE | 45 |
| (2) TO SEW ROLLED HEM | 17 | (13) NARROW HEM AND ROLLED HEM | 45 |
| (3) CHANGE TO CUTTER COVER B | 18 | 32. MACHINE MAINTENANCE | 46 |
| 17. GENERAL THREADING INFORMATION | 18 | (1) CLEANING | 46 |
| (1) TO THREAD THREAD UPPER LOOPER (GREEN) | 19 | (2) OILING | 46 |
| (2) TO THREAD LOWER LOOPER THREAD (RED) | 20 | (3) REPLACING THE MOVABLE UPPER CUTTER | 46 |
| (3) TO THREAD CHAIN STITCH/ COVERSTITCH LOOPER THREAD (BROWN) | 22 | (4) STORAGE | 47 |
| (4) TO THREAD OVERLOCK RIGHT NEEDLE THREAD (BLUE) (B ON NEEDLE CLAMP) | 23 | (5) SERVICING | 47 |
| (5) TO THREAD OVERLOCK LEFT NEEDLE THREAD (ORANGE) (A ON NEEDLE CLAMP) | 25 | 33. TROUBLE SHOOTING | 47 |
| (6) TO THREAD COVERSTITCH RIGHT NEEDLE (GREEN) (E ON NEEDLE CLAMP) | 26 | 34. SPECIFICATIONS | 48 |
| (7) TO THREAD COVERSTITCH MIDDLE / CHAIN STITCH NEEDLE THREAD (BLUE) (D ON NEEDLE CLAMP) | 27 | 35. MACHINE DIMENSIONS | 48 |
| (8) TO THREAD COVERSTITCH LEFT NEEDLE THREAD (ORANGE) (C ON NEEDLE CLAMP) | 29 | | |

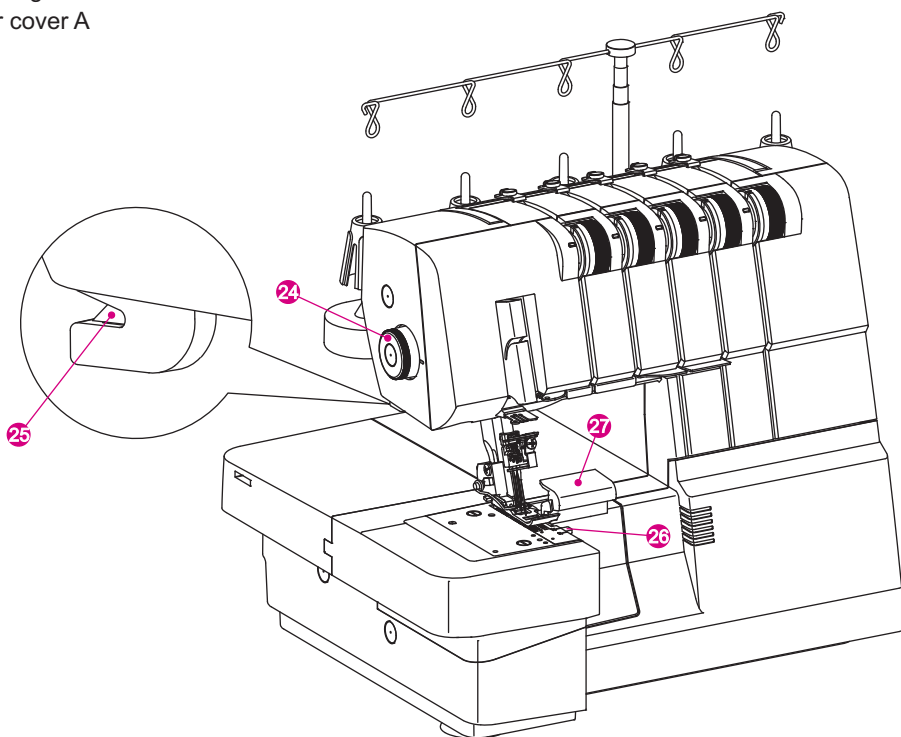
1. PRINCIPAL PARTS

(1) MACHINE OVERVIEW

1. Thread guides and holder
2. Handle
3. Left needle thread tension dial (orange)
4. Right needle thread tension dial (blue)
5. Upper looper thread tension dial (green)
6. Lower looper thread tension dial (red)
7. Chain stitch looper thread tension dial (brown)
8. Stitch plate
9. Cloth plate
10. Attached extension table
11. Cutting width dial
12. Looper cover
13. Power & light switch
14. Hand wheel
15. Differential feed adjusting dial
16. Stitch length dial
17. Spool stand
18. Spool holder
19. Spool pin
20. Presser bar lifter and tension release
21. Stationary lower knife
22. Moveable upper knife
23. Chip box

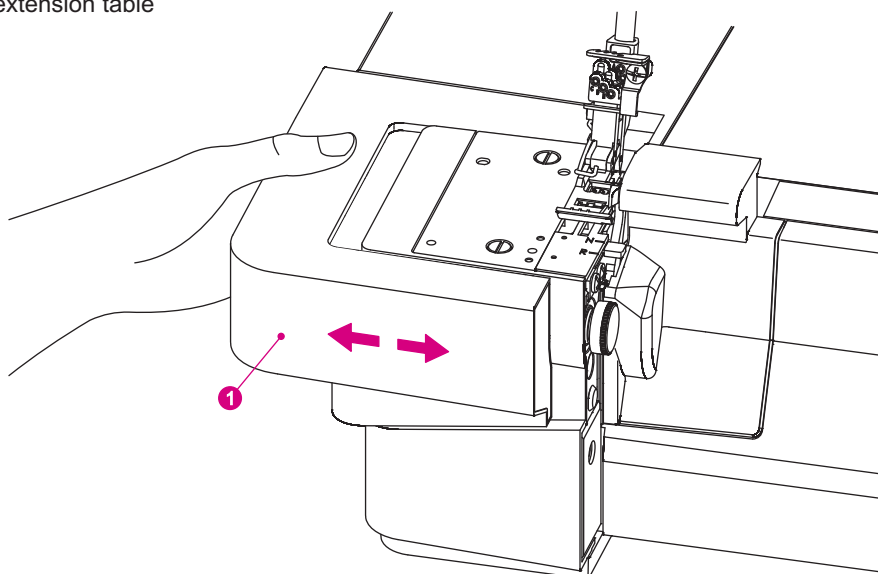


- 24. Foot pressure adjusting dial
- 25. Thread cutter
- 26. Stitch finger lever
- 27. Cutter cover A



(2) FREE ARM

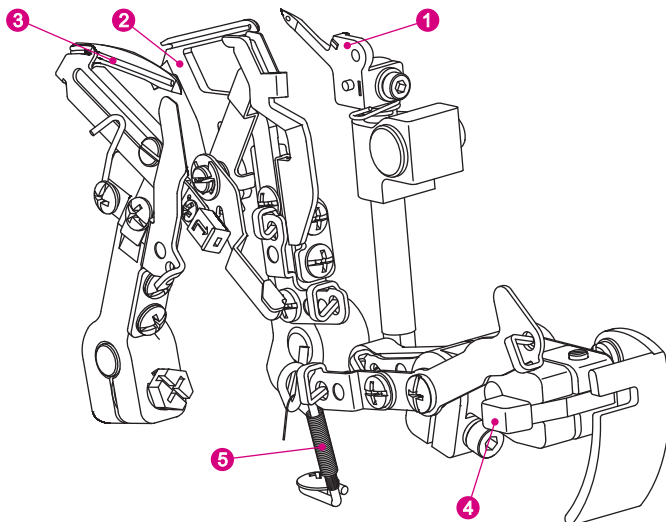
- 1. Attached extension table



- * The attached extension table can be removed to expose the free arm.
- * To remove pull to the left.
- * To attach press firmly to the right until it engages.
- * The free arm is ideal for sewing tubular items such as ribbing, trousers and sleeve hems.

(3) MAIN PARTS BEHIND THE LOOPER COVER

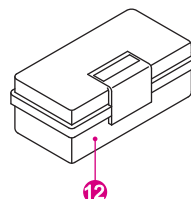
1. Upper looper
2. Lower looper
3. Chain/ Cover looper
4. Upper looper clutch
5. Chain/ Coverstitch thread guide



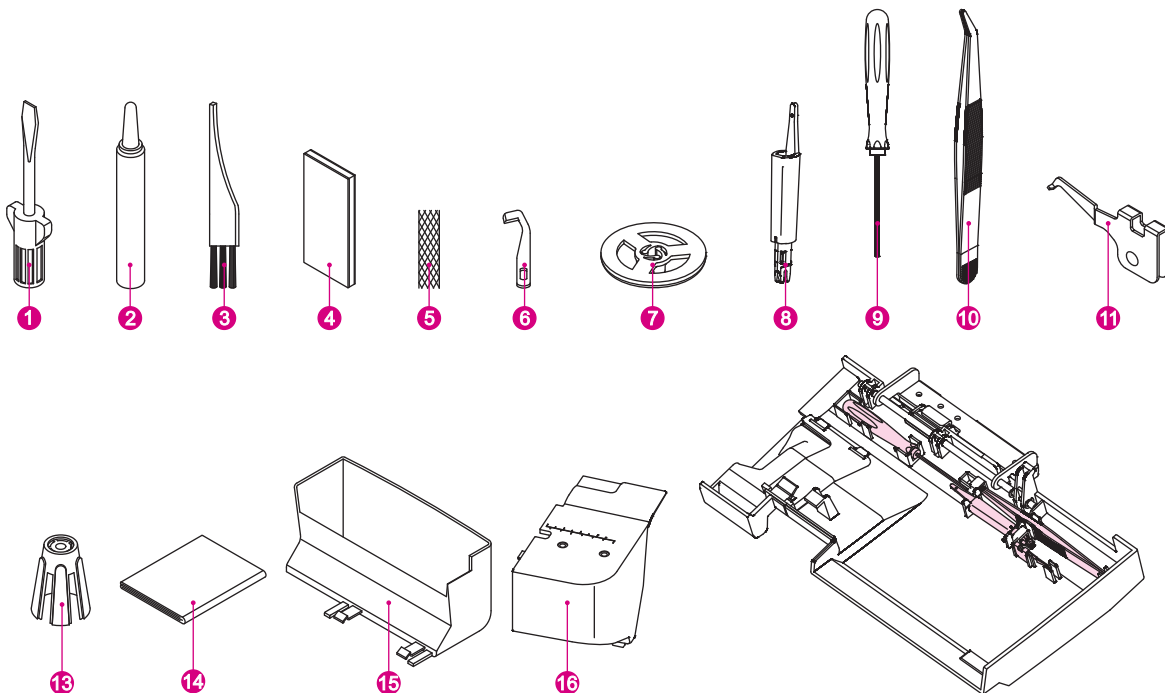
2. ACCESSORIES

Accessories No. 1~11 are contained in the accessory box.

- | | |
|-----------------------------------|------------------------|
| 1. Flat blade screw driver | 9. Screw driver |
| 2. Oiler | 10. Tweezers |
| 3. Brush | 11. 2-thread converter |
| 4. Needle set | 12. Accessory box |
| 5. Anti-spill net (5) | 13. Spool holder (5) |
| 6. Upper cutter | 14. Dust cover |
| 7. Thread unwinding spool cap (5) | 15. Chip box |
| 8. Needle threader | 16. Cutter cover B |



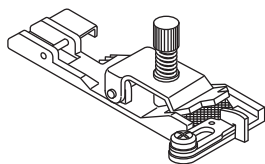
Note : No. 8~11 commonly used accessories can place on looper cover, sewing will be more convenient.



3. OPTIONAL ACCESSORIES

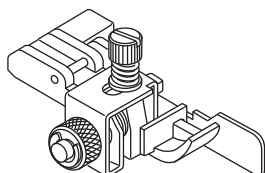
Optional presser feet specially prepared for this machine are available at your dealer. The snap-on type presser foot used on this machine allows easy removal and replacement.

(1) OVERLOCK PRESSER FOOT



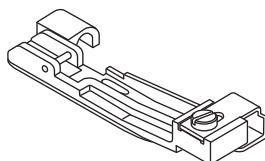
Elastic Foot G20804A

The Elastic Foot guides and stretches narrow elastic (6-12mm, 1/4~1/2") wear, lingerie and other elastic insertion techniques.



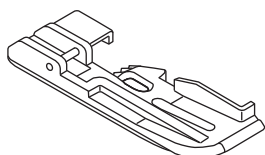
Blindhem & Lace Foot A1A154A

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 A1A284A

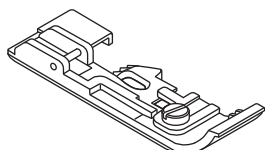
The Beading Foot smoothly guides beads and pearls through a channel on the foot for easy application on garments or crafts.



Piping Foot A1A324A

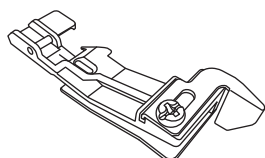
The Piping Foot is perfect for inserting packaged piping into seams and on edges for a tailored finish. The trim is sewn between the two layers of fabric in one step. A groove under the foot helps guide the piping. You can also create your own piping for a custom finish.

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 A1A334A

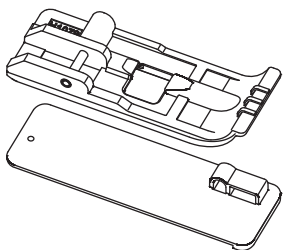
The Taping Foot is used to apply seam tapes to seams to prevent stretching. It is especially good for stabilizing shoulder seams. With this foot you can reinforce and construct seams in one step.



Shirring Foot A1A234A

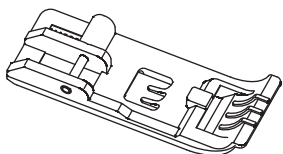
The Shirring Foot easily makes and attaches shirrs in one step to garments, pillows, and other home decorative items with this shirring foot.

(2) COVERSTITCH PRESSER FOOT



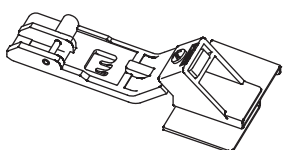
Cording Foot Set H10793

With the Cording Foot with Cording Guide, you can create piping, corded tucks and decorative trims.



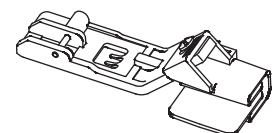
Cover Hem Foot H10803

With the Cover Hem Foot, you can see your fabric and marked line under the foot as you sew.



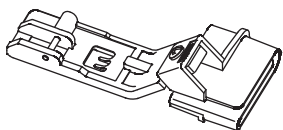
Flat lace foot H10813

With the Flat Lace Foot, you can easily add lace and trims to the top of the fabric with a coverstitch to create beautiful decorative edges and effects.



Bias Tape Binding Foot H10823

Use the Bias Tape binding Foot to sew bias tape along edge of fabric more easily.



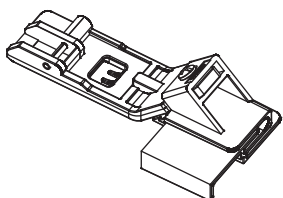
Hemming Foot H10833

With the Hemming Foot makes hems more easily. Just insert the fabric into fabric guide with the folded side down and slide fabric into guide under foot to needle.



Bias Tape Folder Foot H10843

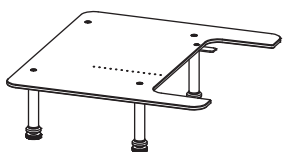
With the Bias Tape Folder Foot, create straps and belt loops easily using a coverstitch. Just put a strip into the foot and the strip is folded automatically and stitched in place.



Flat Edge Lace Foot H10853

Use the Flat Edge Foot to hem the fabric edge and attach lace at the same time.

(3) EXTENSION TABLE SET



Extension Table Set J11862

Including extension table, four legs and push pin. 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.

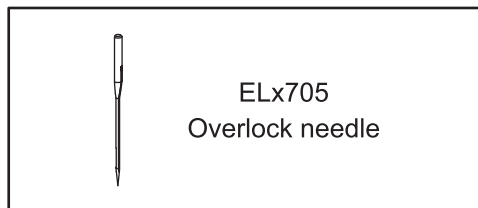
4. NEEDLE INFORMATION

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.

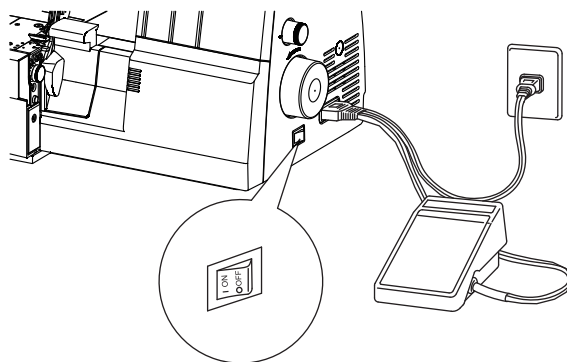
Needle ELx705 size 14/90 is finished with the machine.

Only use Needle ELx705 size 14/90 and 12/80 as supplied in the accessory case.



5. PREPARATION PRIOR TO SEWING

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



Use only foot controller provided with this machine.
(Type 4C-316B for U.S.A. & CANADA only)

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.



- * Be sure that the electrical voltage of the electric outlet (wall receptacle) is the same as the rated voltage of the motor.
- * Handle the foot controller with care and avoid dropping it on the floor. Be sure not to place anything on top of it when not in use.
- * Disconnect the power line plug from the electric outlet when changing needles, presser feet or when leaving the machine unattended. This eliminates the possibility of starting the machine by accidentally pressing the controller.

6. TELESCOPIC THREAD STAND

- * Place the thread spools over the cone holders on the spool pin.
- * If the machine is already threaded, straighten the threads to prevent tangling.

7. PREPARATION FOR THREADING

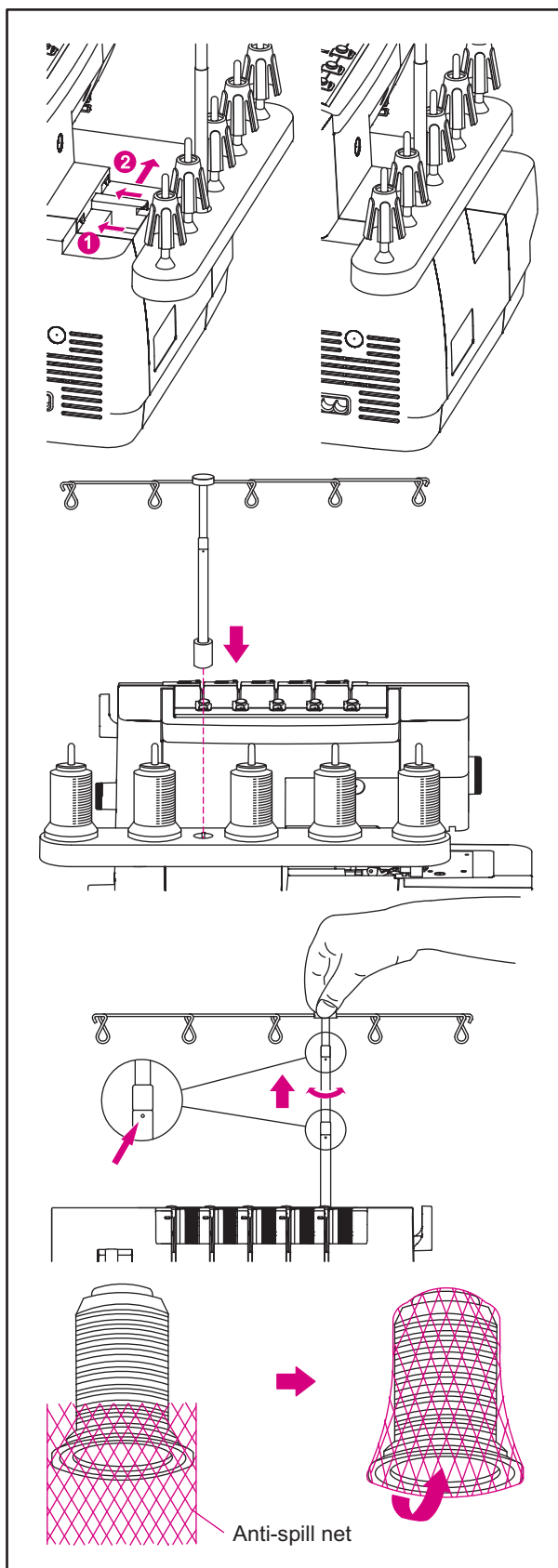
(1) SETTING UP THE THREAD GUIDE HOLDER

- * This machine is shipped with the thread guide holder on the top of Styrofoam.
- * Fully extend the thread guide holder.
- * The two joints on the telescope will click into place when they are correctly positioned.
- * Center the thread guides above the spool pins.
- * Place thread over the cone adapters on the spool pins.

Note : Your new machine is threaded to sew 4-Thread overlock. Refer to Page 18 for instructions on tying on to the threads.

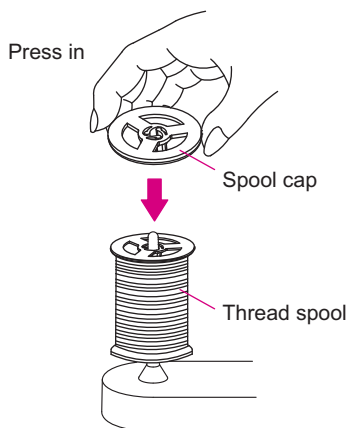
(2) ANTI-SPILL NET

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



(3) SPOOL CAP

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



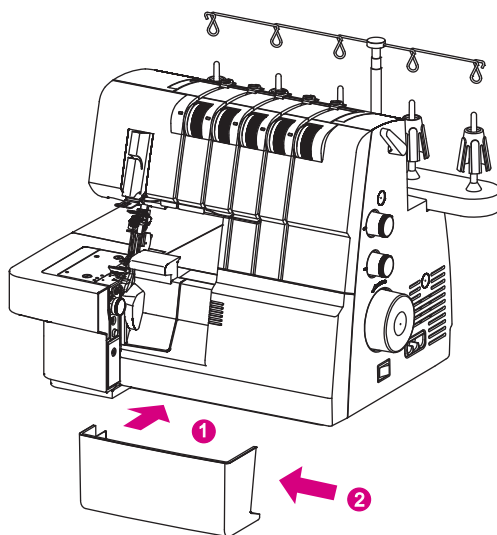
8. REMOVAL AND REPLACEMENT OF CHIP BOX

(1) REPLACEMENT

- * Position the machine so the front is nearly aligned with the edge of the table.
- * Insert the chip box under the looper cover. Be sure the left side of chip box is mounted near the cutter where the scraps drop.

(2) REMOVAL

- * To remove, hold the chip box as shown and pull it outward.



9. HOW TO OPEN AND CLOSE LOOPER COVER



Be sure to turn off power switch.

(1) OPEN LOOPER COVER

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

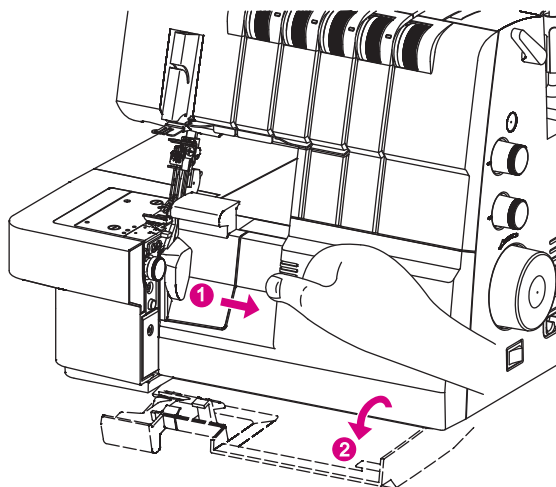
(2) CLOSE LOOPER COVER

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

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



Be sure looper cover is closed when sewing.



10. HOW TO REMOVE AND INSERT NEEDLES

(1) NEEDLE POSITION

* With this machine, five needles can be inserted to the needle clamp as shown in the drawing but only one or two or three needles are to be used for sewing.

Note : Do not attempt to use four or five needles.

* The Instruction Book refers to different needle positions by illustrating the needle clamp at right.

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

(2) TO REMOVE NEEDLE (S)



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

* Turn the hand wheel toward you until the needles are at their highest position.

* Place a thick piece of fabric [such as felt] under the presser foot. Lower the needles halfway into the fabric.

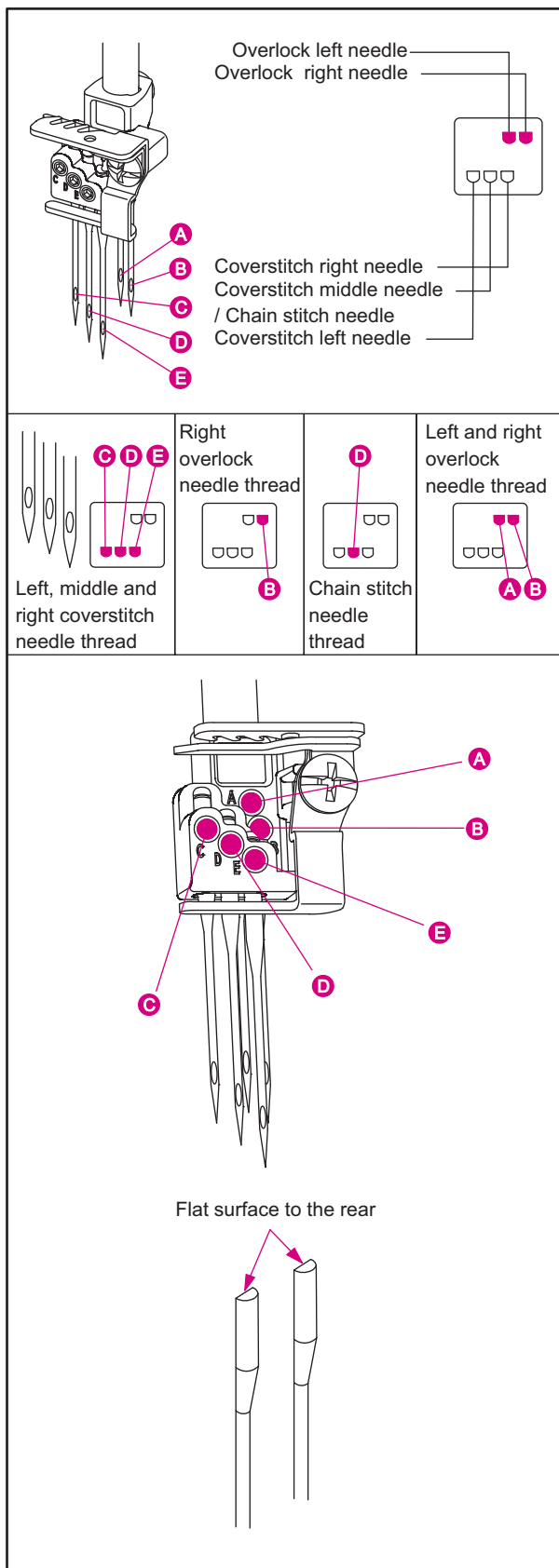
* Loosen, but do not remove the needle clamp screw with the allen key while you are holding the needles.

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

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.

Note: After removing the specific needle which is not currently to be used for sewing, remember to fasten the set screw in the screw hole of the needle clamp and to just fasten tight into the hole.

Please do not over-tighten the screw into the hole or the needle clamp will be damaged.

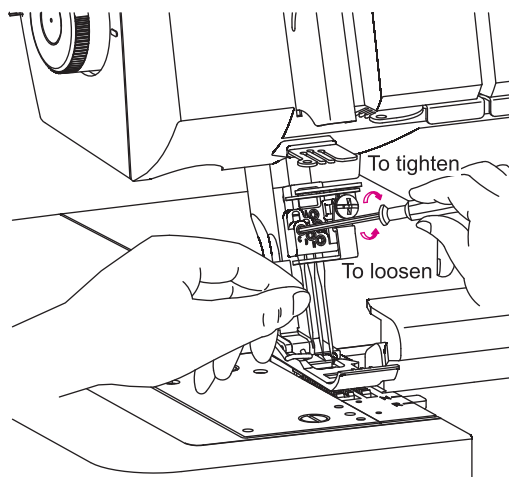


(3) TO INSERT NEEDLES (S)

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

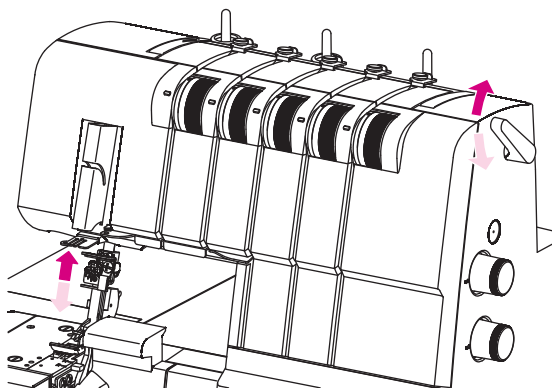
Note : When inserting needles into the A or B sockets it is necessary to loosen both A & B allen Screws. After inserting the needles equally tighten both screws*

This machine uses ELx705 needles. Do not use Standard Household Needles.



11. PRESSER FOOT LIFT

- * Raise the presser foot by raising presser foot lift lever at the right side of the machine.
- * Raising up the presser foot lift puts the presser foot in the extra lift position.

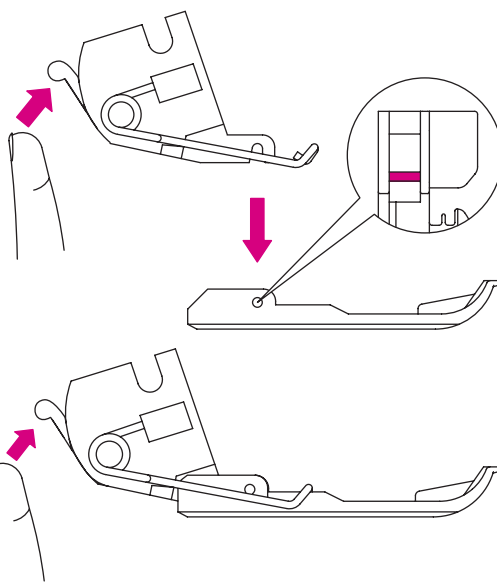


12. CHANGE PRESSER FOOT



Turn off the main power switch and unplug the machine.

- * Raise the presser foot.
- * Turn the hand wheel 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.



13. HOW TO DISENGAGE MOVABLE UPPER CUTTER



Be sure to turn off power switch.

(1) TO PLACE MOVABLE UPPER CUTTER IN NON-WORKING POSITION

- * Open looper cover (page 13).
- * Pull the movable upper cutter holder to the right as far as it will go.
- * Turn the holder toward counter clockwise until the upper cutter clicks into a lock position.

(2) TO PLACE MOVABLE UPPER CUTTER IN WORKING POSITION

- * Open looper cover.
- * Pull the movable upper cutter holder to the right as far as it will go.
- * Turn the holder clockwise until the upper cutter clicks into the working position.



Always close looper cover before operating machine.

14. TO CONVERT UPPER LOOPER TO 2-THREAD CONVERTER



Be sure to turn off power switch

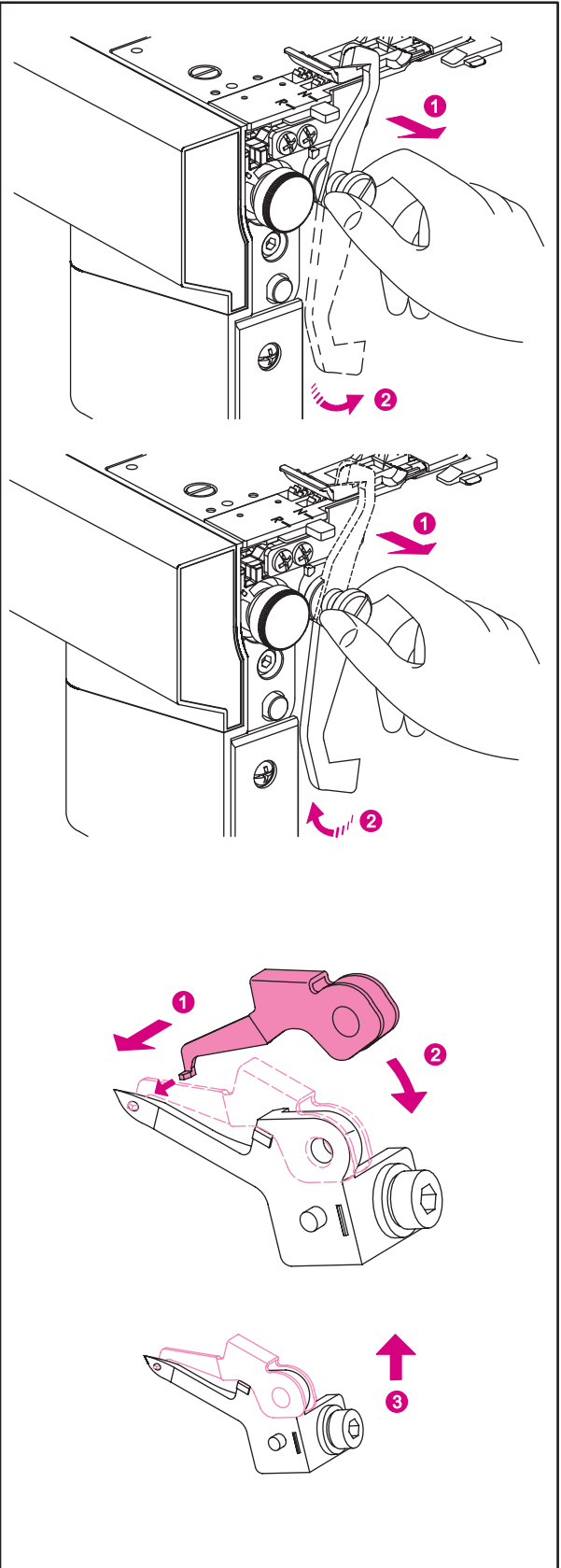
When not threading the upper looper, the 2-thread converter must be engaged into the upper looper eye.

(1) TO USE THE 2-THREAD CONVERTER

- * To engage the 2-thread converter, insert the sharp part into the eye of upper looper.
- * A raised point located in the trough of 2-thread converter must be inserted and fixed in the eye of the 2-thread converter.
- * When using the upper looper, the 2-thread converter must be disengaged.

(2) TO DISENGAGE TO UPPER LOOPER

- * To disengage the 2-thread converter, raise the handle of upper looper according to picture ③.



15. UPPER LOOPER

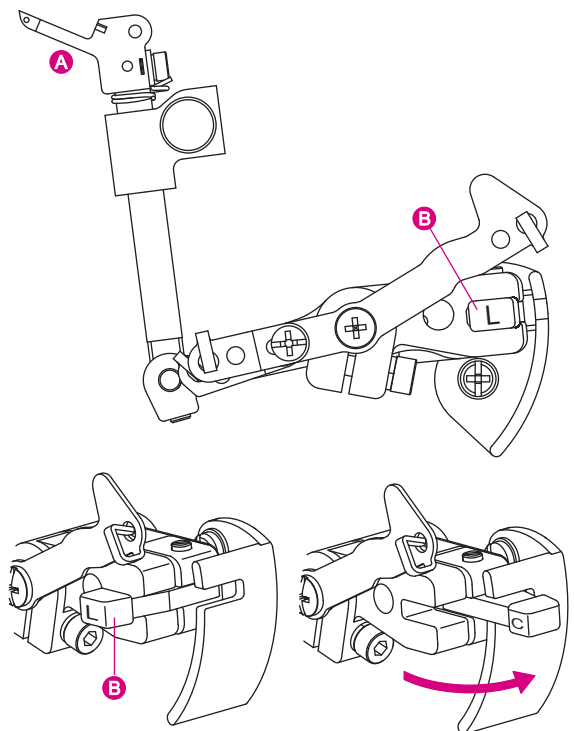
For Coverstitch and Chain stitch sewing the upper looper needs to be disengaged.

(1) DISENGAGE THE UPPER LOOPER

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

(2) ENGAGE THE UPPER LOOPER

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

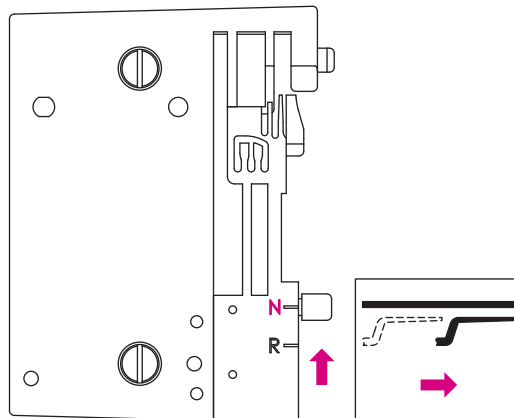


16. STANDARD OVERLOCK AND ROLLED HEM STITCHING

(1) TO SEW STANDARD OVERLOCK

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

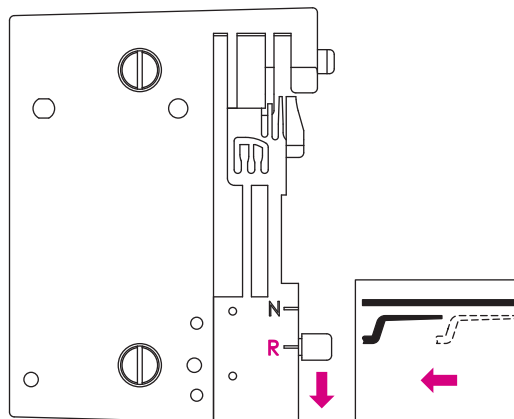
Note : Be sure to push seam width finger knob as far as it will go in the direction of setting N.



(2) TO SEW ROLLED HEM

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

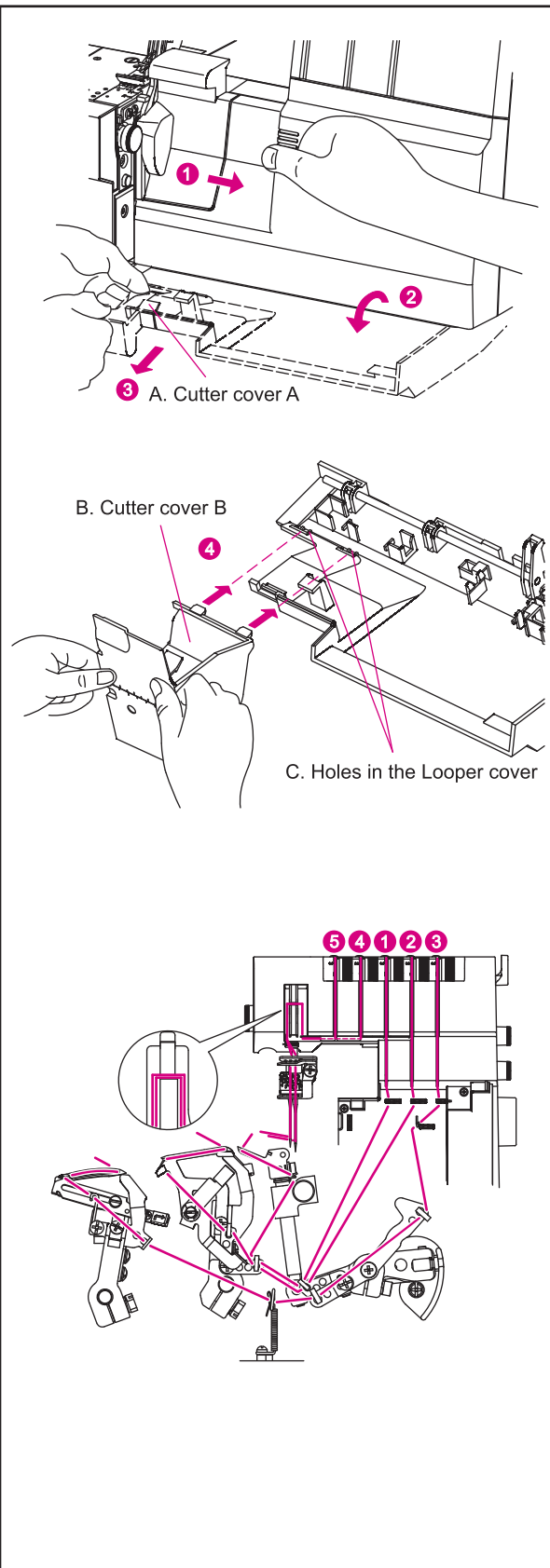
Note : Be sure to push seam width finger knob as far as it will go in the direction of setting R.



(3) CHANGE TO CUTTER COVER B

For Coverstitch and Chainstitch sewing the cutter cover B should be used.

- * Open the loop cover.
- * Lift the hook (A) to release the cutter cover A and pull it towards you.
- * Insert the cutter cover B by fitting the two front pins (B) into the holes (C) and make sure the hook (D) clicks into place.



17. GENERAL THREADING INFORMATION

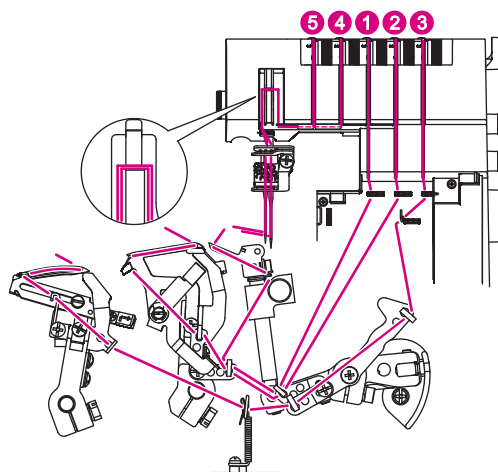
- * Thread the machine in the order 1 to 5 as shown at right.

Note : Threads go through the take-up lever cover for Overlock and Chain stitching as shown.

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.

Note : If the lower looper should come unthreaded, do the following :

- (1). Unthread the needle(s)
- (2). Thread the lower looper
- (3). Thread the needle(s)



(1) TO THREAD **UPPER LOOPER** THREAD (GREEN)



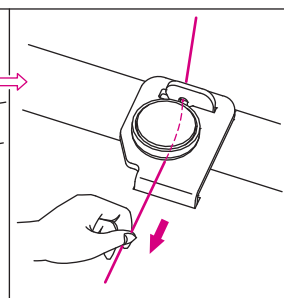
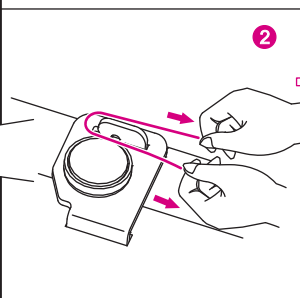
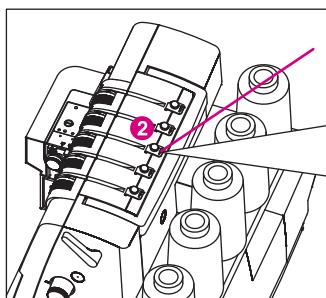
Be sure to turn off power switch.

Thread the upper looper as indicated 1~8.

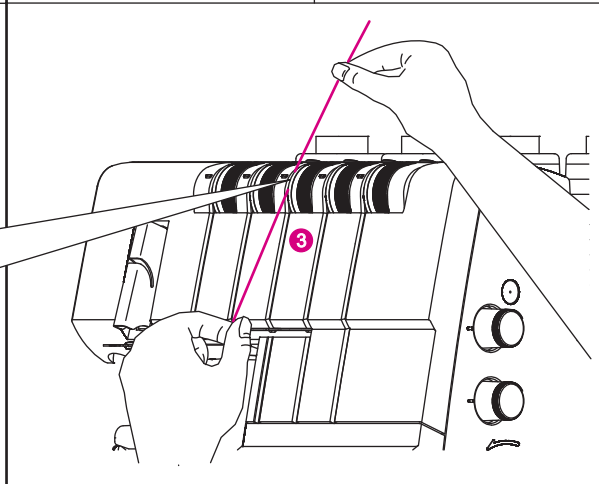
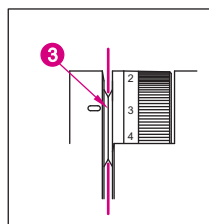
* Raise presser foot to release tension discs.

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

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



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



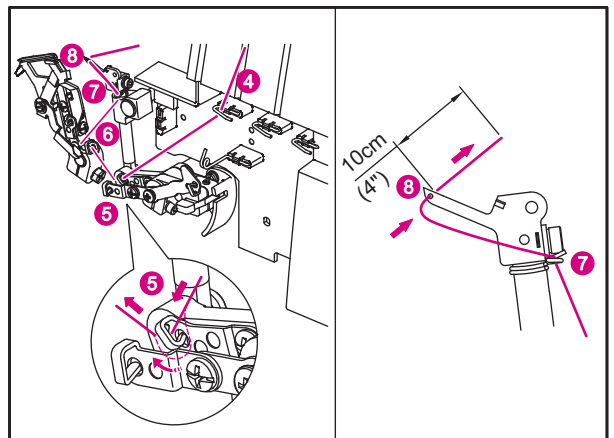
* Thread the looper area of the machine following the green color coded thread guides (4~7).

* Thread the hole in the upper looper from front to back 8.

Note : Make sure thread passes behind lower looper.

Note : Use tweezers provided in the accessory case to aid in threading the looper.

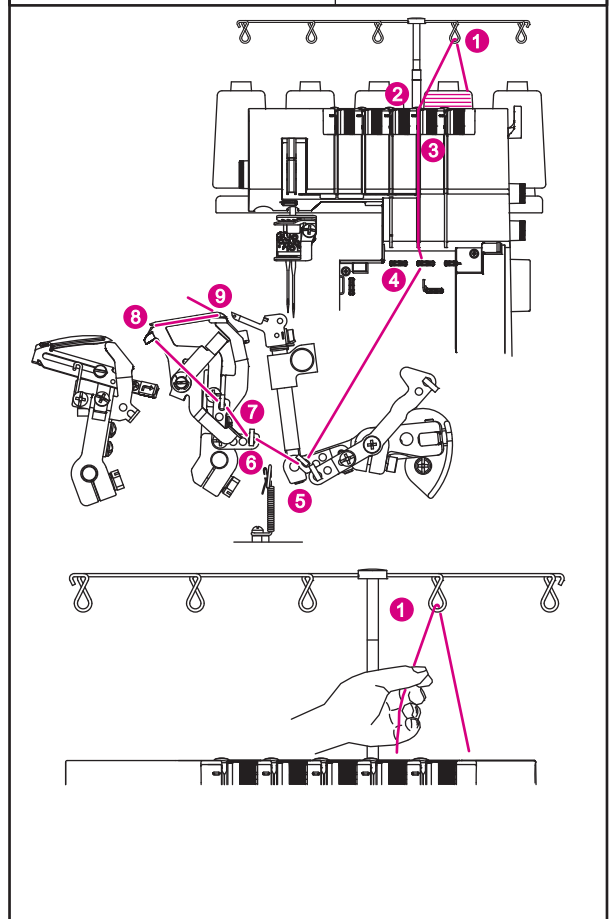
* Pull about 10cm(4 inches) of thread through the looper and place to the back of the stitch plate.



(2) TO THREAD LOWER LOOPER THREAD (RED)

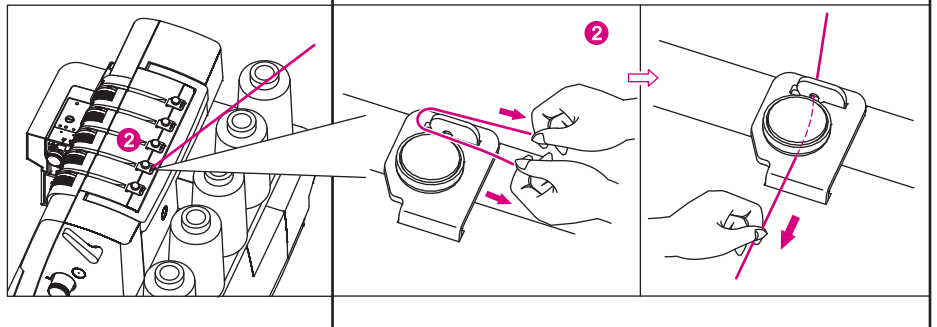
Thread the lower looper as indicated 1~9.

* Raise Presser foot to release Tension discs.

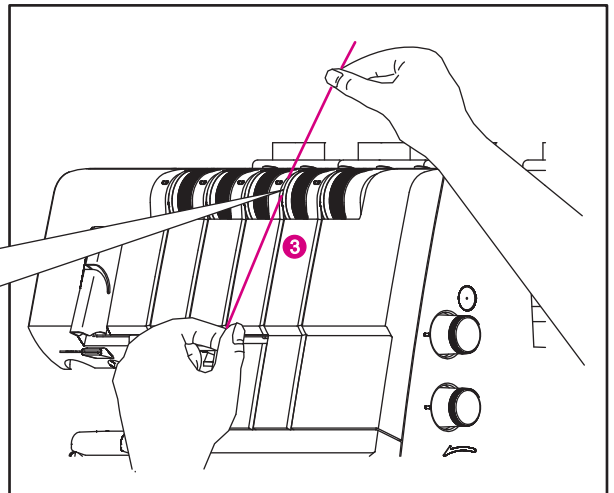
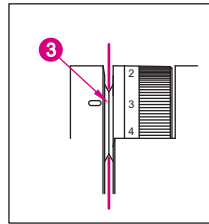


* Pass thread from back to the front through the thread guide 1.

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

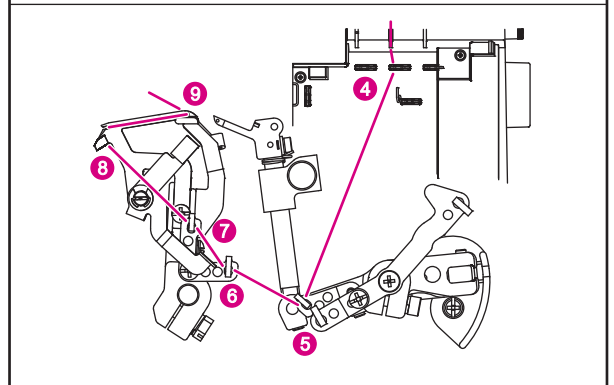


- * While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs 3.

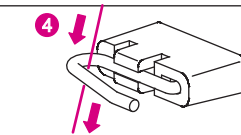


- * Turn the hand wheel toward you until the lower looper extends out 5~10mm from the stitch plate edge.
- * Thread the looper area of the machine following the red color coded thread guides 4~9.

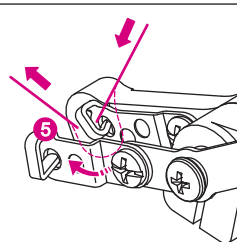
Note : Use tweezers provided in the accessory case to aid in threading the looper.



- * Place the thread with the point of the tweezers slightly from left and to the right of threading guide 4.



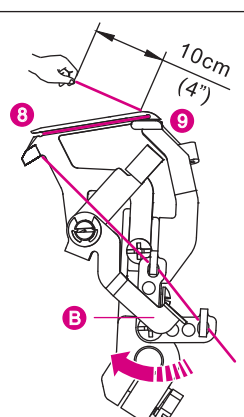
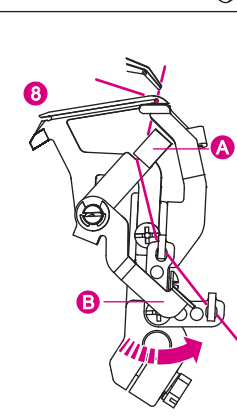
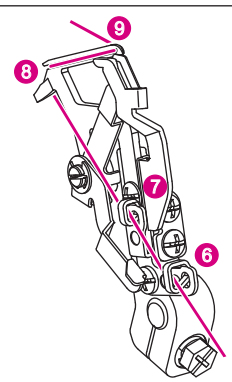
- * Continue threading through guides 5-7.



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

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



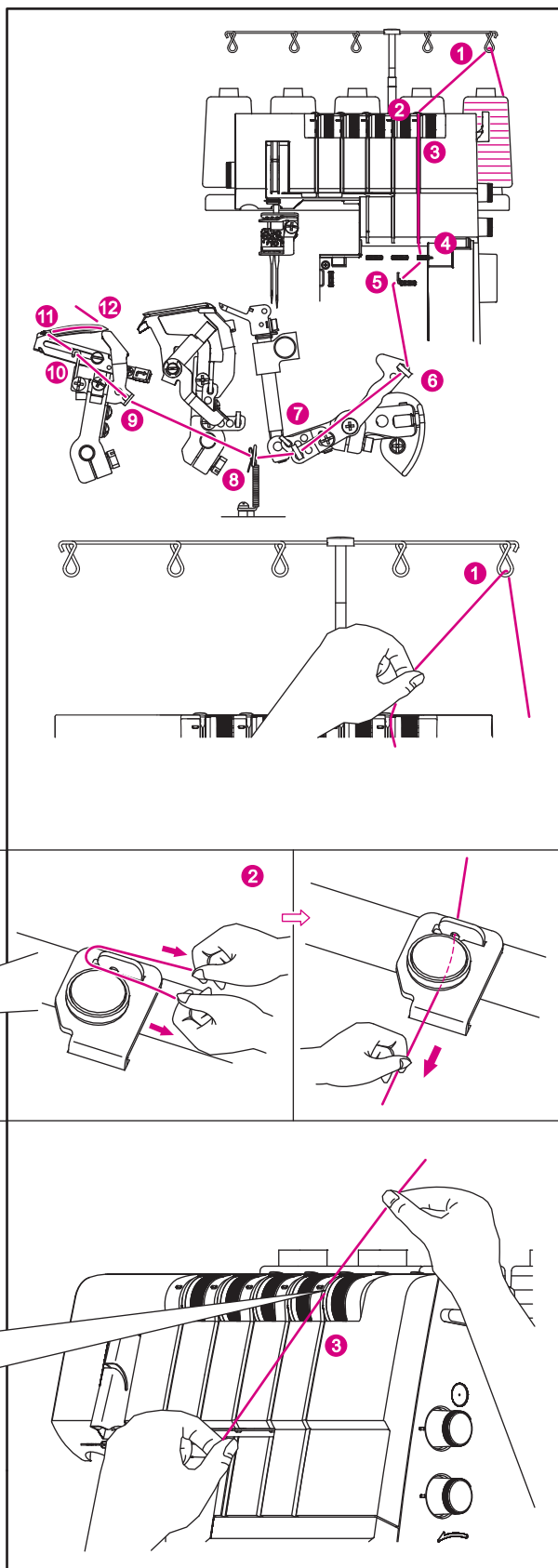
(3) TO THREAD **CHAIN STITCH / COVERSTITCH LOOPER** **THREAD (BROWN)**

* Thread the chain stitch/ coverstitch looper as indicated 1~12.

* Raise presser foot to release tension discs.

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

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



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

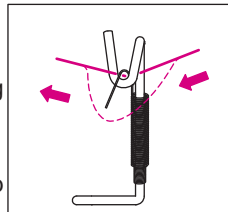
* Turn the hand wheel toward you until the coverstitch looper extends out 10mm from the stitch plate edge.

* Thread the looper area of the machine following the brown color-coded thread guides 4~12.

Note : Use the tweezers provided in the accessory case to aid in threading the looper.

* Place the thread with the point of the tweezers through threading guide 4~7.

* 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.



* Position thread through in guide 9. Pull thread in front the board and through guide 10.

* Thread the looper eye 12 from front to back. Pull about 10cm (4 inches) of thread through the looper.

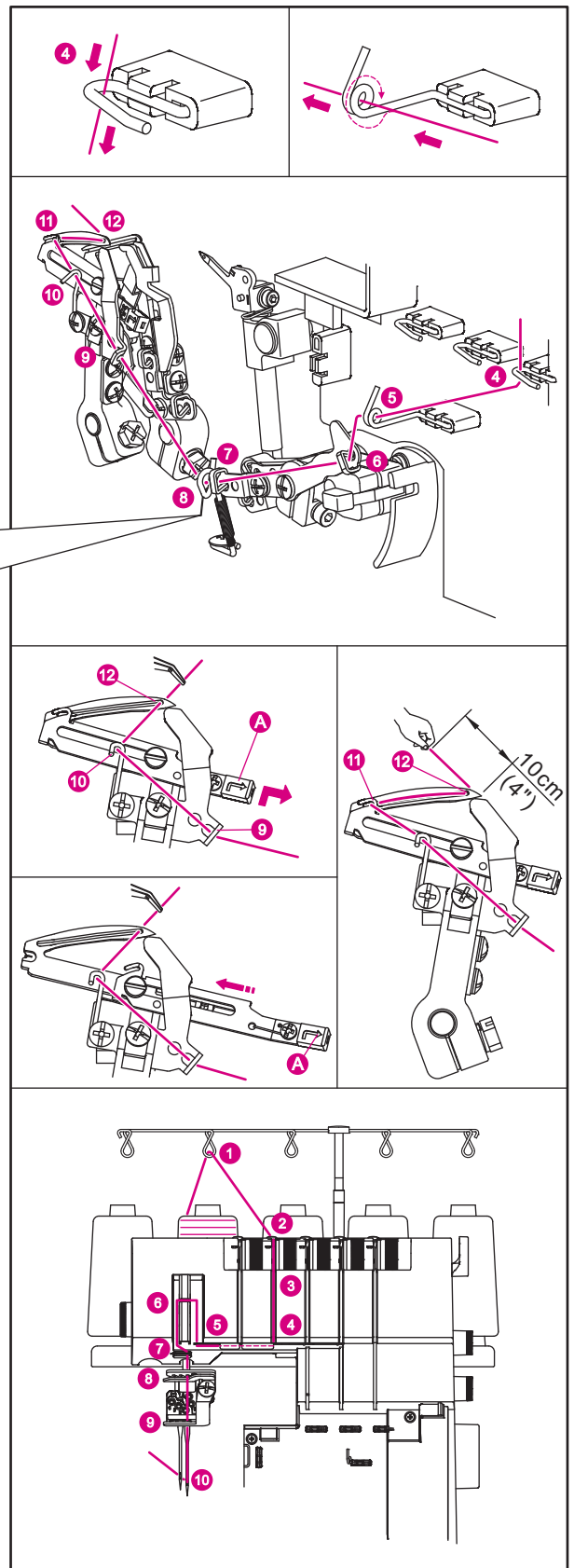
* Press down the threader guide board (A) and pull to the right side out.

* Release the threader guide board (A) that automatically spring back and pull thread into guide 11 and make sure the threader guide board (A) to the leftmost point.

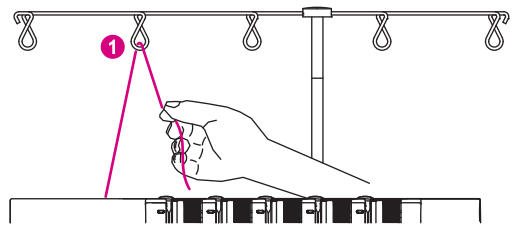
(4) TO THREAD **OVERLOCK RIGHT NEEDLE** **THREAD (BLUE) (B ON NEEDLE CLAMP)**

* Thread the right needle as indicated 1~10.

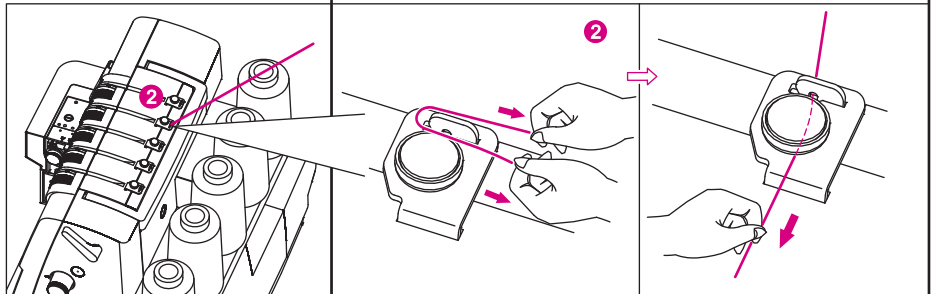
* Raise Presser foot to release Tension discs.



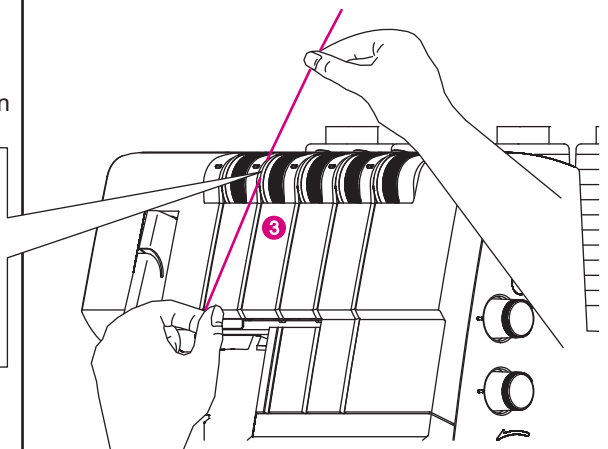
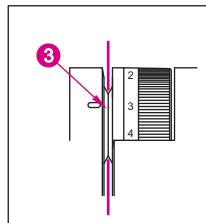
* Pass thread from back to the front through the thread guide 1.



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



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



* Continue to thread points 4~9.

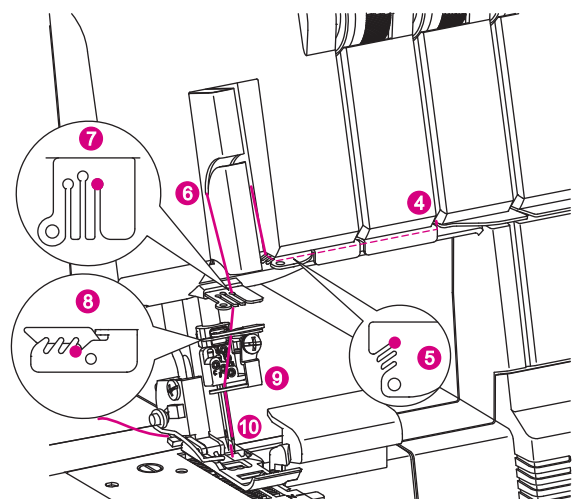
* Slip the thread into the rear slot on the thread guide (5) and into the slot on the take-up lever cover (6). Then slip the thread into the right slot on the thread guides (7) and (8).

* Before threading the eye of the needle, make sure thread is behind the thread guide located on the bottom of the needle clamp (9).

* Thread the eye of the needle. Use the needle threader (page 30) 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.



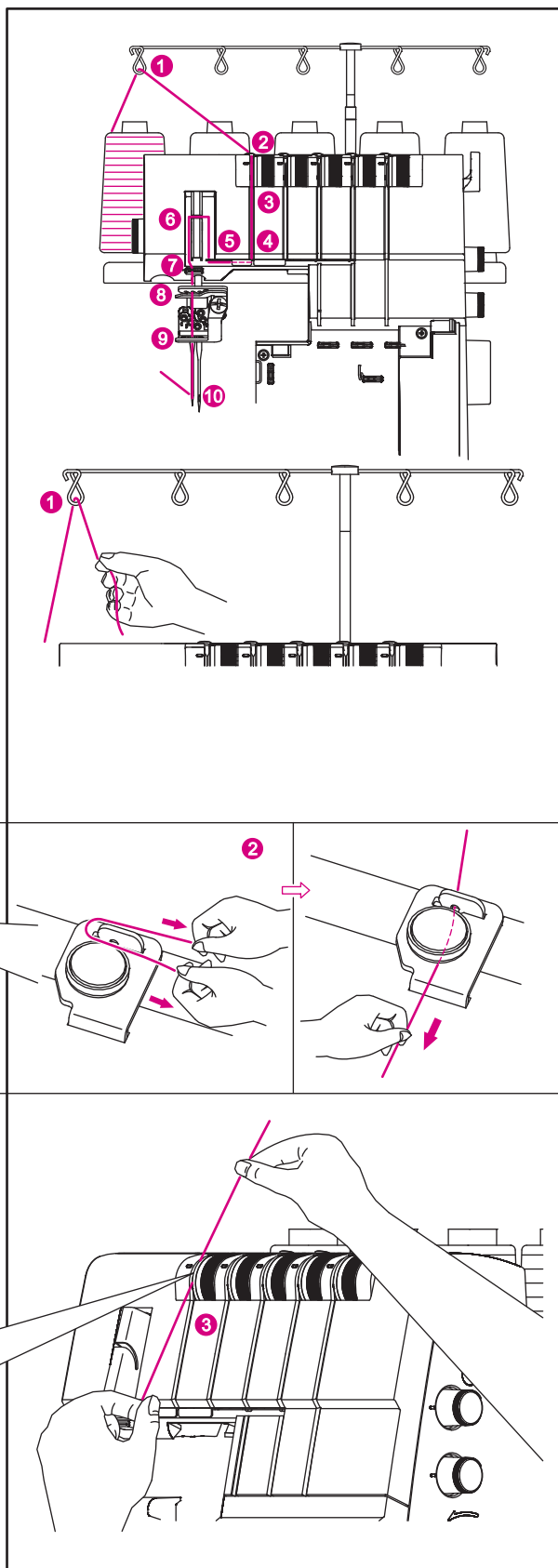
**(5) TO THREAD OVERLOCK LEFT NEEDLE
THREAD (ORANGE) (A ON NEEDLE
CLAMP)**

- * Thread the left needle as indicated 1~10.
- * Raise presser foot to release tension discs.

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

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

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



* Continue to thread points 4-9.

* 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 thread is behind the thread guide located on the bottom of the needle clamp (9).

* Thread the eye of the needle. Use the needle threader (page 30) 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.

Note : For 4 thread overlock left needle: Use needle A.
For chain stitch :Use needle D.

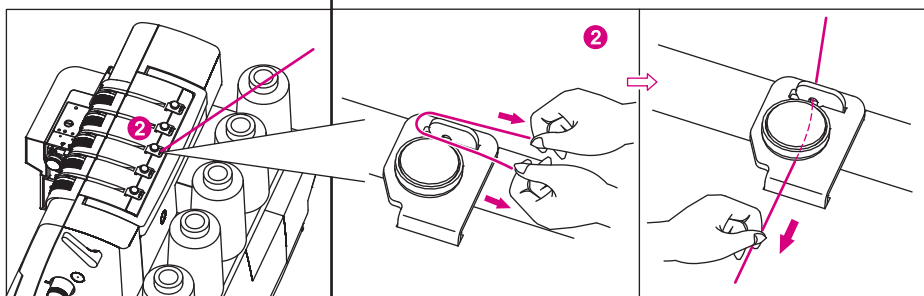
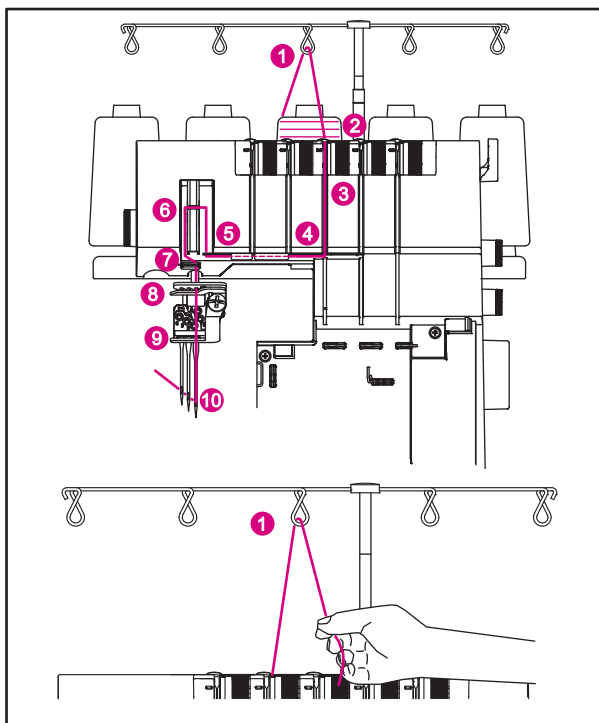
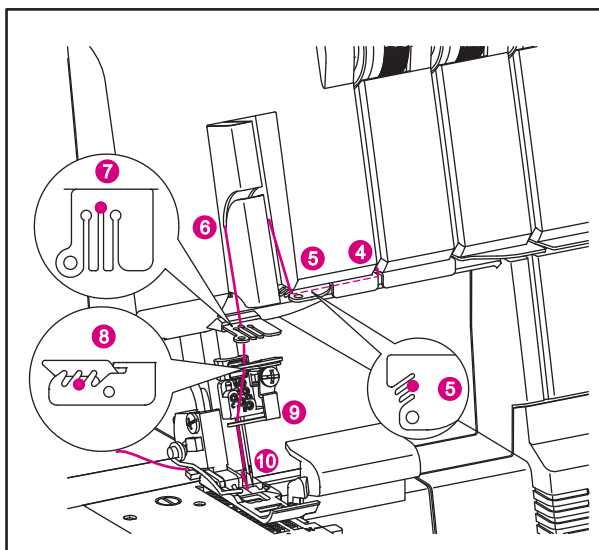
(6) TO THREAD **COVERSTITCH RIGHT NEEDLE (GREEN) (E ON NEEDLE CLAMP)**

* Thread the coverstitch right needle as indicated 1-10.

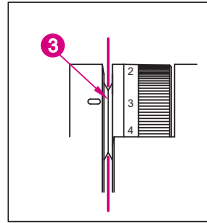
* Raise Presser foot to release Tension discs.

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

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



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



- * Continue to thread points 4~9.

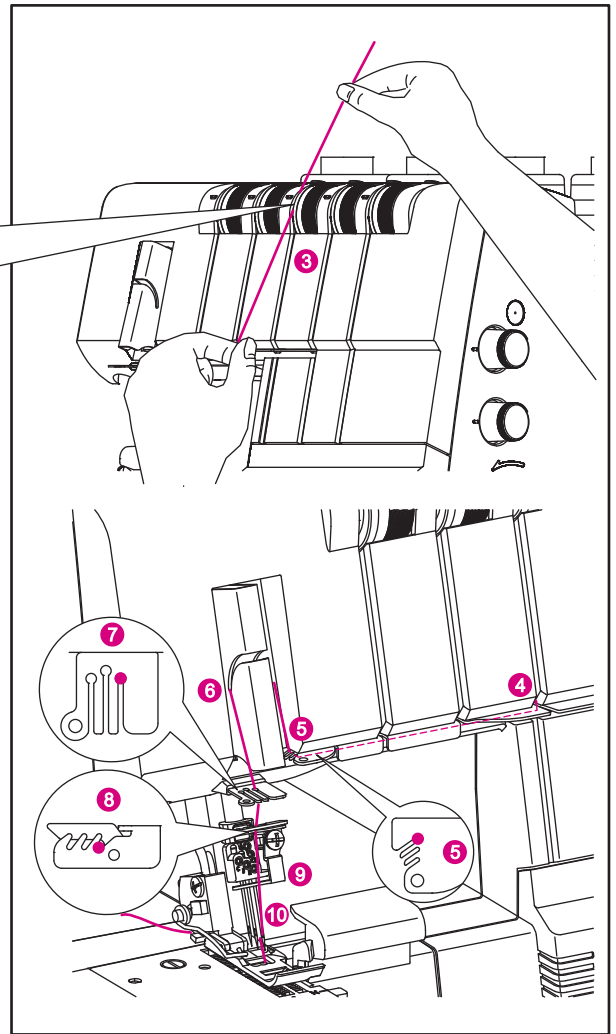
- * Slip the thread into the rear slot on the thread guide (5) and into the slot on the take-up lever cover (6). Then slip the thread into the right slot on the thread guides (7) and (8).

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

- * Thread the eye of the needle. Use the needle threader (page 30) to make the threading easier.

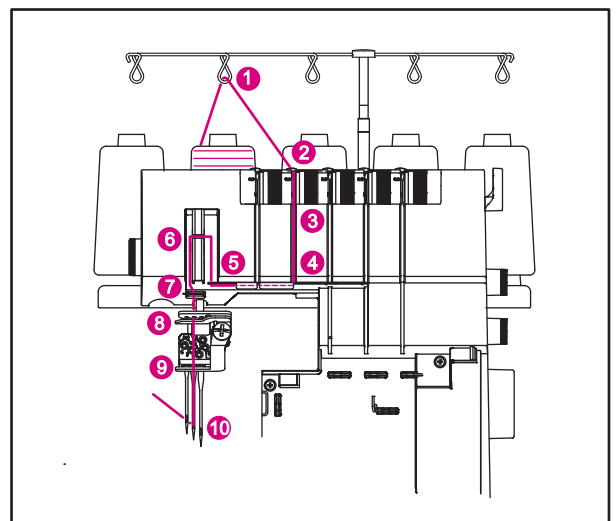
- * Pull about 10 cm (4") of thread through needle eye to hang free.

- * Place the thread to the back, under the presser foot.



(7) TO THREAD **COVERSTITCH MIDDLE / CHAIN STITCH NEEDLE** THREAD (BLUE) (D ON NEEDLE CLAMP)

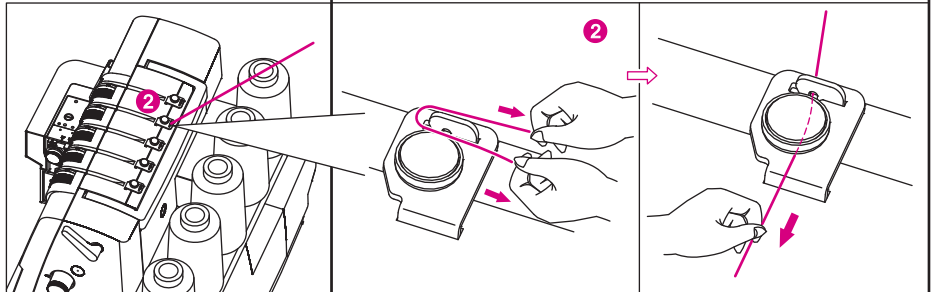
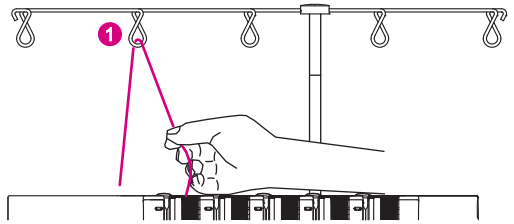
- * Thread the coverstitch middle / chain stitch needle as indicated 1~10.



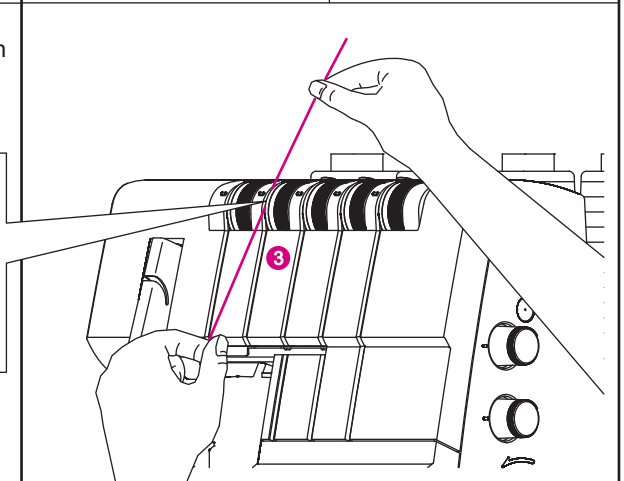
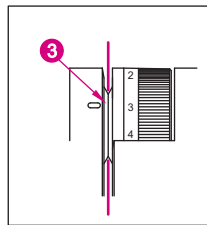
* Raise Presser foot to release Tension discs.

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

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



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



* Continue to thread points 4~9.

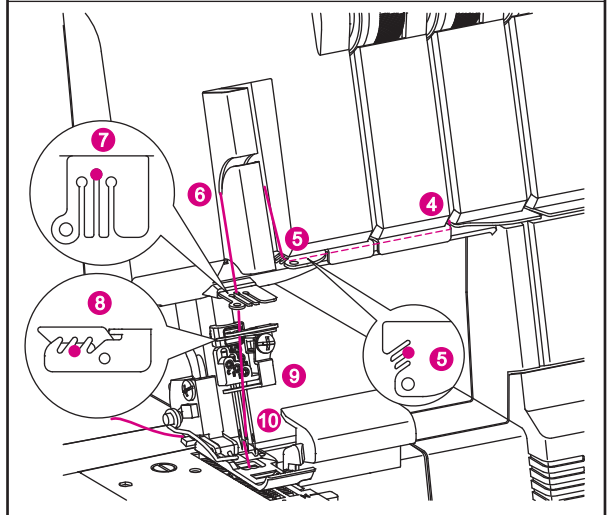
* Slip the thread into the middle slot on the thread guide (5) and into the slot on take-up lever cover (6). Then slip the thread into the middle slot on the thread guides (7) and (8).

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

* Thread the eye of the left needle. Use the needle threader (page 30) 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.



(8) TO THREAD **COVERSTITCH LEFT NEEDLE** **THREAD (ORANGE) (C ON NEEDLE** **CLAMP)**

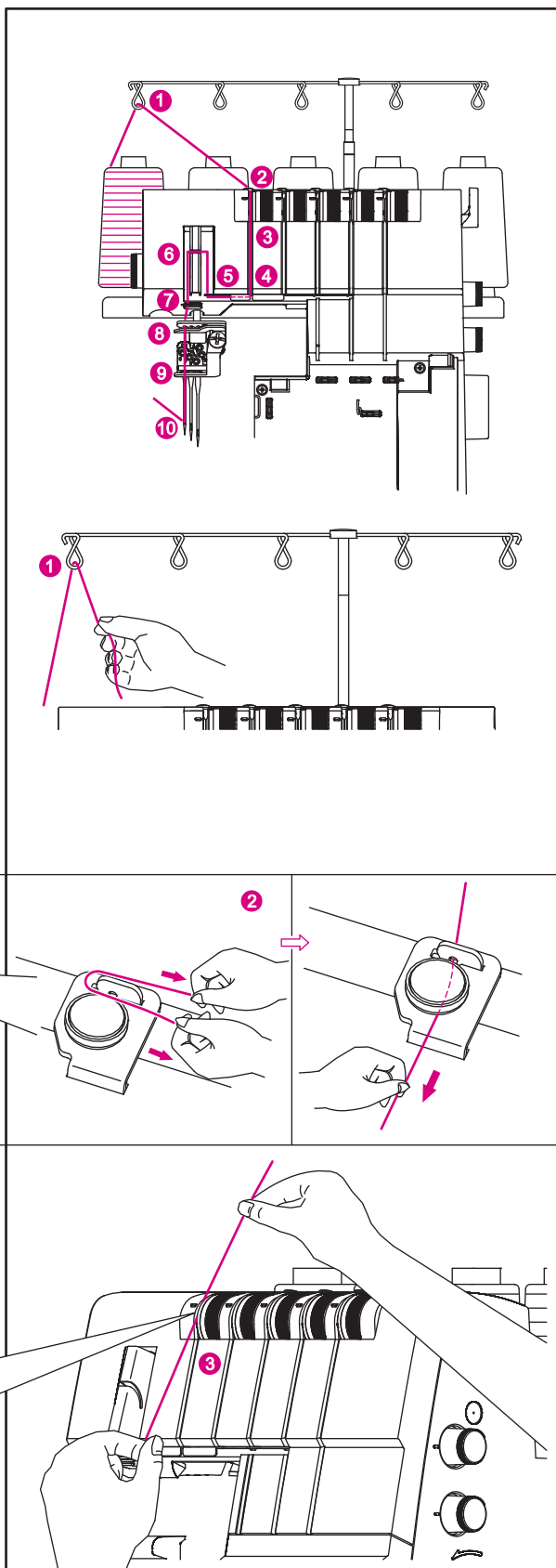
* Thread the coverstitch left / chain stitch needle as indicated 1~10.

* Raise presser foot to release tension discs.

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

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

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



* Continue to thread points 4~9.

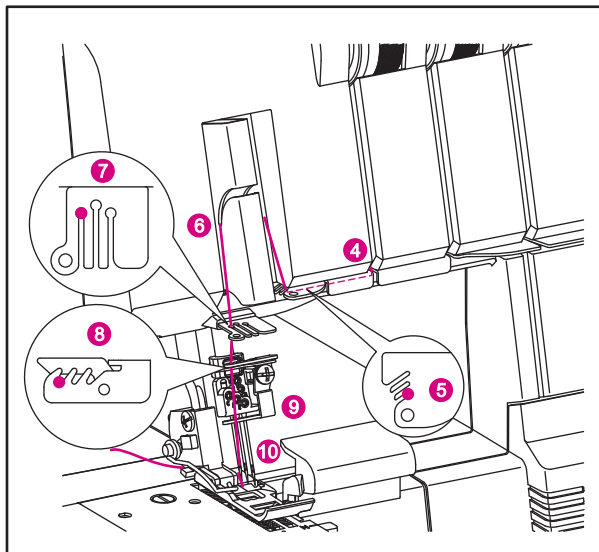
* Slip the thread into the front slot on the thread guide (5) and into the slot on the take-up lever cover (6). Then slip the thread into the left slot on the thread guides (7) and (8).

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

* Thread the eye of the left needle. Use the needle threader (page 29) 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.

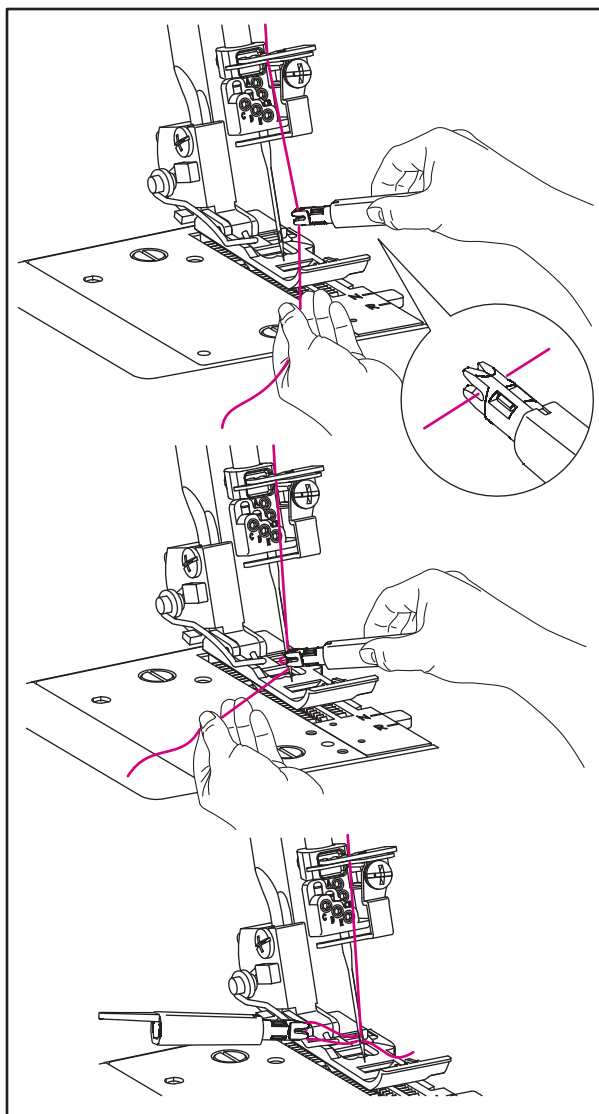


18. NEEDLE THREADER

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

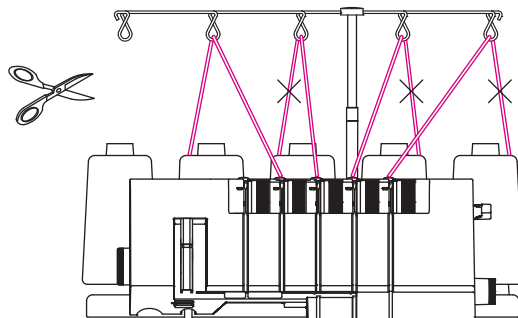
* Turn the handwheel so the needles are in their highest position and lower the presser foot. Make sure one of the rectangular markings of the needle threader is pointing upwards. Place the thread from right to left in the notch on the tip of the needle threader.

* 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.

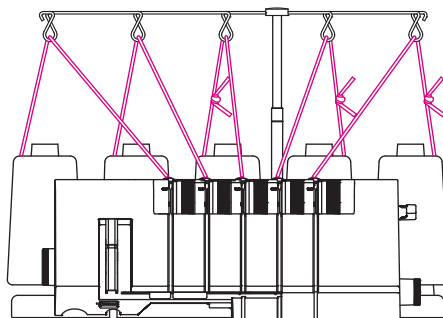


19. HOW TO CHANGE THREADS : TIE ON METHOD

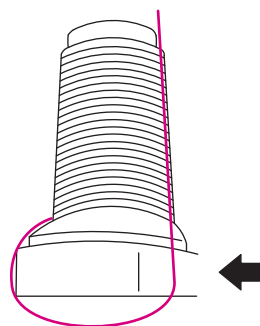
- * To change thread type or color, clip thread near the spool.



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

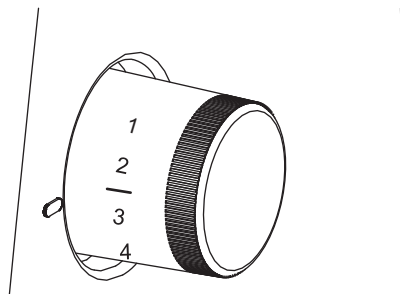


- * Pull the threads through the machine one at a time.
- * If threads do not pull easily, check for tangles on thread guides or looping under thread stand.
- * When pulling thread through the needles, **STOP** when the knot is in front of the needle.
- * Cut the thread, and insert it through the needle.



20. STITCH LENGTH ADJUSTMENT

- * The stitch length dial should be set on the — (=2.5) setting for most sewing conditions.
- * Adjust the stitch length to — (=2.5)~ 5 when sewing heavy weight fabrics.
- * Adjust the stitch length to 2~3 when sewing lightweight fabrics to obtain excellent seams without puckering.



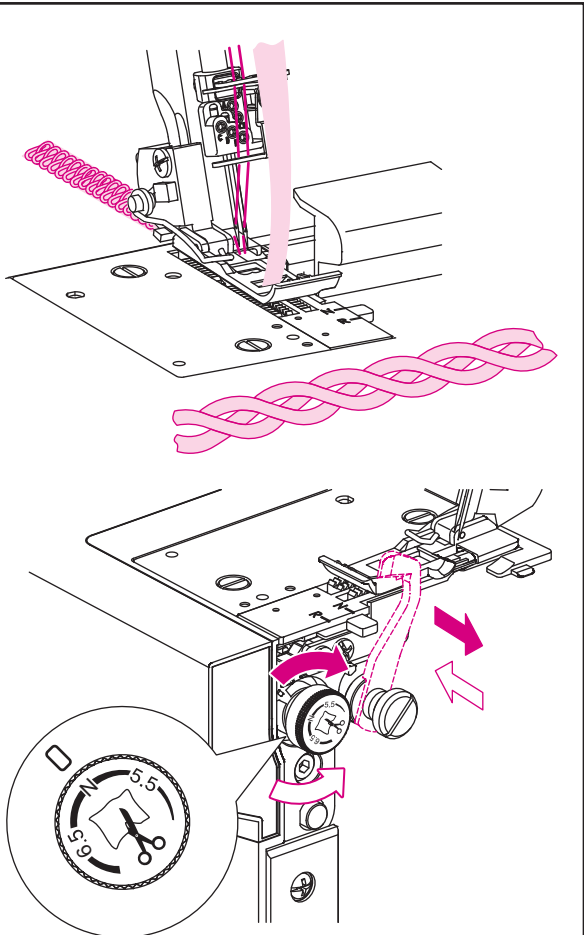
21. SEWING HINTS

(1) 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.

(2) BRAIDING BY CHAINING OFF

- * To place movable upper cutter in non-working position (see page 16).
- * Insert filler cord such as yarn or twill tape through the hole in the front of the foot.
- * Position the filler cord under the foot and chain off the desired length.
- * Chained off braids can be used individually or woven into 3 or 4 ply braids.



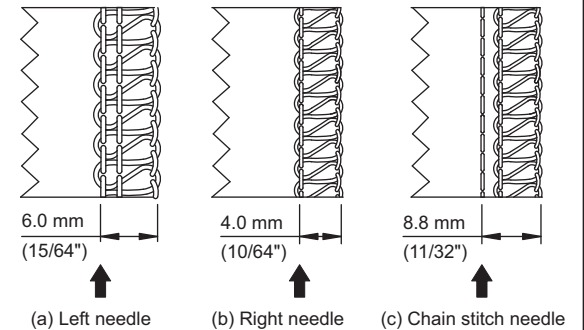
22. STITCH WIDTH ADJUSTMENTS

- * Overlock seam width can be achieved by repositioning the needle position and also with the width adjustment knob.

(1) WIDTH ADJUSTMENT BY CHANGING NEEDLE POSITION

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

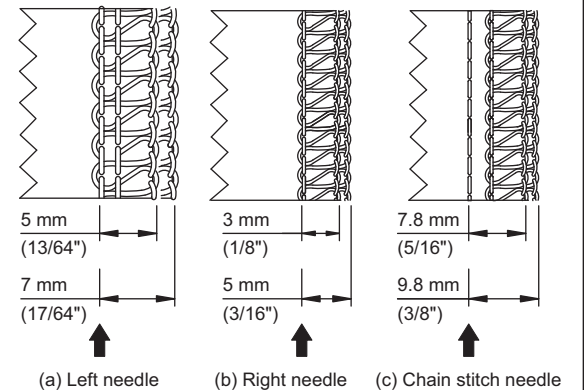
- (a) When using left needle.....6 mm (15/64 inch)
- (b) When only right needle is used.....4 mm (10/64 inch)
- (c) When using chain stitch needle.....8.8 mm (11/32 inch)



(2) WIDTH ADJUSTMENT WITH ADJUSTMENT KNOB

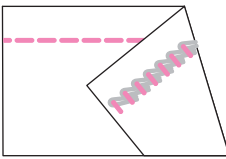
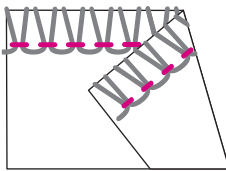
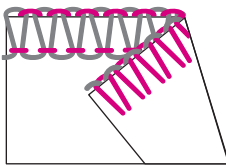
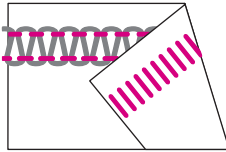
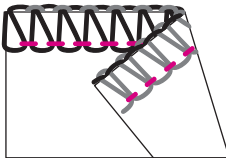
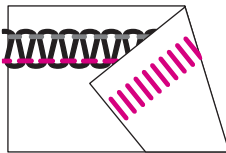
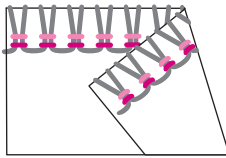
- * Use of width adjustment knob will permit further adjustment within the width range shown below.

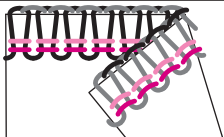
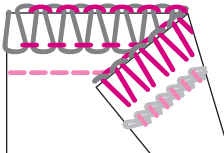
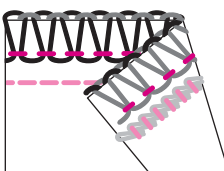
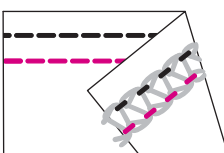
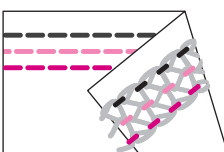
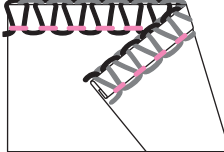
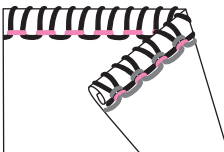
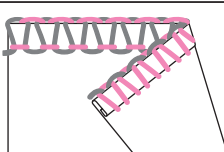
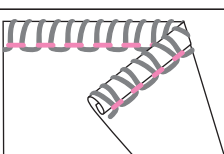
- (a) When using left needle.....5~7 mm (13/64 ~ 17/64 inch)
- (b) When only right needle is used.....3~5 mm (1/8 ~ 3/16 inch)
- (c) When using chain stitch needle.....7.8~9.8 mm (5/16 ~ 3/8 inch)



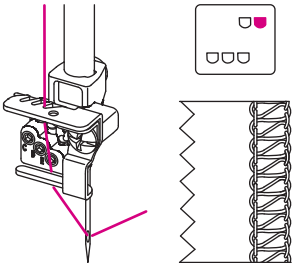
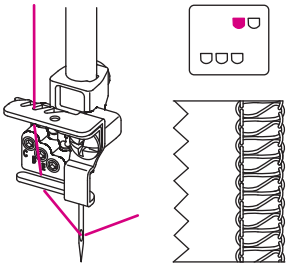
23. SELECTION OF STITCHES

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

| Stitch Type | ● Overlock left needle ● Upper looper ● Chain looper ● Coverstitch middle needle ● Overlock right needle ● Lower looper ● Coverstitch left needle ● Coverstitch right needle | Reference Page |
|--|---|---|
| 1. Chain Stitch <div> </div> |  | <p>A 1-needle 2-thread straight stitch is used for construction or decorative stitching. Seams also can be sewn at desired distance from edge of fabric by disengaging the right looper and movable upper cutter.</p> <p style="text-align: right;">41</p> |
| 2. 2-Thread Wrapped Overlock, Wide <div> ● ● </div> |  | <p>1-needle 2-thread stitch is used for seaming lightweight or stretch fabrics. It is also ideal for rolled and blind hemming. A 4 mm and 6 mm overlock seam width can be obtained by changing the needle position.</p> <p style="text-align: right;">41</p> |
| 3. 2-Thread Wrapped Overlock, Narrow <div> ● ● </div> | | |
| 4. 2-Thread Overlock, Wide <div> ● ● </div> |  | <p>1-needle 2-thread stitch is used for overlocking common fabrics. It is also ideal for flatlock (butted or lapped) seams and blind hemming. A 4 mm and 6 mm overlock seam width can be obtained by changing the needle position.</p> <p style="text-align: right;">41</p> |
| 5. 2-Thread Overlock, Narrow <div> ● ● </div> | | |
| 6. 2-Thread Flatlock, Wide <div> ● ● </div> |  | <p>1-needle 2-thread stitch is used for butted or lapped seams and ornamental stitching with decorative thread. Also, a 4 mm and 6 mm flatlock width can be obtained by changing the needle position.</p> <p style="text-align: right;">42</p> |
| 7. 2-Thread Flatlock, Narrow <div> ● ● </div> | | |
| 8. 3-Thread Overlock, Wide <div> ● ● ● </div> |  | <p>1-needle 3-thread stitch is used for overedging and seaming on common fabrics. A 4mm and 6 mm overlock seam width can be obtained by changing the needle position.</p> <p style="text-align: right;">42</p> |
| 9. 3-Thread Overlock, Narrow <div> ● ● ● </div> | | |
| 10. 3-Thread Flatlock, Wide <div> ● ● ● </div> |  | <p>1-needle 3-thread stitch is used for butted or lapped seams and ornamental stitching with decorative thread. Also, a 4 mm and 6 mm flatlock width can be obtained by changing the needle position.</p> <p style="text-align: right;">42</p> |
| 11. 3-Thread Flatlock, Narrow <div> ● ● ● </div> | | |
| 12. 3-Thread Stretch Overlock <div> ● ● </div> |  | <p>2-needle 3-thread stitch that is ideal for lightweight, extremely stretchy fabrics such as tricot and spandex.</p> <p style="text-align: right;">43</p> |

| Stitch Type | <div><div><div>● Overlock left needle</div><div>● Overlock right needle</div><div>● Upper looper</div><div>● Lower looper</div><div>● Chain looper</div><div>● Coverstitch middle needle</div><div>● Coverstitch left needle</div><div>● Coverstitch right needle</div></div></div> | Reference Page |
|--|--|----------------|
| <div>13. 4-Thread Overlock</div> <div><div><div>●</div><div>●</div><div>●</div><div>●</div><div>○</div></div></div> | <div></div> <div>2-needle 4-thread stitch that is ideal for medium to heavyweight stretchy fabrics such as double knits and swim wear.</div> | 43 |
| <div>14. 4-Thread Safety Stitch, Wide</div> <div><div><div>●</div><div>●</div><div>○</div><div>●</div><div>●</div></div></div> | <div></div> <div>The 4-thread stitch is a safety stitch made up of combined 2-thread overlock and double chainstitch.</div> | 43 |
| <div>15. 4-Thread Safety Stitch, Narrow</div> <div><div><div>●</div><div>●</div><div>○</div><div>●</div><div>●</div></div></div> | | |
| <div>16. 5-Thread Safety Stitch, Wide</div> <div><div><div>●</div><div>●</div><div>●</div><div>●</div><div>●</div></div></div> | <div></div> <div>The 5-thread stitch is a safety stitch made up of combined 3-thread overlock and double chainstitch. A wide seam is formed by using left needle and a narrow seam is formed by using right needle. Overlock and seaming can be done in one operation on non-stretch fabrics.</div> | 44 |
| <div>17. 5-Thread Safety Stitch, Narrow</div> <div><div><div>●</div><div>●</div><div>●</div><div>●</div><div>●</div></div></div> | | |
| <div>18. Coverstitch, Wide (5.6mm)</div> <div><div><div>●</div><div>●</div><div>●</div><div>○</div><div>●</div></div></div> | <div></div> <div>2-needle 3-thread coverstitch is suitable for stretchy fabrics such as knits, etc. A wide seam is formed by using left and right and a narrow seam is formed by using left and middle needles.</div> | 44 |
| <div>19. Coverstitch, Narrow (2.8mm)</div> <div><div><div>○</div><div>●</div><div>●</div><div>○</div><div>●</div></div></div> | | |
| <div>20. Coverstitch, Triple (5.6mm)</div> <div><div><div>●</div><div>●</div><div>●</div><div>○</div><div>●</div></div></div> | <div></div> <div>3-needle 4-thread coverstitch is suitable for stretchy fabrics such as knits, etc. A triple seam is formed by using left, middle, and right needles.</div> | 45 |
| <div>21. 3-Thread Narrow Edge</div> <div><div><div>○</div><div>●</div><div>●</div><div>●</div><div>○</div></div></div> | <div></div> <div>1-needle 3-thread stitch is for edging lightweight fabrics. For a beautiful rolled edge, thread the upper looper with decorative thread and the needle and lower looper with lightweight regular thread.</div> | 45 |
| <div>22. 3-Thread Rolled Edge</div> <div><div><div>○</div><div>●</div><div>●</div><div>●</div><div>○</div></div></div> | <div></div> <div>1-needle 3-thread stitch is used for sewing rolled edge.</div> | 45 |
| <div>23. 2-Thread Narrow Edge</div> <div><div><div>○</div><div>●</div><div>○</div><div>●</div><div>○</div></div></div> | <div></div> <div>1-needle 2-thread stitch is used for edging lightweight fabrics</div> | 45 |
| <div>24. 2-Thread Rolled Edge</div> <div><div><div>○</div><div>●</div><div>○</div><div>●</div><div>○</div></div></div> | <div></div> <div>1-needle 2-thread stitch is used for edging lightweight fabrics.</div> | 45 |

























- * Depending on the needle positions used, this machine can sew 2-thread and 3-thread standard width 4 mm overlock and a 6 mm wide overlock seams.
- * Also, for overlocking heavyweight fabrics, the seam width can be increased still more by turning the overlock seam width adjustment knob. (See page 32)

| Overlock width | 4.0 mm | 6.0 mm |
|----------------------------|---|--|
| Needle used | Overlock right needle | Overlock left needle |
| Needle thread tension dial | Blue | Orange |
| |  |  |

24. STITCH OVERVIEW

- * The settings shown in the table below page are our recommendations based on normal conditions. 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 increments 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 stitch settings with different tensions, needle positions, threading methods, and the use of the 2-thread converter.
- * The thread tension becomes tighter as the dials are turned to higher numbers. The tension settings shown on this page as well as throughout the Instruction book are suggested guides.
- * When chain stitching under conditions given in No.1, 9 and 10, set stitch length to over 2mm.
- * When coverstitching under conditions given in No.11 and 12 set stitch length to over —(2.5mm).

HANDY REFERENCE CHART

| | Stitch Type | SL | DF | C/L | N/R | CW | Converter | Needle Position | Tension Dial : Numbers shown are average settings on medium weight fabric with standard #60 polyester spun thread | | | | | Page |
|----|-----------------------------------|-----|----|-----|-----|-----|-----------|---|---|------|-------|-----|-------|------|
| | | | | | | | | | Orange | Blue | Green | Red | Brown | |
| 1 | Chain Stitch | 2.5 | N | C | R | — | No |  | | 6.0 | | | 6.0 | 41 |
| 2 | 2-Thread Wrapped Overlock, Wide | 2 | N | L | N | 6.5 | Yes | 6.0mm  | 4.0 | | | 3.0 | | |
| 3 | 2-Thread Wrapped Overlock, Narrow | 2 | N | L | N | 6.5 | Yes | 4.0mm  | | 7.0 | | 4.0 | | |
| 4 | 2-Thread Overlock, Wide | 2 | N | L | N | N | Yes | 6.0mm  | 1.0 | | | 4.0 | | |
| 5 | 2-Thread Overlock, Narrow | 2 | N | L | N | 6.5 | Yes | 4.0mm  | | 2.5 | | 4.5 | | |
| 6 | 2-Thread Flatlock, Wide | 2 | N | L | N | N | Yes | 6.0mm  | 1.0 | | | 4.0 | | 42 |
| 7 | 2-Thread Flatlock, Narrow | 2 | N | L | N | 6.5 | Yes | 4.0mm  | | 2.5 | | 4.5 | | |
| 8 | 3-Thread Overlock, Wide | 2.5 | N | L | N | N | No | 6.0mm  | 3.0 | | 4.0 | 3.5 | | |
| 9 | 3-Thread Overlock, Narrow | 2.5 | N | L | N | 6.5 | No | 4.0mm  | | 4.0 | 4.0 | 4.0 | | |
| 10 | 3-Thread Flatlock, Wide | 2 | N | L | N | N | No | 6.0mm  | 0.0 | | 4.0 | 7.0 | | |
| 11 | 3-Thread Flatlock, Narrow | 2 | N | L | N | 6.5 | No | 4.0mm  | | 0.0 | 4.0 | 7.0 | | 43 |
| 12 | 3-Thread Stretch Overlock | 2 | N | L | N | 6.5 | Yes |  | 4.5 | 4.0 | | 3.0 | | |
| 13 | 4-Thread Overlock | 2.5 | N | L | N | N | No |  | 4.0 | 4.0 | 4.0 | 4.0 | | |
| 14 | 4-Thread Safety Stitch, Wide | 2.5 | N | L | N | N | Yes |  | 4.0 | 2.5 | | 4.5 | 6.0 | |
| 15 | 4-Thread Safety Stitch, Narrow | 2.5 | N | L | N | 6.5 | Yes |  | 4.0 | 2.5 | | 4.5 | 6.0 | |
| 16 | 5-Thread Safety Stitch, Wide | 2.5 | N | L | N | N | No |  | 4.0 | 5.0 | 4.0 | 3.5 | 6.0 | 44 |
| 17 | 5-Thread Safety Stitch, Narrow | 2.5 | N | L | N | 6.5 | No |  | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 | |
| 18 | Coverstitch, Wide | 2.5 | N | C | R | — | No | 5.6mm  | 4.0 | | 7.0 | | 3.0 | |
| 19 | Coverstitch, Narrow | 2.5 | N | C | R | — | No | 2.8mm  | 4.0 | 6.0 | | | 3.0 | |
| 20 | Coverstitch, Triple | 2.5 | N | C | R | — | No | 5.6mm  | 4.0 | 6.0 | 7.0 | | 3.0 | |
| 21 | 3-Thread Narrow Edge* | 1.5 | N | L | R | N | No | 4.0mm  | | 5.0 | 5.5 | 5.0 | | 45 |
| 22 | 3-Thread Rolled Edge* | 1 | N | L | R | N | No | 4.0mm  | | 6.0 | 4.0 | 7.0 | | |
| 23 | 2-Thread Narrow Edge* | 1.5 | N | L | R | 5.5 | Yes | 4.0mm  | | 3.5 | | 5.5 | | |
| 24 | 2-Thread Rolled Edge* | 1 | N | L | R | 5.5 | Yes | 4.0mm  | | 6.0 | | 4.0 | | |

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

25. TEST SEWING AND CHAIN OFF

(1) TEST SEWING

Note : The following instructions do not apply to coverstitch. For instructions on coverstitch, see page 38. "COVERSTITCH SEWING."

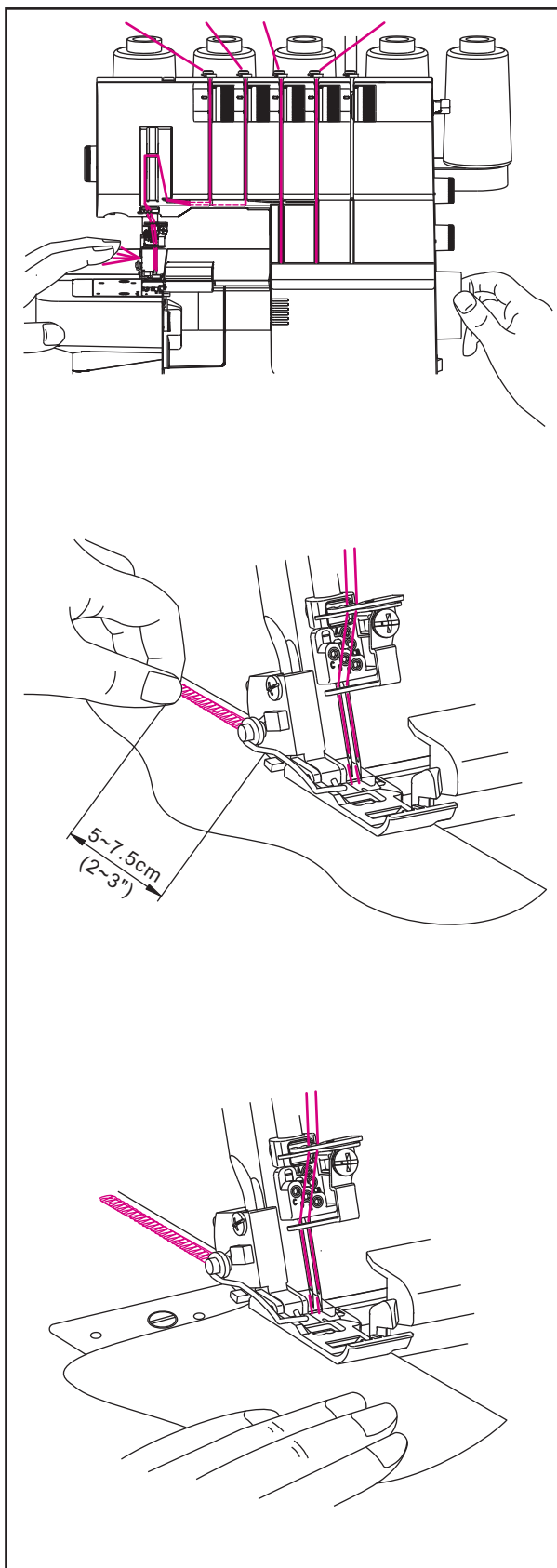
- * When the machine is completely threaded, bring all of the threads across the stitch plate and slightly to the left under the presser foot.
- * Ensure that the upper blade moves against the lower blade correctly by turning the handwheel slowly toward you. If the blades are not moving correctly, check if there are any fabric or waste thread stuck between the blades.
- * Hold the threads and apply a slight tension.
- * Turn the hand wheel toward you two or three complete turns to start the 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.
- * Lower presser foot.
- * Continue holding the chain and press on the foot controller until the chain is 5~8 cm (2~3 inches) 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 while sewing as this may deflect the needle, causing it to break.

(2) 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.

Note : Anytime you have re-threaded the machine always chain off and sew a sample to test tensions and make adjustments as necessary.

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



26. 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.

Note : 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.

27. COVERSTITCH SEWING

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

(1) MACHINE SET UP

- * To place moveable upper cutter in non-working position (page 16).
- * Set the stitch finger lever to R (page 17).
- * If inserted, remove needle B and needle A.
- * Install needles C, D and/or E depending on desired coverstitch.
- * Disengage the upper looper (page 17).
- * Remove cutter cover A and install cutter cover B (page 18). The graduations on the cutter cover B indicate the distance, from coverstitch middle needle. Use it as a guide when positioning the fabric edge.
- * Close looper cover.

(2) 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.

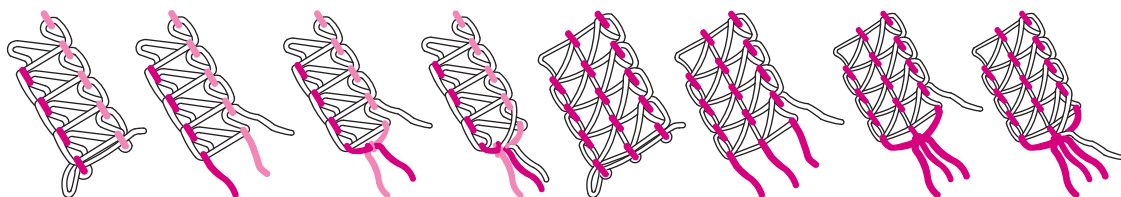
When Sewing through to the Edge of Fabric

- * 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

- * 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.



28. 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.

(1) STANDARD FLATLOCK STITCH

- * Use the left or the right needle.
- * For 2-thread flatlock : Engage the 2-thread converter (page 16). 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 machine according to the “ handy reference chart” (page 36).
- * 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.

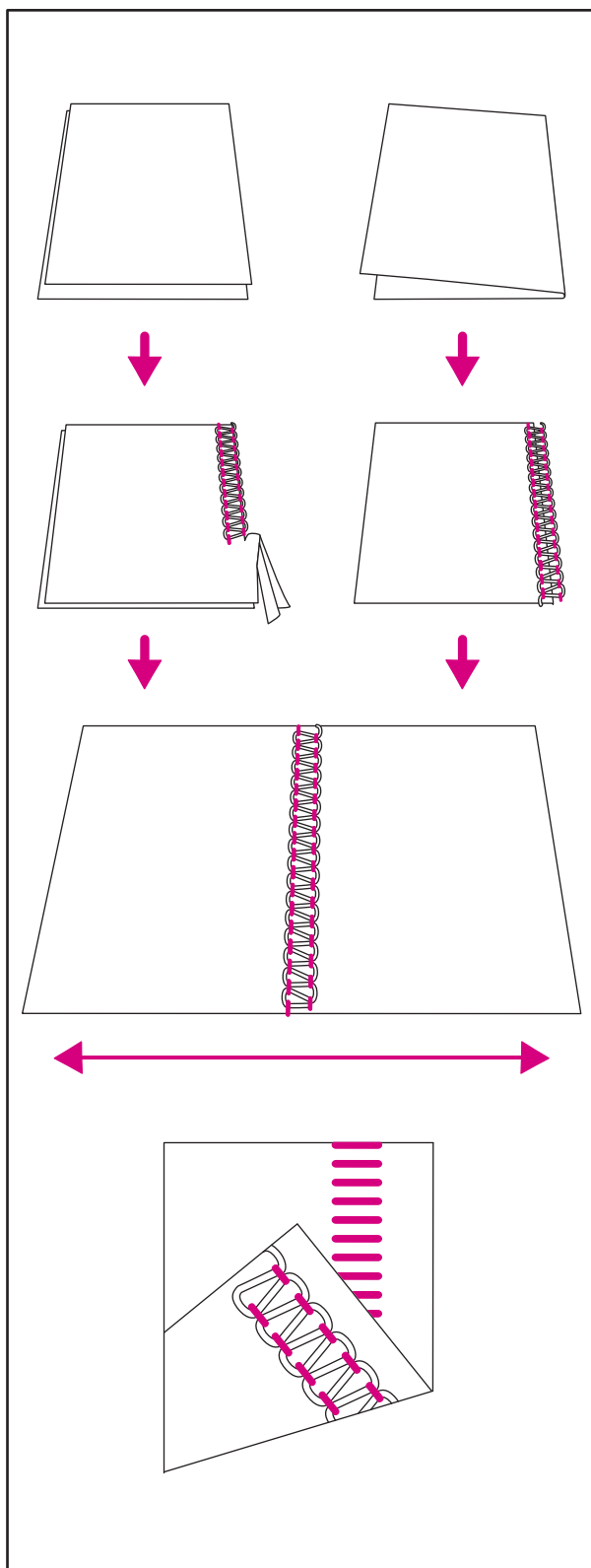
(2) ORNAMENTAL FLATLOCK STITCH

- * To place movable upper cutter in non-working position (see page 16). 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.

(3) 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.



29. PRESSER FOOT PRESSURE ADJUSTMENT

The presser foot pressure for sewing based on normal conditions should be set to N. 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. The presser foot pressure of this machine is pre-adjusted at the factory to suit the sewing of medium weight fabrics.

* In such case, N for normal, 1 for the lightest pressure and 7 for the heaviest.

* For lightweight fabric...Decrease the pressure.

* For heavyweight fabric...Increase the pressure.

30. DIFFERENTIAL FEED

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.

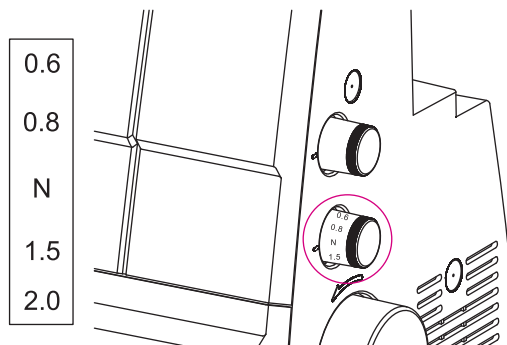
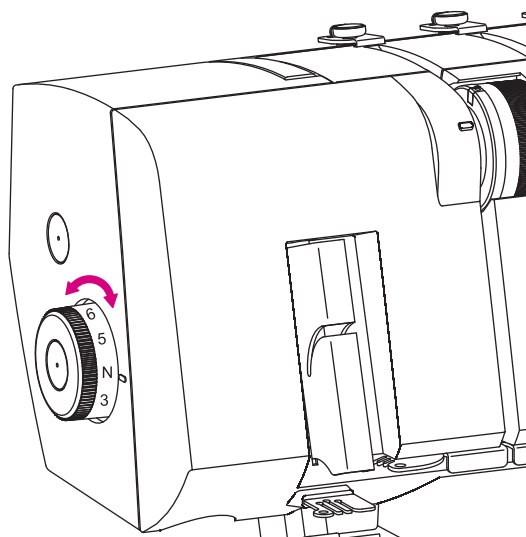
For overlock stitching on normal fabric, set the differential feed adjusting dial to N.

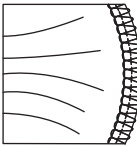
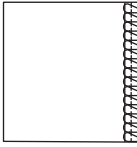
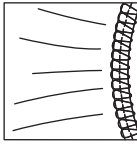
(1) GATHERED OVERLOCK (STRETCH, KNIT FABRICS)

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

(2) 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 N. 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-N | Adjustment |
|---|--|------------|
| Stretch Fabric (Knit, Jersey) |  | N-2.0 |
| Non-Stretch Fabric (Chino, denim) |  | N |
| Light weight Fabric (Silk, silky, knitwear) |  | 0.6-N |

31. SUGGESTED TENSION SETTING

Tension settings are effected by :

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

(1) CHAIN STITCH

- * Stitch length for chain stitch should be set at over 2mm.
- * When the chain stitch needle thread tension is too loose;
 - Turn the needle thread tension dial (blue) toward a higher number.
 - Or, turn the chain stitch loop thread tension dial (brown) toward a lower number.

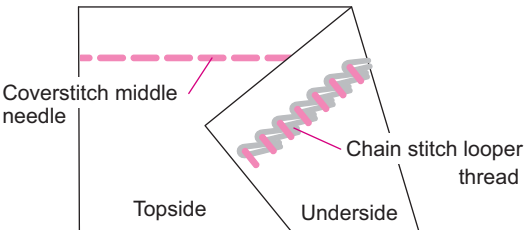
(2) 2-THREAD WRAPPED OVERLOCK

- * When the lower loop thread tension is too tight or needle thread tension is too loose :
 - Turn the lower loop thread tension dial (red) toward a lower number.
 - Or, turn the needle thread tension dial (orange or blue) toward a higher number.
- * When the lower loop thread tension is too loose :
 - Turn the lower loop thread tension dial (red) toward a higher number.

(3) 2-THREAD OVERLOCK

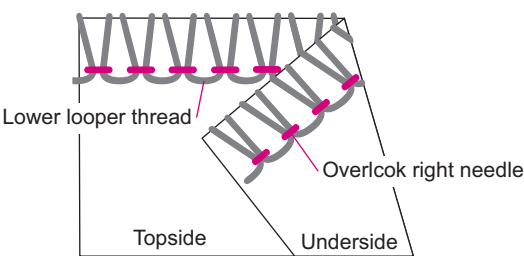
- * See page 16 for instructions on converting upper loop to converter.
- * When the lower loop thread lies on the underside of the fabric :
 - Turn the lower loop thread tension dial (red) toward a higher number.
 - Or, turn the needle thread tension dial (orange or blue) toward a lower number.
- * When the needle thread tension is too loose :
 - Turn the needle thread tension dial (orange or blue) toward a higher number.
 - Or, turn the lower loop thread tension dial (red) toward a lower number.

(1) Chain stitch



| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | | 6.0 | | | 6.0 |

(2) 2-Thread Wrapped Overlock Wide and 2-Thread Wrapped Overlock Narrow



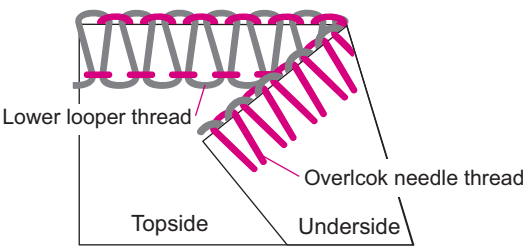
(a) 2-Thread Wrapped Overlock, Wide

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-----------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 4.0 | | Converter | 3.0 | |

(b) 2-Thread Wrapped Overlock, Narrow

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-----------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | | 7.0 | Converter | 4.0 | |

(3) 2-Thread Overlock Wide and 2-Thread Overlock Narrow



(a) 2-Thread Overlock, Wide

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-----------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 1.0 | | Converter | 4.0 | |

(b) 2-Thread Overlock, Narrow

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-----------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | | 2.5 | Converter | 4.5 | |

(4) 2-THREAD FLATLOCK

- * See page 16 for instructions on converting upper looper to converter.
- * When the lower looper thread lies on the underside of the fabric :
 - Turn the lower looper thread tension dial (red) toward a higher number.
 - Or, turn the needle thread tension dial (orange or blue) toward a lower number.
- * When the needle thread tension is too loose :
 - Turn the needle thread tension dial (orange or blue) toward a higher number.
 - Or, turn the lower looper thread tension dial (red) toward a lower number.

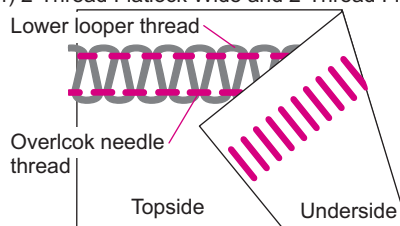
(5) 3-THREAD OVERLOCK

- * When the upper looper thread lies on the underside of the fabric :
 - Turn the upper looper thread tension dial (green) toward a higher number.
 - Or, turn the lower looper thread tension dial (red) toward a lower number.
- * When the lower looper thread appears on the top of the fabric :
 - Turn the upper looper thread tension dial (green) toward a higher number.
 - Or, turn the lower looper thread tension dial (red) toward a lower number.
- * When the needle thread is too loose, turn the needle tension dial (orange or blue) to a higher number.

(6) 3-THREAD FLATLOCK

- * When the lower looper thread tension is too loose :
 - Turn the lower looper thread tension dial (red) toward a higher number.
 - Or, turn the needle thread tension dial (orange or blue) toward a lower number.
- * When the upper looper thread tension is too loose :
 - Turn the upper looper thread tension dial (green) toward a higher number.
 - Or, turn the needle thread tension dial (orange or blue) toward a lower number.
- * When the needle thread tension is too loose :
 - Turn the needle thread tension dial (orange or blue) toward a higher number.
 - Or, turn the upper looper thread tension dial (green) toward a lower number.

(4) 2-Thread Flatlock Wide and 2-Thread Flatlock Narrow



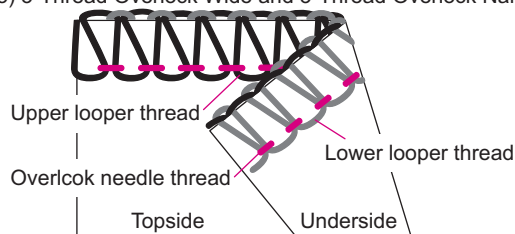
(a) 2-Thread Flatlock, Wide

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-----------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 1.0 | | converter | 4.0 | |

(b) 2-Thread Flatlock, Narrow

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-----------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | | 2.5 | converter | 4.5 | |

(5) 3-Thread Overlock Wide and 3-Thread Overlock Narrow



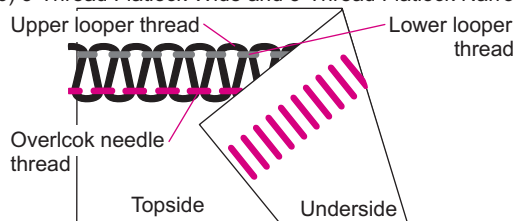
(a) 3-Thread Overlock, Wide

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 3.0 | | 4.0 | 3.5 | |

(b) 3-Thread Overlock, Narrow

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | | 4.0 | 4.0 | 4.0 | |

(6) 3-Thread Flatlock Wide and 3-Thread Flatlock Narrow



(a) 3-Thread Flatlock, Wide

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 0.0 | | 4.0 | 7.0 | |

(b) 3-Thread Flatlock, Narrow

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | | 0.0 | 4.0 | 7.0 | |

(7) 3-THREAD STRETCH OVERLOCK

- * When the lower looper thread tension is too loose :
 - Turn the lower looper thread tension dial (red) toward a higher number.
- * When the left needle thread tension is too loose :
 - Turn the left needle thread tension dial (orange) toward a higher number.
- * When the right needle thread tension is too loose :
 - Turn the right needle thread tension dial (blue) toward a higher number.

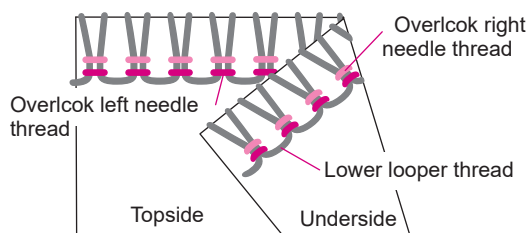
(8) 4-THREAD OVERLOCK

- * When the upper looper thread line on the underside of the fabric :
 - Turn the upper looper thread tension dial (green) toward a higher number.
 - Or, turn lower looper thread tension dial (red) toward a lower number.
- * When the lower looper thread appears on the top of the fabric :
 - Turn the lower looper thread tension dial (red) toward a higher number.
 - Or, turn the upper looper thread tension dial (green) toward a lower number.
- * When the left needle thread tension is too loose :
 - Turn the left needle thread tension dial (orange) toward a higher number.
- * When the right needle thread tension is too loose :
 - Turn the right needle thread tension dial (blue) toward a higher number.

(9) 4-THREAD SAFETY STITCH

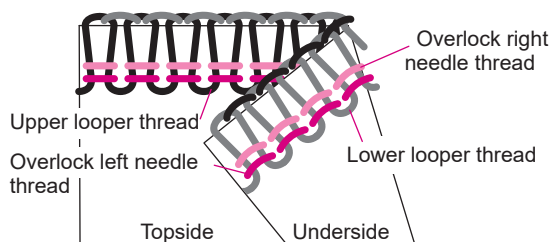
- * See page 16 for instructions on converting upper looper to converter.
- * When the lower looper thread lies on the underside of the fabric :
 - Turn the lower looper thread tension dial (red) toward a higher number.
 - Or, turn the needle thread tension dial (blue) toward a lower number.
- * When the needle thread tension is too loose :
 - Turn the needle thread tension dial (blue) toward a higher number.
 - Or, turn the lower looper thread tension dial (red) toward a lower number.
- * When the chain stitch needle thread tension is too loose :
 - Turn the chain stitch needle thread tension dial (orange) toward a higher number.
 - Or, turn the chain stitch looper thread tension dial (brown) toward a lower number.

(7) 3-Thread Stretch Overlock



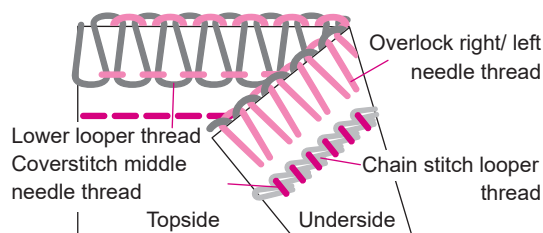
| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-----------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 4.5 | 4.0 | Converter | 3.0 | |

(8) 4-Thread Overlock



| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 4.0 | 4.0 | 4.0 | 4.0 | |

(9) 4-Thread Safety Stitch Wide and 4-Thread Safety Stitch Narrow



(a) 4-Thread Safety Stitch, Wide

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-----------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 4.0 | 2.5 | Converter | 4.5 | 6.0 |

(b) 4-Thread Safety Stitch, Narrow

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-----------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 4.0 | 2.5 | Converter | 4.5 | 6.0 |

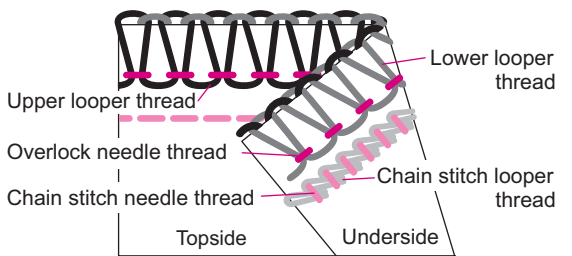
(10) 5-THREAD SAFETY STITCH

- * When the upper looper thread line on the underside of the fabric :
 - Turn the upper looper thread tension dial (green) toward a higher number.
 - Or, turn lower looper thread tension dial (red) toward a lower number.
- * When the lower looper thread appears on the top of the fabric :
 - Turn the lower looper thread tension dial (red) toward a higher number.
 - Or, turn the upper looper thread tension dial (green) toward a lower number.
- * When the left needle thread tension is too loose :
 - Turn the left needle thread tension dial (orange) toward a higher number.
- * When the chain stitch needle thread tension is too loose :
 - Turn the chain stitch needle thread tension dial (orange) toward a higher number.
 - Or, turn the chain stitch looper thread tension dial (brown) toward a lower number.

(11) COVERSTITCH

- * When the coverstitch looper thread is too loose :
 - Turn the coverstitch looper thread tension dial (brown) toward a higher number.
- * When the coverstitch left needle thread tension is too loose :
 - Turn the coverstitch left needle thread tension dial (orange) toward a higher number.
 - Or, turn the coverstitch looper thread tension dial (brown) toward a lower number.
- * When the coverstitch right needle thread tension is too loose :
 - Turn the coverstitch right needle thread tension dial (blue or orange) toward a higher number.
 - Or, turn the coverstitch looper thread tension dial (brown) toward a lower number.
- * When the top surface of fabric bulges between needle threads and the seams on the underside of the fabric becomes tight :
 - Turn the coverstitch looper thread tension dial (brown) toward a lower number.

(10) 5-Thread Safety Stitch Wide and 5-Thread Safety Stitch Narrow



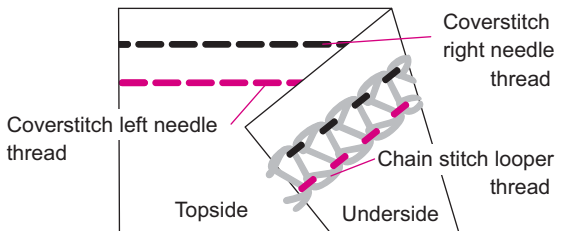
(a) 5-Thread Safety Stitch, Wide

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 4.0 | 5.0 | 4.0 | 3.5 | 6.0 |

(b) 5-Thread Safety Stitch, Narrow

| Fabric | Tension Dial | | | | |
|---------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Medium weight | 4.0 | 4.0 | 4.0 | 4.0 | 6.0 |

(11) Coverstitch Wide and Coverstitch Narrow



(a) Coverstitch, Wide

| Coverstitch looper thread | Tension Dial | | | | |
|---------------------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Polyester | 4.0 | | 7.0 | | 3.0 |
| Wooly nylon | 4.0 | | 7.0 | | 1.0 |

(b) Coverstitch, Narrow

| Coverstitch looper thread | Tension Dial | | | | |
|---------------------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Polyester | 4.0 | 6.0 | | | 3.0 |
| Wooly nylon | 4.0 | 6.0 | | | 1.0 |

(12) COVERSTITCH, TRIPLE

* When the coverstitch looper thread is too loose :

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

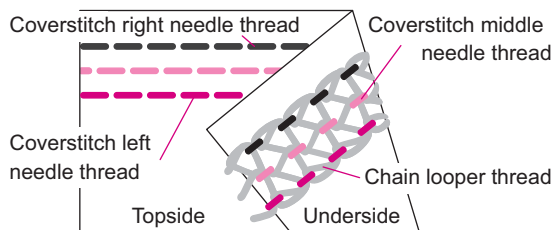
* When the coverstitch left needle thread tension is too loose :

- Turn the coverstitch left needle thread tension dial (orange) toward a higher number.
- Or, turn the coverstitch looper thread tension dial (brown) toward a lower number.

* When the coverstitch middle needle thread tension is too loose :

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

(12) Coverstitch, Triple



| Coverstitch looper thread | Tension Dial | | | | |
|---------------------------|--------------|------|-------|-----|-------|
| | Orange | Blue | Green | Red | Brown |
| Polyester | 4.0 | 6.0 | 7.0 | | 3.0 |
| Wooly nylon | 4.0 | 6.0 | 7.0 | | 1.0 |

* When the coverstitch right needle thread tension is too loose :

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

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

- Turn the coverstitch looper thread tension dial (brown) toward a lower number.

(13) NARROW EDGE AND ROLLED EDGE

| <p>(a) 3-Thread Narrow Edge</p> |  | <table><tr><th rowspan="2">Light Weight Fabric</th><th colspan="5">Tension Dial</th></tr><tr><th>Orange</th><th>Blue</th><th>Green</th><th>Red</th><th>Brown</th></tr><tr><td>Polyester</td><td></td><td>5.0</td><td>5.5</td><td>5.0</td><td></td></tr><tr><td>Wooly nylon</td><td></td><td>5.0</td><td>3.5</td><td>3.5</td><td></td></tr></table> | Light Weight Fabric | Tension Dial | | | | | Orange | Blue | Green | Red | Brown | Polyester | | 5.0 | 5.5 | 5.0 | | Wooly nylon | | 5.0 | 3.5 | 3.5 | |
|---------------------------------|---|--|---------------------|--------------|-------|--|--|--|--------|------|-------|-----|-------|-----------|--|-----|-----------|-----|--|-------------|--|-----|-----------|-----|--|
| Light Weight Fabric | Tension Dial | | | | | | | | | | | | | | | | | | | | | | | | |
| | Orange | Blue | Green | Red | Brown | | | | | | | | | | | | | | | | | | | | |
| Polyester | | 5.0 | 5.5 | 5.0 | | | | | | | | | | | | | | | | | | | | | |
| Wooly nylon | | 5.0 | 3.5 | 3.5 | | | | | | | | | | | | | | | | | | | | | |
| <p>(b) 3-Thread Rolled Edge</p> |  | <table><tr><th rowspan="2">Light Weight Fabric</th><th colspan="5">Tension Dial</th></tr><tr><th>Orange</th><th>Blue</th><th>Green</th><th>Red</th><th>Brown</th></tr><tr><td>Polyester</td><td></td><td>6.0</td><td>4.0</td><td>7.0</td><td></td></tr><tr><td>Wooly nylon</td><td></td><td>6.0</td><td>3.5</td><td>5.0</td><td></td></tr></table> | Light Weight Fabric | Tension Dial | | | | | Orange | Blue | Green | Red | Brown | Polyester | | 6.0 | 4.0 | 7.0 | | Wooly nylon | | 6.0 | 3.5 | 5.0 | |
| Light Weight Fabric | Tension Dial | | | | | | | | | | | | | | | | | | | | | | | | |
| | Orange | Blue | Green | Red | Brown | | | | | | | | | | | | | | | | | | | | |
| Polyester | | 6.0 | 4.0 | 7.0 | | | | | | | | | | | | | | | | | | | | | |
| Wooly nylon | | 6.0 | 3.5 | 5.0 | | | | | | | | | | | | | | | | | | | | | |
| <p>(c) 2-Thread Narrow Edge</p> |  | <table><tr><th rowspan="2">Light Weight Fabric</th><th colspan="5">Tension Dial</th></tr><tr><th>Orange</th><th>Blue</th><th>Green</th><th>Red</th><th>Brown</th></tr><tr><td>Polyester</td><td></td><td>3.5</td><td>CONVERTER</td><td>5.5</td><td></td></tr><tr><td>Wooly nylon</td><td></td><td>3.5</td><td>CONVERTER</td><td>3.0</td><td></td></tr></table> | Light Weight Fabric | Tension Dial | | | | | Orange | Blue | Green | Red | Brown | Polyester | | 3.5 | CONVERTER | 5.5 | | Wooly nylon | | 3.5 | CONVERTER | 3.0 | |
| Light Weight Fabric | Tension Dial | | | | | | | | | | | | | | | | | | | | | | | | |
| | Orange | Blue | Green | Red | Brown | | | | | | | | | | | | | | | | | | | | |
| Polyester | | 3.5 | CONVERTER | 5.5 | | | | | | | | | | | | | | | | | | | | | |
| Wooly nylon | | 3.5 | CONVERTER | 3.0 | | | | | | | | | | | | | | | | | | | | | |
| <p>(d) 2-Thread Rolled Edge</p> |  | <table><tr><th rowspan="2">Light Weight Fabric</th><th colspan="5">Tension Dial</th></tr><tr><th>Orange</th><th>Blue</th><th>Green</th><th>Red</th><th>Brown</th></tr><tr><td>Polyester</td><td></td><td>6.0</td><td>CONVERTER</td><td>4.0</td><td></td></tr><tr><td>Wooly nylon</td><td></td><td>5.5</td><td>CONVERTER</td><td>3.5</td><td></td></tr></table> | Light Weight Fabric | Tension Dial | | | | | Orange | Blue | Green | Red | Brown | Polyester | | 6.0 | CONVERTER | 4.0 | | Wooly nylon | | 5.5 | CONVERTER | 3.5 | |
| Light Weight Fabric | Tension Dial | | | | | | | | | | | | | | | | | | | | | | | | |
| | Orange | Blue | Green | Red | Brown | | | | | | | | | | | | | | | | | | | | |
| Polyester | | 6.0 | CONVERTER | 4.0 | | | | | | | | | | | | | | | | | | | | | |
| Wooly nylon | | 5.5 | CONVERTER | 3.5 | | | | | | | | | | | | | | | | | | | | | |

32. MACHINE MAINTENANCE

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

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

(1) CLEANING



Turn off the main power switch and unplug the machine.

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

(2) 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.

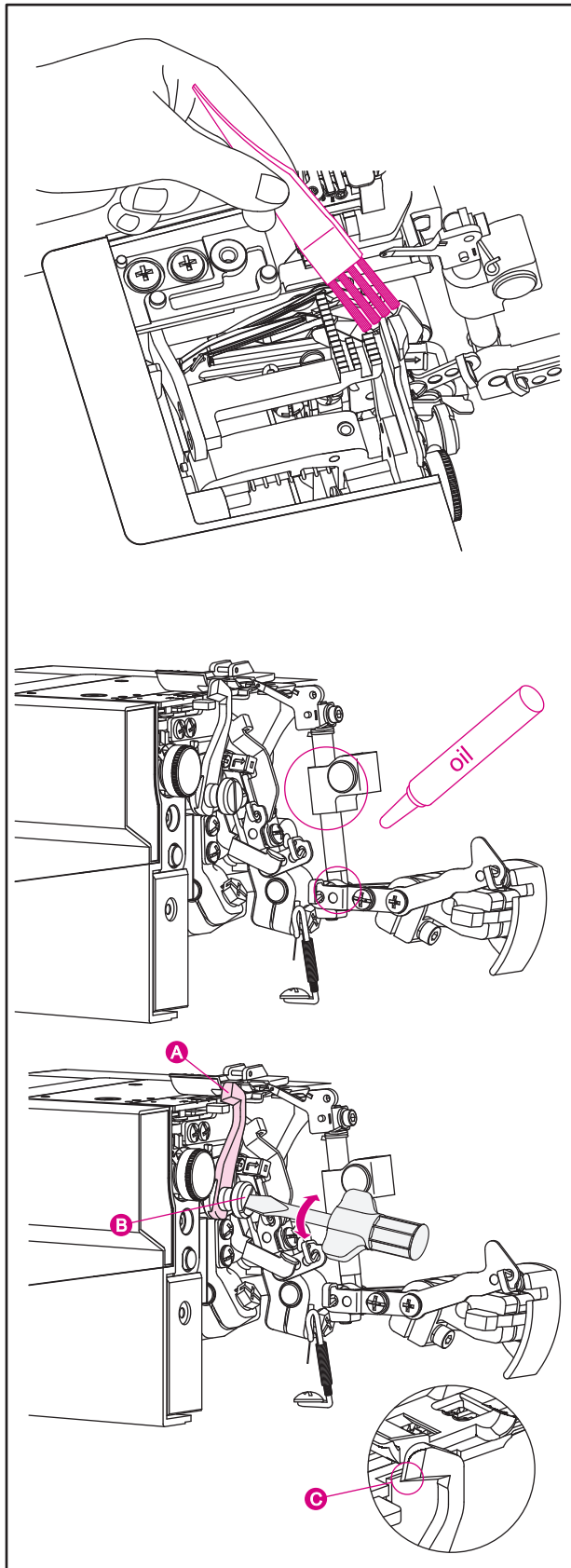
(3) REPLACING THE MOVABLE UPPER CUTTER



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.

- * Open the looper cover and set the moveable upper cutter (A) in the working position.
- * Loosen the set screw (B) and remove the upper cutter (A).
- * 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 (B).
- * Make sure the front edge of the movable upper cutter is 0.5-1.0 mm lower than the cutting edge of the stationary lower cutter (C).



(4) 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.

(5) SERVICING

Have your overlock machine serviced regularly by your local authorized dealer!

If you have followed the trouble shooting information. If there is a specific problem, it is a great help to test sew with your thread on a scrap of your sewing fabric and bring it to your dealer. A sewing sample will often give much better information than words.

Non-original Parts and Accessories

The warranty does not cover any defect or damage caused by use of non-original accessories or parts.

33. 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. |
| Stitch skip | <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. |

| Problem | Solution |
|--------------------------|---|
| 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. |

34. SPECIFICATIONS

| | |
|-------------------------|--|
| Sewing speed | Maximum 1300 stitches/min |
| Stitch length | 1.0 - 5.0 mm |
| Differential feed ratio | 1:0.6 - 1:2 |
| Overlock stitch width | Left needle: 5.0 - 7.0 mm Right needle: 3.0 - 5.0 mm Coverstitch: 2.8 - 5.6 mm |
| Needle bar stroke | 27 mm |
| Presser foot rise | 4.5 mm |
| Needles | ELx705 size: #14/90, #12/80 |
| Number of needles | 1, 2, 3 |
| Number of threads | 2, 3, 4, 5 |

35. MACHINE DIMENSIONS

| | |
|--------|---------------|
| Width | 372mm/ 412 mm |
| Length | 293mm |
| Height | 296 mm/ 354mm |
| Weight | 7.9 kg |

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

