PFAFF®

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Semi-automatic Bobbin Winder

Provisional Instruction Book
and Service Manual

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1. Instructions

1.1 Winding the First Bobbin

Thread the bobbin winder by leading the thread through thread guides 1 - 6 (Fig. 1). Push the bobbin case with the empty bobbin on the upper bobbin winder spindle so that the key enters the slot in the bobbin case (see arrows in Fig. 1a) and that the bobbin case snaps into place on the spindle.

Depress starting lever 18 (Fig. 1). As you do this, thread guide tube 6 is lowered into the bobbin case cut-out.

Cut off the protruding thread end by pulling the thread over knife 7. (The thread has to be cut off by hand only after the bobbin winder has been threaded for the first time). The bobbin winder is now ready for winding the bobbin.

The bobbin is wound automatically while the machine is sewing. When the bobbin is full, gear wheel 10 rotates by half a turn and, while doing so, automatically threads the bobbin case. The bobbin winder is now ready to receive the next bobbin case.

1.2 Bobbin Changing

Take the bobbin case with the empty bobbin out of the sewing hook and place it on the upper bobbin winder spindle. Depress starting lever 18 (Fig. 1) and pull the bobbin case with the full bobbin from the lower bobbin winder spindle. As you do this, the thread is automatically cut to the proper length required for the starting stitches of the next seam. Tear off the thread end protruding on the back of the bobbin and insert the bobbin case with the full bobbin in the sewing hook.
2. Adjustments

2.1 Adjusting the Gear Wheel Rotating Lever

Depress starting lever 18 (Fig. 2) by hand and lift thread guide lever 12 to stop the bobbin winder. Turn the balance wheel toward you and check the operation of gear wheel rotating lever 17 which is actuated by eccentric 14 (Fig. 2a). After this lever has completed its feed stroke, it should contact eccentric screw 16. There should be a clearance of 1 mm between its tip and the tooth of the gear wheel. After it has returned to its starting position, its tip should be positioned behind the next tooth.

This setting normally need not be adjusted.

If for one reason or another adjustment should become necessary, however, disconnect the tension spring of lever 29 (Fig. 2), loosen allen screw 31 and strip lever 29. Then press gear wheel rotating lever 17 down as far as it will go, take out the hinge screw ofstarting lever 18 and swing this lever together with its connection toward the right.

Loosen jam nut 15 and adjust by turning eccentric screw 16. Then tighten jam nut 15 securely, replace the stripped parts in the reverse order and double-check this setting.
2.2 Adjusting the Positioning Lever

Depress starting lever 18 (Fig. 3) and lift thread guide lever 19 to stop the bobbin winder. Start the machine and let gear wheel 10 rotate until the two bobbin winder spindles 2 are positioned in a horizontal line. Now check to see that the tip of positioning lever 29 is flush with the rim of gear wheel 10 (see arrow in Fig. 3a).

If adjustment is required, loosen allen screw 31 and turn eccentric stud 30 to set the tip of positioning lever 29 at the correct height (Fig. 3a). Tighten allen screw 31 securely again.
2.3 Adjusting the Stopping of the Gear Wheel

Check to see that the two stop tripping points 27 protrude about 1 mm beyond the teeth of gear wheel 10. To adjust, loosen set screw 28 and adjust the stop tripping points as shown in Fig. 4a. Then tighten screws 28 securely.

Start the machine and let gear wheel 10 rotate until the bobbin winder stops automatically. (Gear wheel rotating lever 17 no longer engages the teeth of gear wheel 10.) Depress starting lever 18 and check the position of bobbin winder spindle 9 in relation to thread guide tube 6 (Fig. 4). If the bobbin winder has stopped correctly, the left edge of thread guide tube 6 should be in line with the center of bobbin winder spindle 9.

If adjustment is required, loosen set screw 28 and move stop tripping point 27 sideways until the bobbin winder stops correctly. As you make this adjustment, make sure you do not disturb the vertical setting of stop tripping point 27 as shown in Fig. 4a.

Move the tripping point to the left if the bobbin winder stops too early, or to the right, if it stops too late.

Check the position of the other bobbin winder spindle in the same manner and adjust, if necessary.
2.4 Adjusting the Bobbin Winder Spindles

When the bobbin winder has stopped, key 11 on the bobbin winder spindle (Fig. 5) should be positioned at the top and slightly to the right of the vertical line (dash-dot line in Fig. 5).

If adjustment is required, place a bobbin case on the upper bobbin winder spindle, making sure that the key enters the slot in the bobbin case, as shown in Fig. 1a. Depress starting lever 18 (Fig. 5) and lift thread guide lever 19 to stop the bobbin winder. Let gear wheel 10 rotate until both allen screws 35 (Fig. 5a) of pinion 36 on the back of gear wheel 10 are easily accessible.

Loosen both allen screws 35 just lightly so that the bobbin winder spindle can be turned. Run the bobbin winder until the bobbin case is at the top. When rotate the bobbin case until the key on the bobbin winder spindle is at the position indicated above. Again depress starting lever 18 and lift thread guide lever 19. Let gear wheel 10 turn until both screws 35 can be tightened again. As you tighten the two allen screws, make sure that the end play of the bobbin winder spindle does not exceed 0.1 mm.

To check, depress starting lever 18 and lift thread guide lever 19 to stop the bobbin winder. Let the gear wheel turn until the bobbin case is at the top. Then press down starting lever 18 and check to make sure that thread guide tube 6 is centered in the bobbin case cutout.

Check the other bobbin winder spindle in the same manner and, if necessary, adjust.
2.5 **Adjusting the Amount of Thread on the Bobbin**

Place a bobbin case with an empty bobbin on the bobbin winder spindle. Depress starting lever 18 (Fig. 6) and slowly lift thread guide lever 19 by hand. Check to see when this lever stops the bobbin winder.

Thread guide lever 19 should stop the bobbin winder when the lower end of thread guide tube 6 is still positioned about 1 mm inside cutout 20 of the bobbin case (Fig. 6).

To adjust, again depress starting lever 18 and push thread guide lever 19 down onto the core of the bobbin. Loosen the lower allen screw 22 and turn segment 21 upwards or downwards with a hexagon socket screw wrench (see arrow in Fig. 6).

Turn this segment up for more thread, or down for less thread.

Tighten the allen screws, but make sure you do not tighten them too much as they press on a hollow shaft and this might cause heavy working.
2.6 **Inoperative Position of Thread Guide Lever**

When the bobbin winder is inoperative, there should be a clearance of 4-5 mm between the lower end of thread guide tube 6 and the rim of the gear wheel (Fig. 7).

To adjust, loosen the set screw of stop 23 and set the latter higher or lower, as appropriate. After this adjustment, tighten the set screw securely.
2.7 Adjusting Lever 12

When thread guide lever 19 is inoperative, there should be a clearance of 1-2 mm between lever 12 and the left knife 7 (Fig. 8).

If adjustment is required, loosen stop screw 26 and spring suspension screw 25 and turn the set collar as may be required to obtain the above-mentioned clearance. Tighten both screws securely.

Note that screws which are tightened too much are bound to cause heavy working.
2.8 Setting the Thread Guide Lever to the Bobbin

When thread guide lever 19 is inoperative, it is inclined toward base plate 13. With lever 19 in this position, the rear edge of tube 6 should be flush with the rear wall of the bobbin (see arrow in Fig. 9a).

If it is not, loosen set screw 33 (Fig. 9), and adjust the position of thread guide lever 19 while making sure that the prong of bracket 34 contacts the left side of fork 32.
2.9 Adjusting the Leaf Spring

Remove bobbin case with bobbin and depress starting lever 18 (Fig. 5). Lift thread guide lever 19 (Fig. 10) by hand until there is a clearance of about 5 mm between thread guide tube 6 and bobbin winder spindle 2.

When in this position, thread guide lever 19 must not be engaged by leaf spring 37, i.e. it should be at its forward point of reversal. If the gap grows wider than 5 mm, leaf spring 37 should start to press thread guide lever 19 to the rear.

To adjust, loosen set screw 38 which can be reached from the inside of the tension bracket and swing flat spring 37 to the correct position. Then tighten set screw 38 securely.
3. Final Inspection of Bobbin Winder

Start the machine and let the bobbin winder run until it stops automatically. Depress starting lever 18 (Fig. 5) and check whether the left edge of thread guide tube 6 is positioned exactly above the center of the bobbin winder spindle.

If it is not, readjust the bobbin winder as instructed in par. 2.3 above. Make the same check for the second bobbin winder spindle.

Thread the bobbin winder as instructed in par. 1.1 and place a bobbin case with an empty bobbin on the upper bobbin winder spindle. Depress starting lever 18 and start the machine. Watch the machine wind the bobbin and stop. It is recommended to reduce the machine speed shortly before the bobbin is full.

If the bobbin is either too full or not full enough, adjust the segment as instructed in par. 2.5. Double-check the following adjustments and replace the bobbin winder cover.

Now the bobbin winder is ready for operation.