



## TSW Sport Springs Tech Notes

If you plan on installing camber plates in conjunction with our TSW Sport Springs, please keep in mind that any barrel wound spring (including OEM) may require you to clearance the inside of the strut towers to achieve your desired camber (if using adjustable plates) or prevent the coil from binding against the tower (adjustable or fixed plates). This is especially true on later model MINI's, which have ridges on the insides of the strut towers on the inboard side.

On the subject of clearancing - almost all mid '05's and later require clearancing, depending on the camber desired and the suspension setup. Depending on the desired camber setting and suspension, more or less clearancing is required. On coilovers with narrow springs, not much is required (if any) to achieve more than -2.0. On any OEM-style spring, including ours, not much clearancing is required for fixed plates, and more is required for adjustables.

On earlier models (02 – early 05), clearance does not seem to be as much of an issue. And, if you choose a coilover suspension, you will likely not have an issue with clearance on any of the models, assuming the coilover uses standard 2.5" or 2.25" ID springs.

### **Clearancing the passenger side:**

Marking the passenger side interference – you can see where we have marked the spring interference with the strut tower:



**Before clearancing:**



**After clearancing, which in this case took about 1/8" of adjustment with the big hammer:**



It doesn't take much on the passenger side - maybe 1/8" or so of gentle massaging. On the passenger side, it's pretty easy to mark where you think things are going to make contact, as shown above. When you work that area, keep in mind that it doesn't take much adjustment! Our recommendation is to work a little, check it, and work a little more if necessary.

**Clearancing the driver's side:**

**Before:**



**After - it appears not much has been done:**



After:



The driver's side takes a bit more persuasion. The ribs are persnickety. We have found that a round body dolly and body hammer work the best for flattening the ribs out a bit. Then, you can go back and shape the metal a bit more. On this side, you may need 3/16" or more, which provided a finger-width gap between the inboard side of the strut tower and the spring.

It really doesn't take much effort to clearance the towers, so go easy... You really don't need to make that big of a dish. Be sure to check the fuse/relay box under the hood to make sure none of the fuses or relays got loose due to any pounding.

**HINT 1 – While you have the struts out, it's not necessarily "easy" to slip them back in for a test fit but we recommend it. Slide the bottom the strut in, align the top and secure with a nut or two, and then check the clearance. It's a good idea to have someone turn the wheel while you're checking the clearance, too.**

**HINT 2 – On any lowering spring (including TSW) you may have to trim the bump stops. On the TSW sport springs we suggest you trim the very last bulge (0.5 – 0.75 inch) off the bump stops. This is much easier to do when the spring/shock is off the car and unassembled.**