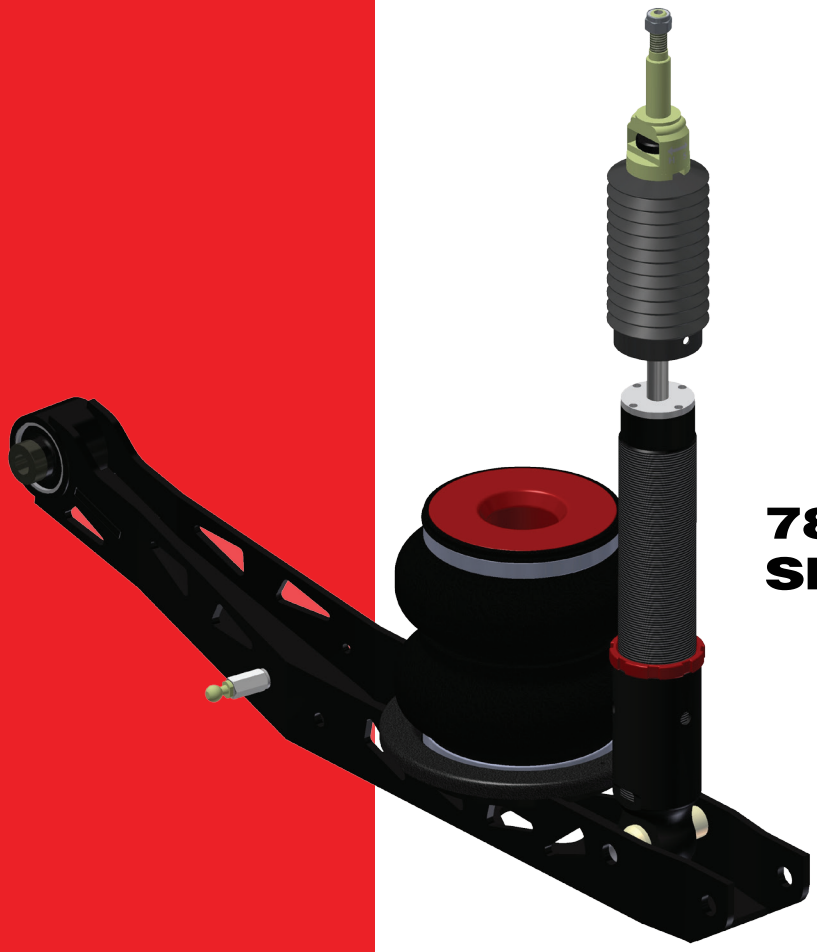
Air Lift™
PERFORMANCE

# 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.*

PERFORMANCE SUSPENSION PARTS

# 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.

## 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.**

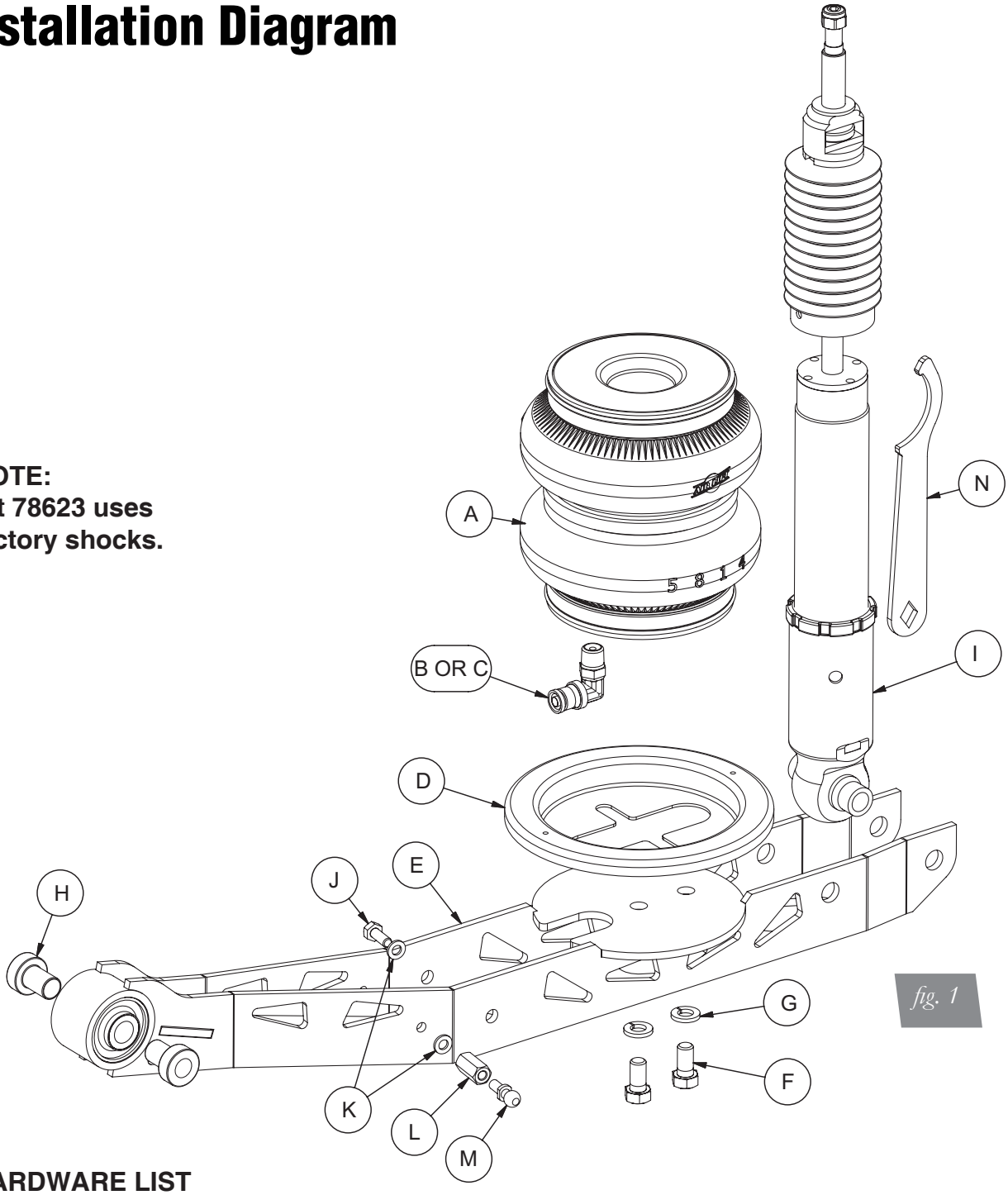



*fig. 1*

## 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 |

# 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).

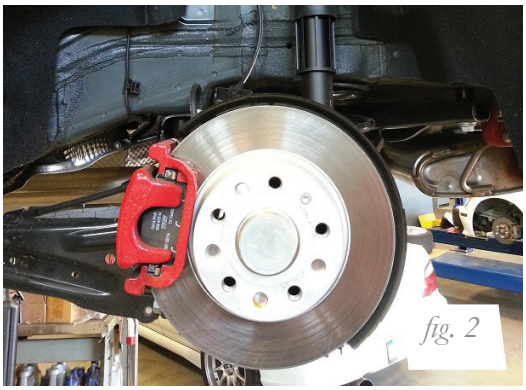


fig. 2


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).

*fig. 7*

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

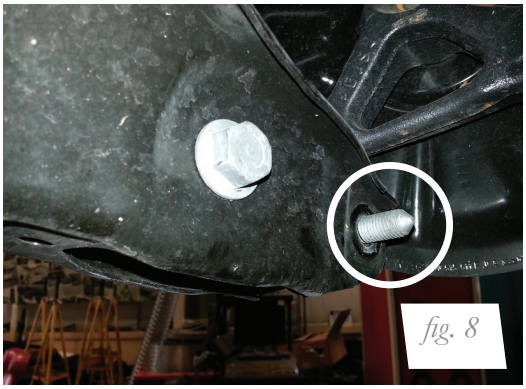


*fig. 8*

**⚠ 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).


fig. 10

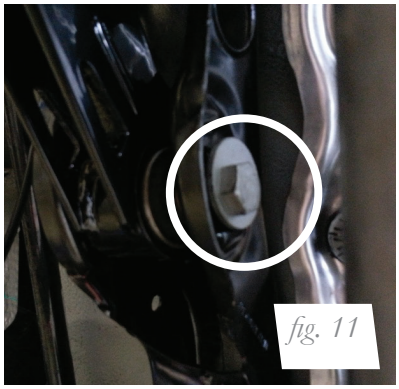


fig. 11


fig. 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).


fig. 13a


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

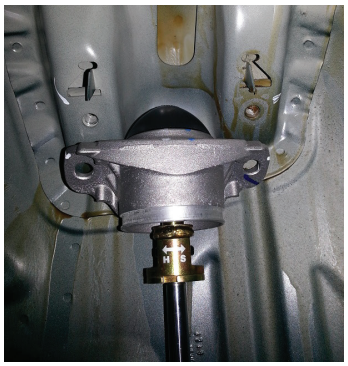


fig. 17

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

4. 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).

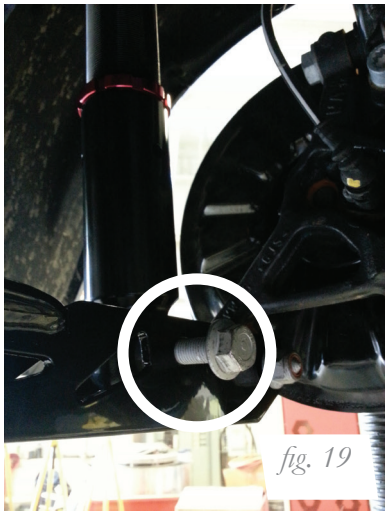


fig. 19


fig. 20

5. 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.


fig. 21


fig. 22

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


fig. 23

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


fig. 24

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).


fig. 26

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.).

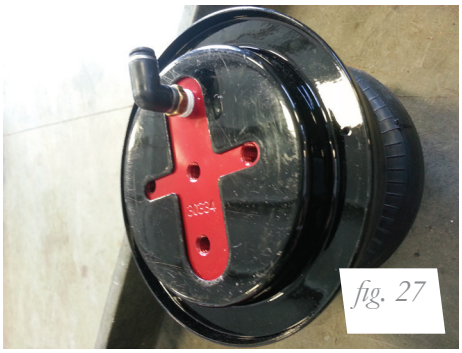


fig. 27


fig. 28


fig. 29


fig. 30

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)÷2=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.

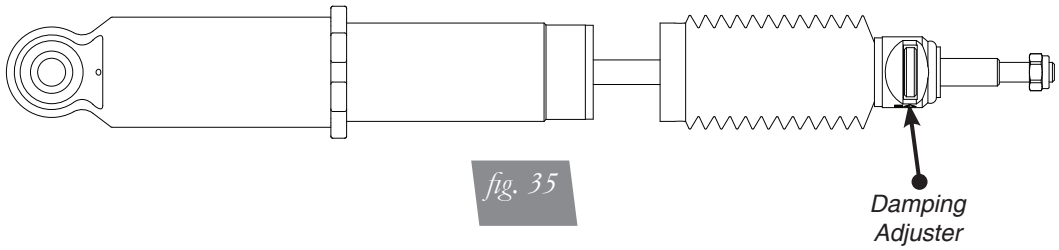



*fig. 35*

## 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).

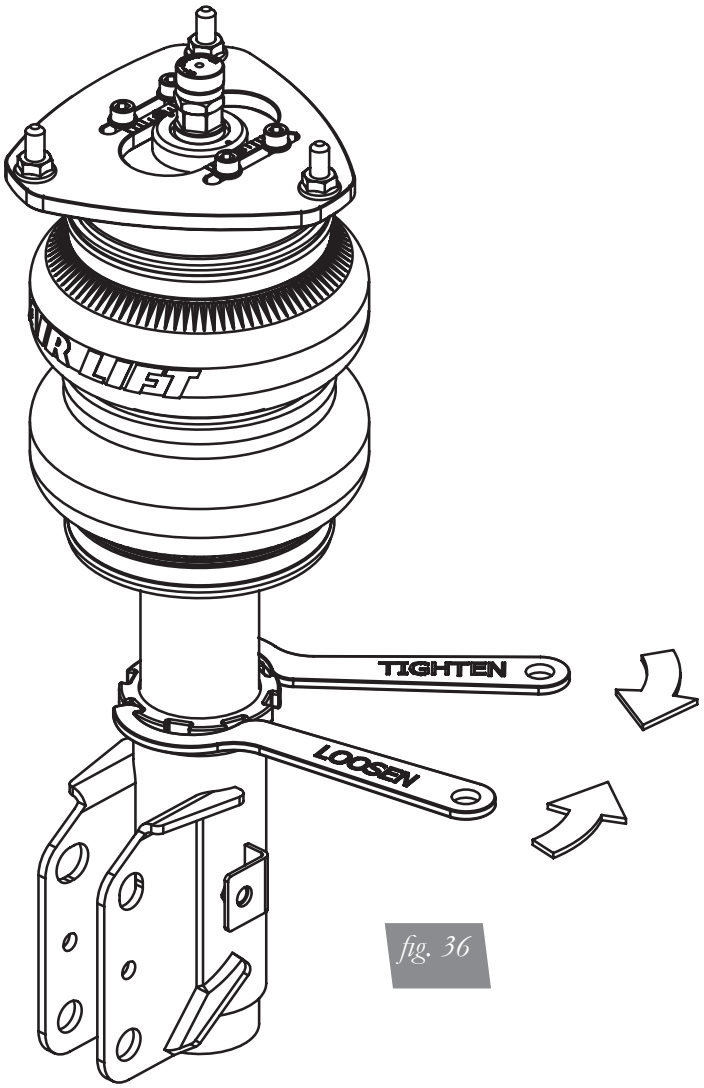



*fig. 36*

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**

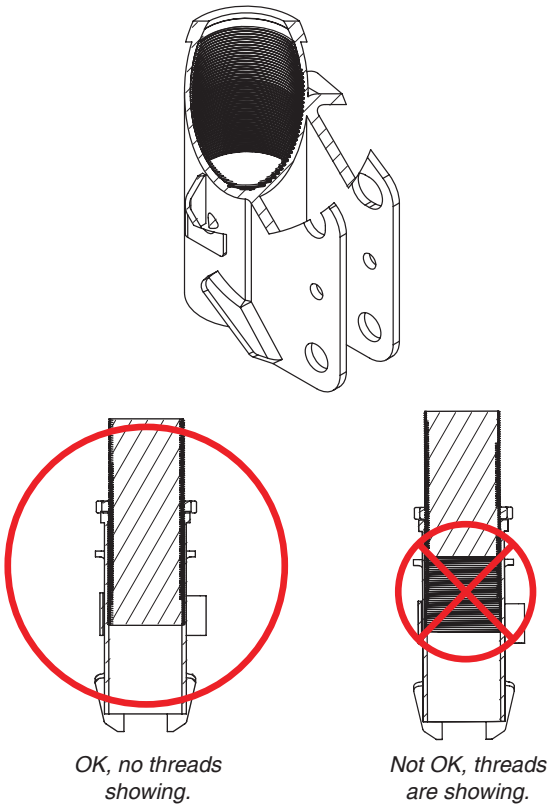
*Not all models will have further drop height available.*

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.

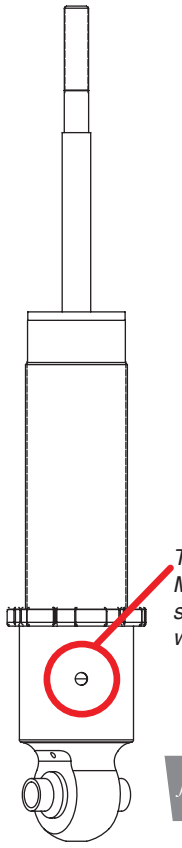
***FOR STRUTS:***



*OK, no threads showing.*

*Not OK, threads are showing.*

***FOR SHOCKS:***



*Thread MUST be showing in window.*

*fig. 37*