

# **Air Lift™**

## **PERFORMANCE**

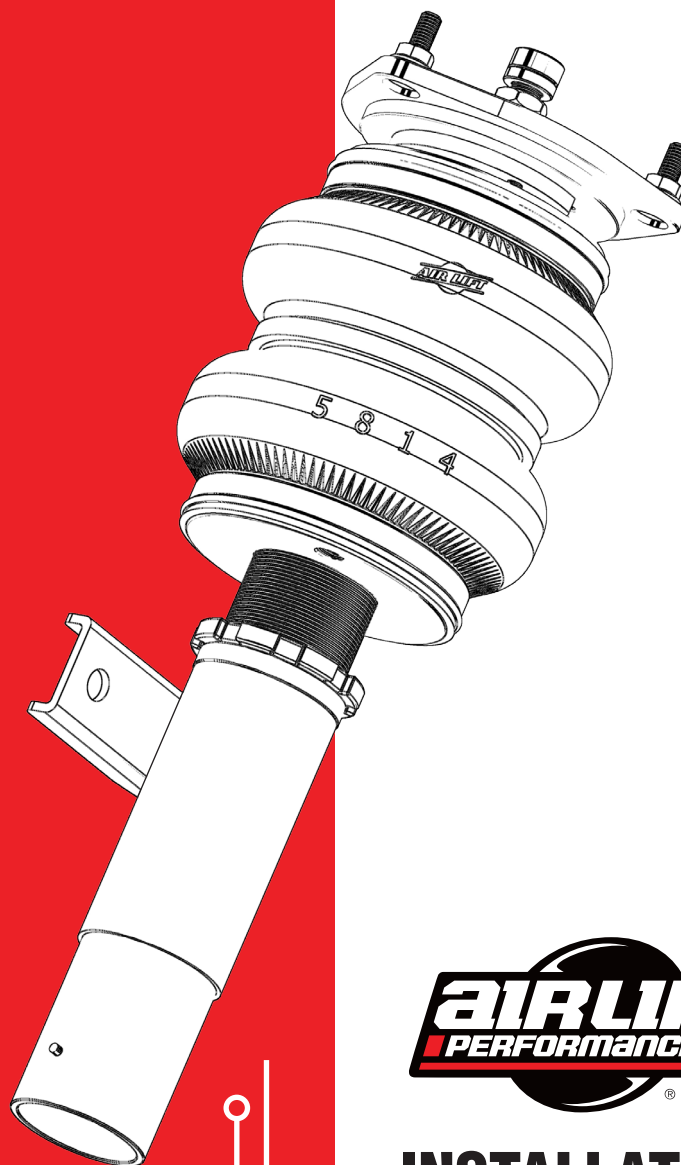
# **Kit 75576**

## **Volkswagen**

### **MKV & MKVI Platform**

### **Front Application**

*(for vehicles with 55mm lower strut diameter)*



## **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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**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.

## Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of this Volkswagen MKV & MKVI 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.

Air Lift Company 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 Company at (800) 248-0892 or visit our website at [www.airliftcompany.com](http://www.airliftcompany.com).

### 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/SOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.

# Installation Diagram

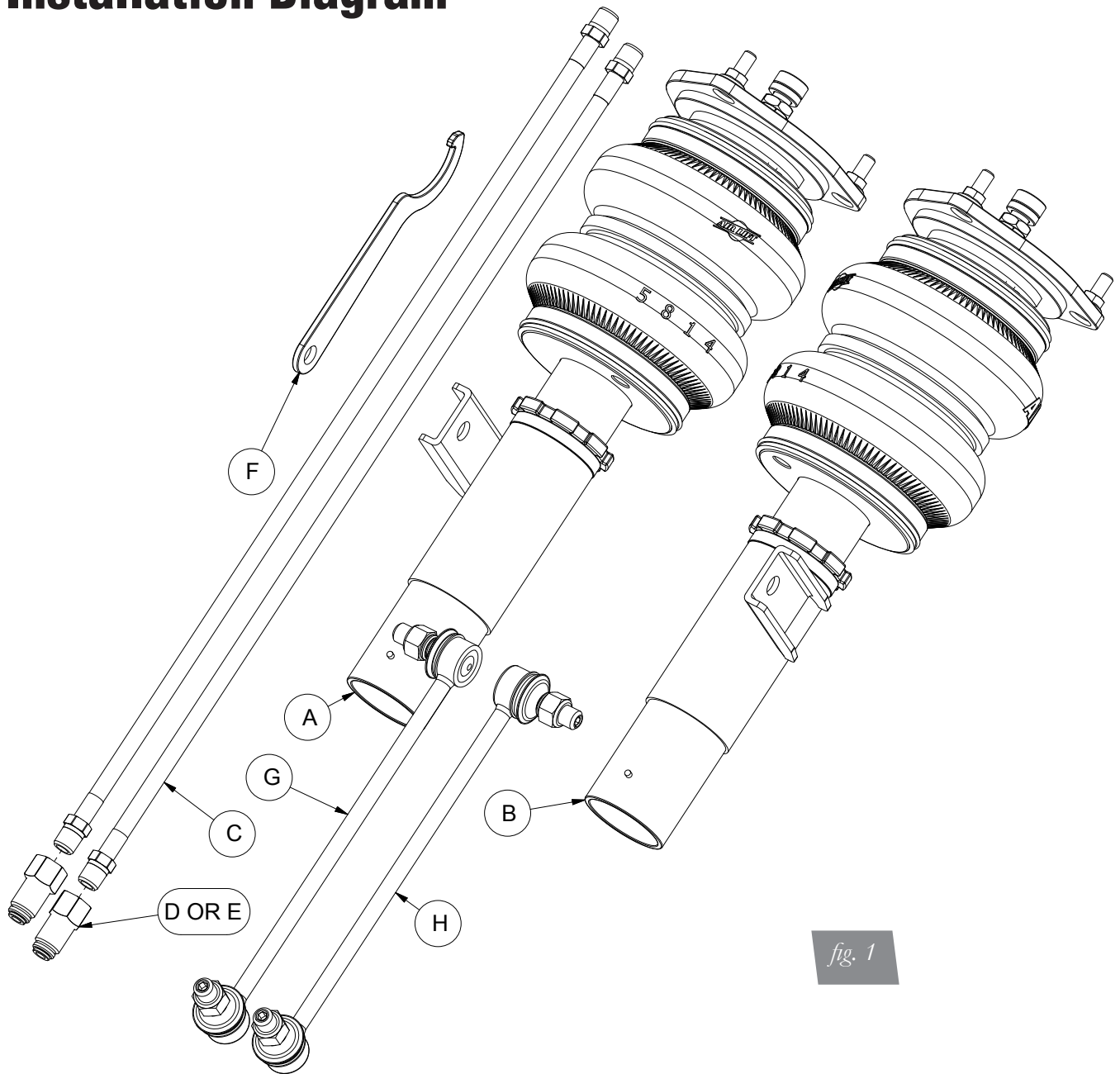


fig. 1

## TOOLS LIST

### Description

Jack  
Jack stands or hoist  
Torque wrench  
Metric Wrenches  
Standard Wrenches  
VW Spreader 3424

## HARDWARE LIST

Item	Part #	Description .....	Qty
A	35234	Strut assembly, MKV/VI Front (55mm) R.....	1
B	35235	Strut assembly, MKV/VI Front (55mm) L .....	1
C	20997	Leader Hose, 1/4" ID.....	2
D	21987	Union, 1/4"FNPT X 3/8" PTC, DOT.....	2
E	21810	Union, 1/4"FNPT X 1/4" PTC, DOT.....	2
F		Collar Wrench .....	1
G		End Link - 260mm RIGHT.....	1
H		End Link - 260mm LEFT .....	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 the vehicle and support the body with a hoist or jack stands.
2. Remove the front wheels.

### NOTE

*If the vehicle is equipped with Automatic Headlight Vertical Aim Control, detach the unit from the lower control arm (fig. 2 - part 1 pictured) to prevent overextension.*

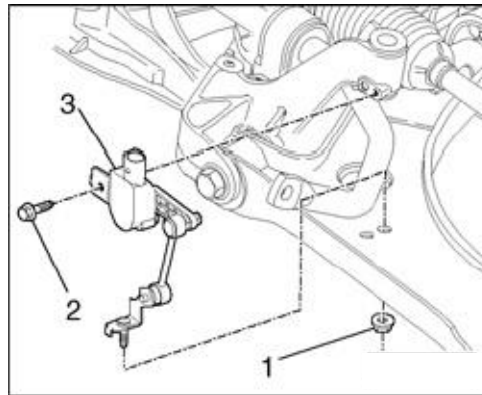


fig. 2

## REMOVING THE STRUT

1. Unbolt the sway bar from the tab (fig. 3). Sway Bar removal, see factory repair manual for instructions.
2. Unthread and remove the axle bolt from the hub assembly (fig. 3a).

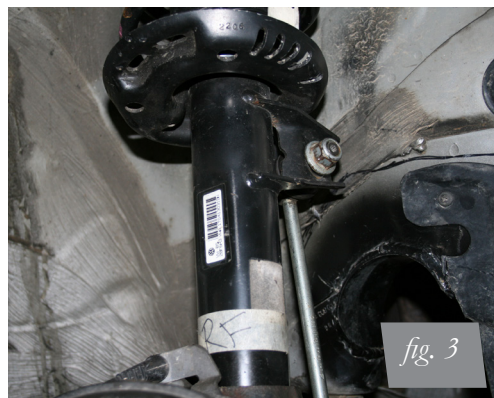


fig. 3



fig. 3a

3. Remove the three lower nuts from the lower ball joint and control arm (fig. 4). Detach the ball joint and hub assembly from the control arm.

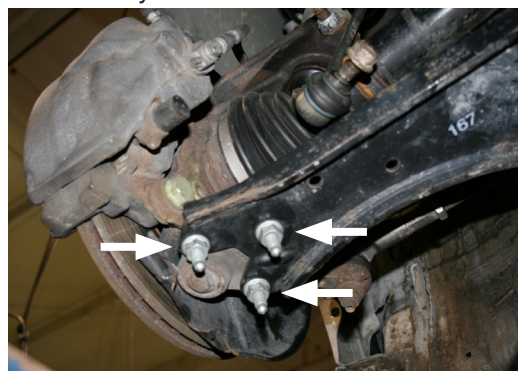


fig. 4



### CAUTION

4. Pull drive axle out of the hub assembly and secure the axle to the body with wire.
- TO PREVENT DAMAGE TO THE INNER AXLE JOINT, DO NOT ALLOW THE AXLE TO HANG FREE.
5. Reattach the lower ball joint to the lower control arm.
6. Support the hub assembly.
7. Remove the bolt at the back of the hub assembly to the strut.
8. Spread the hub assembly slot and push down on the hub to release the strut from its' lower mount (fig. 5). (Volkswagen specific tool is spreader 3424).



*fig. 5*

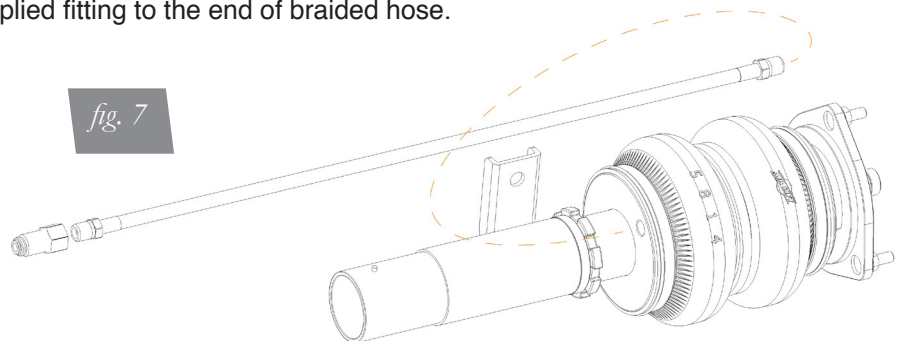
9. Pull weather-stripping away from the plenum chamber cover within the engine bay and pull cover up. Removing the wiper arms and completely removing the cover will gain more access.
10. Remove the three bolts from the upper strut mount (fig. 6) and remove the strut assembly from the vehicle.



*fig. 6*

## INSTALLING THE NEW STRUT ASSEMBLY

1. Prior to installing the strut, attach the braided line provided to the threaded port at the bottom of the air spring (fig. 7). Seal with Teflon tape or thread sealant. Seal and thread supplied fitting to the end of braided hose.



*fig. 7*

2. Insert strut into the hub assembly. Reinstall the lower mounting bolt and torque to 70 Nm (52 ft/lbs).
3. Lift assembly into strut pocket and align upper mounting bolts with three holes. Using the supplied nuts and washers, tighten the upper mount to 37 Nm (27 ft/lbs).
4. Remove the lower ball joint bolts again and separate the control arm from the joint. Reinsert the axle.
5. Reinstall the ball joint nuts and torque to 60 Nm (44 ft/lbs).
6. Torque the hex head drive axle to 200 NM (148 ft/lbs). If the bolt is a 12 point, torque to 70 NM (52 ft/lbs).
7. Reinstall the plenum chamber cover and wiper arms if previously removed.

Torque Specifications		
Location	Nm	ft. lbs.
Strut Lower Mount Pinch Bolt	70	52
Strut Upper Mount Nuts	37	27
Ball Joint Nuts	60	44
Hex Head Drive Axle Bolt	200	148
12 Point Drive Axle Bolt	70	52
Wheels	120	89

Table 1

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. 8). This position gives 50% stroke in either direction and is a great starting point for ride height. At this position torque the lower clevis bolt and lower control arm bolts to manufacturer's specifications (Table 1).

Formula for calculating ride height:

Step 1:

$$\frac{ME - MC}{X}$$

Step 2:

$$\frac{X}{2} = Y$$

Step 3:

$$\frac{Y + MC}{Z}$$

Answer:

**Z = DESIGN HEIGHT**

fig. 8

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. Enjoy the new look and handling! Please 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.

### 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 shocks 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 shock rod. Turn the adjuster clockwise and the damping settings are hardened. Turn the adjuster counterclockwise and the damping is softened. Each rear shock is preset to “-15 clicks”. This means that the shock is adjusted 15 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 2008 Volkswagen Jetta and may need to be adjusted to different vehicles and driving characteristics.



fig. 9

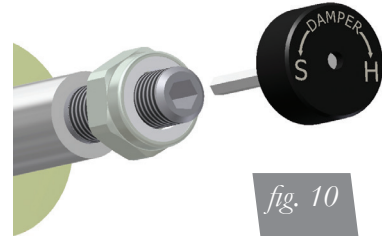


fig. 10

## 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. 11)

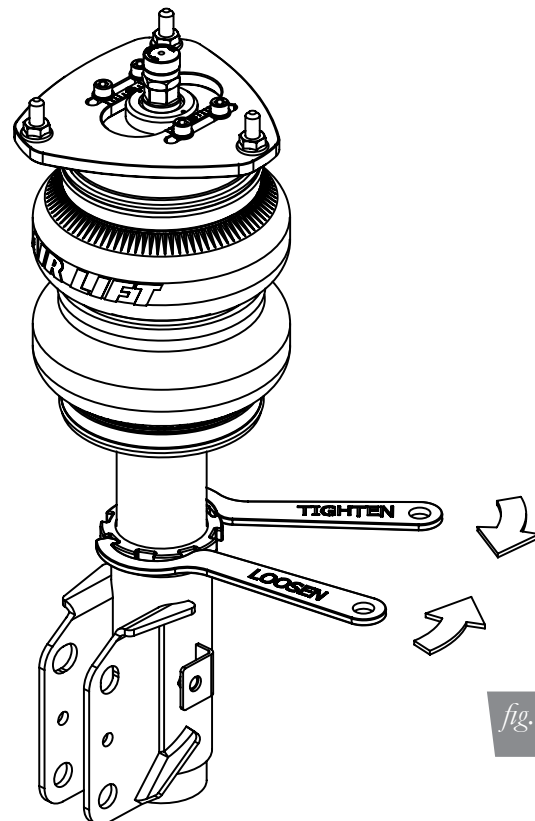


fig. 11

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.

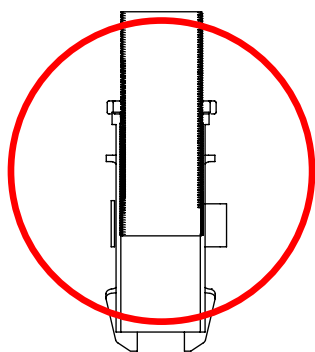
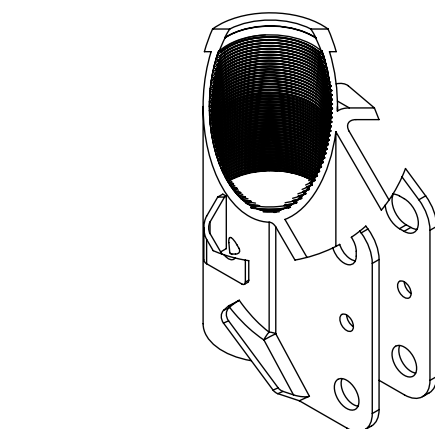
## CAUTION

WHEN ADJUSTING HEIGHT UPWARDS, MAKE SURE THAT THE STRUT BODY ENGAGES ALL THE THREADS OF THE LOWER MOUNT. (FIG. 12) 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.

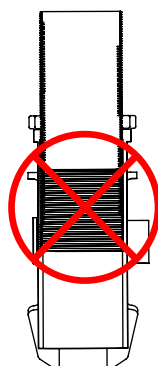
## CAUTION

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

### FOR STRUTS:

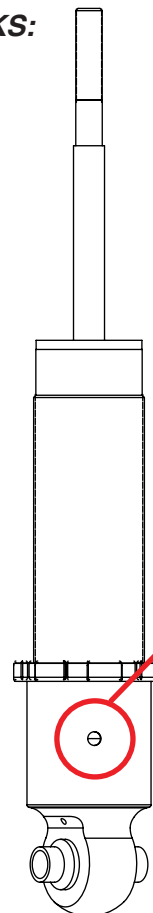


OK, no threads showing.



Not OK, threads are showing.

### FOR SHOCKS:



Thread  
MUST be  
showing in  
window.

fig. 12

# Before Operating

1. Next, completely deflate and reinflate the air bags 2-3 times. This procedure will purge any trapped air in the dampers and allow for maximum performance. For ride performance and the most versatility, Lifestyle recommends setting the strut dial (if equipped) to position 6 or higher.



## CAUTION

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

2. Inflate and deflate the system (do not exceed 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.
3. Inflate the air springs to 75PSI - 90PSI and check all connections for leaks.
4. Air Lift part #27669 or #27671, AutoPilot V2 Air Management System, is highly recommended for this product.
5. Please continue by reading the Product Use, Maintenance and Servicing section.



## INSTALLATION CHECKLIST

- ☐ Clearance test — Inflate the air springs to 55-90 PSI and make sure there is at least ½" clearance from anything that might rub against each sleeve. Be sure to check the tire, brake drum, frame, shock absorbers and brake cables.
- ☐ Leak test before road test — Inflate the air springs to 55PSI - 90PSI and check all connections for leaks. All leaks must be eliminated before the vehicle is road tested.
- ☐ Heat test — Be sure there is sufficient clearance from heat sources, at least 6" for 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 test — Recheck all bolts for proper torque.
- ☐ Road test — The vehicle should be road tested after the preceding tests. Inflate the springs to recommended driving pressures. Drive the vehicle 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 of the paperwork that came with the kit.

**Technician's Signature** \_\_\_\_\_

**Date** \_\_\_\_\_

## POST-INSTALLATION CHECKLIST

- ☐ Overnight leak down test — Recheck air pressure after the vehicle has been used for 24 hours. If the pressure has dropped more than 5 PSI, then there is a leak that must be fixed. Either fix the leak yourself or return to the installer for service.
- ☐ Air pressure requirements — I understand the air pressure requirements of my air spring system. Regardless of load, the air pressure should always be adjusted to maintain adequate ride height at all times while driving.
- ☐ Thirty day or 500 mile test — I understand that I must recheck the air spring system after 30 days or 500 miles, whichever comes first. If any part shows signs of rubbing or abrasion, the source should be identified and moved, if possible. If it is not possible to relocate the cause of the abrasion, the air spring may need to be remounted. If professionally installed, the installer should be consulted. Check all fasteners for tightness.

# Product Use, Maintenance and Servicing

Suggested Driving Air Pressure	Maximum Air Pressure
45 PSI	125 PSI
FAILURE TO MAINTAIN ADEQUATE MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO LOAD) WILL RESULT IN BOTTOMING OUT, OVER-EXTENSION OR RUBBING AGAINST ANOTHER COMPONENT AND WILL <b>VOID THE WARRANTY</b> .	

## MAINTENANCE GUIDELINES

### NOTE

*By following these steps, vehicle owners will obtain the longest life and best results from their air spring.*

1. Check the air pressure before driving.
2. Never inflate beyond 125 PSI.
3. If you develop an air leak in the system, use a soapy water solution to check all air line connections, before deflating and removing the spring.
4. When increasing load, always adjust the air pressure to maintain normal ride height. Increase or decrease pressure from the system as necessary to attain normal ride height for optimal ride and handling. Remember that loads carried behind the axle (including tongue loads) require more leveling force (pressure) than those carried directly over the axle.



### CAUTION

FOR YOUR SAFETY AND TO PREVENT DAMAGE TO YOUR VEHICLE, DO NOT EXCEED MAXIMUM GROSS VEHICLE WEIGHT RATING (GVWR), AS INDICATED BY THE VEHICLE MANUFACTURER. ALTHOUGH YOUR AIR SPRINGS ARE RATED AT A MAXIMUM INFLATION PRESSURE OF 125 PSI, THE AIR PRESSURE ACTUALLY NEEDED IS DEPENDENT ON YOUR LOAD.

5. Always add air to the springs in small quantities, checking the pressure frequently. Sleeves require less air volume than a tire and inflate quickly.
6. Should it become necessary to raise the vehicle by the frame, make sure the control system is turned off before lifting.

## Troubleshooting Guide

1. Leak test the air line connections, the threaded connection into the air spring, and all fittings in the control system.
2. Inspect the air lines to be sure none are pinched. Tie straps may be too tight. Loosen or replace the strap and replace leaking components.
3. Inspect the air line for holes and cracks. Replace as needed.
4. Look for a kink or fold in the air line. Reroute as needed.

If the preceding steps do not solve the problem, it is possibly caused by a failed air spring — either a factory defect or an operating problem. Please call Air Lift at (800) 248-0892 for assistance.

## Frequently Asked Questions

### Q. Will installing air springs increase the weight ratings of a vehicle?

No. Adding air springs will not change the weight ratings (GAWR, GCWR and/or GVWR) of a vehicle. Exceeding the GVWR is dangerous and voids the Air Lift warranty.

### Q. How long should air springs last?

If the air springs are properly installed and maintained they can last indefinitely.



**Q. Will raising the vehicle on a hoist for service work damage the air springs?**

No. The vehicle can be lifted on a hoist for short-term service work such as tire rotation or oil changes. However, if the vehicle will be on the hoist for a prolonged period of time, support the axle with jack stands in order to take the tension off of the air springs.

## Tuning the Air Pressure

Pressure determination comes down to three things — level vehicle, ride comfort, and stability.

**1. Level vehicle**

If the vehicle's headlights are shining into the trees or the vehicle is leaning to one side, then it is not level. Raise the air pressure to correct either of these problems and level the vehicle.

**2. Ride comfort**

If the vehicle has a rough or harsh ride it may be due to either too much pressure or not enough. Try different pressures to determine the best ride comfort. See Air Lift suggested driving air pressure.

**3. Stability**

Stability translates into safety and should be the priority, meaning the driver may need to sacrifice a perfectly level and comfortable ride. Stability issues include roll control, bounce, dive during braking and sponginess. Tuning out these problems usually requires additional air pressure, strut damping, or both.

## Checking for leaks

1. Inflate the air spring to 80 PSI.
2. Spray all connections and the inflation valves with a solution of 1/5 liquid dish soap and 4/5 water. Spot leaks easily by looking for bubbles in the soapy water.
3. After the test, deflate the springs to the minimum pressure required to restore the system to normal ride height.
4. Check the air pressure again after 24 hours. A 2 - 4 PSI loss after initial installation is normal. Retest for leaks if the loss is more than 5 lbs.

## Fixing Leaks

1. If there is a problem with a swivel fitting:
  - a. Check the air line connection by deflating the spring and removing the line by pulling the collar against the fitting and pulling firmly on the air line. Trim 1" off the end of the air line. Be sure the cut is clean and square (see fig. 13). Reinsert the air line into the push-to-connect fitting.
  - b. Check the threaded connection by tightening the swivel fitting another ½ turn. If it still leaks, deflate the air spring, remove the fitting, and re-coat the threads with thread sealant. Reinstall by hand tightening as much as possible and then use a wrench for an additional two turns.
2. If the preceding steps have not resolved the problem, call Air Lift customer service at (800) 248-0892.

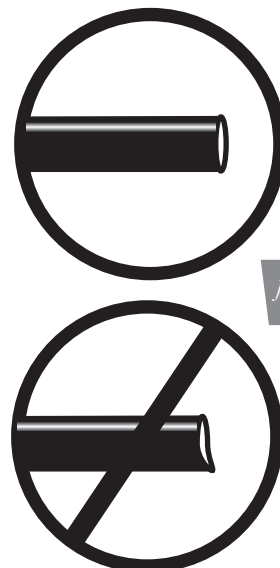


fig. 13

# Warranty and Returns Policy

Air Lift Company warrants its performance products for one year to the original purchaser against manufacturing defects one year from the date of purchase when used on cars and trucks as specified under normal operating conditions. The warranty does not apply to products that have been improperly applied, improperly installed, or which have not been maintained in accordance with installation instructions furnished with all products. The consumer will be responsible for removing (labor charges) the defective product from the vehicle and returning it, transportation costs prepaid, to the dealer from which it was purchased or to Air Lift Company for verification.

Air Lift will repair or replace, at its option, defective products or components. A minimum \$10.00 shipping and handling charge will apply to all warranty claims. Before returning any defective product, you must call Air Lift at (800) 248-0892 in the U.S. and Canada (elsewhere, (517) 322-2144) for a Returned Materials Authorization (RMA) number. Returns to Air Lift can be sent to: Air Lift Company • 2727 Snow Road • Lansing, MI • 48917.

Product failures resulting from abnormal use or misuse are excluded from this warranty. The loss of use of the product, loss of time, inconvenience, commercial loss or consequential damages is not covered. The consumer is responsible for installation/reinstallation (labor charges) of the product. Air Lift Company reserves the right to change the design of any product without assuming any obligation to modify any product previously manufactured.

This warranty gives you specific legal rights and you may also have other rights that may vary from state-to-state. Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of incidental or consequential damages. The above limitation or exclusion may not apply to you. There are no warranties, expressed or implied including any implied warranties of merchantability and fitness, which extend beyond this warranty period. There are no warranties that extend beyond the description on the face hereof. Seller disclaims the implied warranty of merchantability. (Dated proof of purchase required.)

## Replacement Information

If you need replacement parts, contact the local dealer or call Air Lift customer service at (800) 248-0892. Most parts are immediately available and can be shipped the same day.

**Contact Air Lift Company customer service at (800) 248-0892 first if:**

- Parts are missing from the kit.
- Need technical assistance on installation or operation.
- Broken or defective parts in the kit.
- Wrong parts in the kit.
- Have a warranty claim or question.

**Contact the retailer where the kit was purchased:**

- If it is necessary to return or exchange the kit for any reason.
- If there is a problem with shipping if shipped from the retailer.
- If there is a problem with the price.

## Contact Information

If you have any questions, comments or need technical assistance contact our customer service department by calling (800) 248-0892, Monday through Friday, 8 a.m. to 8 p.m. Eastern Time. For calls from outside the USA or Canada, our local number is (517) 322-2144. You may also contact customer service anytime by e-mail at [techsupport@airliftperformance.com](mailto:techsupport@airliftperformance.com).

For inquiries by mail, our address is PO Box 80167, Lansing, MI 48908-0167. Our shipping address for returns is 2727 Snow Road, Lansing, MI 48917.

You may also contact our sales team anytime by e-mail at [sales@airliftperformance.com](mailto:sales@airliftperformance.com) or on the web at [www.airliftperformance.com](http://www.airliftperformance.com).

## Need Help?

Contact our customer service department by calling (800) 248-0892, Monday through Friday, 8 a.m. to 8 p.m. Eastern Time. For calls from outside the USA or Canada, our local number is (517) 322-2144.



*Thank you for purchasing Air Lift Performance products!*

Air Lift Company • 2727 Snow Road • Lansing, MI 48917 or PO Box 80167 • Lansing, MI 48908-0167  
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**Air Lift™**  
**PERFORMANCE**

# **Kit 75691**

***Volkswagen MKVI Golf R***  
***Audi TTRS***  
***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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## Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of this Volkswagen MKVI Golf R/Audi TT RS 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.

Air Lift Company 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 Company at (800) 248-0892 or visit our website at [www.airliftcompany.com](http://www.airliftcompany.com).

### 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

## HARDWARE LIST

Item	Part #	Description .....	Qty
A	18585	3/8"-16 Nutsert .....	2
B	18436	3/8"-16 Nut .....	2
C	17463	3/8"-16 X 2.0" Threaded Rod .....	2
D	17465	3/8"-16 X 3.25" Threaded Rod .....	2
E	13985	Spring Seat Spacer .....	2
F	58531	Air Spring 2B6 Regular (Recess Mount) .....	2
G	21779	1/4" MNPT X 1/4" PTC Elbow (DOT) .....	2
H	21851	1/4" MNPT X 3/8" PTC 90° (DOT) .....	2
I	03993	Lower Bracket, MKV/VI Golf R .....	2
J	18427	3/8" Lock Washer .....	4
K	17101	3/8"-16 X 3/4" Hex Bolt .....	4
L	13980	Spring Seat Centering Spacer .....	2
M	17442	3/8"-16 X 3.0" Hex Cap Screw .....	2

### NOTE

#### OEM SPRING SEAT:

1. USE SHORT THREADED ROD (C).
2. USE RED LOCTITE ON THE THREADED ROD INTO THE UPPER AIR SPRING END CAP.
3. JAM NUTS (B) TOGETHER ON STUD AND USE TO TIGHTEN ROD INTO AIR SPRING UPPER END CAP. THEN REMOVE BOTH NUTS.

#### CUT SPRING SEAT:

1. USE LONG THREADED ROD (D).
2. USE RED LOCTITE ON THE THREADED ROD INTO THE UPPER AIRSPRING END CAP.
3. JAM NUTS (B) TOGETHER ON STUD AND USE TO TIGHTEN ROD INTO AIR SPRING UPPER END CAP. THEN REMOVE BOTH NUTS.

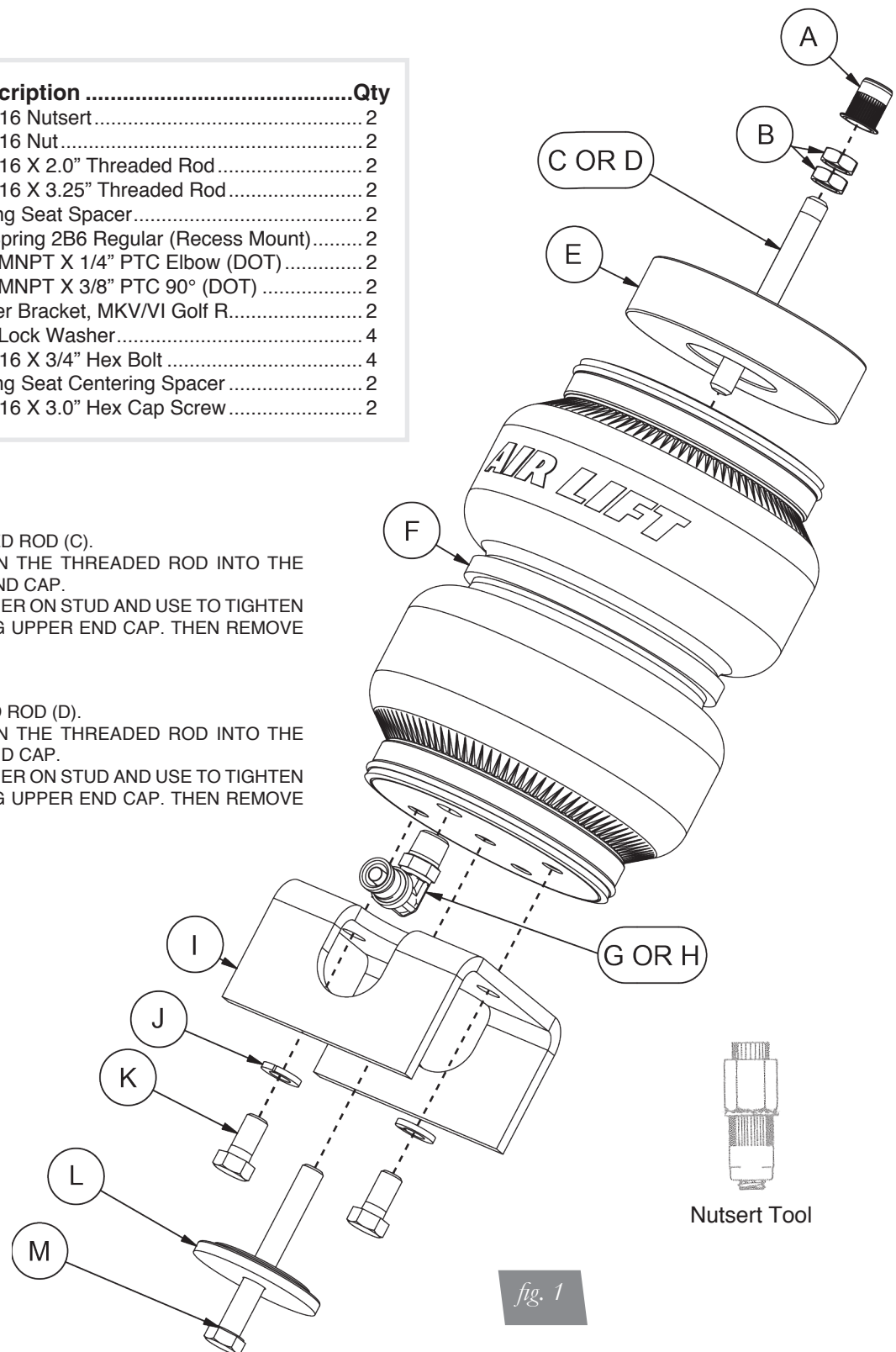


fig. 1



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



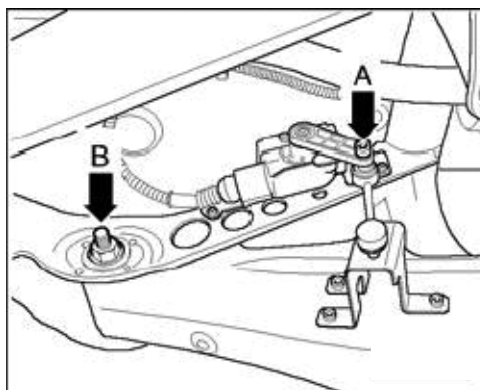
# Installing the Air Suspension

## PREPARING THE STOCK VEHICLE

1. Elevate the vehicle and support the body with a hoist or jack stands.
2. Remove the rear 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.

## INSTALLING THE AIR SPRING

1. 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.

### NOTE

*The hole must be 17/32" for the nutsert to be effective (figs 3-6).*

*Factory/OEM Upper Spring Perch*



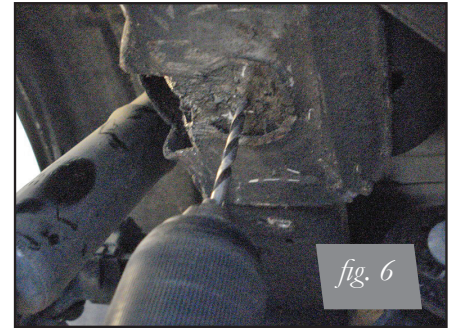
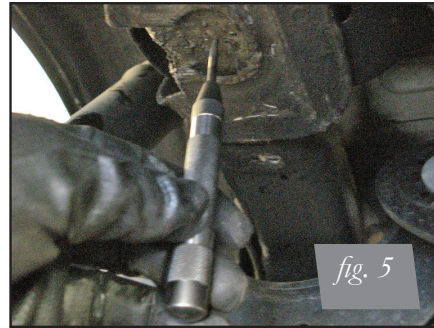
*fig. 3*



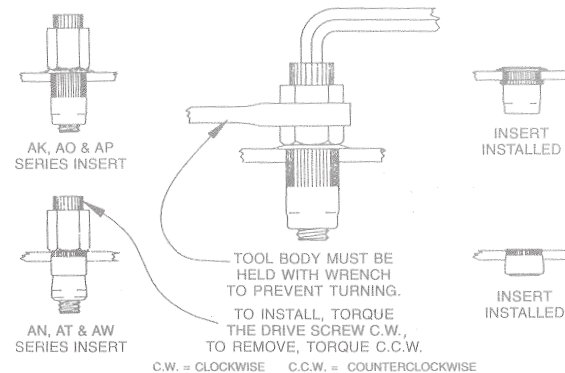
*fig. 4*



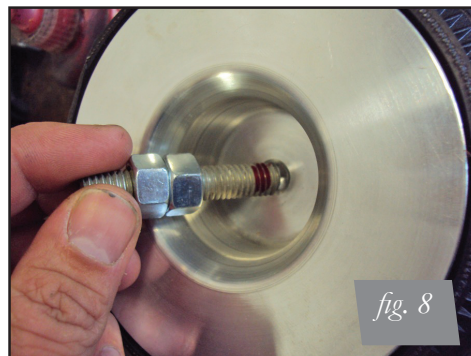
## Previously Cut Spring Perch



2. Assemble the nutsert 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).



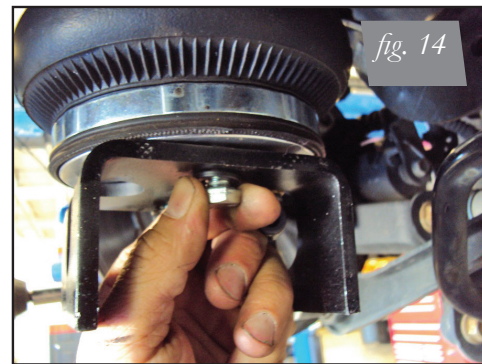
3. Two lengths of threaded studs are included with the kit (C or D, fig. 1). The shorter stud is for vehicles that retain the coil spring perch bump. The longer threaded stud is for vehicles without the spring perch bump. Apply Loctite to the threads of the upper end cap and thread in the appropriate 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).



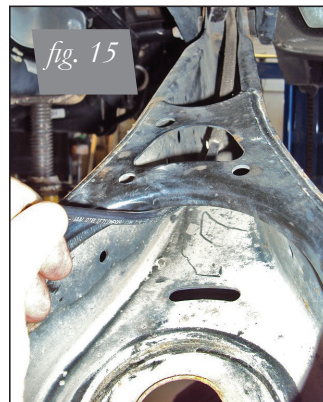
4. Wrap the threads of the fitting with Teflon tape or thread sealant. Tighten the fitting 1 3/4 turns beyond hand tight.
5. Place spacer around the upper spring perch and thread the air spring into the nutsert. Tighten by hand (fig. 12).



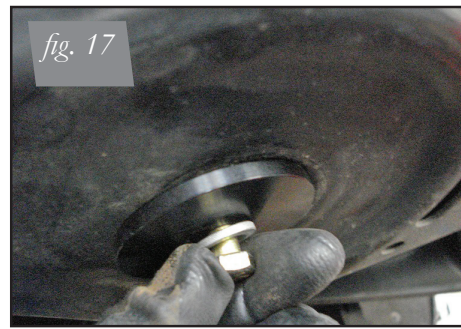
6. Orient the air fitting inline with lower transverse link toward the center of the vehicle.
7. Attach the lower bracket with the lock washer and bolts provided (figs. 13 & 14). Torque to 27Nm (20lb-ft).



8. Route the air line from the center of the cross-member, through the lower transverse link and attach insert into the air fitting (fig. 15).
9. Reattach the lower transverse link to the hub. Do not torque at this time (fig. 16).



10. Install the lower centering washer and bolt through the lower transverse link and into the air spring assembly (fig. 17). Torque to 27Nm (20lb-ft).



11. 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. 18). This position gives 50% stroke in either direction and is a great starting point for ride height. At this position torque the transverse link to wheel bearing housing and lower shock mount to manufacturers specifications (see Table 1).

## Formula for calculating ride height

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

fig. 18

Table 1

Torque Specifications		
Location of Bolt	Nm	lb-ft
Transverse link to wheel bearing housing	90	66
Transverse link to subframe (toe adjustment)	95	70
Upper control arm to subframe (camber adjustment)	95	70
Upper control arm to wheel bearing housing	130+90°	96+90°
Trailing arm to mounting bracket	90+90°	66+90°
Shock upper mount	45+45°	33+45°
Shock to wheel bearing housing	180	133
Wheels	120	89
Air spring to lower bracket	27	20

12. Reinstall wheels and 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. Enjoy the new look and handling! Please 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 (Table 1).

### NOTE

*It may be necessary to cycle the suspension to loosen the bushing up from its mount. This will help re-orient the bushing at its new position based on the custom ride height.*



## Before Operating

### CAUTION

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

1. Inflate and deflate the system (do not exceed 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 75 PSI - 90 PSI and check all connections for leaks.
3. Air Lift part #27669 or #27671, AutoPilot V2 Air Management System, is highly recommended for this product.
4. Please continue by reading the Product Use, Maintenance and Servicing section.

### INSTALLATION CHECKLIST

- ☐ **Clearance test** — Inflate the air springs to 75-90 PSI and make sure there is at least 1/2" clearance from anything that might rub against each sleeve. Be sure to check the tire, brake drum, frame, shock absorbers and brake cables.
- ☐ **Leak test before road test** — Inflate the air springs to 75 PSI - 90 PSI and check all connections for leaks. All leaks must be eliminated before the vehicle is road tested.
- ☐ **Heat test** — Be sure there is sufficient clearance from heat sources, at least 6" for 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 test** — Recheck all bolts for proper torque.
- ☐ **Road test** — The vehicle should be road tested after the preceding tests. Inflate the springs to recommended driving pressures. Drive the vehicle 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 of the paperwork that came with the kit.

**Technician's Signature** \_\_\_\_\_

**Date** \_\_\_\_\_

### POST-INSTALLATION CHECKLIST

- ☐ **Overnight leak down test** — Recheck air pressure after the vehicle has been used for 24 hours. If the pressure has dropped more than 5 PSI, then there is a leak that must be fixed. Either fix the leak yourself or return to the installer for service.
- ☐ **Air pressure requirements** — Regardless of load, the air pressure should always be adjusted to maintain adequate ride height at all times while driving.
- ☐ **Thirty day or 500 mile test** — Recheck the air spring system after 30 days or 500 miles, whichever comes first. If any part shows signs of rubbing or abrasion, the source should be identified and moved, if possible. If it is not possible to relocate the cause of the abrasion, the air spring may need to be remounted. If professionally installed, the installer should be consulted. Check all fasteners for tightness.

# Product Use, Maintenance and Servicing

Suggested Driving Air Pressure	Maximum Air Pressure
40-70 PSI	125 PSI
FAILURE TO MAINTAIN ADEQUATE MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO LOAD) WILL RESULT IN BOTTOMING OUT, OVER-EXTENSION OR RUBBING AGAINST ANOTHER COMPONENT AND WILL <b>VOID THE WARRANTY</b> .	

## MAINTENANCE GUIDELINES

### NOTE

*By following these steps, vehicle owners will obtain the longest life and best results from their air spring.*

1. Check the air pressure before driving.
2. Never inflate beyond 125 PSI.
3. If you develop an air leak in the system, use a soapy water solution to check all air line connections, before deflating and removing the spring.
4. When increasing load, always adjust the air pressure to maintain normal ride height. Increase or decrease pressure from the system as necessary to attain normal ride height for optimal ride and handling. Remember that loads carried behind the axle (including tongue loads) require more leveling force (pressure) than those carried directly over the axle.



### CAUTION

FOR YOUR SAFETY AND TO PREVENT DAMAGE TO YOUR VEHICLE, DO NOT EXCEED MAXIMUM GROSS VEHICLE WEIGHT RATING (GVWR), AS INDICATED BY THE VEHICLE MANUFACTURER. ALTHOUGH YOUR AIR SPRINGS ARE RATED AT A MAXIMUM INFLATION PRESSURE OF 125 PSI, THE AIR PRESSURE ACTUALLY NEEDED IS DEPENDENT ON YOUR LOAD.

5. Always add air to the springs in small quantities, checking the pressure frequently. Sleeves require less air volume than a tire and inflate quickly.
6. Should it become necessary to raise the vehicle by the frame, make sure the control system is turned off before lifting.

## TROUBLESHOOTING GUIDE

1. Leak test the air line connections, the threaded connection into the air spring, and all fittings in the control system.
2. Inspect the air lines to be sure none are pinched. Tie straps may be too tight. Loosen or replace the strap and replace leaking components.
3. Inspect the air line for holes and cracks. Replace as needed.
4. Look for a kink or fold in the air line. Reroute as needed. If the preceding steps do not solve the problem, it is possibly caused by a failed air spring — either a factory defect or an operating problem. Please call Air Lift at (800) 248-0892 for assistance.

## FREQUENTLY ASKED QUESTIONS

### Q. Will installing air springs increase the weight ratings of a vehicle?

No. Adding air springs will not change the weight ratings (GAWR, GCWR and/or GVWR) of a vehicle. Exceeding the GVWR is dangerous and voids the Air Lift warranty.

### Q. How long should air springs last?

If the air springs are properly installed and maintained they can last indefinitely.

**Q. Will raising the vehicle on a hoist for service work damage the air springs?**

No. The vehicle can be lifted on a hoist for short-term service work such as tire rotation or oil changes. However, if the vehicle will be on the hoist for a prolonged period of time, support the axle with jack stands in order to take the tension off of the air springs.

**TUNING THE AIR PRESSURE**

Pressure determination comes down to three things — level vehicle, ride comfort, and stability.

**1. Level vehicle**

If the vehicle's headlights are shining into the trees or the vehicle is leaning to one side, then it is not level. Raise the air pressure to correct either of these problems and level the vehicle.

**2. Ride comfort**

If the vehicle has a rough or harsh ride it may be due to either too much pressure or not enough. Try different pressures to determine the best ride comfort. See Air Lift suggested driving air pressure.

**3. Stability**

Stability translates into safety and should be the priority, meaning the driver may need to sacrifice a perfectly level and comfortable ride. Stability issues include roll control, bounce, dive during braking and sponginess. Tuning out these problems usually requires additional air pressure, strut damping, or both.

**CHECKING FOR LEAKS**

1. Inflate the air spring to 80 PSI.
2. Spray all connections and the inflation valves with a solution of 1/5 liquid dish soap and 4/5 water. Spot leaks easily by looking for bubbles in the soapy water.
3. After the test, deflate the springs to the minimum pressure required to restore the system to normal ride height.
4. Check the air pressure again after 24 hours. A 2 - 4 PSI loss after initial installation is normal. Retest for leaks if the loss is more than 5 lbs.

**FIXING LEAKS**

1. If there is a problem with a swivel fitting:
  - a. Check the air line connection by deflating the spring and removing the line by pulling the collar against the fitting and pulling firmly on the air line. Trim 1" off the end of the air line. Be sure the cut is clean and square (see fig. 19). Reinsert the air line into the push-to-connect fitting.
  - b. Check the threaded connection by tightening the swivel fitting another ½ turn. If it still leaks, deflate the air spring, remove the fitting, and re-coat the threads with thread sealant. Reinstall by hand tightening as much as possible and then use a wrench for an additional two turns.
2. If the preceding steps have not resolved the problem, call Air Lift customer service at (800) 248-0892.

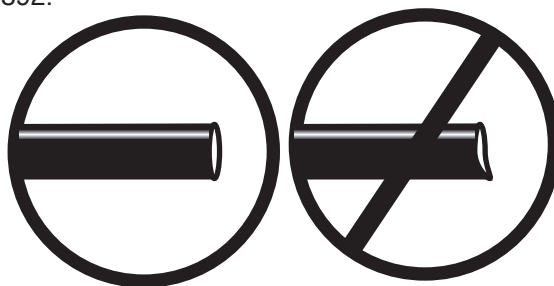


fig. 19

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# Warranty and Returns Policy

Air Lift Company warrants its performance products for one year to the original purchaser against manufacturing defects one year from the date of purchase when used on cars and trucks as specified under normal operating conditions. The warranty does not apply to products that have been improperly applied, improperly installed, or which have not been maintained in accordance with installation instructions furnished with all products. The consumer will be responsible for removing (labor charges) the defective product from the vehicle and returning it, transportation costs prepaid, to the dealer from which it was purchased or to Air Lift Company for verification.

Air Lift will repair or replace, at its option, defective products or components. A minimum \$10.00 shipping and handling charge will apply to all warranty claims. Before returning any defective product, you must call Air Lift at (800) 248-0892 in the U.S. and Canada (elsewhere, (517) 322-2144) for a Returned Materials Authorization (RMA) number. Returns to Air Lift can be sent to: Air Lift Company • 2727 Snow Road • Lansing, MI • 48917.

Product failures resulting from abnormal use or misuse are excluded from this warranty. The loss of use of the product, loss of time, inconvenience, commercial loss or consequential damages is not covered. The consumer is responsible for installation/reinstallation (labor charges) of the product. Air Lift Company reserves the right to change the design of any product without assuming any obligation to modify any product previously manufactured.

This warranty gives you specific legal rights and you may also have other rights that may vary from state-to-state. Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of incidental or consequential damages. The above limitation or exclusion may not apply to you. There are no warranties, expressed or implied including any implied warranties of merchantability and fitness, which extend beyond this warranty period. There are no warranties that extend beyond the description on the face hereof. Seller disclaims the implied warranty of merchantability. (Dated proof of purchase required.)

## Replacement Information

If you need replacement parts, contact the local dealer or call Air Lift customer service at (800) 248-0892. Most parts are immediately available and can be shipped the same day.

**Contact Air Lift Company customer service at (800) 248-0892 first if:**

- Parts are missing from the kit.
- Need technical assistance on installation or operation.
- Broken or defective parts in the kit.
- Wrong parts in the kit.
- Have a warranty claim or question.

**Contact the retailer where the kit was purchased:**

- If it is necessary to return or exchange the kit for any reason.
- If there is a problem with shipping if shipped from the retailer.
- If there is a problem with the price.

## Contact Information

If you have any questions, comments or need technical assistance contact our customer service department by calling (800) 248-0892. For calls from outside the USA or Canada, our local number is (517) 322-2144. You may also contact customer service anytime by e-mail at [techsupport@airliftperformance.com](mailto:techsupport@airliftperformance.com).

For inquiries by mail, our address is PO Box 80167, Lansing, MI 48908-0167. Our shipping address for returns is 2727 Snow Road, Lansing, MI 48917.

You may also contact our sales team anytime by e-mail at [sales@airliftperformance.com](mailto:sales@airliftperformance.com) or on the web at [www.airliftperformance.com](http://www.airliftperformance.com).

## Need Help?

Contact our customer service department by calling (800) 248-0892. For calls from outside the USA or Canada, our local number is (517) 322-2144.



*Thank you for purchasing Air Lift Performance products!*

Air Lift Company • 2727 Snow Road • Lansing, MI 48917 or PO Box 80167 • Lansing, MI 48908-0167  
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