8-1-1949

**Special Instructions for the Adjustments and the Care of the Sewing Machine**

South Dakota State University Cooperative Extension

Follow this and additional works at: https://openprairie.sdstate.edu/extension_special-circ

**Recommended Citation**
Cooperative Extension, South Dakota State University, "Special Instructions for the Adjustments and the Care of the Sewing Machine" (1949). *SDSU Extension Special Circulars*. 4. https://openprairie.sdstate.edu/extension_special-circ/4
Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

For current policies and practices, contact SDSU Extension
Website: extension.sdstate.edu
Phone: 605-688-4792
Email: sdsu.extension@sdstate.edu

SDSU Extension is an equal opportunity provider and employer in accordance with the nondiscrimination policies of South Dakota State University, the South Dakota Board of Regents and the United States Department of Agriculture.
1. Main shaft
2. Bed of machine
3. Upper thread tension
4. Needle bar
5. Presser bar
6. Presser bar lifter
7. Presser bar spring
8. Thread take-up
9. Arm of machine
10. Balance wheel
11. Shuttle vertical lever pivot
12. Shuttle vertical lever
13. Feed vertical lever
14. Stitch regulator
15. Shuttle horizontal lever
16. Shuttle horizontal lever pivot
17. Feed horizontal lever
18. Feed horizontal lever pivot
19. Feed bar
20. Feed dog
21. Feed bar pivot
22. Presser foot
23. Shuttle

KEEP THIS INFORMATION FOR REFERENCE

Correct needle ...........................................
Number of places requiring oil ................................
Order parts from:

...... giving the following information, or as much of it as possible.

Name of machine ........................................ Type of shuttle .................
Model ................................ Serial number ........................ Year built ............

If an instruction manual with a parts list is available, order the parts by number. If in doubt, send the old part to the factory with order.

THIS BOOK DOES NOT CIRCULATE
CLEANING AND OILING THE SEWING MACHINE

Materials needed: Oil can filled with gasoline, pie tin with gasoline, large screw driver, small screw driver, pliers, small paint brush, several old cloths, and oil.

CAUTION: As gasoline is very inflammable this work should not be done near a fire, but in a room where ample ventilation is possible. If ventilation is not possible or desirable, kerosene may be used instead of gasoline. The machine, however, should stand at least 24 hours before oiling to allow the kerosene to evaporate from the bearings.

1. Remove the thread, needle, bobbin and shuttle. Take off the shuttle slide plates, throat plate, and any plates on the arm of the machine.
2. With a tooth pick, hair pin, or other sharp instrument, remove the lint and dust from around the feed mechanism. On the long bobbin machines be sure that the vertical needle groove is clean.
3. With an oil can filled with gasoline squirt a liberal amount in each oil hole and on each bearing and wearing surface.
4. Slide the pie tin under the presser foot and with the paint brush thoroughly wash the mechanism in the left end of the arm.
5. Turn the head of the machine back and with the paint brush and pie tin of gasoline thoroughly wash the under parts of the machine.
6. Run the machine hard for about a minute to loosen the gummed oil in the bearings.
7. Again take the paint brush and wash the parts as before, to remove the gummed oil that has been loosened from the bearings.
8. On the long bobbin machines, under the front shuttle slide near the front of the bed of the machine will usually be found a hole about 1/8 in diameter which is filled with wool or other oil holding material. From this little oil well is a hole about the size of a pin leading to the shuttle race. Force a pin through this small hole to be sure that it is open. Remove the wool, clean with gasoline and replace. The oscillating shuttle machines usually have a piece of flannel or felt in the shuttle race for oiling the race. This piece of flannel or felt should be rinsed with gasoline.
9. Wipe off excess gasoline and allow the machine to set for an hour or so to allow the gasoline to evaporate.
10. Oil the machine by placing a few drops of oil in each oil hole, making sure that all bearings and wearing surfaces are well lubricated. As the oil has all been removed from the bearing, it is well to put on a considerable excess of oil. Run the machine for a few minutes to work the oil into the bearings, then wipe off the excess oil with a cloth. Note: If an oil can with a long spout is not available, a piece of wire or a typewriter oiler works very nicely to deposit the oil at the desired spot.
11. Replace all parts removed, and stitch an some waste material to remove any oil that may be on the presser foot or feed mechanism.
12. The treadle bearings are very important and should not be overlooked. Five or six bearings will be found, one at each end of the treadle, one at each end of the pitman, and either one or two supporting the band wheel. Squirt considerable gasoline into each bearing, then run the treadle. Remove any threads that may be wound around the band wheel bearings, then thoroughly oil each bearing.

NOTE: It is poor economy to use oil of doubtful quality as it may gum on the working parts and make necessary a complete overhauling of the machine by a competent repair man.
Adjustments

There are four main adjustments that are varied for different weights and thicknesses of goods. These are (1) upper thread tension, (2) lower thread tension, (3) stitch regulator, and (4) pressure on the presser foot.

Balancing the tensions

The upper and lower tensions must be balanced, or equalized, in order to insure the formation of a satisfactory stitch. In the formation of the perfect lock stitch, the threads lock in the center of the thickness of the goods; if the threads are not balanced, one thread may be along the surface of the material.

The first thing to do in balancing the tensions is to set the lower one so that it is about right for the cloth to be sewed. With a little practice there will be very little difficulty in judging the tension to be used for a particular kind of cloth. The tension will, of course, be light for fine goods and heavier for thick, heavy materials.

After the lower tension has been set, adjust the upper tension so that it is about the same as the lower, and then sew a few stitches. By examining the stitch produced, it is not difficult to determine whether the tensions are balanced or not. Adjust the upper tension until the threads lock in the center of the thickness of the goods. Always set the lower tension first, then adjust the upper tension until a satisfactory stitch is produced.

Hints in balancing tensions

If the spool thread lies along the surface of the goods or loops of bobbin thread show, the upper tension is too tight or the lower tension is too loose.

If the bobbin thread lies along the underside of the material, or if loops of upper thread show, the lower tension is too tight or the upper tension is too loose.

If the material puckers, either one or both of the tensions may be too tight.

Stitch regulator

The stitch regulator is a means of varying the length of the stitch. In general, heavy goods will require a longer stitch than light goods.

Presser foot

The pressure on the presser foot must be varied for different weights of cloth - the heavier the cloth, the heavier the pressure. If the pressure on the presser foot is too light, the stitches may be staggered. Too much pressure may cause difficulty in getting the cloth to feed properly.
The correct needle for each machine is made in several different sizes for use with different kinds of material. Needles are ordinarily purchased in assorted sizes, and the following table is intended as a guide in the selection of the proper size of needle. Note that the table refers only to sizes of needles and has no reference whatever to the selection of the correct needle to fit a certain machine. Five different codes or systems of numbering are given and in using the table, it is necessary to pick out the particular code that is used by the manufacturer of the needle to be used.

<table>
<thead>
<tr>
<th>Classes of Work</th>
<th>Sizes of Cotton, Silk, or Linen Thread</th>
<th>Needle Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine muslins, linens, georgette, silk, etc.</td>
<td>100-150 cotton</td>
<td>Wheeler, Old Singer's, Plan, Plan, New Plan, Wilson, Boye</td>
</tr>
<tr>
<td>Lawn, batiste, organ-</td>
<td>60-900 silk</td>
<td>Old</td>
</tr>
<tr>
<td>dic, linens, silks, etc.</td>
<td>5 silk</td>
<td>Plan, Plan, New Plan, Wilson, Boye</td>
</tr>
<tr>
<td>Shirtings, sheetings, gingham, heavy silks, and for general household stitching</td>
<td>60-80 cotton</td>
<td>A &amp; B silk</td>
</tr>
<tr>
<td>Heavy muslins, crash towels, woolen goods and heavy silk</td>
<td>80-100 cotton</td>
<td>C silk</td>
</tr>
<tr>
<td>Tickings, very heavy muslins, woolen tweeds and general stitching</td>
<td>20-40 cotton</td>
<td>C silk</td>
</tr>
<tr>
<td>on heavy garments</td>
<td>60-80 linen</td>
<td>2</td>
</tr>
<tr>
<td>Very heavy woolens, ticking, seaming coats, trousers, and heavy garments</td>
<td>60-80 linen</td>
<td>3</td>
</tr>
<tr>
<td>Awnings, rugs, tents and very heavy materials</td>
<td>40-60 linen</td>
<td>Coarse cotton</td>
</tr>
</tbody>
</table>