



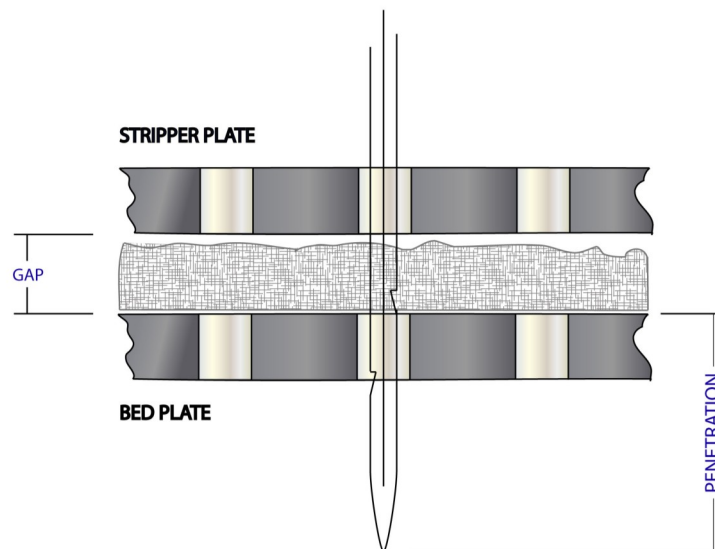
NONWOVEN TERMS

For the informed employee

Needle Dwell Time

In a needle loom the fabric is held between plates called the stripper plate and the bed plate. When the needle is starting to move towards the fabric, it first enters the stripper plate, then it goes into the fabric, and then it enters the bed plate. Of course on the return stroke it first pulls out of the bed plate, then the fabric, and lastly the stripper plate. It is important to understand that the needle beam is not adjustable up and down. However, both the stripper plate and bed plate can move up and down. This enables us to adjust the gap between the plates. We can also move the plates in unison up or down to determine how far the needle goes through the fabric and into the bed plate. Needle dwell time is defined as the percentage of the stroke that the needle is actually in the fiber. The distance involved is the sum of the gap and the penetration. This is very important because bad things can happen if the dwell time is too long. The two main ones are:

1. If the needle is in the needling zone between the plates for more than 40% of the stroke, then lines can be seen in the fabric.
2. If the needle is in the needling zone between the plates for more than 50% of the stroke, then needle breakage is very likely.



“Do what you can, with what you have, where you are.”

Theodore Roosevelt

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