

Regulating the Tokiwa “Miracle Wip” Spring Assisted Wippen with Movable Heel

Steinway Style #TWS-2A Mason & Hamlin Style #TWM-2A

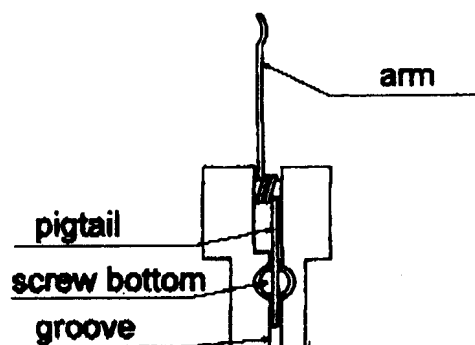
Choosing a spring assisted wippen results in easy fine adjustment of the touch weight. The spring assist is not a substitute for correcting geometry, the Ratio or the friction factor of an action. These issues should be addressed adequately prior to attempting to regulate the assist springs. Calibration of the StrikeWeight will yield a more consistent result and should also be achieved before assist spring regulation. With the assist springs unhooked from their loops, the keys should be weighed off (as per the Pianotek Leading instruction sheet) and the lead(s) installed approximately 8 grams higher than the desired final down weight for each key.

Keys on the Sample Keyboard (refer to the back page) were leaded as smoothly as possible, without a Leading Template, from a Down Weight of 58 grams at note #1 to DW 54 grams at note #87. Down Weight was prioritized and Balance Weight and Up Weight were allowed to float. It was necessary in this sample to back lead almost all of the highest treble section. Back leading was restricted to between the key button and the capstan.

Make a preliminary adjustment to the “pigtail” (short tab) and “arm” (long) of each assist spring by pinching them slightly together. Do not actually bend either one it is the coil that will be adjusted. Pinch until you get, with the spring engaged, of at least 4 grams above the desired final Down Weight. Some trial and error is necessary. If you over pinch, open the coil by spreading the arms in the opposite manner. Once achieved this initial setting will be permanent. All assist springs should have enough strength to hold the loop taut.

Adjust the Spring Assist Regulation Screws to the preferred Down Weight, Balance Weight, or Up Weight by placing the desired gram weights on the keys and turning the Screws. The recommended limit for assist spring engagement is 6-8 grams of the final Down Weight.

Assist Spring-Bottom View



**Sample Keyboard
Steinway & Sons B #3580XX**

Sample Keyboard Ratios were: Bass Key Ratio: .51 Strike Ratio: 5.259
 Treble Key Ratio: .53 Strike Ratio: 5.306

This sample keyboard had a nice feel when completed.

<u>Key Number</u>	<u>Initial DW</u>	<u>DW w/initial spring setting</u>	<u>DW w/ final spring adjustment</u>
1-16	58 gr	54 gr	51 gr
17-32	58 gr	54 gr	50 gr
33-45	57 gr	53 gr	49 gr
46-61	56 gr	52 gr	48 gr
62-75	55,gr	51 gr	47 gr
76-88	54 gr	50 gr	46 gr