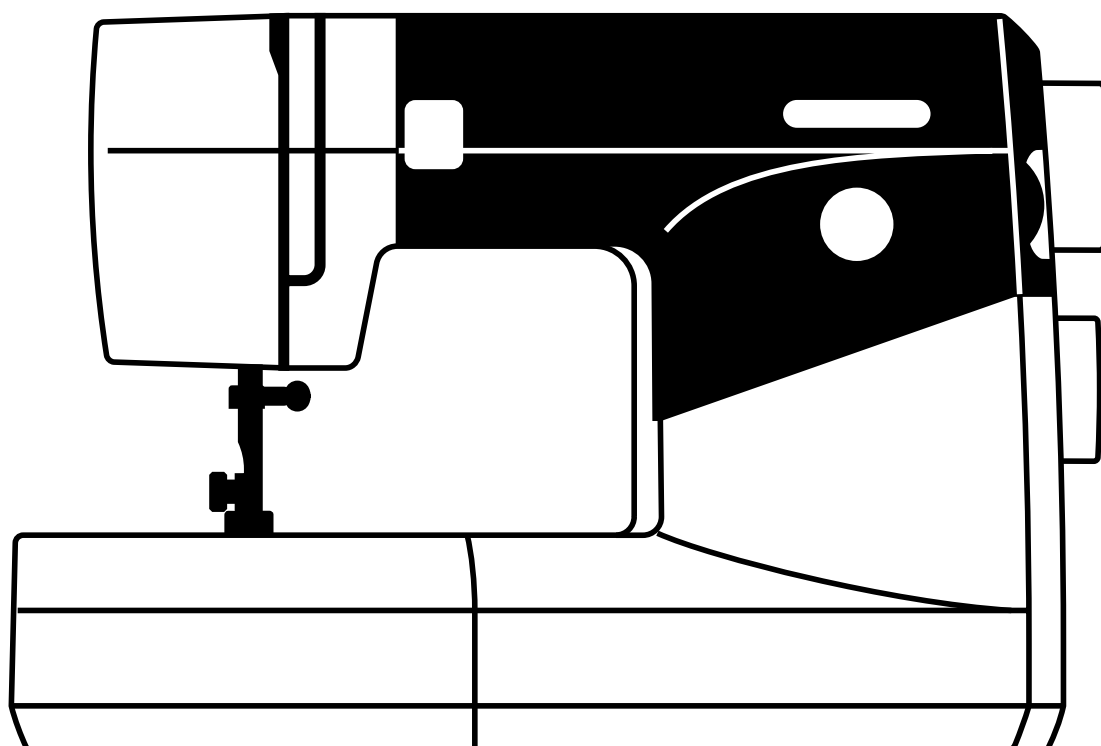


Service Manual



Huskystar 219/224

Typ A

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Face Cover

De mounting

- 1.Remove the cap (A).
- 2.Remove the screw (B).
- 3.Remove the face plate (C).

Mounting

- 4.Reverse the above procedure.

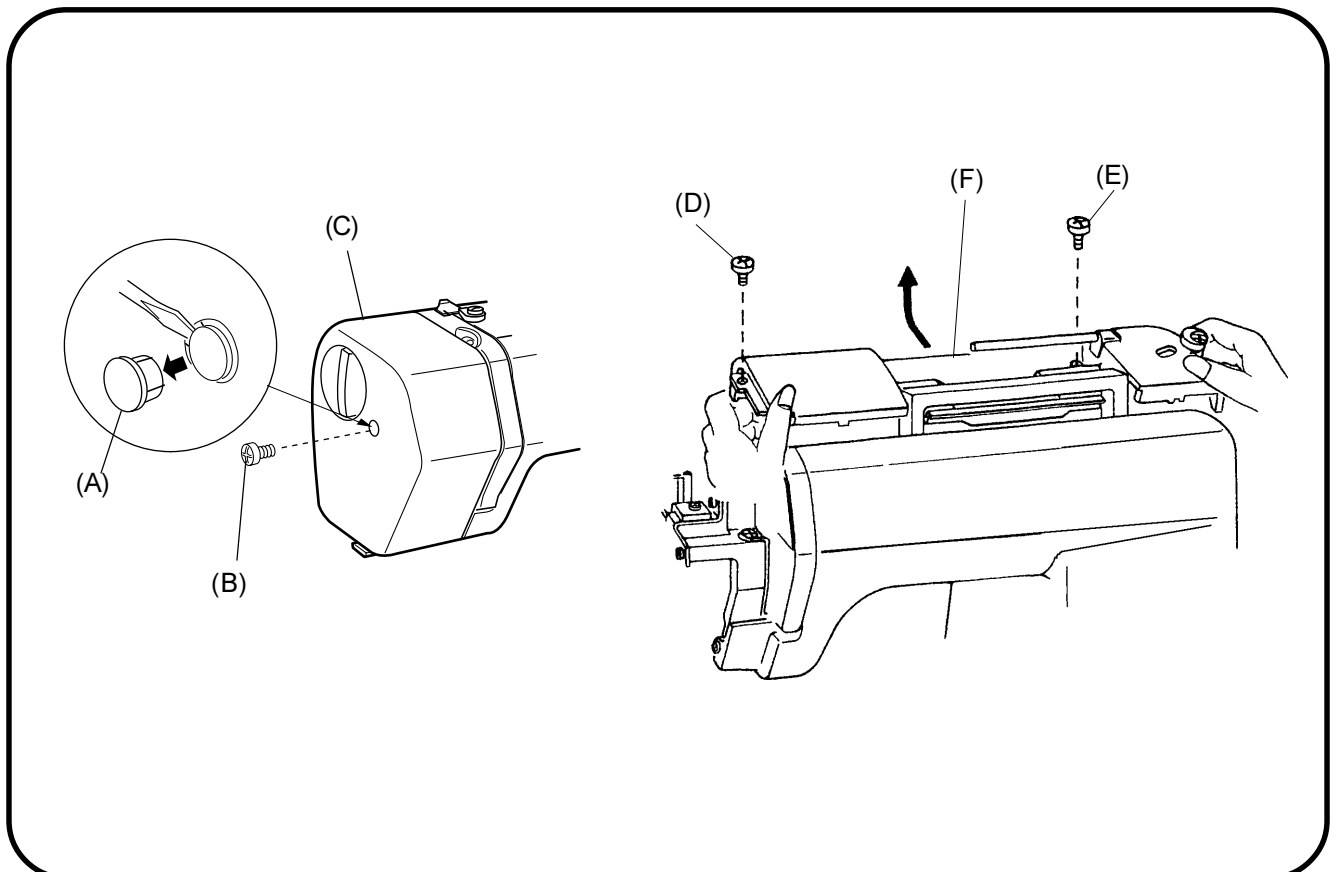
Top Cover

Demounting

- 1.Remove the face cover (C).
- 2.Remove the two screws (D & E).
- 3.Remove the top cover (F).

Mounting

- Reverse the above procedure.



Base plate

De mounting

- 1.Remove the 4 screws (A)
- 2.Remove the base plate (B).

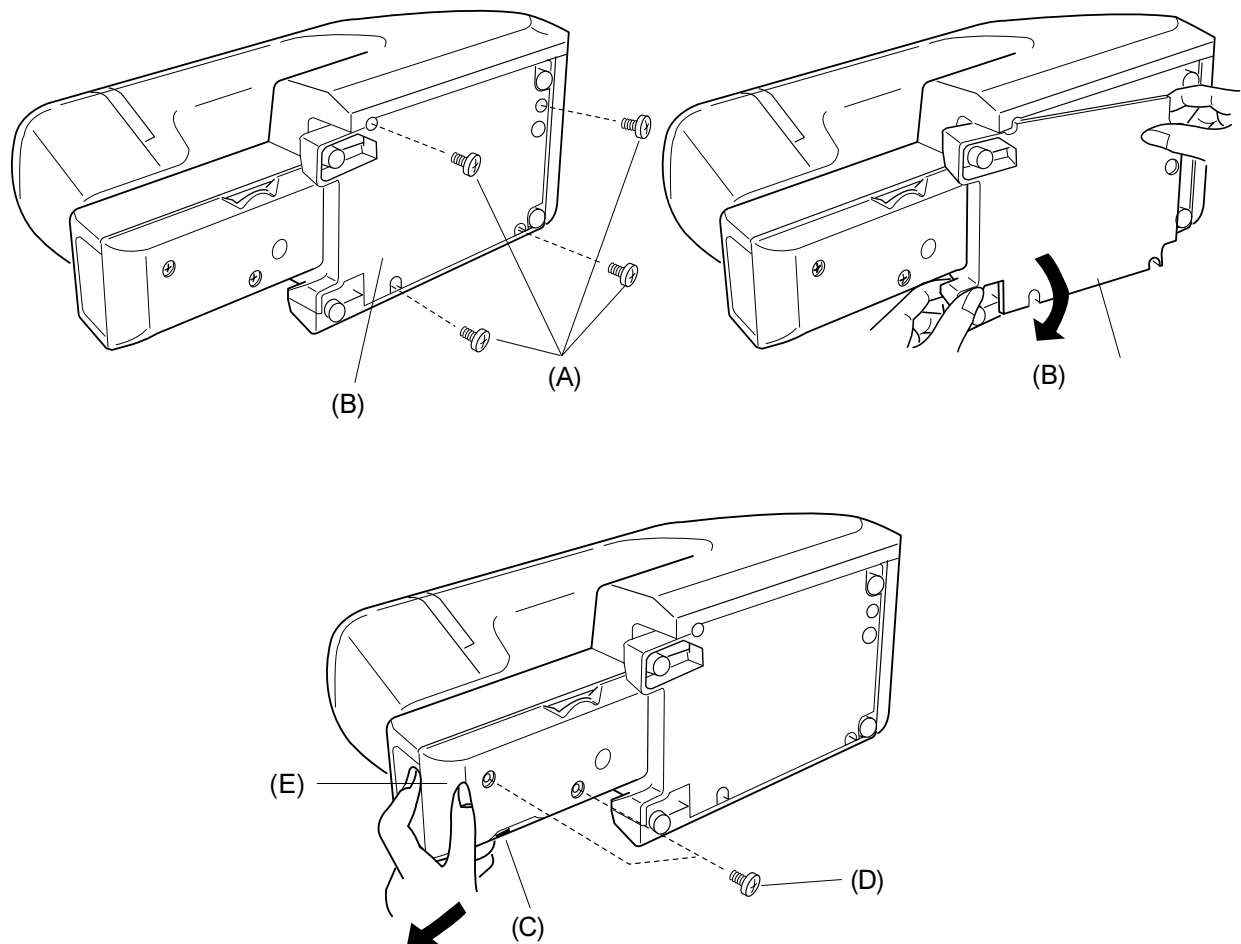
Mounting

Reverse the above procedure.

Lower free arm cover

De mounting

- 1.Shift the drop feed lever (C) to the left.
- 2.Remove the two set screws (D).
- 3.Remove the lower free arm cover (E).



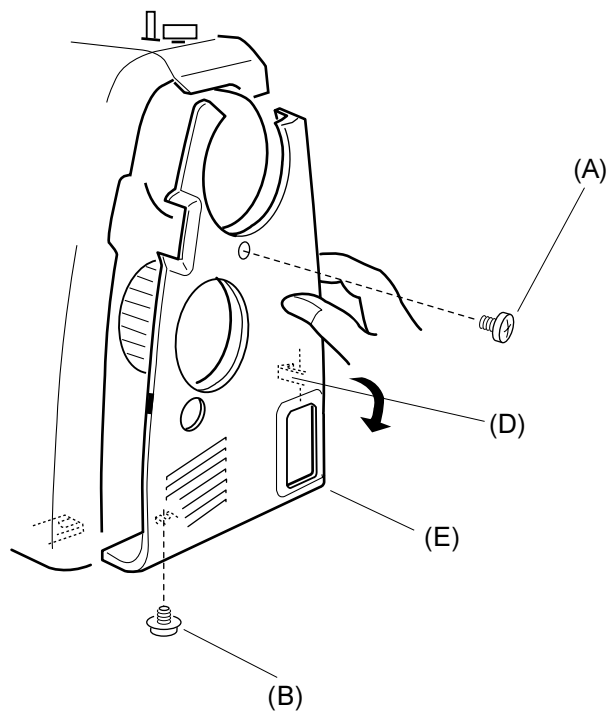
Motor cover

De mounting

- 1.Remove the screw (A).
- 2.Loosen the screws (B & C).
- 3.Unhook the hook (D) from the rear cover and remove the belt cover (E).

Mounting

Reverse the above procedure.



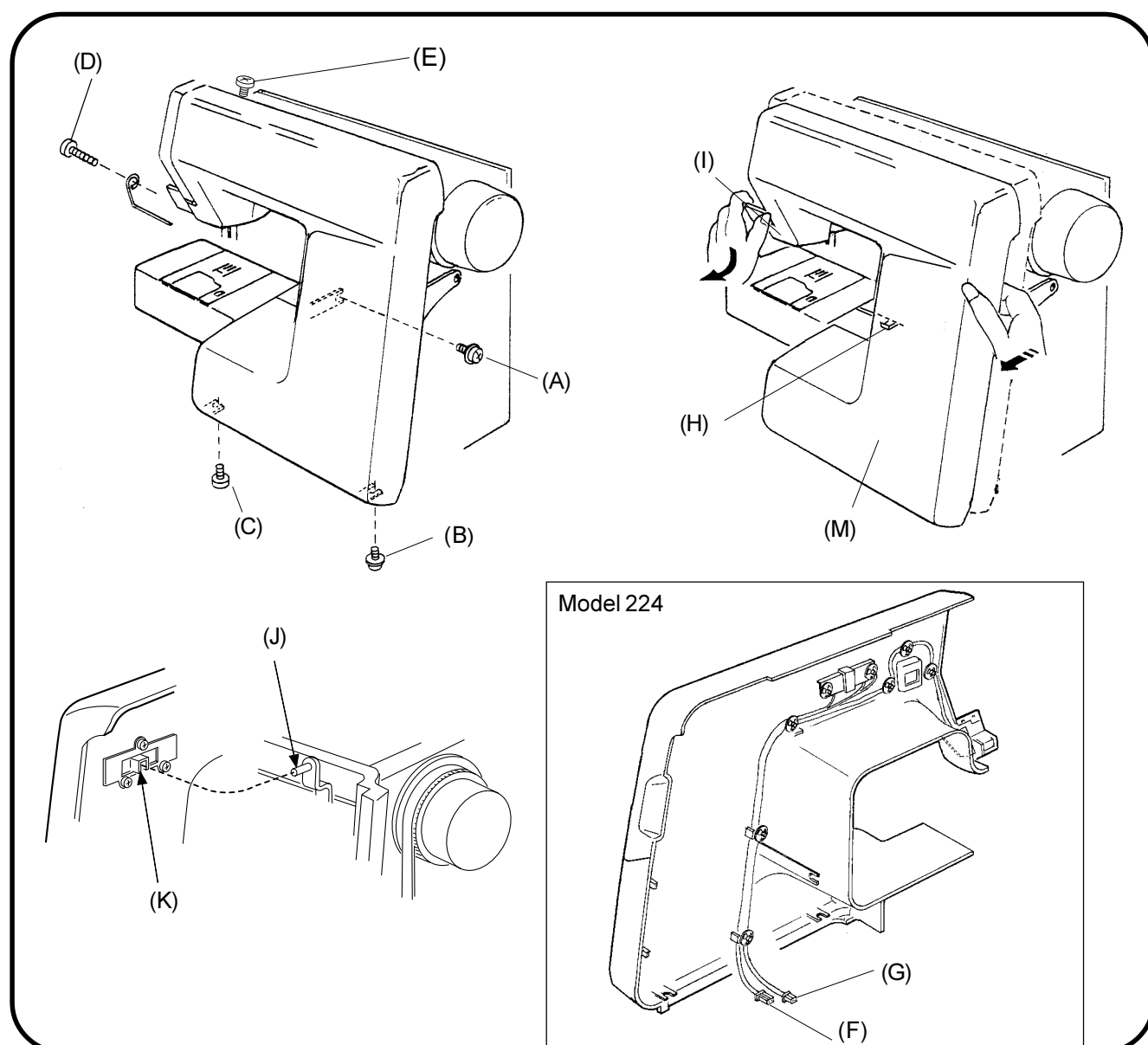
Front cover

1. Remove the face cover, top cover and motor cover .
2. Loosen the screws (A & B).
3. Remove the screws (C & D).
- 4 Loosen the screw (E).
5. Pull out the connectors (F & G).
6. Unhook the hook (H) and pull the left end (I) toward you.
7. Remove the front cover (M).
8. Disconnect the cables (F) and (G) -Only224.

Mounting

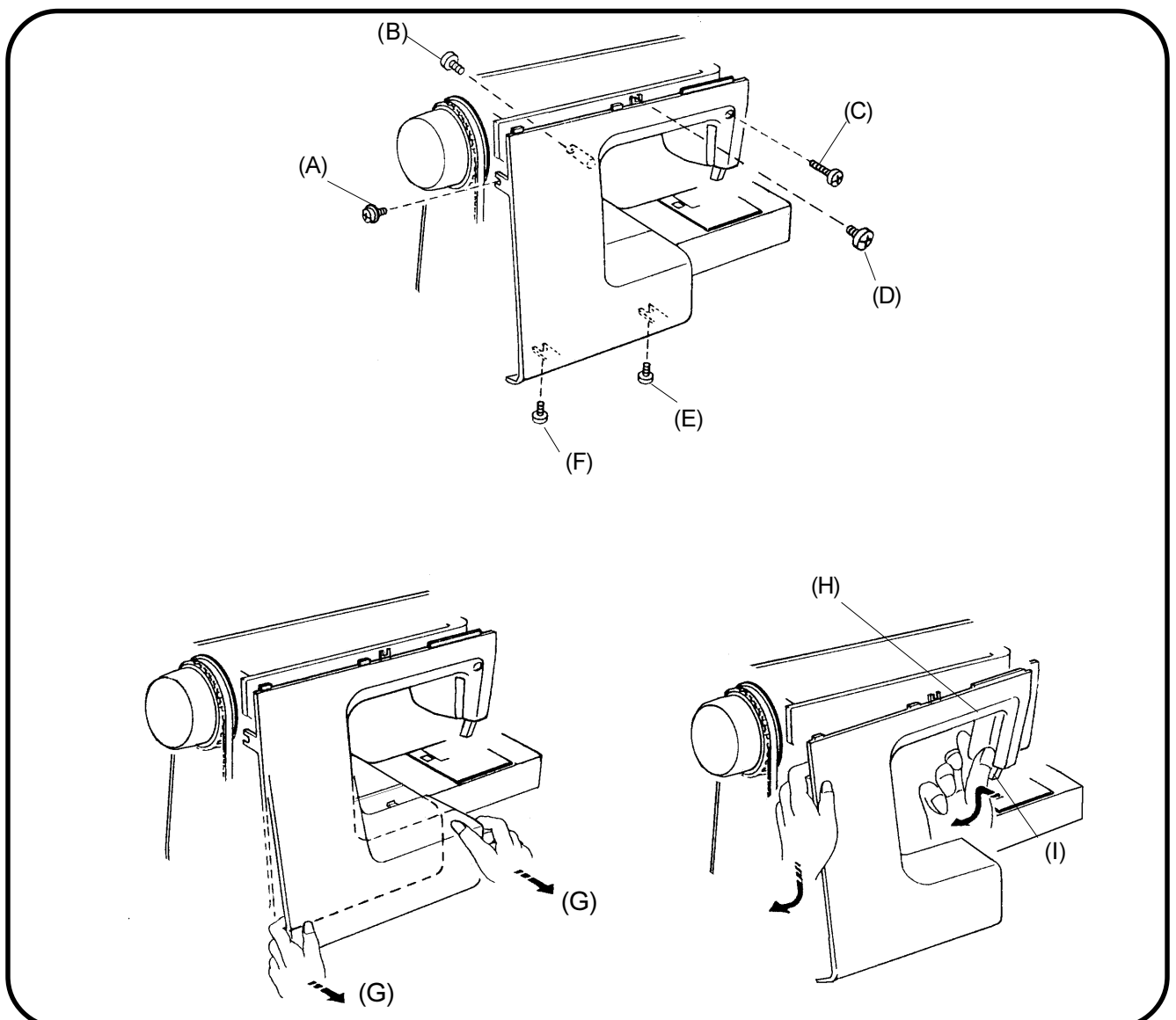
Reverse the above procedure.

When attaching the front cover to the machine, the pin (J) should be in the groove (K).



Back cover

1. Remove the face cover, top cover, motor cover and front cover.
2. Loosen the screw (A).
3. Remove the screws (B, D, E & F).
4. Pull the lower end (G) of the back cover.
5. While pushing the part (H) toward the machine body, pull the left end (J) of the back cover.



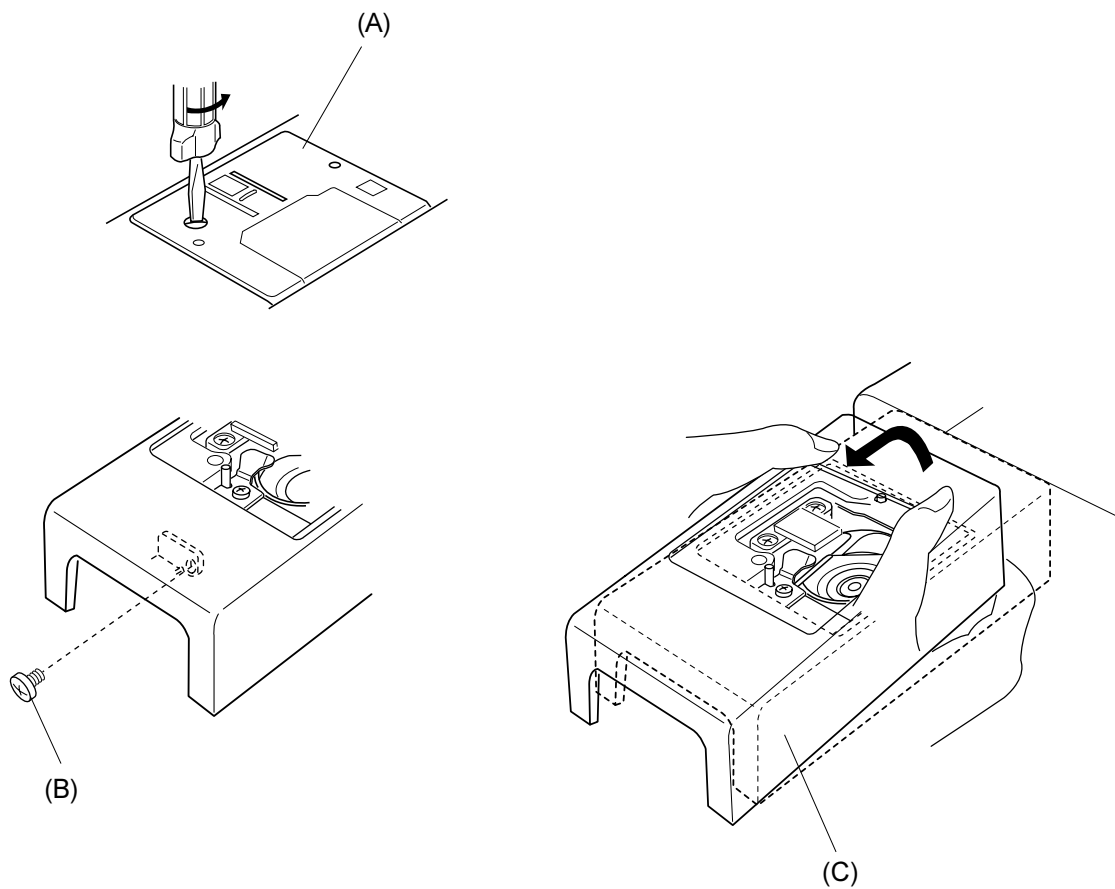
Upper free arm cover

De mounting

1. Remove the Stitch plate (A).
2. Remove the screw (B)
3. Remove the upper free arm cover (C).

Mounting

Reverse the above procedure.



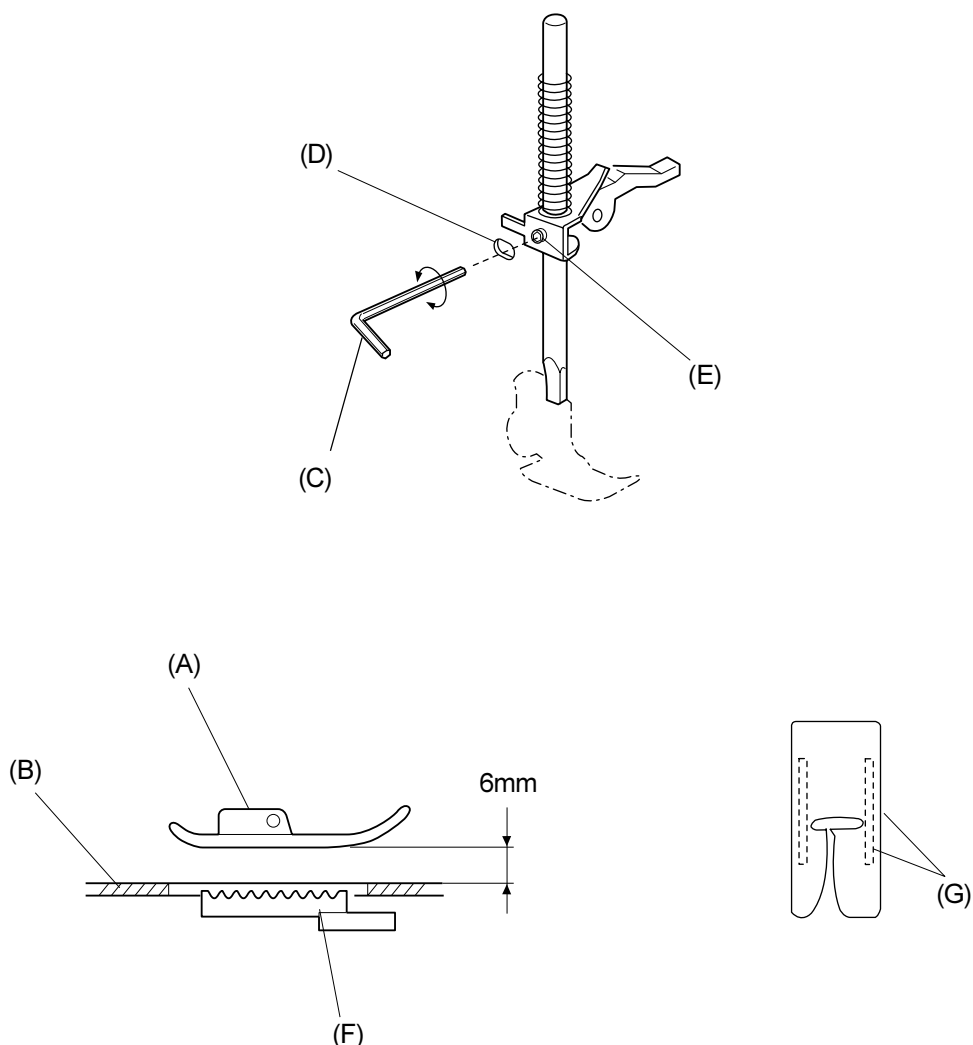
Presser bar height

Check

When the zigzag foot (A) is raised, the distance between the zigzag foot (A) and stitch plate (B) should be 6.0 mm.

Adjustment

1. Remove the face cover.
2. Raise the zigzag foot.
3. Pass the allen key (C) through the hole (D) of the supporter.
4. Loosen the hexagon socket screw (E).
5. Adjust the distance between the zigzag foot (A) and stitch plate (B).
6. Tighten the hexagon socket screw (E).
7. Check if the zigzag foot is paralleled with the feed dog (F) as shown below (G).
If not, loosen the hexagon socket screw (E), and adjust the direction.
8. Attach the face cover.



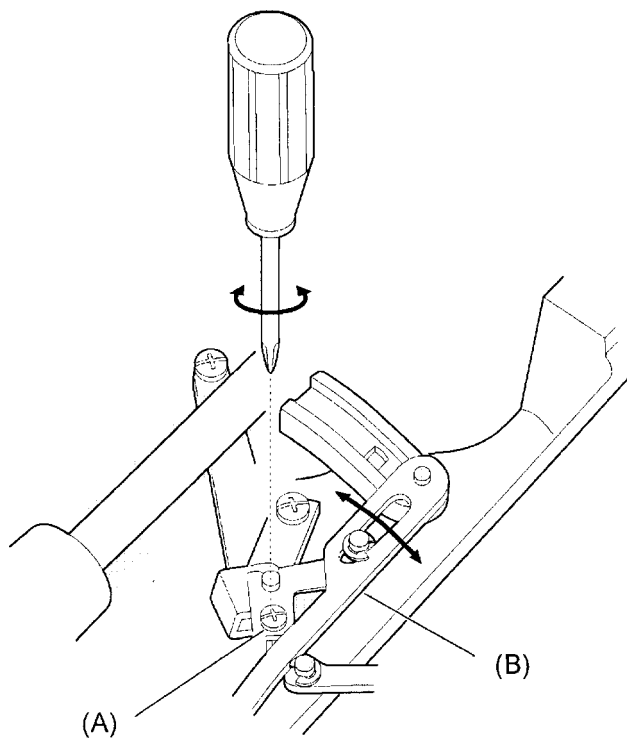
Zeroing the needle

Check

When the stitch  is selected and the zigzag width is set at "0", the needle should not swing while turning the hand wheel toward you with your hand.

Adjustment

1. Remove the face cover and top cover .
2. Select the stitch .
3. Set the zigzag width at "0".
4. Loosen the screw (A).
5. While turning the hand wheel toward you, move the rod (B) until needle stops swinging.
6. Tighten the screw (A).
7. Attach the face cover and top cover.



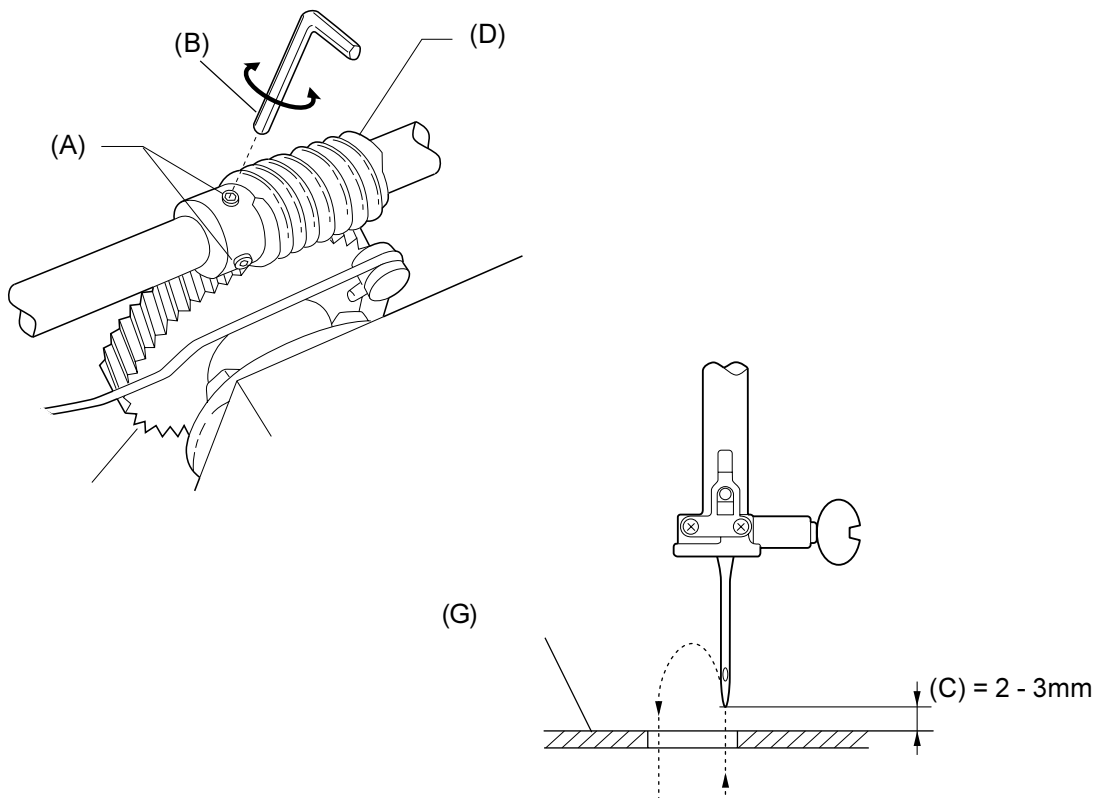
Turning movement of the needle in zig-zag

Check

The needle should start swinging when the needle tip is above the needle plate (G) and should stop swinging before entering into the hole of needle plate.

Adjustment

1. Remove the face cover and top cover.
2. Select the stitch $\approx$ and set the zigzag width at "6".
3. Turn the hand wheel to set the needle bar at the right needle position.
4. Loosen the 2 hexagon screws (A).
5. Insert the Allen key into one of the hexagon socket screws (A).
6. Turn the hand wheel so that the needle tip comes 2 to 3mm above the needle plate (G) in upward travel as shown below (C). Be careful not to move the worm gear (D) sideways.
7. Tighten the 2 hexagon socket screws.



The play of the worm gear

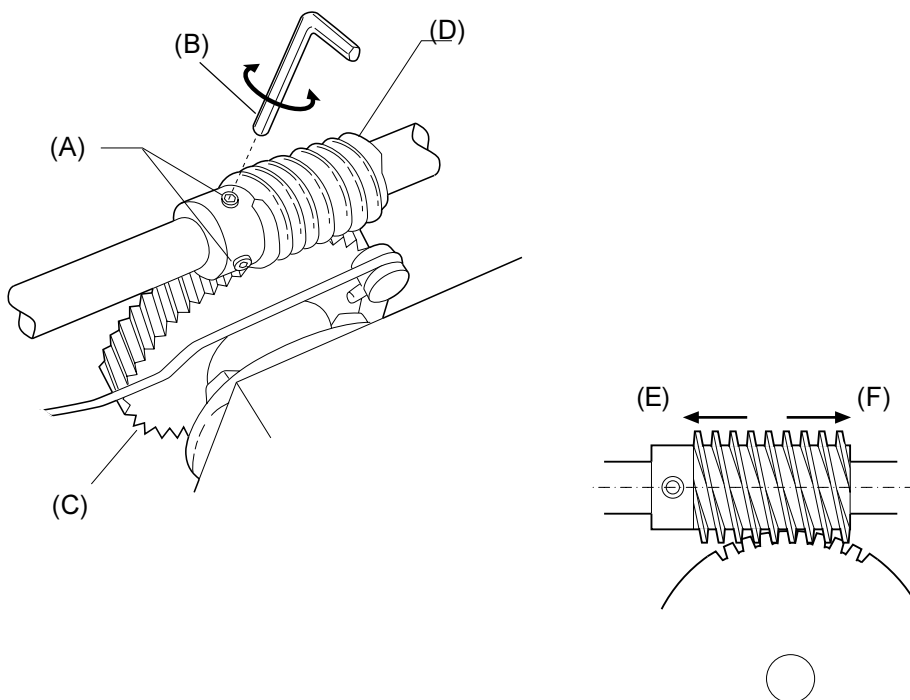
Check

It is impossible to obtain an equally large play in one rotation of the cog wheel, but it should be as small as possible at the tightest spot during the revolution.

Rotate the cogwheel (C) back and forth and check the play. It should be zero or as small as possible.

Adjustment

- Loosen the 2 hexagon socket screws (A) and move the worm gear:
 - to increase the backlash, move the worm gear (D) to the direction of (E).
 - to decrease the backlash, move the worm gear (D) to the direction of (F).
- Check that the setting "Turning movement of the needle in zig-zag" hasn't changed.



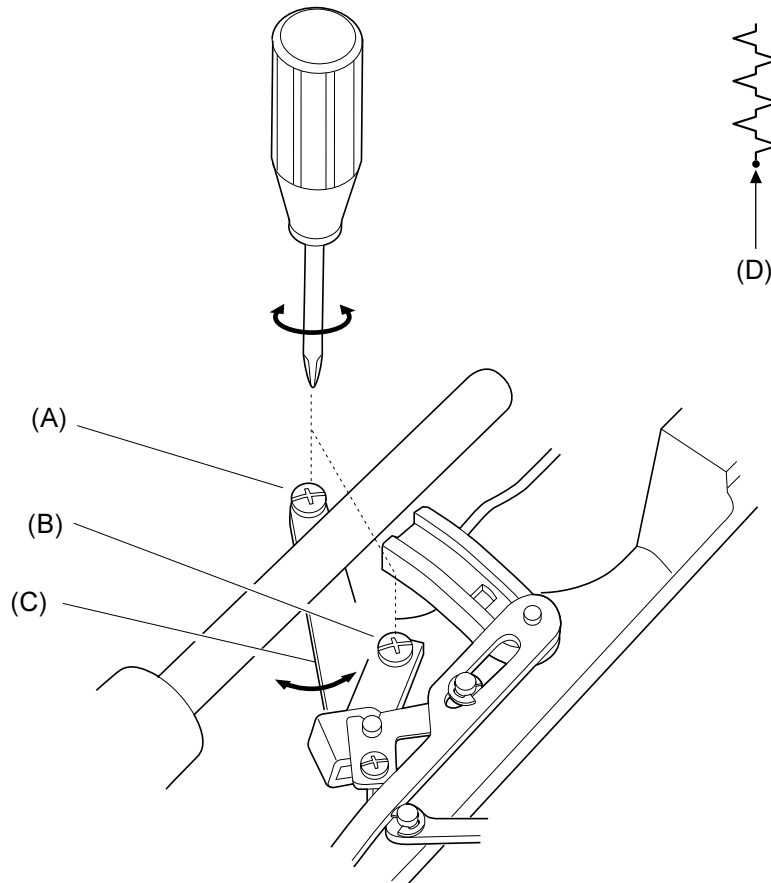
Needle position 1 - Variance

Check

1. Select the stitch .
2. Set the zigzag width at "6".
3. Turn the hand wheel toward you until the needle comes to centre of the stitch (D).
4. The needle should not move when you turn the stitch width control to "0".

Adjustment

1. Remove the top cover.
2. Turn the hand wheel toward you until the needle comes to the centre of the slit in the needle plate.
3. Loosen the screws (A and B) .
4. Tighten the screw (A) slightly.
6. Move the plate (C) in either direction as shown by the arrow until the needle stops moving then the zigzag width is changed from 6 to "0".
7. Tighten the screws (A and B) .



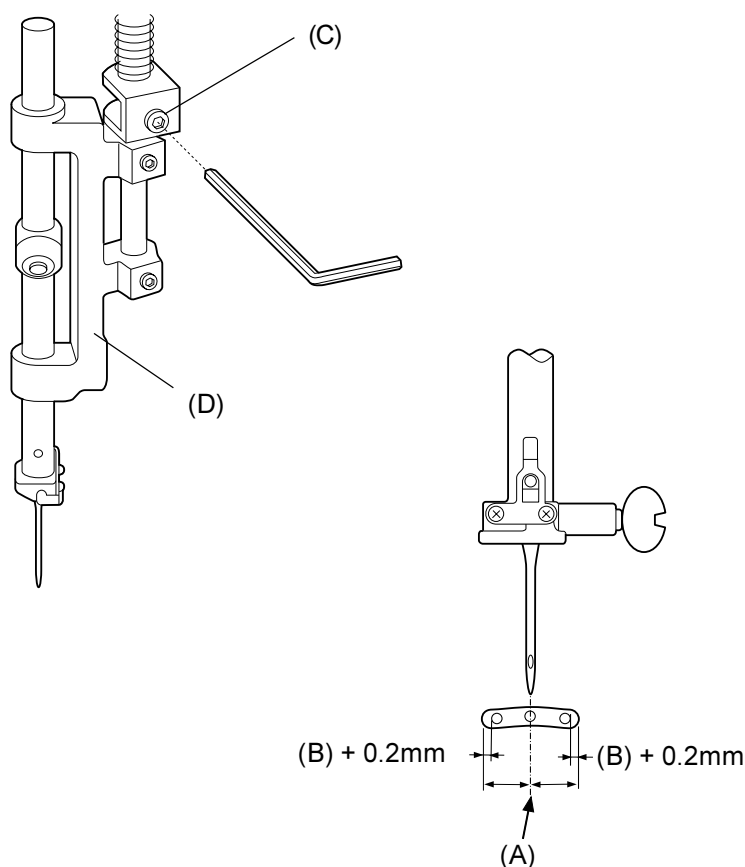
Needle position 2 - centre position

Check

1. When the stitch $\approx$ is selected with the zigzag width dial at "0", needle should be at the centre of the needle hole (A).
2. When the stitch $\approx$ is selected with the zigzag width dial at "6" the distance between the edge of needle hole and needle at both sides should be even and more than 0.2mm (B).

Adjustment

1. Select the stitch $\approx$ and set the zigzag width lever at "0".
2. Remove the face cover.
3. Loosen the hexagon socket screw (C).
4. Move the needle bar supporter (D) so that the needle comes to the centre of the needle hole (A).
5. Tighten the hexagon socket screw (C).
6. Select the stitch $\approx$ and set the zigzag width lever at "6".
7. Check the distance at both sides between needle and edge of needle hole (B).

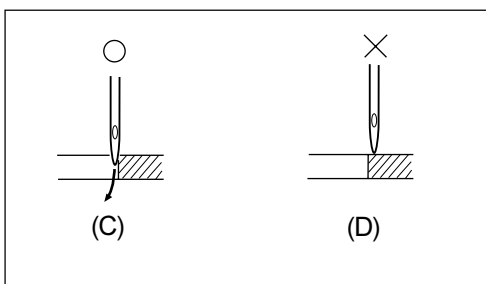
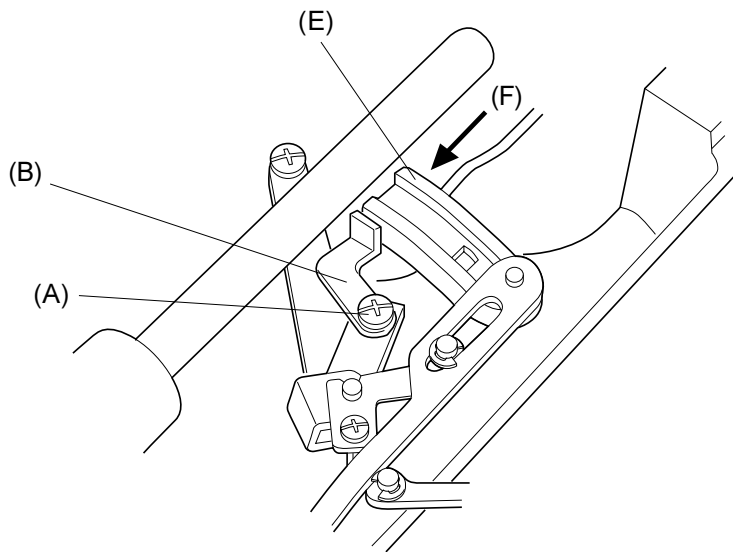


Needle position 3 – End position

The tip of the needle shall not hit the stitch plate when sewing zigzag and stitch with "6"

Adjustment

1. Remove the face cover and top cover.
2. Select the stitch .
3. Set the zigzag lever at "6".
4. Turn the hand wheel and set the needle tip just above the needle plate in downward travel on the right hand side.
5. Loosen the screw (A).
6. Adjust the position of the stopper (B) and check the function.
 If needle scrubs the needle plate as shown below (C), the stopper is in correct position.
 If needle tip hits the needle plate as shown below (D), adjust the position of the stopper (B) again.
7. Run the machine at the maximum zigzag width. The rocking (E) arm should not hit the stopper (B).
8. Attach the top cover and face cover.



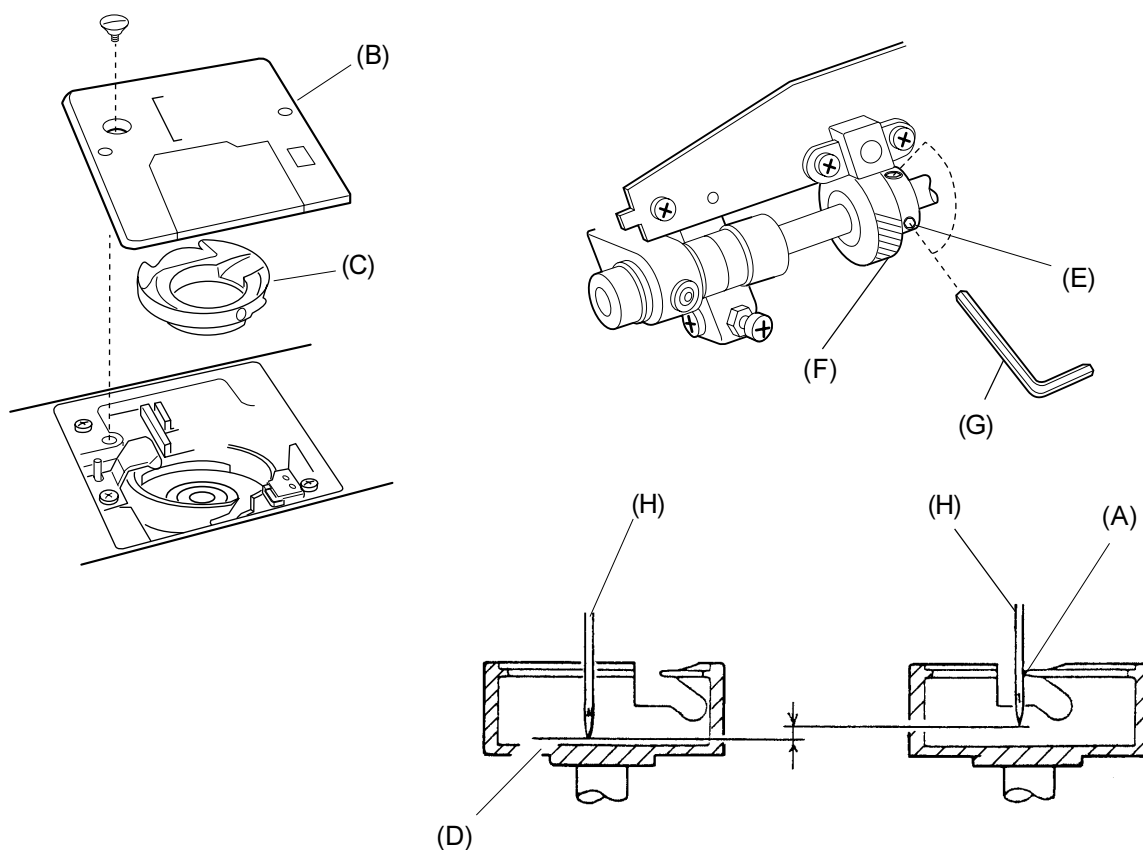
Timing of the hook in relation to the needle

Check

Set the machine on straight stitching. The needle should travel 3,3 $\pm$ 0,15 mm from its lowest left position before the tip of the hook exactly meets the right side of the needle.

Adjustmentq

1. Remove the stitch plate (B) and bobbin holder (C).
 2. Select the stitch $\approx$ and set the zigzag lever at "0".
 3. Remove the lower free arm cover.
 4. Loosen the 2 hexagon socket screws (E) on the lower shaft gear (F).
 5. Turn the hand wheel toward you until needle bar comes 3,3 $\pm$ 0,15 mm from the lowest left needle position in the zigzag.
 6. Insert the allen key (G) into one of the hexagon socket screw (E) and turn the lower shaft gear (F) until the tip of the rotary hook meets the right side of the needle (H).
 7. Tighten the 2 hexagon socket screws (E).
- Attach the bed cover, bobbin holder (C) and stitch plate (B).



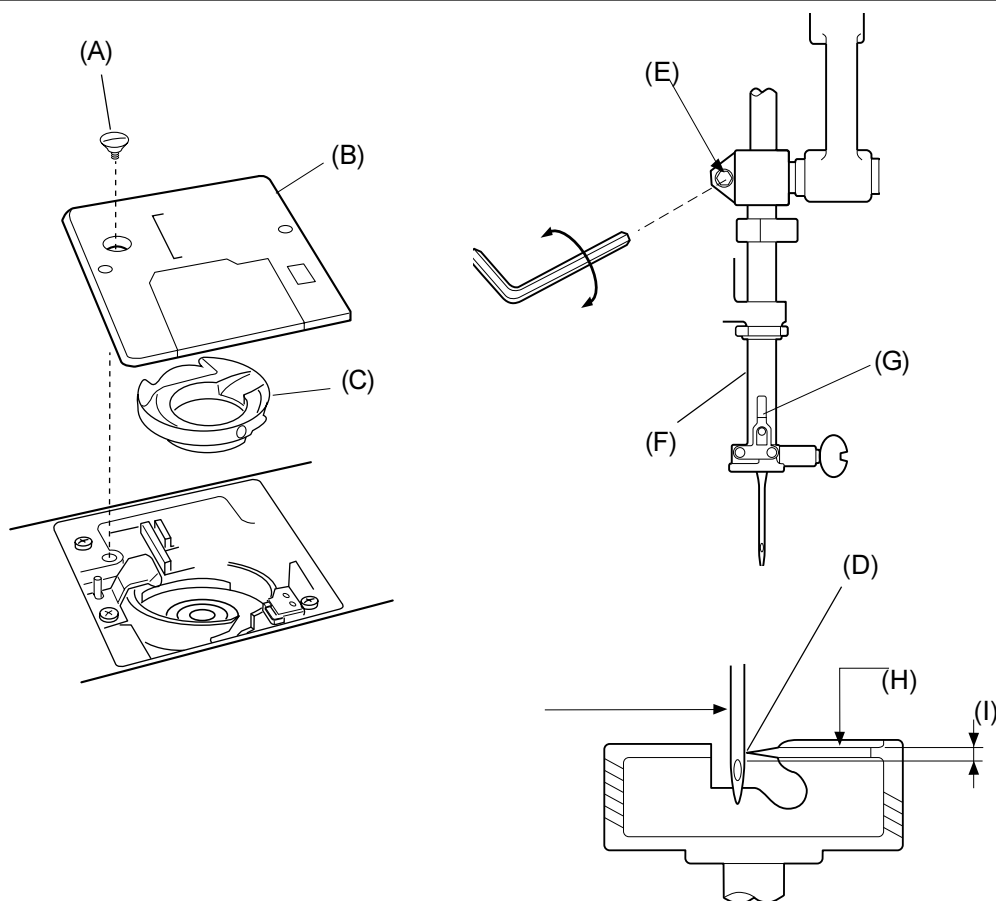
Needle bar height

Check

Set the machine on zigzag and maximum width "6". When the needle from its lowest right hand position exactly meets the tip of the hook the distance between the upper edge of the needle eye and the ring of the hook (H) should be 1,7 to 2,1 mm (I)

Adjustment

1. Select the stitch $\approx$ and set the zigzag width at "6".
2. Remove the screw (A). Remove the stitch plate (B) and bobbin holder (C).
3. Tilt the machine to the back and open the face cover.
4. Turn the hand wheel toward you until the tip of hook (D) exactly meets the right hand side of the needle at the left needle drop position.
5. Loosen the screw (E).
6. Set the distance between the upper edge of needle eye (H) and the ring of the hook (I) to 1.7 to 2.1 mm by moving the needle bar (F).
7. Tighten the screw of the needle bar connecting stud. The groove (G) should come to the front.
8. Attach the bobbin holder and stitch plate.



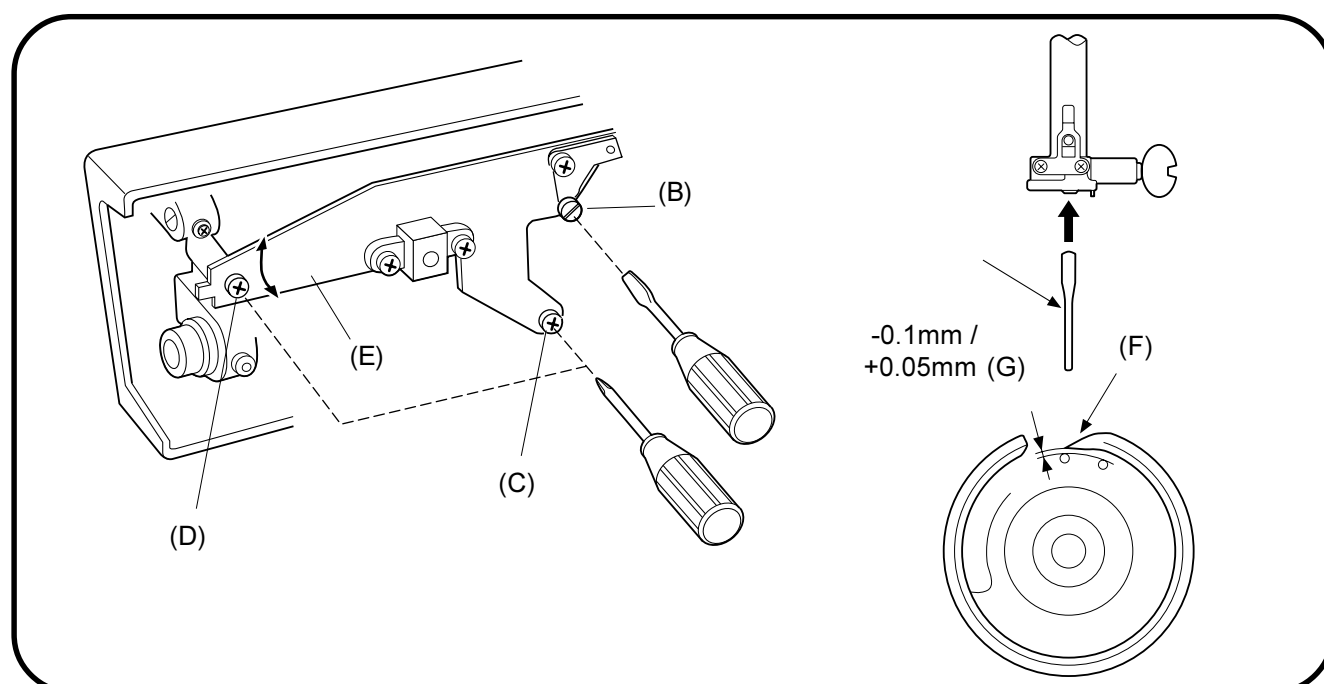
Clarence between needle and the hook

Check

1. Select the zig-zag stitch $\approx$ and width "6".
 2. Insert a new needle 90 in machine
 3. Rotate hand wheel until the point of the hook arrives behind the needle in the left position.
- Check the gap by pressing a small screw driver against the needle.
The gap should be between -0.1 and +0.05mm (G).

Adjustment

1. Remove the stitch plate and bobbin holder.
2. Insert a new #90 needle.
3. Select the zig-zag stitch $\approx$ and width "6". Rotate hand wheel until the point of the hook arrives behind the needle in the left position
4. Turn the machine to the back and remove the lower free arm cover.
5. Loosen the screws (C) and (D).
6. Loosen the screw (B), then tighten it slightly so that the hook can be moved.
7. Move part (E) up or down to set the clearance between needle and the tip of hook (F) between -0.1 and +0.05mm (G) at the right and left sides.
8. Tighten the 3 set screws (B) (C) and (D).
9. Check the Play of the hook gear.
10. Attach the lower free arm cover, bobbin holder and stitch plate.



Play of the hook gear

It's impossible to obtain an equal large play in one rotation of the cogwheel, but it should be as small as possible at the tightest spot during the revolution.

Check

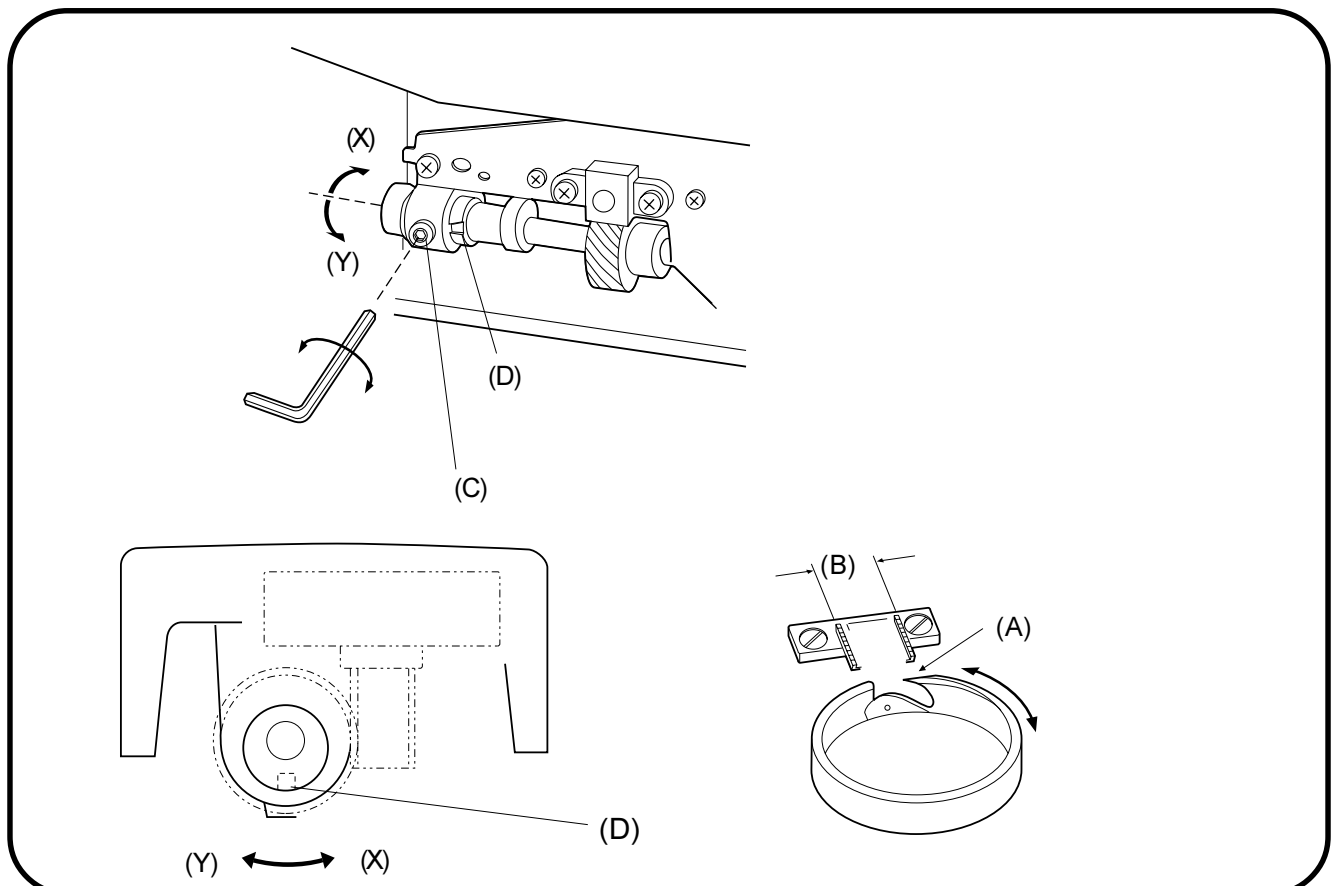
1. Remove the stitch plate and bobbin holder.
2. Turn the hand wheel slowly toward you until the tip of the rotary hook (A) comes between both ends (B) of the feed teeth
3. Turn the hook back and forth and check the play

Adjustment

1. Remove the stitch plate and bobbin holder.
2. Remove the lower free arm cover and loosen hexagon socket screw (C).
3. Turn the grooved part (D) of the lower shaft bushing (eccentric bushing) in the direction of
 - (X) If there is a tight spot.
 - (Y) when the backlash is too much.
4. Tighten hexagon socket screw (C).

Check the timing of hook and feed dog height.

Attach the lower free arm cover, bobbin holder and stitch plate.



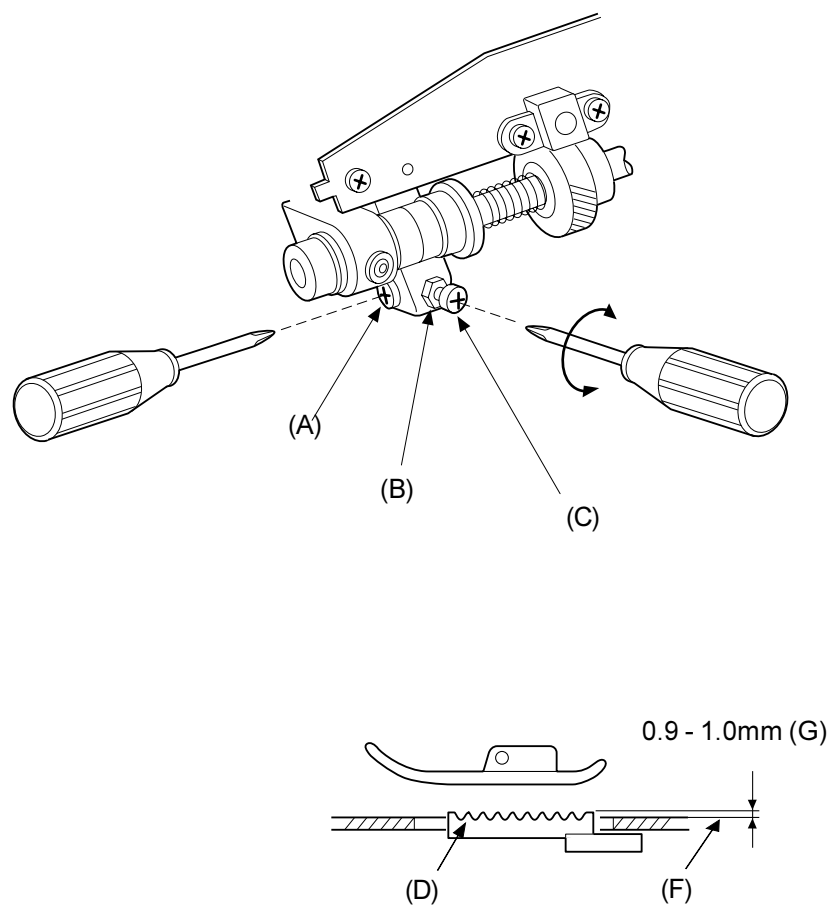
Feed dog height

Check

When the feed dog is in its highest position it should be 0.9 to 1.0 mm (G) from the surface of the needle plate.

Adjustment

1. Turn the hand wheel until the feed dog (D) comes to its highest position.
2. Remove the lower free arm cover.
3. Loosen the screw (A) and nut (B).
4. Turn the adjusting screw (C) so that the feed dog height is between 0,9 mm to 1.0 mm from the surface of the needle plate (F).
6. Tighten the nut (B).
7. Tighten the screw (A).
8. Attach the lower free arm cover.



Zero feeding

When straight stitch is selected and the stitch length dial (G) is set at "0", there should be no feeding.

Adjustment

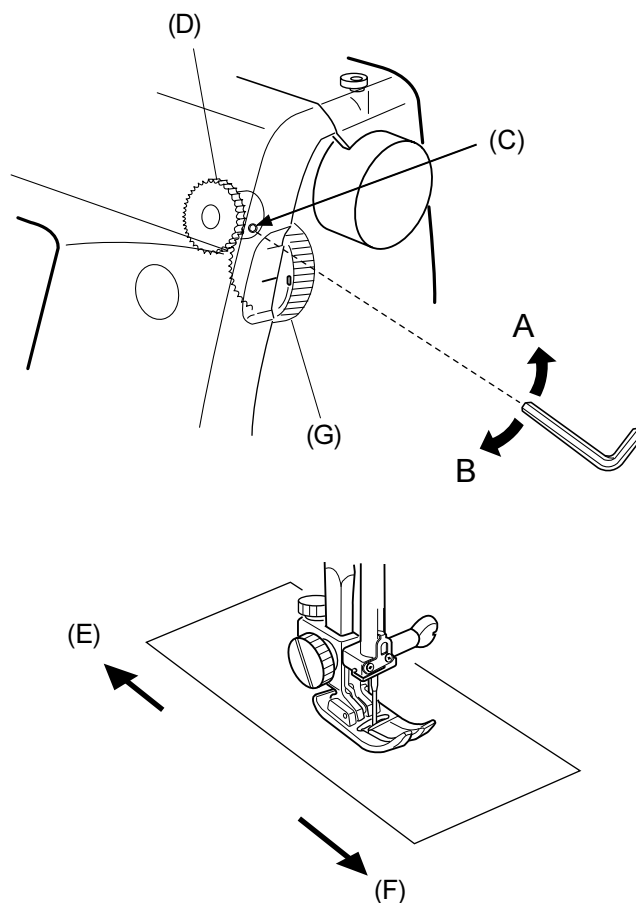
1. Remove the belt cover.
2. Set the machine on straight stitch and stitch length dial (G) at "0".
3. Place a piece of paper under the zigzag foot and lower the foot.
4. Turn the hand wheel toward you with your hand.
5. Loosen the hexagon socket screw (C).

If the paper moves forward (E), turn the feed gear (D) in direction of (A).

If the paper moves backward (F), turn the feed gear (D) in direction of (B).

When turning the feed gear, insert an allen key into the hexagon socket screw and turn the gear.

6. Attach the belt cover.



Stretch stitch balance

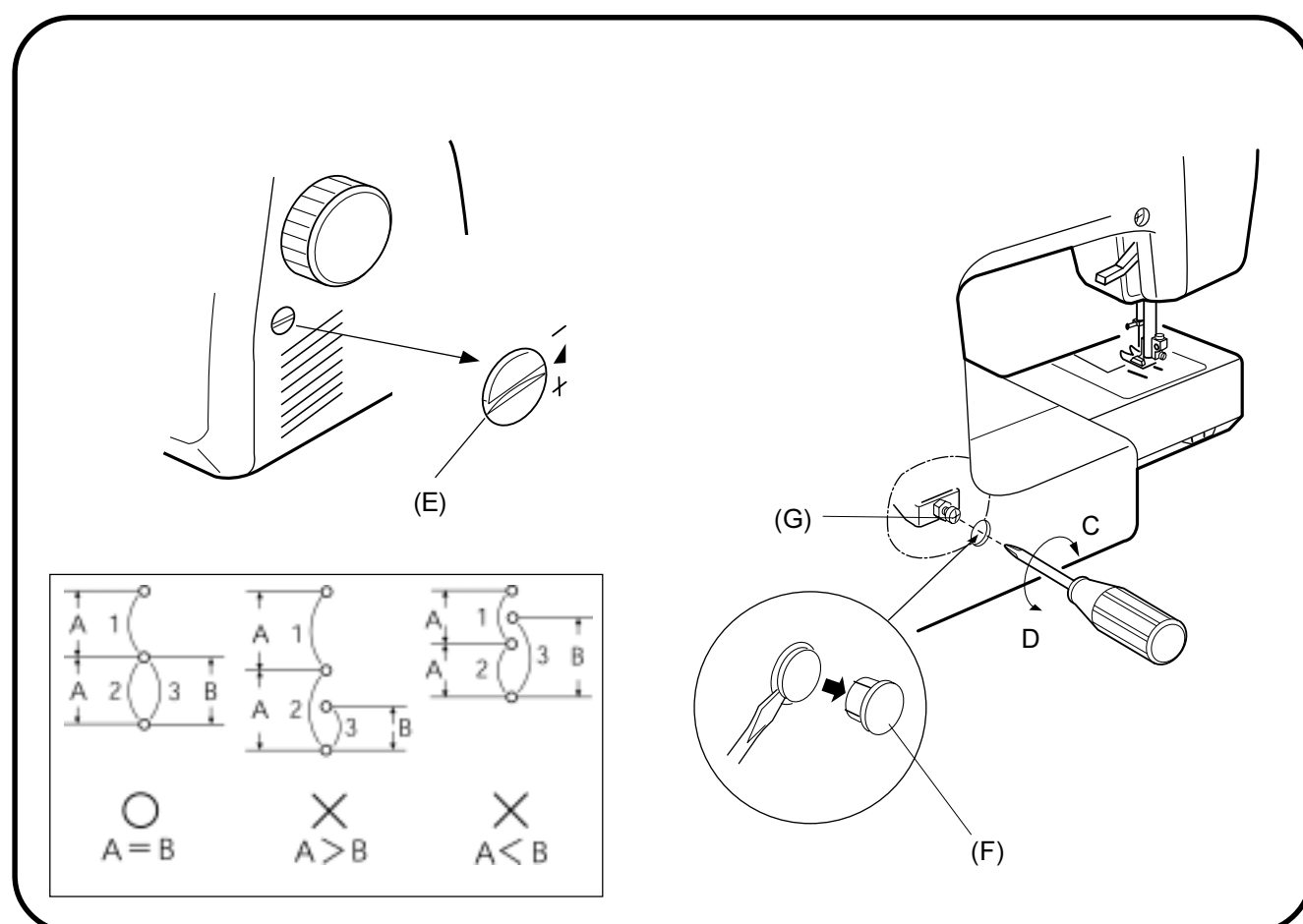
Check

When a stretch stitch  is sewn with the stretch stitch adjusting knob (E) at the ◀ mark, the stitch should be formed as shown in the figure below.

If there is no balance between forward feeding and backward feeding then make adjustment in the following procedure.

Adjustment

1. Select the triple lock straight stitch  and set the zigzag width lever at "6".
2. Set the stretch stitch adjusting knob (E) at the ◀ mark.
3. Put a piece of paper under the presser foot, and turn the hand wheel to check the needle drop position in forward (A) and backward feeding (B).
4. Remove the cap (F).
5. If (A) > (B), then turn the adjusting screw (G) in direction (C).
If (A) < (B), then turn the adjusting screw (G) in direction (D).
6. Attach the cap (F).



Stop right function -Needle up and down

Check

Stop the needle bar at "UP" position by pressing the needle up/down button. The needle bar should now stop when the tip of the needle is 12 to 15mm (F) above the top surface of the needle plate (G).

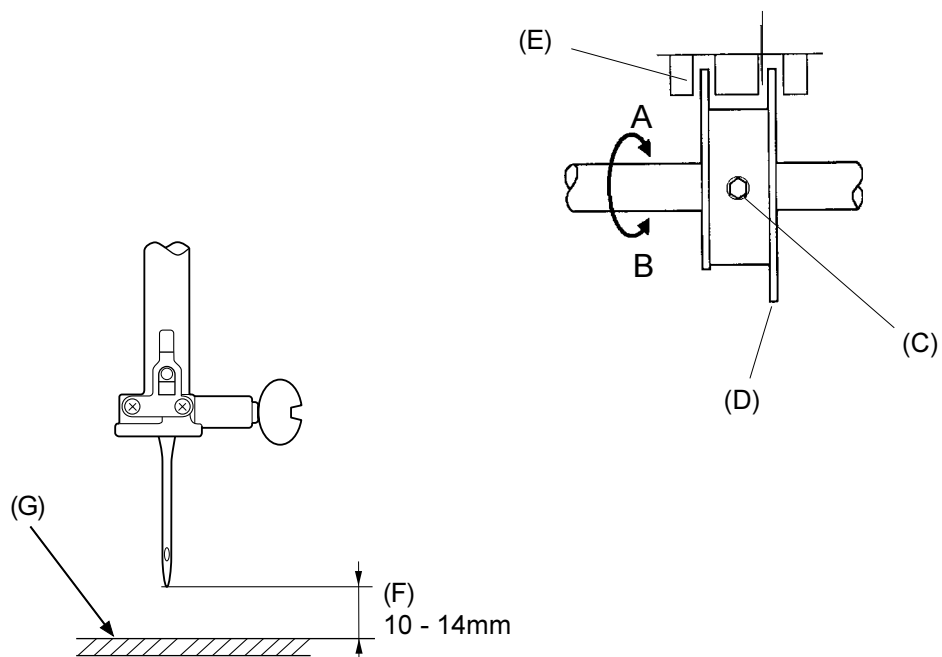
Adjustment

1. Remove the face cover and top cover.
2. Turn on the power switch.
3. Stop the needle bar at "UP" position by pressing the needle up/down button.
4. Loosen the hexagon socket screw (C) and turn the upper shaft shield plate (D) in the direction of:
 - (A) if the tip of the needle is higher than 14mm.
 - (B) if the tip of the needle is lower than 10mm.
5. Tighten the hexagon socket screw (C).

Make sure that the upper shaft shield plate (D) does not touch the upper shaft sensor (E).

6. Repeat this buttonhole function test a few times to see if the adjustment is made properly.

NOTE! Check if needle thread can be threaded by using the needle threader.



Lower thread tension (thread tension of the bobbin basket)

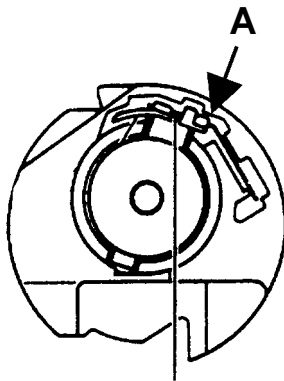
Check

1. Insert a full bobbin into the bobbin basket.
2. The thread tension spring of the bobbin basket shall give a resistance of 15 +- 2g when pulling the thread slowly.

Adjustment

Turn screw (A) until the correct thread tension is obtained.

NOTE! Remove any loose pieces of thread or fluff from under the spring.



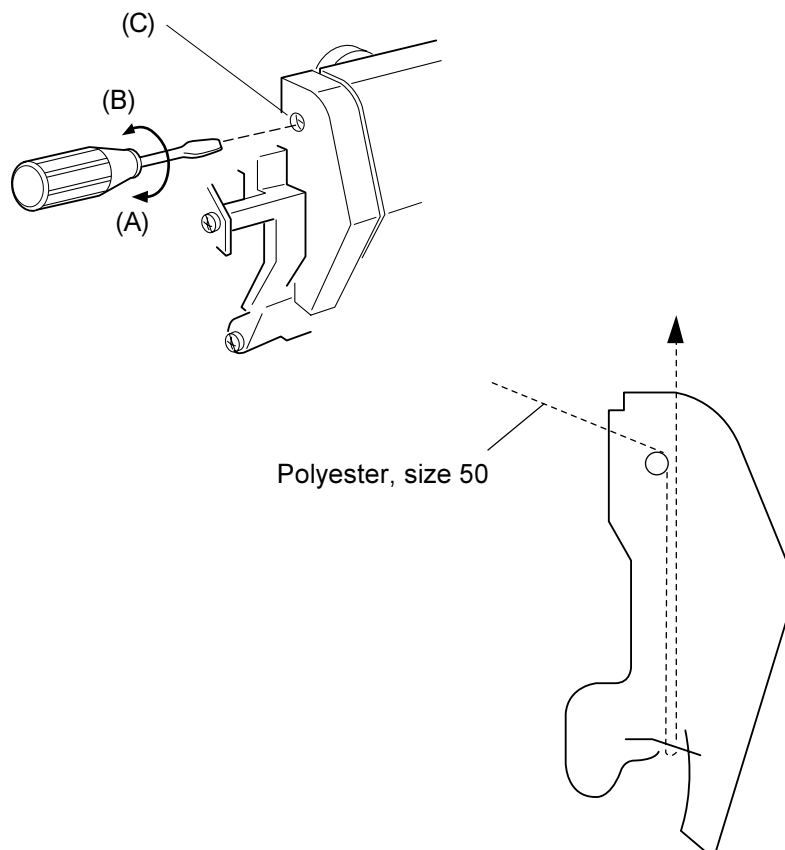
Upper thread tension

Check

A correct take-up should be obtained at straight stitching and zig-zag in cotton, when the thread tension dial is set on the marked field.

Adjustment

1. Remove the face cover
2. Set the thread tension dial at "4".
3. Sew the machine and turn the shaft (C) with a regular screwdriver in the direction of:
A if tension is too tight.
B if tension is too loose.
6. Attach the face cover.



Needle threader (for Model 224 only)

Check

1. Insert a new needle.
2. Bring the needle to its highest turning position.
3. The threader hook shall go smoothly into the needle eye.

Adjustment

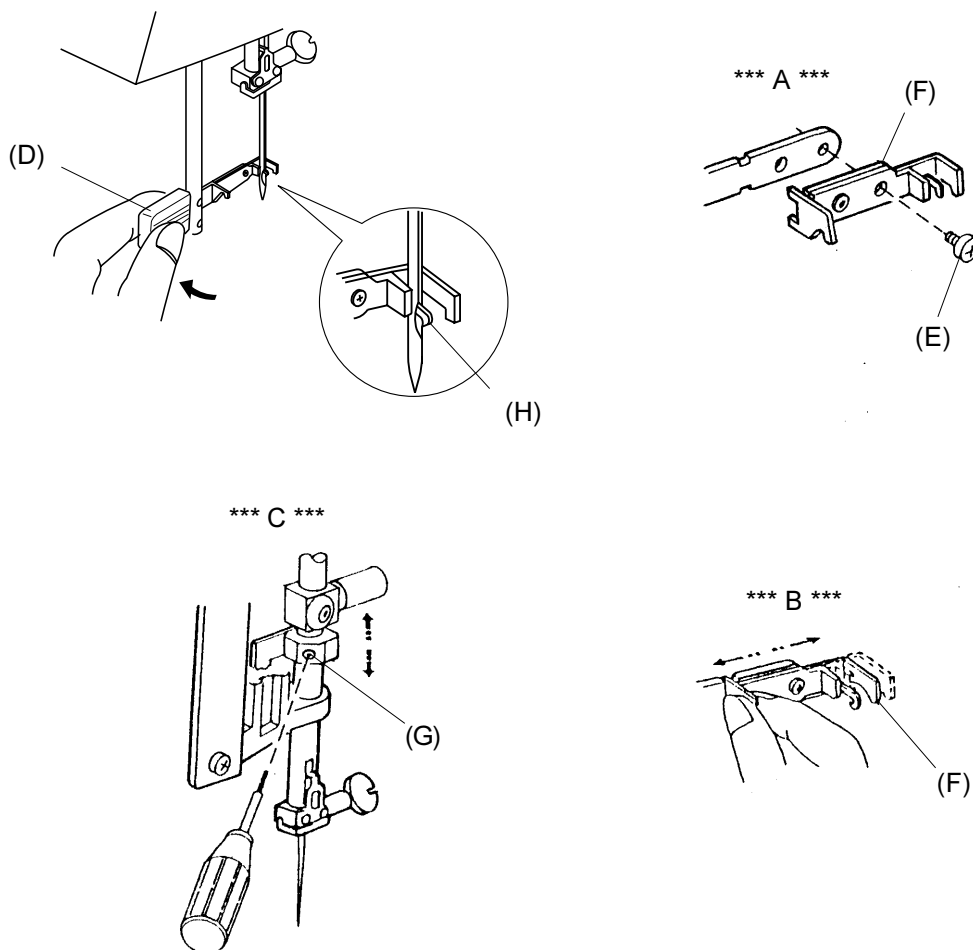
1. Insert a new needle.
2. Bring the needle to its highest turning position.

Setting sideways

If the hook (H) of the threader plate (F) touches the left or right side, loosen the screw (E) and adjust the hook position (** B **).

Setting Height

If the hook (H) of the threader plate (F) touches the top or bottom side of the needle hole, loosen the hexagon socket screw (G) and adjust the hook position (** C **).



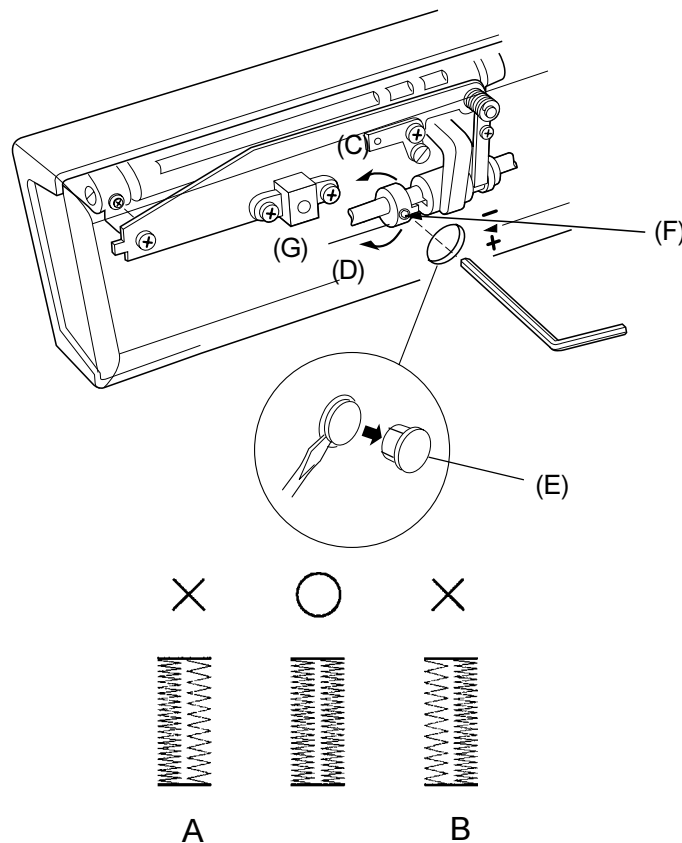
Buttonhole balance - The columns

Check

1. Stitch selector at "BH".
2. Stitch length dial at buttonhole mark .
3. Attach the buttonhole foot (R).
4. Sew a buttonhole.
5. The stitches on each side of the buttonhole should be of the same stitch density.

Adjustment

1. Remove the cap (E).
2. Loosen hexagon socket screw (F).
3. If the right side of the buttonhole is too coarse, turn the ring (G) in the direction of (D).
- If the left side of the buttonhole is too coarse, turn the ring (G) in the direction of (C).
4. Tighten hexagon socket screw (F).
5. Attach the cap (E).



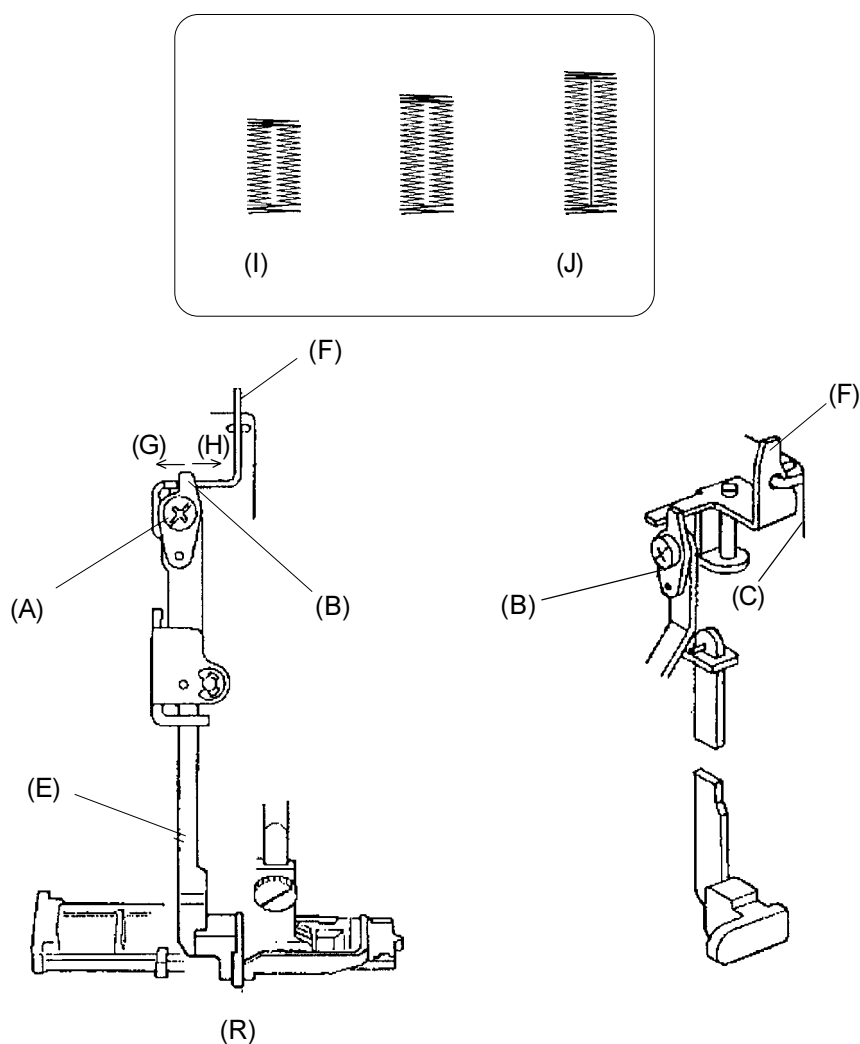
Buttonhole - The lenght

Check

A buttonhole sewn with the buttonhole foot (R) will be 3mm longer than the actual button.

Adjustment

1. Remove the face cover.
2. Attach the buttonhole foot (R) and lower the feed dog by turning the hand wheel, then lower the buttonhole foot.
3. Loosen the screw (A).
4. Pull down the buttonhole lever (E) until it touches foot (R), and plate (F) touches the supporter (C). In this condition the buttonhole lever adjusting plate (B) should touch the plate (F).
5. Tighten the screw (A).
6. Raise the feed dog and sew a buttonhole. If the buttonhole is:
 - too short (I), move the buttonhole lever adjusting plate (B) to the direction of (H).
 - too long (J), move the buttonhole lever adjusting plate (B) to the direction of (G).



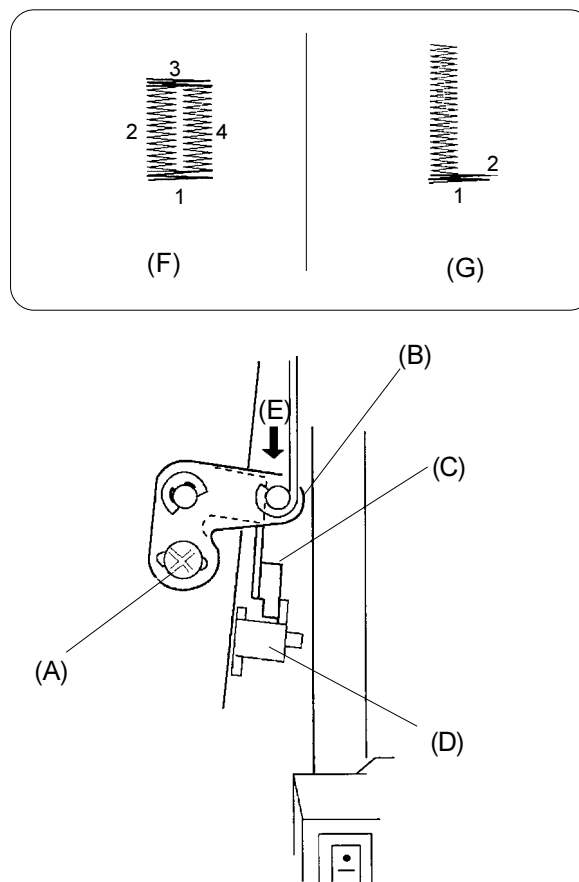
Buttonhole - The bar tack

Check

If the bar tack on the buttonhole is sewn too early (F), or if bar tack is sewn too late (G), adjust as follows:

Adjustment

1. Remove the motor cover.
2. Loosen screw (A).
3. Make adjustment so that plate (C) touches stopper arm (D) while lightly pushing plate (B) in the direction of (E).
4. Attach the motor cover.



Motor and belt tension

Check

The correct motor belt tension is achieved when the belt is pushed in about 7mm - 9mm (E) under a pressure of about 300 grams (D).

Adjust motor belt tension

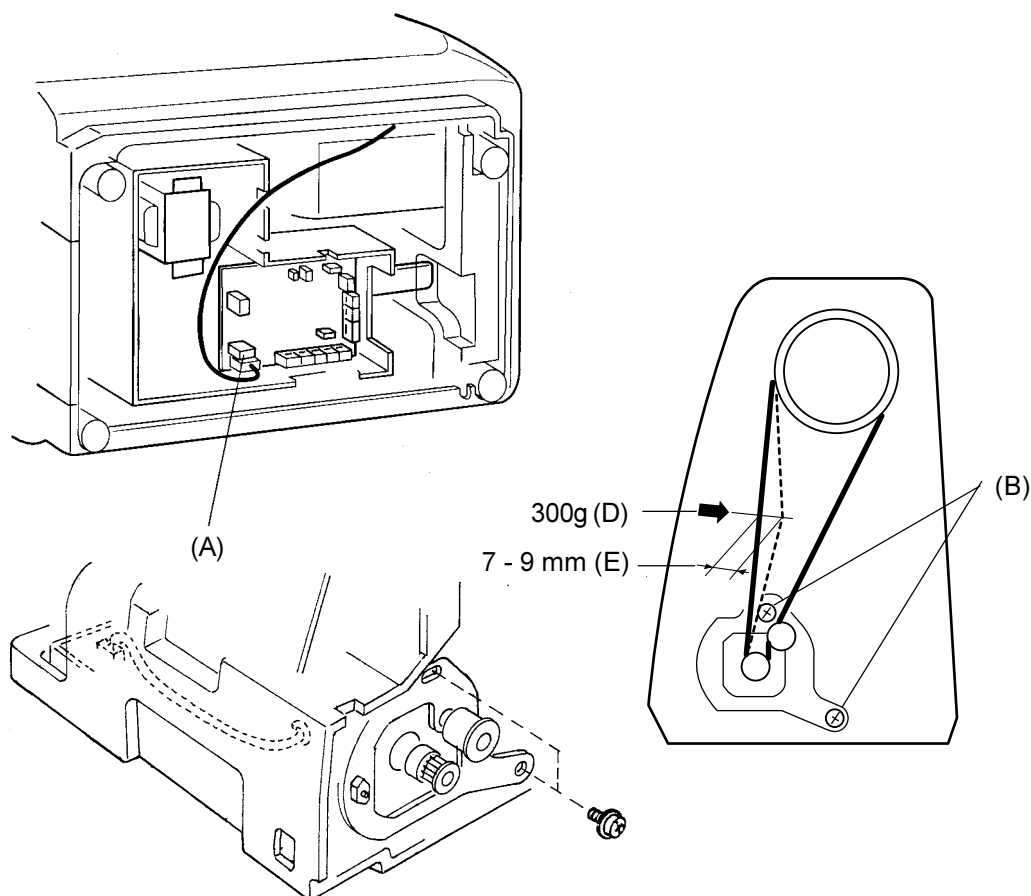
1. Remove the motor cover.
2. Loosen the two screws (B).
3. Move the motor up or down to adjust the deflection to about 7mm - 9mm.
4. Tighten the two screws (B).
5. Attach the motor cover.

Motor - De-mounting

1. Remove the belt cover and front panel
2. Pull out the connector (A) from the circuit board.
3. Remove the 2 screws (B) and remove the motor.

Mounting

Reverse the above procedure.



Transformer board - B and Transformer Fuse (Only for first version of Model 224)

Demounting of the Transformer

1. Remove the base.
2. Remove the 3 screws (A).
3. Remove the circuit board case (D), and disconnect the eight connectors.
4. Remove the 3 screws (B) and remove the circuit board cover (E).
5. Remove the 4 screws (C),
6. Disconnect the two connectors from the circuit board -B (F) and remove it.

Mounting

Reverse the above procedure.

See Wiring diagram on how the cables are connected.

The fuse

1. See demounting of the transformer
2. Remove it from circuit board B from the side of the fuse holder with a screwdriver or the like.

Following two kinds of fuses are used on circuit board B:

Fuse (H)

125V-2A for 110-120V area

250V-1A for 220-240V area

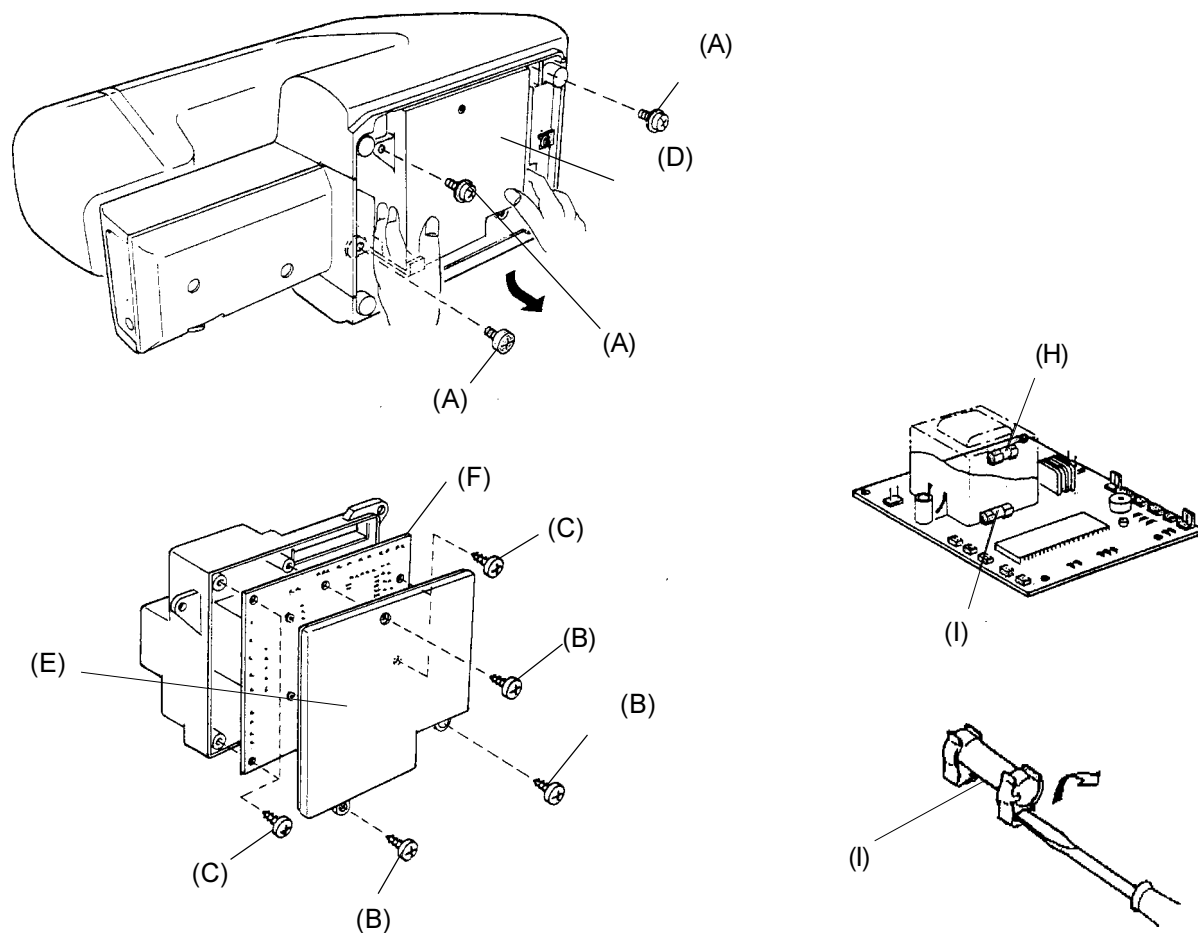
Fuse (I)

125V-0.25A

for 110-120V area

250V-0.25A

for 220-240V area



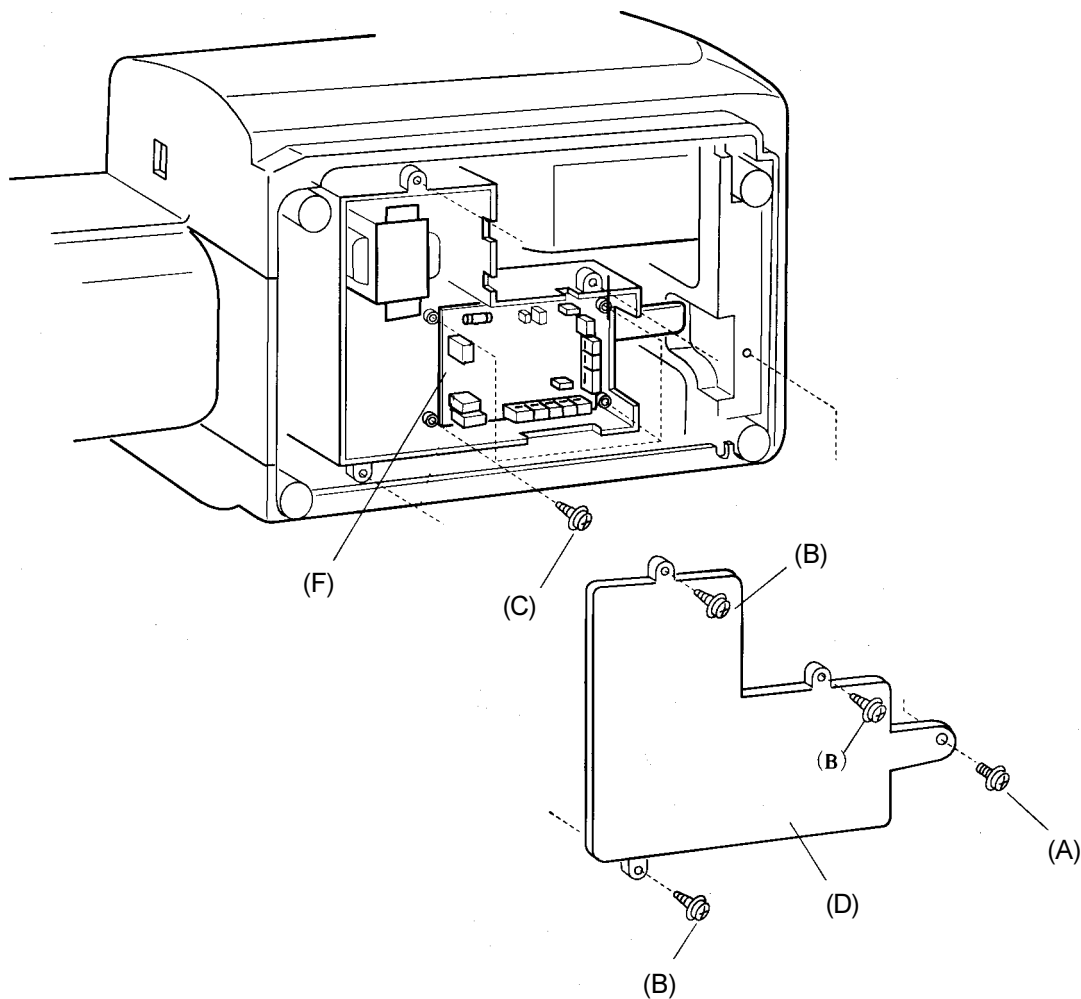
Transformer board - B and Transformer Fuse (Only for second version of Model 224)

De- mounting

1. Remove the base.
 2. Remove the set screw (A) and the 3 set screws (B).
- Remove the circuit board cover (D), and unplug the connectors.
3. Remove the 4 set screws (C), and remove circuit board B (F).

Mounting

Reverse the above procedure.



WIRING (for Model 219 only)

220-240V area

Blue (A)

Brown (B)

To Motor (C)

To Lamp (D)

110-120V area

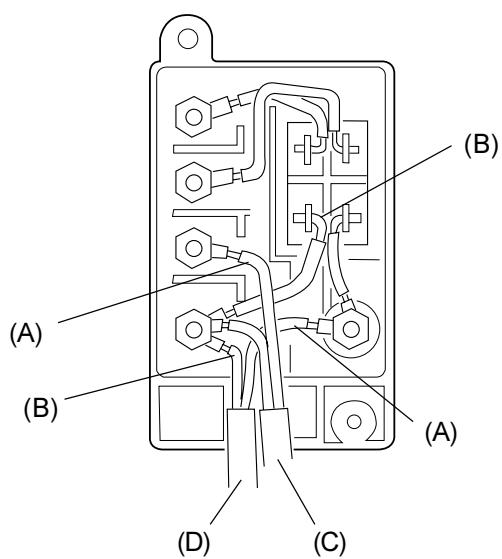
With ridge (E)

Without ridge (F)

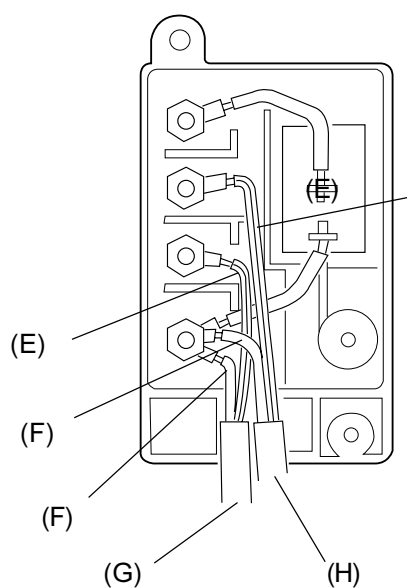
To Motor (G)

To Lamp (H)

220-240 Volt

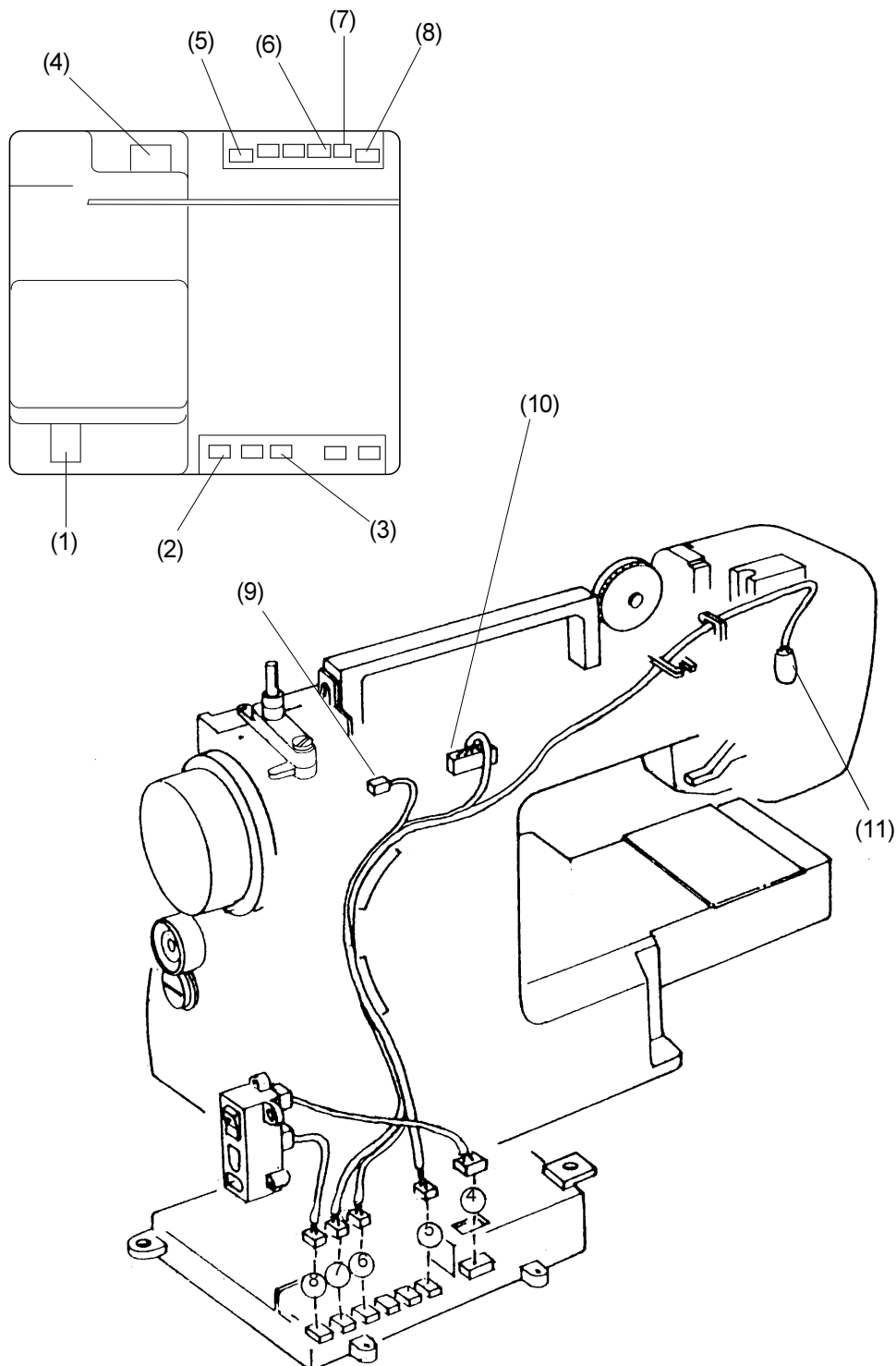


110-120 Volt



WIRING DIAGRAM (for first version of Model 224 only)

- | | |
|------------------------------|---------------------------------|
| (1) Motor | (7) Switch for bobbin winder |
| (2) Needle up/down button | (8) Machine socket (secondary) |
| (3) Zigzag width lever | (9) To switch for bobbin winder |
| (4) Machine socket (primary) | (10) To Upper shaft sensor |
| (5) Lamp switch | (11) Lamp socket |
| (6) Upper shaft sensor | |



WIRING DIAGRAM (Only for second version of Model 224)

- | | |
|------------------------------|--------------------------------|
| (1) Motor | (6) Machine socket (secondary) |
| (2) Transformer (primary) | (7) Speed reducer |
| (3) Machine socket (primary) | (8) Upper shaft sensor |
| (4) Lamp socket | (9) Bobbin winder switch |
| (5) Transformer (secondary) | (10) Needle UP/DOWN button |

