



# MODEL S-4000 SRWD

SINGLE ROW WITH DOT

PARTS AND SERVICE MANUAL

MACHINE SERIAL No:

PART NUMBER **97.2443.2.001**





## LIMITED WARRANTY ON NEW AMF REECE EQUIPMENT

### Warranty provisions:

A ninety (90) day limited service labor warranty to correct defects in installation, workmanship, or material without charge for labor. This portion of the warranty applies to machines sold as "installed" only.

A one (1) year limited material warranty on major component parts to replace materials with defects. Any new part believed defective must be returned freight prepaid to AMF Reece, Inc. for inspection. If, upon inspection, the part or material is determined to be defective, AMF Reece, Inc. will replace it without charge to the customer for parts or material.

Service labor warranty period shall begin on the completed installation date. Material warranty shall begin on the date the equipment is shipped from AMF Reece, Inc.

### Exclusions:

Excluded from both service labor warranty and material warranty are: (1) Consumable parts which would be normally considered replaceable in day-to-day operations. These include parts such as needles, knives, loopers and spreaders. (2) Normal adjustment and routine maintenance. This is the sole responsibility of the customer. (3) Cleaning and lubrication of equipment. (4) Parts found to be altered, broken or damaged due to neglect or improper installation or application. (5) Damage caused by the use of non-Genuine AMF Reece parts. (6) Shipping or delivery charges.

There is no service labor warranty for machines sold as "uninstalled".

Equipment installed without the assistance of a certified technician (either an AMF Reece Employee, a Certified Contractor, or that of an Authorized Distributor) will have the limited material warranty only. Only the defective material will be covered. Any charges associated with the use of an AMF Reece Technician or that of a Distributor to replace the defective part will be the customer's responsibility.

NO OTHER WARRANTY, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, and FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER MATTER IS GIVEN BY SELLER OR SELLER'S AGENT IN CONNECTION HEREWITH. UNDER NO CIRCUMSTANCES SHALL SELLER OR SELLER'S AGENT BE LIABLE FOR LOSS OF PROFITS OR ANY OTHER DIRECT OR INDIRECT COSTS, EXPENSES, LOSSES OR DAMAGES ARISING OUT OF DEFECTS IN OR FAILURE OF THE EQUIPMENT OR ANY PART THEREOF.

## WHAT TO DO IF THERE IS A QUESTION REGARDING WARRANTY

If a machine is purchased through an authorized AMF Reece, Inc. distributor, warranty questions should be first directed to that distributor. However, the satisfaction and goodwill of our customers are of primary concern to AMF Reece, Inc. In the event that a warranty matter is not handled to your satisfaction, please contact AMF Reece office:

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798 11 Prostejov  
Czech Republic  
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# TABLE OF CONTENTS

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## **A - INTRODUCTION**

1. BASIC INFORMATION.....	1-1
2. SAFETY DEVICE AND LABELS .....	1-2
3. GENERAL MACHINE PARTS DESCRIPTION.....	1-3
4. SPECIFICATIONS.....	1-4
5. TABLE TYPE.....	1-4
6. INSTRUCTIONS FOR OPERATOR SAFETY AND MAINTENANCE .....	1-5
7. SPECIAL ACCESSORIES .....	1-6

## **B - MACHINE ASSEMBLY**

1. CONTENT OF THE SHIPPING BOX .....	1-7
2. ACCESSORIES .....	1-7
3. POWER AND AIR CONNECTION.....	1-8
4. THREAD STAND INSTALLATION.....	1-10

## **C - PROPER APPLICATION**

1. POWER UP/HOME POSITION .....	1-11
2. NEEDLE INSTALLATION.....	1-12
3. THREADING .....	1-13

## **D - MACHINE CONTROLS**

1. PROGRESS OF SEWING .....	1-14
2. OPERATOR CONTROL PANEL PUSH BUTTONS AND SWITCHES .....	1-15
3. CONTROL PANEL INFORMATION.....	1-16
4. TESTS.....	1-18
5. PROGRAM VERSION.....	1-19
6. COUNTER RESET .....	1-19
7. PARAMETER CHECKLIST .....	1-20

## **E - MACHINE ADJUSTMENTS**

1. MACHINE HOME POSITION .....	1-21
2. THE PRINCIPLES FOR THE MACHINE ADJUSTMENT .....	1-21
3. NEEDLE BAR .....	1-22
3.1. Needle bar crank position.....	1-22
3.2. The needle bar height adjustment.....	1-22
4. BITE.....	1-23
4.1. Bite cam .....	1-23
4.2. Bite width adjustment .....	1-24
4.3. Centering the bite over the throat plate .....	1-24
5. LOOPER ADJUSTMENTS .....	1-25
6. THE CLAMP PLATE HOME POSITION.....	1-28
7. CLAMP PLATE TO THE CENTER OF THE THROAT PLATE ADJUSTMENT.....	1-28
8. HEAD CLAMP FOOT ADJUSTMENT .....	1-29
8.1. Adjustment for clamp height.....	1-29
8.2. Clamp foot to the center of the needle .....	1-29
9. THREAD DRAW-OFF .....	1-30
9.1. Adjustment of the Draw-Off Lever Position .....	1-30
9.2. The thread end adjustment .....	1-30
9.3. Locking the stitches.....	1-30
10. THREAD TENSION .....	1-31
10.1. Adjustment of the tension discs opening.....	1-31
10.2. The correct position of the tension mechanism.....	1-32
10.3. Regulation of the tension discs opening.....	1-32
11. THREAD TRIMMING .....	1-33
11.1. Trimming cylinder adjustment .....	1-33
11.2. The trimming hook adjustment .....	1-33
12. CHANGING THE DRIVE BELT .....	1-34

## TABLE OF CONTENTS

---

### **F - MACHINE MAINTENANCE**

1. MACHINE CLEANING AND MAINTENANCE .....	1-35
2. PERIODIC MAINTENANCE .....	1-37
3. LUBRICATION DIAGRAM .....	1-38
4. MACHINE LUBRICATION.....	1-39
5. MACHINE DISPOSAL.....	1-41

<b>G - PNEUMATIC DIAGRAM .....</b>	<b>1-42</b>
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<b>H - ELECTRICAL DIAGRAM .....</b>	<b>1-43</b>
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## A - INTRODUCTION

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### 1. BASIC INFORMATION

The sewing machines S-4000 SRWD are designed and produced to be very reliable. Important design goals have been achieved to provide a safe machine that is simple and inexpensive to maintain.

The patented rotary needle bar shaft drive, a major benefit, delivers longer needle bar life. The added benefits of lower vibration and less noise, translate into less operator fatigue.

Simple buttonhole length adjustment located outside the machine, eliminates the need for tilt back, while the quick stop repair function delivers safety and makes repairs easier.

A halogen work light is included with the S-4000 SRWD, to enhance operator safety and product quality.

Special electronic and mechanical safety devices protect the operator and the machine. There is a special power lock out switch that permits the machine to be locked in the off position, so that it cannot be cycled accidentally. There is an emergency off switch. There is a low air pressure detector that will not permit machine operation if air pressure is dangerously low.

There are safety-warning labels on the machine in all areas that require special care. These must not be removed. If they are lost replace them immediately.

You are the most important safety equipment of all. Be sure you understand the proper operation of the machine. Never remove safety mechanisms or labels. We have made every effort to provide the safest possible machine, but without complete knowledge of how this machine operates, and the use of proper care by the operator, this machine can cause serious injury or death. That is why there are safety warnings throughout these instructions that carry one of these messages.

**DANGER!** Possible loss of life.

**WARNING!** Possible serious injury or machine damage.

**NOTICE!** Possible injury or machine damage.

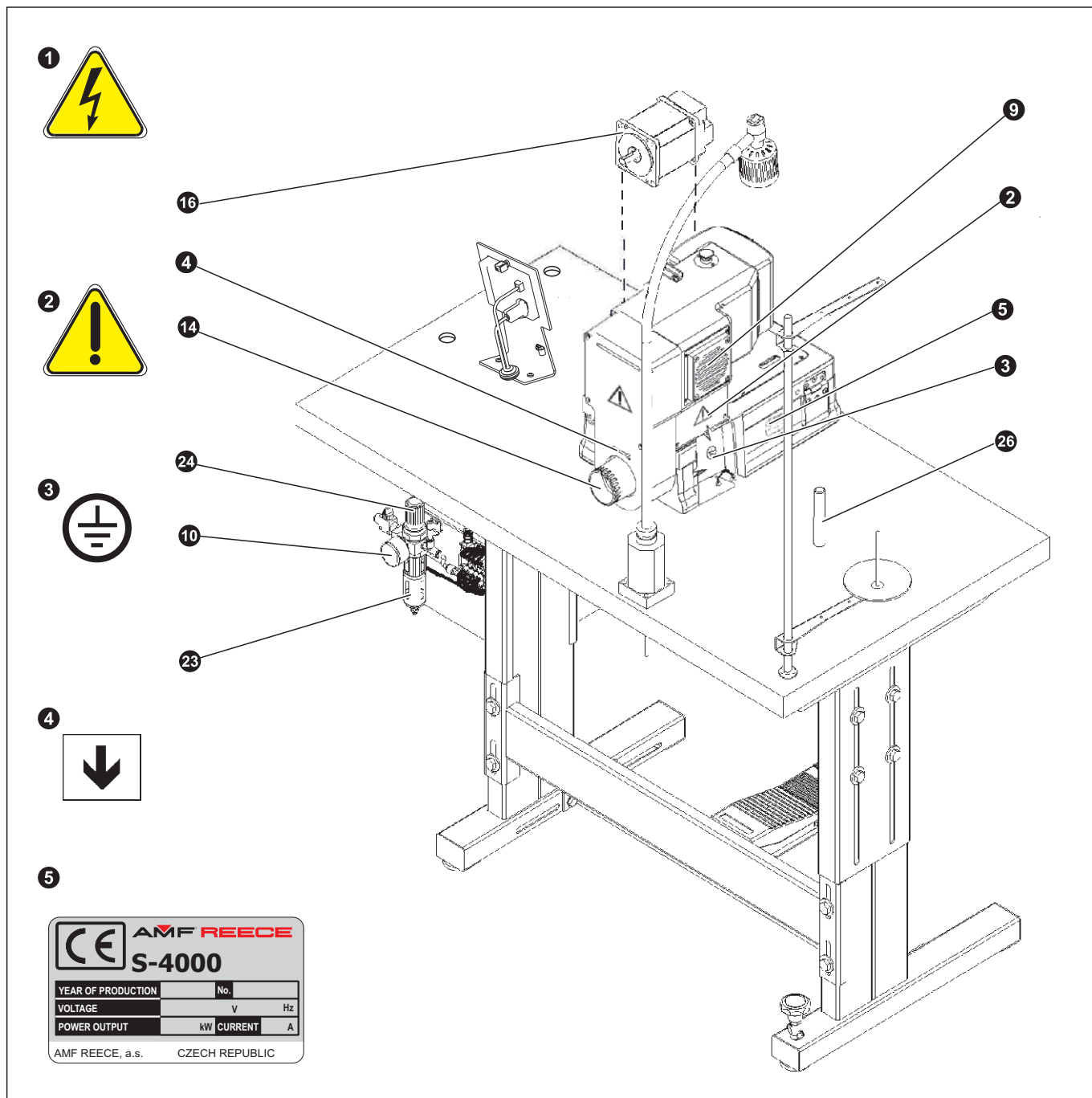
We recommend that service workers from AMF Reece oversee the installation and initial training of your mechanics and operators.

The most effective safety precaution is a well-managed safety program. Be sure those who use this machine are properly trained. Never disable safety equipment.

Always wear safety goggles when operating or servicing the machine.

## A - INTRODUCTION

### 2. SAFETY DEVICE AND LABELS

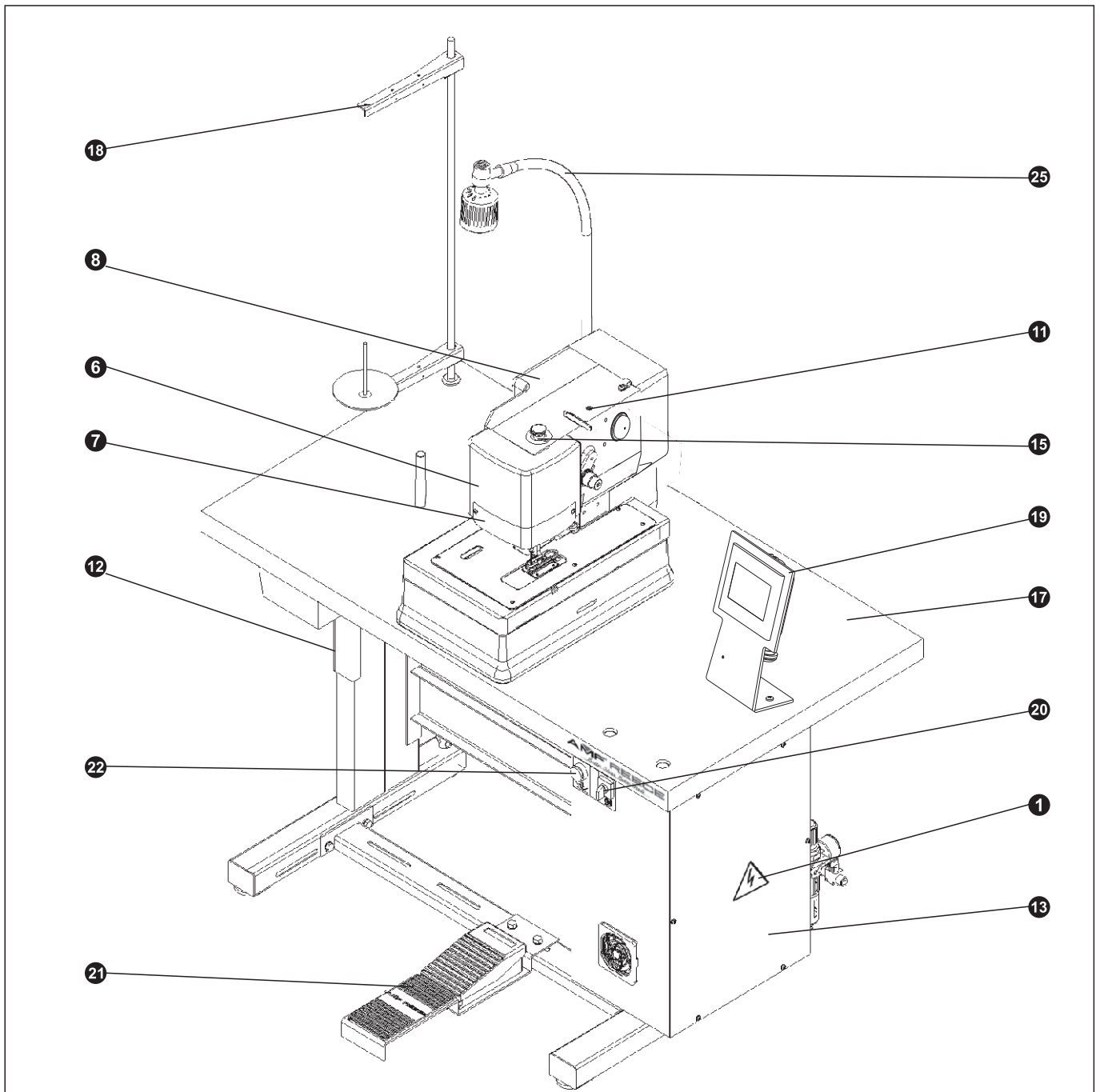


- 1 Warning
- 2 Covers removed, possible injury
- 3 Grounding
- 4 Rotation direction
- 5 Standard label
- 6 Needle bar cover

- 7 Eye guard
- 8 Head cover
- 9 Fan cover
- 10 Manometer with pressure sensor
- 11 Machine head
- 12 Table frame

## A - INTRODUCTION

### 3. GENERAL MACHINE PARTS DESCRIPTION



- 13 Control box
- 14 Hand wheel
- 15 Emergency Stop button
- 16 Motor
- 17 Table top
- 18 Thread stand
- 19 Control panel

- 20 Main switch
- 21 Foot pedal
- 22 Clamps Up/Down button
- 23 Air pressure regulator
- 24 Air pressure adjustment knob
- 25 Halogen lamp
- 26 Rest pin

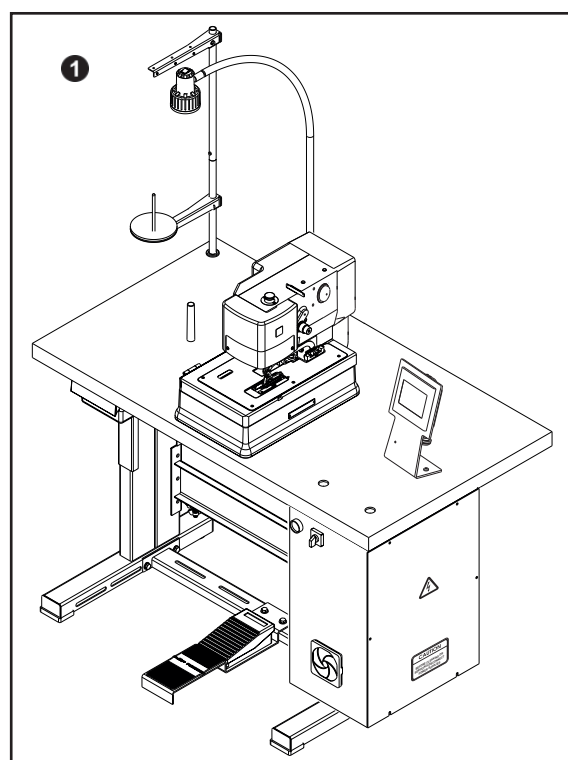
## A - INTRODUCTION

### 4. SPECIFICATIONS

Machine type	S 4000 SRWD
Description	Electronic controlled machine for sewing the tacks on various clothes.
Sewing speed	3200-3800 stitches/min
Machine clamp foot height	12.7 mm (1/2")
No. of stitches	5-9
Maximum work thickness	to 4 mm (5/32")
Bite range	1,7 - 3,0 mm
Recommended thread	thread size 80, 100, 120 (Tex 40-60)
Needle system	Needle 750 SC 90/14 (it is possible to order 80/12 and 70/10)
Lubrication	semi-automatic
Operating Conditions	according to IEC 364-3, IEC 364-5-51 temperature from +5°C to 40°C, relative air humidity from 30 to 80 %
Air pressure	0.55 MPa (80 PSI)
Machine db level	Laeg = 74dB; LWA = 87dB; LpC, peak = 103dB
Machine head dimension	340 mm (height) x 470 (width) x 250 mm (length)
Machine head length	62 kg
Table dimension	700 mm (height) x 600 mm (width) x 1100 mm (length)
Table types	Crosswise
Electrical Requirements	1NPE~60Hz 230V/TN-S (according to EN 60204-1) 1NPE~50Hz 230V/TN-S (according to EN 60204-1)
Line Circuit Breaker	10A charakteristic C (according to EN 60947-2) 16A charakteristic B (according to EN 60947-2)

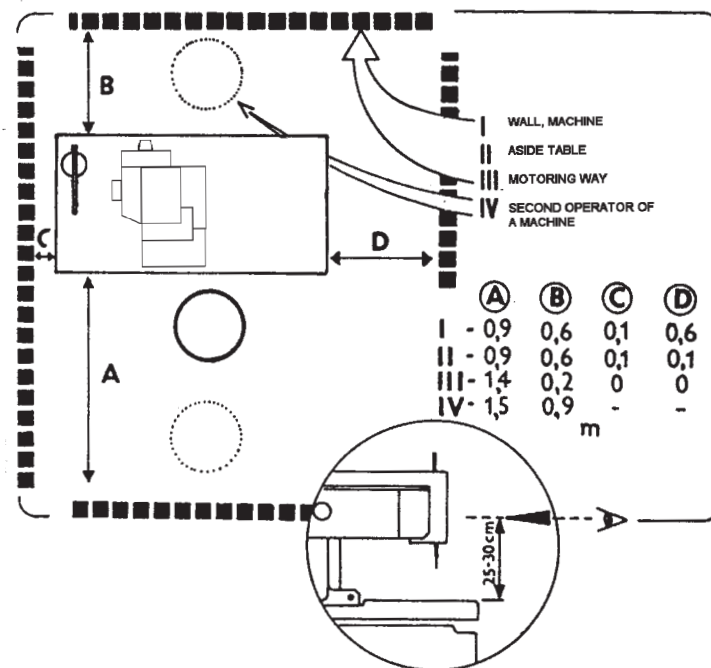
### 5. TABLE TYPE

#### ① Crosswise



## A - INTRODUCTION

### 6. INSTRUCTIONS FOR OPERATOR SAFETY AND MAINTENANCE



When installing the machine we recommend the minimum clearances noted above around the machine. Read all of the instructions that follow. **DO NOT PUT THE MACHINE INTO OPERATION UNTIL YOU ARE COMPLETELY FAMILIAR WITH ALL INSTALLATION AND OPERATING INSTRUCTIONS.**

#### **DANGER!**

- Before connecting the machine to the power supply, be positive that all safety covers are correctly installed.
- Always engage the power lockout switch, or disconnect the main power supply, before removing any safety covers.

#### **WARNING!**

- Locate the Emergency Stop button. Be sure you know how to use it.
  - Be sure that you have a reliable and uniform power supply.
  - Be sure that all electrical supply lines are in good condition and have no signs of damage to avoid electrical shock.
  - If any covers become damaged, they must be repaired or replaced immediately.
  - Do not touch moving parts of the machine while it is operating.
  - Keep clear of the needle.
  - Always switch off the main power before changing the needle.
  - Before cleaning the machine or performing service to the machine, engage the power lock out switch or disconnect the main power supply.
  - When the machine is not in use engage the power lock out switch or disconnect the main power supply.
  - When this machine is used incorrectly, or is incorrectly maintained, it can be dangerous.
- Everyone who uses this machine, or maintains this machine, must be completely familiar with this manual.

## A - INTRODUCTION

### CAUTION!

- Perform all regular service as described in this manual.
- If there is any problem with the power supply, turn off the main power switch.
- Do not remove, paint over, damage or in any way change safety labels. If a safety label cannot be easily read, replace it.
- Long hair and loose clothing may be dangerous near any machinery. Always contain long hair and avoid loose clothing, so that it cannot be caught by machinery and cause injury.
- Never use this machine while under the influence of drugs or alcohol.
- If anything seems to be operating incorrectly in the machine call for maintenance assistance immediately.
- Be sure that there is adequate light for safe operation. A normal minimum light level is 750 lux.

## 7. SPECIAL ACCESSORIES

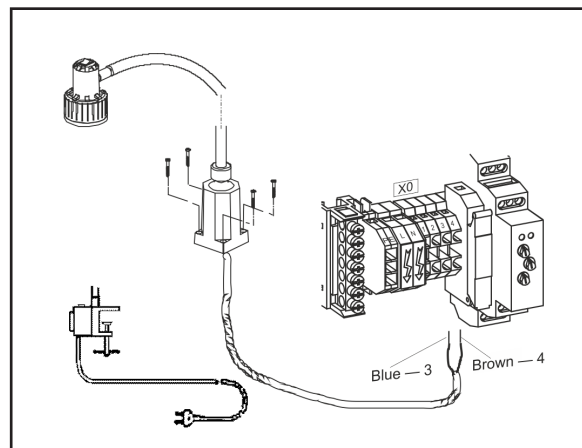
- Machine device, which is not included in the standard equipment of the machine and can be ordered by the customer.

### Light

- customer can order - no. 12.0008.4.403
- connection according to chart (terminal connectors X0; cable clamps 3,4)

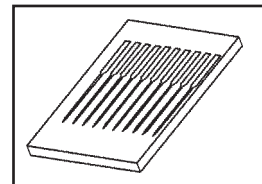
**Warning:** When turning on the light on the machine, disconnect the machine from the power supply.

- in case, you do not want to interfere into the machine wiring, it is possible to order the work light LBH-T65, order no. 12.0008.4.875, which contains its own clip fork the table and supply conductor with fork (plug) CEE7 for connection to the power supply ~ 230 V.



### Needles 750 SC 80/12, 70/10

- the manufacturer recommends to use these needles when sewing thin material
- part numbers 02.0750.2.100 (80/12), 02.0750.2.109 (70/10)



### Connector Ø 8 ①

- order it if the connecting tube has the inner diameter 8 mm.

The connector Ø 10 is supplied with the machine.

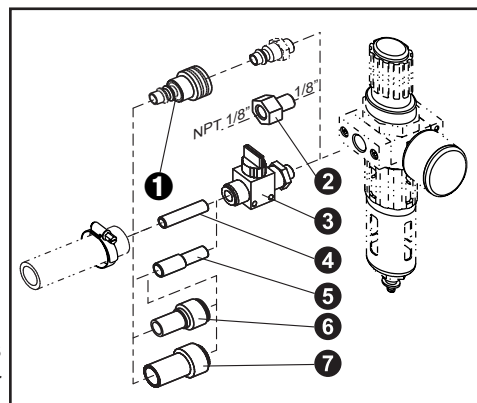
- part number is 12.0008.3.607

### Pneumatic Adapter ②

- order it if using 1/8" NPT
- part number 12.0008.3.081

### Hand valve ③

- to dissipate any air from the machine, order it (air circuit is bled). It is necessary to order the connectors (see below) to the hand valve for connection to the air tubes.
- part number 12.0008.3.463



### Connectors

- ④ 12.0008.3.464 Ø 8 for connection to the tube with inner Ø 8 mm
- ⑤ 12.0008.3.466 Ø 10 for connection to the tube with inner Ø 10 mm
- ⑥ 12.0008.3.467 Ø 12 for connection to the tube with inner Ø 12 mm\*
- ⑦ 12.0008.3.465 Ø 16 for connection to the tube with inner Ø 16 mm\*

\* To connect the tube with inner Ø 12 and Ø 16, it is also necessary to order Ø 10

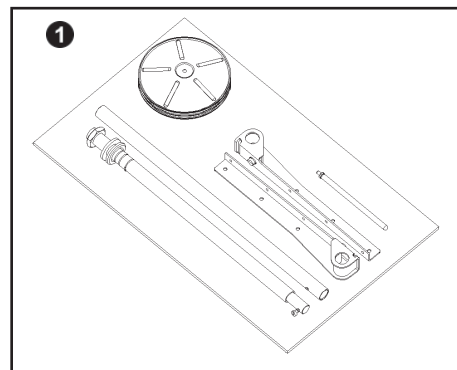


## B - MACHINE ASSEMBLY

### 1. CONTENT OF THE SHIPPING BOX

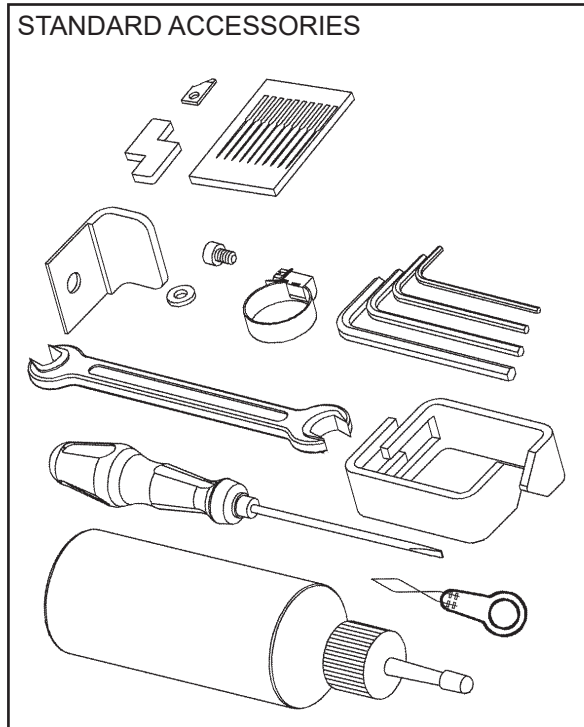
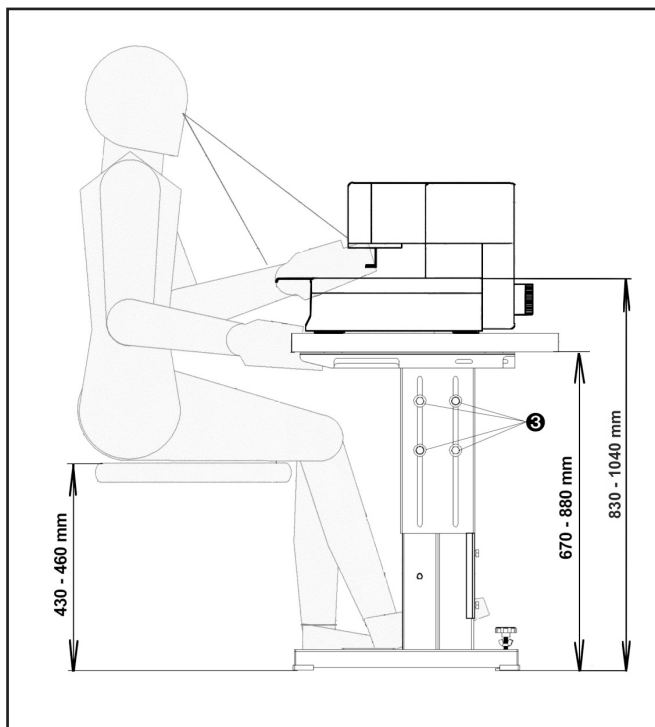
1. The shipment contains one box.
2. There is a carton with accessories, service manual with parts section and thread stand **1** in the box.
3. During unpacking the shipment, follow the labels which are on a cover.

**CAUTION:** If the machine or crate was damaged in shipment inform the freight company immediately. Check the contents of the crate immediately and report any damage or missing items to the manufacturer immediately, late reports will not be considered!

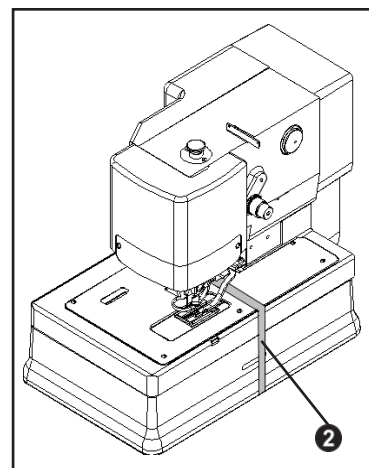


### 2. ACCESSORIES

A package of accessories is supplied with the machine, please refer to page 3-48 for detailed descriptions. The height of the working area is normally set in range 830 - 850 mm from the manufacturer (and embedded) S4000TKF is in range 780 — 800 mm.. When using this height of the working area, recommended height of the operator seat is in range 430 - 460 mm. The height of the table can be set in range 670 - 880 mm by screws **3**.



Remove the shipping strap **2** after unpacking the machine, the use of this strap is recommended anytime the machine is transported (This is valid for all types of tables - parallel, crosswise, universal).

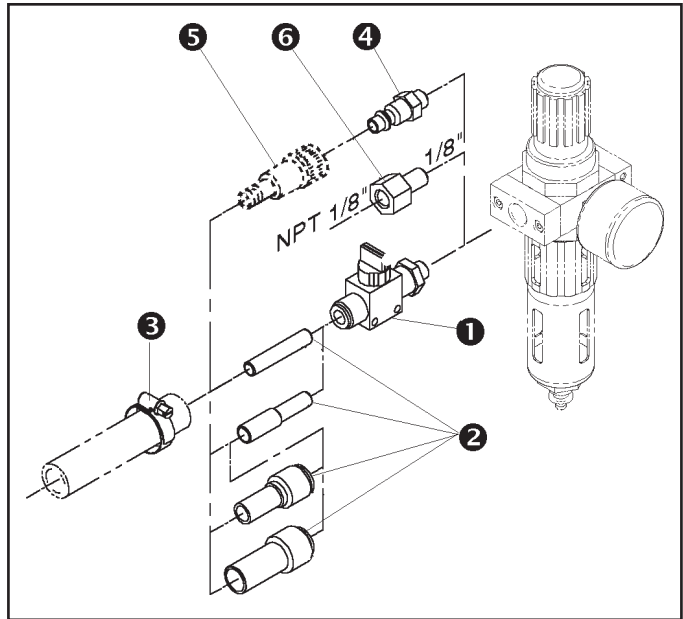


## B - MACHINE ASSEMBLY

### 3. POWER AND AIR CONNECTION

- The machine is equipped with a quick coupler **4** required with connector for inner Ø of the tube 10. The connector for inner Ø of the tube 8 is not supplied with the machine, a customer has to order it. The manufacturer recommends to use connector **6** for customers who requires to connect the tube with connector NPT. If a customer needs to use a shut off valve **1**, which allows fast releasing of the air from the circuit, he must order it. A variety of connectors **2** can be used separately or in combination to adapt to the available input supply hose. It depends on type of the tube which is used by a customer. These connectors are not included in the accessories. A tubing clamp **3** is provided.

**NOTE:** Parts **1**, **2**, **5**, **6** are included in Extra Parts.

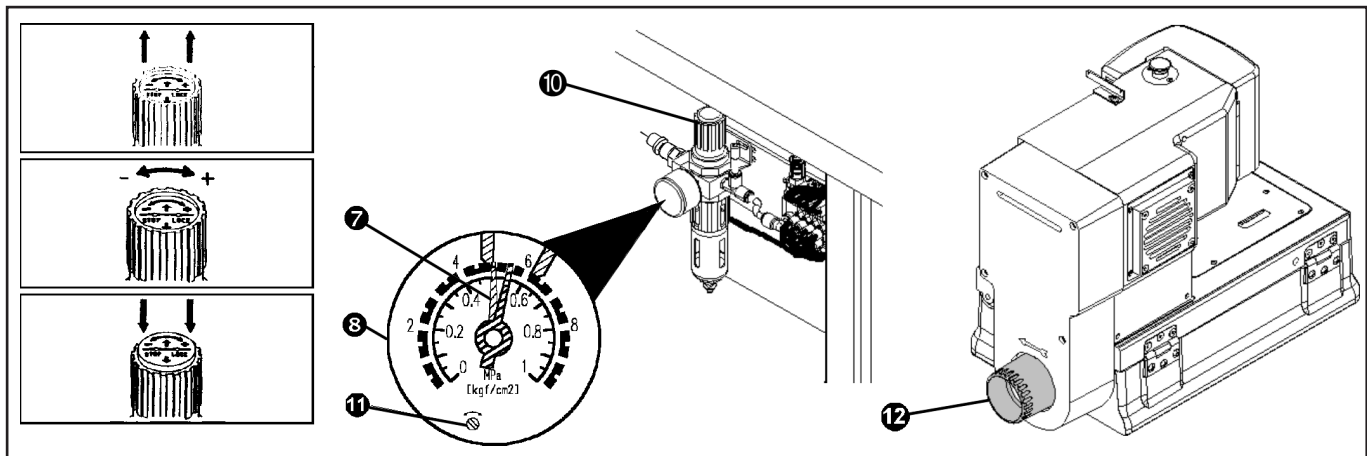


- After air connection check the set air pressure on the dial of the regulator. It should be in range 0.5 - 0.6 MPa. The green pointer **7** indicates the lowest working air pressure 0.5 MPa, which is set from the manufacturer on the regulator **8**. If the air pressure is

lower than 0.5 MPa after connecting the machine to the power supply „Low Pressure“ message appears on the control panel display. To adjust the working pressure, loosen the regulator cap lock **10** and turn the regulator cap clockwise to increase the pressure. Push the regulator cap **10** down. The LED **11** is for setting the minimal operation air pressure.

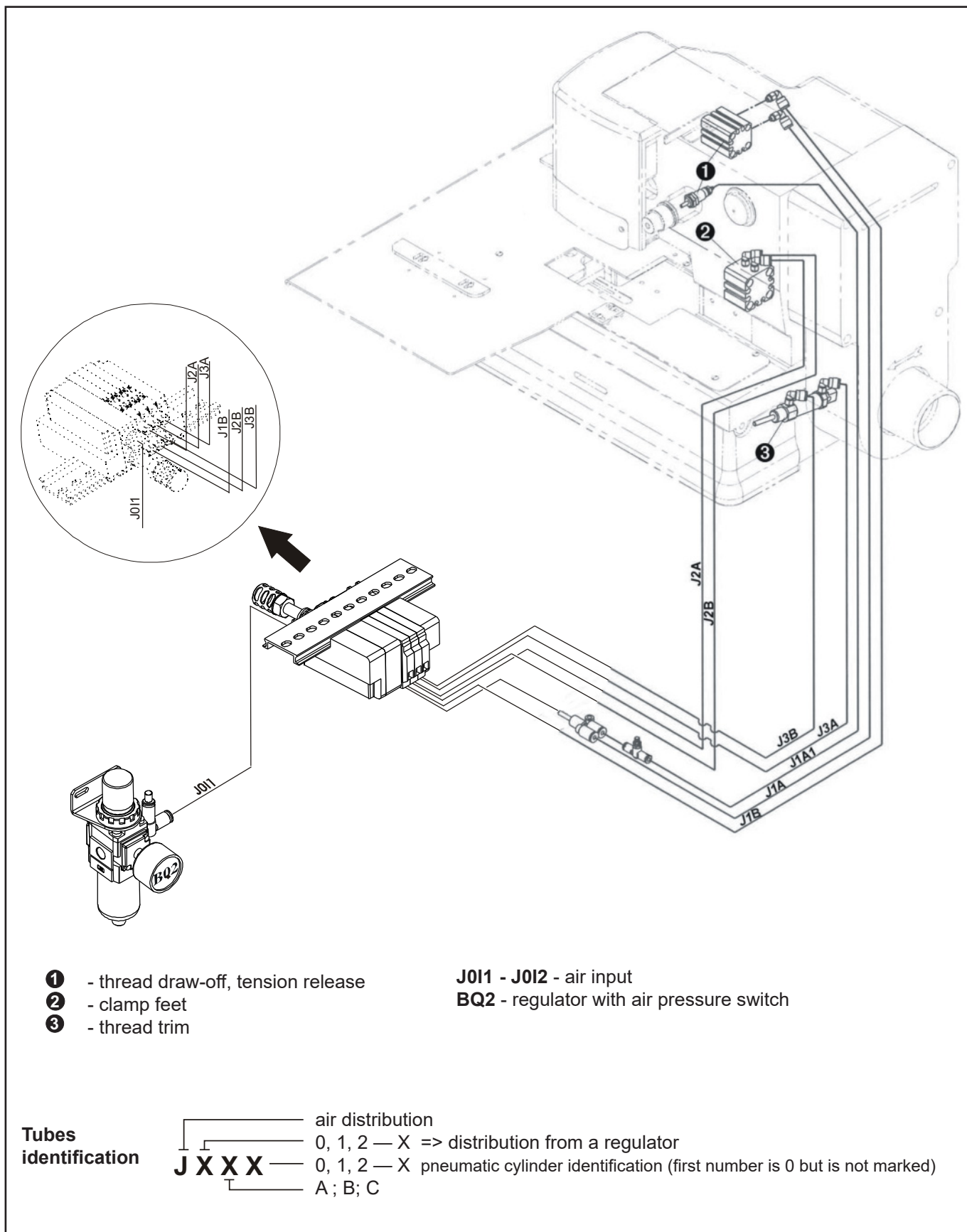
- Power supply must be 208 to 230 volts 1 phase, 50 or 60 hertz. Receptacle plug must meet requirements of IEC standard 364-4-41, its circuit breaker must be minimal 10A with characteristic C according to the EN 60947-2 (or 16A with characteristic B). No other devices must not be connected to the circuit breaker of the socket. The hand wheel **12** must turn counter clockwise.

**The machine is equipped with a filters which contain capacitors which generate an high frequency leakage current. In order to prevent nuisance tripping, residual current protection device must be protected against these high frequency currents: this is the case for industrial residual current device (example „S“ type).**



## B - MACHINE ASSEMBLY

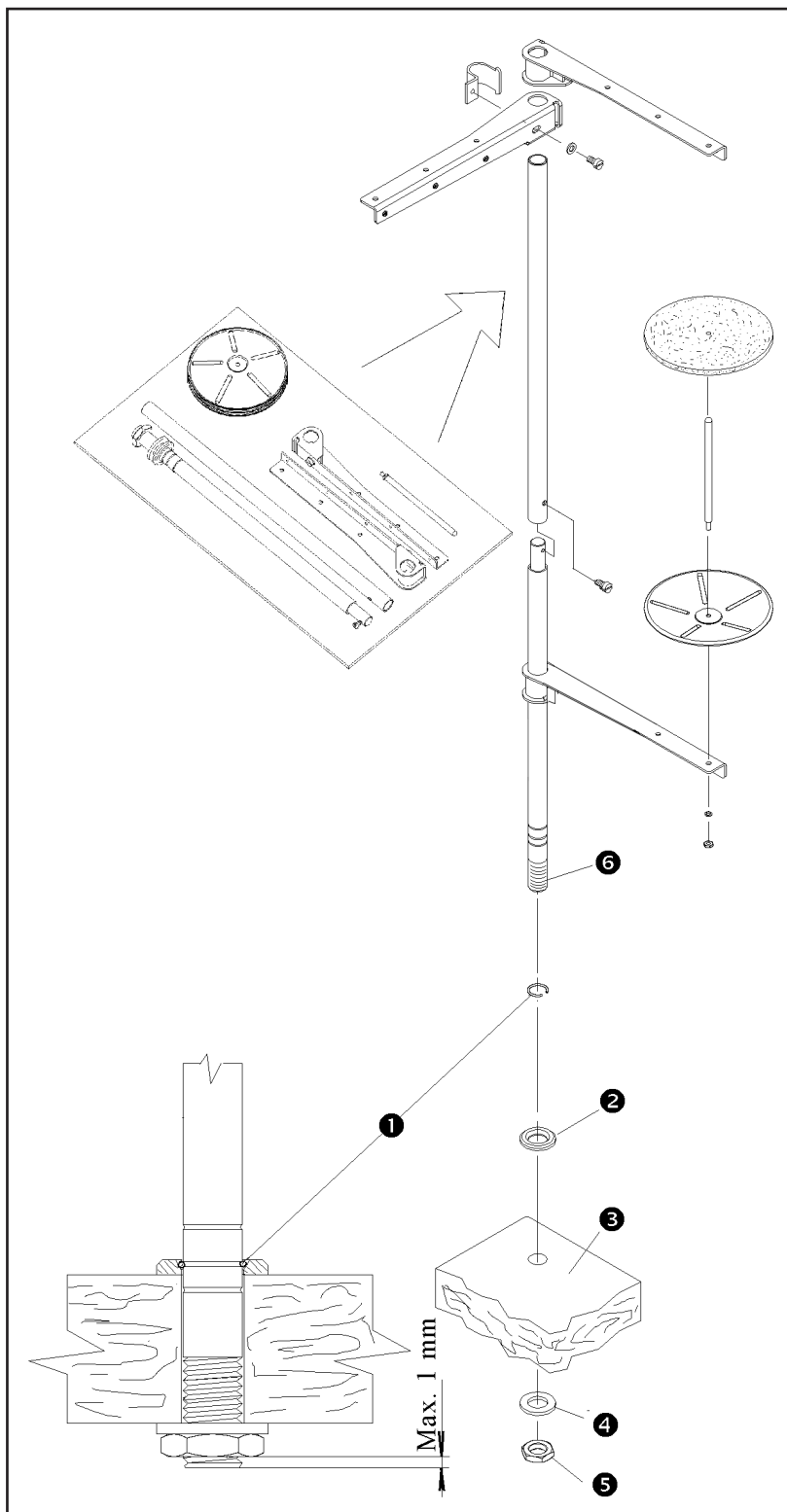
### 4. Head Pneumatic



## B - MACHINE ASSEMBLY

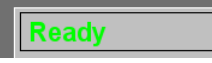
## 4. THREAD STAND INSTALLATION

1. Put the thread stand together according to the drawing.
2. Position of the locking ring **1** allows assembly of the thread stand for various thickness of the table top. Threaded end of the post **6** must not extend more than 1 mm (1/32) through the locking nut **5**.
3. Insert the washer **2** and the post into the hole provided in the right rear of the table top **3**. Insert the washer **4** and tighten the nut **5**.

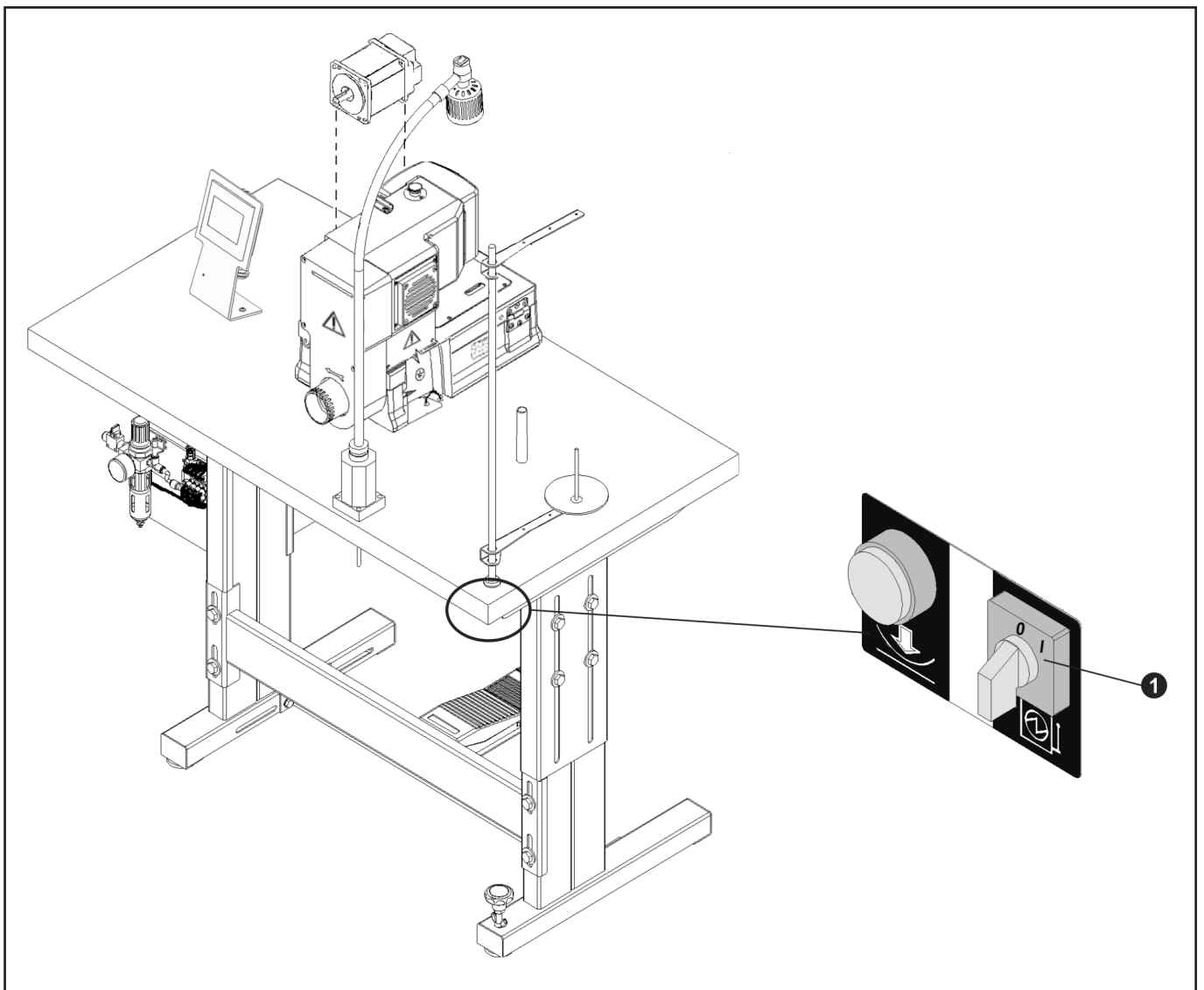


## C - PROPER APPLICATION

### 1. POWER UP/HOME POSITION

1. Turn the main power switch on **1** by turning clockwise to the I position.
2. The machine is ready for operation when the control panel display lights, the Ready message appears on the display and the green LED lights on display.  The machine must be in the home position before starting to sew (to be certain, press the foot pedal and sew one dummy buttonhole).
3. It is possible to instal power voltage control (Voltage monitoring relay HRN 35) in to the machine control system. This power voltage control cautions a machine operator if the supply voltage is not in the required range (185V - 255V) and the machine could be damaged - see section E19.

**Note:** The power voltage guard is installed in the machine only if a customer has ordered it with a machine.



## C - PROPER APPLICATION

### 2. NEEDLE INSTALLATION

**WARNING!** Before performing this adjustment, switch the main machine power off to prevent accidental starting of the machine. Disconnect the air supply and dissipate any stored energy.

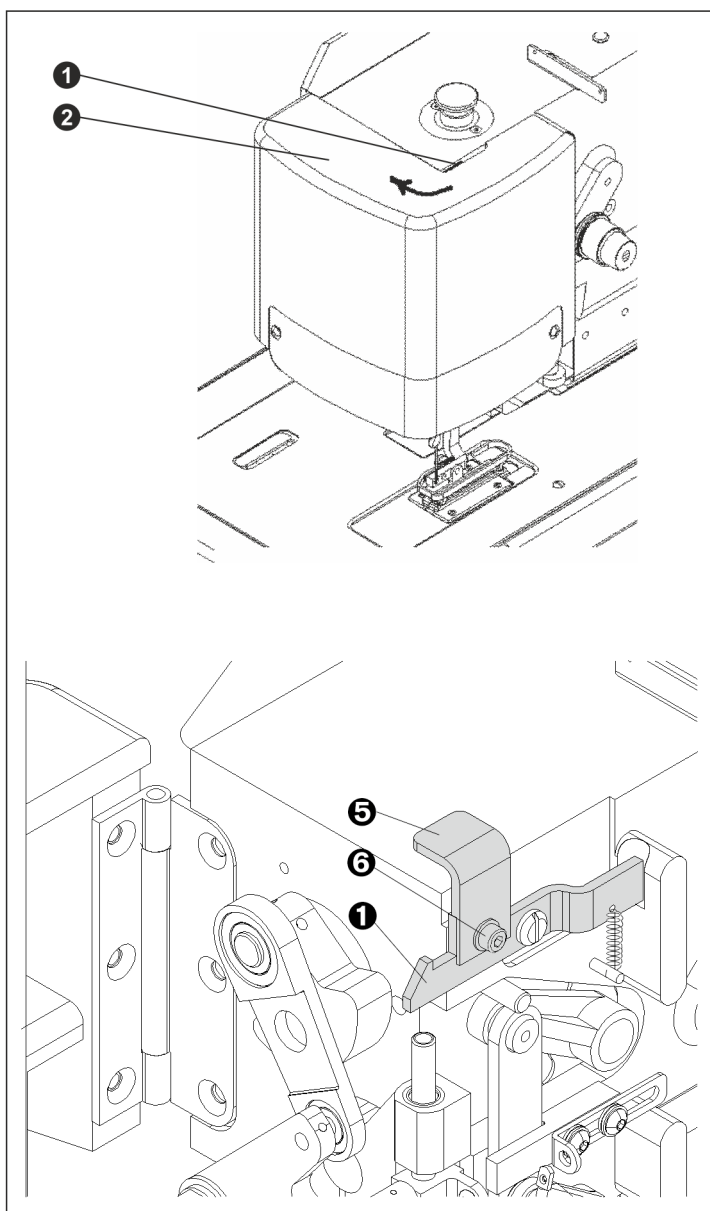
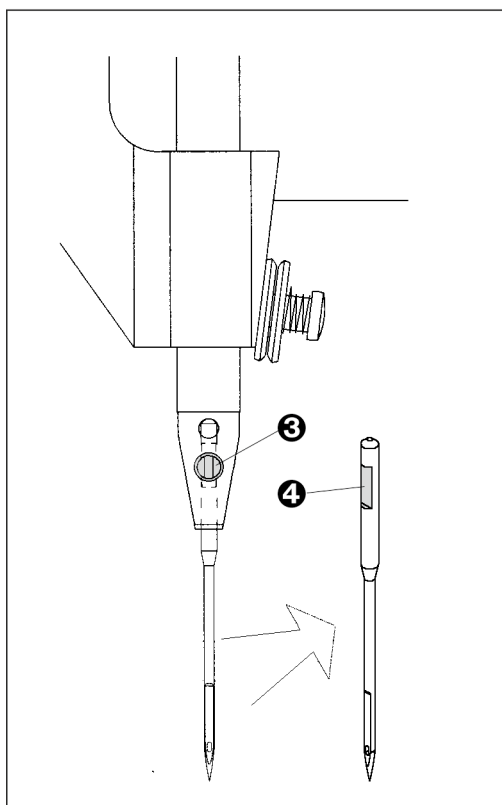
Use needles ordering number 02.0750.2.110 (750SC 90/14) only - see accessories.

It is also possible to use needles part number 02.0750.2.100 (750 SC 80/12) and needles part number 02.0750.2.109 (70/10) for sewing the thin materials - these needles are not included in the standard machine equipment.

1. Using the screwdriver push the latch **1** and open the needle bar cover **2**.

Note: The accessories contain the lever **5** (part number 22.0213.0.000) and screw (part number 08.6000.4.005) with washer (08.6850.4.000) **6**, which is possible to fit to the latch. It allows opening of the cover without using the tool.

2. Loosen the screw **3** and remove the needle.
3. Insert the new needle so that the long thread groove **4** is in the rear and the spot for the clamping screw **3** is in line. Do not install a bent or broken needle. Roll the needle on a flat surface to check for straightness.
4. Tighten the screw **3** well.

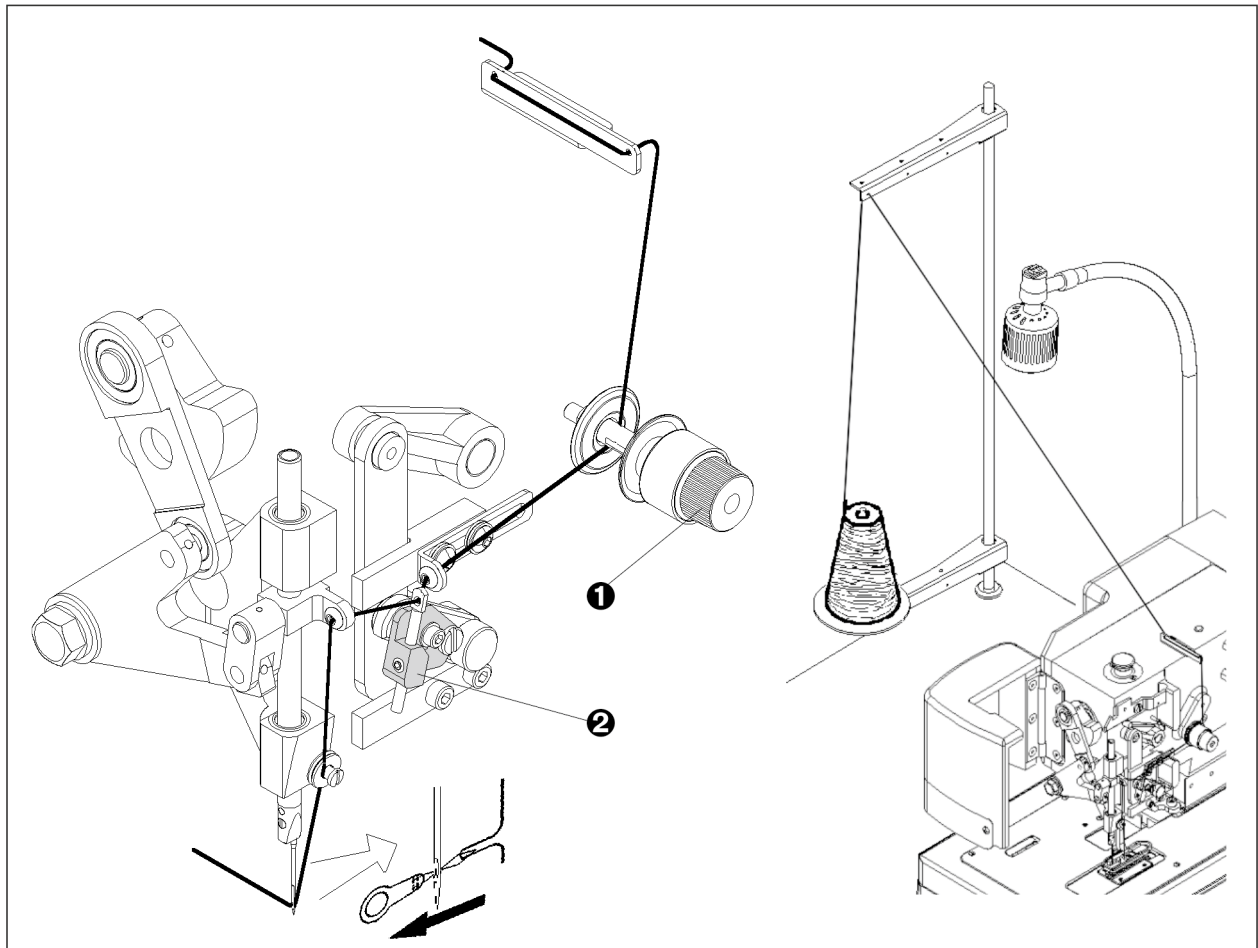


## C - PROPER APPLICATION

### 3. THREADING

**WARNING!** Switch the main machine power off to prevent accidental starting of the machine. Disconnect the air supply and dissipate any stored energy.

When threading, see the pictures below. Change the thread tension by nut **1** according to the sewing conditions. To increase the thread draw off (for example sewing on the thin fabrics) there is an arm **2** installed on the thread draw off lever.



**The appearance and quality of the sewing may be affected by one or more of the following:**

- clamping of the material
- thread tension
- type of thread (size etc.)
- sewn material (thickness, density)




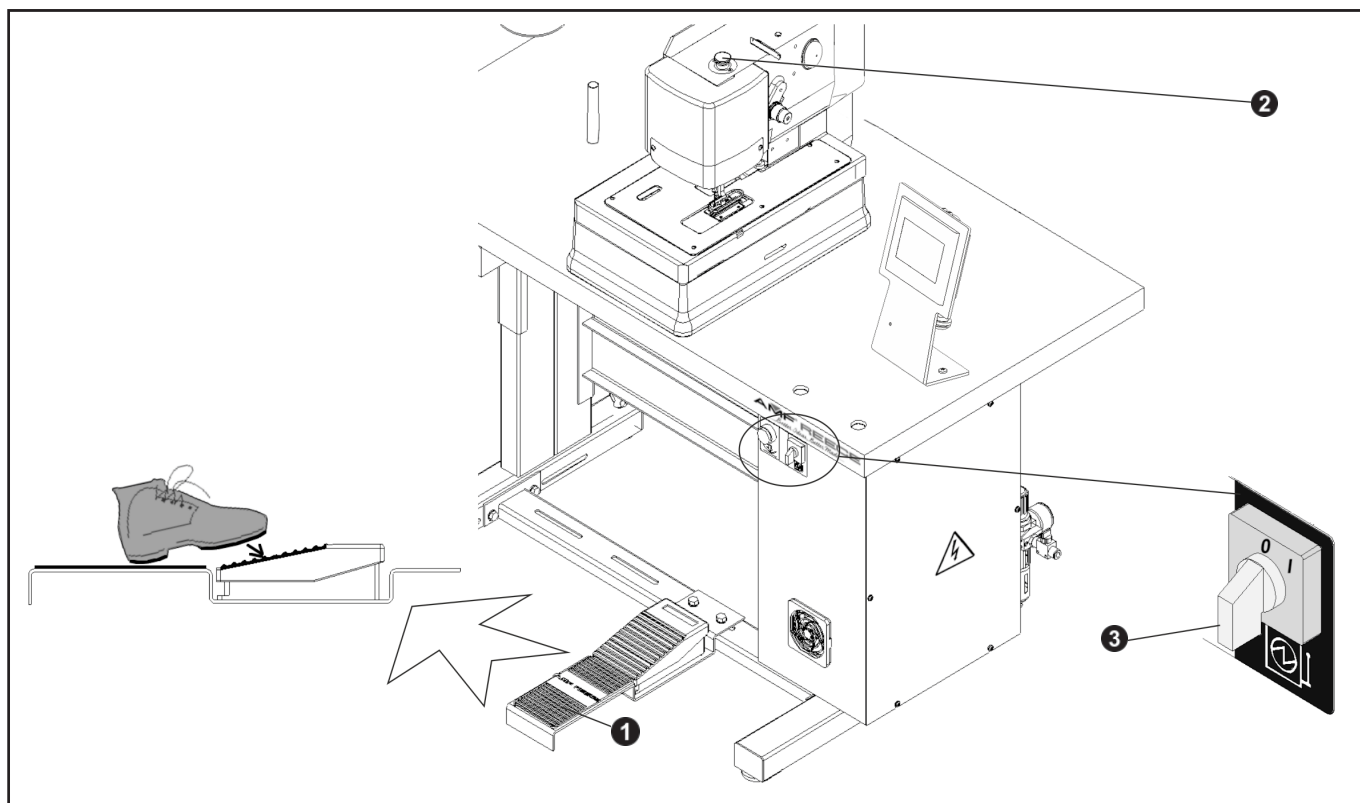
## D - MACHINE CONTROLS

### 1. PROGRESS OF SEWING

1. Bring the machine to the home position according to the section C1.
2. Be certain that the machine is threaded correctly according to the section C3 and insert the work under the clamp feet.
3. When the foot pedal **1** is pressed to the first position, the work is clamped by the clamp feet.  
(Releasing the foot pedal will rise the clamp feet).

Note: It is possible to set in the program the machine start on first pedal position.

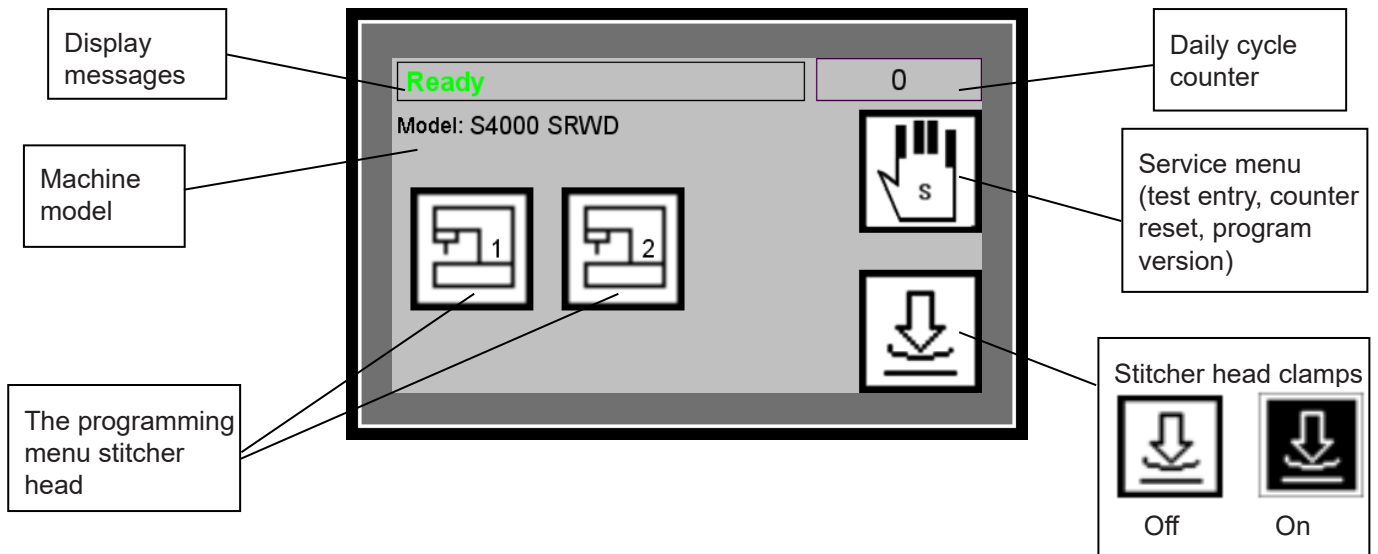
4. When the foot pedal is pressed to its second position, the sewing is started. After finishing the sewing and trimming the thread, the machine returns to the home position and the clamp feet rise.
5. When the clamp feet are up, it is possible to move the sewn work for next sewing.
6. Machine can be stopped in any place of the cycle by pressing the Emergency Stop button **2** which is placed on the machine head. After releasing the Emergency Stop button, pressing the  button and pressing the foot pedal, the machine finishes the sewing.
7. If the foot pedal **1** is pressed before finishing the sewing, the clamp feet will not rise and the machine will sew four cycles instead of two - this is possible to set in program.
8. When the work is done, switch the machine off by the **3** button.





## D - MACHINE CONTROLS

### 2. OPERATOR CONTROL PANEL PUSH BUTTONS AND SWITCHES



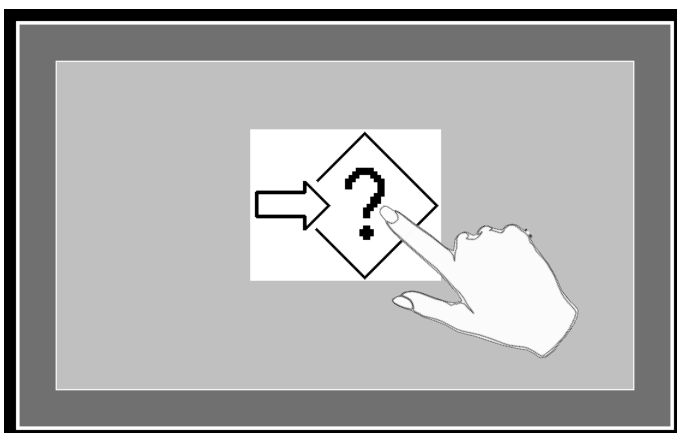
<b>Display messages:</b>	<ul style="list-style-type: none"> <li>• Ready</li> <li>• Emergency stop</li> <li>• Wait please</li> <li>• Busy</li> </ul>
<u>Standard messages:</u>	
<u>Error messages:</u>	<ul style="list-style-type: none"> <li>• Motor not ready</li> <li>• Low air pressure</li> <li>• Low voltage</li> </ul>

#### ATTENTION!

When doing any kind of adjustment, keep your hands off the needle area. The basic machine design is equipped with a pedal control; therefore never place your foot onto the foot pedal.

Error messages on the display are mentioned in *Troubleshooting* section.

#### Error setting



It will display if the value of the parameter is adjusted out of range.

Press the screen on the display, you will return on the main screen

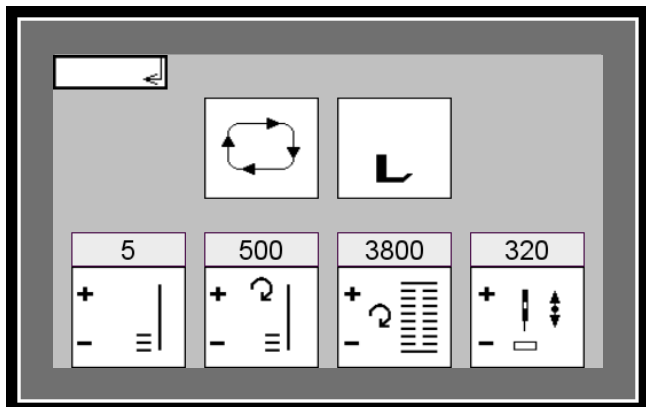
## D - MACHINE CONTROLS

### 3. THE PROGRAMING MENU STITCHING HEAD

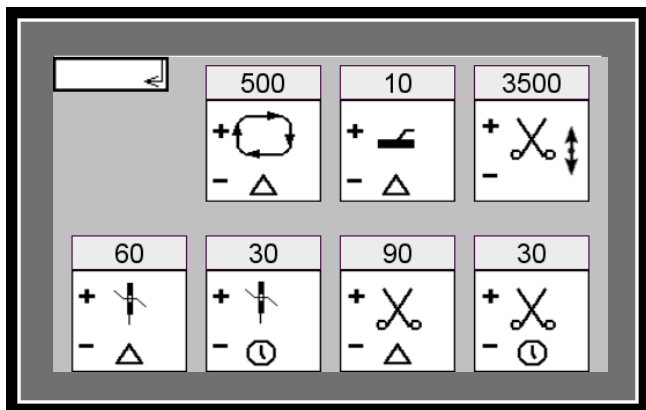
Enter the sewing head program menu by pressing button



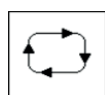
Parameters set 1



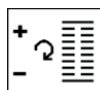
Parameters set 2



## D - MACHINE CONTROLS



Setting the machine cycling. (On/Off).  
If the button is backlit, the function is active.



Setting the maximum sewing speed.  
(Range 1000 - 3800 ppm)



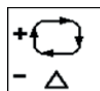
Setting the foot pedal position. (Possible setting 1step/2steps).  
Adjustment for position 1 means, that the machine closes clamps and starts sewing in one moment.



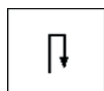
Setting correction of the needle bar upper position. (Range 0 - 600 imp)



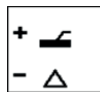
Adjustment for position 2 means, that the machine closes clamps on 1 position and on position 2 starts the sewing cycle.



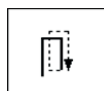
Setting the delay between the button hole sewing cycles. (Range 500 - 2500 ms)



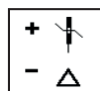
Setting the number of buttonhole sewing  
(It is possible to set 1 sewing/2 sewings/1 or 2 sewings)



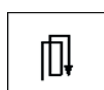
Clamp feet opening delay adjustment,  
at the end of cycle. (Range 0 - 100 ms)



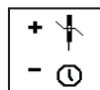
Setting 2 sewings



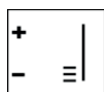
Thread Draw-off delay.  
(Range 60 - 135 ms)



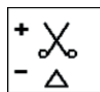
Setting 1 or 2 sewings.  
If you press the foot pedal and keep it pressed down after sewing 1 buttonhole, the buttonhole will be sewn again.  
If you press the foot pedal only at the start of sewing and release it, a buttonhole will be sewn by 1 sewing.



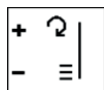
Thread Draw-off time.  
(Range 30 - 200 ms)



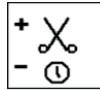
Setting the number of stitches in slow speed at the beginning.  
(it is possible to set 5 - 9 rpm)



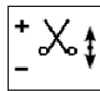
Setting the trim delay.  
(Range 90 - 200 ms)



Setting the slow start speed at the start of sewing cycle.  
(Range 500 - 1000 rpm)



Setting the trim timing activation.  
(Range 30 - 60 ms)



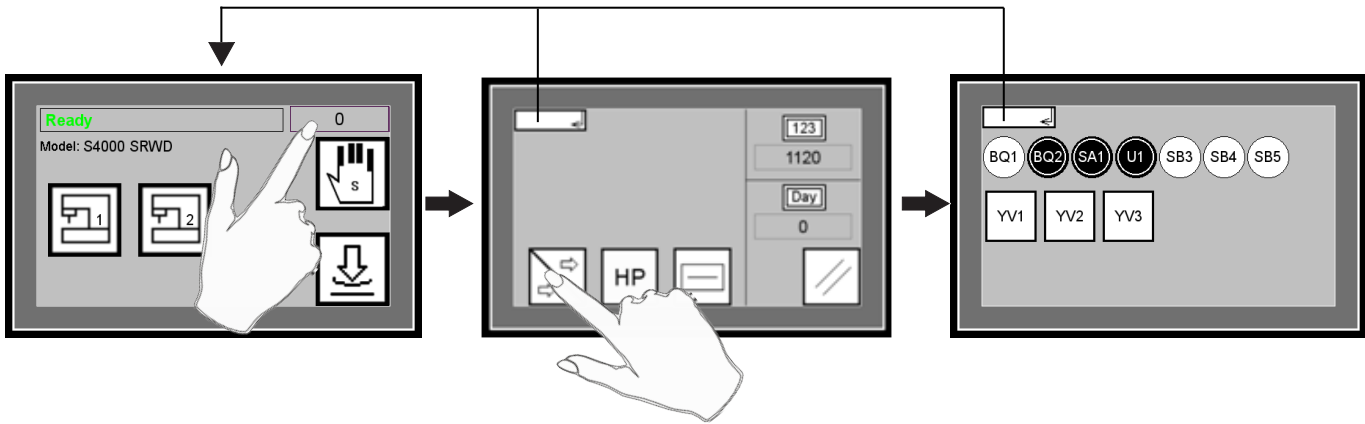
Trim active.  
(0 - 4500 imp)

To return to the main screen, press  key.

## D - MACHINE CONTROLS

### 4. TESTS

Warning !!! The tests can be carried out by qualified service men only.



#### Inputs

**BQ1** – The end position sensor BQ1. The symbol signals correct function of the sensor of the end position of the cam (HOME) BQ1.

Activate the sensor using a metal tool and the button turns black.

**BQ2** – The symbol signals the correct function of the air pressure button BQ2.

If the air pressure is less than 0,5 MPa the button is under lighted.

**SA1** – The symbol signals the correct function of the emergency button SA1.

After pressing button key EMERGENCY STOP the button is under lighted.

**U1** – The symbol signalize the correct function of the servodriver.

If the servodriver is in operation, the button is underlighted.

**SB3** – The sewing head clamps button.

When pressing the clamps button on the machine or in the main menu, the symbol turns black.

**SB4** – The symbol signals the correct function of the first position button of the pedal SB4.

When the foot pedal is pressed to its first position the button SB4 is underlighted.

**SB5** – The symbol signals the correct function of the second position button of the pedal.

When the foot pedal is pressed to its second position the button SB5 turns black.

#### Outputs

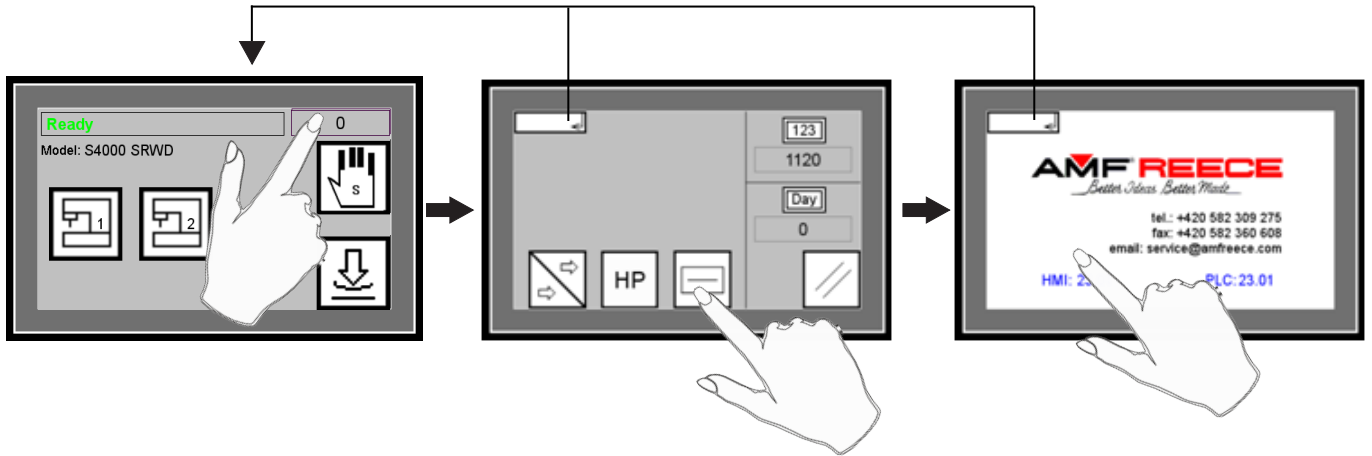
**YV1** – The button is used to activate the YV1 valve of the draw-off lever. The cutting lever goes down.

**YV2** – This button is used to activate YV2 valve of the clamping. The clamps are pressed onto the fabric.

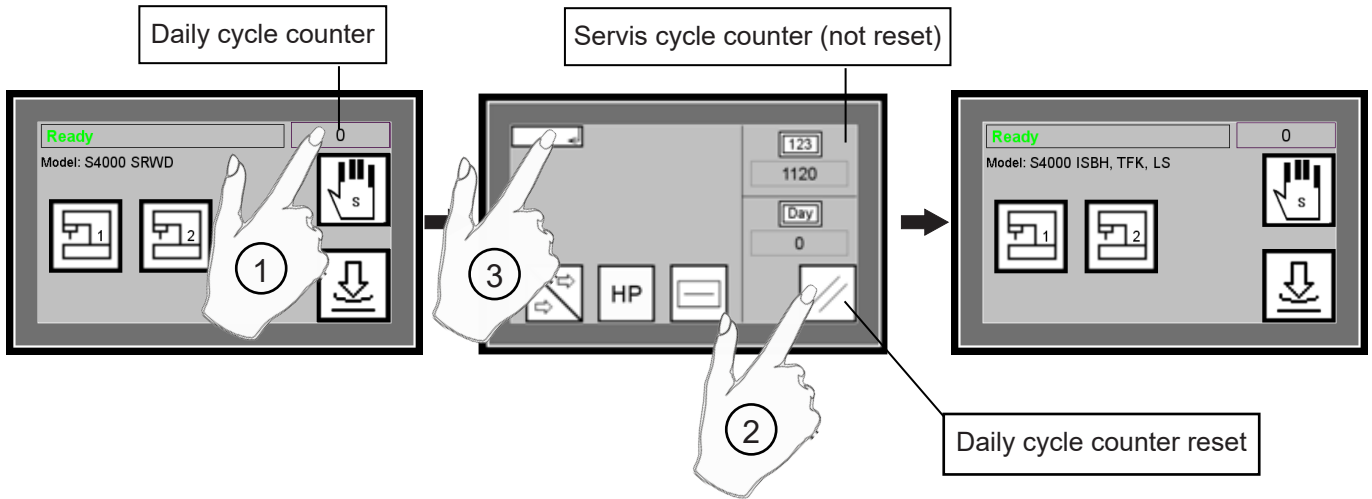
**YV3** – The button is used to activate the YV3 valve of the thread trimming.

## D - MACHINE CONTROLS

### 5. PROGRAM VERSION



























### 6. COUNTER RESET



## D - MACHINE CONTROLS

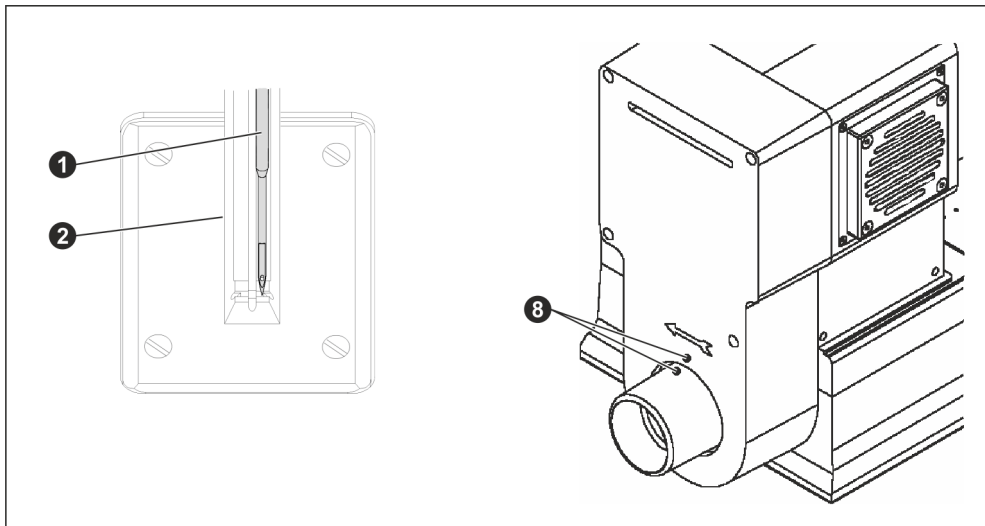
### 7. PARAMETER CHECKLIST

PARAMETER	RANGE	SETTING
	 Off  On	 Off
	 1 step  2 steps	 2 steps
	 1 repeat  2 repeat  1/2 repeat	 1 repeat
	5 - 9	5
	500 - 1000 rpm	1000
	1000 - 3840 rpm	3800
	0 - 600 ipm	320
	500 - 2500 ms	500
	0 - 100 ms	50
	60 - 135 ms	
	30 - 200 ms	
	90 - 200 ms	
	30 - 60 ms	
	0 - 4500 imp	3500

## E - MACHINE ADJUSTMENTS

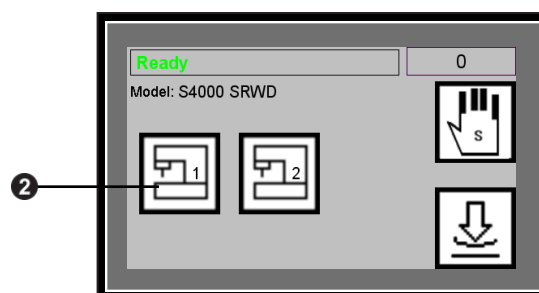
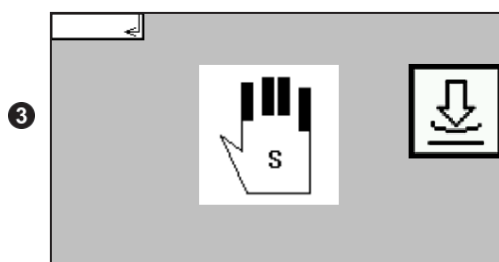
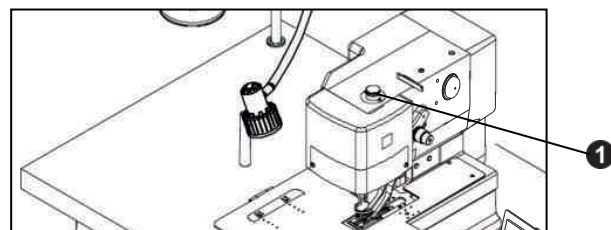
### 1. MACHINE HOME POSITION

The needle bar is in the upper position. The needle **1** descends to the right side of the throat plate slot **2** during the first stitch. The marks **8** on the handwheel and cover casing are aligned.




### 2. THE PRINCIPLES FOR THE MACHINE ADJUSTMENT

1. Before starting doing adjustments switch the machine into the service mode by pressing the emergency stop button **1** on the machine head and releasing it again. Press the button **2** on the control panel afterwards. "Service mode" message appears on the display **3**.



**WARNING! THE MACHINE CANNOT START OPERATION BY PRESSING THE FOOT PEDAL IN THE SERVICE MODE!**

2. Press  button to go back onto the main screen.

## E - MACHINE ADJUSTMENTS

## 3. NEEDLE BAR

## 3.1. Needle bar crank position

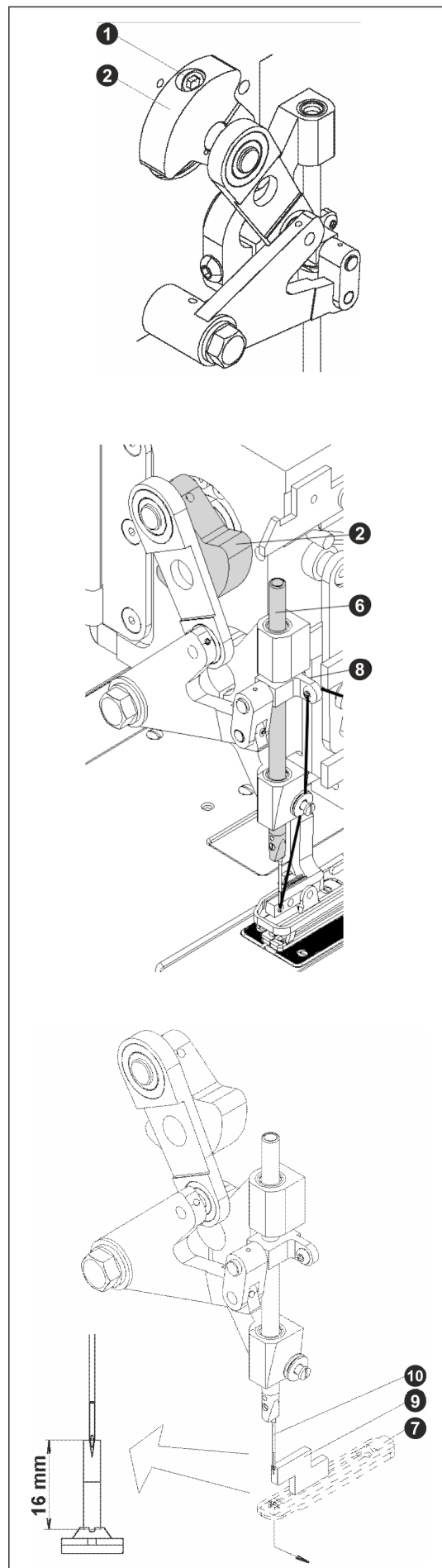
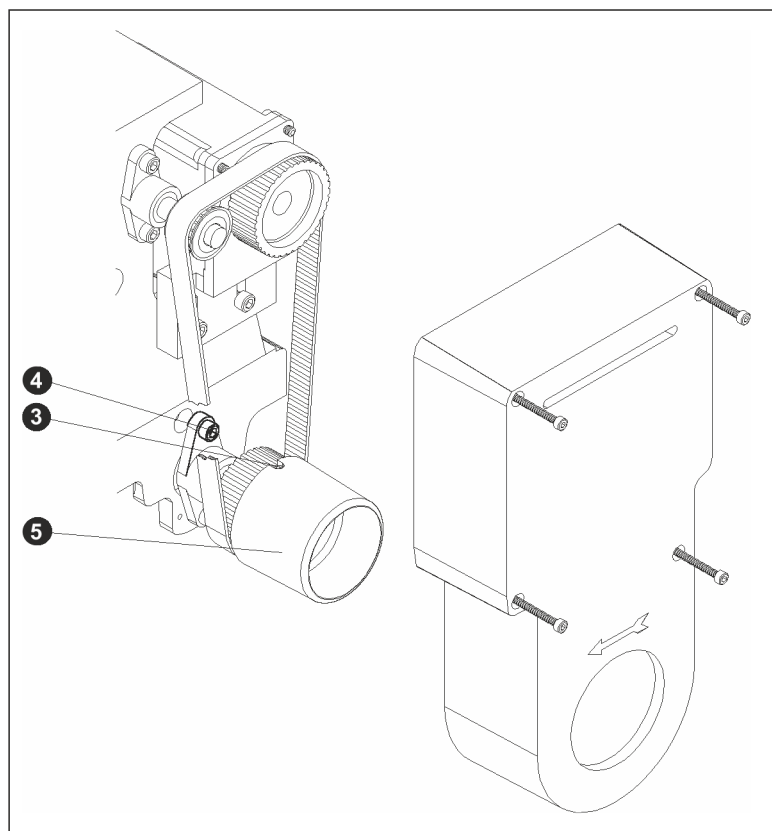
Turn the handwheel **5** and loosen the screw **1** in the needle bar crank **2**. Turn the handwheel until the needle bar reaches the upper position. Pulley screw **3** on the main shaft should be in the same line with screw **1**. Tighten the screw **1**.

**NOTE:** The needle bar should be in the top dead center position when the screw **3** is at 12 o'clock. To check, turn the handwheel clockwise and counter clockwise. The needle bar must move downward in either direction. The needle **10** makes its first stroke into the right side of the throat plate.

## 3.2. The needle bar height adjustment

Adjust the needle bar **6** height to 16 mm (5/8") from the surface of the throat plate **7** to the lower edge of the needle eye. Use height gauge **9**.

Loosen the set screw **8** and move the needle bar up or down as necessary.





## E - MACHINE ADJUSTMENTS

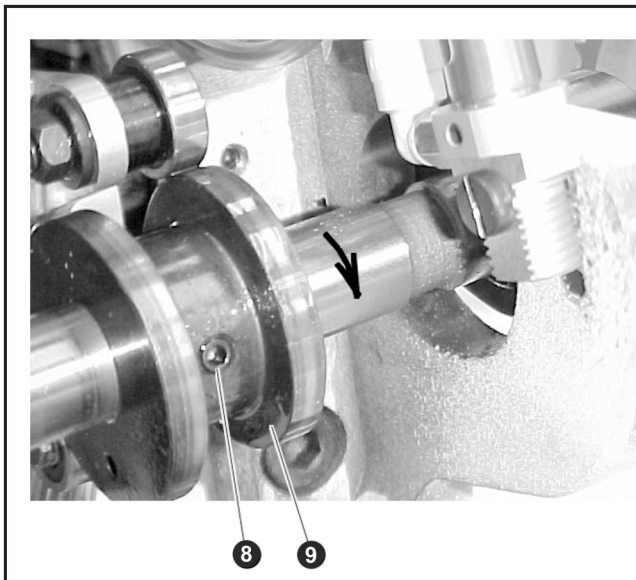
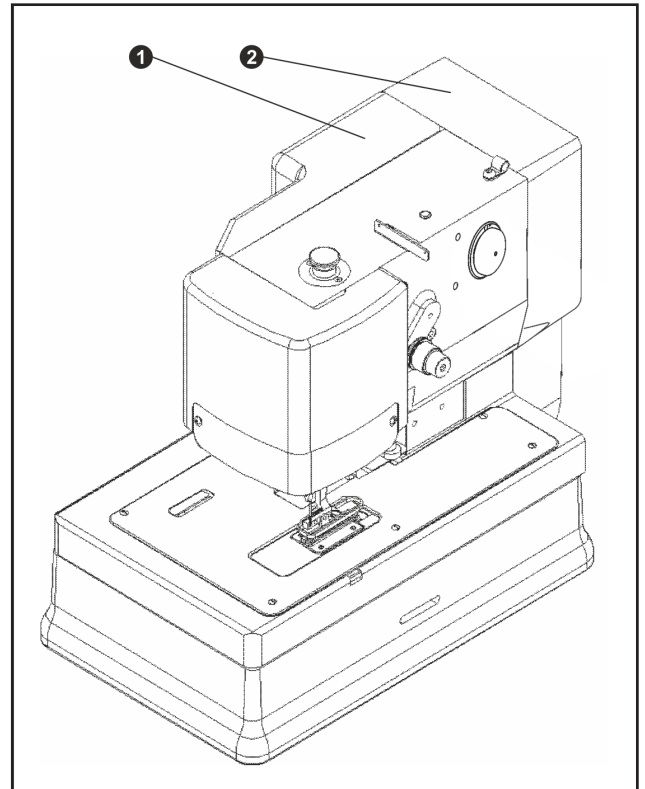
### 4. BITE

Before the bite adjustment, remove the pulley cover **2** and the head cover **1**.

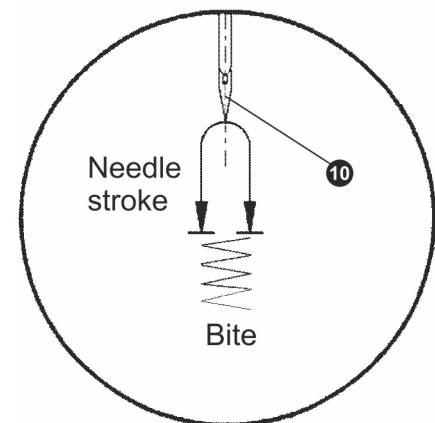
#### 4.1. Bite cam

- a) Check if the machine is in the home position.
- b) Tilt the machine onto the rest pin **7**. If the adjustment is correct, the second cam locking screw **8** (counter clockwise of the bite cam **9**) must be roughly perpendicular to the bedplate casting.
- c) Adjust the position of the bite cam so that all of the needle bite motion occurs equally with the needle out of the work piece on the up and down stroke.

**Note:** There must be no bite movement before the needle **10** comes out of the work nor after it has descended into the work - see illustration. Tighten both locking screws **8** securely.



Needle upper position



## E - MACHINE ADJUSTMENTS

### 4.2. Bite width adjustment

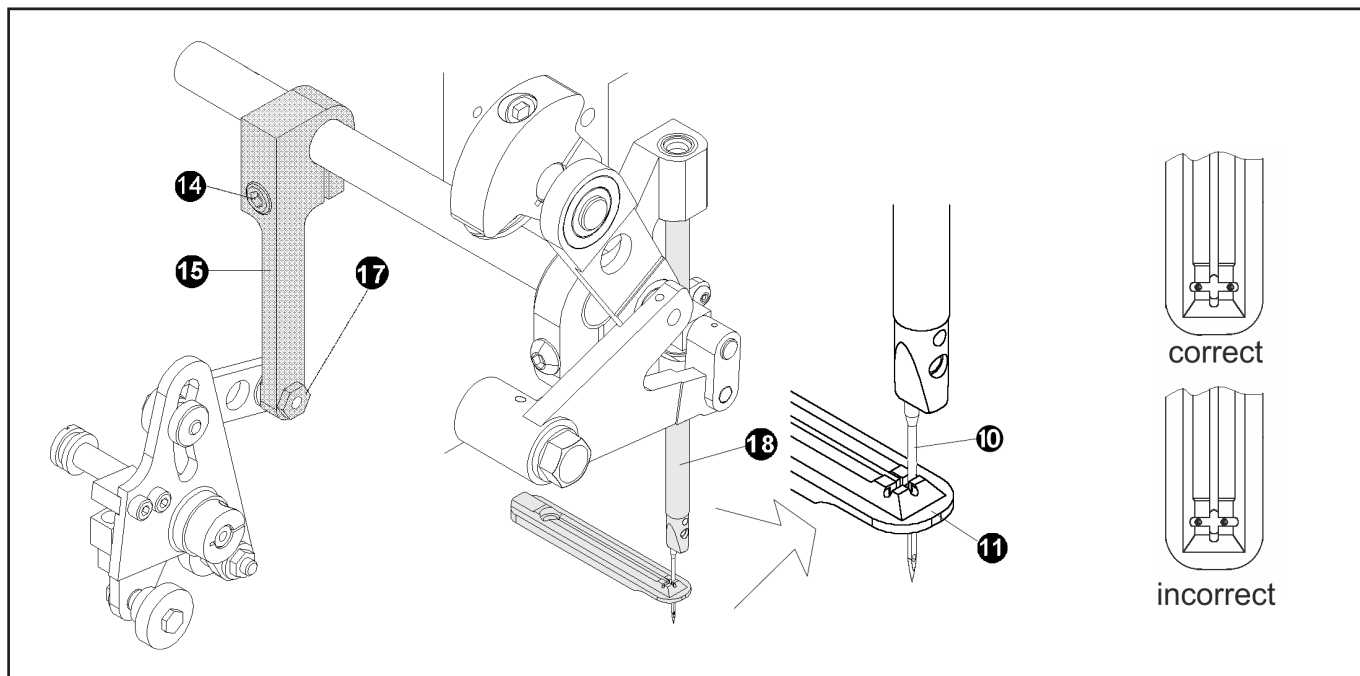
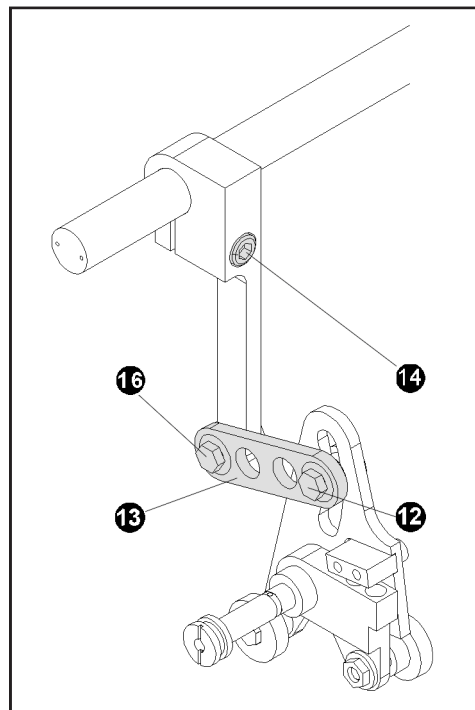
To adjust the bite width, first remove the head cover for access to adjustments.

The S-4000 is fitted with a regular bite throat plate **11**, that allows a bite range of 1.5 mm (1/16") to 2.3 mm (3/31").

- loosen the adjusting screw **12**
- to increase the bite width, raise the bite lever **13**
- to decrease the bite width, lower the bite lever **13**
- tighten the adjusting screw **12**

### 4.3. Centering the bite over the throat plate

- with the machine in the home position - loosen the clamping screw **14** on the bite lever **15**
- for rough adjustment, using the handwheel, rotate the needle bar to its full down position and move the needle to the right side of the throat plate slot **11**. Turn the hand wheel to the second needle **10** down stroke and compare the needle position in the left side of the throat plate. Continue adjusting until the needle is roughly of equal distance from the right and left sides.
- tighten the clamping screw **14**
- for finite adjustment loosen the screw **16** and rotate the eccentric nut **17**. Tighten the locking screw **16**.

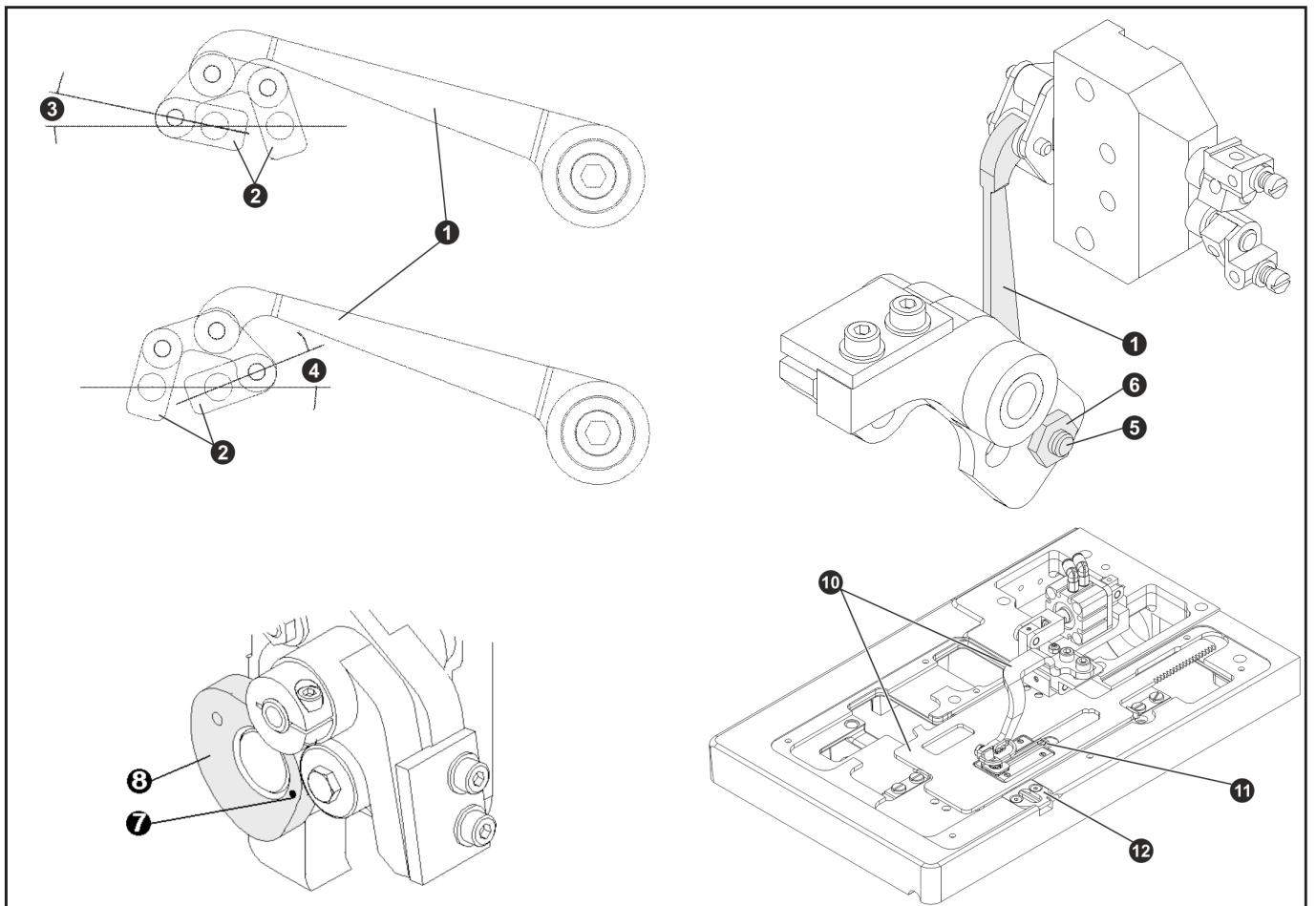


## E - MACHINE ADJUSTMENTS

### 5. LOOPER ADJUSTMENTS

Before making this adjustment, follow the points described below:

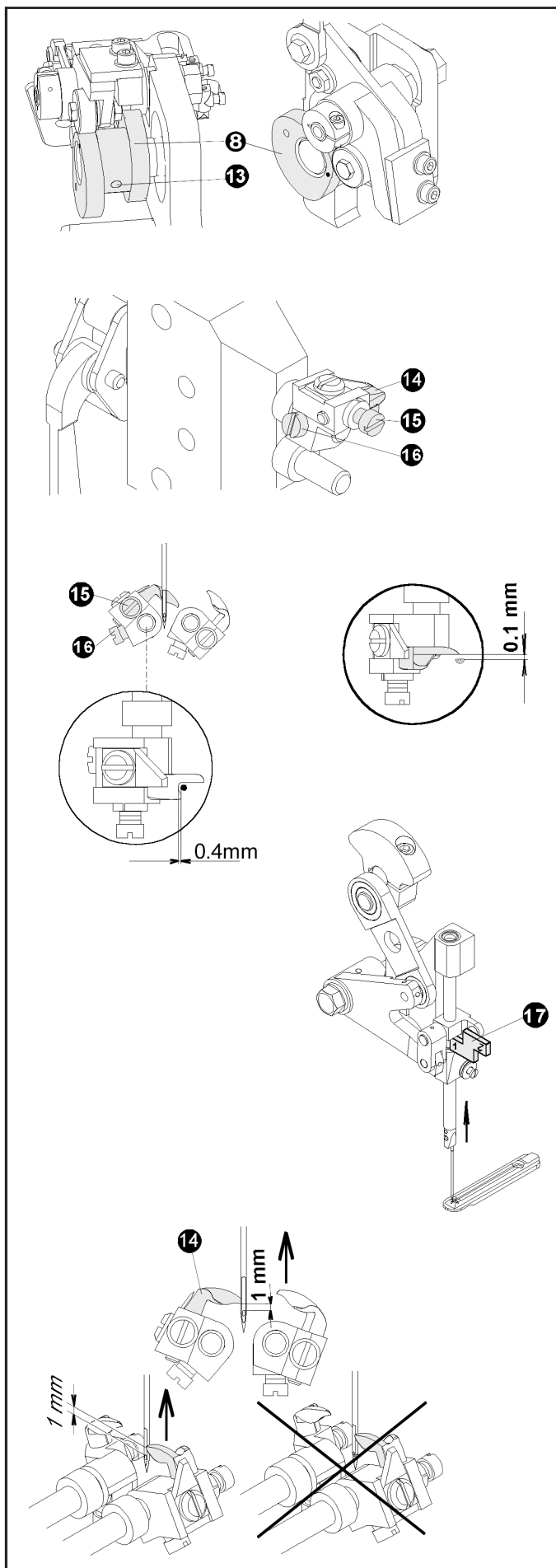
- Turn the handwheel and observe the position of the connecting link **1** at both ends of the looper link arm travel **2**. Angle A **3** must equal angle B **4**.
- If incorrect - loosen the hex mounting screw **5** and rotate the eccentric adjusting nut **6** as needed. Tighten the hex mounting screw **5**.
- Turn the handwheel and bring the needle bar to the upper position.
- Check if the needle is straight.
- Tilt the machine head onto the rest pin and check if the mark **7** on the looper cam **8** is on the left side. If the mark is on the right side, remove it and install it correctly. Return the sewing head back.
- Remove the cover plate, disconnect the air tubes from the clamp feet cylinder and remove the clamping assembly **10** from the machine, remove the throat plate **11**, trimming hook cover **12** and trimming hook. Dismantle the loopers with holders.



## E - MACHINE ADJUSTMENTS

*The first looper adjustment*

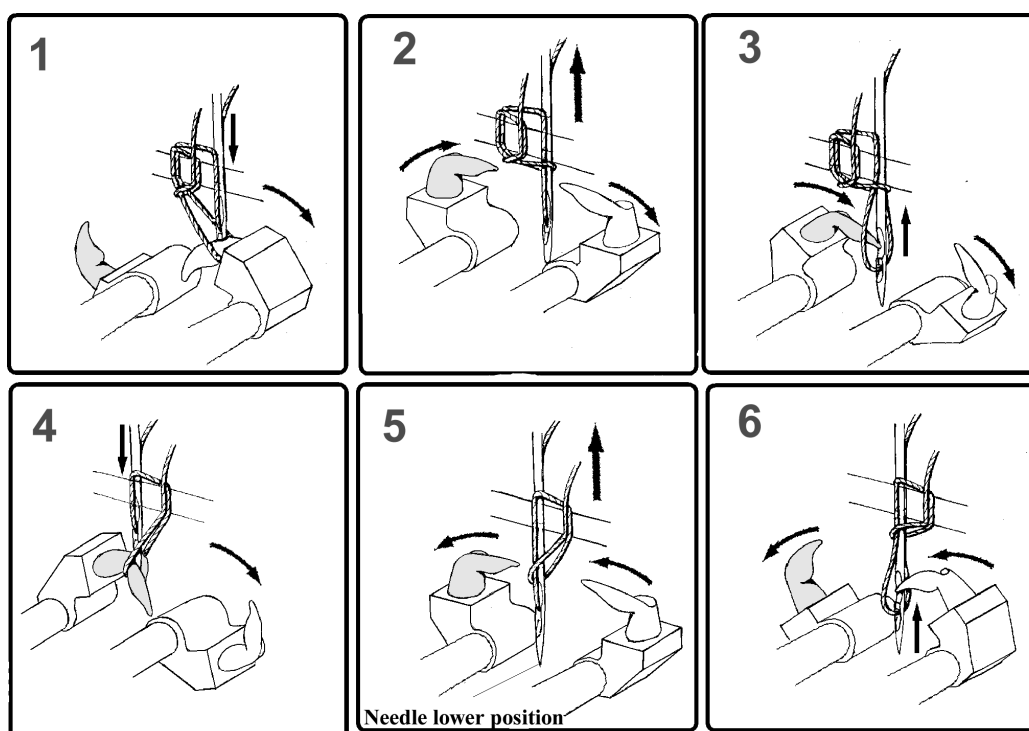
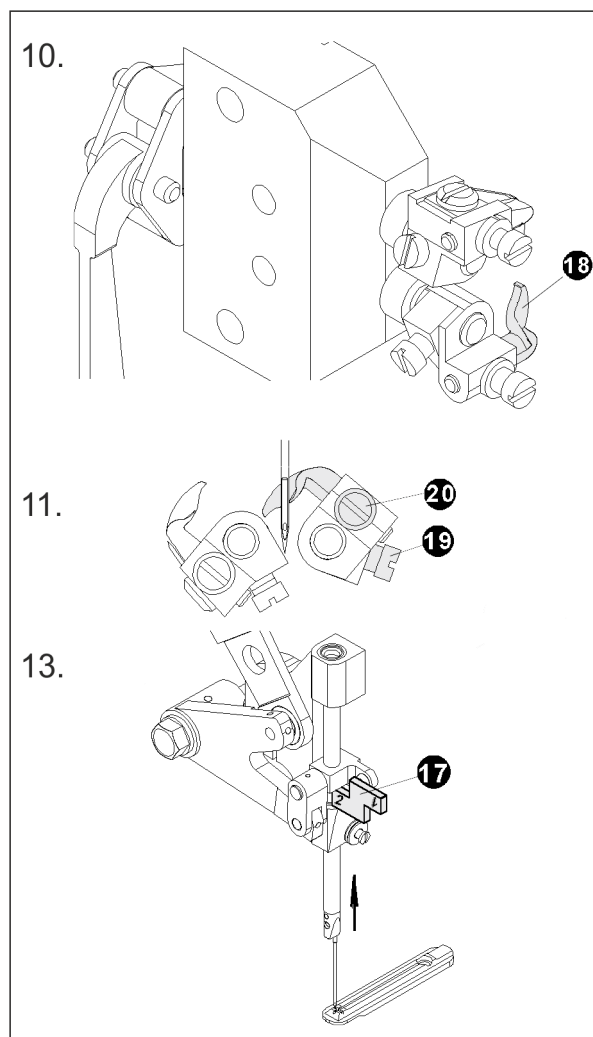
1. Bring the machine to the home position and loosen the screws **13** of the looper cam **8** and adjust the looper cam to the lowest position.
2. Loosen the looper set screw **15** and turn the looper to be perpendicular to the hole in the looper holder.
3. Install the holder with the first looper **14** on the shaft.
4. Loosen the looper holder screw **16** and move the holder so that the needle passes the looper in the center of the looper recess. There must be clearance 0,4 mm between the needle and the looper recess. Tighten the looper holder screw **16**.
5. Loosen the looper screw **15** and turn the looper **14** to the needle to obtain the distance 0,1 mm between the needle and the looper tip.
6. Turn the hand wheel counter clockwise and insert the gauge **17** with 1 mark (wider side of the gauge) between the needle bar holder and the needle bar clamp when the needle returns to the home position from the lower position.
7. Check to determine if the tip of the looper is at the centerline of the needle 1 mm above the needles eye.
8. If incorrect - loosen the looper cam screw **13** by the wrench and hold it . Turn the hand wheel (counter clockwise - if the looper tip is higher than 1 mm; clockwise - if less than 1 mm). Tighten both looper cam screws **13** securely.
9. If it is necessary to adjust the looper cam again, check the clearance 0,4 mm between the needle and the looper recess.



## E - MACHINE ADJUSTMENTS

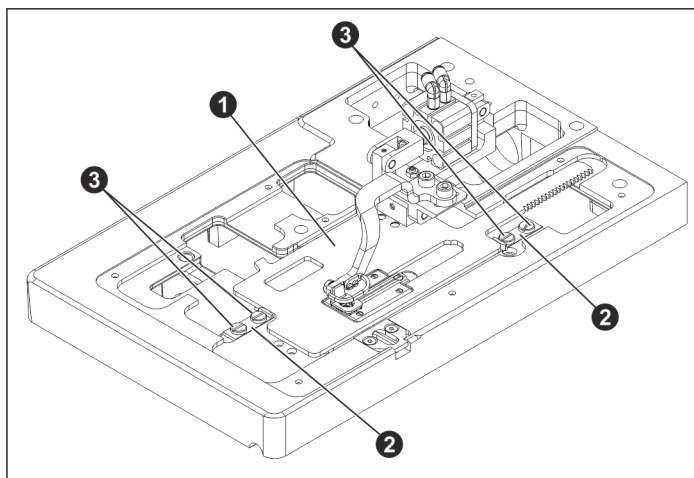
### The second looper adjustment

1. Insert the second looper **18** on the looper shaft.
2. Loosen the looper holder screw **19** and move the holder so that the needle passes the center of the looper recess. There must be clearance 0,4 mm between the needle and the looper recess. Tighten the looper holder screw.
3. Loosen the looper screw **20** and turn the looper **18** to the needle to obtain the distance 0,1 mm between the needle and the looper tip.
4. Turn the handwheel counter clockwise, insert gage **17** with mark 2 (narrower side of the gage) between the needle bar holder and needle bar clamp.
5. Check if the looper tip crosses the axis of the needle 1 mm above the needle eye.
6. If it is necessary to adjust the looper cam again, check the first looper adjustment.



## E - MACHINE ADJUSTMENTS

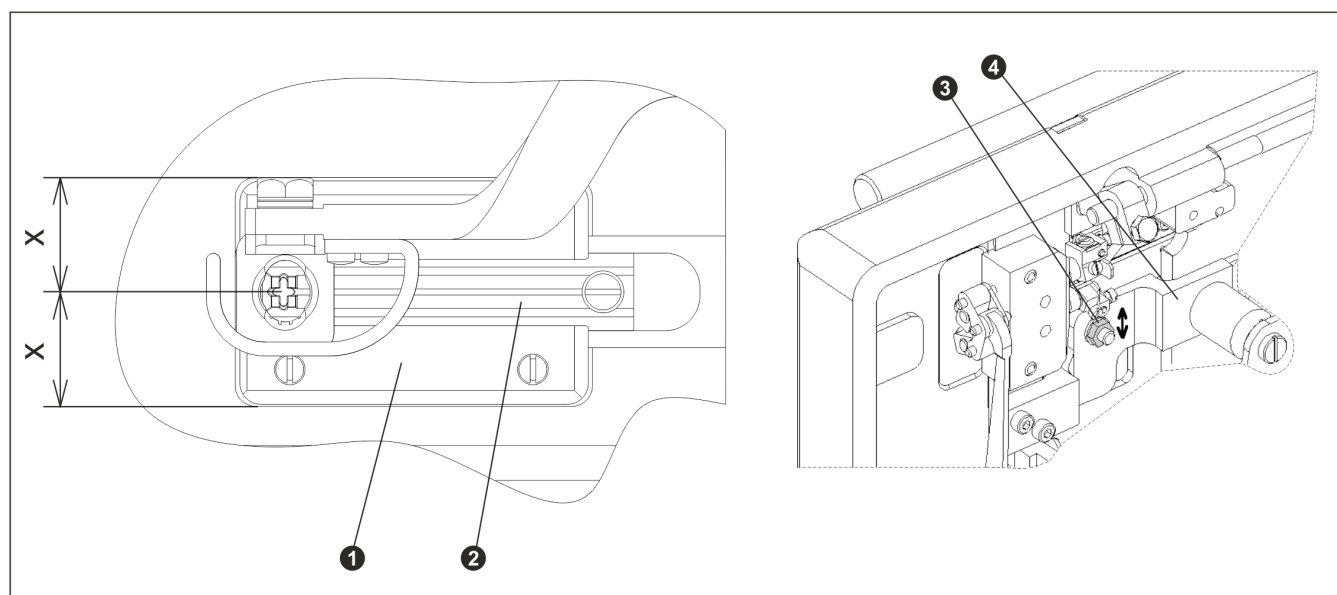
### 6. THE CLAMP PLATE HOME POSITION



The home position of the clamp plate **1** is factory set. The right position is secured by two stops **2** and four screws **3**.

### 7. CLAMP PLATE TO THE CENTER OF THE THROAT PLATE ADJUSTMENT

1. If the clamp plate **1** is not adjusted to the center of the throat plate **2**, tilt the sewing head against the rest pin.
2. Loosen the nut **3** in the slot of the lever **4** and move the clamp plate as needed. Tighten the nut.



## E - MACHINE ADJUSTMENTS

### 8. HEAD CLAMP FOOT ADJUSTMENT

#### 8.1. Adjustment for clamp height

Be sure that air supply is switch on and the clamp foot is opened. If clamp foot is not opened, push the clamp Up / Down button.

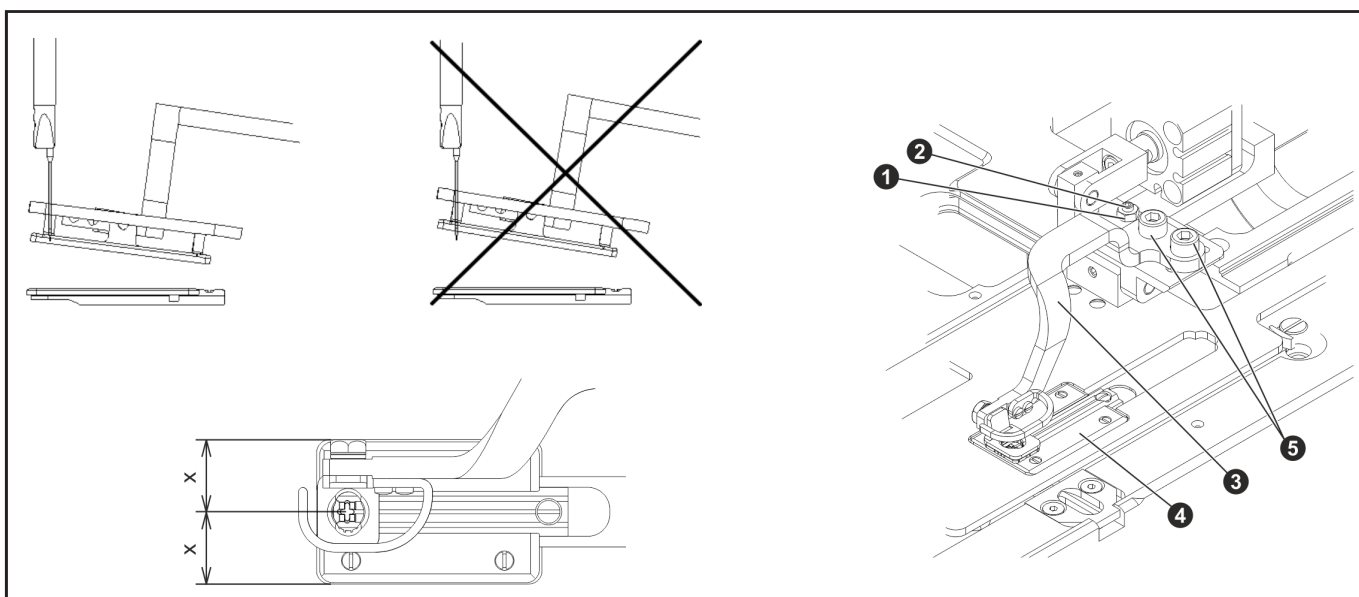
- a) loosen the nut **1**
- b) turning the screw **2** clockwise lowers the clamp foot mechanism **3** to clamp mat **4**
- c) tighten the nut **1**

**NOTE:** Correct height is when the underside of the clamp foot is slightly lower than the point of the needle in the home position.

#### 8.2. Clamp foot to the center of the needle

Be sure that the clamp foot is closed. If clamp foot is not closed, push the clamp Up / Down button.

- a) turn the handwheel to be sure that needle does not hit the clamp foot **3**. If it hits:
- b) push the clamp Up / Down button to open the clamp foot
- c) loosen the screw **5** and get the clamp foot arm further from the needle and tighten the screw **5**
- d) to check this adjustment, turn the handwheel when the clamp foot is closed. The needle must not hit the clamp foot.





## E - MACHINE ADJUSTMENTS

### 9. THREAD DRAW-OFF

#### 9.1. Adjustment of the Draw-Off Lever Position

The correct adjustment ensures a long enough thread tail for starting the next sewing. Remove the covers because this mechanism adjustment is performed in the rear of the head. Air supply is necessary for this adjustment.

- loosen the screw ⑥
- the piston ⑦ of the cylinder ⑧ is in the home position (retracted). Move the lever ⑨ to the pin ⑩ with minimum clearance 0.1 mm. Tighten the screw ⑥
- check the correct clearance adjustment by switching the valve ⑪ of the draw-off cylinder (YV1).

#### 9.2. The thread end adjustment

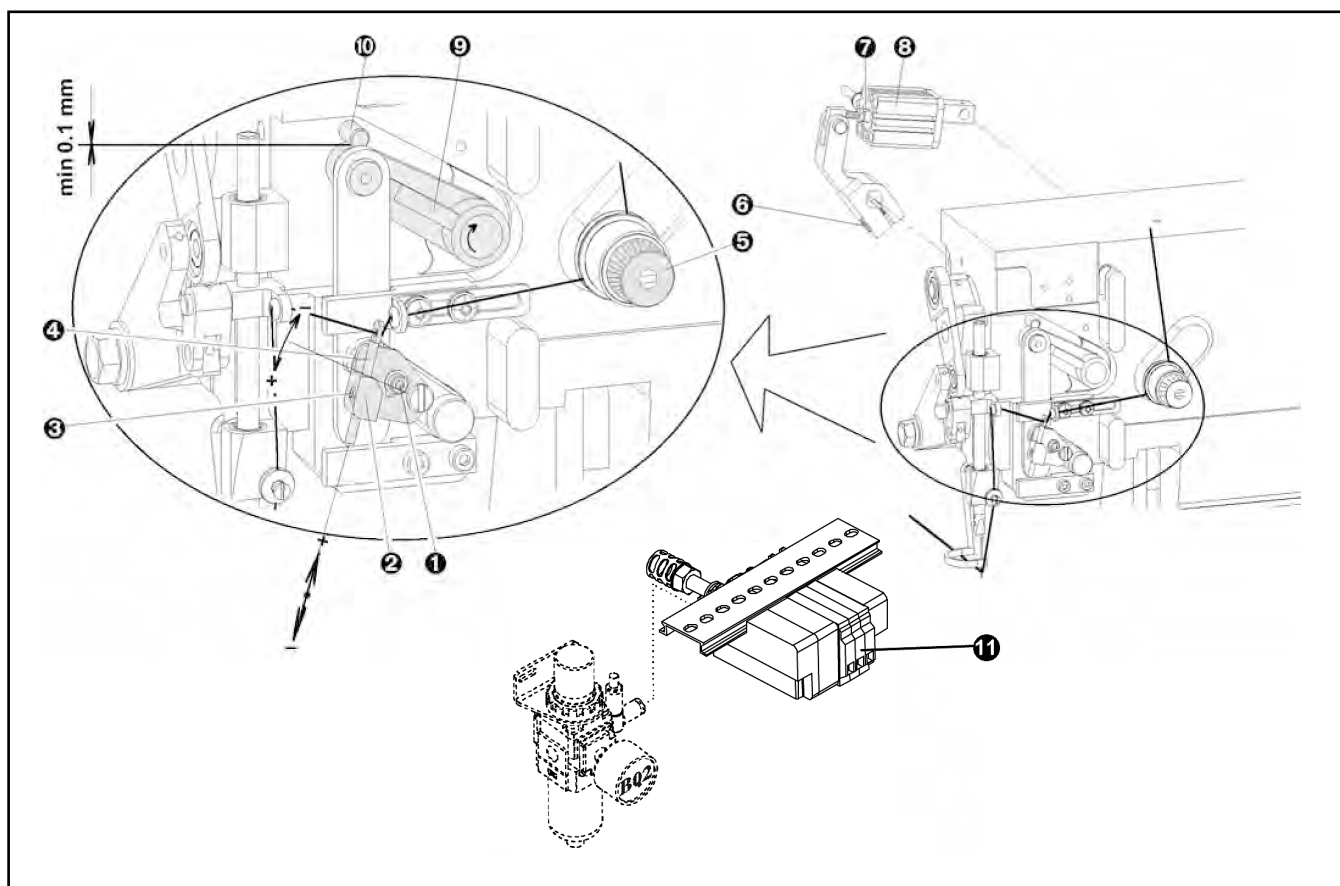
If the first stitches are missing or the sewing is not sewn, follow the below mentioned steps:

- loosen the screw ①.
- turn the draw-off lever ② counter clockwise to increase the thread tail length; turn the draw-off lever clockwise to decrease the thread tail length

#### 9.3. Locking the stitches

If the skipped stitches problem appears during the sewing, follow the below mentioned steps:

- loosen the screw ③
- move the thread take-up ④ to increase the size of the needle loop





## E - MACHINE ADJUSTMENTS

### 10. THREAD TENSION

The thread tension influences the appearance of the sewing. A thread tension change may be needed if the thread and fabric change. Check to be certain all parts, which contact the thread, are smooth and polished with no burrs or sharp edges.

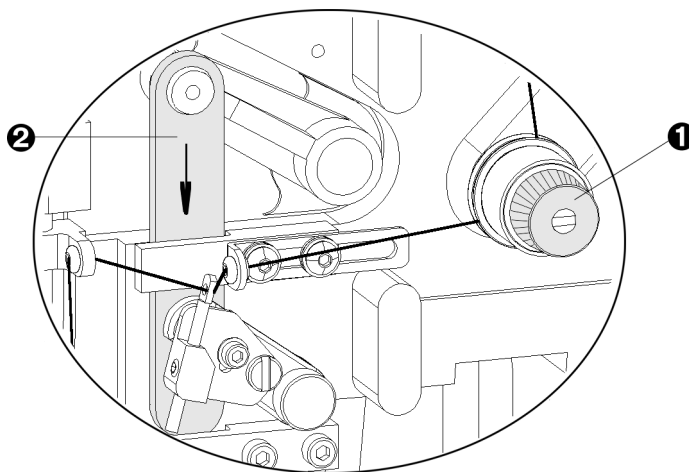
- By turning the tension knob **1** clockwise, the thread tension increases.
- By turning the tension knob **1** anti-clockwise, the thread tension decreases.

**NOTE:** Too big thread tension can cause the unsightly appearance of the sewing when sewing on a thin and elastic material.

#### 10.1. Adjustment of the tension discs opening

The opening of the tension discs is performed in the last phase of the sewing. When the tension discs are opened, it is possible:

- a) to pull the thread from the spool when the draw-off lever **2** receives the impulse for operation
- b) by decreasing or increasing of the air flow it is possible to regulate the tightening of the last loop in the sewing



## E - MACHINE ADJUSTMENTS

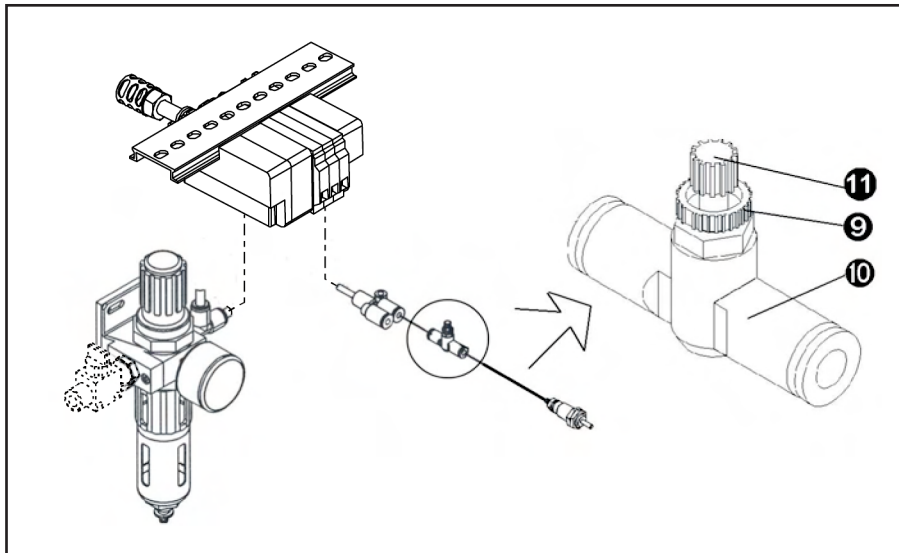
### 10.2. The correct position of the tension mechanism

- remove the tension assembly ③ from the shaft ④
- check if the distance between the stud slot edge and the pin ⑤ is 3.5 mm. If incorrect, it is necessary to adjust the position on the pin.
- remove the pulley cover and the head cover to obtain a good access for this adjustment. Switch off the air supply.
- disconnect the air tube ⑥ from the cylinder.
- loosen the nut ⑦ and turn the cylinder ⑧ as necessary. Turning clockwise the pin is extended. Tighten the nut ⑦ when the correct measurement is obtained.
- connect the air tube ⑥ to the cylinder, open the air supply and install the covers.

### 10.3. Regulation of the tension discs opening

If the last stitch is not tightened, follow the below mentioned steps:

- loosen the locking nut ⑨ on the speed controller ⑩
- to obtain better tightening of the last stitch, tighten screw ⑪ and lock the nut ⑨ securely.



## E - MACHINE ADJUSTMENTS

### 11. THREAD TRIMMING

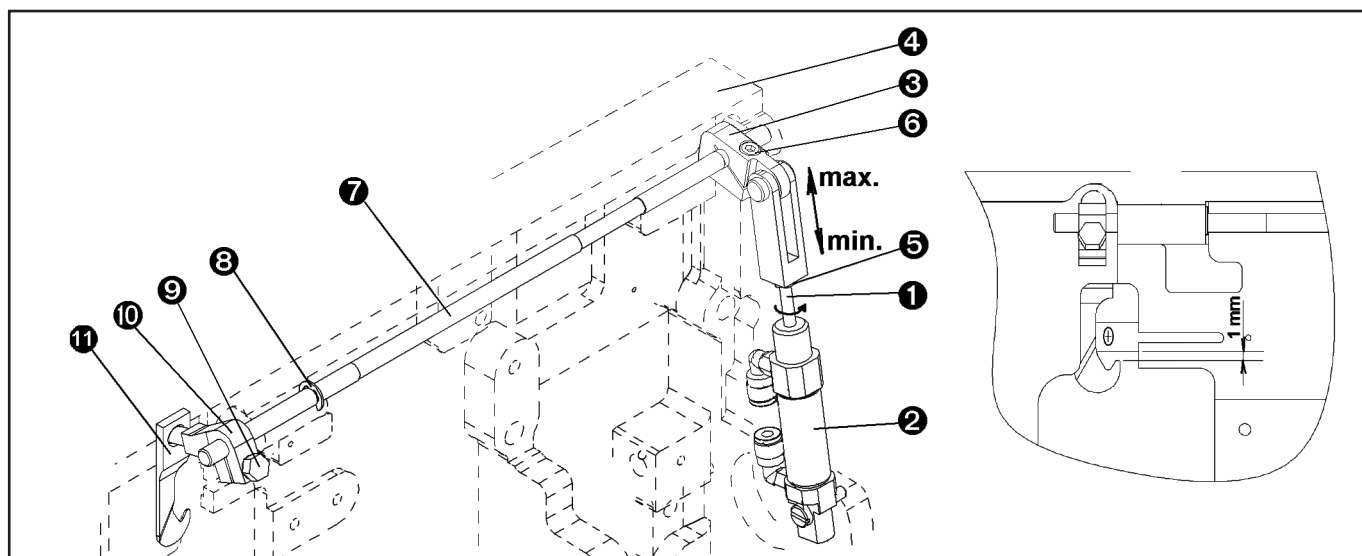
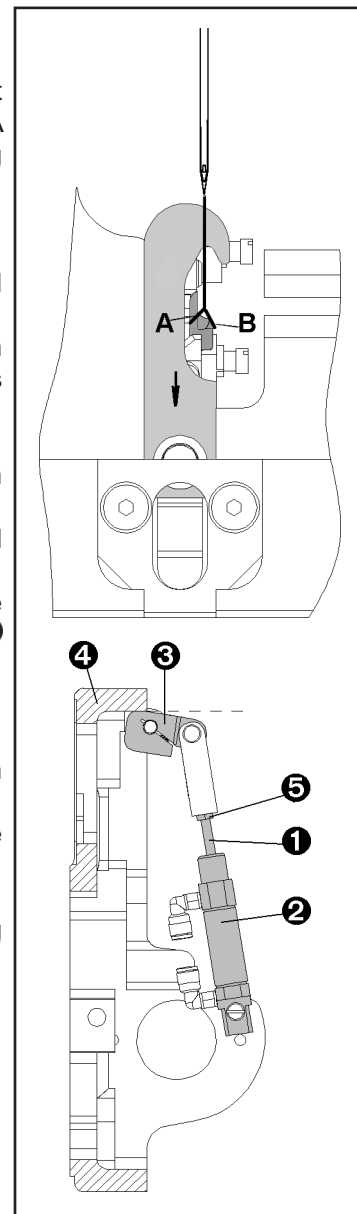
The trimming mechanism ensures the correct thread trimming after sewing the last stitch. The trimming hook moves in the direction of the arrow, both thread loop legs A and B are pulled forward. When the thread hook approaches the end of the stroke, leg A contact the trimming knife, cutting the thread.

#### 11.1. Trimming cylinder adjustment

- tilt the machine head onto the rest pin and close the air supply. Extend the piston **1** of the cylinder **2** to the maximum position.
- check to be certain that the cylinder does not push the lever **3** too high and into contact with the bedplate casting **4**. If no clearance exists, adjust as described in c, d, and e below:
- loosen the screw **6**
- to obtain the correct position of the lever **3**, loosen the nut **5** and turn the cylinder piston **1** in or out as needed
- tighten the nut **5** and the screw **6**. After this adjustment check if no axial clearance exists on the shaft **7**.
- if the axial clearance exists on the shaft, loosen the screw **6**, move the shaft **7** to the left so that the locking ring **8** touches the recess in the plate **3**. Move the lever to the right and tighten the screw **6**.

#### 11.2. The trimming hook adjustment

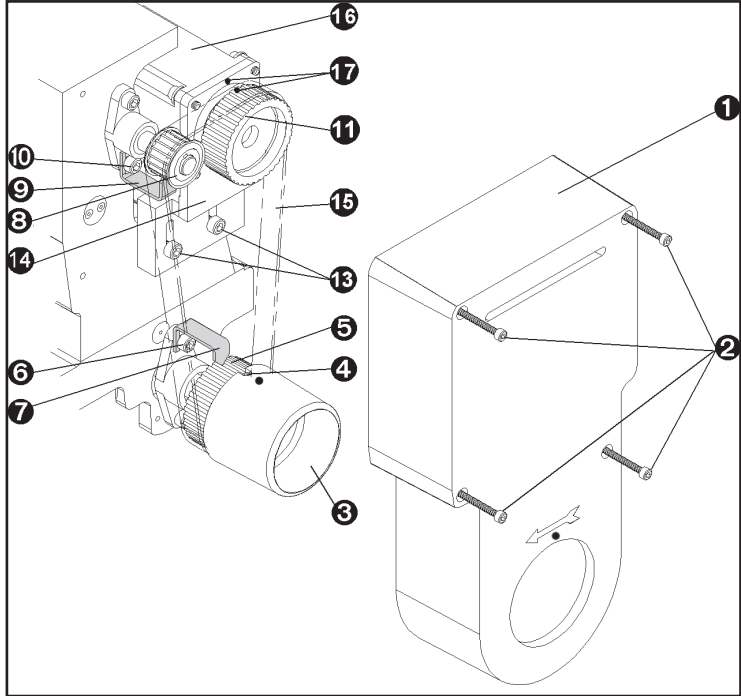
- push the piston **1** of the trimming cylinder **2** to the maximum position and loosen the screw **9** of the trimming actuator **10**.
- turn the trimming actuator **10** and set the clearance 1.0 mm between the throat plate and the point of the trimming hook.
- tighten the screw **9** of the trimming actuator **10**.
- open the air supply and check by switching the valve of the trimming cylinder if the actuator **10** does not hit the bedplate casting.



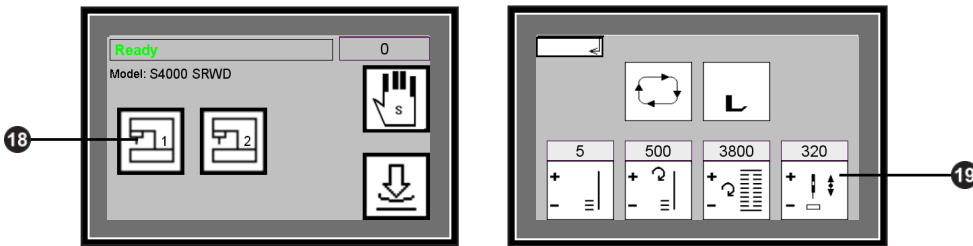
## E - MACHINE ADJUSTMENTS

### 12. CHANGING THE DRIVE BELT

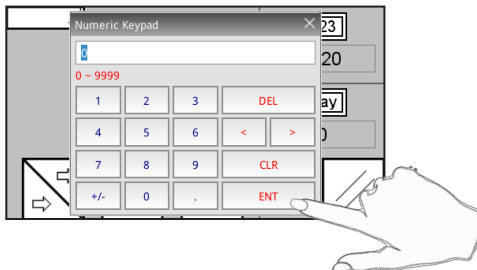
1. Remove the pulley cover **1** after loosening the M4 screws **2**.
2. By turning the handwheel **3** adjust the position of the shaft so that the screw **4** on the pulley **5** is aligned with screw **6** on the bearing carrier lower shaft.
3. Lock the position by the holder 24.0030.0.000 **7**, which is included in the accessories. Using the screw **6** fix the holder to the bearing holder upper screw.
4. Turn the pulley **8** of the needle bar shaft, until the needle bar reaches the upper position.
5. Lock the position by the holder 24.0024.0.000 **9**, which is included in the accessories. Using the screw **10** fix the holder to the bearing carrier lower mounting screw.
6. Rotate the motor pulley **11** until the marks **17** on the motor pulley and the motor bracket are aligned.
7. Loosen the screws **13** on the motor bracket **14** and move the motor with the machine bracket down to fit the belt.
8. Fit the belt **15** on the shaft pulleys **5**, **8** and motor pulley **11**. To tighten the belt **15**, move the motor bracket **14** with motor **16** up. Tighten the screws **13** to lock the motor bracket. Be sure the marks **17** are aligned.
9. Remove the pulley holders **7**, **9**.
10. Press the pedal to check the adjustment. The needle bar must be in the upper position.
11. Small changes of the needle bar adjustment are possible in the program parameters:

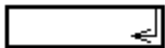


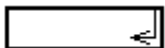
- a) needle bar just before top dead centre  
- **18** press => **19** „Ndl up pos ....imp“



- increase the value to reach correct position of the needle bar



- press , to go back to the operation mode

- b) needle bar behind top dead centre  
- reduce the value to reach correct position of the needle bar  
- press , to go back to the operation mode

## F - MACHINE MAINTENANCE

### Warning:

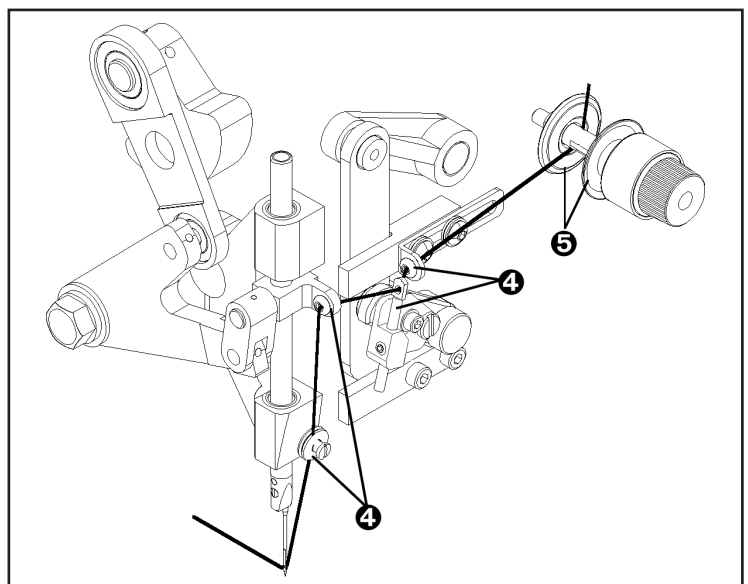
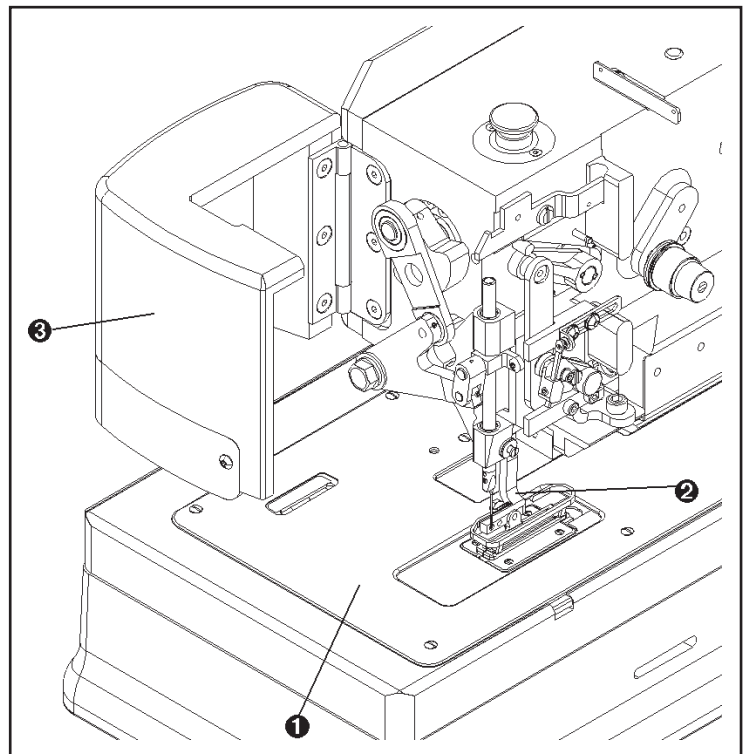
- Check for damage to electrical cables
- Check safety covers for damage and replace immediately if needed
- Keep your hands out of the sewing area
- Do not modify the machine in any way, which could eliminate safety parts
- Do not attach external lights or other devices to the machine's electrical system

### Caution:

- Do not neglect periodic maintenance.
- If you have fault in electrical power supply, switch off the operating switch (circuit breaker).
- Do not damage, correct and remove safety labels.
- Do not work with the machine when you are under the influence of the drugs or alcohol.
- User has to ensure the lighting of the working area minimal 750 Luxes.

### 1. MACHINE CLEANING AND MAINTENANCE

1. Switch the power off and disconnect air supply.
2. For cleaning and oiling, remove the cover **1** and take out the clamp foot mechanism **2**. Clean the clamping area of any fabric and thread lints.
3. Open the needle bar cover **3** and clean any thread lints from the guides **4** and thread tension **5**.
4. Clean any thread lints and fabric from the sewing area - throat plate, loopers.
5. Lubricate the machine according to the section F 4.



## F - MACHINE MAINTENANCE

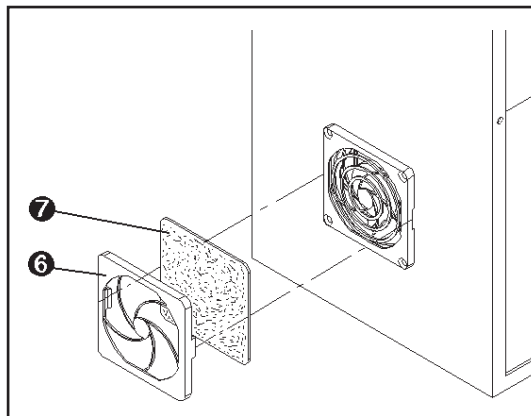
6. Remove the filter cover **6** with cleaning pad **7**. Remove the dust from the cleaning pad or in case of considerable dirt, wash it using a mild detergent.

Perform the same cleaning on the rear fan.

7. The filter and regulator maintenance

**Bowl assembly 8** - polycarbonate bowls may be damaged and possibly fail if exposed to synthetic oils, thinner solvents, trichlorethylene, kerosene and other aromatic hydrocarbons. Clean only with a neutral detergent .

**Auto drain** - Drain line length should be shorter than 5 m. Be sure not to have any upward turns in the drain line which would prevent drainage.



If the unit has no function it is necessary to:

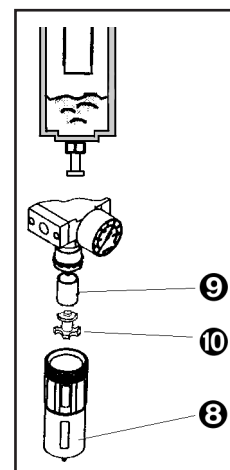
- check if the supplied pressure is higher than the set pressure of the regulator
- check if the valve assembly is clean
- check the membrane or spring for damage
- check if the air flow direction is correct

### Change of the filter element **9**

Conditions

- low flow rate
- high pressure drop
- when the pressure drops to 0.7 bar
- filter element change after one year (in case it has not been changed)

- unscrew the polycarbonate bowl **8**
- take the filter element out **9** with baffle **10**
- change old filter element with new one
- fit the baffle **10** into new filter element **9** and place them both back
- place the polycarbonate bowl back



8. Check the mechanisms especially in the sewing area by sight.

9. When the maintenance and checking are finished, insert the clamp foot mechanism into the machine.

## F - MACHINE MAINTENANCE

### 2. PERIODIC MAINTENANCE

**once a day** (8 hours of operation)




- cleaning of the sewing mechanism area and inner frame of the machine
- lubrication of mechanisms - see area F4.

**once a week** (40 hours of operation)

- visual check - external and internal mechanisms
- fill oil into reservoir with oil level indicator, or sooner if required

**once a month** (160 hours of operation)

- check of the clearance in sewing mechanism drive
- check of the screw connections tightening (obtain values below)
- check of condensate in regulator
- check of dirty of cleaning pads in control box

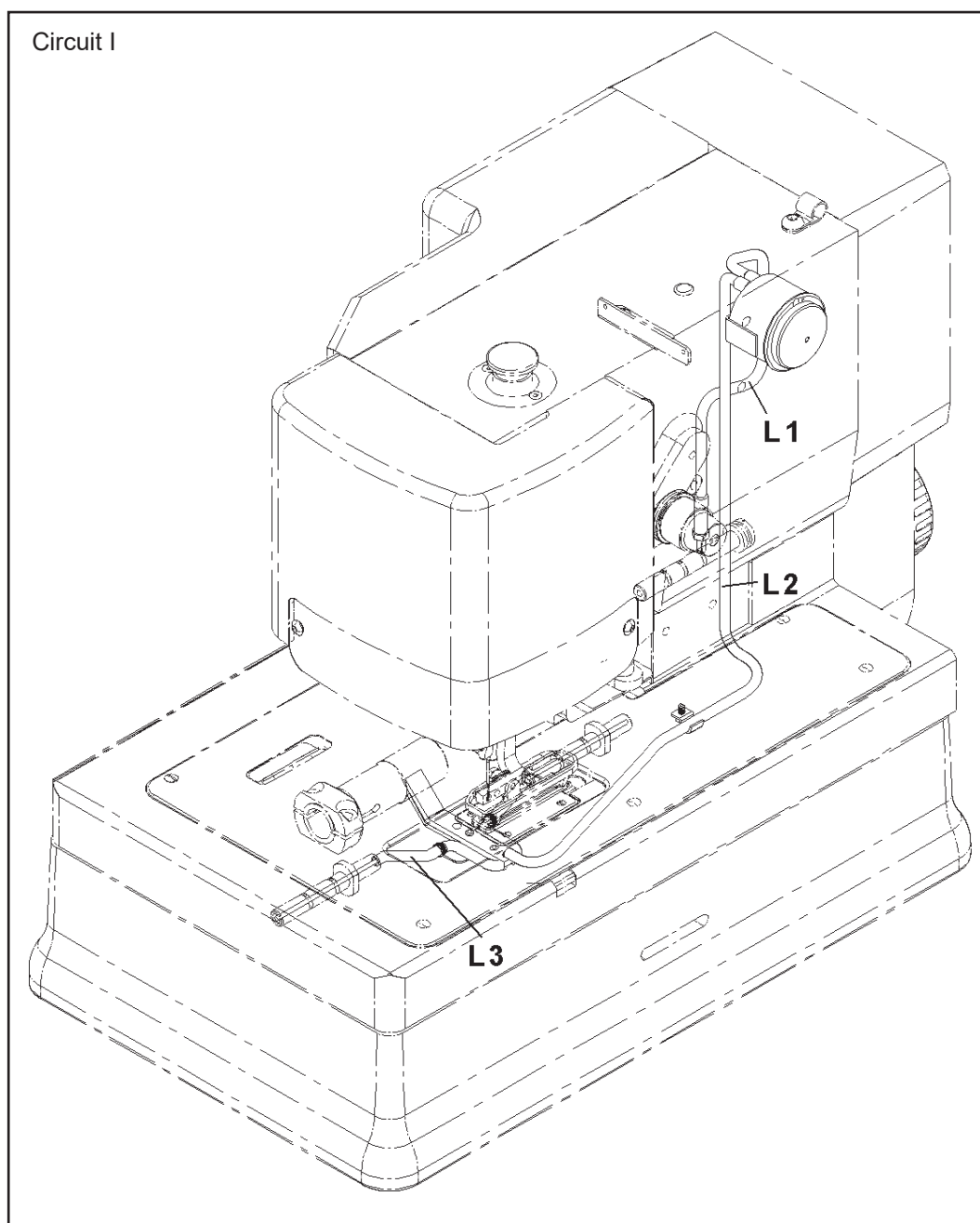
Recommended values for screws tightening (Nm):			
			
<b>M3</b>	0,5	0,6	0,8
<b>M4</b>	1,2	1,5	2,0
<b>M5</b>	2,5	3,0	4,0
<b>M6</b>	4,0	5,0	7,0
<b>M8</b>		8,0	16,0
<b>M10</b>		10,0	30,0

## F - MACHINE MAINTENANCE

### 3. LUBRICATION DIAGRAM

The machine is mainly equipped with needle and ball bearings, which in combination with a single lubrication circuit decrease the requirements for maintenance.

**Circuit I** - with the oil supply in oil indicator for lubrication of the bite, looper lever. In case of replacement of any part of distribution, it is possible to order the tube kits and wicks. To connect the tubes - see picture.

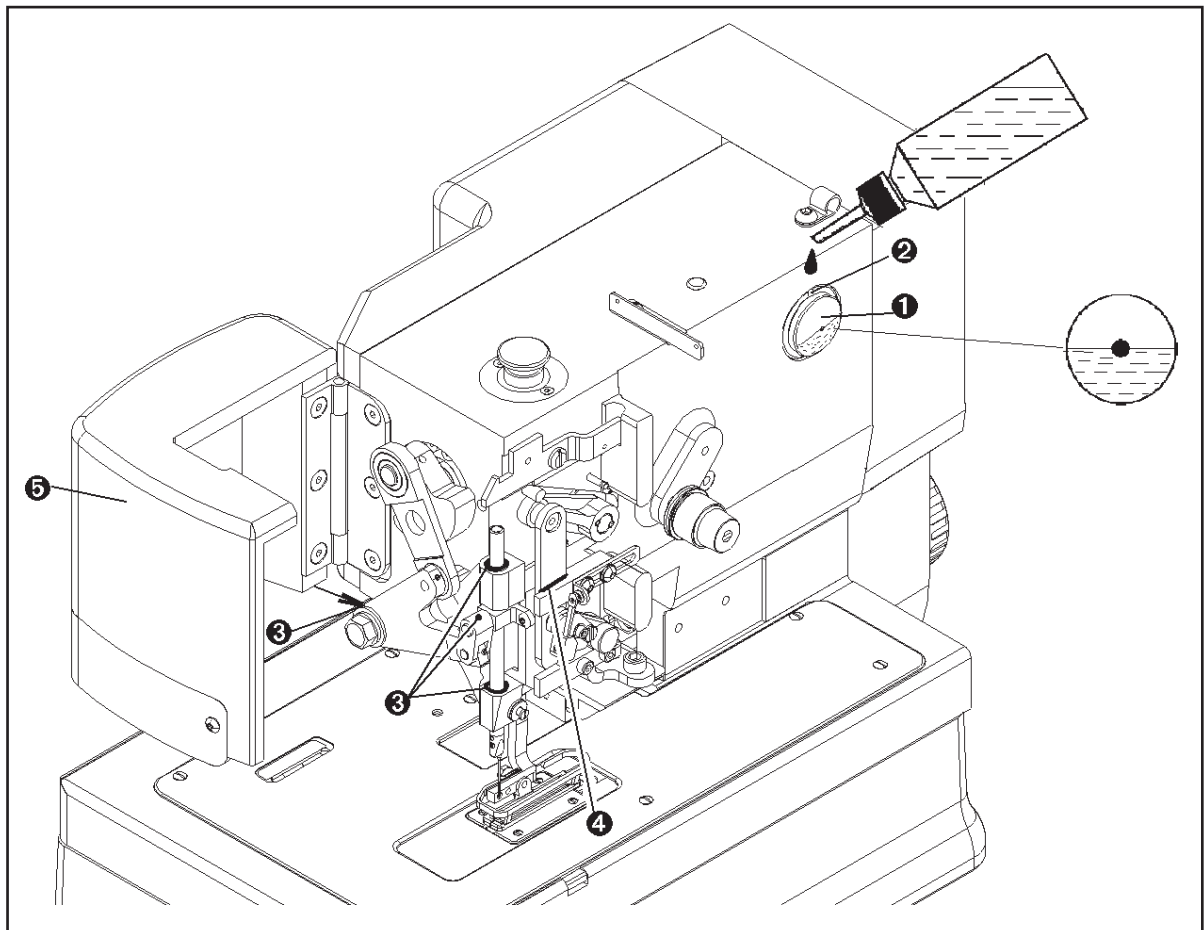




## F - MACHINE MAINTENANCE

### 4. MACHINE LUBRICATION

1. It is necessary to lubricate the places shown below before the machine is switched on for the first time or after a long idle period. Use oil ESSO TERESSO 32 or similar quality.
2. The amount of oil in the reservoir **1** is indicated by the red mark. Too much oil may cause it to overflow from the base area.
3. The reservoir is filled through the hole **2** in front of the gauge.
4. The points for lubrication of the needle bar mechanism **3** and draw-off mechanism **4** are shown in the illustration below (after opening the needle bar cover **5**). Lubricate all of these points every 8 hours.



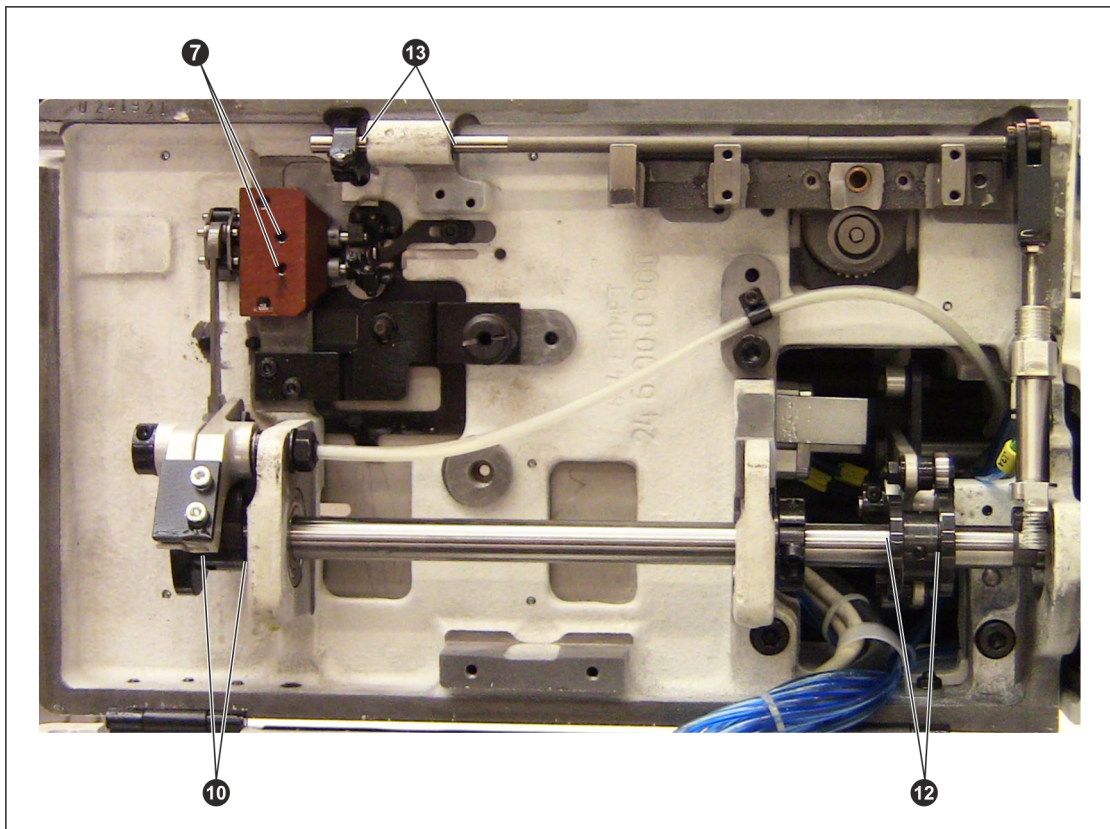
## F - MACHINE MAINTENANCE

5. Tilt the machine head onto the rest pin and lubricate the places shown in the picture.

- ⑦ looper shafts
- ⑩ looper cam surfaces
- ⑫ bite cam surfaces
- ⑬ trimer shaft

Return the sewing head back into the sewing position

6. After lubrication it is important to sew a minimum of 10 sewing cycles on scrap fabric to dispel any excess oil. Wipe all visible excess oil from the mechanism in the work area.



## **F - MACHINE MAINTENANCE**

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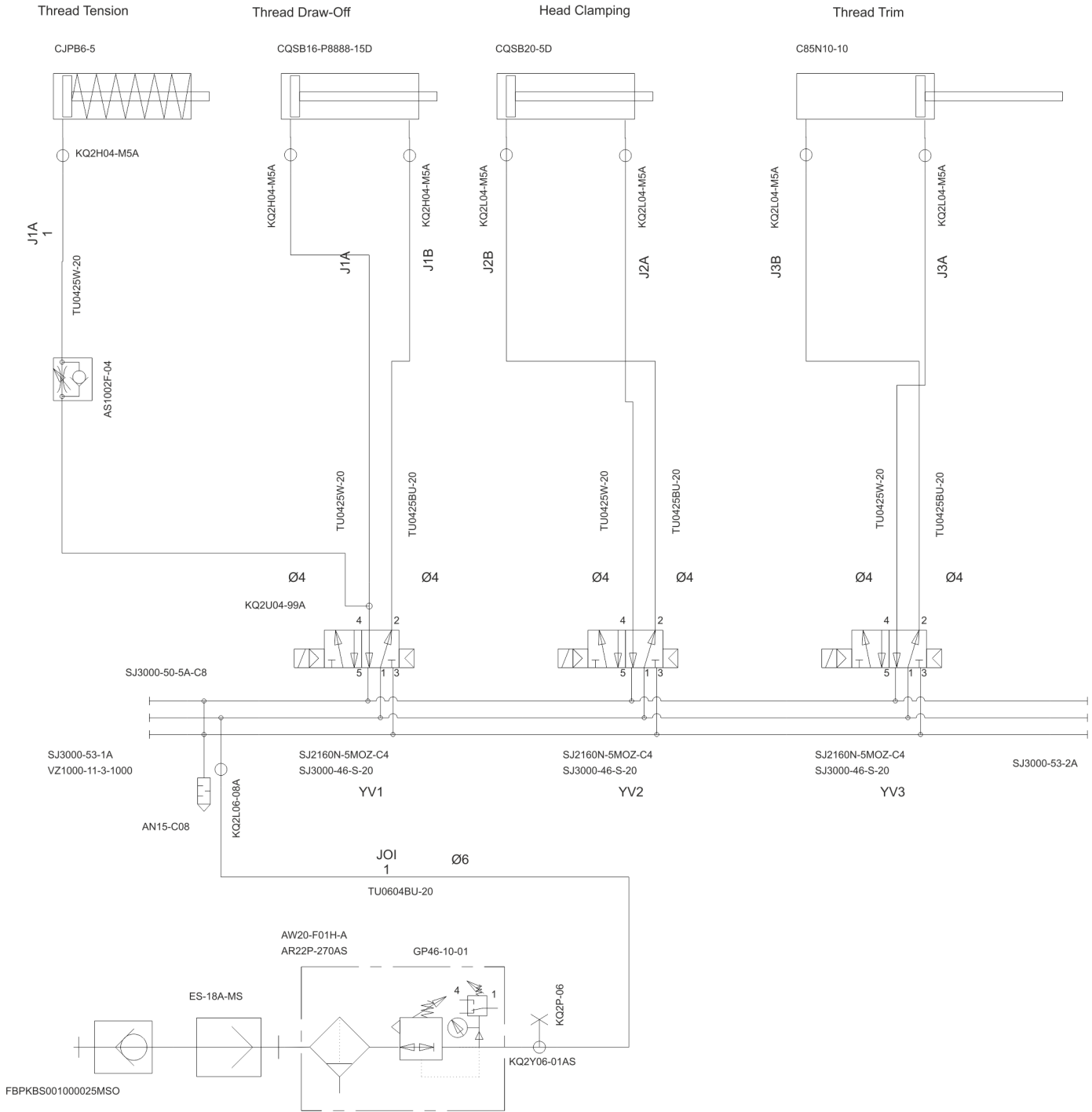
### **5. MACHINE DISPOSAL**

1. To ensure machine ecological disposal, it is necessary to remove nonmetallic parts from the machine. To take these parts out, it is necessary to perform the partial dismantling of the machine, remove covers, dismantle the machine arm and remove the frame.
2. Aluminium and duralumin parts must be treated separately, also nonferrous metal parts and plastic parts.
3. The parts mentioned in the point 2 can be found in the spare parts manual with these marks:

- aluminium parts
- ● non-ferrous metal parts
- ● ● plastic and non-metalic parts

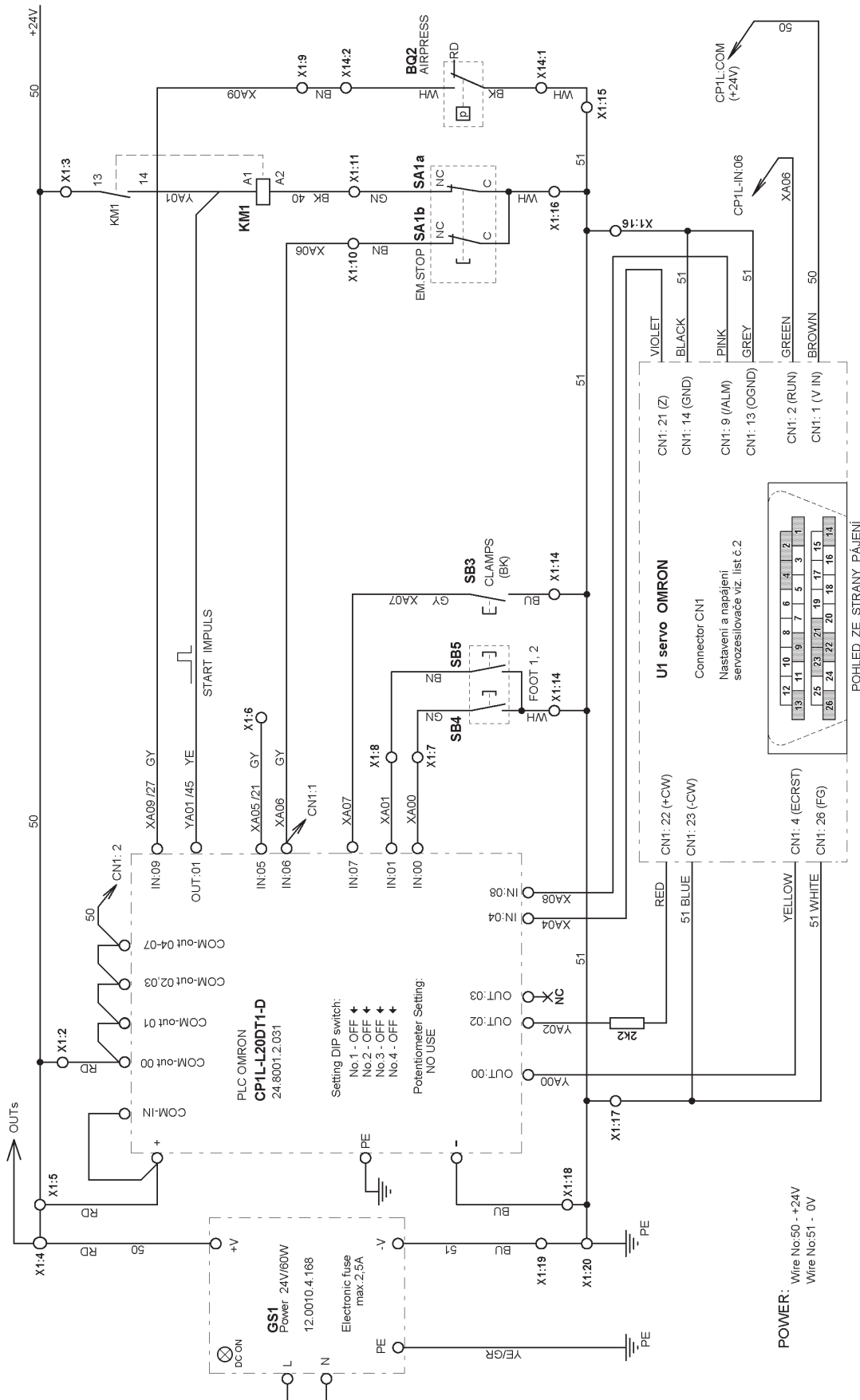
# G - PNEUMATIC DIAGRAM

S-4000 SRWD - Pneumatic diagram

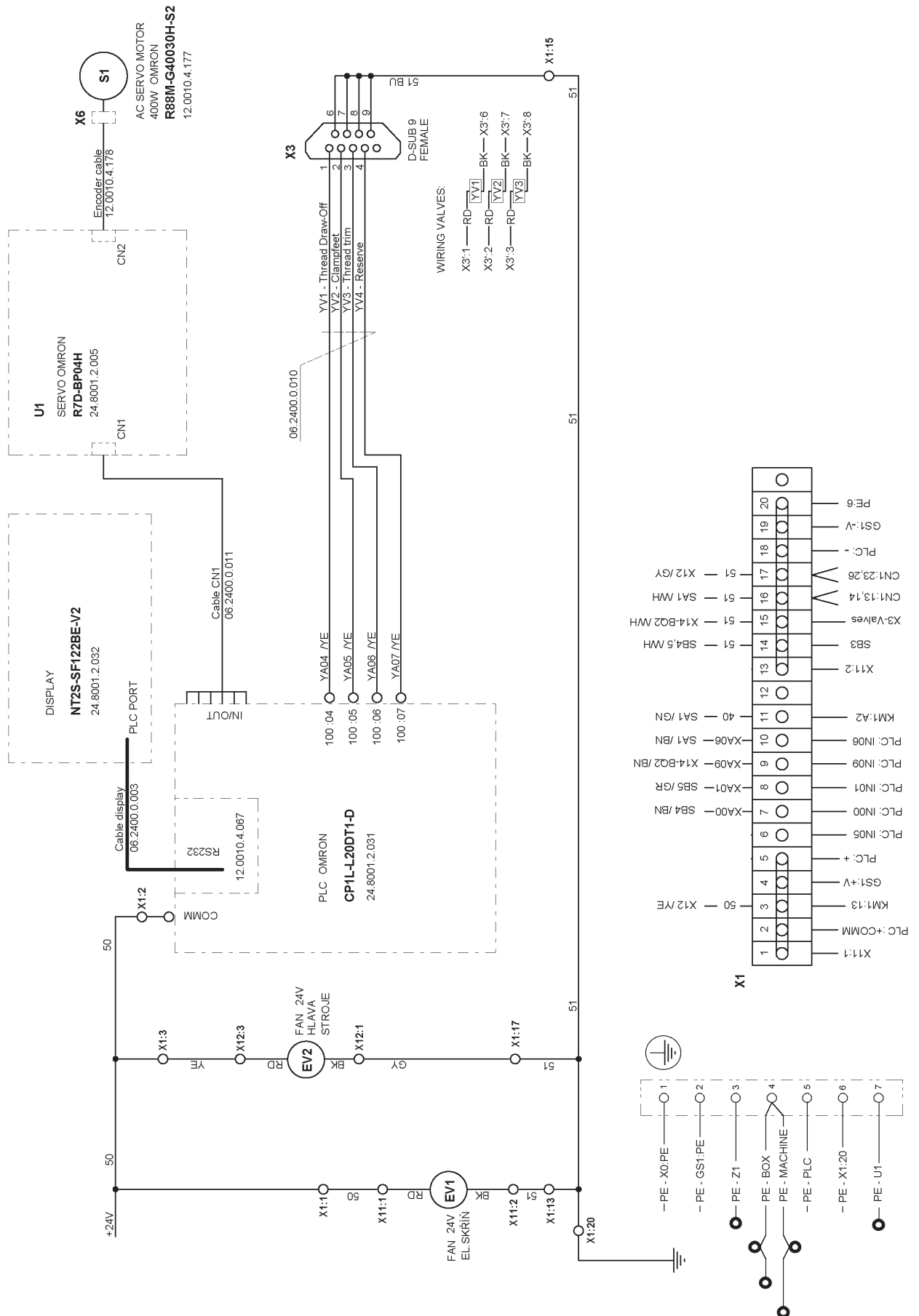




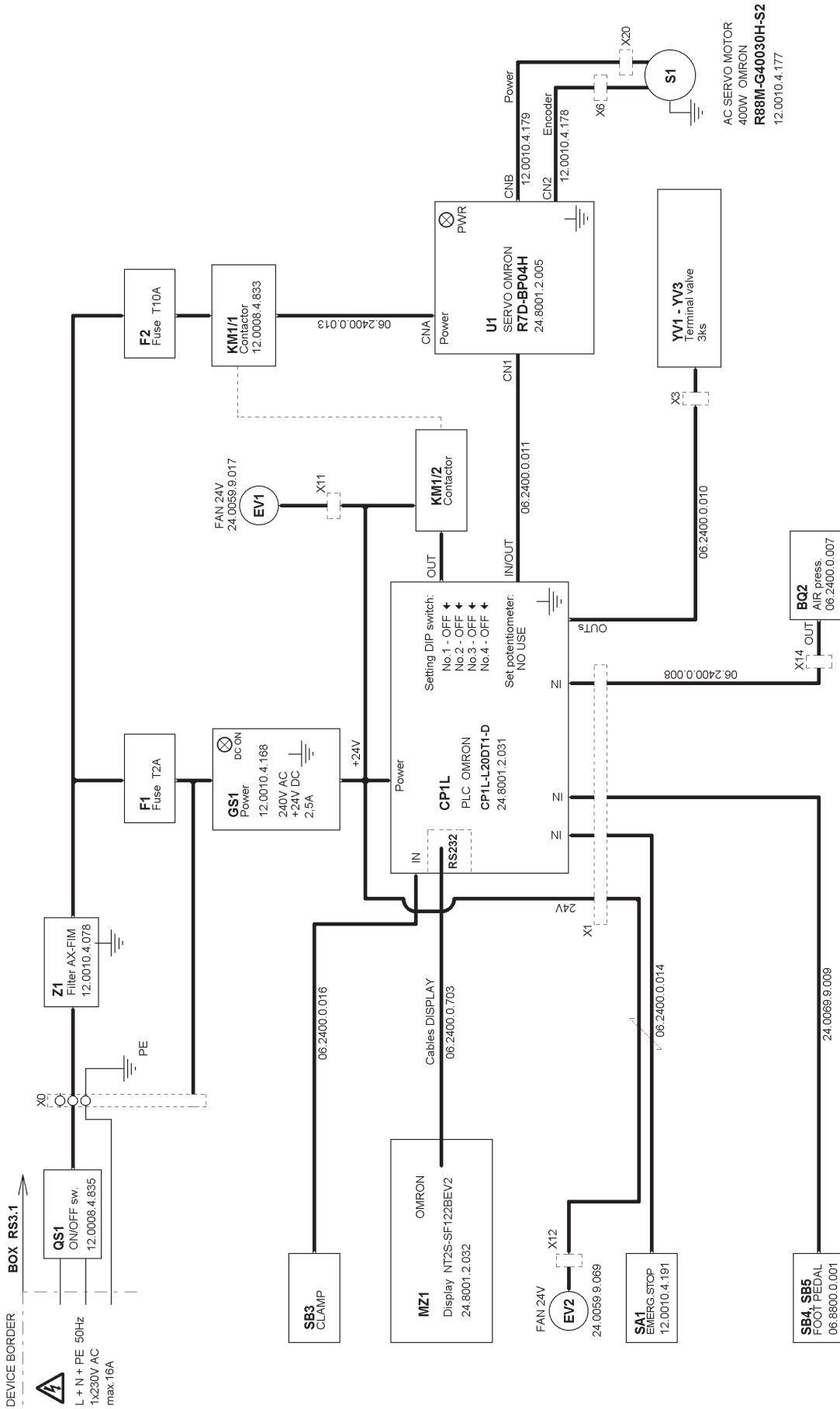
# H - ELECTRICAL DIAGRAM



**H - ELECTRICAL DIAGRAM**



# H - ELECTRICAL DIAGRAM









## **TROUBLESHOOTING**

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### **TABLE OF CONTENTS**

1. MECHANICAL FAULTS.....	2-2
2. CONTROL PANEL DISPLAY ERROR MESSAGES.....	2-3
3. SERVO ERROR MESSAGES.....	2-4
4. ELECTRICAL FAULTS.....	2-6

## TROUBLESHOOTING

### 1. MECHANICAL FAULTS

SYMPTOM	POSSIBLE CAUSE	PROBABLE SOLUTION
Thread breakage	Needle, looper, throat plate damaged	Change damaged parts
	Incorrect needle and sewing mechanism adjustment	Check the adjustment of the mechanisms
	Thread tension is too tight	Adjust correct tension
	Incorrect threading	See section C3 for checking.
	Thread guides polished incorrectly	Polish
	Poor thread quality	Replace thread
	Thread is too heavy for selected needle and throat plate	Use recommended thread sizes - see section A4
Machine fails to sew (missing stitches appear)	Needle, looper, throat plate damaged	Change damaged parts
	Incorrectly adjusted needle bar height	See section E4 for checking
	Incorrectly adjusted clearance between needle and throat plate	See section E5 for checking
	Incorrect loopers timing	See section E9 for checking
Stitch skip at the beginning of sewing	Needle, looper, throat plate damaged	Change damaged parts
	Needle thread end is too short	See section E14, point 2
	Incorrectly adjusted needle bar height	See section E4
	Incorrectly adjusted clearance between needle and throat plate	See section E5
	Incorrect loopers timing	See section E9
	Incorrectly adjusted clamp feet pressure	See section E 14, point 3
Stitch skip during sewing	Needle, looper, throat plate damaged	Change damaged parts
	Incorrectly adjusted needle bar height	See section E4
	Incorrectly adjusted clearance between needle and throat plate	See section E5
	Incorrect loopers timing	See section E9
	Incorrect thread tension adjustment	Adjust the tension correctly
	Incorrect threading	See section C3
	Thread loops are too small	See section E14 point 3
	Incorrectly adjusted clamp feet pressure	See section E14 point 3
	The clamp feet are adjusted too far from the sewing	See section E13 point 2
Thread not trimmed at the end of the cycle	Trimming knife damaged	Replace the knife
	Low air pressure at trimming cylinder	Check supply pressure
	Flow control valve to tension cylinder closed	See section E15 point 3
	Incorrect loopers timing	See section E9
	Incorrect setting of trimming delay	Change Trim dly parameter - D4
	Trimming length incorrectly set	Change Trim tim parameter - D4
Sewing motor turns, machine does not sew	Belt broken or loose	See section E19 for changing
Zero pressure on regulator	Shut off valve closed	Open the shut off valve
Low air pressure	Filter element dirty	Clean the filter element
	Air fitting or tubing obstruction	Check supply guides

## TROUBLESHOOTING

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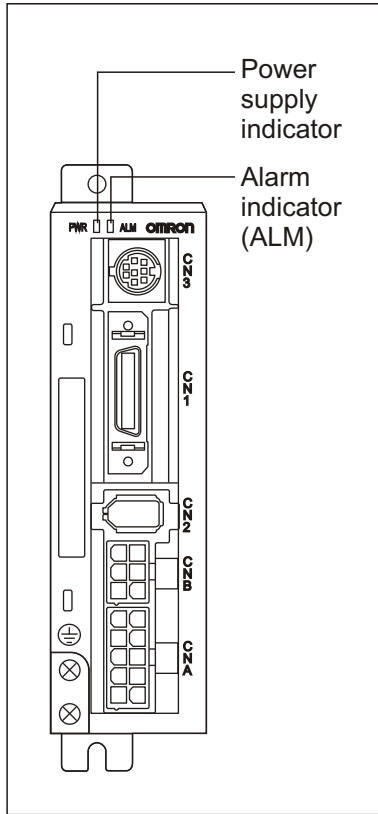
### 2. ERROR MESSAGES OF THE CONTROL PANEL DISPLAY

SYMPTOM	POSSIBLE CAUSE	PROBABLE SOLUTION
Low air pressure	Hand valve of the regulator switched off	Open the hand valve
	The air pressure in the air supply piping below 0.5 MPa	Increase the air pressure
Emergency stop, red LED light is ON	Emergency Stop button is switched on	Release the Emergency Stop button and press F6 key on the control panel
Service mode	The machine is in the operation mode, motor is disconnected	Press F6 key on the control panel
Motor isn't ready	Fuse F2 failure	Replace fuse
	Servodriver U1 failure	Replace servodriver
	The power supply is below 185V	Call electroengineer in a plant

## TROUBLESHOOTING

### 3. ERROR MESSAGES OF THE SERVO

The following messages can be seen on the servo, which is placed inside the control box. In order to eliminate these messages, switch off the machine for 1 minute. Then switch the machine on again. The error message should not appear on the display. If the message appears - call AMF Reece service.



**PWR** - Power supply indication:

INDICATOR	STATUS
Lit green	Voltage is good
Lit orange - Flashes at a 1 sec. intervals	Varning - i.e.: - Exceeded power - Exceeded feed back - Default of inner fan
Lit red	Alarm - default

**ALM** - Default indication (Alarm indicator):  
in case default appears, the indicator is switched on.

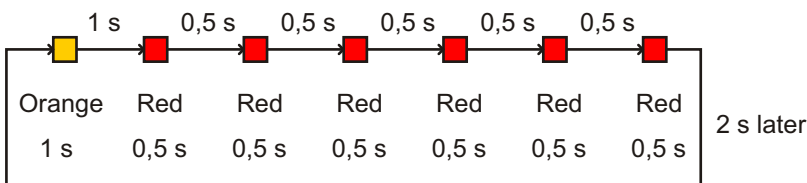
#### Alarm indicator on the Servo Drive

The alarm LED indicator on the front of the Servo Drive lights up if an error is detected. The indicator shows the alarm code by the number of orange and red flashes.

Example:

When an overload alarm (alarm code 16) has occurred and the Unit has stopped the indicator will flash in orange and 6 times in red.

Orange 10s digit, Red: 1s digit





## TROUBLESHOOTING

Alarm code	Error detection function	Detection details and cause of error	Alarm reset possible
11	Power supply undervoltage	The DC voltage of the main circuit fell below the specified value while the RUN Command Input was ON	Yes
12	Overvoltage	The DC voltage of the main circuit is abnormally high	Yes
14	Overcurrent	Overcurrent flowed to the IGBT. Servomotor power line ground fault or short circuit	No
15	Built-in resistor overheat	The resistor in the Servo Drive is abnormally overheating	No
16	Overload	Operation was performed with torque significantly exceeding the rated level for several seconds to several tens of seconds.	Yes
18	Regeneration overload	The regeneration energy exceeded the processing capacity of the regeneration resistor.	No
21	Encoder disconnection detected	The encoder wiring is disconnected.	No
23	Encoder data error	Data from the encoder is abnormal.	No
24	Deviation counter overflow	The number of accumulated pulses in the deviation counter exceeded the setting in the Deviation Counter Overflow Level (Pn63)	Yes
26	Overspeed	The servomotor exceeded the maximum number of rotations. If the torque function was used, the Servomotor's rotation speed exceeded the settings in the Overspeed Detection Level Setting (Pn70 and Pn73)	Yes
27	Electronic gear setting error	The section in Electronic Gear Ratio Numerator 1 (Pn46) or Electronic Gear Ratio Numerator 2 (Pn47) is appropriate.	Yes
29	Deviation counter overflow	The number of accumulated pulses for the deviation counter exceeded 134,217,728.	Yes
34	Overrun limit error	The servomotor exceeded the allowable operating range set in the Overrun Limit Setting (Pn26).	Yes
36	Parameter error	Data in the parameter saving area was corrupted when data was read from the FEPRM at power ON.	No
37	Parameter corruption	The checksum didn't match when data was read from the FEPRM at power ON.	No
38	Drive prohibit input error	The forward drive prohibit and reverse drive prohibit inputs are both turned OFF.	Yes
48	Encoder phase Z error	A phase-Z pulse was not detected regularly	No
49	Encoder CS signal error	A logic error of the CS signal was detected	No
95	Encoder CS signal error	The combination of the Servomotor and Servo Drive is not appropriate. The encoder was not connected when the power supply was turned ON.	No
96	LSI setting error	Excessive noise caused the LSI setting not to be completed properly.	No
Others	Other errors	The servo Drive's self-diagnosis function detected an error in the Servo Drive.	No

## TROUBLESHOOTING

### 4. ELECTRICAL FAULTS

SYMPTOM	POSSIBLE CAUSE	PROBABLE SOLUTION
 When switch in position I, neither the work light, display or the cooling fan operate	No power supply	Check main power supply or voltage in the socket
	Fuse F1 failure	Replace fuse PN 12.0008.4.665
	Power switch QS1 damaged	Replace the switch 12.0008.4.835
	Power GS1 failure	Replace the power 12.0010.4.168
 When switch in position I, display does not operate	Cable from the display disconnected	Check the display connection
	Display or its control damaged	Replace display PN 24.8001.2.032
When sewing operation started, motor does not operate. Contactor KM1 switched on.	Fuse F2 damaged	Replace fuse 12.0008.4.664
	Contactor KM1 damaged	Replace contactor 12.0008.4.833
	Servo U1 error or filter Z1 error	Call AMF Reece service or replace servo U1
	Error in sewing motor circuit	Switch the machine off for 1 minute, or restart it, alternatively call AMF Reece service
When sewing operation started, motor fails to operate. Contactor KM1 switched off.	Make sure the machine is ready for operation	Press key F6 - see D1, point 6
	Contactor KM1 damaged	Replace contactor 12.0008.4.833
	Check the Emergency Stop button	Replace button 12.0010.4.191
	Control unit PLC error	Replace the control unit PLC 24.8001.2.031
The needle does not stop in the upper position	Check the servo amplifier and servo	To set the servo amplifier - call AMF Reece service, alternatively replace servodriver and 24.8001.2.005
When sewing operation started, air valves do not operate. The air pressure correct.	Fork is not fitted properly into connector X3	Check the connector X3 connection
	Control unit PLC error	Replace the control unit 24.8001.2.031

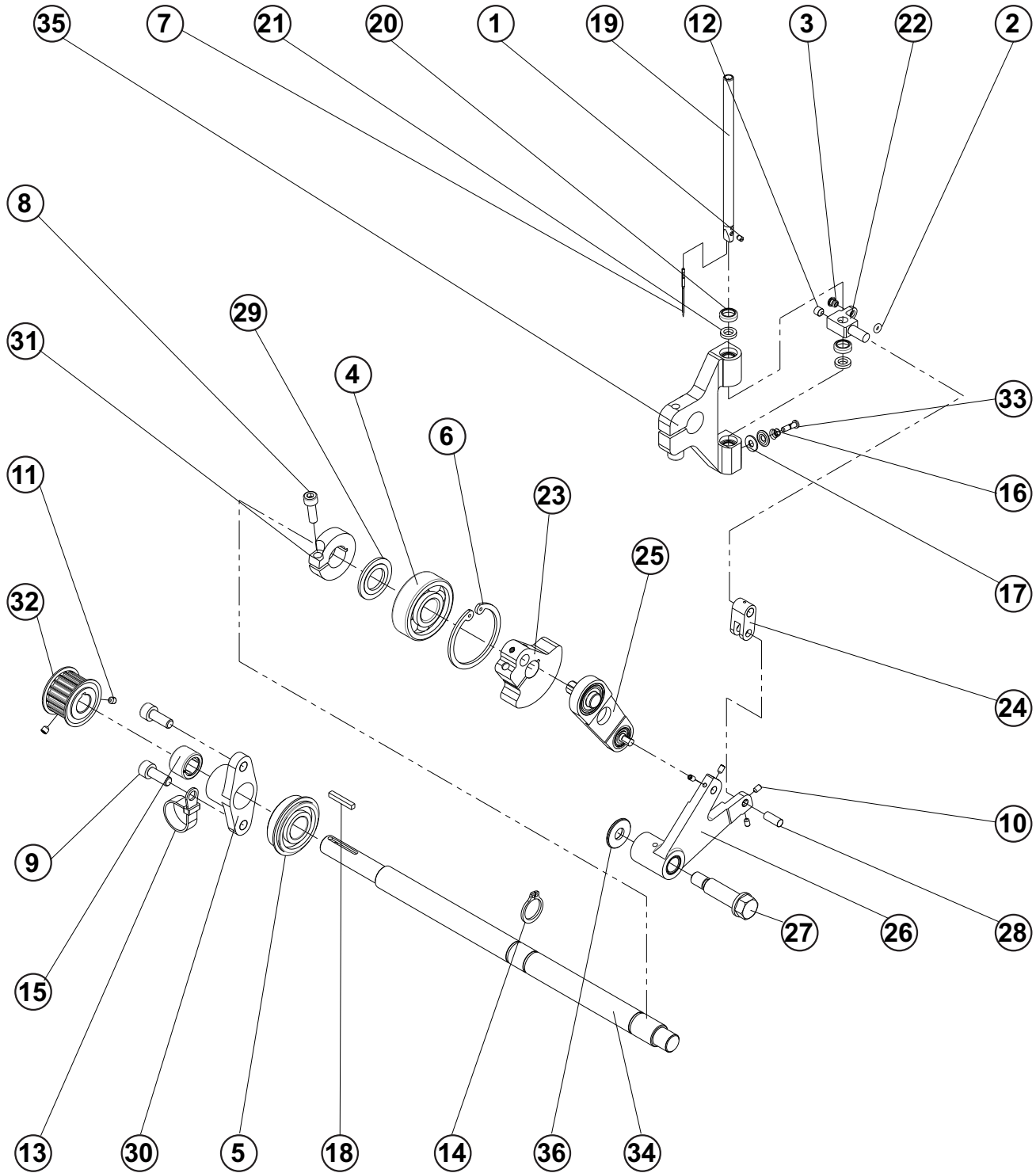


## TABLE OF CONTENTS

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NEEDLE BAR .....	3-2
CLAMPING .....	3-4
THREAD TRIMMER .....	3-6
FEED MECHANISM .....	3-8
LOOPER MECHANISM .....	3-10
BITE MECHANISM .....	3-12
BASE .....	3-14
BEDPLATE TOP .....	3-16
THREAD DRAW .....	3-20
HEAD ASSEMBLY .....	3-22
COVERS .....	3-24
LUBRICATION .....	3-26
FRAME .....	3-28
TABLE .....	3-30
TABLE - ROLLER KIT - EXTRA PARTS .....	3-32
PNEUMATICS - I .....	3-34
PNEUMATICS - II .....	3-36
ELECTRICAL - I .....	3-38
ELECTRICAL - II .....	3-42
ELECTRICAL - III .....	3-44
PANEL KIT .....	3-46
ACCESSORIES - EXTRA PARTS .....	3-48

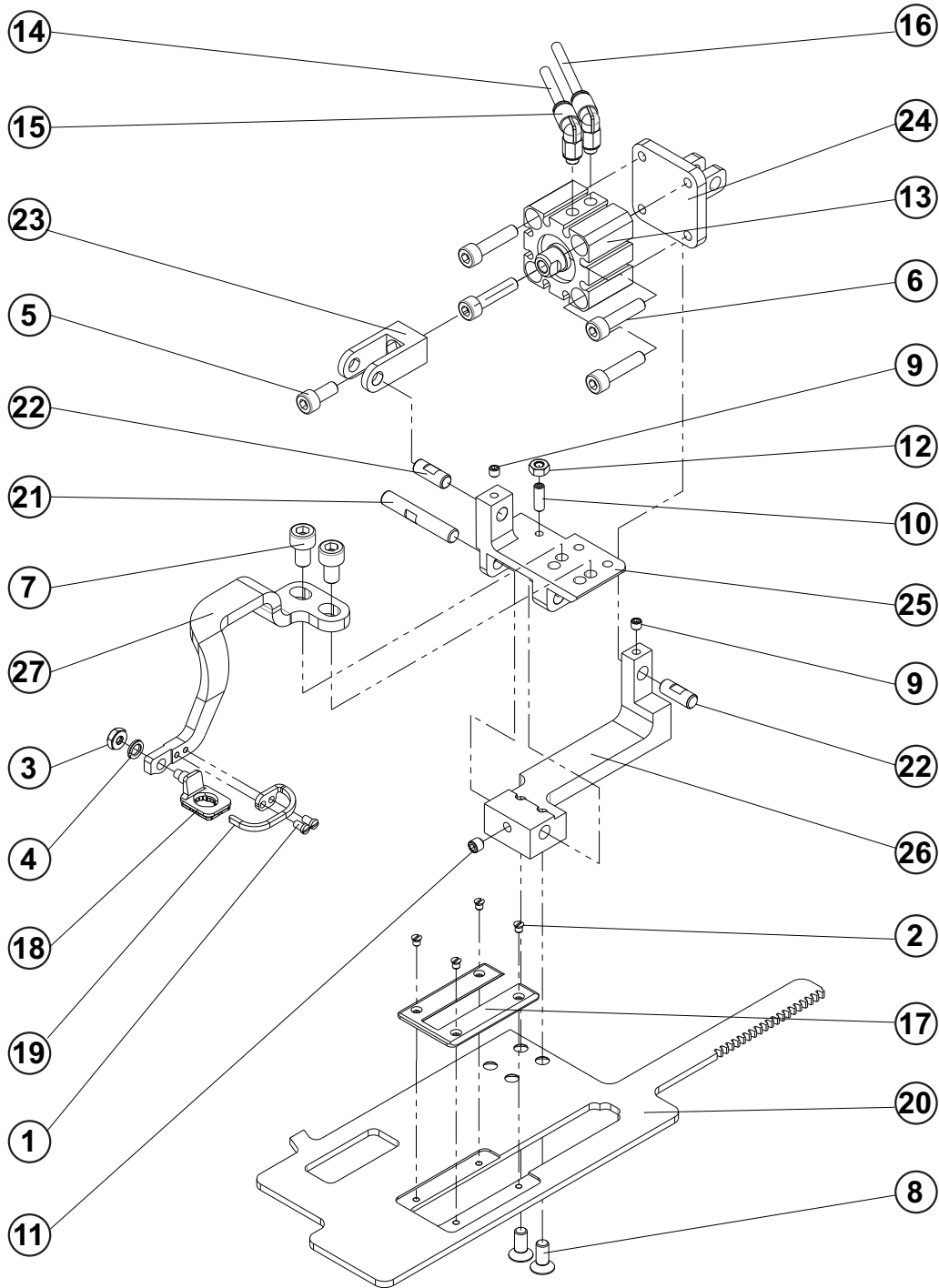
# NEEDLE BAR



## NEEDLE BAR

DET	PART NUMBER	DESCRIPTION	QTY.
01	01.2193.0.000	SCREW-SET	1
02	01.6551.0.000	O-RING	1
03	01.7447.1.000	GUIDE	1
04	01.7804.0.000	BEARING	1
05	01.7805.0.000	BEARING	1
06	01.7809.0.000	RETAINING RING	1
07	02.0750.2.110	NEEDLE	1
08	08.6000.5.016	SCREW M5-16	1
09	08.6000.6.016	SCREW M6-16	2
10	08.6400.3.005	SCREW M3-5	4
11	08.6400.4.004	SCREW M4-4	2
12	08.6400.5.005	SCREW M5-5	1
13	12.0010.4.013	CABEL BINDER	1
14	12.1045.2.001	RETAINING RING 15	1
15	12.2050.0.003	BEARING	1
16	17.0026.2.077	SPRING	1
17	17.0082.8.017	TENSION DISC	2
18	22.0175.0.000	KEY	1
19	22.0195.0.000	NEEDLE BAR	1
20	22.0230.0.000	RING	2
21	22.0239.0.000	FELT	2
22	22.0520.0.000	CLAMP, NEEDLE BAR	1
23	22.0525.0.050	CRANK ASSY.	1
24	22.0530.0.000	CONNECT. LINK, NEEDLE BAR	1
25	22.0535.0.100	NEEDLE BAR CRANK LINK ASSY.	1
26	22.0540.0.000	N.B. CONNECTION LINK PIN	1
27	22.0541.0.000	N.B.SHOULDER SCREW	1
28	22.0542.0.000	N.B. CONNECTINK LINK PIN	1
29	22.0545.0.000	WASHER	1
30	24.0001.0.000	BEARING CARRIER UPPER SHAFT	1
31	24.0002.0.000	CLAMP COLLAR	1
32	24.0048.0.000	NEEDLE BAR PULLEY	1
33	24.0100.0.000	SCREW M3.5X0.35-11	1
34	24.0500.0.000	NEEDLE BAR DRIVE SHAFT	1
35	24.0510.0.000	NEEDLE BAR HOLDER	1
36	24.0546.0.000	WASHER	1

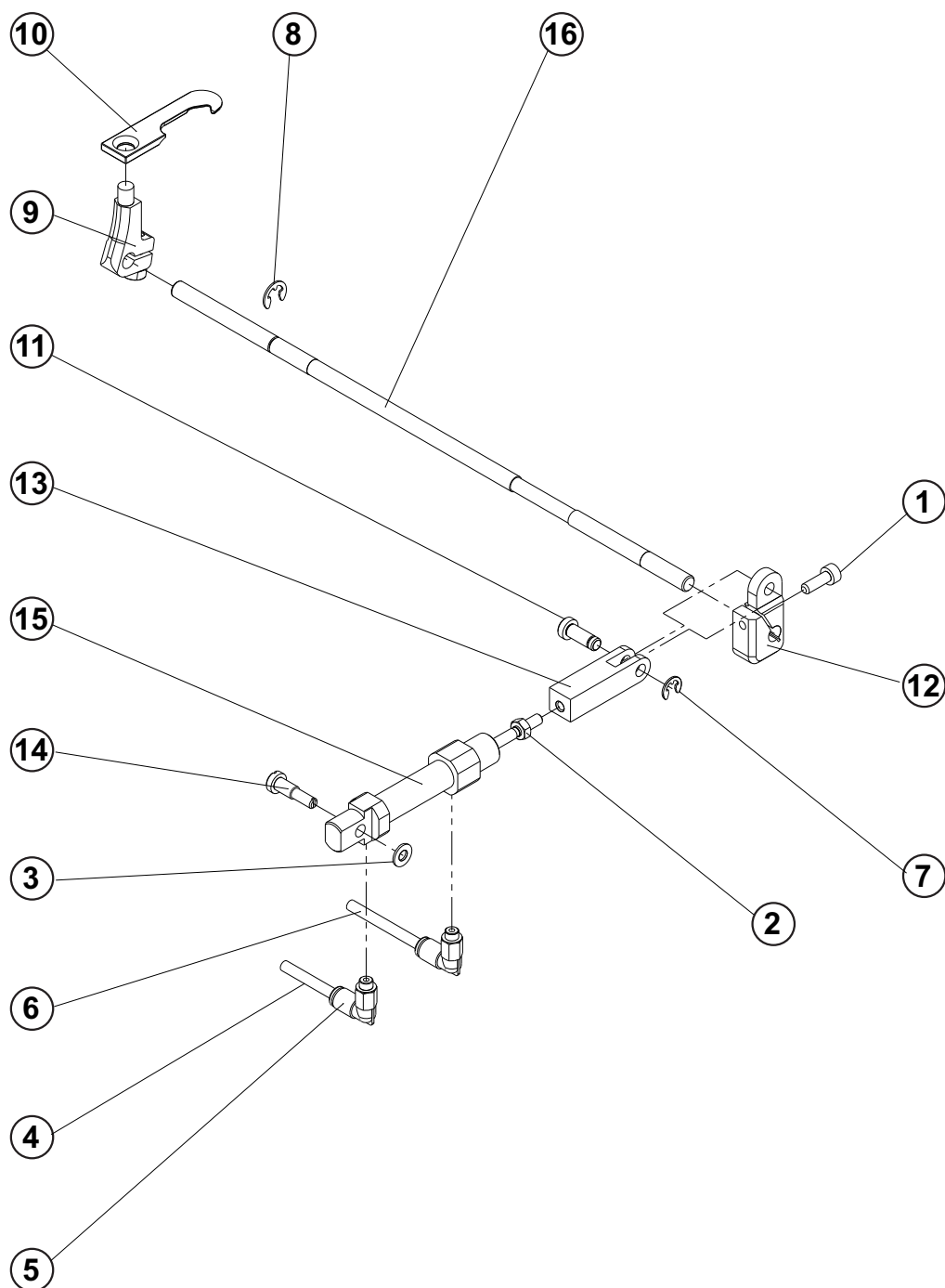
# CLAMPING



## CLAMPING

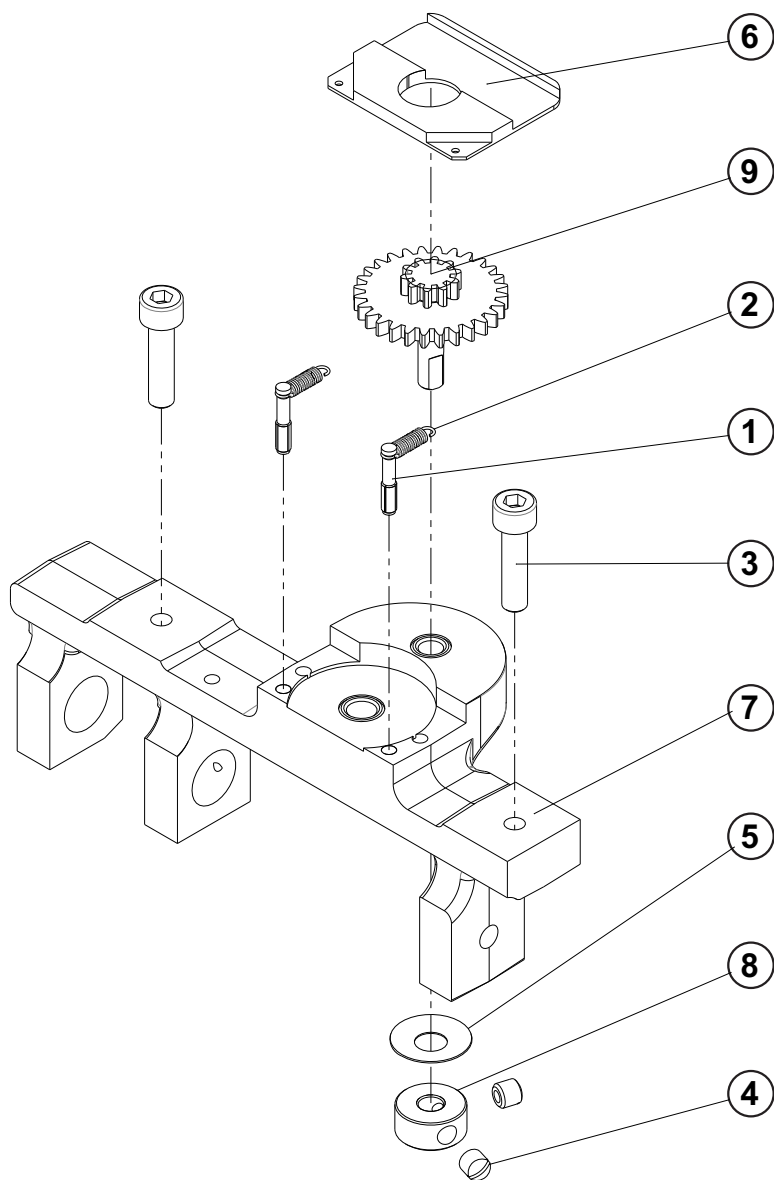
DET	PART NUMBER	DESCRIPTION	QTY.
01	01.2013.0.000	SCREW-FULL THREADED	2
02	01.2376.0.000	SCREW-FLAT HEAD	4
03	01.3413.0.000	NUT-HEX	1
04	01.4003.0.000	WASHER-LOCK	1
05	08.6000.5.012	SCREW M5-12	1
06	08.6000.5.022	SCREW M5-22	4
07	08.6000.6.010	SCREW M6-10	2
08	08.6100.5.012	SCREW M5-12	2
09	08.6400.4.004	SCREW M4-4	2
10	08.6400.4.012	SCREW M4-12	1
11	08.6400.5.005	SCREW M5-5	1
12	08.6700.4.000	NUT M4	1
13	12.0008.3.412	CYLINDER	1
14	12.0008.3.416	AIR TUBE- J2B	
15	12.0010.3.028	CONNECTOR	2
16	12.0010.3.080	AIR TUBE- J2A	
17	20.0208.1.324	CLAMPING	1
18	20.0650.1.044	CLAMP FOOT - SRWD	1
19	20.0767.1.029	NEEDLE GUARD-SRWD	1
20	22.0125.0.000	CLAMPING PLATE	1
21	22.0159.0.000	CLAMP TAIL PIECE PIVOT PIN	1
22	22.0173.0.000	PIN	2
23	24.0035.0.000	CYLINDER CLEVIS	1
24	24.0036.0.000	CYLINDER MOUNTING BRACKET	1
25	24.3209.0.000	TAIL PIVOT CLAMP	1
26	24.3210.0.000	TAIL BRACKET CLAMP	1
27	24.3223.0.000	CLAMP ARM-SRWD	1

# THREAD TRIMMER





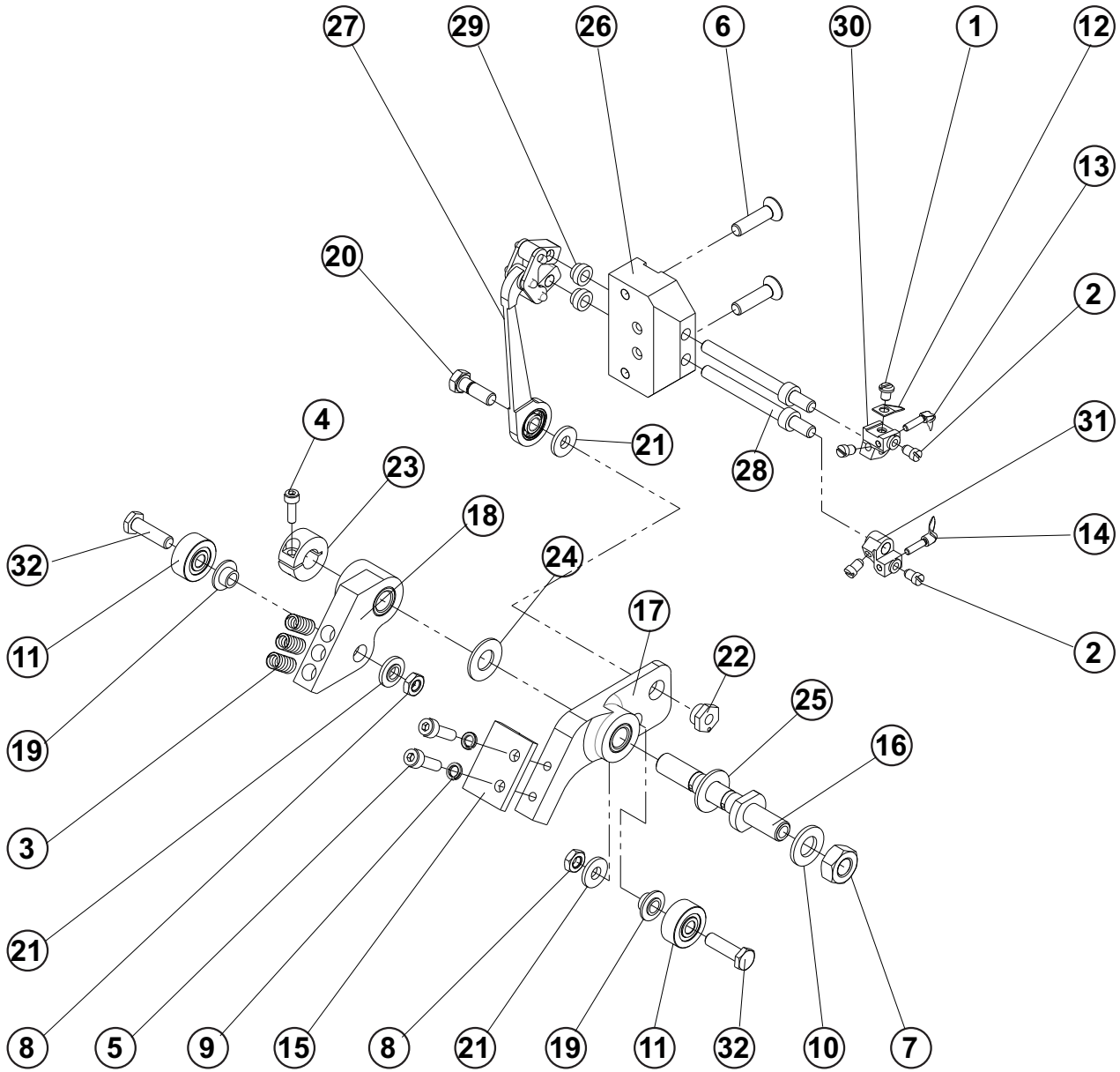
# FEED MECHANISM







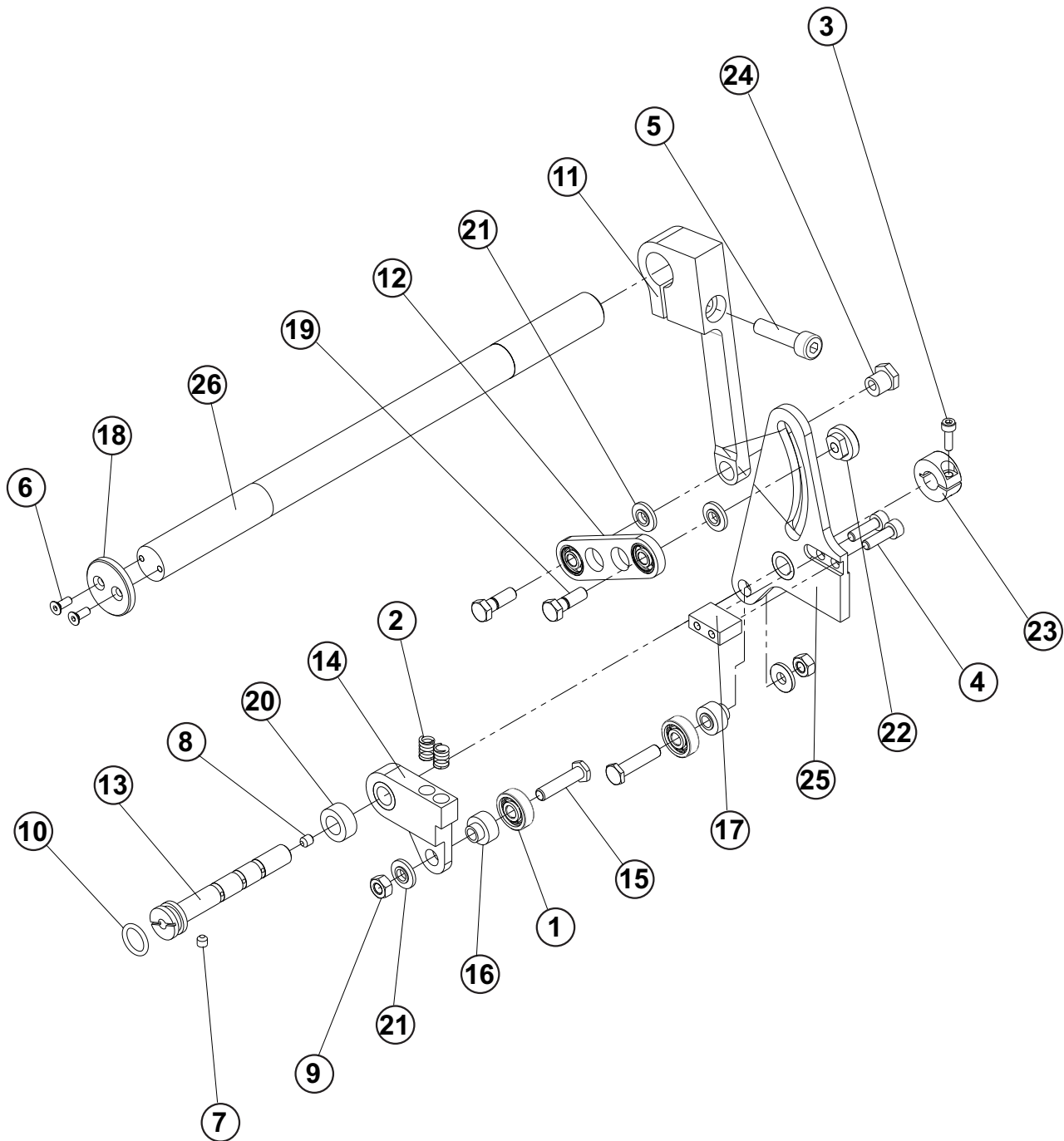
# LOOPER MECHANISM



## LOOPER MECHANISM

DET	PART NUMBER	DESCRIPTION	QTY.
01	01.1382.0.000	SCREW 6-40x4	1
02	01.1397.0.000	SCREW 6-40x4,8	4
03	07.6440.0.036	SPRING	3
04	08.6000.3.010	SCREW M3-10	1
05	08.6000.4.014	SCREW M4-14	2
06	08.6100.5.020	SCREW M5-20	2
07	08.6700.8.000	NUT M8	1
08	08.6710.5.000	NUT M5	2
09	08.6800.4.000	WASHER 4	2
10	08.6850.8.000	WASHER 8	1
11	12.2010.1.002	BEARING	2
12	20.0094.0.000	KNIFE - TRIMMER	1
13	20.0111.0.000	FIRST LOOPER	1
14	20.0112.0.000	SECOND LOOPER	1
15	22.0021.0.000	SPRING RETAINER BLOCK	1
16	22.0022.0.000	PIVOT SHAFT	1
17	22.0023.0.000	R.H.LOOPER CAM FOLLOWER PLATE	1
18	22.0024.0.000	LOOPER CAM FOLLOWER PLATE	1
19	22.0031.0.000	BEARING SPACER	2
20	22.0064.0.000	BITE SHOULDER SCREW	1
21	22.0100.0.000	SHOULDER WASHER	3
22	22.0105.0.000	LOOPER ECCENTRIC NUT	1
23	22.0183.0.000	RING	1
24	22.0232.0.000	WASHER	1
25	22.0233.0.000	WASHER	1
26	22.2410.0.000	SPREADER	1
27	22.2425.0.050	LOOPER LINK ASSY.	1
28	22.2440.0.000	LOOPER SHAFT	2
29	22.2442.0.000	LOOPER SPACER	2
30	23.2106.0.000	FIRST LOOPER HOLDER	1
31	23.2107.0.000	SECOND LOOPER HOLDER	1
32	24.0066.0.000	SCREW	2

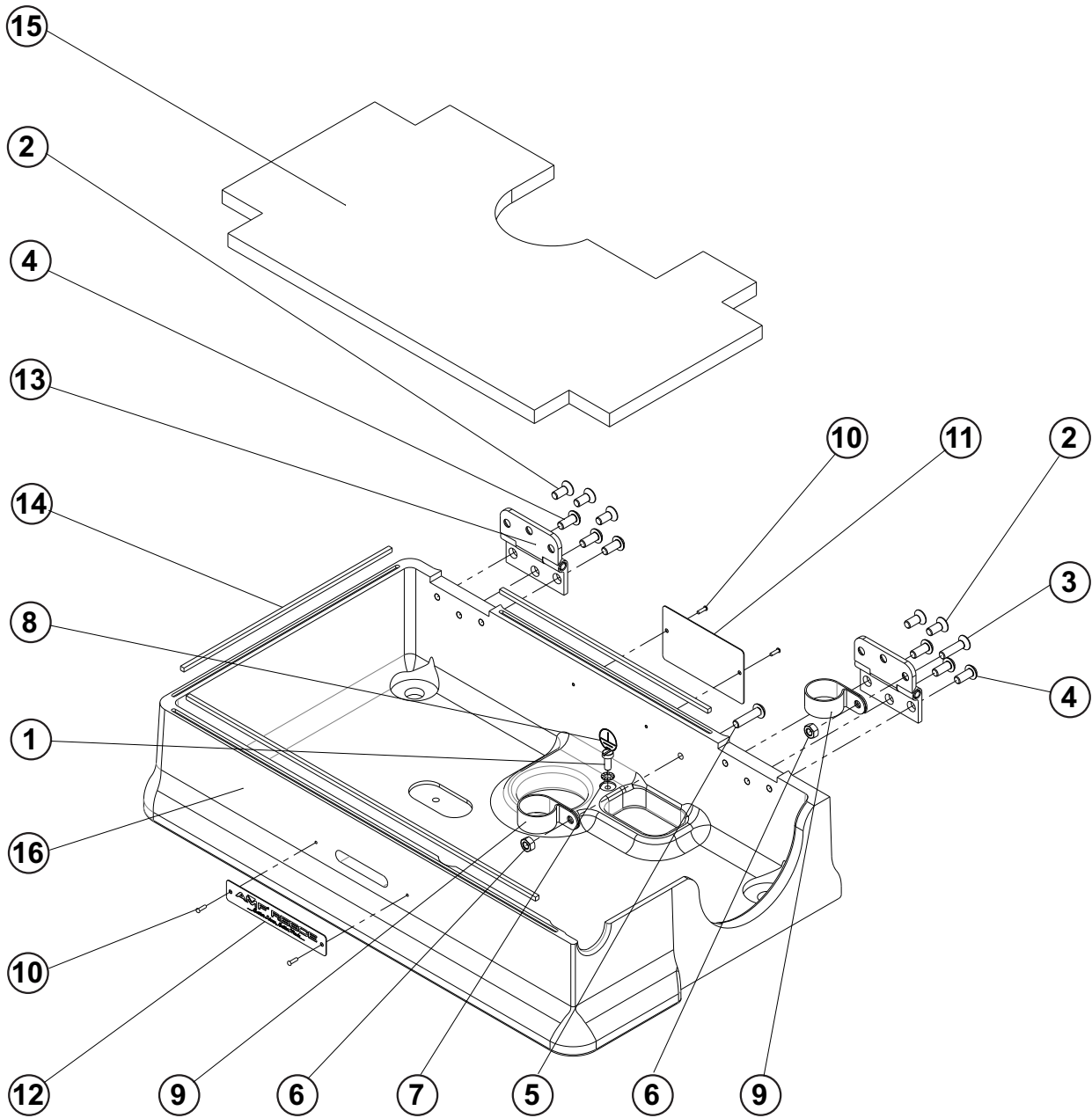
# BITE MECHANISM



## BITE MECHANISM

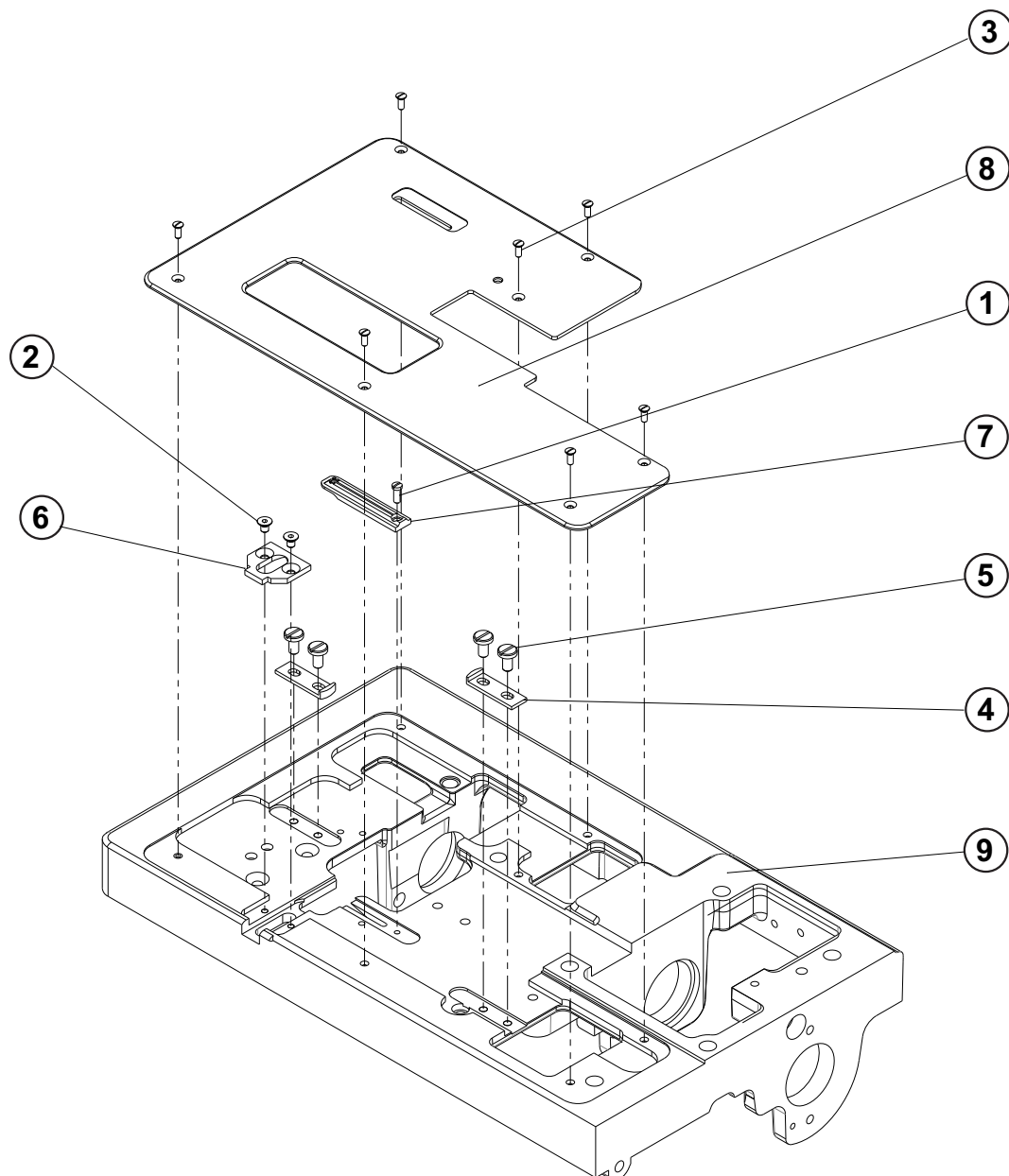
DET	PART NUMBER	DESCRIPTION	QTY.
01	07.6321.0.025	BEARING	2
02	07.6440.0.028	SPRING	2
03	08.6000.3.010	SCREW M3-10	1
04	08.6000.4.014	SCREW M4-14	2
05	08.6000.6.025	SCREW M6-25	1
06	08.6100.3.008	SCREW M3-8	2
07	08.6400.4.004	SCREW M4-4	1
08	08.6400.4.005	SCREW M4-5	1
09	08.6700.5.000	NUT M5	2
10	12.0008.6.800	O-RING 10x2	1
11	22.0008.0.000	BITE LEVER	1
12	22.0009.0.050	BITE ADJUSTING LINK ASSY.	1
13	22.0020.0.000	BITE PIVOT SHAFT	1
14	22.0027.0.000	RIGHT CAM FOLLOWER	1
15	22.0028.0.000	SCREW, BITE FOLLOWER	2
16	22.0029.0.000	BITE FOLLOWER BEARING SPACER	2
17	22.0030.0.000	BITE FOLLOWER SPRING RETAINER	1
18	22.0063.0.000	BITE SHAFT RETAINER	1
19	22.0064.0.000	BITE SHOULDER SCREW	2
20	22.0069.0.000	BITE FOLLOWER SPACER	1
21	22.0100.0.000	SHOULDER WASHER	4
22	22.0110.0.000	SHOULDER NUT M5	1
23	22.0183.0.000	RING	1
24	22.0214.0.000	ECENTRIC NUT M5	1
25	24.0033.0.000	LEFT CAM FOLLOWER	1
26	24.0055.0.000	BITE SHAFT	1

# BASE





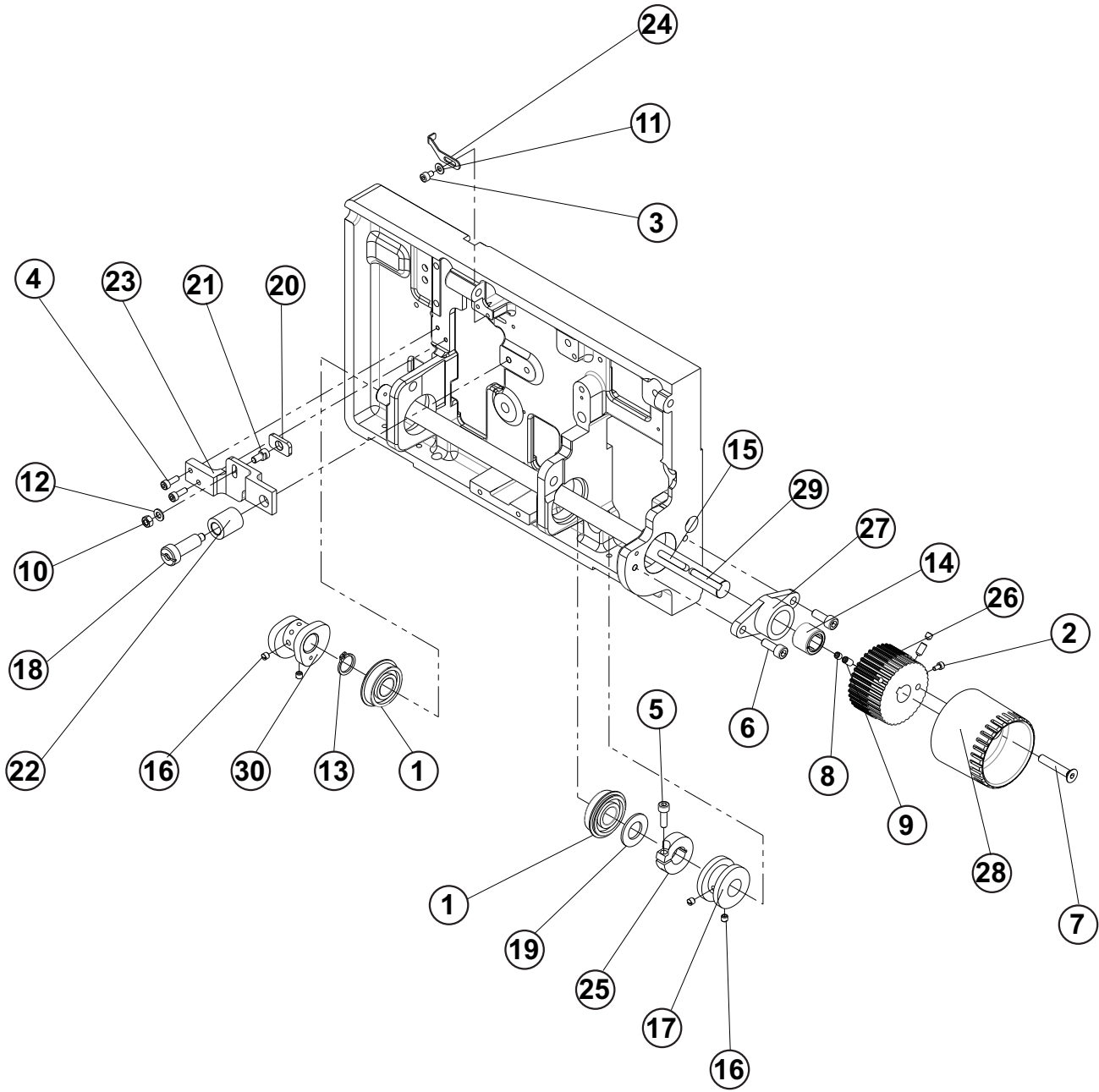
# BEDPLATE TOP







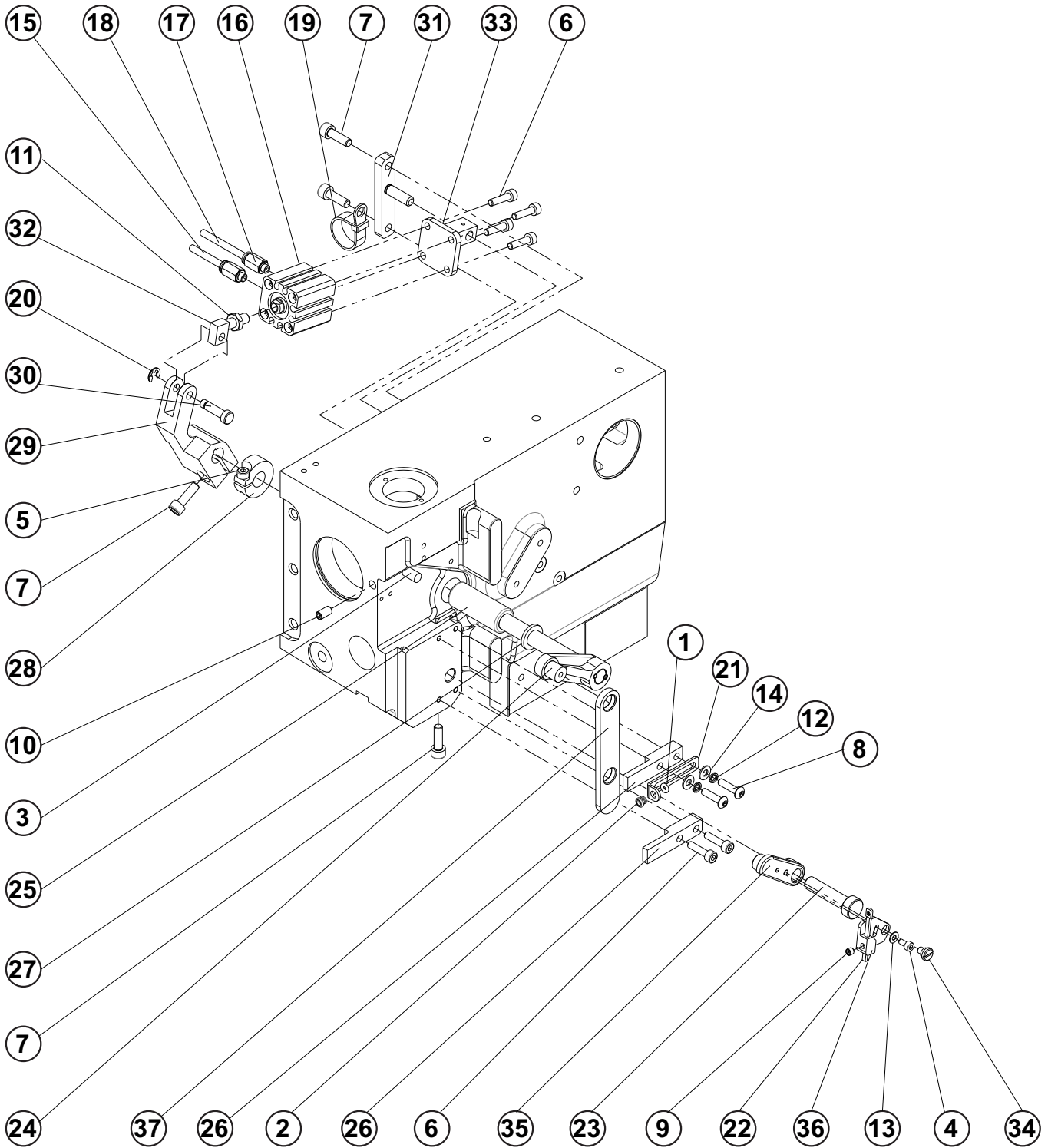
# BEDPLATE BOTTOM



## BEDPLATE BOTTOM

DET	PART NUMBER	DESCRIPTION	QTY.
01	01.7805.0.000	BEARING	2
02	08.6000.3.006	SCREW M3-6	1
03	08.6000.4.006	SCREW M4-6	1
04	08.6000.4.012	SCREW M4-12	2
05	08.6000.5.016	SCREW M5-16	1
06	08.6000.6.016	SCREW M6-16	2
07	08.6100.6.035	SCREW M6-35	1
08	08.6400.5.005	SCREW M5-5	2
09	08.6400.5.010	SCREW M5-10	2
10	08.6700.5.000	NUT M5	1
11	08.6850.4.000	WASHER M4	1
12	08.6850.5.000	WASHER 5,3	1
13	12.1045.2.001	RETAINING RING 15	1
14	12.2050.0.005	BEARING	1
15	12.4030.0.002	KEY	1
16	17.0011.1.149	SCREW M5x0,5-5	4
17	22.0006.0.000	BITE CAM	1
18	22.0106.0.000	HUB SHOULDER SCREW	1
19	22.0545.0.000	WASHER	1
20	22.2631.0.000	CLAMP PLATE SLIDESTONE	1
21	22.2633.0.000	SLIDESTONE RETAINING SCREW	1
22	22.3206.0.000	SPACER-TKF	1
23	22.3216.0.000	CLAMP PLATE LEVER	1
24	22.3219.0.000	NEEDLE GUARD	1
25	24.0002.0.000	CLAMP COLLAR	1
26	24.0018.0.000	MAIN SHAFT DRIVE PULLEY	1
27	24.0019.0.000	BEARING CARRIER LOWER SHAFT	1
28	24.0051.0.066	HAND WHEEL	1
29	24.1000.0.000	MAIN SHAFT	1
30	24.2400.0.000	LOOPER CAM	1

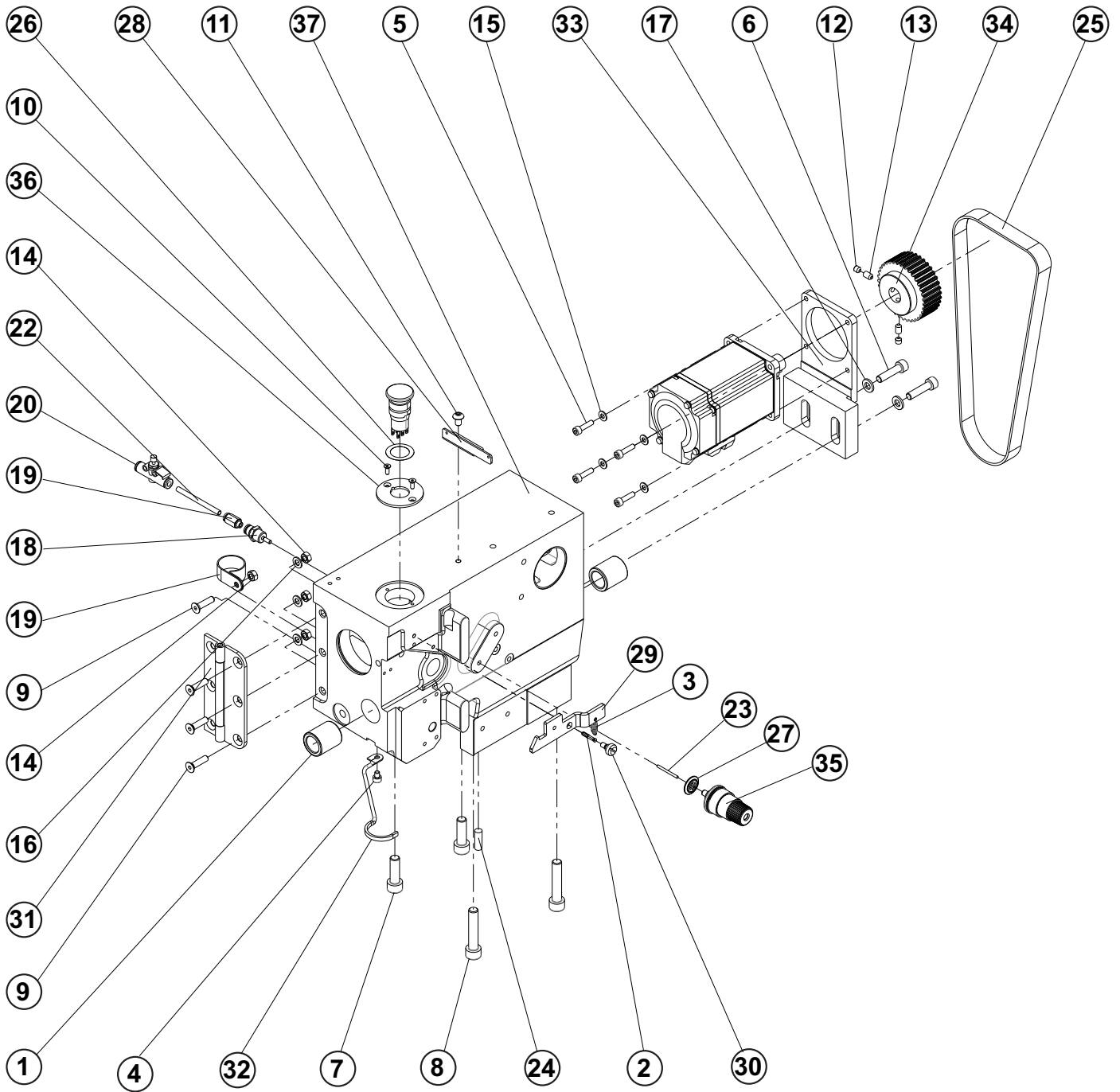
# THREAD DRAW



## THREAD DRAW

DET	PART NUMBER	DESCRIPTION	QTY.
01	01.6551.0.000	O-RING	1
02	01.7447.1.000	GUIDE	1
03	07.6045.0.053	PIN	1
04	08.6000.3.006	SCREW M3-6	1
05	08.6000.4.010	SCREW M4-10	1
06	08.6000.4.016	SCREW M4-16	6
07	08.6000.5.016	SCREW M5-16	4
08	08.6200.4.016	SCREW M4-16	2
09	08.6400.4.004	SCREW M4-4	1
10	08.6400.5.010	SCREW M5-10	1
11	08.6710.6.000	NUT M6	1
12	08.6800.4.000	WASHER 4	2
13	08.6850.3.000	WASHER 3,2	1
14	08.6850.4.000	WASHER M4	2
15	12.0008.3.416	AIR TUBE- J1B	
16	12.0008.3.433	CYLINDER	1
17	12.0010.3.027	CONNECTOR	2
18	12.0010.3.080	AIR TUBE- J1A	
19	12.0010.4.013	CABEL BINDER 200x7,8	1
20	12.1045.0.004	RETAINING RING 4	1
21	22.0046.0.000	THREAD GUIDE BRACKET	1
22	22.0091.0.000	THREAD TAKE-UP	1
23	22.0161.0.000	PIVOT, ECCENTRIC	1
24	22.1415.0.050	KNIFE	1
25	22.1422.0.000	KNIFE SHAFT BUSHING	1
26	22.1436.0.000	RETAINER, DRIVE PLATE	2
27	24.0009.0.000	WASHER	1
28	24.0010.0.000	CLAMP COLLAR 10H7	1
29	24.0011.0.000	KNIFE DRIVE LEVER	1
30	24.0014.0.000	PIVOT	1
31	24.0016.0.000	CYLINDER PIVOT STUD ASSEMBLY	1
32	24.0037.0.000	DRAW BAR CYLINDER	1
33	24.0039.1.000	TENSION RELEASE BRACKET	1
34	24.0061.0.000	THREAD TAKE-UP SHOULDER SCREW	1
35	24.0062.0.000	KNIFE GUIDE LINK	1
36	24.0063.0.000	THREAD TAKE-UP	1
37	24.1430.1.000	DRIVE PLATE	1

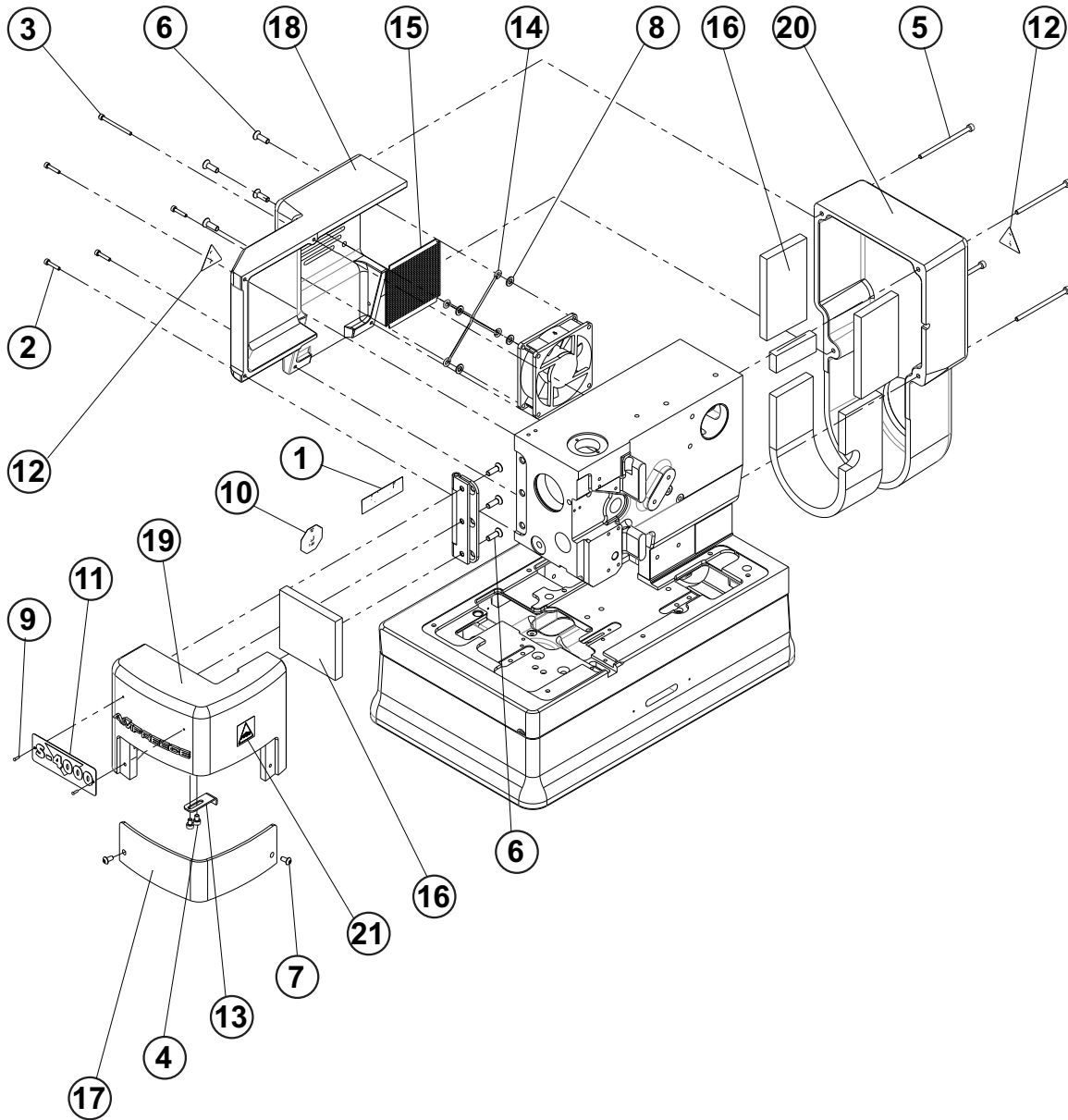
# HEAD ASSEMBLY



## HEAD ASSEMBLY

DET	PART NUMBER	DESCRIPTION	QTY.
01	01.7806.0.000	BUSHING	2
02	07.6045.0.037	PIN 3-16	1
03	07.6440.0.045	SPRING	1
04	08.6000.4.005	SCREW M4-5	1
05	08.6000.4.016	SCREW M4-16	4
06	08.6000.6.025	SCREW M6-25	2
07	08.6000.8.025	SCREW M8-25	2
08	08.6000.8.040	SCREW M8-40	2
09	08.6100.5.020	SCREW M5-20	4
10	08.6102.3.008	SCREW M3-8	2
11	08.6200.5.008	SCREW M5-8	1
12	08.6400.5.005	SCREW M5-5	2
13	08.6400.5.008	SCREW M5-8	2
14	08.6700.5.000	NUT M5	4
15	08.6850.4.000	WASHER M4	4
16	08.6850.5.000	WASHER 5,3	3
17	08.6850.6.000	WASHER 6,4	2
18	12.0008.3.413	CYLINDER	1
19	12.0008.4.197	CLAMP	1
20	12.0010.3.027	CONNECTOR	1
21	12.0010.3.029	SPEED VALVE	1
22	12.0010.3.080	AIR TUBE- J1A1	
23	12.1010.2.003	PIN	1
24	12.1011.0.001	PIN 6-20	1
25	12.5050.2.009	BELT	1
26	12.8000.0.047	LABEL, EMERGENCY STOP	1
27	17.0082.8.082	TENSION DISC	1
28	22.0054.0.000	UPPER THREAD GUIDE	1
29	22.0058.0.000	SEWING HEAD LATCH	1
30	22.0062.0.000	SCREW M4-3	1
31	22.6002.0.000	HEAD HINGE ASSY.	1
32	24.0044.0.000	NEEDLE GUARD	1
33	24.0106.1.000	MOTOR HOLDER	1
34	24.0108.0.000	MOTOR PULLEY - MITSUBISHI	1
35	24.0119.0.050	TENSION DISC ASSY.	1
36	24.0148.0.000	COVER, EMERGENCY STOP	1
37	24.6000.5.000	HEAD BH, ISBH, TKF, LS	1

# COVERS

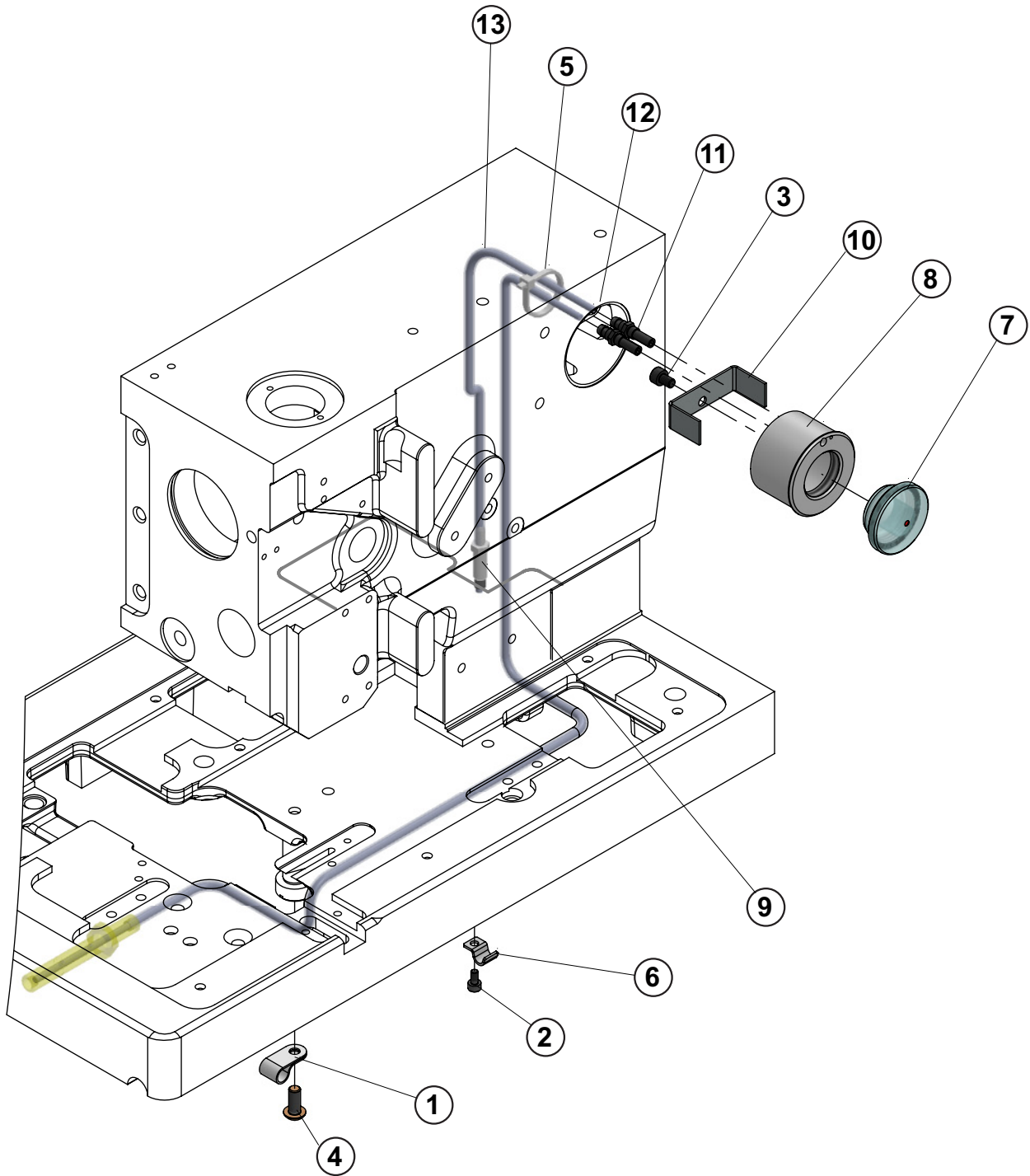




## COVERS

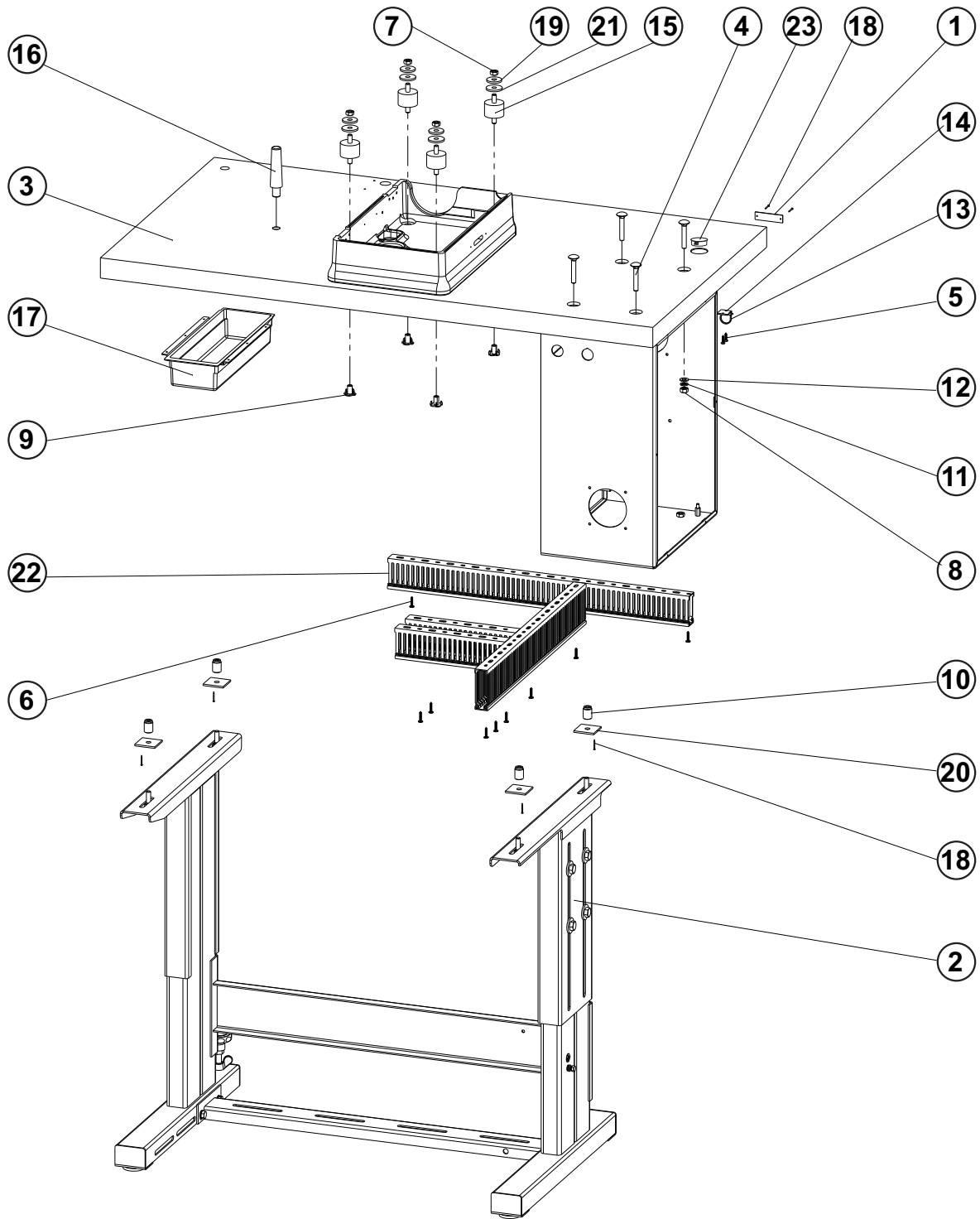
DET	PART NUMBER	DESCRIPTION	QTY.
01	05.1394.0.000	LABEL	1
02	08.6000.3.016	SCREW M3-16	4
03	08.6000.3.040	SCREW M3-40	1
04	08.6000.4.006	SCREW M4-6	2
05	08.6000.4.070	SCREW M4-70	4
06	08.6100.5.016	SCREW M5-16	7
07	08.6200.4.008	SCREW M4-8	2
08	08.6850.5.000	WASHER 5,3	4
09	12.1016.0.002	NAIL	2
10	12.8000.0.438	LABEL - GUALITY TÜV SÜD	1
11	12.8000.1.007	LABEL S-4000	1
12	17.0097.5.174	LABEL- WARNING	2
13	22.0057.0.000	COVER LATCH	1
14	24.0067.0.000	FAN RACK	1
15	24.0068.0.000	NET	1
16	24.0112.0.000	COVER SOUND DEADENER	1
17	24.0154.0.000	EYE SHIELD	1
18	24.6001.2.000	HEAD COVER	1
19	24.6003.0.000	NEEDLE BAR COVER	1
20	24.6004.1.001	PULLEY COVER - CROSSWISE TABLE	1
21	27513603	LABEL, CAUTION (SUPERIOR IMAGE)	1

# LUBRICATION





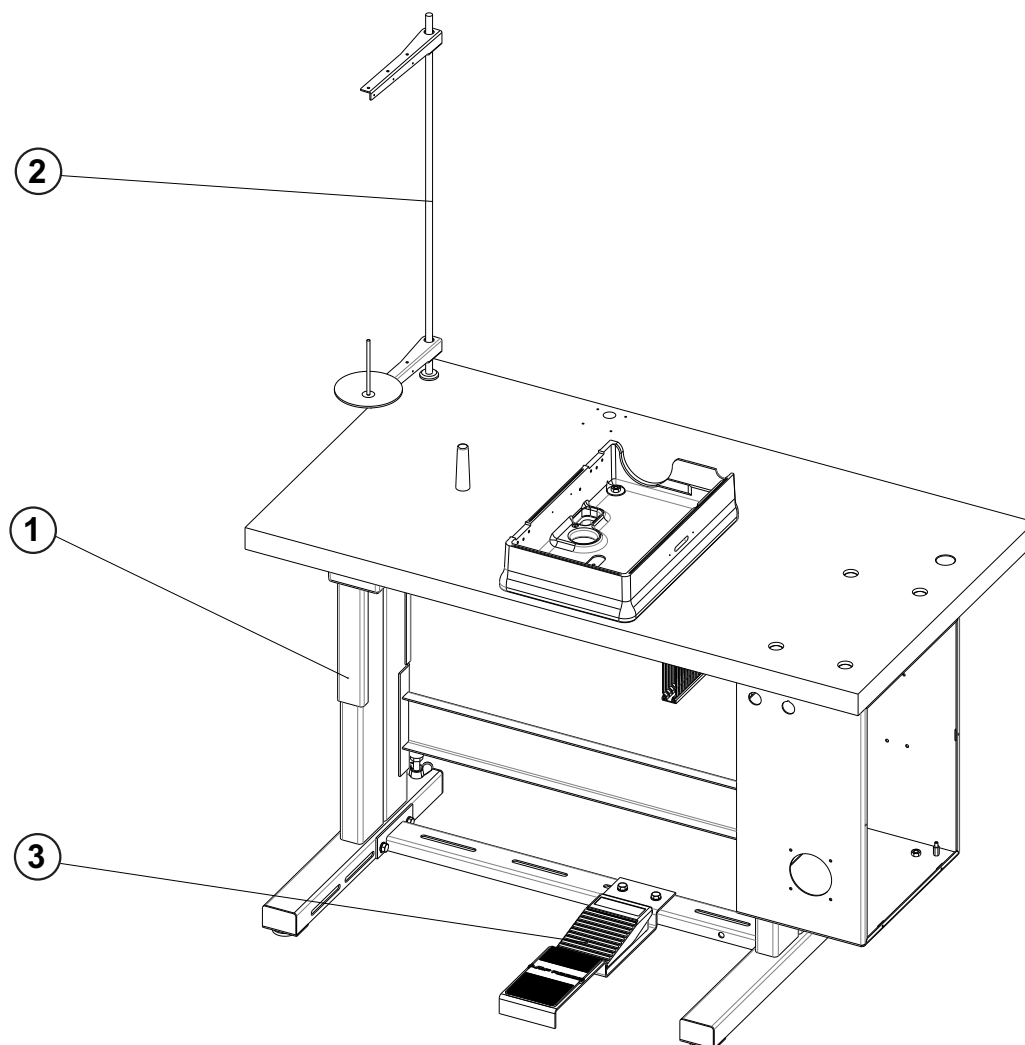
# FRAME



## FRAME

DET	PART NUMBER	DESCRIPTION	QTY.
01	04.1416.1.003	LABEL	1
02	04.9000.2.123	FRAME KIT ASSY.	1
03	04.9024.0.906	TABLE TOP CROSSWISE ISBH+I 30°	1
04	08.6532.8.050	SCREW M8-50	4
05	08.6652.3.016	SCREW ST3,5-16	2
06	08.6676.3.020	SCREW ST3,5-20	10
07	08.6700.8.000	NUT M8	4
08	08.6702.8.000	NUT M8	4
09	08.6742.8.000	NUT M8	4
10	08.6752.8.000	NUT M8	4
11	08.6802.8.000	SPRING WASHER M8	4
12	08.6852.8.000	WASHER M8	4
13	12.0008.3.023	TY-WRAP	1
14	12.0008.4.058	CLIP 21x21	1
15	12.0008.6.801	SHOCK MOUNT	4
16	12.0008.6.900	MACHINE REST TABLE PIN	1
17	12.0008.6.901	BOX	1
18	12.1016.1.000	NAIL 1,6x20	6
19	17.0019.0.441	WASHER	4
20	17.0094.0.200	WASHER	4
21	17.0095.1.272	RUBBER WASHER	4
22	24.0069.9.063	LATCH FOR CABLE PLATE	1
23	12.0010.6.926	PLUG	1

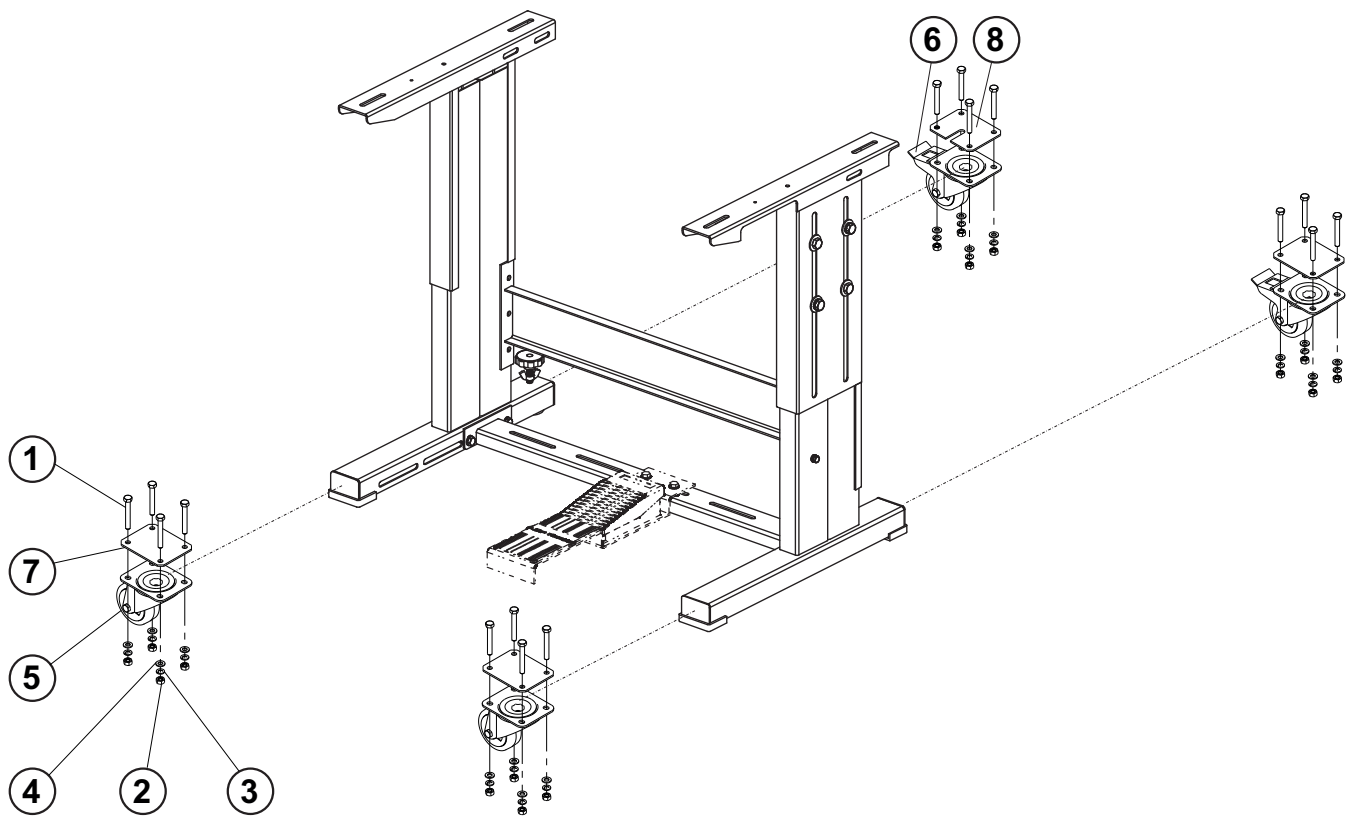
# TABLE



**TABLE**

DET	PART NUMBER	DESCRIPTION	QTY.
01	04.9024.0.006	FRAME ASSY. - S4001 ISBH+I 30°	1
02	22.0219.0.000	THREAD STAND	1
03	24.0069.9.009	PEDAL ASSY.	1

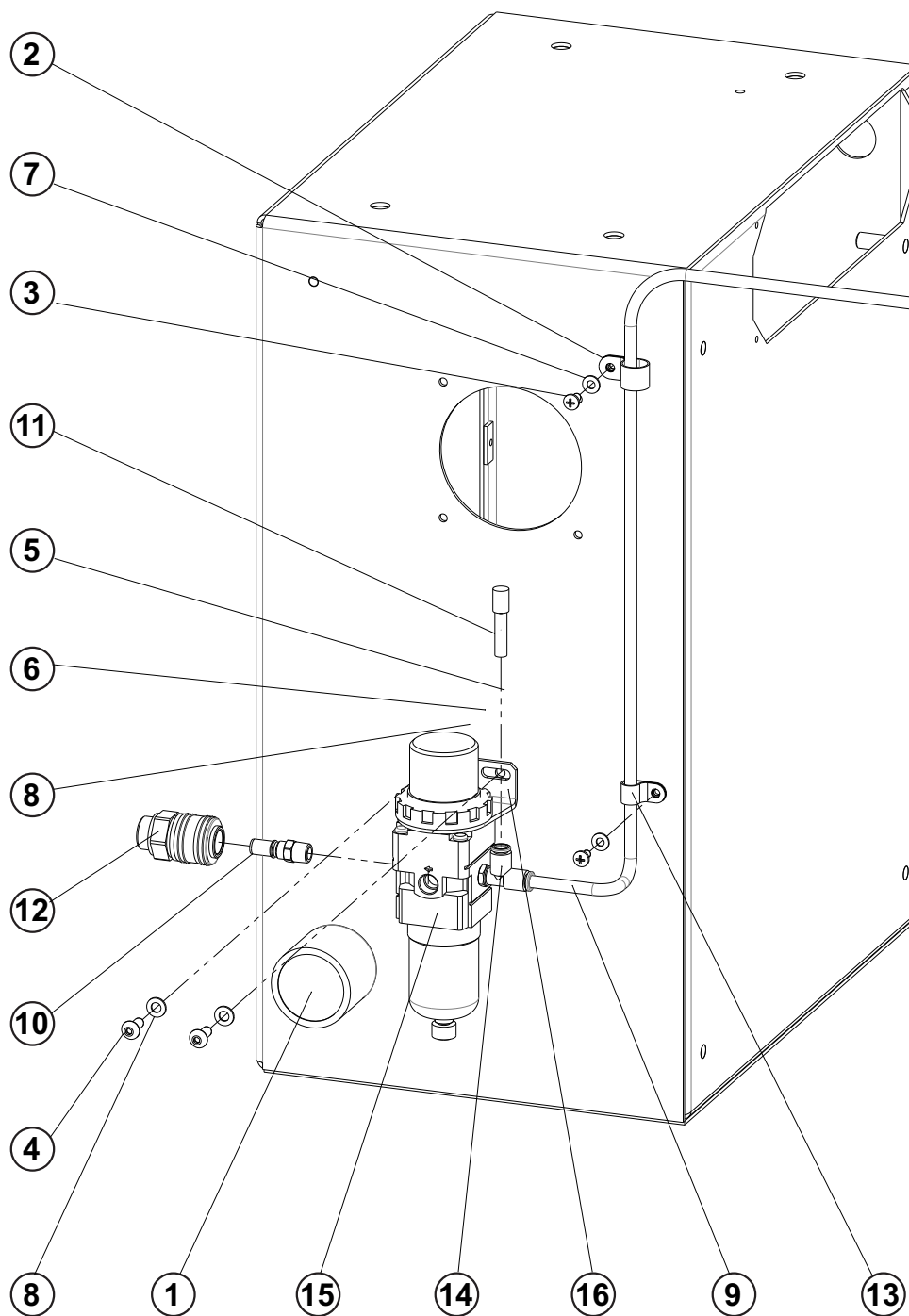
# TABLE - ROLLER KIT - EXTRA PARTS





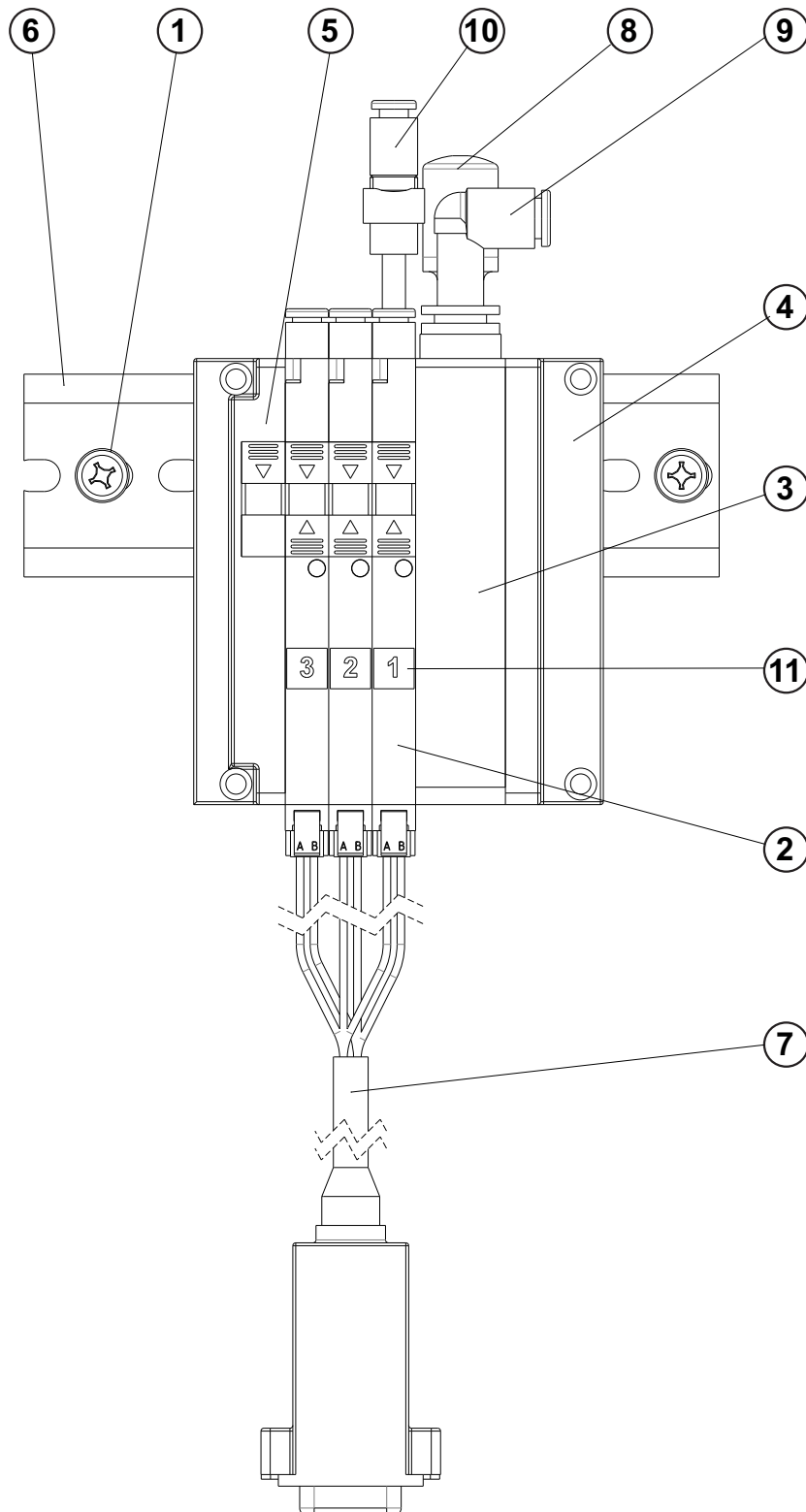


# PNEUMATICS - I





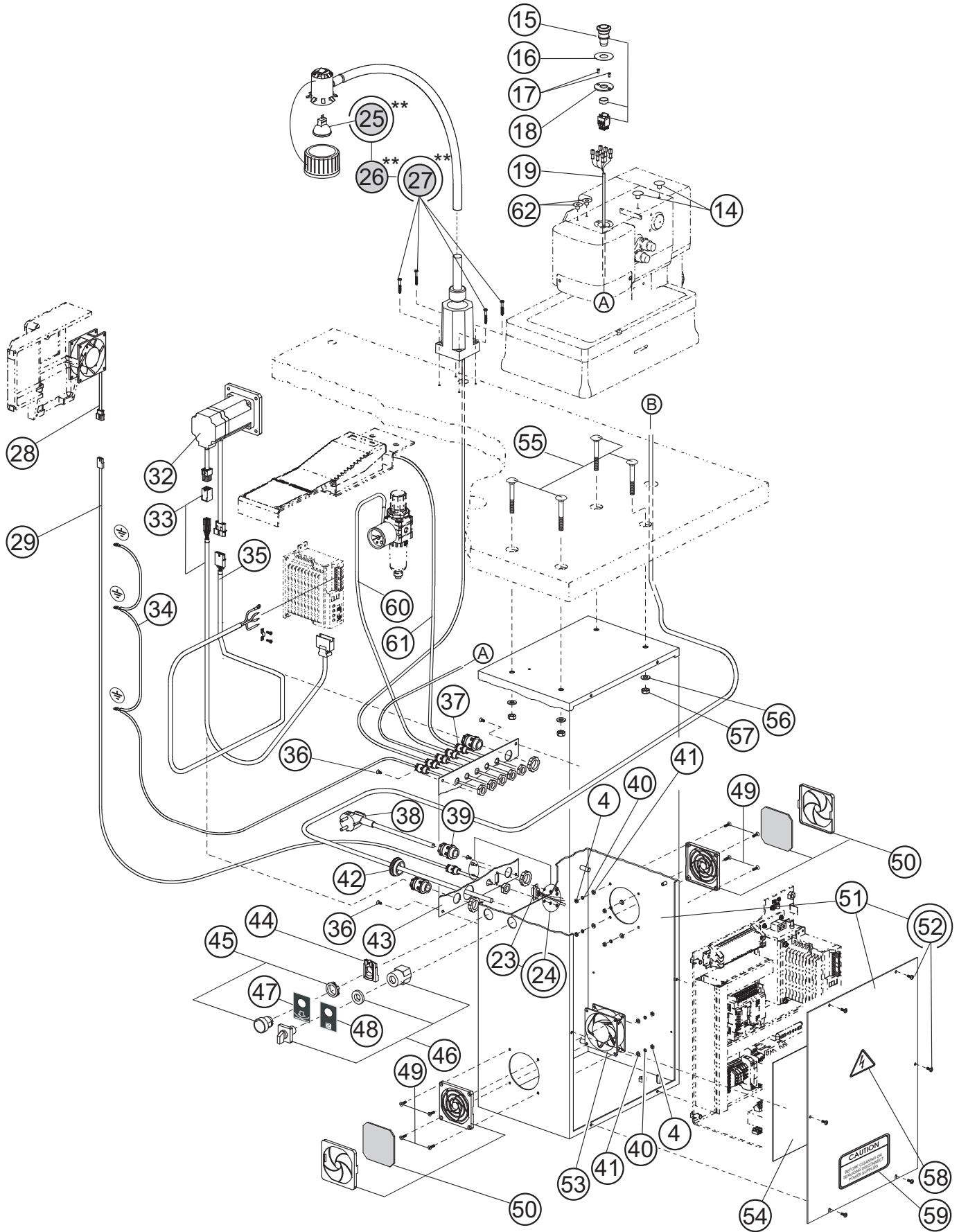
# PNEUMATICS - II



**PNEUMATICS - II**

DET	PART NUMBER	DESCRIPTION	QTY.
01	08.6676.4.025	SCREW ST	2
02	12.0008.3.828	5/2 VALVE	3
03	12.0008.3.829	AIR SUPPLY BLOCK	1
04	12.0008.3.830	END PLATE D	1
05	12.0008.3.831	END PLATE U	1
06	12.0008.3.832	DIN LATH	1
07	12.0008.3.833	CABLE	1
08	12.0010.3.030	SILENCER	1
09	12.0010.3.031	CONNECTOR	1
10	12.0010.3.159	CONNECTOR	1
11	12.8000.0.446	LABELS - VALES	1

# ELECTRICAL - I



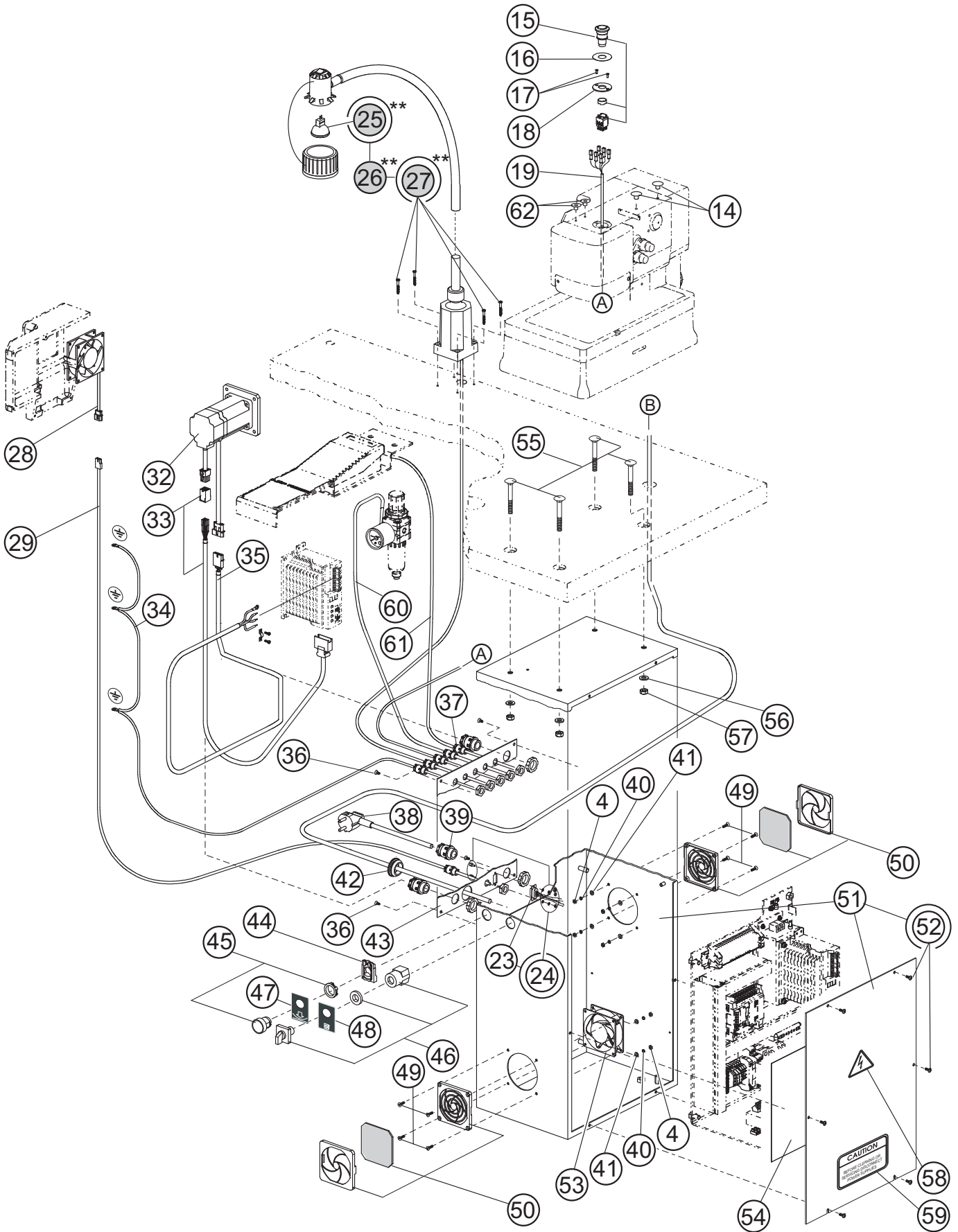
## ELECTRICAL - I

DET	PART NUMBER	DESCRIPTION	QTY.
01	03.5524.0.024	PANEL KIT	1
02	12.0008.4.565	SCREW	(2)
03	08.6000.4.006	SCREW	(2)
04	08.6702.4.000	NUT M4	8
05	06.2400.0.703	CABLE	(1)
06	08.6200.6.012	SCREW	(2)
07	08.6832.6.000	SERRADED WASHER	(2)
08	24.0146.0.000	DISPLAY BOX	(1)
09	12.0008.4.571	PLUG	(2)
10	24.0147.0.000	PANEL HOLDER	(2)
11	24.8001.2.032	DISPLAY	(1)
12	See Page 3-2	SCREW M6X16	—
13	See Page 3-2	PLASTIC CABLE FITTING	—
14	12.0008.4.570	PLUG	2
15	12.0010.4.191	EMERGENCY STOP BUTTON	1
16	12.8000.0.047	LABEL	1
17	08.6102.3.008	SCREW	2
18	24.0148.0.000	EMERGENCY STOP COVER	1
19	06.2400.0.014	EMERGENCY STOP CABLE	
23	24.0069.9.004	CABLE	1
24	12.0008.4.710	SCREW KIT	1
25**	12.0008.4.679	BULB 12V/12W	(1)**
26**	12.0008.4.403	HALOGEN LAMP KIT 12 V ASSEMBLY	1**
27**	—	SCREW	(4)**
28	24.0059.9.069	FAN	1
29	06.2400.0.014	FAN CABLE	1
32	12.0010.4.177	SERVOMOTOR	1
33	12.0010.4.178	ENCODER CABLE	1
34	—	CABLE CROUND	1
35	12.0010.4.179	MOTOR POWER CABLE	1
36	08.6100.4.010	SCREW	4
37	12.0008.4.207	BUSHING	••• 7
38	12.0008.4.885	CABLE	1
39	12.0008.4.231	BUSHING	3
40	08.6802.4.000	WASHER	4
41	08.6852.4.000	WASHER	4
42	12.0008.4.366	PLUG PG 29	1
43	24.0138.0.000	CONNECTORS PLATE ISBH	1
44	12.0008.4.863	BLOCK	1
45	12.0008.4.861	SWITCH (BLACK)	1

\*\* - EXTRA PARTS



# ELECTRICAL - I





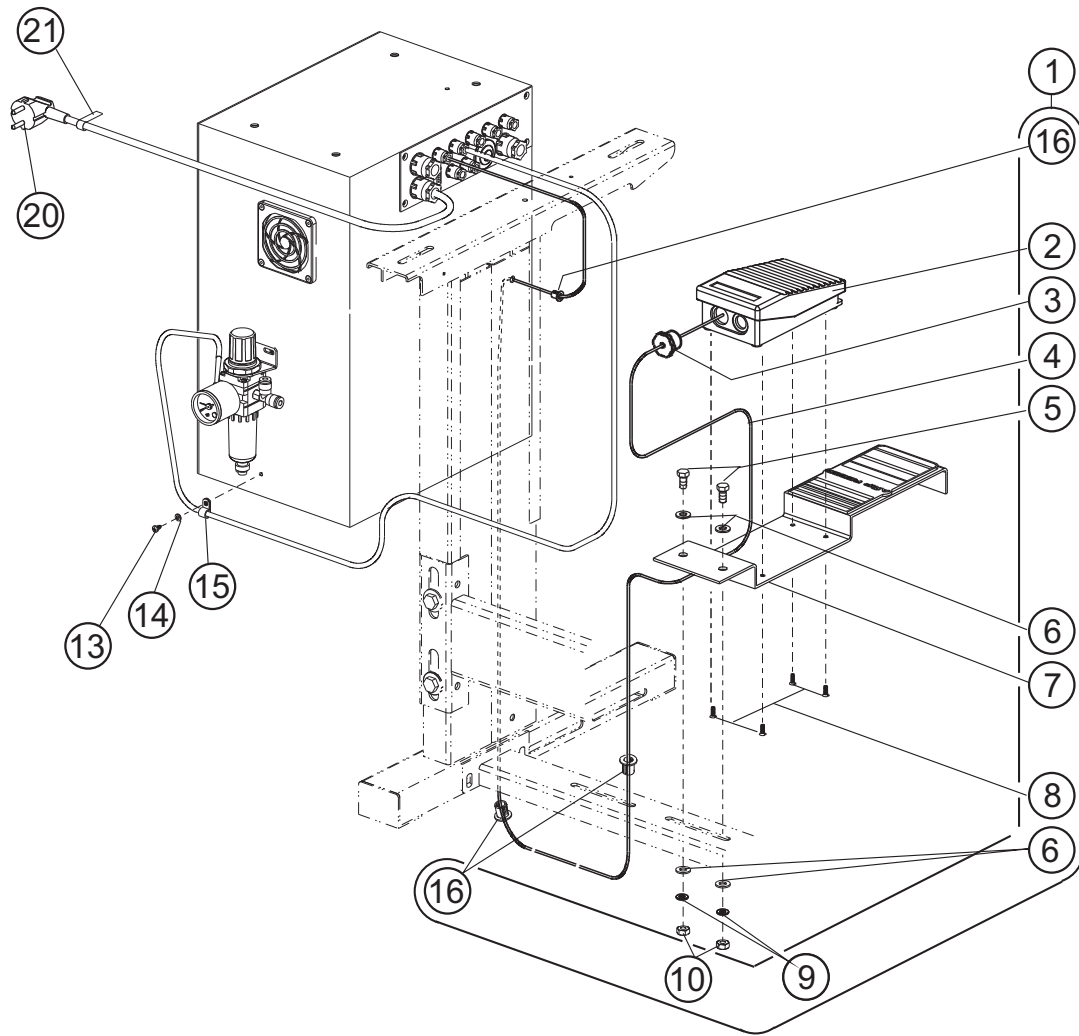
**ELECTRICAL - I**



DET	PART NUMBER	DESCRIPTION	QTY.
46	12.0008.4.835	SWITCH ON — OFF	1
47	12.8000.0.041	LABEL (CLAMP UP/DOWN)	1
48	12.8000.0.040	LABEL	1
49	08.6100.4.014	SCREW	1
50	12.0008.4.762	FAN COVER WITH FILTER	••• 2
51	70.4165.1.125	ELECTRICAL BOX	1
52	08.6032.4.010	SCREW M4X10	(6)
53	24.0059.9.017	FAN	1
54	12.8000.0.162	ELECTRICAL DIAGRAM LABEL	1
55	See Page 3-28	SCREW M8X55	—
56	See Page 3-28	WASHER	—
57	See Page 3-28	NUT	—
58	12.0008.4.155	LABEL	1
59	00.2751.3.602	LABEL "CAUTION"	1
60	See Page 3-32	PRESSURE GAUGE	—
61	See Page 3-30	CABLE	—
62	08.6215.4.006	SCREW	2

\*\* - EXTRA PARTS

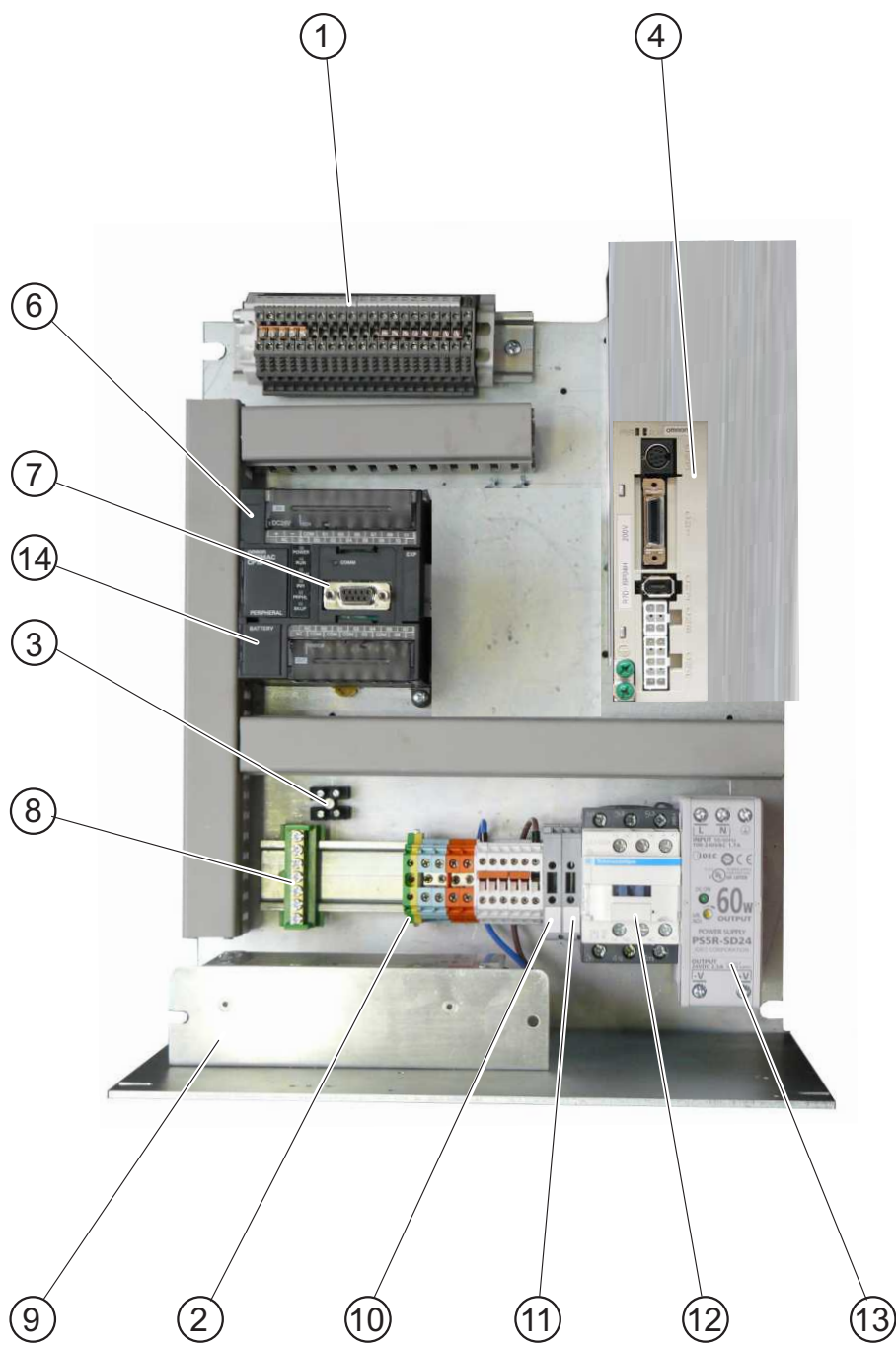
# ELECTRICAL - II



## ELECTRICAL - II

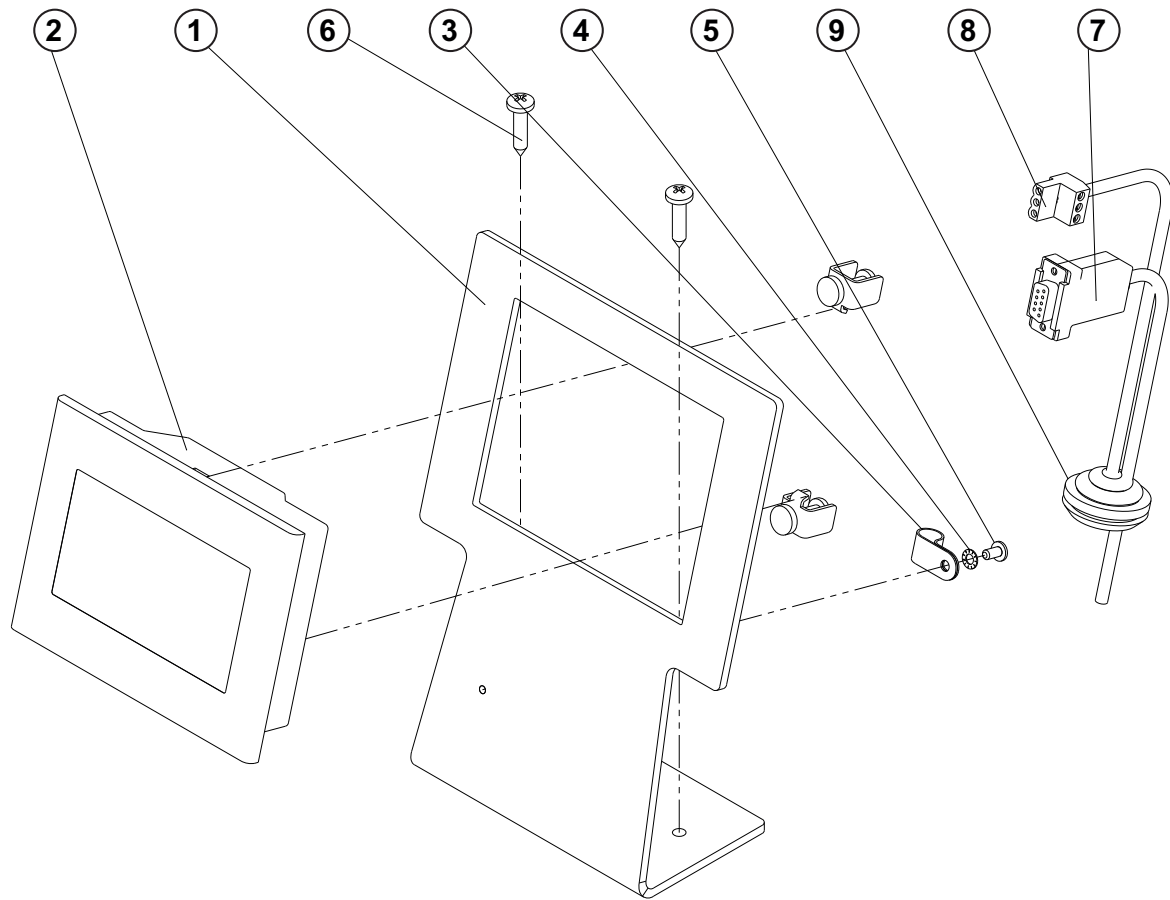
DET	PART NUMBER	DESCRIPTION	QTY.
01	24.0069.9.009	PEDAL ASSEMBLY	1
02	06.8800.0.001	PEDAL	••• (1)
03	12.0008.4.296	BUSHING	••• (1)
04	24.0069.9.003	CABLE	(1)
05	08.6312.8.020	SCREW M8X20	(2)
06	08.6852.8.000	WASHER M8	(4)
07	24.0097.0.000	HOLDER PEDAL	(1)
08	08.6100.4.012	SCREW M4X12	(4)
09	08.6802.8.000	SPRING WASHER M8	(2)
10	08.6702.8.000	NUT M8	(2)
13	12.0008.4.280	CORD CLAMP	1
14	08.6852.4.000	WASHER M4	1
15	08.6683.4.007	SCREW M4X7	1
16	12.0008.4.214	BUSHING	(3)
20	12.0008.4.885	FLEXO 3x1,5	1
21	12.8000.0.112	LABEL 230 V 1PH	1

# ELECTRICAL - III



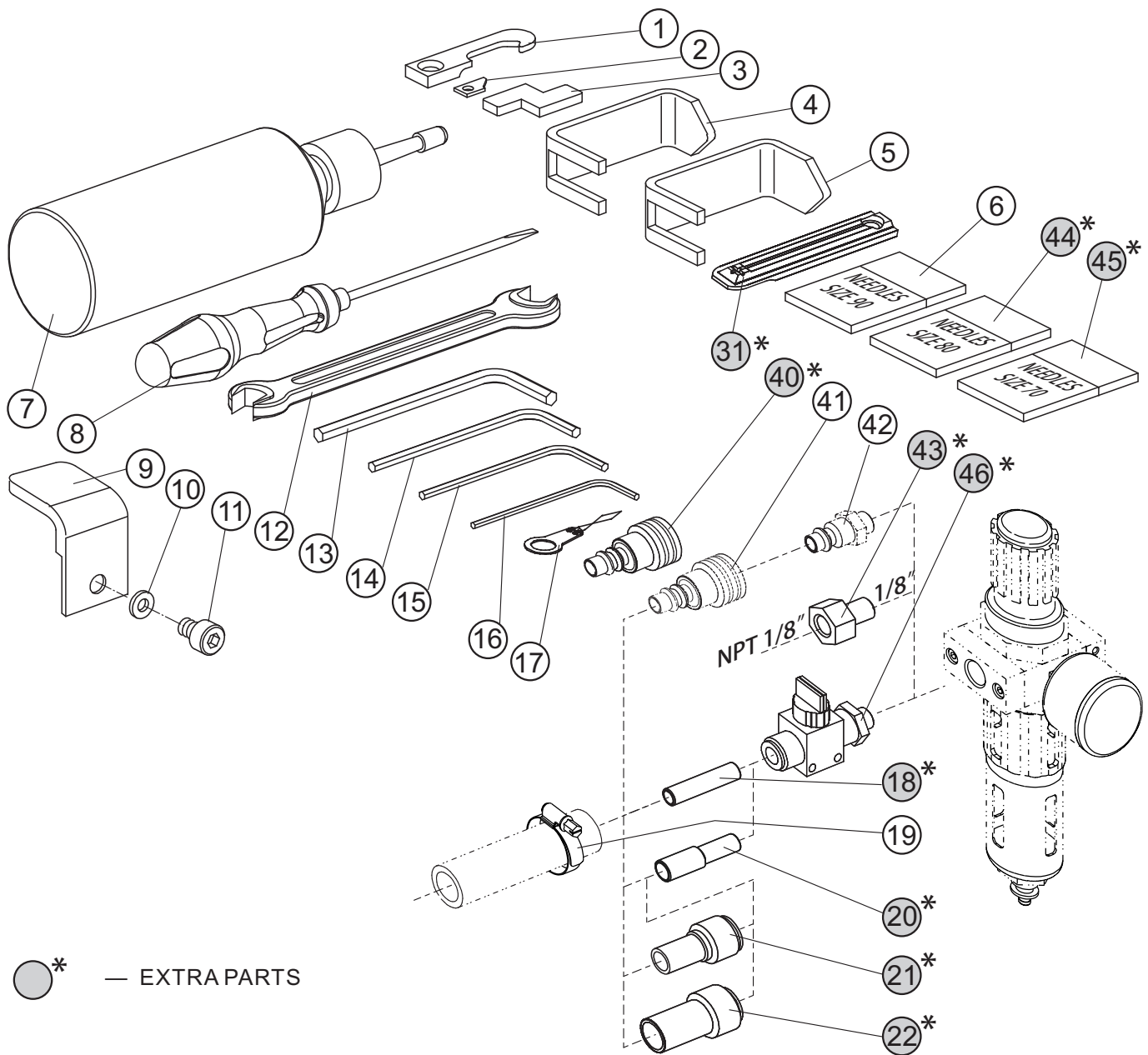


# PANEL KIT





# ACCESSORIES - EXTRA PARTS



●\* — EXTRAPARTS



## ACCESSORIES - EXTRA PARTS

DET	PART NUMBER	DESCRIPTION	QTY.
01	20.0093.2.004	TRIMMER HOOK	1
02	20.0094.0.000	TRIMMER KNIFE	1
03	22.0209.0.000	LOOPER GAUGE	1
04	24.0030.0.000	MAIN SHAFT PULLEY BRACKET	1
05	24.0024.0.000	NEEDLE BAR SHAFT PULLEY BRACKET	1
06	02.0750.2.110	NEEDLES, SIZE 90	10
07	05.1322.0.000	OILER	1
08	12.0008.6.001	SCREWDRIVER	1
09	22.0213.0.000	BRACKET	1
10	08.6850.4.000	WASHER M4	1
11	08.6000.4.005	SCREW M4X5	1
12	12.0008.6.109	WRENCH	1
13	12.0008.6.102	ALLEN KEY WRENCH 4	1
14	12.0008.6.101	ALLEN KEY WRENCH 3	1
15	12.0008.6.112	ALLEN KEY WRENCH 2-1/2	1
16	12.0008.6.100	ALLEN KEY WRENCH 2	1
17	12.0008.6.105	NEEDLE THREADER	1
18*	12.0008.3.464	CONNECTOR	—
19	12.0008.3.251	AIR TUBING CLAMP	1
20*	12.0008.3.466	CONNECTOR	—
21*	12.0008.3.467	CONNECTOR	—
22*	12.0008.3.465	CONNECTOR	—
31*	24.3206.0.000	THROAT PLATE, 3 mm (.118) BITE	—
40*	12.0008.3.607	CONNECTOR DIA 8	—
41	12.0008.3.608	CONNECTOR DIA 10	1
42	See page 3-51	CONNECTOR	1
43*	12.0008.3.081	PNEUMATIC ADAPTER (1/8" / NPT 1/8")	—
44*	02.0750.2.100	NEEDLE, SIZE 80	—
45*	02.0750.2.109	NEEDLE, SIZE 70	—
46*	12.0008.3.463	HANDVALVE	—

\* - EXTRA PARTS



**INDEX**

PART NUMBER	PAGE	DET	QTY	PART NUMBER	PAGE	DET	QTY	PART NUMBER	PAGE	DET	QTY
27513603	3-25	21	1	07.6600.0.004	3-47	3	1	08.6100.5.012	3-5	8	2
00.2751.3.602	3-41	59	1	07.6600.0.006	3-35	2	1	08.6100.5.012	3-15	2	5
01.1382.0.000	3-11	1	1	08.6000.3.006	3-19	2	1	08.6100.5.016	3-25	06	7
01.1397.0.000	3-11	2	4	08.6000.3.006	3-21	4	1	08.6100.5.020	3-11	6	2
01.2013.0.000	3-5	1	2	08.6000.3.006	3-27	1	1	08.6100.5.020	3-15	3	1
01.2084.0.000	3-17	1	1	08.6000.3.010	3-11	4	1	08.6100.5.020	3-23	9	4
01.2193.0.000	3-3	1	1	08.6000.3.010	3-13	3	1	08.6100.6.035	3-19	7	1
01.2376.0.000	3-5	2	4	08.6000.3.016	3-25	02	4	08.6102.3.008	3-23	10	2
01.3413.0.000	3-5	3	1	08.6000.3.040	3-25	03	1	08.6102.3.008	3-39	17	2
01.4003.0.000	3-5	4	1	08.6000.4.005	3-23	4	1	08.6120.3.008	3-17	3	7
01.6551.0.000	3-3	2	1	08.6000.4.005	3-49	11	1	08.6200.4.008	3-25	07	2
01.6551.0.000	3-21	1	1	08.6000.4.006	3-19	3	1	08.6200.4.016	3-21	8	2
01.7447.1.000	3-3	3	1	08.6000.4.006	3-25	04	2	08.6200.5.008	3-23	11	1
01.7447.1.000	3-21	2	1	08.6000.4.006	3-27	2	1	08.6200.5.012	3-15	4	6
01.7804.0.000	3-3	4	1	08.6000.4.006	3-39	3	(2)	08.6200.5.012	3-27	3	1
01.7805.0.000	3-3	5	1	08.6000.4.010	3-21	5	1	08.6200.5.020	3-15	5	1
01.7805.0.000	3-19	1	2	08.6000.4.012	3-7	1	1	08.6200.6.012	3-39	6	(2)
01.7806.0.000	3-23	1	2	08.6000.4.012	3-19	4	2	08.6202.5.012	3-35	4	2
01.7809.0.000	3-3	6	1	08.6000.4.014	3-11	5	2	08.6215.4.006	3-41	62	2
02.0750.2.100	3-49	44*	—	08.6000.4.014	3-13	4	2	08.6312.8.020	3-43	5	(2)
02.0750.2.109	3-49	45*	—	08.6000.4.016	3-21	6	6	08.6312.8.060	3-33	1	16
02.0750.2.110	3-3	7	1	08.6000.4.016	3-23	5	4	08.6400.3.005	3-3	10	4
02.0750.2.110	3-49	06	10	08.6000.4.070	3-25	5	4	08.6400.4.004	3-3	11	2
03.5524.0.024	3-39	1	1	08.6000.5.012	3-5	5	1	08.6400.4.004	3-5	9	2
04.1416.1.003	3-29	1	1	08.6000.5.016	3-3	8	1	08.6400.4.004	3-13	7	1
04.9000.2.123	3-29	2	1	08.6000.5.016	3-19	5	1	08.6400.4.004	3-21	9	1
04.9024.0.006	3-31	1	1	08.6000.5.016	3-21	7	4	08.6400.4.005	3-13	8	1
04.9024.0.906	3-29	3	1	08.6000.5.020	3-9	3	2	08.6400.4.012	3-5	10	1
05.1322.0.000	3-49	07	1	08.6000.5.022	3-5	6	4	08.6400.5.005	3-3	12	1
05.1394.0.000	3-25	01	1	08.6000.6.010	3-5	7	2	08.6400.5.005	3-5	11	1
06.2400.0.007	3-35	1	1	08.6000.6.016	3-3	9	2	08.6400.5.005	3-19	8	2
06.2400.0.014	3-39	19	0	08.6000.6.016	3-19	6	2	08.6400.5.005	3-23	12	2
06.2400.0.014	3-39	29	1	08.6000.6.025	3-13	5	1	08.6400.5.008	3-23	13	2
06.2400.0.019	3-47	8	1	08.6000.6.025	3-23	6	2	08.6400.5.010	3-19	9	2
06.2400.0.023	3-47	7	1	08.6000.8.025	3-23	7	2	08.6400.5.010	3-21	10	1
06.2400.0.703	3-39	5	(1)	08.6000.8.040	3-23	8	2	08.6532.8.050	3-29	4	4
06.8800.0.001	3-43	2	(1)	08.6012.4.010	3-15	1	1	08.6652.3.016	3-29	5	2
07.6045.0.037	3-9	1	2	08.6032.4.008	3-35	3	2	08.6663.5.025	3-47	6	2
07.6045.0.037	3-23	2	1	08.6032.4.008	3-47	5	1	08.6676.3.020	3-29	6	10
07.6045.0.053	3-21	3	1	08.6032.4.010	3-41	52	(6)	08.6676.4.025	3-37	1	2
07.6321.0.025	3-13	1	2	08.6100.3.008	3-13	6	2	08.6683.4.007	3-43	15	1
07.6440.0.028	3-13	2	2	08.6100.4.006	3-17	2	2	08.6700.4.000	3-5	12	1
07.6440.0.033	3-9	2	2	08.6100.4.010	3-39	36	4	08.6700.5.000	3-13	9	2
07.6440.0.036	3-11	3	3	08.6100.4.012	3-43	8	(4)	08.6700.5.000	3-15	6	2
07.6440.0.045	3-23	3	1	08.6100.4.014	3-41	49	1	08.6700.5.000	3-19	10	1

## INDEX

PART NUMBER	PAGE	DET	QTY	PART NUMBER	PAGE	DET	QTY	PART NUMBER	PAGE	DET	QTY
08.6700.5.000	3-23	14	4	12.0008.3.412	3-5	13	1	12.0008.4.710	3-39	24	1
08.6700.8.000	3-11	7	1	12.0008.3.413	3-23	18	1	12.0008.4.762	3-41	50	2
08.6700.8.000	3-29	7	4	12.0008.3.415	3-35	9	0	12.0008.4.833	3-45	12	1
08.6702.4.000	3-7	2	1	12.0008.3.416	3-5	14	0	12.0008.4.835	3-41	46	1
08.6702.4.000	3-39	4	8	12.0008.3.416	3-7	4	0	12.0008.4.861	3-39	45	1
08.6702.5.000	3-35	5	2	12.0008.3.416	3-21	15	0	12.0008.4.863	3-39	44	1
08.6702.8.000	3-29	8	4	12.0008.3.420	3-35	10	1	12.0008.4.885	3-39	38	1
08.6702.8.000	3-33	2	16	12.0008.3.433	3-21	16	1	12.0008.4.885	3-43	20	1
08.6702.8.000	3-43	10	(2)	12.0008.3.437	3-35	11	1	12.0008.6.001	3-49	08	1
08.6710.5.000	3-11	8	2	12.0008.3.463	3-49	46*	—	12.0008.6.100	3-49	16	1
08.6710.6.000	3-21	11	1	12.0008.3.464	3-49	18*	—	12.0008.6.101	3-49	14	1
08.6742.8.000	3-29	9	4	12.0008.3.465	3-49	22*	—	12.0008.6.102	3-49	13	1
08.6752.8.000	3-29	10	4	12.0008.3.466	3-49	20*	—	12.0008.6.105	3-49	17	1
08.6800.4.000	3-11	9	2	12.0008.3.467	3-49	21*	—	12.0008.6.109	3-49	12	1
08.6800.4.000	3-21	12	2	12.0008.3.607	3-49	40*	—	12.0008.6.112	3-49	15	1
08.6802.4.000	3-39	40	4	12.0008.3.608	3-35	12	1	12.0008.6.527	3-33	5	2
08.6802.5.000	3-35	6	2	12.0008.3.608	3-49	41	1	12.0008.6.528	3-33	6	2
08.6802.8.000	3-29	11	4	12.0008.3.828	3-37	2	3	12.0008.6.800	3-13	10	1
08.6802.8.000	3-33	3	16	12.0008.3.829	3-37	3	1	12.0008.6.801	3-29	15	4
08.6802.8.000	3-43	9	(2)	12.0008.3.830	3-37	4	1	12.0008.6.900	3-29	16	1
08.6832.4.000	3-15	7	1	12.0008.3.831	3-37	5	1	12.0008.6.901	3-29	17	1
08.6832.4.000	3-47	4	1	12.0008.3.832	3-37	6	1	12.0010.3.027	3-21	17	2
08.6832.6.000	3-39	7	(2)	12.0008.3.833	3-37	7	1	12.0010.3.027	3-23	20	1
08.6850.3.000	3-21	13	1	12.0008.4.050	3-45	8	1	12.0010.3.028	3-5	15	2
08.6850.4.000	3-19	11	1	12.0008.4.052	3-15	8	1	12.0010.3.028	3-7	5	2
08.6850.4.000	3-21	14	2	12.0008.4.058	3-29	14	1	12.0010.3.029	3-23	21	1
08.6850.4.000	3-23	15	4	12.0008.4.101	3-27	5	1	12.0010.3.030	3-37	8	1
08.6850.4.000	3-49	10	1	12.0008.4.155	3-41	58	1	12.0010.3.031	3-37	9	1
08.6850.5.000	3-19	12	1	12.0008.4.197	3-15	9	2	12.0010.3.032	3-35	14	1
08.6850.5.000	3-23	16	3	12.0008.4.197	3-23	19	1	12.0010.3.080	3-5	16	0
08.6850.5.000	3-25	08	4	12.0008.4.207	3-39	37	7	12.0010.3.080	3-7	6	0
08.6850.6.000	3-23	17	2	12.0008.4.214	3-43	16	(3)	12.0010.3.080	3-21	18	0
08.6850.8.000	3-11	10	1	12.0008.4.231	3-39	39	3	12.0010.3.080	3-23	22	0
08.6852.4.000	3-35	7	2	12.0008.4.280	3-35	13	1	12.0010.3.137	3-35	15	1
08.6852.4.000	3-39	41	4	12.0008.4.280	3-43	13	1	12.0010.3.138	3-35	16	1
08.6852.4.000	3-43	14	1	12.0008.4.296	3-43	3	(1)	12.0010.3.159	3-37	10	1
08.6852.5.000	3-35	8	4	12.0008.4.366	3-39	42	1	12.0010.4.013	3-3	13	1
08.6852.6.000	3-7	3	1	12.0008.4.366	3-47	9	1	12.0010.4.013	3-21	19	1
08.6852.8.000	3-29	12	4	12.0008.4.403	3-39	26**	1**	12.0010.4.067	3-45	7	1
08.6852.8.000	3-33	4	16	12.0008.4.565	3-39	2	(2)	12.0010.4.078	3-45	9	1
08.6852.8.000	3-43	6	(4)	12.0008.4.570	3-39	14	2	12.0010.4.163	3-45	14	1
12.0008.3.023	3-27	4	1	12.0008.4.571	3-39	9	(2)	12.0010.4.168	3-45	13	1
12.0008.3.023	3-29	13	1	12.0008.4.664	3-45	11	1	12.0010.4.177	3-39	32	1
12.0008.3.081	3-49	43*	—	12.0008.4.665	3-45	10	1	12.0010.4.178	3-39	33	1
12.0008.3.251	3-49	19	1	12.0008.4.679	3-39	25**	(1)**	12.0010.4.179	3-39	35	1

**INDEX**

PART NUMBER	PAGE	DET	QTY	PART NUMBER	PAGE	DET	QTY	PART NUMBER	PAGE	DET	QTY
12.0010.4.191	3-39	15	1	20.0111.0.000	3-11	13	1	22.0183.0.000	3-13	23	1
12.0010.6.926	3-29	23	1	20.0112.0.000	3-11	14	1	22.0195.0.000	3-3	19	1
12.1010.2.003	3-23	23	1	20.0208.1.324	3-5	17	1	22.0209.0.000	3-49	03	1
12.1011.0.001	3-23	24	1	20.0650.1.044	3-5	18	1	22.0213.0.000	3-49	09	1
12.1016.0.002	3-15	10	4	20.0767.1.029	3-5	19	1	22.0214.0.000	3-13	24	1
12.1016.0.002	3-25	09	2	22.0006.0.000	3-19	17	1	22.0219.0.000	3-31	2	1
12.1016.1.000	3-29	18	6	22.0008.0.000	3-13	11	1	22.0229.0.000	3-27	11	2
12.1045.0.004	3-7	7	1	22.0009.0.050	3-13	12	1	22.0230.0.000	3-3	20	2
12.1045.0.004	3-21	20	1	22.0020.0.000	3-13	13	1	22.0232.0.000	3-11	24	1
12.1045.0.005	3-7	8	1	22.0021.0.000	3-11	15	1	22.0233.0.000	3-11	25	1
12.1045.2.001	3-3	14	1	22.0022.0.000	3-11	16	1	22.0239.0.000	3-3	21	2
12.1045.2.001	3-19	13	1	22.0023.0.000	3-11	17	1	22.0315.0.000	3-9	7	1
12.2010.1.002	3-11	11	2	22.0024.0.000	3-11	18	1	22.0408.1.000	3-17	6	1
12.2050.0.003	3-3	15	1	22.0027.0.000	3-13	14	1	22.0520.0.000	3-3	22	1
12.2050.0.005	3-19	14	1	22.0028.0.000	3-13	15	2	22.0525.0.050	3-3	23	1
12.4030.0.002	3-19	15	1	22.0029.0.000	3-13	16	2	22.0530.0.000	3-3	24	1
12.5050.2.009	3-23	25	1	22.0030.0.000	3-13	17	1	22.0535.0.100	3-3	25	1
12.8000.0.040	3-41	48	1	22.0031.0.000	3-11	19	2	22.0540.0.000	3-3	26	1
12.8000.0.041	3-41	47	1	22.0046.0.000	3-21	21	1	22.0541.0.000	3-3	27	1
12.8000.0.047	3-23	26	1	22.0054.0.000	3-23	28	1	22.0542.0.000	3-3	28	1
12.8000.0.047	3-39	16	1	22.0057.0.000	3-25	13	1	22.0545.0.000	3-3	29	1
12.8000.0.112	3-43	21	1	22.0058.0.000	3-23	29	1	22.0545.0.000	3-19	19	1
12.8000.0.162	3-41	54	1	22.0061.0.000	3-9	6	1	22.1010.0.000	3-15	13	2
12.8000.0.438	3-25	10	1	22.0062.0.000	3-23	30	1	22.1415.0.050	3-21	24	1
12.8000.0.446	3-37	11	1	22.0063.0.000	3-13	18	1	22.1422.0.000	3-21	25	1
12.8000.1.007	3-25	11	1	22.0064.0.000	3-11	20	1	22.1436.0.000	3-21	26	2
12.8000.1.042	3-15	11	1	22.0064.0.000	3-13	19	2	22.2410.0.000	3-11	26	1
12.8000.1.047	3-15	12	1	22.0069.0.000	3-13	20	1	22.2425.0.050	3-11	27	1
17.0011.1.149	3-9	4	2	22.0091.0.000	3-21	22	1	22.2440.0.000	3-11	28	2
17.0011.1.149	3-19	16	4	22.0100.0.000	3-11	21	3	22.2442.0.000	3-11	29	2
17.0019.0.441	3-29	19	4	22.0100.0.000	3-13	21	4	22.2631.0.000	3-19	20	1
17.0019.2.057	3-9	5	1	22.0104.0.000	3-27	8	1	22.2633.0.000	3-19	21	1
17.0026.2.077	3-3	16	1	22.0105.0.000	3-11	22	1	22.3034.0.000	3-17	7	1
17.0082.6.000	3-27	6	1	22.0106.0.000	3-19	18	1	22.3206.0.000	3-19	22	1
17.0082.8.017	3-3	17	2	22.0108.0.000	3-27	9	1	22.3216.0.000	3-19	23	1
17.0082.8.082	3-23	27	1	22.0110.0.000	3-13	22	1	22.3219.0.000	3-19	24	1
17.0094.0.200	3-29	20	4	22.0115.0.000	3-17	4	2	22.6002.0.000	3-23	31	1
17.0095.1.272	3-29	21	4	22.0120.0.000	3-27	10	1	22.6101.2.000	3-17	8	1
17.0095.1.329	3-27	7	1	22.0125.0.000	3-5	20	1	23.2106.0.000	3-11	30	1
17.0097.5.174	3-25	12	2	22.0143.0.000	3-17	5	4	23.2107.0.000	3-11	31	1
20.0092.0.004	3-7	9	1	22.0159.0.000	3-5	21	1	24.0001.0.000	3-3	30	1
20.0093.2.004	3-7	10	1	22.0161.0.000	3-21	23	1	24.0002.0.000	3-3	31	1
20.0093.2.004	3-49	1	1	22.0173.0.000	3-5	22	2	24.0002.0.000	3-19	25	1
20.0094.0.000	3-11	12	1	22.0175.0.000	3-3	18	1	24.0003.0.000	3-7	11	1
20.0094.0.000	3-49	02	1	22.0183.0.000	3-11	23	1	24.0004.0.000	3-7	12	1

## INDEX

PART NUMBER	PAGE	DET	QTY	PART NUMBER	PAGE	DET	QTY	PART NUMBER	PAGE	DET	QTY
24.0005.0.000	3-7	13	1	24.0139.2.000	3-27	12	1				
24.0006.1.000	3-7	14	1	24.0141.2.000	3-27	13	1				
24.0009.0.000	3-21	27	1	24.0146.0.000	3-39	8	(1)				
24.0010.0.000	3-21	28	1	24.0147.0.000	3-39	10	(2)				
24.0011.0.000	3-21	29	1	24.0148.0.000	3-23	36	1				
24.0014.0.000	3-21	30	1	24.0148.0.000	3-39	18	1				
24.0016.0.000	3-21	31	1	24.0154.0.000	3-25	17	1				
24.0018.0.000	3-19	26	1	24.0170.0.000	3-33	7	3				
24.0019.0.000	3-19	27	1	24.0171.0.000	3-33	8	1				
24.0024.0.000	3-49	05	1	24.0198.0.000	3-47	1	1				
24.0030.0.000	3-49	04	1	24.0351.0.000	3-9	9	1				
24.0033.0.000	3-13	25	1	24.0500.0.000	3-3	34	1				
24.0035.0.000	3-5	23	1	24.0510.0.000	3-3	35	1				
24.0036.0.000	3-5	24	1	24.0546.0.000	3-3	36	1				
24.0037.0.000	3-21	32	1	24.1000.0.000	3-19	29	1				
24.0038.0.000	3-15	14	1	24.1430.1.000	3-21	37	1				
24.0039.1.000	3-21	33	1	24.2400.0.000	3-19	30	1				
24.0044.0.000	3-23	32	1	24.3206.0.000	3-49	31*	—				
24.0048.0.000	3-3	32	1	24.3209.0.000	3-5	25	1				
24.0049.0.000	3-9	8	1	24.3210.0.000	3-5	26	1				
24.0050.1.000	3-7	15	1	24.3223.0.000	3-5	27	1				
24.0051.0.066	3-19	28	1	24.6000.5.000	3-23	37	1				
24.0055.0.000	3-13	26	1	24.6001.2.000	3-25	18	1				
24.0059.9.017	3-41	53	1	24.6003.0.000	3-25	19	1				
24.0059.9.069	3-39	28	1	24.6004.1.001	3-25	20	1				
24.0061.0.000	3-21	34	1	24.6005.1.002	3-15	16	1				
24.0062.0.000	3-21	35	1	24.6100.0.000	3-17	9	1				
24.0063.0.000	3-21	36	1	24.8001.2.005	3-45	4	0				
24.0066.0.000	3-11	32	2	24.8001.2.023	3-47	2	1				
24.0067.0.000	3-25	14	1	24.8001.2.031	3-45	6	1				
24.0068.0.000	3-25	15	1	24.8001.2.032	3-39	11	(1)				
24.0069.9.003	3-43	4	(1)	70.4165.1.125	3-41	51	1				
24.0069.9.004	3-39	23	1								
24.0069.9.009	3-31	3	1								
24.0069.9.009	3-43	1	1								
24.0069.9.063	3-29	22	1								
24.0080.0.000	3-7	16	1								
24.0097.0.000	3-43	7	(1)								
24.0100.0.000	3-3	33	1								
24.0106.1.000	3-23	33	1								
24.0108.0.000	3-23	34	1								
24.0111.0.000	3-15	15	1								
24.0112.0.000	3-25	16	1								
24.0119.0.050	3-23	35	1								
24.0138.0.000	3-39	43	1								