

TRAIL TOUGH

SUZUKI STUFF

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Sidekick / Tracker Solid Axle Suspension 2 Door Installation Instructions

Disassembly



1. Lift vehicle and support by frame & remove wheels.



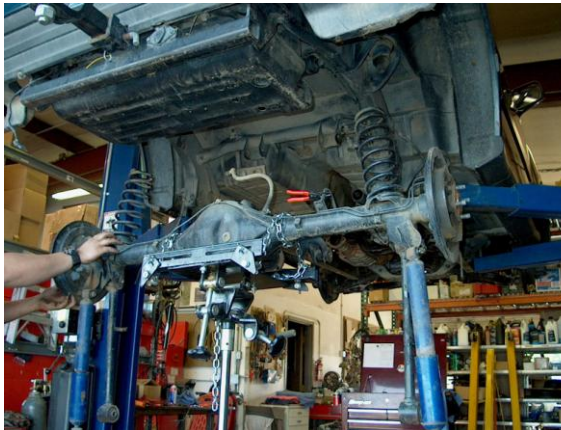
2. Remove rear portion of exhaust behind cat.



3. Drain transfer case, front and rear diffs. Remove front and rear driveshafts. Remove e-brake handle cover (console) & back-off tensioner.



4. Remove rear brake drums. Disconnect e-brake cables from arm & backing plates & remove rubber cable looms from control arm & frame.



5. Support rear housing. Disconnect lower control arms, upper A-arm, breather, brake hose and shocks from the chassis.



6. Support front A-arm. Remove three nuts from the top of the strut.



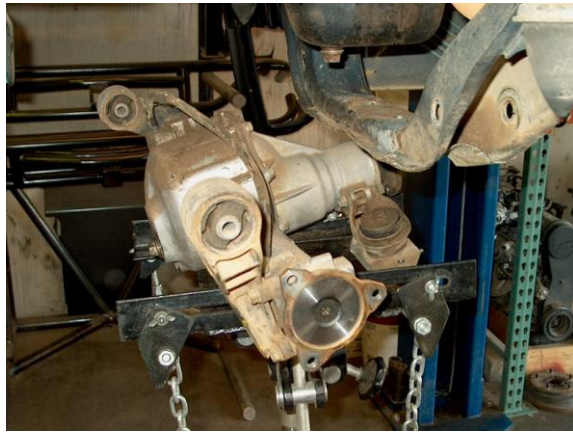
7. Disconnect sway bar from A-arms. Separate tie rod ends at the spindles. On drivers side, disconnect brake hose at the inner fender & remove clip at the frame. Remove 3 bolts from axle flange and the lower A-arm bolts.



8. On passenger side, disconnect brake hose at the frame. Remove A-arm bolts. The axle pulls straight out of the differential.

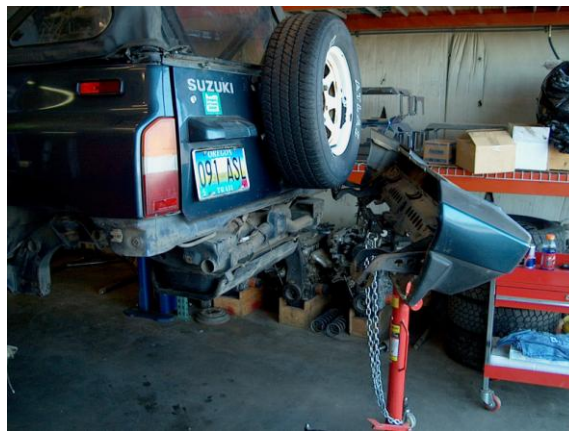


9. Remove sway bar from frame. Separate center link from pitman arm and unbolt idler arm from frame.

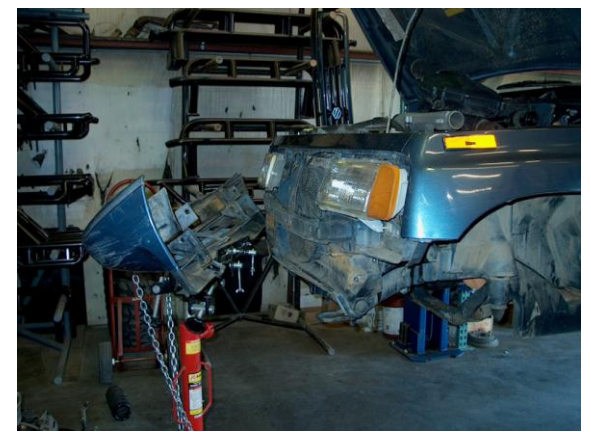


10. Remove front differential with its vent and rubber isolators.

** Use of the stock front and rear bumpers will cause serious tire clearance issues. We recommend Trail Tough bumpers and nerf bars.



11. Remove outer and inner rear bumpers.

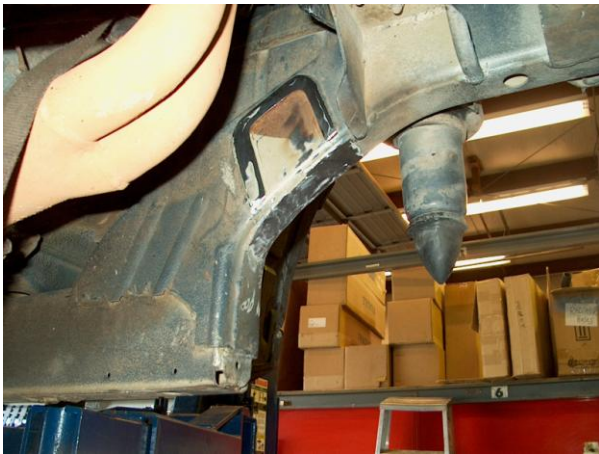


12. Remove outer and inner front bumpers. Some trimming may be done to the ends of the grill. Removal of the grill may make this easier.



13. The second frame cross member from the front must be removed. In preparation, unclamp the fuel and brake lines from inside the right frame rail and tie them out of harms way (Towards the motor).

14. Using a sawzall, torch, plasma or cut-off disc, remove the second frame cross member (The one under the engine oil pan) completely. Be careful not to damage the frame rails. See next 2 photos below.



14. Continued

14. Continued

15. Removal of the front A-arm brackets (on the forward most cross member) is optional. If you choose to remove them, be sure not to damage the cross member (shown NOT removed).

Front Axle

** Requires 1979 to 1985 Toyota pickup complete front end. The factory anti-wrap bar bracket must be removed from the housing. The three small brackets for the steering stabilizer and sway bar should also be removed. ** DO NOT remove the factory leaf spring perches, shock mounts or steering stops!!



16. Fit passenger side lower control arm bracket (with panhard bracket) up to the housing. Some grinding of the weld on the factory perch may be necessary for proper fit. Bracket should fit flat against and centered over perch and be square to the center line of the housing. Before tack welding in place, remove paint and scale in the area to be welded. Fit driver side in the same manner. Some housings have a short perch on the left side. The supplied 3/8 shim can be tacked to the perch to correctly locate the control arm bracket.



17. The upper control arm bracket sits level on top of the housing to the drivers side of the pumpkin. (It does sit to the passenger side of center)
The cutout for the control arm points back. Before tack welding, remove paint and scale in the area to be welded.



18. Weld brackets in place. The upper bracket should only be skip welded.

Rear Axle

** Requires 1986 to 1995 Toyota pick-up complete rear end with 2 3/8" wide spring perches. The factory e-brake cable bracket and proportioning valve rod bracket could be removed. ** DO NOT remove the factory leaf spring perches or the brake hose / line tabs.



19. Fit the drivers side lower control arm bracket up to the housing (shock stud points back and is closest to housing end). Some grinding of the weld on the factory perch may be necessary for proper fit. Bracket should fit flat against and centered over perch and be square to the center line of the housing. Before tacking in place, remove paint and scale in the area to be welded. Fit passenger side in the same manner. Before welding, verify that the shock studs point BACK and are closest to the housing ends.



20. Upper control arm bracket sits centered on top of the housing. Cutout for control arms points forward. Before tacking, remove paint and scale in the area to be welded.



21. Weld brackets in place. Upper bracket should only be skip welded.

Installation



22 Fit right subframe up to passenger side frame rail. Align radiused cutout at rear of subframe with the third (from front) frame cross member. Some clearancing of the factory weld may be necessary for proper fit. Use a floor jack to seat subframe against bottom of framerail. Remove under coating if it is uneven or does not allow subframe to seat flat. Fit left subframe up to drivers side frame rail the same way.



23. Bolt right & left subframes to the crossmember using four $\frac{1}{2}$ -20x1 $\frac{1}{4}$ " bolts, nylocs, & flat washers. Position the crossmember so that the front upper control arm bracket aims forward and its hole is offset towards the ground. Leave the bolts loose enough to allow width adjustment. Use a floor jack to raise assembly up to frame rails. Make sure both sides are located by factory crossmember and seated up against frame. Drill six $\frac{9}{16}$ holes through frame using subframes as drill guides.



24. Bolt in place using six 1/2 -20x3 1/4" bolts & nylocs. Center crossmember between subframes and tighten the four 1/2 -20x1x1/4" bolts.

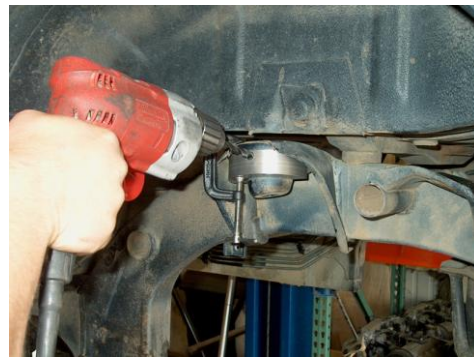


25. Fit panhard bracket up to drivers side frame rail. The bracket fits snugly into pocket where the front differential housing bracket used to be (just back from the steering box). Make sure the bracket seats up against the bottom of the frame. Clamp if necessary. Install one 12m-1.25 bolt through the factory frame hole. Drill one 1/2" hole through the frame rail using the panhard bracket as a drill guide. Unbolt and clean paint and undercoating from the frame in the area around the bracket. Bolt the bracket back into place using supplied 12m – 1.25x90 bolt, lockwasher and one 1/2 -20x3 1/4" bolt, flatwasher and nyloc.



26. Weld bracket to frame as shown.

Remove all four factory bump stops & rubber coil spring bushings.



27. Slide aluminum upper coil retainer into frame spring pocket, chamfered side up. Rotate so the threaded side of the retaining bolt hole is toward the frame rail. Using the coil retainer as a drill guide, drill a 25/64" hole through the outer wall of the spring pocket and start to drill the inner wall. Remove the coil retainer and finish drilling the inner wall so you don't damage the threads in the retainer. Now drill the 25/64" hole up to 7/16" through the outer & inner walls.



28. The outer lip of the spring pockets may need to be cleared around the retaining bolt hole. Give enough clearance to fit a wrench on the bolt.



29. Slide the coil retainer over the last coil, then slide up into the pocket. Bolt in place using the 3/8 -16x4" bolt.



30. Install front upper shock mounts using three 5/16 -24x1" bolt & nyloc per side. Orient the tabs forward in the vehicle.



31. Front lower control arms use straight joints & 29 1/2" control arms (preset center to center length to 34 1/2"). Use 9/16 -18x4" bolt & nyloc at both ends. Leave loose for now. Notice the joint has room to slide on its bolt at the axle bracket. Use one included flat washer on the inside of the joint to take up this space.



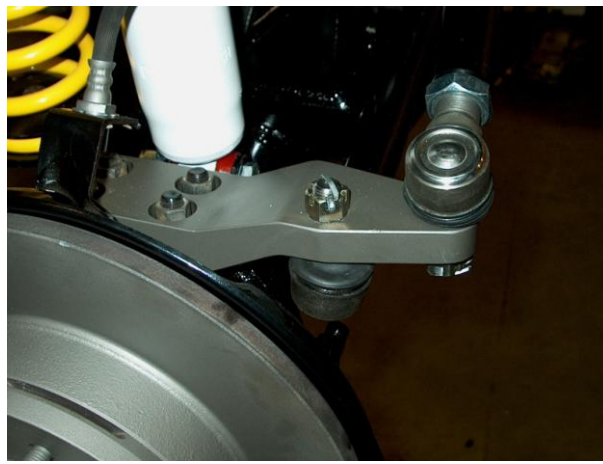
32. Front upper control arm uses straight joint and 34 1/2" control arm (preset center to center length to 39 5/8") Use 9/16 - 18x4" bolt & nyloc at both ends. Leave loose for now.



33. There are two styles of transfer case cross members. If your car has the single layer style, trim the front edge as shown to give the needed control arm clearance. If your car has the two layer welded style. No modifications are necessary.



34. Attach lower end of coil spring to housing using lower spring retainer & one 3/8 – 16x1 1/2" bolt & nyloc.



35. Replace Toyota steering arms with supplied arms using Toyota hardware. Be sure the long arm is on the passenger side. Tie rod installs under the steering arms. Drag link installs above the steering arm. Preset center to center lengths to:
Tie rod = 46" Panhard = 31" Drag link = 34 3/8"



36. The front driveshaft yokes need to be clearanced to accommodate extra wheel travel. Clearance the ears & saddles at both ends of the shaft. Clearance should be checked with the front axle hanging on the coil springs. Once proper clearance is achieved, install driveshaft with the supplied 1 1/8" spacer & M10 – 1.25x60 bolts & flangenuts.



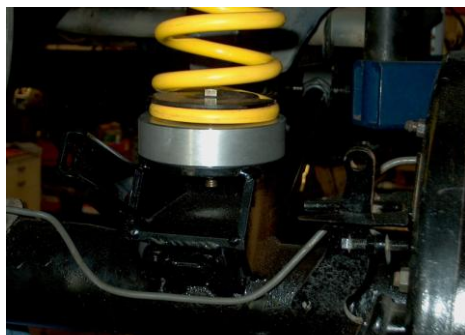
37. Original Toyota front brake hoses & clips will be reused. In order to use the frame tab, the hole will need to be clearanced to accept the Toyota hose. Invert the hose from its factory installation so the long end is at the frame & the short end at the backing plate. On the passenger side, reconnect brake line to hose. On the drivers side screw the supplied hose into the Toyota front hose & tighten. Clearance hole in the inner fender to accept the other end of the supplied hose & reconnect brake line. Install front shocks, shaft up, using supplied M12 – 1.25x60 bolts & nylocs. Install wheels & torque to 65 ft-lbs.



38. Rear lower control arms use straight joints & 29 ½” control arms (preset center to center length to 34 5/8”) Use 9/16 – 18x4” bolts & nyloc at axle end. Notice the joint has room to slide, use one included flat washer on inside of the joint to take up this space. Use 9/16 – 18x7” bolt & nyloc at the subframe. DO NOT slide 7” bolt all the way through the subframe.



39. Rear upper control arms use angled joints & 34 ½” control arms (preset center to center length to 39 ¼”) Be sure the angled joints are oriented to help misalignment. Use one 9/16 – 18x7 bolt & nyloc through the joints at the upper housing mount, Finish inserting the previously installed 7” bolts through the subframe end.



40. Attach lower end of coil spring to housing using lower spring retainer, 1” spring spacer, & 3/8 – 16x2 ½” bolt & nyloc. Original Toyota rear brake hose & clip will be re-used. In order to use the frame tab, clearance the hole to accept the Toyota hose. Reconnect brake line.



41. Install rear shocks using the supplied 5/8 -18 nylocs & flat washers. Set the car on the ground. Use the panhard bar to center the front axle. Adjust the length of the rear upper control arms to center the rear axle. **Remember to take the load off of the coil springs & support the vehicle whenever a control arm is to be removed! Now align the front axle to the rear by taking parallel & cross measurements. Adjust front upper control arm length to achieve 5 degree castor angle. Adjust rear upper control arm length to set the pinion angle equivalent to the transfer case output. Set toe in front to 1/8” toe in. Adjust the drag link to center the steering box travel. Tighten cross bolts at ends of all control arms! Tighten all jam nuts. Make sure all of the joints are in phase when the jam nuts are tightened.

42. Install rear driveshaft with the supplied 1 1/8" spacer and M10-1.25x60 bolts & flangenuts. (If you plan on running 35" tires you will need to utilize the OPTIONAL custom rear driveshaft without a spacer). Press apart original rear driveshaft leaving the u-joint in the flange. Reinstall in the supplied rear driveshaft. Install in vehicle using original hardware.



43. Slide e-brake cable through the tab on the rear control arm bracket, then slide the U shaped clip over the end of the cable. Bend the end of the arm - at the backing plate – forward about 45 degrees. Use the Toyota pin to attach the U-clip to the arm. Re-tension at the e-brake handle.

44. Depending on the tire size, some trimming of the inner fender should be done (to accommodate full steer).

45. Full t-case & diffs with 80/90 gear oil.

46. Refit with cat-back exhaust as desired