Kit 78602

Ford Fusion
2013+ (CD4)
Rear Application

INSTALLATION GUIDE

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

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

MN-891 • (021807) • ECR 8989

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Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of this Ford Fusion (CD4) 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

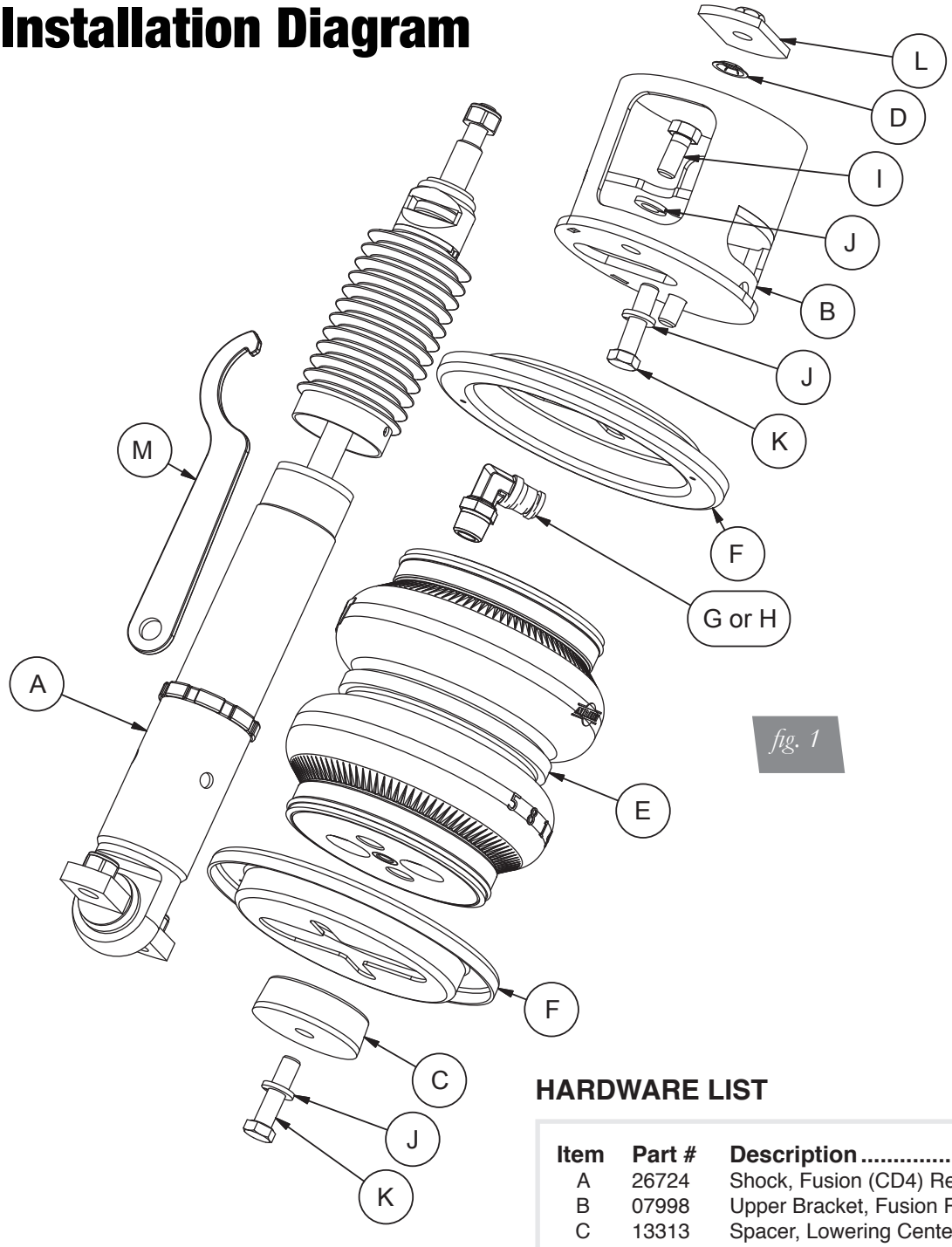


fig. 1

HARDWARE LIST

Item	Part #	Description	Qty
A	26724	Shock, Fusion (CD4) Rear	2
B	07998	Upper Bracket, Fusion Rear	2
C	13313	Spacer, Lowering Centering	2
D	18609	3/8” Push Nut	2
E	58551	Air Spring, 2B6 Reg, 3/8” Port	2
F	11801	Roll Plate	4
G	21851	1/4” MNPT X 3/8” PTC, 90 Degree	2
H	21779	1/4” MNPT X 1/4” PTC, 90 Degree	2
I	17203	3/8”-24 X 7/8” Hex Bolt	4
J	18427	3/8” Lock Washer	8
K	17478	3/8”-24 X 1.5” Hex Capo Screw	4
L	11216	Nut Plate - 3/8”-24 (CD4)	2
M		Spanner Wrench	1

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

Installing the Air Suspension

PREPARING THE VEHICLE

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

fig. 2

REMOVING THE REAR SUSPENSION

1. Disconnect and remove the stabilizer bar end link from the bar and from the lower control arm (fig. 3).

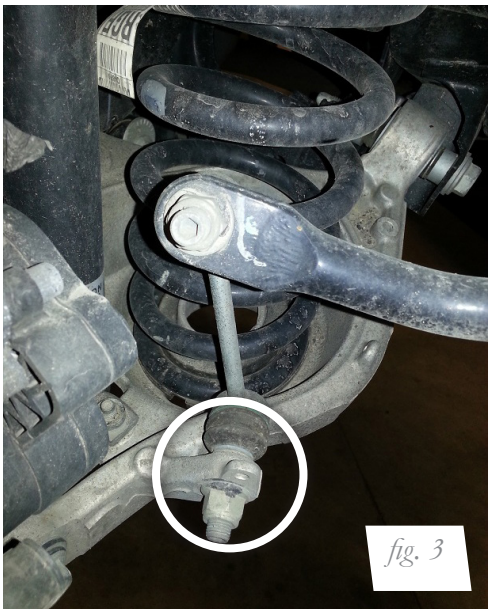


fig. 3

2. With the hub supported, unbolt the lower shock mount from the lower control arm (figs. 4 and 5).

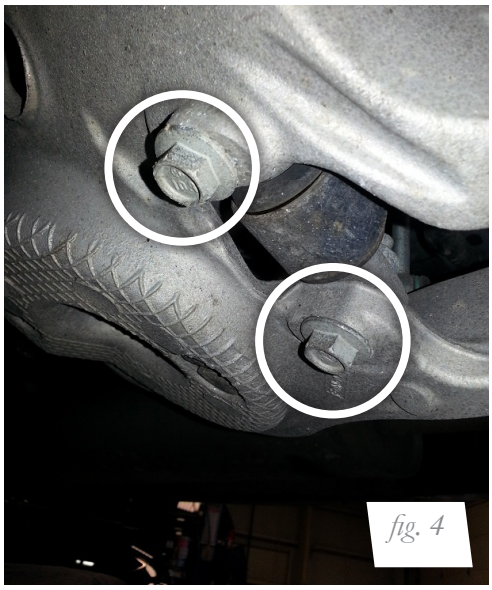


fig. 4

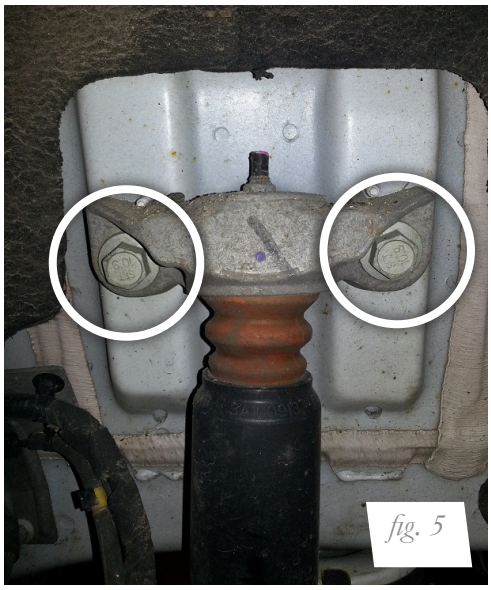


fig. 5

3. Unthread the two upper shock mount bolts and remove the shock from the vehicle.
4. Remove rear coil springs from vehicle.

⚠ CAUTION COIL SPRINGS ARE UNDER SIGNIFICANT LOAD. PROCEED WITH CAUTION AND FOLLOW FACTORY INSTRUCTION FOR SAFE REMOVAL OF THE COIL SPRINGS.

AIR SUSPENSION INSTALLATION

1. Begin by installing the air fitting into the air spring (fig. 6). Apply thread sealant to the threads of the air fitting. Tighten the appropriate fitting to the air spring 1 3/4 turns beyond hand-tight.

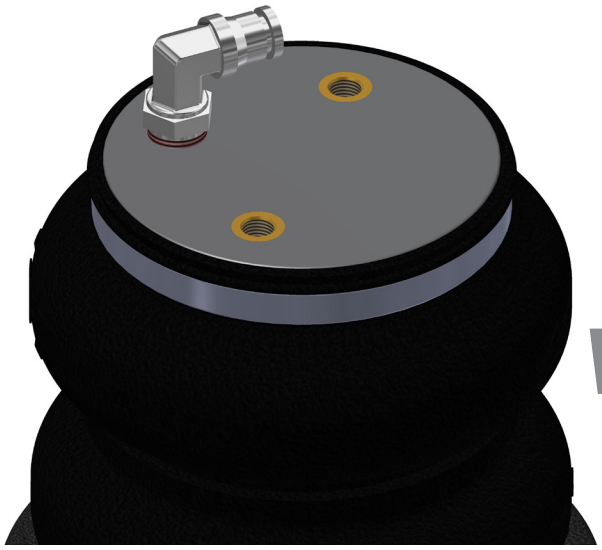


fig. 6

2. Insert long bolt (K) with lock washer (J) through the upper bracket center mounting hole (fig. 7). Retain the bolt to the upper bracket (figs. 8 and 9) using push nut (D).

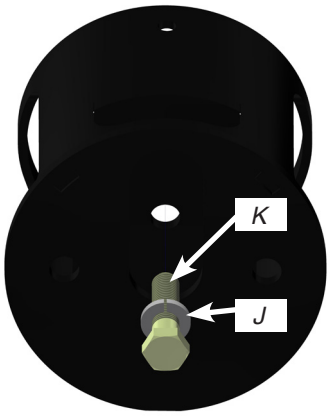


fig. 7

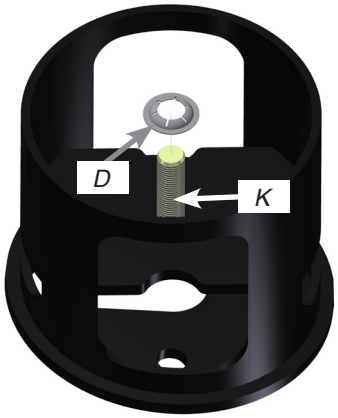


fig. 8

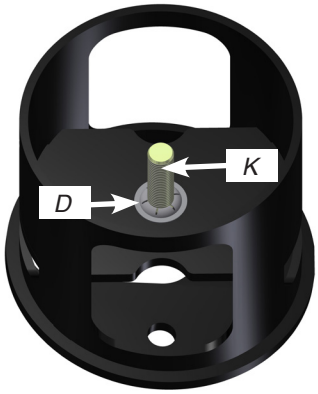


fig. 9

3. Place the roll plate (F) over the air spring (fig. 10). Attach the upper mount to the air spring (fig. 11) using two short bolts (I) and two lock washers (J). Torque to 27Nm (20 lb.-ft.)

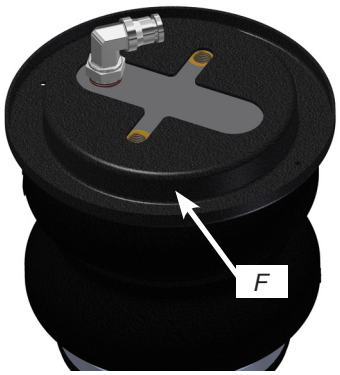


fig. 10

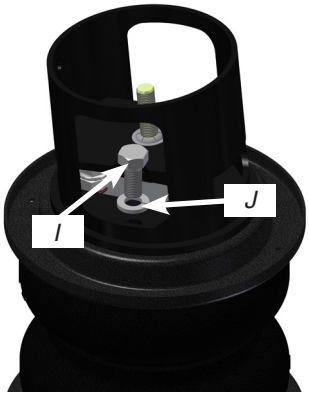


fig. 11

4. Insert the nut plate (L) into the opening within the upper spring perch with the flat of the plate facing downward, nut facing upward (figs. 12 and 13).

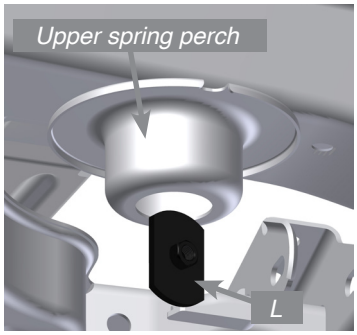


fig. 12

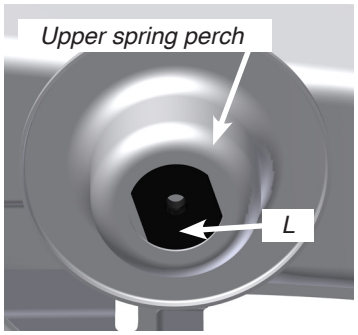


fig. 13

5. Apply the second roll plate (F) within the lower control arm spring pocket (fig. 14).

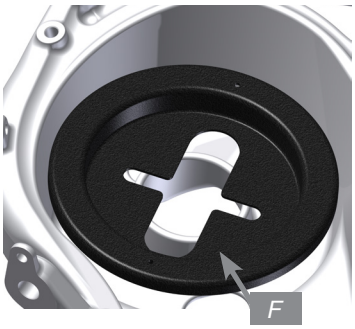


fig. 14

6. Center the assembly over the upper spring perch, with the upper bracket “sight hole” aligned with the notch in the upper spring seat (fig. 15). Thread the upper bracket bolt into the nut plate, torque to 27Nm (20 lb.-ft.)

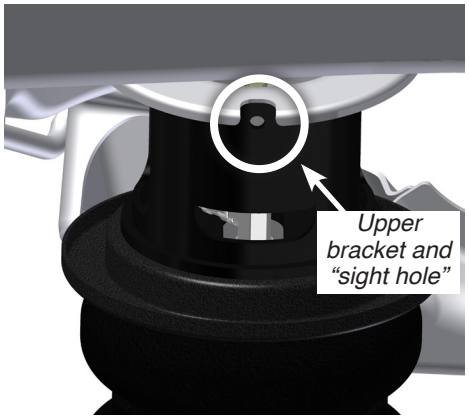


fig. 15

7. Seat the air spring within the lower control arm/roll plate and align the threaded center of the air spring with the lower spring seat. Apply a long bolt (K) and lock washer (J) through the centering spacer (C) and into the underside of the control arm (fig. 16). Thread the bolt into the air spring (fig. 17), and torque to 27Nm (20 lb.-ft.)

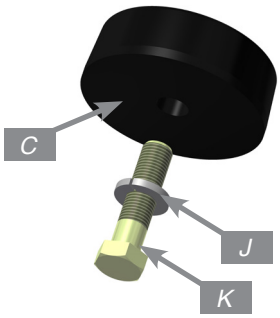


fig. 16

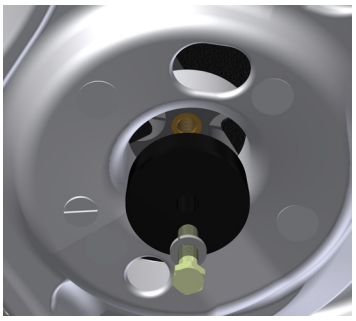


fig. 17

8. Swap the upper shock mounts from the OE shock to the new shock. Torque rod nut to 27Nm (20 lb.-ft.) Attach the mount to the chassis, torque bolts to 90Nm (66 lb.-ft.)
9. Bolt the shock to the lower control arm using the supplied nuts attached to the shock lower mount (fig. 18). Torque to 48Nm (35 lb.-ft.)

fig. 18

10. Reinstall the stabilizer bar end link opposite the way it originally mounted with upper stud facing towards air spring (fig. 19). Torque to 103Nm (76 lb.-ft.).

fig. 19

11. Route the air line in a manner that will not pinch or rub components and is away from heat sources.

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. 20).

Formula for Calculating Ride Height
(ME+MC)÷2=MID STROKE

fig. 20

Torque Specifications		
Location	Nm	lb-ft
Shock rod nut	27	20
Upper bracket bolt	27	20
Lower spring seat bolt	27	20
Stabilizer bar end link nut	103	76
Upper shock mount to body bolts	90	66
Lower shock mount to control arm	48	35
Wheel studs	110	80

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 adjuster at the top of the shock rod (fig. 21). Turn the adjuster clockwise and the damping settings are hardened. Turn the adjuster counterclockwise and the damping is softened. Each rear shock is preset to “-15 clicks”. This means that the shock is adjusted 15 clicks away from full stiff. Counting down from full stiff is the preferred method of keeping track/setting of damping. This setting was developed on a 2013 Ford Fusion AWD 2.0L Turbo and may need to be adjusted to different vehicles and driving characteristics.

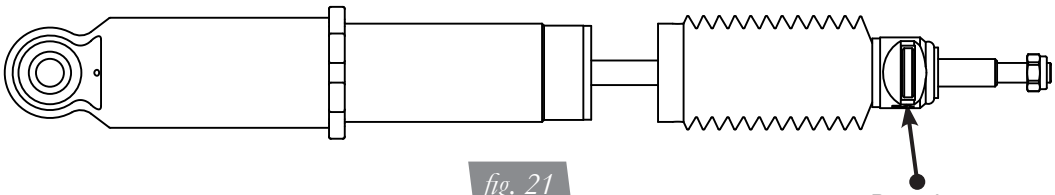


fig. 21

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 dampers 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. 23).

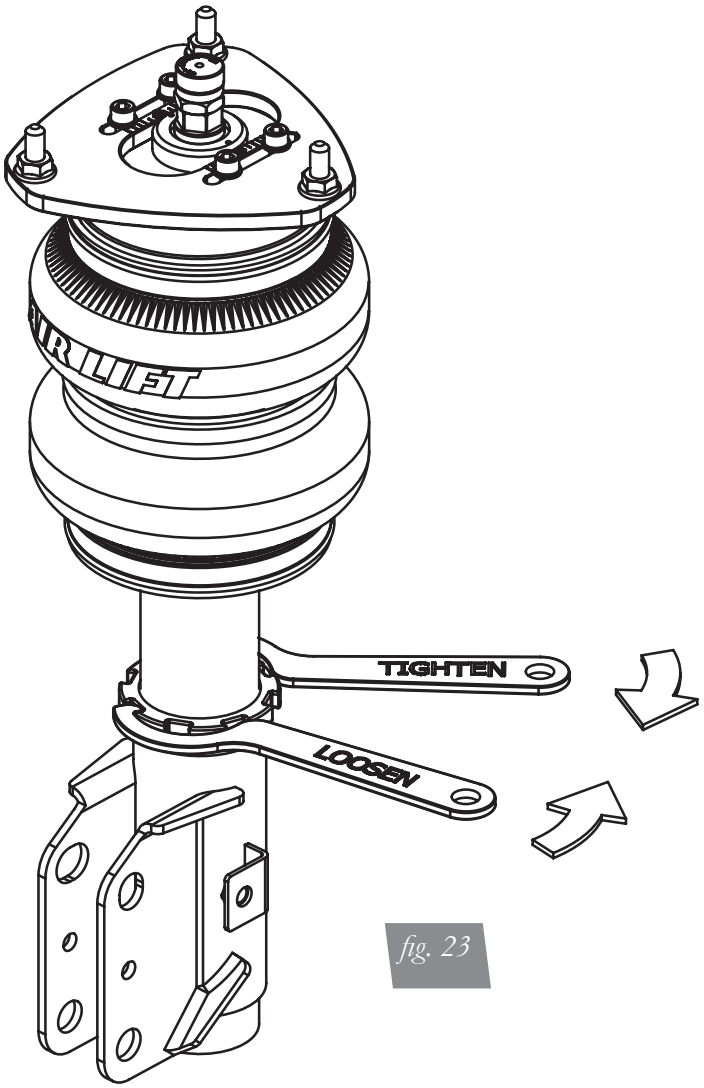


fig. 23

4. Deflate the air spring to 0 PSI on the corner you are adjusting.
5. Disconnect the lower mount from the suspension.
6. Spin the the lower mount to the desired location.

NOTE

Not all models will have further drop height available.

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

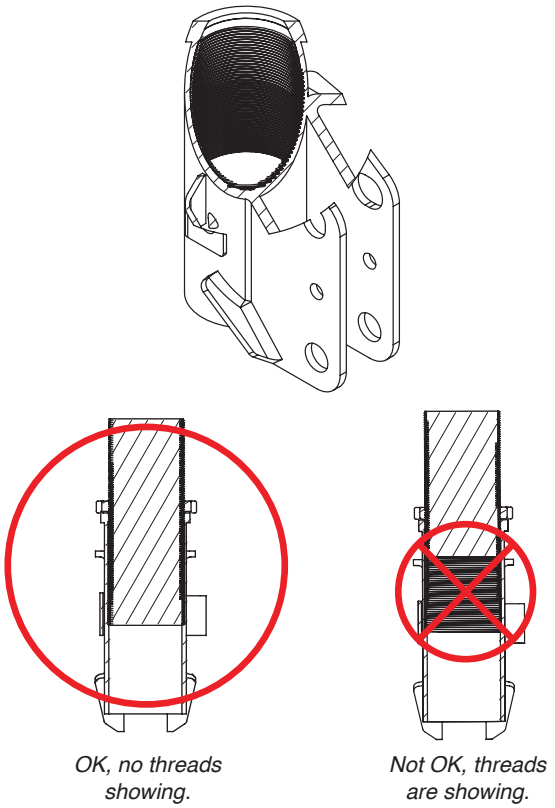
⚠ CAUTION

WHEN ADJUSTING HEIGHT UPWARDS, MAKE SURE THAT THE DAMPER BODY ENGAGES ALL THE THREADS OF THE LOWER MOUNT (FIG. 24). WHEN ADJUSTING DOWNWARDS, MAKE SURE THERE IS ADEQUATE AIR SPRING CLEARANCE TO THE TIRE/WHEEL ASSEMBLY. CLEARANCE MUST BE CHECKED WITH SYSTEM FULLY DEFLATED AS WELL AS FULLY INFLATED TO ENSURE THAT NO RUBBING OCCURS. FAILURE TO MAINTAIN ADEQUATE CLEARANCE CAN RESULT IN AIR SPRING FAILURE AND WILL NOT BE COVERED UNDER WARRANTY.

⚠ CAUTION

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

FOR STRUTS:



OK, no threads showing.

Not OK, threads are showing.

FOR SHOCKS:

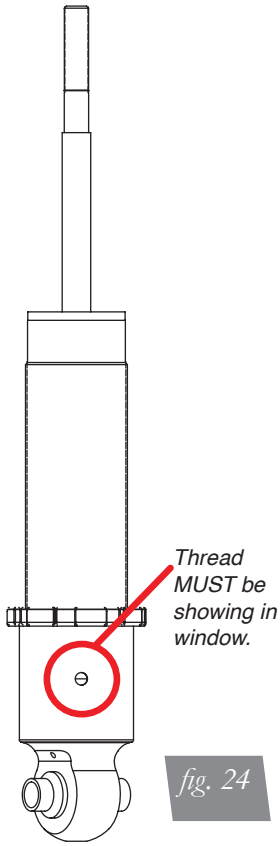


fig. 24

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 8.6BAR [125 PSI]) to check for clearance or binding issues. With the air springs deflated, check clearances on everything so as not to pinch brake lines, vent tubes, etc. Clear lines if necessary.
2. Inflate the air springs to 5.2-6.2BAR (75-90 PSI) and check all connections for leaks.
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 5.2-6.2BAR (75-90 PSI) and make sure there is at least 13mm (1/2") clearance from anything that might rub against each sleeve. Be sure to check the tire, brake drum, frame, shock absorbers and brake cables.
- ❑ Leak test before road test — Inflate the air springs to 5.2-6.2BAR (75-90 PSI) and check all connections for leaks. All leaks must be eliminated before the vehicle is road tested.
- ❑ Heat test — Be sure there is sufficient clearance from heat sources, at least 152mm (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 16km (10 miles) and recheck for clearance, loose fasteners and air leaks.
- ❑ Operating instructions — If professionally installed, the installer should review the operating instructions with the owner. Be sure to provide the owner with all 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 .34BAR (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 800km (500 mile) test — Recheck the air spring system after 30 days or 800km (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
3.5BAR (50 PSI)	8.6BAR (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 8.6BAR (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 8.6BAR (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 soapy water solution. 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 .14-.28BAR (2-4 PSI) loss after initial installation is normal. Retest for leaks if the loss is more than .34BAR (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 25mm (1") off the end of the air line. Be sure the cut is clean and square (see fig. 25). Reinsert the air line into the push-to-connect fitting.
   b. Check the threaded connection by tightening the swivel fitting another 1/2 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.

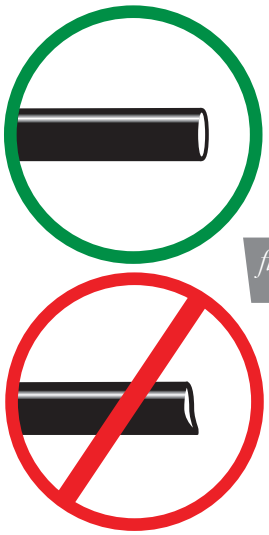


fig. 25

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 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
JJC-0718