



Kansai Special U.S.A. Corp.

INSTRUCTION MANUAL

DVC - 200 SERIES

MORIMOTO MFG. CO., LTD.

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2.0 SPECIFICATIONS

MODEL	DVC-202R	DVC-202RM	DVC-202S	DVC-202D	DVC-202WL
NUMBER OF NEEDLES	2	2	2	2	2
NUMBER OF LOOPERS	1	1	1	1	2
NUMBER OF THREADS	3	3	3	3	4
NEEDLE TYPE, SIZE	UY 128 #75 - #90				TVX5
NEEDLE BAR STROKE	30.5 mm				
FEED MECHANISM	plain	plain	plain	differ.	plain
STITCH LENGTH	8 - 16 stitches per inch				
WORK SPACE BEHIND THE NEEDLE BAR	235 mm				
DIAMETER OF THE CYLINDER	65 mm				
LUBRICATION	FULLY AUTOMATIC LUBRICATION SYSTEM				
RECOMMENDED SPEED	3500 rpm				

MODEL	GAUGE
DVC-202R	5/32, 3/16, 7/32, 1/4
DVC-202RM	
DVC-202S	1/8, 5/32, 3/16, 7/32, 6mm
DVC-202D	1/8, 5/32, 3/16, 7/32, 15/64
DVC-202WL	5/16, 1/4

3.0 HOW TO SET UP THE MACHINE.

3.1) MOTOR SPEED and PULLEY SIZE.

The recommended speed for these machines is 3500 rpm.

The machine speed is determined by the thickness of the fabric.

For the recommended speed and corresponding pulley size see chart (1.0)

MACHINE SPEED (rpm)	MOTOR PULLY (mm)	
	60 Hz.	50Hz.
2500	40	55
3000	50	65
3500	60	75

CHART (1.0)

The machine-pulley operating direction is clockwise. see Fig.(1.0)

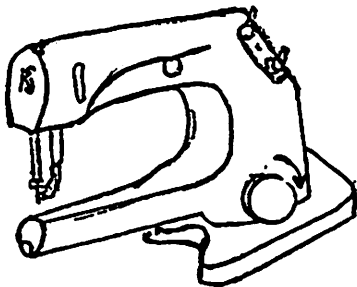
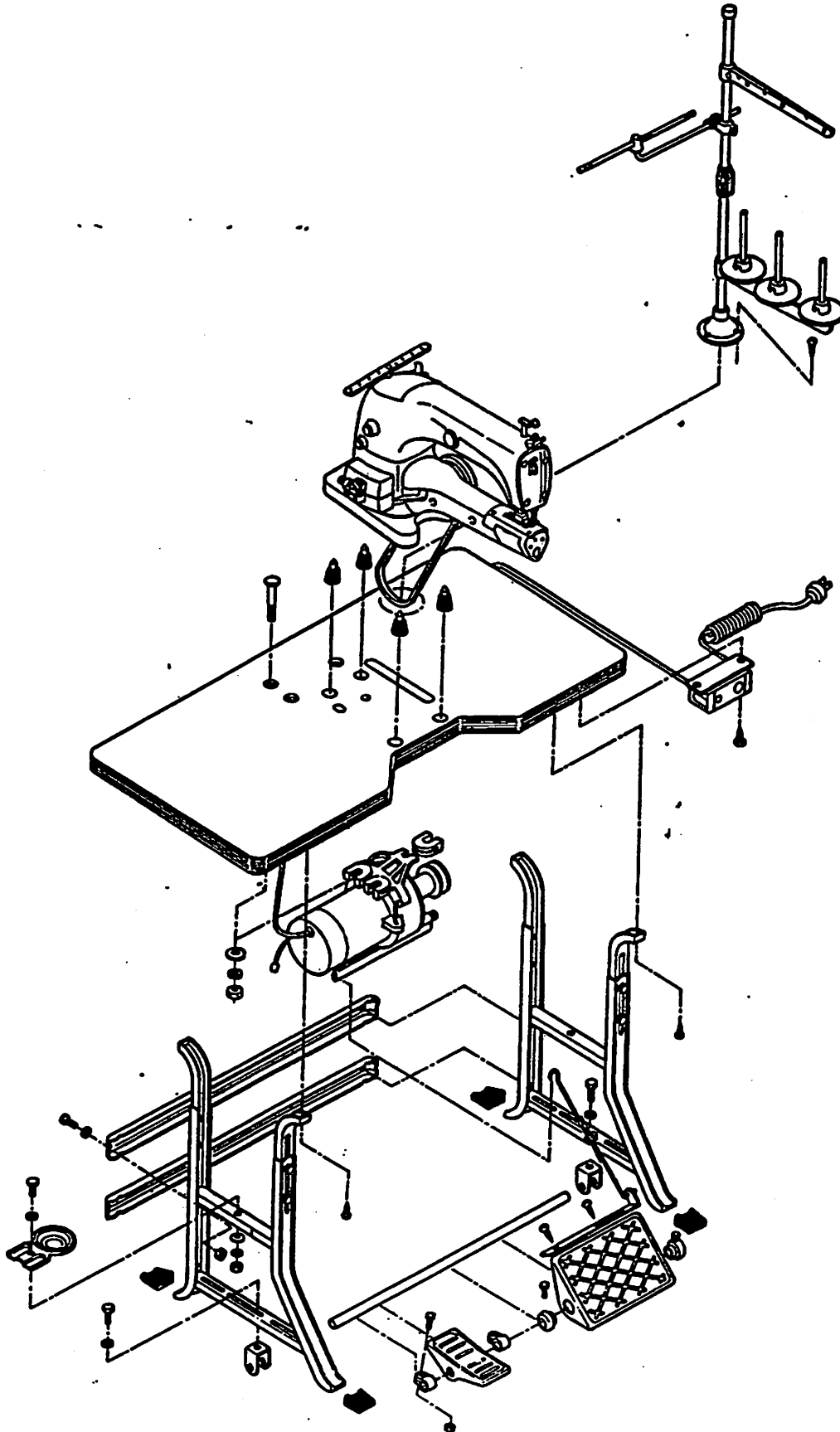


Fig.(1.0)

2.0

Table stand installation diagram (テーブルスタンド据付図)

3.3 LUBRICATION.

1.) ADDING and DRAINING the OIL

Please use SF rated oil in all KANSAI SPECIAL 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.(2.0)
- 2.) Add oil until the oil level is between the red lines of the oil gauge. see Fig.(2.0)
- 3.) Replace oil cap (A)

B) DRAINING OIL

- 1.) Remove screw (E),oil will drain through the opening. see Fig.(2.0)
- 2.) Collect old oil in a suitable container and dispose of properly.

* NOTICE: Before starting the machine CHECK the oil level,add oil if necessary. Always use SF rated oil.

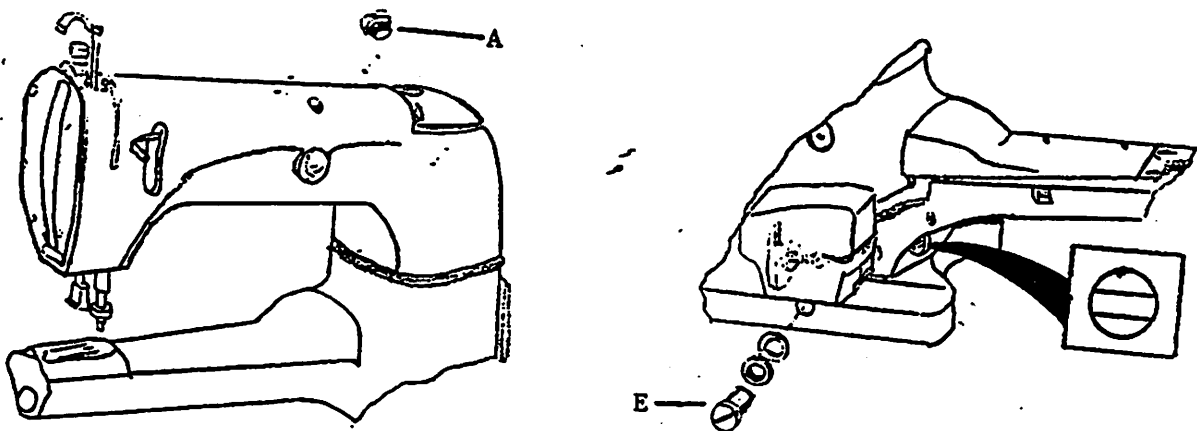


FIG.(2.0)

4.0 HOW TO OPERATE THE MACHINE.

4.1) CHANGING THE NEEDLES.

For the correct needle type and size see section 2.0 specification.
The needle size is determined by the thickness of the fabric. The proper type and size must be used .

[THE CORRECT POSITION OF THE NEEDLES]

- 1.) The long groove of the needle must be directed towards the operator. see Fig.(3.0)
 - 2.) The scarf of the needle will be directed away from the operator.
 - 3.) The needle must be all the way up in the holder.
- *NOTICE: The incorrect setting of the needles can cause, mis-stitching, thread breakage and looper breakage.

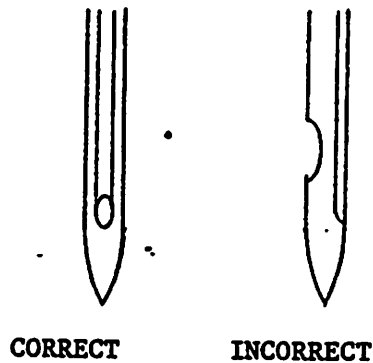


FIG. (3.0)

4.2 THREADING

To thread the machine follow Fig.(3.5)

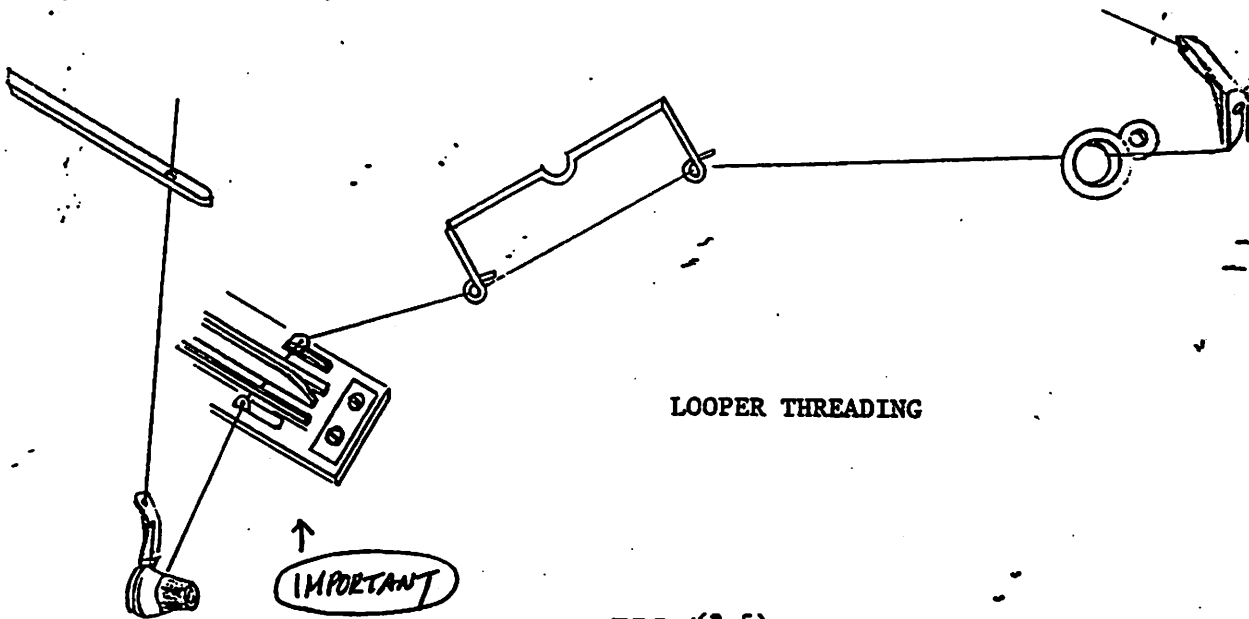
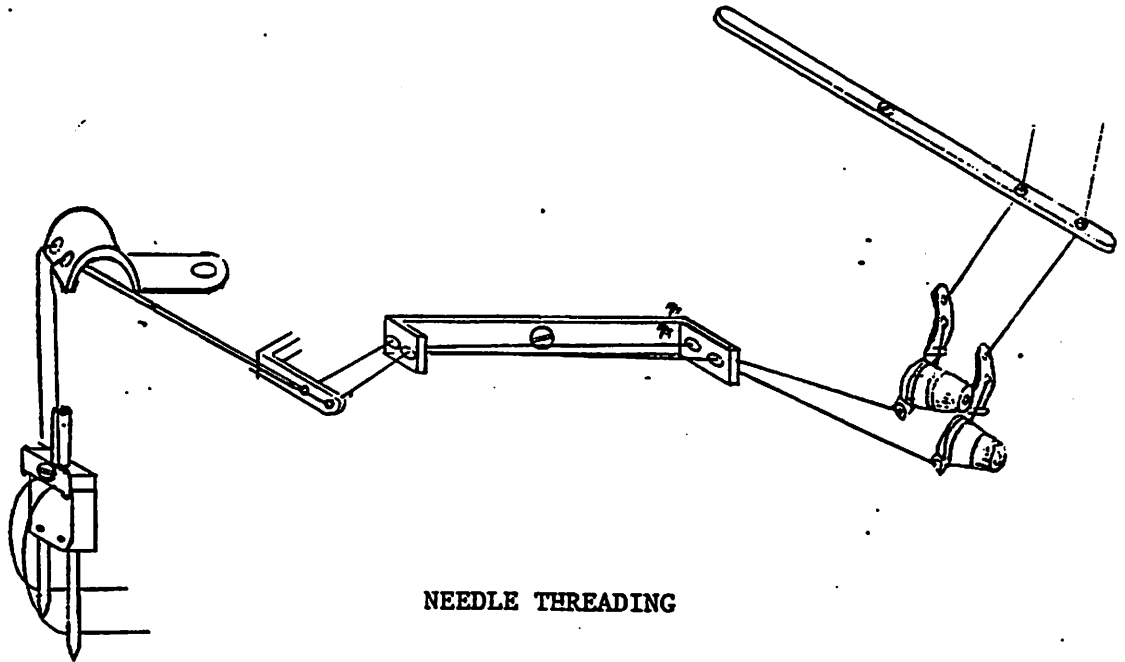


FIG. (3.5)

4.3 ADJUSTMENT of the FEED LENGTH.

The stitch length can be adjusted within the limits of 8 to 16 stitches per inch.

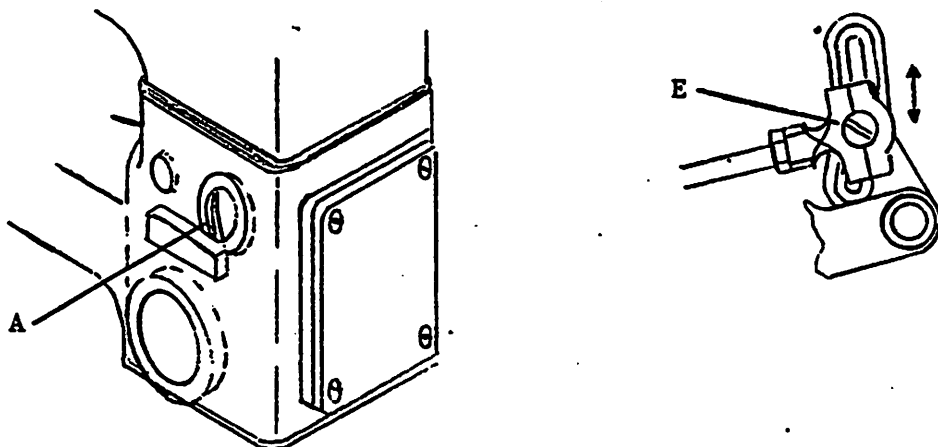


FIG.(4.0)

[ADJUSTMENT]

- 1.) Remove screw (A). see Fig.(4.0)
- 2.) Loosen feed adjusting eccentric (E). see Fig.(4.0)
- 3.) Move the eccentric.(Raise the eccentric for longer stitch length, lower the eccentric for smaller stitch length.).
- 4.) Tighten feed eccentric (E).
- 5.) Repeat adjustment until proper stitch length is achieved.
- 6.) Replace screw (A).

4.4 DIFFERENTIAL FEED ADJUSTMENT.

For model DVC-202D the differential feed can be adjusted.

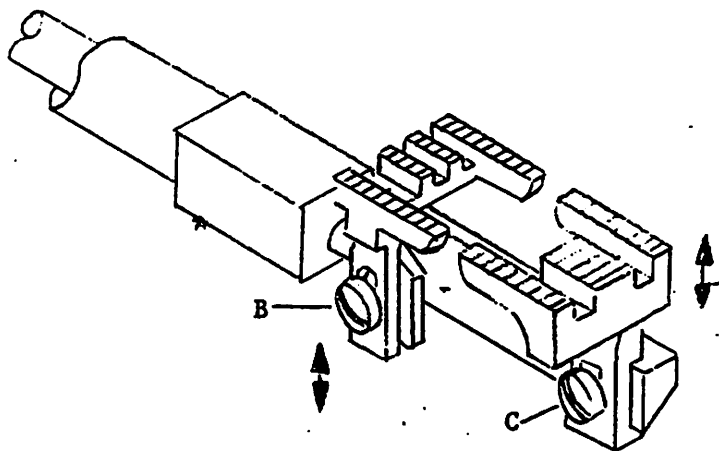
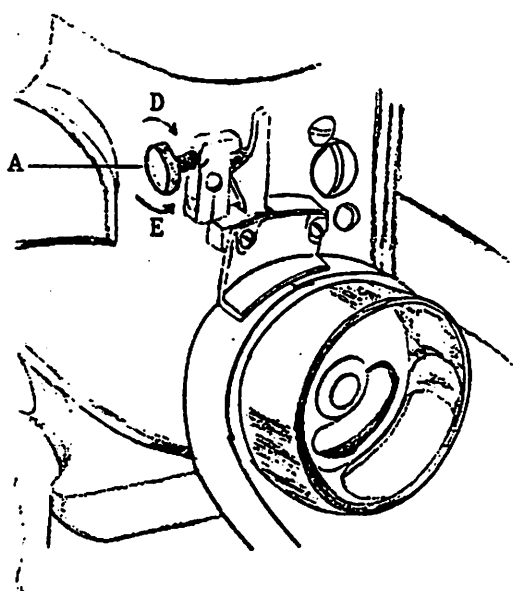


FIG.(5.0)

[ADJUSTMENT]

- A.) The differential feed can be adjusted by rotating screw (A) see Fig.(5.0). The differential will be made smaller by rotating screw (A) in direction (D)[clockwise]. The differential feed will be made larger by rotating screw (A) in direction (E)[counter-clockwise].
- B.) The front and rear feed dog must be set level with each other.
 - 1.) Loosen screws (B) and (C). see Fig.(5.0)
 - 2.) Move Feed dogs to proper level.(see feed dog height adjustment)
 - 3.) Tighten screws (B) and (C).

5.0) HOW TO MAINTAIN THE MACHINE.

5.1) NEEDLE BAR ALIGNMENT.

One of the first operations is to align the needle bar, you must make certain that the needles enter through the center of the holes in the throat plate. see Fig. (6.0)

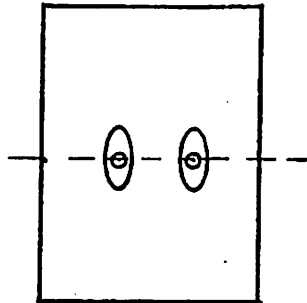


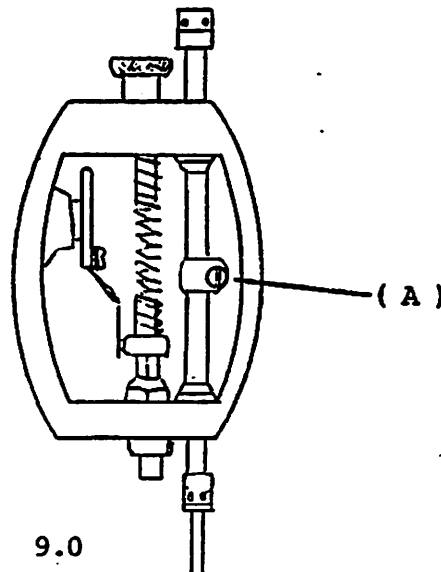
FIG. (6.0)

[ADJUSTMENT]

- 1.0) Remove the face plate.
- 2.0) Loosen screw (A). see Fig. (7.0)
- 3.0) Align the needle bar to the correct position.
- 4.0) Tighten screw (A).

CHECK THE NEEDLE BAR HEIGHT

FIG. (7.0)



5.2) DISTANCE BETWEEN THE LOOPER AND NEEDLE.

The looper distance is measured from the tip of the looper, when the looper is at its extreme left position, to the middle of the needle. see Fig. (9.0). For the appropriate looper distance see table (2.0).

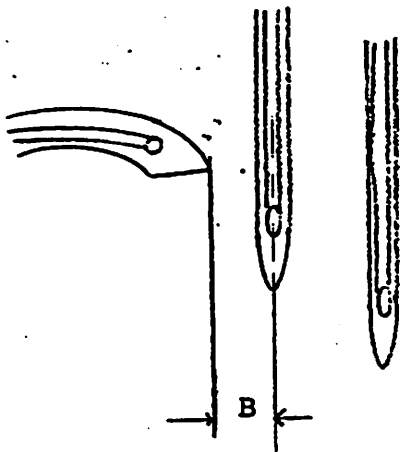


FIG. (9.0)

MODEL	Needle Gauge		LOOPER DISTANCE B
	in	mm	
202R 2025M	5/32	4.0	4.6mm
202D 202S	3/16	4.8	4.3mm
	7/32	5.6	4.0mm
	1/4	6.0	3.7mm
202VL	1/4	6.0	5.5mm

TABLE (2.0)

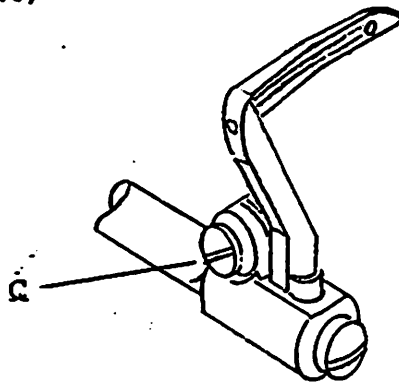


FIG. (10.0)

[ADJUSTMENT]

- 1.0) Rotate the machine pulley until the looper is at its extreme left position.
- 2.0) Loosen the looper rocker set screw (C) .see Fig.(10.0)
- 3.0) Move the looper rocker to the proper distance.
- 4.0) Tighten the looper rocker set screw. (C).

5.3) NEEDLE BAR HEIGHT.

The needle bar height is the measurement from the tip of the looper to the top of the needle eye, when the tip of the looper, moving from left to right, reaches the right edge of the right needle. The needle bar height must be set at 0.5 mm. see Fig. (11.0).

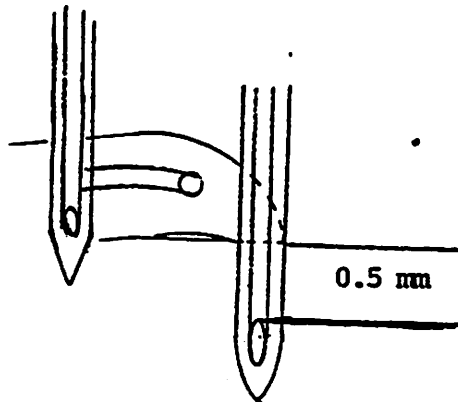


FIG. (11.0)

[ADJUSTMENT]

- 1.) Remove the face plate.
- 2.) Rotate the machine pulley until the tip of the looper reaches the right edge of the needle.
- 3.) Loosen the needle bar set screw (A). see Fig(7.0)
- 4.) Raise or lower the needle bar the proper height.
- 5.) Check the needle bar alignment.
- 6.) Tighten set screw (A).

5.4) NEEDLE AND LOOPER SYNCHRONIZATION

Turn the handwheel in the normal direction of operation (CW) until the tip of the looper, moving behind the needle, just reaches the right edge of the needle. This establishes Measurement A from the top of the needle eye to the tip of the looper. Now turn the handwheel in the reverse direction (CCW) until the tip of the looper, moving in front of the needle, reaches the right edge of the needle. This establishes Measurement B from the top of the needle eye to the tip of the looper.

When the needle - looper synchronization is correct, measurements A and B will be the same. see Fig. (12.0)

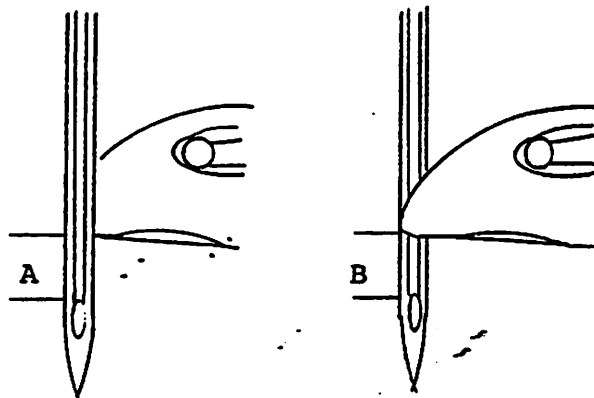


FIG. (12.0)

5.5) LOOPER AVOID MOTION.

The looper, at its farthest left position, moves forward, to the right and across the scarf on back of the needles, then avoids back and moves again to the left. As the looper is travelling to the left, the needles are travelling on their downward stroke. When the needles pass the looper, they should deflect lightly off the looper's shoulder.

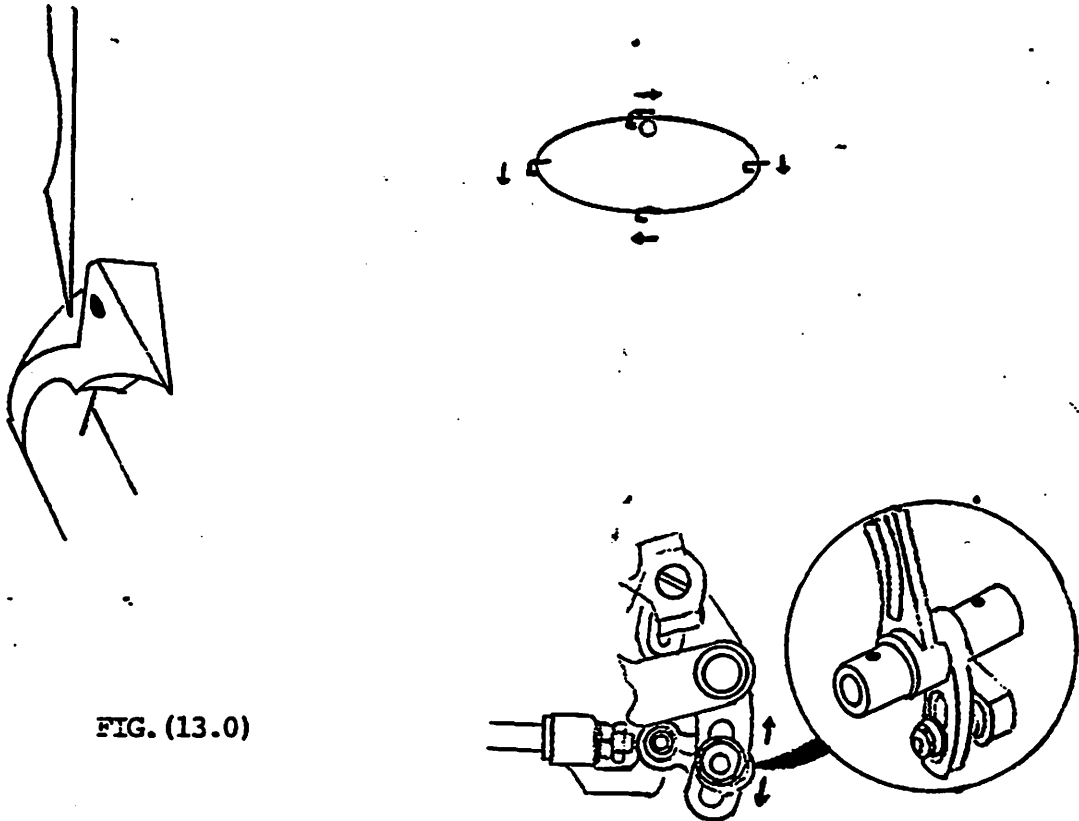


FIG. (13.0)

[ADJUSTMENT]

- 1.0) Remove the back cover plate.
- 2.0) Loosen nut (A), (raising the connecting ball joint will decrease the avoid motion, lowering the connecting ball joint will increase the avoid motion.) see Fig. (13.0)
- 3.0) Tighten nut (A).

5.5a) LOOPER CLEARANCE.

The looper should move across the center of the scarf on the needle with a clearance of 0.0-0.1 mm, (the looper must NOT defect the needle. see Fig. (14.0))

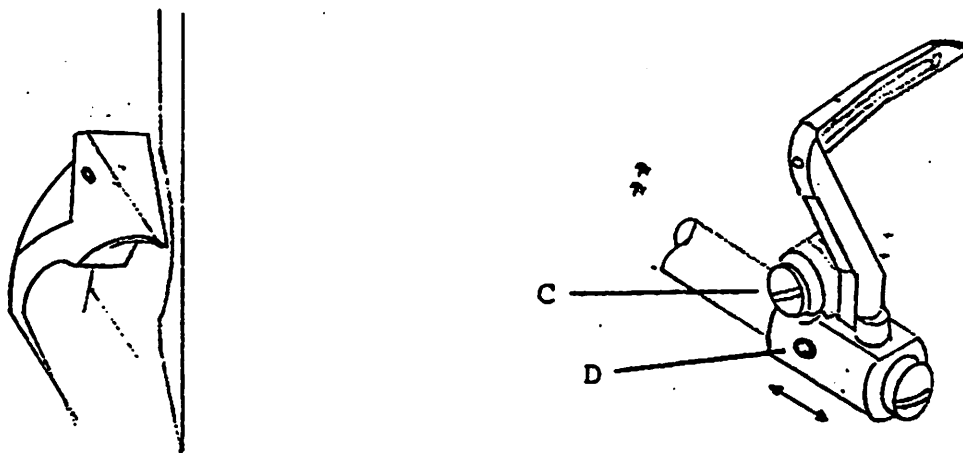


FIG. (14.0)

[ADJUSTMENT]

- 1.0) Loosen the looper rocker set screw (C). see Fig. (14.0)
- 2.0) Loosen the set screw on the looper rocker (D).
1/4 of a turn.
- 3.0) Move the looper rocker to the proper position.
- 4.0) Tighten the set screws.

5.6) FEED DOG HEIGHT.

The feed dog height is the distance from the top of the Feed Dog to the surface of the throat plate, when the Feed Dog is at it's highest position. This distance should be between 0.8 - 1.2 mm. see Fig. (15.0)

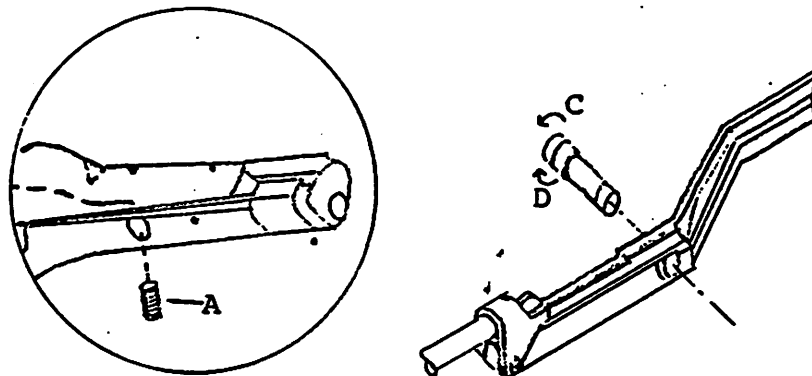
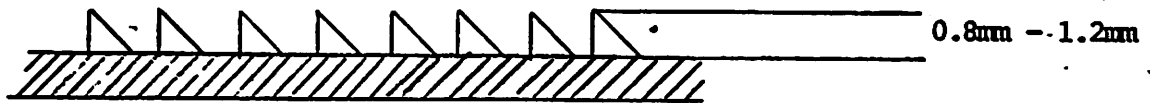


FIG. (15.0)

[ADJUSTMENTS]

- 1.0) Loosen set screw (A). see Fig. (15.0)
- 2.0) Turn the feed adjusting pin (B), (in direction (C) will raise the Feed Dog, in direction (D) will lower the Feed Dog.)
- 3.0) Tighten set screw (A).

5.6a) FEED DOG ALIGNMENT.

To align the Feed Dog you must make certain that the Feed Dog enters through the center of the feed dog cut out on the throat plate with even clearance all around.

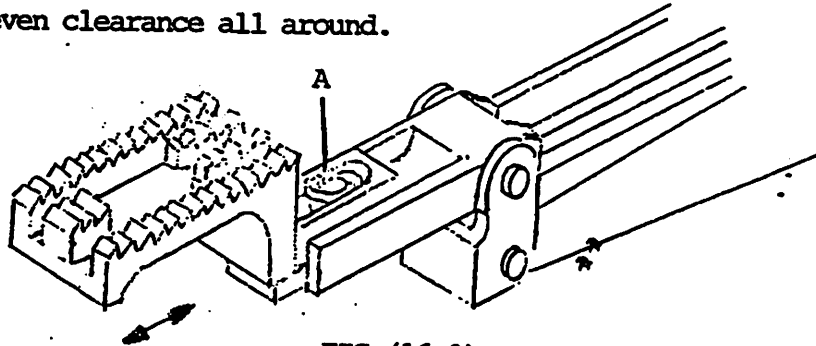


FIG. (16.0)

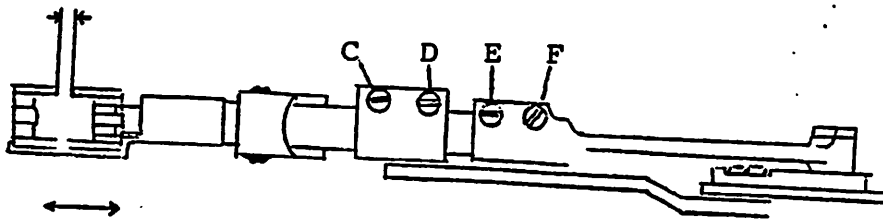


FIG. (16.1)

[ADJUSTMENT for PLAIN FEED]

- 1.) Loosen set screw (A). see Fig. (16.0)
- 2.) Move the Feed Dog forward and back to the proper position.
- 3.) Tighten set screw (A).

[ADJUSTMENT for DIFFERENTIAL FEED]

- 1.) Loosen set screws (C) and (D) see Fig. (16.1).
- 2.) Move the front Feed Dog to the proper position.
- 3.) Tighten set screws (C) and (D).
- 4.) Loosen set screws (E) and (F). see Fig. (16.1)
- 5.) Move the rear Feed Dog to the proper position.
- 6.) Tighten set screws (E) and (F).

* Notice: The front and rear Feed Dogs must not touch !

5.7) NEEDLE GUARD

As the needle bar moves on its upward stroke, the needle guard moves forward to protect the needles. The clearance between the needles and the needle guard at its farthest forward position is to be set at 0.-0.1 mm (i.e. the needle guard should just come up to the needles without deflecting them).

The needle guard height is as follows: When the tip of the looper is at the left edge of the needle, the tip of the needle is to be 1.0 mm below the top edge of the needle guard.

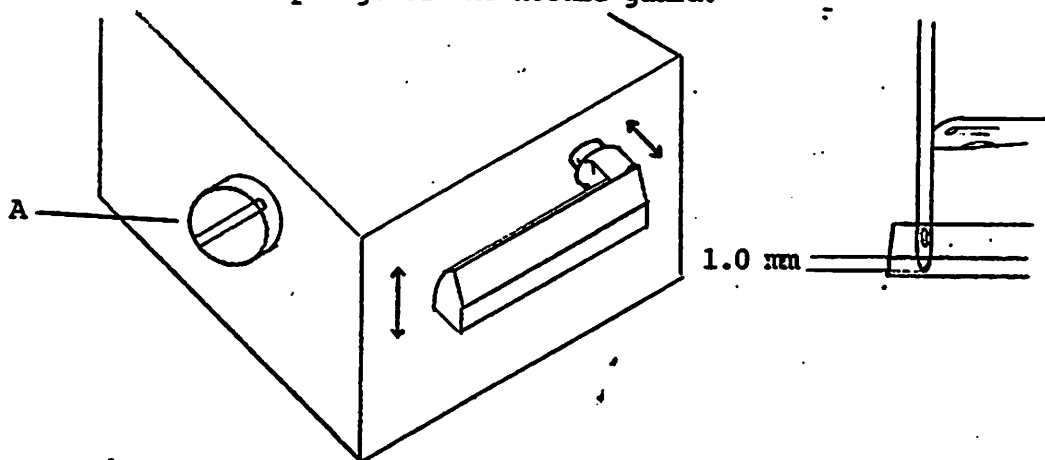


FIG. (17.0)

[ADJUSTMENT]

- 1.) Loosen set screw (A). see Fig. (17.0)
- 2.) Move the needle guard to the proper position.
- 3.) Tighten set screw (A).

* When the feed length is adjusted, the needle guard position must be checked.*

5.8) LOOPER THREAD TAKE-UP CAM.

The looper thread take-up cam works to take up the slack in the looper thread. Proper synchronization the looper thread is released by the forward tip of the take-up cam at the time when the tip of the right needle is level with the center of the looper eye. see FIG. (18.0).

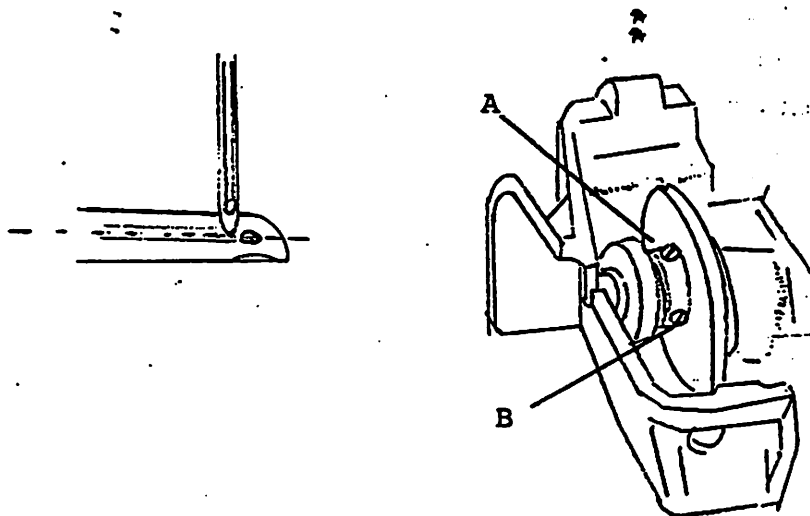


FIG. (18.0)

[ADJUSTMENT]

- 1.0) Loosen set screws (A), (B). see Fig. (18.0)
- 2.0) Move the looper thread take-up cam to the proper position.
- 3.0) Tighten set screws (A), (B).

5.9 THREAD GUIDES OF THE CAST-OFF PLATE.

On both sides of the LOOPER thread take-up cam, on the cast-off plate there are adjustable thread eyelets. By adjusting these eyelets towards the operator will increase the amount of looper thread drawn, by moving the eyelets away from the operator less looper thread will be drawn.

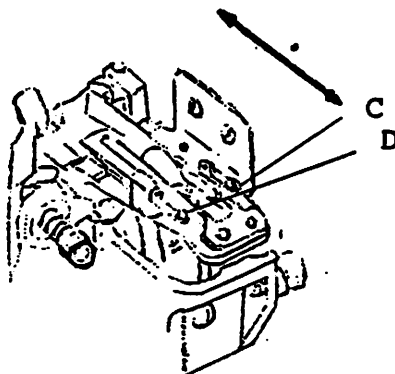


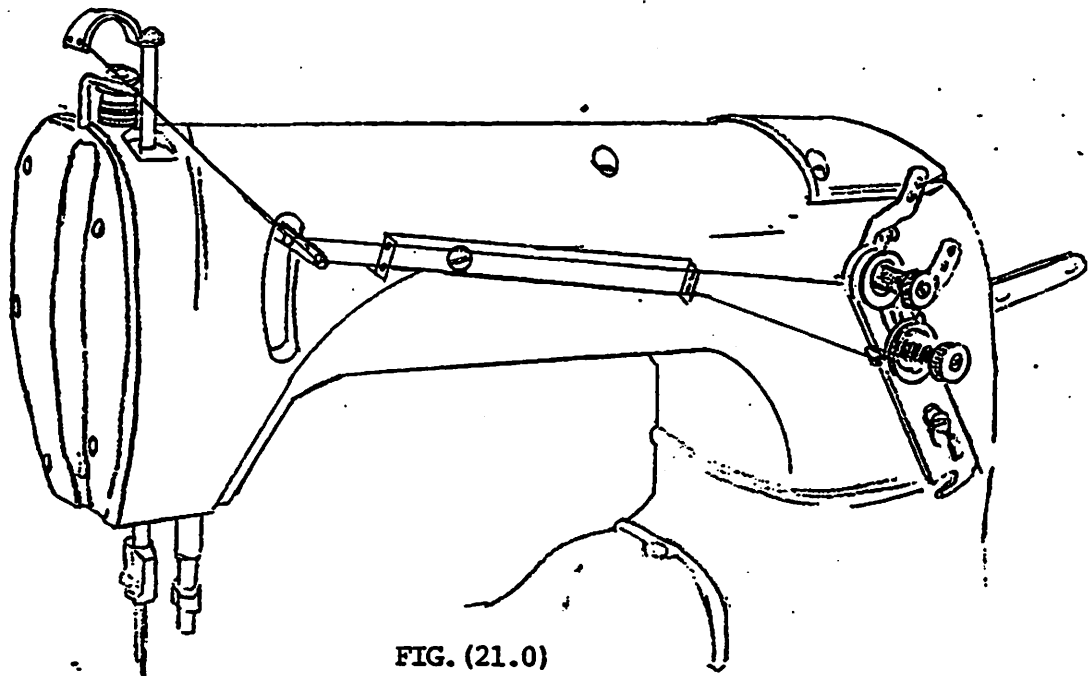
FIG. (19.0)

[ADJUSTMENT]

- 1.0) Loosen set screws (C), (D). see Fig. (19.0)
- 2.0) Move the eyelets in the direction for the proper amount of looper thread.
- 3.0) Tighten set screws (C), (D).

5.11) THE NEEDLE THREAD EYELET.

The needle thread eyelet should be in line with the needle lever thread eyelet, when the needle lever thread eyelet is at it's highest position. see Fig. (21.0)



[ADJUSTMENT]

1. Rotate the handwheel in the operation direction, until the needle lever thread eyelet is at it's highest position.
2. Loosen the needle thread eyelet set screw (G). SEE FIG. (21.0)
3. Move the needle thread eyelet to the proper position.
4. Tighten the set screw (G).