

AIR LIFT
PERFORMANCE

INSTALLATION GUIDE



BMW M3 (F80)/M4 (F82)

REAR APPLICATION

Kit 76541

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 which could result in damage to the vehicle, minor to severe personal injury or death.

Protect your Air Lift Performance Purchase by Completing your Warranty Registration



Thank you for purchasing an Air Lift Performance product!

Take a photo of your sales receipt and then scan the
QR code to complete your online warranty registration.

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Introduction

Air Lift Performance thanks you for purchasing the most complete, fully engineered high-performance air suspension made for the BMW M3 (F80)/M4 (F82). 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 System Overview 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 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

Used to help emphasize areas of procedural importance and provide helpful suggestions.



TECH TIP

Used to provide helpful tips to ease the installation process.

System Overview

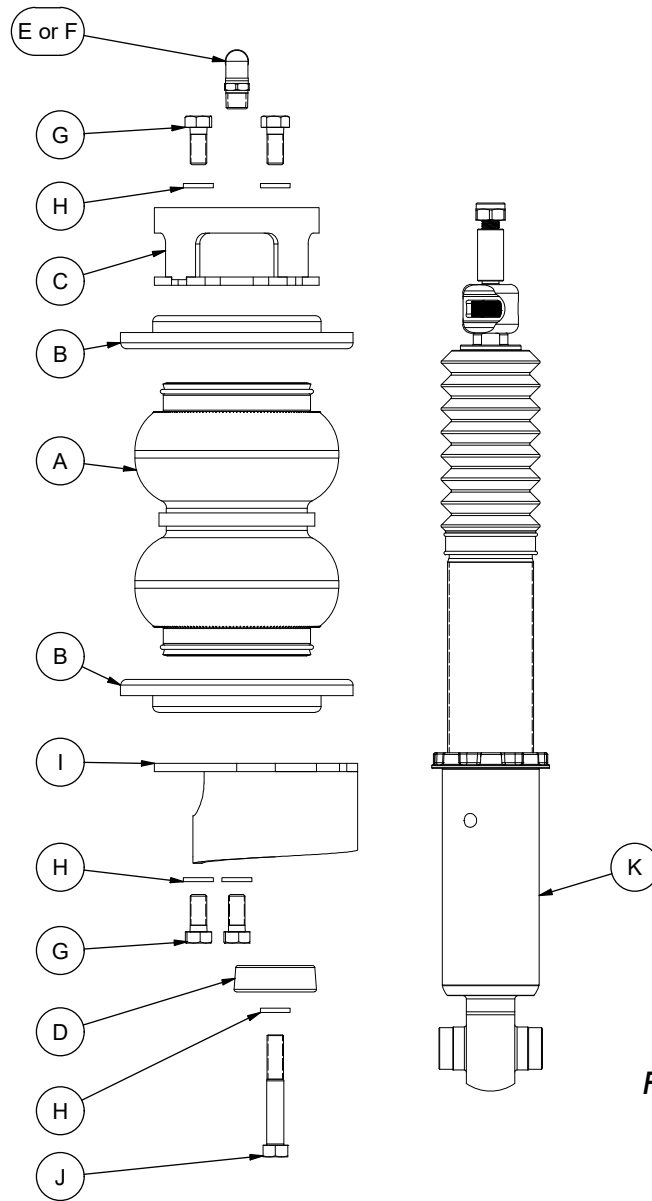


Fig. 1

HARDWARE CONTENT

Item	Part #	Description	Qty	Item	Part #	Description	Qty
A	58535	AIR SPRING, 2B5	2	G	17203	3/8-24 X 7/8" HEX BOLT	8
B	11803	ROLL PLATE, 2B5	2	H	18427	3/8" LOCK WASHER	10
C	07969	UPPER BRACKET, BMW F30 REAR	2	I	03968	LOWER BRACKET, BMW M3/M4 REAR	2
D	13995	CENTERING SPACER, BMW M3/M4 REAR	2	J	17454	3/8-24 X 2.5, HEX CAP SCREW	2
E	21779	1/4" MNPT X 1/4" PTC ELBOW FITTING, DOT	2	K	39180	SHOCK, BMW F80 (5-BOLT), REAR	2
F	21851	1/4" MNPT X 3/8" PTC ELBOW FITTING, DOT	2				



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

Install the System



NOTES

See important safety notices on page 2.

SECTION 1. PREPARE THE VEHICLE

1. Raise the vehicle with a jack at the approved lifting points and use jack stands to support the vehicle. Remove the wheel and fender liner (Fig. 2).

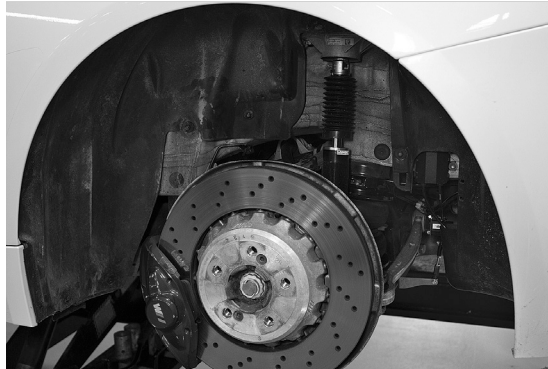


Fig. 2

SECTION 2. STOCK SUSPENSION REMOVAL

1. Unclip the electronic damping control connector at the top of the shock. Support the hub with a jack. Loosen and remove the upper shock bolts (Fig. 3).

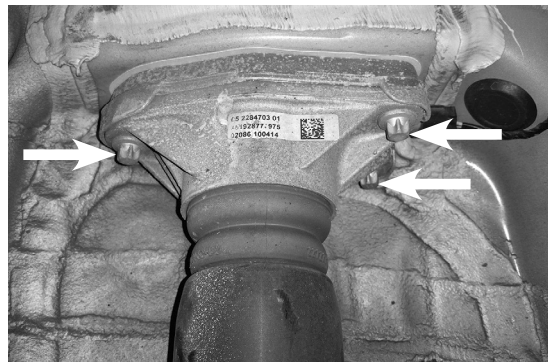


Fig. 3

2. Separate the electronic damping control connector located on the side of the shock (Fig. 4).



Fig. 4

3. Disconnect the headlight alignment linkage from the lower control arm (Fig. 5).

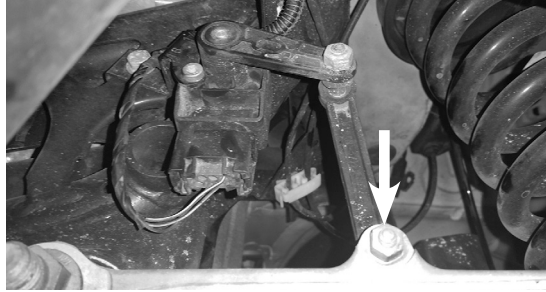


Fig. 5

4. Loosen and remove the lower shock bolt. Remove the shock from the vehicle (Fig. 6).

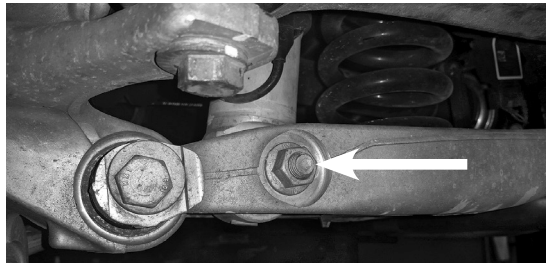
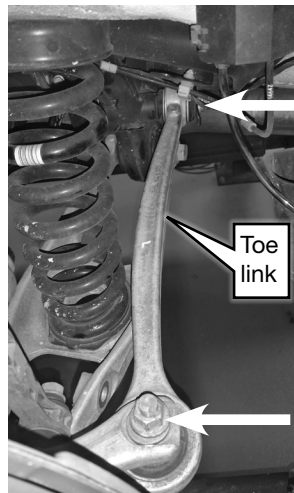


Fig. 6

5. Loosen and remove the bolts at both ends of the toe link. Remove the toe link. Note the direction of the curve of the toe link. It will be reinstalled the opposite way (Fig. 7).



The toe link will be reinstalled opposite of the original orientation.

Fig. 7

6. Make sure jack stands are in place and secure. Release the jack and move it to support the control arm. Loosen the inner bolt on the lower control arm, but do not remove it. Loosen and remove the outer bolt on the lower control arm (Fig. 8).

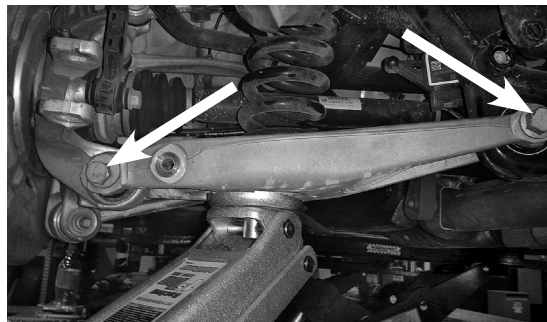


Fig. 8

- Lower the jack to allow for removal of the coil spring. Leave the upper spring cup in place. If it comes out with the spring, set it aside and reinstall it with the air spring assembly. Remove the rubber isolator from the spring cup. (Figs. 9 & 10). After the coil spring is removed, raise the control arm and reinstall the bolt. Torque to 165Nm (122 lb.-ft.).

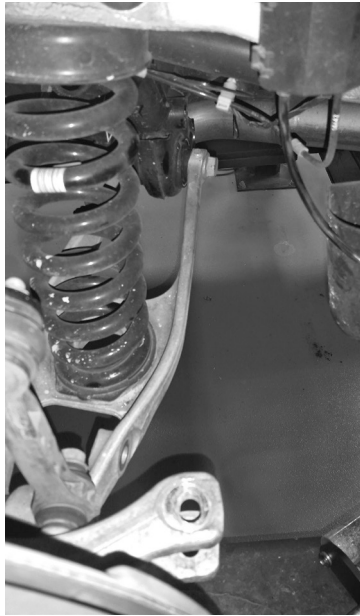


Fig. 9

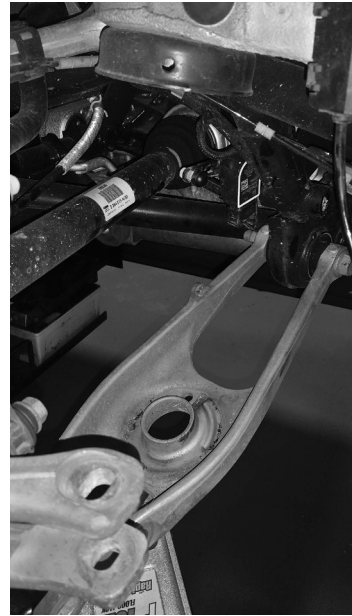
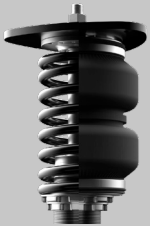


Fig. 10

SECTION 3. INSTALL THE KIT COMPONENTS



PLEASE READ - IMPORTANT INSTALLATION INFORMATION



FOR COIL TO AIR UPGRADE KIT INSTALLATIONS ONLY: Please refer to the included Coil to Air Upgrade Kit installation guide (MN-2000) for details on how to disassemble the coilovers and assemble the air springs.

Also refer to your control system installation guide to ensure the installation of your air suspension system is complete.



NOTES

All dampers come pre-set to even lengths, and locking collars are pre-tightened. It is always recommended to double-check that the dampers are the same length side to side, and the locking collars are tight.

Please refer to the User Guide included with the kit for any suspension setup adjustments.

1. Dismantle the two halves of the upper shock mount. Unclip the electronic damping control connector from the top of the shock. Carefully remove the gasket and set aside for reuse. Remove the nut from the top of the shock rod. Remove the lower portion of the upper mount and the jounce bumper (Figs. 11, 12, 13 & 14).



Fig. 11

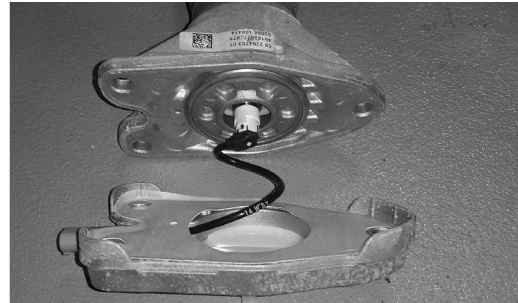


Fig. 12



Fig. 13



Fig. 14

2. Reassemble the upper mount on the Air Lift Performance shock. Attach it with original damper rod nut and torque to 38Nm (28 lb.-ft.). The electronic damping control is not used.
3. Insert the assembled shock in the car and attach with the previously removed upper mount bolts. Make sure that the plastic pin on top of the mount is aligned with the hole in the frame. Torque to 28Nm (21 lb.-ft.) (Fig. 15).



Fig. 15

4. Raise the lower control arm with the jack in order to line up the mount hole with the shock mount. Insert the factory bolt, but do not torque at this time. Torque it at ride height (Fig. 16).



Fig. 16

5. Install the air fitting to the air spring 1 3/4 turns beyond hand-tight.
6. Install the air spring assembly in the lower control arm spring pocket. The upper spring mount will insert into the upper spring mount cup. If the upper spring mount cup came out with the coil spring, install it on the air spring upper mount. Insert the 3/8"-24 x 2.5" (J) hex-cap screw, centering spacer (D) and a 3/8" lock washer (H) through the hole in the bottom of the lower control arm and into the bottom of the air spring. Torque to 27Nm (20 lb.-ft.) (Figs. 17, 18 & 19).



Fig. 17

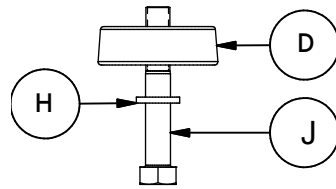


Fig. 18

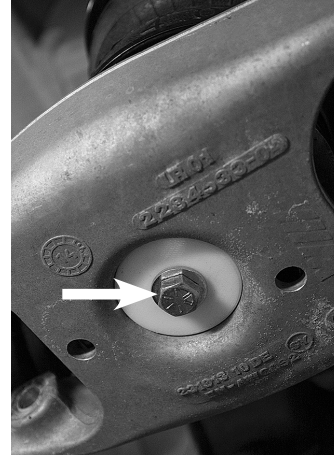


Fig. 19

7. The toe link came from the factory with the curve toward the stock coil spring. Reinstall it with the curve away from the air spring (toward the rear of the vehicle) (Fig. 20).



The curve of the toe link needs to be away from the air spring.

Fig. 20

8. Torque the inner control arm bolt to 165Nm (122 lb.-ft.) (Fig. 20) and the toe link inner and outer bolts to 100Nm (74 lb.-ft.) when the vehicle is set at ride height.
9. Reconnect the headlight alignment linkage to the lower control arm. Torque to 6Nm (53 lb.-in.).
10. Reinstall the fender liner.

SECTION 4. ROUTE THE AIR LINES



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.

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 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.



PLEASE READ - IMPORTANT INSTALLATION INFORMATION

Please refer to your control system installation guide for more details on air line routing and to ensure the installation of your air suspension system is complete.

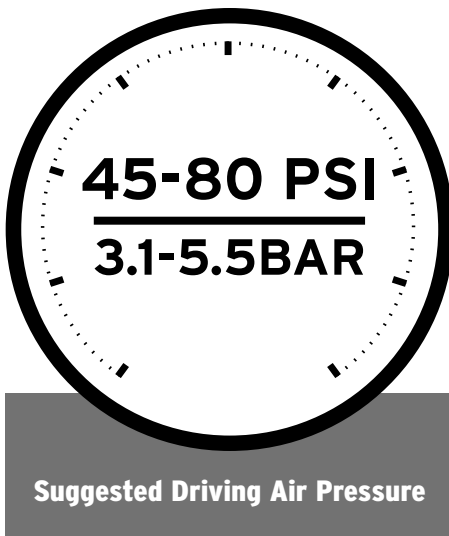
Before Operating

SET THE RIDE HEIGHT

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

Torque Specifications			
Location	Nm	Lb.-ft.	Lb.-in.
Damper rod nut	38	28	
Centering spacer bolt	27	20	
Upper shock mount bolts to chassis	28	21	
Inner/outer control arm bolts	165	122	
Lower shock mount bolt to control arm	100	74	
Toe link inner/outer bolts	100	74	
Top wishbone inner bolt	100	74	
Top front wishbone inner bolt	100	74	
Headlight alignment linkage	6		53
Wheel studs	140	103	

2. Upon successful completion of the installation, follow these pressure requirements for the air springs.



CAUTION

FAILURE TO MAINTAIN ADEQUATE MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO LOAD) MAY RESULT IN EXCESSIVE BOTTOMING OUT AND **WILL VOID THE WARRANTY.**

CHECK FOR BINDING



CAUTION

MAKE SURE THE FRONT WHEELS ARE STRAIGHT WHEN DEFLATING AND REINFLATING AIR SPRINGS.

1. Inflate and deflate the system (do not exceed 8.6BAR [125 PSI]) 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 5.2-6.2BAR (75-90 PSI) and check all connections for leaks.

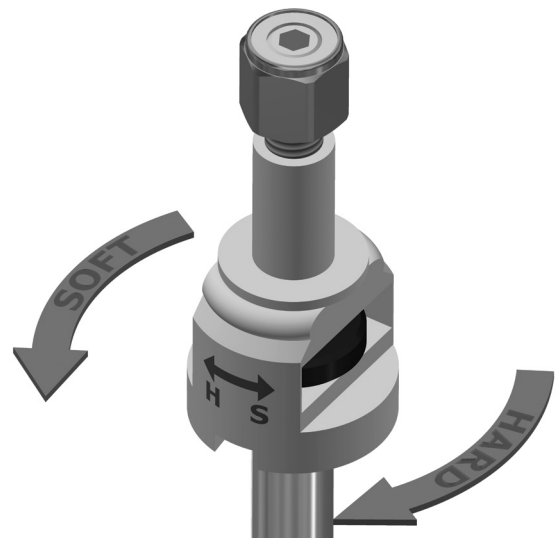
INSTALLATION CHECKLIST

- Clearance** – Inflate the air springs to 5.2-6.2BAR (75-90 PSI) and make sure there is at least 13mm (1/2") 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 5.2-6.2BAR (75-90 PSI) 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 152mm (6") 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 air springs to recommended driving pressures (see previous page). Drive the vehicle 16km (10 miles) 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 32 settings, or “clicks,” of adjustable compression and rebound damping characteristics. Damping is changed through the damper rod using the supplied adjuster (example shown here) 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 will need to be set after installation and your initial drive, as they are not pre-set. It may take multiple adjustments to dial in your ideal ride. A good starting point is in the middle at 16 clicks from full soft, then drive the vehicle and make adjustments either softer or stiffer.

For more information, refer to the user guide.



Limited Warranty and Return Policy

Air Lift Company provides a limited warranty* to the original purchaser of Air Lift Performance Air Suspension kits from the date of original purchase, that the products will be free from defects in workmanship and materials when used on cars and trucks 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.

* Full Limited Warranty and Return Policy are available at www.airliftperformance.com/warranty and are subject to change.

WARRANTY REGISTRATION & CLAIMS

- To register your warranty, please visit <https://www.airliftperformance.com/support/warranty-registration/>
- To submit a warranty claim, please visit <https://www.airliftperformance.com/support/submit-warranty-claim/>

Thank you for purchasing Air Lift Performance products!

Need Help?

Contact Air Lift Company Customer Service at (800) 248-0892 or +1 (517) 322-2144 for calls from outside the U.S. and Canada.



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