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GD TARMAC COILOVER 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 a 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.

- **Check the package for shipping damage.** If damaged, please take the following steps ASAP: **1)** Take pictures before unpacking; **2)** Unpack the box and check for damaged parts; **3)** Take pictures of damaged parts; **4)** Contact RaceComp Engineering
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- **Check the contents of the package ensuring everything is received.**
 - x4 RaceComp Engineering coilovers
 - x1 Spanner wrench
 - x1 Allen key (1mm)
 - x2 Group N Rear adapter

RaceComp Engineering products are produced and assembled with the highest quality ensuring an easy install. However, it is always possible that there are complications while installing. In that case, please contact RaceComp Engineering.

All suspension parts need to be installed and removed according to the manufacturer's specifications for installing and removing standard springs and damper components, unless otherwise specified in this manual.

****WE ALWAYS RECOMMEND CUSTOMERS TO KEEP THEIR OE SHOCKS****

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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 Subaru technician using proper tools.
3. Never use impact wrenches or guns to install or remove shock absorber piston hardware.
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. **A strap wrench is highly recommended to prevent the strut shaft from spinning. Wrap the strap wrench around the strut shaft twice for best results. You must use two people and hold tightly.**
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. **Do NOT over tighten set screws on spring perches. Torque specification is 17.6 in-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. Use OEM strut bolts. Do NOT use aftermarket camber bolts.
10. Carry out a wheel alignment.



Please use caution when driving your vehicle after installation as handling characteristics have changed dramatically.



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Compression and Rebound

Note: Not applicable to Tarmac Zeros

Note: KW rebound knobs must be purchased separately.

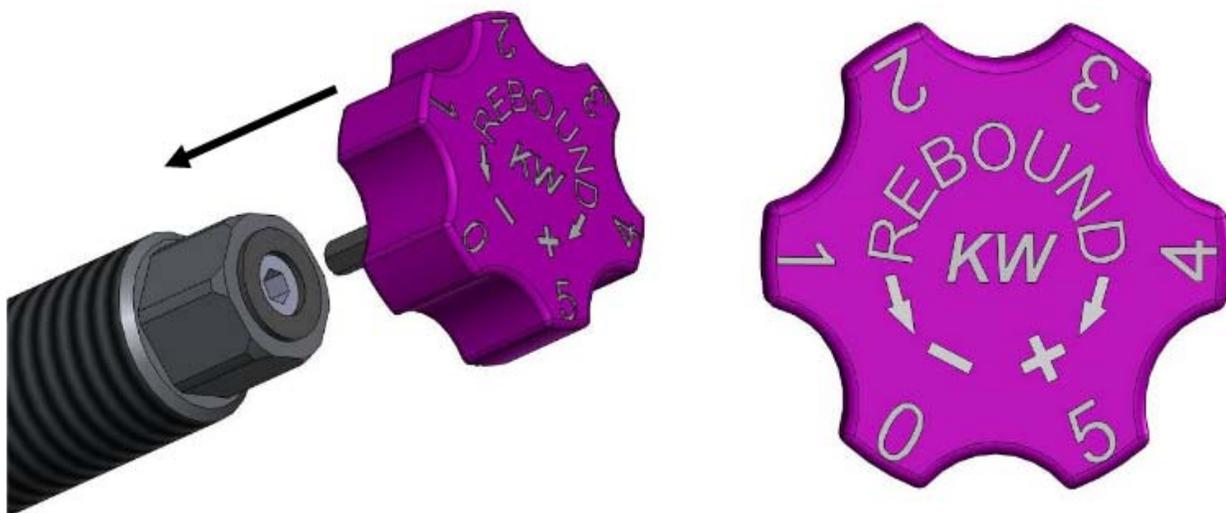


Never apply force to the adjusting mechanism of the shock absorber. As soon as you reach the end of the adjustment range, you will recognize a certain resistance. Stop turning to avoid damage to the bottom valve.



Rebound - Rebound controls how the damper extends back over bumps and during body roll. Adding rebound reduces excessive movement of the chassis and improves stability. Too much rebound can reduce overall grip in cornering and transitions. Too much rebound can also reduce traction coming out of slow speed corners

The adjustment wheel has to be put on the top of the piston rod. If not purchased, the 1mm allen key included with the kit will act as the “knob”. With clockwise rotation of the adjustment wheel the rebound damping will become harder. With anti-clockwise rotation the rebound damping will become softer. The click directions are labeled with “+” (harder) and “-”(softer) on the adjustment wheel



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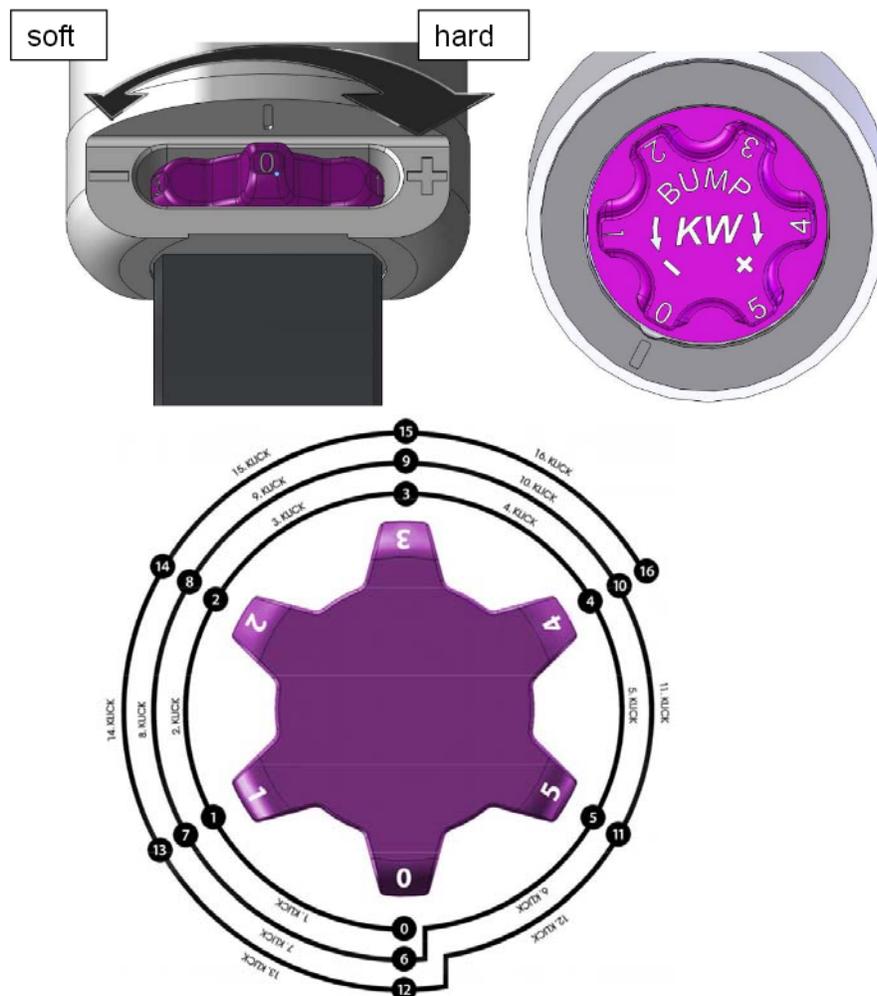


Never apply force to the adjusting mechanism of the shock absorber. As soon as you reach the end of the adjustment range, you will recognize a certain resistance. Stop turning to avoid damage to the bottom valve.



Compression - Compression, also known as bump; controls how the damper compresses over bumps and during body roll. Adding compression damping can improve the stability, feel, and feedback of the car. Too much compression can cause the car to skip or skate over bumps.

Adjustment of compression damping takes place at the bottom of the damper, also with the support of the adjustment wheel. With clockwise rotation of the adjustment wheel the compression damping will become harder. With anti-clockwise rotation the compression damping will become softer. The click directions are labeled with "+" (harder) and "-" (softer) on the adjustment wheel (labels are etched into the damper body in the rear except for GD chassis).



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General Installation Instructions

RaceComp Engineering is **not** responsible for faults or defects that may occur in the damper due to improper installation.

NOTE: For use with OEM top mounts

- Before installation, roll the vehicle onto level ground. Then measure the ride height and note the measurements in the table below. Measure from center of wheel or fender as shown below.



	Left	Right
Front		
Rear		

- We recommend the use of a vehicle hoist or lift when installing suspension.
- It is imperative that you do not damage the piston rod surface, through the use of pliers, etc. The smallest damage on the piston rod surface will result in seal damage.
- The suspension parts should be removed as specified in the manufacturer's instruction.

NOTE: THESE INSTRUCTIONS ARE INTENDED FOR OEM TOP MOUNTS

Front Instructions

- 1) Jack up vehicle, place on jack stands, and remove wheels.
- 2) Remove brake line and ABS wire from front strut.
- 3) Remove two lower 19mm clevis nuts/bolts.

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4) Remove three upper nuts that fasten strut top mounts to chassis.

5) Remove strut/spring assembly from vehicle.

6) 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.



7) Install OEM Subaru conical washer.



8) Install OEM top mount

9) Use strap wrench to prevent the shaft from spinning.

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10) Wrap strap wrench twice around the strut shaft



11) Twist and hold the strap wrench tightly



12) Torque top nut to 30ft-lbs.

13) Install new RCE coilover on vehicle as specified by the manufacturer

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Rear Installation

1) Begin the modification by removing the outer rubber isolation cover. You can simply grab it around the edge and pull it firmly downward. You will be left with the bare metal mount



2) The mount is clearly separated into two individual steel stampings, with the bottom portion shaped like an inverted cup with 4 prongs around its perimeter. You will be cutting the mount where the two stampings are joined marked with a dotted white line here:



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3) Secure the top mount in a tabletop vise. Using an angle grinder with a cutoff wheel, cut the inverted cup portion away from the rest of the top mount:



4) After the cut is complete, use a sanding disc to smooth out and flatten the cut. Be sure to remove any peaks or sharp edges.



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5) You Should be left with a modified top mount that looks like this:



6) Use black industrial grade paint to thoroughly coat the exposed metal and prevent rust and corrosion.



7) Once the paint has dried, you are ready to assemble your rear coilover unit. Racecomp Engineering has supplied an adapter that joins the top of the coilover spring on the bottom side, and the bottom of the modified Group -N top mount on the top side:



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8) Place the adapter on top of the coilover spring so that it sits snugly inside the spring. Then place the Group-N top mount on top of the adapter so the small round protrusion sits inside the hole in the bottom of the mount. **PLEASE NOTE: the rounded portion of the top mount should face outward, in line with the lower clevis tab on the damper body.**



9) Thread the top nut onto the shaft of the damper and torque to 44 ft. lbs

10) Install the new RCE coilovers on the vehicle as specified by the manufacturer

11) All torque values must comply with OE specifications

12) Carry out wheel alignment

IMPORTANT: 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. If there are clearance issues, which are not spotted by the installer, RaceComp Engineering is not responsible for damage that occurs due to clearance issues.