

FSJ Steering Correction:

You will need to do some type of steering correction:

Some folks will argue that a drop pitman arm will work, my experience has shown me that if that is all you do the drag link will hit the right side front spring upon full right turn.

So there is cross-over steering and full high-steering, both involve flat top steering knuckles, these are found on 74-mid 77 FSJ and GM 4x4's with disc brakes.

Do not search for Dodge or Ford knuckles, they do not work for us because of the spindle stud pattern.

Cross-over steering is the cheapest and fine for most folks up through 35" tires.

You will need a passenger side flat top steering knuckle, that will be milled flat, then drilled and tapped for the stock GM knuckle studs.

The tie rod remains in it's current location and a new drag link is built that will connect to a steering arm that is attached to the top of the knuckle.

Full high-steering uses both a passenger and driver side steering knuckle. A new tie rod is made that moves up above the leaf springs and a new drag link is made. This obviously costs more since you are doing both sides and purchasing two steering arms.

The nice thing about using GM knuckles is that the driver side knuckle will be done for you and they made several hundred thousand 4x4 vehicles over that time period.

Where do I get my knuckle(s) milled, drilled and tapped?

If you live in a major city you can probably find a machine shop that can do this quickly and cheaply. If not I use this vendor on Ebay.

<http://www.ebay.com/itm/Flat-top-knuckle-machining-service-Dana-44-GM-10-bolt-/300185812467>

Where do I get my steering arms?

I have had fabulous results from WFO Concepts: <http://www.wfoconcepts.com>

I do suggest you talk to them in person on the phone, they will get a tech person on the line with you, they are very helpful.

For cross-over steering you want: <http://www.wfoconcepts.com/pr/Dana-44-10-bolt-Forged-Cross-Over-Arm-2-Tall/3163/3168/3461/3709>

Order Part Number: WFO 1218-DKIT

This will include your knuckle studs, cone washers and nuts.

For full high-steering you want: <http://www.wfoconcepts.com/pr/Dana-44-High-Steer-Arms-Forged-2/3163/3168/3461/3708>

They do not come with hardware so you will need to order:

<http://www.wfoconcepts.com/pr/Dana-44-Stud-Nut-Cone-kit/3163/3168/3461/4082>

Order Part Number: WFO 1250

You will need two of those.

I am just doing cross-over, where do I get my drag link kit?

<http://www.wfoconcepts.com/pr/Draglink-Kit-w--Ends/3163/4295/4493>

I am doing full high-steering, where do I get that kit?

<http://www.wfoconcepts.com/pr/Full-High-Steer-Inverted-T-Kit/3163/4295/4298>

There are many more vendors that provide all this and more, please shop around.

Again, if you live in a major city with an active 4x4 population you can probably find someone local at a cheaper price.

All this above should get your steering correction done

FSJ Drive Shaft Modifications:

Quarda Trac Owners: Please pay attention.

The front output on a BW 1339 sits a bit more forward than say a Dana 20 or New Process case, this almost always means you are looking at a high angle front drive shaft right from the start.

You may have a local drive shaft place that can do this for you, if not, Tom Woods is your go to guy on this.

<http://www.4xshaft.com/>

Call them, tell them exactly what you are doing. You will need measurements but they will walk you through it painlessly.

Dana 20 and New Process Owners:

For the most part your shafts are just getting longer, any local drive shaft shop can do this.

There are many drive shaft and transfer case output upgrades available.

For anything over 35" tires I highly suggest you look into 1350 series yokes and or flanges and 1350 u-joints. Do your research either locally, or Tom Woods is a great online source.

There are many bigger stronger options out there also.

FSJ Exhaust Modifications:

If your exhaust is stock on a 1979 and older FSJ you will have two areas to modify. The Y-pipe area where it crosses the front drive shaft will either need to be lowered so the front shaft can drop down without hitting it or it can be rerouted above the drive shaft. Typically it is easier to lower this area. This is not a concern on the 80-91 FSJ's since the front drive shaft is on the driver side.

On all FSJ's if the exhaust still exits the vehicle in the stock location this area will need slight modification to clear the rear shackle flip hangers. This is pretty simple, it can be made a little shorter, longer, a 90° elbow added to shoot it back towards the driver side.

Just do your planning, you don't want to relocate it to an area where it might get crushed off-road.

On FSJ's with headers, dual exhaust and/or other existing exhaust changes from stock you will simply just need to look at what was done, where it is located and plan for any areas that might interfere with a SOA/Shackle Flip installation.

80-91 Fuel Tank Skid Plate:

With these years there is an area on the drivers side where the skid plate bolts to the frame by the front mount in the rear, You will need to loosen up the bolts on the skid plate and bend this area slightly for the new bracket to fit.

U-Bolts:

You are going to need new ones all the way around.

The part numbers and sizes are on my website.

That pretty much sums up the major modifications required but don't be surprised if you find something odd. With even the newest FSJ being at least 24 years old the chances are pretty good that something has been changed along the way.

Thanks,

Tad Strickland

<http://www.ttsfabworks.com/>