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USING THE TORTOISE™ WITH PECO OR WALTHERS TURNOUTS

The TORTOISE™ Slow Motion Switch Machine provides constant point tension by nature of the constantly powered stall action and the spring wire transmitting the motion to the points. Some brands of turnouts such as Peco and Walthers have an internal over-center spring which causes a snap action throw. Although this is desireable when used with twin-coil switch machines, or for manual activation, it defeats the purpose of the slow, smooth action the TORTOISE™ is capable of. In some cases, the tension of the turnout spring is greater than the force available from the stock TORTOISE™ wire, and although the TORTOISE™ will make its complete throw under the layout, nothing happens at the points.

We recommend that you remove the stock spring from these "sprung" turnouts. This is easily accomplished if the turnout is not yet mounted, but should be able to be achieved with a little more difficulty even if the turnout is fastened down. On the Peco, the spring must be removed entirely, on Walthers, it is only necessary to snip the spring wire between the throwbar and the adjoining tie. Once the spring is removed, check for free action of the points. When the TORTOISE™ is installed, the system should operate smoothly and provide positive spring tension at each end of the throw.

If you do not want to modify your turnouts, or if you have one mounted inside a tunnel or other inaccessible location, you can still use the TORTOISE™ by substituting a heavier gauge spring wire. .032" or 0.039" diameter will usually work well. You will need to enlarge the wire hole in the throwarm following the instructions supplied with the TORTOISE™. If the Peco spring is left intact, we do not recommend using the internal contacts on the TORTOISE™ to power the points and/or frog. Since the point movement will occur when the spring wire force exceeds the Peco spring force, it is not likely that the two will occur exactly at the center point of the throw, and the possibility of a momentary short circuit then exists.