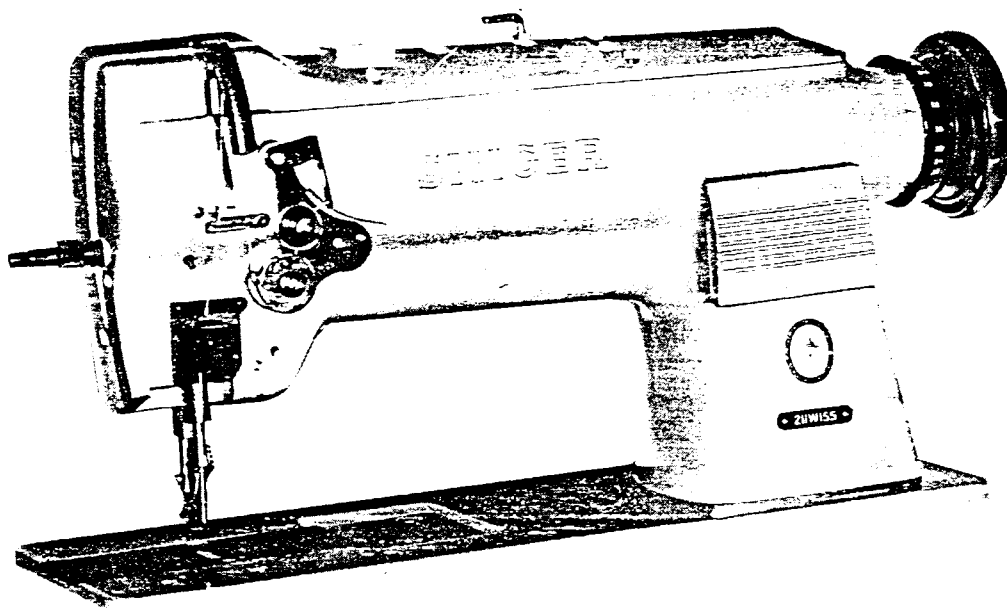


**SINGER**  
**211W155**

# SERVICE MANUAL

FOR

## SINGER<sup>\*</sup> 211W155 machine



Single Needle

High Speed

Lock Stitch

---

THE SINGER COMPANY

<sup>\*</sup>A Trademark of THE SINGER COMPANY

Printed in U.S.A.

## DESCRIPTION

Machine 211W155 is a single needle, lock stitch, compound feed machine with alternating pressers for automobile work, tents, tarpaulins, furniture upholstery, leather coats, work gloves, etc.

It has a belt-driven, rotary sewing hook on a vertical axis.

The compound feeding mechanism consists of a needle feed and a drop feed which are simultaneously adjustable for stitches up to 3 1/2 to the inch.

An adjustable lifting eccentric makes it possible to instantly set the alternating pressers to the minimum amount of lift required for the work to be sewn.

The machine has a safety clutch which prevents damage to the sewing hook or interference with its timing in case of accidental strain.

The needle bar stroke is 1-5/16 inches and the maximum presser bar lift is 1/2 inch.

The pulley ends of the arm shaft and hook driving shaft are mounted on ball bearings.

## SPEED

The maximum speed recommended for this machine is 3500 R.P.M. per minute, depending on the material being stitched and thickness of the seams to be crossed. It is advisable to run a new machine slower than the maximum speed for the first few minutes to allow time for the oil to reach the moving parts. The Machine Pulley turns over toward the operator.

## NEEDLES

Needles for Machine 211W155 are Catalog 3355 (135x17) and are made in sizes 12, 14, 16, 18, 20, 22, 23 and 24.

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.

## CAUTION

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

## TO OIL THE MACHINE

To insure 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. A new machine should be oiled more frequently when it is in continuous use on long runs.

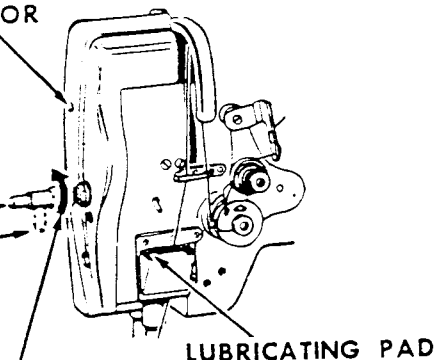
Use "TYPE G" OIL sold by Singer Sewing Machine Company.

FILL THREAD LUBRICATOR  
RESERVOIR WITH  
**SINGER\***  
THREAD LUBRICANT

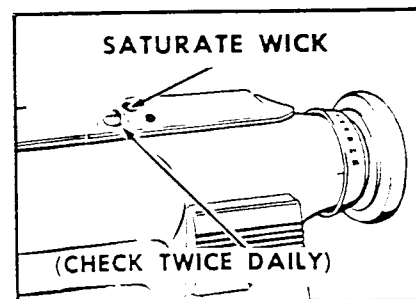
ON  
WHEN MACHINE  
IS RUNNING

OFF  
WHEN MACHINE  
IS IDLE

FOR  
MORE  
THREAD  
LUBRICANT



Lubricating Machine Head

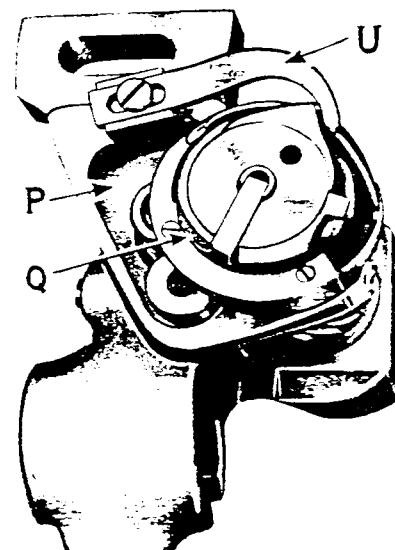


Reservoir in Arm

## HOOK LUBRICATION

Oil should be placed in the oil well (P) to lubricate the upper hook bearing and the mechanical opener mechanism.

The small green felt pad (Q) on the side of the bobbin case should be kept wet with oil to lubricate the hook race. When this pad is wet it appears nearly black, and when it appears light green it indicates that it is dry. When a machine is new, oil should be applied to this felt pad each time a bobbin is replaced.

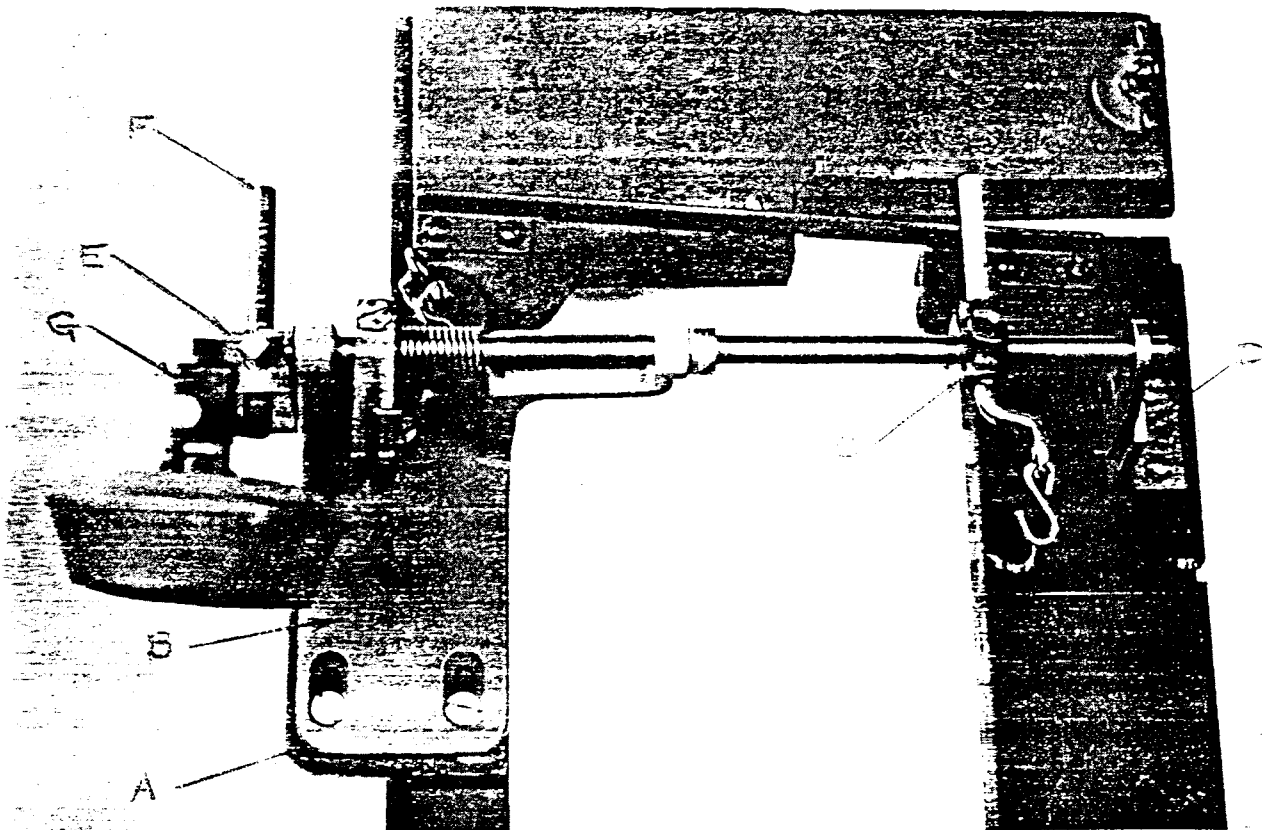


Hook lubrication

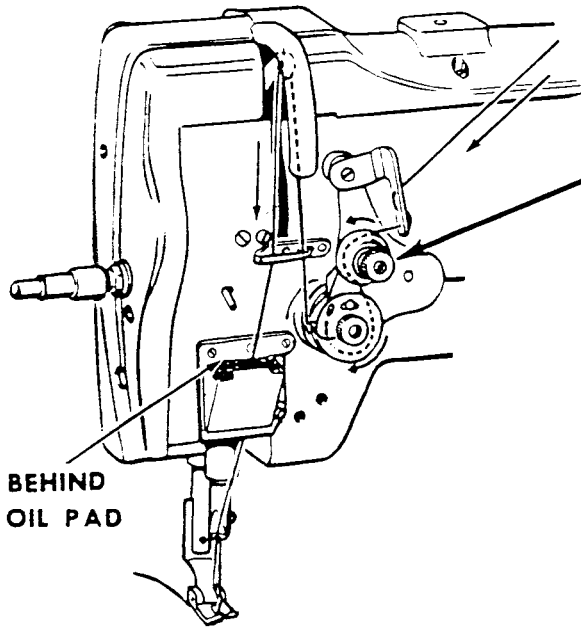
## TO SET THE KNEE LIFTER TO THE INSERT

Turn the insert table over with the underside up, then approximately 7 inches from the right edge of the insert, fasten the auxiliary base plate A to the insert, then fasten the rock shaft bracket B to the auxiliary base plate. Slide the rock shaft bracket C, with the extension arm, on to the long shaft; next fasten the rock shaft support bracket D to the insert. Slide the knee plate arm bracket E on the end of the short shaft and tighten the lock screw; next insert knee lifter arm F in bracket E and tighten the lock screw. Place the knee lifter arm bracket G, on the arm F and tighten lock screw.

To adjust the extension arm in the bracket C, loosen the top lock screw and move arm forward or backward until the lifting chain moves freely through the hole in the insert.



# THREADING NEEDLE



Threading Tension Assembly

BEHIND  
OIL PAD

Upper Threading Complete

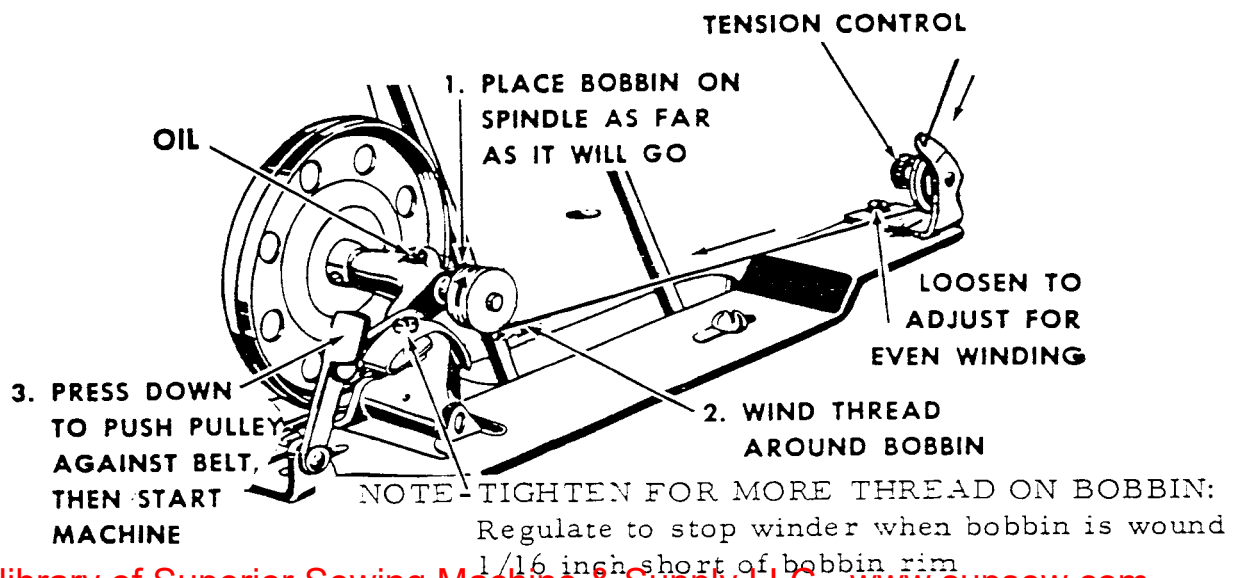
## BOBBIN REMOVAL



RAISE LATCH

- LIFT OUT BOBBIN

## WINDING THE BOBBIN



## BOBBIN REPLACEMENT

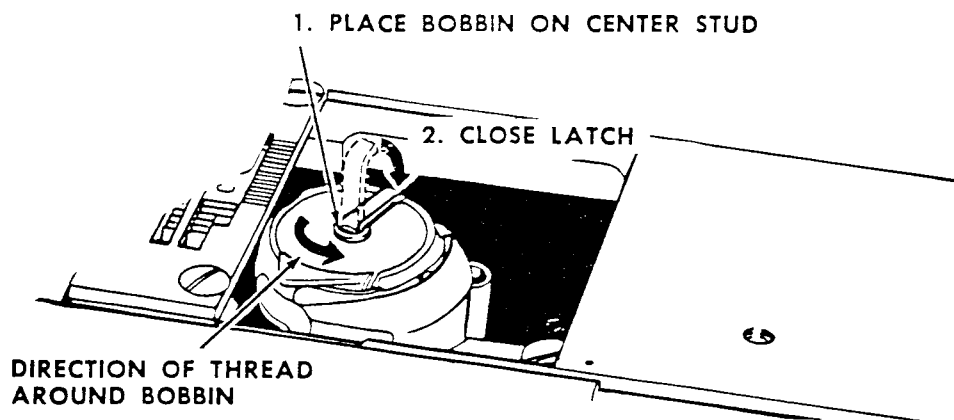
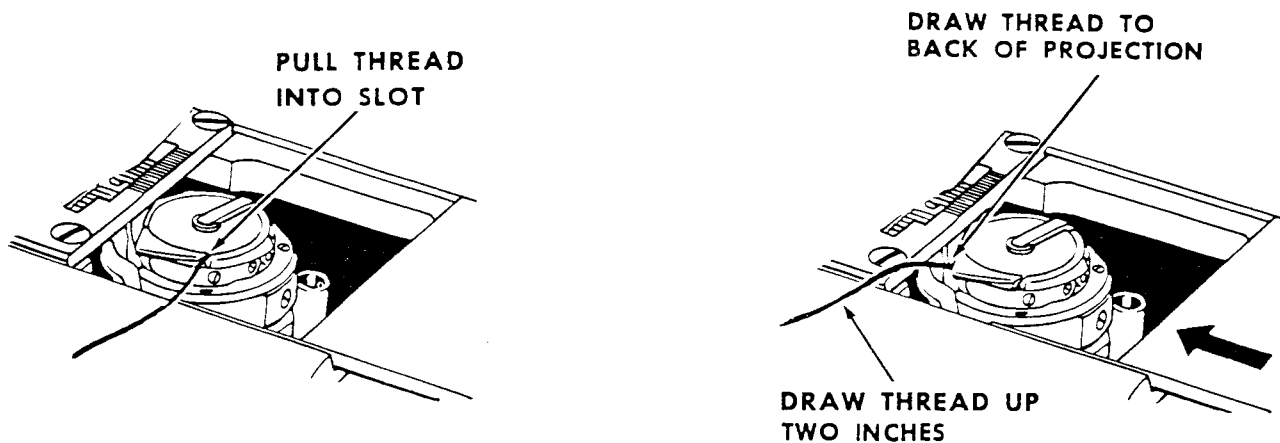


Fig. 14.

## THREADING BOBBIN CASE



## TO SET THE NEEDLE

Turn the machine pulley over toward you until the needle bar moves up to its highest point; loosen the set screw in the needle bar and put the needle up into the bar as far as it will go, with its long groove toward the left, the eye of the needle being directly in line with the machine bed, then tighten the set screw.

### TO REGULATE THE TENSIONS

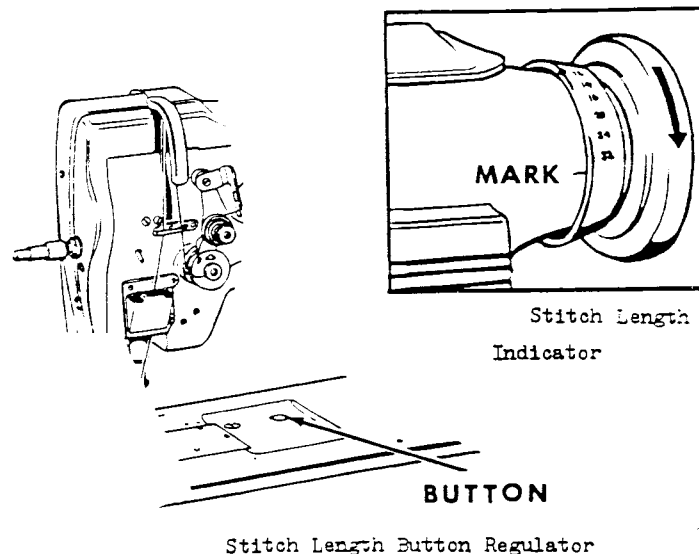
The tension on the needle thread is regulated by the thumb nut (R, Fig. 18) at the front of the tension discs on the front of the machine. To increase the tension, turn this thumb nut over to the right. To decrease the tension, turn this thumb nut over to the left.

The tension on the bottom thread is regulated by means of the screw nearest the center of the tension spring on the outside of the bobbin case. To increase the tension, turn this screw over to the right. To decrease the tension, turn this screw over to the left.

### STITCH LENGTH REGULATION

1. Stop machine.
2. Depress button shown
3. Turn machine pulley toward you slowly - until button drops (clicks).
4. Turn machine pulley until desired stitch length is opposite mark on arm
5. Release button.

Never depress the button while the machine is running.  
Make certain that plunger is disengaged before starting machine.



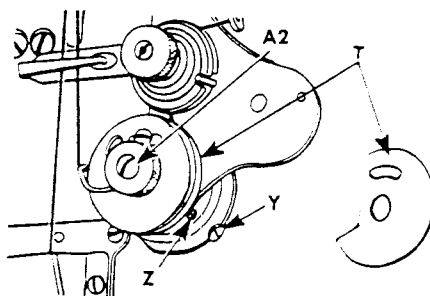
### THREAD CONTROLLER

The function of the thread controller spring is to hold back the slack of the needle thread until point of needle reaches the goods in its descent, as without this controlling action of the spring, the slack thread (especially silk) will sometimes be penetrated by point of needle as needle is descending.

To change the thread controller stop for more controller action on the thread, loosen set Screw Z, and turn thread controller spring stop T, to the right; for less action, turn thread controller spring stop T to the left, after which securely tighten set screw Z.

It may be found advisable to increase tension of spring for coarse thread, or to lessen it for fine thread.

To increase tension of thread controller on thread, loosen tension stud set screw Y, located nearly under tension stud, and turn tension stud A2 slightly to the left. To decrease tension turn it to the right. Re-tighten stud set screw Y.



Adjustment of Thread Controller

#### TO SET NEEDLE BAR

See that needle is up in the holder as far as it will go. There are two lines across the needle bar about two inches above the lower end. When needle bar is at its lowest position, the upper mark should be just visible at end of needle bar frame.

In case needle bar is not correctly set, loosen needle bar connecting stud pinch screw M and place needle bar in correct position as directed above, then re-tighten screw M.

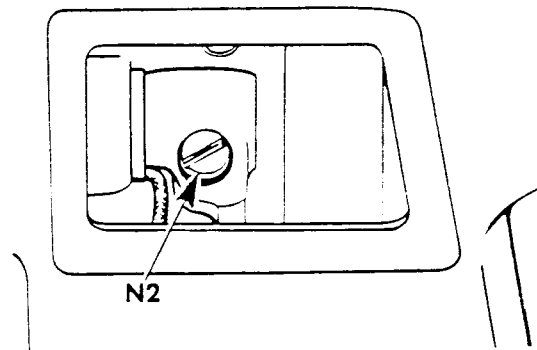
#### TO SET A NEEDLE BAR WHICH HAS NO MARK

Regulate the stitch length as instructed so that there is no feeding motion, then set needle bar so that when it rises  $\frac{3}{32}$  inch from its lowest position and point of sewing hook is at center of needle, eye of needle will be about  $\frac{1}{16}$  inch below point of hook.

## RELATIVE POSITIONS OF NEEDLE BAR AND PRESSER BAR

The distance between the needle bar and presser bar (after regulating stitch length so that there is no feed movement) should be  $2\frac{1}{64}$  inch as shown below.

If the distance between needle bar and presser bar is more or less than  $2\frac{1}{64}$  inch, loosen needle bar frame shaft clamp screw N2. While this screw is loose needle bar frame can be moved forward or backward, as may be required.



To Adjust Needle Rock Frame

## TO CHANGE AND REGULATE THE AMOUNT OF LIFT OF THE ALTERNATING PRESSERS

The height of lift of the pressers is adjustable by moving the link to either of the two holes in the lifting rock shaft crank at the back of the machine. The maximum lift is secured with the link in the bottom hole. The amount of lift should be regulated according to the thickness of the material being sewn. The feet should lift just high enough to clear the material.

The regulation of the amount of lift is controlled by an adjustable eccentric. To regulate, turn the machine pulley until the feed presser is down, loosen the two lock screws and two clamping screws in the eccentric, hold a screwdriver in the notch of the adjusting disc and, while the screwdriver is in the notch, turn machine pulley, clockwise for more lift or counterclockwise for less lift.

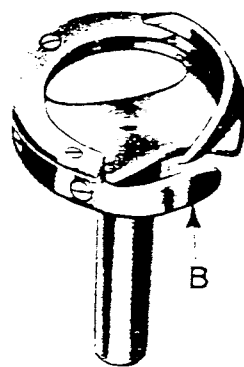
CAUTION: When desired lift is attained, securely tighten the two clamping screws and their locking screws. As a rule, the vibrating and lifting pressers should lift an equal height, but some grades of work may require that they lift an unequal height. To change the relative lift of the presser foot, loosen the screw in the lifting rock shaft, at the back of the machine and move the vibrating presser bar upward or downward as desired, then securely tighten the lifting rock shaft screw.

#### TO SET THE SEWING HOOK TO OR FROM THE NEEDLE

To prevent the point of the hook from dividing the strands of the thread, it should run as close to the needle (within the scarf) as possible.

Turn the machine pulley over toward you until the point of the sewing hook is at the center of the needle. Loosen the two screws holding the hook saddle underneath the bed of the machine and move the hook saddle to the right or left, as may be required, until the point of the hook is as close to the needle as possible without striking it, then securely tighten the two screws.

The needle guard "B", which is attached to the side of the sewing hook should be sprung until it prevents the needle from striking the hook in case the needle is deflected towards the hook.



Sewing Hook Removed from Machine  
Showing Hook Washer

### TO RAISE OR LOWER THE FEED DOG

Usually when the feed dog is at its highest position, it should show a full tooth above the throat plate.

Remove the throat plate; clean the lint and dust from between the feed points and replace the throat plate; tip the machine back and turn the machine pulley towards you until the feed dog is at its highest position; loosen the screw in the feed lifting cam fork on the feed bar and raise or lower the feed dog, as may be required and retighten the screw.

When raising or lowering the feed dog, be careful that its underside does not drop low enough to strike the sewing hook.

### TO REMOVE THE SEWING HOOK FROM THE MACHINE

Remove the bed slide, throat plate, feed dog and bobbin case opening lever, then tip the machine back and loosen the two screws in the hub of the hook shaft gear and lift out the sewing hook.

### SAFETY CLUTCH

The safety clutch is adjustable to suit sewing conditions and protects hook from damage resulting from accidental strain. Should any foreign matter clog the hook, this new type safety clutch will disengage itself and will re-engage only after area has been cleared.

This safety clutch has been set at the factory at proper torque setting and must not be disturbed.

### THE FEED ECCENTRIC

Feed eccentric is provided with a gib P2 which can be adjusted to take up any wear or loose motion between feed eccentric and eccentric body. To adjust gib, loosen two locking screws Q2 against gib until all play is eliminated and eccentric fits snugly in slot in eccentric body. Securely tighten two locking screws Q2.

Spring R2 presses against feed eccentric cam to prevent it from moving out of position while machine is operating. Collar S2 may be moved to right or left to change spring pressure. It should ordinarily be set flush with end of hub of eccentric body.

## TO REPLACE ARM SHAFT CONNECTION BELT

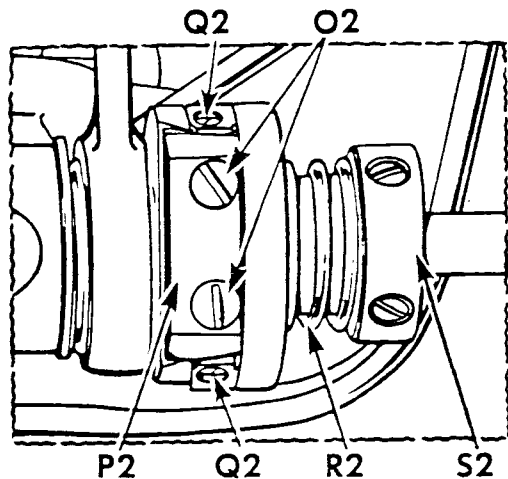
Remove needle to avoid damage while machine is out of time. Slide belt off lower pulley X2. Loosen two screws in machine pulley and remove machine pulley and ball bearing which comes out with the pulley. Lift belt up and draw it around arm shaft through space at M2, normally occupied by ball bearing.

Replace belt through ball bearing hole at M2. After placing belt over upper pulley T2, replace machine pulley with ball bearing. To remove all end play from shaft, lightly tighten set screws in machine pulley and (holding needle bar crank in place) tap machine pulley into position with palm of hand. Tighten machine pulley set screws firmly.

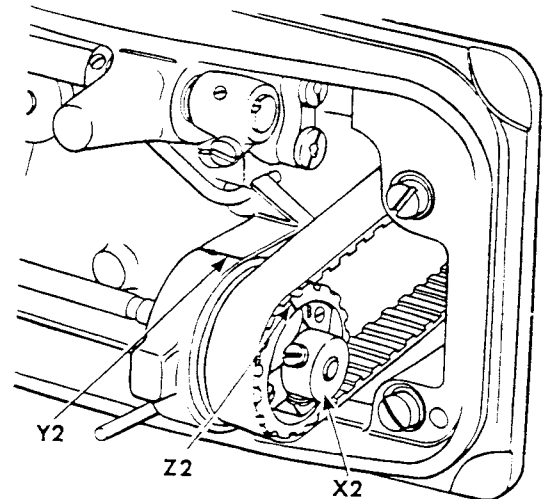
Turn machine pulley over toward you until thread take-up lever is at its highest point. Then turn hook driving shaft until the "B" setting mark at Z2 on safety clutch in pulley X2 is in line with mark Y2 cut into machine bed. Now, without disturbing either arm shaft or hook driving shaft, slip belt over lower pulley.

The feed will then be correctly timed with needle.

NOTE: Safety clutch in lower belt pulley X2 has been set at factory for correct torque and must not be disturbed.



Feed Eccentric



To Replace Arm Shaft Connection Belt