



PEGASUS®

MC Device

Models: MC401

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.

Elastic feeder (High performance type)
with tape cutter / inserter

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

 DANGER	Indicates an immediate hazard to life or limb.
 WARNING	Indicates a potential hazard to life or limb.
 CAUTION	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 ground the machine and labor saving device securely.
	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.
	Indicates a danger of burn injury due to high temperature.

3. Safety precautions

① Applications, 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.

② Circumstances

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.

Battery in the power box

The MC power box is equipped with a battery to keep the sewing data as it is.

If the following happens, the battery may be dead or the power box may be out of order.

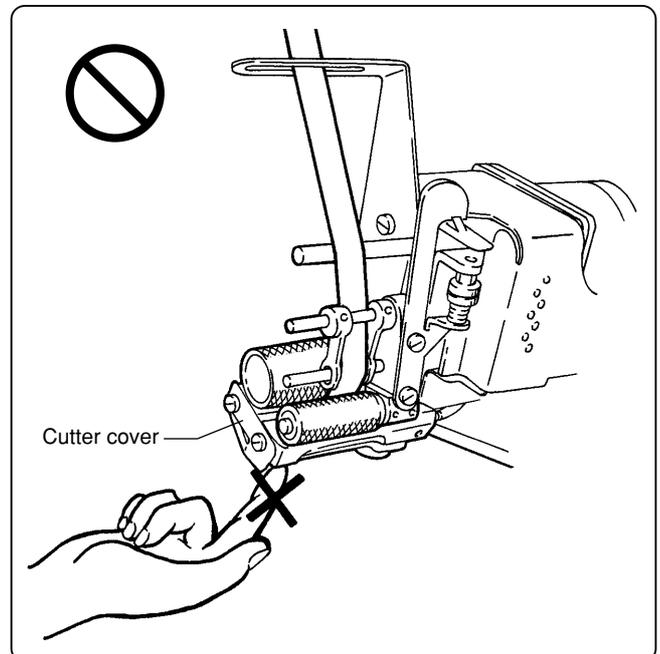
Consult your local Pegasus sales office or representative.

- (1) The sewing data which has been entered often changes.
- (2) When the power is turned on, the sewing data is initialized.

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.
-  Do not put your fingers into the cutter and roller to prevent accidents. And never remove the cutter cover.



Application and performance

Application

For attaching elastic to waists/leg openings of leotards, swimsuits, etc.

Performance

Tape width : 4.2 - 11.8 mm

(In case of using the optional presser foot for inch size tape : 12 - 26 mm)

Max. machine speed : 7000 s.p.m

26 items (types of sewn products) from A to Z can be programmed and stored in the MC device.

5 patterns (where and how to sew each part of product) from 1 to 5 can be programmed and stored in one item.

7 steps (where to switch a position and amount of fullness application during sewing) from 1 to 7 can be programmed and stored in one pattern.

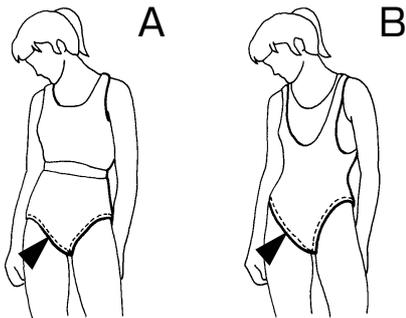
In each step the manual mode (each step is switched with the knee switch) or the automatic mode (each step is switched automatically by stitch counting) can be selected as required.

Feeding amounts and stitch counts can be entered into up to seven steps.
The device can be used with even one step.

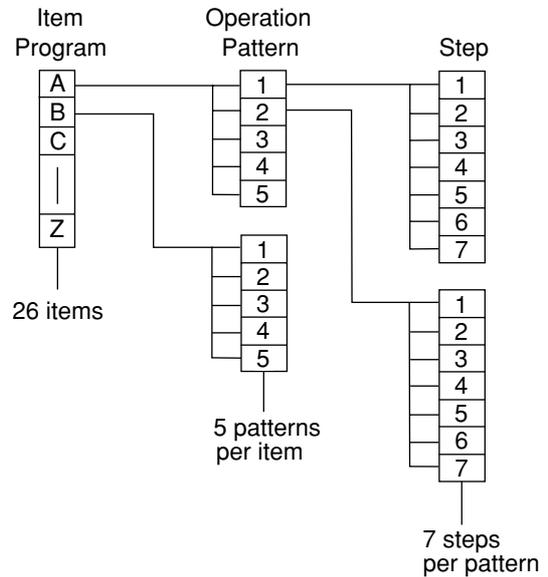
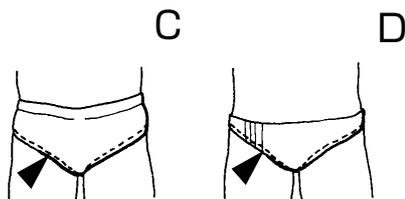
■ 26 items (types of sewn products) can be programmed with the same elastic width.

Ex.

- 2 programs for leg openings on leotards of different designs (A, B)



- 2 programs for leg openings on swimsuits of different designs (C, D)



■ 5 patterns from 1 to 5 can be programmed in each of 26 items from A to Z.

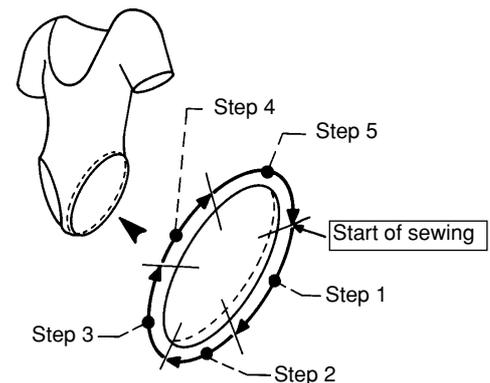
Ex.

Right leg opening, left leg opening, sleeve openings and neck opening on a leotard.



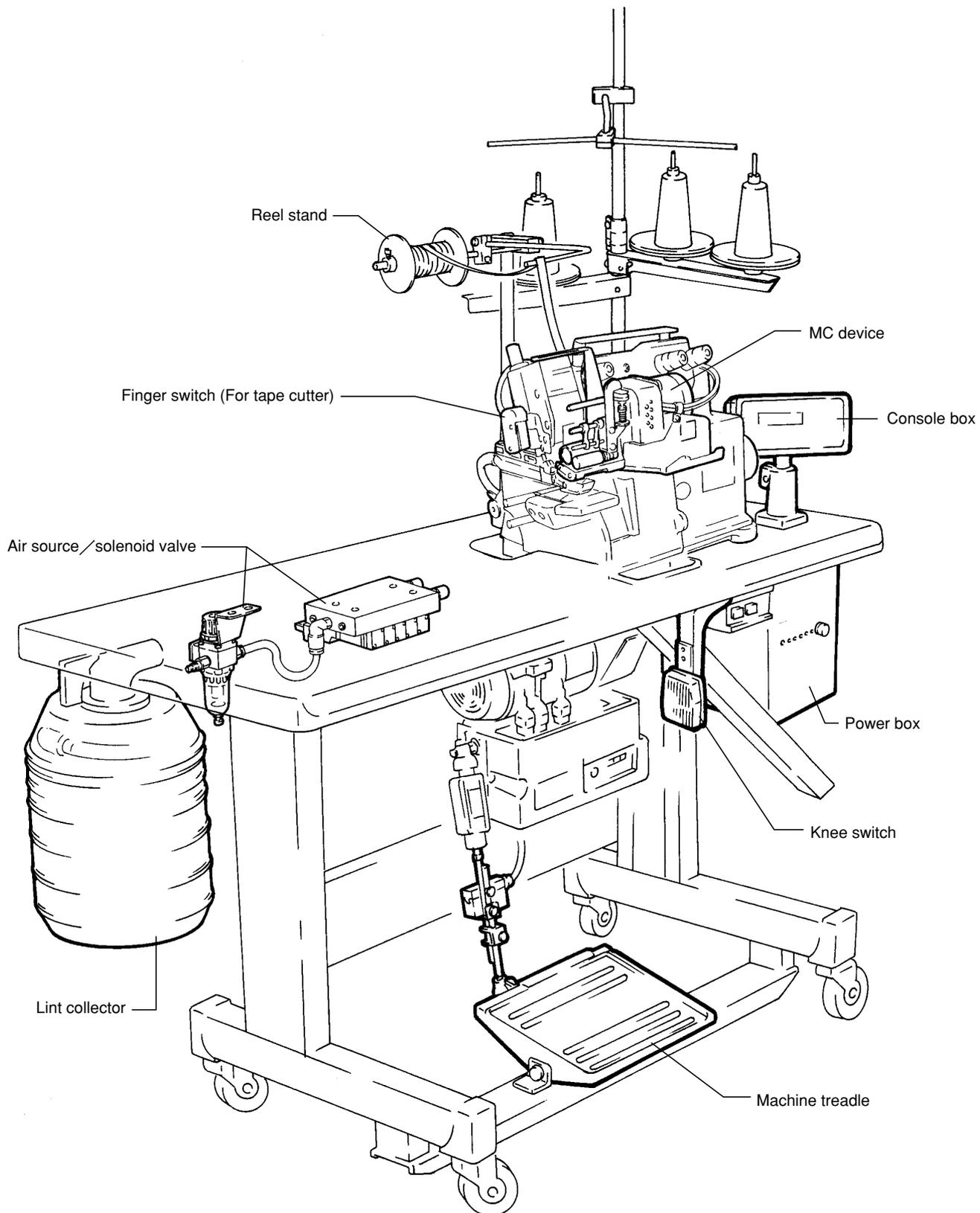
■ 7 steps from 1 to 7 can be programmed in each of 5 patterns from 1 to 5.

Ex.



System construction

* Install the knee switch, air source and solenoid valve properly according to the type of machine, usage and the shape of machine table.



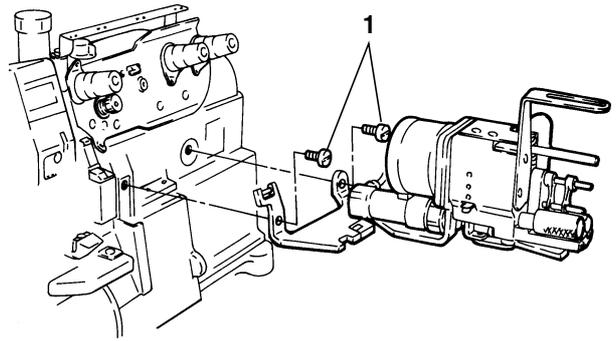
Installing each component

1. Installing the MC device

⚠ CAUTION

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

Install the bracket with the MC device on the machine head with screws **1** as shown in the illustration.

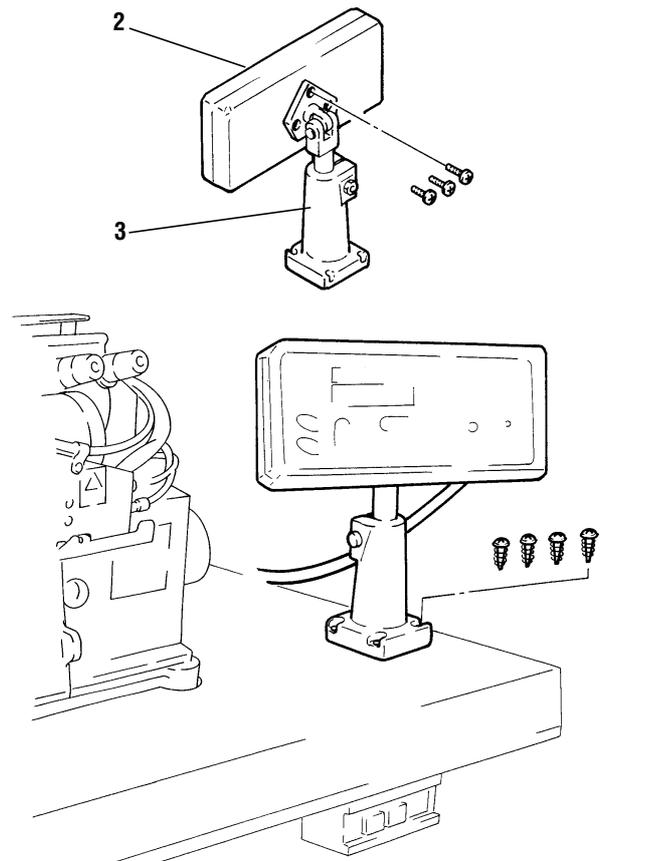


2. Installing the console box

⚠ CAUTION

 Always turn off the power, unplug the machine from the outlet and then well qualified technicians should install the console box.

1. Install console box **2** on bracket **3**.
2. Mount console box **2** and bracket **3** on the machine table.

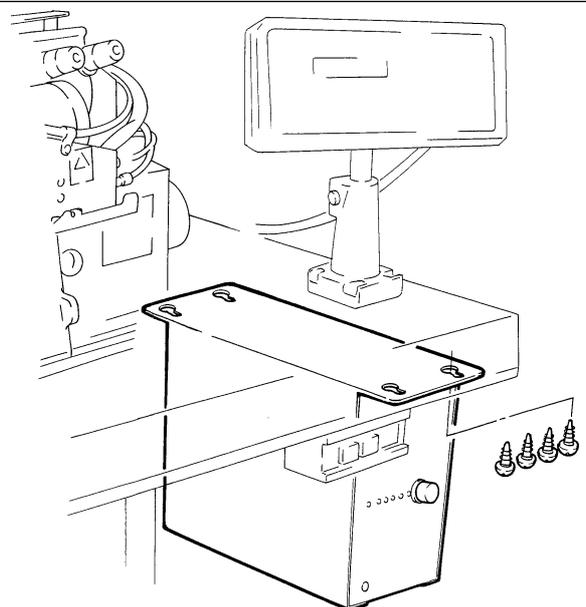


3. Installing the power box

⚠ CAUTION

 Always turn off the power, unplug the machine from the outlet and then well qualified technicians should install the power box.

Install the power box on the machine table.



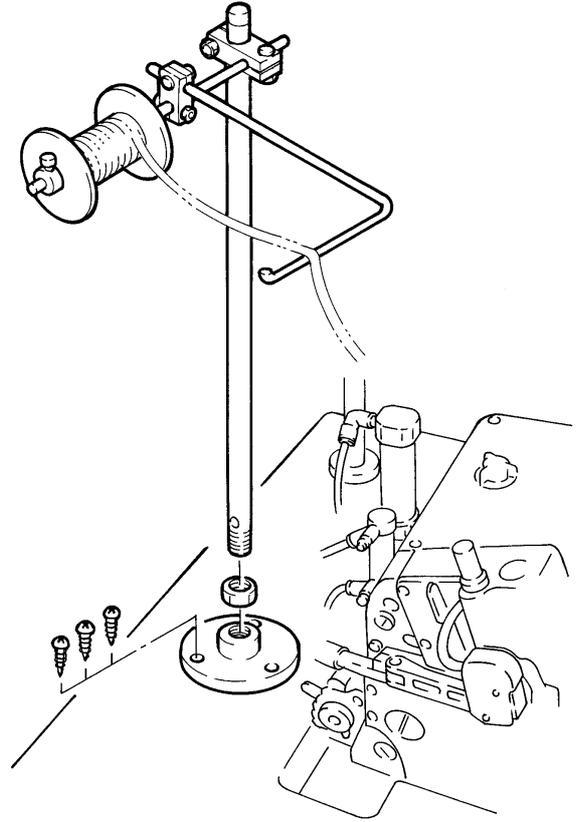
Installing each component

4. Installing the reel stand

CAUTION

 Always turn off the power, unplug the machine from the outlet and then only well-qualified technicians should install the reel stand.

Install the reel stand on the machine table.

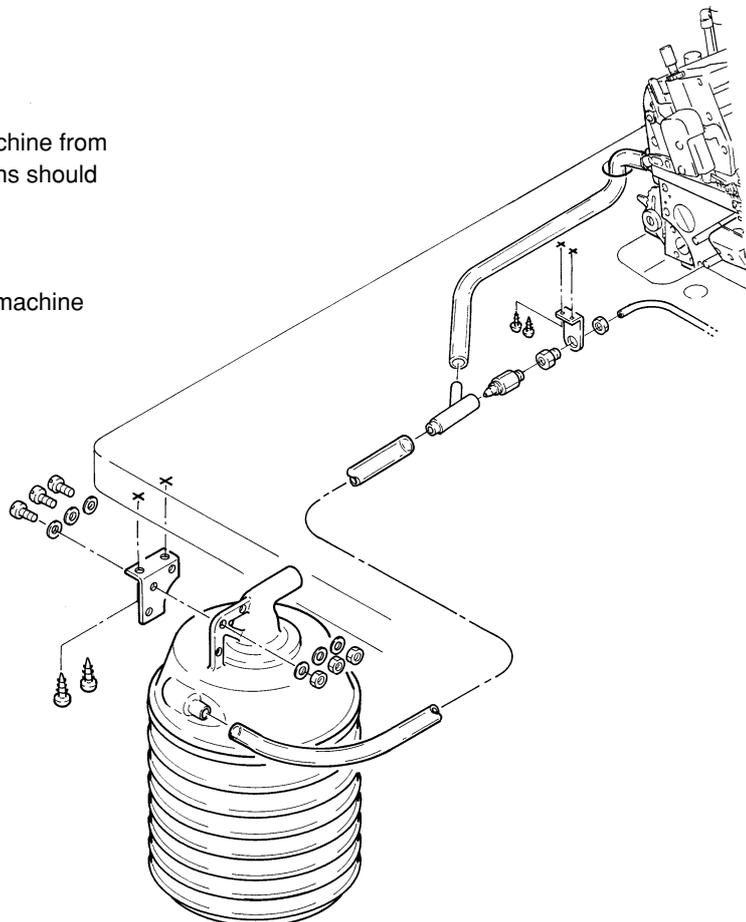


5. Installing the lint collector

CAUTION

 Always turn off the power, unplug the machine from the outlet and then only well-qualified technicians should install the lint collector.

Install the lint collector on the underside of the machine table.



Installing each component

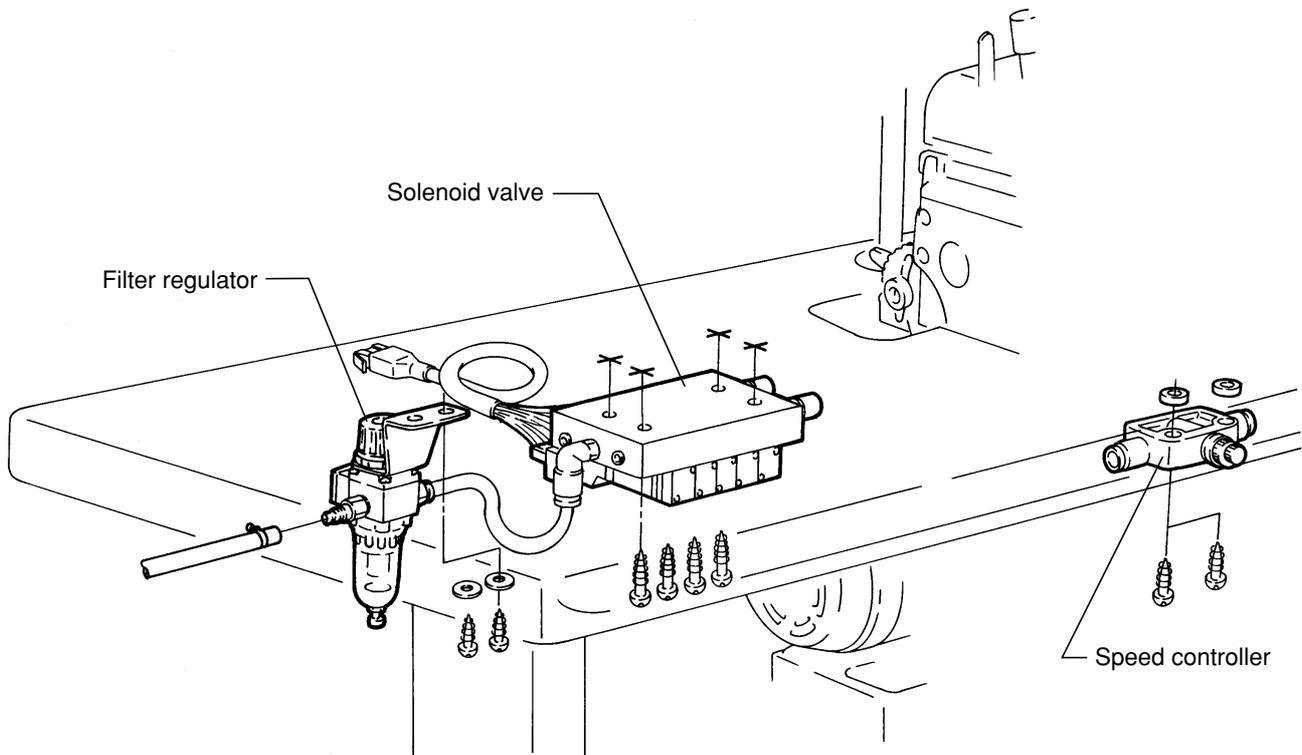
6. Installing the solenoid / filter regulator / speed controller

CAUTION

 Always turn off the power, air compressor first and then only well-qualified technicians should install the solenoid / filter regulator / speed controller.

 Connect other lines first before connecting to the air source (air compressor).

Install the solenoid / filter regulator / speed controller on the underside of the machine table.



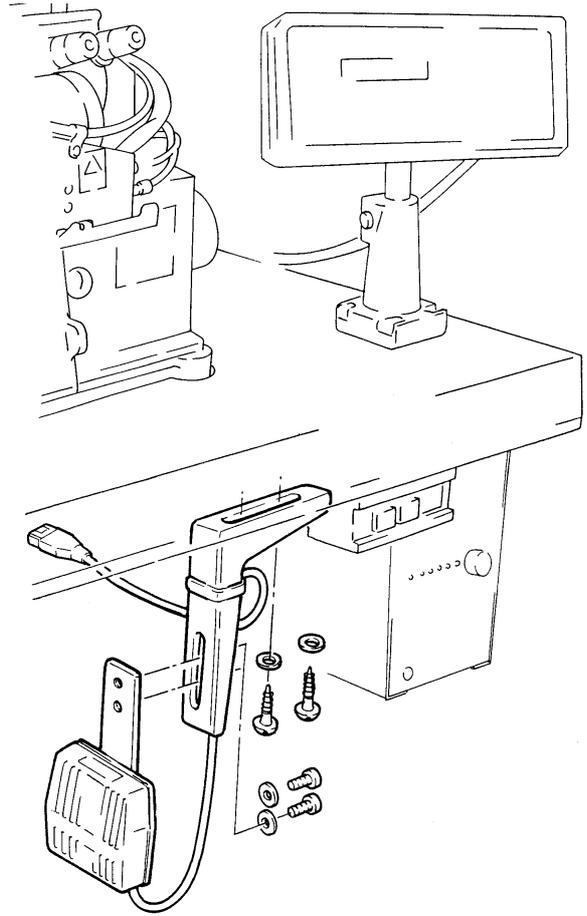
Installing each component

7. Installing the knee switch

CAUTION

 Always turn off the power, unplug the machine from the outlet and then only well-qualified technicians should install the knee switch.

Install the knee switch conveniently on the underside of the machine table.

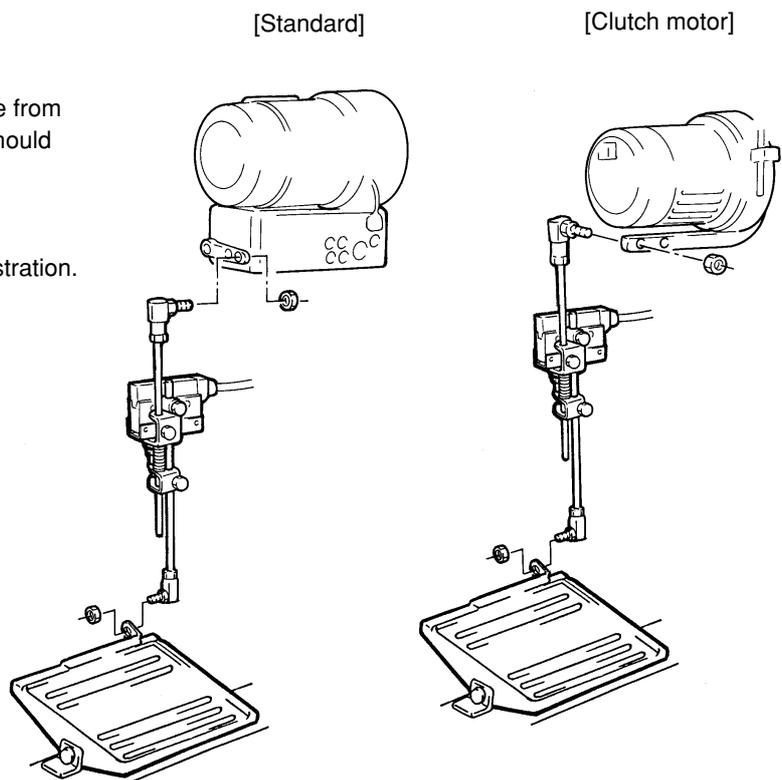


8. Installing the pitman rod / switch

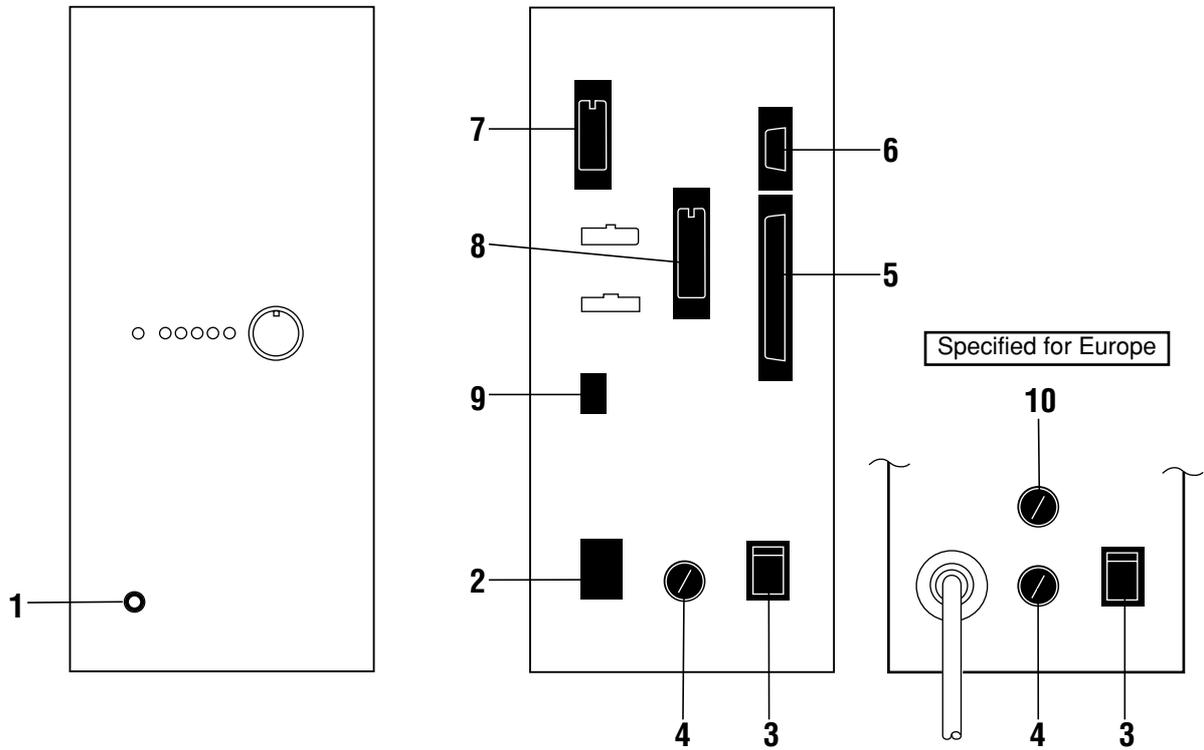
CAUTION

 Always turn off the power, unplug the machine from the outlet and then only well-qualified technicians should install the pitman rod / switch.

Install the pitman rod / switch by referring to the illustration.



Description of MC power box



1 LED for power source

Indicates the power is on/off.
Lit when the power is on.

2 Power connector (input)

To connect the power cord.

3 Power switch

To turn on/off the power box.

4 Fuse holder

3A fuse is included.

5 Console box connector (input/output)

To connect cords from the console box.

6 Sensor connector (input)

To connect the relay cord for the rotation detector.

7 Input switch connector (input)

To connect the relay cord of the knee switch, finger switch, treadle switch and MC device positioning safety switch.

8 Output connector (output)

To connect the relay cord for the solenoid valve and the step indicator.

9 Stepping motor connector (output)

To connect the tape/elastic feed stepping motor relay cord.

10 Fuse holder intended for users in Europe

3A fuse is included.

Replacing the fuse for the power box

WARNING

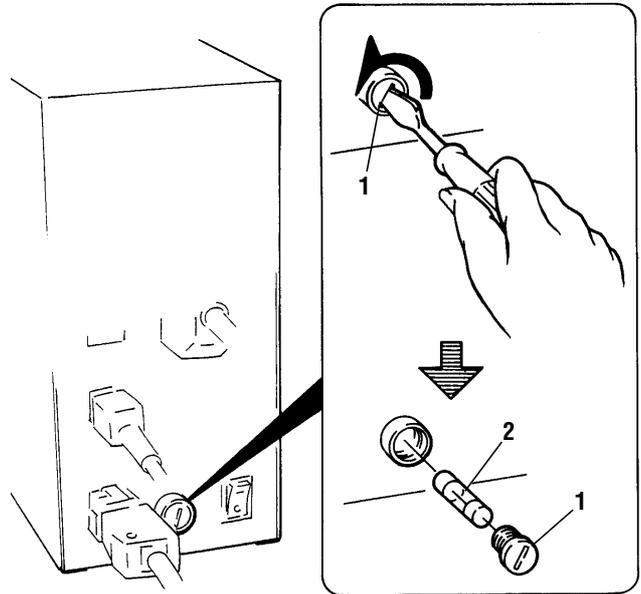
 Be sure to turn off the power and disconnect the power from the outlet, and then well-qualified technicians should replace the fuse.

CAUTION

 The fuse for the MC power box is 3A. Do not use any other than 3A.

 If the replaced fuse is also blown out, the power box may be out of order. Stop using the MC power box and contact your local Pegasus' sales office or representative.

Remove fuse holder cap **1** with the screwdriver by turning in the direction of the arrow, and replace the fuse **2** with a new one.



Connecting cords

⚠ WARNING

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

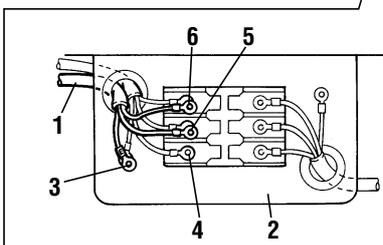
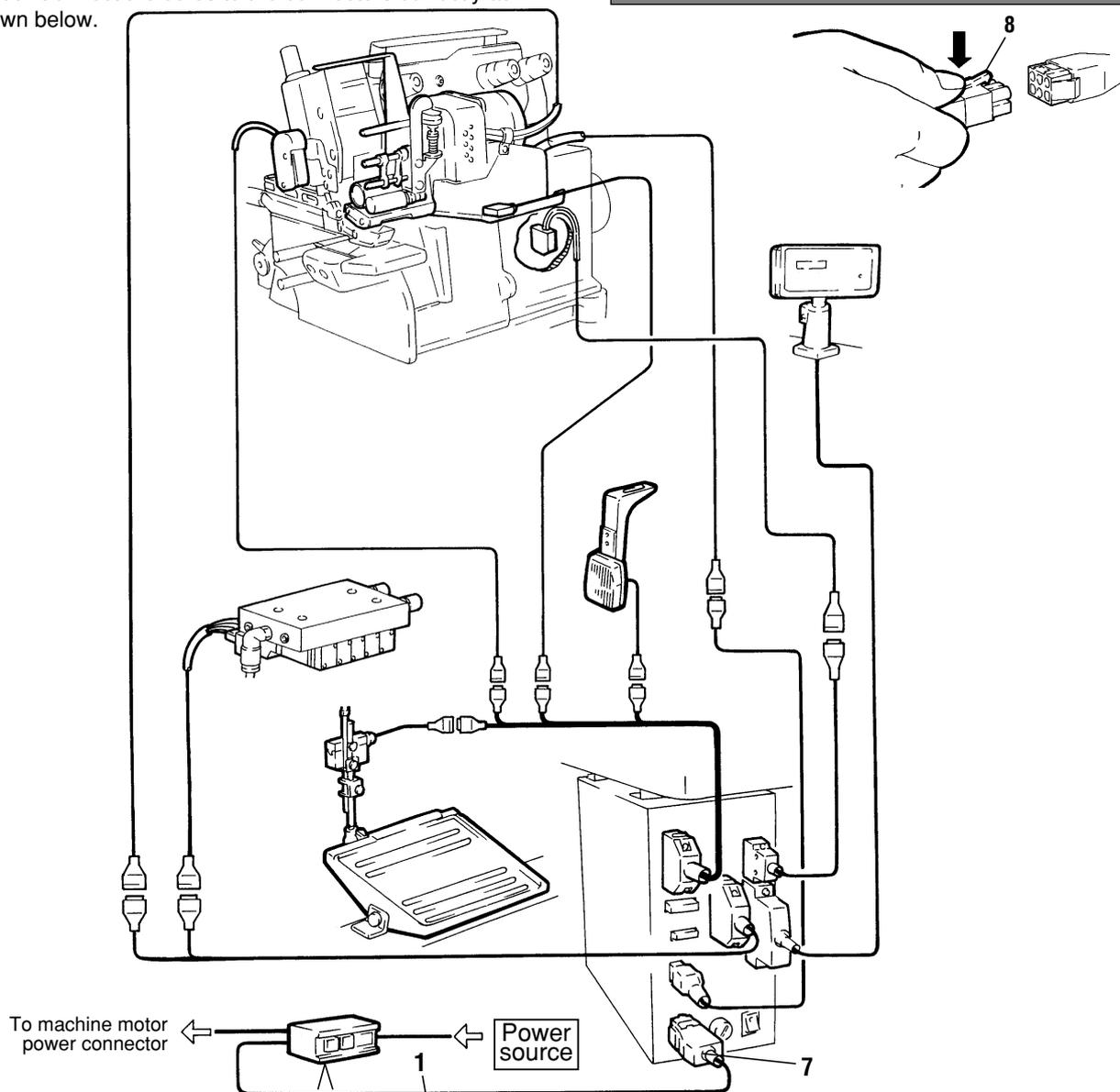
 Check the voltage designation **7** to make sure the power relay cord **1** matches the local supply voltage. The use of wrong cord may cause damage to parts and/or fire.

 Connect the earth wire correctly. Otherwise you may get an electric shock when you touch the MC power box and/or the machine.

 Failure to connect properly may cause hazardous faulty operations and damage to the machine.

● To disconnect the locking connector, hold down the locking mechanism **8** with finger as you pull the connector out.

1. Each of cords and connectors is color- and shape-coded. Connect the cords to the connectors correctly as shown below.



To connect the power relay cord **1** to the push-button switch **2**, connect E marked (green/yellow striped) wire to the GND terminal **3**. The other two cords must be connected to any 2 of the terminals **4**, **5**, and **6**.

2. Fasten the cords on the underside of the table conveniently with the provided cord clamp.

Connecting air lines

⚠ CAUTION

⚠ Always turn off the power and air compressor first and then only well-qualified technicians should connect the air lines.

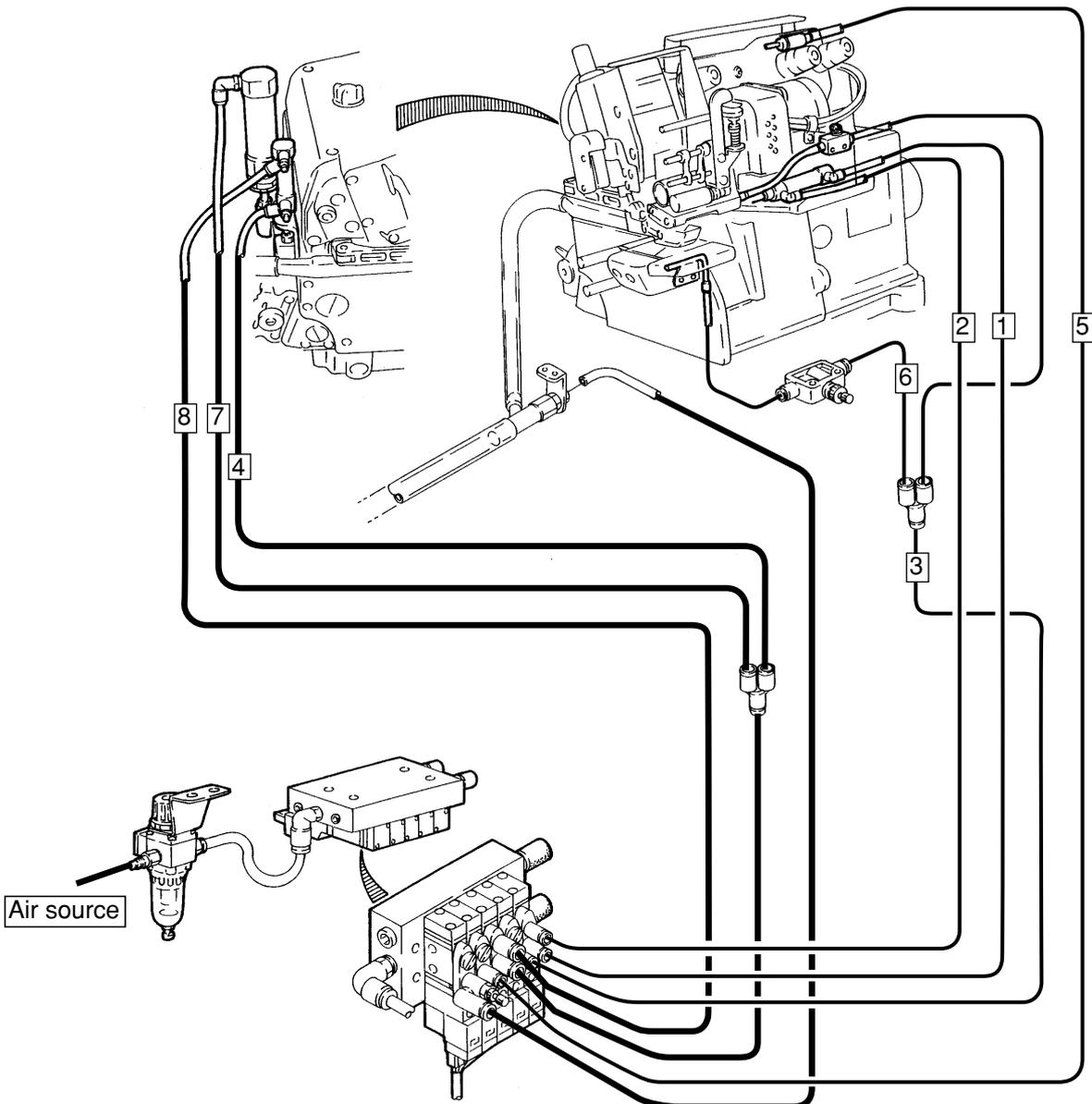
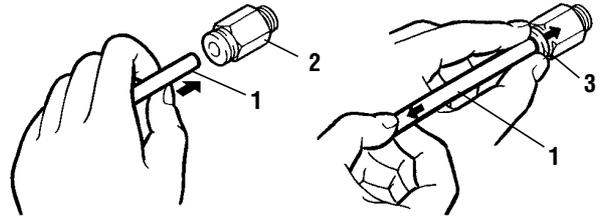
⚠ Connect other lines first before connecting to the air source (air compressor).

Connect the air lines by referring to the illustration.

⚠ WARNING

⚠ Failure to connect air lines properly may cause hazardous faulty operations. To prevent accidents and damage to the machine, check all the air lines for correct piping.

- To connect air tube 1 to joint 2, insert the tube completely to the inlet depth and make sure the tube can not be disconnected by pulling it.
- To disconnect air tube 1, press release ring 3 toward the arrow and pull it out.



Adjusting the filter regulator

1. Adjusting air pressure

Pull up knob **1** on filter regulator until it clicks.
Then set the air pressure at 0.5 Mpa (5 kgf/cm²).

- Turning **1** in the **(+)** direction increases the air pressure.
- Turning **1** in the **(-)** direction decreases the air pressure.

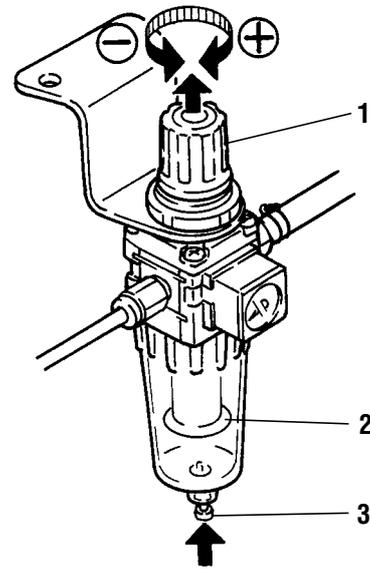
2. Draining the filter regulator

Drain the filter regulator before collected drainage reaches the level **2** by pressing button **3**.

CAUTION

 Be sure to drain periodically. Otherwise, drainage will flow into the solenoid valve and/or air cylinder, causing trouble.

 Note that drainage and air spout out downward.



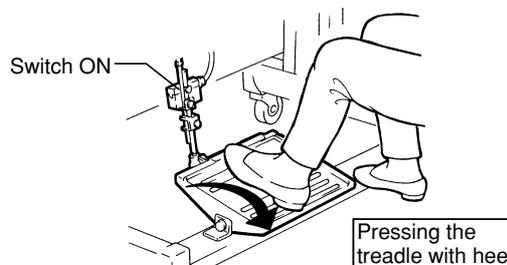
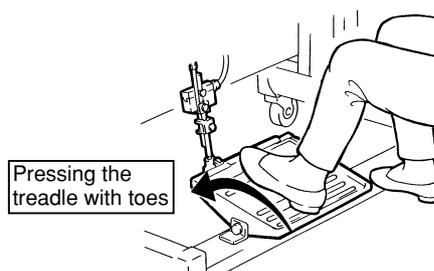
Functions of the machine treadle / external switches

Machine treadle

⚠ CAUTION

⚠ If you press the machine pedal while adjusting the device on the console box, the machine will get actuated. Be careful.

- Pressing the treadle with toes ... Starts the machine.
- Pressing the treadle with heel
 - ... Before the machine starts, the presser foot is raised and then the MC device starts to insert the tape (elastic).
 - If the treadle is pressed with heel during sewing or until the SC device gets activated, the presser foot is raised.
 - While the console box is being adjusted, the tape (elastic) is not inserted.

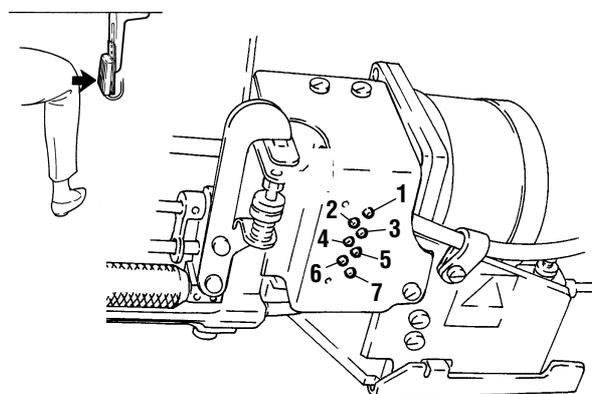


Knee switch

In the MANUAL mode, the machine goes to the next step by pressing this switch.

In the AUTO mode, steps can not be changed by pressing the switch.

The step indicator lights are lit sequently from the top each time the knee switch is pressed to switch one step to another.

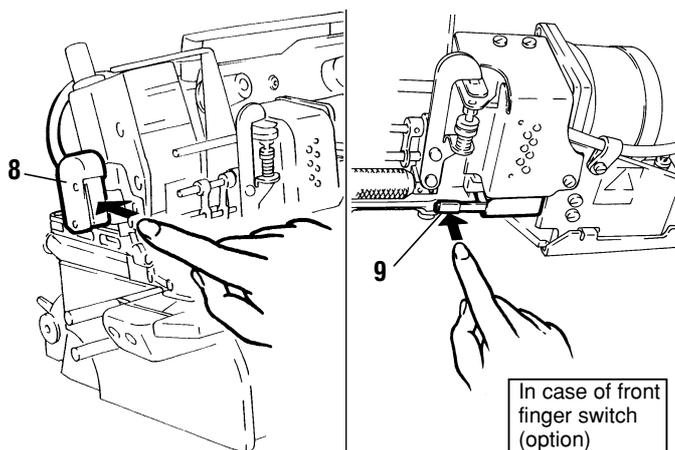


Finger switch

⚠ WARNING

⚠ To prevent accidents, do not bring your fingers and/or hands close to the knives when operating them.

To activate the tape cutter, press finger switch 8 or 9. You can cut tape as required during sewing, such as when having failed in sewing.

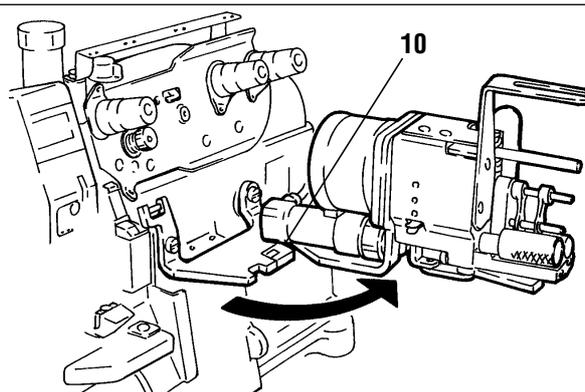


MC device positioner switch

⚠ CAUTION

⚠ Note that the machine starts running by pressing the machine treadle even if the positioner switch is on.

When the MC device is swung aside, positioner switch 10 is turned on. Then you can only run the machine, and operate the chain cutter (KS device) and the presser foot lift.



Adjusting the overlap of the knives

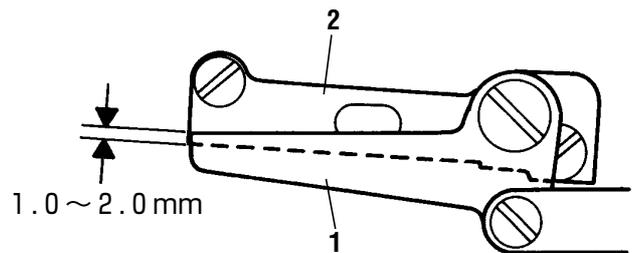
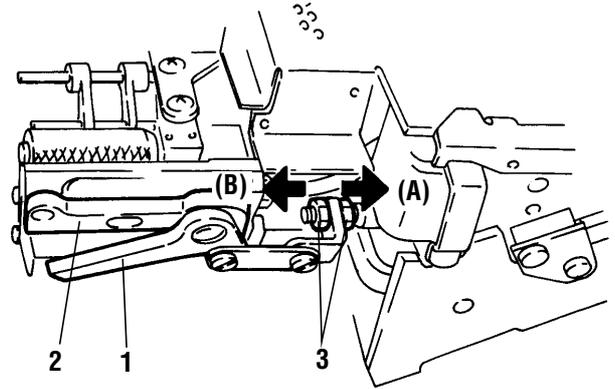
WARNING

 Turn off the power first and then well-qualified technicians should adjust the device. Be careful not to injure any part of your fingers when handling the knives.

To obtain **1.0 - 2.0 mm** overlap of movable knife **1** and stationary knife **2**, turn nut **3** as required.

- To decrease the overlap, turn nut **3** in the direction of **(A)**.
- To increase the overlap, turn nut **3** in the direction of **(B)**.

(1.0-2.0 mm overlap is factory-set.)



Inserting tape (elastic)

⚠ CAUTION

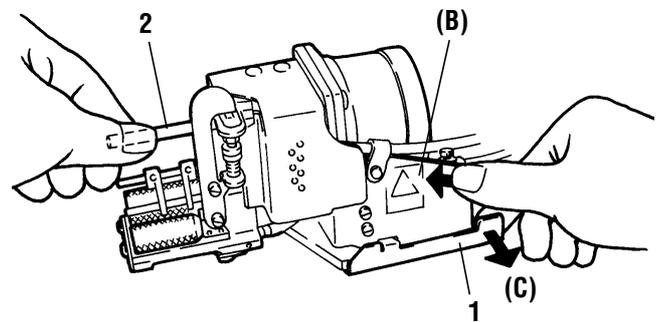
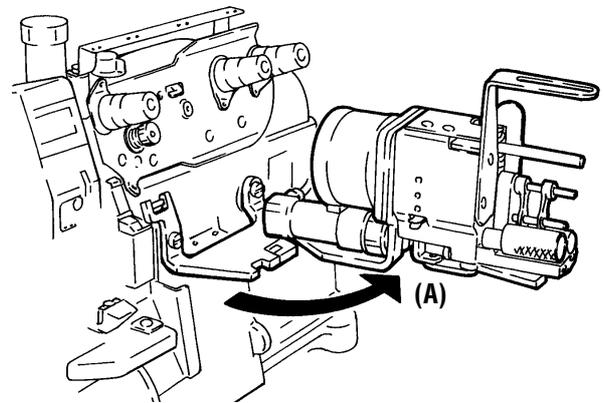
 Always turn off the power, unplug the machine from the outlet and then only well-qualified technicians should insert the tape (elastic).

 Be careful not to injure your fingers and/or hands when handling the knives.

 Turn off the air compressor, confirm air pressure is 0 (zero) and then insert the tape (elastic).

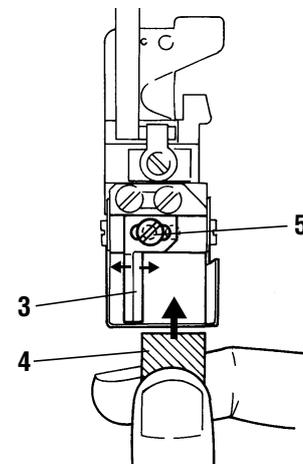
1. Swing the MC device aside in the direction of arrow (A).

Press and hold the side face (B) of the bracket with your thumb, pull lever 1 in the direction of arrow (C), hold shaft 2 and swing aside the MC device.



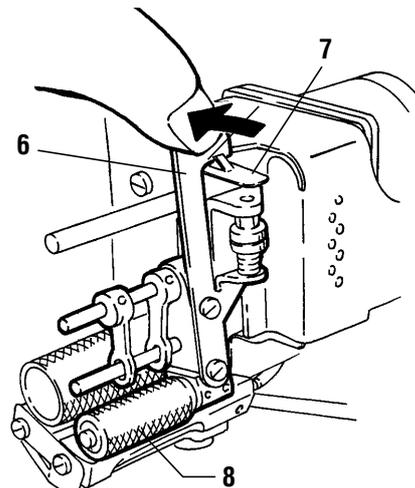
2. Adjust the guide 3 on the presser foot by using the tape (elastic) to be used.

Adjust guide 3 so that tape (elastic) 4 can go through the guide smoothly. Then tighten screw 5.



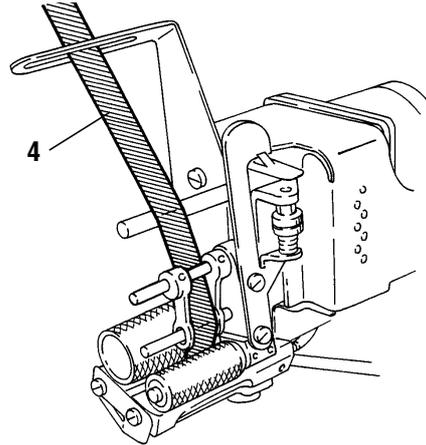
3. Replace the MC device.

4. Press lever 6 in the direction of the arrow to lock flat spring 7, and open roller 8.



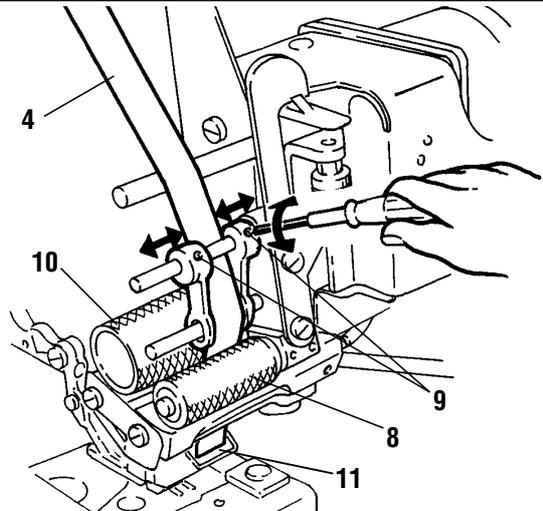
Inserting tape (elastic)

5. Insert tape (elastic) 4 as shown in the illustration.



6. Adjust guides 9 so that tape (elastic) 4 can go along guide 9 smoothly.

7. Insert tape (elastic) 4 between roller 8 and driving roller 10 and up to presser foot guide 11.



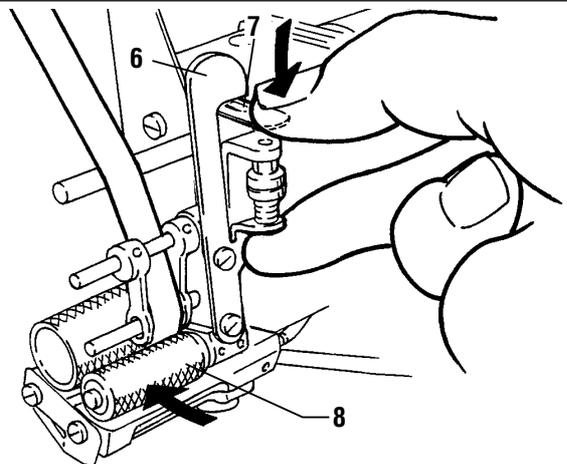
CAUTION

When inserting the tape (elastic), be careful that your hands, fingers and/or hair is not caught in rollers 8, 10 and cut with cutter.

Note

The tape (elastic) should form a straight line as seen from the front of the machine.

8. Push down flat spring 7 as shown in figure to release lever 6 and close roller 8.

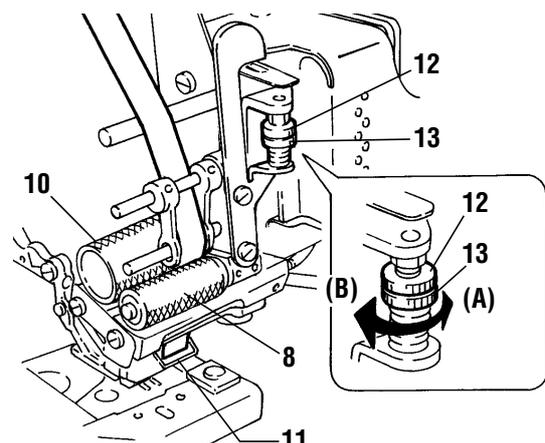


9. Loosen nut 12. Adjust roller 8 & 10 pressure to feed tape (elastic) smoothly. To make this adjustment, turn nut 13 clockwise or counterclockwise as required.

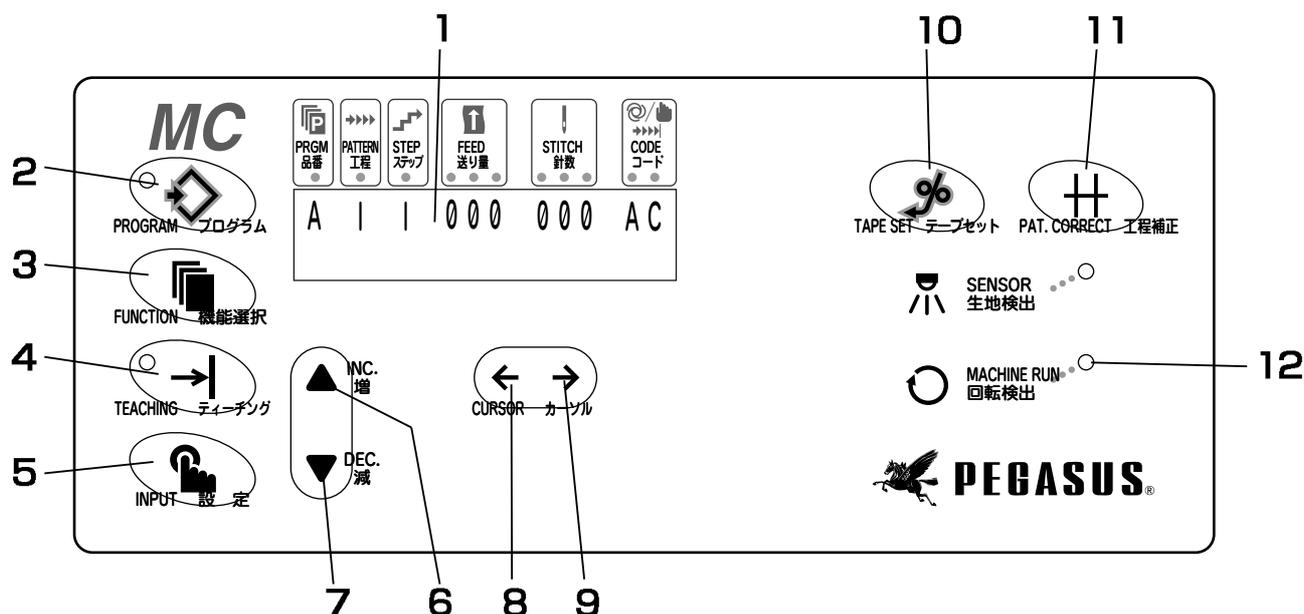
- To decrease the pressure, turn nut 13 in the direction of (A).
- To increase the pressure, turn nut 13 in the direction of (B).

10. After adjustment, tighten lock nut 12.

11. Check to see that tape (elastic) goes through rollers and up to presser foot guide 11 without being stuck.



Description of MC console box



1 LCD (Liquid Crystal Display) screen

Displays various information.

*Select either Japanese or English by referring to page 21.

2 PROGRAMMING key

To call up the sewing mode display in order to set operations, steps, feeding amounts, stitch counts and codes.

3 FUNCTION key

To call up the sewing mode, tape (elastic) inserting amount mode, counter mode and output display on/off mode. In addition, to enter which pattern the machine sews to continuously.

4 TEACHING key

To teach the machine where to change each step by stitch counting during actual sewing after entering sewing data for an operation, step and feeding amount. ("Teaching" is available in the automatic sewing mode.)

5 INPUT key

To input the stitch count obtained in the teaching mode.

6 INC. key

To increase the number on the screen.

7 DEC. key

To decrease the number on the screen.

8 CURSOR (←) key

To move the cursor on the screen to the left.

9 CURSOR (→) key

To move the cursor on the screen to the right.

10 TAPE SET key

To feed out tape (elastic) manually.

11 PAT. CORRECT key

To return to the previous pattern.

12 Rotation detecting light

Lit while the machine is running.

Function selecting mode

Every time FUNCTION key  is depressed, the display on the screen changes sequentially so that you can switch functions and set counters.

Note : The language mode (Japanese or English) is set to English at the factory. To change to Japanese, call up display (6) (see below) and select Japanese.

Note : In the operator mode, display (1) "Sewing check" to display (3) "Tape Ins. Amnt" are shown alternately on the screen.

	[Message on the display]		[Function and details]
(1)	<div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">Sewing Check Plain</div> <div style="text-align: center; font-size: small;">or</div> <div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">Sewing Check Soft Chain</div> <div style="text-align: center;">↓</div>	. . . . .	To select a sewing mode. To stop the tape (elastic) feed roller. [Select the plain seaming mode or thread chain producing mode with INC. or DEC. key ▲·▼]
(2)	<div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">Piece Count 0000 ON</div> <div style="text-align: center; font-size: small;">or</div> <div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">Piece Count OFF</div> <div style="text-align: center;">↓</div>	. . . . .	To select whether the output of finished products is displayed (ON) or not (OFF). To reset the output counter at " 0000 ", press INC. and DEC. keys ▲·▼ simultaneously. [Select the output of finished products is displayed (ON) or not (OFF) with INC. or DEC. key ▲·▼]
(3)	<div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">Tape Ins. Amnt 0450</div> <div style="text-align: center;">↓</div>	. . . . .	To enter the inserting amount of tape (elastic). The initial value is 450. The numbers of 0 to 999 can be entered. [To increase or decrease the number, press INC. or DEC. key ▲·▼]
(4)	<div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">Base Length 0030</div> <div style="text-align: center;">↓</div>	. . . . .	The initial value is 30. [There is no need to change the "Base Length"]
(5)	<div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">Item No. Change Mech. Level</div> <div style="text-align: center; font-size: small;">or</div> <div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">Item No. Change Mech. & Oper.</div> <div style="text-align: center;">↓</div>	. . . . .	To change an item. [Select Mech. Level or Mech. & Oper. with INC. or DEC. key ▲·▼]
(6)	<div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">Japanese ニホンゴ ヒョウジ</div> <div style="text-align: center; font-size: small;">or</div> <div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">English エイゴ ヒョウジ</div> <div style="text-align: center;">↓</div>	. . . . .	Initial setting : English [Select either Japanese or English with INC. or DEC. key ▲·▼]
(7)	<div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 5px;">Counter 00 0002</div> <div style="text-align: center;">↓</div>	. . . . .	To enter the number of stitches to stop the tape (elastic) feed roller at the start of sewing. The initial value is 2 stitches. 0 to 9 stitches can be entered. [To increase or decrease the number, press INC. or DEC. key ▲·▼]

Function selecting mode

	[Message on the display ]	. . . . .	[ Function and details]
(8)	Counter 01 0002	. . . . .	To enter the number of stitches to turn the tape (elastic) feed roller in the reverse direction at the start of sewing. The initial value is 2 stitches. 0 to 50 stitches can be entered. [To increase or decrease the number, press INC. or DEC. key ▲·▼]
	↓		
(9)	Counter 02 0020	. . . . .	To enter the number of stitches from the start of sewing to when the thread chain is sucked up. The initial value is 20 stitches. 0 to 1820 stitches can be entered. [To increase or decrease the number, press INC. or DEC. key ▲·▼]
	↓		
(10)	Counter 03 0030	. . . . .	To enter the number of stitches from when the tape (elastic) is cut to when the thread chain is sucked up. The initial value is 30 stitches. 0 to 150 stitches can be entered. [To increase or decrease the number, press INC. or DEC. key ▲·▼]
	↓		
(11)	Counter 04 0030	. . . . .	To enter the number of stitches while the tape (elastic) is not feed and while the thread releaser is operating after the tape (elastic) is cut. The initial value is 30 stitches. 0 to 150 stitches can be entered. [To increase or decrease the number, press INC. or DEC. key ▲·▼]
	↓		
(12)	Insertion Speed 0008	. . . . .	To enter the feeding speed of tape (elastic) at the start of sewing. Increasing the number slows down and decreasing the number speeds up. The initial value is 8. 3 to 25 can be entered. [To increase or decrease the number, press INC. or DEC. key ▲·▼]
	↓		
(13)	Auto-Ins. Mode Disable or Auto-Ins. Mode Enable	. . . . .	There are two ways of inserting tape (elastic). One is MANUAL mode in which the tape (elastic) is inserted by pressing the machine treadle with heel. Another is AUTO mode in which the tape (elastic) is inserted automatically every time sewing is completed. Select whether AUTO mode is used or not. [Select Auto-Ins. Mode Enable or Disable with INC. or DEC. key ▲·▼]
	↓		
(14)	Indicator Pattern or Indicator Step	. . . . .	To select whether indicator lights are lit according to patterns or steps sequentially. [Select Pattern or Step with INC. or DEC. key ▲·▼]

Entering and changing the sewing data

1. Before entry

Initializing the MC device

When the MC device is used for the first time, initialize the MC device first.

Note

It is not necessary to initialize the MC device at the start of each day.

CAUTION

Since the power is turned on when initializing the MC device, the machine could start unexpectedly. To prevent accidents, perform the following procedures very carefully.

Make sure cords and air lines are connected properly first. Then turn on the machine.

Turn on the power box while pressing INC. and DEC. keys ▲ · ▼ simultaneously.

The screen displays

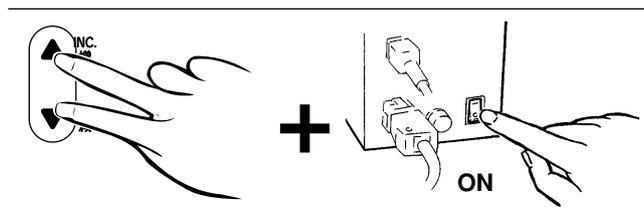
Clear All Data
セツテター シヨウキヨチュウ

Then all the sewing data is initialized.

(Refer to the sewing data preset at the factory before shipment.)

Note

Even if the MC device is initialized, the language mode is not changed.



2. Data entered at the factory

- The following data are entered at the factory. Change the data according to your sewing products.

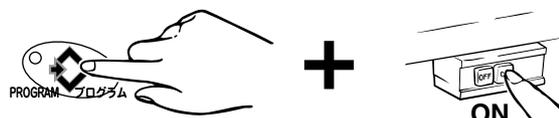
Sewing data entered at the factory	Value which can be entered
Mode : Auto	Auto - Manual
Program (item) : A	26 items from A to Z
Pattern : 1	5 patterns from 1 to 5
Step : 1	7 steps from 1 to 7
Stitch count ; 0 in all steps	0 - 999 stitches
Feeding amount : 0 in all steps	0 - 180
Inserting amount (elastic feeding amount) : 4 5 0	0 to 9 9 9
Stitch count to turn the elastic feed roller in the reverse direction at the start of sewing : 2 stitches	0 to 5 0 stitches
Stitch count to stop the elastic feed roller at the start of sewing : 2 stitches	0 to 9 stitches
Language mode : English	Japanese or English

Entering and changing the sewing data

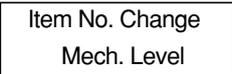
3. Changing PGM (items)

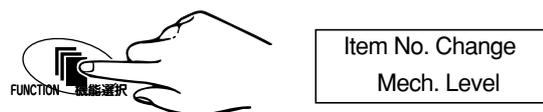
To change the sewing data which have been already programmed.

1. Turn on the machine while pressing PROGRAMMING key  .

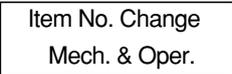


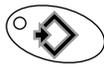
2. Press FUNCTION key  several times to call up

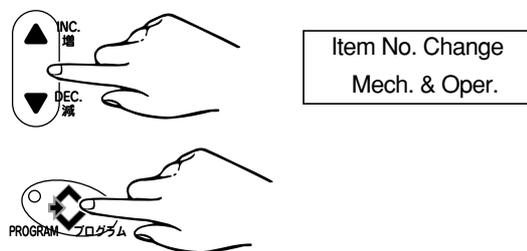
 on the screen.



3. Press INC. or DEC. key ▲ · ▼ to call up

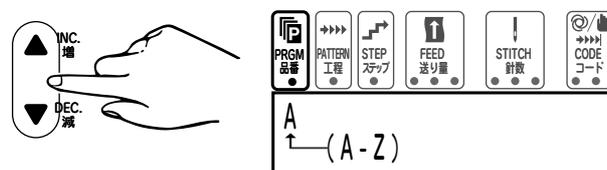
 and then

press PROGRAMMING key  again.



Any of 26 items from A to Z can be selected as required in order to be programmed.

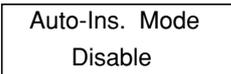
To select, press INC. or DEC. key ▲ · ▼.



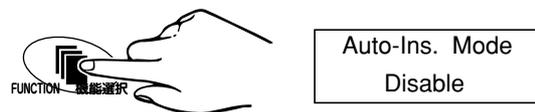
4. Selecting the function for inserting tape (elastic)

There are two ways of MANUAL and AUTO modes.

[MANUAL] The tape (elastic) is inserted by pressing the machinetreadle with heel.

1. Press FUNCTION key  repeatedly until  is displayed on the screen.

*Select Auto-Inc. Mode Enable or Disable with INC. or DEC. key ▲ · ▼.



2. Press PROGRAMMING key  once.



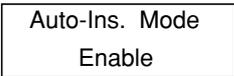
3. Press the machine treadle with heel.
The presser foot is lifted and the tape (elastic) is inserted.



[AUTO] Every time sewing is completed, the tape (elastic) is inserted automatically.

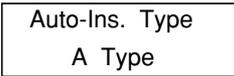
* Two types of inserting (A, B) are available.

1. Press FUNCTION key  repeatedly

until  is displayed on the screen.

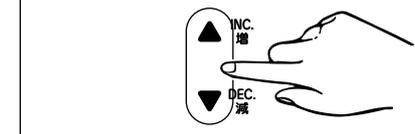
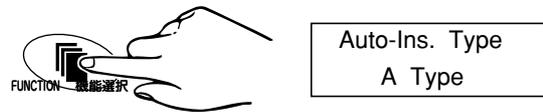
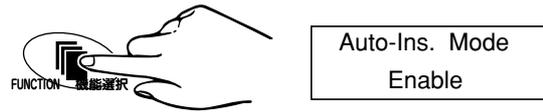
* Select Auto-Ins. Enable or Disable with INC. or DEC. key ▲ · ▼ .

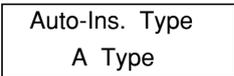
2. Press FUNCTION key  again to

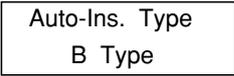
display  on the screen.

3. Select a type of inserting as required with INC. or DEC. key ▲ · ▼ .

4. Press PROGRAMMING key  .



A TYPE . . .  When the machine stops after sewing is completed, the device starts inserting tape (elastic). The presser foot is lowered when the tape (elastic) has been inserted.

B TYPE . . .  When the machine stops after sewing is completed, the device starts inserting tape/elastic. The presser foot remains lifted after the tape (elastic) is inserted. To lower the presser foot, press the machine treadle once with heel.

Note

- * For B type, press the machine treadle once with heel in order to lower the presser foot. If the machine treadle is pressed with toes, the presser foot can be lowered. In this case, note that seam jamming may occur.
- * After the tape (elastic) is inserted, data that can be adjusted using PROGRAMMING key is only the feeding amount. To change other data, remove the tape (elastic) by operating the cutter with the finger switch.
- * To lift the presser foot which has been lowered, press the machine treadle with heel. To lower the presser foot which has been lifted, place the machine treadle in the neutral position.
- * If the tape (elastic) is inserted incorrectly, cut it by operating the cutter with the finger switch. Re-insert the tape (elastic) manually by pressing the machine treadle with heel.
- * Auto insertion cannot be performed in the following conditions.
 - (1) When the power is turned on.
 - (2) When the finger switch is pressed to reset the tape (elastic) for correcting an error of insertion or changing the settings for operations, stitch counting, counters or timers.

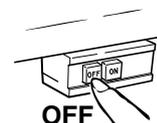
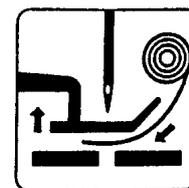
5. Entering and checking the inserting amount of tape (elastic)

1. To check the inserting amount of tape (elastic)

Make sure the tape (elastic) is inserted properly under the presser foot and reaches the needle drop.

- The initial value for the inserting amount of tape (elastic) is 450. ([1] indicates 0.11 mm, so [450] is 49.5 mm.)

(1) Turn off the machine.



Entering and changing the sewing data

- (2) Insert the tape(elastic) correctly by referring to "Inserting tape(elastic)" on page 18.

⚠ WARNING

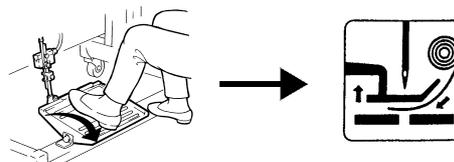
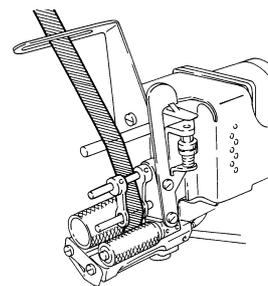
⚠ Be careful that your hands, finger and/or hair are not caught in the roller and cut with the cutter.

- (3) Turn on the machine.

- (4) Press the treadle with heel to insert the tape (elastic).

- (5) Make sure the end of the tape (elastic) reaches the needle drop.

In case the end of the tape (elastic) does not reach the needledrop, adjust the inserting amount of the tape (elastic) as follows.



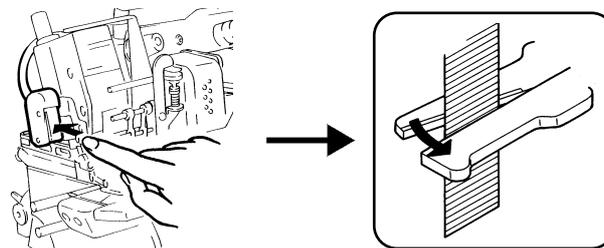
2. To set the inserting amount of the tape (elastic)

To change the inserting amount, follow the procedures below.

- (1) Cut the tape (elastic) by pressing the finger switch. Remove the tape (elastic) which has been cut off.

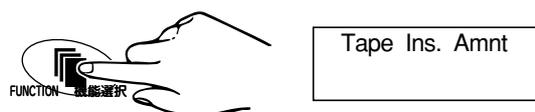
⚠ WARNING

⚠ Be careful not to cut your hands and/or fingers with the cutter.



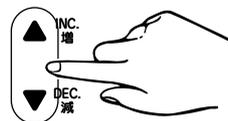
- (2) Press FUNCTION key  several times to call up

Tape Ins. Amnt on the screen.



- (3) Change the number by pressing INC. or DEC. key ▲ · ▼.

- [1] indicates 0.11 mm (calculated value).
- 0 to 999 can be entered.

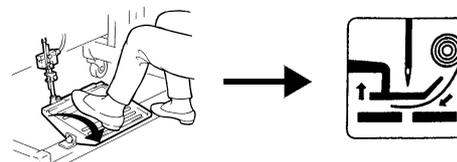


- (4) After entering the new value, press PROGRAMMING key  once.



Then the inserting amount setting is completed.

- (5) Insert the tape (elastic) under the presser foot by pressing the machine treadle with heel and check to make sure the inserting amount is proper.



Entering and changing the sewing data

6. Entering and checking the stitch count to turn the tape (elastic) feed roller in the reverse direction

This stitch count is entered in order to turn the roller in the reverse direction and remove the slack of tape (elastic) at the start of sewing. Adjust the stitch count according to the characteristic of tape (elastic) and/or tension of tape/elastic on finished products.

- The initial value is 2 stitches.
- Check to see if this stitch count is proper at the start of the first test sewing.
- If the stitch count is not proper, program the stitch count over again as shown below.

1. Turn on the power while pressing PROGRAMMING key



If the power is on, turn off the power first and perform the above procedure.

2. Press FUNCTION key repeatedly to call up

Counter 01

on the screen.

3. Change the number by pressing INC. or DEC. key ▲ · ▼ .

- [1] indicates one stitch.
- 00 to 50 stitches can be entered.
- The stepping motor does not turn in the reverse direction with 00.
- The feeding amount of the stepping motor when it turns in the reverse direction is equal to the feeding amount when the stepping motor turns in the operating direction in STEP 1.

4. After entering the new value, press PROGRAMMING key



once.

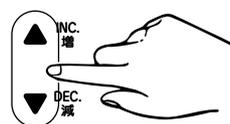
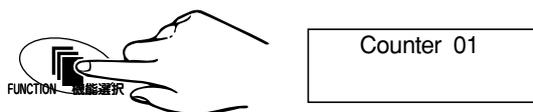
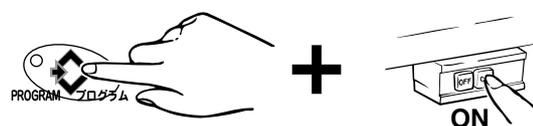
Then this stitch count setting is completed.

5. Check carefully to see if the fabric is stretched/shrunken at the start of sewing by test sewing.

If the fabric is stretched/shrunken, adjust this stitch count over again.

Note

Once this stitch count is programmed, the tape(elastic) is inserted and the feed roller turns in the reverse direction as programmed when each item is sewn.

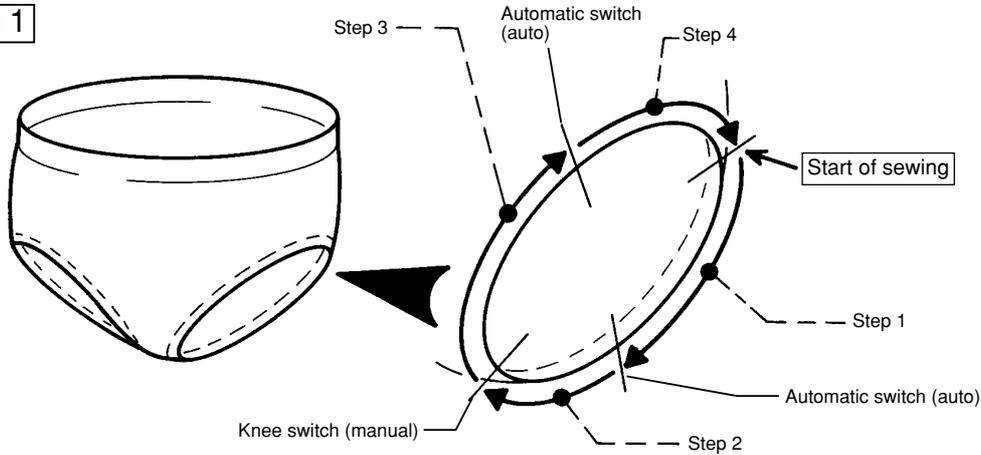


Entering and changing the sewing data

7. Data entry using keys

An example of entering sewing data follows.

Pattern 1



CAUTION

The numbers of feeding amount and stitch count used for the above example are not actual. Enter the numbers according to your products.

Data entry using keys

(1) Setting patterns

1. Press PROGRAMMING key  to turn on the PROGRAMMING indicator light. The controller is ready for entry.

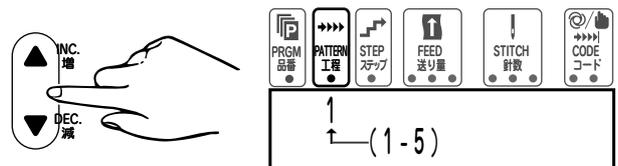


CAUTION

 The machine and MC device will get activated if you press the pedal while entering the data. Be careful.

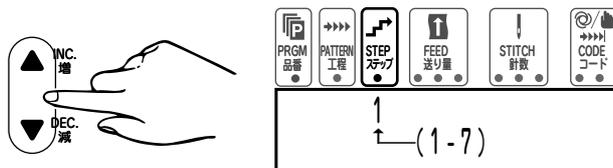
2. Move the cursor to PATTERN and select PATTERN 1 by pressing INC. or DEC. key ▲ · ▼ .

1 to 5 patterns can be entered in sequence.



(2) Setting steps

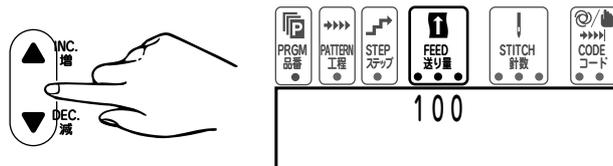
1. Move the cursor to STEP and select STEP 1 by pressing INC. or DEC. key ▲ · ▼.
1 to 7 patterns can be entered in sequence.



2. Move the cursor to FEED and enter the feeding amount by pressing INC. or DEC. key ▲ · ▼.

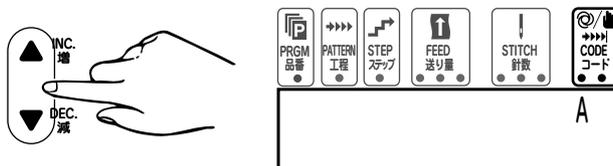
Feeding amount	Feeding distance
40	0.82 mm
50	1.02 mm
60	1.22 mm
70	1.43 mm
80	1.63 mm
90	1.84 mm
100	2.04 mm
110	2.24 mm
120	2.45 mm
130	2.65 mm
140	2.86 mm
150	3.06 mm
160	3.26 mm
170	3.47 mm
180	3.67 mm

Table 1



- The entry range is 0 to 180.
The feeding length denotes the length of tape feed out with a cycle (stitch) of the machine and corresponds to the number of feeding amount as shown in Table 1.
- These distances are obtained by calculation, so they may vary according to the characteristics of the elastic and/or sewing manners.

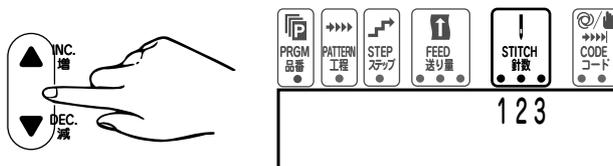
3. Move the cursor to CODE (left) and call up A (auto) by pressing INC. or DEC. key ▲ · ▼.



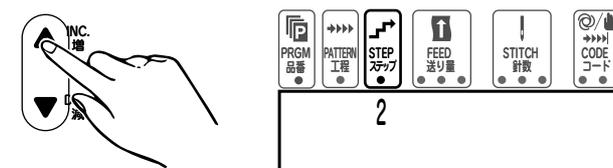
4. Move the cursor to STITCH and enter the number of stitches by pressing INC. or DEC. key ▲ · ▼.

Note

If **M** (manual) is selected in procedure 3, no need to enter the number of stitches.



5. Move the cursor to STEP and call up 2 by pressing INC. key ▲.

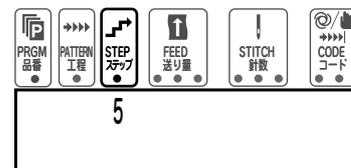
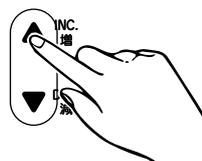


Repeat 2 to 5 procedures until STEP 4 has been programmed.

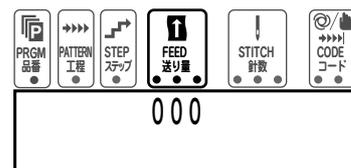
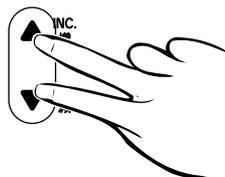
However, call up **M** (manual) for STEP 2 on the position of CODE (left) on the screen.

(3) Finishing the entry of STEP

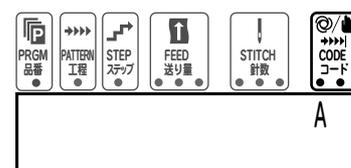
1. Move the cursor to STEP and call up 5 by pressing INC. key ▲.



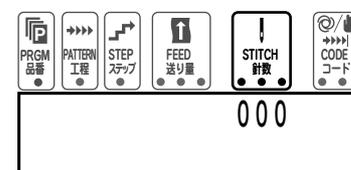
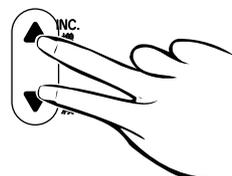
2. Move the cursor to FEED and keep on pressing both INC. and DEC. keys ▲ · ▼ until the number 000 is called on the position of FEED on the screen.



3. Move the cursor to CODE (left) and call up A (auto) on the position of CODE.



4. Move the cursor to STITCH and call up the number 000 by pressing INC. and DEC. keys ▲ · ▼ simultaneously.

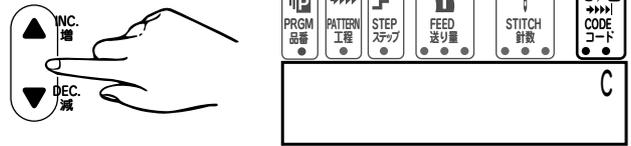


Then step setting for PATTERN 1 has been completed.

Before entering the next pattern, select whether sewing is completed with the current pattern or continued to the next pattern.

Data entry using keys (4) To continue to sew pattern after pattern

1. Move the cursor to CODE (right) and call up C by pressing INC. or DEC. key ▲ · ▼ .



2. Press FUNCTION key  once.



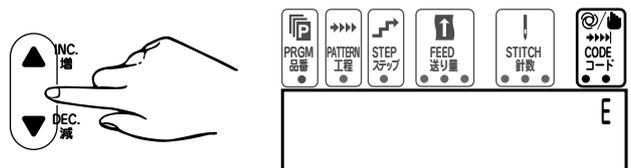
3. Move the cursor to PATTERN and call up 2 by pressing INC. ▲.



Then set each step by referring to the procedures for PATTERN 1.

Data entry using keys (5) To complete sewing when the current pattern is finished

1. Move the cursor to CODE (right) and call up E by pressing INC. or DEC. key ▲ · ▼ .

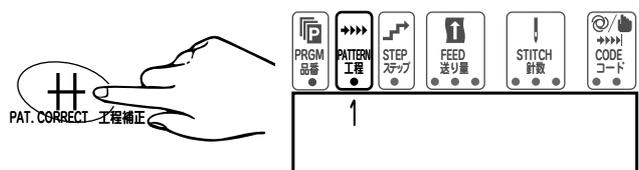


2. Press PROGRAMMING key  once to turn off the indicator light.
Then the sewing data entering mode ends.



3. Press PAT. CORRECT key  several times to return to PATTERN 1.

Then the machine sews from PATTERN 1 to the current pattern repeatedly.



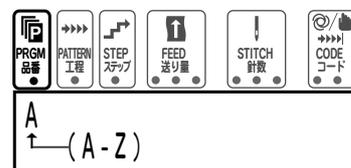
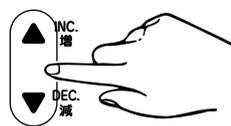
Data entry by actual sewing in the teaching mode

Changing each step in the automatic mode is performed by stitch counting. In this teaching mode the number of stitches can be entered by actual sewing. Enter sewing data for an item, pattern, step, feeding amount first and then follow the procedures below.

1. Make sure the machine is on.

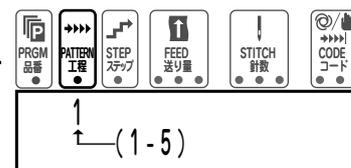


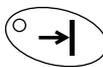
2. Select an item from A to Z by pressing INC. or DEC. key ▲ · ▼ .



3. Select a pattern as desired by pressing

PAT. CORRECT key  several times.



4. Press TEACHING key  to turn

on the TEACHING key indicator light. Then the controller is in the teaching mode.

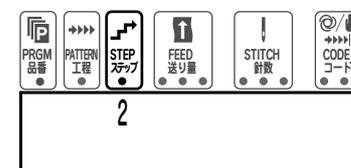


5. Insert the tape (elastic) by pressing the machine treadle.



6. Position the fabric and start the machine. Stop the machine where to quit STEP 1.

Then press INPUT key .



7. The number of stitches is stored. Go to STEP 2.

Note

When a ruffling operation and plain seaming operation are switched in each step manually, the numbers of stitches are not counted. Therefore to go to the next step, press the knee switch.

Manual . . .



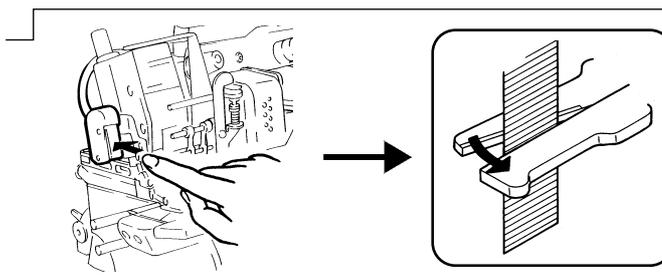
8. Start sewing in STEP 2.

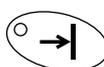
Enter the stitch counts into each step by repeating the above procedures.

9. When the last teaching operation is finished, press the finger switch to cut the tape/elastic. Then a series of teaching operations ends.

Note

Turn the machine pulley until the thread releaser(SC) gets activated.



10. Press TEACHING key  to turn off the indicator light with the machine off.



Entry in this mode is completed.

Sewing

Two kinds of sewing modes (AUTO & MANUAL) are available.

■ **AUTO** : Each step is automatically switched by stitch counting. (The number of stitches is displayed.)

■ **MANUAL** : Each step is switched manually by pressing the knee switch. (The number of stitches is not displayed.)

Firstly, make sure the tape (elastic) is inserted properly. Then perform sewing operation by following the steps below.

1. Turn on the machine.

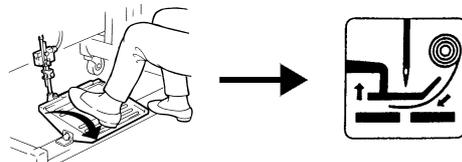


2. Call up an item (program) number to be sewn.

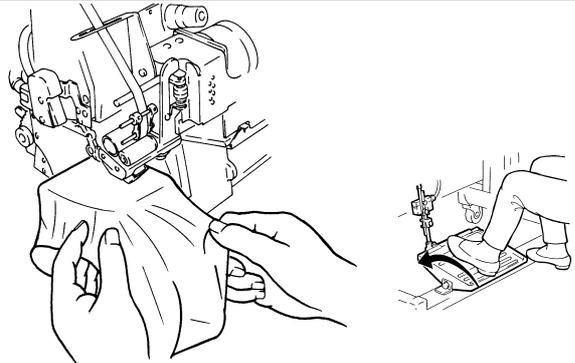
* Perform the procedures 2 to 3 by referring to "Changing PGM (items)" on page 24.



3. Lift the presser foot by pressing the machine treadle with heel and then insert the tape (elastic).



4. Position the fabric.



5. Press the machine treadle with toes to start sewing.

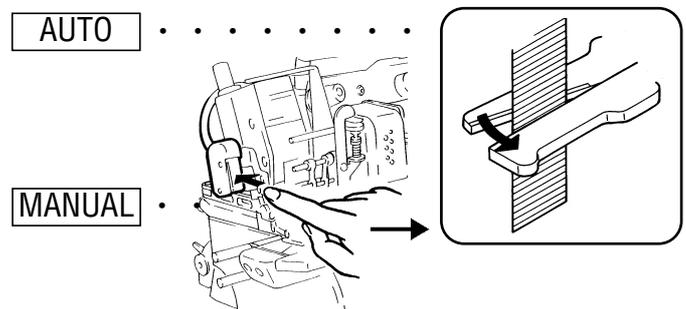
6. In the AUTO mode, switching each step is controlled by stitch counting. Therefore the machine goes to the next step automatically.

7. In the MANUAL mode, to go to the next step, press the knee switch.



8. When the AUTO mode is selected at the last step, the cutter gets activated automatically.

When the MANUAL mode is selected at the last step, press the finger switch to cut the tape (elastic).



Note

Check the first sewn product to see carefully if the machine runs properly. :

- Inserting amount of the tape (elastic) is correct.
- Increasing/decreasing the number of stitches is correct.
- Ruffling operations are performed as required.

After checking the above, change sewing data as needed.

Note

If the cutter is used in the automatic mode, the overlap of tape (elastic) may vary depending on the characteristic of tape (elastic). To obtain overlap constantly, use the cutter in the manual mode.

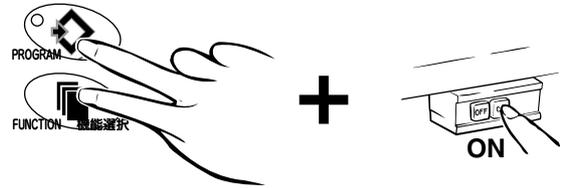
Testing mode

Operation test

If trouble occurs while the MC device is used, find the cause performing the test mode.

1. Turn on the power while pressing

PROGRAMMING  and FUNCTION 
keys simultaneously.
The operation test display comes out.



CAUTION

 Do not turn off the power until the operation test display is shown. Otherwise memory may change.

2. Proceed according to the instructions.

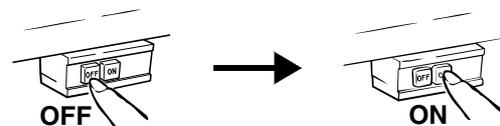
[The instructions are displayed as shown below.]

1. Console box → 2. Input switches → 3. Solenoid valve output (The test starts by pressing PROGRAMMING  key → 4. Stepping motor → 5. Rotation detecting sensor → 6. LED output

CAUTION

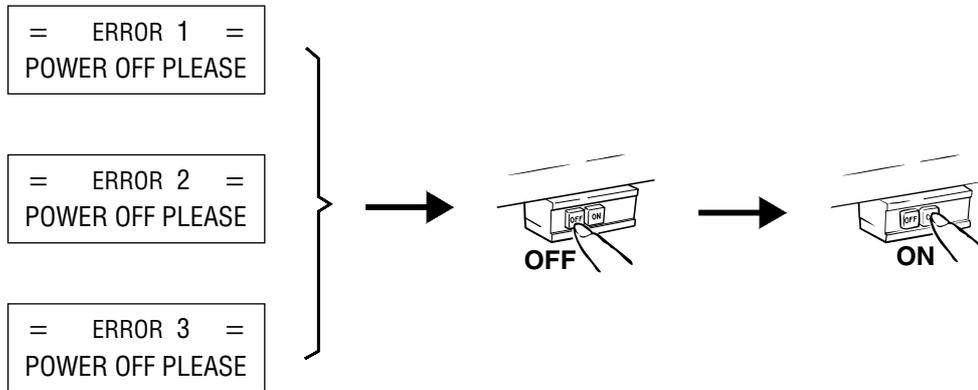
 When any error message comes out, check the connection of cords/air lines and the pressure of the filter regulator, and then perform the test again. If the error is still shown, contact your local Pegasus' sales office or representative.

3. To restart sewing, turn off the power and then turn on the power again.



Error message

If the following instructions are displayed while the MC device is being used, turn off the power and then turn on the power again.
If **【ERROR 3】** is displayed, turn off the power and initialize the MC device.(See page 23.)



CAUTION

 If the above message is shown repeatedly, stop the machine immediately and turn off the power. Then only well-qualified technicians or service/maintenance personnel should check the device.

Adjusting the KS device (chain cutter)

CAUTION

 Always turn off the power, unplug the machine from the outlet and then only well-qualified technicians should adjust the device.

1. Remove the needle by referring to the illustrations.

CAUTION

 Be careful your hands and/or fingers are not injured by the needle point.

2. Turn the machine pulley by hand and check to make sure the thread is cut smoothly.

3. If the thread is not cut smoothly, remove the cloth guide plate 2 by referring to the figure.

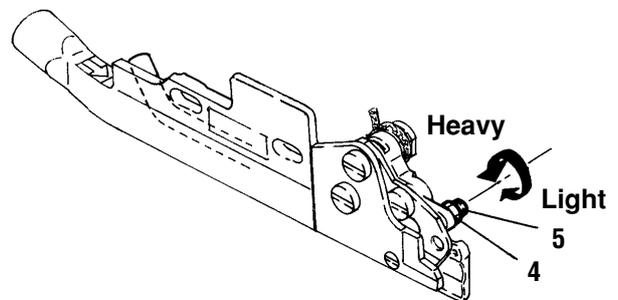
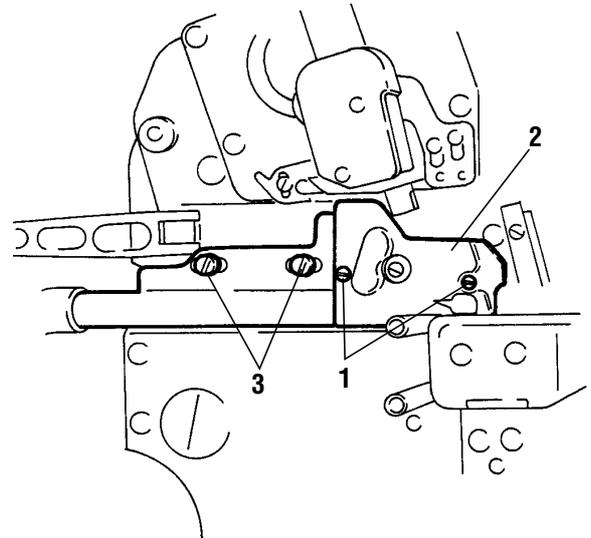
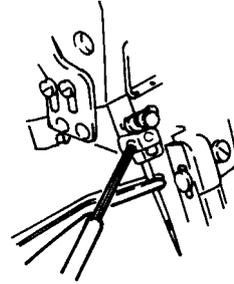
4. Remove screw 3 and then the chain cutter from the machine.

5. Loosen nut 4 and adjust cutting pressure with screw 5.

To increase the pressure, turn screw 5 clockwise.
To decrease the pressure, turn screw 5 counterclockwise.

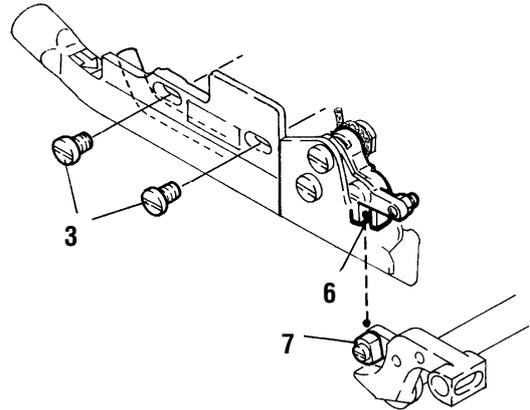
Only enough pressure should be applied to the knives so that the thread chain can be cut smoothly.
Excessive pressure will shorten life of the knives.

6. Tighten nut 4.



Adjusting the KS device (chain cutter)

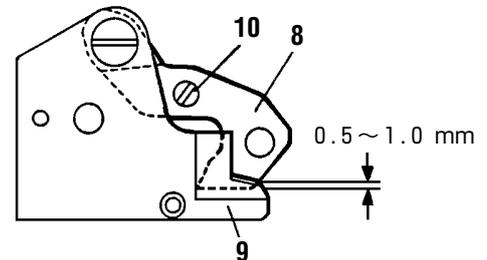
7. Install the chain cutter on the machine so that block 7 can fit in groove 6 of the lever.



8. Replace screw 3.

9. Turn the machine pulley by hand until movable knife 8 is at the bottom of its stroke.

10. Loosen screw 10 and adjust the overlap of movable knife 8 and stationary knife 9. There should be 0.5 mm - 1.0 mm overlap.

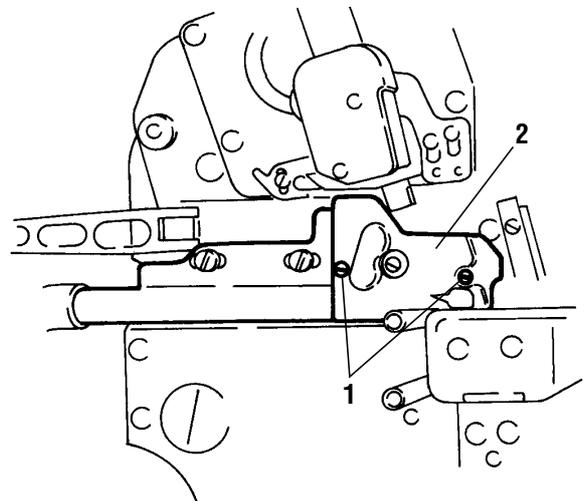


CAUTION

Be careful your fingers are not caught in movable knife 8 and stationary knife 9.

11. Tighten screw 10.

12. Refer to the figure and attach cloth guide plate 2 with screws 1.



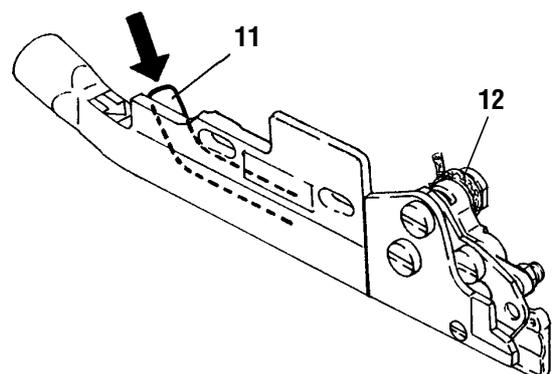
13. Replace the needle.

CAUTION

Be careful your hands and/or fingers are not injured by the needle point.

Note

To keep the chain cutter operating efficiently, lubricate from oil hole 11 and oil wick 12 periodically.



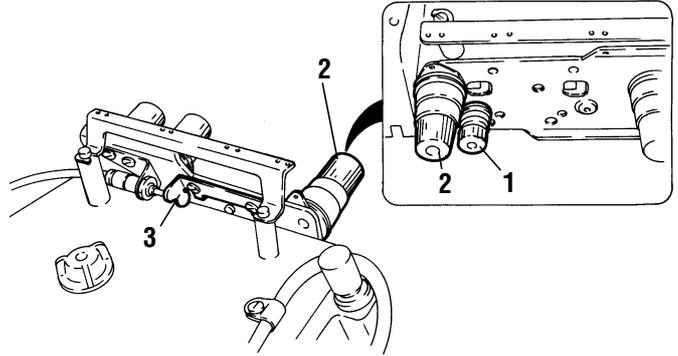
Adjusting the needle thread tension with the thread releaser (SC)

CAUTION

 Always turn off the power and air compressor first and then only well-qualified technicians should make the following adjustment.

Perform a sewing operation and check the needle thread tension. If required, adjust the tension according to the sewn products.

1. Turn nut **1** to adjust the needle thread tension of thread chain from when the SC device gets activated to when the machine stops.
2. Turn nut **2** to adjust the needle thread tension of plain seaming.



Adjusting the drop feed mechanism

CAUTION

 Always turn off the power and air compressor first and then only well-qualified technicians should make the following adjustment.

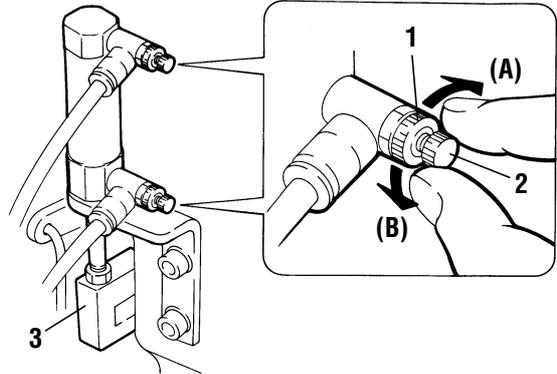
1. Adjusting the speed of the air cylinder

Adjust the speed of the air cylinder so that the cylinder gets activated at the proper speed and the impact to the machine is minimized.

Loosen lock nut **1**.

- Turn knob **2** in the direction of **(A)** to activate the cylinder slowly.
- Turn knob **2** in the direction of **(B)** to activate the cylinder quickly.

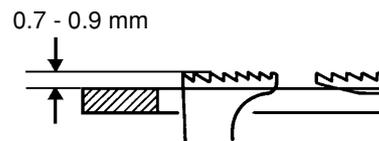
After the adjustment, tighten lock nut **1**.



2. Checking the feed dog height

When the drop feed mechanism is not being actuated (the hook **3** is at its lowest position), check to see if the feed dog height is set to the accurate dimension (0.7 - 0.9 mm).

If it is not so, adjust the feed dog height.



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