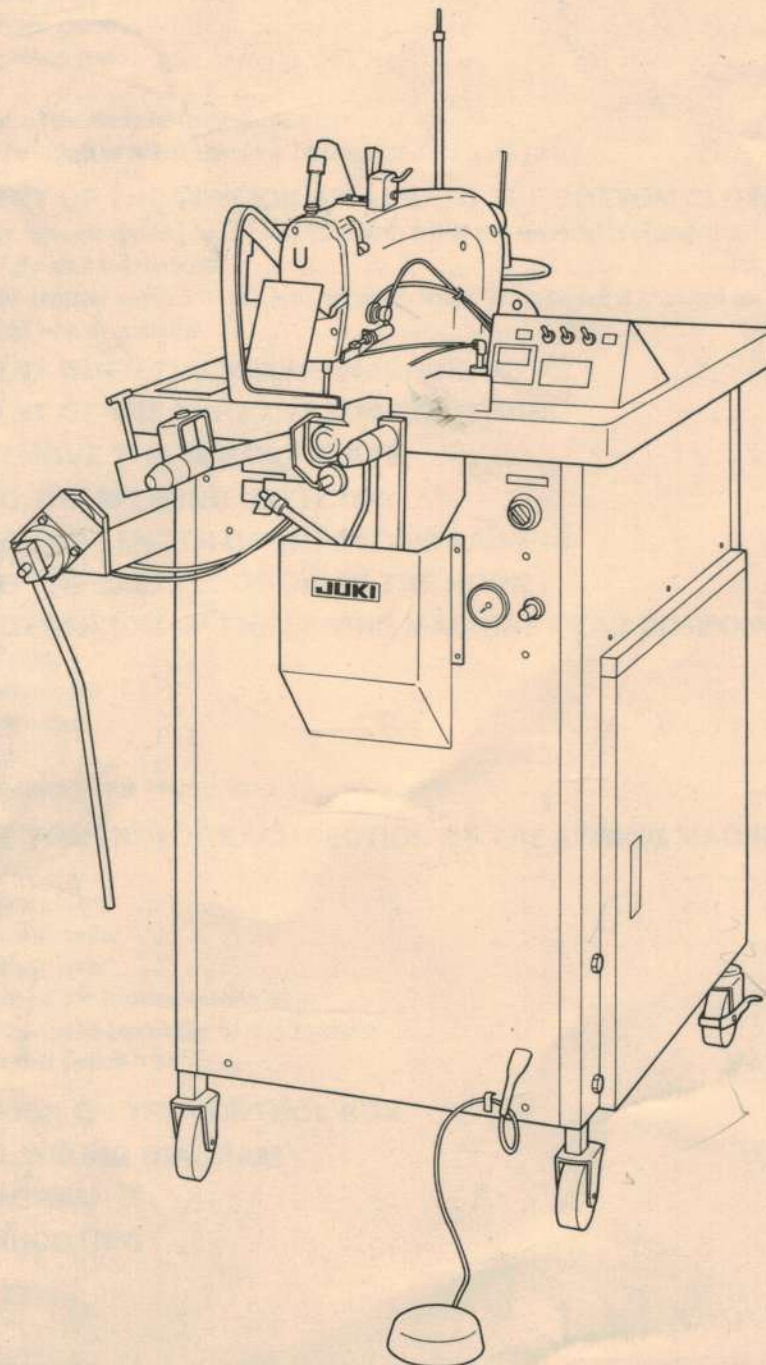


JUKI

**Automatic Bottom Hemmer for Pants
(For jeans and work pants)**

ALH-252

INSTRUCTION MANUAL



No.00

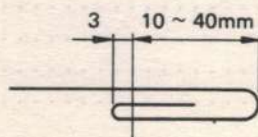
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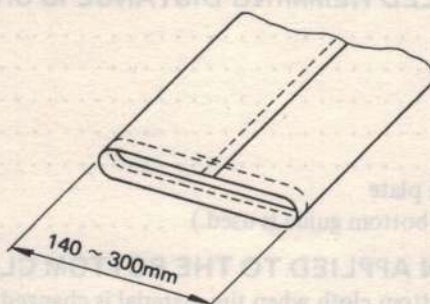
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1. SPECIFICATIONS

Stitch system	: 1-needle lockstitch
Sewing speed	: Max. 4,000 s.p.m.
Stitch length	: 6, 7, 8, 9, 10, 11, 12 stitches/inch Feed gear replacement
Rolled hemming	: 10 to 40 mm Auxiliary presser foot and hemmer replacement



Bottom width	: 140 to 300 mm
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Needles	: SCHMETZ UY180GVS (150/060)
Compressed air	: 5 kg/cm ²

2. PREPARATIONS FOR OPERATION

1) Compressed air

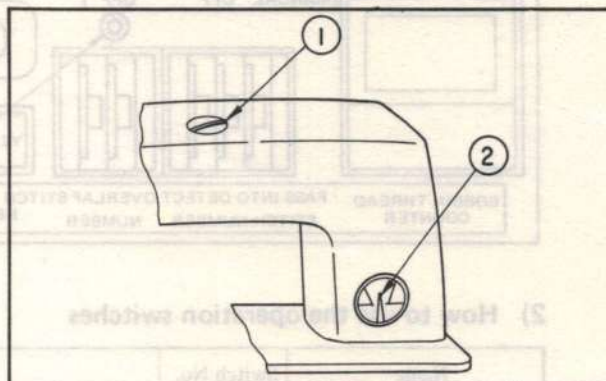
- (1) Set the air pressure to 5 kg/cm².

2) Voltage

- (1) Operate the sewing machine within $\pm 10\%$ of the electric voltage rating.
- (2) Be sure to ground the unit.

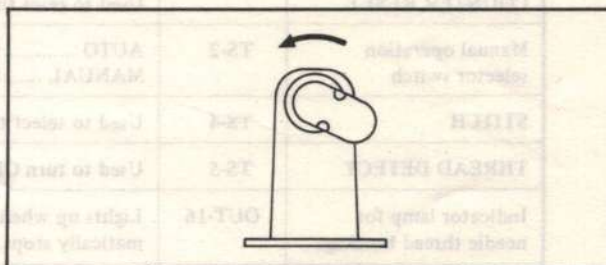
3) Lubrication

- (1) Lubricate the points specified (painted in red).
- (2) Fill the oil pan with lubrication oil.
 1. Loosen plug screw ① and remove it.
 2. Pour in the lubrication oil.
 3. Fill with oil until oil level pointer ② reaches a position equidistant between the LOW mark and FULL mark.

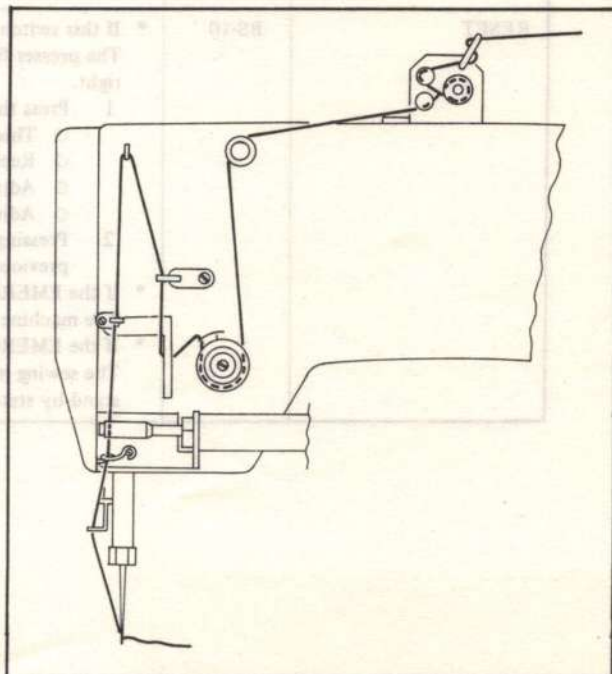


4) Direction of rotation

- (1) Counterclockwise (direction of the arrow), as observed from the pulley side.

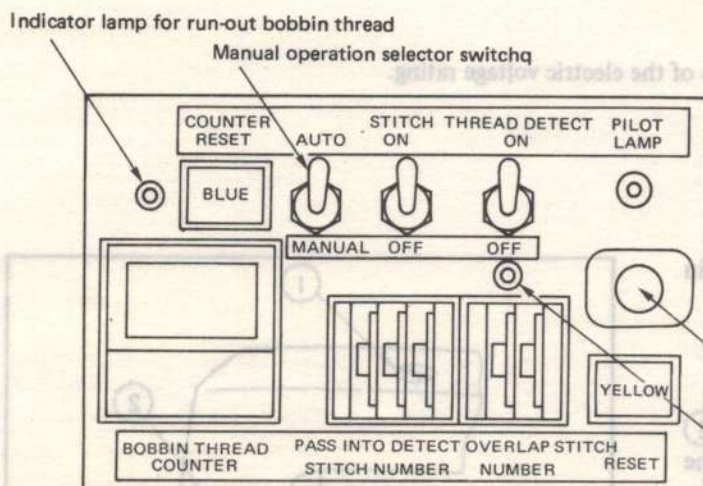


5) How to thread the machine head



3. OPERATION SWITCHES

1) Configuration of the operation switches



- *1 Values set for the bobbin thread counter for reference purpose

(Note) Stitch length: 3.5 mm

Thread count	Counter value set
#50	1100
#30	650
#20	420

- *2 Value set for the stitch number counter

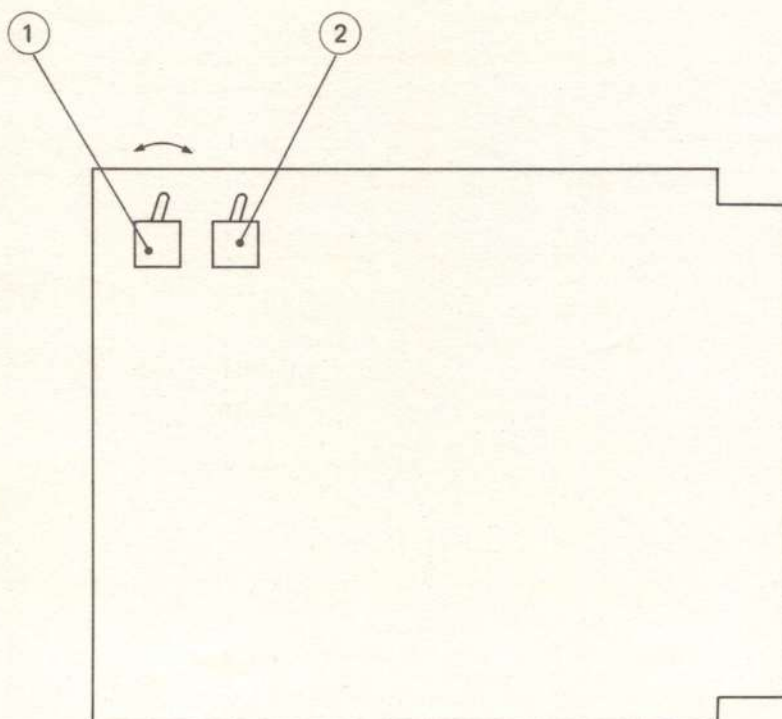
Number of stitches =
Outside length of the bottom – 60 mm

EMERGENCY STOP Stitch length
Indicator lamp for thread breakage detection

2) How to use the operation switches

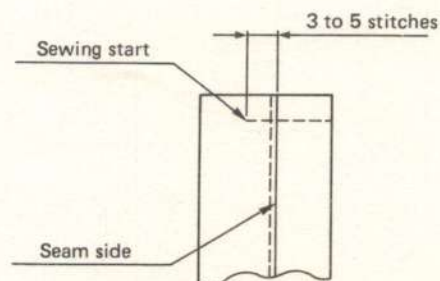
Name	Switch No.	Function
Indicator lamp for run out bobbin thread	OUT-7	Lights up when the bobbin thread has run out, upon which the machine automatically stops.
COUNTER RESET		Used to reset the bobbin thread counter indication to "0".
Manual operation selector switch	TS-2	AUTO If set to the AUTO side, the automatic operation mode is selected. MANUAL If set to the MANUAL side, the manual operation mode is selected.
STITCH	TS-4	Used to select the independent operation mode.
THREAD DETECT	TS-5	Used to turn ON/OFF the thread breakage detector and the automatic stop device.
Indicator lamp for needle thread breakage	OUT-16	Lights up when a broken needle thread is detected, upon which the machine automatically stops.
EMERGENCY STOP	BS-3	* If this switch is pressed before the machine is started up The bottom cloth jump function stops. * If this switch is pressed during an operation The machine stops with the presser foot lowered.
RESET	BS-10	* If this switch is pressed before the foot switch is depressed The presser foot will come down and the bottom tension roller will move to the right. 1 Press the RESET switch before carrying out the following operations: ○ Threading the machine head ○ Replacing the bobbin thread ○ Adjusting the splicing detector ○ Adjusting the position of the hemmer 2 Pressing the RESET switch once more will return the machine to its previous state. * If the EMERGENCY STOP switch is pressed before the machine is started up The machine will return to the previous stand-by state. * If the EMERGENCY STOP switch is pressed while the sewing machine is running ... The sewing machine will perform thread trimming and will then return to the stand-by state.

3) Switches on the control circuit board

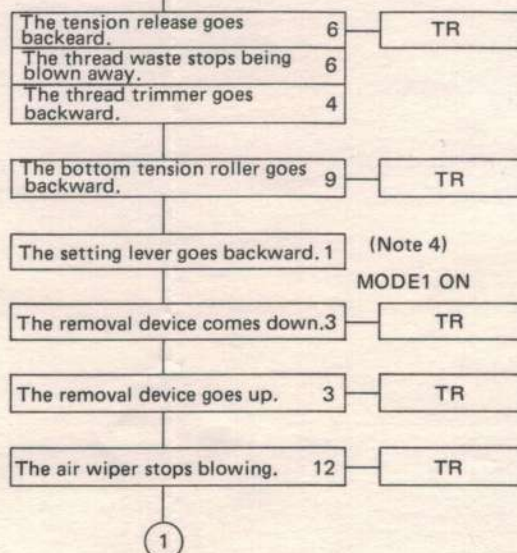
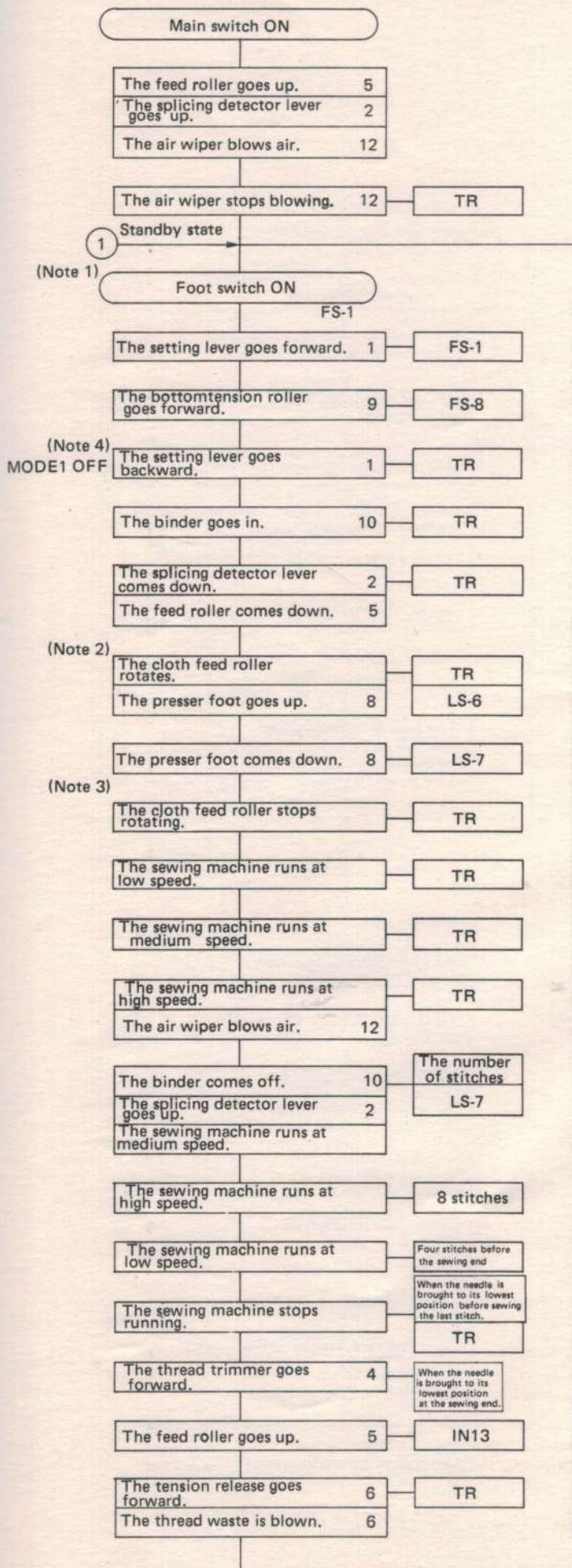


MODE I	MODE II
 ROLLER LEVER: FOWARD BOTTOM LEVER: FOWARD	 START POINT (A FEW STITCH)
 ROLLERLEVER: FOWARD BOTTOMLEVER: BACK WARD	 START POINT (SEVERAL STITCH)

- ① Selector switch for the backward travel of the bottom setting lever (MODE 1 SW)
- OFF : The bottom setting lever starts going backward immediate after the bottom tension roller spreads out the bottom.
- ON : The bottom setting lever moves forward until the sewing end is reached, and it does backward simultaneously with the start of backward travel of the bottom tension roller.
- * Set this switch to its ON position when sewing resilient material which is 14 oz or heavier.
 - * Setting this switch its ON position prevents the folded bottom from re-opening after setting the bottom in the sewing position.
- ② Selector switch for sewing length at the sewing start (MODE 2 SW)
- OFF : Standard (approx. 3 to 5 stitches)
- ON : The sewing length at the sewing start is shortened by approximately three stitches.
- Set the switch to its ON position in the case where the sewing length at the sewing start is 6 stitches or more.



4. OPERATION STEPS



Note 1. In the manual operation mode, the machine performs the automatic operation mode as long as the foot switch is pressed. If the foot switch is released, the machine returns to its standby state.

Note 2. If the rear guide roller is not set properly, the machine will not return to its standby state.

Note 3. The rotating time of the roller can be selected using the MODE1 switch. (Set the switch to the OFF side to obtain the standard rotating time. If the switch is set to the ON side, the roller will rotate longer than the standard rotating time.)

Note 4. When the MODE 1 switch on the control circuit is set to the ON side, the setting lever will move forward until the sewing end is reached. If the switch is set to the OFF side, the setting lever will move forward.

5. HOW TO SET THE BOTTOM CLOTH

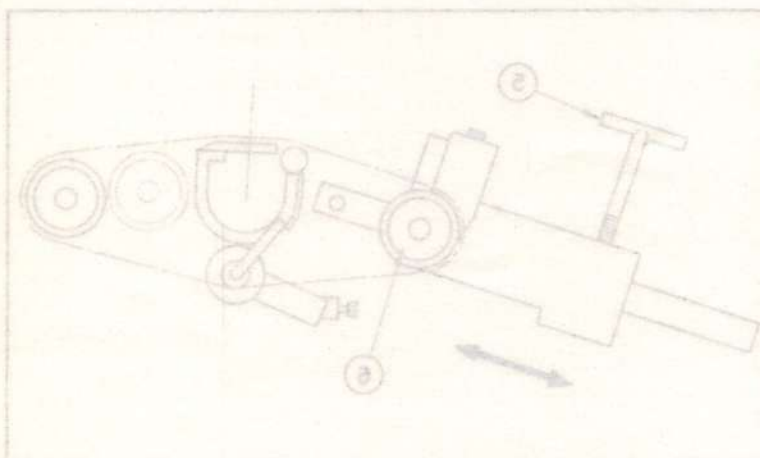
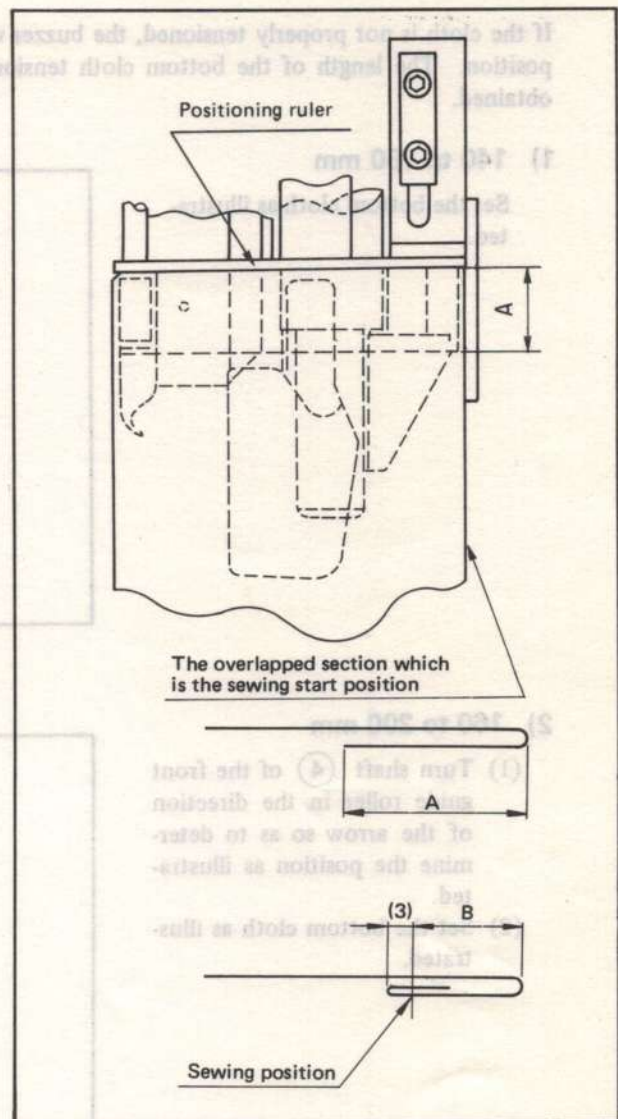
When setting the bottom cloth on the sewing machine, place the bottom cloth so that its overlapped section from which the sewing will be started comes right side observed from the operator. Then straighten the bottom cloth and place it in the predetermined position on the sewing machine.

Fold the bottom cloth to obtain folding width A, referring to the figures shown in the table below.

(Reference values set for the folding width)

Rolled hemming width (B)	Folding width (A)
10 mm	23 ~ 28 mm
12 mm	25 ~ 30 mm
15 mm	28 ~ 33 mm
20 mm	33 ~ 38 mm
25 mm	38 ~ 43 mm
30 mm	43 ~ 48 mm
35 mm	48 ~ 53 mm
40 mm	53 ~ 58 mm

If the seam at the sewing end fails to accurately overlap the seam at the sewing start and the distance between them is 1 mm or more, fold the bottom at the left hand side larger than that at the right hand side by approximately 5 mm and set the bottom to be hemmed on the sewing machine.



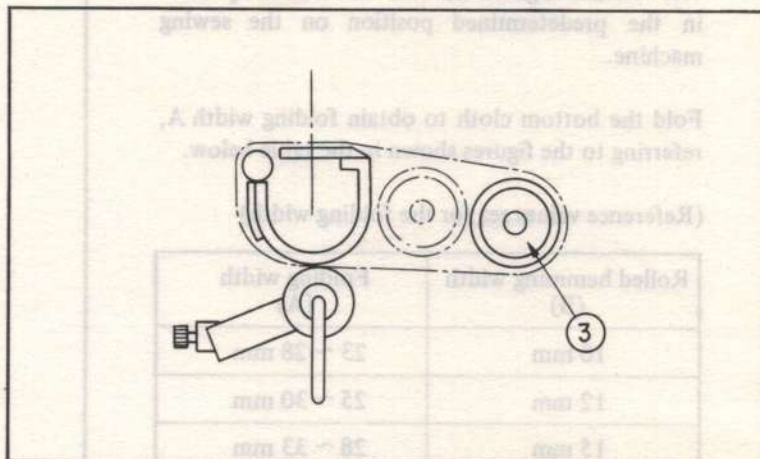
- (1) Loosen rear guide roller adjusting handle (2)
- (2) Move rear guide roller (3) in the direction of the arrow
- (3) Fix the rear guide roller using rear guide roller adjusting handle (2)
- (4) Set the bottom cloth as illustrated

6. ADJUSTMENT WHEN THE BOTTOM WIDTH IS CHANGED

If the cloth is not properly tensioned, the buzzer will sound and bottom tension roller ③ will return to its home position. The length of the bottom cloth tension should now be adjusted so that the distance shown below is obtained.

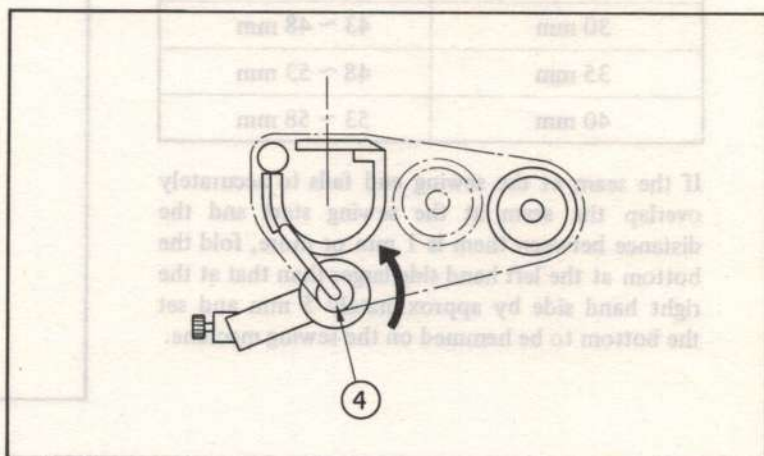
1) 140 to 160 mm

Set the bottom cloth as illustrated.



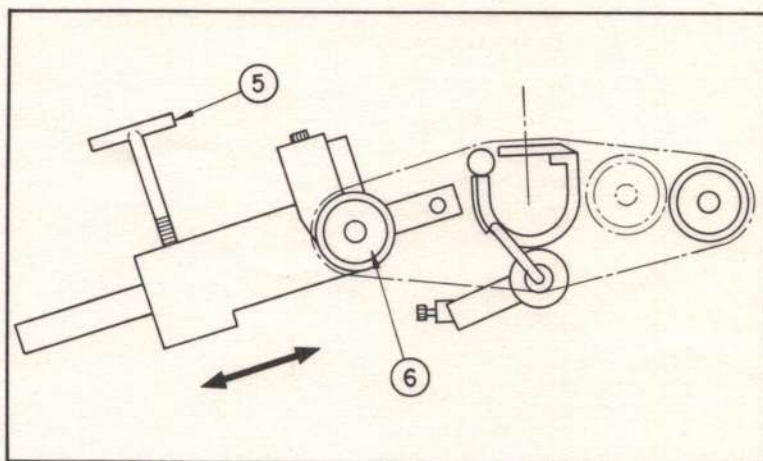
2) 160 to 200 mm

- (1) Turn shaft ④ of the front guide roller in the direction of the arrow so as to determine the position as illustrated.
- (2) Set the bottom cloth as illustrated.



3) 200 to 300 mm

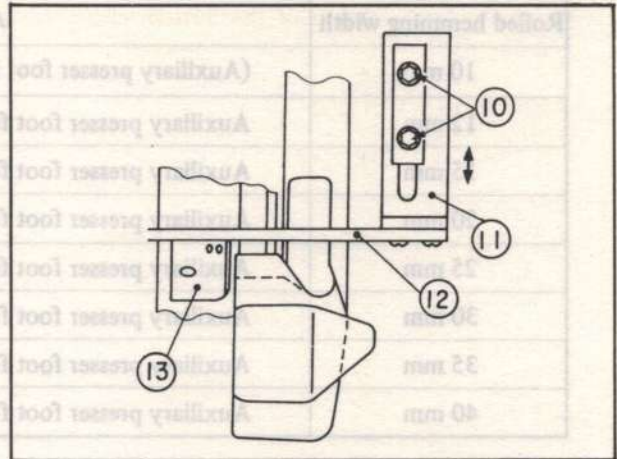
- (1) Loosen rear guide roller adjusting handle ⑤.
- (2) Move rear guide roller ⑥ in the direction of the arrow.
- (3) Fix the rear guide roller using rear guide roller adjusting handle ⑤.
- (4) Set the bottom cloth as illustrated.



7. ADJUSTMENT WHEN THE ROLLED HEMMING DISTANCE IS CHANGED

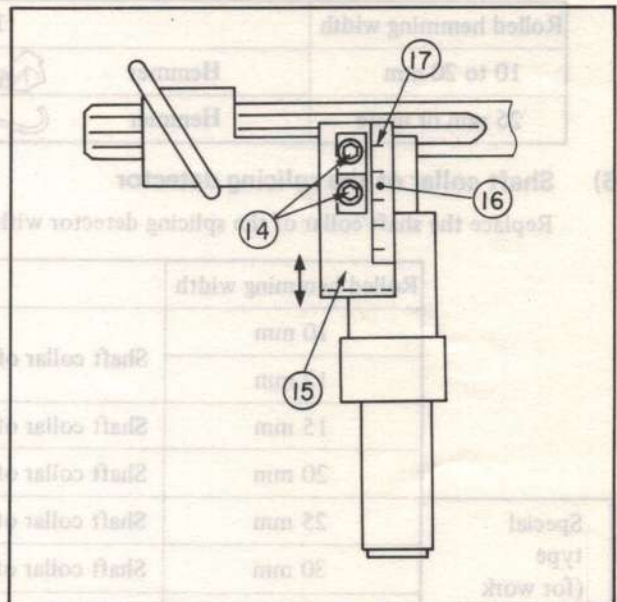
1) Positioning ruler

- (1) Loosen setscrew (10).
- (2) Move positioning ruler attaching metal plate (11) in the direction of the arrow ↓.
- (3) Make positioning ruler (12) flush with presser foot (13).



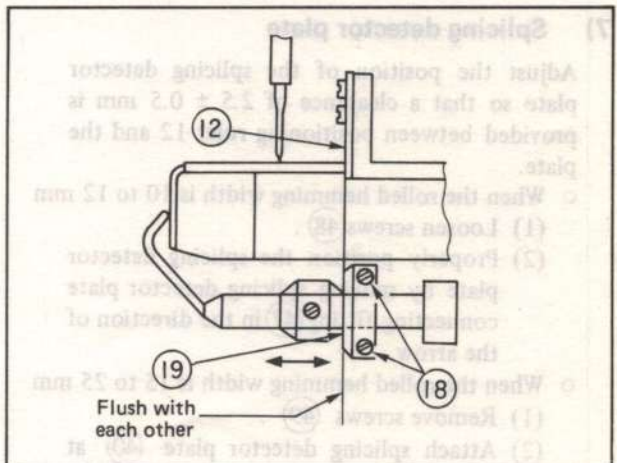
2) Ruler for rear guide roller

- (1) Loosen setscrews (14).
- (2) Move ruler for rear guide roller (15) in the direction of the arrow ↓.
- (3) Align the scale (indicating the rolled hemming width) on scale board (16) with guide line (17).



3) Ruler for front guide roller

- (1) Loosen setscrew (18).
- (2) Move ruler for front guide roller (19) in the direction of the arrow ↔.
- (3) Make the ruler for front guide roller flush with positioning ruler (12).





4) Auxiliary presser foot

Replace the presser foot with one of the auxiliary presser feet shown below.

Rolled hemming width	Auxiliary presser feet	
10 mm	(Auxiliary presser foot is not necessary)	Provided as standard attachments.
12 mm	Auxiliary presser foot for a 12 mm width	
15 mm	Auxiliary presser foot for a 15 mm width	Optional attachments
20 mm	Auxiliary presser foot for a 20 mm width	
25 mm	Auxiliary presser foot for a 25 mm width	
30 mm	Auxiliary presser foot for a 30 mm width	
35 mm	Auxiliary presser foot for a 35 mm width	
40 mm	Auxiliary presser foot for a 40 mm width	

5) Hemmer

Replace with one of the rolled hemmers shown in the table below.

Rolled hemming width	Hemmer		
10 to 20 mm	Hemmer		Provided as standard attachments.
25 mm or more	Hemmer		Accessory

6) Shaft collar of the splicing detector

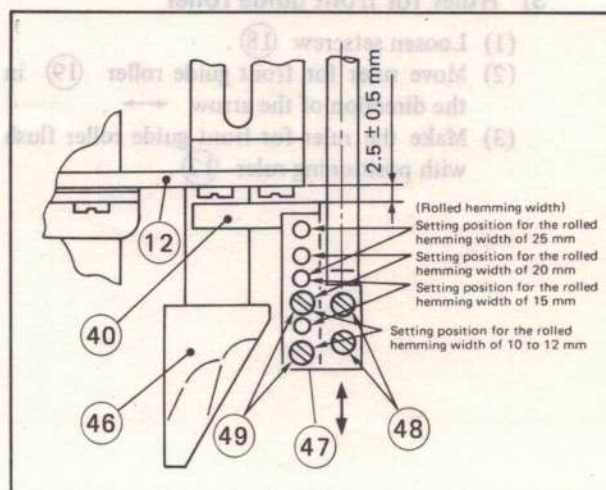
Replace the shaft collar of the splicing detector with one of the shaft collars 46 shown below.

	Rolled hemming width	Shaft collar of the splicing detector	
	10 mm	Shaft collar of the splicing detector 10 ~ 12	Provided as standard attachment
	12 mm		
	15 mm	Shaft collar of the splicing detector 15	Optional parts attachments
	20 mm	Shaft collar of the splicing detector 20	
Special type (for work pants)	25 mm	Shaft collar of the splicing detector 25	
	30 mm	Shaft collar of the splicing detector 30	
	35 mm	Shaft collar of the splicing detector 35	
	40 mm	Shaft collar of the splicing detector 40	

7) Splicing detector plate

Adjust the position of the splicing detector plate so that a clearance of 2.5 ± 0.5 mm is provided between positioning ruler 12 and the plate.

- When the rolled hemming width is 10 to 12 mm
 - (1) Loosen screws (48).
 - (2) Properly position the splicing detector plate by moving splicing detector plate connecting fitting (47) in the direction of the arrow.
- When the rolled hemming width is 15 to 25 mm
 - (1) Remove screws (49).
 - (2) Attach splicing detector plate (40) at the setting position as illustrated in the figure on the right.
 - (3) Loosen screws (48), and finely adjust the position of the plate by moving splicing detector plate connecting fitting (47).



8. ADJUSTMENT OF THE TENSION APPLIED TO THE BOTTOM CLOTH

Adjust the tension applied to the jeans cloth referring to the table of pressure values.

- 1) Increase the tension applied to the bottom cloth when the material is changed to a heavy-weight or hard material.

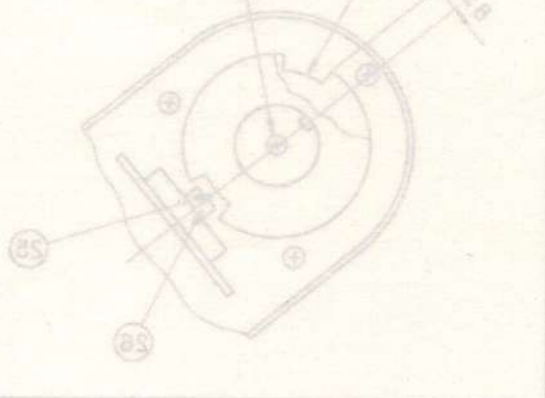
[Adjustment]

- (1) Pull out knob (21) (to release the knob lock).
- (2) Turn knob (21) clockwise to increase the pressure.
- (3) Push in knob (21) (to lock the knob).

- 2) Decrease the tension applied to the bottom cloth when the material is changed to a light-weight or soft material.

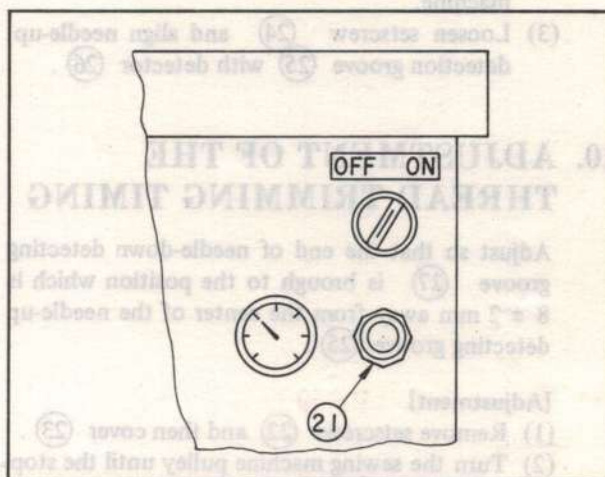
[Adjustment]

- (1) Pull out knob (21) (to release the knob lock).
- (2) Turn knob (21) counterclockwise to decrease the pressure.
- (3) Push in knob (21) (to lock the knob).

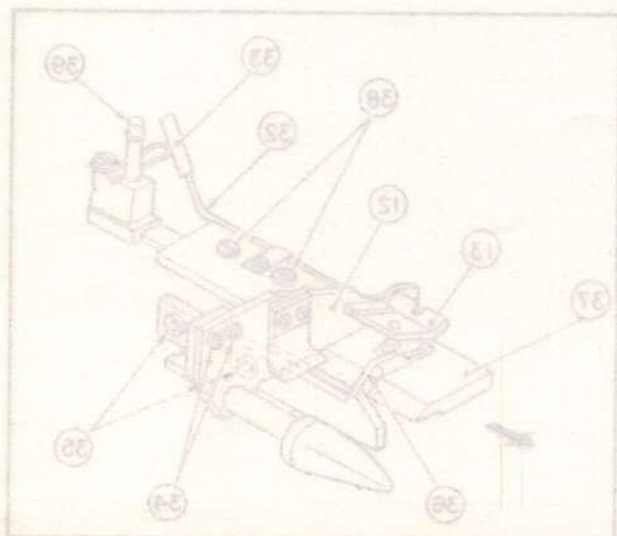


Reference values of the tension applied to the cloth

Jeans	Tension	Air pressure input from the compressor
15 oz or more	5 kg/cm ²	5 kg/cm ²
12 to 14 oz	4 kg/cm ²	
10 oz or less	1 to 4 kg/cm ²	4 kg/cm ²



II. HOW TO REMOVE THE THROAT PLATE



- (1) Turn OFF the power to the machine.
- (2) Release the air.
- (3) Raise pressure foot (13).
- (4) Pull out air tube (33) from thread waste blower pipe (32).
- (5) Loosen screws (34) in positioning ruler (12).
- (6) Remove screws (32).
- (7) Remove front fold guide (36).
- (8) Remove screws (38) in throat plate (37).
- (9) Pull out pin (39).
- (10) Lifting positioning ruler (12), detach throat plate (37) in the direction of the arrow.

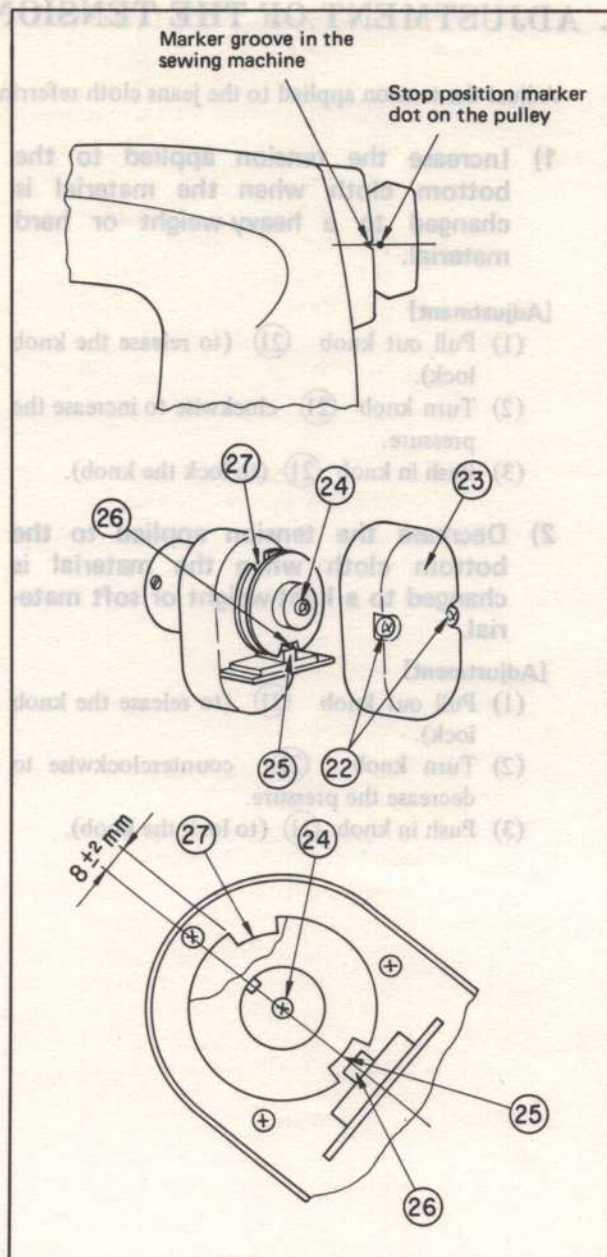
9. ADJUSTMENT WHEN THE SEWING MACHINE STOPS

(Adjustment of the needle-up detector)

When the sewing machine stops, the marker groove should be aligned with the stop position marker dot on the sewing machine pulley.

[Adjustment]

- (1) Remove setscrews (22) and then cover (23).
- (2) Turn the sewing machine pulley until the stop position marker dot on the pulley is aligned with the marker groove in the sewing machine.
- (3) Loosen setscrew (24) and align needle-up detection groove (25) with detector (26).



10. ADJUSTMENT OF THE THREAD TRIMMING TIMING

Adjust so that the end of needle-down detecting groove (27) is brought to the position which is 8 ± 2 mm away from the center of the needle-up detecting groove (25).

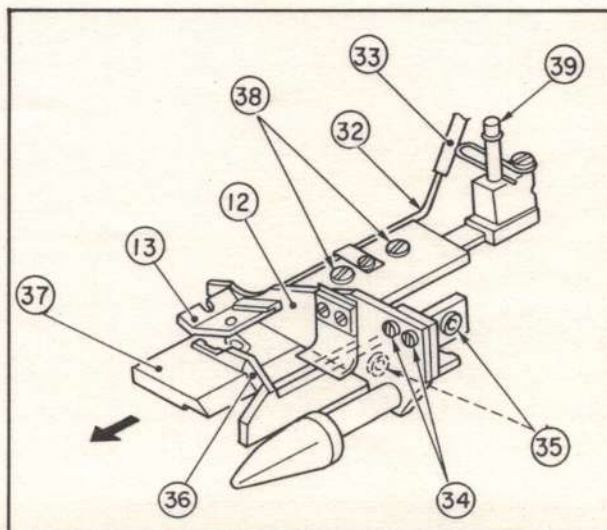
[Adjustment]

- (1) Remove setscrews (22) and then cover (23).
- (2) Turn the sewing machine pulley until the stop position marker dot on the pulley is aligned with the marker groove in the sewing machine.
- (3) Loosen setscrew (24) and turn the needle-down detection disc until the edge of the needle-down detection groove is aligned with the center of the needle-up detection groove, taking care not to dislocate needle-up detection groove (25).

11. HOW TO REMOVE THE THROAT PLATE

Remove the throat plate in accordance with the following procedure.

- (1) Turn OFF the power to the machine.
- (2) Release the air.
- (3) Raise presser foot (13).
- (4) Pull out air tube (33) from thread waste blower pipe (32).
- (5) Loosen screws (34) in positioning ruler (12).
- (6) Remove screws (35).
- (7) Remove front fold guide (36).
- (8) Remove screws (38) in throat plate (37).
- (9) Pull out pin (39).
- (10) Lifting positioning ruler (12), detach throat plate (37) in the direction of the arrow.




12. ADJUSTING THE SPLICING DETECTOR

When changing the current material to a material whose weight is different from the current one, press the Reset switch and check the following items.

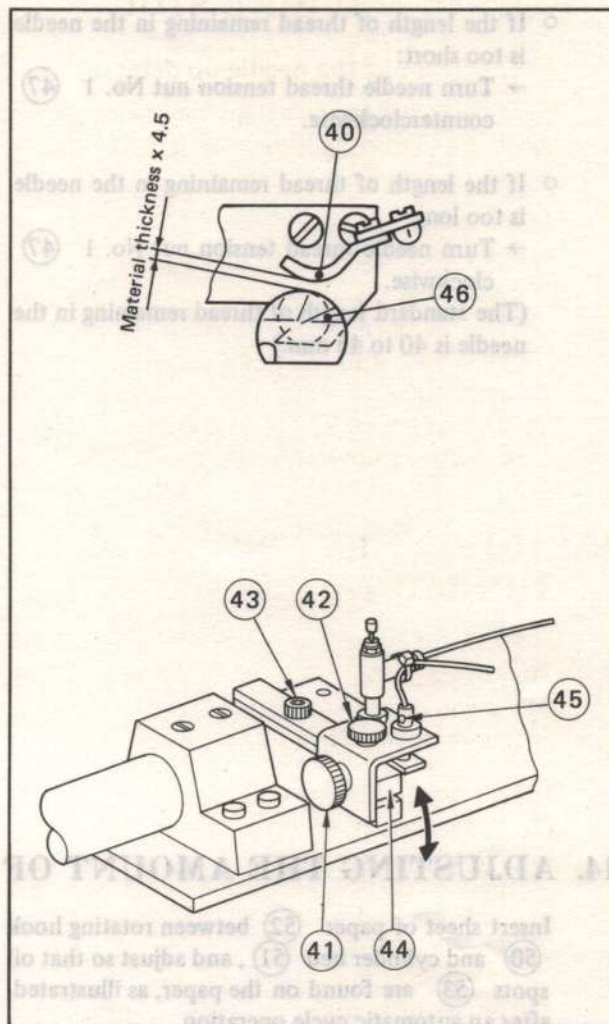
- (1) Check that the clearance between splicing detector bar (40) and the top face of shaft collar (46) of the splicing detector is 4.5 times as much as the thickness of the material to be used.
- (2) If the aforementioned clearance is not provided, make the following adjustment to adjust the clearance properly.

[Adjustment]

- (1) To make a fine adjustment:
 - a. Loosen lock setscrew (41).
 - b. Turn adjusting screw (42) to adjust the clearance.
- (2) To make a rough adjustment:
 - a. Loosen setscrew (43).
 - b. Move splicing sensor base (44) in the direction of the arrow  to adjust the clearance.

- 3) Even if the standard clearance described above is obtained, the splicing detector may fail to function if you attempt to sew pants whose sides are joined together using a method different from the standard method.

In such a case as this, finely adjust the clearance again in accordance with the actual material to be sewn so that detection lamp (45) goes out when the splicing passes under splicing detection plate (40).

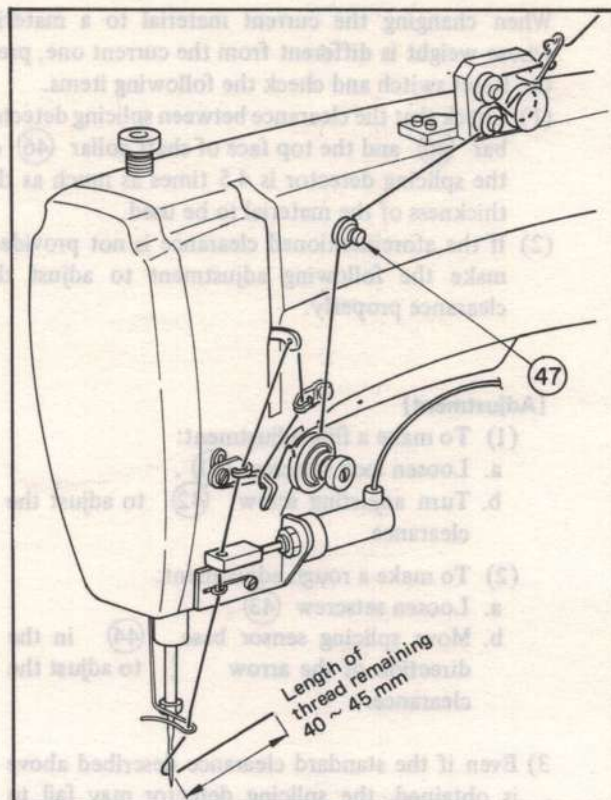


(Note) When performing automatic cycle sewing, be sure to set tubular cloth (54) for test sewing on the sewing machine.

[Adjustment]
Turn oil amount adjusting screw (32) on the right-hand side of the sewing machine bed (insert a screwdriver from oblique hole (56) and turn the adjusting screw).
Turning the adjusting screw in the direction of the arrow will increase the amount of oil in the hook.
Turning the adjusting screw in the opposite direction to the arrow will decrease the amount of oil in the hook.

13. ADJUSTING THE LENGTH OF THREAD REMAINING

- If the length of thread remaining in the needle is too short:
→ Turn needle thread tension nut No. 1 (47) counterclockwise.
 - If the length of thread remaining in the needle is too long:
→ Turn needle thread tension nut No. 1 (47) clockwise.
- (The standard length of thread remaining in the needle is 40 to 45 mm.)



14. ADJUSTING THE AMOUNT OF OIL IN THE HOOK

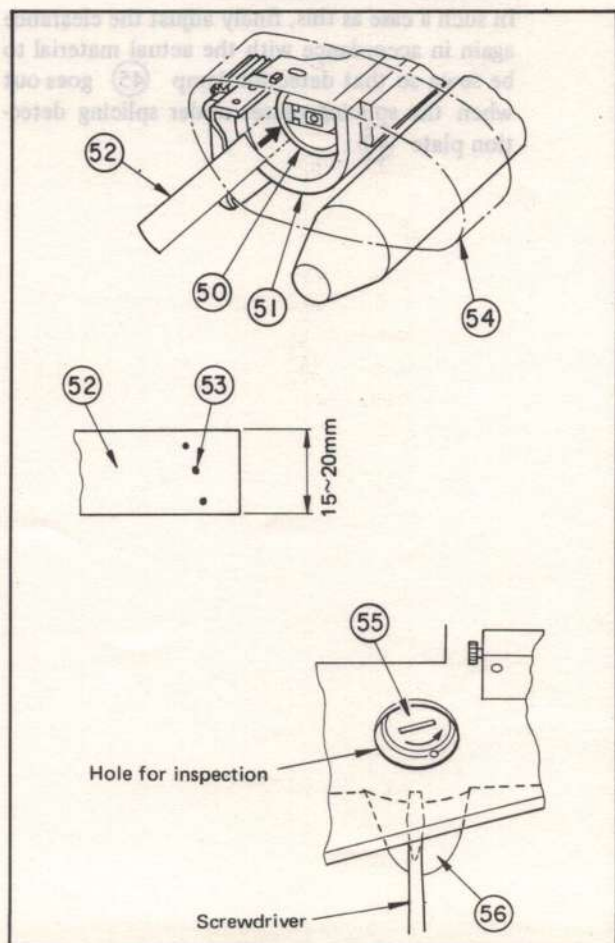
Insert sheet of paper (52) between rotating hook (50) and cylinder bed (51), and adjust so that oil spots (53) are found on the paper, as illustrated, after an automatic cycle operation.

Note) When performing automatic cycle sewing, be sure to set tubular cloth (54) for test sewing on the sewing machine.

[Adjustment]

Turn oil amount adjusting screw (55) on the right-hand side of the sewing machine bed. (Insert a screwdriver from oblique hole (56) and turn the adjusting screw.)

- Turning the adjusting screw in the direction of the arrow will increase the amount of oil in the hook.
- Turning the adjusting screw in the opposite direction to the arrow will decrease the amount of oil in the hook.



15. STANDARD POSITION OF THE SEWING MACHINE HEAD COMPONENTS

1) Front fold guide

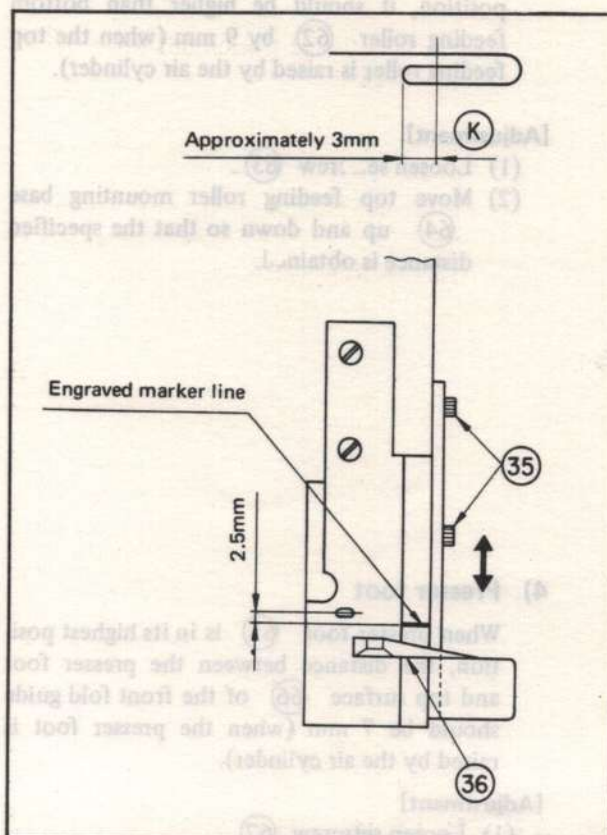
Front fold guide (36) should be positioned 2.5 mm away from the center of the needle entry point.

The 2.5 mm distance between the front fold guide and the center of the needle entry point is obtained while aligning the engraved marker line on the top face of the throat plate with the fold guide surface facing toward the center of the needle. At this time, finished distance (K) will be approximately 3 mm.

[Adjustment]

Adjust finished width (K) by moving front fold guide (36) in the direction of the arrow ↓.

- (1) Loosen two setscrews (35).
- (2) Move the front fold guide until it goes beyond the engraved marker line on the throat plate and reaches the position nearer to the center of the needle to decrease distance (K). Fix the front fold guide in front of the engraved marker line to increase distance (K). Then tighten setscrews (35).

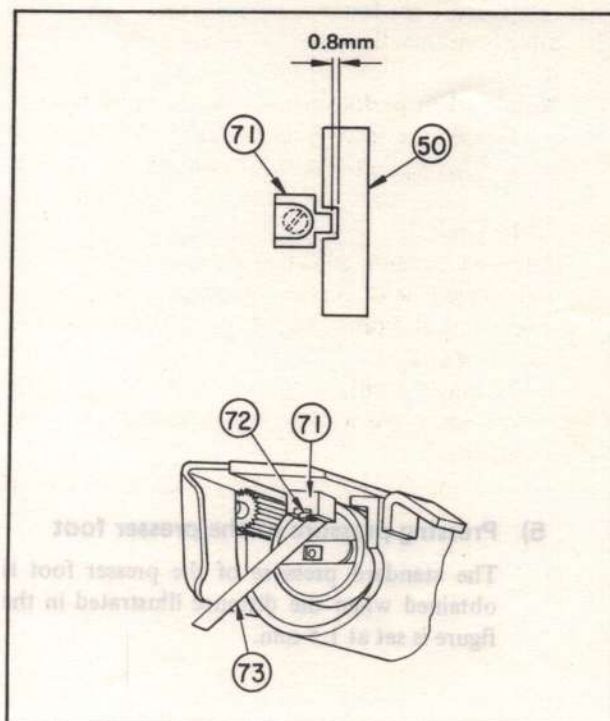


2) Bobbin case stopper

The clearance between bobbin case stopper (71) and the groove in bobbin case (50) should be 0.8 mm.

[Adjustment]

- (1) Loosen setscrew (72).
- (2) Insert 0.8 mm clearance gauge (73) supplied with the unit into the groove in bobbin case (50), and adjust the position of bobbin case stopper (71).

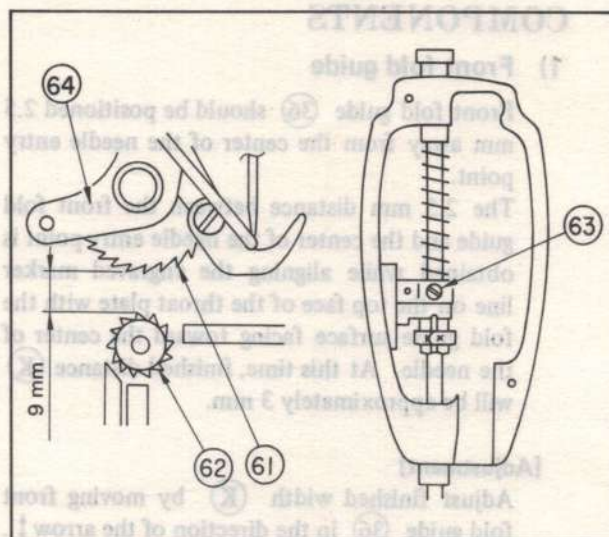


3) Top feeding roller

When top feeding roller (61) is in its highest position, it should be higher than bottom feeding roller (62) by 9 mm (when the top feeding roller is raised by the air cylinder).

[Adjustment]

- (1) Loosen setscrew (63).
- (2) Move top feeding roller mounting base (64) up and down so that the specified distance is obtained.

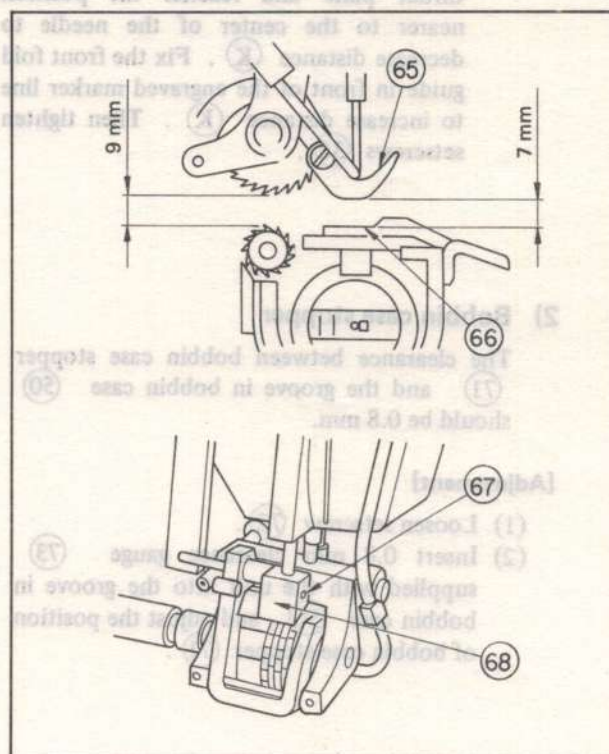


4) Presser foot

When presser foot (65) is in its highest position, the distance between the presser foot and top surface (66) of the front fold guide should be 7 mm (when the presser foot is raised by the air cylinder).

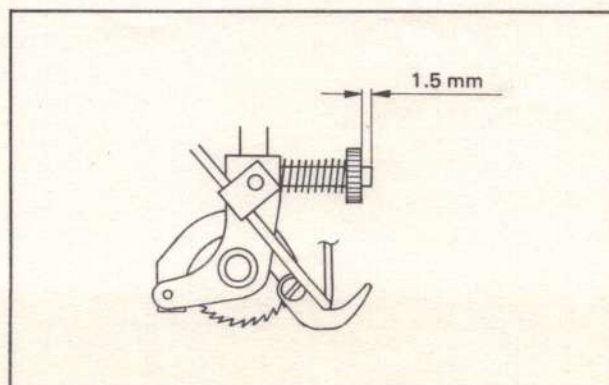
[Adjustment]

- (1) Loosen setscrew (67).
- (2) Move presser foot adjusting cam (68) so that the specified distance is obtained.



5) Pressing pressure of the presser foot

The standard pressure of the presser foot is obtained when the distance illustrated in the figure is set at 1.5 mm.



16. STANDARD POSITION OF EACH SECTION OF THE SEWING MACHINE

1) Hemmer

A. Binder

- When binder (70) goes back, a clearance of approximately 2.5 mm should be provided between folding groove (71) and the center of the needle.

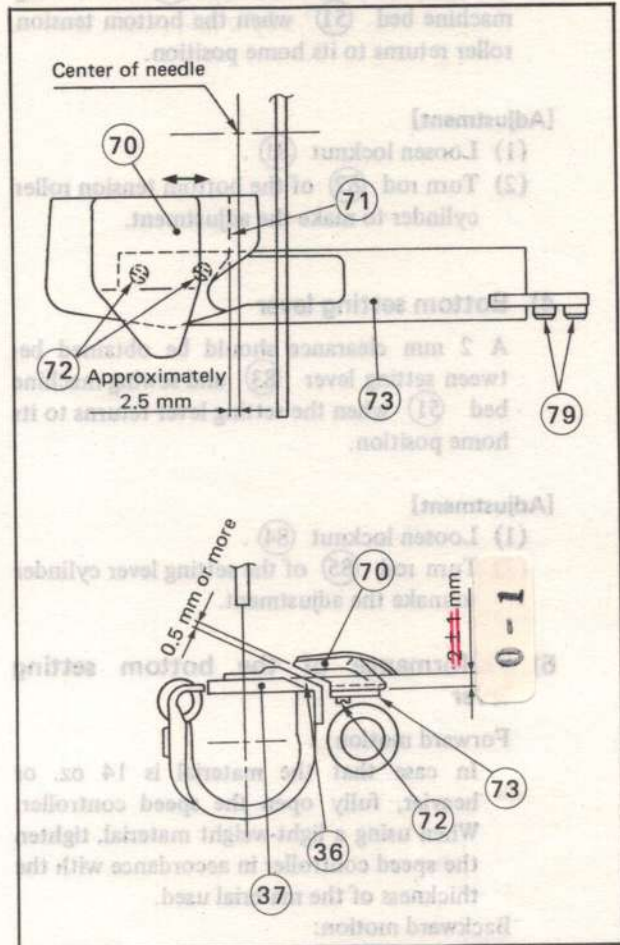
[Adjustment]

- Loosen screws (72).
- Move binder (70) in the direction of the arrow \leftrightarrow so that the binder is properly positioned.

- When binder (70) comes back, the top end of binder mounting base (73) should be positioned 2 ± 1 mm lower than the top face of throat plate (37). At the same time, a clearance of 0.5 mm or more should be provided between binder (70) and front fold guide (36).

[Adjustment]

- Loosen screws (79).
- Move binder mounting base up and down so that the binder is correctly positioned satisfying the above-stated requirements.

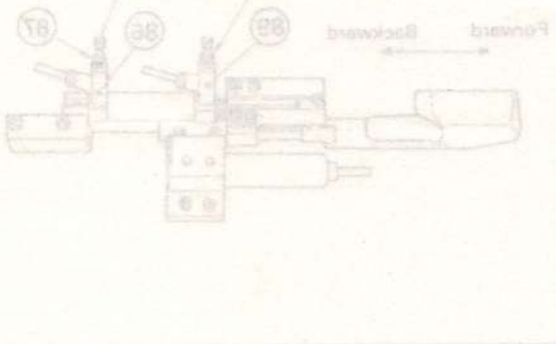
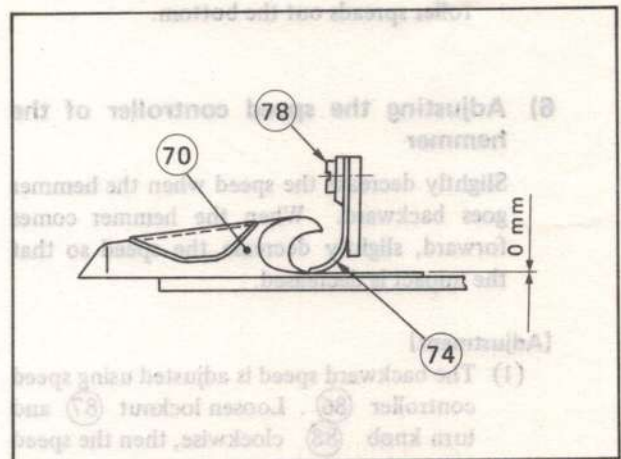


2) Cloth receiving board

When binder (70) goes back, a 0 mm clearance should be provided between the binder and cloth receiving plate (74).

[Adjustment]

- Loosen screw (78).
- Move cloth receiving board up or down so that no clearance is provided between the binder and board.



3) Bottom tension roller

A 2 mm clearance should be obtained between bottom tension roller (3) and sewing machine bed (51) when the bottom tension roller returns to its home position.

[Adjustment]

- (1) Loosen locknut (81).
- (2) Turn rod (82) of the bottom tension roller cylinder to make the adjustment.

4) Bottom setting lever

A 2 mm clearance should be obtained between setting lever (83) and sewing machine bed (51) when the setting lever returns to its home position.

[Adjustment]

- (1) Loosen locknut (84).
- (2) Turn rod (85) of the setting lever cylinder to make the adjustment.

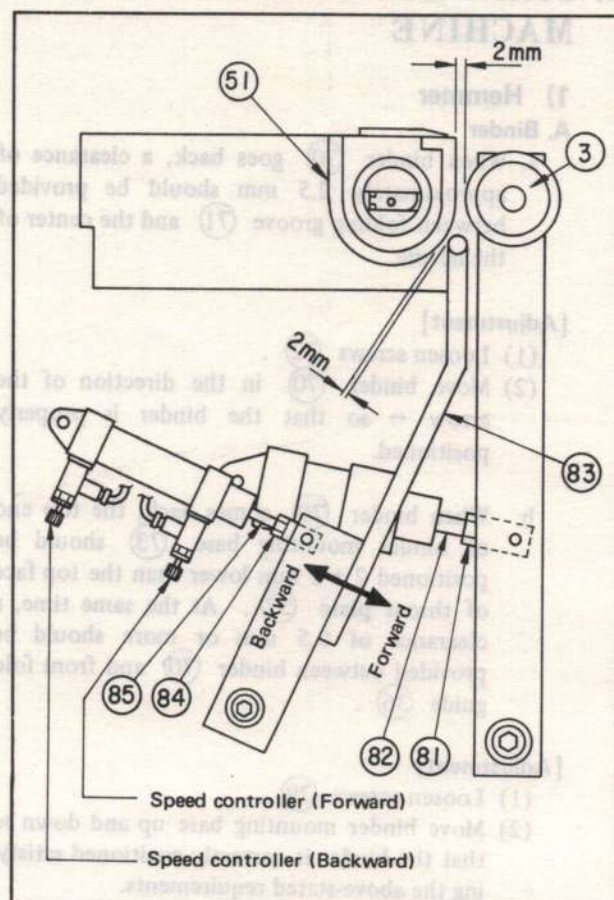
5) Performance of the bottom setting lever

Forward motion:

In case that the material is 14 oz. or heavier, fully open the speed controller. When using a light-weight material, tighten the speed controller in accordance with the thickness of the material used.

Backward motion:

The bottom setting lever goes backward immediately after the bottom tension roller spreads out the bottom.

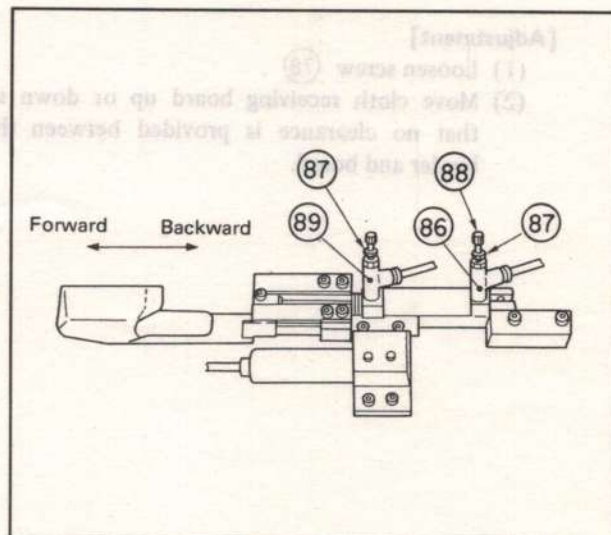


6) Adjusting the speed controller of the hemmer

Slightly decrease the speed when the hemmer goes backward. When the hemmer comes forward, slightly decrease the speed so that the impact is decreased.

[Adjustment]

- (1) The backward speed is adjusted using speed controller (86). Loosen locknut (87) and turn knob (88) clockwise, then the speed will be decreased.
- (2) The forward speed is adjusted using speed controller (89). The adjustment procedure is same as that mentioned in (1).
- (3) After adjustment, tighten locknuts (87).



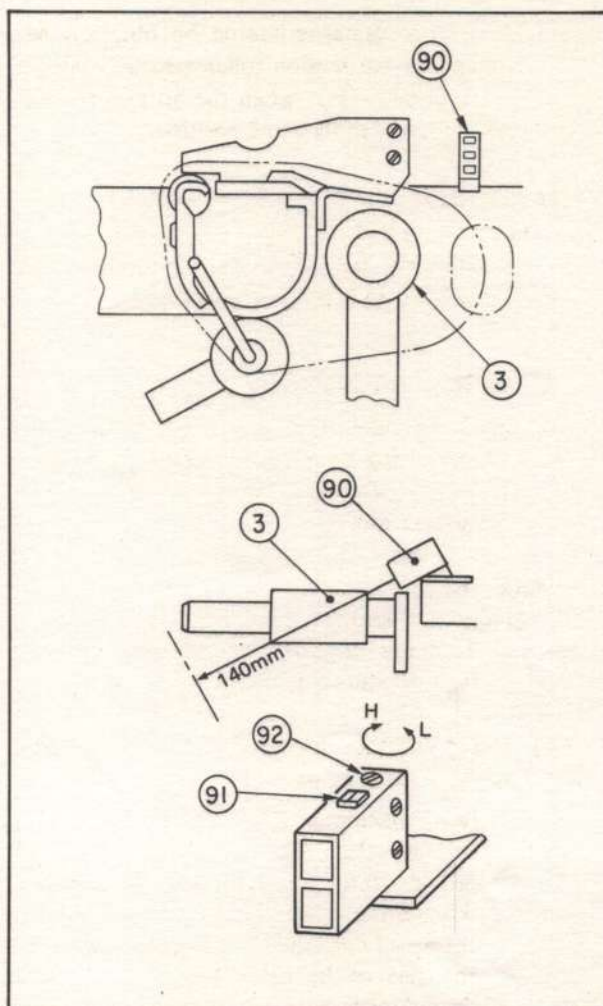
7) Hand detection switch

This switch detects your hand if you place it in the side section (shown by the dotted circle ○) of the tension roller ③ when setting the bottom cloth on the sewing machine.

Adjust so that red indicator lamp ⑨① lights up when your hand holding the bottom cloth comes as close as 140 ± 15 mm to detector switch ⑨②, and so that red indicator lamp ⑨① goes out when you release the bottom cloth and take your hand away from the detector switch by a distance of 140 ± 15 mm or more.

[Adjustment]

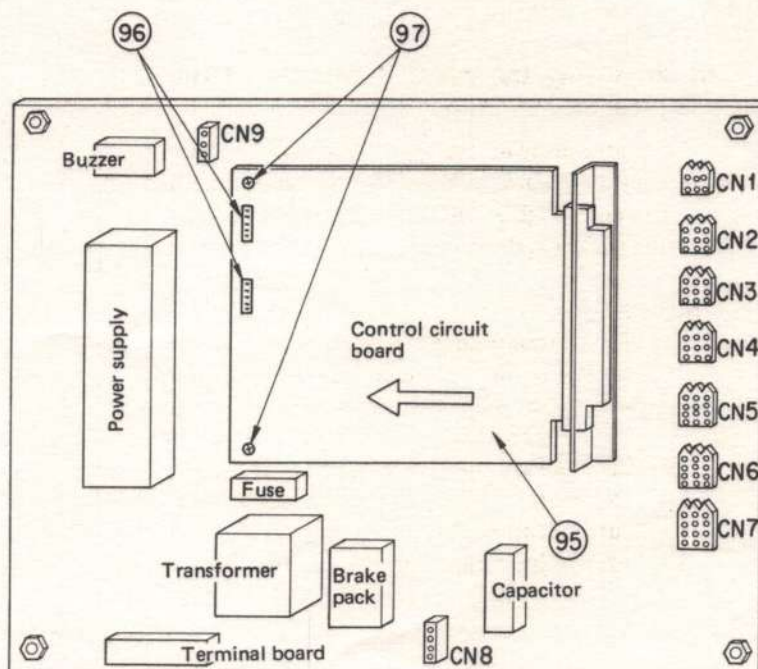
- (1) If the red lamp lights up when you place your hand closer to the detector than the 140 ± 15 mm, turn sensitivity adjusting dial ⑨② in the direction of arrow H.
- (2) If the red lamp lights up when the distance between your hand and the detector is greater than 140 ± 15 mm, turn sensitivity adjusting dial ⑨② in the direction of arrow L.



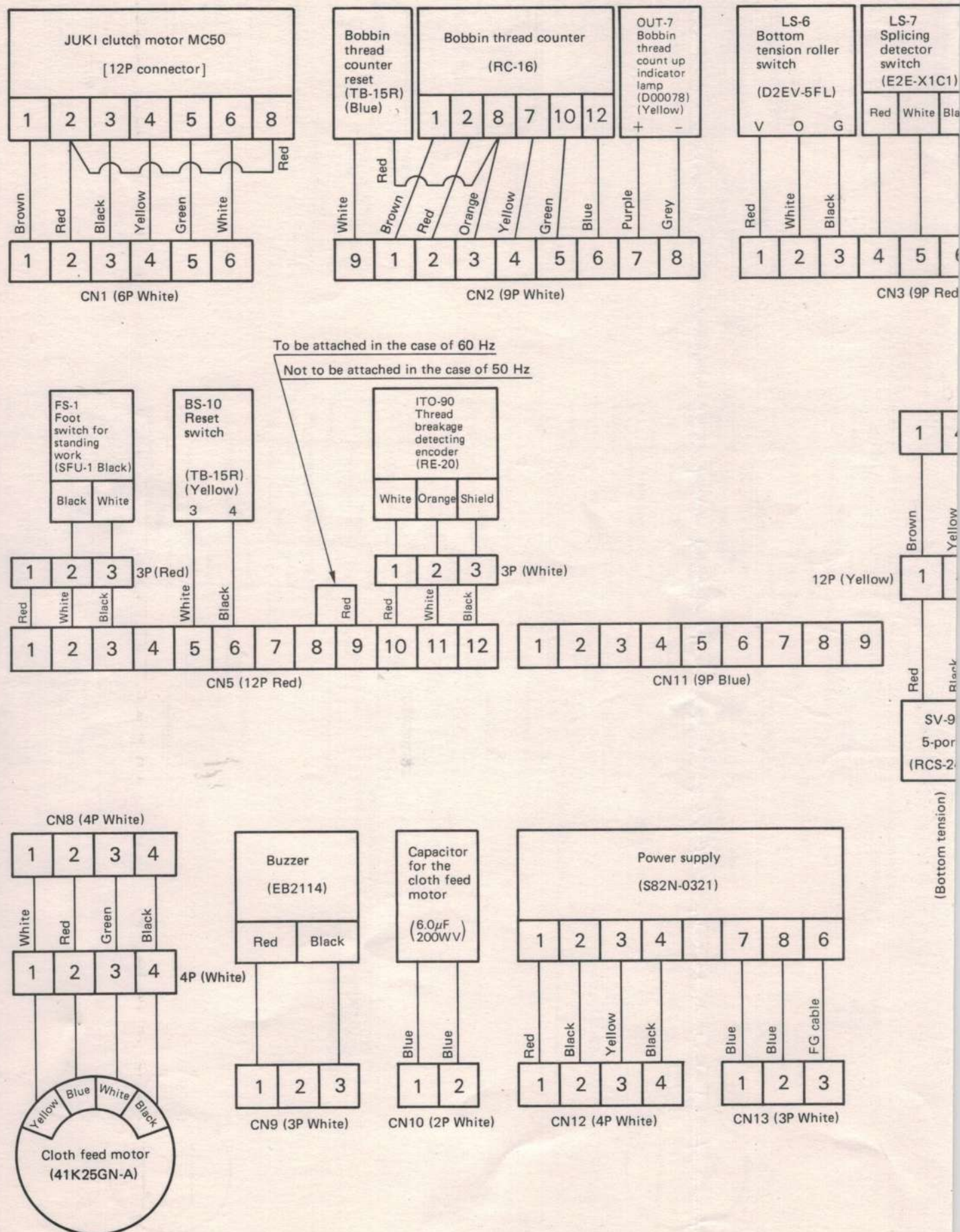
17. EXPLANATION ON THE CONTROL BOX

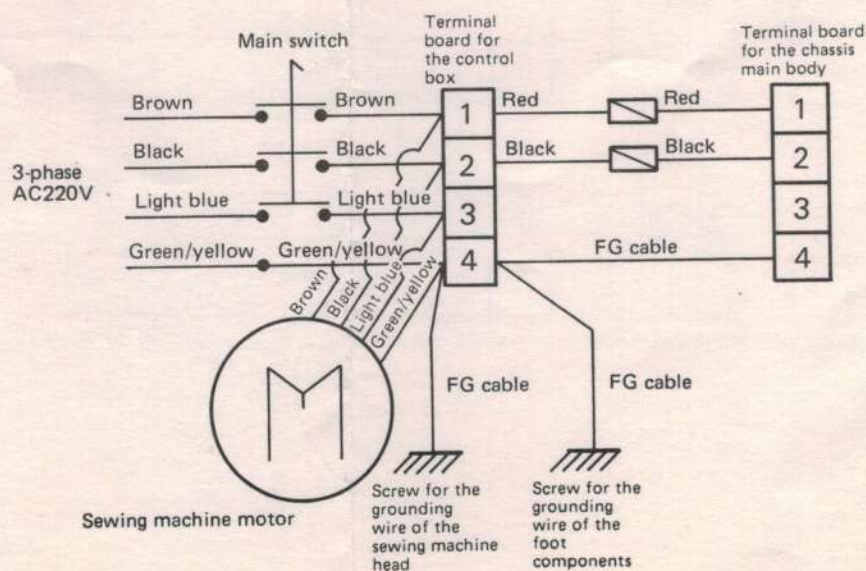
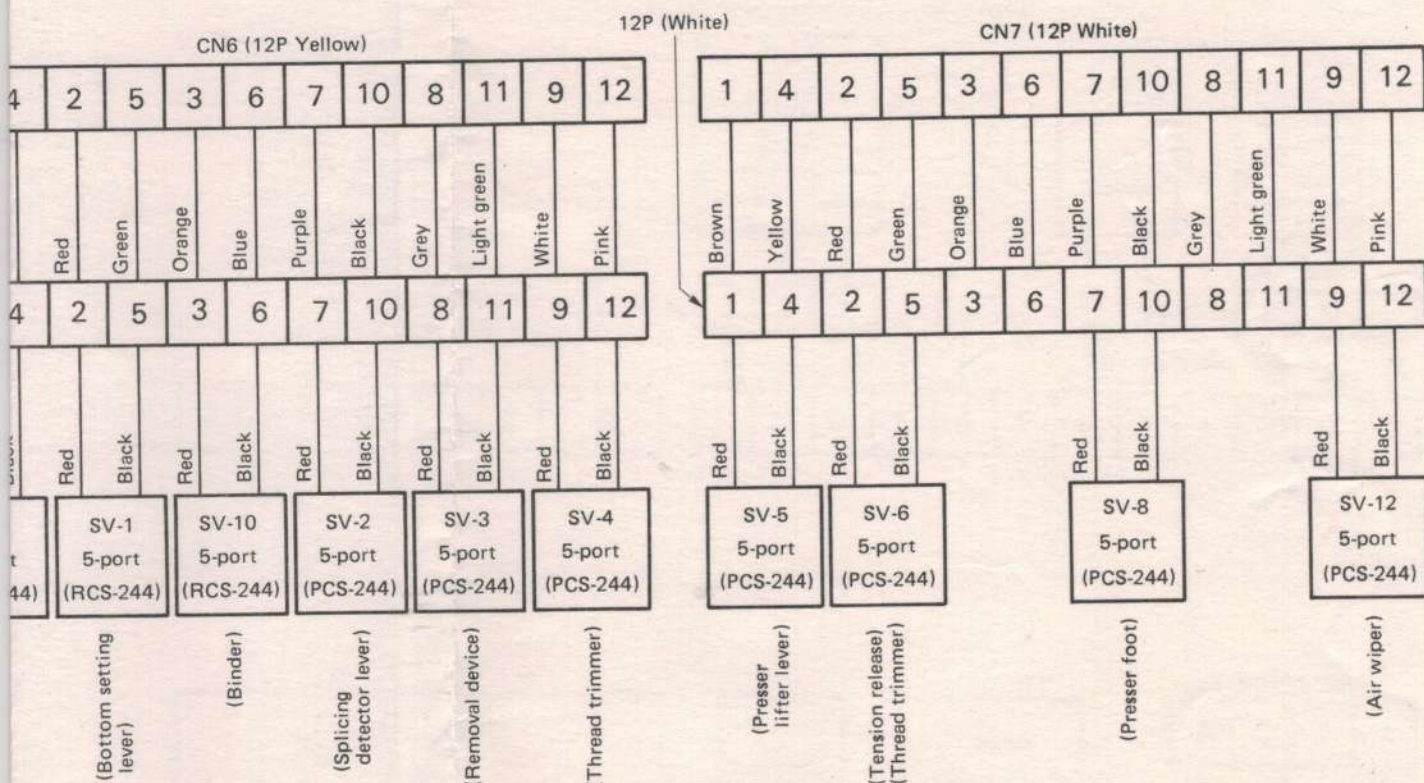
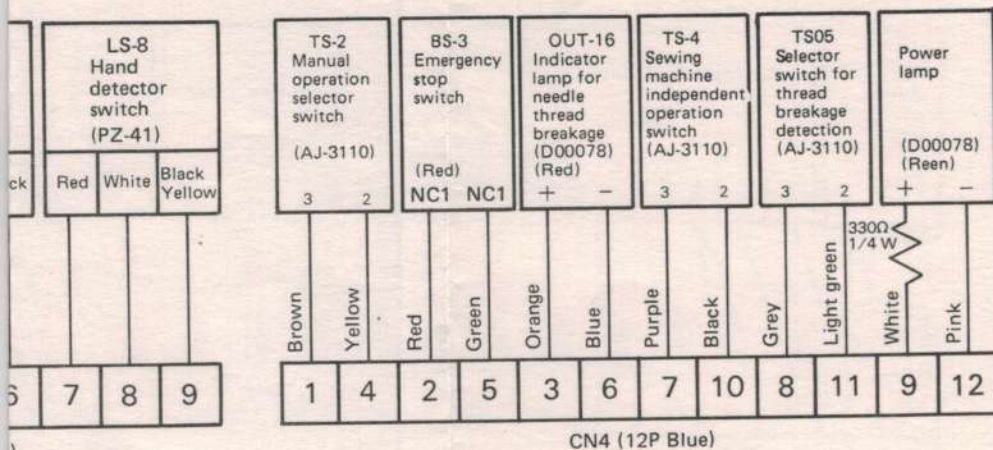
How to remove the control circuit board

- (1) Turn OFF the main switch.
- (2) Detach connector ⑨⑥ from control circuit board ⑨⑤.
- (3) Remove two setscrews ⑨⑦.
- (4) Pull control circuit board ⑨⑤ in the direction of the arrow ← and remove it.

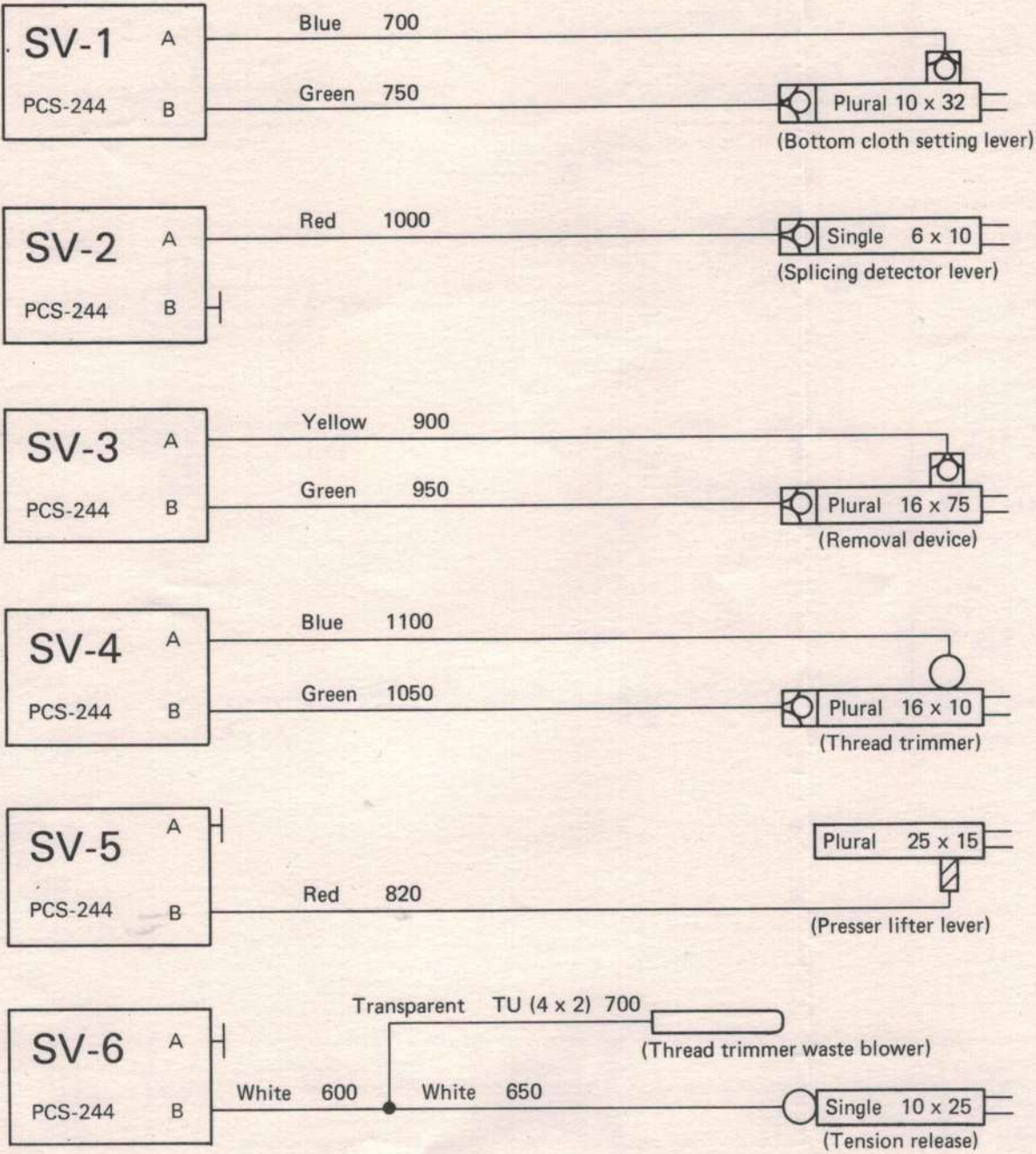


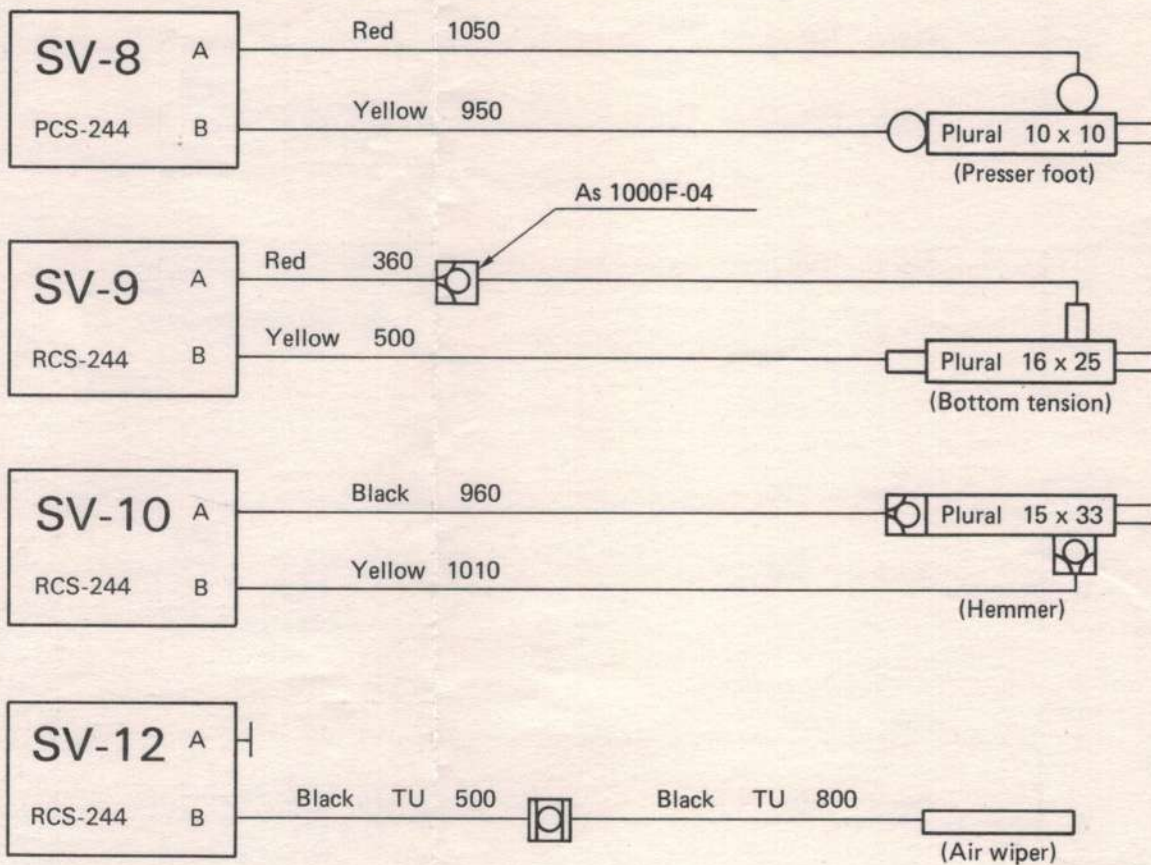
18. EXTERNAL WIRING DIAGRAM





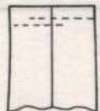
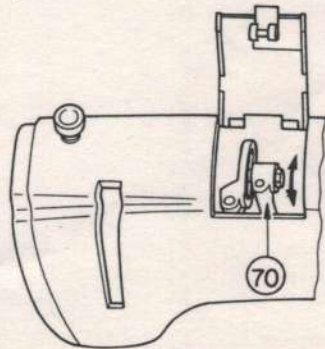
19. PIPING DIAGRAM

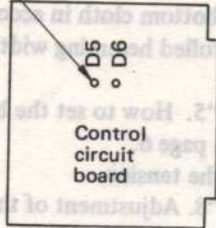
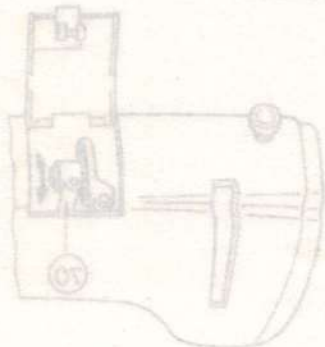




Symbol	Name	Symbol	Name
	Speed controller		Blow-off nozzle
	Swing elbow		Urethane tube
	Plug		Nylon tube
	Half union (φ4-M5)	No symbol	Half joint
	Union Y		Throttle valve
	Half union (φ4-1/8)		

20. TROUBLESHOOTING

Trouble	Cause	Corrective measure
1. The rolled hem cannot be made in shape.	① The fold width of the bottom end is too short. ② The tension applied to the bottom cloth is inadequate.	○ Fold the bottom end in accordance with the rolled hemming width. Refer to "5. How to set the bottom cloth" on page 6. ○ Increase the tension. Refer to "8. Adjustment of the tension applied to the bottom cloth" on page 11.
2. A rolled hem cannot be made.	① The hemmer does not pick the end of the bottom cloth which is folded in two.	○ Adjust the hemmer. Refer to "b and c of 1) Hemmer" on page 17.
3. Puckering is observed on the rolled hem.	① The fold width of the bottom end is too long. ② The tension applied to the bottom cloth is inadequate.	○ Fold the bottom cloth in accordance with the rolled hemming width to be made. Refer to "5. How to set the bottom cloth" on page 6. ○ Increase the tension. Refer to "8. Adjustment of the tension applied to the bottom cloth" on page 11.
4. The stitches at the sewing end cannot be oversewn on the stitches at the sewing start. They are separated from each other by 1 mm or more.	① Faulty setting of the bottom cloth.	○ Set the bottom cloth correctly. Refer to "5. How to set the bottom cloth" on page 6.
		
5. The bottom splicing cannot be detected.	① Faulty adjustment of the thickness of the cloth on which seam is to be detected.	○ Adjust the height of the splicing detector. Refer to "12. Adjusting the splicing detector" on page 13.
6. The needle breaks.	① The upper and lower roller feed of the sewing machine and the needle feed amount are not properly adjusted.	○ Adjust the needle feed amount to the roller feed. [Adjustment] Move eccentric lever ⑦⑩ in the direction of the arrow to make the adjustment.
		

Trouble	Cause	Corrective measure
7. The thread cannot be trimmed.	① The timing of the thread trimming is not proper.	○ Adjust the needle position detector. Refer to "10. Adjustment of the thread trimming timing" on page 12.
8. Faulty detection of thread breakage. 1) The sewing machine stops, though the thread is not broken. (The indicator lamp on the panel lights up.) Thread breakage confirmation lamp	○ When the pulley of the thread breakage detector is slowly turned by hand and confirmation lamp D5 on the control circuit board flashes on and off: ① Incorrect threading of the machine head ② Stitch skipping occurs. ○ When the pulley of the thread breakage detector is slowly turned by hand and confirmation lamp D5 on the control circuit board does not flash on and off: ① Defective encoder. ○ When the pulley of the thread breakage detector is slowly turned by hand and confirmation lamp D5 on the control circuit board flashes on and off:	○ Refer to "5) How to thread the machine head" on page 2. ○ Adjust the needle thread tension. ○ Replace the encoder.
2) The sewing machine does not stop running, though the needle thread is broken. (The indicator lamp on the panel lights up.)	① The control circuit board is defective. ② The selector switch for thread breakage detection is set to its OFF position.	○ Replace the control circuit board. ○ Set the switch to its ON position.
		
		
○ Adjust the height of the splicing detector. Refer to "12. Adjusting the splicing detector" on page 13.	① Faulty adjustment of the thickness of the cloth on which seam is to be detected.	○ The bottom splicing cannot be detected.
○ Adjust the needle feed amount to the roller feed. [Adjustment] Move eccentric lever ⑦ in the direction of the arrow to make the adjustment.	① The upper and lower roller feed of the sewing machine and the needle feed amount are not properly adjusted.	○ The needle breaks.

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*The description covered in this instruction manual is subject to change for improvement of the commodity without notice.

*This instruction manual is edited and printed in accordance with the product specifications as of June, 1991.