

Air LiftTM
PERFORMANCE

Kit 78522

Volkswagen MKVII

Front Application

(for vehicles with 55mm lower strut diameter)



AIR LIFT
PERFORMANCETM

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.

TABLE OF CONTENTS

Introduction	2
Notation Explanation	2
Important Safety Notices	2
Installation Diagram	3
Hardware List	3
Installing the Air Suspension	4
Preparing the Vehicle	4
Removing the Front Suspension	4
Air Suspension Installation	8
Damping Adjustment	11
Aligning the Vehicle	11
Adjusting Extended or Drop Height Using Lower Mount	12
Before Operating	14
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 Volkswagen MKVII 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, step-by-step installation information, maintenance tips, safety information and a troubleshooting guide.

Air Lift Performance reserves the right to make changes and improvements to its products and publications at any time. For the latest version of this manual, contact Air Lift Performance at (800) 248-0892 or visit our website at www.airliftperformance.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.

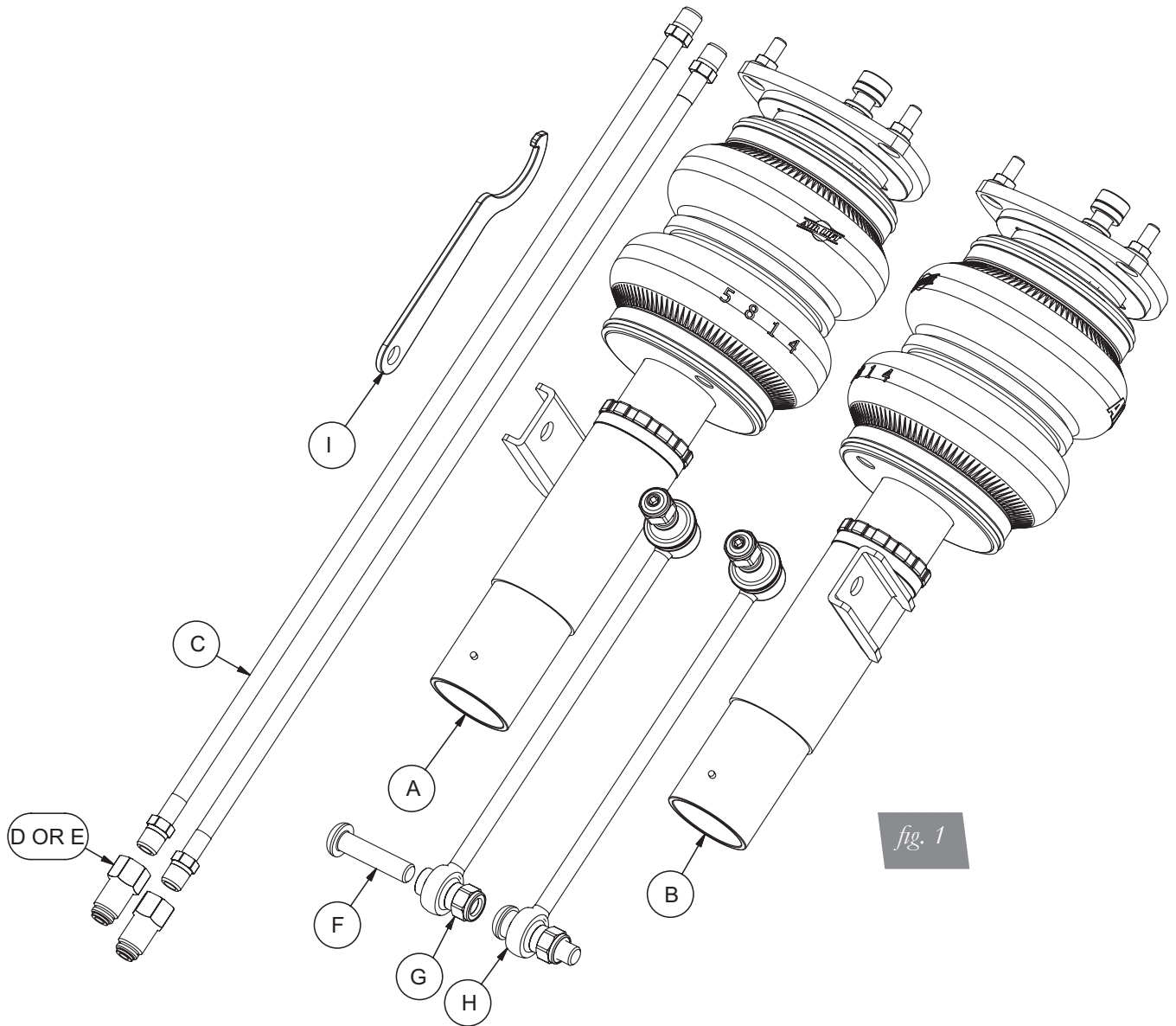
WARNING

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	35310	ASM, Strut, MKV7 Front (55mm) Right	1
B	35311	ASM, Strut, MKV7 Front (55mm) Left.....	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	17491	Male 12x1.25-50 Button Head Cap Screw ...	2
G	18546	Nyloc Nut.....	2
H		End Link, VW MKV7 Front.....	2
I		Spanner Wrench.....	1



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

Installing the Air Suspension

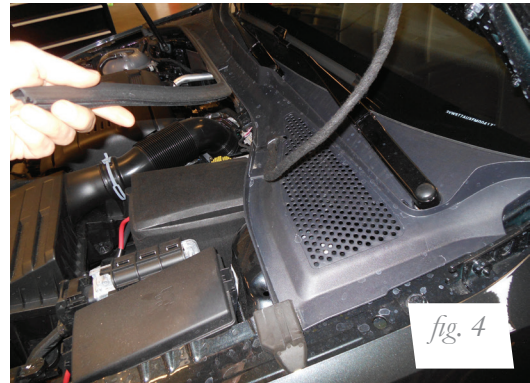
PREPARING THE VEHICLE

1. Elevate and support the vehicle with a hoist or jack stands.
2. Remove the front wheel and support the hub assembly (fig. 2).



REMOVING THE FRONT SUSPENSION

1. Within the engine compartment, remove the weather-stripping from the plastic cowl cover (figs. 3 and 4).



2. Remove both wiper arms (figs. 5a-5c).



fig. 5a

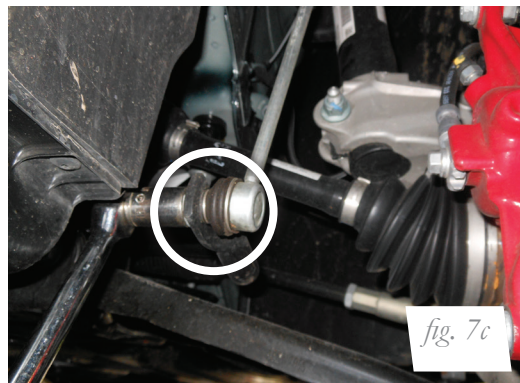
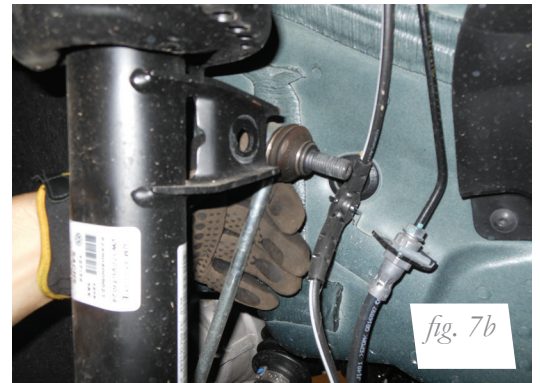
fig. 5b

fig. 5c

3. Unclip the hose from the cowl cover and remove both sections of cover from the vehicle (figs. 6a-6d).



4. Remove the stabilizer bar end link from the strut and bar (figs. 7a-d).



- Remove the axle bolt from the bearing hub (figs. 8a and 8b).



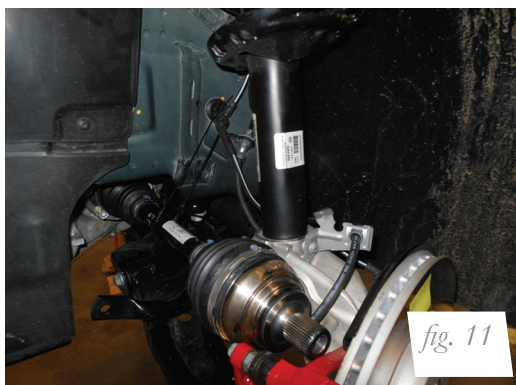
- Remove the lower strut pinch bolt (fig. 9).



- Support the hub assembly and remove the three lower ball joint bolts (fig. 10).



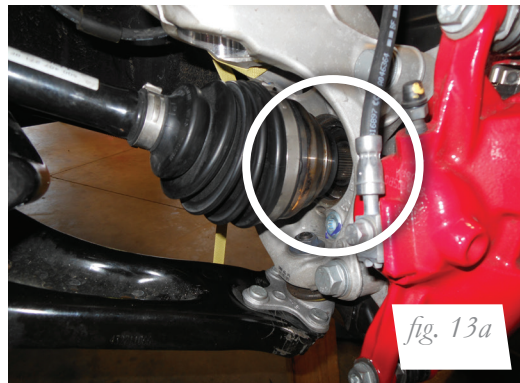
- Rotate the hub and remove the axle from the bearing. Support the axle and slide the hub down from the strut (fig. 11).



9. Unbolt the three upper strut mount bolts and remove the strut from the vehicle (figs. 12a and 12b).



10. Insert the axle through the bearing (fig. 13a), reattach the axle bolt and three lower ball joint nuts (fig. 13b). Torque ball joint nuts to 60Nm (44 ft-lbs.) Thread the axle bolt in place (fig. 13c). See Torque Specifications for axle bolt values.



AIR SUSPENSION INSTALLATION

1. Install the braided air line into the air spring (fig. 14) with thread sealant, torque one and three-quarter turns beyond hand-tight. Attach the desired air fitting to the braided air line with thread sealant, torque one and three-quarter turns beyond hand-tight.

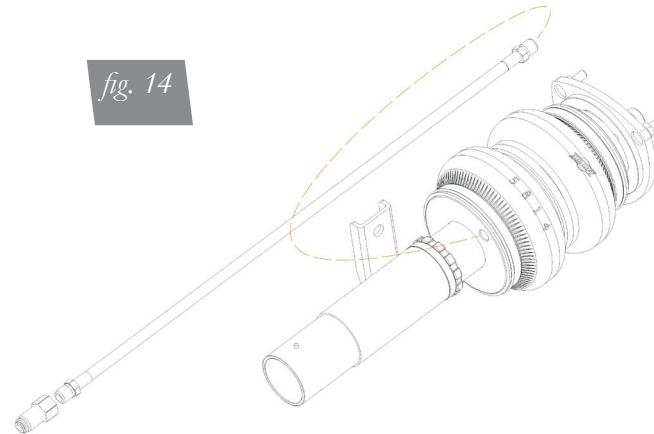


fig. 14

2. Attach the strut camber plate to the chassis (fig 15b). Torque nuts to 27Nm (20 ft-lbs.)



fig. 15a



fig. 15b

3. Lift the hub assembly, sliding over the strut lower mount with the locating pin between the clamp area (fig. 16a). With the lower mount fully seated (fig. 16b), install the lower clamp bolt (fig. 16c). Torque to 70Nm (52 ft-lbs.).

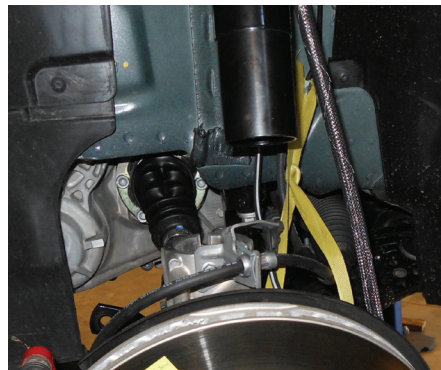


fig. 16a



fig. 16b

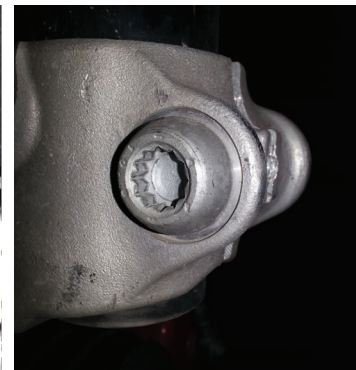
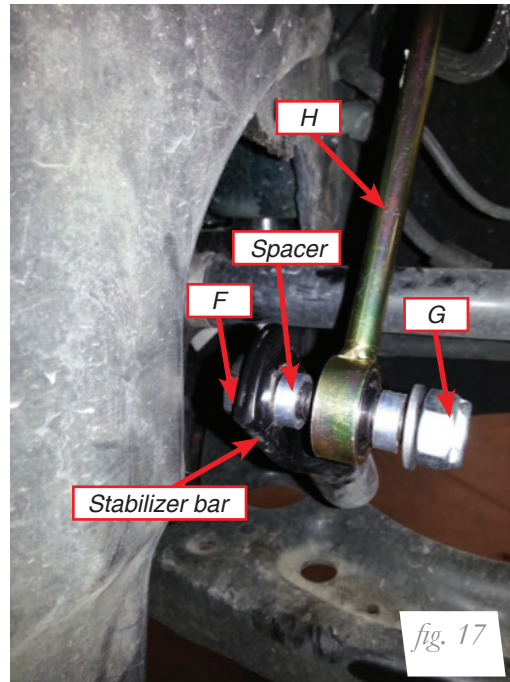


fig. 16c

4. Insert the supplied bolt (F) through the stabilizer bar with the bolt head inboard toward the engine compartment. Slide the supplied end link (G) with spacer on each side of the rod end onto the bolt. Thread the nut onto the bolt and torque to 65Nm (48 ft-lbs.) (fig. 17).



5. Attach the end link stud to the endlink tab on the strut (fig. 18). Torque to 65Nm (48 ft-lbs.)



6. Fully compress the suspension using a jack. With the suspension compressed, review the best routing for the leader hose that is clear of all suspension components and axle. Routing should also allow for the suspension to extend without kinking or pulling the line tight or rubbing on other components. Following the brake line routing is often a good place to start. Check clearances to all other components.
7. With the suspension fully compressed, take a measurement from the fender to some reference point – typically the center of the axle. Record this measurement as Max Compression.
8. Cycle the suspension to Max Extension and record the measurement from the same reference points.
9. Add ME and MC then divide by 2. Set the suspension to this point. This position will give 50% stroke in either direction and is a starting point for ride height (fig. 19).

Formula for Calculating Ride Height

$(ME+MC) \div 2 = \text{MID STROKE}$

fig. 19

10. With the suspension at this position, loosen and then re-torque the forward control arm to sub-frame bolt to manufacturer’s specifications (Table 1).

Torque Specifications		
Location	Nm	lb-ft
Camber plate to chassis	27	20
Lower strut clamp bolt	70	52
Stabilizer end link to bar	65	48
Stabilizer end link to strut	65	48
Camber adjustment bolt	15	11
Ball joint to control arm	60	44
Axle bolt (12 point without ribs)	200	148
Axle bolt (12 point with ribs)	70 + 90 degrees	52 + 90 degrees
Forward control arm to sub-frame bushing bolt	70Nm + 180 degrees	52 + 180 degrees
Wheel studs	120	89
Braided air line threads	1 and 3/4 turns beyond hand tight	

Table 1

DAMPING ADJUSTMENT

The struts in this kit have 30 settings, or “clicks”, of adjustable compression and rebound damping characteristics. Damping is changed through the strut rod using the supplied adjuster (figs. 20 and 21) 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 “-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 of, or setting, damping. This setting was developed on a 2015 Volkswagen Golf GTI and may need to be adjusted to different vehicles and driving characteristics.



fig. 20

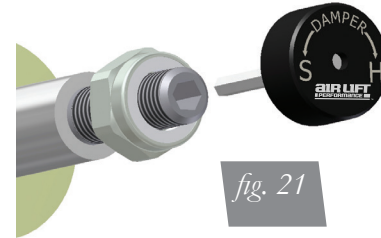


fig. 21

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.

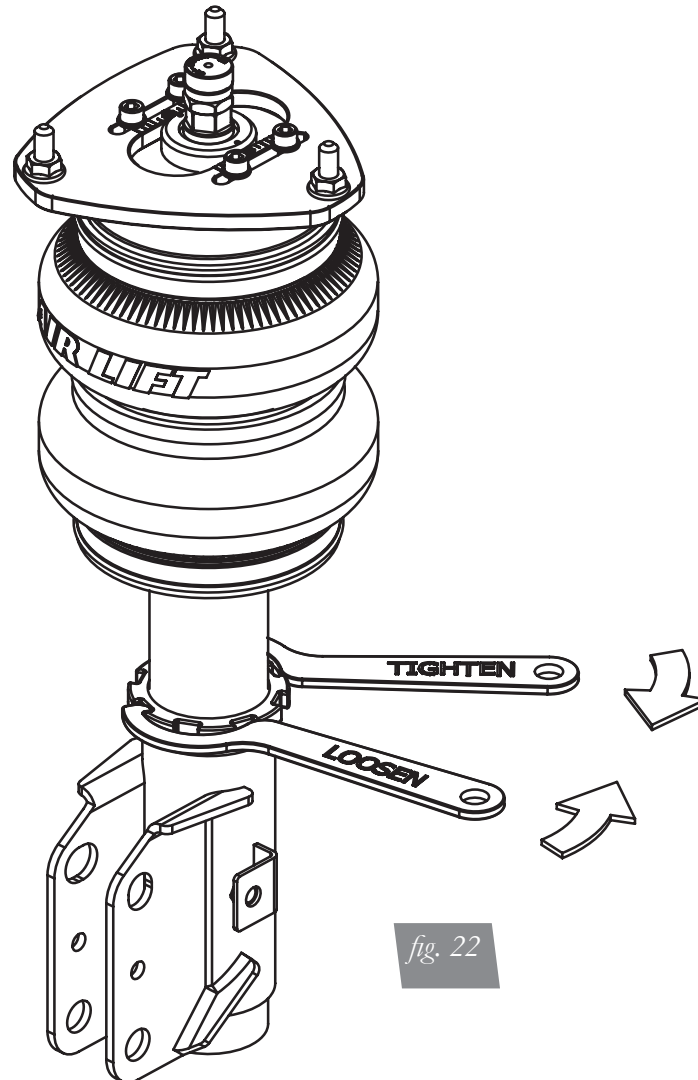
NOTE

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

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. 22).



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

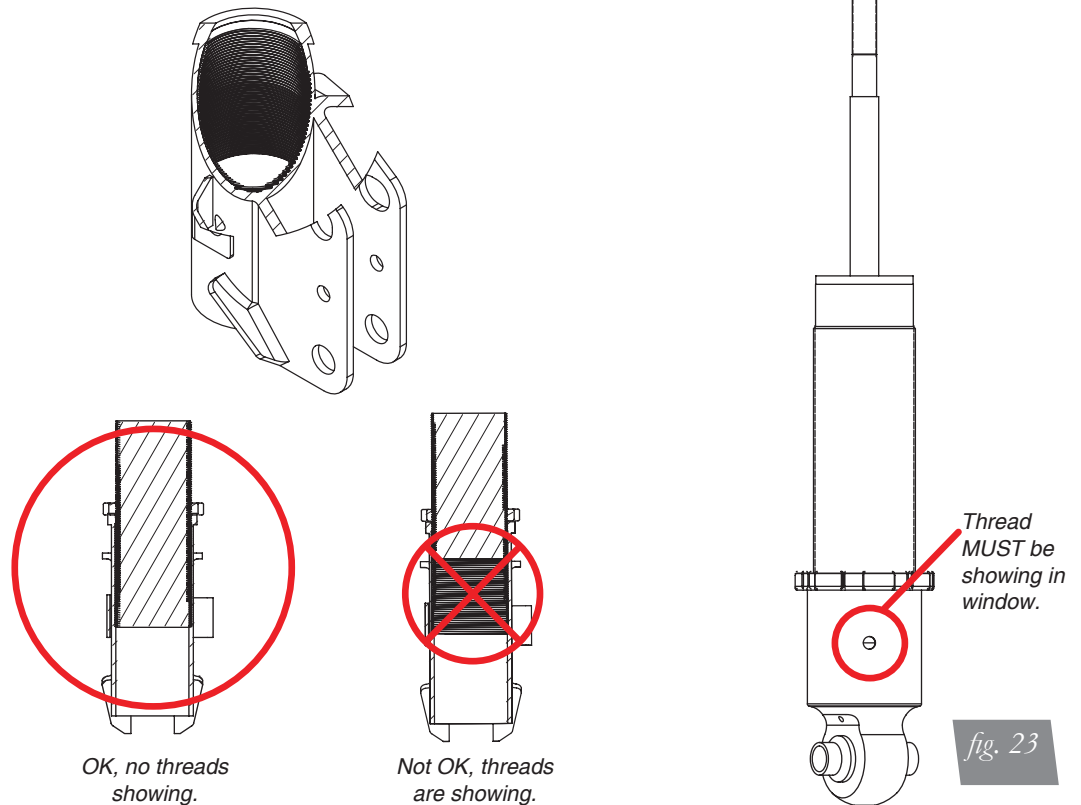
WHEN ADJUSTING HEIGHT UPWARDS, MAKE SURE THAT THE STRUT BODY ENGAGES ALL THE THREADS OF THE LOWER MOUNT (FIG. 23). WHEN ADJUSTING DOWNWARDS, MAKE SURE THERE IS ADEQUATE AIR SPRING CLEARANCE TO THE TIRE/WHEEL ASSEMBLY. CLEARANCE MUST BE CHECKED WITH SYSTEM FULLY DEFLATED AS WELL AS FULLY INFLATED TO ENSURE 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:

FOR SHOCKS:



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 75-90 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 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 a half-inch of 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 75-90 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
45-55 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.

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 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. 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.

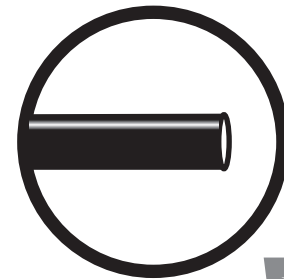


fig. 24



Warranty and Returns Policy

Air Lift Performance 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 Performance 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 Performance • 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 Performance 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 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, our local number is (517) 322-2144.



Thank you for purchasing Air Lift Performance products!

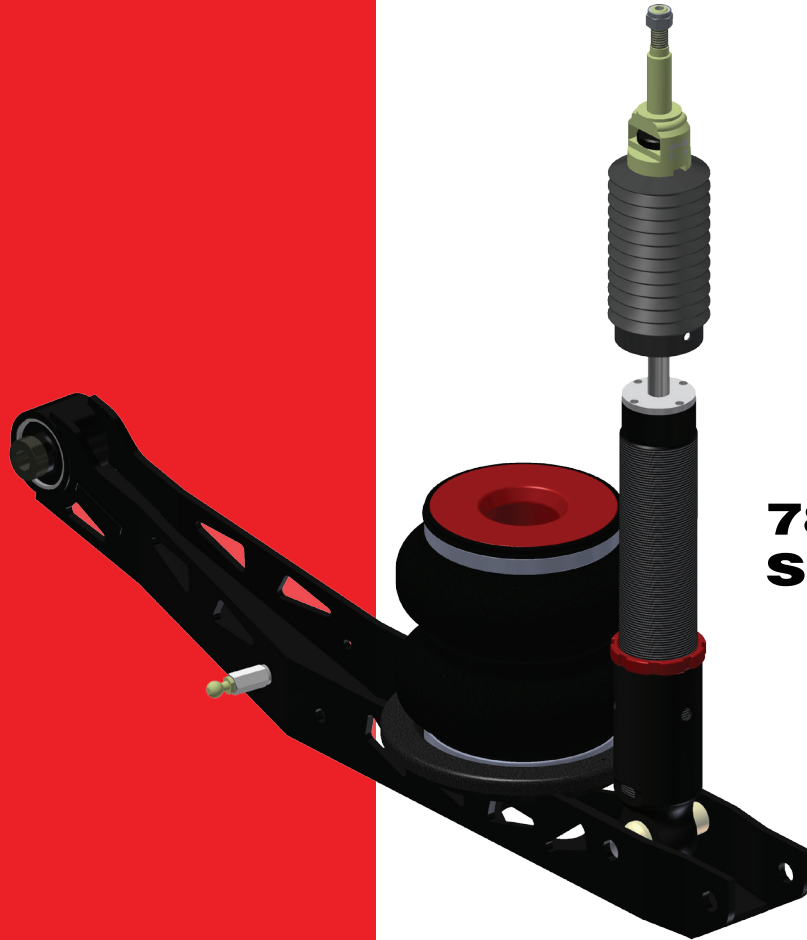
Air Lift Performance • 2727 Snow Road • Lansing, MI 48917 or PO Box 80167 • Lansing, MI 48908-0167
Toll Free (800) 248-0892 • Local (517) 322-2144 • Fax (517) 322-0240 • www.airliftperformance.com

Printed in
the USA

Air Lift™
PERFORMANCE

Kit 78622/ 78623

Volkswagen MKVII
**Rear Application -
Independent Suspension
(with and without shocks)**



**78622
Shown**

AIR LIFT
PERFORMANCE™

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.*

TABLE OF CONTENTS

Introduction	2
Notation Explanation	2
Important Safety Notices	2
Installation Diagram	3
Hardware List	3
Installing the Air Suspension	4
Preparing the Vehicle	4
Removing the Front Suspension	4
Air Suspension Installation	7
Damping Adjustment	12
Aligning the Vehicle	13
Adjusting Extended or Drop Height Using Lower Mount	13
Before Operating	15
Installation Checklist	15
Product Use, Maintenance and Servicing	16
Suggested Driving and Maximum Air Pressures	16
Maintaining and Operating	16
Troubleshooting Guide	16
Frequently Asked Questions	16
Tuning the Air Pressure	17
Checking for Leaks	17
Fixing Leaks	17
Warranty & Return Policy	18
Replacement Information	18
Contact Information	18

Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of this Volkswagen MKVII 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, step-by-step installation information, maintenance tips, safety information and a troubleshooting guide.

Air Lift Performance reserves the right to make changes and improvements to its products and publications at any time. For the latest version of this manual, contact Air Lift Performance at (800) 248-0892 or visit our website at www.airliftperformance.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

NOTE:
Kit 78623 uses
factory shocks.

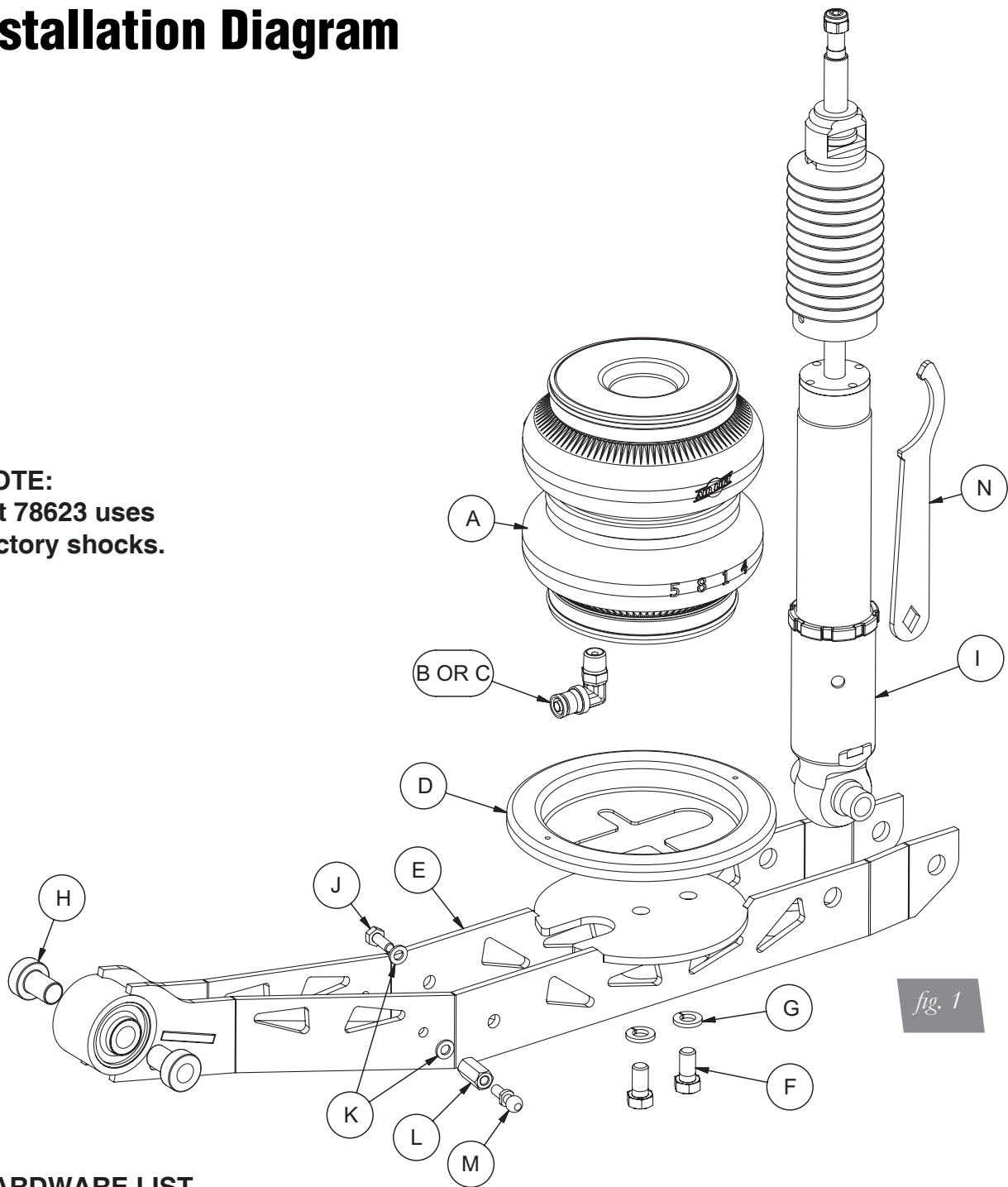


fig. 1

HARDWARE LIST

Item	Part #	Description	Qty	Item	Part #	Description	Qty
A	58531	Air Spring, 2B6 Reg, Recess Mount.....	2	H	13989	Spacer, 14mm Bushing.....	4
B	21779	1/4\"MNPT X 1/4\" PTC Elbow, DOT	2	I	26779	Shock, MKVII Rear	2
C	21851	1/4\"FNPT X 3/8\" PTC, 90 Deg., DOT	2	J	17389	M6 - 1 X 16 Hex Bolt.....	1
D	11801	Roll Plate.....	2	K	18579	M6 Flat Washer.....	2
E	11135	Control Arm, VW MKVII, Rear	2	L	18612	M6 X 1-22 Hex Coupler	1
F	17101	3/8\"-16 X 3/4\" Hex Bolt	4	M	17492	M6 X 1 Ball Stud	1
G	18427	3/8\" Lock Washer.....	4	N		Spanner Wrench.....	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 and support the vehicle with a hoist or jack stands.
2. Remove the rear wheel and support the lower control arm (fig. 2 and 3).

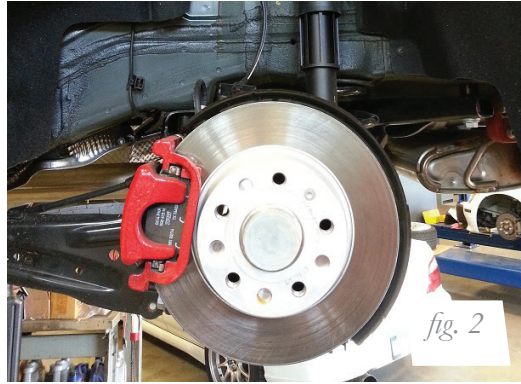


fig. 2



fig. 3

REMOVING THE REAR SUSPENSION

1. Vehicles without headlight alignment systems, move to next step. Unclip the plastic headlight alignment armature from the bracket attached to the control arm (fig. 4).
2. Unbolt the stabilizer end link from the lower control arm. Disconnect the end link from the opposite side control arm at this time. (figs. 5 and 6).



fig. 4



fig. 5



fig. 6

3. Remove the nut from the lower shock eye mount (fig. 7).



4. Remove the outer hub to control arm nut (fig. 8).



 **CAUTION**

COIL SPRING UNDER PRESSURE. PROCEED WITH CAUTION.

5. With the lower control arm supported, remove the shock and hub bolts (fig. 9a) and carefully lower the arm until the coil spring is free to remove (figs. 9b and 9c).



fig. 9a

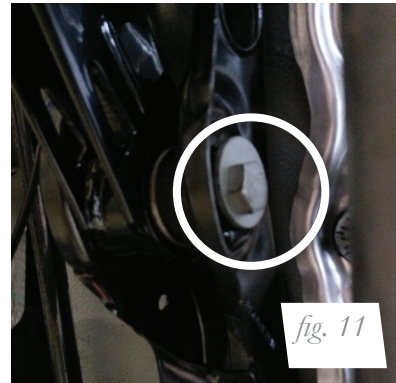


fig. 9b



fig. 9c

6. Support the muffler, remove the muffler support brackets (fig. 10), and lower the muffler enough to gain access to the inner control arm cam bolt. Remove this bolt and control arm from the vehicle (figs. 11 and 12).



7. If installing kit 78623 without rear shocks, move on to Step 3 of Installing the Air Suspension. Remove the fender liner and unbolt the shock upper mount (fig. 13a). Remove the assembly from the vehicle (fig. 13b).



AIR SUSPENSION INSTALLATION

1. Disassemble the stock rear shock from the upper mount. Remove the lower dust cover and jounce bumper from the mount (fig. 14). Install the Air Lift Performance shock with the adjuster lettering facing outboard (figs. 15-17). Torque rod nut to 27Nm (20 ft-lbs.).



fig. 14



fig. 15



fig. 16

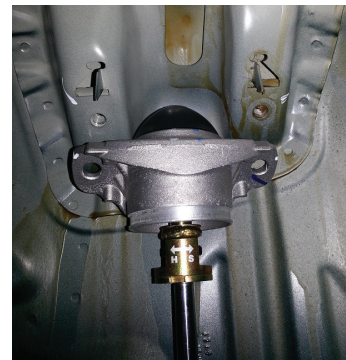


fig. 17

2. Apply the plastic cap on top of the mount and reattach it to the vehicle chassis. Torque upper chassis bolts to 50Nm + 90 degrees (37 ft-lbs. + 90 Degrees).
3. Attach the supplied control arm to the hub. Do not torque bolt at this time (fig. 18).



fig. 18

- Lift the control arm, align the shock eye and attach with the previously removed bolt. Do not torque at this time (figs. 19 and 20).



- Remove the zip tie from the control arm inner bushing/spacers, align with the inner pivot hole, and insert the previously removed cam bolt through the arm (fig. 21). Apply the cam washer and nut, and fit snugly into place (fig. 22). Do not torque at this time.



- Align the stabilizer end link and bolt through the control arm (fig. 23).



7. Reattach the muffler hanger bracket (fig. 24). Torque bolts to 25Nm (18 ft-lbs.)



8. Apply thread sealant to the threads of the appropriate fitting. Tighten the appropriate fitting to the airspring one and three-quarter turns beyond hand-tight (fig. 25).



9. Apply the roll plate to the bottom of the air spring (fig. 27), collapse the air spring, and seat around the upper spring seat and against the lower control arm (fig. 28). Align the mounting holes of the arm and airspring (fig. 29) and install two bolts with lock washers through the arm, into the airspring (fig. 30). Torque to 27Nm (20 ft-lbs.).



10. Vehicles without headlight alignment systems: move to next step. Locate the hole through the control arm closest to the stabilizer end link and on the same side as the headlight alignment bracket (fig. 31). Insert the M6 bolt through this hole with a flat washer on each side of the arm (fig. 32). Thread the hex coupler onto this bolt. Tighten a quarter-turn beyond hand-tight. Thread the supplied ball stud into the hex coupler a quarter-turn beyond hand-tight. Now clip the plastic armature of the headlight alignment system onto the ball stud (fig. 33).

*fig. 31**fig. 32**fig. 33*

11. Fully compress the suspension using a jack. With the suspension compressed, review the best routing for the leader hose that is clear of all suspension components. Routing should also allow for the suspension to extend without kinking, pulling the line tight or rubbing on other components. Check clearances to all other components.

12. With the suspension fully compressed, take a measurement from the fender to some reference point – typically the center of the axle. Record this measurement as Max Compression.
13. Cycle the suspension to Max Extension and record the measurement from the same reference points.
14. Add ME and MC then divide by 2. Set the suspension to this point. This position will give 50% stroke in either direction and is a starting point for ride height (fig. 34).

Formula for Calculating Ride Height

$(ME+MC) \div 2 = \text{MID STROKE}$

fig. 34

15. With the suspension at this position, loosen, then re-torque the lower control arm bolt to manufacturer’s specifications (Table 1).

Torque Specifications		
Location	Nm	lb-ft
Lower Control arm cam bolt	95	70
Lower control arm to end link bolt	45	33
Lower control arm to shock eye bolt	95	70
Lower control arm to hub	90+90 degrees	66+90 degrees
Lower control arm to headlight alignment stud	1/4 turn beyond hand-tight	
Shock mount to chassis	50+90 degrees	37+90 degrees
Shock rod nut	27	20
Upper transverse link to subframe	95	70
Upper transverse link to hub	130+90 degrees	96+90 degrees
Tie rod to subframe	90+90 degrees	66+90 degrees
Tie rod to hub	130+90 degrees	96+90 degrees
Wheel studs	120	89
Braided air line threads	1 and 3/4 turns beyond hand-tight	

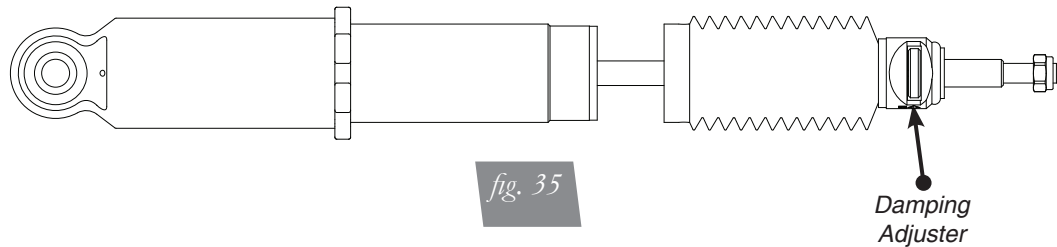
Table 1

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 (fig. 35).

Turn the adjuster clockwise and the damping settings are hardened. Turn the adjuster counterclockwise and the damping is softened.

Each 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 of, or setting, damping. This setting was developed on a 2015 Volkswagen Golf GTI and may need to be adjusted to different vehicles and driving characteristics.



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.

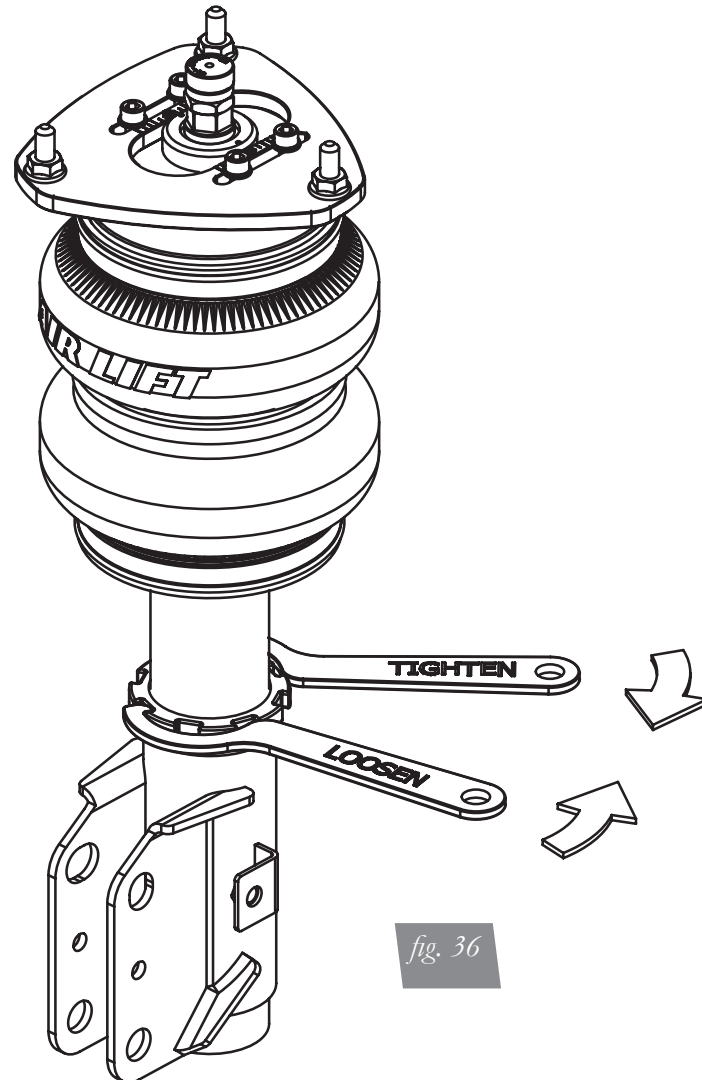
NOTE

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

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. 36).



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

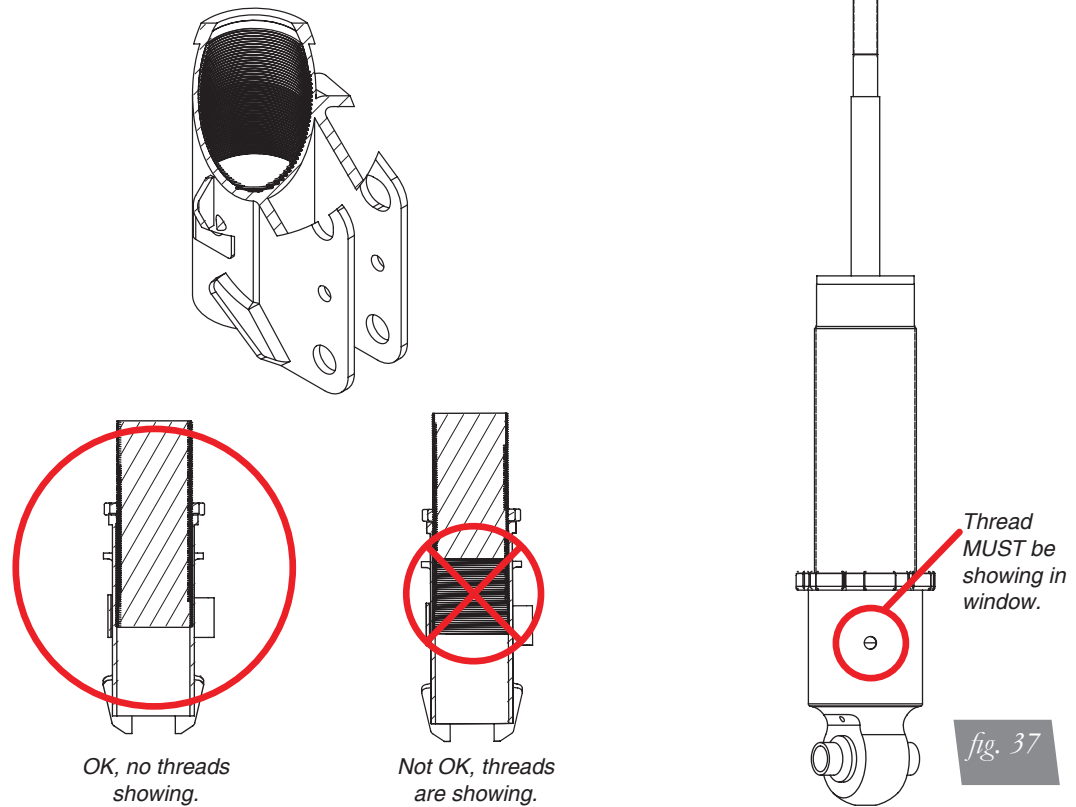
WHEN ADJUSTING HEIGHT UPWARDS, MAKE SURE THAT THE STRUT BODY ENGAGES ALL THE THREADS OF THE LOWER MOUNT (FIG. 37). WHEN ADJUSTING DOWNWARDS, MAKE SURE THERE IS ADEQUATE AIR SPRING CLEARANCE TO THE TIRE/WHEEL ASSEMBLY. CLEARANCE MUST BE CHECKED WITH SYSTEM FULLY DEFLATED AS WELL AS FULLY INFLATED TO ENSURE 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:

FOR SHOCKS:



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 75-90 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 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 a half-inch of 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 75-90 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.
- 30-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
45-65 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.

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 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. 38). 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.

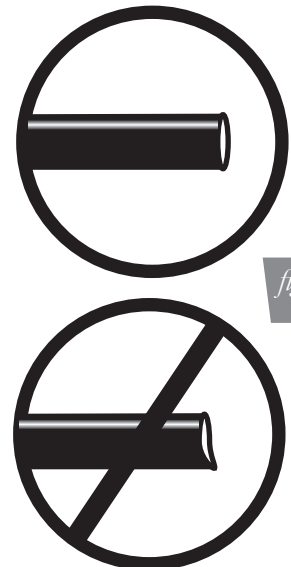


fig. 38

Warranty and Returns Policy

Air Lift Performance 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 Performance 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 Performance • 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 Performance 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 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.

Notes

Notes

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 Performance • 2727 Snow Road • Lansing, MI 48917 or PO Box 80167 • Lansing, MI 48908-0167
Toll Free (800) 248-0892 • Local (517) 322-2144 • Fax (517) 322-0240 • www.airliftperformance.com

Printed in
the USA

Air Lift[™] **PERFORMANCE**

Kit 27666 Manual Air Management System



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.

TABLE OF CONTENTS

Introduction	2
Important Safety Notice	2
Notation Explanation	2
Hardware List	3
NPT Assembly Instructions	3
Helpful Tips: Air Line and Fittings	3
Installing the Air Management System	4
Install Components	4
Mounting the Switch Panel	5
Attaching the Air Lines	5
Troubleshooting Guide	6
Tuning the Air Pressure	7
Leak Testing and Detection	7
Installation Diagram	8-9
Warranty and Returns Policy	10
Replacement Information	11
Contact Information	11
Electrical Schematic	12
Paddle Switch Mounting Bracket Template	13
16380 Compressor Template	15

Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of the Air Management System.

It is important to read and understand the entire installation guide before beginning installation or performing any maintenance, service or repair. The information here includes a hardware list, tool list, step-by-step installation information, maintenance guidelines and 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.

IMPORTANT SAFETY NOTICE

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.

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.

Hardware List

Item	Part #	Description	Quantity	Item	Part #	Description	Quantity
A	16380	Viair 380C Compressor	1	Electrical			
B	11955	4 Gallon Aluminum Air Tank	1	S	24782	30/50A Relay	1
C	26228	Dual Needle Gauge	2	T	24608	10 Gauge Red Wire	15'
D	21703	Paddle Switch	4	U	24643	16 Gauge Red Wire	20'
E	11031	Paddle Switch Mounting Bracket	1	V	24644	16 Gauge Black Wire	10'
F	20946	1/4" Airline	80'	W	24537	Quick Splice	3
G	10530	Air Line Cutter	1	X	24568	18 Gauge Ring Terminal	2
H	24575	145 - 175 PSI Pressure Switch	1	Y	24594	Blue Female Spade Terminal	9
Paddle Switch Mounting Bracket Hardware				Z	24748	12 Gauge Ring Terminal 3/8" ID	1
I	17434	#8 x 3/4" Stainless Steel Screw	4	AA	24542	Fuse Tap	1
Tank Mounting Hardware				BB	24561	Mini Fuse Adapter	1
J	17188	3/8"-16 x 1.25" Grade 5 Bolt	4	CC	24649	Yellow Butt Connector	1
K	18444	3/8" Flat Washer	8	DD	24595	Yellow Female Spade Terminal	2
L	18435	3/8"-16 Nyloc Nut	4	EE	17263	1/4" x 1" Self Threading Screw	1
Tank Fittings				FF	24539	Fuse Holder	1
M	21737	3/8" Pipe Plug	1	GG	24547	30A Spade Fuse	1
N	21738	1/4" FNPT x 3/8" MNPT Bushing	1	HH	17132	1/2" Self Threading Screw	2
O	21779	1/4" NPT x 1/4" Tube Elbow	2	Gauge and Paddle Switch Fittings			
P	21610	1/8" FNPT x 1/4" MNPT Bushing	1	II	21838	1/4" Union Tee	4
Q	21633	Inflation Valve	1	JJ	21842	1/4" Y Tee	3
R	23586	Thread Sealant	1				



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

NPT ASSEMBLY INSTRUCTIONS

1. Inspect the port and fitting ensuring both are free of contaminants and excessive burrs and nicks.
2. Apply a stripe of liquid pipe sealant around the male threads leaving the first two threads uncovered.
3. Screw finger tight into the port.
4. Wrench tighten the fitting to the correct turns past finger tight position (see table 1).



NEVER BACK OFF AN INSTALLED PIPE FITTING TO ACHIEVE PROPER ALIGNMENT. LOOSENING INSTALLED PIPE FITTINGS WILL CORRUPT THE SEAL AND CONTRIBUTE TO LEAKAGE AND FAILURE.

Torque Specifications		
Fitting Size	Turns Past Finger Tight	Torque lb/ft
1/8" NPT	1.5 - 3.0	12
1/4" NPT	1.5 - 3.0	25
3/8" NPT	1.5 - 3.0	40
1/2" NPT	1.5 - 3.0	54
3/4" NPT	1.5 - 3.0	78
1" NPT	1 - 2.5	112
1 1/4" NPT	1 - 2.5	154
1 1/2" NPT	1 - 2.5	211
2" NPT	1 - 2.5	300

Table 1

HELPFUL TIPS: AIR LINE AND FITTINGS

1. Minimum hose bend radius
 - 1/4" hose = 1" hose bend radius.
2. Hose to fitting
 - No side loading on fitting from hose.
 - Hose straight for 1" before bending.
3. Hose cutting
 - Cut hose perpendicular to hose length.
 - Inspect hose for scratches that run lengthwise on hose prior to insertion.
 - Use proper hose cutter, cigar cutter, or razor on flat surface.
4. DOT/SAEJ844 air brake hose data
 - Maximum working pressure of 175 PSI.
 - Not to be used for frame (body) to un-sprung mass connection, use a braided leader hose for this moving connection.

Compressor Tank Pressure		
Viair	Air Lift P/N	Max. Tank Pressure
380C	16380	175
400C	16400	150
444C	16444	175
450C	16450	150

Table 2

Installing the Air Management System

INSTALL COMPONENTS

NOTE

For a complete schematic, please see fig. 1. (pages 8 – 9)

Layout

1. Plan component location first.
2. Prior to mounting components, check to make sure:
 - the compressor leader hose will reach the tank.
 - the plumbing will route cleanly through the vehicle.

NOTE

Be sure to install all components as far as possible from any heat sources. Plan and prepare wiring and plumbing routing thru the vehicle. Eliminate all sharp edges that could chafe. Use grommets when passing through compartment walls.

Prepare and install the compressor

1. Prepare the compressor intake. If inside the vehicle, attach filter to port on end of compressor (fig. 1). If the compressor is located outside the vehicle, snorkel inlet filter to a dry location inside vehicle using components supplied with the compressor.
2. Center punch and drill four holes using the template on page 15.
3. Attach using the hardware supplied with the compressor.

NOTE

Air compressors ingest moisture and will deposit water in the tank. Tanks must be regularly purged to eliminate the possibility of water freezing inside the system or causing corrosion. Be sure to provide easy access to drain/fill valve (preferably outside the vehicle). The system does not include moisture separators or water traps, and does require periodic tank moisture drain. If using an engine driven compressor, proper oil and water filtration must be added as these compressors will contaminate the air suspension system. Water traps are available and sold separately through Air Lift Performance, part numbers: 21011 (1/4"), 21012 (3/8"), 21013 (1/2").

Tank pre-assembly (see fig. 1)

1. Determine tank location and orientation prior to installing fittings.
2. Apply thread sealant as necessary to all fittings.
3. Install the drain/fill PTC fitting in the lower most tank threaded port.
4. Choose a tank threaded port for the compressor fitting.
5. Choose the highest tank threaded port for air line supply.
6. Plug any remaining tank ports with hex plugs.

Tank install (see fig. 1)

1. Using the tank feet as a template, drill holes for hardware assembly.
2. Attach the tank using the supplied hardware.
3. Cut an appropriate length of hose from the manifold port T, to the PTC fitting on the tank.
4. Route the drain/fill air line with a schrader valve (preferably outside the vehicle).

NOTE

When cutting plastic air line, only use a standard hose cutter like (Air Lift part number 10530) or razorblade. Cut all hose ends square and as smoothly as possible. See hose cutting tips on page 4.

MOUNTING THE SWITCH PANEL

Refer to the switch panel template on page 13.

1. Find a location to mount the paddle switch mounting bracket (E).
2. Snap all four paddle switches (D) into the paddle switch mounting bracket (E) so the DEL is toward the top.

NOTE

You may select different locations for the paddle switches. The paddle switches do not need to be used with the supplied paddle switch mounting bracket.

3. Cut six pieces of air line (F) the same length (approximately 3"-6").
4. Push four of these pieces onto the "SUP" port of the switch. Attach two Y fittings (JJ) to the air lines.
5. Push the other two pieces of line into the Y fittings (JJ).
6. Attach the last Y fitting (JJ) to the air lines.
7. Mount the paddle switch mounting bracket (E) with four screws (I).

ATTACHING THE AIR LINES

CAUTION

WHEN CUTTING OR TRIMMING THE AIR LINE, USE AN AIR LINE CUTTER (G), A RAZOR BLADE OR A SHARP KNIFE. A CLEAN, SQUARE CUT WILL ENSURE AGAINST LEAKS. DO NOT USE WIRE CUTTERS OR SCISSORS TO CUT THE AIR LINE. THESE TOOLS MAY FLATTEN OR CRIMP THE AIR LINE, CAUSING IT TO LEAK.

1. Run a length of air line (F) from the air fitting on the compressor to the end of the switch cluster.
2. Run a length of air line from the remaining air fittings on the switch to its respective air spring.
3. Repeat step 2 for the remaining air fittings and air springs.
4. Use a tee and connect into each one of the air spring lines to connect to its respective gauge port.
5. Test and make sure that the switches operate the appropriate air springs.

Troubleshooting Guide

For further technical assistance please 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.

PROBLEM	CAUSE	SOLUTION
<i>Compressor doesn't run</i>	There is a blown fuse or relay, bad ground, or poor electrical connections.	Replace the fuse, check the ground wire, or check the compressor connector
<i>Compressor runs all the time.</i>	The compressor relay is defective or there is a leak.	Replace the relay or locate the leak and repair.
<i>Air spring or tank leak.</i>	Fitting seal or air line is compromised.	Check to make sure air lines are seated in connectors. Inspect fittings with soapy water. Trim hose or re-seal fitting.
<i>Compressors runs all the time but doesn't fill the tank.</i>	Compressor in-line check valve fitting has been overtorqued.	Loosen fitting and check again. Replace if needed.

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.

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 an increase in pressure.

Leak Testing and Detection

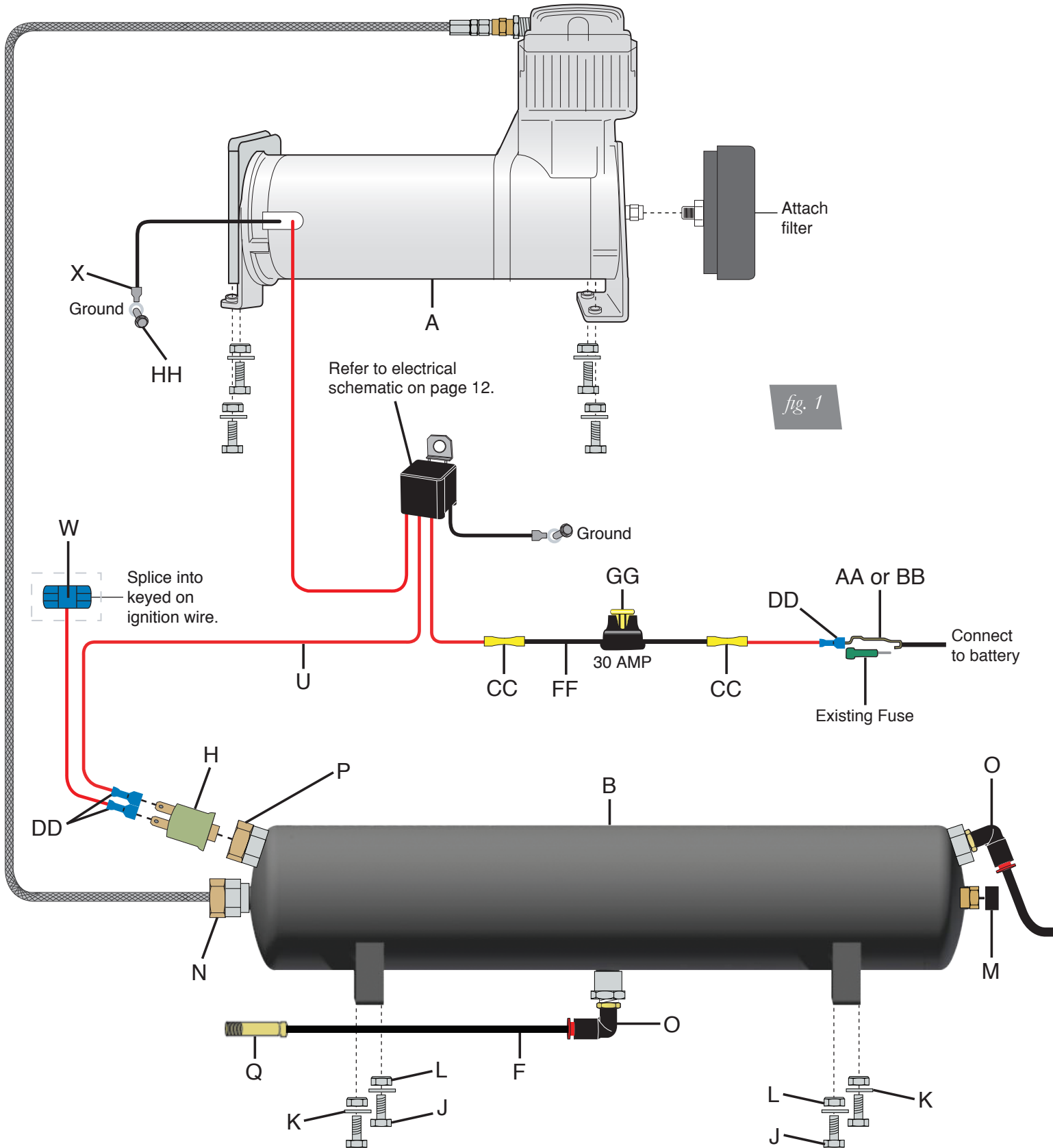
Leak detection

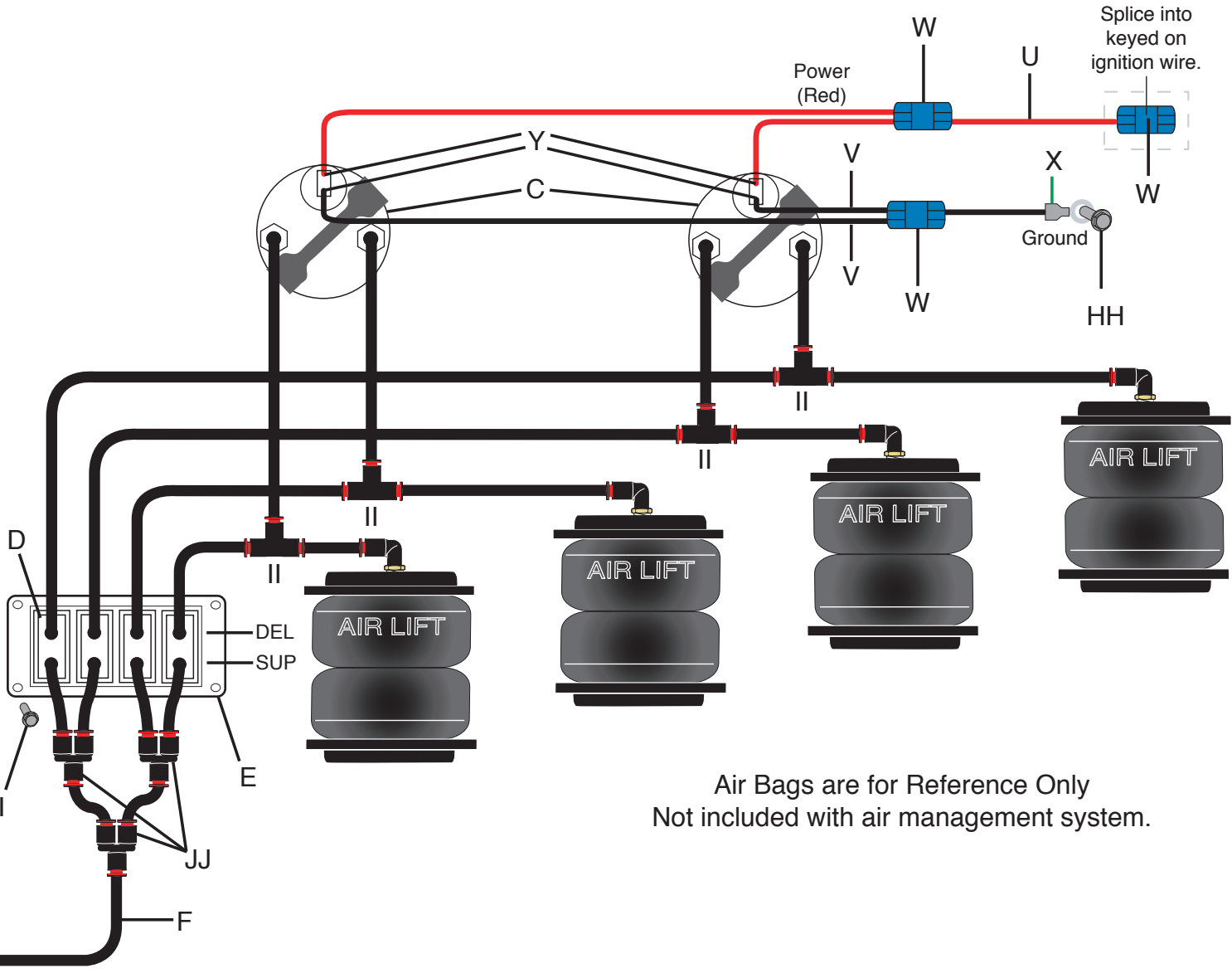
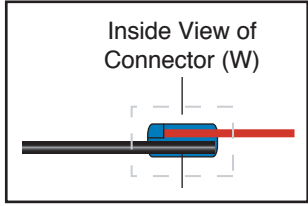
1. A leak can be defined as a loss of pressure of more than 5 psi over an 8 hour period. Be aware that ambient temperature change has an effect on pressure that may seem like a leak. For example: a change of 10° Fahrenheit up or down from your baseline will have an approximate gain or loss of indicated pressure of 2 psi. If a leak is suspected after including any temperature change, then proceed to #2.
2. Spray soapy water (1/5 Dawn brand dish soap to 4/5 water) on suspect fittings and hose connections and look for any bubbling caused by air leakage.
3. Fix leaking connection (review pages 3 and 4 for help on NPT fittings and air line connections).
4. Wipe down sprayed connections with rag to remove any residual soapy water.

NOTE

Dawn brand dish soap will not corrode the metals (aluminum, brass, steel) with which it comes into contact.

Installation Diagram





Air Bags are for Reference Only
Not included with air management system.

NOTE: Air Lift recommends using a hose cutting tool to ensure a proper cut. If a hose connection has been disconnected the hose must be trimmed 1/2" back to provide for a leak free seal.

Warranty and Returns Policy

Air Lift Company warrants its products, for the time periods listed below, to the original retail purchaser against manufacturing defects when used on catalog-listed applications on cars, vans, light trucks and motorhomes under normal operating conditions for as long as Air Lift manufactures the product. The warranty does not apply to products that have been improperly applied, improperly installed, used in racing or off-road applications, used for commercial purposes, 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 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.)

Air Lift 1000™	Lifetime Limited	LoadController/Dual™	2 Year Limited
RideControl™	Lifetime Limited	Load Controller™ (I)	2 Year Limited
LoadLifter 5000™*	Lifetime Limited	Load Controller™ (II)	2 Year Limited
SlamAir™	Lifetime Limited	SmartAir™	2 Year Limited
AirCell™	Lifetime Limited	Wireless AIR™	2 Year Limited
Air Lift Performance™**	1 Year Limited	WirelessONE™	2 Year Limited
LoadController/Single™ ..	2 Year Limited	Other Accessories	2 Year Limited

**formerly SuperDuty*

***formerly LifeStyle & Performance and Easystreet*

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.

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 us anytime by e-mail at sales@airliftcompany.com or on the web at www.airliftcompany.com.

Electrical Schematic

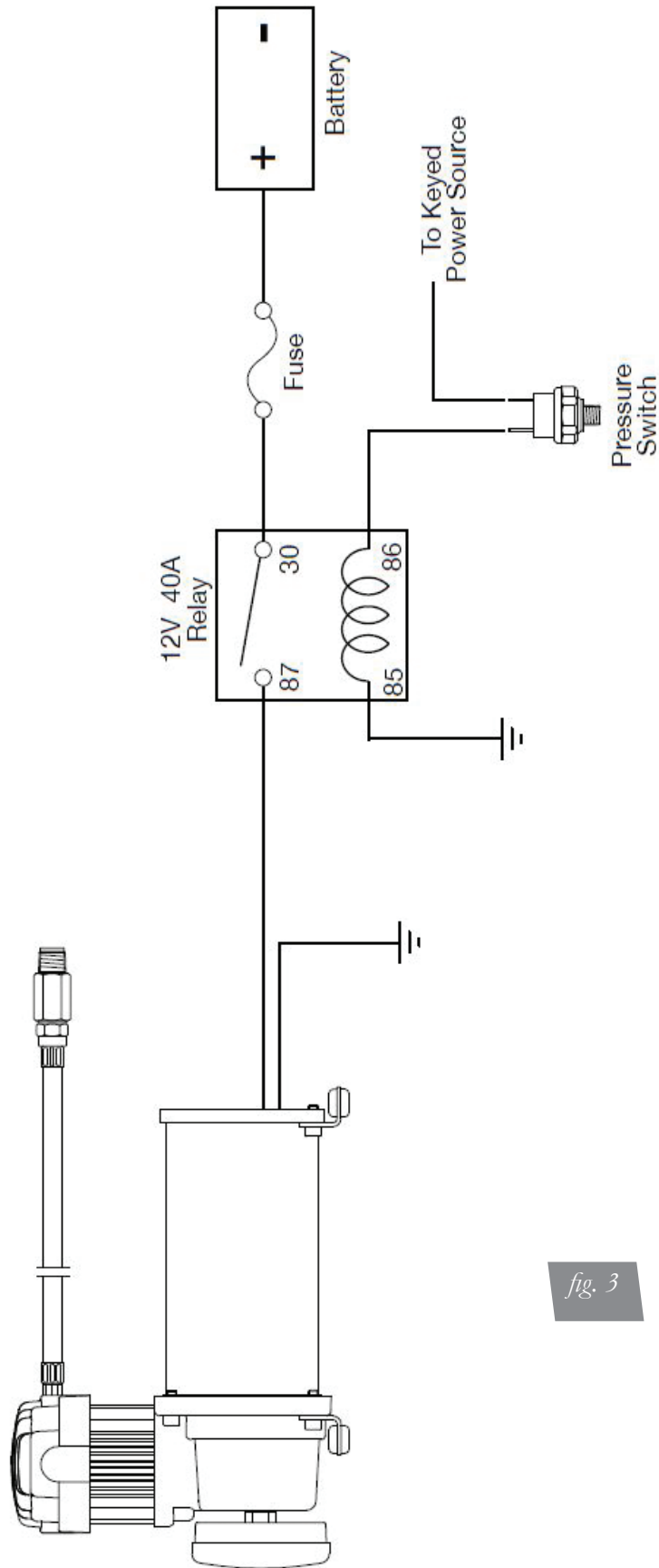
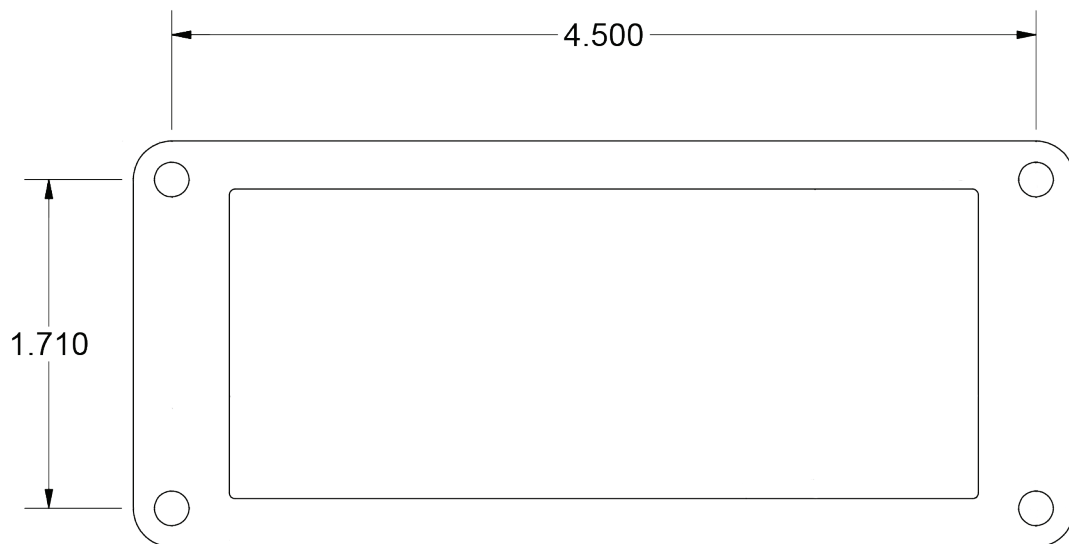
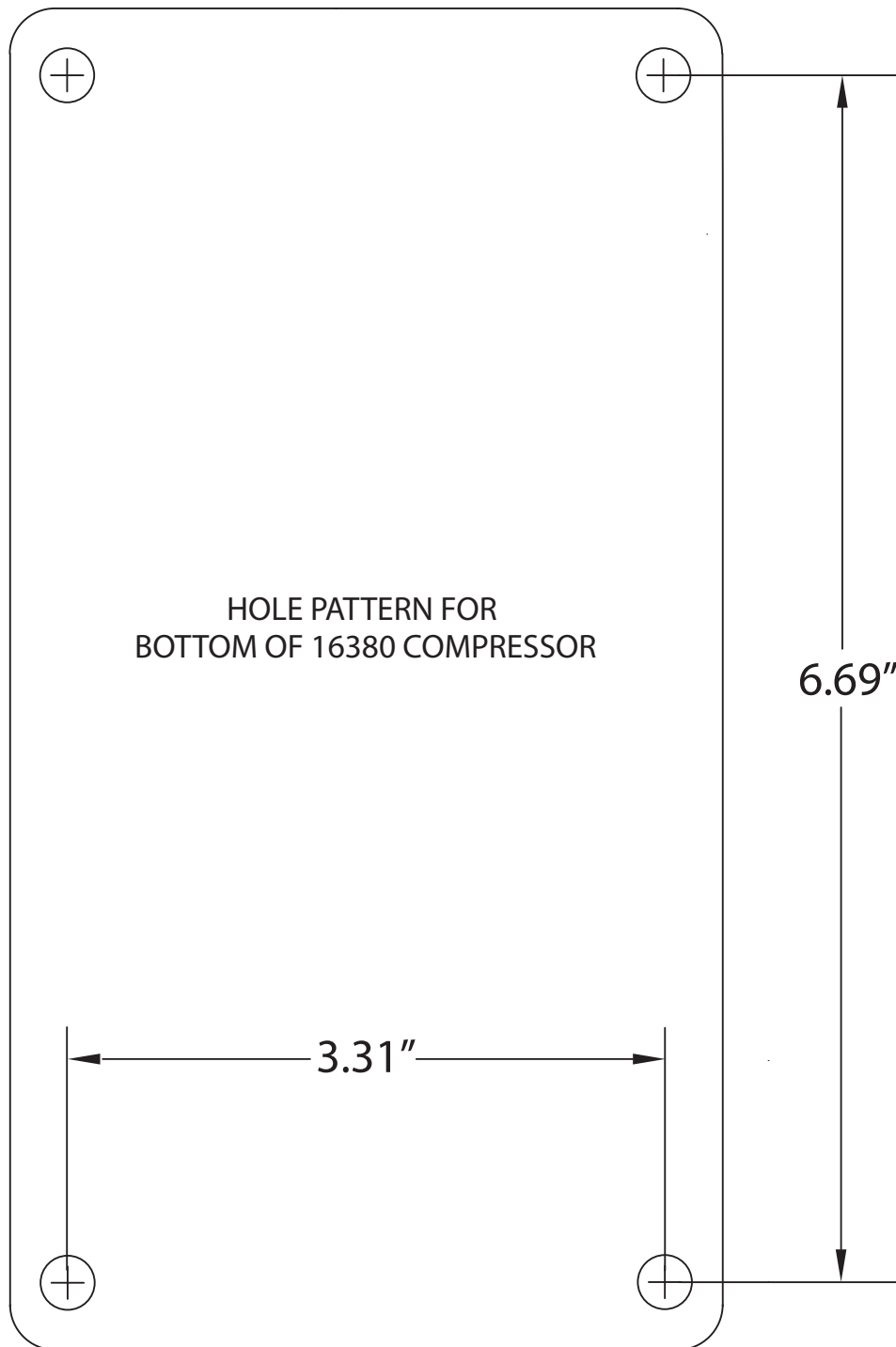


fig. 3

Paddle Switch Mounting Bracket Template



16380 Compressor Template



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.



Thank you for purchasing Air Lift Performance products!

Air Lift Performance • 2727 Snow Road • Lansing, MI 48917 or PO Box 80167 • Lansing, MI 48908-0167
Toll Free (800) 248-0892 • Local (517) 322-2144 • Fax (517) 322-0240 • www.airliftperformance.com

Printed in
the USA