



Kits

78670 (with shocks),
78671 (no shocks)

Audi B9

Rear Application



INSTALLATION GUIDE

For maximum effectiveness and safety, please read these instructions completely before proceeding with installation.

Failure to read these instructions can result in an incorrect installation.



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A. Introduction

Air Lift Performance thanks you for purchasing the most complete, fully engineered high-performance air suspension made for the Audi B9. Read these installation instructions to correctly and safely set up the vehicle for a #lifeonair.

Air Lift assumes that the installer has the mechanical knowledge and ability to work on vehicle suspension systems and has basic tools necessary to complete a suspension replacement project. Special tools needed to complete the installation are noted on the Installation Diagram page.

Air Lift reserves the right to make changes and improvements to its products and publications at any time.

An Air Lift Performance air management system is highly recommended for this product.

NOTATION EXPLANATION

Hazard notations appear in various locations in this publication. Information which is highlighted by one of these notations must be observed to help minimize risk of personal injury or possible improper installation which may render the vehicle unsafe. Notes are used to help emphasize areas of procedural importance and provide helpful suggestions. The following definitions explain the use of these notations as they appear throughout this guide.



DANGER

INDICATES IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.



WARNING

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.



CAUTION

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN DAMAGE TO THE VEHICLE OR MINOR PERSONAL INJURY.

NOTE

Indicates a procedure, practice or hint which is important to highlight.

B. Important Safety Notices



WARNING

DO NOT INFLATE AIR SPRINGS WHILE OFF OF THE VEHICLE. DAMAGE TO ASSEMBLY MAY RESULT AND VOID WARRANTY.



CAUTION

DO NOT WELD TO OR MODIFY PERFORMANCE STRUTS/SOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.



WARNING

AFTER INSTALLATION, ENSURE ALL ORIGINAL EQUIPMENT VEHICLE SAFETY FEATURES ARE PROPERLY CALIBRATED BY A QUALIFIED TECHNICIAN. CHANGING VEHICLE HEIGHT MAY AFFECT FUNCTIONING OF SAFETY SENSORS AND CAMERAS.

C. Installation Diagram

CAUTION

THIS KIT REQUIRES THE REMOVAL OF FACTORY TORQUE-TO-YIELD BOLTS. THESE BOLTS ARE DESIGNED TO BE REPLACED AFTER THEY HAVE BEEN LOOSENED. TORQUE-TO-YIELD BOLTS ARE INDICATED IN THE INSTRUCTIONS AND IN THE TORQUE SPECIFICATION CHART.

NOTE For cars equipped with auto-leveling headlights, installers should purchase the Air Lift Performance kit 14003, which replaces the headlight alignment linkage. Air Lift linkages prevent exceeding the sensor travel limits when at maximum drop height.

TORQUE-TO-YIELD BOLTS*

Description	
A	Upper shock mount bolts
B	Lower shock nut
C	Outer toe link bolt
D	Inner control arm cam bolt
E	Outer lower control arm nut

* These bolts are not included with this kit

HARDWARE LIST

Item	Part #	Description	Qty	Item	Part #	Description	Qty
A	18522	M8-1.25 Nylon lock nut	2	K	07048	Upper bracket.....	2
B	17177	M8-1.25 x 25 Hex bolt.....	2	L	18627	M10-1.5 Self-tightening nut.....	2
C	03044	Lower bracket.....	2	M	17517	M10-1.5 x 25 Hex cap screw	2
D	11801	Roll plate.....	4	N	26873	Shock.....	2
E	58550	Air spring.....	2	O	11157	Toe link.....	2
F	17515	M10-1.5 x 35 Stainless steel set screw ...	2	P	13997	Outer toe link spacer	2
G	21851	Union, 1/4" FNPT x 1/4" PTC	2	Q	13998	Inner toe link spacer	2
H	21779	Union, 1/4" FNPT x 3/8" PTC.....	2	R	17516**	M10-1.5 x 25 Socket-head cap screw ..	4
I	17518	M10-1.5 x 35 Socket-head cap screw ...	2	S	11289	Spanner wrench.....	1
J	18628	M10 Split lock washer	8				

** Not shown

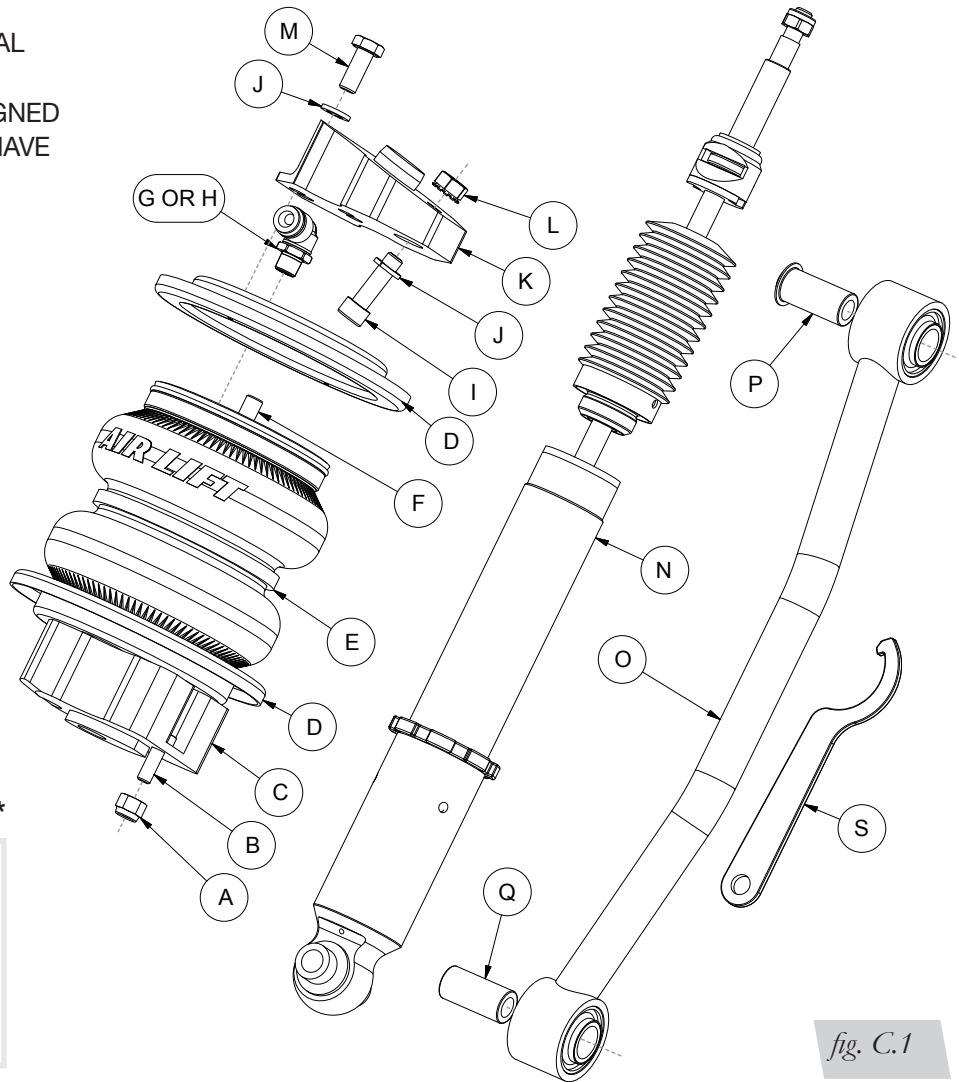


fig. C.1

D. Installing the Air Suspension

NOTE

See "Important Safety Notices" on page 2.

CAUTION

RAISE THE REAR OF THE VEHICLE WITH A JACK AT THE APPROVED LIFTING POINTS AND USE JACK STANDS TO SUPPORT THE VEHICLE.

REMOVING THE STOCK SUSPENSION

1. Remove the splash guard from the lower control arm.
2. Remove the toe link (Fig. D.1).

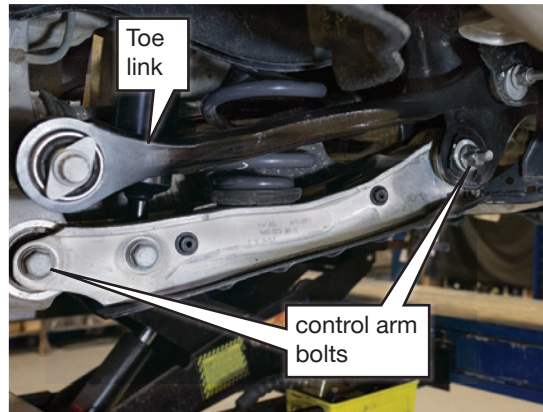


fig. D.1

3. Loosen the bolt connecting the lower control arm to the knuckle. (Fig. D.1).

NOTE

Use 12-point wrenches or sockets on the control arm and toe link bolts.

4. Support the lower control arm nearest the subframe and remove the inner cam bolt that connects the lower control arm to the subframe (Fig. D.1).
5. Drop the lower control arm and remove the lower shock bolt. Remove the coil spring as well as the upper and lower spring seats (Fig. D.2).

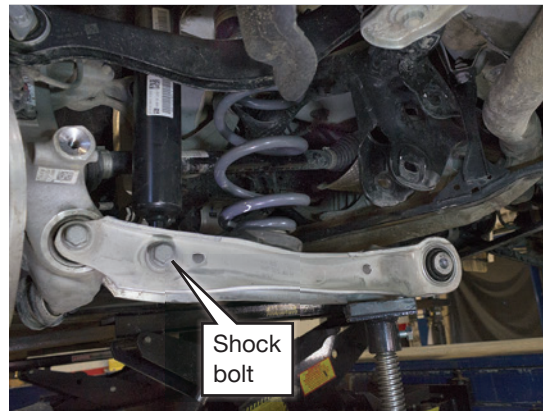


fig. D.2

6. Remove the upper shock mount bolts (Fig. D.3). For vehicles with adaptive damping suspension, unclip the wiring connector located under the fender liner (Fig. D.4).



fig. D.3



fig. D.4

7. For vehicles without adaptive damping suspension, remove the shock nut and the upper shock mount for reuse on the Air Lift Performance shock.

VEHICLES WITH ADAPTIVE DAMPING SUSPENSION

To remove the upper shock mount, the wiring plug must be removed from the shock (Fig. D.5).

- a. Pull back the boot covering the end of the connector (Fig. D.6).
- b. Use a small screwdriver to push into the opening and depress the terminal tabs (Fig. D.7).
- c. After depressing the tabs on the terminals through the openings, take the purple piece and move it in the direction of the arrow (Fig. D.7).
- d. Remove the terminals from the connector. (If you cannot easily pull them out, it is because you didn't depress the tabs on the terminal far enough. Repeat step b.)
- e. Remove the shock nut and slide it over the wire/terminals along with the upper shock mount for reuse on the Air Lift Performance shock.



fig. D.5

The purple part of the connector will move in the direction of the arrow when removing it. NOTE: It is only necessary to disassemble the connector if it is to be sold because it will not be reused with the Air Lift Performance system.

The black wire corresponds with cavity 1 and white corresponds with cavity 2 on the connector.

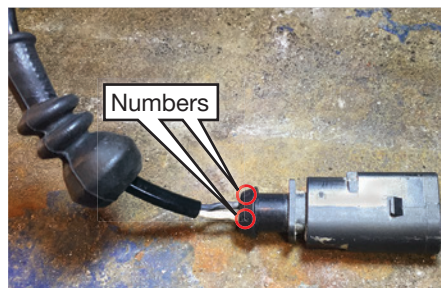


fig. D.6

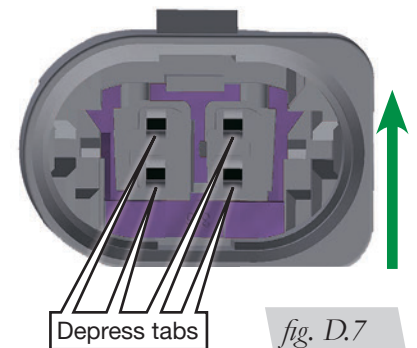


fig. D.7

INSTALLING THE KIT COMPONENTS

1. For vehicles with adaptive damping control, slide the sleeve onto the shock rod and attach the stock upper shock mount to the Air Lift Performance shock. Vehicles that do not have adaptive damping control do not use this sleeve. With the printing on the damping adjuster turned so that it will point toward the wheel when installed, torque the shock rod nut to 35Nm (26 lb.-ft.) (Figs. D.8 & D.9).

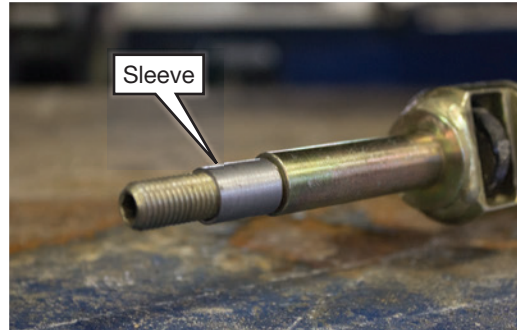


fig. D.8



fig. D.9

2. Insert the shock and attach the upper mount bolts to the chassis. Torque 50Nm + 90 degrees (37 lb.-ft. + 90 degrees) (Fig. D.10).



fig. D.10

3. Insert a self-tightening nut (L) through the large hole in the chassis (Fig. D.11). Install the upper spring mount with a socket-head cap screw bolt (I) and an M10 split lock washer (J), inserting the bolt through the upper mount and the smaller hole. Align the upper mount alignment pin with the large hole. Torque the bolt to 27Nm (20 lb.-ft.) (Fig. D.12).

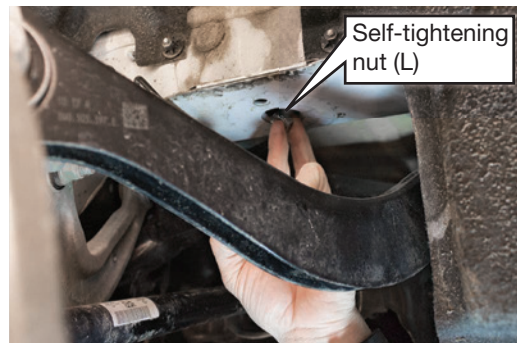


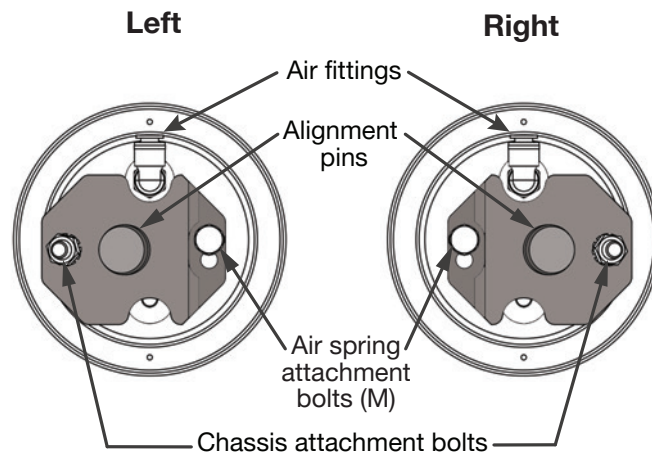
fig. D.11



fig. D.12

4. Raise the lower control arm, reinsert the control arm cam bolt and attach the nut. Torque this nut at ride height.

- Attach the air spring assembly to the upper mount with the M10-1.5 x 25 hex cap screw (M). Torque to 27Nm (20 lb.-ft.). The pre-installed M10-1.5 x 35 stainless steel set screw (F) fits into the forward of the two alignment holes on the underside of the upper bracket (K) (Figs. D.13 & D.14). Insert the M8-1.25 x 25 hex bolt (B) into the lower mount. This bolt will attach to the lower control arm.



Underside view of the upper bracket

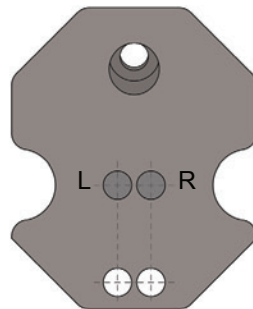


fig. D.13

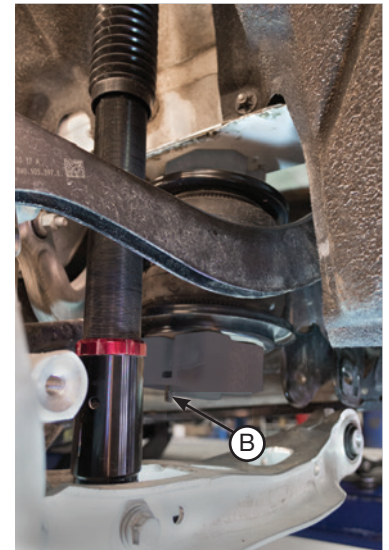


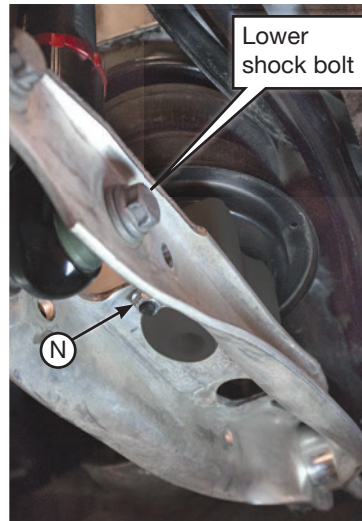
fig. D.14

- Install the new toe link (O) using the stock hardware and spacers (P & Q). Position the toe link for insertion of the rear toe link cam bolt (Fig. D.15). Torque the toe link and lower control arm at ride height.



fig. D.15

7. Reinstall the lower shock bolt. Torque it at ride height (Fig. D.16).

*fig. D.16*

8. Raise the hub so the lower control arm contacts the air spring lower bracket (Fig. D.16). Seat the protrusion on the lower mount in the oval hole on the control arm. The previously installed bolt goes in the small hole next to the oval. Fasten it with a M8 nylon lock nut (A). Torque the nut to 26Nm (19 lb.-ft.).
9. Reinstall the lower control arm splash guard.

ROUTING THE AIR LINES

1. Fully compress the suspension using a jack. With the suspension compressed, review the best routing for the air line that is clear of all suspension components and axle.
2. Routing should also allow for the suspension to extend without kinking or pulling the line tight or rubbing on other components. Following the brake line routing is often a good place to start. Check clearances to all other components.

WARNING

AFTER INSTALLATION, ENSURE ALL ORIGINAL EQUIPMENT VEHICLE SAFETY FEATURES ARE PROPERLY CALIBRATED BY A QUALIFIED TECHNICIAN. CHANGING VEHICLE HEIGHT MAY AFFECT FUNCTIONING OF SAFETY SENSORS AND CAMERAS.

E. Before Operating

Read the User Guide that came with this kit to set up the suspension.

Torque Specifications			
Location	TTY*	Nm	Lb.-ft.
Upper shock mount bolts	✓	50+90 degree	37+90 degree
Shock rod nut		35	26
Lower shock nut	✓	70+180 degree	52+180 degree
Inner toe link nut		90	66
Outer toe link bolt	✓	70+180 degree	52+180 degree
Inner control arm cam bolt	✓	70+180 degree	52+180 degree
Outer lower control arm nut	✓	70+180 degree	52+180 degree
Air spring upper mount bolts		27	20
Air spring lower mount to control arm bolt		26	19
Wheel studs		120	90
Leader lines		1 3/4 turns beyond hand-tight	

* Torque-to-yield bolts

Table 1



THIS KIT REQUIRES THE REMOVAL OF FACTORY TORQUE-TO-YIELD BOLTS. THESE BOLTS ARE DESIGNED TO BE REPLACED AFTER THEY HAVE BEEN LOOSENED. TORQUE-TO-YIELD BOLTS ARE INDICATED IN THE INSTRUCTIONS AND IN THE TORQUE SPECIFICATION CHART.

Suggested Driving Air Pressure	Maximum Air Pressure
70-90 PSI (4.8-6.2BAR)	125 PSI (8.6BAR)
FAILURE TO MAINTAIN ADEQUATE MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO LOAD) MAY RESULT IN EXCESSIVE BOTTOMING OUT AND WILL VOID THE WARRANTY.	

Table 2

CHECK FOR BINDING

1. Inflate and deflate the system (do not exceed 125 PSI [8.6BAR]) to check for clearance or binding issues. With the air springs deflated, check clearances on everything so as not to pinch brake lines, vent tubes, etc. Clear lines if necessary.
2. Inflate the air springs to 75-90 PSI (5.2-6.2BAR) and check all connections for leaks.

INSTALLATION CHECKLIST

- Clearance** — Inflate the air springs to 75-90 PSI (5.2-6.2BAR) and make sure there is at least 1/2" (13mm) clearance from anything that might rub against the air spring. This should be checked with the air spring fully inflated and fully deflated.
- Leak** — Inflate the air springs to 75-90 PSI (5.2-6.2BAR) and check all connections for leaks. All leaks must be eliminated before the vehicle is road tested.
- Heat** — Be sure there is sufficient clearance from heat sources, at least 6" (152mm) from air springs and air lines.
- Fastener** — Recheck all bolts for proper torque.
- Road** — Inflate the springs to recommended driving pressures (Table 2). Drive the vehicle 10 miles (16km) and recheck for clearance, loose fasteners and air leaks.
- Operating instructions** — If professionally installed, the installer should review the operating instructions with the owner. Be sure to provide the owner with all paperwork that came with the kit.

DAMPING ADJUSTMENT

1. The dampers in this kit have 30 settings, or “clicks,” of adjustable compression and rebound damping characteristics. Damping is changed through the damper rod using the supplied adjuster (Fig. E.1) or a 3mm hex key (not included).
2. Turn the adjuster clockwise (H) and the damping settings are hardened, reducing oscillations and body motion. Turn the adjuster counterclockwise (S) and the damping is softened.
3. Each damper in this kit is preset to “-14 clicks.” This means that the damper is adjusted 14 clicks away from full stiff, which starts at 0. Counting up from full stiff is the preferred method of keeping track of, or setting, damping. This setting was developed on a 2017 Audi A4 Allroad with adaptive damping suspension.

For more information, refer to the User Guide.

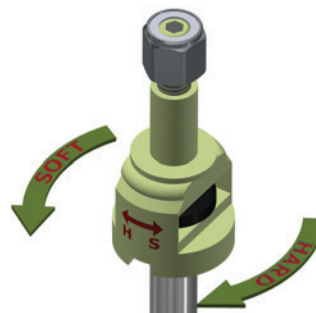


fig. E.1