SINGER
300W201

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

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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 cons or in 55 gallon drums, and can also be supplied in customer’s containers.

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

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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 1/4 lb. tubes and 1 lb. and 4 lb. cans.

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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.”

Needles in Containers marked "FOR SINGER MACHINES" are NOT Singer made needles.

DESCRIPTION

MACHINE 300WZ01 has two needles and two loopers and simultaneously makes two parallel lines of two thread chain stitching. The needles are set abreast and the distance between them may be from 3/16 inch to 2½ inches, in steps of 1/32 inch, as ordered. The standard gauges are 1/4", 9/32", 3/8", 1/2", 3/4", 7/16" and 1".

This machine is especially designed for attaching bibs to overalls, taping awnings, stitching tarpaulins, tents, seat covers and similar work in medium and heavy fabrics.

It has a compound feed consisting of a needle feed and a drop feed which carry the work forward in unison, insuring positive and even feeding of two or more plies of material.

An automatic oiling system delivers the required amount of oil to all of the principal bearings.

SPEED

The maximum speed recommended for this machine is 4500 R. P. M., depending upon the nature of the work. For the first few days, the speed of the machine should not exceed 4000 revolutions per minute, after which it can be driven at its maximum speed. The top of the balance wheel turns over toward the operator.

TO SET UP THE MACHINE

Fasten the two iron hangers (B) in position in the cut-out for the machine, and place the four rubber insulating bushings (C) in the hanger holes, as shown in Fig. 2. Place the four felt pads (A) on the bed pins, as shown in Fig. 2, then set the machine on these pads, having the bed pins pass through the rubber bushings (C).

CAUTION: After setting up, do not start the machine until it has been thoroughly oiled as instructed on pages 4 and 5.
TO OIL THE MACHINE

The machine has an efficient automatic oiling system comprising a hollow arm shaft and a hollow bed shaft which act as oil reservoirs and deliver the required amount of oil to all of the principal bearings when the machine is in operation. The oil is distributed to the various bearings by centrifugal force through small jets in the shafts so that only clean oil reaches the bearing surfaces. Oil holes are provided for hand oiling of parts in moveable contact which are not oiled from the reservoirs.

CAUTION: Use only "SINGER OIL FOR HIGH SPEED SEWING MACHINES" or "SINGER STAINLESS OIL FOR HIGH SPEED SEWING MACHINES."

A MACHINE NEW FROM THE FACTORY, OR ONE THAT HAS BEEN IDLE FOR SOME TIME MUST BE OILED AS INSTRUCTED BELOW AND ON THE FOLLOWING PAGE. FAILURE TO DO THIS WILL RESULT IN DAMAGE TO THE MACHINE.

NOTE: It is not necessary to remove the work plate for the first servicing or subsequent oiling of the machine. For this purpose, merely swing out the face plate and remove bed slide plate.

1. To fill the arm shaft oil reservoir, insert the spout of the oil can in the hole (D, Fig. 3) and at the same time slightly pull out the cap (E, Fig. 4) at the right of the balance wheel, thus opening the air vent. Hold the cap in this position against the spring pressure while filling the arm shaft with oil. As soon as the oil overflows at the cap (E), release the cap, then add a few more shots of oil to the arm shaft reservoir at (D). This assures flushing of bearings with oil.

2. To fill the bed shaft oil reservoir, push to the left the spring cover (F, Fig. 3), insert the spout of the oil can in the hole (G) and at the same time slightly pull out the cap (H, Fig. 6) on the pulley end of the shaft, thus opening the air vent. Hold the cap in this position against spring pressure while filling the bed shaft with oil. As soon as the oil overflows at the cap (H), release the cap and add a few more shots of oil to the bed shaft reservoir at (G) to flush the bearings, then close the oil hole spring cover.

3. Apply oil to work plate oil holes and arm oil holes. Also oil the needle bar bearings and connections, needle bar rock frame bearings, looper rocker sleeve, presser lift mechanism and looper pull-out rack.

A MACHINE IN DAILY USE MUST BE OILED AS FOLLOWS:

Twice a day
- Fill arm shaft oil reservoir (D, Fig. 3).
- Fill bed shaft oil reservoir (G, Fig. 5).

Once a day
- Apply oil to all holes in work plate.
- Oil needle bar bearings and connections and needle bar rock frame bearings.
- Oil looper rocker sleeve.

Occasionally oil the presser lift mechanism and looper pull-out rack.
NEEDLES

Needles for Machine 300w201 are of Class and Variety 62x45 and are made in sizes 16, 17, 18, 19, 21, 22, 23 and 24.

Needles 62x43, made in sizes 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23 and 24, can also be used in this machine, in which case the needle bar must be adjusted as instructed on page 13.

The size of the needle to be used is determined by the size of the thread which must pass freely through the eye of the needle. Rough or uneven thread, or thread which passes with difficulty through the eye of the needle 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 the letter X.

The following is an example of an intelligible order:

"100 No. 18, 62x45 Needles".

The best stitching results will be obtained with needles furnished by the Singer Sewing Machine Company.

THREAD

Either left twist or right twist thread can be used in the needles and loopers.

TO SET THE NEEDLES

Insert the needles up into the needle clamp as far as they will go with the long continuous groove of each needle toward the right, then securely tighten the needle set screws.

TO THREAD THE NEEDLES

(See Fig. 7)

Turn the balance wheel over toward you until the needle bar is at its highest position.

TO THREAD THE NEEDLE AT THE RIGHT, pass the thread from the unwinder down through the right tension thread guide (1), around the right side of the tension post and between the right tension discs (2), down through the tension thread guide (3), down and from right to left through the slot (4), under and through the thread nipper (5), from right to left through the slot (6), through the front eyelets (7, 8, 9 and 10), down through the right eyelet (11) in needle bar rocker, and from right to left through the eye (12) of the right needle.
TO THREAD THE LOOERS

Remove the bed slide plate and turn the balance wheel over toward you until the needle bar is at its highest position.

Pull out the rod (G, Fig. 9) with the right hand, then with the left hand pull out the gear rack button (P, Fig. 9) as far as it will go, as shown in Fig. 9. This will bring the loopers in "throw-out" position for threading and prevent accidental operation of the machine before the loopers are returned to sewing position.

TO THREAD THE RIGHT LOOPER, pass the thread from the unwinder through the left eyelets (1 and 2 Fig. 8) of the thread straightener, down through the tube (3, Fig. 8), down through the tension thread guide (4, Fig. 9), around the right side of the tension post and between the tension discs (5, Fig. 9), to the left through the eyelet (6, Fig. 9) in the right arm of the take-up, down, under the take-up wire (7, Fig. 9), up and through the eyelet (8, Fig. 9) in the left arm of the take-up, up and over the short arm of the take-up wire (7), to the left through the rear eyelets (9 and 10, Fig. 9), through the right eyelet (11, Fig. 9), up through the hole (12, Fig. 9) in the bottom of the right looper, to the right and forward through the hole (13, Fig. 9) in the heel of the looper, into the looper thread groove and through the eye (14, Fig. 9) of the looper.

TO THREAD THE LEFT LOOPER, pass the thread from the unwinder through the right eyelets (A and B, Fig. 8) of the thread straightener, down through the tube (C, Fig. 8), down through the tension thread guide (D, Fig. 9), around the right side of the lower tension post and between the tension discs (E, Fig. 9), to the left through the front eyelet (F, Fig. 9) in the right arm of the take-up, down, under the take-up wire (7, Fig. 9), up and through the eyelet (G, Fig. 9) in the left arm of the take-up, up and over the short arm of the take-up wire (7), to the left through the front eyelets (H and I, Fig. 9) through the left eyelet (K, Fig. 9) up through the hole (L, Fig. 9) in the bottom of the left looper, to the right and forward through the hole (M, Fig. 9) in the heel of the looper into the looper thread groove and through the eye (N, Fig. 9) of the looper. Draw about two inches of thread through the eye of each looper to commence sewing.
TO REGULATE PRESSURE ON MATERIAL

The pressure of the presser foot on the material is regulated by means of the screw (R, Fig. 12) at the rear of the machine. Loosen the lock screw (Q, Fig. 12) and turn the screw (R) downward to increase the pressure, or upward to decrease the pressure. When the correct feeding pressure is attained, tighten the lock screw (Q) to retain the adjustment.

Fig. 12. Presser Bar Spring Pressure Regulator

TO REGULATE THE TENSIONS

The tension on the needle threads is regulated by means of the thumb nuts (V, Fig. 14). To increase the tension, turn these thumb nuts clockwise (over to the right); for less tension turn the thumb nuts in the opposite direction. The tension should be just enough to set the stitch properly in the goods.

The tension on the looper threads is regulated by means of the thumb nuts (W, Fig. 14). To increase the tension, turn these thumb nuts clockwise (over to the right); for less tension, turn the thumb nuts in the opposite direction. For average sewing, the tension on the looper threads should be very light.

TO REGULATE THE LENGTH OF STITCH

To facilitate changing the length of stitch, the stitch indicator plate (S, Fig. 13) is marked with arbitrary letters from A to L, denoting the various lengths of stitches that can be made; the letter A, indicating the longest stitch. The letter opposite the arrow (T, Fig. 13) on the front of the arm indicates the length of stitch the machine is ready to make when the plunger (U, Fig. 14) and button (X, Fig. 14) register with the notches in the feed eccentrics.

Fig. 13. Stitch Indicator

The forward and backward movements of the needles are regulated by means of the knurled plunger (U, Fig. 14) at the top of the machine. The travel of the feed dog is regulated by means of the button (X, Fig. 14) in the bed.

When changing the length of stitch, the following adjustments must be made in unison.

Press in the knurled plunger (U, Fig. 14) at the top of the machine and at the same time turn the balance wheel over toward you until the plunger (U) enters a notch in the adjustable eccentric on the arm shaft, then turn the plunger to the right or left to lock it in position. Now, press the button (X, Fig. 14) in the bed and at the same time turn the balance wheel over toward you to increase the length of stitch or over from you to shorten the stitch, until the desired letter on the stitch indicator plate is opposite the arrow. Then release the button (X) and TURN the knurled plunger (U) to the right or left until it springs outwardly and releases the eccentric. The machine is then ready for operation.

CAUTION: NEVER change the forward and backward movements of the needles without changing the travel of the feed dog.
INSTRUCTIONS
FOR
ADJUSTERS AND MACHINISTS

TO SET THE NEEDLE BAR AT CORRECT HEIGHT

Set the feed eccentrics at (U and X, Fig. 14) so that there is no feed motion. Turn the balance wheel over toward you until the needle bar is at its highest point and turn the presser foot out of the way. Insert two needles of Class and Variety 62x45 up into the needle clamp as far as they will go. Loosen the two screws (Y, Fig. 15) in the needle bar connecting stud and raise or lower the needle bar until the points of the needles are 7/16 inch above the throat plate, using Gauge Plate No. 268260 (Z) as shown above to determine the correct distance, then tighten the two screws (Y). Be sure to have the needles parallel to the front edge of the throat plate. Then reset the feed eccentrics for the desired length of stitch.

NOTE: It may be necessary to vary the needle bar setting for different threads and materials.
TO SET THE SPREADER SIDEWISE IN RELATION TO THE LOOPERS

When the loopers are passing the spreader points on their forward stroke, the spreader (K2, Fig. 19) must clear the loopers by a double thickness of ordinary paper at (H2, Fig. 19). If the spreader is too far away or too close to the loopers, loosen the two screws (H2, Fig. 19) in the spreader holder and move the spreader and holder sidewise in the required direction. Be careful not to tip the spreader up or down when moving it sidewise, as this will change the loop casting-off position. When the spreader is correctly set, tighten the screws (H2).

Fig. 19. Spreader Set in Correct Relation to Loopers

TO SET THE SPREADER FORWARD OR BACKWARD IN RELATION TO THE NEEDLES

To check position of spreader in direction of the feed, remove feed dog and turn the balance wheel over toward you until the needle bar is on its downward stroke and the points of the needles have descended to the same level as the top of the looper blades, as shown in Fig. 20. When the needles are in this position, the distance between the needles and the spreader point should be approximately 1/16 inch, as shown in Fig. 20, slightly more for longer stitches. To make this adjustment, loosen the screw (J2, Fig. 20) and move the spreader (K2) in the required direction, then firmly tighten the screw (J2).

The spreader (K2) should be adjusted horizontally so that when it moves sidewise its fingers will clear the loopers and feed dog. To make this adjustment, loosen the two screws (H2, Fig. 19) and tilt the spreader (K2) up or down to the correct position, then securely tighten the screws (H2).

Fig. 20. Spreader Set in Correct Relation to Needles

TO CHANGE THE AMOUNT OF SIDEWISE MOVEMENT OF THE SPREADER

Loosen the four screws in the spreader driving eccentric (P2, Fig. 21) and move the eccentric to the left to increase the sidewise movement of the spreader or to the right to decrease it, then tighten the two screws. For average sewing requirements, the distance between the left side of the ball strap (N2, Fig. 21) and right side of the rock shaft (M2, Fig. 21) should be 3/8 inch when the ball stud (Q2, Fig. 21) is in horizontal position.

TO REMOVE THE SPREADER SHAFT

Loosen the spreader bearing bracket screws (S2, Fig. 21) and remove the bracket with shaft (R2, Fig. 21) and drive pin (Q2, Fig. 21) from the machine.
TO SET THE FEED DOG AT THE CORRECT HEIGHT

When the feed dog is at its highest position on the feed stroke, approximately the full depth of the teeth should show above the throat plate. To raise or lower the feed dog, loosen the jack screw (T2, Fig. 22) and slightly loosen the feed dog clamping screw (W2, Fig. 22), then set the feed dog at the correct height, turning the jack screw (T2) counterclockwise and tapping the feed dog down to lower it or turning the jack screw (T2) clockwise and tapping the feed dog up to raise it. When the feed dog is correctly set, securely tighten the clamping screw (W2).

TO TIME THE FEED LIFT ECCENTRIC

Insert screwdriver in the hole in the feed lift strap, slightly loosen the screws (U2, Fig. 22) and move the feed lift eccentric until the lower edge of the wooden insert registers with the center line of the screw (V2, Fig. 22) in the looper drive crank, then tighten the screws (U2).

TO SET THE FEED DOG SIDEWISE IN RELATION TO THE NEEDLES

To adjust the feed dog sidewise so that the needles will enter the center of the needle holes, loosen the thrust collar screws in the right collar (Z2, Fig. 23) and in the left collar (X2, Fig. 23) and move the feed rocker and feed bar assembly to the required position. (This adjustment permits a sidewise movement of the feed dog of not more than 1/64 inch). When the feed dog is correctly set, move the thrust collars into the proper position and tighten the screws. See that the feed driving strap (C2, Fig. 23) and the feed lifting link (E2, Fig. 23) are not binding.

TO SET THE FEED DOG FORWARD OR BACKWARD IN RELATION TO THE NEEDLES

To adjust the feed dog in the direction of feed so that the needles will enter the center of the needle holes, loosen the set screw (A3, Fig. 23) and two clamp screws (D3, Fig. 23) in the feed driving rock shaft crank and move the feed rocker (Y2, Fig. 23) to the required position, then securely tighten the two clamp screws (D3) and lock them with the set screw (A3).
TO SET THE FEED BAR AT THE CORRECT HEIGHT

See that the feed lift crank timing screw (K3, Fig. 24) engages the shaft spot correctly and that the slot of the feed lift link clamp (L3, Fig. 24) is properly aligned with the rock shaft timing slot. If an adjustment is required, loosen clamp screw (M3, Fig. 24), move the feed lift link to the correct position, see that it is not binding sidewise, then tighten the clamp screw (M3) as securely as possible.

TO REMOVE THE LOOPER CARRIER ASSEMBLY

Loosen the screws in the rock gear (O3, Fig. 24), remove the gear and the thrust plate (N3, Fig. 24). Loosen the screws in the right hand looper rocker bushing (J3, Fig. 24) and pull out the left hand looper rocker bushing (G3, Fig. 24) and shaft, holding the latch pin (F3, Fig. 24) out of engagement while removing the bushing (G3). The looper rocker (H3, Fig. 24) and driving member can then be removed.

TO SET THE NEEDLE THREAD TAKE-UP

The needle thread take-up (S3, Fig. 25) is usually set with the lower end of the take-up flush with the bottom of its holder.

TO ADJUST THE AUXILIARY THREAD TAKE-UP

To produce a smaller needle thread loop for the looper to enter in forming a stitch, loosen the screw (P3, Fig. 25) and move the auxiliary thread take-up (Q3, Fig. 25) slightly toward the back of the machine. If a larger needle thread loop is required, move the auxiliary thread take-up (Q3) forward or toward you. Securely tighten the screw (P3) after making this adjustment.

TO ADJUST THE LOOP SETTING EYELET

The loop setting eyelet (R3, Fig. 25) controls the tightness of the needle loop while it is being pulled up into the fabric after the loopers have threaded the needle loops on the downward stroke of the needles. To increase the pulling-up action or tightness of the needle loops, raise the loop setting eyelet (R3), or lower it for less.

For the average kind of material and sewing conditions, the eyelet (R3) should be set at about the same height as the center pin (U3, Fig. 26) of the nipper.

TO ADJUST THE AUTOMATIC THREAD NIPPER

To increase the duration of the nipping or clamping action of the automatic thread nipper on the thread, loosen lock screw (W3, Fig. 26) and turn collar (T3, Fig. 26) counterclockwise, or turn it clockwise to reduce the holding time, then securely tighten the lock screw (W3) to prevent the collar (T3) from turning.

If more or less clamping pressure is required on the thread during the nipping action, turn the two nuts (V3, Fig. 26) inwardly on the center pin of the nipper for more pressure, or outwardly for less. Lock the outer nut against the inner nut to retain the adjustment.
TO ADJUST THE NEEDLE THREAD TENSION RELEASER

The function of the tension releaser is to release the tension on the needle threads when the presser foot is raised. If the tension releaser does not release the threads when the presser foot is raised, or if the tension is partially released when the presser foot is down, move the button (X3, Fig. 27) in or out on its holding stem to open the tension more or less, or if necessary, move the tension releaser plate (Y3, Fig. 27) sidewise to release the tension at the correct time.

TO ADJUST THE LOOPER THREAD TAKE-UP

The looper thread take-up (A4, Fig. 28) can be raised or lowered to take up more or less thread, as required, after loosening the screw which holds it in position.

The U-shaped looper thread take-up wire (B4, Fig. 28) may require resetting for various kinds of thread and materials. To set the "U" wire (B4) to make a short needle loop stitch, loosen the two screws (Z3, Fig. 28) and turn the wire so that only the right hand portion (long end) of the wire acts on the threads. To form a long needle loop stitch, turn the wire (B4) so that the short end is higher than the long end. When the "U" wire is correctly set, securely tighten the two screws (Z3).

TO REMOVE THE ARM SHAFT

Remove the back cover of the machine. Remove the oil vent button (M4) and pulley end cap (N4, Fig. 29), then loosen the two screws in the balance wheel (C4, Fig. 29), remove the balance wheel and the bearing ring (D4, Fig. 29). Loosen the screw in the oil slit (F4, Fig. 29), and the two screws in the needle vibrating eccentric (E4, Fig. 29), and the screw (O4, Fig. 29) in the nipper drive eccentric. Also loosen the two screws in needle bar drive crank (G4, Fig. 30), (these screws are accessible through hole in casting), slide the chip belt off the bed shaft pulley and remove it through the pulley bearing hole, then remove the arm shaft from pulley end of machine.

TO REMOVE THE BED SHAFT

Loosen the screws in the counterweights (K4, Fig. 31), spreader drive eccentric (P2, Fig. 31), looper thread take-up drive eccentric (J4, Fig. 31), feed drive eccentric (B3, Fig. 31), and looper rocker drive crank (H4, Fig. 31), then remove the bed shaft from pulley end of machine, leaving pulley on shaft for easier handling.
TO TIME ARM SHAFT AND BED SHAFT
AND REPLACE CLIP BELT

After reassembling mechanism on arm and bed shafts, replace the clip belt on the arm shaft pulley and turn arm shaft until needle bar is at its highest position, then turn bed shaft until the arrow (L4, Fig. 32) on counterweight of the bed shaft pulley points straight upward toward arm shaft. Now, without disturbing either the arm shaft or the bed shaft, slip the clip belt over the bed shaft pulley, making certain that the clips properly engage the pulley notches. Replace the bearing ring (D4, Fig. 29) and tighten the ring screws, then replace the balance wheel, forcing it into the bearing ring, and tighten the balance wheel set screws. Replace the balance wheel end cap and the oil vent button.

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