555 QE
Service Manual

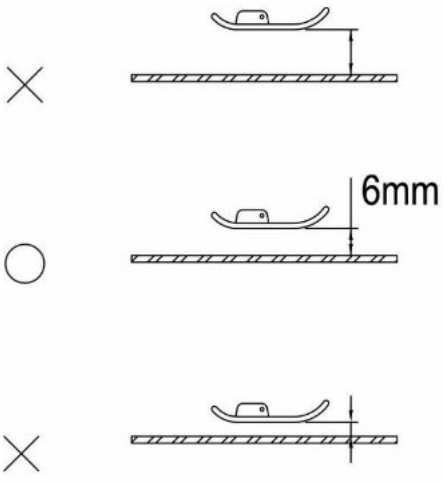
CONTENT

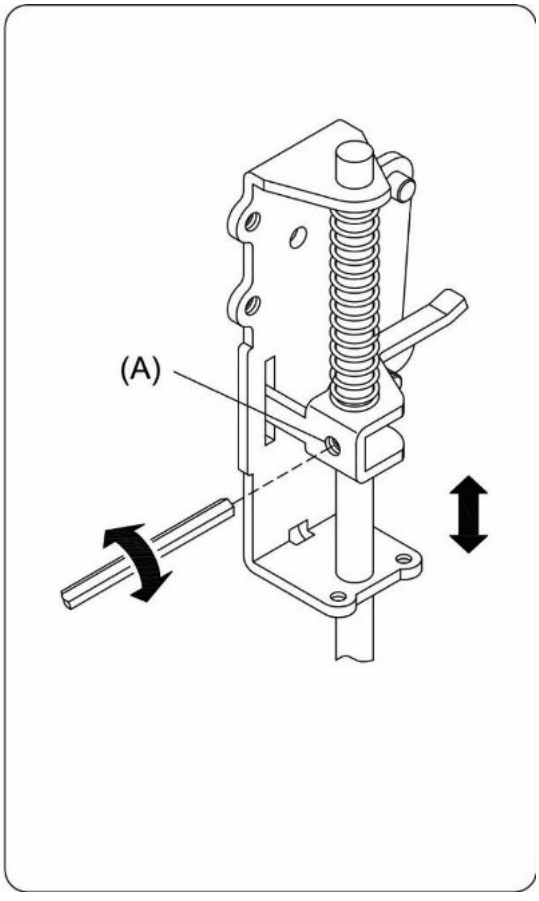
1. Presser Bar height

Tool: 2.0mm hexagon screwdriver & 6.0mm height of gauge

Standard: Height of presser foot is 6.0mm
A. Open face cover.
B. Lift presser bar lever to upper position.
C. Loosen hexagon screw (A) of presser bar guide bracket.
D. Adjust presser bar until presser foot lifting height is 6.0mm
E. Tighten hexagon screw (A).

CHECK:
Repeat the presser bar lifter down & up for confirm the height of presser foot is 6.0mm.



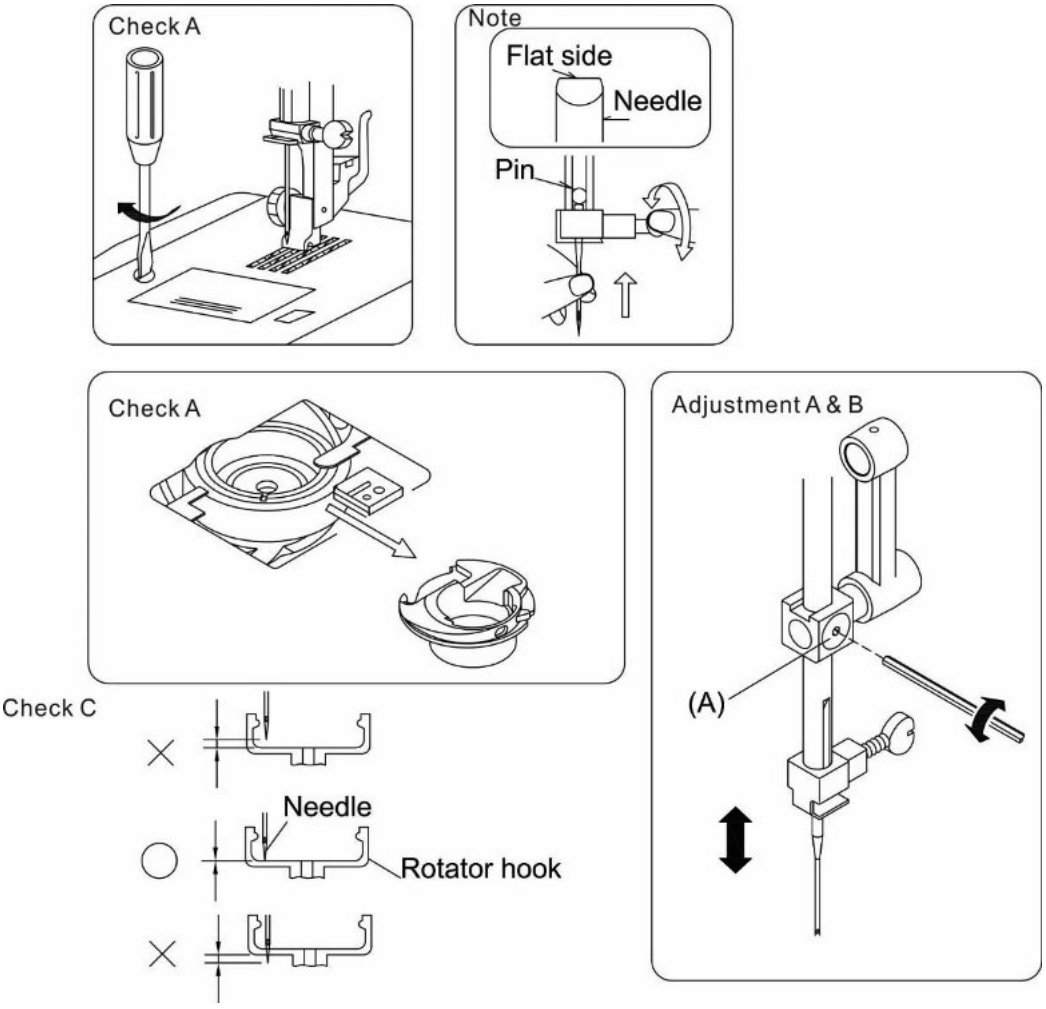


2. Needle bar height

Tool: 2.0mm hexagon screwdriver, flathead screwdriver.
Standard: Sharp point of needle is lowered to touch bottom surface of rotary hook.
Note: Needle must be inserted and against the pin in the top and hold.
Tighten the needle clamp screw for fixing the needle.

CHECK:
A. Open needle plate, take bobbin case out.
B. Turn the hand wheel counter-clockwise to lower needle to lowest position.
C. Check the distance between needle and bottom surface of rotary hook. (See below figure.)
Note: The needle sharp touches bottom surface of hook gently

Adjustment:
A. Loosen the hexagon screw (A) of needle bar rod link (281045004), and adjust its position to Up or Down until needle is in correct position.
B. Tighten the hexagon screw of needle bar rod link (281045004)



3. Needle drop position

Tool: 2.0mm hexagon screwdriver and flathead screwdriver.

Standard: 3.5 mm each side in the needle plate hole when Needle position is in the center of needle plate hole.

Requirement of Adjustment: Select stitch No. 006 zigzag as adjusting sample pattern, and needle will stop in right position.

Check:

A. Open front cover.

B. Adjust stitch width to 3.5. (Needle is in the center)

C. Turn manually hand wheel to make needle lower into needle plate hole, and check the distance between needle and right side/left side in the needle plate hole.

Adjustment:

A. Use 2.0mm hexagon screwdriver, and loosen the hexagon screw (A) of needle bar crank.

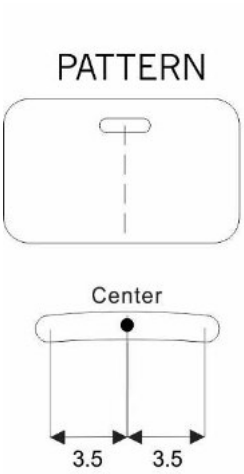
B. Use flathead screwdriver to adjust zigzag eccentric pin until the needle is in right correct position:

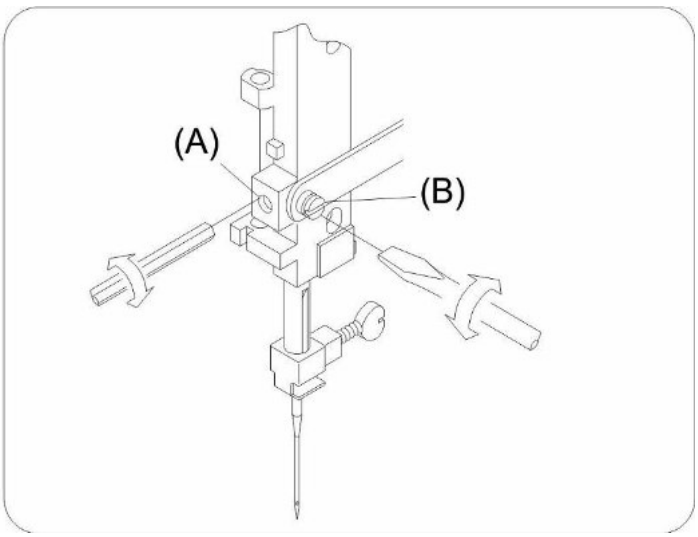
- When you turn it clockwise the needle is moved to right side.
- When you turn it counter-clockwise the needle is moved to left side.

C. Tighten and secure the hexagon screw (A) of needle bar crank when position is set.

-Hexagon screw (A)-000079103(4×4)

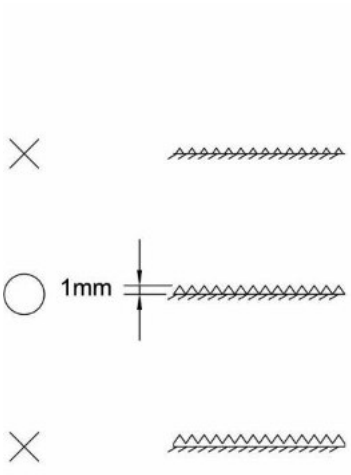
-Needle bar crank (296201)

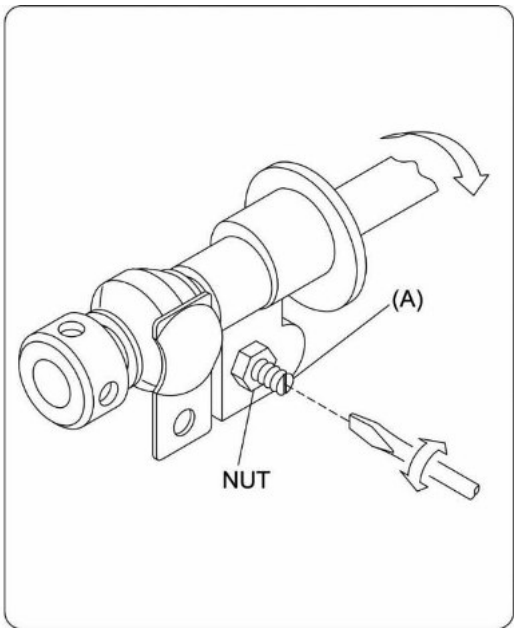




4. Height of Feed dog

Tool: 7.5mm nut driver, flathead screwdriver and gauge measurement for height of feed dog.
Standard: Height of Feed dog is 0.9mm when it starts to move ~height of feed dog moves to highest position 1.1mm
Adjustment:
A. Turn hand wheel to make needle rising to highest position.
B. Open bottom cover.
C. Use flathead screwdriver and turn the feed regulate screw (730171) clockwise until feed dog is raised to standard height when feed dog is lower than 0.9mm.
D. Use flathead screwdriver and turn the feed regulate screw (730171) counter-clockwise until feed dog is lowered to standard height when feed dog is higher than 1.1 mm.
E. Use Nut driver to tight the hexagon nut. (000010003)





5. Transmission of Feed dog

Tool: 2.5mm hexagon screwdriver.

Standard: Transmission of Feed dog is in between 0-1mm when needle is moved down from highest position.

Check:

Turn hand wheel to move needle to highest position, and check transmission of feed dog.

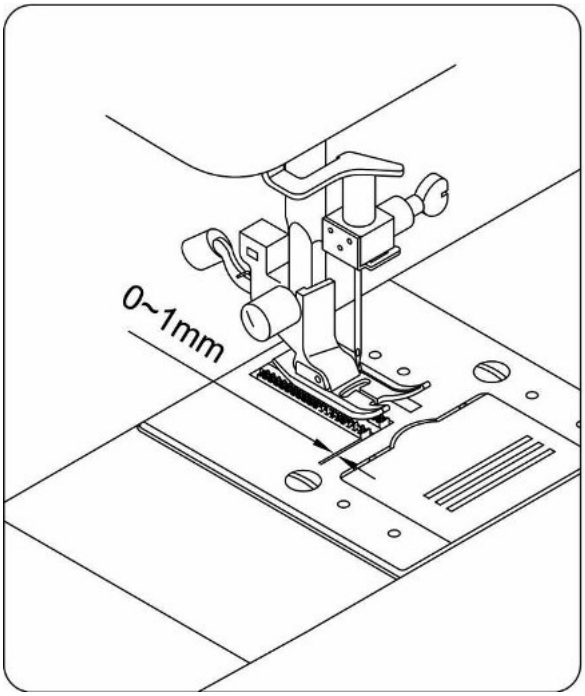
Adjustment:

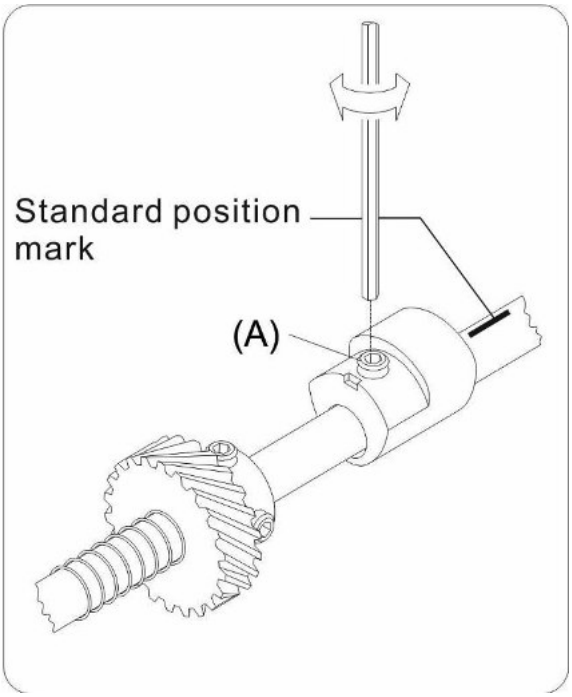
A. Open front cover.

B. When transmission is too early**,** use 2.5mm hexagon screwdriver to loosen the hexagon screw (A) of feed cam (T4-29), and keep screwdriver in the screw as a handle to move the cam up for adjusting it to standard position mark on the shaft.

C. When transmission is too late**,** use 2.5mm hexagon screwdriver to loosen the hexagon screw (A) of feed cam (T4-29), and keep screwdriver in the screw as a handle to move the cam down for adjusting it to standard position mark on the shaft.

D. Use 2.5mm hexagon screwdriver to tighten the hexagon screw of feed cam (T4-29).





6. Needle clearance in rotary hook.

Tool: 2.0mm hexagon screwdriver.

Standard: The distance between needle(HA-1 #14) and rotary shuttle sharp hook is 0.05～0.1mm

Check:

Move needle position to center by setting stitch width at 「3.5」.

Adjustment:

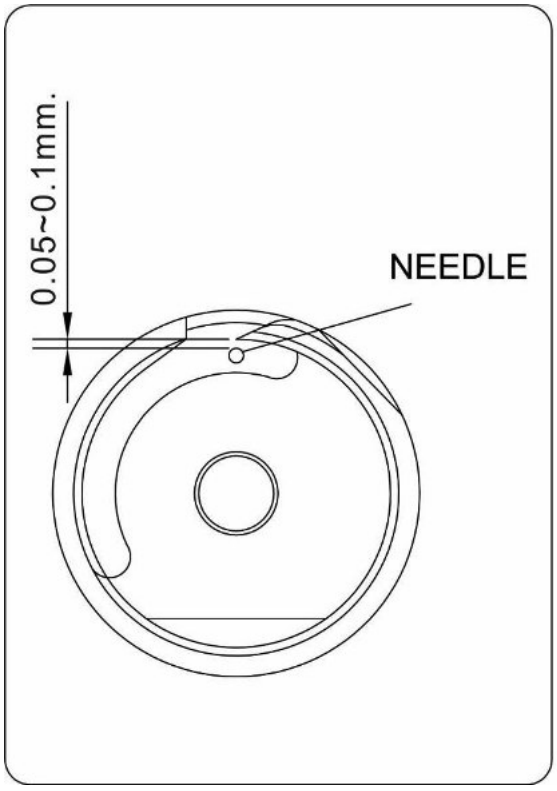
A. Open face cover

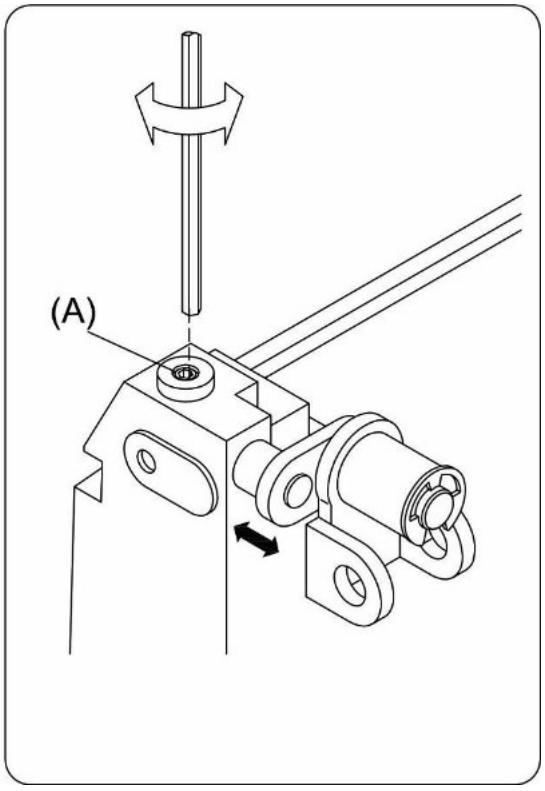
B. Use 2.0mm hexagon screwdriver and loosen the hexagon socket screw (A) (00079206)

C. When the distance is too close, move needle bar crank (730095) forth until distance is correct.

D. When the distance is too far, move needle bar crank(730095) back until distance is correct.

E. Hexagon socket screw (A) (00079206) must be tightened and secured.





7. Timing of rotary hook.

Tool: 2.5mm hexagon screwdriver and a specialized gauge of measurement.

Standard: The needle is required to be at a proper position with rotary shuttle hook tip

Check:

A. Set Pattern No. at 002 (straight stitch in left position) or adjust stitch width to “0” for left needle position when pattern No. 006 is set.

B. Open Needle plate, and take bobbin case off.

C. Turn hand wheel by clockwise to make the needle raising from the bottom of shuttle race to correct positon with shuttle hook tip as below figure shown.

D. Check relevant position between Needle hole and rotary shuttle hook tip.

Adjustment:

A. Open bottom cover

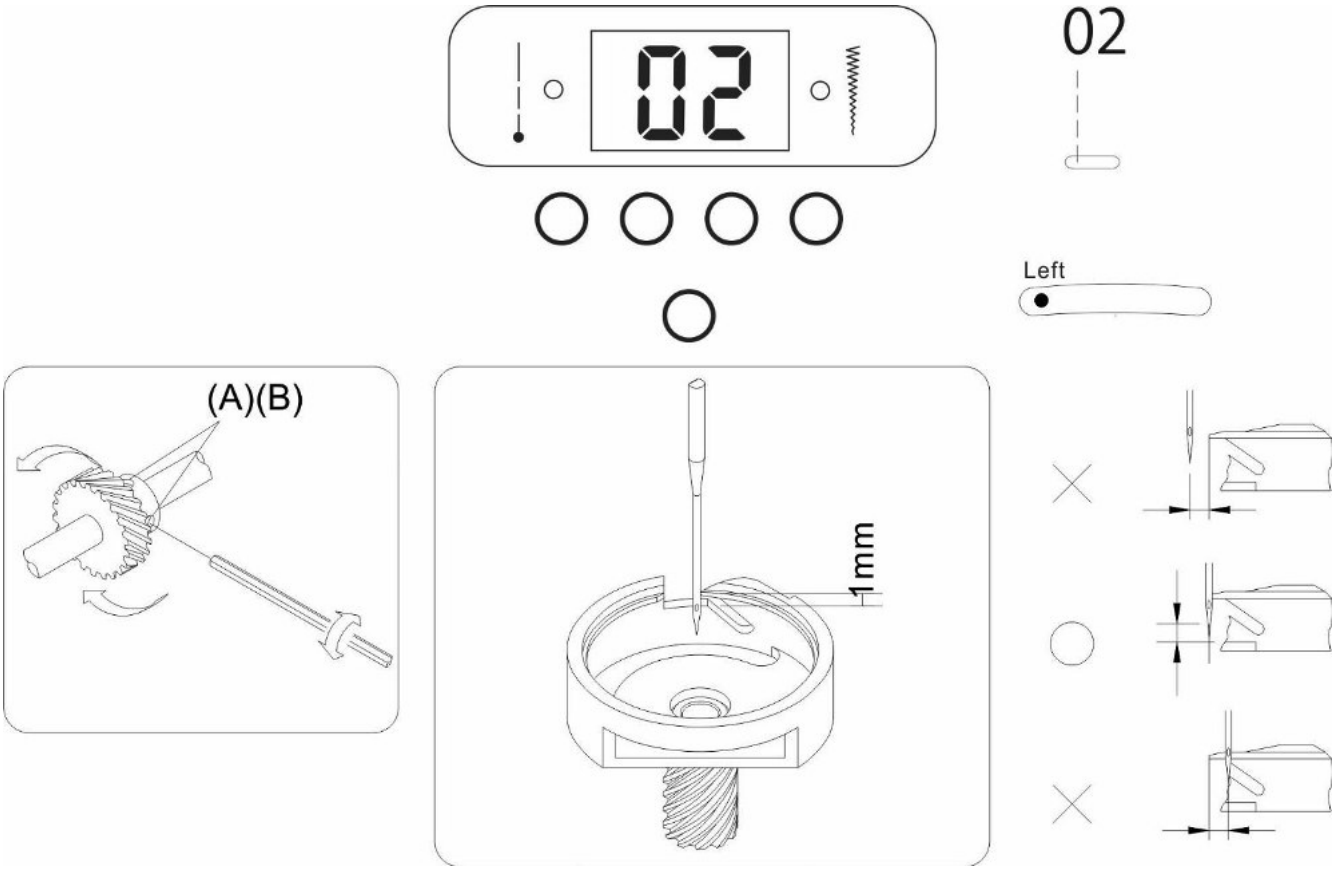
B. Use 2.5mm screwdriver, loosen the hexagon screw (A),(B) of lower shaft gear

C. When shuttle hook moves exceeding needle hole position 2.5mm screwdriver can be used as a handle with screw (A) to move gear down until the hook tip reaches correct position with needle.

D. When shuttle hook moves before needle hole position 2.5mm screwdriver can be used as a handle with screw (A) to move gear up until the hook tip reaches correct position with needle.

E. Tighten the hexagon screw (A) (B) of lower shaft gear.

Note: 2 pcs of hexagon screws (A) & (B) must be secured and tightened.



8. Positioning of Bobbin case

Tool: Phillips screwdriver.

Standard: Distance is 1mm between bobbin case and stop shrapnel holder (C2900-023/730152)

Adjustment:

A. Open needle plate

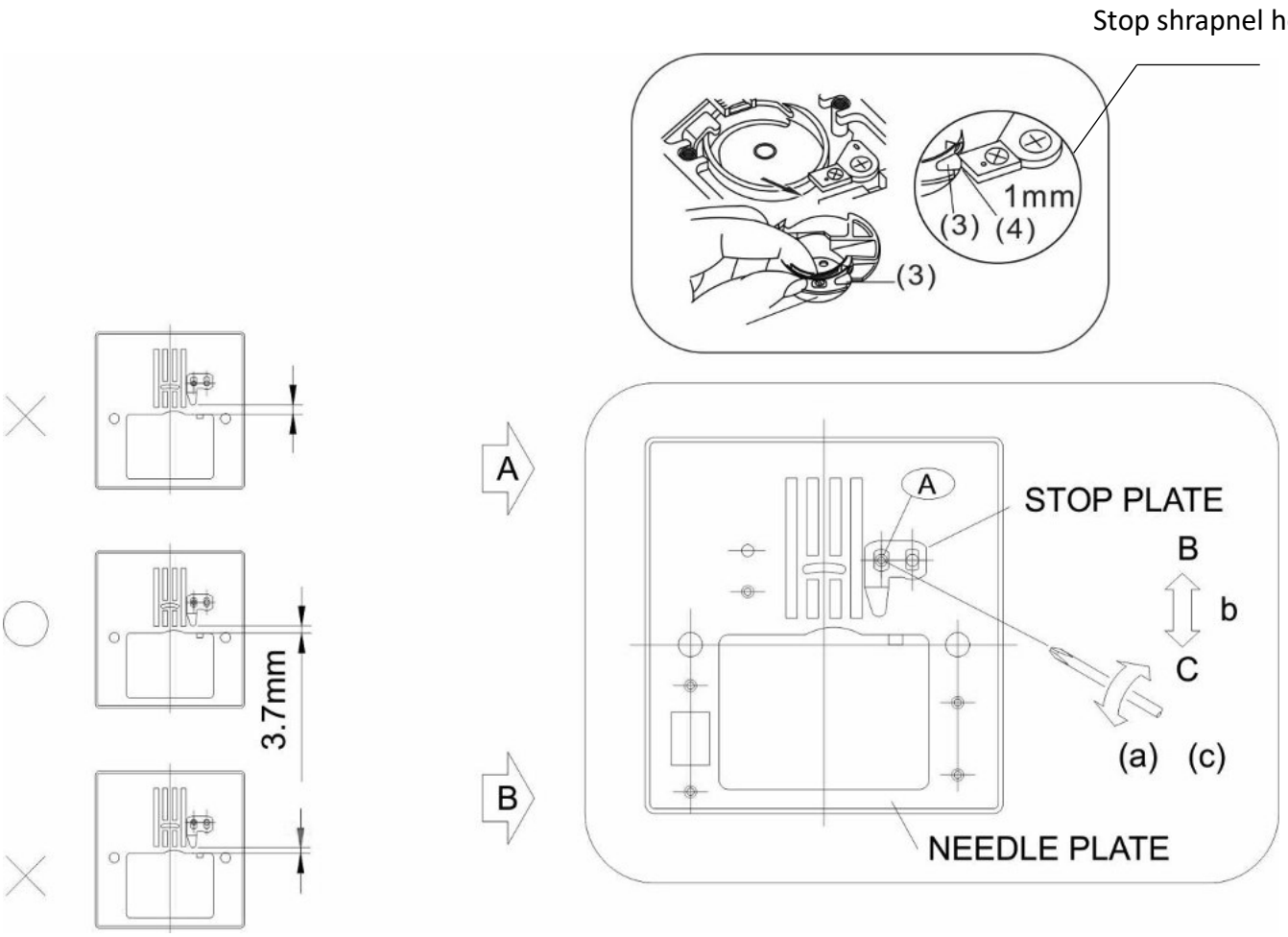
B. Loosen screw (A) of bobbin case stop plate (730151) on needle plate

C. When the gap is more than 3.7mm as below standard figure shown bobbin case stop plate needs to be adjusted lower.

D. When the gap is less than 3.7mm as below standard figure shown bobbin case stop plate needs to be adjusted upper.

E. Tighten screw (A) of bobbin case stop plate and install needle plate and bobbin case back.

F. Check bobbin case has 1mm gap with stop shrapnel holder (C2900-023/730152)



9. Upper Tension Dial

Tool: Tension meter

Standard: Tension range is 35～40g when Tension dial is set at level 4

Check:

A. Set Tension Dial at level 4.

B. Lift presser bar

C. Threading the thread with tension meter

D. Lower presser bar.

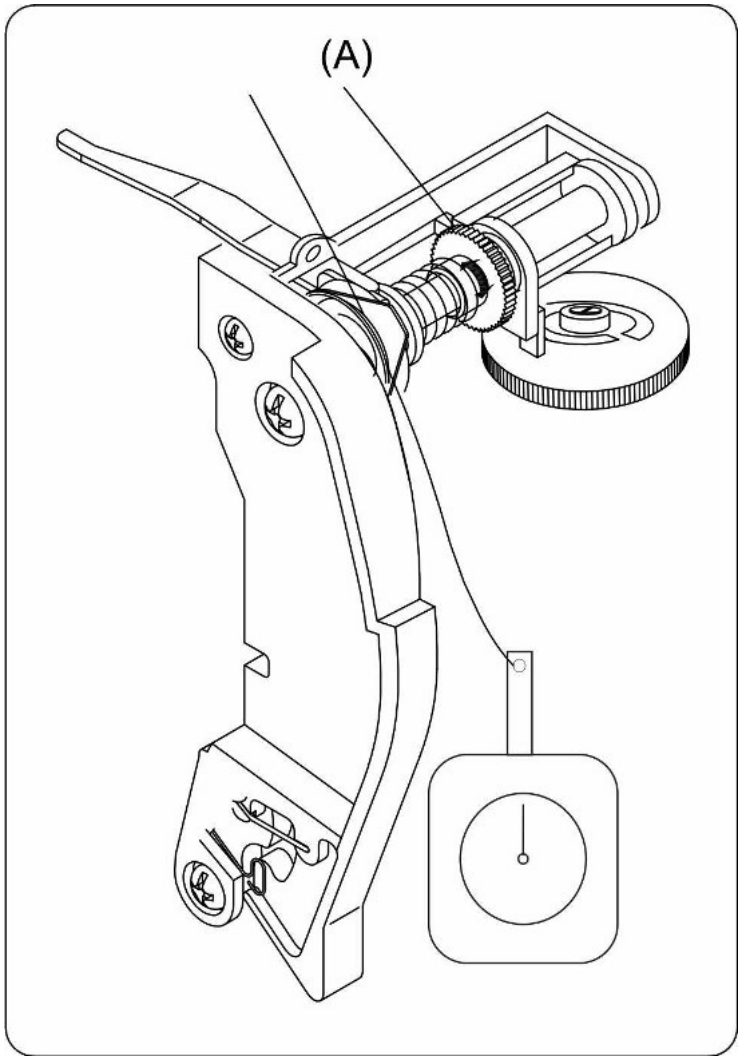
E. Pull the thread with the meter for measuring

Adjustment:

A. Open front cover.

B. When tension is too tight (More than 40g at level 4), turn tension regulator (A) down manually until standard tension value.

C. When tension is too loose (less than 35g at level 4), turn tension regulator (A) up manually until standard tension value.



10. Tension of Bobbin case

Tool: Tension meter and small flathead screwdriver.

Standard: Tension range is 15～18g.

Check:

A. Open needle plate, and take bobbin case off.

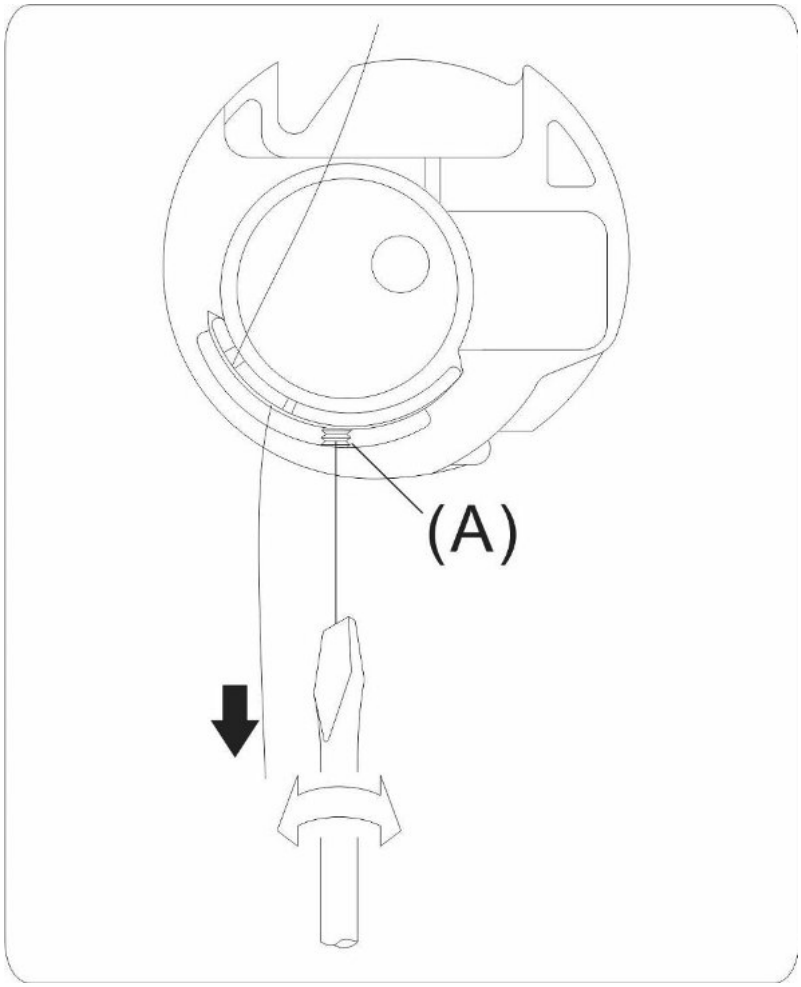
B. Threading with meter to check (see figure)

Adjustment:

A. When tension is too tight use small flathead screwdriver to turn the regulating screw (A) counter-clockwise until standard tension value.

B. When tension is too loose use small flathead screwdriver to turn the regulating screw (A) clockwise until standard tension value.

C. Install needle plate and bobbin case when regulating is finished.



11. Auto Needle threader

Tool: 1.5 mm hexagon screwdriver and flathead screwdriver

Standard: Hook of Auto needle threader is correctly into needle eye to get thread through it.

Check:

A. Turn hand wheel to make needle raising to highest position.

B. Check thread can be hooked well from needle eye when threader is used.

Adjustment:

A. Open face cover.

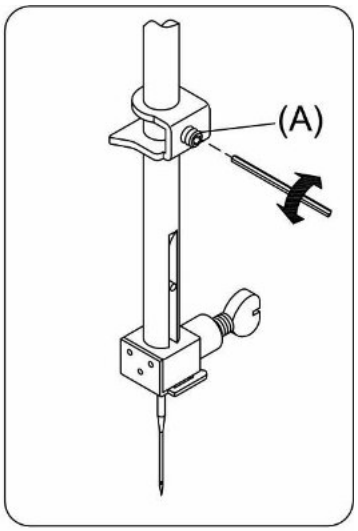
B. Use 1.5mm hexagon screwdriver to loosen hexagon screw (A) of through thread location plate (270017003), and keep screwdriver in the hexagon screw hole.

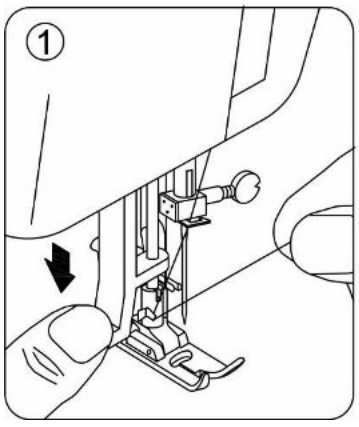
C. When the hook of threader is lower than needle eye hexagon screwdriver is used to move up the location plate until correct position.

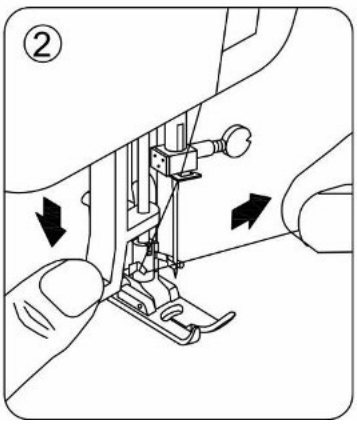
D. When the hook of threader is higher than needle eye hexagon screwdriver is used to presser down the location plate until correct position.

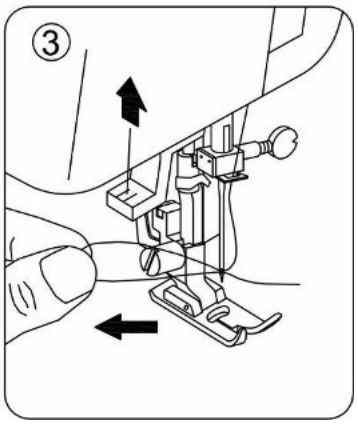
E. Check whole threading process when auto threader is used.

F. Tighten the hexagon screw(A) of through thread location plate(270017003).



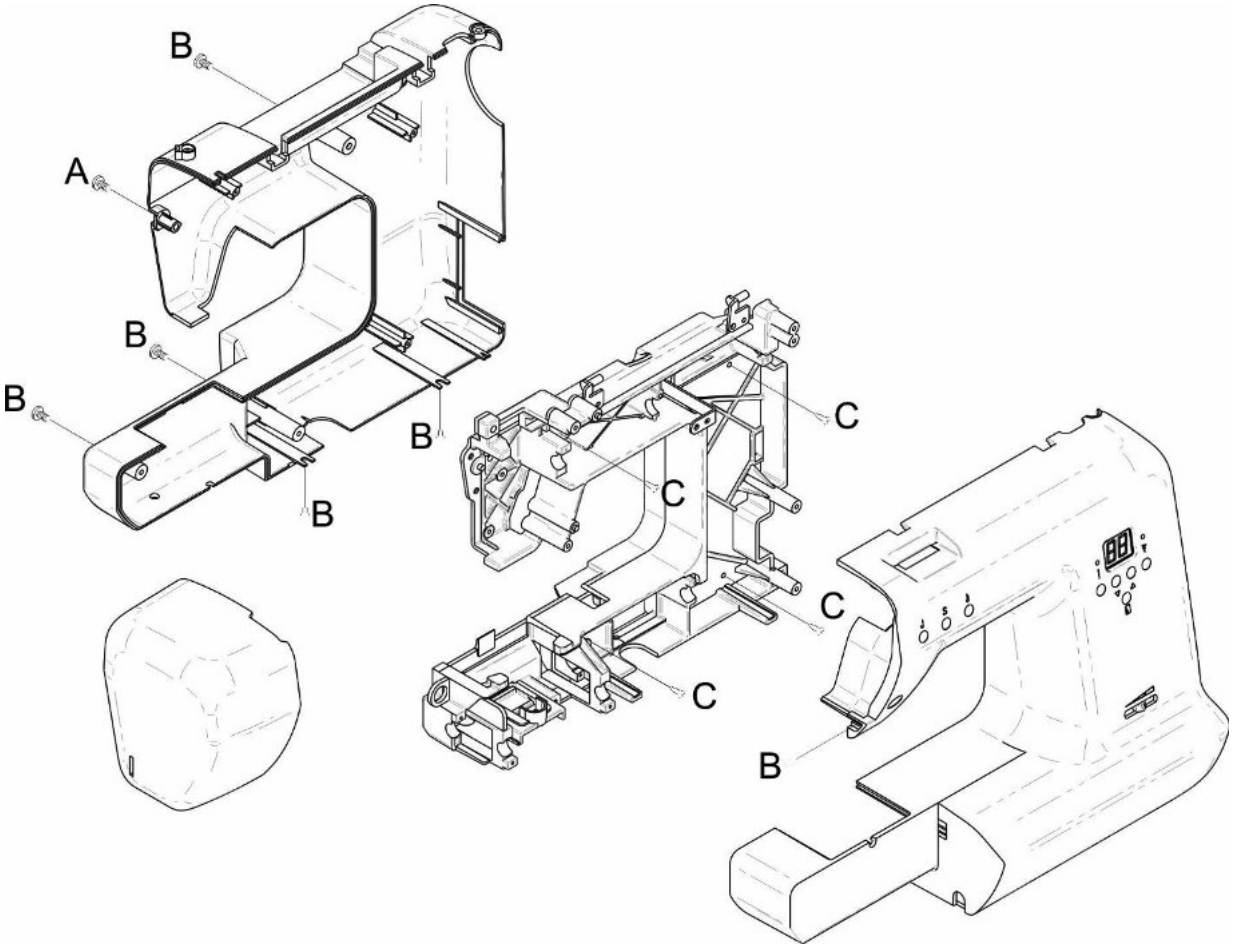






12. Open External Covers

A. Face cover, front cover, rear cover.
B. Start to open face cover first before opening front cover and rear cover



13. Adjust starting point

Check:

(1) Power of machine is turned on.

(2) Stepping motor will senses the start point when needle position is tuned to Upper or lower.

Problem 1:

Stepping motor doesn't have motion to sense the starting point or starting point is off standard position.

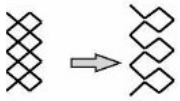
Solution: Change PC-2 (11K23M) Main circuit board or Stepping Motors (128082)

Problem 2: Pattern is sewn differently from standard.

The pattern is shown different from standard after sewing as below similar situation

Ex 1.


Pattern No. 082 is sewn as left standard diagram.

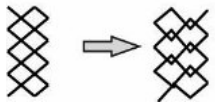
When  is wider

a. Use Philip screwdriver to loosen screw (A)

b. Adjust screw (B) by count-clockwise

c. Tighten screw (A) before test

d. Secure screw (A) well if sewing test is ok.

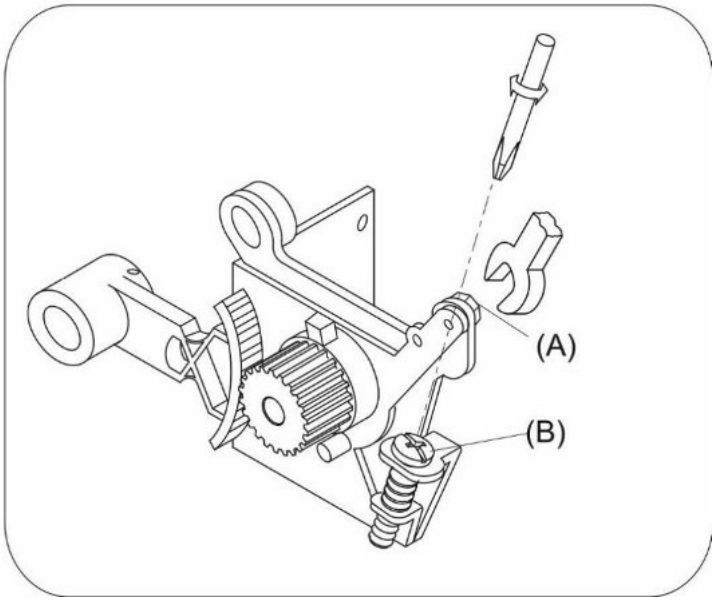
When  is closer

a. Use Philip screwdriver to loosen screw (A)

b. Adjust screw (B) by clockwise

c. Tighten screw (A) before test

d. Secure screw (A) well if sewing test is ok.

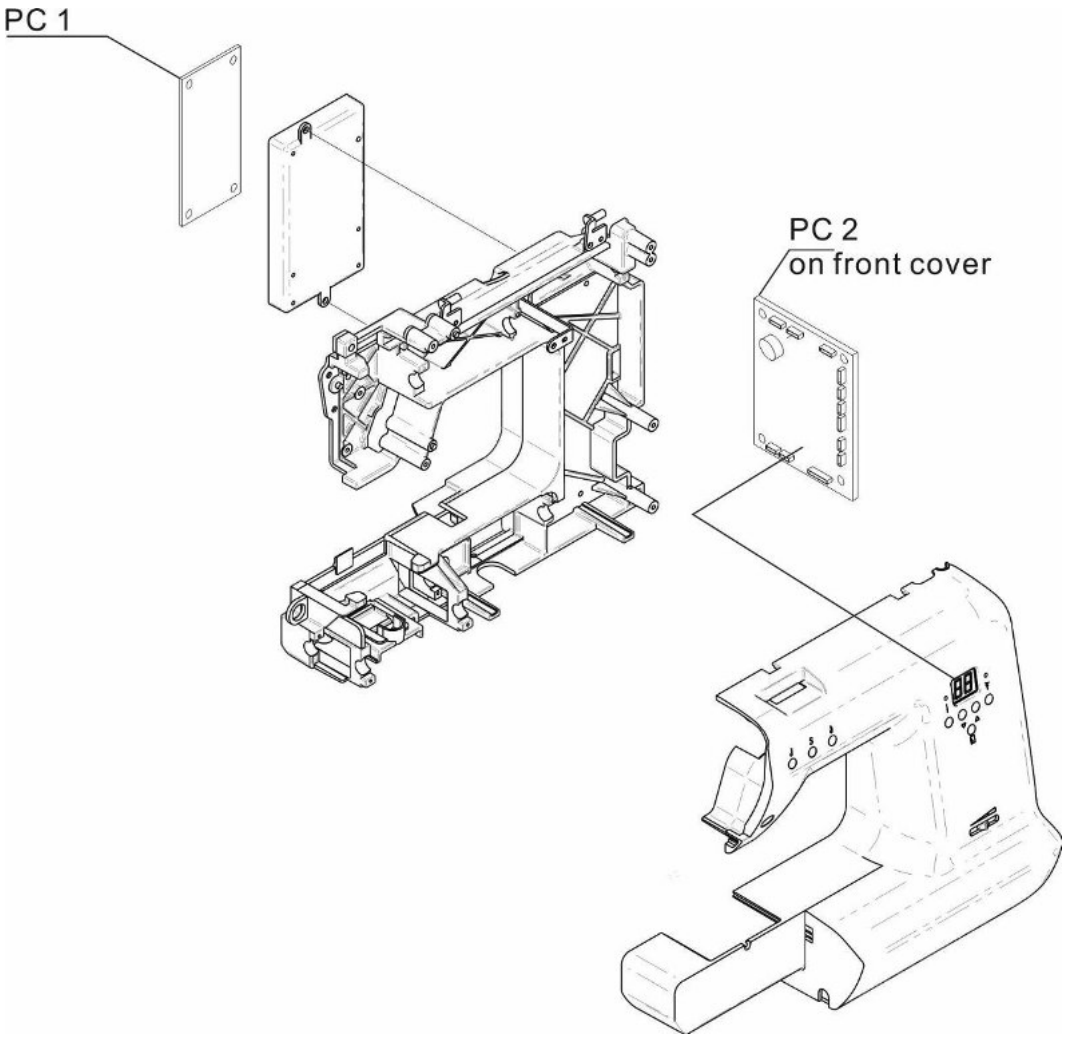


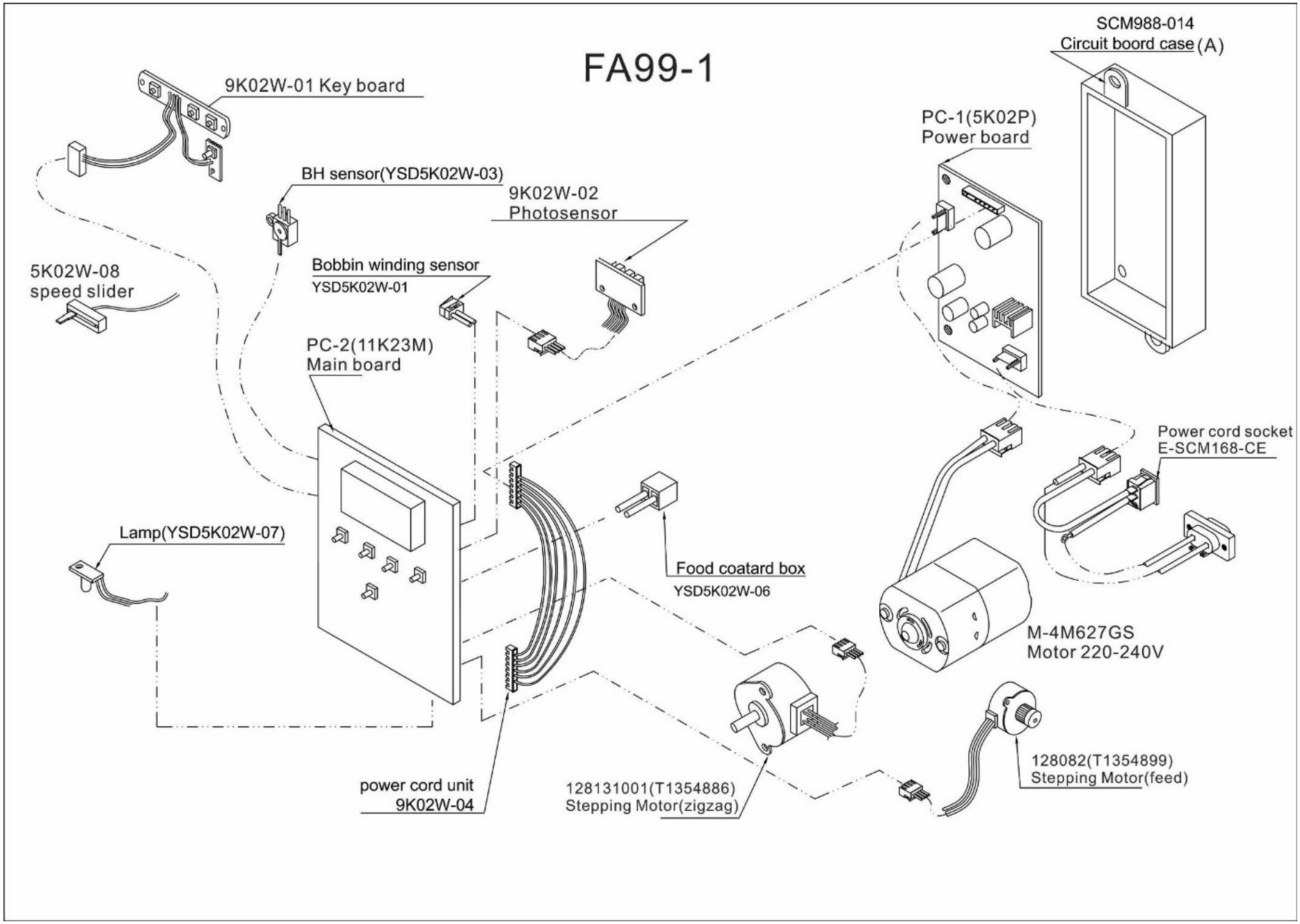
14. Location of Circuit boards

Problem 1: LED Lamp cannot be lightened
Solution: Change LED lamp (5K02W-07)

Problem 2: LED display cannot be lightened/control button has no response.
Solution: Change Display & control board (**PC2**-11K23)

Problem 3: LED lamp and LED display cannot be lightened in the same time.
Check: The power plug is connected completed well, and Power switch is turned [On], the machine doesn't have response.
Solution: Change Power circuit board (**PC1**-5K02P)




FA99-1
SCM988-014
Circuit boord case (A)
9K02W-01 Key board
PC-1(5K02P)
Power board
BH sensor(YSD5K02W-03)
9K02W-02
Photosensor
5K02W-08
speed slider
Bobbin winding sensor
YSD5K02W-01
PC-2(11K23M)
Main board
Power cord socket
E-SCM168-CE
Lamp(YSD5K02W-07)
Food coatard box
YSD5K02W-06
M-4M627GS
Motor 220-240V
power cord unit
9K02W-04
128131001(T1354886)
Stepping Motor(zigzag)
128082(T1354899)
Stepping Motor(feed)

16. Change feeding stepping motor (128082)

1. Open front and back cover

2. Loosen 3 screws (A, B and C) for disassembling the stepping motor.

3. Replace new motor on the feed motor plate, then secure it with screws.

Note: Motor gear must be secured well when new motor is replaced with feeding motor plate.

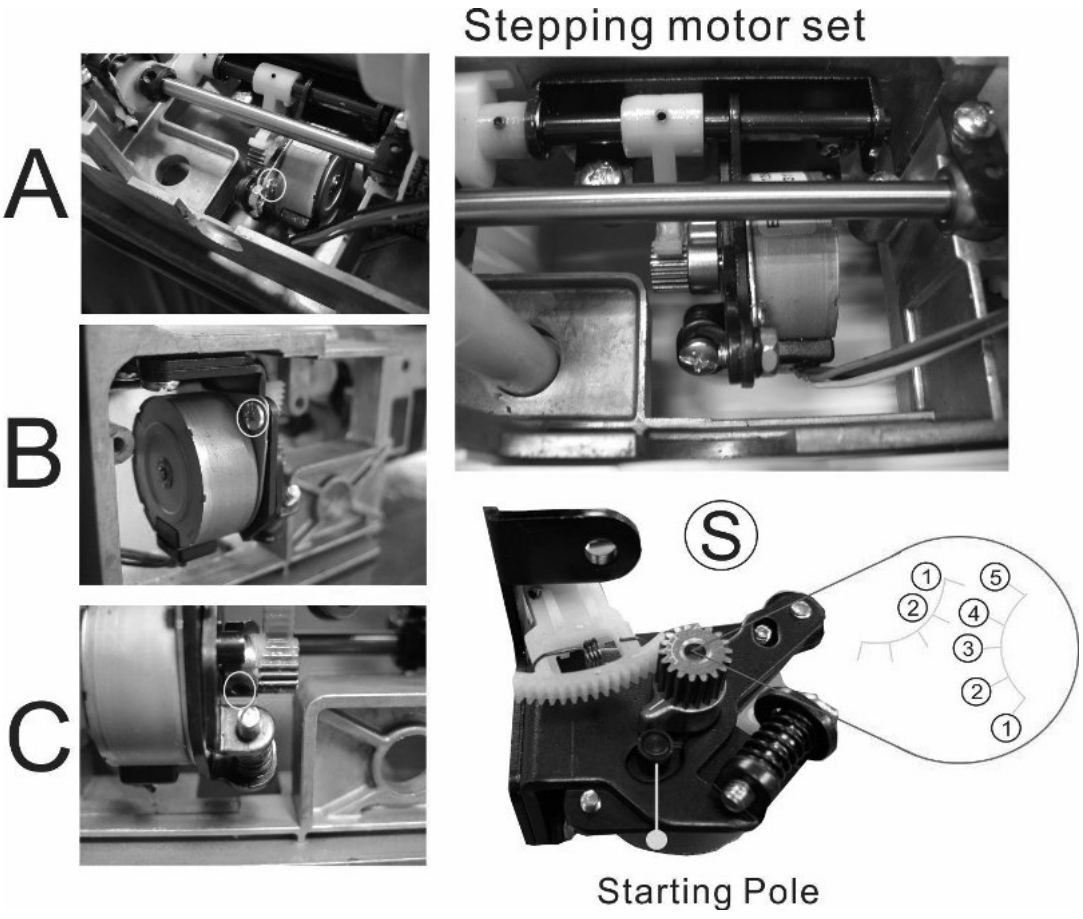
S. Starting point regulating

(1) Place feeding regulating gear (FA-057) to grip motor gear (C168-003) together, and count 5th teeth starting from position of starting pole when motor gear is moved to touch against starting pole, and grip 2 teeth of the feeding regulating gear(FA-057), then secure the hexagon socket screw (C) of motor gear.

4. Make sure the feeding regulating unit is secured on the Arm bed with 4 screws (C).

Check:

1. Switch power on, and sew letter of A, B, 9 and 0 for testing starting point.
2. If sewing result is different or a little regulating please refer to page 15.



17. Auto Buttonhole adjustment

Problem 1: buttonhole presser foot is not sensed when you select button pattern and pull buttonhole lever down.

Solution:

1. Open face cover
2. Loosen the screw of buttonhole switch case (128024), then adjust and move the switch case backward, tighten screw and test.

Check:

1. Select buttonhole pattern
2. Pull down buttonhole lever while the sign of lever doesn't flash on the LED display.
3. Start to sew complete  buttonhole

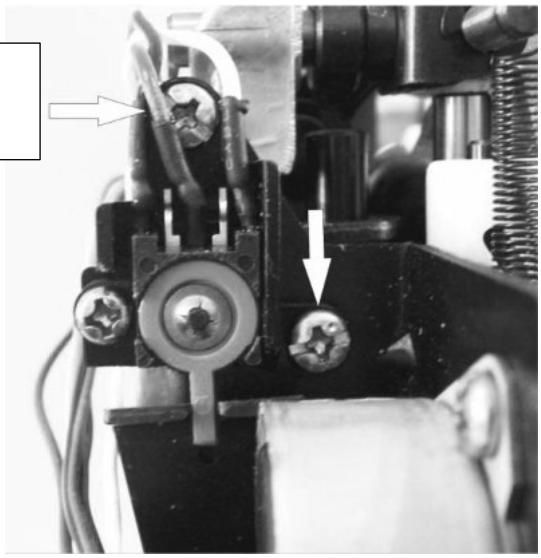
Problem 2. The shape of buttonhole is sew like  , this situation is BH switch is backward too far.

Solution: Loosen the screw of buttonhole switch case (128024), then adjust and move the switch case forward, tighten screw and test.

Check:

Select buttonhole pattern

2. Pull down buttonhole lever while the sign of lever doesn't flash on the LCD display.
3. Start to sew complete  buttonhole



18. Motor belt adjustment

Problem:

(1)When the tension of belt is loose the machine doesn’t run properly.

Solution:

1. Loosen screw (A) for releasing the bracket of motor.
2. Bracket of motor can be moved downward or Upward until belt is in proper tension.
3. After adjusting tension, hold the position of motor and use Philip screwdriver to tighten screw (A) for securing bracket of motor.