

# #034211, #034203, #034204

## Installation Instructions

### 2" Suspension System

Jeep TJ, XJ, ZJ, WJ

**READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS PRIOR TO INSTALLATION OF SYSTEM AND OPERATION OF VEHICLE.**

#### SAFETY WARNING

BDS Suspension Co. recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/reassembly procedures and post installation checks must be known.

#### INSTALLATION INSTRUCTIONS

**CHEROKEE XJ ONLY:** Before installing this suspension system check for the correct sized rear U-bolts. The XJ came equipped with three different axles from the factory. The following is a list of the axle options and the U-bolts required. If axle type is not known measure the OD of the axle tube.

**Chrysler type rear axle – 3-1/8 OD, BDS #040012**

**Dana 35 – 2-3/4 OD, BDS #040005**

#### A. FRONT SYSTEM INSTALLATION

1. Raise and support the vehicle.
  - a. Place a hydraulic jack under the axle to support it.
2. Remove the OE front coils.
  - a. Paint or scribe alignment marks on the cam adjuster and axle bracket as shown in figure 1.

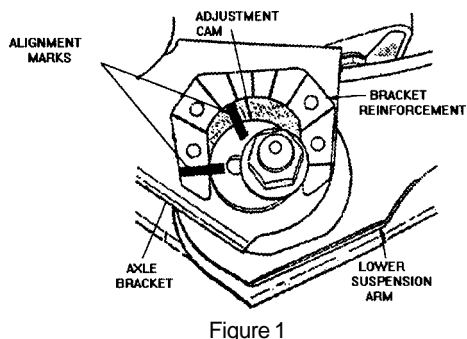


Figure 1

- b. Remove the lower control arm nut, cam, and cam bolts from the axle as shown in figure 2.

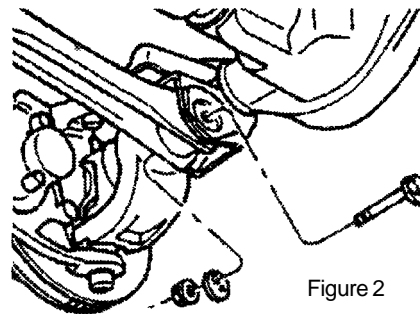


Figure 2

- c. Disconnect the stabilizer bar links from the axle
    - d. Remove the shocks.
    - e. Disconnect the track bar from the frame rail bracket. Remove the cotter pin. Remove the nut. Use a universal puller tool to separate the ball stud from the bracket.
    - f. Disconnect the drag link from the pitman arm.
      1. Remove the cotter pin.
      2. Remove the nut.
      3. Remove the drag link ball stud from the pitman arm using a puller.
3. Install the front assembly.
  - a. Install the BDS coil spring. Be sure to center the spring before tightening the retainer. Raise the axle to bring the spring in to contact with both the upper and lower mounts, but do not place the spring under compression, before tightening the retainer. **Note: Take care not to stretch the brakelines.**
  - b. Connect the stabilizer bar links.
  - c. Connect the correct BDS shocks at this time.
  - d. Connect the track bar to the frame rail.

**Note: It may be necessary to pry the axle assembly over in order to install the track bar.**

    1. Install the ball stud into the frame rail bracket.
    2. Install the retaining nut on the stud.
      - a. Torque to 65 lbs.
    3. Install new cotter pin.

**Note: Always tighten the nut in order to align the cotter pin hole, never loosen.**

- e. Install the lower suspension arm in the axle bracket.
  1. Position the lower suspension arm in the axle bracket.
  2. Install cam bolts, cam, and nut.
    - a. Finger tighten only, do not tighten at this time.
- f. Install the front propeller shaft onto the axle pinion.
  1. Position the propeller shaft with the reference marks aligned.
  2. Replace the U-joint straps and the strap bolts. Torque to 14 lbs.
- g. Install the drag link to the pitman arm.
  1. Install the drag link ball stud into the pitman arm.
  2. Install the nut & torque to 60 lbs.
  3. Install a new cotter pin as described previously.
- h. Remove the supports and lower the vehicle to the ground.
- i. Torque the lower control arm pivots at the axle.
  1. Align the marks you painted or scribed and torque to 85 lbs.

## **B. REAR SYSTEM INSTALLATION (TJ, WJ & ZJ ONLY)**

1. Raise and support the vehicle.
  - a. Place a hydraulic jack under the axle to support it.
2. Remove the rear coils.
  - a. Disconnect the stabilizer bar links from the axle
  - b. Remove the shock absorbers.
  - c. Disconnect the track bar from the frame rail bracket.
    1. Remove the bolt and nut from the frame rail bracket.
  - d. Lower the axle until the spring is free from its upper mount. Remove the spring retainer. Remove the coil spring from the vehicle.
3. Install the rear assembly.
  - a. Install the BDS coil spring. Be sure to center the spring before tightening the retainer. Raise the axle to bring the spring in to contact with both the upper and lower mounts, but do not place the spring under compression, before tightening the retainer. **Note: Take care not to stretch the brakelines.**
  - b. Connect the Stabilizer bar links and torque to 40 lbs.
  - c. Install correct BDS shocks at this time.
  - d. Connect the track bar to the frame rail bracket.

**Note: It may be necessary to pry the axle assembly over to install the track bar.**

    1. Install the track bar into the frame rail bracket.
    2. Loosely install nut and bolt. Do not tighten at this time.
  - e. Remove the supports and lower the vehicle.
  - f. Torque all remaining fasteners.

4. Torque mounts and track bar
  - a. Torque lower shock mounts to 74 lbs
  - b. Torque the track bar to 74 lbs

## **C. REAR SYSTEM INSTALLATION (XJ ONLY)**

1. Raise and support the vehicle.
  - a. Place a floor jack under the axle for support.
2. Add-a-leaf Installation. Complete one side at a time.
  - a. Disconnect the stabilizer bar links from the axle brackets, if equipped.
  - b. Remove the OE shocks.
  - c. Remove the U-bolts. Lower the axle from the spring.
  - d. Use C-clamps to hold the spring pack together.
  - e. Remove the leaf spring center pin and slowly remove the clamps.
  - f. Place the add-a-leaf between the second and third leaf. Place the rest of the leaves below the add-a-leaf.
  - g. Slide the new center pin up through the leaf pack and start the nut to hold the pack together. Do not draw the leaf pack together with the center pin.
  - h. Use a C-clamp on each side of the center pin to draw the pack together while ensuring that the leaves are in line. After the pack is drawn together tighten the center pin.
  - i. Raise the axle to the spring taking care to align the spring center pin with the hole in the spring perch. Install the new U-bolts, nuts and washers. Torque the U-bolts to 70 ft-lbs.
4. Complete Installation
  - a. Install the new shocks with the stock hardware and torque to manufacturer's specifications.
  - b. Reattach the stabilizer bar links to the axle brackets.
  - c. Lower the vehicle to the ground.
  - d. Install warning label in a highly visible location inside the cab of the vehicle.
  - e. Check all fasteners for proper torque.
  - f. The vehicle will need a front end alignment check.
  - g. Align headlights.
  - h. Check all fasteners after 500 miles.