sal-tech.com
EASY PACKAGING

MODEL
N980A (1-Needle)
N980AC (1-Needle)
N980AP (1-Needle)
N980AW (2-Needle)
N980ACW (2-Needle)

N980AC SERIES

High Speed Bag Closing Machine
with Auto-lubrication System

INSTRUCTION GUIDE

MANUAL-EN

CE

For Operator Safety

- This manual contains the instructions and precautions for using the N980A Bag Closing Machine Head. Be sure to read and understand this manual before use and use the machine correctly.

- Keep this manual near the sewing machine for easy reference. Be sure to attach this manual to the machine when lending or transferring it to another person or company.

- The contents of this manual are subject to change without prior notice for improvement and safety purpose.

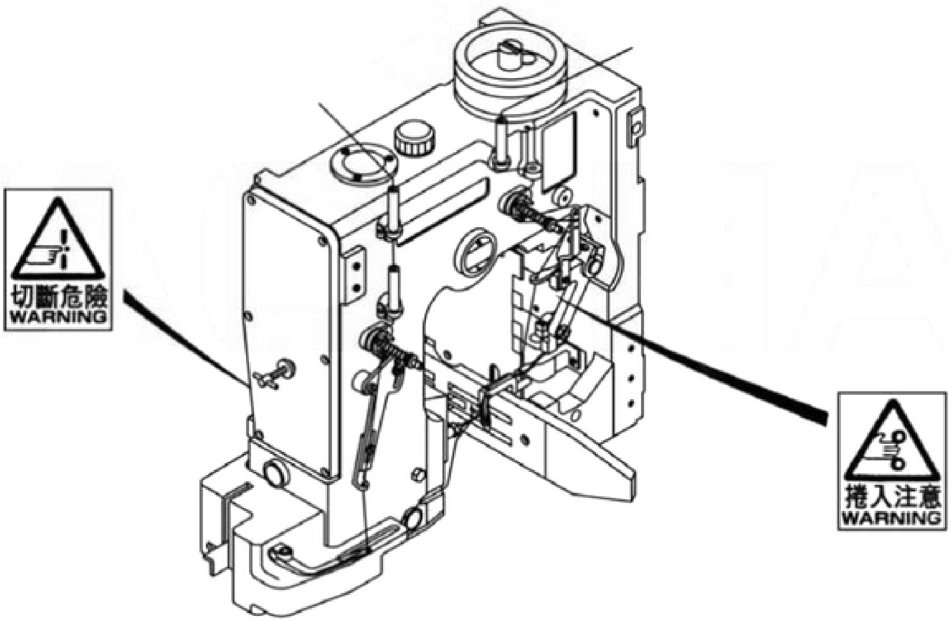
Instructions with this mark are especially important for operator safety.
Be sure to observe these marked instructions.

Hazard of Injuring the Fingers

- The Model N980A Sewing Machine head is provided with a built-in automatic tape/thread cutter. The operator's fingers may be injured by the cutter. A "hazard of injuring the fingers" mark is attached to the sewing machine. Do not put your fingers in or near the cutter when the machine is running.

Hazard of Being Caught in the Machine

- Be careful, when you insert a bag to be closed into the sewing machine, or your fingers may be caught in the machine between the presser foot and feed dog. A "Hazardous" mark is attached to the machine.
  When sewing, be sure to support the bag with the hand from beneath the sewing head and not to touch on the machine.



- The instruction manual and part list is subject to change without prior notice.

WARNING

PERSONAL INJURY MAY RESULT IF THE FOLLOWING SAFETY PRECAUTIONS ARE NOT OBSERVED

1. BE SURE THE AREA SURROUNDING MACHINE IS FREE OF ALL HAZARDS SUCH AS FIRE, WATER, OIL, RUBBISH OR ANYTHING THAT CAN CAUSEINJURY.

2. DO NOT OPERATE MACHINE IN AN EXPLOSIVE AREA OR UNDER WET CONDITIONS. THE MACHINE IS NOT AN EXPLOSION - PROOF TYPE NOR WATER - PROOF TYPE.

3. DO NOT OPERATE MACHINE BEFORE READING INSTRUCTION MANUAL.

4. DO NOT OPERATE MACHINE ON VOLTAGES OTHER THAN SPECIFIED FOR THE MACHINE.

5. BE SURE MACHINE IS CONNECTED TO BUILDING ELECTRICAL SAFETY GROUND (EARTH).

6. BE SURE POWER (AND AIR SUPPLY) IS OFF BEFORE PERFORMING MACHINE MAINTENANCE, PARTS REPLACEMENT, ADJUSTMENTS OR CLEANING.

7. DO NOT OPERATE MACHINE WITH GUARDS AND COVERS REMOVED.

8. BE SURE POWER (AND AIR SUPPLY) IS OFF BEFORE PERFORMING MACHINE MAINTENANCE, PARTS REPLACEMENT, ADJUSTMENTS OR CLEANING.

9. BE SURE MACHINE IS PLACED ON A SMOOTH (LEVEL) SURFACE WHEN PERFORMING MAINTENANCE, PARTS REPLACEMENT, ADJUSTMENTS, CLEANING OR STORAGE.

10. BE SURE THE MATERIAL TO BE SEWN OR CLOSED COMPLIES WITH THE MACHINE SPECIFICATIONS.

2. THREADING

Thread the machine as shown in figure 1.

1. Thread Ⓐ on the left side of thread stand is upper thread. Thread it points ① through ⑥ in order.
2. Thread Ⓑ on the right hand side of thread stand is lower thread. Thread it points ⑦ through ⑬ in order.
3. Both threads should extend from the last threading point by 15 to 20 cm.

Caution:

No stitching at all, or thread break or skipping stitches result if the machine is not properly thread. Check the threading with Figure 1, and be sure both upper and lower threads are correctly thread.

3. Oiling

Oil is Compietly drained from the machine before packing. Ensure the machine is filled to the correct levels as described below. Use mineral oil 22-32 cSt at 40°C. (Eg. Tellus oil #32.)

3-1 Oil Filling

a. Unscrew breather cap a and fill with oil to between the maximum and minimum levels Ⓐ.
   Approximately 1600cc should be used. (Fig.2)
b. Remove cover ⓑ and fill with oil so that level reaches the "red point" indicator Ⓑ .
   Approximately 140cc should be used. (Fig.2)

3-2 Exchanging oil

a. Oil should be exchanged after the first 1000 hours of operation then after every 2000 hours.
b. Oil Draining
   As indicated (Fig.3) oil is drained from the machine by rotating and un-plugging Ⓒ, Ⓓ.

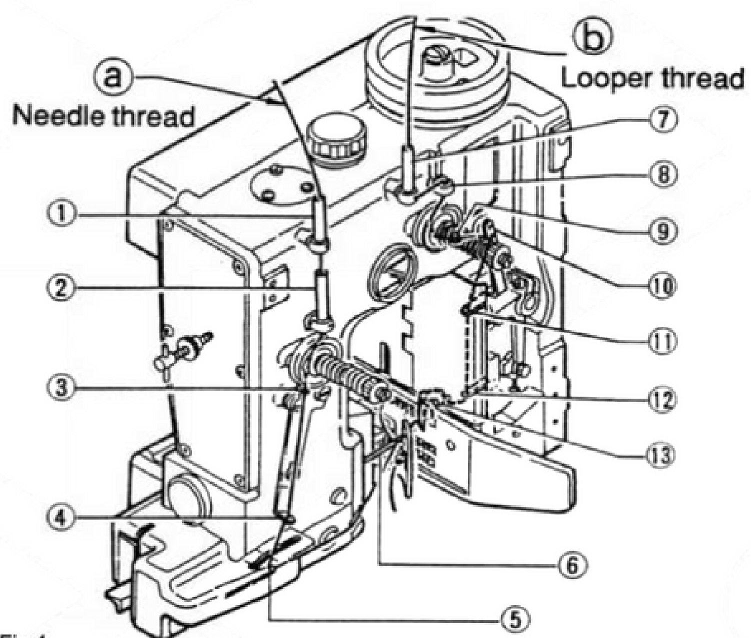


Fig.1

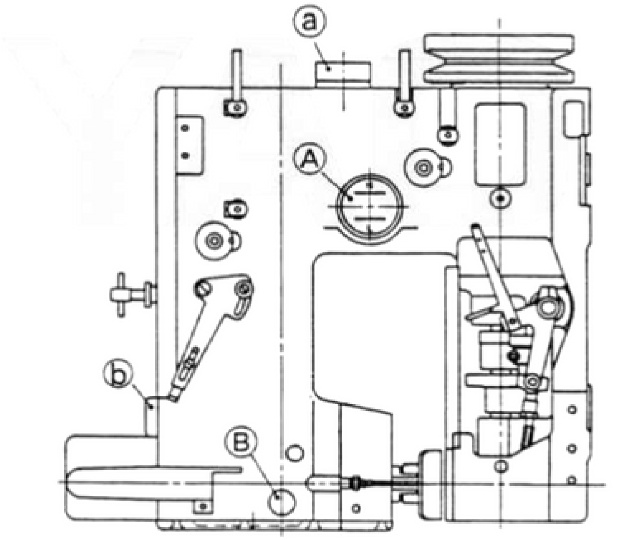


Fig.2

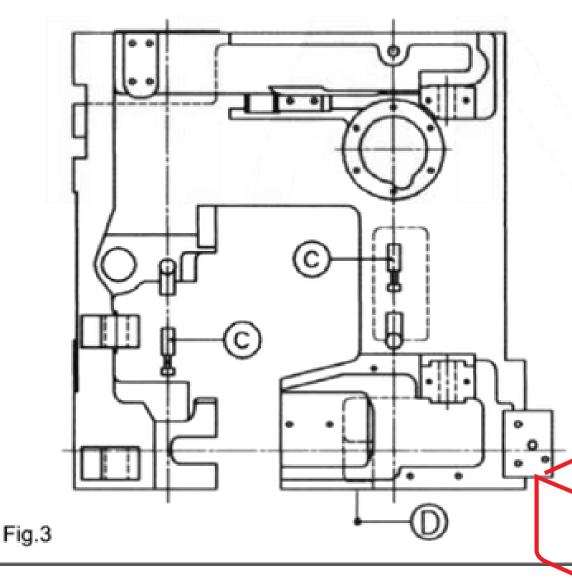


Fig.3

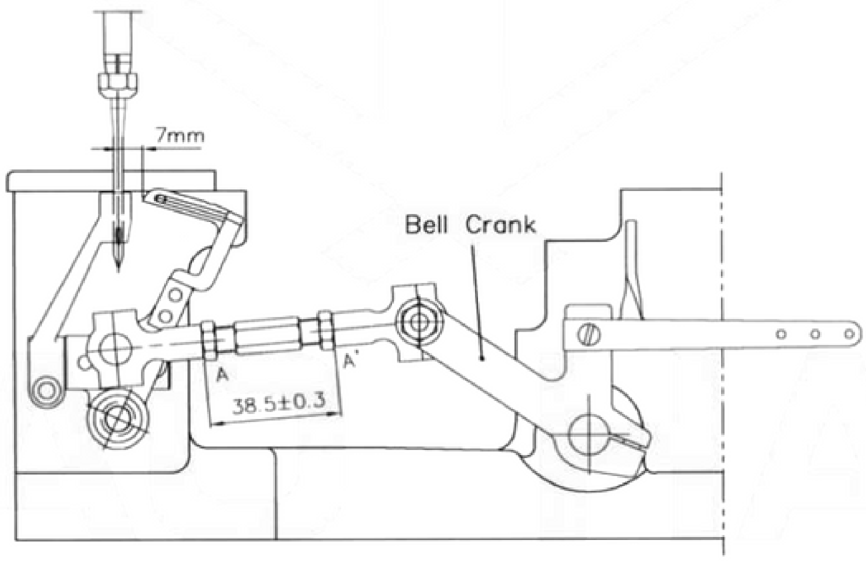
4. ADJUSTING

The looper movement of this machine has been properly adjusted before shipment from the factory, but if it needs re-adjustment when it is disassembled for repair or etc, proceed as follows.

4-1 Looper

a. Turn the pulley in the forward direction and adjust the bell crank so that the end of the looper is 7mm away from the needle center when the needle is in the most retracted position, as shown in (Fig.4).
The distance between the nut (outside) of Looper Connecting Rod must be 38.5 ± 0.3mm. (Fig.4)
Upon completion of the adjustment, tighten the screw of the bell crank.

b. Check of Height of Needle
Needle 5 and looper 1 movements are correctly timed if distance (A and A' of Fig.4) between Looper point and Needle hole when Looper points gets in line with leftside edge of Needle 5 is the same as Looper 1 passer Needle in forward and backward movements.
A=A' ± 0.3mm is allowable. Adjust by hightly tapping the looper Drive Lever.
Looper eyelet should overlap with lower part of oval hole of Needle, as shown in (Fig.5-c) as looper goes forward.
Adjustment can also be done by loosening the set screw of the needle bar connecting stud and adjusting the height of the needle bar so that the end of the needle is 15.5mm from the upper surface of the throat plate as shown in (Fig.6).



c. Clearance Between Looper and Needle

Adjust the clearance between the needle and the looper to between 0.05-0.1mm when the needle goes forward and passes the rear of the needle. To obtain the correct clearance, loosen the screw ⓑ of the looper rocker frame ⓐ and incline ⓒ the looper rocker.

Adjust the clearance of the needle and looper to between 0.1-0.5mm when the looper moves forward to the right at the closest point to the needle. (Fig.7-a)

d. Looper Retainer

Loosen set screw ⓓ and adjust the clearance of the needle and looper retainer to between 0.05-0.1mm as the needle goes up. (Fig.7-c)

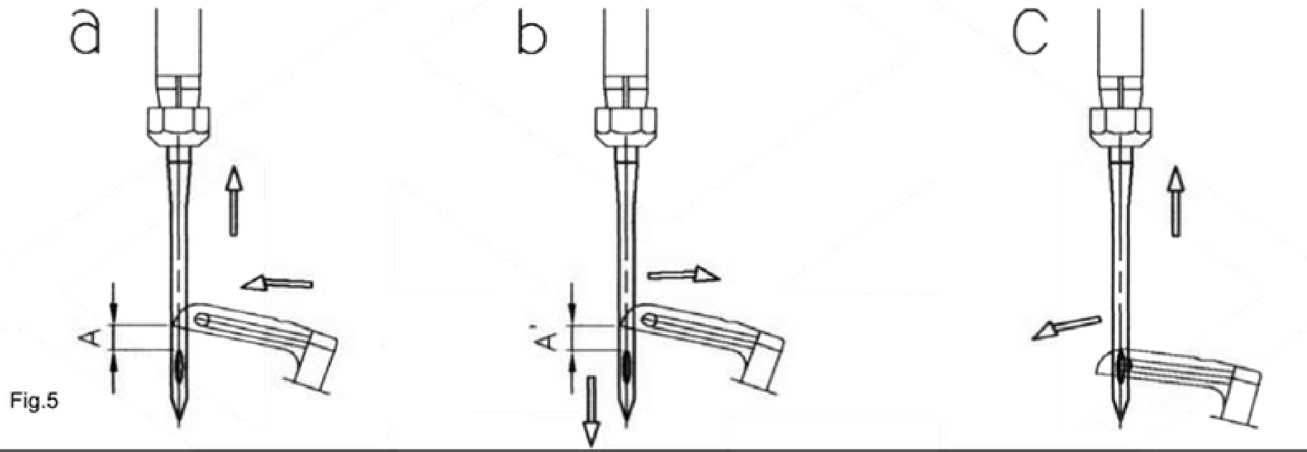


Fig.5

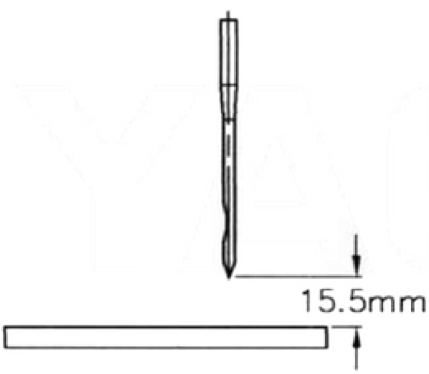


Fig.6

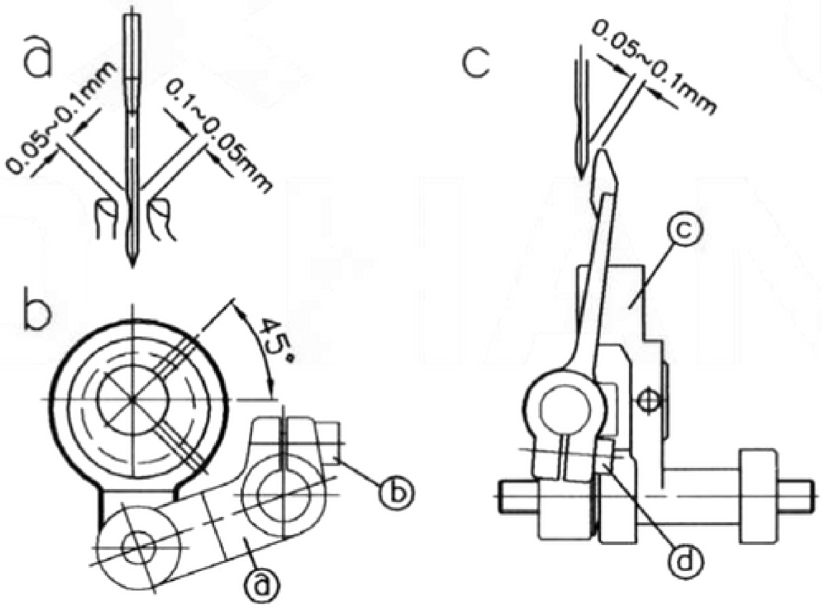


Fig.7

4-2 Feed mechanism

a. Ensure that the feed dog does not touch the throat plate as it passes through. A clearance of 1.5mm should be seen between the
middle teeth of the front feed dog and the throat plate as indicated (Fig.8)

b. Height of the Feed Dog
Adjust the height of the feed dog so that it protrudes 2.5mm from the upper surface of the throat plate when the feed dog has risen to the highest position, as shown in (Fig.9). If the feed dog is higher than this, stitch will not chain satisfactorily, and if it is lower than this, the stitch width will be too small. Slacken nut ⓑ with a box spanner to adjust the height with set screw ⓐ to ensure that the pressure from the Pressure Foot should not force it back down. Tighten nut ⓑ when the adjustment is correct.
The Rear Feed Dog should be set 0.1mm lower than the Front Feed Dog.

c. Stitch Spacing
The stitch width of this machine has been adjusted to 10mm before shipment from the factory. The stitch width is adjustable from 7 to 10.5mm. Loosen the nut a of the feed regulator and move the feed connecting rod ⓑ in the direction of S, as shown in (Fig.10), to decrease the stitch width, and move the rod in the direction of L to increase the width. When moving the feed do so after confirming that the feed connecting rod can move freely along the slot in the feed rocker (Rotate the pulley in the forward direction until the feed dog is in the forefront position).

d. Needle Guide
When the stitch width is changed, the needle guide must be adjusted accordingly, as the clearance betweenthe needle guide and the needle will change. Turn the pulley in the forward direction after loosening the screw ⓐ of Fig.11 and adjust the clearance between the needle and needle guide to aero when the end of the looper comes to the side of the needle, as shown in (Fig.11) and tighten the screw ⓐ .

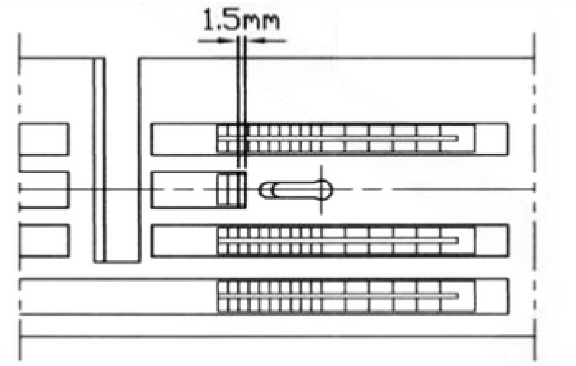


Fig.8

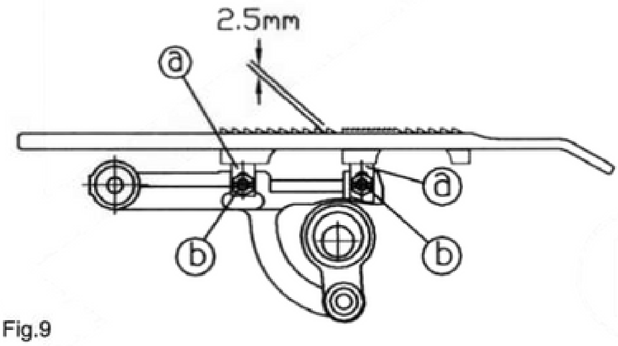


Fig.9

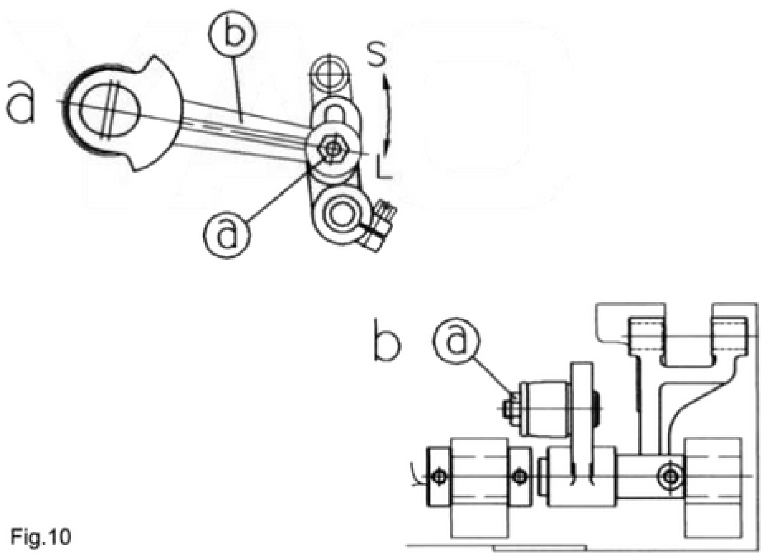


Fig.10

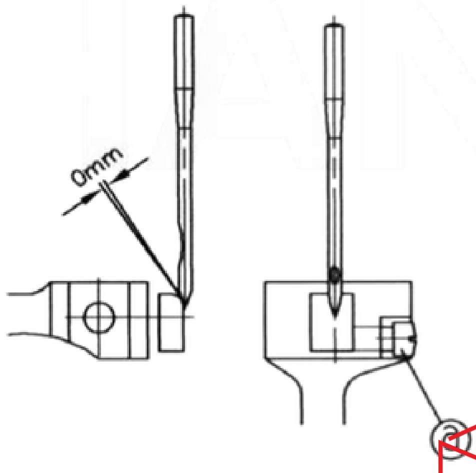


Fig.11

4-3 Thread Cutter (N980A)

The knives, (A) and (B) are to be adjusted as following steps.

a. Fix the knife (A) with tightening screw Ⓐ at the proper poition. Be sure that the knife edge does not protrude from thread gutter of throat plate.

b. Fix the knife (B) in the gutter of knife lever, by tentatively tightening screw Ⓑ .

c. Tum pulley clockwise direction. When the knife (B) moves farthest right position, fix the knife (B) moves so that it contact with the edge of knife (A) approx, 2mm.

d. Slightly bend knife lever to obtain proper contact between knife (A) and (B).

e. Try to cut several threads wound and then confirm if they are cut sharply and straightly.

4-4 Cutter (N980A)

a. To occlude the upper and lower blades, manually move the upper blade. To do so, put off air source. Here, prior to lowering the upper blade, loosen the screw ⓐ and ⓑ and the nuts ⓒ and ⓓ shown in (Fig.13). When both blades are occluded, allow a gap of 0.1 to 0.2mm between the faces of the two blades on the rear side, and tighten the screw ⓐ and the nut ⓓ .

NOTE: The gap adjustment can be easily made placing a sheet of kraft paper between the upper and lower blades, as shownin (Fig.14).

b. After the setting described in ① above, where the screw ⓑ is in light contact with the screw ⓔ , tighten the nut ⓓ .

c. After the adjustment by steps ① and ② , cut a crepe tape or thread for test. If the front end of the cutter cuts but the rear end does not, there is a gap on the rear side. In this case, loosen the nut ⓓ and loosen the screw ⓘ by 1/8 trun, and cut the thread again for test. If it still does not cut, loosen the screw by another 1/8 turn and repeat this adjustment and test cut until the thread can be cut, and then retighten the nut ⓓ . If the rear end of cutter cuts but the front end does not cut, the adjustment by step ① is insufficient. Then, make readjustment of the rear side so that the gap between both the blades becomes 0.1 to 0.2mm.
Here, adjust the upper and lower blades so that they are in contact with each other on the front side.
If the lower blade tends to turn away without cutting, loosen the nut ⓕ and increase the pressure of the spring by turning the screw ⓖ clockwise. (Fig.13)

d. Adjust the overlapped depth of the upper and lower blades by changing the length of air cylinder rod end so that the distance between the upper face of the lower blade and the rear side of the upper blade becomes 2mm, as shown in (Fig.14).

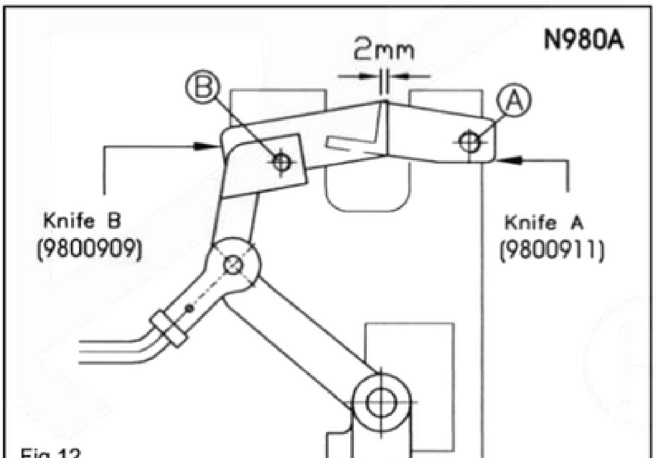
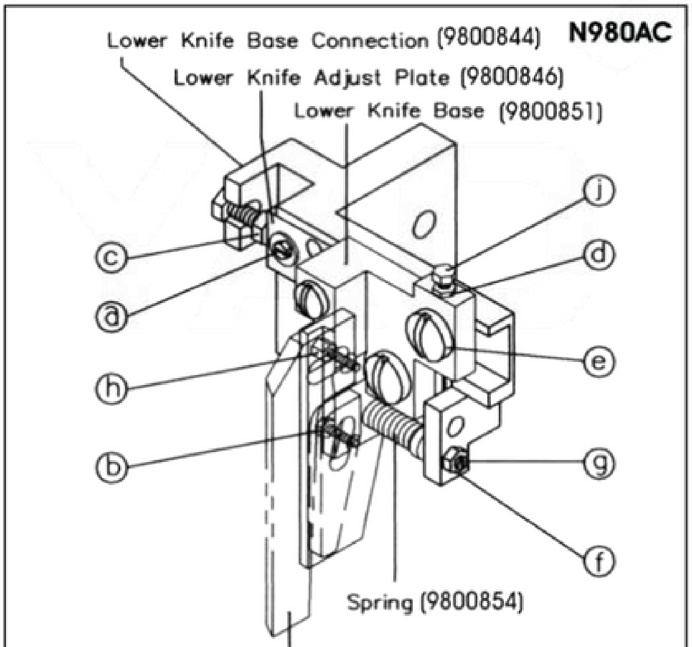


Fig.12



F

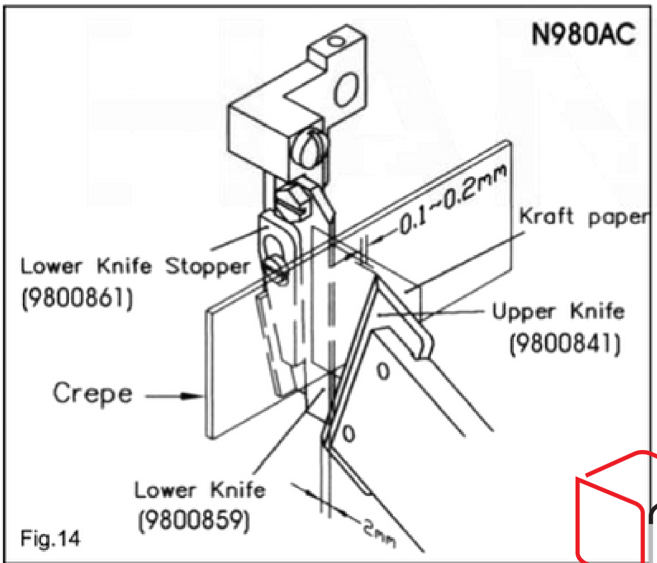


Fig.14

5. TROUBLE SHOOTING

Problem	Cause	Solution	Ref.
Needle (looper) thread breaks	1. Damaged looper 2. Too much thread tension 3. Too little thread tension 4. Thread snarled or hung up along path between thread stand and needle / looper 5. Incorrect threading. Thread not between tension discs 6. Incorrect needle setting 7. Bent or damaged needle 8. Double sewing 9. Decreased stitch length because of worm feed dog teeth	Replace Decrease Increase Correct Thread correctly Set correctly Replace Move up thread conntroller Replace feed dog	 2 4-2-2
No chain formed between bags	1.Incorrect threading 2. too much looper thread tension 3. Too little needle thread tension 4. Thread controller too low 5. Needle and looper not timed each other 6. Not enough presser foot pressure 7. Thread is cut by feed dog teeth 8. Thread is fed back because feed dog is set too high	Thread Correctly Decrease Increase Move it up Adjust timming Increase File the row of feed dog teeth that comes in touch with thread Adjust height of feed dog	2 4-1 4-2-2
Skipping stitch	1. Wrong setting of needle 2. Bent or damaged needle 3. Thread controller too low 4. Worn looper point 5. needle too high 6. Thread sticking to needle due to heat 7. Needle guard pushing needle 8. Looper thread too loose to form a good triangle (reverse skip) 9. Needle and looper wide apart (scoop skip)	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	 4-1-2 4-2-4 4-1-3
Needle or looper breaks	1. Bent needle 2. Looper point hitting needle. Needle point hitting looper 3. Needle guard pushing needle or they are wide apart	Replace Adjust timing of needle and looper Adjust needle guard	 4-1-3 4-2-4
Stitch length not uniform. Curved Seam	1. Not enough presser foot pressure 2. Worn feed dog teeth 3. Bent needle	Increase Replace feed dog Replace	 4-2-2
Thread bites into crepe tape	1. Two much needle thread tension	Decrease	

- 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 contens, or use silicone oil processed thread for packing rice and other food products.

Sal-Tech Easy Packaging
part of
Salbæk Technology Group

www.sal-tech.com
Skype: easy.packaging
support@sal-tech.com
+45 7027 2220

Sal-Tech Worldwide
Int'l Customer Support 24/7:
Skype: easy.packaging
Telephone: +45 – 7027 2220
support@sal-tech.com

Denmark Jutland
Warehouse, Showroom, Service Sal-Tech Easy Packaging
Eggebækvej 10, Kravlund
DK 6360 Tinglev
Reg. no.: DK18429098
+45 – 7027 2230 (8-16 CEU)

Sweden
Sales & Service
Sal-Tech Easy Packaging Sweden
+46 - 31 799 5398

Denmark Zealand
Sales & Service:
Sal-Tech Easy Packaging
DK 2000 Frederiksberg
+45 – 7027 2230 (8-16 CEU)

Hong Kong
Sales, Purchase & Service:
Sal-Tech HKG Ltd.
Tai Hong Wai, Third Lane
28A-G/F
Kam Tin, Yuen Long, N.T. Hong Kong
+852 - 8170 1025
Reg. no.: 1553382

Italy Site Office
Sales & Service
Sal-Tech Easy Italy
Via de Amicis 52,
Somma Lombardo 21019 (VA)
Milano, Italy
+39 – 351 988 0682

Spain Malaga
Sales, Showroom & Service
Sal-Tech Emballage SL
Calle Ardales 105B
29130 Alhaurin de la Torre, Pinos
Malaga, Spain
Reg. No.B01970045
+34 – 699 900 987

Philippines Manila/Cebu
Sales & Marketing
Sal-Tech Marketing Service
+63 - 916 777 5299

USA Hurst Texas
Sales & Service
Sal-Tech Easy Packaging USA
225 Ridgecrest Dr.
Hurst, Texas 76053 USA
+1 – 310 773 3423

USA Los Angeles
Sales & Service
Sal-Tech Easy Packaging USA
+1 – 310 773 3423

Salbæk Technology Group
HQ-DK Eggebækvej 10,
6360 Tinglev Denmark
HQ-ES C.Ardalves 105B
Alhaurin de la Torre, Malaga
Telephone: +45 – 7027 2220
Skype: easy.packaging
Skype line: +45 - 3695 9804