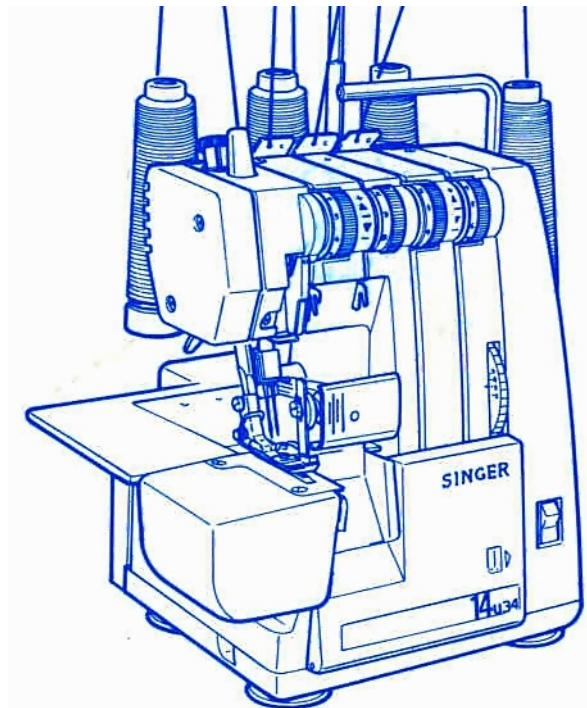


# Service Guide 14U34



## Contents

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© Specifications of the model 14U34B machine.

### NOTE:

- Refer to service manual From U3870 (14U32A) for the other instructions.
- Use Cat. No. 2054-01 size #14.

14U32 manual at back

## 1. TO SET NEEDLE BAR AT CORRECT HEIGHT

- Remove light cover and lampholder bracket.
- Remove presser foot.
- Remove cylinder cover.
- Remove throat plate and feed dog.
- Turn machine pulley toward you until the needle bar is at its highest position.
- Loosen needle bar connecting stud screw. (Fig. 1)

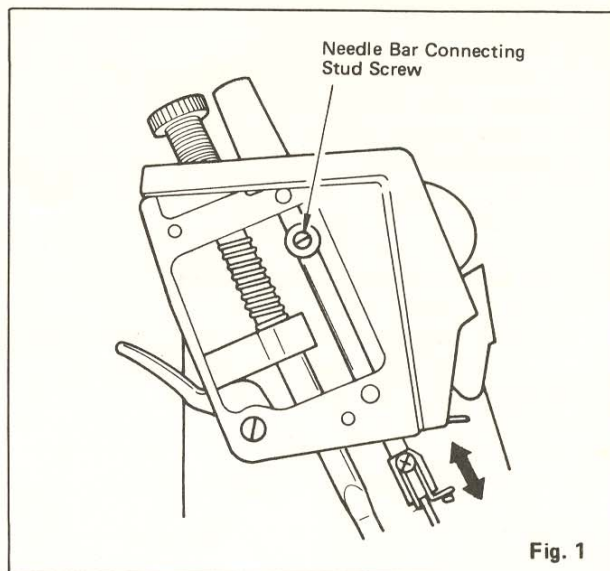


Fig. 1

- With size No. 14 needle set in needle bar, and using service gage set height of needle bar by moving needle bar up or down as required until correct height is obtained, see Fig. 2.
- Firmly tighten needle bar connecting stud screw.
- Check and make sure the long groove of the needle is facing the front of machine.
- Replace feed dog and throat plate.
- Replace cylinder cover.
- Replace lampholder bracket, light cover and presser foot.

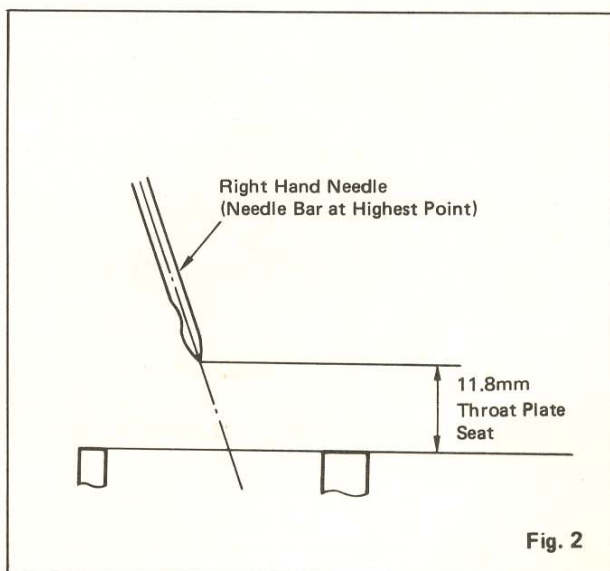


Fig. 2

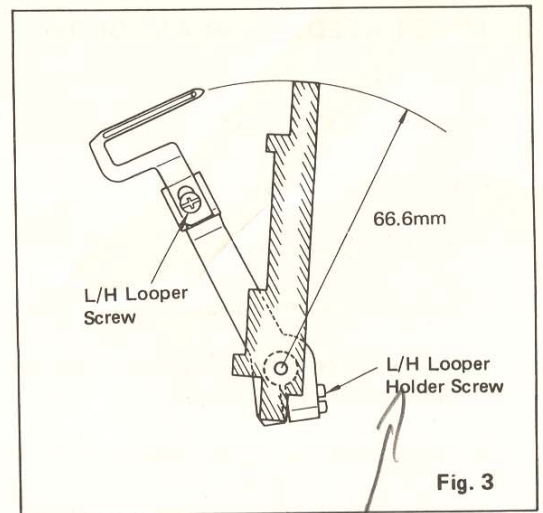
## 2. LOOPERS (LEFT AND RIGHT)

- Open loopers cover and remove machine base.
- Remove cylinder cover.
- Remove presser foot and throat plate.
- Remove feed dog.

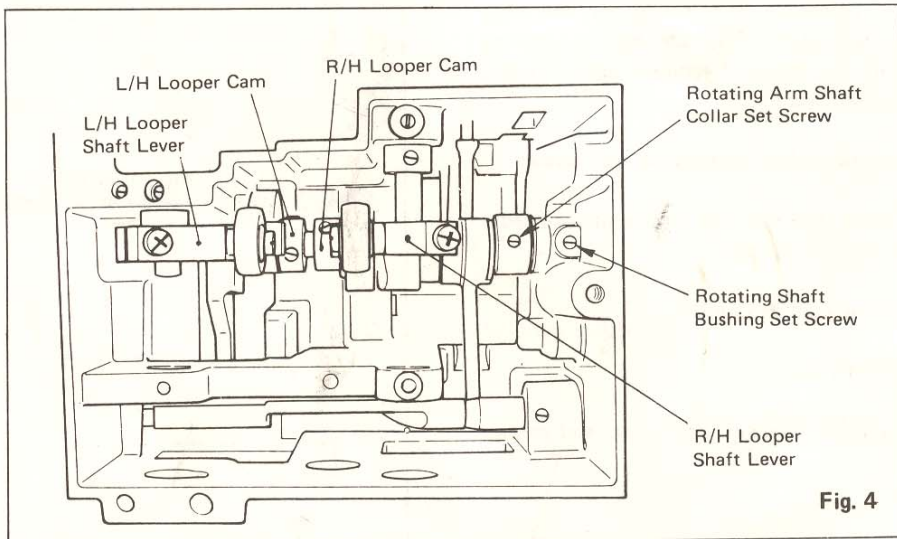
### 1) To Set the Left Hand Looper Height

- Loosen left hand looper screw. Using service gage, set the left hand looper in position as shown in Fig. 3. Firmly tighten left hand looper screw.

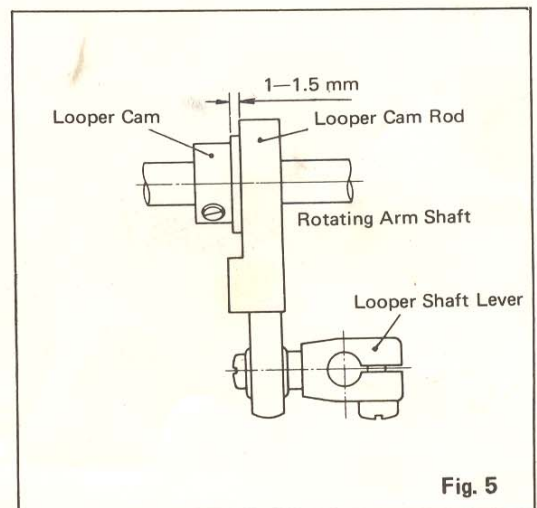
### 2) To Time the Left Hand Looper



NOTE



- When the left and right hand looper shaft levers are parallel to the rotating arm shaft, the position of looper cam in relation to looper cam rod is as shown in the figure at right.



↑ TOP OF MACHINE .

- The position of the left and right hand looper cams should be adjusted as follows.

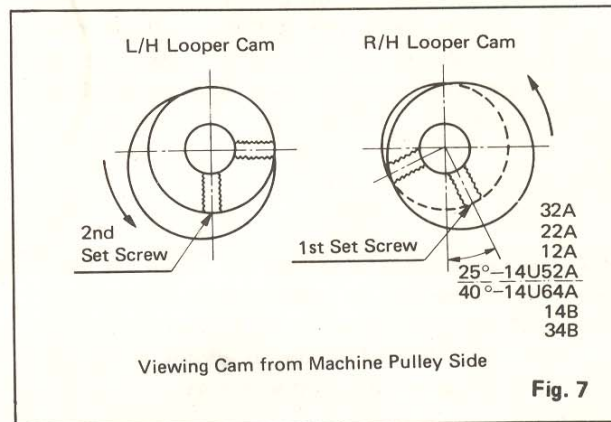
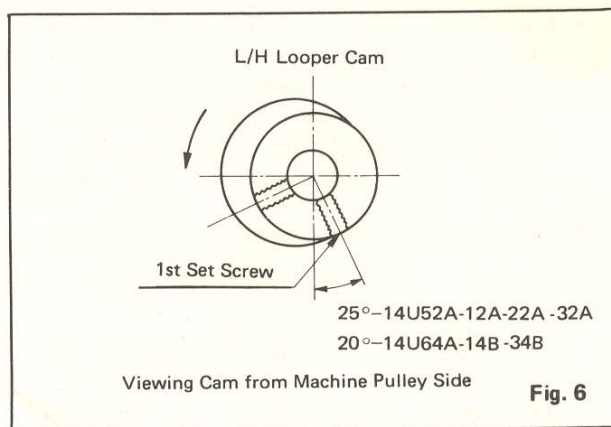
#### a. Left hand looper cam

Turn the left hand looper cam so that its first set screw is located in the position shown in Fig. 6 when the second rotating arm-shaft collar set screw is aligned with the rotating shaft bushing set screw. tighten the left hand looper cam set screws temporarily.

#### b. Right hand looper cam

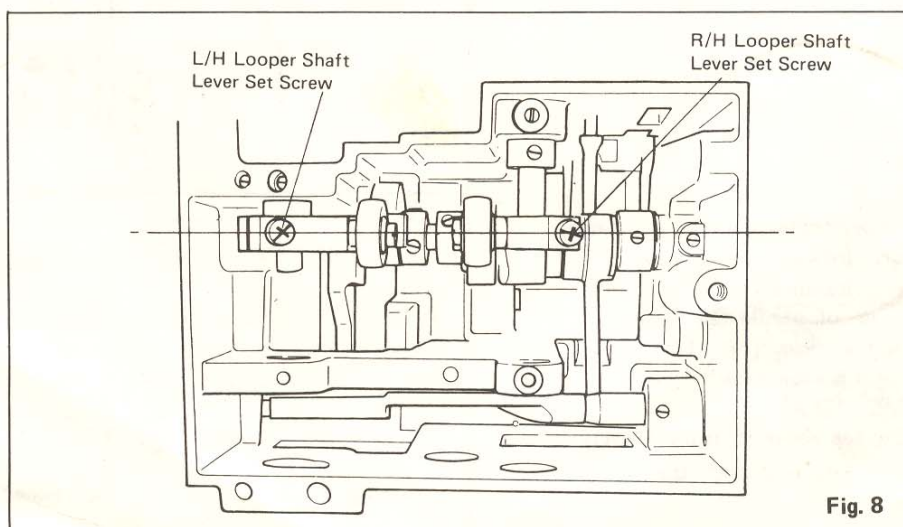
Turn the right hand looper cam so that its first set screw is located in the position shown in the figure at the far right when the second left hand looper cam set screw is in the position shown in Fig. 7.

- Make fine adjustments of both left and right hand looper timing using the above setting as a starting point.



#### • Setting Left and Right Looper Shaft Levers

Left and right looper shaft levers should be set so that the center of the set screws align with the center of rotating arm shaft. (Fig. 8).



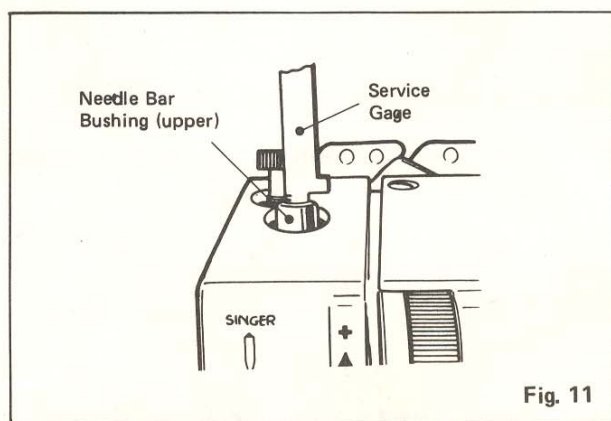
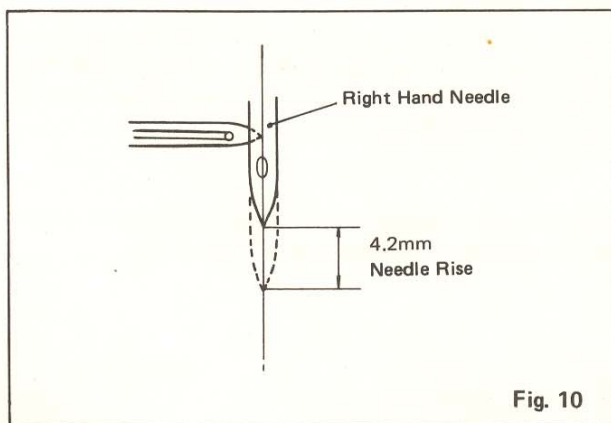
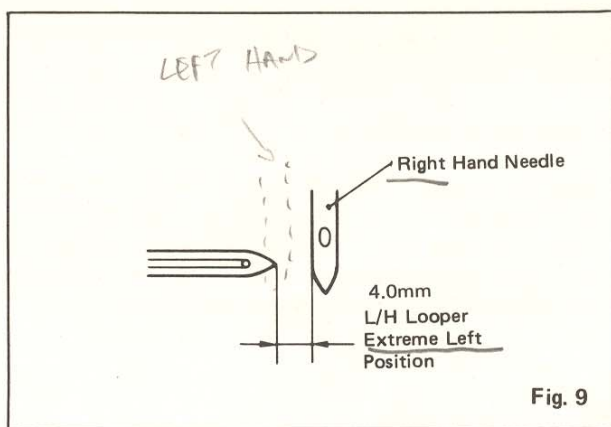


- Loosen left hand looper shaft lever set screw taking care not to move the left hand looper cam, and set the looper shaft lever so that the point of left hand looper is located 4.0mm from the side of needle and firmly tighten the set screw. (Figs. 4 and 9)

\* Turn machine pulley and check above adjustments.

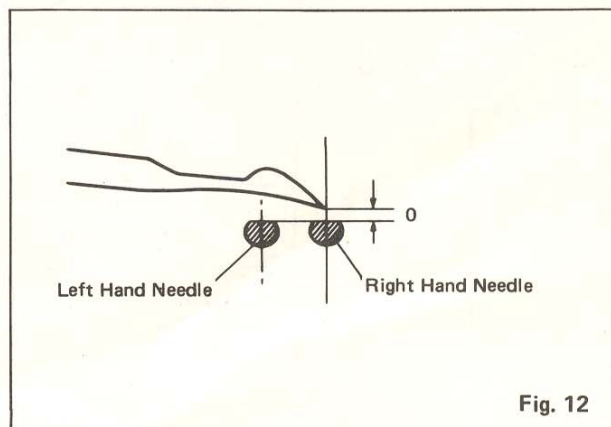
- Use service gage when setting needle rise. The service gage is calibrated at 0.6mm intervals. Remove needle bar bushing (upper) cap and insert service gage into the needle bar bushing (upper), turn pulley toward you until the needle bar rises seven calibration (on the service gage) from its lowest position. This position is the specified 4.2mm needle rise. (Fig. 11)

- Maintain this needle bar rise and loosen left hand looper drive cam set screws and rotate drive cam until the looper point on its forward path, is on the center line of needle as shown in Fig. 10. Securely tighten drive cam set screws.



- Loosen left hand looper holder screw (Fig. 3) and move looper holder forward or backward, as required, so there clearance between looper point and reverse side of needle (Looper point at center of needle) is zero. (Fig. 12) Firmly tighten left hand looper holder screw.

NOTE: When making the above adjustment, every care must be taken not to disturb the setting shown in Fig. 9.



### 3) To time the Right Hand Looper

- Turn machine pulley toward you until the right hand looper is at its highest position.
- Loosen right hand looper shaft lever set screw taking care not to move the right hand looper cam, and set the looper shaft lever so that the center of eye of the looper is located 4.0mm from the side of needle and firmly tighten the set screw. (Figs. 4 and 13)
- Turn the pulley toward you to bring the left and right hand loopers to the position shown in Fig. 14 and adjust the right hand looper cam to provide clearance shown in Fig. 14. Then tighten the right hand looper cam set screw.
- Loosen right hand looper screw and adjust right hand looper so that clearance between its point and rear side of left hand looper is as shown in Fig. 15.
- Replace feed dog.
- Replace throat plate and presser foot.
- Replace machine base.
- Replace cylinder cover.

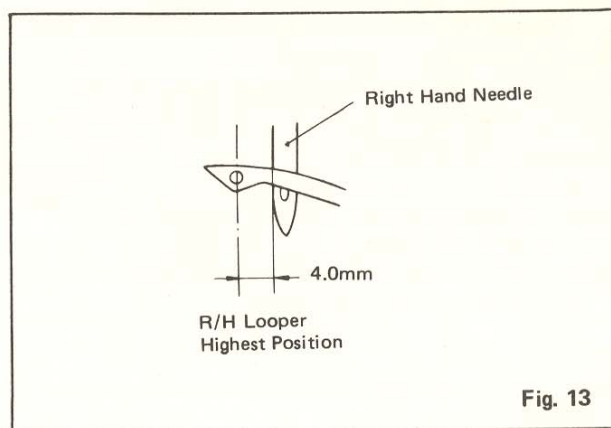


Fig. 13

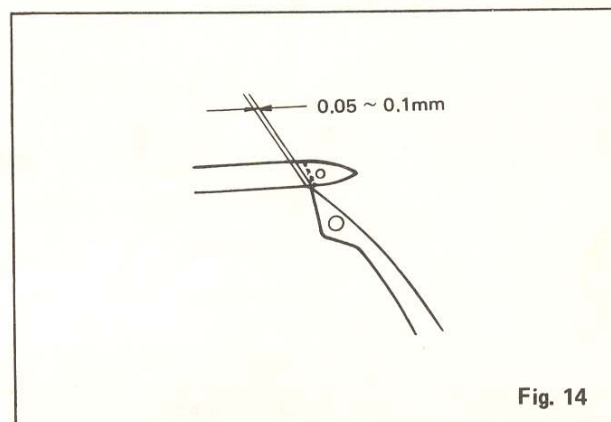


Fig. 14

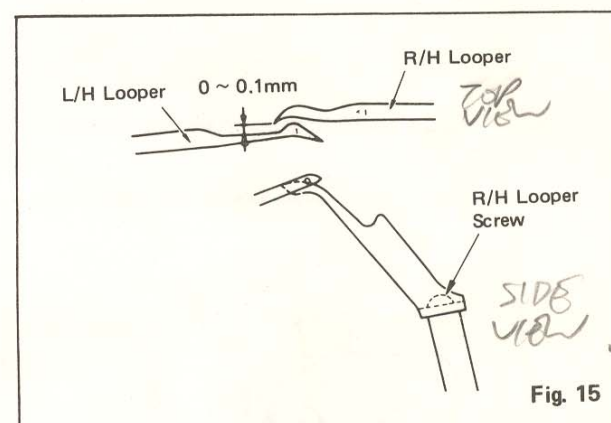


Fig. 15

### 3. ADJUSTMENT OF NEEDLE GUARD

Loosen the needle guard set screw, adjust the clearance between the needle and needle guard as shown in Fig. 16 and retighten needle guard set screw.

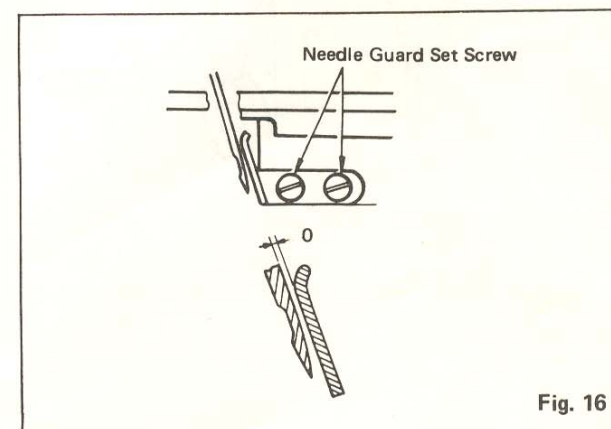
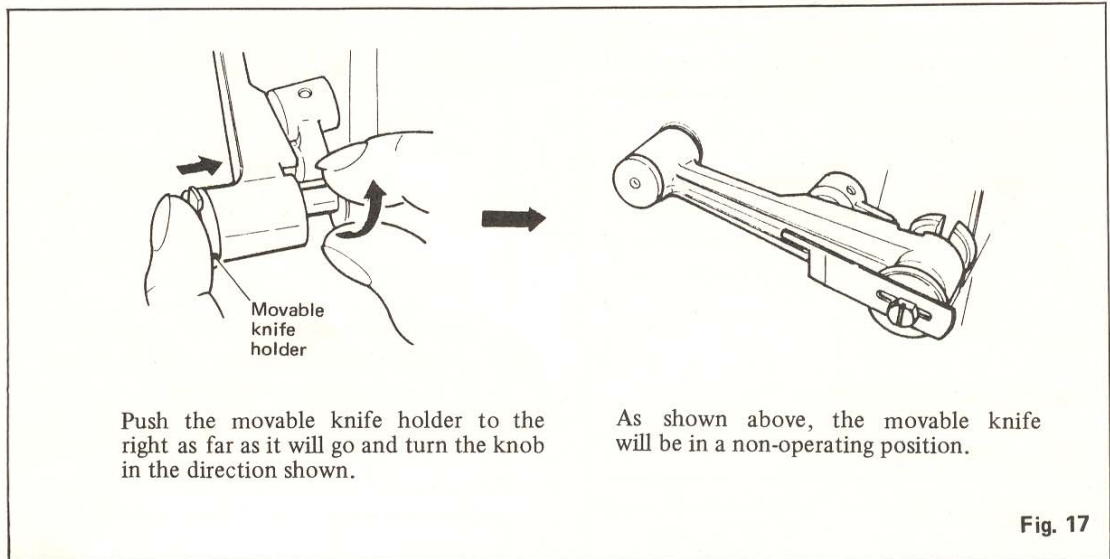


Fig. 16

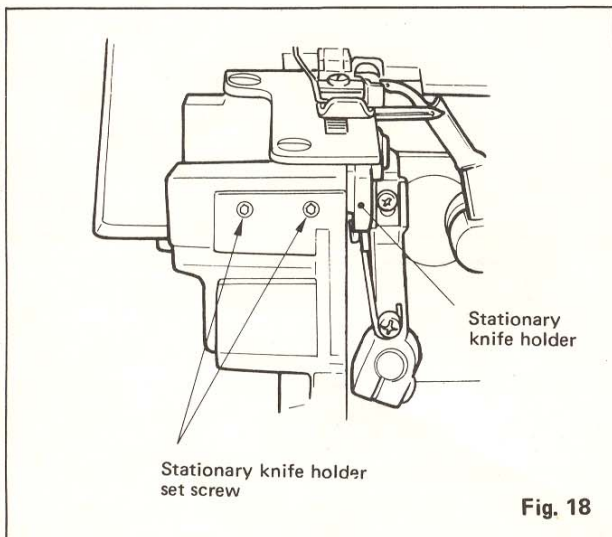
#### 4. ADJUSTMENT OF OVEREDGE SEAM WIDTH

Overedge seam width of this machine is set to 3.5 mm for normal sewing with right needle and 5.7 mm with left needle however it can be increased up to 5 mm for overedge heavy weight fabrics with right needle and 7.2 mm with left needle as instructed below.

- Before making the adjustment, be sure that the power line plug is disconnected from the wall receptacle.
- Open the looper cover.
- Turn the machine pulley toward you, lower the movable knife as far as it will go and set it in the non-operating position as shown in figure below.



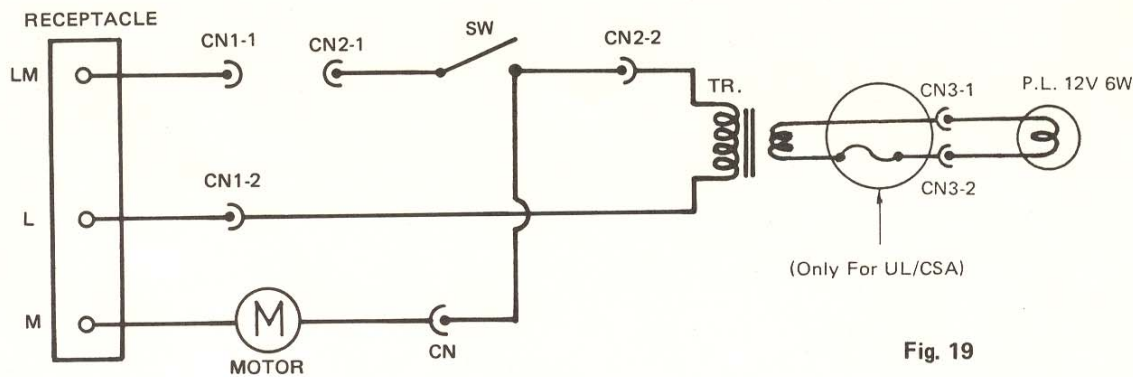
- Press down the convertible bed plate and remove the cylinder cover.



- Loosen the stationary knife holder set screws with the hex-head wrench provided in the accessories, move the stationary knife holder to the right or left and tighten the set screw.. (When a wider seam is desired, move the holder to the right and when a narrower seam is desired, move the holder to the left). Be sure to align the cutting edge of the stationary knife level with the top surface of the throat plate
- Replace the cylinder cover.
- Return the movable knife to its original position.



5. ELECTRIC CIRCUIT



Specification of the Model 14U34B Machine

Item	Specification
Sewing speed	1300SPM max.
Stitch length (feed)	1 – 5mm
Height of feed dog	1,3 – 1.1mm
Overedge seam width	3.5 – 5mm (Standard 3.5mm)
Needle bar stroke	27mm
Presser bar lift	4.5mm
Needle	Singer Cat. No. 2054 (# 10) # 14
Number of needle	2
Number of thread used	4
Size of machine	Width 257mm x depth 231mm x height 313mm
Weight of machine	5.6kg

**SINGER<sup>®</sup>**

**Service  
Manual**

**14**

**U32A**

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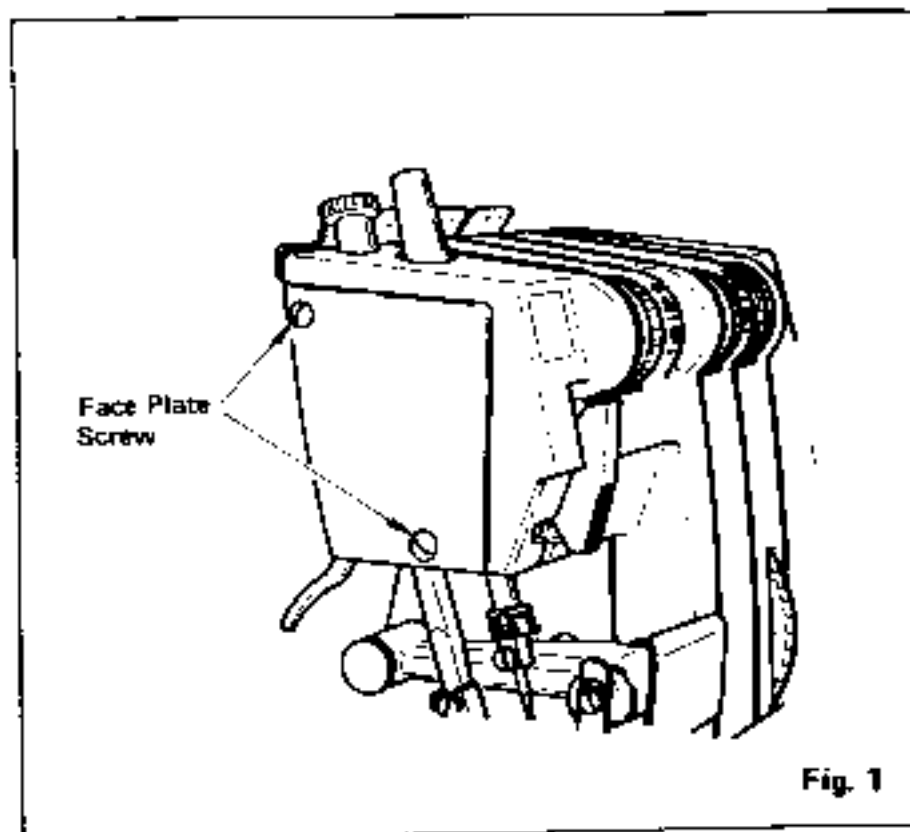
### NOTE:

- Refer to operator's guide Form U3864 for instructions on presser bar pressure adjustment and lubrication, etc.
- Use service gage (Part No. 410499) for adjustment of this machine.

## 1. EXTERNAL PARTS

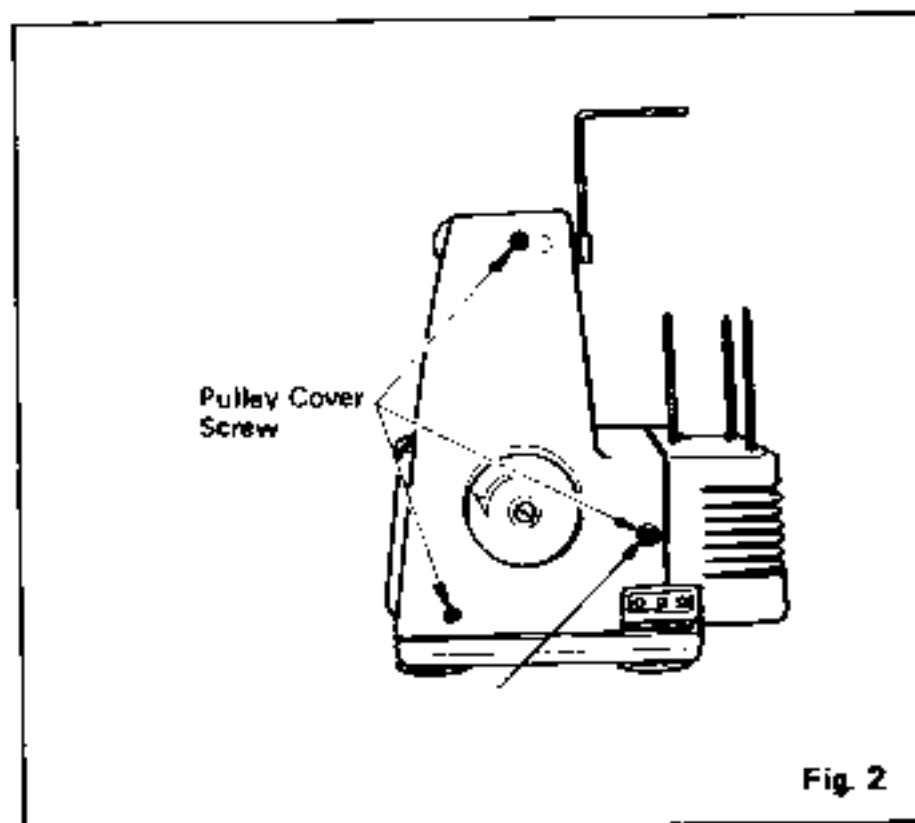
### Face Plate

- Remove the two face plate screws. (Fig. 1)
- Remove face plate.



### Pulley Cover

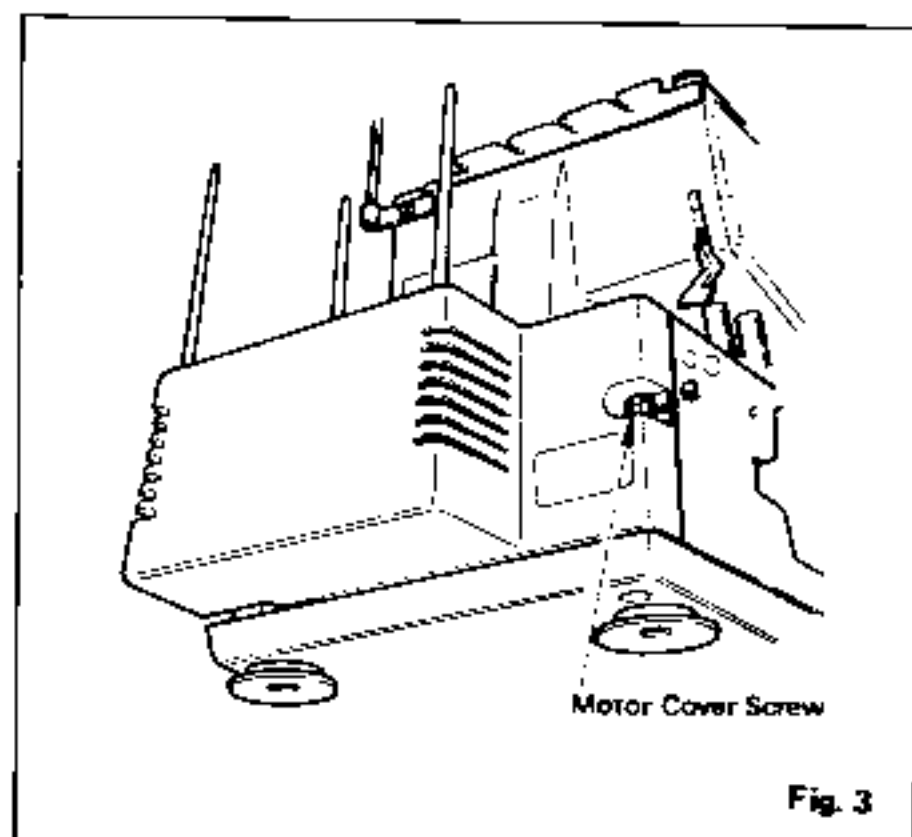
- Remove the three pulley cover screws (Fig. 2)
- Remove pulley cover.





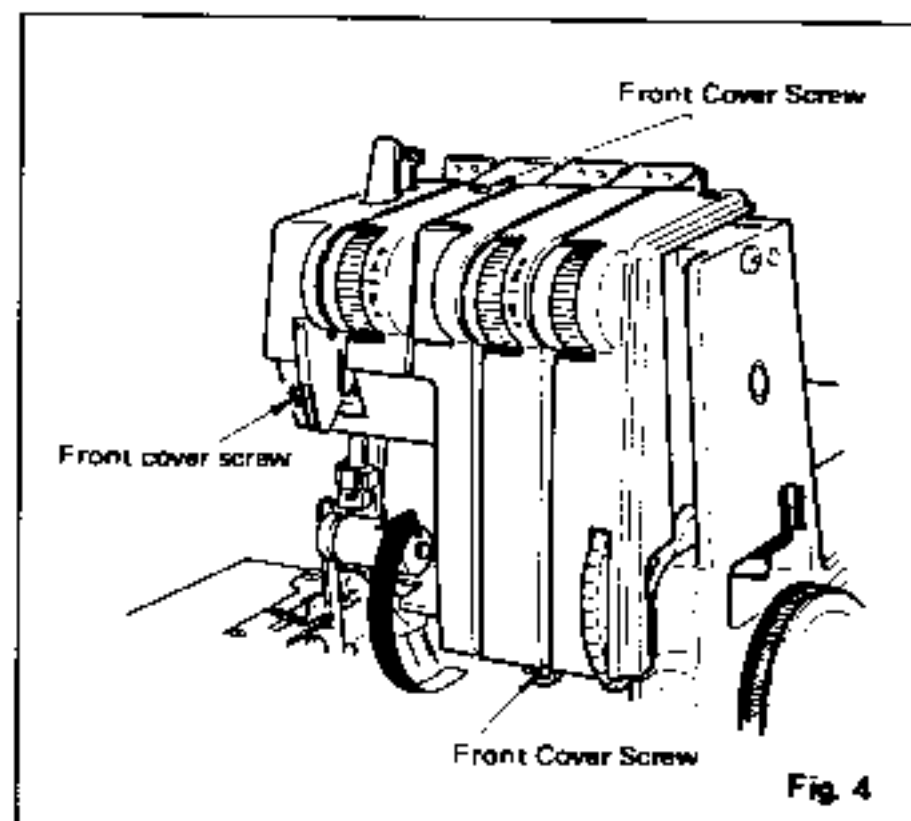
### Motor Cover

- Remove pulley cover screw (Fig. 2)
- Loosen motor cover screws. (Fig. 3)
- Remove motor cover in the direction shown in Fig. 3



### Front Cover

- Remove pulley cover.
- Open looper cover.
- Raise needle bar to highest position.
- Remove the four front cover screws.
- Remove front cover by lifting cover up and toward front of machine as shown in Fig. 4.



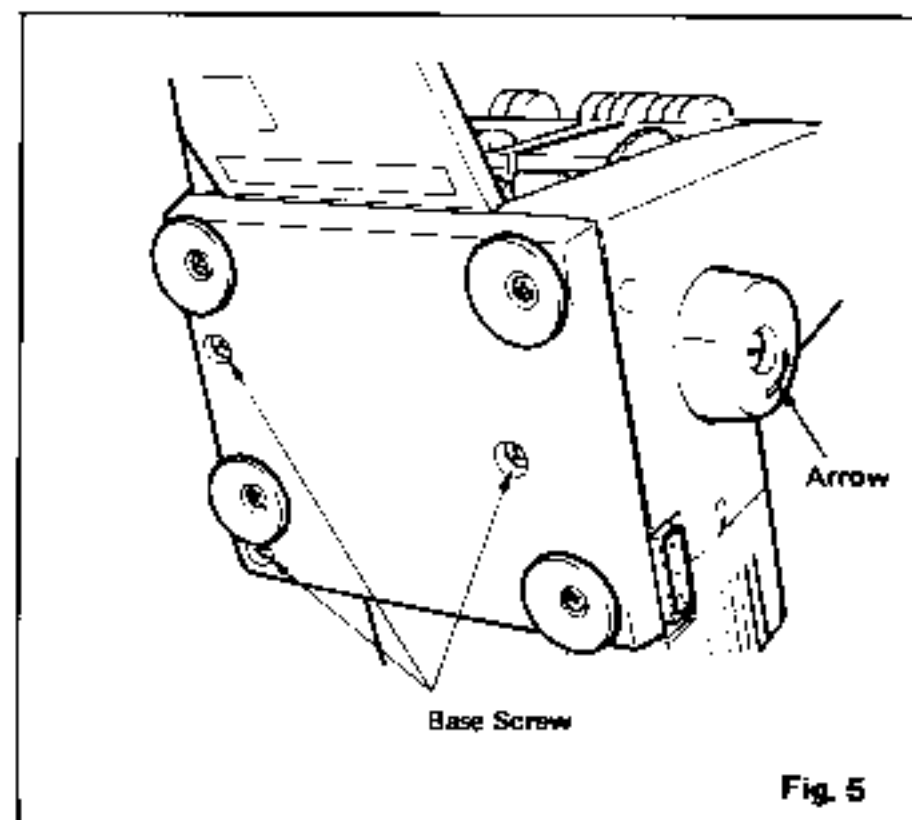
### Machine Base

- Open looper cover.
- Remove the three machine base screws. (Fig. 5)
- Remove machine base.

### NOTE

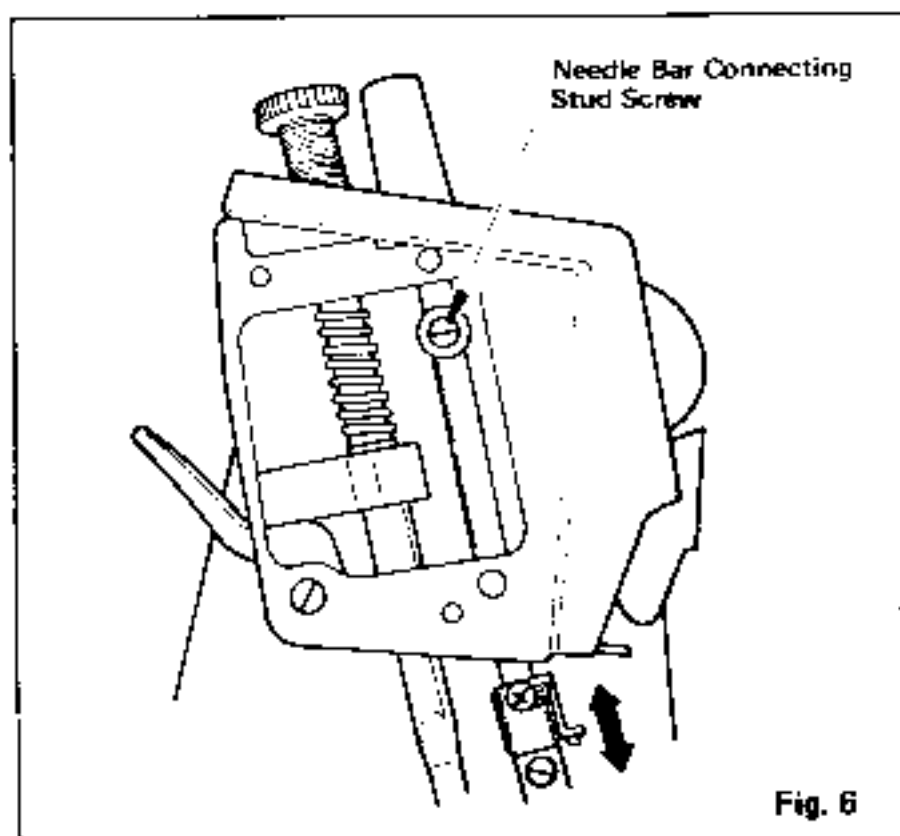
#### Machine pulley rotation

When turning machine pulley, always do so in the direction as illustrated by arrow on end of pulley, i.e. towards operator see (Fig. 5).

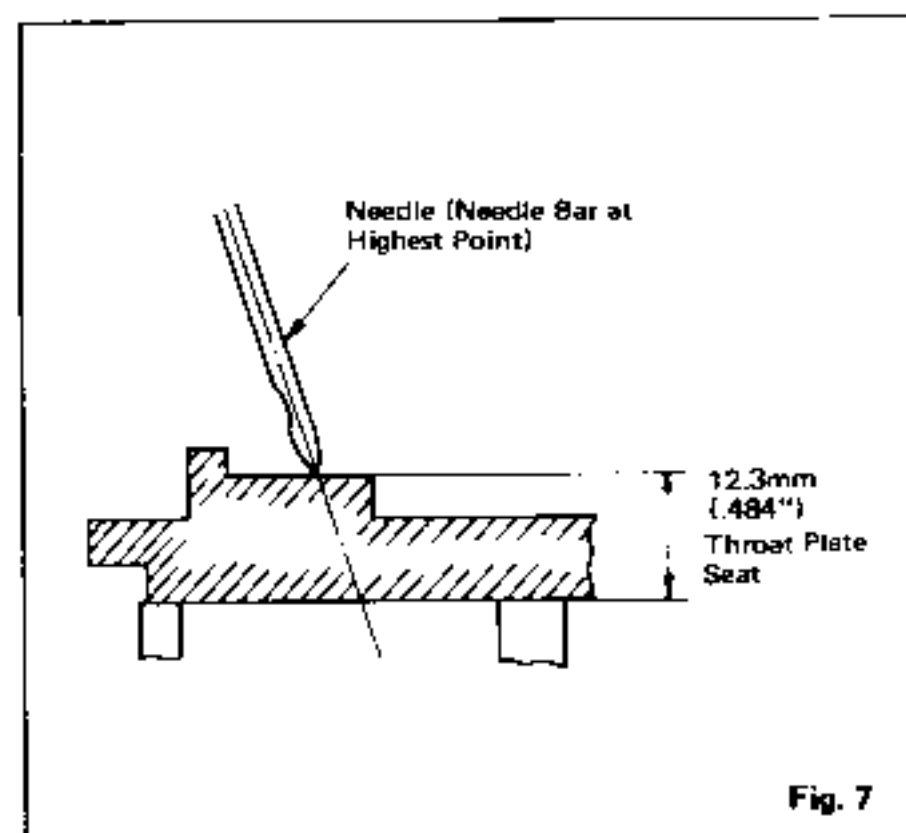


## 2. TO SET NEEDLE BAR AT CORRECT HEIGHT

- Remove face plate.
- Remove presser foot.
- Remove cylinder cover.
- Remove throat plate and feed dog.
- Turn machine pulley toward you until the needle bar is at its highest position.
- Loosen needle bar connecting stud screw. (Fig. 6)



- With size No. 14 needle set in needle bar, and using service gage set height of needle bar by moving needle bar up or down as required until correct height is obtained, see Fig. 7.
- Firmly tighten needle bar connecting stud screw.
- Check and make sure the long groove of the needle is facing the front of machine.
- Replace feed dog and throat plate.
- Replace cylinder cover.
- Replace face plate and presser foot.



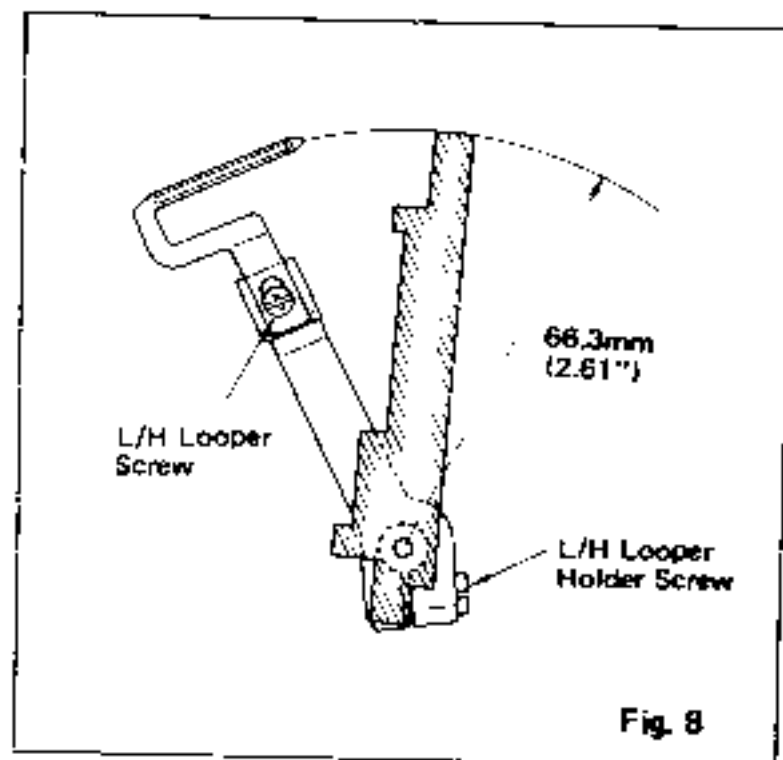
### 3. LOOPERS (LEFT AND RIGHT)

- Open looper cover and remove machine base.
- Remove cylinder cover.
- Remove presser foot and throat plate.
- Remove feed dog.

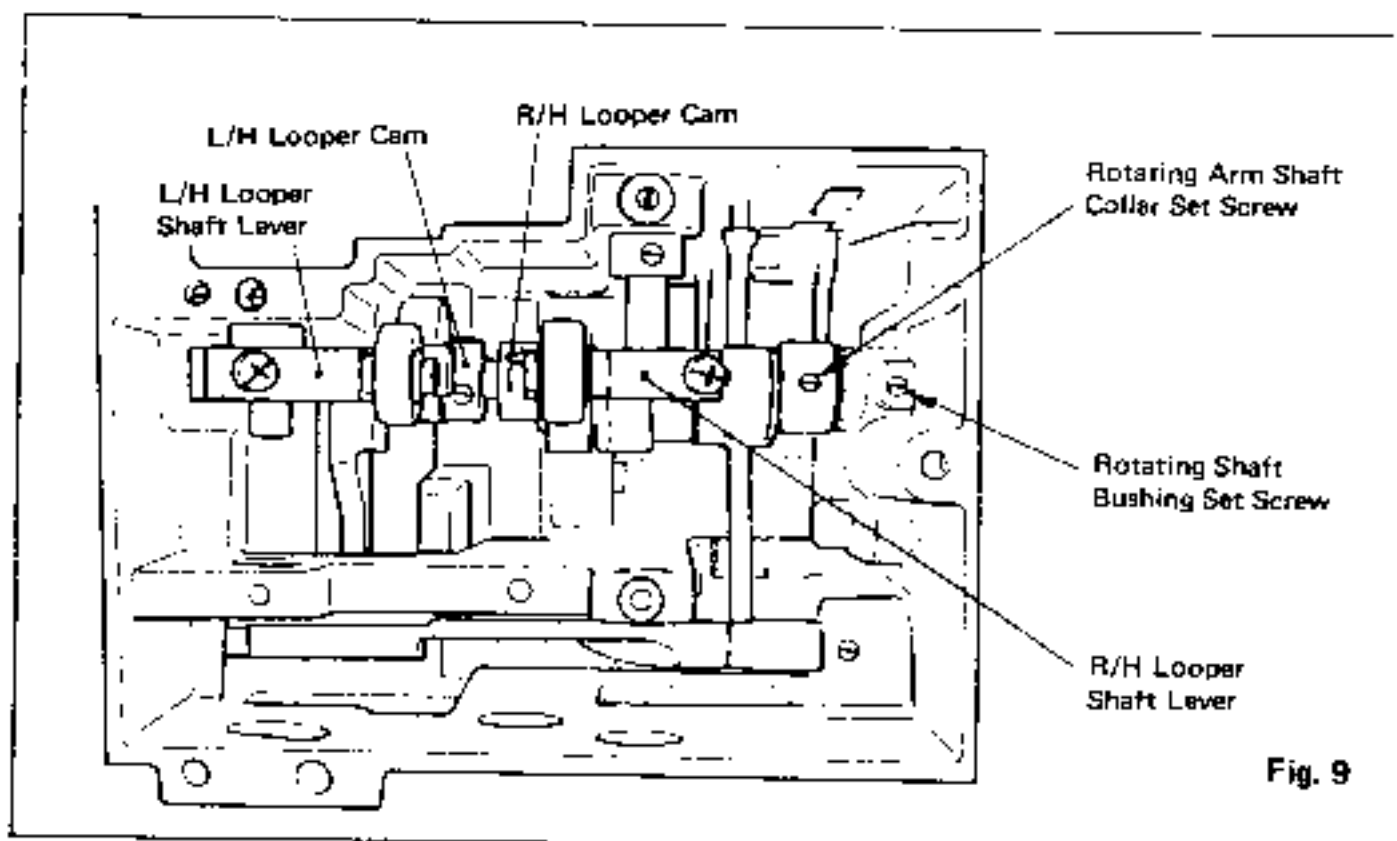
Use Catalog 2054 size #14 needle.

#### 1) To Set the Left Hand Looper Height

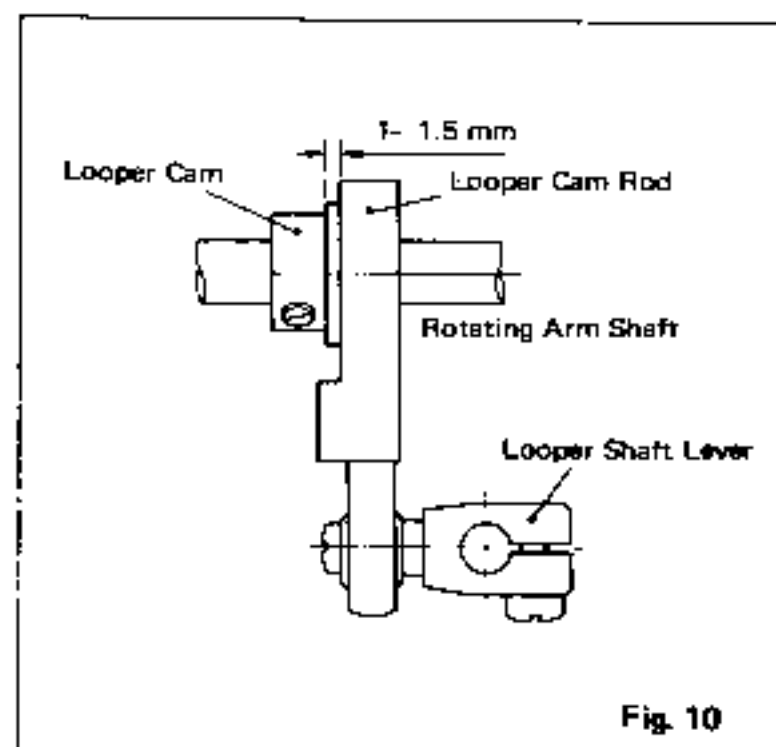
- Loosen left hand looper screw. Using service gage, set the left hand looper in position as shown in Fig. 8. Firmly tighten left hand looper screw.



#### 2) To Time the Left Hand Looper



- When the left and right hand looper shaft levers are parallel to the rotating arm shaft, the position of looper cam in relation to looper cam rod is as shown in (Fig. 10).



- The position of the left and right hand looper cams should be adjusted as follows.

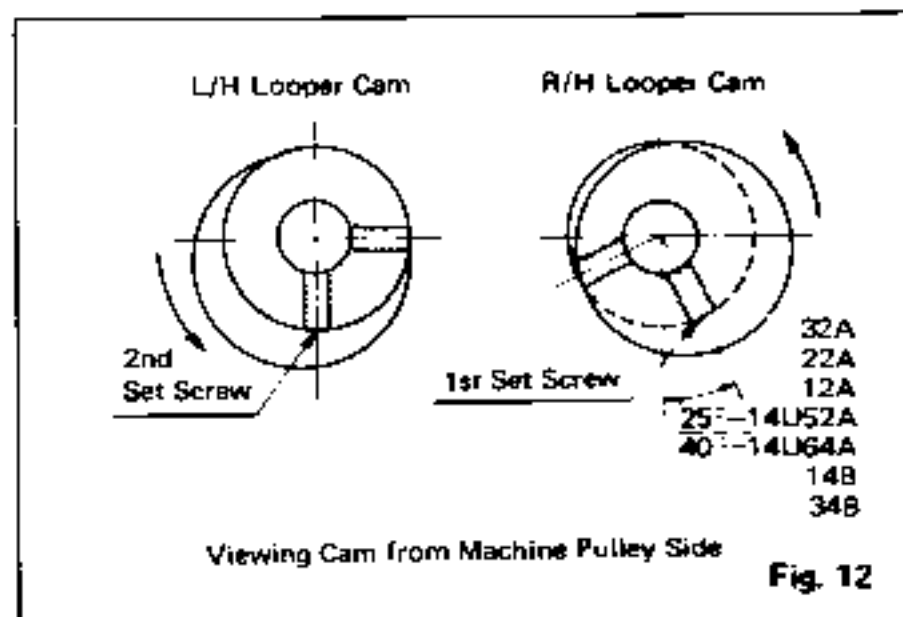
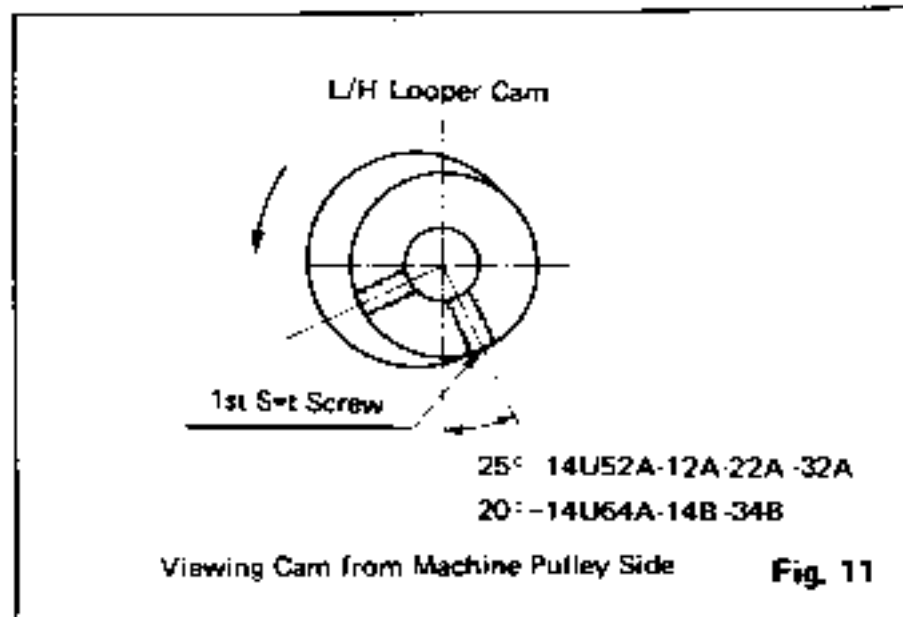
**a. Left hand looper cam**

Turn the left hand looper cam so that its first set screw is located in the position shown in the figure at right when the second rotating arm-shaft collar set screw is aligned with the rotating shaft bushing set screw. Tighten the left hand looper cam set screws temporarily. (Fig. 11)

**b. Right hand looper cam**

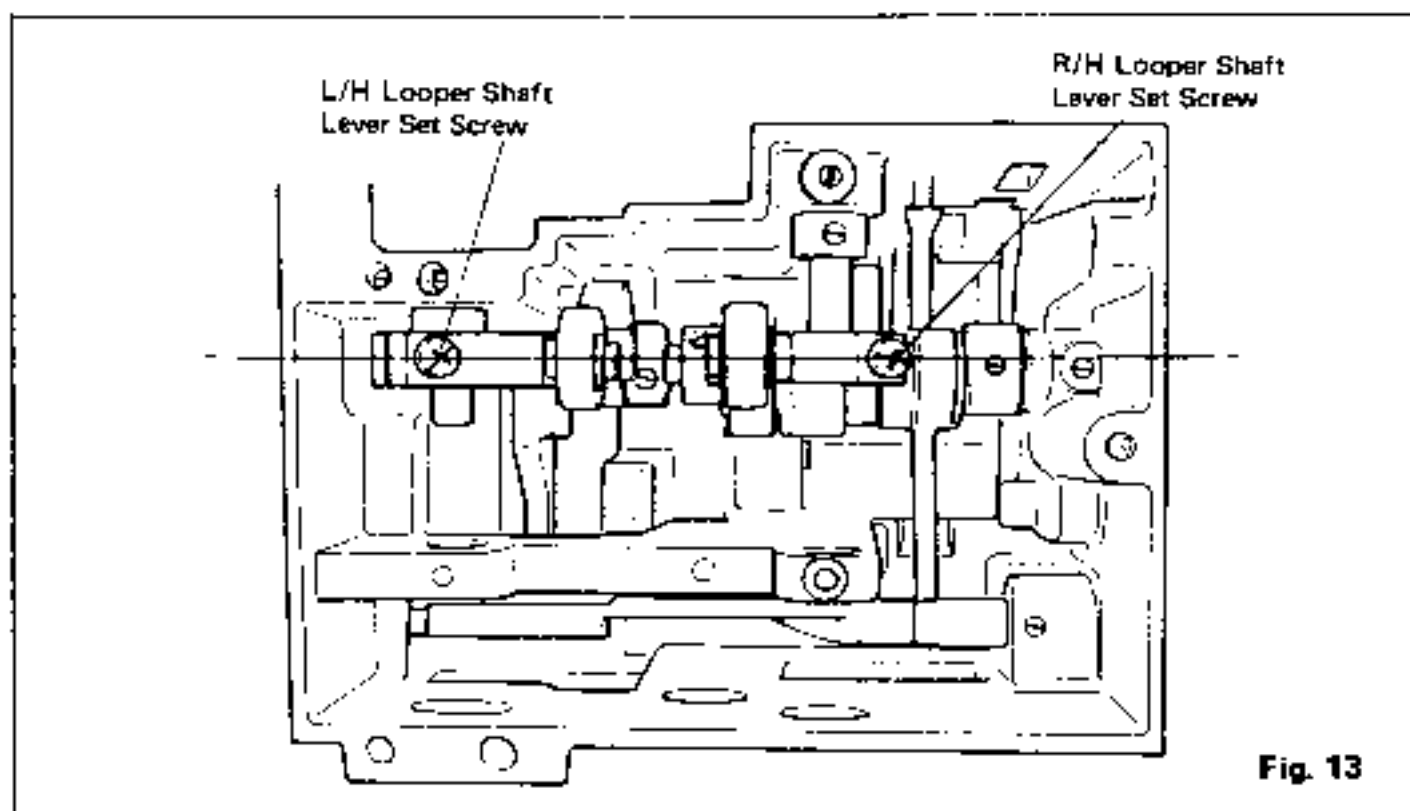
Turn the right hand looper cam so that its first set screw is located in the position shown in the figure at the far right when the second left hand looper cam set screw is in the position shown in (Fig. 12).

- Make fine adjustments of both left and right hand looper timing using the above setting as a starting point.



**Setting Left and Right Looper Shaft Levers**

Left and right looper shaft levers should be set so that the center of the set screws align with the center of rotating arm shaft. (Fig. 13)





- Loosen left hand looper shaft lever set screw taking care not to move the left hand looper cam, and using service gage, set the looper shaft lever so that the point of left hand looper is located 3.5mm from the side of needle and firmly tighten the set screw. (Figs. 9 and 14)
- \* Turn machine pulley and check above adjustments.
- Use service gage when setting needle rise. The service gage is calibrated at 0.6mm intervals. Remove needle bar bushing (upper) cap and insert service gage into the needle bar bushing (upper), turn pulley toward you until the needle bar rises three calibration (on the service gage) from its lowest position. This position is the specified 1.8mm needle rise. (Fig. 16)
- Maintain this needle bar rise and loosen left hand looper drive cam set screws and rotate drive cam until the looper point on its forward path, is on the center line of needle as shown in Fig. 15. Securely tighten drive cam set screws.

NOTE: When making the above adjustment, every care must be taken not to disturb the setting shown in Fig. 14.

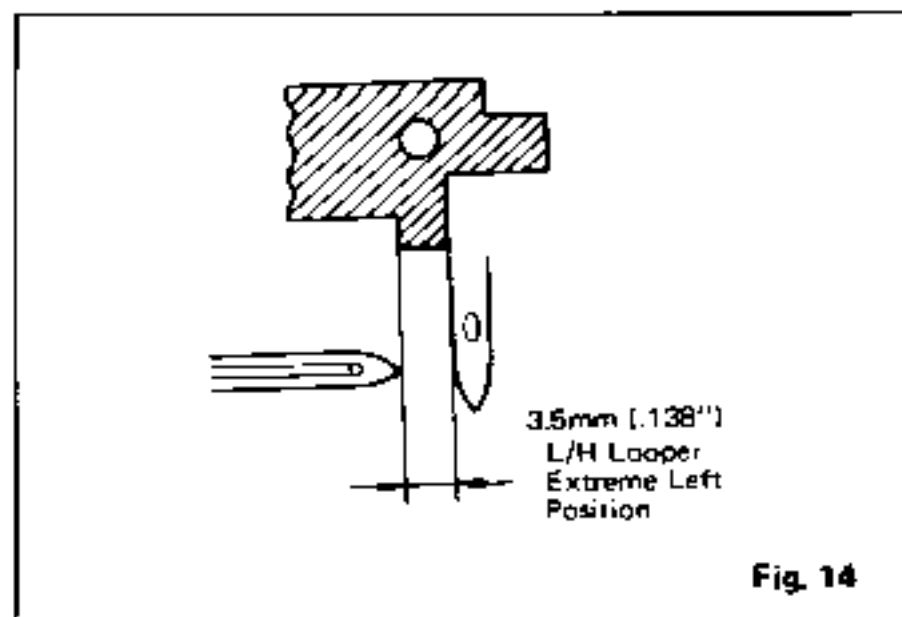


Fig. 14

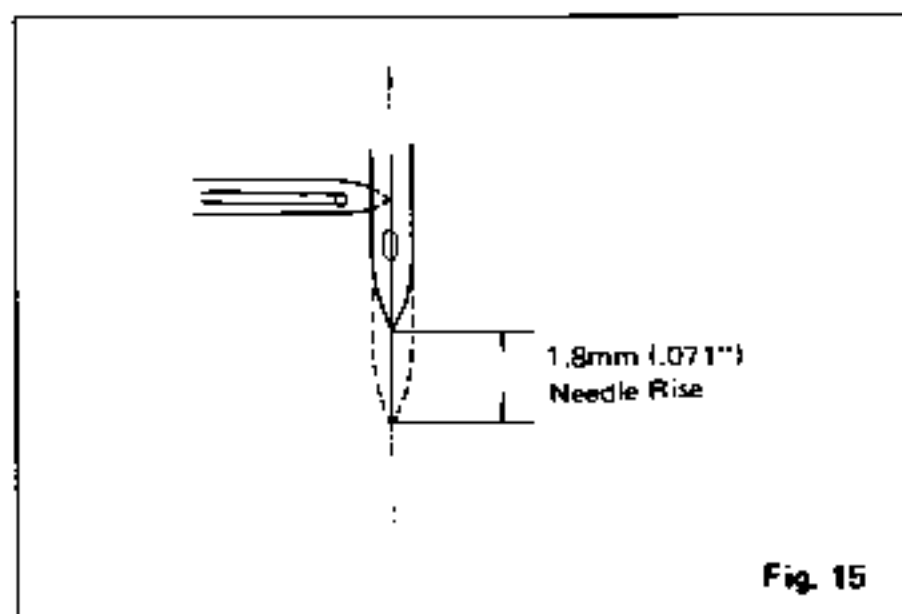


Fig. 15

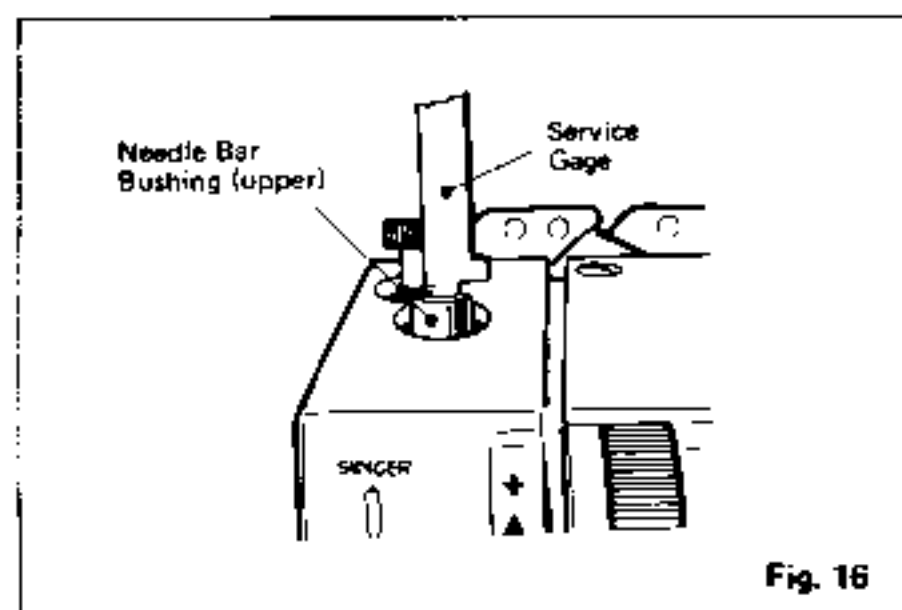


Fig. 16

- Loosen left hand looper holder screw (Fig. 8) and move looper holder forward or backward, as required, so there is a 0 ~ 0.05mm clearance between looper point and reverse side of needle (Looper point at center of needle). (Fig. 17) Firmly tighten left hand looper holder screw.

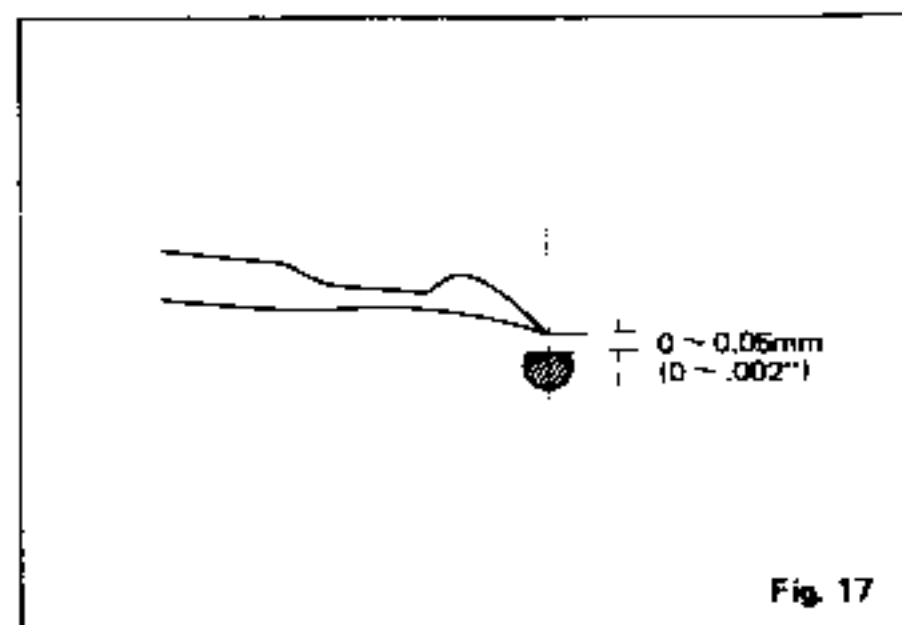
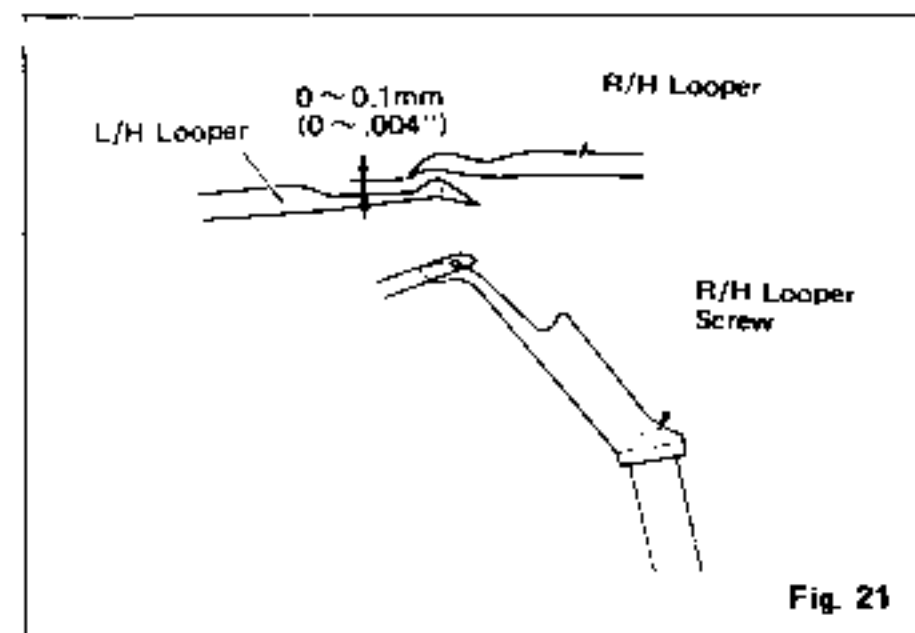
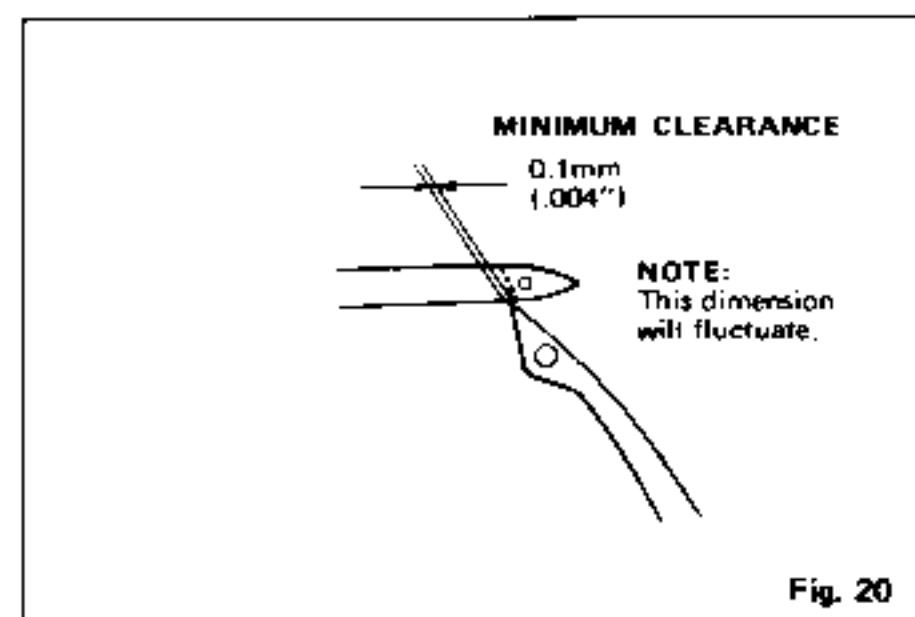
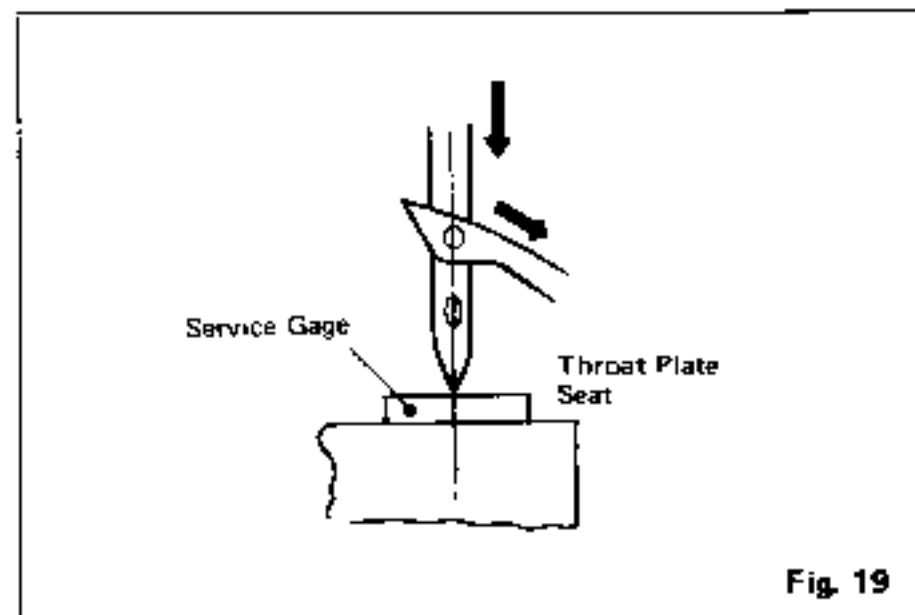
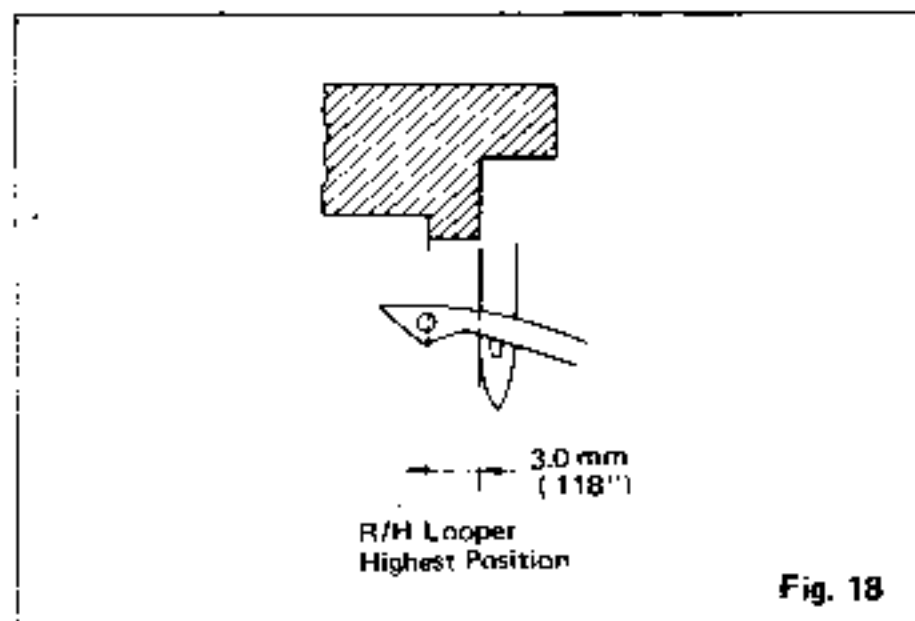


Fig. 17

### 3) To time the Right Hand Looper

- Turn machine pulley toward you until the right hand looper is at its highest position.
- Loosen right hand looper shaft lever set screw taking care not to move the right hand looper cam, and using service gage, set the looper shaft lever so that the center of eye of the looper is located 3.0mm from the side of needle and firmly tighten the set screw. (Figs. 9 and 18)
- Next, turn the pulley toward you and lower the needle bar until the needle point is located 1.8mm (thickness of the service gage is 1.8mm) from the throat plate seat. Loosen the right hand looper cam set screws and adjust the right hand looper cam so that the eye of right hand looper is at the center of the needle and tentatively tighten the right hand looper cam set screws. (Figs. 9, 19)
- Turn the pulley toward you and make sure that the point of the right hand looper clears the head of the left hand looper when passing behind the left hand looper; then securely tighten the right hand looper cam set screws.
- If interference exists, check the timing of the left and right hand loopers.
- Should the parts interfere with each other even after the timing is found to be set correctly, adjust the right hand looper cam slightly to obtain relationship as shown in Fig. 20.
- Loosen right hand looper screw and adjust right hand looper so that clearance between its point and rear side of left hand looper is as shown in Fig. 21.
- Replace feed dog.
- Replace throat plate and presser foot.
- Replace machine base.
- Replace cylinder.



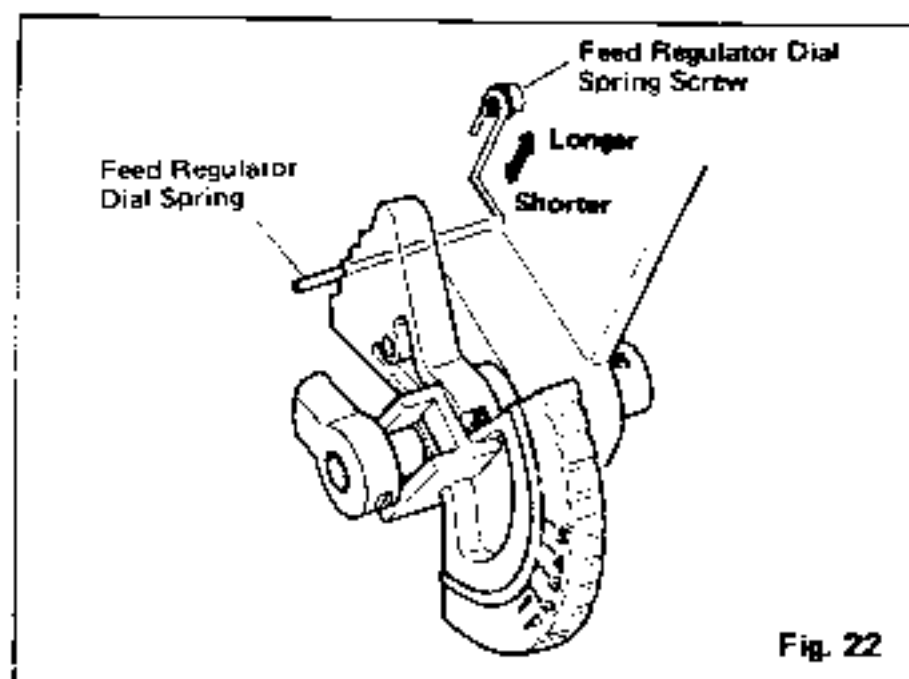
## 4. FEED

### 1) To Adjust the Amount of Feed

- Normally, the machine is adjusted to sew a maximum stitch length of 5mm therefore when making adjustment, set machine for the longest stitch of 5mm.
- Remove pulley cover and front cover.
- Loosen feed regulator dial spring screw and move spring up or down as required.

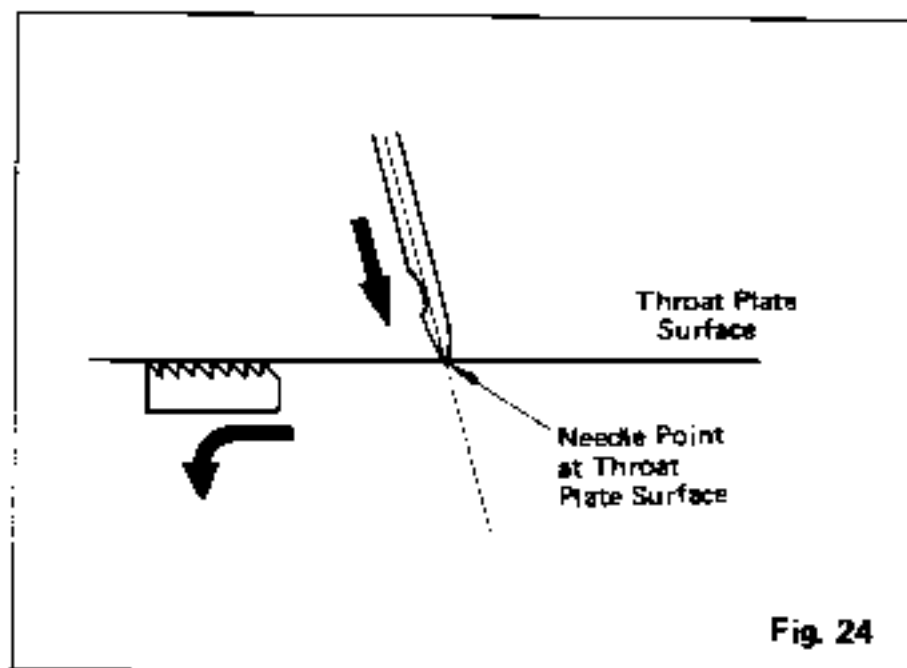
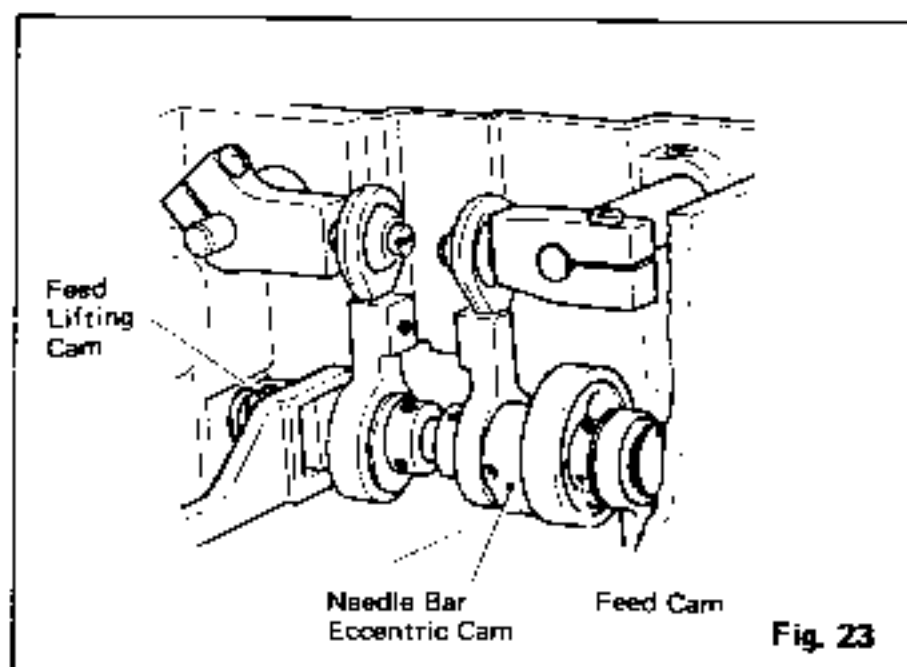
(Move spring upward for longer stitch and downward for shorter stitch.) (Fig. 22)

- Firmly tighten feed regulator dial spring screw.
- Replace front cover and pulley cover.



### 2) To Time the Feed

- Open looper cover and remove machine base.
- Turn machine pulley toward you and check that the first set screws in the needle bar eccentric cam, feed cam and feed lifting cam are aligned with each other as shown in Fig. 23. Also check feed timing.
- When point of needle reaches the throat plate surface on its descent, the feed dog should be located at rearmost position and its top level with the throat plate surface, as shown in Fig. 24.
- \* Use Catalog 2054 #14 needle.



- If adjustment of feed timing is necessary, adjust as follows.

**Horizontal direction:** Loosen two feed cam set screws and adjust feed cam as required.

**Vertical direction:** Loosen two feed lifting cam set screws and adjust as required.

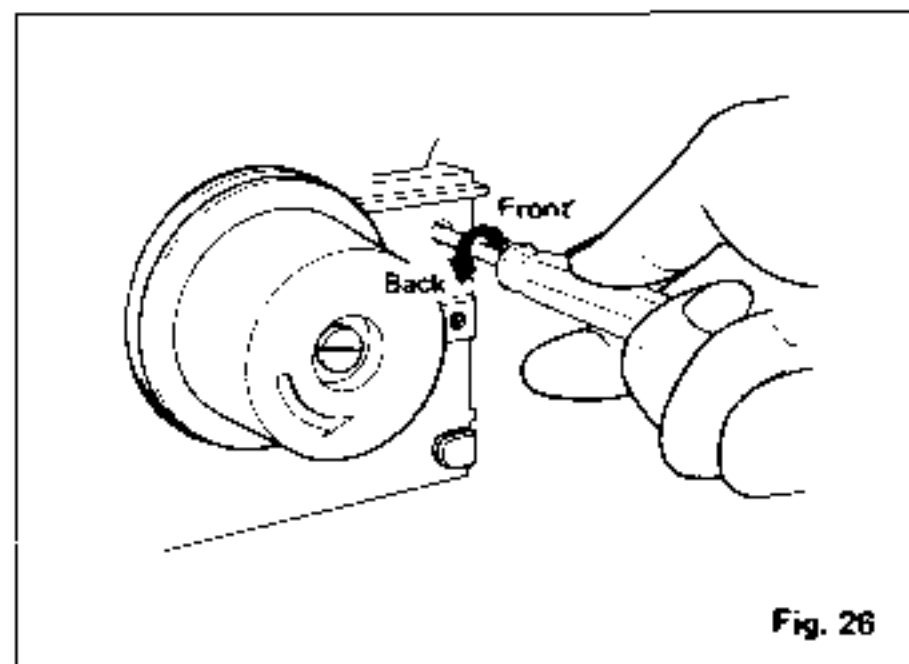
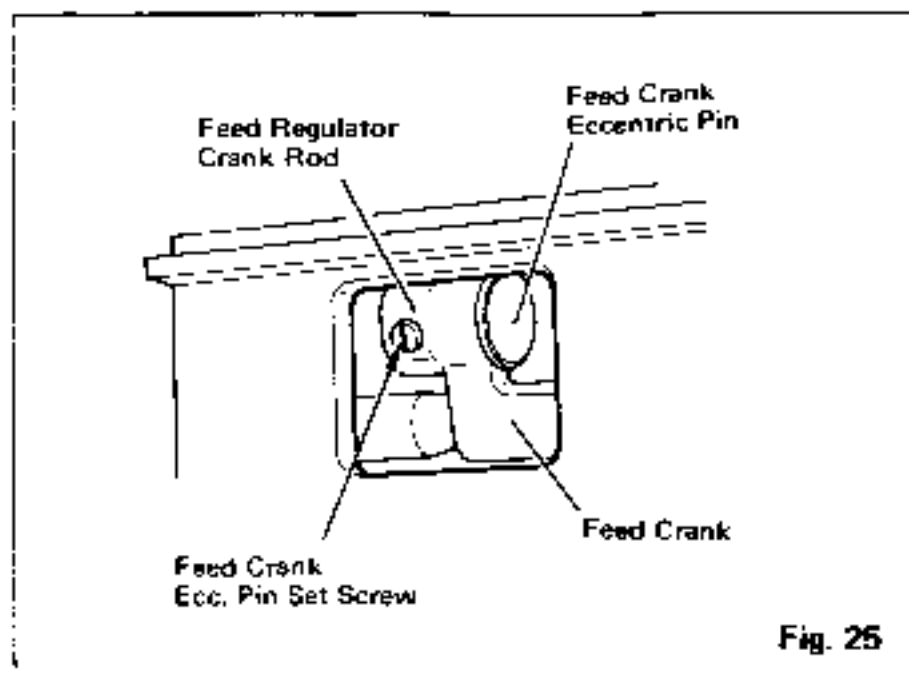
- Firmly tighten the four set screws.
- Replace machine base and close looper cover.

### 3) To Position Feed Dog in Throat Plate Slots

- Set feed regulator dial for longest stitch "5".
- Remove pulley cover, motor cover and motor.
- Feed dog should be set so that its movement is equidistant from front and rear edges of throat plate slots.

Loosen feed crank eccentric pin set screw and turn feed crank eccentric pin, as required, with a screwdriver. (Figs. 25 and 26)

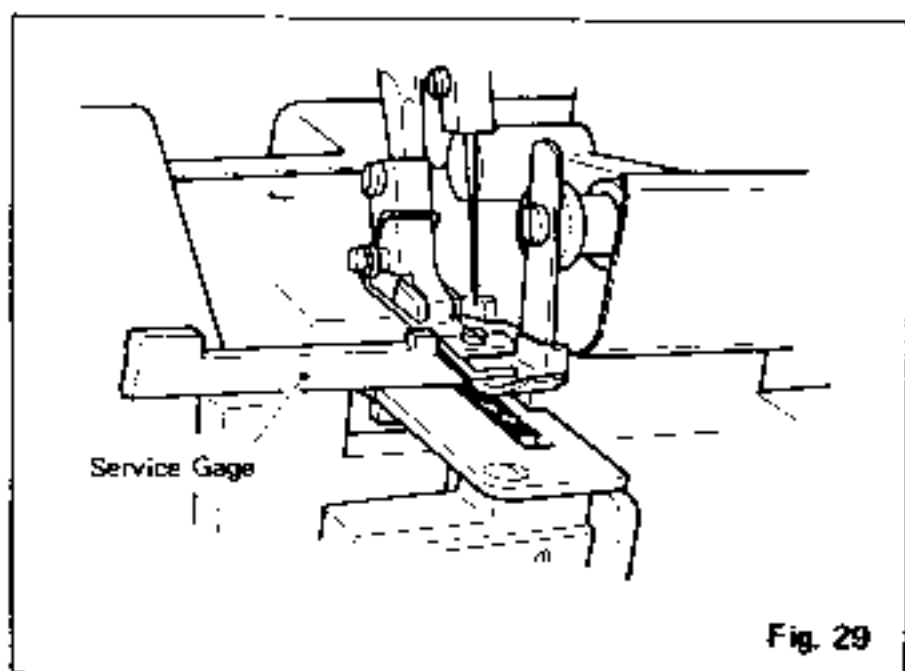
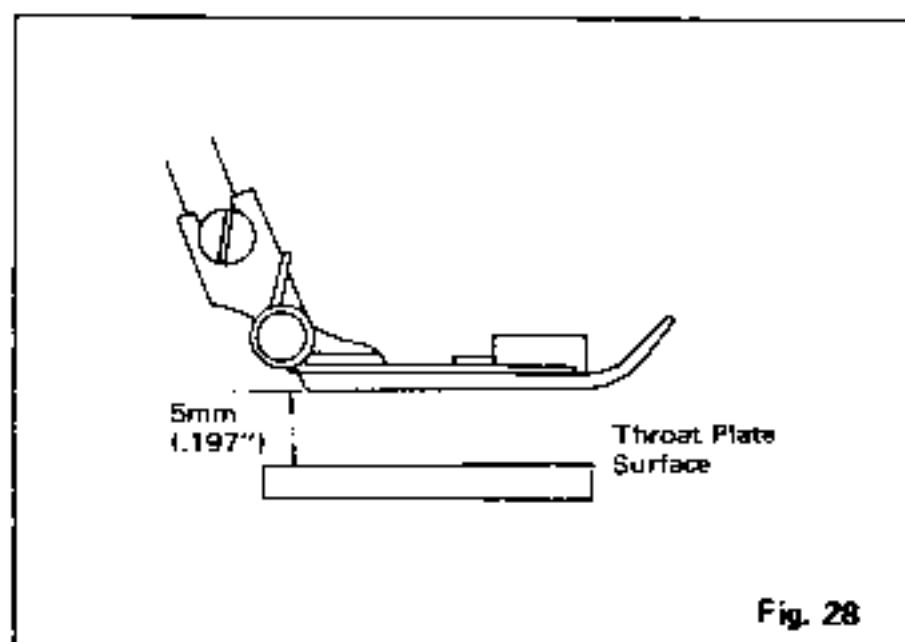
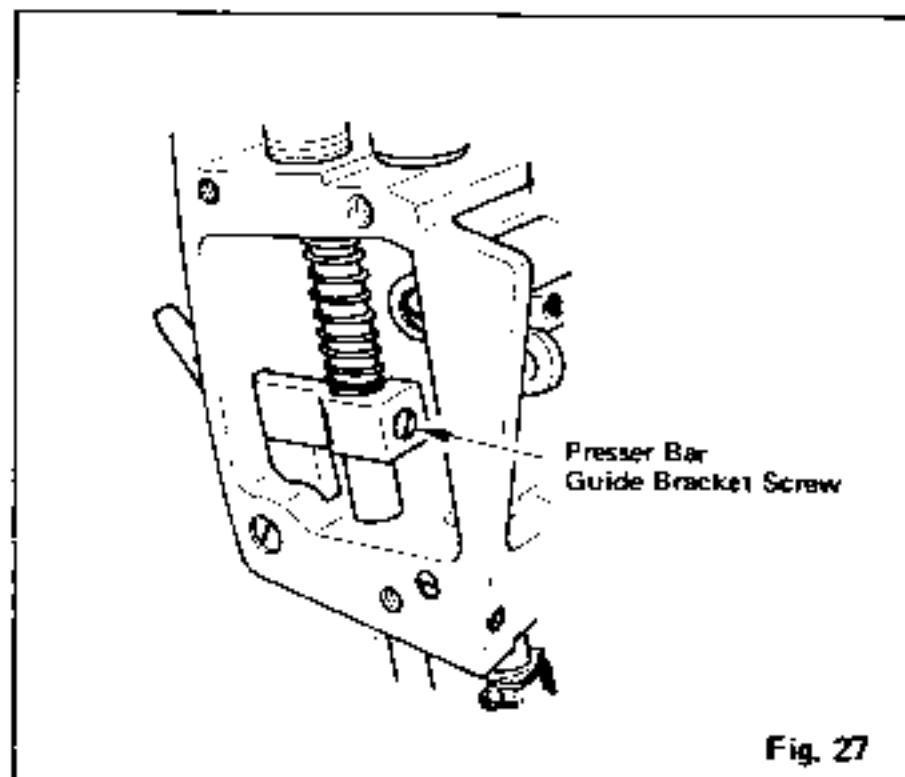
- Hold feed crank, feed crank eccentric pin and feed regulator crank rod together with one hand to eliminate looseness between the parts and firmly tighten the eccentric pin set screw.
- Replace motor, motor cover and pulley cover.





## 5. TO ADJUST PRESSER BAR LIFT

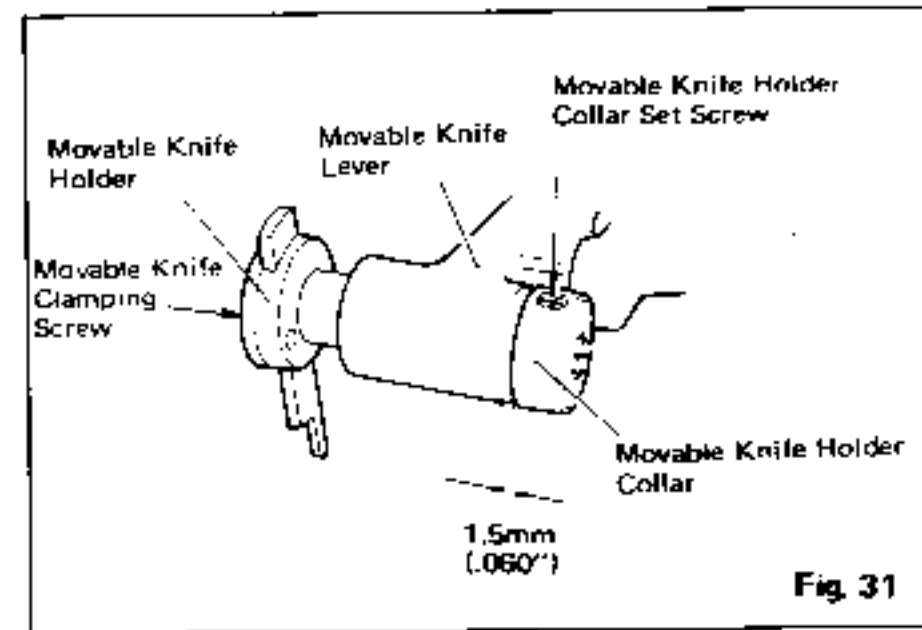
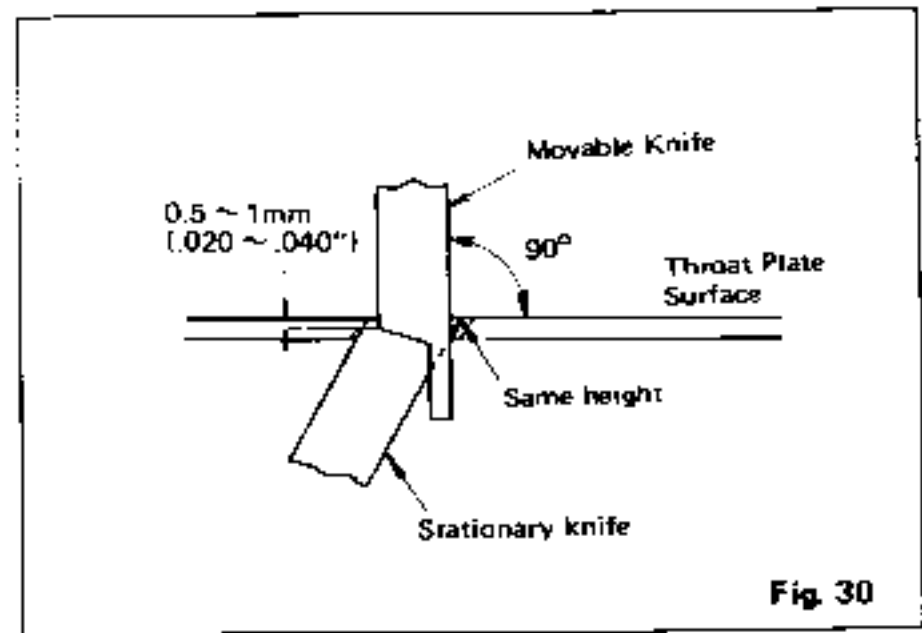
- Remove face plate, pulley cover and front cover.
- Remove cylinder cover.
- Turn machine pulley toward you until the feed dog is below the top surface of the throat plate.
- Raise the presser bar and loosen the presser bar guide bracket screw. (Fig. 27)
- Using service gage to set presser foot height by moving presser bar up or down as shown in Fig. 28. (Fig. 29)
- Tentatively tighten presser bar guide bracket screw, turn pulley toward you and make sure presser bar does not contact the needle or looper. Also make certain that presser bar moves freely.
- While taking care not to move the setting of the presser foot, securely tighten the presser bar guide bracket screw.
- Replace cylinder cover.
- Replace pulley cover.
- Replace front cover, pulley cover and face plate.



## 6. KNIVES

### 1) Movable knife.

- Open looper cover.
- Turn pulley toward you until the movable knife is at its lowest position. The movable knife should be set so that the angle and overlap with the stationary knife, at this position, is as shown in Fig. 30.
- The angle is adjusted by loosening the movable knife holder collar set screw and turning the movable knife holder. The clearance between the right end of the movable knife lever and left end of the movable knife holder collar should be 1.5mm. (Fig. 31)
- The overlap of the knives is adjusted by loosening the movable knife clamping screw and moving the movable knife up or down as required while pushing the movable knife holder to the right.



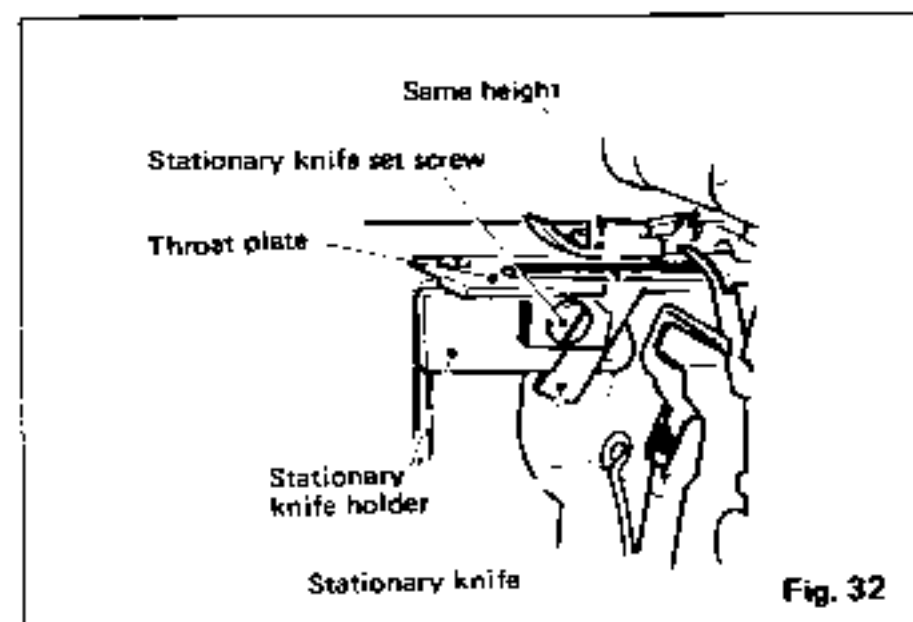
Close the looper cover and check that the movable knife does not interfere with the looper cover.

Should there be an interference, adjust the position of the looper cover.

Replace front cover and pulley cover.

### 2) Stationary Knife

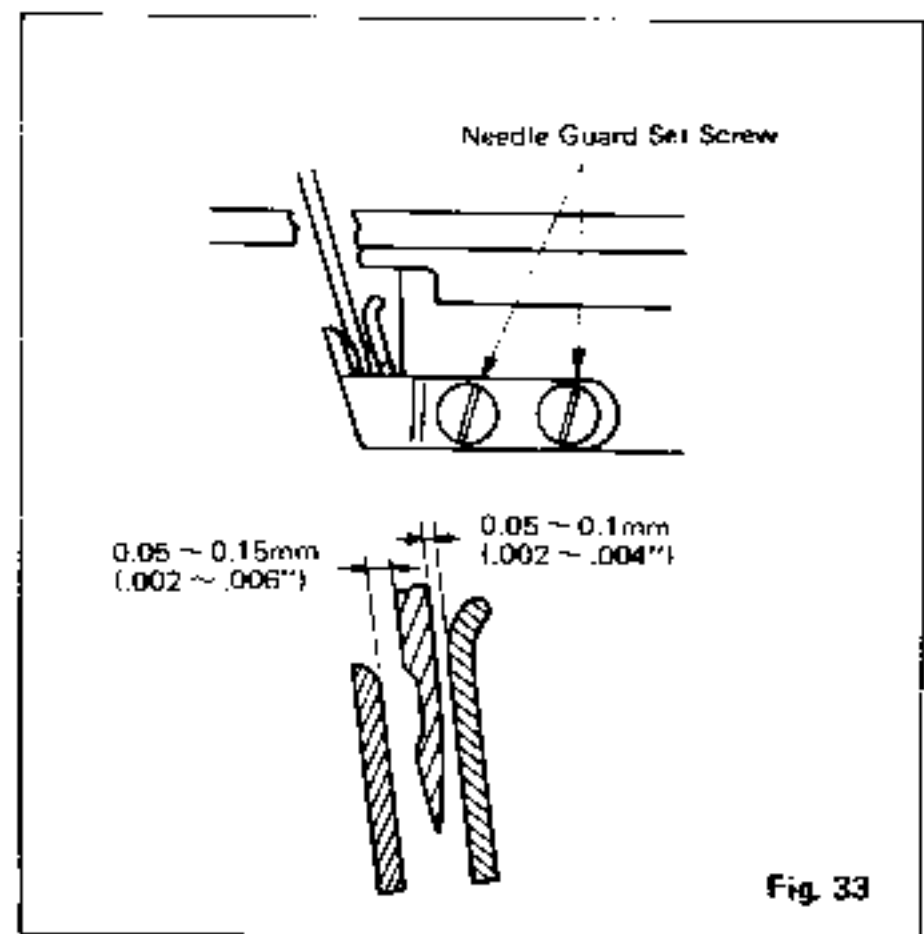
- Open looper cover, and set the movable knife in the non-operating position.
- Loosen the stationary knife set screw and remove stationary knife. (Fig. 32)
- Insert a new stationary knife into the groove of the stationary knife holder, set the cutting edge level with the top surface of the throat plate and tighten stationary knife set screw. (Fig. 32)
- Return the movable knife back to the original position.



## 7. ADJUSTMENT OF NEEDLE GUARD

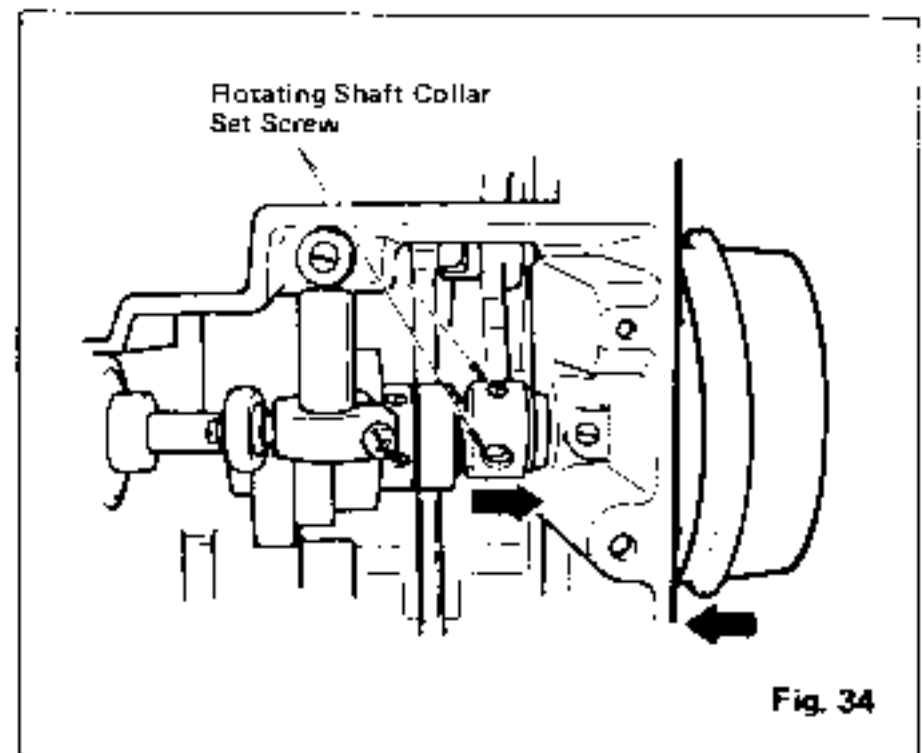
Remove cylinder cover.

Loosen the needle guard set screw, adjust the clearance between the needle and front and back needle guard as shown in Fig. 33 and retighten needle guard set screw.



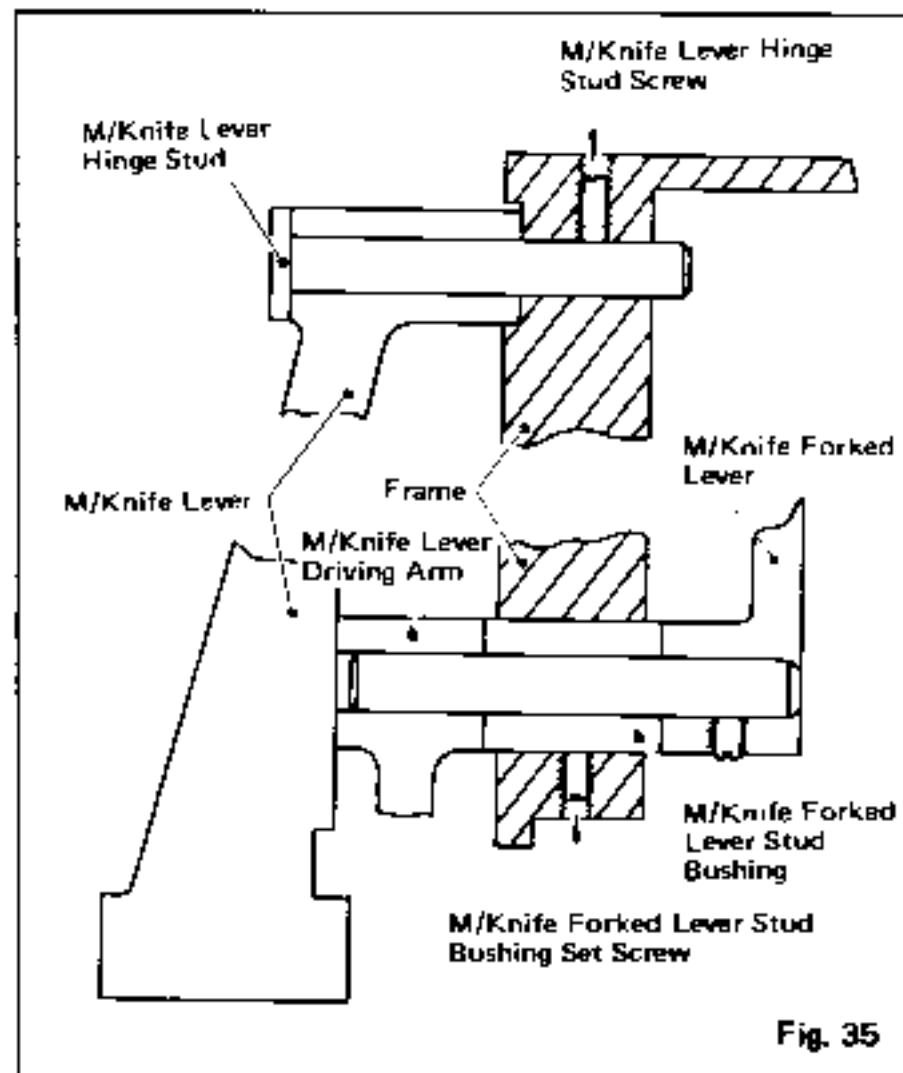
## 8. ADJUSTMENT OF END PLAY OF ROTATING SHAFT

- Open looper cover and remove machine base.
- Loosen the two rotating shaft collar set screws. (Fig. 34)
- While pressing the pulley to the left (inward) push the rotating shaft collar to the right and tighten the two set screws. (Fig. 34)
- Check that there is no play of rotating shaft.
- Replace machine base and close looper cover.



## 9. ADJUSTMENT OF END PLAY OF MOVABLE KNIFE LEVER

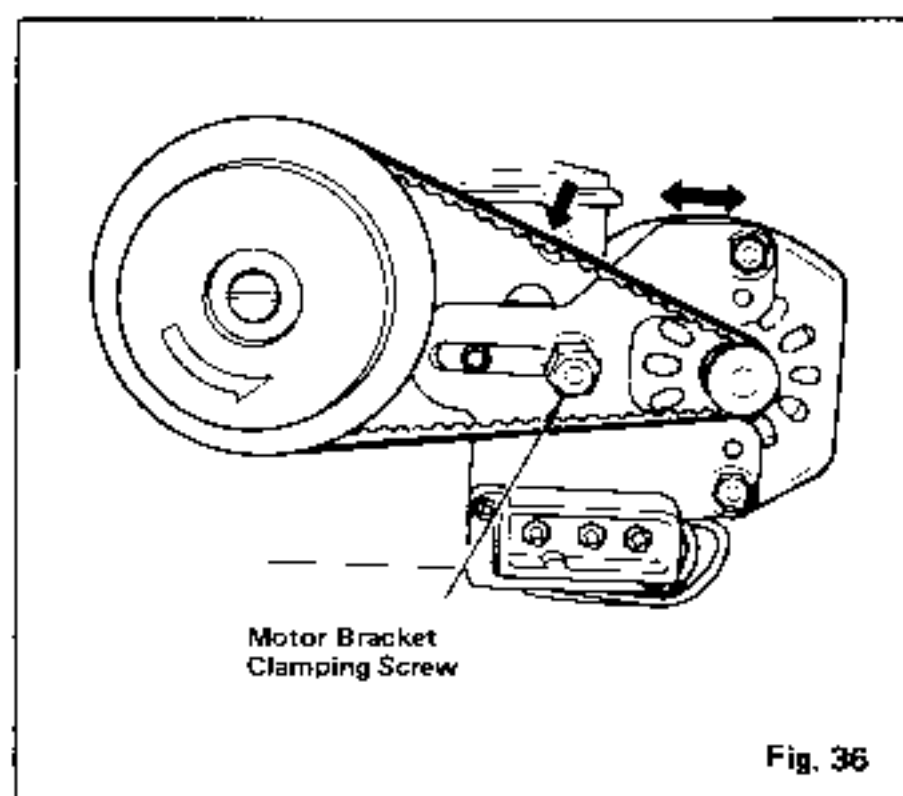
- The movable knife lever and related parts are as shown in Fig. 35.
- Remove pulley cover and front cover.
- Loosen movable knife forked lever stud bushing set screw, move movable knife lever driving arm to the right and provide clearance between the movable knife lever and movable knife lever driving arm.
- Loosen movable knife lever hinge stud screw, press down firmly so that there is no gap between the movable knife lever hinge stud, movable knife lever and the frame, and tighten the movable knife lever hinge stud screw.
- The position of the movable knife lever is set in this condition.



- Check that there is no gap between the movable knife lever driving arm, movable knife forked lever stud bushing and movable knife forked lever; press the movable knife lever driving arm against the movable knife lever so that there is no gap and tighten movable knife forked lever stud bushing set screw.
- Turn pulley toward you and check torque and function and replace front cover, and pulley cover.

## 10. ADJUSTMENT OF BELT TENSION

- Remove pulley cover and motor cover.
- Loosen the motor bracket clamping screw and adjust the belt tension by moving the motor forward or backward. (Fig. 36)
- The correctly set motor belt should deflect slightly when a force is applied to the belt with your fingers half way between the machine pulley and motor pulley. (Fig. 36)
- Replace pulley cover and motor cover.





### Specifications of the Model 14U32A Machine

<u>Item</u>	<u>Specification</u>
Sewing speed	1,300 SPM max.
Stitch length (feed)	1 – 5mm (.039 – .197")
Height of feed dog	1.3 – 1.1mm (.051 – .043")
Needle bar stroke	25mm (1")
Presser bar lift	5mm (.197")
Needle	Singer Cat. No. 2054 (#10), #14
Number of needle	1
Number of thread used	3
Size of machine	Width 257mm x depth 231mm x height 270mm (10.118") (9.094") (10.630")
Weight of machine	5.0kg