Part#: **034201**
Product: **2" Suspension System**
Application: **Jeep Liberty KJ**

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.

INSTALLATION INSTRUCTIONS

FRONT INSTALLATION

1. Safely raise the front of vehicle and support with jack stands for safety.
2. Remove the wheels.

Perform front installation on one side of the vehicle at a time.

3. Disconnect negative then the positive battery cables.
4. Remove the battery retaining clamp (Fig 1).

Fig 1

5. Remove the battery.
6. Remove the fuse box, electrical connector, and any additional devices from the battery tray.
7. Remove three battery tray mounting nuts.
8. Lift the tray enough to access battery tray safety switch connector and disconnect. Remove tray from vehicle (Fig 2).

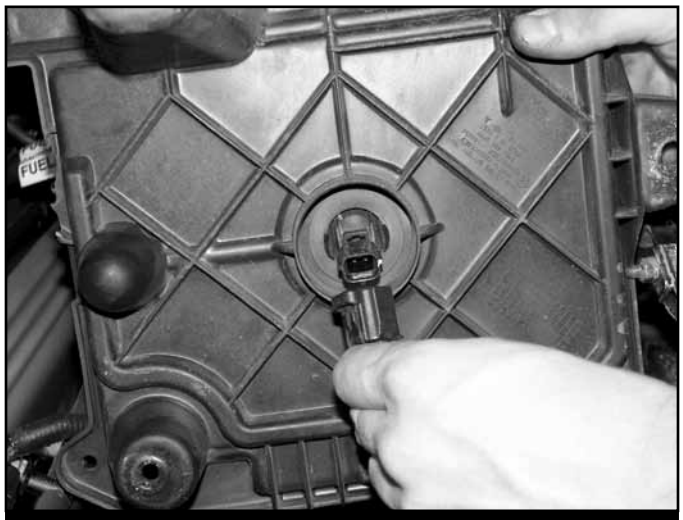

Fig 2

9. Disconnect the air intake hose from air filter box (Fig 3).

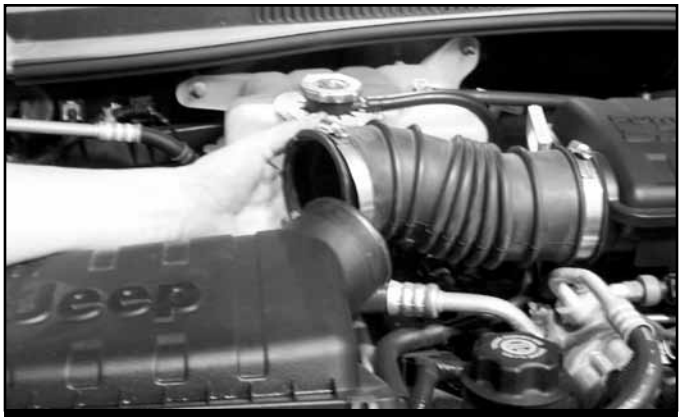

Fig 3

10. Pull filter box up out of the rubber retaining grommets and remove it from the vehicle.
11. Lift vehicle and support with jack stands. Remove the front wheels.
12. Support the passenger's side lower control arm with a floor jack.
13. Disconnect the sway bar link from the lower control arm (Fig 4).

Fig 4

14. Disconnect the upper ball joint from the steering knuckle by removing the nut and striking the knuckle near the ball joint with a hammer. The ball joint can also be removed with a pickle fork but take care not to damage the ball joint boot (Fig 5).

Fig 5

15. Remove the strut fork-to-strut pinch bolt (Fig 6).

Fig 6

16. Remove the strut fork-to-lower control arm mounting bolt (Fig 4).
17. From inside the engine compartment, remove the four upper strut plate retaining nuts (Fig 7).

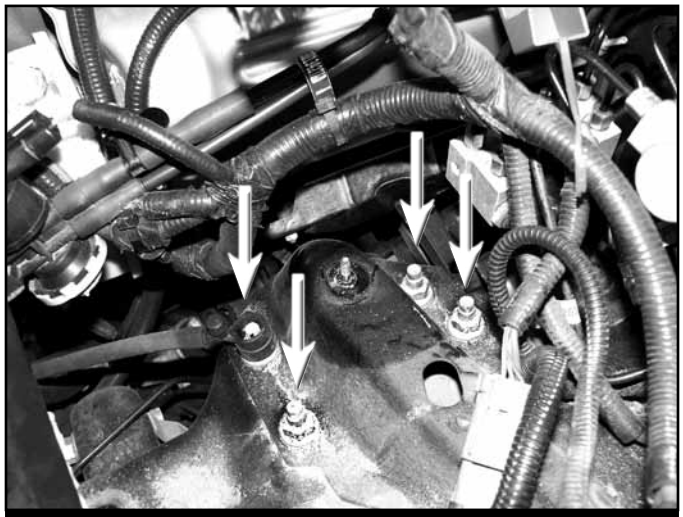

Fig 7

18. Slowly lower the lower control arm. Separate the strut assembly from the strut fork and remove the strut assembly from the vehicle.

⚠ **Caution: Coil spring is under extreme pressure. Improper removal/installation of coil spring could result in serious injury or death. Use only a high-quality spring compressor and carefully read and follow the manufacturer's instructions.**

19. Disassemble strut using an appropriate spring compressor.
20. Install new spring making sure that it is setting correctly in the rubber isolator and the isolator is on the locating tab on the strut.
21. Install four 1/2" x 1-1/2" carriage bolts in the new strut relocation bracket so that they stick out the flat side of the bracket.
22. Install the upper isolator on the strut relocation plate. There is a driver's and passenger's plate, make sure to use the correct one by matching it with OE plate that was just removed.
23. Install a new stem bushing on the strut.
24. Install the new plate assembly on the end of the spring so that the alignment notch (Fig 8) is in line with the strut fork locating edge on the bottom of the strut (Fig 9).

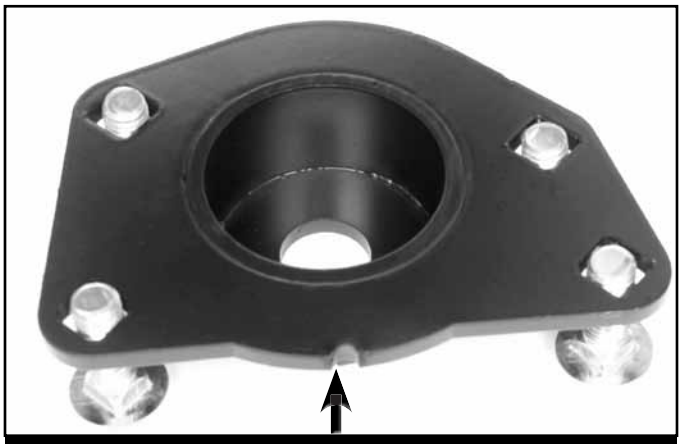

Fig 8

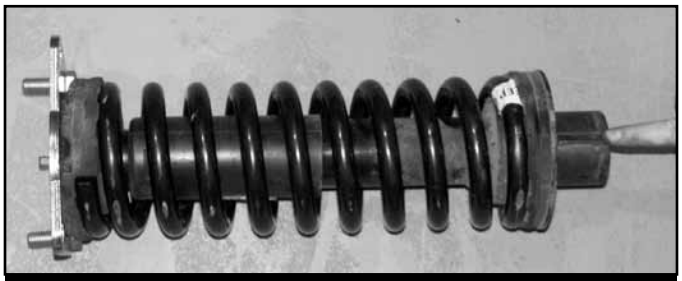

Fig 9

25. With the new spring compressed with an appropriate spring compressor, insert the strut rod through the new bracket mounting hole, install a second stem bushing and secure the assembly with the provided stem washer and OE nut. Tighten the nut until the bushings begin to swell.
26. Adjust the assembly so that the alignment notches are lined up and release the spring compressor.
27. Install the strut assembly into the vehicle by sliding it up through the upper control arm and running the carriage bolts into the four wheel well mounting holes. Loosely fasten the bolts with 1/2" nuts and 1/2" SAE washers.
28. Install the strut fork on the strut by aligning the split in the fork with the alignment tab on the strut. Loosely install the fork pinch bolt.
29. Install the fork-to-lower control arm mounting bolt and nut. Do not tighten.
30. Raise the lower control arm with a floor jack to aid in installing the upper ball joint in the knuckle. Torque ball joint nut to 60 ft.lbs.
31. Torque strut pinch bolt to 100 ft.lbs. Torque for bracket to the lower control arm bolt to 110 ft.lbs.
32. Torque the four upper mounting bolts to 50 ft.lbs.
33. Repeat installation procedure on driver's side of the vehicle.
34. With both sides complete, attach the driver's and passenger's sway bar links to the lower control arms with the OE hardware and torque to 85 ft.lbs.
35. Install the wheels and lower the vehicle to the ground.
36. Install the filter box and battery in reverse of removal. Do not reconnect the battery cables at this time.

REAR INSTALLATION

37. Raise the vehicle and support with jack stands.
38. Remove the wheels.
39. Support the center of the rear axle with a floor jack.
40. Remove the OE rear shocks.
41. Slowly lower the axle with the floor jack.
42. Remove the OE coil springs.
43. Install the new coil springs. The small diameter goes to the top.
44. Install the new BDS shocks. Use the washers included as spacers on both sides of the bushings.
45. Install the wheels and lower the vehicle to the ground.
46. Check all hardware torque.
47. Connect the positive then the negative battery cables.
48. The vehicle will need a front end alignment.
49. Check hardware torque after 500 miles.