

SINGER
81-60 and 81-65

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 manufacturing sewing machines except where a stainless oil is desired.

“Singer Stainless Oil for High Speed Sewing Machines”

For all manufacturing sewing machines where a stainless oil is desired.

“Singer Motor Oil”

For oil-lubricated motors, power tables, transmitters and machinery in general.

“Singer Stainless Thread Lubricant”

For lubricating the needle thread of sewing machines for stitching fabrics or leather where a stainless thread lubricant is required.

NOTE: All of the above oils are available in 1 quart, 2 quart, 1 gallon and 5 gallon cans or in 55 gallon drums, and can also be supplied in customer's containers.

“Singer Gear Lubricant”

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

“Singer Ball Bearing Lubricant”

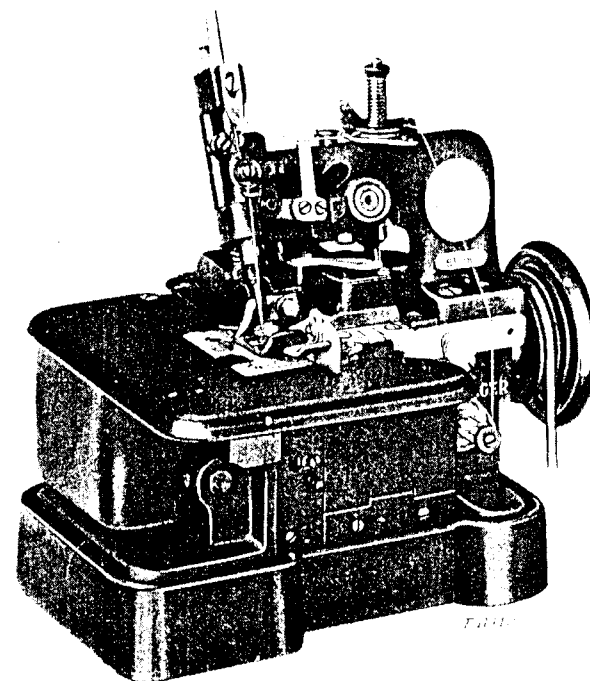
This pure grease is specially designed for the lubrication of ball bearings and ball thrust bearings of motors and electric transmitters, ball bearing hangers of power tables, etc.

NOTE: The above greases are furnished in 1 lb. and 4 lb. tins.

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19051

INSTRUCTIONS FOR USING AND ADJUSTING SINGER SEWING MACHINES 81-60 AND 81-65 HIGH SPEED



THE SINGER MANUFACTURING CO.

To all whom it may concern:

The placing or renewal of the name "Singer" (Reg. U. S. Pat. Off.) or any of the trade marks of The Singer Manufacturing Company on any machine that has been repaired, rebuilt, reconditioned, or altered in any way whatsoever outside a Singer factory or an authorized Singer agency is forbidden.

THE IMPORTANCE OF USING
GENUINE SINGER PARTS AND NEEDLES
IN SINGER MACHINES

The successful operation of Singer machines can only be assured if genuine Singer parts and needles are used. Supplies are available at all Singer Shops for the Manufacturing Trade and mail orders will receive prompt attention.

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

DESCRIPTION

MACHINE 81-60 is designed for overedging rugs, carpets, felt pads, blankets, etc. up to 5/16 inch in thickness. It can also be fitted for folding and overedging net laundry bags.

Fittings for 81-60

The machine is regularly fitted for carpet work, unless otherwise ordered.

WORK	GUIDE	FEED DOG	PRESSER FOOT	THROAT PLATE
Carpets, Rugs, Blankets, etc.	12238	132885	132714	132887
Folding Edges of Laundry Bags	121502	132885	132919 (HINGED)	132887

NOTE. Machine 81-60 is regularly fitted for making the three-thread chain stitch but can be changed to make the two-thread chain stitch by substituting spreader 42250 for the right hand looper.

MACHINE 81-65 is adapted for serging trousers and for overedging the cut edges of cloth up to 3/16 inch in thickness.

NOTE. The machine is regularly fitted for making the two-thread chain stitch but can be fitted to make the three-thread chain stitch if specified on the order.

These machines are automatically oiled by means of a series of wicks which convey the oil from the reservoirs to the principal bearings.

Speed

MACHINE 81-60 can be driven up to a maximum speed of 3000 revolutions per minute.

MACHINE 81-65 should be driven at a speed not exceeding 4000 revolutions per minute for the first week; the second week 4300; and the third week 4500. The speed of 4500 revolutions per minute can be maintained for long runs.

To Set Up the Machine

Line up the machine on the table so that the belt groove of the balance wheel is in line with the belt groove of the driving pulley.

TO INSTALL BASE 132704: By means of a template or other method, spot and drill five holes in the table before the base is fastened to the table. The diameters of these holes are $\frac{3}{8}$ " for the three machine base bolts, $\frac{3}{4}$ " for the machine base thumb screw, and $1\frac{1}{4}$ " for the oil drain pipe.

Fasten the base to the table by means of the three bolts. Then screw the drain pipe, from the underside of the table, into the drain hole in the machine base.

Be sure the felt cushions are in place, including the center cushion, then set the machine on the base. Place the spring and washer over the machine base thumb screw, put this screw through the center hole in the base from the underside of the table, and securely tighten the screw.

TO INSTALL LOWERED BASE 132705: For the cut-out in the table, lay the base right side up on the table and outline the base with pencil. Cut the hole $\frac{1}{8}$ " larger than the pencil outline so that the base will not touch the plank.

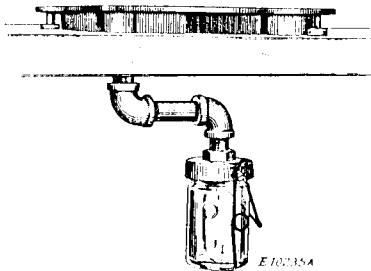


Fig. 3

Remove the three screw pins from the base, and with a center-punch, through the screw pin holes, make a spot mark for the center of the bit. A bit $\frac{5}{8}$ " diameter should be used and the three holes should be of such a depth that the three rubber cushions will extend $\frac{1}{8}$ " above the top of the table. Replace the screw pins, and when placing the base in position, have each pin enter the hole in the center of the rubber cushions as shown. Then press the base down until it rests on the cushions. The oil drain jar should be located out of the operator's way. Then fasten the machine to the base as instructed above.

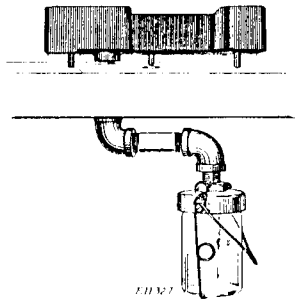


Fig. 2

Oiling

Before Starting the Machine: Apply Singer "OIL FOR HIGH SPEED SEWING MACHINES (Cloth and Leather)" for general use or

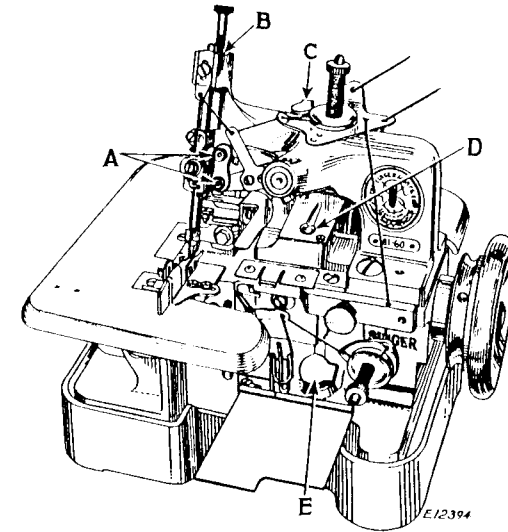


Fig. 4. Front View, Showing Oiling Points

"STAINLESS OIL FOR HIGH SPEED SEWING MACHINES", where a stainless oil is desired, to the oil hole (D, Fig. 4) and oil cup (E, Fig. 4) until the reservoirs are full. Fill the oil cup (C) at the top of the machine and thoroughly saturate the wick through the hole (B) in the casting near the top of the needle bar. Then oil the needle bar link connection (A) at the front of the machine. Also apply oil to the presser lever bearings (F, Fig. 5) at the back of the machine.

THEREAFTER, replenish the oil supply in the reservoirs about once each day, or often enough to keep them filled. Twice a day apply oil to the remainder of the oiling points.

The surplus oil drips into the cast iron base and this oil should be occasionally drained by turning the tap which is provided in the base for this purpose.

CAUTION: A machine new from the factory, or one that has not been used for some time, should not be operated until about three hours after filling the reservoirs. Failure to heed this caution may result in serious damage to the mechanism of the machine.

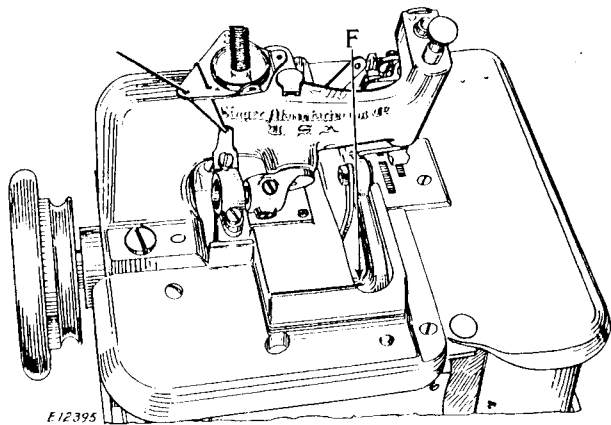


Fig. 5. Rear View, Showing Oiling Point

Needles and Thread

Needles for Machine 81-60 are of Class and Variety 81x5 and are made in sizes 19, 21, 22, 23, 24 and 25.

Needles for Machine 81-65 are of Class and Variety 81x1 and are made in sizes 14, 16, 17, 18, 19 and 21.

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. The use of rough or uneven thread or thread which passes with difficulty through the needle eye, will interfere with the proper operation of the machine.

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

The following is an example of an intelligible order:

"100 No. 23, 81x5 Needles."

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

To Set the Needle

Loosen the clamping nut (G, Fig.6) at the lower end of the needle bar and put the needle up into the bar as far as it will go, with the clearance above the eye at the back, or farthest from you. Then tighten the clamping nut (G).

Needle Threading

Pass the thread from the unwinder down through the hole (1) in the tension bracket, from back to front through the lower hole (2),

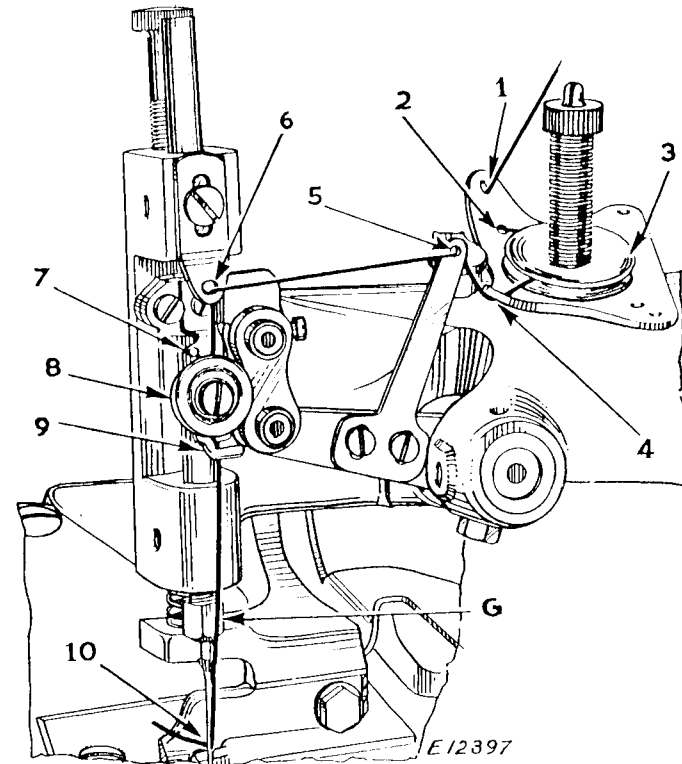


Fig. 6. Threading the Needle

around the front between the tension discs (3), through the hole (4), from back to front through the hole (5) in the take-up, and from front to back through the hole (6) in the needle thread eyelet, down to the right of the pin (7), around the left side between the retainer discs (8), down into the guide (9), and from front to back through the eye of the needle (10).

To Thread the Left Hand Looper

(Operator at Front of Machine)

Pass the thread from the unwinder down through the hole (1, Fig.7) in the frame top cover, and from back to front through the

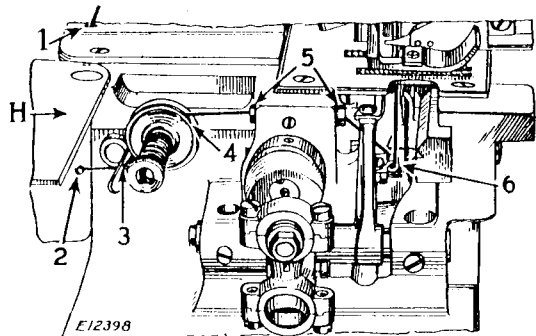


Fig. 7

hole (2) in the cloth plate extension. Swing cloth plate (H) to the left, then pass the thread up through the hole in the thread eyelet (3), over between the tension discs (4), through the tube (5), down and from right to left through the thread guide (6, Figs. 7 and 8), up and through the hole (7, Fig.8) in the heel of the left hand looper, and from front to back through the eye (8) of the left hand looper.

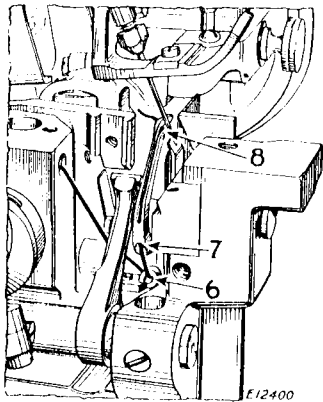


Fig. 8

NOTE. Machine 81-65 is threaded as instructed above with the exception of the thread guide (6, Fig. 8) through which the thread is passed from back to front (toward the operator), up and from back to front through the heel of the looper, and from front to back through the eye of the looper.

To Thread the Right Hand Looper

(For Three-Thread Stitch)

Pass the thread from the unwinder, down through the hole (1, Fig.9) in the tension bracket, from back to front through the

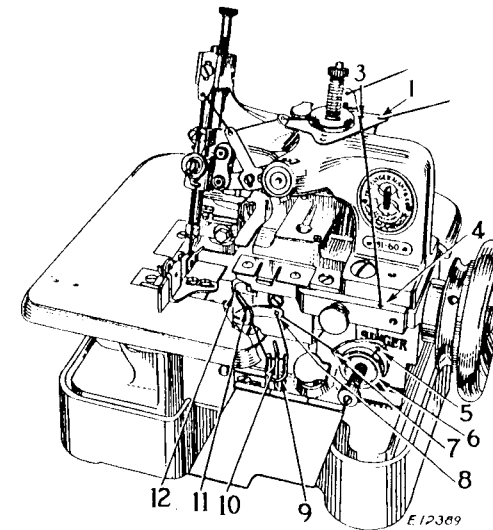
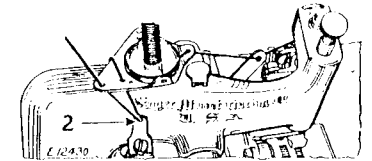


Fig. 9. Threading the Right Hand Looper

pull-off (2) at the back of the machine, up through the hole (3), down through the hole (4), through the hole (5), under between the tension discs (6), through the hole (7), from back to front through the take-up (8), down under the loop (9) of the staple then, with the forefinger, slide the thread up and over the prong (10), so that the thread rests in back of the prong, up and from back to front through the hole (11) in the heel of the right hand looper, and from front to back through the eye (12) of the right hand looper.

To Regulate the Pressure on the Material

The pressure on the material is regulated by means of the thumb screw (J, Fig. 10). To increase the pressure, turn this thumb screw downwardly. To decrease the pressure, turn the thumb screw upwardly.

To Regulate the Length of Stitch

The length of stitch is regulated by means of the adjusting screw (L, Fig. 10) in the feed eccentric. This screw faces directly outward.

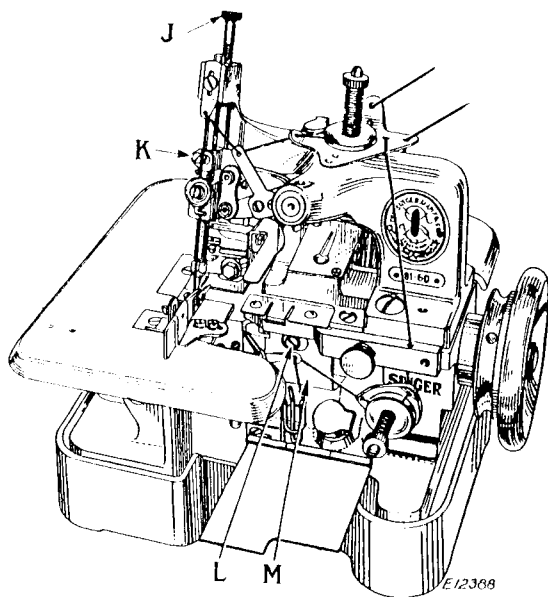


Fig. 10. Adjustments on the Machine

To change the length of stitch, turn the balance wheel until the lock screw in the feed eccentric appears in the hole of the cover (M, Fig. 10). This screw faces slightly downward. Loosen the lock screw. Then turn the balance wheel until the adjusting screw (L) is visible through the hole in the cover (M). Turn the adjusting screw (L) over to the right for a long stitch. Turn this screw over to the left for a short stitch. Then turn the balance wheel over until the lock screw appears and securely tighten this screw.

INSTRUCTIONS FOR ADJUSTERS AND MACHINISTS

To Set the Needle Bar at the Correct Height

Remove the throat plate in order to obtain a clear view of the needle and looper.

Now turn the balance wheel over from you until the needle bar has risen $\frac{3}{32}$ inch from its lowest position. The point of the left hand looper, on its loop taking stroke, should then be at the center of the needle, and the eye of the needle should be about $\frac{1}{16}$ inch below the looper point. If the needle bar is not at the correct height, loosen the pinch screw (K, Fig. 10) and move the needle bar upward or downward as required, then securely tighten the pinch screw (K).

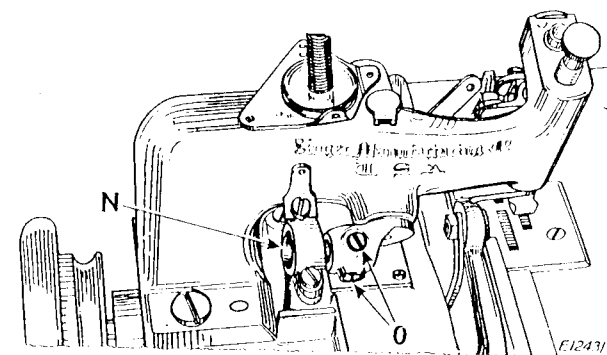


Fig. 11. To Change the Needle Bar Stroke

To Change the Stroke of the Needle Bar

A variation in the amount of needle bar stroke can be obtained by adjusting the ball stud (N, Fig. 11). To lengthen the stroke, loosen the two set screws (O, Fig. 11) in the needle bar crank and move the ball stud inwardly or toward the crank. To shorten the stroke of the needle bar, move the ball stud outwardly or away from the crank, then securely tighten the set screws (O).

To Set the Left Hand Looper

Turn the balance wheel over from you until the needle bar is in its lowest position. At this position, the looper point should be about $1/32$ inch to the left of the needle. Now turn the balance wheel until the needle bar has risen $3/32$ inch from its lowest position and the point of the looper should be at the center of the needle. (Some threads and materials require more needle loop, in which case the looper point can be set $1/16$ inch from the needle).

The left hand looper should be set in the looper carrier so that the point of the looper, on its loop-taking stroke, passes as close as possible to the needle without striking it. The point of the right hand looper or spreader should pass at the recess back of the left hand looper eye as close as possible without touching it.

To Regulate the Looper Motion

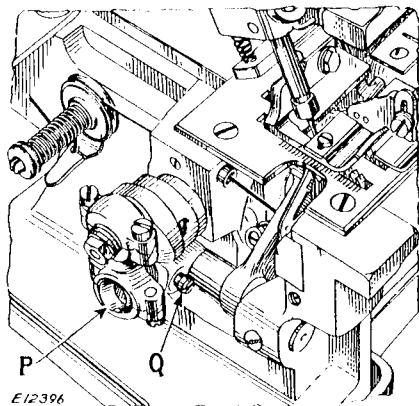


Fig. 12.

A variation in the amount of the looper motion can be obtained by adjusting the ball stud (P, Fig. 12). To increase this motion, loosen the set screw (Q) in the looper lever and move the ball stud (P) inward, or toward the looper lever. To decrease the motion, move the ball stud outward, or away from the looper lever.

After the desired motion has been obtained, securely tighten the set screw.

To Set the Needle Guard

The needle guard should be set so that it just touches but does not bend the needle, nor interfere with the needle loop.

Note the small countersunk screw beneath the throat plate, directly in line with the needle, at the front of the machine. The end of this screw is screwed into the needle guard, and any upward or downward movement of this screw causes a similar movement of the needle guard. Therefore, to change the setting of the needle guard, loosen the countersunk screw and move it upward, closer to the needle, or downward, away from the needle. Then securely tighten the screw.

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