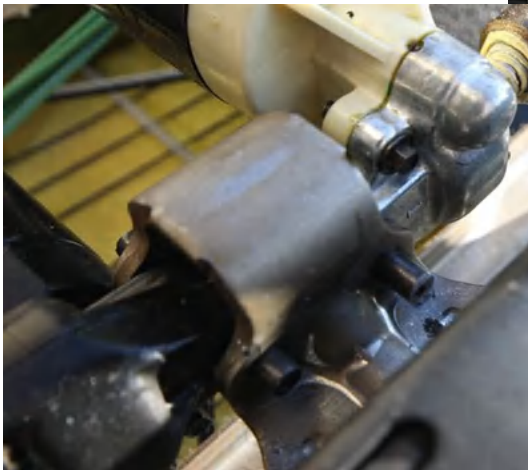


# Two Men One Garage

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## 2002 – 2008 Ram truck vertical adjustment motor replacement

1. Remove the power seat assembly from the truck.



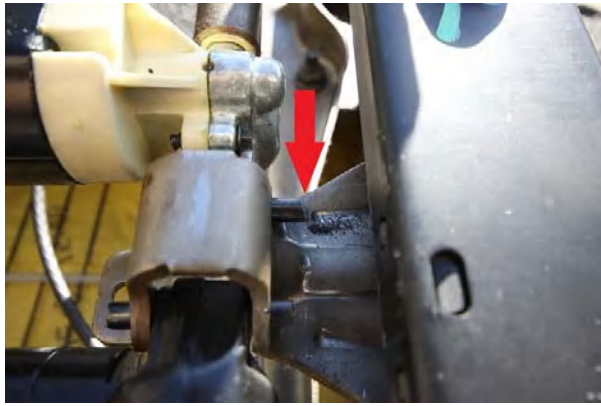
2. Remove the knurled 1/4" pin – This pin attaches the tube nut to the seat frame lever. One method is to use a pair of Channel locks and a big flat blade screwdriver. Another is a hammer and punch.

3. Prepare the roll pin – !!!READ THE WHOLE STEP BEFORE PROCEEDING!!!

The roll pin can be removed towards the center of the seat but is extremely hard to do. The easy way is to hammer it out towards the track. However, the roll pin is too long to completely remove it this way, so it will have to be trimmed off. First hammer the pin till it's flush with the housing. It will only be hammered about 3/16". Use a cut off wheel, dremel tool, or hacksaw to cut 3/16" off the roll pin. The cut will be made between the motor housing and the seat track. We WILL reuse this later so do NOT throw it out. The following pictures show what it looks like.



Direction to drive roll pin



Shows the roll pin after 3/16" is cut off the end.

4. Remove the roll pin – Finish hammering out the roll pin using a drift bar, punch, bolt or whatever will fit inside the hole without getting stuck. The roll pin should fall out.

5. Remove the motor – This should just pop right out. Do not throw out. We need to remove the tube nut in the next step.

6. Prepare the tube nut for removal – The tube nut will not unscrew off the threaded shaft. It is prevented from doing so by a bushing held in place with a constant section ring (thick circular piece of wire inside the bushing. The constant section can be removed by prying it out with a screwdriver, but is extremely difficult to do. The easiest way is to cut the shaft off the motor and unscrew the tube nut from the cut off shaft. Cut the shaft right at the motor housing using a cut off wheel or dremel tool. After the shaft is cut off, you need to make a slot in the end of the shaft which will help unscrew the shaft from the tube nut. Using the cut slot, take a screwdriver to turn the shaft out of the tube nut. You are spinning the tube nut towards the cut end. Keep the tube nut and discard the shaft.



Cut the shaft here.



Cut a notch to help unscrew the shaft from the tube nut

7. Remove the left hand thread nut and bronze bushing from the new motor and screw the tube nut onto the shaft. Coat the shaft with white lithium grease. Slide the bronze bushing over the shaft end and thread the nut (LEFT HAND THREAD) onto the tube. The tube is too skinny to get a socket in so you can slightly spread the ends to get a thin wall socket over the nut. Once the nut is tight, you can clamp the ends back to the normal distance. If you don't have a socket, you can thread the nut on by hand and use a small punch on the side of the nut to tighten. It doesn't need a lot of force, just something more than hand tightening to hold it. Because the threads are reverse direction, the tube nut will tighten the nut each time it bottoms out. The small dimple on the nut in the below picture is from using a small punch to tighten.



8. Install motor – First smooth out the roll pin with your grinder. This will make it easier to hammer in or you could use the other side. Put the motor in place and hammer the roll pin in gently. The roll pin will be shorter but it fits in so tight it won't move. You could use a ¼ bolt, but the motor tends to twist more than normal. The roll pin is slightly oversized, thus a much tighter fit. If the roll pin is too damaged, a ¼ sized one can be bought at a home supply store.

9. Prepare and attach tubing nut to the seat frame and secure with the ¼" knurled pin. Be careful if hammering the knurled pin in place, you don't want to bend the lever on the seat assembly. Use a socket to support the backside of the lever when hammering. Some customers have used channel locks to clamp the pin in place.

10. Plug in motor – You can use dielectric grease on the connections. Plug the harness connection into the motor. Finished motor installation picture is shown below.

11. Please contact me at [sales@2men1garage.com](mailto:sales@2men1garage.com) with any issues.

