

Barudan

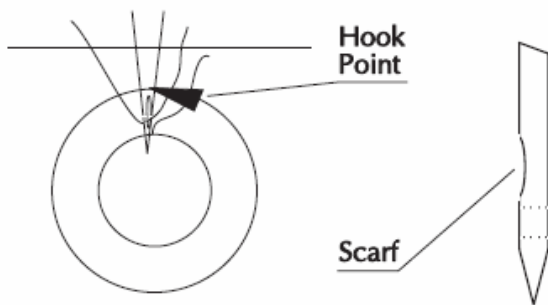
Knowledge Base > Installation and Maintenance > Hook Timing, ZO/ZN sewing heads

Hook Timing

Hook timing is probably the most misunderstood aspect of embroidery machine mechanics. It has nothing to do with the type of fabric, tension or synchronization of the heads on a multi-head machine. Hook timing is the proper position of the hook assembly in relation to the needle in order to form a stitch. The hook is directly attached to the drive shaft, eliminating the need to routinely re-time it. Re-timing of the hook only becomes necessary due to external factors.

- Something gets caught in the hook assembly.
- The size of the needle is changed by more than one size.
- An accumulation of thread behind the hook pushes the hook out of line.

The most common indication that the hook timing needs adjustment is when the machine fails to form and complete a stitch.



Checking the Hook Timing

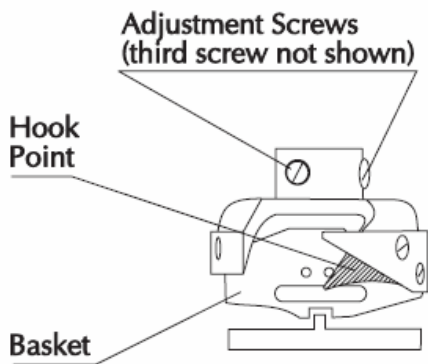
1. Leave the needle and bobbin threaded and remove the throat plate.
2. For easier access to timing, set the machine to the last needle.
3. Locate the main drive pulley with the degree indicator.

NOTE: The main drive pulley on an arm type machine is driven by the main motor drive belt. Remove the cover to access it. The main drive pulley on a bridge machine is located on the side of the machine opposite the Automat under a metal cover. Always rotate the main drive pulley in the direction that rotates the hook counterclockwise.

4. Rotate the main drive pulley to where the indicator points to 25 degrees on Bridge machine or 23 degrees on a Arm type head (or Single head). The point of the hook should be directly behind the scarf of the needle and above the needle eye.
5. Check the hook-to-needle clearance. There should be approximately one half to one thread-width clearance between the hook point and the back of the needle. Improper adjustment would cause the hook point to miss the small loop and create a skipped stitch.
6. Replace the covers.

Adjusting the Hook Timing

1. Clean any thread debris or lint from the hook area with compressed air.
2. Loosen the three screws at the rear of the hook. This will allow you to advance or retard the hook.
3. Locate the main drive pulley with the degree indicator.
4. Rotate the main drive pulley to where the indicator points to **25** degrees for a Bridge head or **23** degrees for an Arm type head (or Single Head). The point of the hook should be directly behind the scarf of the needle and above the needle eye.
5. Check the hook-to-needle clearance. There should be approximately one half to one thread-width clearance between the hook point and the back of the needle. Improper adjustment would cause the hook point to miss the small loop and create a skipped stitch.
6. When the correct position has been attained, tighten the three screws on the hook.
7. Replace the throat plate.
8. Use a Lettering program and make up an HOX test as follows:
 - Using a block alphabet, program "H O X" in capital letters, 20mm high. Load this design into the machine. These letters are used because they encompass all the various directions of the pantograph.
 - Sew the letters.
 - Check for any irregularities in the sewing. If the machine is not properly timed, it will result in skipped stitches.



Hook Assembly