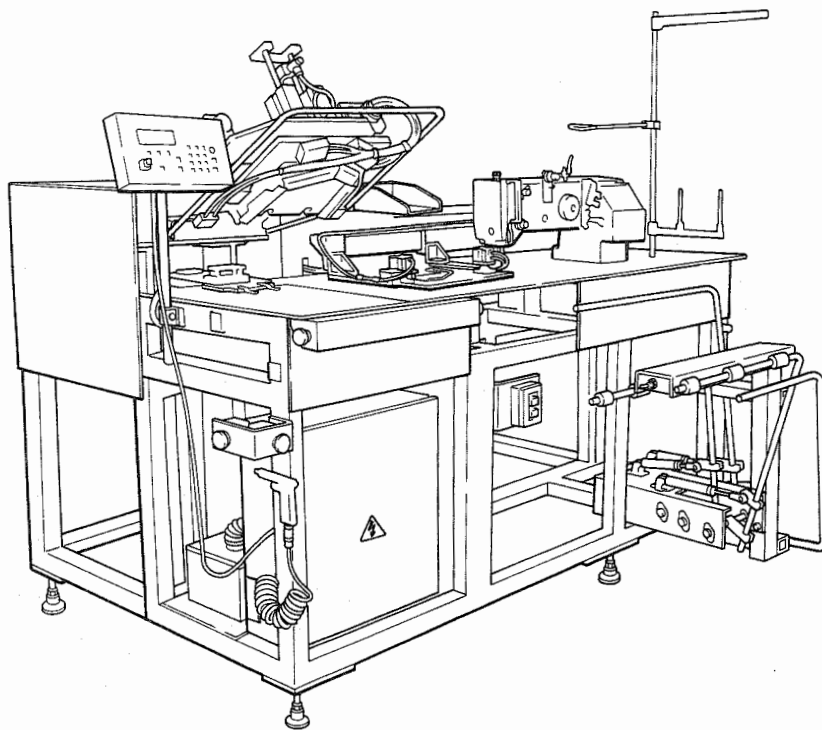


Jeans Pocket Setter

# AVP-875

# INSTRUCTION MANUAL



NOTE: Read safety instruction carefully and understand them before using your AVP-875.  
Retain this instruction Manual for future reference.

No.00

29302403



## IMPORTANT SAFETY INSTRUCTIONS

Putting sewing systems into operation is prohibited until it has been ascertained that the sewing systems in which these sewing machines will be built into, have conformed with the safety regulations in your country. Technical service for those sewing systems is also prohibited.

1. Observe the basic safety measures, including, but not limited to the following ones, whenever you use the machine.
2. Read all the instructions, including, but not limited to this Instruction Manual before you use the machine. In addition, keep this Instruction Manual so that you may read it at anytime when necessary.
3. Use the machine after it has been ascertained that it conforms with safety rules/standards valid in your country.
4. All safety devices must be in position when the machine is ready for work or in operation. The operation without the specified safety devices is not allowed.
5. This machine shall be operated by appropriately-trained operators.
6. For your personal protection, we recommend that you wear safety glasses.
7. For the following, turn off the power switch or disconnect the power plug of the machine from the receptacle.
  - 7-1 For threading needle(s), looper, spreader etc. and replacing bobbin.
  - 7-2 For replacing part(s) of needle, presser foot, throat plate, looper, spreader, feed dog, needle guard, folder, cloth guide etc.
  - 7-3 For repair work.
  - 7-4 When leaving the working place or when the working place is unattended.
  - 7-5 When using clutch motors without applying brake, it has to be waited until the motor stopped totally.
8. If you should allow oil, grease, etc. use with the machine and devices to come in contact with your eyes or skin or swallow any of such liquid by mistake, immediately wash the contacted areas and consult a medical doctor.

9. Tampering with the live parts and devices, regardless of whether the machine is powered, is prohibited.
10. Repair, remodeling and adjustment works must only be done by appropriately trained technicians or specially skilled personnel. Only spare parts designated by JUKI can be used for repairs.
11. General maintenance and inspection works have to be done by appropriately trained personnel.
12. Repair and maintenance works of electrical components shall be conducted by qualified electric technicians or under the audit and guidance of specially skilled personnel.

Whenever you find a failure of any of electrical components, immediately stop the machine.
13. Before making repair and maintenance works on the machine equipped with pneumatic parts such as an air cylinder, the air compressor has to be detached from the machine and the compressed air supply has to be cut off. Existing residual air pressure after disconnecting the air compressor from the machine has to be expelled. Exceptions to this are only adjustments and performance checks done by appropriately trained technicians or specially skilled personnel.
14. Periodically clean the machine throughout the period of use.

15. Grounding the machine is always necessary for the normal operation of the machine. The machine has to be operated in an environment that is free from strong noise sources such as high-frequency welder.
16. An appropriate power plug has to be attached to the machine by electric technicians. Power plug has to be connected to a grounded receptacle.

17. The machine is only allowed to be used for the purpose intended. Other used are not allowed.
18. Remodel or modify the machine in accordance with the safety rules/standards while taking all the effective safety measures. JUKI assumes no responsibility for damage caused by remodeling or modification of the machine.

19. Warning hints are marked with the two shown symbols.



Danger of injury to operator or service staff



Items requiring special attention

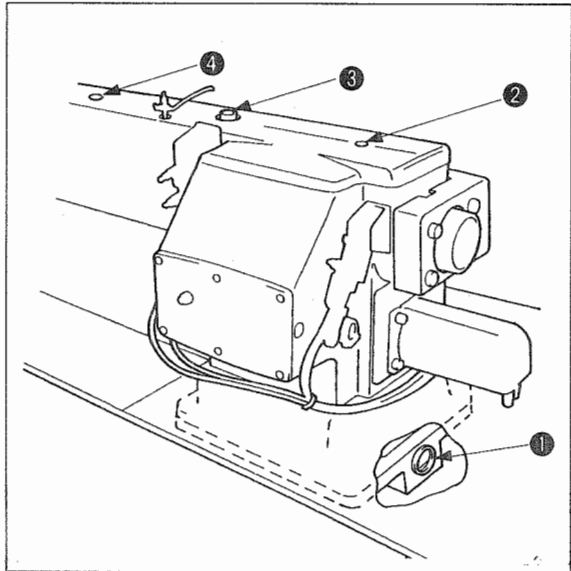
## **FOR SAFE OPERATION**



1. To prevent accidents caused by electric shock, never open the control box cover or touch the components inside the control box while the power switch is ON.



1. To avoid personal injuries, never operate the machine with any of the belt cover, finger guard, eye guard or safety devices removed.
2. To avoid personal injuries, never bring your fingers, hair or clothes close to or place anything on the handwheel, V-belt or motor while the machine is running.
3. To avoid personal injuries, never bring your fingers under or near the needle when the power switch is turned ON or while the machine is running.
4. To avoid personal injuries, never bring your fingers into the needle bar cover while the machine is running.
5. To avoid personal injuries, be careful not to allow your fingers to be caught when tilting or re-setting of the machine is performed.
6. To prevent accidents caused by abrupt start of the sewing machine, turn OFF the power switch when the machine is tilted or the belt cover and the V-belt are removed.
7. The motor does not produce the noise while the machine is stopped. To prevent accidents caused by abrupt start of the sewing machine, be sure to turn OFF the power switch when you stop the machine.
8. To prevent accidents caused by electric shock, do not operate the machine with the ground wire removed.
9. To prevent accidents caused by electric shock and damage of the electrical components, turn OFF the power switch in advance in case of inserting or removing the power plug.

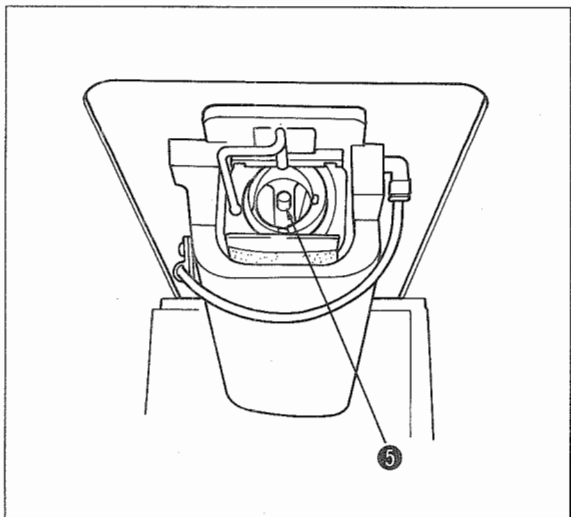


**(Caution) 1. Be sure to lubricate the sewing machine before starting running it.**

**2 Be sure to use JUKI New Defrix Oil No. 1 as the lubrication oil for your sewing machine.**

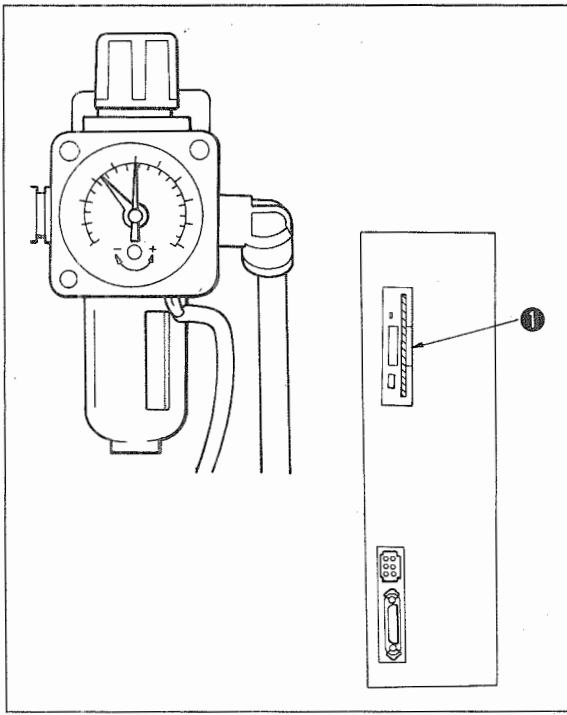
- 1) Fill oil from lubrication hole ② until the center of oil gauge ① is reached.

After the machine has been properly filled with oil, oil flow is observed from oil sight window ③ as long as the machine is normally lubricated. The amount of oil to be filled in the machine does not affect the performance and functions of the sewing machine.



When you put the machine into service for the first time after set-up or after an extended period of disuse, be sure to pour oil into oil hole ④ in the front bushing and apply a drop of oil to hook race surface ⑤.

- 2) Be sure to operate your machine with the pulley cover, eye guard and any other guards mounted on the sewing machine.
- 3) Do not apply a strong impact to the display of the operation panel.

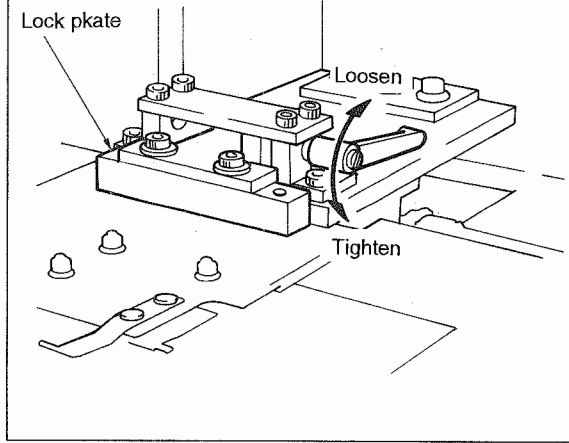


- 4) Use an air pressure of 5 kgf/cm<sup>2</sup>.
- 5) Do not run the sewing machine when the pulley cover or surface cover is removed.
- 6) Do not apply a strong shock to the operation panel display surface.
- 7) Load/unload floppy disk ❶ while the power to the machine is ON.  
Turning ON/OFF the power to the machine with floppy disk ❶ mounted may destroy data stored in the floppy disk.

8) Prohibitions with respect to handling of floppy disks

	<p>Do not place floppy disks near an ash tray, foods or drinks.</p>		<p>Do not touch exposed areas of magnetic sheet.</p>
	<p>Do not allow a floppy disk to come close to magnetized objects.</p>		<p>Do not keep floppy disks in a place where temperature is extremely high (50°C or higher). Avoid exposure to direct sunlight.</p>

to make sure that it is locked.



**(Caution)** Lock the locking plate with its end face completely pressed against the mating surface so as to avoid a cause of defective folding of a pocket bag.

10) Check of feed block air pressure

Move the holder up and down, and check the holder control pressure. Use a control pressure in the range 0.6 to 1 kgf/cm<sup>2</sup>. If it is too low, the cloth will not be held in place; if it is too high, the cloth will be displaced in transport.

- 11) Do not turn ON the power to the sewing machine with any of the operation switches or panel switches pressed.
- 12) When replacing a bobbin, blow off dust in the hook with an air gun.

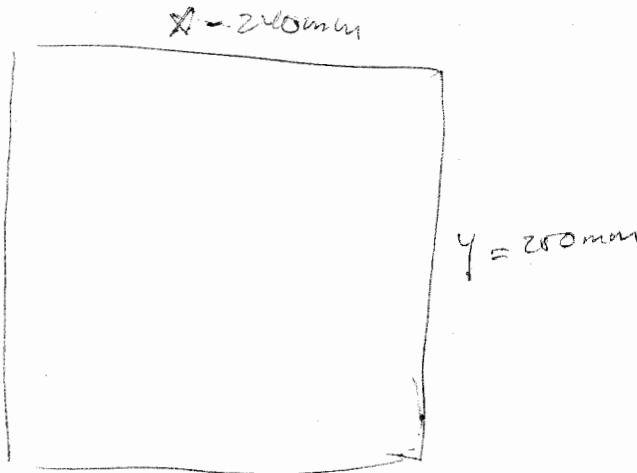
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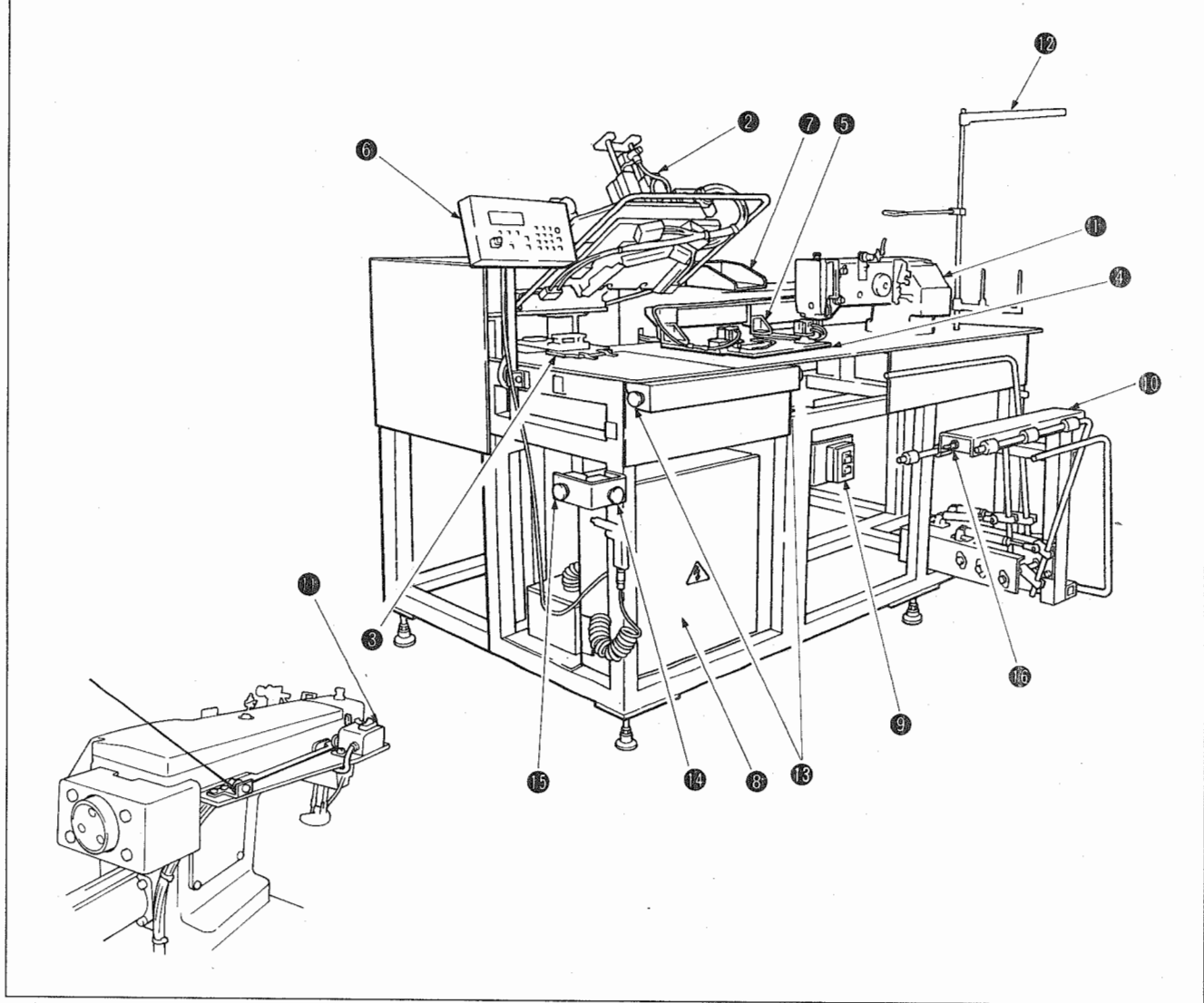
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# I. SPECIFICATION

- 1) Sewing size: X(lateral) direction 240 mm Y(longitudinal) direction : 250 mm
- 2) Max. sewing speed: 4000 rpm (according to sewing specifications)
- 3) Stitch length: 0.1 to 6.0 mm (0.1 mm pitch) ( Note that the maximum sewing speed will be limited to a certain extent depending on sewing specifications in the case where the stitch length is set to 3.5 mm or more. )
- 4) Main shaft of machine head drive unit: AC servo motor
- 5) Holder travel: Continuous feed (AC servo motors, 2-shaft drive)
- 6) Needle bar stroke: 35 mm
- 7) Needle: SCHMETZ 134 SES SERV 7 Nm: 130 (very important)
- 8) Hook: Full-rotary exclusive hook (forced lubrication)
- 9) Bobbin case: Bobbin case exclusively designed for a full-rotary, 1.7-fold hook (provided with an idling prevention spring)
- 10) Lubrication oil Machine head : New Defrix oil No.1
- 11) Thread trimming mechanism: Scissors cutting mechanism using a counter knife and a moving knife (grooved cam method)
- 12) Pattern data stored in memory: 2DD 3.5" floppy disk 691 patterns/disk
- 13) Dimensions: 1860 mm (W) x 1900 mm (L) x 1200 mm (H) (excluding the thread stand unit and stacker)
- 14) Total weight : 600 kg
- 15) Power consumption: 400W
- 16) Working temperature range: 5°C to 40°C
- 17) Working humidity range: 20 to 80 % (with no dew condensation)
- 18) Supply voltage: Rating ±10 % 50/60 Hz
- 19) Compressed air: 0.5MPa {5kgf/cm<sup>2</sup>}
- 20) Air consumption: 20 NI/cycle

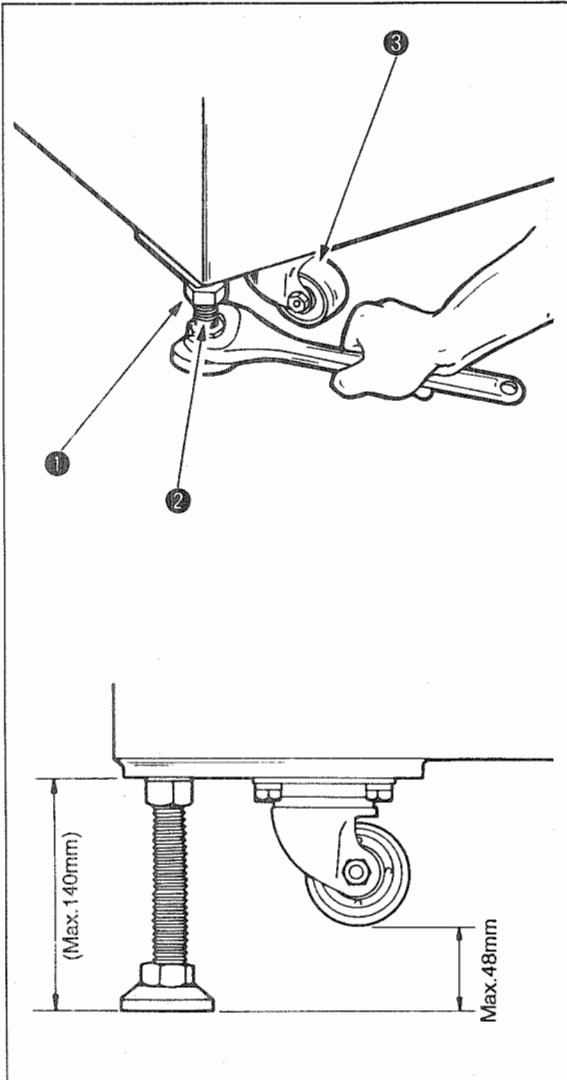




- |                              |                                |
|------------------------------|--------------------------------|
| ① Sewing machine head        | ⑨ Power switch                 |
| ② Crease folding unit        | ⑩ Stacker                      |
| ③ Pattern board              | ⑪ Bobbin winder                |
| ④ Holder                     | ⑫ Thread stand                 |
| ⑤ Feed block and X-Y unit    | ⑬ Setting completion switch    |
| ⑥ Operation panel            | ⑭ Pause switch                 |
| ⑦ Pocket cloth holding board | ⑮ Setting release switch       |
| ⑧ Electrical box             | ⑯ Stack presser release switch |

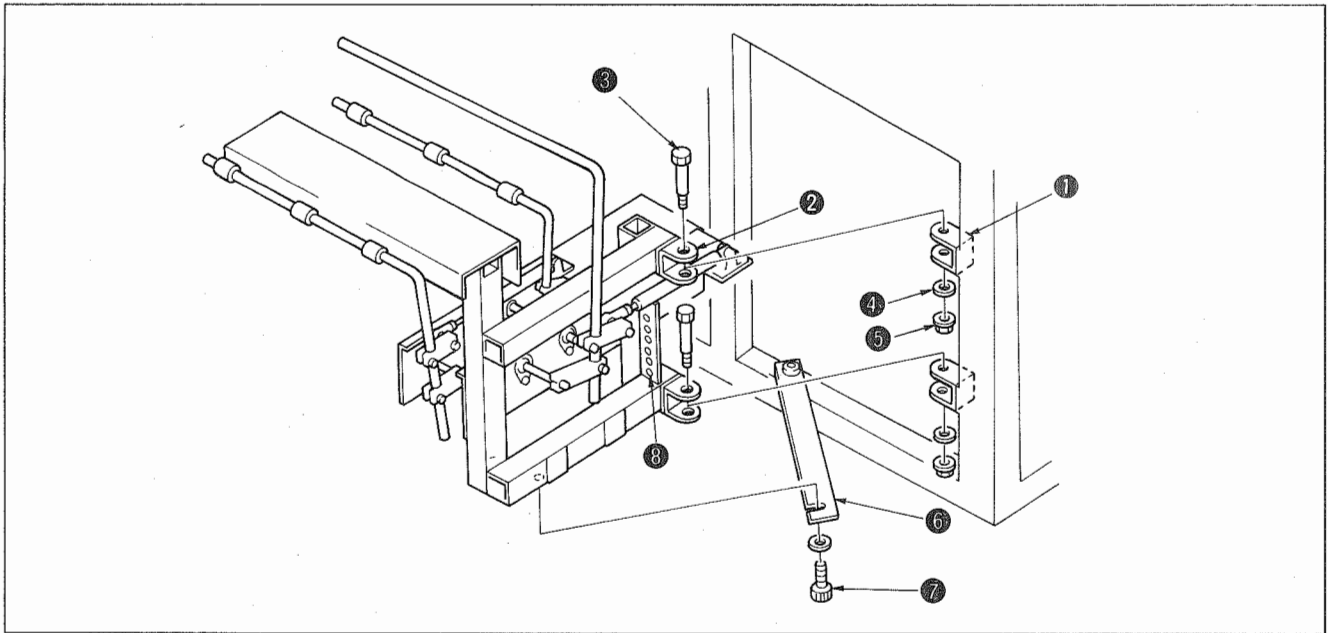
### III. INSTALLATION

#### 1. Setting up the machine



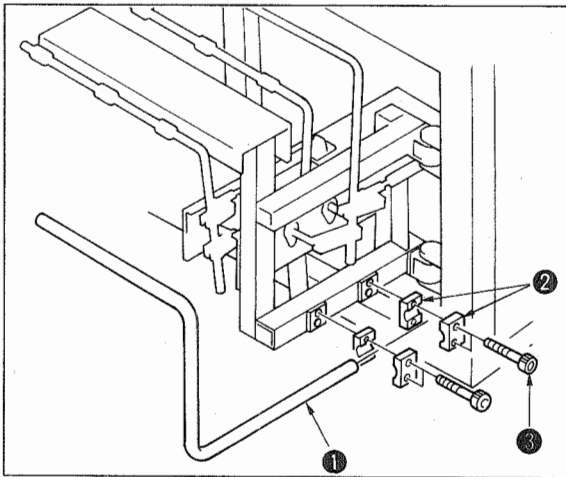
- 1) Install the machine on a flat place with leveled.
  - 2) Loosen nut ①. and turn level adjuster ② to lift the machine until caster ③ idles.
  - 3) After the machine has been set up properly, tighten nut ① and fix level adjuster ②.
- \* The machine can be lifted with the level adjuster until the caster is raised 48 mm above the floor.  
Be sure to adjust the height of the machine within the aforementioned range.

## (1) Installing the main unit of the stacker



- 1) Temporarily secure hinge B ① on the main unit frame.
- 2) Fit hinge A ② of the main unit of the stacker in hinge B ① and fasten them with screw ③.
- 3) Attach washer ④ and nut ⑤ in position.
- 4) Check to be sure that the main unit of the stacker can be turned in the direction of the arrow. Then, securely tighten the screw in hinge B ①.
- 5) Secure fixing plate ⑥ on the main unit of the stacker with screw ⑦.
- 6) Connect the air tube and connector to junction plate

## (2) Assembling the stacker guard pipe

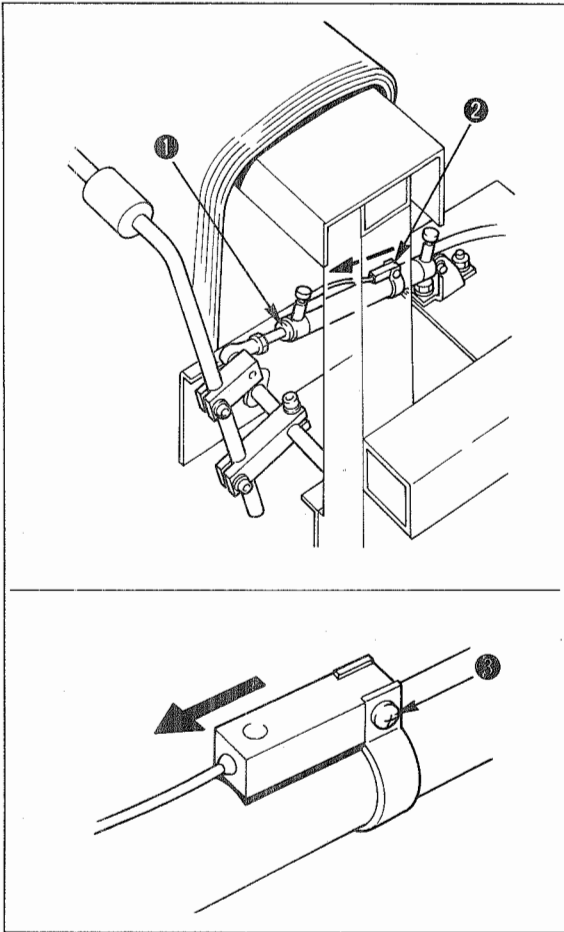


Attach stacker guard pipe ① to the main unit of the stacker using pipe clamp ② and secure with screw ③.

**(Caution)** Do not sit on the stacker guard or put any heavy matter on it so as to prevent the stacker guard pipe from deforming.

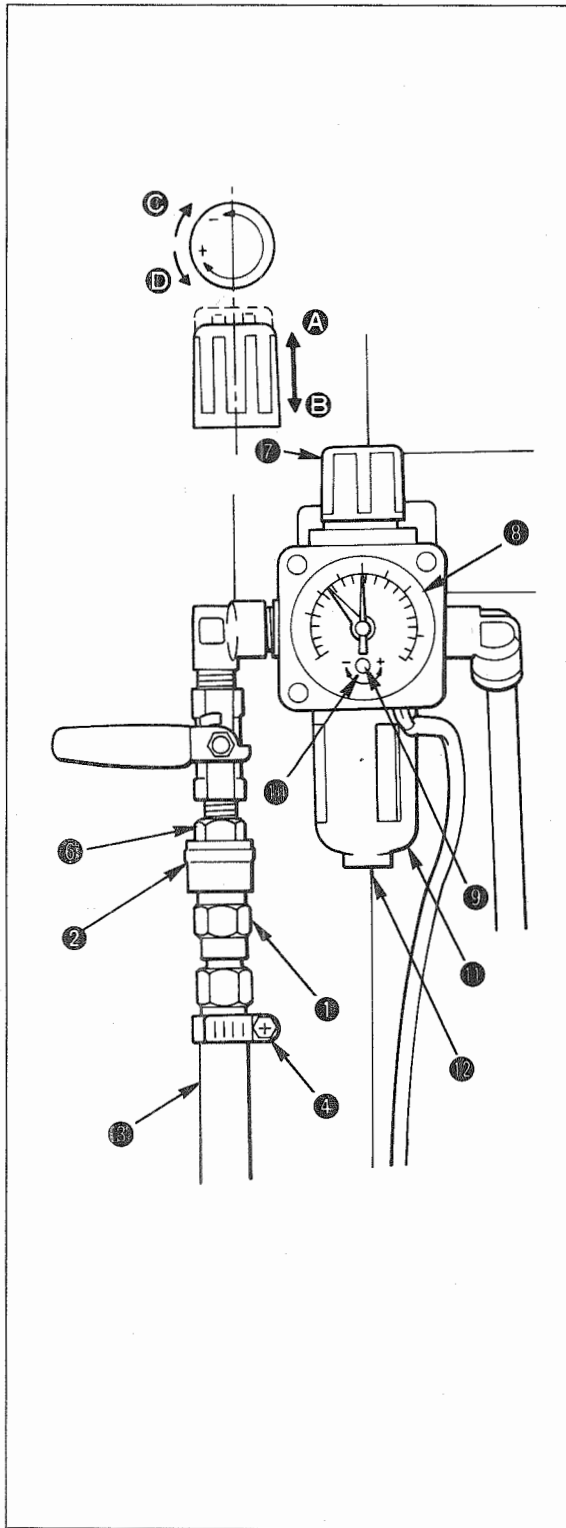
### (3) Adjusting the stack-full sensor

The stacker of the device has a function to detect the thickness of finished products stacked on the stacking board and stop the stacker operation.



- 1) If sensor ② mounted on work clamp cylinder ① detects, the error message "Over stack" will be shown on the operation panel. Then, the start switch will be rendered ineffective.
- 2) To reset, remove the finished products and press the Reset switch on the operation panel.

**(Caution)** To render the stack-full detecting function ineffective, loosen screw ③ in sensor ② and shift sensor ② in the direction of the arrow until it will go no further. Then, tighten the screw to fix the sensor.

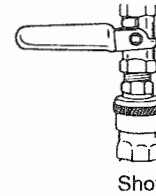


**(1) Connecting the air hose**

- 1) Connect fitting ① to plug ②. At this time, wrap sealing tape or the like round the screw.
  - 2) Insert air hose ③ into fitting ① and fasten them with hose band ④. (Use the correct air hose to match the fittings.)
- (2) Connecting the quick-coupling joint Shut valve ⑤, and connect plug ② to joint ⑥.



Open



Shot

**(Caution) Turn the valve it securely stops (90-degree position).**

**(3) Adjusting the supply air pressure**

- 1) The operating air pressure should be set to 5 kgf/cm<sup>2</sup>.
- 2) Deliberately open valve ⑤.
- 3) Lift regulator knob ⑦ in direction ①. Turning it in this state will change the supply air pressure. Turn knob in direction ③ (+) or in direction ④ (-) so that black point of pressure gauge ⑧ indicates 5 kgf/cm<sup>2</sup>. After the adjustment, lower knob ⑦ in direction ② to securely lock it.

**(Caution) When the compressed air is supplied to the machine, somepart of the stacker unit and crease folding unit will actuate.**

**(4) Pressure drop signal adjustment**

- 1) Set the pressure at which an emergency signal will go off if the pressure drops below it.
- 2) The normal setting is 3.5 kgf/cm<sup>2</sup>.
- 3) Insert a small screwdriver into cap ⑩ of pressure gauge ⑧, and adjust screw ⑨ which is inside. Turn the screw with the screwdriver until the red needle points to 3.5 kgf/cm<sup>2</sup>.

**(Caution) If the air supply source pulse is too large, even at the above setting the emergency signal might go off.**

## (5) Draining

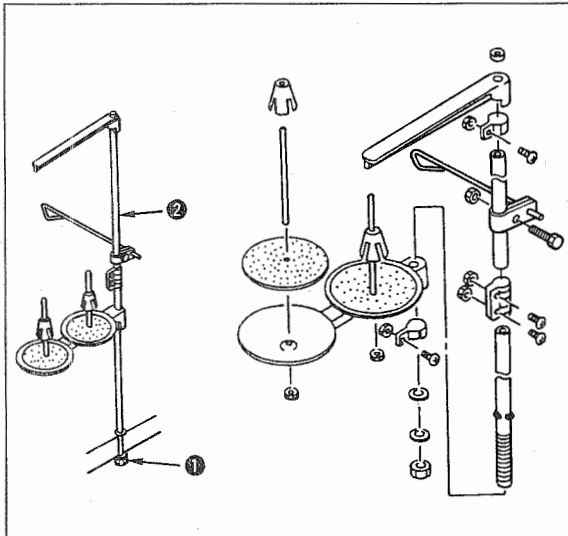
- 1) Water accumulates in the bottom of tank case ⑩. If it is allowed to accumulate for a long time without being drained, then water might also accumulate in the pipes inside the sewing machine.
- 2) Periodically push drain push-button ⑫ upward with a finger to drain the water out.

**(Note) It is recommended that the water be drained out before and after every time that the machine is operated.**

- (6) Sometimes air has to be released from inside the sewing machine to adjust the sewing machine mechanism. The procedure is to first close valve ⑤, then push drain push-button ⑫ upward just as when draining water until the black pointer on the pressure gauge reads 0.

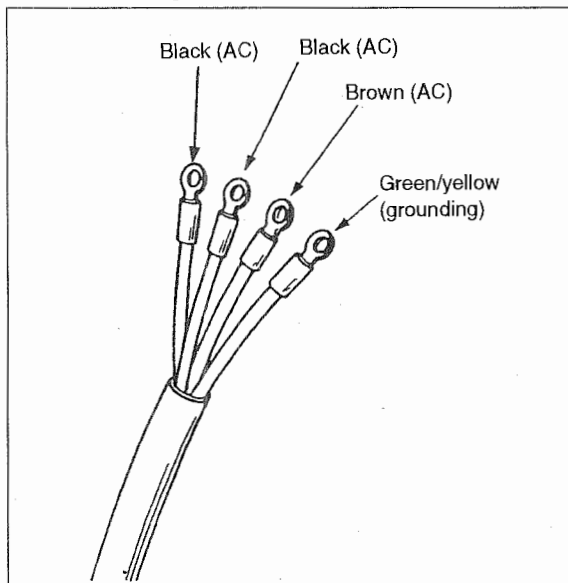
**(Caution) After completing the adjustment, be sure to open valve ⑤ in accordance with (3) 2).**

## 4. Thread stand assembly

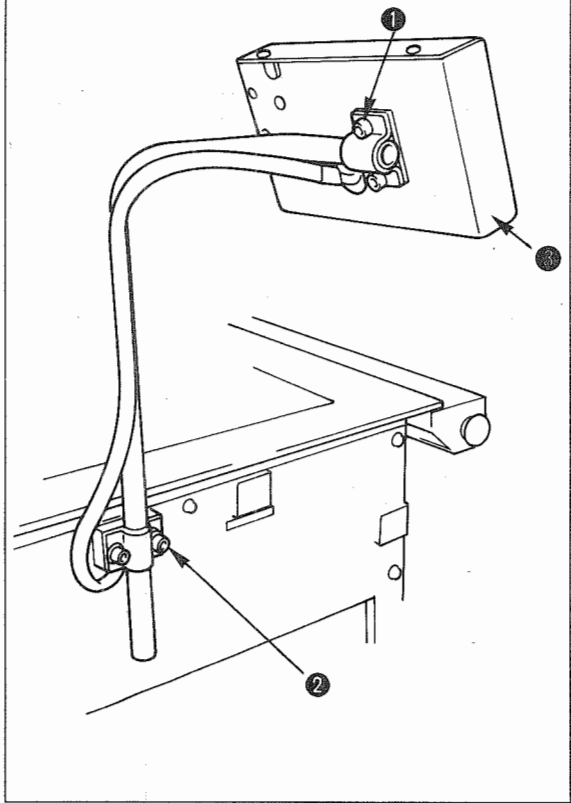


- 1) Set the thread stand in the hole at the right corner of the table.
- 2) Insert thread stand rod ② into thread stand thread guide ③.
- 3) Tighten lock nut ① so that the thread stand will not be able to move.
- 4) If ceiling wiring is possible, pass the power cord through thread stand rod ②.

## 5. Connecting the power supply

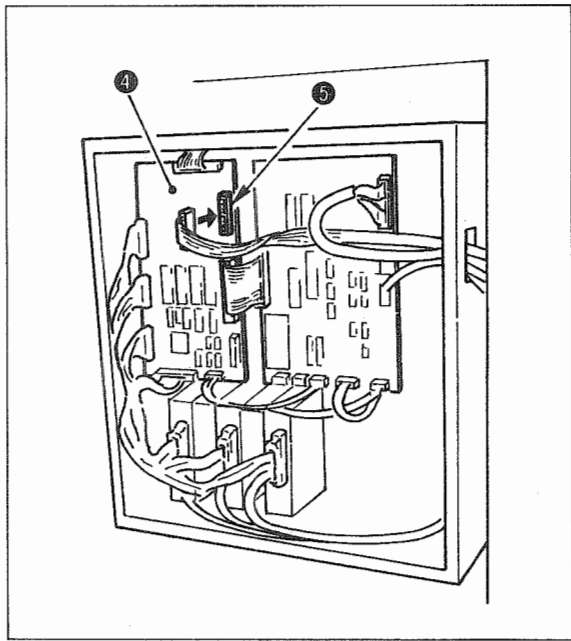


- 1) The machine is not supplied with a power plug. It is therefore necessary for you to select a plug that matches the receptacle available under a given operating environment and attach it to the power cable.
- 2) The machine uses a 3-phase power supply. Use a 3-phase power supply that matches the voltage specifications.
- 3) Check the direction of rotation of the blower motor. If the air is blown from the garment body setting section of the table, the blower motor rotates in the reverse direction. Change round the wiring of two power cords to correct the direction of rotation.

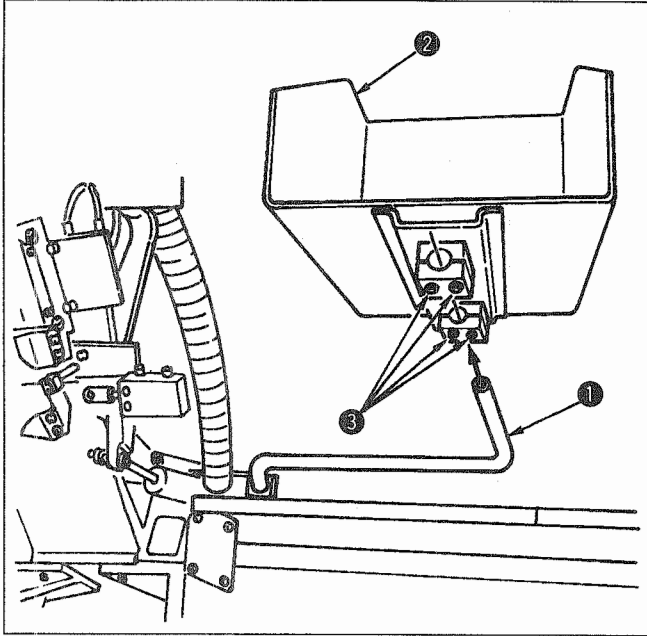


- 2) Connect the power connector on the operation panel to connector plug CN29 ⑤ mounted on CPU circuit board ④.
- 3) Loosen the operation panel set screw ① and support column setscrew ②, adjust the operation panel ③ direction, inclination and height, and fix in place.

**(Caution) Do not apply a strong shock to the operation panel surface.**

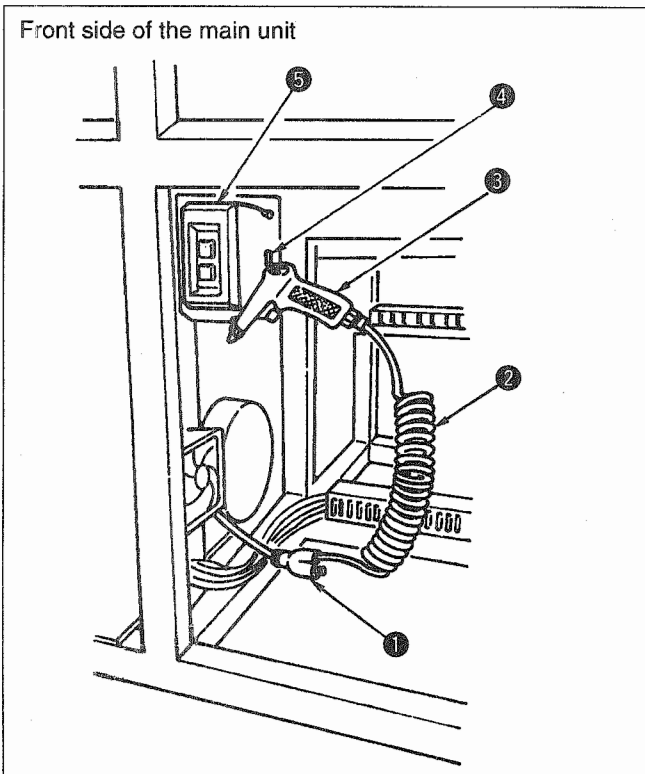


## 7. Locking the Pocket Folding Board



- 1) Mount the pocket folding board ② on the pocket folding board pipe ③.
- 2) Lock the pipe to the pocket folding board using the pipe setscrew ①.

## 8. Mounting the Air Gun



- 1) Insert the spiral tube ② of air gun ③ into the hollow side of Y-joint.
- 2) The air gun ③ shall be applied to the hook ④ on the right side of power switch ⑤ as shown in the figure.

## 9. Mounting the Pattern

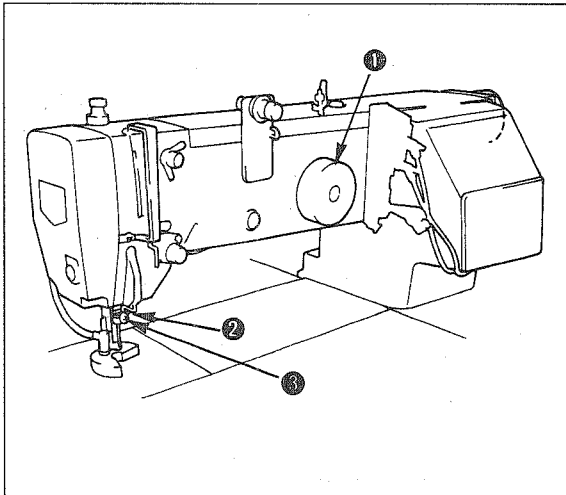
For the mounting of pattern, refer to "How to replace the pattern" of V-11 (P35).

## 1. How to install the needle



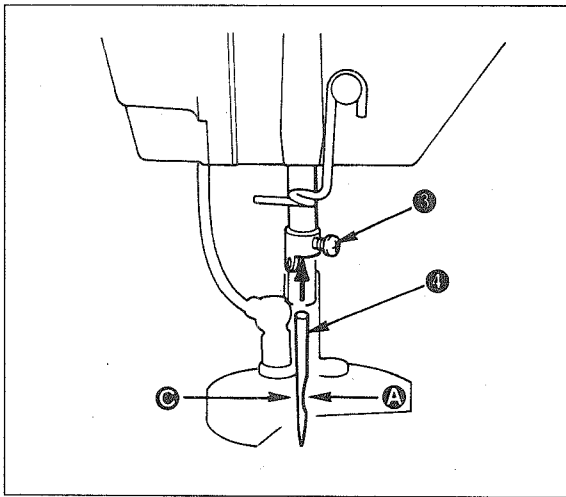
### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



Use a SCHMETZ 134 SES SERV 7 Nm: 130 needle  
There are number of different size needles; use the needle that is appropriate for the thread thickness and type of fabric.

- 1) Turn handwheel ① to lift needle bar ② to its highest position.
- 2) Loosen needle setscrew ③ and turn needle ④ so that its indentation ⑤ is on the handwheel side.
- 3) Push the needle deeply into the hole in the needle bar, in the direction of the arrow, until it hits the surface at the far end of the hole.
- 4) Tighten the needle setscrew very tightly.
- 5) Check to make sure that long groove ⑥ of the needle is on the face plate side.

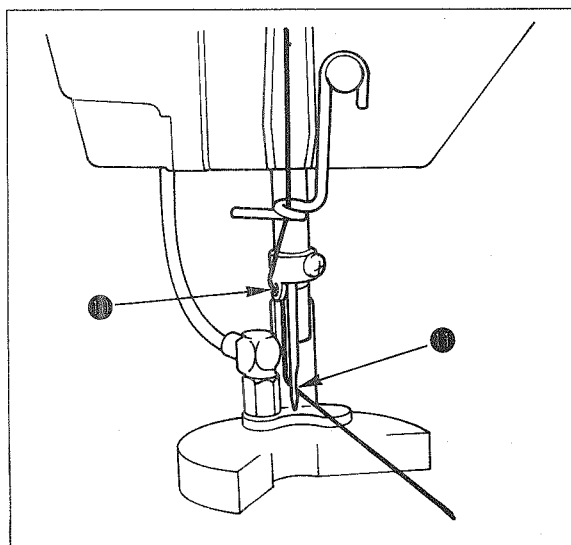
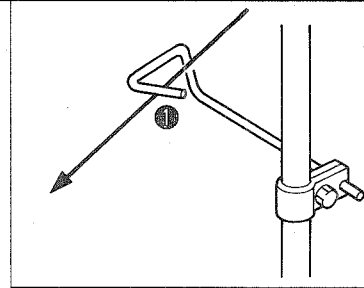
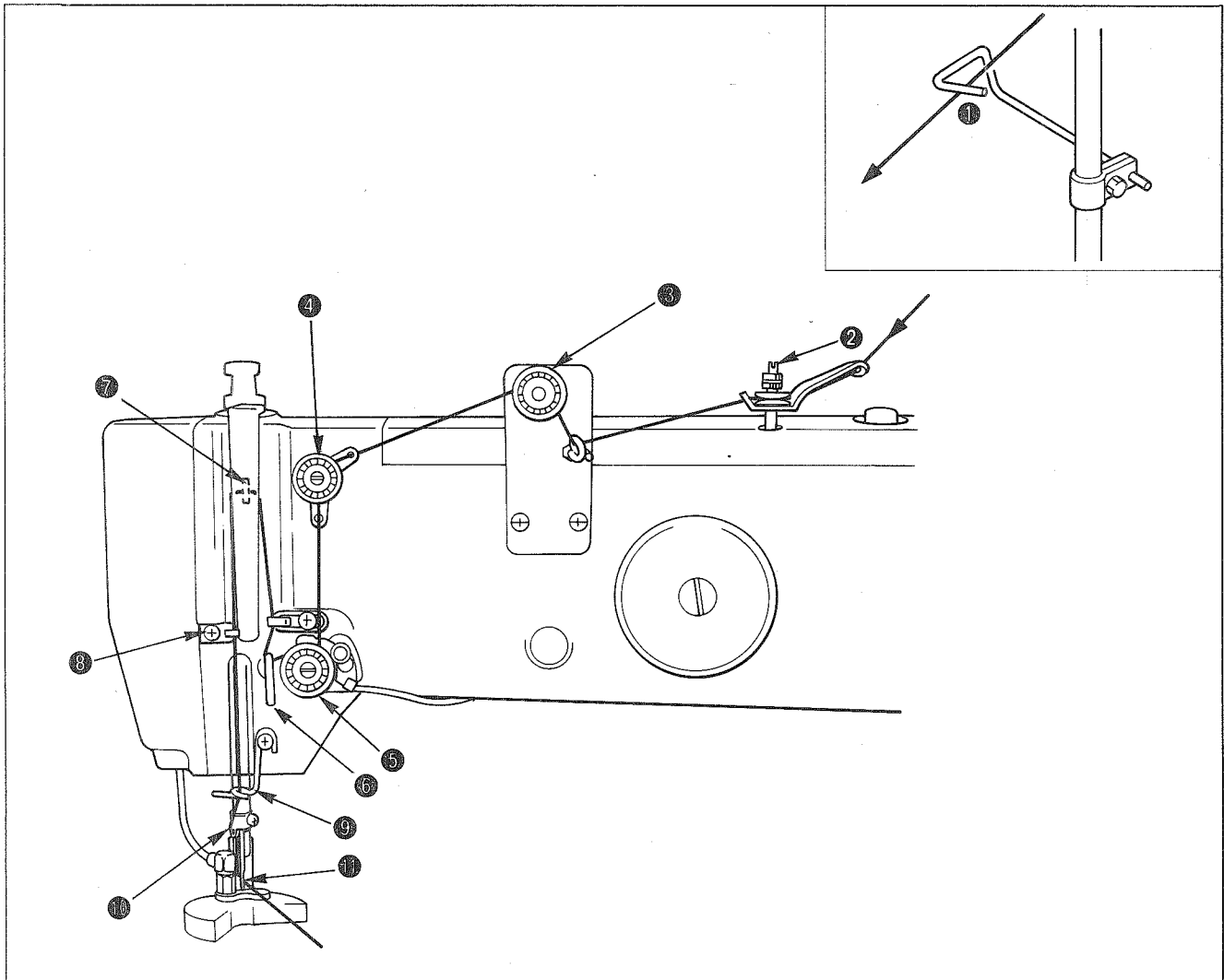


## 2. Threading the needle thread



### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

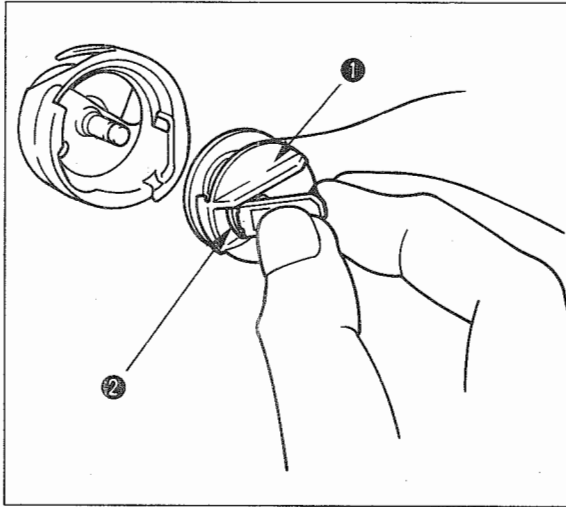


- 1) Thread the needle thread through the points shown in the figure, in the order of the numbers.
- 2) Pull out about 4 cm of the thread that passes through the needle.
- 3) For threading the thread while power is ON, please refer to the section on threading.

**(Caution) Pass the thread over the front side of the disc of thread guide ②.**



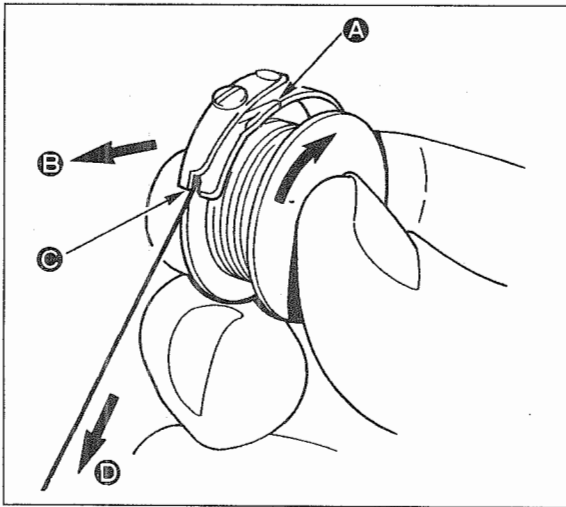
**WARNING:**  
Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



- 1) Fully raise latch ② of bobbin case ①, and take the bobbin case out of the hook. The bobbin fitted in bobbin case ① will not come off the bobbin case by holding latch ② with fingers.
- 2) To install the bobbin case in the hook, be sure to raise latch ② and fully fit the bobbin case over the hook driving shaft. Then release latch ② to let it down.

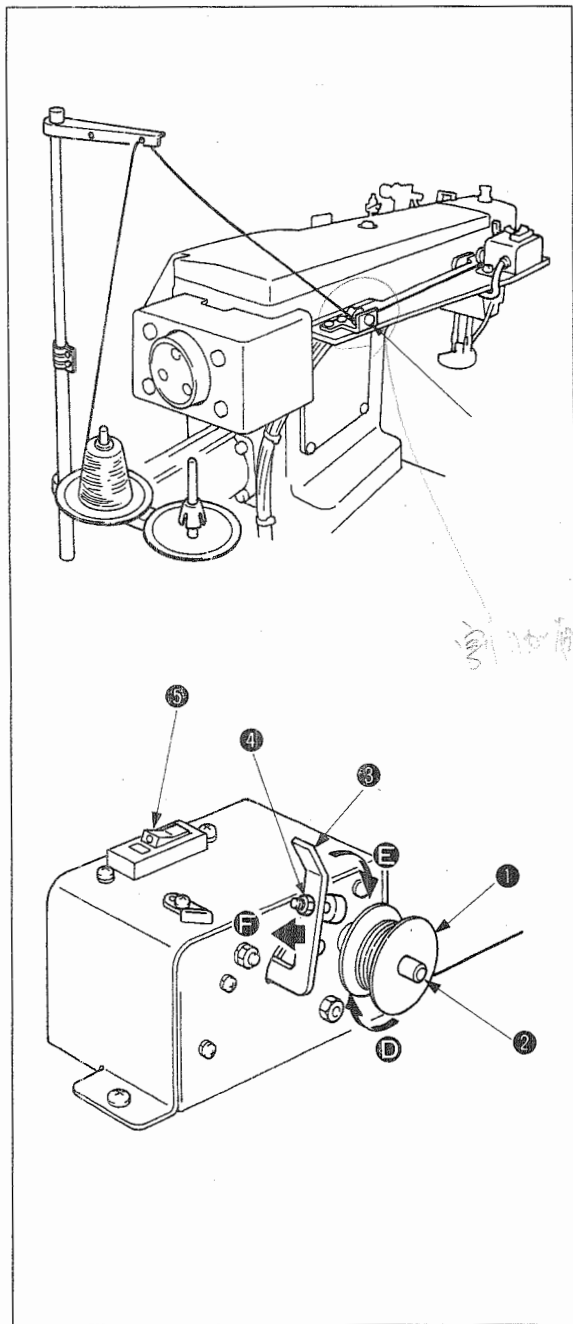
**(Caution)** Please use the accessory exclusive bobbin case. Also, if it is not pushed in far enough, bobbin case ① might fall out during sewing, so use caution.

#### 4. Setting a bobbin into the bobbin case



- 1) Hold the bobbin in a way that the thread open end is directed to the right as observed from you, and set the bobbin into the bobbin case.
- 2) Pass the thread through thread slit ①, and pull the thread in direction ②. By so doing, the thread will pass under the thread tension spring and come out from notch ③.
- 3) Check that the bobbin rotates in the direction of the arrow when thread ④ is pulled.

## 5. Winding a bobbin



Route the thread in the order as illustrated in the figure on the lift before starting winding a bobbin. Place the thread at **A** of the thread stand, and pass the thread through **B** and tension controller **C**. Then wind the thread round bobbin.

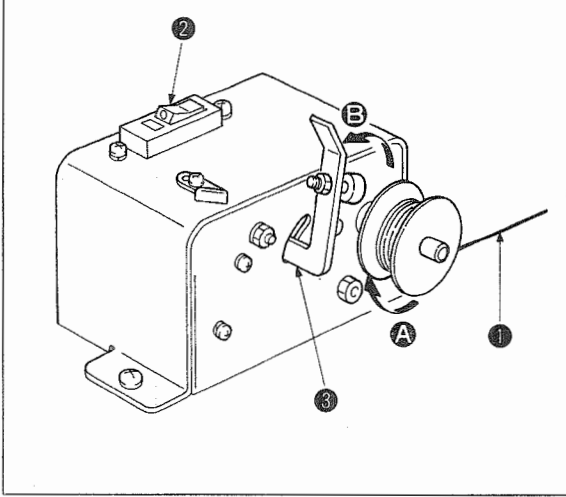
- 1) Fit bobbin **1** over bobbin winding shaft **2**.
- 2) Pass the thread as illustrated in the figure, and wind the thread round bobbin four or five times in the direction of arrow **D**.
- 3) Push bobbin presser **3** toward the bobbin (in the direction of arrow **E**), and the bobbin winder will start winding the bobbin. It will automatically stop winding the bobbin when the predetermined amount of thread has been wound round the bobbin (80% of the outside diameter of bobbin).
- 4) To adjust the amount of thread to be wound round the bobbin, loosen screw **4** and change the position of the bobbin presser. (Moving the bobbin presser in the direction of arrow **F** will increase the amount of thread to be wound round the bobbin.)

**(Caution) 1. The bobbin winder will not actuate unless breaker **5** of the seesaw type switch is in its ON state (where the white engraved marker dot can be observed). It means that you can use breaker **5** as the bobbin winder switch.**

**2. There are times when even when breaker **5** is ON (the white dot is visible), the bobbin winder fails to operate. This means that inside, the breaker is actually OFF. Turn the breaker OFF and back ON.**

**3. Be sure to use the JUKI' s genuine bobbins and bobbin cases.**

**4. When threading the bobbin thread from thread guide arm **B** to tension controller **C**, fix thread stand disc **A** in such a position that the disc **A** and arm do not interfere with the bobbin thread path between **B** and **C**.**

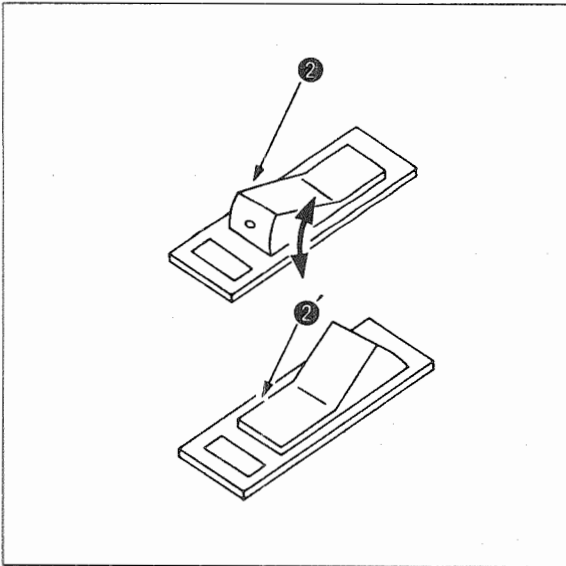


thread ① catches on something, producing a force that tends to stop it from winding (A direction).

- 2) In such a case, to prevent the motor from burning out, circuit protector ② operates to temporarily break the circuit inside the bobbin winder, stopping the winder.

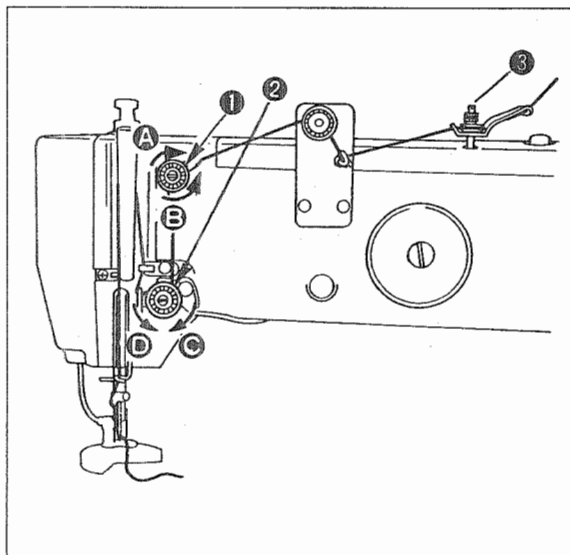
**(2) Restoring the bobbin winder to operation after it stops**

- 1) First flip bobbin presser ③ in the direction of arrow B, then turn the bobbin winder switch OFF.
- 2) Remove the cause of the force that tends to stop the thread from winding.
- 3) Temporarily flip the circuit protector switch from position ② to ②', then return it to ②.
- 4) Step 3) restores the circuit protector to its original status. When bobbin presser ③ is flipped back to the bobbin side and the bobbin winder switch is turned ON, the winder resume operation.



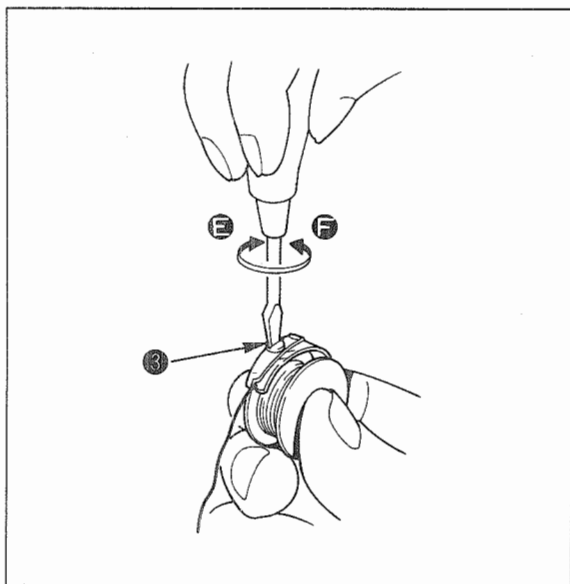
## 6. Thread tension

### (1) Adjusting the needle thread tension



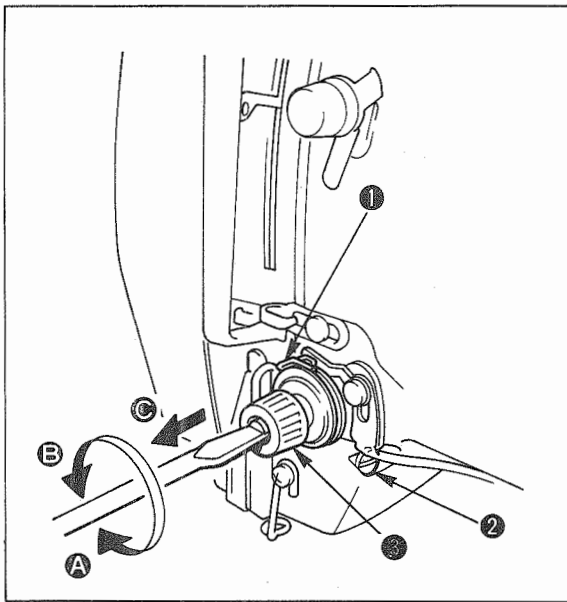
- 1) When No. 1 tension controller ① is turned clockwise (arrow A), the amount of thread left on the needle tip after thread trimming is reduced.
- 2) When the tension controller is turned counterclockwise (arrow B), the amount of thread remaining is increased.
- 3) When No.2 tension controller ② is turned clockwise (arrow C), the needle thread tension becomes stronger.
- 4) When the tension controller is turned counterclockwise (arrow D), the tension becomes weaker.
- 5) Thread guide rod ③ should apply as little tension as possible.

### (2) Adjusting the bobbin thread tension



- 1) Turning tension controller ③ clockwise (in direction E) will increase the bobbin thread tension.
- 2) Turning the tension controller counterclockwise (in direction F) will decrease the bobbin thread tension.

20-259



- 1) The standard stroke of the thread take-up spring is 10 to 12 mm.
- 2) To change the stroke of thread take-up spring (1), loosen screw (2) in the tension post socket, fit a flat-bit screwdriver in the groove in tension post (3) and turn the post with the screwdriver. Turning the post clockwise (in direction A) will increase the stroke. Turning it counterclockwise (in direction B) will decrease it.

**(2) Adjusting the pressure of thread take-up spring**

- 1) The pressure of the thread take-up spring should be adjusted to 15 to 25 g when it starts pulling the thread.
- 2) Fit a flat-bit screwdriver in the groove in tension post (3), and turn the tension post clockwise (in direction A) to increase the pressure of thread take-up spring, or counterclockwise (in direction B) to decrease it.

**(Caution) 1. When adjusting the stroke of thread take-up spring, the position of the thread breakage detecting plate should also be adjusted. Adjust the position of the thread breakage detecting plate so that it always comes in contact with the thread take-up spring when the thread take-up spring is not threaded. (Deflection of the spring is approximately 0.5 mm)**

☆ Do not adjust the stroke of thread take-up spring using the thread breakage detecting plate. Doing so may result in thread take-up spring breakage.

2. Confirm that the tension disc comes in close contact with the thread take-up spring after the stroke of thread take-up spring after the stroke of thread take-up spring has been adjusted. If the tension disc does not come in close contact with the thread take-up spring, loosen screw (2) in the tension post socket, and draw the tension post in direction C to make the adjustment.

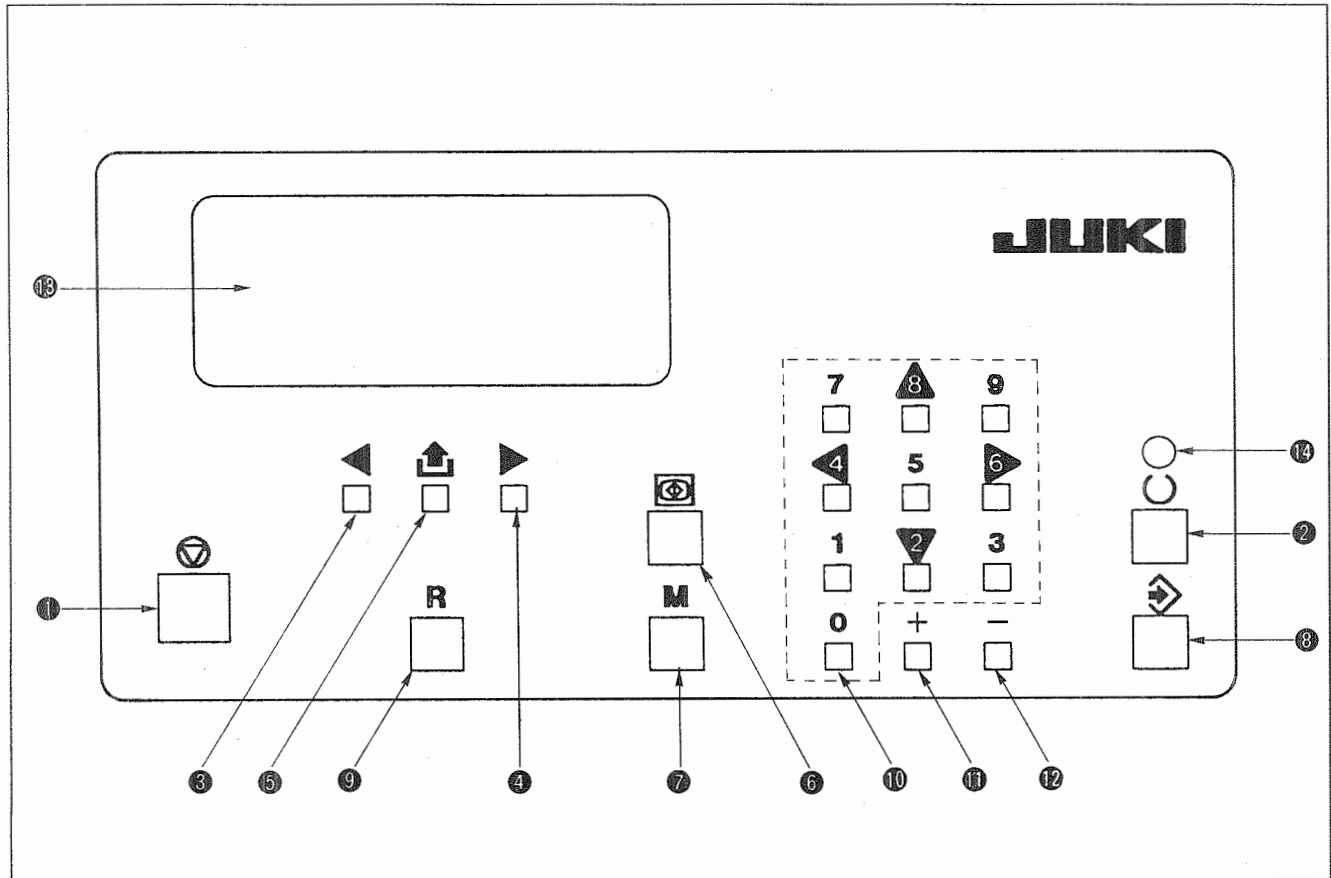
## V. SWITCHES AND INDICATOR LAMPS ON THE OPERATION PANEL












### WARNING:




To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

### 1 Switches on the operation panel



Panel indication	Function and operation
<p>① Pause switch</p> 	<p>Press this switch if you hear an abnormal noise or when you want to stop the machine at emergency while the machine is in operation or when you want to stop the machine at emergency. The sewing machine and holders stop movement.</p>
<p>② Machine ready key</p> 	<p>Used to change over the operation mode between the "Standby mode" and the "Run mode." Various data items are changed and adjusted under the "Standby mode." Sewing is performed under the "Run mode."</p>

<p>④ Jog key to shift data correcting position to the left</p> 	<p>Used to shift the pictograph that is flashing on and off to the left. (If this key is held pressed for 0.7 sec. or longer, the pictograph will be automatically shifted in succession.)</p>
<p>⑤ Jog key to shift data correcting position to the right</p> 	<p>Used to shift the pictograph that is flashing on and off to the right. (If this key is held pressed for 0.7 sec. or longer, the pictograph will be automatically shifted in succession.)</p>
<p>⑥ Screen change-over key</p> 	<p>Used to change over the screen shown on the display or the setting mode.</p>
<p>⑦ Standard screen key</p> 	<p>Used to invoke the standard screen on the display.</p>
<p>⑧ Mode screen key</p> 	<p>Used to invoke the mode selection screen on the display.</p>
<p>⑨ Enter key</p> 	<p>Used to save entered data in the system.</p>
<p>⑩ Reset key</p> 	<p>Used to reset an error or to resume the operation.</p>

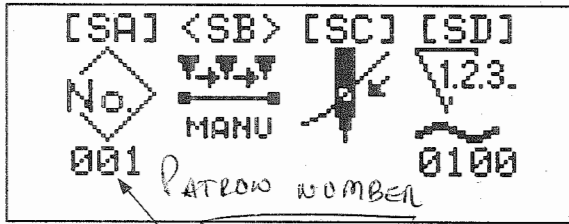
Panel indication	Function and operation
<p>⑩ <b>Numeric keys (ten-digit keys)</b></p> 	<p>Used to specify data.</p>
<p>⑪ <b>Plus key</b></p> 	<p>Used to increase data by the minimum unit.</p>
<p>⑫ <b>Minus key</b></p> 	<p>Used to decrease data by the minimum unit.</p>
<p>⑬ <b>LCD display unit</b></p>	<p>Indicates specified data, state of the machine and function used. Normally, pictographs 1 through 4 are shown on the LCD display unit. One of them flashes on and off at all times. The pictograph flashing on and off is the pictograph representing the item being corrected. Data on the item can be entered.</p>
<p>⑭ <b>Mode indicator LED</b></p>	<p>Used to indicate either the "Standby mode" and the "Run mode." Under the "Standby mode," the LED goes out. When the power to the machine is turned on, the machine enters the "Standby mode." Under the "Run mode," the LED lights up. Under this mode, the sewing can be conducted.</p>



**WARNING:**

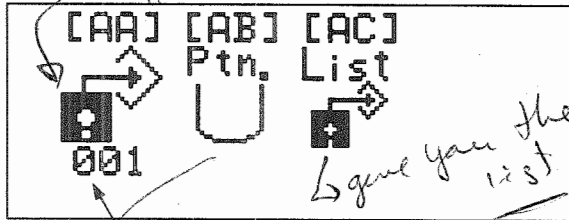
To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

Before starting the operation, a sewing pattern number has to be specified.



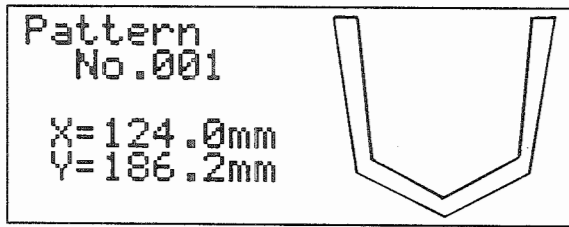
Standard screen  
Pattern number 3 choices

*If they ever select it will read from disk*



Pattern number setting screen

*this one will check the shape of the last patterns sewed*




Pattern shape indicating screen


*information of the pattern*

X = Lateral length of the pattern shape




Y = Longitudinal length of the pattern shape






*Handwritten notes at the bottom left of the page.*


- 1) When the power to the machine is turned ON, the display of the operation panel gives the standard screen.
- 2) If the back-up pattern number is acceptable, the pattern number setting procedure can be omitted.
- 3) Set pictograph number [SA] No to the "being corrected" state (the pictograph flashes on and off) and press the Screen change-over key , and the pattern number setting screen will be shown on the display.





- 4) Set pictograph number [AA]  in the "being corrected" state. Then, press numeric keys (0 through 9) to enter a pattern number.

(Example)

To select pattern number 1, press the keys    in the written order.

- 5) Press the Standard screen key , and the entered number will be rendered ineffective and the standard screen will be restored on the display.
- 6) Press the Enter key , and the relevant pattern will be invoked from the floppy disk and the pattern shape indicating screen will appear on the display.
- 7) Check the pattern shape and press the Enter key . This will shift the mode to the pattern check mode. If the Standard screen key  or the Mode screen key is pressed, the screen corresponding to the key pressed will appear on the display.
- 8) If the pattern shape is not the one you need, press the Standard screen key  to restore the standard screen on the display and re-carry out the data entry.

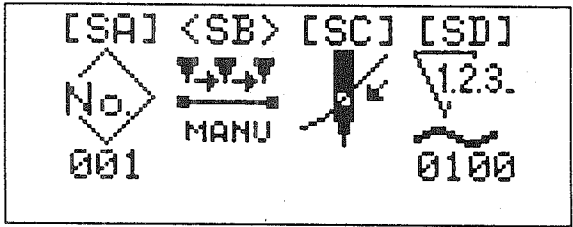
- (Caution)1. The pattern number setting screen will be invoked only when the mode indicator LED on the operation panel goes out (the Standby mode). If the mode indicator LED shows that the machine is in the Run mode, press the Machine ready key  to enter the Standby mode, then specify a pattern number.
2. If you have changed the pattern number, check to be sure that the pattern groove on the holder matches the sewing pattern referring to the description given in "Pattern checking procedure."

- 9) Set pictograph number [AB]  in the "being corrected" state on the pattern number setting screen and press the Screen change-over key , and the pattern shape stored in memory will be shown on the display.
- 10) Set pictograph number [AC]  in the "being corrected" state on the pattern number setting screen and press the Screen change-over key , and all the pattern numbers written on the floppy disk will be given on the display.




**WARNING:**

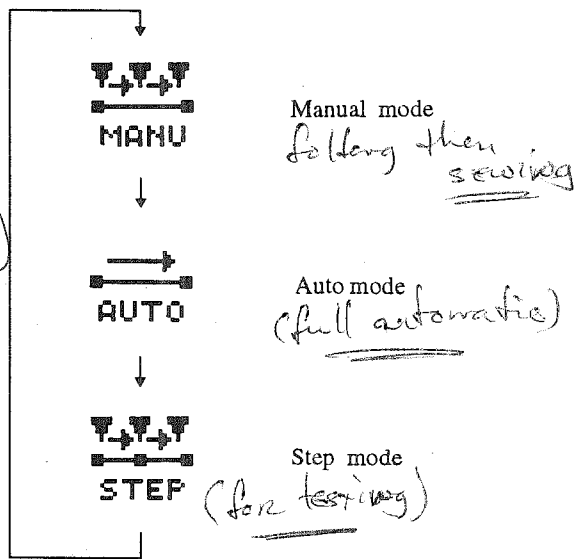
To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).




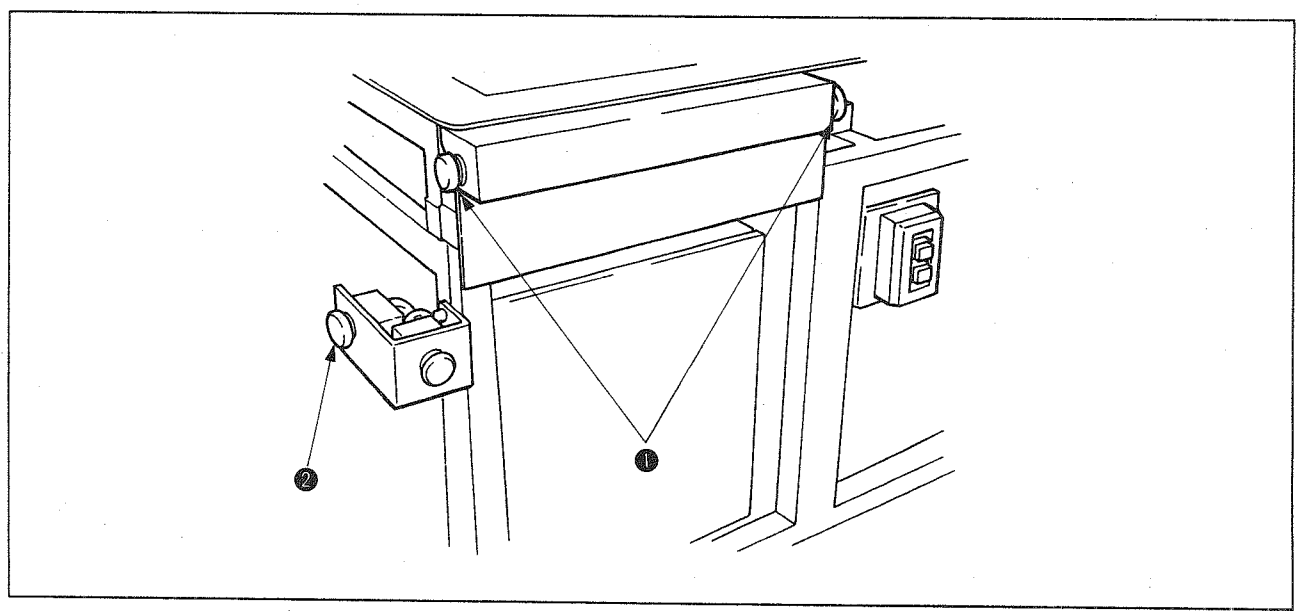
Standard screen

- 1) Set pictograph number <SB> to the "being corrected" state (the pictograph flashes on and off). Now, pressing the Screen change-over key  will change over the operation mode among the manual mode, auto mode and step mode.

*to stop (temporary stop switch) and then reset.*



*important key in this case*  
Setting the "manual/auto/step" mode 



<SB>



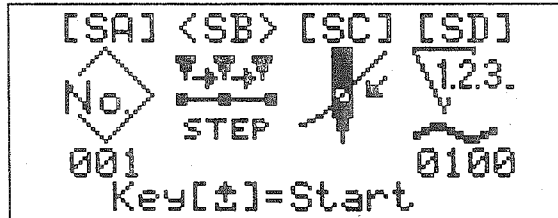
### Auto mode


After setting completion switch ① is pressed, the machine will perform a predetermined series of operations until stacking of the finished pocket is completed.



### Manual mode

The machine stops once upon completion of the folding and “Key[⏏]=Start” is given on the standard screen of the display on the operation panel.




Then, press the Screen change-over key  to start the subsequent operation or press setting release switch ② to resume the initial state.



### Step mode

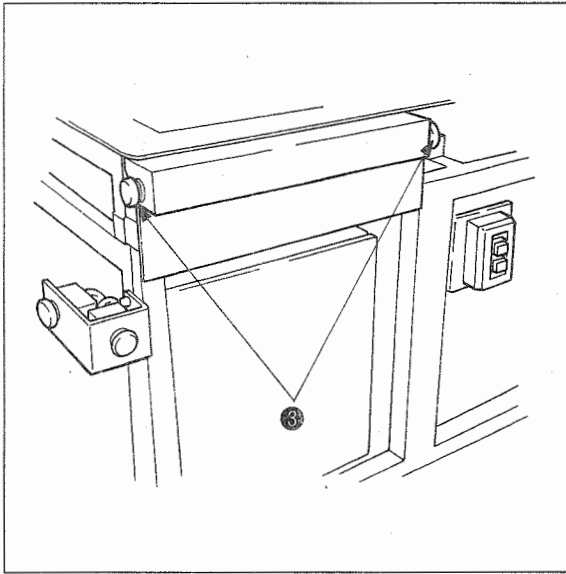
When setting completion switch ① is pressed, the folding unit comes down and “Key[⏏]=Start” will be shown on the standard screen of the display on the operation panel.

The air cylinder sequence will be carried out step by step by pressing the Screen change-over key . Sewing will also be carried out.

**(Caution)** The power switch should be turned off for the protection of the machine after the completion of the sequence (when the stacker operation completes).

**WARNING:**

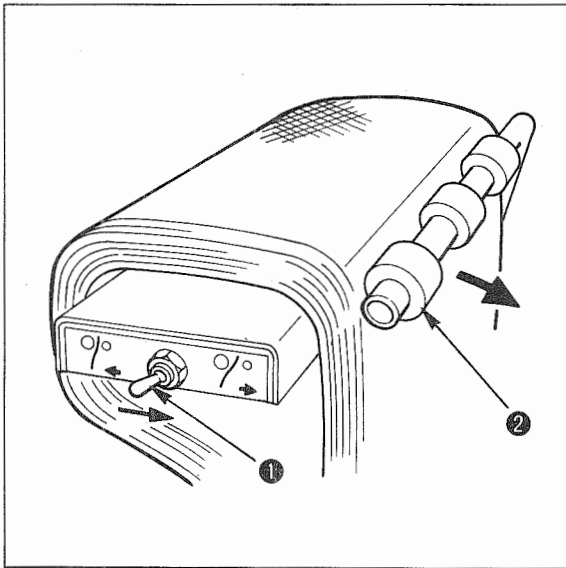
To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).



- 1) Once a pocket piece and a garment body are placed in position, press setting completion switches ③ by both hands. This will start the folding performance.

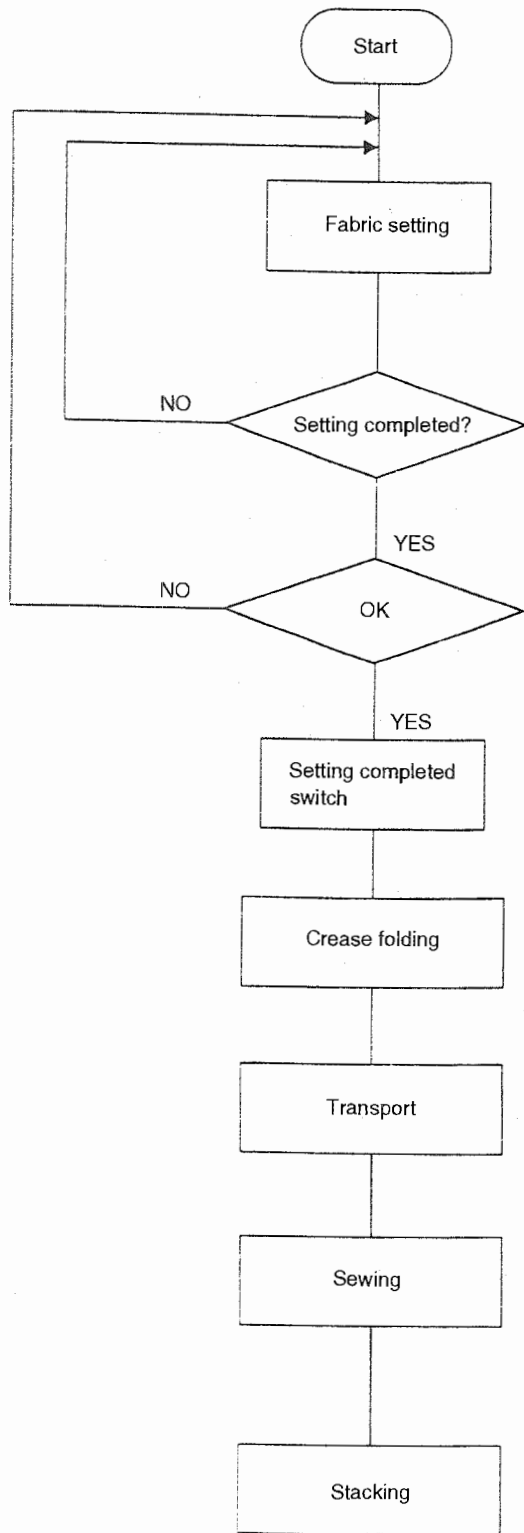
**(Caution)** 1. If a hand is left on the table, there is a danger that it will be caught between the table and the base plate during folding, so do not place a hand on the table.

2. There are setting completion switches ③ on both the right and left sides. For safety, operation starts only when both switches are pressed. Press with both hands.



- 2) Change over the set position of switch ① mounted on the left-hand side of the stacking board of the main unit of the stacker, and holder arm ② will shift in the direction of the arrow to allow you to remove the finished garment body.

**(Caution)** After the garment body is taken out from the stacker, be sure the change over the set position of the switch to the previous one. If not, the stacker will not normally operate.



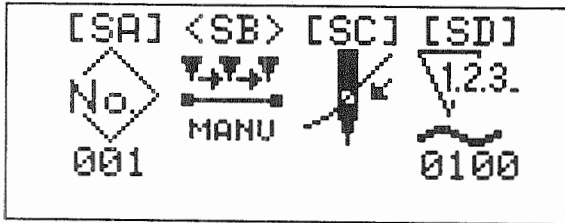
If the garment body position and pocket cloth position are correct, press the setting completed switch.

In automatic mode, transport, sewing and stacking are done automatically when crease folding is completed.

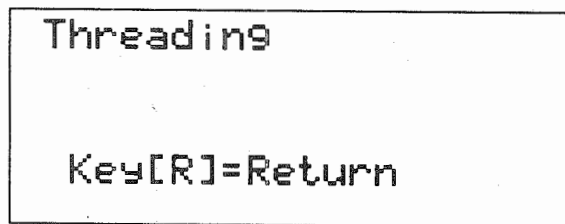
**WARNING:**

To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).



When the standard screen appears on the display, the holder is in the upper position. This makes it difficult to thread the needle eyelet. Select the threading mode to thread the needle.



Standard screen



Threading screen

- 1) Set pictograph number [SC]  in the "being corrected" state (the pictograph flashes on and off) on the standard screen and press the Screen change-over key .
- 2) The work clamp plunger and the holder come down and the threading screen will appear on the display.
- 3) After the needle is threaded, press the Reset key, and the holder and the work clamp plunger will go up and the standard screen will be restored on the display.

## 6 Setting/resetting the number of pieces counter

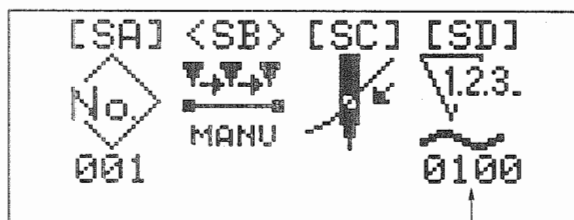


### WARNING:

To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

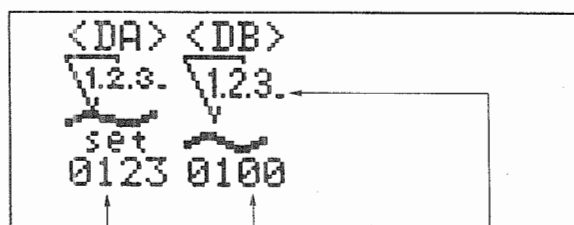
When the preset number of pieces specified is reached, the sewing machine will stop running. Either the count-up method or the count-down method can be specified for the number of pieces counter.

When the preset number of pieces specified is reached, the sewing machine will stop running. Either the count-up method or the count-down method can be specified for the number of pieces counter.



Standard screen

Number of pieces finished

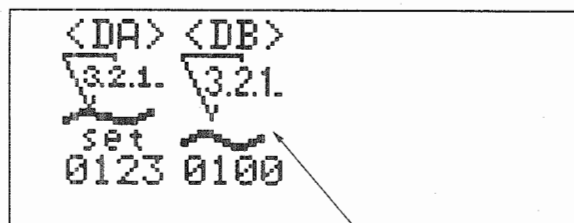


Number of pieces counter setting screen



Preset number of pieces


Number of pieces finished

Count-up method







Count-down method

- 1) Set pictograph number [SD]  in the "being corrected" state (the pictograph flashes on and off) on the standard screen and press the Screen change-over key .

- 2) The number of pieces counter setting screen appears on the display.
- 3) Set pictograph number <DA>  in the "being corrected" state on the standard screen and specify the number of pieces to be sewn using the numeric keys 0 through 9.

(Example) To set the number of pieces counter to 234, press the keys

,  and  in the written order.

- 4) Pressing the Screen change-over key  will change over the counting method of the counter between the count-up method and the count-down method.

#### Count-up method:








The counter, starting from "0000," adds one (1) to the value after one piece of pocket is finished.

When the preset number of pieces is reached, the machine will stop running.

#### Count-down method:

The counter, starting from the preset number of pieces specified, subtracts one (1) from the value after one piece of pocket is finished. When "0000" is reached, the sewing machine will stop running.

up or count-down method. In this case, the sewing machine will not stop running corresponding to the counter.

- 6) Set pictograph number [DB]  in the "being corrected" state and press the Reset key , and the number of pieces given on the counter will be reset (to "0000" for the count-up method or to the preset number of pieces for the count-down method).
- 7) Press the Standard screen key  on the number of pieces setting screen, the established data will be rendered ineffective and the standard screen will be restored on the display.
- 8) Confirm the specified value for the number of pieces counter and press the Enter key . The established set value will be rendered effective and the standard screen will be restored on the display.
- 9) Set pictograph number [SD]  in the "being corrected" state and press the Reset key , and the number of pieces given on the counter will be reset to the initial value. If the Reset key  is pressed after the initial value has been resumed, the initial value will be replaced by the number that has been shown on the counter before the initial value is resumed.

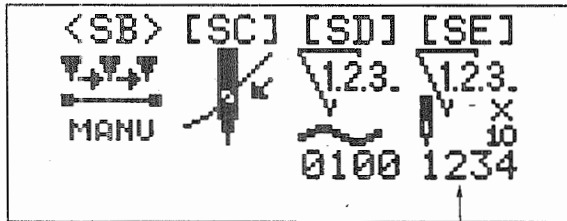
## 7 Setting/resetting the number of stitches counter



### WARNING:

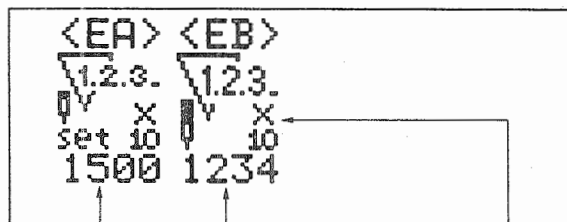
To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

When the sewing machine completes sewing and the value given on the counter exceeds the preset value, the machine will stop running to warn the operator to replace the bobbin thread. Either the count-up method or the count-down method can be specified for the number of stitches counter.



Standard screen

Number of stitches on the counter

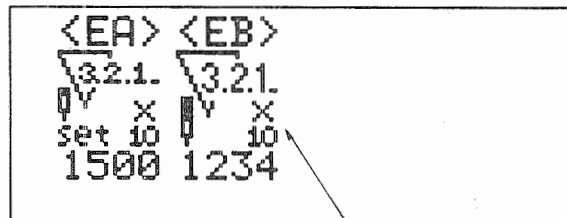


Number of stitches setting screen

Preset number of stitches

Number of stitches on the counter

Count-up method



Count-down method

- 1) After the standard screen appears on the display, press the jog key to shift data correcting position to the right four times, and the indication shown on the left will appear on the display.

Set pictograph number [SE] in the "being corrected" state (the pictograph flashes on and off) and press the Screen change-over key .

- 2) The number of stitches setting screen appears on the display.
- 3) Set pictograph number <EA> in the "being corrected" state on the standard screen and specify the number of stitches using the numeric keys 0 through 9.

(Example) To set the number of stitches counter to 1600, press the keys ,  and  in the written order.

- 4) Pressing the Screen change-over key will change over the counting method of the counter between the count-up method and the count-down method. If the number of stitches is set to "0000," the counter can be used as an endless counter.

- 5) If the Standard screen key is pressed on the number of stitches setting screen, the established value will be rendered ineffective and the standard screen will be restored on the display.

The set value will be rendered effective and the standard screen will be restored on the screen.

- 7) Set pictograph number [SE]  $\sqrt{1.23}$   $\frac{x}{10}$  in the "being corrected" state and press the Reset key **R**, and the number of stitches given on the counter will be reset to the initial value. If the Reset key **R** is pressed after the initial value has been resumed, the initial value will be replaced by the number that has been shown on the counter before the initial value is resumed.

SG- Bobbin automatic loader (AW-2)

if is auto is active  
if is manual is not active

SH- counts for the bobbin to  
replace the bobbin.

**(Caution)** The number of stitches shown on the counter is indicated in the unit of "indicated number x 10." For example, if "0160" is shown on the screen, the actual number specified for the number of stitches counter is 1600. This indicating method also applies to other specified values.

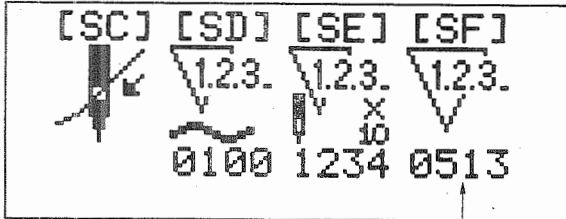
## 8 Indicating the total counter and resetting it



### WARNING:


To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).


The total counter indicates the total number of pieces finished.



Standard screen

Value on the total number of pieces counter

- 1) After the standard screen appears on the display, press the jog key  to shift data correcting position to the right four times, and the indication shown on the left will appear on the display.

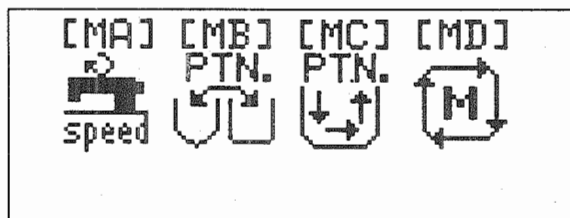
Set pictograph number [SF]  in the "being corrected" state (the pictograph flashes on and off) and press the Reset key **R**. This will clear the value shown on the counter to "0000."



**WARNING:**  
To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

Pressing the **M** mode selection screen key can invoke the mode selection screen on the display.

Note 1      Note 1

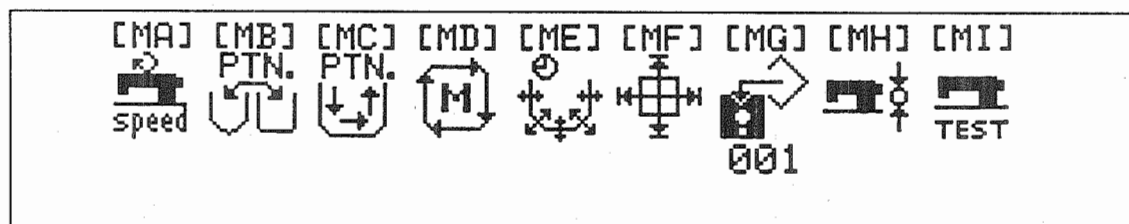


Mode selection screen

Then, many kinds of pictographs can be shown on the display by operating the jog keys ◀ ▶ to shift data correcting position to the right and left.

Note 1      Note 1  
Note 2

Note 1  
Note 2      Note 1




Entire mode selection screen

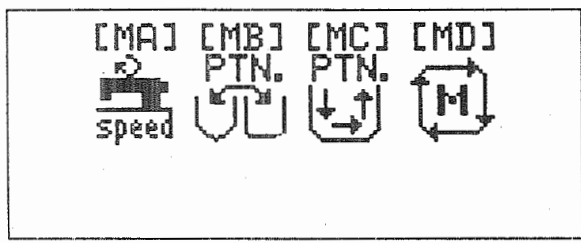
(Note 1) This indication is not given under the "operation mode."

(Note 2) This indication is not given if a sewing pattern has not been entered.



# 10 Setting the sewing speed

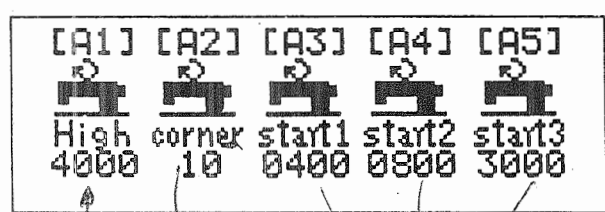
**WARNING:**  
 To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

The maximum sewing speed of the sewing machine can be specified within the range from 200 to 4,000 r.p.m. in increments of 100 s.p.m. It is also possible to limit the sewing speed at the corner sections of a pocket. Furthermore, the sewing speed to sew first three stitches at the start of sewing can be specified




Mode selection screen


1) Set pictograph number [MA]  in the "being corrected" state and press the Screen change-over key . This will invoke the sewing speed changing screen.




Sewing speed changing screen

2) The value specified for the pictograph that is being corrected can be changed using the numeric keys 0 through 9 and Plus and Minus keys.

3) If the Standard screen key  or M mode screen key is pressed, the established value will be rendered ineffective and the screen corresponding to the key pressed will appear on the display.


4) Confirm the set value for the sewing speed and press the Enter key . This will rendered the set value effective and the standard screen will be restored on the screen.

MAX Speed (Only four pictographs are shown on the LCD.)

corner speed.  
  
 outside and inside sewing

SET START.  
 1st, 2nd, 3rd stick  
 you can adjust the speed.  
 (you can input max. speed) of 4000 R.P.M.

RROM - Rev - 013C Version 2.00 (starting in this version from latest one)

 + #6 will give you the ~~latest~~ version information -



Data setting range: 200 to 4,000 (r.p.m.)



: Corner sewing speed

The sewing machine automatically decreases its sewing speed. In addition, the corner sewing speed is further limited to the specified one.

Data setting range: 1 to 10 (Standard value = 10 When it is set to "1," the minimum sewing speed is employed.)



: The sewing speed for the first stitch at the start of sewing is limited.

Data setting range: 200 to 4,000 (r.p.m.) Standard value = 400 (r.p.m.)



: The sewing speed for the second stitch at the start of sewing is limited.

Data setting range: 200 to 4,000 (r.p.m.) Standard value = 800 (r.p.m.)



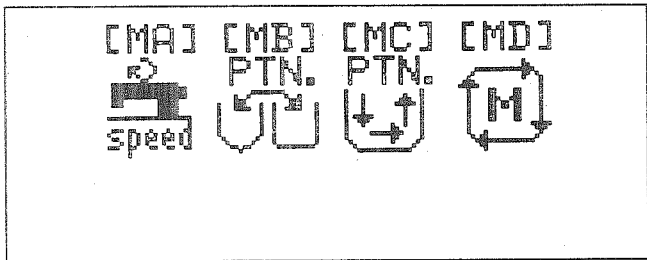
: The sewing speed for the third stitch at the start of sewing is limited.

Data setting range: 200 to 4,000 (r.p.m.) Standard value = 3,000 (r.p.m.)

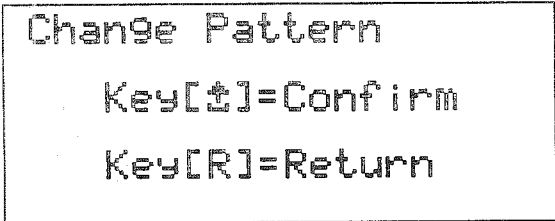


**WARNING:**



To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).





Mode selection screen

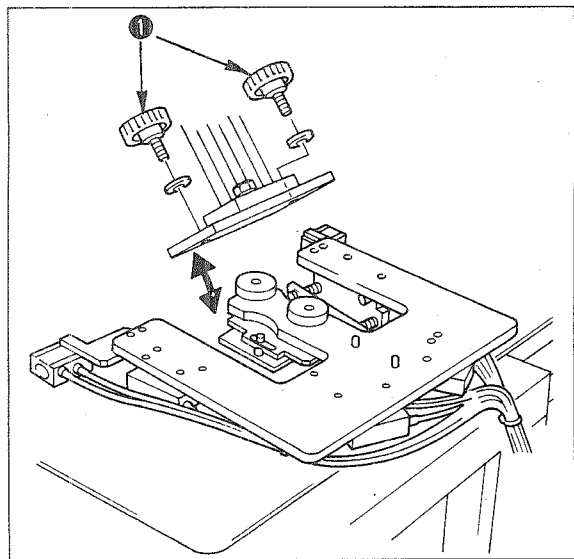


Pattern changing screen

- 1) Set pictograph number [MB]  in the "being corrected" state and press the Screen change-over key . This will invoke the pattern changing screen.

(Caution) When the mode indicator LED lights up (Run mode), the pictograph number [MB] is now shown on the display. In this case, press the Machine ready key  to make the machine enter the Standby mode.

- 2) Press the Screen change-over key  on the pattern changing screen, and the holder will stop at the standby position after the retrieval of origin. Furthermore, the air supply to the folding cylinder is cut off.

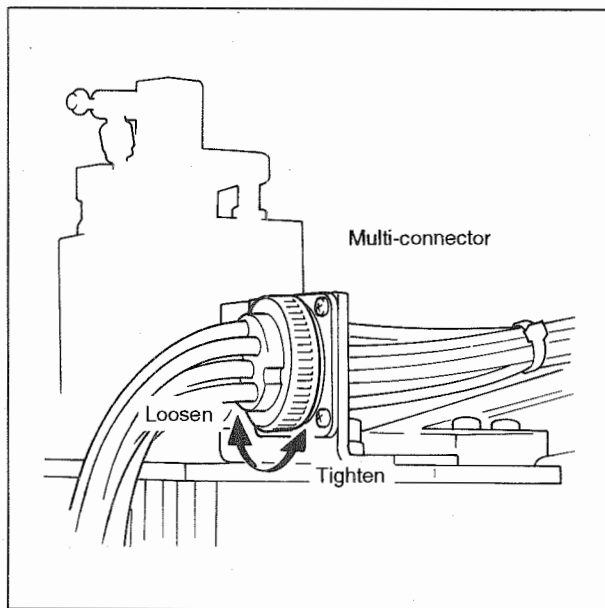
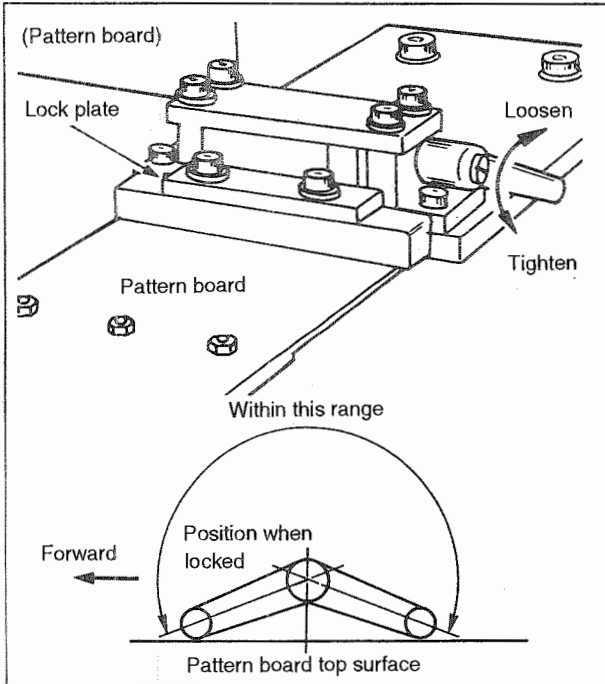
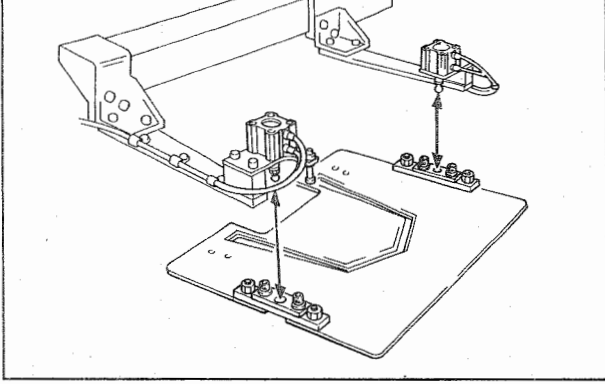


- 3) Remove screw ① and shift the pattern folding unit in the direction of the arrow until it comes off. Then, replace it with another pattern folding unit.

*to change the shape or size you have to change 3 part clam the folding device and the corner pocket (metal)*

*then check the shape for the new pattern. if doesn't go outside the area.*

*also [MC] you can check your pattern origin and walk through it.*



- 5) Remove the pattern and replace it with another pattern.  
Tighten the lock lever and the multiple connector.

**(Caution)**

1. If the lock lever is not placed within the illustrated range when it is locked, the lock lever can come in contact with other components, resulting in a sensor error and defective folding. Carefully determine the position of the lock lever.

Turning the lock lever while drawing it sideways can change the position of the lock lever in the locked state.

2. Be sure to press in the lock plate until its side face comes in contact with lock lever.

- 6) Press the Reset key **R**, and the air supply to the folding cylinder will re-start and the standard screen will be restored on the display.

- 7) Input the pattern number of the pattern attached in place of the previous one referring to "Setting a pattern number."

**(Caution)**

If you have changed the pattern, check to be sure that the pattern groove on the holder matches the sewing pattern referring to the description given in "Pattern checking procedure."

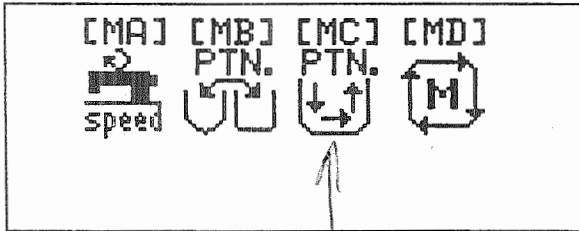
## 12 Pattern checking procedure



### WARNING:

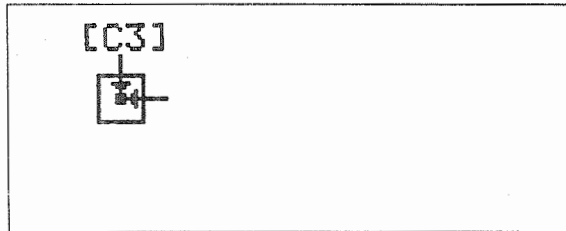
To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

In prior to the driving of the machine, check that the work clamp pattern matches the sewing pattern.

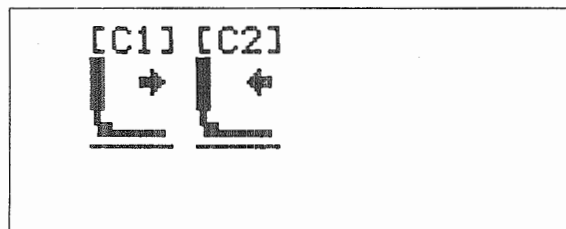


Mode selection screen



*this function*





Pattern checking screen (1)


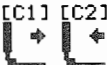




Pattern checking screen (2)



- 1) Set pictograph number [MC]  in the "being modified" state on the mode selection screen and press the SCREEN CHANGE-OVER key , and the pattern checking screen (1) will appear.




(Caution) When the mode indicator LED lights up (Run mode), the pictograph number [MC] is not shown on the display. In this case, press the Machine ready key  to make the machine enter the Standby mode.

- 2) Pictograph number [C3]  is in the "being modified" state on the pattern checking screen (1).

Press the SCREEN CHANGE-OVER key , and the sewing machine will travel to the origin, lower the holder and release the main shaft. Then, the indication  will appear on the pattern checking screen (2).

- 3) Set the [C1]  in the "being modified" state and press the SCREEN CHANGE-OVER key , and the feed block will travel forward by one stitch.

Set the [C2]  in the "being modified" state and press the SCREEN CHANGE-OVER key , and the feed block will travel backward by one stitch.

- 4) Press the Standard screen key  or the Mode screen key , and the sewing machine will resume the needle-up stop state, lift the holder and restore the screen corresponding to the key  pressed on the display.

*to check the pattern and walk thro it.*



: The sewing machine travels forward by one stitch.



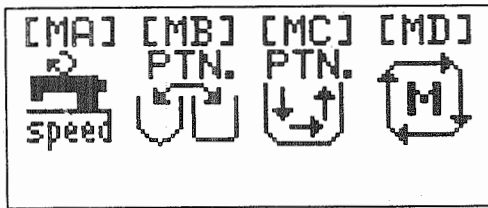
: The sewing machine travels backward by one stitch.



**WARNING:**

To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

Selection of whether or not the stacker is operated upon completion of sewing, selection of the material curl-up preventing function, selection of either the folding blades of the folder is operated one by one or all blades are operated together, and the selection of the timing of the label attaching cylinder can be made.



Mode selection screen

- 1) Set pictograph number [MD] in the "being corrected" state (the pictograph flashes on and off) and press the Screen change-over key .
- 2) The operation mode setting screen will appear on the display.
- 3) Set pictograph number <D1> in the "being corrected" state (the pictograph flashes on and off) and select the stacker operation using the Screen change-over key .



: The stacker operation is specified.

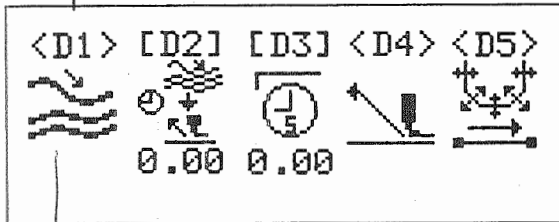


: The stacker operation is not specified.

*sticking* ↑

*Only if D1 is on for two functions this one available*

Note 1      Note 2



Operation mode changing screen (1)

- 4) In the case where the stacker operation is specified, the operating timing can be specified. Note 1 (In the case where the stacker operation is not specified, the pictograph number [D2] is not displayed.)

Set pictograph number [D2] in the "being modified" state (the pictograph flashes on and off) and specify the operating timing of the stacker by pressing the numeric keys 0 to 9.

The operating timing means the period of time (in seconds) from the start of operation of the stacker to the start of operation of the feed block.

*If two lines showing (not working) (off)*

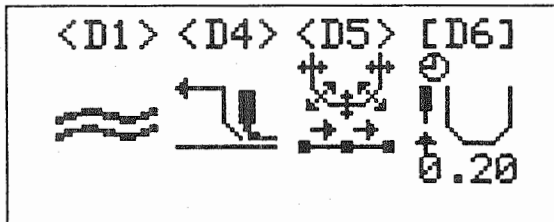
*If shows 3 lines (is working) (on)*

**Example) To set the operating timing to 0.20 second, input as    in the written order.**

- 5) When the stacker operation is specified, the operating time can be specified. Note 2 (When the stacker operation is not specified, the pictograph number [D3] is not shown on the display.)

Set pictograph number [D3] in the "being corrected" state (the pictograph flashes on and off) and specify the operating timing of the stacker by pressing the numeric keys 0 to 9.

The operating timing means the period of time (in seconds) from the start of operation of the work clamp bar of the stacker to the start of operation of the cloth spreading bar of the stacker.



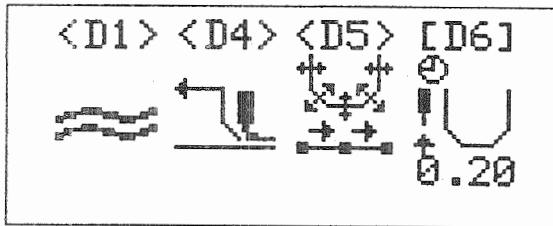
Operation mode changing screen (2)

*D2 → time from the stacker start to work to the sewing clam start to move*

*D3 → time between the two components of the stacker.*

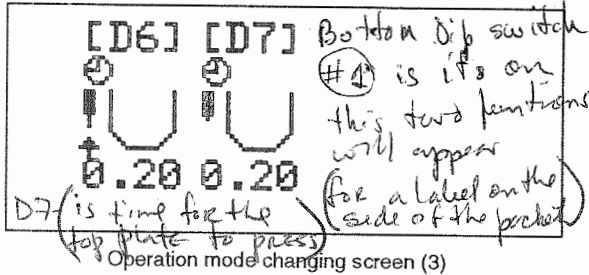
*→ D2 (Hold the material)*

*→ D3 (Put it on top of the one before)*



Operation mode changing screen (2)

Devices for label attaching always go out for loading the D6 is at which time the ATTACHMENT GO BACK AFTER THE PACKET IS FOLD.






Operation mode changing screen (3)


D4 - moving clam on the way back to pick another two pieces of material. it has to lift there is two ways of lifting one gradually and fast the other stop after been outside needle area go up then move forward.

D5 -> for the movement of the blades of folding one big arrow on the buttons all together two little arrows one by one by pressing the op key (can only be seen if you are on the step mode) [3B] STEP SEWING


(in manual or auto mode this feature will NOT work)

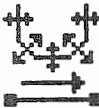
- Set pictograph number <D4>  in the "being corrected" state (the pictograph flashes on and off) and select, using the Screen change-over key , the material curl-up preventing function performed by the work clamp.

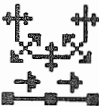
FAST  : The curl-up preventing function is not specified.


SLOW  : The curl-up preventing function is specified.

**(Caution) If the curl-up preventing function is specified, the cycle time will be lengthened.**

- Set pictograph number [D5]  in the "being corrected" state (the pictograph flashes on and off) and select the operation of the folding blades of the folder.


 : The folding blades of the folder operate together.

 : The folding blades of the folder operate one by one.

- Setting the label attaching cylinder timing  
Set pictograph number [D6]  in the "being corrected" state (the pictograph flashes on and off) and specify the operating timing of the cylinder by pressing the numeric keys 0 to 9.


The operating timing means the period of time from the completion of the folding action of the folder to the start of the operation of the label attaching cylinder.

Example) To set the delay time to 0.20 second, input as [0] [2] [0] in the written order.

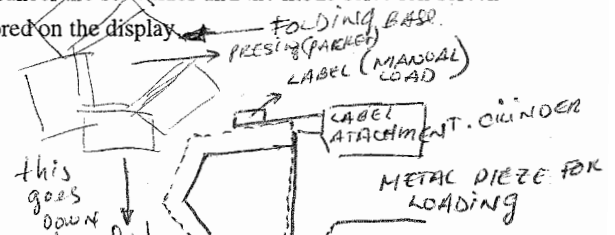
- Set pictograph number [D7]  in the "being corrected" state (the pictograph flashes on and off) and specify the delay time by pressing the numeric keys 0 to 9.

The delay time means the period of time from the completion of the label attaching cylinder operation to the release of the folder from the folding action.

**(Caution) The setting of ON/OFF timing of the label attaching cylinder is permitted only when the label attaching is specified by the relevant DIP switch. (See page 50 for how to select the label attaching.)**

- Upon completion of the aforementioned procedure steps, press the Enter key .

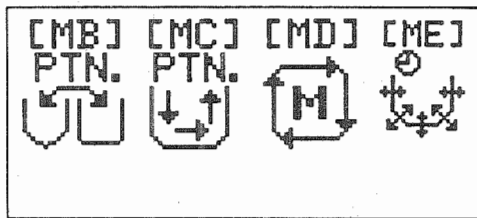
- Pressing the Reset key **R** on the operation mode changing screen will cancel the set values and the mode selection screen will be restored on the display.



**WARNING:**

To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

This function is used to change the operating order of the folding cylinder or stop the cylinder.



Mode selection screen

*lines or second*

A1	ON	0.10	OFF	0.05
A2	ON	0.20	OFF	0.10
A3	ON	0.30	OFF	0.30
A4	ON	0.10	OFF	0.10
A5	ON	----	OFF	----
B	ON	0.30	OFF	0.30

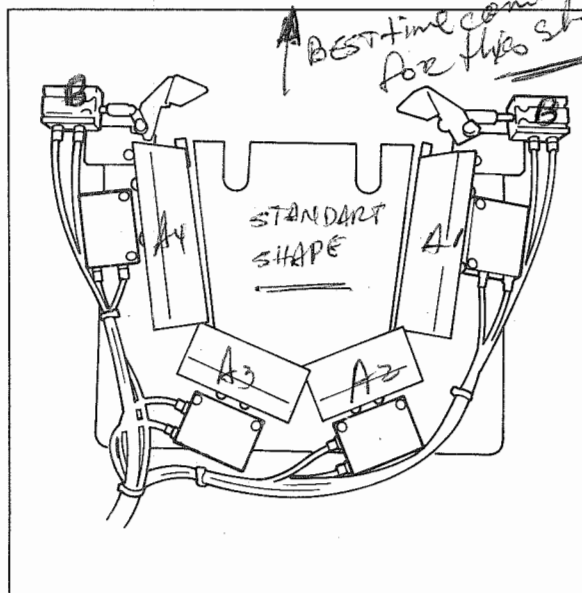
Folding time changing screen

- 1) Set pictograph number [ME] in the "being corrected" state (the pictograph flashes on and off) on the mode selection screen and press the Screen change-over key .

*This is for changing the timing of the operation of the folders (for slaps)*

- 2) The folding timing changing screen will appear on the display. Operating timings of the folding cylinders A1 through B are given on the screen. The numeric value following the "ON" indicates the delay time from the start of folding to the actuation of the cylinder. The numeric value following "OFF" indicates the delay time (ms) from the completion of folding to the returning of the cylinder.

The dotted line (—) indicates that no operation takes place.



*more shape on page 63 or E.M*

To change the A3 cylinder

- ① Press the jog keys to shift data correcting position to the right and left to select the ON time of the A3 cylinder.
- ② Specify the set time by pressing the numeric keys 0 to 9. (Data setting range : 0.00 to 9.95)
- ③ To make the A3 cylinder inoperative, press the Screen change-over key . The indication — will appear on the screen.
- ④ Press the Enter key , and the newly established numeric value will be stored in memory.

If the Standard screen key or the M mode screen key is pressed before pressing the Enter key , the established values will be rendered ineffective and the screen corresponding to the key pressed will be given on the display.

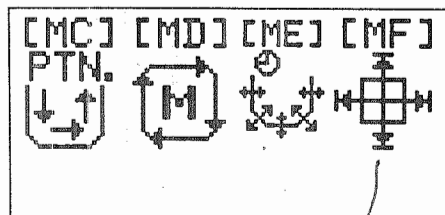
## 15 Changing the folding position



### WARNING:

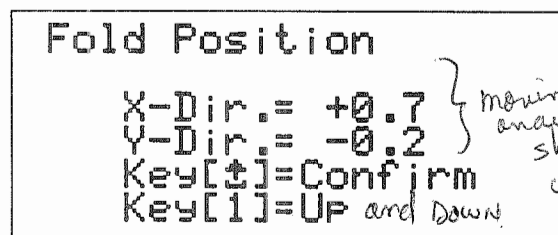
To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

The position of the pattern board and the holder can be adjusted in increments of 0.1 mm up to the back and forth and right and left within 9.9 mm.



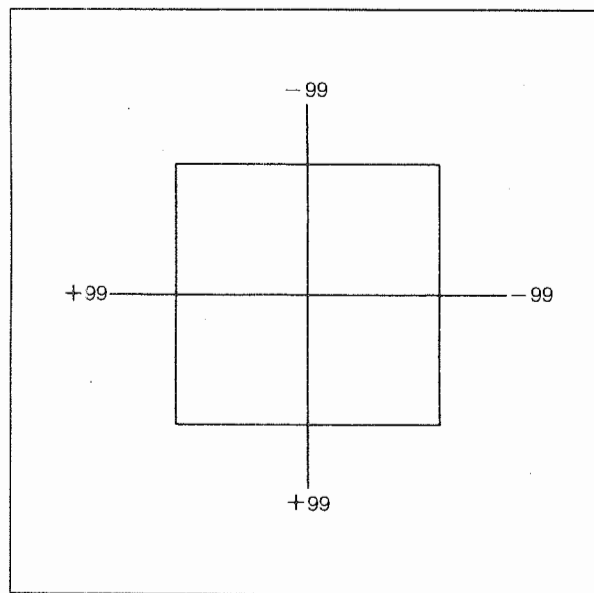
Mode selection screen

*to get inside press the arrow twice*



Folding position changing screen

*what you are moving is only the relation between the folding pocket and the sewing stitches not the sewing area*



- 1) Set pictograph number [MF] in the "being corrected" state (the pictograph flashes on and off) on the mode selection screen and press the Screen change-over key .
- 2) The folding position changing screen will appear on the display. Press the Screen change-over key , and the machine will retrieve the origin. After the origin is retrieved, the holder travels to the folding position and rests in the standby state.

**(Caution)** The machine automatically performs the aforementioned procedure. Do not play your hand or any matter on the table.

- 3) Press the switches given below in this state, and the corresponding operation will take place.

Numeric key 4: The folding position shifts 0.1 mm to the positive (left) direction in terms of the X direction.

Numeric key 6: The folding position shifts 0.1 mm to the reverse (right) direction in terms of the X direction.

Numeric key 2: The folding position shifts 0.1 mm to the positive direction (toward you) in terms of the Y direction.

Numeric key 8: The folding position shifts 0.1 mm to the reverse direction (away from you) in terms of the Y direction.

Numeric key 1: If this key is pressed when "UP" is indicated on the screen, the work clamp will go up and the indication "DOWN" will replace "UP" on the screen. If this key is pressed when "DOWN" is indicated on the screen, the work clamp will come down and the indication "UP" will replace "DOWN" on the screen.

Screen change-over key : The work clamp goes up, travels to the standby position and to the folding position.

Press the Enter key , and the specified data will be stored in memory and the holder will travel to the standby position.

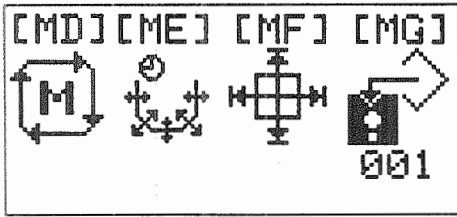
- 5) If the Reset key **R** is pressed instead of the Enter key , the established data will be canceled and the holder will travel to the standby position.

*\* Caution After this data is change you have to come to the floppy disk with [MG] the the arrow*



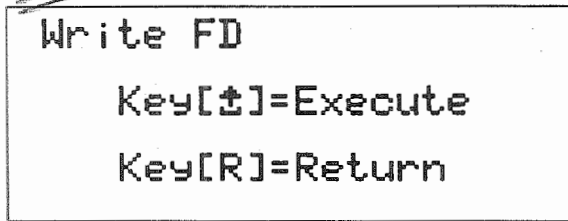
**WARNING:**  
To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

This function is used to write data on the sewing machine speed, folding timing and folding position on a floppy disk.







Mode selection screen

*Caution*




Floppy disk writing screen

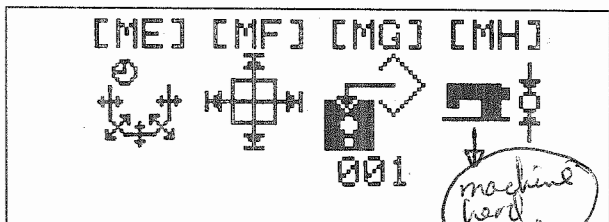
- 1) Set pictograph number [MG]  in the "being corrected" state (the pictograph flashes on and off) on the mode selection screen and press the Screen change-over key .
- 2) Press the Enter key , and the established data on the sewing machine speed, folding timing and folding position will be written on the floppy disk. Upon completion of writing, the mode selection screen will be restored on the display.

If the Reset key **R** is pressed instead of the Enter key , no operation will be performed and the mode selection screen will be restored on the display.





# 17 Adjusting the sewing machine head

**WARNING:**  
 To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

This function is used to operate only the machine head. Use this function for maintenance.

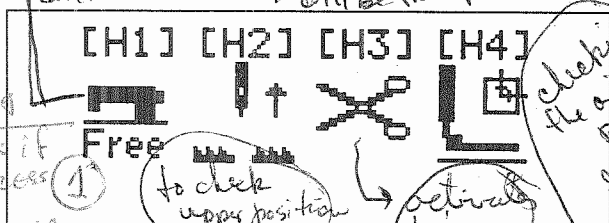


Mode selection screen





- 1) Set pictograph number [MH]  in the "being corrected" state (the pictograph flashes on and off) on the mode selection screen and press the Screen change-over key .
- 2) Set pictograph number [H1]  in the "being corrected" state (the pictograph flashes on and off) on the mode selection screen and press the Screen change-over key , and the indication on the display will change to allow the main shaft of the sewing machine to be turned by hand.

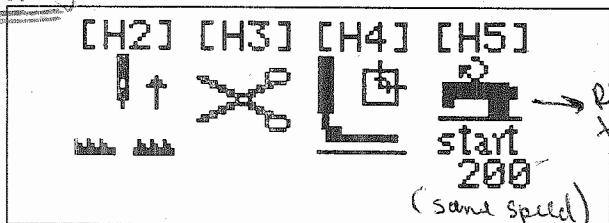
(Normally, the main shaft of the sewing machine cannot be turned by hand since the servo-motor is working.)

After the main shaft is released, the main shaft release screen will appear on the display. If the R reset key is pressed, the main shaft of the machine can be returned to the upper stop position.







Sewing machine head adjusting screen (1)

- 3) Set pictograph number [H2]  in the "being corrected" state (the pictograph flashes on and off) on the mode selection screen and press the Screen change-over key . This will move the main shaft of the sewing machine to the upper stop position.
- 4) Set pictograph number [H3]  in the "being corrected" state (the pictograph flashes on and off) on the mode selection screen and press the Screen change-over key . This will make the thread trimmer actuate.



Sewing machine head adjusting screen (2)

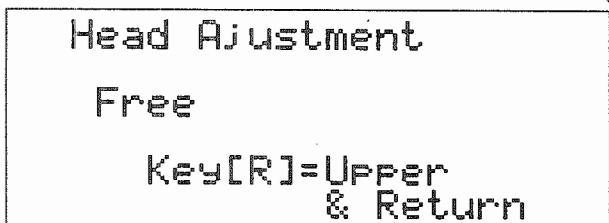
- 5) Set pictograph number [H4]  in the "being corrected" state (the pictograph flashes on and off) on the mode selection screen and press the Screen change-over key . This will cause the machine to retrieve the origin and move the holder to the standby position at which the plate waits for the material.
- 6) Set pictograph number [H5]  in the "being corrected" state (the pictograph flashes on and off) on the mode selection screen and press the Start switch . This will change the indication on the display over to the sewing machine drive screen.

On this screen, the sewing machine can be driven or stopped by operating the Start switch. The sewing machine can be stopped by operating the R reset key.

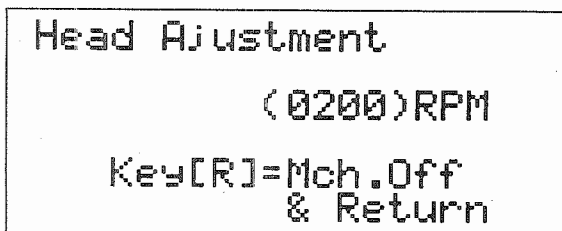
The rotating speed given on the screen will be employed. It is possible to change the sewing speed by operating the + key or - key.

The rotating speed given on the screen will be employed. It is possible to change the sewing speed by operating the + key or - key.

The rotating speed given on the screen will be employed. It is possible to change the sewing speed by operating the + key or - key.



Main shaft release screen



Sewing machine drive screen

**(Caution)** To drive the sewing machine, remove both the needle thread and the bobbin thread. If not, the thread can be entangled in the hook, causing a sewing failure.

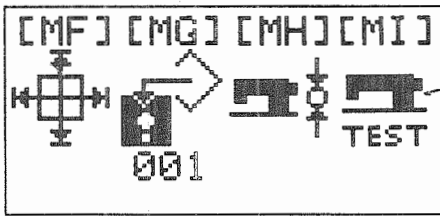
- 7) Press the M Mode screen key, and the sewing machine head adjusting operation will complete and the mode selection screen will be restored.





**WARNING:**

To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).


This function is used to confirm only stitching performance while the folder is not used.



Mode selection screen

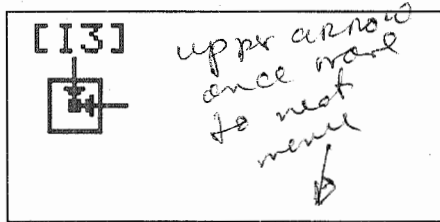
1) Set pictograph number [MI]  in the "being corrected" state (the pictograph flashes on and off) on the mode selection screen and press the Screen change-over key .

2) The test sewing screen (1) will appear on the display.

3) Press the Screen change-over key , and the machine will retrieve the origin. After the origin is retrieved, the machine will travel to the sewing start position and gives the test sewing screen (2) on the display.

4) Place the material to be sewn directly under the holder and press the setting release switch, and the holder will come down to clamp the material. Press the setting release switch again, and the holder will go up.


**(Caution) Be careful not to allow your hands, etc. to be caught in the holder.**



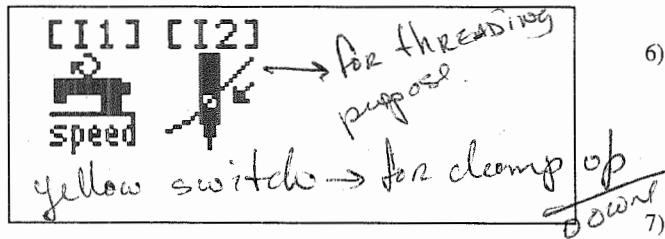
Test sewing screen (1)

5) Press the right and left setting completion switches simultaneously, and the sewing machine will start sewing. Upon completion of sewing, the machine will return to the sewing start position and the holder will go up.

6) If you want to conduct test sewing again, place the material to be sewn in position and repeat the aforementioned steps of procedure by pressing the setting release switch and the setting completion switches.

7) Press the  Mode key to restore the mode selection screen.

8) The operation modes such as "Changing the sewing speed" and "Threading" can be selected on the test sewing screen (2). Refer to ". Setting the sewing machine speed" and "Threading" for how to use the respective operation modes.



Test sewing screen (2)

to green together for a list of options next page

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## When the compressed air pressure is too low

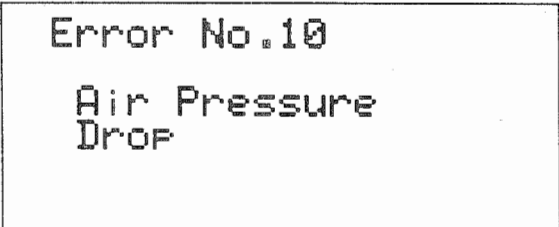


### WARNING:

To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

If the compressed air is not supplied to the machine, or if the air pressure drops from the specified one, the machine will stop running and give the relevant error screen on the display.

(1) In the case where the compressed air is not supplied to the machine at the time when turning on the power to the machine

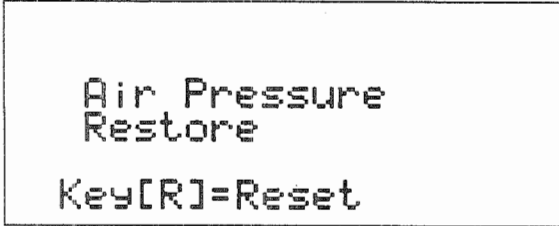


Error No.10  
Air Pressure  
Drop

Air pressure drop error screen

- 1) The air pressure drop error screen will be shown on the LCD.  
Supply the compressed air to the machine.

(Caution) The folding base plate goes up when the compressed air is supplied to the machine. It is necessary to carefully open the air cock and keep your face away from the space above the base plate.



Air Pressure  
Restore  
Key[R]=Reset

Air pressure restoring screen

- 2) When the compressed air is supplied to the machine, the air pressure restoring screen will appear on the display.
- 3) Press the **R** reset key, and the standard screen will be restored on the display.

Error Stop

Key[9]=Re-Start

Key[0]=Origin

Start/return to origin screen

- 1) After the carrier unit stops running, the air pressure drop error screen will appear on the display.
- 2) When the normal compressed air pressure is reached, the air pressure restoring screen will replace the error screen. Press the Reset key **R**, and the start/return to origin screen will appear on the display. Press the **9** key, and the machine will re-start running. Press the **0** key, and the machine will cause the work clamp to go up and return to the initial state. The standard screen will be given on the display.


(3) In the case where the compressed air pressure drops while the machine is engaged in sewing

Error Stop

Key[+] = Trimming

Key[9] = Re-Start

Thread trimming/start screen

- 1) After the machine stops running, the air pressure drop error screen will appear on the display.
- 2) Once the normal compressed air pressure is reached, the air pressure restoring screen will replace the error screen. Press the Reset key **R**, and the thread trimming/start screen will be given on the display. Press the Screen change-over key , and the thread trimmer will be actuated. Press the **9** key, and the machine will start running.

(4) In the case where the compressed air pressure drops during idling

Error Stop

Key[+] = Threading


Key[9] = Re-Start

Key[+] = Forward

Key[-] = Backward

Key[0] = Origin

Thread trimming/start screen

- 1) After the holder stops, the air pressure drop error screen will appear on the display.
- 2) Once the normal compressed air pressure is reached, the air pressure restoring screen will replace the error screen. Press the Reset key **R**, and the thread trimming/start screen will be given on the display. Press the Screen change-over key , and the thread trimming screen will appear on the display. Press the **9** key, and the machine will resume the operation. At this time, the standard screen will be restored on the display. Press the **+** key to shift the holder forward by one stitch. Press the **-** key to shift the holder backward by one stitch. Press the **0** (zero) key to return the holder to the sewing end position to retrieve the state of the machine under which the machine rests before starting sewing.

*↑ This screen  
or the previous  
one in ~~that~~ depends*

## 19 In the case of needle thread breakage



### WARNING:

To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

Error No.21

Needle Thread  
Breakage

Key[R]=Reset

Needle thread breakage error indicating screen

Error Stop

Key[+] = Trimming  
Key[9] = Re-Start

Thread trimming/start screen

Error Stop

Key[+] = Threading  
Key[9] = Re-Start  
Key[+] = Forward  
Key[-] = Backward  
Key[0] = Origin

Needle threading/start screen


Error Stop


Threading

Key[R]=Return

Needle threading screen

- 1) In the case where the needle thread breaks, the needle thread breakage error indicating screen will appear on the display.
- 2) Press the Reset key **R**.
- 3) This invokes the thread trimming/start screen on the display.

- 4) Press the Screen change-over key  to actuate the thread trimmer. Then, the needle threading/start screen will appear on the display.  
Press the **9** key to resume sewing. The standard screen will be restored on the display.

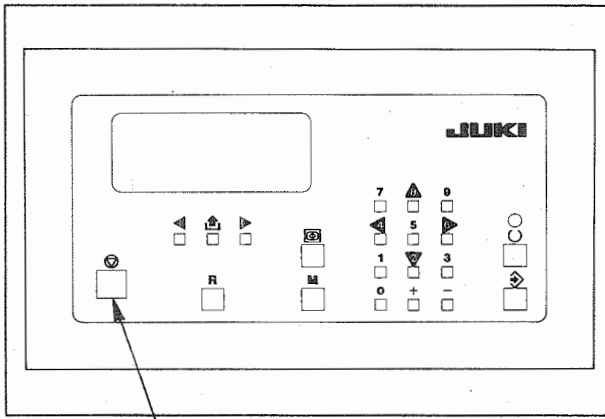
- 5) Needle threading/start screen  
Press the Screen change-over key  to invoke the needle threading screen.  
Press the **9** key to resume sewing. The standard screen will be restored on the display.  
Press the **+** key to shift the holder forward by one stitch.  
Press the **-** key to shift the holder backward by one stitch.  
Press the **0** (zero) key to return the holder to the sewing end position to retrieve the state of the machine under which the machine rests before starting sewing.

- 6) Needle threading screen  
Since the holder is in the lower position when this screen is given on the display, the needle can be threaded.  
Press the Reset key **R** to restore the needle threading/start screen.



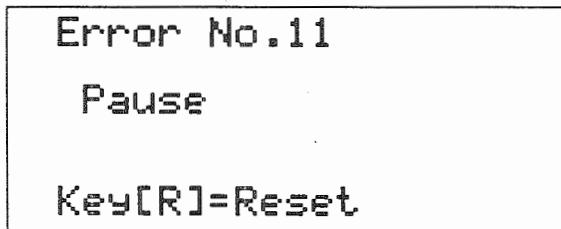
**WARNING:** To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

The pause switch can be used to stop the X-Y drive.



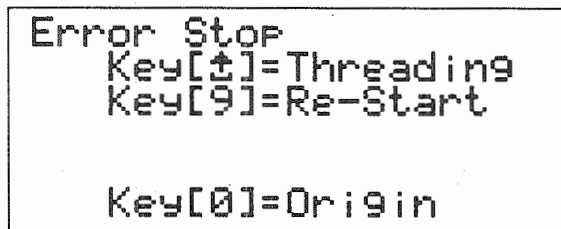
Pause switch

**(Caution)** Since this switch stops the X-Y drive, it will not put the folder or stacker on hold.




Pause screen

- 1) When the Pause switch is pressed, the pause screen will appear on the display.
- 2) Press the Reset key **R** . After resetting, the start/holder reset screen or the thread trimming/start screen will appear on the display.



Start/holder reset screen

- 3) Start/holder reset screen  
This is the reset screen that appears when the pause switch is pressed while a material is being carried.

Press the Screen change-over key  to invoke the needle threading screen.

Press the **9** key to resume the subsequent operation. At this time, the standard screen will appear on the display.

Press the **0** (zero) key to lift the holder and retrieve the initial start. At this time, the standard screen will appear on the display.

```
Error Stop
Key[†]=Trimming
Key[9]=Re-Start
```


Thread trimming/start screen


```
Error Stop
Key[†]=Threading
Key[9]=Re-Start
Key[+]=Forward
Key[-]=Backward
Key[0]=Origin
```

Needle threading/start screen

```
Error Stop
Threading
Key[R]=Return
```

Needle threading screen

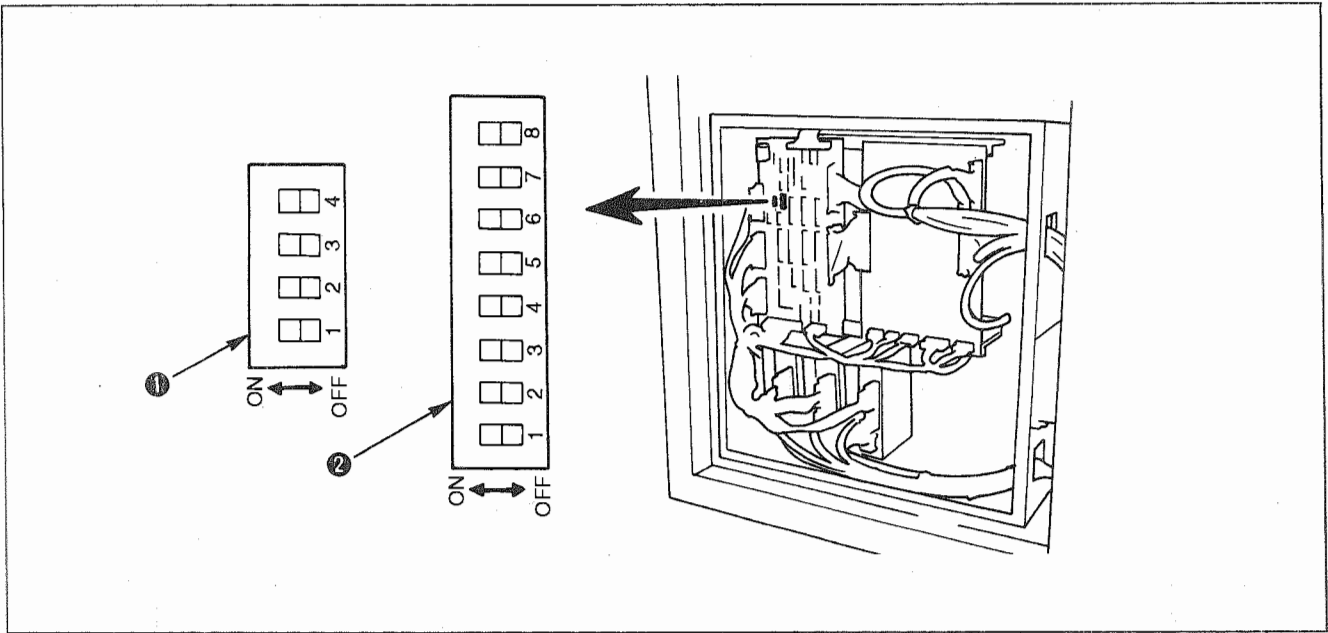
- 4) Press the Screen change-over key  to perform thread trimming. Then, needle threading/start screen will be given on the display.  
If the **9** key is pressed, the machine will re-start sewing and restore the standard screen on the display.

- 5) Needle threading/start screen  
Press the Screen change-over key  to invoke the needle threading screen.  
Press the **9** key to resume sewing. The standard screen will be restored on the display.  
Press the **+** key to shift the holder forward by one stitch.  
Press the **-** key to shift the holder backward by one stitch.  
Press the **0** (zero) key to return the holder to the sewing end position to retrieve the state of the machine under which the machine rests before starting sewing.

- 6) Needle threading screen  
Since the holder is in the lower position when this screen is given on the display, the needle can be threaded.  
Press the Reset key **R** to restore the needle threading/start screen.

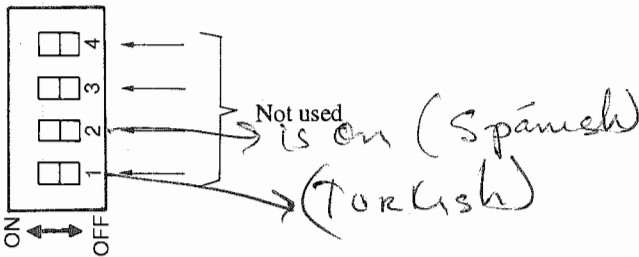


**WARNING.** To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

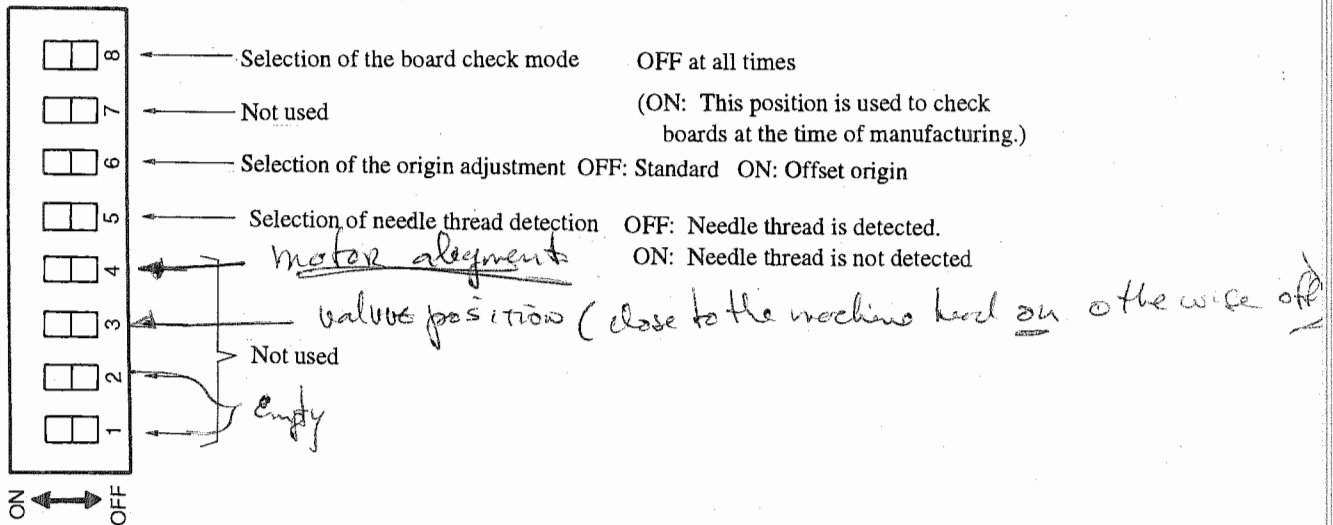


*Main BOARD for languages*

① DIP SW1



② DIP SW2



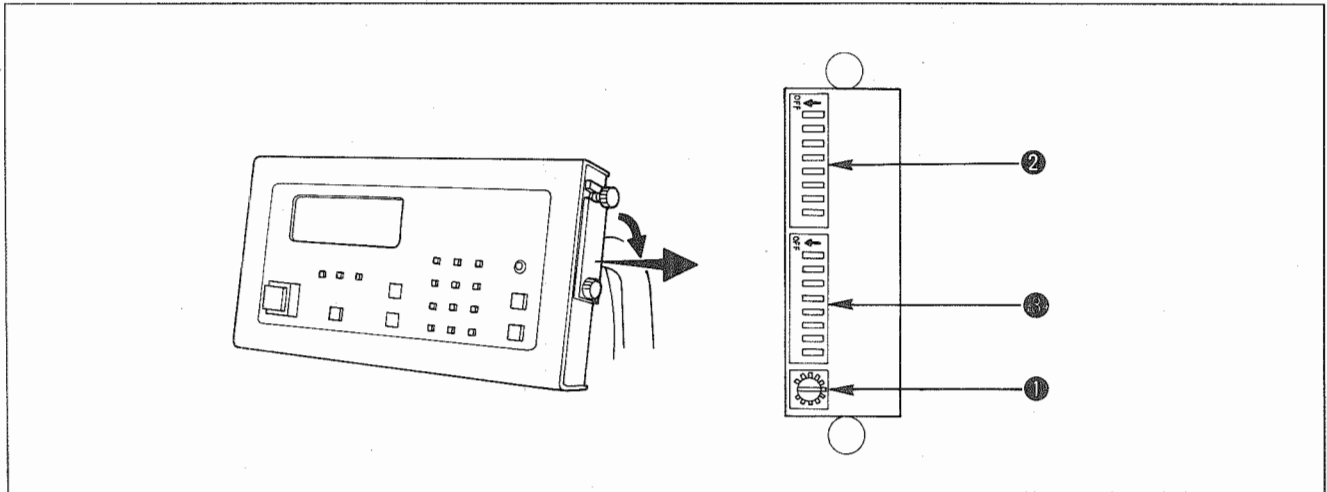
\* All the DIP switches have been factory-set to OFF at the time of delivery.

22 Explanation of the variable resistor and DIP switches in the operation panel



**WARNING:**

To avoid possible accidents caused by abrupt start of the machine, check to be sure that no one places hand, finger and face or any tool in the moving part of the main unit before operating the switches (keys).

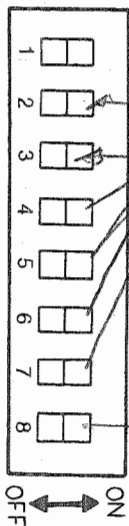


(1) Explanation of function

① VR (variable resistor)

This variable resistor is used to adjust the visibility of the liquid crystal display. The visibility of the LCD delicately varies in accordance with the viewing angle and ambient temperature. Use this variable resistor for adjustment.

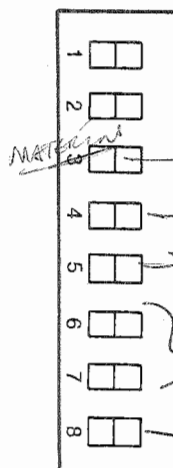
② DIP 1



← maintenance mode ③  
 ← NOT USE -  
 ← key lock for the panel

Selection of maintenance mode ② (max function they w/out)  
 OFF: Standard  
 ON: Pictographs representing the adjusting items on the mode selection screen.

③ DIP 2



← vacuum control by pedal  
 ← speed of feeding off - 4600  
 ← Holding plate control by pedal. 0w-3500  
 ← combination for remaining thread of AW-2  
 ← this is for AW-2  
 0w-actual  
 off-not actual

Selection of label attaching  
 To be selected when the label attaching device has been optionally added to the machine.  
 OFF: Not selected  
 ON: Selected

Selection of delay for the lowering of work clamp  
 A delay time can be added to the period from the time when the work clamp (large) has come down at the folding position to the time when the pattern board starts to go backward.  
 OFF: Delay time is not added.  
 ON: Delay time is added.

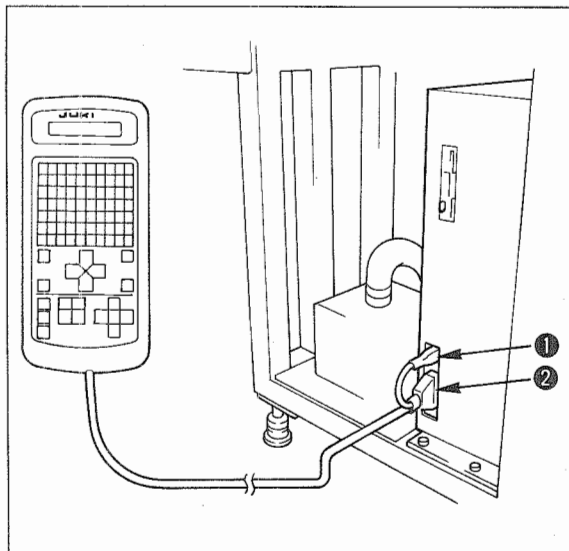
The PGM-6 Handy Input Device is needed for pattern creation and collection. Please refer to the PGM-6 Instruction Manual.  
 When used with the AVP-875, the following functions can be used. Other functions cannot be used, so use caution.

*for 3rd function #2 (same as 2nd) then select (3) → size SA9 from that point*

7	A Pattern deletion 	B One-turn 	C Mark 1 	D	E	F External output 	G Floppy format 	H Stitch length change 	I <i>this signal is only on/off (on all principle offset line)</i>	
6	Temporary change in the sewing speed 	Jump 	Mark 2 			External input 		<i>change Pitch any area on the zig zag with a equal</i>	Linear apex movement (relative) 	Linear apex movement (absolute) 
5	Changing the point speed 	Point sewing 				Delay 		Pattern movement 	Linear apex deletion (relative) 	Linear apex deletion (absolute) 
4		Circle sewing 		Circle offset sewing 	Circle double-stitch, normal-feed sewing 	Circle double-stitch, normal-feed sewing 		Point symmetry 		
3	Temporary stop 	Arc sewing 		Arc offset sewing 	Arc double-stitch, normal-feed sewing 	Arc double-stitch, normal-feed sewing 		Y symmetry 	Element deletion 	Element deletion 
2	Second origin 	Spline sewing 		Spline offset sewing 	Spline double-stitch, normal-feed sewing 	Spline double-stitch, normal-feed sewing 	Pattern writing 	X symmetry 	Point movement (relative) 	Point movement (absolute) 
1	Thread trimming 	Linear sewing 		Linear offset sewing 	Linear double-stitch, normal-feed sewing 	Linear double-stitch, normal-feed sewing 	Pattern reading 	Referring to the set value 	Point deletion (relative) 	Point deletion (absolute) 

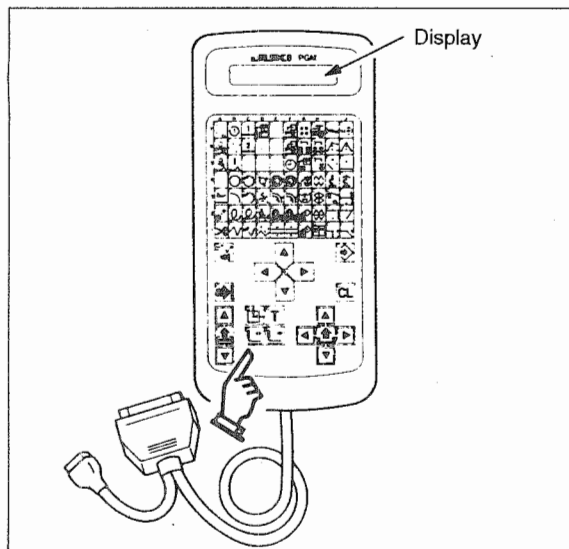
④ to put the PGM-6 online with machine press FORWARD key and power on  
 yellow → lift or down (clamp)



## 1. PGM-6 connection



Confirm that power is OFF, then connect the PGM-6 connectors to the sewing machine main unit power relay connector ① and signal connector ②.

## 2. Starting the PGM-6



While pressing the  key on the PGM-6, turn the power to the main unit ON. The  key should be pressed until ON-LINE appears on the PGM-6 display.

The holder moves to the origin, then lowers and waits for PGM-6 input.

If it is desired to insert fabric under the holder, press the (yellow) set release switch; then the presser rises. When the (yellow) setting release switch is pressed again, the holder lowers.

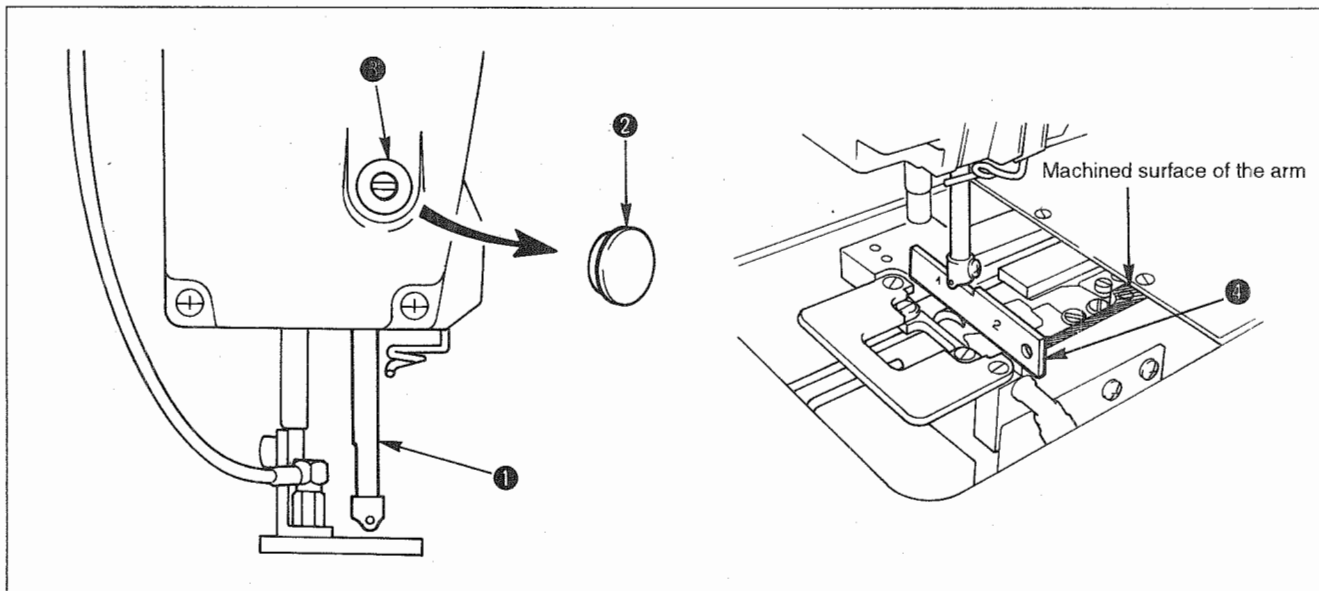
**(Note)** If the holder is moved without a material fabric or paper placed under the holder, the sponge attached on the reverse side of the holder can come off. Be sure to place a material fabric or paper under the holder and check the pattern entered.

## 1. Adjusting the height of the needle bar



### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



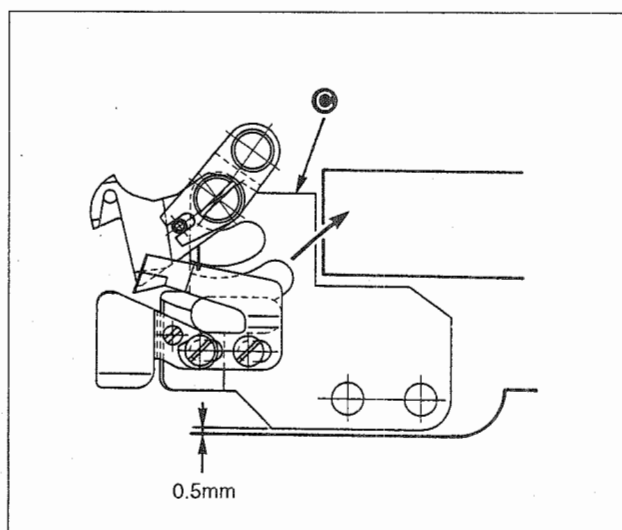
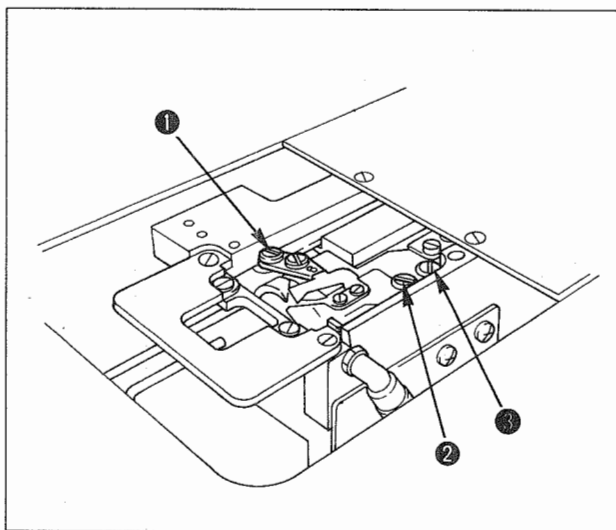
Move needle bar ① to the lowest position of its stroke. Align the lower end of the needle bar with the top surface of hook timing gauge ④ on "1" side. Then, remove cap ② and loosen needle bar connecting stud screw ③. Now, conduct adjustment works.

## 2. Needle and hook adjustment

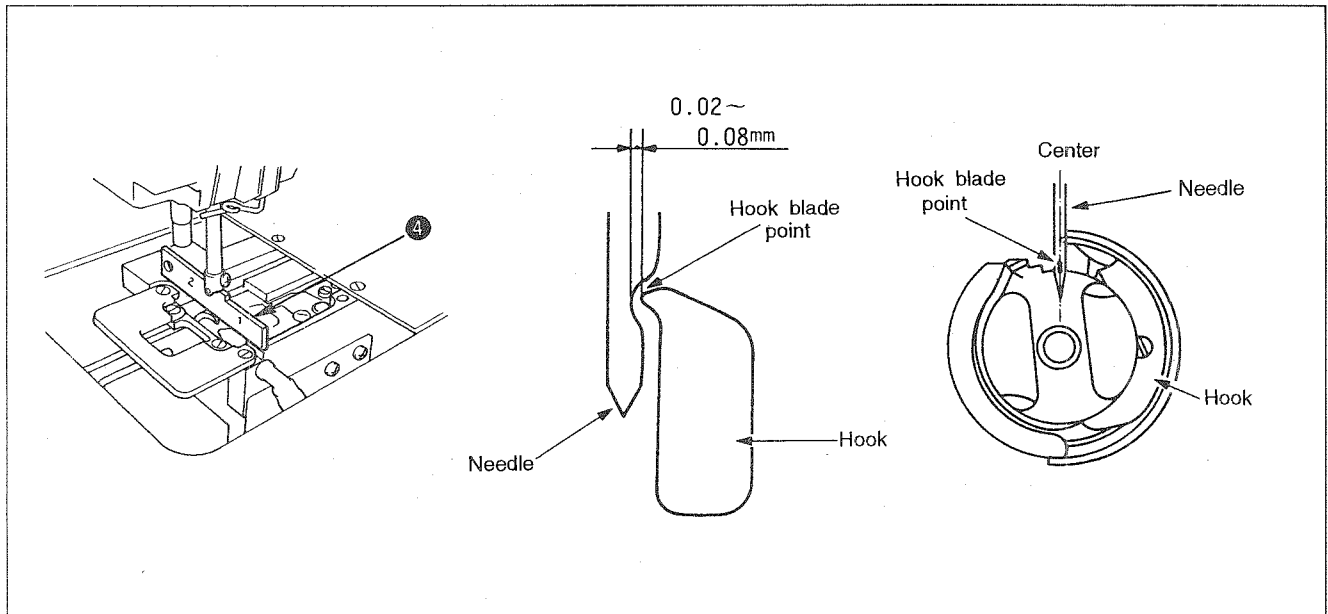


### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



- 1) Remove the throat plate (front side) from the bed surface.
- 2) Remove the screws in the order ①②③, then remove trimmer mounting base ④ from the bed surface.



- 3) Adjust so that the lower end of the needle bar is aligned with the top surface of hook timing gauge ④ on "2" side, a clearance of 0.02 to 0.08 mm is provided between the needle and the blade point of the inner hook and the blade point of the hook meets the center of the needle. Then, tighten three screws that are used to secure the hook.
- 4) Attach knife mounting base ⑥ to the bed surface.  
At this time, pressing the knife mounting base in the direction of the arrow to provide a 0.5 mm clearance between the base and the bed surface. Then, tighten screws ② and ③.  
Finally, tighten screw ①.

3 DIFFERENTS HOOK IN RELATION WITH THE NEEDLE SIZE

G1814-875-AAO - size #21.  
 G1814-875-OAA - size #18.  
 G1814-875-OAB - size #16.

} DIFFERENCES ARE ON THE DISTANCE FROM NEEDLE BOARD.

\* CAUTION: When the needle is at the lowest position the thread should move free ~~thru~~ thru the eye of the needle. If this is not CORRECT NEEDLE BAR HEIGHT IS NOT CORRECT OR HOOK TYPE IS DIFFERENT.

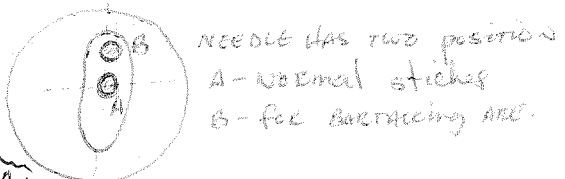
\* CAUTION: When done the previous you have to change throat plate too and you have 3 choices depend on the needle size too.

THROAT PLATES.

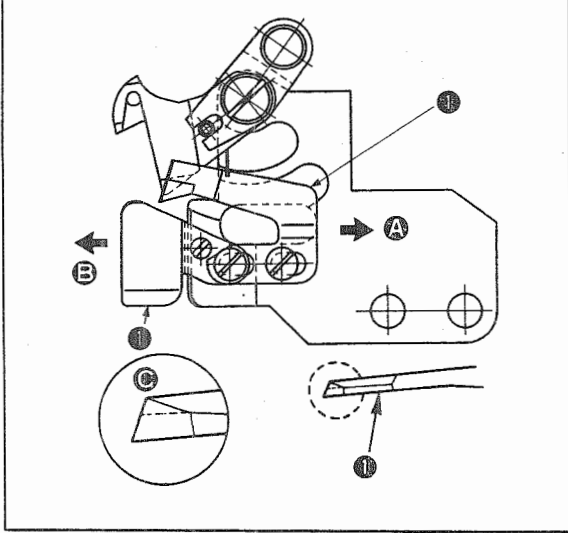
G2422-875-000	→	2.4 mm (21 size)	
G2422-875-00A	→	2.0 mm (18 size)	
G2422-875-00B	→	1.6 mm (16 size)	

Hook timing checking

\* CAUTION: the two point of the hook timing A and B can be work if you go to MEMORY.



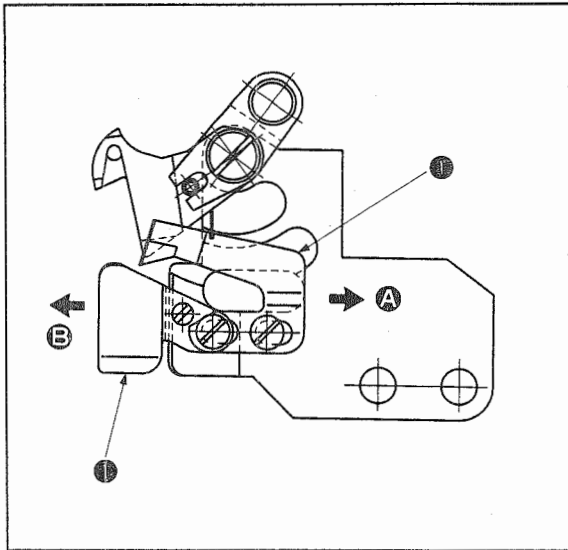
DIMENSIONS A1 and A2 are bigger than B1 and B2 that's why you have to check these points.



**WARNING:**  
Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

- 1) If the knife sharpness has deteriorated, re-sharpen counter knife ① soon as illustrated in Fig. ③. Then re-attach it in position.
- 2) If the mounting position of the counter knife is moved in the right (direction ①) from the standard mounting position, length of the thread remaining after thread trimming will be longer than the standard length by the distance between the standard position.
- 3) If the mounting position of the knife is moved in the left (direction ②), length of the thread remaining after thread trimming will be shorter than the standard length accordingly.

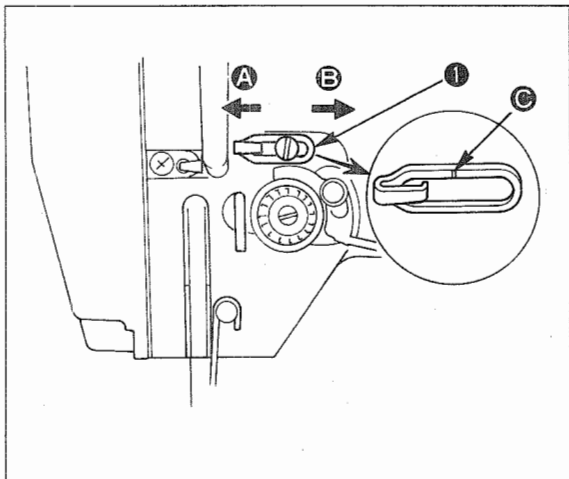
#### 4. Positioning the counter knife and the knife the knife thread guide



**WARNING:**  
Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

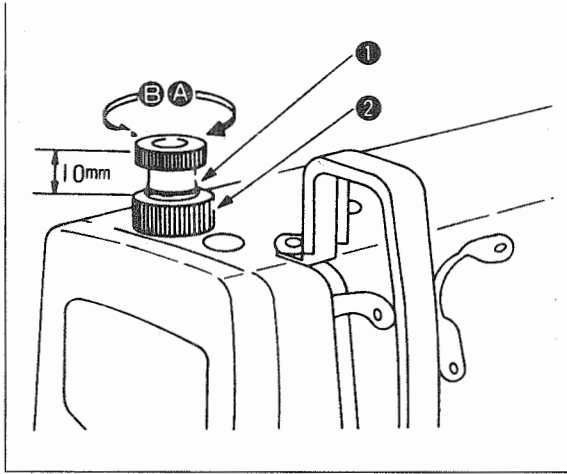
- 1) Knife thread guide ② should be attached so that the needle enters about the center of the window section.
- 2) If the counter knife position is changed from the standard position in direction ①: The length of remaining thread after thread trimming will be lengthened by the shifting amount of the counter knife as compared with the thread length when the counter knife is in the standard position.  
If the counter knife position is changed from the standard position in direction ②: The length of remaining thread after thread trimming will be shortened by the shifting amount of the counter knife as compared with the thread length when the counter knife is in the standard position.

## 5. Thread take-up amount adjustment



- 1) When sewing heavy-weight material, move thread guide ① to the left (arrow ④) to increase the thread take-up amount.
- 2) When sewing light-weight material, move thread guide ① to the right (arrow ⑤) to reduce the thread take-up amount.
- 3) The standard position of thread guide ① is where marker line ⑥ is aligned with the center of the screw.

**(Caution)** If thread guide ① is moved to where marker line ⑥ is far from the center of the screw, it can cause the thread to break.



- 1) First loosen nut ②. To increase the holder pressure, turn holder adjustment screw ① clockwise (arrow A).
- 2) To decrease the presser pressure, turn counterclockwise (arrow B).
- 3) After adjustment, tighten nut ②.

**(Caution) After holder pressure adjustment, do not change the height of holder adjustment screw ①.**

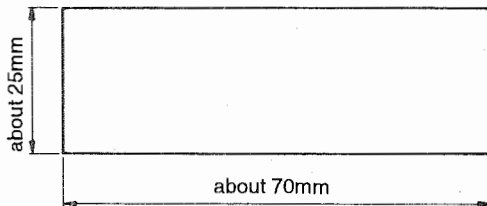
## 7. Hook oil amount (track of oil) adjustment



### WARNING:

Be extremely careful about the operation of the machine since the amount of oil has to be checked by turning the hook at high speed.

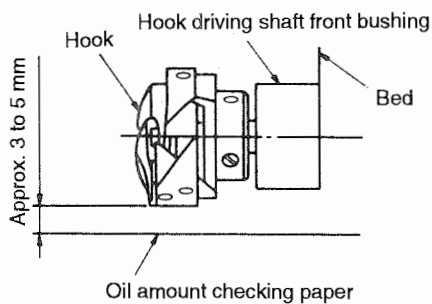
#### ① Oil amount (trace of oil) test paper



\* It is not necessary to be fussy about the paper quality.

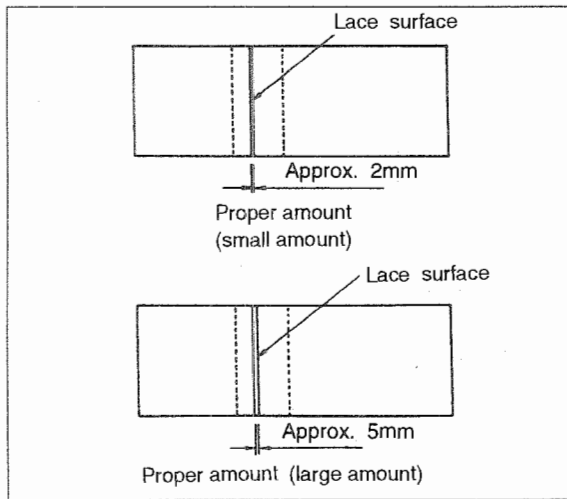
- 1) Check that the oil amount in the hook is proper against the oil gauge.
- 2) Set the sewing machine at 4,000 s.p.m. referring to "27. Adjusting the sewing machine head", and make the sewing machine run idle for about three minutes.
- 3) place an oil amount checking paper in the specified position while the sewing machine is in operation.
- 4) Check the oil amount (trace of oil) in five seconds. (Confirm the time with your watch.)

#### ② Oil amount (trace) checking position



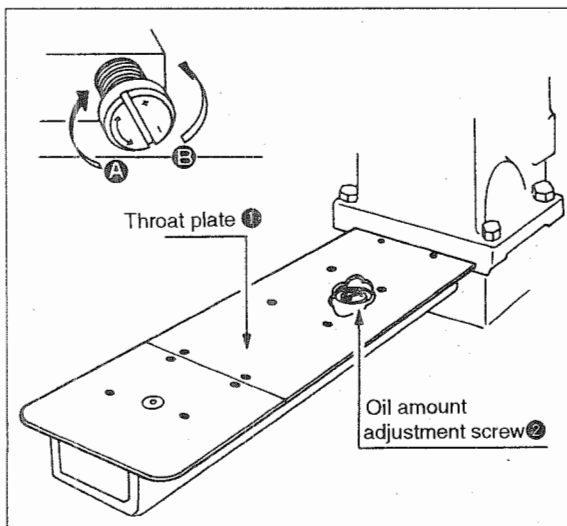
\* Fit the oil amount checking paper to the underside of the hook.

### (1) Sample of the correct oil amount (trace of oil)



- 1) The oil amount in the sample shown in the figure on the left should be finely adjusted to increase/decrease it properly. When finely adjusting the oil amount, be careful not to excessively increase or decrease it.  
When the oil amount is too small =  
The hook may be seized. (The hook may become hot.)  
When the oil amount is too large =  
The sewing material would be stained with oil.
- 2) The oil amount is checked on the condition that the amount of oil on the three sheets of the oil amount checking paper must be uniform.

### (2) Adjusting the oil amount (trace of oil) in the hook

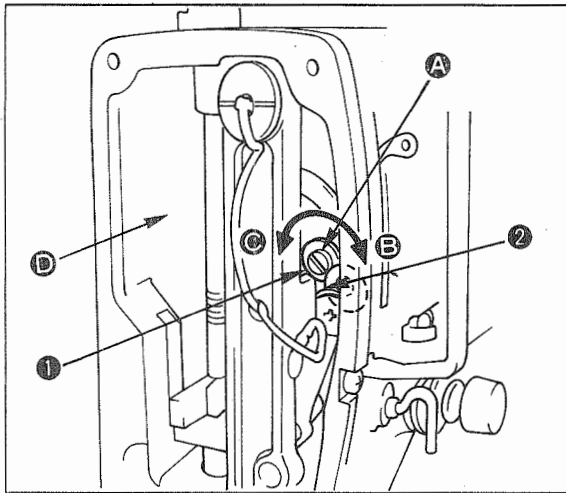


- 1) Remove throat plate ①. Turn oil amount adjustment screw ② in the “+” direction (direction ④) to increase the oil amount (trace of oil). Turn the screw in the “-” direction (direction ⑤) to decrease it.
- 2) After the oil amount is adjusted using oil amount adjustment screw ②, run the sewing machine idle for approximately 30 seconds and confirm the oil amount (trace of oil).



**WARNING:**

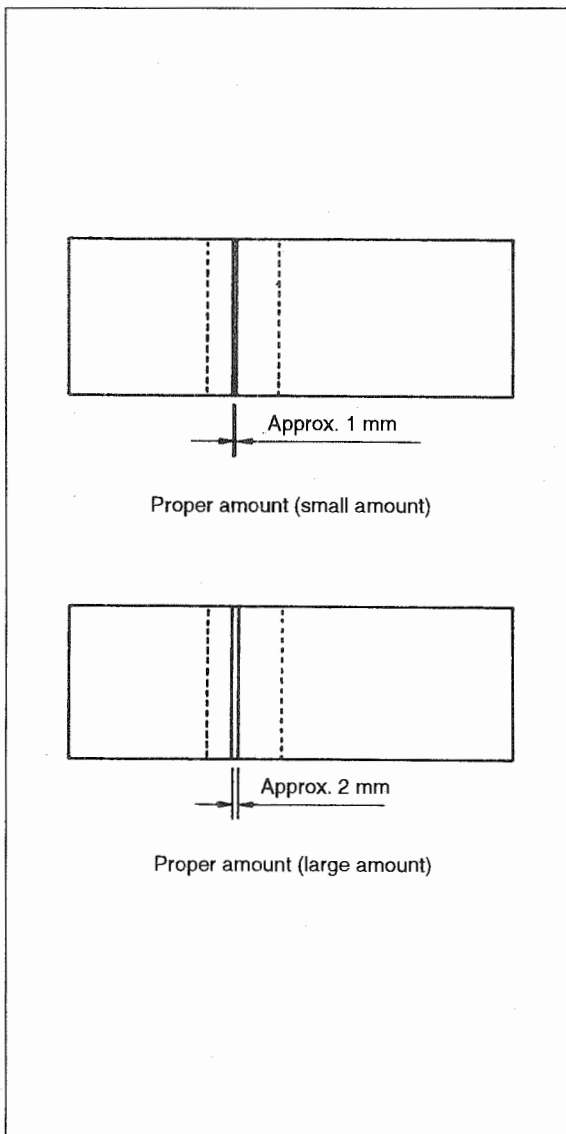
The sewing machine is running at high speed. To avoid personal injuries, be extremely careful when adjusting the amount of oil.



(1) Sample of the correct oil amount (trace of oil)

- 1) the amount of oil to be fed to the thread take-up lever and needle bar crank section ② by turning oil amount adjusting pin ①.
- 2) The oil amount is minimized by turning the adjusting pin in direction ⑥ until marker dot ⑤ engraved on the pin moves from the position in the figure reaches near needle bar crank ②.
- 3) The oil amount is maximized by turning the adjusting pin in direction ⑦ from the position in the figure to the position opposite to the needle bar crank.

**(Caution)** After the oil amount is adjusted using oil amount adjust pin ①, run the sewing machine idle for approximately 30 seconds and confirm the oil amount (trace of oil).



- 1) Place a sheet of oil amount (trace of oil) checking paper in position ⑧ in the figure on the upper right, and check the amount of oil.

**(Caution)** At this time, be sure not to allow the oil amount checking paper to come in contact with the moving parts.

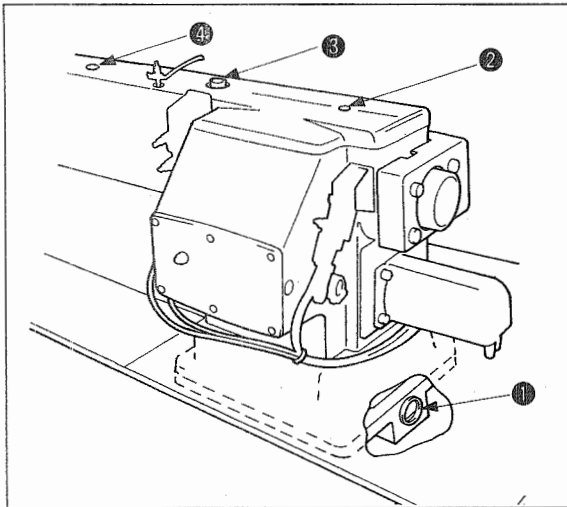
- 2) Check the amount of oil (trace of oil) three time in repetition to be sure that the amount oil does not change.
- 3) Check the amount of oil (trace of oil) for 10 seconds. (Check the time with your watch.)

## 9. Replacing the oil in the machine head

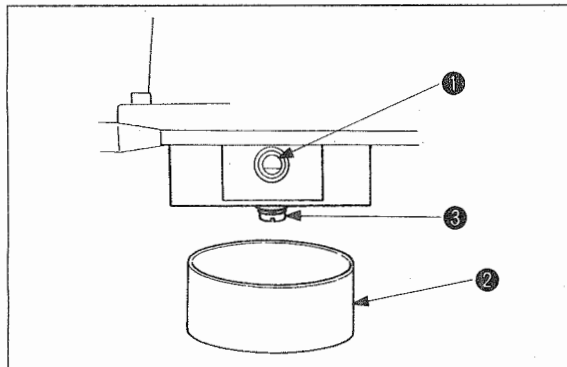


### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



(Caution) Be sure to apply JUKI New Defrix Oil. Visually check the oil through oil gauge window ① on the machine head. If the oil is contaminated, replace it with new oil.



### Oil changing procedure

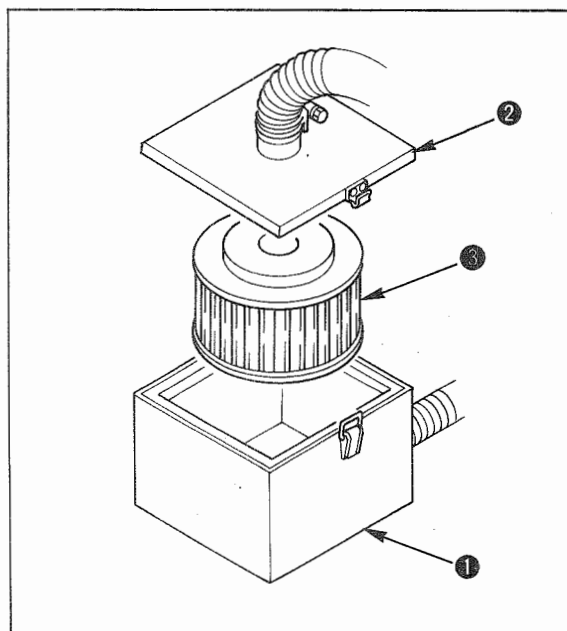
- 1) Prepare oil receiver ② and remove screw ③ from the lower section of the oil pan, then oil flows out from the oil pan.
- 2) After the oil pan is drained, tighten screw ③ and pour oil from the oil hole until the oil surface reaches the center of oil gauge ④.

## 10. Cleaning the vacuum filter



### WARNING:

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.

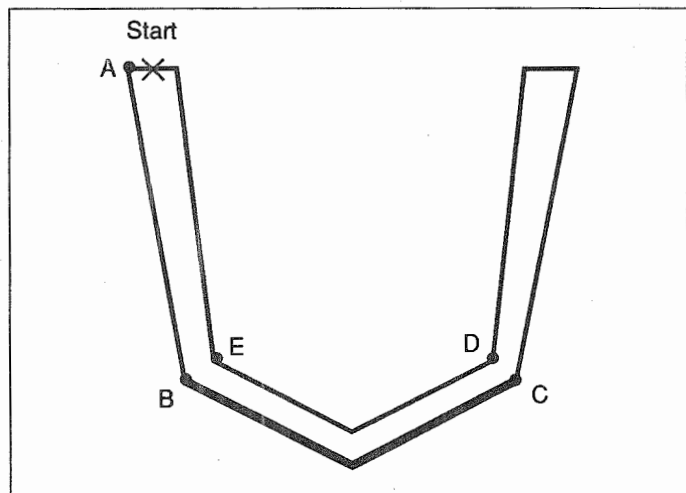


- 1) Detach top cover ② from filter box ① and take filter ③ from inside the filter box.
- 2) Blow off dust or any other foreign matters that have gathered in the filter using an air gun supplied with the machine. (Clean the vacuum filter periodically once a week.)

Check the seams first in terms of thread tension. Then, one of the two different thread tensions can be selected.

① Entire thread tension (tension controllers No. 2 and No. 3)

② Tension of the tension controller No. 2 only



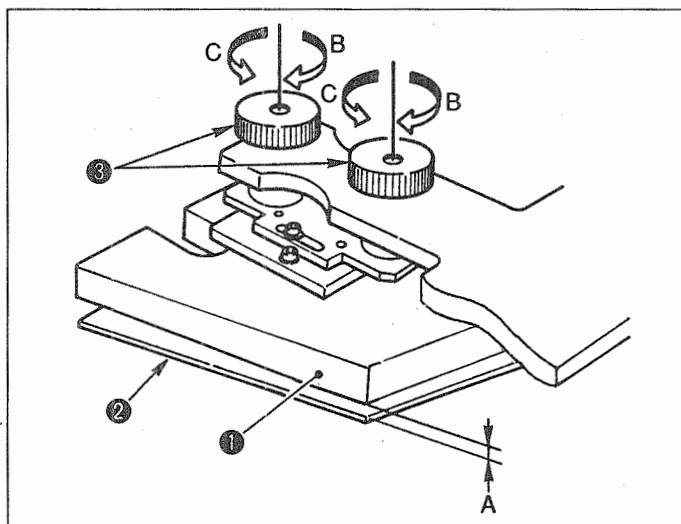
Example To increase the tension only for the section extending from B to C, use the tension controller No.

- 1) Start the PGM-6 to read out an input pattern.
- 2) Move the pattern forward, input the external output "F7.2" at point A and turn on the cylinder of the tension controller No. 3 to cause the tension disk to rise.
- 3) Move the pattern forward to point B, input the external output "F7.2" and turn off the cylinder of the tension controller No. 3 to cause the tension disk to close.
- 4) Move the pattern to point C, input the external output "F7.2" and turn on the cylinder of the tension controller No. 3 to cause the tension disk to close.

In the aforementioned inputting procedure, select ON/OFF the tension controller No. 3. To increase the tension for the section extending from D to E, follow the same procedure.

## 12. Adjusting the folding function

(1) The clearance provided between the pattern board and the pocket holder in accordance with the material thickness.



- 1) Change dimension A of the clearance provided between pattern board ① and the pocket holder ② using two knobs ③.

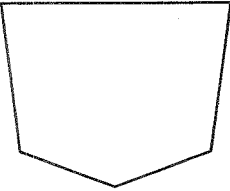
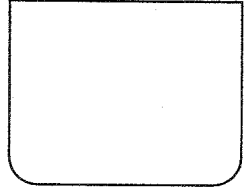
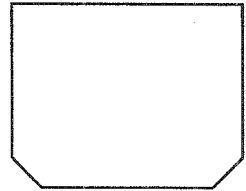
Turn knob ③ in direction B to increase dimension A of the clearance for heavy-weight materials.

Turn knob ③ in direction C to decrease dimension A of the clearance for light-weight materials.

- 2) In the adjustment described in 1), adjust pattern board ① and pocket holder ② so that their peripheries match to each other.

(Caution) It should be noted to turn knob ③ so that pattern board ① and pocket holder ② come in uniform contact over the surface. If not, a pocket folding failure can be caused.

(2) Standard folding timing is given in the table below.

						
	ON	OFF	ON	OFF	ON	OFF
A1	100	300	100	100	100	300
A2	200	200	200	100	300	100
A3	300	100	200	100	200	200
A4	100	300	200	100	300	100
A5	---	---	100	100	100	300
B	000	000	000	000	000	000

\* The folding timing slightly differ with material.

Error		Power Off
01	14	47
04	15	
07	30	
11	31	
13	46	

Error screen when turning the power ON

If an error arises when the power to the machine is turned ON, the error number will be given on the screen. Turn the power OFF, eliminate the error, and re-turn the power ON.

```

Error No.01

Main_Motor
Error

Power Off
  
```

Error screen

If an error arises during operation, the error number, description of error and one of the following indications will appear on the display.

- o Power OFF
- o Key **[R]** = Reset

```

Error No.11

Pause

Key[R]=Reset
  
```

Pause screen

If [Key **[R]** = Reset] is given on the screen, press the Reset key to restore the screen that has appeared before the arising of the error.

If [Power Off] is indicated, turn the power off and find the cause of the error.

Refer to [Error messages list] (pages 65 to 66) for the explanation of the error description.

## 1. Error messages list

Error No.	Error message	Description of error
01	Main shaft motor error	An alarm is output from the main shaft motor driver unit.
02	Main shaft motor error	An in-position signal is not input from the main shaft motor driver unit.
03	Main shaft motor error	A Z-phase signal from the main shaft motor driver unit is not detected.
04	X-shaft motor error	An alarm is output from the X-shaft motor driver unit.
05	X-shaft motor error	An in-position signal is not input from the X-shaft motor driver unit.
06	X-shaft motor error	A Z-phase signal from the X-shaft motor driver unit is not detected.
07	Y-shaft motor error	An alarm is output from the Y-shaft motor driver unit.
08	Y-shaft motor error	An in-position signal is not input from the Y-shaft motor driver unit.
09	Y-shaft motor error	A Z-phase signal from the Y-shaft motor driver unit is not detected.
10	Air pressure drop	The compressed air pressure is lower than the specified pressure.
11	Pause	The pause switch is pressed during operation. The pause switch is disconnected when turning the power ON.
13	(Setting release switch ON)	The setting release switch is held pressed when turning the power ON.
14	(Setting completion switch, right ON)	The setting completion switch, right is held pressed when turning the power ON.
15	(Setting completion switch, left ON)	The setting completion switch, left is held pressed when turning the power ON.
20	No pattern data	This error message is given when the "Standby" key is pressed before reading pattern data from a floppy disk.
21	Needle thread breakage	This error message is given when the needle thread breaks.
24	Over stack	The possible number of the finished materials to be stacked on the stacker is exceeded when the stack-full sensor (optionally available) has been equipped for the machine.
30	Over X-limit	The X travel limit is detected.
31	Over Y-limit	The Y travel limit is detected.
32	X1 origin sensor error	X1 origin sensor is not detected at the time of origin retrieval.
33	Y1 origin sensor error	Y1 origin sensor is not detected at the time of origin retrieval.
34	Y2 origin sensor error	Y2 origin sensor is not detected at the time of origin retrieval.
37	Work clamp upper position passing error	The material does not pass the upper position of the work clamp while it travels from the sewing end to the folding position.
38	Work clamp standby position passing error	The material does not pass the standby position of the work clamp while it travels from the folding position to the sewing start position.
39	External input error	An external input signal is not detected.
41	Sensor error	The main shaft position sensor is not detected.
42	Sensor error	Work clamp sensor (upper) is not detected.
43	Sensor error	Work clamp sensor (lower) is not detected.
44	Sensor error	Table sensor (upper) of the folding unit is not detected.
45	Sensor error	Table sensor (lower) of the folding unit is not detected.
46	Sensor error	The folding arm sensor (upper) of the folding unit is not detected.
47	Sensor error	The folding arm sensor (lower) of the folding unit is not detected.
48	Sensor error	The sensor (upper) of the folding unit is not detected.
49	Sensor error	The sensor (lower) of the folding unit is not detected.
50	Sensor error	The pattern board sensor (front) is not detected.
51	Sensor error	The pattern board sensor (rear) is not detected.

Error No.	Error message	Description of error
80	FD unready	A floppy disk is not loaded in the floppy disk drive when reading/writing data from/on the floppy disk.
81	FD write protect	The floppy is in the write-protect state. So, data cannot be written on it.
82	No pattern	The floppy disk loaded does not store a target pattern
83	Other pattern data	When writing a reference pattern into a floppy disk, a pattern saved on the floppy disk is different from that stored in the sewing machine.
84	Data error	Abnormal data exists on the floppy disk when reading data from the floppy disk.
85	Over memory	Data cannot be stored in memory when reading data from a floppy disk.
86	FD type error	The type of the floppy disk is different from the one designated for the machine.
90	FD error	Floppy disk seeking error
91	FD error	Data cannot be read from a floppy disk.
92	FD error	Data cannot be written on a floppy disk.
93	FD error	File structure of a floppy disk is abnormal.
94	FD error	Another file exists on the floppy disk.
95	FD error	Format system of the floppy disk is not proper.

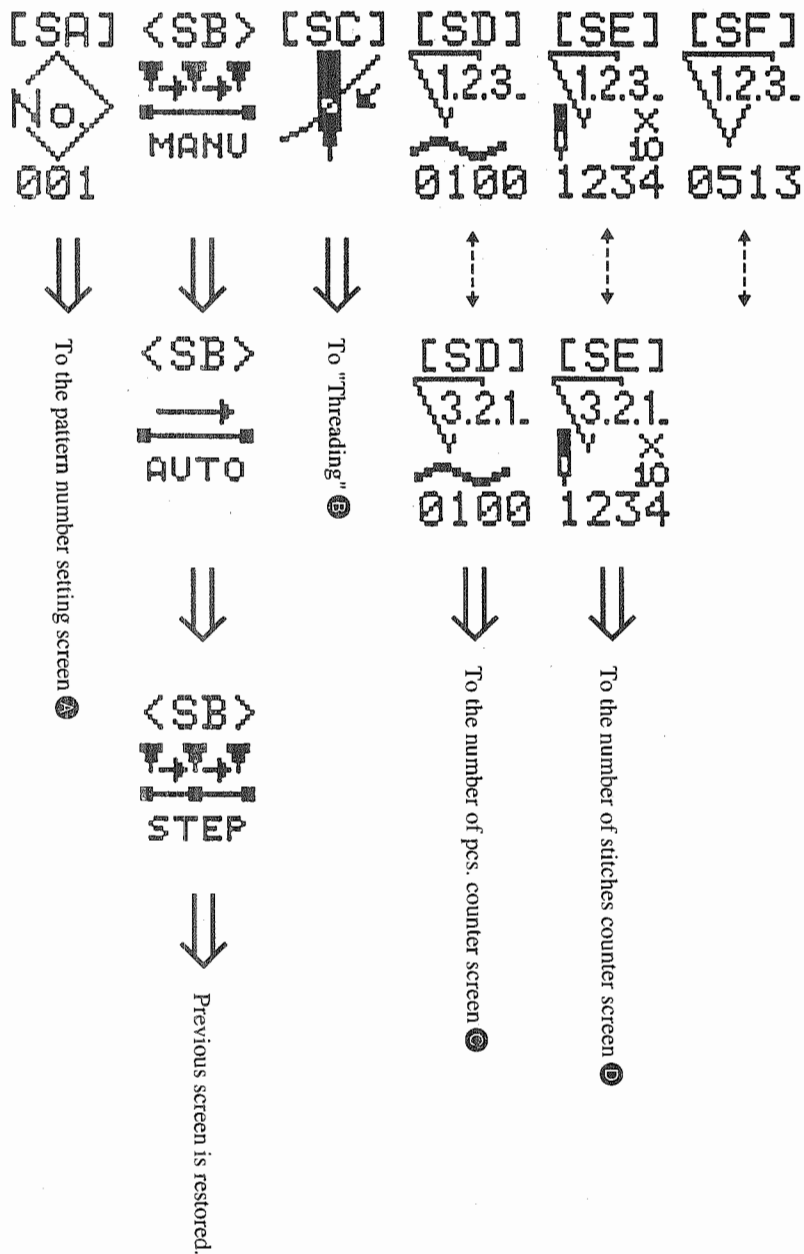
## IX. TROUBLESHOOTING

Phenomenon	Cause	Corrective measure
1. Thread Breakage	<ul style="list-style-type: none"> <li>① The thread path, tip of needle, blade point of hook, or bobbin case positioning finger has scratches.</li> <li>② The needle thread tension is too high.</li> <li>③ The needle comes in contact with the blade point of hook.</li> <li>④ Lubricating oil in the hook is too small.</li> <li>⑤ The needle thread tension is too low.</li> <li>⑥ The thread take-up spring pressure is too high, and stroke of the thread take-up lever is too small.</li> <li>⑦ The timing between needle and hook is too early or too late.</li> <li>⑧ Idling amount of the bobbin is too large.</li> </ul>	<ul style="list-style-type: none"> <li>○ Re-sharpen the blade point of hook with a fine emery paper to remove scratches. Buff the bobbin case positioning finger.</li> <li>○ Adjust the needle thread tension.</li> <li>○ Refer to "2. Adjusting the needle-to-hook relationship."</li> <li>○ Adjust the oil amount properly. Refer to "7. Adjusting the amount of oil (oil spots) in the hook" and "8. Adjusting the amount of oil in the face plate."</li> <li>○ Adjust the needle thread tension properly.</li> <li>○ Decrease the pressure of the thread take-up spring, and increase the stroke of thread take-up lever.</li> <li>○ Refer to "2. Adjusting the needle-to-hook relationship."</li> <li>○ Increase the spring pressure.</li> </ul>
2. Stitch skipping	<ul style="list-style-type: none"> <li>① The clearance between the needle and the hook point is too large.</li> <li>② The timing between the needle and the hook is too early or too late.</li> <li>③ The holder pressure is too low.</li> <li>④ The clearance between the top edge of the needle eyelet and the hook point is not correct.</li> <li>⑤ The needle thread guide is not properly threaded.</li> </ul> <p>→ Refer to "Threading the machine head."</p>	<ul style="list-style-type: none"> <li>○ Refer to "2. Adjusting the needle-to-hook relationship."</li> <li>○ Refer to "2. Adjusting the needle-to-hook relationship."</li> <li>○ Tighten the holder spring regulator.</li> <li>○ Refer to "2. Adjusting the needle-to-hook relationship."</li> </ul>
3. Loose stitches	<ul style="list-style-type: none"> <li>① The thread has not been passed through the forked section of the bobbin case tension spring.</li> <li>② The thread path has been poorly finished.</li> <li>③ The bobbin does not rotate smoothly.</li> <li>④ The bobbin thread tension is too low.</li> <li>⑤ The bobbin thread tension is too high.</li> <li>⑥ The presser sponge is located too close to the needle entry. As a result, the thread comes in contact with the sponge.</li> </ul> <p>→ Cut the section of sponge which comes in contact with the thread.</p>	<ul style="list-style-type: none"> <li>○ Properly thread the bobbin case.</li> <li>○ Grind the thread path with a fine emery paper, or buff it up.</li> <li>○ Replace the bobbin or the hook.</li> <li>○ Adjust the bobbin thread tension properly.</li> <li>○ Decrease the bobbin thread tension.</li> </ul>
4. The tread slips off the needle upon being trimmed.	<ul style="list-style-type: none"> <li>① The returning force of the thread take-up spring is too high.</li> <li>② The tension of the tension controller No. 1 is too high.</li> <li>③ The counter knife is improperly positioned.</li> </ul>	<ul style="list-style-type: none"> <li>○ Refer to "2. Threading the machine head."</li> <li>○ Refer to "4. Adjusting the position of the counter knife and the knife thread guide."</li> </ul>
5. The needle thread cannot be trimmed. (The bobbin thread can be trimmed.)	<ul style="list-style-type: none"> <li>① The last stitch has been skipped. (The clearance between the needle and the hook is too large.)</li> </ul>	<ul style="list-style-type: none"> <li>○ Refer to "2. Adjusting the needle-to-hook relationship."</li> </ul>

<p>6. Neither the needle thread nor the bobbin thread can be trimmed.</p>	<p>① The thread trimming timing is wrong.          ② The knife has been damaged.          ③ The knife pressure is inadequate.          ④ The moving amount of the moving knife is too short.          ⑤ The thread trimming cylinder fails to work.</p>	<p><input type="radio"/> Replace the knife.  <input type="radio"/> Increase the knife pressure.  <input type="radio"/> Check the cylinder for proper operation.</p>
<p>7. Thread cannot be trimmed sharply.</p>	<p>① Thread trimming timing is wrong.          ② The knife pressure is too low.          ③ The knife blade is blunt.</p>	<p><input type="radio"/> Refer to "4. Positioning the counter knife and the knife thread guide."  <input type="radio"/> Increase the knife pressure.  <input type="radio"/> Replace the knife.</p>

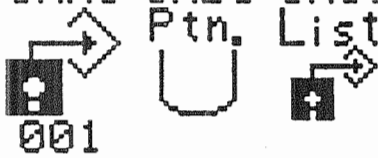
# X. PICTOGRAPHS LIST

## 1. Standard screen



※ ⇕ indicates the change caused by pressing the SCREEN CHANGE-OVER key [ ]

⇓ indicates that the pictograph selected by other setting is displayed.

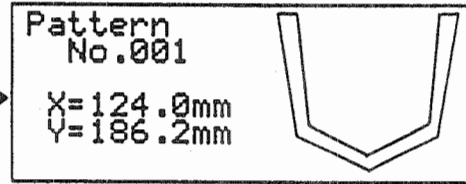


The machine is caused to perform the pattern reading and change over the screen to the pattern shape indicating screen.

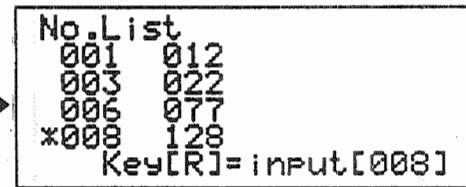
To the pattern shape indicating screen

To the all-pattern indicating screen

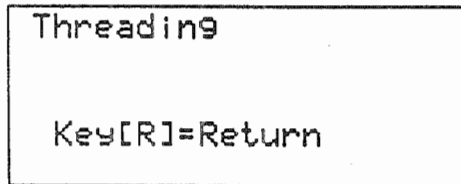
All-pattern indicating screen



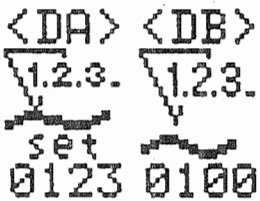
Pattern shape indicating screen



Ⓑ To "Threading"



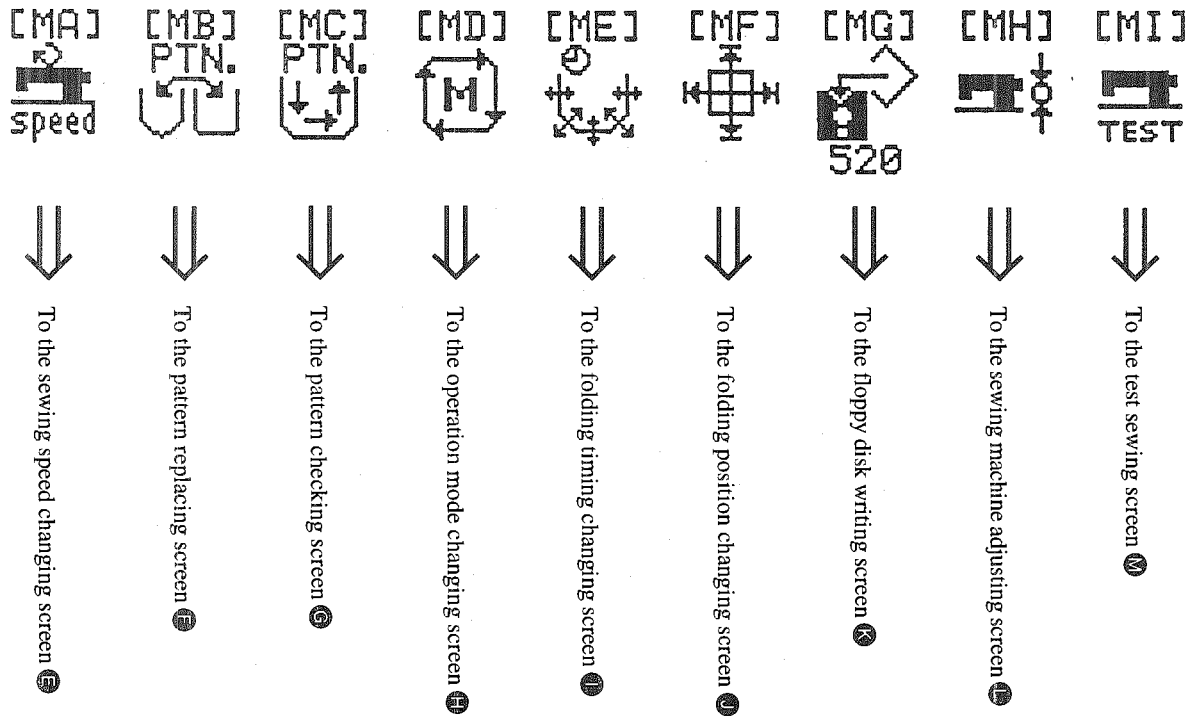
Ⓒ Number of pcs. counter screen



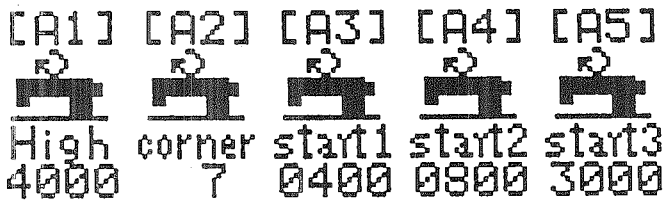
Ⓓ Number of stitches indicating screen



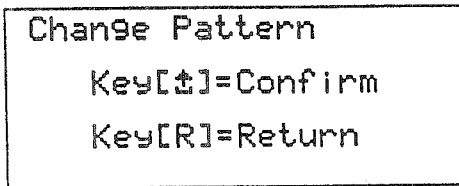
2. Mode selection screen



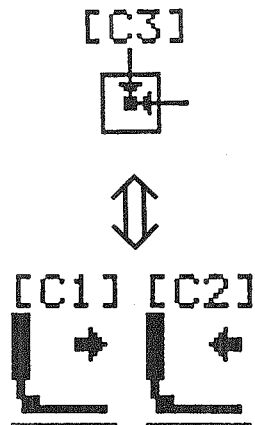
⑤ Sewing speed changing screen

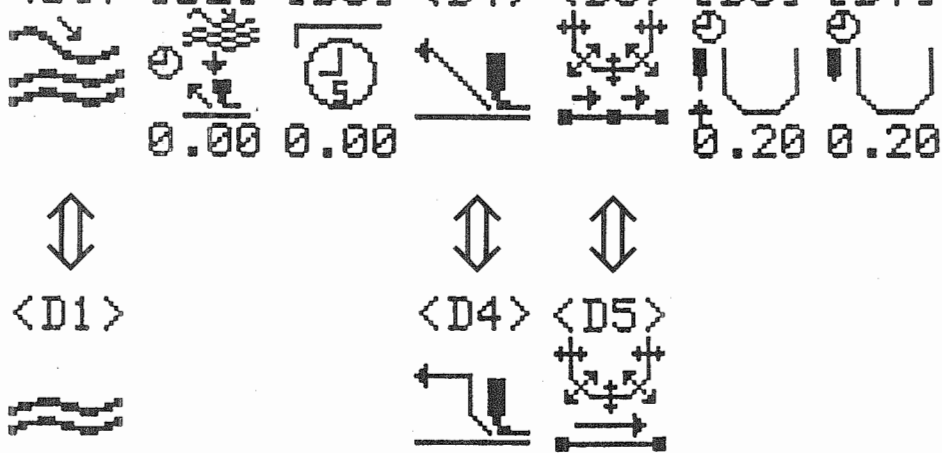


⑥ Pattern replacing screen



⑦ Pattern checking screen





(Note1) These pictographs are indicated only when the label attaching device is selected.

① Folding timing changing screen

A1	ON	0.10	OFF	0.05
A2	ON	0.20	OFF	0.10
A3	ON	0.30	OFF	0.30
A4	ON	0.10	OFF	0.10
A5	ON	---	OFF	---
B	ON	0.30	OFF	0.30

① Folding position changing screen

```

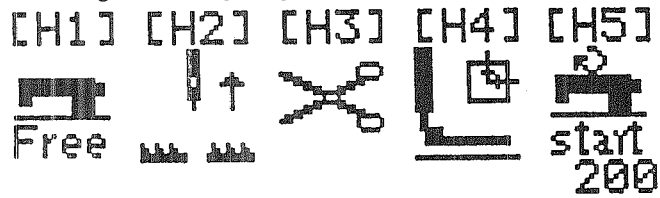
Fold Position
X-Dir.= +0.7
Y-Dir.= -0.2
Key[↑]=Confirm
Key[↑]=Up
  
```

⊗ Floppy disk writing screen

```

Write FD
Key[↑]=Execute
Key[R]=Return
  
```

① Sewing machine adjusting screen



M motor is released and the screen changes over to the main shaft releasing screen.



The needle bar is lifted to the highest dead point.



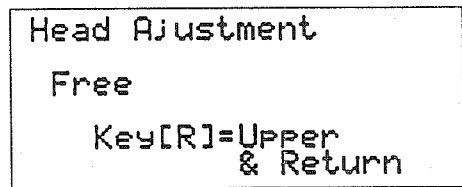
Thread trimmer actuates.



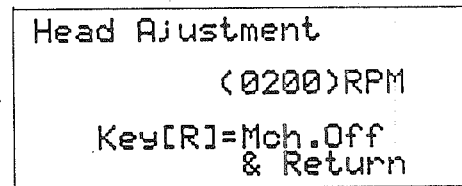
The holder is caused to travel to the standby position for the material.

The machine is caused to run under the independent mode by the START switch and change over the screen to the sewing machine driving screen.

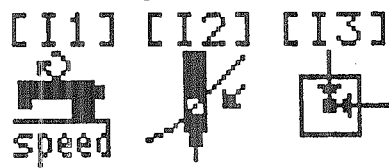
Sewing machine driving screen



Main shaft releasing screen



② Test sewing screen



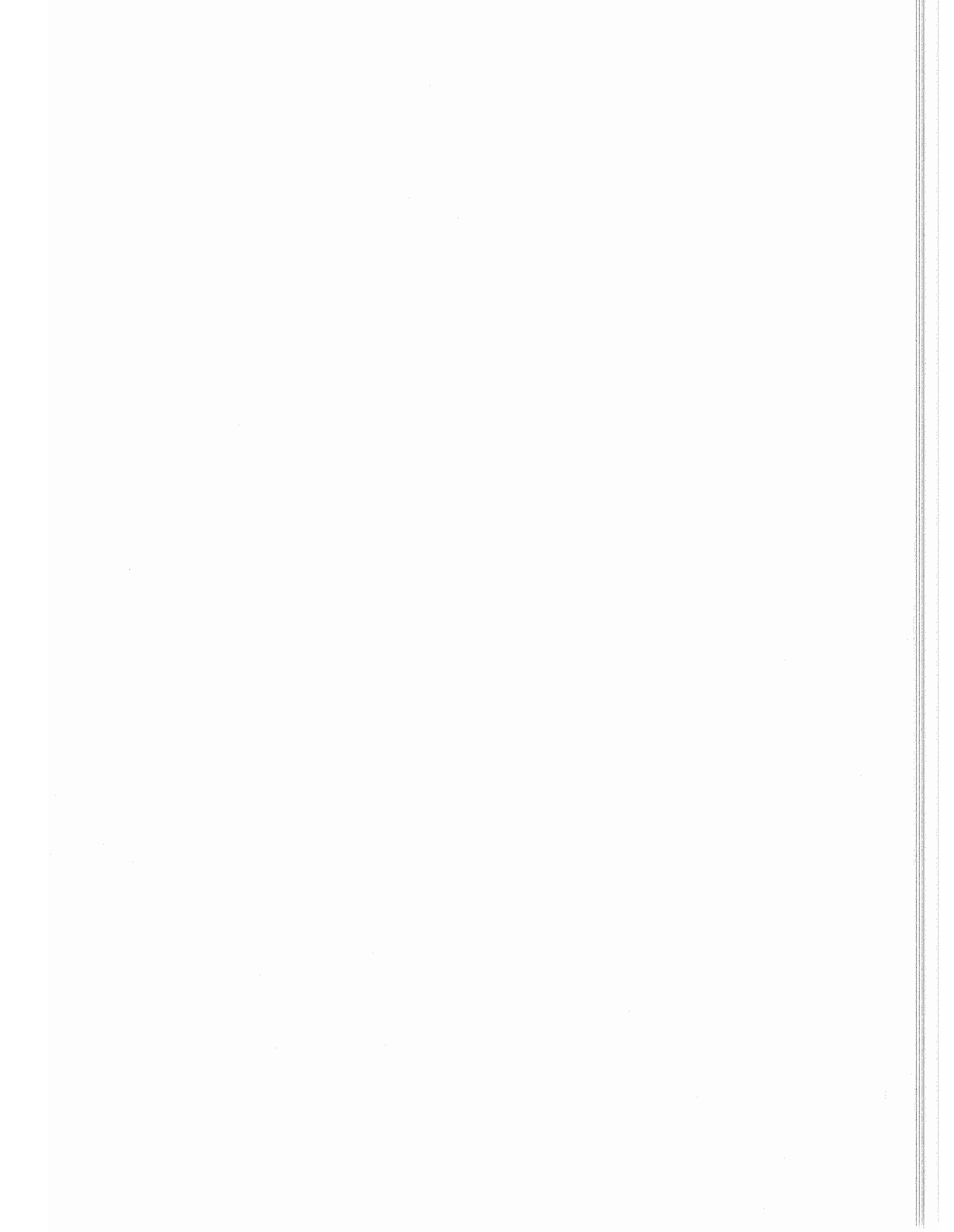
To the sewing speed changing screen



To the needle threading screen



The holder is caused to travel to the origin.



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**INTERNATIONAL SALES DIVISION**  
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CHOFU-SHI, TOKYO 182, JAPAN

To order or for further information, please contact :

Please do not hesitate to contact our distributors or agents in your area for further information when necessary.  
\*The description covered in this instruction manual is subject to change for improvement of the