



**TYPICAL**

# **GN79** SERIES

**HIGH SPEED OVERLOCK SEWING MACHINE**

**INSTRUCTION BOOK**

**PARTS CATALOGUE**

**XI'AN TYPICAL INDUSTRIES CO., LTD.**

## I. TO THE OPERATORS FIG1.2

THANK you very much for using our super High Speed, Straight Needle, Overlock/Safety Stitch Machine Before operating this machine, please study this book thoroughly, Understand the functions and features of the machine Then it will help you to increase. Your sewing efficiency and quality.

ATTENTION: Because this is an super high speed machine. DO not run it before filling. Oil and/making sure the correct turning direction of motor.

## II. How TO INSTALL THE MACHINE

- (1) Install the machine according to the table cut-out diagram, Cushion Rubber and Rest Board as enclosed. In case of semi-submerged, the distance between Needle plate top surface and Table Top is about 100mm, and for fully-submerged is about 5mm.
- (2) Setting the pedal of clutch motor to the left side and the pedal of presser foot lift at right side.
- (3) Install the cloth waste chute, thread stand as parts list.
- (4) Be sure the motor turning direction is clockwise. And the belt can be pressed inward about 10mm.

NOTE: The dimensions of motor pulley and sewing speed are shown in Table 1.

Tab.1

Machine speed (S.P.M)	Motor pulley diameter (mm)	
	60Hz	50Hz
5500	90	110
6000	95	115

## HOW TO OPERATE THE NEW MACHINE

Please run the new machine in the first four at 20% less speed than maximum. Then replace the new oil and thereafter the machine may be operated up to maximum speed.

## III. LUBRICATION AND DRAINAGE

### (1) Lubrication Fig.1

·Remove Screw A and fill in enclosed ultra high speed lubricate oil (or similar to Mobil# 10,Esso#32) until the oil surface between two lines of oil Level Sight Window , Then replace Screw A.

·When the machine is operated for the first time it was idle for a long time ,please be sure to oil the top of the needle holder , guide , upper looper guide etc. before operating the machine.

### (2) Drainage Fig.2

·Remove Screw A and drain out the oil then replace Screw A.

·For keeping the good lubrication and machine life. please replace the new oil when the new machine has been operating over four weeks, And after that , change oil every four months.



·This machine has been fixed with oil filler .please clean it every month or replace a new one if necessary .

### (3) Needle Cooling Lubrication-Silicon oil.

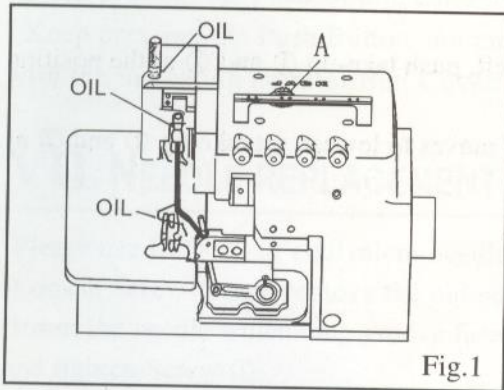


Fig.1

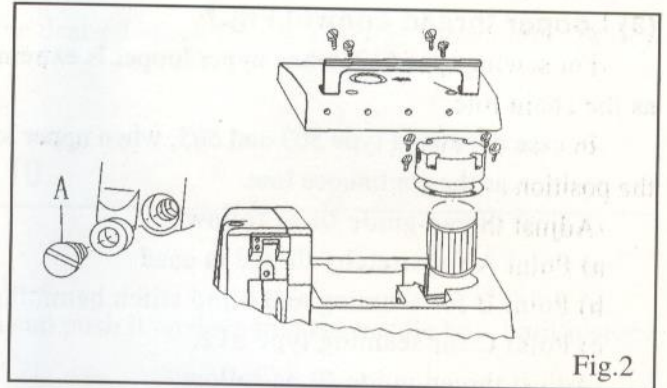


Fig.2

## IV. THREADING THE MACHINE FIG3.4

Refer to the sewing type you need for correct threading. Any incorrect threading may cause thread break, uneven stitches or skip stitches etc.

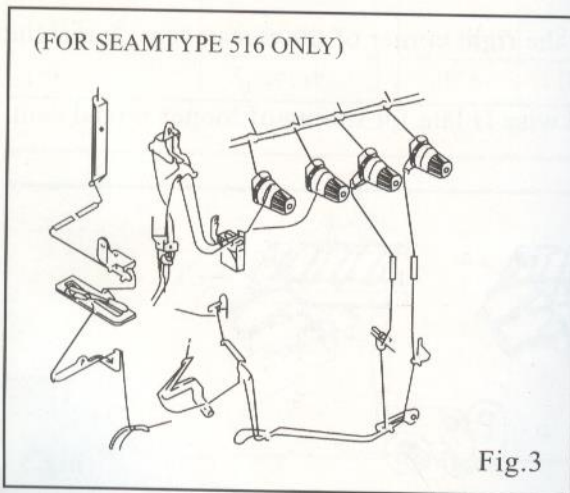


Fig.3

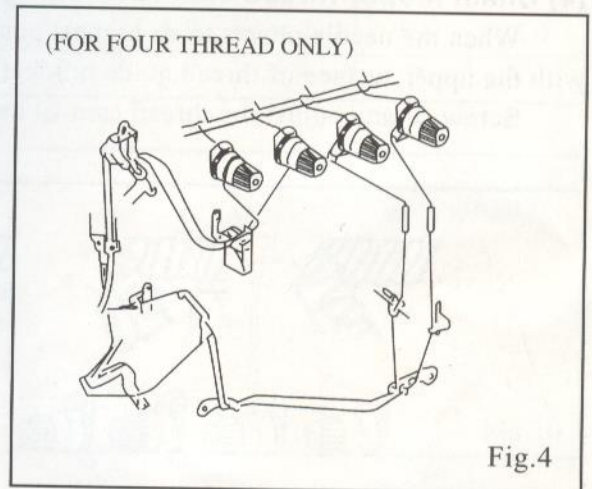


Fig.4

## V. TUREAD TENSION

The thread tension be adjusted according to sewing fabric, thickness, sewing thread, seam width stitch length etc. Therefore the pressure of the Tension Nuts or Thread Guides must be adjusted in each individual case.

### (1) Tension Nut Adjustment.Fig.5

- The tension Nut ① controls the double chain needle thread or left side overlock needle thread.
- The Tension Nut ⑤ controls the double chain looper thread.
- The Tension Nut ② controls the overlock needle thread.
- The Tension Nut ③ controls the upper looper thread.
- The Tension Nut ④ controls the lower looper thread.

## (2) Needle thread control.Fig.6

·In case of sewing type 504, 512, &514, push thread guide ① and ② to lowest point. and up to highest point of sewing type 503,505.

Note: the ⊕ direction is for more needle thread tension, otherwise it is for less needle thread tension

## (3) Loper thread control.Fig.7

·For sewing type 512, when upper looper is extremely left, push take-up ① and ② at the position as the chain line.

·In case of sewing type 503 and 505, when upper looper moves to lowest, set take-up ① and ② at the position as the continuous line.

·Adjust thread guide ③ as follows:

- Point A for stretchy thread is used.
- Point B for seaming and blind stitch hemming.
- Point C for seaming type 512.

·Adjust thread guide ④ as follow,

- Point D for stretchy thread is used.
- Point E for seaming and blind stitch hemming.

Note: The direction is for more thread in sewing seam, and the direction is for less thread in sewing seam.

## (4) Chain looper thread cam control.Fig.8

When the needle moves to its highest position, the right corner of the thread cam ③ matches with the upper surface of thread guide bracket ①.

Screw ② and adjust the thread cam ③ as clockwise is late for timing of looper thread cam.

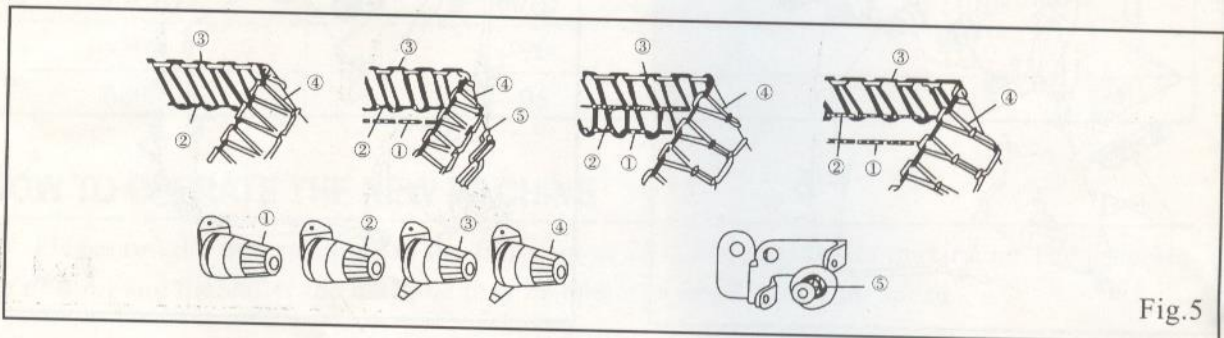


Fig.5

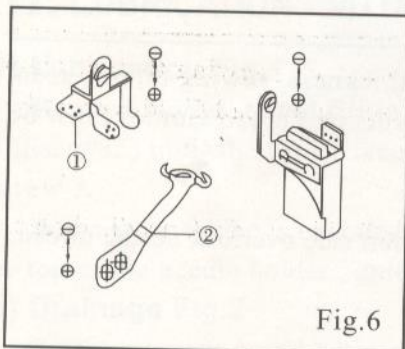


Fig.6

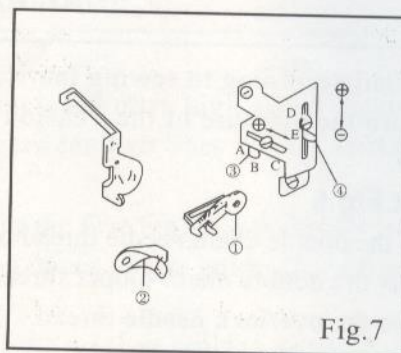


Fig.7

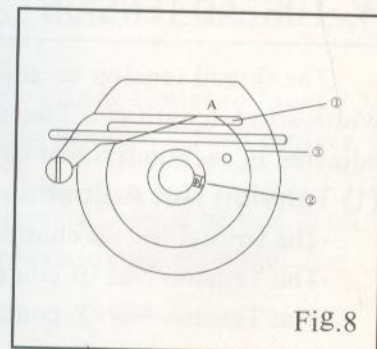


Fig.8



## VI. STITCH LENGTH ADJUSTMENT FIG.9TAB2

- The stitch length adjustment is made according to the sewing fabric , differential feed ratio etc.
- Keep pushing the Push Botton enter deep inside .
  - Keep pressing the Push Botton and match the desired stitch length which is show on the pulley with the indicating point of Belt Cover.

## VII. NEEDLE REPLACEMENT FIG.10

- Please use DC × 27 or equivalent needle size.
- Loosen Screw ① and remove the old needle .
- Insert the needle which long groove faces you and push it up deep into the needle hole until it stops and tighten Screw ① .

Tab.2

Maxi diff ratio	Machine type	Pulley scale						
		1	2	3	4	5	6	7
1:2	Seaming	1	1.5	2	2.5	3	3.5	3.8
1:3	Shirring	0.7	1	1.4	1.7	2	2.3	2.5
1:1.3	Serging	1.6	2.3	3.1	3.9	4.7	5.4	5.9
1:4	Special	0.6	0.9	1.2	1.5	1.8	2.1	1

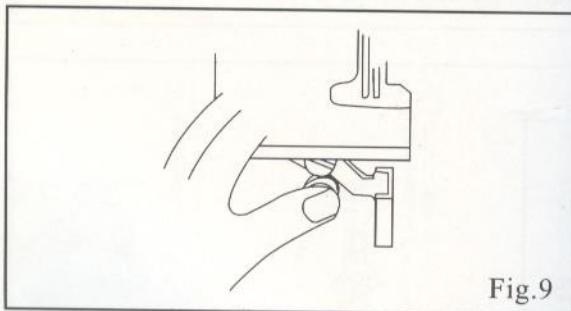


Fig.9

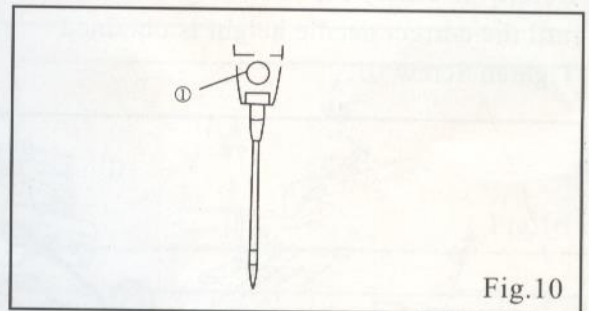


Fig.10

## VIII. DIFFERENTIAL FEED RATIO ADJUSTMENT(FIG.11TAB.3)

The differential feed ratio is the ratio of movements between Main Feed Dog and Differential Feed Dog , when the movement of Main Feed Dog is bigger than Differential Feed Dog , the fabric be stretched in sewing Otherwise the fabric be shrinked.

- Loosen Nut ① then turn Screw ② in clockwise for stretching the fabric. and in reverse direction for shrinking the fabric then tighten Nut ① .

NOTE: When the surface of adjusting Level ③ be set at the scale ② the differential feed ratio is 1:1, and if it be set over the scale its ratio can be adjustable up to 1:0.7 .

Tab.3

Scale		1	2	3	4	5
Differential Feed ratio	1:3	---	1:0.7	1:0.9	1:1.1	1:1.3
	1:2	1:0.7	1:1	1:1.4	1:1.7	1:2
	1:3	1:1	1:1.5	1:2	1:2.5	1:3
	1:4	1:1.1	1:1.6	1:2.3	1:2.8	1:3.3

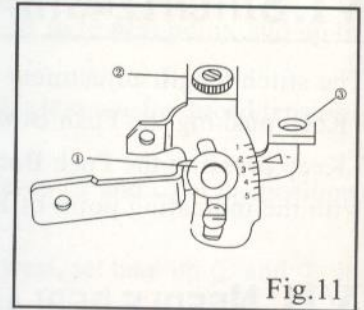


Fig.11

## IX. PARTS RELATION AND TIMING

### (1) Needle and Needle Plate Fig.12

When the Needle moves to the highest position, the distance between needle point (left needle if two needle) and Needle Plate is 9.5-9.7mm for standard lift machine or 10.8-11.0mm for high lift machine. Each needle must centers in each needle slot of Needle plate. The right needle must be ahead about 0.2-0.3mm than left needle. And the distance between the needle point (right needle if two needle).

To needle slot of Needle Plate or Presser Foot is 1.2mm.

·Slightly loosen Screw ① of Needle Drive Crank.

·Rotate the Pulley to check if needle center in each needle slot of Needle Plate. or you may loosen Screw ② and adjust Needle Holder .

·Rotate the Pulley for removing the needle to the highest position , tap the Needle Holder Guide until the correct needle height is obtained .

·Tighten Screw ① .

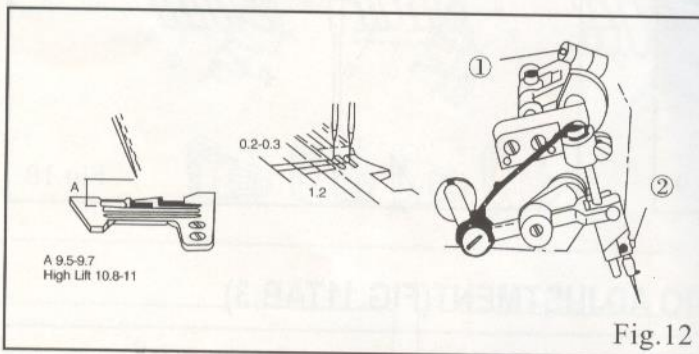


Fig.12

### (2) Upper Looper (Spreader) and Needle Fig.13

·When the Upper (spreader) moves to the extremely left, the distance between the point of looper (spreader) and center line of needle is 4.5-5.0, for 1 needle (spreader) to center line of left needle is 5.5-6.0mm for 2 needle machine.

### (3) Lower Looper and Needle Fig.14.15

·When the Lower Looper moves to the extremely left, the distance between looper point and center line of needle (left needle if 2 needle) is 3.4-3.6mm for high lift machine.



When the Lower Loooper moves to the center line of needle (left needle if 2 needle), the gap between needle and looper is 0-0.05mm.

#### (4) Upper Loooper and Lower Loooper Fig.16

When the Upper and Lower Loooper is crossed.

#### (5) Needle and Needle Guard Fig.17

When the Lower Loooper point is opposite the center line of Needle (left needle if 2 needle), the gap between Needle and rear Needle Guard A is 0mm. when Needle moves to the lowest position, the gap between Needle and front Needle Guard B is 0.15-0.2mm.

#### (6) Chain Loooper and Needle Fig.18

The Chain Loooper must be fixed into the lowest position of its holder and when the Chain Loooper moves to the extremely left, the distance between the looper point and center line of needle is 2.5mm.

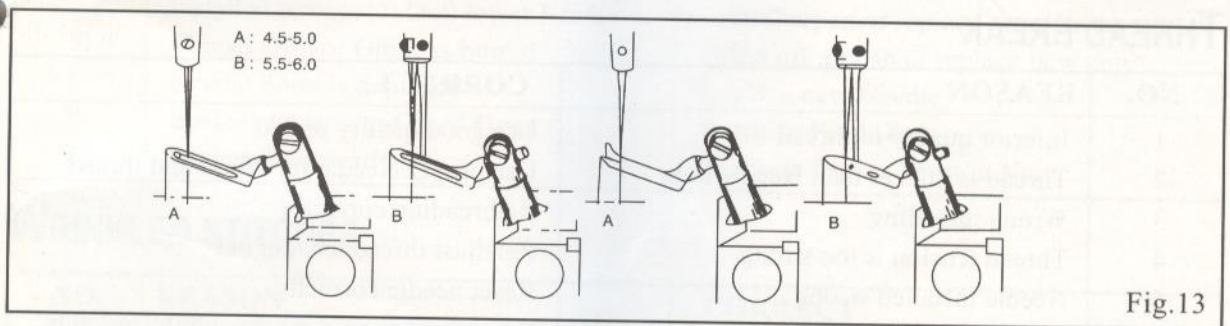


Fig.13

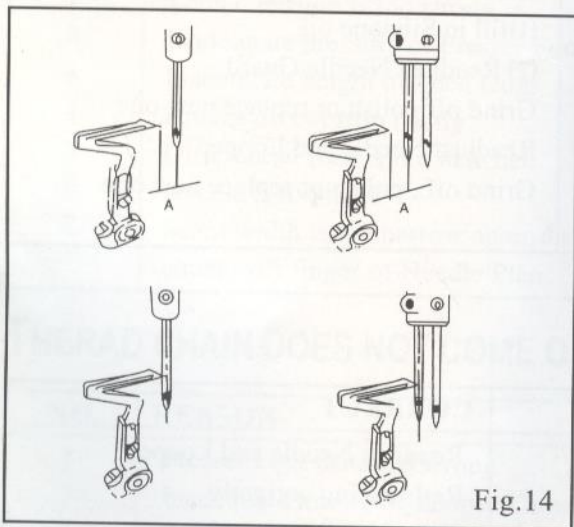


Fig.14

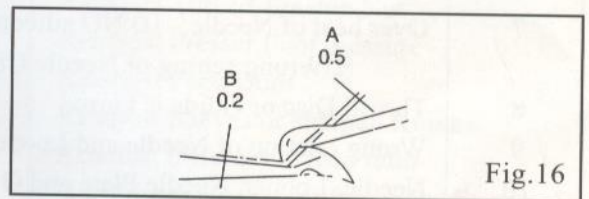


Fig.16

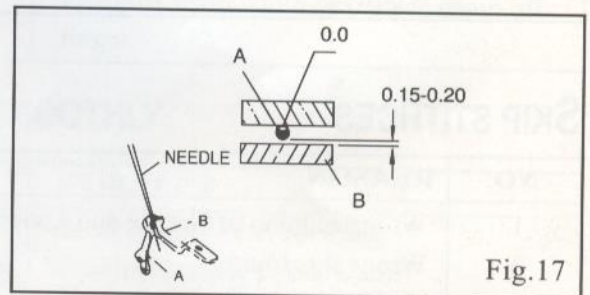


Fig.17

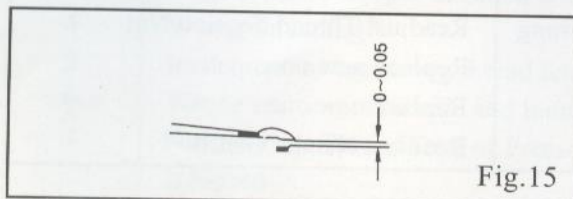


Fig.15

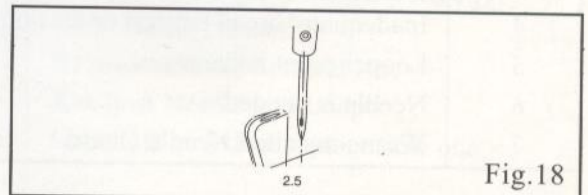


Fig.18

# X. OBVIATE MALFUNCTION

## NEEDLE BREAK

NO.	REASON	CORRECT
1	Needle installed wrong	Reset needle correctly
2	Wrong needle size	Use properly needle for fabric and thread
3	Needle is bended	Replace new needle
4	Wrong relation with Needle Guars	Readjust Needle Guard
5	Wrong relation with looper	Readjust looper
6	Needle does not center the needle slot of needle Plate or Presser Foot	Readjust the needle plate and presser point

## THREAD BREAK

NO.	REASON	CORRECT
1	Inferior quality of thread	Use good quality thread
2	Thread is thicker than Needle hole	Use proper Needle for fabric and thread
3	Wrong threading	Rethreading correctly
4	Thread tension is too strong	Readjust thread tension nut
5	Needle installed wrong	Reset needle correctly
6	Thread Stand installed wrong	Reset thread stand for threading smoothly
7	Over heat of Needle: (1).NO silicon oil (2)Wrong setting of Needle Guard	(1)fill in Silicone oil (2) Readjust Needle Guard
8	Thread Disc or Guide is burred	Grind off polish or replace new one
9	Wrong relation of Needle and Looper	Readjust Needle and Looper
10	Needle, Looper, Needle Plate and Guide is burred	Grind off , polish or replace new one

## SKIP STITHCES

NO.	REASON	CORRECT
1	Wrong relation of Needle and Looper	Readjust Needle and Looper
2	Wrong threading	Rethreading correctly
3	Needle installed wrong	Reset Needle correctly
4	Inadequate thread tension or tension too strong	Readjust Thread Tension Nut
5	Looper point is damaged	Replace new one
6	Needle is bended	Replace new one
7	Wrong installed Needle Guard	Readjust Needle Guard



## LOOSEN STITCHES

NO.	REASON	CORRECT
1	Wrong threading	Rethreading correctly
2	Thread is thicker than Needle hole	Use proper Needle
3	Tension Disc do not press thread properly	Reset Tension Disc Properly
4	Needle thread is not lubricated	Fill silicon oil
5	Wrong setting of Needle and Loopers	Readjust Needle and Loopers

## UNEVEN STITCHES

NO.	REASON	CORRECT
1	Wrong threading	Rethreading correctly
2	Thread Stand installed wrong	Reset Thread for threading smoothly
3	Lower Knife installed wrong	Readjust Lower Knife
4	Knives do not trim neatly (1)Knives installed wrong; (2) Dull lower Knife	Correct as follow (1)Readjust Knives; (2)Sharpen or replace new Knives
5	Thread Disc or Guide is burred	Grind off ,polish or replace new one
6	Needle Point is damaged	Replace new Needle
7	Inadequate heigh of Feed Dogs	Readjust Feed Dogs.
8	Inadequate thread tension	Readjust Thread Tension Nut

## WRINKLED STITCHES

NO.	REASON	CORRECT
1	Thread tension is too strong	Readjust Thread Tension Nut
2	Inadequate pressure of Presser Foot	Readjust Presser Foot pressure
3	Inadequate height of Feed Dogs	Readjust Feed Dogs
4	Knives do not trim neatly	Readjust Knives or sharpen Knives
5	Differential feed is not matched	Readjust differential feed ratio
6	Needle is too thick	Use Proper Needle for fabric and thread
7	Seam width is too narrow against the chain - off finger of Needle Plan.	Readjust seam width or replace chain off finger.

## THEAD CHAIN DOES NOT COME OUT SMOOTHLY

NO.	REASON	CORRECT
1	Presser Foot installed wrong	Reset Presser Foot correctly
2	Inadequate timing of Loper Thread Cam	Readjust Loper thread Cam
3	Double Chain Loper installed wrong	Reset Double Chain Loper correctly
4	Wrong threading	Rethreading correctly
5	Inadequate or too strong thread tension	Readjust Thread Tension Nut
6	Wrong relation of Needle and looper	Readjust Needle and Loper
7	Needle Plate Thread Disc or Presser foot is burred	Grind off, polish or replace new one
8	Thread tension disk is rough	Polish thread tension disk