FD3S FORD 9” IRS INSTALL DIRECTIONS

Kit Includes:

1. 1x Front Mount Support X-pipe Bridge (weld in)
2. 2x Subframe reinforcement plates (weld-in)
3. 1x Front mount support
4. 1x Center section (strange) with pinion support machined for front mount
5. 1x Rear Case (bolt-in)
6. 2x Solid rear bushings for rear case mounts
7. Hardware to support the Rear cradle, front mount hardware
8. Hardware for pinion support (front mount)
9. Driveshaft Shop PRO level axles and Billet wheel hubs

INSTALLATION:

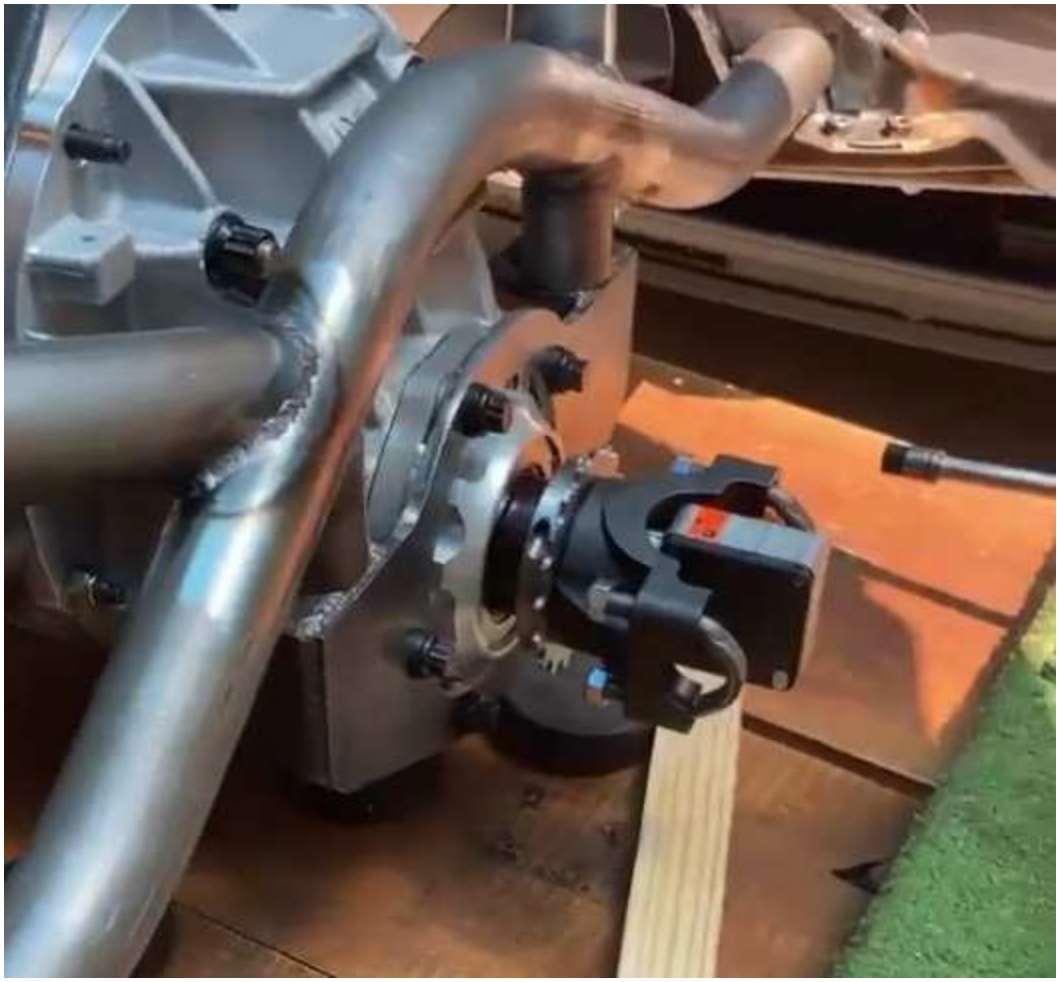
To start installation, the first step is to remove your subframe from the car and prep it for install. I recommend grinder with wire wheel to remove the paint off in order to be able to weld the subframe reinforcement plates. I recommend MIG welding these plates into the subframe as the subframe may be difficult to tig weld due to contamination from age and usage. See picture below for how the plates are oriented on the subframe. Tack weld them first before fully welding.

After the plates are welded in place the next step is to assemble the center section onto the rear case using the studs and nylock nuts.

After the center section and rear case are married, you will then install the stubs (one long, one short) into the appropriate side, and bolt the seal retaining plates onto the case. To make fluid install easier, I normally install one stub completely, then add fluid to the case before installing the other stub. I put the fluid right through the stub hole. The 9” diff takes 2 quarts 85-140 gear oil (any quality brand is fine, we prefer Lucas). Now that the rear is fully assembled, you ca add the breather fitting to the top of the case.

Once the rear end is fully assembled we can install it into the rear mounting holes of the OEM subframe. Leave these bolts hand tight for now as we do want to be able to rotate the differential in the subframe for the front mount positioning

Now that the diff is in the subframe you will need to get the differential angle setup. To get started you will want to set the subframe on the floor and get the flat surface on top of the subframe level or at as close to 0 degrees as possible. I like to use a digital angle finder which you can find at any local hardware store for about $30. What we typically do is stack some wood under the front legs of the subframe to raise it up about 2-3 inches to get it to where the top is level. Try to make sure the subframe is stable so that you can pick up the front of the diff without shifting the subframe from being level. See picture for reference



With the subframe level, now you will want to attached the x-brace to the front mount (snug only, so it can be rotated slightly for best fitment) and now use wood again to lift the front of the differential nose up so that you can get the differential to about 3 or 4 degrees of angle UPWARD.

Why I typically angle the differential up here, is because you can easily space the differential nose down with washers to get the angle closer to 0 — but once the x-brace is welded in, there is no way to get the angle upward again. So setting it up initially with 3-4 degrees up gives you more adjustment to get your driveline angle matched up to your transmission as close as possible.

Once you have the differential yoke/input at the desired angle , you can now tack weld the x-pipe in place to the subframe reinforcement plates. Try to tack it well so it will have less tendency to move around when finish welding. You can TIG or MIG weld the x-pipe to the plates. Due to variances in the subframes you may have more gap in certain areas than others - for this reason mig welding the brace may be easier.

After you have the x-brace fully welded you can paint the subframe and it will all be ready for reinstallation.

For the axles, you will need to remove the OEM spindles and press off the OEM wheel hubs. You will then press on the new BILLET DSS upgraded wheel hubs. You will want to replace the rear wheel bearings with new OEM bearings at this point as well. You do not want to do all the work to replace the hubs without doing new bearings as well.

After you have the subframe back in place and your wheel hubs installed and the spindles and suspension all back in place you can install the axles into the wheel hubs and bolt on the CV's to the inner 9" stubs.

Below are more miscellaneous pics to help assist with your install