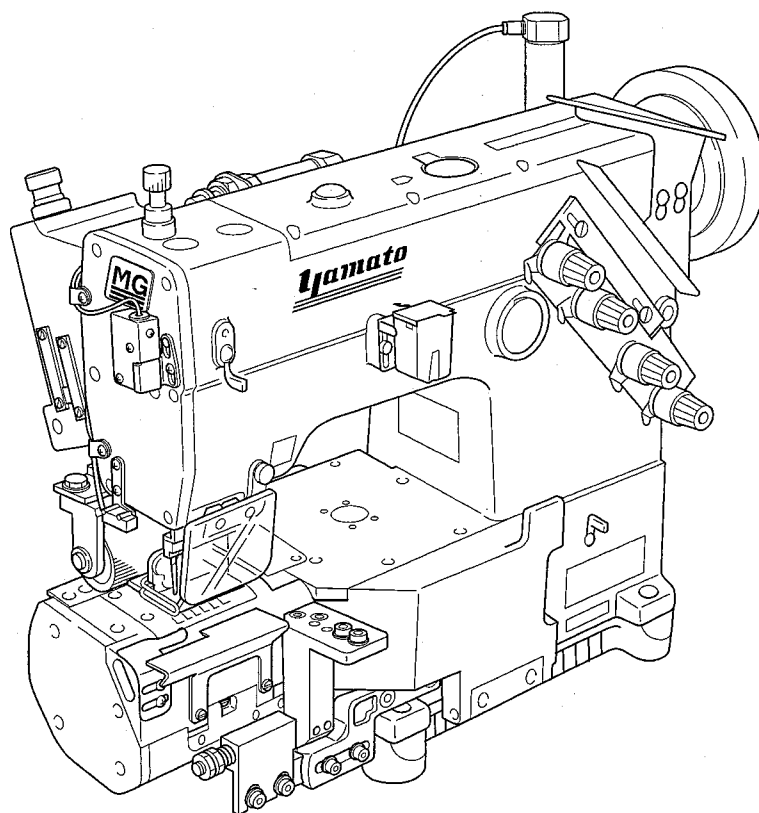


Yamato[®]

Instruction manual

DOUBLE CHAIN STICH MACHINE
WITH NEEDLE FEEDING

MG2002PC






This instruction manual includes adjustments differed from MG2000 model.

Before using your MG2002PC model, please read both of the instruction manuals and understand the contents well. After reading the instruction manuals, please keep them in a location where it is easily accessible to the operator.



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1. Installation

1.1 Installing presser foot lifter device (with FL10 device)

1. Loosen the lock nut ② of the cylinder rod chip ① fully, and then tighten the cylinder rod chip ① fully.
2. Install the air cylinder, C. set ③ to the back of the sewing machine with the screws ④ and washers ⑤ (2 pcs. for each) as Fig.1.
3. Install the solenoid valve.
(Refer to 「1.3 Installing solenoid valve」)
4. Connect the pipe to the air cylinder, C. set ③.
(Refer to 「1.4 Wiring and air piping」)
5. Turn the motor switch ON.
6. Toe down the pedal and lift the presser foot up.
7. Adjust the cylinder rod chip ① as below
 - (1) While pressing down the lifter lever ⑥ by hand, turn the cylinder rod chip ①, and lower the lifter lever ⑥ to where it touches the lifter lever stopper ⑦.
 - (2) Tighten the nut ② and fix the cylinder rod chip ①.
8. Lower the presser foot and make sure the clearance between the lever ⑥ and the chip ① is enough. If there is no clearance, loosen the nut ② and the chip ① a little to make one.

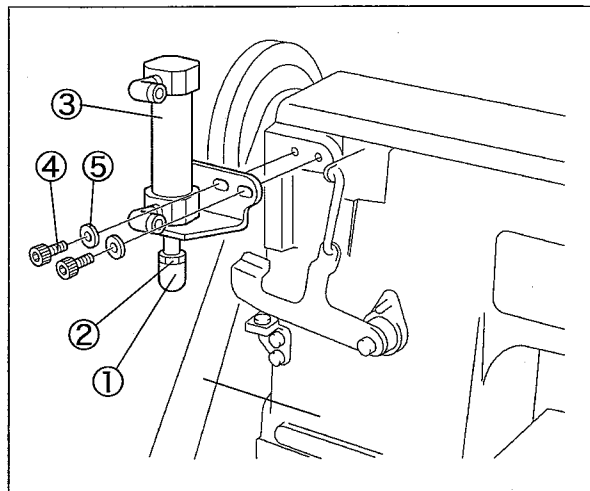


Fig. 1

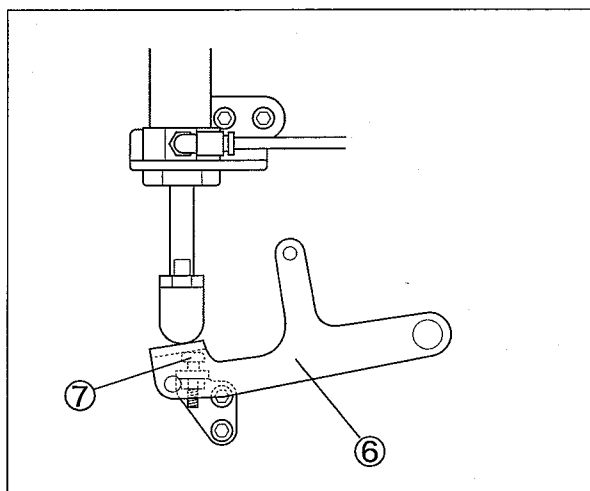


Fig. 2

WARNING

After installation, turn the motor switch OFF.

1.2 Installing roller lifter cylinder (with APL10 device)

1. Remove the screws (4 pcs.) from the rear cover ⑧.
2. Install the roller lifter cylinder ⑧ with the screws ⑩ and washers ⑪.
3. Connect the feed roller lifter link ⑫ and the puller link joint ⑬ with the screw ⑭.
4. Connect the air pipes.
(Refer to 「1.4 Wiring and air piping」)

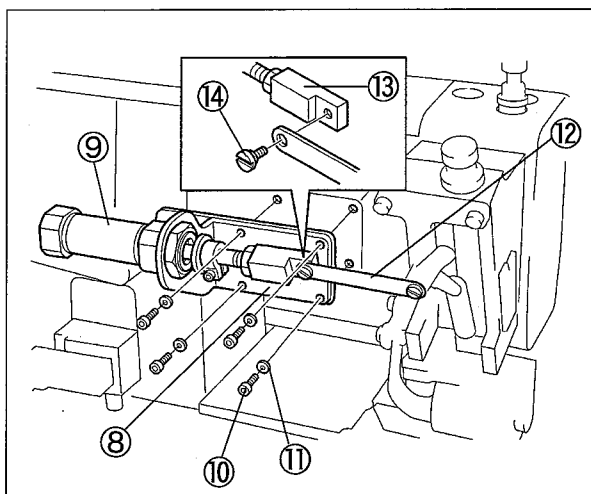


Fig. 3

1. Installation

1.3 Installing solenoid valve

1. Loosen the screws ① (2 pcs.) from the back of the sewing machine.
2. Insert the solenoid valve support ② into the screws ①, and tighten them ①.

1.4 Wiring and air piping

1.4.1 Wiring

- Set the knee switch to the bottom of the table.
- Connect the connectors ③ from intermediate cable to the solenoid valve ④ by the same number.
- Connect the connectors ⑤ from intermediate cable to the cord connectors from the switch and sensor.
- Connect each connector from intermediate cable with the one on the control box that is the same in color and shape.

1.4.2 Air piping

- Install the air regulator to the bottom of the table.
Connect the air pipes as the figure.
Set the air regulator to 0.4MPa.

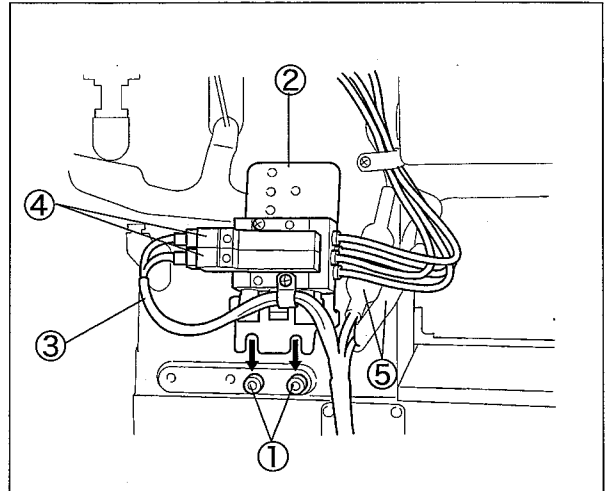


Fig. 4

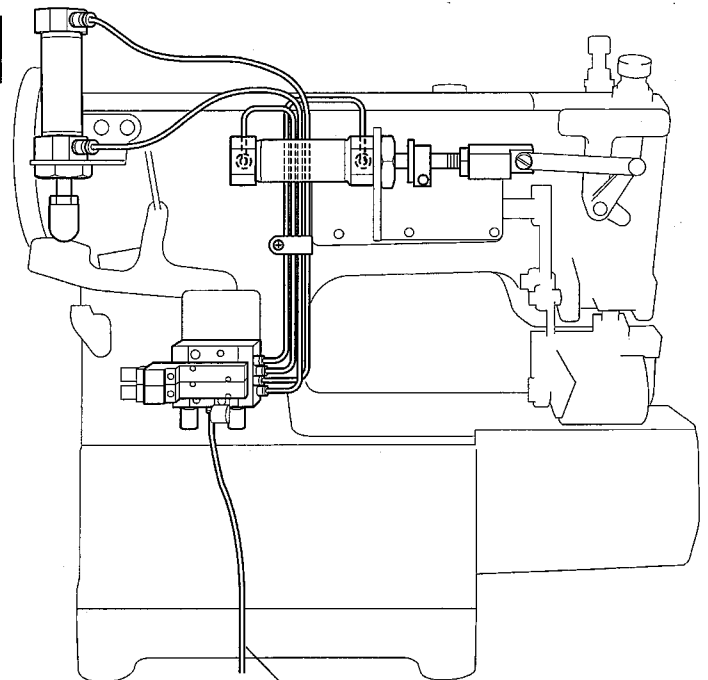


Fig. 5

to air regulator

1.5 Installing folder bracket

1. Fix the folder bracket① with the screws② and place it parallel with the top of the stitch plate.
2. Fix the folder bracket③ with the screws④ and place it vertical to the top of the stitch plate. (Set it a little higher than the stitch plate.)

When installing folder

Adjust the up-and-down direction by the screws④.

Adjust the right-and-left direction by the screws⑤.

3. Set the folder to folder bracket⑥ with the screws⑦.
4. Make the clearance between the upper surface of supplementary cover⑧ and the folder bottom as less as possible.

Make sure the folder bracket③ falls forward smoothly.

(Make adjustment by the screws④.)

Note) The folder need to be prepared by customer.

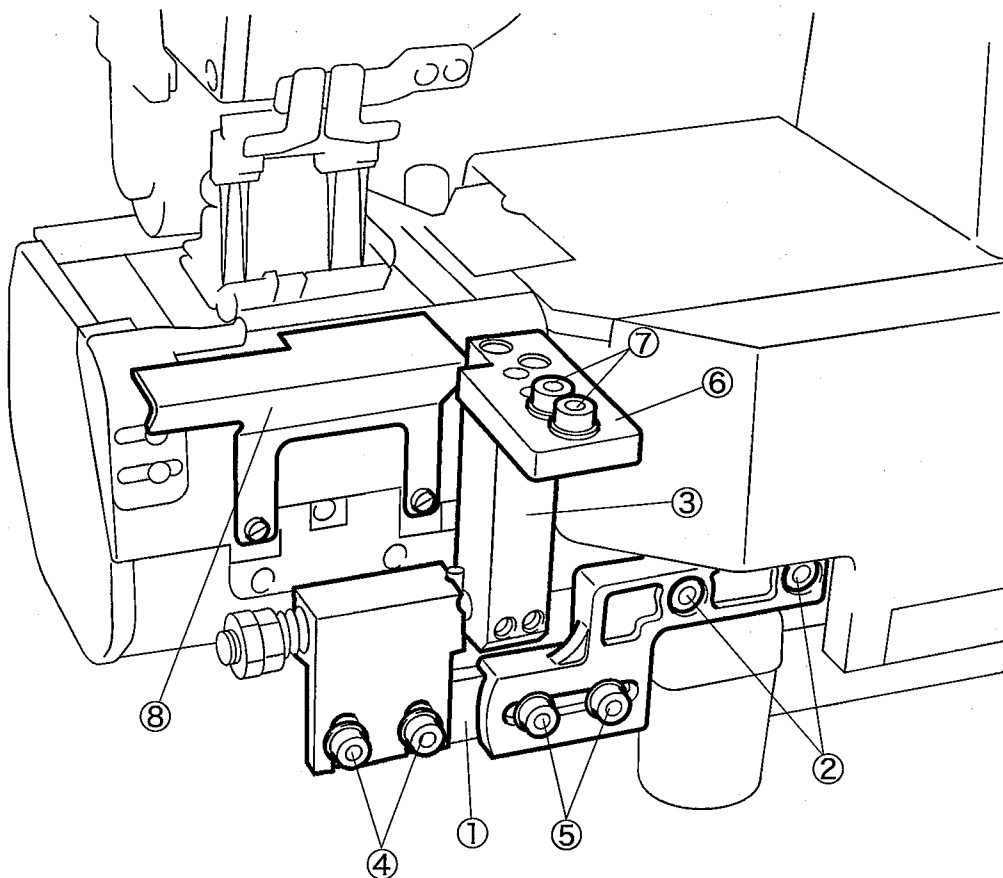


Fig. 6

1. Installation

1.6 Program for motor

In case of using roller lifer device (APL10 device), refer to the instruction manual for motor and install the program as the following.

For Mitsubishi motor FMF or GMF series

C mode (↓ + C)

S mode (↓ + B + D)

Function	Set value	Function	Set value
IA	F	SQS	Go
IB	I01	NS1	oN
IH	I02	NE1	oN
IM	UF	S1S	IN
oM	oT2	K11	how many stitches the sewing machine sews before the puller rise, after detecting the fabric
A1	I01	K12	how many stitches the sewing machine sews after the puller rise and before the puller lowers
N1	oT2		
N2	FU		
IC	I06		
IN	I01		
oN	KS1		
ICL	oM		

Supplement

Change the set value of K11 and K12 when changing
stitch length.

2. Proper operation

WARNING

ALWAYS turn the motor switch OFF and check that the motor has been stopped, before installing needles. If not, it may cause injury.

2.1 Installing needles

1. Loosen the screws ② of the needle ① with a screwdriver.
2. Remove the old needle with a pair of tweezers.
3. Insert a new needle into the needle clamp ③ as far as it goes with facing its scarf to the left.
4. Tighten the screws ② of the needle ①.

Attention

Be sure to check the “clearance between the needle and the looper” and “clearance between the needle and needle guard” after needle changing.
(Refer to the instruction manual for MG2000 on page 19.)

Supplement

One or two needles are installed for using, even though four needles can be installed.

According to the installing position of the needles, the width of the needles will be as the following.

A,C	31.8mm
B,D	34.9mm
A,B	6.35mm
C,D	9.45mm
A,D	41.25mm
B,C	25.45mm

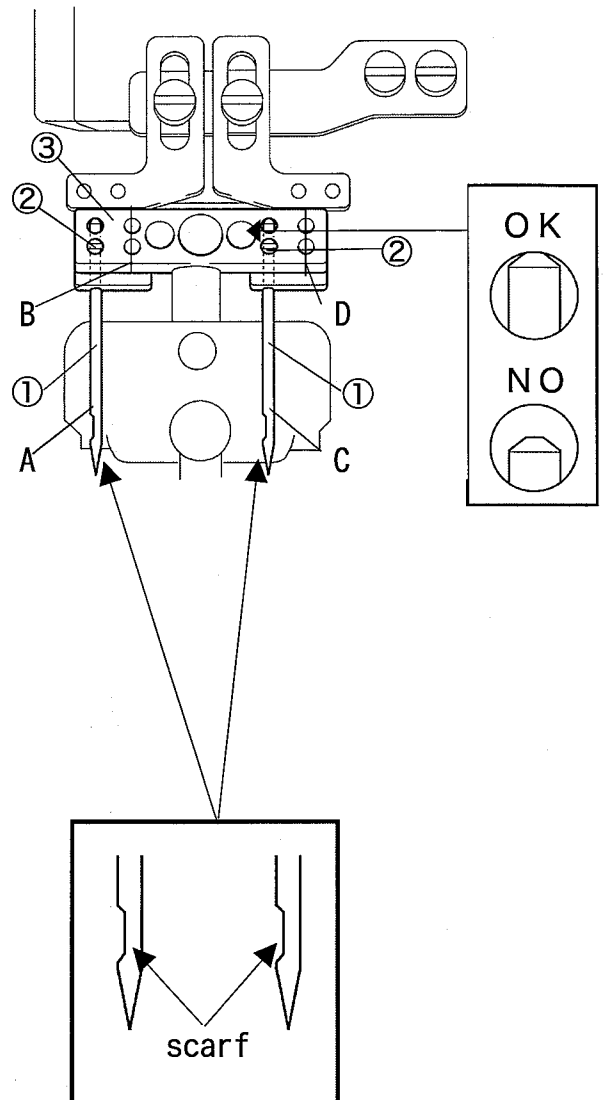


Fig. 7

2. Proper operation

2.2 Threading



WARNING

ALWAYS turn the motor switch OFF and check that the motor has already stopped, before threading.

Improper threading can cause thread breakage, skip stitch, and uneven stitch.

When not threaded, thread correctly as shown in Fig. 8, 9.
When threaded, rethread by tying new threads to the preset threads.

Needle thread

1. Pull the new threads until the knots come to the front of the needle.
2. Cut off the knots and pass the threads through the needle eyes.

Looper thread

Change the threading for looper according to the installing position of the needles. The threading of needle thread take-up ① and looper thread eyelet (left) ② has been shown in Fig. 9.

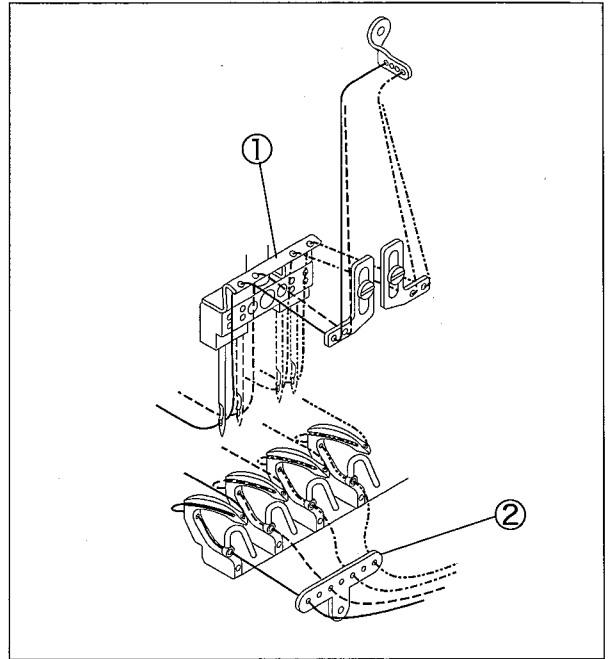


Fig. 9

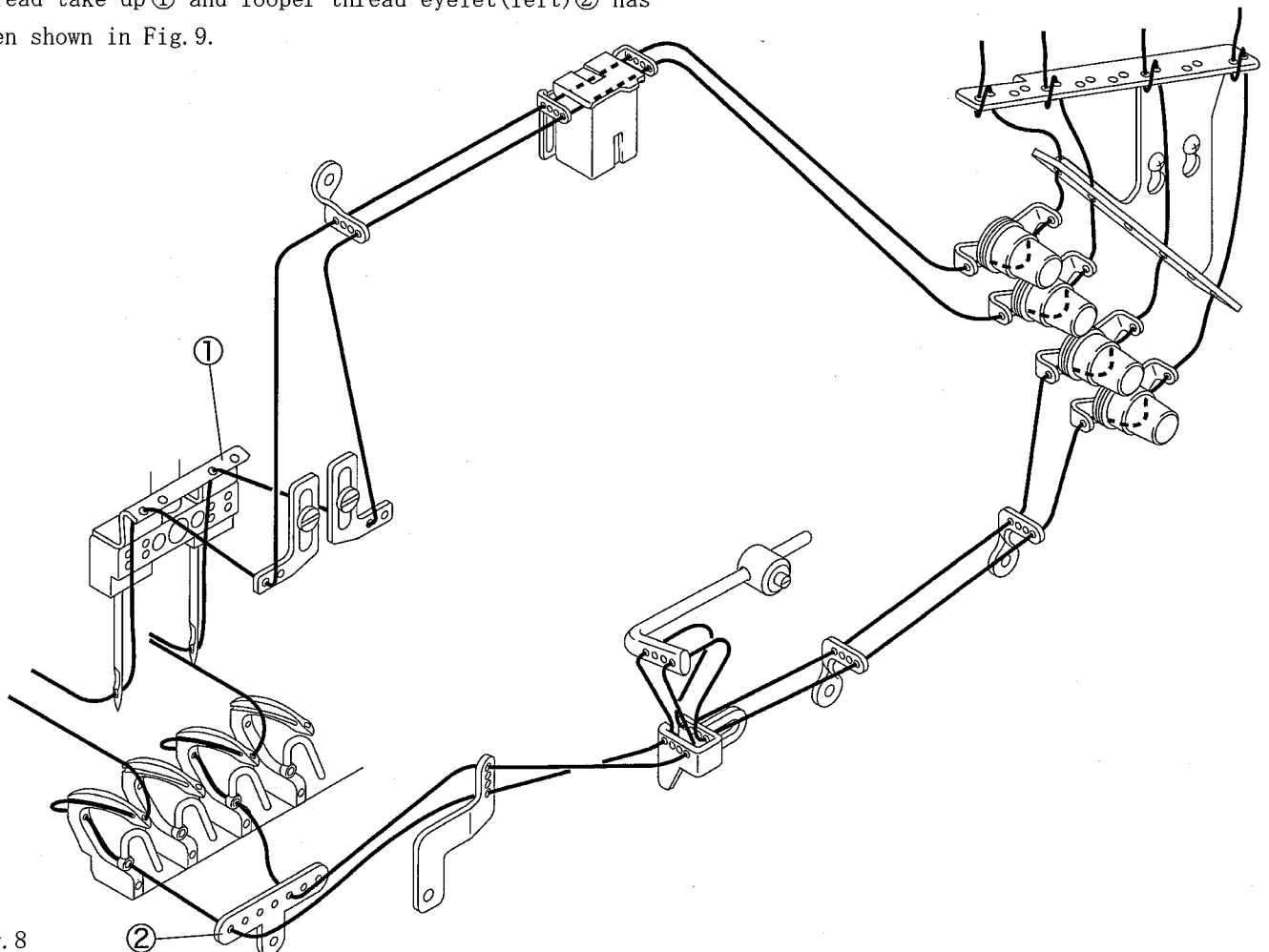


Fig. 8

2.3 Procedure



In both cases of with FL10 device and APL10 device

1. Heel back the pedal.

The presser foot and the puller will be raised.

2. Release the pedal to neutral.

The presser foot and the puller will be lowered.

3. Toe down the pedal, start sewing.

When the fabric comes to the front of the puller, puller rises up, and when fabric reaches puller, puller lowers. (Adjust it by the program for motor.)

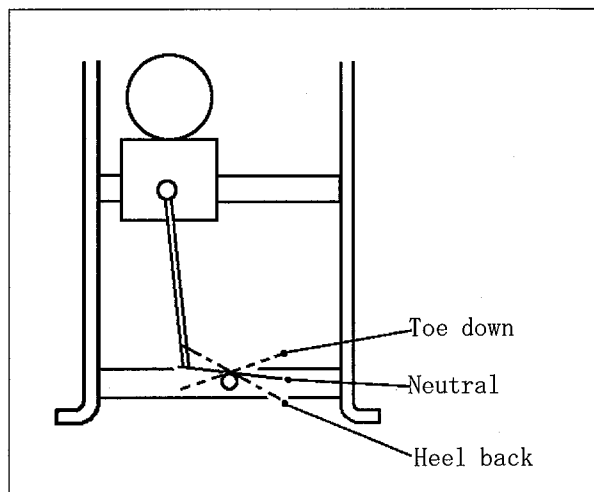


Fig.10

Others

○ Press the knee switch.

Only the presser foot rises up.

However, when the sewing machine starts running, the presser foot falls down.

○ Press the manual switch.

The puller rises up.

3. Adjustment

3.1 Height of feed dog

Adjust the height of the feed dog①(the third rows on the left) to 1.4-1.6 mm from the top of the stitch plate when the feed dog is at the highest point.

Adjusting

1. Remove the needle, the presser foot and the stitch plate holder.
 2. Loosen the adjusting screw②, the nut③ and the screw④ for the feed dog①.
 3. Adjust the height of the feed dog①, and tighten the screw④.
 4. Tighten the screw② until it touches the feed bar lightly, then fix it with the nut③.
 5. Re-install the stitch plate holder, the presser foot, and the needles.
- ※ After this adjustment, the height of the feed dog① will be automatically decided by the screw②, even though the feed dog is removed for cleaning etc.

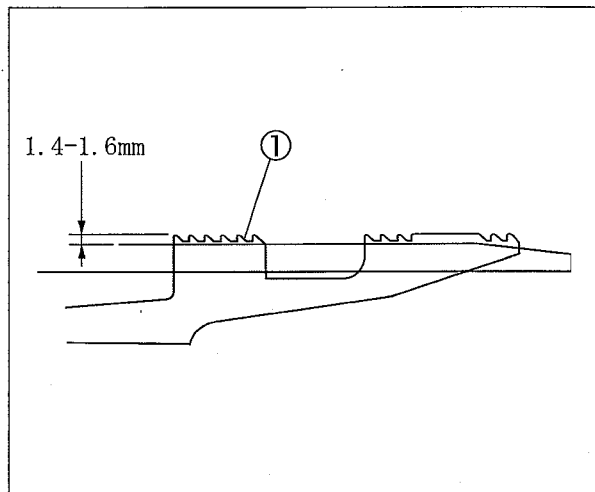


Fig. 11

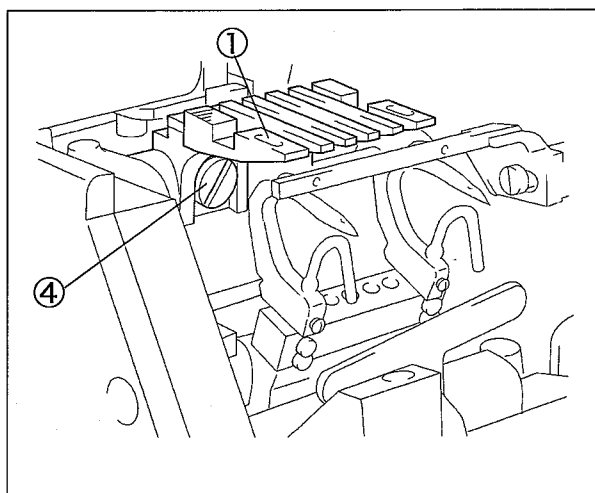


Fig. 12

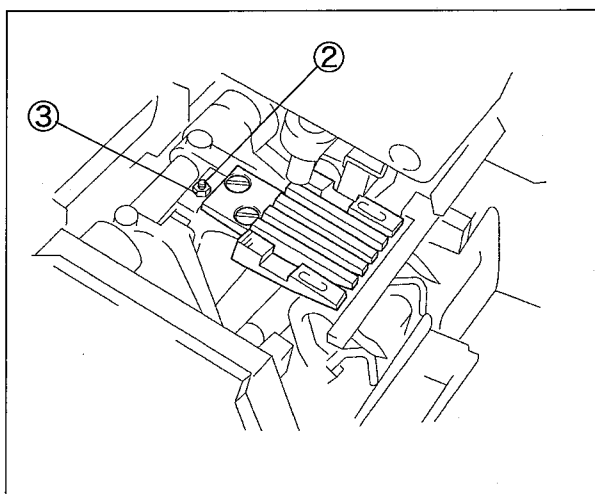


Fig. 13

3.2 Adjusting the tape guide of presser foot and fabric guide

1. Tape guide (left) ② guides the upper part of the tape. ①. Make adjustment by letting the tape guide (left) ② touch the tape lightly and tighten the screw ③.
2. Fabric guide ⑤ guides the lower part ④ of the tape. Make adjustment by letting the fabric guide ⑤ touch the tape lightly and tighten the screw ⑥.

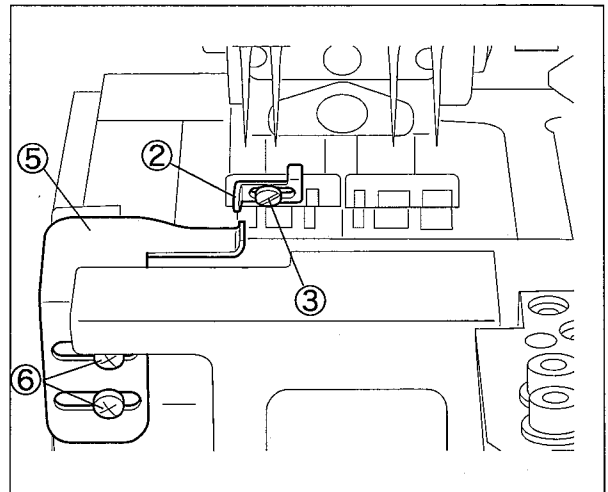


Fig. 14

3.3 Installing folder

Front-and-rear position

Make the distance between the presser foot ⑦ and the folder ⑧ to about 10mm as shown in figure.

Right-and-left position

Make the left side of folder ⑧ parallel with the direction of the tape sending and match it to the tape guide ② of the presser foot as figure.

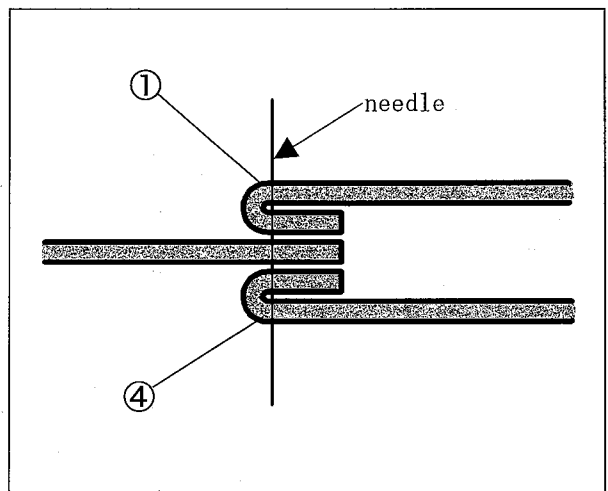


Fig. 15

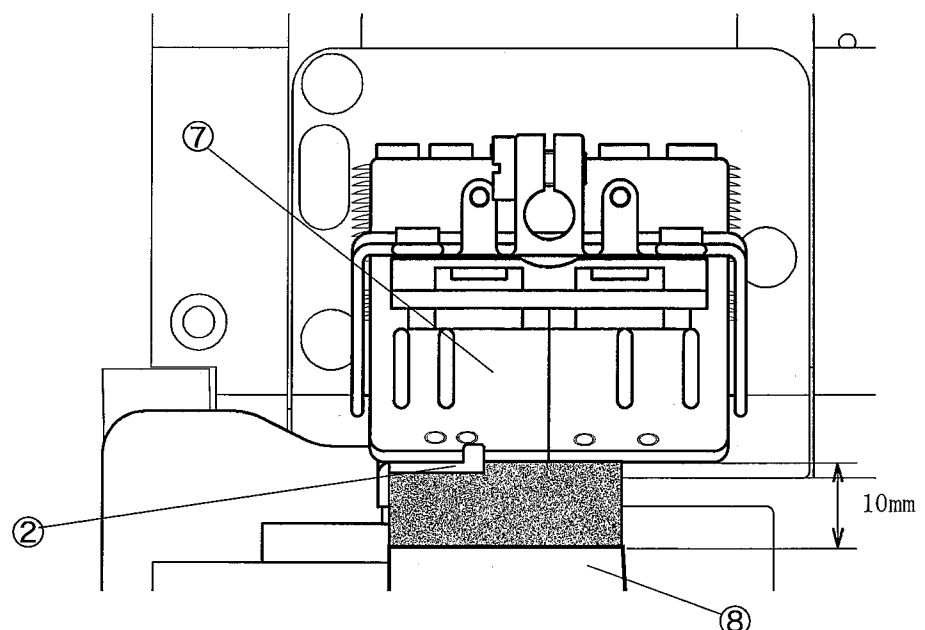


Fig. 16

3. Adjustment

3.4 Movement of roller (puller' s feeding amount)

Adjust the movement of the upper feed roller according to type of material and the sewing condition.

1. Loosen the nut ①, place the upper feed roller lever rod ② in middle of the slot on the upper feed roller lever ③ as standard. Tighten the nut ① after setting.

2. Adjust the position of upper feed roller lever rod ②, when the feeding amount of roller is insufficient.

- Move it in the U direction...The feeding amount decreases.
- Moving it in the D direction...The feeding amount increases.

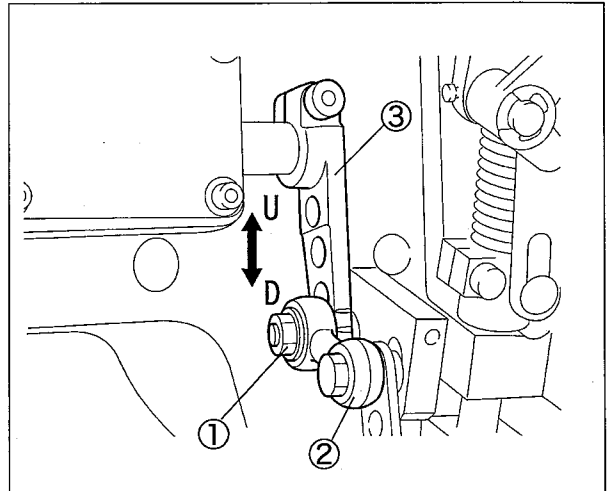


Fig.17

3.5 Height of roller

1. Loosen the screw② of the collar①.
2. Let the roller touch the roller lower plate(right)④ and (left)⑤ firmly, when the roller is lowered.
3. Fix the collar① with the screw② to make the clearance between the collar① and the bracket⑥ to 0.

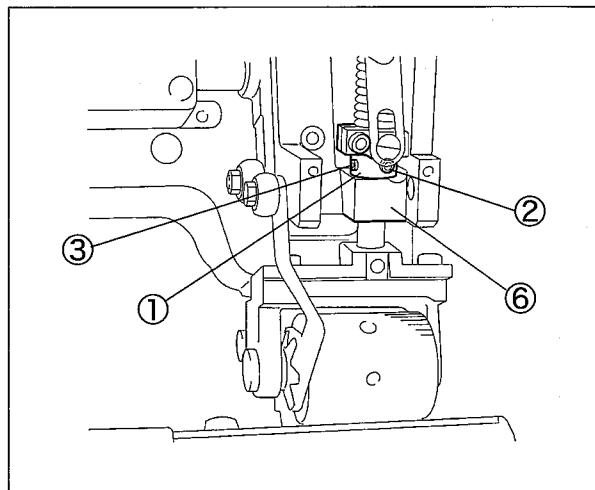


Fig. 18

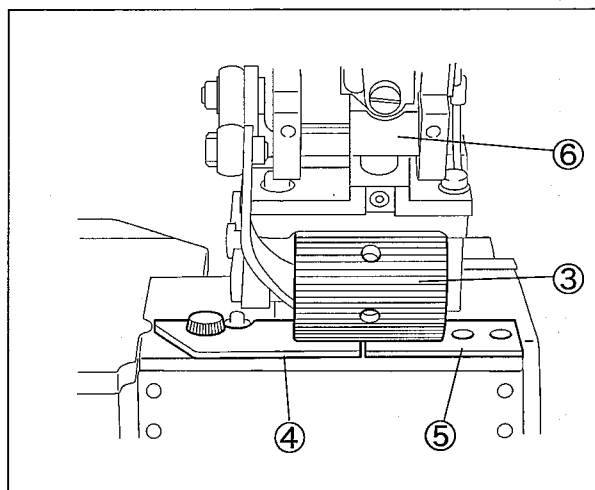


Fig. 19

3.6 Lifting amount of roller

Make the lifting amount of the roller to 5mm as standard.

Make adjustment by loosening the screw⑧ for the collar⑦ of feed roller lifter cylinder, and move the collar right and left.

- Moving it in the I direction...The lifting amount decreases.
- Moving it in the J direction...The lifting amount increases.

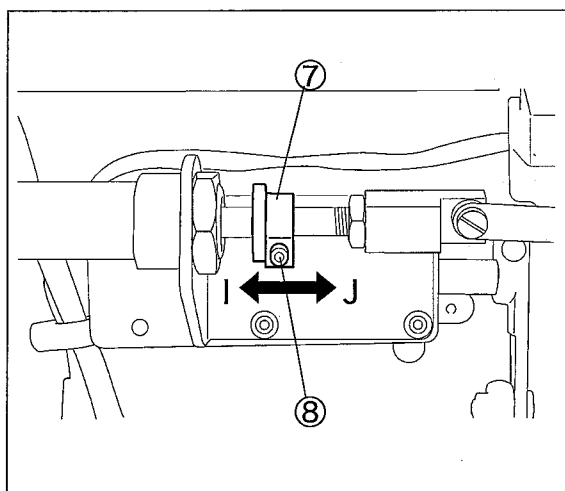


Fig. 20

3. Adjustment

3.7 Adjusting roller

Adjustment for roller will be different according to that the waist band is straight(it will be called as "straight band" in the following) or curved (it will be called as "curved band" in the following) when sewing a waist band for such as jeans onto the body part.

3.7.1 For straight band

In case of switching to straight band from curved band

1. Loosen the screw ② of upper feed roller lever ①.
2. Loosen the two screws ④ of upper roller yoke(lower) ③.
3. Rotate upper roller yoke(lower) ③ fully counterclockwise in view of above, and tighten the screws ④ . (Fig. 22)
4. Loosen the screw ⑥, put the roller lower plate(right) ⑤ upside down and change the direction. Fix it with the screw ⑥ as figure.
5. Tighten the screw ② to adjust the right-and-left position of upper feed roller lever ①. (Refer to 「3.7.3 Attention for setting roller」.)

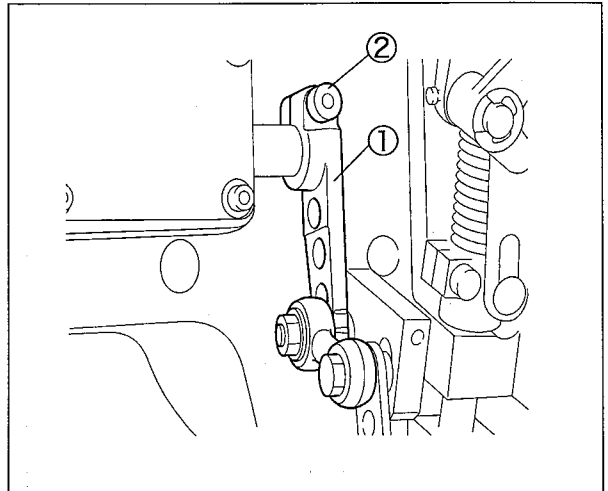


Fig. 21

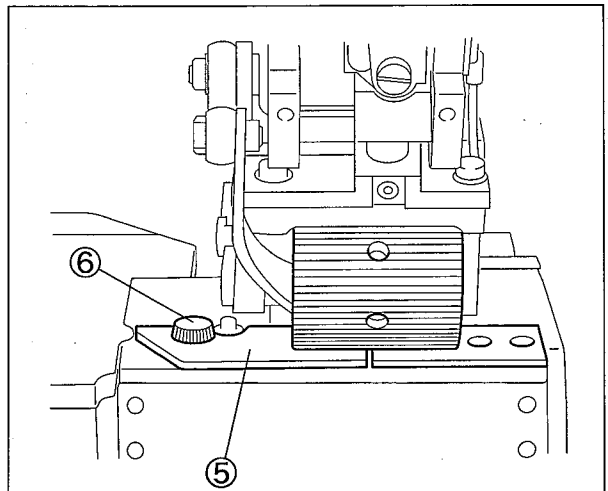


Fig. 22

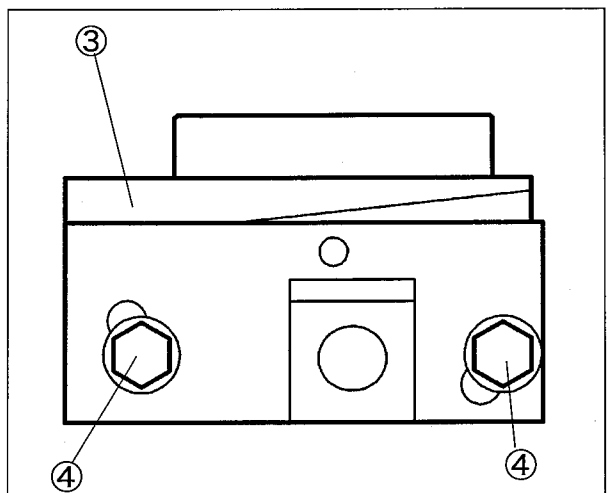


Fig. 23

3.7.2 For curved band

In case of switching to curved band from straight band

It is possible to sew the curved band well by doing only 1 of the following procedure. In that case, the procedure after 2 will not be necessary.

1. Loosen the screw④ of the roller lower plate(right)③ turn the roller lower plate upside down and place it with an angle as shown in the figure, because of not using. (Fig.24)

Do test sewing and decide if the adjustments after procedure 2 are necessary.

2. Loosen the screw② of upper feed roller lever①. (Fig. 21)
3. Loosen the two screws⑥ of upper feed roller yoke (lower)⑤. (Fig. 25)
4. Rotate the upper roller yoke(lower)⑤ clockwise in view of above, and tighten the screw⑥(2pcs.).
5. Tighten the screw② to adjust the right-and-left position of upper feed roller lever①. (Fig. 21)
(Refer to 「3.7.3 Attention for setting roller」.)

i Supplement

Upper feed roller yoke(lower)③ need to be turned according to the curved condition of waist band. When upper feed roller yoke(lower)③ is overturned, the sewing may not be carried out properly.

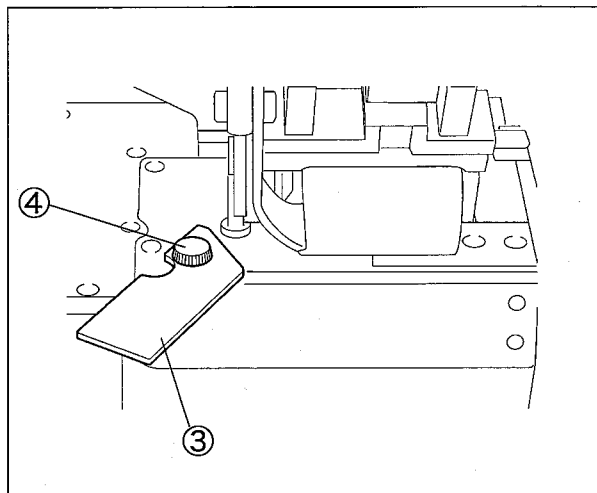


Fig. 24

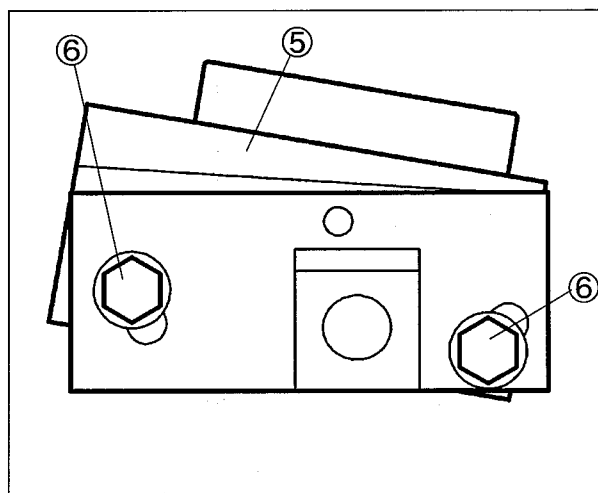


Fig. 25

3. Adjustment

3.7.3 Attention for setting roller

1. Adjust the right-and-left position of the upper feed roller lever① to make upper feed roller lever①, upper feed roller lever rod② and clutch driving lever (right)③ move smoothly.
2. Tighten the screw④ lightly, adjust the clearance between the machine arm and the upper feed roller lever① to about 5mm by rotating the hand wheel. Then tighten the screw④ firmly.

● **Switching to curved band from straight band**

Move the upper feed roller lever in the direction “A” .

● **Switching to straight band from curved band**

Move the upper feed roller lever in the direction “B” .

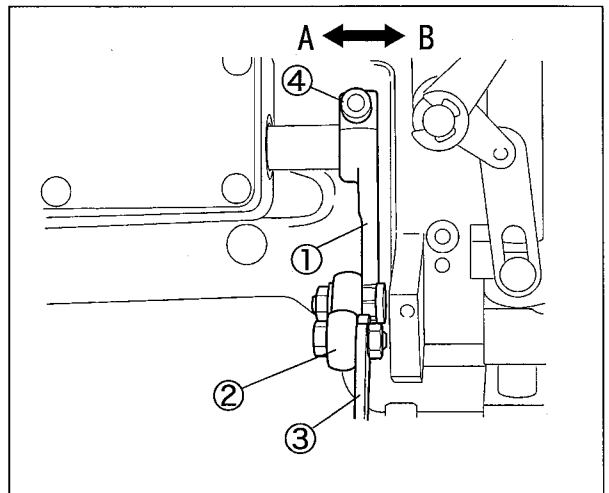


Fig. 26

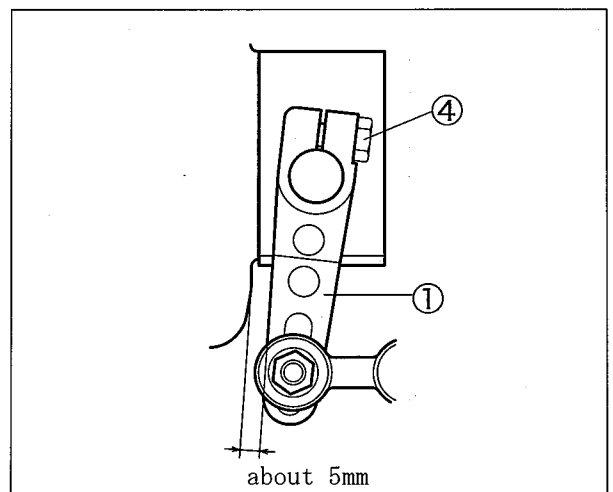


Fig. 27

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