



TIMING

By Wayne Snyder, USAPR Instructor

The needle bar height is NOT timing.

NEEDLE BAR:

Way too far up – hit bottom of lower needle bar bushing

Little to far up – loop forms above the eye of the needle and is not captured by hook.

At $3/32$ " needle rise the point of the hook lines up with the centerline of needle between $1/16$ " & $1/8$ " above the top of the eye and it will sew.

TOO far down – loop deformed/deflected by hook parts.

Way to far down – needle hits something

NOTE:

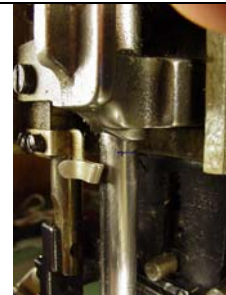
Moving needle bar up or down does not change the timing – it only changes the vertical location on the needle where the hook passes.

GENERAL TIMING ROUTINE

- Always time by going forward
- Mark needle at $1/16$ " (.0625) and $1/8$ " (.125) inch above top of eye of needle
- Insert correct needle fully into needle bar with correct orientation. Largest size normally used.
- Hand wheel forward to bring needle bar to lowest point. Mark needle bar with $3/32$ " (.09375) inch mark below lower needle bar bushing.
- Hand wheel forward to bring $3/32$ " (.09375) mark on needle bar up to bottom of lower needle bar bushing.

NOW: The point of the hook should be at the center line of needle between the $1/16$ and $1/8$ marks if the timing is correct.

If needed, rotate hook to line up with centerline of needle.



$3/32$ mark needle bar



Needle up $3/32$





Correct timing



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<p>NEEDLE BAR HEIGHT</p> <p>Put the correct needle in needle bar and mark need, i.e. at 1/16 inch and 1/8 inch above the top of the eye.</p> <p>With the correct timing (after 3/32 inch of need riser) adjust needle bar height so point of hook is within the marks.</p>	 <p>Marked needles</p>
<p>To adjust need bar height:</p> <ol style="list-style-type: none">1. Have the correct needle (marked at 1/16 & 1/8) need bar.2. Loosen clamp screw.3. Adjust up/or down.4. Tighten clamp screw.5. Double check.	 <p>Needle bar height adjustment</p>