

# **Suspension Lift Kit Instructions**

## Introduction

Installation requires a professional mechanic. Prior to beginning, inspect the vehicles steering, driveline, brake systems, paying close attention to the suspension link arms and bushings, anti-sway bars and bushings, tie rod ends, pitman arm, ball joints and wheel bearings. Also check the steering sector-to-frame and all suspension-to-frame attaching points for stress cracks. The overall vehicle must be in excellent working condition; repair or replace all worn parts.

Read instructions several times before starting. Be sure you have all needed parts and know where they install. Read each step completely as you go.

#### **Notes:**

- Front-end realignment is necessary.
- This Base Lift System contains no hardware for modifying or relocating the suspensions compression travel bump stops. Generally, bump stop modification is not required except for competition style offroading. For severe offroading, extension travel limiting straps are also recommended.
- FRONT/REAR DRIVESHAFT LENGTH Generally, with a suspension lift of 2.5" & over, rear driveline must be lengthened. Front driveline should be adequate up to 3.5" lifts. Typically with 5.5" lifts, front driveline must be lengthened. We recommend 1.5" minimum spline contact with suspension at full extension travel.
- With most lifts 3.5" or taller, track-bar, vent hose and brake hose length must be addressed along with caster angle.
- A foot-pound torque reading is given in parenthesis ( ) after each appropriate fastener.
- Do not fabricate any components to gain additional suspension height.
- Prior to drilling or cutting or welding, check behind the surface being worked on for any wires, lines or fuel hoses that could be damaged.
- After drilling, file smooth any burrs and sharp edges.
- Prior to attaching components, be sure all mating surfaces are free of grit, grease, undercoating, etc.
- A factory service manual should be on hand for reference. We recommend the Chilton's Repair Manual.

## FRONT PROCEDURE

## 1. PREPARE VEHICLE

Put transmission in neutral. Position a floor jack under front axle and raise vehicle. Secure jack stands under the frame rails, a few inches behind the radius arm-to-frame brackets. Ease down the jack until frame is resting on stands. Keep a slight load on jack. Put vehicle in gear or park, set emergency brake and chock rear wheels to prevent any possibility of movement.

#### 2. BRAKE HOSES/PITMAN ARM

Front brake hose, if being replaced, should be installed now. If stock hose is retained, it must be in good condition. Check for chafed spots, cracks and dry rot.

## 3. TIRES/SHOCKS

Remove tires and shocks. On either side, remove the coil springs upper retaining strap. Loosen, but do not remove, the two bolts attaching the coil/seat to the axle.

If installing front hoop shocks, do this now.

#### 4. COIL SPRINGS

Lower jack enough to allow for coils removal. Do not overextend brake and axle vent hoses; both may need rerouting or replacing. Rotate the coils out of their lower seats.

**NOTE:** If applicable, install C-bushings, radius arm bushings, and/or radius arm lowering brackets.

Install new coils. Usually, the coils bottoms can be rotated into the seats without the two-piece seats being completely disassembled. Upper retaining straps may require reforming to properly fit the large diameter coil wire.

#### 5. PITMAN ARM

If applicable, install drop pitman arm and adjustable drag link.

#### 6. SHOCKS

Install bushings, sleeves and boots on shock absorbers.

Install new shocks. Tighten upper stem type bushings or sleeveless eye type bushings only until they swell slightly. Torque lower bolts (40-60).

## 7. TIRES/WHEELS

[Diagram 1] Tighten the lug nuts in the sequence shown.

**WARNING:** When the tires/wheels are installed, always check for and remove any corrosion, dirt or foreign material on the wheel mounting surface or anything that contacts the wheel-mounting surface (hub, rotor, etc.). Installing wheels without the proper metal-to-metal contact at the wheel mounting surfaces can cause the lug nuts to loosen and the wheel to come off while the vehicle is in motion.

**WARNING:** Retighten lug nuts at 500 miles after any wheel change, or anytime the lug nuts are loosened. Failure to do so could cause wheels to come off while vehicle is in motion.

## 8. CLEARANCE CHECK

With the vehicle still on jack stands and the suspension hanging at full extension travel, cycle steering lock-to-lock and check all components for proper operation and clearances. Pay special attention to the clearance between the tires/wheels and brake hoses, wiring, etc.

Lower vehicle to the floor.

## REAR PROCEDURE

#### 9. PREPARE VEHICLE

Raise rear of vehicle with a floor jack positioned under the rear axle. Place jack stands under the frame rails, a few inches in front of the rear springs front hangers. Ease the jack down until the frame is resting on the stands. Keep a slight load on the jack. Chock front tires to prevent possibility of movement.

Remove tires, U-bolts and shocks. Lower the axle by easing down the jack. Do not overextend the brake and axle vent hoses; both may need rerouting or replacing.

If installing rear dual shock mounts, do this now (see separate instructions).

**NOTE:** If a longer rear hose is to be installed, pinch closed the factory rubber hose with vise grips or a small C-clamp, and disconnect at the axle mounted T-block. Hose installation is performed in Step 12.

**WARNING:** The spring perches, where the leaf springs seat on the axle, are prone to collapse or warp, especially toward the ends. Without a perfectly flat mounting surface, the block may fail or "roll" out from under the vehicle. If not flat, replate the perches with ½" thick steel plate (or something similar) or replace perches completely.

#### 10. ADD-A-LEAFS

Perform the following steps if add-a-leafs have been purchased. If not, proceed to the next step.

With a C-clamp positioned close to each wrap, bend wraps out of the way.

Now reposition the clamp next to the center bolt and remove bolt. Be careful when removing C-clamp since the leafs are "loaded" and will "spring" apart when released. The leaf installs directly underneath the main, which is the longest one with mounting eyes. Remember to stack the leaf plates in the proper pyramid order – progressively longer from bottom to top.

Recompress the spring pack with the C-clamp, not the center bolt, to avoid stripping the bolt/nut threads. After tightening, trim excess bolt.

Place a C-clamp beside each spring wrap, prior to installing or re-forming, to ensure total pack compression. If heat is used on the wraps, allow them to cool naturally and thoroughly before removing C-clamps.

## 11. LEAF SPRINGS

If new leaf springs are being installed, remove the U-bolt attaching nuts and remove the two U-bolts and the spring clip plate. Lower the axle to relieve the spring tension and remove the nut from the spring front attaching bolt. Remove the spring front attaching bolt from the spring and hanger with a drift. Remove the nut from the shackle-to-hanger attaching bolt and drive the bolt from the shackle and hanger with a drift and remove the spring from the vehicle. Remove the nut from the spring rear attaching bolt. Drive the bolt out of the spring and shackle with a drift.

**NOTE:** On all 11 pack leaf springs the military double wrap will face the front of the vehicle. When installing the 3.5" 5-pack leaf springs, the curved eyelet end will mount to the rear for shackle clearance or to avoid shackle bind.

Install the new leaf spring by first positioning the shackle (closed section facing toward the front of the vehicle) to the spring rear eye and install the bolt and nut.

Position the spring front eye and bushing to the spring front hanger, and install the attaching bolt and nut. Position the spring rear eye and bushing to the shackle, and install the attaching bolt and nut.

#### 12. U-BOLTS, SHOCKS & TIRES

Raise the axle to the spring and install the U-bolts and spring clip plate. Torque the U-bolt nuts and spring front and rear attaching bolt nuts (45-60)

## U-BOLT TORQUE GUIDE

| Description                   | Plated (lb-ft) | Plain Finish (lb-ft) |
|-------------------------------|----------------|----------------------|
| ½" dia, up to 13" long        | 57             | 92                   |
| 9/16" dia, up to 13 ½" long   | 82             | 131                  |
| 9/16" dia, 13 1/2" and longer | 106            | 185                  |
| 5/8" dia, up to 14 ½" long    | 112            | 181                  |
| 5/8" dia, 14 ½" and longer    | 145            | 256                  |

Install new shocks and tires, then lower the vehicle to the floor.

If applicable, install new rear brake hose.

#### 13. FINAL CLEARANCE and TORQUE CHECK

With vehicle on floor, cycle steering lock-to-lock and inspect the tires/wheels, and the steering, suspension and brake systems for proper operation, tightness and adequate clearance.

#### 14. Activate four wheel drive system and check front hubs for engagement

#### 15. HEADLIGHTS

Readjust headlights to proper setting.

#### 16. ALIGNMENT

Camber angle was not significantly altered by the suspension lift. Caster should have been maintined with the use of C-bushings and/or radius arm lowering brackets. Have toe-in setting checked.

#### IMPORTANT PROCUCT USE INFORMATION

As a general rule, the taller a vehicle is, the easier it will roll over. As much as possible, offset what is lost in roll over resistance by increasing tire track width. In other words, go "wide" as you go "tall". Many sportsmen remove their mud tires after winter/hunting season and install ones more appropriate for street driving; always use as wide a tire and wheel combination as possible to enhance vehicle stability.

We strongly recommend, because of roll over possibility, that the vehicle be equipped with a functional roll bar and cage system. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

Generally, braking performances and capabilities are decreased when significantly larger/heavier tires and wheels are used. Take this into consideration while driving.

Do not add, alter of fabricate any factory or aftermarket parts to increase vehicle height over the intended height of the lift kit purchased. Mixing component brands is not recommended.

Most states have some type of law limiting vehicle height. The amount of lift allowed, and how the lift may be achieved, varies greatly. Several states offer exemptions for farm or commercially registered vehicles. It is the owner's responsibility to check state and local laws to ensure that their vehicle will be in compliance.

Tom's Bronco Parts makes no claims regarding lifting devices and excludes any and all implied claims. Tom's Bronco Parts will not be responsible for any altered product or any improper installation or use of our products.

We will be happy to answer any questions concerning the design, function and correct use of our products.

#### IMPORTANT MAINTENANCE INFORMATION

It is the ultimate buyer's responsibility to have all bolts/nuts checked for tightness after the first 100 miles and then every 1000 miles. A qualified professional mechanic should inspect the steering, suspension and driveline systems, along with wheel alignment at least every 3000 miles.