Kansai Special
Industrial Sewing Machines

INSTRUCTION MANUAL

L-500 SERIES

MORIMOTO MFG. CO., LTD.

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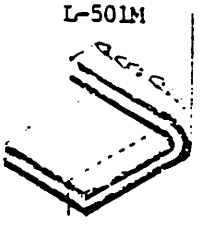
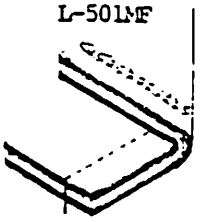
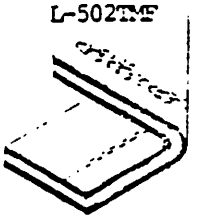
2. SPECIFICATIONS

MODEL	L-501M	L-501MF	L-502TMF
			
GAUGE SIZE	—	—	0
			1/64 (0.4mm)
MACHINE TYPE	L-501 — High Speed, Fully Automatic Lubrication System. 1-Needle, Flat Bed Double Chainstitching Machine. (For Light and Medium Fabrics) L-502 — High Speed, Fully Automatic Lubrication System. 2-Needle, Tandem, Flat Bed Double Chainstitching Machine. (For Light and Medium Fabrics)		
NUMBER OF NEEDLES	1	1	2
NUMBER OF LOOPERS	1	1	2
NUMBER OF THREADS	2	2	4
NEEDLE TYPE	SCHMETS UY 128 #70 - #90		
NEEDLE BAR STROKE	31 mm		
FEED MECHANISM	Plain FEED		
WORK SPACE RIGHT OF NEEDLE BAR	210 mm		
FEED LENGTH	8 - 14 Stitch		
LUBRICATION SYSTEM	Fully Automatic Lubrication System		
RECOMENDED SPEED	5000 rpm		

3. How To Set Up The Machine.

3.1 Motor Speed and Pulley Size

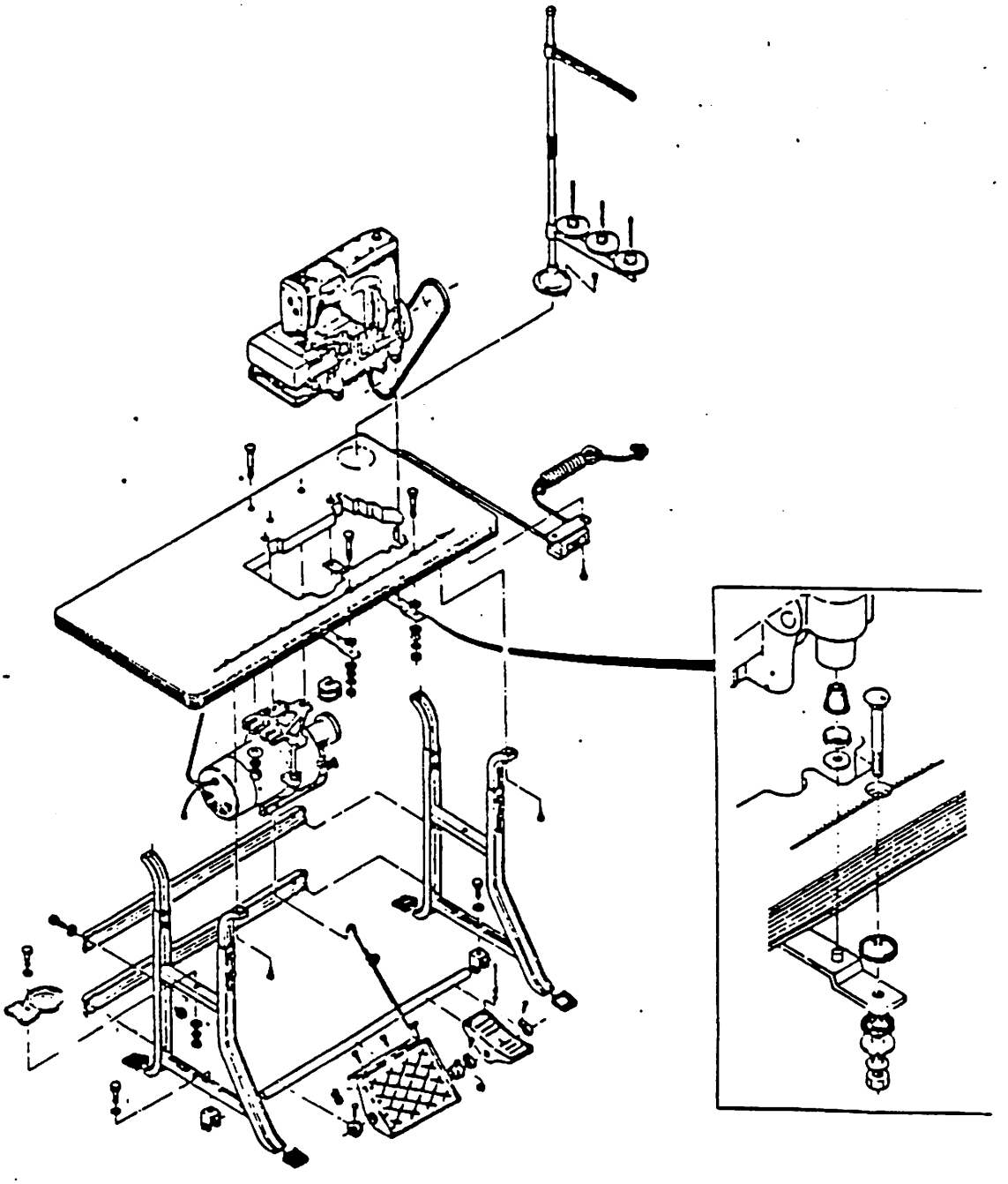
Recomended speed of this machine is 5000 rpm. The machine speed is determined by the thickness of the fabric.

MOTOR PULLEY (mm)		MACHINE SPEED (rpm)
(60 hz.)	(50 hz.)	
55	70	3500
65	80	4000
75	90	4500
85	100	5000
95	110	5500

Table (1.0)

The machine pulley operation direction is counter-clockwise

3.2) **Table stand assembly diagram** (テーブルスタンド据付図)



3.3) LUBRICATION

1.) ADDING and DRAINING OIL

Please use SF rated oil in all our machines.
Initial oil change is suggested after one month of operation.
There after the recommended oil change interval is every six months.

(A) Adding Oil

1.) Unscrew oil cap (A). see Fig.(1.1)

2.) Add oil until level is between the red lines of the oil gauge. see Fig.(1.2)

3.) Replace oil cap (A).

4.) Run machine - check if oil jet is spraying oil smoothly and completly, by looking through the oil cap. If the oil jet is not spraying oil properly, check the oil pump sreen.

(B) Draining Oil

1.) Remove screw (E) , oil will drain through opening. see Fig.(1.0)

2.) Collect old oil in a suitable container and dispose of properly.

* Notice: Before starting machine check oil level and add oil if necessary. Always use SF rated oil.

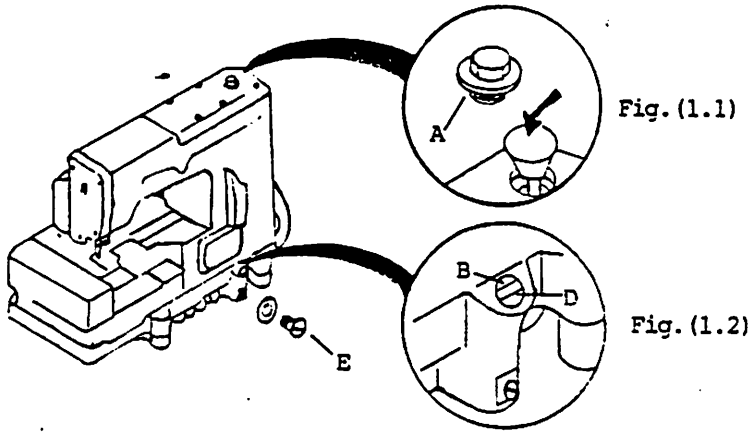


Fig.(1.1)

Fig.(1.2)

Fig.(1.0)

3. LUBRICATION

C) Oil Filter

1.) Check oil filter after the first ten days of operation.The oil filter should be checked once a month there after.

2.) If the oil filter is dirty , clean by blowing filter with compressed air. [see Fig.(1.3) on removal of oil filter.]

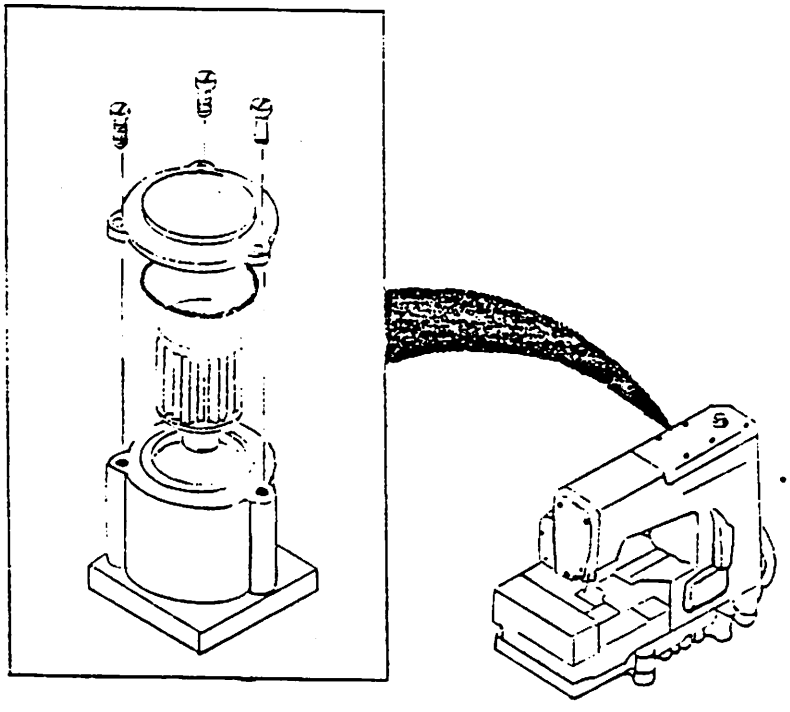


Fig.(1.3)

HOW TO OPERATE THE MACHINE

(4.1) Changing the Needles

The correct needle type of this machine is 128
The needle size is determined by the thickness of the fabric and can be chosen within the limit of (#70) to(# 90). The proper type and size should be used.

[The correct position of the needles are as follows.]

(1) The scarf of the needle should be directly behind the needle. see Fig.(2.0)

(2) The needles are all the way up in their holders.

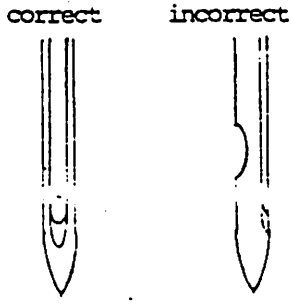


Fig.(2.0)

4.2 THREADING

To thread machine follow Fig.(2.5)

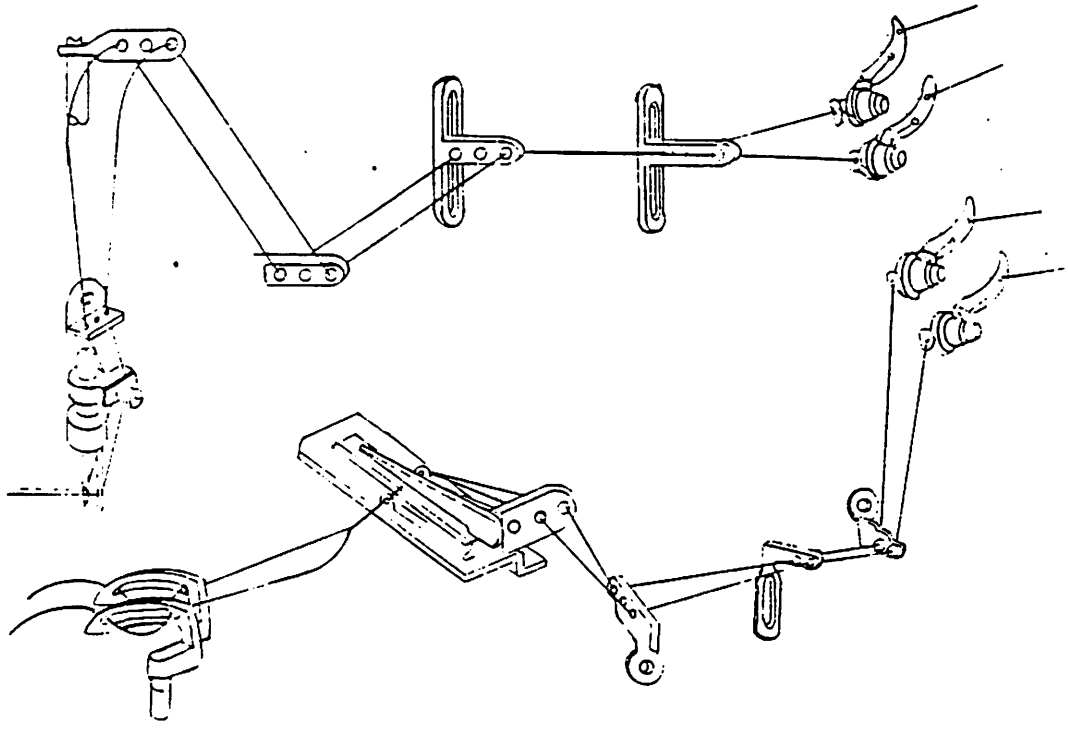


Fig.(2.5)

4.3 LOOPER BRAKE DOWN MECHANISM

To make looper threading easier.

1) Rotate machine pulley counter-clockwise until loopers are at the extreme right position.

2) Apply pressure on looper driver connecting link at point (A) until connecting link drops down. see Fig.(3.0) [loopers will also drop.]

2) To return loopers to their orginal position, lift up looper driver connecting link at point (B) (see Fig.(3.0)) or push loopers to the left.

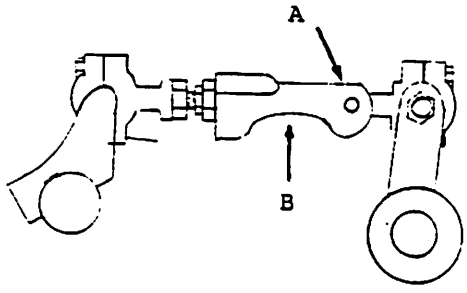


Fig.(3.0)

4.4 ADJUSTMENT OF FEED LENGTH

The feed length of this machine is adjusted at 2mm per stitch (12 stitches per inch) when shipped out from the factory.
If another stitch length is required, it can be changed, within the limits of 8 to 14 stitches per inch.

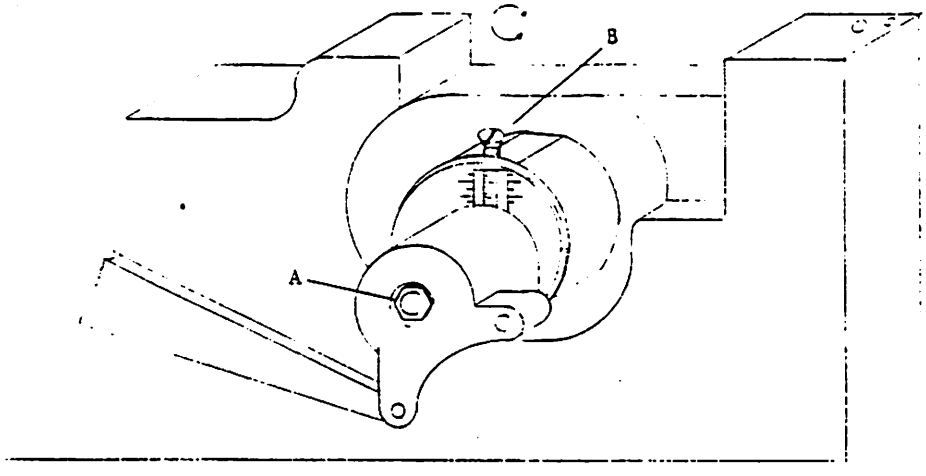


Fig.(4.0)

[ADJUSTMENT]

1.) Loose Nut (A) see Fig.(4.0)
2.) Turn screw (B) [in clockwise direction stitch length will be made smaller, in the counter-clockwise direction the stitch length will be made larger] see Fig.(4.0)
3.) Tighten Nut (A) see Fig.(4.0)
4.) Run machine, observe stitch length.
Repeat adjustment until proper stitch length is achieved.

* CHECK NEEDLE GUARD ALIGNMENT *

5. HOW TO MAINTAIN THE MACHINE

5.1) Needle Bar Alignment

On this machine (when the loopers move across the feed,right to left) one of the first adustments to do is to align the needle bar with the throat plate.

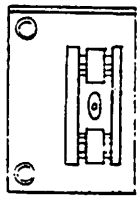


Fig.(5.0)

Needles should enter into the center of the hole on the throat plate. see Fig.(5.0) [L-502TMF 1/64 gauge the rear needle will be slightly off center.]

[ADJUSTMENT]

1.) Loosen screw (A) on the tension nipper. see Fig(6.0)
2.) Twist needle clamp to correct position.
3.) At this time needle clamp should be pushed all the way up into the needle bar.
4.) Tighten screw (A)

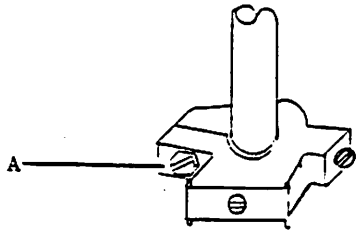


Fig.(6.0)

3.2) NEEDLE BAR HEIGHT

The needle bar height is the distance between the tip of the needle to the top surface of the throat plate, when the needle bar is at it's highest position.

The needle bar height on this machine should be 10 mm.

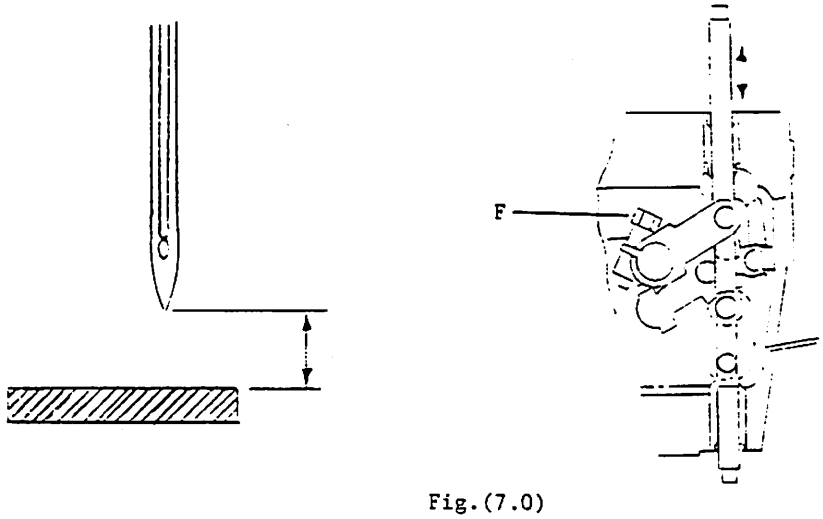


Fig.(7.0)

[ADJUSTMENT]

1.) Remove the face plate
2.) Rotate the machine pulley until the needle bar is at it's lowest position.
3.) Loosen Nut (F) see Fig(7.0)
4.) Lift up on the needle bar (if the needle bar height is too short) Push down on the needle bar (if the needle bar height is too long)
5.) Tighten Nut (F)
6.) Rotate the machine pulley until the needle bar is at it's highest position, check needle bar height.
7.) Repeat adjustment until proper height is achieved.

5.3) SYNCHRONIZATION BETWEEN LOOPER AND NEEDLE

Turn the machine pulley in the operation direction until the point of the looper,(moving from right to left on the back side of the needle.) is even with the left side of the needle.
Now turn the machine pulley in the reverse direction until the point of the looper is even with the left side of the needle (in front of the needle).
If the machine is synchized the dimention (A) from the top of the eye of the needle to the point of the looper will be the same dimention (B). seeFig.(8.0)

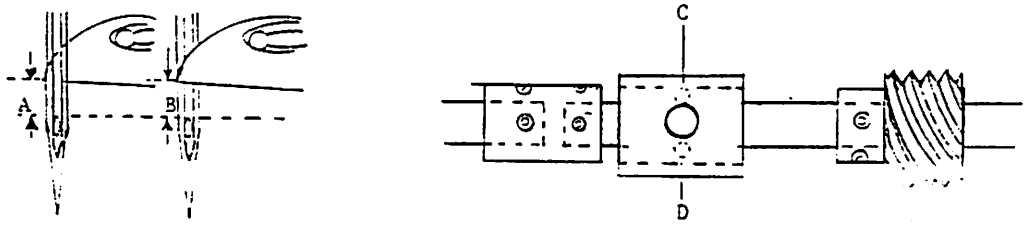


Fig.(8.0)

[ADJUSTMENT]

1.) When the dimention (A) is larger or smaller than (B), loosen set screws (C) and (D). see Fig.(8.0)
2.) If (A) is greater than (B) the looper motion is faster than the needle motion.Rotate the machine pulley counter-clockwise.
* The eccentric cam MUST NOT MOVE. *
3.) If (A) is less than (B) the looper motion is slower than the needle motion.Rotate the machine pulley clockwise.
* The eccentric cam MUST NOT MOVE *
4.) Tighten screws (C) and (D).

(5-4) DISTANCE BETWEEN LOOPER AND NEEDLE

The distance between the tip of the looper and the center of the needle, when the looper is located at its farthest position to the RIGHT , must be 4.5 mm (approximately 0.177") .
See fig. (9.0a).

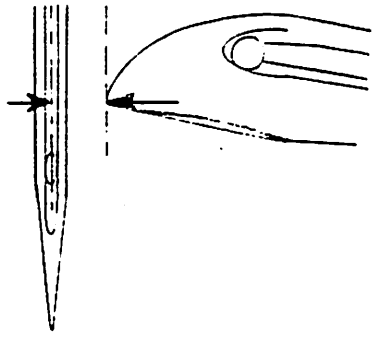


Fig.(9.0a)

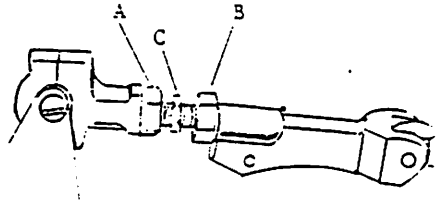


Fig.(9.0b)

[ADJUSTMENT]

1) Loosen nut [A] (it has a left hand thread) and nut [B] (it has a right hand thread) on connecting rod [C] .
2) Turn the connecting rod [C] forward or backward to obtain the 4.5mm dimention . see Fig(9.0b)
3) Re-tighten both nuts, first nut [A] then nut [B] .
4) Make sure both ball joints are in a vertical position.

(5-5) LOOPER AVOID MOTION

The looper avoid motion on this the looper across the line of feed machine is controll by the looper aboid eccentric.

It is located on the left hand side of the looper thread take up cam.

See fig. (14.0)

The first screw in the operating direction (A) should be on the flat of the main shaft.

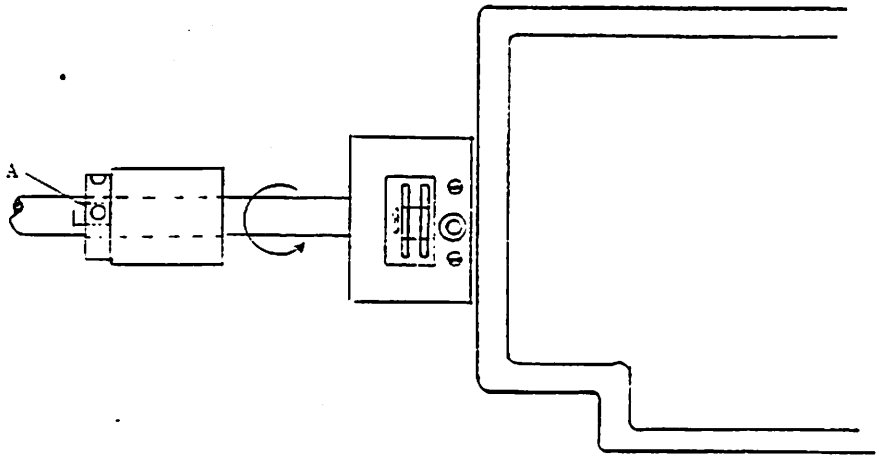


Fig.(14.0)

(5-6) FEED DOG HEIGHT

The dimention from the surface of the throat plate to the top of the feed dog, when the needle bar is at its highest position, should be adjusted to 1.0mm .

See fig. (11.0)

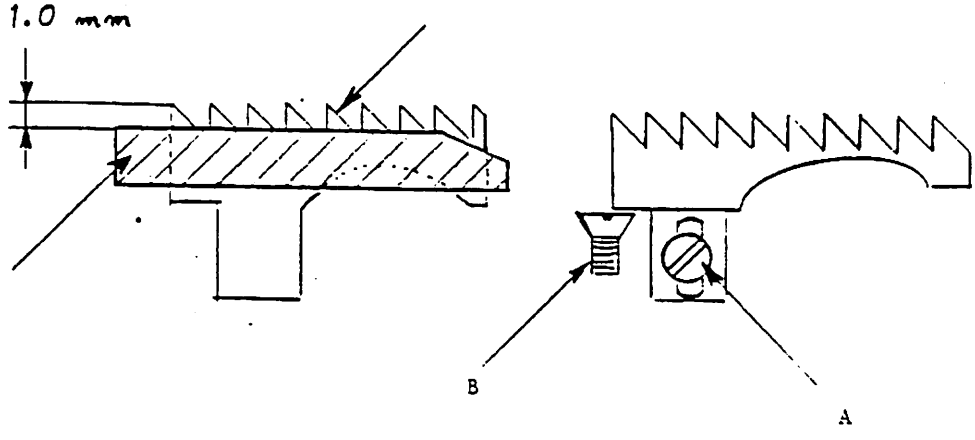


Fig.(11.0)

[ADJUSTMENT]

1) Loosen screw (A).

2) Turn screw (B) CLOCKWISE if feed dog is too high.
   Turn screw (B) COUNTER-CLOCKWISE if feed dog is too low.

3) Tighten screw (A).

See fig. (11.0)

5.6a) FEED DOG HORIZONTAL POSITION

When the needle bar is at it's highest position the feed dog should be horizontal with the throat plate.

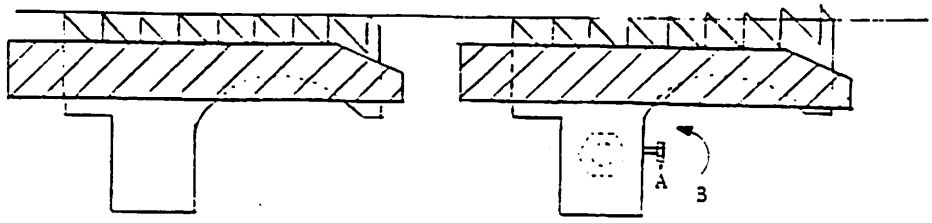


Fig.(12.0)

If one end of the feed dog is higher than the other in relationship to the thraot plate,(see Fig.(12.0) this adjustment must be performed.

[ADJUSTMENT]

1.) Rotate the machine pulley until the feed dog is at it's highest position.
2.) Loosen Nut (B) see Fig.(12.0)
3.) Turn screw (A)[counter-clockwise moves front of the feed dog up, clockwise moves the feed dog down]
4.) Tighten nut (B)
5.) Repeat adjustment until feed dog is horizontal with the throat plate.
6.) CHECK feed dog height.

5.7 NEEDLE GUARD

The needle guard is mounted on the feed rocker so that the position of the needle guard is moving with the feed dog.
The synchronization of the needle guard is as follow.
When the tip of the looper comes to the middle of the needle scarf, the tip of the needle should be 1.0 mm below the top edge of the needle guard (A). see Fig.(13.0).
At this time the needle should touch the needle guard without deflection of the needle.

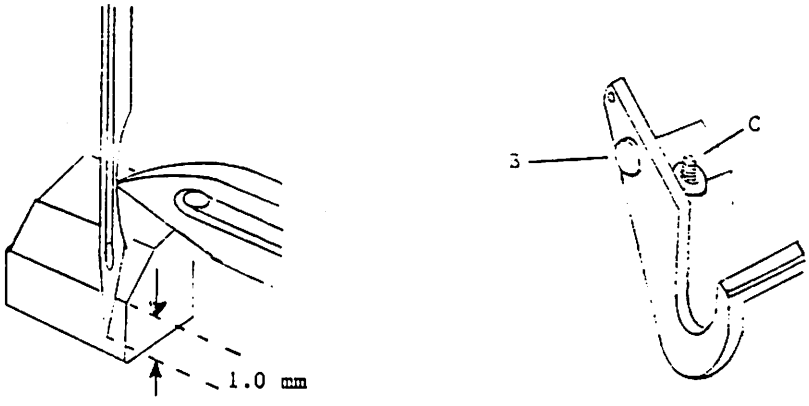


Fig.(13.0)

[ADJUSTMENT]

1.) This adjustment is made by loosening screw (B) and turning screw (C). see Fig.(13.0)

5.3 LOOPER CLEARANCE

The clearance from the looper to the needle,when the looper reaches the center of the needle,the looper should be dead against the needle with NO needle deflection. see Fig.(14.0)

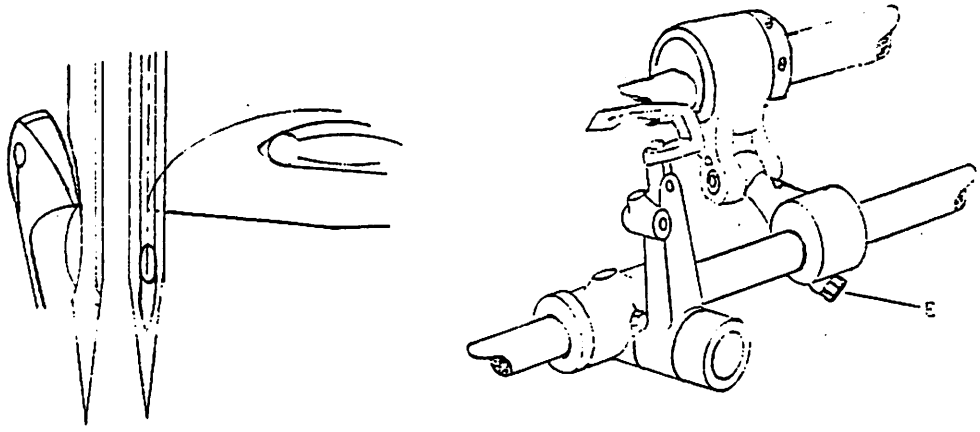


Fig.(14.0)

[ADJUSTMENT]

1.) Loosen screw (E). see Fig.(14.0)

2.) Move the looper holder forwards or backwards to the proper position. see Fig.(14.0)

3.) Tighten screw (E).

5.9 LOOPER TAKE-UP CAM

When the needle reach point (A) of the looper,(loopers moves from right to left) the looper thread should cast off from the high point of the take-up cam (B). see Fig(15.0)

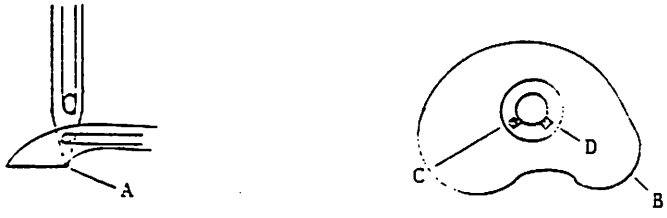


Fig.(15.0)

[ADJUSTMENT]

1.) Loosen scews (C) and (D). see Fig.(15.0)
2.) Move Take-up cam to the proper position.
3.) Tighten scews (C) and (D).

The height of the retainer bar should be 6 mm. This is measured from the surfce of the cast off plate to the bottom of the retainer bar.

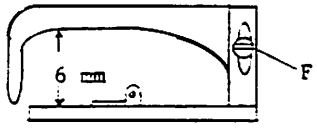


Fig.(15.1)

[ADJUSTMENT]

1.) loosen screw (F). see Fig.(15.1)
2.) Move retainer bar (up or down) to proper height.
3.) Tighten srew (F).

5.3a LOOPER THREAD TAKE-UP

The center of the holes of the eyelets on the cast off support plate should line up with the lines engraved on the plate.

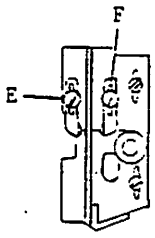


Fig.(16.0)

[ADJUSTMENT]

1.) Loosen screws (E) and (G). see Fig.(16.0)
2.) Move the eyelets to the proper alignment.
3.) Tighten screws (E) and (G).

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