



**PEGASUS®**

# HG Device

**Models: W(T)664-08/HG410  
W(T)664-35/HG411**

Thank you for purchasing Pegasus' labor saving device.

Study this manual very carefully before beginning any of the procedures and then use the device correctly and safely.

Keep this manual in a convenient place for quick reference when needed.

Sewing unit for hemming bottoms of tubular goods

**INSTRUCTIONS**

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Be sure to study very carefully **for safety.**

## 1. Introduction

- This manual describes the instructions for using this device safely.
- Study this manual very carefully and understand fully how to operate, check, adjust and maintain the labor saving device before beginning any of the procedures.
- You always perform operations close to moving parts such as needles when using industrial sewing machines. Therefore you have to keep in mind you could easily touch them. To prevent accidents, it is essential that you use the safe products supplied by Pegasus correctly.  
All the people who will use sewing machines must study this manual and the instruction manual for sewing machines very carefully and then take necessary safety measures before beginning any of the procedures.

## 2. Indications of dangers, warnings and cautions




To prevent accidents, indications (symbols and/or signs) which show the degree of danger are used on our products and in this manual. Study the contents very carefully and follow the instructions.

Indication labels should be found easily.










Attach new labels when they are stained or removed.

Contact our sales office when new labels are needed.

### Symbols, signs and/or signal words which attract users' attention

 <b>DANGER</b>	Indicates an immediate hazard to life or limb.
 <b>WARNING</b>	Indicates a potential hazard to life or limb.
 <b>CAUTION</b>	Indicates a possible mistake that could result in injury or damage.

## Symbols and messages

	Be sure to follow the instructions when you operate the machine and/or labor saving device.
	If you use the machine and/or labor saving device incorrectly, you may get an electrical shock.
	If you use the machine and/or labor saving device incorrectly, your hands and/or fingers may be injured.
	If you use the machine and/or labor saving device incorrectly, you may cause fire.
	Never do this.
	Unplug the machine or shut off the power when checking, adjusting and/or repairing the machine and/or labor saving device, or when lightning may strike.
	Be sure to connect to ground.
	If you use the machine and/or labor saving device incorrectly, your fingers and/or hands may be caught in them or it, causing trouble.
	If you use the machine and/or labor saving device incorrectly, you may burn yourself.

### 3.Safety precautions

#### ①Applications, purpose

The labor saving device is designed to increase quality and productivity according to you needs.  
Therefore never use the device for the applications which may defeat the above purpose.

#### ②Circumstances

Some circumstances when you are using the labor saving device may affect its life, function, performance, and safety.



For safety, do not use the labor saving device under the circumstances below.

- 1.Do not use the device near objects which make noise such as a high-frequency welder, etc.
- 2.Do not use or store the device in the air which has vapor from chemicals, or do not expose the device to chemicals.

- 3.Do not leave the device outside, in high temperatures or the direct sun.
- 4.Do not use the device in high humidity or ambient temperatures which may affect them.
- 5.Do not use the device on the condition that the voltage fluctuation range is more than  $\pm 10\%$  of the rated voltage.
- 6.Do not use the device at the place where the supply voltage specified for the control motor cannot be properly obtained.
- 7.Do not use the device at the place where the air supply specified for the device cannot be properly obtained.
- 8.Do not expose the device to the water.

### ③ Safety measures



(1) Safety precautions when you perform maintenance on the labor saving device.

- When performing maintenance such as when checking, repairing, cleaning the labor saving device, turn off the power, disconnect the power plug from the outlet and press the machine treadle in order to make sure the machine does not run.

If you have to perform maintenance on the machine and/or labor saving device with the power on, always be careful because the machine and/or device could start operating unexpectedly.

To prevent accidents caused by incorrect operation, you should establish your own procedures for safe operation and follow them.

- Only well-trained people should perform routine daily maintenance and/or repair the machine and/or device.



- Do not modify the machine and device yourself.

※ Consult your local Pegasus' sales office or representative for modification.



(2) Before operating the device

- Before operating the device, check the machine head, machine unit and device to make sure they do not have any damage and/or defects.  
Repair or replace any defective parts immediately.

- To prevent accidents, always make sure the safety covers and safety guards are properly secured.  
Never remove the safety covers and safety guards.



(3) Training

- To prevent accidents, operators and service/maintenance personnel should have proper knowledge and skills for safe operation.  
To ensure so, managers must design and conduct training for these people.

### 4. Notes for each procedure



## CAUTION

#### ① Unpacking



The machine and device are packed in boxes (and plastic bags) in the factory before shipment. Unpack the boxes and bags properly and sequentially by following the instructions shown on them.

#### ② Installation, preparation



## CAUTION




#### Connecting the air lines


1. Always turn off the power first and then connect the air lines to the joints. Be sure to connect all the air lines before connecting them to the air source.
2. When connecting the air lines to the joints, be sure to insert the joints to the proper depth of the air lines and fasten securely.
3. Do not allow excessive force to be exerted on the air lines while using the device.
4.  Do not bend the air lines too much.
5. If necessary, protect the air lines by positioning them safely and/or using the cover.
6.  Do not use staples to secure the air lines. Otherwise it may cause damage.




## WARNING

#### Connecting the cords

1.  When connecting the power cord, be sure to turn off the power and disconnect the power plug from the outlet.
2.  Check the voltage designation to make sure the power relay cord matches the local supply voltage. The use of wrong cord may cause damage to parts and/or fire.
3. Do not allow excessive force to be exerted on the cords while using the device.
4.  Do not bend the cords too much.


- 
5. Confirm that the cord is at least 25mm away from moving part of the machine and/or the device when you connect the cord.
  6. If necessary, protect the cords by positioning them safely and/or using the cover.
  7.  Do not use staples to secure the cords. Otherwise it may cause damage.

#### Ground

1. Connect each of the ground wires in the sewing machine system to the ground terminal. Do not connect one device's ground wire to another device's.
2.  Connect the ground wires securely to the indicated ground points on the machine head.



## WARNING

### ③ Before operation


1. Check the cords, connector and air lines to make sure they do not have any damage, disconnections or tangles and then turn on the power.
2.  Do not bring your hands and/or any part of your body close to the needle and pulley when turning on the power.
3. Well-trained people who studied this manual and the instruction manual very carefully should use the machine with the labor saving device.
4. Study the contents on "2. Indications of dangers, warnings and cautions" very carefully and then provide users with safety training as required.

## WARNING

### ④ Precautions for work and operation


1.  The area near the presser foot is very dangerous during sewing. Do not bring your hands and/or any part of your body close to the presser foot.
2. To prevent accidents, be careful that any foreign matter such as water, other liquids or metals do not get into the device.
3. Wear clothes that cannot be caught in the machine.
4.  Do not leave tools or other unnecessary objects near the device.
5. To prevent accidents, always make sure the safety cover are properly secured.

6. Drain and clean the filter regulator periodically, if the device is pneumatic. Otherwise drainage will flow into the solenoid valve and/or air cylinder, causing trouble.
7. Always turn off the power before leaving the machine table.
8. If any trouble occurs, stop using the machine and turn off the power. Check, repair and/or perform other necessary procedures immediately.

9.  Pay close attention to the knife edges not to injure your hands and/or fingers.

## CAUTION

### ⑤ Maintenance, check & repair

1. Well-trained people who studied this instructions very carefully should maintain, check and repair the machine and device.
2. Perform routine daily maintenance and periodical maintenance by following this instructions.
3. Use Pegasus' genuine parts when repairing and/or replacing parts.  
Pegasus disclaims all responsibility for accidents caused by improper repair/adjustment and/or use of parts which are not genuine.
4.  Do not modify the device yourself.  
Pegasus disclaims all responsibility for accidents caused by modification.
5. After maintaining, checking, and/or repairing the machine and device, always make sure that any trouble does not occur when the power is turned on.
6. Before and after operation clean lint and any other foreign from the device not to cause trouble.
7. Make sure to replace the safety covers when you need to remove them for checking and/or maintenance.

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## Applications and performance

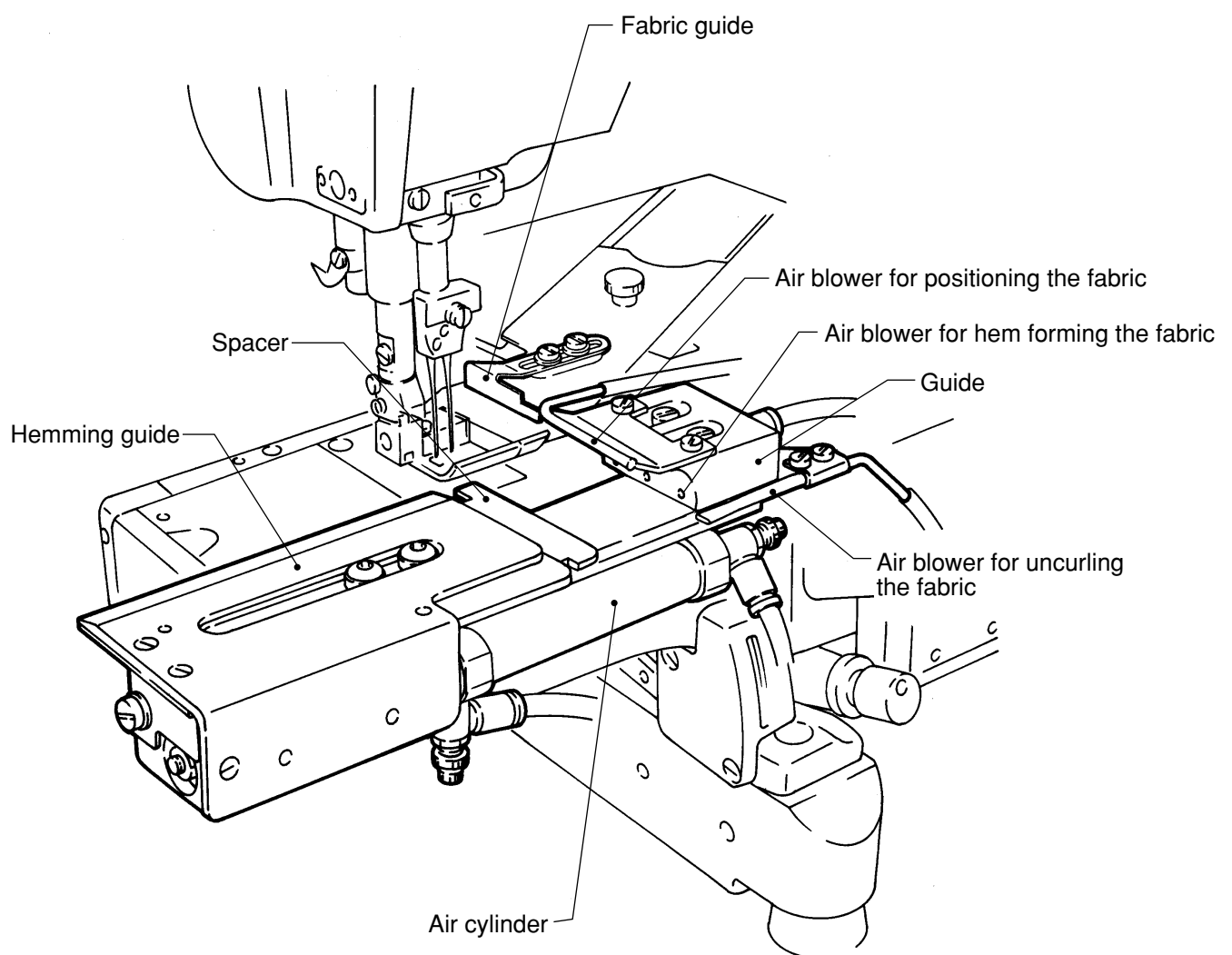
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HG410/HG411 are the devices that can be used for hemming bottoms of T- shirts and polo shirts.

The pneumatic hemming guide keeps the hem width constant during sewing, allowing the operator to concentrate on the sewing operation.

Thanks to these devices, a difficult operation of hemming bottoms becomes easy and uniformly finished products are produced.

## Description of each part






## Installation

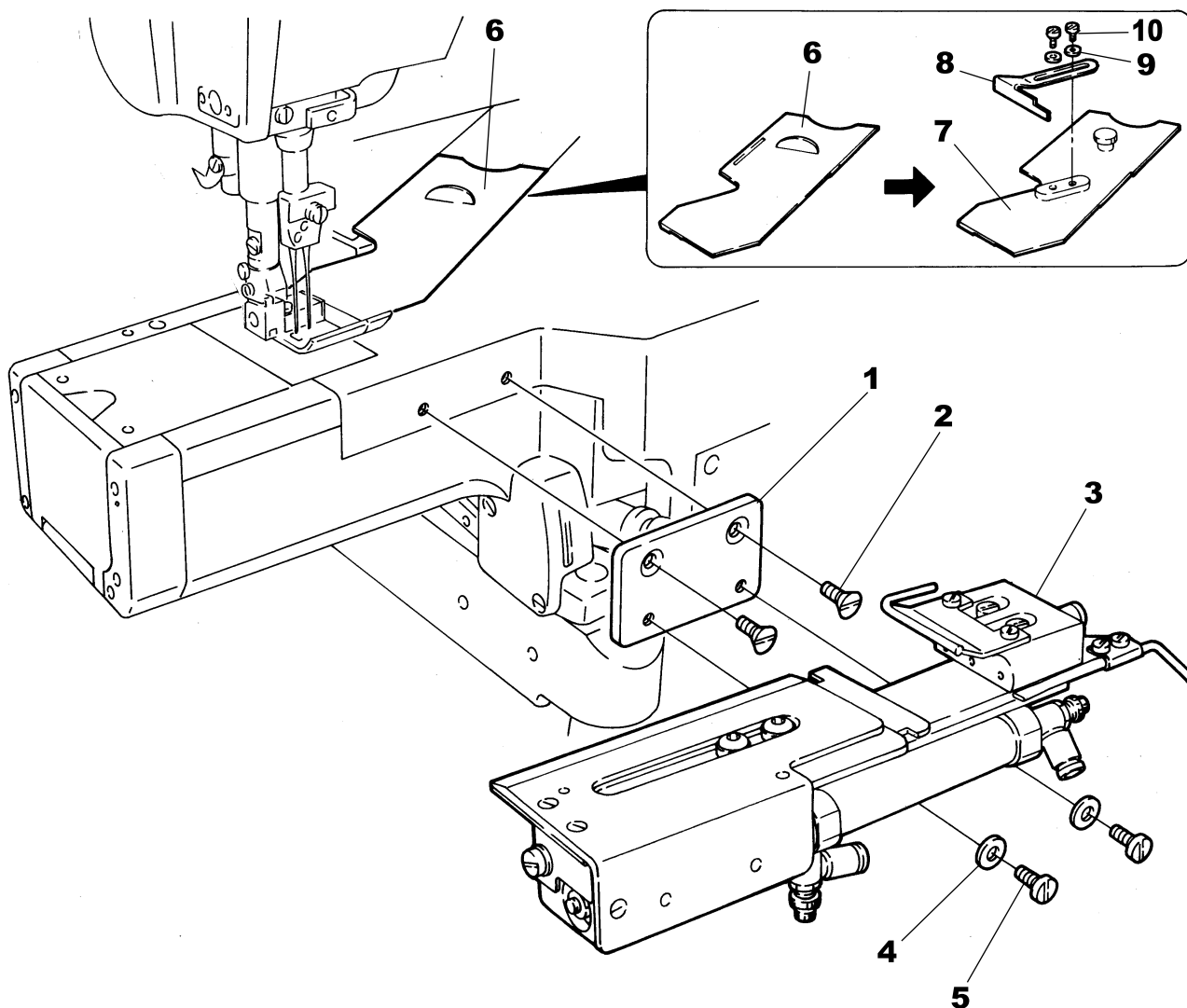
Mechanic level

# Installing the device (HG410)

## ⚠ CAUTION

 Always turn off the power, unplug the machine and then well-qualified technicians should install the device.

1. Install the device by referring to sequence 1 ~ 5 as shown below.
2. Remove plate 6. Install new plate 7 and fabric guide 8 by referring to sequence 7 ~ 10.



## Installation

Mechanic level

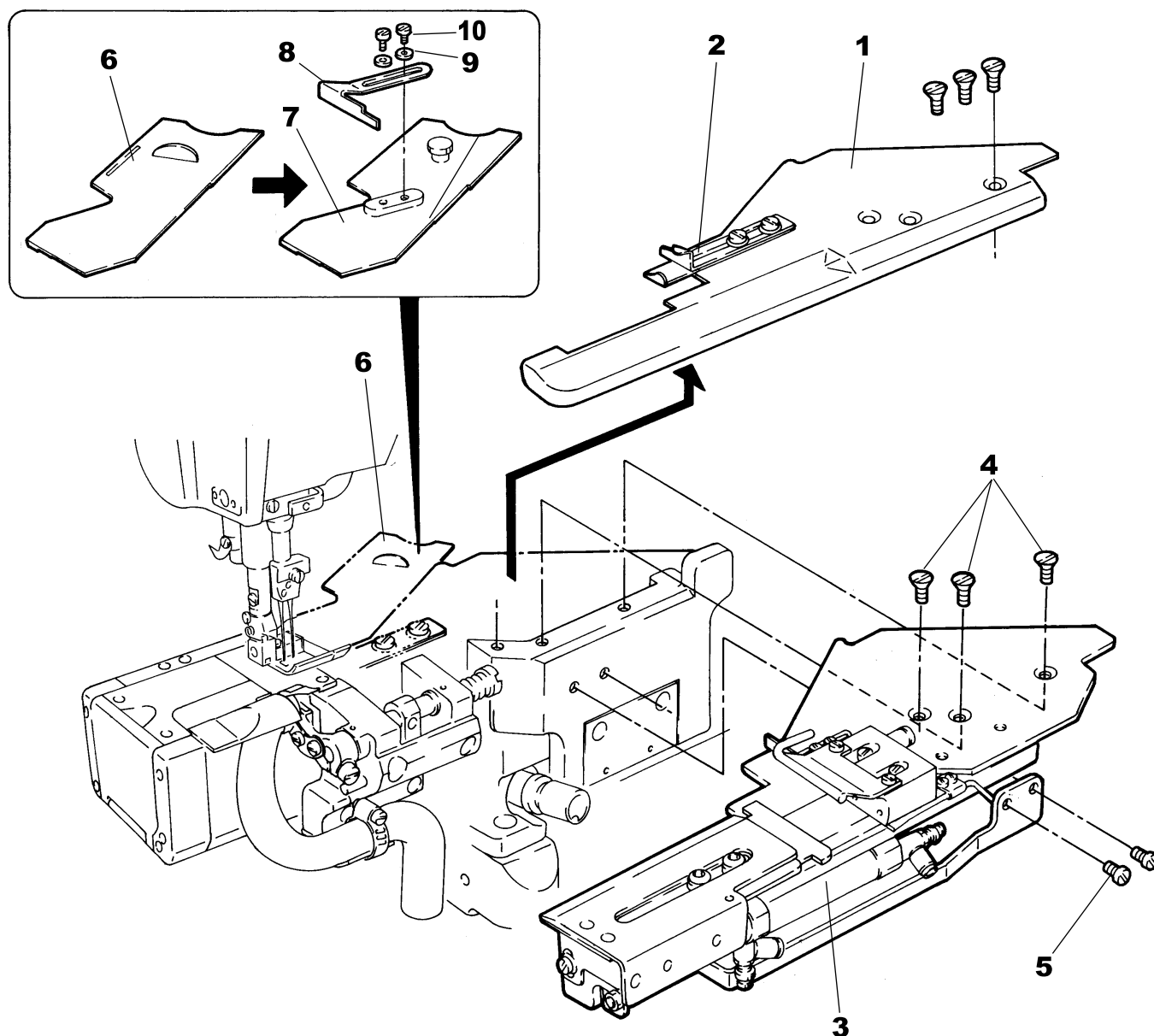
# Installing the device (HG411)

## ⚠ CAUTION



Always turn off the power, unplug the machine and then well-qualified technicians should install the device.

1. Remove auxiliary plate/front cover **1** and hemming guide **2** by referring to the illustration.
2. Install HG device **3** with screws **4** and **5**.
3. Remove plate **6**. Install new plate **7** and fabric guide **8** by referring to sequence **7 ~ 10**.
  - ※ Plate **7** and fabric guide **8** have been already attached to W(T)664-35A.



## Installation

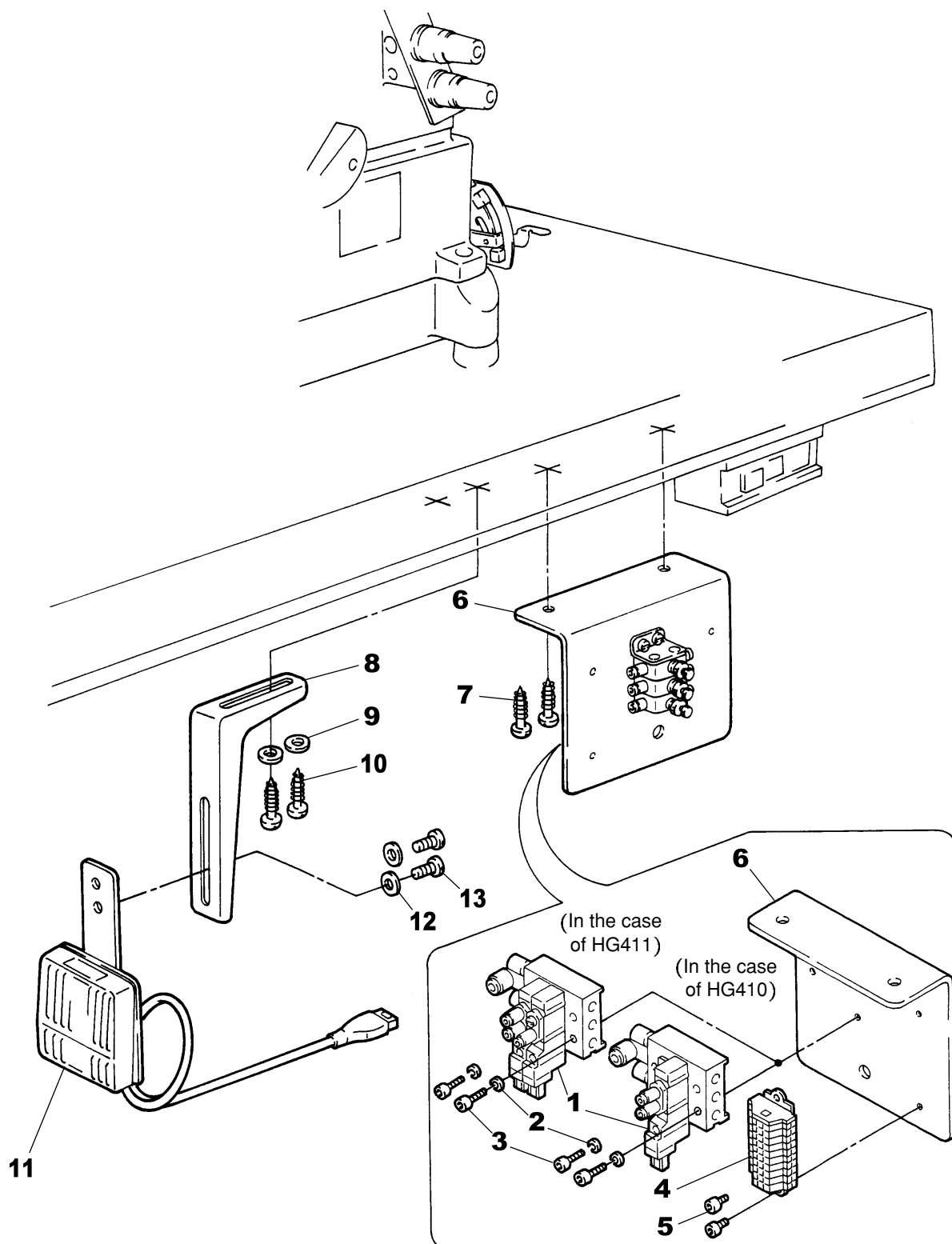
Mechanic level

# Installing the solenoid valve and electric knee switch

## ⚠ CAUTION

Always turn off the power, unplug the machine and then well-qualified technicians should install the solenoid valve and electric knee switch.

Install the solenoid valve and electric knee switch by referring to sequence 1 ~ 13 in the illustration.



## Installation

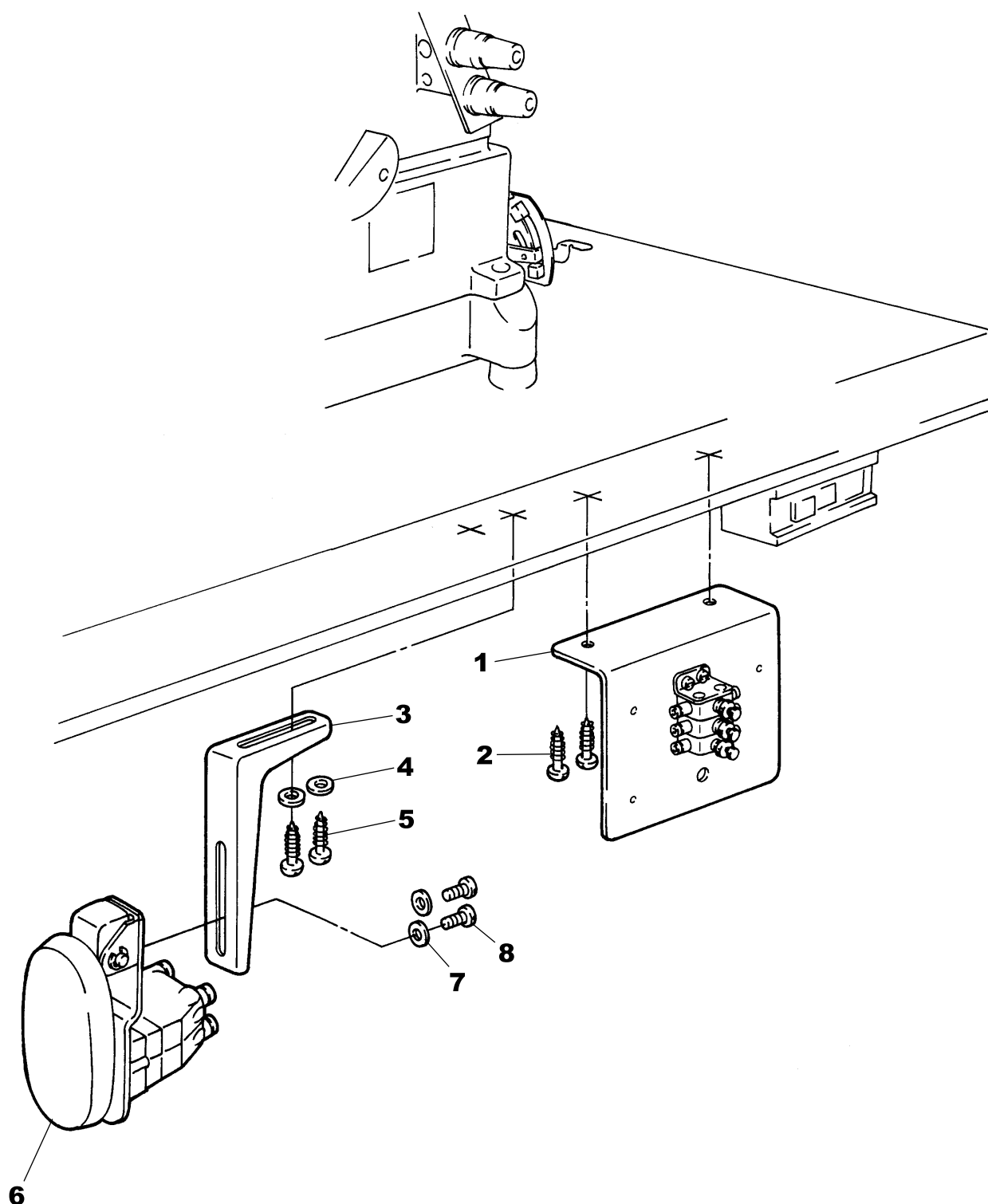
Mechanic level

# Installing the solenoid valve and pneumatic knee switch

## ⚠ CAUTION

Always turn off the power, unplug the machine and then well-qualified technicians should install the solenoid valve and pneumatic knee switch.

Install the solenoid valve and electric knee switch by referring to sequence 1 ~ 8 in the illustration.



## Installation

Mechanic level

# Connecting the cords (HG410)

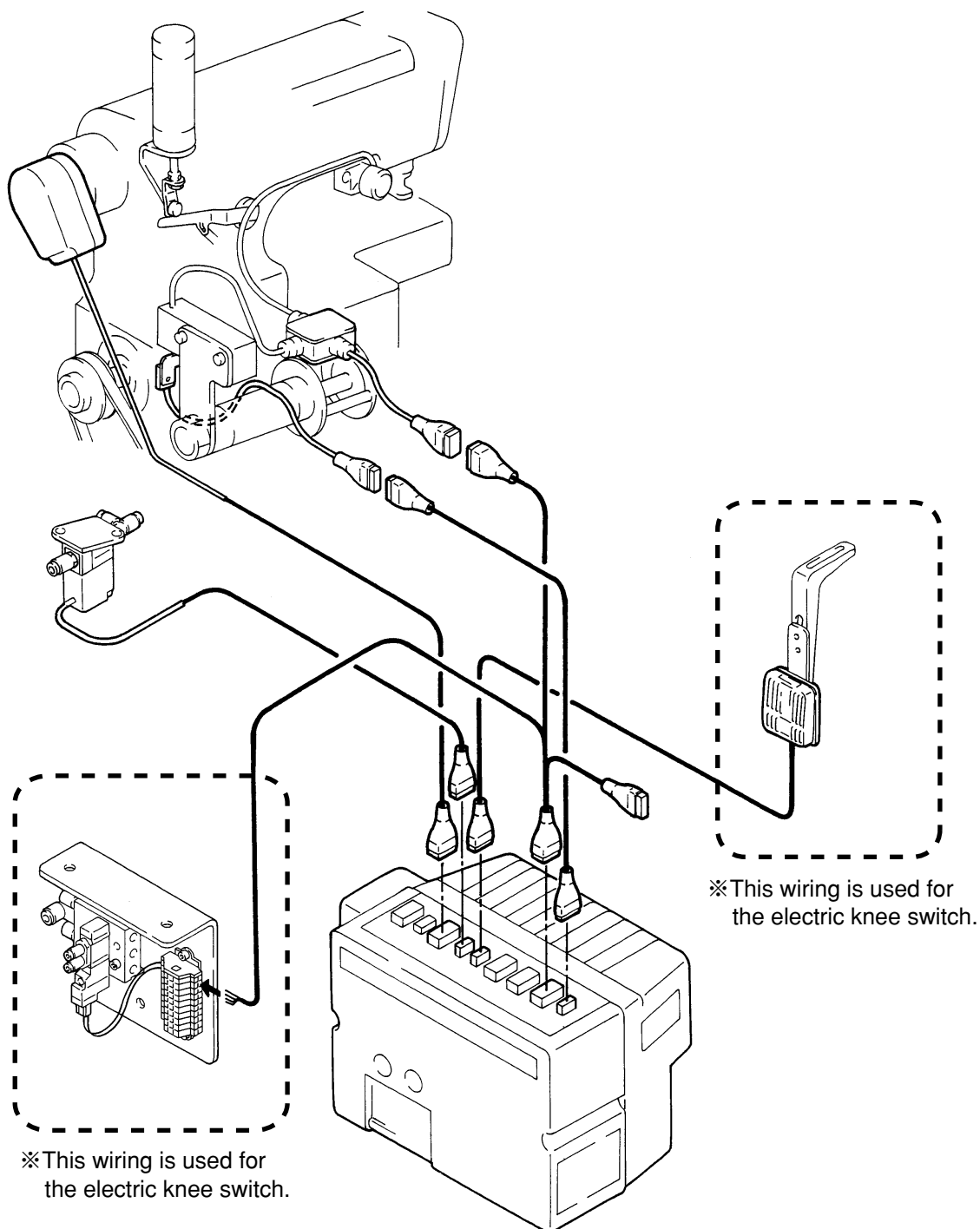
## ⚠ CAUTION

⚠ Always turn off the power, unplug the machine and then well-qualified technicians should connect relay cords.

⚠ Match the colors and shapes of the connectors when connecting the relay cords.

## ⚠ WARNING

⊘ Faulty wiring of the relay cords may cause a malfunction. To prevent accidents and damage to the machine, check the relay cords for correct wiring.



## Installation

Mechanic level

# Connecting the cords (HG410)

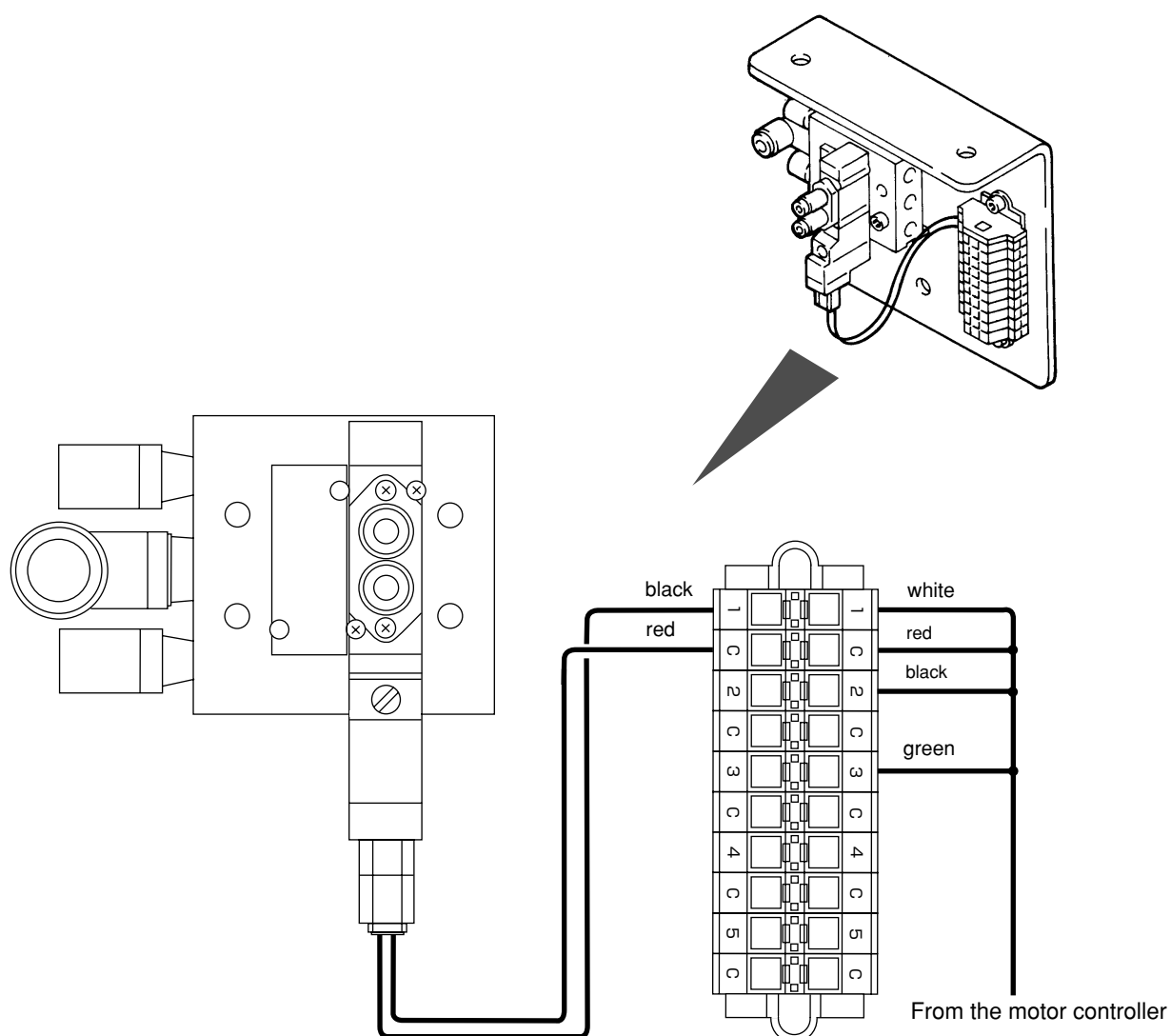
## ⚠ CAUTION

⚠ Always turn off the power, unplug the machine and then well-qualified technicians should connect relay cords.

⚠ Match the colors and shapes of the connectors when connecting the relay cords.

## ⚠ WARNING

⚠ Faulty wiring of the relay cords may cause a malfunction. To prevent accidents and damage to the machine, check the relay cords for correct wiring.



## Installation

Mechanic level

# Connecting the cords (HG411)

## ⚠ CAUTION



Always turn off the power, unplug the machine and then well-qualified technicians should connect relay cords.



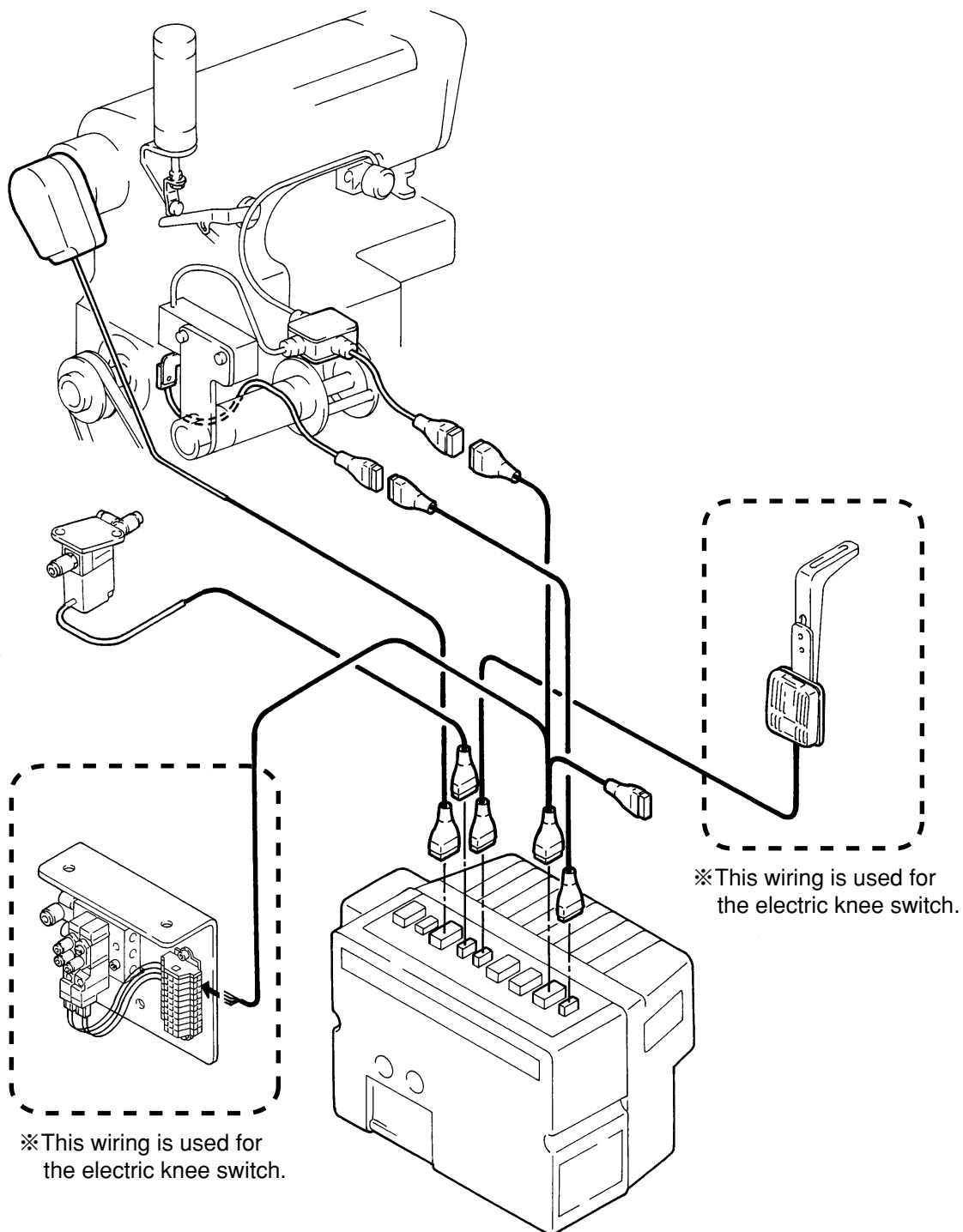
Match the colors and shapes of the connectors when connecting the relay cords.



## WARNING



Faulty wiring of the relay cords may cause a malfunction. To prevent accidents and damage to the machine, check the relay cords for correct wiring.



## Installation

Mechanic level

# Connecting the cords (HG411)

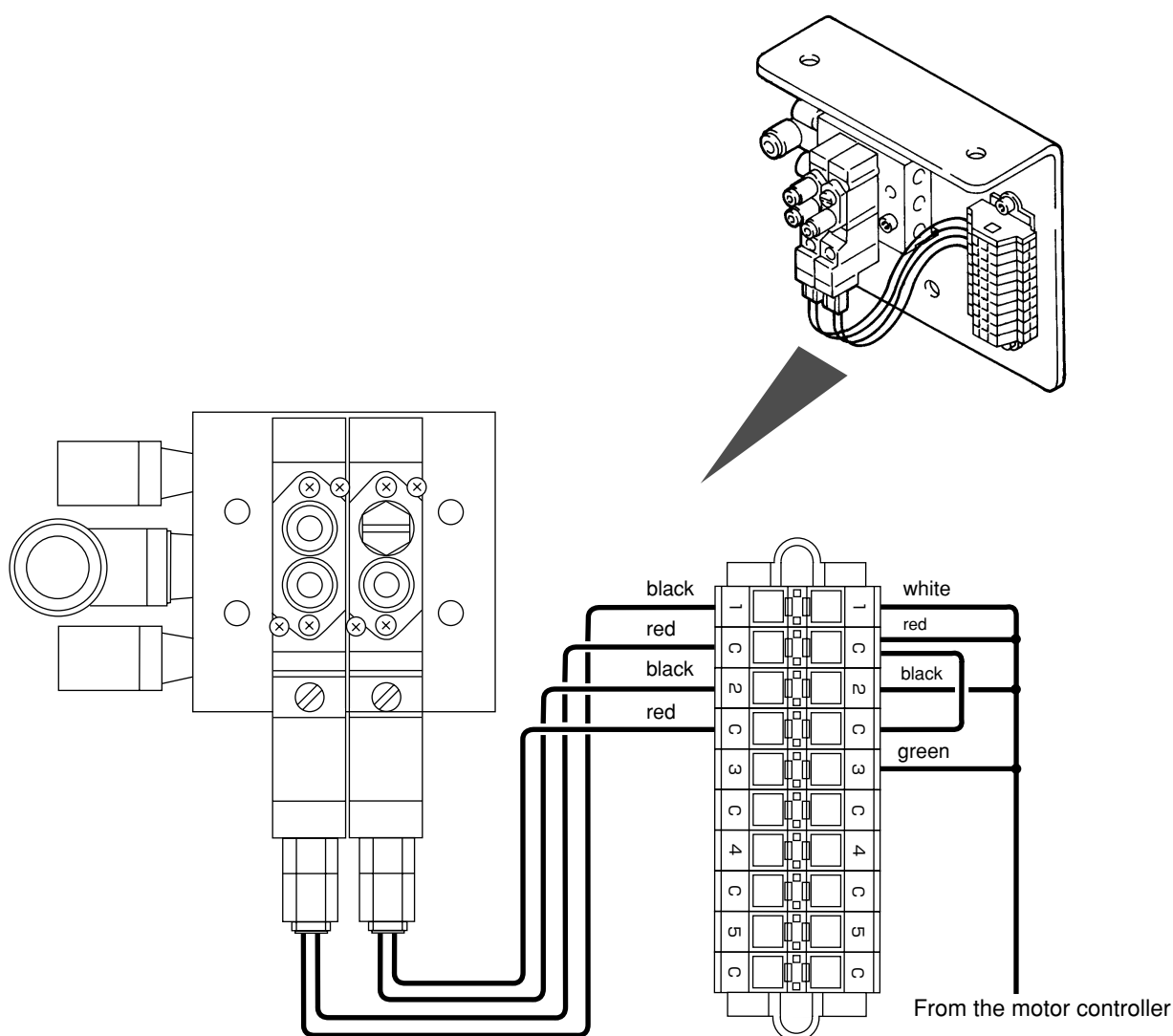
## ⚠ CAUTION

⚠ Always turn off the power, unplug the machine and then well-qualified technicians should connect relay cords.

⚠ Match the colors and shapes of the connectors when connecting the relay cords.

## ⚠ WARNING

⊘ Faulty wiring of the relay cords may cause a malfunction. To prevent accidents and damage to the machine, check the relay cords for correct wiring.





## Installation

Mechanic level

# Connecting the air lines (HG410) (electric knee switch)

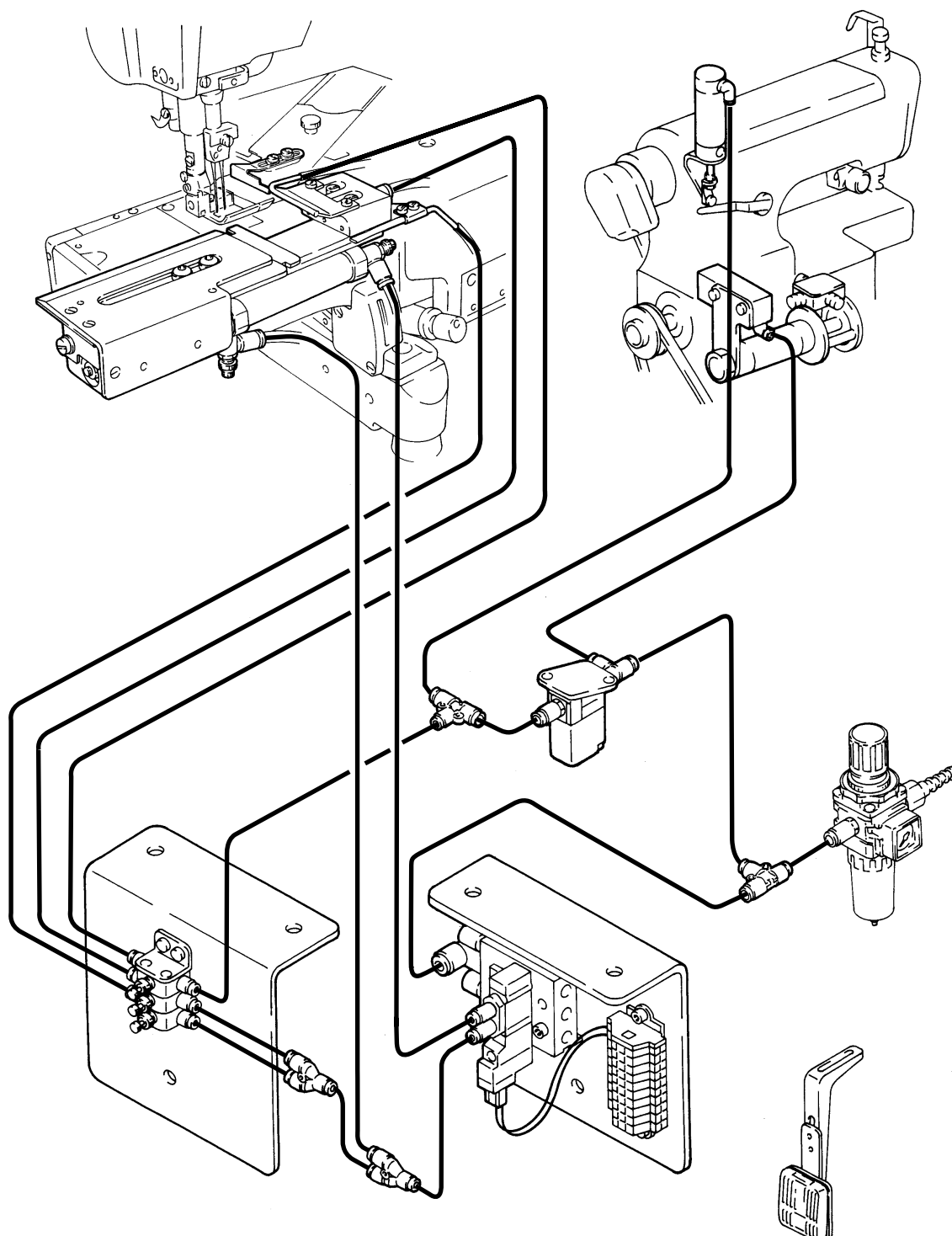
## ⚠ CAUTION

⚠ Always turn off the power and shut down the air compressor first and well-qualified technicians should connect the air line.

⚠ Before connecting to the air compressor (air source), all the air lines should be connected completely.

## ⚠ WARNING

⊘ Improper piping of the air lines may cause a malfunction. To prevent accidents and damage to the machine, check all the air lines for correct piping.



## Installation

Mechanic level

# Connecting the air lines (HG410) (pneumatic knee switch)

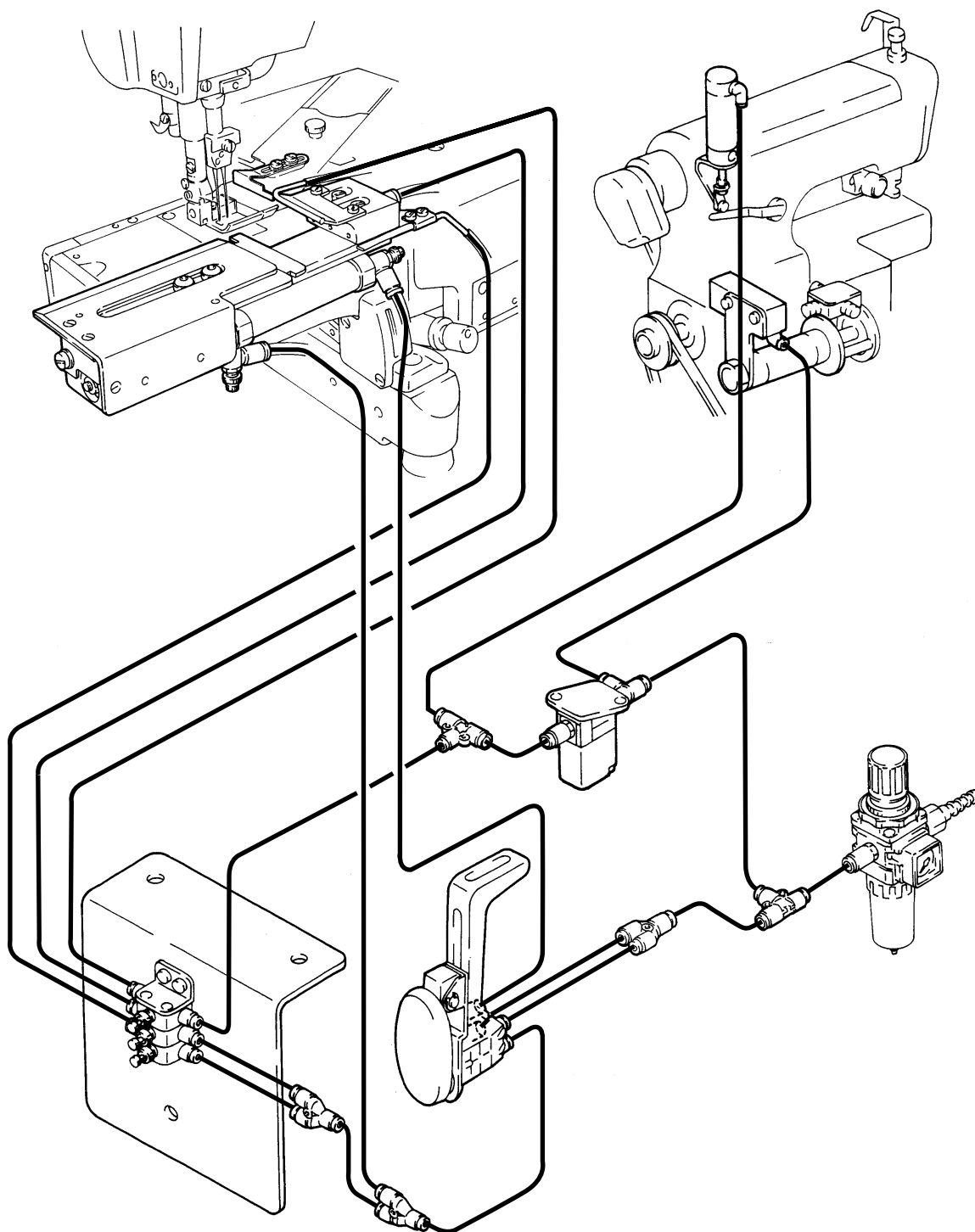
## ⚠ CAUTION

⚠ Always turn off the power and shut down the air compressor first and well-qualified technicians should connect the air line.

⚠ Before connecting to the air compressor (air source), all the air lines should be connected completely.

## ⚠ WARNING

⊘ Improper piping of the air lines may cause a malfunction. To prevent accidents and damage to the machine, check all the air lines for correct piping.



## Installation

Mechanic level

# Connecting the air lines (HG411) (electric knee switch)

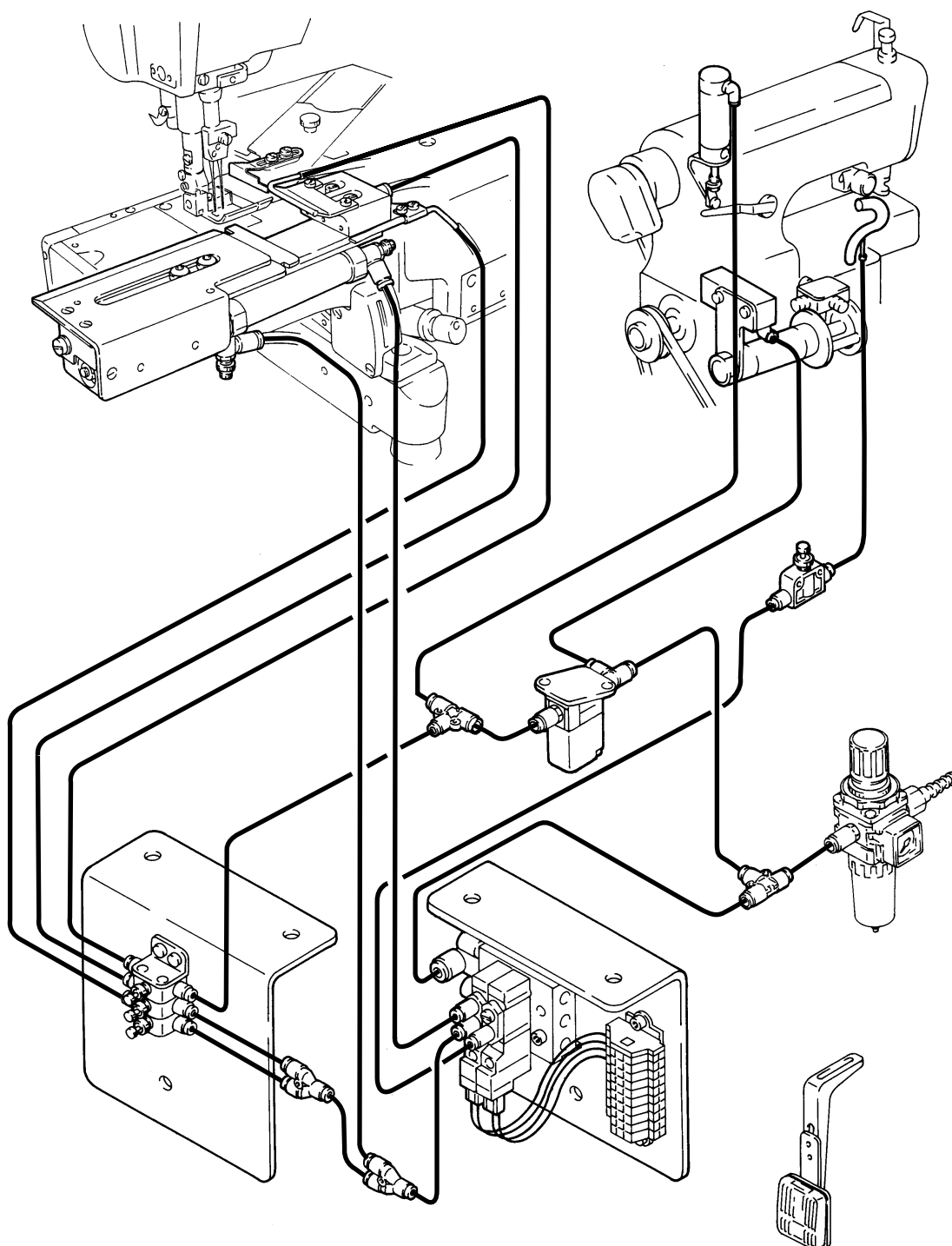
## ⚠ CAUTION

⚠ Always turn off the power and shut down the air compressor first and well-qualified technicians should connect the air line.

⚠ Before connecting to the air compressor (air source), all the air lines should be connected completely.

## ⚠ WARNING

⊘ Improper piping of the air lines may cause a malfunction. To prevent accidents and damage to the machine, check all the air lines for correct piping.



## Installation

Mechanic level

# Connecting the air lines (HG411) (pneumatic knee switch)

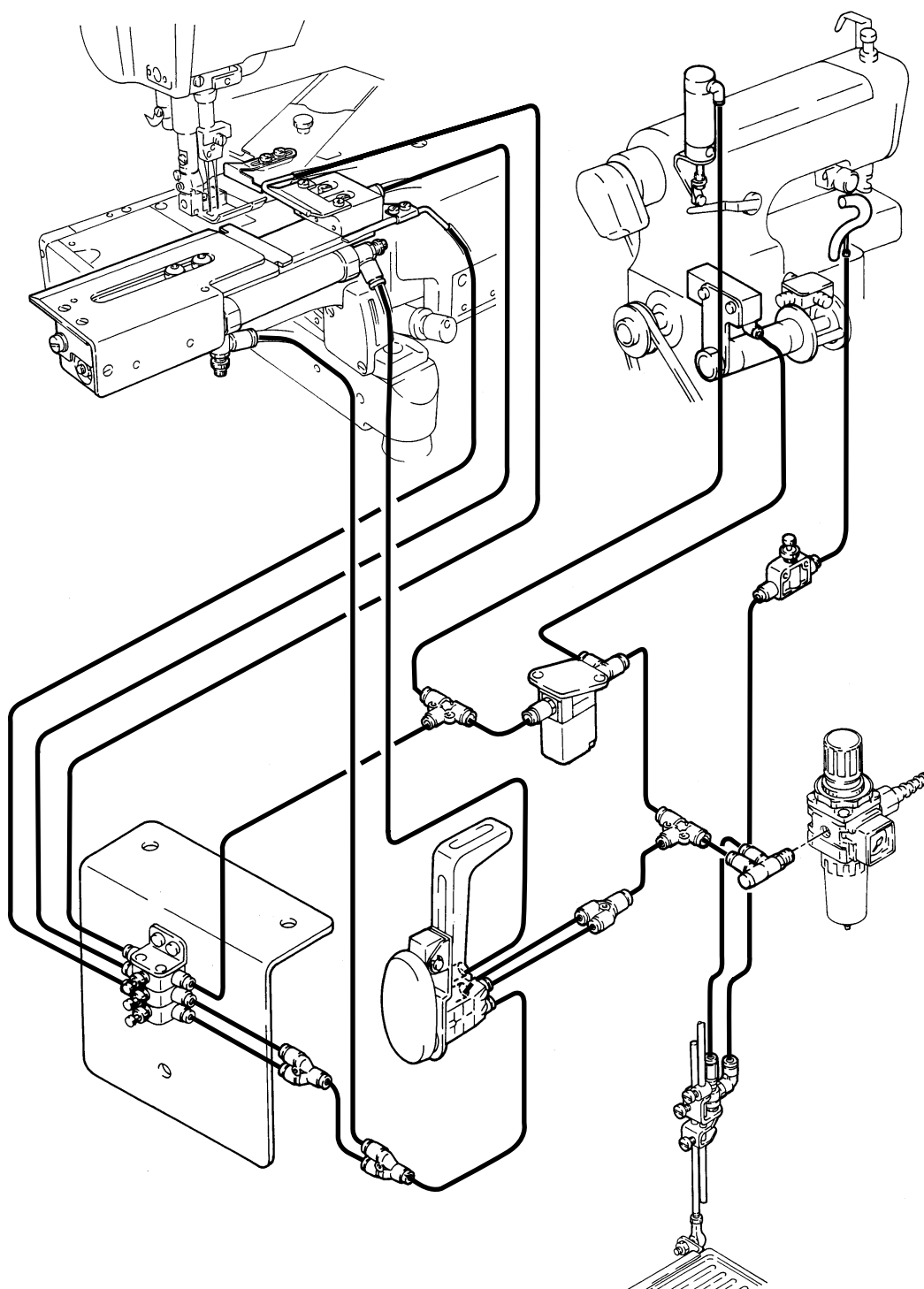
## ⚠ CAUTION

⚠ Always turn off the power and shut down the air compressor first and well-qualified technicians should connect the air line.

⚠ Before connecting to the air compressor (air source), all the air lines should be connected completely.

## ⚠ WARNING

⊘ Improper piping of the air lines may cause a malfunction. To prevent accidents and damage to the machine, check all the air lines for correct piping.



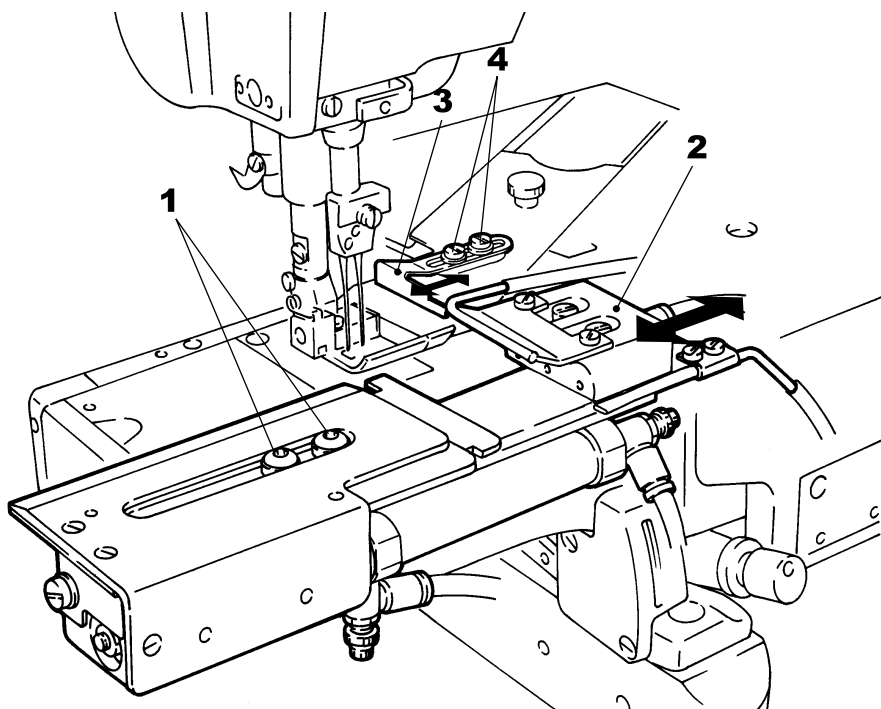
# Adjusting the hem width

## ⚠ CAUTION

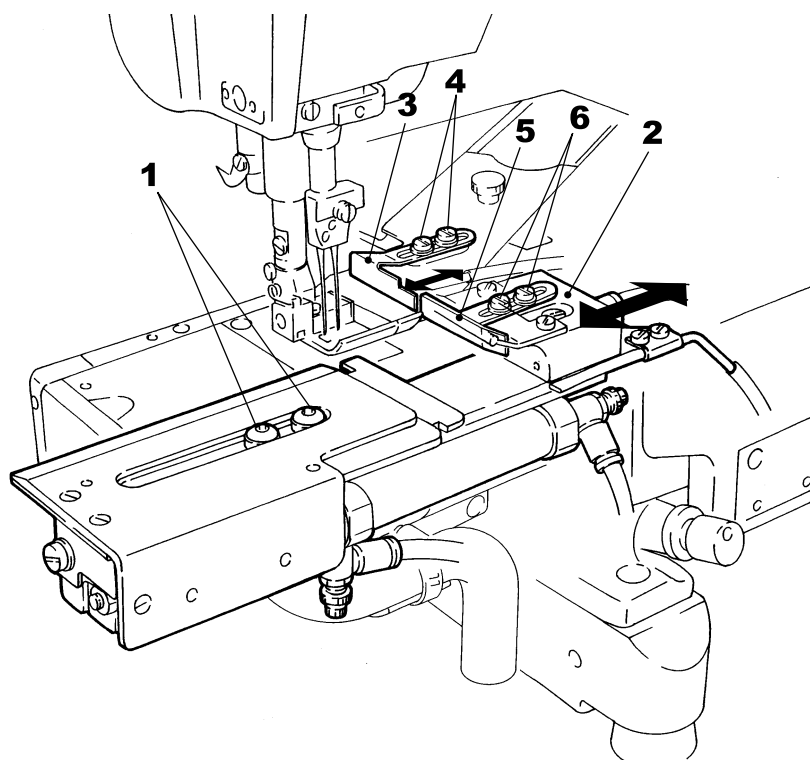
⚠ Always turn off the power, shut down the air compressor first and well-qualified technicians should adjust hem width.

1. Loosen screws **1**. Adjust the hem width by moving the fabric guide **2** to the left or right as required.
2. After adjusting fabric guide **2**, adjust fabric guide **3** according to the hem width by loosening screws **4**.
3. In the case of HG411, after adjusting fabric guides **2** and **3**, adjust fabric guide **5** according to the hem width by loosening screws **6**.

【HG410】



【HG411】




## Basic Adjustment

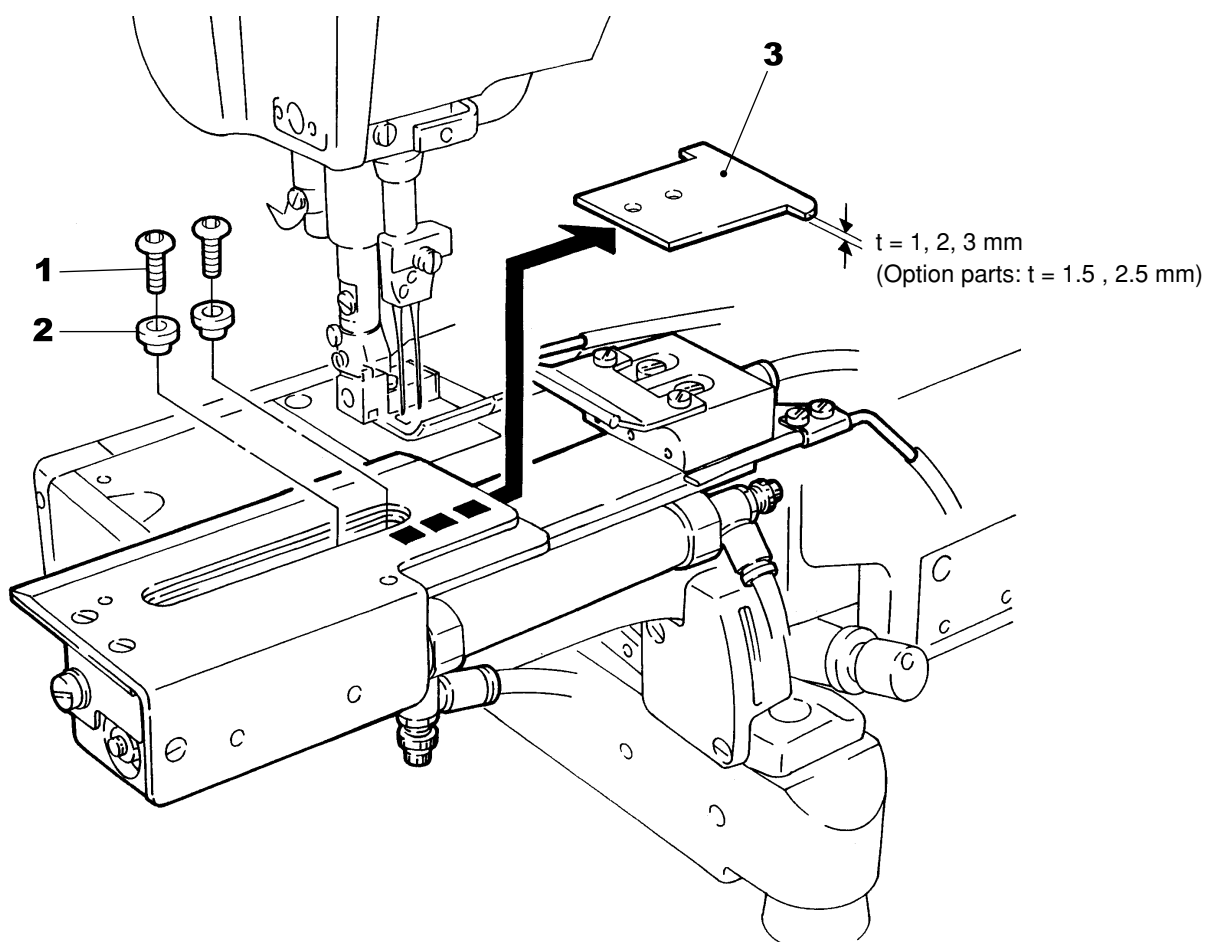
Mechanic level

# Changing the spacer (for the fabric thickness)

## CAUTION

 Always turn off the power shut down the air compressor first and well-qualified technicians should change the spacer.

Remove screws **1** and spacers **2**. Change the spacer **3** according to the fabric thickness.



## Basic Adjustment

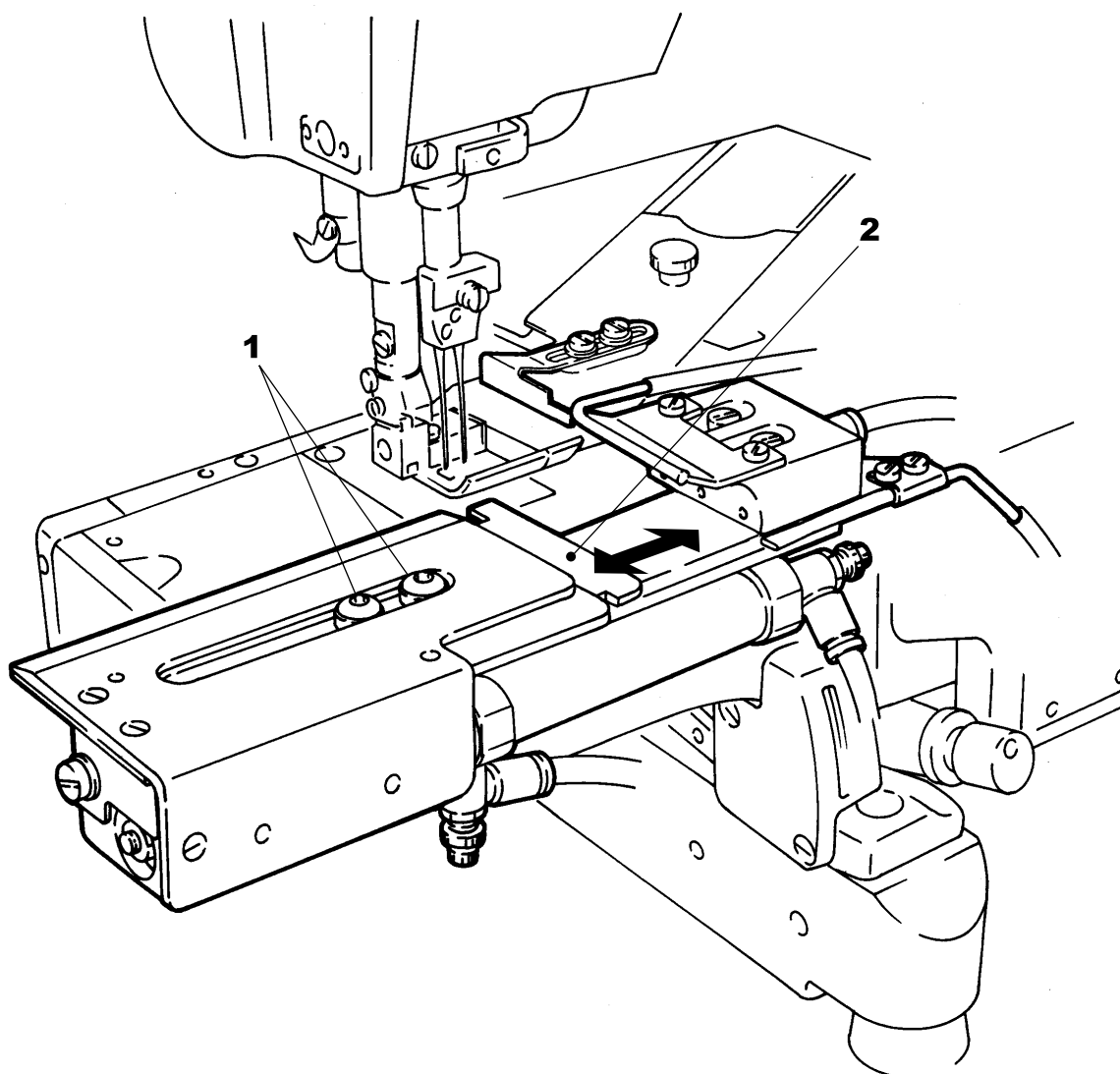
Mechanic level

# Adjusting the spacer (for the fabric edge)

## ⚠ CAUTION

⚠ Always turn off the power, shut down the air compressor first and well-qualified technicians should position the spacer.

Loosen screws **1**. Move the spacer **2** to the left or right as required so that the left needle sews the fabric edge properly.



## Basic Adjustment

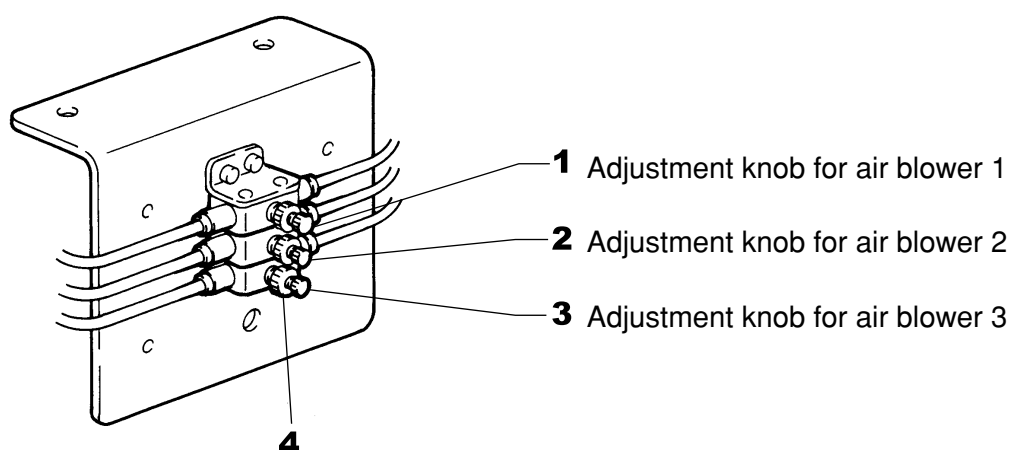
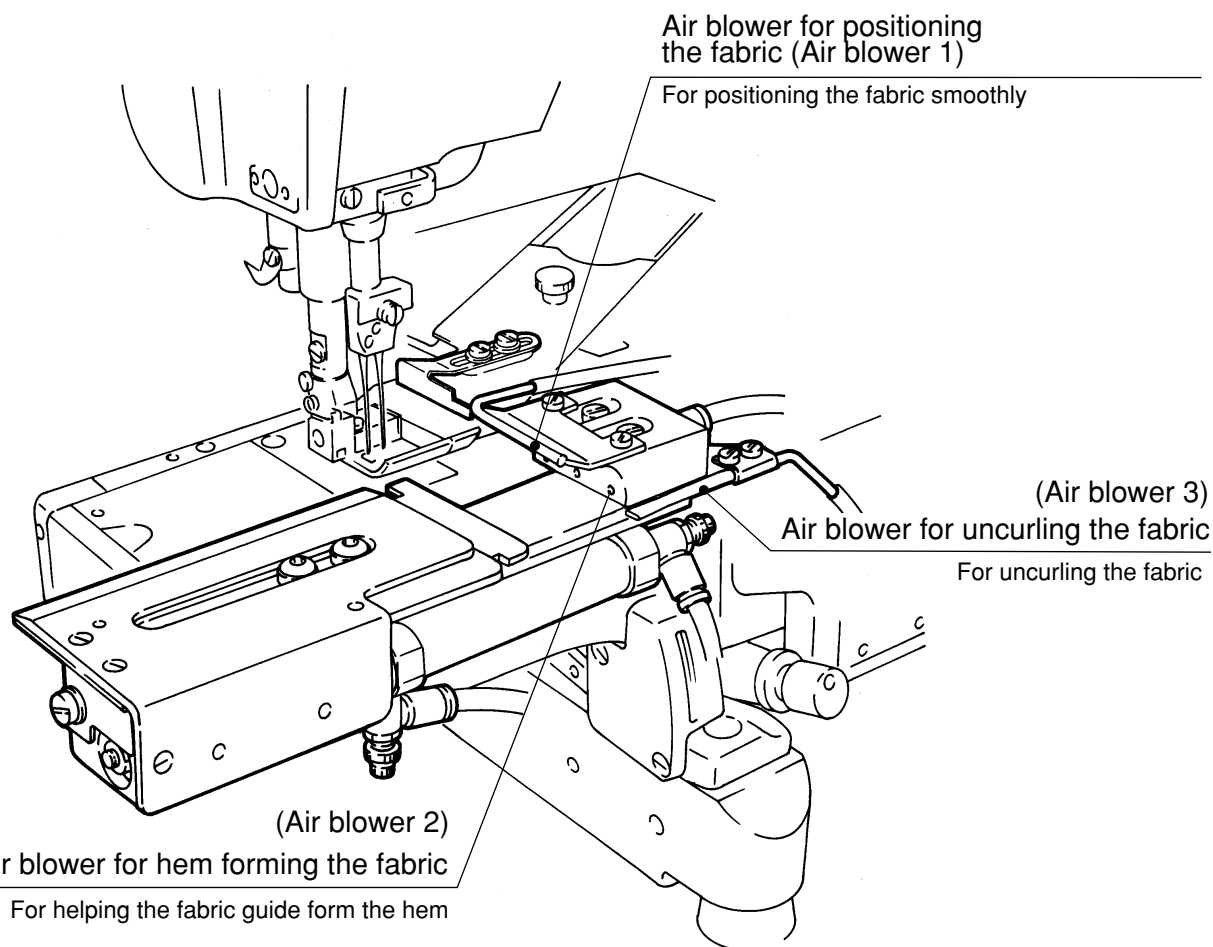
Mechanic level

# Adjusting the air blowers

## ⚠ CAUTION

⚠ Be careful when you adjust the air blower. To prevent accidents due to the unexpected start of the machine and/or users' misoperation, consider the procedures for safety and follow them.

Adjust the amount of air according to the fabric. Adjustment is made by loosening lock nuts **4** and turning knobs **1**, **2** and **3** as required. After this adjustment, be sure to tighten lock nuts **4**.

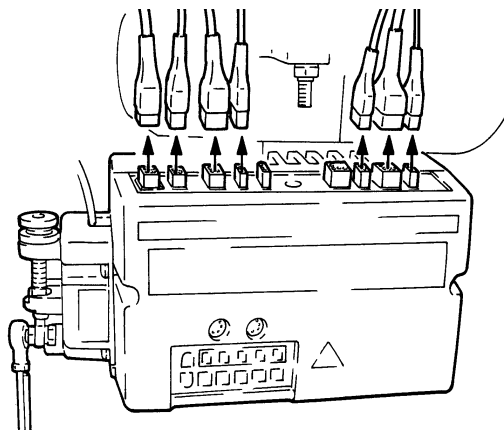




# Programming the motor controller with data

## CAUTION

- ⚠ Well-qualified technicians should enter the data. This procedure is performed with the power on. To prevent accidents due to the unexpected start of the machine and/or users' misoperation, consider the procedures for safety and follow them.
- ⚠ Disconnect the cords first with the power on as shown in the illustration. Then enter the data for motor controller. After this programming, reconnect the cords.



If you use the HG device with electric knee switch, be sure to program the motor controller with data. Otherwise the HG device does not operate.

Models of motor controller applicable to an electric knee switch

Mitsubishi limi servo motor	B series	Model	XC-BPS(A)-10-05 XC-BPS(A)-20-05
	E series	Model	XC-EPS-10-05 XC-EPS-20-05

Program the motor controller with data as shown below.

1. Set up the UT mode first (see the next page).

### Note

If you set up the UT mode after programming the motor controller to use the electric knee switch, motor controller settings will be deleted to become invalid.

2. Enter the data to use the electric knee switch.

## Basic Adjustment

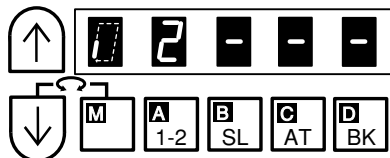
### Mechanic level

# Setting the UT mode

※ UT mode is preset No.1 (without top cover thread) in the factory before shipment.

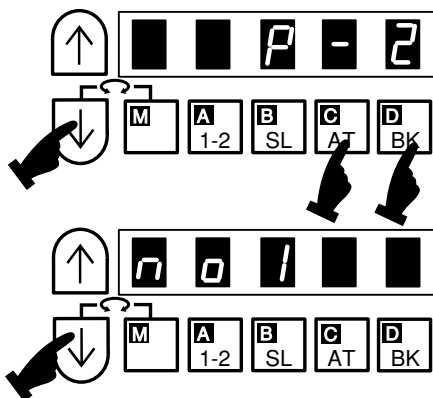
## [B series]

1. Turn the power switch OFF and turn ON again.



2. Press **C AT** and **D BK** keys simultaneously for more than 2 seconds while pressing **↓** key.

Display 『P-2』 blinks and then the next display appears as shown below.

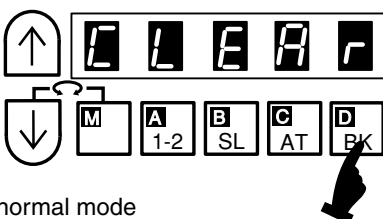


3. Press **↓** key and select UT mode (No.1- No.8).

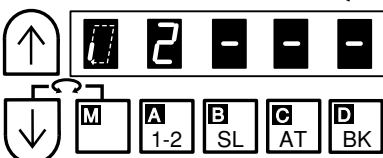
※ Press **↑** key to return to the previous display.

UT mode	Sewing application	UT mode	Sewing application
※No.1	Without top cover thread	No.5	Do not use.
No.2	With top cover thread	No.6	Do not use.
No.3	Do not use.	No.7	Without top cover thread for condensed
No.4	Do not use.	No.8	With top cover thread for condensed

4. Press **D BK** key for more than two seconds after you select UT mode.

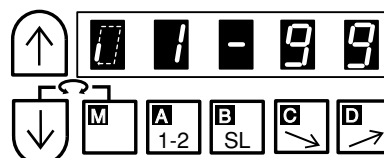


5. Factory-set normal mode



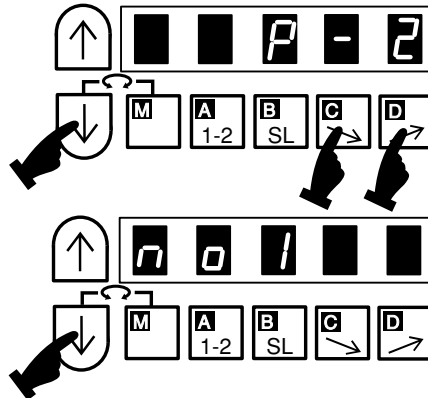
## [E series]

1. Turn the power switch OFF and turn ON again.



2. Press **C** and **D** keys simultaneously for more than 2 seconds while pressing **↓** key.

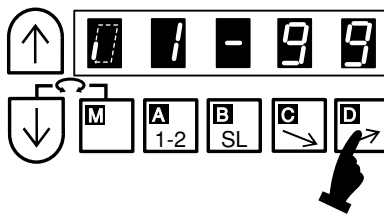
Display 『P-2』 blinks and then the next display appears as shown below.



3. Press **↓** key and select UT mode (No.1- No.8).

※ Press **↑** key to return to the previous display.

4. Press **D** key for more than two seconds after you select UT mode.





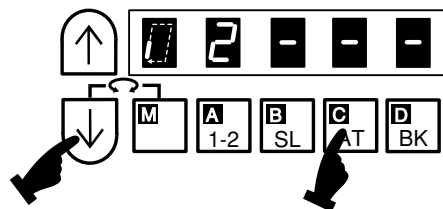
## Basic Adjustment

## Entering the data to use the electric knee switch

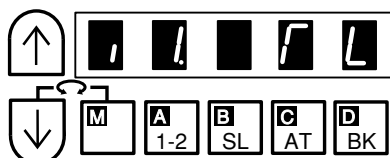
Mechanic level


(B series XC-BPS, BPSA motor controller)

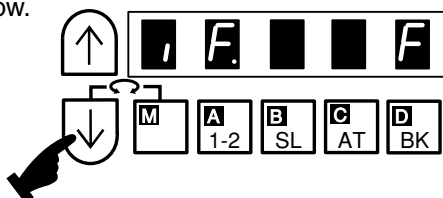
1. Press  and  simultaneously for more than 2 seconds.







2. The following display appears.




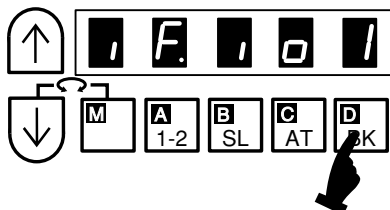
3. Press  32 times to call up the display as shown below.





### Note


- If you press  more than 32 times, return to the display as shown above by pressing .
- Pressing  or  continuously speeds up the change of display.

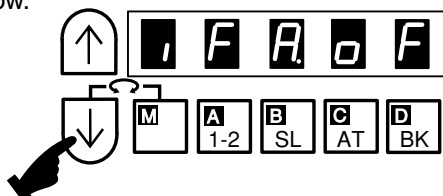
4. Press  22 times to call up the display as shown below.




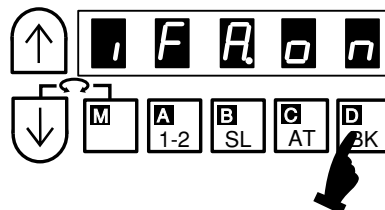
### Note


If you press  more than 22 times, return to the display as shown above by pressing .

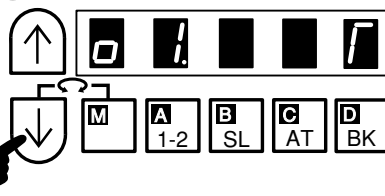
5. Press  twice to call up the display as shown below.




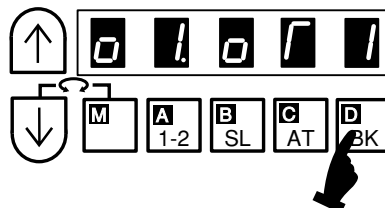
6. Press  once to call up the display as shown below.




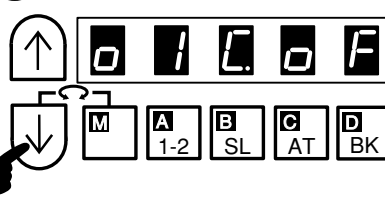
7. Press  58 times to call up the display as shown below.




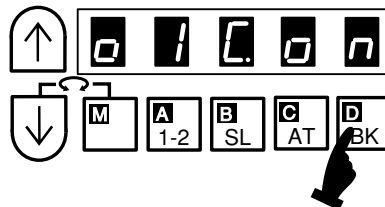
8. Press  14 times to call up the display as shown below.





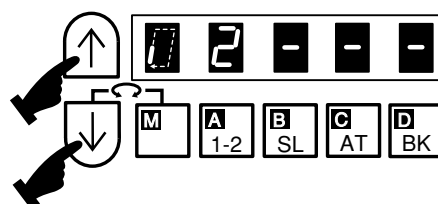
9. Press  twice to call up the display as shown below.



10. Press  once to call up the display as shown below.



11. Press  and  simultaneously to return to the normal mode.





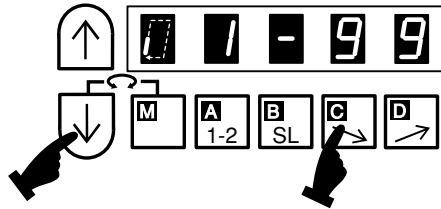
## Basic Adjustment

# Entering the data to use the electric knee switch

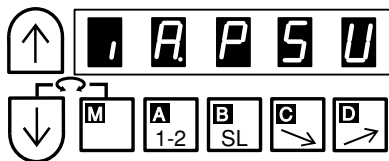
Mechanic level


(E series XC-EPS motor controller)

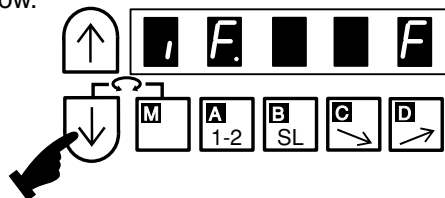
1. Press  and  simultaneously for more than 2 seconds.







2. The following display appears.




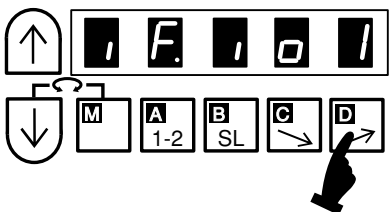
3. Press  15 times to call up the display as shown below.





### Note


- If you press  more than 15 times, return to the display as shown above by pressing .
- Pressing  or  continuously speeds up the change of display.

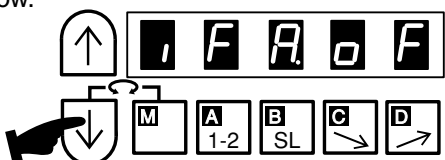
4. Press  22 times to call up the display as shown below.




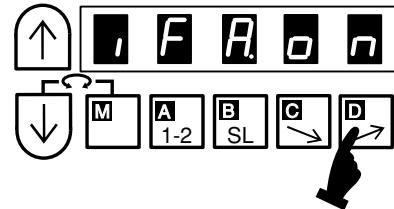
### Note


- If you press  more than 22 times, return to the display as shown above by pressing .

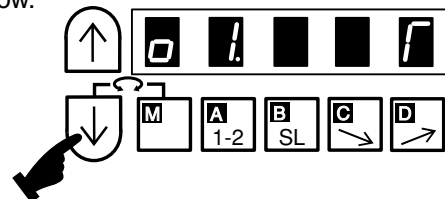
5. Press  twice to call up the display as shown below.




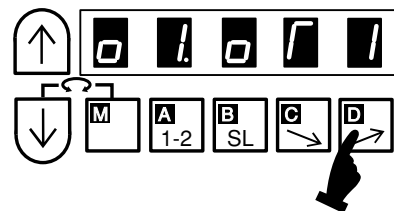
6. Press  once to call up the display as shown below.




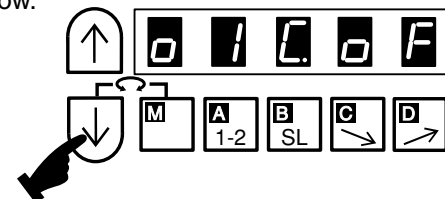
7. Press  90 times to call up the display as shown below.




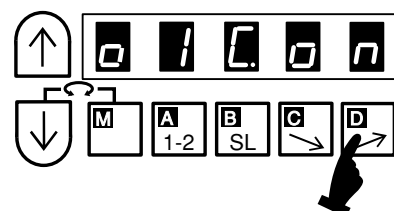
8. Press  14 times to call up the display as shown below.



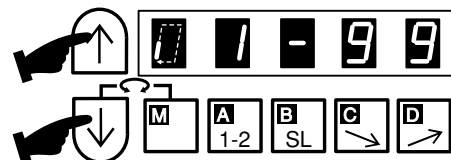
9. Press  twice to call up the display as shown below.



10. Press  once to call up the display as shown below.

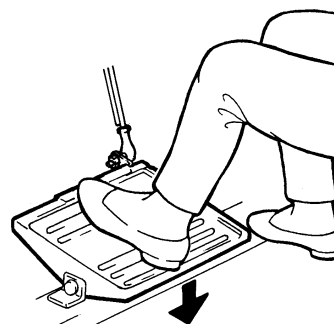


11. Press  and  simultaneously to return to the normal mode.

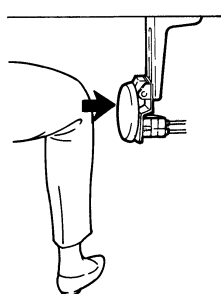


# Sewing

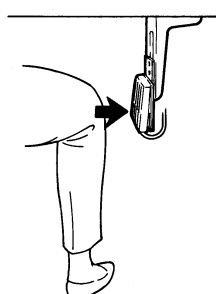
1. Heel the treadle to lift the presser foot.



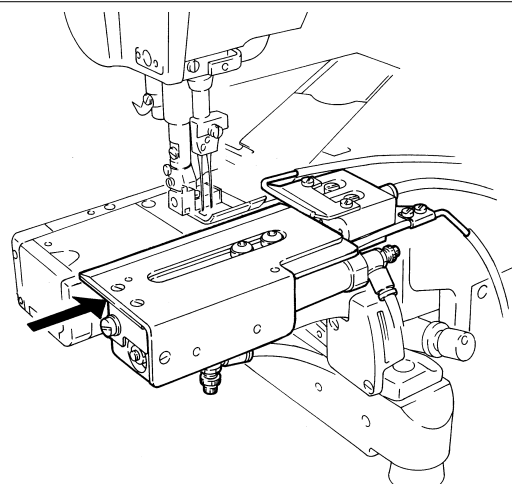
2. Move the hem guide to the right by pressing the knee switch.



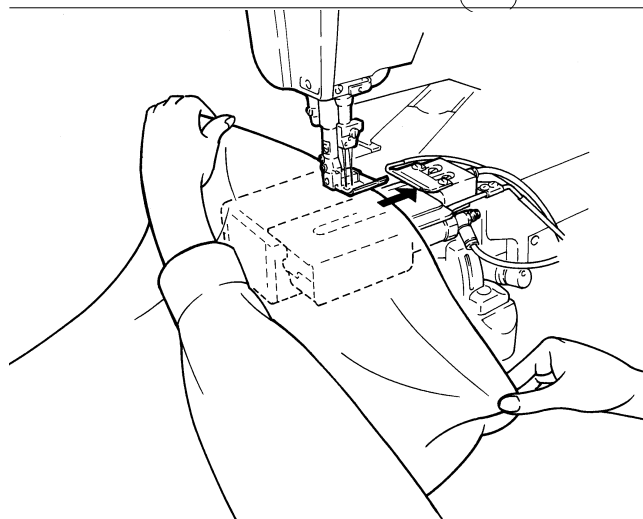
Pneumatic knee switch



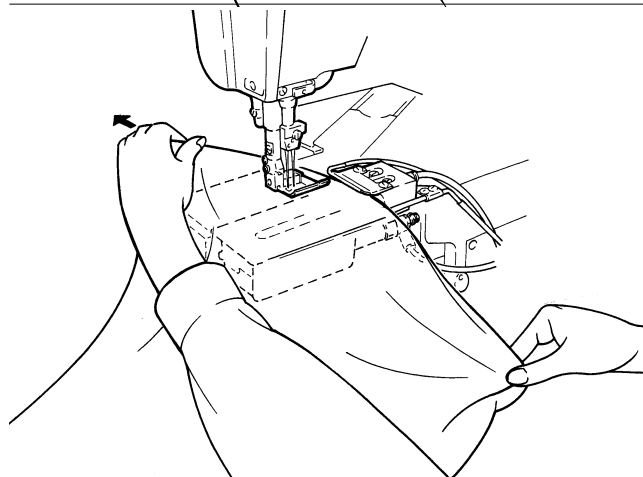
Electric knee switch



3. Insert the fabric into the fabric guide (the fabric is folded pneumatically).

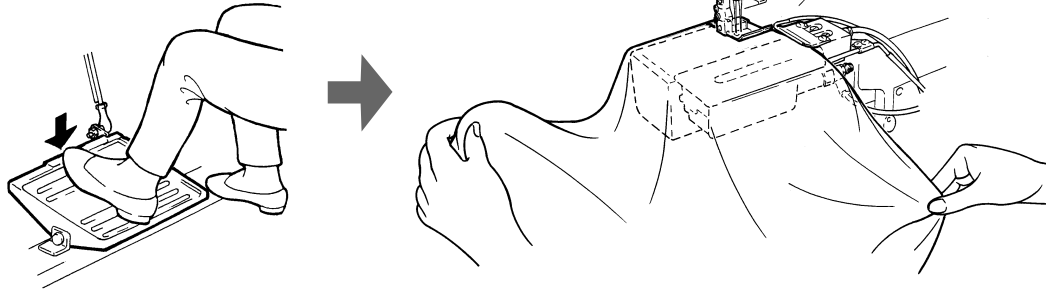


4. To form the hem neatly, pull the fabric straight and slightly to the back side of the machine. Then lower the presser foot.

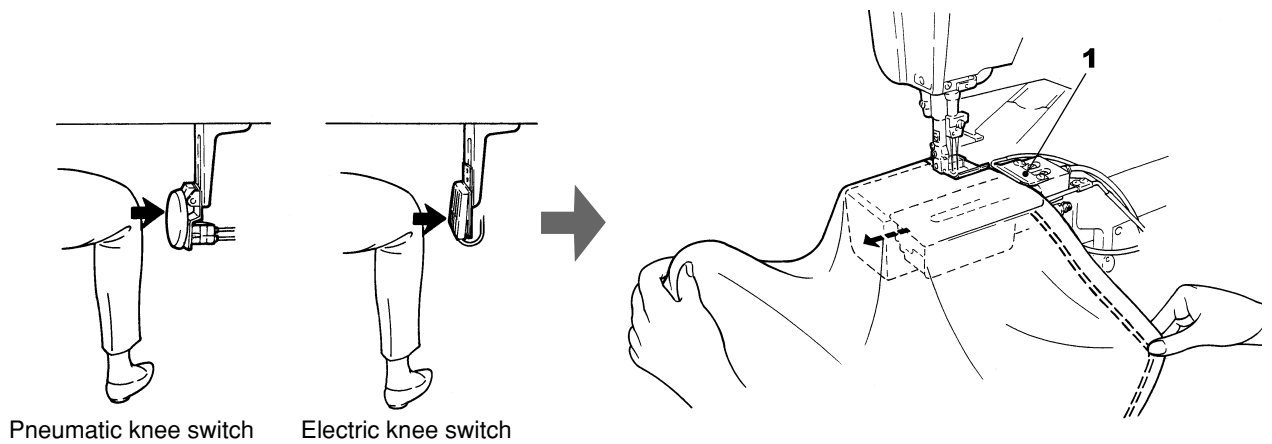


# Sewing

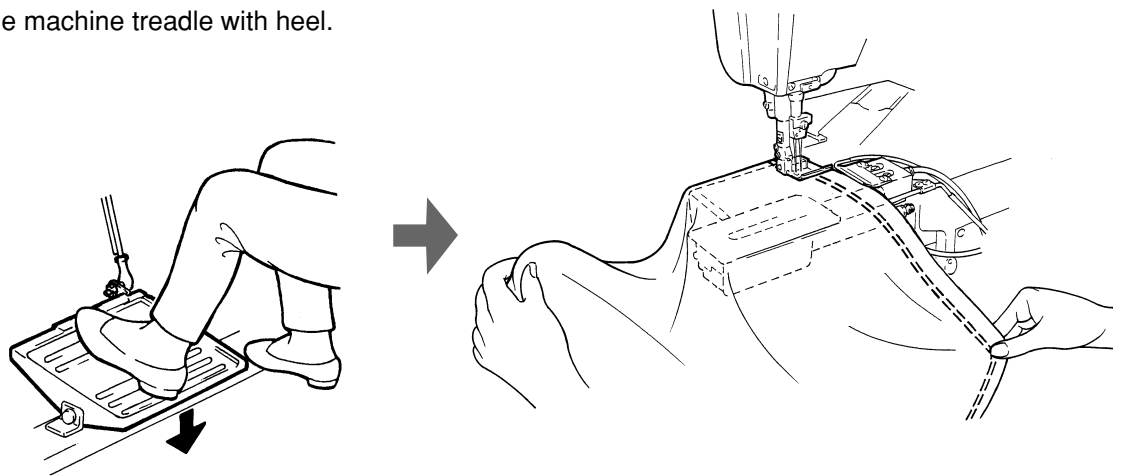
5. Toe the treadle to start sewing (unnecessary to fold the fabric previously).



6. When the start of sewing comes to guide 1, remove the guide by pressing the knee switch.



7. After producing overlapped seams, raise the presser foot by pressing the machine treadle with heel.





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The description in this INSTRUCTIONS is subject to change without notice.