air lift performance®

INSTALLATION GUIDE

# VOLKSWAGEN MKV & MKVI PLATFORM

## *REAR APPLICATION*

Kit 76502

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.*

MN-2502 • (012507) • ERN 10188

# 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 Volkswagen MKV & MKVI Platform. 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

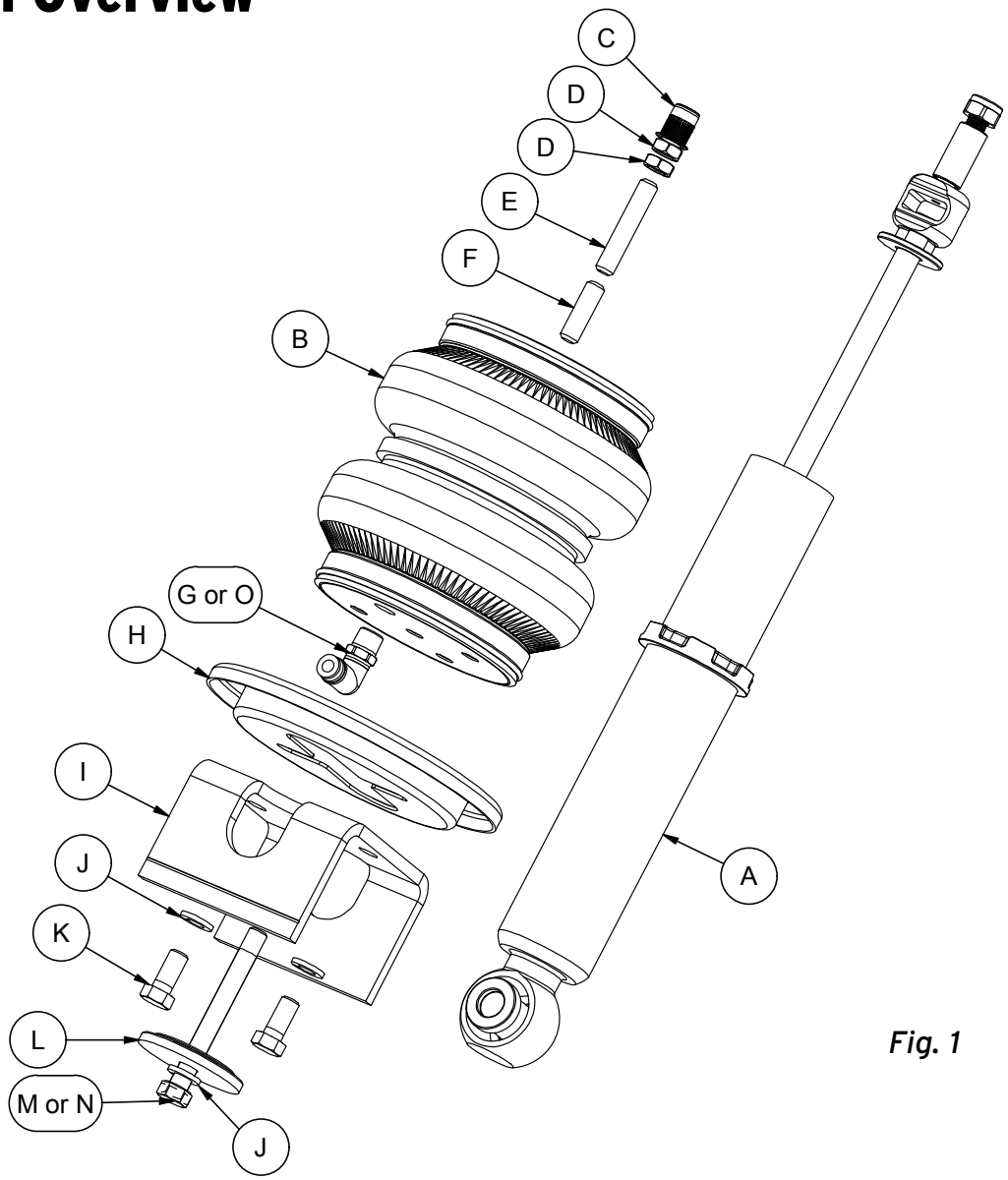



*Fig. 1*

## HARDWARE CONTENT

| Item | Part # | Description | Qty |
|---|---|---|---|
| A | 39118 | SHOCK, MK5/6, REAR | 2 |
| B | 58531 | AIR SPRING, 2B6 REGULAR (RECESS MOUNT) | 2 |
| C | 18585 | 3/8-16 NUTSERT | 2 |
| D | 18436 | 3/8-16 NUT | 4 |
| E | 17463 | 3/8-16 X 2" THREADED ROD | 2 |
| F | 17447 | 3/8-16 X 1 1/4" THREADED ROD | 2 |
| G | 21779 | 1/4" MNPT X 1/4" PTC ELBOW FITTING - DOT | 2 |
| H | 11801 | ROLL PLATE | 2 |

| Item | Part # | Description | Qty |
|---|---|---|---|
| I | 03992 | BRACKET, LOWER, MKV REAR | 2 |
| J | 18427 | 3/8" LOCK WASHER | 6 |
| K | 17203 | 3/8-24 X 7/8" HEX BOLT | 4 |
| L | 13980 | SPACER, SPRING SEAT CENTERING | 2 |
| M | 17109 | 3/8-16 X 3 1/2" HEX CAP SCREW | 2 |
| N | 17442 | 3/8-16 X 3" HEX CAP SCREW | 2 |
| O | 21851 | 1/4" MNPT X 3/8" PTC ELBOW FITTING - DOT | 2 |

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

# Install the System

**DANGER**

THIS APPLICATION IS DESIGNED FOR PREVIOUSLY MODIFIED VEHICLES WHERE THE FRAME HAS BEEN NOTCHED FOR AXLE CLEARANCE. AIR LIFT COMPANY DOES NOT RECOMMEND FRAME MODIFICATION, AND ANY MODIFICATIONS PREVIOUSLY DONE ARE AT THE OWNER'S RISK. AIR LIFT COMPANY IS NOT LIABLE FOR VEHICLE OR PERSONAL DAMAGE DUE TO MODIFICATIONS PERFORMED.

## SECTION 1. PREPARE THE VEHICLE

1. Elevate the vehicle and support the body with a hoist or safety stands.
2. Remove the front wheels.

**NOTE**

*If the vehicle is equipped with automatic vertical headlight control, disconnect the coupling rod from the lower transverse link (Fig. 2).*

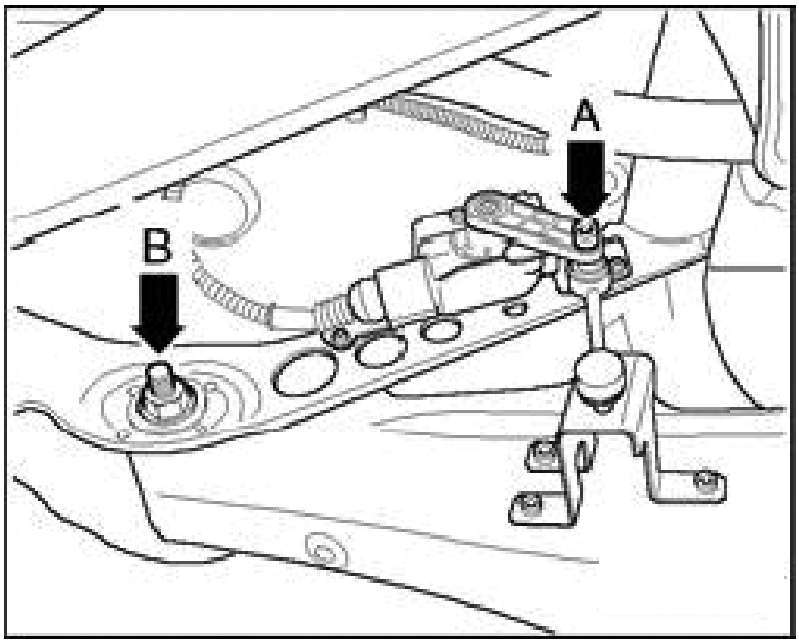



*Fig. 2*

3. To remove the coil spring, it is recommended that you use a spring compressor.

**CAUTION**

COIL SPRING UNDER COMPRESSION: THE COIL SPRING CAN BE REMOVED BY SECURELY SUPPORTING THE LOWER TRANSVERSE LINK WITH A JACK AND REMOVING THE LOWER MOUNTING BOLT FROM THE WHEEL BEARING HOUSING. SLOWLY LOWER THE TRANSVERSE LINK UNTIL THE SPRING IS LOOSE AND FREE FROM TENSION.

4. Remove the rubber isolator in the lower transverse link.
5. Disconnect the lower transverse link from the hub.
6. Support the axle carrier and remove the lower shock mount.
7. Unbolt the upper shock bracket and remove the shock from the vehicle.
8. Remove the upper bracket plastic cap and remove the nut shock rod nut. Retain the upper shock bracket and plastic cap for later use.

## SECTION 2. INSTALL THE REAR SHOCK

1. The rear shocks (A) supplied in this kit are height adjustable through the use of the threaded lower mount. To adjust the height, loosen the locking collar and thread the shock cartridge in or out of the lower mount. Lock the shock cartridge in-place by torquing the collar against the lower mount 45 degrees beyond hand-tight.
2. Attach the factory upper shock mount to the shock using the supplied nut and torque to 25Nm (18 lb.-ft.).
3. Reattach the shock upper bracket to the chassis and torque bolts to 50Nm + 45 degrees (37 lb.-ft. + 45 degrees).
4. Align the lower shock eye with the axle carrier and reinstall the lower shock bolt. Do not torque at this time.
5. Use a 17/32" drill bit to enlarge the hole in the upper coil spring perch. If the upper coil spring perch has been removed, drill in the center of where the perch used to be.
6. The hole must be 17/32" for the nutsert (C) to be effective (Figs. 3-6).

*Factory / OEM Upper Spring Perch*

***Fig. 3***

***Fig. 4***

*Previously Cut Spring Perch with Aftermarket Shock*

***Fig. 5***

***Fig. 6***

7. Assemble the nutsert (C) and nutsert tool together and insert into the 17/32" hole. Review diagram below on how to attach the nutsert to the vehicle (Fig. 7).

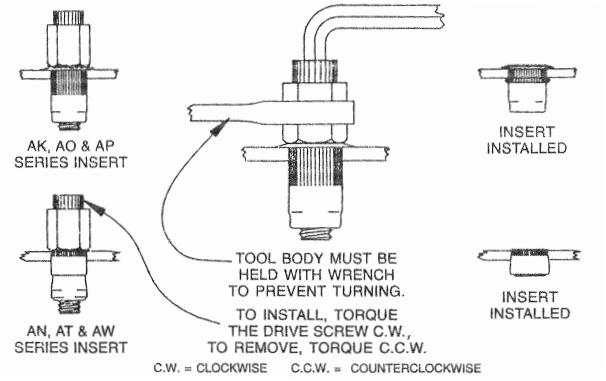



*Fig. 7*

8. Two lengths of threaded studs are included with the kit (E or F, Fig. 1). The shorter stud (F) is for vehicles that retain the coil spring perch bump. The longer threaded stud (E) is for vehicles without the spring perch bump. Apply thread sealant to the threads of the upper end cap and thread in the appropriate stud. Take the supplied nuts and thread both onto one stud (Figs. 8 & 9). Using the nuts jammed together, tighten the stud into the end cap until it bottoms (Fig. 10). Remove both nuts (Fig. 11).

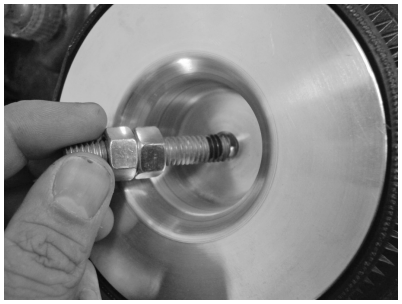


*Fig. 8*

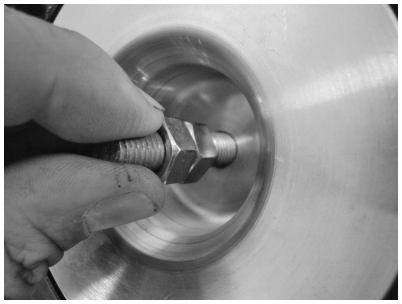


*Fig. 9*


*Fig. 10*

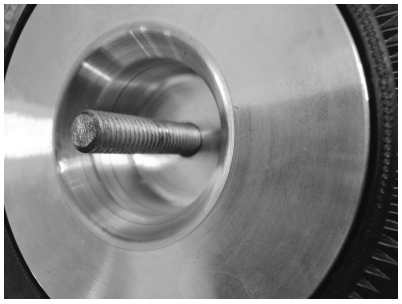


*Fig. 11*

## 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.

1. Cover the threads of the air fitting (G or O) with tape or thread sealant. Tighten the fitting 1 3/4 turns beyond hand-tight.
2. Thread the air fitting into the lower end cap of the air spring. Tighten by hand (Figs. 12 & 13).

*Previously Cut Spring Perch with Aftermarket Shock*

*Fig. 12*

*Fig. 13*

3. Orient the air fitting inline with lower transverse link toward the center of the vehicle.
4. The lower bracket in this kit has a scribe line. This indicates the height the bracket should be if using Air Lift rear shocks or shocks that allow for more drop than the factory shock absorbers with half cut jounce bumpers.

**⚠ CAUTION** IF RUNNING A SHORTER-THAN-FACTORY SHOCK, THE BRACKET MUST BE TRIMMED DOWN TO PREVENT THE AIR SPRING FROM BEING OVER COMPRESSED AND POTENTIALLY CAUSING A RUPTURE.

5. Attach the lower bracket (I) and roll plate (H) with the lock washer (J) and bolts (K) provided. The roll plate is used with the full length lower bracket. Roll plates are not used with a cut bracket (Figs. 14-16)

*Fig. 14*

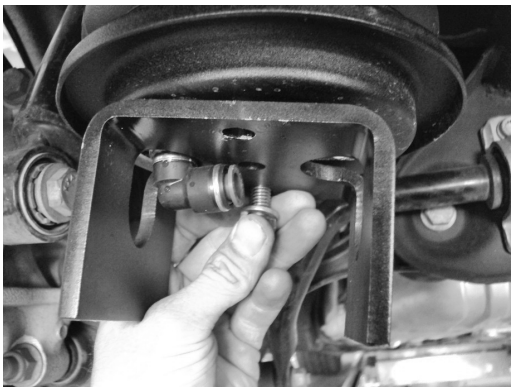


*Fig. 15*

*Fig. 16*

*Installation with aftermarket shock, no roll plate and cut bracket (Figs. 17-20)*

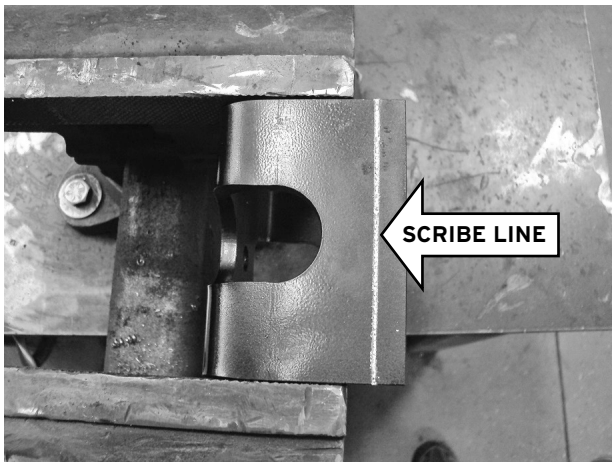



*Fig. 17*

*Fig. 18*

*Fig. 19*

*Fig. 20*

6. Route the air line from the center of the cross-member, through the lower transverse link and attach insert into the air fitting (Fig. 21).

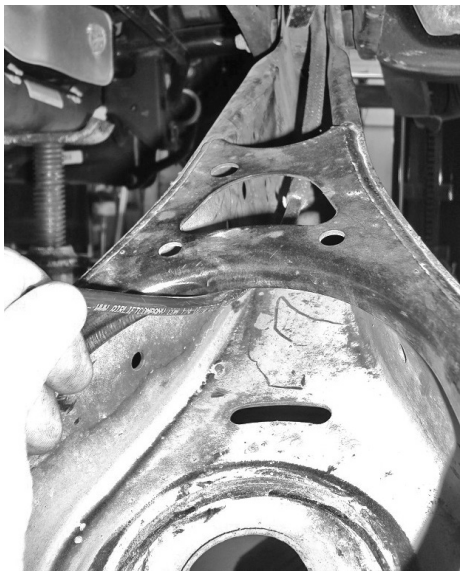


*Fig. 21*

7. Reattach the lower transverse link to the hub. Do not torque at this time (Fig. 22).

**NOTE**

*If the lower bracket has been cut, the shorter length bolt (N) should be used to secure the assembly to the lower transverse link with the centering washer (L) and lock washer (J). Uncut brackets use the longer bolt (M, Fig. 1) (Fig. 23).*

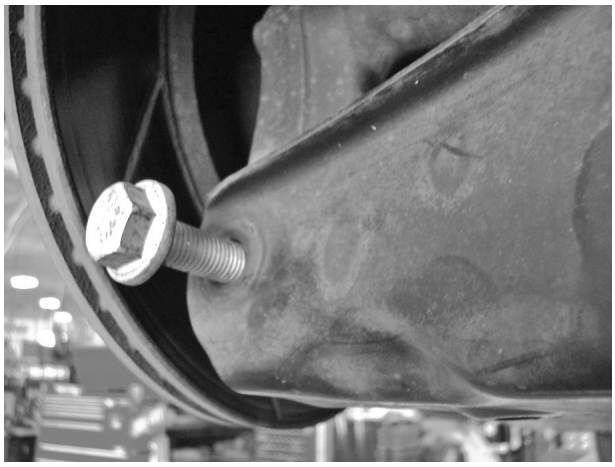


*Fig. 22*

*Fig. 23*

## *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.

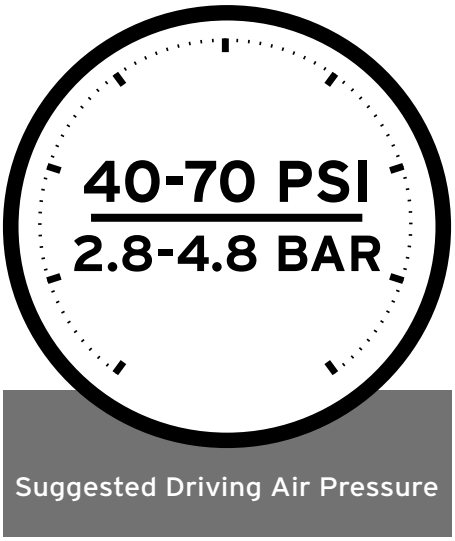
# Before Operating

## SET THE RIDE HEIGHT

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

| Torque Specifications | | | |
|---|---|---|---|
| Location | TTY* | Nm | Lb.-ft. |
| Upper shock bracket to chassis | ✓ | 50 + 45 degrees | 37 + 45 degrees |
| Upper shock mount cap | ✓ | 25 | 18 |
| Wheel hub to shock eye | | 180 | 133 |
| Lower transverse link to wheel hub | ✓ | 90 + 90 degrees | 67 + 90 degress |
| Headlight alignment link | | 5 | 44 lb.-in. |
| Wheels | | 120 | 88 |

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 REAR 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.

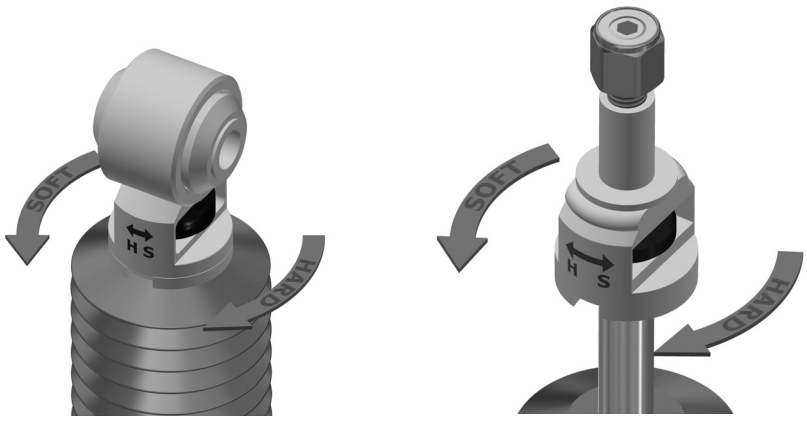
## INSTALLATION CHECKLIST

- ☐ **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.

Connect by searching for **Air Lift Performance** #LifeonAir

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