

INSTRUCTION

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RX9701J SERIES

Industrial Sewing Machines

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KANSAI
SPECIAL®

INTRODUCTION

Thank you for your purchasing Kansai Special's RX9701J Series.

Read and study this instruction manual carefully before beginning any of the procedures and save it for later use.

1. This instruction manual describes adjustments and maintenance procedures on this machine.
2. Before starting the machine, check to make sure the pulley cover, safety cover, etc. are secured.
3. Before adjusting, cleaning, threading the machine or replacing the needle, be sure to turn off the power.
4. Never start the machine with no oil in the reservoir.
5. Refer to the parts list and instruction or RX as well as this instruction manual before maintenance. If the machine includes a thread trimmer, read and study the instruction manual for the thread trimmer carefully.
6. The contents described in this instruction manual are subject to change without notice.

□1□NEEDLES

1-1 Needles

TV□5 of Schmetz or Organ

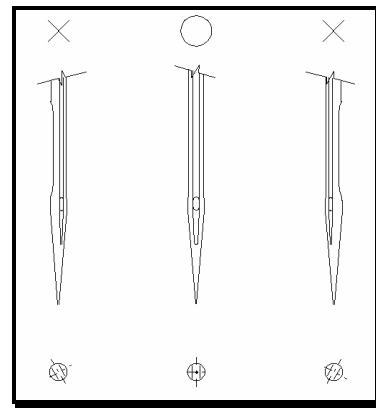
Select the proper needle for the fabric and thread.

< Needles and needle size >

Schmetz	Nm120	Nm125	Nm130
Organ	# 19	# 20	# 21

1-2 Replacing the needle

To replace the needle, check the needle carefully to see that the scarf is turned to the rear of the machine (see the illustration). Then install the needle correctly.



< Note >

Before replacing the needle, be sure to turn off the machine.

A clutch motor continues running for a while after the machine is turned off. Therefore keep on pressing the pedal until the machine stops.

□2□MACHINE SPEED

2-1 Machine speed & direction in which the machine pulley runs

Refer to the table below for maximum and standard speeds of the Series. To extend machine life, run the machine approximately 15~20% below the maximum speed for the first 200 hours of operation (approx. 1 month).

Then run the machine at the standard speed.

The machine pulley turns clockwise as the handwheel does as seen from the machine pulley.

2-2 Motor & belt

Motor : 3-phase, 2-pole, 400W clutch motor

Belt : M type V belt

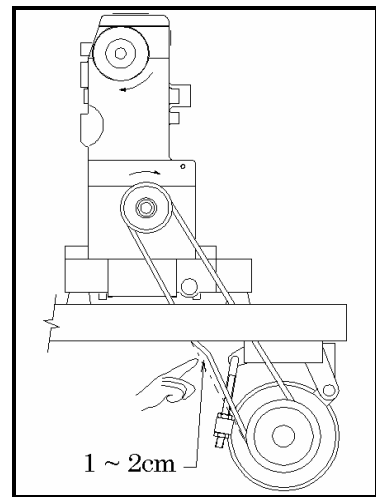
- Select the proper motor pulley according to the machine speed (refer to the motor pulley outer diameter on the table below). Adjust where to position the motor by pressing the finger onto the middle of the belt so that 1~2cm deflection can be achieved (see the illustration on the right).

< Machine speed >

Type	Maximum speed	Standard speed
RX9701J	4500SPM	4000SPM

< Motor pulley selection table >

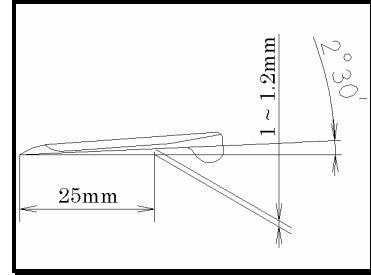
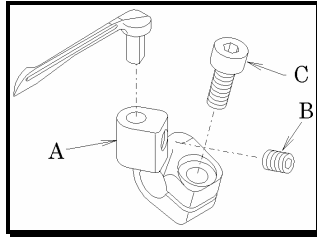
Motor pulley outer diameter (mm)	Machine speed (SPM)	
	50Hz	60Hz
80	3300	3900
90	3700	4400
100	4100	4900
110	4500	5400



□3□TIMING OF THE LOOPER TO THE NEEDLES

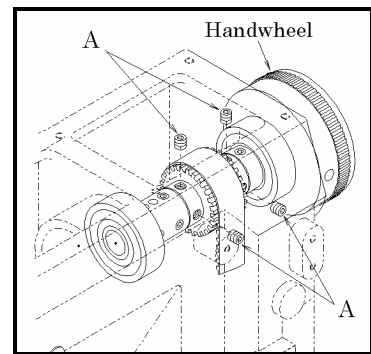
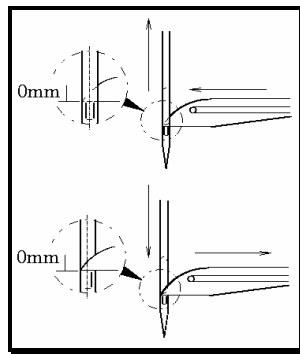
3-1 Angle and height for installing the looper

To obtain the proper angle and height, insert the looper fully into looper holder A and then tighten screw B. The proper angle for the looper is $2^{\circ} 30'$. Distance at 25mm from the point of the looper between the bottom of the looper blade and the extension line from the point of the looper : Approximately 1.1mm



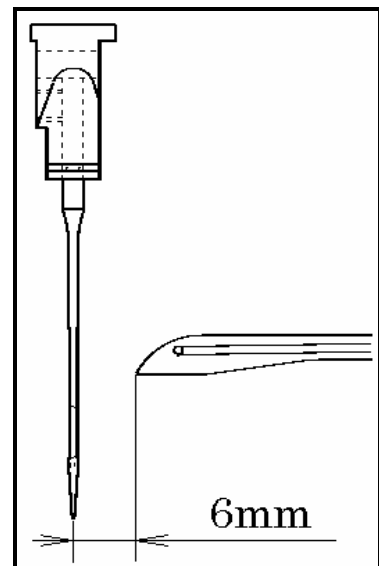
3-2 Looper left-to-right movement

When the point of the looper, moving to the left or right, has reached the left side of the needle, distance as from the top of the needle's eye to the point of the looper should be the same (0mm). See the illustration on the below. To adjust the timing of the looper to the needles, remove the machine cover, loosen screws A on the timing pulley (upper), and shift the timing pulley (upper) by turning the handwheel while holding the timing pulley (upper) by hand.



3-3 Looper setting distance

The distance from the point of the looper to the center of the needle bar should be 6mm when the looper is at its farthest position to the right. To make this adjustment, loosen screw C (see 3-1) on the looper holder.



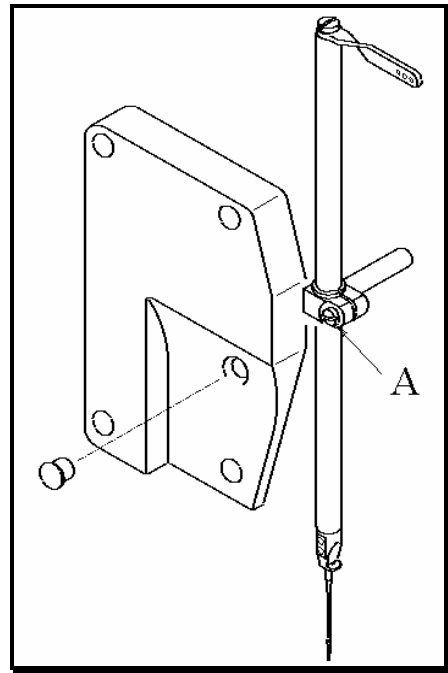
3-4 Needle height

When the needle bar is at the top of its stroke, adjust distance should be 11.3mm from the top surface of the needle plate to the point of the needle.

To make this adjustment, loosen screw A and move the needle bar up or down.

< Note >

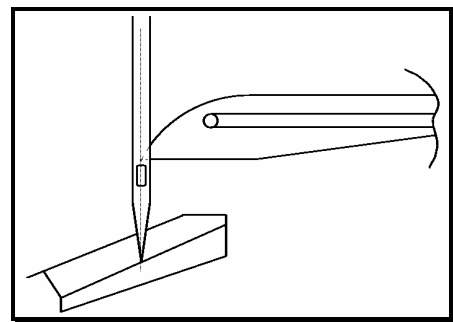
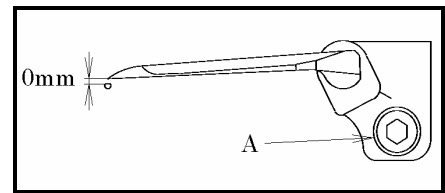
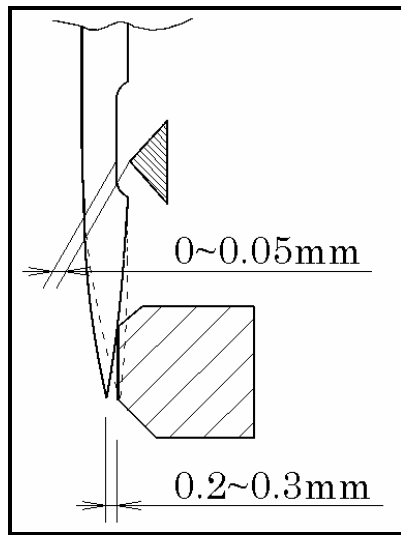
After the above adjustment, check to make sure each needle drops into the center of each needle



3-5 Needle/looper front-to-back relationship and position of the needle guard

The clearance between point of the looper and needle should be 0~0.05mm.

Then adjust the needle guard (rear) so that it presses needle at approximately 0.2~0.3mm to the front. (refer to instruction for RX series 6)



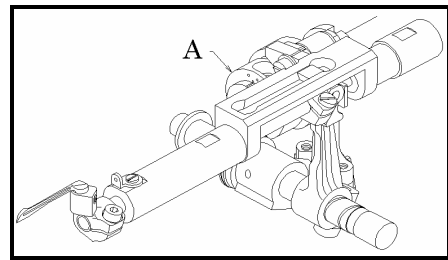
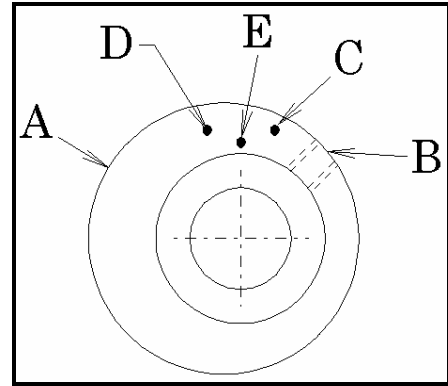
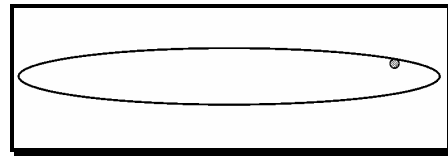
3-6 Changing the looper orbit

When the looper moves around the needles, the point of the looper barely touches the needle.

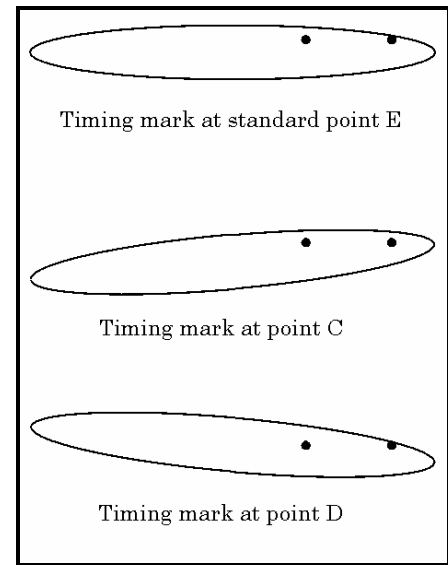
< Note >

To sew under good conditions, after changing the amount of the looper front-to-back movement adjust the looper orbit by moving the timing mark slightly to C or D

- To change the looper's orbit, loosen screw B on eccentric A and shift the timing mark by moving eccentric A front or back.
The timing mark is factory-set for standard.
Do not change the orbit extremely.



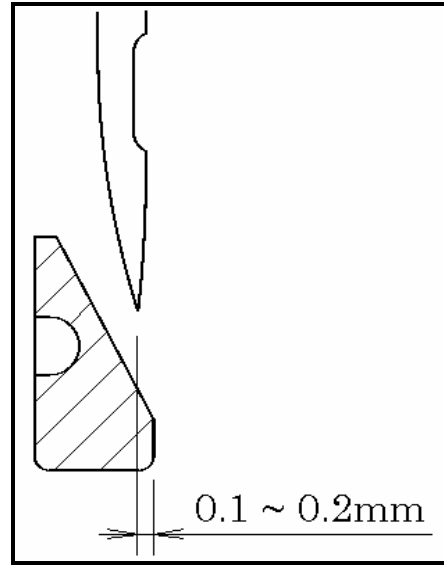
- The timing mark is at point E : standard
- When the timing mark is at point C, The clearance between the point of the looper and the left needle when the looper moves to the left decreases. The clearance when the looper moves to the right increases. Then the point of the looper touches the right needle. Skip stitching may occur when the looper moves to the right. A thread chain is not produced smoothly.
- When the timing mark is at point D, The clearance between the point of the looper and the left needle increases. Skip stitching may occur when the looper moves to the left. The needle extremely touches the back of the looper, causing needle breakage.



3-7 Changing the amount of the looper front-to-back movement

The clearance between the point of the needle and the back side of the looper when the looper moves to the right from the extreme left end of its travel should be 0.1~0.2mm (The needle is pressed to the back).

The amount of the looper front-to-back movement is factory-set properly for needle count #21 (Nm130). If you use needle counts Nm80~90, adjust the amount as required.

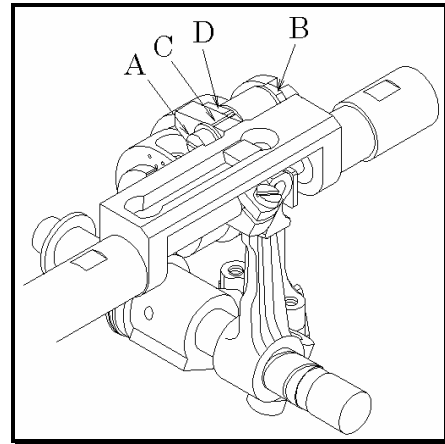


- Remove the inside cover.

Loosen nut B while holding screw A for the looper front-to-back adjusting pin with a screwdriver.

Then move the front-to-back rod front or back.

To increase the amount, move alignment mark D on the front-to-back rod to the front from mark C on the looper bar guide. To decrease the amount, move mark D to the back. Adjust according to the needle count.



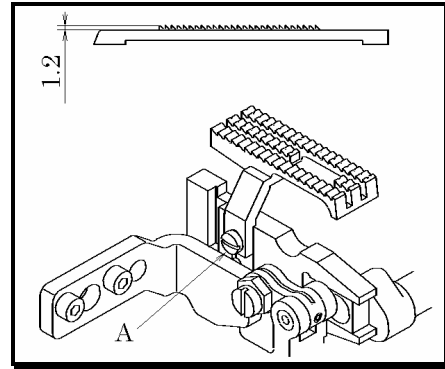
4 FEED DOGS & STITCH LENGTH

4-1 Feed dog height & tilt

□ Height

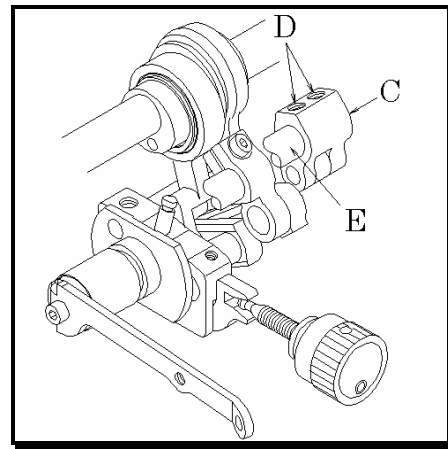
When the feed dog is at the top of this stroke, the feed dog teeth should be parallel with and 1.0~1.2mm above the top surface of the needle plate.

To make this adjustment, loosen screw A and move the feed dog up or down.



□ Tilt

When the feed dogs are at their top of their stroke, the feed dogs should be parallel with the top surface of the needle plate. To make this adjustment, loosen screws D and move shaft E. If the fabric to be used is thick and soft, install the feed dogs slightly higher than standard to feed the fabric smoothly.

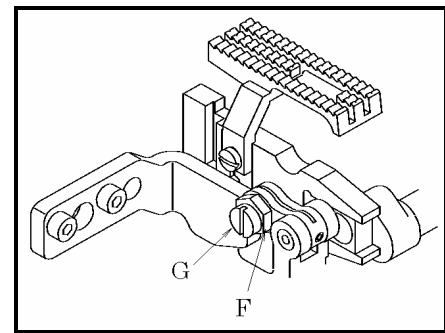


4-2 Feed dog front-to-back position

The feed dog should be centered front to back.

The feed dog should not touch the needle plate.

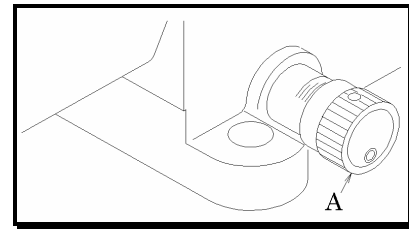
Fine adjustment is made by tightening screw G and turning front-to-back adjusting eccentric F



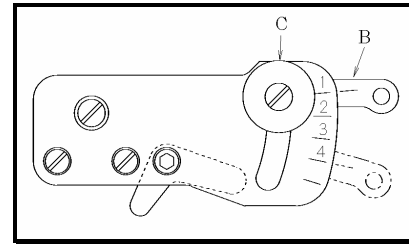
4-3 Stitch length

The stitch length is adjustable from 1.4~4.5mm. The following table shows the number of stitches within 1 inch (25.4mm) according to the stitch length.

Stitch length	No. of stitches (within 1")
4.5mm	5.5
4.0mm	6.5
3.0mm	8
2.0mm	12
1.0mm	18



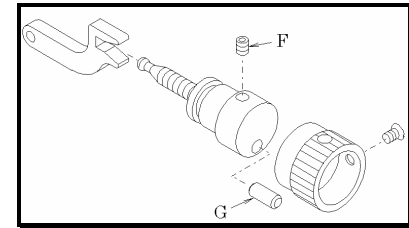
- To change the stitch length
Turn adjusting knob A or position lever B as required.
The readings show the stitch length.



< Note >

When turning adjusting knob A or positioning lever B, loosen screw C. Since this machine has a single feeding system, differential feed is unavailable. To change the stitch length, be sure to turn off the power.

- On the RX9701J Series, the feeding amount can be changed mechanically up to 4.5mm.
To achieve a feeding amount of 4.5mm, loosen screw F on the adjusting knob and release the stop position by moving stop pin G. Adjust while checking the front or back clearance so that the needle plate will not touch the feed dog.



5 CLEANING THE MACHINE

At the end of each day, remove the needle plate and clean the slots of the needle plate and the area around the feed dogs.

