

Spezialnähmaschine

Serviceanleitung

D[Instructions for service](#)**GB**

Instructions de Service

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Instrucciones de servicio

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Istruzioni per meccanici

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General safety instructions

The non-observance of the following safety instructions can cause bodily injuries or damages to the machine.

1. The machine must only be commissioned in full knowledge of the instruction book and operated by persons with appropriate training.
2. Before putting into service also read the safety rules and instructions of the motor supplier.
3. The machine must be used only for the purpose intended. Use of the machine without the safety devices is not permitted. Observe all the relevant safety regulations.
4. When gauge parts are exchanged (e.g. needle, presser foot, needle plate, feed dog and bobbin) when threading, when the workplace is left, and during service work, the machine must be disconnected from the mains by switching off the master switch or disconnecting the mains plug.
5. Daily servicing work must be carried out only by appropriately trained persons.
6. Repairs, conversion and special maintenance work must only be carried out by technicians or persons with appropriate training.
7. For service or repair work on pneumatic systems, disconnect the machine from the compressed air supply system (max. 7-10 bar). Before disconnecting, reduce the pressure of the maintenance unit.
Exceptions to this are only adjustments and functions checks made by appropriately trained technicians.
8. Work on the electrical equipment must be carried out only by electricians or appropriately trained persons.
9. Work on parts and systems under electric current is not permitted, except as specified in regulations DIN VDE 0105.
10. Conversion or changes to the machine must be authorized by us and made only in adherence to all safety regulations.
11. For repairs, only replacement parts approved by us must be used.
12. Commissioning of the sewing head is prohibited until such time as the entire sewing unit is found to comply with EC directives.

**Adler Class 269
Instructions for Mechanics**

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1. Technical data

Class: 269- with subclasses

Subclass	:	73	363	373
- Needle system	:	134-35	134-35	134-35
- Needle size	Nm:	130	130	130
- Needle clearance	mm:	-	-	-
- Synth. sewing thread	Nm:	30/3	20/3	30/3
- Braided thread	Nm:	-	-	-
- Foot stroke, max.				
· pneumatical	mm:	-	-	-
· by hand	mm:	13	13	13
- Stitch length, max.				
· Bottom feed	mm:	6	6	6
· Upper feed	mm:	6	6	6
- Bottom feed stroke (above throat plate)	mm:	-	1,3	0,5
- Final feed	mm:	-	-	-
- Alternating top feed stroke	mm:	8	-	8
- Stitches/min., performed:		1500	1600	1500
- Motor pulley Ø	mm:	100	106	100
- Handwheel belt pulley Ø	mm:	95	95	95
- Motor speed 50 Hz 1/min.:		1400	1400	1400

Subclass	:	262	273
- Needle system	:	134-35	134-35
- Needle size	Nm:	100	130
- Needle clearance	mm:	4,8-24	4,8-24
- Synth. sewing thread	Nm:	70/3	30/3
- Braided thread	Nm:	-	-
- Foot stroke, max.			
· pneumatical	mm:	-	-
· by hand	mm:	7	7
- Stitch length, max.			
· Bottom feed	mm:	6	6
· Upper feed	mm:	6	6
- Bottom feed stroke (above throat plate)	mm:	1,2	0,5
- Final feed	mm:	-	-
- Alternating top feed stroke	mm:	-	8
- Stitches/min., performed:		1750	1500
- Motor pulley Ø	mm:	100	100
- Handwheel belt pulley Ø	mm:	80	95
- Motor speed 50 Hz 1/min.:		1400	1400

2. Adjusting the sewing machine

2.1 Lower feed

2.1.1 In general

The feed-dog describes an elliptical path, producing at the same time a stroke and thrust movement.

The vertical stroke and thrust movement should be so co-ordinated that the feed-dog raises and falls as vertically as possible in the throat plate.

By machines with level feed, the feed-dog has no vertical stroke and oscillates back and forth at throatplate height.

2.1.2 Height of feed-dog in relation to throatplate

The height of the feed-dog above the throatplate for all sub-classes is described in point 1 Technical data.

Correction:

- Set to stitch length 0. Lift sewing feet. Take out needle.
- Bring the feed-dog to its highest position
- By 2-needle machines, unscrew g/1 and take out the left hand hook bearing with the hook
- Loosen screws a/2 and b/2 and adjust the height of the feed-dog A/2 with the eccentric B/2
- By 2-needle-machines, re-install the hook-bearing so that the hook point is in its original position

2.1.3 Location of feed-dog in the throatplate

2.1.3.1 Lateral position

Rule: The feed dog should have the same clearance left and right in the throatplate cut-out.

Correction:

- Loosen screws c/4 and d/3, and re-set feed-dog

2.1.3.2 Location in direction of feed

Rule: At maximum stitch length, the feed dog should have the same clearance fore and aft in the throatplate cut-out

Correction:

- Set to maximum stitch length
- Loosen screw d/3 and re-set feed-dog

2.1.4 Feed-dog stroke timing

Rule: The feed-dog should be at its highest point when the needle bar is at its lowest position.

When the adjustment is correct, the descending point of the needle and the rising feed-dog should meet at the height of the throatplate.

Correction:

- Set stitch length to 0
- Advance until needle bar is at its deepest point
- Loosen screw k/4 and adjust eccentric accordingly.

2.1.5 Thrust stroke timing

Rule: When the needle bar is at its deepest point, both needle bar and feed-dog should not move when the stitch regulating lever is operated.

By machines with alternating feed, the timing for feed foot thrust stroke, feed-dog and needle bar rocker are all governed by the same eccentric.

Correction:

- Set to maximum stitch length
- Bring needle bar to its deepest point
- Loosen screws s/5 and adjust eccentric S/5 accordingly.

This correction displaces the elliptic path of the feed-dog, therefore the stroke timing must be re-adjusted. See "Feed-dog stroke timing".

Note: Before removing the arm cover on machines with pneumatic back-tacking, RAP, the turning knob E/11 must first be dismantled:

- Remove screw e/11
- Unscrew turning knob E/11
- Turn back screw f/11

2.2 Loop catching

The safety clutch must be engaged before checking or correcting loop catching.

2.2.1 Centering needle bar

Rule: The needle should enter the stitch hole centrally in the direction of sewing when the machine is set to stitch length 0.

Check:

- Set to stitch length 0 and advance machine by hand

Correcting:

- Loosen screw w/5 and re-set the needle bar rocker.

Note: Before removing the arm cover on machines with pneumatic back-tacking, RAP, the turning knob E/11 must first be dismantled:

- Remove screw e/11
- Unscrew turning knob e/11
- Turn back screw f/11

2.2.2 Timing of loop catching (looping stroke)

The looping stroke is the distance the needle travels upwards from its deepest point to form a loop which is then caught by the hook.

Rule: When the needle has risen 1,8 mm from its deepest point, the point of the hook should be at the middle of the needle (looping stroke)

Check:

- Remove throatplate
- Set to stitch length 0 and bring needle to its deepest point
- Mount the 1,8 m looping stroke gauge (Part-No. 981 15 000 1) with the block (Part-No. 981 15 000 2) on the needle bar and slide up to the bushing and tighten, Fig. 6.
(Over-tightening can damage the needle bar).
- Remove gauge and turn handwheel in running direction until the block rests against the bushing, (looping stroke position)
- Check position of hook point to needle

Correction:

- Loosen screws p/17 in the toothed belt pulley
- In the looping stroke position, turn the shaft G/17, so that the hook point is at the middle of the needle.

2.2.3 Needle bar height

Rule: The point of the hook should be alongside the middle of the groove in the needle at the looping stroke position, Fig. 7

Correction:

- Remove head cover
- Loosen screws o/8 and adjust the height of the needle bar

2.2.4 Clearance between hook and needle

Rule: The clearance between hook point and needle should be approx. 0,1 mm at looping stroke position, when the height of the needle bar is correct, fig. 7

Correction:

- Loosen screws g/1 holding the hook shaft bearing and align the hook point accordingly. If necessary the screws g/4 in the large bevelled gear wheel may be loosened. (The needle must not be deflected by the needle guard).
- Re-tighten the hook shaft hearing screws
- Set up the bevelled gears so that the hook has only slight radial play.

Note: When changing to a needle of another size, the clearance to the hook must be checked and if necessary re-adjusted.

2.2.5 Hook guard

The hook guard prevents the point of the hook being hit by the needle.

Rule: In the looping stroke position, the needle should, without being deflected, rest against hook guard V/7.

Check:

- Press the needle lightly against the hook guard. The hook point should not touch the needle.

Correction:

- Bend the hook guard carefully.

2.3 Bobbin case opener

2.3.1 In general

The bobbin case in the middle of the hook is opened slightly by the finger to allow easier release of the thread. This allows thread tension to be reduced.

The opening timing is predetermined constructionally and cannot be altered.

2.3.2 Duration of opening

Rule: The finger G/1 should open the bobbin case K/1 to the thickness of the thread.

If the duration of opening is too short, then the thread is not freed sufficiently, excessive noise can be caused if the duration is too long

Correction:

- Loosen screw h/1 and turn the carrier plate H/1.

2.4 Maximum presser foot stroke

2.4.1 Handlever stroke

Rule: It should be possible to lift the presser foot with the handlever, 13 mm by 1-needle and 7 mm by 2-needle machines.

Check:

- Set to stitch length 0 and remove needle
- Lift presser foot using the handlever
- Bring the feed-dog to throatplate height
- It should be possible to slide a 7, or as the case may be, a 13 mm distance piece under the presser foot.

Correction:

- Release tension to spring P/9 and loosen clamp v/8 or w/16
- Lay a 7 mm or 13 mm distance piece under the presser foot and press down the feed foot onto the distance piece
- Re-tighten clamp.

2.4.2 Presser foot stroke with knee lever

Rule: The presser foot stroke, when operated by the knee lever should be slightly longer than with the handlever, so that the presser foot, previously raised by the handlever can be dropped using the knee lever.

Check:

- Raise presser foot using handlever G/16
- Press knee lever hard to the right. The handlever should flip down on its own.

Correction:

- Loosen screw m/25
- Adjust the hook M/25 so that it is approx. 1 mm from the table top when the knee lever is at rest
- Attach the chain with as little slack as possible to hook M/25

Rule: With dropped presser foot there should be approx. 1 mm of play between lever E/16 and plate L/16.

Correction:

- Take out screw f/15 and adjust the lever E/15/16 with nut F/15 accordingly

Rule: The knee lever should be vertical when at rest.

Correction:

- Loosen screw r/25 and re-align the knee lever

2.4.3 Presser foot stroke with pneumatic lifting, FLP

Rule: The stroke of the presser foot with FLP should be slightly longer than with the hand lever, so that the presser foot previously raised by the handlever can be lowered by the FLP.

Check:

- Lift presser foot using the handlever G/16.
- Operate FLP, the hand lever should flip down automatically.

Correction:

- Loosen nut t/14 and turn the piston rod of the FLP-cylinder T/14 taking care to maintain approx. 1 mm of clearance between lever E/16 and plate L/16 when the presser foot is down.

2.5 Upper feed

2.5.1 Needle transport

The thrust strokes of both needle bar and feed dog are adjusted together as they are both governed by the same eccentric. See point 2.1.5 thrust stroke timing.

2.5.2 Alternating feed

2.5.2.1 Timing of feed foot thrust stroke timing

the thrust strokes of both feed foot and feed-dog are governed by the same eccentric and can only be adjusted together. See point 2.1.5 Feed foot thrust stroke timing.

2.5.2.2 Equal stroke length of feet

Rule: The stroke of both presser and feed feet should be the same.

Correction:

- Set to stitch length 0
- Advance to maximum stroke height
- Lift the foot with the higher stroke slightly above the throatplate
- Loosen screw p/9 and press down the foot onto the throatplate
- Repeat until the stroke of both feet is identical.

2.5.2.3 Stroke timing of feed foot

Rule: The descending feed foot and needle bar should meet the rising feed-dog simultaneously at throatplate height.

Pre-requisites for this adjustment are the identical strokes of feed and presser foot and the correct adjustment of feed-dog stroke.

Check:

- From maximum stroke height positions, and at stitch length 0, turn the handwheel in running direction.

Correction:

- Loosen eccentric screws T/12 on the arm shaft (through the opening at the rear of the machine)
- Bring the descending point of the needle to throatplate height
- Turn eccentric T/12, so that the feed foot rests on the feed-dog.
- Re-tighten the eccentric screws.

2.5.2.4 Stroke height of feed foot

Rule: By varying thickness of material (cross seams) in a run, the stroke height should be adjusted to the height of the thickest material.

Correction

- Loosen nut h/10 and re-set the pullrod in the guideplate H/10:
Pullrod up - maximum stroke
Pullrod down - minimum stroke

2.6 Safety clutch

2.6.1 In general

To avoid damage, due to tangled threads in the hook cage, etc., the safety clutch should disengage when overloaded.

2.6.2 Re-engaging the clutch

- Clear hook of obstructions
- Hold shaft G/18, and turn the handwheel until the clutch engages.

2.6.3 Adjusting the torque

- Disengage clutch
- Slide toothed belt slightly to the side without pushing it from the drive wheel, otherwise the hook must be re-adjusted
- Screw in fully the 2 screws w/18 and then turn them back 1/4 turn (max. torque)
- Turn back the screws further to achieve an average torque value

Note: The torque value must be increased if the clutch regularly disengages when sewing heavy material.

2.7 Thread pulling spring

2.7.1 Function

The thread pulling spring G/13 should maintain the tension on the thread from the top position of the thread lever, to the point where the eye of the needle enters the material.

2.7.2 Spring tension

Rule: The spring should be so adjusted that it works smoothly and returns to the stop, when not under tension.

Correction:

- Loosen screw f/13 and turn bolt F/13, then press in the whole unit fully.

2.7.3 Spring reflexion

Rule: The thread pulling spring should be at rest when the eye of the needle enters the material.

Correction:

- Loosen screw g/13 and re-set the stop accordingly.

3. Position maker

3.1 1st. position

Rule: The point of the hook should stop 4-8 mm after the looping stroke position.

Note: The loop has been caught and is held securely by the hook. The material can, by 1-needle machines, be turned around the needle without the loop falling from the hook. To facilitate this by 2-needle machines, the switch S17/22 on the Efka-control box or b5/23 on the Quick-control box must be set to "needle up" position, so that the machine stops in the 2nd position. *To check or adjust the position maker in the 1st. position the switches must be in the "needle down" position.*

Check:

- Set control to "needle down"
- Depress pedal forwards and release, the machine should stop in the 1st. position.

Correction:

Position maker Quick Type B/0

- Turn the machine by hand into the 1st. position
- Loosen screw c/20
- Set the switching edge s/20 of the notched screen under the cut-out in the sliding screen A/20
- Check positioning operation. If incorrect, alter the position of the notched screen.

Position maker Efka Type P4-1

- Turn the machine by hand into the 1st. position
- Loosen screw c/19
- Set up the inner switching disc A/19 so that both white marks are partially covered by the light screen. (The edge trigger the signal).
- Check positioning. If incorrect, alter the position of the switching disc.

3.2 2nd. position

Rule: The 2nd. position is the needle-up position.

Check:

- Set control to "needle up" position
- Depress pedal forwards, release, and then depress backwards. The machine should stop in the 2nd. position

Position maker Quick Type B/0

- Advance needle bar by hand to needle up position
- Depress pedal forwards, release, and depress backwards. The machine should stop in the 2nd. position.

Correction:

Position maker Quick Type B/0

- Advance by hand to needle up position
- Set up the switching edge s/20 of the notched screen C/20 under the cut out in the sliding screen A/20
- Check positioning. If incorrect, alter the position of the nosed screen

Position Efka Type P 4-1

- Advance to needle up position
- Set up the outer switching disc B/19, so that both white marks are partially covered by the light screens
- Check positioning. Alter position of switching screen if necessary.

4. Additional equipment

4.1 Pneumatic foot lifting FLP

Adjustments to FP: see point 2.4 Max. Stroke of presser foot.

4.2 Pneumatic back tacking RAP

4.2.1 Function

The RAP-cylinder is not under pressure when sewing forwards. The piston is extended under spring tension. When back tacking, the cylinder is charged to sew backwards, the piston rod retracts and switches over the stitch regulator.

The RAP-cylinder U/24 requires a constant air pressure of 6 bar.

4.2.2 Damping

Rule: The speed of the extending and retracting piston rod should be regulated so that it does not violently come to a stop at the ends of its stroke.

The speed when extending can be regulated by the throttle valve V/24. Retraction speed can be regulated by throttle valve R/24.

4.2.3 Back tack stitch length

The length of the backward stitches when back tacking can be varied by the turning knob E/11 without affecting the forward stitch length. When altering the length of the forward stitches, the back tack stitches should be altered similarly.

4.3 Stroke quick adjustment HP

4.3.1 In general

By machines with alternating upper feed and HP it is possible to increase the stroke of the feed during sewing, to enable sewing over cross seams.

For machines with HP 11-1, with the pneumatic kneelever K/24. Machines with HP 11-2, with the left pedal.

4.3.2 Stroke height

Minimum stroke height - Piston rod of HP-cylinder Z/21 extended
Pullrod P/21 at the bottom end of the guide plate

Maximum stroke height - Piston rod of the HP-cylinder retracted.
Pullrod P/21 at the upper end of the guide plate.

Rule: The distance the pullrod P/21 travels in the guide plate should be limited by the stroke of the piston rod to prevent it reaching the ends of the guide plate too violently.

Correction:

- Loosen screw n/21 and re-set the cylinder in the elongated hole.
Adjust nuts t/21 so that pullrod glides easily in the guide plate.

Note: Should the bolt nevertheless hit against the ends of the guide plate, loosen nut s/21 and turn piston rod.

4.3.3 Reduction of speed during the HP-function

If the speed of the machine is too high when the feet are raised to maximum stroke height, noise and wear will occur.

By machine with HP 11-2, the screw z/26 under the left pedal should be so adjusted that at max. stroke the speed is reduced by about 1/3 rd.

5. Service

After intensive daily use, the throatplate, hook, needle thread tension and feed-dog should be cleaned and oil applied to the lubricating points.

See Operating instructions cl. 269

Lubricating oil

Use only branded oils e.g. ESSO MILLCOT K 68 or similar products with the following specifications:

Viscosity at 40° C : 65 mm²/s

Flashpoint : 212° C

ESSO MILLCOT K 68 can be ordered from Kochs Adler:

1 ltr.: Part-No. 990 47 012 8

5 ltr.: Part-No. 990 47 012 9

Pneumatic oil

Use only branded oils, e.g. ESSO NUTO H 68 or similar products with the following specifications:

Viscosity at 40° C : 66 mm²/s

Flashpoint : 236° C

ESSO NUTO H 68 can be ordered from Kochs Adler:

250 cm³: Part-No. 990 81 006 7

1 ltr.: Part-No. 990 47 010 5





