

367

Spezialnämaschine

Bedienanleitung

[Operating Instructions](#)

Instructions de maniement

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Preface and general safety instructions

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1. Product description

The **Dürkopp Adler 367** is a special sewing machine for first-class single-needle decorative seams in light to medium-heavy material.

- It is a single-needle flatbed double-backstitch machine with lower conveyor, needle transport and alternating upper foot conveyor.
- A safety coupling prevents the shuttle from being displaced or damaged if the thread jams in the shuttle track.
- Large horizontal shuttle (bobbin as classes 767, 291, 8967).
- Automatic wick lubrication with sight-glasses for the oil level.
- Integral bobbin winder.

2. Designated use

The 367 is a sewing machine designed for sewing light to medium-heavy material. Such material is generally made of textile fibres, but it may also be leather. It is used in the clothing industry and for domestic and motor-vehicle upholstery.

This special sewing machine can also be used to produce so-called technical seams. In this case, however, the operator must assess the possible dangers which may arise (with which **DÜRKOPP ADLER AG** would be happy to assist), since such applications are on the one hand relatively unusual and, on the other, so varied that no single set of criteria can cover them all. The outcome of this assessment may require appropriate safety measures to be taken.

Generally only dry material may be sewn with this machine. The material may be no thicker than 10 mm when compressed by the lowered sewing feet. The material may not contain any hard objects, since if it does the machine may not be operated without an eye-protection device. No such device is currently available.

The seam is generally produced with textile-fibre sewing thread of gauge up to 15/3 NeB (cotton), 20/3 Nm (synthetic) or 25/4 Nm (covering yarn). Before using any other thread the possible dangers arising must be assessed and appropriate safety measures taken if necessary.

This special sewing machine may be set up and operated only in dry, well-maintained premises. If the sewing machine is used in premises which are not dry and well-maintained it may be necessary to take further precautions (which should be agreed in advance - see EN 60204-31:1999).

As manufacturers of industrial sewing machines we proceed on the assumption that personnel who work on our products will have received training at least sufficient to acquaint them with all normal operations and with any hazards that these may involve.

3. Subclasses

367-170010:	single-needle flatbed-double-backstitch machine with lower conveyor, needle transport and alternating upper foot conveyor. Needle thickness 100-150.
367-170115:	like class 367-170010, but with electromagnetic thread cutter, electro-pneumatic bar-tacking and sewing-foot lift. Needle thickness 100-150.
367-170315:	like class 367-170115, but with electro-pneumatic quick stroke adjustment, 2nd stitch-length and 2nd thread tension. Pneumatic residual-thread reduction to approx. 8 mm after thread trimming. Needle thickness 100-150.
367-180010:	single-needle flatbed-double-backstitch machine with lower conveyor, needle transport and alternating upper foot conveyor. Needle thickness 130-180.
367-180115:	like class 367-180010, but with electromagnetic thread cutter, electro-pneumatic bar-tacking and sewing-foot lift. Needle thickness 130-180.
367-180315:	like class 367-180115, but with electro-pneumatic quick stroke adjustment, 2nd stitch-length and 2nd thread tension. Pneumatic residual-thread reduction to approx. 8 mm after thread trimming. Needle thickness 130-180.

4. Optional equipment

Item no.	Optional equipment
9780 000108	WE-8 maintenance unit For pneumatic optional equipment
9822 510001	Sewing lamp (halogen) with 12V/20W bulb, fits on the upper part of the machine
0907 487519	Sewing-lamp attachment set for 9822 510001
0798 500088	Sewing-light transformer For 230V, with mains cable, without switch, for sewing lamps 9822 510001 and 9822 510129
0797 003031	Pneumatic connection pack
9400 367001	Service set
9880 002001	Knee switch for automatic bartacking (Cl. 367-170115; 367-180115)

5. Technical data

Noise

Workplace-related emission value in accordance with DIN 45635-48-A-1-KL2

**Class 367-170010; -180010
367-170115; -180115
367-170315; -180315**

LC = 82 dB (A)

Stitch length: 6,4 mm
Altern. sewing feet stroke.: 1,5 mm
Stitch rate: 2.800 rpm
Material: G1 DIN 23328 4-ply

**Class 367-170010; -180010
367-170115; -180115
367-170315; -180315**

LC = 82 dB (A)

Stitch length: 6,4 mm
Altern. sewing feet stroke.: 5,6 mm
Stitch rate: 2.800 rpm
Material: 2-ply Skai 1,6 mm 900g/m² DIN 53352

Stitch type		double-backstitch		
Needle system:		134-35		
Class 367	Subclass	-170010 -170115 -170315	-180010 -180115 -180315	
Needle thickness (depending on E no.):	max. [Nm]	150	180	
Max. sewing-thread thicknesses:	[Nm]	15/3	10/3	
Max. sewing-foot stroke:	Stitch length range	Max. Stitch rate: [min ⁻¹] *)		
		-170010 -180010	-170115 -180115	-170315 -180315
1 - 3 mm 3 - 5 mm 5 - 6,5 mm 6,5 - 8 mm *) 9 mm	0 - 6 mm	2800 2300 2000 1800 -	3000 2300 2000 1800 -	3000 2300 2000 1800 1800
1 - 6,5 mm 6,5 - 8 mm *) 9 mm	6 - 8 mm	2000 1800 -	2000 1800 -	2000 1800 1800
Max. clearance under sewing feet:				
- sewing	[mm]	10		
- raised	[mm]	20		
Operating pressure:	[bar]	6		
Air consumption per working cycle:	ca. [NI]	0.7		
Rated voltage:		depends on the drive fitted		
Dimensions (H x W x D)	[mm]	630 x 220 x 420		
Working height (Factory settings):	[mm]	790		

Notes:

6. Operation

6.1 Threading the needle thread



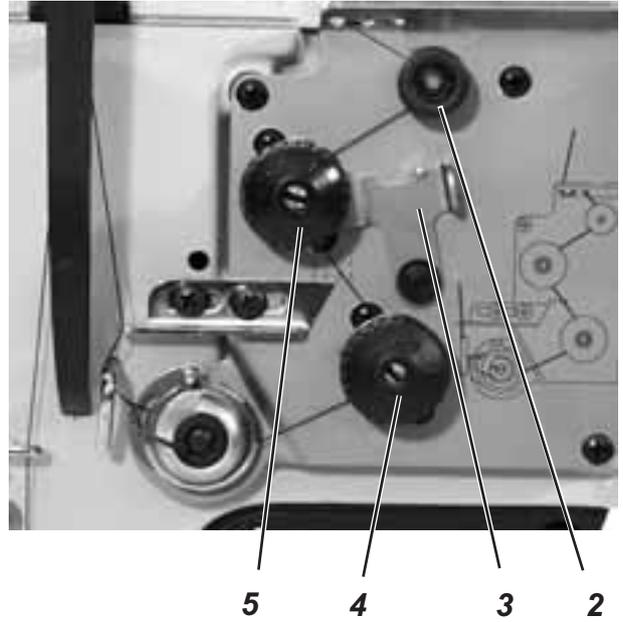
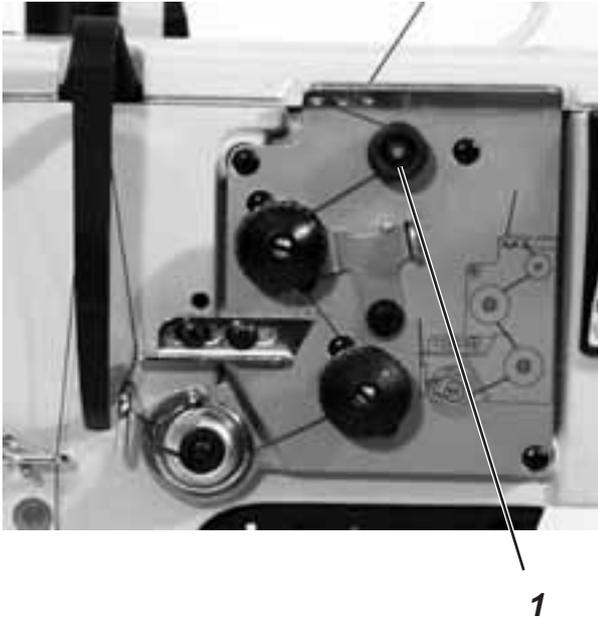
Caution: danger of injury

Turn off the main switch.

The needle thread may only be threaded with the sewing machine switched off.

- Place the yarn reels on the reel stand and pass the needle and looper threads through the unwinding arms. Unwinding arm 1 must be vertically above the yarn reels.
- Thread the needle thread as shown in the following illustration.





	<p>Fig. A: Correct thread loop in the centre of the material</p>
	<p>Fig. B: Needle-thread tension too low or Looper-thread tension too high</p>
	<p>Fig. C: Needle-thread tension too high or Looper-thread tension too low</p>

6.2 Adjusting the needle-thread tension

Pre-tensioner

When the main tensioner 4 and supplementary tensioner 5 are open (e.g. when the sewing feet are raised) the needle thread must be under slight residual tension. This residual tension is produced by the pre-tensioner 2.

The pre-tensioner 2 simultaneously affects the length of the end of the severed needle thread (the starting thread for the next seam).

- Basic setting:
Turn knurled nut 2 until its front is flush with the bolt 1.
- To shorten the starting thread:
Turn knurled nut 2 clockwise.
- To lengthen the starting thread:
Turn knurled nut 2 anticlockwise.

Main tensioner

The main tensioner 4 should be set to the minimum possible tension.

The looping of the threads must be in the centre of the material.

With thin material excessive thread tension can cause unwanted gathering and thread breakage.

- Adjust the main tensioner 4 so that the stitches are uniform.
To increase tension - turn the knurled nut clockwise
To decrease tension - turn the knurled nut anti-clockwise

Supplementary tensioner

The supplementary tensioner 5 can be switched in to effect a rapid change in needle-thread tension during operation (e.g. with thickened seams).

- Set the supplementary tensioner 5 lower than the main tensioner 4.
- The supplementary tensioner 5 is switched on and off with the lever 3.
Lever 3 turned to the left = supplementary tensioner is switched off.
Lever 3 turned to the right = supplementary tensioner is switched on.

6.3 Opening the needle-thread tensioner

Subclass -170010; -180010

When the sewing feet are raised the main and supplementary tensioners are also opened automatically.

Subclass -170115; -180115

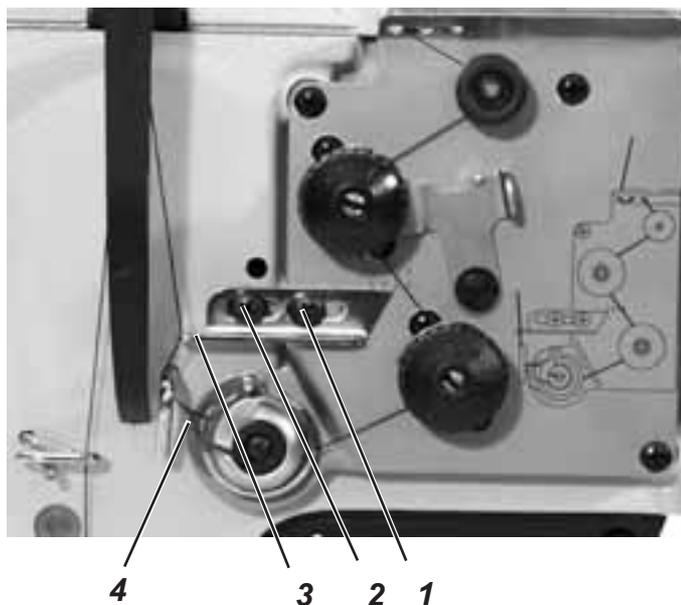
The needle-thread tensioner is automatically opened when the thread is severed.

Hint !

(subclass -170115; -180115 only)

The time when the thread-tensioner is opened can be set with parameters F-191 and F-192 (technician level).

6.4 Adjusting the thread regulator



Caution: danger of injury

Turn off the main switch.
The thread regulator may only be adjusted with the sewing machine switched off.

The thread regulator 3 controls the quantity of needle thread required for stitch formation.

The thread regulator must be precisely adjusted for an optimum result.

The thread-regulator setting depends on the following factors:

- Stitch length
- Material thickness
- Characteristics of the sewing yarn in use.

At the correct setting the needle-thread loop must slide at low tension over the thickest point of the shuttle.

- Undo screws 1 and 2.
- Adjust the thread regulator 3.
- Tighten screws 1 and 2.

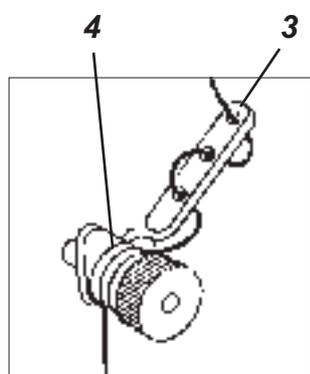
Adjustment hint:

If the maximum quantity of thread is required the thread-tensioning spring 4 must be pulled upwards about 0.5 mm from its lower limit position. This is the case when the needle-thread loop passes the maximum shuttle diameter.

Adjusting the thread regulator

- Undo screws 1 and 2.
- Move the thread regulator 3:
to the left for more thread,
to the left for less thread.
- Tighten screws 1 and 2.

6.5 Winding on the looper thread



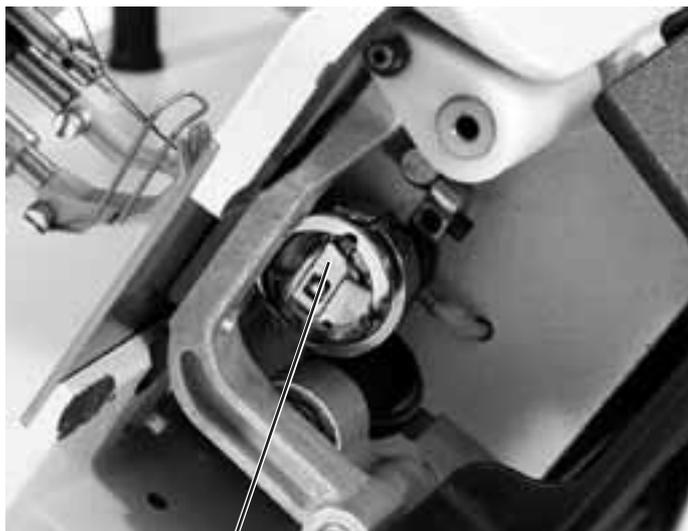
- Pull the thread through the guide 3 and the tensioner 4.
 - Place the thread behind the blade 5 and sever it.
 - Fit the bobbin 1 onto the bobbin winder.
- Hint**
There is no need to wind the thread onto the bobbin by hand.
- Press the bobbin-winder lever 2 into the bobbin.
 - Sewing
The bobbin-winder lever terminates the process as soon as the bobbin is full.
The bobbin winder always stops in such a position that the blade 5 is in the insertion position (see right-hand illustration).
 - Remove the full bobbin 1, place the thread behind the blade 5 and sever it.
 - Fit empty bobbin onto the bobbin winder for the next winding process and press the bobbin-winder lever 2 into the bobbin.



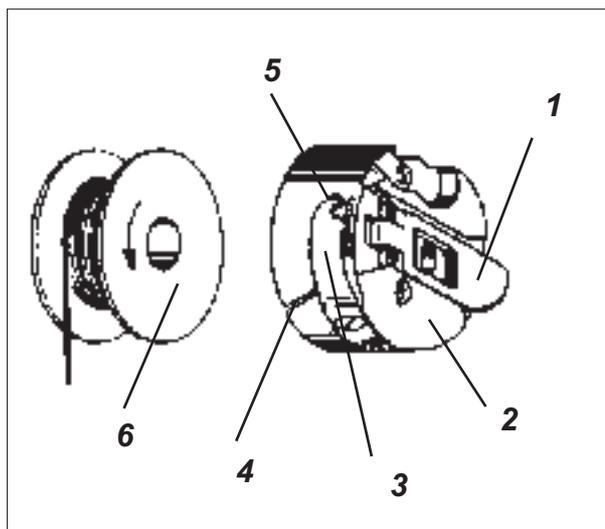
CAUTION !

If the thread is not to be wound on during sewing, it is essential for the sewing foot to be locked in the raised position and the sewing-foot stroke set to the smallest value.

6.6 Changing the looper-thread bobbin



1

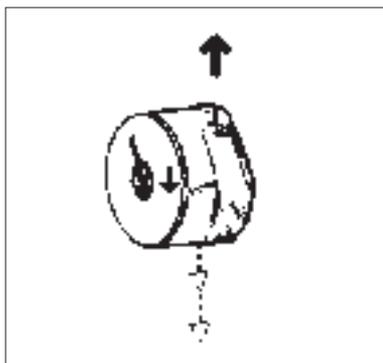


Caution: danger of injury

Turn off the main switch.
The looper-thread bobbin may only be changed with the machine switched off.

Removing the empty bobbin

- Raise the needle bar.
- Lift the bobbin-housing flap 1.
- Extract the upper part of the bobbin housing 2 together with the bobbin 6.
- Remove the empty bobbin from the upper part of the bobbin housing 2.



Inserting the full bobbin

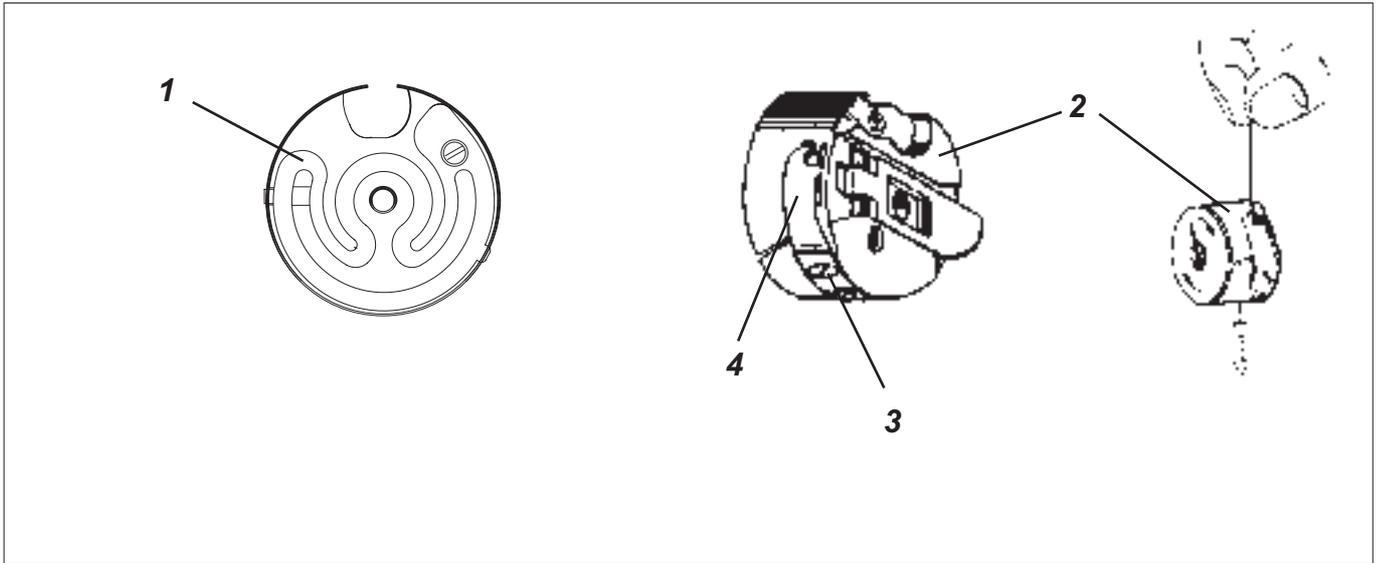
- Insert the full bobbin in the upper part of the bobbin housing 2. Check the bobbin's direction of rotation. This is correct if the bobbin rotates in the opposite direction to that in which the thread is drawn off.
- Pull the looper thread through the slit 4, under the tension spring 3 and into the hole 5.
- Pull about 5 cm of looper thread out of the bobbin housing 2. When the thread is drawn off the bobbin must turn in the direction of the arrow.
- Replace the bobbin housing 2.
- Close the bobbin-housing flap 1.



Danger of breakage !

Press firmly on the bobbin housing and make sure it is properly locked into position.

6.7 Pre-setting the looper-thread tension



Caution: danger of injury

Turn off the main switch.
The looper-thread tension may only be adjusted with the machine switched off.

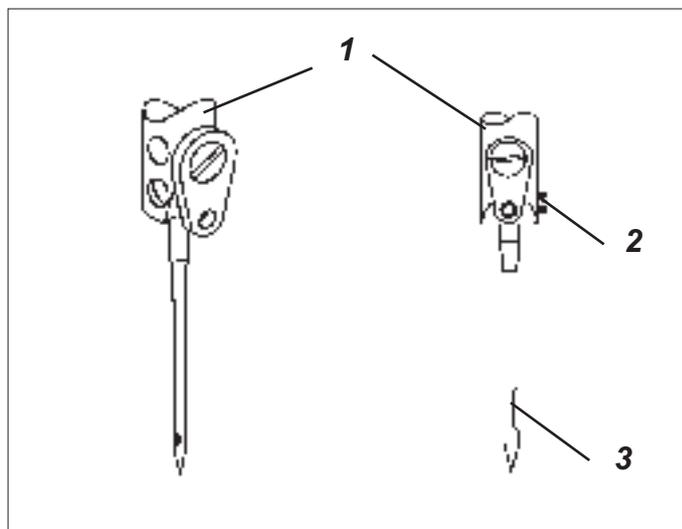
Braking spring

The braking spring 1 prevents the bobbin from running on when the machine halts and when the looper thread is severed and cannot be adjusted!

Setting the tension spring

- When the bobbin is full the top of the bobbin housing 2 should gradually descend under its own weight (see right-hand illustration).
- Adjust the tension spring 4 with the regulating screw 3 until the required tension is reached.

6.8 Changing the needle



Caution: danger of injury

Turn off the main switch.
The needle may only be changed with the sewing machine switched off.

- Undo screw 2.
- Push the new needle as far as it will go into the hole in the needle bar 1.

CAUTION !

The throat 3 of the needle must face towards the shuttle tip.

- Tighten screw 2.

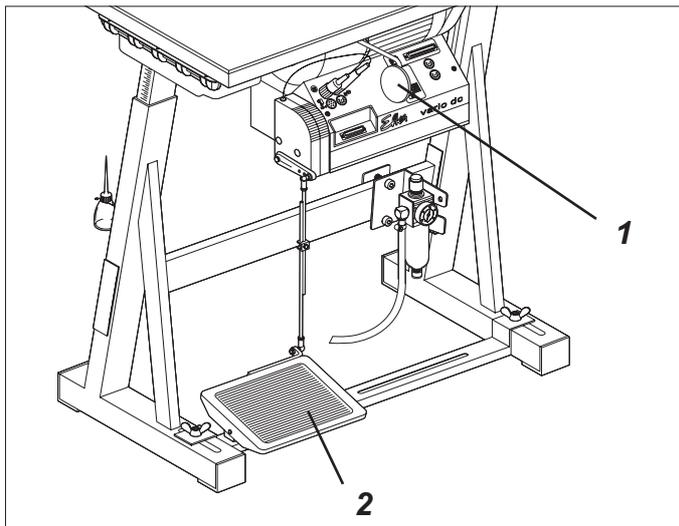
CAUTION !

After changing to a needle of a different thickness the distance between the shuttle and the needle must be corrected (see servicing instructions).

Failure to carry out this adjustment may lead to the following errors:

- Changing to a thinner needle:
 - faulty stitches
 - damage to thread
- Changing to a thicker needle:
 - damage to the shuttle tip and needle

6.9 Lifting the sewing foot



Subclass -170010; -180010

The sewing foot can be raised mechanically by operating the knee lever 1.

Subclass -170115; -180115

The sewing foot can be raised electro-pneumatically by operating the foot pedal 2 or the knee lever 1.

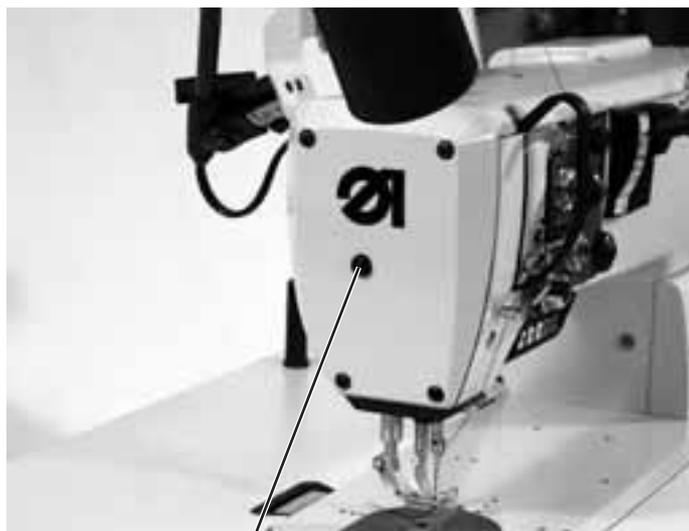
Raising the sewing foot mechanically (knee lever)

- To adjust the position of the material (e.g. for corrective purposes), push the knee lever 1 to the right or press the pedal 2 half-way back.
The sewing foot stays in the up position as long as pressure is maintained on the knee lever 1.

Raising the sewing foot electro-pneumatically (pedal)

- Press the pedal 2 half-way back.
The sewing feet are raised with the machine at a halt.
- Press the pedal 2 all the way back.
The thread is severed and the sewing foot raised.

6.10 Locking the sewing feet in the up position



1



2

Once they have been mechanically or pneumatically raised the sewing feet can be locked in the up position with button 1 (e.g. to wind on the looper thread).

- With the machine at a standstill press the knee lever to the right or push the pedal half-way back. The sewing feet are raised.
- Press button 1 and release the knee lever or pedal. The raised sewing feet are locked in the up position.
- Operate the knee lever or push the pedal half-way back once again. The sewing feet are no longer locked.

6.11 Setting the sewing-foot pressure

The required sewing-foot pressure is set with the knurled screw 2.



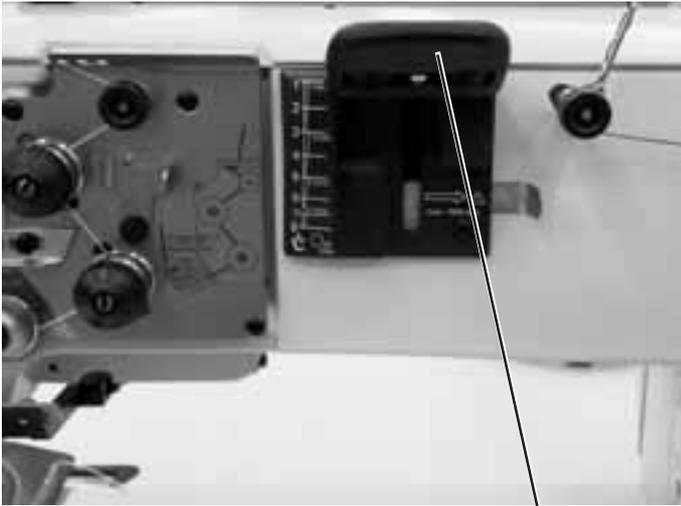
CAUTION !

The material must not “swim”.

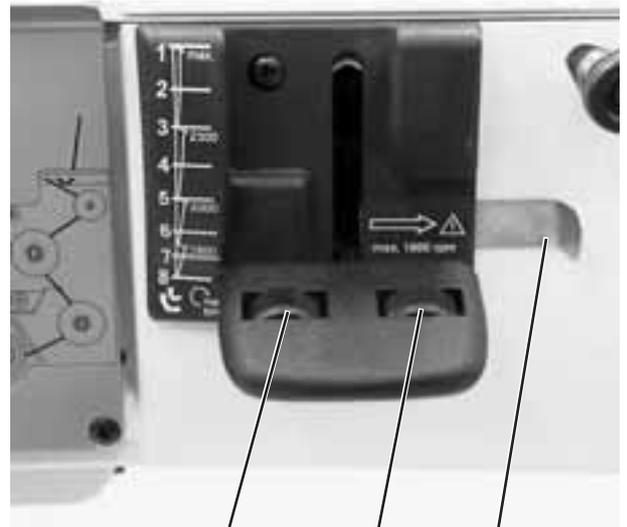
Do not set a higher pressure than is necessary.

- To increase the sewing-foot pressure = turn screw 2 clockwise.
- To decrease the sewing-foot pressure = turn screw 2 anti-clockwise.

6.12 Setting the sewing-foot stroke



5



4

3

6



CAUTION !

Subclass -170010; -180010 has no automatic speed restriction. It is essential to reduce the speed when working with a large sewing-foot stroke (see the plaque on the sewing-foot-stroke lever). Excessive speed makes sewing noticeably noisy and causes damage to the machine.

The required sewing-foot-stroke height is adjusted with the sewing-foot-stroke lever 5.

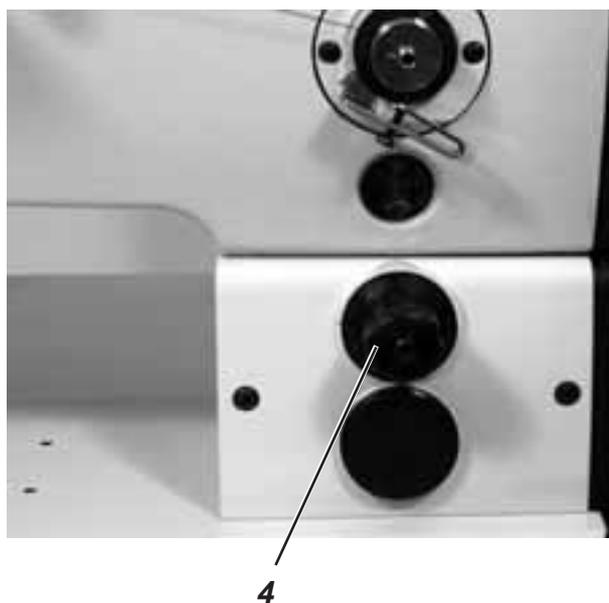
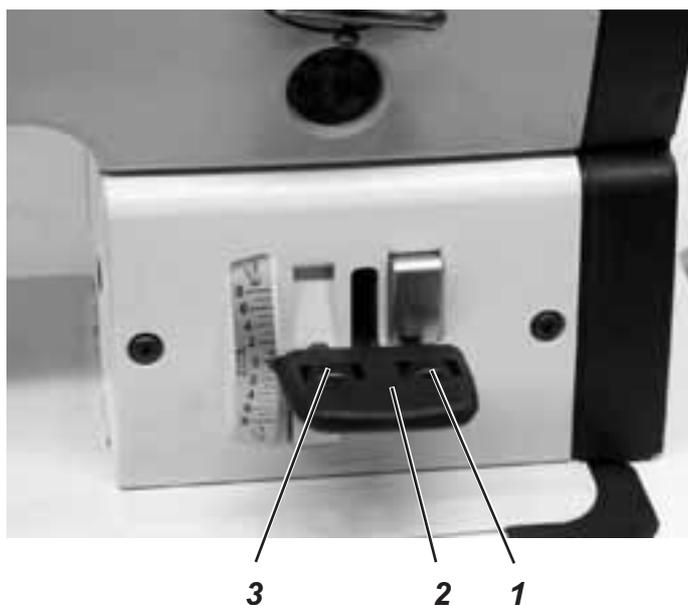
If you have to sew with a sewing foot stroke larger than 5 mm, the slide 6 must be shifted to the **right**.

With the slide 6 actuated, sewn may only be done **with reduced speed**.

The knurled nuts 3 and 4 integral to the sewing-foot-stroke lever can be used to set stop screws for the minimum and maximum sewing-foot stroke.

- Sewing-foot-stroke lever fully up = minimum sewing-foot-stroke height.
- Sewing-foot-stroke lever fully down = maximum sewing-foot-stroke height.

6.13 Setting the stitch length



Subclass -170010; -180010

The required forwards-stitch length is set with the knurled nut 1 in the manual stitch-setting lever 2.

The required backwards-stitch length is set with the knurled nut 3 in the manual stitch-setting lever 2.

Changing stitch length during sewing:

The stitch length can be infinitely varied during sewing with the manual stitch-setting lever 2, within the limits of the stitch lengths set for forwards and backwards sewing.

- Fully raise the manual stitch-setting lever to sew forwards with the stitch length set.
- Fully lower the manual stitch-setting lever to sew backwards with the stitch length set.

Subclass -170115; -180115

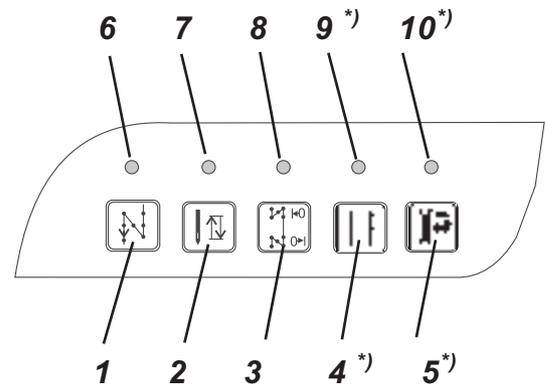
The required stitch length is set with adjustment wheel 4. It has the same value for both forward and backward sewing.

Changing the stitch length while sewing:

The stitch length can be infinitely varied during sewing with the adjustment wheel 4.

- Turn the adjustment wheel fully to the right for minimum stitch length.
- Turn the adjustment wheel fully to the left for maximum stitch length.

6.14 Machine-arm keypad (subclass -170115; -170315; 180115; 180315 *))



LED	Key	Function
	2	Position the needle in the up or down position. The function of key 2 can be determined with the F-140 parameter. 1 = needle up, 2 = needle up/down, 3 = single stitch 4 = single stitch with 2nd stitch length / short stitch 5 = needle up if out of position 2. The factory setting is 1 = needle up.
	1	Manual backwards sewing. The machine sews backwards while key 1 is held down.
	3	Trigger or suppress starting or ending bar tack. If starting or ending bar tacks are generally switched on, pressing this key switches the next one off. If starting or ending bar tacks are generally switched off, pressing this key switches the next one on.
	4 *)	2nd Stitch length
	5 *)	2nd Thread length
6		LED display "mains on"
7		LED display: no function
8		LED display for key 3
9 *)		LED display on = 1st (upper) Stitch length active LED display off = 2nd (lower) Stitch length active
10 *)		LED display on = 2nd Thread tension active LED display off = 2nd Thread tension off

7. EFKA DC1600/DA82GA direct-current positioning actuator

7.1 General

Operation

The DC1600/DA82GA sewing drive must be commissioned and operated with the V810 or V820 operating panel.

Operating instructions

These operating instructions give the key functions and the meaning of the operating-panel symbols, and describe how operator-level parameter values are changed by the operator.

For a detailed description of the control please consult the “EFKA DA82GA” operating manual.

Functions of the DA82GA sewing-drive control

The functions of the DA82GA sewing-drive control are determined by the program and the parameter settings. When parameter values are correct the control is properly set for the relevant class and subclass. Actuator parameter values are pre-set by EFKA prior to delivery. Certain parameters must be altered for each class and subclass: see the set-up instructions. All parameters are correctly set on delivery.

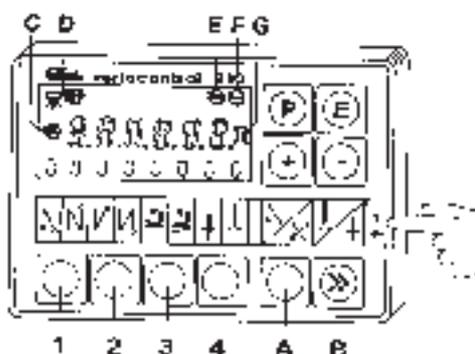
Access authorisation for command entry

To prevent the unwanted alteration of pre-set functions there are three levels of command entry. These are as follows:

- the **manufacturer** has access to the highest level and all subordinate levels with a code number. “**manufacturer level**”
- the **technician** has access to the two lower levels with a code number. “**technician level**”
- the **operator** has access to the lowest level with no code number. “**operator level**”

7.2 V810 operating panel

7.2.1 Operating and display elements on the V810 operating panel



7.2.2 Key functions on the V810 operating panel

Functions can be turned on and off by briefly pressing the keys on the operating panel. The functions are effective on the machine only if the relevant devices (e.g. magnetic or electro-pneumatic sewing-foot lift) are present.

Key	Function	Display
1	Double starting bar tack on Starting bar tack off Single starting bar tack on	Right arrow above the key on Both arrows off Left arrow above the key on
2	Double ending bar tack on Ending bar tack off Single ending bar tack on	Right arrow above the key on Both arrows off Left arrow above the key on
3	Auto foot-lift on halt in seam on Auto foot-lift on halt in seam off Auto foot-lift after thread cut on Auto foot-lift after thread cut off	Left arrow above the key on Left arrow above the key off Right arrow above the key on Right arrow above the key off
4	Basic needle position = down Basic needle position = up	Left arrow above the key on Right arrow above the key on
A	Suppress or trigger bar tack If the starting or ending bar tack is switched on, pressing the key switches the next bar tack off. If the starting or ending bar tack is switched off, pressing the key switches the next bar tack on.	No display
B	Needle up/down or shift function in programming mode. Pressing this key executes a needle movement that can be programmed with parameter 140. See the parameter list in the set-up instructions. In programming mode this key has a different function: see set-up instructions.	No display
P	Programming mode on/off for description see set-up instructions.	Parameter number/standard display
E	Switch from parameter number to parameter value. Confirm parameter value and switch to next parameter. For description see set-up instructions.	Parameter number/parameter value
+	Increase the value displayed in programming mode	Displayed value is increased
-	Decrease the value displayed in programming mode	Displayed value is decreased

7.2.3 Meaning of symbols on the V810 operating panel

Symbol	Function	Display
C	Automatic rotation speed active Only seam sectors processed automatically.	Symbol on
D	Light barrier switched on	Symbol on
E	Sewing drive switched on	Symbol on
F	Rotation-speed limit active	Symbol on
G	Bobbin-thread monitor switched on	Symbol flashes when bobbin is running out

7.2.4 Changing operator-level parameter values

The operator-level parameters are in the parameter list (see section 7.4).

- Turn on the main switch.
- Press the “P” key. The first operator-level parameter **F-000** is displayed.
- Press the “+” or “-” keys to move to the next or preceding parameter.
- Press the “E” key. The value of the selected parameter is displayed.
- The parameter value can be changed with the “+” and “-” keys.
- Press the “E” key to save the change and display the next parameter, or press the “P” key twice to save the change and leave programming level.



CAUTION:

The changed parameter values are not saved unless a complete seam is sewn after leaving programming level, i.e. the pedal is pushed forwards and then all the way back. If the drive is switched off straight after leaving programming level, the changes are lost.

7.2.5 Reducing the maximum rotation speed

The maximum speed can be reduced to adapt it to particular applications.

The current maximum speed is shown in the display after each seam has been completed. This value can now be directly changed with the “+” and “-” keys. The adjustment range lies between the values of parameters **F-111** (maximum value) and **F-121** (minimum value).



Caution:

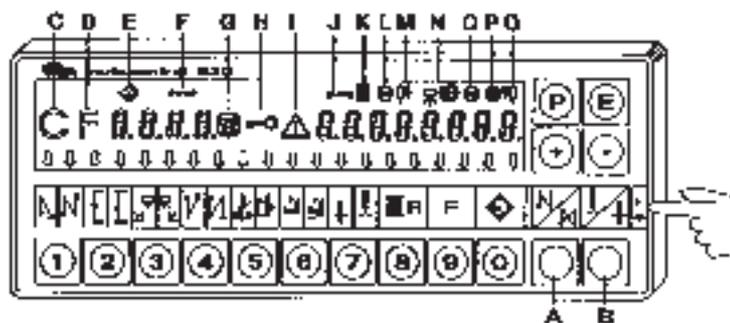
Reducing the maximum rotation speed also reduces the rpm for starting and ending bar tacks and for counted seam sections executed automatically.

7.2.6 Entering the technician-level code number:

(see set-up instructions)

7.3 V820 operating panel

7.3.1 Operating and display elements on the V820 operating panel



7.3.2 Key functions on the V820 operating panel

Functions can be turned on and off by briefly pressing the keys on the operating panel. The functions are effective on the machine only if the relevant devices (e.g. magnetic or electropneumatic sewing-foot lift) are present.

Key	Function	Display
1	Double starting bar tack on Starting bar tack off Single starting bar tack on	Right arrow above the key on Both arrows off Left arrow above the key on
2	Stitch count, backwards seam Stitch count off Stitch count, forwards seam	Right arrow above the key on Both arrows off Left arrow above the key on
3	Light-barrier function "light - dark" = change from: "no material present" to "material present". Light barrier off Light-barrier function "dark - light" = change from: "material present" to "no material present".	Right arrow above the key on Both arrows off Left arrow above the key on
4	Double ending bar tack on Ending bar tack off Single ending bar tack on	Right arrow above the key on Both arrows off Right arrow above the key on
5	Thread cutter on Thread retractor on Thread cutter and thread retractor on Thread cutter and thread retractor off	Left arrow above the key on Right arrow above the key on Both arrows on Both arrows off
6	Auto. foot lift on halt in seam on Auto. foot lift on halt in seam off Auto. foot lift after thread cut on Auto. foot lift after thread cut off	Left arrow above the key on Left arrow above the key off Right arrow above the key on Right arrow above the key off
7	Basic needle position = down Basic needle position = up	Left arrow above the key on Right arrow above the key on
8	Residual-thread monitor on The function of the residual-thread monitor can be altered with parameter 195 (see parameter list in the set-up instructions).	xxxx - - - -

Key	Function	Display
9	<p>Function key The function of the key can be altered with parameter F-008 (see parameter list in section 1.4)</p> <p>1 = Softstart ON/OFF 2 = ornamental-stitch bar tack ON/OFF 3 = stroke adjustment</p> <p>Function of the knee-switch or key: “press and release” = ON / “press and hold” = OFF</p> <p>4 = needle cooling ON/OFF 5 = handwheel reverse ON/OFF</p>	<p>SSt ON*/OFF < - > SSc xxx SrS ON*/OFF hPr ON*/OFF</p> <p>nh ON*/OFF rd ON*/OFF * when ON the left arrow above the key is switched on.</p>
0	<p>Tteach in or Sew stored sewing program see programming instructions in the EFKA DA82GA 3301 operating manual</p>	<p>Program number Seam-section number Seam-section stitch number Number of stitches after light-barrier detection</p>
A	<p>Suppress or trigger bar tacks If the starting or ending bar tack is switched on, pressing the key switches the next bar tack off. If the starting or ending bar tack is switched off, pressing the key switches the next bar tack on.</p>	No display
B	<p>Needle up/down or shift function in programming mode. Pressing this key executes a needle movement that can be programmed with parameter 140. See the parameter list in the set-up instructions. In programming mode this key has a different function: see set-up instructions.</p>	No display
P	<p>Programming mode on/off for description see set-up instructions.</p>	Parameter number/standard display
E	<p>Switch from parameter number to parameter value. Confirm parameter value and switch to next parameter. For description see set-up instructions.</p>	Parameter number/standard display
+	<p>Increase the value displayed in programming mode</p>	Displayed value is increased
-	<p>Decrease the value displayed in programming mode</p>	Displayed value is decreased

7.3.3 Meaning of symbols on the V820 operating panel

Symbol	Function	Display
C	Abbreviation C for the code number	Symbol on when a code is displayed, e.g. C 1907
D	Abbreviation F for the parameter number	Symbol on when a parameter number is displayed e.g. F - 111
E	Program number in teach-in mode	Symbol on when a sewing-program number is displayed
F	Seam-section number in teach-in mode	Symbol on when the seam-section number of a sewing program is displayed
G	Cut-out active	Symbol flashes on active cut-out.
H	Entry via keys blocked	Symbol on when entry via keys is blocked.
I	Error message	Symbol on. (See section 7.5 for fault list).
J	Stitch-rate entry in teach-in mode	Symbol on when the number of stitches in a seam section is displayed.
K	Bobbin-thread monitor on	Symbol flashes when bobbin is running out
L	Speed limit effective	Symbol on when one of the possible rpm limits is effective.
M	Right needle switched off	Symbol on when the right needle bar is switched off. Only on machines with automatic needle-bar switch-off.
N	Equalising stitches for light barrier	Symbol on
O	Machine running	Symbol on
P	Automatic rpm effective	Symbol on when a seam section in a sewing program is being automatically executed at constant rpm.
Q	Left needle switched off	Symbol on when the left needle bar is switched off. Only on machines with automatic needle-bar switch-off.

7.3.4 Changing operator-level parameter values

- Turn on the main switch.
- First press the “**P**” key, then the “**E**” key. The first operator-level parameter value (**Arv 002**) is displayed.
- Press the “**+**” or “**-**” key to change the value.
- Press the “**E**” key. The next parameter value is displayed or press the “**P**” key to save the change and leave programming level.

7.3.5 Reducing the maximum rotation speed

The maximum speed can be reduced to adapt it to particular applications.

After each completed seam the current value of the maximum speed is shown in the display. This value can now be directly changed with the “+” and “-” keys. The adjustment range lies between the values of parameters **F-111** (maximum value) and **F-121** (minimum value).



Caution !
Reducing the maximum rotation speed also reduces the rpm for starting and ending bar tacks and for counted seam sections executed automatically.

7.3.6 Fast information display and settings entry (HIT)

When functions are switched on with keys 1, 2, 3, 4 and 9 the associated values are displayed to the operator for about 3 seconds. During this period the value can be changed immediately with the “+” or “-” keys.



CAUTION !
The changed parameter values are not saved unless a complete seam is sewn after leaving programming level, i.e. the pedal is pushed forwards and then all the way back.
If the drive is switched off straight after leaving programming level, the changes are lost.

7.3.7 Entering the technician-level code number

See set-up instructions.

7.3.8 Seam programming with the V820 operating panel

A maximum of 8 programs with a total of up to 40 seam sections may be saved.

The starting-bar-tack, ending-bar-tack, stitch-count, thread-cut and foot-lift functions can be individually assigned to each seam.

For a description see the “EFKA DA82GA” operating manual.

7.4 Operator-level parameter list for EFKA controls DA82GA and 6F82FA-

The following pre-set values apply to class: 367

Parameter No.	Abbr.	Name / Function Name / Function	Adj. range min	max	Pre-set 100R
000	Arv	starting-bar-tack stitches forwards	0	254	2
001	Arr	starting-bar-tack stitches backwards	0	254	4
002	Err	ending-bar-tack stitches backwards	0	254	3
003	Erv	ending-bar-tack stitches forwards	0	254	3
004	LS	number of light-barrier equalisation stitches (large stitch length)	0	254	4
005	LSF	number of light-barrier filter stitches for knits	0	254	0
006	LSn	number of seams terminated with the light barrier	0	15	1
007	Stc	number of stitches in the automatically-produced seam section	0	254	10
008	F	assigning a function to key 9 1 = Softstart ON/OFF 2 = ornamental-stitch bar tack ON/OFF 3 = stroke adjustment press and release = ON/ press and hold = OFF 4 = needle cooling ON/OFF 5 = handwheel reverse ON/OFF **	1	5	2
009	LS	light barrier ON/OFF	OFF	ON	OFF
010	cLS	number of light-barrier equalising stitches (small stitch length)	0	254	8
013	FA	thread cutter ON/OFF	OFF	ON	ON
014	FW	thread retractor ON/OFF	OFF	ON	ON
015	StS	stitch count ON/OFF	OFF	ON	ON
080	Sav	number of stitches, starting decorative-stitch bar tack forwards	0	254	3
081	SAr	number of stitches, starting decorative-stitch bar tack backwards	0	254	3
082	SEr	number of stitches, ending decorative-stitch bar tack backwards	0	254	3
083	SEv	number of stitches, ending decorative-stitch bar tack forwards	0	254	3
085**	cFW	residual-thread-monitor stitch count F-195 = 1-3 F-195 = 4	0 0	2540 9990	0 0

7.5 Status and error messages on the V810 and V820 operating panels

General information

V810	V820	Meaning
InF A1	InFo A1	The pedal is not in its zero position when the sewing drive is switched on
StoP flashes	symbol "G" "cut-out" flashes	The cut-out is active
InF A3	InFo A3	Reference position not stored. For programming see set-up instructions.
InF A5	InFo A5	No valid Autoselect resistance detected. For information see set-up instructions

Programming error message

V810	V820	meaning
If jumps back to 1st digit	InFo F1	Incorrect code or parameter number entered

Hardware and software error messages

V810	V820	meaning
InF E1	InFo E1	After main switch on: proximity or commutation switch defective or connection lead wrongly connected. During or after a sewing run: proximity switch defective.
InF E2	InFo E2	Mains voltage too low or the time between main switch OFF and main switch ON was too short.
InF E3	InFo E3	Machine is blocked or not reaching the required rotation speed
InF E4	InFo E4	Control disrupted by defective earthing or defective plug connections (contact error).
InF H1	InFo H1	Commutation-switch lead is defective or the power electronics for the generation of the rotating field is faulty.
InF H2	InFo H2	Processor faulty.

8. EFKA VD552KV/6F82FA coupling-positioning actuator

8.1 General

Operation

The VD552KV/6F82FA sewing-drive control contains an integral “operating panel” with 5 keys, 8 LEDs and a three-digit LED display. All required adjustments to the sewing-drive control can be carried out with this operating panel. The V810 or V820 operating panel can also be connected to the control. In this case the integral operating elements are ineffective.

Operating instructions

The functions of the operating elements of the 6F82FA sewing-drive control are described below, together with the procedure for the alteration by the operator of operator-level parameter values.

For a detailed description of the 6F82FA control please see the “EFKA 6F82FA” operating manual:

V810 operating panel - see section 7.2

V820 operating panel - see section 7.3.

Functions of the 6F82FA sewing-drive control

The functions of the 6F82FA sewing-drive control are determined by the program and the parameter settings. When parameter values are correct the control is properly set for the relevant class and subclass. Actuator parameter values are pre-set by EFKA prior to delivery. Certain parameters must be altered for each class and subclass: see the set-up instructions. All parameters are correctly set on delivery.

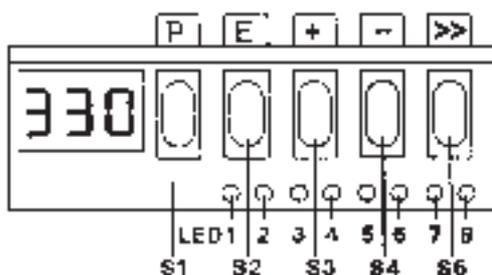
Access authorisation for command entry

To prevent the unwanted alteration of pre-set functions there are three levels of command entry. These are as follows:

- the **manufacturer** has access to the highest level and all subordinate levels with a code number. “**manufacturer level**”
- the **technician** has access to the two lower levels with a code number. “**technician level**”
- the **operator** has access to the lowest level with no code number. “**operator level**”

8.2 Operation of the 6F82FA sewing-drive control

8.2.1 Operating elements in the 6F82FA sewing-drive control



8.2.2 Key functions in the 6F82FA sewing-drive control

Functions can be turned on and off by briefly pressing the keys on the operating panel. The functions are effective on the machine only if the relevant devices (e.g. magnetic or electro-pneumatic sewing-foot lift) are present.

Key	Function	Display
S1	programming mode on/off	
S2	double starting bar tack starting bar tack off single starting bar tack	LED 2 on, LED 1 off both LEDs off LED 1 on, LED 2 off
S3	double ending bar tack ending bar tack off single ending bar tack	LED 4 on, LED 3 off both LEDs off LED 3 on, LED 4 off
S4	auto. foot lift on halt in seam no auto. foot lift on halt in seam auto. foot lift after thread cut no auto. foot lift after thread cut	LED 5 on LED 5 off LED 6 on LED 6 off
S5	basic needle position = down basic needle position = up	LED 7 on, LED 8 off LED 8 on, LED 7 off

8.2.3 Changing operator-level parameter values

The operator-level parameters are in the parameter list (see section 7.4).

- Turn on the main switch.
- Press the “P” key. The first operator-level parameter **000** is displayed.
- Press the “+” or “-” keys to move to the next or preceding parameter.
- Press the “E” key. The value of the selected parameter is displayed.
- The parameter value can be changed with the “+” and “-” keys.
- Press the “E” key to save the change and display the next parameter, or press the “P” key twice to save the change and leave programming level.



CAUTION !

The changed parameter values are not saved unless a complete seam is sewn after leaving programming level, i.e. the pedal is pushed forwards and then all the way back. If the drive is switched off straight after leaving programming level, the changes are lost.

8.2.4 Reducing the maximum rotation speed

The maximum speed can be reduced to adapt it to particular applications.

The current maximum speed is constantly shown in the LED display during sewing. The display shows a 3-digit figure that must be multiplied by 10 to obtain the actual rotation speed. This value can be changed during sewing or on a mid-seam halt with the “+” and “-” keys. The adjustment range lies between the values of parameters **F-111** (maximum value) and **F-121** (minimum value).

8.2.5 Entering the technician-level code number:

See set-up instructions.

8.3 6F82FA control operator-level parameter list

See section 7.4.

8.4 Status and error messages on the V810 and V820 operating panels

See section 7.5.

9. Operation

9.1 Subclass 367-170010; -180010

Action	Operation / Remarks
Before starting work	
initial position	<ul style="list-style-type: none">- Pedal in neutral position. Sewing machine at a halt. Needle up. Sewing foot down.
position material at start of seam	<ul style="list-style-type: none">- Press knee lever. The sewing foot rises.- Position material.- Release knee lever. The sewing feet descend onto the material.
At the start of seam	
starting bar tack and continue sewing	<ul style="list-style-type: none">- Carefully press pedal forwards. The machine sews forwards.- Pull down stitch-setting lever. The machine sews backwards.- Release stitch-setting lever. The machine sews forwards.
In mid-seam	
interrupt action	<ul style="list-style-type: none">- Release pedal (neutral position). The machine halts. The sewing feet are down.
Continue action	<ul style="list-style-type: none">- Push pedal forwards. The machine sews at the speed set by the pedal.
Sew intermediate bar tack	<ul style="list-style-type: none">- Press stitch-setting lever down. The machine sews backwards.- Release stitch-setting lever. The machine resumes forward sewing.
Removing the material	
at seam-end	<ul style="list-style-type: none">- Release pedal (neutral position) The machine halts.- Manually rotate the needle to the up position.- Operate the knee lever. The sewing feet lift.- Pull material forward and sever threads.

9.2 Subclass 367-170115; -170315; -180115; -180315

The description of operation is based on the following preconditions:

- The following functions are set on the operating panel:

Starting bar tack: ON

Ending bar tack: ON

Sewing-foot position before and after cutting: DOWN

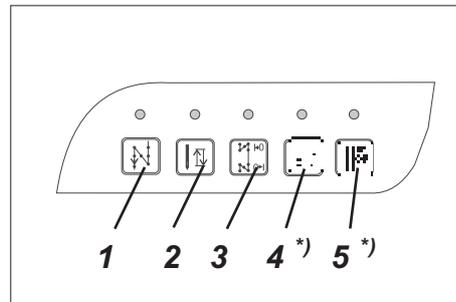
needle position before cutting: DOWN (position 1)

- Main switch on.
- The last action was concluded with an ending bar tack and thread-cutting.



4

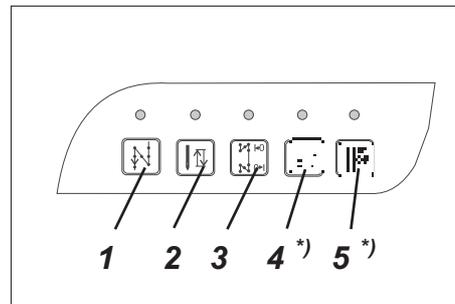
Operating and function sequence:



Action	Operation / Remarks
Before starting work	
Initial position	- Pedal in neutral position. Sewing machine at a halt. Needle up. Sewing foot down.
Position material at start of seam	- Push pedal back. The sewing feet rise. - Position material. - Release pedal. The sewing feet descend onto the material.
At the start of seam	
Starting bar tack and continue sewing	- Push pedal forwards and hold it there. The starting bar tack is sewn. The machine then continues sewing at the speed set by the pedal.
Do not sew starting bar tack	- Press key 3 (bar-tack suppression). - Push pedal forwards. - The machine sews at the speed set by the pedal.



4



Action	Operation / Remarks
In mid-seam	
Interrupt action	<ul style="list-style-type: none"> - Release pedal (neutral position). The machine halts in position 1 (needle down). The sewing feet are down.
Continue action (after pedal is released)	<ul style="list-style-type: none"> - Push pedal forwards. The machine sews at the speed set by the pedal. The starting bar tack is not sewn.
Sew intermediate bar tack	<ul style="list-style-type: none"> - Press key 2 and hold the pedal down. The machine sews backwards as long as key 2 is held down. <p>The speed is set by the pedal.</p>
At the seam-end	
Remove the material	<ul style="list-style-type: none"> - Push pedal fully back and hold it there. The ending bar tack is sewn. The thread is severed. The machine halts in position 2. The sewing feet are raised.
Do not sew an ending bar tack	<ul style="list-style-type: none"> - Press key 3 (bar-tack suppression). Push pedal fully back. The ending bar tack is not sewn. The thread is severed. The machine halts in position 2. <p>The position of the sewing foot depends on key 4 on the operating panel: a) On: - sewing foot raised. b) Off: - sewing foot down.</p>
Subclass 367-170315; -180315	<ul style="list-style-type: none"> - The 2nd Stitch length key 4 *) and - The 2nd Thread tension key 5 *) can be at any time switched on or off.

10. Maintenance

10.1 Cleaning and testing

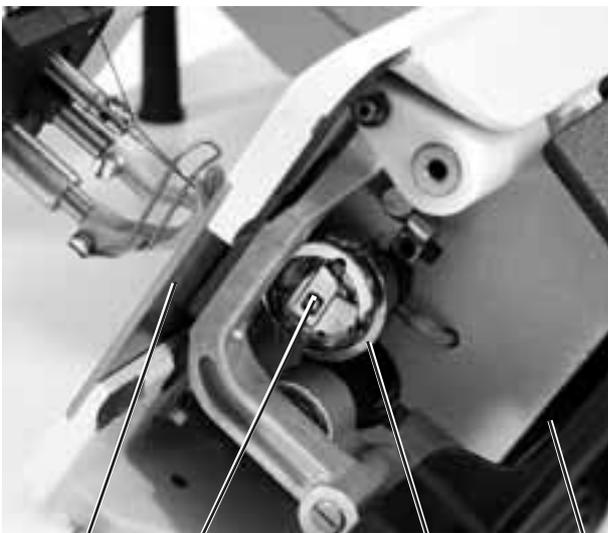


Caution: danger of injury

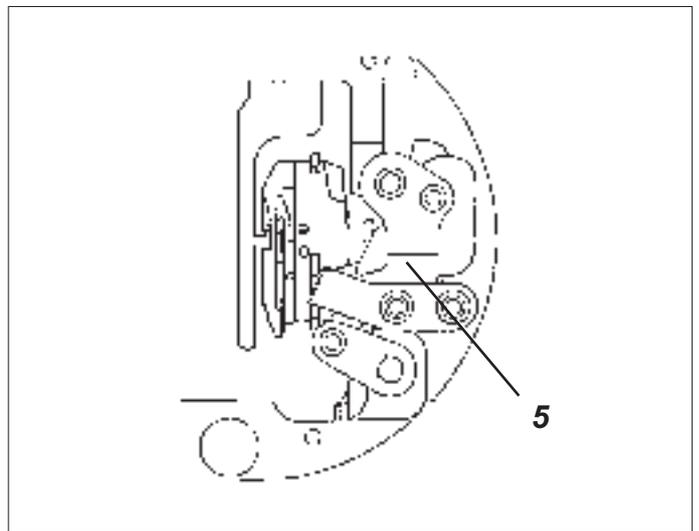
Turn off the main switch.
Maintenance may only be carried out with the machine switched off.

Maintenance work must be carried out no less frequently than at the intervals given in the tables (see “operating hours” column). Maintenance intervals may need to be shorter when processing heavy-shedding materials.

A clean machine is a trouble-free machine.

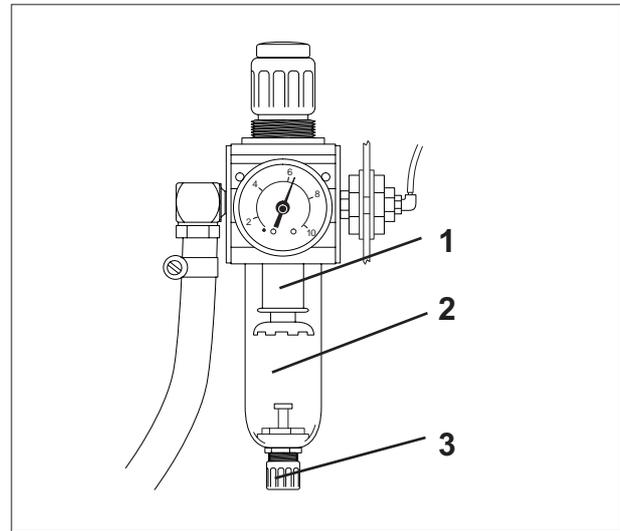
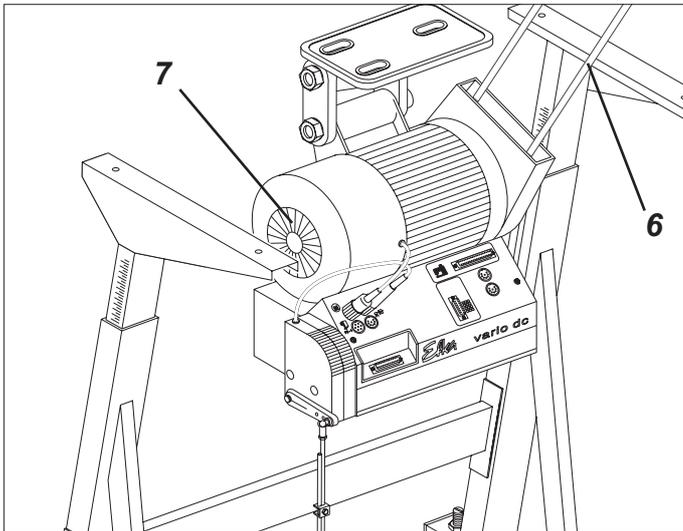


4 3 2 1



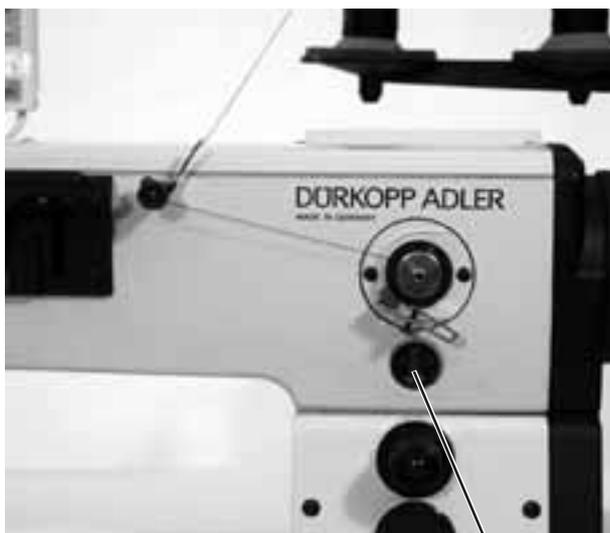
5

Maintenance work to be carried out	Explanation	Operating hours
<p>Upper part of machine</p> <ul style="list-style-type: none"> - Remove lint, pieces of thread and other debris (e.g. with a compressed-air pistol) 	<p>Places in special need of cleaning:</p> <ul style="list-style-type: none"> - underside of needle plate 4 - feeders - area around shuttle 2 - bobbin housing 3 <p>CAUTION ! Hold the compressed-air pistol so that the lint is not blown into the oil collector 1.</p> <ul style="list-style-type: none"> - thread cutter Clean the area under the thread clipper 1 especially thoroughly (there may be problems with the thread cutter 5) - needle area 	8



Maintenance work to be carried out	Explanation	operating hours
Sewing drive		
Clean fan grille 7. (e.g. with a compressed-air pistol)	Remove lint and pieces of thread from air-intake openings.	8
- Check condition and tension of V-belt 6	It must be possible to depress the V-belt by about 10 mm by pressing it with a finger at its mid-point.	160
Pneumatic system		
- Check water level in pressure regulator.	The water level must not rise to the level of the filter cartridge 1. - After screwing in the drain screw 3 blast water under pressure out of the water separator 2.	40
- Clean filter cartridge.	Dirt and condensation are separated out by the filter cartridge 1. - Disconnect the machine from the compressed-air supply. - Unscrew the drain screw 3. There must be no pressure in the machine's pneumatic system. - Unscrew water separator 2. - Unscrew filter cartridge 1. Wash the filter shell and cartridge with cleaning fluid (not solvent) and blast clean. - Re-assemble the maintenance unit.	500
- Check the system for leaks.		500

10.2 Lubrication



1



2

3



Caution: danger of injury

Oil can cause skin eruptions.
Avoid protracted contact with the skin.
In the event of contact, thoroughly wash the affected area.

CAUTION:

The handling and disposal of mineral oils is subject to legal regulation.
Deliver used oil to an authorised collection point.
Protect your environment.
Take care not to spill oil.

To lubricate the special sewing machine use only **DA-10** lubricating oil or an equivalent oil of the following specification:

- Viscosity at 40° C: 10 mm²/s
- Flashpoint: 150° C

DA-10 is available from **DÜRKOPP ADLER AG** retail outlets under the following part numbers:

250-ml container:	9047 000011
1-litre container:	9047 000012
2-litre container:	9047 000013
5-litre container:	9047 000014

Maintenance work to be carried out	Explanation	Operating hours
Lubricating the upper part of the machine	<p>The upper part of the machine is fitted with a central oil-wick lubrication system. Except for the shuttle all lubrication points are supplied from the oil reservoir 1.</p> <ul style="list-style-type: none"> - The oil level must not fall below the “MIN” mark. - Top up through the holes in the sight glass to the “MAX” mark. 	40
Lubricating the shuttle	<ul style="list-style-type: none"> - Turn back the upper part of the machine. - Check oil supply through viewing window 3. - Fill the oil reservoir through the nipple 2. - The quantity of oil required to lubricate the shuttle properly is factory-set. 	8

Notes: