

Re: art.no. 12.565.01 VM-safety part, new part for electra 3000 and 3000A

### 1. Modification

From serial no. 116021 (incl. serial no. 115724-115783) all electra 3000A are equipped with a new VM-safety part 12.565.01, according to sketch 1 and 2 on the back page.

### 2. Reason for modification

- The VM-safety part 12.565.01 prevents the large toothed belt 12.530.02 on drive wheel 12.975.03 (or 12.826.03) from jumping over in case the cam boxes are blocked. See sketch 2 on the back page!
- When the large toothed belt 12.530.02 jumps over due to the blocking of the cam boxes, the very important adjustment of the rack rod 12.839.02 goes out of position. Observe point 5!
- To prevent functional failures, the VM-safety part 12.565.01 should be fitted to:
  - electra 3000 from serial no. 107000 - 109200
  - electra 3000A from serial no. 109201 - 116020 (excluding serial no. 115724 - 115783, where it is already fitted)

### 3. New parts

Art.no. 12.565.01 VM-safety part, existing of:

- 06.401.02 pressure spring
- 12.566.02 safety part

### 4. Fitting of the VM-safety part

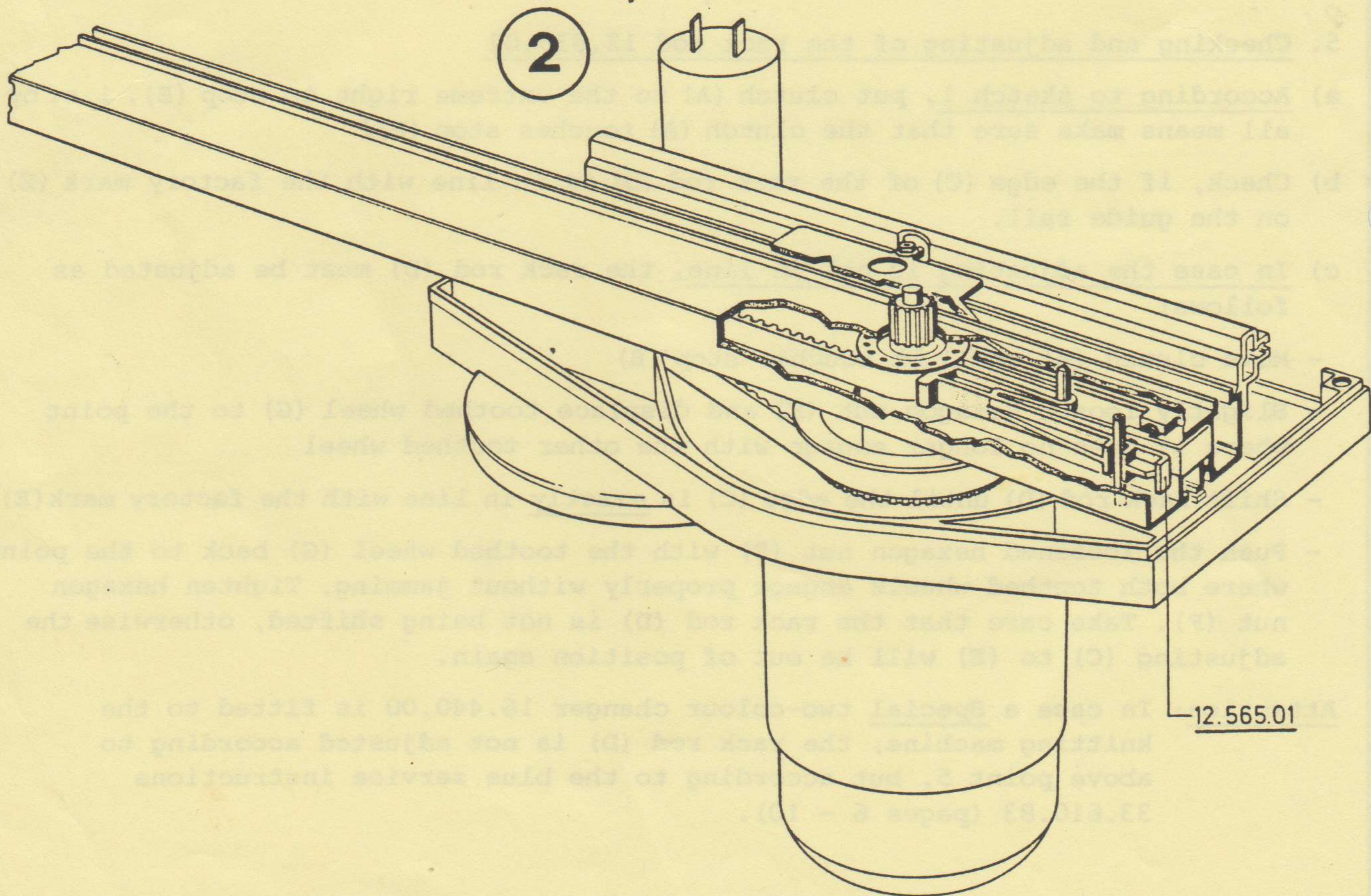
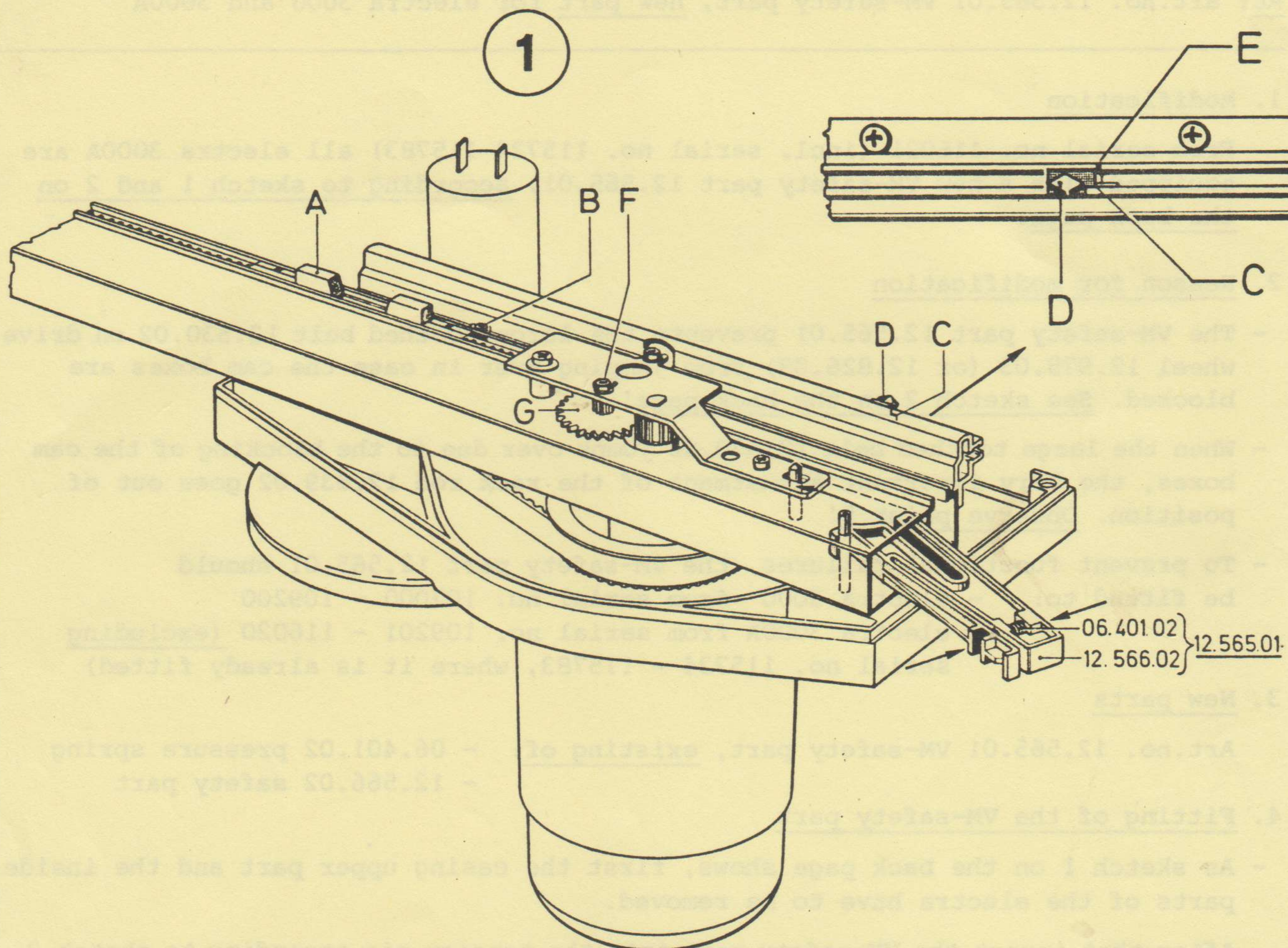
- As sketch 1 on the back page shows, first the casing upper part and the inside parts of the electra have to be removed.
- After that insert the VM-safety part into the tension pin according to sketch 2, let it snap and secure.

### 5. Checking and adjusting of the rack rod 12.839.02

- a) According to sketch 1, put clutch (A) to the extreme right to stop (B), i.e. by all means make sure that the clutch (A) touches stop (B)!
- b) Check, if the edge (C) of the rack rod (D) is in line with the factory mark (E) on the guide rail.
- c) In case the adjusting is not in line, the rack rod (D) must be adjusted as follows:
  - Move clutch (A) until it touches stop (B)
  - Slightly loosen hexagon nut (F) and displace toothed wheel (G) to the point where it does no longer engage with the other toothed wheel
  - Shift rack rod (D) until the edge (C) is exactly in line with the factory mark (E)
  - Push the loosened hexagon nut (F) with the toothed wheel (G) back to the point, where both toothed wheels engage properly without jamming. Tighten hexagon nut (F). Take care that the rack rod (D) is not being shifted, otherwise the adjusting (C) to (E) will be out of position again.

Attention: In case a Special two-colour changer 16.440.00 is fitted to the knitting machine, the rack rod (D) is not adjusted according to above point 5, but according to the blue service instructions 33.610.83 (pages 6 - 10).

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Re: - ACCESSORY-I/IA and ACCESSORY-II/IIA  
 - Art.no. 12.969.02 switch lever, new part  
 - Art.no. 12.820.02 spacing piece, modified, new art.no. 12.820.12

### 1. Modification

From serial no. 116221 the small micro switch 12.903.03 of the electra 3000A with accessory-IA and IIA is no longer to be found on the side of the casing, but it is fitted on to the modified spacing piece 12.820.12, according to sketch 3 on the back page.

### 2. Reason for modification

If necessary, the new switch lever 12.969.02 can, to some extent, be readjusted without having to unscrew the switch lever. This has the advantage that the switching motion relevant to the small micro switch 12.903.03 can be more evenly distributed, i.e. after switching over the switch lever, the distance from top and bottom of the small micro switch to the switch lever is about identical.

### 3. Modified parts

<u>new art.no.</u>		<u>previous art.no.</u>
1 piece,	12.820.12 spacing piece	12.820.02
2 pieces,	90.249.77 lens head screw (freedrive)M 2x12	90.431.57

### 4. New parts

1 piece, art.no. 12.969.02 switch lever  
 1 " , " " 90.605.31 hexagon nut M 3  
 1 " , " " 90.700.31 spring washer M 3

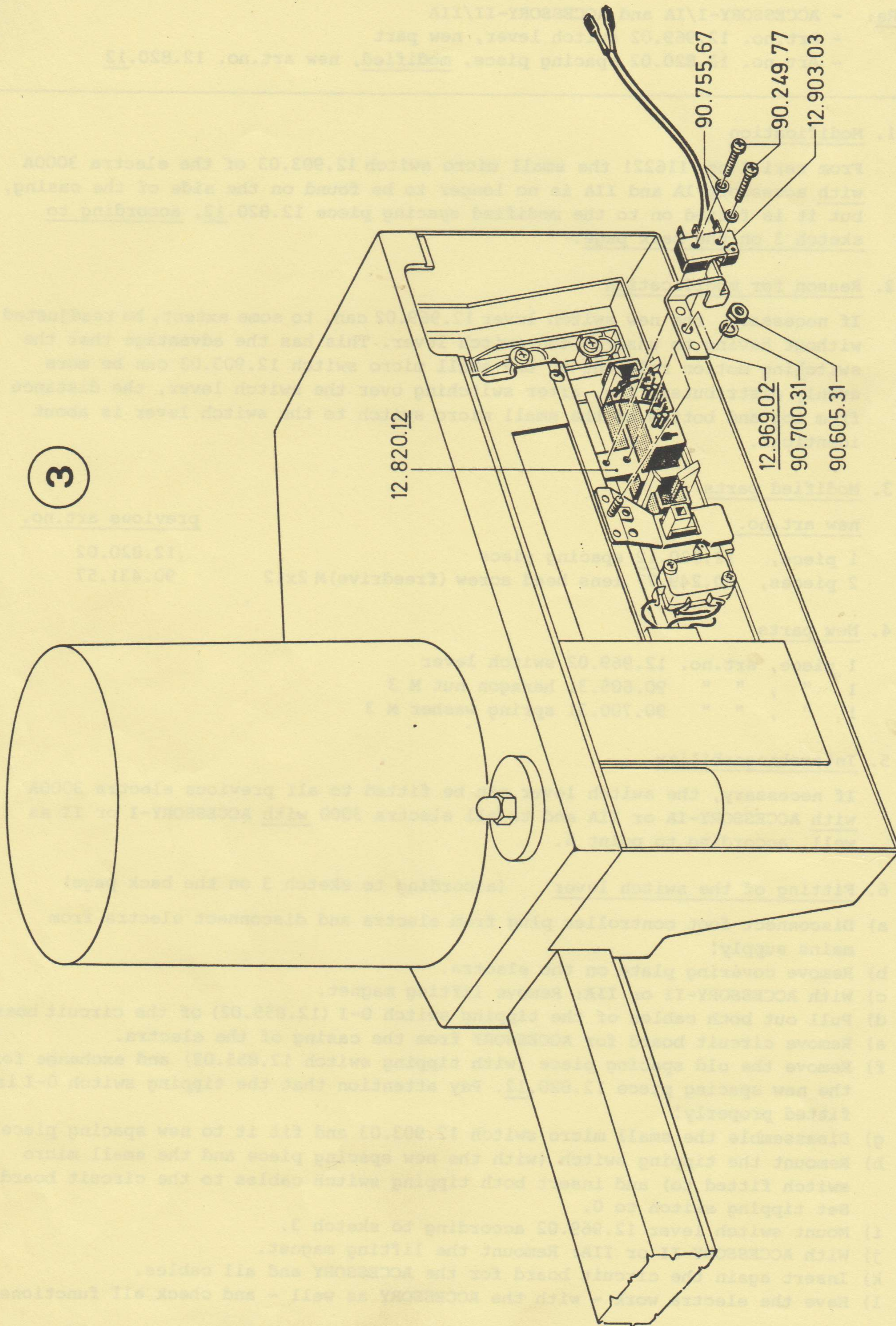
### 5. Interchangeability

If necessary, the switch lever can be fitted to all previous electra 3000A with ACCESSORY-IA or IIA and to all electra 3000 with ACCESSORY-I or II as well, according to point 6.

### 6. Fitting of the switch lever (according to sketch 3 on the back page)

- a) Disconnect foot controller plug from electra and disconnect electra from mains supply!
- b) Remove covering plate on the electra.
- c) With ACCESSORY-II or IIA: Remove lifting magnet.
- d) Pull out both cables of the tipping switch 0-I (12.855.02) of the circuit board.
- e) Remove circuit board for ACCESSORY from the casing of the electra.
- f) Remove the old spacing piece (with tipping switch 12.855.02) and exchange for the new spacing piece 12.820.12. Pay attention that the tipping switch 0-I is fitted properly!
- g) Disassemble the small micro switch 12.903.03 and fit it to new spacing piece.
- h) Remount the tipping switch (with the new spacing piece and the small micro switch fitted to) and insert both tipping switch cables to the circuit board. Set tipping switch to 0.
- i) Mount switch lever 12.969.02 according to sketch 3.
- j) With ACCESSORY-II or IIA: Remount the lifting magnet.
- k) Insert again the circuit board for the ACCESSORY and all cables.
- l) Have the electra work - with the ACCESSORY as well - and check all functions.

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Adjustment instructions for the rack rod 12.839.02 and the tension of the large toothed belt 12.530.02 on the electra 3000 and 3000A, with COLOR-80.

Required tools:

1 Control gauge	art.no.	03.350.02
1 Box spanner 5,5 mm	" "	03.604.02
1 Orange tool	" "	09.802.03
1 Cross head screw driver	no.	1
1 Screw driver	no.	4

Important: Disconnect foot controller plug from electra and disconnect electra from mains!

Sketch 1: Remove covering plate on the electra by unscrewing the 2 screws (A).

Sketch 2: If the electra is equipped with an ACCESSORY-I or II, remove circuit board (A) and turn it as shown in the sketch.

Sketch 3: Move locks to the middle of needle bed, disconnect the back lock from electra and guide the clutch-toothed belt (A) to the extreme right to stop (B).

Sketch 4:

- Check according to sketch, if the left edge (A) of the rack rod (B) is in line with the factory mark (C).
- If this is not the case, the rack rod (B) has to be adjusted according to the sketches 5-8.
- If the rack rod (B) is well adjusted, insert carefully circuit board (A, sketch 2) again and screw on the covering plate of the electra with the 2 screws (A) sketch 1.
- Continue with sketch 9

Sketch 5: Remove circular cover (A) from electra, as per sketch.

Sketch 6: With box spanner 5,5 mm (A) slightly loosen hexagon nut (B) and move it in the direction of the arrow as far as stop, as per sketch.

Sketch 7: According to sketch, push the direction indicator (D) slightly up in the direction of the arrow and shift the rack rod (B) with the help of the orange tool (A) until the left edge (E) of the rack rod is exact in line with the factory mark (C).

Sketch 8:

- With box spanner 5,5 mm (A) slightly loosen the hexagon nut (B) and push it back in the direction of the arrow until the teeth of the two small toothed wheels engage properly. Check carefully the engagement of the two small toothed wheels!
- The hexagon nut (B) can now be tightened (not too hard) with box spanner (A).

- Now check, according to sketch 3, if the clutch-toothed belt (A) is still leaning against the stop (B)? If this is not the case, repeat the procedure given under point 6-8.

- Check, according to sketch 7, if the left edge (E) of the rack rod (B) is still in line with the factory mark (C)? If this is not the case, repeat the procedure given under point 6-8.

- With ACCESSORY-I or II only, insert carefully circuit board (A, sketch 2) again. Then screw on the covering plate of the electra with the 2 screws (A) sketch 1.

- Press the circular cover (A, sketch 5) back into the electra casing upper part.

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Sketch 9 and 10:

- a) Guide the clutch-toothed belt (A) to the extreme right to stop (B) as shown in sketch 9.
- b) Put gauge (C) art.no. 03.350.02 in the middle on the electra; as shown in sketch 9.
- c) Check according to sketch 10, if gauge (C) is parallel to the electra.
- d) If gauge (C) is pointing downwards (sketch 10) it means that the toothed belt is not enough tightened. The toothed belt has to be tightened as follows:
  - Remove circular cover (E)
  - Tighten screw (F) with screw driver until gauge (C) is parallel to the electra, according to sketch 10
  - Remove gauge (C) from electra
  - Press circular cover (E) back into the electra.

Attention:

When tightening screw (F) pay attention that the screw does not press against the toothed belt/tension wheel (G)!  
If necessary use shorter cylinder screw M 5x18, art.no. 90.415.11.

