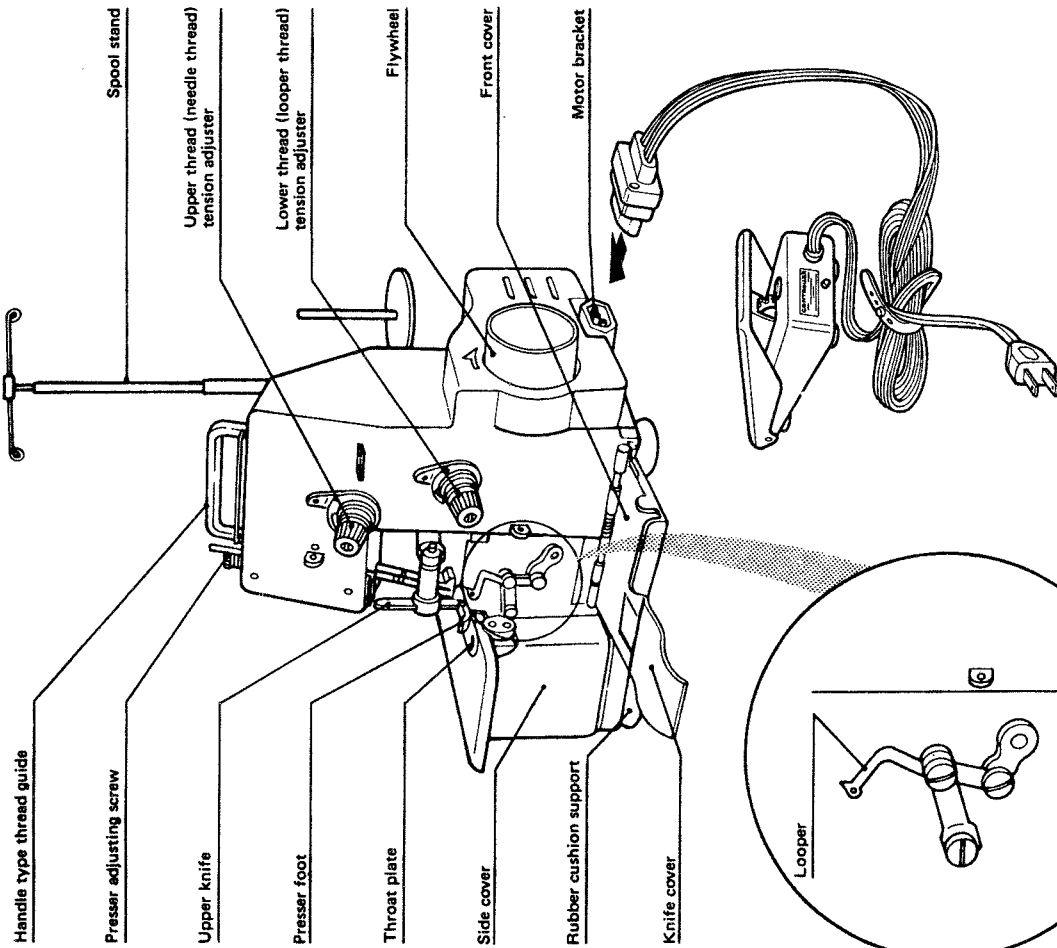


# PREFACE

Thank you for your purchase of this machine.  
Please refer to this booklet for optimum use of this machine and for long service in the future.

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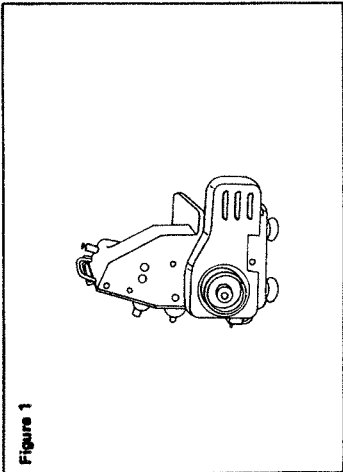


\* For safety, remove the power supply plug after use.  
Be sure not to place anything on the controller.

Looper section detailed diagram.

# 1 SETTING UP THE MACHINE

Figure 1



It is important that this sewing machine be set up in the correct manner before use.

## 1-1 Correct installation of the motor

The bracket set screw (Figure 2), bracket set washer (Figure 2) and the belt are packed in this set and attached to the machine body by fastening the set screw while setting the belt as shown in Figure 3.

Belt tension is considered adequate, if it bends slightly when pressed by finger as shown in Figure 4. When the belt tension is not adequate, further adjust the tension by moving the belt tension adjusting nut (Figure 4) to the right or left.

Figure 2

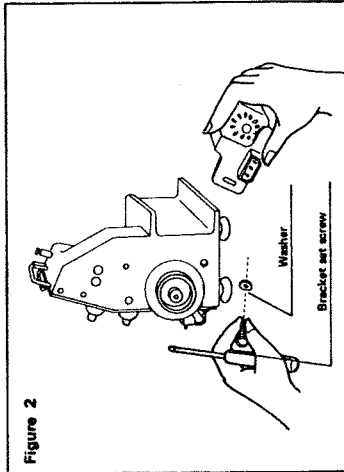


Figure 3

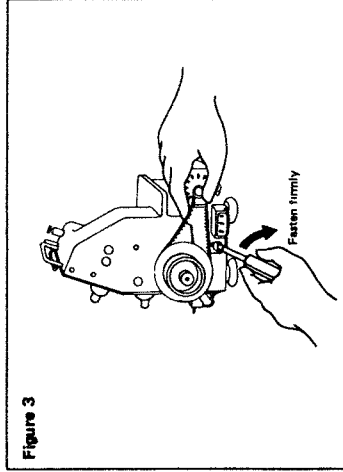
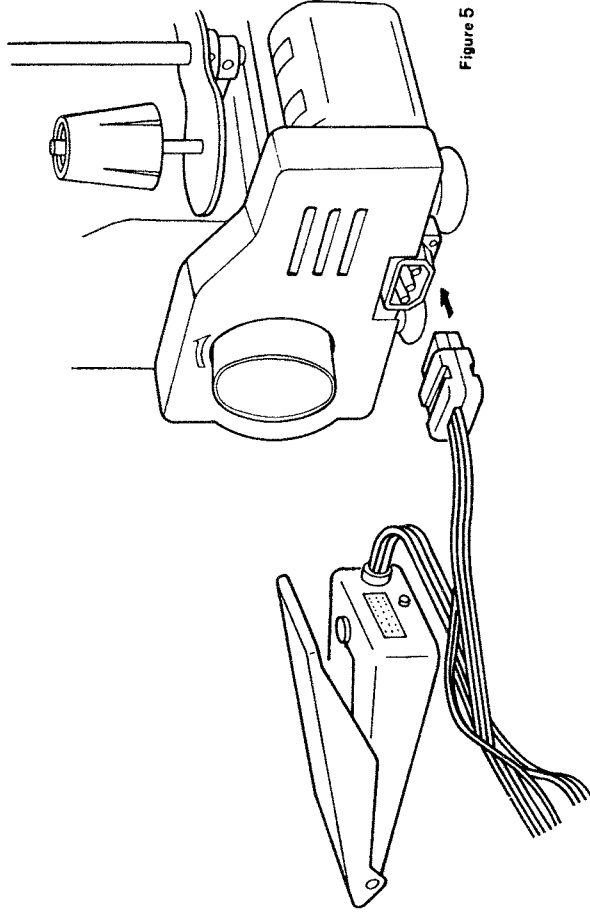
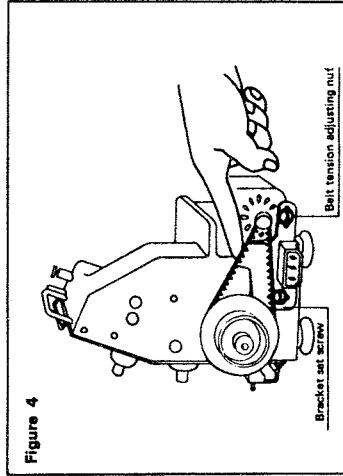


Figure 4



## 1-2 Connecting the controller to the motor

Connect the controller socket as shown in Figure 5. Next, insert the plug into the power source.

This machine runs faster when the controller pedal is depressed with strong force, and the speed decreases when the controller pedal is lightly depressed.

# 2 OVEREDGING

## 2-1 How to thread correctly

### (1) Spool setting

Cheese spool thread (Figure 6) is generally used for this machine, however, it is possible to use bobbin spool thread (Figure 6) as well. In this case, it is required that the bobbin spool be set in such a way that the winding stop groove is on the bottom.

### (2) How to thread the upper thread correctly (needle thread)

The thread should be inserted from the front to rear through the needle eye while facing the machine, the end of the thread should be pulled out about 10 cm.

\* Tweezers are helpful for threading needle eye.

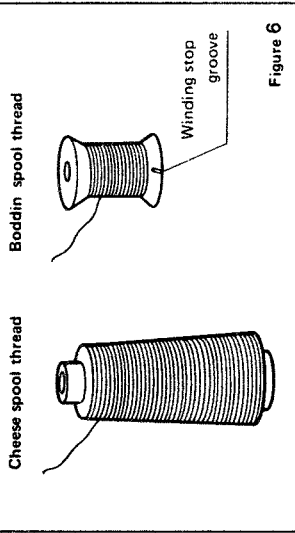
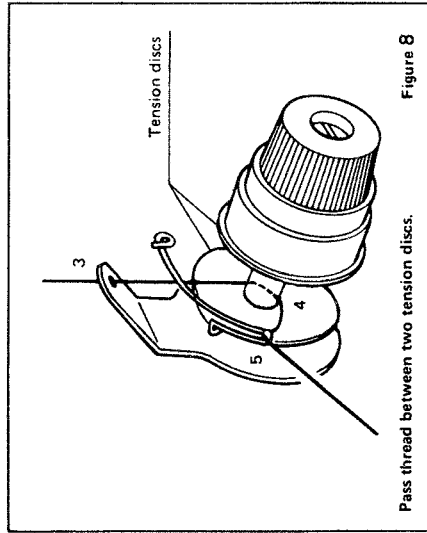
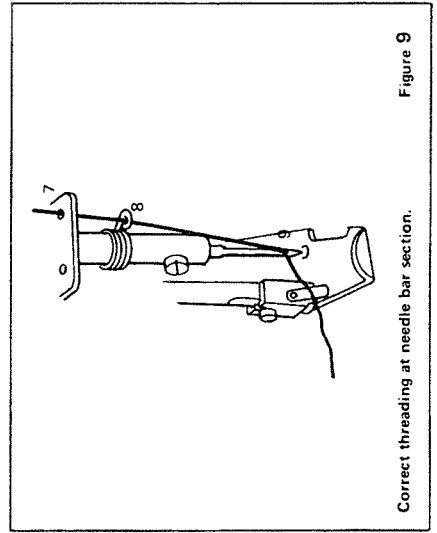


Figure 6



Pass thread between two tension discs.

Figure 8



Correct threading at needle bar section.

Figure 9

### (3) Lower thread (looper thread) insertion

First, open the front cover as shown in Figure 10. Then, the thread should be inserted in the order as shown in Figure 11. After inserting the thread, close the front cover.

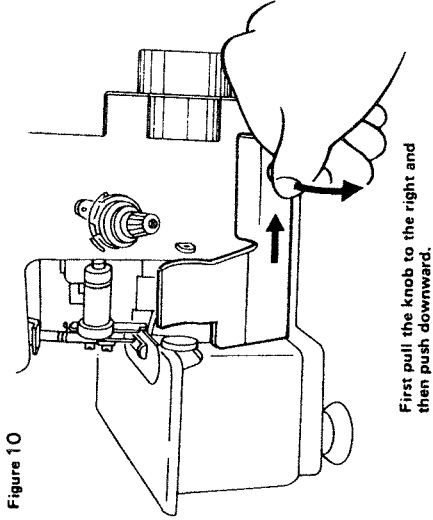


Figure 10

First pull the knob to the right and then push downward.

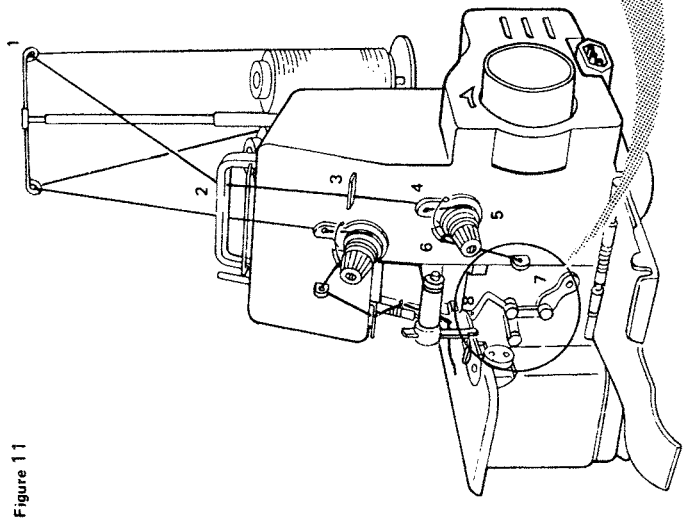


Figure 11

Correct threading at looper section.

Figure 7

# 3 THREAD TENSION ADJUSTMENT

## 2-2 Sewing

(1) After the completion of threading, hold the ends of both the upper and lower threads with the fingers of the left hand creating a minor tension as shown in Figure 12 and turn the flywheel with the right hand in the clockwise direction.

Confirm that both threads are inter-twining. Then, set the cloth, and begin to sew. (Figure 13)

(2) If the tension balance of the upper and lower threads is not satisfactory, it is possible that creases will appear on the cloth or that the seams will become irregular. Refer to the section "Thread tension adjustment". (Page 6)

Figure 12

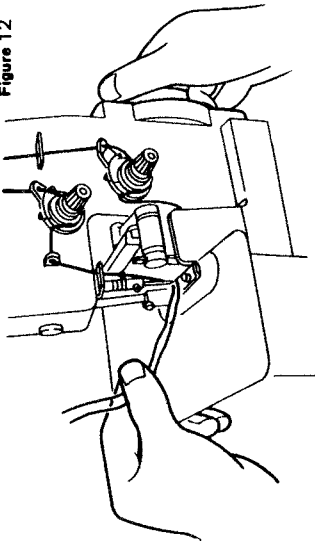
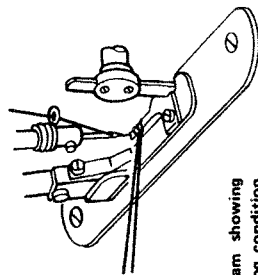


Figure 13



Detailed diagram showing the inter-twining condition of the thread.

Figure 14

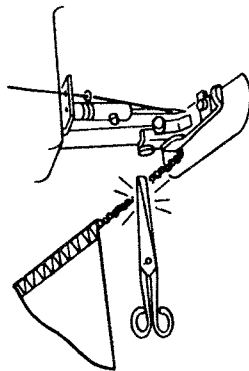
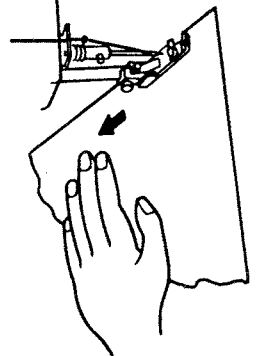
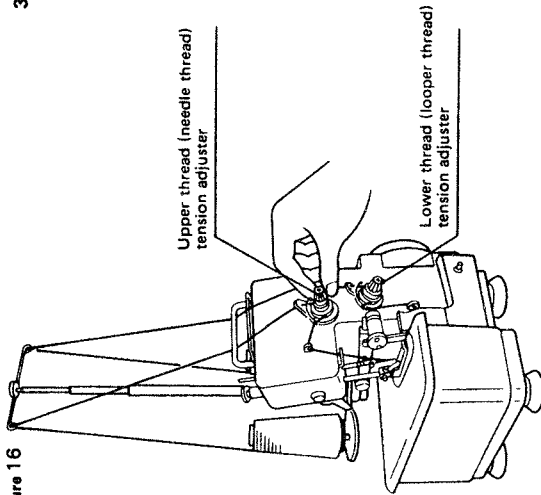


Figure 15



When sewing thin or thick cloth such as knitted material, the work can be neatly finished if part of the cloth is slightly pulled with the left hand. (Figure 15)

Figure 16

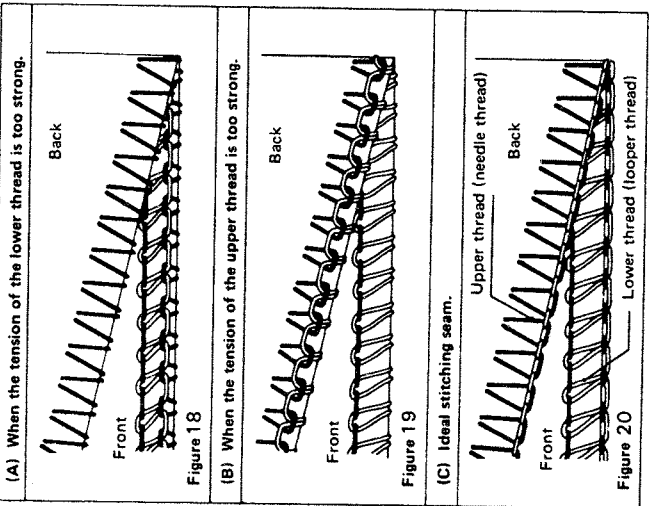


## 3-1 How to adjust the seams

Thread tension adjustment will differ according to the type of cloth, thickness, and thread being used.

Adjust the tension using the upper and lower thread tension adjusters while watching the seams. (Figure 16)

Thread tension may be strengthened by turning in a clockwise direction.



(A) When the tension of the lower thread is too strong.

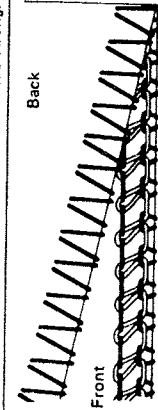


Figure 18

(B) When the tension of the upper thread is too strong.

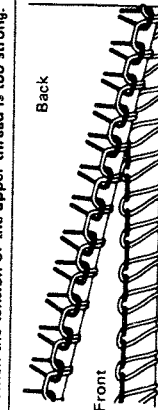


Figure 19

(C) Ideal stitching seam.

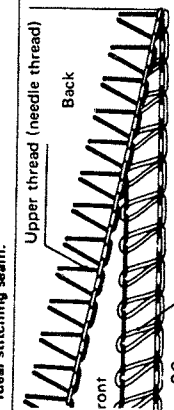


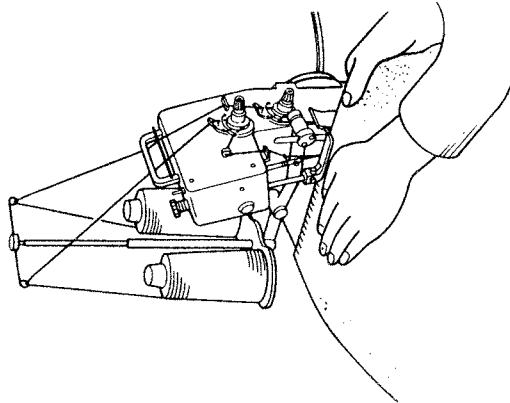
Figure 20

(1) When the tension of the lower thread is too strong (Figure 18), loosen the lower thread tension adjuster.

(2) When the tension of the upper thread is too strong (Figure 19), loosen the upper thread tension adjuster.

(3) When the stitching seams appear as shown in Figure 20, the tensions are satisfactory.

Figure 17



## 4 ADJUSTING STITCH LENGTH

This machine is pre-set at 3 mm stitch length for regular seaming and overedging. You may adjust your stitch length setting within the range of 1 mm ~ 5 mm according to the sewn fabrics and type of sewing. Normally, heavy weight fabrics is with long stitch length, light ones is with short stitch length.

1. Open side cover.
2. Turn flywheel clockwise by your right hand, pushing stitch length button (red) firmly until stitch length button fits in groove of stitch length dial.
3. While pushing stitch length button, turn flywheel to align the number indicator to the desired stitch length.
4. Close side cover.

### NOTE:

Number 1 on stitch length dial is the shortest stitch, number 5 is the longest stitch.

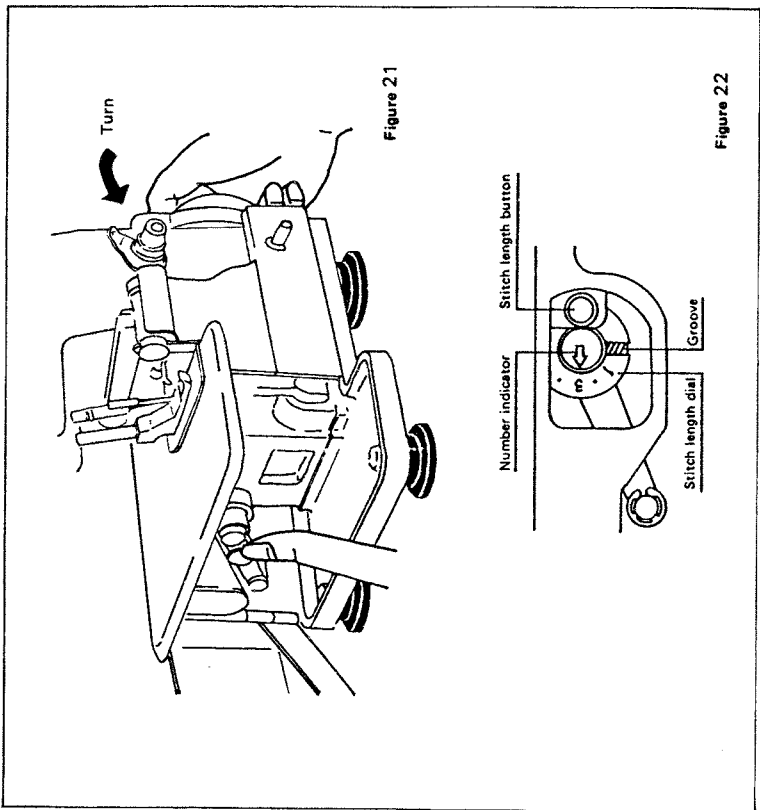


Figure 21

Figure 22

## 5 PRESSER FOOT ADJUSTMENT

The presser foot adjustment of this machine is adjusted for standard (medium) thickness. Adjust only in the case when very thin or very thick cloth is being sewn. Sew thin cloth with a weaker pressure, and, thick cloth with a stronger pressure.

- \* Tighten presser adjusting screw for thick cloth. Loosen the screw for thin cloth.

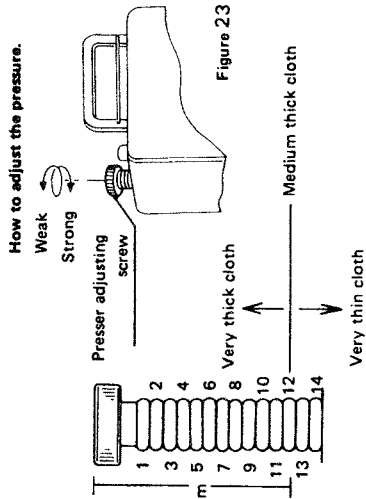


Figure 23

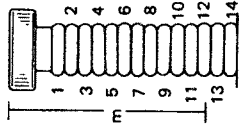


Figure 24

## 6 HOW TO INSTALL THE NEEDLE

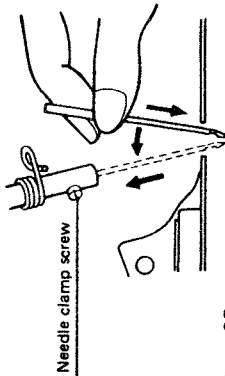


Figure 25

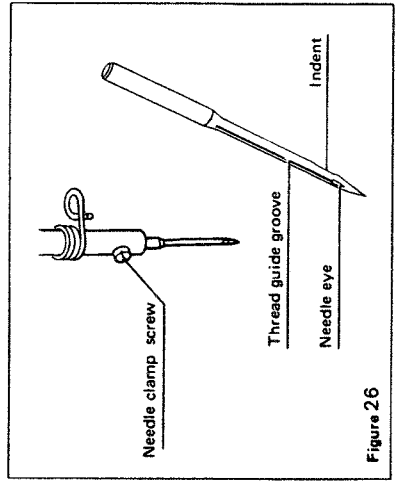


Figure 26

With regard to the needle for this sewing machine, BLx1 or DBx1, No.14 and No.11 can be used for overedging.

- (1) For needle installation, first turn the fly-wheel so as to raise the needle bar up as far as it will go.
- (2) Next, loosen the needle clamp screw (Figure 25, 26), insert the tip of the needle into the needle drop hole (Figure 25) on the presser first, and secondly insert the needle completely deep into the needle hole of the needle clamp.
- (3) Firmly tighten the needle clamp screw.

\* For the direction of inserting the needle, it is requested that the needle be set in such a way so that the thread guide groove is facing the front when facing the machine as shown in Figure 26.

# 7

## REPLACING THE CUTTING KNIVES

The knife should be changed only after removing the electric power source.

- 1) The upper knife may be changed after loosening the upper knife set screw and the lower knife may be changed after loosening the lower knife holder set screw and the lower knife set screw as shown in Figure 27.

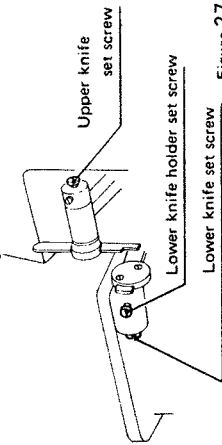


Figure 27

- 2) The position of the lower knife must be arranged in such a way so that it can be set in the indentation for the knife in the throat plate as shown in Figure 28.
- 3) The normal position for fixing the upper knife can be determined when the upper knife reaches its lowest point during operation. The front tip of the cutting edge of the upper knife will drop about 0.5~1.0mm against the surface of the tip of the cutting edge on the lower knife. (Figure 28)

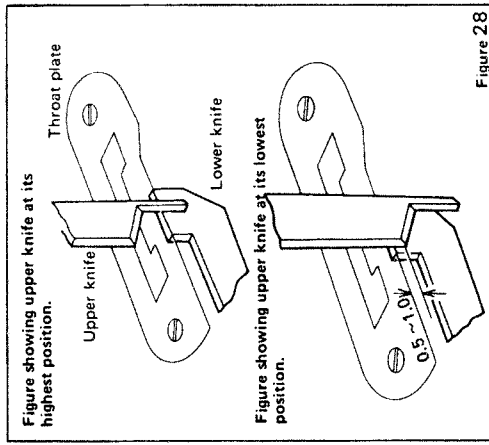


Figure 28

# 8

## LUBRICATION

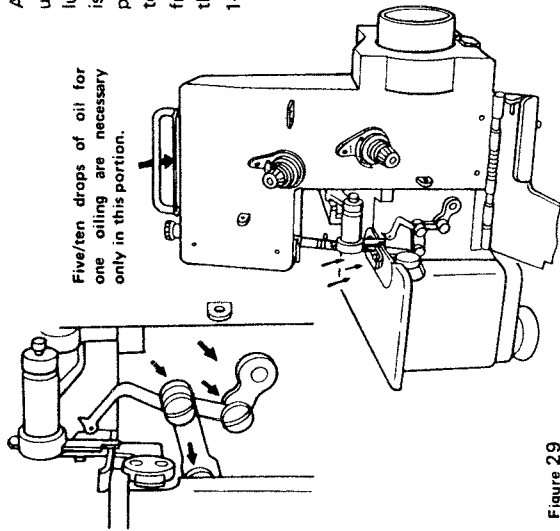


Figure 29

As special materials (oil impregnated metal) are used for parts of this machine actual additional lubrication is negligible. However, since oil wick is provided for the inner sections, oil should be provided no more than once or twice per month to those parts marked in red which can be seen from the outside of the machine, in addition to those parts (Figure 29)

1-2 drops of oil is sufficient for one oiling.

# 9

## CHECKING AND ADJUSTMENT

This machine is so designed that there is absolutely no need for complex professional adjustments.

The following five examples are the only possible instances where difficulties are likely to occur through lack of fundamental adjustments. These points should be carefully considered when operating this machine.

- A) When the machine does not operate —  
Is the electric cord properly inserted into the plug receptacle?  
Is there any slipping in the set position of the motor?  
Is the belt loose?  
Have the threads been inserted correctly?  
Is the thread tension too strong?  
Is the needle bent?  
Is the presser pressure adequate?
- B) When the thread breaks —  
Have the threads been inserted correctly?  
Is the thread tension too strong?  
Is the needle bent?  
Is the presser pressure adequate?
- C) When the needle breaks —  
Is the needle touching against the throat plate or presser foot?  
Has the needle been inserted correctly?
- D) When the seams are irregular —  
Has the needle been inserted correctly?  
Is the needle bent or the point worn?  
Have the threads been inserted correctly?  
Is the presser pressure sufficient?
- E) When the seams are not satisfactory —  
Is the tension adjustment of the upper and lower threads satisfactory?  
Have the threads been correctly inserted?

Are there any problems with regard to the type of thread being used?

- A) When the machine does not operate —  
Is the electric cord properly inserted into the plug receptacle?  
Is there any slipping in the set position of the motor?  
Is the belt loose?  
Have the threads been inserted correctly?  
Is the thread tension too strong?  
Is the needle bent?  
Is the presser pressure adequate?
- B) When the thread breaks —  
Have the threads been inserted correctly?  
Is the thread tension too strong?  
Is the needle bent?  
Is the presser pressure adequate?
- C) When the needle breaks —  
Is the needle touching against the throat plate or presser foot?  
Has the needle been inserted correctly?
- D) When the seams are irregular —  
Has the needle been inserted correctly?  
Is the needle bent or the point worn?  
Have the threads been inserted correctly?  
Is the presser pressure sufficient?
- E) When the seams are not satisfactory —  
Is the tension adjustment of the upper and lower threads satisfactory?  
Have the threads been correctly inserted?

# 10 SETTING UP THE SEWING MACHINE LAMP

## Setting up the sewing machine lamp

When using a working lamp, it is recommended to use a commercially available lamp set in the position as shown in Figure 30.

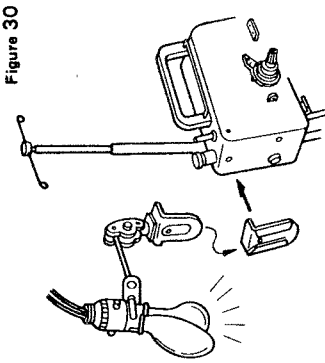


Figure 30

# 11 CHANGING THE CARBON BRUSHES OF THE MOTOR

Two carbon brushes (in two positions) are attached to be used for the motor on this sewing machine. The carbon brushes should be changed according to the following method, as they are worn away after long hours of use.

- A) Period for changing carbon brushes  
The carbon brushes should be changed when they have worn too short for contact (see carbon brush figure).
- B) First remove the motor. Remove the brush caps (see figure of motor), and replace the brushes.

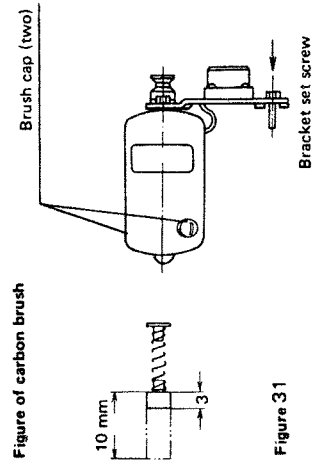


Figure of carbon brush

Figure 31

Note: Special care should be taken with regard to the aforementioned points as failure to change the brushes may result in sparks emitting from the motor which will consequently further damage the motor.

- \* The carbon brushes should be changed when the brush section has worn down to approximately 3 mm as shown in the figure.
- \* Carbon brushes may be purchased from any sewing machine shop or electrical appliance shop.

# 12 SUPPLEMENT

## Detailed list of contents

- 1. Machine
- 2. Motor
- 3. Controller
- 4. Vinyl cover
- 5. Instruction booklet
- 6. Accessory (Contents)
  - Screw driver 1
  - Needles BL x 1 3
  - Tweezers 1
  - Baby net 2

It is recommended that the pocket on the side cover be used for securing the accessories at the time of using the machine as shown in Figure 32.

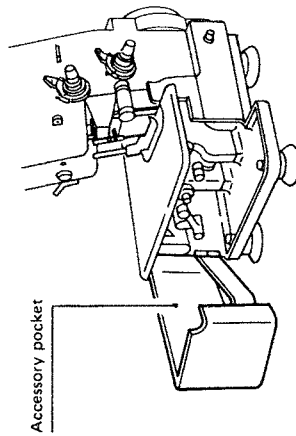


Figure 32

# 13 SPECIFICATIONS

ITEM	SPECIFICATION
Overredging width	4m/m
Stitch length	1~5m/m
Needle bar stroke	27m/m
Knife movement	7m/m
Presser lift (upward volume)	4m/m
Feed dog height	0~1.3m/m (standard 0.7m/m)
Needle	BL x 1 No. 14, No. 11.
Number of threads	2
Method of lubrication	Semi-automatic oil wick lubrication
Machine dimensions	Length 250m/m x Breadth 250m/m x Height 280m/m
Weight of machine	8kg (with motor)

# 14 TABLE SHOWING RELATIONSHIP BETWEEN THREAD AND CLOTH

No.	Type of cloth	Use	Type of thread	Length of stitch
1.	Thin cloth (organdy, thin Tricot, taffeta, silk, crepe, suit lining)	Overredging	Cotton #80 Silk #80	3.0m/m ~ 4.0m/m
2.	Ordinary cloth (cotton, tricot, linen, satin, cloth in general)	Overredging	Cotton #60~#80	3.0m/m ~ 4.0m/m
3.	Thick cloth (tweed, overcoat cloth, denim, thick suit cloth)	Overredging	Cotton #40~#60 Silk #40~#60 Tetron and wooly nylon threads	3.0m/m ~ 5.0m/m
4.	Knitted cloth (knitted goods, knitted cloth)	Overredging	Wooly nylon and tetron threads *Very thin woolen thread may be used as the lower thread.	3.0m/m ~ 5.0m/m