Part#: **014306, 014307**
Product: **3" Suspension System**
Application: **1994-2001 Jeep XJ**

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.

PRODUCT SAFETY WARNING Certain BDS Suspension products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. BDS Suspension Co. does not recommend the combined use of suspension lifts, body lifts, or other lifting devices.

You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

PRE-INSTALLATION NOTES

1. Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/ reassembly procedures of OE and related components.
2. Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
3. Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting combinations larger than OE, consider the additional stress you could be inducing on the OE and related components.
4. Post suspension system vehicles may experience drive line vibrations. Angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened or trued, and U-joints may need to be replaced.
5. Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
6. If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.
7. Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

POST-INSTALLATION WARNINGS

1. Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.
2. Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure. Longer replacement hoses, if needed can be purchased from a local parts supplier.
3. Perform head light check and adjustment.
4. Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

PARTS LIST

Part #	Qty	Description
114202R	2	Add-A-Leaf
01201	2	5/8" Bolt-on Block
00105	2	Transfer Case Drop Spacer
703	1	Bolt Pack - Transfer Case Drop
	4	*10mm-1.50mm x 50mm bolt*
	4	*10mm flat washer*
	4	*10mm helical spring lock washer*
01311	2	Front Sway Bar Link
SB58RB	4	Hourglass Bushing
746	1	Bolt Pack - Front Sway Bar Links
	4	*3/8" SAE flat washer*
	2	*3/8"-16 x 2-1/2" bolt*
	2	*3/8"-16 prevailing torque nut*
	2	*10mm-1.50 x 40mm bolt*
	2	*10mm-1.50 prevailing torque nut*
	4	*7/16" SAE flat washer*
62147	2	0.625 x 0.075 x 1.375 Sleeve
45313	2	0.625 x 0.109 x 1.375 Sleeve
01325	2	Sway Bar Link U-Bracket
S10024	2	Stem Washer
	4	U-Bolt
N12FH	8	1/2" High Nut
W12S	8	1/2" Washer
560312FCP	2	5/16" x 3-1/2" Center Pin/Nut
HKK250	4	2-1/2" Spring Clamp
65077	1	1/8" Cotter Pin

INSTALLATION INSTRUCTIONS

Park the vehicle on a clean, flat surface and block the rear wheels for safety.

Front Installation

1. Remove the bolt mounting the front track bar to the passenger's side of the axle (Fig 1). Save track bar bolt and nut tab. Allow the track bar to hang free.

Note: The track bar bolt may require a T-50 Torx socket on early models.

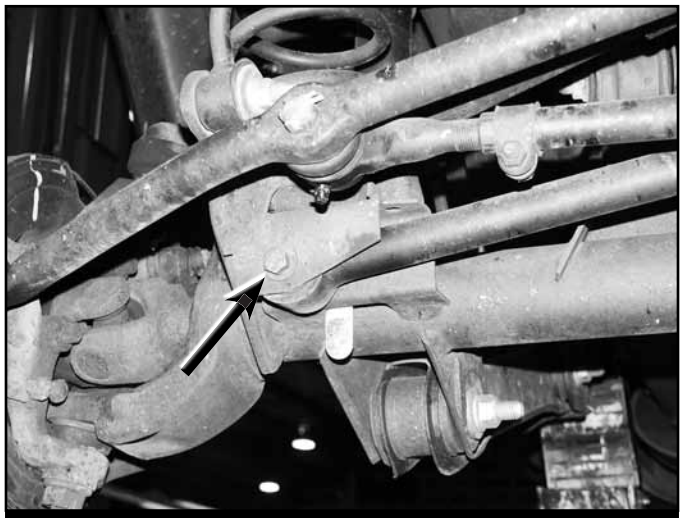

Fig. 1

2. Raise the front of vehicle with a hydraulic jack and place jack stands under the frame rails, just behind the lower control arm pockets.
3. Remove the wheels.
4. Support the front axle with a hydraulic jack. Remove the shocks. Save the lower shock hardware.
5. Disconnect the front brake line brackets from the frame. Save hardware.
6. Remove the upper mounting nut from the sway bar links (Fig 2). Swing the sway bar up off the links.

Fig. 2

7. Disconnect the sway bar links from the axle. Remove the nut and the sway bar link from the bolt (Fig 2). Some early models will require a T55 torx socket to hold the bolt from rotating. Later models used a bolt with a serrated neck that is pressed into the bracket so it will not rotate. Save axle mount hardware.

8. Remove the cotter pin and castellated nut from the drag link end at the pitman arm (Fig 3). Thread the nut back on a couple of turns. Strike the pitman arm near the drag link end to release the tapered seat. Take care not to damage the end. Remove the nut and the drag link from the pitman arm. Save hardware.

Fig. 3

9. Remove the driver's and passenger's side coil spring retainer clips located on the back side of the axle coil seat. Save clips and bolts.
10. Ensure the axle is well supported with a jack. Loosen and remove the driver's and passenger's side lower control arm bolts at the axle. Save the control arm hardware.
11. Lower the axle with the hydraulic jack and remove the original coil springs. Take care not to over extend the brake lines.

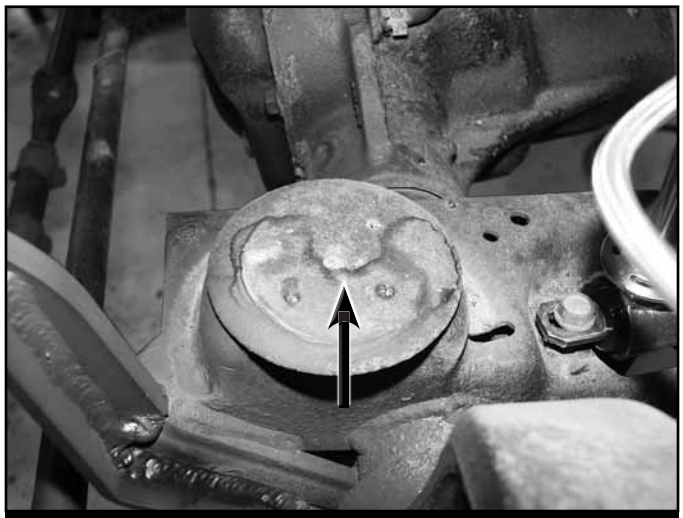

Fig. 4

12. Install the provided new front coil springs in the vehicle. Rotate the coils until they are seated properly in the axle mounts.
13. Raise the axle until the coils touch the upper mounts. Reinstall the driver's and passenger's side coil retainers and torque to 20 ft-lbs.
14. Reattach the driver's and passenger's side lower control arms to the axle with the factory bolts/nuts/washers. Snug the bolts but do not tighten completely. The lower control arm bolts will be tightened with the weight of the vehicle on the suspension.
15. Install the new shocks with the provided upper bushings/hardware. Leave the upper nut loose.
16. Attach the shock to the axle with the original shock hardware. Torque bolts to 20 ft-lbs. Go back and tighten the upper shock stem nut until the stem bushings begin to swell. Install the thin jam nut on the stem and tighten it against the first nut.

17. Locate the factory track bar mount on the passenger's side of the axle. Measure from the center of the original track bar mounting hole 3/4" toward the driver's side and mark. Drill a 13/32" hole at the mark through the front and back faces of the track bar mount (Fig 5). This will be the new mounting point for the track bar. Do not install the track bar at this time.

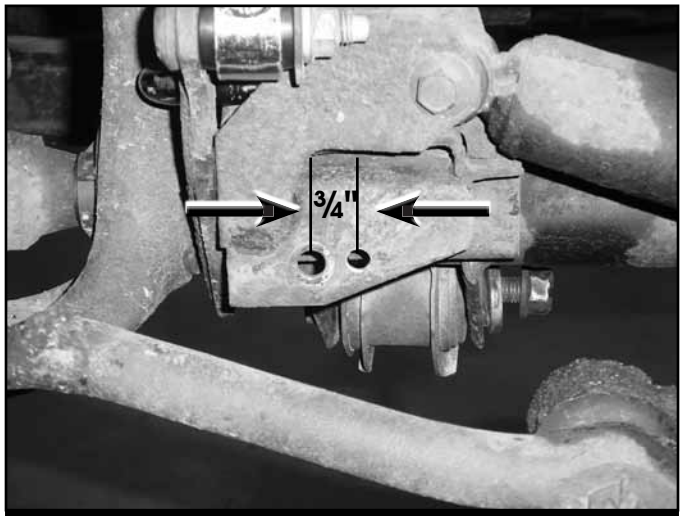

Fig. 5

18. Reattach the drag link to the pitman arm with the original castellated nut. Torque the nut to 60 ft-lbs. Align the cotter pin hole with the slots in the nut and install the new cotter pin (65077). Never loosen the nut to align the cotter pin, only tighten.

19. Install the provided sway bar link u-brackets (01325) to each end of the sway bar using 10mm x 40mm bolts, nuts, a 3/8" USS washer (BP 746) and curved a stem washer (S10024). Install the bolt up through the bracket and sway bar hole. Fasten the bracket to the sway bar by place a stem washer on the bolt followed by the nut. The washer is curved to match the concave sway bar hole. Position the bracket so that the through holes are parallel with the sway bar link axle mount hole. Torque bolt to 40 ft-lbs.

20. Locate the new front sway bar links (01311). The links have offset eyes. Install a 5/8"OD x 0.480" ID steel sleeve (62147) in one end and a 5/8"OD x 0.407ID sleeve (45313) in the other end of each link. The links will have the bushings preinstalled.

21. Attached the new sway bar links to the axle mount with the factory hardware and to the new sway bar u-bracket with 3/8" x 2-1/2" bolts, nuts and washers (BP 746) run from inside out. The end with the smaller ID sleeve will mount to the u-bracket. When mounted correctly, the links will taper in toward the center of the vehicle as the run from the axle to the sway bar (Fig 6). Torque the factory hardware to 55 ft-lbs and 3/8" hardware to 30 ft-lbs.


Fig. 6

22. Reattach the factory brake line to the original mount on the frame. Fasten the brake line with the OE bolt and torque to approximately 10 ft-lbs.

23. Install the wheels and torque the lug nuts to the manufacturer's specs. See vehicle owner's manual.
24. Remove the jack stands and lower the vehicle to the ground.
25. Bounce the front of the vehicle to settle the suspension.
26. Attach the sway bar links to the sway bar with the original hardware/bushings. Tighten nuts until the bushings begin to swell.
27. Connect the front track bar to the newly drilled hole in the axle mount with the original hardware. Torque bolt to 50 ft-lbs. Note: To aid in aligning the track bar hole have an assistant turn the steering wheel to shift the trackbar in the correct direction.
28. Torque the lower control arm bolts to 85 ft-lbs.
29. Check all hardware for proper torque.

Rear Installation

30. Block the front wheels for safety.
31. Raise the rear of the vehicle with a hydraulic jack and support with jack stands at the frame rails just ahead of the leaf spring hanger.
32. Remove the wheels.
33. Remove the rear brake line retaining clip at the frame. Remove the brake line from the bracket. Save clip.
34. Support the rear axle with a hydraulic jack. Remove the shocks. Save all shock hardware.
35. Complete the following one side at a time, starting with the passenger's side.
36. With the rear axle well supported with a hydraulic jack, remove the leaf spring u-bolts. The sway bar link bracket will be free with the removal of the outer u-bolt.
37. Lower the axle from the spring.

Note: Slightly loosening the driver's side u-bolts will allow the axle to lower from the spring with less restriction.

38. Remove the factory bend-over style leaf spring clamps. These will not be reused.
39. Place C-clamps on each side of the leaf spring center pin to hold the leaf pack together. Remove the leaf spring center pin and then release the C-clamps. This will allow the leaf pack to come apart. Take note each leafs' position and orientation (front to rear).
40. Place the provided new leaf (114202R) in between the 2nd and 3rd leaf in the factory leaf pack. The leaf lengths get shorter as they go from the top leaf in a pyramid shape (Fig 7). Install a new center pin (560312FCP) into a new 5/8" block (01201) and install the pin into the bottom OE leaf and new leaf center pin hole so that the block is at the bottom.

Fig. 7

41. Using the C-clamps on each side of the center pin hole, compress the leafs together while aligning the new center pin through all of leaf center pin holes (from the bottom up). With the pack completely compressed together with the

clamps, fasten the center pin with the provided nut. Torque nut to 20 ft-lbs. Make sure the block is square under the leaf pack. Cut off any access center pin. Do not use the center pin to compress the pack together.

42. Remove the C-clamps from the leaf pack and ensure the individual leafs are all inline with each other. Install the provided bend-over style clamps on the leaf pack (Fig 8). Install one clamp on each side of the center pin about 12" from the center pin. Bend the ends of the clamps over to secure them to the spring.

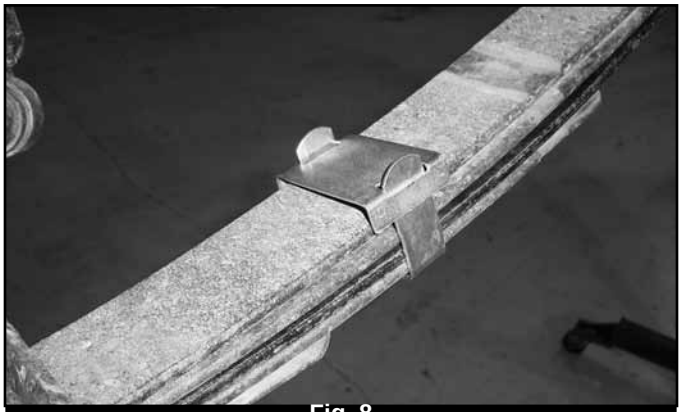

Fig. 8

43. Raise the axle to the leaf spring, aligning the center pin with the center pin hole in the axle. Fasten with the provided u-bolts, nuts and washers. Be sure to reattach the sway bar link bracket. Snug u-bolts but do not tighten completely. U-bolt torque with be set with the weight of the vehicle on the suspension.
44. Repeat procedure on the driver's side.
45. With both sides complete, install the new shocks with the factory hardware. Torque the upper hardware to 25 ft-lbs and the lower nut to 50 ft-lbs.
46. Reinstall the rear brake line in the OE mount on the driver's side with the original retaining clip
47. Install the wheels and lower the vehicle to the ground.
48. Bounce the rear of the vehicle to settle the suspension. Torque the u-bolts to 75-90 ft-lbs.

Transfer Case Drop

49. Support the transfer case with a hydraulic jack.
50. Remove the two bolts and two nuts (one each per side) holding the transfer case crossmember to the frame rails.
51. Lower the transfer case about 1-1/8". The stud in each frame rail must be removed. This can be done with the double nut method. Install one nut followed by another and tighten the nuts against each other. Remove the stud by turning the top nut (one closest to the frame).

Note: If the double nut method will not work, the nut can be tack welded to the stud to form a "bolt". Thread the nut on the stud and tack the end of the stud so the nut cannot be threaded off. Remove the stud. BE SURE to disconnect the battery before welding.

52. Position the provided transfer case drop spacers (00105) between the frame rails and the crossmember. Align the holes in the crossmember with the holes in the spacers. The outer face of the spacer should be relatively flush with the outer edge of the crossmember, if not turn the spacer around. Fasten the crossmember and spacers to the frame with 10mm x 60mm bolts and lock washers (BP 703). Torque hardware to 35 ft-lbs.
53. Check the transfer case shift level operation. The linkage may need to be adjusted in some cases.

Post-Installation

54. A complete front end alignment is required.
55. Adjust headlights.