

STaSiS Engineering B5 Streetsport Suspension

SS Suspension Kit

Parts List

Qty	Description	Part Number
1	STaSiS adjusted Koni cadmium plated dampers (2 front, 2 rear)	1150-5019

Special Tools Required

Qty	Description	Part Number
1	Torque Wrench	VAG 1331
1	Torque Wrench	VAG 1332
1	Engine/transmission jack	VAG 1383 A
1	Spring Compressor	VAG 1752/1
1	Spring holder	VAG 1752/16
1	Spreader	3424
1	Pliers	T40067
1	Tensioning strap	T10038

Please read ALL instructions prior to attempting installation. Please torque all fasteners to specifications.

Torque Values



Front upper damper mount to body	15 ft-lbs
Front clevis nut	66 ft-lbs*
Front ARB link to lower control arm	30 ft-lbs + ¼ turn
Front ARB link to ARB (early model)	74 ft-lbs*
Front ARB link to ARB (late model)	30 ft-lbs + ¼ turn*
Rear upper damper and control arm mount to body	41 ft-lbs
Rear upper damper eye to upper mount	52 ft-lbs + ¼ turn
Rear lower shock eye to lower control arm	52 ft-lbs + ¼ turn
Rear upper control arm to upright	37 ft-lbs + ¼ turn
OEM wheel bolts	89 ft-lbs

* Must be tightened with vehicle at or near ride height.

Ride Height Settings

Front perch setting	Rear perch setting	Recommended ride height
13 9/16 " clevis (center of bolt hole) to spring seat	1 1/4" end of threads to spring seat	13.5" center of wheel to fender

Front

1	Before removing any parts, park the car on a secure, stable, and level surface. Remove wheel trim; pull trim cap off light-alloy wheels (using puller in vehicle tool kit) and loosen (but do not remove) the wheel lug nuts. Jack the vehicle up, and place the car on four stable jack stands or use a professional vehicle lift. We recommend having two people available for certain steps of the installation.	
2	Remove wheels	
3	Remove nut and bolt that attach the ARB link to the front lower control arm on both sides of the vehicle. Use a tappet wrench on the shaft to hold the stud (older design). (16mm)	
4	Loosen (but do NOT remove) the bolt that attaches the ARB link to the ARB.	
5	Rotate the ARB and links out of the way with ends pointing down.	

6	Remove the plastic body plugs from the strut tower (located in the engine compartment) exposing the upper spring perch nuts. This will ruin the plastic plugs. (Available from STaSIS in our accessory kit)
7	Remove the upper spring perch nuts (*Note* be careful not to drop the nuts as they would likely be difficult to recover). (13mm)
8	Remove the spring and shock assembly from the vehicle. Be careful not to damage the front wheel speed sensor wire! (*Note* you may have to pull down on the upright slightly to facilitate removal).
	The following steps can be completed with the front dampers off of the car.
9	Use VAG 1752/1 spring compressor to remove the tension from the spring.
10	<p>Remove the nut from the top of the shock shaft and disassemble the OEM assembly, removing the upper spring perch rubber bushing, shock shaft load-distributing washer, upper spring perch, OEM bump stop rubber and plastic splash shield. (19mm)</p> <p>*Note* do NOT score the shock shaft. If you need to hold the shaft to prevent it from turning when you loosen the lock nut you may use a hex top 19mm deep socket and a 6mm Allen key. Use an open-end wrench on the flats of the socket and hold the shaft with the 6mm Allen key. You may purchase a special tool, #3353 from an Audi dealer or Zelenda tools (888.892.8348), which will allow you to remove the nut while holding the shaft stationary.</p>



11	<p>Extend KONI shock shaft to maximum extension.</p> <p><i>*Note*</i> this will be time consuming for kits with aggressive rebound dampening.</p>
12	<p>Optional: Install the OEM shock body protective cap on the KONI shock in place of the white KONI protective disk (<i>*Note*</i> this may take some force).</p>
13	<p>Install the shortened (see below & image) bump stop over the KONI shock shaft.</p> <p>WARNING: STaSiS recommends removing approximately 1" from the top of the OEM bump stop to allow for more compression travel at lower ride heights.</p>
14	<p>Install the spring so it seats on the lower spring perch.</p>
15	<p>Install the upper spring perch</p> <p><i>*Note*</i> if the shock shaft is truly fully extended, there should be approximately one-inch of shaft showing above the upper spring perch.</p>
16	<p>Install the shock shaft load-distributing washer, followed by the upper spring perch rubber bushing on the threaded part of the shock shaft</p> <p><i>*Note*</i> there are two indents on the rubber bushing that need to line up with the bolts on the upper spring perch.</p>

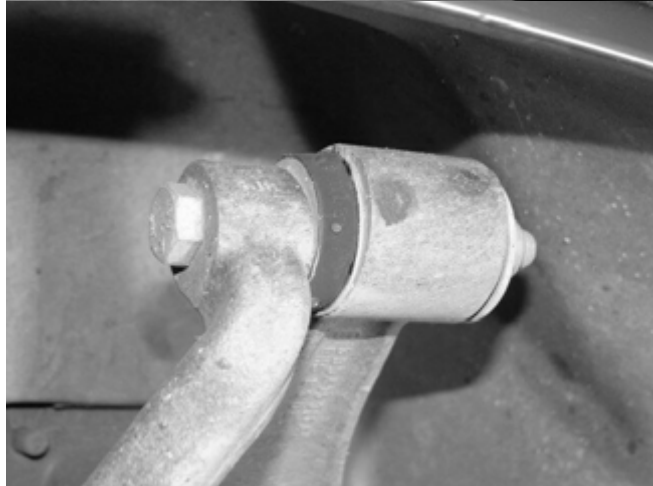


17	<p>Install the included lock nut on the threaded part of the shock shaft and tighten until all free play is removed</p> <p><i>*Note*</i> do NOT score the shock shaft. A scored shaft will damage the internal seals of the damper. If you need to hold the shaft to prevent it from turning when you tighten the lock nut you can use a set of vice grips with an appropriate material (rubber/heavy cloth) on the jaws to prevent scoring of the shaft. You'll want to grab the shaft at the upper most portion as close to the threading as possible (as this area of the shaft will always be covered by the bump stop and won't damage the seals).</p>
18	<p>Adjust the lower spring perch so that the distance from the lower clevis eye to the seat of the lower spring perch is 13 7/8". Set the perch height BEFORE installing the damper assembly. (<i>*Note*</i> this is an initial height setting as fine tuning of ride height will be done later. Make sure the locking ring and perch are hand tightened together).</p>
19	<p>We recommend that you use a new locking nut on the clevis bolt. Additionally the upper spring perch to body nuts and the ARB link to ARB nuts should all be replaced with new locknuts. We recommend using Original Equipment (OE) Audi locknuts, which can be obtained from your local dealer or in the optional STaSiS Accessory Kit. (20mm).</p>
20	<p>Installation of the assembled front dampers is the reverse of removal.</p> <p>Note: Bonded rubber suspension bushings can only be turned to a limited extent. <u>All mounting bolts of the suspension links must only be tightened when the suspension is compressed to the curb weight position.</u></p>

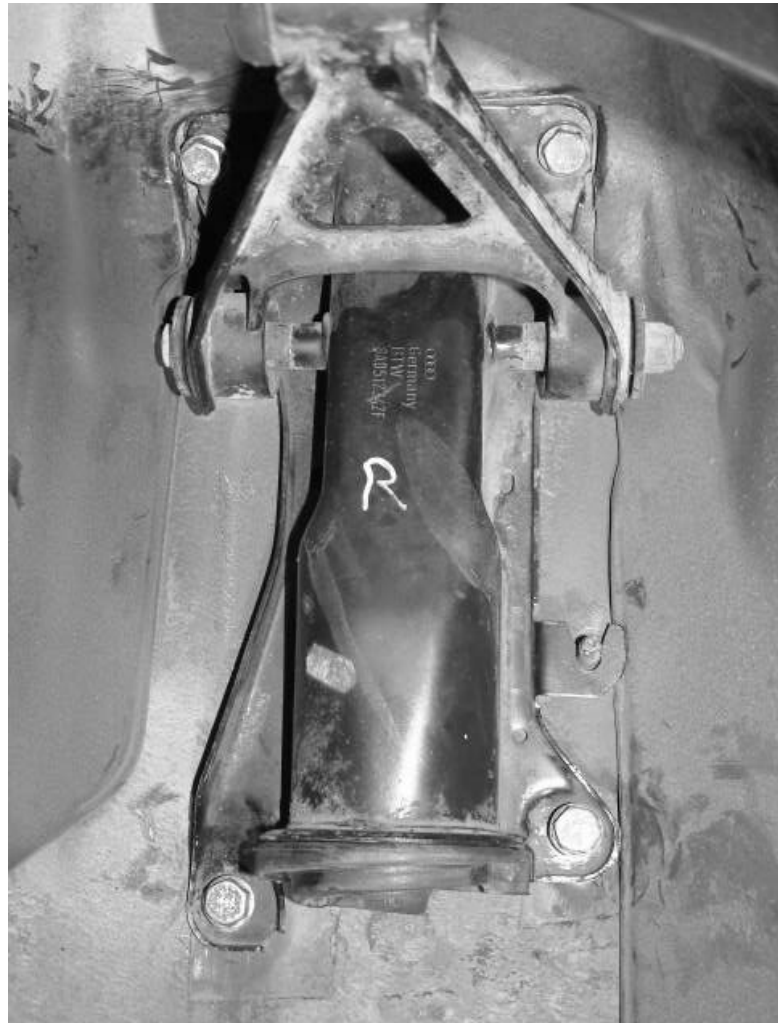


Rear

1	Securely support both rear corners of the car, relieving tension on the swaybar.
2	Remove wheels
3	Remove the bolt that goes through the lower control arm and the lower shock mounting point. *Note* do NOT try to pull the shock from the lower control arm. (19mm, 19mm)
4	Remove the upper control arm outer mounting bolt. *Note* make a note of the orientation of the concave washer). (18mm, 19mm)
5	Push down on the upright assembly with just enough force so that the lower control arm pulls free from the lower shock eye.



6	<p>Remove the four bolts that hold the spring and upper control arm bracket to the body of the car. (17mm)</p>
7	<p>Remove the spring, shock, upper control arm and mount as a unit from the car. Be careful not to damage the rear wheel speed sensor wire!</p> <p>*Note* you may have to push down on the lower control arm assembly to facilitate removal.</p>
	<p>The following steps can be completed with the front dampers off of the car.</p>
8	<p>Use a VAG Tool 1752/1 to remove the load from the spring, and then remove the bolt that holds the top of the damper. (19mm, 18mm)</p>
9	<p>Remove the spring and damper assembly from the mount.</p>



EXTERNAL ADJUSTMENT OF REAR DAMPERS REQUIRE THE FOLLOWING STEPS

The rear suspension mount can be modified to allow for access to the rebound adjustment with the suspension installed on the car. Please verify that the customer would prefer this modification.

Using a proper cutting tool and safety glasses cut a slot across the mount below the upper rear shock mount. Verify first that you will be able to access the KONI rebound adjustment wheel then widen the slot so that it is both long enough and wide enough to allow for a full sweep of the wheel.

Note Dampers have been preset by STaSiS for recommended valving and spring rates.



Once the slot has been completed, spray the slot with some type of anti-rust corrosion resistance spray.

- | | |
|----|---|
| 10 | Extend the shock body to maximum extension.
Note This will be time consuming for kits with aggressive rebound dampening. |
|----|---|

11	<p>Making sure the shock body is fully extended, insert the shock body into the upper mount and install the upper shock bolt and locknut.</p> <p>STaSiS recommends using a new locknut.</p>
12	<p>Adjust the lower spring perch so that there is about 1 5/8" of visible threads showing under the spring perch.</p> <p><i>*Note*</i> This is an initial height setting as fine tuning of ride height will be done later. Make sure the locking ring and perch are hand tightened together.</p>
13	<p>Install spring/shock/upper control arm and mount into car as one assembly. Reverse the install procedure starting at step 6 and working towards step 1. When you are installing the lower control arm to shock connection, line up the shock eye with the suspension arm and then press up on the upright to push them together. This requires a bit of force, as it is a slight interference fit. Use NEW locknuts on the lower shock mount and the upper control arm to upright attachment points.</p> <p>The final torque of these two attachment points should to be done with the vehicle on the ground and at the approximate ride height to properly set the rubber bushings. We recommend using Original Equipment (OE) Audi locknuts, which can be obtained from your local dealer or in the optional STaSiS Accessory Kit.</p>

Rev. 1, 12/19/08

STaSIS Engineering

Ride Height Adjustment for Street Sport KONI Coil Over kit

Final ride height adjustment procedure:

1. After completing installation of the kit set the vehicle on the ground and **MAKE SURE IT'S ON A LEVEL SURFACE. VERY IMPORTANT!**
2. Measure the ride height of the vehicle at four points for future reference. We recommend measuring from the center of the wheels to the bottom of the fender lip.
3. If you are pleased with this ride height then you are done, save the measurements for future reference. If not continue to step 4.
4. Calculate the difference between the actual ride height and the ride height you would like the car to sit at for the right front wheel. For optimum handling we recommend this be done with the driver in the car and $\frac{3}{4}$ of a tank of fuel. We recommend that the distance between the center of the wheels and the bottom of the fender lip be 13.50 inches. Below 13.0 inches the suspension is operating too close to its maximum bump travel and handling can be negatively impacted.
5. The ratio between shock body motion and wheel motion is about 0.7 to 1. This means that the wheel travels about 1 inch for every 0.7 inches of shock body travel. Therefore, for example, if you wanted to lower the car $\frac{1}{2}$ inch from its current ride height at the right front wheel, then you would have to lower the lower spring perch on the right front shock body by $\frac{1}{2} \times 0.7 = 0.35$ inches. The rear motion ratio is slightly different.
6. Repeat steps 4 & 5 for the left front, left rear and right rear wheels.
7. Armed with the data from steps 4,5 & 6, securely jack the car up and place it on four jack stands. Remove the wheels if necessary to reach the lower spring perches. Loosen the lower perch set screw and thread the lower perch up or down by the amount you have calculated in step 5. Record the location of the perch so you can have it as a future reference if needed. Once the desired height is attained, tighten the locking perch against the spring perch.
8. Place the wheels back on the car and lower it to the ground. Go to step 2. Make sure the car is in the exact same location as before and press up and down on the car 3 or 4 times at each of the four wheels to settle the suspension before you make any measurements.

STaSIS Engineering

Maintenance Instructions for Street Sport KONI Coil Over kit

Yearly maintenance:

The Street Sport KONI Coil Over system is designed to provide superior service for the lifetime of your vehicle with a minimum of preventative maintenance. We recommend the following steps are performed a minimum of once a year, preferably before winter season. Vehicles that are exposed to more abusive environments, such as sea salt, road salt or dirt roads may necessitate more frequent maintenance.

1. Securely support the vehicle on four jack stands and remove the road wheels.
2. Clean the threaded portion of the damper with a non metallic brush using soap and water.
3. We recommend lowering or raising the lower spring perch to allow access to clean the threaded portion of the damper that is covered by the perch.
4. Lubricate the threaded portion of the damper with a lithium or silicon based grease, if you are unsure, you can obtain proper thread lubricant from STaSIS.
5. Return the perches to their original location and tighten the locking perches.
6. Secure the road wheels and return the vehicle to the ground. Watch that the springs seat properly on the spring perches.