AIT LIST
PERFORMANCE

# Kit 75558

Audi A4 (B8 platform)
Front Application



For maximum effectiveness and safety, please read these instructions completely before proceeding with installation.

Failure to read these instructions can result in an incorrect installation.

# TABLE OF CONTENTS

Introduction	2
Notation Explanation	
Important Safety Notices	2
Installation Diagram	3
Hardware List	3
Installing the Air Suspension	4
Preparing the Vehicle	4
Stock Strut Removal	
Air Suspension Installation	
Damping Adjustment	
Adjusting Extended or Drop Height Using Lower Mount	11
Before Operating	13
Installation Checklist	14
Product Use, Maintenance and Servicing	15
Suggested Driving and Maximum Air Pressures	15
Maintaining and Operating	15
Troubleshooting Guide	15
Frequently Asked Questions	15
Tuning the Air Pressure	16
Checking for Leaks	16
Fixing Leaks	16
Warranty & Return Policy	17
Replacement Information	17
Contact Information	17



### Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of this Audi A4 B8 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.

#### 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.



INDICATES IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.



INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.



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.

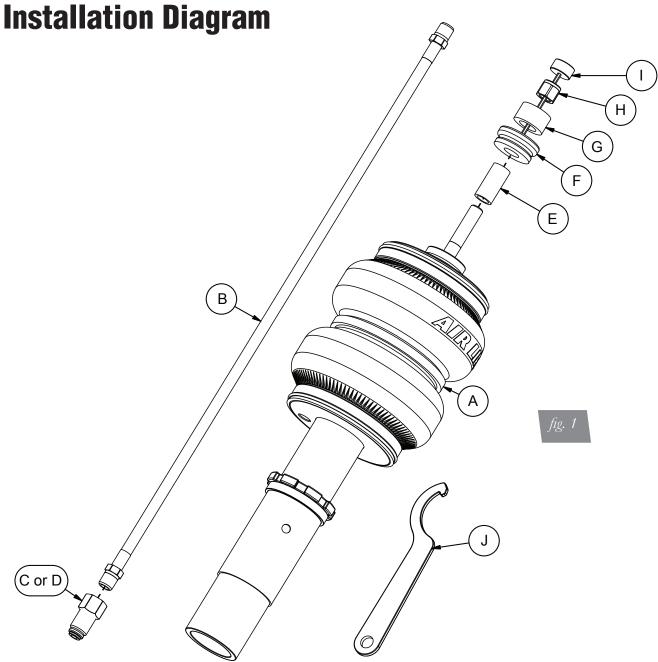


DO NOT INFLATE AIR SPRINGS WHILE OFF OF THE VEHICLE. DAMAGE TO ASSEMBLY MAY RESULT AND VOID WARRANTY.



DO NOT WELD TO, OR MODIFY PERFORMANCE STRUTS/SHOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.





#### **HARDWARE LIST**

ltem	Part #	DescriptionQty
Α	35232	Shock, Audi B8 Front1
В	20997	Leader Hose, 1/4" ID1
С	21810	Union, 1/4"FNPT X 1/4" PTC, DOT
D	21987	Union, 1/4"FNPT X 3/8" PTC, DOT1
Е	26989-004	Shock Spacer1
F	26989-005	Shock Isolator1
G	26989-006	Upper Bracket Spacer1
Н	26989-007	Nyloc Nut1
I	26989-008	Shock Adjuster1
J		Spanner Wrench1

STOP!

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. Support vehicle with jack stands or a hoist at approved lifting points.
- 2. Remove the front wheels (fig. 2).



fig. 2

#### STOCK SHOCK REMOVAL

NOTE

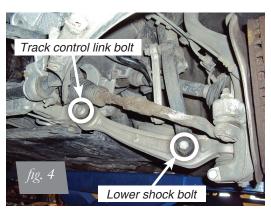
If equipped with a headlight alignment system, disconnect range control linkage first.

- 1. Support the hub assembly to prevent over extension of suspension components.
- 2. Disconnect the stabilizer bar (fig. 3).



fig. 3

3. Remove the lower shock bolt and track control link bolt from the subframe (figs. 4-7).



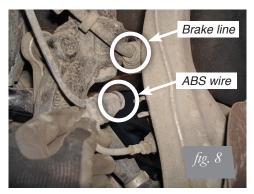








4. Disconnect the brake line and ABS wire from the steering knuckle (fig.8). Remove the bolt from the upper control arms to the adjoining steering knuckle (fig. 9). Carefully pull the upper control arms free from the steering knuckle (fig. 10).







5. Remove the plenum chamber cover from below the windshield (figs. 11-14).





MN-872 5







6. Unbolt and remove the washer fluid filler neck with tube (fig. 15).

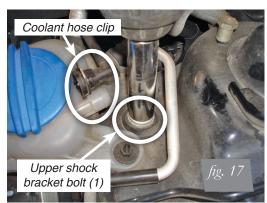
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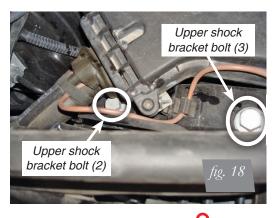
The washer fluid will spill out during this procedure if the fluid level is full by approximately 75% or more.

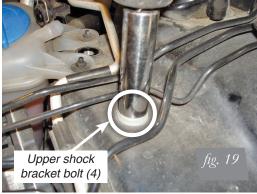


7. Unclip the coolant hose and remove it from the coolant reservoir (fig. 16). Remove all four shock upper bracket bolts (figs. 17-19) and remove the shock assembly from the vehicle (fig. 20).













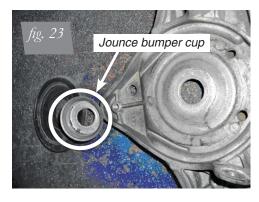
#### AIR SUSPENSION INSTALLATION

1. Remove the lower attaching bolt from the lower fork/shock mount. Use a spreader tool to separate the lower fork from the original/OE shock and insert the supplied shock with the air-port opposite the notch in the fork (figs. 21 and 22).





2. Remove the jounce bumper cup from the upper bracket (fig. 23). Either grind the innermost lip away from the bracket or use a punch and hammer to bend the lip away from the upper bracket. Do not increase the diameter of the center hole.



3. Insert the shock rod through the upper bracket. Apply the stock isolator over the rod and thread the lock nut on top.

**NOTE** 

Tighten the nut onto the rod using hand tools only. An impact wrench may not fully seat the nut before the rod starts to spin. If the nut is not tight, you will hear a rattling noise.



DO NOT USE AN IMPACT WRENCH FOR THIS STEP AS DAMAGE WILL OCCUR TO THE SHOCK.

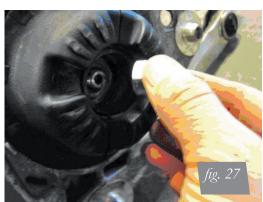


4. Tighten the nyloc nut on the shock rod to 27Nm (20lbs-ft).











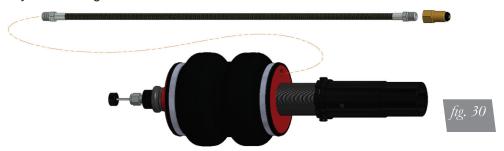
5. Center punch and drill a 3/8" hole through the center of the suspension shock dome (fig. 29). This hole will be used as an access port for damping adjustments.



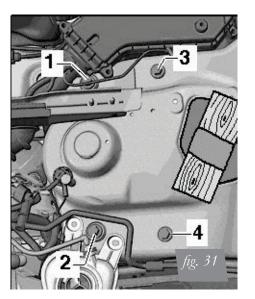


9

6. Begin by installing the leader line into the air spring (fig. 30). Wrap the threads of the leader hose with Teflon tape or thread sealant. Tighten the appropriate fitting to the air line 1 ¾ turns beyond hand tight. Tighten the leader line into the air spring 1 ¾ turns beyond hand tight.



7. Install the upper bracket and tighten the four upper bracket bolts to 40Nm + 90 degree turn (29.5lb-ft + 90 degree turn). Torque in the following order-1-2-3-4 (fig. 31).





8. Reattach the upper control arm ball joints to the steering knuckle (fig. 33). Make sure the joints are fully seated as the bolt is slid through. Torque to 40Nm (29.5lb-ft).



Loosely install the lower fork/shock mount bolt into the lower control arm bushing. Also, loosely reinstall the track link to chassis bolt as well as the sway bar end link (figs. 34 and 35).

**NOTE** 

Do not tighten at this time. These bolts should be tightened when the vehicle is at ride height.







10. Make sure the lower fork/shock mount is fully seated against the shock adapter, install the nut and bolt and torque to 40Nm + 180 degree turn (29.5lb-ft + 180 degree turn) (fig. 36).



#### **POST INSTALLATION**

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

Torque Specifications		
Location	Nm	Lb-ft
Upper bracket to chassis	40 + 90° turn	29.5 + 90° turn
Upper control arms to bracket	50 + 90° turn	37 + 90° turn
Upper control arms to steering knuckle	40	29.5
Shock to lower fork/shock mount	40 + 180° turn	29.5 + 90° turn
Track control link to lower fork/shock mount	90	66
Track control link to subframe	70 + 180° turn	52 + 180° turn
Guide link to subframe	70 + 180° turn	52 + 180° turn
End link to sway bar	40 + 90° turn	25.9 + 90° turn
Wheels (except RS2 and RS4 type 8D)	120	89

Table 1



Formula for calculating ride height:

Step 1: Step 2: Step 3: Answer:

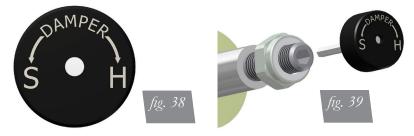
ME

- MC
$$\frac{X}{Y}$$
 $\frac{X}{2} = Y$ 
 $\frac{+ MC}{7}$ 
 $\frac{X}{7}$ 
 $\frac{X}{2} = Y$ 
 $\frac{X}{7}$ 

 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!

#### DAMPING ADJUSTMENT

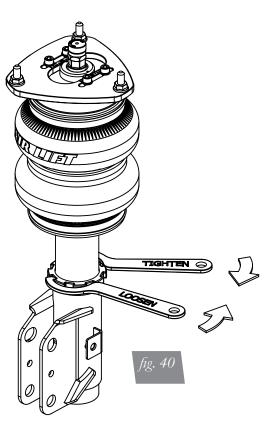
The shocks in this kit have 30 settings, or "clicks", of adjustable compression and rebound damping characteristics. Damping is changed through the shock rod using the supplied adjuster or a 3mm allen wrench. Turn the adjuster clockwise and the damping settings are hardened. Turn the adjuster counterclockwise and the damping is softened. Each shock is preset to "-12 clicks". This means that the shock is adjusted 12 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 2009 A4 2.0T Quattro and may need to be adjusted to the different vehicles and driving characteristics.



# 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.
- Using the supplied spanner wrench, loosen the lower locking collar. (fig. 40)



MN-872 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.

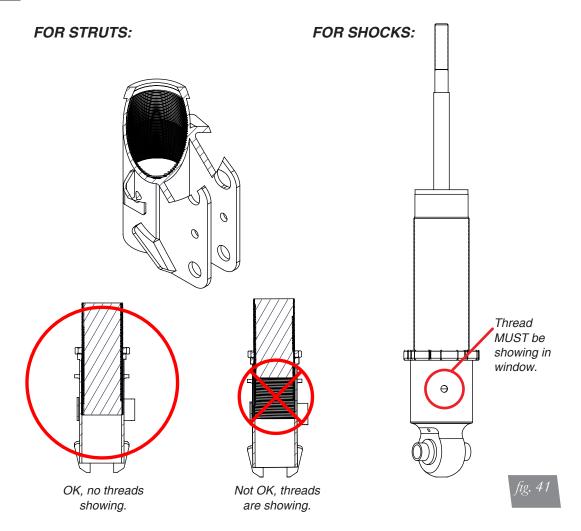
- 7. Re-install lower mount to suspension and torque fasteners.
- 8. Tighten the lower locking collar to the lower mount using significant force.



WHEN ADJUSTING HEIGHT UPWARDS, MAKE SURE THAT THE STRUT BODY ENGAGES ALL THE THREADS OF THE LOWER MOUNT. (FIG. 41) 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.



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





### **Before Operating**

 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, Air Lift Performance recommends setting the strut dial (if equipped) to position 6 or higher.



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

- 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 75 PSI 90 PSI 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 familiarize yourself further with this product by reading the Product Use, Maintenance and Servicing section.

MN-872 13



### **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.
	<b>Leak test before road test</b> — Inflate the air springs to 55 PSI - 90 PSI and check all connections for leaks. All leaks must be eliminated before the vehicle is road tested.
	<b>Heat test</b> — 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.
	${f Road\ test}$ — 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.
	<b>Operating instructions</b> — 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.
T	
	echnician's Signature
D	echnician's Signatureate
F	ate
	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



# **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 **VOID THE WARRANTY**.

#### 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.



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.

MN-872 **15** 



#### 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

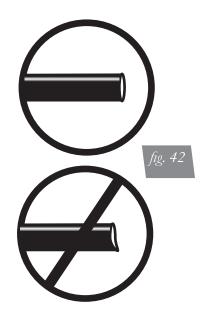
Stability translates into safety and should be the priority, meaning the driver may need to sacrifice a perfectly level and comfortable ride. Stability issues include roll control, bounce, dive during braking and sponginess. Tuning out these problems usually requires additional air pressure, strut damping,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

### **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. 42). 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.





# **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. 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.

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 or on the web at www.airliftperformance.com.

MN-872 17

# **Need Help?**

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# TABLE OF CONTENTS

Introduction	2
Notation Explanation	
Important Safety Notices	
Installation Diagram	3
Hardware List	
Installing the Air Suspension	1
Preparing the Vehicle	
Stock Suspension Removal.	
Air Suspension Installation	
Damping Adjustment	
Adjusting Extended or Drop Height Using Lower Mount	
Before Operating	10
Installation Checklist	
Post-Installation Checklist	
Product Use, Maintenance and Servicing	11
Suggested Driving Air Pressure and Maximum Air Pressure	
Maintenance Guidelines	
Troubleshooting Guide	
Frequently Asked Questions	
Tuning the Air Pressure	
Checking for Leaks	
Fixing Leaks	
Warranty and Returns Policy	13
Replacement Information	13
Contact Information	40
CONTACT IIIIOMINALIOM	13



### Introduction

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**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.



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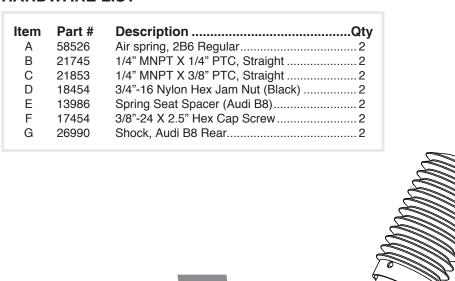


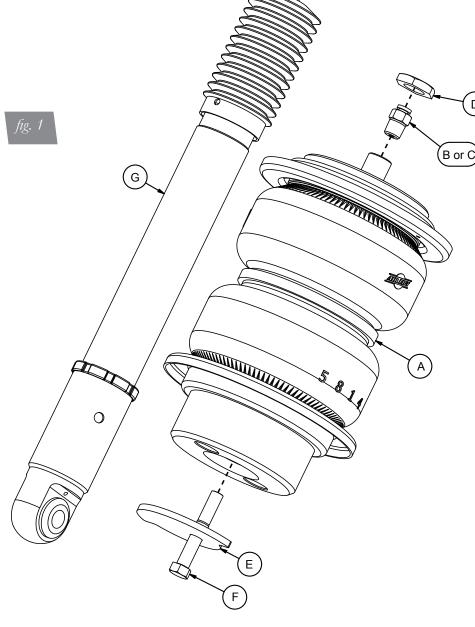
DO NOT WELD TO, OR MODIFY PERFORMANCE STRUTS/SHOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.



# **Installation Diagram**

#### **HARDWARE LIST**





STOP!

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. Support the vehicle with jack stands or a hoist at approved lifting points.
- 2. Remove rear wheels (fig. 2).



fig. 2

3. Disconnect the headlight alignment sensor linkage from the lower control arm (fig. 3).

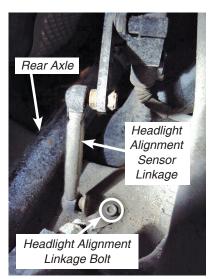


fig. 3

#### STOCK SUSPENSION REMOVAL

- 1. Support the hub assembly before beginning work.
- 2. Remove the inner fender liners from both sides (fig. 4).



fig. 4



3. Unbolt the upper and lower shock mounts and remove from the vehicle (figs. 5-7).





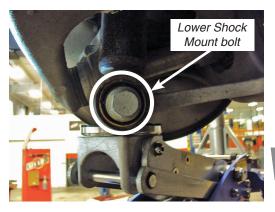


fig. 7

4. Using a coil spring compressor, remove the rear coil springs along with upper and lower isolators (fig. 8).



fig. 8

5. Directly above the upper coil spring perch, remove the rubber plug (figs. 9 and 10).





MN-873 5



#### **AIR SUSPENSION INSTALLATION**

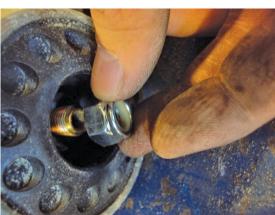
1. Remove the upper bracket from the OE shock and install on to the new shock (figs. 11 and 12). DO NOT USE AN IMPACT WRENCH!



DAMAGE MAY OCCUR TO THE SHOCK IF AN IMPACT WRENCH IS USED.









- 2. Tighten the nyloc nut on the shock rod to 27Nm (20lb-ft).
- 3. Attach the shock to the vehicle chassis and torque upper bracket bolts to 50Nm + 45 degree turn (37lbs-ft + 45 degree turn). Install but do not tighten the lower shock mount bolt at this time.
- 4. Cut a vertical line from the hole where the rubber plug was down 37-50mm (1.5"-2") and across 25mm (1"). Fold this material outward to gain access to the top side of the spring perch (fig. 13).

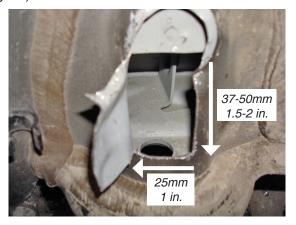


fig. 13

5. If using ¼" air line, 1/4" PTC fittings can be installed now. Wrap the fitting threads with Teflon tape or thread sealant. Torque fitting 1 ¾ turns beyond hand tight. If using 3/8" PTC fittings, move to the next step (fig. 14).





6. Collapse the air spring and install over the lower coil spring perch with the threaded boss going through the vehicles upper coil spring perch (figs. 15-18). With the air spring assembly fully seated at the upper spring seat, check the clearance around the roll plate. Some vehicles may need a slight clearance modification to the chassis.









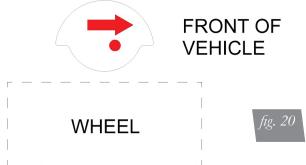


7. Thread the plastic nut onto the threaded boss (fig. 19). If using 3/8" air line, install the fitting after the plastic nut is installed.



fig. 19

8. The supplied washer is shaped to fit with the contour of the underside of the lower control arm. The bolt hole of this washer is not on the center. This hole must be installed so that it is closest to the front of the vehicle (fig. 20). Thread the supplied bolt through this washer and into the air spring assembly through the lower control arm. Torque to 20Nm (15ft lbs).



9. Insert air line through the hole into the air spring fitting. At this point, securely route the air line away from heat sources and suspension components (fig. 21). Best practice is to route the air line behind the fender liner paying close attention to shock travel. Failure to protect the line from the shock may result in kinked hose. Fold the bent sheet metal into positon while being cautious not to pinch the air line. Seal the cut edges with silicone.



fig. 21

10. Compress the suspension fully and check clearance around the air spring and air line.

11. Reattach the inner fender liners and wheels.



12. Time to develop a preferred ride height. With the suspension fully compressed, take a measurement from the fender to the lower wheel lip. Record this as Max Compression. Cycle the suspension to Max Extension 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. This position gives 50% stroke in either position and is a great starting point for ride height. At this position loosen all pivot points and bounce the vehicle several times. This will "reset" the bushings to the new lowered height. At the desired ride height re-torque the pivot points to the manufactures specifications (see Table 1).

#### Formula for calculating ride height:

Step 1 Step 2 Step 3 Answer

ME
- MC
$$\overline{X}$$
 $\overline{Z}$  = Y
 $\overline{Z}$ 

Step 3 Answer

 $\overline{Y}$ 
 $\overline{Z}$ 

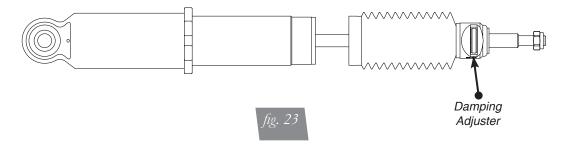
Z = DESIGN HEIGHT

Torque Specifications		
Location	Nm	ft. lbs.
Upper shock absorber mount to body bolt	50 + 45°	37
Shock absorber to wheel bearing housing bolt	150 + 180°	111
Level control system sensor to body bolt	5	3.68
Level control system sensor to lower transverse link bolt	9	6.63
Lower transverse link to subframe bolt	70 + 180°	52
Lower transverse link to wheel bearing housing nut	120 + 360°	88
Tie rod to subframe nut	95	70
Tie rod to wheel bearing housing bolt	90 + 90°	66

Table 1

#### DAMPING ADJUSTMENT

The shocks in this kit have 30 settings or "clicks" of adjustable compression and rebound damping characteristics. Damping is changed through the shock rod using the supplied adjuster or a 3mm allen wrench. Turn the adjuster clockwise and the damping settings are hardened. Turn the adjuster counterclockwise and the damping is softened. Each shock is preset to "-16 clicks". This means that the shock is adjusted 16 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 2009 A4 2.0T Quattro and may need to be adjusted to different vehicles and driving characteristics. (Fig. 23)





### **Before Operating**



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

- 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**

	$ \begin{tabular}{ll} \textbf{Clearance test} &- & \textbf{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.   \end{tabular} $
	<b>Leak test before road test</b> — 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.
	<b>Heat test</b> — 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.
	${f Road\ test}$ — 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.
	$ \begin{tabular}{ll} \textbf{Operating instructions} & - & \textbf{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. \\ \end{tabular} $
T	echnician's Signature
D	ate
F	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.
	<b>Air pressure requirements</b> — Regardless of load, the air pressure should always be adjusted to maintain adequate ride height at all times while driving.
	<b>Thirty day or 500 mile test</b> — 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

10 MN-873

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 **VOID THE WARRANTY**.

#### **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.



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.

MN-873 11



#### 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

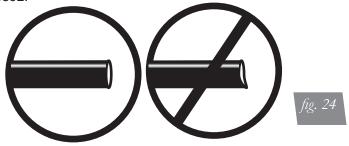
Stability translates into safety and should be the priority, meaning the driver may need to sacrifice a perfectly level and comfortable ride. Stability issues include roll control, bounce, dive during braking and sponginess. Tuning out these problems usually requires additional air pressure, strut damping, 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. 24). 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.





# **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. 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.

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 or on the web at www.airliftperformance.com.

MN-873 13

# **Need Help?**

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

