

## PRESSER FOOT ALIGNMENT

Fig. 52, 53, 54

Presser Foot should be flat on Needle Plate and its needle slot should be aligned with that of Needle Plate. For this setting, eliminate the pressure of Presser Foot (see page 28).

Loosen Screw ① for Presser Foot Needle Plate.  
Move Presser Foot ② until its needle slot is aligned with that of Needle Plate.

With Presser Foot ② flat on Needle Plate, tighten Screw ①.  
Apply a proper pressure on Presser Foot (see page 28).

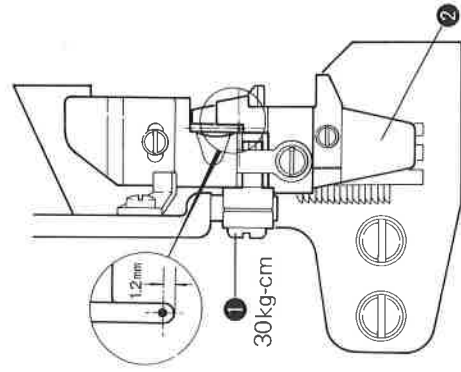


Fig. 52

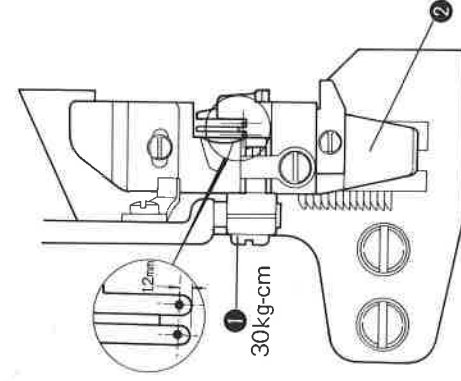


Fig. 53

## PRESSER ARM SETTING

Fig. 55

1. Loosen Screw ④ for Foot Lift Lever Bushing ③.
2. Move Presser Arm ⑦ so that Presser Arm Guide ⑥ is smooth when Hand Lift Lever ⑤ is moved up or down.  
Check Presser Foot is aligned with Feed Dogs. Tighten Screw ④.

## 押エの取付 (図52, 53, 54)

## 押エ台の調節 (図55)

1. 押エバネ調節ネジをゆるめ、止ネジ①を軽く仮締する。
2. 押エ②を前後に動かし、押エ②の針溝と針板の針溝を合わせる。
3. 押エ②を強く押しつけ、押エ底面と針板上面をピッタリと添わせて、止ネジ①を締付ける。
4. 押エバネ調節ネジを締め、適度のバネ圧力を加える。

1. 押エ台軸ブッシュ③の止ネジ④をゆるめる。
2. 押エ手揚⑤を上下させたとき、押エ台案内⑥がスムーズに上下するよう、押エ台⑦を左右に動かす。
3. 押エが送り歯に対し平行であることを確かめ、止ネジ④を締付ける。

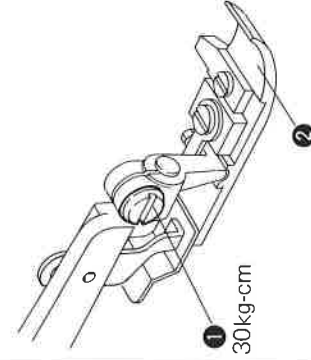


Fig. 54

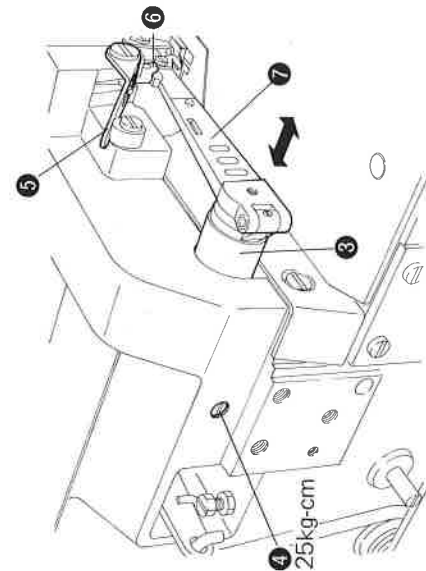


Fig. 55

## READ CONTROL

Read control or the positions of Thread Guides and Takeups varies more or less depending on operation, threads, fabrics, etc. The standard setting is as shown in Fig. 56, 57, 58.

**Needle thread control** Fig. 56, 57  
Set Needle Thread Takeup ① as shown in Table 8.  
Set Needle Thread Guide ② lowest.

## Looper thread control

- Fig. 58**  
1. Check the position of Upper Looper Thread Takeup ③ when Upper Looper is lowest.  
2. Check the position of Lower Looper Thread Takeup ④ when Upper Looper is extremely left.  
3. Set Thread Guide ⑤ so that its top surface is on the center of the head of Screw ⑨.  
4. Set Thread Guide ⑥ at the center between the two indication lines.  
5. Set Thread Guide ⑦ highest in the long groove.  
6. Set Thread Guide ⑧ in the middle of the long groove.

**Note:** Move Thread Guide ⑤ ⑥ or ⑧ to the ⊕ direction for more thread in seam, and move it to the ⊖ direction for less.

Fig. 56

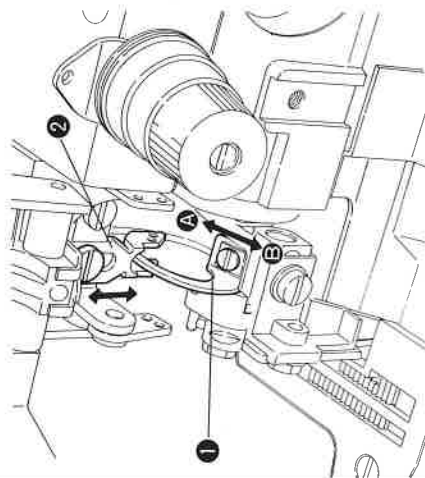
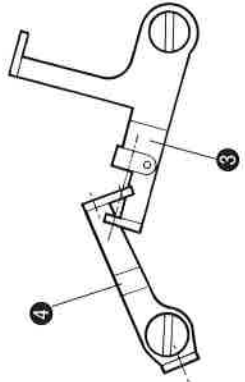


Fig. 57



## 糸道の取付位置

針糸繰り、針糸道 (図56)

- 針糸繰り①の取付は、表8を参照して正しく取付けてください。
- 針糸道②の標準位置は、最下位置です。

## 糸道の調節

糸道⑤、⑥、⑧は58図のように、標準位置より⊕方向へ移動すると、糸の繰り出し量が多くなり、⊖方向へ移動すると少なくなります。

ルーパー糸繰り、糸道 (図57, 58)

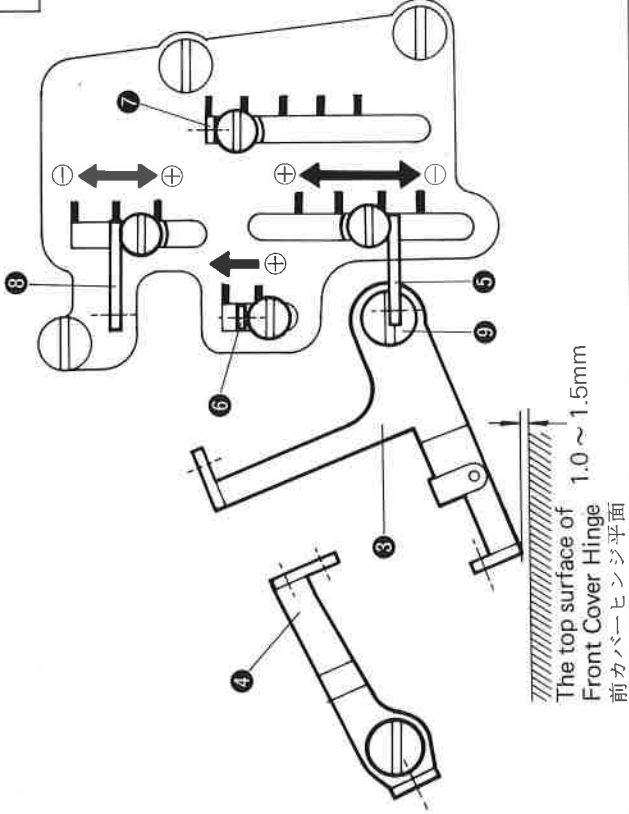
- 上ルーパー糸繰り③は、上ルーパーが下死点のときを基準に取付ける。
  - 下ルーパー糸繰り④は、上ルーパーが左死点のときを基準に取付ける。
  - 糸道⑤の上面を止ネジ⑨の中心に合わせ取付ける。
  - 糸道⑥は、上下2線の中間に取付ける。
  - 糸道⑦は、長穴の最も上に取付ける。
  - 糸道⑧は、長穴の中間に取付ける。
- 糸道の取付位置は、縫目形式、使用糸、素材などによって多少異なります。

Tab. 8

Stitch type	Threads	Applications	Stitch length	Set position of Takeup ①
縫目形式	糸数	用途	縫目長さ	針糸繰り①取付位置
504.	3	Seaming	Min. - Max.	⑥
512.514.	4	地縫		⑥
503	2	Blindstitch hemming	3.8mm or less. 以下 (7SPI or more, 以上)	⑥
505	3	裾引縫	4.3mm or more, 以上 (6SPI or less, 以下)	④
503	2	Serging	3.8mm or less. 以下 (7SPI or more, 以上)	⑥
503	2	サージング	4.3mm or more, 以上 (6SPI or less, 以下)	④

表8

Fig. 58



Guide, equipped with E56-2110 and  
Set Base 1 on machine with Screw  
2 so that the bottom surface of Cloth  
Guide 3 is parallel with the top  
surface of Needle Plate.

Loosen Screws 4 for Cloth Guide 3.  
Move Cloth Guide 3 so that it is even  
flat on Needle Plate. Tighten  
Screws 4.

Loosen Screw 5. Turn Thumb Screw  
6 until a desired position of Folder 7  
obtained. Tighten Screw 5.

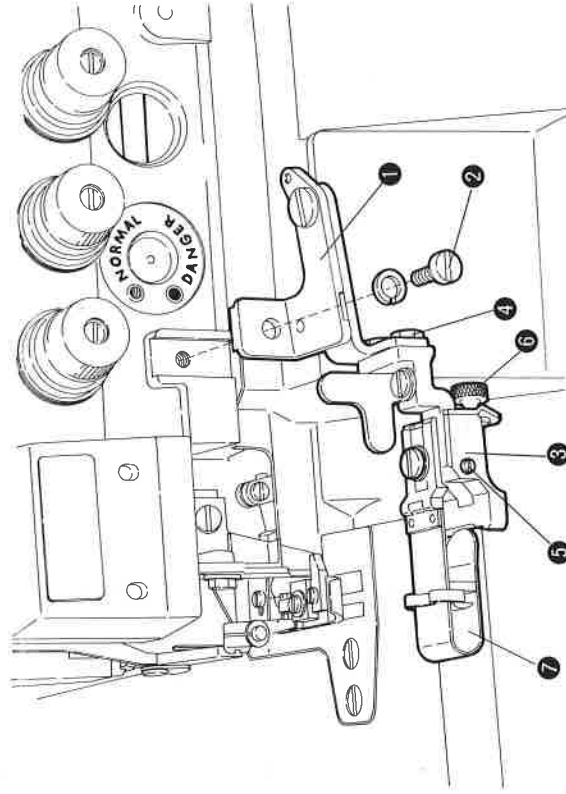
Edge Guide is used for serging operation.

1. Set Base 1 on machine with Screw  
2 so that the surface 'A' of Edge  
Guide 3 is vertical to the top surface  
of Needle Plate.

2. Loosen Screws 10 for Bracket 9.  
Move Bracket 9 so that the bottom of  
Edge Guide 3 is even and flat on  
Needle Plate. Tighten Screws 10.

3. Loosen Screw 11, move Edge Guide 3  
right or left and obtain the desired  
position of it. Tighten Screw 11.

Fig. 59



1. 定規台 1 を止ネジ 2 でミシンに仮止す  
る。

2. 裾引定規台 3 下面が、針板上面と平行  
になる位置で、止ネジ 2 を締付けける。

3. 定規台 3 下面を針板上面にピッタリ添  
わして、止ネジ 4 を締付けける。

4. 止ネジ 5 をゆるめる。

5. 調節ネジ 6 を回し、適当な裾引巾の位  
置まで、左または右に定規羽根 7 を移  
動させ、止ネジ 5 を締付けける。

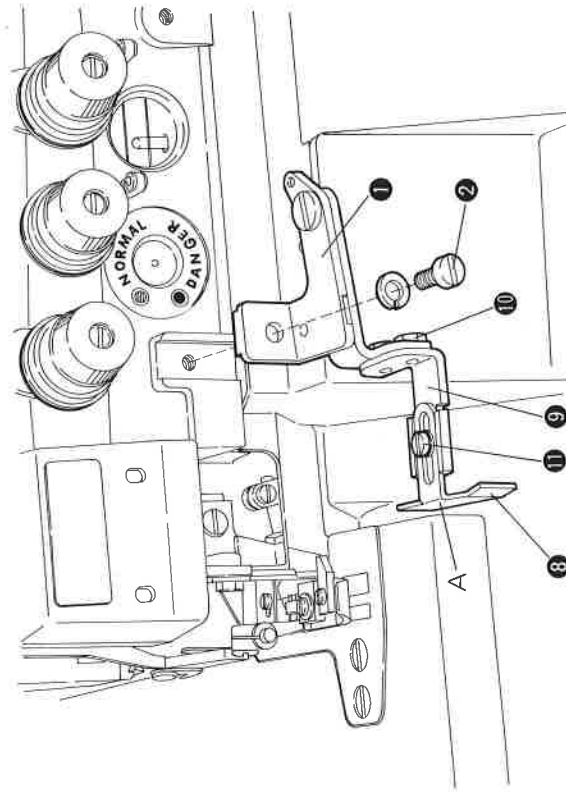
1. 定規台 1 を止ネジ 2 でミシンに仮止す  
る。

2. 当定規 8 A 面が針板上面に対し、垂直  
になるような位置で、止ネジ 2 を締付  
ける。

3. ブラケット 9 を動かし、当定規 8 の下  
面が針板上面に添うよう調節して、止  
ネジ 10 を締付けける。

4. 縫巾の調節は、当定規 8 を左右に動か  
して調節し、止ネジ 11 を締付けける。

Fig. 60



## TROUBLE SHOOTING

### ip stitches

Cause	Remedy	Page
1. Incorrect threading. 2. Damaged needle point. 3. Incorrect setting of needle. 4. Too heavy or too light thread tension.	1. Thread your machine correctly. 2. Replace with new needle. 3. Obtain proper thread tension by adjusting Thread Tension Nut or by resetting Thread Guides. 4. Replace with new needle. 5. Reset the needle height correctly. 6. Obtain the correct looper setting. 7. Remedy the shape of Looper's point correctly, using an abrasive stone or an emery paper, or replace with new Looper.	18-21 16 18. 52
1. Distorted needle. 2. Incorrect setting of Needle and Loopers. 3. Damaged Loopers' points.	1. Replace with new needle. 2. Obtain the correct looper setting. 3. Remedy the shape of Looper's point correctly, using an abrasive stone or an emery paper, or replace with new Looper.	16 40 42. 44
1. Incorrect setting of Needle Guards.	1. Reset Needle Guards correctly.	46

### read breakage

Cause	Remedy	Page
1. Incorrect threading. 2. Incorrect setting of Needle. 3. Too heavy or too light thread tension.	1. Thread machine correctly. 2. Reset Needle correctly. 3. Obtain proper thread tension by adjusting Thread Tension Nut or by resetting Thread Guides. 4. Reset Thread Stand so that threads smoothly come in. 5. Replace with new needle.	18-21 16 18. 52
1. Incorrect setting of Thread Stand. 2. Damaged Needle point or distorted needle. 3. Needle heat is high.	1. Fill Needle Cooler with fresh Silicone oil. 2. Replace with a proper needle.	16 14 16
1. The size of Needle is too big or the point of Needle is not suitable for the fabric sewn. 2. Incorrect setting of Needle Guard. 3. Incorrect setting of Needle and Loopers.	1. Reset Needle Guard correctly. 2. Reset the needle height correctly. 3. Obtain the correct looper setting.	46 40 42. 44

### Needle breakage

Cause	Remedy	Page
1. Incorrect setting of Needle. 2. Needle is too thin. 3. Needle does not center the needle slot of Needle Plate. 4. Incorrect setting of Needle and Loopers. 5. Incorrect setting of Needle Guard. 6. Incorrect setting of Presser Foot.	1. Reset Needle correctly. 2. Replace with a proper size Needle. 3. Reset Needle Plate correctly. 4. Reset the needle height correctly. 5. Reset the looper setting correctly. 6. Reset Needle Guard correctly. 7. Reset Presser Foot correctly.	16 40 42. 44 46 50

### Loose stitches

Cause	Remedy	Page
1. Incorrect threading. 2. Thread is too thick for Needle. 3. Tension Discs are slant and do not catch threads properly. 4. Needle Thread is not lubricated with Silicone oil in Thread Lubricator. 5. Incorrect setting of Needle and Loopers. 6. Thread Guides are not properly set for the threads used.	1. Thread machine correctly. 2. Replace with a proper size Needle for the thread used. 3. Reset Tension Discs properly. 4. Fill Thread Lubricant Reservoir with fresh Silicone oil. 5. Reset the needle height correctly. 6. Reset the looper setting correctly. 7. Reset Thread Guides to suit the threads used.	18-21 40 42. 44 52

### The finished seam is not uniform.

Cause	Remedy	Page
Incorrect threading. Incorrect setting of Thread Stand.	1. Thread machine correctly. 2. Reset Thread Stand so that threads smoothly come in.	18-21
Incorrect setting of Lower Knife. Knives does not trim neatly.	3. Reset Lower Knife correctly. 4. Remedy as follows.	28
a) Incorrect setting of Knives. b) Dull Lower Knife.	a) Reset Knives correctly. b) Re-sharpen or replace with new Knife.	26, 28 28
Incorrect setting of Thread Guides. The thread eyelet of Thread Guide is rough.	5. Reset Thread Guides correctly. 6. Polish the hole finely, using an emery cord.	52

### Bursting of weave threads

Cause	Remedy	Page
1. Needle has burrs at its point. 2. The size of needle is too big for the fabric sewn.	1. Replace with new Needle. 2. Use a proper size needle suitable for the fabric sewn.	16
3. The needle does not center the needle slot of Needle Plate.	3. Reset Needle Plate correctly.	
4. Incorrect setting of Needle height.	4. Reset Needle at its correct height.	40
5. Too high heat of Needle.	5. a) Fill the reservoir of Needle Cooler with fresh Silicone oil. b) Replace with a proper size Needle.	14
a) Needle Cooler does not lubricate the needle with Silicone oil. b) The size of needle is not suitable for the fabric sewn.	c) Reset Needle Guard correctly.	46
c) Incorrect setting of Needle Guard.		
6. The edges of the needle slot of Needle Plate is keen.	6. Chamfer the edges, using an emery paper.	40
7. Incorrect setting of Needle and Loopers.	7. Reset the needle height correctly. Reset the looper setting correctly.	42, 44

### The thread chain does not smoothly come out.

Cause	Remedy	Page
1. Incorrect threading.	1. Thread machine correctly.	18-21
2. Too high or too low thread tensions.	2. Obtain proper thread tension by re-adjusting Thread Tension Nut or by resetting Thread Guides.	18 52 52
3. Positions of Thread Guides are not proper for the operation performed.	3. Reset Thread Guides properly.	
4. Incorrect setting of Needle and Loopers.	4. Reset the needle height correctly. Reset the looper setting correctly.	40 42, 44
5. There are burrs on the chaining-off finger of Needle Plate or Presser Foot.	5. Polish the chaining-off finger with an emery paper and the like.	

### Feed marking

Cause	Remedy	Page
1. The pressure of Presser Foot on the fabric is too heavy.	1. Re-adjust the pressure of Presser Foot properly.	22
2. Teeth of Feed Dogs are sharp.	2. Chamfer the teeth, using an abrasive stone and the like.	

### Seam puckering

Cause	Remedy	Page
The tension on Thread is too heavy. Improper pressure on Presser Foot.	1. Obtain proper thread tension. 2. Obtain proper pressure on Presser Foot.	18 22
The differential feed ratio is not properly set.	3. Reset the differential feed ratio properly.	24
Needle is too thick for the fabric and the thread used.	4. Replace with a proper size needle suitable for the fabric and the thread used.	
Dull trimming of Knives.	5. Reset Knives correctly. Re-sharpen Lower Knife.	26, 28 28
The seam width is too narrow against the chaining-off finger of Needle Plate.	6. Re-adjust the seam width. If necessary, replace with the Needle Plate of a proper size chaining-off finger.	26
Incorrect setting of Feed Dogs.	7. Reset the feed dog height correctly. Re-adjust the feed tilt properly.	34 34