



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 or 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 on CV shaft.
5. Remove brake line clips on strut and frame.
6. Remove calipers (leave brake lines attached) and secure them out of the way, remove brake rotor.
7. Remove lower sway bar nuts (a-arms) and remove sway bar.
8. Place floor jack underneath a-arm and apply small amount of pressure. Remove tie rod castle nut (17mm) and hit knuckle with hammer to release tie rod from knuckle. Loosen and remove two 17mm bolts attaching strut to knuckle. Remove ball joint castle nut (19mm or 7/8") and hit knuckle with hammer to release ball joint from knuckle. Remove knuckle from vehicle. Slowly release pressure off floor jack to release pressure on coil. With a-arm completely dropped out remove coil. Repeat for passenger side. Once both coils are removed and control arms hung out move to under the hood and remove factory air box, unbolt both struts x3 12mm nuts and remove struts from vehicle.
9. Remove both front control arms, remove ball joints from control arms if you are reusing your current ball joints.
10. Unbolt driver side CV shaft from differential (x3 14mm bolts).
11. Drain front differential.
12. Using a flathead screwdriver or pry bar, pry between the passenger side cv shaft and differential while turning the cv shaft in the differential. This will release the circlip inside and remove passenger cv shaft.
13. Unbolt front driveshaft from front differential and tie up with bungee cord or mechanics wire to frame.
14. Unbolt centre differential mount from differential and frame, using a pry bar pry the mount out towards the rear of the vehicle. It is difficult but will wiggle out.
15. Remove breather line from top of front differential.
16. Loosen the 17mm bolt that holds the driver side differential bracket in place, leave this bolt in place for now but threaded all the way out.
17. Support differential with floor jack or a second person to hold it, remove the 3 14mm bolts that go through the passenger side differential bracket to the differential housing.
18. Now remove the 17mm bolt holding the drivers side differential bracket in the truck, this will release the differential from the truck and you can lower it or lift it out of the truck, remove driver side differential bracket from differential once it is out.
19. Remove the passenger side differential bracket from the frame held in with 17mm bolt.
20. With the differential on the floor you can now prep it for reinstallation (not all front casings are the same and some require die grinding on the bottom to clear the front crossmember). If your differential has a piece of aluminum that runs from the pinion to the front of the third member that hangs down it must be ground the clear the crossmember. (Pictured for reference) You can use a die grinder with an aluminum bit for this.



21. Install driver and passenger side differential drop brackets loosely into truck, then lift differential into place and run all 7 bolts in **LOOSELY**. (Not all differential casings are threaded the same, some may require stacking two flat washers on each bolt due to them not being threaded deep enough from the factory).
22. Disassemble centre differential bracket by removing the 14mm bolt that retains the rubber bushings, remove metal sleeve from inside of bushings and cut sleeve down to 1 11/16<sup>th</sup>". Reinstall bushings into new supplied centre differential bracket and tighten to original frame side bracket with the original 14mm bolt. Reinstall centre differential bracket into truck bolting to the differential first and then to the frame.
23. Once all differential bolts are installed you may tighten them, failure to leave all the bolts loosely installed while fitting the differential into the brackets will result in misalignment of the differential and a large struggle to install the bolts through their brackets. This will inevitably strip your bolts and the differential housing.
24. Reinstall driver and passenger side CV shafts.
25. Fill the front differential with 80-90W gear oil.
26. Reinstall front driveshaft to front differential.
27. Reinstall breather hose to top of differential.
28. Clean all debris and grit etc from driver side front knuckle and CV end.
29. Liberally apply wheel bearing grease to inside of the knuckle assembly and bearings.
30. Liberally apply wheel bearing grease to the end of the CV, paying special attention to both back shoulder areas.

31. Install supplied tubular front control arms, and then install ball joints to the control arms. **Ball joints go on the bottom of the control arm.** Ensure you install the drilled 14mm sleeve into the rearward bushing as it uses a 14mm bolt.
32. The front struts must be slotted for alignment purposes, mark the top hole of the strut (where it bolts to the knuckle) 3/16" back towards to body of the strut centered to the original hole and centre punch. Drill with a 7/16" drill bit, this will mate the two holes together with a small amount of material in between, die grind the two holes together to create a slot. If you do not wish to prep the struts yourself you can purchase a pre prepped set from us.



33. The knuckle must be prepped for alignment purposes, belt sand the back side of the knuckle where it bolts to the strut behind the top hole till it is flat with the rest of the knuckle, this will allow the knuckle to tilt further back into the strut. If you do not have a belt sander a grinder with a stone will work as well.



34. Install strut spacer onto factory strut mount using supplied x3 8mm nuts and lock washers and install struts into vehicle using factory hardware.
35. **\*\*IMPORTANT\*\*** Install new polyurethane coil isolator to the lower control arm and coil with the the small wound end up, and ensure the bottom pigtail of the coil is pointed towards to ball joint . 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 to compress the spring. \*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. Install the prepped knuckle assembly and thread on ball joint castle nut loosely and install factory 17mm strut bolt in bottom hole and supplied 12x70mm with flat washers, lock washer and nut on the top hole of the strut.
36. Lower the jack slowly, when the knuckle starts to tilt back towards the body of the strut tighten up the top and bottom bolt when the top bolt is  $\frac{3}{4}$  of the way back in the slot. This will give you an acceptable amount of camber to transport your vehicle to the alignment shop when the installation is complete. Completely release jack and lower vehicle back down to jackstand. Tighten up lower ball joint castle nut.
37. Reinstall brake rotor and brake caliper, clip brake line back into strut bracket.
38. Using a small cut off wheel or grinder, cut the upper brake line tab off both the driver and passenger side, on the passenger side use the supplied  $\frac{1}{4}$ " rubber clamp and self tapping screw to relocate the hard brake line lower to reduce the stress on the soft brake line at full extension and full steering lock.
39. Reinstall CV shaft spacer and snap ring and hub.
40. Reinstall tie rod to knuckle and tighten.
41. Repeat for passenger side.
42. Double check all hardware to ensure it is tight.

43. **\*\*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 3/8" of thread showing to be screwed in. Install the jam nut and tighten. Be careful to only thread in 3/8" of the steering stop bolt before tightening jam nut. Failure to do so can result in brake failure
44. Mount front tires and secure lug nuts.
45. After completing the installation of the front your alignment will need to be set, in order to drive it to the alignment shop you must roughly set your toe to drive the vehicle. Do this by cracking the jam nuts on the tie rod assemblies and threading each side evenly until the front tires are pointed straight at ride height, this will be enough to get you to the alignment shop. Give the alignment shop our lift kit specifications, these differ from factory specifications but are required for our lift kit to ensure proper ride quality.  
CAMBER: 0.5 to 1 degree of POSITIVE camber on EACH front wheel. TOE: 1/16<sup>th</sup> Toe IN.

## 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 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 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 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 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\*\*** 18 7/8" centre to centre is 1/2" over stock. Make sure the grease nipple is up, lock jam nut and **\*\*very important\*\*** ensure both rear links are 18 7/8ths" centre to centre or your rear axle will be crooked. Take a 9/16 drill bit and drill rear link axle mount bracket holes.
10. Install rear link using hardware provided.
11. 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.
12. Remove rear brake line and put a cap on it to stop it from leaking.
13. 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.
14. 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.
15. Install rear shocks.

16. Install new rear brake line.
17. Install rear drive shaft spacer.
18. Bleed brakes.
19. Extend rear differential vent tube.
20. Mount tires.
21. Remove from jack stands.

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.