

BERNINA

Instruction-manual

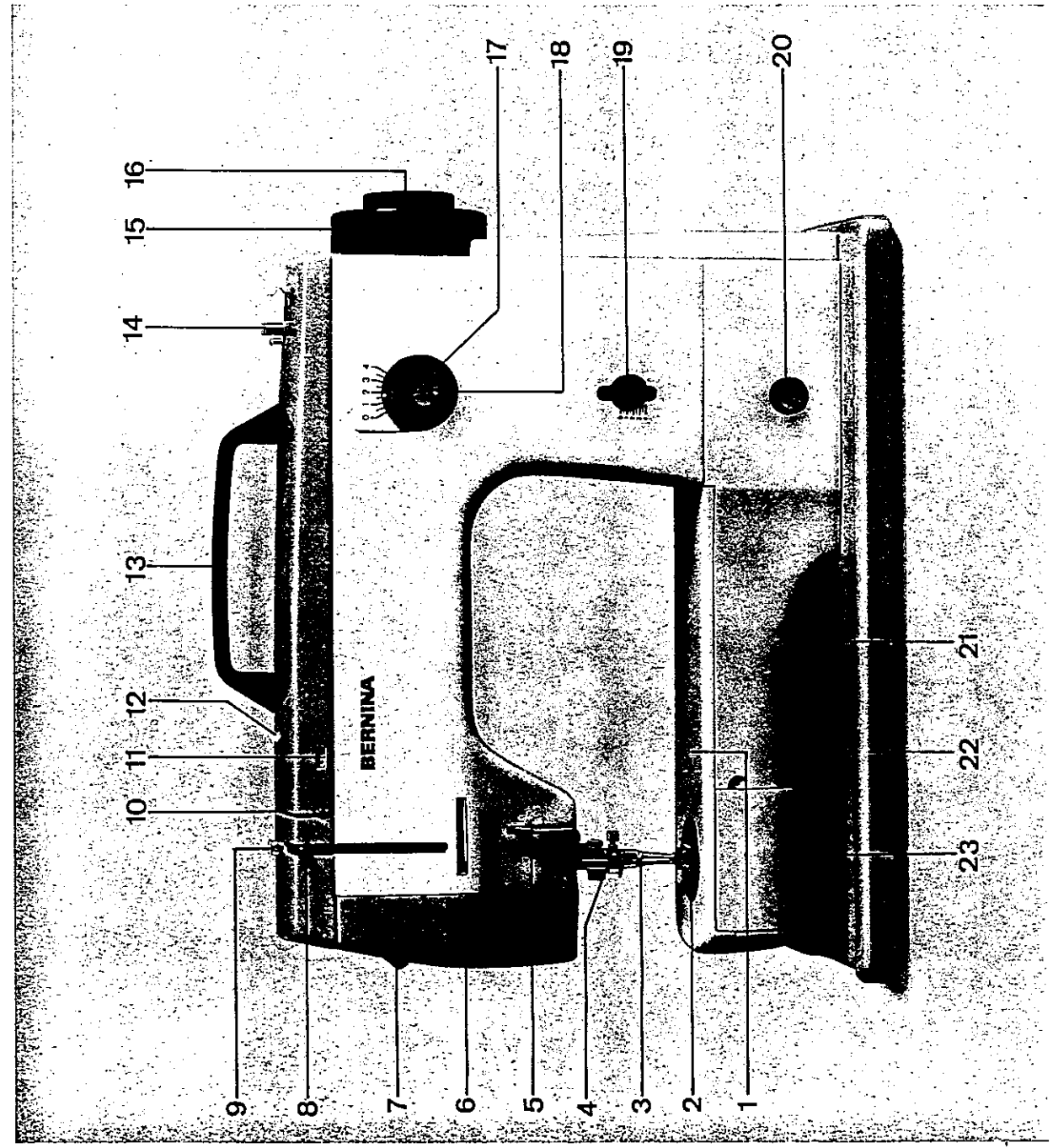
800



Model 800 The various parts of the machine

Model 800

- 1 Free-arm cover-plate
- 2 Needle-plate
- 3 Presser-foot
- 4 Needle-clamp
- 5 Thread guide
- 6 Face-plate
- 7 Lamp switch
- 8 Take-up lever
- 9 Winder pre-tension
- 10 Thread tension and thread guide
- 11 Tension indicator window
- 12 Thread tension control wheel
- 13 Carrying handle
- 14 Winder spindle
- 15 Handwheel
- 16 Handwheel release
- 17 Left-center-right adjusting knob (needle position)
- 18 Zigzag adjusting knob
- 19 Stitch length adjustment (stitch length lever)
- 20 Drop-feed control
- 21 Free-arm
- 22 Base-plate
- 23 Hinged cover



Electrical Connector

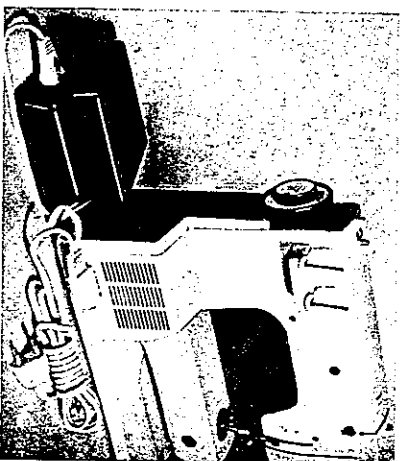
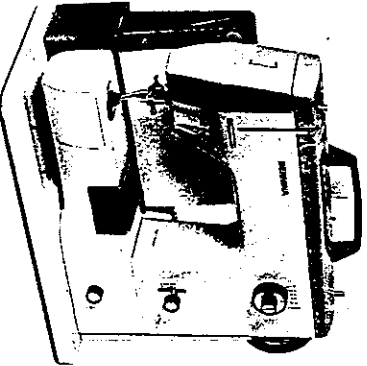
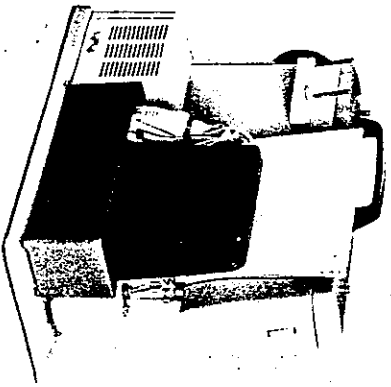
Connecting to supply

Warning! First compare voltage specified on machine with the existing mains voltage.

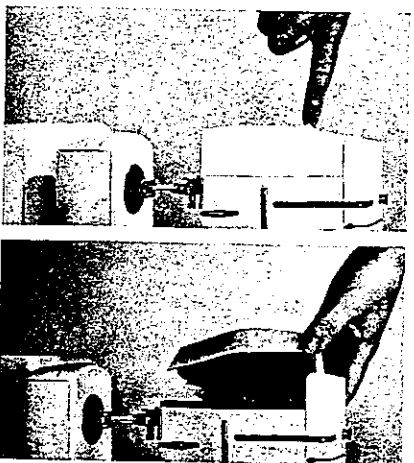
Fit special plug on foot-starter. After inserting the special combination plug for mains and starter connection in the machine, only then connect the mains plug with the socket and start the machine by pressing lightly on the foot-board of the starter.

Warning! The special connecting cable may only be used for connecting Bernina sewing machines.

The container, which can be fitted on the free-arm, is used to house the foot starter with cable and the Bernina-Instruction manual.

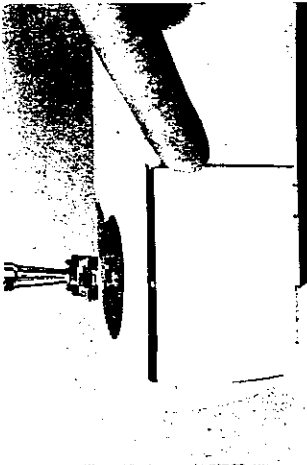


Light switch. By pressing switch the dazzle-free light can be switched on and off. Pull out light cover sideways to change the bulb. Press bulb upwards, turn anti-clockwise and draw downwards. To insert bulb, turn it clockwise.
Sewing lamp: 15 watts.

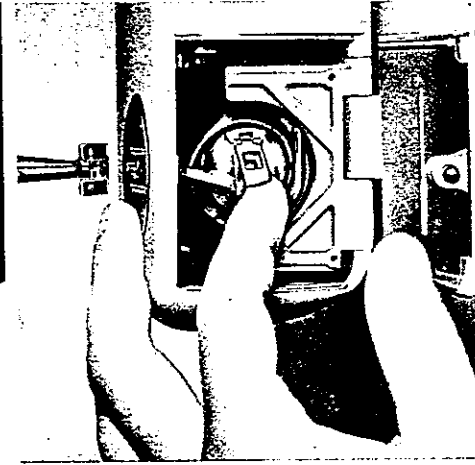


Bobbin and Case

Removing the bobbin case



Open hinged bobbin case cover. Turn hand wheel towards you until the needle is in its highest position.



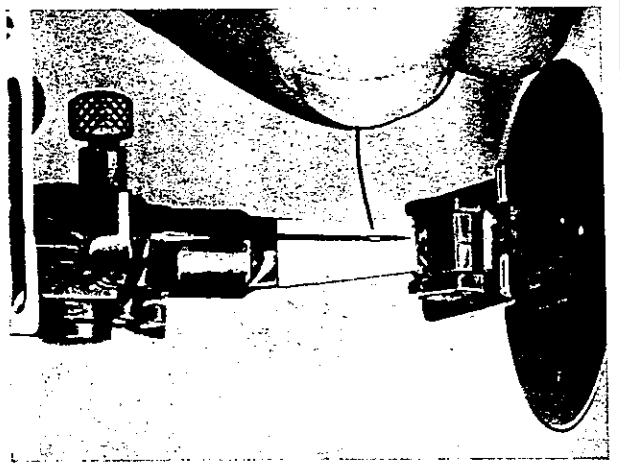
Open the hinged latch with thumb and forefinger of the left hand and remove the bobbin case. The insertion of the bobbin case is carried out in the same manner.

Needle and thread table

	very fine	fine	medium	strong	large
Needle system 705 B	60	70	80	90	100
Mercerised sewing thread (3 ply)	50	50	50	40	40
Darning thread (2 ply)	50	30-50	30		

Correct choice of needle and thread.

Use only needle system 705 B for Bernina sewing machine 800. Please ensure that the needle and thread used conform to the table above. The usual needles for sewing are numbers 80, 90 and 100 while those for darning are numbers 70 and 80.



The presser foot with the white plate is a Bernina innovation. Set the needle with the handwheel high enough so that the eye of the needle is in front of the white surface. The eye becomes much more clearly visible and threading is thereby made considerably simpler.

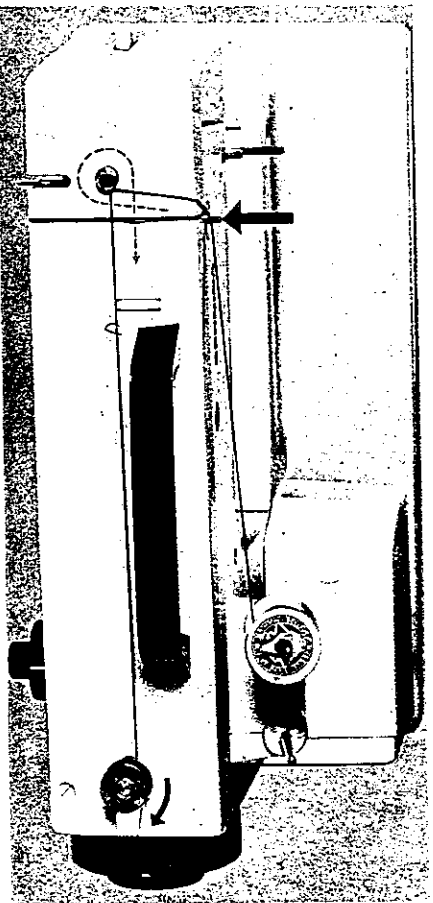
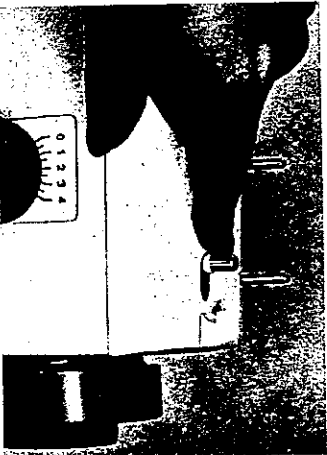
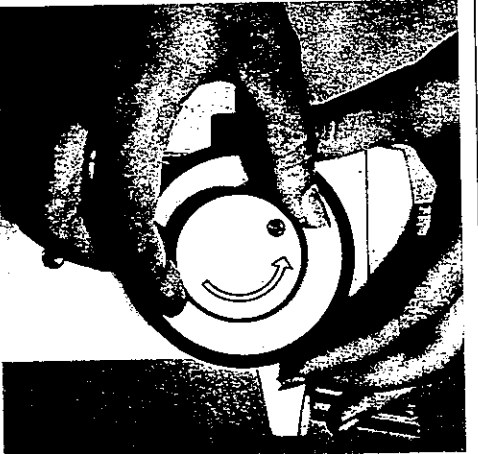
Winding of thread on bobbin

Release handwheel: hold handwheel with the left hand. Release handwheel with the right hand by turning the knurled screw on handwheel.

Place bobbin on winder spindle and press to the right. The winder is then switched on.

Draw thread from the reel clockwise round the pre-tensioning device and from there — as shown in the picture — take to the mounted bobbin. Start motor with the foot starter.

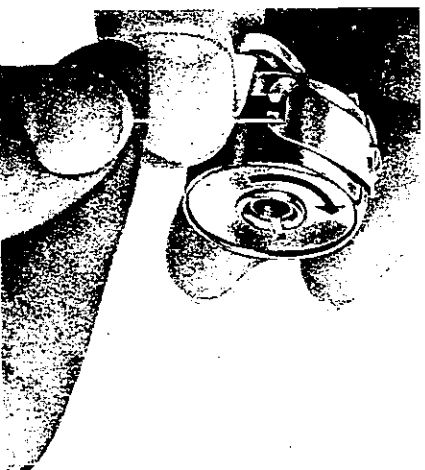
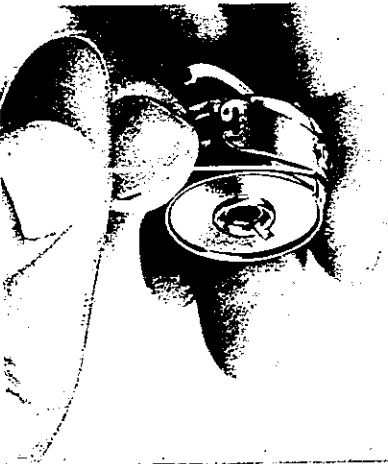
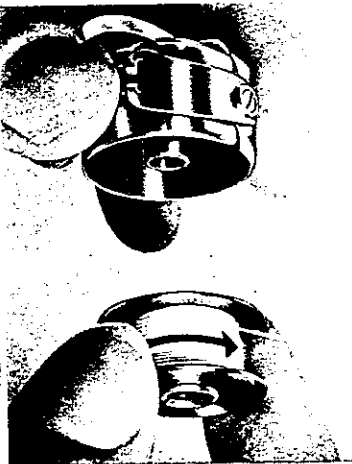
When the bobbin is full, the winding process stops automatically. Switch off motor, remove bobbin and push winder spindle back to left. Then re-tighten knurled screw on handwheel.



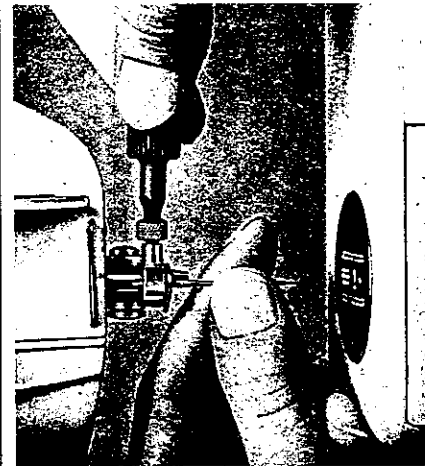
Insertion of bobbin into the bobbin case.
When the bobbin is in the case make sure that the thread unwinds in the direction of the arrow.

Draw thread through slot and then under tension spring. Do not hold the bobbin. The bobbin must turn in the direction of the arrow when unwinding.

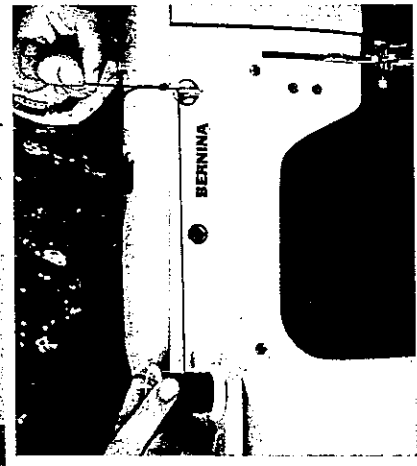
Insertion of the bobbin case into the hook. Raise needle to top position by turning the handwheel. As when removing the bobbin case hold it by the hinged latch with thumb and forefinger of the left hand. Hold bobbin case in such a way that the extension arm is directed upwards and fits into the niche of the hook race cover.
Check-up: Pull end of thread.



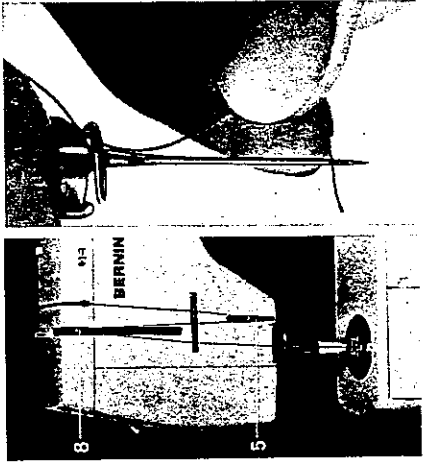
Inserting the bobbin



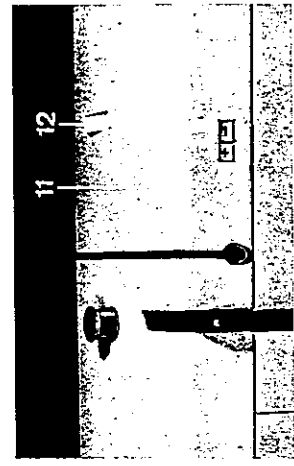
Fixing the needle. Loosen the needle clamp screw half a turn. Push the needle upwards as far as it will go with the flat side at the back and facing away. Tighten needle clamp screw.



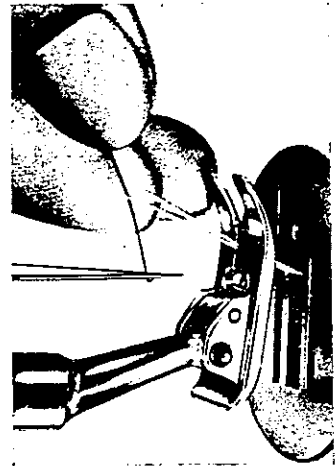
Threading the machine. The thread is led from the spool to the needle in one movement. Presser foot and take-up lever must be in their highest positions. Place spool in pin. Lead the thread with the left hand through the eyelet then pull it through the slot of the tension disc. With the right hand hold the spool steady.



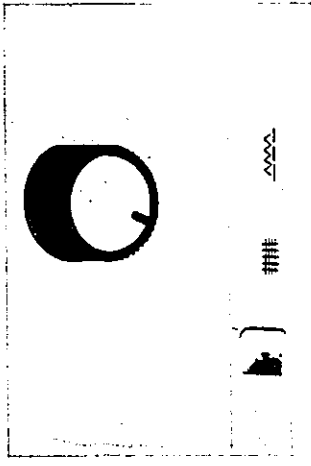
Now draw thread through the thread guide (5) up to the slot of the take-up lever (8) and again down to the needle eye. Thread the needle from the front to the back leaving a loose end of approximately 10 cm (4 ins.).



The thread tension discs. Bernina has the unique advantage that during normal sewing the thread tension does not have to be altered. The tension centering wheel (12) can be regulated for special purposes. For your guidance: Normal tension = Black line in center of window. + in center = Tighter tension. — in center = Looser tension.



Bringing up the bottom thread. Hold needle thread loosely. Now turn the hand wheel towards you until the take-up lever is in its highest position. Pull the needle thread slightly and the bobbin thread will come up through the needle hole. Pull both threads under the presser foot and lay them there sideways.



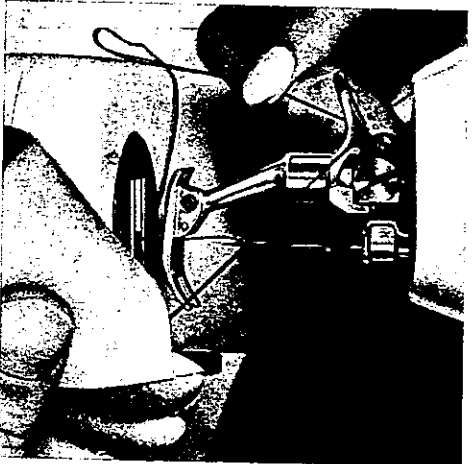
Lowering the feed dog. For certain types of sewing, in particular darning, the feed dog must be lowered.

Darning. Turn control knob (20) to the left as far as it will go towards the darning sign. For normal sewing turn knob to right as far as it will go towards the zigzag and straight stitch sign.

Changing the presser feet

Removing work. It is essential to bring the take-up lever (8) into its highest position by use of the handwheel when sewing is finished. Raise presser foot by means of the lever at the back of the machine; this will release the top thread tension and the material can be removed easily by pulling to the rear.

Thread cutter. The lever on the presser foot bar is made in such a way that it can be used as a thread cutter. This small device helps to save time, especially when scissors are not close at hand.

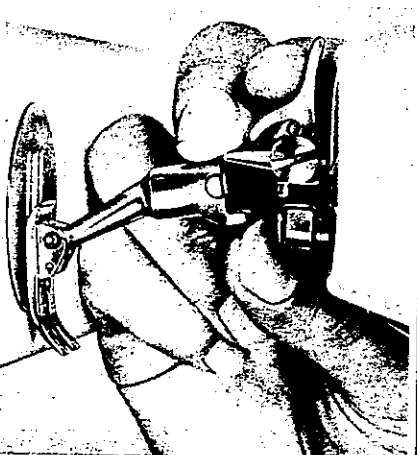


Use the correct presser foot for each type of work. Only in this way will you achieve easy and perfect work. The patented Bernina presser foot clamping lever permits quick and easy changes. The Bernina principle: "Just clip it on!" The work is done in no time.

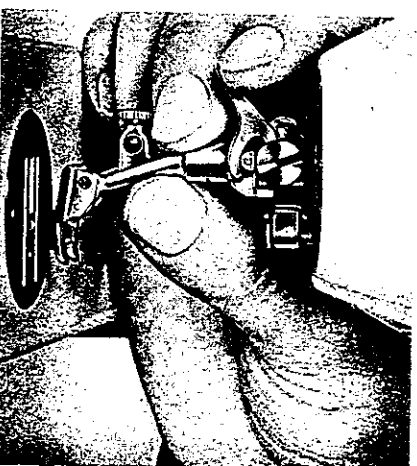
Raise presser foot by using lifting lever



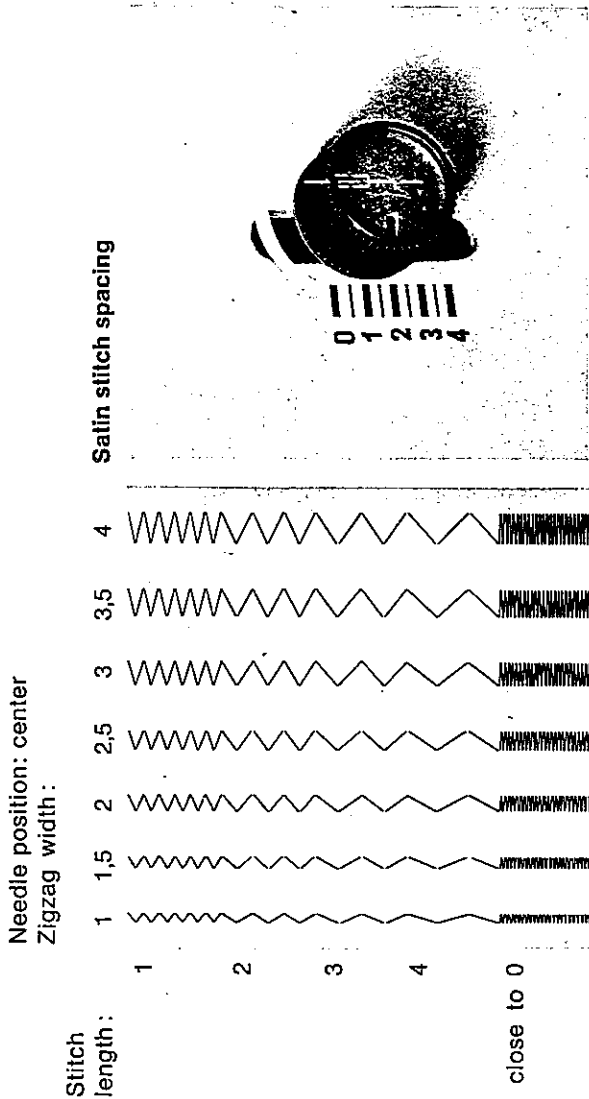
Loosen clamping lever and release presser foot



Fix the required presser foot on and push lever downwards. The presser foot is secured and the machine is ready for sewing. Only Bernina has this advantage.



Satin Stitch / Zigzag Sewing



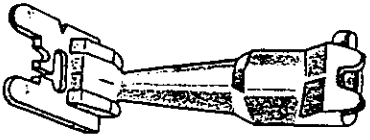
Zigzag sewing

Setting the zigzag spacing: knob 18. The line on zigzag 18 allows the stitch spacing to be read on the scale at the back. For straight stitching the knob pointer is at «0». If the knob is turned to the right — from 0 to 4 — the needle displacement becomes greater. The higher the number, the wider the zigzag stitch. The knob may be moved while sewing but when the machine is stationary only if the needle is out of the material.

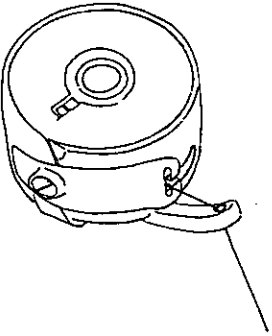
The satin stitch spacing can be accurately adjusted with the stitch length adjusting knob (19).

Turn knob (19) clockwise to the right until it stops. The marker line on the knob is vertical (stitch length = «0»). You can then adjust the satin stitch spacing — depending on material and thread — by turning the knob to the left.

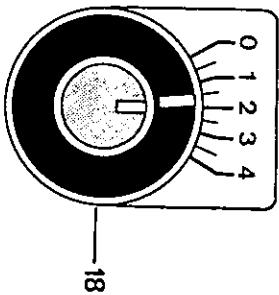
Buttonholes



Buttonhole
foot 033
Needle: 80-70
Thread: 30 or 50



For sewing a buttonhole, thread bottom cotton through hole in finger of bobbin case.

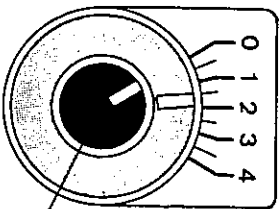


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Adjustment of the Buttonhole

Two mechanical spring settings have been built-in for the buttonhole: one for zigzag 1,75 satin stitch for the beads of the buttonhole, the other for zigzag 3-3 1/2 width for the bar tacks at each end of the buttonhole. By turning the zigzag knob slightly the spring settings can easily be felt.

Zigzag 1,75 (Spring setting)



17

Needle Position: left

The buttonhole satin stitch spacing can be accurately set with the stitch length adjusting knob (19).

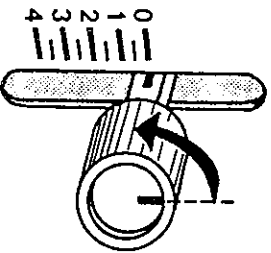
Turn knob (19) clockwise to the right until it stops. The marking line on the knob is vertical (stitch length = 0). Then you can set the satin stitch spacing — depending on material and thread — by turning knob (19) to the left.

It is best to check the satin stitch spacing on a piece of spare material before starting to sew.

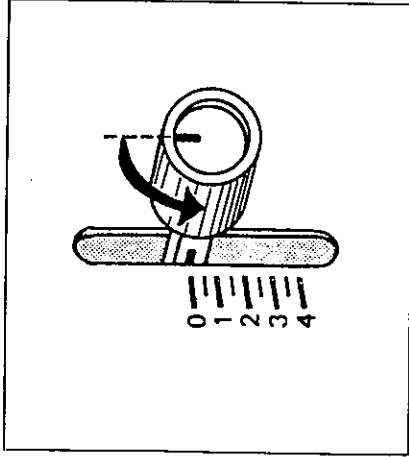
Sewing the Buttonhole

Mark desired buttonhole length on material. Set the required buttonhole length with the guide on the buttonhole foot. Move needle downwards to foot level and check that needle comes to middle of foot opening. If not do one stitch, turning handwheel by hand. But never change zigzag or needle position.

1. Satin Stitch: Sew first bead of buttonhole to required length. Set needle in work in the middle of the foot. Lift foot. Turn work completely clockwise. Lower foot again.
 2. Bar Tack: Lift needle out of work. Set zigzag to approx. 3 width (using spring setting). Hold work firmly. Sew stitches for bar tack.
 2. Satin Stitch: Lift needle out of work. Set zigzag back on to 1,75 (using spring setting) and sew satin stitch for second bead.
 2. Bar Tack: Lift needle out of work. Adjust zigzag again to width approx. 3 (using spring setting). Hold work firmly. Sew stitches for bar tack.
- Finishing off: Set zigzag on 0 and sew a few stitches, still holding work firmly.

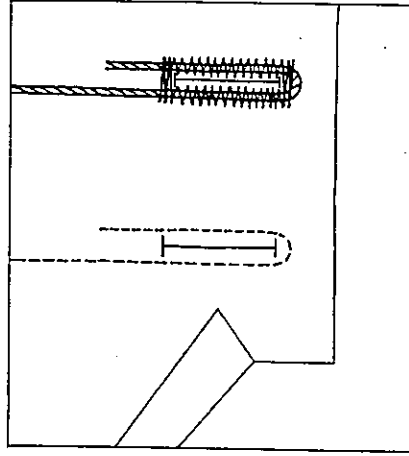


Buttonhole with Re-Inforcing Cord

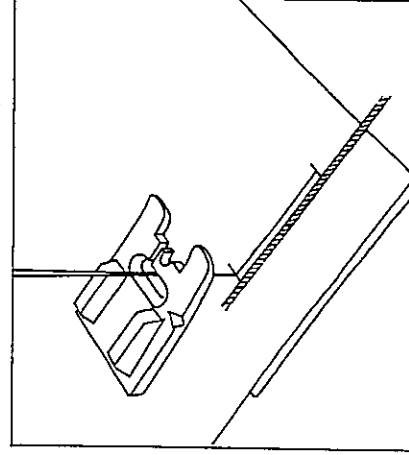


Set the buttonhole satin stitch

With knob (19) the stitch density can easily be regulated to suit the material. It is recommended to make a trial buttonhole on a remnant of the material to be used. The method of adjusting is the same as for the satin stitch.



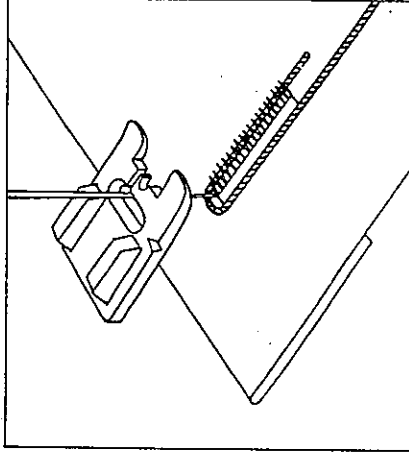
So that the loop of the inserted cord will reinforce the buttonhole where the button will pull, place the work to be sewn so that the edge of the material lies in front of the sewing foot and not behind.



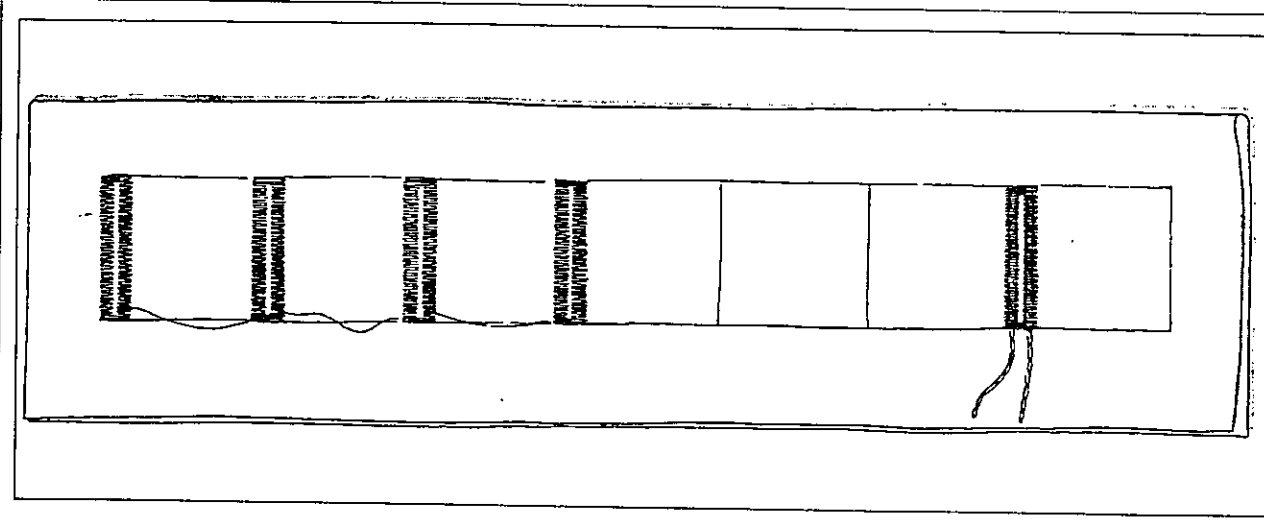
Lay the cord to be inserted to the left of the needle, so that when the sewing foot is lowered it will be in the left hand groove of the foot. Sew satin stitch for the first bead. Finish first bead with needle in work and to right of the cord and lift foot.

How to sew the buttonhole with reinforcing cord

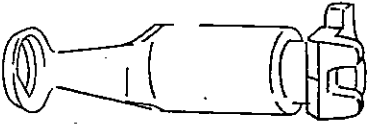
Set machine. Lower needle to the raised foot and make sure that it is in the center. If not do one stitch by turning the hand wheel towards you, bringing the needle to the center. Under no circumstances should the zigzag or needle position be changed. Place the work to be sewn under the foot and set the needle exactly at the beginning of the buttonhole. Do not lower the foot yet.



Hold cord in left hand and turn work clockwise with right hand until cords are parallel. Lower foot so that first bead now lies under right hand groove of foot. Continue sewing as described.



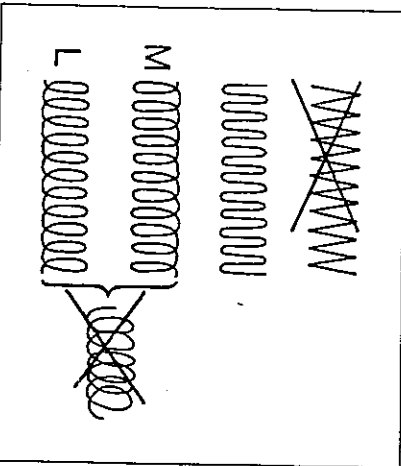
Darning



Small
darning foot 285
Needle: 80-70
Thread: 50

Darning material

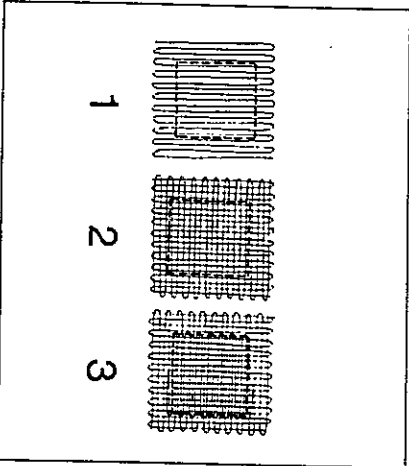
Stitch width: 0
Stitch length: 0
Drop feed control: center
Needle position: lowered



How to darn correctly

Make the turning points of each row blunt or the stitching will draw little holes at the ends. Beginners may prefer the L or M movement.
Take care not to get circles.

The quick mastering of this work depends on regular guiding.
Therefore:
- Hold the hoop correctly.
- Always work from left to right (as when writing).
- Move work lengthways (not sideways) for selvedge and wetway.

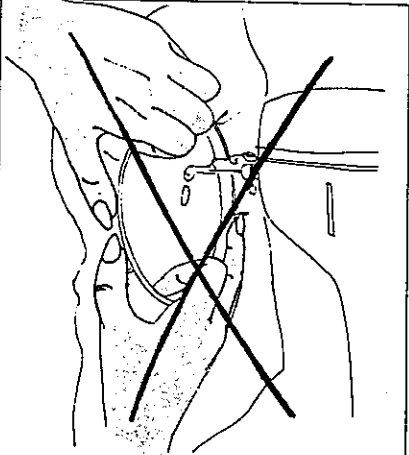


A careful darn is done in 3 runs

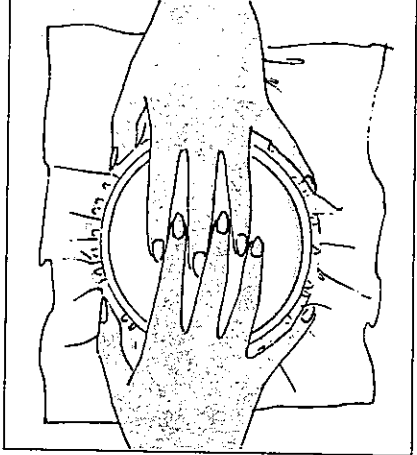
1. Wetway.
2. Selvedgeway. (Not too dense or it becomes too thick around the hole.
3. Same way as 2nd run but only over hole itself losing threads in 2nd run of stitching.

Main faults when darning

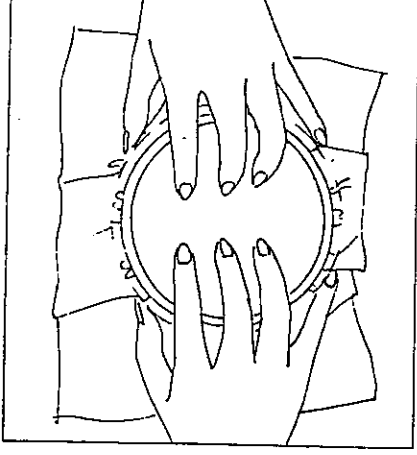
Frequent thread breaking - work guided irregularly.
Poor stitch (looping on top) - work moved too quickly.



When wrong side of work is "grainy" work moved too slowly.



How to hold hoop correctly
Not like this... this would produce irregular guiding with frequent thread breaks.

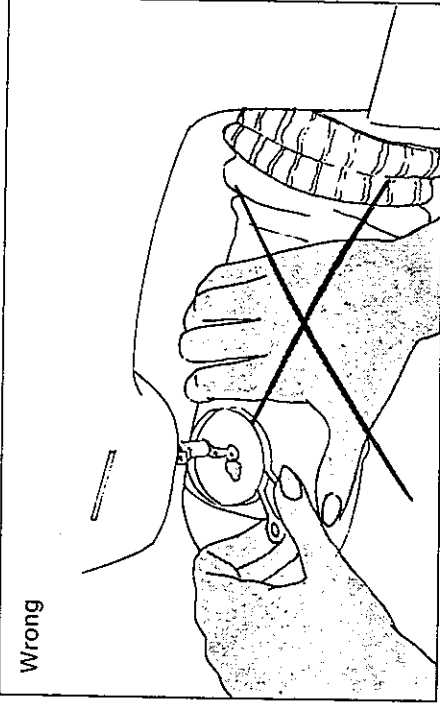


... but like this.
What is to be guided must be firmly held.
Thumb facing the frame (slightly bent) side of little finger to the frame.
Starting position of the fingers as in the picture - opposite one another.
Then pulled back a little.
The frame is guided however by the outer fingers.

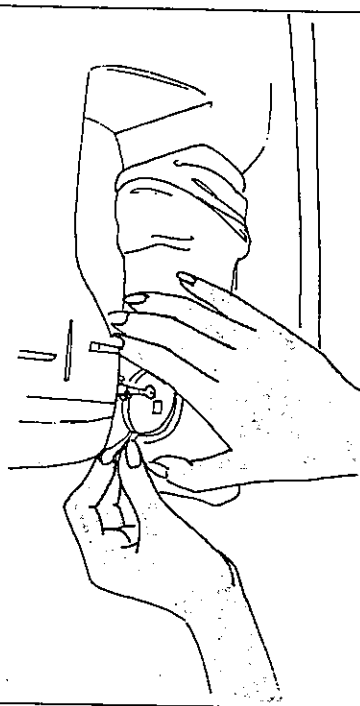
Darning fine socks

Pull work over ring (not ring over the work) stretch it to its maximum and insert the spring. Remembering the following points: After sliding the sock over the ring stretch it to its maximum and insert the spring clip so that the area to be darned is in the center. It is obvious here that we do the 1st stitch run sideways and the 2nd run lengthways as we cannot turn the frame to another angle.

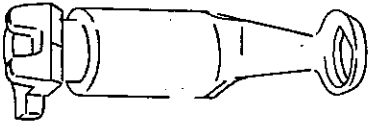
Wrong



Correct



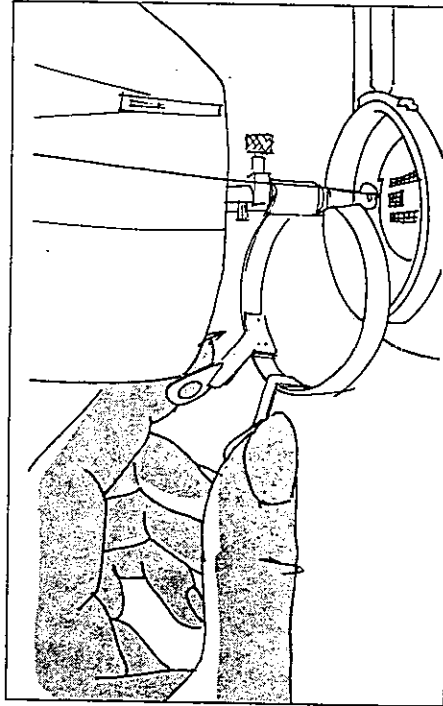
With the right hand keep the area of the hole taut over the hoop. Thumb on extreme point of free arm.



Small
darning foot 285
Needle: 80-70
Thread: 50

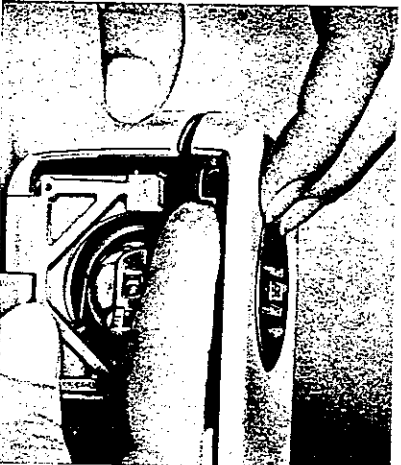
Darning fine socks (also sleeves)

Stitch width: 0
Stitch length: 0
Needle position: center
Drop feed control: lowered

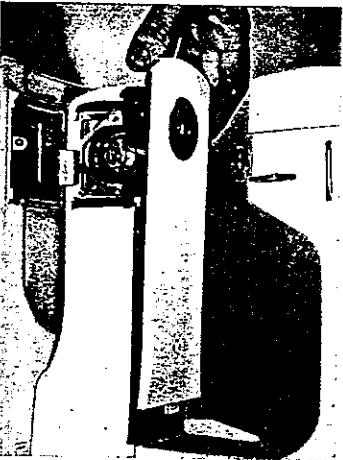


Cleaning and oiling

Cleaning the machine. During sewing pieces of thread and fluff collect under the needle plate and around the hook. The cover plate of the free arm should be removed from time to time so that the sewing fluff can be cleaned away.

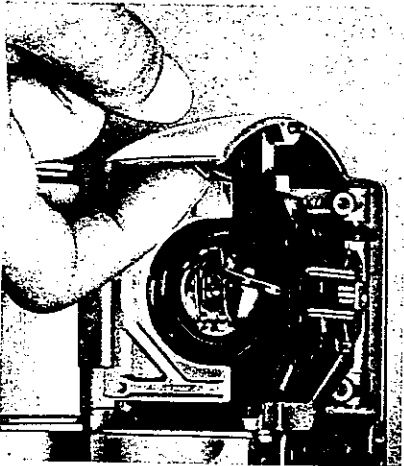


Take off cover-plate from free-arm. Remove presser foot or needle, open hinged cover. Then hold the cover-plate with the left hand and press the release lever at the same time with the forefinger of the right hand.

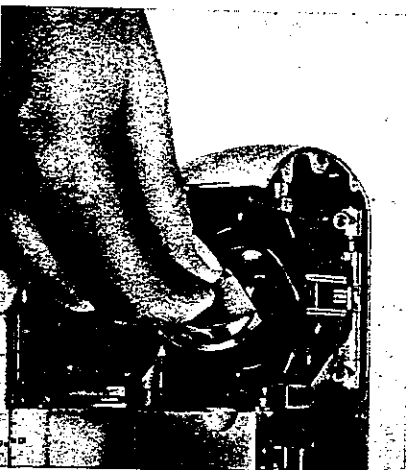


After removing the cover, the feed dog is free and can then be properly cleaned as also can the lower side of the needle plate on the arm-cover.

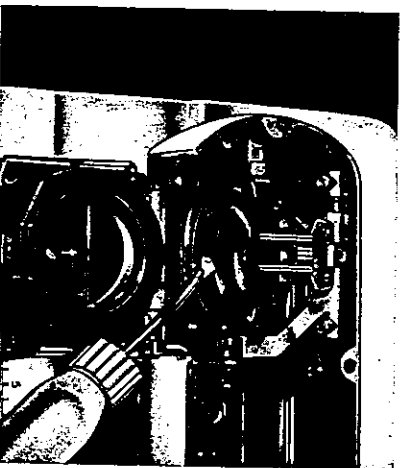
Cleaning and oiling the hook. Remove the bobbin case. With the forefinger of the right hand press latch to the left. The locking bridge together with the hook race cover can now be turned down.



Now the hook can be taken out and the hook race cleaned with a small brush and cotton duster. Never use hard tools such as screwdrivers and scissors for removing thread particles.



After cleaning pour a few drops of oil into the shuttle race. Insert the shuttle again with the left hand. Lock the bridge together with the shuttle race cover, making sure that the spring snaps back into position. Test by turning the hand-wheel as a precautionary measure. Replace arm cover and re-screw tightly. When the bobbin case is inserted the hinged shuttle cover can be closed.



1. Generally, most breakdowns are caused by incorrect handling of the machine. If breakdowns do occur then examine whether:

- a) the needle is inserted properly (the flat side of the needle must be at the back);
- b) the correct needle is being used (see needle and thread table);
- c) the machine is cleaned properly. Lift free arm cover plate and remove sewing lint;
- d) the hook race is clean and oiled;
- e) there are pieces of thread caught between the thread tension discs or under the bobbin case spring;
- f) hand wheel is secured properly.

2. If the upper thread breaks. Can have the following causes:

- a) top thread is too tight;
- b) use of inferior needles (buy them preferably from a Bernina dealer);
- c) needle inserted wrongly. Flat side must be at the back;
- d) the needle is blunt or crooked;
- e) poor quality or knotted thread. Thread has dried out due to long storage;
- f) the needle plate hole is pitted by needle and needs repolishing (bring the free arm cover plate or needle plate to authorized Bernina dealer);
- g) hook point is damaged (call authorized Bernina dealer).

3. If bottom thread breaks. Can have the following causes:

- a) the bottom thread tension is too tight;
- b) bobbin is crushed and jammed in the bobbin case;

c) needle hole in throat plate is damaged by the needle and needs repolishing (call authorized Bernina dealer to change needle plate).

4. Faulty stitches. Can have the following causes:

- a) wrong needle. Use system 705B only;
- b) needle is crooked or not inserted correctly (push needle right up in the needle bar!);
- c) low quality needle, roughly polished.

5. Needle breaks. Can have the following causes:

- a) needle clamp screw is not sufficiently tightened;
- b) the material was withdrawn towards the operator and needle bent (material should always be withdrawn to the rear);
- c) when sewing over thick part material was pushed whilst the needle was still in, therefore it bent, touched the throat plate and broke;
- d) when cheap cotton, irregularly twisted or even containing knots is used.

6. Seam irregularities. A bad uneven seam results:

- a) if thread remnants are between the thread tension discs;
- b) if thread remnants are under the bobbin case tension spring.

7. Machine runs slowly

- a) Motor does not function properly (call authorized Bernina dealer);
- b) foot starter does not function properly (call authorized Bernina dealer);

c) tension of driving belt is either too tight or too loose (call authorized Bernina dealer);

d) use of low quality oil can block the movement. The machine must be dismantled and cleaned. Call Bernina dealer;

e) machine has been standing in a cold room.

When you bring your machine to an expert, please take along accessories and foot starter.

Important note (safety regulations)

Please observe the sewing position while sewing. The moving needle is a source of danger (danger of injury to fingers).

The sewing machine should be disconnected from the power supply by pulling out the plug from the socket when changing the needle, presser foot, bobbin or needle plate, when stopping work without supervision and during servicing (cleaning).

Subject to changes in design from those shown in text and illustrations.

Address of my Bernina agency:

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