

Air Lift[™]
PERFORMANCE

Kit 78621

Ford Mustang S550

Rear Application



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 Ford Mustang S550 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/SOCKS IN ANY WAY. DAMAGE TO UNIT MAY OCCUR AND WILL VOID WARRANTY.

Installation Diagram

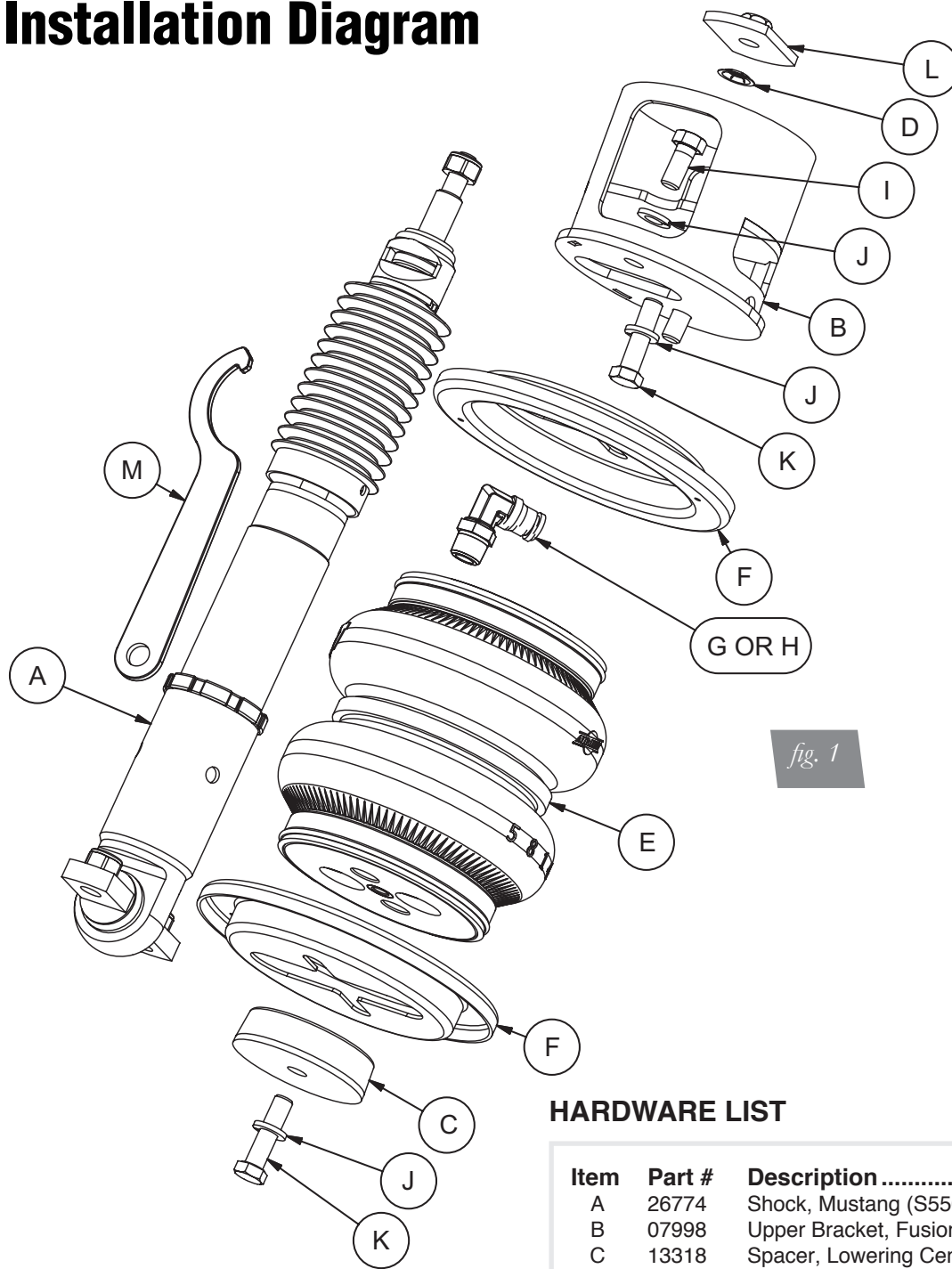


fig. 1

HARDWARE LIST

Item	Part #	Description	Qty
A	26774	Shock, Mustang (S550) Rear	2
B	07998	Upper Bracket, Fusion Rear	2
C	13318	Spacer, Lowering Centering	2
D	18609	3/8" Push Nut.....	2
E	58530	Air Spring, 2B6 Reg, 3/8" Port	2
F	11801	Roll Plate	4
G	21867	3/8" MNPT X 3/8" PTC, 90°	2
H	21846	3/8" MNPT X 1/4" PTC, 90°	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 Bolt.....	4
L	11216	Nut Plate - 3/8"-24 (CD4).....	2
M		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 hub assembly (fig. 2).

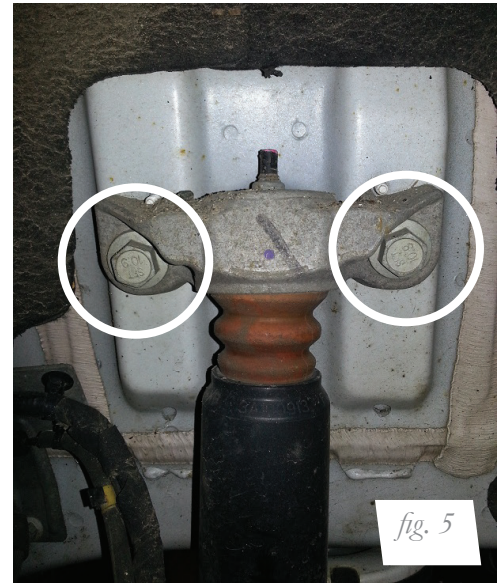
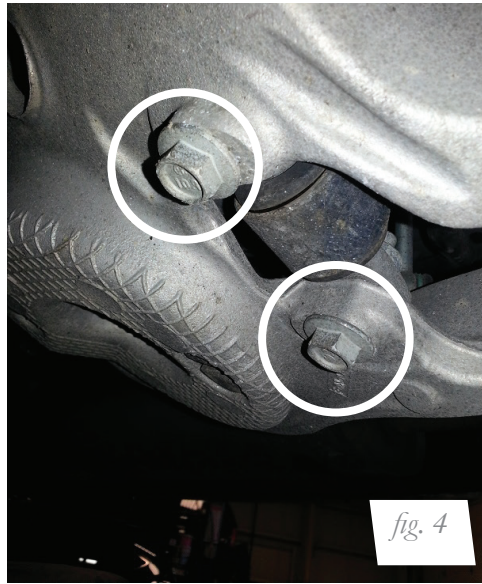


REMOVING THE REAR SUSPENSION

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



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



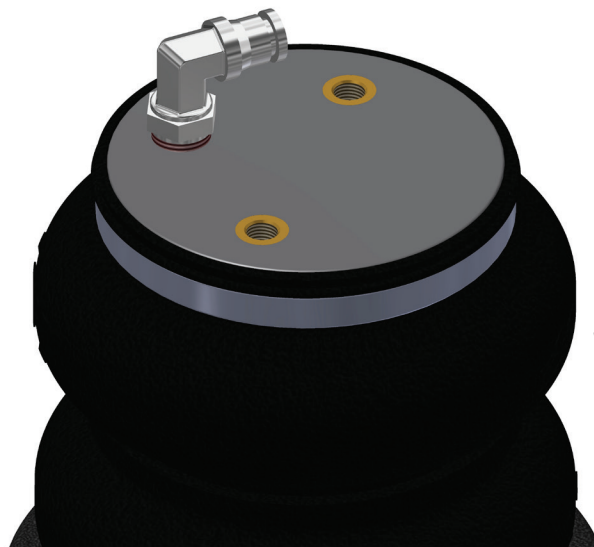
3. Unthread the two upper shock mount bolts and remove the shock from the vehicle.
4. Remove rear coil springs from vehicle.

 **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 ¼ turns beyond hand-tight.



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).

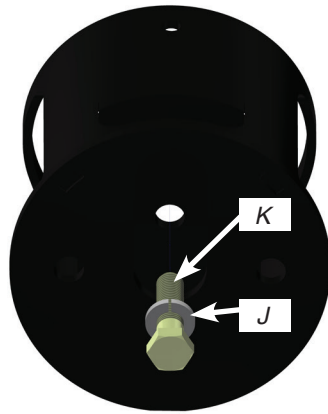


fig. 7

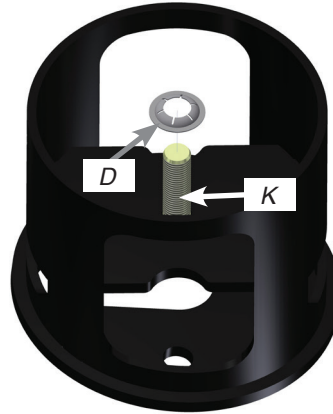


fig. 8

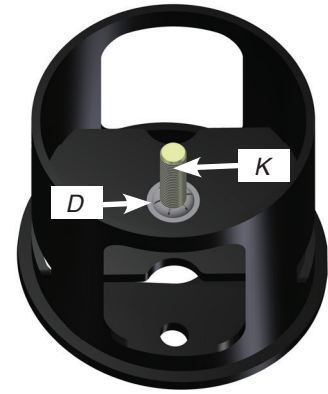


fig. 9

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 27 Nm (20 ft-lbs.)

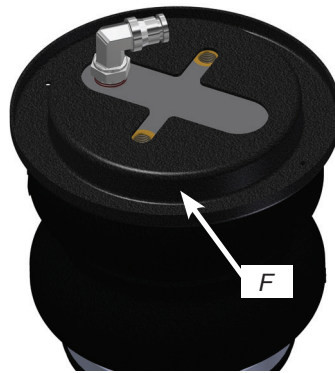


fig. 10

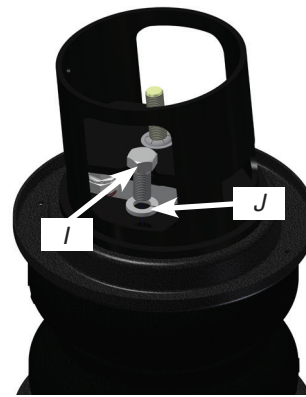


fig. 11

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).

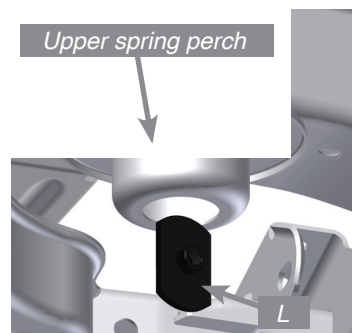


fig. 12

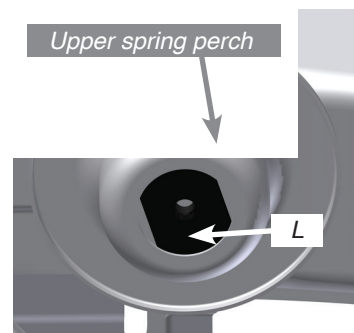


fig. 13

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

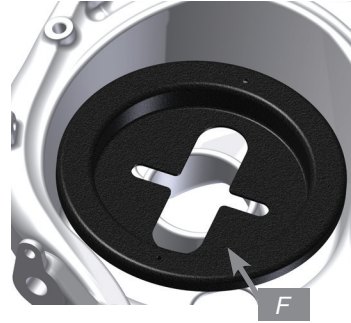


fig. 14

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 27 Nm (20 ft-lbs.)

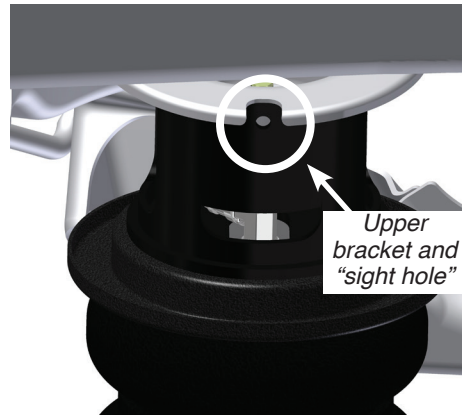


fig. 15

7. Seat the airspring within the lower control arm/roll plate and align the threaded center of the airspring 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 airspring (fig. 17), and torque to 27 Nm (20 ft-lbs.)

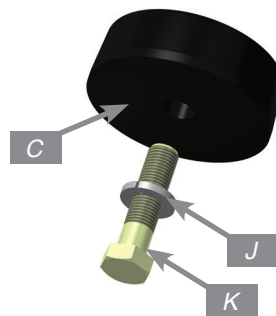


fig. 16

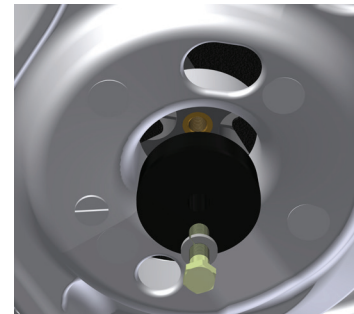
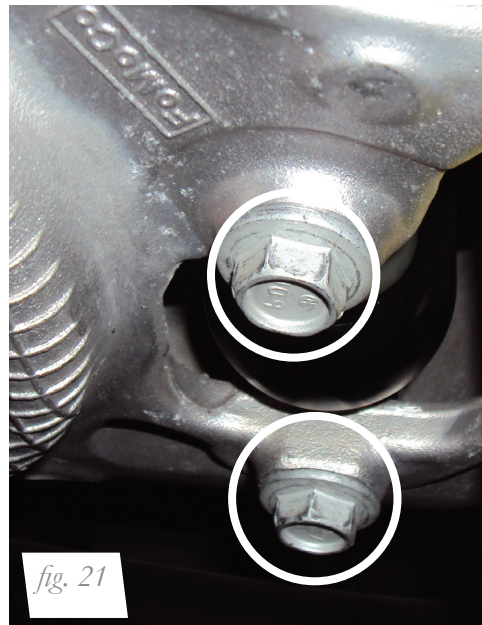


fig. 17

8. Swap the upper shock mounts from the OE shock to the new shock (figs. 18-20). Torque rod nut to 27 Nm (20 ft-lbs.) Attach the mount to the chassis, torque bolts to 90 Nm (66 ft-lbs.)



9. Bolt the shock to the lower control arm using the supplied nuts attached to the shock lower mount (fig. 21). Torque to 48 Nm (35 ft-lbs.)



- Reinstall the stabilizer bar end link opposite the way it originally mounted with upper stud facing towards air spring (fig. 22). Torque end link nuts to 103 Nm (76 ft-lbs).



fig. 22

- Route the air line in a manner that will not pinch or rub components and is away from heat sources and axle shafts.
- 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.
- Cycle the suspension to Max Extension and record the measurement from the same reference points.
- 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. 23).

Formula for Calculating Ride Height

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

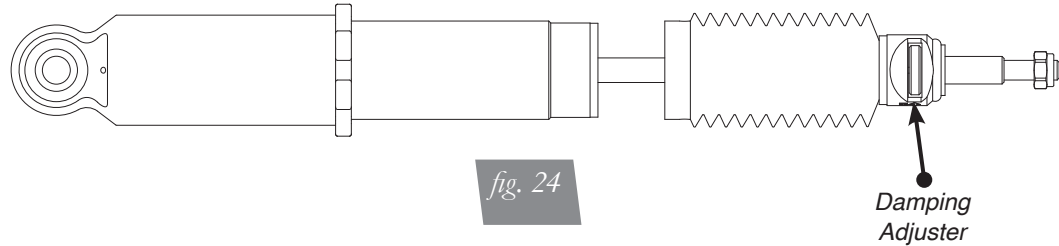
fig. 23

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	201	148
Air fitting (use thread sealant)	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 adjuster at the top of the shock rod (fig. 24). 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 2015 Ford Mustang 2.3L EcoBoost 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.

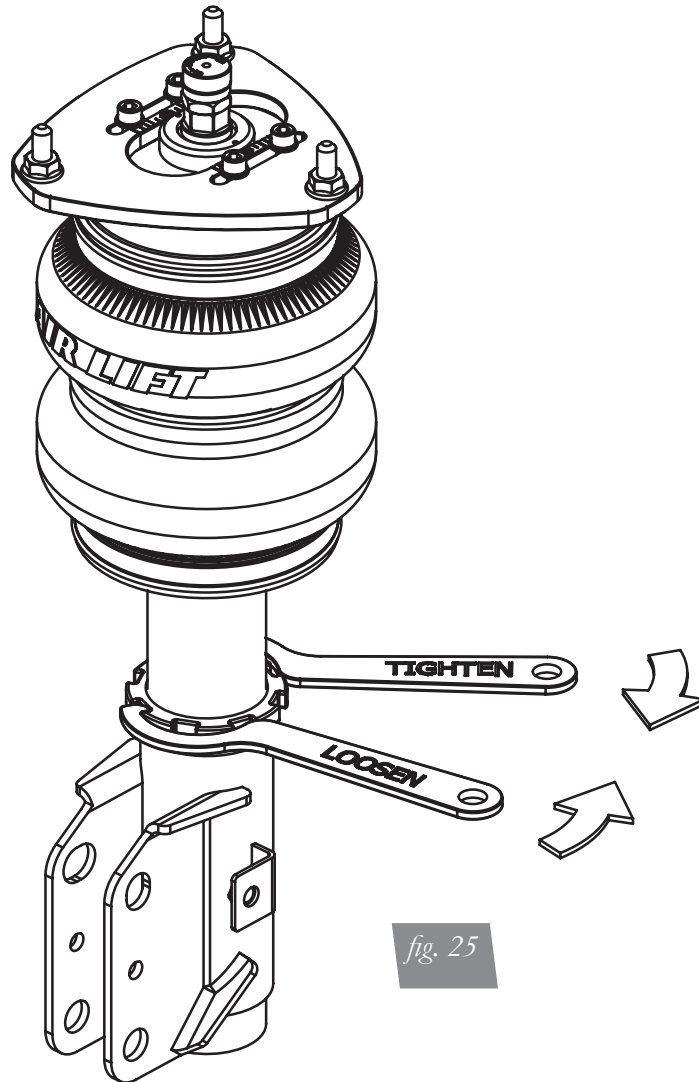
NOTE

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. 25).



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.

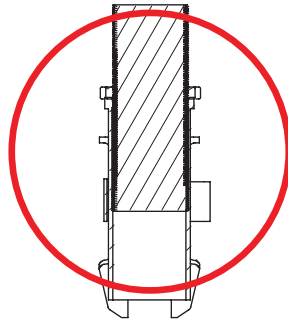
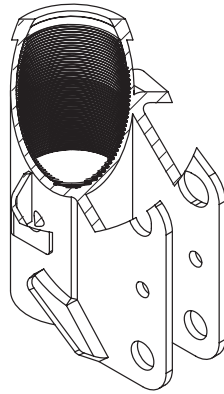
CAUTION

WHEN ADJUSTING HEIGHT UPWARDS, MAKE SURE THAT THE STRUT BODY ENGAGES ALL THE THREADS OF THE LOWER MOUNT (FIG. 26). 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:

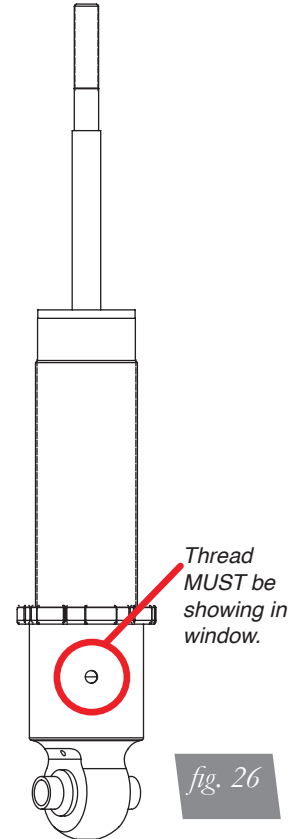


fig. 26