Dodge Off Road, LLC

Specializing in Dodge Ram Solid-Axle 4x4
Suspension and Steering for Off Road Applications
dodgeoffroad.com *sales@dodgeoffroad.com*
Lakeview, Arkansas

DODGE OFF ROAD LONG ARM KIT INSTALLATION INSTRUCTIONS

For all 1994-2001 Dodge Ram 1500 4x4 Trucks, and all 1994-2002 Ram 2500 and 3500 4x4 trucks.

Thank you for your purchase of our long arm kit! This kit represents over a decade of testing and fine tuning to not only be the strongest long arm kit available, but also the easiest to install.

Tools Needed

Tape measure, metal cutting tool, grinder, drill with multiple bits up to 9/16", assorted sockets and wrenches, vehicle jack, jack stands, and a moderate level of suspension and mechanical know-how.

Installation Procedure

There are a few things you should know before you begin installing this kit on your truck. Please read all instructions before beginning installation.

First, go out and spray your control arm bolts with PB Blaster or Liquid Wrench right now. There is a good chance those bolts will be seized in place, so spray them as far in advance of installation as possible.

Installation of this kit does require that you cut the lower control arm mount off of the frame. You cannot easily return your truck to stock once this is done. Going back to stock would require welding the lower control arm mount back on. So hold on to that if you think there is even a remote chance you will ever want to lower the truck. If you cut it cleanly off of the frame, it can easily be welded back in place.

Trucks with 3" to 5" of lift, you should have ordered the bent upper arms for the most room. If you did not, the long arms can still work. You will need to cut your body mount as much as possible and then weld in some gussets. This can be done later, but you'll want to reinforce the body mount at some point so it does not sag over time. If your truck has more than 5" lift, you shouldn't need to notch the body mount as much, but you'll want to cycle the suspension and check for clearance under full compression to make sure.

Once installation is complete, a front end alignment is strongly advised. You can still use your factory cam bolts on all versions of the long arms so the alignment procedure is the same as with stock arms.

This kit includes all hardware required for installation. You will have a bunch of 9/16” Grade 8 bolts in a few different lengths, plus washers and nuts for all bolts.

The 4.5” long bolts are used to bolt the arms in place to the new long arm brackets. On basic non-adjustable kits, there will be two extra 4.5” bolts that will be used to mount the upper arms to the axle.

The 5” long bolts are used on the front half of the frame brackets where the bolt goes through the frame and transmission crossmember.

The 1.5” bolts are used on the rear half of the frame bracket.

Each bracket has six bolts, with five of them going through the frame.

All bolts should be tightened to 100 ft.lbs initially, and then re-tightened after 500 miles.

INSTALLING THE BRACKETS

Installation of the long arm frame brackets can be done prior to removing the factory control arms. If you need to break the install up into two days or two weekends, do this step first and then you can install the arms later.

Locate the sheet metal lip under the door next to the frame. Mark the following cut lines. Locate the two rearward 1” holes on the frame where the transmission crossmember attaches to the frame. From the rearward hole mark back 10” and down. Using a die grinder, cut the sheet metal on the marked line. Paint cut edge of sheet metal to prevent rust. Repeat this step for both sides. Note: on some trucks, there will be charcoal canister lines in the way on the passenger side. These will need to be relocated in order for the frame bracket to bolt up.

Safety Note: When cutting metal under the truck using any tool that create sparks, ensure that there are no flammable liquids that can ignite when sparks start flying. It is a good idea to wrap any surfaces that have flammable liquids or residues with a wet towel to prevent combustion.

Locate the stock transfer case skid plate cross bracket, that runs from driver side to passenger side across the frame. Remove it from each side of the frame and discard. You will not be reusing this.

Remove the two rearward bolts on each side of the vehicle that attaches the transmission crossmember to the frame. These bolts can be accessed through the two large 1" holes on each side of the frame. Once the two rearward bolts have been removed, drill out the bolt holes in the frame and crossmember to 9/16" diameter. The new 4-link bracket will be bolted through these new holes.

Locate the stock upper control link pivot mounting hole on the frame. This is where the stock arm bolts to the frame. Using the center of the hole, measure to the rear of the truck 27-7/16" and scribe a vertical line on the side of the frame. On most trucks, there is a small hole already in this spot that you can drill out to 9/16". It is located a few inches behind the two large 1" crossmember holes mentioned in the last step.

If your vehicle does not have the factory hole in the proper location, you must mark and center punch the new pivot hole. Double check your measurements prior to drilling; the location of this hole will determine the position of the front axle to the truck. On some 1994 & 1995 vehicles this new pivot hole may come into contact with a backside angled frame plate. If so, cut out a small section of the plate to allow access to the new pivot hole and the other holes of the 4-link mounting bracket. Drill out the new pivot hole to 9/16". Bolt up the bracket to the new pivot hole through the upper arm hole on the frame bracket. Do not tighten all the way yet.

On some trucks, there is a small plate on the bottom side of the frame that will interfere with the bracket holes lining up. If this plate it present, you will need to grind it smooth with the rest of the frame until the bracket can be bolted into the hole mentioned above.

Once the upper arm pivot point is snugly bolted in place, you can now put the 5" long 9/16" bolts through the front of the frame bracket, through the frame, and through the transmission crossmember. Just finger-tighten the nuts for now.

Finally, you can mark and center punch the two rearward holes on the frame bracket. In most cases, these holes will line up with two holes already in the frame. However, if they do not line up in the center of those holes, or the holes are not present, you will need to center punch the frame and drill it out to 9/16". You can use the long arm bracket as a template to drill through, or you can remove it once the hole is marked and punched, drill the holes out, and then bolt up the bracket again. Once drilled, you can put the shorter bolts through and now you can begin to tighten up the rest of the bolts. Leave the upper arm bolt loose because you will need to remove it to install the upper arm.

INSTALLING THE ARMS

This is a fairly straight-forward part of the installation; however there are a few things that need to be noted.

There are three types of arms we build, depending on which kit you purchase. The non-adjustable arms use bushings at each end, the single-adjustable arms use a bushing at one end and a joint at the other, and the dual-adjustable arms use joints at both ends. There are some slight variances in the installation of these arms because of the different ends.

There is a difference between the upper and lower arms on all kits. The lower arms are slightly longer than the upper arms, and at the axle end, they use wider joints than the upper arms. Also, on the non-adjustable arms, the lower arms have angles notched into them and are labeled for driver side or passenger side use. Make sure you put them on the correct side of the truck. This will allow the arms to easily slide into the axle and also give you easy access to the grease fittings.

1994 to 1999 trucks will need to drill out the upper control arm mounts on your axle to a 9/16" size on all kits.

Before removing the lower control arms, mark the cam bolts so you can set them back to their original position. On the cam bolts, there is a small arrow that points to a mark on the axle bracket. Just use a piece of chalk or a marker to draw a line to where the arrow currently points.

To install the arms, you will first need to remove your stock control arms. This may be the hardest part of the installation. The truck will need to be raised in the air with all of the weight off of the front suspension so that the coil springs are loose inside their buckets. The springs do not need to be removed, however you need to make sure they are not supporting any weight. To achieve this, some trucks may require the shocks to be unbolted. The easiest way to do this is to remove the single lower shock bolt, which can be accessed using a socket and a long extension through the front of the axle, under the coil buckets. There may be other parts that limit the suspension's ability to extend all the way, such as the track bar or drag link. Unbolt anything needed to get the weight of the truck off of the coils and the axle. It is also easier to work on the suspension with the front wheels/tires removed, but not necessary.

After letting the bolts soak in PB Blaster, you should be able to loosen the nuts just to the point that they sit at the end of the bolt, and then smack the bolts with a mini sledge to loosen them up. Don't hit the bolts themselves or you can damage them where they can't be reused. If that doesn't work, you might have to cut the bolts out with a Sawzall or another method. Keep in mind that if you destroy the cam bolts, you'll need to source new ones to complete the installation. We make cam bolts as a special order item, however the fastest resource is to go to your local Dodge dealer.

When removing the existing control arms, it is important to not only have all of the weight off of the front axle, but to also support the axle's pinion so the axle does not rotate when you remove the existing arms. You can put a jack stand under the pinion of the axle (where the driveshaft bolts up), and then put another one under the tie rod in front of the axle (the long bar that goes from knuckle to knuckle), and this will keep the axle from rotating. If the axle does rotate and you can't get it to line back up by hand, you can use ratchet straps to reposition the axle. Ensure that you still have two jack stands under the axle itself, and two more holding up the weight of the truck. Always exercise extreme caution when working under a truck that is supported by jack stands. Always position yourself so that if the truck does fall, you will not be hurt. Extra safety supports backing up the jack stands are a good idea.

Once the factory arms are removed, you can install the long arms. Start with the upper arms first. You will find it easier to first put the arm in the axle bracket as far forward as you can go (the arm will touch the coil spring), then slide the arm back into the frame bracket and bolt up, and then bolt up the axle end. This will allow you to tap the axle end with a hammer to put the frame end in place if needed. You should spray the bushings with any kind of lubricant or even soapy water to help the bushing get into place.

If you find that your bushing doesn't seem to go into the upper axle bracket, your axle brackets have collapsed due to being over-tightened and the stock arms not being a snug fit in the first place. The upper arm opening should be 2 3/8" wide. If yours is not that wide, you will need to get a piece of all-thread and two nuts and make a spreader to push the bracket back out. You can also try to use a small scissor-jack or sometimes you can even make a Hi-lift jack fit in there. However you do it, the upper arm mounts on the axle will need to be widened to the factory specs in order for the new long arms to slide into place.

Once both of the upper arms are in place, you can move to the lower arms. With the factory lower arms already removed, you should be able to slide the new lower long arms into place pretty easily. It's best to install the end in the frame bracket first, then slide the arm up into the axle bracket. If the arms don't line up with the bracket, you'll need to maneuver the axle until they do line up. The lower arms are 2 5/8" wide, so if the bushing or joint does not slide into the axle bracket, the axle brackets will need to be widened. These can just be hit with a hammer since they are open on the bottom and easy to get to. When the arm is attached at both ends, you can set the cam bolts back to the same setting they had prior to installation. If you aren't sure where to set them, make the arrows point straight up at 12 o'clock and then your alignment technician will change them as needed later.

Once the lower long arms are installed, you can cut off the factory lower control arm bracket. This is easy to do with a plasma cutter or a torch, but be careful of the fuel lines and brake lines in the area. A small die grinder also works really well, although it does take a little more time. If you cut these off without damaging them, you can always weld them back on the frame if you decide to lower the truck or sell it without the long arms.

Once all of the long arms are in place, go back and double check all bolts are tightened to at least 100 ft.lbs. Grease the bushings and test the suspension for any contact. If you find contact anywhere, you will need to clearance the frame to make room for the arms.

If you find that you do need to notch the body mounts, you will want to cut out the flat plate from the bottom first, and then you can use a hole saw to cut holes in the side of the body mount. It is a good idea to brace this mount back up if you are able to.

If you have any questions, please do not hesitate to email us at sales@dodgeoffroad.com ! Thanks again for your purchase. Please consider our other suspension and steering upgrades as part of your truck's build process.

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