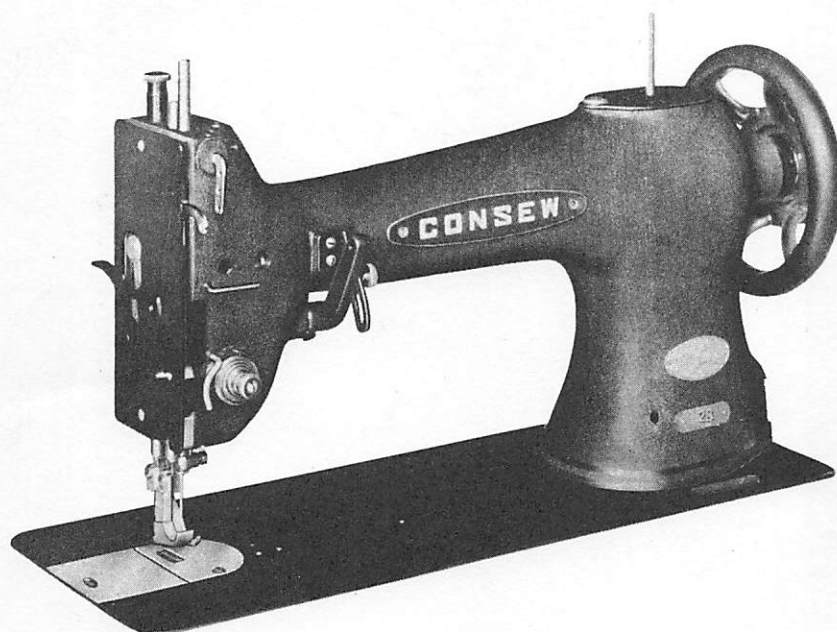


OPERATING INSTRUCTIONS
FOR

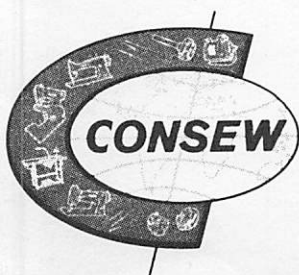
CONSEW



MODEL

28

SEWING MACHINE



CONSOLIDATED SEWING MACHINE



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OPERATING INSTRUCTIONS CONSEW MODEL 28

SETTING UP THE MACHINE

Carefully unpack machine from packing case and make sure that all small parts and accessories are removed from packing material.

Wipe machine clean of protective grease and lubricate oil holes with a good grade of sewing machine oil (see below).

CAPACITY AND SPEED

Maximum operating speed after a break-in period is 16000 stitches per minute depending, of course, on the type of material being sewn, its thickness and that of the seams being crossed.

To assure durability and trouble free operation, it is imperative that for the first several weeks of operation the maximum speed is held to not more than 1200 RPM in order to allow the parts to become properly broken in.

DIRECTION OF ROTATION

In operation, the handwheel of the machine always turns toward the operator. To avoid tangled threads and jamming of the sewing hook, do not turn handwheel otherwise.

OILING

Do not operate the machine, even if only for testing, unless it has been properly oiled at every spot requiring lubrication. These spots are the holes at the arm and bed of the machine which are identified with red paint markers. In addition, place one or two drops of oil at all places where one part of the machine is in movable contact with another. Occasionally, also remove the face plate, remove the accumulated lint from the mechanism and distribute oil thoroughly, but in small quantities to all moving parts.

Also swing back the arm top cover, located to the left of the handwheel, and lubricate the bearing of the connecting rod on the main shaft. Turn machine head back on its hinges and lubricate the left hand shuttle shaft bearing as well as the sliding block connected to the crank at the right end of the shuttle shaft.

Oiling must be done at least twice daily when the machine is in continuous operation to assure free running and durability of the operating parts.

NOTE: During the break-in period a new machine should be oiled more frequently.

NEEDLES

The machine uses needle style 29 x 3 (Cat. 3741) in sizes 9 through 24. Needle style 135 x 17 (cat. 3355) can likewise be employed. The size of the needle should be determined by the size of the thread, which must pass freely through the eye of the needle.

THREAD

Use only LEFT twist thread for the needle. For the bobbin either left or right twist thread may be used.

SETTING THE NEEDLE

Turn handwheel toward you until needle bar has reached its highest point. Loosen the needle clamp screw, remove old needle and insert a new one into its place. Push needle upward into needle clamp as far as it will go. Be sure long groove of needle is to the left and the eye of the needle aligned with the arm of the machine. Be sure to tighten needle clamp screw to prevent needle from slipping or turning.

THREADING THE NEEDLE

To thread the machine, follow the points in the order in which they are numbered.

- (1) Pass the thread through the hole in the spool pin on top of the machine arm cover.
- (2) From right to left through the top hole of the thread retainer with the three holes.
- (3) From left to right through the bottom hole of this thread retainer.
- (4) Down between the tensions discs, with the thread running from right to left under the tension controller stud.
- (5) Over the hook of the thread take-up spring.
- (6) Under the slack thread regulator.
- (7) Up and from right to left through the hole in the end of the thread take-up lever.
- (8) Down through the eyelet on the faceplate.
- (9) Down through the eyelet on the needle bar thread guard.
- (10) From left to right through the eye of the needle. Leave about 4 inches of thread t through the eye of the needle.

THREAD TENSIONS

a. Correct Tension. For ordinary stitching, the bobbin and needle threads should be locked in the center of the thickness of the material, as illustrated in A, Figure 1. If the tension on the needle thread is too tight, or if that on the bobbin thread is too loose, the needle thread will be straight along the upper surface of the material, as illustrated in B, figure 1. If the tension of the bobbin thread is too tight, or if that on the needle thread is too loose, the bobbin thread will be straight along the under side of the material, as illustrated in C, figure 1. If both threads are too tight, the material will be puckered and drawn together by the stitches, and the threads will break.

b. Bobbin Thread Tension. The tension on the bobbin thread is regulated by the bobbin case tension spring. To increase the tension, turn the screw to the right. To decrease the tension, turn the screw to the left. When the tension on the bobbin thread has been properly adjusted, it is seldom necessary to change it, because a correct stitch can usually be obtained by varying the tension on the needle thread.



A



B



C

- A. Perfect stitch.
- B. Tight needle thread tension.
- C. Loose needle thread tension.

Figure 1. Effect of tension on stitch.

c. Needle Thread Tension. The tension on the needle thread is controlled by the tension regulating thumb nut on the tension controller. To change the needle thread tension, proceed as follows:

(1) Lower the presser foot so that it rests upon throat plate. The tension discs, if correctly adjusted, will then be closed. The tension should be regulated only when the presser foot is down.

(2) To increase the tension, turn the thumb nut to the right. To decrease the tension, turn the thumb nut to the left.

REMOVING BOBBIN

- a. Turn the balance wheel toward you until the needle moves up to its highest point.
- b. Draw out the slide (view plate) in the bed of the machine.
- c. Reach under the stand top. With the thumb and forefinger of the left hand, open the latch on the bobbin case and, holding the bobbin case by the latch, lift it to the left and out of the shuttle race.
- d. As long as the latch is held open, a sliding lug inside the bobbin case holds the bobbin inside the case. When the bobbin case is turned open-side down, and the latch is released, the bobbin will drop out. Do not try to force the bobbin out of the case while the latch is open.

WINDING BOBBIN

To wind thread on bobbin, proceed as follows:

- a. Place the bobbin on the bobbin winder spindle and push it on as far as it will go.
- b. Pass the thread from the bobbin thread cone on the thread stand down through the thread hole in the tension bracket and down between the bobbin winder tension discs.
- c. Pull the thread from the lower side of the tension discs to the bobbin.
- d. Pass the thread around the bottom side of the bobbin, wind the end of the thread around the bobbin a few times, push the bobbin winder pulley over against the machine belt by pressing on the stop latch thumb lever and see that the automatic stop latch catches and holds the pulley against the driving belt.

e. The bobbin may be wound while the machine is stitching. However, if no fabric is under the needle, see that the needle thread is pulled out of the eye of the needle and lock the presserfoot in the raised position by raising the hand lifting lever. The needle thread should be pulled from the needle to prevent its catching the bobbin thread and balling up under the throat plate; and the presserfoot should be raised to prevent undue wear.

f. Run the machine until the bobbin is full. If the bobbin winder is properly adjusted, the automatic stop latch will operate and throw the bobbin winder pulley away from the machine belt when the bobbin is full.

g. If the thread fails to wind evenly on the bobbin, or piles up on one side of the bobbin, loosen the screw which holds the tension bracket and move the bracket to the right or left as required. Then tighten the screw.

THREADING BOBBIN CASE

a. Figure 2 shows the relative positions of the bobbin case, bobbin and thread when the bobbin is put into the bobbin case. The thread should draw over the top of the bobbin and from left to right just before the bobbin is slipped into the case.

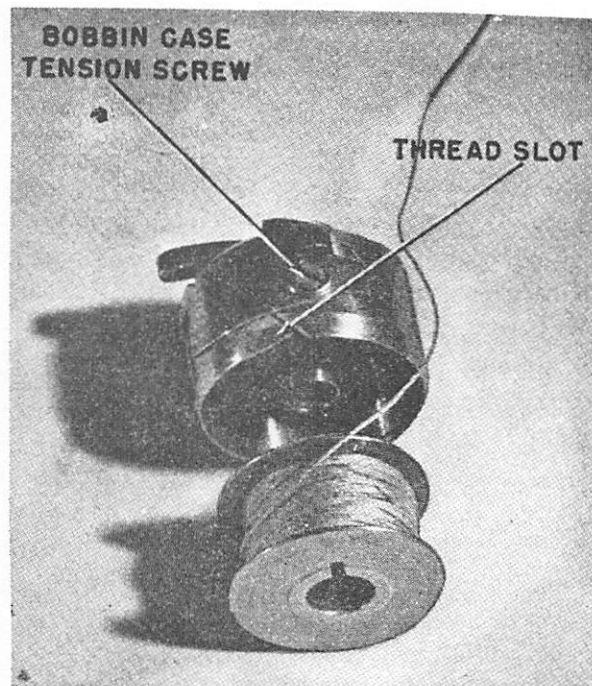


Figure 2. Bobbin case with bobbin ready to be slipped in

b. To thread the bobbin case, hold it in the left hand, as shown in A, figure 3, the slot in the edge being near the top, and place the bobbin in the case so that the thread pulls over the top of the bobbin and away from you.

c. Pull the thread into the bobbin case thread slot, as in B, figure 3, draw the thread down under the bobbin case tension spring and into the delivery eye at the end of the tension spring, as in C.

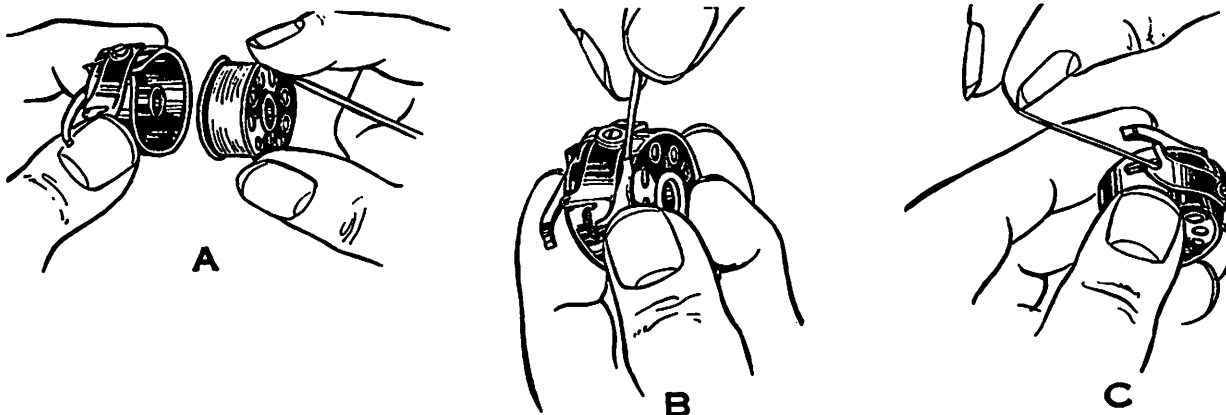


Figure 3, Threading Bobbin Case

REGULATING THE LENGTH OF STITCH

Upon the arm, facing the operator, is a pivoted lever that is fastened in position by a thumb screw, movable in a slot; to change the length of the stitch, have the needle bar up, loosen the thumb screw and move the end of the lever down to make the stitch longer, or up to make it shorter; then tighten the thumb screw.

TO BEGIN SEWING

With the left hand take hold of the needle thread, leaving it slack between the hand and the needle, turn the balance wheel toward you until the needle moves down and up again to its highest point, thus catching the shuttle thread; draw up the needle thread and the shuttle thread with it through the hole in the throat plate, and lay both threads back from you; then place the material beneath the presserfoot, lower the presserfoot and commence to sew, turning the balance wheel over toward you.

PRESSERFOOT PRESSURE ADJUSTMENT

Pressure on the material is regulated by the thumb screw which forms the upper bearing of the presser bar. This seldom requires changing for ordinary work.

KNEE LIFTER

The presserfoot can be raised by operating the knee lifter to the right. This knee lifter connects with a knee lifting lever on the bottom of the head of the machine. A knee lifting lever push rod runs up and behind the arm of the machine to the presserfoot.

HAND LIFTING LEVER

The presserfoot may also be lifted and locked in its raised position by raising the hand lever to its highest position. After the presserfoot has been locked in its raised position, it may be released by pressing the knee lifter to the right.

REMOVING WORK FROM MACHINE

Let the take-up lever rest at its highest point; raise the presserfoot and draw the fabric back and to the left and cut the threads close to the goods.

2006	Thread take up cam
2007	Needle bar crank
2008	Thread take up crank
2009C	Thread take up lever complete
2010	Needle bar
2011	Feed forked connection
2012C	Feed regulating crank w/roller
2013	Feed regulating lever shaft
2014	Feed regulating lever
2015	Feed regulating lever clamp plate
2017	Feed bar socket joint
2018	Needle bar connecting stud
2019	Feed bar bell crank bracket
2020	Feed bar bell crank bracket set screw
2021	Lifting presser bar connecting link
2022	Feed bar guide bracket
2023	Lifting presser bar (hollow)
2024	Lifting presser bar spring
2025	Lifting presser bar spring pin
2026	Presser regulating thumb screw
2027	Lifting presser bar lifting bracket
2028	Lifting presser bar lifting bracket set screw
2029	Feed bar bell crank
2030	Feed bar bell crank gap screw washer
2031	Lifting presser bar connecting link cap screw

2032	Tension releasing lever
2033	Feed bar socket joint cap plate
2034	Feed bar guide bracket cap plate w/pin
2035	Feed bar guide bracket slide block
2037	Feed bar bell crank
2038	Tension Releasing lever connecting extension
2039	Tension releasing lever connection
2040	Tension releasing lever connection screw
2041	Tension releasing lever connection screw washer
2042	Feed regulator lever segment
2043	Feed regulator lever segment screw
2044	Shuttle race upper spring screw
2045	Shuttle race upper spring
2046	Arm shaft bushing (front)
2047C	Race body complete
2048	Arm shaft
2049	Shuttle bobbin case position plate
2050	Knee lifter lifting lever
2051	Lifting presser bar lifter
2052	Lifting presser bar lifter pin
2053	Thread Guard (large)
2054	Thread take up spring regulator (tension bushing)
2055	Needle plate (medium hole)
2056	Needle plate thread guard
2057	Thread take up spring reg. spring

2058	Feed reg. lever shaft set screw
2059C	Face plate complete
2060	Pulley (hand wheel)
2061C	Arm top cover complete
2062	Arm top cover screw
2063	Arm top cover washer
2064	Spool pin
2065	Spool pin washer
2066	Arm oil tube (long)
2067	Arm oil tube (short)
2068	Knee lifter lifting lever pin
2069	Face plate thread guard
2070	Face plate thread guard rivet
2080	Needle plate (large hole)
2081	Lifting presser foot)
)
2082	Feeding hinged presser foot)
3007	Arm shaft bushing (back)
3011	Thread take up cam screw (large)
3012	Thread take up cam screw (small)
3015	Thread take up lever hinge pin
3016	Thread lever counter screw
3028	Knee lifter lifting lever link
3029	Knee lifter lifting lever link hinge screw
3033	Tension releasing lever pin
3034	Crank connecting rod

3036C	Crank connecting rod hinge screw w/nut
3037	Oscillating rock shaft crank
3038	Oscillating rock shaft pipe
3039	Oscillating shaft crank
3040	Face plate set screw
3041	Lower shaft/
3042	Shuttle driver
3047	Bobbin case
3060	Knee lifter lifting bar
3065	Thread retainer
3066	Thread retainer set screw
3069	Tension screw stud
3070	Tension check spring
3071	Tension releasing disc
3073	Tension releasing pin
3076	Shuttle body (hook)
3077	Thread take up lever hinge pin set screw
6007	Lower shaft crank slide block
6011	Shuttle race back
6012	Shuttle race spring
6013	Shuttle race spring screw
6024	Feed lifting rocker shaft crank roller
6025	Feed lifting rocker shaft crank set screw
6031	Needle plate screw
6033	Slide plate
6034	Slide plate spring

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6035	Slide plate spring screw
6038C	Knee lifter bell crank complete
6041	Knee lifter bell crank spring
6042	Knee lifter bell crank set screw
6322C	Thread take up crank pipe w/screw
6359	Lifting lever connecting joint
6361	Lifting lever connecting set screw
6363	Upper shaft screw
7018	Oscillating shaft crank set screw
7035	Needle plate thread guard
8007	Balance wheel set screw
8009	Rear bushing
8020	Shuttle driver pin
8029	Needle clamp
8030	Needle bar thread guide
8039	Presser bar
8040	Presser bar screw
8077	Tension disc
8078	Tension spring
8079	Tension nut
8086	Knee lifter lifting lever hinge screw
8091	Shuttle Race set screw
8093	Feed reg. lever clamp thumb screw