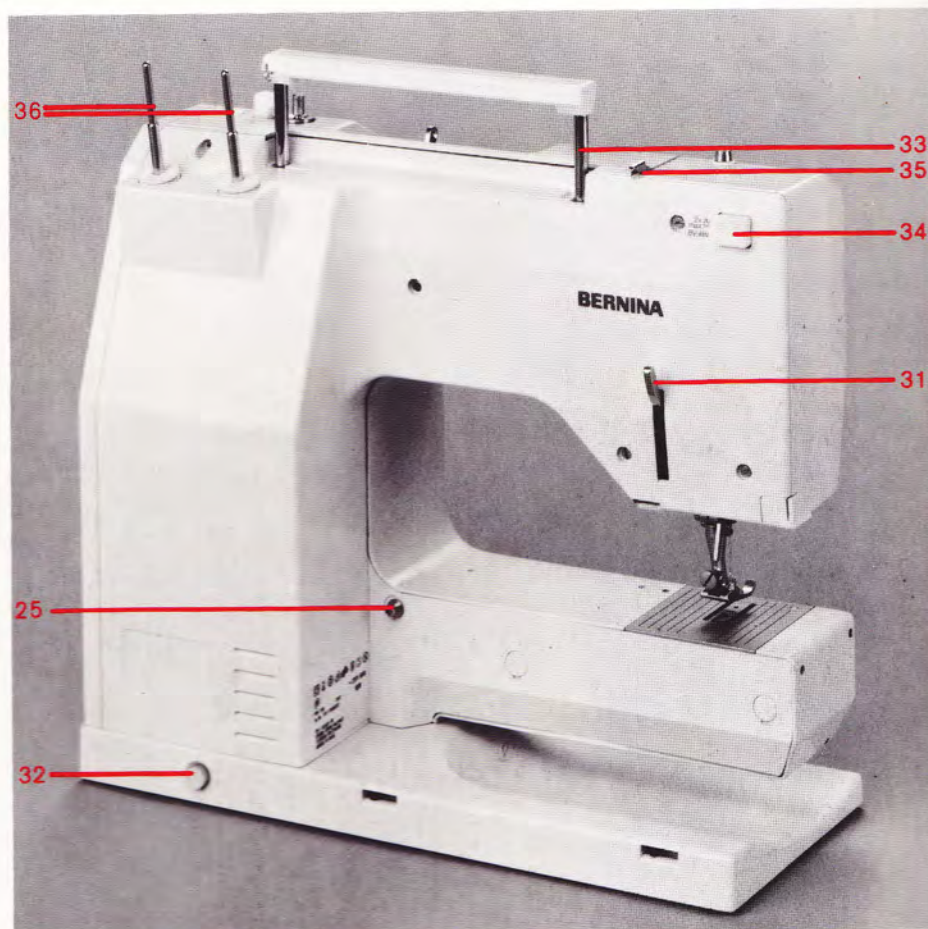
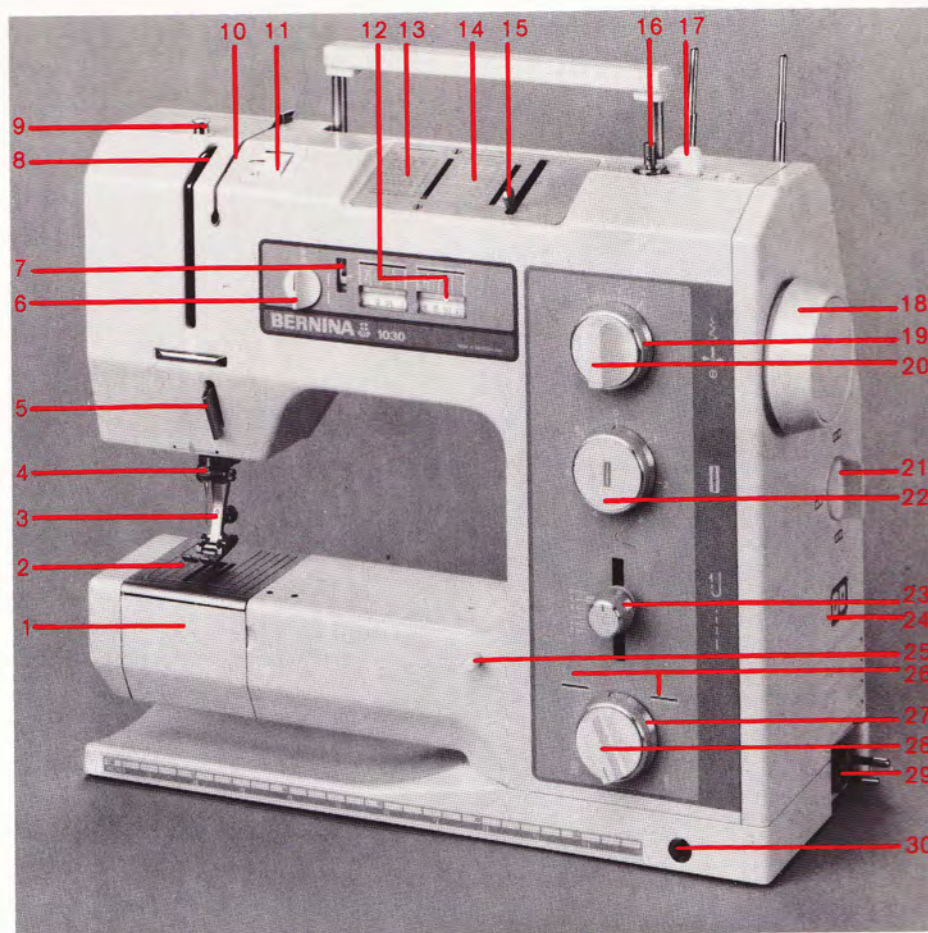
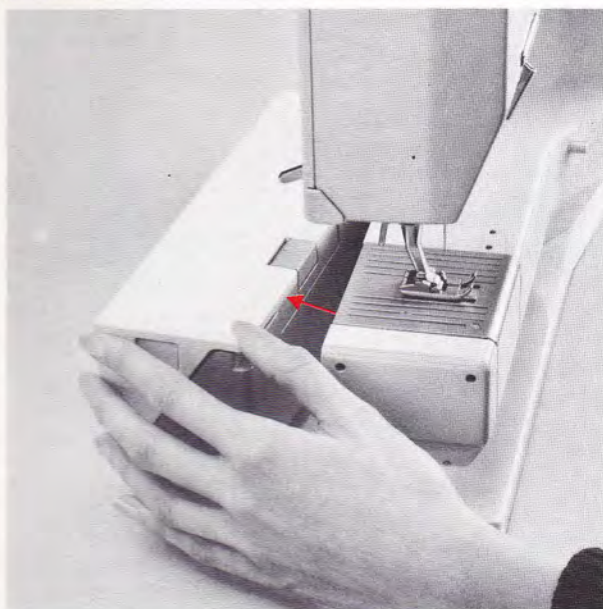


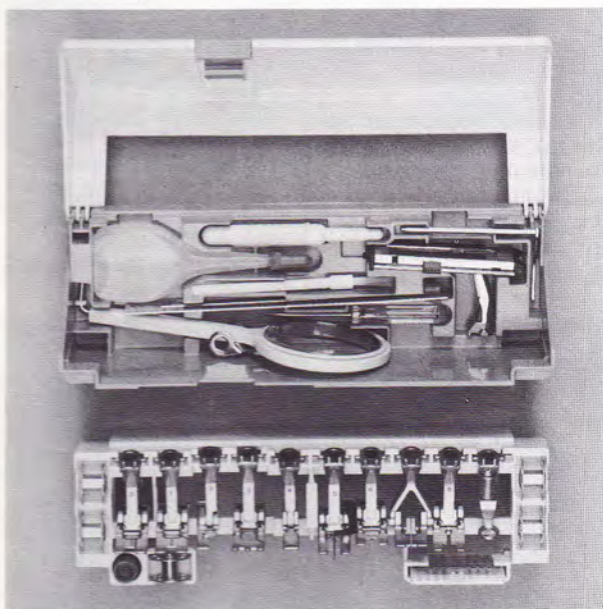
- 1 Hinged front cover
- 2 Stitch plate
- 3 Presser foot
- 4 Needle clamp
- 5 Thread regulator
- 6 Long stitch selector (model 1030 only)
- 7 Pattern indicator
- 8 Thread take-up lever
- 9 Pre-tension stud
- 10 Thread tension slot
- 11 Adjusting knob for thread tension
- 12 Basic setting scale
- 13 Red stitches
- 14 Green stitches
- 15 Selector lever
- 16 Bobbin spindle
- 17 Engaging lever for bobbin winder
- 18 Handwheel
- 19 Stitch width knob
- 20 Needle position knob
- 21 Power switch
- 22 Buttonhole knob
- 23 Stitch length knob
- 24 Socket for foot control unit
- 25 Securing pins for sewing table
- 26 Indicator for stitch programme (RED-GREEN)
- 27 Stitch programme selector knob
- 28 Selector knob for sewing/darning
- 29 Mains cable
- 30 Presser foot lifter socket
- 31 Presser foot lever
- 32 Cable winder knob
- 33 Carrying handle
- 34 Sewing light switch
- 35 Thread guide
- 36 Thread holder pins





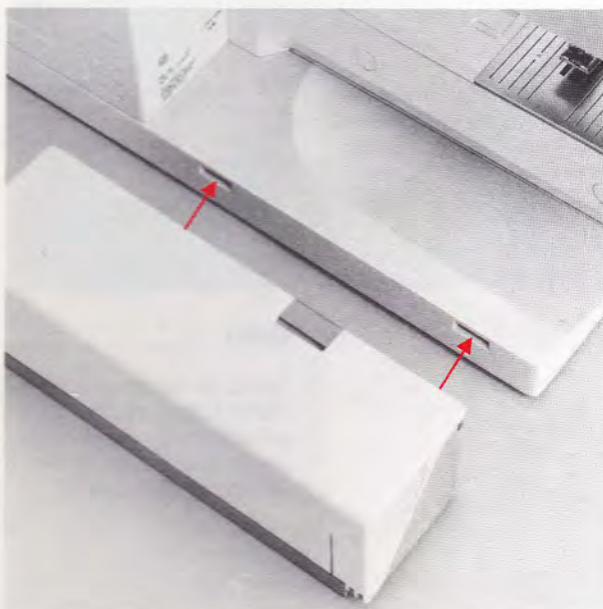
Removing the accessories box

Simply push the accessories box backwards.



Accessories box

The accessories box allows the accessories to be seen at a glance.



Fitting the accessories box onto the machine

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

Lay the accessories box onto the base plate from the rear, and press against the free arm until the fixing lugs engage in the holes provided.

Standard accessories for the BERNINA 1030

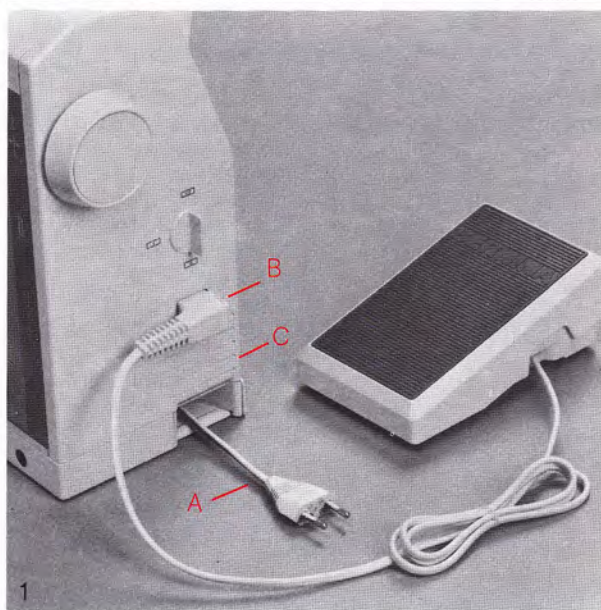
6 bobbins with holes
Needle assortment
Ruler/template
Seam ripper
Darning ring, with arm
Small screwdriver
Special screwdriver
Cleaning brush
Oiler, filled
Seam/quilting guide
Zig-zag presser foot
Reverse pattern foot
Overlock foot
Blind stitch foot
Buttonhole foot
Buttonhole foot with slide
Zip foot
Darning foot
Jeans foot
Tailor tack foot
Embroidery foot

Standard accessories for the BERNINA 1020

6 bobbins with holes
Needle assortment
Ruler/template
Seam ripper
Darning ring, with arm
Small screwdriver
Special screwdriver
Cleaning brush
Oiler, filled
Seam/quilting guide
Zig-zag presser foot
Reverse pattern foot
Overlock foot
Blind stitch foot
Buttonhole foot
Buttonhole foot with slide
Zip foot
Darning foot

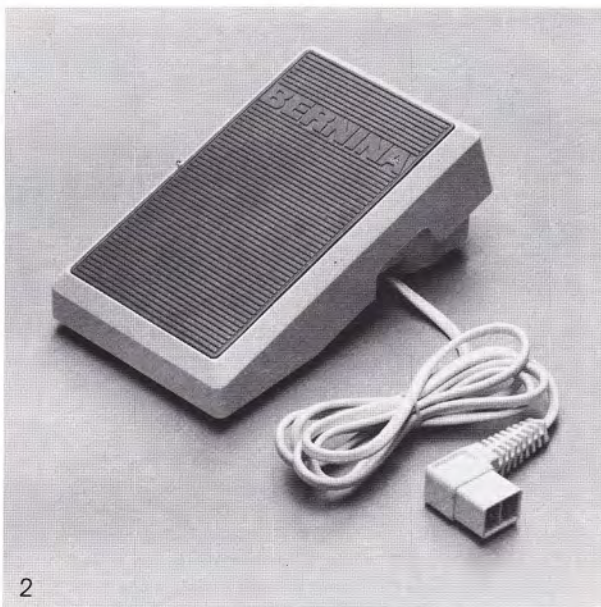
Mains cable, foot control unit, sewing light, power switch, needle stop

Model 1030/1020



Connecting mains cable and foot control unit

Pull the mains cable (A) out from the machine and plug into a power socket. Plug the foot control cable into (B). Press button (C) to automatically rewind the mains cable into the machine.



Foot control unit

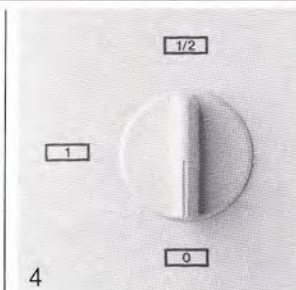
This is used to regulate the sewing speed.

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



Sewing light

The sewing light is switched on and off by means of the switch at the rear of the machine. When the power switch is in the ☐ position, the sewing light is also off.



Power switch

The power switch is below the handwheel (Fig. 4) and has 3 positions.

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

☐ **On** The machine is switched on for full sewing speed.

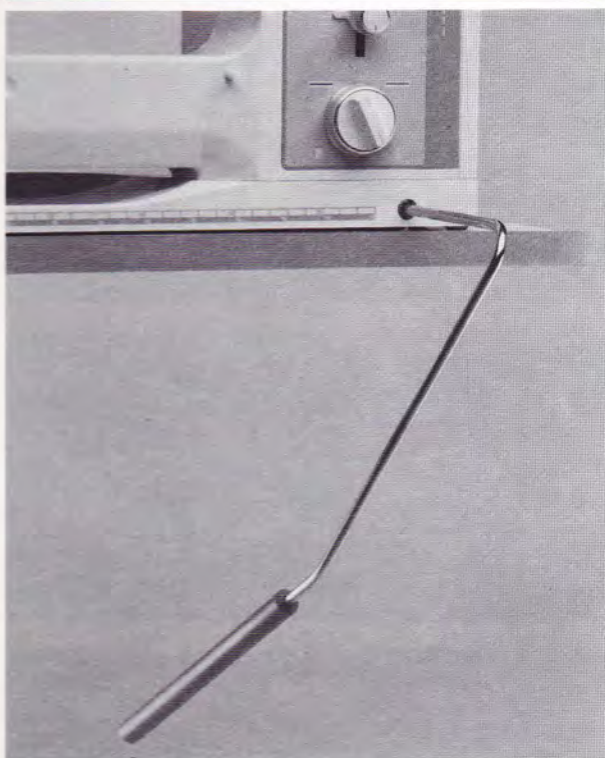
☐ **1/2** The machine is switched on for reduced sewing speed. In this position, the maximum speed is reduced to about half. With the machine switched to reduced sewing speed, difficult work will be easier to handle, even for the inexperienced user.

Needle stop and foot control unit

Whenever you stop sewing, the electronic system returns the needle to its highest position. By gently tapping the back of the foot control, the needle can be moved electronically down into the work or up again out of the work.

Motor

The D.C. motor and electronic speed control give exceptionally good fabric penetration, even when sewing at slow speed.



Raise the presser foot Lower the feed-dog

Many sewing techniques are much simpler if both hands are free to guide the work.

The presser foot lifter is operated by the right knee and is used to raise and lower the presser foot, leaving both hands free.

When the presser foot lifter is moved to the right, the presser foot is raised and at the same time the feed-dog is lowered.

The next stitch returns the feed-dog to the normal sewing position.

Attaching the presser foot lifter

The presser foot lifter is stored in the carrying case (see picture on page 8).

The presser foot lifter socket is located on the front right hand side of the base plate. Insert the presser foot lifter so that it hangs to the left.

It should be possible to operate the presser foot lifter comfortably with the right knee, without the need to alter the customary sitting position. If the angle of the presser foot lifter is uncomfortable, it can be adjusted.

Your BERNINA dealer will be pleased to make this adjustment for you.



The sewing table

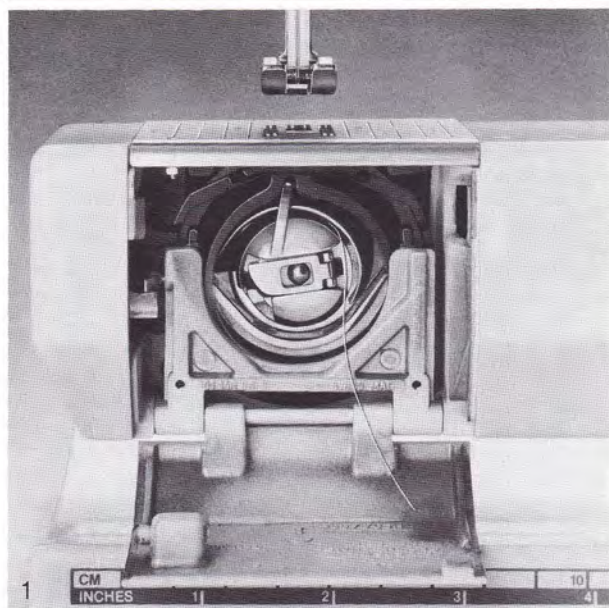
The sewing table is used to enlarge the working surface. It simplifies all sewing where the free arm is not required.

Fitting the sewing table

Slide the table along the free arm until the securing pins engage in the holes provided. Press firmly from the left to lock the sewing table in position on the machine.

Removing the sewing table

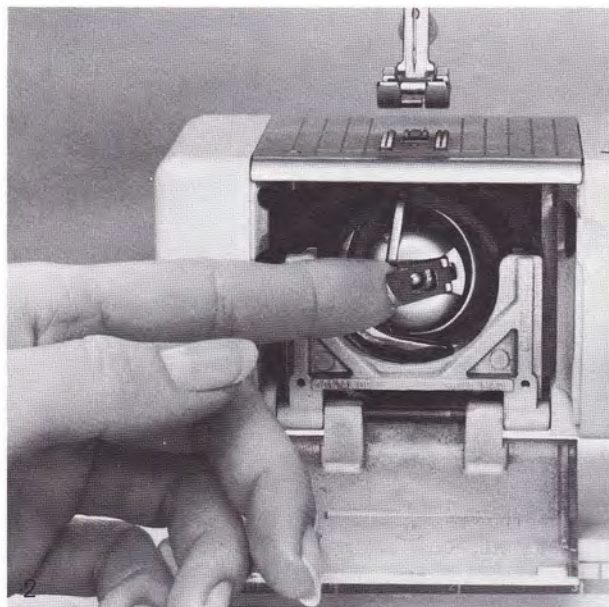
Push firmly to the left (away from the machine) to release the sewing table.



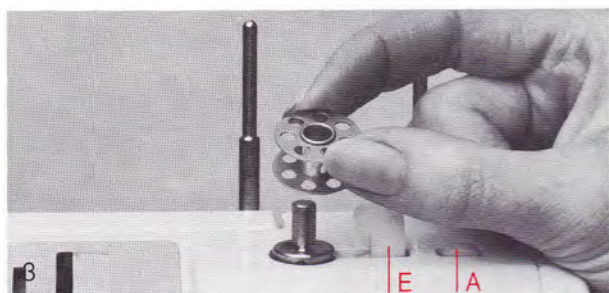
Removing the bobbin case

Set the power switch to the ☐ position.

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



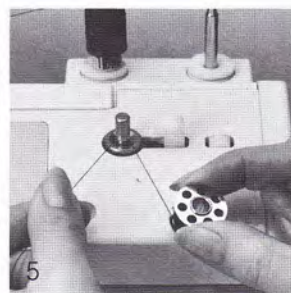
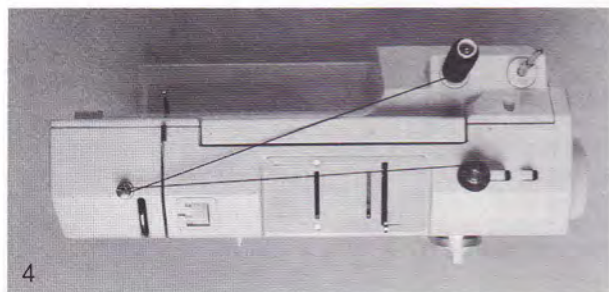
With the index finger and thumb of the left hand, pull the bobbin case latch forward and remove the bobbin case (Fig. 2).



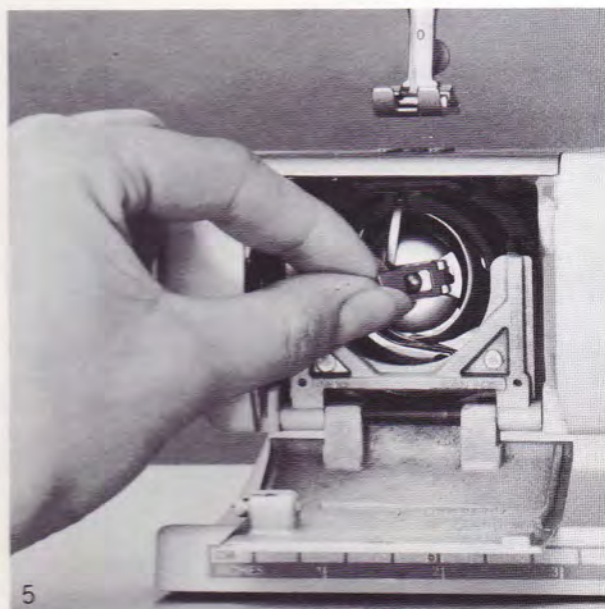
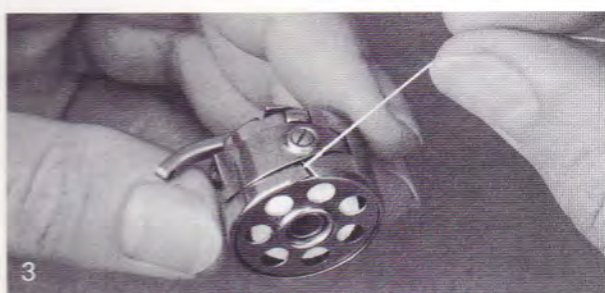
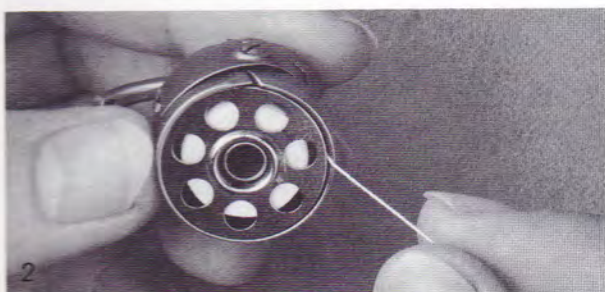
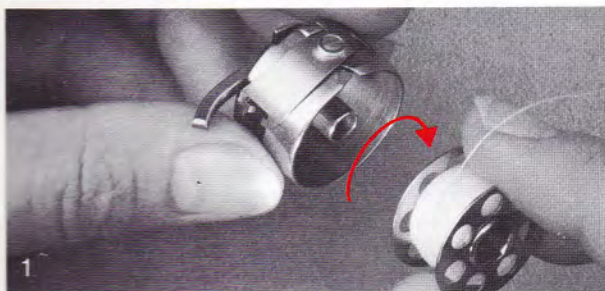
Winding lower thread

Place empty bobbin on spindle (Fig. 3). Take thread from the reel of thread on the thread holder pin, pass thread clockwise around the pre-tension stud to the empty bobbin (Fig. 4). Wind around the empty bobbin several times, again in a clockwise direction.

Set the power switch to the ☐ position. Press the engaging lever E against the bobbin. The bobbin motor will start to run. When the bobbin is full, the bobbin winder will stop automatically. The winding operation can be stopped at any time, if necessary, by pressing lever A (Fig. 3).



When removing the bobbin, cut the thread by pulling it under and up against the thread cutter at the base of the spindle (Fig. 5).



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

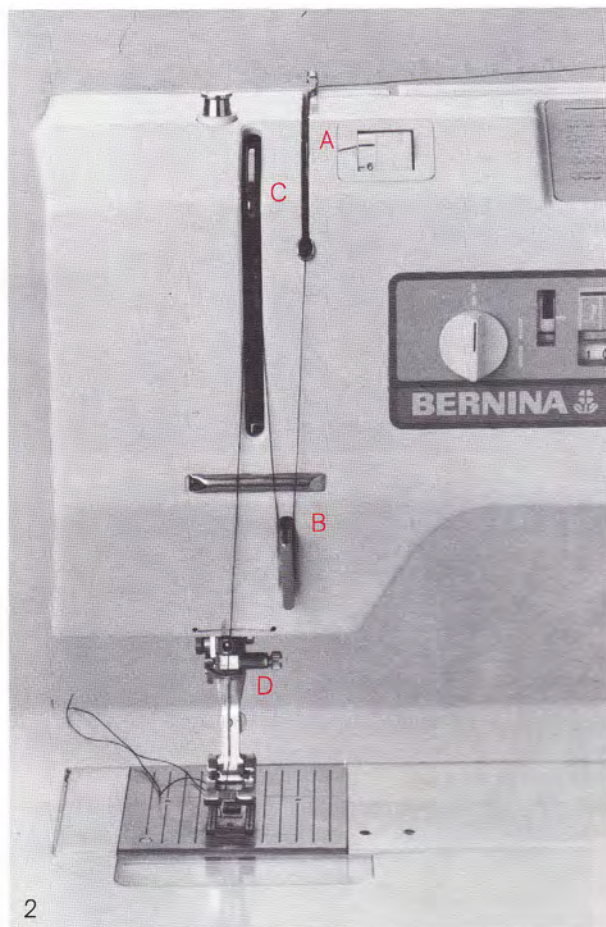
Hold the bobbin case by the latch with the index finger and thumb of the left hand. Insert so that the finger of the bobbin case points upwards, engaging in the notch of the hook race cover. Check: Pull end of thread. Close the hinged front cover.



Threading the upper thread

Set the power switch to OFF . 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. Hold the reel of thread in position while threading.

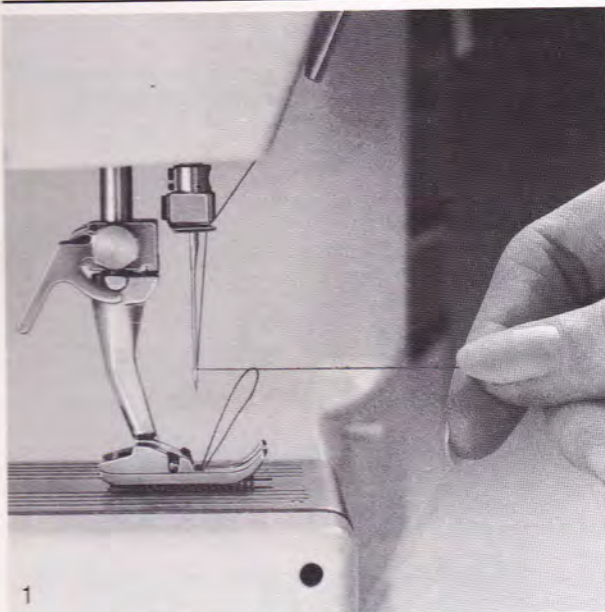
First clip the thread in the thread guide on the top of the machine. Then pull it through the long slot (A) into the thread tension (Fig. 1).



At the front of the machine, take the thread downwards under the thread regulator , then up to the thread take-up lever at the top , and down again to the needle holder thread guide  (Fig. 2).

Always thread the needle from front to back.

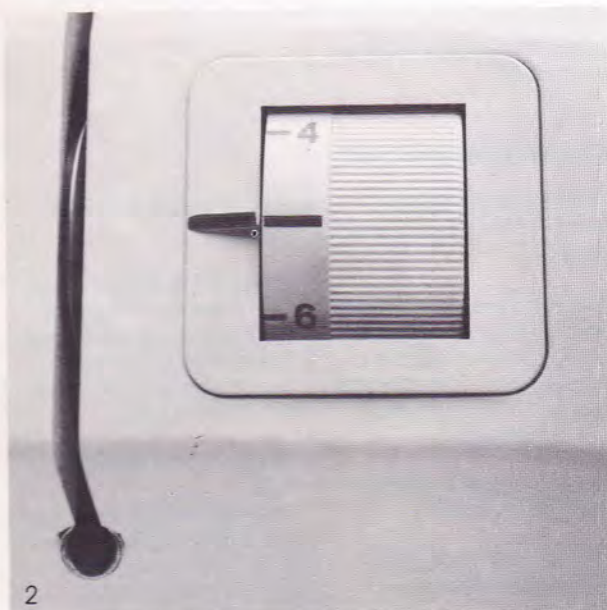
The small white plate on the front of presser foot shank helps when threading the needle eye. Pull the thread approx. 10 cm (4") through the needle eye.



Bringing up the lower thread

Set the power switch to **1** position. Hold the end of the upper thread with the right hand. Sew a single stitch by tapping on the foot control. Pull the upper thread so that the lower thread is brought up through the stitch plate hole (Fig. 1). Take both threads through the slot in the presser foot and place to the side.

Instead of using the needle stop, the lower thread can also be brought up by turning the handwheel forward until the needle returns to its highest position. In this case the upper thread has to be held with the left hand.



Thread tension

One of the great advantages of BERNINA machines is that the thread tension vary rarely has to be altered for normal sewing. Normal tension is set when the red mark on the regulating dial matches the adjacent mark on the machine (Fig. 2).

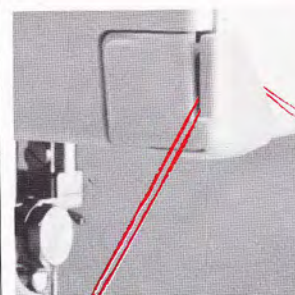
Turning the regulating dial forwards, to number 4 or below, gives a looser upper thread tension. Turning the regulating dial backwards, to number 6 or above, gives a tighter upper thread tension.

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

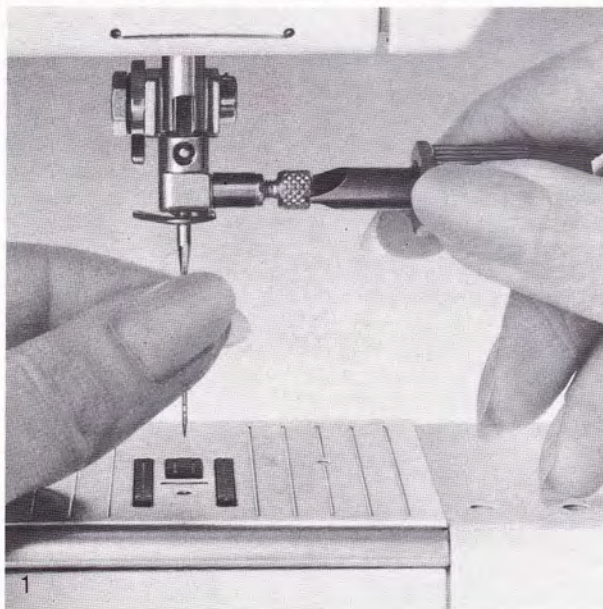


Lowering the feed-dog

For certain types of sewing, eg. for 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  (Fig. 3). 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

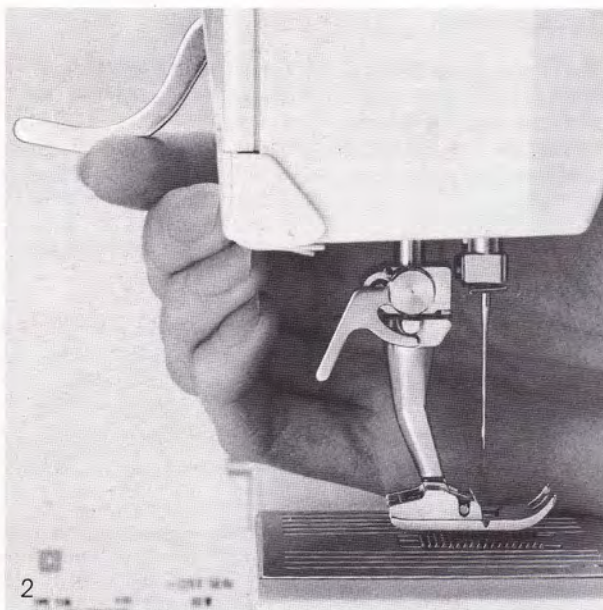
A small brown screwdriver for slackening or tightening the needle clamp is provided in the accessories box.

Set the power switch to the  position. Check that the needle is in the raised position.

To slacken the needle clamp: half a turn forwards, anti-clockwise (Fig. 1).

To insert the needle: The flat side of the needle shank should always be to the rear. Insert the needle until it reaches the top. If the needle does not reach the top, i.e. is set too low, skipped stitches will result.

Tighten the needle clamping screw securely.



Changing presser feet

For the various presser feet and their uses, see page 21.

The success of a piece of sewing largely depends on the correct choice of presser foot. The presser feet are easy and practical to change.

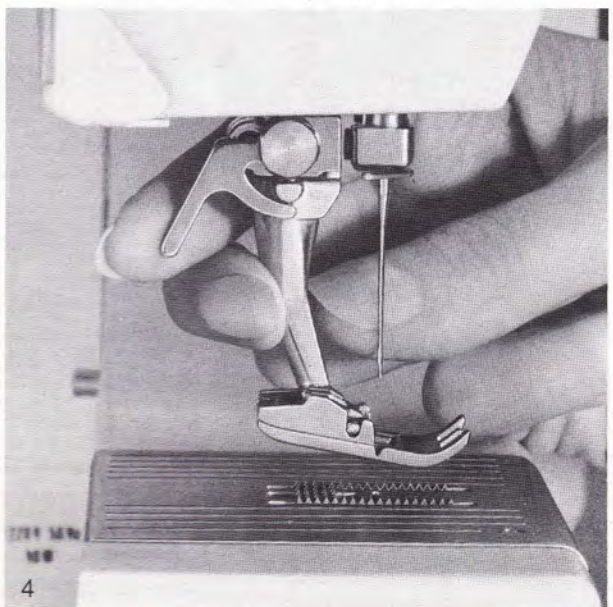
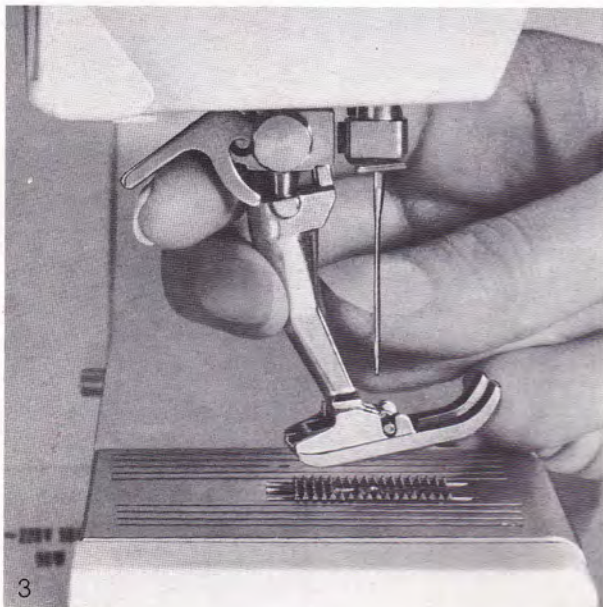
Set the power switch to the  position.

Check that the needle is in the raised position.

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).

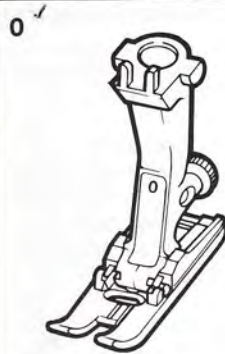
To attach the presser foot: The procedure is the same, but press the clamping lever downwards with the index finger (Fig. 4).



Presser feet are an important aid to sewing. They are designed with grooves and guides. The success of a piece of sewing is determined by the correct choice of presser foot.

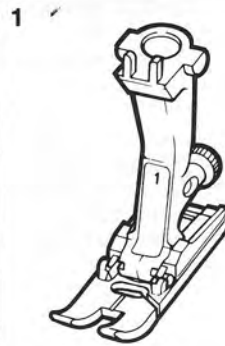
However, individual presser feet are not just for one particular type of work. They can also be used to simplify other tasks.

* Additional accessory for Model 1020



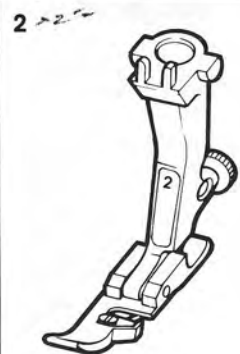
Zig-zag foot

Straight stitch
Zig-zag
Green practical stitches



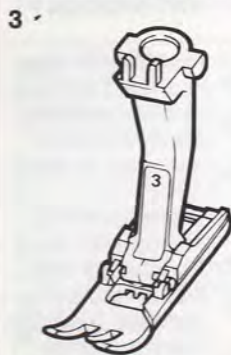
Reverse pattern foot

Red practical stitches
Red decorative stitches



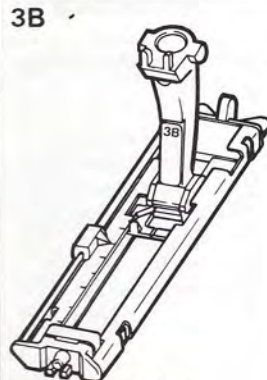
Overlock foot

Vari-overlock seam
Vari-overlock hem
Oversewing seam edges



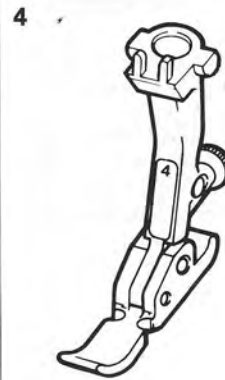
Buttonhole foot

Buttonholes



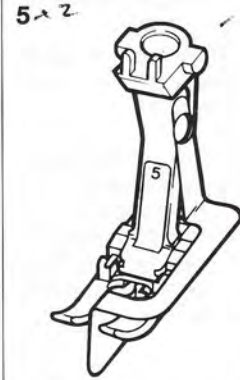
Buttonhole foot with slide

Buttonholes



Zip foot

Sewing in zips
Sewing close along raised seam



Blind stitch foot

Blind hemming
Edge stitching



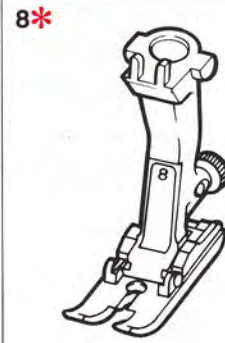
Embroidery foot

Decorative stitches
Satin stitching
Applique
Couching



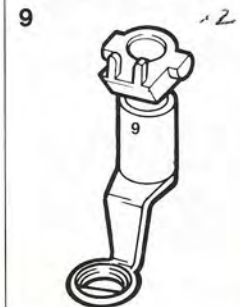
Tailor tack foot

Tailor tacking
Fringing
Faggotting



Jeans foot

Straight stitch seams in hard, thick fabrics and over thick seams

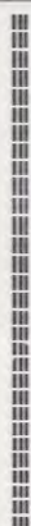


Darning foot

Darning
Free hand monograms
Free hand embroidery

1 Straight stitch  All types of non-elastic fabric All straight stitch work	2 Zig-zag stitch  For most types of fabric All simple zig-zag work, eg. over-sewing, especially on fine fabrics. Sewing elastic and lace.	3 Sewn-out zig-zag  For most types of fabric Oversewing loosely woven fabrics, reinforcing and repairing edges, decorative work.	4 Blind stitch  For most types of fabric Blind hemming, shell edging on soft jersey and fine fabrics, decorative work.
5 Universal stitch  For firmer knitted fabrics, felt leather etc. Flat joining seams, visible hems, patchwork, mending interlock fabrics, sewing on elastic, decorative seams.	6 Lycra stitch  Especially for lycra fabric Flat joining seams and hems, re-sewing of seams in foundation garments.	7 Stretch stitch  For highly elastic fabrics Highly elastic open seams for ski, horse-riding, climbing and hiking wear.	8 Vari-overlock  Primarily for fine synthetic and silk jerseys, helanca and fine cotton and wool jerseys. Elastic overlock seams and hems, particularly suitable for sports underwear, pyjamas, T-shirts, sweat-shirts, jogging suits etc.
9 Running stitch  For most types of fabric Darning with running stitch, mending of woven fabric, reinforcing edges etc.	10 Scallop stitch  Primarily for woven fabrics Edging of tablecloths, place mats, collars, cuffs etc.	11-13 Decorative stitches 11  12  13 	

14 Triple straight stitch



For corduroy, denim, overall and deckchair fabrics, carpet borders, rucksacks, sleeping bags and similar.

Hard wearing seams for joining pieces of fabric or top stitching of seams.

15 Triple zig-zag



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, deckchair fabrics etc.

16 Honeycomb stitch



For many types of jersey and smooth fabrics

Visible hems and seams for T-shirts, sweatshirts, underwear, place mats, table-cloths, craft work etc.

17 Towelling stitch



Primarily for towelling fabrics, denim, leather and other firmer fabrics.

Flat joining seams, visible hems for beachwear, craft work.

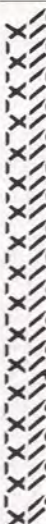
18 Double overlock



For all types of knitted fabrics and hand and machine knitted items.

Overlock seam = Sewing and oversewing in one operation (hand and machine knitted goods).

19 Jersey stitch



For jersey in natural, blended and synthetic fibres

Visible hems and seams, particularly in underwear and sweatshirts, mending interlock fabrics, sewing on elastic etc.

20 Edge stitch



For most types of fabric

Visible hems, sewing on lace and tapes of all kinds, decorative edges, craft work.

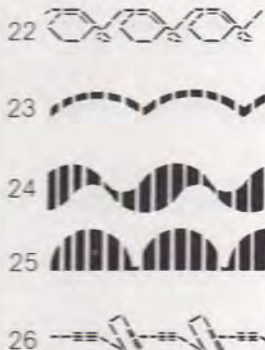
21 Reinforced overlock stitch



For sweatshirt material, towelling, medium knits

Reinforced overlock seams, craft work.

22-26 Decorative stitches



The pattern indicator

The pattern indicator shows how far a pattern has been sewn.

a) The red mark shows the beginning and end of a pattern.

b) The black mark shows the centre of the pattern.

c) The broken bar (horizontal black marks) warns that the pattern is nearly finished.

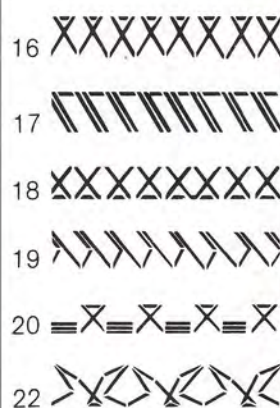
a)

b)

c)

Additional Decorative stitches

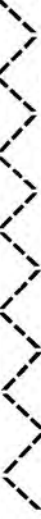
Red stitches combined with Long Stitch



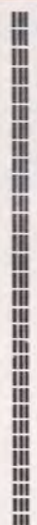
Range of applications Green practical stitches

Model 1020

Green decorative stitches

1 Straight stitch All types of non-elastic fabric All straight stitch work 	2 Zig-zag stitch For most types of fabric All simple zig-zag work, eg. over-sewing, especially on fine fabrics. Sewing elastic and lace. 	3 Sewn-out zig-zag For most types of fabric Oversewing loosely woven fabrics, reinforcing and repairing edges, decorative work. 	4 Blind stitch For most types of fabric Blind hemming, shell edging on soft jersey and fine fabrics, decorative work. 
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9 Running stitch For most types of fabric Darning with running stitch, mending of woven fabric, reinforcing edges etc. 	10 Scallop stitch Primarily for woven fabrics Edging of tablecloths, place mats, collars, cuffs etc. 	11 Decorative stitches 11 	

12 Triple straight stitch



For corduroy, denim, overall and deckchair fabrics, carpet borders, rucksacks, sleeping bags and similar.

Hard wearing seams for joining pieces of fabric, or top stitching of seams.

13 Triple zig-zag



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, deckchair fabrics etc.

14 Honeycomb stitch



For many types of jersey and smooth fabrics.

Visible hems and seams for T-shirts, sweatshirts, underwear, place mats, table-cloths, craft work etc.

15 Towelling stitch



Primarily for towelling fabrics, denim, leather and other firmer fabrics.

Flat joining seams, visible hems for beachwear, craft work.

16 Double overlock



For all types of knitted fabrics and hand and machine knitted items.

Overlock seam = Sewing and over-sewing in one operation (hand and machine knitted goods).

17 Jersey stitch



For jersey in natural, blended and synthetic fibres.

Visible hems and seams, particularly in underwear and sweatshirts, mending interlock fabrics, sewing on elastic etc.

18 Edge stitch



For most types of fabric.

Visible hems, sewing on lace and tapes of all kinds, decorative edges, craft work.

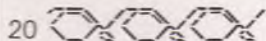
19 Reinforced overlock stitch



For sweatshirt material, towelling, medium knits.

Reinforced overlock seams, craft work.

20 Decorative stitches



The pattern indicator

The pattern indicator shows how far a pattern has been sewn.

a) The red mark shows the beginning and end of a pattern.

b) The black mark shows the centre of the pattern.

c) The broken bar (horizontal black marks) warns that the pattern is nearly finished.

a)

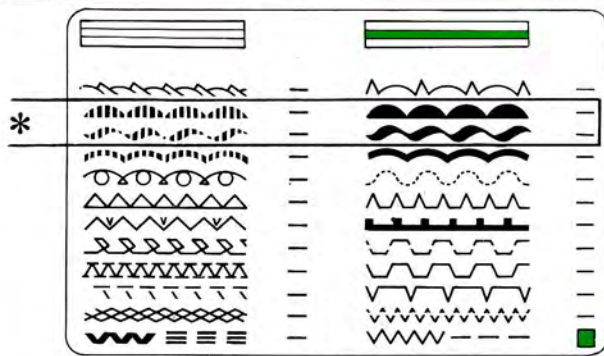


b)



c)





* not available on Model 1020

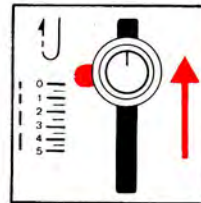
Presser foot:	0
Thread:	according to fabric
Needle:	according to thread
Stitch:	-----
Stitch width:	0
Stitch length:	1-5 according to fabric
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

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

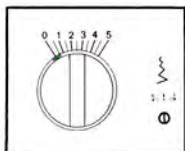


Securing the ends

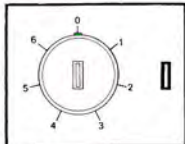
At the beginning and end of a seam, sew in reverse for approx. 1 cm (3/8") and then forwards again.

Securing thick seams

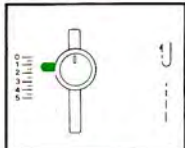
When changing from forward to reverse sewing and vice versa, stop the machine. The needle stop device always returns the needle to its highest position when the machine stops. This prevents the needle from being bent by thick fabrics.



**Stitch width
Needle position**



Buttonhole



**Stitch length
Normal stitch length is approx. 2**

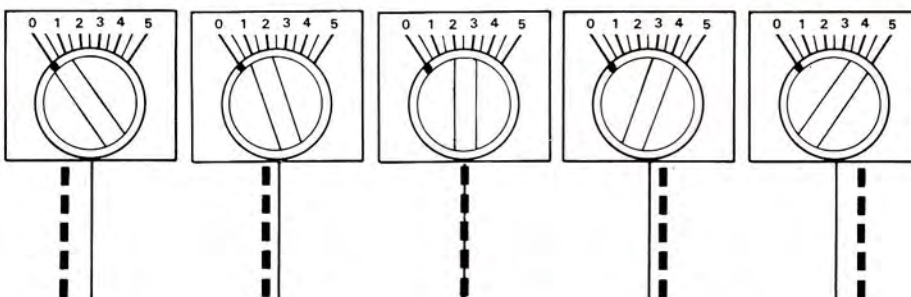


Colour indicator

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:

Sewing in zips	page 36
Blind hem	page 38
Edge stitching	page 39

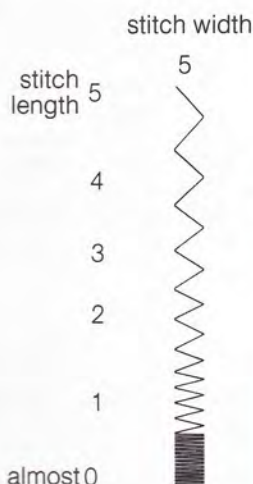
Setting zig-zag

Presser foot:	0
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 completely step-free up to 5 mm. **The needle must not be left in the work when the machine is stopped.**



Satin stitch = close zig-zag

Presser foot:	0 (6*)
Thread:	embroidery thread no. 30
Needle:	80
Stitch width:	1½-5
Stitch length:	IIII

*Additional accessory for Model 1020

Set stitch length to very close zig-zag

Turn stitch length knob to the right until it locks.

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



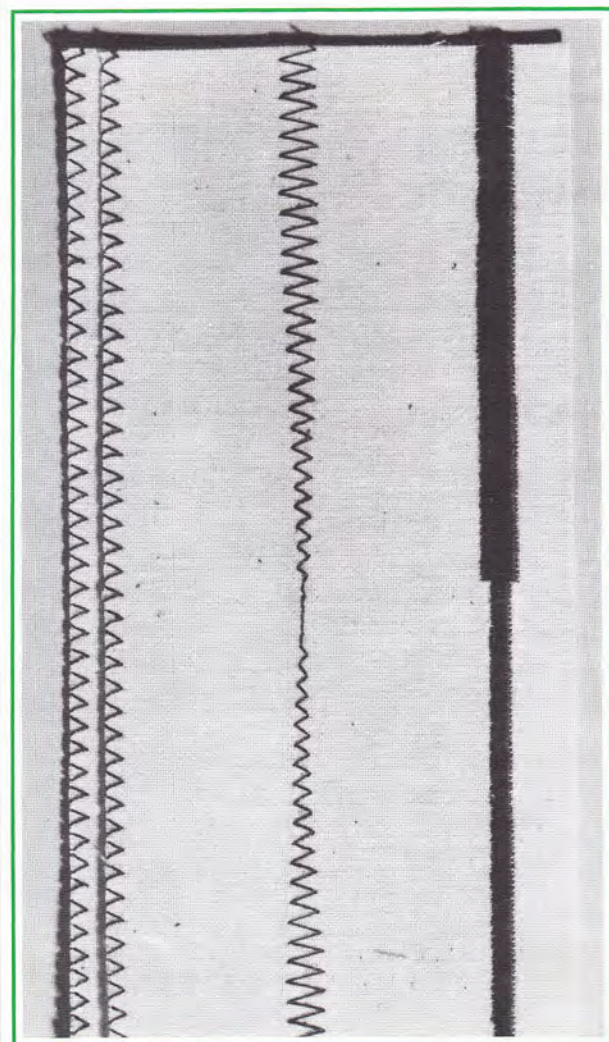
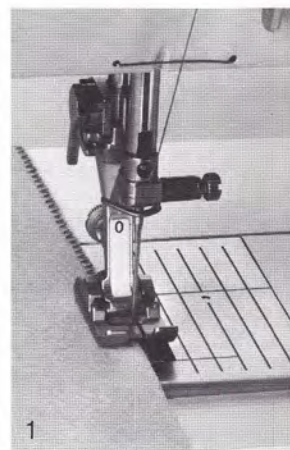
By rotating half a turn to the left (mark at the bottom) the basic setting for satin stitch is obtained. Adjust stitch density from the basic setting according to the work. Turn anti-clockwise for thicker work, clockwise for finer work.

Oversewing edges

Presser foot:	0
Thread:	darning or sewing thread
Needle:	80-70
Stitch width:	2½-5 (according to fabric)
Stitch length:	1-3 (according to fabric)

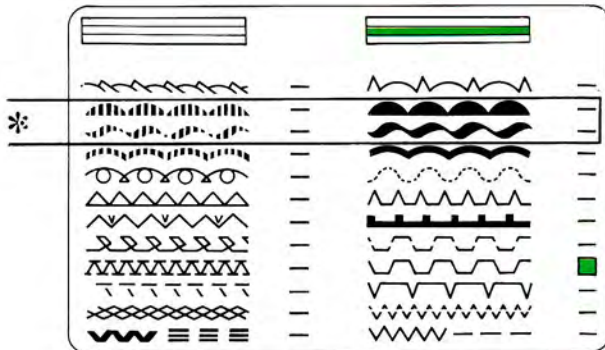
Generally, the zig-zag should not be too wide or the stitch length too long. Start by cutting a neat edge. Use as fine a thread as possible, especially on fine fabrics.

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 (Fig. 1).



– Push the selector lever to the right to disengage and set to the desired stitch.

– Set the colour indicator to **green**.



*not available on Model 1020

Examples for choosing a stitch

Thread: according to fabric
Needle: according to fabric

Universal stitch

Presser foot: 0
Stitch:
Stitch width: 4
Stitch length: 1
Needle position: centre
Feed-dog: sewing
Colour indicator:

Scallop stitch

Presser foot: 0 (6*)
Stitch:
Stitch width: 5
Stitch length: approx. 1/4 llll
Needle position: centre
Feed-dog: sewing
Colour indicator:

Running stitch

Presser foot: 0
Stitch:
Stitch width: 5
Stitch length: 1
Needle position: centre
Feed-dog: sewing
Colour indicator:

Vari-overlock

Presser foot: 0 (2)
Stitch:
Stitch width: 4
Stitch length: 1
Needle position: right
Feed-dog: sewing
Colour indicator:

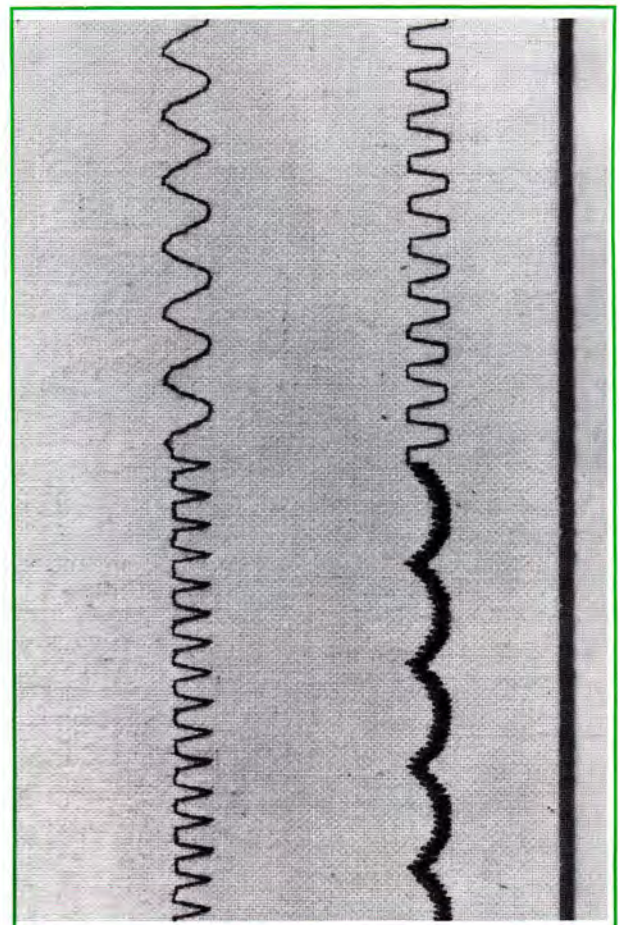
*Additional accessory for Model 1020



Presser foot
Stitch width
Stitch length
Needle position

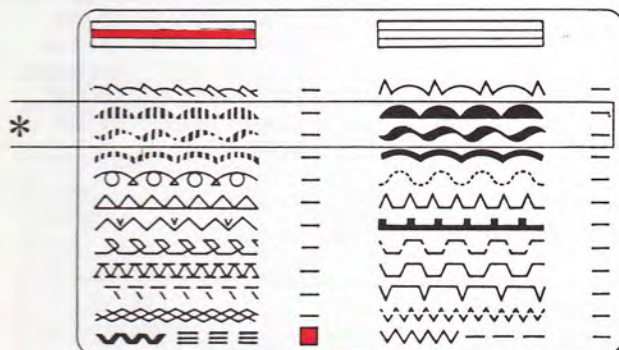
Basic setting scale

- As the stitch is selected, the basic setting will be displayed at the same time.
- Each type of stitch has many different applications.
- The presser foot display recommends the best type of presser foot to use, to make the work easier and achieve the best result.
- The stitch width and stitch length can be adjusted to the type of work and to the fabric.



– Push the selector lever to the right to disengage and set to the desired stitch.

– Set the colour indicator to red.



*not available on Model 1020

Examples for choosing a stitch

Thread:	according to fabric
Needle:	according to thread

Triple straight stitch

Presser foot:	1
Stitch:	
Stitch width:	0
Stitch length:	3
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

Triple zig-zag

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

Jersey stitch

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

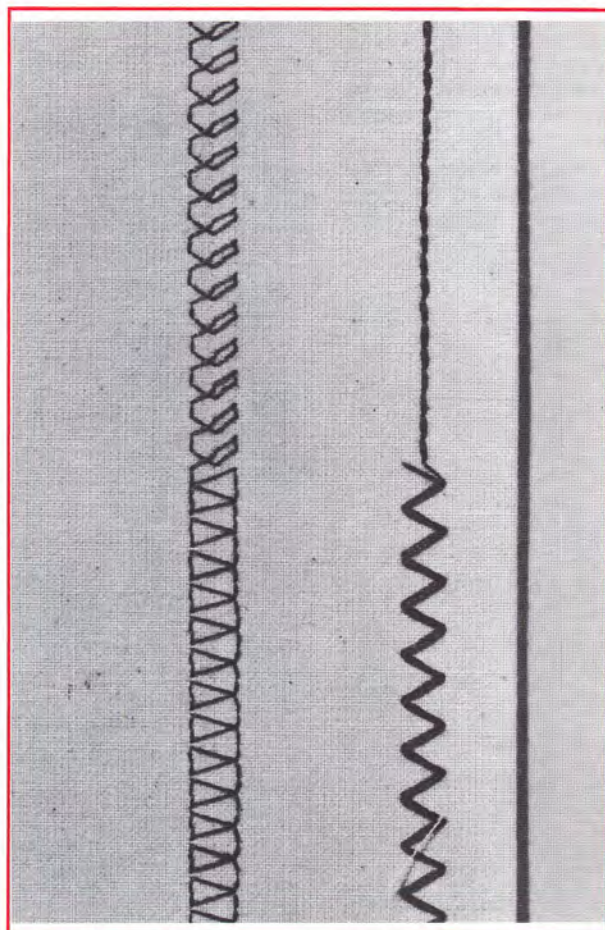
Double overlock

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



Basic setting scale

- As the stitch is selected, the basic setting will be displayed at the same time.
- Each type of stitch has many different applications.
- The presser foot display recommends the best type of presser foot to use, to make the work easier and achieve the best result.
- The stitch width and stitch length can be adjusted to the type of work and to the fabric.



eg. interlock, jersey

When sewing knitted fabrics, the following points generally apply:

1. Use a perfect needle. Even a very slightly blunt needle will damage the knit, causing it to ladder.
2. Use fine sewing thread, particularly for fine jerseys. Coarse thread can also damage the knit.
3. Use darning thread for basting. After the seam has been sewn, darning thread is more easily removed than the considerably thicker and shorter fibre basting thread.
4. Press each seam as it is sewn. This will make subsequent work easier.
5. Sew a sample to test the stretch of the stitch. The seam should be as elastic as the fabric. As modern textiles vary considerably in their elasticity, the basic setting of the practical stitches can be adjusted, where necessary, to suit the fabric. For «hand-look» knitted fabrics use a slightly longer stitch length.

Neckband with visible seam

Primarily for knitted cot-

ton fabrics (pyjamas, T-shirts, sports underwear, underwear)

Presser foot:	1
Thread:	sewing thread
Needle:	80
Stitch:	XXXXXXXXXXXXXXXXXXXX
Stitch width:	5
Stitch length:	2
Needle position:	centre
Feed-dog:	sewing
Colour indicator:	

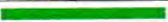
Fold the neatly cut neckband in half and press. Pin and baste to the right side of the neckline. Then sew with Honeycomb stitch. Guide the work so that the stitches come exactly to the edge of the band. Cut off the surplus fabric from the inside.

**Neckband with overlock seam**

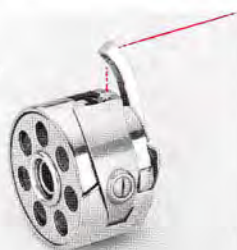
Presser foot:	2
Thread:	sewing thread
Needle:	80
Stitch:	/\/\ /\ /\ /\ /\ /\ /\ /\ /\
Stitch width:	4-5
Stitch length:	1
Needle position:	right
Feed-dog:	sewing
Colour indicator:	

Fold the neatly cut neckband in half and press. Pin to the right side of the neckline, with the cut edges of the band exactly in line with the neckline edge. When sewing, guide the edges to the pin of the overlock foot.



Presser foot:	buttonhole foot with slide 3B
Thread:	sewing thread / darning thread
Needle:	80–70
Stitch:	
Stitch width:	set automatically
Stitch length:	
Needle position:	set automatically
Feed-dog:	sewing
Colour indicator:	

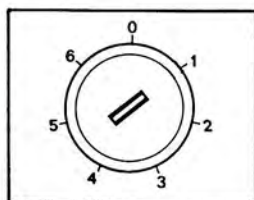
When sewing buttonholes, thread the lower thread through the finger of the bobbin case (Fig. 1).



1

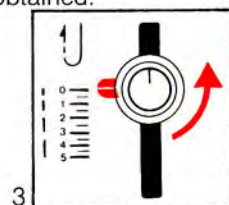
Setting buttonhole

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) the basic stitch length setting for buttonholes is obtained.



3

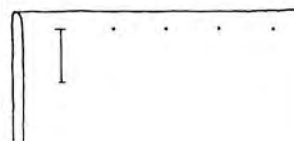
Set the stitch density according to the fabric. Turn anti-clockwise for thicker fabrics, clockwise for finer fabrics.

Always sew a trial buttonhole

The stitch length will vary slightly depending on the fabric.

Mark buttonholes

Mark one buttonhole only.

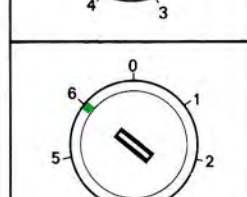
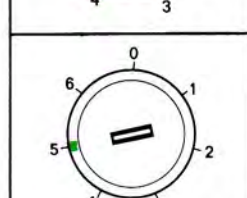
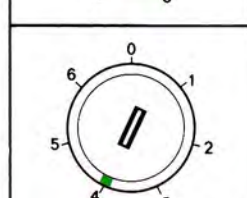
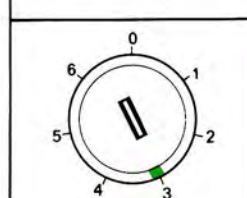
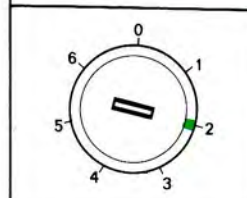
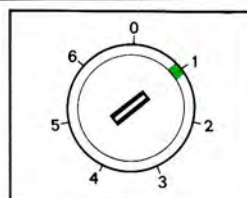


Sewing the buttonhole

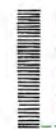
Bring the needle to the centre of the presser foot with the aid of the handwheel or with the needle stop. Lower the needle into the fabric at the start of the buttonhole. Lower the presser foot.

Sewing the first bead

Stop at the end of the buttonhole marking. Set the slide at the side of the foot precisely to this length (Fig. 4). The length of all further buttonholes can then be sewn to this marker.



Knob to 1
The machine sews the first bead forwards.



Knob to 2
The machine sews a reverse straight stitch.



Knob to 3
The machine sews the bar tack.



Knob to 4
The machine sews the 2nd bead forwards.



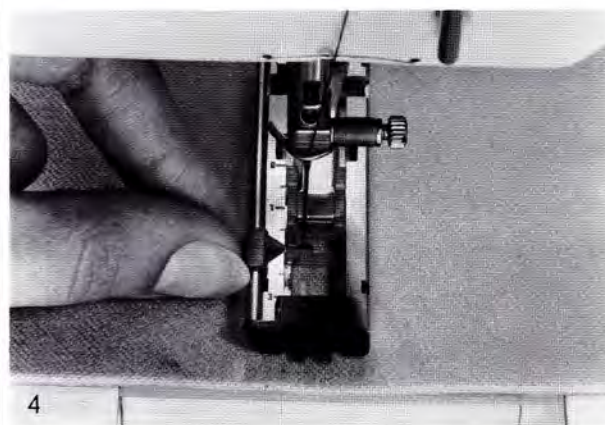
Knob to 5
The machine sews the bar tack.



Knob to 6
The machine sews the securing stitch.

Sew the buttonhole step by step. For further buttonholes, reset to 1. The sewing sequence continues as described.

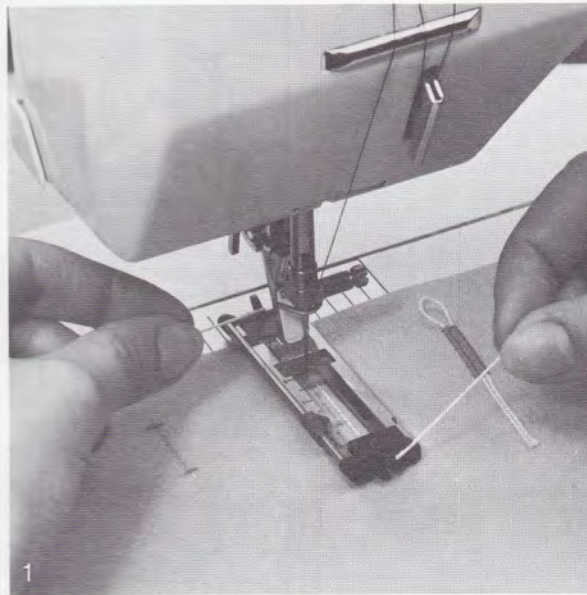
For all other sewing, set knob to 0.



4

The gimp cord strengthens the buttonhole

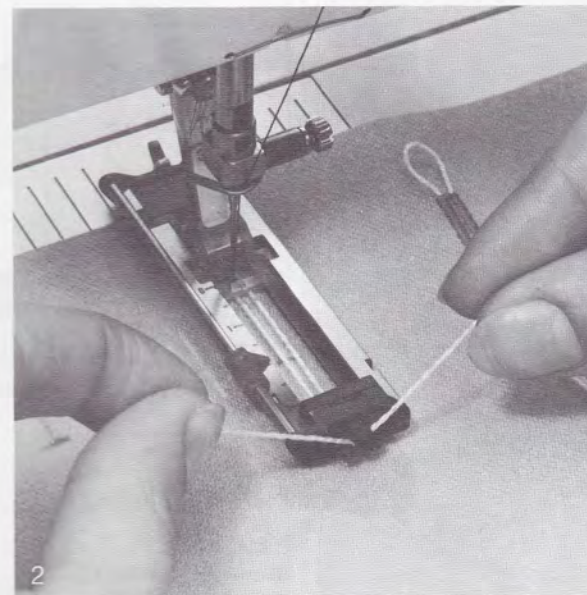
The gimp cord is especially important for all knitted fabrics – including hand and machine knits – to prevent the buttonhole from pulling out of shape. The thickness of the cord depends on the fabric to be sewn. Suitable cords are: perle cord no. 8, thick hand sewing thread or fine crochet cord. Sew a trial buttonhole. The loop of gimp should lie at the end of the buttonhole where the button will pull. Lay the fabric under the presser foot accordingly (Fig. 1).



Positioning the cord

It is easier to position the cord if the needle is already in the fabric. Bring the needle to the centre of the presser foot using the handwheel or needle stop. Lower the needle into the fabric precisely at the start of the buttonhole. Do not lower the foot yet.

Guide the cord to the right under the buttonhole foot and hook it over the prong at the back (Fig. 1). Then bring it round to the left and forwards under the foot. Pull the ends of the cord into the retaining slots at the front (Fig. 2) and trim away any surplus.

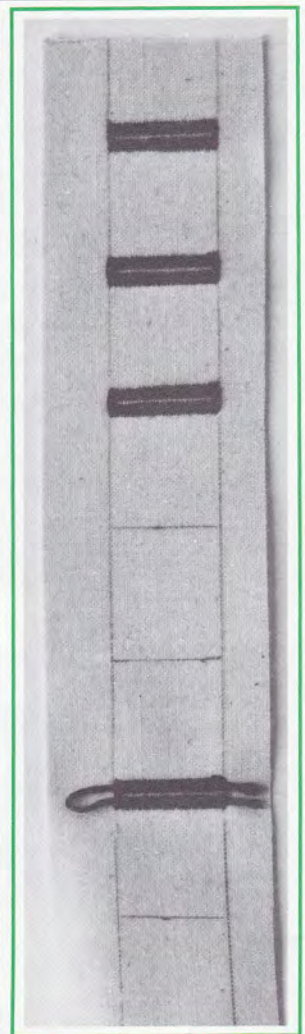


To secure the gimp cord and cut the buttonhole open, see page 42–43.

Jeans buttonhole

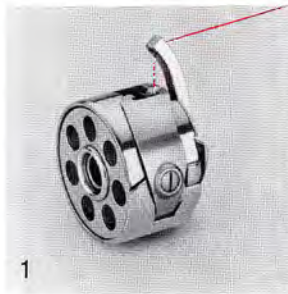
(strengthened buttonhole for Denim, sporty shirts and work clothes)

- Set colour indicator to RED.
- Set stitch length a little longer (approx. 1 – test).
- Set buttonhole to position 1, sew.
- At the END of the first forward bead, the needle should be going towards the LEFT. Then switch to position 2 and sew buttonhole as usual.



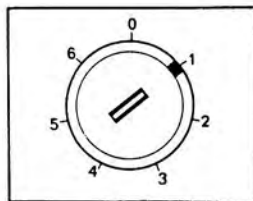
Presser foot:	3
Thread:	sewing thread/darning thread
Needle:	80-70
Stitch:	
Stitch width:	set automatically
Stitch length:	
Needle position:	set automatically
Feed-dog:	sewing
Colour indicator:	

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



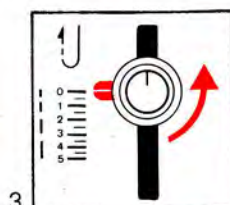
Setting buttonhole

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)



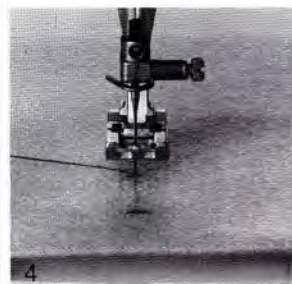
3

the basic stitch length setting for buttonhole is obtained.

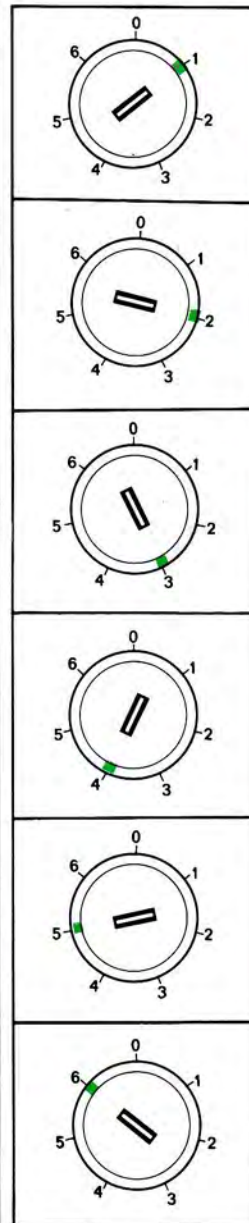
Set the stitch density according to the fabric. Turn anti-clockwise for thicker fabrics, clockwise for finer fabrics. Always sew a trial buttonhole. The stitch length will vary slightly depending on the fabric.

Sewing the buttonhole

Lower the needle with the aid of the handwheel and check that it is in the **centre** of the presser foot. If not, do one stitch by tapping the foot control once.



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 into the fabric precisely at the start of the buttonhole. Lower the presser foot and sew the buttonhole.



Knob to 1
The machine sews the first bead forwards.

Knob to 2
The machine sews a reverse straight stitch.

Knob to 3
The machine sews the bar tack.

Knob to 4
The machine sews the 2nd bead forwards.

Knob to 5
The machine sews the bar tack.

Knob to 6
The machine sews the securing stitch.

Further buttonholes

Reset button 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.



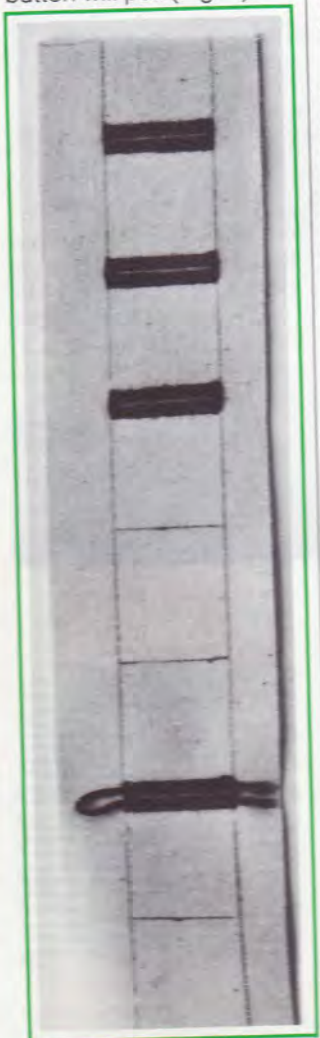
Buttonhole with gimp cord

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.

Lower the needle with the aid of the handwheel and check that it is in the centre of the presser foot. If not, do one stitch by tapping the foot control once. 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. 2).



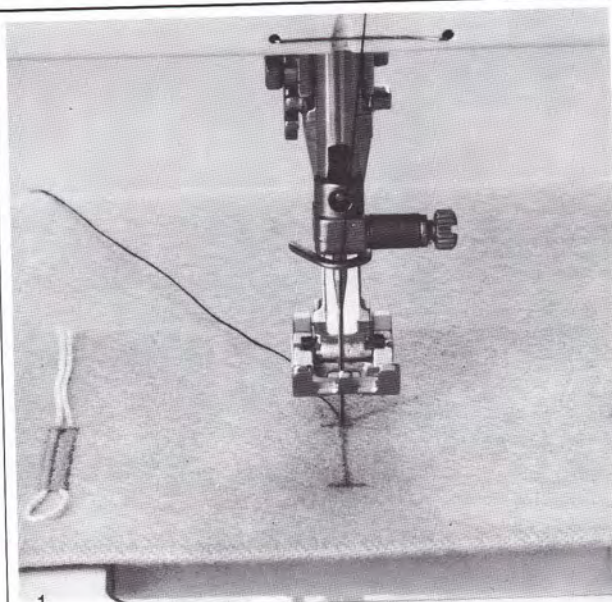
Sewing with gimp cord

It is easier to position the cord if the needle is already in the fabric: Lower the needle into the fabric precisely at the start of the buttonhole. Do not lower the foot yet (Fig. 1).

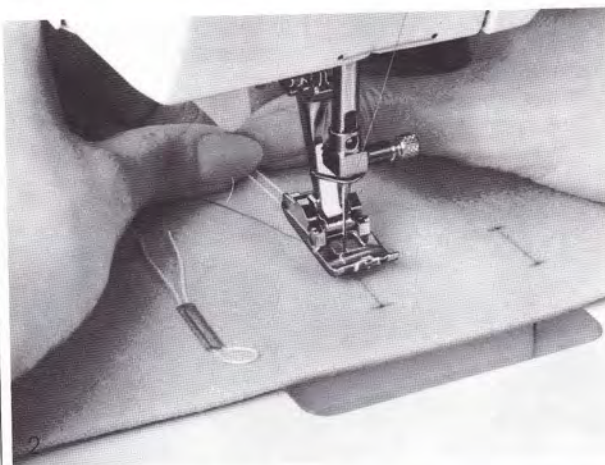
Hook the gimp cord over the centre prong of the buttonhole foot and take both ends back under the foot (Fig. 2). Lower the foot and check that the cord is able to slide, i.e. is not trapped by the foot.

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).

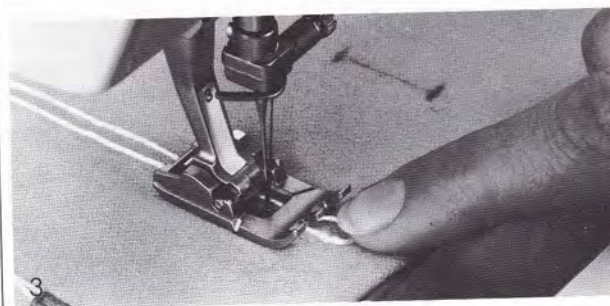
Finally, pull the loop of gimp through. With knitted fabrics, pull the gimp ends to the rear with a coarse hand sewing needle (Fig. 4) and tie or sew in securely. In woven fabrics, the gimp ends can be simply cut off.



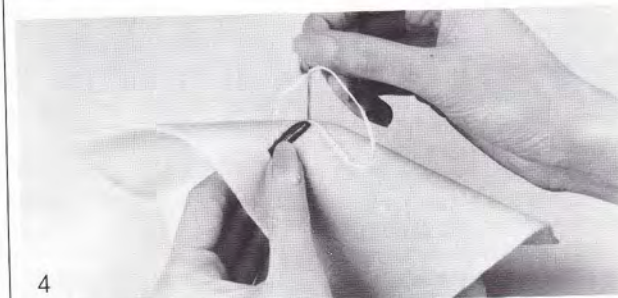
1



2



3



4

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

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 out any remnants of thread.
- The hook race is clean and oiled.
- Any remnants of thread are trapped between the thread tensioning discs 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 fitted incorrectly. 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 re-polished 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 fitted. 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 hard leather.

Needle breaks

- Needle clamping 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 still in the fabric. Use the Jeans foot.
- Poor quality thread, unevenly wound or knotted.

Faulty tension

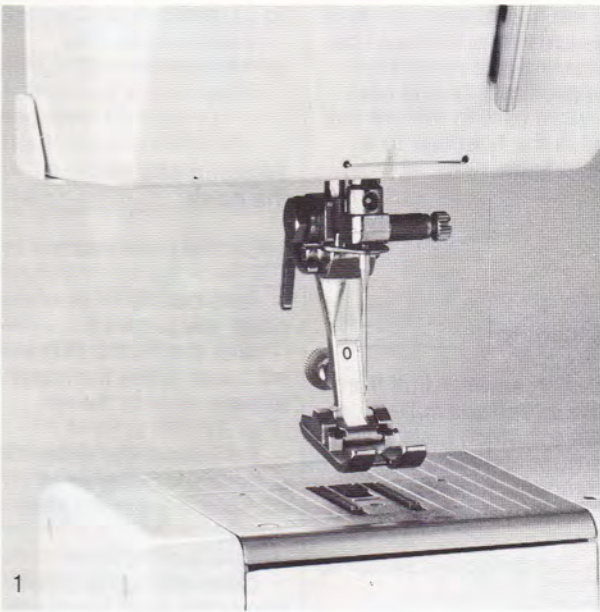
- Remnants of thread between the thread tensioning discs.
- Remnants of thread under the bobbin case spring.
- Lower thread still threaded in the bobbin case finger.
- Threaded with foot down.
- Incorrectly threaded. Check lower and upper threads.

Machine fails to run, or will run only slowly

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

Important

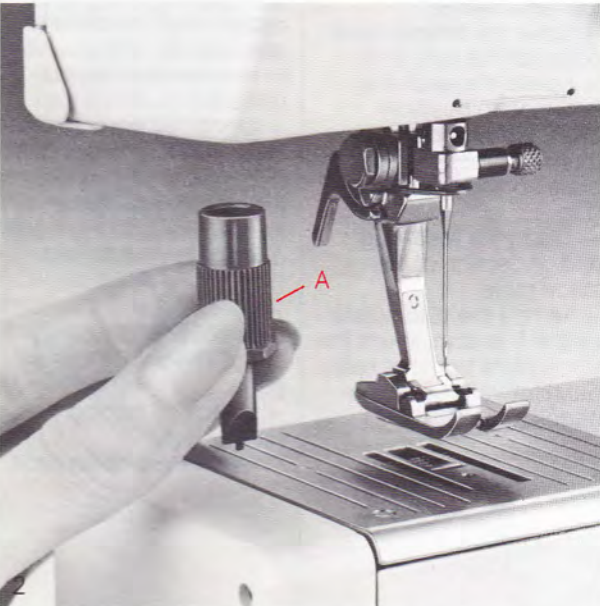
If you have to take your machine to a BERNINA dealer, please always take the foot control unit and accessories.



Fitting the bulbs

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

There are 2 low voltage 6 volt/4 watt bulbs provided. One is located in front to the left of the presser foot, the other one behind, to the right.



Changing bulbs

To change the front bulb: (Fig. 2). Using special tool A, press the bulb upwards, twist to the left and withdraw.

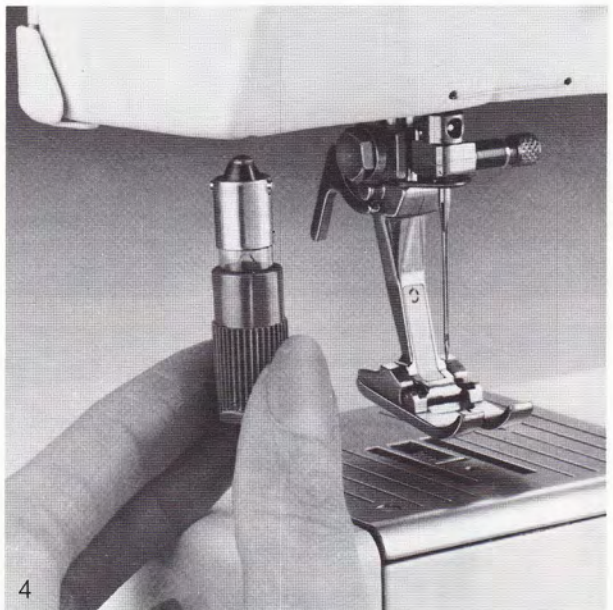
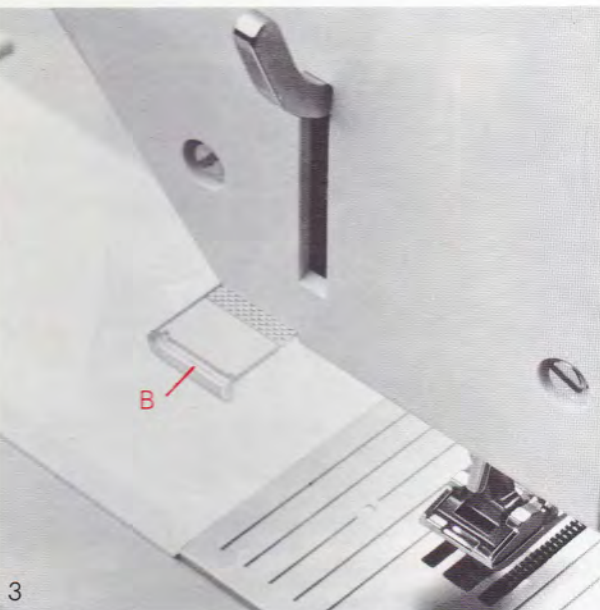
To change the rear bulb

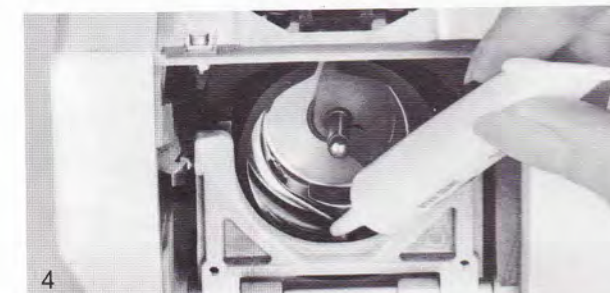
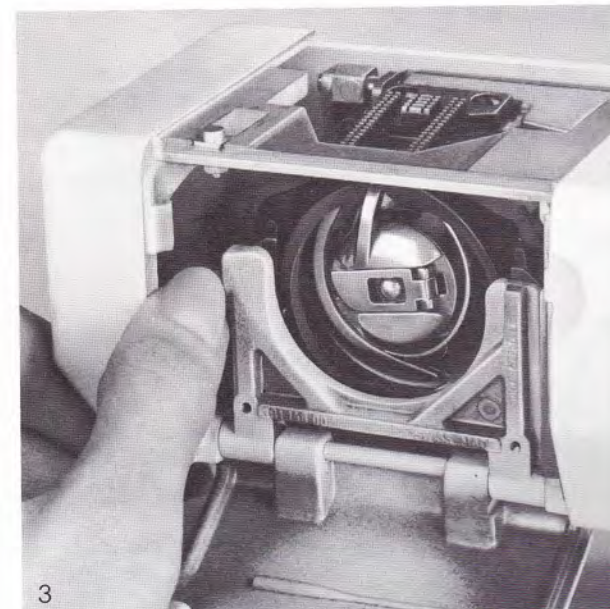
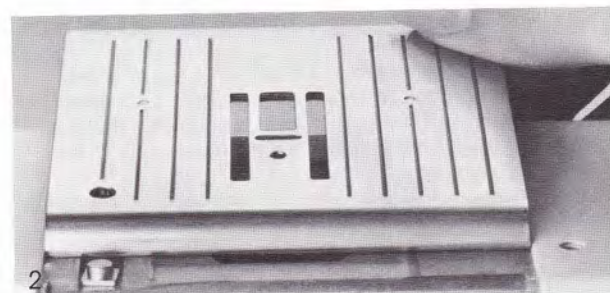
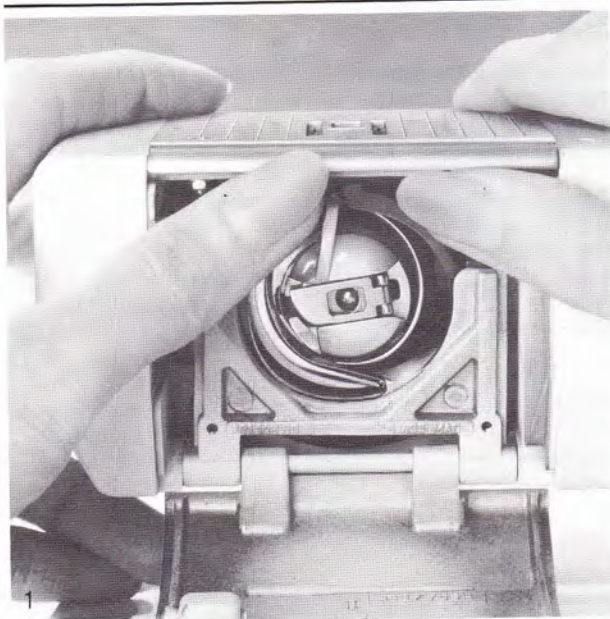
Pull out diffuser B (Fig. 3). The bulb can then be removed in the same way as the front bulb.

To insert new bulbs:

Place the new bulb on the special tool (Fig. 4).

Insert the lamp in the socket, press upwards and twist to the right as far as it will go. For the rear bulb, refit diffuser B.





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.

- Set the power switch to **0**.
- 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

- Set the power switch to **0**.
- Take out the bobbin case, see page 12.
- 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 screwdriver, 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 handwheel 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.

