



# TOYOTA TUNDRA 2" FRONT LEVELING KIT INSTALLATION INSTRUCTIONS

2005-2006

KIT# PATL222

## ⚠ WARNING

Installation of a Performance Accessories 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.

## ⚠ 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.

## Before Starting Installation

### NOTE

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

1. Carefully read all warnings and instructions completely before beginning.
2. Verify all parts have been received in this kit by checking the parts list at the end of this document.
3. **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.
4. Special tools needed:
  - a. Spring compressors

- Park vehicle on a clean, dry, flat, level surface and block tires so vehicle cannot roll in either direction.

## Prepare to Install Front Suspension

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

### 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.

### Torque Specifications

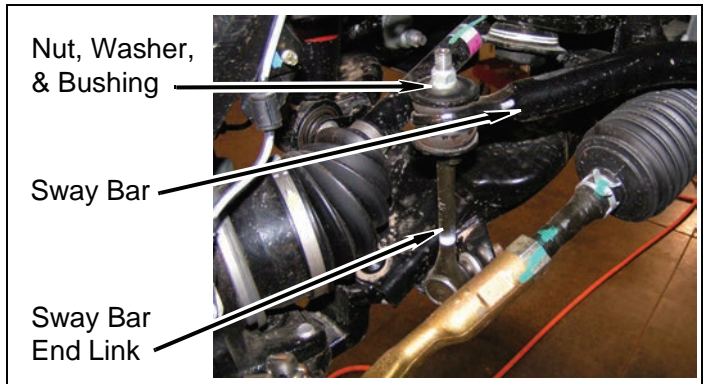
See factory service manual for torque values when re-using OE fasteners.

<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

### WARNING

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

- Remove lug nuts and front wheels from vehicle.
- Remove two nuts, two washers, two bushings and sway bar from two sway bar end links.

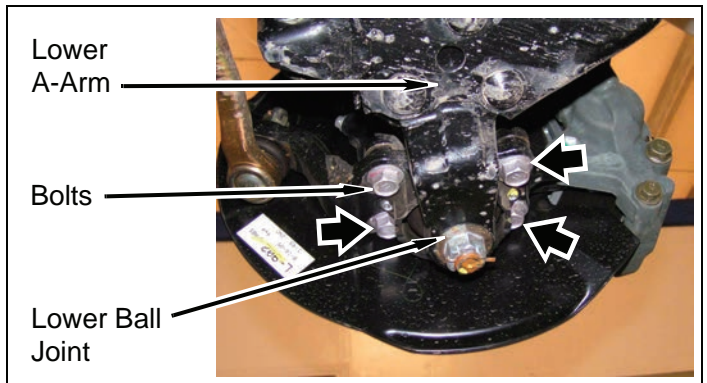
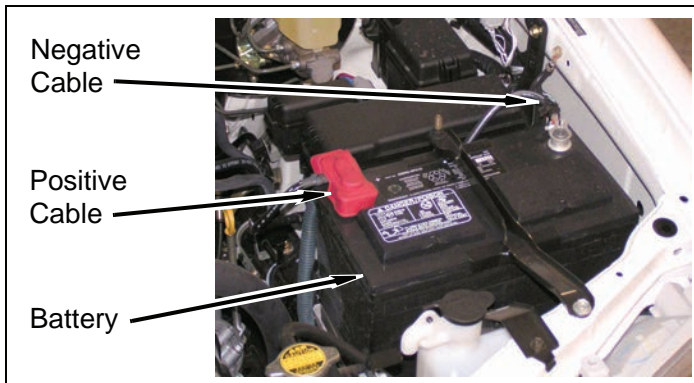


- Driver side strut assembly

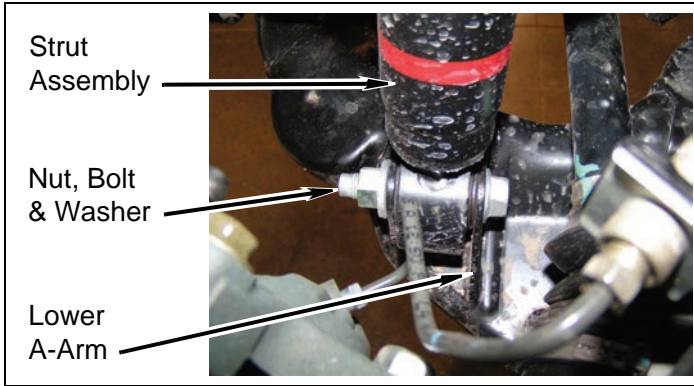
- Remove four bolts and lower ball joint from steering knuckle.

### Engine Compartment

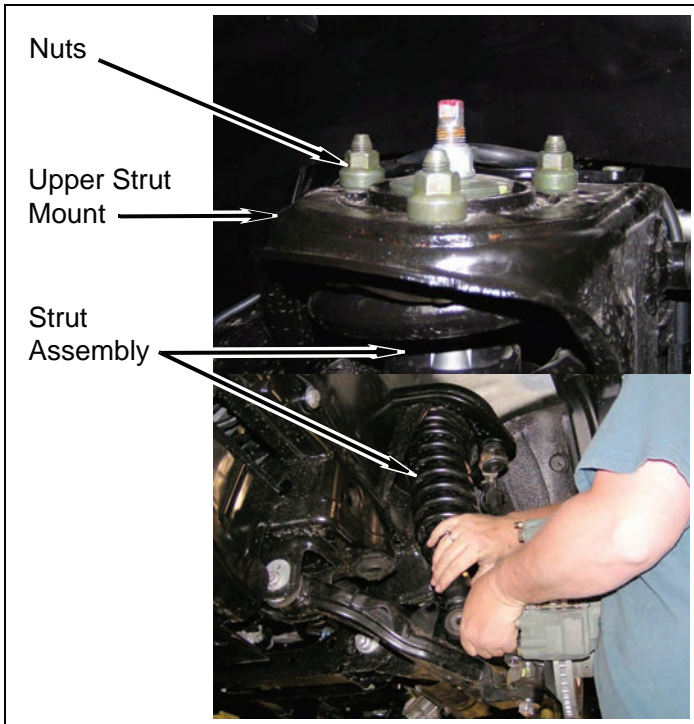
- Disconnect both battery cables. Disconnect negative cable first, then positive cable.



- b. Remove lower bolt, nut, washer, and strut assembly from lower A-arm.



- c. Remove three nuts and strut assembly from upper strut mount.



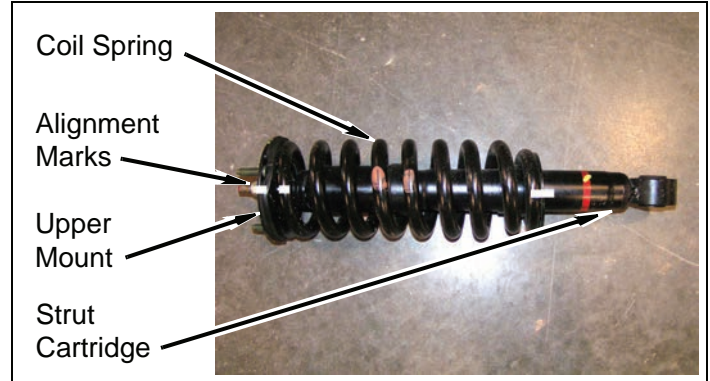
- d. Repeat above steps for passenger side strut assembly.

# Install Front Suspension

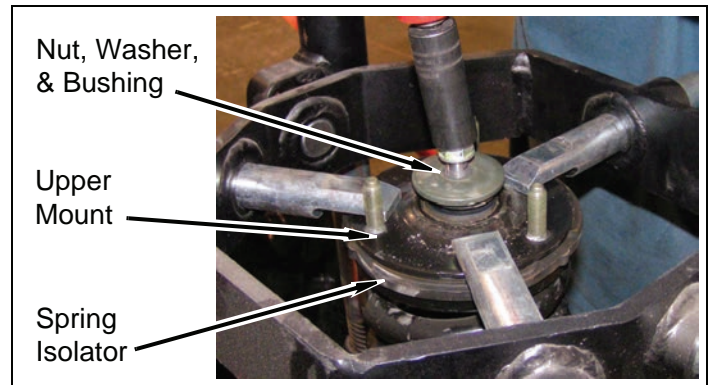
- 1. Driver side strut assembly

**⚠ 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. Mark coil spring, upper mount, and strut cartridge for alignment during re-assembly.

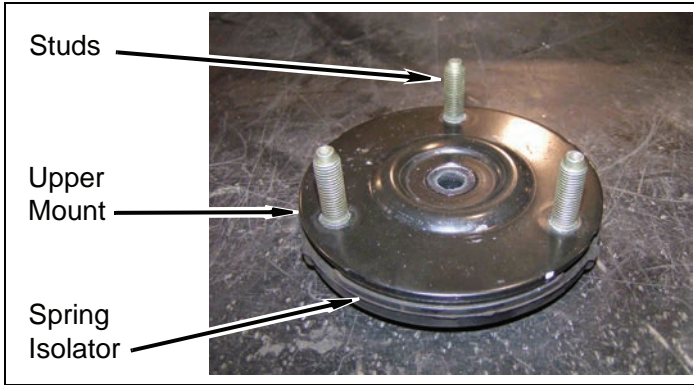


- b. Compress coil spring using spring compressors.
- c. Remove nut, washer, bushing, and strut cartridge from strut assembly.

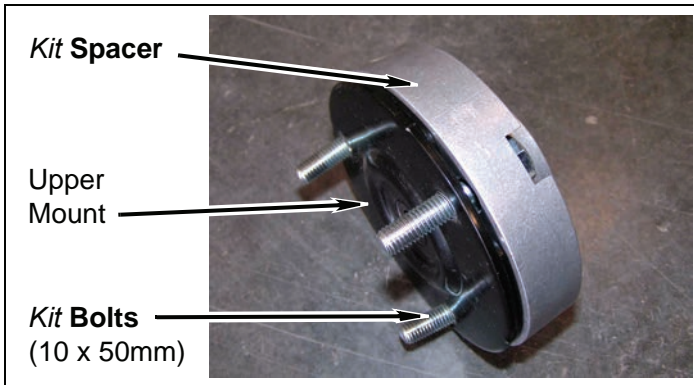


- d. Uncompress spring and remove upper mount and spring isolator from coil spring.

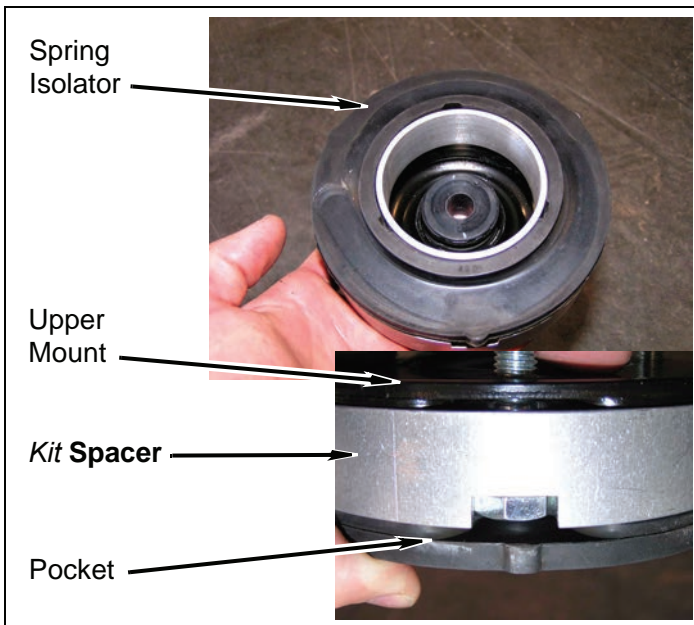
e. Remove three studs from upper mount.



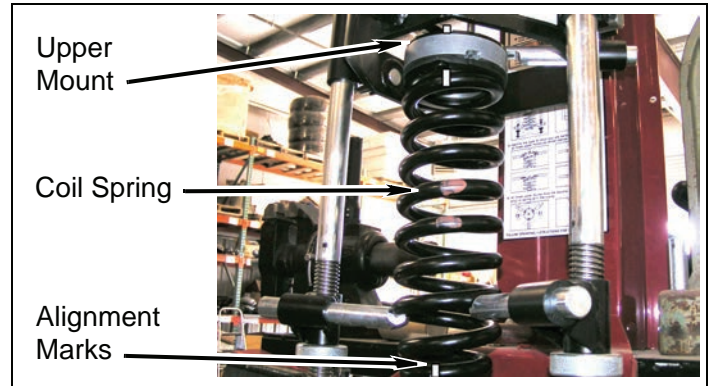
f. **From TL222BAG:** Install three *kit bolts* (10mm x 50mm) and *kit spacer* onto bottom of upper mount.



g. Install spring isolator onto *kit spacer* and align pockets above *kit bolt* heads.



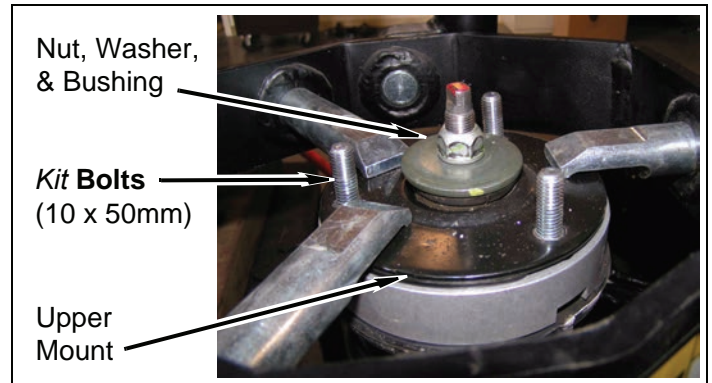
h. Install upper mount onto coil spring and align previously made marks.



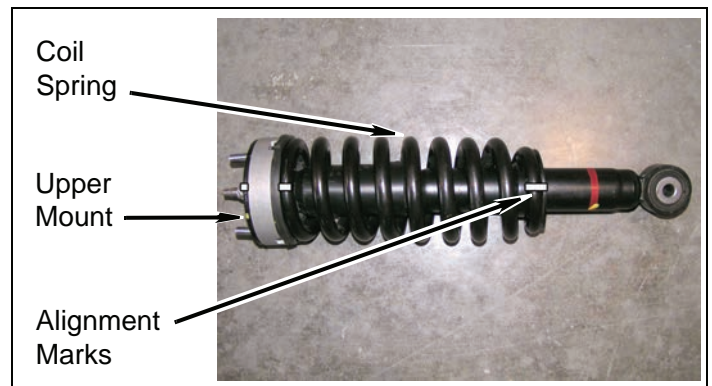
i. Compress coil spring using spring compressors.

j. Install strut cartridge and align previously made marks.

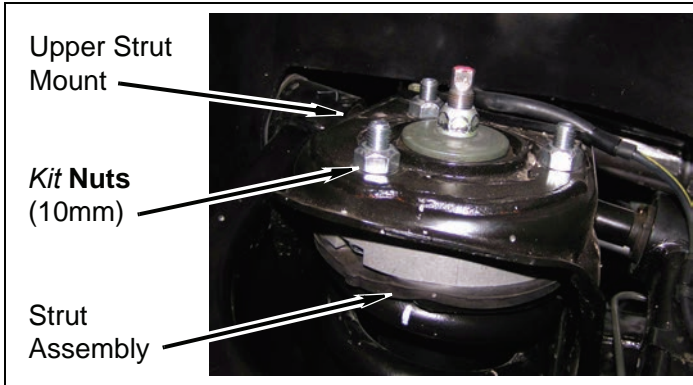
k. Install strut cartridge onto upper mount and coil spring with bushing, washer, and nut.



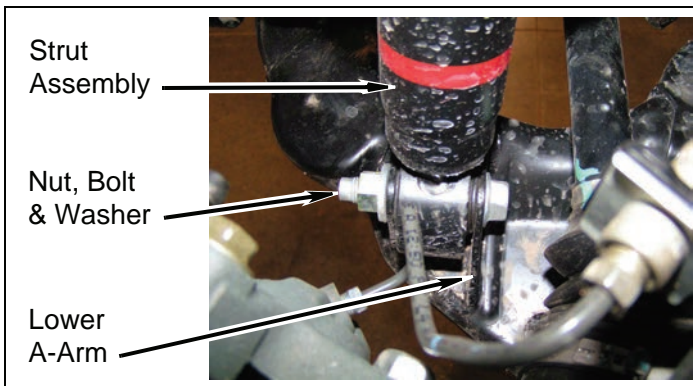
l. Uncompress coil spring and confirm alignment of previously made marks.



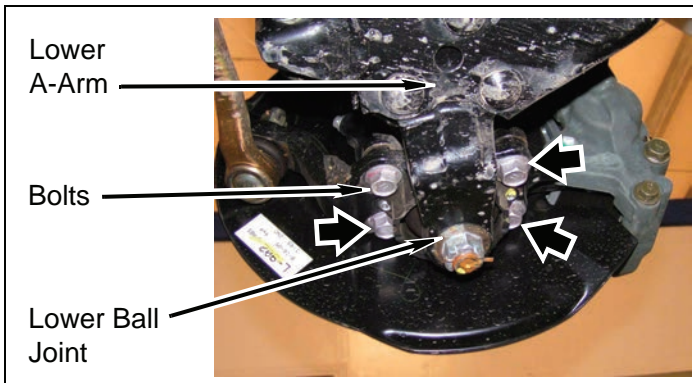
- m. **From TL222BAG:** Install strut assembly onto upper strut mount with three *kit nuts* (10mm stover). **DO NOT TIGHTEN.**



- n. Install strut assembly onto lower A-arm with bolt, washer, and nut. **DO NOT TIGHTEN.**



- o. Install lower ball joint onto steering knuckle with four bolts. **TORQUE** to specification.



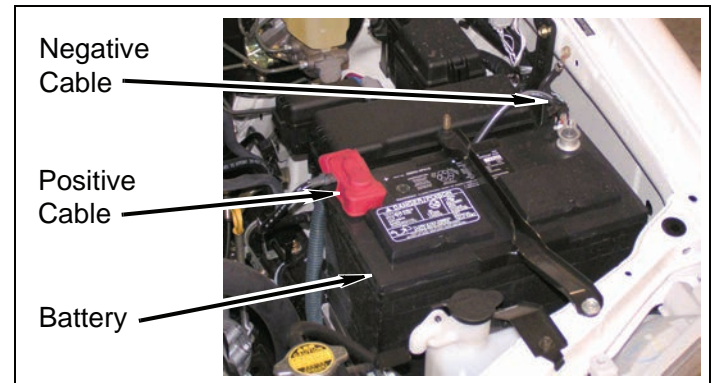
- p. **TIGHTEN** all hardware.
- q. Repeat above steps for passenger side strut assembly.
- r. Install front wheels onto vehicle with lug nuts. Snug, but **DO NOT TORQUE.**

- s. Raise vehicle and remove two jack stands from beneath vehicle. Lower vehicle onto ground and **TORQUE** lug nuts.

## 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 Accessories 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

1	<b>Label</b> (logo)
1	<b>Label</b> (warning)
2	<b>Spacer</b>
<b>1</b>	<b><u>TL222BAG (Hardware Bag Kit)</u></b>
6	<b>Bolt</b> (10mm x 50mm)
6	<b>Nut</b> (10mm stover)

### **NOTE**

Depending on the vehicle configuration some parts may not be used.