

## **Kit 75583** MKII-III Platform front application

# MN-733 • (031602) • ECR 8332

## **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 MKII-III 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.

**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 AIR LIFT PERFORMANCE STRUTS/SHOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.

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## **Installation Diagram**

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#### NOTE:

- Air fitting to be installed with thread sealant and torqued 1-3/4 turns beyond finger tight.
- 2.) 13975 Spacer assembles on top of supplied VR6 Upper Mount Bearing 11037 below Rebound Washer.
- 3.) 13977 Spacer assembles on top of G60 Upper Mount Bearing below Rebound Washer.

#### HARDWARE LIST

Item	Part #	Description Qty
А	35388	Strut assembly - front2
В	21745	1/4" MNPT x 1/4" PTC Straight2
С	STOCK	G60 Strut Bushing w/ Bearing2
D	13977	Spacer, Strut Rod, G602
E	STOCK	VW MKII-III Rebound Washer2
F	18015	1/2-20 Nyloc Nut2
G	11037	VR6 Strut Bearing, VW MKII-III2
Н	13975	VR6 Strut Rod Spacer, VW MKII-III2
1	STOCK	VR6 Strut Bushing2
J	21853	1/4" MNPT x 3/8" PTC Straight2



fig. 1

**TOOLS LIST** 

Description

Jack stands or hoist Torque wrench Metric Wrenches Standard Wrenches

Jack

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.

#### **REMOVING THE STRUT**

1. Unbolt the brake line/ABS bracket from the strut, save for later reinstallation (Fig. 2).



2. Support the hub assembly. Unbolt the lower spindle mounting bolts and save for later reinstallation (Fig. 3).



fig. 3

fig. 4

- 3. Remove the upper strut mount nut within the rebound washer. Remove the strut assembly from the vehicle. Skip step 4 if using new upper mounts (Fig. 4).

4. Using a coil spring compressor, securely mount the assembly in the compressor and carefully apply tension to the coil spring. Once the coil spring tension is secure, unthread the upper mount nut and remove the nut and mount bushing from the assembly. Slowly release tension from the coil spring. Save the upper mount bushing for later reinstallation.

#### **INSTALLING THE NEW STRUT ASSEMBLY**

- 1. Prior to installing the strut, apply Teflon tape or thread sealant to the threads of the air fitting and thread into the lower end cap of the air spring. Torque 1-3/4 turns beyond hand tight.
- 2. IMPORTANT: 4 cylinder chassis vehicles will install the stock mount onto the strut rod, followed by the long 13977 spacer over the stock mount and underneath the stock rebound washer when installed (see installation diagram Fig. 1). VR6 chassis vehicles will use the supplied bearing and spacer to replace the stock bearing that is removable from the mount. VR6 mounts will need rubber removed from the top side of the mount to clear the rebound washer. Skim a layer of rubber off from this area of the mount until metal is shown approx. 1/8 inch down. See figures below (Fig. 5a and Fig. 5b).



fig. 5a

4 Cylinder Shown



fig. 5b

VR6 Shown



Rubber removed from VR6 mount

- 3. Lift hub and strut assembly into the strut pocket. Align the stock upper mount with the pocket and install the stock rebound washer and supplied nyloc nut. Torque to 54Nm (44 lb.-ft.)
- 4. Reattach the ABS bracket and brake line to the tab.
- 5. Lift the hub assembly and align spindle knuckle with the spindle tabs on the strut and reinstall the previously removed bolts. 19mm head bolts are torque to 80Nm (59 lb.-ft.) while 18mm head bolts are torque to 95Nm (70 lb.-ft.).
- 6. Compress suspension fully and check for clearance issues around the axle, tie rods, control arm, brake lines and the air spring. Modify if necessary.
- 7. Install wheel and torque to 110Nm (81lb.-ft.).

#### **ALIGNING THE VEHICLE**

- 1. Using the control system set the vehicle height to the new desired ride height and align there.
- 2. If the 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.

Torque Specifications		
Location	Nm	ft. lbs.
Strut to wheel bearing housing (18mm bolt head)	95	70
Strut to wheel bearing housing (19mm bolt head)	80	59
Upper nut to strut rod	54	44
Wheels	110	81

Table 1

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.

### **Before Operating**

**A** 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 75-90 PSI and check all connections for leaks.
- 3. An Air Lift Air Management System such as 3H/3P is highly recommended for this product.
- 4. Please familiarize yourself further with this product 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 air spring. Be sure to check the clearance at ride height and after vehicle alignment.
- □ Leak test before road test Inflate the air springs to 75-90 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, it must be remedied immediately! Please consult installation manual and re-check your installation. Rubbing of any kind will cause failure and will not be covered under warranty. 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
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45 PSI

125 PSI

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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

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.

#### **A** CAUTION

NOTE

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 safely. If equipped with a digital control system, it is recommended that the system be put in "manual mode" before lifting so the system does not try and adjust while on the hoist.

#### 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

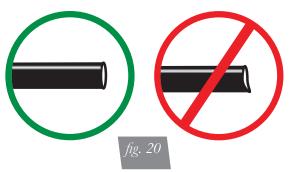
Stability translates into safety and should be the priority, meaning the driver may need to sacrifice a perfectly level and comfortable ride. Stability issues include roll control, bounce, dive during braking and sponginess. Tuning out these problems usually requires additional air pressure, strut damping, 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. 20). 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.



## **Limited Warranty and Return Policy**

#### WHAT THIS WARRANTY COVERS

Air Lift Company provides a Limited Lifetime Warranty to the original purchaser of its Air Lift Performance 3H<sup>™</sup> and 3P<sup>™</sup> Control/Air Management Systems, that the Air Lift Performance products will be free from defects in workmanship and materials for the normal expected life of the part when used on cars and trucks as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth below.

For all other Air Lift Performance products, Air Lift Company warrants to the original purchaser for a period of one year from the date of original purchase, that the Air Lift Performance products will be free from defects in workmanship and materials when used on cars and trucks as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth below.

#### WHAT THIS WARRANTY DOES NOT COVER

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. This warranty does not apply and is void if damage or failure is caused by: accident, abuse, misuse (including but not limited to racing or off-road activities or commercial use), abnormal use, faulty installation, liquid contact, fire, earthquake or other external cause; operating the product outside Air Lift Company's instructions, specifications or guidelines; or service, alteration, maintenance or repairs performed by anyone other than Air Lift Company to the product from its purchased condition. This warranty also does not apply to: Universal Air (Fabricator Kits), consumable parts, such as batteries; cosmetic damage, including but not limited to scratches or dents; defects caused by normal wear and tear or otherwise due to the normal aging of the product, or if any serial or identification number has been removed or defaced from 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.

#### LIMITATION OF LIABILITY

To the extent permitted by law, this warranty and the remedies set forth herein are exclusive and in lieu of all other warranties, remedies and conditions, whether oral, written, statutory, express or implied. AIR LIFT COMPANY DISCLAIMS ALL STATUTORY AND IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS TO THE EXTENT PERMITTED BY LAW. To the extent such warranties cannot be disclaimed, such implied warranties shall apply only for the warranty period specified above. Please note that some states do not allow limitation on how long an implied warranty (or condition) lasts. So the above limitation may not apply to you. Except as provided in this warranty and to the extent permitted by law, Air Lift Company shall not be liable for any direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or arising in connection with the sale, use or repair of Air Lift products, or under any other legal theory, including but not limited to loss of use, loss of revenue, loss of actual or anticipated profits, loss of the use of money, loss of business, loss of opportunity, loss of goodwill, and loss of reputation. Air Lift Company's maximum liability shall not in any case exceed the purchase price paid by you for the Air Lift product. Please note that some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

#### HOW TO GET SERVICE

If a defect in workmanship or materials causes your Air Lift Performance product to become inoperable within the warranty period, before returning any defective product, call Air Lift Company at (800) 248-0892 in the U.S. and Canada (elsewhere, (517) 322-2144) to obtain a Returned Materials Authorization (RMA) number. The consumer shall be responsible for removing (labor charges) the defective product from the vehicle and returning it, shipping costs prepaid, to Air Lift Company for verification. Returns to Air Lift Company must be postage prepaid and sent to: Air Lift Company • 2727 Snow Road • Lansing, MI • 48917. You must prove to the satisfaction of Air Lift Company the date of original purchase of your Air Lift Performance product. You must also enclose the RMA number and a return address. A minimum \$10 shipping and handling charge will apply to all warranty claims. You must also pack the product to minimize the risk of it being damaged in transit. If we receive a product in damaged condition as the result of shipping, we will notify you and you must seek a claim with the shipper.

#### WHAT AIR LIFT COMPANY WILL DO

If you submit a valid claim to Air Lift Company during the warranty period, Air Lift Company will, at its option, repair your Air Lift Performance product or furnish you with a new or rebuilt product. Air Lift Company will not reimburse you for repairs or replacement parts provided by other parties. Your repaired or replacement Air Lift Performance product will be returned to you (subject to payment of the required warranty claim shipping and handling charge) and it will be covered under the warranty for the balance of the warranty period, if any. When a product or part is replaced, any replacement item becomes your property and the replaced item becomes property of Air Lift Company. You are responsible for installation/reinstallation (labor charges) of the product.

#### HOW THE LAW RELATES TO THIS WARRANTY

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. By this warranty, Air Lift Company does not limit or exclude your rights except as allowed by law. To fully understand your rights, you should consult the laws of your state.

## **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 Performance 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.

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.

## **Need Help?**

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



Thank you for purchasing Air Lift Performance products!

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