********* SERVICE MANUAL **********

Memory Craft 3000

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Top cover & face plate attaching and removing

TOP COVER (Y)

(TO REMOVE)

1. Remove 3 screws (A & B) and top cover.

(TO ATTACH)

2. Attached the top cover with 3 screws (A and B).

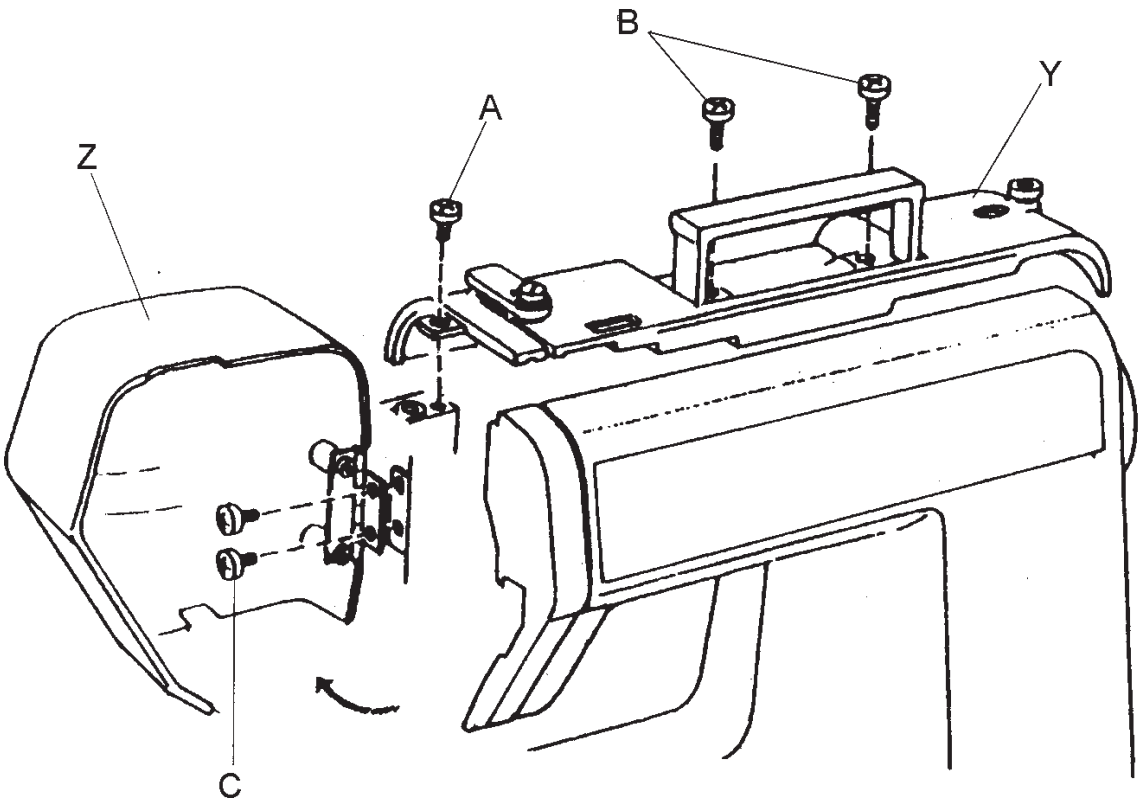
FACEPLATE (Z)

(TO REMOVE)

3. Remove 2 screws (C) and face plate.

(TO ATTACH)

4. Attach the face plate with 2 screws (C).



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Base & bed cover attaching and removing

BASE (Y)

(TO REMOVE)

1. Remove 6 screws (A) and base.

(TO ATTACH)

2. Attach the base with 6 screws (A).

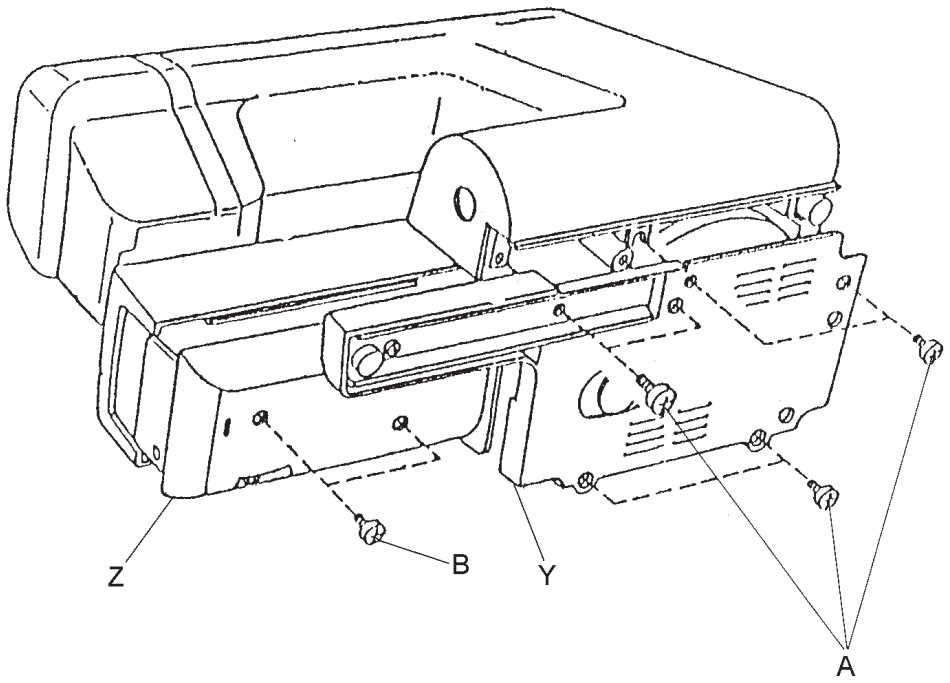
BED COVER (Z)

(TO REMOVE)

3. Move the drop lever to the left, then remove 2 screws (B).
4. Remove the bed cover.

(TO ATTACH)

5. Move the drop lever (C) to the left and attach the bed cover with 2 screws (B).



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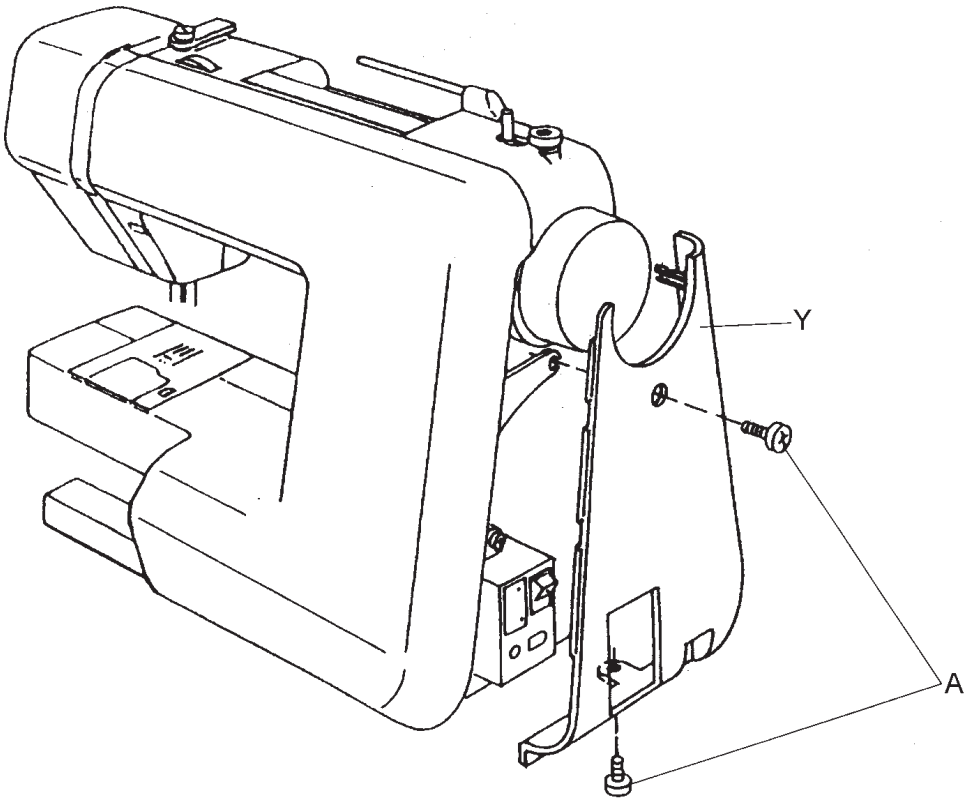
Belt cover attaching and removing

(TO REMOVE)

1. Remove 2 screws (A) and belt cover (Y), then pull out.

(TO ATTACH)

2. Attach the belt cover (Y) with 2 screws (A).



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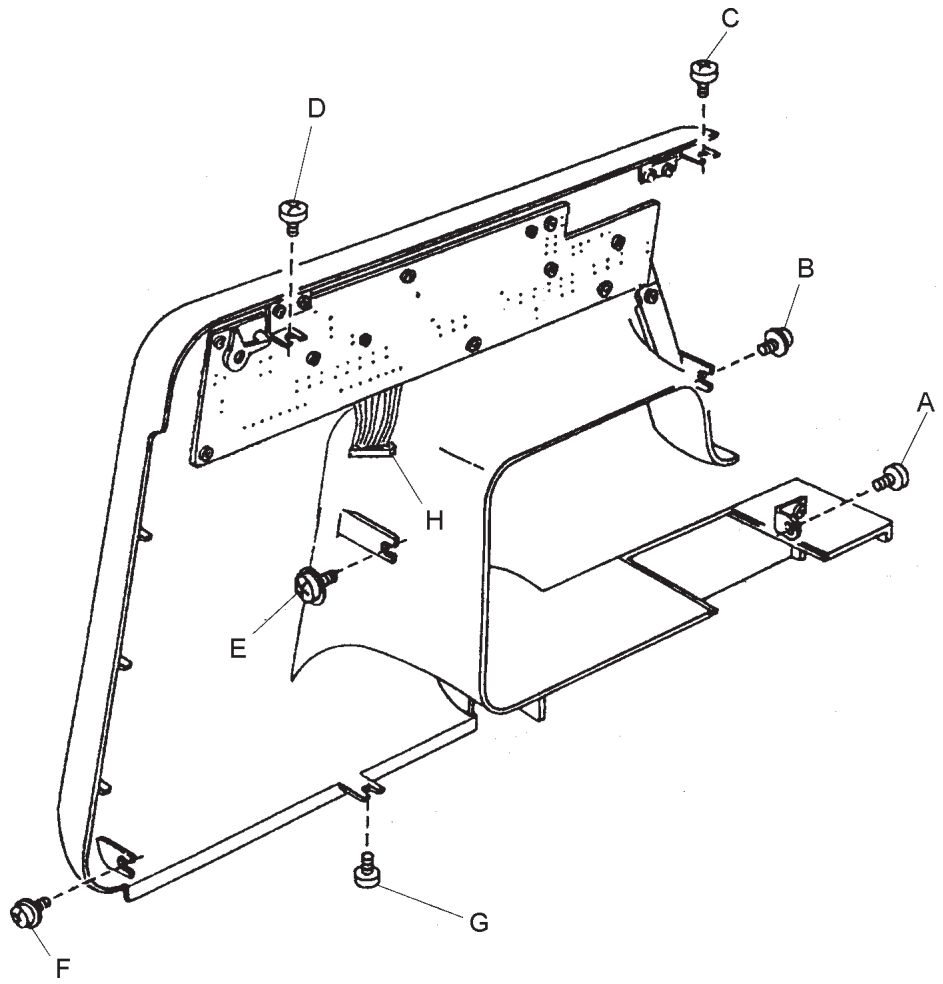
Front panel attaching and removing

(TO REMOVE)

1. Remove the top cover, belt cover and bed cover (See pages 1, 2 and 3).
2. Remove screw A and loose screws (B, C, D, E, F and G).
3. Pull out connectors (H) and remove the front panel.

(TO ATTACH)

4. Insert connectors (H) and attach the front panel.
5. Tighten the screws.



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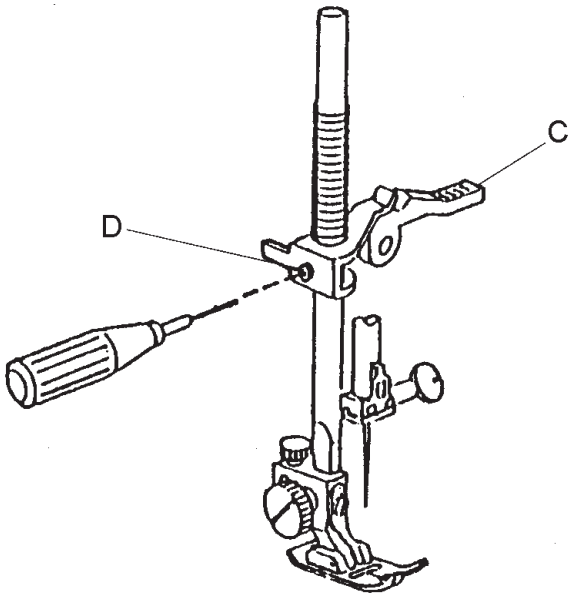
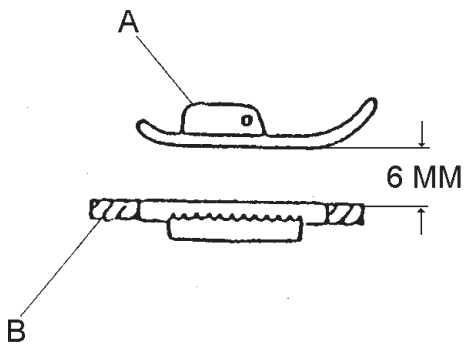
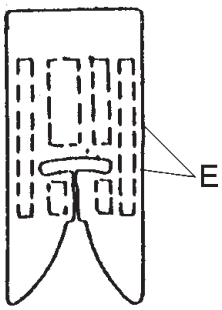
To adjust the presser bar height

The standard presser bar height is 6.0 mm between the bottom surface of the foot (A) and needle plate(B) when the presser bar (C) lifter is lifted.

1. Open the face plate.
2. Raise the presser foot, loosen the presser bar bracket screw (D) and adjust the height to 6.0 mm.
3. Check if the presser foot is parallel to the openings for the feed dog on the needle plate as shown below (E). If not, adjust it.
4. Tighten the presser bar bracket screw while holding the presser bar to keep the foot parallel to the openings.
5. Close the face plate.







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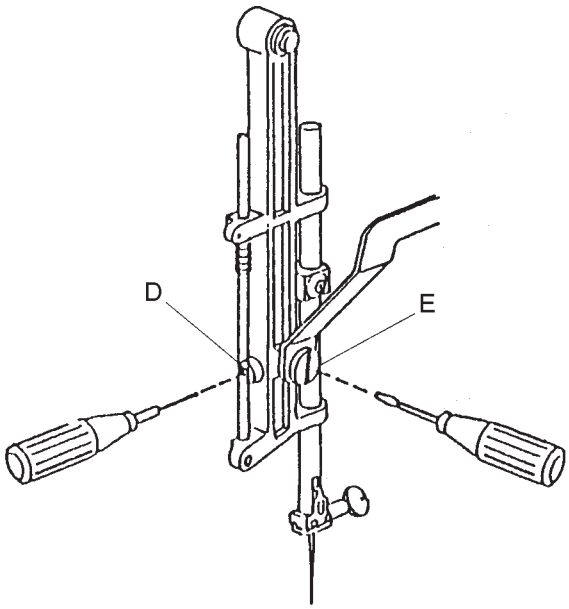
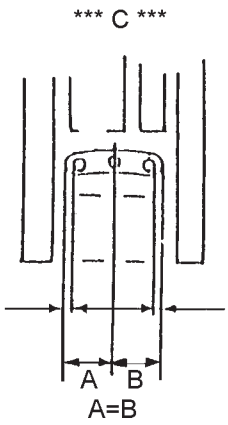
To adjust the needle drop

When you select the pattern 01 (straight stitch on center needle position), the needle drop should be in the center position of the needle hole in the needle plate.
When the needle swings in maximum zigzag width, the distance between both edges of the needle hole on the needle plate and the needle drop position should be equal as shown below (*** C ***).

1. Turn on the power switch.
2. Select pattern 01 (straight stitch on center needle position), or pattern 07 (simple zigzag) at maximum zigzag width.
3. Loosen the set screw (D).
4. Turn the eccentric pin (E) to adjust the needle drop.
5. Tighten the set screw (D).

NOTE: Check the hook timing after this adjustment.





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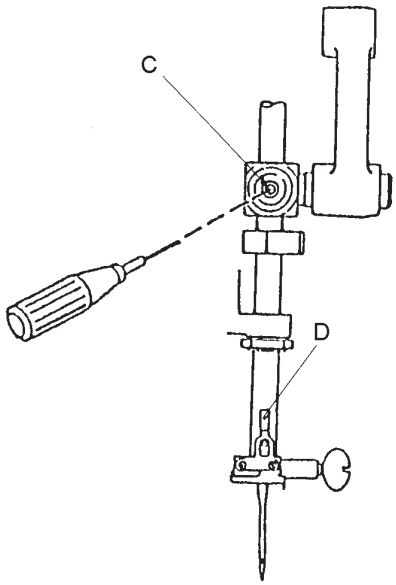
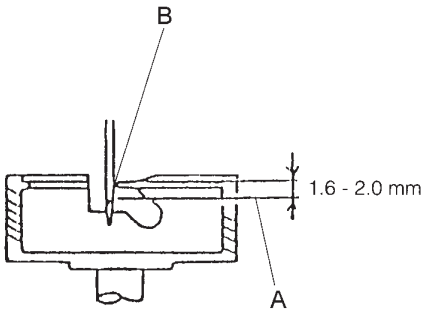
To adjust the needle bar height

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

1. Remove the needle plate & bobbin holder.
2. Turn on the power switch and select the pattern (straight stitch at the left needle position).
3. Turn the balance wheel toward you until tip of hook meets the right side of the needle (B).
4. Loosen the needle bar connecting stud set screw (C).
5. Adjust the height of the needle bar by moving the needle bar upward or downward without turning it. (Make sure that the needle setting groove (D) on the needle bar is in the front).
6. Tighten the set screw (C).
7. Insert the bobbin holder.
8. Attach the needle plate.





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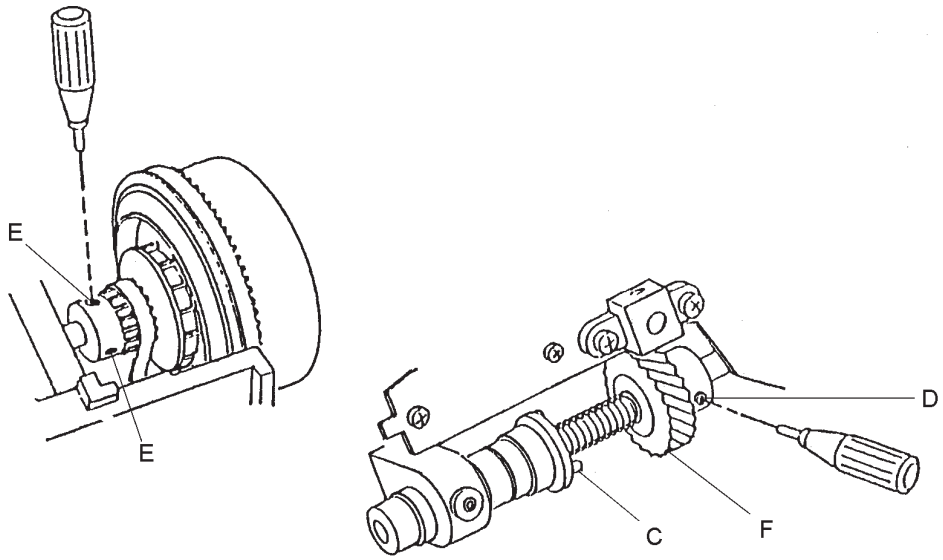
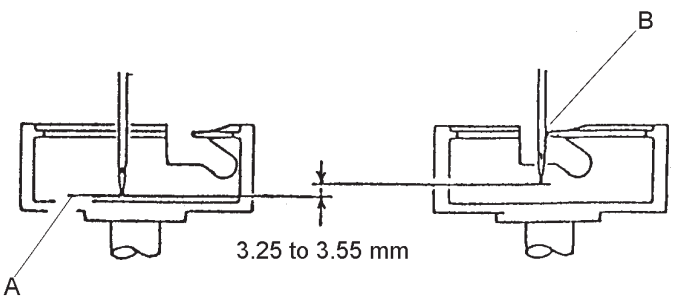
To adjust the hook timing

When the straight stitch at left needle position is selected, the amount of ascending travel of the needle bar from its lowest position (A) to the position where the tip of the rotary hook exactly meets the right side of the needle (B) should be 3.25 to 3.55 mm.

1. Remove the needle plate and bobbin holder.
2. Turn on the power switch and select the straight stitch at left needle position.
3. Remove the top cover, belt cover and bed cover (See pages 1, 2 and 3).
4. Turn the balance wheel toward you, and set the needle bar to the lowest position (A).
5. In this condition
   * If the projection of feed lifting cam (C) is in the lowest position, loosen the set screws (D) of lower shaft timing wheel.
   * If not, loosen the set screws (E) of upper shaft toothed wheel.

6. Raise the needle bar further 3.25 to 3.55 mm from the lowest position.
7. Turn the lower shaft gear (F) until the tip of hook meets with the right side of needle (B).
8. Tighten the set screws (D) of lower shaft timing wheel or the ones (E) of the upper shaft toothed wheel.
9. Attach the bed cover, belt cover, top cover, bobbin holder and the needle plate.





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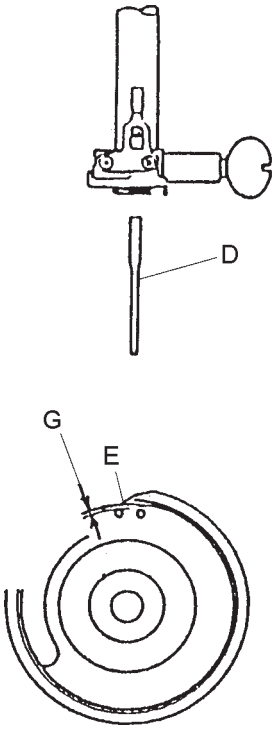
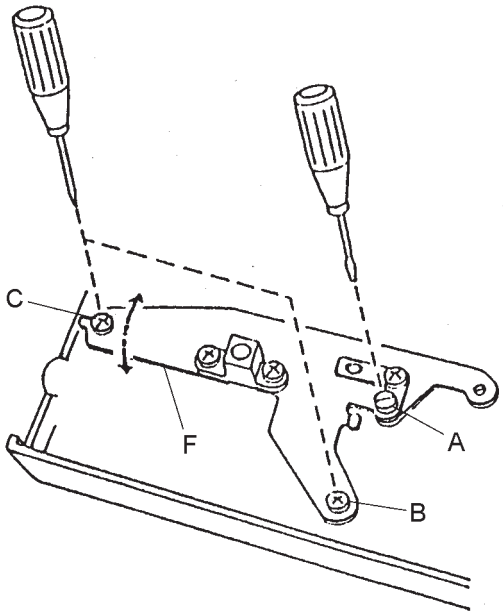
To adjust the clearance between the needle and the hook

The clearance between needle and hook should be - 0.10 to + 0.05 mm (G). If not, make an adjustment as follows:

1. Remove the needle plate and bobbin holder.
2. Attach the master needle.
3. Turn on the power switch and select the simple zigzag stitch
4. Loosen the set screws (B and C), and slightly tighten the hinge screw (A).
5. Turn the balance wheel and adjust the clearance between the master needle and the point of hook (E) in the left and right needle positions to - 0.1 mm to + 0.05 mm by moving the hook set plate (F) up or down.
6. Tighten the set screws (A, B and C).
7. Remove the master needle.
8. Insert the bobbin holder and attach the needle plate.





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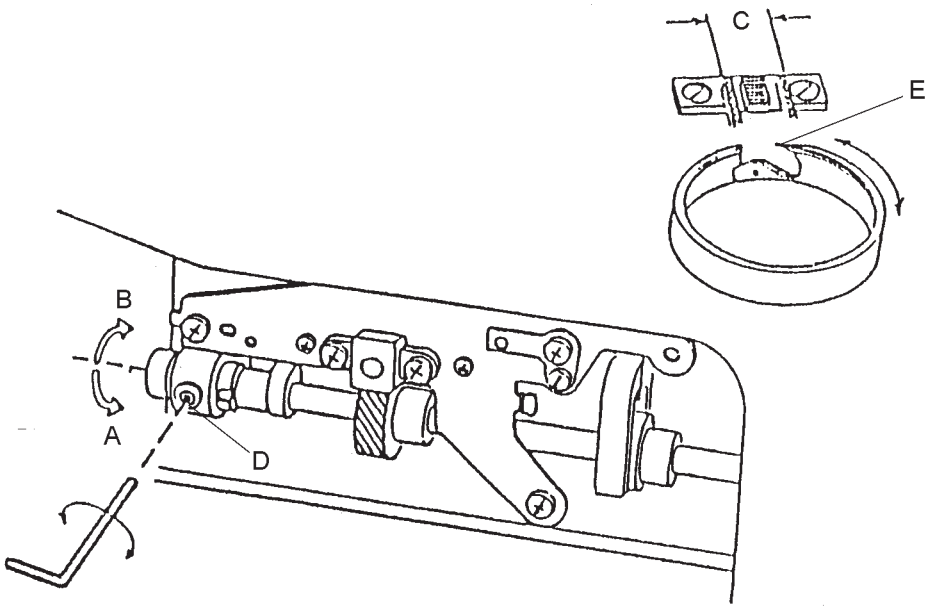
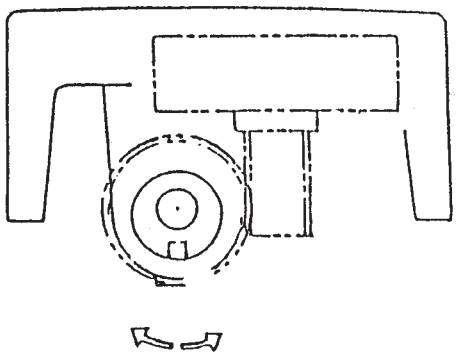
To adjust the backlash of hook drive gear and lower shaft gear

The backlash of gears should be smooth and should be less than 0.8 mm when the tip of hook (E) is within the width of the feed dog (C) as shown below.

1. Remove the bed cover (See page 2).
2. Loosen the hexagon socket screw (D).
3. If the backlash is too much, turn the lower shaft bushing in direction A.
   If the backlash is too little, turn the lower shaft bushing in direction B.
4. Tighten the hexagonal socket screw (D).
5. Attach the bed cover.

NOTE: After adjusting the backlash, be sure to check and adjust the ”HOOK TIMING” and the “FEED DOG HEIGHTS” (See pages 8 and 11).





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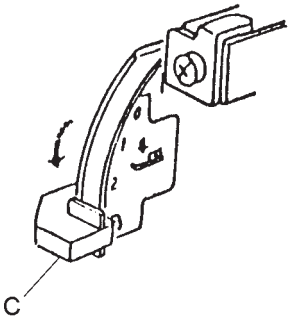
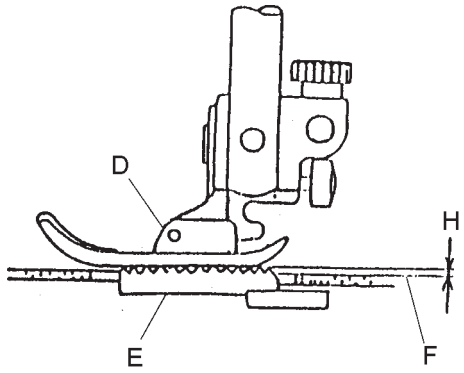
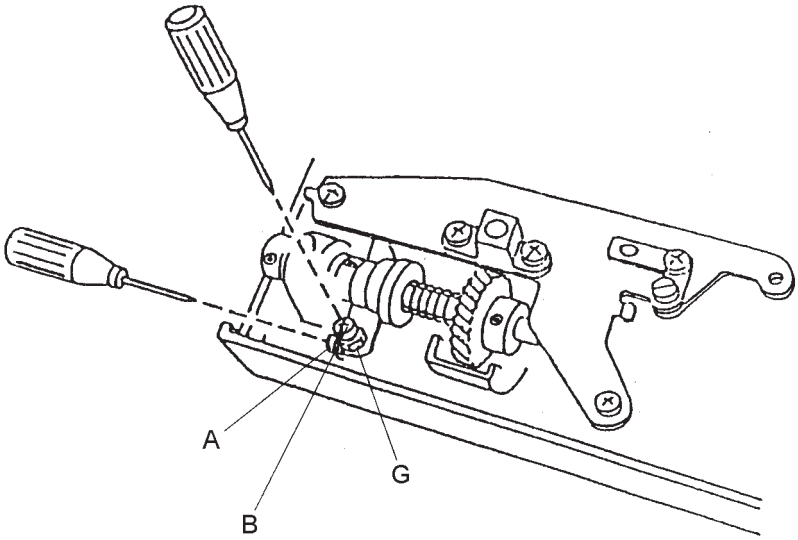
To adjust the feed dog height

When pressure adjusting lever (C) is at “3” and the presser foot (D) is lowered, the highest position of the feed dog (E) should be 0.80 to 0.90 mm (H) from the surface of the needle plate (F).

1. Set the pressure adjusting lever (C) at “3” with the presser foot lowered.
2. Turn on the power switch.
3. Turn the balance wheel toward you to get the highest position of feed dog.
4. Remove the bed cover.
5. Loosen the set screw (A) and nut (G).
6. Adjust the feed dog height to 0.80 mm to 0.90 mm by turning the adjusting screw (B).
7. Tighten the nut and set screw (A).
8. Attach the bed cover.







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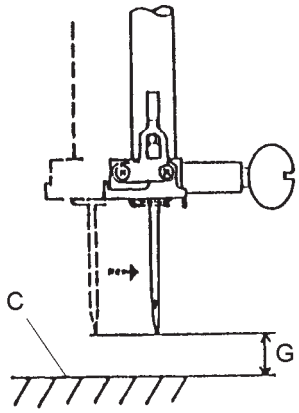
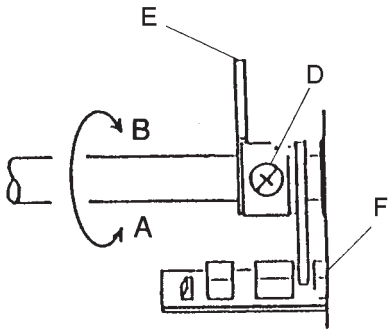
To adjust the upper shaft shield plate position

When the machine is set for zigzag stitching, the needle should start to swing 6.3 mm to 7.5 mm (G) above the surface of the needle plate (C).

1. Remove top cover.
2. Turn on the power switch and select the simple zigzag stitch.
3. Turn the balance wheel toward you slowly with your hand until the needle starts swinging.
   (A) If higher than 7.5 mm, loosen the set screws (D) and turn the upper shaft shield plate (E) in direction of A.
   (B) If lower than 6.3 mm, loosen the set screws and turn the upper shaft shield plate (E) in direction of B.
4. Push the upper shaft shield plate as close as possible to the left, but It should not touch the upper shaft sensor (F). Then tighten the set screw (D).
5. Turn the balance wheel toward you, and check the start swing.
6. Attach the top cover (See page 1).





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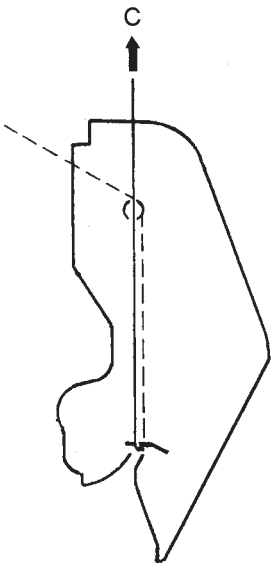
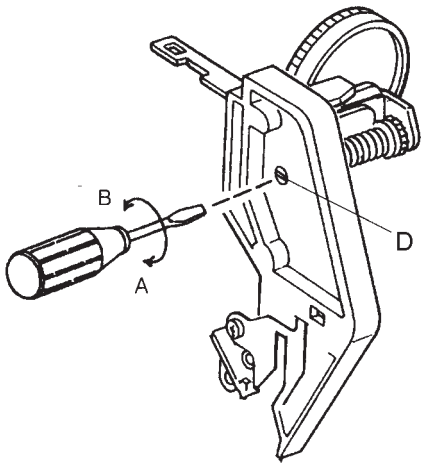
To adjust the upper thread tension

The upper thread tension should be 65 g - 95 g when pulling the thread (cotton thread size 50) in direction C with setting the tension dial at" 3 (Make sure the foot is lowered.)

1. Set the thread tension dial to "3".
2. Open the face plate and adjust the thread tension by turning the thread tension stem (D) with a screw driver in direction...
   A: to loosen the tension.
   B: to tighten the tension.
3. Close the face plate.





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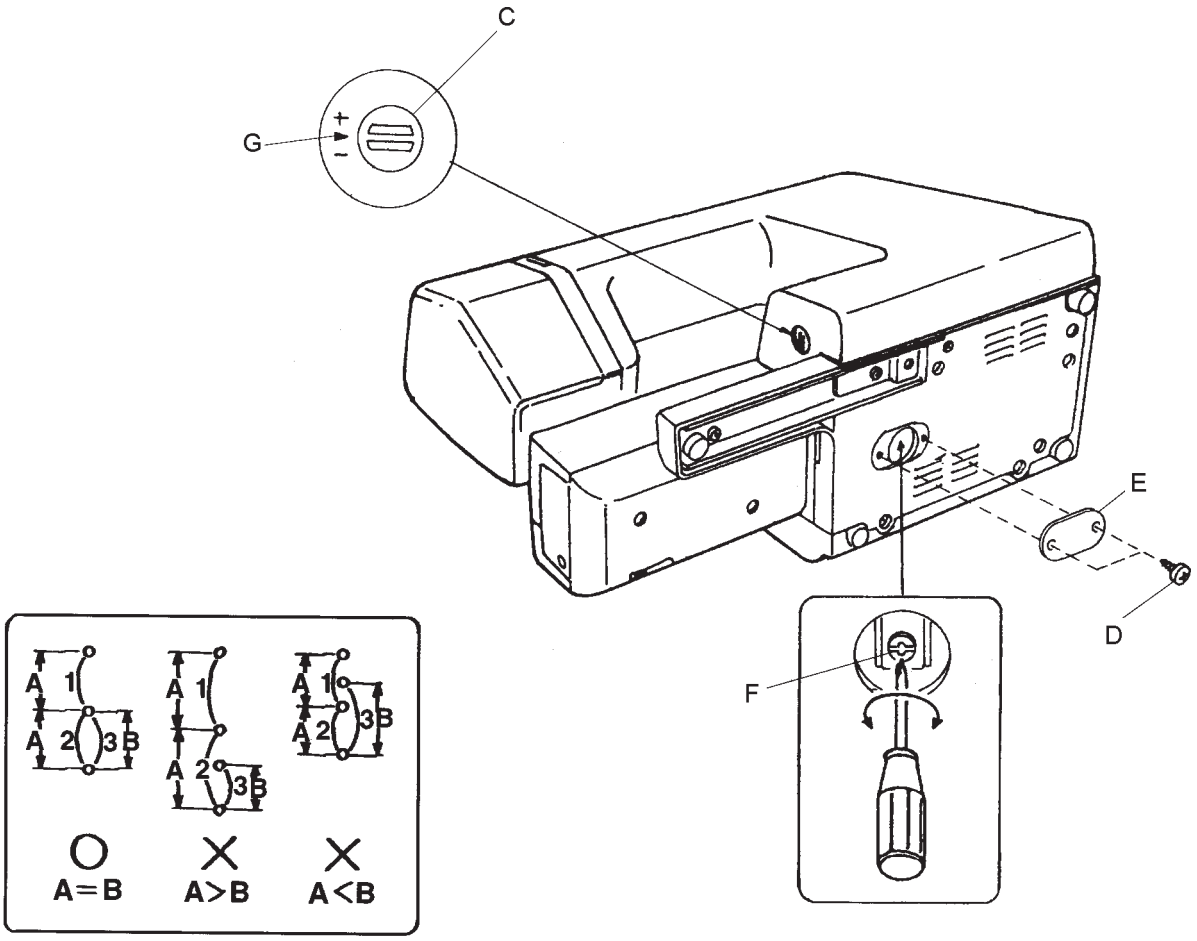
To adjust the stretch feed balance

When the triple straight stitch is sewn with the feed balancing dial (C) at the standard setting mark (G, the forward feed (A) and reverse feed (B) should be same length.

1. Set the triple straight stitch and the feed balancing dial at standard setting mark (G).
2. Remove the screws (D) and base cap (E).
3. Adjust the stretch stitch feed balance by turning the adjusting screw (F) in direction A or B.
4. Attach the base cap (E) with screws (D).



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To replace and adjust the threader plate

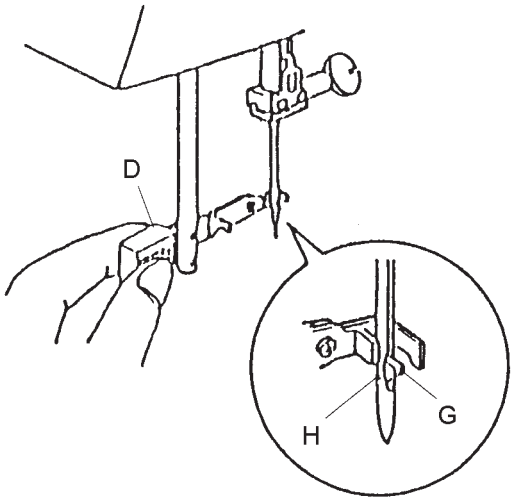
If the needle threader plate is broken or bent, replace it as follows:

(TO REPLACE)

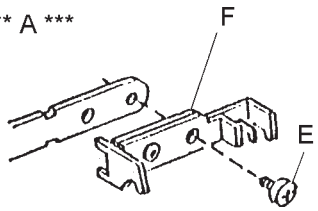
1. Turn the balance wheel toward you until the needle bar reaches its highest position and lower the needle threader knob (D) as far as it will go.
2. Loosen screw (E) and replace the needle threader plate (F) (See *** A ***).

(TO ADJUST)

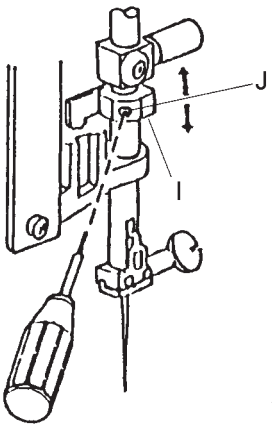
3. If the hook (G) touches the right or left side of the needle eye (H), loosen screw (E) and move the needle threader plate (F) (See *** B ***).
4. If the hook (G) touches the top or bottom of the needle eye (H), loosen set screw (J) and move the position set plate (I) (See *** C ***).



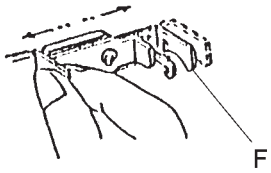
*** A ***



*** C ***



*** B ***



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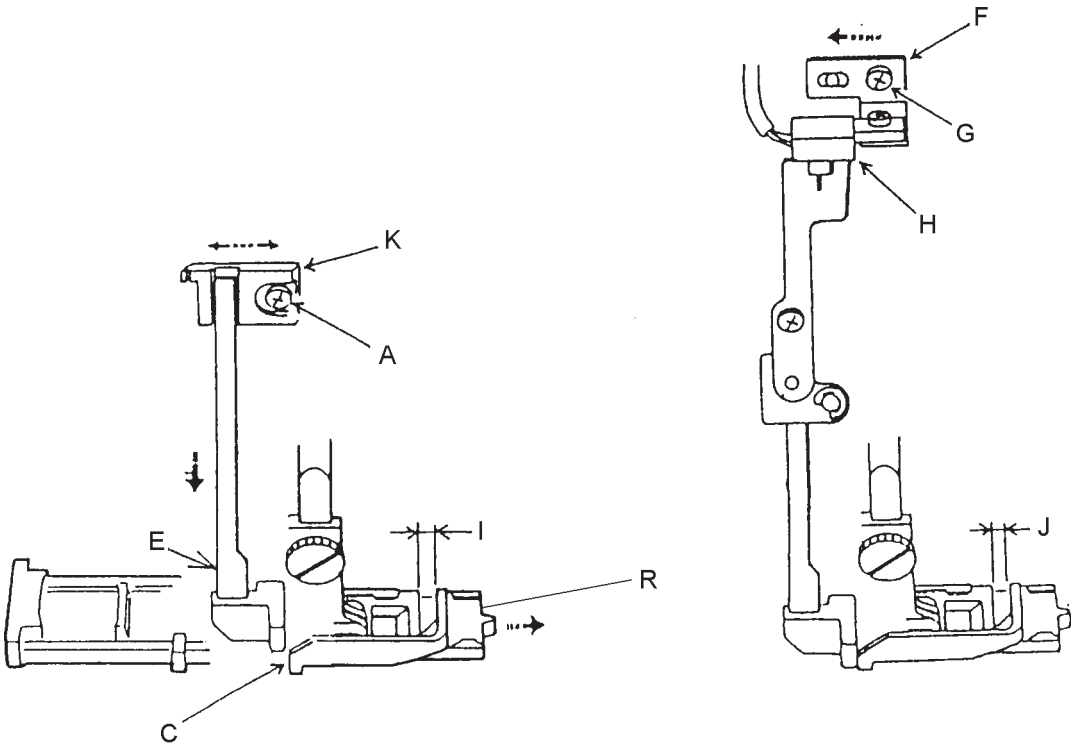
To adjust the buttonhole lever

A) Buttonhole lever guide

1. Attach the automatic buttonhole foot (R).
2. Loosen the set screw (A) and leave the clearance of 2.9mm (I) between the spring holder and slider (B) by moving the buttonhole lever guide (K). In this condition, the buttonhole lever (E) should touch the spring holder (C) slightly.
3. Tighten the set screw (A).

B) Buttonhole sensor

1. Turn the power switch on while pressing the reverse button, then press BH1 at once. “H SENSOR H or L” will appear in the screen.
2. Lower the buttonhole lever (E). Then leave the clearance (J) of 1.6mm between the slider (B) and Spring holder (C).
3. Loosen the set screw (G) and move the buttonhole sensor base plate (F) from the right to left slowly. At the position where the screen message changes from “H SENSOR L” to “H SENSOR H” tighten the set screw (G).
4. When the clearance between the spring holder (C) and slider (B) is:
   * 1.4mm, the screen shows “H SENSOR H”
   * 1.8mm, the screen shows “H SENSOR L”



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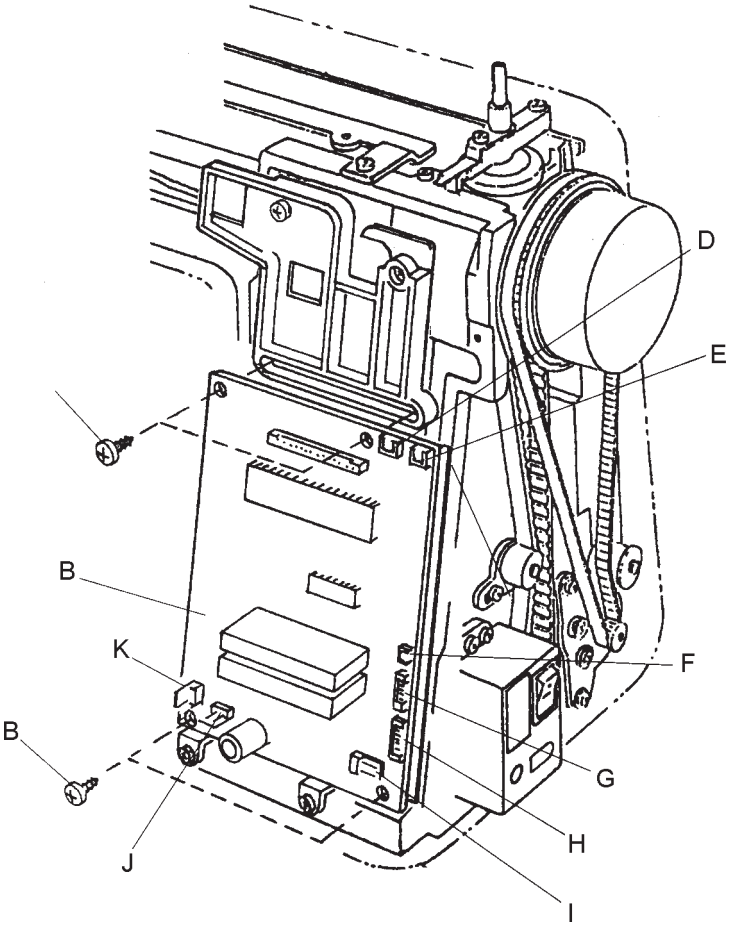
Board A attaching and removing

(TO REMOVE)
1. Remove the front cover unit.
2. Pull out 8 connectors from the Board A.
3. Remove 4 screws (B) and Board A.

(TO ATTACH)
3. Follow the above procedure in reverse.

D: Upper shaft sensor
E: Buttonhole sensor
F: Machine socket
G: Zigzag stepping motor
H: Feed stepping motor
I: Driving motor
J: Circuit board C
K: Sewing light



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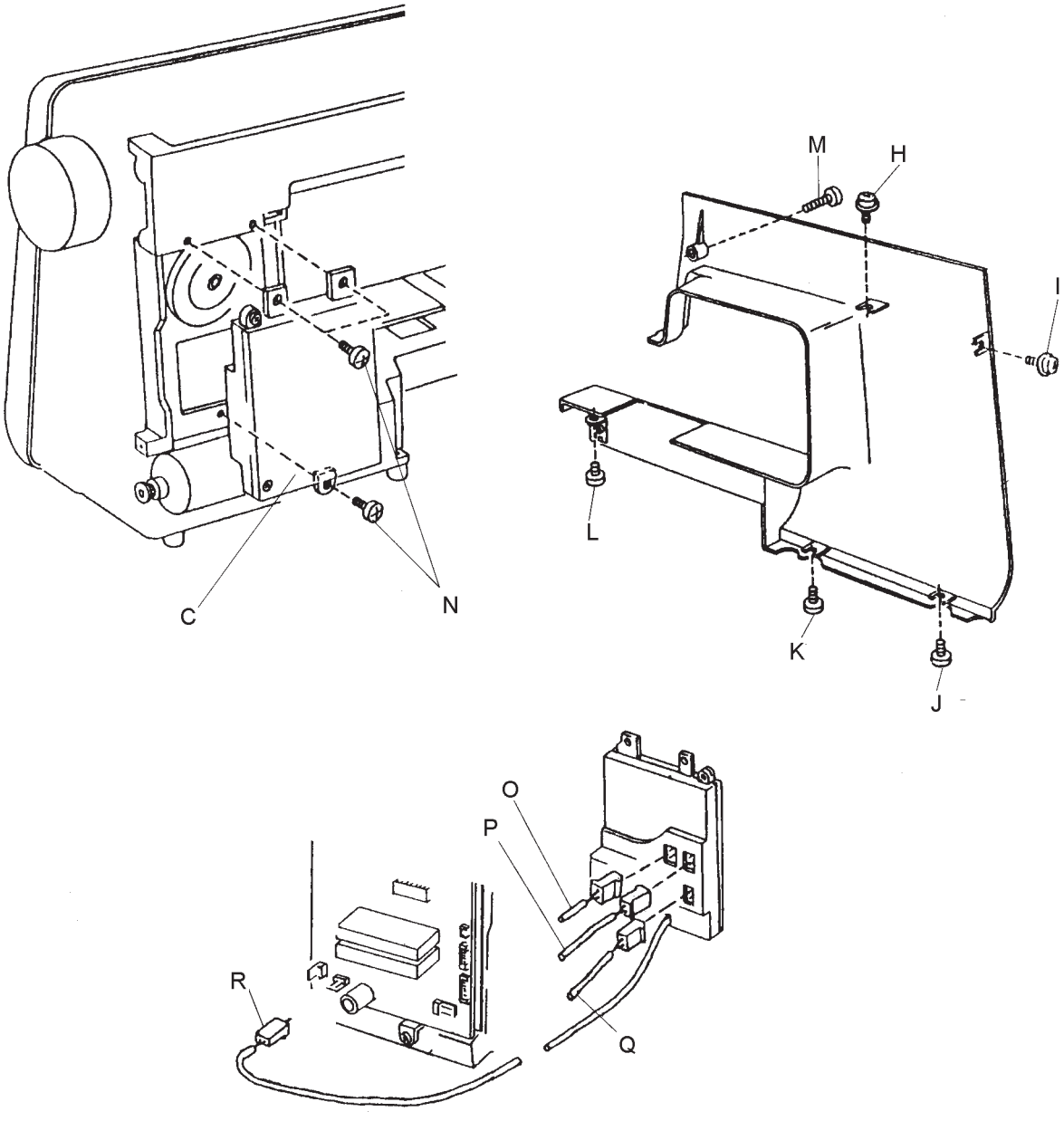
Board C attaching and removing

(TO REMOVE)

1. Remove the front panel unit (See page 4).
2. Loosen screws (H, I & J), and remove screws L and M.
3. Remove the rear cover (W).
4. Pull out the 4 connectors (O, P, Q & R) and remove screws N.
   - O: Transformer (primary)
   - P: Machine socket
   - Q: Transformer (secondary)
5. Remove Board C.

(TO ATTACH)

6. Attach Board C with 3 screws (N) and insert the connectors (O, P, Q & R).
7. Attach the rear cover with 6 screws (H, I, J, K, L & M).
8. Attach the front panel unit.



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Board C and fuse attaching and removing

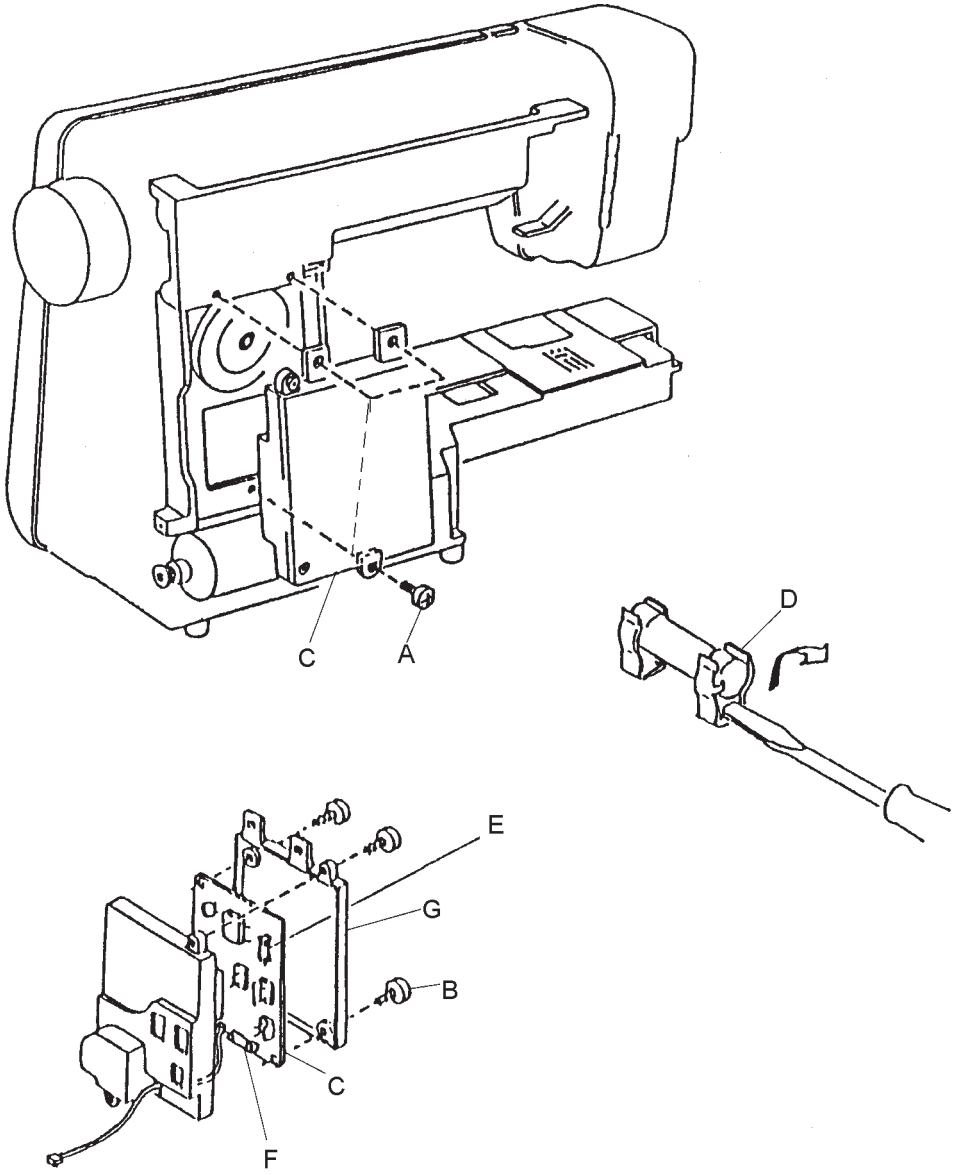
(TO REMOVE)
1. Remove the rear cover.
2. Remove 3 screws (A) and Board C (See page 18).
3. Remove 3 screws (B) and remove case cover (G).
4. Replace fuse or Board C.

(TO ATTACH)
5. Attach the case cover with 3 screws (B).
6. Attach the Board C with 3 screws (A).
7. Attach the rear cover.

NOTE: To replace fuse, pry it out of the fuse holder (D) with a screwdriver as shown below.

The following two specified fuses are used for Board C:

E: 250V, 2.0A
F: 250V, 5.0A



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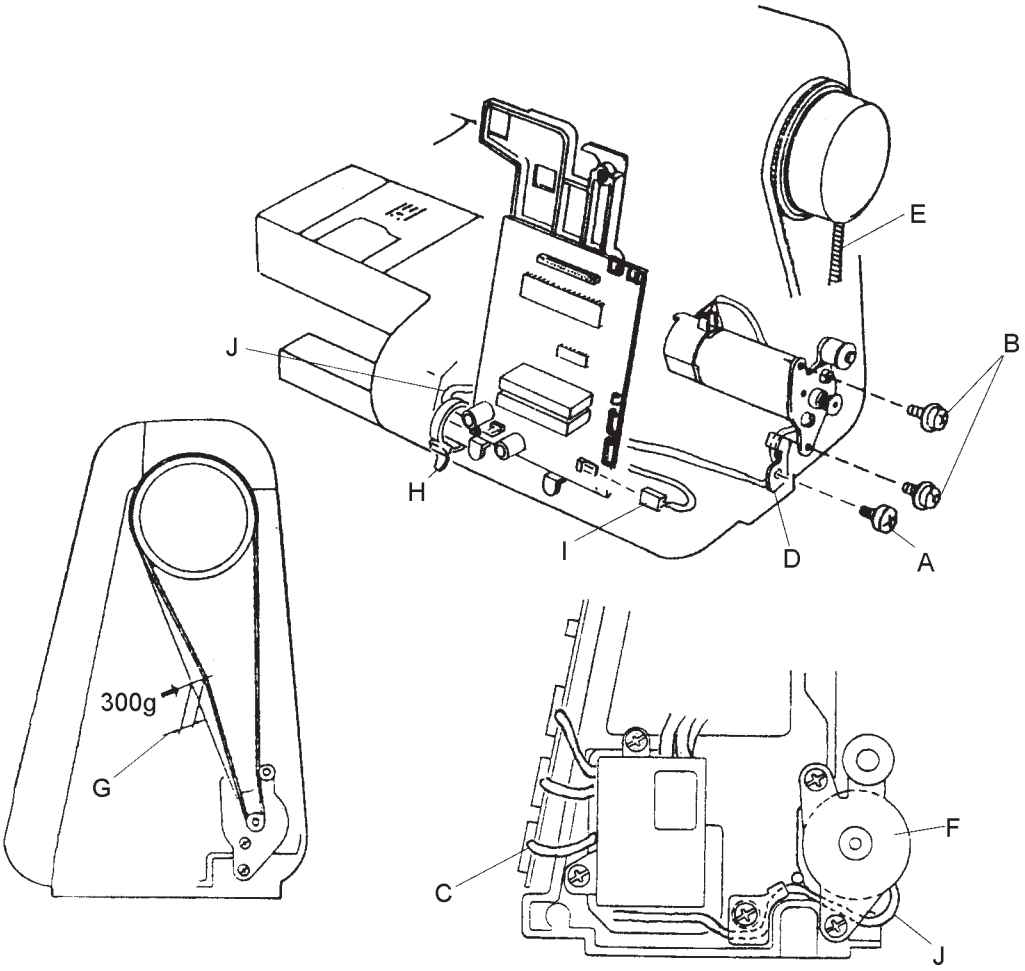
Driving motor unit attaching and removing

(TO REMOVE)

1. Remove the front panel unit (See page 4).
2. Remove the machine socket unit (See page 22). (No need to pull out the connectors)
3. Cut the cord binder (H) and pull out the motor connector (C) from Board A.
4. Remove the screw (A) and the cord guide (D).
5. Remove the motor belt (E), screws (B) and the driving motor (F).

(TO ATTACH)

6. Attach the driving motor (F) by tightening the two screws (B) slightly.
   The motor cord should be set as shown below (J).
7. Attach the motor belt (E) and adjust the belt tension.
   When the motor belt is pushed with the pressure at 300g, the slag should be 7 to 8 mm as shown below (G).
8. Set the cord guide (D) with screws (A).
9. Secure the cord with a new cord binder (H).
10. Connect the motor connector (I) to the Board A.
11. Attach the machine socket unit and front cover unit.



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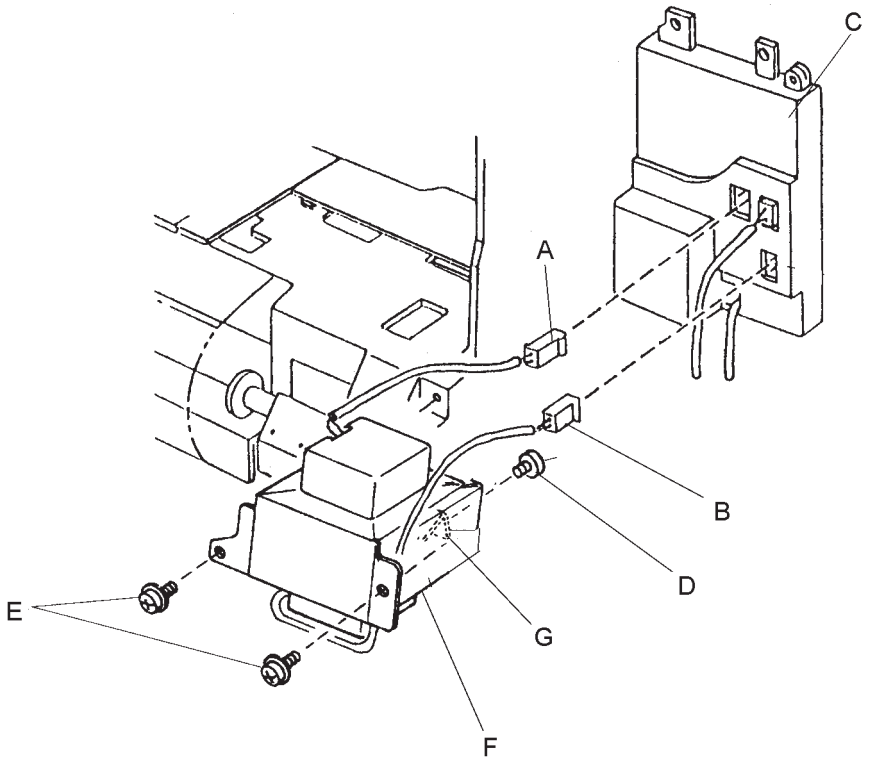
Transformer unit attaching and removing

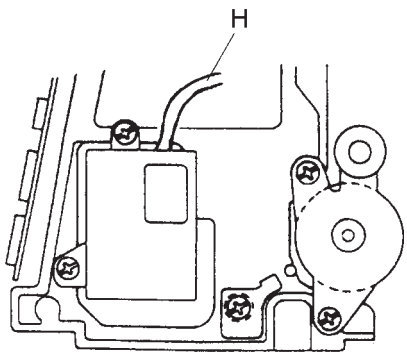
(TO REMOVE)

1. Remove the front panel unit (See page 4).
2. Remove the Board A and C (See page 17) and machine socket unit (See page 20).
3. Pull out the connectors (A & B) for the transformer (F) from the Board C.
4. Remove 3 screws (D & E) and transformer (F).

(TO ATTACH)

5. Attach the transformer unit (F) with 3 screws (D & E).
   2 for the transformer (F) and 1 for the hook (G).
6. Insert the connectors (A & B) into the Board C.
   The cord (H) for connector (A) should be set as shown below.
7. Attach the machine socket unit, Board C, Board A and front panel.





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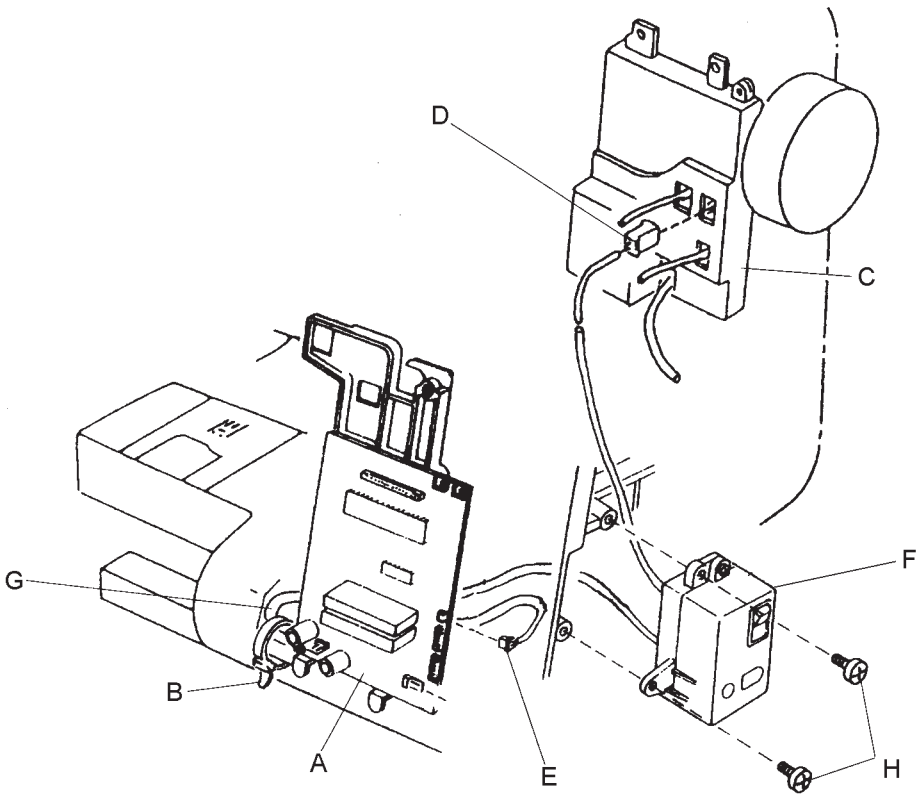
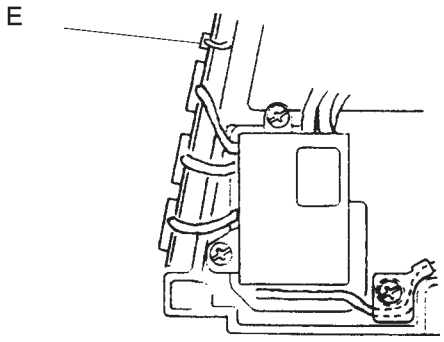
Machine socket unit attaching and removing

(TO REMOVE)
1. Remove the front panel unit, Board C and base unit.
2. Cut off the cord binder (B) and pull out the connectors (D & E) from Boards A and C.
3. Remove 2 screws (H) and machine socket unit (F).

(TO ATTACH)
4. Attach the machine socket unit (F) with 2 screws (H).
5. Secure the cords with a cord binder (B) and insert the connectors (D &E).
   Attach the base unit, Board C and front cover unit.





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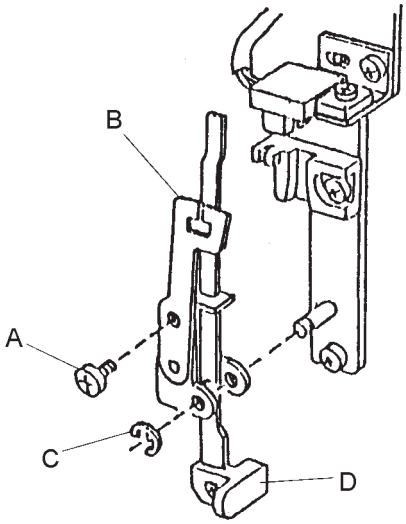
Buttonhole lever attaching and removing

(TO REMOVE)
1. Remove set screw (A) and BH shield plate (B).
2. Remove the snap ring (C).
3. Pull the buttonhole lever (D) toward you, and remove it.

(TO ATTACH)
4. Insert the shaft into the holes of the buttonhole lever (D) , and attached the buttonhole lever with the snap ring.
5. Attach the buttonhole shield plate (B) with the screw (A).

NOTE: After changing the buttonhole lever, adjust the buttonhole lever position (See page 16).



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Boards F and K attaching and removing

Board K

(TO REMOVE)

1. Remove the front panel unit (See page 4).
2. Remove the 9 screws (A).
3. Pull out the connector (B) from board K and remove Board K.

(TO ATTACH)

4. Follow the above procedure in reverse.

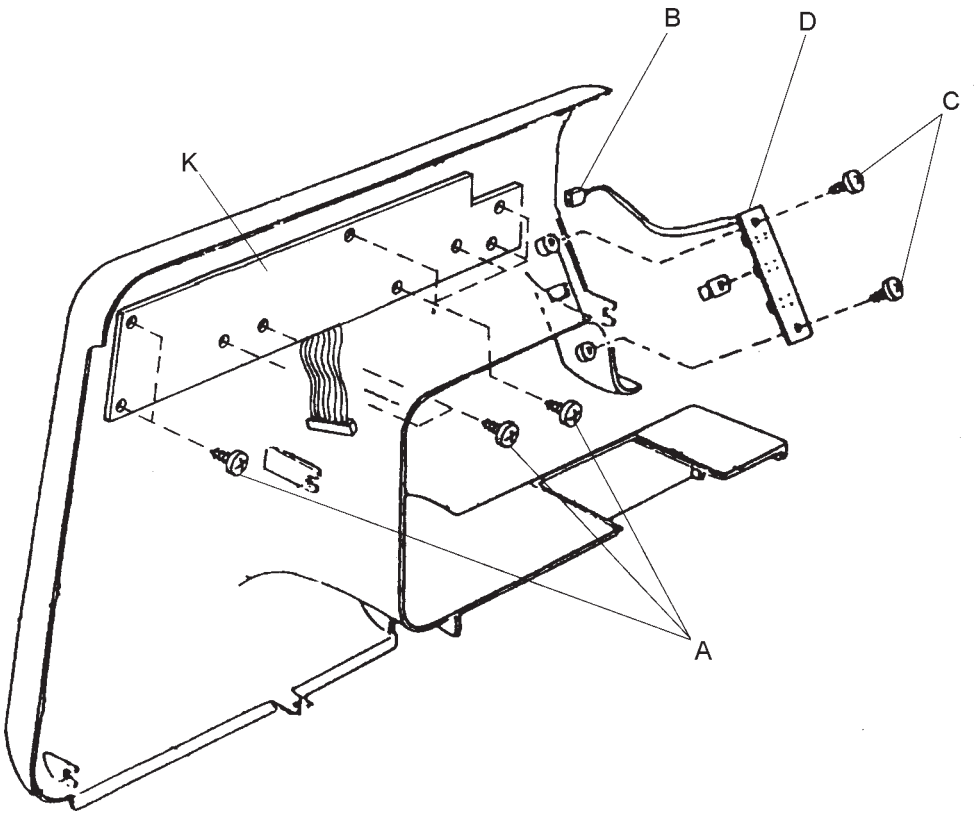
BOARD F

(TO REMOVE)

1. Remove the front panel unit (See page 4).
2. Pull out the connector (B) from Board K.
3. Remove 2 screws (C) and Board F

(TO ATTACH)

4. Follow the above procedure in reverse.



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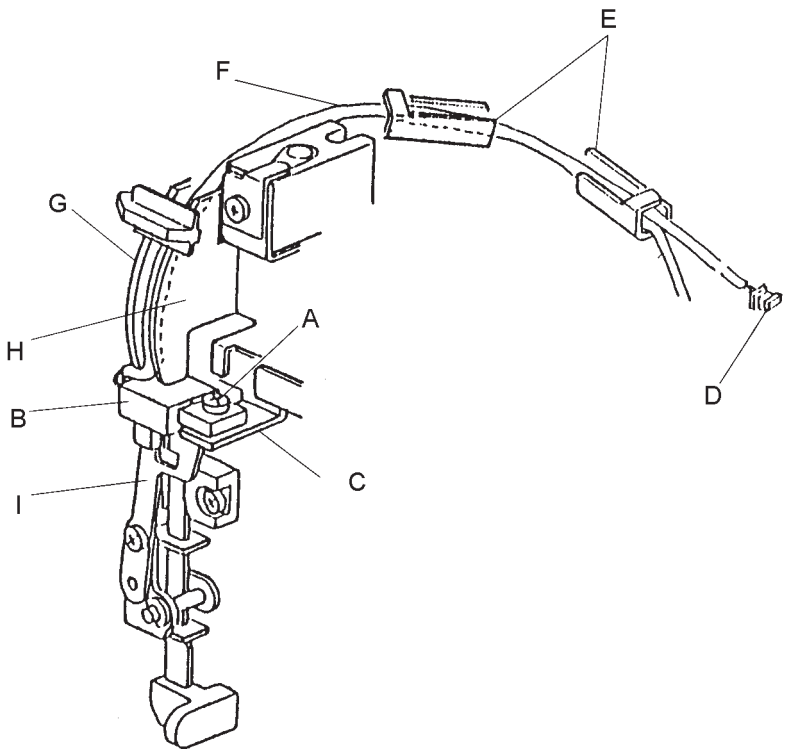
Buttonhole sensor attaching and removing

(TO REMOVE)
1. Remove the front panel (See page 4).
2. Remove screw (A) and remove the buttonhole sensor unit (B) from the sensor set plate (C).
3. Pull out the connector (D) of buttonhole sensor unit from the Board K.
4. Pull out the cord (F) of buttonhole sensor unit from cord guide (E) and remove the buttonhole sensor unit (B).

(TO ATTACH)
5. Insert the buttonhole sensor cord (F) through the front bracket unit (G), cord guide plate (H) and the two cord guides (E).
6. Insert the connector (D) for buttonhole sensor unit into Board K.
7. Attach the BH sensor unit to the sensor set plate and adjust so that the shield plate does not touch the buttonhole sensor unit (B) when moving.
8. Tighten screw (A).
9. Attach the front panel unit.

NOTE: When replacing the buttonhole sensor unit, check the adjustment of the buttonhole lever (See page 16).



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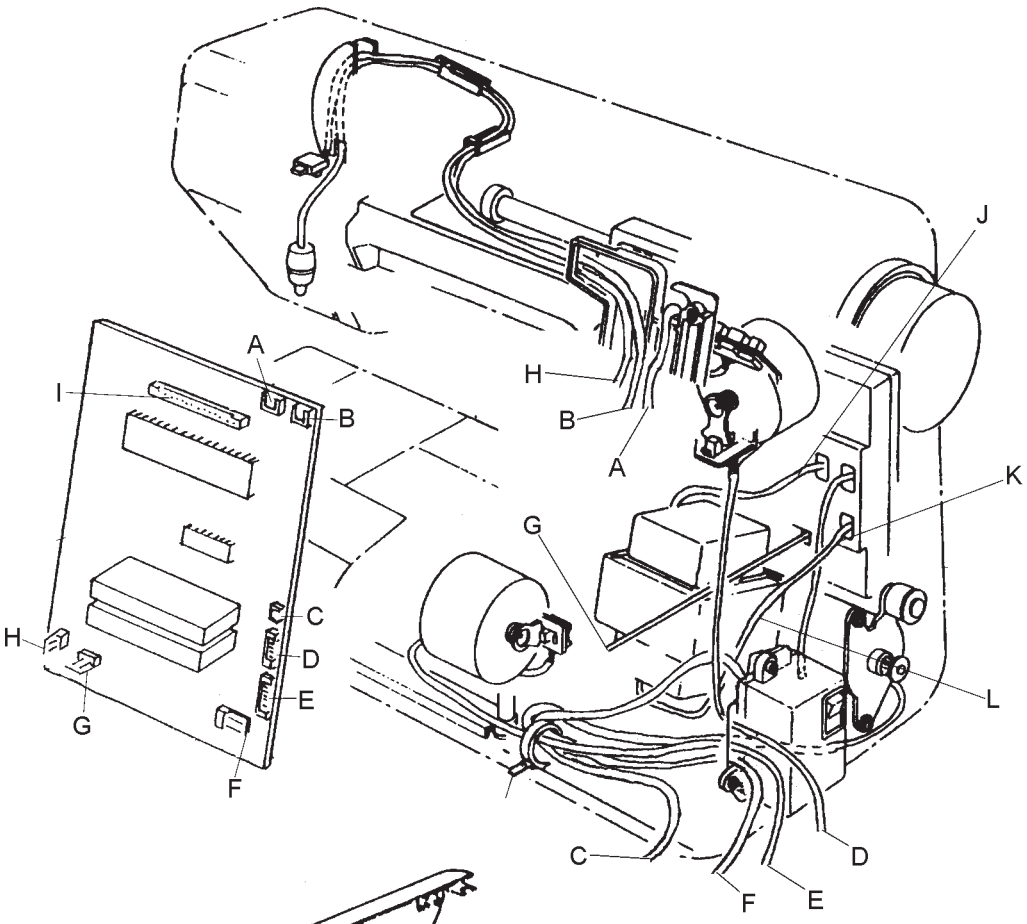
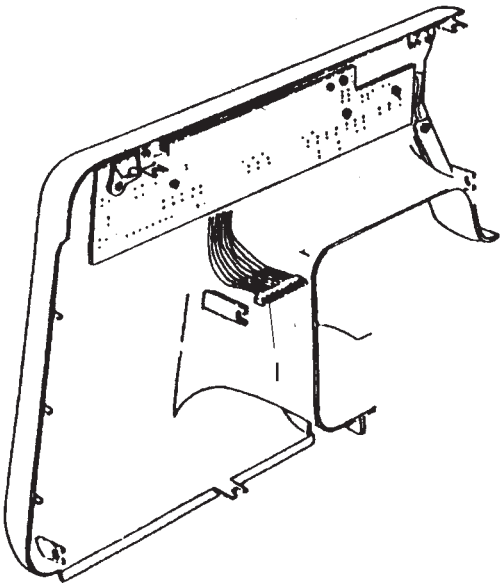
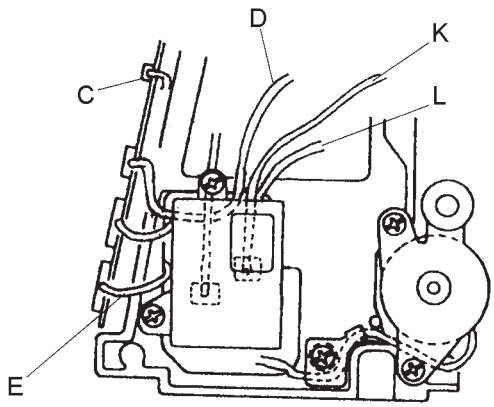
Wiring diagram

The connectors of the electrical components should be connected to the respective positions shown in the figure below.

A Upper shaft sensor
B. buttonhole sensor
C Machine socket (secondary circuit)
D Zigzag stepping motor
E Feed stepping motor
F Driving motor
G Board C
H Lamp socket
I Board K
J Transformer primary cord
K Machine socket (primary)
L Transformer (secondary)
M Cord binder to secure the cords C, E and F







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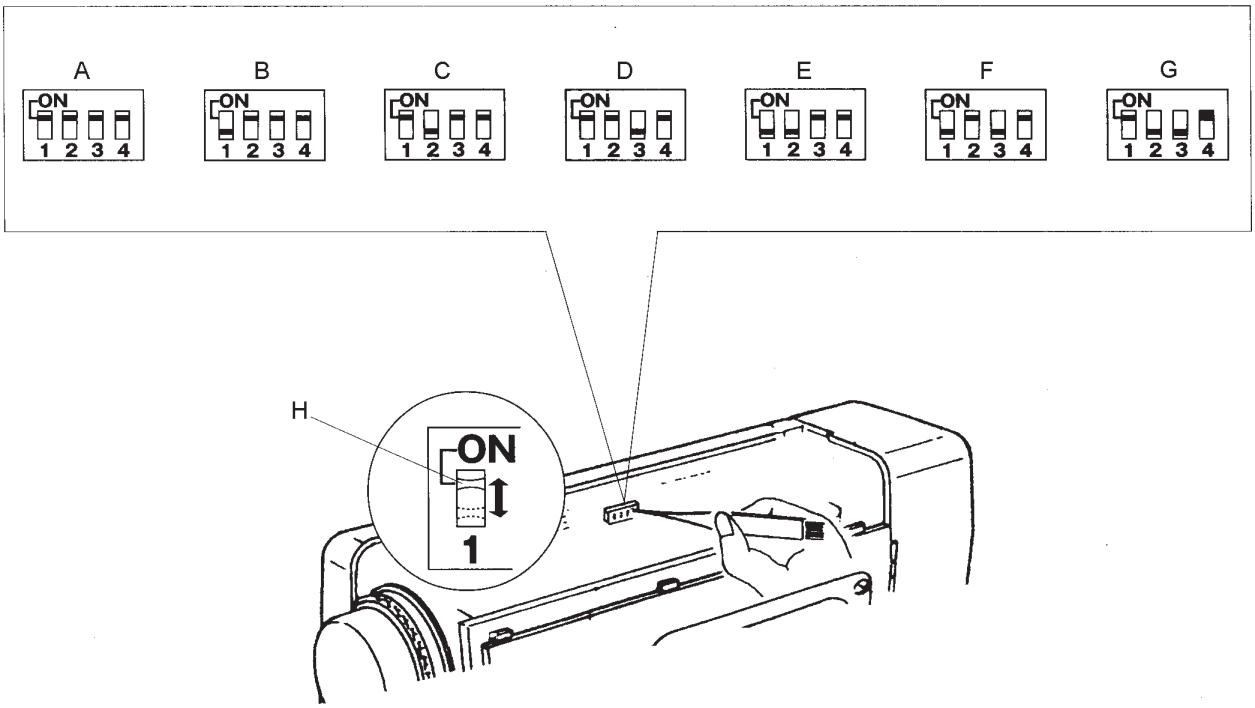
Multiple language function

The display language can be changed if necessary, as illustrated bellow.

1. Remove the top cover unit.
2. Move the dip switches with the tail of the lint brush

   A: English
   B: Deutsch (German)
   C: Espanol (Spanish)
   D: Nederlands (Dutch)
   E: Francais (French)
   F: Italiano (Italian)
   G: Portuguese

3. Replace the top cover unit after adjustment.



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MEMORY CRAFT 3000 Diagnosis Chart

[CHECK OPERATION]

If nothing happens on the machine when turned on the power switch is, turn off the power switch and do following:

1. Check all wire connections and recheck.
2. Replace the machine socket and recheck.
3. Replace Board A and recheck.
4. Replace Board D and recheck.
5. Replace the transformer unit and recheck.

If lamp bulb does not light when the power switch is turned on, turn off the power switch and do following:

1. Replace the lamp bulb and recheck.
2. Replace Board A and recheck.

If LCD (LIQUID CRYSTAL DISPLAY) shows nothing when power switch is turned on,

1. Replace LCD unit and recheck.
2. Replace Board K and recheck.
3. Replace Board A and recheck.

NOTE: When checking operation the machine may suddenly start running. For your safety, turn off the power switch when replacing any parts. Always recheck after replacing defective parts.

[CHECK OPERATION 2] - Use diagnosis chart

Preparation:

1. Turn off the power switch.
2. Push the bobbin winder spindle to the left.
3. Detach the presser foot and raise the presser foot lever.
4. Raise needle bar all the way up.
5. Connect the foot controller.

NOTE: If a defect was found in step 01, do not proceed to further steps.

Turn off the power switch and do following:

1. Replace LCD unit and recheck.
2. Replace Board K and recheck.
3. Replace Board A and recheck.

If a defect is found in step 02, you can not proceed further.
Turn off the power switch and do following:

1. Replace Board F and recheck.
2. Replace Board K and recheck.
3. Replace Board A and recheck.

NOTE: During diagnosis, press the MEMORY key when the correct result is obtained and press the CLEAR key if the result is incorrect to proceed to the next step.

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Step	Test operation	Correct condition	Defect condition & remedy
(01) step LCD, LED Test	Turn on the power switch while pressing Reverse stitch key, then press Auto-lock key within 2. 5 seconds.The machine runs at normal speed if Auto-lock key is pressed too late.	I. LCD shows [840 Test mode]. 2. LCD shows [Self—check Start]. 3. Buzzer sounds. 4. The LCD turns on and off repeatedly.	If the machine does not go to Test mode, replace the following parts in order and recheck. 1. Printed circuit board F 2. Printed circuit board K 3. Printed circuit board A
(02) Step Keys	Press the keys shown below in order.REVERSE, AUTO-LOCK, U/D, WIDTH -, WIDTH +, LENGTH -, LENGTH +, MEMORY, CLEAR, stitchesThen press the remaining key from left to right and top to bottom.	1. Buzzer sounds. 2. LCD shows [Key]. 3. Each time you press the key, buzzer sounds.	If buzzer does not sound when you press the key, replace the following parts in order and recheck. 1. Printed circuit board F 2. Printed circuit board K 3. Printed circuit board A
(03) Step Buttonhole sensor	1. Pull down the button—hole lever. 2. Move the buttonhole lever back and forth.	1. Buzzer sounds and LCD shows [BH Sensor L]. 2. LCD shows [BH Sensor H] when the sensor is closed. 3. LCD shows [BH Sensor L] when the sensor is open.	If machine does not work properly, replace the following parts in order and recheck: 1. Buttonhole sensor 2. Printed circuit board K 3. Printed circuit board A
(04) Step Bobbin winder switch	1. Shift the bobbin winder spindle to the right, 2. Shift the bobbin winder spindle to the left.	Buzzer sounds each time and LCD shows [Spool].	If not working replace the following parts in order and recheck: 1. Printed circuit board K 2. Printed circuit board A
(05) Step Upper shaft sensor	Turn the hand wheel toward you to move the needle bar to the highest, then continue to turn the hand wheel until needle bar comes to the highest again	1. Buzzer sounds and LCD shows [PH Sensor H.H.]. 2. LCD shows [PH Sensor L.H.] when the needle bar is moved from the lowest to the highest. 3. LCD shows [PH Sensor H.L.] when the needle bar is moved from the highest to the lowest.	If not working properly, replace the following parts in order and recheck: 1. Upper shaft sensor 2. Printed circuit board A
(06) Step Stepping motor for zigzag	Turn the balance wheel toward you to move the needle bar to the highest position. Then press the Reverse key.	1. Buzzer sounds and LCD shows [Zigzag motor], 2. The stepping motor moves to the default position.	If not working, replace the following parts in order and recheck: 1. Stepping motor for zigzag 2. Printed circuit board A
(07) Step Stepping motor for feed	Turn the balance wheel toward you to move the needle bar to the lowest position. Then press the Reverse key.	1. Buzzer sounds and LCD shows [Feed motor]. 2. The stepping motor moves to the default position.	If not working properly, replace the following parts in order and recheck: I. Stepping motor for feed 2. Printed circuit board A
(08) Step Foot control	Depress the foot control as far as it will go. Then release it.	1. Buzzer sounds and LCD shows [Controller]. 2. Buzzer founds when the foot control is released.	If not working properly, replace the following parts in order and recheck: 1. Foot control 2. Machine socket 3. Printed circuit board A
(09) Step Driving motor	Press the Reverse key.	1. Buzzer sounds and LCD shows [DC Motor]. 2. The machine runs at low speed, then at high speed and stops at the highest position automatically.	If the machine won't stop at highest position or runs irregularly, replace the following parts in order and recheck: 1. Driving motor 2. Printed circuit board AIf other than the above fault, replace the following parts in order and recheck: 1. Printed circuit board C 2. Transformer unit

When the checking is completed, LCD shows [Self-Check End].
If the machine works properly, LCD, shows [Self-Check OK!
If not, LCD shows [ERROR-A] (Example)
"A" means Board A. The letters have the following meaning;

A: Printed circuit board A B: Buttonhole sensor C: Foot control D: Driving motor K: Printed circuit hoard K
P: Upper shaft sensor R: Machine socket X: Stepping motor for Zigzag
Y: Stepping motor for feed

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