



Stop!!!!!!!

Caution

Modifying a vehicle for off-road use, whether it is center of gravity, suspension or steering, will change the way it handles both on and off road. Reaction, ride and possible premature wear on parts are possible. Extreme caution is recommended when encountering off camber of abrupt maneuvers. Avoid sharp turns that may result in a vehicle's loss of control and/or possible roll-over causing serious injury or death. Height modifications may increase a vehicles susceptibility to roll-overs. Know your provincial, territory, or state lift/modification laws. Not all modifications may be legal for road or safety certification in your area. Knowing your provincial, territory, or state laws is the responsibility of the purchaser and/or vehicle operator.

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## **Alter Ego 4.5" Suspension Lift Installation Instructions for 1989-1998 Model Years**

**Zuki Nation always recommends having a licensed professional install any kits or parts.**

**Please read all instructions carefully before installing any kit or parts.**

**When installing hardware and super flex joints apply anti seize to threads or bolt shafts when going through sleeves.**

### **Front**

1. Secure front of vehicle under jack stands making sure you have enough room to work.
2. Remove front tires.
3. Remove front hubs.
4. Remove snap rings and washers.
5. Remove brake line clips.
6. Remove callipers (leave brake lines attached) and secure them out of the way.
7. Remove lower sway bar nuts (a-arms).
8. Remove driver side front cv, three 14mm bolts.
9. Remove cotter pins on lower ball joints and tie rod ends (back off so only a few threads are holding the nut on).
10. Split tie rod ends. Remove castle nuts. Remove tie rod ends from the knuckle.
11. Remove struts and coils. Place floor jack underneath a-arm and apply small amount of pressure. Loosen two 17mm bolts attaching strut to knuckle. Remove factory air box. Undo three 12mm nuts on upper strut mount. Slowly lower jack and guide strut out of mounting position. Remove remaining bolts, remove strut. With a-arm completely dropped out remove coil. Repeat for passenger side.
12. Split lower ball joint. Finish removing lower ball joint castle nuts.
13. Remove knuckle assembly.
14. Secure tie rod ends safely out of the way.
15. Remove front a-arms and sway bar.
16. Remove passenger cv with large flat head screw driver or pry bar by gently prying cv out of the front differential.
17. Remove three front differential brackets **\*\*Be careful, the front differential is now only held in position by the front drive shaft.\*\***
18. Install centre differential bracket first.
19. **\*\*NOTE\*\***- The next two differential brackets have extremely tight tolerances, but they do fit. Take your time!
20. Install large driver side bracket next. Reuse upper bolt. Thread the bolt loosely and allow the bracket to hang. **LOOSELY** fit all four lower bolts. You may need to massage bolts into place. When you have all four bolts started, run them in half way.
21. Thread and loosely hang passenger side differential bracket. Loosely start all three bolts and then tighten them half way.
22. Tighten all upper hanger and lower bracket bolts.
23. **\*\*NOTE\*\*** Not all front differential housing bolt holes for the mounts are threaded the same. In some instances, washers may need to be used as shims in case a bolt bottoms out.

24. Install front a-arms using original hardware.
25. Install ball joints (driver and passenger side) to the bottom of the a-arm mount. Mount with the bolt head up and the nut on the bottom. Remember ball joint points down when installed correctly.
26. Place floating polyurethane seat into a-arm seat bucket with high ramped side to the outside or ball joint end of a-arm.
27. **\*\*IMPORTANT\*\*** When you put in your coil you want to make sure it is preloaded properly. Install coil spring, small wound end up and large end on bottom. Make sure the end of the coil pig tail and the high ramped end of the floating polyurethane seat come together and where they meet to the ball joint side (or outside) of the a-arm. Hold a-arm up with your hand. Place floor jack underneath ball joint where it bolts to the arm, preferably only catching the furthest most inside bolt. (To the inside of the vehicle). Jack up a-arm until the spring collapses to the point where it wants to lift the vehicle. NOTE: If installing shims for heavy bumper/winch combo etc., they go under rubber isolator at top of upper coil mount prior to installing the coils.
28. Reinstall drive side cv, the differential end only.
29. Clean all debris and grit etc. from driver side front knuckle and cv end. Grind/clearance top and back of knuckle at top hole, clearance so flattened at back about 1/4" material remaining.
30. Liberally apply wheel bearing grease to inside of the knuckle assembly and bearings.
31. Liberally apply wheel bearing grease to the end of the cv, paying special attention to both back shoulder areas.
32. Slide the knuckle assembly onto lower ball joint and over outer cv end simultaneously.
33. Reinstall lower ball joint castle nut.
34. Remove upper strut mount on old strut and replace onto new strut (unless using original struts).
35. **\*\*If you are using your original struts, you must prep them for alignment. To prep them you die grind the upper hole of the strut into a 12mm high slot using a strut bolt as reference, die grind the strut backwards toward the body of the strut until the bolt is about 1/8" out against the strut body. Be careful and make sure you die grind in a straight line and do not enlarge the 12mm hole up to down. You want to retain a 12mm high slot. See prepped strut picture on the website for reference. If you have purchased the prepped struts with your kit, skip this step.**
36. Install upper strut spacer.
37. Install strut with strut spacer into truck. Reuse original 12mm nuts. **\*\*NOTE\*\*** We have found some variances in the upper strut mounts of these vehicles. If you find that the upper strut spacer will not bolt into the vehicle some clearances may be required. Running a 3/8 drill bit through all three holes or some minor die grinding will solve this problem quickly.
38. Reinstall tie rod end. Tighten tie rod end castle nut and lower ball joint castle nut. Install new cotter pins.
39. Continue jacking up a-arm to compress the spring further. **\*Be careful\*** This may cause the frame to temporarily lift off the jack stand on the side you are jacking up. This is not uncommon; the spring must be compressed heavily to install the knuckle assembly to the strut.
40. Reinstall the caliper bracket. Make sure the brake line is on the outside of the strut.  
**\*\*\*\*\*VERY IMPORTANT.....DO NOT SKIP THIS STEP\*\*\*\*\***
41. Install knuckle back into strut using original bolt in bottom & provided new bolt in top with flat washers.
42. On both sides remove upper brake line clip. Remove brake line from clip/bracket, then cut off upper brake line mount from coil towers. Carefully tweak the hard lines down to give more slack on the brake line. Re mount the hard line lower on the tower assembly with the provided brake line clip & screw provided.
43. Re-install brake line and clip to the strut and mount caliper to brackets.
44. When the front end is assembled slightly loosen lower knuckle assembly bolt, loosen the upper

more, pull full assembly towards you, push back  $\frac{3}{4}$  back through its travel and lock in position. This will get you camber and alignment close enough to get to an alignment shop.

45. **\*\*DO NOT SKIP THIS STEP\*\*** Your steering stops must be reset. Remove both steering stop bolts, reset the jam nut so there is only about  $\frac{1}{4}$ " of thread showing to be screwed in. Install the jam nut and tighten. Be careful to only thread in  $\frac{1}{4}$ " of the steering stop bolt before tightening jam nut. Failure to do so can result in brake failure.
46. Double check to make sure all hardware is tight and secure.
47. Re-install snap ring and washer.
48. Re-install hubs.
49. Mount front tires and secure lug nuts tightly.

This completes your front installation.

## **Rear**

1. Secure rear of vehicle under jack stands on the frame. Place floor jack on the centre of the rear differential and jack up slightly to take pressure off the suspension.
2. Remove rear tires.
3. Remove the upper third link assembly in one piece. Start by removing the four 14mm bolts on the top of the differential. Undo two 17mm bolts on the frame end and remove complete assembly.
4. Re-install new upper pedestal mount with the offset hole to the rear. Reuse original hardware.
5. Grease all three super flex joints.
6. Install one super flex joint and jam nut onto new rear third link. Thread in super flex joint until there is 1" - 1.25" in between the back threaded shoulder of the super flex joint and the end of the third link. Make sure grease nipple is up. Put in a vice and tighten jam nut. This should set your pinion angle, although some adjustment may be required.
7. Install new upper third link. When attaching super flex third link to pedestal mount place two  $\frac{1}{8}$ " spacers on either side of the joint inside the pedestal mount. This will take up the gap inside the pedestal mount and allow full movement with zero bind. This uses the longer  $\frac{9}{16}$  x 4.5" bolt.
8. Remove driver side rear link. These may need to be cut out to be removed. Be careful not to cut the frame mounts.
9. Thread super flex joints into end of link, thread in joint until its length matches stock take out links. From this point to adjusted out up to  $\frac{1}{2}$ " will not require drive shaft modifications. **\*\* These can be extended longer but a custom drive shaft or drive shaft spacer will be required\*\*** Wherever you set the length make sure the grease nipple is up, lock jam nut and **\*\*very important\*\*** measure centre of mounting point to mounting point on the link and record this measurement (to use for passenger side assembly). Take a  $\frac{9}{16}$  drill bit and drill rear link axle mount bracket holes.
10. Install rear link using hardware provided.
11. Repeat for passenger side making sure that you make the length from mounting point to mounting point on the rear link the same as the recorded measurement on the driver side rear link.
12. Remove both e-brake cable mounts for the rear links, one per side (10mm wrench). Follow e-brake cable forward, through the slotted rubber mount, to the upper hard mount on the rear cross member. Remove these 12 mm bolts and small bracket. These will no longer be used. The slotted rubber bracket on the frame will be the only ones still used.
13. Remove rear brake line and put a cap on it to stop it from leaking.
14. Jack up rear of vehicle as high as safely possible, set on highest setting of jack stands. Place small amount of pressure on rear differential and remove rear shocks.
15. Take pressure off, lower jack and allow rear differential to lower completely. Remove rear coils. Install new rear coils, making sure pig tail matches the spring seat.
16. Install rear shocks.

17. Install new rear brake line.
18. Install rear drive shaft spacer.
19. Bleed brakes.
20. Extend rear differential vent tube.
21. Mount tires.
22. Remove from jack stands.
23. Jack up front end to roughly 30-degree angle and refill front diff to site hole (this will not allow the pinion bearing to starve).
24. Take to alignment shop for alignment. Ensure that the alignment shop aligns the vehicle with a .75-degree positive camber and slight toe in. A secondary alignment may be required after the springs have broke in.

Re-torque your suspension bolts after 400 kms and every few months from then on. Ensure that you check your suspension components frequently to make sure they are in good working order and hardware is tight.

When the vehicle is all back together and on the ground, it will sit higher than the 4.5" specified. The ride will be fairly stiff initially. It will remain this way until the springs start to break in. When the springs are fully broken in you will have 4.5" of lift and a soft ride. Break in time varies.

1-877-291-9854

Email: [info@zukination.com](mailto:info@zukination.com)

Website: [www.alteredegomotorsports.com](http://www.alteredegomotorsports.com)