

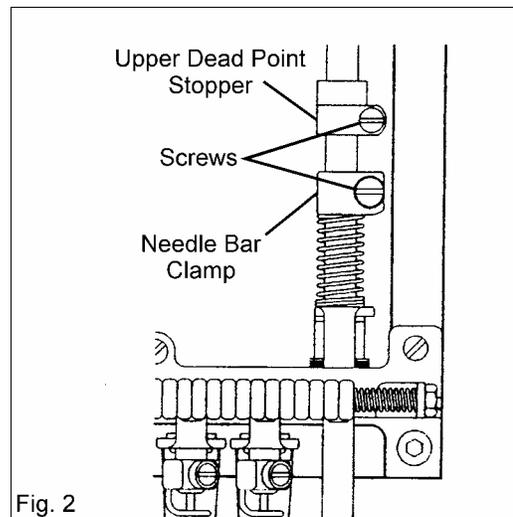
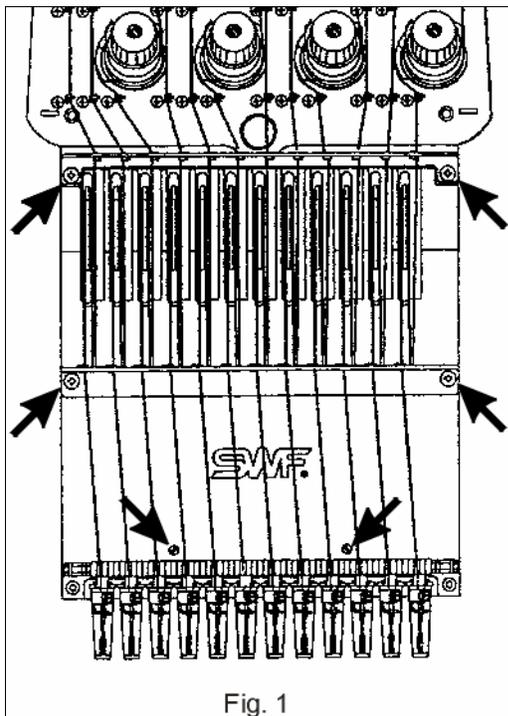
Setting Needle Bar Depth for SWF Embroidery Machines (All Models)

To set the needle bar depth for your SWF Embroidery machine, follow these instructions. These steps apply to all models of the SWF machine. Any exceptions to this will be noted where applicable.

Preparation and checking

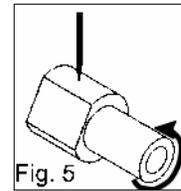
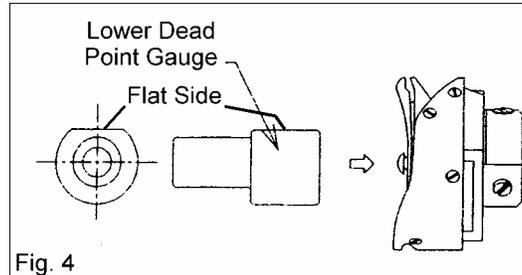
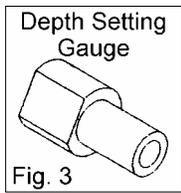
First set the machine to the needle bar you wish to adjust by pressing the appropriate button on the control panel. Remove the thread from the face plate area of the needle case. It is not necessary to unthread the tension base.

Next, remove the upper and lower face plates by removing the screws shown in fig.1. In the lower half of the needle case, locate the two clamps on each needle bar as shown in fig.2. The lower clamp is for adjusting the needle bar depth, the upper clamp is for setting the upper dead point stop position. If you adjust the depth on a needle bar, you will need to reset the upper dead point for that needle bar. Those steps are also included in this document.



Remove the needle plate, and then take out the bobbin case. Pull the needle bar that you are adjusting down until it locks in place. Rotate the main shaft to the lower dead point. This is the lowest point of the stroke of the needle bar. For multi-heads (2 to 12 heads), this is 178 degrees on the timing wheel, for single heads (standard and compact), this will be 180 degrees. In your tool kit, you will find a depth setting tool like the one shown in fig.3. Insert the gauge, flat side up, as shown in fig.4. Slowly rotate the gauge (either direction) until the tip of the needle slightly "scratches" the rounded side of the gauge as seen in fig.5. If the needle does not contact the surface of the gauge, the needle bar is too high. If the needle bends, the needle bar is too low. Either case means you will need to adjust the depth of that needle bar.

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Adjusting Lower Dead Point

Loosen the lower clamp on the needle bar you are adjusting. When loose, you should be able to slip the needle bar up or down. Adjust the depth so that the tip of the needle is just lightly touching the rounded surface of the depth gauge. Make sure the needle bar is turned to match the direction of the other needle bars, and then tighten the clamp.

Adjusting the Upper Dead Point

Now loosen the upper clamp on the needle bar and slide it down (refer to fig.2 again). Rotate the main shaft to the upper dead point. This is the highest point of the stroke of the needle bar. ***For ALL MACHINES this will be 0 degrees on the timing wheel.*** The needle bar should be raised at this position. While keeping firm pressure downward on the needle bar, slide the upper clamp all the way up as far as it will go. Tighten the clamp in this position. ***Make sure the clamp is turned in the same direction as the other clamps before tightening the screw.*** Rotate the main shaft to the Fixed Position, 100 degrees, which is marked in red on the timing wheel. The needle bar will be down, slightly above the hook at this time. This is normal. You may color change the machine to raise the needle bar, and then change back to the needle bar you are adjusting. Before continuing, you may want to test the upper dead point position. Turn off all heads ***except*** the head you are adjusting. On the control panel press the Trim button, and then press start. The machine should make about 2~3 stitches and then stop. If the needle bar came down on ***every*** stitch, the upper dead point is set correctly. If it did not come down at all, or the machine made 1 or 2 revolutions before the needle bar started, the upper dead point needs to be readjusted.

If the needle bar seems to be moving properly, you are ready to reassemble the face plates and test sew the head.