

My
BERNINA
Guide

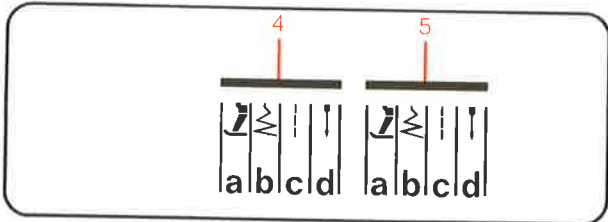
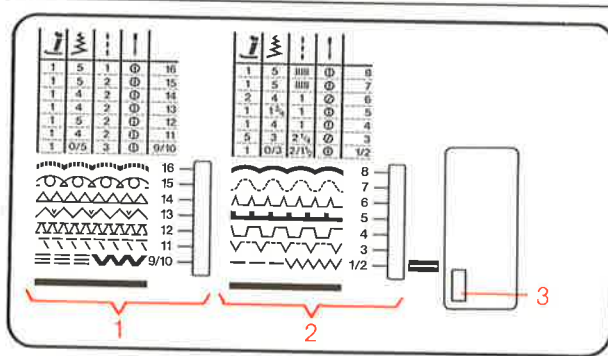
Model 1010

BERNINA

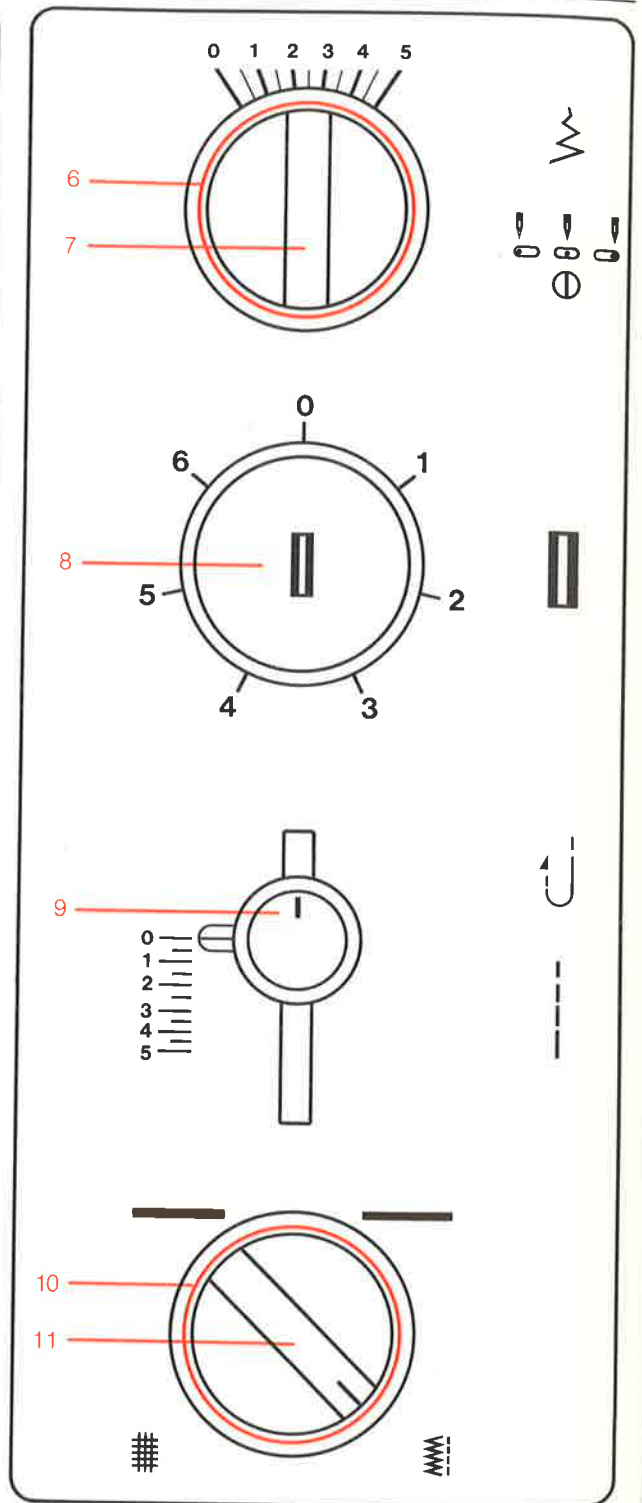
MADE IN SWITZERLAND



Display/Control panel

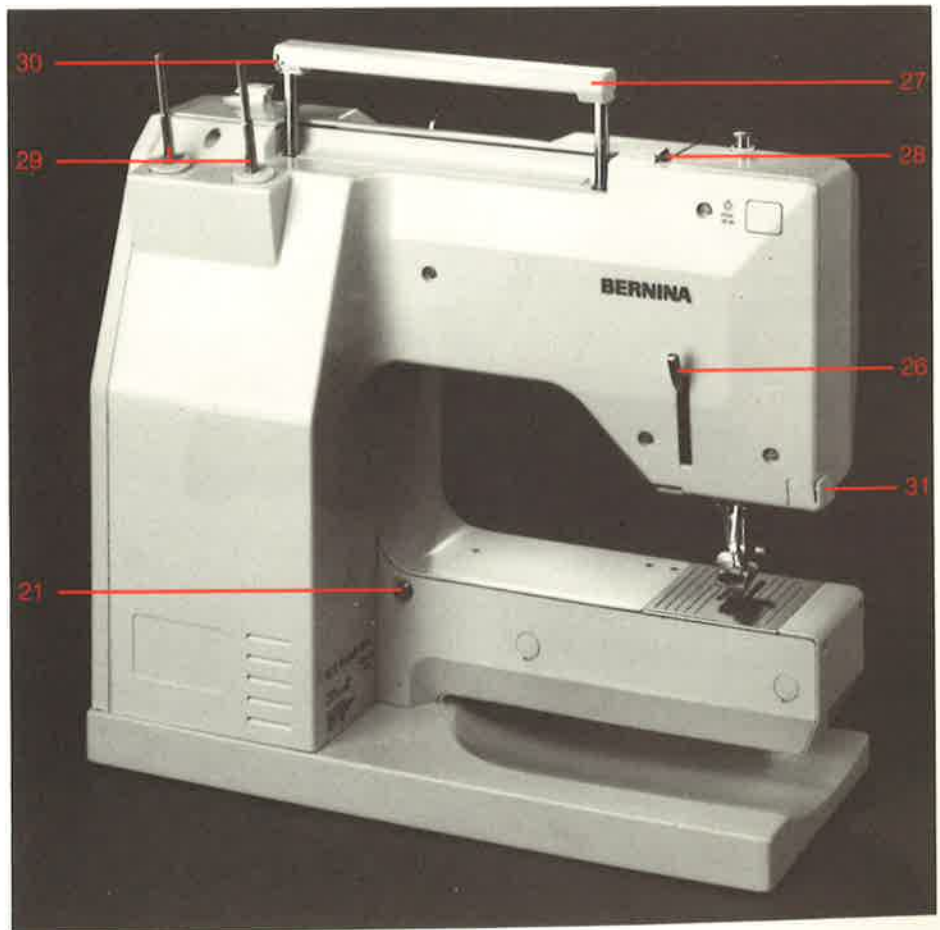
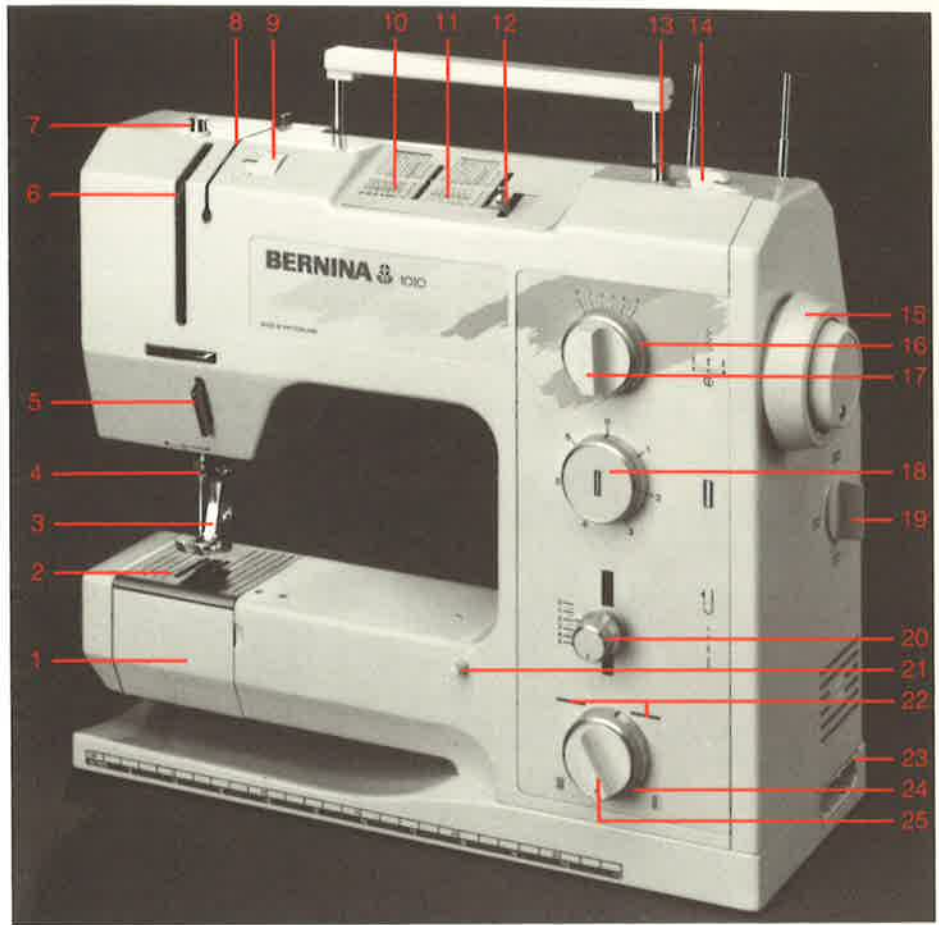


- 1 Red stitch programme
- 2 Green stitch programme
- 3 Selector lever
- 4 Basic setting panel, red stitches
 - a. Presser foot
 - b. Stitch width
 - c. Stitch length
 - d. Needle position
- 5 Basic setting panel, green stitches
 - a. Presser foot
 - b. Stitch width
 - c. Stitch length
 - d. Needle position
- 6 Stitch width knob
- 7 Needle position knob
- 8 Buttonhole knob
- 9 Stitch length knob
- 10 RED - GREEN stitch programme selector knob
- 11 Feed-dog knob



Details of machine

- 1 Hinged front cover
- 2 Stitch plate
- 3 Presser foot
- 4 Needle clamp
- 5 Thread regulator
- 6 Thread take-up lever
- 7 Pre-tension stud
- 8 Thread tension slot
- 9 Thread tension adjustment knob
- 10 Red stitches
- 11 Green stitches
- 12 Selector lever
- 13 Bobbin spindle
- 14 Bobbin winder stop
- 15 Handwheel
- 16 Stitch width knob
- 17 Needle position knob
- 18 Buttonhole knob
- 19 Power/light switch
- 20 Stitch length knob
- 21 Securing pins for sewing table
- 22 Stitch programme color indicator (RED - GREEN)
- 23 Combined mains/foot control socket
- 24 Stitch programme selector knob
- 25 Sewing/Darning selector knob
- 26 Presser foot lever
- 27 Carrying handle
- 28 Thread guide
- 29 Thread holder pins
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- 31 Thread cutter



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Dear BERNINA Customer,

You are now the proud owner of a BERNINA 1010. Congratulations on your choice! Our machines are manufactured with the greatest care. They are simple to operate and highly robust. You have bought a high-quality product which will give you endless enjoyment.

You and your BERNINA are a winning team. You have the creative ideas while your BERNINA does the sewing for you. Together you can achieve superb results. By sewing for yourself, you can create your own individual style, let your imagination run free. Your BERNINA gives you unlimited possibilities for sewing a complete personal wardrobe. If you require any further information or any advice on sewing problems, you can call on your BERNINA dealer for help.

We wish you enjoyment with your BERNINA 1010 and success with your sewing.

Yours truly,

Odette Ueltschi

Odette Ueltschi-Gegauf, Chairman of the Board
FRITZ GEGAUF LIMITED
Manufacturer of Swiss Sewing Machines, CH-8266 Steckborn TG, Switzerland

BERNINA® 

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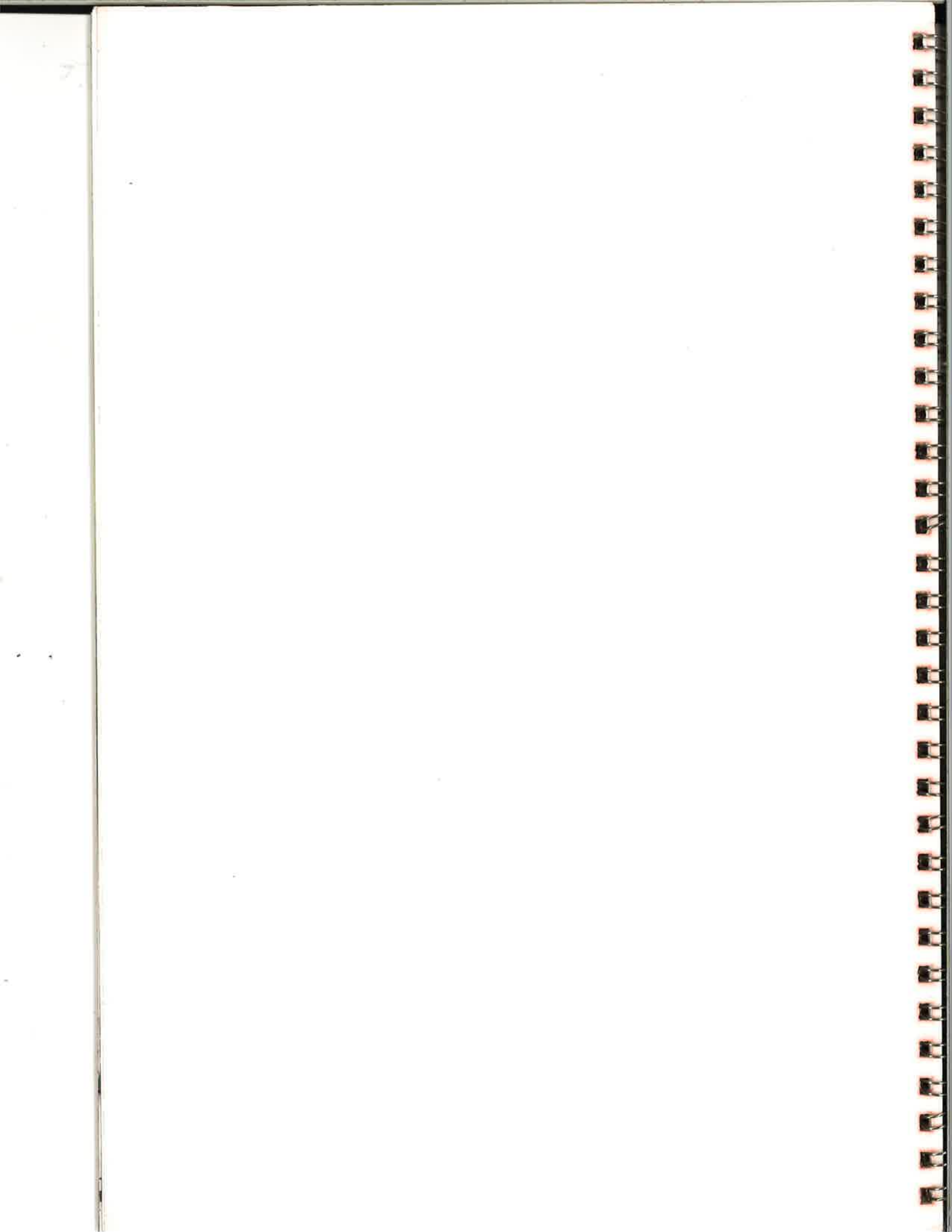
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Important!

Safety instructions

The following safety instructions must be observed.

- The moving needle is a source of danger (risk of injury to the fingers). Therefore, always watch your work.
- Any operations performed within the needle movement area, e.g. changing a needle or presser foot, must always be carried out with the machine switched off (power switch at 0). The same applies to removing and replacing the lower thread bobbin.
- When carrying out maintenance (cleaning or oiling), whenever work is interrupted or finished and also for changing bulb, the sewing machine should be disconnected from the mains by removing the mains plug from the socket.
- All repairs to the machine, especially electrical repairs (for example, changing wiring connections) may only be carried out by one of our service agencies.



Setting up the sewing machine

Cover, Accessories



Cover, accessories

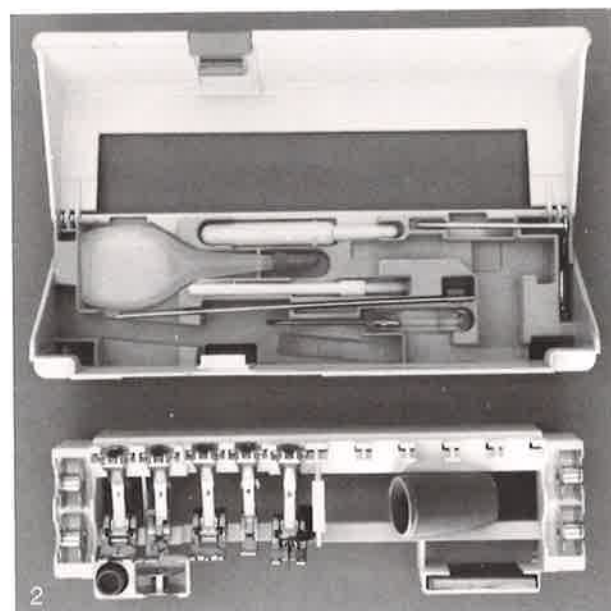
The cover protects the machine from dust and dirt.

The outside pocket provides storage for the instruction manual, foot control and cable.

The machine is very easy to carry with the practical, retractable handle.

Standard accessories

- 6 bobbins
- Needle assortment
- Ruler/template
- Seam ripper
- Small screwdriver
- Special screwdriver
- Bulb holder
- Cleaning brush
- Oiler, filled
- Seam/quilting guide
- Presser foot
- Overlock foot
- Blind stitch foot
- Buttonhole foot
- Zip foot



Accessories box

The accessories are neatly stored in the accessories box (Fig. 2).

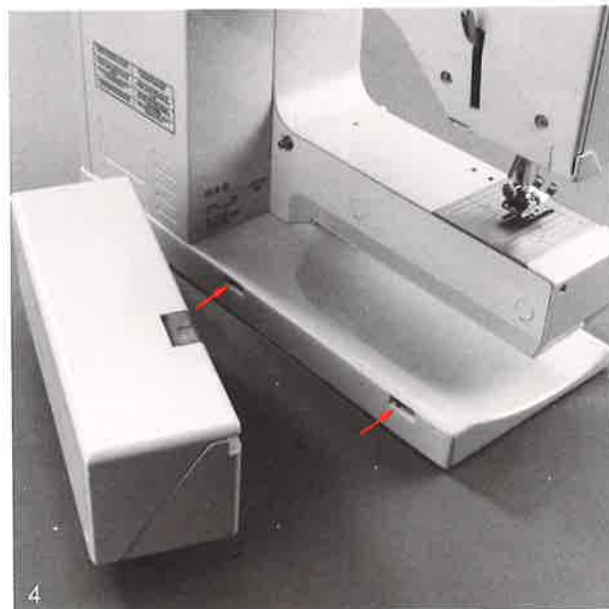
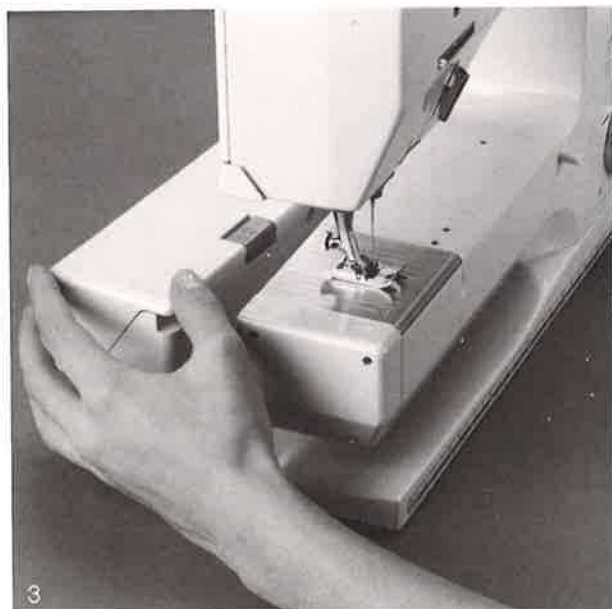
Fitting the accessories box onto the machine

The accessories box has two fixing lugs that fit into the base plate of the machine.

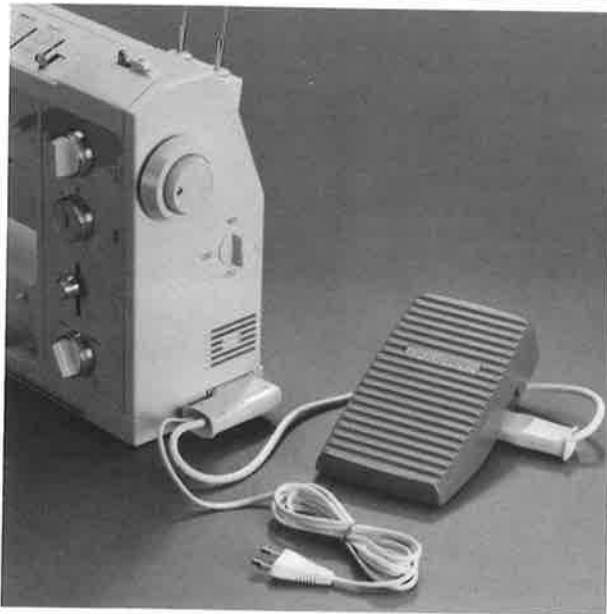
Removing the accessories box

Simply push the accessories box backwards (Fig. 3).

Lay the accessories box onto the base plate from the rear and press against the rear arm until the fixing lugs engage in the holes provided (Fig. 4).



Mains cable, foot control unit, sewing light, power switch



Connecting mains cable and foot control unit

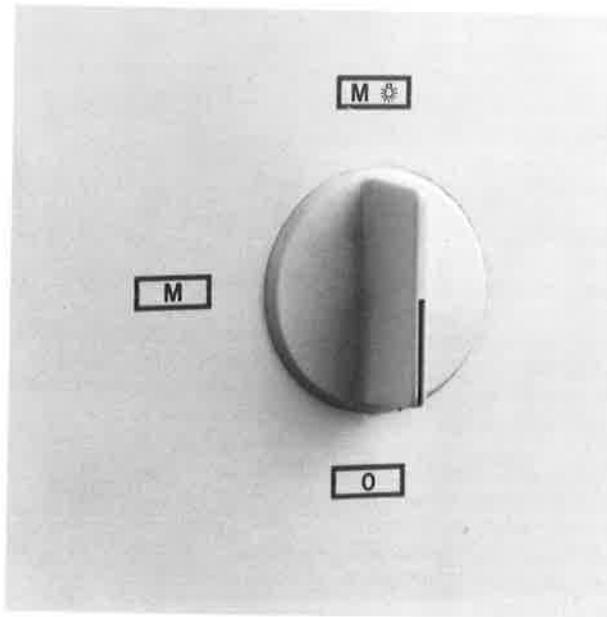
Plug the specially combined mains/foot control cable into the machine. Plug the foot control cable into the foot control and the machine cable into the mains socket.



Foot control unit

This is used to regulate the sewing speed.

The sewing speed can be controlled from virtually 0 to maximum speed by varying the pressure on the plate of the foot control unit.



Power switch, sewing light

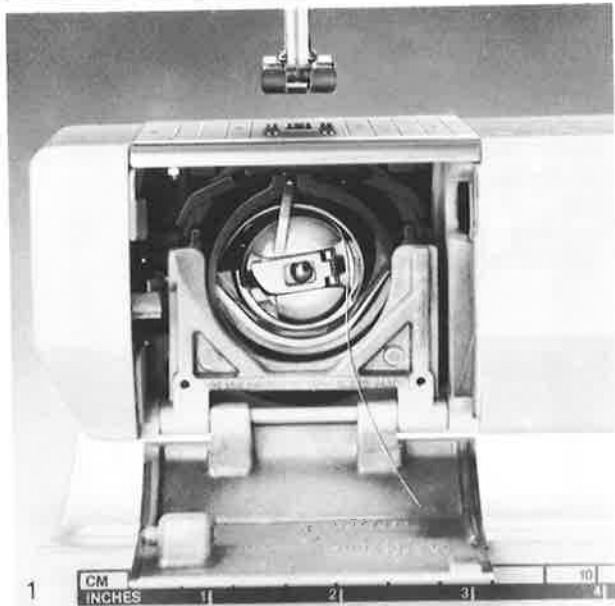
The power switch below the handwheel has 3 positions:

0 **Off** The machine is switched off.

M **On** The machine is switched on.

M **The machine and sewing light are switched on.**

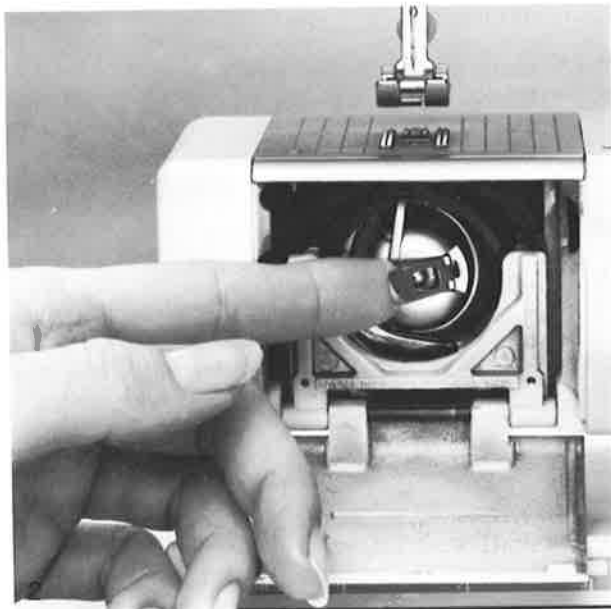
Bobbin case and bobbin, winding lower thread



Removing the bobbin case

Set the power switch to the position.

Check that the needle is raised. Open the hinged front cover on the free arm (Fig. 1).



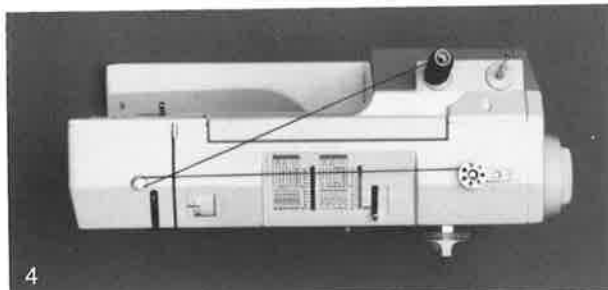
With the index finger and thumb of the left hand, pull the bobbin case latch forward and remove the bobbin case (Fig. 2).



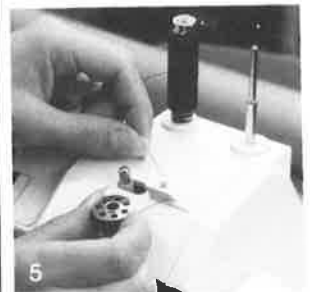
Winding lower thread

Holding the handwheel with the left hand, turn the handwheel release forward with the right hand. The sewing machine is now disengaged (Fig. 3). Place empty bobbin on the spindle and press it to the right against the bobbin winder stop. The bobbin winder is now engaged.

Take thread from the reel of thread on the thread holder pin and pass it clockwise around the pre-tension stud to the empty bobbin. Wind around the empty bobbin several times, again in a clockwise direction (Fig. 4).



Press on the foot control to start the motor. When the bobbin is full, the bobbin winder will stop automatically. Push bobbin to left and remove.



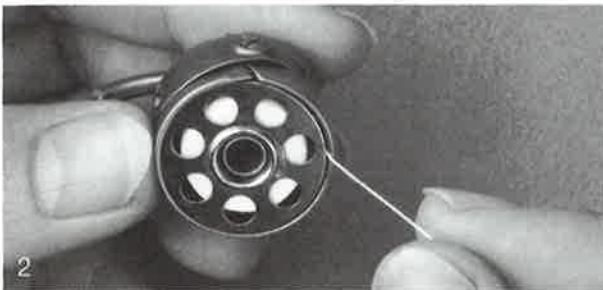
When removing the bobbin, cut the thread by pulling it to the left against the bobbin winder stop (Fig. 5).

Inserting the bobbin

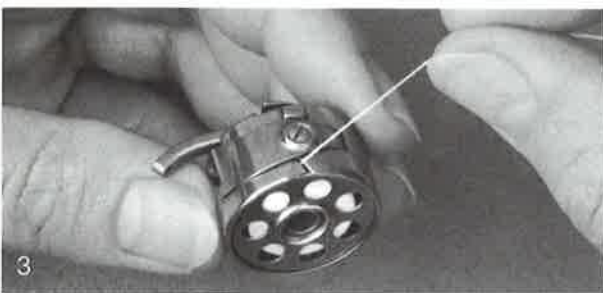


Inserting the bobbin

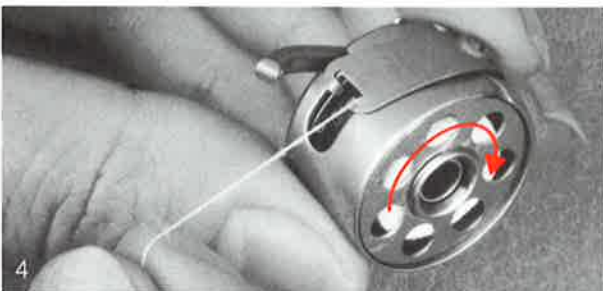
Hold the bobbin case in the left hand.
Insert the bobbin with the thread running in a clockwise direction, see arrow.



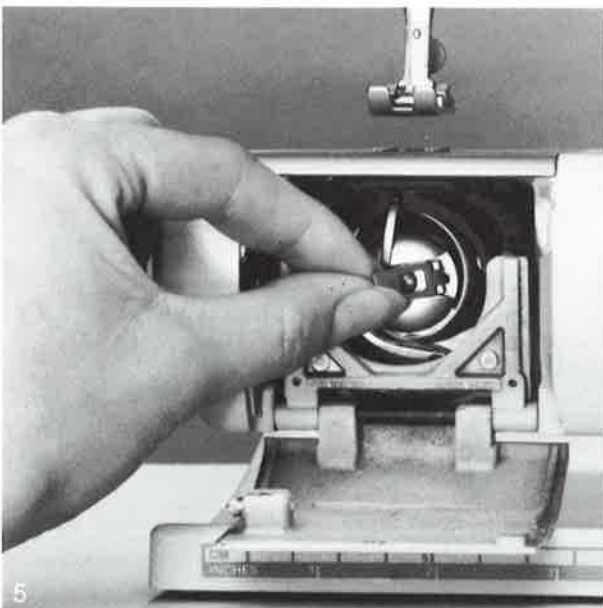
Take the thread anti-clockwise to the slot.



Pull the thread into the slot and under the spring, until it lies in the T-shaped slot at the end of the spring.



When the end of the thread is pulled, the bobbin should turn clockwise, in the direction of the arrow.



Inserting the bobbin case into the hook

Hold the bobbin case by the latch with the index finger and thumb of the left hand. Insert so that the finger of the bobbin case points upwards, engaging in the notch of the hook race cover.
Check: Pull end of thread. Close the hinged front cover.

Threading the upper thread



Thread the upper thread

Check that the needle is in the raised position.
Raise the presser foot.

Place the reel of thread on one of the two thread holder pins.

Firmly clip the thread into the thread guide on the top of the machine. Then pull it through the long slot (A) into the thread tension.

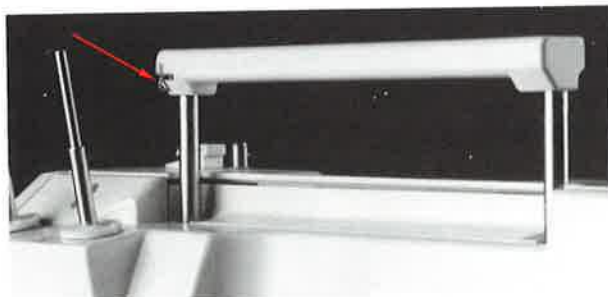


On the front of the machine, take the thread from the slot ④ downwards under the thread regulator ③, then up to the thread take-up lever at the top ② and down again to the needle holder thread guide ①.

Always thread the needle from front to back.

The small white plate on the front of the presser foot shank helps when threading the needle eye.

Pull the thread approx. 10 cm (4") through the needle eye.

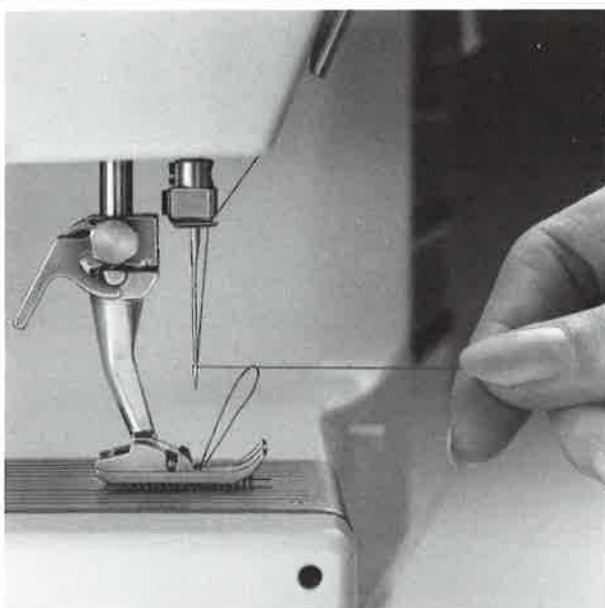


Supplementary thread guide on handle

Sewing with cross-wound reels, metal and silver threads, double or triple needles.

For perfect thread feed, take the thread through the special supplementary thread guide on the handle.

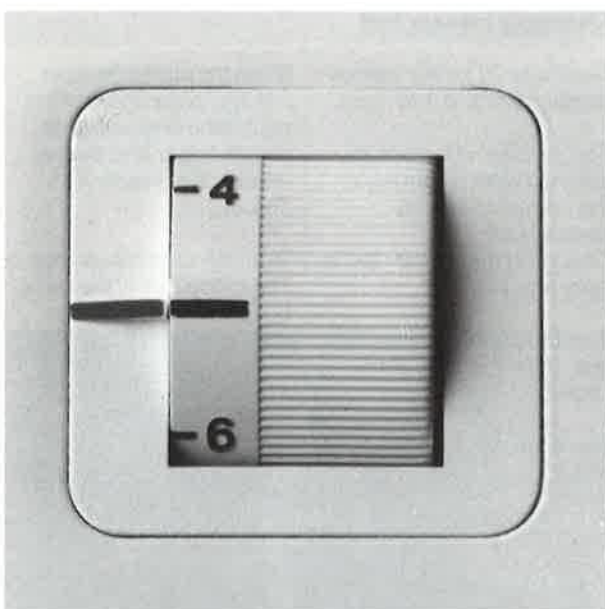
Bringing up the lower thread, thread tension, feed-dog



Bringing up the lower thread

Hold the upper thread loosely. Turn the handwheel towards you until the thread take-up lever is fully raised.

Pull the upper thread so that the lower thread is brought up through the stitch plate hole. Take both threads through the slot in the presser foot and place to the side.



Thread tension

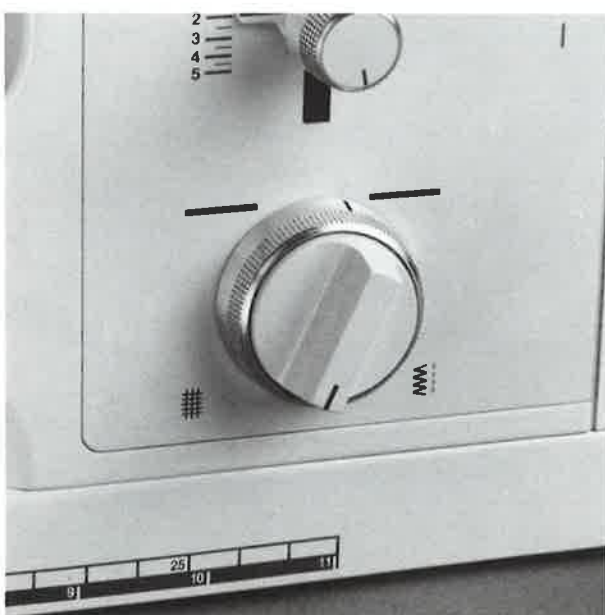
Normal tension is set when the red mark on the regulating dial matches the adjacent mark on the machine.

The thread tension should be adjusted for special sewing, e.g. buttonholes.


Turning the regulating dial forwards to number 4 or below gives a looser upper thread tension.


Turning the regulating dial backwards to number 6 or above gives a tighter upper thread tension.

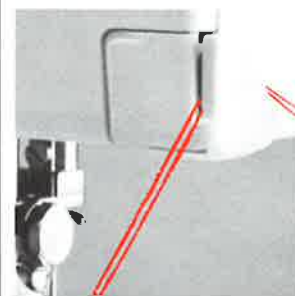
Do not forget: The thread tension should be reset to normal when special sewing has been completed.



Lowering the feed-dog

For certain types of sewing, e.g. darning, the fabric must not be moved by the feed. Therefore the feed-dog must be lowered by turning the knob to the left until the mark points to the symbol .

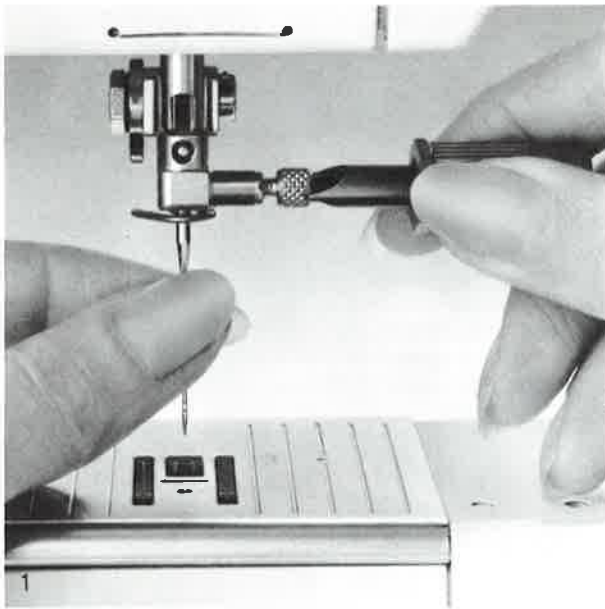
For all normal sewing, the mark on the knob should point to symbol .



To remove the work, raise the presser foot, pull work out to the rear left and hook both threads into the thread cutter.

The thread ends free themselves when you start sewing again.

Inserting the needle, changing presser feet



Inserting the needle

The small black screwdriver for loosening or tightening the needle clamp is provided in the accessories box.

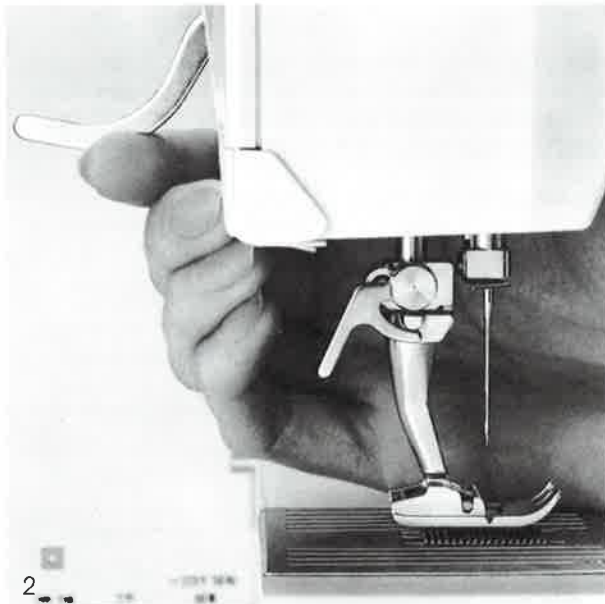
Set the power switch to **0**.

Check that the needle is in the raised position. If not, turn the handwheel.

Loosen the needle clamp screw by half a turn (anti-clockwise) and remove the needle (Fig. 1).

Insert a NEW needle – flat side to the rear.

Insert the needle until it reaches the **top**. If the needle is not inserted fully, i.e. is set too low, skipped stitches will result. Tighten the needle clamp screw securely.



Changing presser feet

See Page 20 for the various presser feet and their uses.

The success of a piece of sewing depends largely on the correct choice of presser foot.

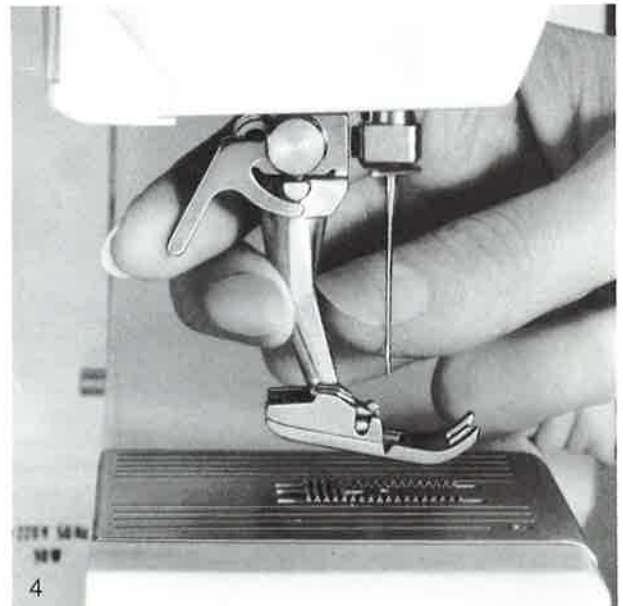
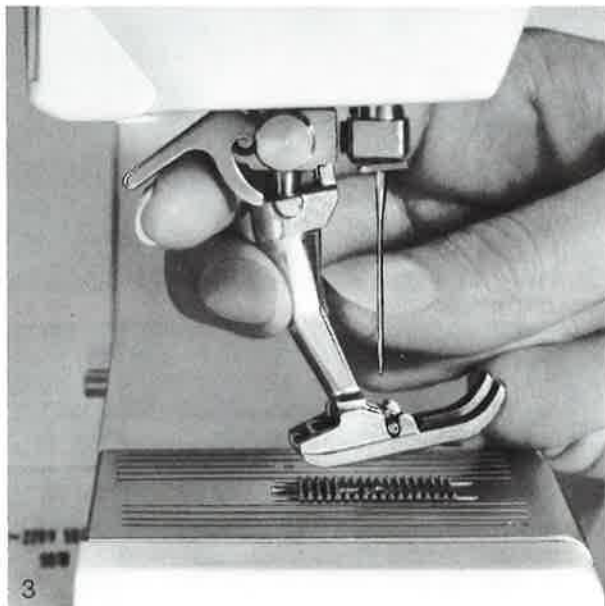
Changing the presser feet is easy and practical.

Turn the handwheel towards you until needle is fully raised.

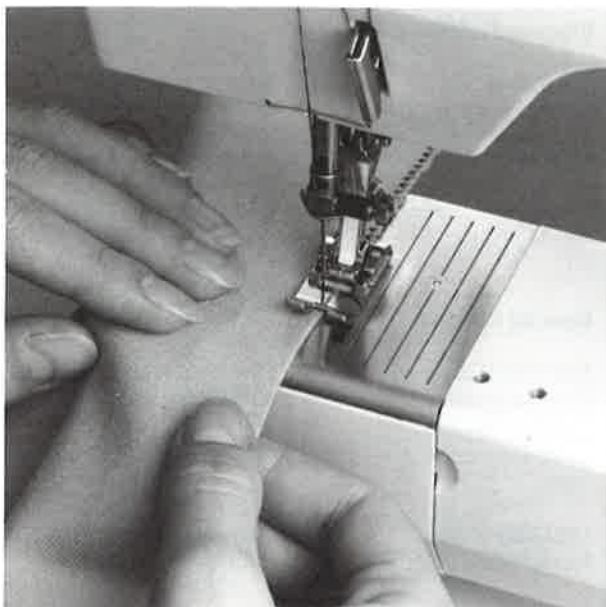
Raise the presser foot (Fig. 2).

Raise the clamping lever with the index finger of the right hand and using the middle finger and thumb, remove the presser foot (Fig. 3).

To attach the presser foot: The procedure is the same but press the clamping lever downwards with the index finger (Fig. 4).



Sewing tips



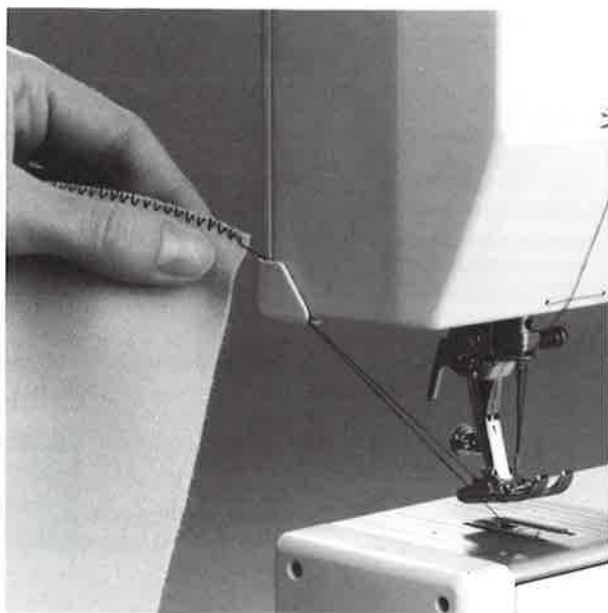
A few hints

Set your Bernina far enough away from the table edge. Correct sitting position and correct guiding of the work will make sewing easier. Sit right in front of the needle, i.e. in front of the working area.

This will enable you to watch the working area without strain.

Ensure that the height of your chair allows you to work comfortably.

It is best to guide the work from the side with the fingers of the left hand close to the presser foot. When sewing delicate work, it is preferable to stop and guide it a little at a time rather than let the work slide beneath the fingers.



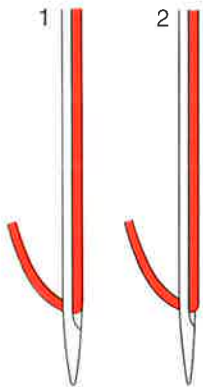
To remove the work, raise the presser foot and check that the needle is raised. If not, turn the handwheel. Take work out to the rear left and hook both threads into the cutter. The thread ends free themselves when you start sewing again.

Needle and sewing machine

Your BERNINA has needle system 130/705 H. Make sure when buying new needles that they are the 130/705 H system. Commercially available needle sizes are nos. 70 to 120. The finer the needle, the lower the number. The opposite applies to thread. The finer the thread, the higher the number.

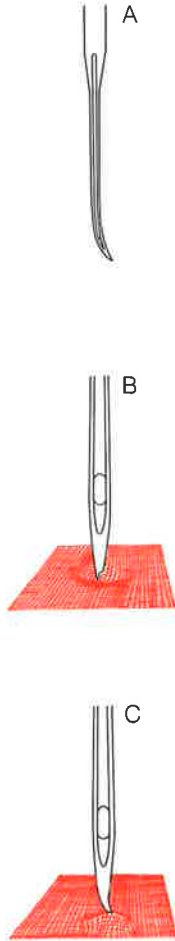
Needle and thread

The needle size required depends on the thread selected. The needle must match the thread. When sewing, the thread lies in the long groove to the front of the needle (Fig. 1). If the needle is too fine, the thread will not fit into the groove (Fig. 2) and skipped stitches will result.



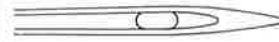
Needle and fabric Condition of needle

The needle must be in perfect condition. Sewing problems are caused by:
A. bent needles
B. blunt needles
C. hooked tips



Standard needles

130/705 H
Normal point, slightly rounded



All-purpose needle for woven synthetic and natural fibres, fine linen, chiffon, batiste, organdie, wool, velvet, decorative seams and embroidery.

Special needles

130/705-SES
Fine ball point



Fine knits, also specially suitable for synthetics.

130/705 H-SUK
Medium ball point



Heavier synthetic or natural fibre knits.

130/705 H-Stretch
Medium ball point



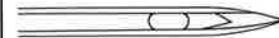
Special needle for delicate or difficult stretch fabrics.

130/705 H-J
Extra fine point



Twill, workwear, heavy linen, denim, canvas. Penetrates dense fabrics more easily.

130/705 H-LL or H-LR
Cutting point



Leather, suede, calfskin, kid, pigskin, imitation leathers and suedes, plastics, waxed fabrics.

Needle/Thread Table

Needle	70	80	90	100	110-120
Darning thread	*	*			
Embroidery thread 30		*			
Mercerised cotton sewing thread		*	*		
Synthetic sewing thread		*	*		
Coarse mercerised cotton Mercerised synthetic			*	*	
Buttonhole thread for top stitching (Cordonnet)				*	*

This table shows clearly which needle suits which thread.

Feed-dog and fabric feed

1. Feed-dog and stitch length

With each stitch, the feed-dog moves forward by one step. The length of this step is governed by the stitch length selected. With an extremely short stitch length, the steps are extremely short. The fabric moves under the presser foot slowly. For example, buttonholes and satin stitching are sewn with this short stitch length.

Important

a) Make sure that the fabric feeds evenly!



b) Pulling or pushing will result in "gaps".

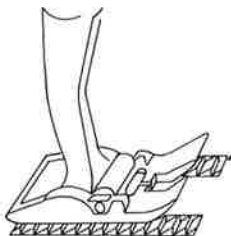


c) Holding back will result in "pile-ups".

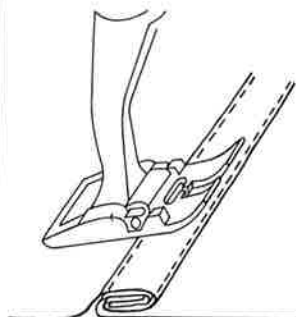


2. Feed-dog and fabric feed

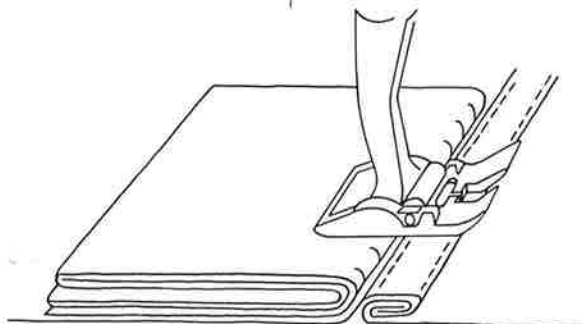
a) The feed-dog can only work effectively if the presser foot is horizontal.



b) If the presser foot is tilted, e.g. at a very thick seam or hem, the feed-dog will be unable to grip the fabric. The work will stick.



c) Place a piece of fabric, neatly folded to the thickness of the seam, beside the sewing so that the presser foot is level again.

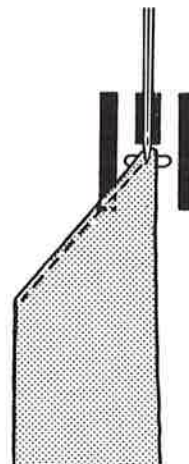


3. Feed-dog and sewing corners

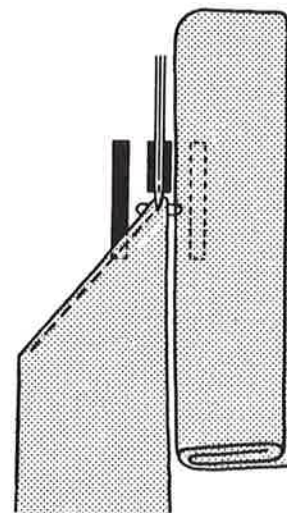
a) The two rows of teeth of the feed-dog are quite a distance apart because of the width of the needle hole.



b) When sewing corners, only a small part of the fabric is on the feed-dog so it cannot transport the work correctly.



c) If a folded piece of fabric is placed against the corner, the feed-dog will be able to do its job properly.

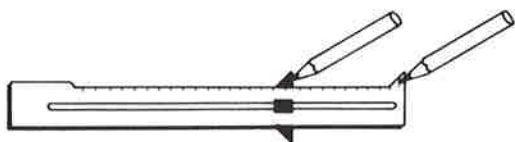


Ruler/Template for buttonholes, hems, pleats, etc.

The ruler/template is extremely versatile and simple. Using the red slide, the required measurement can be set with millimetre accuracy.

There are two ways of using the template:

a) Using the edges when lines are required.



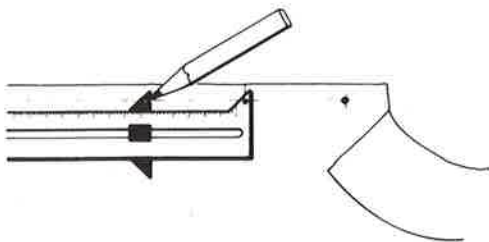
b) Using the small holes when dots are required.

Examples:

1. Marking intervals

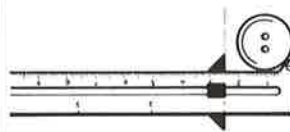
for buttonholes, buttons, eyelets, pleats, etc.

Set the desired measurement with the red slide. Transfer the dots or lines to the work.

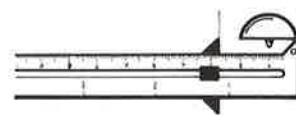


2. Calculating buttonhole lengths

Flat buttons
Button + 2–3 mm ($1/8$ ")

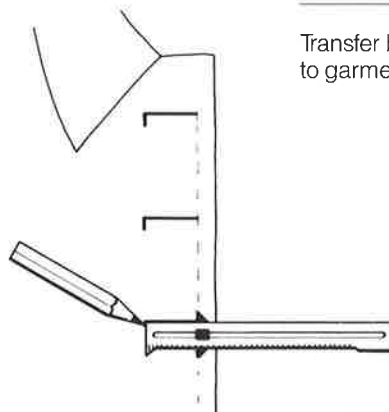


Domed buttons (or thick, fancy buttons)
Button + 5–8 mm ($1/4$ "– $3/16$ ")



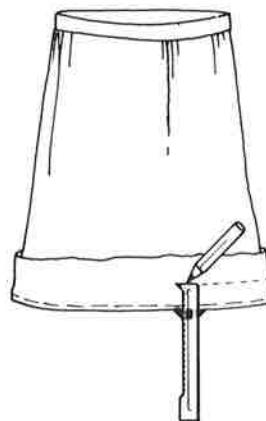
3. Marking buttonholes

Transfer buttonhole length to garment.



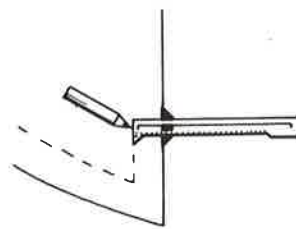
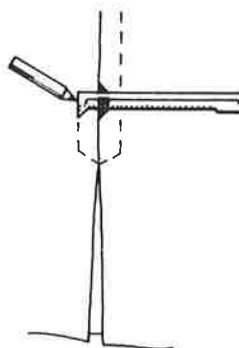
4. Marking hem depths

Set the red slide to the desired hem depth. Place the red slide against the hem edge. Mark the hem depth.



5. Marking sewing lines

Set the red slide to the desired width. Place the red slide against the edge of fabric or to seam. Mark the sewing line.



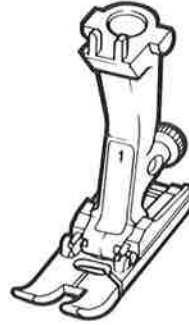
Presser feet
Practical stitches
Practical sewing

Presser feet

Presser feet are an important sewing aid.

They are designed with grooves and guides. Successful sewing depends on the correct choice of presser foot. However, individual presser feet are not just for one particular type of work. They can also be used to simplify other tasks.

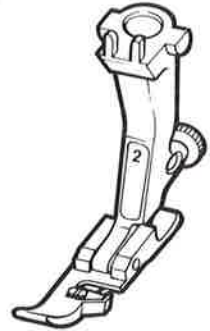
1



Presser foot for

Straight stitch
Zig-zag
Red and green practical stitches

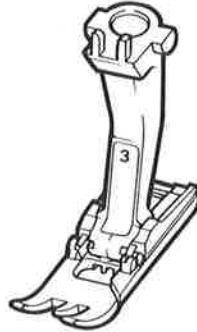
2



Overlock foot

Vari-overlock seam
Vari-overlock hem
Oversewing seam edges

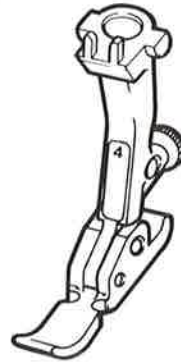
3



Buttonhole foot

Buttonholes

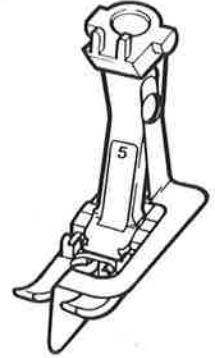
4



Zip foot

Sewing in zips
Sewing close along raised seam

5











Blind stitch foot

Blind hemming
Edge stitching










Range of applications

Green practical stitches

<p>1 Straight stitch</p>  <p>All types of non-stretch fabric. All straight stitch work.</p>	<p>2 Zig-zag</p>  <p>For most types of fabric. All simple zig-zag work, e.g. over-sewing, especially on fine fabrics. Sewing elastic and lace.</p>	<p>3 Blind stitch</p>  <p>For most types of fabric. Blind hemming, shell edging on soft jersey and fine fabrics, decorative work.</p>	<p>4 Universal stitch</p>  <p>For firmer knitted fabrics, felt, leather etc. Flat joining seams, visible hems, patchwork, mending interlock fabrics, sewing on elastic, decorative seams.</p>
<p>5 Stretch stitch</p>  <p>For very stretchy fabrics. Very stretchy open seams for ski, riding, climbing and hiking wear.</p>	<p>6 Vari-overlock</p>  <p>Primarily for fine synthetic and silk jersey, Heianca, fine cotton and wool jerseys. Stretchy overlock seams and hems, particularly suitable for sports underwear, T-shirts, sweatshirts etc.</p>	<p>7 Running stitch</p>  <p>For most types of fabric. Darning with running stitch, mending of woven fabric, reinforcing edges etc.</p>	<p>8 Scallop stitch</p>  <p>Primarily for woven fabrics. Edging of tablecloths, place mats, collars, cuffs etc.</p>

Range of applications

Red practical stitches Red decorative stitches

<p>9 Triple straight stitch</p>  <p>For corduroy, denim, overall and deckchair fabrics, carpet borders, rucksacks, sleeping bags and similar. Hard-wearing seam for joining pieces of fabric or top stitching seams.</p>	<p>10 Triple zig-zag</p>  <p>For denims, corduroys, leathers, decorative hems, light fabrics for blinds and similar. Visible hems and seams, sewing on tape, extra strong seam for sportswear, woollen blankets, sleeping bags, rucksacks.</p>	<p>11 Towelling stitch</p>  <p>Primarily for towelling fabrics, denim, leather and other firm fabrics. Flat joining seams, visible hems for beachwear, craft work.</p>	<p>12 Double overlock</p>  <p>For all types of knitted fabrics and hand and machine knitted articles. Overlock seam.</p>
<p>13 Edge stitch</p>  <p>For most types of fabric. Visible hems, sewing on lace and tapes of all kinds, decorative edges, craft work.</p>	<p>14 Reinforced overlock stitch</p>  <p>For sweatshirt fabric, towelling, medium-weight knits. Reinforced overlock seams, craft work.</p>	<p>15/16 Decorative stitches</p>  <p>15 </p> <p>16 </p>	

Straight stitch

Needle positions

1	5	1	⊙	16	1	5		⊙	8
1	5	2	⊙	15	1	5		⊙	7
1	4	2	⊙	14	2	4	1	⊙	6
1	4	2	⊙	13	1	1 3/4	1	⊙	5
1	5	2	⊙	12	1	4	1	⊙	4
1	4	2	⊙	11	5	3	2 1/4	⊙	3
1	0/5	3	⊙	9/10	1	0/3	2 1/4	⊙	1/2

Presser foot:	1
Thread:	according to fabric
Needle:	according to thread
Stitch:	-----
Stitch width:	0
Stitch length:	1-5 according to fabric
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

Forward sewing

The machine sews forwards with the settings specified and with the selected stitch length.

The stitch length is selected according to the type of sewing and fabric.

Reverse sewing

Push the stitch length knob upwards above 0 and hold until reverse sewing is completed.

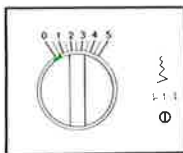
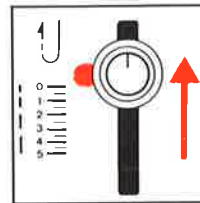
When the knob is released again, the machine will again sew forwards with the previously selected stitch.

Securing ends

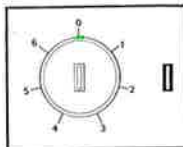
At the beginning and end of a seam, sew in reverse for approx. 1 cm (3/8") and then forwards again.

Securing thick seams

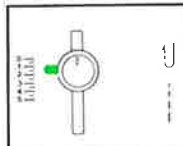
When changing from forward to reverse sewing and vice-versa, stop the machine. The needle should be raised. If not, turn the handwheel forwards. This prevents the needle from being bent by thick fabrics.



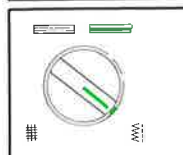
Stitch width
Needle position



Buttonhole

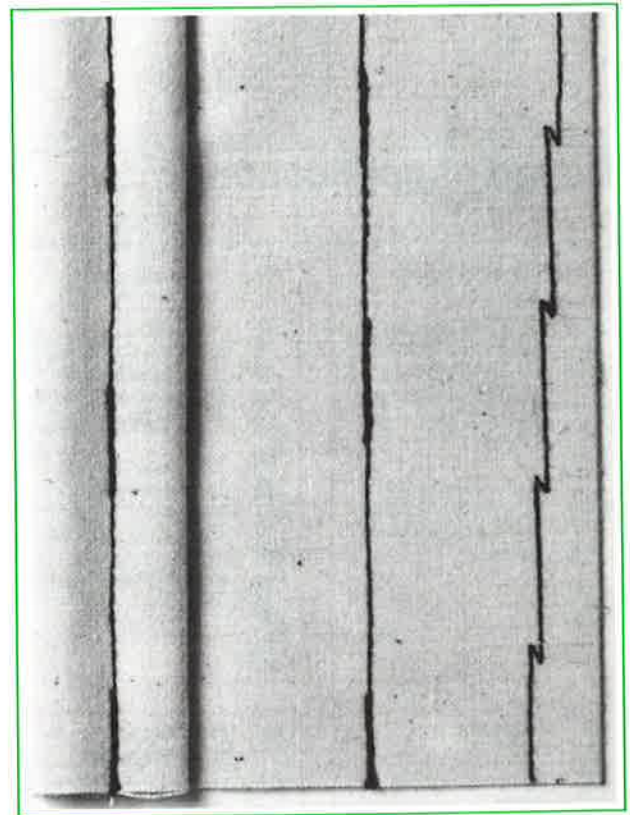


Stitch length
Normal stitch length is approx. 2



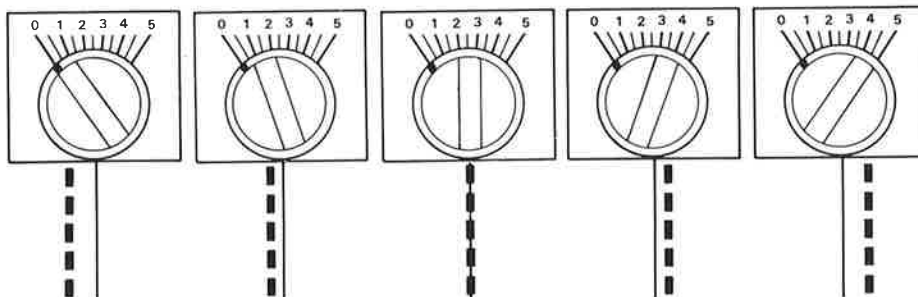
Colour indicator

Feed-dog



Five needle positions

The position of the stitch can be set to left and right in five positions with the needle position knob.



For normal sewing, the needle is in the centre.

Examples of use:

Blind hemming	Page 30
Edge stitching	Page 31
Sewing in zips	Page 26

Zig-zag

Satin stitch

Setting zig-zag

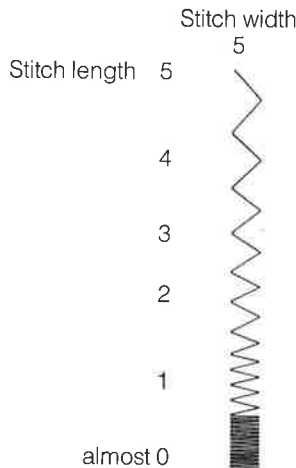
Presser foot:	1
Thread:	according to fabric
Needle:	according to thread
Stitch:	^/\/\/\/\/\/\/\/\/\/^
Stitch width:	1-5
Stitch length:	1-5
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

Setting zig-zag width and length

The stitch width and length can be altered during sewing or while the machine is stopped.

Set the width of the zig-zag stitch with the stitch width knob. It is infinitely variable up to 5 mm.

The needle must not be left in the work when the machine is stopped.



Satin stitch = close zig-zag = IIIII

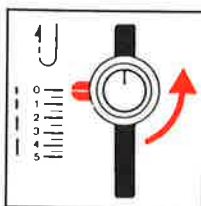
Presser foot:	1 (6*)
Thread:	embroidery thread No. 30
Needle:	80
Stitch width:	1½ - 5
Stitch length:	IIIII (satin stitch density)

* Additional accessory

Set stitch length to very close zig-zag = IIIII

Turn stitch length knob to the right until it locks.

The mark on the knob is at the top. Stitch length is now 0.



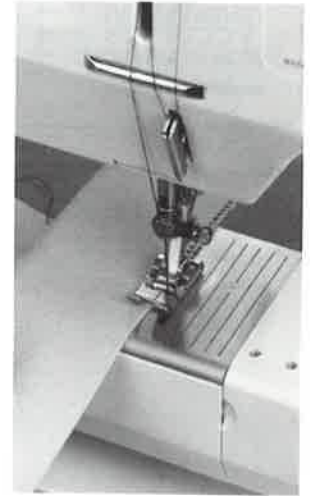
By rotating half a turn to the left (mark at the bottom) the basic setting for satin stitch is obtained = IIIII .

Adjust the stitch density according to the work. Turn anti-clockwise for thicker fabric, clockwise for finer fabric.

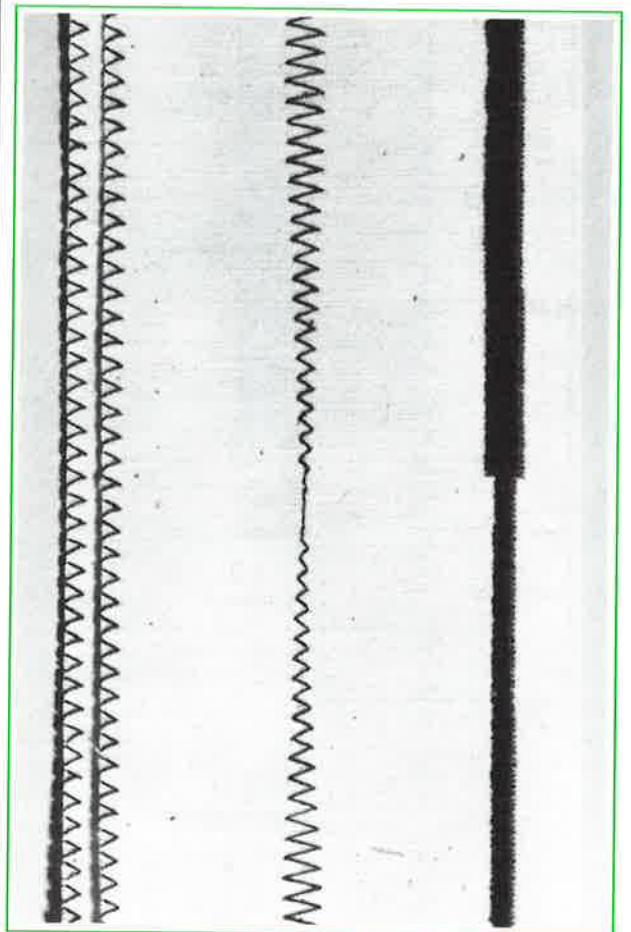
Oversewing edges

Presser foot:	1
Thread:	darning or sewing thread
Needle:	80 - 70
Stitch width:	2½ - 5 (according to fabric)
Stitch length:	1 - 3 (according to fabric)

Generally, the zig-zag should not be too wide or the stitch length too long. Start by cutting a neat edge. Use as fine a thread as possible, especially on fine fabrics.



Guide the edge of the fabric to the centre of the foot so that the needle goes alternately into the fabric and then over the edge.



Selecting green stitches

The diagram shows two sets of controls, 'a' and 'b'. Each set consists of a table of settings and a row of stitch patterns. The settings are: a) Presser foot (1, 5, 1, 0), Stitch width (16, 15, 14, 13, 12, 11, 9/10); b) Presser foot (1, 5, 1, 0), Stitch width (8, 7, 6, 5, 4, 3, 1/2). The '4' settings in set 'b' are highlighted in green.

- a Presser foot
- b Stitch width
- c Stitch length
- d Needle position

Push the selector lever to the right to disengage and select a stitch from 1-8.

Set the colour indicator to green.

The number for the basic setting is the same as the number of the stitch selected.

Each stitch has many different applications. The stitch width and length can be adjusted to the type of work and fabric. The presser foot display recommends the appropriate foot for easy work and perfect results.

For practice however, the foot recommended on the panel should be used.

Universal stitch

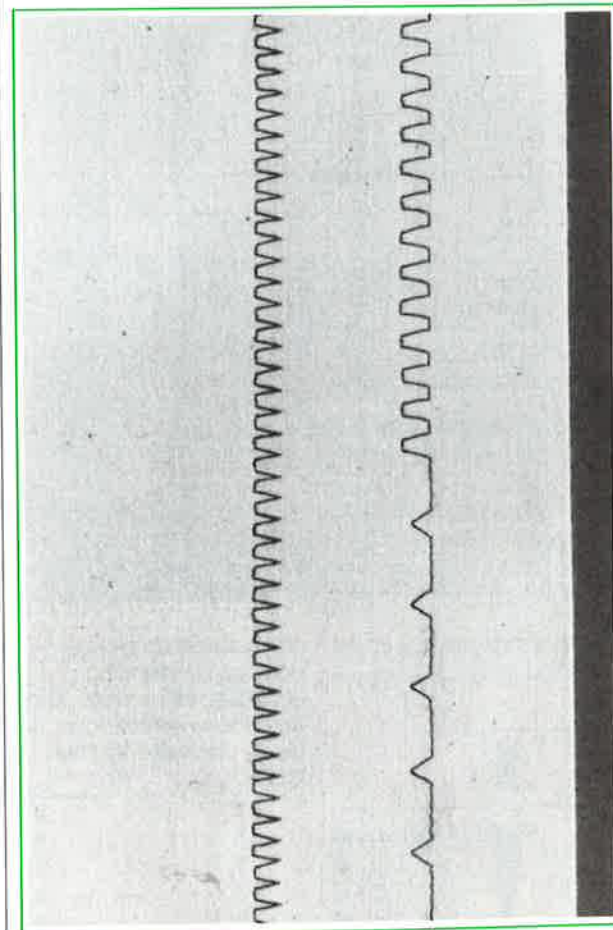
Presser foot:	1
Stitch:	
Stitch width:	4
Stitch length:	1
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

Blind stitch

Presser foot:	1 (5)
Stitch:	
Stitch width:	3
Stitch length:	2 1/4
Needle position:	right
Feed-dog:	sewing
Colour indicator:	

Vari-overlock

Presser foot:	1 (2)
Stitch:	
Stitch width:	4
Stitch length:	1
Needle position:	right
Feed-dog:	sewing
Colour indicator:	



Selecting red stitches

a	b	c	d	
				16
				15
				14
				13
				12
				11
				9/10

a	b	c	d	
				8
				7
				6
				5
				4
				3
				1/2

- a Presser foot
- b Stitch width
- c Stitch length
- d Needle position

Push the selector lever to the right to disengage and select a stitch from 9–16.

Set the colour indicator to red.

The number for the basic setting is the same as the number of the stitch selected.

Each stitch has many different applications. The stitch width and length can be adjusted to the type of work and fabric. The presser foot display recommends the appropriate foot for easy work and perfect results.

Triple zig-zag

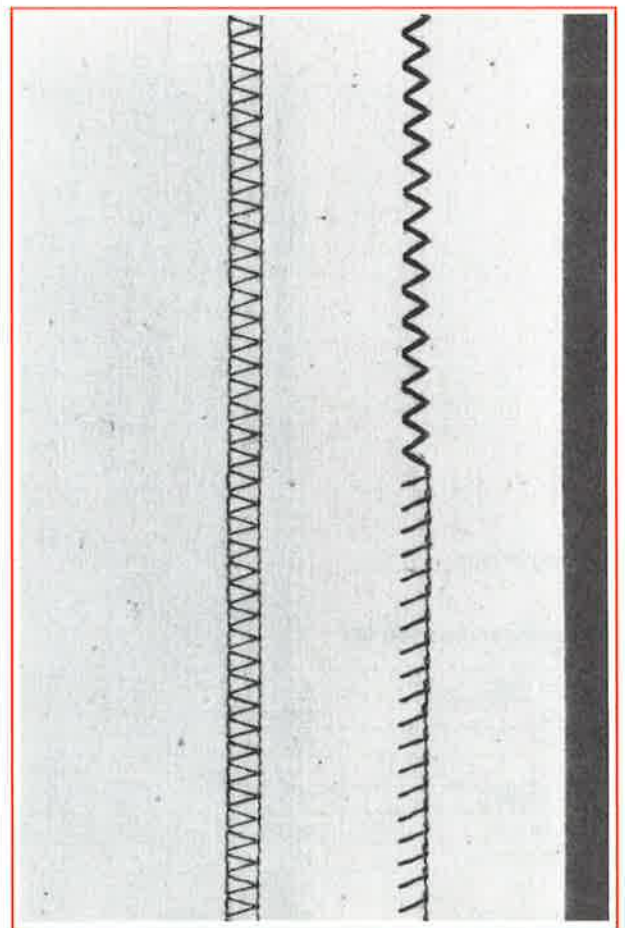
Presser foot:	1
Stitch:	
Stitch width:	5
Stitch length:	3
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

Towelling stitch

Presser foot:	1
Stitch:	
Stitch width:	4
Stitch length:	2
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

Double overlock



Presser foot:	1
Stitch:	
Stitch width:	5
Stitch length:	2
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	



Practical stitch seams



Vari-overlock seam

Stretchy overlock seam for all fine jersey fabrics, dresses, blouses, underwear, nightwear, etc.

Presser foot:	2
Stitch:	
Stitch width:	4
Stitch length:	1
Needle position:	right
Feed-dog:	sewing
Colour indicator:	



Double-overlock seam

Stretchy overlock seam for all thicker or loosely knitted jersey fabrics

Presser foot:	1
Stitch:	
Stitch width:	5
Stitch length:	2
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	



Reinforced overlock seam

Stretchy overlock seam for casual wear, crafts, etc. sweatshirts, sportswear and

Presser foot:	1
Stitch:	
Stitch width:	4-5
Stitch length:	2
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

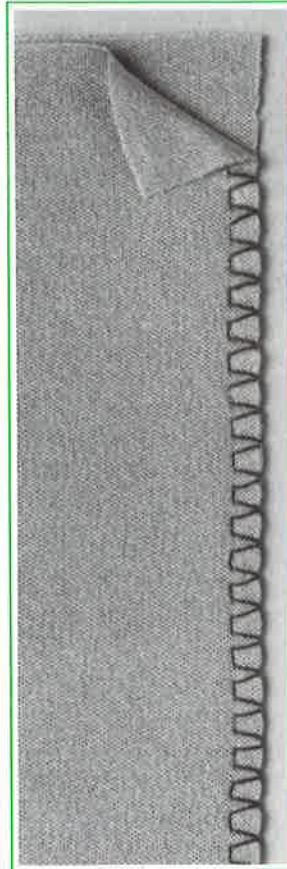
Flat seam

Visible seam for towelling wear, crafts, etc. felt, leather, denim, casual

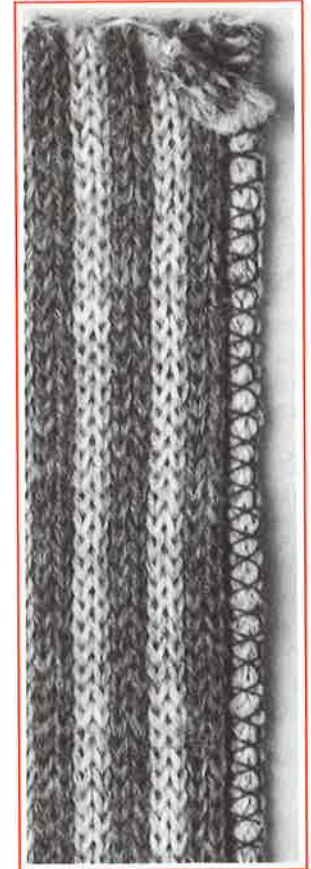
Presser foot:	1
Stitch:	
Stitch width:	4
Stitch length:	2
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

Reminder

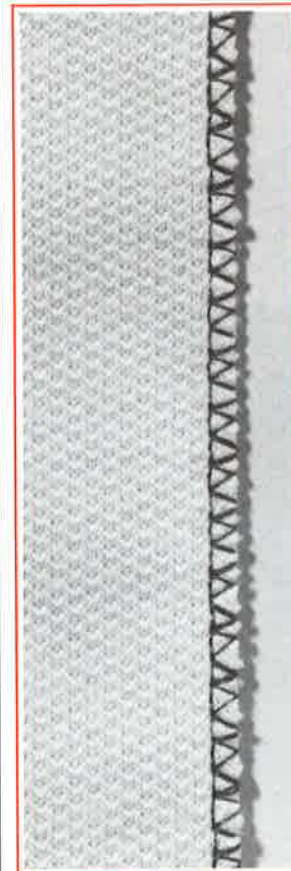
For sewing knitted fabrics see Page 26.



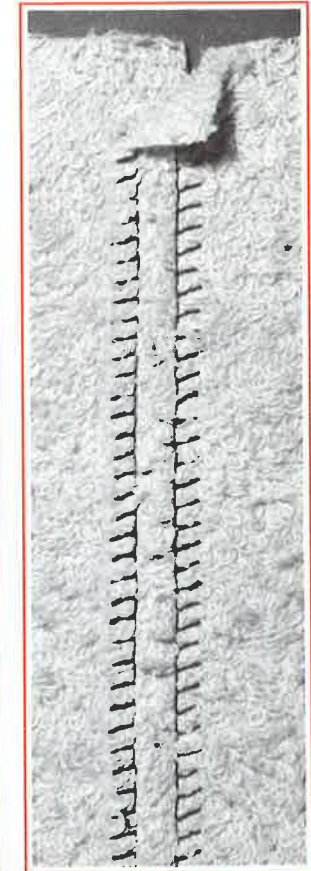
Vari-overlock seam



Double overlock seam





Reinforced overlock seam



Flat seam

Blind hemming

Presser foot:	5
Thread:	sewing thread/darning thread
Needle:	80-70
Stitch:	
Stitch width:	approx. 3
Stitch length:	2¼
Needle position:	right/half right
Feed-dog:	sewing
Colour indicator:	

Sewing table/special accessory

Important

As with hand sewing, fine fabrics require a fine needle and fine thread.

Preparation

The hem should be prepared in the same way as for sewing by hand. Oversew raw edge, baste and press.

Positioning the hem

The hem is positioned under the foot as shown in Fig. 1.

Sewing test

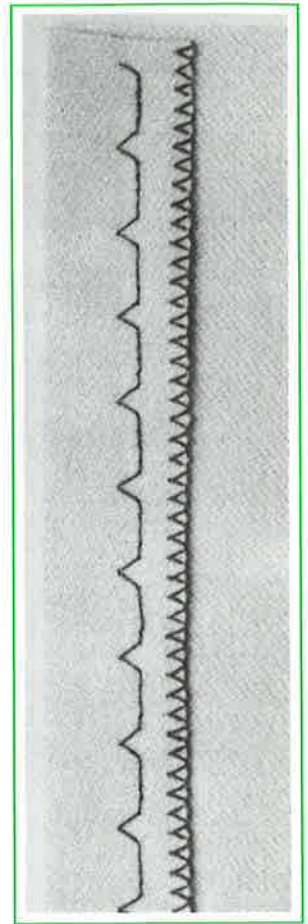
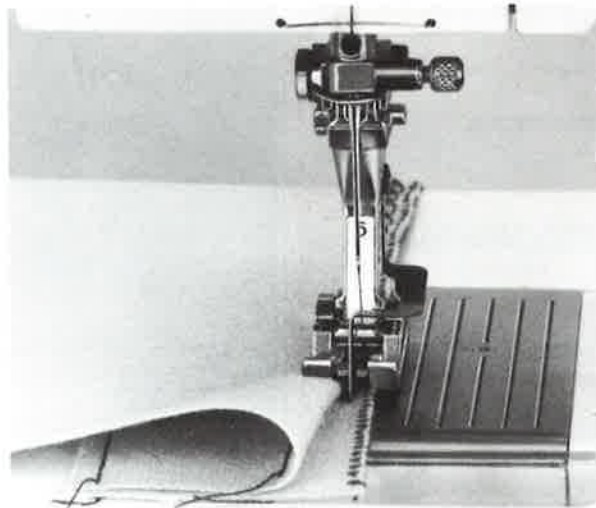
(Either on a remnant of fabric or directly on the hem.)

Given the variations in fabric thickness, it is advisable to sew a test piece first. As when sewing by hand, the needle should only catch the fold of the fabric. Because of these variations, a slight adjustment may be necessary.

Sew slowly until the needle swings to the left. Using the handwheel, bring the needle down until it is just about to enter the fabric and check that it is only just catching the fabric. If necessary, adjust the stitch width slightly.

Narrower if the needle is going in too far and a little wider if it is failing to catch sufficiently.

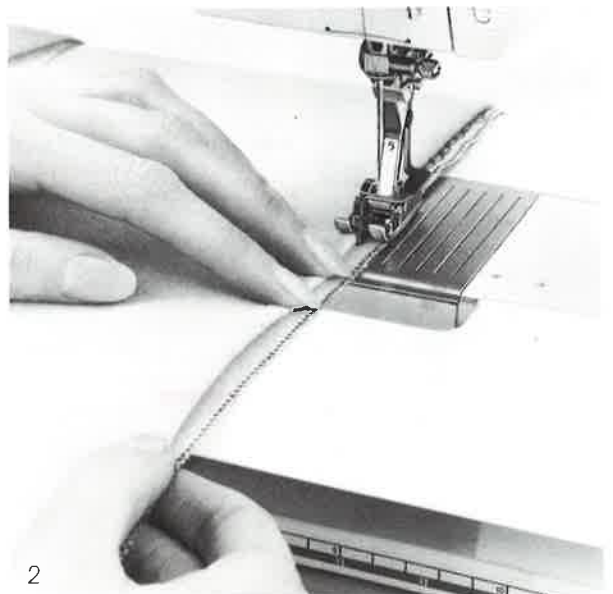
Check the next zig-zag stitch in the same way. Then sew for approximately 10 cm (4") and check again.



Guiding the work

In this way, you can check that the hem is running straight.

Tip: While sewing, hold the underfabric back slightly (Fig. 2).



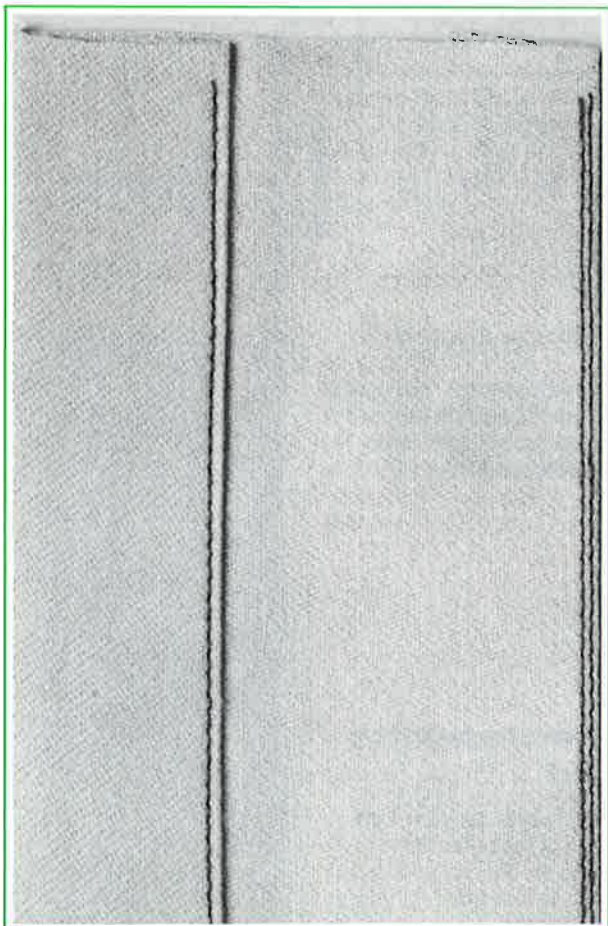
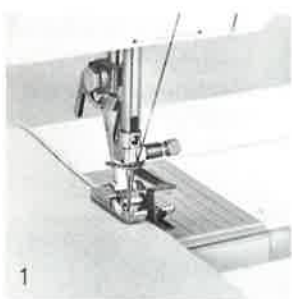
Edge stitching using the needle positions

Edge stitching on collars, cuffs, lapels, hems, etc.

Presser foot:	5
Thread:	sewing thread
Needle:	80
Stitch:	-----
Stitch width:	0
Stitch length:	2 - 5 (as required)
Needle position:	left/half left
Feed-dog:	sewing
Colour indicator:	

Sewing table/additional accessory

Place the edge of the fabric from the left against the guide of the Blind stitch foot (Fig. 1). Set the needle position to left or half left.



Top stitching, for edges of all kinds.

Presser foot:	1
Thread:	sewing thread
Needle:	80
Stitch:	-----
Stitch width:	0
Stitch length:	2 - 5 (as required)
Needle position:	any position
Feed-dog:	sewing
Colour indicator:	

Guide the edge of the fabric to the edge of the presser foot or along the grooves in the stitch plate.

Widths:

(Needle position centre)

Edge of presser foot = 7.5 mm ($\frac{5}{16}$ "). (Fig. 2)

Grooves in stitch plate:

Line 1 = 1 cm ($\frac{3}{8}$ ")

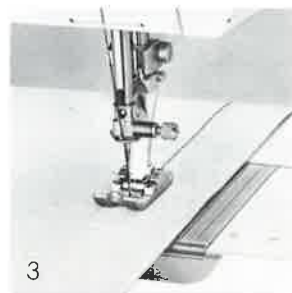
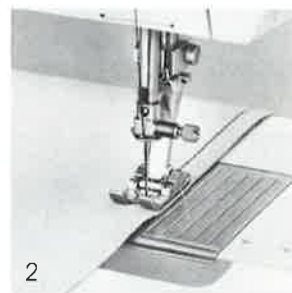
Line 2 = 1.5 cm ($\frac{5}{8}$ ")

Line 3 = 2 cm ($\frac{3}{4}$ ")

Line 4 = 2.5 cm (1")

Line 5 = 3 cm ($1\frac{3}{16}$ ")

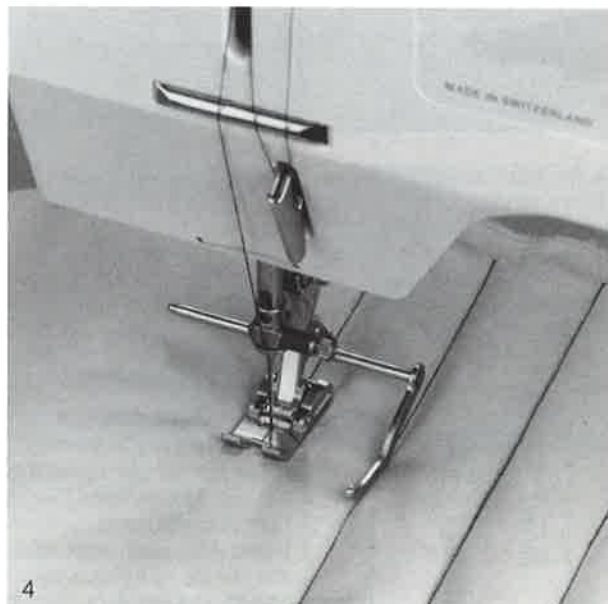
It is also possible to sew intermediate widths using the left, half left, right and half right needle positions.





Sewing with seam/quilting guide

Insert the seam/quilting guide into the presser foot. The distance between the seam/quilting guide and

the centre of the presser foot corresponds to the space between the rows of sewing (Fig. 4).



Buttonhole

Presser foot:	3
Thread:	sewing/darning thread
Needle:	80-70
Stitch:	
Stitch width:	set automatically
Stitch length:	IIIII (satin stitch)
Needle position:	set automatically
Feed-dog:	sewing
Colour indicator:	

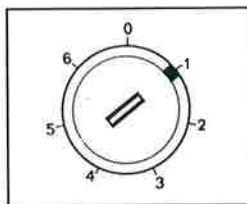
To sew buttonholes, thread the lower thread through the finger of the bobbin case (Fig. 1).



1

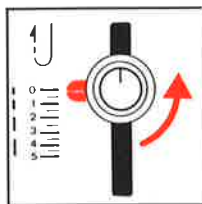
Setting buttonhole

1. Switch buttonhole knob to position 1 (Fig. 2).



2

2. Set stitch length: Turn knob to the right until it locks. The mark will be at the top (Fig. 3). Stitch length is 0. By rotating half a turn to the left (mark at the bottom)

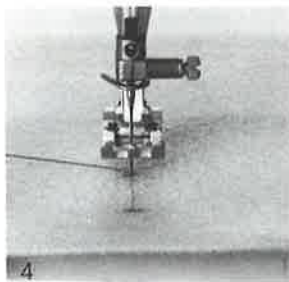


3

the basic stitch length setting for buttonholes is obtained = IIIII. Set the stitch density according to the fabric. Turn anti-clockwise for thicker fabrics, clockwise for finer fabrics. **Always sew a trial buttonhole.** The stitch length will vary slightly depending on the fabric.

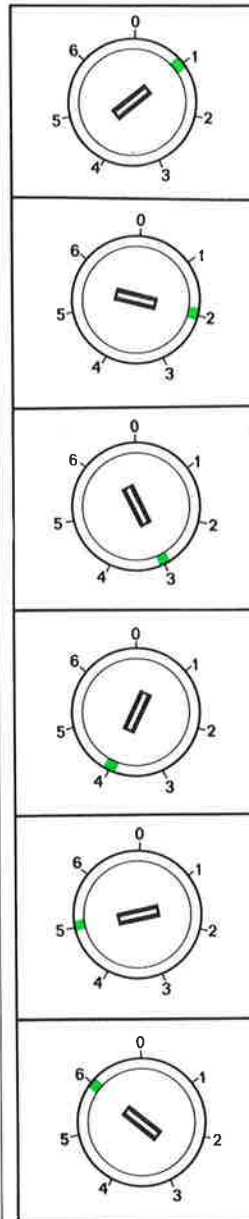
Sewing the buttonhole

Lay the fabric under the foot so that the edge of the fabric lies in front of the presser foot (Fig. 4). Lower the needle with the aid of the handwheel and check that it is in the **centre**



4

of the presser foot. If not, turn the handwheel. Lower the needle into the fabric precisely at the start of the buttonhole. Lower the presser foot and sew the buttonhole in steps. **Note:** After each step, raise the needle by turning the handwheel forward.



Knob to 1
Machine sews the first bead forwards.

Knob to 2
Machine sews a reverse straight stitch.

Knob to 3
Machine sews the bar tack.

Knob to 4
Machine sews the 2nd bead forwards.

Knob to 5
Machine sews the bar tack.

Knob to 6
Machine sews securing stitches.

Further buttonholes

Reset knob to 1. The sewing sequence continues as described. For all other sewing, set knob to 0.

Cutting the buttonhole open

It is best to cut from each end of the buttonhole towards the centre (Fig. 5). This avoids cutting through a bar tack.



5

With gimp cord

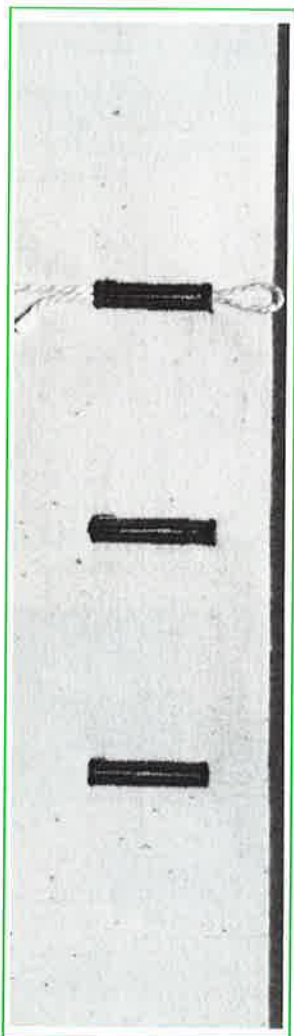
Buttonhole with gimp cord

The gimp cord strengthens the buttonhole.

The gimp cord is especially important for all knitted fabrics – including hand and machine knits – to prevent the buttonhole from pulling out of shape.

The thickness of the cord depends on the fabric to be sewn. Suitable cords are: perle cord no. 8, thick hand sewing thread or fine crochet cord. Sew a trial buttonhole.

Lay the fabric under the foot so that the folded edge or seam lies in front of the presser foot. The loop of the gimp will lie at the end of the buttonhole where the button will pull (Fig. 1).



Sewing with gimp cord

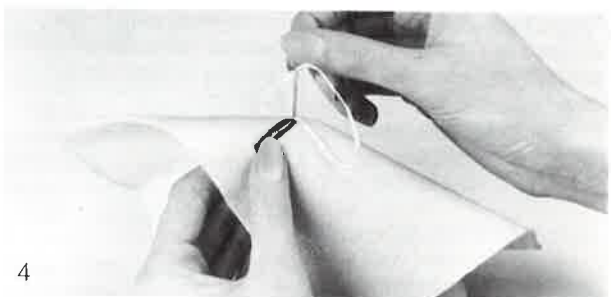
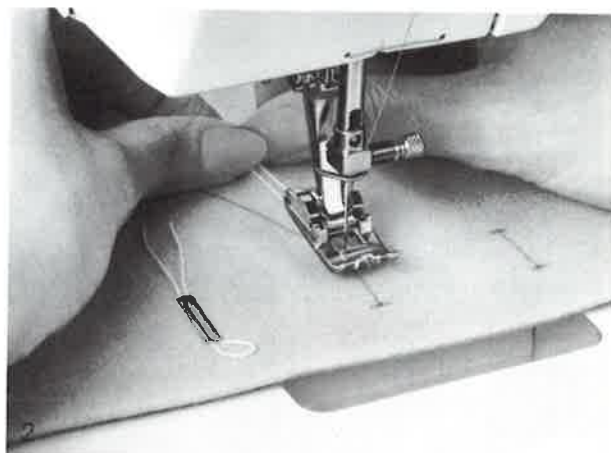
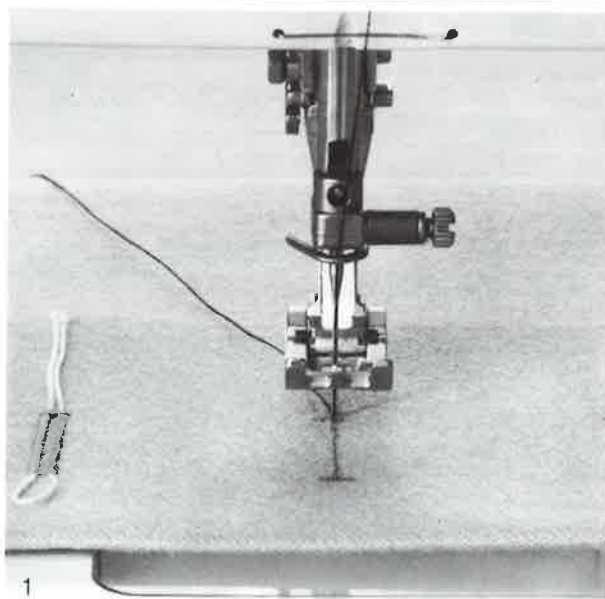
It is easier to position the cord if the needle is already in the fabric:

1. Using the handwheel, lower the needle and check that it is in the centre of the presser foot. If not, turn the handwheel. Lower the needle into the fabric precisely at the start of the buttonhole. Do not lower the foot yet.

2. Hook the gimp cord over the centre prong of the buttonhole foot and take both ends back under the foot (Fig. 2). Lower the foot and check that the cord is able to slide, i.e. is not trapped by the foot.



3. Sew the buttonhole. At position 2 (reverse straight stitch), the cord comes away from the prong of the foot. Therefore, it is advisable to hold the loop of gimp down LIGHTLY with the finger (Fig. 3).

Finally, pull the loop of gimp through. With knitted fabrics, pull the gimp ends to the rear with a coarse hand sewing needle (Fig. 4) and tie or sew in securely. In woven fabrics, the gimp ends can be simply cut off.

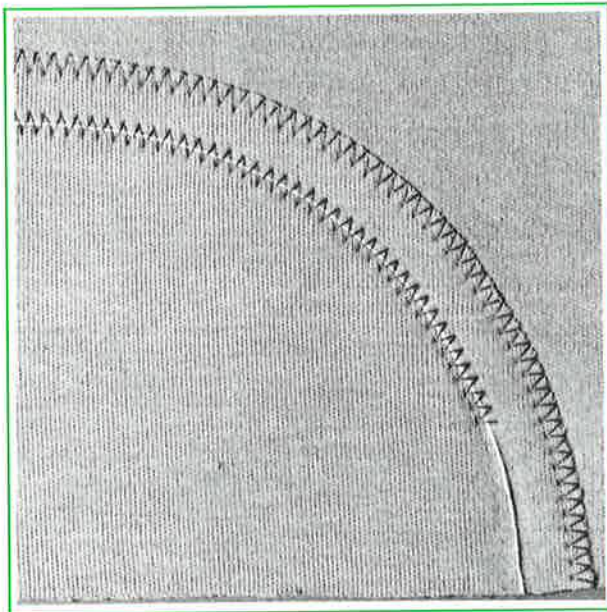


Mending interlock fabric

Patching

Presser foot:	1
Stitch:	
Stitch width:	3-4
Stitch length:	approx. 1-1½
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

Can also be sewn with the Universal stitch.



Cut out a patch, if possible from the sound part of a discarded similar garment. Where possible, round off the corners to preserve the elasticity in all directions. Pin on the patch and baste as close as possible to the edge. Then sew with 1-2 rows of zig-zag stitch, possibly sewing in thread simultaneously.

Finally, cut away torn/worn piece from behind patch.

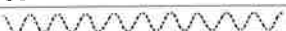

For all knits, refer to the general instructions "Sewing knitted fabrics" on page 26.

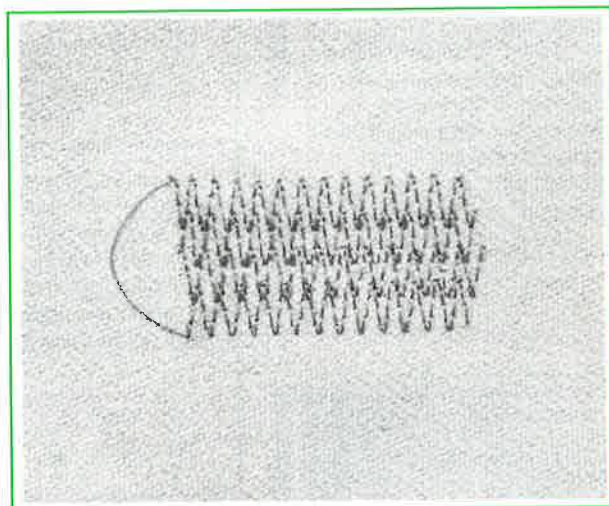
Mending woven fabric

Mending tears using

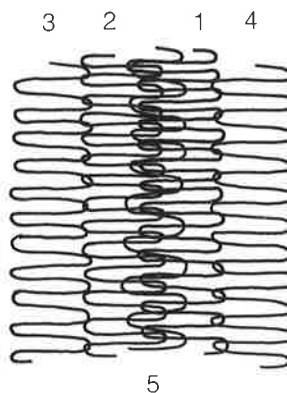
Running stitch

(Modern darning method) for tears and thin areas on virtually all fabrics.

Presser foot:	1
Thread:	darning thread/Machine emb. 60
Needle:	80
Stitch:	
Stitch width:	5
Stitch length:	
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	



Always lay a fine fabric underneath. On tears, sew 3-5 rows of Running stitch, depending on the type of fabric (Fig. 1). On thin areas, sew sufficient adjacent rows to cover. Let each row overlap the previous one very slightly.



Darning

Principles of darning

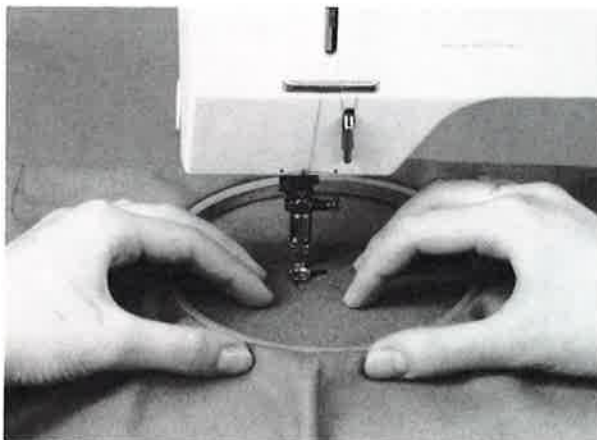
The feed-dog must be lowered for darning, as the work is moved to and fro by hand and not by the feed-dog. It is important to guide evenly when darning.

– Use the sewing table* and keep the elbows supported, when possible by the work table. Move the machine sufficiently far away from the edge to do this.

Recommendation

- Whenever possible, use a darning or embroidery ring to keep the darning area taut.
- Move the ring backwards and forwards without pressure, otherwise jerky movements and thread breakage will result.
- Always work from left to right, moving up and down over the hole. Do not move the hoop from side to side.
- The ideal way to hold the ring is with the little fingers and thumbs to the outside of the ring, held firmly to give a smooth movement.

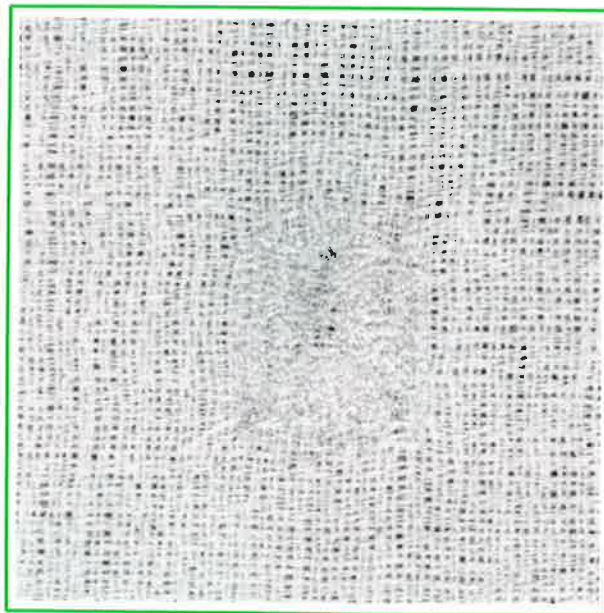
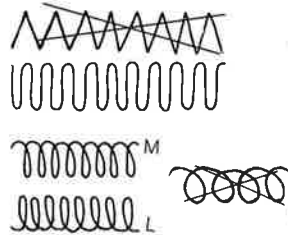
* Additional accessory in some countries



Presser foot:	9
Thread:	darning thread / Machine emb. 60
Needle:	80–70
Stitch:	-----
Stitch width:	0
Stitch length:	0
Needle position:	centre
Feed-dog:	lowered
Colour indicator:	

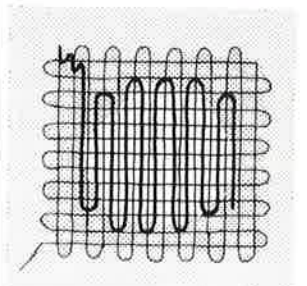
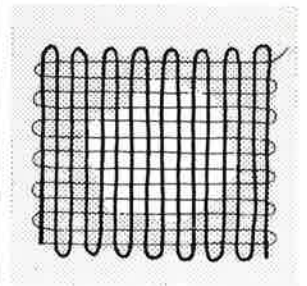
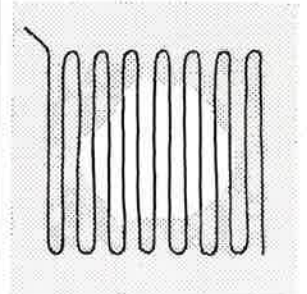
Important

Darn in a curved rather than a pointed shape, otherwise the fabric is liable to tear. Beginners often tend to prefer L and M movements, but care must be taken to ensure that this does not result in circular movements.



Darning technique

There are various methods of darning. Here is a method that is easy to learn:



The three steps

1. Bring lower thread up, start at top left, work from left to right across hole, finish at top right, then turn through 90°.
 2. Again work from left to right, but not too densely that a ridge forms at the edge. Turn work through 180°.
 3. Fill in the darn, but only across the «hole». The stitches will be in the same direction so that they blend with the 2nd row.
- When the darning technique has been mastered, work the rows of stitches in irregular lengths so the darn blends into the fabric.

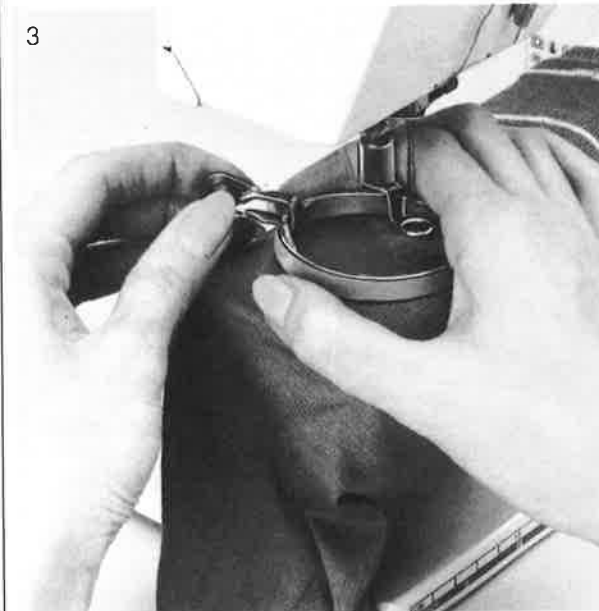
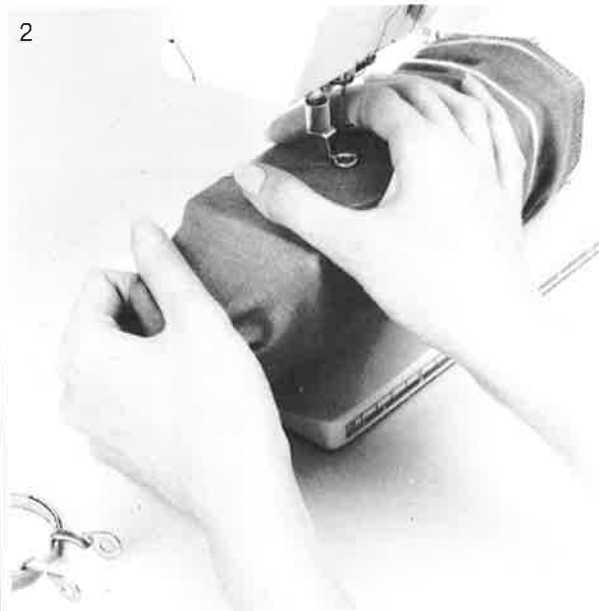
Main faults

- Thread frequently breaks:
- Fabric is guided unevenly.
- Stitching is unattractive, thread lies loose on top:
- Fabric is guided too quickly.
- Small knots form on the underside:
- Fabric is guided too slowly.

Darning with small darning ring

The small darning ring

The small darning ring is particularly practical for darning small torn/worn areas in fine fabrics and in fine underwear of all kinds, fine socks and pullovers, eg. in Helanca, interlock, jersey.



Stretching the work

- Fit the darning ring without the spring clip on to the free arm (Fig. 1).
- Slide the garment over both the free arm and the darning ring.
- Push the darning ring out as far as possible to the left.

- Place the index finger and thumb of the right hand on the darning ring to form a circle.
- With the left hand, stretch the fabric over the end of the free arm. Hold the tensioned fabric with the thumb of the right hand (Fig. 2).

- With the left hand, fit the spring clip as follows: Close the spring clip, insert under the index finger of the right hand and hold firmly. Then press the spring clip into the darning ring (Fig. 3).

Darning technique

Tubular items are usually stitched up and down and then side to side as it is not possible to turn the work.

Troubleshooting Maintenance

Fault prevention

If the sewing machine does not sew properly, it is usually due to incorrect use.

Check whether:

- The upper and lower threads are correctly threaded.
- The needle has been correctly inserted with the flat side of the shank to the rear.
- The needle size is correct. See needle and thread table.
- The machine is clean. Brush away any thread remnants.
- The hook race is clean and lubricated.
- Any remnants of thread are trapped between the thread tension disc and beneath the bobbin case spring.

Upper thread breaks

- The upper thread tension is too tight.
- Poor quality needles. Ideally, needles should be purchased from a BERNINA dealer.
- The needle has been incorrectly inserted. The flat side of the shank must be to the rear.
- The needle is blunt or bent.
- Poor quality thread, knotted or dried-out thread.
- Stitch plate or hook tip damaged. Take to a BERNINA dealer.

Lower thread breaks

- The lower thread tension is too tight.
- The bobbin is jamming in the bobbin case. Replace bobbin.
- The hole in the stitch plate has been damaged by the needle. This must be repolished by an expert.
- The needle is blunt or bent.

Skipped stitches

- Wrong needles. Use only 130/705 H needle system.
- The needle is blunt, bent or incorrectly inserted. Push right to the top when inserting.
- Poor quality, badly polished needle.
- The needle point does not suit the fabric being sewn. If necessary, use ball point for knitted fabrics and cutting point for leather.

Needle breaks

- Needle clamp screw not sufficiently tightened.
- Fabric withdrawn forwards instead of backwards under the presser foot.
- When sewing over a thick area, the fabric was pushed while needle still in the fabric. Use a Jeans foot.
- Poor quality thread, unevenly wound or knotted.

Faults in seams

- Remnants of thread between the thread tension discs.
- Remnants of thread under the bobbin case spring.
- Lower thread still threaded in the bobbin case finger.
- Threaded with foot down.
- Incorrectly threaded. Check lower and upper threads.

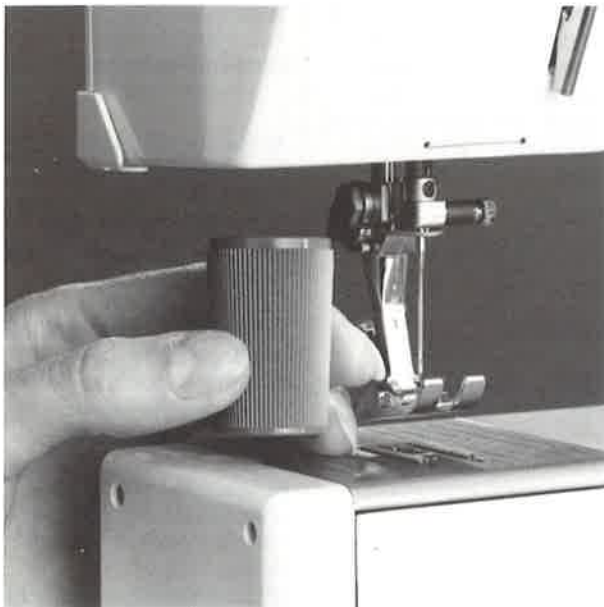
Machine fails to run

- Plug is not inserted properly.
- Power switch in position.
- Machine gummed up by use of unsuitable oil. Machine will have to be cleaned by a BERNINA dealer.
- Machine has been standing in a cold room.

Important

If you have to take your machine to a BERNINA dealer, please always take the foot control unit and accessories.

Changing the bulb

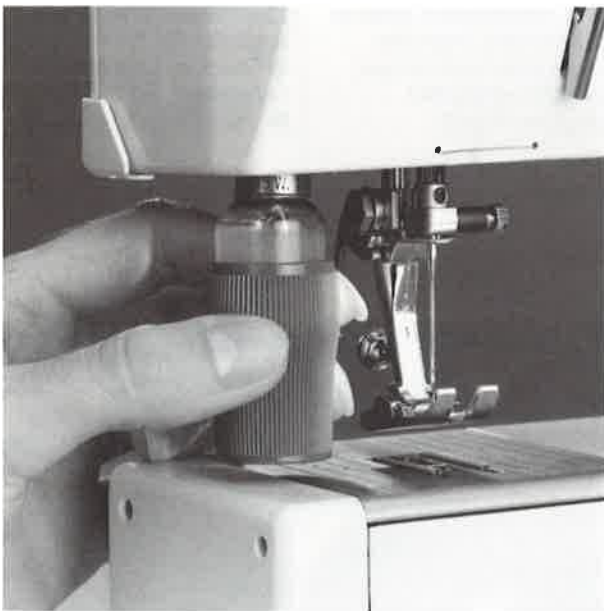


Disconnect machine from the mains by removing the mains plug from the socket.

Sewing light:
220V/15 Watt

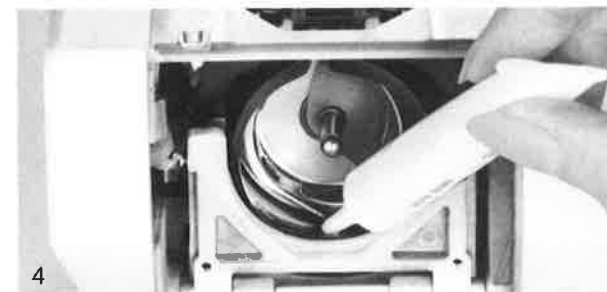
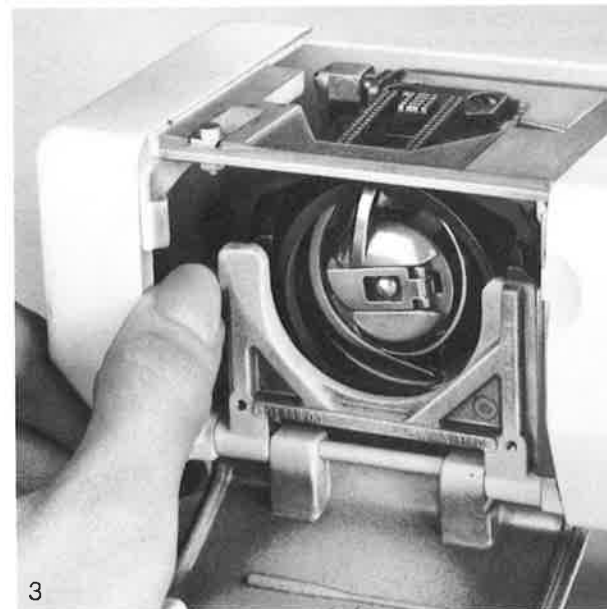
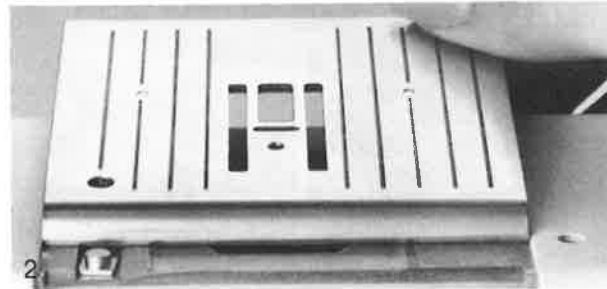
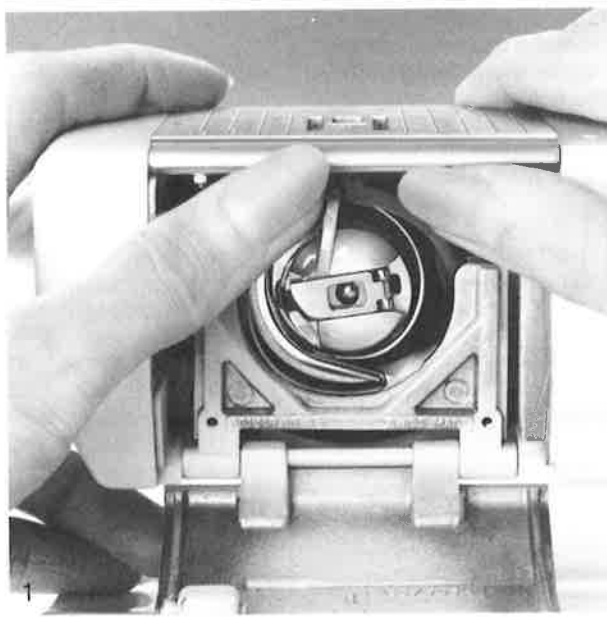
Changing the bulb

Disconnect the machine from the mains – take the plug out of socket. Using the special bulb holder, press the bulb up, twist to the left and remove.



To insert new bulb:
Place the new bulb on the bulb holder. Insert the bulb into the socket, press upwards and twist to the right as far as it will go.

Maintenance: Cleaning and oiling




If the machine is stored in a cold room, it should be brought to a warm room approximately one hour before use, to restore the oil in the bearings to a fluid state.

Cleaning

During sewing, fluff from the thread will collect under the stitch plate and around the hook. These remnants must be removed from time to time.

Disconnect the machine from the mains by removing the mains plug from the socket!

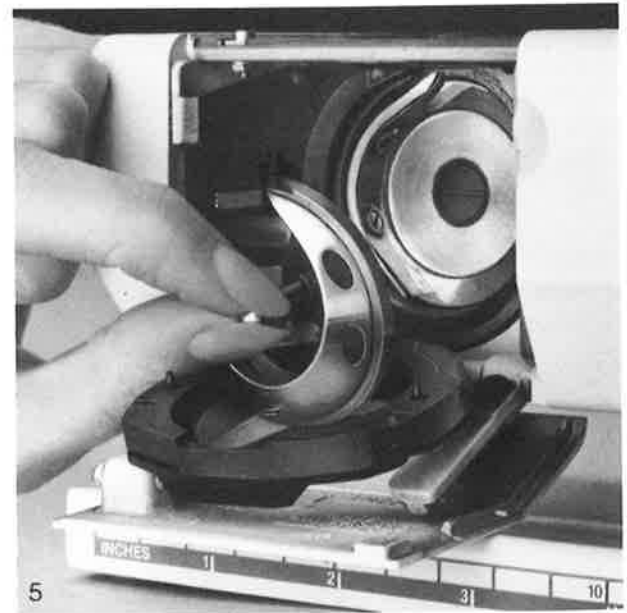
- Remove the presser foot and needle.
- Open the hinged front cover on the free arm.
- Lower the feed-dog. Set knob to position . Using both thumbs, press the stitch plate up and back (Fig. 1).
- Clean the feed-dog and underside of the stitch plate.
- To refit the stitch plate on the free arm, insert the stitch plate from the rear, push forward until it engages (Fig. 2).

To oil the hook: Apply 1–2 drops of oil after 3–4 hours' sewing.

To clean and oil the hook

Disconnect the machine from the mains by removing the mains plug from the socket!

- Take out the bobbin case, see page 10.
- With the thumb of the left hand, press the lower release lever to the left (Fig. 3)
- Fold down the semi-spherical locking strap with the black hook race cover.
- Take out the hook.
- Clean the top and bottom of the hook race with the cleaning brush and cotton cloth. Never use a screw-driver, scissors etc. to remove remnants of thread.
- Lightly oil the hook race with 1–2 drops of oil (Fig. 4). Insert the hook. If necessary, turn the hand-wheel until the hook driver is on the left (Fig. 5).
- Close the black hook race cover and locking strap. The pawl must engage.
- Check by turning the handwheel.
- Insert the bobbin case.



Important!

Safety instructions

The following safety instructions must be observed.

- The moving needle is a source of danger (risk of injury to the fingers). Therefore, always watch your work.
- Any operations performed within the needle movement area, e.g. changing a needle or presser foot, must always be carried out with the machine switched off (power switch at **0**). The same applies to removing and replacing the lower thread bobbin.
- When carrying out maintenance (cleaning or oiling), whenever work is interrupted or finished and also for changing bulb, the sewing machine should be disconnected from the mains by removing the mains plug from the socket.
- All repairs to the machine, especially electrical repairs (for example, changing wiring connections) may only be carried out by one of our service agencies.

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