

INSTRUCTIONS ON UPPER THREAD TENSION GAUGE

This manual describes the procedure used for zero position adjustment which is necessary when using the gauge for the first time, and also the procedure for measuring the thread tension.

Before using the gauge, please read this manual carefully so that you fully understand the functions of the gauge and the procedure to be followed for your intended operation.

1. ZERO POSITION ADJUSTMENT

Follow the procedure indicated below.

- (1) Take out the spring unit [2] from the case by turning the knob [1] and set it upright by holding the threaded part [3].
- (2) Turn the indicator nut [5] clockwise so that the stopper [4] comes into light contact (NOTE) with the knob [1].

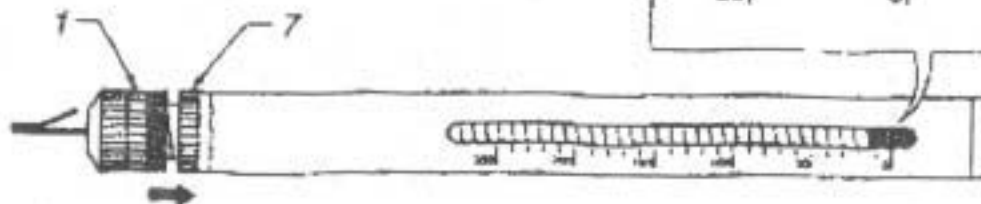
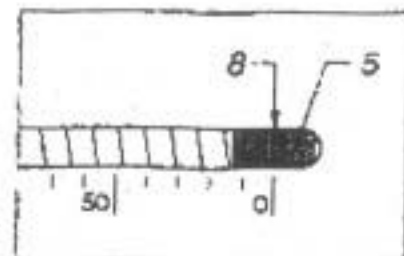
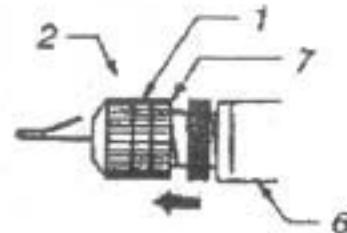
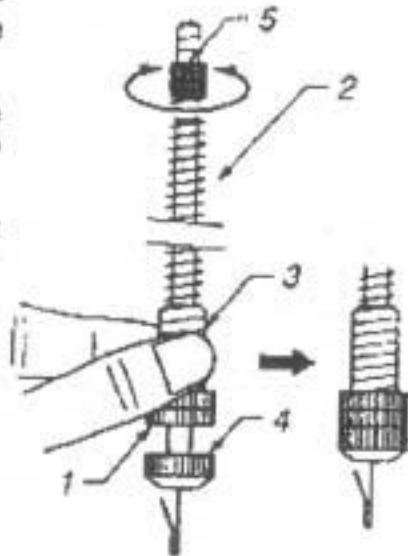
NOTE: If the stopper [4] is already in contact with the knob [1], turn the indicator nut [5] counterclockwise to move the stopper away from the knob [1] once. After that bring the stopper [4] into light contact with the knob [1] by turning the nut [5].

SUPPLEMENT: When turning the indicator nut [5], hold the stopper [4] with the finger.

- (3) Install the spring unit [2] into the case [6].

SUPPLEMENT: If there is a gap between the lock nut [7] and the knob [1], eliminate the gap by turning the lock nut [7] before installing the spring unit [2] into the case [6].

- (4) Adjust the indicator nut [5] position by turning the knob [1] so that the reference line [8] on the indicator nut [5] will be aligned with the "0" position. Then, lock the knob [1] by tightening the lock nut [7].

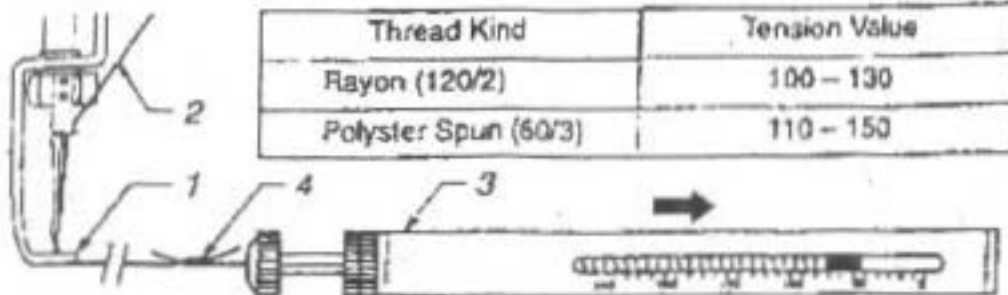


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2. MEASURING THE UPPER THREAD TENSION

- (1) Wind the front end of upper thread [2] which has been threaded to the presser [1] around the hook [4] of the gauge [3] about by two turns.
- (2) Read the indication (tension) of the gauge [3] while pulling it horizontally at a rate of 2 - 3 cm/sec.

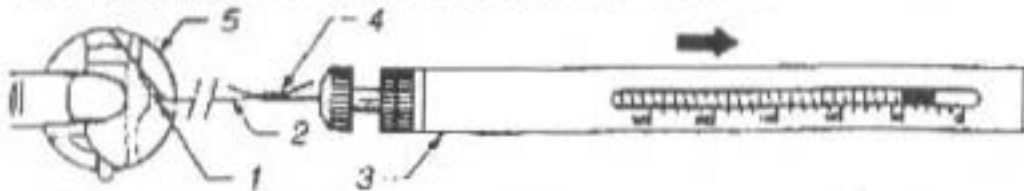
SUPPLEMENT: Tension values of typical kinds of threads are indicated below for your reference. Please note that the values will vary depending on the embroidery conditions.



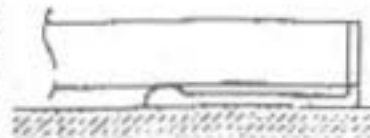
Thread Kind	Tension Value
Rayon (120/2)	100 - 130
Polyster Spun (60/3)	110 - 150

3. MEASURING THE UNDER THREAD TENSION

- (1) Wind the front end of the under thread [2] which has been pulled out of the thread guide [1] around the hook [4] of the gauge [3] about by two turns.
- (2) Place the bobbin case [5] on a flat place such as a table and hold it in place with a finger. Read the indication (tension) of the gauge [3] while pulling it slowly in the direction shown in the illustration below at a rate of 2 - 3 cm/sec.



SUPPLEMENT: Tension value of typical kind of thread is indicated below for your reference. Please note that the value will vary depending on the embroidery conditions.



Thread Kind	Tension Value
Cotton thread (80/2)	20 - 35