

**SINGER**  
**246-1 TO 246-5**

Form 20449  
(350)  
Printed in U. S. A.

## INSTRUCTIONS

FOR ADJUSTING

FEED DOGS, NEEDLE CARRIER,

LEFT and RIGHT LOOPERS

on

# **SINGER**\* Machines

**246-1, 246-2, 246-3 and 246-4**

USING GAUGE No. 164459

**and on Machine 246-5**

USING GAUGE No. 164460

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### TO SET THE FEED DOGS AT THEIR CORRECT HEIGHT

(See Fig. 1)

To check the height of the feed dogs, swing the presser foot **K** out to the left. Place the gauge **J2** over the feed dogs and firmly resting upon the throat plate **U2**, as shown in Fig. 1. Turn the machine pulley over from you until the feed dogs are at their highest point, in which position the feed dogs should just touch the bottom face **K2** of the gauge **J2**.

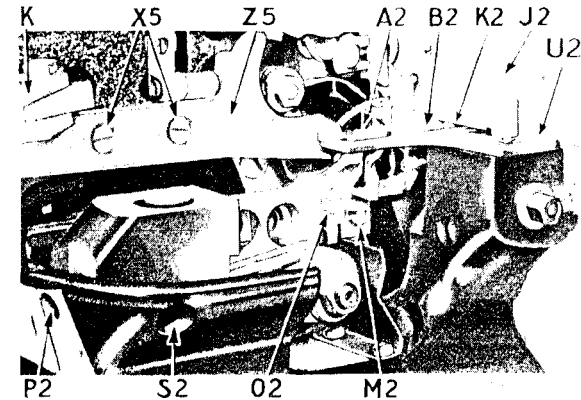


Fig. 1. Setting the Feed Dogs

To set the feed dog **B2**, swing the cloth plate and the feed eccentric cover out to the left, then loosen the adjusting screw **M2** and move the feed dog **B2** up or down, as required. Then tighten the screw **M2**.

To set the rear feed dog **A2**, loosen the adjusting screw **O2** and move the feed dog **A2** up or down, as required. Then tighten the screw **O2**.

### TO SET THE NEEDLE CARRIER AT THE CORRECT HEIGHT

(See Figs. 2 and 3)

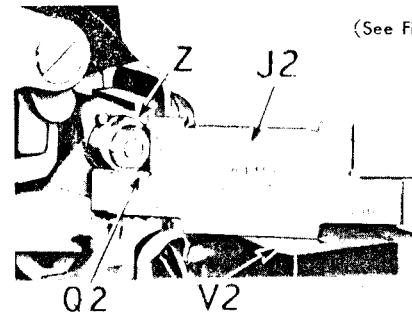


Fig. 2

Checking the Needle Carrier Height

To check the height of the needle carrier, turn the machine pulley over from you until the needle carrier **Z** reaches its highest position. Remove the needle and the throat plate, swing the presser foot and cloth plate out to the left and turn the machine pulley over from you until the needle carrier **Z** reaches its lowest position. Slip the "LOW" end of the gauge **J2** between the needle carrier and the throat plate seat, as shown in Fig. 2.

At this setting, the needle carrier Z should just touch the top surface Q2 on the "LOW" end of the gauge J2.

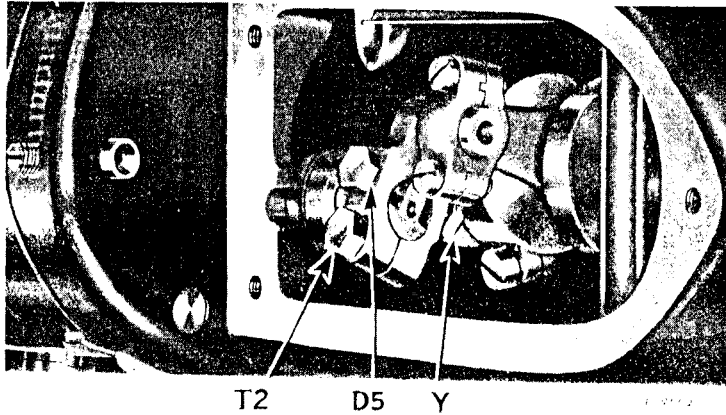


Fig. 3. Adjusting the Needle Carrier

To set the needle carrier at the correct height, remove the top frame cover and loosen the clamping screw T2 and the two adjusting screws X and Y. Move the needle carrier Z up or down, as required. Then first securely tighten the screw T2. Next tighten the two screws X and Y, and replace the top frame cover on the machine.

#### TO SET THE LEFT LOOPER IN RELATION TO THE NEEDLE

(See Figs. 4 and 5)

To install the left looper, remove the throat plate U2, Fig. 2 and the chip guard. Loosen the set screw W2 in the left looper holder C3, and set the looper all the way down into its holder. Then securely tighten the set screw W2.

To set the left looper the correct distance to the left of the needle, turn the machine pulley over from you until the needle carrier Z, after reaching its lowest position, rises sufficiently to permit the "HIGH" end of the gauge J2 to pass between the needle carrier and the throat plate seat, as shown in Fig. 4. At this setting the needle carrier Z should just touch the top surface U4 on the "HIGH" end of the gauge and the tip of the left looper Z2 should just touch the left side of the needle. If the left looper does not reach the needle at this setting, loosen the right adjusting screw B3, and tighten the left adjusting screw A3, until the tip of the left looper meets the needle.

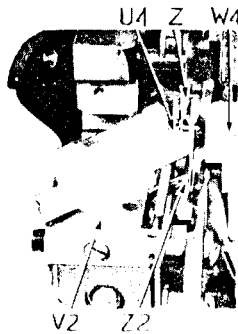


Fig. 4  
Setting the Left Looper

If the left looper passes the needle at the above setting, loosen the left adjusting screw A3 and tighten the right adjusting screw B3 until the tip of the left looper Z2 returns to the correct position. Then tighten the screw A3 and recheck the sidewise position of the left looper in relation to the needle, as described above.

The left looper must rub lightly on the needle, as it passes behind the needle in its movement toward the right. To set the left looper correctly behind the needle, remove the throat plate U2, Fig. 2 and the chip guard and turn the machine pulley over from you until the point of the left looper just passes the needle. Loosen the adjusting screw Y2 and the set screw X2 and move the looper holder C3 until the left looper Z2 almost touches the needle from the rear. Tighten the set screw X2 and then slowly tighten the adjusting screw Y2 until the left looper Z2 actually rubs on the needle. Then replace the throat plate U2, Fig. 2, and chip guard.

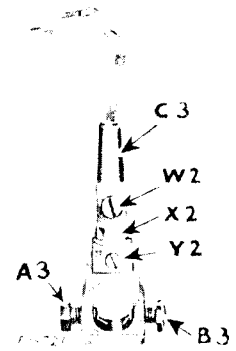


Fig. 5. Left Looper

#### TO SET THE RIGHT LOOPER IN RELATION TO THE NEEDLE

(See Figs. 6 and 7)

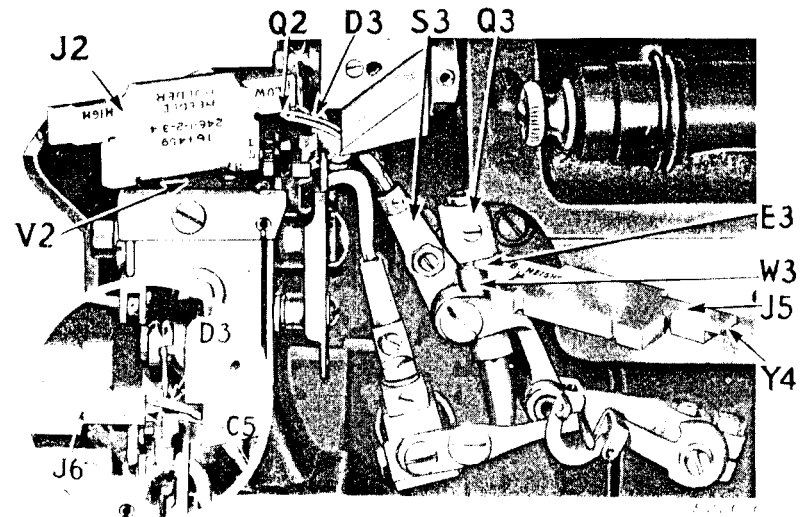


Fig. 6. Setting the Right Looper

To properly adjust the right looper setting, swing the presser foot out to the left, remove the chip guard, open the front cover plate, and remove the looper thread plate and the throat plate.

Adjust the right looper in the same order given in the following instructions.

1. When the right looper carrier is at its extreme left position, the distance between the bracket **Q3** and the guide bar **W3** should be at least equal to the thickness **E3** on the "LOW" side of the gauge shown at **J5**, **Fig. 6**. However, this clearance must be not greater than the thickness **Y4** on the "HIGH" end of the gauge.

To adjust the distance between the bracket and guide bar, loosen the clamping screw **M3** and the adjusting screws **N3** and **P3**. To increase this distance, tighten the lower adjusting screw **P3** until the proper distance is obtained. To decrease this distance, tighten the upper adjusting screw **N3**. When the correct setting is obtained, securely tighten the clamping screw **M3**.

2. Loosen the two set screws **G3** and move the bracket **Q3** right and left to determine its extreme right and left positions on the casting. Locate the bracket **Q3** at the midpoint of the two extremes and tighten the two set screws **G3**.

3. Insert the looper **D3** in the looper carrier **S3** and place the gauge on the throat plate seat, as shown at **J2**, **Fig. 6**. When the right looper **D3** is at its extreme left position, it should just touch the undersurface **Q2** on the "LOW" end of the gauge.

To set the right looper at the correct height, loosen the set screw **F3** on the looper collar **K3** and loosen the nut on the locking screw stud **H3** on the looper carrier **S3**. Making sure that the slot in the locking screw stud **H3** is in line with the looper carrier, set the right looper **D3** up or down in looper carrier, as required, and tighten the nut on the stud **H3** in looper carrier. Then press looper carrier **K3** firmly down against the looper carrier and securely tighten the set screw **F3**.

4. When the right looper passes the left looper, it should pass behind the left looper head and in front of the needle. Place the "HIGH" end of the gauge, as shown at **J6**, in the insert in **Fig. 6**, against the left side of the needle. Turn the machine pulley until the right looper **D3** is at its extreme left position. At this point, the tip of the right looper **D3** should just touch the surface **C5** of the gauge.

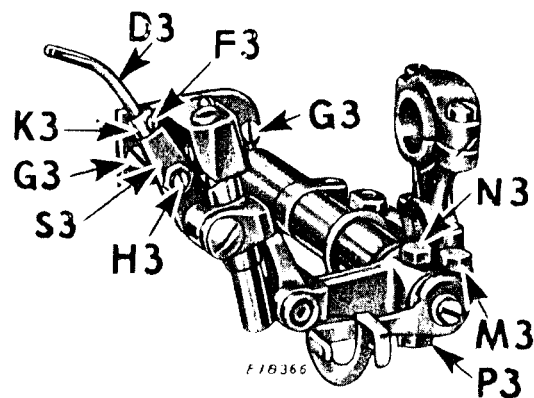


Fig. 7. Adjustments of the Right Looper

5. The right looper, when passing behind the left looper, should brush lightly on the front of the needle. To adjust this position of the right looper **D3**, loosen the nut on the stud **H3** and move the right looper **D3** in the right looper carrier **S3**, as required, then securely tighten the nut on the stud **H3**. Recheck and adjust the height and the right and left position of the right looper, as described above.

When all the settings of the right looper have been properly adjusted, check each setting again and make sure all set screws and nuts are securely tightened. Then replace looper thread plate and chip guard.