

**NECCHI
LELIA
513**

**Instructions for the
use and maintenance**

GB

NECCHI Società per Azioni - Pavia (Italy)

Chapter 1

GENERAL INSTRUCTIONS

TO ENSURE PERFECT FUNCTIONING OF MACHINE

- Presser foot must not rest on feed dog unless there is cloth in between.
- Do not try to help feeding by pulling fabric: the machine feeds the fabric by itself.
- Balance wheel must always be turned in the direction of the arrow in fig. 1.
- When starting sewing, hold the ends of the two threads, thus avoiding that they fall in the shuttle housing.
- Always use appropriate needle and thread (see table).

RECOMMENDED NEEDLE AND THREAD SIZES

Types of fabric and classes of Work	Machine embroidery cotton	Mercerized cotton	Synthetic thread	Schappe silk	Real silk, cordonnet	Size of needle (syst. 705)
Very fine fabrics for lingerie: chiffon, batiste, muslin, etc.	50	80-100	140	-	-	70
Fine fabrics: for shirtings, aprons, sheeting, pillows cases, summer dresses, etc.	30	50	120	100	-	80-90
Medium fabrics: for men's suiting, cretonne, brocade, quilts, upholstery.	-	40	70	70	-	90
Medium - heavy fabrics: overalls, smocks, trousers, blankets, bed ticking, awnings, closely woven fabrics, etc.	-	30	50	60	3	100
Heavy fabrics: canvas, sacks, bags, etc.	-	24	30	40	5	110

The numbers of the various threads may change from one country to the other

TO INSERT NEEDLE

- Turn the balance wheel «P» (fig. 1) in the direction of the arrow, so as to bring the needle clamp to its highest position.
- Loosen with a screwdriver the screw on the needle clamp.
- Insert the needle into the groove, making sure that the flat side of the needle shank is toward the right, then tighten again the screw.

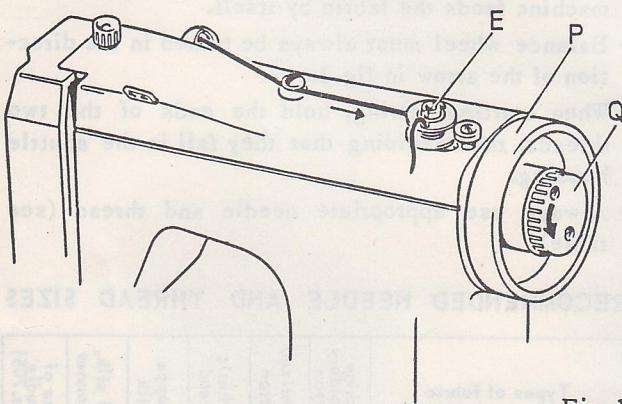


Fig. 1

TO WIND UP EMPTY BOBBIN

- Disconnect balance wheel «P» (fig. 1) by holding it with a hand and by turning knob «Q» in the direction of the arrow.
- Pass thread through points indicated in illustration and insert it from the inside to the outside into one of the holes of the bobbin flange, leaving about 10 cm. of thread hanging free.
- Insert bobbin, with its flange provided with holes turned upwards, on spindle «E».
- Push bobbin towards the balance wheel, and while holding with your hand the end of the thread hanging from the hole, start the machine: after a few turns of the wheel the thread held by the hand will automatically snap.

When the bobbin is wound up, the bobbin-winder stops automatically.

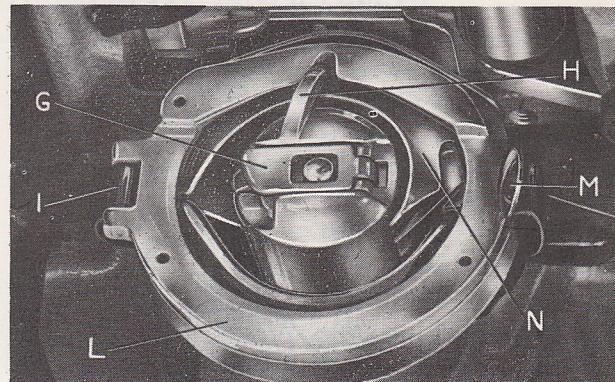


Fig. 2

TO INSERT BOBBIN

- Bring needle clamp to its highest position and move slide plate to the left.
- Lift latch «G» (fig. 2) and remove bobbin case.
- Release the latch and overturn the bobbin case: the bobbin will drop out by itself.
- Insert bobbin into bobbin case, with the flange provided with holes towards the inside (fig. 3). Pass thread first through bobbin case cutting (position «C») and then under tension spring (position «D»), leaving about 4 inches of thread hanging out.
- Insert bobbin case on centre stud of shuttle, holding it by latch «G» and taking care that finger «H» goes into notch of shuttle ring (fig. 2). Release latch «G» and press on bobbin case until a click is heard.

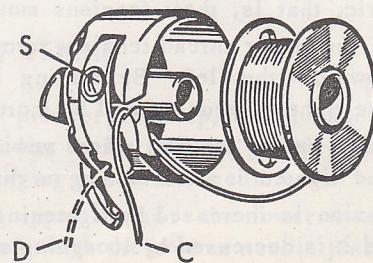


Fig. 3

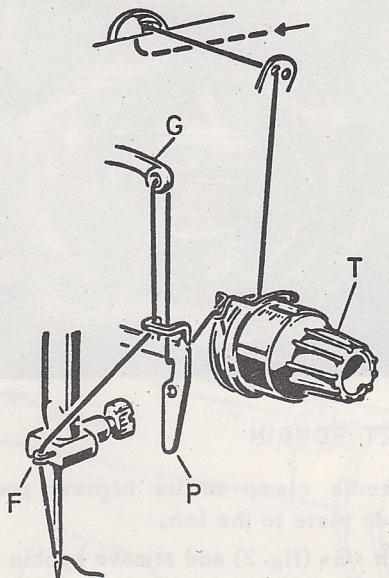


Fig. 4

TO THREAD MACHINE

Pass thread through points indicated in fig. 4. The length of thread in between thread-guide P and thread-guide F must pass through the slot between the front plate and the face of the machine. Thread must pass through needle eye from left to right, letting about 6 inches hang free, when thread take-up lever «G» is in its highest position.

TO ADJUST TENSIONS

The upper and lower threads must lock in the centre of the fabric, that is, their tensions must be even. To loosen the upper thread tension, turn button «T» (fig. 4) towards the left. By turning button «T» towards the right the tension will be increased. Loosen the upper tension when sewing on thin fabrics and tighten it when sewing on thick fabrics. Lower tension is increased by tightening screw «S» (fig. 3) and it is decreased by loosening same.

TO REGULATE STITCH LENGTH

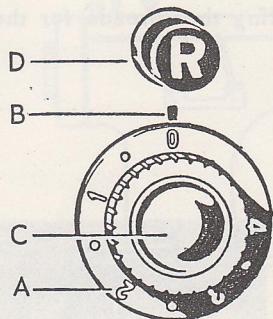


Fig. 5

Turn button «C» (fig. 5) until the number on «A» corresponding to the desired stitch length (in mm.) comes under reference point «B».

The normal stitch length is no. 2.

To obtain «satin stitch», keep stitch length close so that fabric is fed just enough to get stitches close but not piled up.

To reverse direction of sewing: push button «D» completely; the machine will sew in reverse with the same stitch length obtained by turning button «C».

TO DROP FEED DOG

Feed dog must be dropped for hoop embroidery and daming. Move slide plate to the left. Lift lever «A» (fig. 6).

To bring feed dog back to its working position, press lever «A».

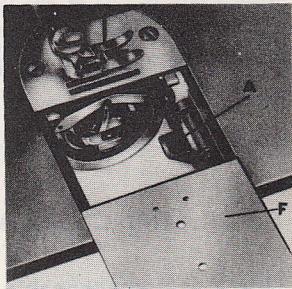


Fig. 6

TO START SEWING

- With the presser foot up, turn balance wheel to bring needle to its highest position, holding the thread hanging out of the needle eye.
- Draw the upper thread: the lower thread will be pulled up through the hole of needle plate.

- Place both threads behind presser foot, put the fabric under the presser foot and lower the latter.
- Start sewing slowly, holding the threads for the first 4-5 stitches.

LIGHT

To put the light on, move switch «L» (fig.7) towards the right.

To replace light bulb

Remove front plate; push bulb «E» upwards and slide it downwards by rotating it toward the left.

Insert the new bulb in the lamp holder «F», pushing it upwards and turning it towards the right.

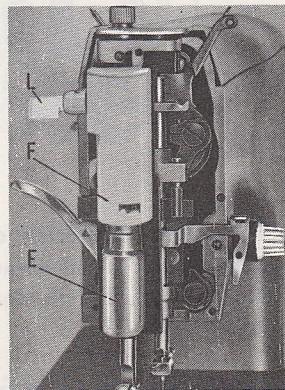


Fig. 7

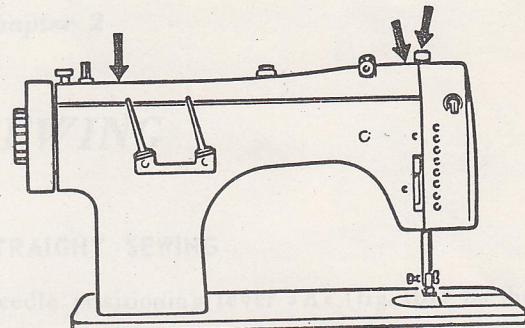


Fig. 8

- push spring «M» (fig. 2) sideways and remove shuttle ring «L» by turning it around hinge «I»,
- extract shuttle «N»,
- after cleaning, put a drop of oil in the shuttle race; replace shuttle, fit shuttle ring «L» onto the short studs and press it until spring «M» blocks it in its housing.

From time to time remove needle plate and carefully clean feed dog teeth.

TO OIL AND CLEAN MACHINE

Oiling is indispensable in order to secure a smooth and trouble-free running of your machine.

It is therefore necessary to oil it frequently, using NECCHIOIL or some other good quality oil.

Oiling points are indicated in figs. 8 and 9.

From time to time also oil shuttle rim and shuttle race.

To do so, proceed as follows :

- bring needle to its highest position,
- tilt machine back on its hinges,
- remove bobbin case,

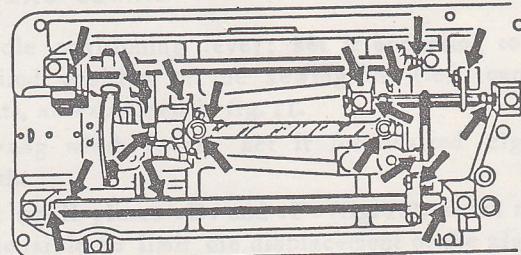


Fig. 9

SEWING

STRAIGHT SEWING

Needle positioning lever «A» (fig. 10): on the left.

Foot: metallic normal.

To sew on light fabrics (silk, nylon, etc.) it is advisable to replace normal needle plate and foot with those provided with a round hole and therefore best suited for straight sewing (accessories available upon request and against payment: foot symb. 9560093, needle plate symb. 9560082).

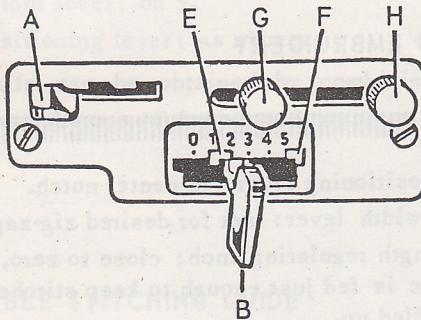


Fig. 10

ZIG-ZAG SEWING

Needle positioning lever: set it according to the desired position of the sewing line (left, center, right), as explained in fig. 11.

Zig-zag width lever: set it for desired zig-zag width.

The small plates «E» and «F» (fig. 10), which make it possible to limit the displacement of the zig-zag width lever, can be shifted by loosening and shifting the two buttons «G» and «H».

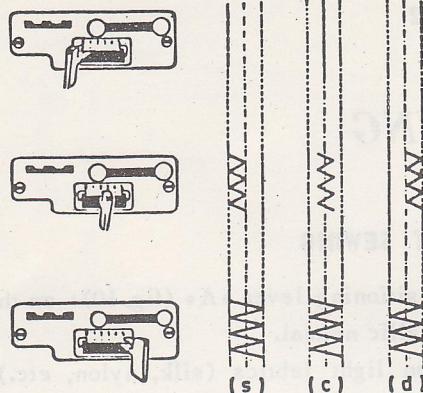


Fig. 11

- s) Needle positioning lever on the left
- c) Needle positioning lever in the center
- d) Needle positioning lever on the right

ZIG-ZAG EMBROIDERY



Needle positioning lever: in center notch.

Zig-zag width lever: set for desired zig-zag width.

Stitch length regulating knob: close to zero, so that the fabric is fed just enough to keep stitches close but not piled up.

Upper tension: rather loose.

Lower tension: rather tight.



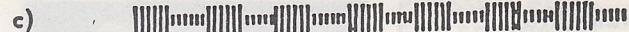
Needle positioning lever: in center notch.

Zig-zag width lever: move it quickly from 0 to 5 and vice versa.

Stitch length regulating knob: close to zero.

Upper tension: rather loose.

Lower tension: rather tight.



Needle positioning lever: in center notch.

Zig-zag width lever: shift small plate «E» on 1.5 (fig. 10), then move the lever quickly from 5 to 1.5 and vice versa, stopping a while in both positions.



To obtain small squares:

Zig-zag width lever: on or about 1.5 (small plate «E» on 1.5).

Needle positioning lever: move it quickly to each of the three positions.

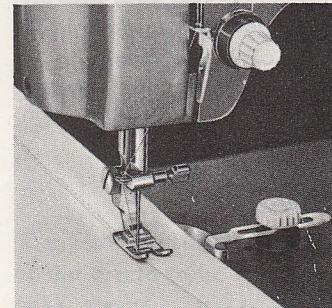
To obtain larger squares:

Zig-zag width lever: on 5.

Needle positioning lever: as above.

Other motifs can be obtained by combining in a different way the use of these two levers.

ADJUSTABLE STITCHING GUIDE



This guide makes it possible to keep the stitches at a uniform distance from the edge of fabric.

It is fitted on machine, at the desired distance from needle (fig. 12).

Fig. 12

HEMMING PRESSER FOOT

It is fitted in replacement of normal presser foot to execute hems.

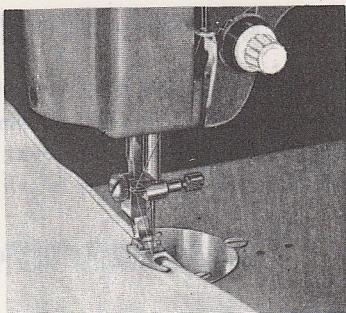


Fig. 13

Needle positioning lever: in center notch.

Zig-zag width lever: on the left.

Fold over edge of fabric about $1/8"$ and insert the fold from beneath into the scroll of presser foot, moving fabric back and forth until hem forms itself inside the scroll.

Lower presser foot and commence sewing, guiding fabric by hand.

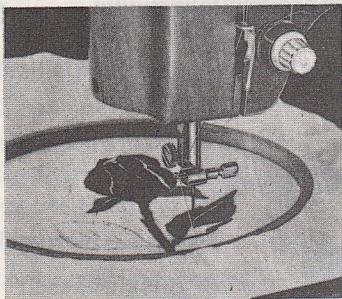


Fig. 14

request and against payment symb. 9350095).

Needle positioning lever: in center notch.

Zig-zag width lever: on the left.

Stitch length regulating knob: on zero.

Upper tension: rather loose.

Clamp fabric in hoop and move the latter only when needle is out of fabric.

PRESSER FOOT FOR SEWING ON BUTTONS

Drop feed dog and put on the special presser foot (fig. 15).

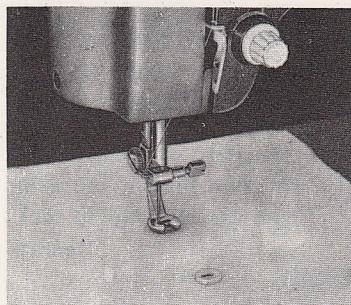


Fig. 15

Needle positioning lever: on the left.

Zig-zag width lever: between 4 and 5 according to distance between holes of button.

Lower presser foot and turn balance wheel slowly, checking that needle goes through left hole and then through right hole of button; if needle does not clear button, change the position of zig-zag width lever.

Make slowly about 5 stitches, then bring zig-zag lever to the left and make a few more stitches in the left hole to tie up sewing.

CIRCULAR SEWING

Insert small rubber stopper «B» (fig. 16) in one of the holes «H» of slide plate «A» and fix center of fabric on rubber stopper by means of pin «C».

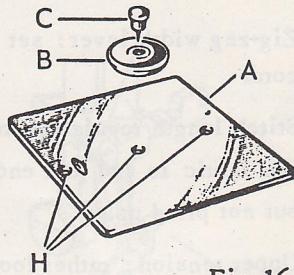


Fig. 16

The choice of the hole «H» depends on the diameter of the circle to be sewn.

When sewing, keep a finger on pin «C» so as to prevent fabric from slipping or becoming detached.

Circular sewing should be done only with material possessing a certain consistency. With lighter materials, use an embroidery hoop or place a piece of tissue paper under fabric.

RAISED STITCH APPLIQUE

Use special cording foot (fig. 17) and insert cord into the hole of the foot.

Needle positioning lever: in center notch.

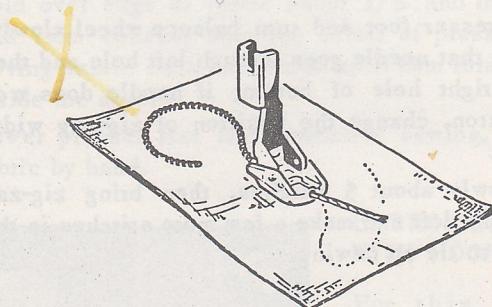


Fig. 17

Zig-zag width lever: set according to thickness of cord.

Stitch length regulating knob: close to zero, so that the fabric is fed just enough to keep stitches close but not piled up.

Upper tension: rather loose.

Commence sewing following the design carefully.

If the cord has to be visible, increase the stitch length by turning the appropriate knob.

(Accessory available upon request and against payment symb. 9200125).

PRESSER FOOT FOR ROLLED EDGES

It is fitted in replacement of normal presser foot to execute zig-zag hems.

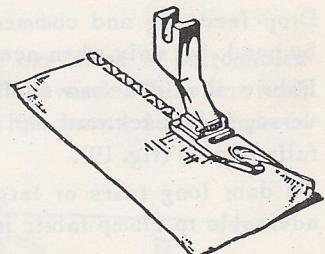


Fig. 18

Needle positioning lever: in center notch.

Zig-zag width lever: between 2 and 3.

Stitch length regulating knob: between 1 and 2.

Upper tension: rather tight.

Fold over edge of fabric about $1/8"$ and insert the fold from beneath into the scroll of presser foot, moving fabric back and forth until hem forms itself inside the scroll.

Lower presser foot and commence sewing, guiding fabric by hand.

(Accessory available upon request and against payment symb. 9000485).

DARNING PRESSER FOOT

It is fitted on machine in replacement of normal presser foot as shown in fig. 19.

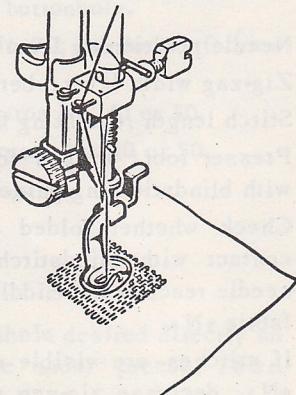


Fig. 19

Needle positioning lever: in center notch.

Zig-zag width lever: on the left.

Drop feed dog and commence sewing moving fabric by hand, but only when needle is out of fabric.

Fabric should be moved from right to left and vice versa, then backward and forward until the hole is fully darned (fig. 19).

To darn long tears or large threadbare zones, it is advisable to clamp fabric in a hoop.

BLINDSTITCHING

Blindstitching makes it possible to sew together two pieces of fabric (a flat piece «M» and a folded one «N») so that stitches appear on one side only.

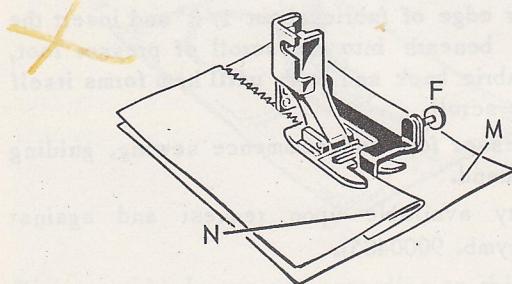


Fig. 20

Needle positioning lever: in centre notch.

Zig-zag width lever: between 2 and 4.

Stitch length regulating knob: on 4.

Presser foot: hinged for zig-zag sewing provided with blindstitching guide (fig. 20).

Check whether folded edge of fabric «N» is in contact with blindstitching guide and whether the needle reaches the middle of the thickness of folded fabric «N».

If stitches are visible on the inner side of fabric «N», decrease zig-zag width or adjust position of guide by means of screw «F».

BUTTONHOLE DEVICE

Insert regulating knob for execution of buttonholes as illustrated by fig. 21. Place mark «0» in line with mark «D». (The knob can be inserted and removed only in this position).

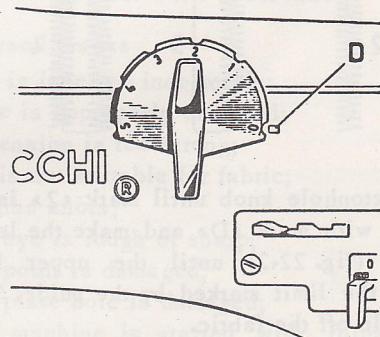


Fig. 21

Presser foot: use the transparent buttonhole foot provided with the guide.

Needle positioning lever: in left notch.

Zig-zag width lever «B»: extreme left.

Stitch length regulating knob: close to zero; check right position by trying out on a piece of fabric similar to that used to make buttonhole.

Needle: for light fabrics No. 70; for heavy fabrics No. 90.

Upper thread: mercerized cotton No. 40 or 50.

Lower thread: mercerized cotton No. 40 or 50.

Upper tension: normal setting.

Procedure :

- Mark the length of buttonhole desired directly on garment and place fabric under presser foot. Adjust the graduating guide according to desired length of the buttonhole.

- b) With the needle at its highest position, turn buttonhole knob to the right so that mark «1» is brought into line with mark «D».
- c) Make the upper bar tack with 3 or 4 stitches (fig. 22-1) and stop with the needle off the fabric.

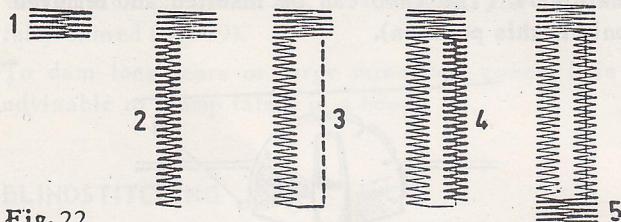


Fig. 22

- d) Turn buttonhole knob until mark «2» is brought into line with mark «D» and make the left row of stitches (fig. 22-2) until the upper bar tack reaches the limit marked by the guide. Stop with the needle off the fabric.
- e) Turn buttonhole knob until mark «3» is brought into line with mark «D». The machine will sew straight stitches in the reverse direction (fig. 22-3).
- f) When the needle arrives at the upper bar tack, turn buttonhole knob until mark «4» is brought into line with mark «D» and make the right row of stitches (fig. 22-4) until the upper bar tack reaches the limit marked by the guide. Stop with the needle off the fabric.
- g) Turn buttonhole knob until mark «5» is brought into line with mark «D», make the lower bar tack with 3 or 4 stitches: the buttonhole is then completed (fig. 22-5).
- h) Raise the presser foot, cut the two threads leaving 2-2½ inches and remove the fabric. Pull the lower thread and with the aid of an ordinary needle draw the upper thread through the fabric in order that both ends are on its wrong side. Then knot the two threads together.
- i) Finally cut the fabric between the two rows of

stitches with the special NECCHI buttonhole cutter.

NOTE: After some practice all the operations described above can be made continuously without having to stop the machine each time to raise the needle from the fabric and turn the buttonhole knob.

CAUSES OF MINOR DIFFICULTIES

Upper thread breaks

- Needle is inserted incorrectly;
- machine is improperly threaded;
- upper tension is too strong;
- thread is not suitable for fabric;
- thread has knots;
- needle eye is rough or sharp;
- needle point is damaged;
- needle plate hole is damaged;
- sewing machine is started with thread take-up lever not in its highest position;
- shuttle is damaged.

Needle breaks

- Fabric is pulled by hand in such a manner that needle hits needle plate;
- needle is bent or blunt.

Lower thread breaks

- Lower thread tension is too tight;
- bobbin is not evenly filled or too full;
- dirt or lint in bobbin case.

Skip stitches

- Needle is inserted incorrectly;
- needle is bent or blunt;
- needle is of wrong size for thread in use;
- needle is of wrong size for fabric in use.

Heavy turning of machine

- A loose piece of thread has been caught in shuttle race;
- motor belt is too tight.

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