



2265 Crosswind Drive • Prescott, AZ 86301  
(928) 636-3175 • www.p-a-g.net

## JEEP GRAND CHEROKEE 2" SUSPENSION LIFT KIT INSTALLATION INSTRUCTIONS 1999-2003 KIT# JWJ22

### ⚠ WARNING

Installation of a Performance Automotive Group suspension lift kit will change the vehicle's center of gravity and handling characteristics both on- and off-road. You must drive the vehicle safely! Extreme care must be taken to prevent vehicle rollover or loss of control, which could result in serious injury or death. Avoid sudden sharp turns or abrupt maneuvers and always make sure all vehicle occupants have their seat belts fastened.

### ⚠ WARNING

Before you install this kit, read and understand all instructions, warnings, cautions, and notes in this instruction sheet and in the vehicle owner's manual.

### ⚠ CAUTION

Proper installation of this kit requires knowledge of the factory recommended procedures for removal and installation of original equipment components. We recommend that the factory shop manual and any special tools needed to service your vehicle be on hand during the installation. Installation of this kit without proper knowledge of the factory recommended procedures may affect the performance of these components and the safety of the vehicle. We strongly recommend that a certified mechanic familiar with the installation of similar components install this kit.

### ⚠ WARNING

This kit should only be installed on a vehicle that is in good working condition. Before you install the kit, thoroughly inspect the vehicle for corrosion or deformation of the sheet metal. If the vehicle is suspected to have been in a collision or misused, do not install this kit. Off-road use of your vehicle with this kit installed may increase the stress applied to the factory components. Failure to observe this warning may result in serious personal injury and/or severe damage to your vehicle.

### ⚠ WARNING

Many states and municipalities have laws restricting bumper heights and vehicle lifts. Consult state and local laws to determine if the changes you intend to make to the vehicle comply with the law.

### ⚠ WARNING

The installation of larger tires may reduce the effectiveness of the braking system.

### ⚠ WARNING

Always wear eye protection when operating power tools.

### ⚠ WARNING

Before you install this kit, block the vehicle tires to prevent the vehicle from rolling.

### NOTE

Performance Automotive Group recommends using the Loctite® supplied in the kit on the threads of all kit nuts and bolts unless specified otherwise in these instructions.

### ⚠ WARNING

DO NOT combine suspension, body, or other lift devices. Use of vehicle with combined lifts may result in unsafe and/or unexpected handling characteristics.

### NOTE

Lift height may vary depending on vehicle configuration, engine size, additional accessories, the factory suspension package, and vehicle's condition.

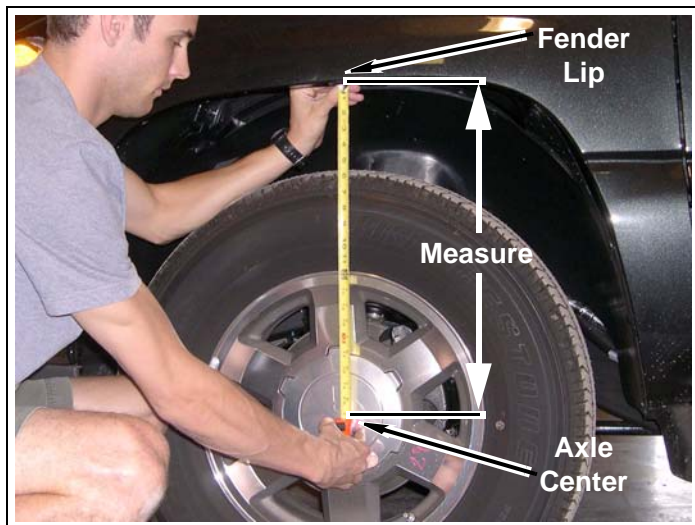
# Before Starting Installation

**NOTE**  
Kit parts are prefaced by the word *kit* and appear in **bold print**.

- Carefully read all warnings and instructions completely before beginning.
- Verify all parts have been received in this kit by checking the parts list at the end of this document.
- Only install this kit on the vehicle for which it is specified.** If anytime during the installation you encounter something different from what is outlined in the instructions, call technical support at (928) 636-3175.
- Park vehicle on a clean, dry, flat, level surface and block tires so vehicle cannot roll in either direction.

**NOTE**  
Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the factory service manual. When re-assembling the vehicle it is recommended by the vehicle manufacturer that certain fasteners are replaced in order to maintain proper retention characteristics. This system may not include all replacement hardware as recommended by the factory service manual. Additional replacement hardware should be obtained prior to installation of this system to meet the requirements of the factory service manual.

- Measure ride height with the vehicle supporting its own weight on level ground. To settle the suspension, the vehicle should be driven forward at least 10 feet immediately prior to taking these measurements. Ride height is the measurement from the center of the axle straight up (vertical) to the fender lip. Record this measurement for all four wheels.



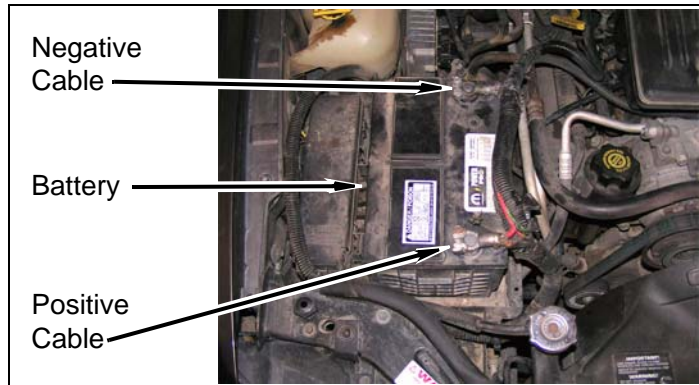
# Torque Specifications

- See factory service manual for torque values when re-using OE fasteners.

<b>Bolt Size</b>	<b>Grade 5 (ft.-lbs.)</b>	<b>Grade 8 (ft.-lbs.)</b>
1/4"-20	10	10
1/4"-28	10	12.5
5/16"-18	17	22.5
5/16"-24	20	25
3/8"-16	30	40
3/8"-24	35	45
7/16"-14	50	65
7/16"-20	55	70
1/2"-13	75	100
1/2"-20	55	70
9/16"-12	105	135
9/16"-18	115	150
5/8"-11	150	195
5/8"-18	160	210
3/4"-16	175	225

# Engine Compartment

- Disconnect both battery cables. Disconnect negative cable first, then positive cable.



# Prepare to Install Front Suspension

## ⚠ WARNING

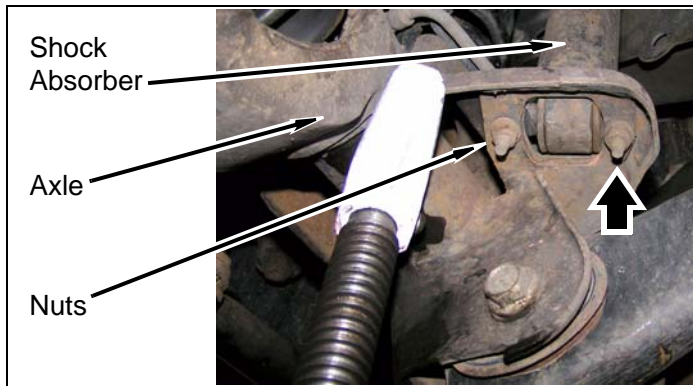
Compressed coil springs can expand violently causing serious personal injury. Before removing the coil springs, lower the axle housing as far as possible to allow the coil springs to expand. Use caution when using coil spring compressors.

1. Loosen, but do not remove, lug nuts on each front wheel.
2. Using hydraulic floor jack, slowly lift front axle until front tires are 3-5" off ground. Position jack stands under frame behind lower control arm perches. Lower vehicle onto jack stands while maintaining hydraulic jack pressure underneath axle.

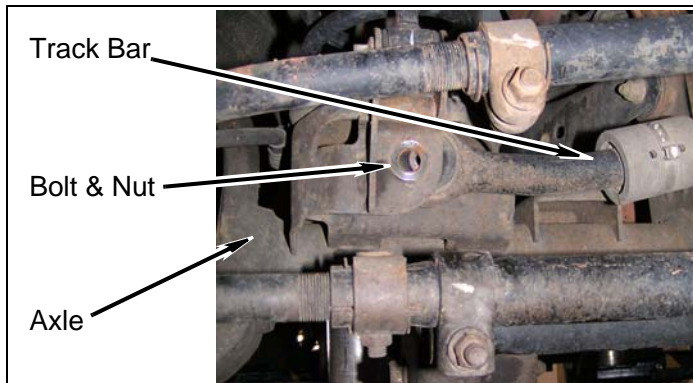
## ⚠ WARNING

Use extreme caution when lifting vehicle from ground. To prevent serious personal injury, ensure the lifting device is securely placed.

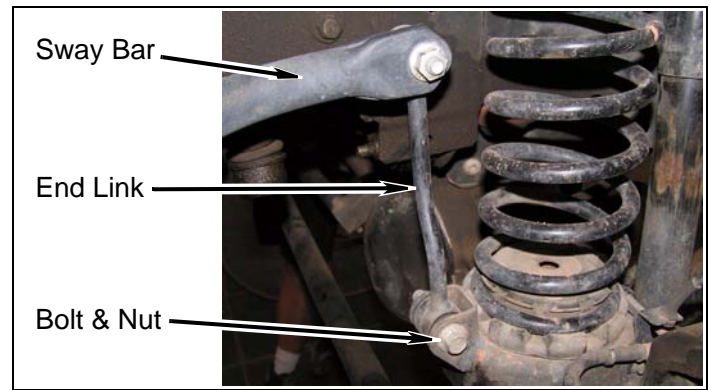
3. Remove lug nuts and front wheels from vehicle.
4. Remove four lower nuts and shock absorber from axle.



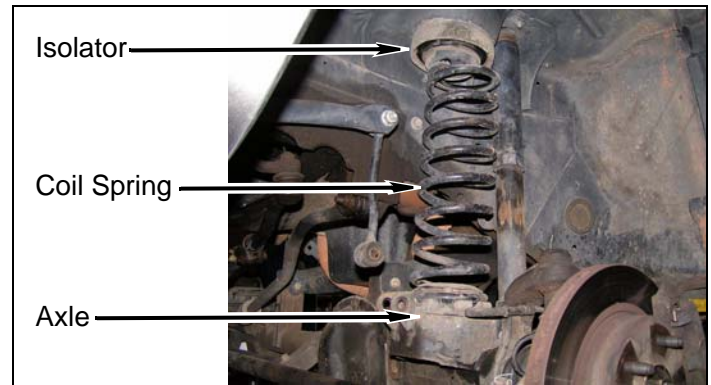
5. Remove bolt, nut and track bar from axle.



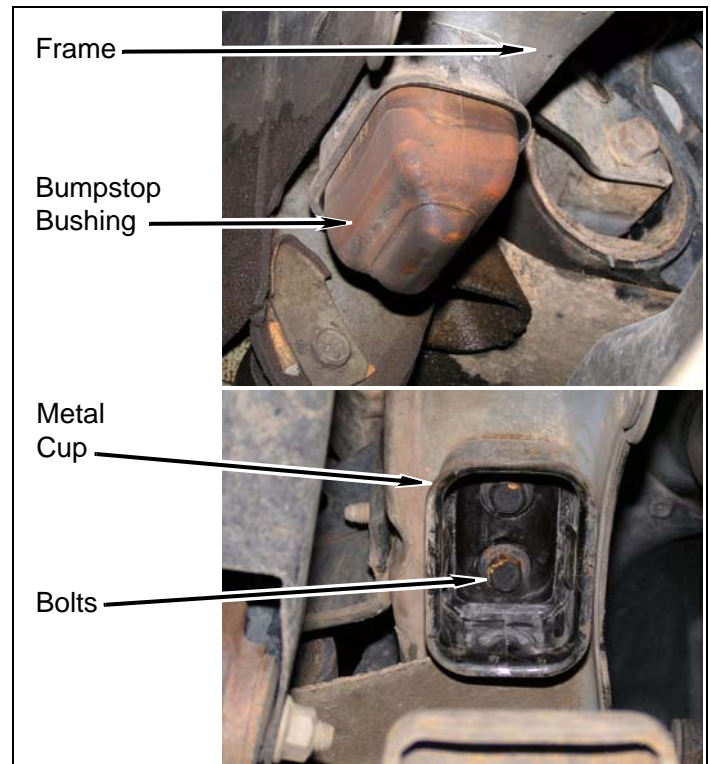
6. Remove two nuts, bolts and sway bar end links from axle.



7. Using hydraulic floor jack, lower front axle and remove two front coil springs and two isolators.



8. Remove two bumpstop bushings, two bolts and two metal cups from frame rails.



## NOTE

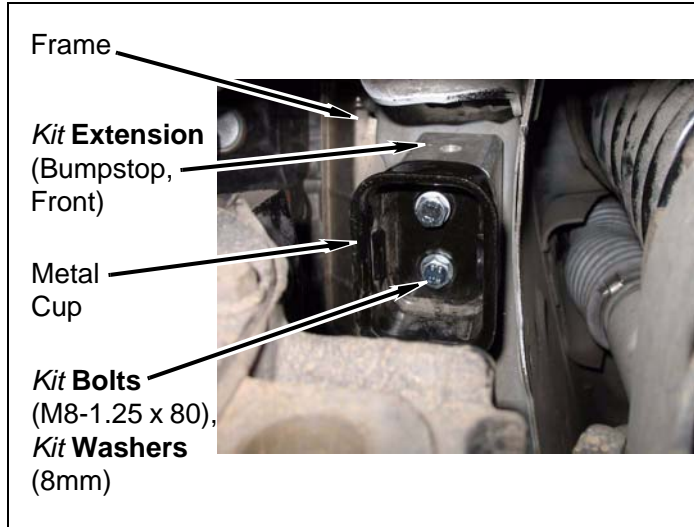
Bumpstop bushings and metal cups will be re-used.



# Install Front Suspension

## 1. Driver bumpstop bushing

- a. From **JWJ22BAG**: Apply a small amount of **kit Loctite®** onto threads of **kit bolts** (M8-1.25 x 80) and install **kit extension** (bumpstop, front) and metal cup onto frame with two **kit bolts** (M8-1.25 x 80) and two **kit washers** (8mm).



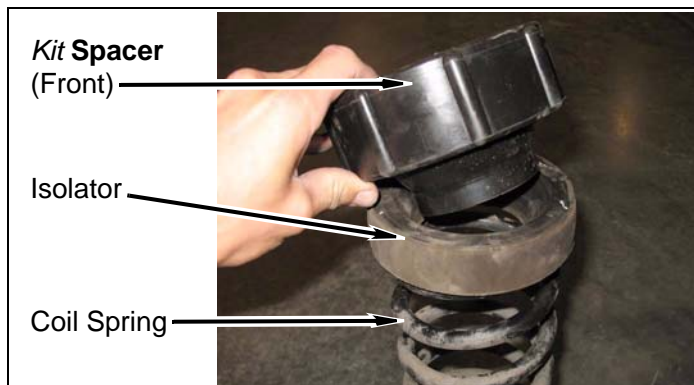
- b. Install bumpstop bushing into metal cup.
- c. Repeat above substeps for passenger bumpstop bushing.

## 2. Driver coil spring

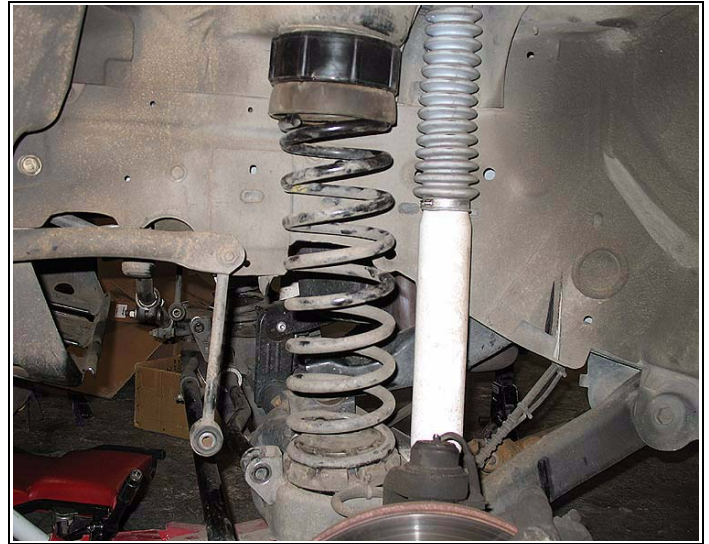
### ⚠ WARNING

Compressed coil springs can expand violently causing serious personal injury. Before removing the coil springs, lower the axle housing as far as possible to allow the coil springs to expand. Use caution when using coil spring compressors.

- a. Install **kit spacer** (front) onto isolator and coil spring.

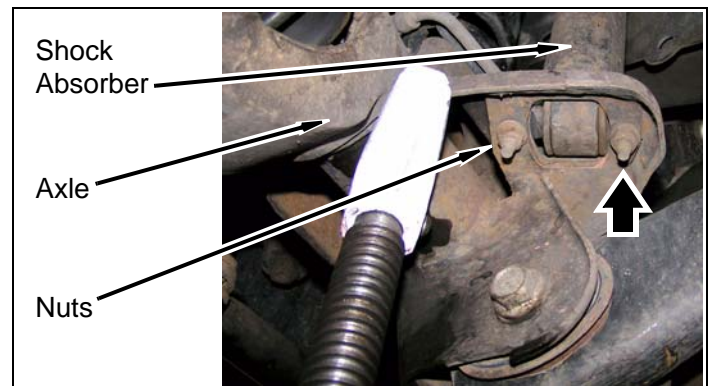


- b. Using hydraulic floor jack, adjust height of axle and install coil spring, isolator and **kit spacer** (front) onto vehicle.

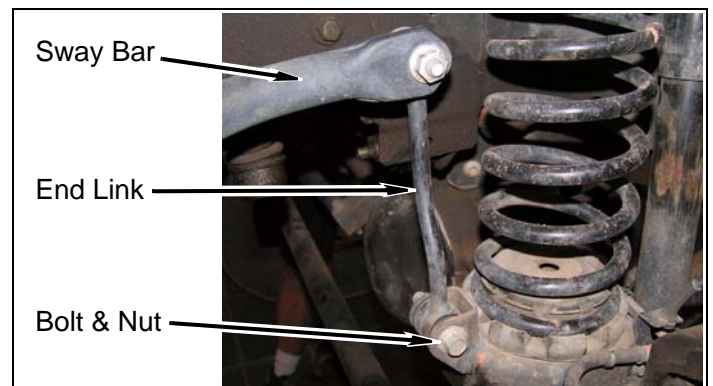


- c. Repeat above substeps for passenger coil spring.

3. Using hydraulic floor jack, raise axle and install two shock absorbers onto axle with four nuts.

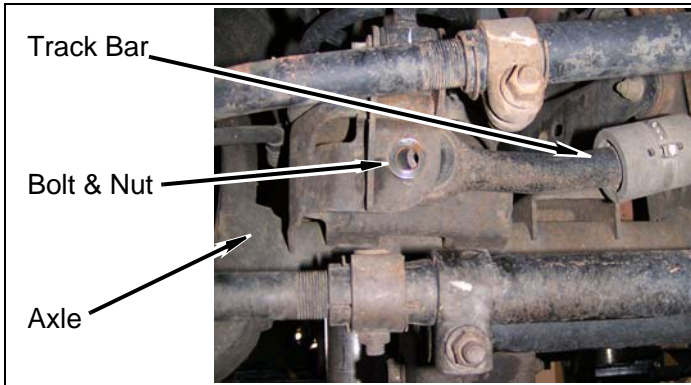


4. Install two sway bar end links onto axle with two bolts and nuts.



5. Install front wheels onto vehicle with lug nuts. Snug, but **DO NOT TORQUE** lug nuts.
6. Using hydraulic floor jack, raise front of vehicle and remove jack stands. Slowly lower vehicle onto ground.

7. TORQUE lug nuts to specification.
8. Cycle front suspension several times by pushing on front bumper.
9. Install track bar onto axle with nut and bolt.



## Prepare to Install Rear Suspension

### ⚠ WARNING

Compressed coil springs can expand violently causing serious personal injury. Before removing the coil springs, lower the axle housing as far as possible to allow the coil springs to expand. Use caution when using coil spring compressors.

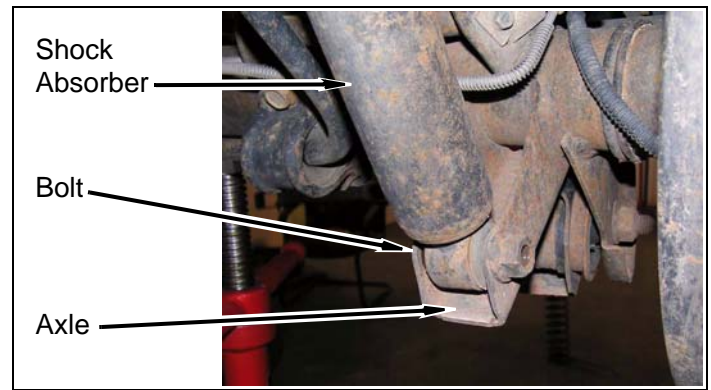
1. Loosen, but do not remove, lug nuts on each front wheel.
2. Using hydraulic floor jack, slowly lift axle until rear tires are 3-5" off ground. Position jack stands under frame in front of lower control arm perches. Lower vehicle onto jack stands while maintaining hydraulic jack pressure underneath axle.

### ⚠ WARNING

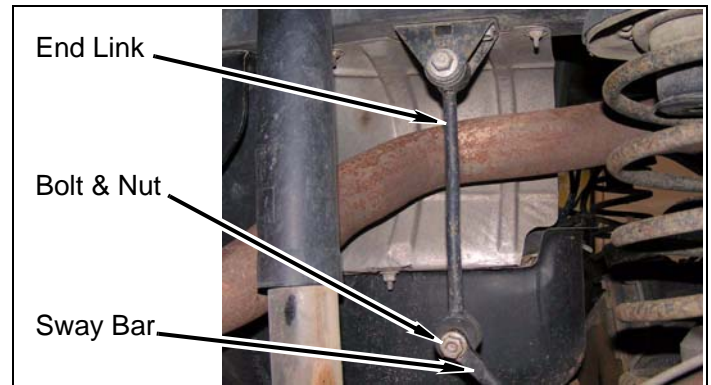
Use extreme caution when lifting vehicle from ground. To prevent serious personal injury, ensure the lifting device is securely placed.

3. Remove lug nuts and rear wheels from vehicle.

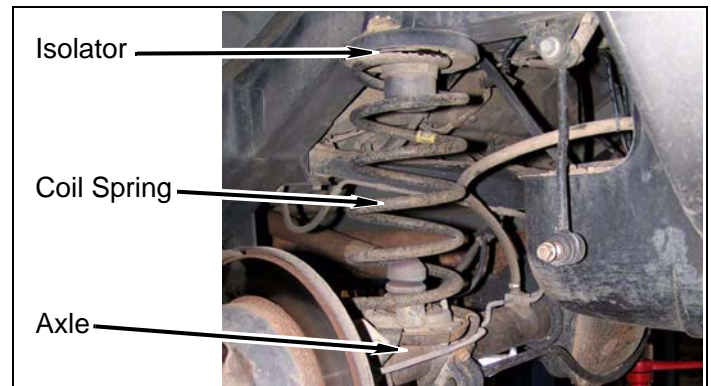
4. Remove two bolts and rear shock absorbers from axle.



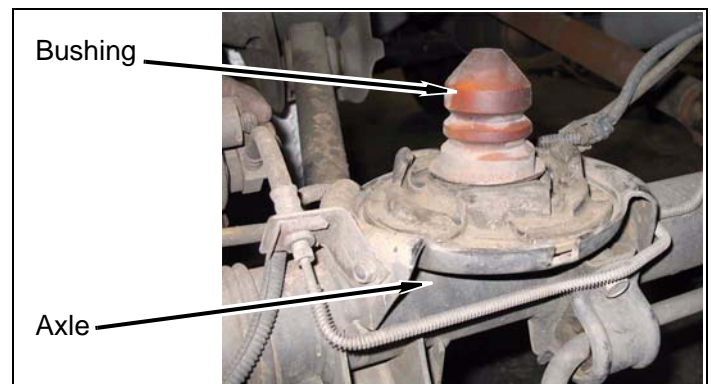
5. Remove two bolts, nuts, and sway bar end links from sway bar.



6. Using hydraulic floor jack, adjust axle height and remove two coil springs and two isolators.



7. Remove two bumpstop bushings from axle.

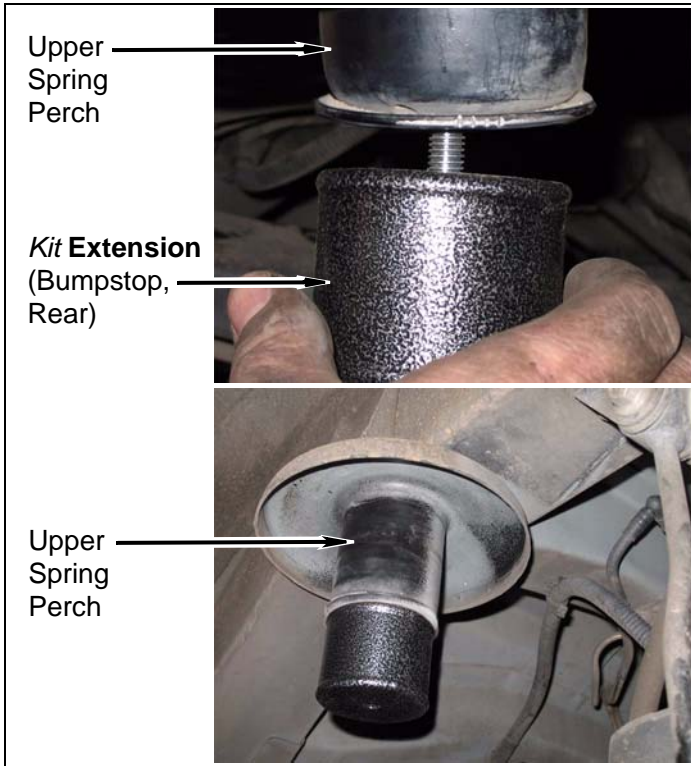




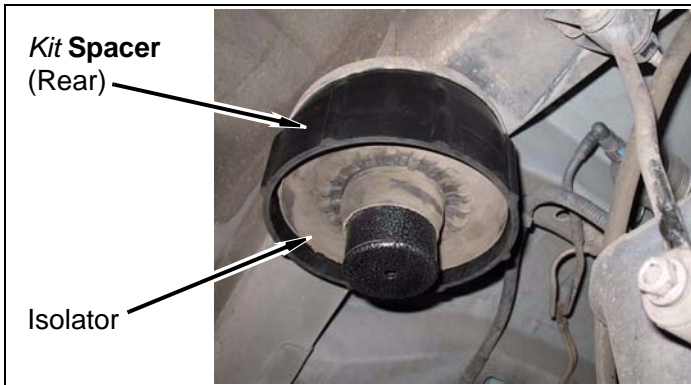
# Install Rear Suspension

## 1. Driver coil spring

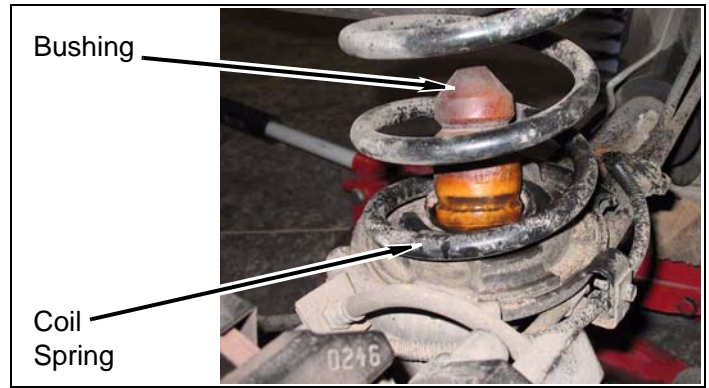
- a. Install **kit extension** (bumpstop, rear) by threading self-tapping bolt into existing hole of upper spring perch.



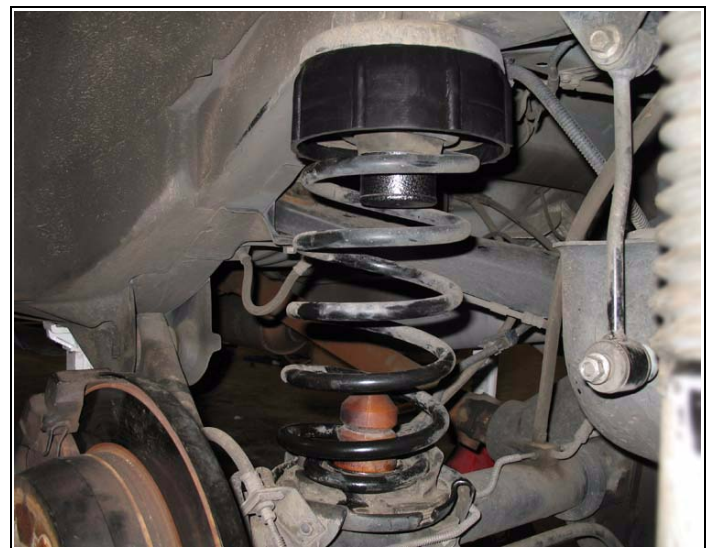
- b. Install isolator into bottom of **kit spacer** (rear).



- c. Place bumpstop bushing inside bottom of coil spring for easier installation into axle following next substep.



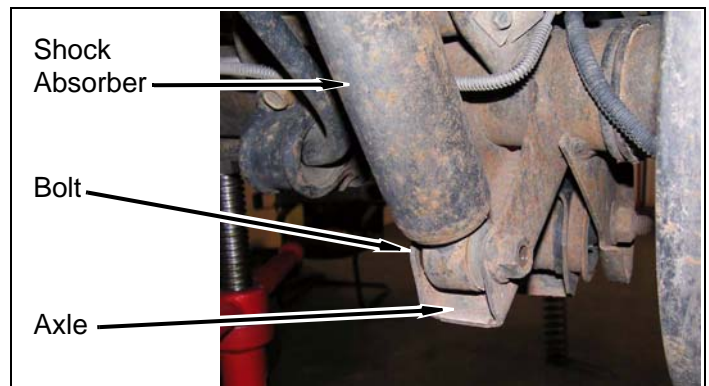
- d. Using hydraulic floor jack, adjust axle height and install coil spring, isolator and **kit spacer** (rear) onto vehicle.



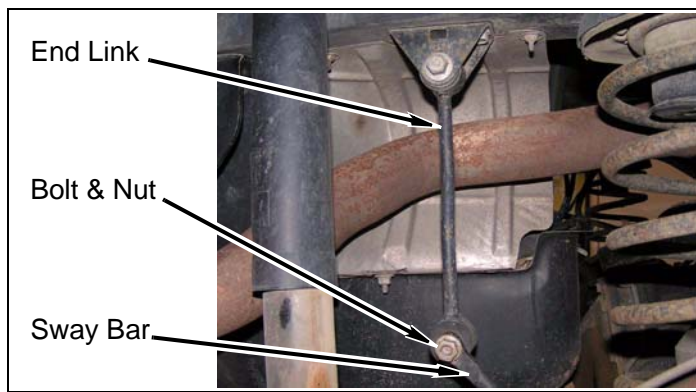
- e. Install bumpstop into axle.

- f. Repeat above substeps for passenger coil spring.

- ## 2. Using hydraulic floor jack, raise axle and install two shock absorbers onto axle with two bolts.



3. Install two sway bar end links onto sway bar with two bolts and nuts.

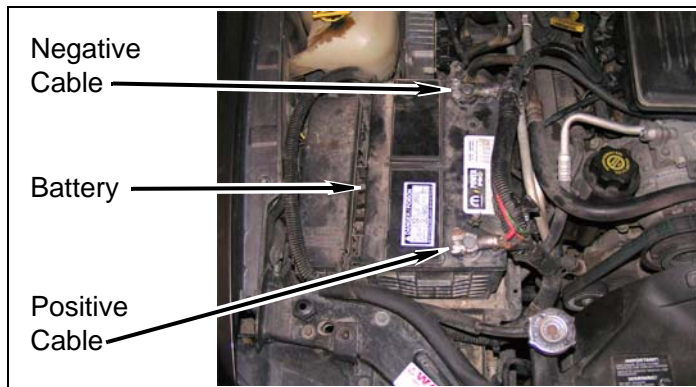


4. Install rear wheels onto vehicle with lug nuts. Snug, but DO NOT TORQUE lug nuts.
5. Using hydraulic floor jack, raise rear of vehicle and remove jack stands. Slowly lower vehicle onto ground.
6. TORQUE lug nuts to specification.

## After Completing Installation

### Engine Compartment

1. Connect both battery cables. Connect positive cable first, then negative cable.



### Miscellaneous

1. Align vehicle to OE specifications. Retain alignment results.
2. Apply **kit label** (warning) onto dashboard in plain sight of all vehicle occupants.
3. Adjust headlights.
4. Check all fasteners to ensure they are tight.
5. Ensure all wires, hoses, cables, etc. are properly connected and there is ample slack.

## Dynamic Vehicle Check

1. Check steering and suspension in all positions to ensure that there is no bind and adequate clearance between all moving, fixed, and heated members. Check operation of clutch, brake system, and parking brake. Check operation of transmission and transfer case. Ensure there is full engagement in all gears and 4WD ranges. Check battery connections and electrical component operations. Test-drive vehicle.

### ⚠ WARNING

Retorque all fasteners after 500 miles and after off road use. All suspension lift components should be visually inspected and fasteners retorqued during routine vehicle servicing.

### ⚠ CAUTION

Performance Automotive Group does not recommend any particular wheel and tire combinations for use with its suspension lifts and cannot assume responsibility for the customer's choice of wheels and tires. Refer to your owner's manual for recommended tire sizes and warnings related to the use of oversized tires. Larger wheel and tire combinations increase stress and wear on steering and suspension components, which leads to increased maintenance and higher risk for component failure. Larger wheel and tire combinations also alter speedometer calibration, braking effectiveness, center of gravity, and handling characteristics. Consult an experienced local off road shop to find what wheel and tire combinations work best with your vehicle.

### NOTE

All warranty information, instruction sheets, and other documents regarding the installation of this product must be retained by the vehicle owner. Information contained in the instructions and on the warranty card will be required for any warranty claims. The vehicle owner needs to understand the modifications made to the vehicle and how they affect vehicle handling and performance. Failure to provide the customer with this information can result in damage to the vehicle and severe personal injury.

# Kit Parts List

## Qty. Description

2	<b>Extension</b> (bumpstop, front)
2	<b>Extension</b> (bumpstop, rear)
1	<b>Label</b> (logo)
1	<b>Loctite®</b> (6ml bottle)
2	<b>Spacer</b> (front)
2	<b>Spacer</b> (rear)
<b>1</b>	<b>JWJ22BAG (Hardware Bag)</b>
4	<b>Bolt</b> (M8-1.25 x 80)
4	<b>Washer</b> (8mm)