

# INSTRUCTION

## ***DLR*** SERIES

Industrial Sewing Machines

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**KANSAI**  
SPECIAL®

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## **INTRODUCTION**

*Thank you for your purchasing Kansai Special's DLR Series.*

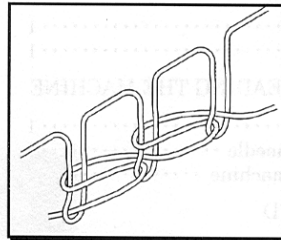
*Read and study this instruction manual carefully before beginning any of the procedures and save it for later use.*

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 as well as this instruction manual before performing preventive maintenance.
6. The contents described in this instruction manual are subject to change without notice.

## 【1】 SPECIFICATIONS

### 1-1 Stitch type

JIS401 double chainstitch machines



### 1-2 Model

Model	1501	1502, 1507	1503	1504	1508
No. of needles	1	2	3	4	4
No. of threads	2	4	6	8	8
No. of loopers	1	2	3	4	4
Needle count	UY×128GAS #14 ~ #18		TV×5 #21	UY×128GAS #14 ~ #18	TV×5 #21
Needle space		3/16 ~ 11/2	1/4, 9/32	1", 11/8	1/4 - 1 - 1/4
Needle bar stroke	31mm	34mm			

## 【2】 NEEDLES & THREADING THE MACHINE

### 2-1 Needles

UY×128GAS, TV×5 of Schmetz or Organ

Select the proper needle for the fabric and thread.

< Needle count comparison table >

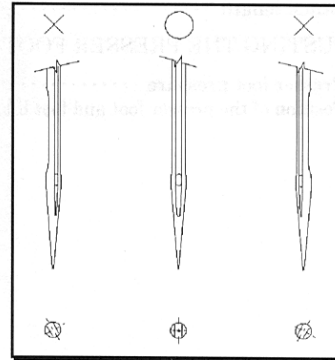
Schmetz	Nm90	Nm95	Nm100	Nm105	Nm110	Nm120	Nm125	Nm130
Organ	# 14	# 15	# 16	# 17	# 18	# 19	# 20	# 21

### 2-2 Replacing the needle

When replacing the needle, check the needle carefully to see that the scarf is turned to the rear of the machine (see the illustration).

< Note >

When 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.

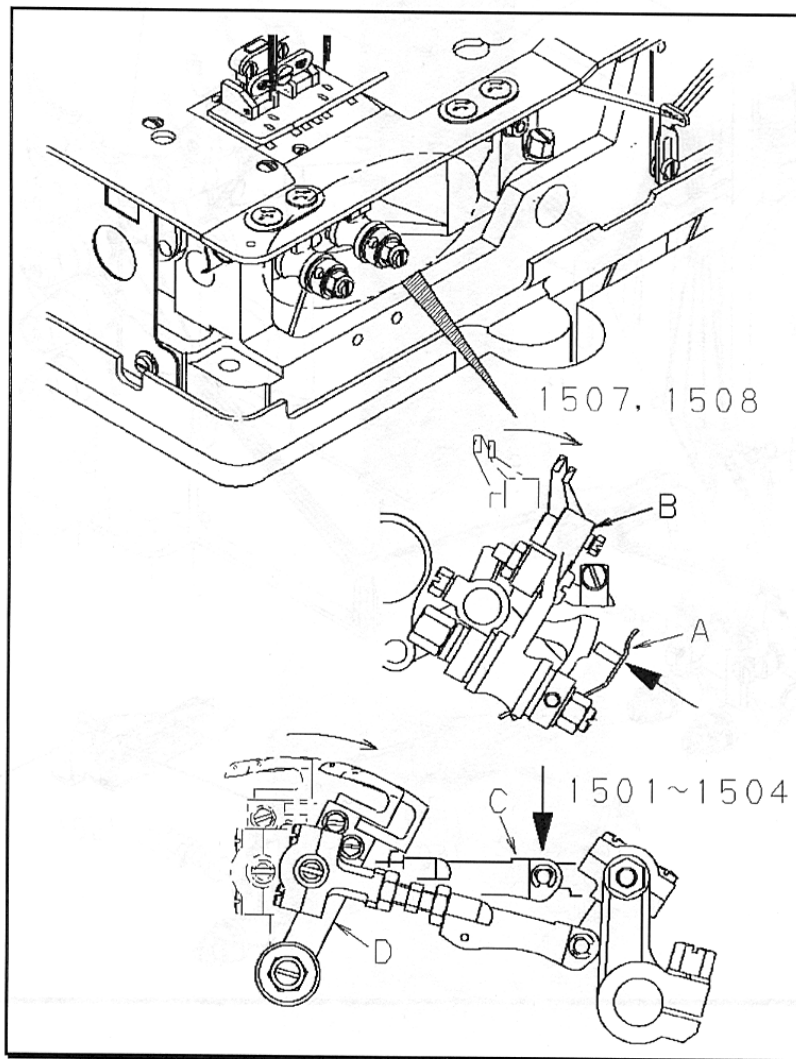


### 2-3 To thread the machine

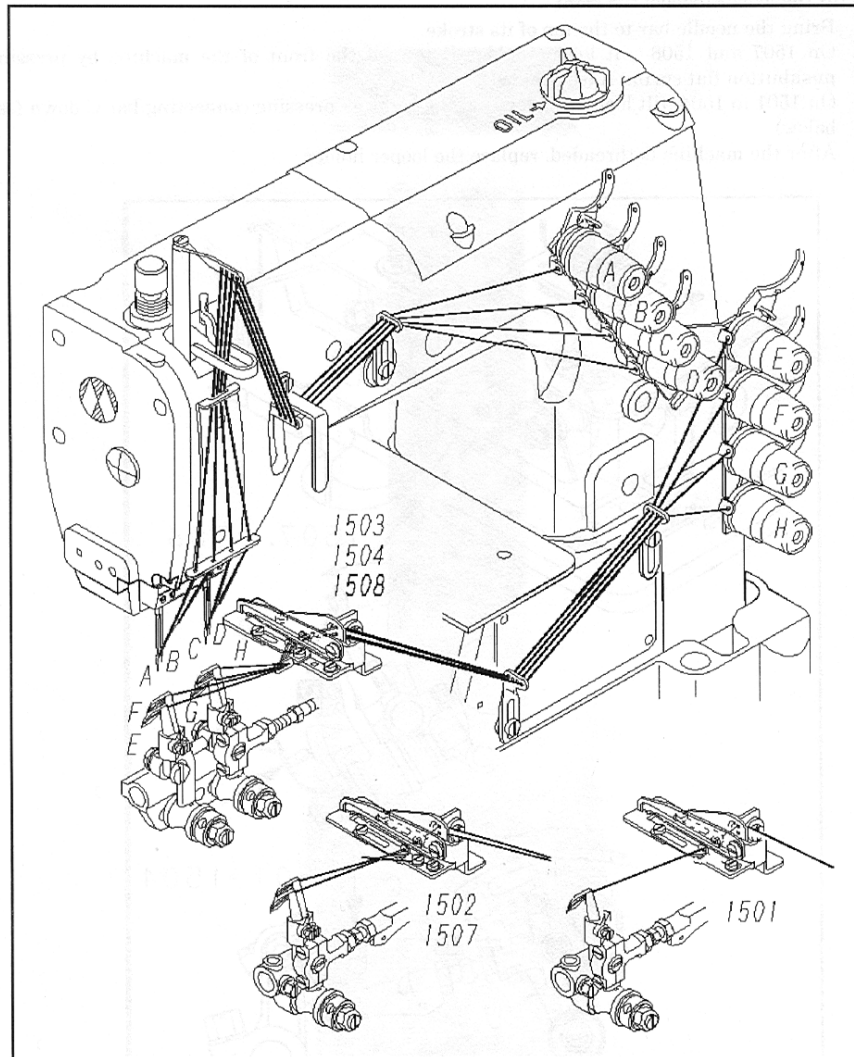
Thread the machine correctly by referring to the next page. Incorrect threading may cause skip stitching, thread breakage and/or uneven stitch formation. When threading the looper, tilt the looper holder toward the front of the machine by means of the looper drawing bar.

#### ■ To tilt the looper toward the front

1. Bring the needle bar to the top of its stroke.
2. On 1507 and 1508, tilt looper holder B toward the front of the machine by pressing pushbutton flat spring A (see below).
3. On 1501 to 1504, tilt looper holder D to the right by pressing connecting bar C down (see below).
4. After the machine is threaded, replace the looper holder.



■ A, B, C, D ... Needle threads      E, F, G, H ... Looper threads



### **[3] MACHINE SPEED**

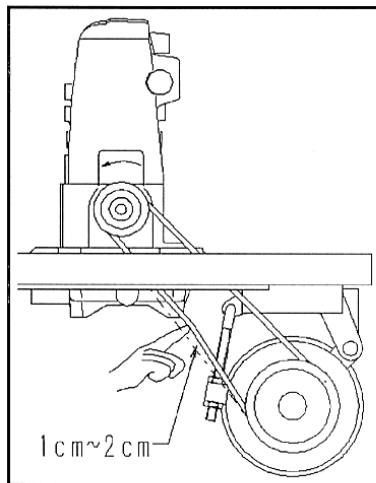
#### **3-1 Machine speed & direction in which the machine pulley runs**

Maximum speed : 4,500 rpm

Standard speed : 4,000 rpm

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 counterclockwise as seen from the end of the machine pulley (see the illustration).



#### **3-2 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 the position of the motor by pressing the finger onto the middle of the belt so that 1 - 2cm deflection can be achieved (see the illustration).

< Motor pulley selection table >

Motor pulley outer diameter (mm)	Machine speed (SPM)	
	50Hz	60Hz
70	2900	3450
80	3300	3900
90	3700	4400
100	4100	(4900)
110	4500	(5400)

## 【4】 LUBRICATION

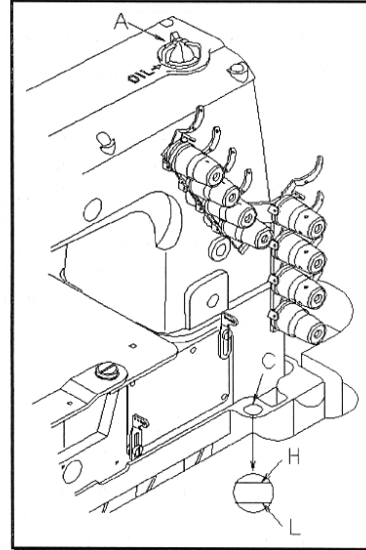
### 4-1 Oil

Use Kansai Special's genuine oil  
(Part No. 28-611 : 700 cc)

### 4-2 To fill the machine with oil

Remove oil plug A. Fill the machine with oil until the oil level is at the top line (see H in the illustration) on oil gauge C. After the first lubrication, add oil so that the oil level will be between H and L.

After filling the machine with oil, tighten plug A and run the machine to check the oil is splashing onto oil pot A.



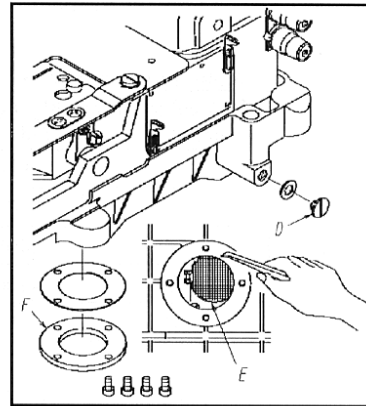
### 4-3 Replacing the oil and the filter element

To extend machine life, be sure to replace the oil after the first 250 hours of operation. To replace the oil, follow the procedures below.

1. Remove the V belt from the motor pulley and then remove the machine from the table.
2. Remove screw D and then drain the oil. Be careful not to stain V belt with the oil.
3. After draining the oil, be sure to tighten screw D.
4. Fill the machine with oil by referring to 4-2 shown above.

If filter element E is contaminated, proper oiling may not be performed. Clean the filter element every six months. If just a little or no oil flows out from the nozzle with the proper amount of oil in the machine, check the filter element.

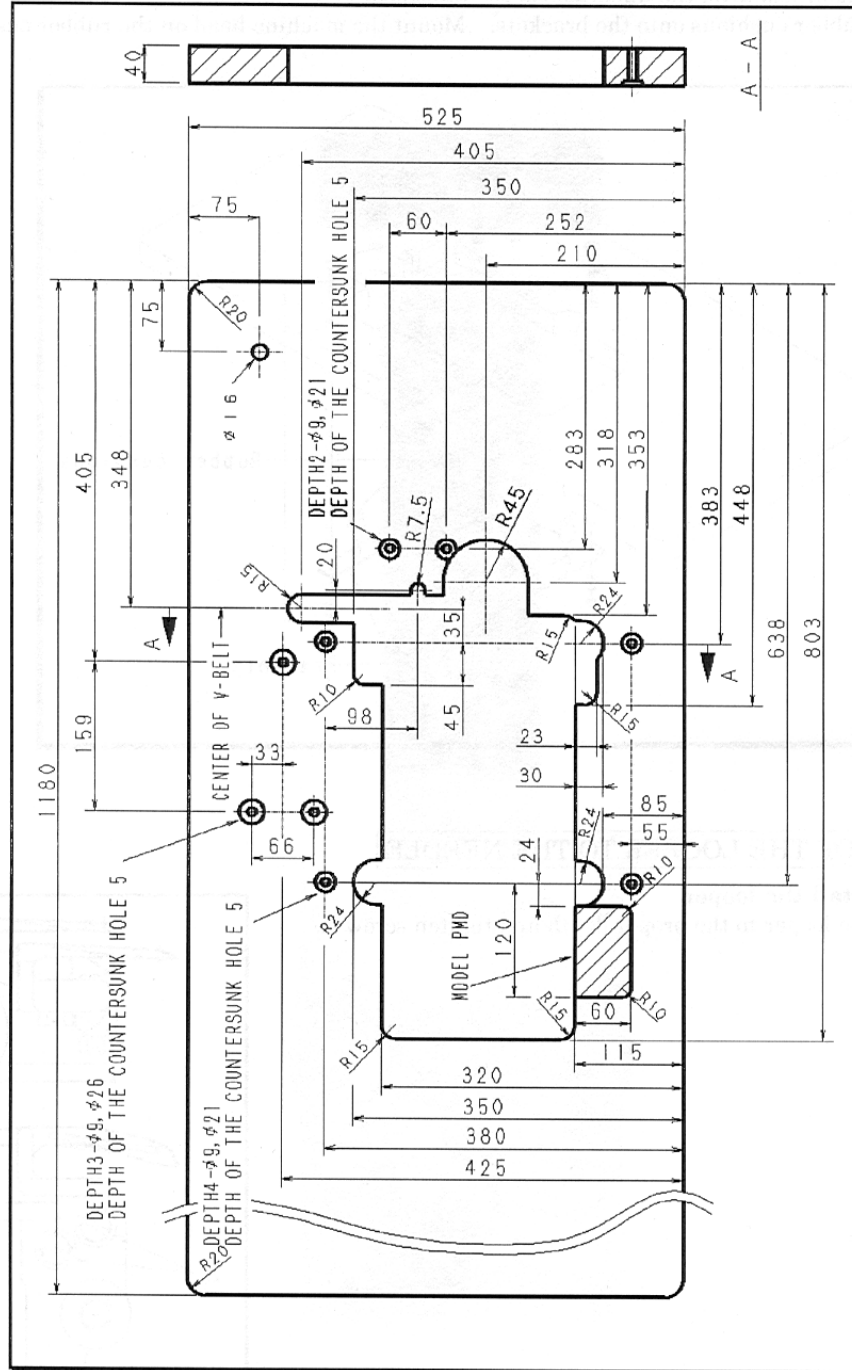
To clean the filter element, remove oil filter cap F.





## 【5】 SEWING MACHINE INSTALLATION

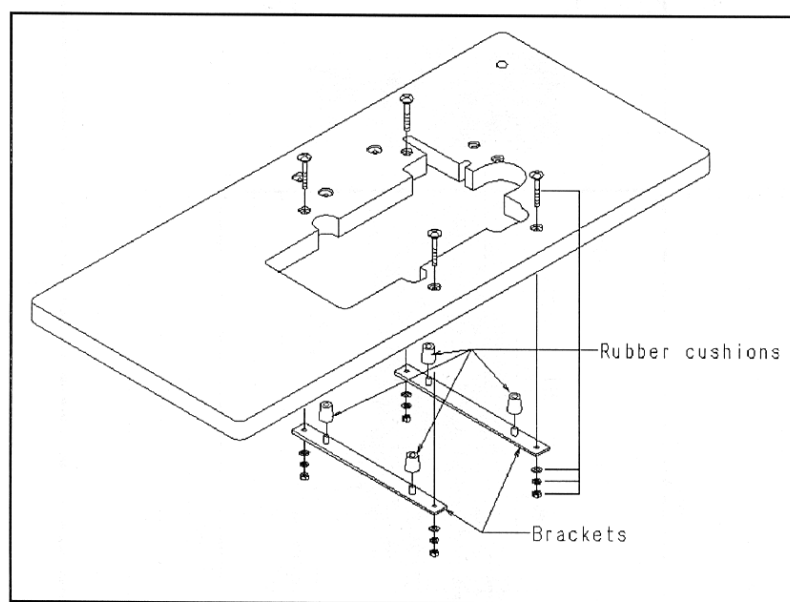
### 5-1 Cutting the machine table



**5-2 To install the machine**

Install the brackets on the underside of the table board (see the illustration below).

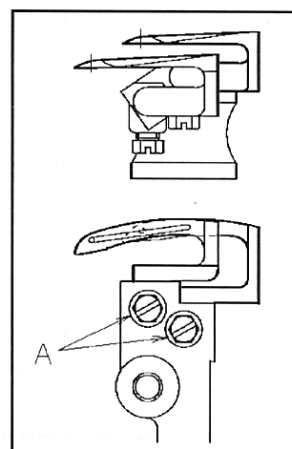
Fit the rubber cushions onto the brackets. Mount the machine head on the rubber cushions.



**[6] TIMING OF THE LOOPER TO THE NEEDLE**

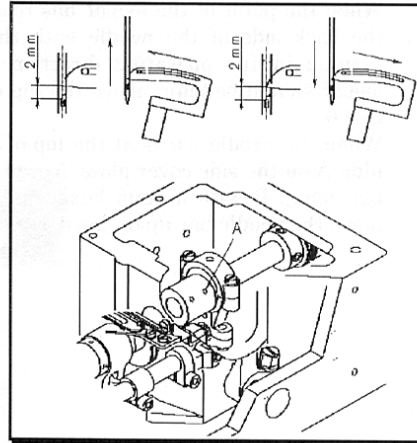
**6-1 To install the looper**

Insert the looper to the proper depth and tighten screw A.



### 6-2 Looper left-to-right movement

When the point of the looper, moving to the left or right, has reached the center of the needle, the point of the looper should be 2mm above the top of the needle's eye. Adjustment is made by removing the cover and loosening three screws A. After this adjustment, tighten three screws A with the same torque.

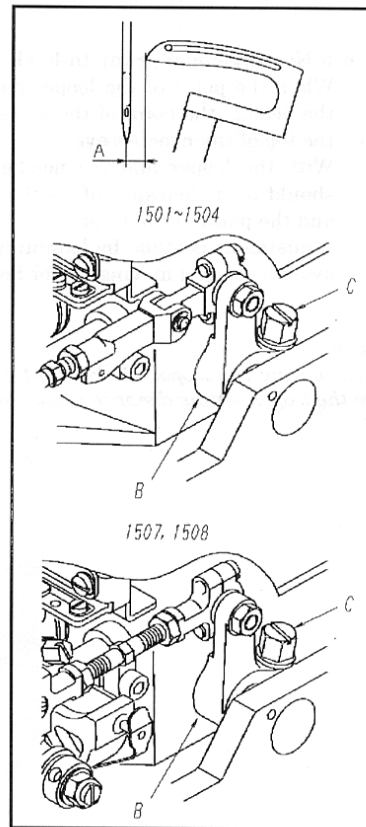


### 6-3 Looper setting distance

When the needle is at the bottom of its stroke and the looper is at the extreme right end of its travel, adjust distance A from the point of the looper to the center of the needle (see the table below).

Model	Looper setting Distance A
1501 ~ 1507	3.5mm
1508	3mm

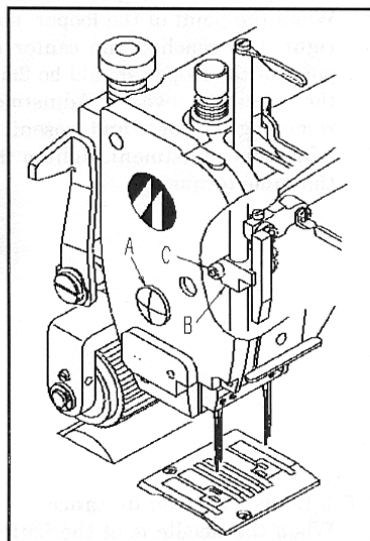
Adjustment is made by loosening screw C on lever B.



#### -4 Needle height

When the point of the looper has reached the center of the back side of the needle with the machine pulley turning in the operating direction, the point of the looper should be 2mm above the top of the needle's eye (see 6-2).

When the needle bar is at the top of its stroke, remove plug A on the side cover plate, loosen screw C on needle bar clamp B with a 3mm hexagonal wrench and then move the needle bar up or down as required.

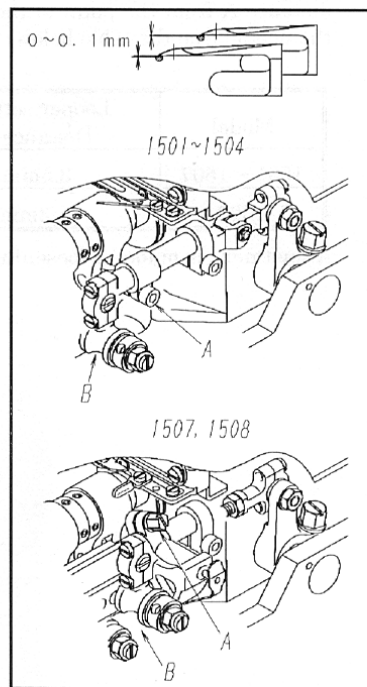


#### 6-5 Needle/looper front-to-back relationship

When the point of the looper has reached the center of the needle, the point of the looper should be 2mm above the top of the needle's eye.

With the looper and the needle in this position, there should be a clearance of 0 - 0.1mm between the needle and the point of the looper.

Adjustment is made by loosening screw A on the looper avoid lever and moving looper holder B front or back.



#### < Note >

When moving the looper holder front or back, check to make sure the looper setting distance is not changed.