

1997-2001 Jeep Cherokee Power Window Repair Kit

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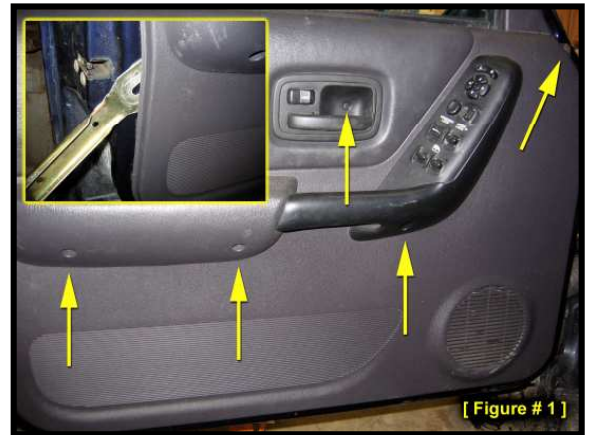
Thanks very much for purchasing this Steiger Performance repair kit! In addition to the repair bracket and this installation guide, you should have received one 1/4-28 bolt with 2 flat washers, 1 lock washer and nut as well as two #3-48 machine screws with two flat washers, one lock washer and one nut each (*you actually only need one of the smaller machine screws, but I include two because they are small and easy to lose*).

If you encounter any problems or have any questions or comments, please feel free to contact me via e-mail at jon@steigerperformance.com. A full color version of this document is available at <http://www.steigerperformance.com>

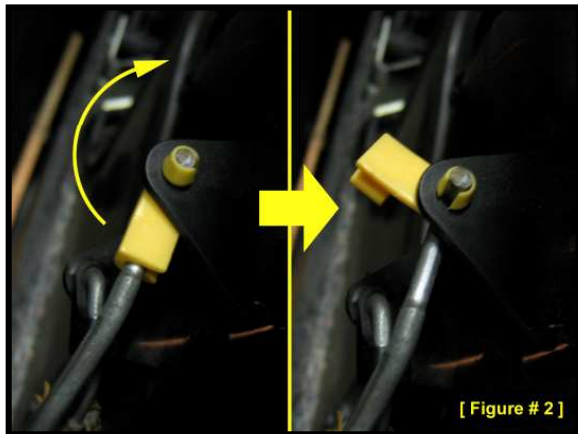
Tools required: 10mm hex socket or wrench, two 7/16" hex sockets or wrenches, 3/16" hex socket or wrench (or small pliers), small screwdriver, medium and large Phillips screwdrivers, drill or angle grinder, utility knife

(For an illustrated guide to the parts of the window regulator referred to in this document, please see Figure #12.)

The first step is to remove the door panel. There are three large Phillips head screws under the armrest, a Phillips head screw behind the door handle, and another at the top corner of the panel, near the door jamb. (see Figure #1) Remove these screws, then go around the left, bottom, and right sides of the panel and pry it away from the door. You can use a special tool designed for this purpose (see inset of Figure #1), or a flat blade screwdriver (be careful not to scratch the paint). If you manage to break any of the plastic fasteners, you can get replacements at the dealer or an auto parts store (though one or two missing clips won't make a big difference). You can now pull the bottom of the panel away from the door, and lift up to release it from the top of the door. (Just keep pulling the bottom of the panel away from the door until you are able to lift the top of the panel out of the window slot.)



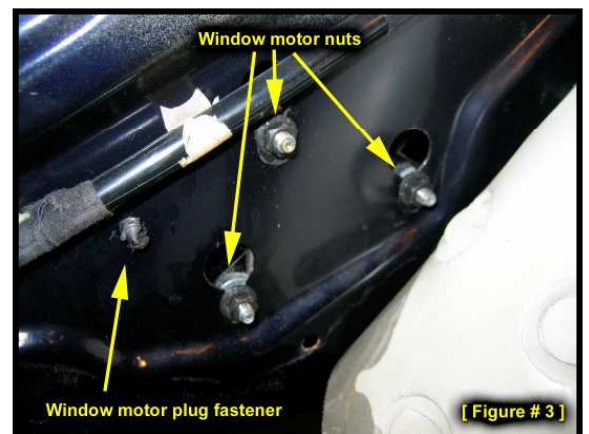
[Figure # 1]



[Figure # 2]

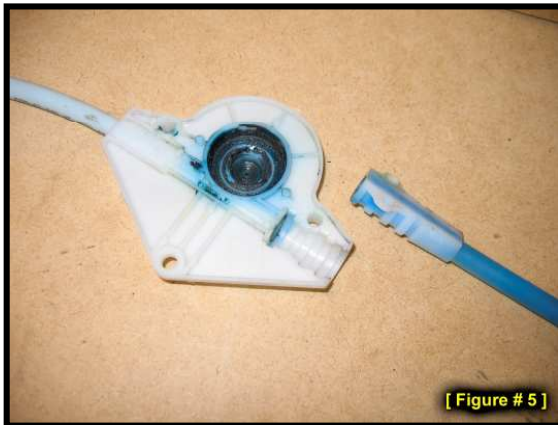
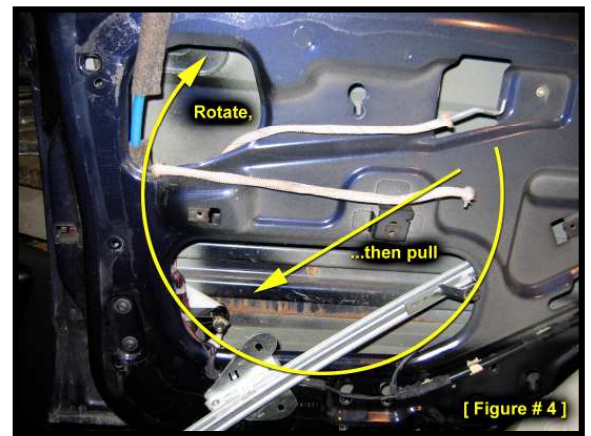
To disconnect the door latch and lock levers, just unclip and rotate the plastic locks. The metal rod can then be pulled out of the hole. (see Figure #2) Once you do that and unplug the electrical connections from the door switch module, you can set the panel aside. You will notice that there is a moisture barrier behind the panel, which is glued to the door. Carefully peel back this barrier. You don't need to remove it completely, you can leave the part closest to the door jamb attached, just peel it back enough to gain access to the door innards. Remove the two 10mm bolts which connect the glass to the window bracket. Be sure to support the window while you are doing this so that it won't crash down into the door. You can remove the window glass from the door at this point if you wish (pull the inner and

outer seals out of the window slot, then rotate the front of the window down and lift it out through the slot, back side first). Or, what I prefer to do is instead of removing the window, just slide it all the way up to the closed position and use a large suction cup or some duct tape to hold it in place. (Not only do I find that method faster and easier, I figure that the less the window is messed with, the lower the odds are of breaking the glass.) Down near the lower front portion of the door, you will find three 10mm nuts, and you will see a plastic fastener next to them, which is holding the power window motor plug in place inside the door. (see Figure #3) Reach inside the door, and pull the plug away from the door, then disconnect it. (You will need to slide the red lock on the top of the socket to the side and then depress the plunger at the top rear of the socket to pull the plug out.) Loosen the three window motor nuts as well as the bolt at the top of the guide rail and the two bolts at the bottom of the guide rail. You do not need to completely remove the nuts on the motor or the bolts on the guide rail, just back them out 1/4" or so. Slide the motor up enough for the nuts to pass through the holes at the top of the slots they are resting in, then rest the motor on the bottom of the door and let it sit there for now.



[Figure # 3]

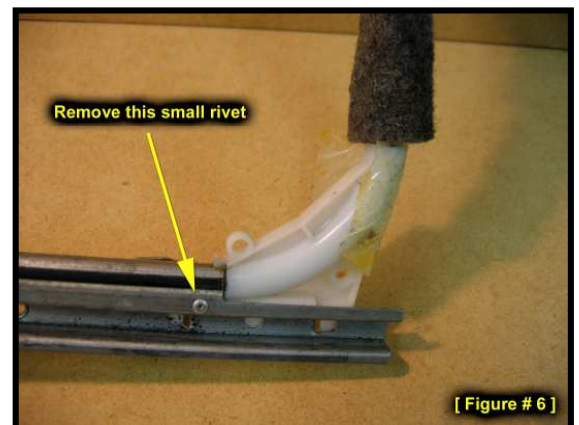
Lift the guide rail out of its slots, same as what you just did with the motor. The window regulator assembly is now free and can be removed from the door. To do so, rotate the entire assembly such that the window motor moves along the bottom of the door, towards the rear edge. (You will be rotating clockwise for the driver's side door and counterclockwise for the passenger side.) The tail piece will begin to move up. Feed it out through the square-ish opening at the top rear corner of the door so that it doesn't hit the top of the door and thus stop the assembly from rotating. Rotate the regulator assembly until the motor is sitting at the bottom rear corner of the door, then pull the guide rail out of the large opening in the bottom of the door, followed by the rest of the assembly. (see *Figure #4*)

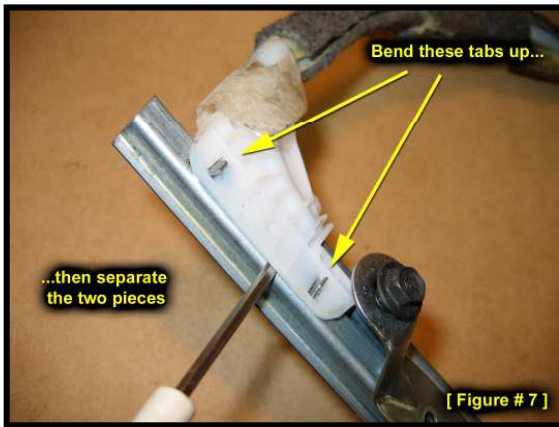


Now that the regulator has been removed from the vehicle, you can unbolt the motor. If the spiral cable which is contained inside the regulator hasn't fed all the way into the assembly, it is technically possible to continue without removing the motor, but it is very simple to do and I find that it makes the job easier since it makes the regulator less cumbersome to work on. To remove the motor, just remove the three nuts from the "plastic" side of the regulator. The nuts which are on the "metal/motor" side of the regulator are actually the nuts which hold the motor to the door, and loosening them any further is not necessary. Once the proper nuts are removed, you can slip out the bolts and the motor will come right off the regulator. Be careful not to lose the gear which is attached to the output shaft. Now you will be able to pull

the spiral cable out of the regulator and you can also slip the tail piece out of the plastic motor housing. (see *Figure #5*) Note that because of the manner in which the window bracket typically fails, a piece of plastic will sometimes remain around the end of the spiral cable, and if you have held the window switch in the "up" position, it is possible for that piece of plastic to have entered the main tube and become royally jammed. If that is the case, you have got your work cut out for you! I have been able to un-jam this condition by carefully forcing the tail piece off (even with the cable still inside it), then clamping the cable in a vise and twisting the motor housing and main tube around the cable such that the "core" of the cable starts to come out of the tube enough to be able to grab onto it with a pair of vise grips. This does mess up the end of the cable a bit (the end that is jammed), but when re-installing, you can flip it around and use the other end to attach to the bracket. Each jam is bound to be different though, so use your own judgment as to the best way to free the cable. If you are lucky, maybe a little lubricant and elbow grease will dislodge it. A heat gun may help to soften the plastic a bit and coax things along, but be careful not to heat things to the point of melting! If you are dealing with a jam, at least one positive thing about the whole situation is that since DaimlerChrysler® already considers a broken regulator to be junk, if you damage yours, you aren't much further back from where you started. ☺ If you do manage to damage something, you can probably pick up a broken regulator with the parts you need somewhere between free and cheap from a dealership, garage, junkyard, or eBay. (Watch for people bidding on regulators and inquire about buying their old one.)

The next step is to detach the plastic main tube from the top of the guide rail, which is held on by a small rivet and a couple of tabs. First, remove the rivet at the top of the guide rail. (see *Figure #6*) Basically what you need to do is to remove the head of the rivet and then push the body all the way through. To remove the head, you can use a drill bit about the same size as the head, or an angle grinder / rotary tool. To push the body of the rivet through, you can use a small punch or a small drill bit. The size of the rivet hole is approximately one tenth of an inch (.100").

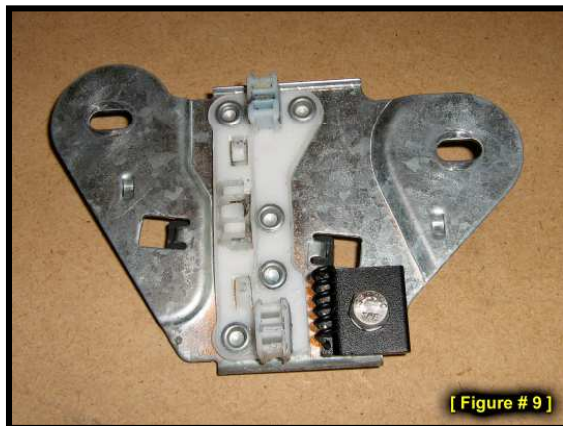
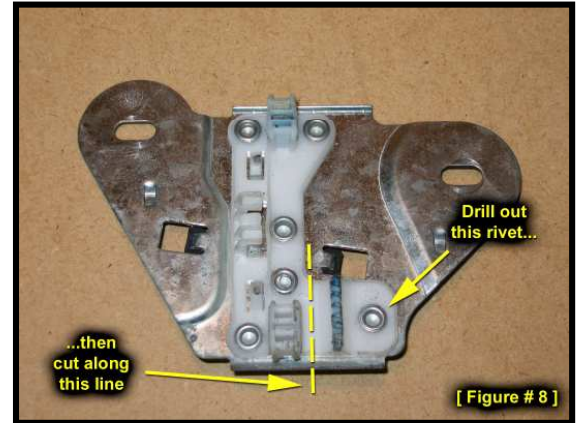




After you've removed the rivet, use a screwdriver and/or a pair of pliers to bend up the two metal tabs which are holding the main tube in place. Once they are basically straight, you should be able to separate the plastic piece from the metal guide rail. (see *Figure #7*) You may find it helpful to use a small screwdriver to pry the tube away from the guide rail, but be careful; it should come apart fairly easily, so don't force things. If it seems too hard, you may need to straighten the tabs a bit further.

If you haven't already removed the window bracket from the guide rail, slide it off now.

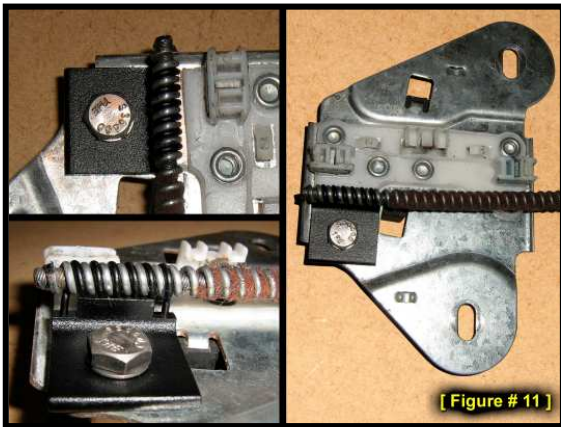
Before repairing the window bracket, the broken portion needs to be cut off, and the rivet that is holding it in place drilled out. (see *Figure #8*) Drill the rivet on the plastic side of the bracket using a large drill bit. If the rivet starts to spin, you may need to hold onto the head from underneath. Instead of a drill, you could also use an angle grinder or rotary tool. It doesn't matter if you damage the plastic in the immediate vicinity of the rivet because we are throwing that part out anyway. After the rivet is out, cut the plastic piece along the line shown in *Figure #8*. A utility knife is probably the easiest way to do this, just score a line and keep making it deeper until you cut through. You can also use a rotary tool if you prefer, but be careful not to damage the metal bracket underneath.



Now that the broken part has been removed, you can bolt the repair bracket to the window bracket using the hole previously occupied by the rivet you just drilled out. The repair bracket gets bolted to the plastic side of the window bracket with the wire portion facing up and closest to the plastic piece. (see *Figure #9*) Slip the bolt through (with one washer under the head), then install the other flat washer, a split lock washer and nut underneath. The bolt would probably work either way, but putting the head on the same side of the window bracket as the plastic piece and the repair bracket will create maximum clearance between the bolt and the guide rail. Don't tighten it up yet, leave the bolt and nut loose.

Slip the window bracket into the guide rail and then tighten the bolt on the repair bracket a bit. The reason for slipping the window bracket into the guide rail before snugging up the bolt is to make sure that the alignment is correct. Inspect the clearance; make sure that the repair bracket is sitting straight in the guide rail and that the window bracket can move back and forth without rubbing or binding. If the spiral is a tight fit in the guide rail, you can use a large screwdriver to pry the channel open a bit until you get the clearance you need. Once you are satisfied with the fitment, slide the window bracket out and fully tighten the bolt. Don't horse 'er down to the point where you strip the threads, but do make sure that it is very tight, as we don't want the bracket to move. After you have done that, slip the window bracket back into the guide rail to verify that the repair bracket didn't move while you were tightening it. Next, you need to thread the spiral cable into the repair bracket. Before doing so, you must remove approximately one inch of the "fuzz" from the end of the cable. (A wire wheel mounted on a bench grinder works great for this, or you can use a wire bristle brush, or if all else fails, just pick it out with a pair of tweezers or needle nose pliers.)



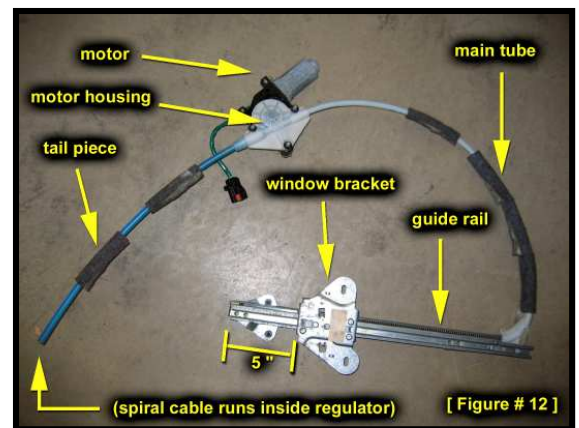


[Figure # 11]

Screw the cable all the way into the repair bracket such that the end of the cable is approximately 1/8" to 1/4" beyond the edge of the bracket. (see Figure #11) The end of the cable hits a stop when the window is all the way down, so the cable must be through the bracket far enough that the stop will contact the cable instead of the bracket itself. However, if you thread it through too far, you will find that your window won't go down all the way. Insert the window bracket into the guide rail and move it back and forth to check that it operates without binding; adjust as necessary. Push the window bracket all the way to the bottom of the guide rail and verify that it is the cable hitting the stop, and not the repair bracket. This is a good time to clean and lubricate the guide rail, if necessary. If there is sticky residue in the channels, I use brake cleaner to clean it out, but soap and water will work

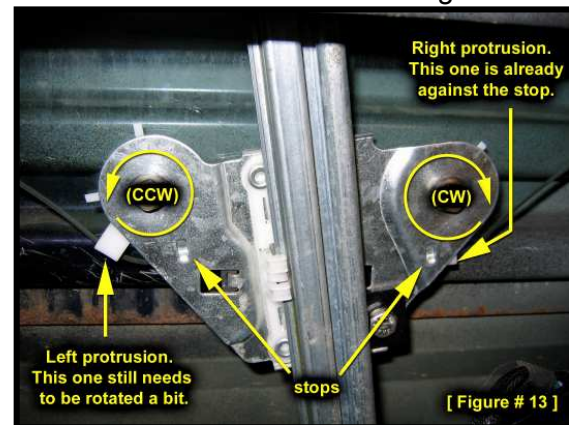
also. If you need to lubricate the rail, use a graphite based product; avoid general lubricants such as WD-40® as these will trap dirt and cause gunk. Attach the tail piece to the main tube and then thread the cable through. Snap the main tube into place on the guide rail, then insert the small machine screw provided with the repair kit into the hole previously occupied by the small rivet. For clearance reasons, the head of the machine screw and one flat washer must be on the metal side of the guide rail; the flat washer, lock washer and nut will be on the plastic side.

Bend the two metal tabs back down and then tighten the machine screw with a small screwdriver and a 3/16" wrench (or a pair of pliers). This is a very small fastener, so there is no need to break out the impact wrench. ☺ Just make it snug. Position the window bracket so that the bottom of the bracket is about five inches from the bottom of the guide rail; this will ensure that you have adequate clearance through the door panel to re-attach the window glass. (see Figure #12) Reinstall the motor in the motor housing. If the gear has fallen off the output shaft, place the gear on the shaft such that the teeth are away from the motor, not right next to it. Install the motor bolts from the motor side; the nuts go on the plastic housing side. Two of the bolts are the same (usually silver) and the third is different (usually gold). The same/silver bolts go in the outside holes, and the different/gold one through the middle hole. Thread the regulator back into the door, reversing the method you used to remove it. Slide the motor and guide rail into their respective slots and tighten the nuts. (The tail piece should run underneath the lower guide rail bracket, not above it.) Plug the motor back into the wiring harness and secure it to the door by pushing the plastic fastener attached to the plug through the hole in the door. Slide the window glass down to the holes in the window bracket and start the two bolts which secure it in position. Notice that the plastic "washers" attached to the window each have a few small protrusions and one large one. These large protrusions should rest against the stops in the window bracket. Rotate the left one counterclockwise and the right one clockwise until these protrusions hit the stops. (see Figure #13) Now you can tighten the bolts. Be careful of the glass – just make them snug. (If you are worried about the bolts coming loose, put a drop of Loctite® on the threads.) Check to make sure that both the front and the back of the glass are in the window tracks. (If you notice that the



[Figure # 12]

window goes up fine until the very top, then the motor strains and the window tips forward slightly, the glass has probably come out of the front track.) If you would like to test the operation of the window prior to buttoning everything up, just remove the switch module from the door panel by removing the three Phillips head screws. Slip the module out of the door panel, then plug it in and let it hang from the wiring harness. Once you are satisfied that all is well, reinstall the switch module in the door panel, press the moisture barrier back into place, connect the door latch and lock rods to the door panel, plug in the switch module, snap the door panel into place and install the five retaining screws (see Figure #1). Congratulations, you're done! ☺



[Figure # 13]

Check to make sure that both the front and the back of the glass are in the window tracks. (If you notice that the window goes up fine until the very top, then the motor strains and the window tips forward slightly, the glass has probably come out of the front track.) If you would like to test the operation of the window prior to buttoning everything up, just remove the switch module from the door panel by removing the three Phillips head screws. Slip the module out of the door panel, then plug it in and let it hang from the wiring harness. Once you are satisfied that all is well, reinstall the switch module in the door panel, press the moisture barrier back into place, connect the door latch and lock rods to the door panel, plug in the switch module, snap the door panel into place and install the five retaining screws (see Figure #1). Congratulations, you're done! ☺

LIMIT OF LIABILITY: User shall determine the suitability of the product for his or her intended use and shall assume all risk and liability in connection therewith. Use of the product implies consent to these conditions.