Air Lift™
PERFORMANCE

Kit 75536

BMW E36 Chassis
Front Application

AIRLIFT PERFORMANCE

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.

PERFORMANCE SUSPENSION PARTS

Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of this BMW E36 Performance kit.

It is important to read and understand the entire installation guide before beginning installation or performing any maintenance, service or repair. The information includes a hardware list, tool list, step-by-step installation information, maintenance tips, safety information and a troubleshooting guide.

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.*

IMPORTANT SAFETY NOTICES

The installation of this kit does not alter the Gross Vehicle Weight Rating (GVWR) or payload of the vehicle. Check your vehicle's owner's manual and do not exceed the maximum load listed for your vehicle.

Gross Vehicle Weight Rating: The maximum allowable weight of the fully loaded vehicle (including passengers and cargo). This number — along with other weight limits, as well as tire, rim size and inflation pressure data — is shown on the vehicle's Safety Compliance Certification Label.

Payload: The combined, maximum allowable weight of cargo and passengers that the vehicle is designed to carry. Payload is GVWR minus the Base Curb Weight.

⚠ 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/SHOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.

Installation Diagram

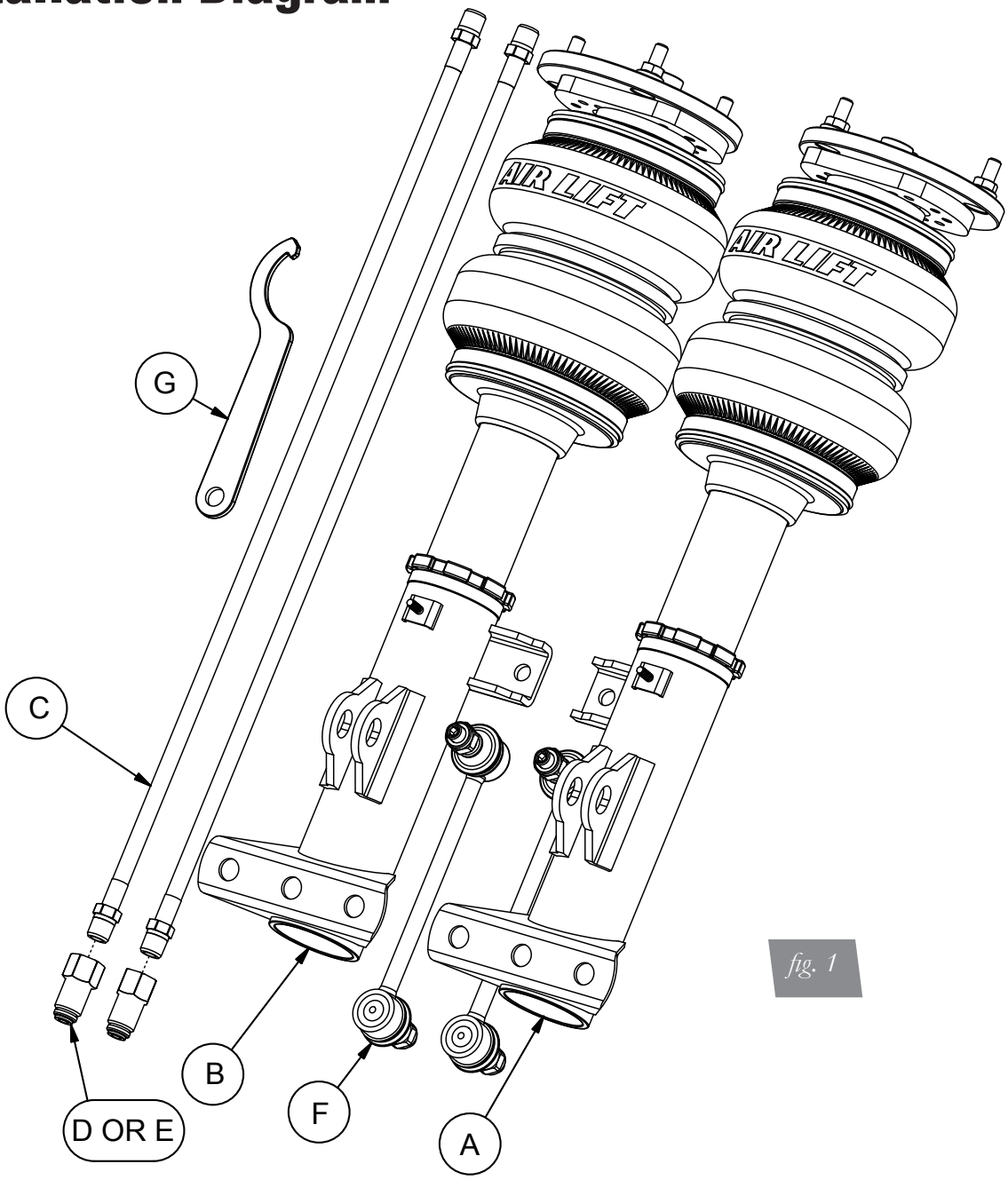

fig. 1

HARDWARE LIST

Item	Part #	Description	Qty
A	35226	Strut Assembly, E36 Front Right	1
B	35227	Strut Assembly, E36 Front Left	1
C	20997	Leader Hose, 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		Sway Bar End Link - 170mm	2
G		Spanner Wrench	1

Installing the Air Suspension

PREPARING THE VEHICLE

1. Support the vehicle with jack stands or a hoist at approved lifting points.
2. Remove the front wheels.

STOCK STRUT REMOVAL

1. Detach the brake line/ABS sensor and brake pad sensor wire from the strut body (fig. 2). To prevent tension on the wires in steps ahead, open the plastic wire holder panel on the inner fender well and unclip the wires from this panel (fig. 3). The added slack in the wires will be helpful when removing the strut.


fig. 2


fig. 3

2. Stabilizer link (fig. 4):
    a. M3 models: remove the stabilizer link from the strut body and stabilizer bar. Replacement stabilizer links are supplied with kit.
    b. All other models: replacement stabilizer links are included in the kit to change the mounting location to M3 style mounting. If you wish to run the M3 style stabilizer link, detach the stock link from the stabilizer bar and lower control arm.


fig. 4

3. Support the steering knuckle and remove the three bolts attaching to the strut (figs. 5-8).

fig. 5

fig. 6

fig. 7

fig. 8

4. Unthread the three upper bracket nuts and remove the strut from the vehicle.

AIR SUSPENSION INSTALLATION

1. Begin by installing the leader line into the air spring (fig. 9). Wrap the threads of the leader line with Teflon tape or thread sealant. Tighten the appropriate fitting to the airline 1 ¾ turns beyond hand tight. Tighten the leader line into the air spring 1 ¾ turns beyond hand tight.

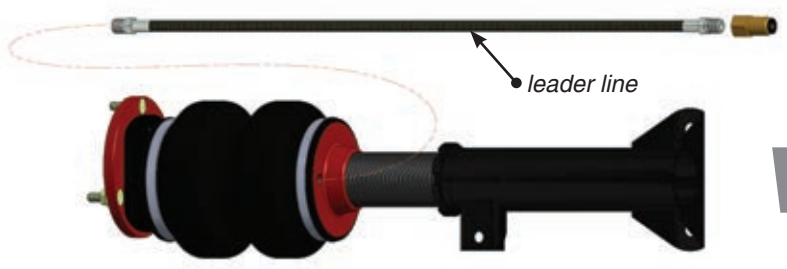

fig. 9

2. Struts are left and right specific (fig. 10). Make sure the correct strut is being installed. Insert the strut into the strut pocket with the camber/caster adjustable plates installed as shown in Figure 10. Tighten camber/caster plate nuts to 24Nm (18Lb-ft).

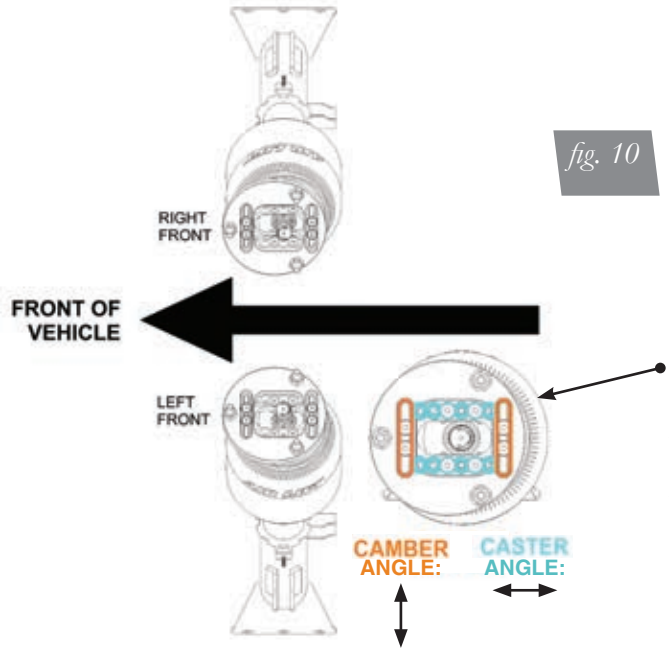

fig. 10

This kit includes a camber/caster plate allowing adjustment of both parameters. Please see your alignment specialist for recommendations on settings.

3. Lift and reattach the steering knuckle to the strut (figs. 11, 12). Torque bolts to 107Nm (79Lb-ft).

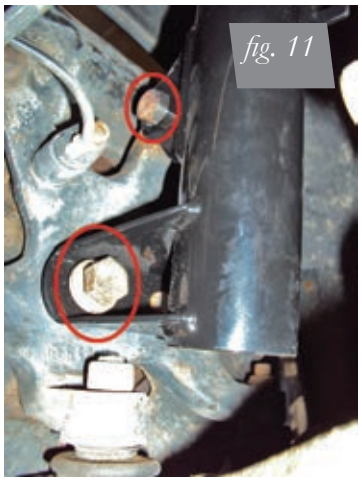

fig. 11

fig. 12

4. M3 models (optional for all others): install the new stabilizer link to the strut and stabilizer bar. Disconnecting the opposing side stabilizer link when installing the new link will ease the process. Torque to 59Nm (44Lb-ft), (figs. 13, 14).

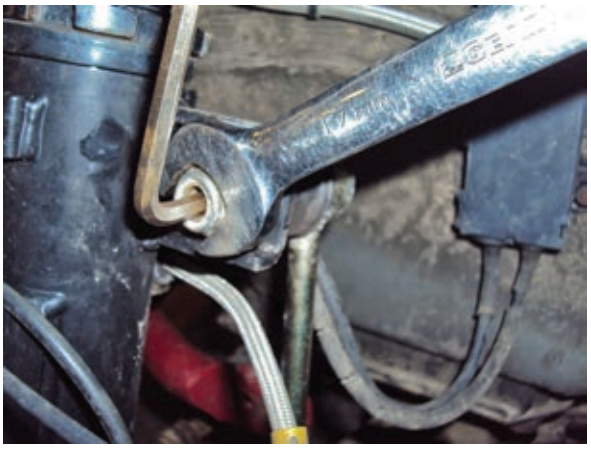

fig. 13

fig. 14

5. Reattach the ABS/pad wear wire and brake line to the strut at this time (fig. 15).

fig. 15

6. Route the air spring leader line in a manner that will allow for full wheel/steering travel without pinching/binding or rubbing (fig. 16).

fig. 16

7. Reinstall wheels. Torque the wheels to 107Nm (79Lb-ft).
8. With the suspension fully compressed, take a measurement from the fender to some reference point, typically the center of the axle. Record this as Max Compression (MC). Cycle the suspension to Max Extension (ME) and record the measurement from the same reference points. Take the difference between the two numbers and divide by two. Add that value to the Max Compression number and then set the suspension to that point (fig. 6). This position gives 50% stroke in either direction and is a great starting point for ride height. At this position torque the lower control arm bolts to manufacturer's specifications (Table 1).

Torque Specifications		
Location	Nm	Lb-ft
Camber/caster plate to chassis	24	18
Strut to steering knuckle	107	79
Stabilizer link to strut	59	44
Stabilizer link to stabilizer bar	59	44
Wheels	107	79

Table 1

Formula for calculating ride height:

fig. 17

Step 1:	*Step 2:*	*Step 3:*	*Answer:*
$\frac{ME - MC}{X}$	$\frac{X}{2} = Y$	$\frac{Y + MC}{Z}$	**Z = DESIGN HEIGHT**

9. Reinstall wheels; retake the Max Compression and Extension measurements from the fender to lower wheel lip. Recalculate the ride height at 50% stroke and set the vehicle to that height.

NOTE

Make sure to get an alignment at the preferred drive height.

ALIGNING THE VEHICLE

1. Using the control system, set the vehicle height to the new custom ride height.
2. If the custom ride height is lower than stock, we recommend loosening all pivot points (bolts, nuts) on any control arm, strut arm or radius rod that contains bushings. Once they have been loosened, re-torque to stock specifications.
3. Check for air spring clearance to the strut tower. Be sure there is no rubbing!

NOTE

It may be necessary to cycle the suspension to loosen the bushing up from its mount. This will help unload the bushing to make it last longer at its new position based on the custom ride height.

DAMPING ADJUSTMENT

The struts in this kit have 30 settings or “clicks” of adjustable compression and rebound damping characteristics. Damping is changed through the adjuster at the top of the strut. Turn the adjuster clockwise and the damping settings are hardened. Turn the adjuster counterclockwise and the damping is softened. Each front strut is preset to “-20 clicks”. This means that the strut is adjusted 20 clicks away from full stiff. Counting down from full stiff is the preferred method of keeping track/setting of damping. This setting was developed on a 1993 BMW 325is and may need to be adjusted to the different vehicles and driving characteristics. (figs. 18, 19).

fig. 18

fig. 19

ADJUSTING EXTENDED OR DROP HEIGHT USING LOWER MOUNT

Your struts have been pre-set at the factory to provide maximum drop height while maintaining adequate tire clearance to the air spring. If you wish to gain more extended height (lift), which is the same as reducing drop height, or want to lower the chassis further and there is still adjustment available at the lower mount, please use the following procedure:

1. Support the vehicle with jack stands or a hoist at approved lifting points.
2. Remove the wheel.
3. Using the supplied spanner wrench, loosen the lower locking collar (fig. 20).

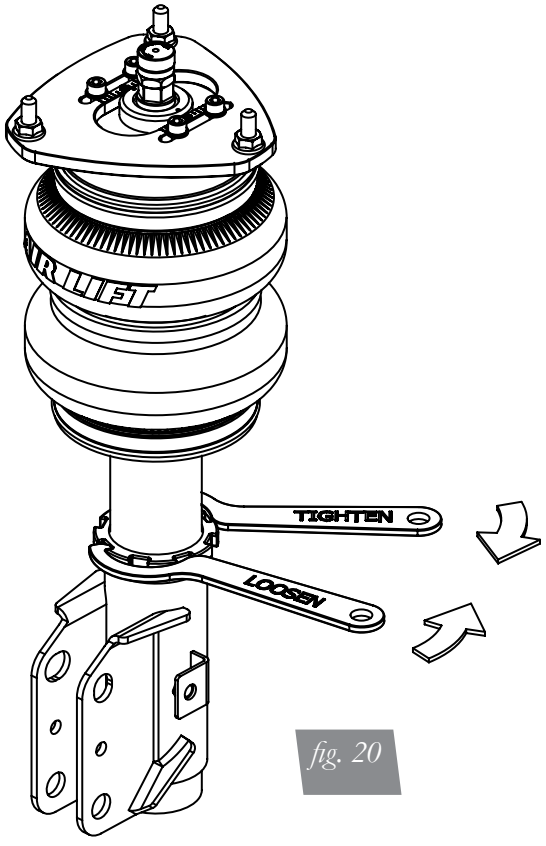

fig. 20

4. Deflate the air spring to 0 PSI on the corner you are adjusting.
5. Disconnect lower mount from suspension
6. Spin the lower mount to the desired location.

NOTE

Not all models will have further drop height available.

7. Re-install lower mount to suspension and torque fasteners.
8. Tighten the lower locking collar to the lower mount using significant force.

⚠ CAUTION

WHEN ADJUSTING HEIGHT UPWARDS, MAKE SURE THAT THAT THE STRUT BODY ENGAGES ALL THE THREADS OF THE LOWER MOUNT. (FIG. 21) WHEN ADJUSTING DOWNWARDS, MAKE SURE THERE IS ADEQUATE AIR SPRING CLEARANCE TO THE TIRE/WHEEL ASSEMBLY. CLEARANCE MUST BE CHECKED WITH SYSTEM FULLY DEFLATED AS WELL AS FULLY INFLATED TO ENSURE THAT NO RUBBING OCCURS. FAILURE TO MAINTAIN ADEQUATE CLEARANCE CAN RESULT IN AIR SPRING FAILURE AND WILL NOT BE COVERED UNDER WARRANTY.

⚠ CAUTION

DO NOT ADJUST HEIGHT BY SPINNING AIR SPRING ON STRUT! DOING SO MAY CAUSE AN AIR LEAK AND COMPROMISE THE ASSEMBLY.

FOR STRUTS: ***FOR SHOCKS:***

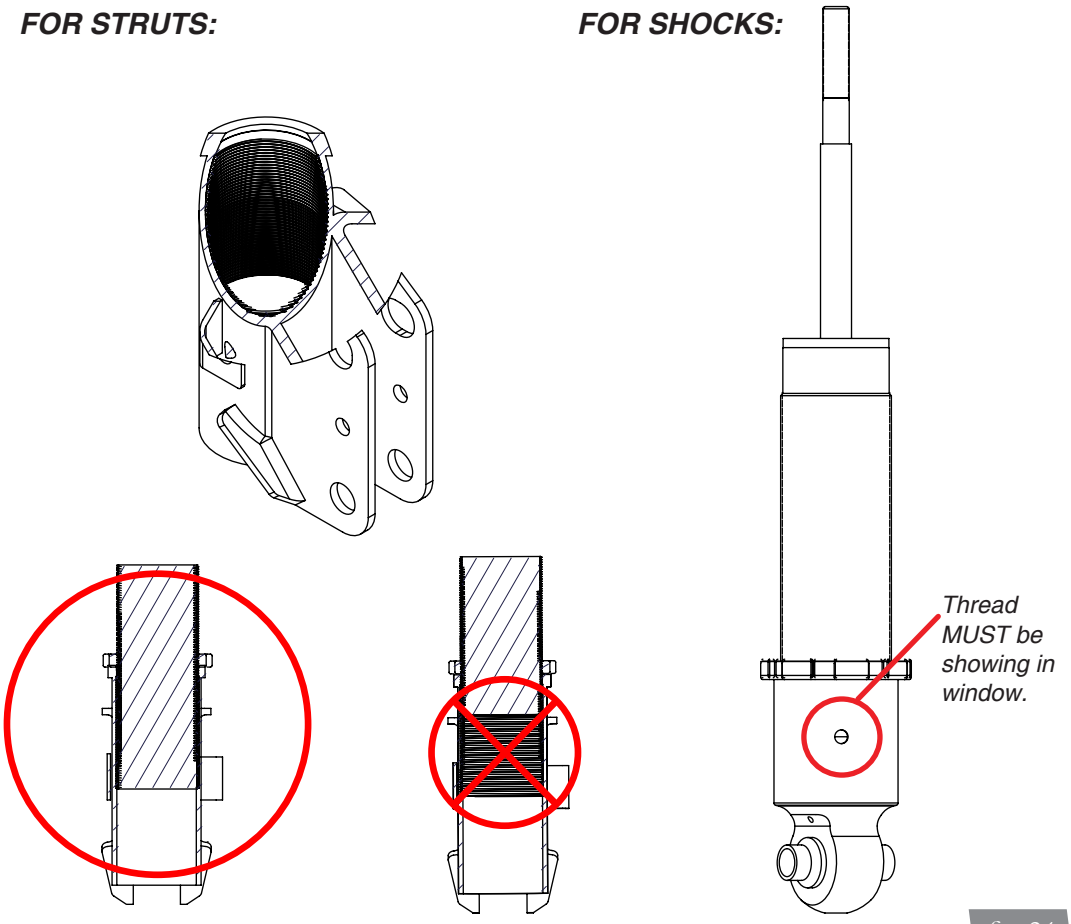

fig. 21