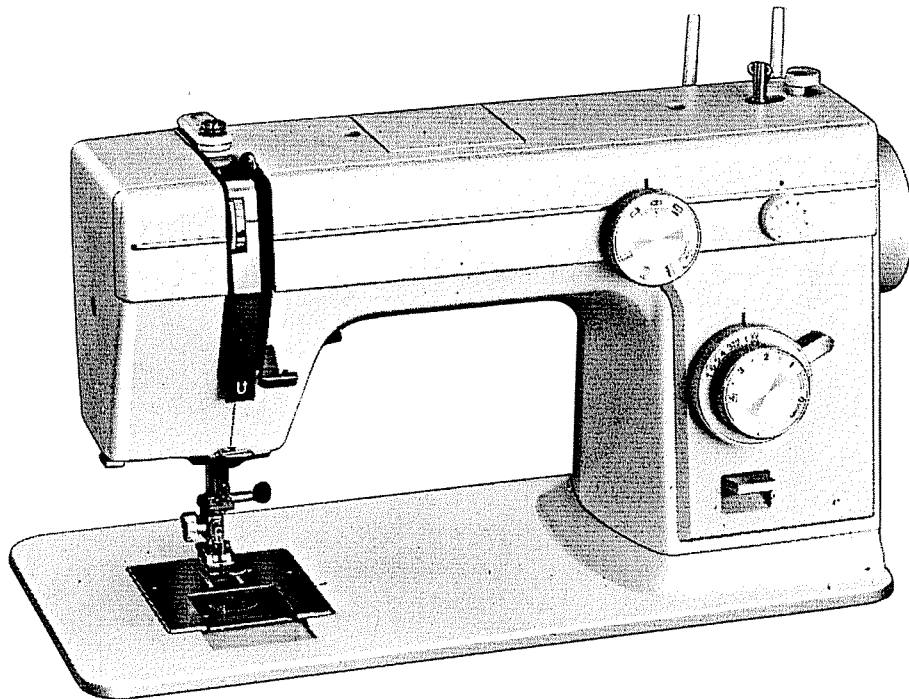


Servicing Manual

Model 808



JANOME

TO REMOVE AND TO ATTACH EXTERNAL PARTS -----	1
TO CORRECT STAGGERED STRAIGHT STITCH -----	2
ADJUSTMENT OF UNEVEN ZIGZAG STITCH AT L NEEDLE POSITION AND R NEEDLE POSITION -----	3
ADJUSTMENT OF TIMING OF NEEDLE SWING -----	5
ADJUSTMENT OF TIMING OF NEEDLE SWING (E CAM) -----	6
ADJUSTMENT OF NEEDLE DROP IN NEEDLE PLATE HOLE -----	7
ADJUSTMENT OF NEEDLE BAR HEIGHT -----	8
ADJUSTMENT OF HOOK TIMING -----	9
ADJUSTMENT OF CLEARANCE BETWEEN NEEDLE BAR AND ROTARY HOOK -----	10
ADJUSTMENT OF PITCH DIFFERENCE IN BUTTONHOLE SEWING -----	11
ADJUSTMENT OF CUTTING SPACE OF BUTTONHOLE -----	12
ADJUSTMENT OF BAR-TUCK FEED OF BUTTONHOLE -----	13
ADJUSTMENT OF PRESSER BAR HEIGHT AND DIRECTION -----	14
ADJUSTMENT OF STRETCH STITCH FEED BALANCE -----	15
ADJUSTMENT OF HEIGHT OF FEED DOG -----	16
ADJUSTMENT OF MOTOR BELT TENSION -----	17
REPLACEMENT OF CHECK SPRING -----	18
ADJUSTMENT OF UPPER THREAD TENSION UNIT -----	19
PARTS LIST -----	20

TO REMOVE AND TO ATTACH EXTERNAL PARTS

FACE PLATE

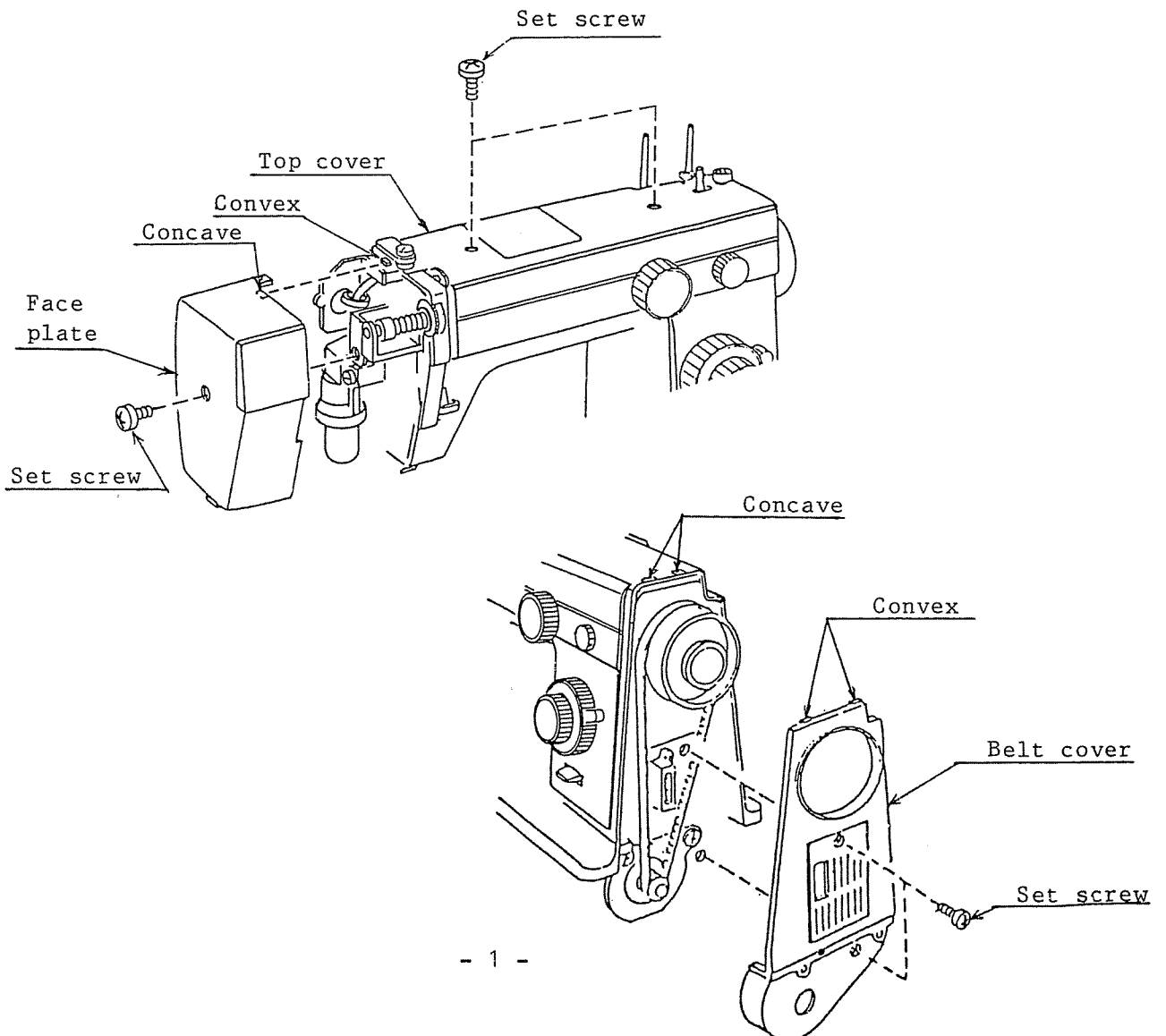
The face plate is attached or removed with one screw as shown. When attaching, place the convex area of the top cover into the concave area of the face plate.

TOP COVER

The top cover is attached or removed with two screws as shown. When attaching or removing, be careful not to force it on or off.

BELT COVER

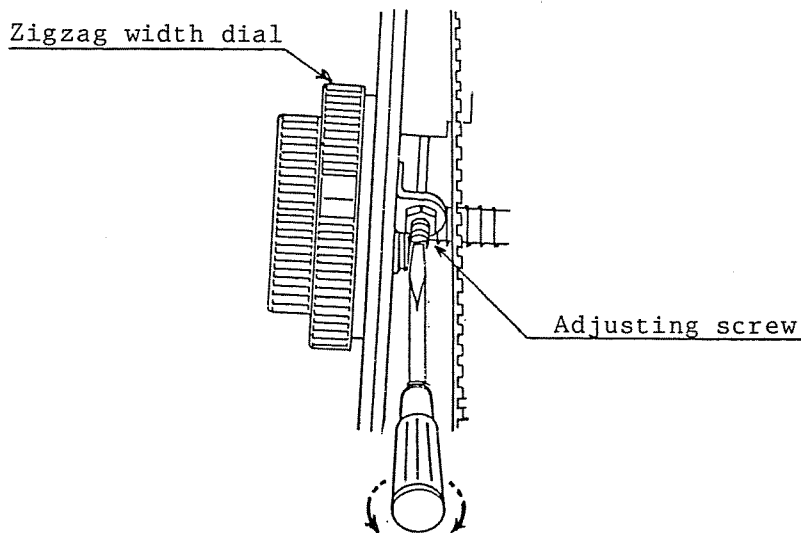
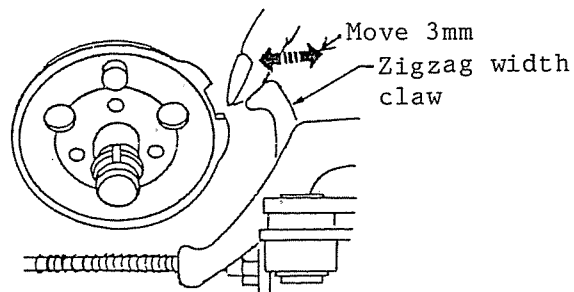
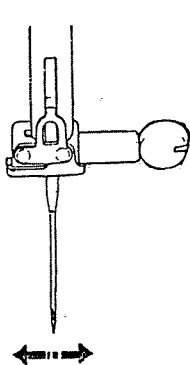
The belt cover is attached or removed with two screws as shown. When attaching, fit the convex parts of on the belt cover into the concave areas of on the top cover.



TO CORRECT STAGGERED STRAIGHT STITCH

If the zigzag movement still remains in straight stitching by setting the zigzag width dial at "0" and the pattern selector dial at "⌘", make an adjustment as follows:

1. Take out the basic cam. Set the zigzag width dial at "0" and the pattern selector dial at "⌘".
2. Remove the belt cover.
3. While moving the zigzag width claw in the direction of the arrow about 3mm on both sides as illustrated turn the adjusting screw with the screw driver until needle movement stops.
4. Replace the belt cover.
- 5 Set the basic cam, turn the balance wheel toward you and make sure the needle bar can't move sideways.

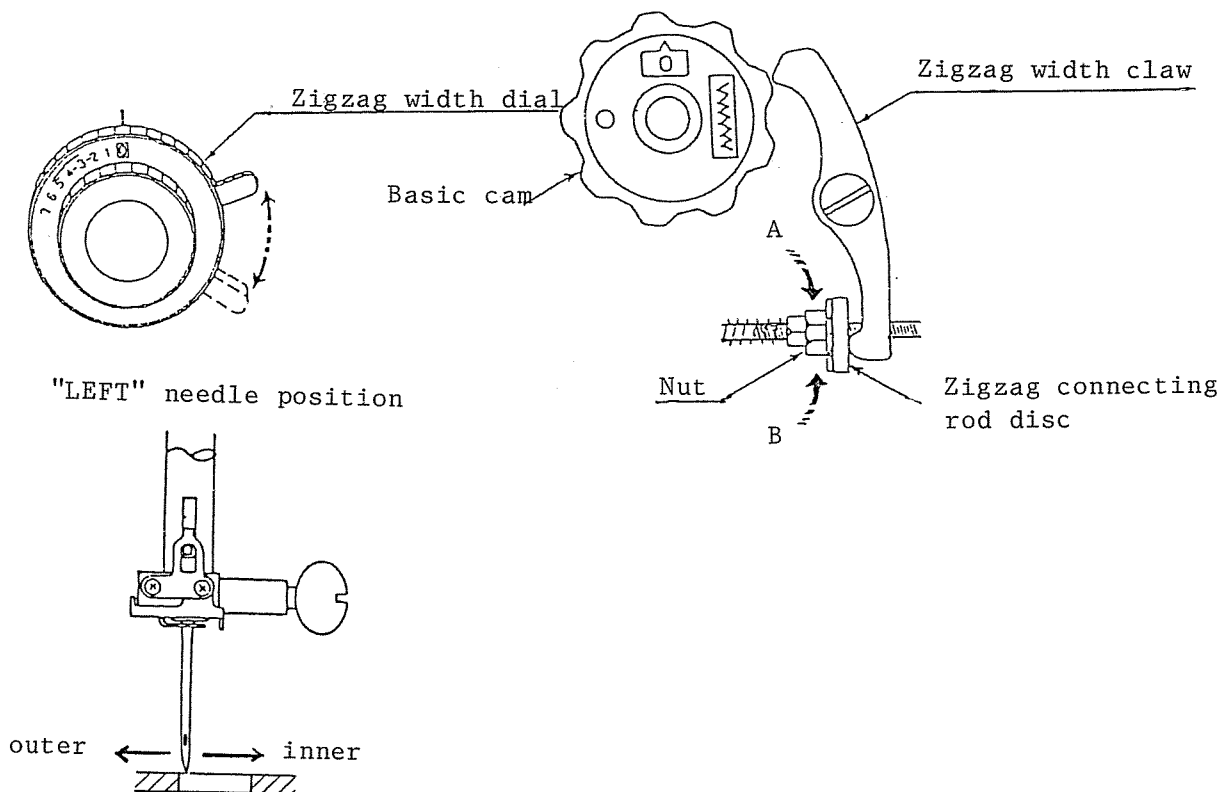


ADJUSTMENT OF UNEVEN ZIGZAG STITCH AT L NEEDLE POSITION AND R NEEDLE POSITION (1/2)

Manual patterns are sewn with needle position at either "LEFT" or "RIGHT".

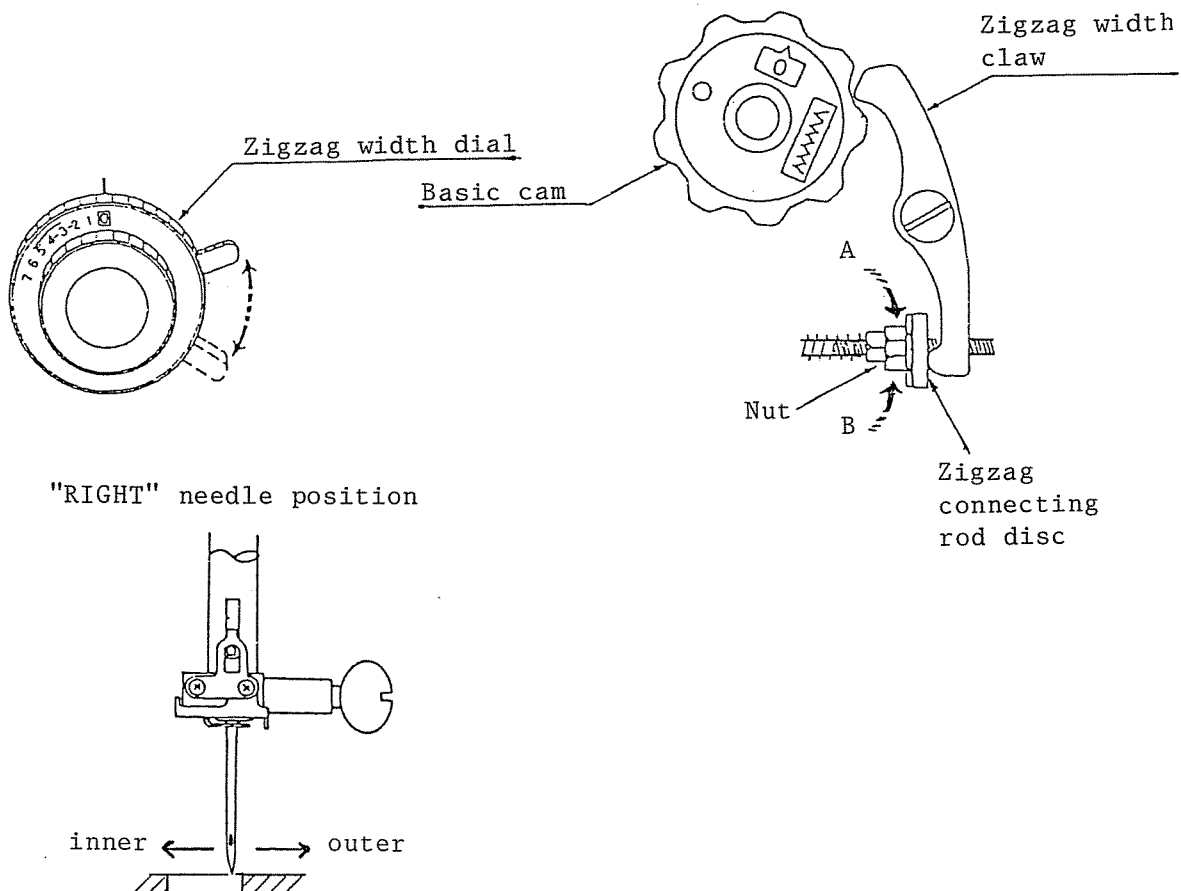
If the stitches at the respective needle position appear to be irregular, make an adjustment as follows:

1. Set the pattern selector dial at "P".
Turn the balance wheel toward you until the needle reaches the lowest point in the "LEFT" needle position, when the zigzag width claw is set at the middle of the convex part of the basic cam.
2. Move the zigzag width dial from "0" to "7" to see which direction the needle staggers to.
3. Loosen the nut with a 6mm wrench while holding the zigzag connecting rod disc with a 9mm wrench.
 - a) When the needle staggers to the inner direction, turn the zigzag connecting rod disc toward you (in the direction of A).
 - b) When the needle staggers to the outer direction, turn the zigzag connecting rod disc away from you (in the direction of B).
4. Tighten the nut with 6mm and 9mm wrenches.



ADJUSTMENT OF UNEVEN ZIGZAG STITCH AT L NEEDLE POSITION AND R NEEDLE POSITION (2/2)

5. Set the pattern selector dial at "4".
Turn the balance wheel toward you until the needle reaches the lowest point in the "RIGHT" needle position, when the zigzag width claw is set at the middle of the concave part of the basic cam.
6. Move the zigzag width dial from "0" to "7" to see which direction the needle staggers in.
7. Loosen the nut with a 6mm wrench while holding the zigzag connecting rod disc with a 9mm wrench.
 - a) When the needle staggers to the inner direction, turn the zigzag connecting rod disc away from you (in the direction of B).
 - b) When the needle staggers to the outer direction, turn the zigzag connecting rod disc toward you (in the direction of A).
8. Tighten the nut with 6mm and 9mm wrenches.
9. Make sure that the point of the needle swings symmetrically.



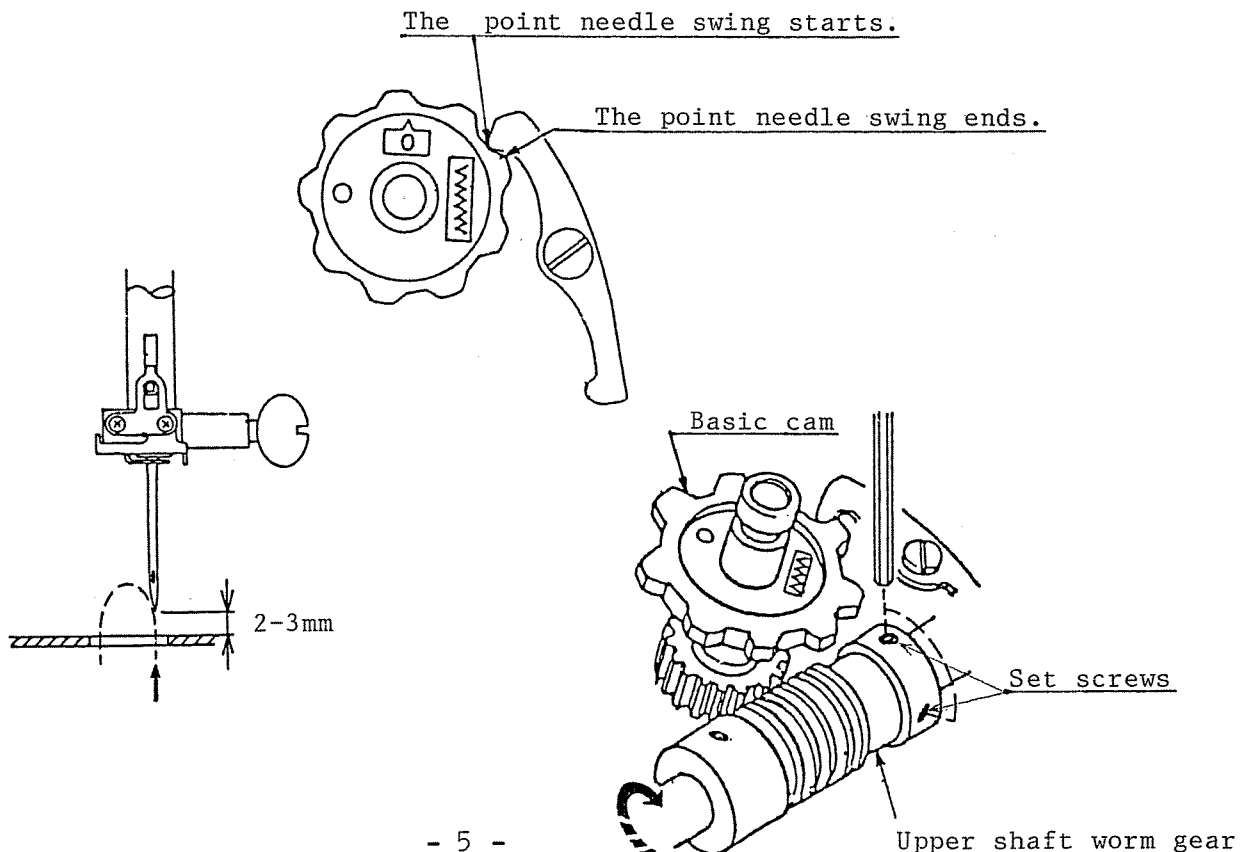
ADJUSTMENT OF TIMING OF NEEDLE SWING

The rise and fall movement of the needle between the lowest position and the upper surface of the needle plate in zigzag stitch should be perpendicular to the upper surface of the needle plate.

If the needle bar is not timed correctly for zigzag stitching, the needle will move sidewise while it is in the fabric.

Ideally the needle's right outflow should start from a position 2-3mm above the needle plate.

1. Set the pattern selector dial at "P".
2. Turn the balance wheel toward you and see if the needle rises about 2-3mm above the needle plate in its right upward stroke.
3. Loosen the two set screws on the upper shaft worm gear.
4. Hold the upper shaft worm gear in place with a screw driver and turn the balance wheel slightly.
 - a) If the needle starts swinging too soon, turn the balance wheel in the direction of "A". (counter-clockwise)
 - b) If the needle starts swinging too late, turn the balance wheel in the direction of "B". (clockwise)
5. Tighten the two set screws on the upper shaft worm gear.

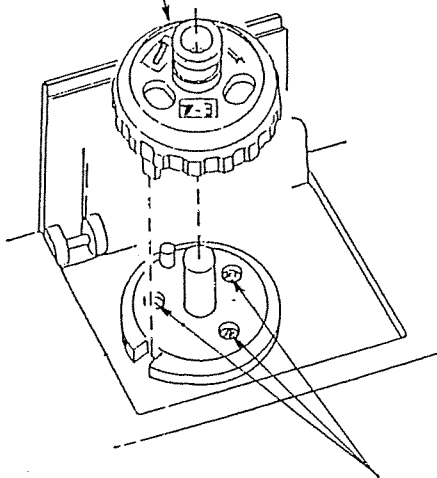


ADJUSTMENT OF TIMING OF NEEDLE SWING (E CAM)

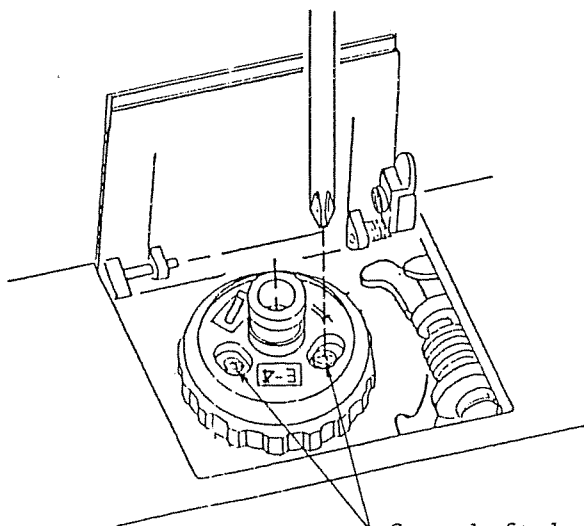
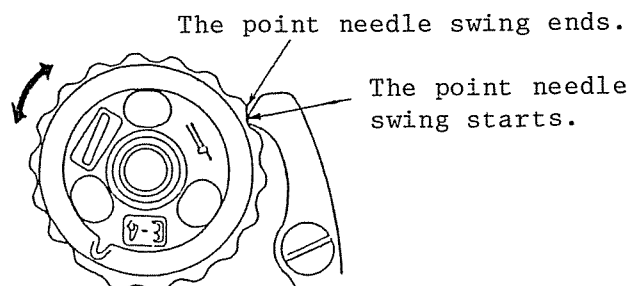
Adjustment of timing of needle swing in E cam should be made after the adjustment of needle swing in basic cam.

1. Insert E-4 cam and set the pattern selector dial at "E", the zigzag width dial at "7".
2. Turn the balance wheel toward you and check if the needle starts to rise about 2-3mm above the needle plate in its right upward stroke.
3. If it is incorrect, loosen the cam shaft bushing set screws.
4. If the needle starts to swing too soon (less than 2mm above the needle plate), turn the cam E-4 anti-clockwise slightly.
If the needle starts to swing too late (more than 3mm above the needle plate), turn the cam E-4 clockwise slightly.
5. Tighten the cam shaft bushing set screws.

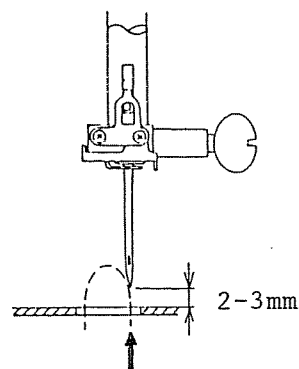
Cam (E-4)



Cam shaft bushing
set screws (3 pcs.)



Cam shaft bushing
set screws (3 pcs.)



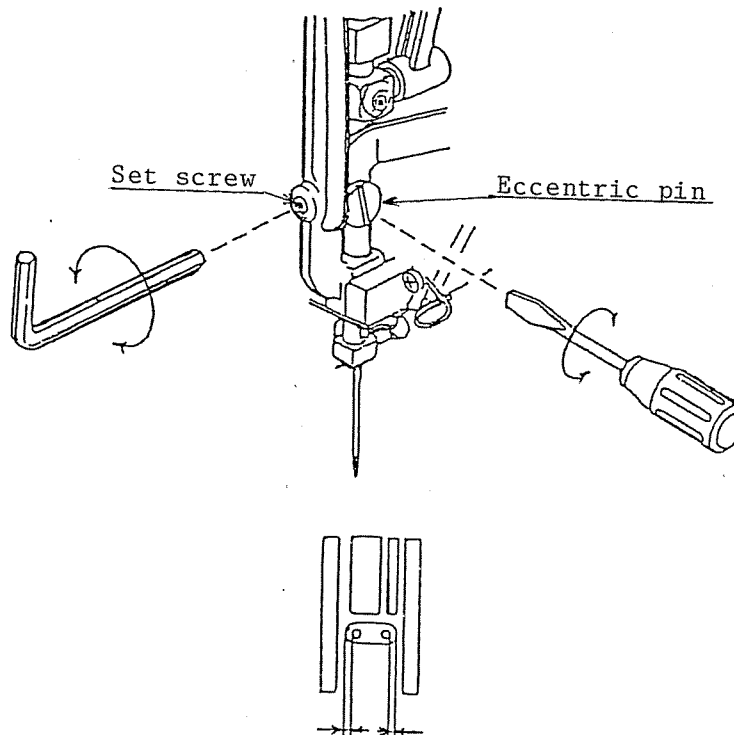
ADJUSTMENT OF NEEDLE DROP IN NEEDLE PLATE HOLE

When the zigzag width dial is set at "7" and the setting for the basic cam is "0", the clearance between the needle and the edges of the needle hole on needle plate at both left and right needle drop positions should be equal.

If not, make an adjustment as follows:

1. Set the zigzag width dial at "7" and remove the face plate.
2. Loosen the set screw.
3. Turn the eccentric pin to adjust the needle drop.
4. Tighten the set screw.
5. Attach the face plate.

(NOTE) After the above adjustment, check the hook timing.

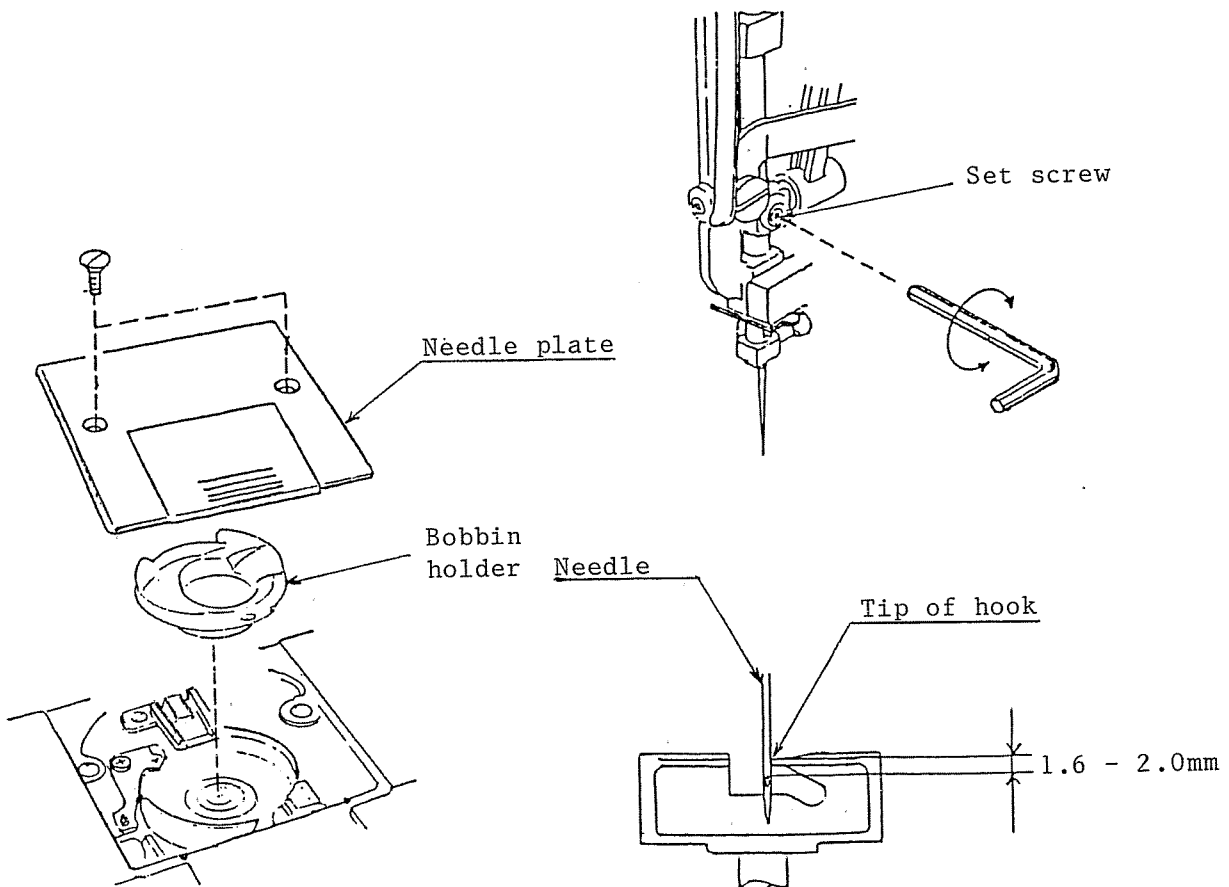


The both clearance
should be equal.

ADJUSTMENT OF NEEDLE BAR HEIGHT

The standard distance between the upper edge of the needle eye and the tip of the hook should be in the range of 1.6-2.0mm when the tip of the hook meets the right side of the needle in the left needle position ("P") in ascending travel of needle from its lowest position.

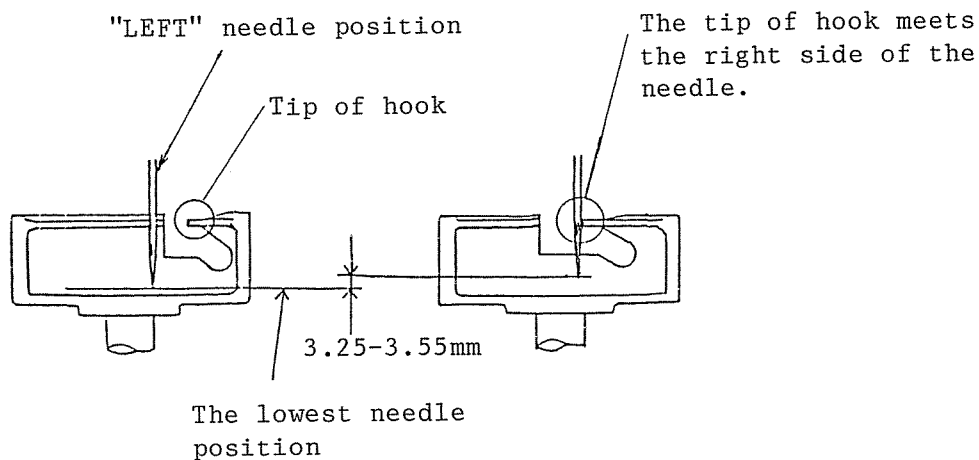
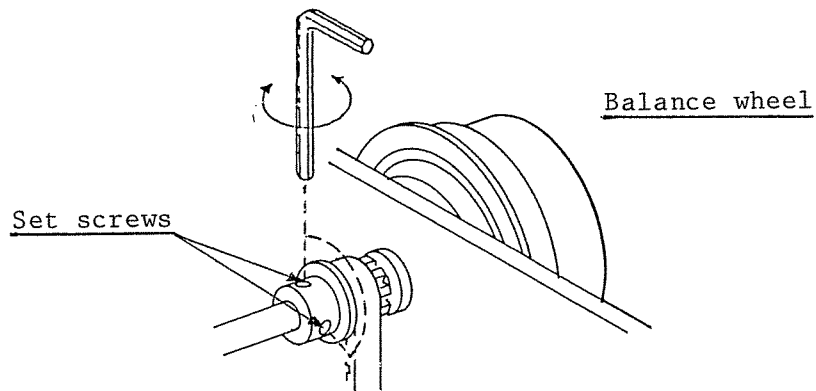
1. Remove the needle plate, bobbin holder and face plate.
2. Set the pattern selector dial at "P".
3. Turn the balance wheel toward you until the tip of the hook meets the right side of the needle.
4. Loosen the set screw.
5. Adjust the needle bar height.
6. Tighten the set screw.
7. Replace the bobbin holder, needle plate, and face plate.



ADJUSTMENT OF HOOK TIMING

The standard range of movement of the needle point from its lowest point of travel to its highest point should be in the range of 3.25-3.55mm when the tip of the hook exactly meets the right side of needle in left needle position ("P").

1. Remove the needle plate, bobbin holder and top cover.
2. Set the pattern selector dial at "P".
3. Turn the balance wheel toward you until the tip of the hook meets the right side of the needle. Loosen the set screws (2pcs.).
4. While holding the hook, turn the balance wheel toward you to lower the needle bar to its lowest position, then a little further to raise the needle bar to within the range of 3.25-3.55mm from its lowest position.
5. Replace the bobbin holder, needle plate and top cover.



ADJUSTMENT OF CLEARANCE BETWEEN NEEDLE BAR AND ROTARY HOOK

The standard clearance between needle and rotary hook should be +0.05 to -0.10mm.

1. Remove the needle plate and bobbin holder.
2. Set the pattern selector dial at "Φ".
3. Loosen the set screw(a).
4. Turn the lower shaft bushing (front) in the direction of A to increase the backlash on the lower shaft gear and the hook driver shaft gear.
5. Loosen the set screw(b).
6. Adjust the clearance between needle and rotary hook by turning the hook driver shaft.

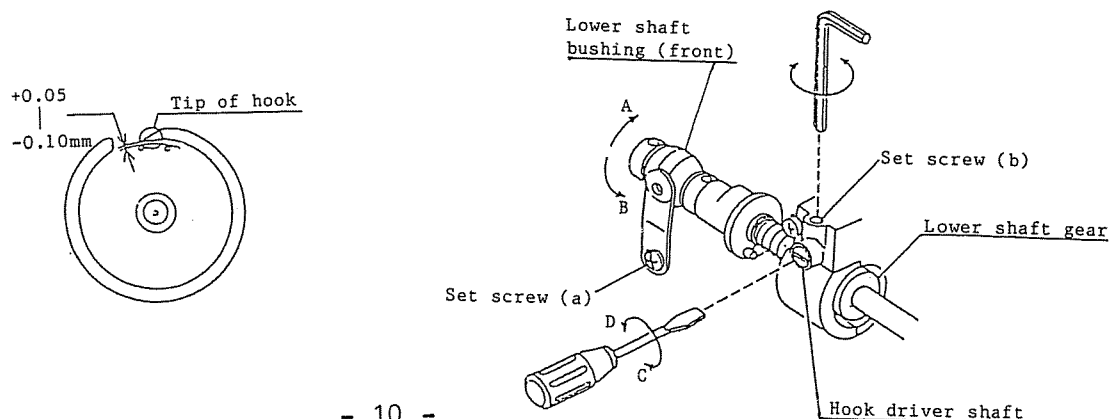
Turn in the direction of C to increase the clearance.
Turn in the direction of D to decrease the clearance.

7. Tighten the set screw(b).

(NOTE) Make sure that there is no play in the hook driver shaft.
(To adjust the clearance at left and right needle positions,
refer to next page.)

8. Adjust backlash between the hook shaft gear and lower shaft gear by turning lower shaft bushing (front) in the direction of B.
9. Tighten the set screw(a).
10. If the lower shaft becomes tight after the above adjustment, turn the lower shaft bushing (rear) to make the shaft turn smoothly. Both lower shaft bushings (front & rear) have dents on their edges. Both dents should face the same direction for lower shaft to turn smoothly.

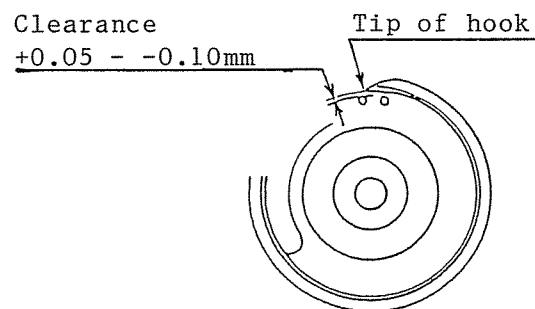
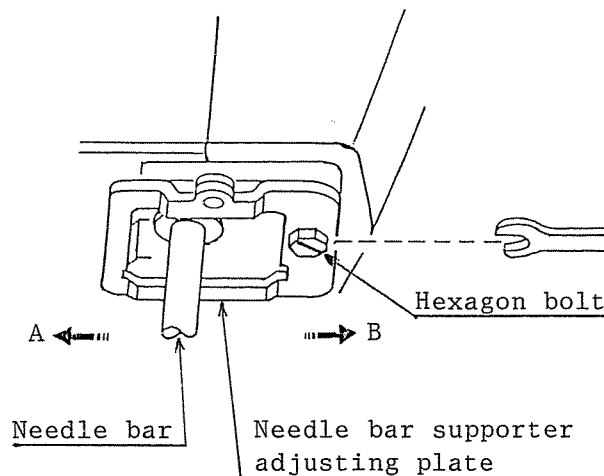
(NOTE) Check the hook timing after the adjustment.



**Adjustment of clearance between needle and hook
on left & right needle position**

1. Set the pattern selector dial at "Φ".
2. If the clearance between needle and hook is too large, loosen the hexagon bolt and move the needle bar supporter adjusting plate in direction (A).
3. If the clearance is too small, move the needle bar supporter adjusting plate in direction (B).
4. Tighten the belt.

* After above adjustment, readjust position of needle bar supporter stopper.



ADJUSTMENT OF PITCH DIFFERENCE IN BUTTONHOLE SEWING

The pitch difference between the left and the right rows of a buttonhole seam should be 9-11 stitches on the right side, and 10 stitches on the left.

If not, make an adjustment as follows:

1. Remove the top cover.
2. Set the zigzag width dial at "5", the stitch length dial at "4".
3. Turn the pattern selector dial "1" "2" "3" "4", stitch the buttonhole and see if there is any difference between the left and the right rows in pitch.
4. If the buttonhole is sewn like figure (a), turn the set screw in the direction of (A).
5. If the buttonhole is sewn like figure (b), turn the set screw in the direction of (B).
6. Replace the top cover.

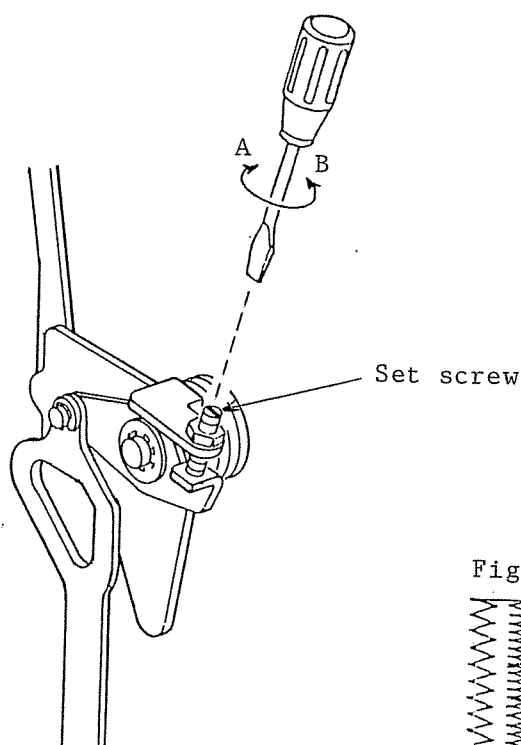


Fig. a

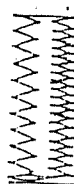
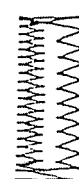


Fig. b



ADJUSTMENT OF CUTTING SPACE OF BUTTONHOLE

The maximum total width of a buttonhole should be 4.8-5.0mm. The cutting space of a buttonhole should be 0.6mm. When the cutting space is too wide or too narrow, make an adjustment as follows:

1. Remove the top cover.
2. Set the zigzag width dial at "5" and set the stitch length dial at "  ".
3. Place a piece of paper under the presser foot and turn the buttonhole dial in order of "  " "  " "  " while sewing buttonhole.
4. If the cutting space is too wide, (like figure A), loosen the nut and turn the buttonhole stopper set screw counter-clockwise.
5. If the cutting space is too narrow, (like figure B), loosen the nut and turn the buttonhole stopper set screw clockwise.
6. Tighten the nut.
7. Replace the top cover.

Fig. A

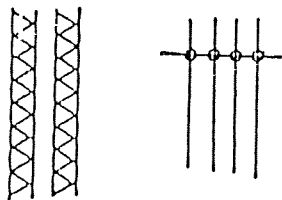
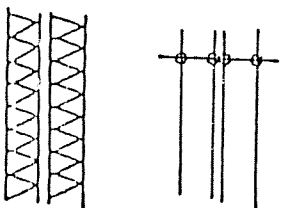
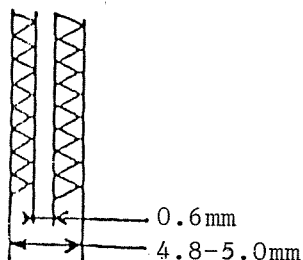


Fig. B



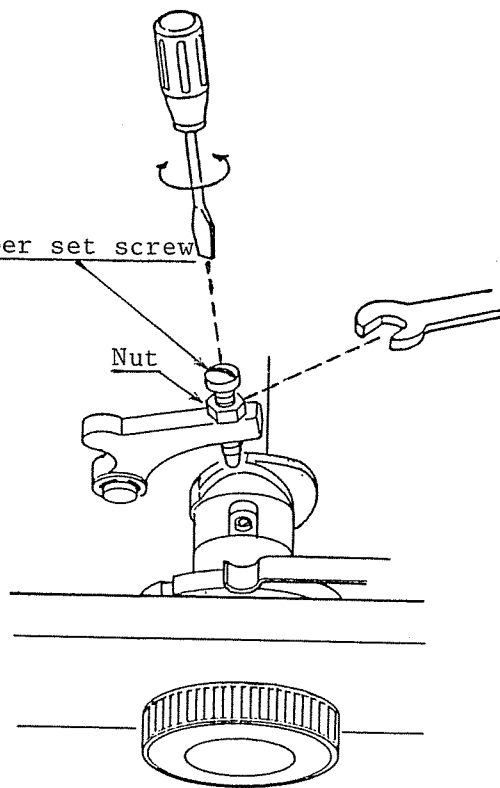
Standard



Buttonhole stopper set screw

Nut

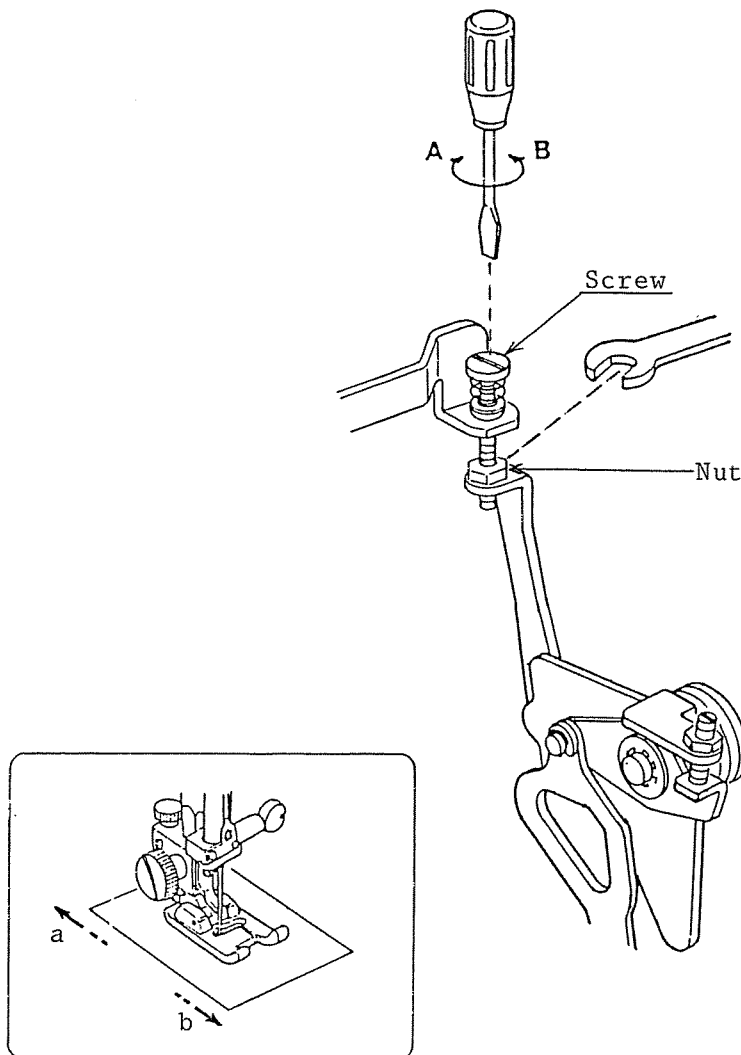
Buttonhole dial



ADJUSTMENT OF BAR-TUCK FEED OF BUTTONHOLE

The material should not be fed when bar-tuck stitching ("⁴/₂") in buttonhole sewing. If it is fed, make an adjustment as follows:

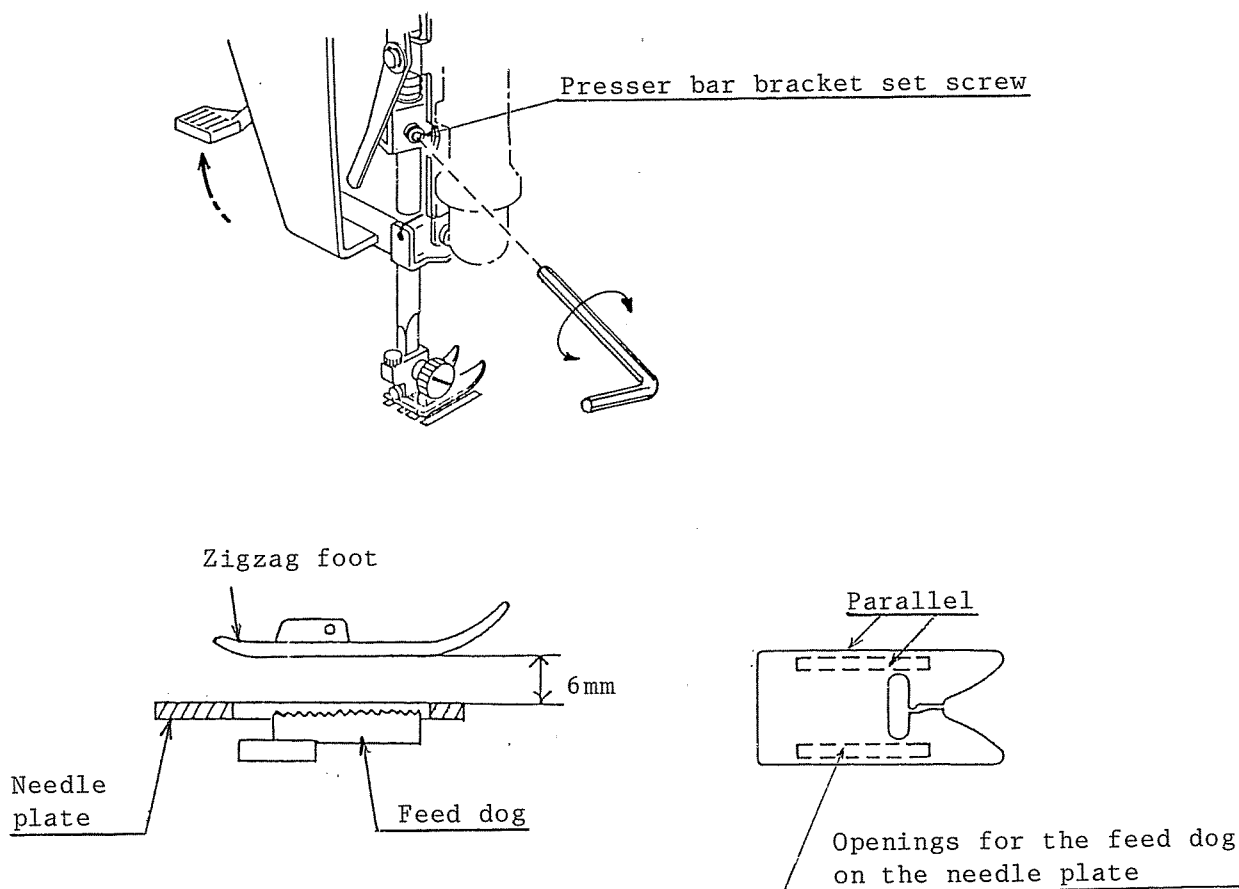
1. Remove the top cover. Set the pattern selector dial at "⁴/₂", the zigzag width dial at "5" and the stitch length dial at "4".
2. Place a piece of paper under the foot and turn the balance wheel toward you.
3. If paper is fed forward (a), loosen the nut and turn the screw in the direction of A.
4. If paper is fed backward (b), loosen the nut and turn the screw in the direction of B.
5. Tighten the nut.
6. Replace the top cover.



ADJUSTMENT OF PRESSER BAR HEIGHT AND DIRECTION

The standard presser bar height is 6.0mm between the bottom surface of the foot and needle plate.

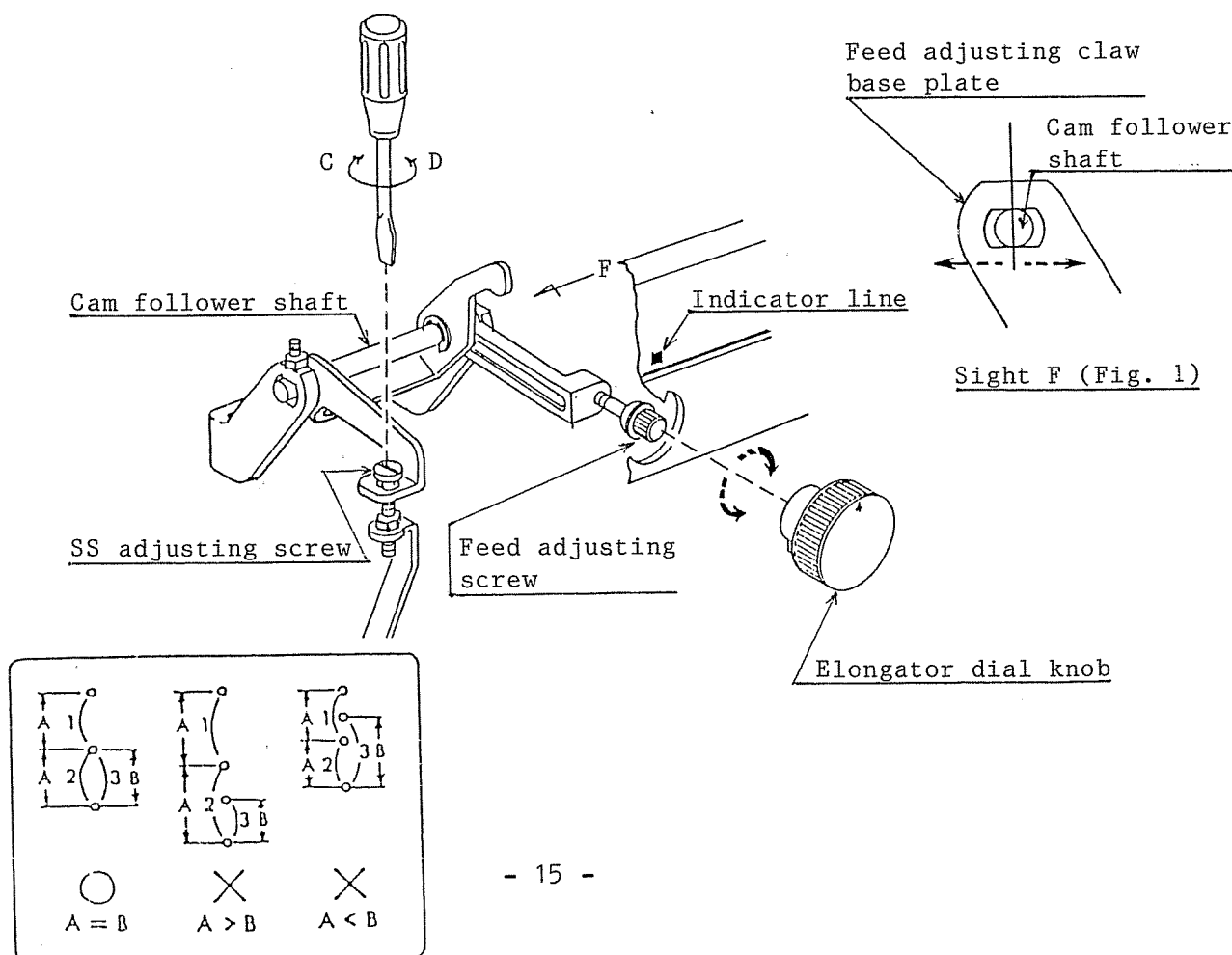
1. Set the stitch length dial at "DOWN". Remove the face plate.
2. Raise the presser bar lifter. Loosen the presser bar bracket set screw and adjust the height so that the clearance between the bottom surface of the presser foot and the needle plate is 6.0mm.
3. Check if the presser foot is parallel to the openings for the feed dog on the needle plate. If not, adjust it.
4. Tighten the presser bar bracket set screw while holding the presser bar to keep the foot parallel to the openings.
5. Raise the presser bar lifter and turn the balance wheel and check if the needle or needle bar thread guide touches the foot.



ADJUSTMENT OF STRETCH STITCH FEED BALANCE

The stretch stitch pattern by double stuck cams can be lengthened or shortened by turning the pattern elongator dial. When this dial is set at standard position "4", normal shaped patterns should be formed. If the patterns are distorted after setting the pattern elongator dial at "4", make an adjustment as follows:

1. Insert pattern cam #13 and set the zigzag width dial at "0", the stitch length dial at "4".
2. Remove the top cover.
3. Remove the pattern elongator dial knob and turn the feed adjusting screw to bring the cam follower shaft into the center of the hole on the feed adjusting claw base plate as illustrated in figure 1.
4. Attach the pattern elongator dial knob by pushing it onto the feed adjusting screw with matching the number "4" on the knob with indicator line on the top cover.
5. If the forward feed A is longer than the backward feed B, turn the SS adjusting screw in the direction C. If the forward feed A is shorter than the backward feed B, turn the SS adjusting screw in the direction D.
6. Replace the top cover.



ADJUSTMENT OF HEIGHT OF FEED DOG

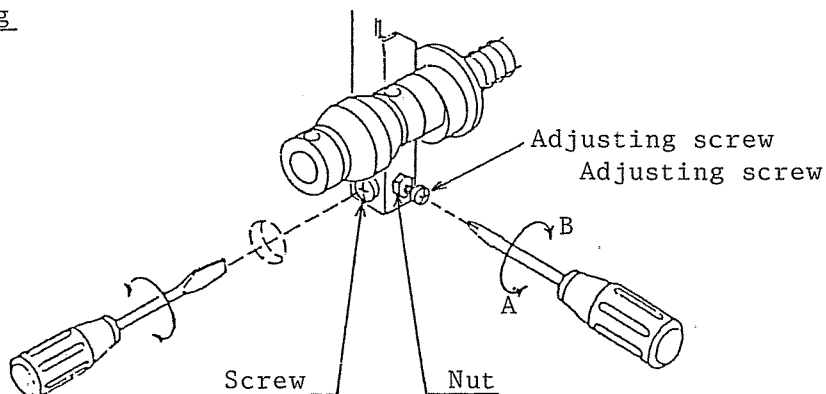
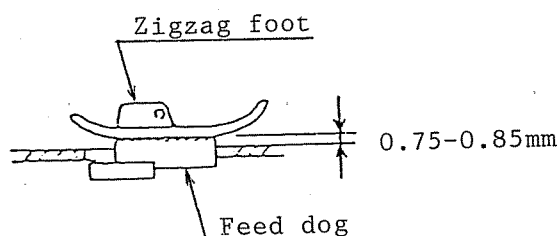
Lower the presser foot and turn the balance wheel toward you until the needle bar comes to the highest point of its travel.

In this condition, the height of the feed dog above the needle plate should be 0.75 - 0.85 mm.

If it is incorrect, make an adjustment as follows:

1. Lower the presser foot and turn the head over.
2. Turn the balance wheel toward you until the needle comes to the highest point of its travel.
3. Loosen the screw and the nut.
4. a) When the feed dog is too high, turn the adjusting screw clockwise (in the direction of A).

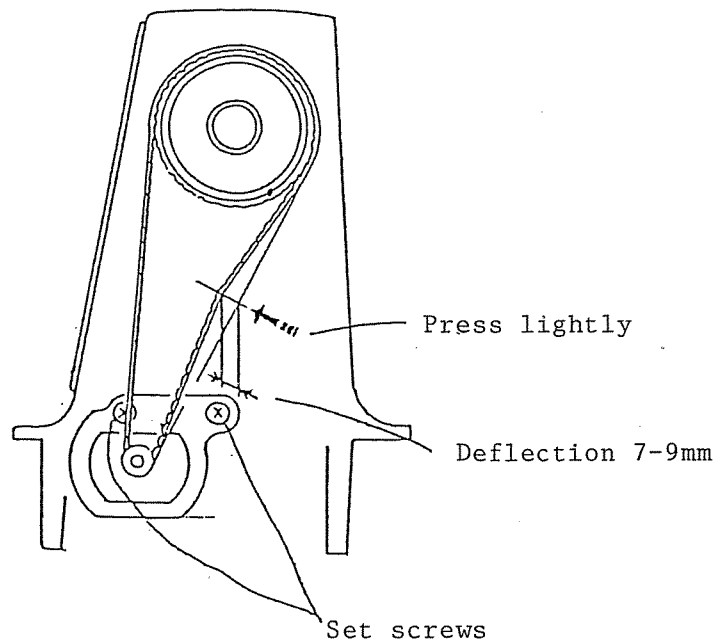
b) When the feed dog is too low, turn the adjusting screw counter-clockwise (in the direction of B).
5. Tighten the nut.
6. Tighten the screw.
7. Make sure that the height of the feed dog is 0.75 - 0.85 mm by turning the balance wheel.



ADJUSTMENT OF MOTOR BELT TENSION

If there is a deflection of about 7 to 9mm on the belt by pressing it lightly as shown in the drawing, the tension of the belt is correct. If not, make an adjustment as follows:

1. Remove the belt cover.
2. Loosen the set screws (2pcs.), and adjust the tension of belt.
3. Replace the belt cover.



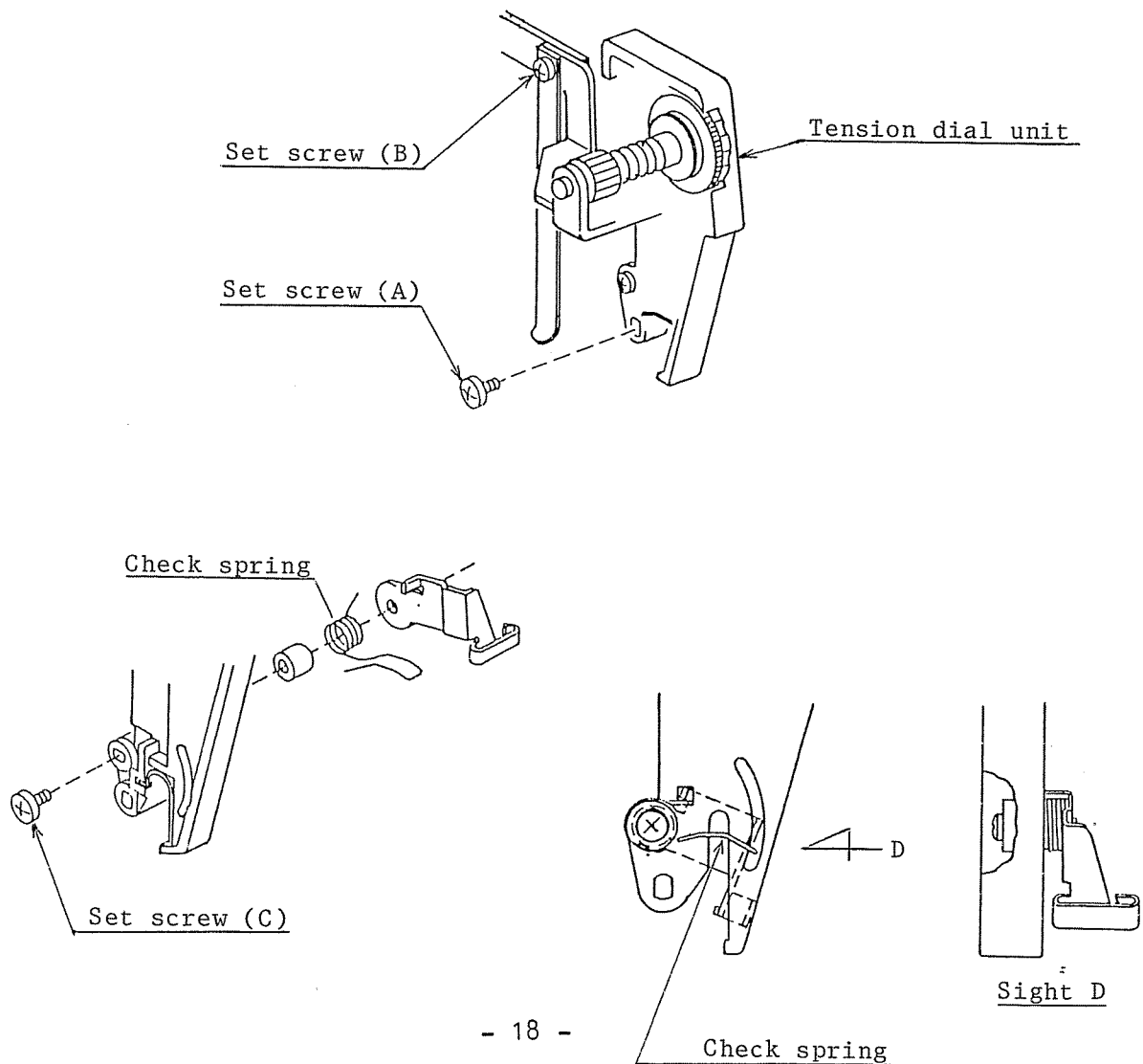
REPLACEMENT OF CHECK SPRING

TO REMOVE

1. Remove the face plate.
2. Remove set screw(A), loosen set screw(B) and remove the thread tension dial unit.
3. Remove the set screw(C) and remove the check spring.

TO ATTACH

4. Set the check spring as shown in the figure and secure with set screw(C).
5. Replace the thread tension dial unit with the set screw(A) and (B).
6. Replace the face plate.



ADJUSTMENT OF UPPER THREAD TENSION UNIT

When the tension dial is set at "3", standard, the tension should be 65-95g.

1. Remove the face plate.
2. Pass the thread (Cotton thread #50) between the tension discs and draw it down around the check spring holder.
3. Lower the presser foot and bring the thread up.
4. While pulling the thread upward, adjust the tension by turning the thread tension adjusting screw.
 - 1 If the tension is too tight, turn the adjusting screw in direction (A).
 - 2 If the tension is too loose, turn the adjusting screw in direction (B).

