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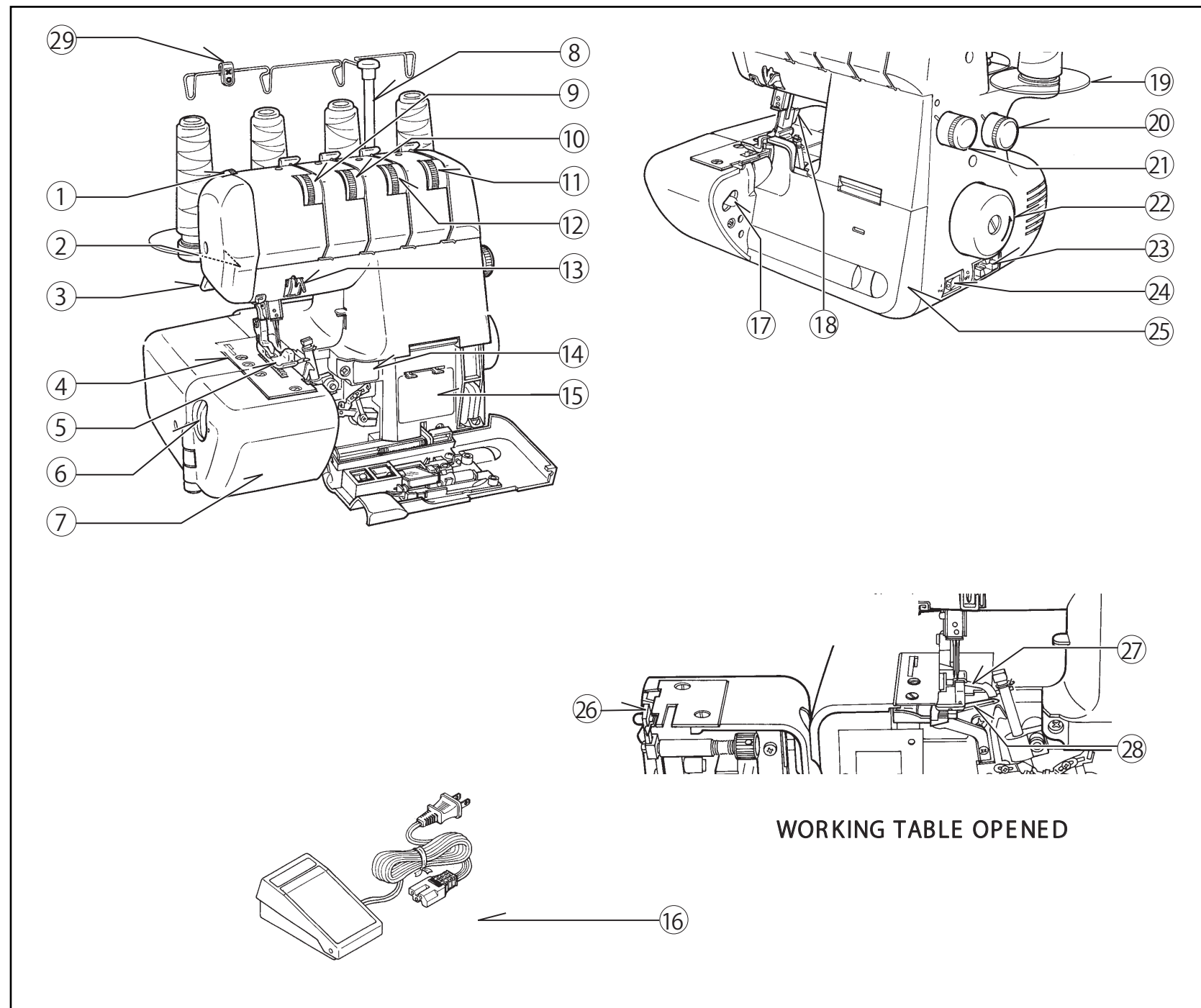
SPECIFICATION OF MACHINE

MODEL	087
Number of threadS	2, 3 or 4 threads
Overedge Stitch width	6 mm (left needle) and 3.8 mm (right needle)
Needle	HA 1- SP, HA × 1 (130/705 H)
Stitch length	1 - 5 mm
Stitching Speed	Up to 1300 Stitches per minute
DimenSionS	320 mm(W) × 280 mm(D) × 280 mm(H)
Weight	8 KgS (17.6 lbS)

1. KNOWING YOUR MACHINE

IDENTIFICATION CHART

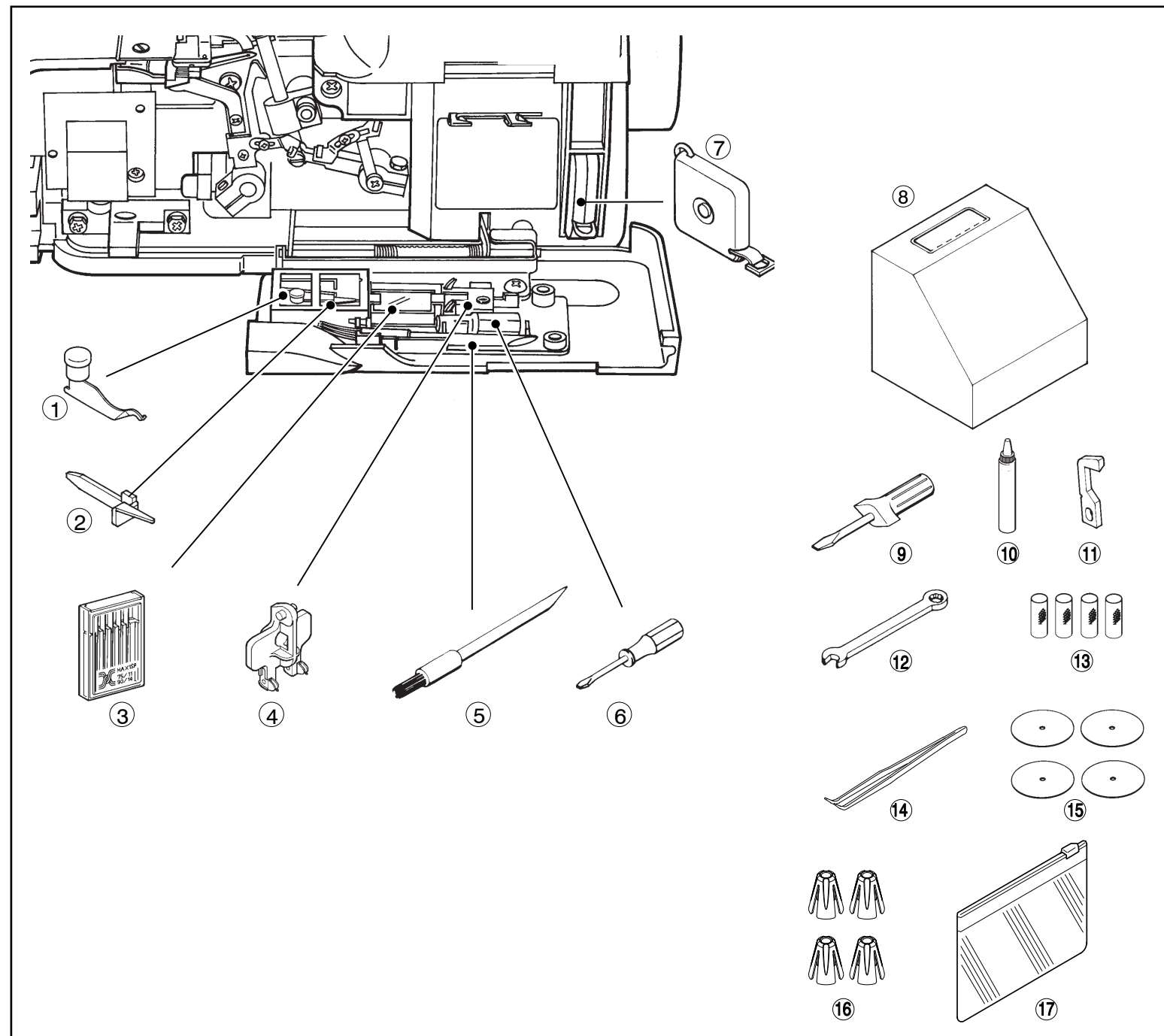
1. Foot pressure regulator
2. Sewing light
3. Presser foot lever
4. Needle plate
5. Presser foot
6. Overedge cutting width dial
7. Working table
8. Thread guide pole
9. Left needle thread tension control
10. Right needle thread tension control
11. Lower looper thread tension control
12. Upper looper thread tension control
13. Needle thread guides
14. Two thread convertor instruction
15. Threading chart
16. Foot control
17. Release lever
18. Foot release lever
19. spool disc
20. Differential feed control dial
21. Stitch length dial
22. Hand wheel
23. Plug connector socket
24. Light and power switch
25. Front cover
26. Moving cutter
27. Upper looper
28. Lower looper
29. Cord guide



ACCESSORIES

All parts listed may be obtained from your nearest dealer.

1. Two-thread convertor
2. Stitch finger (B) (See page 40)
3. Needle set
4. Needle threader (option)
5. Brush
6. Screw driver (small)
7. Tape measure (option)
8. Machine cover
9. Screw driver (large)
10. Oiler
11. Moving cutter
12. Spanner
13. Thread net
14. Tweezers
15. Spool disc
16. Spool holder
17. Accessory bag



SETTING UP YOUR MACHINE

1. Wipe off excess oil in the needle plate and bed areas.

2. FOOT CONTROL

Push foot control plug into connector socket, and connect the power line plug into power supply outlet.

3. POWER /LIGHT SWITCH

Your machine will not operate unless the power/light switch is turned on. This same switch controls both machine power and sewing light.

When leaving the machine unattended, or servicing the machine, remove the power line plug from supply outlet.

4. OPENING FRONT COVER

To open front cover, pull it to the right and down towards you.

POLARIZED PLUGS CAUTION (USA only)

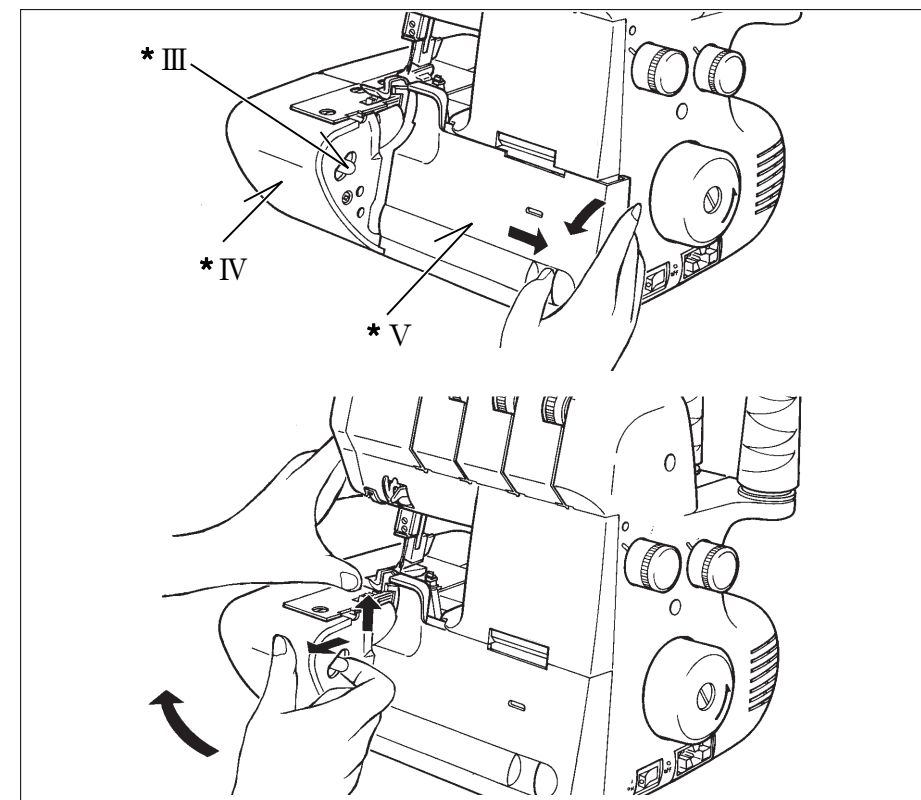
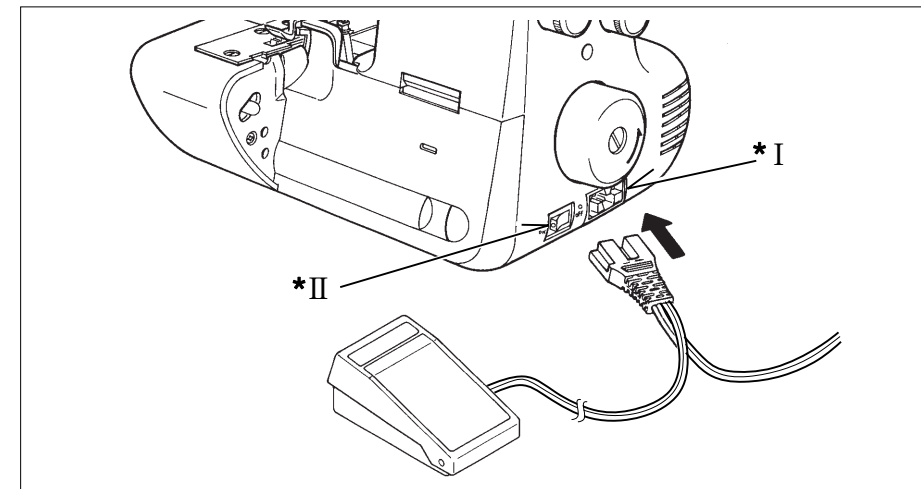
This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact an electrician to replace the obsolete outlet. Do not defeat the safety purpose of the polarized plug.

Use Yamamoto Electric, Model YC-482E with this sewing machine model 087.

5. OPENING WORKING TABLE

To open working table, pull the release lever towards you with your right hand, and lift the front of presser foot up with your left hand.

Illustration * I : Connector socket
* II : Power/light switch
* III : Release lever
* IV : Working table
* V : Front cover



PREPARATION FOR THREADING

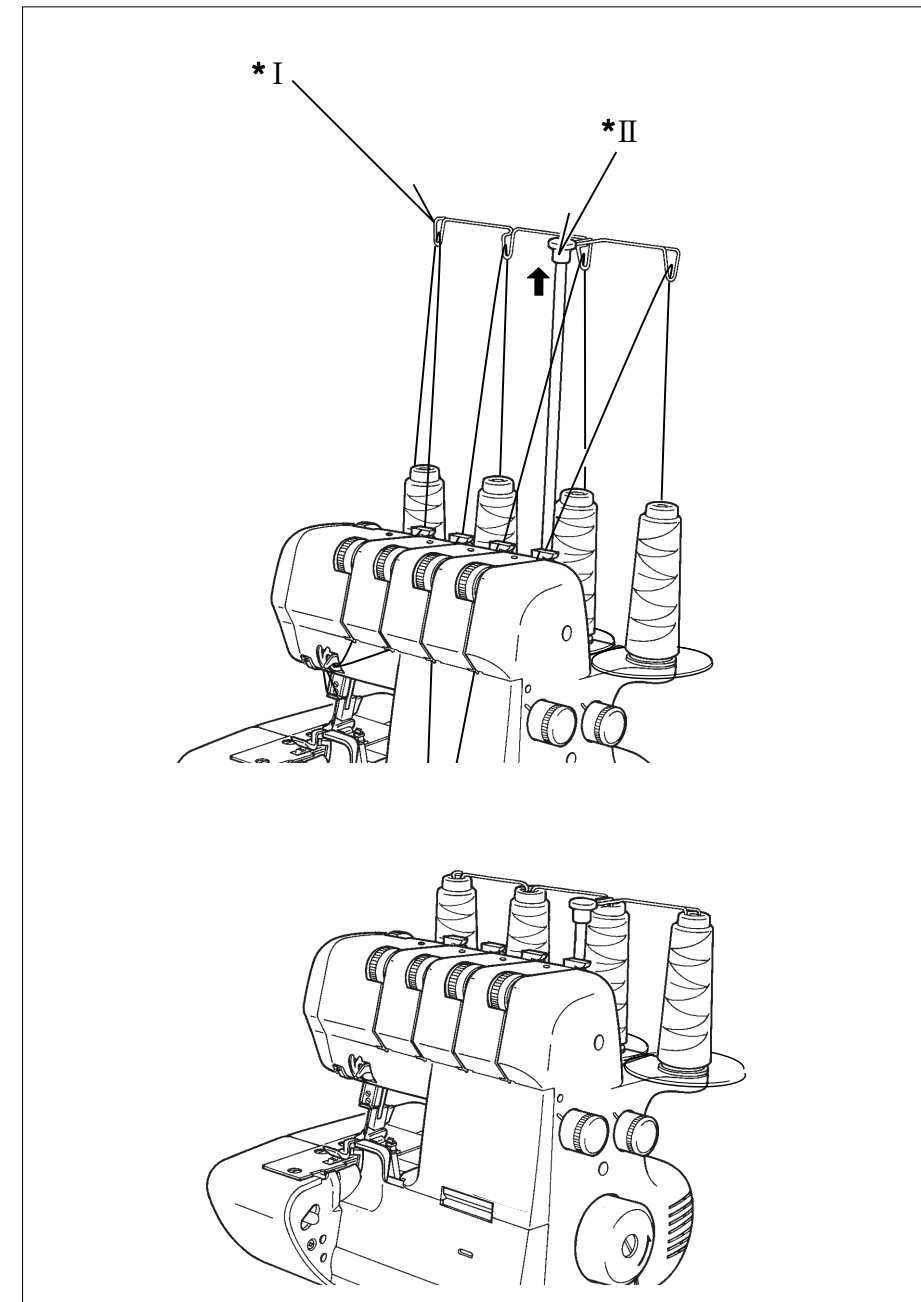
THREAD GUIDE POLE

Pull up thread guide pole to the highest point until you hear it click. Place thread spools on pins and draw thread through thread guides on the pole from rear to front.

Thread guide of pole can hold thread spools on the spool stand by pulling down the pole as illustrated.

Illustration * I : Thread guide

* II : Thread guide pole



SPOOL CAPS FOR DOMESTIC TYPE SPOOLS

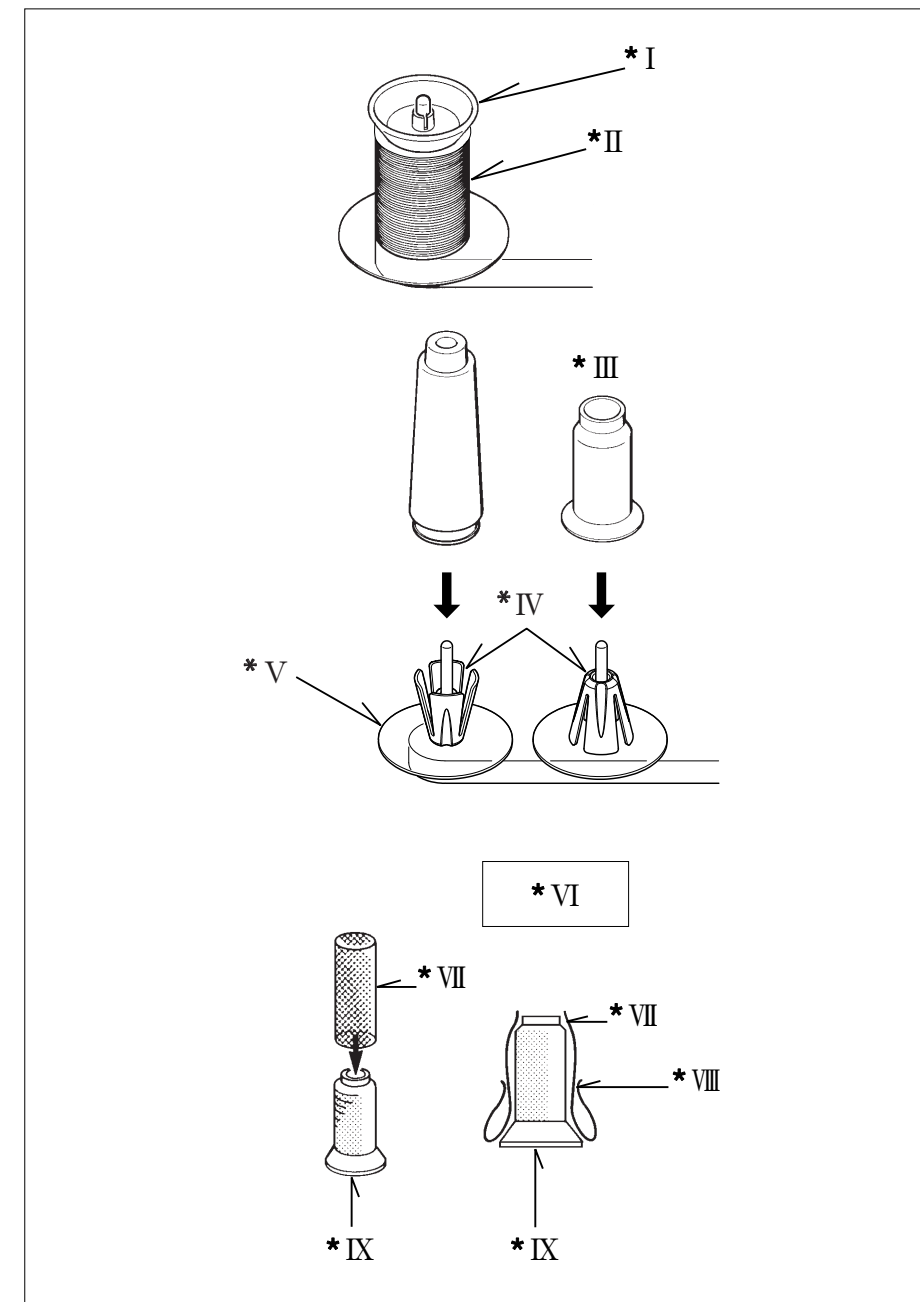
SPOOL DISC AND SPOOL HOLDERS FOR CONE SPOOLS

For large cone spools use the spool holders with the wide end at the top, and for small ones, use the same spool holders but with the narrow end at the top.

SPOOL NETS

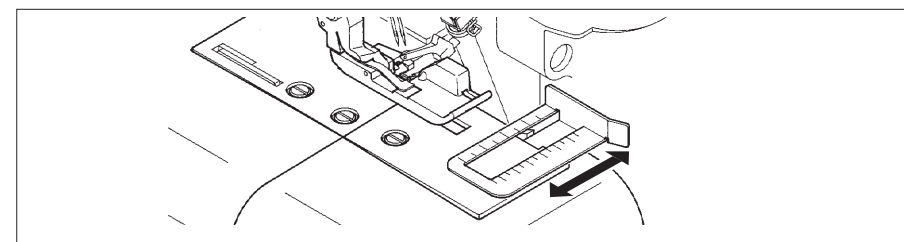
Polyester or bulky nylon threads become loose while unwinding. To keep consistent feeding of such threads, utilize spool net sleeving over the spool.

Illustration * I : Spool cap
 * II : Domestic cotton reel
 * III : Cone type thread
 * IV : Spool holder
 * V : Spool disc
 * VI : Thread comes off the top
 * VII : Net
 * VIII : Turn up
 * IX : Spool



CUTTING WIDTH GAUGE

When using cutting width gauge, the fabric is cut down and sewn at same distance from the edge of fabric within the distance of the width adjuster.

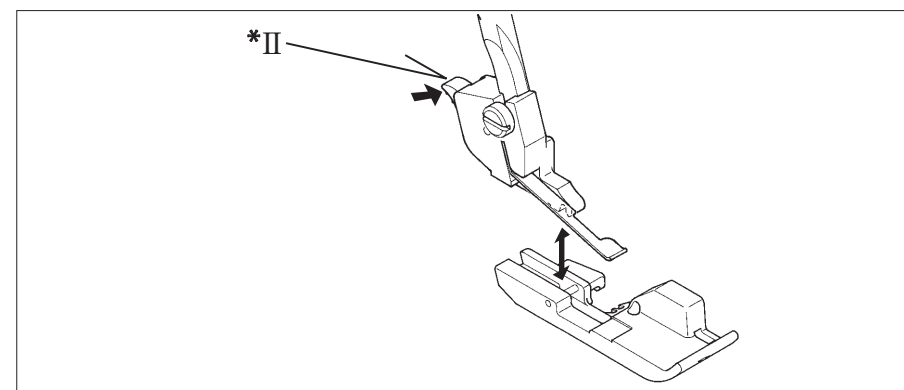


CHANGING PRESSER FEET

Be sure needle is in the up position. Raise presser foot lever.

1. Push foot release lever to remove the foot.
2. Place the desired foot on the needle plate aligning needle holes.
3. Lower the presser foot lever and push foot release lever so that the foot holder snaps on the foot.

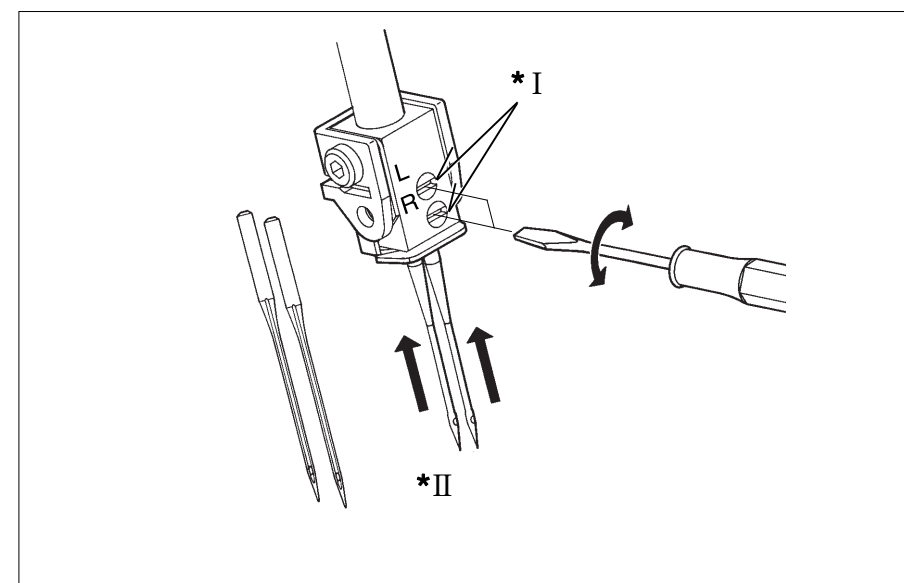
Illustration * I : Turn upwards
* II : Foot release lever



CHANGING NEEDLE

Raise needle bar to its highest point by turning hand wheel towards you, but leave presser foot down. Loosen needle clamp screw to remove the needle, and place new needle with Flat side Away From You, into the needle bar as far as it will go, and tighten screw.

Illustration * I : Needle clamp screw
* II : Flat side away from you.



NEEDLE, THREAD AND FABRIC CHART

USe HA × 1SP, HA × 1(130/705H) NeedleS.

FABRIC		THREAD	NEEDLE
COTTON LINEN	Light weight: Organdy, Lawn, Gingham	Cotton No. 100	90 (14) for general Sewing 75 (11) for light weight fabricS
	Heavy weight: Oxford, Denim, Cotton Gaberdine	PolyeSter No. 60 - 50 Cotton No. 60	
WOOL	Light weight: Tropical, Wool, Poplin	PolyeSter No. 80 Cotton No. 60	
	Serge, Gaberdine, Flannel	PolyeSter No. 80 - 60 Cotton No. 60	
	Heavy weight: VelourS, Camelhair, AStrakhan	PolyeSter No. 60 - 50 Cotton No. 60	
SYNTHETIC FIBRE	Light weight: Georgette Crepe, Voile, Satin	PolyeSter No. 100 - 80 Cotton No.120-80	
	Heavy weight: Taffeta, TwillS, Denim	PolyeSter No. 60 Cotton No. 60	
KNIT	Tricot	PolyeSter No. 80 - 60 Cotton No. 80-60	
	JerSey	PolyeSter No. 60 - 50 Cotton No. 60	
	Wool	PolyeSter No. 60 - 50 Bulk Nylon	

* Synthetic threadS are recommended for ordinary overlocking.
PolyeSter thread, for example, iS very uSeful for different typeS
of fabric.

NOTE: Keep in mind that the lower and upper looperS will uSe
about twice the amount of thread aS the needleS. When
purchaSing thread for Sewing, therefore, eSpecially if it iS an
unuSual colour, you Should buy Sufficient for your
requirementS.

2. STARTING TO SEW

THREADING YOUR MACHINE

Wrong threading may cause skipped stitches, breaking threads, or other problems.

Try to master the correct threading before moving on to test sewing.

Threading must be carried out in the sequence of Lower Loper-Upper Loper-Needle.

Open the front cover and the working table.

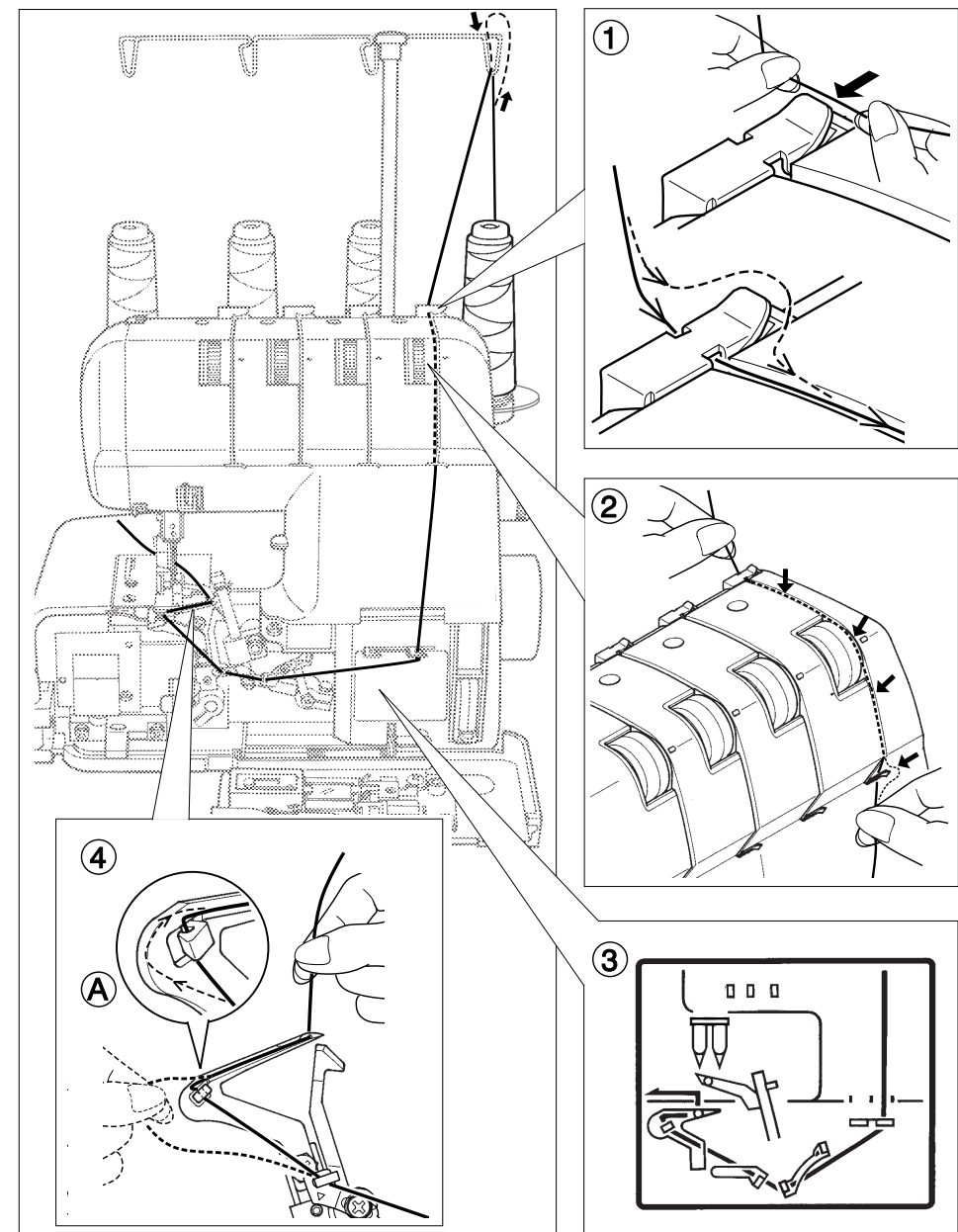
Raise needle to its highest point by turning hand wheel towards you, and raise the presser foot.

Before re-threading lower looper, remove thread from needle eye first, then re-thread the lower looper. This will prevent tangling.

NOTE: Thread tension is released when the presser foot is lifted up.

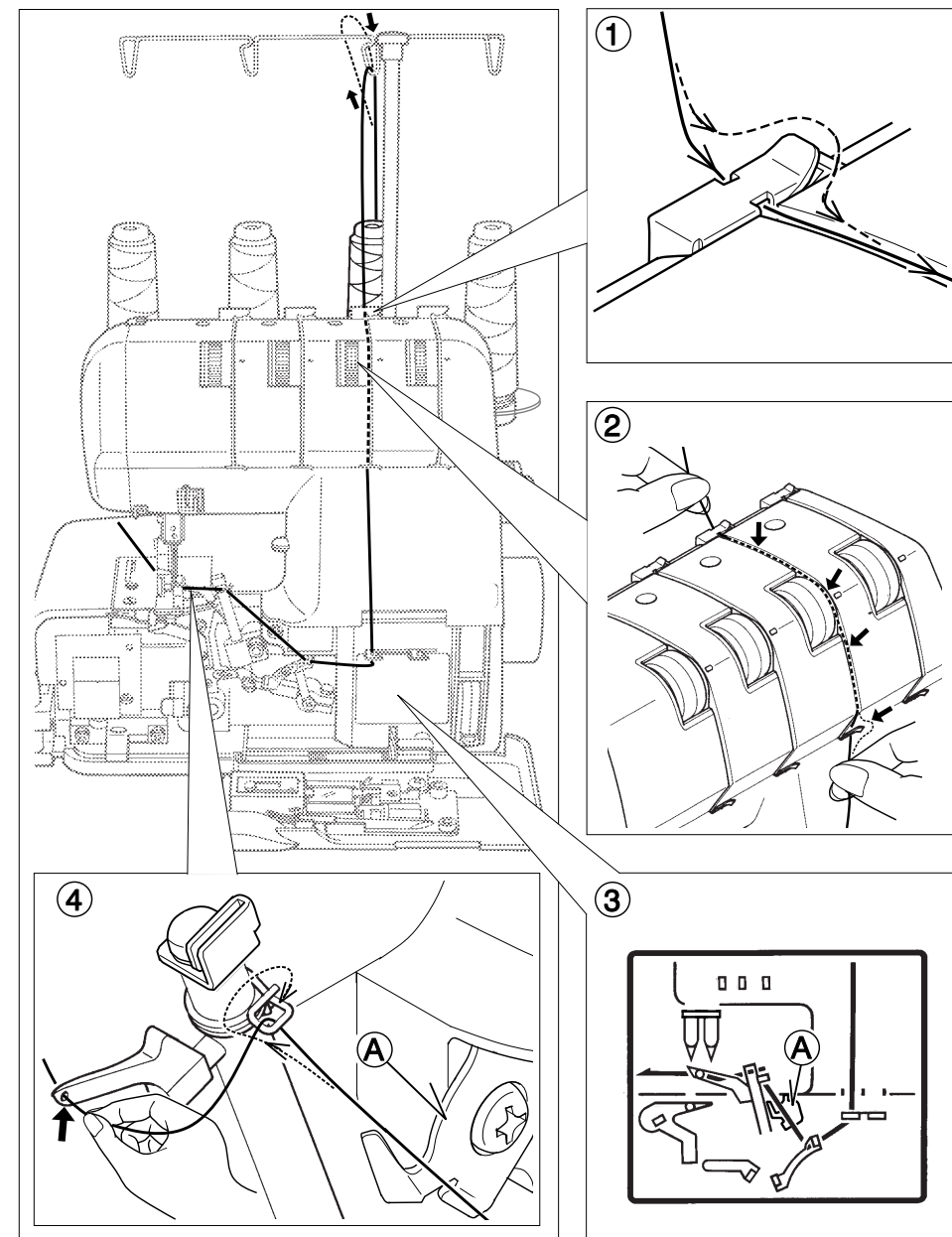
THREADING LOWER LOOPER

1. Feed the thread through the thread guide as illustrated.
2. Pull the lower thread through tension slot. Holding the thread with your left hand, pull down with right hand firmly.
3. Draw the thread through thread guide as illustrated.
4. Pass the thread through lower looper eye, and hook it around part A as indicated by the arrow. Leave about 4 (10 cm) extra thread.



THREADING UPPER LOOPER

1. Feed the thread through the thread guide as illustrated.
2. Pull the upper thread through the slot. Holding the thread with your left hand, pull down with right hand firmly.
3. Draw the thread through the thread guide as illustrated.
When threading according to the instruction, upper looper thread pass the thread guide (A) automatically after rotating hand wheel.
4. Pass the thread through wire thread guide and looper eye, leaving an excess length of about 4 (10 cm) .

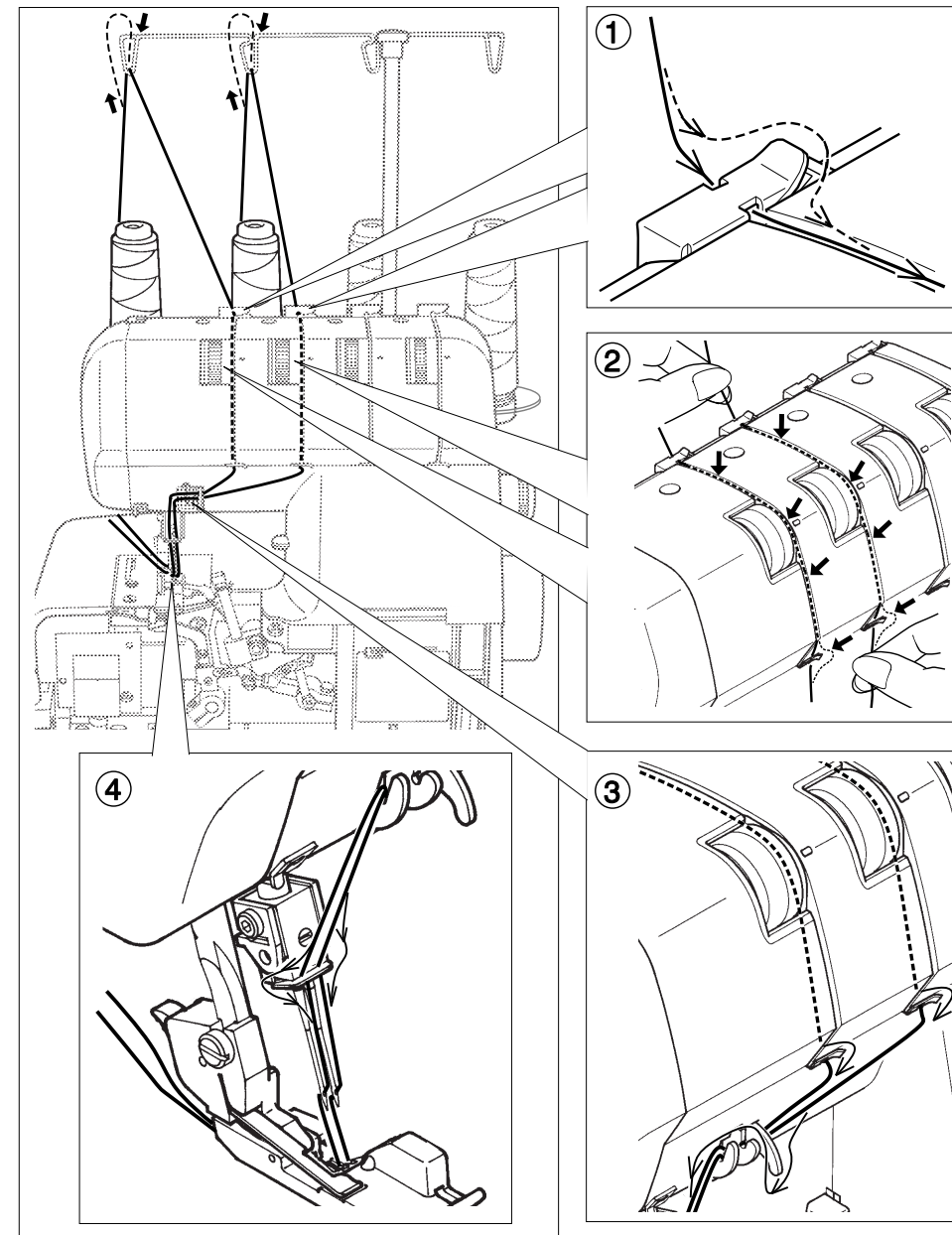


THREADING NEEDLES

1. Feed the thread through the thread guide as illustrated.
2. Draw the needle threads through tension slot. Holding the thread with your left hand, pull down with right hand firmly.
3. Draw the thread through the thread guide as illustrated.
4. Thread the needles from front to back through needle eye and pull the threads towards the back passing along the right side of presser foot, leaving an extra length of about 4 (10 cm).

NEEDLE THREADER (OPTION)

Needle is threaded easily by needle threader. (See page 68.)

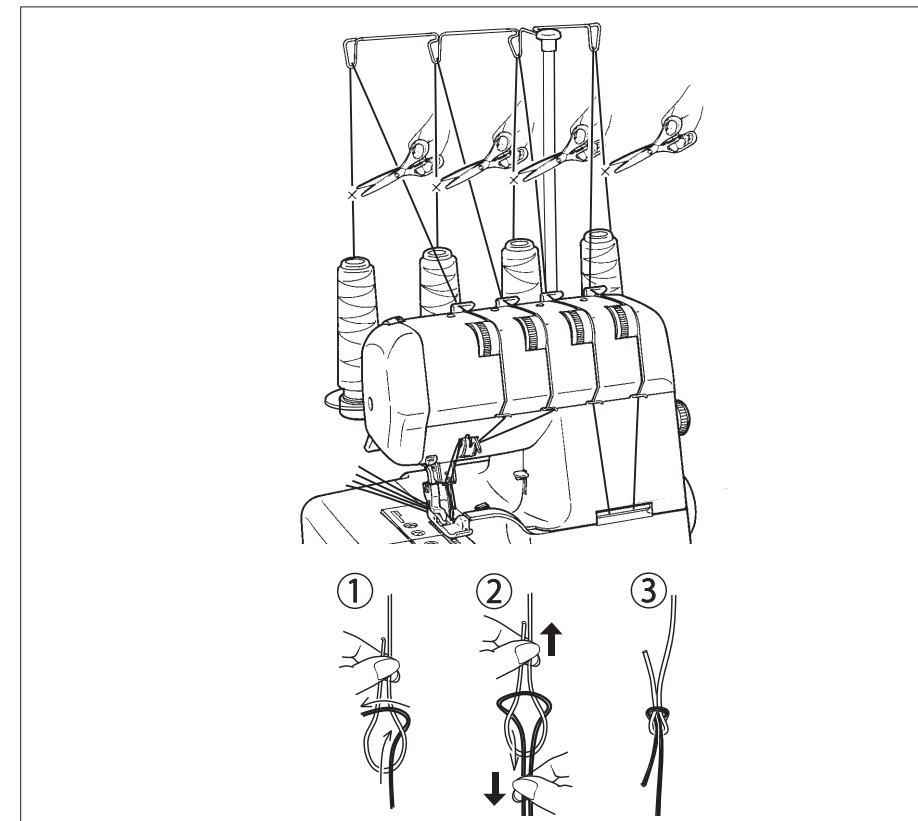


HELPFUL HINTS

REPLACING THREAD SPOOLS

When replacing thread spools, the following steps may be helpful for quick changeover.

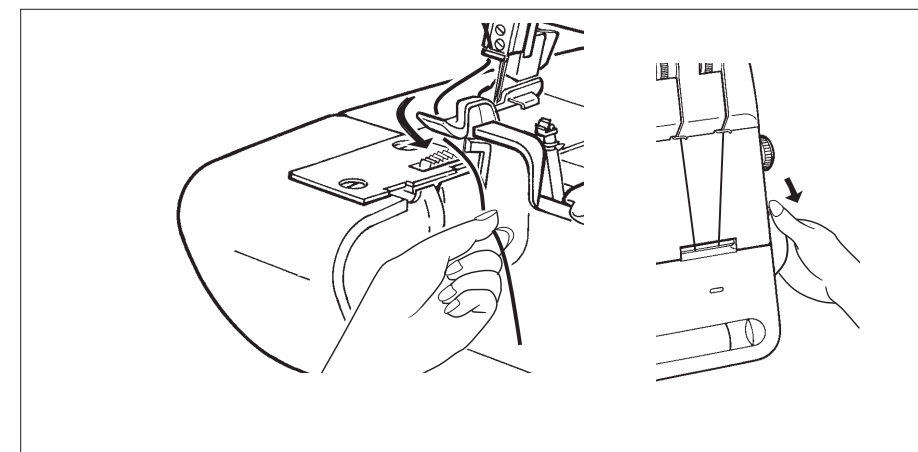
1. Cut off existing threads near the spools. Tie the cut ends thread from new spools as illustrated (seamen's knot).
2. Raise presser foot.
3. Lower needle bar to its lowest position by turning hand wheel AWAY FROM YOU. Carefully pull the existing threads until the connecting knots pass through needle eye and looper eyes.



CUTTING NEEDLE THREAD

Frayed thread may make needle threading difficult.

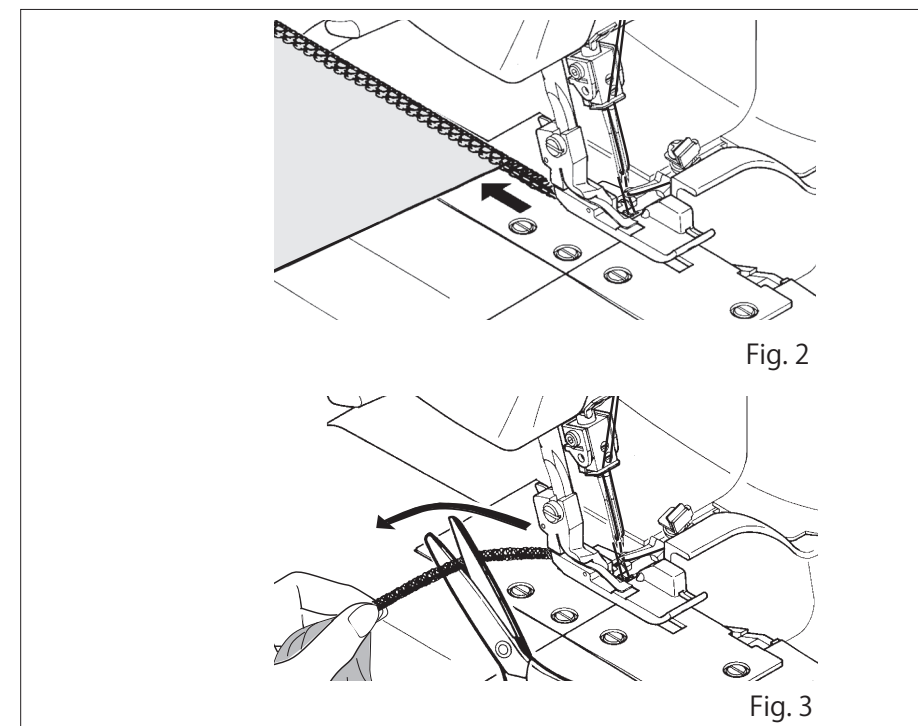
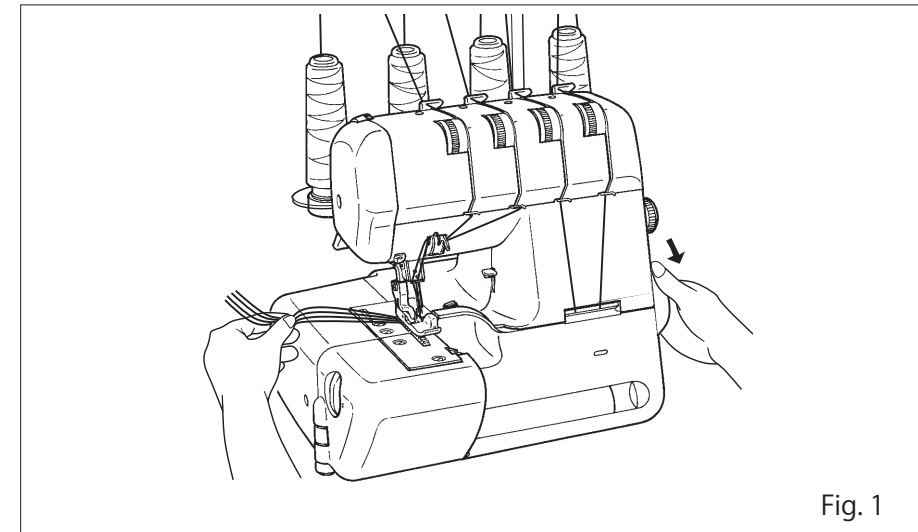
Draw the thread passing under the moving cutter and turn hand wheel towards you to obtain clear cut end as illustrated or cut it with scissors.



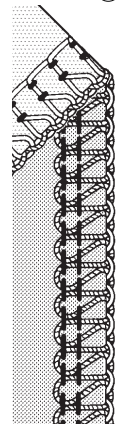
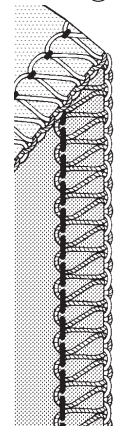

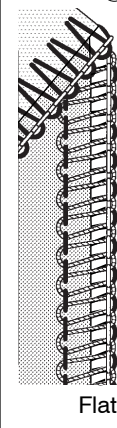
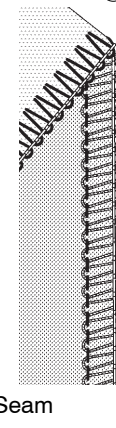
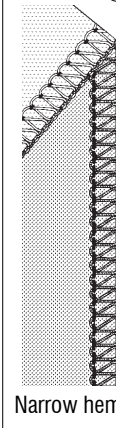
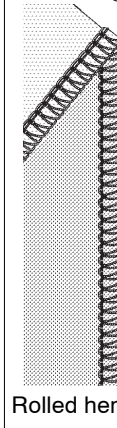
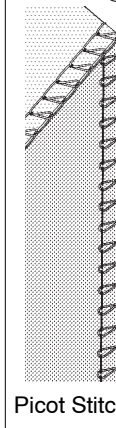
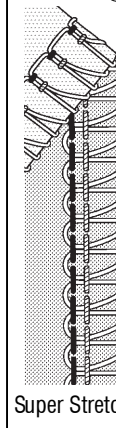
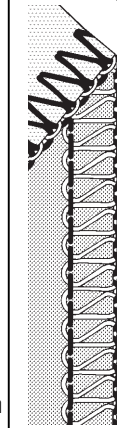
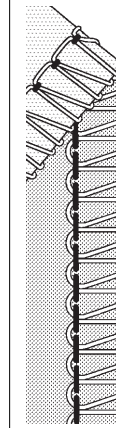
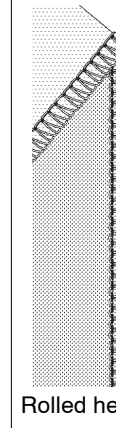
TESTING STITCH OVERLOCK STITCHES

After threading is completed, use a scrap of fabric that you plan to sew and test to sew in the following order.

1. Gently pulling all the threads to the left, lower the presser foot. Rotate the hand wheel towards you a few times to see if the lock stitches are properly formed.
2. Start the machine at low speed and feed in test fabric under the presser foot by slightly pushing it forward. (This can be done with the presser foot down on most fabrics except bulky materials.) Guide the fabric gently as machine automatically feeds the material.
3. Check thread tensions by test sewing on spare fabric. (See page 36.)
4. At fabric end, carry on running machine at low speed, gently pulling the fabric towards the back, until about 5 to 6 cm of extra lock stitches are produced without fabric.
Cut thread with scissors.



SETTING CHART

Number of threadS		4	3							3	2		
Overedge cutting width dial		- 6 -	6		4 -	- 5 -	4	4 - 6		6	- 6 -		4 - 6
Needle to uSe		LeftandRight	Left	Right	Left	Right	Right			LeftandRight	Left		Right
Stitch finger		○	○	○	○	○				○	○	○	
Two thread convertor										○	○	○	○
TenSion control	Left needle thread	- 4 -	- 4 -	-	0 -	-	-	-	-	- 4 -	0 -	- 4 -	-
	Right needle thread	- 4 -	-	- 4 -	-	0 -	- 4 -	- 4 -	- 4 -	- 4 -	-	-	- 5
	Upper looper thread	- 4 -	- 4 -	- 4 -	- 4	- 4	- 4 -	- 4 -	- 4 -	-	-	-	-
	Lower looper thread	- 4 -	- 4 -	- 4 -	7 -	7 -	0 -	- 4 -	- 4 -	0 -	- 4 -	0 -	1 -
Stitch length control		2.5 - 3.5	2.5 - 3.5		3 - 5		2 - 2.5	- R -	- P -	2.5 - 3.5	2.5 - 3.5	2 - 3.5	1 - 2
Ref. No.		①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
													
					Flat Seam		Narrow hem	Rolled hem	Picot Stitch	Super Stretch			Rolled hem
Reference page		36			50		34			32	32, 36	50	32, 34

Note: The above SettingS of tenSion and overedge cutting width dial are for general guidance. A little fine tuning will improve your Stitching in many caSeS. Following advice helpS you.

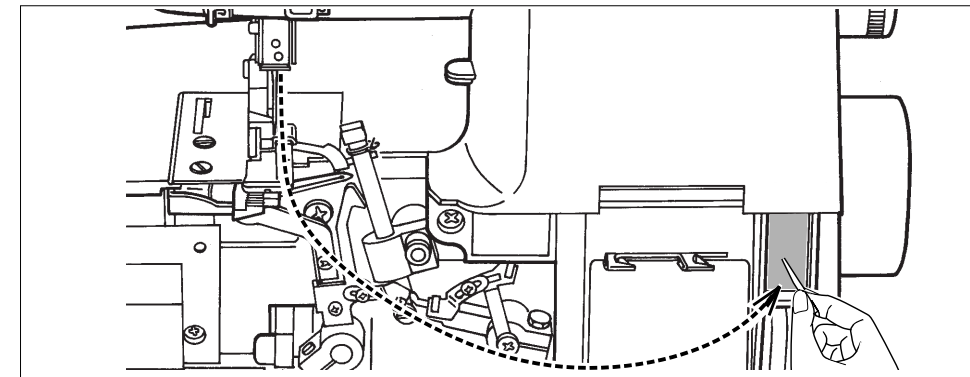
1. Turn overedge cutting width dial. (See page 40)
2. AdjuSt needle tenSionS when you Sew thin or thick material.
3. Reduce the tenSion when you uSe thick thread.

4. Incorrect tenSion Setting cauSeS Stitch Skipping. AdjuSt the tenSion Setting.
5. TenSion Setting will have problem when needle Setting iS incorrect.

Try teSt-Sewing with a piece of fabric you are going to uSe and find the beSt SettingS.

THREE-THREAD OVERLOCK WITH ONE NEEDLE

By threading the LEFT needle only a width of 6 mm will be produced and by threading the RIGHT needle only a width of 3.8 mm will be produced.
Please keep the unused needle on the needle pad as illustrated.



CONVERTING TO TWO-THREAD USE

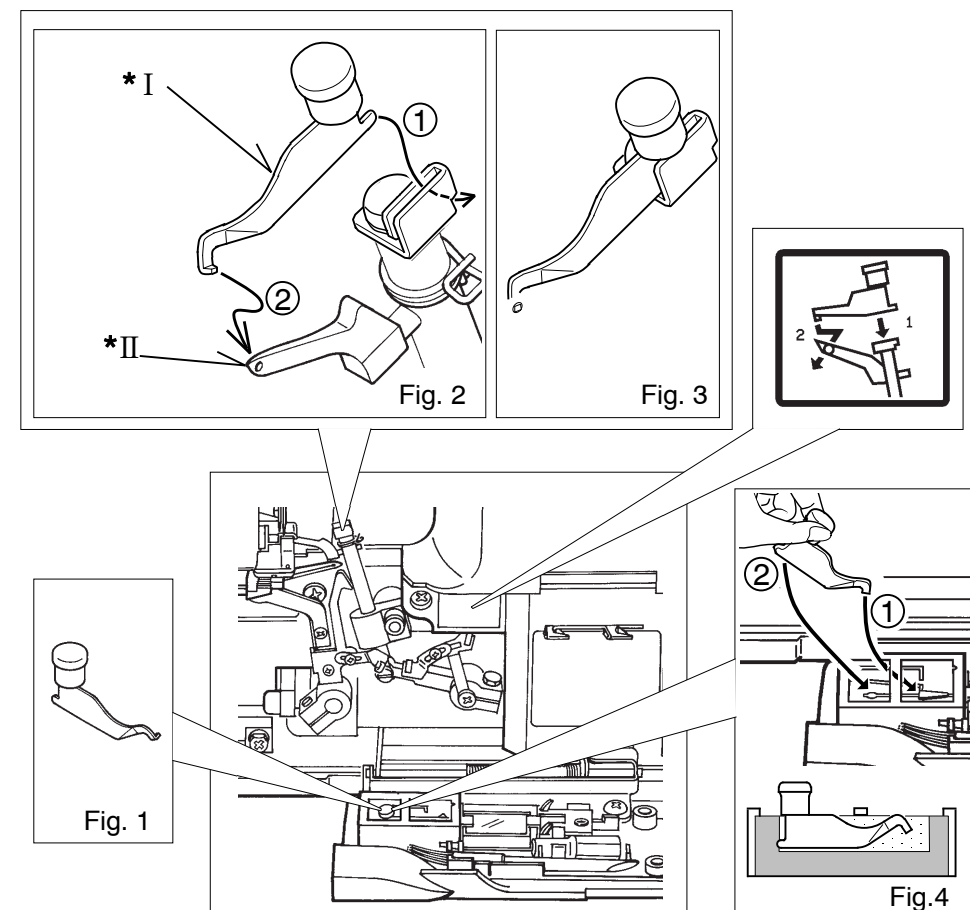
To convert to two thread use, first open the front cover and working table and raise needle to its highest point by turning hand wheel towards you. Remove the right needle and use the left needle. Please keep the unused needle on the needle pad. Pull out the converter as shown in Fig. 1.

Attach the two-thread converter onto the upper looper as shown in Fig. 2, Fig. 3, making sure that you slide tail end in first then locate hook end into looper hole.

When not using converter, insert it deep and keep as illustrated in Fig. 4.

Illustration * I : Two-thread overlock convertor

* II : Upper looper



NARROW AND ROLLED HEM, PICOT STITCH

Narrow and rolled edge is ideal for use on thin materials such as georgette crepe, crepe de chine, silk etc.

Also, picot stitch can be produced particularly when sewing on fine 'scarflike' materials. In view of the nature of these hems, they are unsuitable for use on 'hard' or 'heavy' materials.

1. Raise the presser foot.
2. Open the front cover and working table.
3. Remove the stitch finger from the needle plate by screw driver and keep it in the front cover as illustrated or in the accessory bag.
4. Set the machine according to page 28.

NOTE: 1. Please use following recommended thread for making ideal seams.

2. After finishing, re-set the stitch finger in its place. Please ensure inserting it deep as illustrated in Fig 1.

RECOMMENDED THREAD

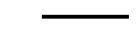
	Narrow overlock edge	Rolled edge	
	with Three ThreadS	with Three ThreadS	with Two ThreadS
Thread for needle	PolyeSter, Nylon, Silk No. 50-100	Nylon No. 100	
Upper looper	PolyeSter, Nylon, Silk No. 50-100	Bulk nylon (leSS Stretchable)	
Lower looper	Bulk nylon (leSS Stretchable)		

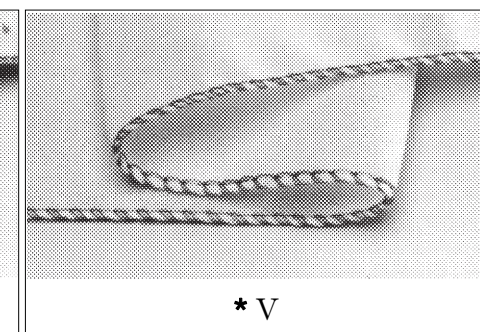
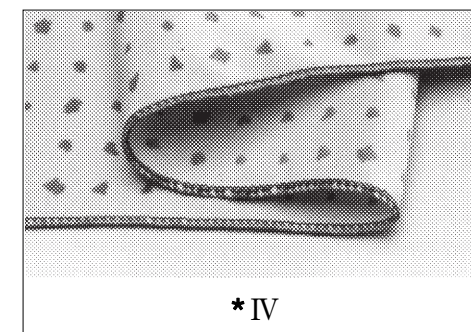
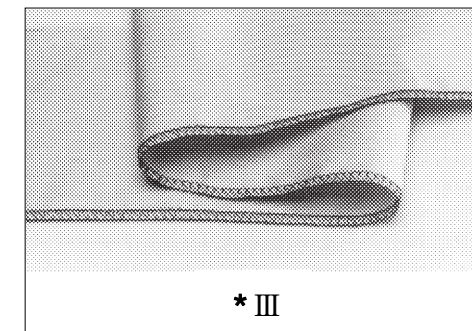
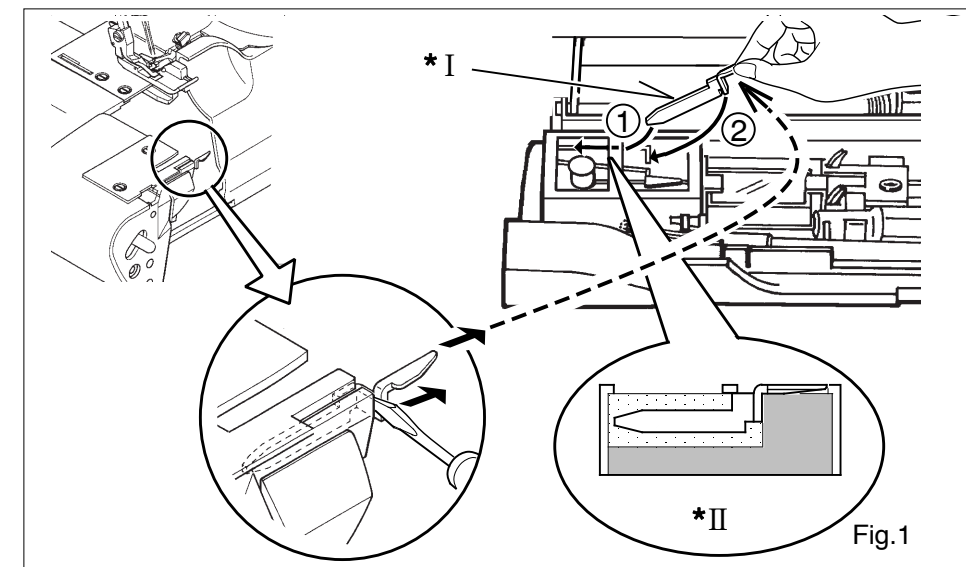
Illustration * I : Stitch finger (A)

* II : Cross section

* III : Narrow hem

* IV : Rolled hem

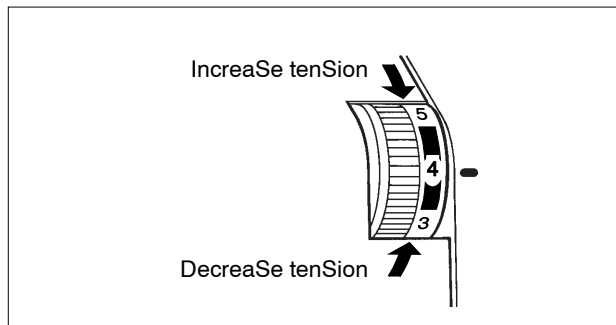
* V : Picot stitch



ADJUSTING THREAD TENSIONS

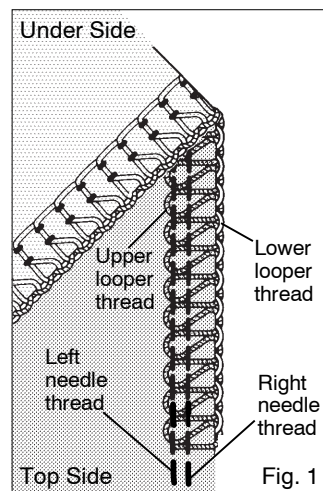
Turning tension dial to a higher number gives a tighter thread tension. Turning tension dial to a lower number gives a looser thread tension. The higher the number, the tighter the tension.

Test thread tensions on a scrap you plan to use.

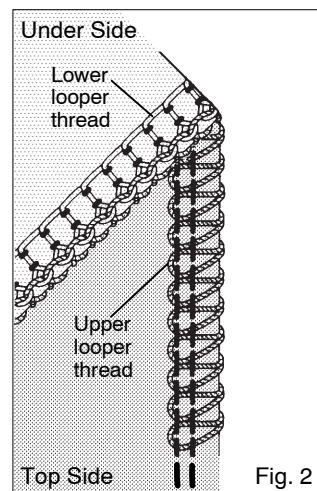


FOUR-THREAD USE

JuSt right.

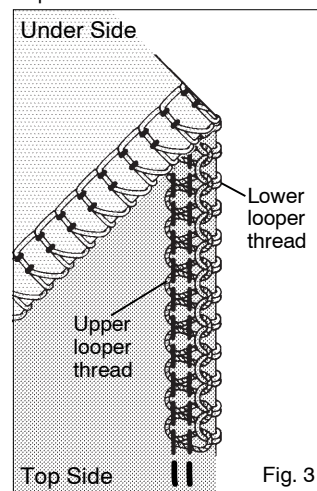


Upper looper thread pulled to under Side.



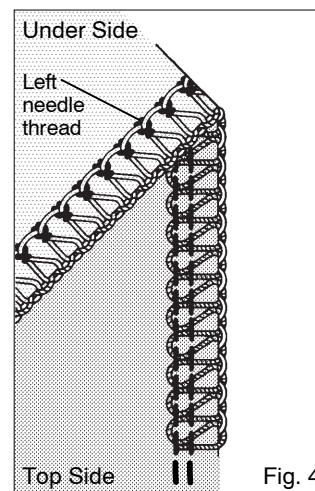
Increase upper looper thread tension and/or decrease lower looper tension.

Lower looper thread pulled to top Side.



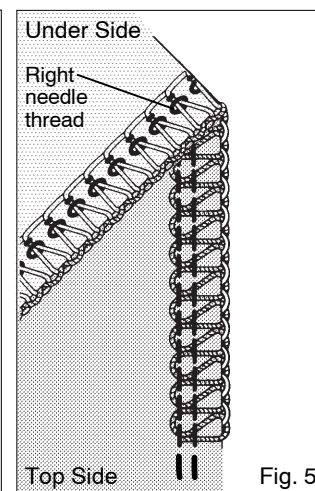
Increase lower looper thread tension and/or decrease upper looper tension.

Left needle thread loose and visible on under Side of fabric.



Increase left needle thread tension and/or decrease either or both looper threads.

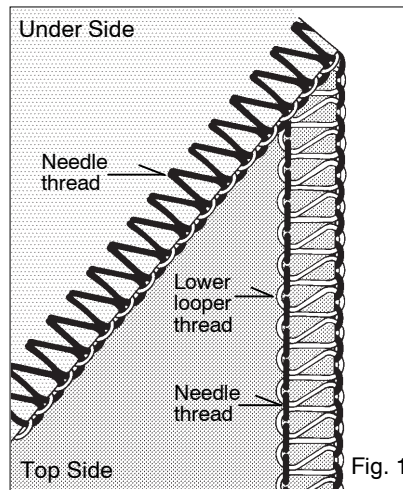
Right needle thread loose and visible on under Side of fabric.



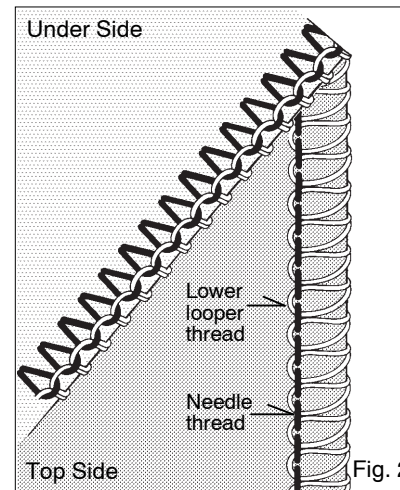
Increase right needle thread tension.

TWO-THREAD USE

JuSt right.

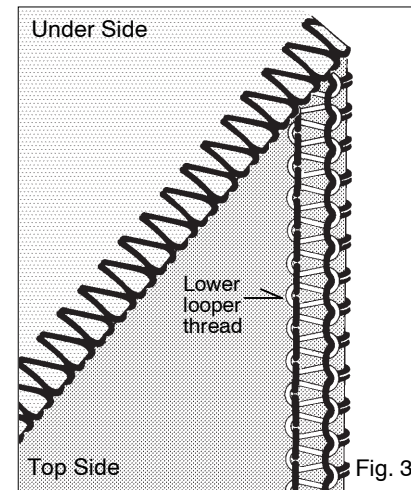


Lower looper thread pulled to under Side.

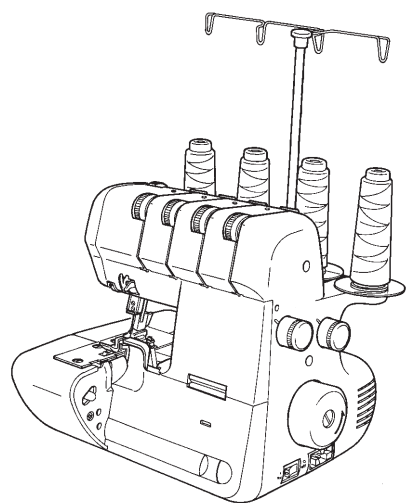


Decrease needle tension.

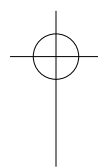
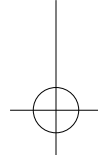
Needle thread pulled to top Side.



Increase needle thread tension.



Handwriting practice lines consisting of six horizontal rows. Each row is defined by a solid top line, a dashed middle line, and a solid bottom line.



ADJUSTING STITCH LENGTH

Turn the stitch length dial until the required length is required.

The higher the number, the longer the stitch. This dial can adjust the stitch length from 1 to 5 mm.

ADJUSTING OVEREDGE CUTTING WIDTH

Overedge cutting width can be adjusted from 4 to 7 mm by simply turning overedge cutting width dial according to the kind of fabric.

It is set at standard width of 6 mm when delivered from the factory.

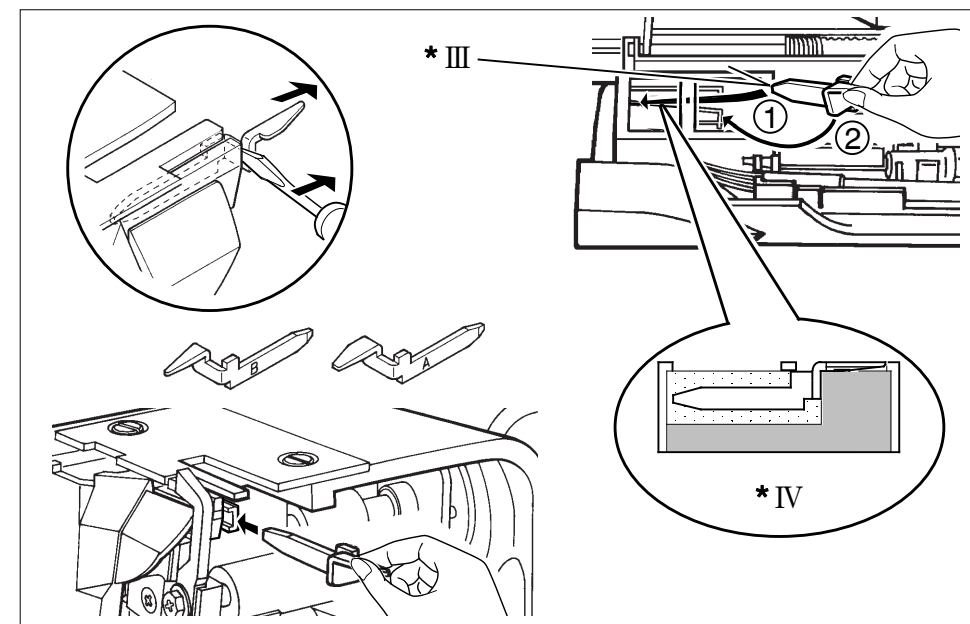
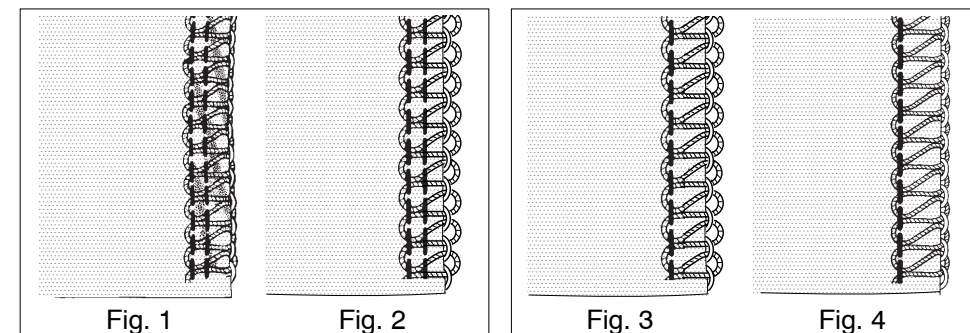
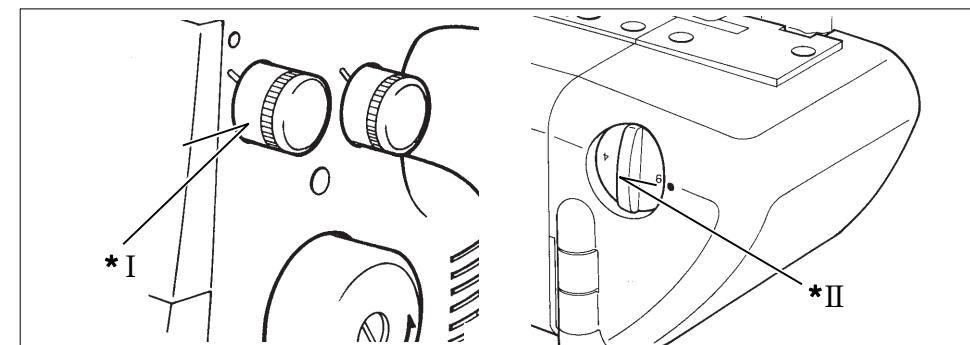
Turn it towards "5" if fabric edge curls while sewing. (Fig. 1)

Turn it towards "7" if loops hang off the edge. (Fig. 2)

Stitch finger (B)

Loops may hang off the edge, when you sew with lightweight fabric using 3 threads (right needle only), and setting cutting width dial at 4 - 5 (Fig. 3). In such a case change the stitch finger (A) to (B) to get neat stitching (Fig. 4).

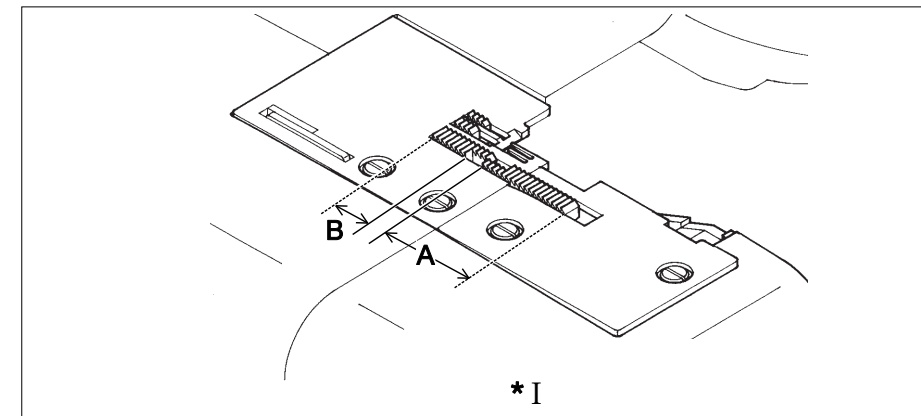
Illustration * I : Stitch length dial
* II : Overedge cutting width dial
* III : Stitch finger (B)
* IV : Cross section



DIFFERENTIAL FEED

The differential feed has two independent feed dogs, one front (A) and one rear (B).

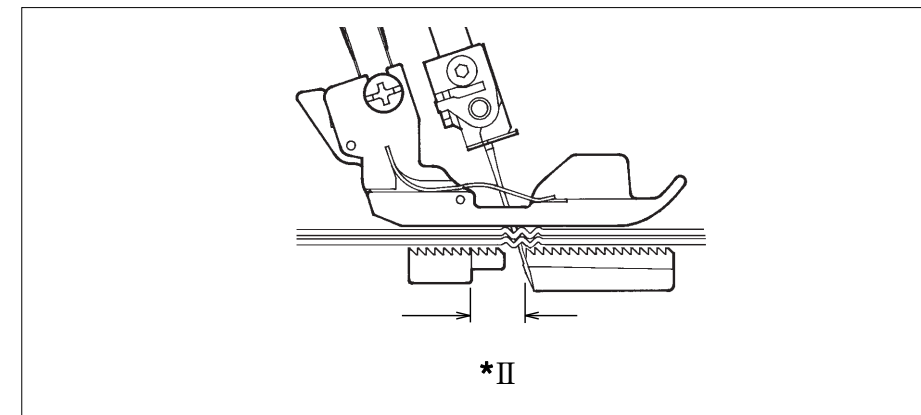
Each feed dog has an individual feed mechanism which enables the feeding of material at a different ratio.



POSITIVE DIFFERENTIAL FEED

WHEN SET FOR POSITIVE DIFFERENTIAL FEED, the front feed dog (A) makes a longer stroke than the rear feed dog (B).

This has the effect of accumulating material under the presser foot to offset the wavering on the fabric.



NEGATIVE DIFFERENTIAL FEED

WHEN SET FOR NEGATIVE DIFFERENTIAL FEED, the front feed dog (A) makes a shorter stroke than the rear feed dog (B). This has the effect of stretching material under the presser foot to offset the puckering on the fabric.

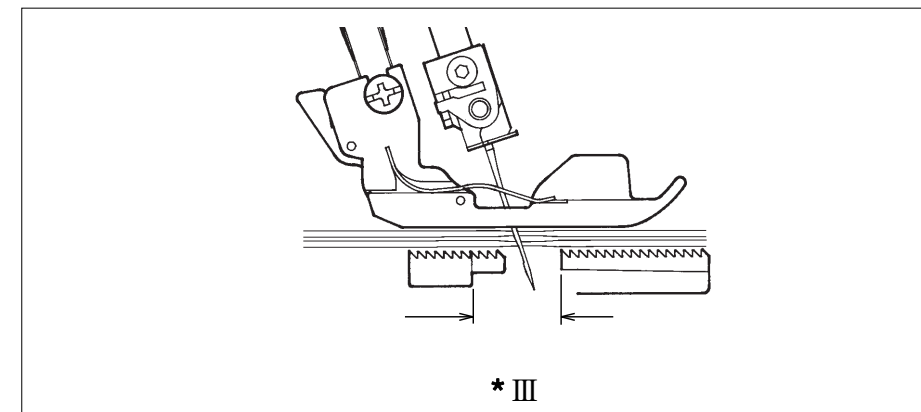


Illustration * I : Differential feed dogs
* II : Positive differential feed
* III : Negative differential feed

SETTING DIFFERENTIAL FEED

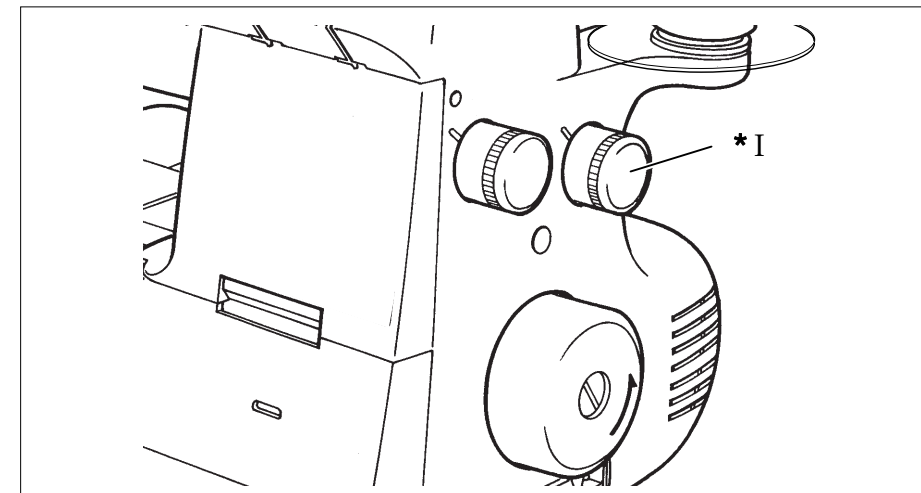
Set by simply turning the differential feed control dial in the direction desired referring to the chart below.

The adjustment can be made between 0.7 (negative effect) and 2 (Positive effect). These settings give the best ratio of feeding.

For normal sewing, the dial should be set at 1.

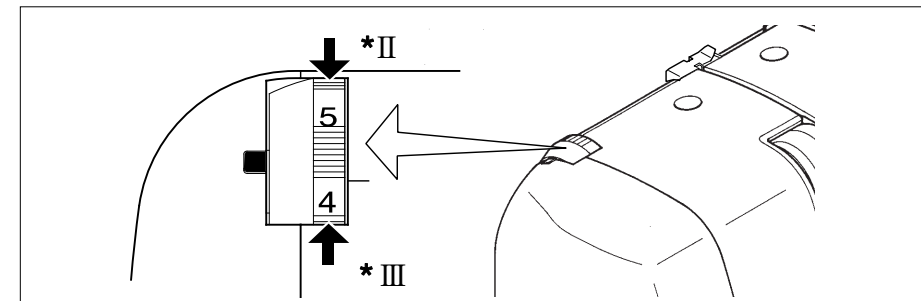
The dial can be reset even while sewing.

EFFECT AND APPLICATION	TYPE OF FEEDING	SETTING	FEED RATIO REAR: FRONT
Waver-free SeamS, Gathering	PoSitive differential feed	1-2	
No differential feed	Neutral feed	1	
Pucker-free SeamS	Negative differential feed	0.7-1	



FOOT PRESSURE REGULATOR

Presser foot pressure has been correctly set at the factory, so you do not need to adjust it for most of ordinary sewing. If adjustment is necessary, turn the foot pressure regulator to higher number to increase or to lower number to decrease pressure.



SEWING WITH EXTRA HEAVYWEIGHT FABRIC OR MULTIPLE LAYERS OF FABRIC

A wide range of fabric can be overlapped on this machine, but it is recommended to tighten screw as illustrated, when sewing with extra heavyweight fabrics or multiple layers of fabric. Open working table for adjustment.

Loosen the screw when sewing with light to normal weight fabric or turning overedge cutting width dial, or otherwise fabric may not be well cut.

The machine is set for normal weight fabrics from the factory.

Illustration * I : Differential feed control dial

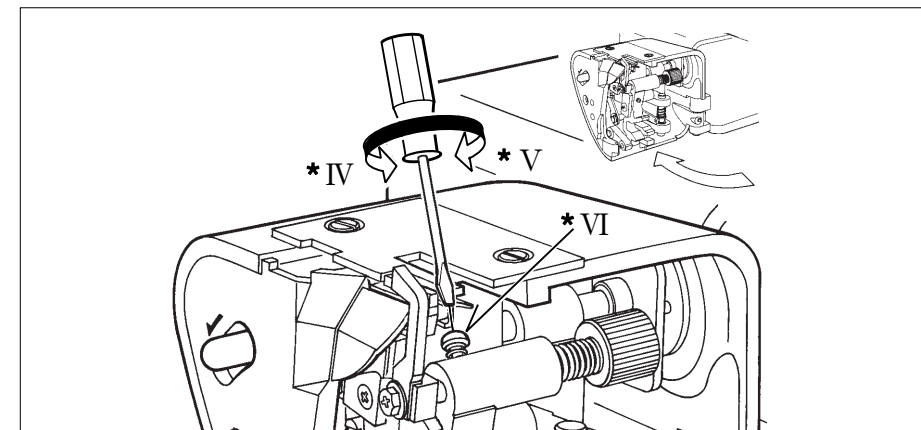
* II : Increase

* III : Decrease

* IV : Tighten

* V : Loosen

* VI : Screw



BASIC TECHNIQUES

TURNING OUTSIDE CORNERS WITHOUT CUTTING THREADS

1. When you reach the fabric edge, stop stitching with the needle above the fabric.
2. Raise the presser foot and gently pull on the thread chain just enough to clear the stitch finger.
3. Turn the fabric, lower the presser foot and begin stitching in the new direction. Fig. 1.

NOTE: When overlocking and trimming at the same time, cut the fabric along the new stitching line for about 3 cm, before turning the fabric. Fig. 2.

TURNING CURVED EDGES

For inside curves, guide fabric gently with trimming line of the fabric under the right front of the presser foot (or a little to the left), applying pressure at point A in the direction of the arrow with your left hand, and at the same time applying a little opposite pressure at point B with your right hand. Fig. 3.

For outside curves place under the presser foot in a similar manner but applying the pressure in the opposite directions. Fig. 4.

REMOVING STITCHES FROM SEWN FABRIC

To remove stitches already sewn, snip off needle thread(s) at intervals and pull out looper thread(s).

Illustration * I : Cut !

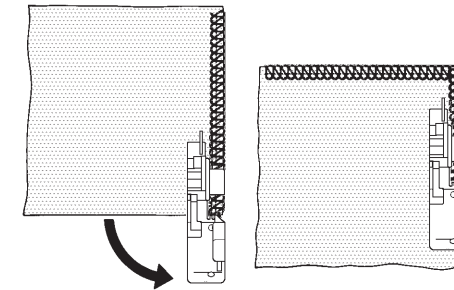


Fig. 1

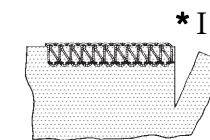


Fig. 2

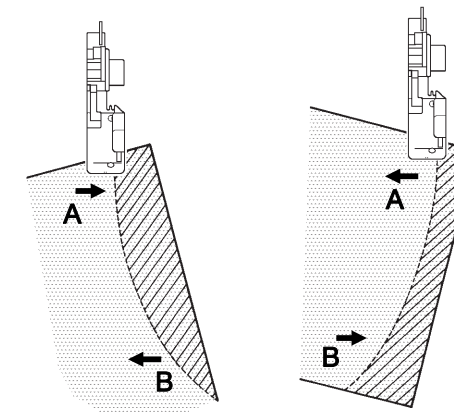


Fig. 3

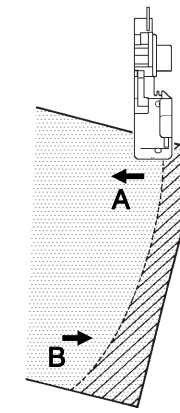
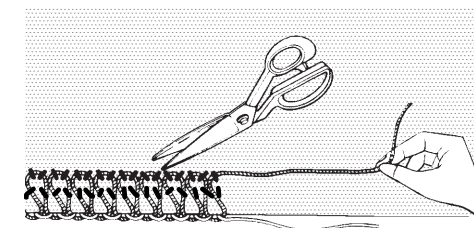


Fig. 4



CORDED OVERLOCK

Corded overlock can be used to strengthen shoulder, sleeve or side seams when joining or making up knitted garments. As a decorative feature you can use knitting yarn of contrasting colours to further enhance your garment. Your machine is equipped with a presser foot which has been designed to feed your cord or yarn to the left of the safety stitch or to the right. Follow instructions as follows:

1. Snap the detachable cord guide, in your accessory set onto the thread guide pole (Fig. 1).
2. Place a ÇillerÇ cord, such as a crochet cotton, gimp, wool, knitting yarn, or shirring elastic at the rear of the machine spool pin. Pass the cord through the cord guides (1) and (2) and then through the left needle thread guide (3). See Fig. 1.
3. Insert the cord through either the front or rear hole (according to the operation, see diagrams Figures 2 and 3), in the presser foot and pass it under and to the rear of the foot.
4. Place the material to be sewn as normal. Start at slow speed observing if cord is feeding correctly and increase speed as needed.

FOR JOINING SHOULDERS OR SLEEVES, pass the cord through the front hole, ensuring that it is fixed between the left and right needle threads as it is guided through the front hole. (Fig. 2).

FOR JOINING SIDE SEAMS, pass the cord through the rear hole, ensuring it is positioned to the right needle thread. (Fig. 3).

FOR DECORATIVE EFFECTS, you may pass contrasting colours either through the front or rear hole or if you desire, pass cord or yarn through each hole.

FOR MAKING WAVED HEM WITH GUT (Fig. 4), pass the gut through the rear hole and start ROLL HEMMING (See page 34). This is used for the hem of skirt, etc.

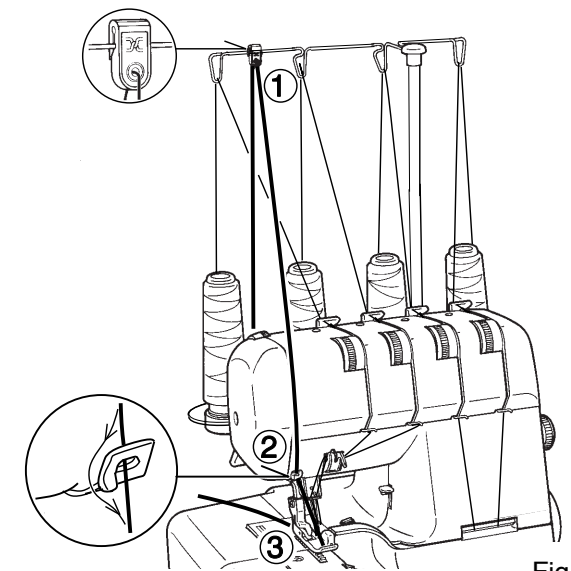


Fig. 1

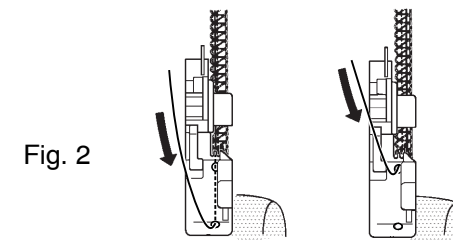


Fig. 2

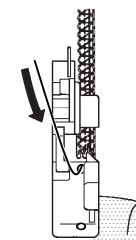


Fig. 3

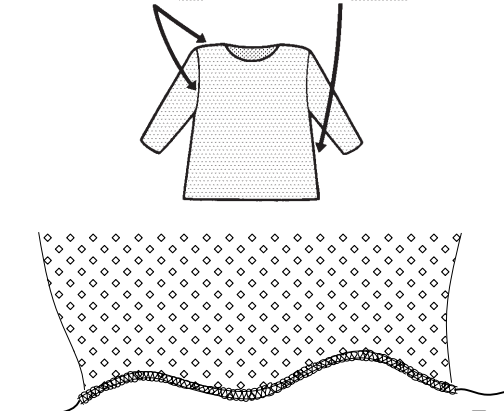


Fig. 4

DECORATIVE EFFECTS

In addition to normal overlocking which is fully described in this instruction book, your machine can also be used for a number of decorative applications such as decorative top-stitching, butted seams, pin-tucking or making lengths of decorative braid. see below.

Decorative top-stitching – using only two threads or using three threads (flat seam)

Fold fabric along the line to be top-stitched and sew over the folded edge, making sure not to cut into the fold. Fig. A.

Unfold the fabric, pull the ends of the threads to the underside and press flat.

The final appearance can be enhanced by using buttonhole twist or embroidery thread on the lower looper.

Butted seams – using only two threads or using three threads (flat seam)

Place two pieces of fabric wrong sides together and overlock along the edge. Unfold and press.

By using different coloured fabrics and thread a pleasing S patchwork S effect can be achieved.

Pin-tucking – using three threads

Fold fabric along a line to be pin-tucked and overlock sew along the folded edge, making sure not to cut into the folded edge of the fabric. (see page 54). Pull ends of threads to the underside and press.

Making decorative braid – using three threads

Overlock over a cord or braid, holding it carefully with both hands, making sure not to cut the edge. (See page 54).

NOTE: *If you use blind hem foot (option, See page 60), decorative stitch is made easily.

** Reduce the upper looper tension when you use thick thread.

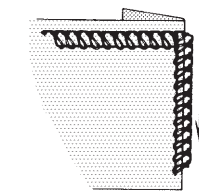


Fig. A

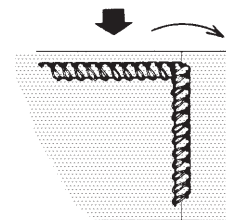
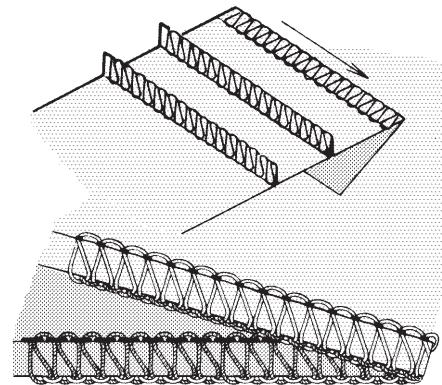
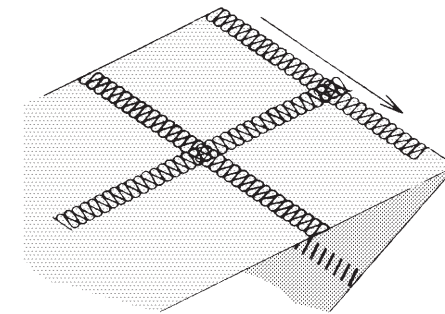


Fig. B



DIFFERENTIAL FEED APPLICATIONS

Please refer to pages 42 - 45 DIFFERENTIAL FEED.

Differential feed is designed to minimize puckering and wavering.
It is also very effective for gathering.

1. Puckering

Puckering tends to occur on woven or sheer fabrics.

To obtain pucker-free seams, set the differential feed control dial at less than 1.

2. Wavering

Wavering tends to occur on knitted or stretchable fabrics.

To obtain waver-free seams, set the differential feed control dial at more than 1.

3. Gathering

Differential feed makes gathering easier on lightweight fabric. Use it on waistlines, sleeve heads, sleeve bottoms and ruffles, etc.

Set the differential feed control dial between 1.5 and 2 to obtain the best gathering effect for your use.

IMPORTANT

The exact adjustment depends on the thickness and elasticity of fabric. Even the stitch length can influence the setting. The longer the stitches, the more the fabric is contracted.

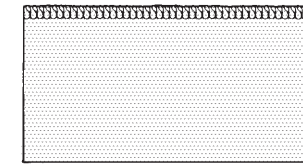
Always do a test run with a piece of actual fabrics you use and find the best settings.

Illustration * I : Pucker or waver-free seams

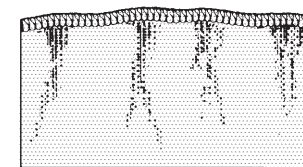
* II : Puckering

* III : Wavering

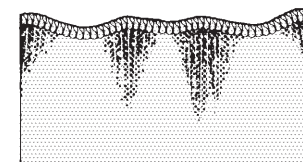
* IV : Gathering



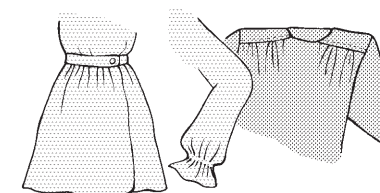
* I



* II



* III



* IV

3. CARING FOR YOUR MACHINE

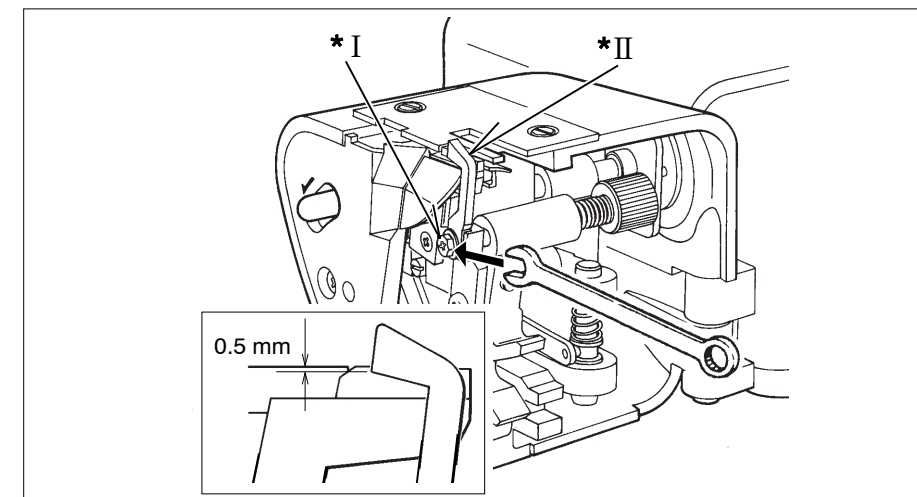
REPLACING MOVING CUTTER

Replace a moving cutter if it becomes blunt as follows. A spare cutter will be found in your accessories.

NOTE: You should not need to replace fixed cutter, which is made of a special hard alloy material.

FIRST REMOVE THE POWER PLUG FROM THE SUPPLY SOCKET-OUTLET.

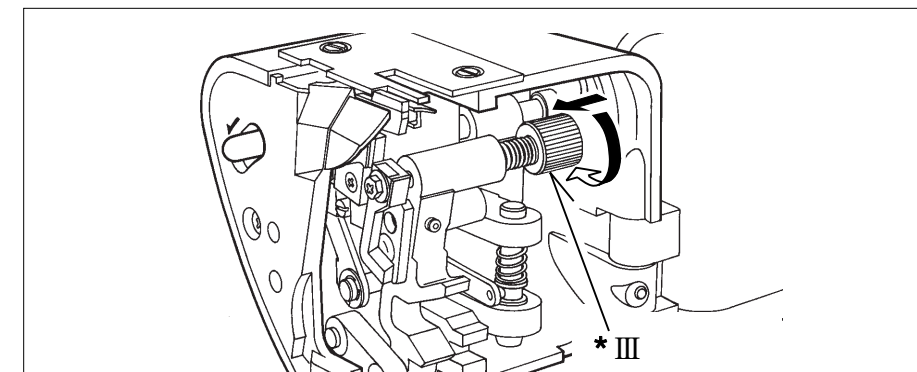
1. Loosen screw and take out moving cutter.
2. Close the working table. Lower cutter driving arm to its lowest position by turning the hand wheel towards you by hand. In this position, set replacement cutter in position and secure it with screw, ENSURING THAT THE EDGE OF THE MOVING CUTTER IS APPROXIMATELY 0.5 MM BELOW THE SURFACE OF THE FIXED CUTTER.



DISENGAGING MOVING CUTTER

If you want to sew without cutting, open the working table and disengage the moving cutter by pushing the cutter release knob to the left and turning it towards you as illustrated.

Ensure that fabric edge is not wider than overedge width selected or upper looper and needle can be damaged.

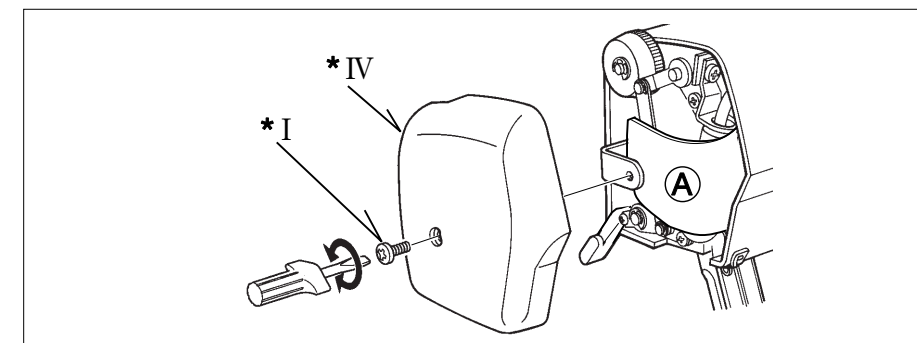


REMOVING FACE COVER

Disconnect from power supply before removing face cover.

Remove the screw and take off the face cover.

Illustration * I : Screw
* II : Moving cutter
* III : Cutter release knob
* IV : Face cover



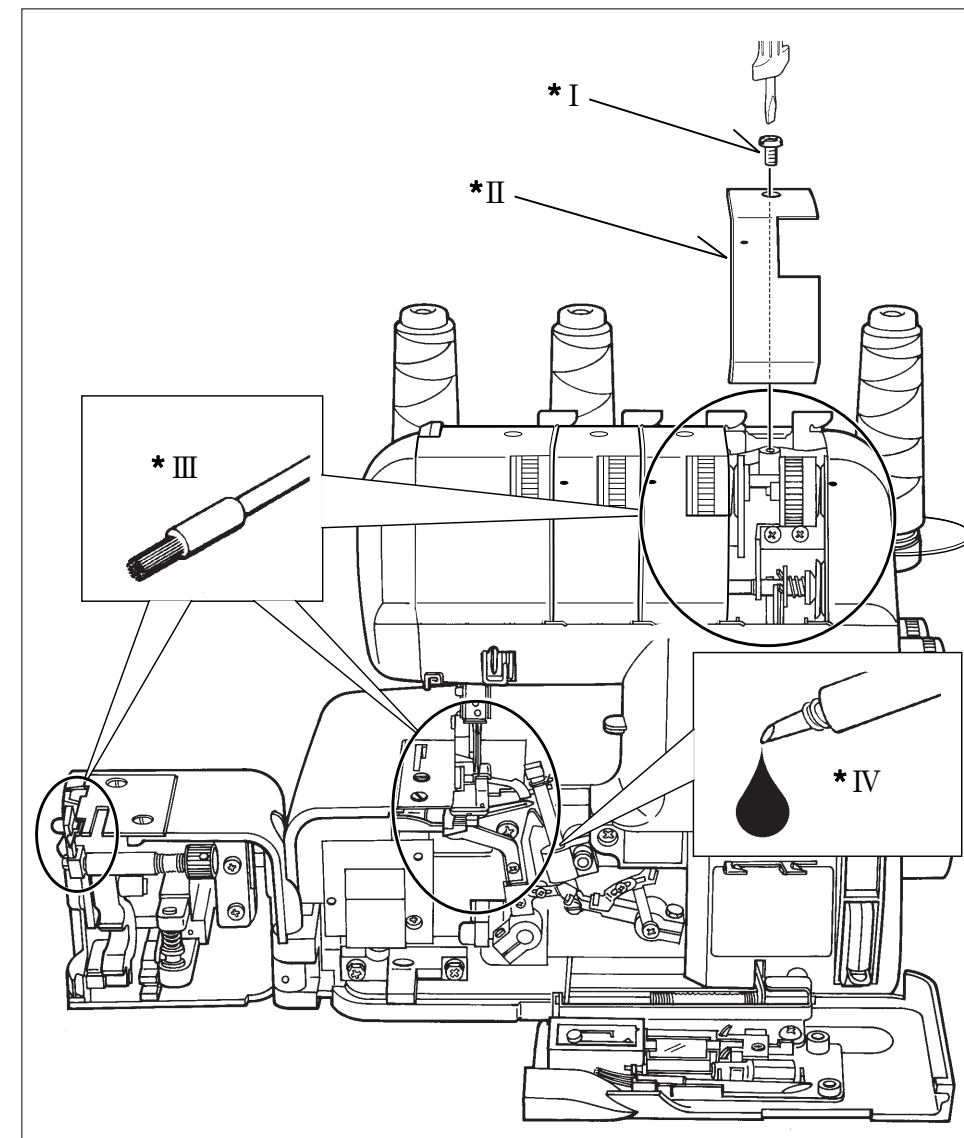
CLEANING AND OILING

To keep the machine running smoothly, keep it clean and lubricated at all times.

FIRST DISCONNECT MACHINE FROM POWER SUPPLY BY REMOVING PLUG FROM SOCKET-OUTLET.

1. Open the front cover and working table. Using the brush provided, remove dust and lint that have accumulated.
2. Apply a few drops of oil to the points indicated by arrows.
ALWAYS USE A GOOD QUALITY SEWING MACHINE OIL.
3. Remove top cover with screw driver and remove dust and lint of inside with the brush.

Illustration * I : Screw
* II : Top cover
* III : Brushing
* IV : Oil



4. CHECKING PERFORMANCE PROBLEMS

PROBLEM	PROBABLE CAUSE	CORRECTION
Irregular Stitches	Incorrect Thread Tension(S). Incorrect Size Needle. Improper Threading. Pulling Fabric. Loose Presser Foot.	Reset Thread Tension(S). Choose correct Size Needle for Thread and Fabric. Re-thread Machine. Do not pull Fabric; guide it gently. Reset Presser Foot.
Breaking Needle	Pulling fabric. Incorrect Size Needle. Incorrect Setting of Needle. Loose Presser Foot.	Do not pull Fabric; guide it gently. Choose correct Size Needle for Thread and Fabric. Reset Needle. Reset Presser Foot.
Puckering	Incorrect Thread Tension(S). Bent or blunt Needle. Differential feed is Set incorrectly.	Reset Thread Tension(S). Insert new Needle. Set it at less than 1.
Wavering	Differential feed is Set incorrectly.	Set it at 1 or at more than 1. for knitted fabrics.
Skipping Stitches	Improper Threading. Incorrect Size Needle. Bent or blunt Needle. Incorrect Setting of Needle.	Re-thread Machine. Choose correct Size Needle for Thread and Fabric. Insert new Needle. Reset Needle.
Breaking Thread	Improper Threading. Bent needle. Thread Tension(S) too tight. Incorrect Setting of Needle. Thread Spool tangled. Thread Guide Pole not extended.	Re-thread Machine. Insert new Needle. Reset Thread Tension(S). Reset Needle. Reset Spool properly. Fully extend Guide Pole.

5. OPTIONAL ACCESSORIES

BLIND HEM FOOT

Blind hem feet are obtainable as an optional extra and are available in two sizes. 0.5 for fine-medium fabrics and 1.0 for medium/heavy fabrics.

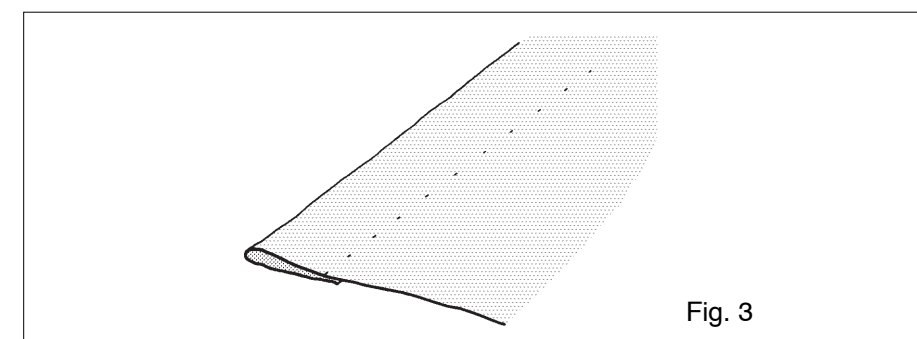
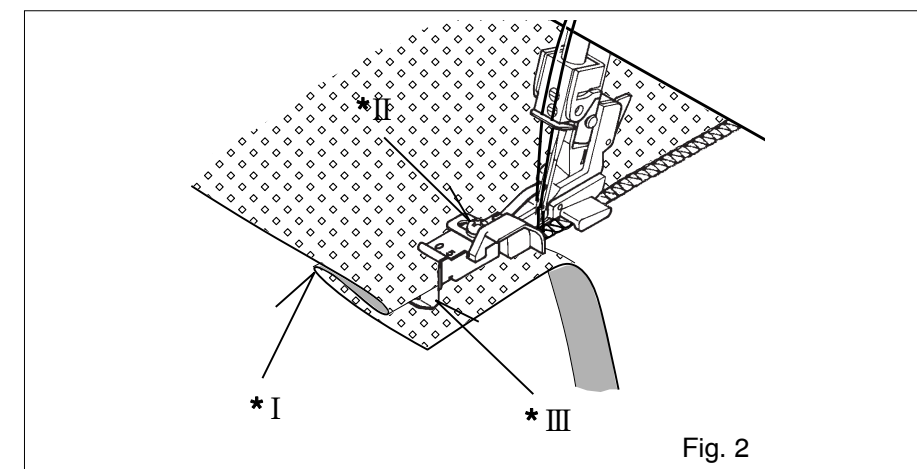
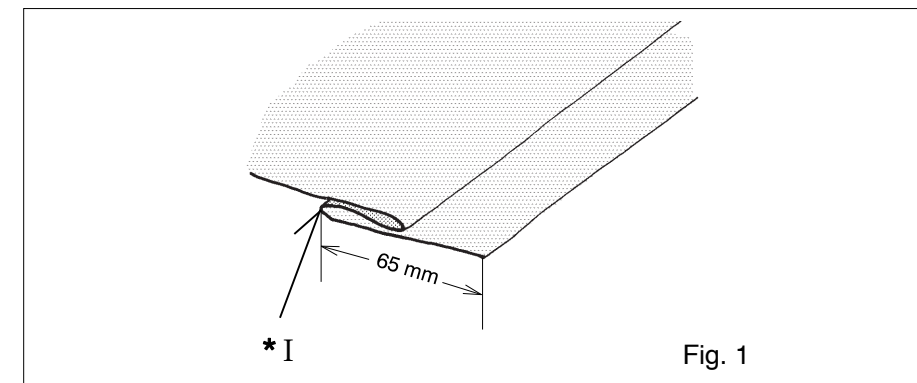
Fit the appropriate foot.

Set the stitch length 4 - 5.

Now proceed as follows:

1. Turn up the hem to the required depth and press. Fold the hem back against the § right § side of the garment, creating a § soft § fold on the § wrong § side of the fabric – See Fig. 1.
2. Place fabric under the presser foot with the § wrong § side up. Feed the folded edge through the guide in the front of the foot and lower the presser foot lever. Try a stitch (or several stitches) on a spare piece of the actual fabric, and adjust the guide so that the needle just catches the fold. Adjust the guide by means of the small screw on the top of the foot – See Fig. 2.
3. When correctly set, sew the hem. The outside edge will be cut away by the machine – See also Fig. 2. After completion, open out and press again. The stitches should be almost invisible on the § right § of the fabric – See Fig. 3.

Illustration * I : Final hem length
* II : Screw
* III : Guide

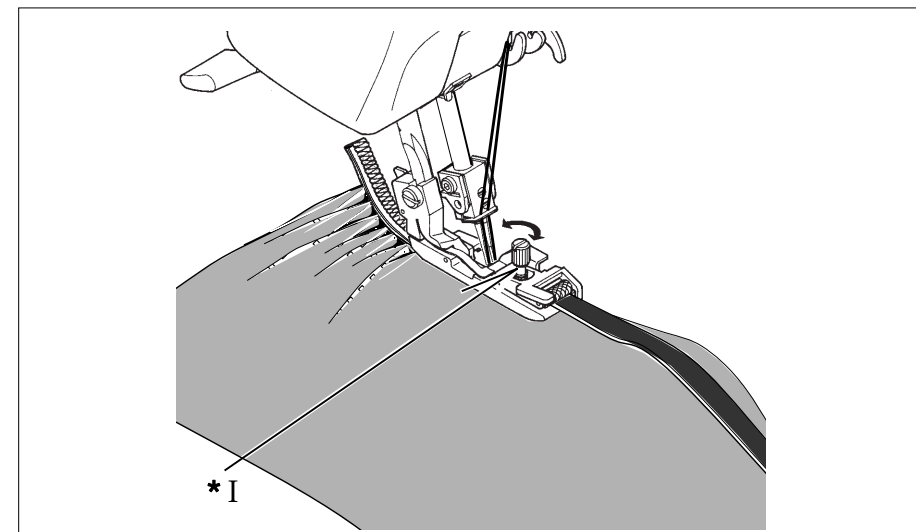
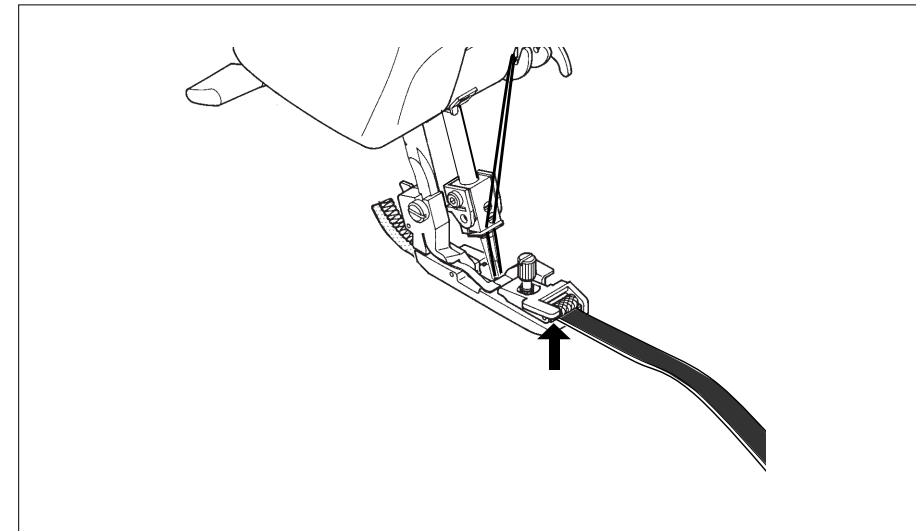


ELASTICATOR

An elastic foot is available as an optional extra. This foot will guide your elastic and at the same time apply pressure to the elastic with our specially designed tension controlled roller, allowing you to control the elasticity while sewing.

1. Replace regular foot with elasticator.
2. Set stitch length at about 4.
3. Slightly raise the roller portion of the foot and insert elastic tape between the roller and the lower support bar as illustrated, until the edge of elastic reaches the feed dog teeth.
4. Sew the elastic for about one inch (3 cm) or more to confirm if the tape is properly sewn.
5. Insert the fabric under the foot and sew together with the elastic.
6. Check the stitches to make sure they are correct and adjust tension (tighter) if necessary.
7. Adjust the tension control of the roller so that the desired finish can be obtained.
 - a. Tighter tension of the roller gives more elasticity of the fabric after it is sewn.
 - b. Weaker tension of the roller gives less elasticity of the fabric.
8. When the right side of elastic is not even with right side of fabric, remove the stitch finger (A) or change it to stitch finger (B). Decrease the number of overedge cutting width dial. Three threads overlock with right needle or left needle is recommendable in accordance with the size of elastic.

Illustration * I : Tension control of roller



PIPING FOOT

Prepare a piece of ready-made piping (corded bias fold tape).

Place folded piping between seam edges with fold extending beyond seam line toward garment.
Pin or baste, and stitch the seam.

Braid or ribbon may also be used, either flat or folded braid can be used in straight seams.

Use for decorating edges of collars, cuffs, pockets, etc.

PEARL FOOT

1. PEARLS ALONG AN EDGE:

Set for left needle (remove right needle) 3-thread overlock.

Set tensions as follows:

Left needle: 4

Upper looper: 1 - 2

Lower looper: 7 - 8

SEW:

- Remove regular foot; replace with pearl foot.
- Remove stitch finger as you did for a rolled edge.
- Swing cutter away to lowest position, close from covers.
- Raise the needle to it's highest position.
- Place pearls in the channel on the right side of the foot with 2" of pearls extending behind foot.
- Take one stitch with the hand wheel to secure the pearls.
- Follow edge of fabric along fabric guide.
- Sew pearls on edge of fabric.
- Return cutter to original position when finished.

2. PEARLS SEWN WITH A FLAT LOCK STITCH:

FABRIC:

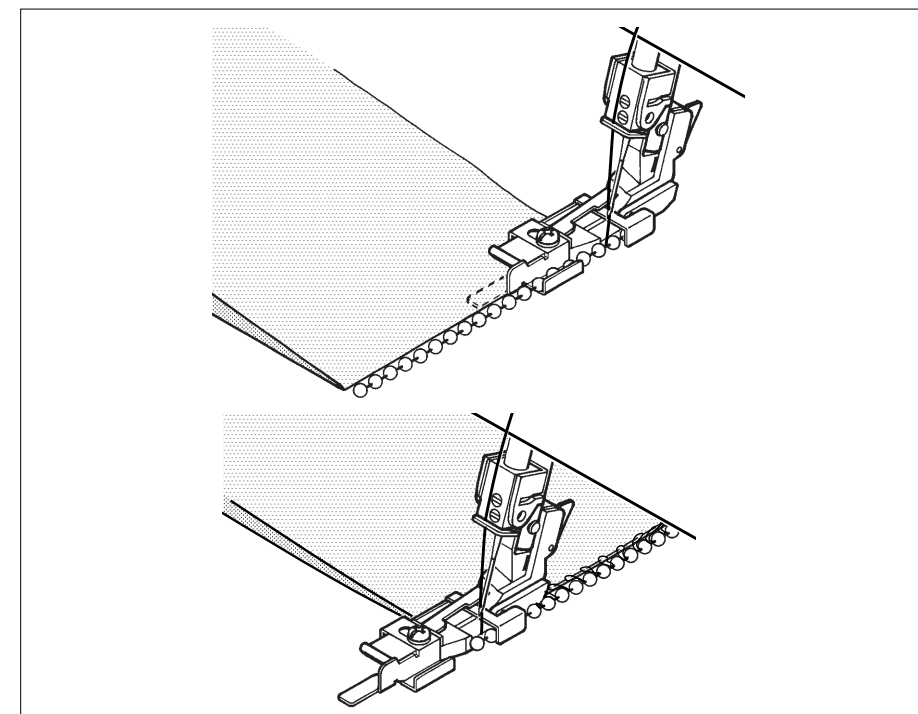
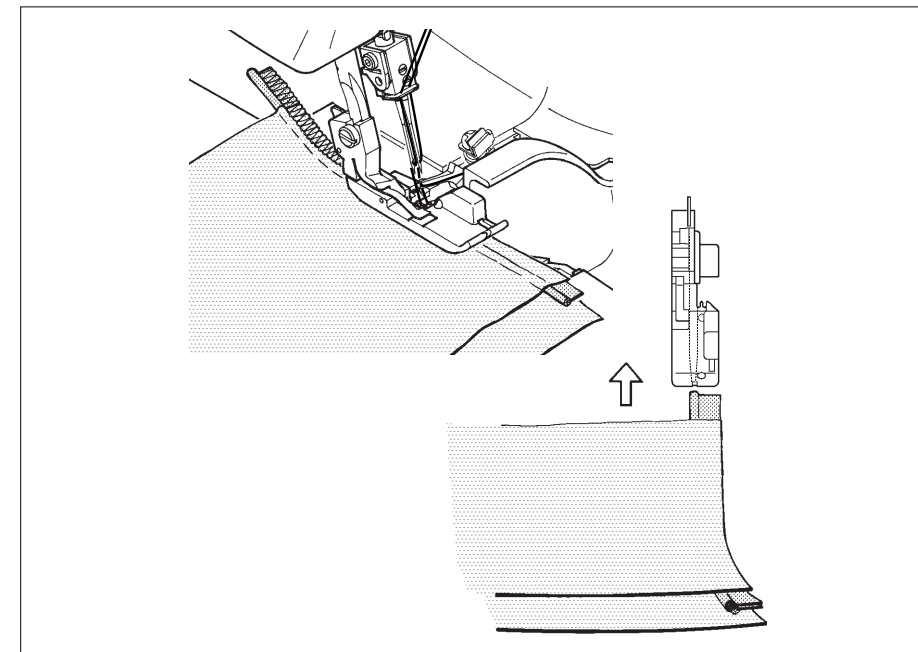
Medium weight woven

2 or 4 mm pearls

Set for a 3-thread flat lock, left needle only. See pg.

SEW:

- Remove regular foot; replace with pearl foot.
- Insert small stitch finger.
- Swing cutter away to lowest position.
- Raise needle to it's highest position.
- Place pearls in channel on right side of the foot with 2" of pearls extending behind foot.
- Take one stitch with the hand wheel to secure the pearls.
- Sew pearls on with the left needle just catching the fold of the fabric.
- Pull flat lock open.



GATHERING/SHIRRING FOOT

1. Tension settings for gathering:

Left needle	4	Differential feed	2.0
Right needle	4	stitch length	4
Upper looper	4		
Lower looper	4		

2. Replace regular presser foot with gathering foot.

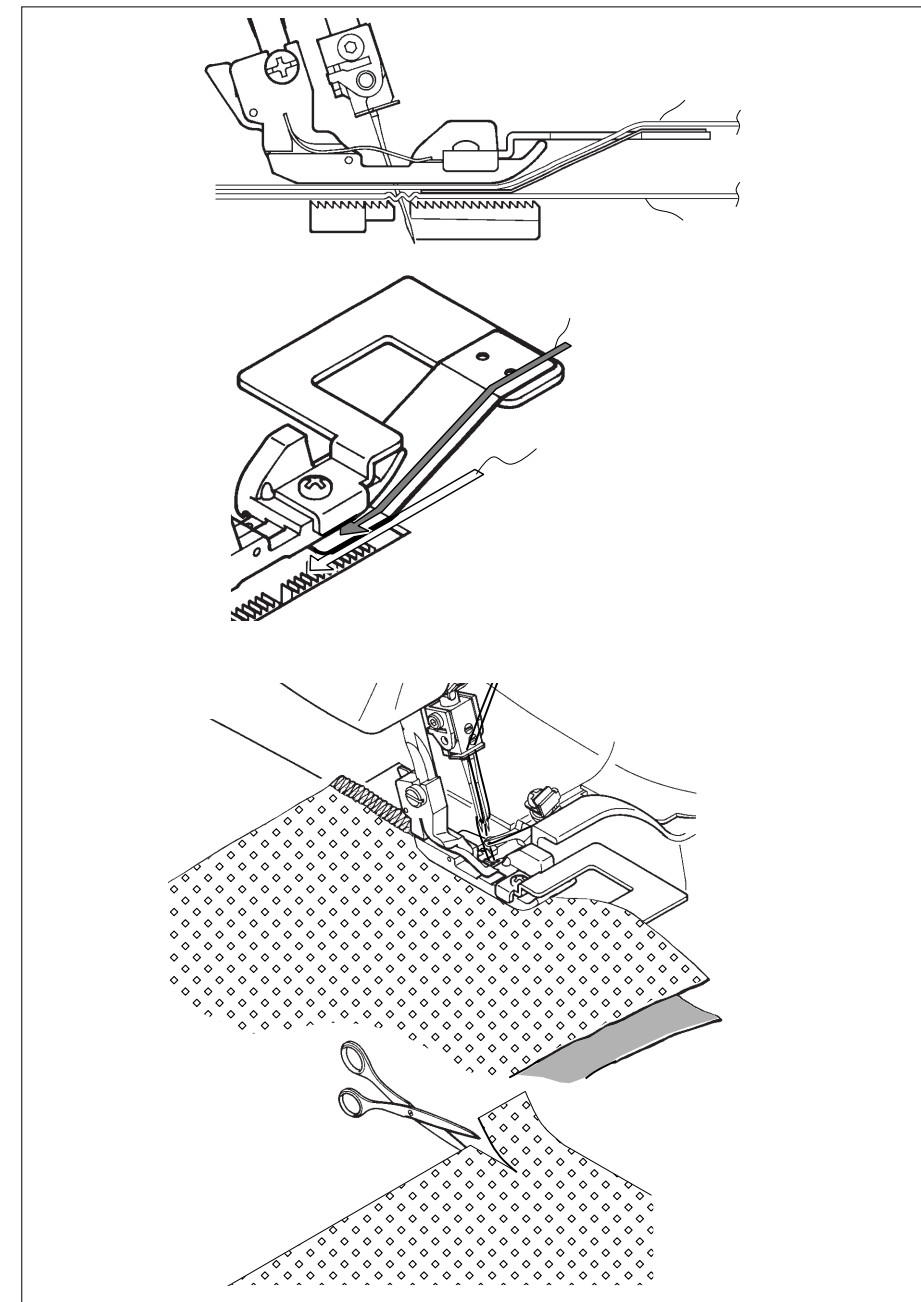
3. Clip both fabric layers approximately 5/8" (1.5 cm.) inside and 1 1/2" (4 cm.) down.
Lift front of presser foot to place fabric.

4. Place fabric to be gathered underneath the presser foot. Place fabric which will remain straight between presser foot and lower metal piece. Push clipped portion through slot in foot. Lower presser foot.

5. Turn handwheel to make 4 - 5 stitches in the fabric, making sure to catch both upper and lower layers.

6. Serge. Use both hands to guide fabric, one on the under layer of fabric. Keep in mind that the lower piece of fabric will move faster as it is gathering than the top piece.

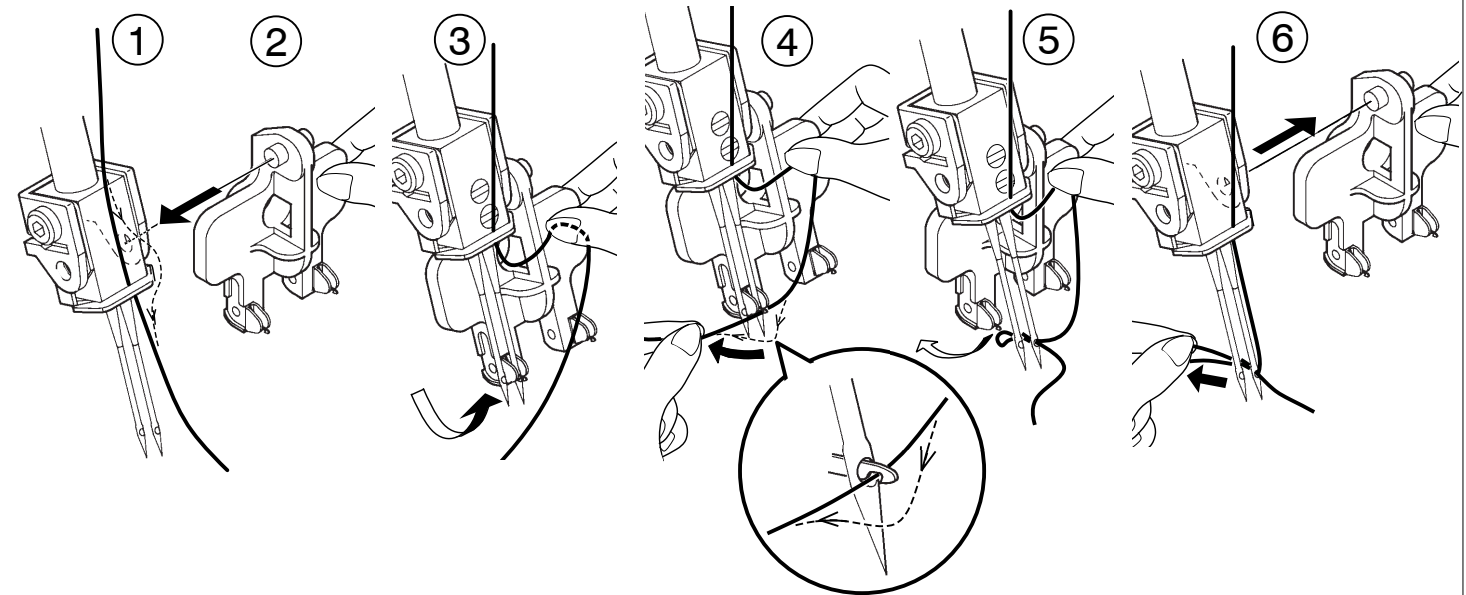
Illustration ① : Fabric to be straight
② : Fabric to be gathered



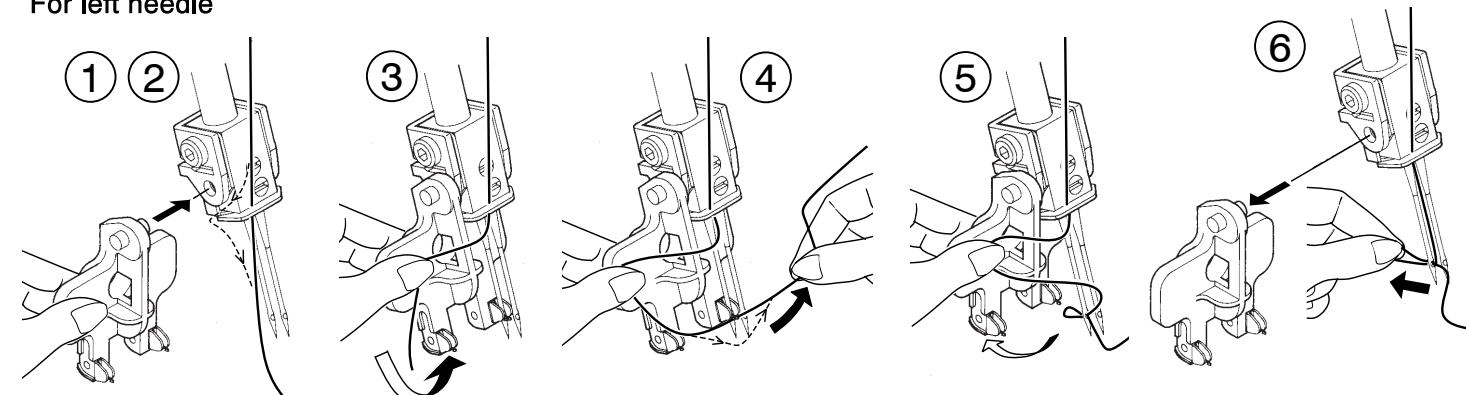
NEEDLE THREADER

1. Feed the thread through the thread guide of needle clamp as illustrated. Raise the presser foot. Raise the needle bar to highest position, and pull the thread leaving about 4 (10 cm) clear.
2. Lower the presser foot. set the needle threader ensuring the hooking fork enters into the needle hole.
3. Hold the thread with the needle threader with your hand.
4. Guide the thread into hooking fork and pull the thread with your another hand.
5. Move the needle threader backwards slightly. Then release the hand which is pulling the thread.
6. Take the needle threader off the needle clamp.
7. Pull the thread away from you.

For right needle



For left needle



This appliance complies
with EEC Directive
89/336/EEC covering the
electromagnetic compatibility.

English

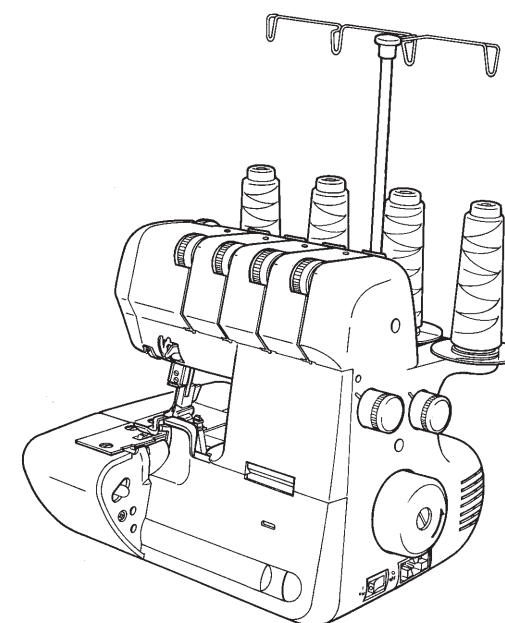
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19554

ENGLISH

INSTRUCTION MANUAL





“IMPORTANT SAFETY INSTRUCTIONS”

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

“Read all instructions before using this sewing machine.”

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

1. “This sewing machine should never be left unattended when plugged in. Always unplug this sewing machine from the electric outlet immediately after using and before cleaning.”
2. “Always unplug before replacing light bulb. Replace bulb with same type rated 15 watts.”

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

1. “Do not allow to be used as a toy. Close attention is necessary when this sewing machine is used by or near children.”
2. “This appliance can be used by children aged from 8 years and above and persons with reduced physical sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.”
3. “Use this sewing machine only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.”
4. “Never operate this sewing machine if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the sewing machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.”
5. “If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.”
6. “Never operate the sewing machine with any air openings blocked. Keep ventilation openings of the sewing machine and foot control free from the accumulation of lint, dust, and loose cloth.”
7. “Never drop or insert any object into any opening.”
8. “Indoors use only.”
9. “Do not operate where aerosol (spray) products are being used or where oxygen is being administered.”
10. “To disconnect, turn switch to the off („0“) position, then remove plug from outlet.”
11. “Switch off or unplug the appliance when leaving it unattended, unplug the appliance before carrying out maintenance or replacing lamps.”
12. “Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.”
13. “Keep fingers away from all moving parts. Special care is required around the sewing machine needle.”
14. “Never sew with a damaged needle plate as this can cause needle to break.”
15. “Do not use bent needles.”
16. “Do not pull or push fabric while stitching. It may deflect the needle causing it to break.”
17. “Switch the sewing machine off (“0”) when making any adjustments in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot, etc.”
18. “Always unplug sewing machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the instruction manual.”
19. “To avoid electrical shock never put the machine nor the mains cable or mains plug into water or other liquids.”
20. “Attention the following to avoid injury:
 - Unplug the foot controller of the appliance when leaving it unattended:
 - Unplug the foot controller of the appliance before carrying out any maintenance.”

“CAUTION -Moving parts-To reduce risk of injury, switch off before servicing. Close cover before operating machine.”

“SAVE THESE INSTRUCTIONS”

“This product is for household use, or equivalent.”

This appliance complies with EEC Directive 2004/108/EC covering the electromagnetic compatibility.



DISPOSAL:

This equipment is marked with the recycling symbol. Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary. (European Union only)

