All-Pro Tacoma/FJ Cruiser/ 4Runner Spindle Gusset Installation

Important notices:

These instructions are intended only as a general guide for installing All-Pro products. For some items, specialized mechanical skills, metal fabrication and/or welding skills may be needed for proper installation. If you have any doubts or questions about installing these or other parts please call us at the shop 951-658-7077 or contact a competent mechanic, fabricator, welder or other appropriate professional.

Aftermarket accessories are intended to modify and/or prepare a vehicle for uses that exceed conditions anticipated by the vehicle manufacturer. These uses may include high performance demands and negotiation of rough terrain. These conditions have extreme variance and cannot be controlled by the vehicle manufacturer or aftermarket accessory manufacturer. Therefore, the safe control of your vehicle is entirely your responsibility. Do not purchase parts from All-Pro Off-Road unless you are willing to accept this responsibility. Do not install any All-Pro part that you do not feel competent at installing without causing present or future injury to yourself or others; consult a professional installer.

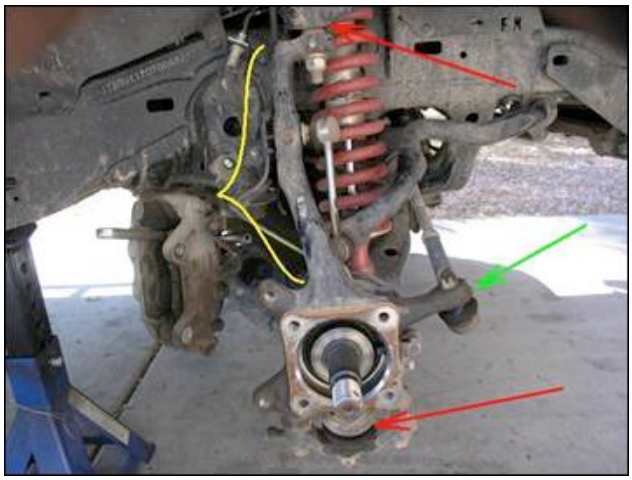
All parts sold by All-Pro Off-Road are for off road racing use only and are not intended for use on the street. Modification of your vehicle to enhance performance with the parts sold by All-Pro Off-Road can result is dangerous situations that may result in bodily harm. The buyer hereby assumes all risks associated with any such modifications. All-Pro Off-Road will not accept responsibility for personal injury or property damage arising from the failure of any parts manufactured or sold by All-Pro Off-Road.

In an effort to provide both durability and safety, All-Pro Off-Road recommends you carefully read the entire installation procedure before beginning, then rigidly follow these instructions during installation. Also, it is extremely important that you abide by proper safety procedures including the use of jack stands, setting the parking brake, wearing eye protection, etc.

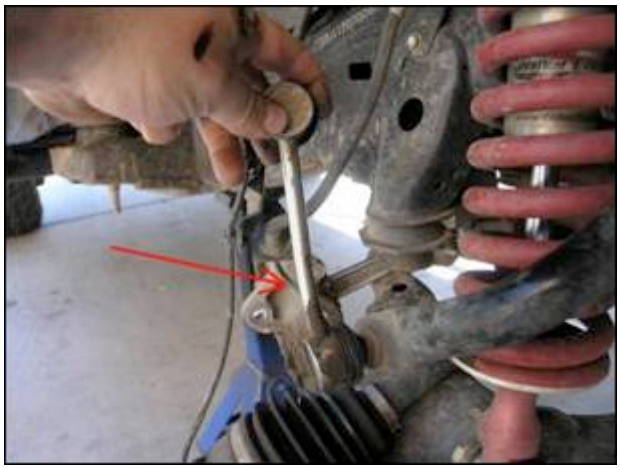
Install Procedure

Kit Includes: 1ea Left & Right side Spindle Gussets

Disassemble the front end down to the knuckle. Remove the wheel & tire, brake caliper and rotor, spindle nut and hub as pictured on the left below. Also disconnect the wire that connects to the front hub sender. On the right below, the upper & lower arrows point to the ball joints at the top and bottom of the knuckle assembly. The bracket shows the upper spindle arm. The center arrow shows the steering arm with the steering drag link still attached. In the center, without any arrow, you can see the end of the front CV axle sticking out, now totally free of attachments. Along the upper spindle arm, you can see where the sway bar link is attached.



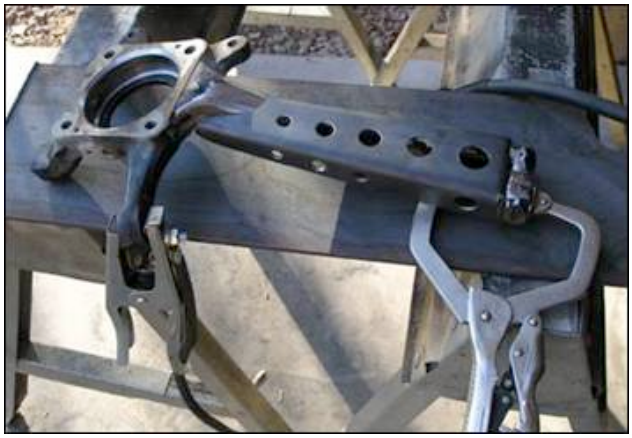
When disconnecting the sway bar link, inspect them for damage such as bending as pictured at the arrow below, or leakage from the boots. If you find damage, now would be a great time to upgrade to the All Pro heavy duty sway bar links and the sway bar centering collars we offer to prevent the problem from happening again.



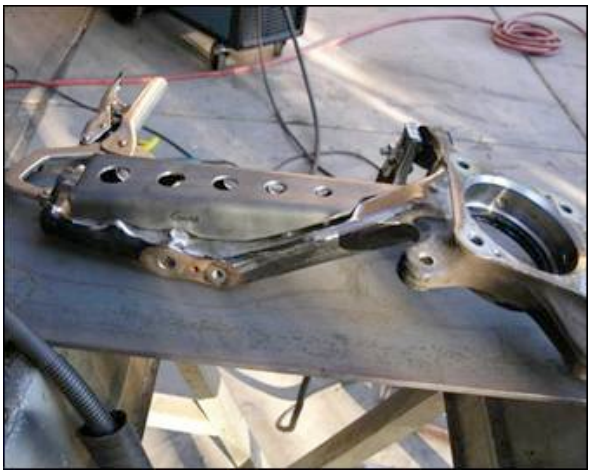
Finish disassembly and remove the spindle from the vehicle. Here is the knuckle, taken down to where nothing else is attached other than the grease seal that the axle rides in

Inspect the seal for damage. Pictured below is a failure in progress; the seal had eroded. One of the garter springs had eaten through its own lip. If you find any damage replace the seal with a new unit from your local Toyota dealer. As of the writing of these instructions no aftermarket seals are available. Toyota's part number is 90316-A0001

Tests fit the gussets to the spindle and make any adjustments as necessary. A slight gap is normal and will be filled during the welding process. Prep the area on the spindle to be welded using a flap disc or other adequate sanding process so the area to be welded is clean and bare. Clamp and double check fitment again before beginning



Tack the gusset to the spindle (left photo) Pictured on the right below is the finalized weld



Paint and reinstall

Various notes for potential installers:

Other than the welder, I used an air impact wrench with 17, 19, 21 and 22 mm sockets, a couple of 1/2" drive ratchet wrenches, a 12 mm box end wrench, a 17 mm box end wrench, and a needle nose pliers for the cotter pins in the spindle nut retainer and the steering arm castle nut. I pulled the steering drag link using a 3 jaw puller, and I found use for a ball peen hammer a couple of times. I used a 5 mm allen wrench to unscrew the socket head cap screw holding the wheel sender into the knuckle, and I used a standard screwdriver to unsnap the electrical wire.

When you get down to the knuckle, the major attachments are the taper-fit connector at the upper ball joint, the taper fit connector at the steering drag link and the two bolts in the bottom of the knuckle that take a 19mm socket. The bolts on the bottom are easy. The UCA ball joint taper connector is pretty tight, but the spring in the coil over is working FOR you. The trick to opening this up is to loosen the nut on the bottom PART WAY, and then tap on the flat in the front of the end of the spindle arm with a hammer. This will shock-free the taper and the mechanism will fall open onto the nut, which you've wisely left in place. However; DETATCH THE STEERING LINK FIRST!! The reason is that the knuckle is still stabilized by its other connections. I used a 3 jaw puller since I didn't want to muck up the rubber boot with a fork-type separator. Break the steering link free, but leave it attached. Then break the upper spindle arm ball joint taper free, and leave it attached. THEN take the bottom bolts and unscrew all the rest. It's important to have a good floor jack and jack stands. The floor jack needs to be used to move the LCA up and down when you're taking apart or putting together the front suspension.

Thanks to Jon “Bellydoc” Goodman for the pictures and installation tips!