

RACECOMP ENGINEERING

08-14 WRX/STI Tarmac ZERO Coilovers Installation Instructions

DISCLAIMER: PLEASE READ

We (Racecomp Engineering) are not responsible for any issues resulting from improper installation. Removal and installation of suspension components may be dangerous, as parts may be under compression and are likely to shift unexpectedly, causing serious injury or death. Installation should be performed by an ASE certified Subaru technician. Unless you are a technician by trade, you should not attempt installation of this part. Please use caution when driving your vehicle after installation, as handling characteristics may have changed dramatically.

Before installation, please read the following manual carefully

1. Check the package for shipping damage. If damaged, please take the following steps ASAP:

- A. Take pictures before unpacking
- B. Unpack the box and check for damaged parts
- C. Take pictures of damaged parts
- D. Contact Racecomp Engineering

2. Check the contents of the package ensuring everything is received. If any of these items are missing, please contact us.

- A. x2 Racecomp Engineering front struts
- B. x2 Racecomp Engineering rear shocks
- C. x1 Spanner Wrench
- D. x1 Allen key



Racecomp Engineering products are produced and assembled with the highest quality ensuring an easy install. However, sometimes complications arise during installation. In that case, please contact Racecomp Engineering.

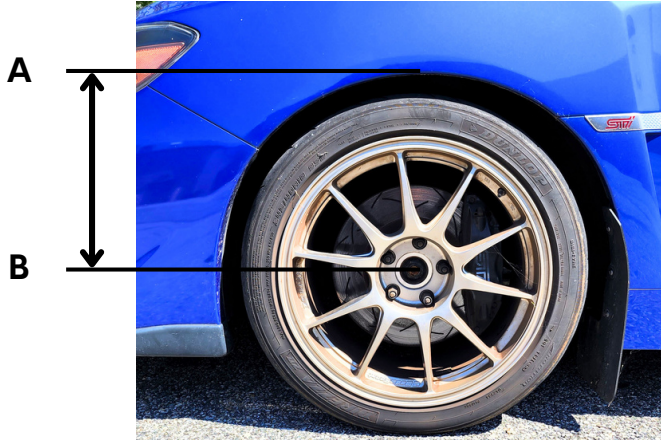
IMPORTANT NOTES:

1. We recommend the use of a vehicle hoist or lift when installing the suspension. If a lift is not available and jacking equipment is used, make sure that the vehicle is secured with jack stands to ensure safety.
2. The suspension components may only be installed by a trained and certified technician using proper tools.
3. Never use impact wrenches or guns to install or remove shock absorber piston hardware. **A strap wrench is highly recommended to secure shock shaft.**
4. It is imperative that you do not damage the piston rod surface, through the use of pliers, etc. as the smallest damage will result in seal damage and **will not be covered under warranty.**
5. Never disassemble or cut open shock absorbers and/or shock absorber inserts. They contain oil under pressure. Danger of explosion.
6. Ensure that the set screw on each spring collar is tightened to prevent movement of the spring perch after install. Do NOT over tighten set screws on spring perches.
Maximum torque is 0.74 - 1.47 ft-lbs
7. After assembly and installation is complete, the vehicle should be rolled onto level ground. Once on level ground, measure the vehicle height and adjust to your specifications, within the lowering range specified earlier.
8. Examine the clearance between the tires and the suspension over the full range of motion of the wheel. **The minimum clearance between the suspension and the tire is 5mm.**
9. DO NOT use an aftermarket camber bolt on the UPPER slotted upper strut hole. If additional camber is needed, an OEM crash bolt is recommend. An aftermarket camber bolt may be used for the LOWER bolt.
10. Have the car aligned to ensure camber and toe are corrected (caster if available)

Ride Height

Before installation, roll the vehicle onto level ground. Then measure the ride height and note the measurements in the table below.

Measure from top of the fender (A) to center of the hub (B)

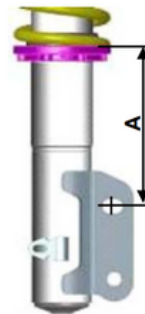


| | Left | Right |
|-------|------|-------|
| Front | | |
| Rear | | |

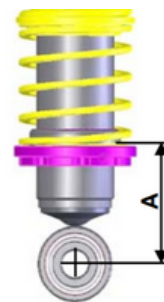
RECOMENNDED HEIGHT SETTINGS

Ride height should be set AFTER coilovers are fully assembled

FRONT STRUT



REAR SHOCK



| Approximate distance measurement A Front axle: Lower fastening screw - spring contact area Rear axle: Seating height adjustment - spring contact area or lower fastening screw - spring contact area | min: | max: | min: | max: |
|--|-------------------|-------------------|-------------------|-------------------|
| | 125 mm / 4,9 inch | 150 mm / 5,9 inch | 120 mm / 4,7 inch | 135 mm / 5,3 inch |

! GOING BELOW THE MINIMUM COULD VOID WARRANTY CLAIM !

| Approximate measurement* B in mm / inch: wheel hub center to fender edge | min: | min: |
|---|--------------------|--------------------|
| | 325 mm / 12,8 inch | 325 mm / 12,8 inch |



Front Camber Adjustment

Racecomp Engineering coilovers have camber adjustment via a slotted clevis tab on the TOP strut hole.

Slotted clevis tab on top

The clevis tabs are slotted and this allows for more front camber by pushing in the top of the wheel when doing an alignment.



DO NOT use an aftermarket camber bolt on the UPPER slotted upper strut hole. If additional camber is needed, an OEM crash bolt is recommend. An aftermarket camber bolt may be used for the LOWER bolt.

Both top and bottom strut bolts must be loosened to adjust camber

NOTE: Always begin with the eccentric bolt on the lower strut when adjusting camber. Fine adjustments can be made via camber plates

Front Strut Assembly

Owners have the choice to install an OEM top mounts or aftermarket mounts. Below are instructions for use with OEM mounts.

OEM conical washers are needed

Part #20326AA000 x2

For aftermarket mounts, please follow manufacturer's instructions.

1. Lower the spring collars all the way down so the upper spring perch is below the lip of the strut shaft. Do the same for both sides. See photo below.



2. Install OEM conical washer on top of upper spring perch.



3. Install OEM mounts and lightly thread on supplied top nut.



3. Use strap wrench to secure shock shaft. For best results, wrap around shock shaft twice.



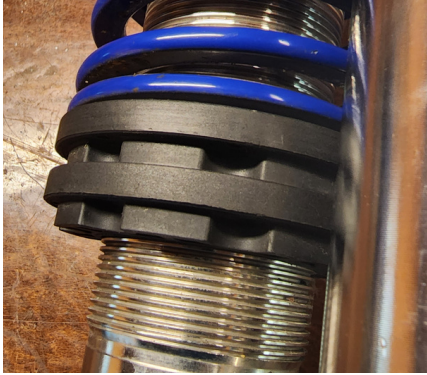
5. Twist and hold the strap tightly. **Torque top nut to 26ft-lbs**



Rear Shock Assembly

NOTE: FOR USE WITH OEM TOP MOUNT. Please follow manufacturer's instructions if using aftermarket rear top hats

1. Lower the spring collars fully to the bottom.



2. Install OEM top mount directly on top of the supplied upper spring perch.
OEM RUBBER NOISE ISOLATOR IS NOT NEEDED



SUPPLIED UPPER SPRING PERCH



3. Use strap wrench to secure shock shaft.
For best results, wrap around shock shaft
twice.



4. Install ONE Top nut at a time (VERY IMPORTANT) and torque to 15ft-lbs

A) Start by threading ONE of the supplied top nuts onto the rear shock shaft.
Tighten and torque to **15ft-lbs**

B) Carefully thread the second supplied top nut. Tighten and torque to **15ft-lbs**

**** MAKE SURE SOCKET DOES NOT CATCH BOTH TOP NUTS AT THE SAME TIME ****

Rear shock Installation

1. Remove trunk mat to expose tops of rear shocks.



2. Remove two 14mm upper nuts that fasten top mounts to chassis.



3. Remove 17mm bolt/nut that attaches the shock to swingarm (1) and 14mm bolt/nut that attaches swaybar endlink to swingarm (2)



4. Push down on swing arm and remove shock



NOTE:

If there is still too much tension to remove the shock, remove the 17mm nut/bolt that connects the swing arm to rear hub

Rear lower arm to hub: 59 ft-lb

5. Install assembled Tarmac ZERO shocks by guiding bottom of the shock back into the control arm.

DO NOT insert lower bolt through the shock and control arm yet.

6. Push the shock upward and secure the rear top mount with the two OEM 14mm nuts.

7. Reinstall the bolts for the sway bar endlink and rear shock and torque to the following:

- **Top mount to car: 22.4 ft-lb**
- **Shock to LCA: 63 ft-lb**
- **Swaybar endlink to LCA: 28 ft-lb**
- **Wheels: 88.5 ft-lb**



8. Install and torque wheels. Roll the car on level ground and check ride height. Adjust if needed