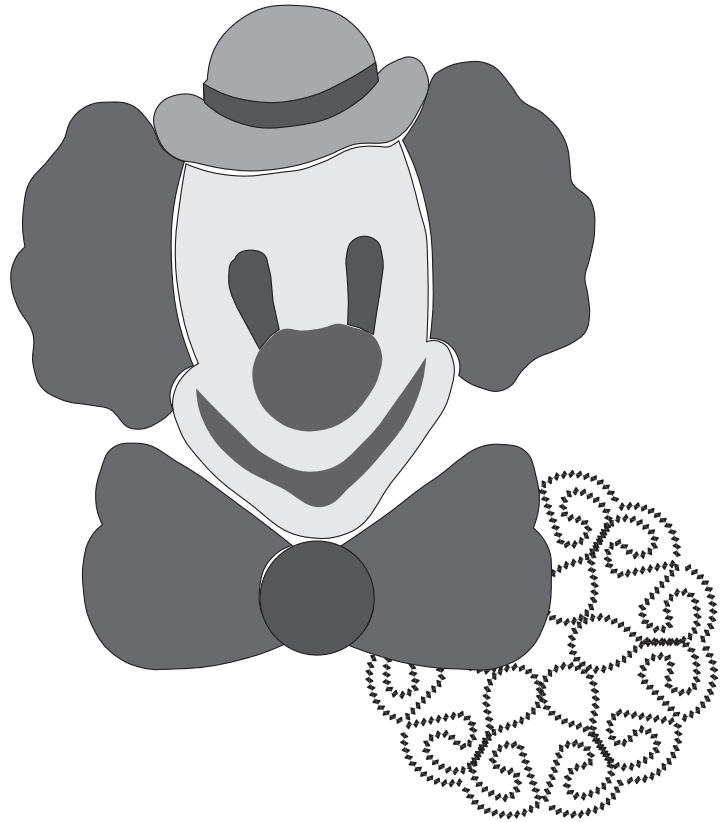


Operating Manual



Cord / Loop device

Version 1.0

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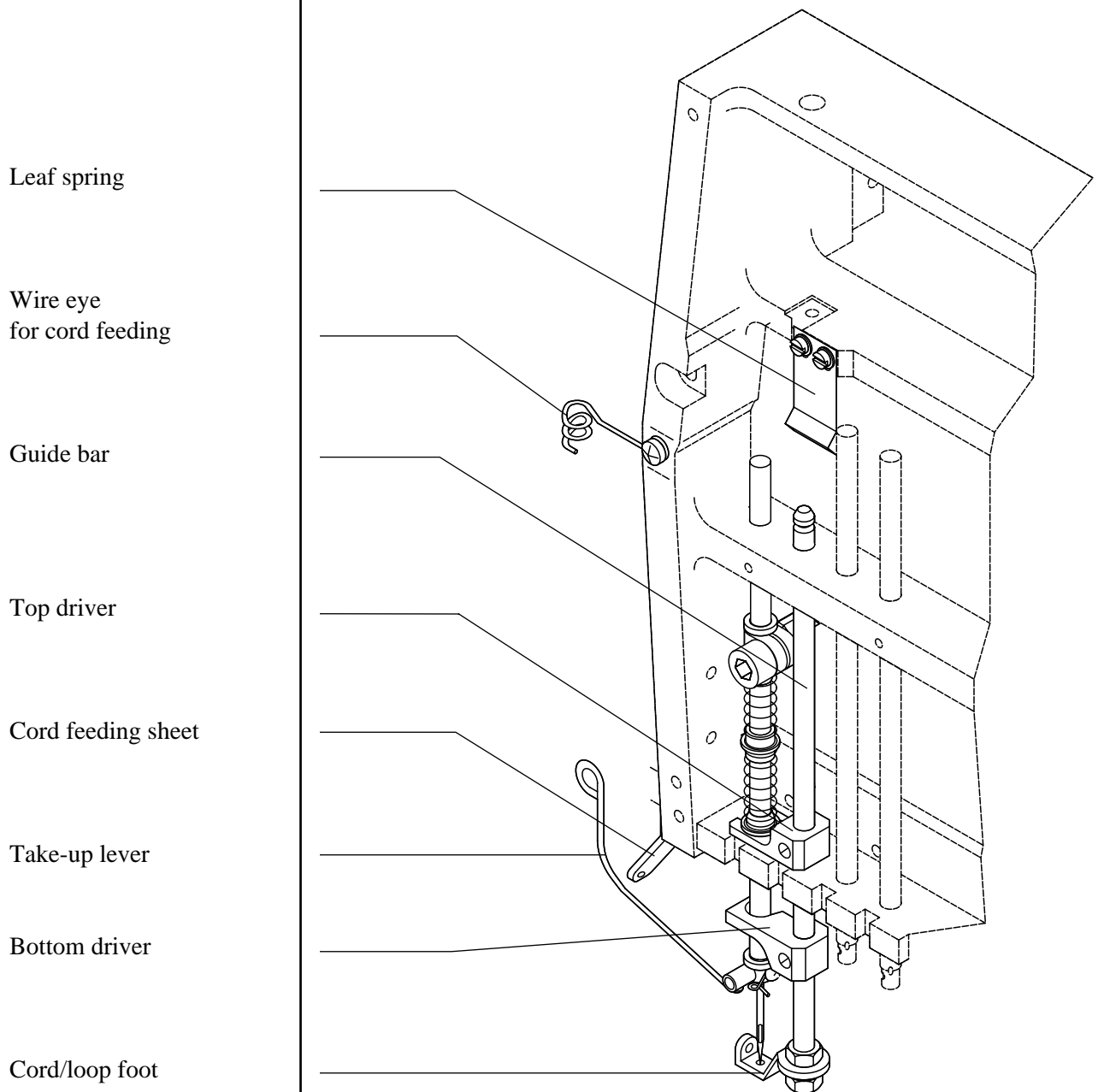
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1. CORD / LOOP DEVICE

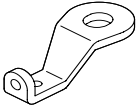
1.1 General overview

We are able to supply the cord/loop device as a right or a left device alternatively. It is positioned on the left or the right side of the embroidery head and replaces the two end embroidery needles. This manual describes the device as installed on the left side.



1.2 Accessories

1.2.1 Cord/loop feet

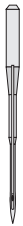


Indexing	Hole diameter (mm)
9	0,9
11	1,1
13	1,3
15	1,5
17	1,7
20	2,0
25	2,5

NOTE

The indexing is stamped into the bottom side of the cord/loop foot.

1.2.2 Needles



Type: 287 WKH KK 70-2

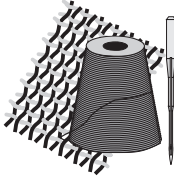
Only use the mentioned needle type with the cord loop device!

1.3 Assembly

CAUTION

The subsequent assembly of the cord/loop device may only be carried out by the ZSK service staff.

1.4 Materials



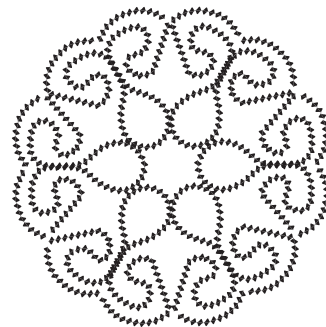
With the cord/loop device almost any cords, yarns and backings which are common in embroidery, can be used. Owing to the large number of possible combinations we are not able to provide general outlines on the suitability of material combinations. On principle, check out the applicability of any new material combination by embroidering a sample first!

Consult our customer service in case of any doubt. We will gladly advise you and try out unusual material combinations on your behalf if you submit samples.

1.5 Fields of application

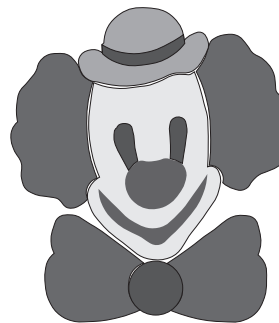
1.5.1 Cord embroidery

Cord embroidery involves embroidering a cord onto predetermined contours with a monofilament transparent or decorative thread.



1.5.2 Loop embroidery

Loop embroidery involves embroidering standing wool yarn loops onto a predetermined surface across the full width. The wool yarn is embroidered with a monofilament transparent or decorative thread.



NOTE

For cord/loop embroidery appropriately punched embroidery designs are necessary.



2. PREPARING TO EMBROIDER

2.1 Cord/loop foot

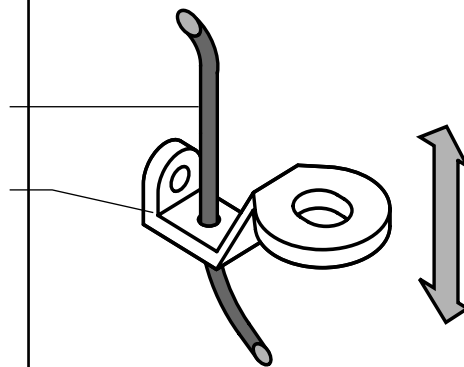
2.1.1 Selection

The selection of the cord/loop foot depends on the thread /cord thickness. Make sure that the cord runs smoothly through the hole of the cord/loop foot.

Figure 1

Cord

Cord/loop foot

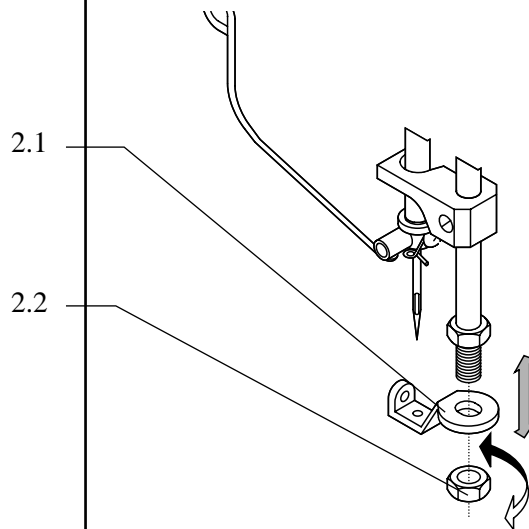


2.1.2 Assembly

WARNING

The machine must be switched off and the mains plug removed from the socket before carrying out any assembly or setting work on the cord/loop device.

Figure 2

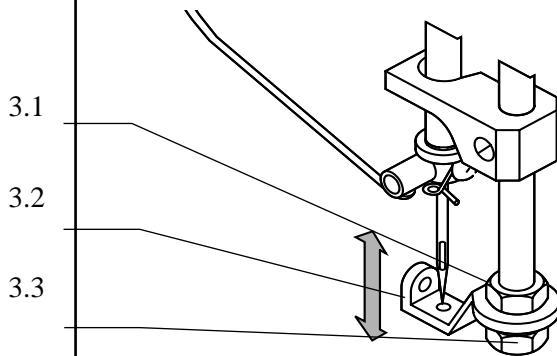


- Remove the bottom nut (2.2)
- Mount the selected cord/loop foot (2.1)
- Retight the nut (2.2)

2.1.3 Height adjustment

The height of the cord/loop foot is determined by the cord thickness as well. This means the gap between the embroidery backing and the bottom edge of the cord/loop foot must be at least equivalent to the cord thickness.

Figure 3



- Slacken off the top nut (3.1)
- Adjust the cord/loop foot (3.2) to the height required
- Retight the bottom nut (3.3)

NOTE

1 revolution of the nut corresponds to a height alteration of 1 mm.

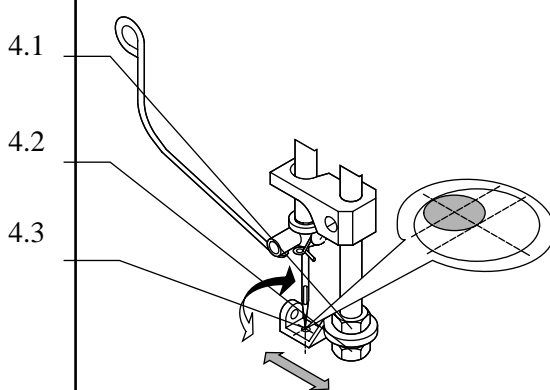
CAUTION

Check the position of the needle relative to the hole of the cord/loop foot before tightening the bottom nut.

2.1.4 Lateral adjustment

In order to embroider a cord securely a correct position of the needle inside the hole of the cord/loop foot is necessary. The needle should enter the hole of the cord/loop foot slightly to the left. With a left-hand cord/loop device correspondingly slightly to the right.

Figure 4

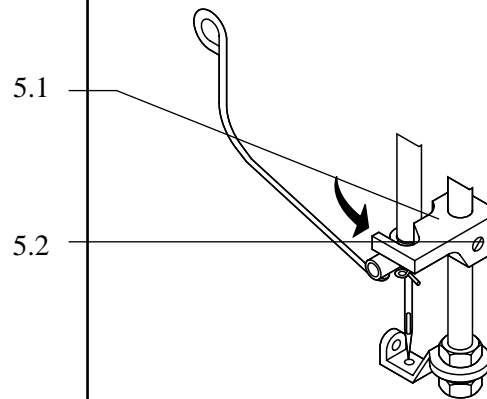
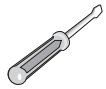


- Prevent the top nut (4.1) from moving from its set position with an open-ended wrench
- Slacken off the bottom nut (4.2)
- Set the cord/loop foot (4.3) to the position required.
- Retight the nut (4.2)

2.2 Cord embroidery

For cord embroidery operation swivel the bottom driver to the front by 90°.

Figure 5

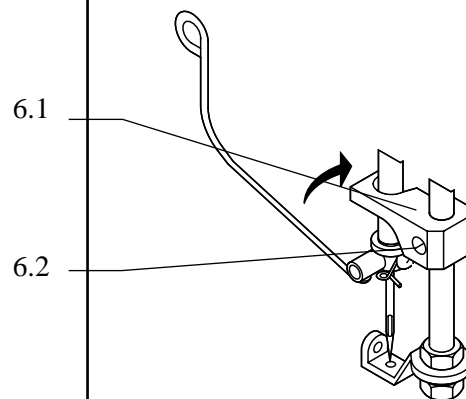
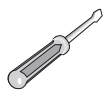


- Slacken off the screw (5.2)
- Swivel the driver (5.1) to the front by 90°
- Retight the screw (5.2)

2.3 Loop embroidery

For loop embroidery operation the driver must be swivelled back to its original position.

Figure 6



- Slacken off the screw (6.2)
- Swivel the driver (6.1) backwards
- Retight the screw (6.2)

CAUTION

Make sure that the needle bar is free to move up and down inside the driver blank.

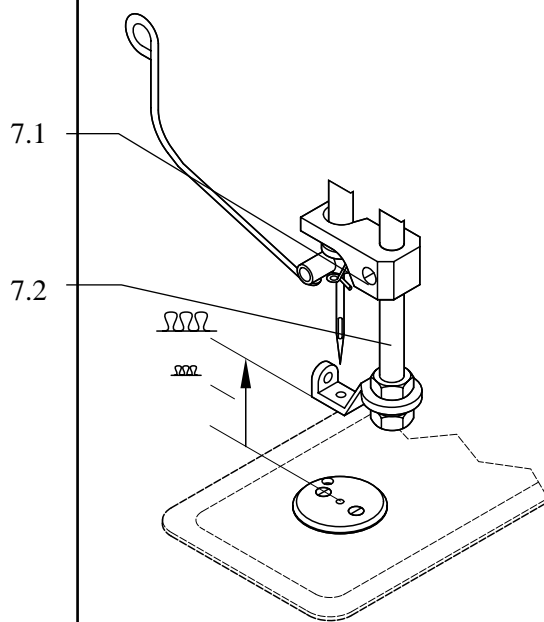
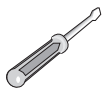
2.3.1 Adjustment of the loop height

The adjustment of the loop height can be changed with the needle bar positioned in the top dead centre (TDC). The loop height is adjusted by moving the guide bar with the driver being released. An upward movement enlarges the loop stroke (↑) and thus the loop creation. If the guide bar is moved downwards the loop stroke and loop creation is reduced.

NOTE

The basic value for the adjustment of the device with the needle bar in the TDC is ↑ ~ 15 mm.

Figure 7



- Slacken off the screw (7.1)
- Set the guide bar (7.2) to the position required
- Retighten the screw (7.1)

2.4 Threading

Figure 8

Cord
(from bobbin rack)

Monofilament thread
(from bobbin rack)

Pretension regulator
(shown open)

Deflector pin
(for 11-needle machine)

Main tension regulator
(shown open)

Thread controller spring

Guide rail

Thread take-up

Deflection rail

Wire eyelet
for cord feeding

Clamping rail

Thread gripper

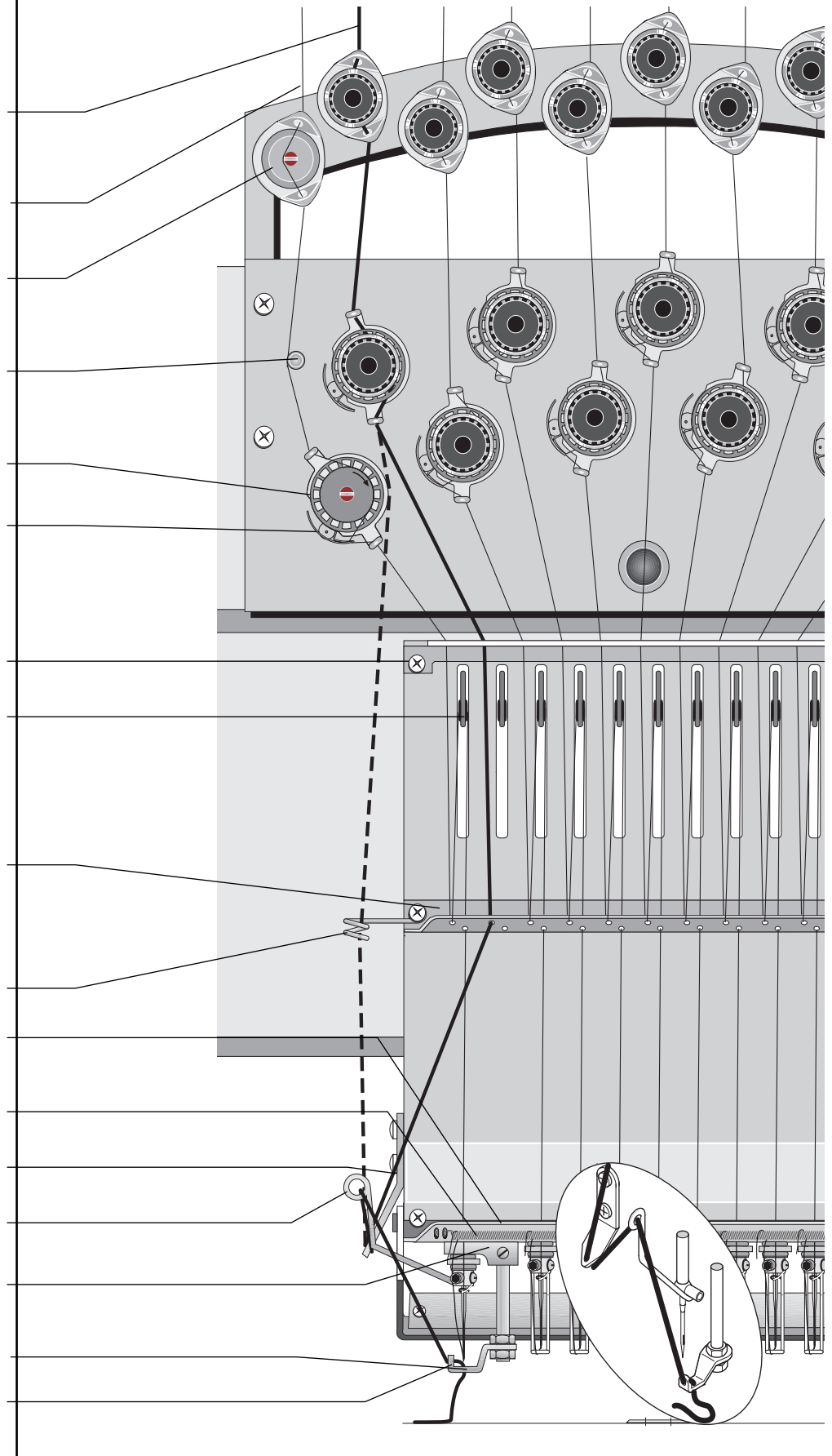
Cord feeding sheet

Thread take-up left

Bottom driver left

Needle

Cord/loop foot



NOTE

The machine as shown in figure 8 is filled with cord yarn. Make sure that the cord is only run through the top and bottom eye of the pretension and main tension regulator and that it is basically run clockwise around it. The pretension and the main tension regulator have to be adjusted without exerting any tension.

In order to avoid a friction of thick cords inside the guide holes of the guide rail and the deflection rail thread the cord according to the broken line shown in figure 8.

The monofilament yarn is threaded like the normal upper thread. Please find detailed instructions for the threading of the upper thread in the 'Operating manual -MECHANICAL-' chapter 'Preparing to embroider'.

3. EMBROIDERING

3.1 Rest position

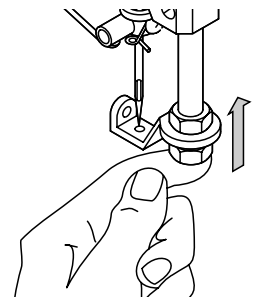
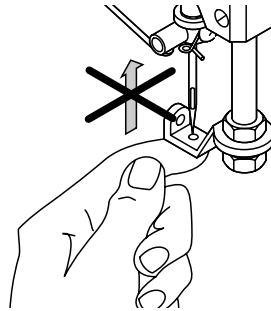
The cord/loop device **must be released manually before starting the embroidery process**. With the needle bar in the top dead centre (TDC) after the embroidery process, the cord/loop device can be moved manually to its rest position.

WARNING

Keep your hands well away from the hole of the cord/loop foot when setting it manually to the rest position. Otherwise your finger can be injured by the needle entering the hole.

Figure 1: (left)
wrong

Figure 2: (right)
correct



3.2 Speed

Cord embroidery operation can be carried out with maximum machine speed.

If the option 'LOOP EMBROIDERY' is switched on in the machine control, the machine speed automatically decreases to 500 rpm. Please take our 'Operating manual - CONTROL - ' chapter 'SET UP' for detailed information.

3.3 Travel limit

NOTE

The embroidery field is restricted with a cord/loop device mounted. Note this when selecting your embroidery design.

Due to the alteration of the initiators and stops respectively, the lateral travelling is restricted with the cord/loop device mounted so that the frame cannot collide with the cord/loop device.

4. TROUBLE SHOOTING

Trouble	Explanation / Remedy
Cord is clamping	<p>Cord/loop foot is adjusted too low / Correct the height adjustment of the cord/loop foot.</p> <p>Hole of the cord/loop foot has been selected too small / Mount a cord/loop foot with a larger hole.</p>
Missing stitches of the monofilament yarn	<p>The cord/loop foot has been adjusted too high / Correct the height adjustment of the cord/loop foot.</p> <p>Hole of the Cord/loop foot has been selected too small / Mount a cord/loop foot with a larger hole.</p>
Thread break Needle break	<p>Hole of the cord/loop foot has been selected too small / Mount a cord/loop foot with a larger hole.</p> <p>Lateral adjustment of the cord/loop foot has not been adjusted correctly / Correct the lateral adjustment of the cord/loop foot</p> <p>A wrong needle has been installed / Mount an appropriate needle</p>
Loops are too small	Wrong adjustment of the loop height / Correct the adjustment of the loop height
Loops are too large	
Cord is not embroidered	Lateral adjustment of the cord/loop foot has not been carried out correctly / Correct the lateral adjustment of the cord/loop foot



5. MAINTENANCE

NOTE

Grease the needle bars and the guide bar of the cord/loop device every three months with some sewing machine oil.

