



## Tune and Service: What do you get for your money?

A common question that is asked by our customers is "What do you do when performing a full tune and service?" Most customers are prompted to bring their machines in because it has started to have a particular problem. This is the time we often perform the full tune-up. Often they are heavy sewers and they have not had this done in a while or at all.

Common problems that prompt our customers to come in are: Poor stitch quality, skipping stitches, unusual sounds (squeaks or growling), electronic issues such as no power or error messages, poor fabric feeding, and the famous needle threader not working... The most important thing a sewing machine technician must remember is to do his work in a precise sequence because one adjustment affects another. For example, you must always check and adjust feed timing before hook timing. Changing feed timing always changes hook timing but changing hook timing does not change feed timing. In fact, most adjustments performed have a direct effect on every other adjustment. There are basically two main categories of adjustments. They are the feeding system and the stitch forming system. Then there are additional minor areas such as bobbin winding, needle threader, and electronic calibrations.

Below is a list of checks and adjustments we do in sequence:

1. Remove all external covers to expose all inner workings
2. Disconnect key electrical connection and remove circuit boards as needed.
3. Clean machine with compressed air and remove all shredded or caught up thread
4. Inspect for worn or broken parts
5. Take up shaft play and gear lash (translation: make loose parts tight again)
6. Lubricate machine (We do not use any grease as a general rule)

### Feed System Adjustments:

7. Motor belt tension
8. Feed dog position in needle plate
9. Timing of feed motion
10. Feed dog height
- 11 Synchronizer (you wouldn't want needle moving right and left in the fabric)
12. Presser foot alignment and height

### Stitch Forming Parts:

13. Position of needle in needle plate (left to right and front to back)
14. Hook to needle clearance (must be close but not touching)
15. Hook timing
16. Needle bar height
17. Bobbin case position finger or bracket

### Sew Off Adjustments:

18. Bobbin winder and Bobbin winder auto stop
19. Bobbin Case thread tension
20. Check spring travel
21. Top thread tension
22. Forward and reverse feeding (machine should feed forward the same as reverse)
23. Foot control speed calibration

There are probably 20 other secondary adjustments that I have not listed. In addition, we address all of the customer's particular issues which prompted them to come to us in the first place.

I hope this article has been of interest to you and has given you insight to how a sewing machine works. It truly is one of the most interesting machines ever invented not to mention one of the most important.

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