SINGER
131W103, W104, W110 to W113
USE ONLY SINGER OILS and LUBRICANTS

They insure freedom from lubricating trouble and give longer life to sewing equipment

“Singer Oil for High Speed Sewing Machines”
Cloth and Leather

For all moving parts and gears of machines where speed is constant

“Singer Stainless Oil for High Speed Sewing Machines”

For all moving parts and gears of machines where speed is variable

“Singer Motor Oil”

For all moving parts, gears, and bearings of motors and machines

“Singer Stainless Thread Lubricant”

For lubrication of bobbins, bobbins of all machines of all types and makes. One, 32 oz. bottle is contained.

Note: All Singer machines other than 131 w103 and 131 w104 require the use of Singer Stainless Thread Lubricant.

“Singer Gear Lubricant”

This specially prepared grease is recommended for gear lubrication on manufacturing sewing machines.

“Singer Ball Bearing Lubricant”

This pure grease is specially designed for the lubrication of ball bearings and ball thrust bearings of motors and electric transmitters, ball bearing hangers of power tables, etc.

Note: The above greases are furnished in 14 lb. tubes and 1 lb., and 4 lb. tins.


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INSTRUCTIONS
FOR USING

SINGER SEWING MACHINES

131 w103, 131 w104 AND
131 w110 TO 131 w113

THE SINGER MANUFACTURING CO.
DESCRIPTION

Machine 131 w 103 simultaneously makes three parallel rows of lock stitching in all descriptions of light and medium weight fabrics, and is used in the manufacture of corsets, skirts, cloaks, suits, etc. It has three needles and three rotary hooks.

Gaskets can be made, as ordered, with a width varying from 3/8 to 2-1/4 inches between the outside lines of stitching, and as the position of the inner needle remains fixed at all times, the distance from the center row of stitching to each outside row may be from 3/16 to 1-1/8 inch. Orders for the machine should specify the gauges required.

Machine 131 w 104 has four needles and four rotary hooks for simultaneously making four parallel rows of lock stitching. It is intended for use on all descriptions of light and medium weight fabrics and can be used in the manufacture of a wide variety of work where it is desired to make four rows of lock stitching at one operation.

Eight can be made different widths as desired, the greatest distance between the two outside rows of stitching being 2-1/4 inches while the least distance between rows of stitching is 1-4 inch. Orders for the machine should specify the gauges required.

Machine 131 w 112 is the same as 131 w 103 except that it has a puller feed device which makes it especially suitable for stitching scarves, corners, linings, overalls, etc.

Machine 131 w 111 is the same as 131 w 103 except that it has a puller feed device and binder especially suited for binding woolen blankets with silk ribbon.

Machine 131 w 112 is the same as 131 w 104 except that it has a puller feed device and binder especially suited for binding woolen blankets with silk ribbon.

Machine 131 w 113 is the same as 131 w 104 except that it has a puller feed device and is especially fitted for stitching parachutes.

Speed

The maximum speed recommended for Machines of Class 131 w is 2500 revolutions per minute. The machines should be run slower than the maximum speed at first until the parts which are in movable contact have become glazed by their action upon each other. When the machine is in operation, the balance wheel should always turn over toward the operator.

Needles

Needles for Machines of Class 131 w are of Class and Variety 141 x 1 and are made in sizes Nos. 10, 12, 14, 16, 18 and 20.
The size of the needle to be used should be determined by the size of the thread which must pass freely through the eye of the needle. If rough or uneven thread is used or if it passes with difficulty through the eye of the needle, the successful use of the machine will be interfered with.

Orders for needles must specify the quantity required, the size number, also the class and variety numbers separated by the letter x.

The following is an example of an intelligible order:

'100 No. 14, 141 x 1 Needles.'

The best results will be obtained in using the needles furnished by the Singer Sewing Machine Company.

Thread

Use left twist thread for the needles. Either left or right twist may be used for the bobbins.

![Fig. 2. How to Determine the Twist](image)

Hold the thread as shown above. Turn the thread over toward you between the thumb and the forefinger of the right hand; if left twist, the strands will wind tighter; if right twist, the strands will unwind.

The Relative Sizes of Needles and Thread

The following sizes of needles and thread are recommended:

<table>
<thead>
<tr>
<th>SIZES OF NEEDLES</th>
<th>COTTON</th>
<th>SILK</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>80 to 100</td>
<td>000, 00</td>
</tr>
<tr>
<td>12</td>
<td>70, 80</td>
<td>00, 0</td>
</tr>
<tr>
<td>14</td>
<td>60, 70</td>
<td>0, A</td>
</tr>
<tr>
<td>16</td>
<td>40 to 60</td>
<td>A, B</td>
</tr>
<tr>
<td>18</td>
<td>30 to 40</td>
<td>B, C</td>
</tr>
<tr>
<td>20</td>
<td>24 to 30</td>
<td>D</td>
</tr>
</tbody>
</table>

CAUTION

After setting up, do not start a machine, not even to test the speed, until it has been thoroughly oiled, as instructed below.

To Oil the Machine

To ensure easy running and prevent unnecessary wear of the parts which are in movable contact, the machine requires oiling, and when in continuous use, it should be oiled at least twice each day.

![Fig. 3. Oiling Points at the Front of the Machine](image)

Oil should be applied at the places designated by arrows as shown in Figs. 3, 4 and 5. Swing back the cover which is on the top of the machine at the right, and oil the bearings and gears which are thus uncovered, then replace the cover.

When the machine is shipped from the factory, the grease pan (A, Fig.5) is packed with Singer High Speed Lubricant. Occasionally this grease pan should be removed, thoroughly cleaned out and filled to the level of shaft clearance out with Singer High Speed Lubricant. Oil should regularly be applied through oil hole at the front of the grease pan (A, Fig.5) to lubricate the gears and shaft.

The small felt pad on the side of the bobbin cases should be kept wet with oil to lubricate the hook races.
Loosen the thumb screw in the upper end of the face plate, turn the face plate upward and oil all the wick and bearings which are thus uncovered, then turn down the face plate and tighten the thumb screw.

Turn the machine back on its hinges and apply oil to the places designated by arrows as shown in Fig. 6, and all other places where there are parts in movable contact.

**To Set the Needles in Machines 131w103, 131w110 and 131w111**

Turn the balance wheel over toward you until the needle bar moves up to its highest point. Loosen the three set screws in the needle holder and put the needles up into the holder as far as they will go. The outside needle or the one farthest from the upright part of the arm having its long groove toward the right, the centre needle having its long groove toward the operator and the inside needle or the one nearest the upright part of the arm having its long groove toward the left. When setting the right and left needles, care should be taken to see that the slab at the top of the needles is set properly into position in the needle holder, then firmly tighten the set screws.

**To Set the Needles in Machines 131w104, 131w112 and 131w113**

Turn the balance wheel over toward you until the needle bar moves up to its highest point. Loosen the four set screws in the needle holder and put the needles up into the holder as far as they will go. The two left needles or the needles farthest from the upright part of the arm having their long groove toward the right, and the two needles nearest the upright part of the arm having their long groove toward the left. Care should be taken to see that the slab at the top of the needle is set properly into position in the needle holder, then firmly tighten the set screws.

**To Remove the Bobbins**

Draw out the slide plate in the bed of the machine. Insert the finger nail of the forefinger under the latches (A, B and C, Fig. 6), raise the latches and lift out the bobbins.
To Wind the Bobbin

(See Fig. 7)

Fasten the bobbin winder to the table with its driving pulley in front of the machine belt, so that the pulley will drop away from the belt when sufficient thread has been wound upon the bobbin.

Fig. 7. Winding the Bobbin

Place the bobbin on the bobbin winder spindle and push it on as far as it will go.

Pass the thread down through the thread guide (1) in the tension bracket, around the back and between the tension discs (2). Then wind the end of the thread around the bobbin a few times, push the bobbin winder pulley over against the machine belt and start the machine.

When sufficient thread has been wound upon the bobbin, the bobbin winder will stop automatically.

If the thread does not wind evenly on the bobbin, loosen the screw (A) in the tension bracket and move the bracket to the right or left as may be required, then tighten the screw.

The amount of thread wound on the bobbin is regulated by the screw (B). To wind more thread on the bobbin, turn the screw (B) inwardly. To wind less thread on the bobbin, turn the screw outwardly.

Bobbins can be wound while the machine is stitching.

To Replace the Bobbins and Thread the Bobbin Cases in Machines 131w103, 131w110 and 131w111

The following instructions apply to the three bobbins:

Hold the bobbin between the thumb and forefinger of the left hand, the thread drawing on top from the right toward the left (see Fig. 6. Direction of Thread on Bobbin

Fig. 6), and place it on the center stud of the bobbin case, then push down the latch as shown in Fig. 6. Draw the thread into the

Fig. 7. Threading the Bobbin Cases in Machines 131w103, 131w110 and 131w111

Fig. 7, Fig. 8), and back of the projection (6, Fig. 10), leaving a loose end of the thread about two inches long above the slide. When closing the slides leave just enough space for the threads to pass through.
To Replace the Bobbins and Thread the Bobbin Cases in Machines 13lw104, 13lw112 and 13lw113

The following instructions apply to the four bobbins:

Hold the bobbin between the thumb and forefinger, the thread drawing on top from the right toward the left (see Fig. 6), and place it on the centre stud of the bobbin case, then push down the latch as shown in Fig. 11. Draw the thread into the slot (1, Fig. 11) and back of the projection (2, Fig. 12), leaving a loose end of thread about two inches long above the slide. When closing the slides leave just enough space for the threads to pass through.

Fig. 10. Bobbin Cases Threaded in Machines 13lw104, 13lw112 and 13lw113

To Thread the Needles in Machines 13lw103, 13lw110 and 13lw111

To thread the outside needle or the one farthest from the upright part of the arm, pass the thread from the unwinder from back to front through the lower hole in the left pin on top of the machine, then from right to left through the upper hole in the pin, through the upper thread guide and thread retainer, over from right to left between the tension discs at the extreme left, under from right to left around the thread controller into the thread controller spring and up through the thread guide, up and from right to left through the top hole in the thread take-up lever, down through the left hole in the thread guide at the front of the machine, through the thread guide below, through the left hole in the needle holder and from right to left through the eye of the left or outside needle.

To thread the centre needle, pass the thread from the unwinder from back to front through the lower hole in the centre pin on top of the machine, then from right to left through the upper hole in the pin, through the left lower thread guide and thread retainer under from right to left between the centre tension discs, under from right to left around the thread controller into the thread controller spring and up through the thread guide, up and from right to left through the centre hole in the thread take-up lever, down through the hole second from the left in the thread guide at the front of the machine, through the thread guide below, through the centre hole in the needle holder and from front to back through the eye of the centre needle.
Note: When the needle bar is raised to its highest position, the eye of the centre needle can be easily seen for threading, through the hole in the presser foot.

To thread the needles in machines 131W104, 131W112 and 131W113 (See Fig. 14)

To thread the front left needle or the one farthest from the upright part of the arm, pass the thread from the unwinder from right to left through the upper hole in the pin at the extreme left on top of the machine, then from back to front through the lower hole in the pin, through the upper thread guide and thread retainer, over from right to left between the tension discs at the extreme left, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the bottom hole in the thread take-up lever, down through the hole third from the left in the thread guide at the front of the machine, through the thread guide below, through the right hole in the needle holder and from left to right through the eye of the right or inside needle.
To thread the rear left needle, pass the thread from the unwinder from right to left through the upper hole in the pin second from the left on top of the machine, then from back to front through the lower hole in the pin, through the left lower thread guide and thread retainer, under from right to left between the tension discs second from the left, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the hole second from the left in the thread guide at the front of the machine, through the thread guide below, through the hole in the rear left needle holder, through the thread guide and from right to left through the eye of the rear left needle.

To thread the rear right needle, pass the thread from the unwinder from right to left through the upper hole in the pin third from the left on top of the machine, then from back to front through the lower hole in the pin, through the centre thread guide and thread retainer, under from right to left between tension discs third from the left, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the hole third from the top in the thread take-up lever, down through the hole third from the left in the thread guide at the front of the machine, through the thread guide below, through the hole in the rear right needle holder, through the thread guide and from left to right through the eye of the rear right needle.

To thread the front right needle or the one nearest the upper part of the arm, pass the thread from the unwinder from right to left through the upper hole in the pin at the extreme right on top of the machine, then from back to front through the lower hole in the pin, through the thread guide and thread retainer at the extreme right, under from right to left between the tension discs at the extreme right, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the bottom hole in the thread take-up lever, down through the hole at the extreme right in the thread guide at the front of the machine, through the thread guide below, through the thread guide on the front right needle holder and from left to right through the eye of the front right needle.

To Prepare for Sewing

With the left hand hold the ends of the needle threads, leaving them slack from the bobbin to the needles. Turn the balance wheel over toward you until the needles move down end up again to their highest point, thus catching the bobbin threads; draw up the needle threads and the bobbin threads will come up with them through the holes in the thread plate (see Fig. 15). Lay the threads back under the presser foot and close the slide.

Fig. 15. Drawing Up the Bobbin Threads

To Commence Sewing

Place the material beneath the presser foot, lower the presser foot end commence to sew, turning the balance wheel over toward you.

To Remove the Work

Have the thread take-up lever at the highest point, raise the presser foot, draw the work back and cut the threads close to the goods. Lay the ends of the threads back under the presser foot.

To Regulate the Pressure on Material

The pressure on the material is regulated by the thumb screw (A, Fig. 4) at the top of the machine.

To increase the pressure, loosen the lock screw (B, Fig. 4) at the back of the machine and turn the thumb screw (A) over to the right or downward. To decrease the pressure, turn the thumb screw (A) over to the left or upward. When the required amount of pressure is obtained, tighten the lock screw (B).
Tensions

The needle and bobbin threads should be located in the center of the thickness of the material, thus:

Fig. 16. Perfect Stitch

If the tension on the needle thread is too tight, or if that on the bobbin thread is too loose, the needle thread will lie straight along the upper surface of the material, thus:

Fig. 17. Tight Needle Thread Tension

If the tension on the bobbin thread is too tight, or if that on the needle thread is too loose, the bobbin thread will lie straight along the underside of the material, thus:

Fig. 18. Loose Needle Thread Tension

To Regulate the Tensions

The tensions on the needle threads are regulated by the thumb nuts at the front of the tension discs on the front of the machine. To increase the tension, turn these thumb nuts over to the right. To decrease the tension, turn the thumb nuts over to the left.

The tensions on the bobbin threads are regulated by means of the screw nearest the center of the tension spring on the outside of each bobbin case. To increase the tension, turn this screw over to the right. To decrease the tension, turn the screw over to the left.

To Regulate the Length of Stitch

The length of stitch is regulated by the thumb screw (C, Fig. 2) at the right of the balance wheel.

There is a notch in the hub of the balance wheel and the number appearing in the notch shows the number of stitches to the inch that the machine is ready to make.

To lengthen the stitch, turn the thumb screw (C) over toward you. To shorten the stitch, turn this thumb screw over from you.

To Adjust the Puller Feed on Machines 131w110 to 131w113

Fig. 19. Showing Adjustment for Changing Speed of Puller Feed

The puller feed should be adjusted to feed the material slightly faster than the drop feed of the machine, so that the pulling action of the feed rolls will cause a slight tension on the material between the drop feed and the puller feed rolls.

The speed of the puller feed is changed by moving the end of the connection (A) which is fastened by the hexagon nut (C) in the clootted segment (B) on the underside of the bed of the machine. To increase the speed of the puller feed, loosen the hexagon nut (C) and move the connection (A) in the clootted segment away from the shaft. To decrease the speed of the puller feed, move the connection (A) toward the shaft. When the required speed of the feed roll is obtained, firmly tighten the hexagon nut (C).

When the puller feed is once correctly set, it seldom requires attention, as the adjustment for changes in length of stitch is automatically taken care of by the stitch regulator of the machine.

If trouble is experienced with clutch slipping, it is probably caused by oil working into clutch assembly (D). Saturate the clutch thoroughly with gasoline or benzine and run the machine a few moments, after which wipe off surplus gasoline, and then place a drop of oil on hinge screw of connection (A).
To Regulate the Pressure on the Upper Feed Roll of Machines 131w110 to 131w113

The pressure of the upper feed roll on the material should be only sufficient to enable the feed rolls to pull the material from the drop feed of the machine without slipping. To increase the pressure on the upper feed roll, turn the thumb screw (D) over to the right or downwardly. To decrease the pressure on the upper feed roll, turn the thumb screw (D) over to the left or upwardly.

Puller Feed Rolls

The two rolls of the puller feed may be either corrugated steel or rubber faced to suit the requirements of the work being sewn.

Following is a list of the corrugated steel rolls which can be furnished, and the classes of work for which they are adapted:

<table>
<thead>
<tr>
<th>CORRUGATED FEED ROLLS</th>
<th>NO. OF TEETH</th>
<th>CLASS OF WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>237035 lower (fine)</td>
<td>27</td>
<td>Flags, tents, awnings, balloons and similar work</td>
</tr>
<tr>
<td>237036 upper (fine)</td>
<td>27</td>
<td>For banding overalls and pants</td>
</tr>
<tr>
<td>237017 lower (coarse)</td>
<td>13</td>
<td>Comfortable and thick work generally</td>
</tr>
<tr>
<td>237020 upper (coarse)</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>237017 lower (coarse)</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>237045 upper (coarse)</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

The Rubber Faced Feed Rolls are 237038 (Lower) and 237039 (Upper). These rolls are used when stitching articles on which it is desirable not to show the marks of the corrugated steel puller feed rolls on either side of the material.

The combination of Rubber Faced Feed Roll 237039 (Upper) and Corrugated Steel Feed Roll 237038 (Lower) is found most satisfactory for materials which are easily marked on the upper side, but on the underside of which a corrugated steel roll can be used.

The cork faced puller feed rolls are 237048 (Lower) and 237049 (Upper).

These rolls are used when stitching parachute work.
Genuine Singer Needles should be used in Singer Machines. These Needles and their Containers are marked with the Company's Trade Mark "SIManco." 1

Needles in Containers marked "For Singer Machines" are not Singer made needles. 2