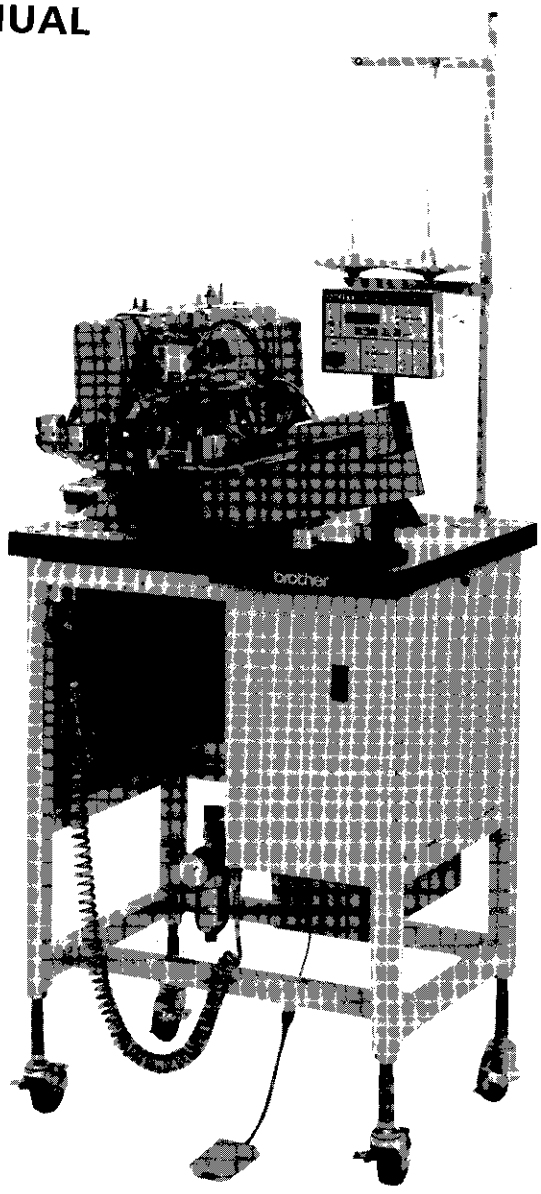
brother

AUTOMATIC BELT LOOP SEWING MACHINE

BAS-700

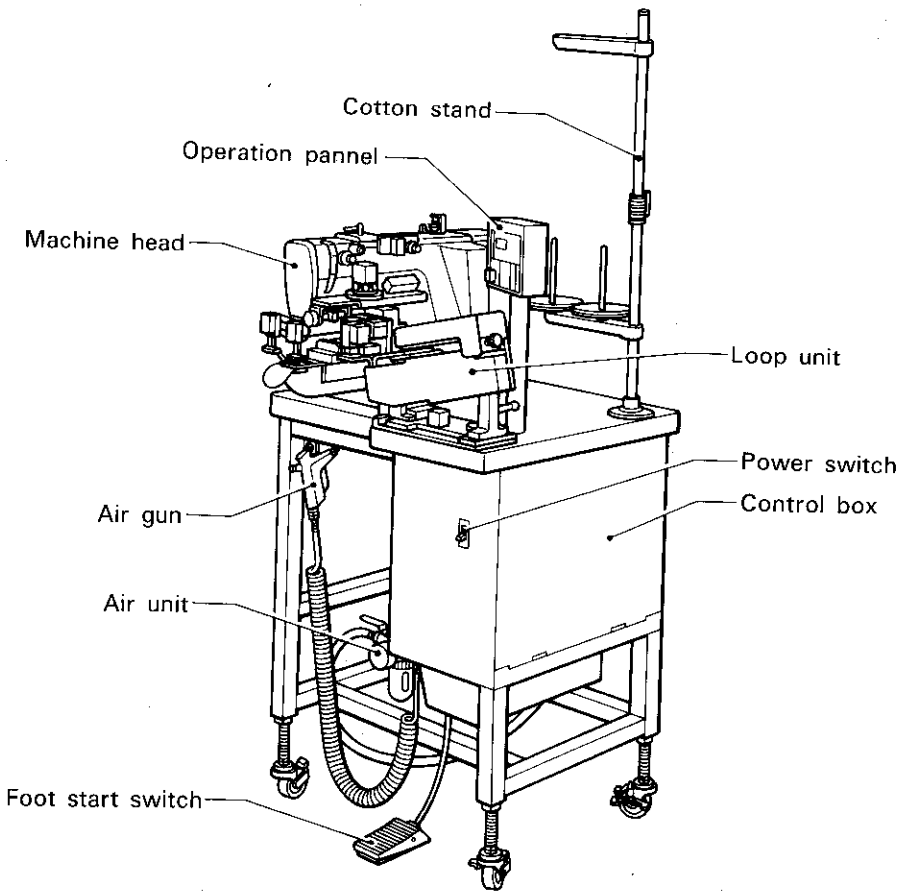
INSTRUCTION MANUAL



Refer to the machine head explanation in the LK3-B434 instruction manual along with this manual for BAS-700.
When there is an overlap description between these two manuals, follow this manual.

CONTENTS

PART NAMES

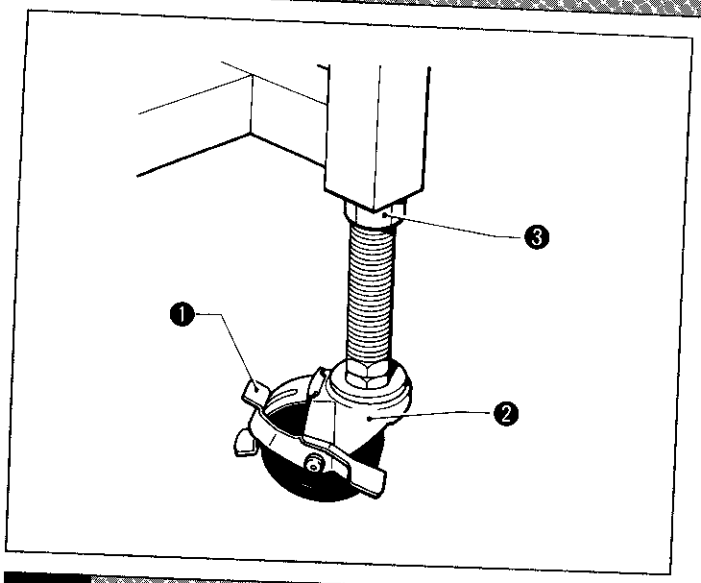


SPECIFICATIONS

Sewing speed	1,800 spm
Stitch length	Bar tacking height 1-3 mm bar tacking width 10-18 mm
No. of stitches	28, 35, 42 (cam change system)
Rotary hook	Half rotation, double hook
Belt loop length	40-80 mm (finished length)
Belt loop width	10-16 mm
Belt loop thickness	1-3 mm
Sewing start positron	Center start (standard), side start (sewing from the left)
Needle	DP × 17 #16-21, DP × 5#14-19
Loop cutting	Flat cut, V-cut (selectable)
Power supply	3 phase, 220V, 380V, 415V (50, 60Hz)
Air pressure	4.5-5 kgf/cm^2
Weight	150 kg
Dimensions	W 700 mm × L 700 mm × H 1,300 mm
Table height	860-960 mm (standard: 900 mm)

PREPARATION

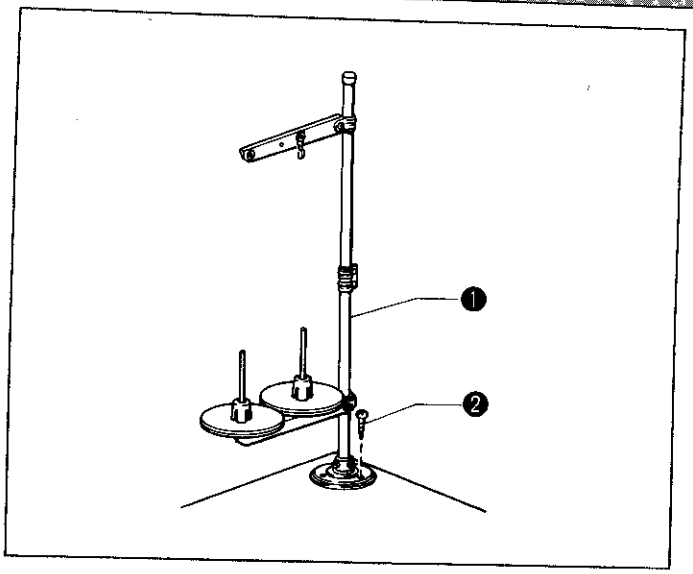
1 Installing power table



- Lower the levers ❶ to lock the casters ❷.
  Raising the levers ❶ will move the casters ❷.

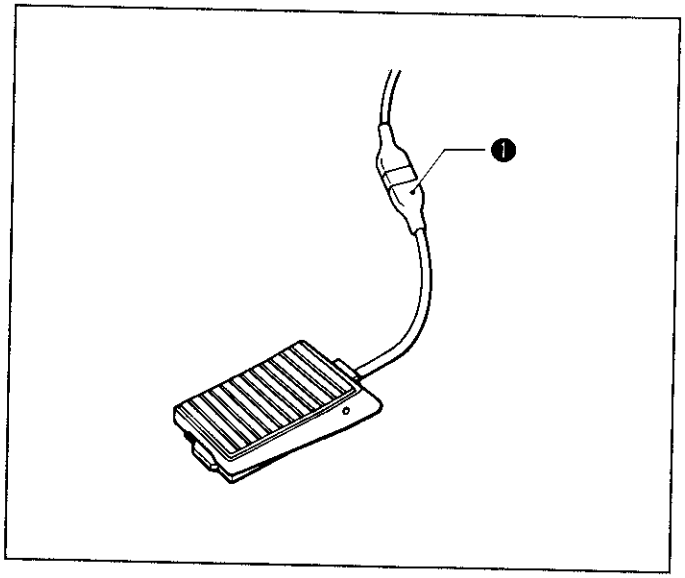
NOTE: To adjust the power table height:
Loosen the nut ❸ and turn the caster ❷.
When the adjustment is done, tighten the nut ❸ firmly.

2 Installing cotton stand assembly



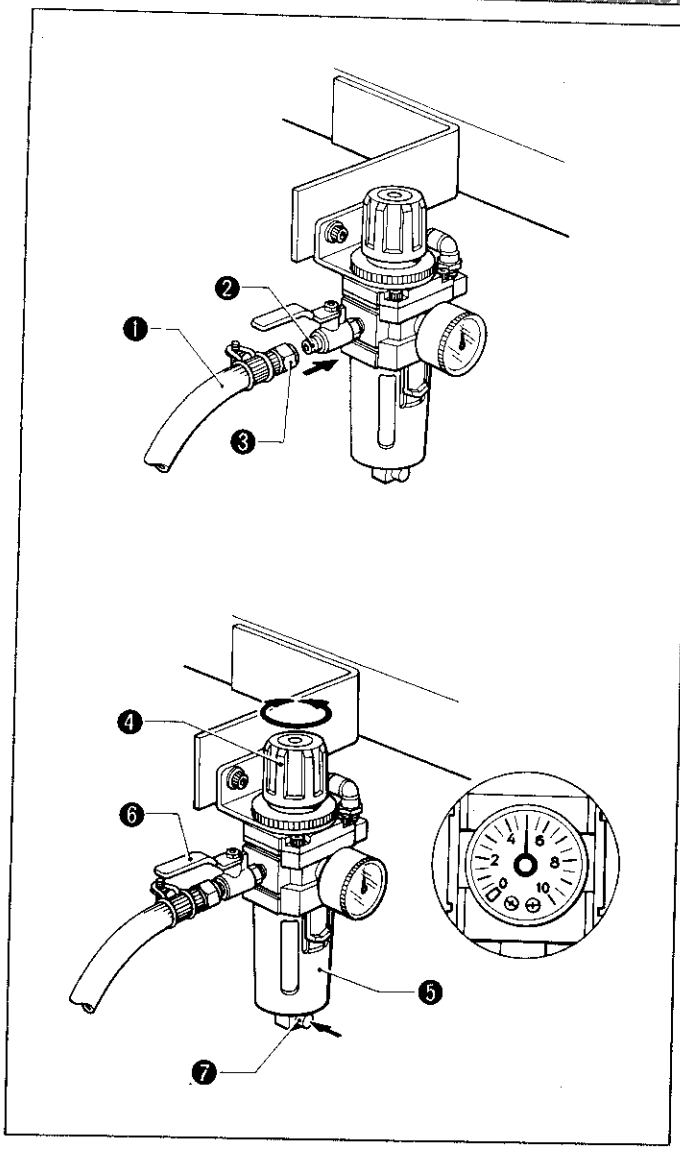
- With the screw ❷, attach the cotton stand assembly ❶ to the rear, right-hand corner of the table.

3 Foot start switch



- Attach the connector ❶ to the plug of the machine body.

4 Air tube

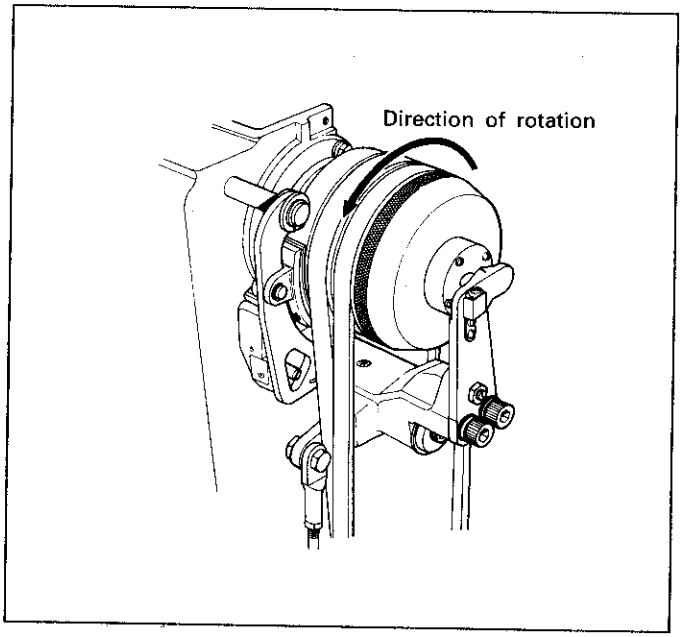


- Attach the air tube ❶ to the air unit connector ❷ with the nut ❸.

- Use an air pressure at 5 kgf/cm^2.
  Pull up the cap at the top of the air unit ❹ and adjust the pressure. After adjustment, push the cap down to lock it.

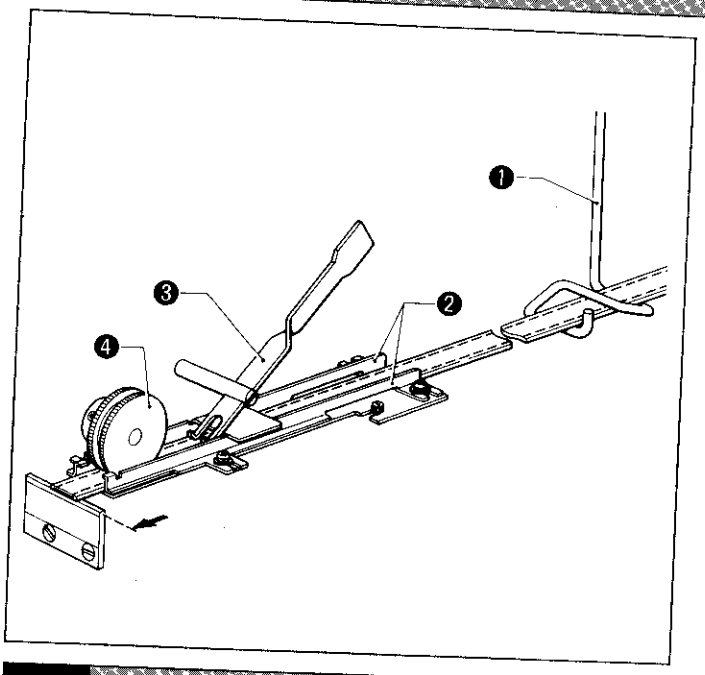
NOTE: When water has gathered in the bottle ❺, close the air cock ❻ and push the drain cock ❼ to remove the water.

5 Pulley rotation direction



1) Close the air cock ❻ and push the drain cock ❼ to remove the air.
2) Turn on the power switch. Confirm that the pulley rotates in the direction of the arrow.

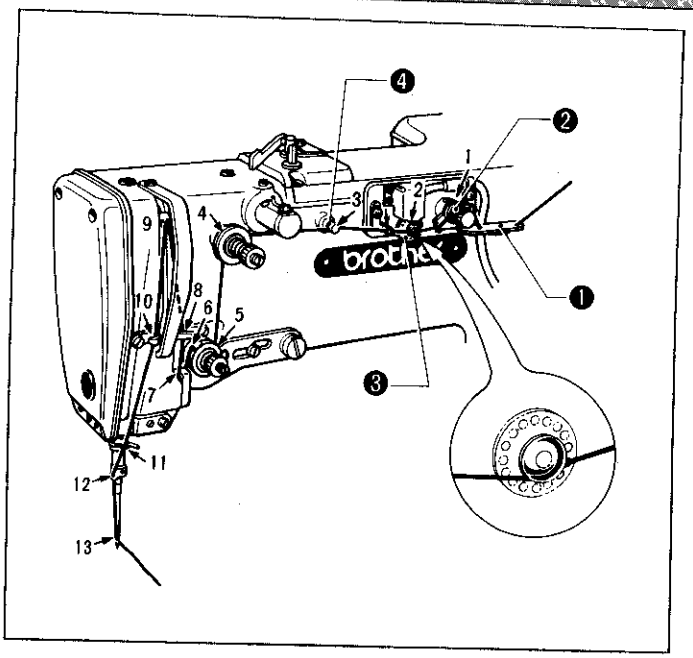
6 Threading belt loop



1) As shown in the figure on the left, thread a belt loop through the loop guide ❶, the channel guide ❷ and the actuator ❸, in that order.

2) Raise the feed roller ❹ and fit the belt loop tip to the fixed knife.

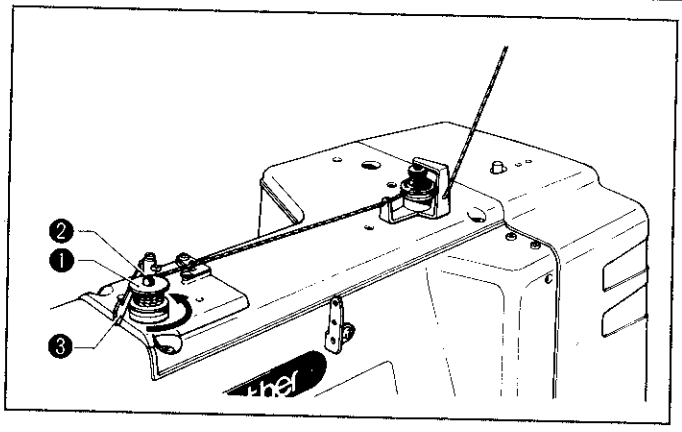
7 Threading needle thread



- Thread the needle thread as shown in the figure on the left.
  In the thread breakage detector, thread it through the thread guide ❶ and the pre-tension ❷, then wind it around pulley (A) ❸ once from the bottom and thread it through the thread hook ❹.

NOTE: The presser foot can be moved up and down to make threading easy. (Refer to page 11.)

8 Winding bobbin thread



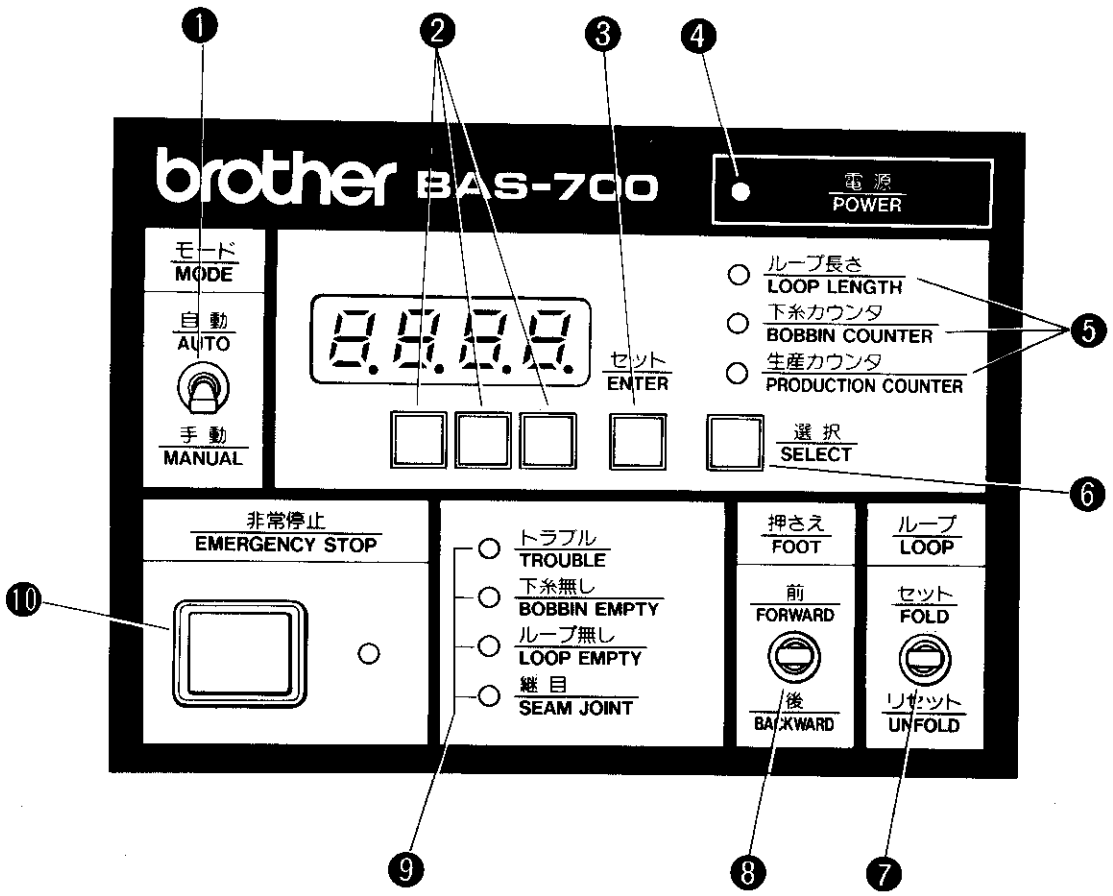
1) Place the bobbin ❶ on the bobbin winder shaft ❷ and wind the bobbin thread around the bobbin ❶ several times in the direction of the arrow.

2) When the machine is being operated, pressing the bobbin winder lever ❸ winds the bobbin thread automatically.

SEWING

1 Procedures before sewing

2 Explanation of panel



❶ MODE switch: for switching between AUTO and MANUAL modes

❷ INPUT switch: for changing a loop length and setting the bobbin counter (Refer to page 7, 8)

❸ ENTER switch:
in AUTO mode –
for clearing the production counter (Refer to page 9)
for storing the bobbin count (Refer to page 8)
in MANUAL mode –
for storing a belt loop length (Refer to page 7)

❹ POWER indicator: displays current power status (ON/OFF)

❺ LOOP LENGTH indicator: is lit when a belt loop length is being displayed (Refer to page 7)
BOBBIN COUNTER indicator: is lit when the rest of the bar tacking number (remainder of the bobbin thread) is being displayed (Refer to page 8)
PRODUCTION COUNTER indicator: is lit when the production number of a belt loop is being displayed (Refer to page 9)

❻ SELECT switch:
in AUTO mode –
for switching between the loop length, the bobbin count and the production count (Refer to page 7, 8, 9)
in MANUAL mode –
always displays loop length (no switching is possible)

❼ LOOP switch:
FOLD –
for setting a belt loop (Refer to page 11)
UNFOLD –
for releasing a belt loop (Refer to page 11)

❽ FOOT switch:
for moving a body backwards and forwards when an emergency stop (E.-00) or thread breakage (E.-80) occurs (Refer to page 27, 28)
in MANUAL mode –
for moving a body backwards and forwards when re-sewing (Refer to page 12)

❾ TROUBLE indicator: lights when there is something wrong with the machine (The error code is also displayed at the same time (Refer to page 27)
BOBBIN EMPTY indicator: lights when the bobbin thread runs out (Refer to page 8)
LOOP EMPTY indicator: is lit when the machine runs out of belt loop material (Refer to page 11)
SEAM JOINT indicator: is lit when the joint sensor detects a belt loop joint (the belt loop is cut around the joint and is re-set by the machine) (Refer to page 11)

❿ EMERGENCY STOP switch:
in AUTO mode –
for emergency stopping the machine during sewing (Refer to page 11)
for moving the presser foot up or down when the needle is in starting position (Refer to page 11)
in MANUAL mode –
performs the step motion (Refer to page 10)

3 Setting belt loop length

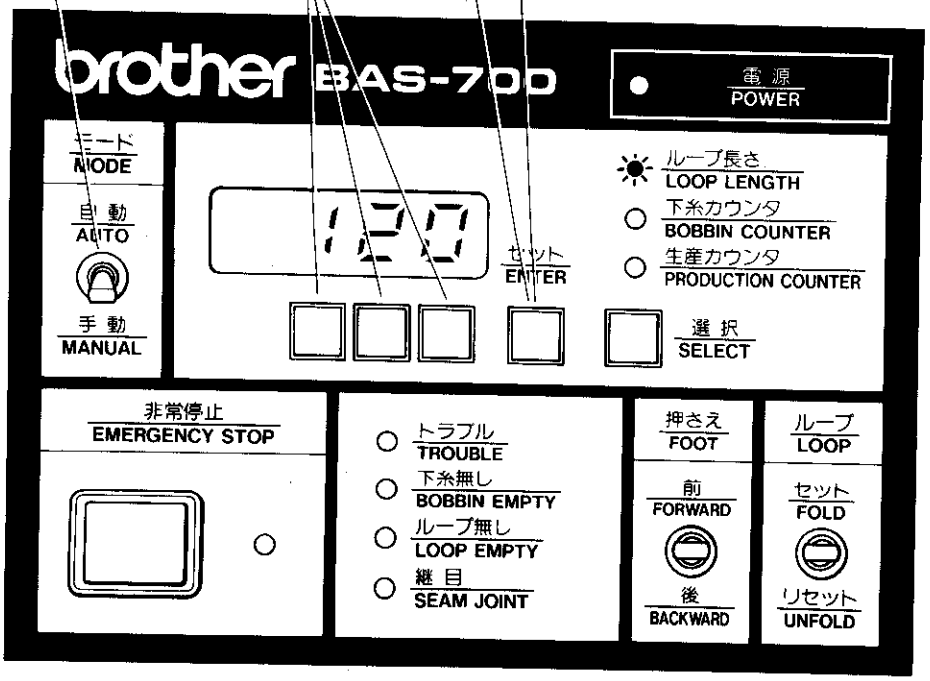
1 Set the MODE switch to MANUAL.
- The LOOP LENGTH indicator will light.

2 Press the ENTER switch.
- The display will flash.

3 Input the belt loop length* using the INPUT switches.
* The length must be a cut length including a flap margin.

NOTE: The length can be set between 50 and 120 mm.
NOTE: If the EMERGENCY STOP switch is pressed, the latest set length will be displayed.

4 Press the ENTER switch.
- The input length is displayed and stored.



The DIP switch is used to change between 0.5-mm increments and 1-mm increments (refer to page 22). When in 0.5-mm mode, 0.5 is indicated by lighting of the decimal point to the right of the first unit.

4 Setting bobbin counter

1 Set the MODE switch to AUTO.

2 Press the SELECT switch to select the BOBBIN COUNTER.
- The BOBBIN COUNTER indicator will light.

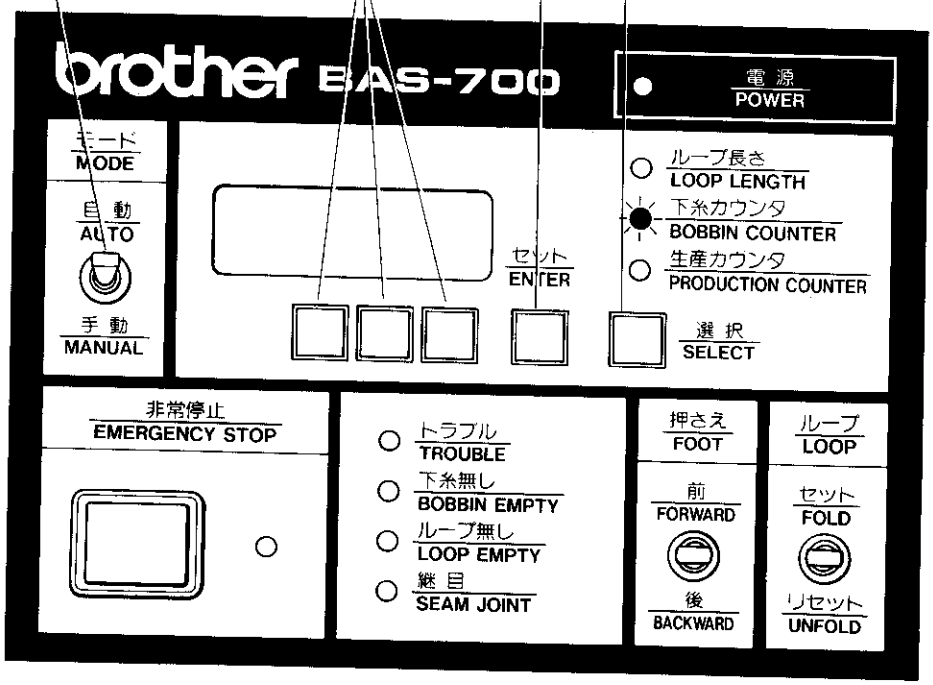
3 Press the ENTER switch.
- The display will flash.
- The latest set value flickers in the display.

4 Input the possible bar tacking number using the INPUT switches.

NOTE: Setting 000 does not make the bobbin counter work.
NOTE: 001 is not accepted. Be sure to set 002 or more.
NOTE: If the EMERGENCY STOP switch is pressed, the latest set count will be displayed.

5 Press the ENTER switch.
- The input count is displayed and stored.

NOTE: The count is down by one when each bar tacking is completed.
NOTE: When the count is down to 001 or less (000 is displayed in AUTO mode.), the BOBBIN EMPTY indicator lights, the display flashes, and the sewing comes to a halt.
Replace the bobbin and reset the BOBBIN COUNTER to restart.



5 Clearing production counter

1 Set the MODE switch to AUTO.

2 Press the SELECT switch to select the PRODUCTION COUNTER.
- The PRODUCTION COUNTER indicator will light.

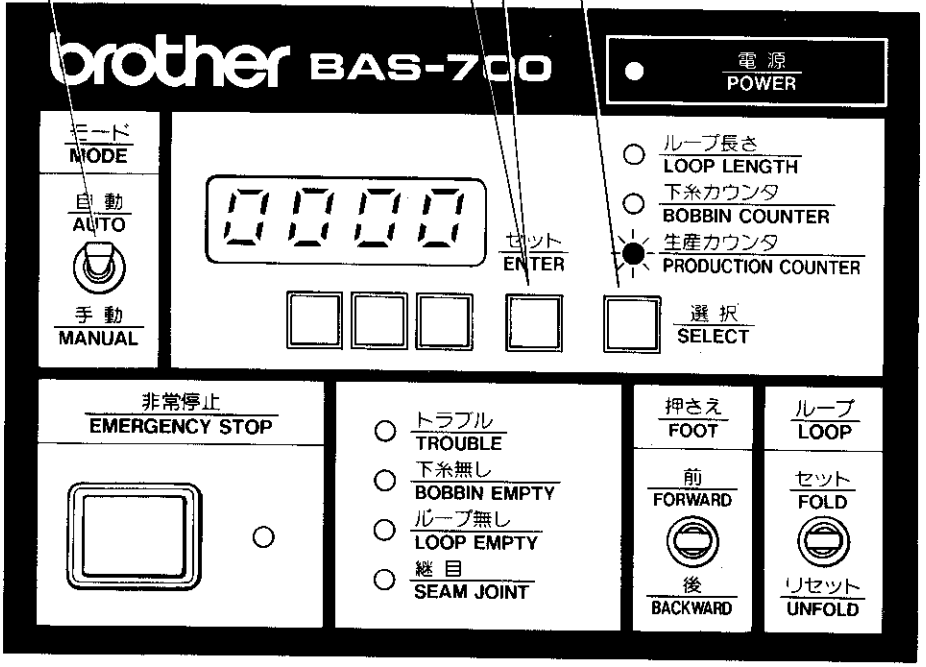
3 Press the ENTER switch.
- "0000" flashes on the display.

NOTE: If the EMERGENCY STOP switch is pressed, the latest count will be displayed.

4 Press the ENTER switch.
- The "0000" will be displayed and the production counter will be cleared.

NOTE: The count increases by one when each belt loop is completed.

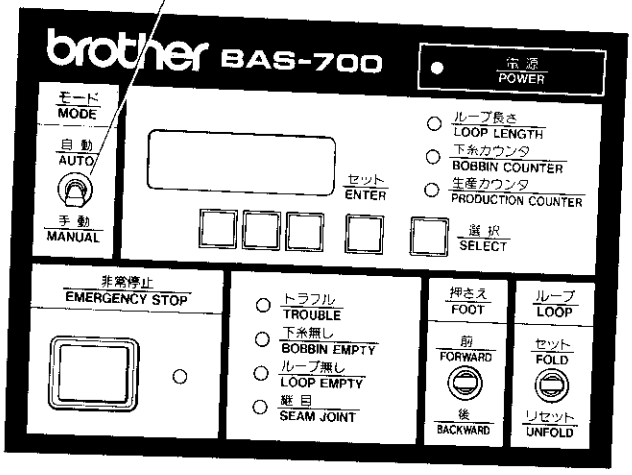
NOTE: Up to 9999 is counted.



6 Trial sewing

Trial sewing and step motion checks can be performed.

[Trial sewing]

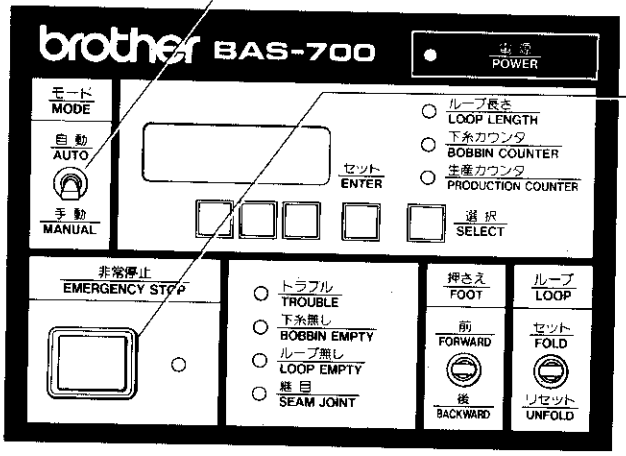


1 Set the MODE switch to MANUAL.

2 Set the main material.

3 Press the foot start switch.
- The machine will complete trial sewing and stop.

[Step motion]



1 Set the MODE switch to MANUAL.

2 Set the main material.

3 Press the EMERGENCY STOP switch.
- The EMERGENCY STOP indicator will light. Pressing the EMERGENCY STOP switch once completes one step motion in the cycle.
- When the last step has been completed, the EMERGENCY STOP indicator goes off and the needle returns to its home position.

7 Automatic sewing

1 Set the MODE switch to AUTO.
NOTE: To make threading easy, press the EMERGENCY STOP switch and move the presser foot up and down at the starting position.

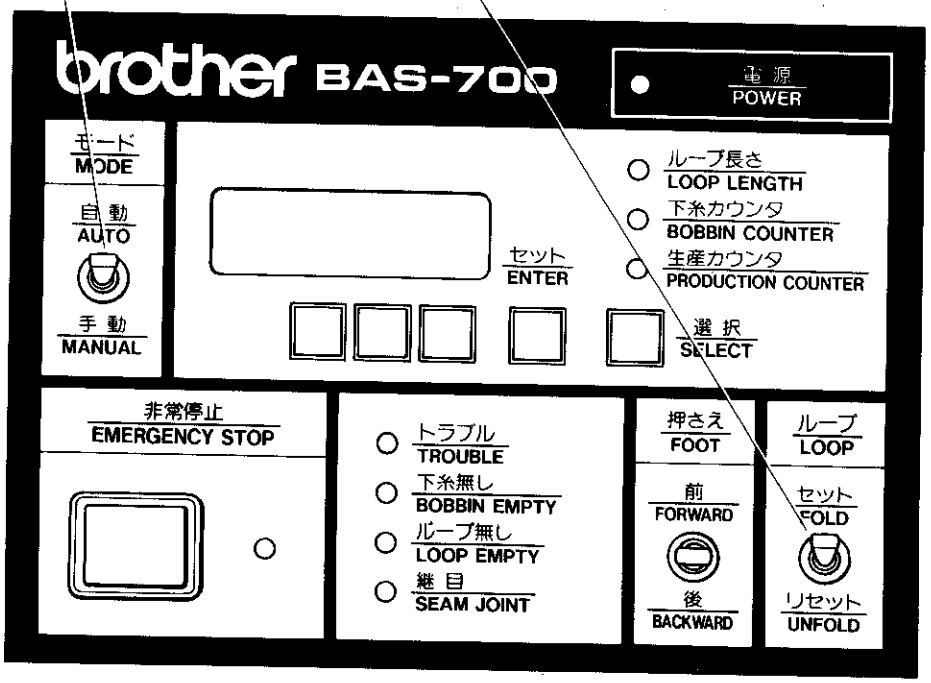
2 Set the LOOP switch to FOLD and load the belt loop material.

NOTE: When automatic sewing is started, the belt loop material is set automatically.
NOTE: Set the LOOP switch to UNFOLD to cancel the set loop.
NOTE: When the machine detects a joint during belt loop feeding, the SEAM JOINT indicator lights and the material is cut around the joint. (The length to be cut is written on page 22.)
NOTE: When the machine runs out of belt loop material during belt loop feeding, the LOOP EMPTY indicator lights. Load additional belt loop material.

3 Set the main material.

4 Press the foot start switch.
- Automatic sewing will start.

NOTE: Press the EMERGENCY STOP switch during sewing to stop the machine. The machine will stop and display E.-00.
NOTE: If the machine stops with an error code displayed during automatic sewing, refer to page 27 "ERROR CODES."
NOTE: When DIP SW23 is ON, the presser foot will be at its lowest position after automatic sewing is completed. Pressing the EMERGENCY STOP switch will raise the presser foot.



8 Re-sewing

When re-sewing after sewing up to the second bar tacking in automatic sewing, do as follows.

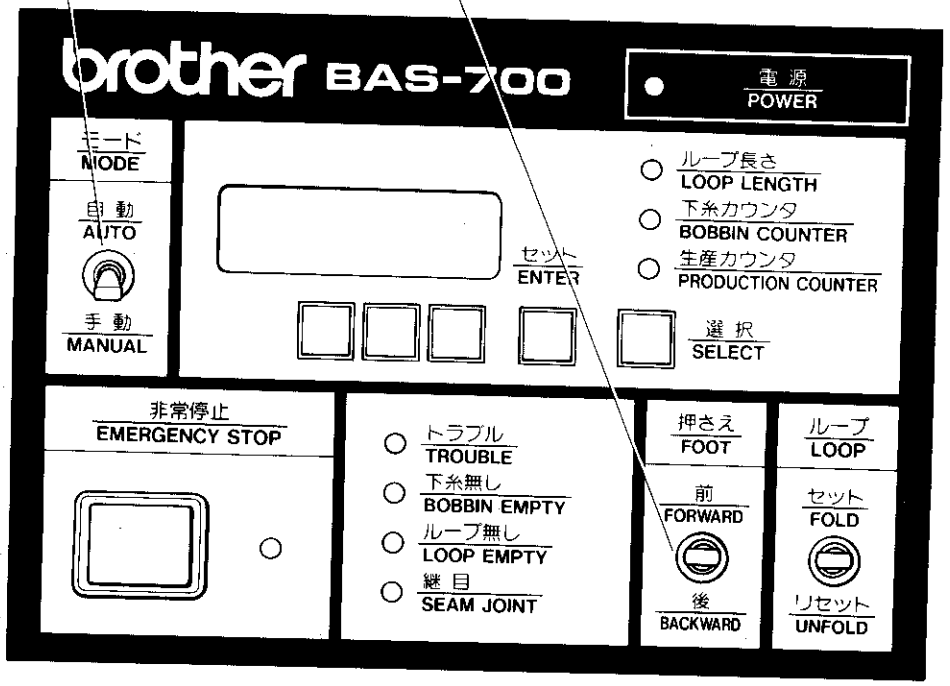
1 Set the MODE switch to MANUAL.

2 Set the FOOT switch to FORWARD or BACKWARD.
- The presser foot will go down and the first bar tacking will be ready to re-sew.

NOTE: When setting the FOOT switch to FORWARD, the presser foot will rise and the machine will return to its starting position.

NOTE: When setting the FOOT switch to BACKWARD, the second bar tacking will be ready to re-sew.

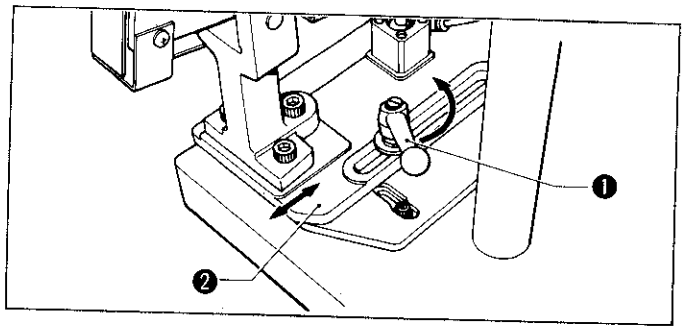
3 Press the foot start switch.
- The machine will operate a short time, stop then return to its starting position.



ADJUSTMENT

1 Adjusting belt loop length

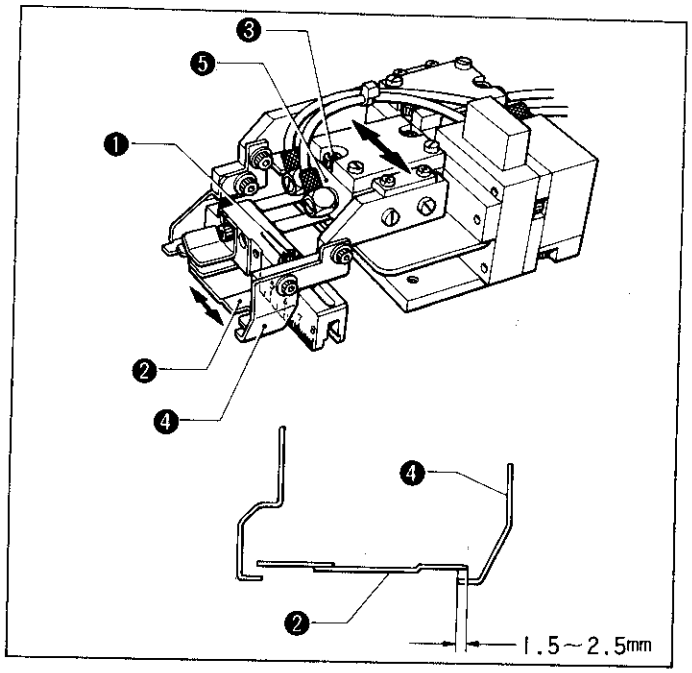
How to move Unit



1) Loosen the clamp lever ❶.

2) Move the unit base ❷ to the right. The space between the machine head and the unit base ❷ will make the adjustment easy.

Adjusting fold plate unit

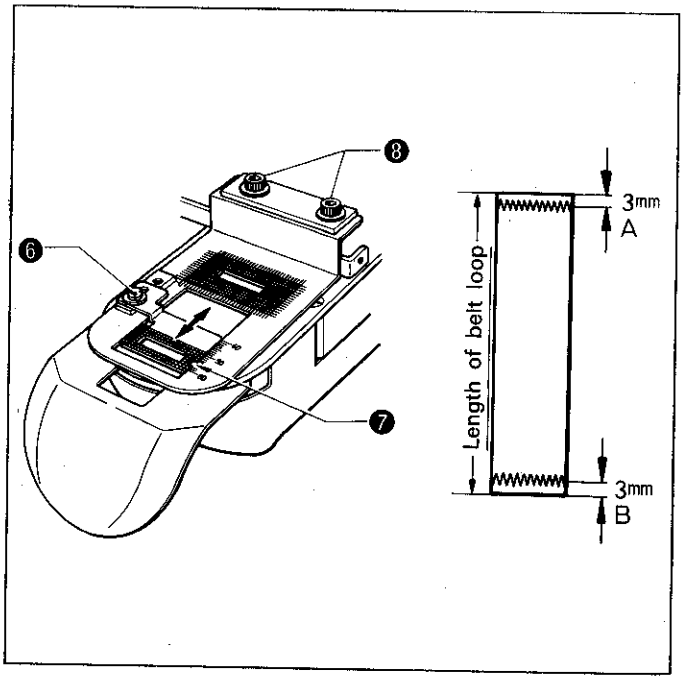


1) Loosen the bolt ❶. Adjust the supporter plate ❷ position so that it matches the belt loop length.

NOTE: Match the dimension to the finished belt loop length (except overlap width).

2) Loosen the bolt ❸.
Adjust the fold cylinder ❺ position so that the supporter plate ❷ overlaps the fold plate ❺ 1.5-2.5 mm.

Adjusting feed plate

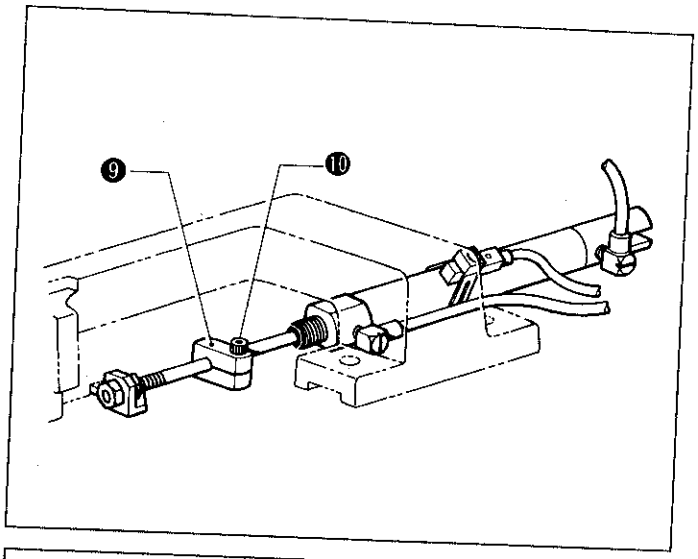


1) Loosen the screw ❻. Match the V-mark ❼ on the feed auxiliary plate to the belt length.

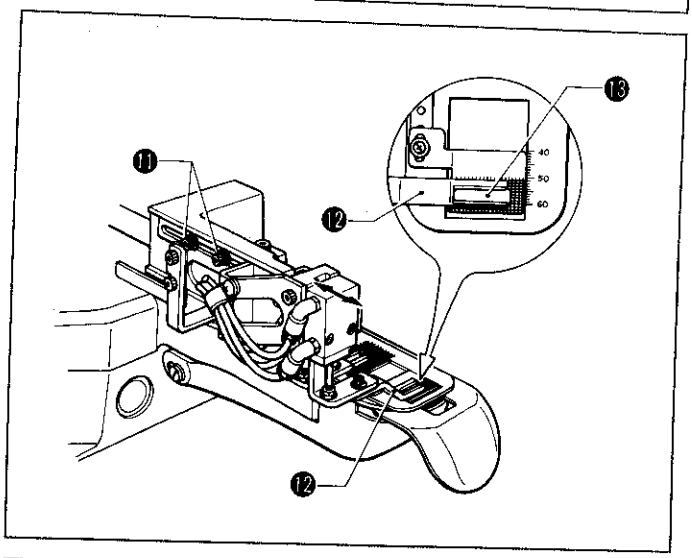
NOTE: If the belt loop length is more than 60 mm, loosen the bolt ❽ and replace the feed plate with 40-80 mm type one.

NOTE: The scale shows the belt loop length when the bar tacking position width at A and B is 3 mm.

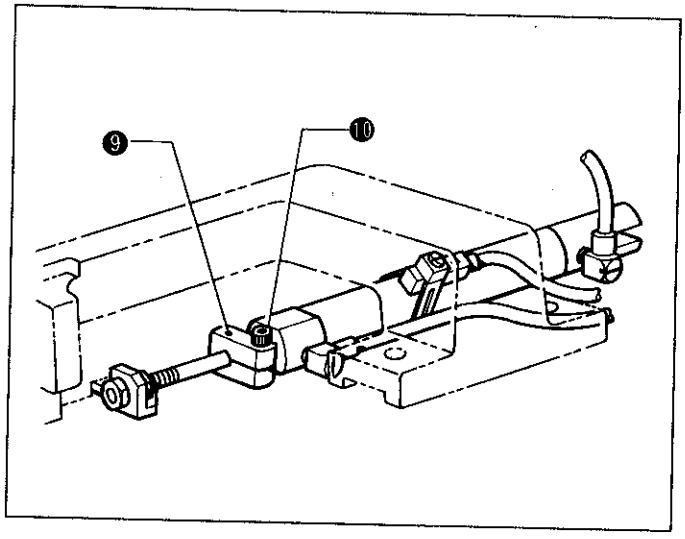
Adjusting presser foot



1) Loosen screw ⑩ of cylinder stopper ⑨.

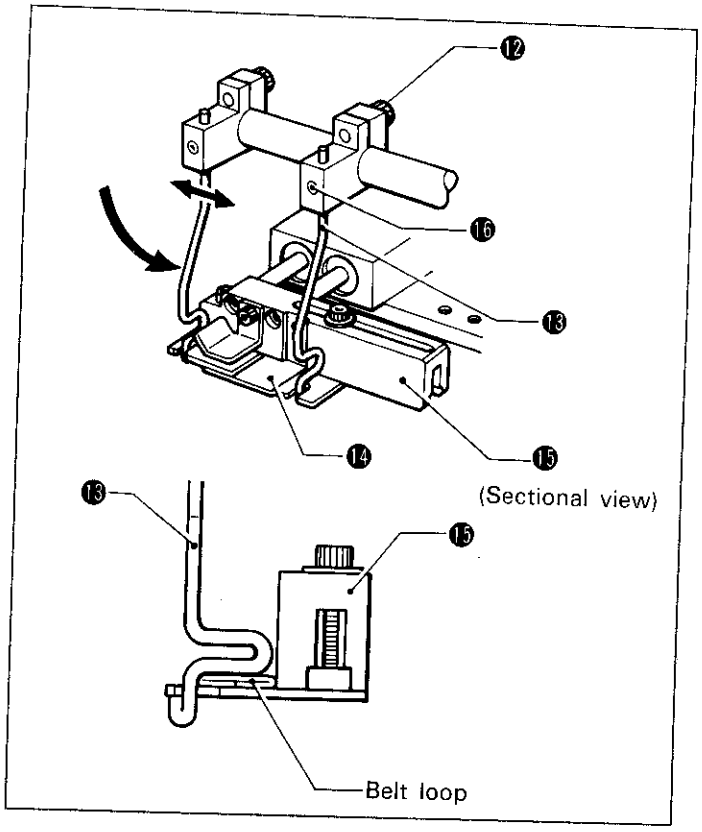


2) Loosen bolt ⑪ on the presser arm. Adjust presser foot ⑫ on this side to feed auxiliary plate ⑬ hole.
3) Tighten bolt ⑪.



4) Move the second bar tacking position on the feed plate to the needle position. Place cylinder stopper ⑨ so it contacts the cylinder edge, then tighten the screw ⑩.

Adjusting belt loop setting bar



1) Using step motion, adjust the machine so that the belt loop setting bar ⑬ holds the belt loop. (Refer to page 10.)

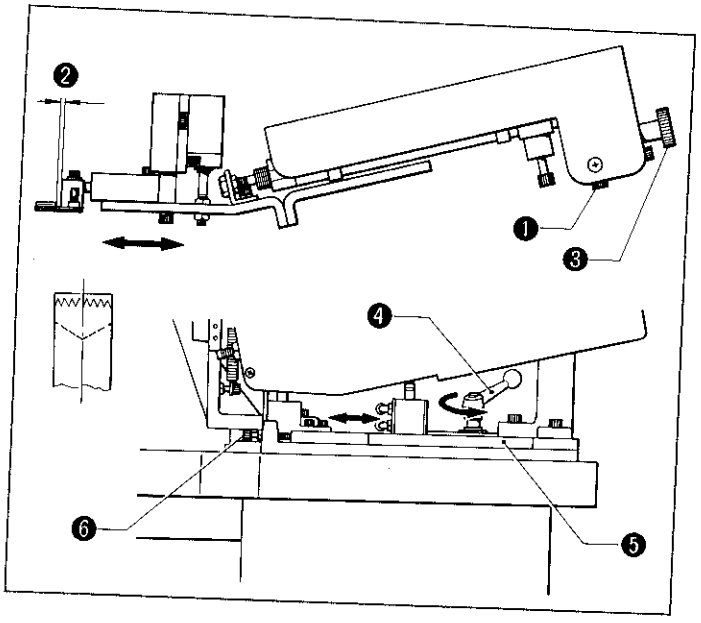
2) Loosen the bolt ⑫.
Adjust the belt loop setting bar to the channel of the supporter plate ⑭.

3) Adjust the belt loop setting bar so that the belt loop fits on the guide setting plate ⑮.
Secure the bolt ⑫.

4) Loosen the screw ⑯.
Adjust the belt loop setting bar ⑬ up and down so that the belt loop is fixed even if it is pulled lightly by hand.

2 Adjusting belt loop width

Adjusting loop holder



1) Loosen the bolt ❶.

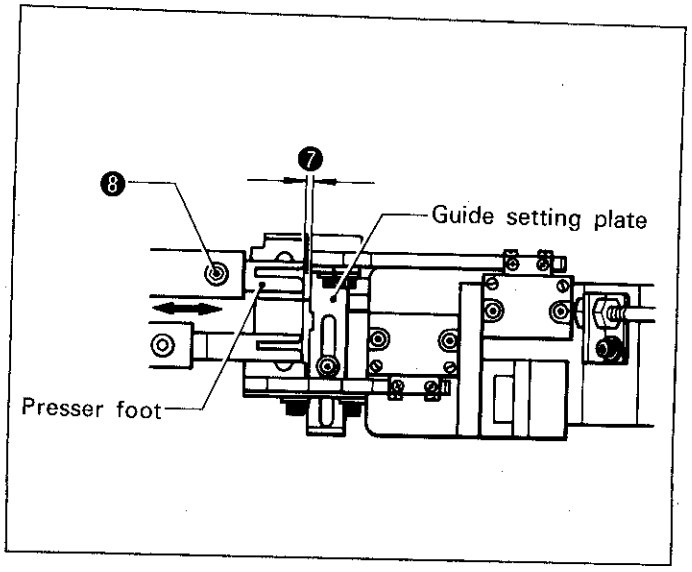
2) Adjust the loop holder so that the dimension between belt loop right edge and loop holder edge ❷ to 1-1.5 mm using adjusting screw ❸.

NOTE: If the dimension ❷ is too narrow, the belt loop is pressed on the loop holder.
If the dimension ❷ is too wide, the center of the V-cut deviates.

3) Loosen the clamp lever ❹.
Adjust the unit base ❺ so that the bar tacking comes in the middle of the belt loop.

4) Adjust the unit plate position ❻ using the stopper screw ❺.

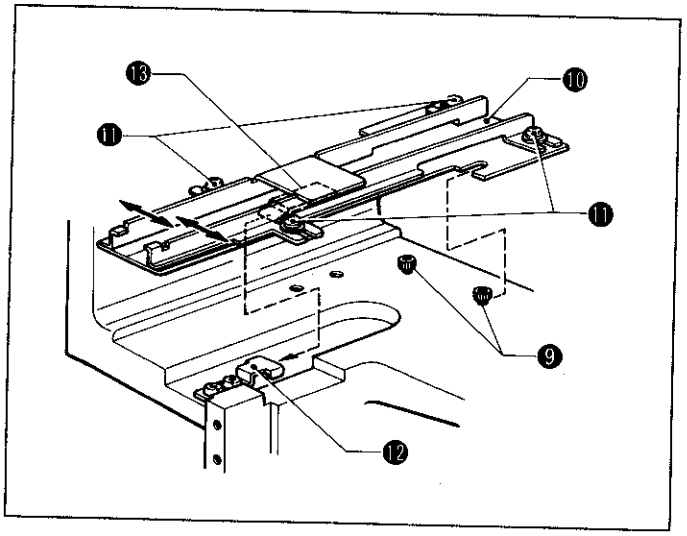
Adjusting presser foot



1) Use step motion to move the belt loop under the presser foot. (Refer to page 10.)

2) Adjust the distance between the guide setting plate left edge and the presser foot tip ❼ to 0-0.5 mm using the screw ❽.

Adjusting loop guide channel



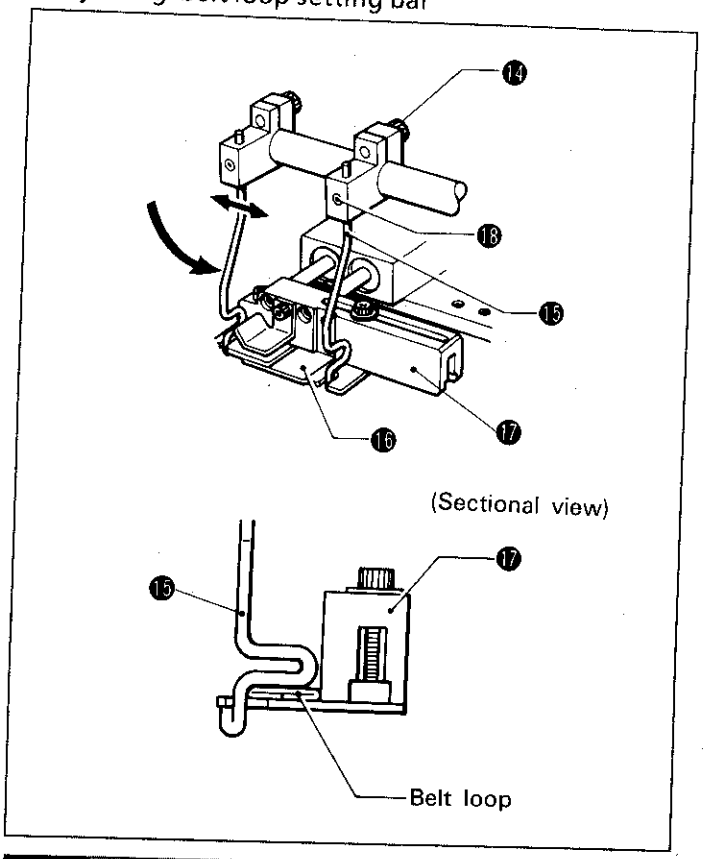
1) Loosen the bolt ❾.
Remove the channel assembly ❿ from the unit.

2) Adjust the channel width to the belt loop width using four screws ⓫.

NOTE: Adjust the right and left channel so that the belt loop comes at the center of the channel base.

3) Position the coupler of the channel ⓭ to the coupler of the unit base ⓬. Secure them using the bolt ❾.

Adjusting belt loop setting bar



1) Using step motion, adjust the machine so that the belt loop setting bar ⑮ holds the belt loop. (Refer to page 10.)

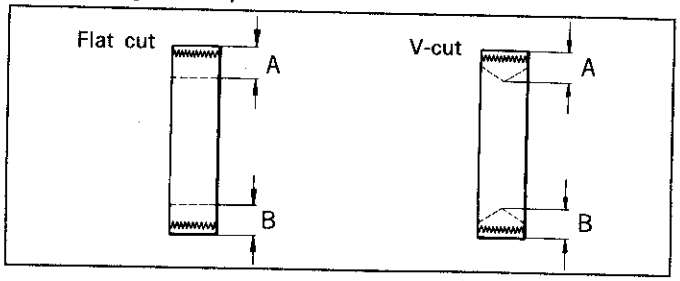
2) Loosen the screw ⑭.
Adjust the belt loop setting bar ⑮ to the channel of the supporter plate ⑯.

3) Adjust the belt loop setting bar ⑮ so that the belt loop fits on the guide setting plate ⑰.
Secure the screw ⑭.

4) Loosen the screw ⑱.
Adjust the belt loop setting bar ⑮ up and down so that the belt loop is fixed even if it is pulled lightly by hand.

3 Adjusting belt loop overlap

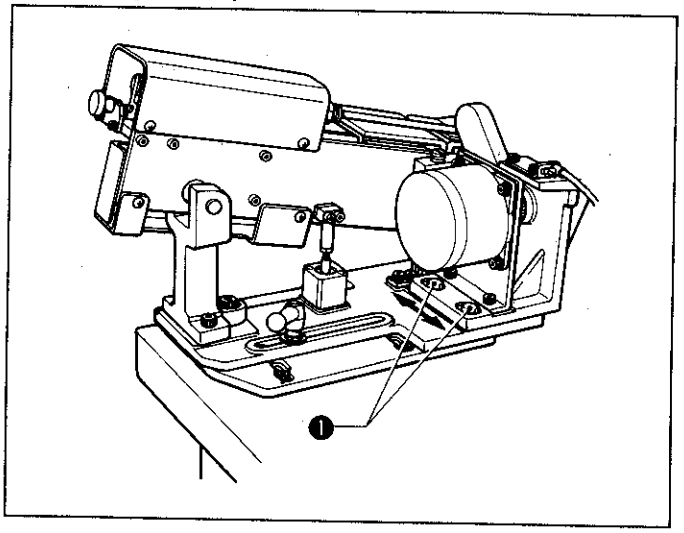
Adjusting overlap A



Loosen the the bolts ❶ on the feed unit base. Adjust dimension A by moving the feed unit base.

NOTE: Check that the knives do not strike the unit when the feed unit moves toward the operator and A diminishes.

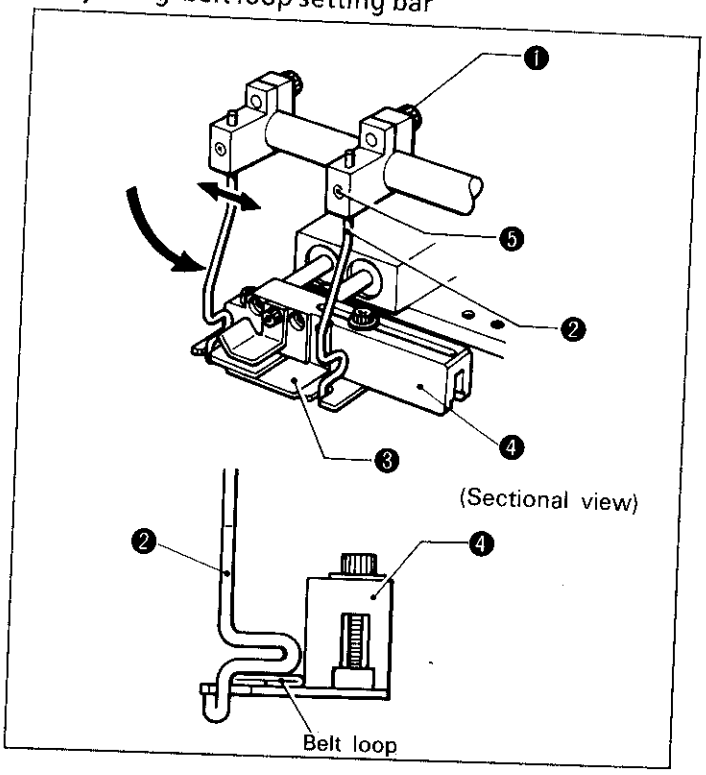
Adjusting overlap B



Adjust dimension B by adjusting the belt loop length on operation panel. (Refer to page 7.)

4 Changing belt loop material

Adjusting belt loop setting bar



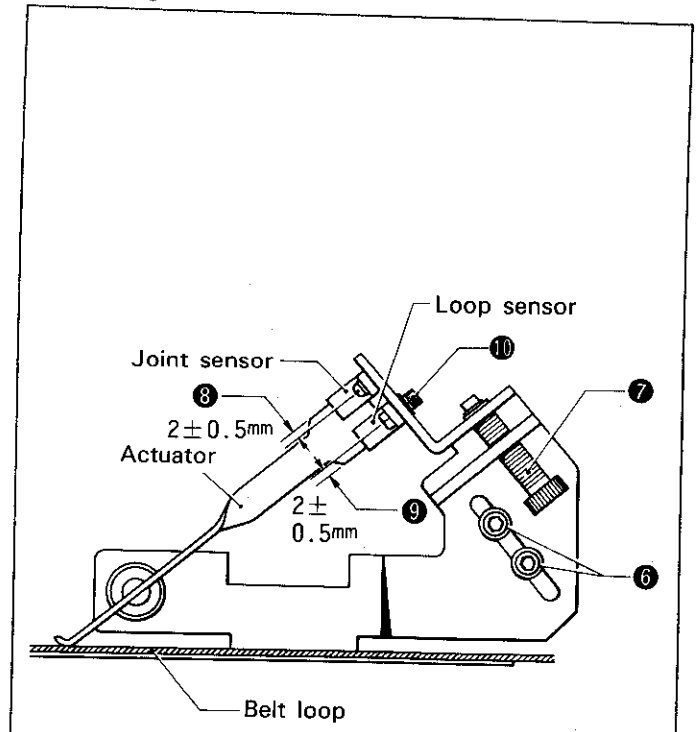
1) Using step motion, adjust the machine so that the belt loop setting bar ⑫ holds the belt loop. (Refer to page 10.)

2) Loosen the screw ❶.
Adjust the belt loop setting bar to the channel of the supporter plate ❸.

3) Adjust the belt loop setting bar so that the belt loop fits on the guide setting plate ❹.
Secure the screw ❶.

4) Loosen the screw ❺.
Adjust the belt loop setting bar ❷ up and down so that the belt loop is fixed even if it is pulled lightly by hand.

Adjusting sensor



1) Loosen the bolt ⑤.

2) Adjust the dimension ⑧ between the center of the joint sensor and actuator edge to 2 ± 0.5 mm using the adjusting shaft ❼.

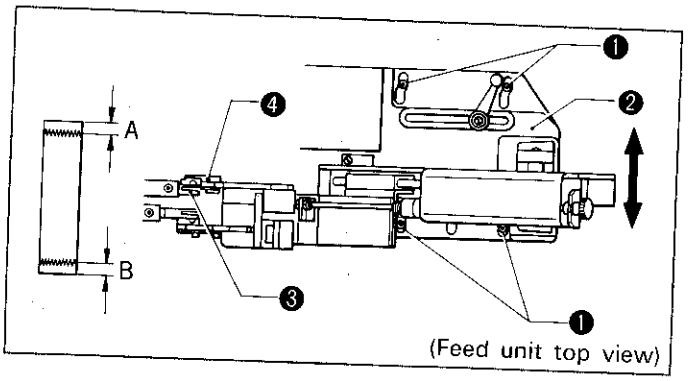
NOTE: Check that the joint sensor detects the loop joint.
NOTE: When the joint sensor detects the loop joint, the SEAM JOINT indicator lights.

3) Adjust the dimension ⑧ between the center of the loop sensor and actuator edge to 2 ± 0.5 mm using the bolt ⑩.

NOTE: Check that the loop sensor functions properly when the belt loop is not set.
NOTE: When the loop sensor detects that the belt loop is not set, the LOOP EMPTY indicator lights.

5 Adjusting bar tacking position

Adjusting first bar tacking position A

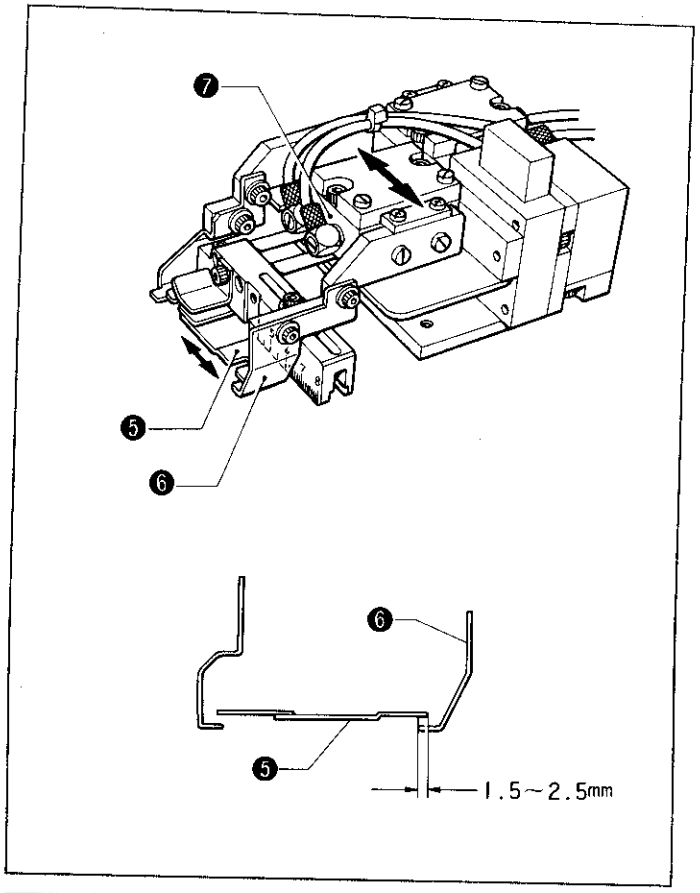


1) Feed the belt loop under the work clamp by step motion. (Refer to page 10.)

2) Loosen the four screw ❶.
Move the feed unit ❷ forward and backward to match first bar tacking position A with the presser foot ❸.

NOTE: Adjust the presser foot ❸ so that it is inside of the fold plate ❹.

Adjusting second bar tacking position B

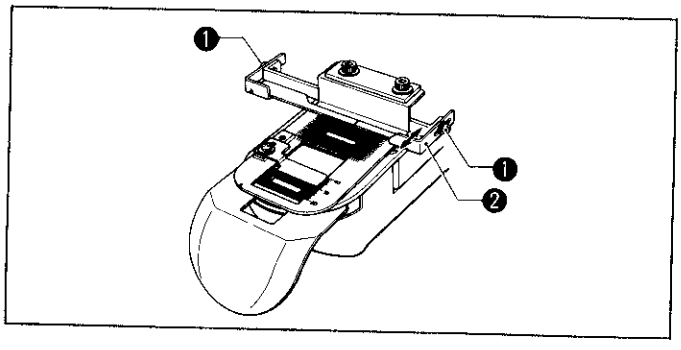


1) Move supporter plate ❺ forward and backward against second bar tacking position B to adjust it.

2) Adjust the fold cylinder ❼ so that supporter plate ❺ overlaps the fold plate ❻ 1.5-2.5 mm.

6 Adjusting sewing position

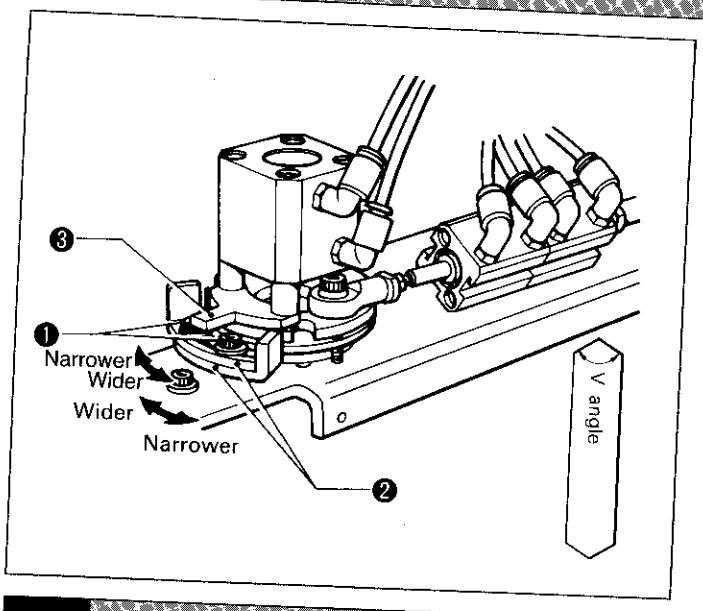
Adjusting body ruler



1) Loosen the screws ❶ on both ends.

2) Adjust the body ruler ❷ position so that the body adjusts to sewing position.

7 Adjusting V knives

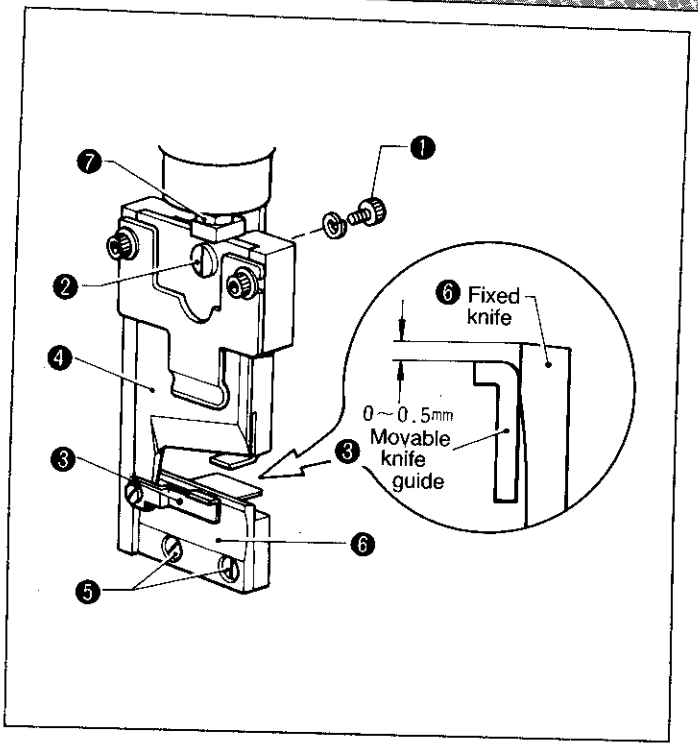


1) Loosen the bolt ❶ and adjust the stopper ❷.

NOTE: Increasing knife rotation stopper holder ❸ movement decreases the belt loop V angle.

NOTE: Move the stopper ❷ symmetrically so that the V shape is not distorted.

8 Replacing fixed and movable knives



1) Remove the knife unit by loosening the bolt ❶ and stud screw ❷.

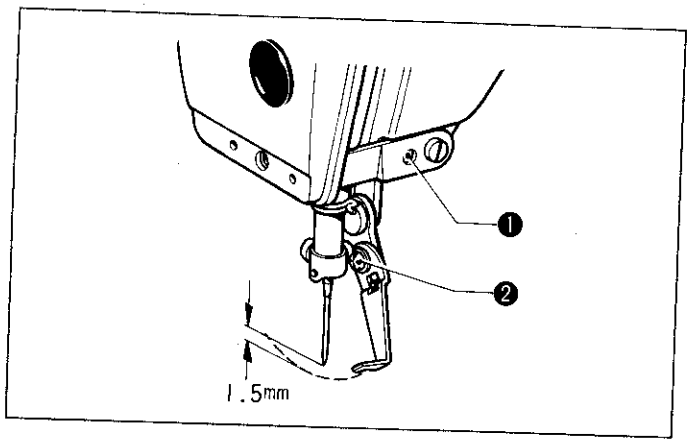
2) Remove the movable knife guide ❸ and pull out the movable knife ❹.

3) Remove the fixed knife ❻ by loosening the screw ❺.

NOTE: When the movable knife ❹ is at its highest position, adjust the movable knife guide ❸ upper edge height so that it is even with the fixed knife ❻ upper edge or 0 -0.5 mm lower using nut ❼.

9 Adjusting thread wiper mechanism

Adjusting thread wiper height

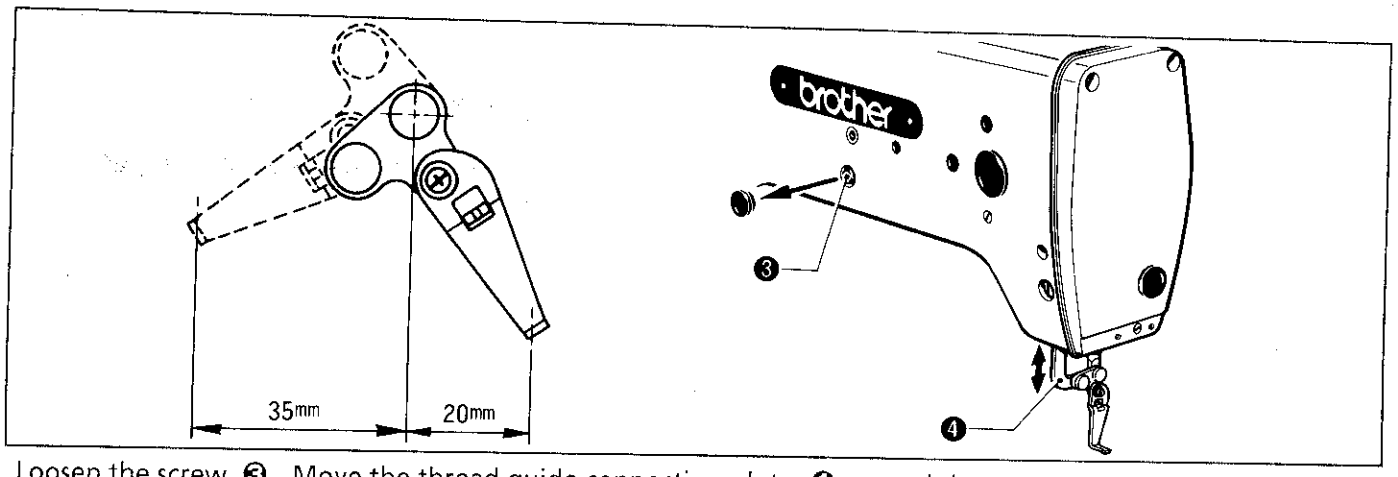


Loosen the screw ❶. Move the thread guide arm holder ❷ up and down to adjust so that the wiper is 1.5 mm from the needle bar tip when the wiper passes under it.

Adjusting thread wiper stroke

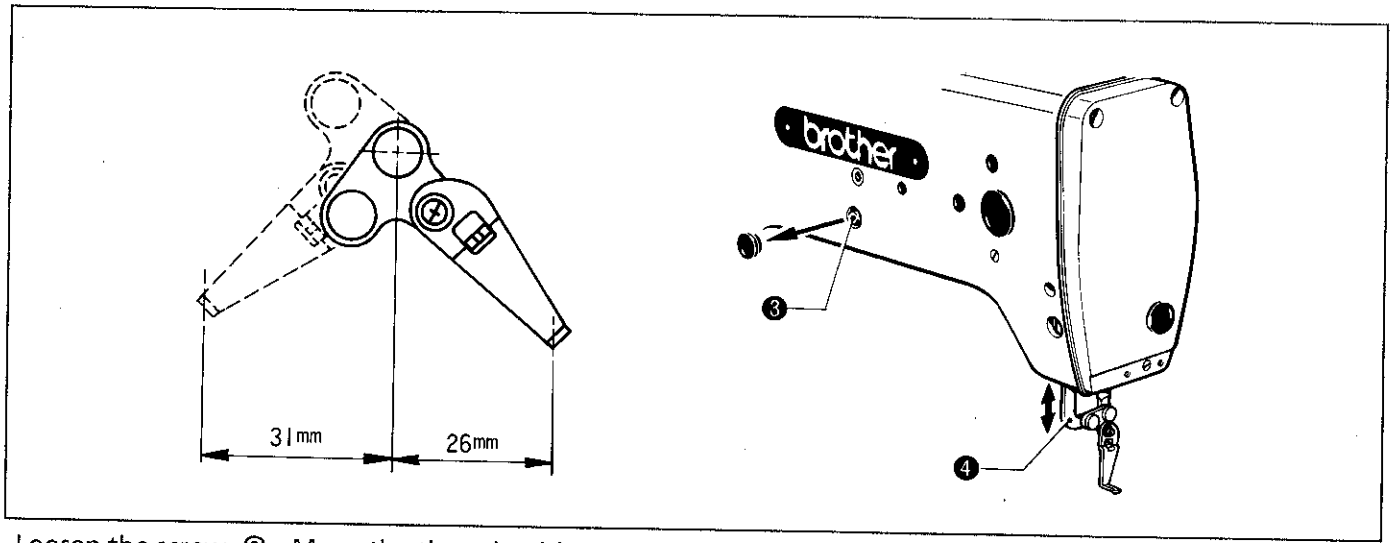
Note that there is a different thread wiper stroke adjustment procedure for sewing from the center of the loop and for sewing from the left.

When sewing from the center



Loosen the screw ❸. Move the thread guide connecting plate ❹ up and down to adjust so that the wiper operation range is 20 mm right of the center of the needle bar and 35 mm left.

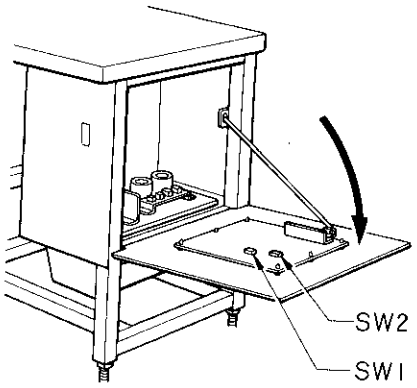
When sewing from the left

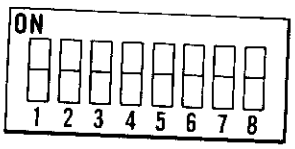


Loosen the screw ❸. Move the thread guide connecting plate ❹ up and down to adjust so that the wiper operation range is 26 mm right of the center of the needle bar and 31 mm left.

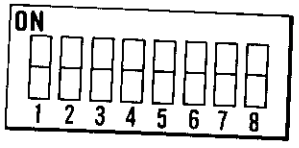
DIP SWITCH

When in changing the DIP switch, the power must be off.





SW1



SW2

	ON	OFF
SW11	To activate thread breakage detector	To inactivate thread breakage detector
SW12	V-cut	Flat cut
SW13	To set belt loop length to 0.5 mm	To set belt loop length to 1.0 mm

SW15 \ SW14	ON	OFF
ON	To cut 40 mm from joint	To cut 30 mm from joint
OFF	To cut 20 mm from joint	To cut 10 mm from joint

SW16	To shorten loop- feeding time	
SW17	Spare	Spare
SW18	Initialization of memory	Normal operation
SW21	To activate presser foot switch (option) (Refer to page 26)	To inactivate presser foot switch
SW22	To activate folding switch (option) (Refer to page 24)	To inactivate folding switch

	ON	OFF
SW23	After automatic sewing, the presser foot remains down. Pressing the EMERGENCY STOP switch will raise the presser foot.	After automatic sewing, the presser foot rises.
SW24	Spare	Spare
SW25	Spare	Spare
SW26	Spare	Spare
SW27	Spare	Spare
SW28	Spare	Spare

Initialization of memory

- To clear backup data and initialize memory, necessary steps for sewing.
- Use the initialization if:
  The TROUBLE indicator lights and the error code E.- 6□ is displayed when turning on the power. This occurs when the memory disappears due to extended non-use.

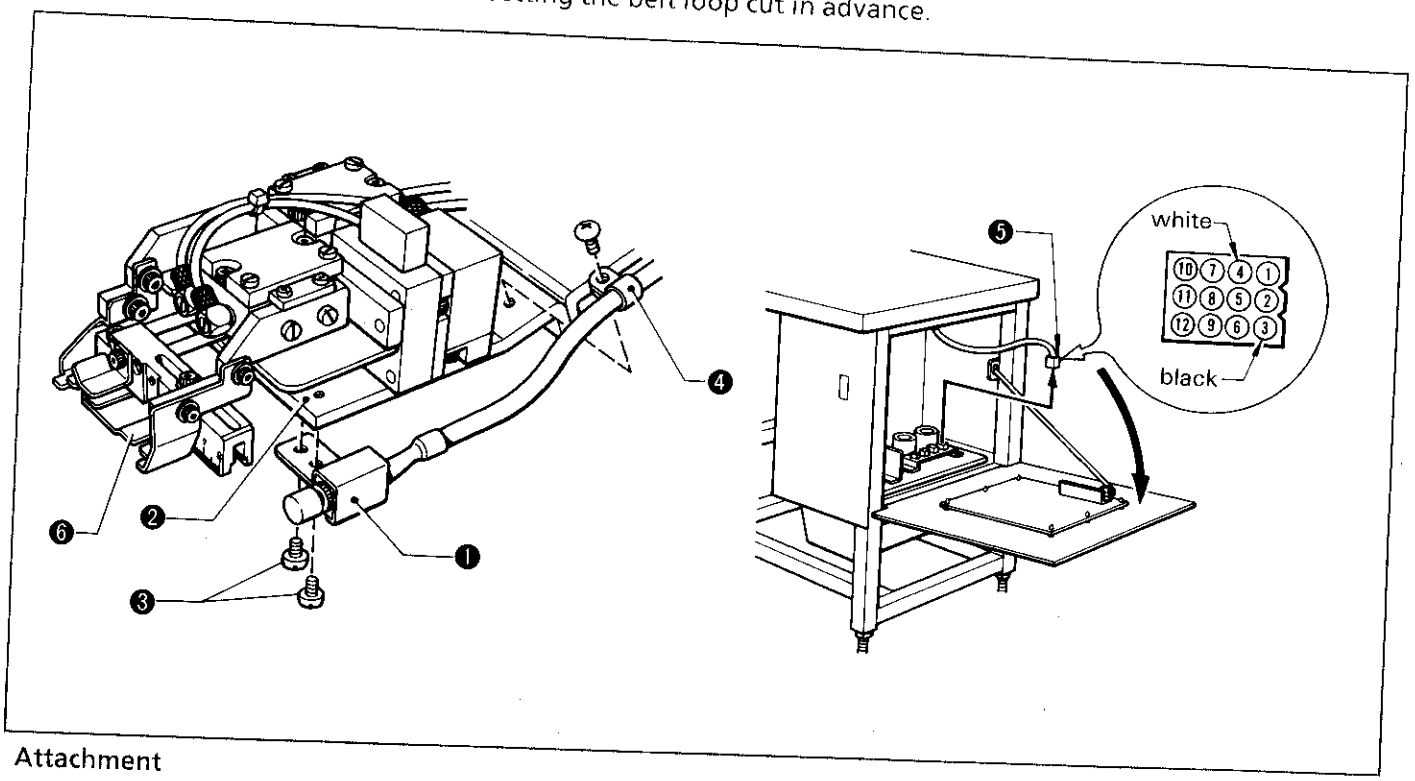
1) Turn off the power.
2) Set DIP SW18 to ON.
3) Turn on the power.
   The memory will be cleared and data will return to the default. When the default data is completely entered, the buzzer sounds once and three display mode indicators (LOOP LENGTH, BOBBIN COUNTER and PRODUCTION COUNTER) light.
4) Turn off the power.
5) Set DIP SW18 to OFF.

Default:
belt loop length 100 mm
bobbin counter 400 bar tackings
production counter 0 leaf
display shows belt loop length

OPTIONS

1 Folding switch

Use the folding switch when setting the belt loop cut in advance.



Attachment

1) Attach the folding switch ❶ to the fold cylinder base ❷ with the screw ❸. Secure the harness with the band ❹.

2) Open the control box and remove the connector ❺.

3) Put the connector pin (black) of the folding switch into #3 of the connector ❺, and the connector pin (white) into #4 of the connector ❺.

4) Attach the connector ❺.

5) Secure the harness to the air tube with the band.

Use

1) Set DIP SW22 to ON, then turn on the power. (Refer to page 22.)

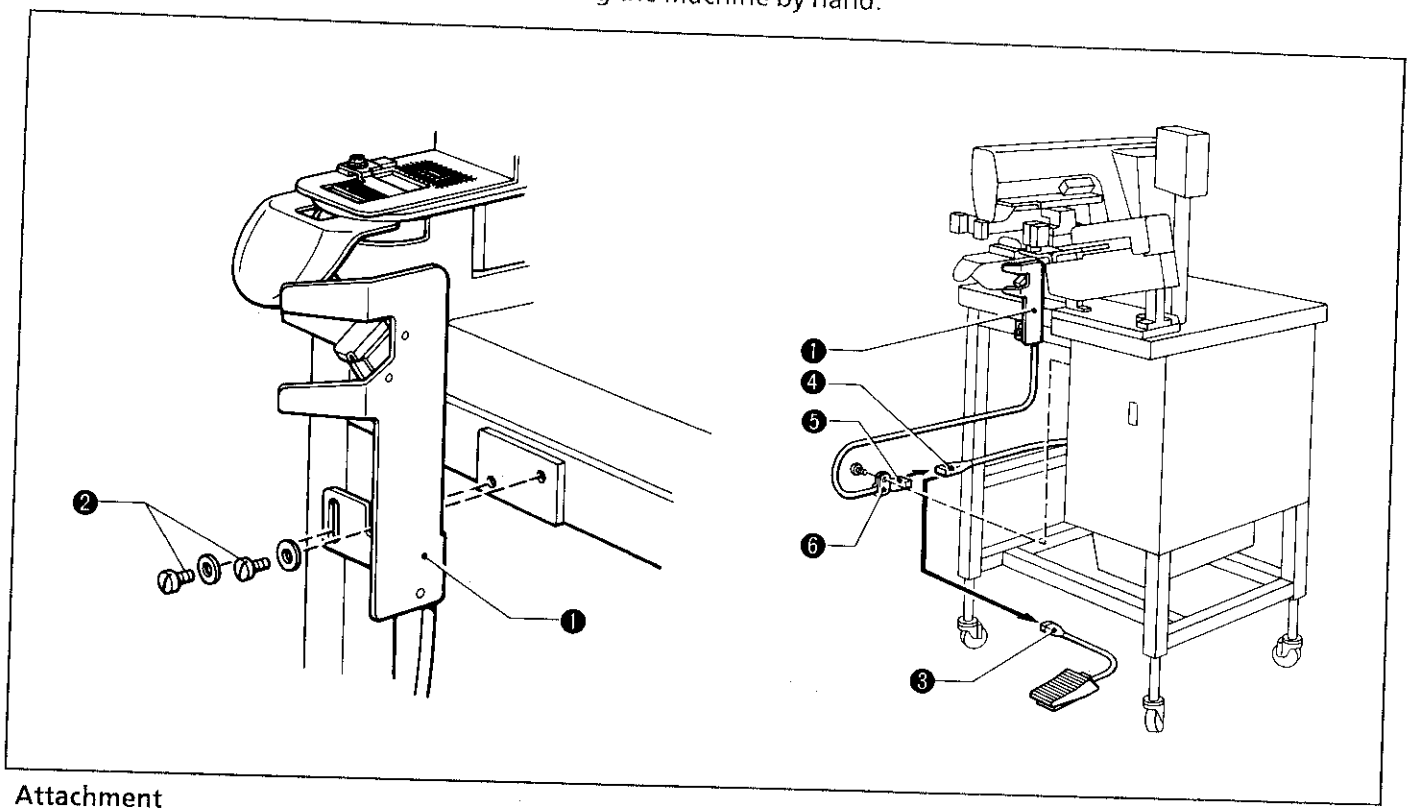
2) Put the belt loop cut off on the supporter plate ❻.

3) Press the folding switch ❶.
The belt loop will be set.

NOTE: After automatic sewing, an operation of the folding switch always sets the loop length.

2 Hand start switch

Use the hand start switch when starting the machine by hand.



Attachment

1) Attach the the hand start switch ❶ to the leg with the screw ❷.

2) Remove the connector of the foot start switch ❸ and the connector ❹ of the machine body.

3) Attach the connector ❺ of the the hand start switch ❶ to the connector ❹ of the machine body.

4) Secure the harness on the machine side with the band ❻.

Use

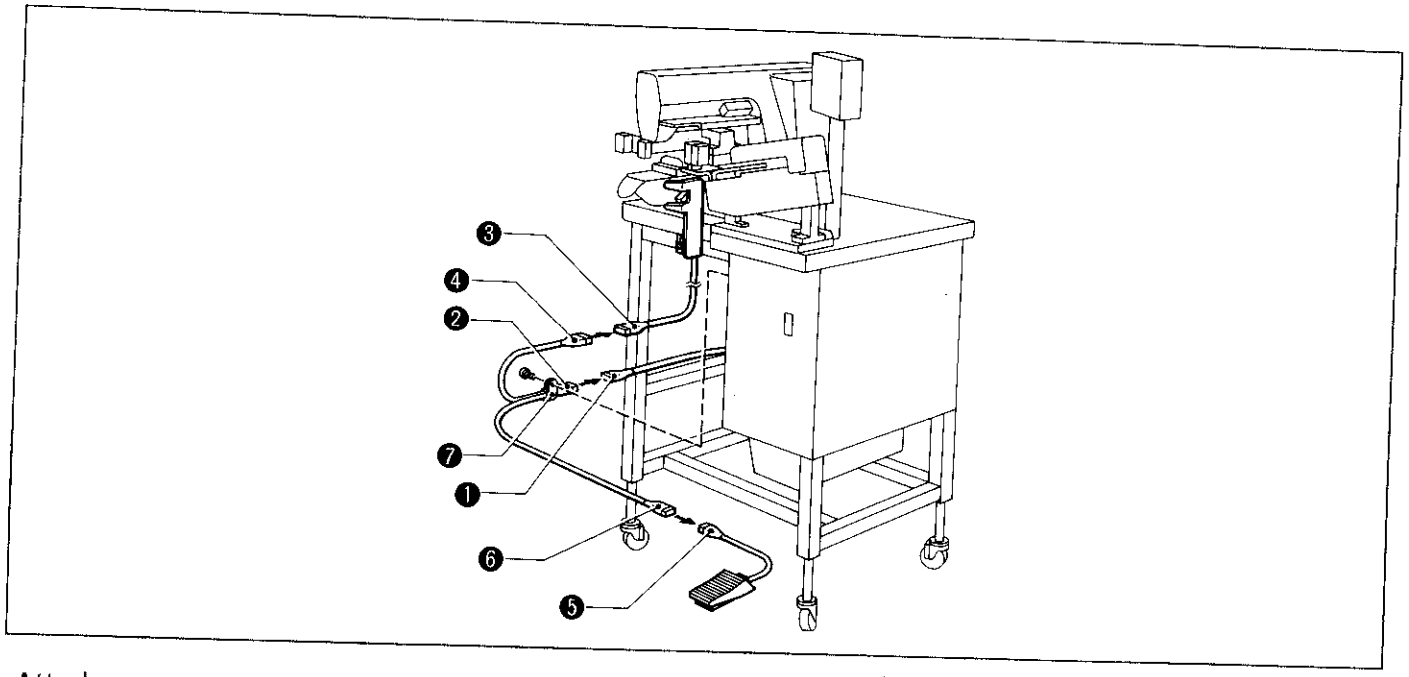
Use the hand start switch as same as the foot start switch.

NOTE: To avoid trouble when reclining the machine head, follow the procedures below :
Loosen the screw ❷, and lower the hand start switch all the way. Move the hand start switch to the right, then, the machine head can be tilted.

3 Presser foot switch

By using the presser foot switch together with the hand start switch :

- Trial sewing can be performed while confirming the presser foot position.
- After automatic sewing, the presser foot remains down, so the material does not slip. The presser foot may now be raised by the foot switch.
  This feature is useful when the operator is using many different machines at the same time.
- Re-sewing can be stopped in the middle.



Attachment

1) Attach the connector ❶ of the machine body to harness connector A ❷.

2) Attach the connector ❸ of the hand start switch to harness connector B ❹.

3) Attach the connector ❺ of the presser foot switch to harness connector C ❻.

4) Secure harness connector A with the band ❼.

Use

1) Set DIP SW21 to ON, then turn on the power. (Refer to page 22 for DIP switch explanations.)
   - When the needle is in starting position, pressing down the presser foot switch will lower the presser foot, and releasing it will raise the presser foot.
   - Press the presser foot switch during re-sewing and the machine will return to its starting position. (Refer to P.12)

2) Set DIP SW21 and SW23 to ON, then turn on the power.
   After automatic sewing, the presser foot remains down, pressing the presser foot switch will raise it.

NOTE: When DIP SW21 is OFF but DIP SW23 is ON, pressing the EMERGENCY STOP switch will raise the presser foot.

ERROR CODES

Error code	Problem	Solution
E -00	EMERGENCY STOP switch selected during automatic sewing.	**[When machine is disengaged]** (1) Press EMERGENCY STOP switch. (2) Press START switch to re-start automatic sewing. **[When machine is engaged and is in first bar tacking]** (1) Set FOOT switch to BACKWARD, then position main material at second bar tacking position. (2) Press EMERGENCY STOP switch. (3) Press START switch to start second bar tacking. (4) Press EMERGENCY STOP switch twice to return machine to its starting position. **[When machine is engaged and is in second bar tacking]** Press EMERGENCY STOP switch twice to return machine to its starting position.
E -01	START switch on when power turned on.	(1) Turn off START switch. (2) Turn power on again.
E -02	EMERGENCY STOP switch on when power turned on.	(1) Turn off EMERGENCY STOP switch. (2) Turn power on again.
E -03	ENTER switch on when power turned on.	(1) Turn off ENTER switch. (2) Turn power on again.
E -04	STOP POSITION SENSOR off when power turned on.	(1) Turn on STOP POSITION SENSOR. (2) Turn power on again.
E -05	LOOP switch set FOLD when power turned on.	(1) Move LOOP switch to neutral. (2) Turn power on again.
E -10 E -11	LOOP FRONT SENSOR problem	(1) Check LOOP FRONT SENSOR. (2) Turn power on again.
E -12 E -13	LOOP REAR SENSOR problem	(1) Check LOOP REAR SENSOR. (2) Turn power on again.
E -20 E -21	BODY FRONT SENSOR problem	(1) Check BODY FRONT SENSOR. (2) Turn power on again.
E -22 E -23	BODY REAR SENSOR problem	(1) Check BODY REAR SENSOR. (2) Turn power on again.
E -30 E -31	CUTTER CENTER SENSOR problem	(1) Check CUTTER CENTER SENSOR. (2) Turn power on again.

Error code	Problem	Solution
E -40 E -41	STOP POSITION SENSOR problem.	(1) Check STOP POSITION SENSOR. (2) Turn power on again.
E -50	Joint was detected twice in a row.	(1) Check JOINT SENSOR. (2) Turn power on again.
E -60	Data of loop length was destroyed.	If "100" flashes after error code, set loop length. (Refer to page 7.)
E -61	Bobbin counter malfunction	If "400" flashes after error code, set bobbin counter. (Refer to page 8.)
E -62	Producton counter malfunction	After error code display, production counter will be cleared automatically.
E -63	Selection impossible in display.	After error code display, loop length will be displayed. Then select the desired mode with SELECT switch.
E -70	Memory read write error	Turn power on again.
E -80	Needle thread breakage	**[During automatic sewing in first bar tacking]** (1) Thread needle thread. (2) Press EMERGENCY STOP switch. (3) Press START switch to start first bar tacking. (4) Set FOOT switch to BACKWARD, then position material main body at second bar tacking position. (5) Press EMERGENCY STOP switch. (6) Press START switch to start second bar tacking. (7) Press EMERGENCY STOP switch twice to return machine to its starting position.

Error code	Problem	Solution
E.-80	Needle thread breakage	**[During automatic sewing in second bar tacking]** (1) Thread needle thread. (2) Press EMERGENCY STOP switch. (3) Press START switch to start second bar tacking. (4) Press EMERGENCY STOP switch twice to return machine to its starting position. **[During trial sewing of belt loop cycle]** (1) Thread needle thread. (2) Press EMERGENCY STOP switch to return machine to its starting position. **[During step motion]** (1) Thread needle thread. (2) Press FOOT switch, then put the body to the correct position. (3) Press EMERGENCY STOP switch. (4) Pressing START switch will begin sewing and machine will sew in step motion. **[During re-sewing]** (1) Thread needle thread. (2) Press EMERGENCY STOP switch. (3) Pressing START switch will begin sewing and return machine to its starting position.

NOTE: If an error code other than E.-□□type is displayed and does not disappear after turning the power off, then on again, contact the Brother office nearby.

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