

## **2005+ JD Fabrication 2.25" and 4" long travel install instructions**

This guide is to be used as a basic outline for installing your long travel kit. Please note that the tools we use for the installation are what's recommended to make your life easier however you may improvise when need be depending on the tools you have available. In addition to a complete metric/standard tool set, floor jack, jack stands and a grinder you will need a 3 1/8" hole saw for the upper shock mounts. Welding is required to mount the shock reservoirs and upper limit strap tabs.

Place your vehicle securely on jack stands with the front wheels off the ground. The ideal position for the stands is just behind the cab mount as they will be out of the way during the install process. Remember to have the vehicle in park and set the emergency brake!

Once you have the truck stable on jack stands with the tires completely off the ground you can start the disassembly process.

**IMPORTANT!** Disconnect the negative (-) battery terminal at the battery. The Tacoma computer and electronics are very sensitive and damage can be done when welding to the truck if the battery isn't disconnected.

### Step 1:

Remove the factory lower skid plates by removing the 4 12mm bolts. Next remove the factory swaybar as this can not be reused with our kit. To remove the sway bar loosen the sway-bar end links from the spindle. Remove the 4 14mm bolts from the swaybar bushing area on the bottom of the frame. We also recommend removing the lower strut braces making the swaybar removal easier.

Step 2 – We strongly recommend draining the differential oil as it will leak everywhere when the axles are removed. Locate the factory diff drain plug and remove using a 12mm allen wrench or socket.

Step 3 – Remove the rubber aprons from both sides of the wheel wells by remove the plastic clips.

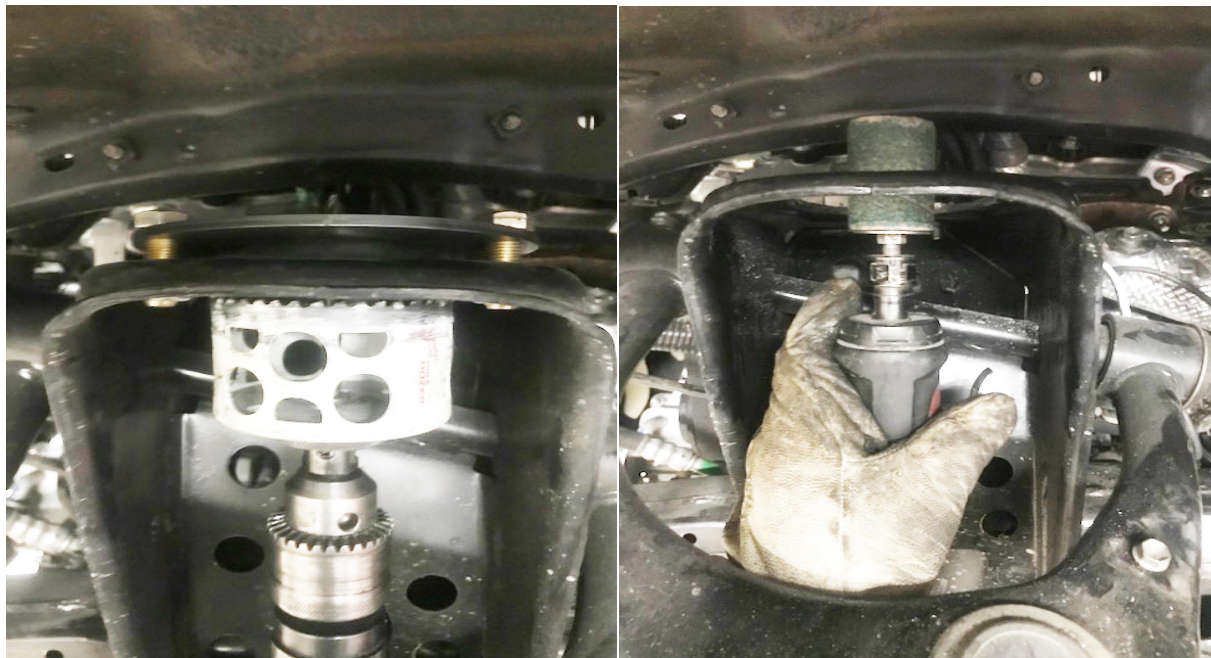
Step 4 – Removing the spindle is the next step. To do so disconnect the ABS wire from the ABS sensor at the lower portion of the stock spindle. Along with the brackets that hold the wires to the spindle. Using a 17mm socket remove the front brake calipers and hang them out of your working area. You do not need to disconnect the brake lines yet. Then loosen the tie-rod jam nuts from each tie-rod end with a 22mm wrench. Remove the cotter pins from both outer tie-rod ends at the spindle. Loosen the 19mm nut on the tie-rod at the spindle. Smack the steering arm portion of the spindle just above the tie-rod to loosen the tapered fit. If smacking the spindle does not work you can use a pickle fork however be prepared to replace the outer tie rod boots. Let both tie-rods hang free and out of your working area. Using a chisel and a hammer tap around the outer edge of the hub cover to remove. Once the hub cover has been removed undo the cotter pin and remove hardware. Loosen both 4wd axles nuts on each side using a 36mm socket. Next loosen the lower ball-joint cradle from the spindle using a 19mm socket on both bolts. (Leave the bolts loose until the upper ball-joint nut has been loosened.) Use a 19mm wrench to loosen the upper ball-joint nut at the top of the spindle. Smack the top portion of the spindle under the ball-joint to loosen the tapered fit. If smacking the spindle does not work you can again use a pickle fork. In order to remove the spindle you will have to tap on the 4wd axle to loosen the splines in the hub bearing. Make sure you do not damage the axle threads when doing this.

Step 5 – Removing the upper control arms requires two 19mm wrenches. Using the 19mm wrench's loosen the upper cross shaft bolt and remove. You will have to bend a portion of the steel inner fender out of the way to remove the bolts. Make sure the wiring is out of the way when removing the upper arm bolts. Remove any other sensors from both aprons that might be obstructing the bolt from removal.

Step 6 – In order to remove the axles you will need a drift or pry bar. Using the drift/pry bar tap on the inner cv-joint to release the inner retaining clip. Tapping on the inner joint where the factory grooves in the CV housing is recommended. Once the retainer clip has been released, remove the axle. Once you have removed the axles use a 19mm socket and wrench loosen

both lower arm cam bolts. With the hardware removed, remove the control arms from the frame.

Step 7 – Upper shock mount prep. Once you have the entire front end of the truck disassembled the first step is to prep the upper shock mounts. The upper mounts need to be opened up to 3 1/8" in order to clear the new upper shock mounts. The easiest way to do this is with a 3 1/8" hole saw. We provide you with a hole saw alignment template to aid in the process. Simply bolt the template to the top side of the shock mount and start cutting the hole from the underside until you are through the factory mount. Repeat the same process for both sides. After you have opened both factory upper mounts we recommend cleaning up the 3 1/8" holes with a barrel sander as the hole saw will leave some sharp edges. If you do not have a barrel sander a combination of a round file and a grinder with a sanding disk can achieve the same results.



Step 8- If you purchased a secondary shock mount for your LT kit this is the time to install it. After you have opened up the upper shock mounts, bolt the bypass mounts on. To get the bypass mounts to sit flush against the frame you will have to sand down some exposed bolts that protrude through the inner fenders. Once the bypass mounts are bolted up mark where they

land on the side of the frame. Then remove the bypass mounts and weld the supplied square plates on the frame with them centered over the marked hole. Once the frame plates are welded, reinstall the bypass mounts and weld them to the square plate. Then fit the supplied gussets in and weld them up. It is recommended that you paint the backside of the bypass mounts before they are welded on as you will not be able to once they are installed.



Step 9- Remove the factory brake line clips from all mounts frame side and spindle side. Loosen the bottom brake line fitting at the caliper then at the top of the frame. Install the new brake lines provided in this kit. Before

tightening the fittings make sure the line is not contacting anything that might damage the line. Snug down both lines at this time

Step 10- Install the new lowers arms on the truck. You may have to bend the factory lower arm tabs open as they easily get crushed when they are tightened around the OE rubber bushings.

Step 11- With the lower arms installed and the upper shock mounts prepped you will need to install our upper top hat on the shock. The top hat must be bolted to the shock before its installed on the truck. When installing the shock on the truck the rear top hat bolt can be a little tricky and we recommend taping the nut into a socket with a long extension to get it started. When the upper shocks are bolted in you can then install the lower control arms and bolt the lower shock ends on. Torque the shock bolts and nuts to 35 ft/lbs

Step 12- Next you will need to prep the lower ball joint adapters so the spindle can be installed. We recommend cutting off the steering stops completely. You can cut the steering stops off of the ball joint cradle using either a band saw, hack saw, reciprocating saw, or a disc cutter. Sand off any rough edges from cutting the steering stops off and paint the sanded area. The factory ball joint adapters are bolted to the spindle using the supplied hardware and necessary spacers. It is extremely important to loctite these bolts in and torque them to 115ft/lbs! The EMF ball joints are torqued to 105 ft/lbs. However before you install the ball joint adaptor you will need to install the 4WD axles.



Step 13- If you are not using our 934 axle conversion we recommend purchasing complete axle for a 2" over kit from CVJ Axles. For the axle installation we recommend to grease the inner and outer dust seals. Place a small amount of grease on each end of the axle splined areas. Place the inner axle shaft into the diff housing, rotate the axle till the splines line up. While holding the outer CV give the axle a good shove towards the diff to seat the retaining clip. If the axle does not seal all the way against the seal you may need to tap it in lightly. Install the outer CV nut then tap on the CV joint till it seats against the seals.

Step 14- Install the upper control arm. You do not use grease as the control arms utilize sealed uniballs. You do not use the factory upper arm washers with our kit and we also strongly recommend adding the upper are double shear kit at this time. Torque nut to 85 ft/lbs.

Step 16- While holding the spindle up slide the 4WD axle through the bearing/turning the hub to insure proper spline alignment. Lower the spindle till the ear of the spindle rests on top of the lower uni-ball adapter. Using the supplied bolts and ball joint spacers thread them through ball joint cradle (with Loctite) then into the spindle. (Leave these bolts finger tight for now). Using a floor jack under the ball joint cradle, carefully jack up the lower control arm about 2" being careful to not lift the vehicle off of the jack stands. Next lower the upper control arm down to the top of the spindle. With the spindle on the suspension tighten all hardware. Now lower the jack

returning the suspension to full droop and remove the jack. Torque the upper EMF bolt to 105 ft/lbs, 2 lower 19mm bolts to 115 ft/lbs and the axle nut torque to 175 ft/lbs. Tighten the axle nut, install the keeper over the nut and install a new cotter pin. Install the axle hub cap and tap to seat in place.

Step 17- Once the spindle is bolted to the lower control arm install the axles and then install the upper control arm. When the suspension is dropped out the upper control arm will come in contact with the lip on the side of the factory coil bucket. This lip will have to be ground down in order for the suspension to completely drop out. The best way to do this is to mark where the upper control arm comes into contact with the coil bucket and sand off the lip.



Step 18- Don't forget to install the supplied brake lines and we recommend zip tying the ABS lines to the brake lines. We also supply you with Adele clamps that allow you to bolt the brake line to the factory bolt hole in the spindle. Then place the rotor over the hub bearing, slide caliper and brake pads over the rotor. Push caliper on until the mounting holes are lined up. Tighten caliper to the spindle using factory hardware. Torque caliper bolts to 90 ft/lbs. Mount all factory brake line brackets using factory hardware. Make sure supplied clips with the brake lines are installed on both ends. Refer to vehicle repair manual for brake bleeding procedures. Make sure the ABS wire takes the stock path to the ABS plug. Mounting the ABS wire to the outside of the upper arm is recommended. Tie-wrap the ABS wire in two locations on the straight tube of the upper control arm. From this point, route the wire just like factory. Check to make sure the ABS plug is inserted all the way and be make sure that the ABS wire is free from obstructions.





Step 19- When installing the limit straps start with the chip in the lower position. With the suspension completely dropped out measure 1" down on the shock shaft and mark a line on the shaft. Then compress the suspension to the mark and tack the limit strap tab to the frame. Make sure when the suspension is dropped out that the limit strap stops the suspension before the upper ball joint make metal on metal contact. If need be the chip in the tab can be flipped thus shortening the limit strap length.



Step 20- The shock reservoir mounts need to be welded to the front portion of the frame rails. We recommend tack welding them on first and checking the fit. Make sure the shock hose does not contact the upper arm when the suspension is completely dropped out.



Step 21- Remove the stock outer tie-rod end from the inner tie-rod. Install tie-rod extension provided along with the provided locktite to the outer tie-rod and tighten all the way down. (Please note some aftermarket outer tie rods are longer than OEM ones and the ends may need to get trimmed down in order to set the proper toe during the alignment process.) Then thread onto the inner tie-rod (Do not tighten at this time, an alignment will need to be done.) Place ball joint end into spindle and secure with the factory castle nut. Torque the nut to 75ft/lbs and install the cotter pin.

Step 22- After the brakes have been bleed, shocks have been charged to 150psi and everything torqued to spec take the truck to get an alignment. For trucks that are street driven the majority of the time we recommend having the alignment set at 3 degrees caster, 0 degrees camber and 1/8" of toe in. For a more aggressive off road alignment we suggest caster numbers between 4-5 with camber set at -1 degree

Make sure everything is re-torqued at 500 miles and if you have any questions regarding the install process please do not hesitate to call us at (760) 740-0442 or email [sales@jdfabrication.com](mailto:sales@jdfabrication.com)

We are open 6am-4pm PST and are closed between 11am-12pm for lunch

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