

AIR LIFT
PERFORMANCE

Kit 78552

BMW E8X/E9X

(Except M Series)

Front 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.



TABLE OF CONTENTS

Introduction	2
Notation Explanation	2
Installation Diagram	3
Hardware List	3
Installing the Air Suspension	4
Preparing the Vehicle	4
Removing the Front Strut	5
Preparing the Air Suspension	7
Installing the Air Suspension	8
Routing the Air Lines	10
Before Operating	11
Setting the Ride Height	11
Torque Specifications	11
Suggested Driving Air Pressure and Maximum Air Pressure	11
Damping Adjustment	11
Installation Checklist	12
Limited Warranty and Return Policy	12



Introduction

Air Lift Performance thanks you for purchasing the most complete, fully engineered high-performance air suspension made for the BMW E8X/E9X. 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 the 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. For the latest version of this manual, contact Air Lift Performance at **(800) 248-0892** or visit **www.airliftperformance.com**.

An Air Lift Performance air management system is highly recommended for this product. Learn more at **air-lift.co/productlines**.

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 MACHINE OR MINOR PERSONAL INJURY.

NOTE

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

Installation Diagram

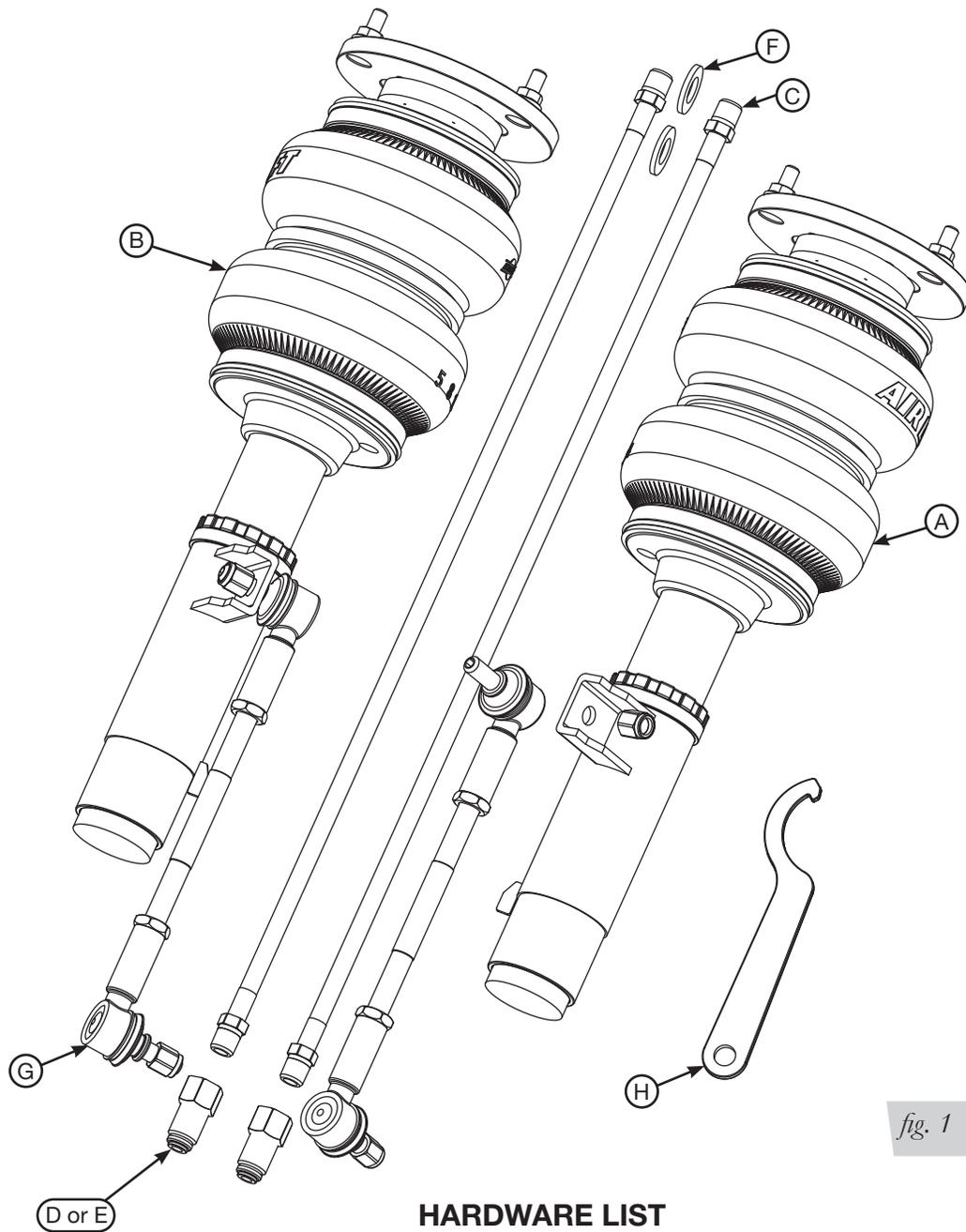


fig. 1

HARDWARE LIST

Item	Part #	Description.....	Qty
A	35358	Strut, BMW E8X/E9X right front.....	1
B	35357	Strut, BMW E8X/E9X left front.....	1
C	20997	Leader line, 1/4" ID	2
D	21810	Union, 1/4"FNPT X 1/4" PTC, DOT	2
E	21987	Union, 1/4"FNPT X 3/8" PTC, DOT	2
F	18571	M14 Flat washer	2
G	26827-009	End link 260mm (pair)	2
H		Spanner wrench.....	1

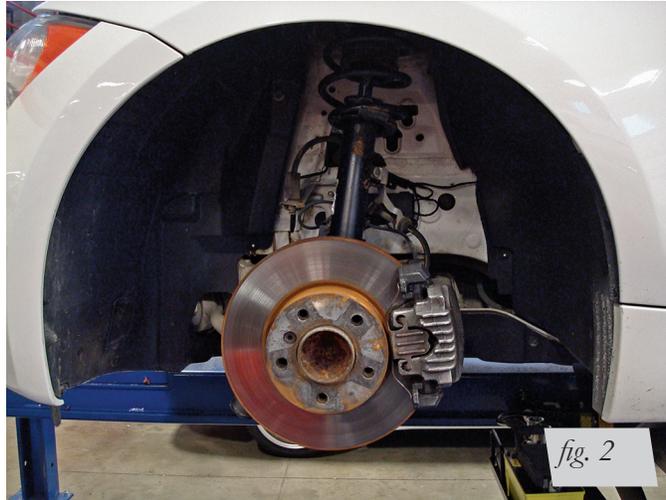


Missing or damaged parts? Call Air Lift customer service at (800) 248-0892 for a replacement part.

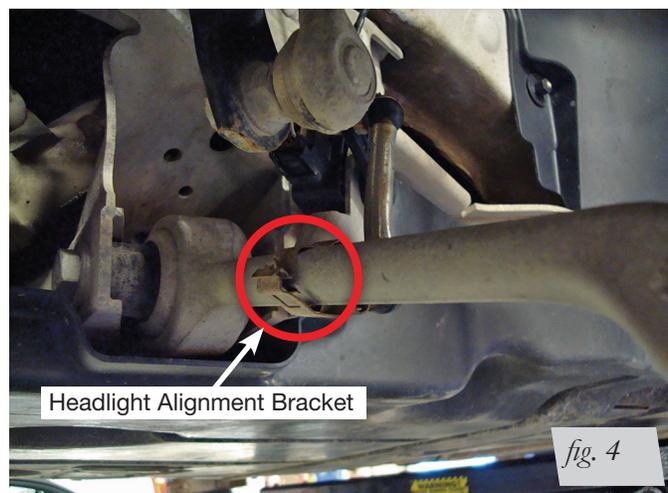
Installing the Air Suspension

PREPARING THE VEHICLE

1. Elevate and support the vehicle with a hoist or safety stands.
2. Remove the front tire and support the hub assembly (Fig. 2).

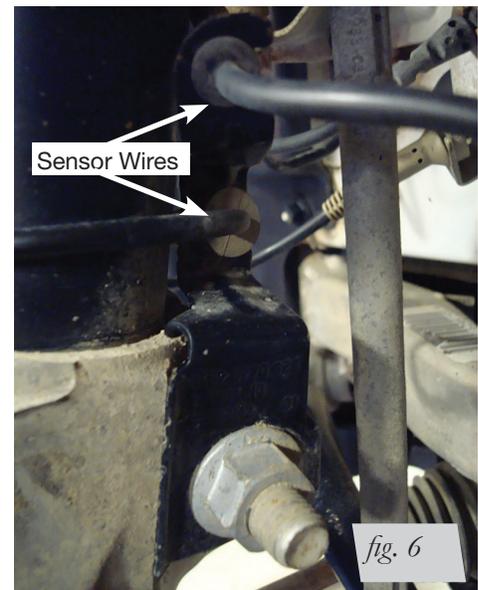
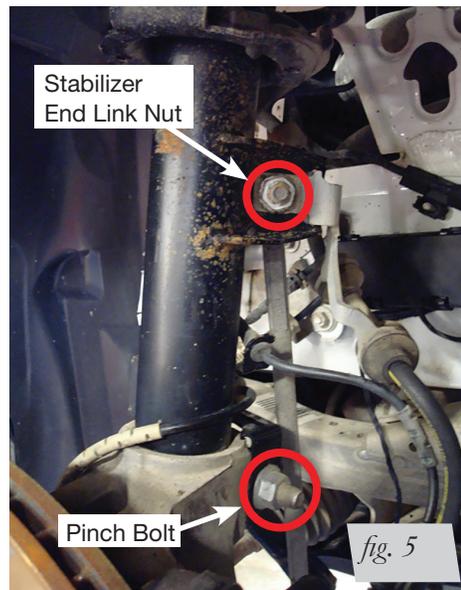


3. Disconnect the headlight alignment bracket from the lower control arm (if equipped) (Figs. 3 & 4).



REMOVING THE FRONT STRUT

1. Disconnect the stabilizer end link nut and pinch bolt from the strut assembly (Fig. 5). This will allow the removal of the brake line and ABS sensor wire brackets from the strut (Fig. 6).



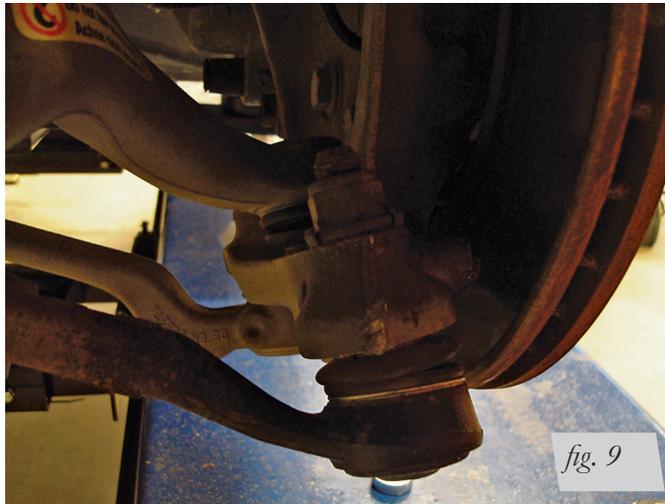
2. Remove the stabilizer end link from the bar (Fig. 7).



3. Loosen the rearward control arm bushing to the sub frame (Fig. 8).



4. Unbolt the forward control arm and tie rod from the hub (Figs. 9 & 10).



5. Slide the hub off of the strut (Fig. 11). Be careful not to over-extend the brake line or ABS wires.



6. Remove the three upper mount bracket nuts (Fig. 12) and remove the strut from the vehicle (Fig. 13).



fig. 12



fig. 13

7. Reattach the tie rod and forward control arm to the hub assembly (Fig. 14). Torque to 165Nm (122 lb.-ft.) Support the hub to prevent over extension of the ball joints, hoses or sensor wires (Fig. 15).



fig. 14



fig. 15

PREPARING THE AIR SUSPENSION

1. Begin by installing the leader line into the air spring (Fig. 16). Wrap the threads of the leader line with thread sealant. Tighten the appropriate fitting to the leader line 1 3/4 turns beyond hand tight. Tighten the leader line into the air spring 1 3/4 turns beyond hand tight.

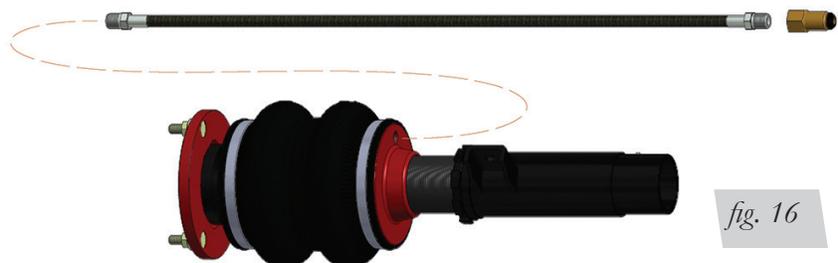


fig. 16

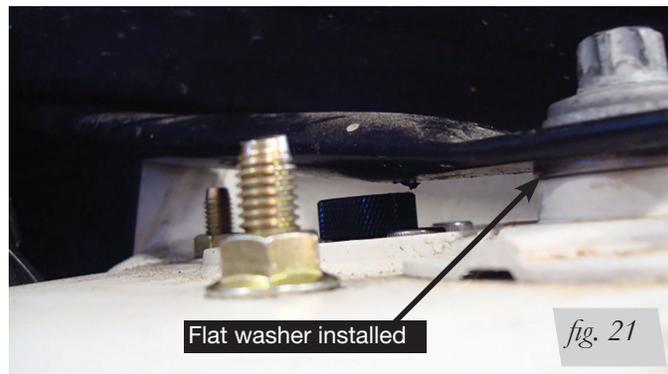
INSTALLING THE AIR SUSPENSION

1. Insert the strut into the strut tower and attach the camber plate studs to the chassis (Fig. 17). Torque nuts to 19Nm (14 lb.-ft.).

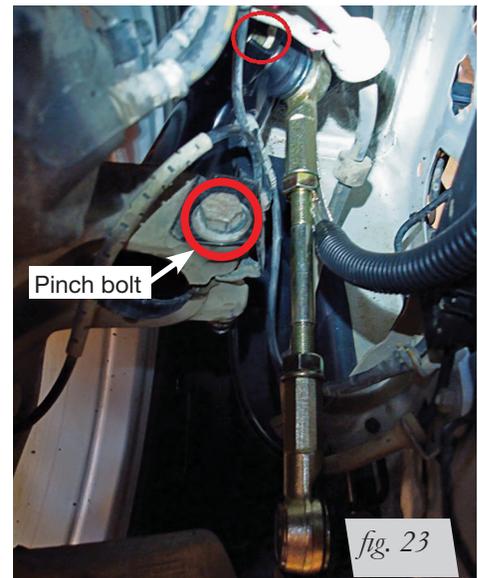


2. The factory strut tower brace needs the provided flat washer placed underneath the outboard attaching point. This will allow the use of the damping adjustment knob. Unbolt (Fig. 18) and place the flat washer under the brace (Figs. 19 & 20), bolt back in (Fig. 21).





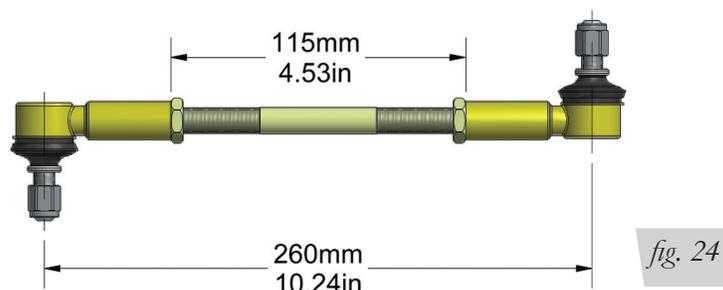
3. Lift the hub onto the strut adapter (Fig. 22). Reinstall the lower pinch bolt with the sensor wire bracket in place (Fig. 23). Torque to 81Nm (60 lb.-ft.).



4. Assemble the stabilizer bar end link with the brake line bracket to the strut (Fig. 23). Orient the upper and lower end link ball joints in a manner that allows for proper articulation of the end link without damaging the ball joint. The ball joints of the link should be squarely installed in the mounting holes when properly adjusted.

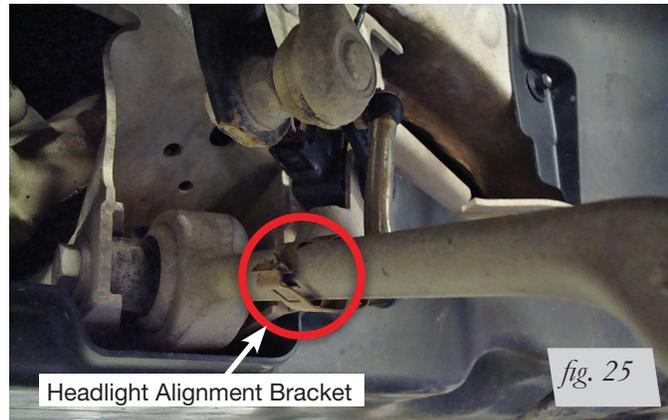
NOTE

Stabilizer end links are adjustable and need to be set at the same length (Fig. 24). The recommended setting from upper ball joint center to lower ball joint center is 260mm (10.24"). Accurately measuring between ball joint centers can be difficult using standard measuring equipment. The distance between the two rod end flats is 115mm (4.53"). Make certain that an equal amount of thread is showing on both sides of the center of the rod.



5. Attach the end link to the stabilizer bar. Torque the upper and lower ball joint nuts to 58Nm (43 lb.-ft.).

6. Reattach the headlight alignment bracket to the lower control arm (if equipped) (Fig. 25).



ROUTING THE AIR LINES

1. Fully compress the suspension using a jack. With the suspension compressed, review the best routing for the leader line that is clear of all suspension and steering components.
2. Routing should allow for the suspension to extend and steer without kinking, 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.

Before Operating

SETTING THE RIDE HEIGHT

1. Refer to the User Guide supplied with this kit to set up the suspension.

Torque Specifications		
Location	Nm	Lb.-ft.
Camber plate to chassis	19	14
Strut lower pinch bolt to hub	81	60
End link to strut/stabilizer bar	58	43
Tie rod to hub	165	122
Forward control arm to hub	175	129
Forward control arm to sub frame	68	50
Wheel studs	120	89
Leader line threads (use thread sealant)	1 3/4 turns beyond hand tight	

Table 1

Suggested Driving Air Pressure	Maximum Air Pressure
35-45 PSI (2.4-3.1BAR)	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

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 (Figs. 26 & 27) or an 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 “-20 clicks.” This means that the damper is adjusted 20 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 2009 BMW 328xi.



fig. 26



fig. 27

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. If a heat shield was included in the kit, install it. If there is no heat shield, but one is required, call Air Lift customer service at **(800) 248-0892**.
- 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.

Limited Warranty and Return Policy

Air Lift Company provides a 1-year limited warranty to the original purchaser of Air Lift Performance damper kits from the date of original purchase, that the products will be free from defects in workmanship and materials when used on vehicles as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth in the full Limited Warranty and Return Policy that is available online at www.airliftperformance.com/warranty.

For additional warranty information contact Air Lift Company customer service.

Need Help?

Contact Air Lift Company customer service department by calling (800) 248-0892. For calls from outside the USA or Canada, dial (517) 322-2144.



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