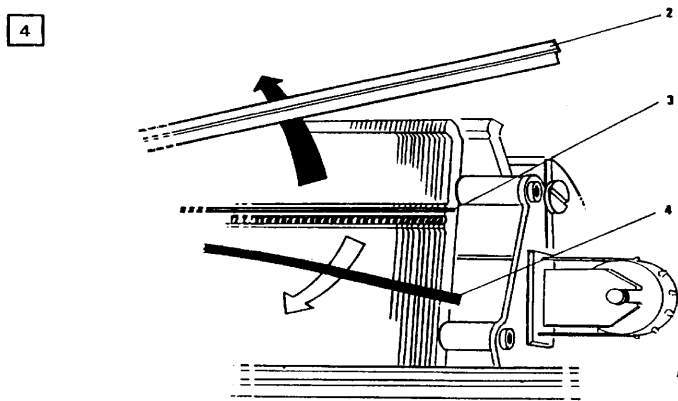
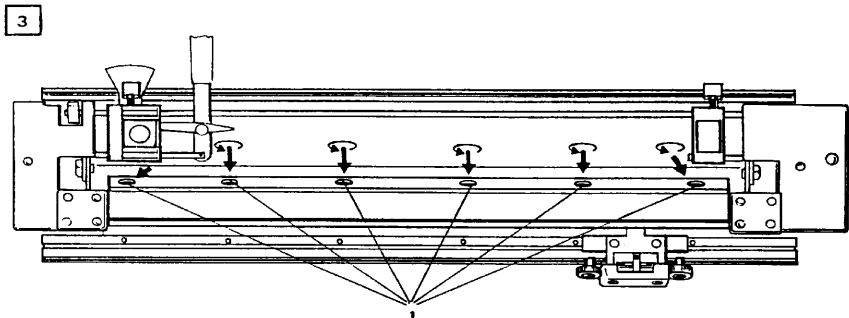
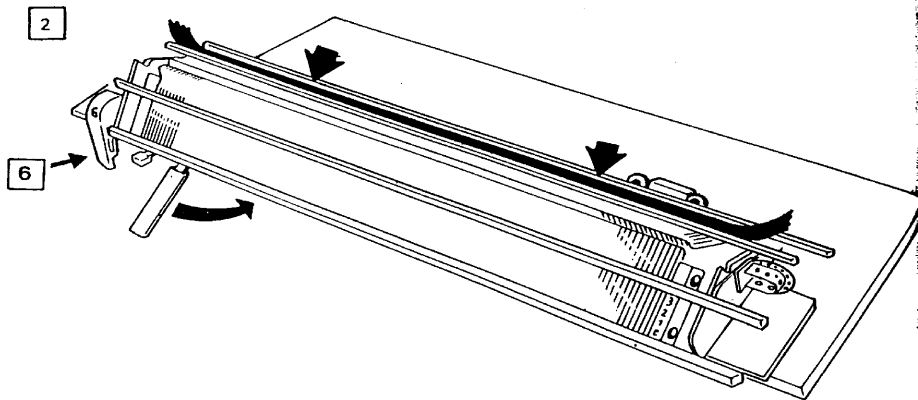


THE BACK NEEDLE BED.



For both models of machines with needle selection :

- equipped with an optical reading box
- or equipped with a memory box.

The rear needle beds are the same, except some details, we'll mention while dismantling.

First of all, we are going to replace the needle retaining spring, but now we'll work on a back needle bed with selection.

The machine is still fastened on the table with the two clamps.

The carriages, the selection box and both end covers are removed.

2. Stick an adhesive tape on the whole length of the rear needle bed.

3. Take the clamps off, whisk the racking lever away and set the space selector lever on (6)

Take the machine upside down on the table.

Loosen the six screws (1) on the upper rail.

N.B. : Those screws are unloosable screws : you can't withdraw them totally and they can't drop into the machine.

4. Take again the machine upside down.

Recover the upper rail (2) and the needle retaining wire (3)

Mind the earth band (4) ; you do not bove any on the front needle bed, not on rear needle beds from machines without selection.

The rule of this band is to connect, at any moment, the needles to the earth : it must be constantly in contact with the needles from the rear needle bed with selection. Do not remove the earth band, let it hang down at the back of the machine.

5. Remove now the needle retaining spring (5) by unhooking it from its anchoring discs at each end of the needle bed.

Clean the springs housing. In this channel, you're going to find dust of wool mixed with oil.

If this housing is not cleaned regularly, needles will not be able to slide freely in the needle bed channels, it will be very heavy to push the carriage and this may even cause selection mistakes.

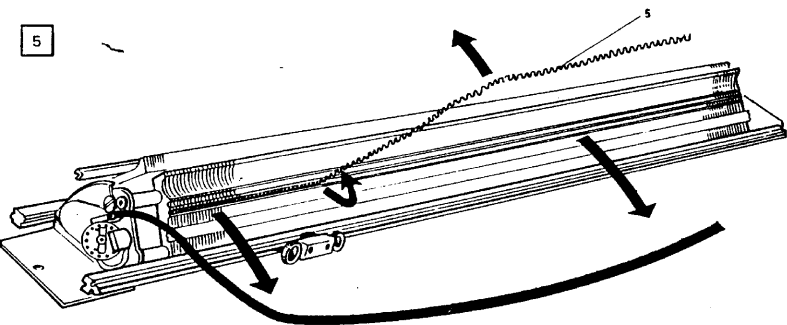
6. Take a new spring and proceed as for the front needle bed, that means :

6a : Hook it on its anchoring discs, at each end of the needle bed, let 3 or 4 spirals-hang out on each side.

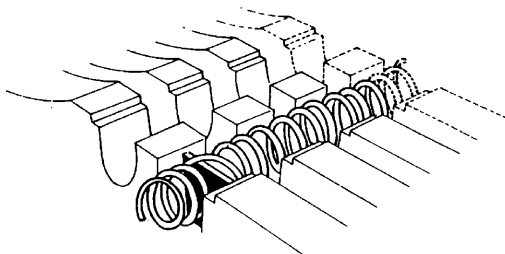
6b : Press the spring against the needle bed to share out the spirals between the needles, starting in the middle.

N.B. : This last step is very important.

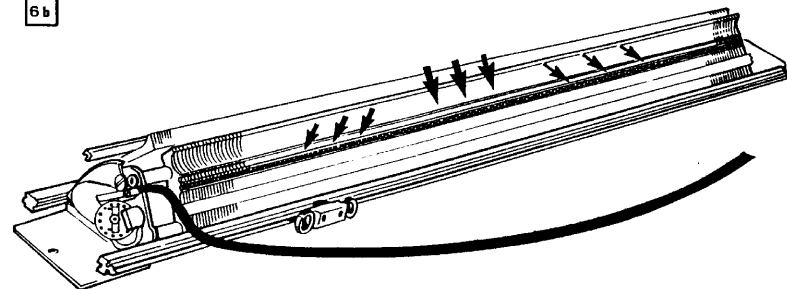
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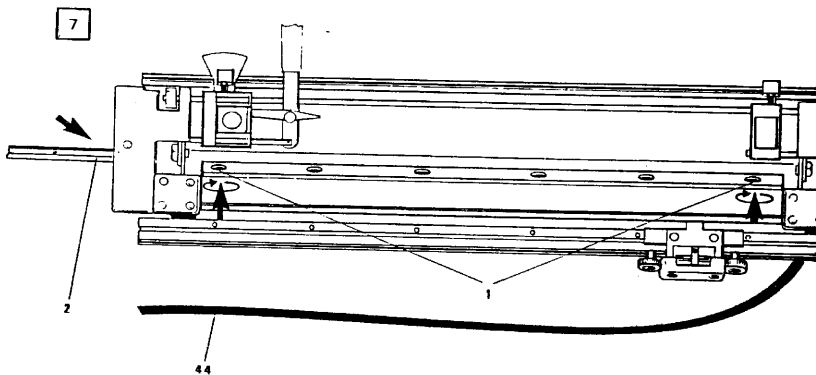


6a

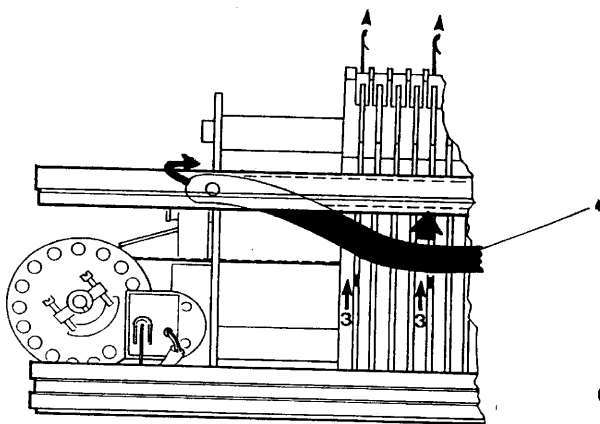


6b

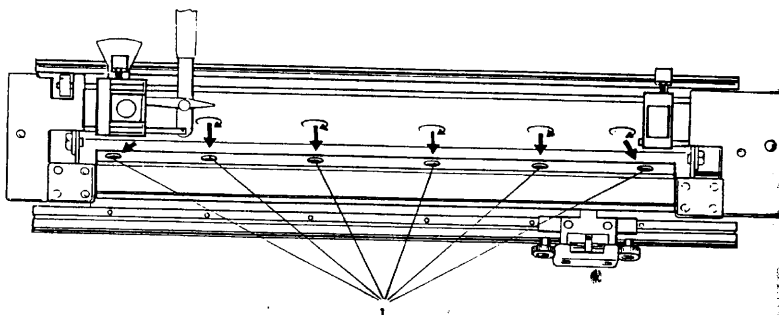




8



9



7. Lay the top rail (2) on the spring.

For the moment, don't care about the earth band (44) and let it hang down at the back of the machine.

Fix the top rail starting by both extreme screws (1)

Do not tighten those screws completely.

8. Then, slide the earth band (4) under the top rail.

Keep it in this position by moving up some needles in level 3

9. Finish by tightening the six screws (1)

Check that the earth band doesn't come out from underneath the top rail.

Take the adhesive tape off.

DISMOUNTING OF THE REAR NEEDLE BED

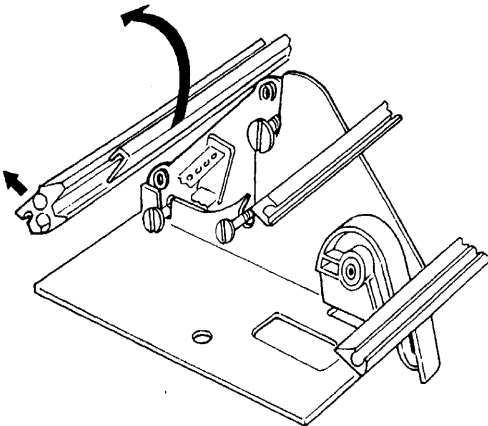
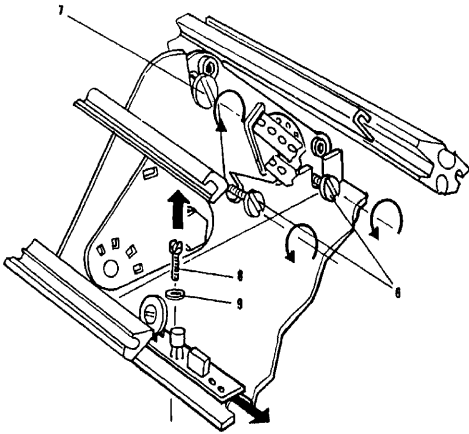
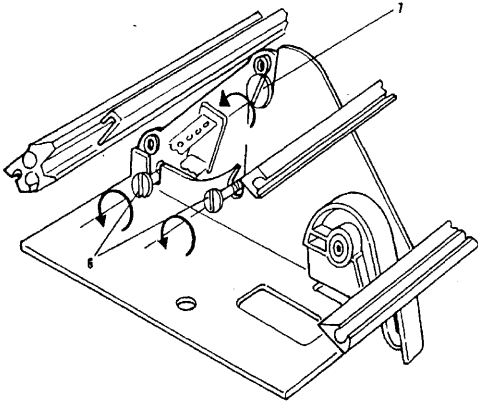
10. Loosen, without screwing them out completely, the two screws (6) and the screw (7) at each end of the machine.

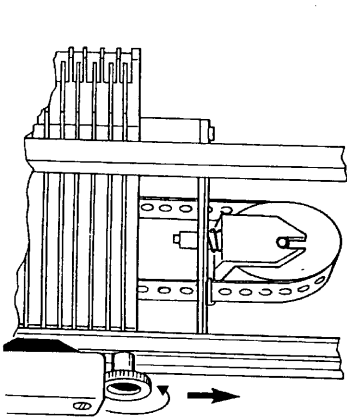
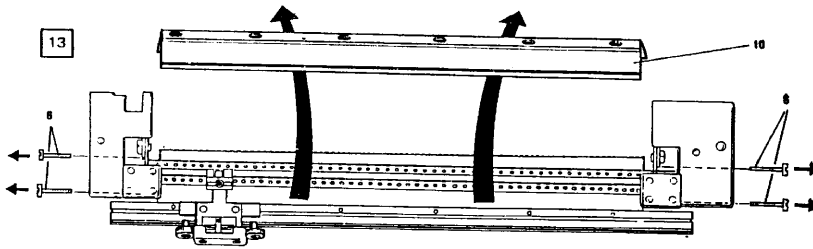
Beware not to brake a yarn when you work on the right side of the machine, in case of a machine with selection.

11. For the machines equipped with an optical reading selection box, you'll also have to take off the screw (8) which maintains the amplification printed circuit.

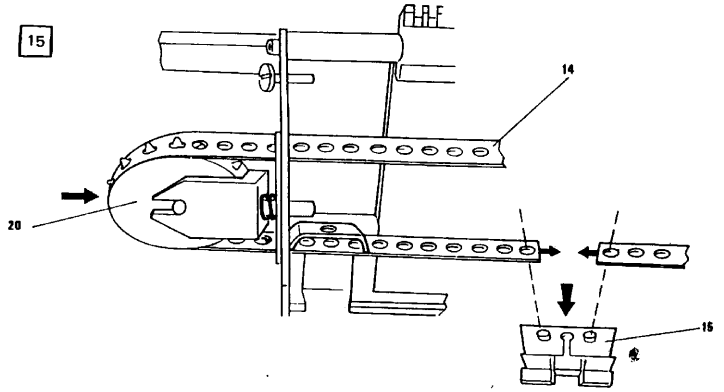
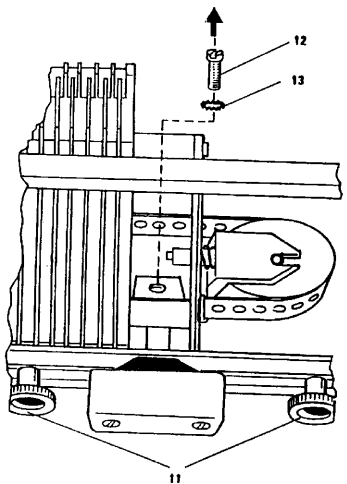
Beware of the small washer (9) situated on this screw !
Then pull the amplification printed circuit towards the outside of the machine to bring it out of its location in the right end bracket.

12. Lift up the rear needle bed holding it by the lower rail and by turning it around the lower rail.





14



HOW TO CHANGE THE PERFORATED BELT

13. Turn the needle bed upside down on the table.
Remove the rear needle bed reinforcing plate (10) unscrewing completely both screws (6) at each end of the machine.

14. Turn again the needle bed upside down (it's now on the right way).
Loosen both cursor stop button (11) and push the cursor assembly at one extremity of the machine, to be able to reach the carriage connecting block mounting screw (12) .
Unscrew and remove this screw (12) with its washer (13)

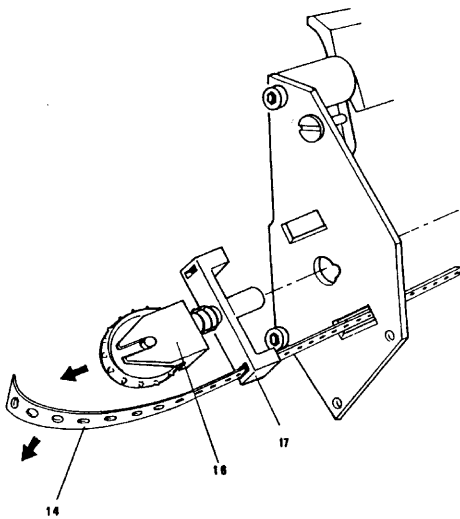
15. Turn again the needle bed upside down.
Push on the belt tightener (20) to compress the spring and thus to release the perforated belt (14) of its pins on the cursor guiding rail (15)

16. Remove the perforated belt (14) from the belt tightener bracket (16) and from the base of bracket (17)

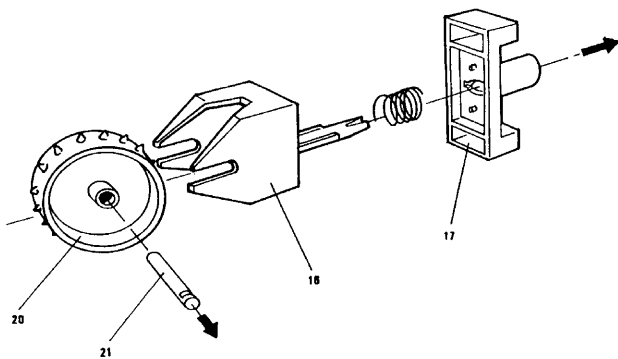
17. You can now remove the belt tightener assembly from the left end bracket break the belt tightener bracket (16) away from the belt tightener (20) with its shaft (21)

Separate the shaft (21) from the belt tightener (20)

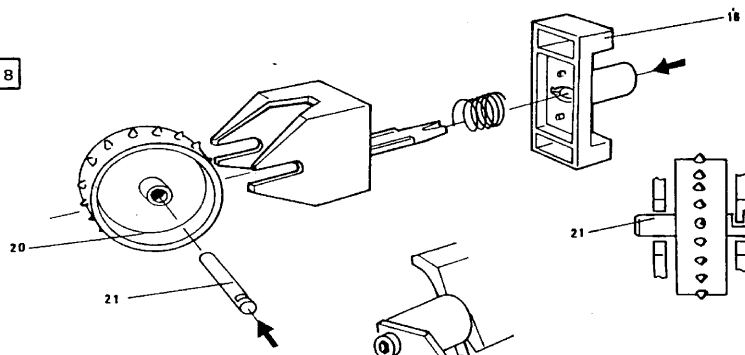
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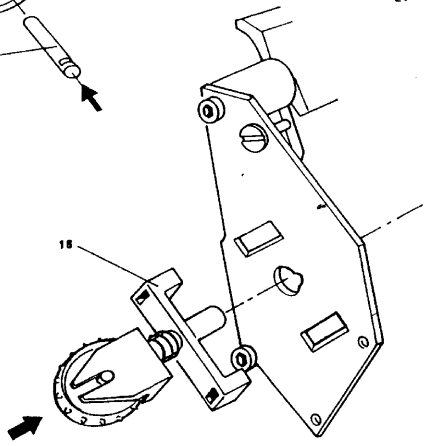
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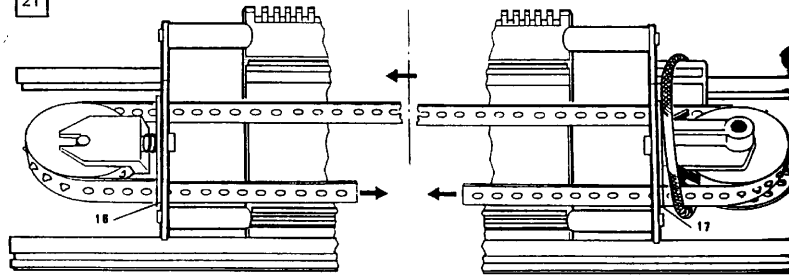
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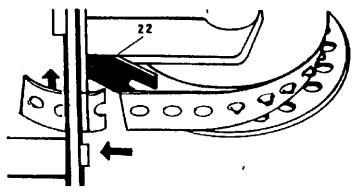
20



21



A



REMountING OF THE PERFORATED BELT

18. Introduce the shaft (21) into its location on the belt tightener (20)
19. Take the assembly (belt tightener + shaft) and bring it together with the belt tightener bracket (16)

ATTENTION : As shown on the picture, the flat part of the shaft 21 must be introduced in the thinner slot on the belt tightener bracket.

20. Put the assembly back into its location on the end bracket.
The sense of mounting doesn't care.

21. Then make the new perforated belt get through the slots into the belt tightener bracket (16) and the base of bracket (17)

ATTENTION :

- You have to think that the perforated belt must be hooked on the cursor side ; it means that both ends must be facing the lower part of the needle bed.
- The side of belt in relief must be regarding the outside.
- Take care not to hang the contact brush (22) or the cables while passing through the slots of the base of bracket (17) with the perforated belt.

Because of the brushes, it is sometimes difficult to introduce the perforated belt : use a guide (ex : a piece of broken perforated belt).

See detail drawing A.

22. Hang the perforated belt on the pins of the cursor guiding rail (15)

N.B. : Push on the belt tightener to hang the second extremity.
Mind the sense of the cursor guiding rail (15) : the three tongues must be orientated towards the top of the needle bed.

23. Put the slider of the cursor, (on which is hooked the perforated belt) on the guide (23) and push the assembly (perforated belt + cursor) at one end of the needle bed.

24. Introduce the screw (12) with its washer (13) into its location on the cursor guide.

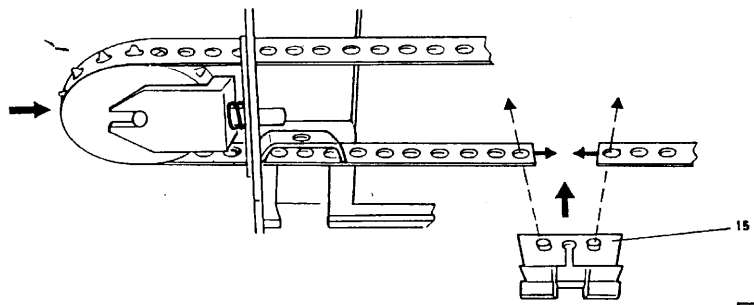
Tighten this screw.

N.B. To facilitate this operation, let the extremity of the needle bed come out of the table (the extremity of the needle bed with the cursor) and introduce the screw from the bottom.

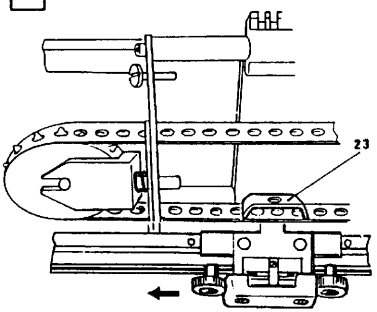
25. Now, remount the reinforcing plate (10) with the 4 screws (6)

ATTENTION : Insert first the reinforcing plate under the upper rail, and then insert the cursor slider on the guide of the cursor on the reinforced plate.

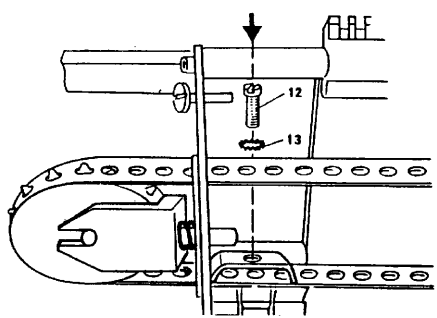
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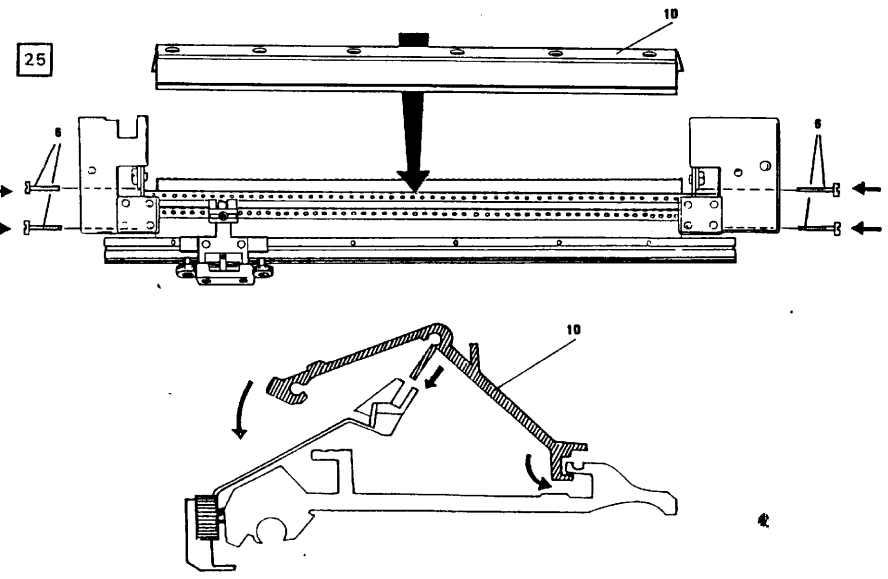
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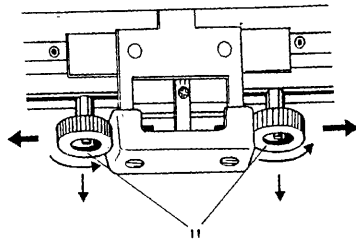


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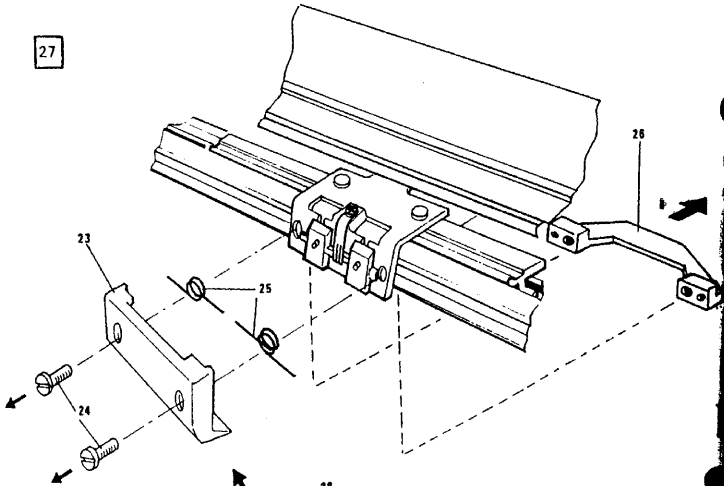


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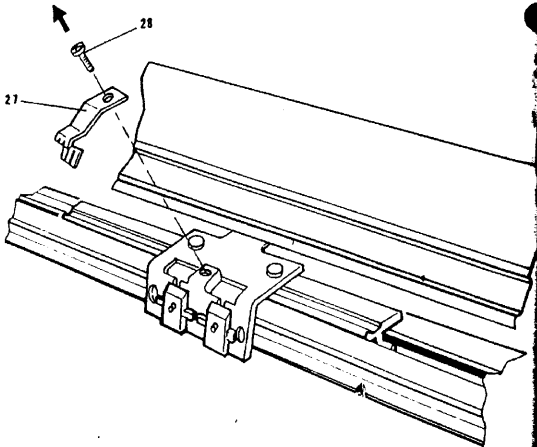
26



27



28



DISMOUNTING OF THE CURSOR

Before remounting the back needle bed, we're going to take the cursor in pieces.

The cursor is the element of the knitting machine which transmits the information given by the selection box to the needles.

26. First of all, be sure that the cursor is not locked between its cursor stops. Thus, loosen the buttons (11) and remove them further off from the cursor.

27. The rear needle bed is turned upside down on the table.
Remove the cursor cover (23) by unscrewing both screws (24).
Take care of both springs of coupling part (25) just as the index (26) in case of a machine equipped with a programable memory box.

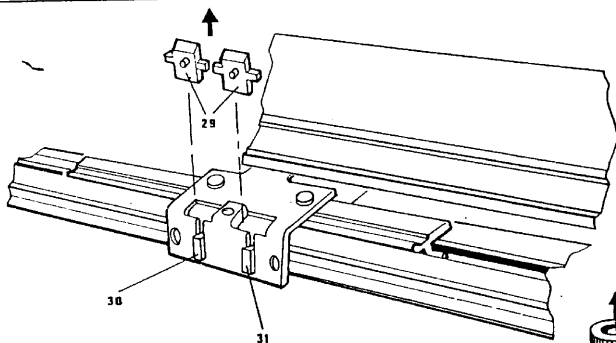
28. With draw the cursor contact (27) by screwing out the screw (28).

29. Withdraw both cursor coupling part covers (29) by pulling them towards the top : both parts are similar.

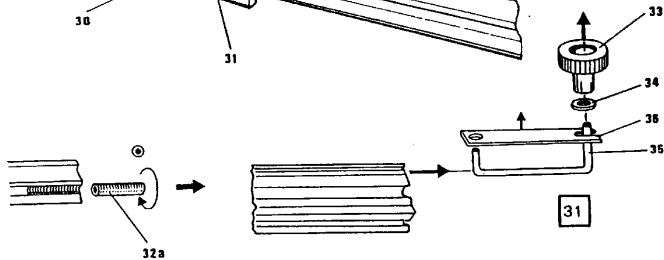
To replace a cursor coupling part left (30) or right (31) :

30. Take off, with a wedge and a hammer (or by unscrewing the Allen screw (32a) with an Allen key of 3 mm) the cursor stop positioning stud (32) from one of the stop (side of cursor coupling part to replace).
31. Withdraw the assembly "cursor stop button (33) , + washer (34) + cursor stop (35) + cursor stop plate (36) " from its location into the lower rail.
32. Loosen the six screws (37) from the lower back rail (38)
Do not withdraw those screws completely.
33. Pull the lower back rail (38) at the opposite side from the cursor stop (32) which has been removed.
You have now access to the cursor coupling parts.

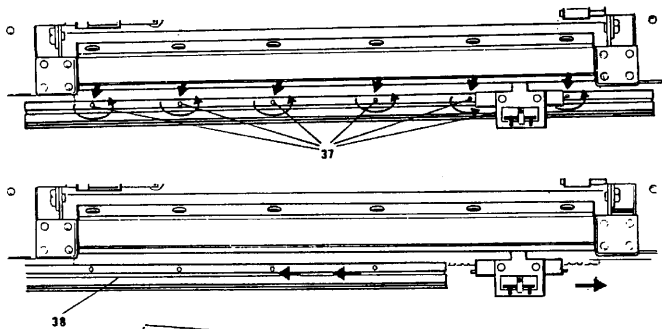
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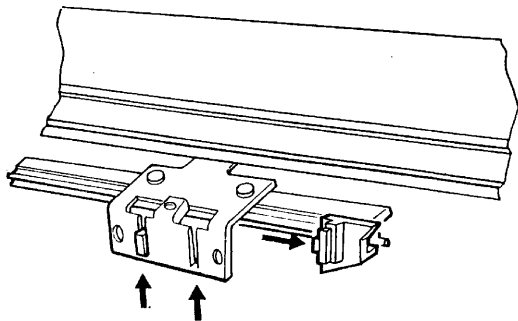
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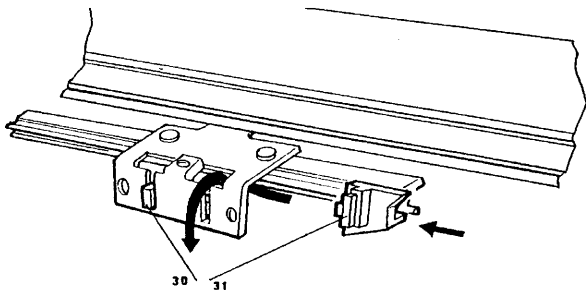
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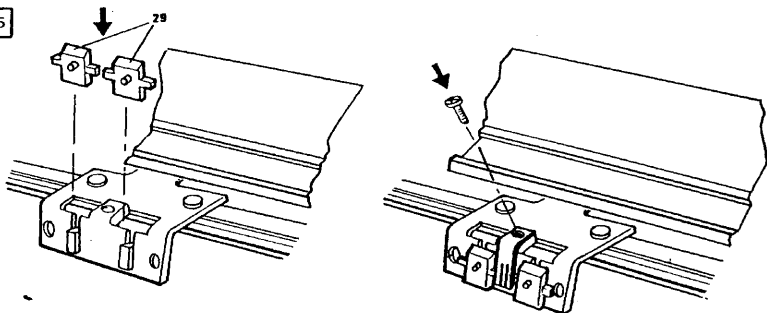
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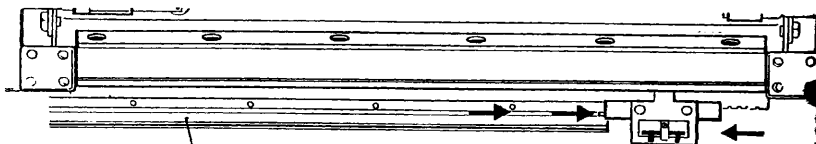
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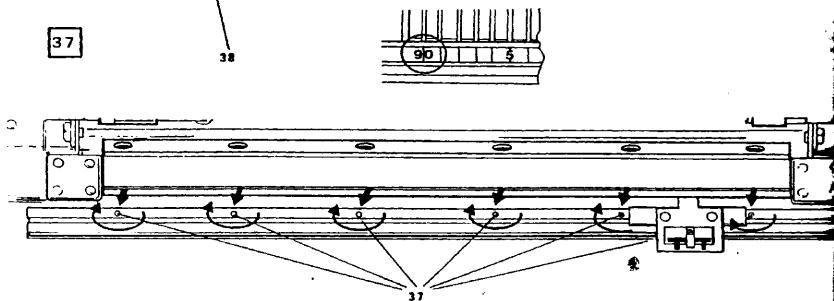
35



36



37



REMountING OF THE CURSOR

34. Take both cursor coupling part (30) and (31) and put them back into their locations into the cursor.

ATTENTION : There is a left cursor coupling part (30) and a right one (31)

As shown on the picture, mind the sense of mounting !


35. Maintain both cursor coupling parts together with the cursor and put the cursor coupling part covers (29) .
Remember that they are both the same.

36. Introduce the cursor guide into its location in the rail.

37. Slide back in place the lower rail (38) making coincide number 90 from the graduated scale with the last needle at each end of the needle bed.

Fix it by tightening the six screws (37)

38. Take the cursor cover (23) and set both springs of coupling part (25) into it (both springs are the same).

Start by laying the shortest arm of each spring against the boss in shape of , at the edge of the cursor cover (23)

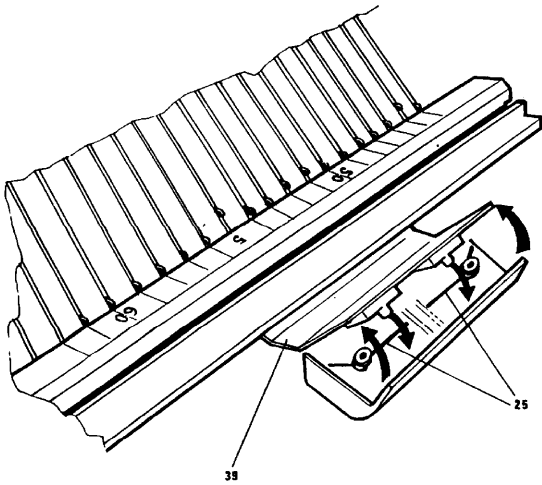
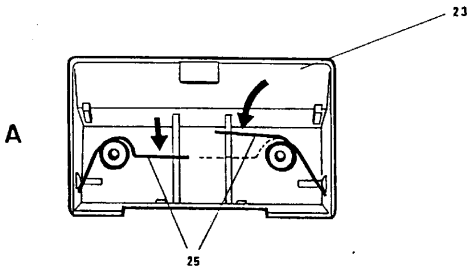
Then bring the longest arm in touch with the stop located on the central boss, as shown on detail drawing A.

39. The rear needle bed is turned upside down on the table.
Remount the cursor cover with the springs, on the cursor (39)

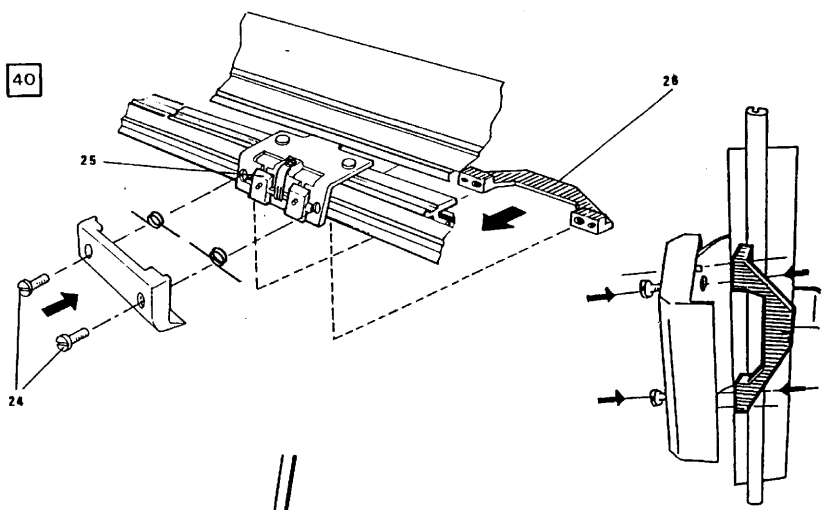
As shown on the picture, the two teats of the cursor coupling part covers must press against on both springs (25)

Fix the cursor cover with the two screws (24)

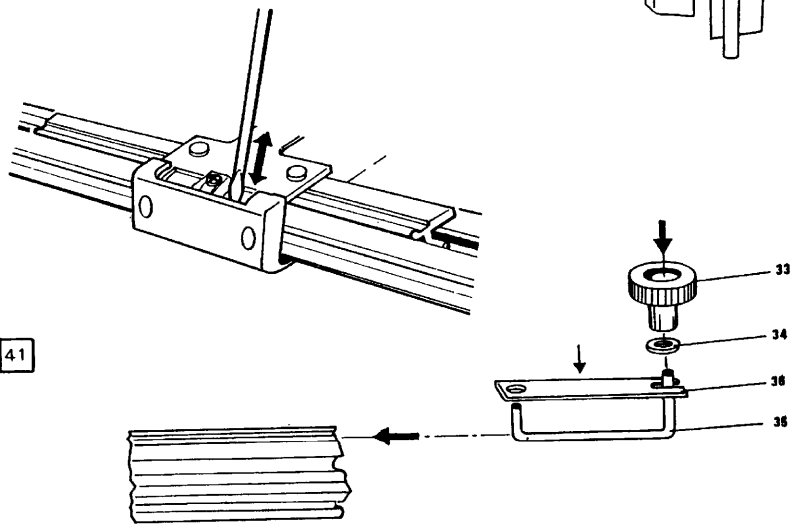
Turn again the needle bed upside down and check the good functioning of the cursor coupling parts : when pushing them towards the bottom, with the top of a screwdriver, for exemple, they must automatically (because of the springs) come back.



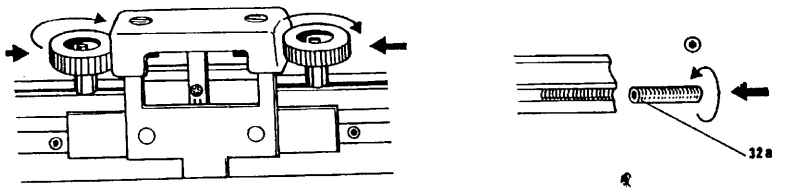
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41



42



D. If you work on a machine equipped with a programable memory box, before tightening completely the two screws (24) , you have to put the index (26) back.

B. Before the final tightening, check with a screwdriver, the functioning of both springs for coupling part.

They must come to their first step from their own.

11. It remains to remount the assembly "cursor stop button (33) + washer (34) + cursor stop (35) + cursor stop plate (36)" into the lower rail.

12. With a wedge and a hammer (or an Allen key of 3 mm) remount the cursor stop positioning stud (32) (or the Allen screw (32a)).

REMountING OF THE REAR NEEDLE BED

43. Take the rear needle bed and set both screws (6) into their notches on the end bracket, at each end of the machine.

To make it easier :

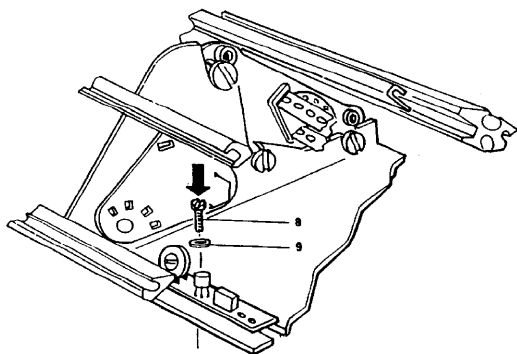
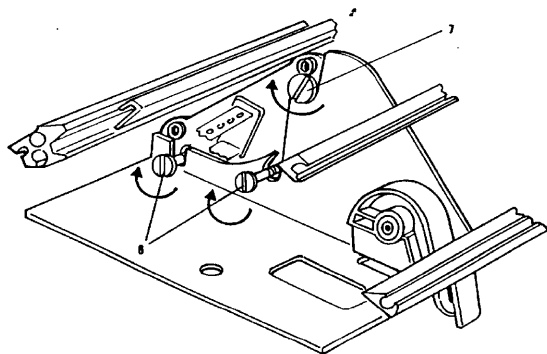
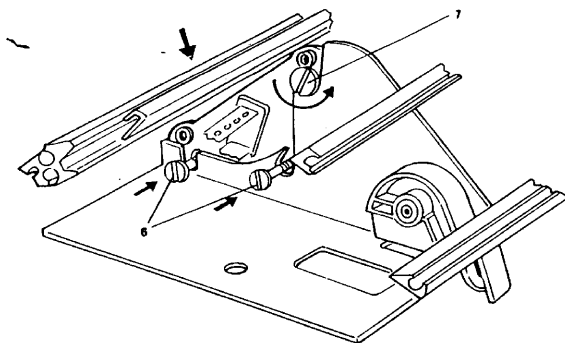
- loosen slightly both clamps
- loosen too, on each side of the needle bed, the screw (7) , so that the shouldering of the screw stays outside of the end bracket.

Push strongly on the needle bed to make the screws enter into their notches.

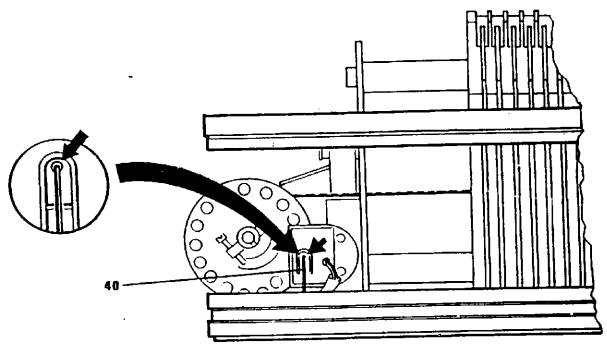
44. Fix the rear needle bed, tightening the two screws (6) and the screw (7) on each side.

Beware not to cut off a wire when working on the right side !

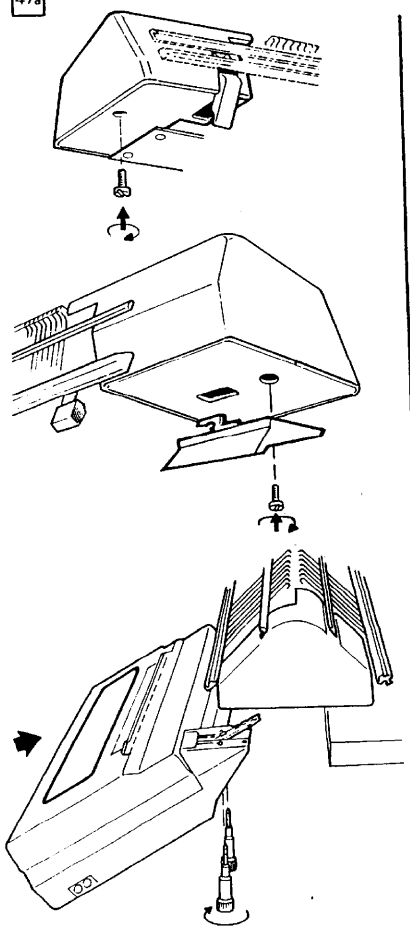
45. For the machines equipped with an optical reading selection box, remount the amplification printed circuit and fix it on the right end bracket with the screw (8) and its washer (9)
Set the wires into the slots of the base bracket.



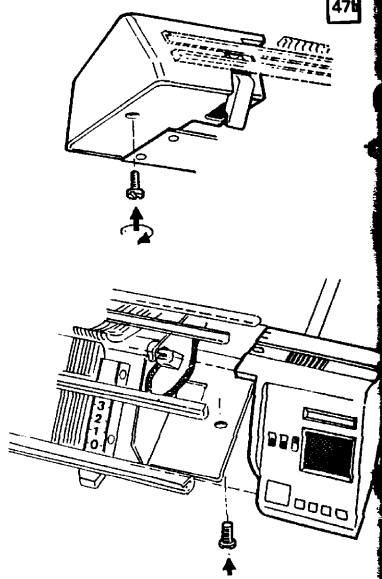
46



47a



47b



16. For all machines with selection, check that the catcher spring (40) fits into its location (as shown on detail picture).
- 17 a. Remount the left and right end covers.
Fix them with their respective screws
Remount, as well, the optical reading selection box (see instruction box).
- 17 b. Remount the left end cover and fix it
Remount the memory box and fix it.