

Ai10 Troubleshooting Manual

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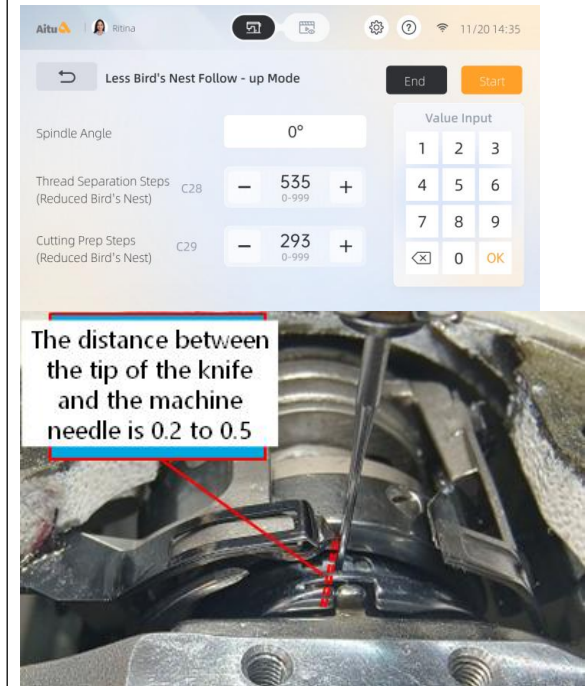
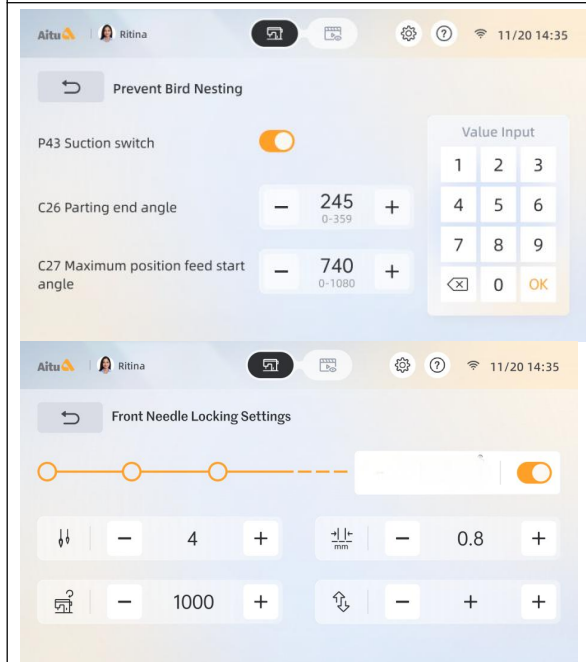
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1 Bird's Nest And Thread

Keywords: Bird's Nest, Bird's Nest thread length, Bird's Nest surface line length

Note: When the machine turns on the Bird's Nest function, it is found that the thread end of the Bird's Nest does not meet the factory standard after sewing (the length of the thread end before the lock is not opened is more than 10mm; The length of the lock needle head before opening is about 6-8mm, and the length of the thread head in the Bird's Nest short line head mode is within 6mm). Please refer to the following solutions.

Picture	Standard Procedure
 Figure 4.1.1-1 I Check if the action of the small bird's nest is correct	If the length of thread ends exceeds the standard too much, enter according to the setting, factory setting and less bird nest following mode in sequence; Click Start, then you can turn the handwheel to check if the action of the nest is correct; When turning to the wire clamping position, check whether the wire pressing piece covers the movable blade edge. If not, adjust the anti-bird nest wire cutting preparation stepping process C29.
 Figure 4.1.1-1 II Adjustment Parameters	If the length of the thread end fluctuates in the standard range, it can enter the setting of less bird's nest, and adjust the starting angle C27 of the knife at the maximum position of less Bird's Nest (not less than 800, otherwise it is easy to get out of line); Enter the front lock needle setting and adjust the sewing speed of the lock needle (only the front lock needle is useful, and it is not recommended to be less than 700);

2 Poor Effect Of Bird's Nest Bottom Line

Keywords: Bird's Nest, Bird's Nest thread length, Bird's Nest bottom line length

Note: When the machine turns on the Bird's Nest function, it is found that the bottom thread of the cloth Bird's Nest is abnormal.

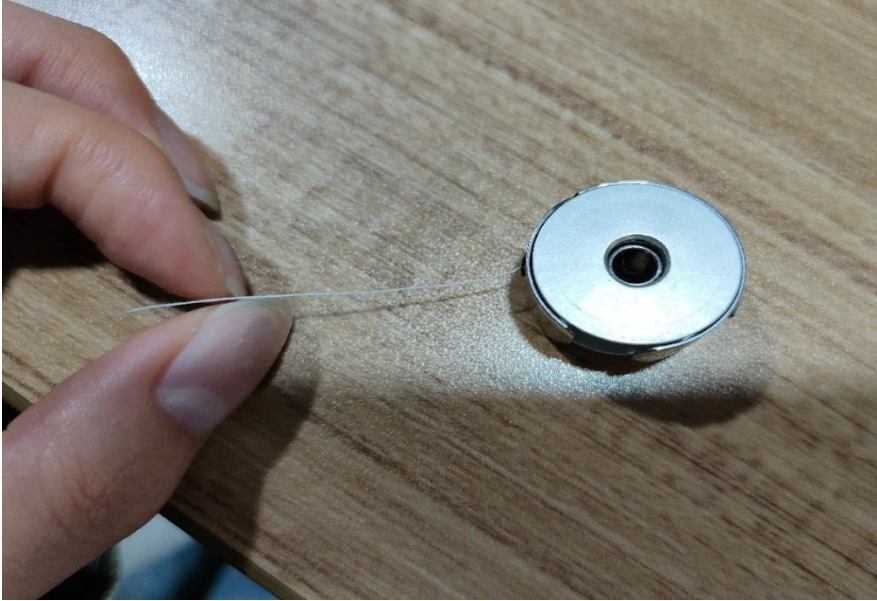
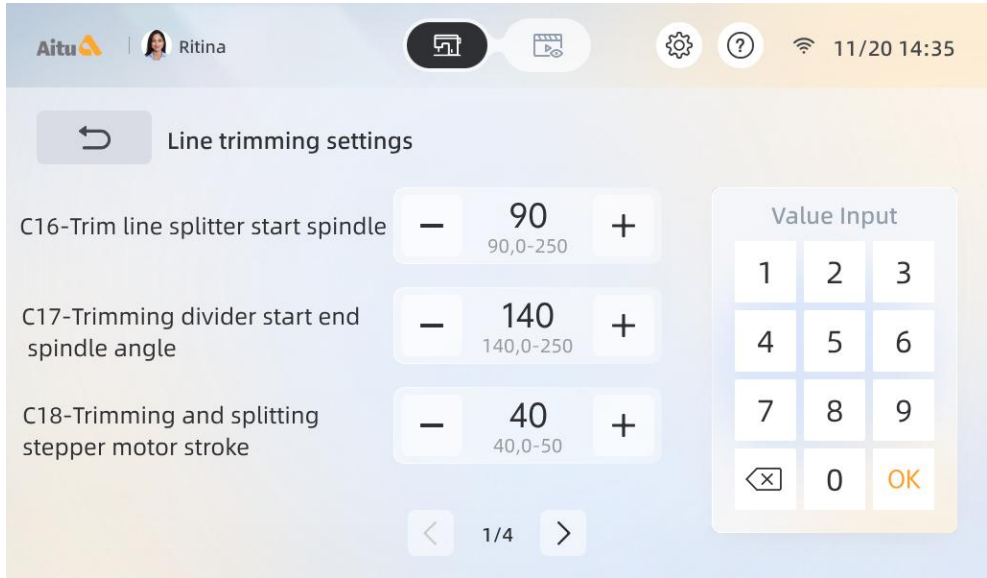
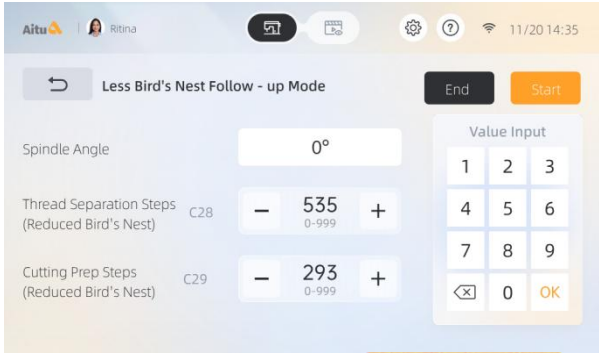
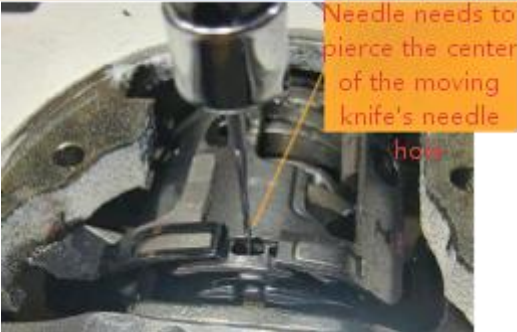
Picture	Standard Procedure
	Take out the bobbin after sewing and pull the thread end by hand. If the bottom line can be pulled out, the Bobbin will run idle;
Figure 4.1.1-2 Idling of Lock Cylinper I 	If the bobbin idling occurs, enter the cutting line setting and reduce the cutting line speed C22 from 80 to 60 (minimum 50)

Fig. 4.1.1-2 II Lower Shear Line Speed

3 Starting Seam Thread-Parameter Adjustment

Keywords: seam unraveling

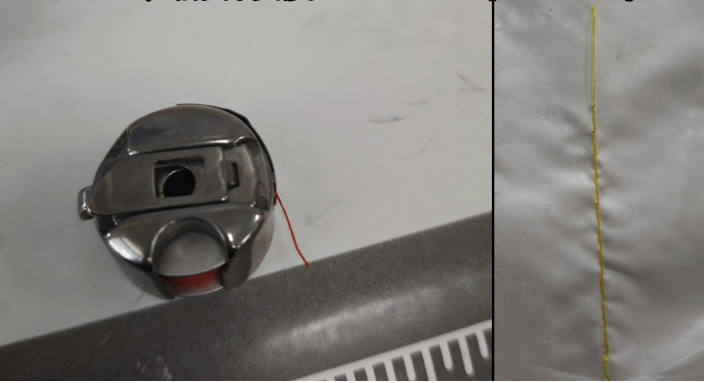
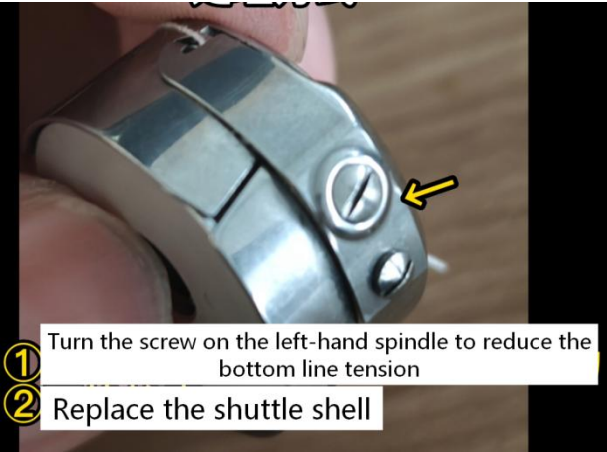
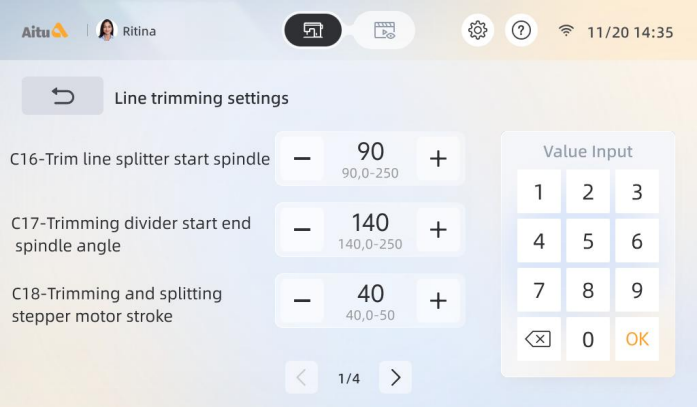
Note: When the machine turns on the Bird's Nest function, if the movement of the Bird's Nest is correct, if there is a seam and thread, please refer to the following solution.

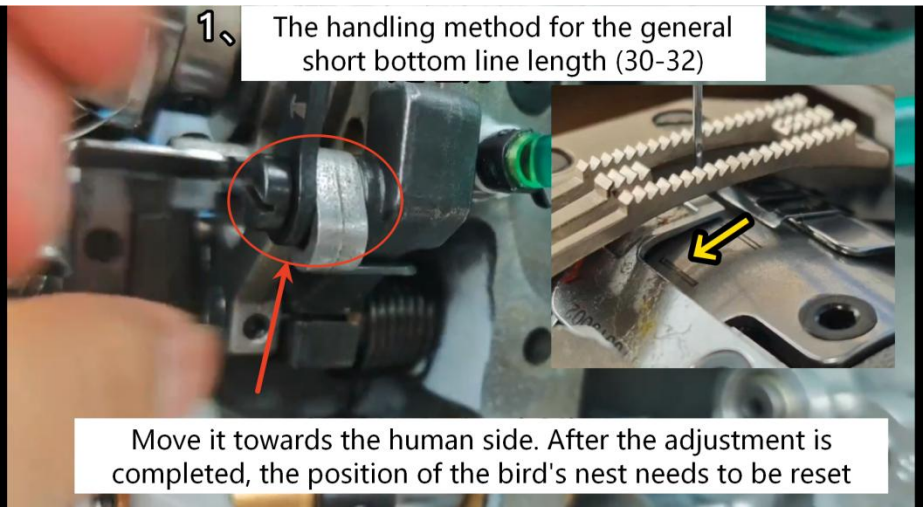
Picture	Standard Procedure
  	Access method: Tap Settings icon, Factory Settings and Small Bird Nest Follow Mode in sequence. Press Start, then rotate the handwheel to check if the small bird nest operates normally. Small bird nest dividing stepping progress C28: In this mode, verify the needle aligns with the center of the movable knife hole. Adjust values via +/- keys or numeric input, then press Start and turn the handwheel for reconfirmation. Small bird nest thread trimming standby stepping progress C29: Check the tip-to-needle distance is 0.85-1.3mm, and ensure the pressure plate covers the raised cutting edge. Adjust parameters with +/- keys or numbers, then recheck by pressing Start and rotating the handwheel.

4 Starting Seam Thread-Bottom Thread Length

Keywords: seam unraveling

Note: When the machine turns on the Bird's Nest function, if the movement of the Bird's Nest is correct, if there is a seam and thread, please refer to the following solution.

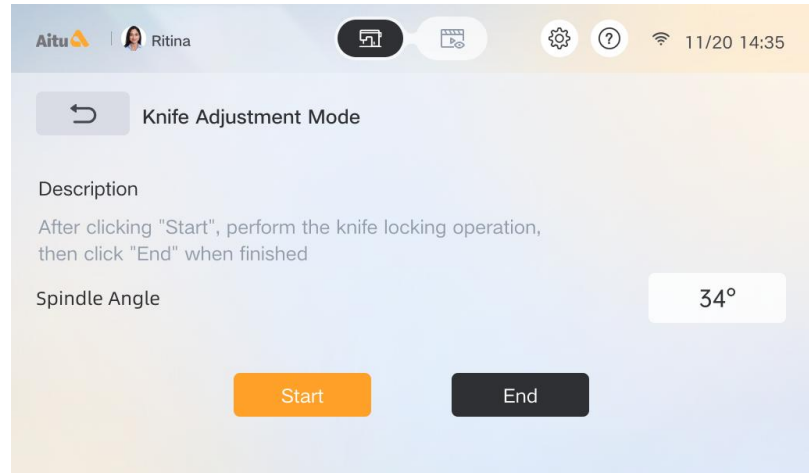
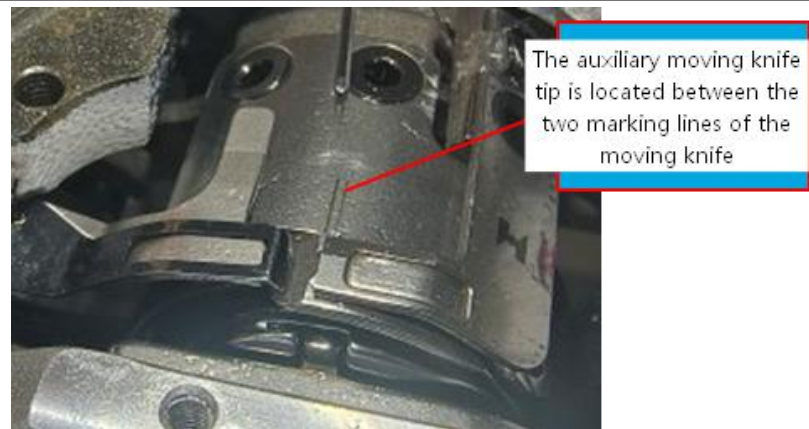
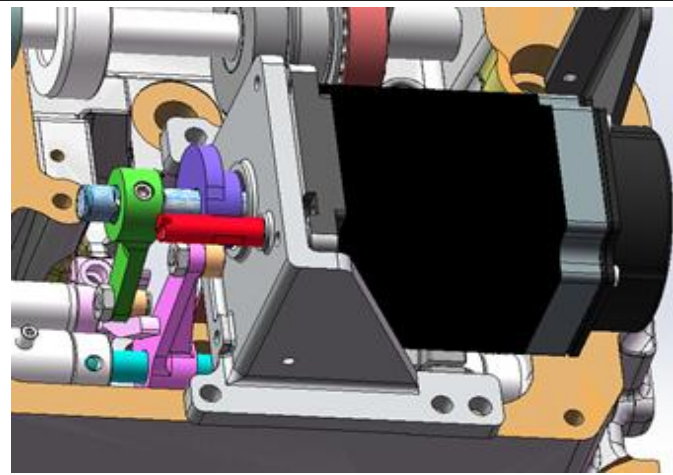
Picture	Standard Procedure
 Figure 4.1.2-2 I View Bottom Line Length	Try to sew 20 times, and check the length of the bottom thread head (standard 33-35mm);
 Figure 4.1.2-2 II Tension of Adjusting Bottom Line  Fig. 4.1.2-2 III Adjustment of Shear Line Setting	If the end of the bottom line is occasionally short, 1. Minor the tension of the bottom line; 2. Replace the bobbin shell with a new one; 3. In the line cutting setting, reduce the line cutting speed C22 from 80 to 60 (minimum 50), and adjust the line cutting timing C17 = 140; C19 = 180;

 1、 The handling method for the general short bottom line length (30-32) Move it towards the human side. After the adjustment is completed, the position of the bird's nest needs to be reset Figure 4.1.2-2 IV Adjusting the Occlusal Position	If the end of the bottom line is generally short, Loosen the screw of the crank shaft of the thread cutting, adjust the position of the auxiliary crank of the thread cutting, and adjust the occlusal position of the movable knife and the auxiliary movable knife to the human direction; (note: After adjustment, enter the anti-bird nest following mode and re-align the lower anti-bird nest position)
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5 The Thread End Of The Back Trimming Is Long

Length of thread end of rear shear lineLength of thread end of rear shear lineKey words: Post-cutting line thread length

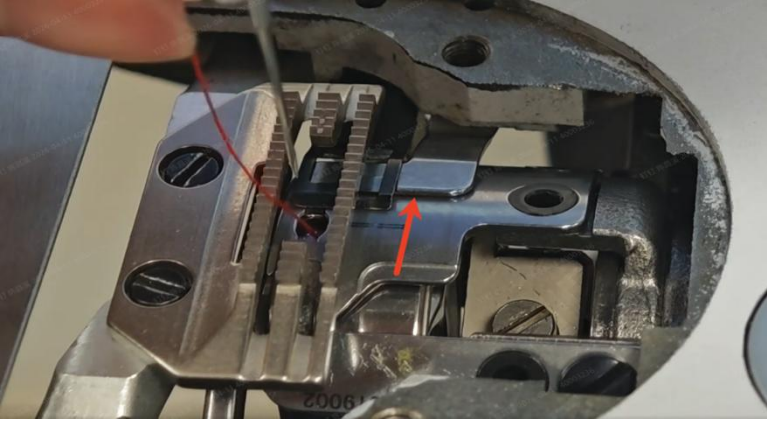
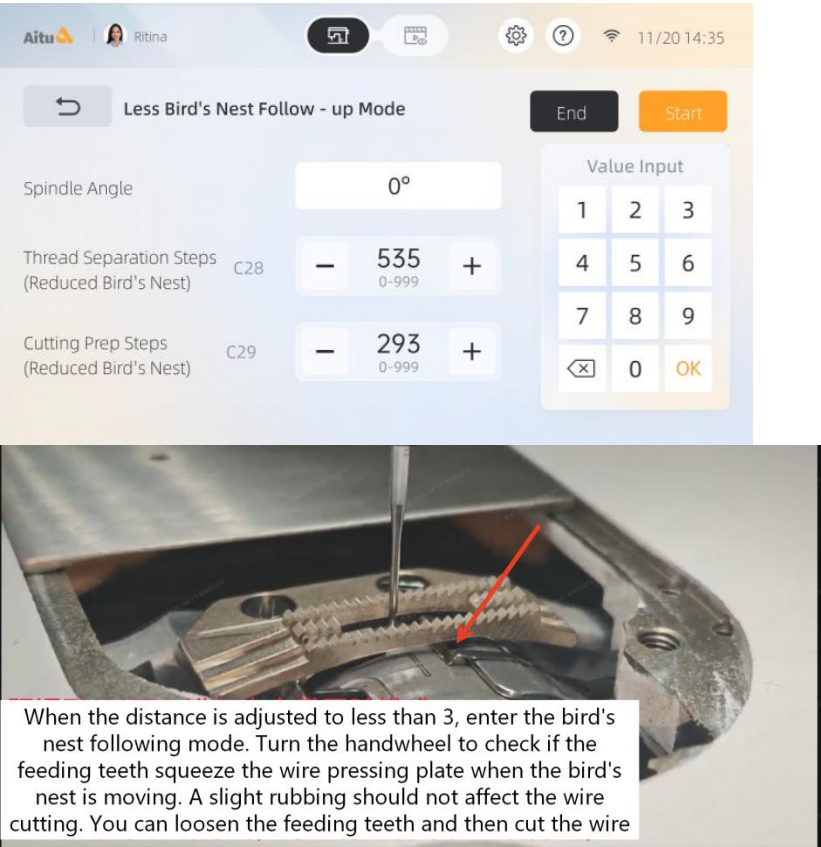
Note: After the machine cuts the thread, it is found that the thread head is long after the cloth is cut (the locking needle is more than 3mm after opening).

Picture	Standard Procedure
 Figure 4.1.3-1 Tool Adjustment Mode	Press Settings, Parameter Settings and Line Cutting Settings in turn, with a total of 4 pages, to enter the knife adjustment mode (page 3);
 Figure 4.1.3-2 Check occlusal volume	Click Start to check whether the bite volume is sufficient and whether the bite position is directly below the needle;
 Figure 4.1.3-3 Re-adjust the knife	If the standard is not met, re-set the knife; Loosen the fixing screw of the thread cutting crank, then press the thread cutting fork crank against the stepping motor roller with one hand (see figure), and turn the moving knife and the auxiliary moving knife to the occlusal position with the other hand (the auxiliary moving knife tip is between the two cutting lines of the moving knife), and tighten the fixing screw of the thread cutting crank.

6 Wire Cutting And Drawing

Keywords: Bird's Nest drawing, thread end drawing, drawing

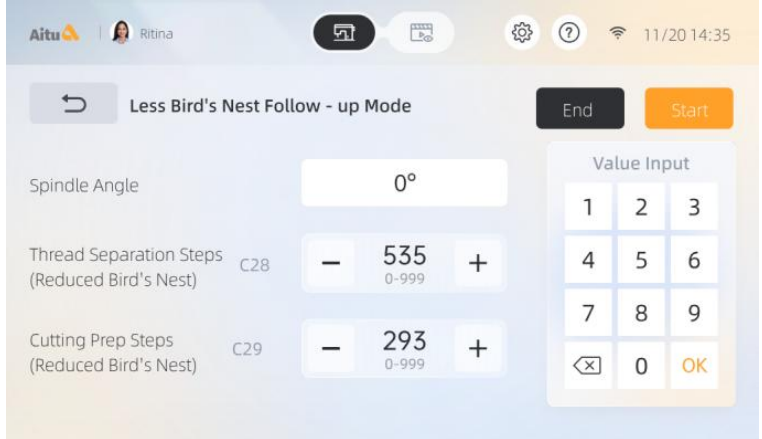
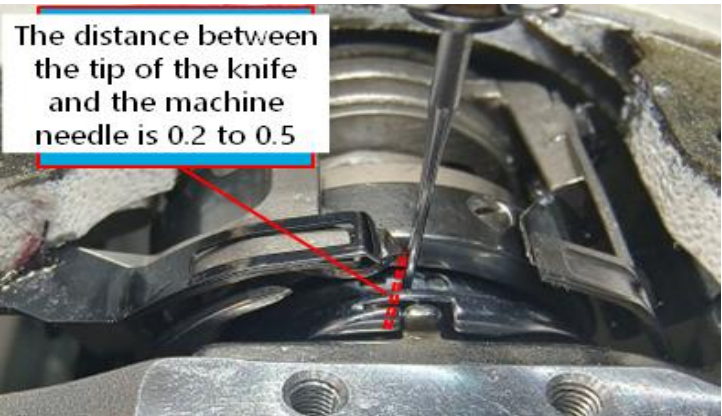
Note: When the machine opens the Bird's Nest function, it is found that the bird's nest thread has drawing phenomenon after sewing. Please refer to the following solutions.

Picture	Standard Procedure
 Figure 4.1.4-1 Check if the tool is worn	Turn off the machine, manually break the thread-cutting crank, put a face thread (1 thread is enough, the silk light is the best) in the pinhole of the movable knife, reset the thread-cutting crank, bite the fixed knife with the movable knife, and observe whether the thread can be cut or whether the wire is drawn. If the hand-cutting is continuous, the tool will wear out; It is suggested to change the fixed knife first and then cut it by hand. If not, replace the movable knife holder;
 When the distance is adjusted to less than 3, enter the bird's nest following mode. Turn the handwheel to check if the feeding teeth squeeze the wire pressing plate when the bird's nest is moving. A slight rubbing should not affect the wire cutting. You can loosen the feeding teeth and then cut the wire Figure 4.1.4-2 Check whether the pressing wire piece interferes with the feeding tooth	Adjust the needle pitch below 3, enter the anti-bird nest following mode, turn the handwheel to check whether the feeding tooth is squeezed to the pressing piece when the anti-bird nest action is taken; Slight rubbing should not affect the cutting thread, and the feeding tooth can be cut after loosening the thread. If it is not drawn, it is caused by interference; It is recommended to adjust the position of the pressing wire piece left and right for the factory standard feeding teeth, and it is recommended to polish the interference part of the teeth for the external teeth;

7 Broken Needle At The Start Of Sewing

Key words: sew broken needle, broken needle, Bird's Nest broken needle

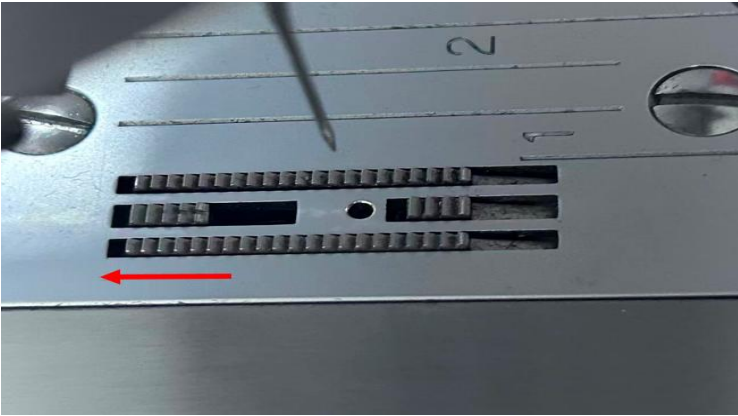
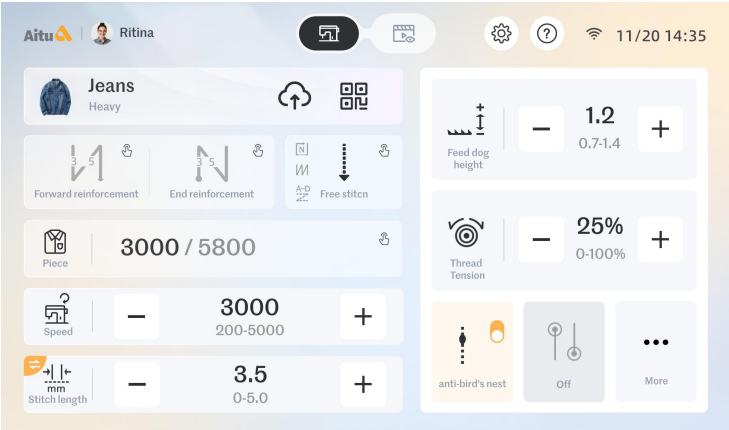
Note: When the machine opens the Bird's Nest function, the needle is broken when sewing. Please refer to the following solution.

Picture	Standard Procedure
 4.1.5-1 Less Bird's Nest Follow Mode Interface	Press  Icon, factory settings, less bird nest follow mode to enter; Click Start, and then you can turn the handwheel to check whether the less bird nest action is correct.
 4.1.5-2 C28 parameter inspection	Turn the handwheel to check whether the needle is stuck in the middle of the needle hole of the movable knife (front and rear center). You can press-+ or enter a number to adjust the size of the small bird's nest line splitting step process C28, and press the start handwheel to reconfirm.
 4.1.5-3 C29 parameter inspection	Continue to turn the handwheel to see if the tip of the knife is 1-1.5 away from the needle, ensure that the pressing piece covers the bulge cutting edge, press-+ or enter a number to adjust the size of the step-by-step process C29 of the Bird's Nest thread cutting preparation, and press the start turning handwheel to reconfirm.

8 Soft Thin Material Seaming Cloth

Key words: eating cloth, biting cloth, Kabu, stacking cloth, not moving

Note: When there is a problem that the presser foot and the back end of the stacked fabric cannot be fed during sewing, the feeding teeth can be adjusted to achieve smooth feeding.

Picture	Standard Procedure
 Figure 4.2.1.1 Thick tooth needle position group (18 teeth)	① Replace coarse tooth needle position Group
 Figure 4.2.1.2 Teeth Move Back	② Teeth move back (back: away from people)
 Figure 4.2.1.3 Height adjustment of feeding teeth	③ Large tooth height (need to check whether touch needle plate)

9 Tooth Needle Leveling Case

Key words: wrong layer, cloth, wrinkling, uneven, uneven

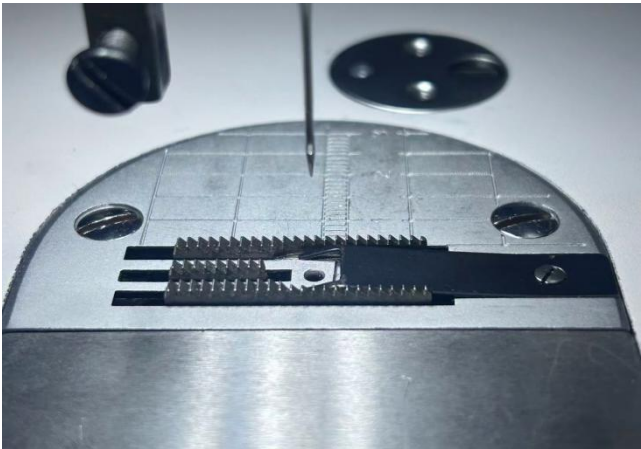
Note: When sewing fabrics, especially sliding materials, the problem of poor fabric flatness is easy to occur. The problem can be improved by changing to 40 fine-tooth needle position groups.

Picture	Standard Procedure
 Figure 4.2.2.3 40-tooth needle position Group	Replace the 40 fine tooth needle position Group

10 Anti-wrinkle Needle Set Leveling Case

Keywords: wrinkling, arch, wave, uneven

Note: There is a problem of poor smoothness in sewing fabrics, which can be improved by changing to 40 fine-tooth needle position groups.

Picture	Standard Procedure
 Figure 4.2.2.2 Anti-wrinkle Needle Set	Replace anti-wrinkle needle position Group

11 Rear Tugboat Leveling Case-Esquel

Key words: wrinkling, arching, wave, cloth catching, uneven alignment

Note: The problem of poor smoothness of the sewing fabric can be improved by changing to 40 fine-tooth needle position groups.

Picture	Standard Procedure
 Figure 4.2.2.1 Aytu Rear Tugboat	Standard Procedure Install Aito rear tugboat

12 Split-Level

Keywords: staggered floors, fabric gathering, wrinkling, unevenness, misalignment

Note: When sewing fabrics, especially sliding materials, the problem of wrong-layer cloth driving is easy to occur. The problem can be improved by changing the adjustment of pressing materials and feeding materials.

Picture	Standard Procedure
 Figure 4.2.3.1 Pressure regulating stud	① Lower the pressure of the presser foot by the left-hand pressure regulating stud: it is recommended that the scale is below "1";
 Figure 4.2.3.2 40 Tooth Needle Group	② Change needle position group: 40-tooth needle position Group;
 Figure 4.2.3.3 Brace Pin	③ Adjust the bracket pin scale groove to the horizontal scale, and the tooth posture is low in front and high in back (front: near the human side, rear: far away from the human side);

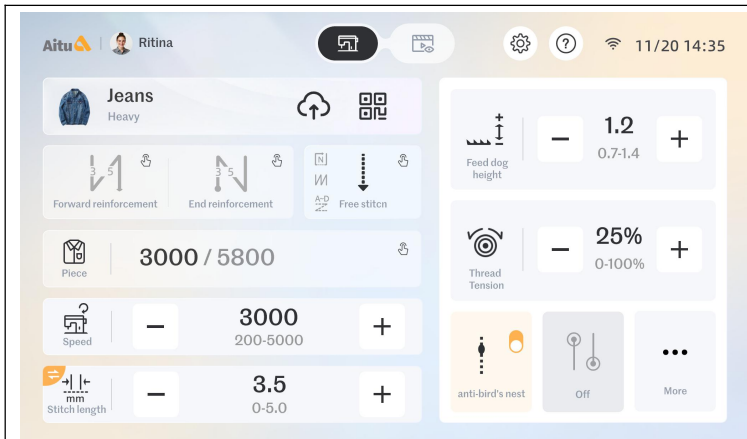


Figure 4.2.3.4 Panel Tooth Height Adjustment Parameters

④ Lower the tooth height on the panel: recommended 0.7-0.8;

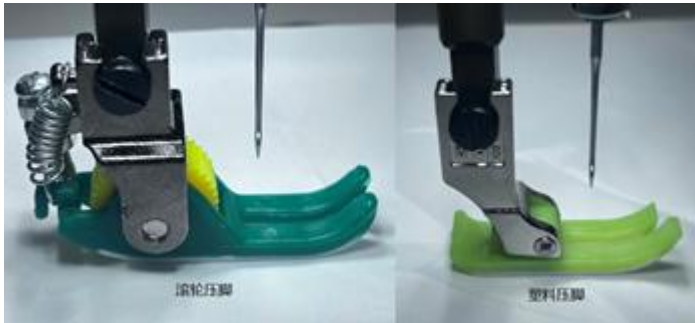


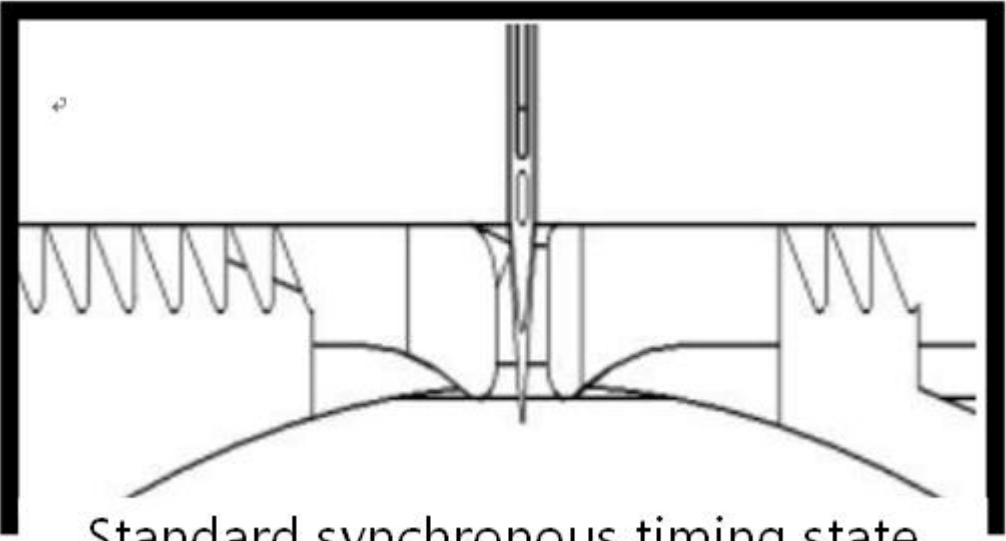
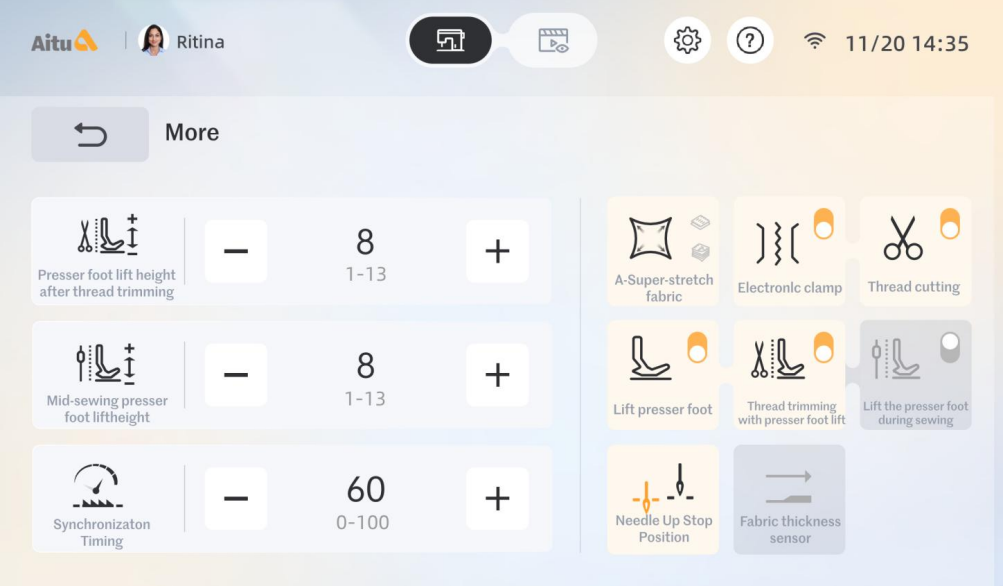
Figure 4.2.3.5 Roller presser foot and plastic presser foot

⑤ Change plastic presser foot/roller presser foot according to the process

13 Broken Needle

Key words: Over stem, broken needle

Note: In the production process, when the needle is broken when the over-stem position occurs, the adjustment of the over-stem broken needle is carried out.

Picture	Standard Procedure
 Standard synchronous timing state (Synchronous timing 60) Figure 4.3.1-1	Standard timing check: adjust the timing to 60 to check the three levels of the teeth. When the lower edge of the pinhole of the machine is flush with the needle plate, the teeth are not higher than the needle plate. Inspection of the needle hole position on the needle plate and the needle plate: the needle is required to fall in the middle of the needle hole on the needle plate
 Figure 4.3.1-2	Adjustment Method 1: Start thickness detection or adjust the synchronization sequence to 45, as shown in Figure 4.3.1-2.

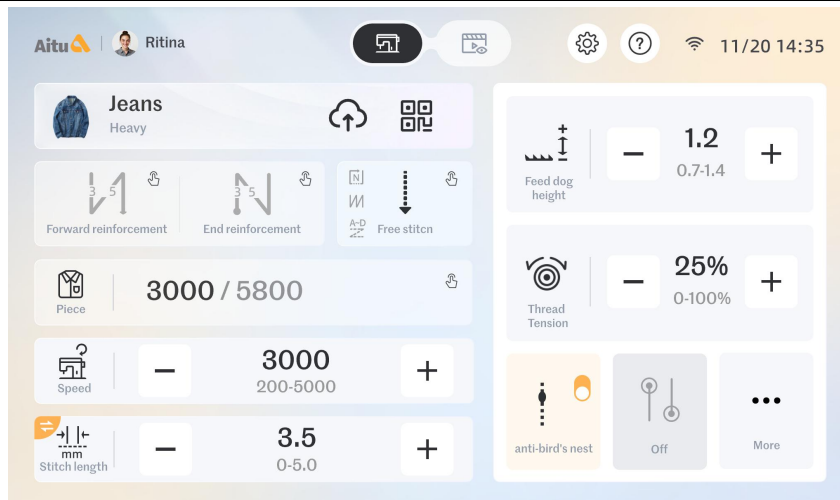


Figure 4.3.1-3

Adjustment mode 2: Reduce the thread tension under the condition that the thread take-up is normal, as shown in Figure 4.3.1-3.

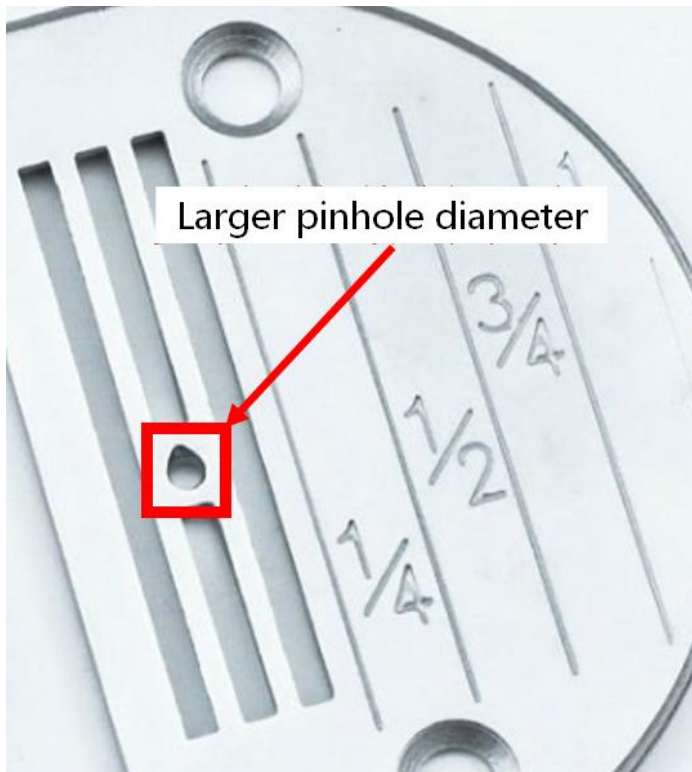


Figure 4.3.1-4

Adjustment Mode 3: Replace the pin plate with larger pin hole, as shown in Figure 4.3.1-4. A larger needle.

14 Thick Fabric Feeding Failure

Key words: thick stem, immobile delivery, needle spacing denser, thin and thick connection

Note: In the production process, adjust when there is a starting point or when there is no movement in the middle of the delivery.

Picture	Standard Procedure
 Figure 4.3.2-1	Left-hand pressure regulating stud to lower presser foot pressure
 Figure 4.3.2-2	Change to needle position group: thick tooth needle position Group



Adjust the bracket pin to the vertical scale, and the tooth posture is high in front and low in back (the front end refers to the end close to the person);

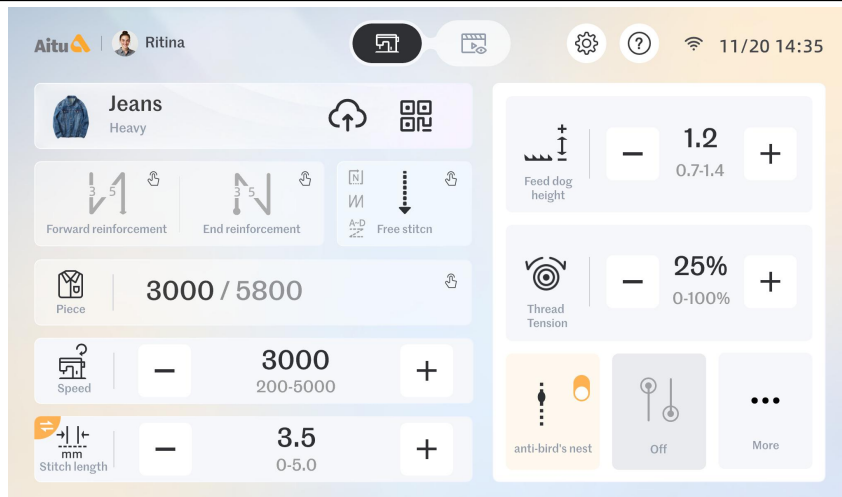


Figure 4.3.2-4

③ Large tooth height, (need to check whether touch needle plate)



Figure 4.3.2-5

Change the sewing method:
① When the starting stem is over and cannot be delivered, sew on the stem and sew it back to the starting point and sew it normally.
② When the stem can't be fed halfway, the electronic knee is used to slightly raise the presser foot halfway to feed the stem.

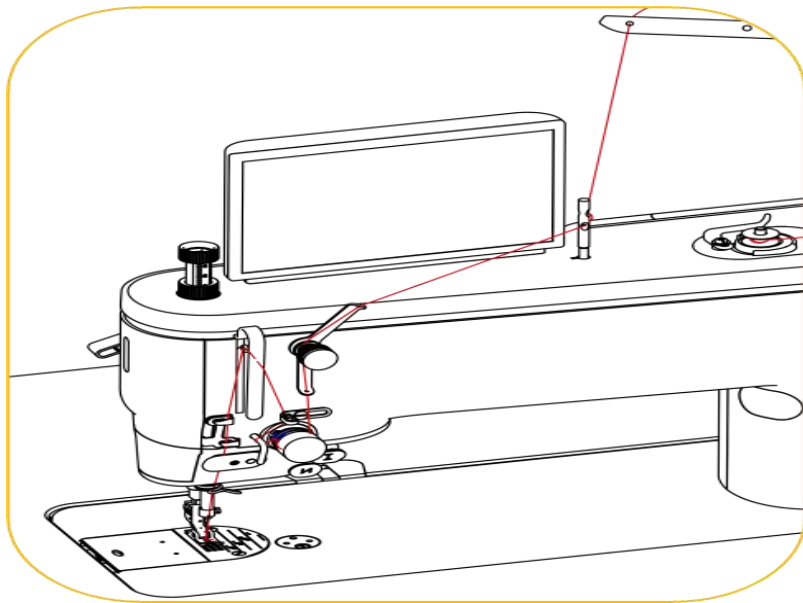


Figure 4.3.2-6

15 Abnormal Sticking Point Of Wire Path

Keywords: line, broken line, stitch instability

Note: In the production process, when there is a broken line and unstable trace, the abnormal stuck point of the line can be avoided or reduced by checking the line, so as to avoid the occurrence of broken line and unstable trace.

Picture	Standard Procedure
 Figure 4.5.2-1  Figure 4.5.2-2	① Suture threading inspection: Check whether the threading path of the suture is correct, and successively pass through the thread passing column, small thread gripper, large thread gripper, slow thread hook, right thread Hook, thread take-up rod hole and left thread Hook and other parts, and check whether the suture is abnormally pulled out of the thread passing part (if the small thread gripper occurs frequently, contact the manufacturer for replacement) as shown in Figure 4.5.2-1. ② Line crossing inspection: Check whether there are burrs, cracks and other abnormal defects on the line passing parts of the line passing column, small line gripper, large line gripper, slow line hook, right line hook, take-up rod hole and left line hook, as shown in Figure 4.5.2-2. ③ Grinding of line passage: Grind the line passing part of the above-mentioned line passing piece with oil line.

16 Double Color Line Throwing Point

Key words: two-color line, stitch instability, throwing point

(In the production process, when the two-color line is thrown, the throwing point can be solved or reduced by checking the line and adjusting the parts.)

Picture	Standard Procedure
 Figure4.5.2-1  Figure 4.5.2-2	① Suture threading inspection: Check whether the threading path of the suture is correct, and successively pass through the thread passing column, small thread gripper, large thread gripper, slow thread hook, right thread Hook, thread take-up rod hole and left thread hook, and check whether the suture has abnormal prolapse from the thread passing part (if the small thread gripper occurs frequently, contact the manufacturer for replacement), as shown in Figure 4.5.2-1. ② Thread-passing path inspection: Examine the thread- passing sections of components such as the thread- guiding post, small thread clamp, large thread clamp, slack- thread hook, right thread hook, loop- forming lever hole, and left thread hook for abnormalities like burrs or cracks, as shown in Figure 4.5.2- 2. ③ Wire-groove polishing: Use an oilstone to polish the wire-guiding sections of the aforementioned threading components. ④ Adjust the wire spring: increase or small the strength of the wire spring