



# **Dodge Off Road, LLC**

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

## **DODGE OFF ROAD PROGRESSIVE SHACKLE FLIP INSTALLATION**

**For all 1994 - 2002 Ram 2500 and 3500 4x4 trucks with progressive leaf packs**



**Installation of the shackle flip kit requires your stock shackle plate to be removed. If this is done properly, the plate can be reused later if you wish to return to stock. There are no permanent modifications required, as the new bracket bolts up to the existing holes in the frame.**

**The kit includes two brackets, two shackles, two zero rates, and all of the mounting hardware and center pins required. Some kits come with the optional U bolt flip, which includes new U bolts and a top plate that works with the offset zero rate.**

### ***Installation Procedure***

**Block the rear wheels so that the axle cannot move once the leaf springs are detached.**

**Loosen the nuts holding the leaf spring to the stock shackle. If you have difficulty reaching these, you can opt to remove them later, but they are usually easier to loosen while the truck's weight is holding them in place. You also need to loosen the factory U bolts.**

**You will need to jack up the rear of the truck by it's frame to take the weight of the truck off of the suspension. Use a jack stand to hold the truck frame in the air. Then remove the bolt that holds the leaf pack to the shackle, allowing the leaf pack to rest on the axle.**

**Next, you will need to remove the factory shackle plate. The easiest way to do this is to grind the heads off of the rivets holding it on, and then use an air chisel to pop the rivets out. Doing it this way will ensure that the frame and the shackle plate are not damaged and can be returned to stock easily. Other methods include drilling the rivets out, or using a torch or plasma cutter. If you have a good grinding disc (we recommend 36 grit Zirconia flap discs over standard grinding discs) then the process of grinding the heads off can actually be faster than the other methods. An air chisel is not required, although it does make the job go much faster. A standard chisel or punch with a hammer will work as well.**

**Once the brackets and factory shackle are removed from the frame, you need to check the frame rail for any high spots that will interfere with the new bracket, and grind those smooth. It's a good idea to paint over any bare metal so the frame does not rust.**

**Now you can install the new bracket to the frame using the supplied ½" bolts, with the locknuts on the backside of the frame. The bushing will sit towards the front of the truck, so that the shackle will angle towards the back of the truck. The bracket and shackle shown in the photo on the previous page are for the passenger side of the truck. The driver side bracket is a mirror image. Do not torque the ½" bolts down just yet, but leave them a little loose until you get the shackle and leaf spring bolted together.**

**Now you can pull the leaf pack up to the shackle and use the included 5/8" bolt to attach the shackle to the leaf spring. The shackles are adjustable, and we recommend starting in the center hole. The lower hole will give you ¼" more lift, and the highest hole will give you ¼" less lift.**

**With the shackle and leaf pack loosely bolted together, go ahead and torque your ½" bolts for the brackets to 50 ft.lbs.**

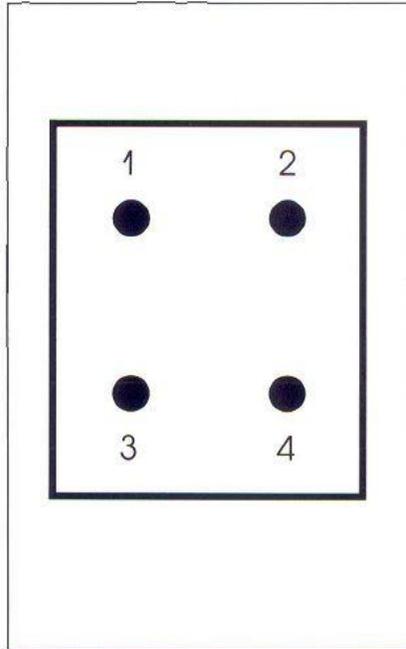
**Then torque the shackle bolts to 120 ft.lbs.**

**The next step is to install the zero rates. These bolt to the bottom of the leaf pack, and will use our supplied ½" Grade 9 Allen head bolts. The center pin is offset and will go towards the front of the truck, which moves the axle back 1.5". To install this, you will need to use some large C clamps to compress the leaf pack on either side of the existing center bolt, and then remove that center bolt. Install the new one up through the zero rate and through the leaf pack, with the new Grade 9 nut securing the whole stack on top of the leaf pack. This nut will need to be torqued to 50 ft.lbs. DO NOT use the center bolt to pull the leaf pack together; use the C clamps to hold the whole pack together while the center bolt is torqued to spec.**

**Once the center bolt is torqued, you can drop the zero rate onto the leaf spring perch and then fasten the U bolts to the spring pack and axle. If you purchased our U bolt flip, the plate goes on top of the leaf pack, and the plate is notched for the center bolt flange nut. If you did not purchase our U bolt flip, you'll need to notch your top plate to clear the flange nut on top of the leaf pack.**

Torque specs for our 5/8" U bolts are 170 ft.lbs, and you need to torque them in a cross pattern similar to lug nuts on a wheel. Torque 1 to 4 partially, then 2 to 3 partially, then 1 to 4 to full torque and finally 2 to 3 at full torque.

**U-Bolt Torque Pattern  
Visual Aid**



Once everything is in place, double check all of your bolts and torque specs. Make sure that everything clears the frame and there is no interference anywhere. You may need to re-route your exhaust tip, depending on the exhaust setup.

If you have any questions about the install, send us an email with a photo and we can quickly troubleshoot it for you. [sales@dodgeoffroad.com](mailto:sales@dodgeoffroad.com) You can also call us Monday through Friday for tech support at 855-9009-DOR.

Thank you for your purchase! Please consider us for your other Dodge Ram suspension and steering needs. We carry a wide range of heavy duty products that are an excellent value, and all of our products are made in-house in Lakeview, Arkansas by American fabricators.

