

## Technical Bulletin

No. 19-11

From : Smitsen Tech department

Function : Chief Technical Officer

Subject : Chainforming problems with Newlong Sewingmachine DS9-C ( pneumatical knife).

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General	X
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Confidential	

**The DS9-C sewing machine has two pressure feet, a small one and a big one, see Fig. 1**

The small foot is (mainly) ment to clamp the chain at the start of bag to be sewn. The big foot has no role in clamping the chain, because this foot is hollow underneath the position where the chain is formed .

Clamping takes place with the three teeth (second row) of the front feaddog, see Fig. 1a.

These teeth are always in contact with the looper/needle threads.

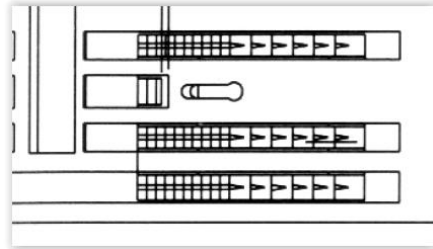


Fig. 1a

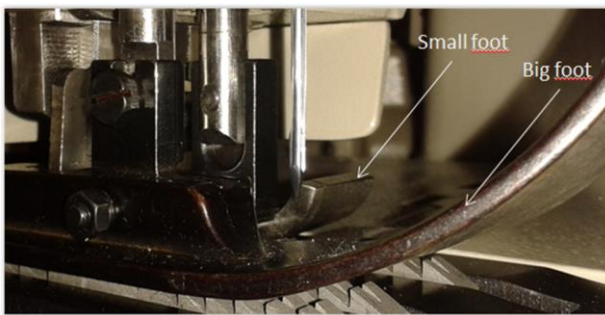


Fig. 1



Fig. 2

### **Chaining problems a the leading end of a bag.**

The footpressure of both feet cannot easily be adjusted independently. The pressure regulator-screw from Fig. 2 regulates the pressure of both feet (Small foot and big foot)

Fig. 2b

If the small foot is not clamping enough, the chain (the remaining part of the previous bag) will be pulled back, and the result will be as shown in Fig. 4.

There can be different reasons for the chain, being pulled back:

1. The teeth under the small foot are dirty ore worn out.
2. There is too much difference in the pressure of both feet.
3. The needle thread needs a large force to be drawn from the bobbin. The path of the thread is possibly obstructed.
4. A special case of obstruction is when the bottom-winding of the bobbin is falling off, and hooks on the underside of the bobbin. To solve this problem, you can:
  - a. Place a foam-collar underneath the bobbin.

- b. Rotate the bobbin 95 degrees (becomes horizontally)
- 5. The height of the front feaddog is not properly adjusted. Underneath the front feaddog is a small set-screw to adjust the height in relation to the rear feaddog.



Fig. 4

### **Chain-forming at the end of a bag.**

There are rarely problems with chain-forming at the end of a bag.  
There are no problems, because the bag on the conveyor is pulling on the chain (Takes over poor clamping).

### **Problems with forming a proper stitch, related to thread-tension**

Place some material to be sewed, under the foot .  
Make some stiches by turning the pulley by hand.

When making a stitch, it is important that the thread is never bending down during a stitch-forming cycle, as shown in Fig. 5 . However a millimeter bending down is allowed.

Raise the regulator-arm upwards to correct the problem, until the the situation is reached as shown in Fig. 6, during the forming of a new! Stitch-cycle. (Needle has gone up and down again)

Adjust the thread tension screws (Fig. 4b) if a stitch is too tight, or not tight enough.  
Push the spring inwards first ! Than make adjustments with the tension regulation screw.



Fig. 4b

When threading is damaged, make the screw 2b more loose. Turn the screw counter clockwise.  
Or in case of a new feaddog : Make the teeth that are in contact with thread less sharp with sandpaper.



Fig. 5



Fig. 6

## General Troubleshooting

Problem	Cause	Solution	Ref.
Needle (looper) thread breaks	<ol style="list-style-type: none"> <li>1. Damaged looper</li> <li>2. Too much thread tension</li> <li>3. Too little thread tension</li> <li>4. Thread snarled or hung up along path between thread stand and needle/looper</li> <li>5. Incorrect threading. Thread not between tension discs</li> <li>6. incorrect needle setting</li> <li>7. Bent or damaged needle</li> <li>8. Double sewing</li> <li>9. Decreased stitch length because of worn feed dog teeth</li> </ol>	Replace Decrease Increase Correct  Thread correctly Set correctly Replace Move up thread controller Replace feed dog	5-3 5-1 5-1 3  3 5-3-b 5-3-b 5-1 5-4-b
No chain formed between bags	<ol style="list-style-type: none"> <li>1. Incorrect threading</li> <li>2. Too much looper thread tension</li> <li>3. Too little needle thread tension</li> <li>4. Thread controller too low</li> <li>5. Needle and looper not timed each other</li> <li>6. Not enough presser foot pressure</li> <li>7. Thread is cut by feed dog teeth</li> <li>8. Thread is feedback because feed dog is set too high</li> </ol>	Thread correctly Decrease Increase Move it up Adjust timing Increase File the row of feed dog teeth that comes in touch with thread Adjust height of feed dog	3 5-1 5-1 5-1 5-3-c 5-2 5-4 5-4-b
Skipping stitches	<ol style="list-style-type: none"> <li>1. Wrong setting of needle</li> <li>2. Bent or damaged needle</li> <li>3. Thread controller too low</li> <li>4. Worn looper point</li> <li>5. Needle too high</li> <li>6. Thread sticking to needle due to heat</li> <li>7. Needle guard pushing needle</li> <li>8. Looper thread too loose to form a good triangle (reverse skip)</li> <li>9. Needle and looper wide apart (scoop skip)</li> </ol>	Set correctly Replace Move it up Replace looper Lower needle bar Dampen needle thread with oil Adjust needle guard Increase looper thread tension Adjust distance needle to looper	5-3-b 5-3-b 5-1 5-3-c 5-3-b * 5-4-d 5-1 5-3-c
Needle or looper breaks	<ol style="list-style-type: none"> <li>1. Bent needle</li> <li>2. Looper point hitting needle. Needle point hitting looper</li> <li>3. Needle guard pushing needle or they are wide apart</li> </ol>	Replace Adjust timing of needle and looper Adjust needle guard	5-3-b 5-3-c 5-4-d
Stitch length not uniform, Curved seam	<ol style="list-style-type: none"> <li>1. Not enough presser foot pressure</li> <li>2. Worn feed dog teeth</li> <li>3. Bent needle</li> </ol>	Increase Replace feed dog Replace	5-2 5-4-b 5-3-b
Thread bites into crepe tape	<ol style="list-style-type: none"> <li>1. Too much needle thread tension</li> </ol>	Decrease	5-1
Crepe tape creases	<ol style="list-style-type: none"> <li>1. Feed dog, rear, is higher than feed dog front a little</li> </ol>	Adjust height	5-4-b

\* Plastic contents existent in bag material is melt by the heated needle and may stick to needle, etc., causing skipping stitches. When closing woven cloth bags, kraft paper bags inclusive of polyethylene coated layer, polyethylene and PVC bags, etc., dampen needle thread with oil to prevent sticking of plastic contents. Use silicone oil processed thread for packing rice and other food products.