2006-2007 Jeep Liberty Rear Door Power Window Regulator Repair Kit

Thanks very much for purchasing this Steiger Performance window regulator repair kit! This kit is designed to work on all 2007 models as well as some 2006 models - those that were manufactured on or after March 16, 2006. (If you have a 2006 Liberty and are unsure of its build date, please visit my web site to learn how to find this info.) Part number SP13005 is for the right rear window and SP13006 is for the left rear window. In addition to the repair bracket and this installation guide, you should have received a T-20 Torx tool 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 these machine screws; I include two just because those parts are small and easy to lose.)*

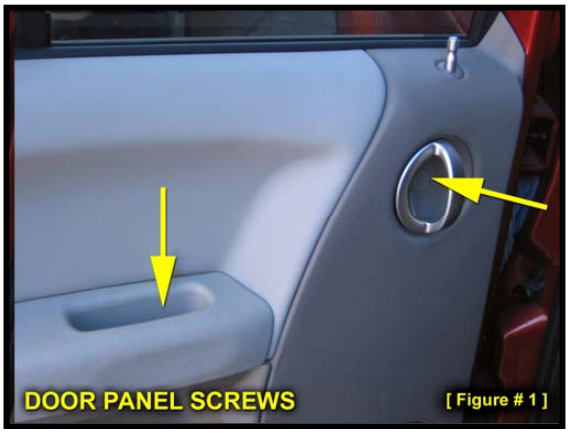
If you run into any problems or have questions or comments regarding this repair, please feel free to contact me via e-mail at *jon@steigerperformance.com* or by using the contact form on my web site. A copy of this installation guide is available in Adobe PDF format on the Steiger Performance web site at http://www.steigerperformance.com

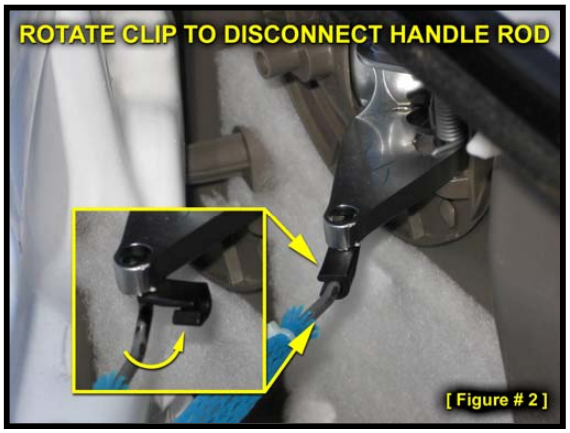
Tools required: T-20 Torx tool (included), 10mm hex socket or wrench, 3/16" hex socket or wrench (or pliers), small flat head screwdriver, Phillips head screwdriver, pliers. Tape or a wedge would be helpful to hold the window up while you remove the regulator from the door. Finally, you also need a drill, grinder or file to remove a small rivet.

(Note: For a diagram showing the window regulator parts referred to in this document, please see Figure 8 on the second page.)

Before beginning this repair, I recommend holding the window switch in the "down" position until the motor stops. If the motor does not stop on its own after several seconds, release the switch. If you hear any grinding or other unusual noises while doing this, release the switch immediately and do not continue to operate the motor. The reason for operating the switch is to feed the spiral cable back inside of the regulator. (If your window switch was held in the "up" position for too long after the regulator broke, it is possible for the spiral cable inside to have fed partially outside of the regulator.) Also, when the window bracket breaks, there is usually a piece of plastic that remains attached to the end of the spiral cable. If this piece has fed into the main tube, it is possible for it to become stuck and difficult to remove by hand, but the window motor often has enough power to push it back into the guide rail where it belongs. Operating the switch in the "down" position will accomplish this.

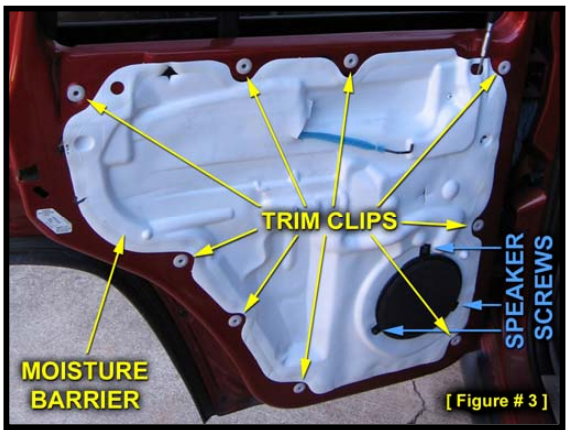
The first step is to remove the door panel. There is a Phillips head screw in the armrest grab handle and another behind the door handle. *(Figure 1)* The screw behind the door handle is hidden by a small cover which you will need to gently pry out using a small flat head screwdriver. Once both screws have been removed you can disengage the door panel trim clips by working your way around the edge of the door panel, pulling it away from the door. You may need to pry something under the edge to get it started. Auto parts stores sell a special tool that is designed for this purpose but a flat head screwdriver will also work. (If you use a tool of some type, be careful not to scratch or chip your paint.) There are nine trim clips running around the perimeter of the panel - their locations are shown in *Figure 3*. Once you have pulled all of them loose, you can lift the panel slightly to allow the top lip to clear the window slot.



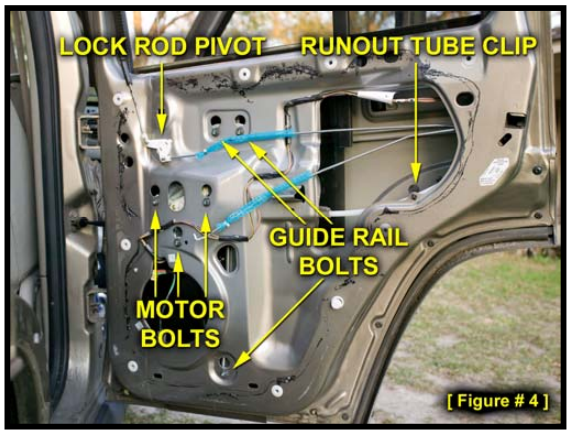


You should now be able to pull the panel far enough away from the door to reach behind it and disconnect the inside door handle actuating rod. To do so, simply unclip and rotate the plastic lock which will allow the metal rod to slip down and out of the hole. *(Figure 2)* Lift the panel up off the door lock knob and then set it aside.

Remove the three Phillips head screws holding the speaker in place, *(Figure 3)* pull it away from the door, disconnect its electrical connector and then set the speaker aside.

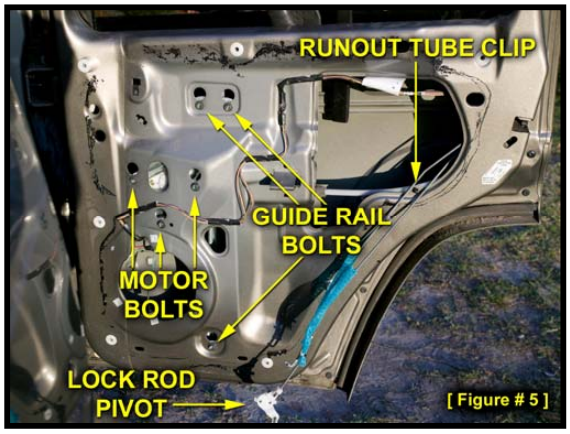


The moisture barrier *(Figure 3)* is glued to the door using a non-hardening, tar-like sealant. You can remove the moisture barrier by simply peeling it away from the door. Go slowly so that you don't rip the barrier and be careful not to get any of that sticky adhesive on your nice clean upholstery! Once you have peeled off the moisture barrier, lay it somewhere out of the way with the adhesive side facing up. (If the adhesive becomes contaminated with dirt or dust, this will reduce its effectiveness and make it more difficult to stick the barrier back on later.)

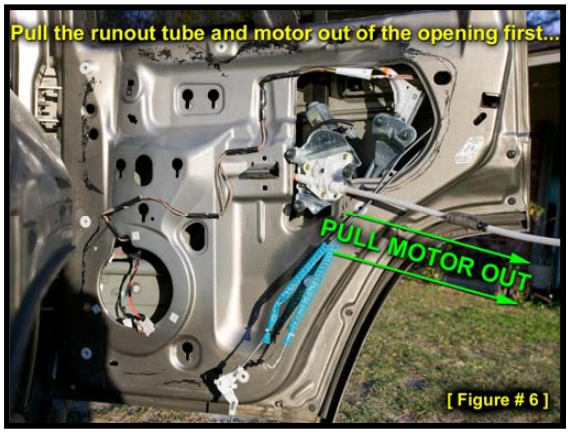


Reach inside the door and lift the window up a bit so you can reach the top of the white plastic window bracket through the speaker opening. (If the window does not move up easily or if it stops before you can lift it high enough, hold the window switch in the "up" position for a couple of seconds and then try again.) You will notice that a little nub on the window bracket is latched into a hole in the glass. While using a screwdriver or a probing tool of some type to push this nub back, lift on the glass to disengage it from the window bracket. Raise the glass all the way to the top of the door and secure it by using tape or a wedge. (If you use tape, masking or painter's tape works well for this because it does not leave behind a sticky residue - run a few strips from the inside of the glass over the top of the door frame to the outside of the glass. Taping the front and rear edges of the glass to the window frame will also work.)

There are six bolts holding the window regulator in place: two at the top of the guide rail, one at the bottom and three on the window motor. Their locations are shown in *Figures 4 and 5*. Loosen these bolts – you don't need to remove them completely, just backing them out several turns is sufficient. Reach through the speaker opening and disconnect the electrical connector from the motor by sliding the red lock on top to the side and then squeezing the locking tab at the top rear of the connector while pulling the plug and socket apart. On the bottom edge of the large opening in the door, the runout tube is clipped to a hole in the inner door skin using a plastic anchor. *(Figures 4 and 5)* Disconnect it by squeezing the prongs of the anchor together and pushing it through the hole. You may find it helpful to disconnect the lock rod pivot from the door so that the lock rod can hang out of the way. *(Figures 4 and 5)* This will create some additional space in the large opening to make it easier to remove the regulator from the door.



Slide the guide rail and motor up in their slots and allow their bolts to slip through the holes at the top of those slots. Pull the end of the runout tube through the large opening and then move the regulator towards the rear edge of the door, positioning the top of the guide rail as far to the rear-top edge as possible. *(Figure 6)* You should now be able to pull the rest of the runout tube, the motor and the main tube through the opening such that the only part still inside the door is the metal guide rail. *(Figure 7)* At this point, you can lift the guide rail out as well. The next step is to disassemble the regulator.



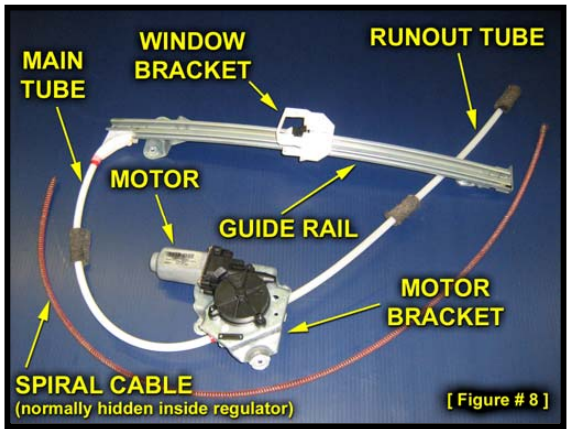
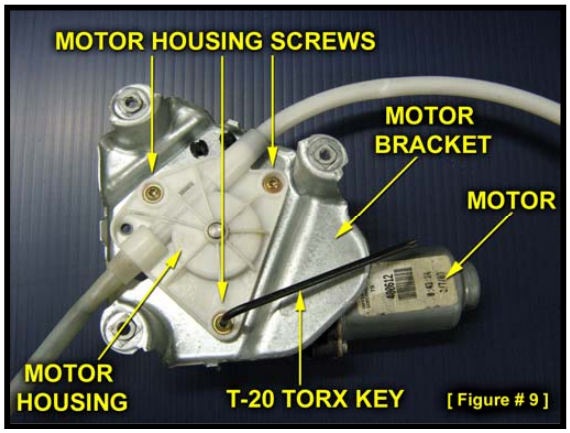
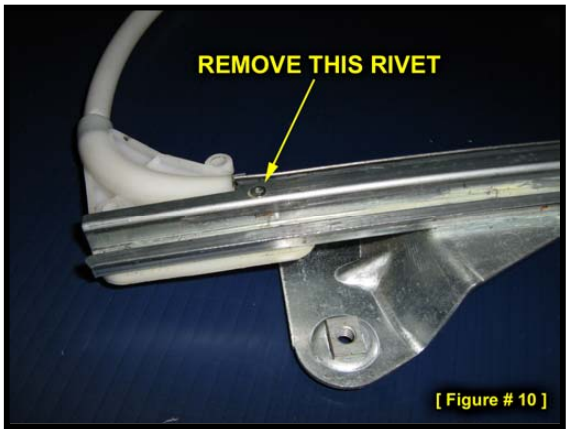


Figure 8 shows what the window regulator assembly looks like when removed from the vehicle. Various parts of the regulator are labeled for your reference.

Use the Torx tool provided in this kit (or a T-20 Torx driver) to remove the three motor housing screws *(Figure 9)* then set the motor and the motor bracket aside.

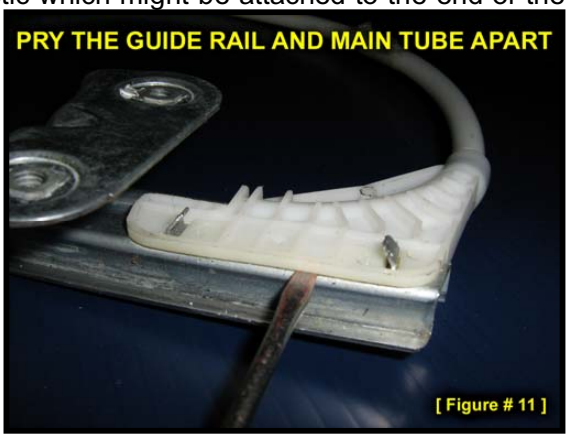




At the top of the guide rail (where the main tube attaches) you will find a small rivet. *(Figure 10)* Remove the head of this rivet. You can use a drill, grinder, cutoff wheel, Dremel® tool or even a hand file if you have the elbow grease to spare, but whatever method you use, be careful to only remove the head of the rivet itself; do not damage the underlying metal guide rail.

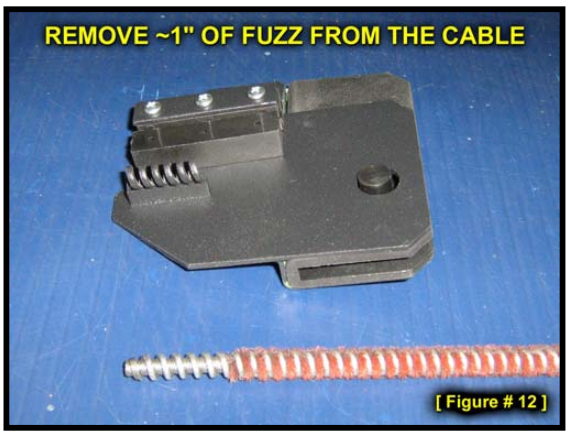
Flip the guide rail over and bend up the two tabs that hold the main tube to the guide rail. Once you have done this, you should be able to separate the main tube from the guide rail. When bending the metal tabs, do not straighten them any further than is necessary to separate the guide rail from the main tube. These tabs can only be bent back and forth a few times before the metal will fatigue and they will break off.

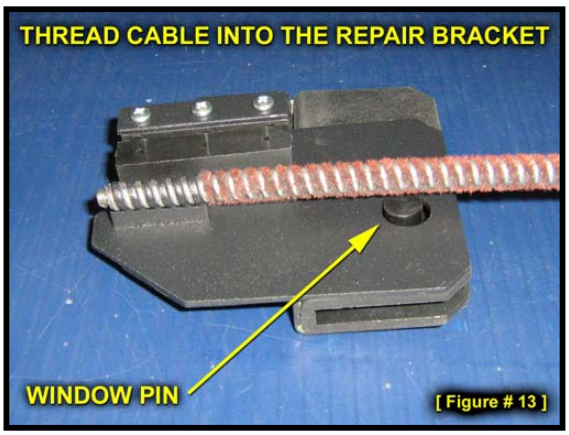
You may find it helpful to pry the main tube and guide rail apart using a small screwdriver as shown in *Figure 11*. Be careful not to damage the plastic. Pull the spiral cable out of the guide rail and main tube. Remove any bits of plastic which might be attached to the end of the cable. *Note: If you cannot remove the spiral cable because it is stuck in the main tube, use a pair of pliers or vise grips to grab the end of the cable that is sticking out of the runout tube and rotate the cable in a counter-clockwise direction to unscrew the cable from the broken plastic piece. After the cable is free, you can use it to push the broken plastic piece out of the main tube.*



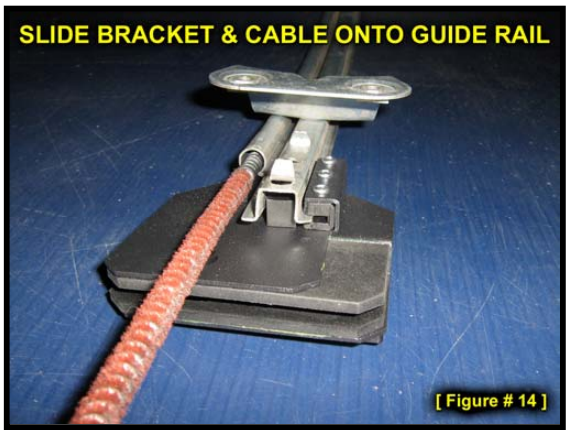
In the previous step, you removed the head of a small rivet. At this point, you can use a hammer along with a small punch (or one of the machine screws included in this kit) to press out the body of that rivet. Press from the side of the rivet where the head used to be. (If you look at this part of the main tube, you will see that one side of the curved elbow portion has a number of ribs cast into it but the other side has none. Lay the main tube on your workbench such that the ribs are against the surface of the bench (facing down) and then press down on the rivet with your punch. The side of the main tube that is facing up in *Figure 11* should be facing down while you press the rivet through.)

Remove approximately 1" of the "fuzz" from one end of the spiral cable (it does not matter which end). A wire wheel mounted on a bench grinder works great for this, but it can also be picked out with a pair of tweezers if necessary. A properly prepped cable is shown in *Figure 12* at right, along with the replacement bracket.





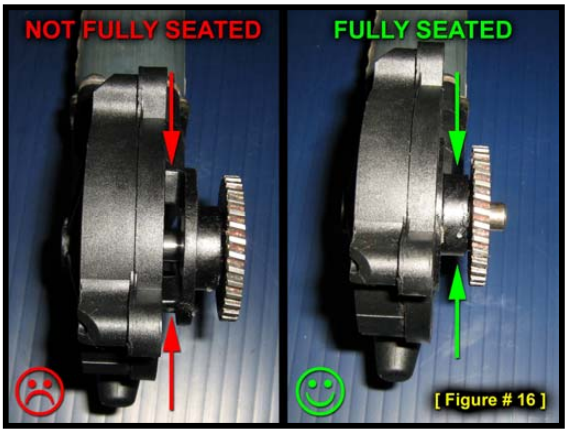
Screw the spiral cable into the replacement window bracket included with this kit. The spiral cable should pass by the window pin prior to threading into the bracket as shown in *Figure 13* above. The end of the cable should extend approximately 1/8" beyond the end of the last loop in the bracket. If you do not thread the cable in far enough, the bracket will hit the bottom of the guide rail when you lower the window, which could damage it. If you thread the cable through too far, the window will not be able to lower all the way. If the cable does not thread easily into the bracket, try the other end of the cable. Failing that, you can also file down the very tip of the cable a bit to get it started.



Slide the broken plastic window bracket off the guide rail and install the new one as shown in *Figure 14*. The cable rides in the round channel, the nylon block in the middle of the bracket rides in the square channel and the nylon slot rides on the edge of the guide rail. *Note: Figures 12-14 show a left rear window bracket. If you are working on a right rear door, your parts will be a mirror image of those shown here.*

Move the bracket back and forth in the guide rail by pushing and pulling on the spiral cable to ensure that it moves smoothly, with no binding. This is a good time to clean the guide rail, if necessary. If there is a sticky residue in the channels, I use brake cleaner to remove it, but soap and water will work too (be sure to dry it thoroughly afterwards). Lubricating the rail is usually not necessary, but if you would like to do so, try to avoid using "wet" products such as WD-40® because these will trap dirt and create gunk. I prefer to use a graphite based product for this purpose.

Move the bracket all the way down to the end of the guide rail and then insert the other end of the spiral cable into the main tube. Bring the main tube and guide rail together and then rotate the main tube so that the slots fit down over the tabs in the guide rail. Install the small machine screw (included in the kit) in the hole that was previously occupied by the rivet by placing one flat washer on the machine screw and inserting it from the guide rail side. Install another flat washer on the other side, then a lock washer and a nut, finger tight. Bend the two metal tabs down and then tighten the machine screw. It is important that the machine screw be installed as shown in *Figure 15*. The head must be on the metal guide rail side and the nut on the plastic main tube side. If you install this screw backwards, the window bracket will hit it when you try to raise the window.



Using the three Torx screws, reattach the motor to the motor housing, making sure to sandwich the metal motor bracket between the two. If you are not sure about the orientation of the motor, bracket and housing, you may find it helpful to study *Figure 9* on the second page of this guide. (Note: The window regulator pictured in *Figure 9* is for a right rear door, so if you are working on the left rear door, bear in mind that your regulator will be a mirror image of the one shown in the photo.) If the gear has fallen off the motor shaft, put it back in place. The metal gear connects to a plastic piece which has three “legs” on it. These legs must mesh with a rubber “star washer” at the bottom of the motor shaft in order for the plastic piece and gear to be fully seated. *Figure 16* shows what the gear should look like when it is properly installed in the motor, as well as an example of what it looks like when the gear is not fully seated.

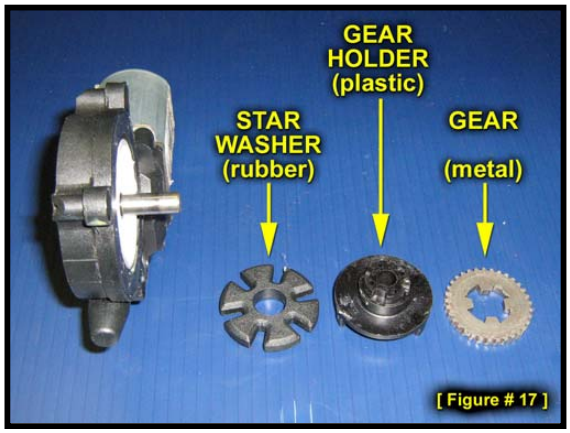
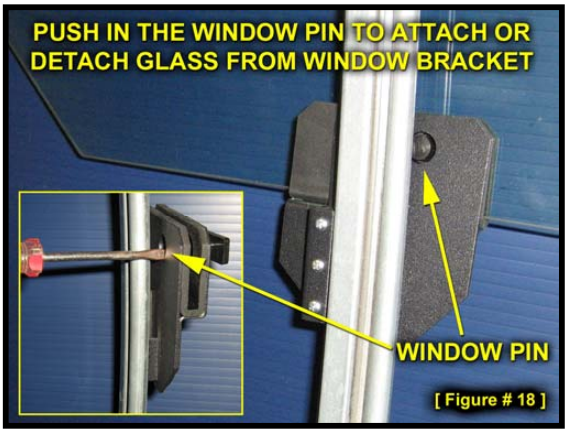


Figure 17 to the left is provided in case your motor has become disassembled further than it needed to be, and you are not sure how to put it back together. Pictured from left to right are the motor, the rubber “star washer”, the plastic gear holder and the metal gear itself. From left to right is also the order in which these items go into the motor. The rubber piece goes in first. The three legs on the bottom of the plastic gear holder slip into the slots of the rubber star washer and the metal gear goes on the plastic holder. During disassembly of the regulator, if you simply set the motor and the motor bracket aside you will not have to worry about this step. This info is provided just in case any of these parts have fallen out of your motor.



You are finished with the repair of the regulator and now it’s just a matter of reinstalling it in the door by reversing the procedure you used to remove it. Put the regulator back in the door, tighten the bolts on the guide rail and motor bracket, plug the motor back in, reconnect the runout tube clip and put the lock rod pivot back into place. Use the window switch to move the window bracket to the speaker opening (so that you can access the window pin) and then lower the glass by hand and allow it to rest on top of the bracket’s window pin. While supporting the glass with one hand, use a probing tool such as a screwdriver to push on the window pin. *(Figure 18)* The glass will drop down slightly and rest on the tool you used to push in the window pin. Remove the tool and allow the glass to lower to the bottom of the bracket. When the spring loaded window pin lines up with the hole in the glass, it will snap forward to lock the glass into place. Make sure that it has come forward all the way. *(Note: For the sake of clarity, Figure 18 shows the regulator and glass outside of the door, however when you attach the glass to the regulator, it will of course be inside the door.)* Run the window all the way up and down a few times to make sure that all is well. Route the door handle and lock rods through their openings in the moisture barrier then stick the top rear locating indent of the barrier into place followed by the top front locating indent and finally the rest of the barrier. Make sure that the barrier completely covers the drain holes at the bottom of the inner door skin. Plug in the speaker and screw it into place. Lower the door panel down over the lock knob, reattach the door handle rod and then snap the panel into place. Reinstall the armrest and door handle screws then replace the door handle screw cover. Congratulations – you’re done! ☺