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1. Setting up machine for work
Unpack the machine from its shipping box, making certain that you remove all the components and accessories.

A. Location (Figs 1-2)
Place machine on a firm table, preferably near its right front corner.
Attach the machine to the near edge of the table using the supplied table clamp. The table clamp is inserted into groove in the base plate of the machine either from the front or right side.
The selection of the clamp groove depends on how you desire to place the machine on the table to suit your own convenience. Make sure the table clamp is clamped tightly to avoid the machine from falling off table. See Figs. 1 and 2 for details of clamping.

B. Installing the thread stand
First, loosen the thread guide stud set screw (1) and insert thread guide (2) and stud (3) assembly into the hole at rear of machine. Then tighten set screw (1).
Loosen clamp screw (4). and adjust head (5) of thread guide to face the direction of spool pin (6), and then tighten clamp screw (4).
C. Connecting the foot control (Figs. 4-5)

Insert the three-hole plug on control lead into the terminal block at the right side of machine (Fig. 4), then insert plug into a wall socket (Fig. 5). Place foot control on floor and regulate the speed of the machine by stepping on foot controller.
D. Assembling the knee lift

Push sleeve (1) onto free end of shaft (2) and allow pin (3) to enter L-shaped groove in sleeve.
In case of adjusting the angle of knee lifter, loosen the set screw (4) and adjust the knee lifter to the suitable angle. Then tighten the set screw (4).

Fig.6

2. Lubrication

Lubrication is important for the trouble-free operation and long service life of the machine. Therefore, after setting-up machine, place a drop of sewing machine oil into all the holes indicated by arrows on Fig. 7, and also place a drop of oil into the inner moving parts after opening the side cover and rear cover of machine.
Daily and before operating machine, place one or two drops of sewing machine oil into all the oil holes indicated by arrows on Fig. 7.
To assure clean operation, it is suggested that oiling be done upon completion of the work. This will allow excess oil to drip off and only the needed quantity will remain, be certain to wipe off machine all excess oil before starting work. Also before sewing, operate machine for about a minute or so with the knee lifter depressed to eliminate all excess lubricant.
3. Needles and thread

The recommended needle is system LW x 6T (or style 29-49) blindstitch machine needle. Sizes range from 70/10 to 100/16.

To assure satisfactory operation needles, thread and fabric must be matched as suggested in the table below:

<table>
<thead>
<tr>
<th>NEEDLE</th>
<th>THREAD</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size 70/10</td>
<td>No. 80-100</td>
<td>Nylon, silk and other light weight fabrics</td>
</tr>
<tr>
<td>Size 90/14</td>
<td>No. 60-70</td>
<td>Cotton, woollen, and other medium weight fabrics</td>
</tr>
<tr>
<td>Size 100/16</td>
<td>No. 50-60</td>
<td>Thick woollen and other thick fabrics</td>
</tr>
</tbody>
</table>
4. Replacing the needle (Fig. 8)

Turn hand wheel away from you (clockwise direction) until needle reaches the end of its return stroke. Remove needle to be replaced by loosening needle clamp screw (1) about two turns.
Insert new needle into its seat on needle carrier (2) pushing it as far to the left as it will go. Now tighten needle clamp screw (1).
NOTE: Fig. 8 shows needle carrier and its parts in a disassembled view.

5. Threading the machine (Figs. 9-12)

A. When using sewing thread from a cone, place it over plastic cup on thread stand (Fig. 9).
B. When using spool thread, remove plastic cup before placing spool on thread stand (Fig. 10).

C. For correct threading of machine, follow carefully course of thread as shown on Fig. 9.

When reaching to thread tension device, enter thread first in rear eye of thread guide (1). Then, lead thread between the two tension discs (2) as per Fig. 9. Now enter it from behind through the front eye of thread guide. Lead thread forward to front of machine. Enter thread into thread guide (3), and eyelet of needle clamp (4).

At this point, make certain that needle is in extreme left-hand position. Now pull thread through needle eye from below as shown in Fig. 11. It is easier to pull thread through needle eye when work plate is opened by loosening the clamp screw (Fig. 12).
6. Inserting the work piece and starting to sew (Figs. 13-14)

Depress knee lifter. This causes the cylinder bed of the machine to swing downward and creates a gap between the presser foot and the cylinder bed. Insert the work in the gap just opened in such a manner that the folded or sewn edge of the article is alongside the edge guide of the presser foot.

![Fig. 13](image)

When the article is in the proper position, completely release the knee lifter. Start the machine slowly and watch the material passing the edge guide rather than to observe the action of the needle.
In case of sewing double folded edge of material, insert the material as per Fig. 14-1. In case of sewing single folded, insert the material as per Fig. 14-2.
7. Adjusting the thread tension

Different kinds and weights of material and various sizes of thread require respective thread tensions. Thread tension is regulated by turning the tension nut located at the top of the machine arm.

![Diagram of thread tension](image)

**Fig. 16**

To decrease tension, turn the nut clockwise. To increase tension, turn the nut counterclockwise.

**Fig. 15**

To increase thread tension, turn the nut away from you (clockwise). To decrease the tension, turn the nut towards you (counter-clockwise). Do not, turn, tighten, or loosen tension more than about one quarter turn at one time. Test for results and readjust if necessary.
8. Regulating the stitch length (Fig. 17)
Open side cover by loosing two clamp screws. Loosen two set screw (1) in stitch regulating collar (2), and then turn collar (2) until the desired number is reached by indicator groove (3) of eccentric. Then tighten screws (1) securely.
When delivered from our factory, the number for stitch length of the machine is set to be at ‘6’.

![Fig. 17](image)

Each number shows the following stitch length.

<table>
<thead>
<tr>
<th>Number on collar</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stitch Length (mm)</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

To have the best choice of stitch length, it is recommended to try stitching on different kinds of material.

9. Adjusting needle penetration (Fig. 18)
The depth of needle penetration into the cloth can be adjusted by turning the plunger regulator located on the front of the machine.

![Fig. 18](image)
To increase needle penetration for light materials, turn the regulator counter-clockwise. The greater the numbers directly in front on the regulator dial, the deeper the penetration of the needle. To lessen the penetration for thick materials, turn regulator clockwise.

To prevent damage to the needle and the machine, it is recommended to begin sewing with the least degree of penetration, and to sew a short length of seam. Check for catching of the material and appearance, making whatever penetration adjustments are required until stitching is as desired.

NOTE: Beginning and end of penetration adjustments are controlled by built-in stops. Do not force beyond its stops.

10. Removal of work from the machine (Fig. 19)

Stop machine and turn hand wheel away from you until needle is completely out of the material (at highest position). Press knee lifter to the right and pull the work piece rearward out of the machine with a quick stroke. This will lock the last stitch and break the thread.

![Diagram of sewing machine](image-url)
11. Skip-stitch device (Sketch 20 -21)

The hand pull-rod which controls the skip-stitching device is located on the right side of the machine. When the pull-rod points to ‘No Skip’ position, fabric will be sewn on every stitch. When the pull-rod points to ‘Skip’ position, fabric will be sewn at every other stitch.

In order to guarantee the machine will run correctly, please do not move the pull-rod in either direction until the machine as stopped. If the pull-rod is kept in the middle position, the machine will not run correctly. Meanwhile, if necessary, penetration of the needle should be checked and adjusted when you switch between ‘ Skip’ and ‘No Skip’.